ELDORADO NUCLEAR LIMITED

Exploration Division

Office of the Supervising Mining Recorder
MAR 2 1981
WHITEHORSE
Yukon Territory

RECEIVED
FEB 20 1981
MINING RECORDER
DAWSON, Y.T.
I.A. & N.D.

090762

ELDORADO NUCLEAR LIMITED
PROJECT 522
REPORT ON FIELD ACTIVITIES
JOVE CLAIM GROUP
1980

090762

January 1981

William Olsson
Project Geologist

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

$_____

Resident Geologist or
Resident Mining Engineer

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

Commissioner of Yukon Territory

INDIAN and NORTHERN AFFAIRS

TRANSMITTAL FORM

Y.R File No _____
S.M.R. File No _____
Date Fwd. _____

FROM Mining Recorder at DAWSON

TO Supervising Mining Recorder at Whitehorse, Y.T.

FOR ACTION ARE:

☐ NEW APPL'N for PLACER LEASE to PROSPECT: Name:

☐ RENEWAL APPL'N PLACER LEASE to PROSPECT: Name: Lease No. .....

☐ AFFIDAVIT of EXPENDITURE on PLACER LEASE. Name Lease No. .....

☐ ASSIGNMENT of PLACER LEASE No. .....
From: To:

☐ GROUPING APPL'N UNDER SEC. 52(2) PLACER MINING ACT.
Owner:

090762

☐ DIAMOND DRILL LOGS:
Claims: Claim sheet no:

☒ QUARTZ ASSESSMENT REPORT
Claims: JOVE 1-370 Claim sheet no. 115-N-9/10
Type of report: Geol., Geochem. & Geophys. Submitted by: Eldorado Nuclear
Cls. work performed on: $ Req. for ren. application #119,100.00

Signature

REPLY ACTION Date Ret.

Signature

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED SEP 5 1980 MINING RECORDER LAND AGENT DAWSON, Y.T. I.A. & N.D.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 44, 46, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 141, 142, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 266, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the headwaters of Glory Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1000~~ 148,000 up

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Prospecting Certificate No. Q911
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

UA 32[illegible] Jove ~~121 F~~ 119 F

UA 32[illegible] " ~~122 F~~ 120 F

" ~~123 F~~ 121 F

" ~~124 F~~ 122 F

4 years

3. The following is a detailed statement of such work. (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept. 1980

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

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LAND AGENT
DAWSON, Y.T.
I.A. & N.D.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 4
5, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 14
2, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 2
66, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the headwaters of Glory Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1600~~ $148,000 Lyo

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Grouping Certificate No. Q897
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 29847	Jove 72	4 years
YA 29849	" 74	
YA 29851	" 76	
YA 29853	" 78	
YA 29966	" 91	
YA 29968	" 93	
YA 29970	" 95	
YA 29972	" 97 to YA 29975 Jove 100	
YA 29994	" 119 to YA 29997 Jove 122	
YA 47338	" 362 ← 1 yr only	

3. The following is a detailed statement of such work. (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept 1980

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

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MINING RECORDER
LAND AGENT
DAWSON, Y.T.
I.A. & N.D.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
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situated at the headwaters of Dozy Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1600~~ $45,000.00

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Prospecting Certificate No. Q896
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 29919 Jove 44
YA 29921 " 46
YA 29923 " 48
YA 29925 " 50
YA 29932 " 57 to YA 29939 Jove 64 } 4 years
YA 29946 " 71
YA 29948 " 73
YA 29950 " 75
YA 29952 " 77

3. The following is a detailed statement of such work (set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required, or the time as shown by Section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of September 1980

Notary Public

William Olsson
Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

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I.A. & N.D.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

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2. I have done, or caused to be done, work on the following mineral claim(s):
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situated at the headwaters of Dozy Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$100~~ $148,000 (490)

dollars, since the 4th day of September 19 79,

to represent the following mineral claims under the authority of Grouping Certificate No. Q898
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 29958	Jove 83	YA 47515	Jove 301
YA 29960	" 85	YA 47517	" 303
YA 29962	" 87	YA 47519	" 305
YA 47498	" 284	YA 47521	" 307
YA 47500	" 286		
YA 47502	" 288		
YA 47503	" 289		
YA 47505	" 291		
YA 47507	" 293		
YA 47509	" 295		
YA 47511	" 297		
YA 47513	" 299		

1 yr only.

4 years

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Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept 1980

Notary Public

William Olsson
Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

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OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
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situated at the headwaters of Dozy Creek Plan Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$100~~ $148,000.00

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Prospecting Certificate No. _____
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 29965	Jove 90			
YA 29967	" 92			
YA 29969	" 94			
YA 29971	" 96			
YA 29988	" 113	to	YA 29993 Jove 118	4 years
YA 47349	" 135	to	YA 47352 Jove 138	19 only
YA 47361	" 147			
YA 47363	" 149			

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept. 1980

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

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SEP 5 1980
MINING RECORDER
LAND AGENT
DAWSON, Y.T.
LA 2 R.12

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 4
6, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 141
2, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 26
66, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the headwaters of Glory Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1600~~ $148,200 1/50

dollars, since the 4th day of September 19 79,

to represent the following mineral claims under the authority of Grouping Certificate No. Q 901
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

Grant Number	Claim Name
YA29978	Jove 101
YA29986	" 111 ~~110~~
YA29987	" 112 ~~111~~
YA29998	" 123
YA29999	" 124
YA47362	" 148
YA47364	" 150
YA47366	" 152
YA47373	" 159
YA47374	" 160
YA47375	" 161
YA47376	" 162
YA47377	" 163
YA47378	" 164
YA47387	" 173
YA47389	" 175

1 yr only

→ 4 years

3. The following is a detailed statement of such work. (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept, 1980

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

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RECEIVED SEP 5 1980 MINING RECORDER LAND AGENT DAWSON, Y.T. I.A. & N.D.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 44, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 141, 142, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 266, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the headwaters of Dozy Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1000~~ $145,000 after

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Grouping Certificate No. Q902
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 29978	Jove 103	to YA 31007 Jove 132	4 years
YA 31000	" 125		
YA 47385	" 171		
YA 47386	" 172		
YA 47442	" 228		
YA 47444	" 230		
YA 47463	" 249		
YA 47464	" 250		
YA 47466	" 252		

14 only

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.) Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept 1980

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

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SEP 5 1980
MINING RECORDER
LAND AGENT
DAWSON, Y.T.
I.A. & N.D.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 4
6, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 14
12, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 26
66, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the headwaters of Dozy Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value or at least ~~$7600~~ $148,000 Up

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Grouping Certificate No. Q904
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 29981 Jove 106
YA 29983 " 108
YA 29985 " 110
YA 47484 " 270 } 1 yr only
YA 47486 " 272 }
YA 47488 " 274
YA 47490 " 276 to YA 47497 Jove 283
YA 47499 " 285
YA 47501 " 287

} 4 years.

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept 1980

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

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OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, wotk on the following mineral claim(s): Jove Claims 1 to 16, 37, 39 to 4
(Here list claims on which work was actually done by number and name)
6, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 1
2, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 2
66, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the Headwaters of Glazy Creek Claim Sheet No. 115N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1600~~ $148,000 LFO

dollars, since the 4th day of September 19 79,

to represent the following mineral claims under the authority of Grouping Certificate No. Q 887.
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

Grant Numbers	Claim Name	
YA10220	Jove 1	4 years
YA10222	" 3	
YA10757	" 10	
YA10759	" 12	
YA29956	" 18	
YA29957	" 84	
YA29959	" 86	
YA29961	" 88	
YA29963	" 290	1 yr. only
YA47504	" 292	
YA47506	" 294	
YA47508	" 296	
YA47510	" 298	
YA47512	" 300	
YA47514	" 302	
YA47516		

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.) Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept 1980

[signature]

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED SEP 5 1980 MINING RECORDER LAND AGENT DAWSON, Y.T. I.A. & N.D.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Draftsman

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 44, 6, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 141, 2, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 266, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the headwaters of Dozy Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1600~~ $148,000 Lyo

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Grouping Certificate No. Q888
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 10221	Jove 2	4 years
YA 29944	" 69	
YA 29945	" 70	
YA 29954	" 79	
YA 29955	" 80	
YA 29964	" 89	
YA 29977	" 102	
YA 29979	" 104	

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Sworn before me at Whitehorse

this 3 day of Sept. 1980

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

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OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

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situated at the headwaters of Hozzy Creek Claim Sheet No. 115N 9,10,15,16

in the Dawson Mining District, to the value of at least ~~$100~~ $145,000 Up

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Grouping Certificate No. Q889.
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 10223	Jove 4	to	~~YA4~~ YA10227	Jove 8
YA 29893	" 18			
YA 29915	" 40			
YA 29917	" 42			
YA 29930	" 55			
YA 29931	" 56			

} 4 years

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Sworn before me at Whitehorse

this 3 day of Sept 1980

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED SEP 5 1980 MINING RECORDER LAND AGENT DAWSON, Y.T. I.A. & N.D.

I (Name) William Olsson	Occupation Geologist
(Postal Address) 400-255 Albert Street, Ottawa	OFFICE DATE STAMP

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situated at the headwaters of Hoxy Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1600~~ $148,000 Ufb

dollars, since the 4th day of September 19 79,

to represent the following mineral claims under the authority of Prospector Certificate No. Q890
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 10756	Jove 9	1 yr. only
YA 29942	" 67	
YA 29940	" 65	
YA 47523	" 309	
YA 47525	" 311	
YA 47527	" 313	
YA 47529	" 315	
YA 47531	" 317	
YA 47533	" 319	
YA 47535	" 321	
YA 47537	" 323	
YA 47539	" 325	
YA 47541	Jove 327	4 years
YA 47518	" 304	
YA 4720	" 306	
YA 4722	" 308	

3. The following is a detailed statement of such work. (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept. 1980

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED SEP 5 1980 MINING RECORDER LAND AGENT DAWSON, Y.T. I.A. & N.D.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, wotk on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 4
6, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 14
2, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 2
66, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the Headwaters of Glazy Creek Claim Sheet No. 115N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1600~~ $148,000 UFO

dollars, since the 4th day of September 19 79,

to represent the following mineral claims under the authority of Grouping Certificate No. Q891.
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

Grant Numbers	Claim Number	
YA10758	Jove 11	4 years
YA29941	" 66	
YA29943	" 68	
YA47524	" 310	1 yr. only
YA47526	" 312	
YA47528	" 314	
YA47530	" 316	
YA47532	" 318	
YA47534	" 320	
YA47536	" 322	
YA47538	" 324	
YA47540	" 326	
YA47542	" 328	
YA47557	" 343	
YA47558	" 344	
YA47573	" 359	

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.) Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept 1980

[signature]

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

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OFFICE DATE STAMP

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(Postal Address) 400-255 Albert Street, Ottawa

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2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 44, 6, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 141, 12, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 26 66, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the Headwaters of Glazy Creek Claim Sheet No. 115N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1600~~ 148,000 kJO

dollars, since the 4th day of September 19 79,

to represent the following mineral claims under the authority of Grouping Certificate No. Q905.
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 47347	JOVE 133
YA 47348	" 134
YA 47353	" 139
YA 47355	" 141
YA 47357	" 143
YA 47359	" 145
YA 47360	" 146
YA 47337	" 361
YA 47339	" 363 to YA47346 JOVE 370

~~4 years~~ 1 yr. only

3. The following is a detailed statement of such work. (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.) Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept 1980

[signature]

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

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RECEIVED SEP 5 1980 MINING RECORDER LAND AGENT DAWSON, Y.T. I.A. & N.D.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 46, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 142, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 266, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the headwaters of Glory Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1000~~ $148,000.00

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Grouping Certificate No. Q906

(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 47354	Jove 140	YA 47380	Jove 166
YA 47356	" 142	YA 47381	" 167
YA 47358	" 144	YA 47382	" 168
YA 47365	" 152	YA 47383	" 169
YA 47367	" 153	YA 47384	" 170
YA 47368	" 154		
YA 47369	" 155		
~~YA 47364~~	" 156		
YA 47370	" 157		
YA 47371	" 158		
YA 47372	" 165		
YA 47379			

1 yr.

3. The following is a detailed statement of such work. (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shewn by Section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept., 1980

M. Kemp

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED SEP 5 1980 MINING RECORDER LAND AGENT DAWSON, Y.T. I.A. & N.D.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 44, 46, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 141, 142, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 264, 266, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the headwaters of Dozy Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1600~~ $148,000 (40

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Grouping Certificate No. Q898
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

Grant Numbers	Claim Name	
YA47388	Jove	174
YA 47390	"	176
YA 47391	"	177
YA47392	"	178
YA47393	"	179
YA47394	"	180
YA47395	"	181
YA47396	"	182
YA47398	"	184
YA47406	"	186
YA 47419	"	205
YA47420	"	206
YA47421	"	207
YA47422	"	208
YA47441	"	227
YA47443	"	229

4 years

1 yr. only

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept 19 80

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED
SEP 5 1980
MINING RECORDER
LAND AGENT
DAWSON, Y.T.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

I OATH AND SAY, THAT:-

I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 4
50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 14
3, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 2
269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situate at the headwaters of Dozy Creek (Plan Sheet No. 115 N 9, 10, 15, 16
Dawson Mining District, to the value of at least ~~$1000~~ 145,200 c/o
dollars, since the 4th day of September 19 79.

I represent the following mineral claims under the authority of Grouping Certificate No. Q 901
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 47397 Jove 183 } 1 yr. only
YA 47399 " 185
YA 47401 " 187
YA 47403 " 189
YA 47405 " 191
YA 47407 " 193
YA 47409 " 195
YA 47410 " 196
YA 47411 " 197
YA 47412 " 198
YA 47413 " 199
YA 47414 " 200

YA 47415 Jove 201
YA 47416 " 202
YA 47417 " 203
YA 47418 " 204
} 4 years

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse
this 3 day of Sept 1980

Notary Public

William Olsson
Applicant.

5

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED
SEP 5 1980
MINING RECORDER
LAND AGENT
DAWSON, Y.T.
I.A. & N.D.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 4
6, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 14
2, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 2
66, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the headwaters of Dozy Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1000~~ $148,000 Cdn

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Grouping Certificate No. Q908
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA47402	Jove 188	YA47469	Jove 255
YA47425	" 209	YA47470	" 256
YA47424	" 210	YA47471	" 257
YA47420	" 212		
YA47445	" 231		
YA47446	" 232		
YA47447	" 233		
YA47448	" 234		
YA47450	" 236		
YA47452	" 238		
YA47465	" 251		
YA47467	" 253		
YA47468	" 254		

} 4 years

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept., 1980

Notary Public

William Olsson
Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED
SEP 5 1980
MINING RECORDER
LAND AGENT
DAWSON, Y.T.
I.A. & N.D.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 4
5, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 14
2, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 26
66, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the headwaters of Hozy Creek (Plan sheet No. 115 N 9, 10, 15, 16)

in the Dawson Mining District, to the value of at least ~~$~~ $148,000 (US)

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Yearling Certificate No. Q909
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA47404	Jove 190			
YA47406	" 192			
YA47408	" 194			
YA47425	" 211			
YA47427	" 213	to	YA47430 Jove 216	4 years
YA47432	" 218			
YA47449	" 235			
YA47451	" 237			
YA47453	" 239	to	YA47456 Jove 242	
YA47473	" 259			

3. The following is a detailed statement of such work. (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required by law to be done shewn by Section 53.) Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of September 1980

Notary Public

William Olsson
Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

FORM "C" - APPLICATION FOR A CERTIFICATE OF WORK

(This form required in duplicate with sketch showing location of work.)

RECEIVED SEP 5 1980 MINING RECORDER LAND AGENT DAWSON, Y.T. I.A. & N.R.

OFFICE DATE STAMP

I (Name) William Olsson Occupation Prospector

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, work on the following mineral claim(s):
(Here list claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 4
, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 14
2, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 2
66, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

situated at the headwaters of Hozy Creek Claim Sheet No. 115 N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1600~~ 148,000 Ufo

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Grouping Certificate No. Q910
(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

YA 47431 Jove 217
YA 47433 " 219 to YA 47440 Jove 226
YA 47457 " 243 to YA 47462 Jove 248
YA 47475 " 261

} 4 years

3. The following is a detailed statement of such work. (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

this 3 day of Sept. 1980

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

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OFFICE DATE STAMP

I William Olsson Occupation Geologist

(ress) 400-255 Albert Street, Ottawa

AN^ SAY, THAT:-

c..ner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

...or , or caused to be done, work on the following mineral claim(s):

...s claims on which work was actually done by number and name) Jove Claims 1 to 16, 37, 39 to 44, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 141, 5, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 264 271, 345, 347, 348, 349, 350, 352, 365, 366, 368

...; Leaseholders of Dozy Creek Claim Sheet No. 115 N 9, 10, 15, 16

Dawson Mining District, to the value of at least ~~$7600~~ $148,000 LJO

...the 4th day of September 19 79.

the following mineral claims under the authority of Prospecting Certificate No. Q 903.

...ims to be renewed in numerical order, by grant number and claim name, showing renewal period

1980	JOVE 105	YA47483	JOVE 269	4 years
1982	" 107	YA47485	" 271	
...84	" 109	YA47487	" 273	
7472	" 258	YA47489	" 275	
7474	" 260			
...76	" 262			
7477	" 263			
...78	" 264			
...79	" 265			
7480	" 266			
7481	" 267			
...82	" 268			

...following is a detailed statement of such work. (Set out full particulars of the work done indicating ...work commenced and ended in the twelve months in which such work is required ... to be done as shown by ...n 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

...fore me at Whitehorse

3 day of Sept 1980

Notary Public

William Olsson

Applicant.

Department of Indian Affairs and Northern Development

YUKON QUARTZ MINING ACT

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OFFICE DATE STAMP

I (Name) William Olsson Occupation Geologist

(Postal Address) 400-255 Albert Street, Ottawa

MAKE OATH AND SAY, THAT:-

1. I am the owner, or agent of the owner, of the mineral claim(s) to which reference is made herein.

2. I have done, or caused to be done, wotk on the following mineral claim(s): Jove Claims 1 to 16, 37, 39 to 44, 5, 48, 50, 52, 54 to 58, 69 to 72, 74, 79 to 84, 89 to 95, 97, 101 to 107, 109, 141, 2, 153, 155, 156, 167, 168, 170, 181 to 183, 253, 254, 256, 257, 259, 261, 263, 26 66, 269, 271, 345, 347, 348, 349, 350, 352, 365, 366, 368
(Here list claims on which work was actually done by number and name)

situated at the headwaters of Glazy Creek Claim Sheet No. 115N 9, 10, 15, 16

in the Dawson Mining District, to the value of at least ~~$1600~~ $148.000 LFO

dollars, since the 4th day of September 19 79.

to represent the following mineral claims under the authority of Grouping Certificate No. Q895

(Here list claims to be renewed in numerical order, by grant number and claim name, showing renewal period requested).

Grant Numbers	Claim Name
YA47544	Jove 330
YA47559	345
YA47560	346
YA47561	347
YA47562	348
YA47563	349
YA47564	350
YA47565	351
YA47566	352
YA47567	353
YA47568	354
YA47569	355
YA47570	356
YA47571	357
YA47572	358
YA47573	360

4 years

3. The following is a detailed statement of such work: (Set out full particulars of the work done indicating dates work commenced and ended in the twelve months in which such work is required to be done as shown by Section 53.)

Ground geochemical and geophysical surveys, trenching, geological mapping and diamond drilling were carried out on the property during the 1980 field season.

Sworn before me at Whitehorse

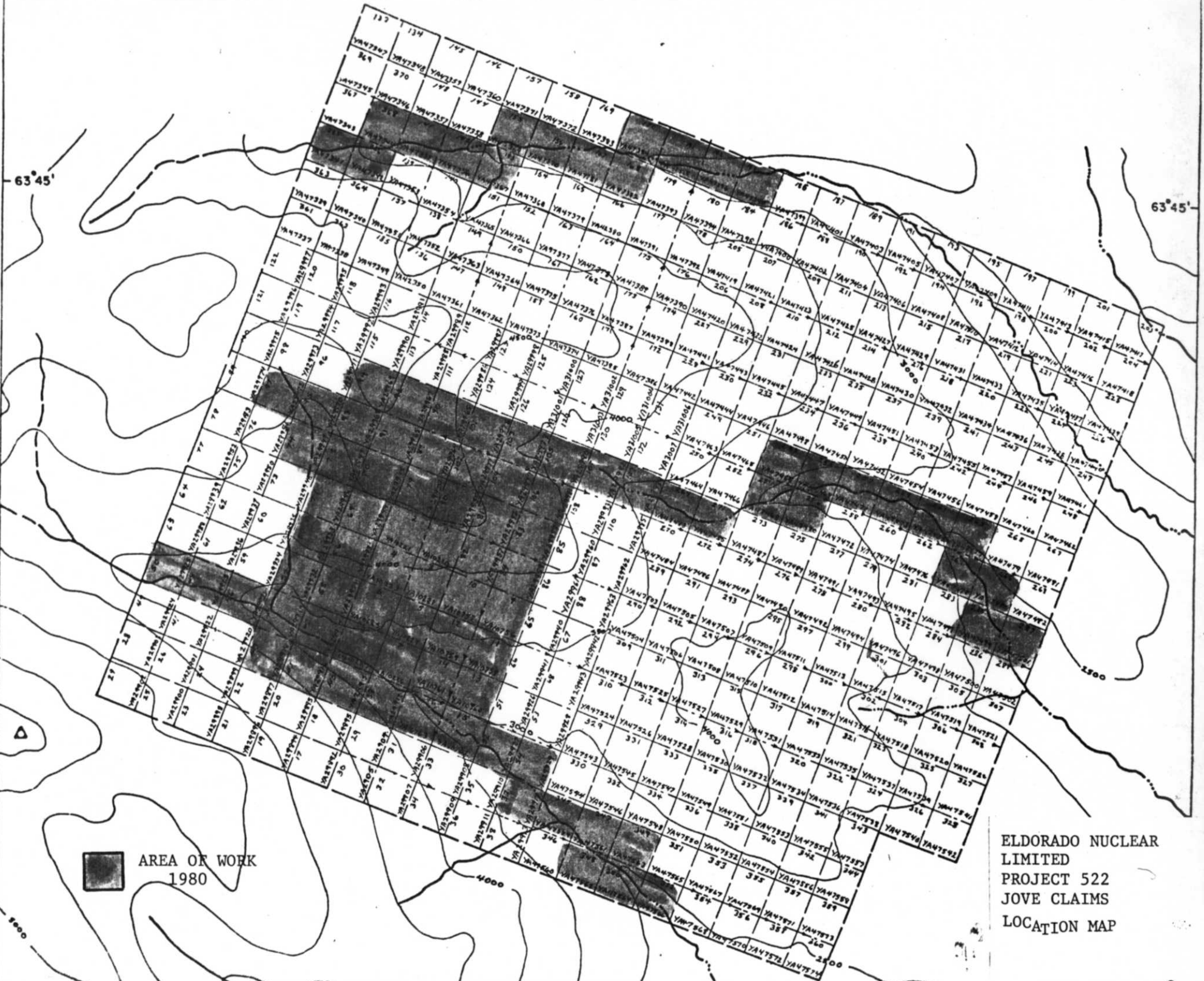
this 3 day of Sept 1980

[signature]

Notary Public

William Olsson

Applicant.


63°45'
63°45'
AREA OF WORK
1980
ELDORADO NUCLEAR
LIMITED
PROJECT 522
JOVE CLAIMS
LOCATION MAP

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F.	Raw Geophysical Data, 1980 Field Work.
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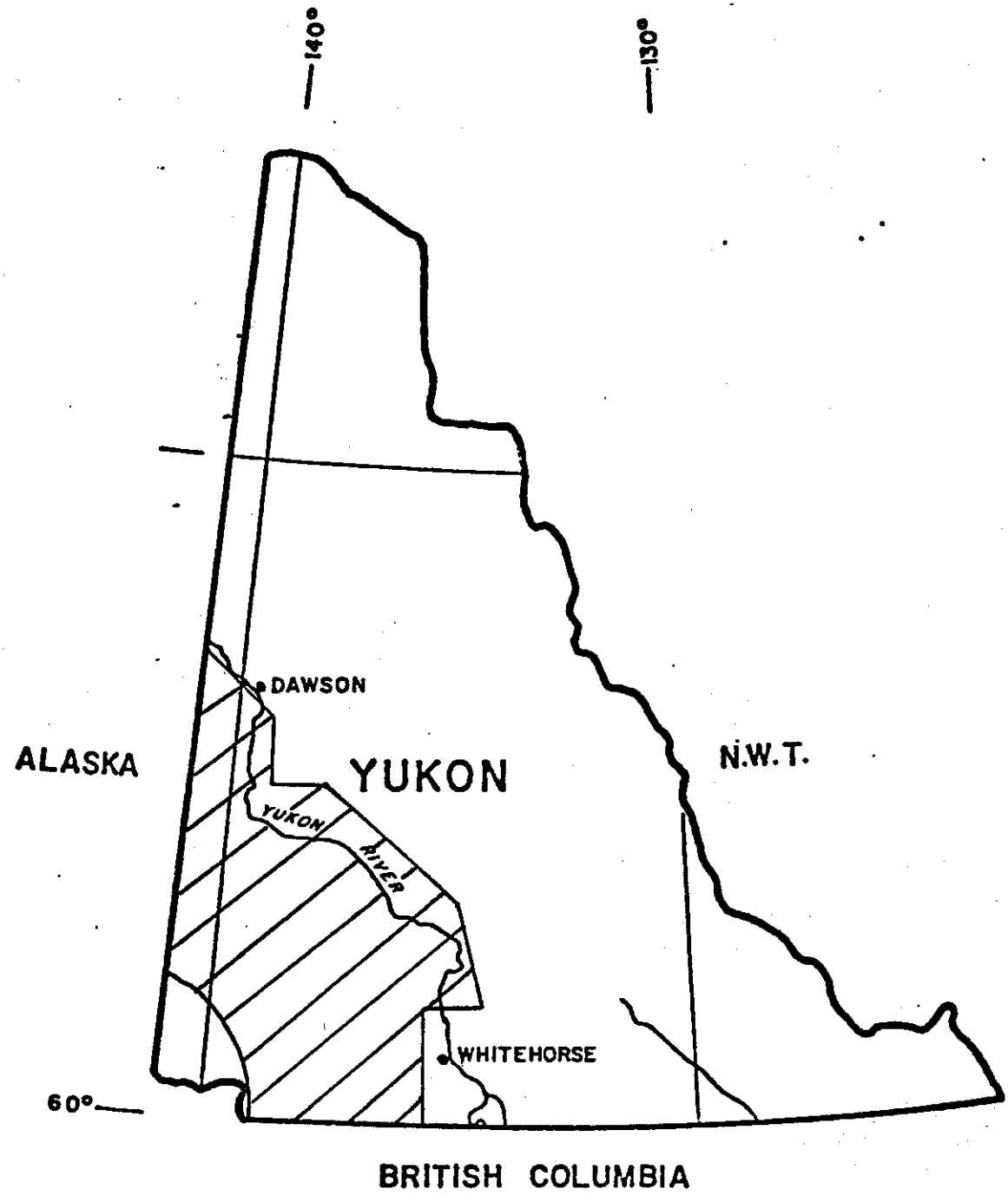

Fig 1

ELDORADO NUCLEAR LIMITE

PROJECT 522

LOCATION MAP

AREA OF INTEREST

N

I INTRODUCTION

1.1 General

1.1.1 Introduction

Project 522 is carried out under a Joint Venture Agreement between Eldorado Nuclear Limited (66 2/3%) and Canadian Occidental Minerals (33 1/3%). Eldorado is the operator of the venture.

1.1.2 Previous Work

Large portions of the project area have been prospected and mined for placer gold at one time or another since the late 1800's. The recent resurgence in the price of gold has resulted in vigorous renewed interest by individuals and companies in gold deposits and potential gold-bearing streams in the area.

The Geological Survey of Canada has mapped the terrane around the JOVE property. The geological map of the area is published at a scale of 1:250,000 and accompanies G.S.C. Paper 73-41 authored by D. Templeman-Kluit and entitled "Reconnaissance Geology of Aishikik Lake, Snag and Part of Stewart River Map-areas; West-Central Yukon.

Eldorado Nuclear, as part of a broad, regional program, examined 6 anomalies defined by analyzing pulps held from previous surveys. The work involved hound dogging (a 113 cubic inch Mt. Sopris crystal mounted on the side of a Bell-47 helicopter and connected to a GAD-4 spectrometer and recorder), combined with geochemical sampling of stream silts and waters. JOVE 1-16 were staked as a result of this preliminary work. A portion of this claim group was systematically sampled for soil and rock on a 100m x 100m grid. Several uranium-in-soil anomalies and corresponding radiometric anomalies were delineated by the grid work.

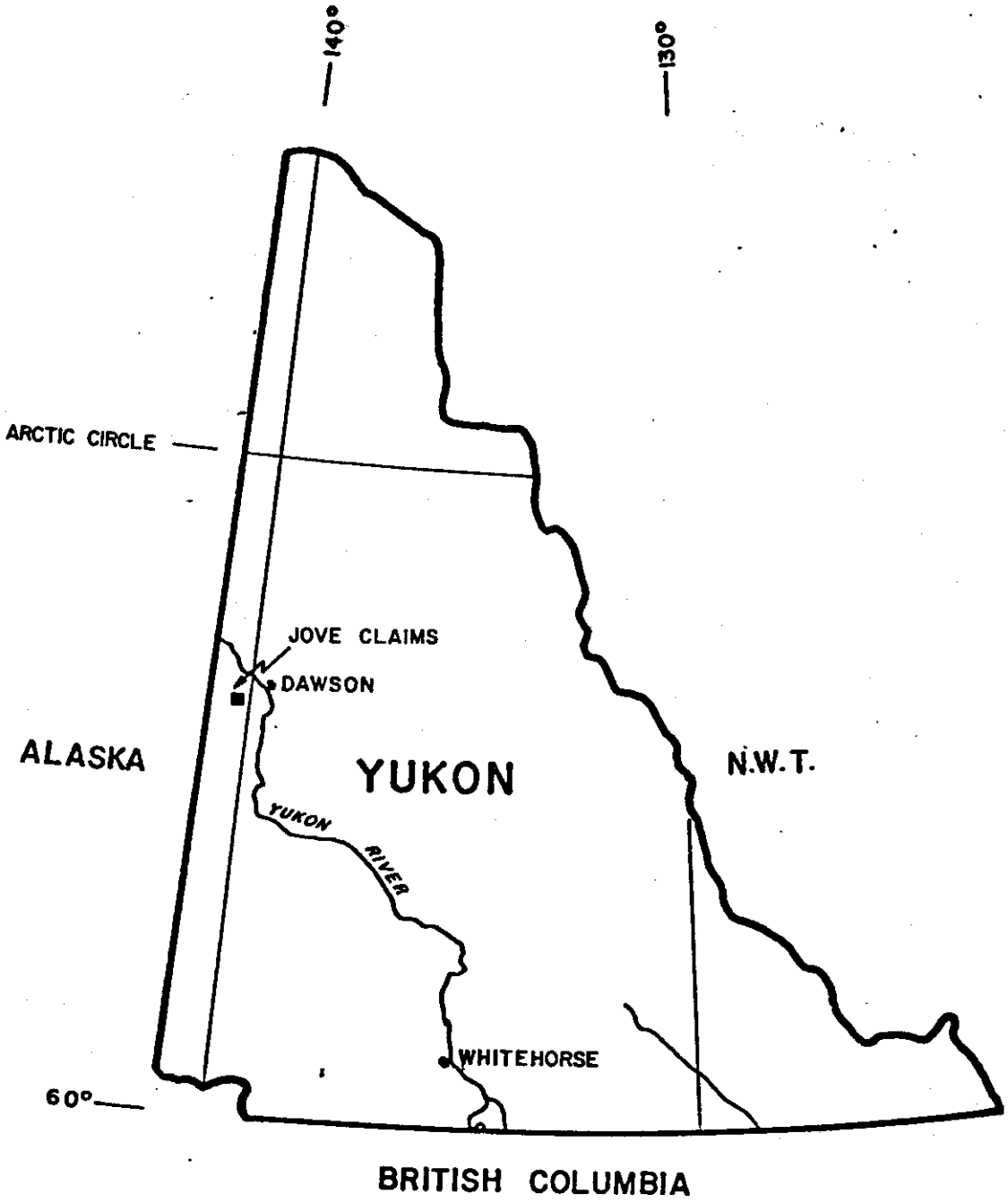

Fig 2

ELDORADO NUCLEAR LIMITED

N

LOCATION MAP

JOVE CLAIMS

SCALE: 1" = 120 mi

During the 1978 season, a further 116 claims were acquired, extending the JOVE Claim Group to 132 claims. A portion of the 1978 field effort was used to examine parts of the newly acquired ground in a fashion similar to the work done on the properties in 1977.

The last half of the 1979 field season consisted of trenching and diamond drilling on the JOVE property. Initial drill results were encouraging and precipitated the extension of the JOVE property to the north and to the east (238 additional claims).

A summary of the JOVE claims held by the Joint Venture as of September 30, 1980, is presented as Table I. The claims are listed by year staked, NTS map sheet on which they appear, name, certificate number, recording date and expiry date.

TABLE I
CLAIMS HELD BY THE JOINT VENTURE

NTS MAP SHEET	CLAIM NAME	CERTIFICATE NUMBER	RECORDING DATE	EXPIRY DATE
		1977		
115N/9, 10,15,16	JOVE 17-132	YA29892-YA31107	09/06/7809/03/89	
115N/9, 10,15,16	JOVE 119F 122F		08/06/79	08/06/89
	133-186	YA47337 - 390	04/09/79	04/09/88
	205-208	YA47407 - 410	"	"
	227-230	YA47429 - 432	"	"
	249-250	YA47451 - 452	"	"
	269-272	YA47471 - 474	"	"
	289-292	YA47491 - 494	"	"
	294	YA47496	"	"
	296	YA47498	"	"
	309-316	YA47511 - 518	"	"
	329-336	YA47531 - 539	"	"
	345-352	YA47548 - 555	"	"
	361-370	YA47564 - 574	"	"
	187-204	YA47390 - 407	"	04/09/84
	209-226	YA47411 - 428	"	"
	231-248	YA47433 - 450	"	"
	251-268	YA47453 - 470	"	"
	273-288	YA47475 - 490	"	"
	293	YA47495	"	"
	295	YA47497	"	"
	297-308	YA47499 - 510	"	"
	317-328	YA47519 - 530	"	"
	337-344	YA47540 - 547	"	"
	353-360	YA47556 - 563	"	"

II THE 1980 FIELD PROGRAM

2.1 General

The 1980 field work on Project 522 consisted entirely of property evaluation. The largest part of the program dealt with the JOVE property which displayed the largest anomaly and was therefore considered as a locus of significant uraniferous mineralization. The largest portion of the 1980 expenditures resulted from the trenching and diamond drilling of the 2 most significant anomalies on the property. The remaining portions of the program dealt with evaluating the northern half of the JOVE property (JOVE-5 and 6). The approach used was to evaluate these properties by a detailed program of surface radiometrics and geochemistry, and to compare the results to those reported for the JOVE CENTRAL and JOVE EAST anomalies. Based on these comparisons, each grid was to be rated with respect to the JOVE CENTRAL and EAST anomalies.

2.2 Logistics

2.2.1 Personnel

The 1980 field crew consisted of the following personnel employed by Eldorado Nuclear:

NAME	TITLE	STATUS
William Olsson	Project Geologist	Permanent
Sandy McAllister	Senior Assistant	Temporary
John Mulvie	Senior Assistant	Temporary
Dave Melling	Assistant	Temporary
Bridget Garey	Assistant	Temporary
Pam Hobbs	Assistant	Temporary
Beth Fischer	Assistant	Temporary
Trina Madore	Cook	Temporary

Table IV summarizes the crew listing as to dates and work areas involved.

TABLE II

DATES INDIVIDUALS WORKED SPECIFIC PROJECT PROPERTIES IN 1980

NAME	PROPERTY	DATES INVOLVED
William Olsson	JOVE	May 23, 1980-July 30, 1980
		Aug. 7, 1980-Aug. 29, 1980
Sandy McAllister	JOVE	May 22, 1980-July 3, 1980
		July 15, 1980-Aug. 29, 1980
John Mulvie	JOVE	May 22, 1980-July 17, 1980
		July 24, 1980-Aug. 6, 1980
Dave Melling	JOVE	May 22, 1980-July 17, 1980
		July 24, 1980-Aug. 6, 1980
Beth Fischer	JOVE	June 16, 1980-Aug. 29, 1980
Bridget Garey	JOVE	May 22, 1980-May 29, 1980
Pam Hobbs	JOVE	June 2, 1980-June 9, 1980
Trina Madore	JOVE	May 22, 1980-July 17, 1980

Figure 3: A Bell 204 Helicopter Demobilizing Drill Equipment From JOVE, July 1980

Technical advice was provided by Dr. J.D. Scott, Staff Mineralogist, Eldorado Nuclear Limited, and Dr. C.F. Gleeson, Consultant. Visitors to the project during the 1980 field season were Mr. D.K. Fountain, Manager, Exploration Division, Eldorado Nuclear Limited, Mr. D.M. Ward, Senior Staff Geologist, Eldorado Nuclear Limited, Mr. L.A. Homeniuk, District Geologist, Eldorado Nuclear Limited, Dr. J.J. Brummer, General Manager, Exploration, Canadian Occidental Minerals, Dr. R.H. Wallis, Chief Geologist, Canadian Occidental Minerals, Mr. M. Hendrich, Project Supervisor, Canadian Occidental Minerals, Mr. M. Kuehnbaum, Project Geologist, Canadian Occidental Minerals, Dr. D.J. Tempelman-Kluit, Senior Geologist, D.I.A.N.D., and Dr. D. Bell, Geological Survey of Canada.

2.2.2 Aircraft

All airborne support between the properties and Dawson City was carried out by helicopters that were chartered on a casual basis. These helicopters were supplied by Trans North Turbo Air of Whitehorse, Y.T., Shirley Helicopters of Edmonton, Alberta, or Canwest Aviation Ltd., of Calgary, Alberta. A Bell 204 owned by Frontier Helicopters but operated by Trans North Turbo Air Ltd. was used in mobilizing to the property at the beginning of the season as well as for demobilizing all drilling equipment following completion of the drill program. Other machines such as a Hughes 500D, Bell 206B and a Bell Long Ranger were utilized on a regular basis for supply trips between the camp sites and Dawson.

2.2.3 Expediting

Resources Expediting of Dawson City,, Y.T. provided excellent radio support and expediting services during the entire field season. Traeger SSB50C H.F. radios were used for communication with the expeditors and between camps. A UHF radio telephone supplied by Northwestel was also used with varying success.

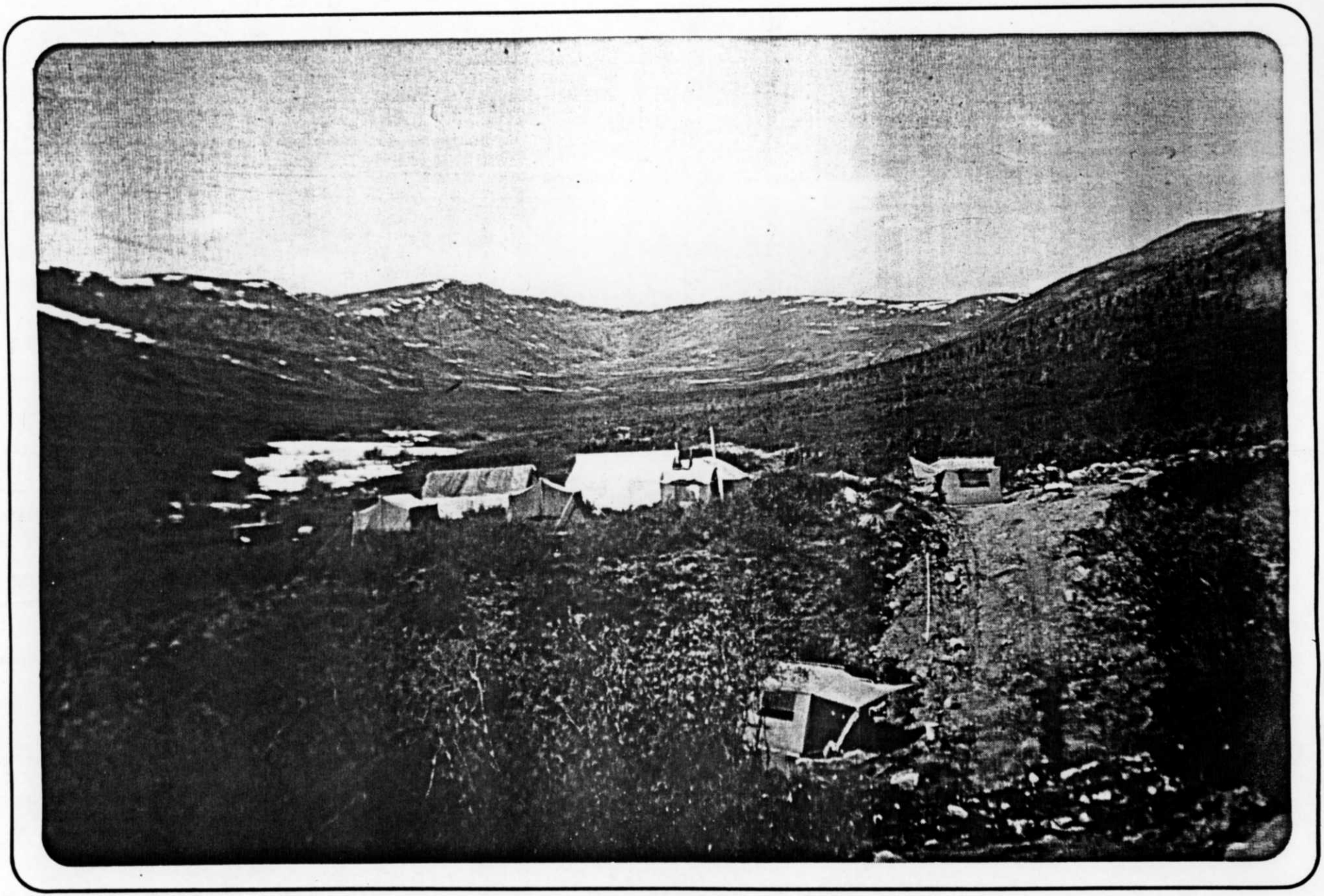

Figure 4: The 1980 Camp on Glazy Creek

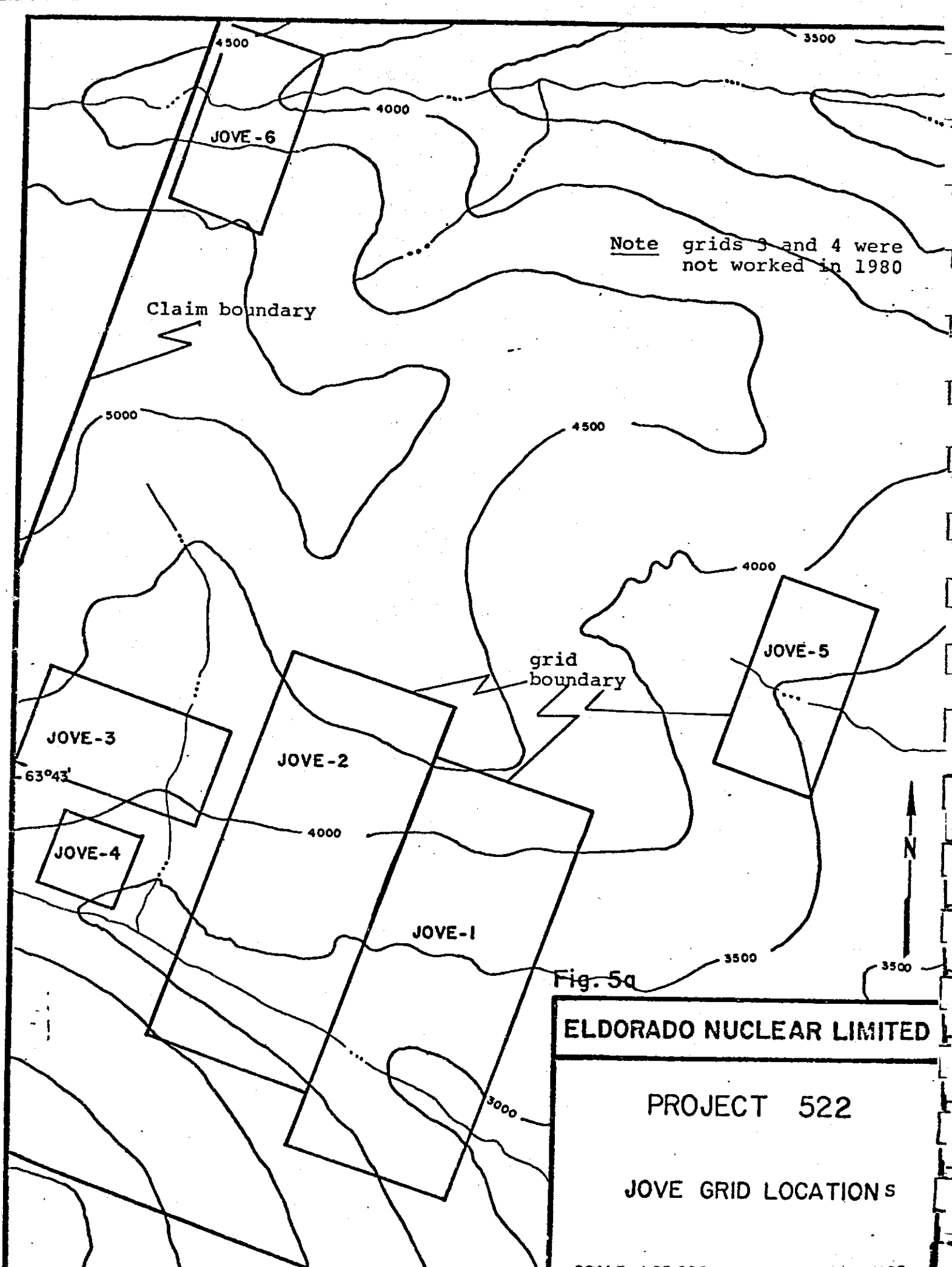

Fig. 5a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE GRID LOCATIONS

2.2.4 Camp Locations

The 1980 program was operated from a base camp established in late May along Glazy Creek on the JOVE property. Work on the northern portions of the JOVE claims was undertaken from fly camps located close to the work areas.

2.2.5 Grid Locations

The JOVE property was divided into 6 major work areas based on previous data. Four of these were examined in 1980. These four were called JOVE-1, JOVE-2, JOVE-5 and JOVE-6. The JOVE-1 and JOVE-2 grids correspond to the eastern and central anomalies as described in 1979. These grids were each subsequently divided into a northern and southern half. Grid JOVE-5 was centred over the apparent source for anomaly 115N9-5 while JOVE-6 was centred over the area of provenance for anomaly 115N16-1. All JOVE grid locations are illustrated by Figure 5a.

2.2.6 Linecutting

In late April, a linecutting contract was awarded to establish a controlled grid over the JOVE-1 and JOVE-2 areas. Baselines were cut on lines 32 00W and 40 00W extending from 20 00N to 42 00N. Crosslines were then cut every 200 metres between 28 00W and 44 00W.

2.2.7 Contractors

Trenching operations were carried out on the JOVE property under contract to Kolody Enterprises of Whitehorse, Y.T. Diamond drilling was contracted to E. Caron Diamond Drilling Ltd., Whitehorse, Y.T. while linecutting was contracted to M.J. Moreau Enterprises, Whitehorse, Y.T.

2.2.8 Permits

Land Use Permit YA 9F428 was issued by the Department of Indian Affairs and Northern Development to Eldorado Nuclear Ltd. for mobilizing 2 cats to and from the property. The diamond drilling was carried out under the authority of Water Use Permit Y2A3-1470 issued to Eldorado Nuclear Ltd. by the Yukon Territory Water Board as required by the Northern Inlands Water Act.

2.3 Geology

2.3.1 Property Mapping

Geological mapping of the JOVE-1 and JOVE-2 grid areas was continuously done throughout the field season. Traverses were carried out on lines established at 25m intervals. The results are plotted at 1:2500 (Figure 8a) which corresponds to the scale other survey results are plotted. The outlines of felsenmeer fields are shown on this map. At times it was necessary to traverse in between the 25m lines in order to establish the boundary of some of the felsenmeer fields. Rock types are based on differences mappable at a scale of 1:2500. Contacts are inferred or assumed, and are based on the distribution of rock types identified in the felsenmeer. Samples representative of each lithological unit were obtained during the mapping exercise. In addition, numerous samples were obtained throughout the map area and submitted for geochemical analysis. The final geological map consists of a compilation of all information derived from traverses, the trench mapping, diamond drill logs from both 1979 and 1980, and from the airphoto interpretation carried out in 1979.

2.3.2 Trench Mapping

Stations were established along each trench at 10 metre intervals. Each interval was then mapped separately. A geological map of each trench was drawn up at a scale of 1:500. Where bedrock was exposed, all joints, fractures etc. were first cleaned out and attitudes were recorded. The rock type(s) were then described and representative samples were obtained to represent each rock type. Lithological samples were also obtained from each section where the soil horizons were sampled and submitted for analysis, enabling a relationship between the soil geochemical results and the geochemical response of the underlying rock to be established. In areas where bedrock was not exposed, all geological information was inferred from the boulders exposed in the trenches at those points.

1.1.3 Objectives of the 1980 Program

The work carried out in 1980 under the Joint Venture Agreement between Eldorado Nuclear and Canadian Occidental Minerals was centered in the JOVE-CRAG vicinity of the project area. It involved a detailed examination of the main JOVE anomalies as well as a detailed surface evaluation of the major geochemical anomalies present on the JOVE claims. The objectives of the field program were established as follows:

1) Investigate and evaluate the surface and subsurface expression of the zone of autunite mineralization located on the JOVE property in 1979.

2) Carry out a similar investigation on the ground known as the JOVE EAST anomaly.

3) Detailed geological mapping of the area surrounding the JOVE-1 (EAST) and JOVE-2 (CENTRAL) anomalies.

4) Evaluate the radiometric and radon gas response over the terrain located immediately uphill from the JOVE EAST and JOVE CENTRAL anomalies.

5) Using radiometrics and follow-up soil geochemistry, locate the sources for anomalies 115N9-3 and 115N16-2 (situated in the northern half of the JOVE property),

All geological information obtained from the trenches is plotted on sections looking north.

2.3.3 Diamond Drilling

All drill core was logged according to mineralogical, textural and structural characteristics. This information has also been plotted on the east-west sections at a scale of 1:500. All core was split. Half was submitted for geochemical analysis while the other half is stored on the property. Numerous samples of varying lithology have been submitted to Eldorado Nuclear's R & D section in Ottawa for study by Dr. R.D. Scott. Dr. Scott's report is appended to this report.

2.4 Geophysical Surveys

2.4.1 General

One of the objectives of the 1980 field program was to obtain a detailed radiometric response of our work areas. This was accomplished through a detailed ground radiometric survey and where possible complemented by a drill hole down hole gamma logging.

2.4.2 Radiometric Surveys

A detailed ground radiometric response of properties was obtained with field personnel running lines 25 metres apart and taking readings every 10 metres. Instruments used for the surveys were Scintrex BGS-1SL total count scintillometers containing a 1½" crystal. Raw data was plotted daily at a scale of 1:2500 and contoured at a 20cps interval.

The final radiometric map for the properties is presented with only the contours and no raw data. The contour interval in this instance is 40 cps as a re-evaluation of the 20 cps intervals has shown it to be insignificant. Since radioactive decay producing gamma ray emissions follows the Poisson Distribution, the variance of the distribution of samples equals the standard deviation. Therefore, for a population with a mean around 100 cps (JOVE-1 and -2 have a mean radiometric response of 105 cps) there is a corresponding variance of 10 cps. One would therefore expect a reading of 100 cps to vary somewhere between 90 cps and 110 cps. If one uses the formula of the mean of ±2 times the standard deviation as a minimum significant observation, one arrives at a minimum contour interval of 100±20 cps as the minimum significant fluctuation in data and, therefore, any contouring below 40 cps for data in the 100 cps range is not meaningful.

2.4.3 Down Hole Gamma Logging

All diamond drill holes were probed through the rods and casing using a Mount Sopris 1000-C logging unit and recorder. The procedure involved logging each hole from the bottom to the top on the 50 cps/cm scale and at an approximate speed of 6m/min. Sections that recorded off the 50 cps/cm scale were relogged at 1m/min. on an appropriate scale. (A scale is deemed appropriate when the pen is on scale in the upper half of the chart.) All resulting radiometric chart recordings are presented with the drill logs in the appendix of this report.

2.5 Geochemical Surveys

2.5.1 General

The geochemical work in 1980 on Project 522 involved sampling of stream waters and silts, sampling of seeps on the grids, soil sampling of grids as well as of soil horizons exposed in the trenches, lithological sampling in conjunction with the mapping, sampling of all drill sludge and the splitting of all drill core and submitting half for geochemical analysis.

Most analyses were carried out by Chemex Ltd. in their labs located in North Vancouver, B.C. Bulk water samples, however, were submitted to Bondar Clegg and Company Limited in Ottawa, Ontario. Specific conductivity, pH measurements and approximate radon determinations were all carried out in the field by Eldorado personnel. The conductivity meter employed was Model 1484 manufactured by the Horizon Ecology Company while pH measurements were made using a digital meter Model 5985-40 manufactured by the same company. All radon-in-water measurements were carried out in camp utilizing a RE 279 Radon Counter obtained on lease from Bondar Clegg Company. Radon-in-soil measurements were approximated in the field by alpha meters leased from Alpha Nuclear Company. Field supplies for the geochemical sampling were obtained through Chemex Labs Ltd.

All sample sites were identified by a 4-digit number which was pre-printed on Kraft sample bags. A prefix was added to the 4-digit number for sample-type identification while a suffix was also added for work area identification. For example, a water sample taken from anomaly 115N9-3 would appear 42-7521-N93. Table V lists the prefixes used in 1980.

TABLE III

PREFIXES ASSIGNED TO SAMPLE SITE NUMBERS FOR SAMPLE TYPE IDENTIFICATION

PREFIX	SAMPLE TYPE
22	rock
26	drill core
27	drill sludge
40	soil
41	silt
42	water

All field data was recorded on 80-character data cards. These completed cards are on file in Ottawa for possible future computerization of data.

Daily traverses were summarized nightly in a report. Individual traverses were identified by the letter E followed by a second letter taken from the first letter in an individual's last name. In the event of two people with last names beginning with the same letter, the letter of their first name was used.

2.5.2 Sampling Procedures

(a) Streams

Glazy Creek, its tributary known as West Creek, and the streams draining anomalies 115N9-3 and 115N16-1 were systematically sampled at stations 125m apart along the creeks. Successive sample sites were located on opposite banks of the water course so the effective sample interval for one side of the stream was 250m.

Water samples were taken from the main stream using 200 ml plastic water bottles. The silt samples were obtained from a "low energy environment" within the active stream channel.

A radiometric reading was taken and recorded at each sample site. A piece of flagging with the 4-digit sample number written on it was hung in an obvious location nearby for future reference.

(b) Soils

Soil sampling was carried out on a 50m x 50m interval on the grid work. The B horizon was sampled at each location. Sample sites had previously been marked by the radiometric survey which alo established the radiometric response at each station. The soil sample number was then written on a piece of flagging which was tied to a nearby branch at each location.

Soil horizons exposed by the trenching were sampled at 10 metre intervals. In areas of significantly increased radioactivity this interval was reduced to 5 metres. Sampling began at the lower C horizon and progressed up to the Ao horizon to minimize contamination from above during the sampling.

The grid soil sampling geochemical results are plotted at a scale of 1:2500. The data derived from sampling the soil horizons is presented in sectional form along with a radiometric profile of the trench.

(c) Soil gas

Radon-in-soils was indirectly measured using alpha meters. Initially, the program involved 25 alpha meters that are owned by Eldorado. However, as the technique appeared to have some merit to it, the number of alpha meters was increased to 100 by leasing additional units from Alhpa Nuclear Co. and from Canadian Occidental Minerals.

The spacing of alpha meters was at 50m x 50m. Areas of interest were followed up at 25m x 25m. For the most part a large contrast was observed in the data, however, difficulties were met in relating data derived by Eldorado's units with that read from the rest of the meters. Testing in camp revealed the CanOxy and Alpha Nuclear units read below the Eldorado units by a factor of 4.4. All data plotted has been adjusted to compensate for this difference between units.

(d) Waters

All seepages present on the grids were sampled for uranium analysis as well as for radon analysis. This required 2 samples to be taken at each site: one in a 200 ml plastic bottle; one in a 200 ml glass bottle. The water in the plastic bottle was measured for pH and specific conductivity before shipping to Chemex for uranium analysis. The sample in the glass bottle was used for radon determination in camp. As was the case for all other sample sites, the 4-digit sample number was written on a piece of flagging which was left nearby.

The Bondar-Clegg RE 279 radon counter can also be used to determine an indirect measurement of radium-in-water. This is done by first running a sample for radon where the assumption is made that the sample is totally degassed of radon at this point. The sample is then allowed to sit for 3½ days at which time the procedure for analyzing for radon is once again repeated. The amount of radon detected during this second analysis is directly proportional to the amount of radium from which it was derived. (A 3½ day waiting period allows the radium-derived radon to arrive at equilibrium with the radium in solution.) The theory is intriguing, however, experience in the field revealed that the assumption that the sample is entirely degassed during the radon analysis is in fact incorrect. This was confirmed later by discussions with Bondar-Clegg.

In order to overcome the problem of incomplete degassing of water, two procedures were used. First of all, bulk samples were obtained from seeps with anomalous values in radon. These samples were submitted to Bondar Clegg and Company for both radon and radium determinations. At the same time a sample was taken for radon analysis in camp. In this way the amount of radon liberated during the analysis in camp was determined. The second procedure involved setting aside arbitrary samples with variable amounts of radon in them. These samples were kept for 30 days (equivalent to 6 half lives of radon) at which time any excess radon in the sample due to incomplete degassing will have desintegrated to negligible amounts. Any radon detected in the water at that time will have thus been derived from the radium in the sample.

All drill holes were bulk sampled with a down hole water sampler. The holes were allowed to stabilize for several days prior to the sampling. All samples taken were submitted for a bulk analysis involving total dissolved solids as well as radon and radium determinations. Bulk samples were obtained from highly anomalous radon seeps as well and handled similarly. These bulk samples consisted of approximately 1 litre of water in volume.

(e) Lithology

Samples of all rock types identified during the property mapping were obtained for geochemical analysis. Sample sites are plotted on the geological map while geochemical results are presented separately.

Lithological samples were obtained from the trenches on sections at stations where soil horizons were sampled. The resulting geochemical results are presented with the correspnding soil geochemical results.

(f) Drill core

All drill core was split with half sent in for chemical analysis and half returned to the core box and stored on the property. To increase the efficiency of this sampling, samples were determined by the footage marker placed in the box by the drillers. The maximum length of any one sample was thus 1.52m. In the case of radioactive intersections, the amount of core per sample was reduced to 0.5m.

Drill crews were constantly collecting sludge samples during the drilling. Each time the core tube was pulled, the sludge obtained during that run was placed in a sample bag. These samples were decanted as much as possible prior to submission for analysis.

All drill core and drill sludge samples were assigned a 5-digit number obtained from one of Eldorado Nuclear's record book of assay slips. All sludge samples from one hole were assigned successive numbers followed by all drill core from the same hole. These sample numbers were recorded in a traverse report along with the radiometric response of each sample. This radiometric response was taken just prior to packing the samples for shipping.

2.5.3 Sample Control

Lots of pre-numbered sample bags were assigned to specific sampling surveys to allow for easy monitoring of results. Table VI summarizes the distribution of sample numbers according to surveys carried out in 1980.

TABLE IV

THE DISTRIBUTION OF SAMPLE NUMBERS
ACCORDING TO SURVEYS CARRIED OUT
ON PROJECT 522 IN 1980

SERIES OF SAMPLE #'s	SURVEY AND/OR AREA WORKED
1000, 2000 and 3000	Mapping JOVE-1 and -2 stream work and grid work on JOVE-5, and JOVE-6
4000	Seeps on JOVE-1 and -2
5000, 6000	Soils on JOVE-1 and -2

Individuals were responsible for the drying of their own soil and silt samples. Specific individuals were assigned tasks involving shipping the samples or analyzing the waters for specific conductivity and pH. All data was entered nightly into the traverse report and data accumulation book.

All lithological samples were split prior to shipment for analysis. The retained portion is presently stored in Ottawa.

2.5.4 Analytical Procedures and Methods

All silt, soil, water, rock, drill sludge and drill core samples were submitted for uranium analysis. Waters were regularly measured for pH and specific conductivity prior to shipping. In the case of samples greater than 100 ppm U, an automatic analysis for % U_3O_8 was carried out.

A series of bulk waters and drill hole waters were submitted for total dissolved solids analysis which included analysis for Mn, Fe, Ca, Na, K, Cl, F, U, HCO_3, PO_4, SO_4, SiO_2, Ra, and Rn.

Analytical results were sent to Dawson City by telex and then forwarded to the field on the first available flight. Certificates of analysis were subsequently received.

Soils and silts were dried at 550° C, screened to -80 mesh, split, weighed, dried twice in 4M nitric acid, acidified, fused with a standard sodium fluoride flux and analyzed with a G.K. Turner Fluorometer. Results are reported as ppm U. Rock samples were initially crushed and then processed in a similar fashion. The detection limit for this analytical method is 0.5 ppm U. As reported earlier, samples with values in excess of 100 ppm U (.001%) were automatically assayed and results reported as % U_3O_8.

Water samples were first preconcentrated in the laboratory by evaporation and then analyzed in a similar fashion as the silts, soils and rocks. In this instance, results are reported as ppb U with a lower detection limit of 0.05 ppb U.

Bulk water samples were analyzed using Atomic Absorption Spectrometry for Mn, Fe, Ca, Na, and K; titrimetry for Cl and HCO_3; fluorometry for U; colourmetry for PO_4; gravimetry for SO_4 and SiO_2; alpha scintillation for Rn and Ra.

2.5.5 Data Control

(a) Monitoring

Individuals were responsible for completing a Daily Traverse Report which consisted of a sketch map showing sample locations, a paragraph or two of comments regarding the day's work and a list of all samples taken according to type. As analytical data was received, the information was transferred to the traverse reports and then plotted in the field.

A Data Accumulation book was kept to record various information regarding traverses. This information consisted of:

i) the traverse number
ii) the grid/work area worked
iii) a list of sample numbers used during the traverses
iv) a list of sample types taken at each station

and was filed according to individual traverse numbers.

A sample location map accompanies each set of maps and consists of the 4-digit sample number plotted along with a series of symbols indicating sample type. These symbols are:

X water
O silt
● soil

III RESULTS

3.1 Regional Geochemistry

3.1.1 Glazy, West and East Creeks

Water samples taken from the drainage systems adjacent to the JOVE-1 and JOVE-2 grids had uranium values that varied from trace to 6.0 ppb. Corresponding silt samples returned values of 5.0 ppm U to 169 ppm U. This analytical data is illustrated by Figures 7a, b and c.

West Creek

The tributary of Glazy Creek known as West Creek contains 0.2 ppb to 3.6 ppb uranium in its waters (see Figure 7b). These uranium values increase in a downstream direction with a significant jump occurring just over the halfway point between the headwaters and Glazy Creek. All water samples have pH values of 6.0 to 6.4 with the exception of one sample taken at the headwaters (pH value of 5.3). The specific conductivity of these waters is constant with measurements of 10 to 12 micromohs/cm recorded.

The silts corresponding to the above water samples have analytical values of 5.5 ppm U to 116 ppm U (see Figure 7c). The peak value of uranium-in-silt is related to a sample taken 250 metres upstream from the water sample with the highest uranium value reported. All other silt samples vary from 33 ppm to 61 ppm uranium with the exception of one low sample (5.5 ppm) taken at the headwaters. Generally there appears to be a slight increase in uranium in the silts in a downstream direction.

A close correlation exists between uranium-in-water and uranium-in-silt values, between uranium-in-silt and pH of water values, and between pH of water and uranium-in-water values. The anomalous samples do not appear to be preferentially on one side of the creek.

Glazy Creek

The waters of Glazy Creek have uranium values of trace to 6.0 ppb, pH values of 5.7 to 6.3 and specific conductivities of 11 to 31 micromohs per cm (see Figure 7b). The uranium values are generally low for waters taken near the headwaters of Glazy Creek and upstream from the mouth of West Creek (values are trace to 0.6 ppb U) whereas downstream from the influence of West Creek, values increase to 1.6 ppb near the mouth of the tributary and go as high as 6.0 ppb (the last sample taken downstream along Glazy Creek).

Silts taken from Glazy Creek have a uranium content varying from 4.5 ppm to 169 ppm U (see Figure 7c). Generally, above the mouth of West Creek, these values fluctuate between 5.0 ppm and 150 ppm. The samples with the high uranium-in-silt values (in excess of 50 ppm U) were taken from the north bank of Glazy Creek while those obtained from the south bank returned values of 4.5 ppm to 10 ppm. (One exception is a sample taken from the south bank near the starting point on the upstream end of Glazy Creek, that has a uranium value of 64.0 ppm.) Silts taken from Glazy Creek below the mouth of West Creek are all anomalous in uranium (32 ppm to 169 ppm). It is interpreted that the anomalous silts and waters are entering the system from West Creek, and contributions are being made from the 2 major seepage anomalies that define the JOVE-1 and JOVE-2 areas of interest.

A subtle, inverse correlation exists between uranium-in-water values and the corresponding pH measurements. A stronger inverse relationship between the uranium content of waters and the corresponding specific conductivities is evident as well. No clear, discernible relationship is evident between the uranium values of silts and those of corresponding waters.

East Creek

Waters taken from East Creek which drains the east side of JOVE-1 and JOVE-2 grids, contains trace to 4.0 ppb U, have pH readings of 5.0 to 6.2 and specific conductivity measurements of 13 to 16 micromohs/cm (see Figure 15). Every third sample taken from East Creek contain 30 to 235 picocuries/litre radon. Silt samples from the same drainage feature returned uranium contents that vary from 2.5 ppm at the headwaters to 14.5 ppm near the mouth.

Uranium values in waters and silts as well as radon values in waters, increase several times background at a point approximately 300 metres upstream from the mouth of the creek. That location represents the point at which the seepage anomaly defining the JOVE-1 work area enters the water course.

3.1.2 Anomaly 115N9-3 (JOVE-5)

Waters taken from anomaly 115N9-3 along a creek immediately northeast of the JOVE-1 and JOVE-2 grids have uranium contents of 0.2 ppb to 6.0 ppb, pH values of 5.6 to 6.1, and specific conductivity measurements of 8 to 14 micromohs/cm (see Figure 7b). Corresponding silt values have a range of 4.5 ppm to 358 ppm U (see Figure 7c). In both water and silts, uranium values appear anomalous at approximately 2.5 km downstream from the headwaters of the water system.

No correlations exist between any of the various analytical values relating to silts and waters taken from anomaly 115N9-3. The sharp increase in uranium in waters at a location 2.5 km downstream from the headwaters is interpreted as representing an influx of uranium to the surface water system. Fluctuation within the uranium values of silts is seen as reflecting fluctuation in the geochemical and physical environment from sample site to sample site.

3.1.3 Anomaly 115N16-1 (JOVE-6)

The amount of uranium in water samples obtained from a creek cutting through the northern corner of the JOVE property, varies from 1.0 ppb to 4.2 ppb (see Figure 7). Corresponding pH meaurements are 6.3 to 6.6 and specific conductivity ranges from 8 to 13 micromohs/cm. Silts from the same stream have uranium contents of 13.0 ppm to 98.0 ppm.

An observed increase in the uranium content of both silts and waters is observed 500 metres downstream from the western edge of the property. This does not appear to be related to changes in the observed pH's and specific conductivities of the waters. This increase in uranium values is interpreted to be due to the influx of uranium from a nearby seep.

3.2 JOVE Grids 1 and 2

3.2.1 Geology

(a) Geological setting

The JOVE claims are situated in an unglaciated area of the north-central part of the Yukon and are underlain by Proterozoic assemblages ranging from amphibolite gneiss to quartz monzonite orthogneiss that has been mapped as the Fifty Mile Batholith by D. Templeman-Kluit of the GSC (Can. Jour. of Earth Sc. Vol. 17, No. 3). The batholith is, for the most part, a biotite quartz monzonite augen gneiss that is pervasively intruded by leucocratic sill-like material. A K/Ar date of 97.6 Ma has been determined for the subunit (Can. Jour. of Earth Sc. Vol. 12, No. 11). This date is interpreted as the time of cooling following the amphibolite grade metamorphism, the foliation of the original batholithic rocks and the injection of the sills. Subsequent work by Templeman-Kluit and R. Wanless (Can. Jour. of Earth Sc. Vol. 17, No. 3) has determined a crystallization age of 375 Ma, implying an Early Devonian time for the crystallization of zircon. The sample collected for the above age determinations came from the ridge that marks the northern limit to the JOVE-1 and JOVE-2 grids.

(b) Petrology of the JOVE-1 and -2 grids

The results of the geological mapping are presented as Figure 8a. Five mappable units are shown to underlie the two grids. They consist of the following:

(1) subunits of Pelly Gneiss
(2) foliated to massive biotite quartz monzonite
(3) foliated muscovite-biotite quartz monzonite
(4) massive muscovite-biotite quartz monzonite
(5) foliated to massive muscovite quartz monzonite cut by pegmatite and aplite dykes.

Contacts on the map are inferred from the distribution of rock types observed in boulder fields and assumed by the distribution of boulder fields containing specific rock types. Towards the southern half of the grid, field observations are somewhat limited due to the lack of felsenmeer and boulder fields. Contacts drawn in this area are less accurate than in the northern half of the grid where the frequency of felsenmeer fields has given a higher degree of confidence to the placing of these contacts.

Pelly Gneiss (Map Unit 4)

The Pelly Gneiss is represented on the JOVE claims by subunits consisting of amphibolite gneiss, granodiorite gneiss and augen gneiss. The amphibolite gneiss consists of hornblende, biotite and feldspar with a distinct foliation defined by the orientation of the hornblende and biotite grains. Generally the unit appears fresh with little evidence of alteration except for the usual weathering phenomena (limonite stains, chalky feldspars). Due to the rapid weathering characteristics of the amphibolite gneiss, few boulders are visible on the surface at JOVE. The observation whereby small boulders of amphibolite gneiss are present beside large boulders of quartz monzonite is interpreted to be reflecting the more rapidly weathering characteristics of the amphibolite gneiss.

The granodiorite gneiss is more resistant to weathering and thus is exposed on surface, most noteably along the ridge that transects the northern edge of the grids. It consists of a medium to fine-grained, granular rock composed of an interlocking mosaic of feldspar and quartz. Macroscopic lenses rich in quartz, K-feldspar, and mafic minerals are common. These lenses together with the preferred orientation of platey minerals have imparted a distinct gneissosity to the unit. Plagioclase is the predominant constituent of the granodiorite gneiss and occurs in tabular subhedra of varying sizes. Compositional determinations through microscopic examination carried out in 1979 (see Project Report of Activities for 1979) indicate a sodic andesine core varying to sodic oligoclase on the rim. Minor sericitic alteration is present in cracks that cut the plagioclase crystals.

The augen gneiss is by far the most prevalent subunit of the Pelly Gneiss in the JOVE terrane. This rock has a variable grain size between 1mm and .05mm. Augens of K-feldspar up to 2cm in size are present throughout. The augen gneiss has a typical metamorphic texture with an interlocking mosaic of quartz and feldspar and a well developed schistosity defined by the preferred orientation of the mica minerals.

Biotite Quartz Monzonite (Map Unit 3)

The biotite-rich quartz monzonite was only observed in the extreme northeast corner of the JOVE-1 and -2 grids. Typically it is granular with a rather variable grain size exhibiting a somewhat confused-looking texture. Medium-grained anhedra of

quartz, K-feldspar and plagioclase are surrounded by a jumbled mixture of fine-grained quartz and feldspar. K-feldspar crystals show microcline twinning and are non-perthitic. The plagioclase ranges from calcic to sodic oligoclase and tends to be slightly altered as is indicated by a somewhat turbid appearance or the presence of sericite. Biotite can be fresh but at times shows signs of chloritization. The biotite content of this unit comprises close to 30% of the rock and is approximately twice the amount observed in other varieties of quartz monzonite present on the property. This biotite is interpreted to have resulted from the "sweating out" of ferromagnesian minerals from the surrounding Proterozoic units during the magmatic event and as such the biotite quartz monzonite is interpreted to represent a transition zone between the intrusive body and these Proterozoic units.

Foliated Muscovite Biotite Quartz Monzonite
(Map Unit 2)

The foliated muscovite-biotite-quartz monzonite is present as a long, narrow body from 44+00W, 35+00N to 40+00W, 26+00N where it merges with a northeast-southwest trending, 250m to 300m wide body of the same unit. The foliation is well defined and is interpreted to reflect a tectonic event that occurred following the formation of the unit (see discussion on page 39). The foliated muscovite-quartz monzonite is composed predominantly of K-feldspar, calcic oligoclase, and quartz, with up to 15% muscovite and 0 to 10% biotite. Shearing of the unit has broken the quartz into highly sutured, strained crystals while feldspar crystals are strained-looking and often are partially fractured. Muscovite is invariably aligned parallel to the shear direction, however, in some instances cross cutting flakes were observed.

Quartz and K-feldspar crystals are irregularly shaped anhedra with the latter exhibiting microcline twinning. Plagioclase anhedra are compact and typically fresh but in some instances, traces of secondary sericite are present along cracks in the crystals. In a few cases, plagioclase crystals contain scattered patches of K-feldspar which are in optical continuity with one another. This suggests some replacement of plagioclase by K-feldspar.

Massive Muscovite-Biotite Quartz Monzonite
(Map Unit 1)

Massive muscovite-biotite quartz monzonite is the most common rock unit on the JOVE-1 and 2 grids. It varies from fine to coarse-grained and consists of subhedra of tabular plagioclase in a mosaic comprised of quartz and K-feldspar. Up to 15% of the unit is made up of muscovite and biotite.

The quartz grains appear as patchy, irregularly shaped anhedra. They are sutured on their margins and are strained.

The K-feldspar is variable in grain size and consists of compact, irregularly shaped anhedra. Moderate to intense microcline twinning is common and crystals tend to be finely perthitic to non-perthitic. Locally the K-spar is strained and contains inclusions of round blebs of quartz and tabular anhedra of plagioclase. For the most part, crystals are fresh, however, some are turbid. Locally, stringers of densely matted sericite stained by limonite, cut across the grains.

Plagioclase appears as subhedral to anhedral tabular phenocrysts and as inclusions in some K-feldspar grains. It varies from unzoned with a calcic oligoclase composition to oscillating zoning with a sodic oligoclase to andesine composition. The crystals are fresh to turbid and show the development of myrmekite along the fringes and especially along interfaces between plagioclase and K-feldspar. Moderate to intense sericitization accompanied by limonitic staining has developed along fractures transecting the plagioclase crystals.

Biotite and muscovite are found intermingled with one another throughout the unit. Both are invariably fresh, however, the biotite does exhibit chloritization and in some instances is ringed by iron oxides.

The material interstitial to the quartz and feldspar grains consists of fine-grained intergrown quartz and feldspar crystals suggesting the quartz monzonite is magmatic. The later stages of this magmatic development were accompanied by a period of deuteric alteration as indicated by the presence of secondary muscovite and by the development of myrmekite along the K-feldspar - plagioclase interfaces.

Pegmatite and Aplite Dykes

The final map unit is comprised of the two preceeding units cut by pegmatite and aplite dykes. These pegmatite dykes are interpreted to have occurred at a late stage in the development of the overall intrusive body and were extremely hydrous and cooled slowly (Report MNR79-1 by Dr. J.D. Scott). Tourmaline and almandine are common accessory minerals associated with the pegmatite.

The pegmatite consists of large anhedra of K-feldspar in a quartz-plagioclase mosaic. The K-feldspar grains are strained, exhibit microcline twinning, are sparsely perthitic and sometimes contain scattered inclusions of small plagioclase crystals. The plagioclase crystals are fresh with local signs of minor sericitization. Crystals are unzoned with a composition of calcic oligoclase. The interface between the plagioclase and K-feldspar crystals is marked by the development of myrmekite. Muscovite crystals form large, euhedral, somewhat strained books scattered throughout.

Aplite samples are fine-grained and consist of an interlocking mosaic of smooth-sided anhedra of quartz and feldspar of equal grain size. The quartz appears as lobate anhedra while the K-feldspar forms equidimensional anhedra. The K-feldspar is typically untwinned and rarely perthitic. Plagioclase anhedra are equidimensional, frequently untwinned, unzoned and are myrmekitic when in contact with the K-feldspar. A few flakes of biotite and mucovite are spotted throughout.

Petrographic Descriptions

Petrographic descriptions of diamond drill core from the property are consistent with the above descriptions of the rock units observed on JOVE-1 and -2 grids. In addition, the drill core indicated that major fractures transecting the units were found to contain stilbite, saponite and chlorite along with muscovite and quartz (see Report MNR79-1 by Dr J.D. Scott in Appendix).

Uranium Mineralization

Uranium has been identified in two modes on the JOVE property. It appears as autunite in fractures above the water table and in near-surface fractures where it has been scavenged out of groundwater by iron oxides that coat the channelways. No primary uranium mineral has been identified on the JOVE property to date.

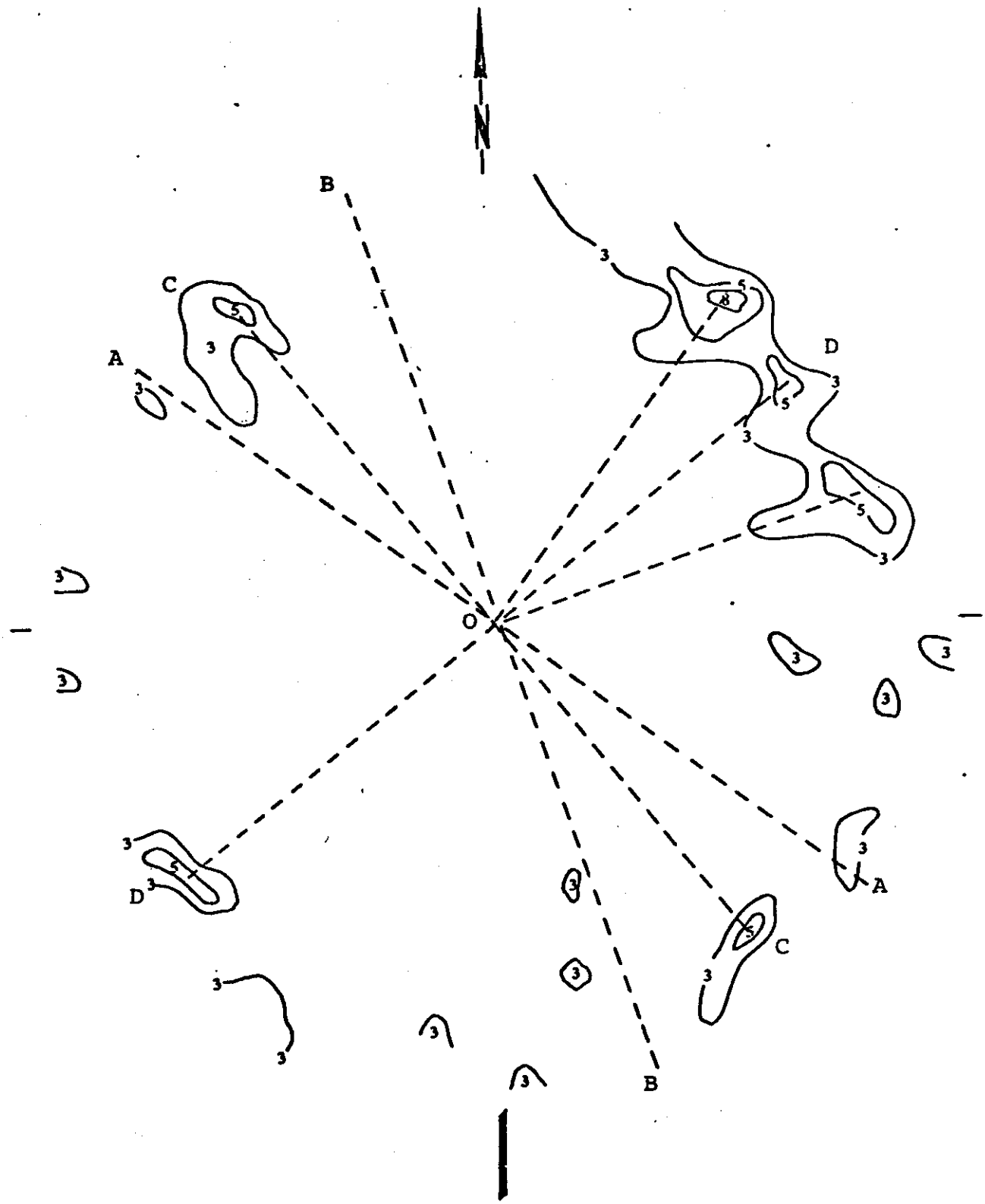

Figure 9: Equal Area Net Projections of Structural Readings Taken on JOVE-1 and JOVE-2, 1980.

(c) Structure

The regional structural setting of the JOVE-1 and 2 grids is comprised of an inferred fault that is reflected by the present drainage of Glazy Creek and 3 north-trending lineaments identified from aerial photographs. A fourth linear feature as defined by the mapping, follows a southeast to northwest trend.

Examination of the trenches and diamond drill core indicates that the central portions of the JOVE-1S and JOVE-2S are underlain by zones of intense fracturing (see Figure 8a). On JOVE-1S, the fracture zone has been identified from 27+00N to 30+00N and is open both to the north and to the south. The trend of this zone curves to the west between 28+00N and 30+00N. The fracture zone identified on JOVE-2S extends from 27+00N to 30+00N and is open to the north and south as well. At approximately 29+00N, the fracture zone branches uphill to a zone that is characterized by both fracturing and shattering. This fracture/shatter zone is characterized by broken, chloritized limonitic quartz monzonite and extends to 36+00N. Although the fractured/shattered zone for the most part follows the foliated quartz monzonite - pegmatitic quartz monzonite contact, several "offshoots" do exist. The tectonic event that resulted in the foliation of the quartz monzonite, also produced the shattered mylonitic zone and may have prepared the way for the intrusion of pegmatite dykes.

Figure 9 illustrates an equal area net projection of poles calculated from 395 measurements taken on the JOVE-1 and -2 grids. It is interpreted that the strike of the strongest set of joints is represented on Figure 9 by lines AA and BB which correspond to a set of conjugate shear joints. Line CC represents a cross joint system and line DD represents a longitudinal joint system. This interpretation would require a maximum stress approximately parallel to the cross joint system. (ie. The direction of the force is from the northwest and southeast.) (After Structural Methods for the Exploration Geologist, P.C. Badgley, 1959, Pg. 218-221).

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(d) Mineralization

Trenching operations in 1980 exposed several radioactive fractures in the bedrock. These fractures are accompanied by limonite, chlorite and manganese minerals which precipitated on the walls out of solution. No radioactive minerals were identified on surface. Microscopic examination by Dr. J.D. Scott (see Report MNR79-1), of material taken from radioactive fractures indicates the iron oxides are present as a coating as opposed to resulting from an in situ alteration of the wall rock. Further microscope examination by Scott revealed the uranium is related to the iron oxides in the following manner. The iron first precipitated out from groundwaters moving through the fractures, then once in place, the iron acts as a scavenger and removes uranium from the groundwater.

Autunite has been identified in fractures in drill core to a depth of 50 metres below the surface on the JOVE-2 South grid. (The 50m depth is interpreted to represent the present depth of the water table). Mineralized fractures extending below the water table were intersected by drilling and were found to be void of uranium mineralization in either a primary or a secondary state. This observation suggests the uranium was transported to its present site by groundwater flow and with the proper pH conditions, the uranium precipitated out in the form of autunite along fractures as the water table lowered.

The autunite mineralization has been found only in fractures and not as material interstitial to the fabric of the rock. This observation would appear to preclude any in situ weathering of the quartz monzonite in the immediate vicinity of the known autunite zone.

(e) Interpretation of data

The geological evolution of JOVE can best be summarized using the following model:

(1) The implacement of an intrusion in Devonian/ Permian time (Fifty Mile Batholith).

(2) A subsequent second intrusion that assimilates part of the pre-existing batholith and metamorphoses the remaining portion during Cretaceous time.

(3) A regional tectonic event with maximum stress from the northwest and southeast creating shear zones trending northwest-southeast and occurring during the latter stages of development of the Cretaceous intrusion.

(4) The injection of residual melts along fractures developed by Step (3) and the formation of pegmatite and aplite dykes.

(5) A continuation of Step (3) producing shear/fault zones.

(6) The migration of residual deuteric solutions through the rock, resulting in the development of interstitial muscovite and myrmekite, and possibly the alteration of plagioclase to K-feldspar.

(7) The circulation of groundwaters and subsequent deposition of iron oxides and uranium in fractures.

(1) The implacement of an intrusion in Devonian/ Permian time (Fifty Mile Batholith).

(2) A subsequent second intrusion that assimilates part of the pre-existing batholith and metamorphoses the remaining portion during Cretaceous time.

(3) A regional tectonic event with maximum stress from the northeast and southwest creating shear zones trending northwest-southeast and occurring during the latter stages of development of the Cretaceous intrusion.

(4) The injection of residual melts along fractures developed by Step (3) and the formation of pegmatite and aplite dykes.

(5) A continuation of Step (3) producing shear/fault zones.

(6) The migration of residual deuteric solutions through the rock, resulting in the development of interstitial muscovite and myrmekite, and possibly the alteration of plagioclase to K-feldspar.

(7) The circulation of groundwaters and subsequent deposition of iron oxides and uranium in fractures.

3.2.2 Radiometrics

There are 5 radiometric anomalies outlined by the contoured radiometric data obtained from JOVE-1 and 2 prior to trenching. These are summarized in Table VII and illustrated on Figure 11.

TABLE V

RADIOMETRIC ANOMALIES, JOVE-1 AND -2 GRIDS, 1980

Anomaly	Location	Description
A	Along 40+00W baseline between 24+00N and 30+00N	oblong shape 600m x 300m range of 120-660 cps max. reading at 28+50N, 41+00W
B	Along 32+00W baseline between 22+00N and 30+00N	oblong shape 1000m x 300m range of 120-760 cps max. reading at 30+00N, 33+00W
C	In the northeast quarter of the map between 30+00N and 37+00N and centered about 42+50W	oblong shape 750m x 300m range of 120-220 cps max. reading at 32+50N, 42+00W
D	In the north central part of the map between 33+00N and 40+00N centered about 36+00W	oblong shape 750m x 300m (open to north) range of 120-200 cps max. reading at 37+75N, 36+90W

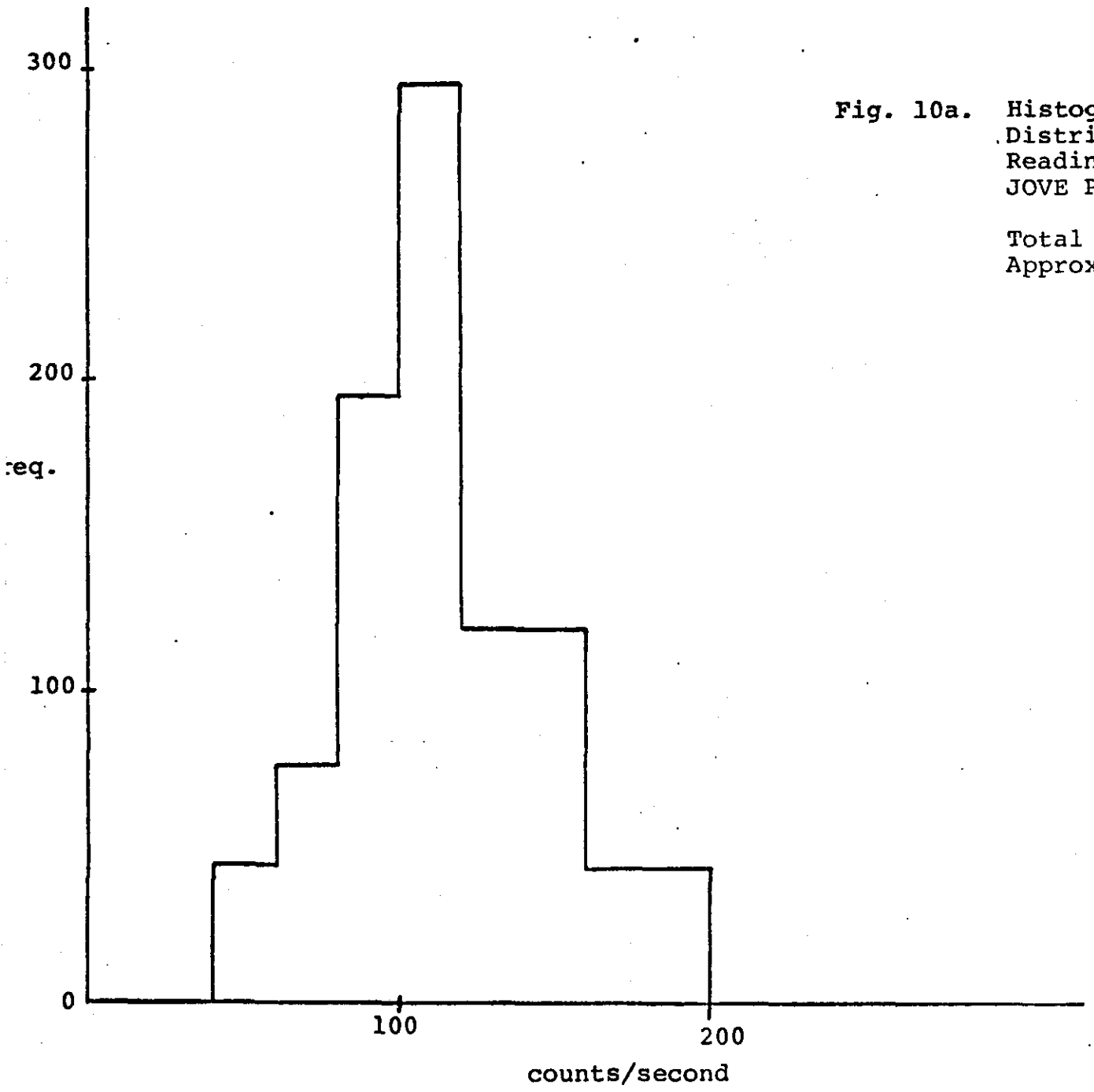


Fig. 10a. Histogram Illustrating the Distribution of Radiometric Readings Observed over the JOVE Property in 1978.

Total No. of Readings: 938
Approximate Mean: 105 cps

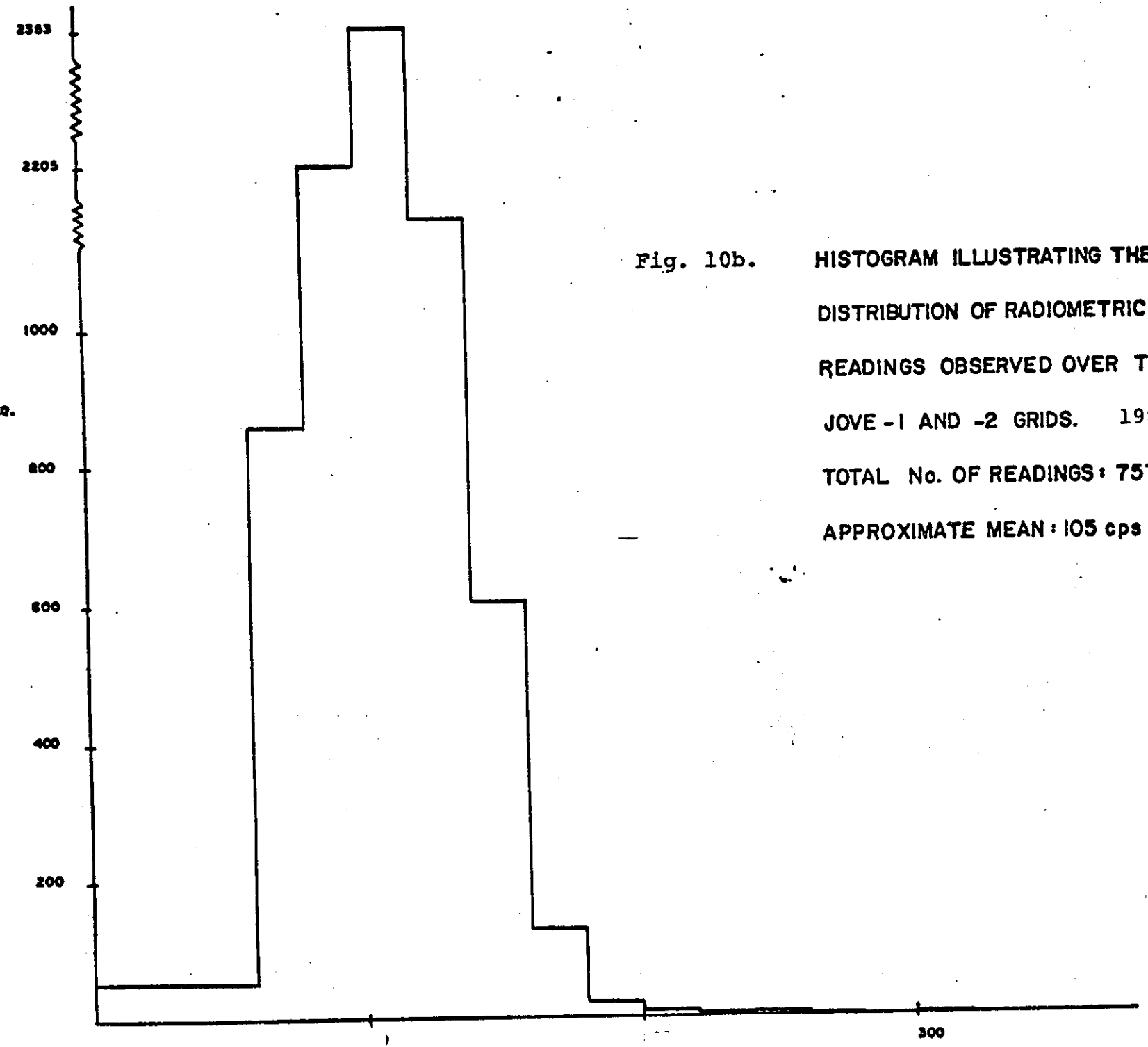


Fig. 10b. HISTOGRAM ILLUSTRATING THE DISTRIBUTION OF RADIOMETRIC READINGS OBSERVED OVER THE JOVE-1 AND -2 GRIDS. 1980

TOTAL No. OF READINGS: 7578

APPROXIMATE MEAN: 105 cps

Anomaly	Location	Description
E	Along the north edge of the map area between 35+00W and 44+00W along 42+00N	along north edge of grid range of 120-200 cps max. reading at 42+00N and 42+20W as well as at 42+00N, 42+70W.

The radiometric data obtained in 1980 from the JOVE-1 and 2 grids has a frequency distribution similar to data obtained in previous years (see Figure 10a). The mean value is in the 100 to 110 cps range with the 120 cps contour outlining trends to the data. Counts greater than 140 cps are considered anomalous.

Two prominent trends are evident in the contour map (Fig. 11). One lies in a northeasterly direction, the other lies almost true north. The former is the most prominent of the two.

The strongest radiometric response is represented by anomalies A and B. These anomalies were initially defined by work carried out in 1979 and correspond to the central and eastern zones as defined in the 1979 report (the 1979 data is included in Figure 11). Anomaly A is the most significant of the two as it covers an area underlain by autunite in bedrock (see Figure 8c) and where the radiometric response was greatly enhanced by trenching. Anomaly B was trenched and drilled in 1980 with negative results as no significant mineralization was encountered by drilling, nor were radiometric values greatly enhanced by trenching.

Anomaly C is parallel to anomaly A but is offset 100m to the west and is north of anomaly A. Radiometric values increased slightly with depth in the trenching while drilling located a trace of autunite within a fault structure beneath the anomaly.

Anomaly D is located on the grid northwest of anomaly B and is a wide weak zone corresponding to a large series of felsenmeer fields. Trenching of this anomaly at 34+00N failed to enhance the radiometric values.

Anomaly E lies along the north edge of the map area and corresponds to an area completely covered with frost-heaved bedrock and is interpreted to be due to the proliferation of felsenmeer.

3.2.3 Soil Geochemistry

The uranium-in-soil data to date from JOVE-1 and JOVE-2 work areas is presented as Figure 12. Areas covered by the 1980 field work include the "Inverted T" area located between baselines 32+00W and 40+00W and extends the full width of grids 1 and 2 south of Glazy Creek, and the areas covered by radiometric anomalies C and D. The sample interval used in 1980 was 50m by 50m. The 1979 data is also included in Figure 12 and was obtained from samples collected on a 50m x 25m interval from the areas south of 30+00N and covered by radiometric anomalies A and B. The remaining data on Figure 12 was obtained in 1977 and 1978 when soils were collected on a 100m by 100m grid.

Soil values from the "Inverted T" area range from 1.5 ppm U to 409 ppm U. In all instances highly anomalous values (50 ppm U) are related to areas outlined as anomalies in 1979. No new significant soil anomalies were exposed by the 1980 work. Trends to the data appear to reflect drainage direction. The linear trends observed with the radiometrics from the "Inverted T" area are not reflected by similar trends in the contoured soil geochem data.

The soils from JOVE-2 North (radiometric anomaly C) for the most part ranged in value from trace to 12.0 ppm U. Two spot anomalies with uranium values of 19.5 ppm and 56.0 ppm are present but due to their limited extent, are not considered significant.

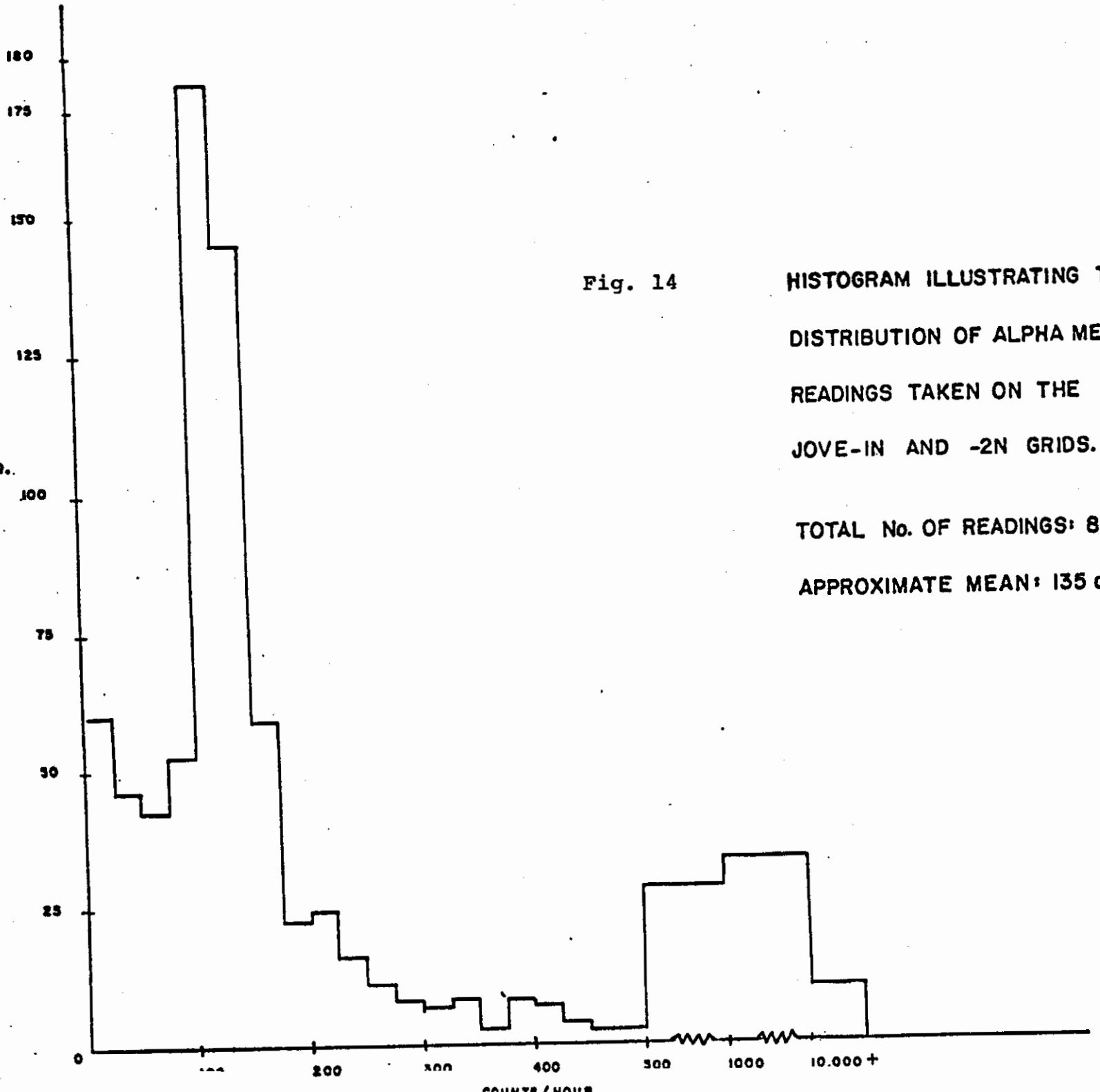


Fig. 14 HISTOGRAM ILLUSTRATING THE DISTRIBUTION OF ALPHA METER READINGS TAKEN ON THE JOVE-IN AND -2N GRIDS. 1980

TOTAL No. OF READINGS: 830

APPROXIMATE MEAN: 135 cph

Soils from JOVE-1 North returned values similar to those observed in soils from JOVE-2 North. However, several anomalies defined by 1 or 2 samples in the 15.0 to 25.0 ppm U range are present on the grid. As was the case for anomalies on the JOVE-2 North grid, these "spot" anomalies are not considered to be significant.

The soil data from 1980 confirmed the two soil anomalies defined in 1979 are not separated by a third intermedidate soil anomaly, nor do the 1979 soil anomalies extend south across Glazy Creek. Furthermore, the radiometric anomalies outlined on the JOVE-1 N and -2 N grids do not have a corresponding uranium-in-soil anomaly associated with them.

3.2.4 Soil Gas Geochemistry

The results of the alpha meter survey are presented in contoured form in Figure 13. The lowest contour (135 cph) is the approximate mean value observed in the survey. The subsequent contours 250, 400 and 1000 represent roughly 85%, 95% and 98% of the values respectively. A summary of the radon-gas anomalies on the JOVE-1 and JOVE-2 grids is presented as Table VIII.

TABLE VI

ALPHA METER ANOMALIES, JOVE-1 AND -2 GRIDS, 1980

Anomaly	Location	Description
A	43+00W, 34+00N	- areal extent of 350m x 500m - peak value of 60,241 cph - several values at 10,000 cph - open ended to the west and south of survey area
B	37+00W, 34+00N	- areal extent of 500m x 300m - Y-shaped anomaly - peak value of 23,429 cph
C	34+00W, 35+50W	- areal extent of 250m x 100m - peak value of 6028 cph
D	34+00W, 32+00N	- areal extent of 400m x 400m - peak value of 18,215 cph
E	30+00W, 34+00N	- a small sharp anomaly defined by 563 cph and 606 cph
F	37+00W, 41+50N	- spot value of 1367 cph
G	41+50W, 40+00N	- spot value of 24,450 cph

A total of 8 values in excess of 10,000 cph are clustered in an area 300m x 300m and define anomaly A - the most significant radon-gas anomaly on the property. The uphill limit to stations with values in excess of 10,000 cph is 34+50N. The overall anomaly is comprised of several smaller anomalies whose trends are north-south, east-west, or northwest-southeast.

Anomalies B, C, and D are comprised of seemingly unrelated clusters of anomalous values. Two patterns are apparent however and trend north-south or east-west. The sampling medium in the vicinity of anomalies B, C, and D consists of felsenmeer partly covered by soil, which has been shown to produce inconsistent results in an alpha meter survey. The inconsistency in the sampling medium is considered to be the prime factor contributing to the sporadic values observed in anomalies B, C, and D.

Anomalies E, F, and G are considered to be erratic spot anomalies.

The alpha meter data obtained in 1980 indicates anomalies are repeatable and as such the data is valid. The survey results indicate large amounts of radon are present in localized areas on the JOVE grids.

Since radon exists in gaseous form and moves either in either a gaseous state or dissolved in a liquid medium such as groundwater, three possible interpretations are considered: first, radon is diffusion only as gaseous matter; secondly, radon is the result of degassing from circulating groundwaters; thirdly, a combination of the first two is occurring. It is felt the third interpretation best suits the situation on JOVE.

3.2.5 Water Geochemistry

The purpose of the water sampling program undertaken on the JOVE property in 1980 was fourfold:

(1) To determine the amount of radon present in ground and surface waters, and through repetitive sampling and analysis, determine the fluctuation observed in the radon content of water over the summer.

(2) To determine the corresponding uranium content, pH and specific conductivities of waters mentioned in (1).

(3) To determine any relationship between the values obtained in (1) and those obtained in (2).

(4) To understand the geochemistry of the groundwaters through multi-element analysis of bulk water samples.

The radon values of waters taken from seeps on JOVE vary from less than 50 pc/l to in excess of 25,000 pc/l. Approximate background readings are 100-200 pc/l, whereas threshold values are estimated to be near 500 pc/l. Values greater than 1000 pc/l are considered anomalous and those above 5000 pc/l are definitely anomalous. All values are plotted on Figure 15.

The area along 40+00W baseline between Glazy Creek and 30+00N produced the highest values of radon in waters from the property (values in excess of 10,000 pc/l are common). These high readings were obtained from samples taken between 27+00N and 29+00N. Downhill from 27+00N, the amount of radon diminishes due to degassing caused by the waters running over the surface. This observed decrease suggests absence of uranium mineralization or radium existing at depth at this location. Any mineralization present should be producing radon which in turn should be reflected in an increase or constant rate of radon in waters flowing over this area.

The second most radoniferous waters on the JOVE property are found along 32+00W between 27+00N and 30+00N. Values here peak in excess of 18,000 pc/l but generally remain at slightly lower levels than those observed along baseline 40+00W. The radon content of waters diminishes in a downhill direction starting at 29+00N which is also considered to be due to degassing caused by waters running along the surface.

Waters obtained north of 30+00N and east of 40+00W returned radon values well below threshold levels. However, the area west of 40+00W produced several samples greater than 1000 pc/l (42+00W, 34+00N) along with samples in the 400-600 pc/l range.

The extremely high radon values observed in waters sampled in the south half of the grid are attributed to seeps coming out of the side of the hill at the 3500' elevation contour. These waters are interpreted to have flowed through a radon producing zone thereby dissolving large amounts of radon in the water. The amount of radon that can be dissolved in a set period of time is proportional to the amount of radon being produced per unit volume and the rate at which a set unit volume of water flows through the radoniferous zones.

Water samples taken from north of 30+00N (the line defining the boundary between the north and south halves of the work area as per the 1980 program proposal) are considered to represent surface flowage. Any radon in these samples is interpreted to be due to the diffusion of the gas from a source below (ie. the waters flow over a radon producing zone). Based on this interpretation, anomalies from the north half of the grid cannot be compared with those from the south half as a difference in magnitude of the values would be expected.

The pH of waters from the JOVE property fall between 4.5 and 6.5. Most are in the vicinity of 5.5. This data is consistent with that observed from nearby stream waters. Corresponding specific conductivity measurements are between 10 and 40 micromohs per cm. Uranium contents fluctuate between 1.0 ppb and 378 ppb. Generally, pH and specific conductivity measurements do not appear to correlate with the radon content of waters. However, a rough inverse relationship between the uranium content and the radon content of waters exists for the property.

Several bulk water samples were obtained from highly radoniferous seeps and submitted for multi element analysis. Table IX summarizes the subsequent analytical results.

The analytical results summarized by Table IX suggest a correlation exists between the U and Fe content of waters, as well as between U and K. Somewhat weaker correlations are evident between U and Ca, U and F, U and PO_4, and U and Ra. Although the preceeding correlations appear to exist, the bulk water analysis has not clearly defined the means by which uranium is transported in groundwater on JOVE.

TABLE VII

BULK WATER ANALYSIS FROM JOVE-1 AND JOVE-2 GRIDS

Sample No.	Mn ppb	Fe ppb	Ca ppm	Na ppm	K ppm	Cl ppm	F ppb	U ppb	HCO_3 ppm	PO_4 ppm	SO_4 ppm	Rn pCi/l	Ra pCi/l^{-1}	SiO_2 ppm	pH	Spec. Cond.
4002	10	810	7.50	2.95	0.80	L5	103	85.0	14	0.3	6.2	52900	18	11	5.5	52
4004	20	65	3.45	2.15	0.40	L5	63	19.8	10	0.1	0.8	17020	25	11	5.5	38
4018	20	40	2.35	2.60	0.40	L5	61	14.5	7	0.1	0.8	54200	2	11	6.5	24
4043	20	40	5.80	2.60	0.40	L5	70	14.5	12	0.1	L0.4	43700	3	11	5.5	42
4099	20	3600	6.40	3.30	1.90	L5	130	195.0	11	0.3	L0.4	9819	29	11	5.6	46
4100	5	1525	6.80	3.20	0.80	L5	120	82.0	12	0.2	L0.4	17490	27	11	5.5	39
4101	5	220	6.60	3.30	0.60	L5	96	54.5	12	0.1	0.4	67700	35	11	5.6	47
42-4195	550	7850	9.90	9.54	84.6	45.2	2550	83	45	0.12	2.88	2714	2	11	6.3	260
42-4196	54	340	2.27	6.77	3.39	L0.3	35	30	19	0.12	7.82	4383	1	5	5.4	42

NOTE: L means less than

See Appendix for sample location map

Figure 16: A D-8 Cat Cutting Trench JT-11

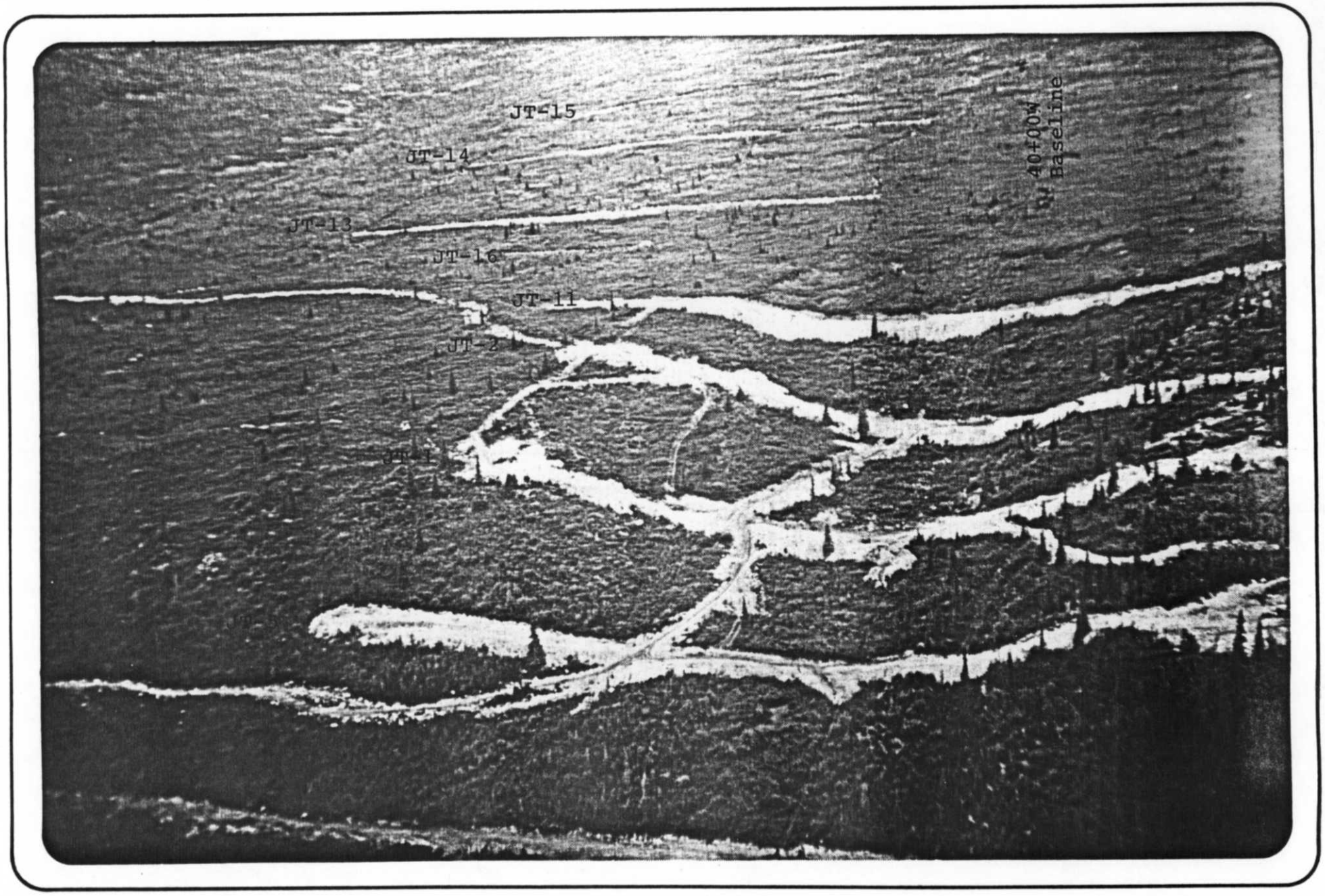


Figure 17: Trenches on JOVE-2 Grid, 1980

Radon values as determined in the lab were 1 to 9 times greater than those determined in the field for these bulk waters. This discrepancy is discussed on page 20 of this report.

3.2.6 Trenching

(a) General

A total of 16 trenches cut in 1980 on the JOVE property includes 14 new ones and the deepening of 2 the 1979 trenches. Table X summarizes the trenches worked in 1980.

TABLE VIII

TRENCHES WORKED ON THE JOVE PROPERTY DURING THE 1980 FIELD SEASON

Trench	Section	From	To
JT-1	28+00N	38+60W	41+60W
JT-2	29+00N	38+50W	41+10W
JT-5	27+00N	38+00W	41+75W
JT-6	26+00N	38+75W	42+05W
JT-7	25+00N	38+70W	41+55W
JT-8	29+00N	31+45W	34+05W
JT-9	28+00N	31+55W	34+00W
JT-10	27+00N	31+05W	33+80W
JT-11	30+00N	38+15W	42+00W
JT-12	30+00N	31+50W	33+90W
JT-13	32+00N	41+00W	44+10W
JT-14	34+00N	41+00W	44+15W
JT-15	36+00N	42+00W	44+00W
JT-16	37+00N	42+00W	44+00W
JT-17	31+00N	41+20W	42+80W
JT-18	34+00N	34+60W	37+30W

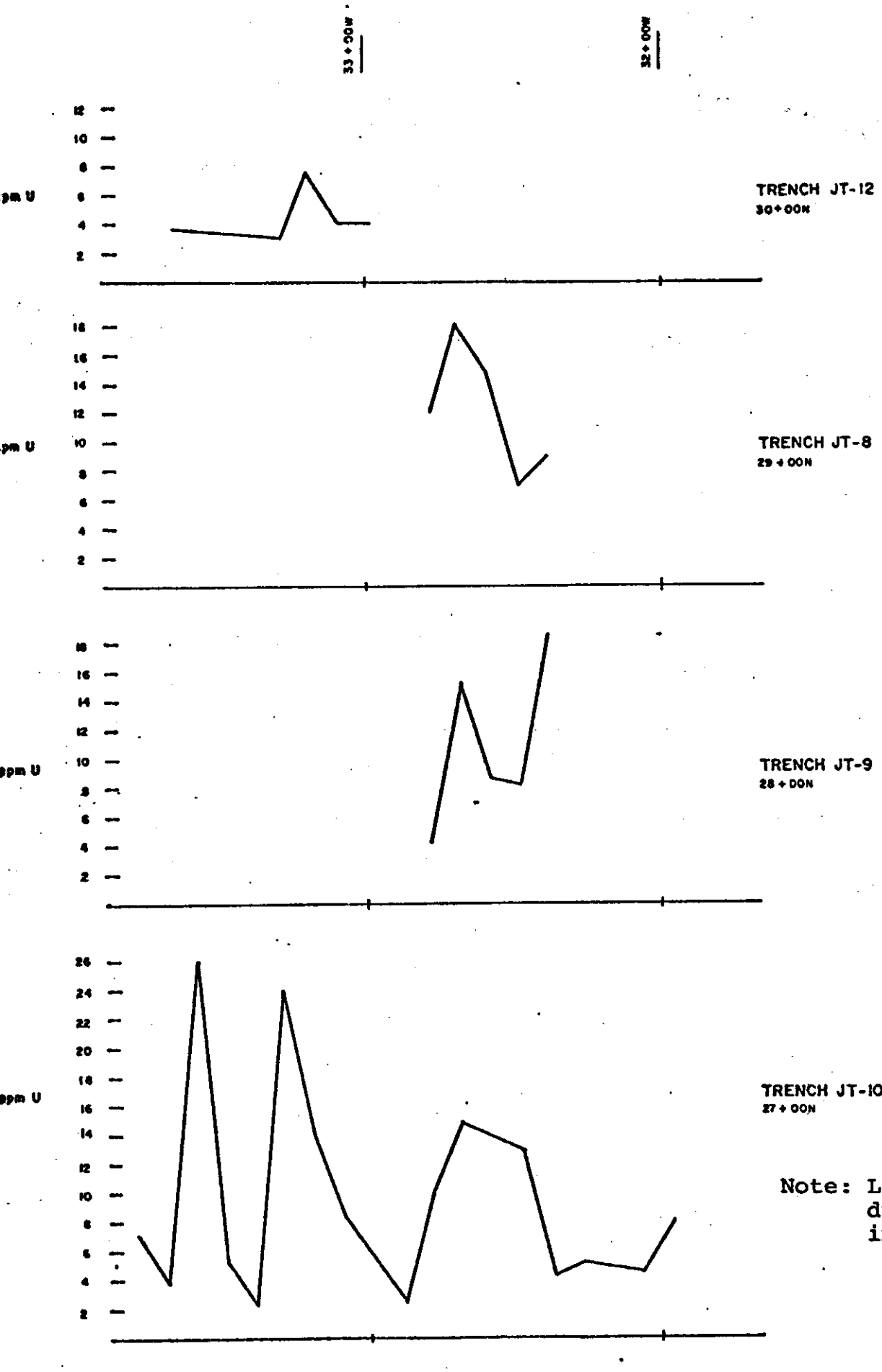
Each trench was systematically scinted, mapped geologically, and soil horizons were sampled at regular intervals. A rock sample representative of the lithology at each soil station was also submitted for analysis. The results of this work are presented as Figures 16a, b to 31a, b inclusive.

(b) JOVE grid 1

Trenches JT-8, 9, 10 and 12 are all located within the area designated as JOVE-1S (formerly the EAST zone). Some frozen ground was encountered during the trenching but was due to ground frost and not permafrost as it eventually was penetrated, and thawed ground was encountered at depth.

The geology exposed in the trenches cut on JOVE-1 South essentially consists of foliated quartz monzonite on the west grading into a more massive unit towards the east arm. Secondary muscovite is ubiquitous. A fracture zone is exposed at 32+50W on 27+00N and swings 100 metres to the west by 30+00N. It is characterized by closely spaced joints and fractures, many of which are coated or stained by chlorite and iron oxides. The staining of these fractures is restricted to the fracture zone indicating this zone has acted as a channelway for groundwater flow.

The radiometric response of the trenches on the JOVE-1S grid have peak observations in the 300-410 cps range compared to background readings of 150-200 cps. The anomalous readings are all associated with the fracture zone. The strongest response was observed at 32+60W in trench JT-8 on section 29+00N (Figure 23). Values decrease in either direction from this point (360 cps on 30+00N and 250 cps on 28+00N).



Note: Limited sampling is due to restrictions in bedrock exposure

Figure 38a: Trench Rock Geochemistry
JOVE-1 South, 1980

The uranium-in-soil values are most anomalous in the two A and the B horizons. The absolute values of uranium in these horizons increase in a downhill direction from 30+00N to 27+00N. In most instances the fluctuation in the uranium values of the A and B horizons is independent of those obtained from the C horizon. However, on 29+00N and 28+00N (Figures 23b and 24b) , increases in uranium values within the upper horizons is accompanied by a corresponding increase in uranium values in the C horizon. This observation is interpreted to be the result of uraniferous waters flushing out of fractures in the bedrock at these locations. As the water percolates up through the soil, anomalies become more dispersed downhill where uranium is concentrated in the A and B horizons.

The results of the analysis for rocks obtained from the trenches on JOVE 1-S are presented together as Figure 38a. The plots for sections 28+00N, 29+00N and 30+00N represent analytical data related to samples from bedrock whereas that for section 27+00N reflects data from samples taken of felsenmeer etc. at each soil station. The range of observed values is 2.0 ppm U to 26.0 ppm U. In the case of sections 28+00N, 29+00N and 30+00N, all peaks of uranium-in-rock correspond to sections where high uranium values were obtained in the C horizon. However, on section 27+00N, the two high uranium-in-rock values obtained in rocks from the west half of the trench, do not represent values from bedrock and therefore represent invalid data. All soils taken from those 2 locations returned low values in uranium as indicated on Figure 25b.

The analytical results of waters taken from the trenches on JOVE-1S grid are presented on the same figures as the radiometric and soil geochem profiles (Figures 23-25, 27). Radon values varied between 59 pc/l and 12,939 pc/l. Wherever radon is in excess of 1000 pc/l in water (ie. 33+75W on JT-12 and 32+65W on JT-8), a corresponding radiometric high is observed.

The uranium content of these same waters range from a low of 3.8 ppb to a high of 473 ppb. There does not appear to be any clear relationship between the uranium content and the radon of waters.

The pH and specific conductivity of these waters are 5.0-6.0 and 15 to 55 micromohs/cm respectively. Generally radoniferous waters have a specific conductivity in excess of 20 micromohs per cm but there are cases where this pattern is not followed.

Alpha meter readings taken at the bottom of the trenches returned values from 42 cph to over 25,000 cph. (This data is shown on Figures 23a-25a, 27a.) Usually, anomalous alpha meter readings were observed in close proximity to seeps with high radoniferous waters. Anomalous alpha meter readings elsewhere are attributed to radon emanating from underlying fractures as opposed to mineralization. Although it would appear the radiometric data from the trenches is reflecting the radiometric signature of the bedrock, the close proximity of radon-emanating fractures to the scintillometer anomalies in the trenches suggests the gamma radiation is derived from the decay of radon as opposed to uranium mineralization in the bedrock.

Trench JT-18 (Figure 33) was cut along 34+00N between 34+50W and 37+30W. The detailed radiometric survey over the trench did not detect any anomalies. Only the Ao and A horizons revealed fluctuating uranium-in-soil anomalies. The corresponding values for the B and C horizons remained fairly consistant at the 5-10 ppm range. The interpretation is the dissolved uranium

present in surface waters flowing down the hill is scavenged by the organic content of the A and Ao horizons. The result is anomalous amounts of U in these 2 horizons. The absence of a scavenging agent in the B and C horizons precludes any build-up of uranium to anomalous levels in those horizons.

(c) JOVE grid 2 South

Trenches JT-1, 2, 5, 6, 7, and 11 were excavated across anomalies located in the area referred to as JOVE CENTRAL in the 1979 report, with JT-1 and JT-2 being initially cut in 1979 and deepened in 1980. Survey data for these trenches are presented as Figures 18 to 22 inclusive.

Bedrock or frost-heaved boulders were exposed on the east and west limbs of trenches JT-1, 2, 5, and 11. The central portions of these trenches as well as those of trenches JT-6 and JT-7, consist of transported overburden characterized by sub-rounded to rounded boulders of varying lithology within the B/C soil horizon. The floors of trenches JT-6 and JT-7 were frozen solid. Due to the presence of permafrost, the apparent depth of overburden and the decrease in radiometric response over anomalies with depth, trenching was terminated after 2 successive passes whereby 2 to 3 metres of surficial material were removed.

The maximum penetration into bedrock was about 3m and was achieved in trench JT-11 on section 30+00N. For the most part, 1-2m of geology is exposed locally in trenches JT-1, JT-2, JT-5 and JT-11. The lithology in the trenches consists of massive to foliated, medium to coarse-grained muscovite-quartz monzonite. Pegmatite dykes up to .75m wide are present cutting the quartz monzonite at relatively steep angles (60-90°). Secondary muscovite is evident everywhere. Fractures and joints trend equally both northwest with dips to the northeast and northeast dipping northwest. A zone of intense jointing and fracturing is located between 39+00W and 39+50W on trenches

Figure 34: Radioactivity Associated with Limonitic Zones

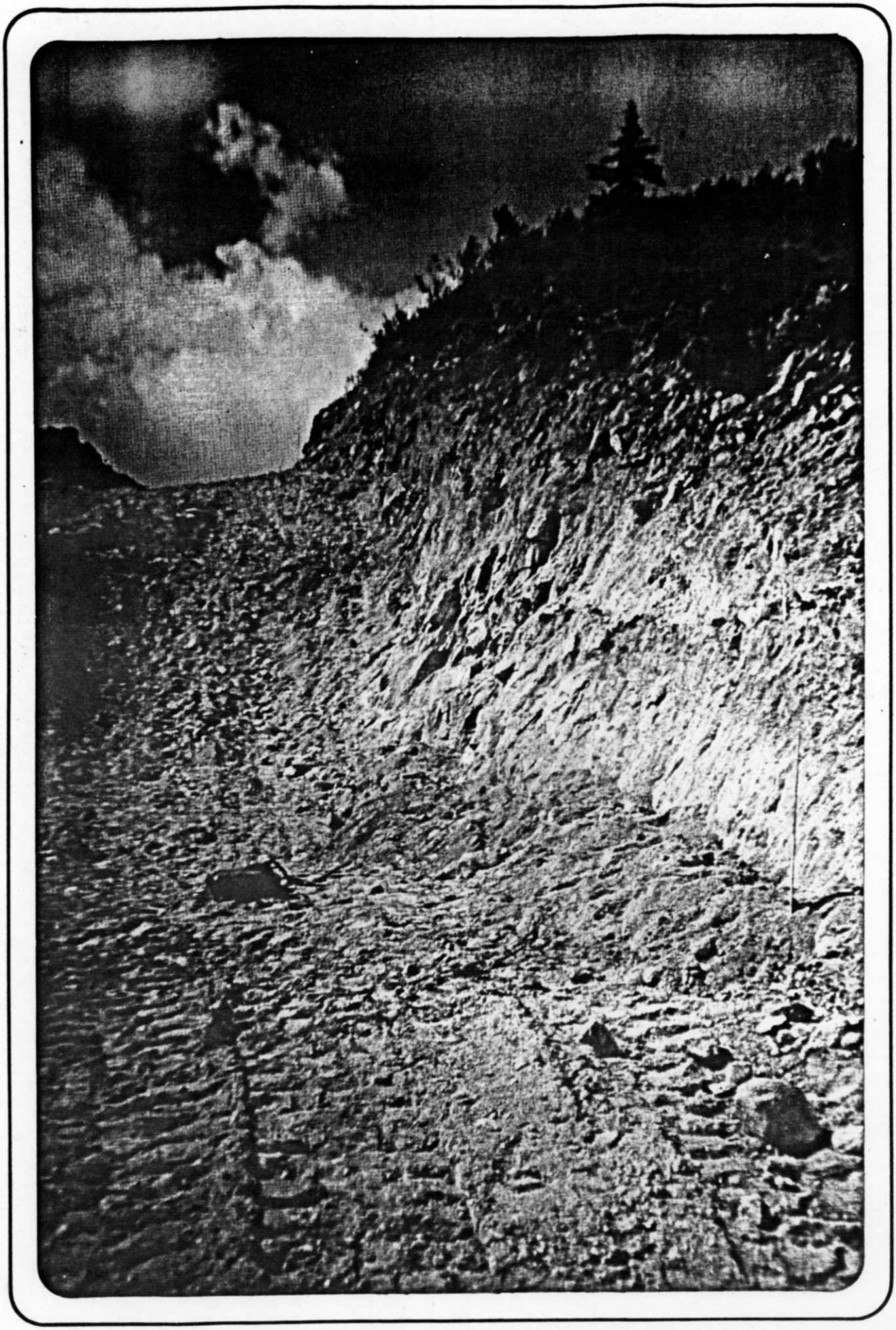


Figure 35: Looking West From 40+60W in Trench JT-11
The Yellow Area in the Radioactive Zone

Figure 36: Geological Mapping of Trench JT-11

Figure 37: Radioactive Fractures at 41+00W in Trench JT-11

JT-1, 2, and 5. This zone is characterized by small angular chips of rock coated with limonite and/or hematite as well as talcose-chloritic material. The best exposure of the zone is in trench JT-5 (section 27 00N) where it is 15 to 20 metres wide. In trench JT-2, the zone is less than 5 metres in width.

Radioactive fractures are well exposed on the west arm of trench JT-11 on 30+00N. These fractures are accompanied by limonite staining, chloritic material and manganese coatings. The limonite contains uranium and was deposited along the fractures by the actions of groundwater as opposed to resulting from the in situ alteration of the wall rock (MNR79-1, D. Scott).

Prior to trenching, the scint readings for the JOVE-2 South grid were 150 cps for background response and 200-250 cps for anomalies. In the case of trenches JT-1, 2, 5 and 11, the radiometric response was found to increase with depth during the trenching operations. However, the scint readings over trenches JT-6 and JT-7 remain the same as prior to trenching, or in some instances, lower than those observed previously indicating the source of the radioactivity is confined to the surface environment. The 200 cps contour generally outlines anomalies, however, and readings up to 6 times this value were recorded.

Four radiometric anomalies are present over the JOVE-2 South trenches between 27+00N and 30+00N. They are summarized by Table XI.

Anomaly A (Figures 18a-20a, 26a) is the most significant and corresponds to the radioactive fractures exposed at station 40+85W on 30+00N in trench JT-11. A maximum radioactive response of 1200 cps for anomaly A occurs in trench JT-1 on 28+00N at station 40+40W. The maximum reading observed at this location in 1979 was 2500 cps. The deepening of trench JT-1 in 1980 resulted in a lower radiometric response of 1200 cps, suggesting the source of the radioactivity is in the upper soil horizon as opposed to being in a bedrock source. The radioactivity of anomaly A is less in trench JT-5 to the south on Line 27+00N and all but disappears in trench JT-6 on Line 26+00N.

TABLE 1X

A SUMMARY OF RADIOMETRIC ANOMALIES OBSERVED OVER TRENCHES JT-1, JT-2, JT-5 AND JT-11

Anomaly	Location			
	Section 27+00N	Section 28+00N	Section 29+00N	Section 30+00N
A	40+25W-40+65W	40+25W-40+70W	40+50W-41+05W	40+80W-41+15W
B	39+75W-40+00W	39+90W-40+00W	39+90W-40+00W	---
C	39+45W-39+65W	39+75W-39+80W	39+40W-39+60W	---
D	38+95W-39+40W	39+00W-39+40W	39+00W-39+35W	---

Anomaly B is located within the central portions of the trenches where the overburden is deepest. Diamond drilling has intersected autunite-coated fractures at depth below this anomaly on Lines 27+00N to 30+00N. The outline of anomaly B follows closely the active water course present in the central gully and therefore does not appear to reflect underlying mineralized structures. The proximity of radon anomalies suggests anomaly C also occurs in overburden and does not appear to be related to bedrock structures. The highest radiometric response (390 cps) to this anomaly occurs in trench JT-2 on 29+00N at station 39+55W. Anomaly C parallels anomaly B, follows the contact between the overburden and the bedrock of the east limb of the central draw, and is interpreted to be related to radoniferous waters draining down the east side of the central draw.

Anomaly D coincides with a mylonitic shatter zone characterized by small, broken, angular chips of bedrock that are coated with iron oxides and chlorite-talc material. This zone is considered to be comprised of 2 sets of closely spaced fractures forming a zone that trends northwest and which has been mapped in trenches JT-13 to JT-15 and JT-17.

Anomaly A is the only radiometric anomaly found to be related to bedrock north of 29 00N. The other 3 anomalies may in fact be related to a bedrock source on 30+00N as bedrock was not exposed between 38+50W and 40+80W in trench JT-11.

Trenches JT-1 and JT-2 were deepened and re-surveyed radiometrically in 1980, but no re-sampling of the soil horizons was carried out, and so the 1979 soil data is plotted on Figures 18b and 19b.

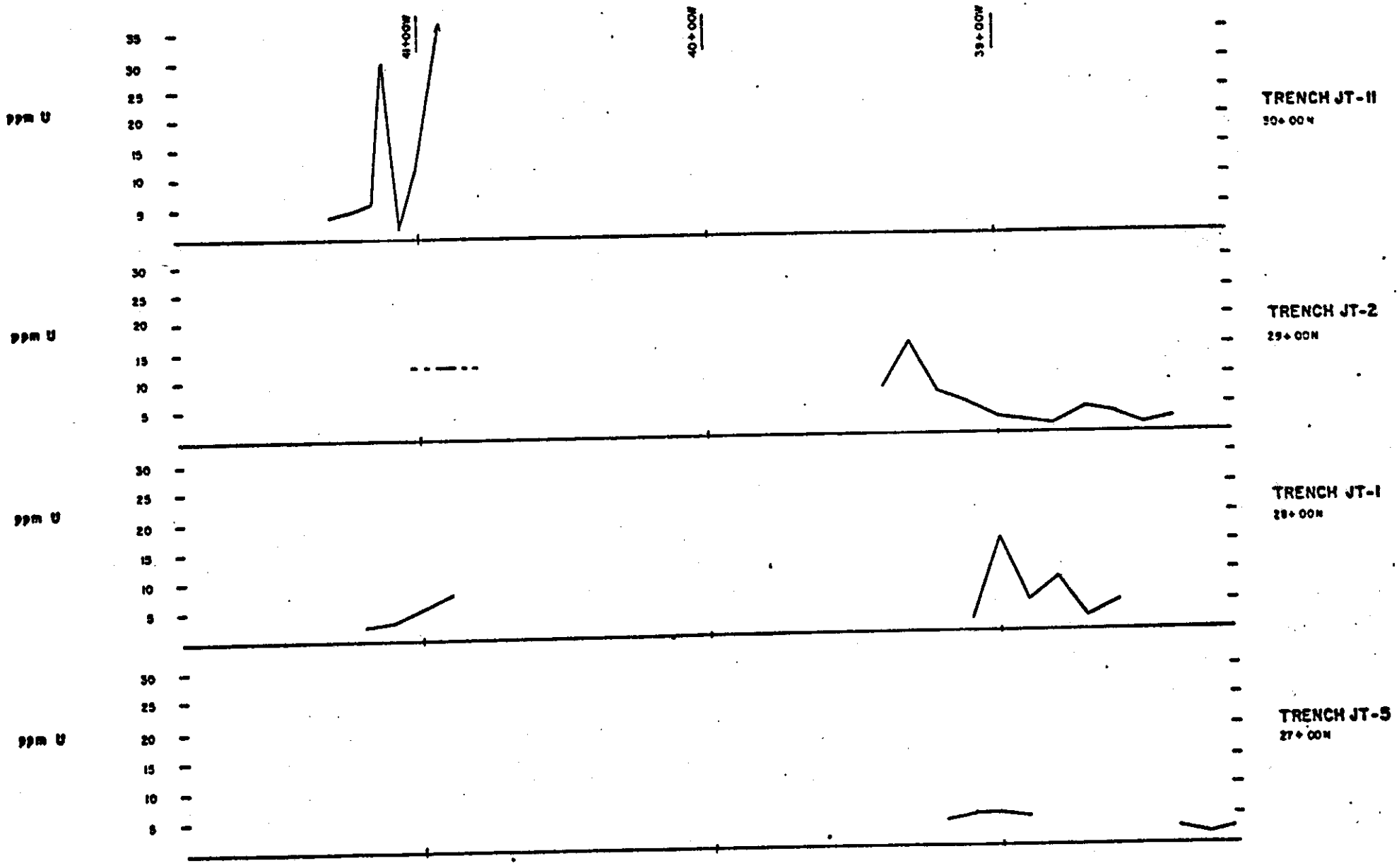


Figure 38b: Trench Rock Geochemistry
JOVE-2 South, 1980

Note: Limited sampling is due to restrictions in bedrock exposure.

The observation made on examining the sectional data is the presence of only one strong soil geochemical anomaly on sections 27+00N and 28+00N. The anomaly is defined by all soil horizons on these 2 sections. Trench JT-2, located on section 29+00N has a strong uranium-in-soil response restricted to only the A horizon. Of particular interest is the lack of a good soil geochem response over the radioactive fractures exposed in trench JT-11 on section 30+00N. Similarly there is a lack of significant uranium in all soil horizons in the vicinity of the other 3 radioactive anomalies. The interpretation here is the radiometric response is due to gamma activity resulting from the decay of radon gas that has migrated along underlying fractures in the bedrock.

Figure 38b illustrates the uranium content of the bedrock exposed in the trenches on the JOVE-2 South grid. The highest values were obtained in rocks taken near the radioactive zone in trench JT-11. The anomalous values reflected in samples from JT-1 and JT-2 around 39+00W correspond to a fracture zone exposed on the east limb of the 2 trenches. Limonitic and chloritic alterations accompany the rocks in this vicinity. Due to the transported nature of the overburden, only samples of bedrock were obtained for analysis from these trenches.

Waters obtained from trenches JT-1 and JT-5 on JOVE-2 South returned the highest radon contents with values in excess of 20,000 pc/l being obtained from seeps. Surface waters are lower in radon content with values running below 1000 pc/l. Seepage water is prevalent on the grid south of 28+50N between 39+50W and 41+00W. Uphill and to the north from this locale, the number and extent of seeps drops off sharply thereby limiting the number of water sampling stations available.

The water data from JOVE-2 South suggests an inverse correlation between the radon content and uranium content of samples. Where samples have in excess of 10,000 pc/l radon, the corresponding uranium values are in the 20 to 40 ppb range whereas samples with 3000-5000 pc/l radon have a corresponding uranium content of 200-300 pb. All pH values are in the 4.5 to 6.0 range while specific conductivity measurements vary from 10 to 30 micromohs/cm.

The observed decrease in the radon content of waters obtained in trenches JT-1 and JT-2 as samples were obtained lower down the hill, is attributed to the degassing of radon as the water flows over the surface. A corresponding increase in uranium values associated with these same waters may be due to the remobilization of uranium in the soil horizons by the surface waters. The waters with low radon values taken uphill from trench JT-2 are considered to represent surface or near surface waters and not seeps as the main seep enters the surficial environment at 28+50N between trenches JT-1 and JT-2.

A small survey with alphameters was undertaken on the east limbs of trenches JT-1, JT- 2 and JT-5 to test if radon was emanating from a uranium source at depth in the shatter zones exposed in the trenches. The results are shown on Figures 18a to 20a.

The data from work undertaken in trenches JT-6 and JT-7 indicate: 1) uranium is restricted to only the A soil horizons; 2) radiometric results decrease with depth in these trenches; 3) waters with observed high radon values north of 26+00N are notably deficient in radon but are more anomalous in uranium than was observed uphill.

The information documented from the work in the trenches on JOVE-2 South is interpreted to indicate the soil anomaly on this grid is a seepage anomaly and is the result of the A horizons scavenging uranium from uraniferous waters percolating out the side of the hill. The radiometric anomalies are interpreted to be reflecting emanations of radon some of which may be originating from the uranium in the soil but the bulk of which is emanating from underlying structures or is liberated from seepage waters. Neither the soil nor the radiometric anomalies extend to depth south of section 27+00N.

(d) JOVE grid 2 north

Five trenches were dug on the JOVE-2 North grid in 1980. Trenches JT-13, JT-14 and JT-15 were dug to investigate the weak radiometric anomaly outlined on the JOVE-2 grid. Trench JT-16 was dug to confirm the apparent northern cutoff in radiometric data observed in trench JT-15; trench JT-17 was cut to "link" the data obtained in the uphill trenches to that obtained in JOVE-2 South area. All survey data from these trenches are presented as Figures 28 to 32 inclusive for trenches JT-13 to JT-17 respectively.

The lithology exposed by the 5 trenches consists essentially of a fine to medium-grained, foliated, muscovite-bearing quartz monzonite. Locally, intense fracturing accompanied by iron oxide staining and chloritic material cuts across the quartz monzonite with a northwest trend. Accompanying this fracturing is a porphyroclastic-mylonitic phase of the intrusion that also has retained its original fabric. This structural zone is interpreted to be a strike slip shear zone that developed due to pressure from the northeast. Very little if any vertical movement accompanied this faulting.

The lithology of the east arms of the trenches is characterized by pegmatite dykes cutting the quartz monzonite unit. These dykes occur on the east side of the previously described shear zone only, suggesting the shearing followed a structural trend that developed with the emplacement of the dykes or the dykes were emplaced following the evolution of the shear zone or they were emplaced simultaneously with the shearing. Towards the western end of the trenches, the quartz monzonite becomes less foliated and more massive. The foliation thereby appears to be genetically related to the shear zone located in the central portions of the trenches.

Although the radiometric response recorded over the trenches on JOVE-2 North is weak, values were enhanced over those observed prior to trenching operations (before trenching 120-160 cps; after trenching 160-250 cps). The highest response was over the center of JT-17 (260 cps). A 250 cps reading was observed on the west end of JT-14. In all cases where anomalous radiometric readings were observed, the geology consits of faulted, altered mylonitic quartz monzonite. There are no radiometric anomalies present on 36+00N or 37+00N thereby confirming the uphill limit to the radiometric anomaly on JOVE-2 North lies somewhere between 34+00N and 36+00N.

The uranium content of the various soil horizons is variable, with a trend to higher values in soils from trenches lower on the hillside. Apart from local fluctuations up to 15 ppm U, the uranium content of the C horizon remains constantly around 10 ppm. Similarly, apart from variations up to 20 ppm or 40 ppm, the uranium content of the B horizon tends to be close to 10 ppm. The values of uranium in both A horizons fluctuate the most, especially in the trenches located lower on the hill. Generally the Ao horizon contains more uranium than the A horizon. In some instances peaks in the A horizon values correspond to increased values observed in the B and/or C horizons.

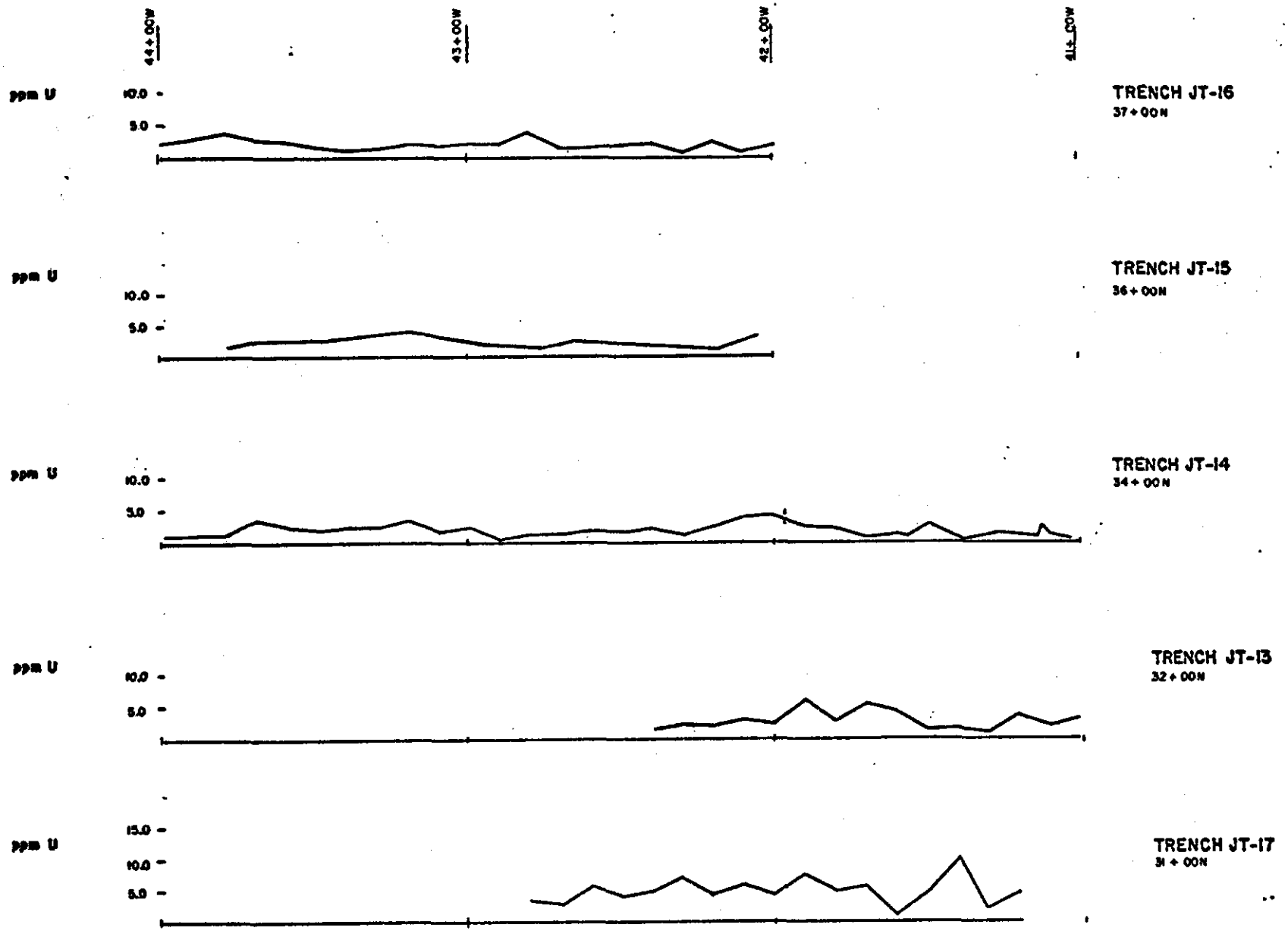


Figure 38c: Trench Rock Geochemistry
JOVE-2 North, 1980

Note: Limited sampling is due to restrictions in bedrock exposure.

The high fluctuating uranium values observed in samples from the A horizon coupled with a relatively constant uranium content for the B and C horizons suggests the uranium has originated from uraniferous groundwater flowing through the soil horizons. Uraniferous waters are interpreted to be percolating up through the soil horizons from underlying fractures and flowing downhill as surface waters. The organic matrix of the Ao horizon acts as a filter and concentrates the uranium from these waters.

The analytical results of rock samples taken from trenches JT-13 to JT-17 are presented as Figure 38c. Values tend to average to 1.0 ppm in the upper trenches and 2.0 ppm in the lower 2 trenches. Fluctuations up to 5.0 ppm do appear but occur predominantly in the lower trenches. The 1.0-2.0 ppm values are not unlike the geochemical response of the fresh quartz monzonite as determined by the analysis of fresh drill core. These values are lower than those obtained in the Ao soil horizon. The source for the uranium in the soils may be either at depth and is being brought to surface by waters flowing along the shear zones or from weathered bedrock adjacent to the shear zone both at depth and further up-slope.

Waters obtained from seeps exposed by trenching contain varying amounts of radon and uranium. Waters from trench JT-16 on 37+00N contain 200-500 pc/l radon. One hundred metres downhill in trench JT-15, the amount of water exposed by trenching is reduced and limited only to the interval between 43+00W and 43+50W. Here, radon values remain moderate at 100 to 300 pc/l. In trench JT-14, 200 metres downhill from JT-15, the amount of seepage increases. Here high radon values (1600 to 5000 pc/l) are related to seeps near the east end of the trench. Elsewhere in the trench values are in the 20-400 pc/l range. Trench JT-13 which is another 200 metres downhill, had fewer seeps, and values once again are in the 100-350 pc/l range. Trench JT-17 on section 31+00N was dry with the exception of one small seep on its west end where the radon content was measured at 20 pc/l.

The uranium values (Figure 15) of the seeps from JOVE-2 North range from less than 1.0 ppb to 20.0 pbb on 36+00N and 37+00N, are strongly anomalous on 34+00N with values of 113.0 ppb and 168.0 ppb reported and continue to be anomalous on 32+00N with 53.0 ppb and 77.0 ppb reported. The one seep on 31+00N has a uranium content of 5.6 ppb.

The pH of the seepage waters is in the 5.0 to 5.5 range while the specific conductivity measurements vary from 9 to 20 micromohs/cm. There do not appear to be any correlations between these measurements and the radon content of the waters. Nor do any exist between them and the uranium content of water. There is, however, a rough inverse relationship between radon values and uranium values but only in the extremely anomalous cases.

The geochemical values from the rock obtained in the trenches do not support the amount of uranium present in some of the seeps. The source of the uranium in waters must be located somewhere at depth and uphill from 34+00N.

The results of the alphameter evaluation of the trenches dug on JOVE-2 North are presented on Figures 28a to 32a inclusive along with the other geological and radiometric data. Trenches on sections 36+00N and 37+00N returned values in the 300 to 1000 counts per hour range. Two stations on 37+00N and seven stations on 36+00N returned values in excess of 1000 cph. These readings were obtained towards the east end of the trenches. Two radoniferous zones were located by alphameters in trenches JT-13 (32+00N) and JT-14 (34+00N). One is outlined by readings grouped near 42+00W while the other, which is relatively sharp, is located near 43+75W. In the former case, values between 1000 cph and 13,000 cph are common and in the latter instance, values are in the 8000 to 13,000 cph range. Radoniferous seeps are present nearby and may be partially or entirely due to the source of the radon detected by the alphameters.

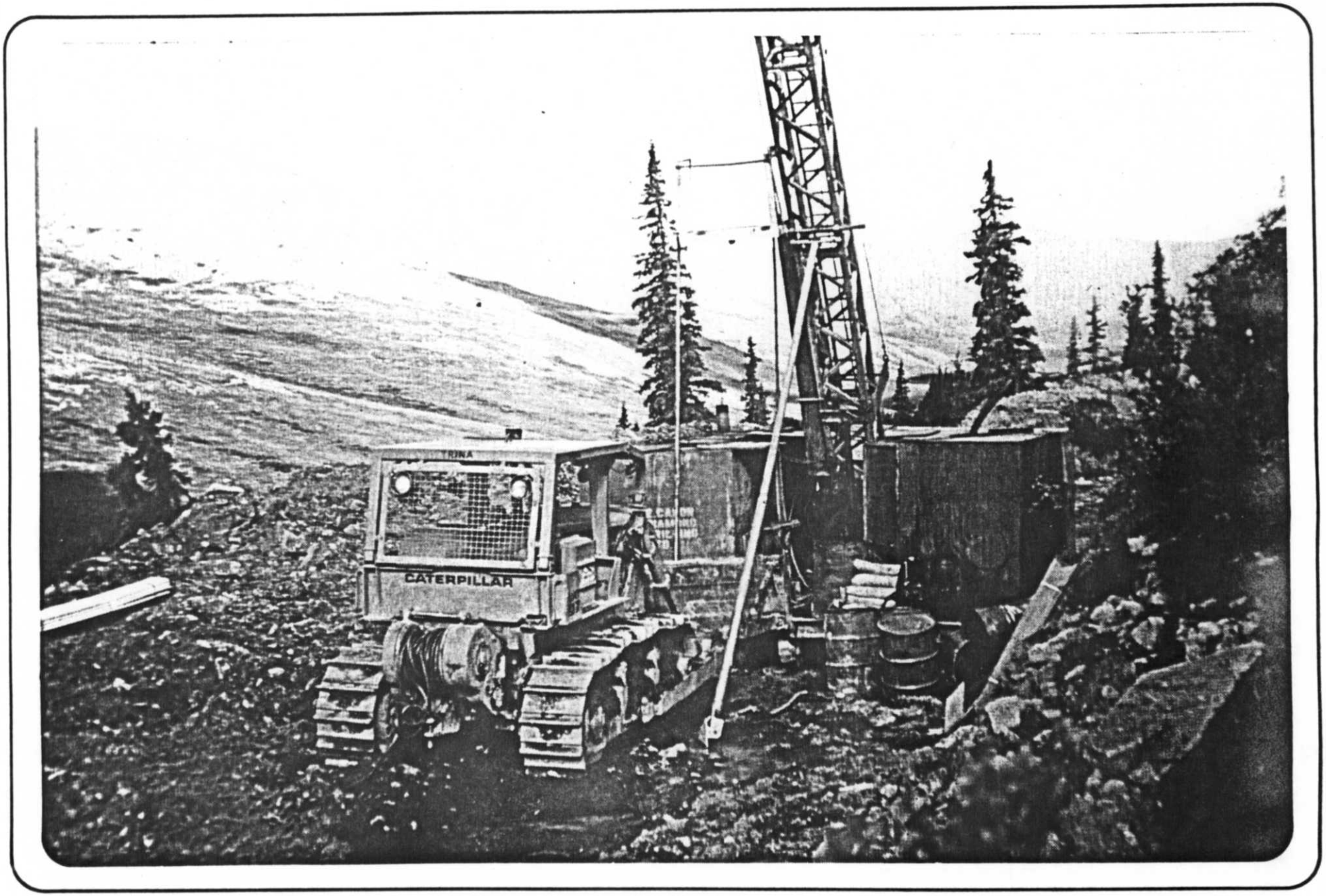


Figure 39a: Drilling Hole 80-J-3

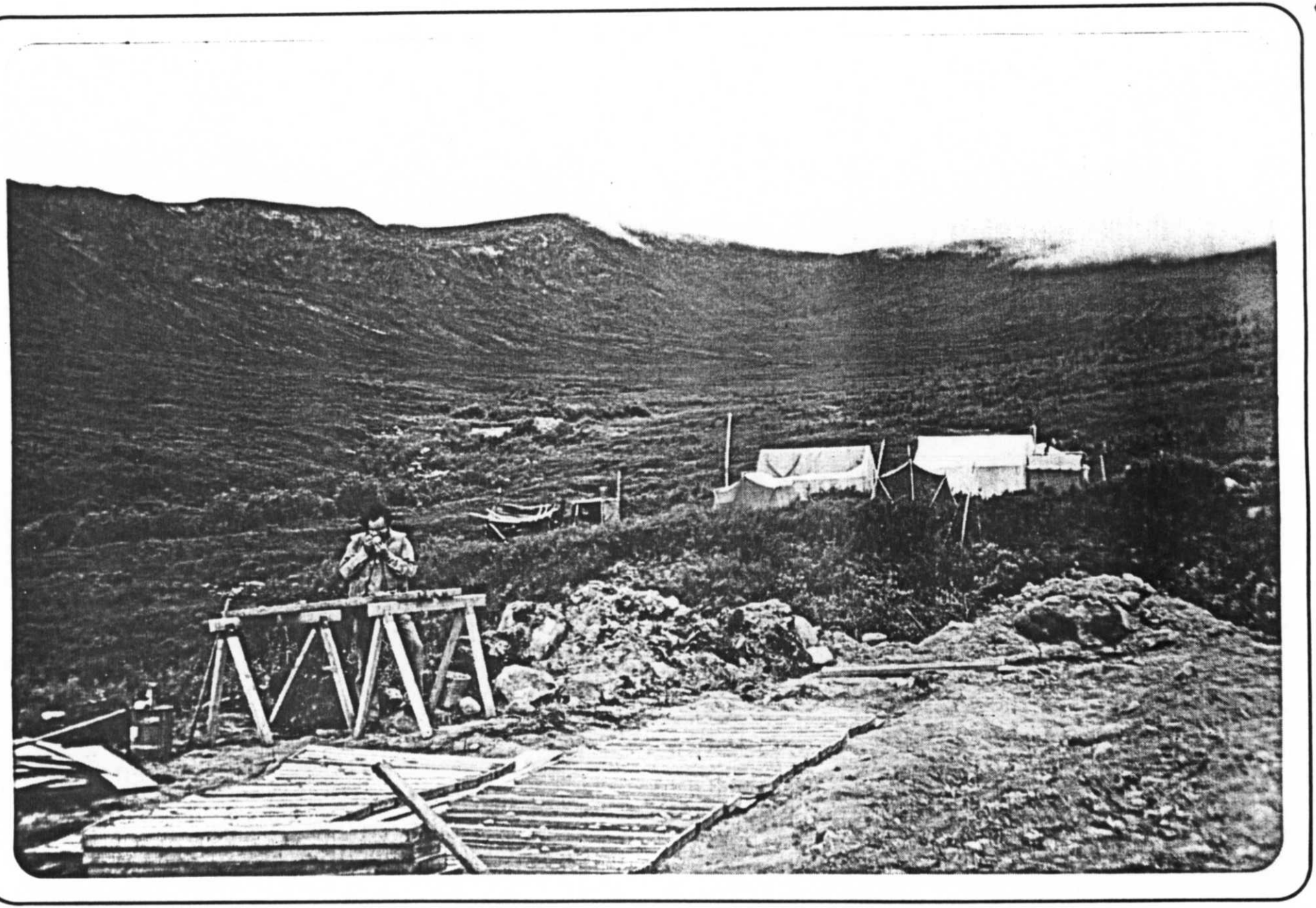


Figure 39b: Logging Core, JOVE Claims, 1980

Figure 39c: Splitting Core, JOVE Claims, 1980

The JOVE-2 North grid is characterized by a mylonitized shatter zone accompanied by weak radiometric anomalies and uraniferous soil anomalies defined in the A horizons. Waters are radoniferous downhill from 36+00N. The mylonite shatter zone is interpreted to be the major conduit along which uraniferous and radoniferous waters flow. The radon is degassed in the surface environment and the uranium is partially scavenged by the limonite that coats the fractured bedrock. Uranium is also concentrated in the A horizons. The radiometric anomalies in the trenches are interpreted to be related to radon emanations and not mineralization within the bedrock.

3.2.7 Diamond Drilling

(a) General

A total of 11 drill holes were collared on the JOVE property for a cumulative meterage of 918.2m in 1980. Two holes were drilled on JOVE-1 South, seven on JOVE-2 South and 2 on JOVE-2 North. All holes intersected various phases of the quartz monzonite. Mineralization in the form of autunite-coated fractures was encountered in all but 2 of the holes. No primary uranium minerals were identified in the core.

Table XII summarizes the results of the 1980 diamond drill program. Following that, results are discussed by area starting with the JOVE-1 South grid, followed by JOVE-2 South and then by JOVE-2 North. All holes were collared on an azimuth of 292°. The collars and horizontal projections of holes from both 1979 and 1980 are shown on Figure 6.

(b) JOVE-1 south

(i) drill holes

Drill holes 80-J-3 and 80-J-4 were drilled to investigate the 2 "best" radiometric anomalies encountered in the trenches cut across JOVE-1 South. The results of each hole are best summarized as follows:

TABLE X

A SUMMARY OF RESULTS OF THE 1980 DRILL PROGRAM ON JOVE

Drill Hole Number	Co-ordinates North	Co-ordinates West	Mineralization Interval	Core Assays .01% U_3O_8
80-J-1	30+00N	40+25W	41.5-44.0	0.06
			46.0-47.0	0.06
			48.5-52.0	0.02
80-J-2	27+00N	40+25W	-	-
80-J-3	29+00N	32+05W	-	-
80-J-4	30+00N	32+85W	-	-
80-J-5	27+00N	38+70W	No Value	
80-J-6	29+00N	38+80W	No Value	
80-J-7	28+00N	40+32W	49.1-50.6	0.01
80-J-8	29+00N	40+65W	11.0-13.7	0.01
			35.4-36.9	0.04
80-J-9	30 00N	40+60W	43.3-44.5	0.04
80-J-10	34 00N	42+12W	-	-
80-J-11	34 00N	42+65W	-	-

NOTE - denotes values less than 0.01% U_3O_8 encountered.

No value denotes holes where gamma logging did not detect anomalous radioactivity.

Hole No.: 80-J-3

Co-ordinate: 29+00N, 32+05W

Length: 109.6m

Purpose: to investigate at depth the radiometric anomaly defined in trench JT-8 at 32 60W (Figure 23a).

Description:
- bedrock encountered at 1.5m
- foliated, biotite-rich quartz monzonite encountered to 16.2m
- 16.2-29.9m: altered, vuggy zone
- generally fresh, unaltered quartz monzonite with some bleaching adjacent to the fractures occurs from 29.9m to the bottom of the hole
- numerous fault/fracture zones are present between 36.0 and 86.0m
- some autunite identified at 76.5m, 82.6m, 88.2m and 90.4m.

Discussion:
- The high analytical values observed with the sludge data and the corresponding lower values observed in the core assays suggest uranium is being washed out of fracture zones during the the drilling.
- The radiometric data, core assays and sludge assays all peak at approximately the same location, thereby providing a relatively good correlation between sampling mediums.
- The higher values obtained in the core assays are interpreted to be due to fractures and faults that cut the zone.
- The radioactive intersection in this hole correlates well to the radiometric anomaly observed at 32+60W shown on Figure 23a.

Analytical Results: DDH 80-J-3

Meterage Interval	Sludge Samples (ppm)	Core Assay	Radiometric Data
1.5- 2.7	11.0	4.0	
2.7- 4.0	9.5	4.5.	
4.0- 5.8	6.0	4.0	
5.8- 6.4	-	3.5	
6.4- 7.6	-	8.0	
7.6- 9.1	9.0	7.0	
9.1-10.7	7.6	7.5	
10.7-11.6	8.5	7.0	
11.6-13.1	16.5	7.5	
13.1-14.6	5.0	4.5	
14.6-16.2	9.0	3.0	
16.2-17.7	10.0	4.5	
17.7-19.2	15.5	6.5	
19.2-20.8	11.5	8.0	
20.8-21.3	11.5	7.0	
21.3-22.9	17.5	8.5	
22.9-24.7	27.0	5.5	
24.7-25.9	14.5	9.0	
25.9-27.4	18.0	10.0	
27.4-28.7	13.5	10.0	
28.7-29.9	12.5	7.0	
29.9-31.4	11.0	3.5	
31.4-32.9	14.5	6.5	
32.9-34.4	26.0	4.0	
34.4-37.2	12.0	8.5	
37.2-38.8	48.0	10.0	
38.8-40.1	32.0	5.5	
40.1-41.0	35.0	11.0	
41.0-42.9	18.5	8.5	
42.9-44.6	15.0	9.5	
44.6-47.2	12.0	10.0	
47.2-48.8	20.5	8.5	
48.8-50.0	16.0	10.5	
50.0-51.2	11.5	10.0	
51.2-52.4	12.5	17.0	
52.4-53.6	21.5	11.5	
53.6-55.2	13.5	3.5	
55.2-56.7	14.5	6.0	
56.7-58.2	9.0	4.5	
58.2-59.7	13.5	5.0	
59.7-61.3	11.0	6.0	
61.3-62.8	13.5	8.0	
62.8-64.3	No sample	7.5	
64.3-65.8	15.0	7.5	
65.8-66.8	25.0	26.0	81 cps
66.8-68.3	19.0	6.5	275 cps
68.3-69.8	.012%U_3O_8	13.5	162 cps
69.8-71.3	.014%U_3O_8	26.0	81 cps
71.3-72.8	9.5	3.5	162 cps
72.8-74.4	9.5	2.5	292 cps
74.4-75.9	18.5	8.5	97 cps
75.9-76.7	22.5	37.0	130 cps
76.7-78.4	9.5	9.5	340 cps
78.4-79.6	43.0	10.0	130 cps
79.6-80.8	.013%U_3O_8	4.5	340 cps
80.8-82.2	35.0	9.0	81 cps
82.2-84.4	23.0	40.0	
84.4-85.6	16.0	8.5	81 cps
85.6-87.3	11.5	6.5	284 cps
87.3-88.7	19.5	3.0	486 cps
88.7-90.3	.015%U_3O_8	78.0	122 cps
90.3-91.3	11.0	27.0	81 cps
91.3-92.4	11.0	11.0	
92.4-94.7	12.5	8.0	
94.7-96.3	23.0	6.0	
96.3-97.8	13.0	12.5	
97.8-99.6	8.5	7.5	
99.6-101.8	88.0	6.5	
101.8-103.4	.014%U_3O_8	4.5	
103.4-105.0	14.0	5.0	
105.0-107.0	10.0	6.0	
107.0-109.4	34.0	7.5	

Note: - sludge and core assays are in ppm U unless otherwise noted
- radiometric data is from gamma logs and is adjusted for shielding by drill rods (factor of 1.62) and in some instances casing (factor of 1.62)
- a vertical line under radiometric data indicates uncorrected background readings of less than 50 cps

Hole No.: 80-J-4

Co-ordinates: 30+00N, 32+85W

Length: 70.4m

Purpose: to investigate at depth the radiometric anomaly defined in trench JT-12 at 33+15W (Figure 27a).

Description:
- bedrock encountered at 1.5m
- foliated, fine-grained quartz monzonite between 1.5m and the bottom of the hole
- intense fracturing/faulting at 16.7 to 16.8m and 28.9 to 29.3m
- radioactive zones are present at 17.7-17.9m, 20.2-20.4m, 48.2-48.7m, 56.1-56.2m
- no visible mineralization was observed in association with the radioactivity.

Discussion:
- The radioactive zone at 46 metres in the hole corresponds to a steeply dipping structure that, when extended to the surface, correlates with the radiometric anomaly at 33 15W.

Analytical Results: DDH 80-J-4

Meterage Interval	Sludge Samples ppm/% U_3O_8	Core Assays ppm/% U_3O_8	Radiometric Data	Meterage Interval	Sludge Samples	Core Assays	Radiometric Data
0- 4.9	-			38.4-39.9	3.0		
4.9- 6.4	8.0			39.9-41.5	5.0		
6.4- 7.9	5.0			41.5-43.0	8.0		
7.9- 9.4	6.0			43.0-44.5	4.5	1.5	
9.4-11.0	6.5			44.5-46.0	3.0	1.5	81
11.0-12.4	12.0			46.0-47.5	6.0	4.0	365
12.4-14.0	10.5			47.5-49.1	72.0	40.0	81
14.0-15.5	12.0			49.1-50.6	22.0	15.5	
15.5-17.1	15.5	11.0		50.6-52.1	13.5	9.5	
17.1-18.6	15.5			52.1-53.6	15.5	10.0	
18.6-20.1				53.6-55.2	44.0	8.0	
20.1-21.6	26.0	15.5		55.2-56.7	49.0	10.0	
21.6-23.2				56.7-58.2	16.5	9.0	
23.2-24.7	13.5			58.2-59.7	17.5	10.0	
24.7-26.4	4.5			59.7-61.3	13.5	10.0	
26.4-29.4	13.3			61.3-62.8	19.0	5.0	
29.4-30.8	14.5			62.8-64.3	18.0	6.0	
30.8-32.4	15.5			64.3-65.8	19.5	10.0	
32.4-33.8	10.0			65.8-67.4	12.0	6.0	
33.8-35.5	5.5			67.4-68.9	30.0	5.0	
35.5-36.9	7.5			68.9-70.4	9.0	7.0	
36.9-38.4	7.0						

Note: - sludge and core assays are in ppm U unless otherwise noted
- radiometric data is from gamma logs and is adjusted for shielding by drill rods (factor of 1.62) and in some innstances casing (factor of 1.62)
- a vertical line under radiometric data indicates uncorrected background readings less than 50 cps

(ii) discussion

Originally, the 1980 program called for 6 diamond drill holes to be collared on JOVE-1 South. The initial field investigation of this area in 1978 and 1979 outlined a strong uranium-in-soil anomaly (values greater than 1000 ppm U) (Figure 12) and a coincident radiometric anomaly (200-250 cps) (Figure 11). Trenching of these anomalies exposed bedrock, however, the radiometric response of the bedrock does not increase at depth in the trenches. A decision was then made to investigate by drilling the 2 best radiometric anomalies in the trenches. The negative results from the 2 holes provided further evidence to support the theory the radioactivity encountered at surface and in the trenches is due to radioactive seeps running along fractures and not due to any major concentration of mineralization in the bedrock. No further drilling was undertaken on the JOVE-1 South grid.

(c) JOVE-2 south

(i) drill holes

The drilling of the JOVE-2 South grid in 1980 was undertaken to investigate the extension of the autunite zone discovered by drilling in 1979 and to re-evaluate some of the intersections obtained in 1979. Greater depth penetration by trenching with the D-8 cat in 1980 exposed radioactive fractures having a general dip to the east (a direction parallel to the plunge of most holes drilled in 1979).

Drill holes 80-J-1, -2, and -5 to -9 inclusive were collared on JOVE-2 South in 1980. The following is a summary of the results obtained from this portion of the drilling program:

Hole No.: 80-J-1

Co-ordinates: 30+00N, 40+25W

Lenght: 91.6m

Purpose: to investigate at depth the radioactive fractures exposed on the west arm of trench JT-11 (Figure 26a).

Description:
- bedrock encountered at 24.7m
- weathered, fractured quartz monzonite was encountered from 24.7 to 52.5m
- fresh to slightly altered quartz monzonite with some fracturing was intersected between 52.5m and the bottom of the hole
- numerous faults/fractures are present from 27.9 to 59.2m
- pegmatite dykes cut the unit
- autunite is present - mainly as fracture coatings in the weathered quartz monzonite. The deepest occurrence of autunite is a fracture zone at 67.3m.

Discussion:
- Since numerous radioactive sections were encountered, the sampling interval for the core was more detailed than the sludge sampling.
- The relatively high uranium content in the sludge samples at the bottom of the hole accompanied by low core assays and low radiometric response probably reflects contamination from the mineralized zones further up the hole.

- An abrupt decrease in uranium values in core samples reflects the fresh quartz monzonite which begins at 52.0m. The peaks in uranium values observed in sludge samples from 52.0 to 60.0m reflect local limonitic fracture zones.
- A good positional correlation exists between the radiometric response of the downhole logger and the geochemical assays of core samples.

Analytical Results: DDH 80-J-1

Meterage Interval	Sludge Samples	Meterage Interval	Core Assays	Radiometric Response(cps)	Meterage Interval	Sludge Samples	Meterage Interval	Core Assays	Radiometric Response(cps)
0- 1.5	2.5	0- 5.5	3.0	|	54.9-56.4	.029%U_3O_8	47.0-47.5	51.0	648
1.5- 3.0	2.5	5.5- 9.4	5.5	|	56.4-57.9	78.0	47.5-48.0	36.0	810
3.0- 4.6	2.5	15.5-17.0		288	57.9-59.4	.041%U_3O_8	48.0-48.5	92.0	1134
4.6- 6.1	3.0	17.0-17.5		485	59.4-61.0	43.0	48.5-49.0	.017%U_3O_8	2025
6.1- 7.6	7.0	17.5-18.0		720	61.3-62.8	50.0	49.0-49.5	.013%U_3O_8	1215
7.6- 9.1	9.5	18.0-18.5		817	62.8-64.3	64.0	49.5-50.0	.019%U_3O_8	535
9.1-10.7	18.5	18.5-19.0		445	64.3-65.8	32.0	50.0-52.0	.027%U_3O_8	227
10.7-12.2	25.0	19.0-19.5		1572	65.8-67.4	14.5	52.0-52.5	27	|
12.2-13.7	22.0	19.5-20.0		2227	67.4-68.9	22.0	52.5-53.0	3.5	97
13.7-15.2	19.5	20.0-20.5		2882	68.9-70.4	34.0	53.0-53.5	5.0	2268
15.2-16.8	14.0	20.5-21.0		2096	70.4-71.9	57.0	53.5-54.0	6.5	486
16.8-18.3	20.0	21.0-21.5		655	71.9-73.5	25.0	54.0-56.0	37.0	265
18.3-19.8	61.0	21.5-22.0		328	73.5-75.0	69.0	56.0-56.5	10.0	324
19.8-21.3	.028%	22.0-22.5		262	75.0-76.5	34.0	56.5-57.0	3.0	567
21.3-22.9	.038%			|	76.5-78.0	40.0	57.0-57.5	3.0	97
22.9-24.4	41.0	9.4-24.7	-	|	78.0-79.6	52.0	57.5-58.0	11.5	|
24.4-25.9	39.0	24.7-27.0	32.0	|	79.6-81.1	36.0	58.0-60.0	65.0	|
25.9-27.4	.023%U_3O_8	27.0-30.0	30.0	|	81.1-82.6	61.0	60.0-62.0	2.0	|
27.4-28.9	.011%U_3O_8	30.0-32.0	17.0	|	82.6-84.1	.012%U_3O_8	62.0-64.0	1.5	|
28.9-30.5	47.0 3 8	32.0-34.0	31.0	|	84.1-85.6	66.0	64.0-66.0	1.5	|
30.5-32.0	68.0	34.0-36.0	29.0	|	85.6-87.2	64.0	66.0-68.0	5.0	|
32.0-33.5	43.0	36.0-38.0	77.0	|	87.2-88.7	51.0	68.0-70.0	4.0	|
33.5-35.1	23.0	38.0-40.0	94.0	445	88.7-90.2	73.0	70.0-72.0	10.5	|
35.1-36.6	20.0	40.0-40.5	27.0	1231	90.2-91.7	38.0	72.0-74.0	7.2	|
36.6-38.1	63.0	40.5-41.0	19.0	2025			74.0-76.0	1.5	|
38.1-39.6	71.0	41.0-41.5	48.0	1944			76.0-78.0	1.5	|
39.6-41.1	68.0	41.5-42.0	.022%U_3O_8	1134			78.0-80.0	2.5	|
41.1-42.7	.056%U_3O_8	42.0-42.5	.049%U_3O_8	1053			80.0-82.0	1.5	|
42.7-44.2	.072%U_3O_8	42.5-43.0	.141%U_3O_8	648			82.0-84.0	1.5	|
44.2-45.7	.021%U_3O_8	43.0-44.0	.043%U_3O_8	130			84.0-86.0	1.5	|
45.7-47.2	.069%U_3O_8	44.0-44.5	40.0	405			86.0-88.0	1.5	|
47.2-48.8	.092%U_3O_8	44.5-45.0	24.0	2025			88.0-90.0	1.5	|
48.8-50.3	.039%U_3O_8	45.0-45.5	14.0	1215			90.0-92.0	1.5	|
50.3-51.8	.043%U_3O_8	45.5-46.0	51.0	283					
51.8-53.3	41.0	46.0-46.5	.052%U_3O_8	1134					
53.3-54.9	.186%U_3O_8	46.5-47.0	.055%U_3O_8	1247					

Note: - sludge and core assays are in ppm U unless otherwise noted
- radiometric data is from gamma logs and is adjusted for shielding by drill rods (factor of 1.62) and in some instances casing (factor of 1.62)
- a vertical line under radiometric data indicates uncorrected background readings less than 50 cps

Hole No.: 80-J-2

Co-ordinates: 27+00N, 40+25W

Length: 81.7m

Purpose:
- to investigate a possible extension to the south of the autunite zone discovered in 1979 which is considered to be related to the strong radioactive anomaly present at 40 55W over trench JT-5.

Description:
- bedrock encountered at 20.1m
- intensely fractured and weathered quartz monzonite intersected to a depth of 68.9m
- unaltered quartz monzonite is present between 68.9m and the bottom of the hole. Few fractures are present in this interval with only 1 fault intersected at 70.4m
- autunite is present in minor amounts between 33.1 and 51.5m.

Discussion:
- A noticeable drop in the uranium values in sludge samples occurs at 67.4m whereas a similar drop for core assays is observed at 58.2m. This difference is interpreted to be reflecting contamination of the drill sludge.
- Even though the extent of fracturing observed in this hole is greater than or at least equivalent to that observed in holes further uphill, there is a noticeable lack of mineralization present. The fracturing encountered is on strike from the mineralized fractures intersected by drilling on Lines 28 00N and 29 00N. The autunite zone is therefore interpreted to be closed off to the south.
- The radioactivity observed 43m down the hole is associated with a zone which, when extrapolated up dip to the surface, corresponds to the radiometric anomaly at 40+55W.

Analytical Results: DDH 80-J-2

Meterage Interval	Sludge Samples	Meterage Interval	Core Assays	Radiometric Response	Meterage Interval	Sludge Samples	Meterage Interval	Core Assays	Radiometric Response
3.4- 5.0	32.0	9.0-10.0	-	243	39.9-41.5	13.0	41.5-43.0	16.5	243
5.0- 6.4	49.0	10.0-11.0	-	211	41.5-43.0	26.0	43.0-44.5	35.0	81
6.4- 7.9	51.0	11.0-12.0	-	211	43.0-44.5	37.0	44.5-46.0	8.5	|
7.9- 9.4	34.0	12.0-13.0	-	365	44.5-46.0	11.5	46.0-47.5	14.5	|
9.4-11.0	29.0	13.0-14.0	-	365	46.0-47.5	20.0	47.5-49.1	15.5	|
11.0-12.5	39.0	14.0-15.0	-	324	47.5-49.1	17.5	49.1-50.6	20.0	|
12.5-14.0	34.9	15.0-16.0	-	146	49.1-50.6	20.0	50.6-52.1	23.0	|
14.0-15.5	41.0	16.0-17.0	-	162	50.6-52.1	29.0	52.1-53.6	14.5	|
15.5-17.1	55.0			|	52.1-53.6	18.0	53.6-55.2	6.0	|
17.1-18.6	89.0	0-18	66.0	81	53.6-55.2	12.0	55.2-56.8	8.0	|
18.6-20.1	.012% U_3O_8	18 -20.1	34.0	|	55.2-56.7	9.5	56.8-58.2	13.0	|
20.1-21.6	45.0	20.1-22.1	14.5	|	56.7-58.2	18.5	58.2-59.2	12.5	|
21.6-23.2	18.5	22.1-23.3	16.5	|	58.2-59.7	16.5	59.2-60.8	8.5	|
23.2-24.7	12.5	23.3-24.7	18.0	113	59.7-61.3	18.0	60.8-62.5	6.0	|
24.7-25.9	13.5	24.7-27.7	30.0	454	61.3-62.8	15.0	62.5-64.0	5.0	|
25.9-27.4	71.0	27.7-29.3	16.5	113	62.8-64.3	18.5	64.0-65.0	4.5	|
27.4-29.3	23.5	29.3-30.8	23.5		64.3-65.8	18.5	65.0-66.4	3.0	|
29.3-30.8	22.0	30.8-32.3	22.5	122	65.8-67.4	12.0	66.4-68.1	3.0	|
30.8-32.3	28.0	32.3-33.8	41.0	324	67.4-68.9	8.0	68.1-68.9	4.5	|
32.3-33.8	.013% U_3O_8	33.8-35.4	11.0	|	68.9-70.4	8.5	68.9-70.4	2.5	|
33.8-35.3	15.5	35.4-36.9	21.0	|	70.4-17.9	10.5	70.4-72.0	2.5	|
35.3-36.9	36.0	36.9-38.9	20.5	|	71.9-73.5	8.0	72.0-73.5	2.0	|
36.9-38.4	30.0	38.9-39.9	11.5	|	73.5-75.0	9.0	73.5-75.1	4.0	|
38.4-39.9	30.0	39.9-41.5	10.5	81	75.0-76.5	6.0	75.1-76.1	5.5	|
					76.5-78.0	8.5	76.1-78.1	5.5	|
					78.0-79.6	6.5	78.1-79.6	5.0	|
					79.6-81.7	5.0	79.6-81.0	2.5	|
							81.0-81.7	3.0	|

Note: - sludge and core assays are in ppm U unless otherwise noted
- radiometric data is from gamma logs and is adjusted for shielding by drill rods (factor of 1.62) and in some instances casing (factor of 1.62)
- a vertical line under radiometric data indicates uncorrected background readings of less than 50 cps

Hole No.: 80-J-5

Co-ordinates: 27+00N, 38+70W

Length: 62.5m

Purpose: to investigate at depth the radon anomaly obtained 39+00 to 39+30 on the east arm of trench JT-5 (Figure 20a).

Description:
- solid bedrock was encountered at 5.4m
- medium-grained quartz monzonite was intersected for the entire length of the hole
- locally the unit shows evidence of weathering
- no radioactive sections were intersected.

Discussion:
- No mineralization was encountered during the drilling.
- No source of the radon anomaly was discovered by the drilling.
- There is a close correlation between the analytical values observed from the sludge samples with those from the core samples.

Analytical Results: DDH 80-J-5

Meterage Interval	Sludge Samples	Core Assays	Radiometric Response	Meterage Interval	Sludge Samples	Core Assays	Radiometric Response
15.0- 3.0	1.5			38.4-39.9	3.5	1.5	
3.0- 4.6	3.0	2.0		39.9-41.5	6.0	3.5	
4.6- 6.1	3.0			41.5-43.0	3.0	1.5	
6.1- 7.6	2.0	5.5		43.0-44.5	4.0	2.0	
7.6-11.0	7.0	7.5		44.5-46.0	16.5	4.0	
11.0-12.5	5.5	3.5		46.0-47.5	4.0	2.0	
12.5-14.0	4.5	2.5		47.5-49.1	4.5	2.5	
14.0-15.5	4.5	3.0		49.1-50.6	5.5	3.5	
15.5-17.1	4.0	2.0		50.6-52.1	15.5	6.5	
17.1-18.6	3.5	3.0		52.1-53.6	7.0	4.0	
18.6-20.1	3.5	1.5		53.6-55.2	3.5	2.5	
20.1-21.6	3.5	0.5		55.2-56.7	3.0	1.5	
21.6-23.2	3.5	1.0		56.7-58.2	3.5	1.5	
23.2-24.7	2.5	1.0		58.2-59.7	6.5	5.5	
24.7-26.2	2.0	1.0		59.7-61.3	4.5	1.5	
26.2-27.7	3.5	1.5		61.3-62.8	6.5	3.5	
27.7-29.3	5.5	4.0					
29.3-30.8	6.0	8.5					
30.8-32.3	2.5	2.0					
32.3-33.8	2.5	2.0					
33.8-35.4	2.5	1.0					
35.4-36.9	2.5	1.0					
36.9-38.4	4.0	1.5					

Note: - sludge and core assays are in ppm U unless otherwise noted
- radiometric data is from gamma logs and is adjusted for shielding by drill rods (factor of 1.62) and in some instances casing (factor of 1.62)
- a vertical line under radiometric data indicates uncorrected background readings of less than 50 cps

DDH 80-J-5

Hole No.: 80-J-6

Co-ordinates: 29+00N, 38+80W

Length: 77.9m

Purpose: to investigate at depth the radon anomaly obtained by alphameters associated with a shatter zone on the east arm of trench JT-2 (Figure 19a).

Description:
- solid bedrock was encountered at 15.4m
- medium-grained quartz monzonite is present the entire length of the hole
- no radioactive intersections were encountered.

Discussion:
- No mineralization was encountered during the drilling.
- The source of the radon anomaly was not discovered by the drilling.

Analytical Results: DDH 80-J-6

Meterage Interval	Sludge Samples	Core Assays	Radiometric Response	Meterage Interval	Sludge Samples	Core Assays	Radiometric Response
0- 1.8	2.0			39.9-41.5	3.5	5.5	
1.8- 3.4	2.5			41.5-43.0	3.0	8.0	
3.4- 4.9	2.5	1.5		43.0-44.5	2.5	1.5	
4.9- 6.4	3.0			44.5-46.0	3.5	0.5	
6.4- 7.9	2.0			46.0-47.5	2.5	9.0	
7.9-9.4	6.5			47.5-49.1	21.0	2.0	
9.4-11.0	16.5	15.5		49.1-50.6	5.5	1.0	
11.0-12.5	11.0			50.6-52.1	3.5	1.0	
12.5-14.0	14.5	9.0		52.1-53.6	10.0	1.5	
14.0-15.5	12.0			53.6-55.2	2.5	3.0	
15.5-17.1	9.5	11.5		55.2-56.7	3.5	4.0	
17.1-18.6	3.5	3.0		56.7-58.2	3.5	11.0	
18.6-20.1	4.5	3.0		58.2-59.7	6.5	17.5	
20.1-21.6	6.0	4.5		59.7-61.3	10.5	12.5	
21.6-23.2	13.5	14.0		61.3-62.8	13.5		
23.2-24.7	6.5	5.0		62.8-64.3	6.5	6.0	
24.7-26.2	4.5	3.0		64.3-65.8	6.0	8.0	
26.2-27.7	4.5	3.0		65.8-67.4	8.0	4.5	
27.7-29.3	4.5	3.5		67.4-68.9	4.0	3.5	
29.3-30.8	3.5	1.0		68.9-70.4	4.0	3.0	
30.8-32.3	6.5	4.5		70.4-71.9	3.5	4.0	
32.3-33.8	3.5	2.0		71.9-73.5	5.0	4.5	
33.8-35.3	3.5	3.5		73.5-75.0	4.5	3.5	
35.3-38.4	5.0	3.0		75.0-76.5	3.0	4.5	
38.4-39.9	4.5	1.5		76.5-77.9	3.0	3.5	

Note: - sludge and core assays in ppm U unless otherwise noted
- radiometric data is from gamma logs and is adjusted for shielding by drill rods (factor of 1.62) and in some instances casing (factor of 1.62)
- a vertical line under radiometric data indicates uncorrected background readings of less than 50 cps

Hole No.: 80-J-7

Co-ordinates: 28+00N, 40+32W

Length: 64.3m

Purpose: to investigate the best mineralized intersection obtained in 1979 (hole 79-J-1 on 28 00N) in view of the new information suggesting the major mineralized structural zone is dipping to east as observed in trench JT-11 on 30 00N

Description:
- bedrock was encountered at 9.4m
- weathered quartz monzonite is present the entire length of the hole
- fault zones are present between 21.0 and 53.0m
- pegmatite cuts the core throughout and comprises less than 1% of the unit
- feldspars have a "bleached" appearance
- autunite is visible between 31.0 and 52.0m

Discussion:
- Hole JT-7 intersected mineralization one or 2 metres below the level of the 1979 intersection.
- Geochemical and radiometric assays obtained in 1980 are well below the values obtained in 1979 (.22/1 M in 1979 vs. .11/1 M in 1980).
- The high uranium values observed in the sludge samples indicate uranium is being removed mechanically in the cuttings.

Analytical Results: DDH 80-J-7

Meterage Interval	Sludge Samples	Core Assays	Radiometric Response	Meterage Interval	Sludge Samples	Core Assays	Radiometric Response
0- 3.4	35.0		|	33.8-35.3	35.0	28.0	223
3.4- 6.1	N.S.		|	35.3-38.4	.018% U_3O_8	35.8	223
6.1- 7.9	79.0		|	38.4-39.9	.029% U_3O_8	6.0	81
7.9- 9.4	.012% U_3O_8		|	39.9-41.5	14.0	9.0	|
9.4-11.0	53.0	54.0	|	41.5-43.0	21.0	8.5	|
11.0-12.5	45.0		|	43.0-44.5	12.0	13.0	81
12.5-14.0	92.0		|	44.5-46.0	23.0	8.0	446
12.5-15.5	69.0		|	46.0-47.5	15.5	6.0	810
15.5-17.1	88.0	88.0	|	47.5-49.1	11.0	79.0	701
17.1-18.6	.015% U_3O_8		|	49.1-50.6	.012% U_3O_8	100.0	389
18.6-20.1	53.0	61.0	|	50.6-52.1	.066% U_3O_8	32.0	81
20.1-21.6	.023% U_3O_8	1.5	|	52.1-53.6	.015% U_3O_8	23.0	|
21.6-23.2	29.0	24.0	|	53.6-55.2	.015% U_3O_8	6.0	|
23.2-24.7	23.5		162	55.2-56.7	22.0	6.0	|
24.7-26.2	23.5	17.0	518	56.7-58.2	9.5	4.5	|
26.2-27.7	.027% U_3O_8	14.5	450	58.2-59.7	7.5	5.0	|
27.7-29.3	.025% U_3O_8	12.0	203	59.7-61.3	9.5	4.0	|
29.3-30.8	.101% U_3O_8	9.5	292	61.3-62.8	14.0	3.0	|
30.8-32.3	.037% U_3O_8	28.0	81	62.8-64.3	7.0	3.0	|
32.3-33.8	27.0	20.5	162				

Note: - sludge and core assays are in ppm U unless otherwise noted
- radiometric data is from gamma logs and is adjusted for shielding by drill rocks (factor of 1.62) and in some instances casing (factor of 1.62)
- a vertical line under radiometric data indicates uncorrected background readings of less than 50 cps

DDH 80-J-7

Hole No.: 80-J-8

Co-ordinates: 29+00N, 40+65W

Length: 57.6m

Purpose: to investigate at depth the radiometric anomaly at 40+35W on the west arm of trench JT-2

Description:
- basement was encountered at 13.8m
- weathered quartz monzonite was cored the entire length of the hole
- the unit is badly fractured and crushed
- autunite is found in fractures and in fault gouge between 27.2 and 49.0m.

Discussion:
- The mineralization identified in hole J-8 correlates very well with the radiometric anomaly that peaks at 40 80W in trench JT-2.
- The more dispersed nature of the uranium anomalies in the sludge samples is due to contamination.
- There is a close correlation between the position of the radiometric response in the downhole logging and the geochemical analysis of core samples.

Analytical Results: DDH 80-J-8

Meterage Interval	Sludge Samples	Meterage Interval	Core Assays	Radiometric Response(cps)	Meterage Interval	Sludge Samples	Meterage Interval	Core Assays	Radiometric Response(cps)
0.0- 3.0	17.0			657	38.4-39.9	89.0		10.0	518
3.0- 6.1	63.0			873	39.9-41.5	54.0		6.0	81
6.1- 7.9	81.0			|	41.5-43.0	60.0		3.5	|
7.9- 9.4	.013%U_3O_8	9.0- 9.8	45.0	590	43.0-44.5	16.0		2.5	81
9.4-11.0	.026%U_3O_8	9.8-11.0	43.0	459	44.5-46.0	52.0		2.0	486
11.0-12.5	.034%U_3O_8	11.0-13.7	.012%U_3O_8	819	46.0-47.5	.068%U_3O_8		4.5	162
12.5-14.0	.012%U_3O_8	13.7-15.2	14.0	276	47.5-49.1	84.0		27.0	81
14.0-15.5	75.0	15.2-16.8	11.5	181	49.1-50.6	.029%U_3O_8		6.1	|
15.5-17.1	100.0	16.8-18.3	7.0	|	50.6-52.1	.017%U_3O_8		12.0	|
17.1-18.6	35.0	18.3-19.2	13.5	|	52.1-53.6	86.0		8.0	|
18.6-20.1	74.0	19.2-20.7	14.0	|	53.6-55.2	33.0		10.0	|
20.1-21.6	60.0		8.5	|	55.2-56.7	23.0		8.0	|
21.6-23.2	20.5		9.0	|	56.7-57.6	25.0		8.0	|
23.2-24.7	76.0		8.5	81					
24.7-26.2	24.0		8.0	162					
26.2-27.7	65.0		14.5	243					
27.7-29.3	.028%U_3O_8		53.0	81					
29.3-30.8	.014%U_3O_8		17.0	122					
30.8-32.3	.017%U_3O_8		4.5	284					
23.3-33.8	.214%U_3O_8		6.0	365					
33.8-35.4	.027%U_3O_8		33.0	1620					
35.4-36.9	.035%U_3O_8		.042%U_3O_8	81					
36.9-38.4	79.0		12.5	454					

Note: - sludge and core assays are in ppm U unless otherwise noted
- radiometric data is from gamma logs and is adjusted for shielding by drill rods (factor of 1.62(and in some instances casing (factor of 1.62)
- a vertical line under radiometric data indicates uncorrected background readings of less than 50 cps

TABLE XI

GEOCHEMICAL ANALYSIS OF DRILL HOLE WATERS

JOVE PROPERTY

	pH	Spec. Cond.	Rn (camp) pc/l	Rn (lab) pc/l	U ppb	Mn ppm	Fe ppm	Ca ppm	Na ppm	K ppm	Cl ppm	HCO_3 ppm	PO_4 ppb	SO_4 ppb	Ra pc/l	SiO ppm
79-J-3	6.1	73	383		22.6											
79-J-6	6.5	86	9		5.2											
79-J-7	6.1	50	23429		79.0											
80-J-1	6.2	210	1536	19730	361.0	0.37	13.6	16.2	11.0	36.7	41.7	NIL	160	2	4.0	26.9
80-J-2	6.5	25	250	943	27.0	0.05	1.2	3.0	4.5	1.8	NIL	NIL	140	2	12	55.5
80-J-4	5.8	340	39	90	212	0.25	5.2	10.8	11.0	75.6	90.3	NIL	500	2	4	30.5
80-J-5	6.6	140	57	303	72	0.12	3.1	8.1	8.0	28.6	26.0	NIL	200	2	1	40.0
80-J-6	6.2	390	117	356	112	0.44	6.8	37.0	14.3	52.4	149.4	NIL	80	2	92	43.5
80-J-7	6.7	210	709	2635	243	0.25	4.2	13.2	15.3	72.0	83.4	NIL	200	2	3	22.9
80-J-8	6.7	290	585	3568	231	0.16	3.5	13.0	11.0	68.8	76.6	NIL	60	2	2	34.5
20-J-10	6.5	200	446	2398	85	0.6	10.1	15.1	13.2	31.6	59.1	NIL	80	2	1	29.5

Hole No.: 80-J-9

Co-ordinates: 30+00N, 40+60W

Length: 47.5m

Purpose: to investigate the zone between the mineralized sections of hole 80-J-1 and the mineralized fractures observed on surface in trench JT-11.

Description:

- bedrock was encountered at 9.2m
- a massive, porphyroclastic quartz monzonite was encountered from 9.2 to 28.7m
- medium-grained, weathered, foliated quartz monzonite is present from 28.7m to the bottom of the hole
- limonitic staining is evident throughout the hole
- autunite is present from 14.0 to 15.0m, at 30.0m, 38.0m, 39.0m, 40.5m, 43.0m and 44.0m, and is generally associated with fractures.

Discussion:

- A loss of return of water occurred at 23m resulting in no sludge sampling undertaken below that point.
- The magnitude of all values from hole J-9 is substantially below those observed from hole 80-J-1, suggesting either the concentration of mineralization increases with depth or the intersection in hole J-9 is located above the main flow of uraniferous waters.
- The radioactive sections in hole 80-J-9 correlate well with those in the lower portion of 80-J-1 and with the radioactive fractures exposed in trench JT-11.

Analytical Results: DDH 80-J-9

Meterage Interval	Sludge Samples	Core Assays	Radiometric Response	Meterage Interval	Sludge Samples	Core Assays	Radiometric Response
0- 3.0	4.0		|	28.7-29.9		15.5	203
3.0- 6.1	8.1	10.0	|	29.9-31.4		14.5	81
6.1- 7.9	35.0		|	31.4-32.9		6.0	|
7.9- 9.4	37.0		|	32.9-34.4		3.5	122
9.4-11.0	12.5	17.0	|	34.4-35.7		3.5	405
11.0-12.5	14.5	13.5	|	35.7-37.2		11.5	162
12.5-14.0	18.5		284	37.2-38.7		9.0	1074
14.0-15.5	31.0	25.0	729	38.7-40.2		52.0	486
15.5-17.1	.013% U_3O_8	42.0	162	40.2-41.8		34.0	750
17.1-18.6	44.0	16.5	|	41.8-43.3		97.0	1782
18.6-20.1	52.0	31.0	|	43.3-44.5		400.0	81
20.1-21.6	19.5	13.5	|	44.5-46.0		13.0	648
21.6-23.2	39.0	25.0	162	46.0-47.5		6.5	81
23.2-24.4	Loss of return	17.0	284				
24.4-24.7		13.5	122				
24.7-25.9		26.0	81				
25.9-27.4		14.5	486				
27.4-28.7		18.5	425				

Note: - sludge and core assays are in ppm U unless otherwise noted
- radiometric data is from gamma logs and is adjusted for shielding by drill rods (factor of 1.62) and in some instances casing (factor of 1.62)
- a vertical line under radiometric data indicates uncorrected background readings of les than 50 cps

(d) JOVE-2 north

Approximately 250m of the 1980 diamond drilling program were reserved for testing for an uphill source for the autunite zone. Spotting of the first hole (DDH 80-J-10) was based primarily on the radiometric results and geological information obtained from the detailed work on the trenches. Soil geochemistry data was not available. Little emphasis was placed on the alpha meter data in view of the possibility most alpha meter anomalies indicate radon conduits as opposed to mineralized bedrock.

Hole No.: 80-J-10
Co-ordinates: 34+00N, 42+12W
Length: 177.1m
Purpose:
- to investigate at depth the broad radiometric anomaly and radon-gas anomaly outlined on JOVE-2 North prior to trenching.
- to investigate specifically the radiometric anomaly located at 42+90W over trench JT-14.

Description:
- bedrock was encountered at 1.0m
- fine-grained, weathered, fractured quartz monzonite is present from 1.0 to 52.3m
- fresh quartz monzonite accompanied by local weathering along fractures is present from 52.3m to the bottom of the hole
- fault structures are present between 10.0m and 15m, from 39.0 to 49.0m, from 71.3 to 81.4m, at 106m, at 118m, and from 138.0 to 140.0m
- autunite accompanies fracture zones between 32.0 and 42.0m, and at 115.0m

Discussion:
- No significant mineralized zone is present beneath the radiometric/radon gas anomalies outlined on the JOVE-2 North grid.
- The weathered quartz monzonite and accompanying radioactive zones correspond to the same unit underlying the radiometric anomaly at 42 90W in trench JT-14.
- The siliceous, crushed nature of the unit in the altered zones suggests these zones are part of a large shear zone that cuts the quartz monzonite.

Hole: 80-J-11

Co-ordinates: 34+00N, 42+65W

Length: 78.0m

Purpose: to investigate the zone between hole 80-J-10 and the weak radioactive anomaly on surface at 43+15W (Figure 29a)

Description:
- bedrock was encountered at 1.0m
- the hole intersected zones of weathered quartz monzonite that alternate with fresh quartz monzonite
- fault/fracture zones are present at 4.0-5.0m, 6.7-10.3m, 15.0-18.0m, and 26.2-33.8m
- fine specks of autunite are present at 15.0m to 17.0m, and from 25.5 to 30.5m.

Discussion:
- The radioactive zones in hole 80-J-11 correspond well with the autunite-bearing zones outlined by hole 80-J-10 and when projected to the surface, relate well with the radiometric anomaly at 43+15W in trench JT-14.

Analytical Results: DDH 80-J-10

Meterage Interval	Sludge Samples	Core Assays	Radiometric Response	Meterage Interval	Sludge Samples	Core Assays	Radiometric Response	Meterage Interval	Sludge Samples	Core Assays
0- 5.0	N.S.	9.2		73.5-75.0	3.0	2.5		143.6-145.1	14.5	2.5
5.0- 6.4	10.0	13.0		75.0-76.5	5.0	4.0		145.1-146.6	4.5	2.0
6.4- 7.9	42.0			76.5-78.0	7.0	4.5		146.6-148.1	6.0	16.0
7.9- 9.4	11.5			78.0-79.6	2.5	5.3		148.1-149.7	4.0	2.0
9.4-11.0	7.0	10.4		79.6-81.1	9.5	5.5		149.7-151.1	8.5	1.5
11.0-12.5	7.5			81.1-82.6	5.5	3.0		151.1-152.7	2.0	2.5
12.5-14.0	10.0			82.6-84.1	7.0	6.0		152.7-154.2	3.0	2.5
14.0-15.5	22.5			84.1-85.6	7.5	2.5		154.2-155.8	4.5	1.5
15.5-17.1	9.5	8.6		85.6-87.2	10.5	5.5		155.8-157.3	10.0	2.0
17.1-18.6	5.0	4.0		87.2-88.7	17.5	9.0		157.3-158.8	5.5	4.5
18.6-20.1	7.0	6.5		88.7-90.2	13.5	9.5		158.8-160.3	6.5	
20.1-21.6	11.5	10.0		90.2-91.7	7.5	5.0		160.3-161.8	10.5	2.0
21.6-23.2	10.0	10.5		91.7-93.3	9.5	7.5		161.8-163.4	4.5	2.5
23.2-24.7	20.5	18.5		93.3-94.8	7.0	3.5		163.4-164.9	5.0	8.0
24.7-26.2	11.0	10.0		94.8-96.3	8.5	4.0		164.9-166.4	4.5	2.5
26.2-27.7	5.5	5.5		96.3-97.8	5.0	4.0		166.4-167.9	4.5	5.0
27.7-29.3	8.0	7.0		97.8-99.4	9.5	2.5		167.9-169.5	18.5	2.5
29.3-30.8	14.5	8.0	81	99.4-100.9	8.0	3.5		169.5-171.0	4.0	3.5
30.8-32.3	9.0	11.8	162	100.9-102.4	8.5	3.0		171.0-172.5	4.5	7.0
32.3-33.8	28.0	16.0	130	102.4-103.9	13.5	5.0		172.5-174.0	15.5	3.5
33.8-35.3	22.0	20.0	81	103.9-105.5	6.5	3.5		174.0-177.1	N.S.	2.5
35.3-36.9	15.5	15.5		105.5-107.0	5.0	3.0				
36.9-38.4	14.0	12.0		107.0-108.5	4.5	3.0		No anomalous radiometric response		
38.4-39.9	10.0	10.0		108.5-110.0	3.5	2.0		below 114.6m		
39.9-41.5	14.5	4.5		110.0-111.6	8.0	2.5	81			
41.5-43.0	7.5	13.0		111.6-113.1	24.5	2.0	203			
43.0-44.5	9.0	10.0		113.1-114.6	6.5	2.5	81			
44.5-46.0	12.0	13.0		114.6-116.1	4.5	21.5				
46.0-47.5	6.5	4.5		116.1-117.7	4.0	6.0				
47.5-49.1	7.0	6.8		117.7-119.2	5.5	1.5				
49.1-50.6	6.5	7.0		119.2-120.7	4.5	1.5				
50.6-52.1	9.5	6.0		120.7-122.2	7.5	2.0				
52.1-53.6	4.0	3.0		122.2-123.7	15.5	1.5				
53.6-55.2	4.0	2.0		123.7-125.3	5.0	9.5				
55.2-56.7	3.0	2.0		125.3-126.8	9.5	13.5				
56.7-58.2	2.5	2.0		126.8-128.3	3.0	2.0				
58.2-59.7	3.0	2.0		128.3-129.8	N.S.	2.5				
59.7-61.3	2.5	2.0		129.8-131.4	3.5	1.5				
61.3-62.8	4.0	2.0		131.4-132.9	N.S.	2.0				
62.8-64.3	3.0	2.0		132.9-134.4	5.5	2.5				
64.3-65.8	4.5	2.0		134.4-135.9	2.0	3.5				
65.8-67.4	4.5	2.0		135.9-137.5	3.0	1.5				
67.4-68.9	2.5	3.0		137.5-139.0	1.5	2.0				
68.9-70.4	2.0	2.5		139.0-140.5	2.5	2.5				
70.4-71.9	5.5	2.5		140.5-142.0	3.0	2.0				
71.9-73.5	4.0	3.0		142.0-143.6	6.0	3.0				

Note:
- sludge and core assays are in ppm U unless otherwise noted
- radiometric data is from gamma logs and is adjusted for shielding by drill rods (factor of 1.62) and in some instances casing (factor of 1.62)
- a vertical line under radiometric data indicates uncorrected background readings of less than 50 cps.

Analytical Results: DDH 80-J-11

Meterage Interval	Sludge Samples	Core Assays	Radiometric Response
0- 5.0	N.S.	4.5	|
5.0- 6.4	5.0	2.0	|
6.4- 7.9	20.5	11.5	|
7.9- 9.4	15.0	15.0	|
9.4-11.0	18.0	14.0	|
11.0-12.5	4.5	8.3	|
12.5-14.0	10.5	2.5	81
14.0-15.5	15.0	16.5	178
15.5-17.1	44.0	21.0	146
17.1-18.6	50.0	4.5	81
18.6-20.1	16.0	3.0	|
20.1-21.6	7.5	3.0	|
21.6-23.2	4.5	3.5	|
23.2-24.7	17.0	3.5	81
24.7-26.2	6.5	2.5	284
26.2-27.7	48.0	20.5	80
27.7-29.3	44.0	32.0	284
29.3-30.8	28.0	15.0	80
30.8-32.3	16.0	12.0	|
32.3-33.8	11.5	5.5	|
33.8-36.9	7.0	5.0	|
36.9-38.4	4.0	2.5	|
38.4-39.9	5.0	1.5	|
39.9-41.4	4.5	1.5	|
41.4-43.0	5.0	2.0	|
43.0-44.5	5.0	2.0	|
44.5-46.0	2.5	2.5	|
46.0-47.5	3.0	3.0	|
47.5-49.1	3.5	3.5	|
49.1-50.6	5.5	2.5	|
50.6-52.1	2.5	2.0	|
52.1-53.6	6.0	3.0	|
53.6-55.2	3.5	2.0	|
55.2-56.7	2.5	3.0	|
56.7-58.2	3.5	3.0	|
58.2-59.7	6.5	2.5	|
59.7-61.3	4.5	4.0	|
61.3-62.8	6.5	4.5	|
62.8-64.3	6.5	6.0	|
64.3-65.8	7.5	5.5	|
65.8-67.4	7.5	8.8	|
67.4-68.9	4.0	4.0	|
68.9-70.4	6.0	3.5	|
70.4-71.9	3.5	2.0	|
71.9-73.5	2.5	2.0	|
73.5-75.0	4.5	6.5	|
75.0-76.5	3.0	3.0	|
76.5-78.0	5.5	3.5	|

Note: - sludge and core assays are in ppm U unless otherwise noted
- radiometric data is from gamma logs and is adjusted for shielding by drill rods (factor of 1.62) and in some instances casing (factor of 1.62)
- a vertical line under radiometric data indicates uncorrected background readings of less than 50 cps

(e) Drill hole water

Table XIII summarizes the analytical data from the bulk water samples obtained from the drill holes as described on page 21 of this report.

The pH values are consistent from drill hole to drill hole while the specific conductivity measurements vary slightly. The largest variations as noted in Table XIII is the large difference in radon values determined in camp and those determined by the lab. On the average, the camp measurements are 20% of the lab values. In the most extreme case (hole 80-J-1) the difference in radon is tenfold between the lab determinations and the camp measurements. The radon values varied from a low of 90 pc/l reported for hole 80-J-4 up to 19,730 pc/l for hole 80-J-1. Waters from the 1979 drill holes were submitted for analysis prior to the recognition of the degassing problem as described on pages 20 and 21 of this report. At that time, radon was not requested as part of the analysis. The 1980 waters were submitted later at a time when a comparison between the lab determinations for Rn and the field determinations was required.

Uranium values in waters from all drill holes sampled are very anomalous and have an approximate correlation with specific conductivity measurements. No other apparent correlations are visually evident in the data.

TABLE XI

GEOCHEMICAL ANALYSIS OF DRILL HOLE WATERS

JOVE PROPERTY

	pH	Spec. Cond.	Rn (camp) pc/l	Rn (lab) pc/l	U ppb	Mn ppm	Fe ppm	Ca ppm	Na ppm	K ppm	Cl ppm	HCO_3 ppm	PO_4 ppb	SO_4 ppb	Ra pc/l	SiO ppm
79-J-3	6.1	73	383		22.6											
79-J-6	6.5	86	9		5.2											
79-J-7	6.1	50	23429		79.0											
80-J-1	6.2	210	1536	19730	361.0	0.37	13.6	16.2	11.0	36.7	41.7	NIL	160	2	4.0	26.9
80-J-2	6.5	25	250	943	27.0	0.05	1.2	3.0	4.5	1.8	NIL	NIL	140	2	12	55.5
80-J-4	5.8	340	39	90	212	0.25	5.2	10.8	11.0	75.6	90.3	NIL	500	2	4	30.5
80-J-5	6.6	140	57	303	72	0.12	3.1	8.1	8.0	28.6	26.0	NIL	200	2	1	40.0
80-J-6	6.2	390	117	356	112	0.44	6.8	37.0	14.3	52.4	149.4	NIL	80	2	92	43.5
80-J-7	6.7	210	709	2635	243	0.25	4.2	13.2	15.3	72.0	83.4	NIL	200	2	3	22.9
80-J-8	6.7	290	585	3568	231	0.16	3.5	13.0	11.0	68.8	76.6	NIL	60	2	2	34.5
20-J-10	6.5	200	446	2398	85	0.6	10.1	15.1	13.2	31.6	59.1	NIL	80	2	1	29.5

(f) Discussion

All drill hole logs, sections and downhole probe results can be found in the Appendix to this report.

The significance of the data obtained by diamond drilling the JOVE property in 1980 is summarized as follows:

- The strong uranium-in-soil anomaly present on the JOVE-1 grid is underlain by a weakly mineralized structural system. The source of the uranium in the soils as well as that present in the underlying structure is considered to be primarily due to the uranium precipitating out from groundwaters flowing through the structural system. The possibility exists that the primary source of the uranium could simply be labile uranium in the granite, with the uranium being carried in solution with phosphate and being precipitated by contact with calcium associated with the shear zones (MNR79-1 by D. Scott).

- The structural zone controlling the deposition of the autunite present in JOVE-2 area is open to the north and to the south. It is characterized by a north trending, foliated, mylonitic, fractured quartz monzonite. The autunite in this zone between 27+00N and 30+00N is very low and cannot be considered to be of economic importance. Furthermore, the autunite appears to be restricted to a vertical depth of approximately 50 metres.

- Alteration of the quartz monzonite is due to circulating groundwaters. There is no evidence to suggest widespread, classic hydrothermal alteration has taken place (MNR79-1, Pg. 5).

- The source of the autunite zone located in the JOVE-2 grid is considered to be the uraniferous groundwaters that flow through the structural system. The primary source for the uranium is interpreted to be deep in the mountain, north of 34+00N.

- The mineralized fractures intersected by diamond drilling appear to correlate with the radiometric anomalies identified on surface in the central portions of the trenches. However, the radioactivity present on the east limb of the trenches in JOVE-2S are not related to mineralized fractures in the underlying bedrock.

- The 1980 diamond drilling did not penetrate far into the unweathered bedrock in most instances as the 1979 drilling indicated mineralization was restricted to structures in the weathered quartz monzonite and not in the fresh unit even though the same structures transgressed both rock types.

3.3 JOVE-5 Grid (Anomaly 115N9-3)

3.3.1 Introduction

The stream waters draining anomaly 115N9-3 (see Figure 7b) were found to be anomalous in uranium during the 1977 field season and confirmed by work in 1979. The initial step in 1980 was to systematically sample the stream at 150m intervals, locate the point at which uranium is introduced to the system and establish a grid, slightly upstream from that point.

Follow-up grid work consisted of detailed radiometrics (stations every 10m on lines 25m apart) followed by soil sampling and alpha meter readings over radiometric anomalies. Waters were sampled where available on the grid. All survey results were to be evaluated with respect to results observed on JOVE-1 and JOVE-2 grids.

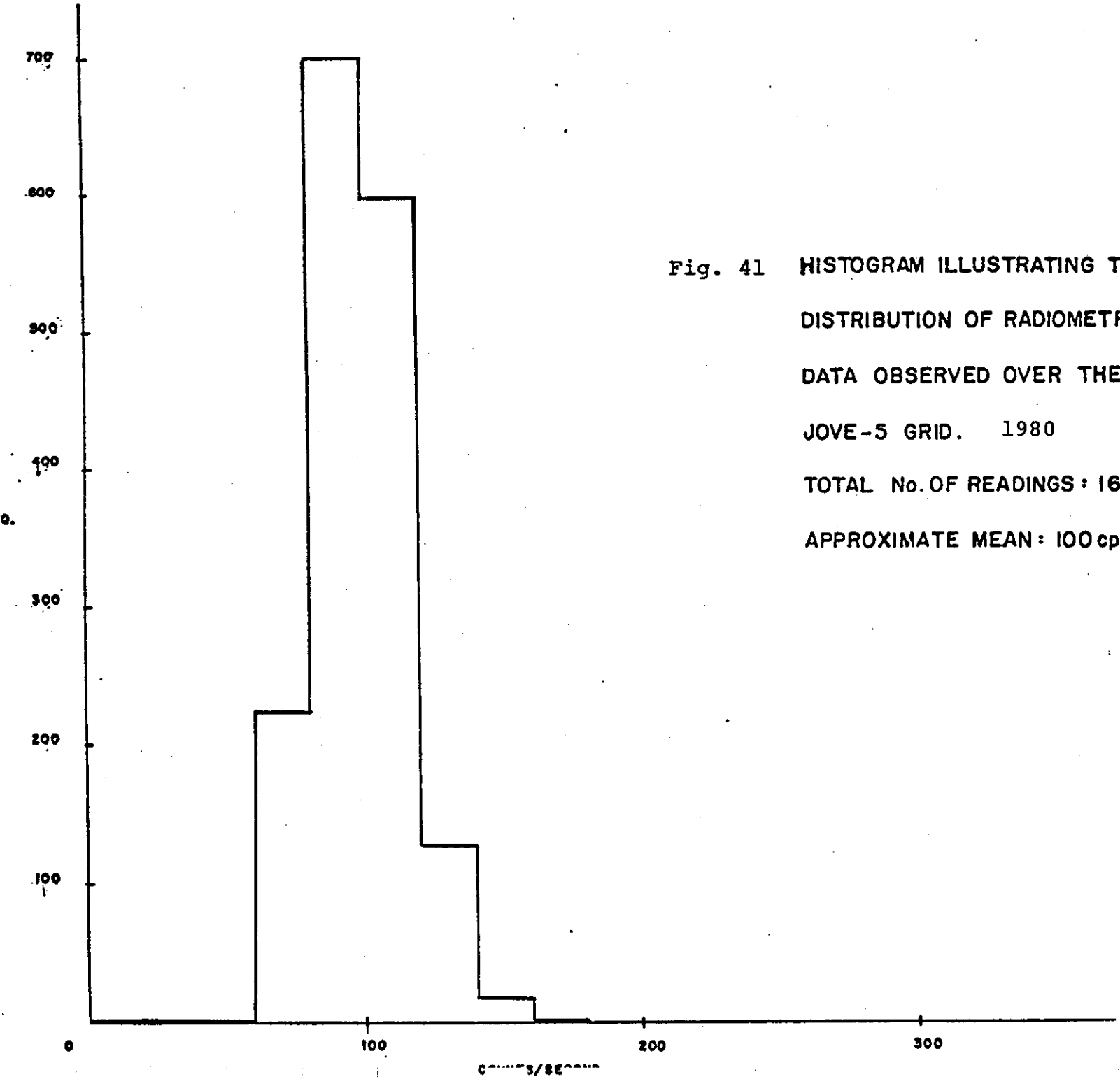


Fig. 41 HISTOGRAM ILLUSTRATING THE DISTRIBUTION OF RADIOMETRIC DATA OBSERVED OVER THE JOVE-5 GRID. 1980

TOTAL No. OF READINGS : 1670

APPROXIMATE MEAN : 100 cps

3.3.2 Radiometrics

The radiometric response over JOVE-5 grid is presented in contour form as Figure 40. A histogram of the same data is illustrated by Figure 41. The mean value for the scintillometer readings lies between 80 cps and 100 cps. The histogram indicates a near normal distribution to the data with values above 160 cps considered anomalous.

3.3.3 Soil Geochemistry

Areas to be covered by soil sampling were determined by the results of the radiometric survey. As no definite radiometric anomaly was outlined on the JOVE-5 grid, the soils were taken from an area with a background response that was above the average for the area. The results from the analysis of the soils is presented as Figure 42.

The background uranium content for the soils is estimated at 4.0 ppm. Values over 9.0 ppm U are considered to be anomalous. A uranium-in-soil anomaly is located along baseline 10+00W at 48+00W. Analytical data shows the uranium content of these soils to be 13.0 to 25.0 ppm. The anomaly is 50m wide, and at least 150m long. It is open to the north as well as to the south.

3.3.4 Soil Gas Geochemistry

Alpha meters were placed at each soil sample location. The results are presented as Figure 43.

The average response of the alpha meters on the grid was in the 50 to 75 cph range. Measurements greater than 100 cph are estimated to be anomalous. On JOVE-1 and JOVE-2, 100 cph represents the lower 25% of the results. Either radon is not being generated on JOVE-5 or some chemical/physical barrier exists to prevent radon from easily getting to the surficial environment.

The contoured alpha meter results (Figure 43) show several spot anomalies exist on the JOVE-5 grid. None are considered to be significant and all are probably related to local drainage patterns. There does not appear to be any definite correlation between the alpha meter results and the uranium-in-soil data nor is there any relationship between the alpha meter measurements and the radiometric data. The apparent correlation between the alpha meter data and soil data on the east side of the grid is attributed to uraniferous and radoniferous waters flowing out of the hillside at that location. This is substantiated by Figure 44 which indicates a water obtained 50m downstream from this location is anomalous in radon (837 pc/l) and uranium (2.7 ppm).

3.3.5 Water Geochemistry

The analytical results of the water samples collected on the JOVE-5 grid are presented as Figure 44. Most seeps occur in close proximity to the main stream.

The pH of water on the grid is remarkably consistent at 5.0 to 5.9. Similarly, the specific conductivity measurements have little variance as the maximum and minimum values 34 and 13 micromohs/cm respectively were recorded. High variations in radon content are present (5 to 1458 pc/l) and uranium values are similarly variable (0.15 to 12.6 ppb). The highest radon values (1458 and 2531 pc/l) were recorded in waters from the main stream at the west side of the grid. They indicate a radon source is located upstream, west of the last sample taken. Two samples with uranium content greater than 10.0 ppb were obtained from seeps rather than the main stream. Both seeps are located north of the main creek. One is at 48+50N, 9 90W, the other is at 52+50N, 8+75W. The first location corresponds to the previously described soil anomaly. The second lies in an area not covered by soil sampling.

3.3.6 Summation

Detailed geological mapping of the JOVE-5 grid was not included in the final program approved by the Management Committee in early 1980 as the primary objective was to observe the radiometric and geochemical response of the grid and compare it to that observed on JOVE-1 and JOVE-2. While these surveys were undertaken, observations by the field crew indicated the grid is underlain primarily by quartz monzonite with secondary muscovite present. Pegmatite dykes are reported as is xenolithic material consisting of Pelly Gneiss. Although a definitive distribution of these rock types on the JOVE-5 grid is unknown, the interpretation based on information gathered during traverses in previous seasons in the geological environment at JOVE-5 is similar to that observed at JOVE-1 and JOVE-2.

The uranium-in-water values plus the moderate uranium-in-soil anomaly suggest the source of the cutoff in uranium in the silts and waters that define anomaly 115N9-3 has been located. The high radon values observed on the upstream side of the grid suggest that radon is emanating from waters flowing from that direction. The magnitude of all geochem values combined with the low radiometric response and the apparent similarity of the terrane with the geology of JOVE-1 and JOVE-2 diminish the potential of a uranium deposit present on the JOVE-5 grid.

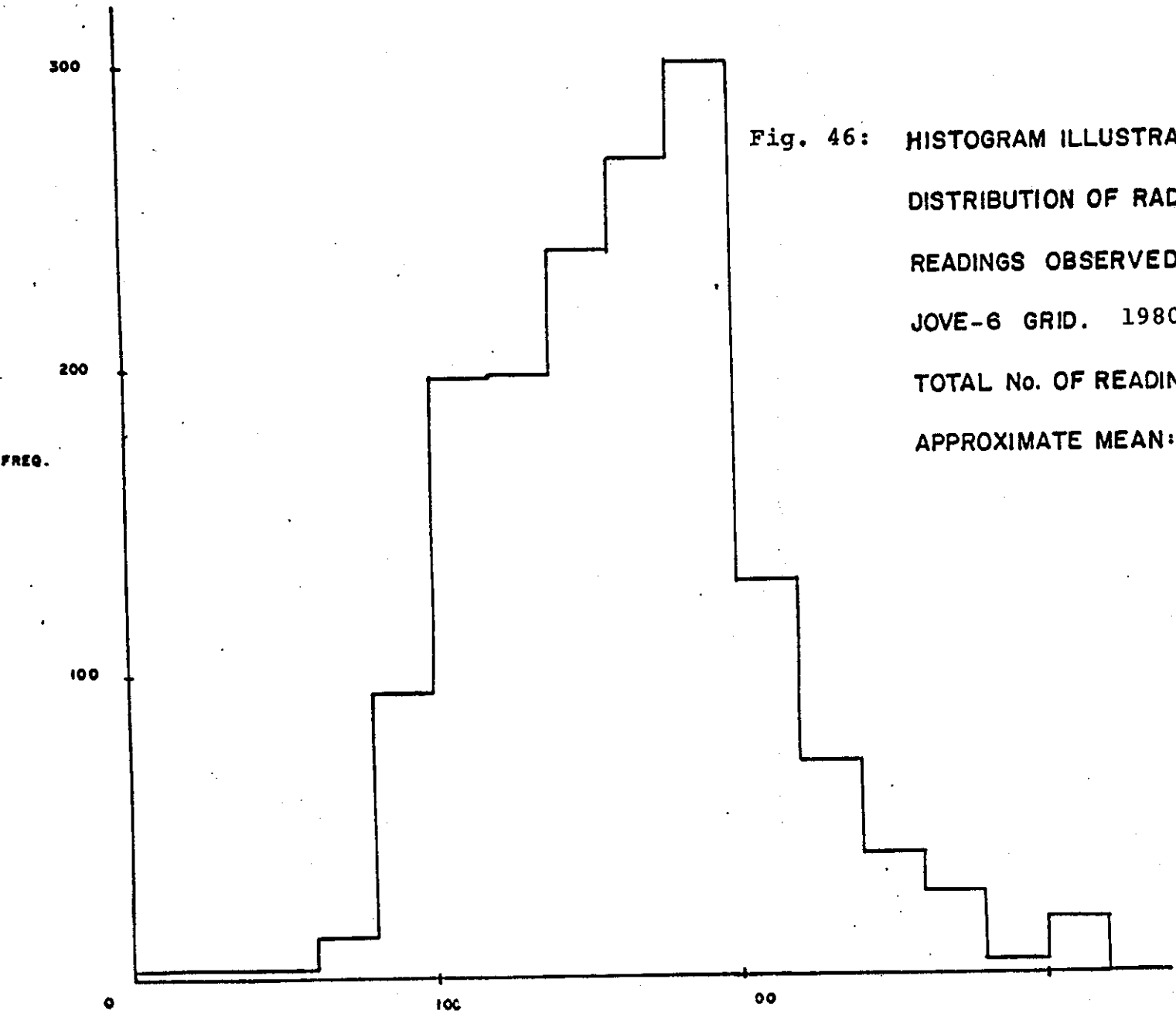


Fig. 46: HISTOGRAM ILLUSTRATING THE DISTRIBUTION OF RADIOMETRIC READINGS OBSERVED OVER THE JOVE-6 GRID. 1980

TOTAL No. OF READINGS: 1302

APPROXIMATE MEAN: 150 cps

3.4 JOVE-6 Grid (Anomaly 115N16-1)

3.4.1 Introduction

The steps and criteria explained for the work on JOVE-5 are the same for JOVE-6, namely a stream anomaly was found and confirmed in 1977 and 1979, detailed stream sampling was done early in 1980 and a grid was established over the area where a cutoff in uranium values was observed in the stream data.

Field work in 1980 consisted of detailed radiometrics (10m stations on lines 25m apart), soil sampling and alpha meter readings of radiometric anomalies along with sampling of seeps found on the grid. All results were to be evaluated with respect to data obtained from the JOVE-1 and JOVE-2 grids.

3.4.2 Radiometrics

Figures 45 and 46 illustrate the contoured radiometric data and the radiometric histogram respectively for the scintillometer work done on the JOVE-6 grid in 1980. The mean radiometric response for the grid is between 160 and 180 cps as compared with 100 to 110 cps for the main JOVE property. The average radioactivity is attributed to a much lighter soil cover than is present on the main JOVE property.

The survey on JOVE-6 was focussed in 2 areas, one north of the stream, the other south of the stream due to the occurrence of a 200m wide zone of alluvium separating the areas. Anomalous areas were observed in the extreme north end of the grid and in the south end as well. The major anomaly consists of an area bounded by 85+00N and 87+00N between 53+00W and 55+00W. Values are in excess of 500 cps and tend to follow a northwest trending pattern. The second anomaly is located between 76 50N and 78+00N bounded by 51+00W and 52+00W. The values are of the same magnitude as in the previously described anomaly, however, the areal extent is approximately half the size.

3.4.3 Soil Geochemistry

The radiometric anomaly located in the southern half of the grid lies over a felsenmeer-covered slope. No soils were available for sampling in this location. Although the radiometric data outlined 2 areas of distinct radioactivity, time constraints limited sampling to the northernmost anomaly, considered to be the better of the two.

The estimated average uranium content of the soils obtained from the JOVE-6 grid (5.0 ppm) is almost twice that observed in data from the JOVE-1 and JOVE-2 areas (3.0 ppm). However, the variance in soil values from JOVE-6 is considerably less with extreme values being 1.0 and 17.0 ppm U whereas on the JOVE-1 and -2 extreme values are 0.5 to 1000 ppm U. Therefore, on a comparative basis, the soil geochemistry carried out on JOVE-6 failed to outline any significant anomalies.

3.4.4 Soil Gas Geochemistry

The north half of the grid was covered by alpha meters as the absence of soil cover on the south half restricted the number of available stations. The data from this survey is presented in contour form as Figure 46.

The mean value from the alpha meter survey is approximated and lies between 200 and 300 cph. Values in excess of 1000 cph are considered to be anomalous based on observations made at JOVE-1 and JOVE-2 (see page 43 of this report). Using that criteria, there are several spot anomalies on the grid. The highest alpha meter reading was taken at 82+50N, 52+00W and had a value of 56,021 counts per hour. There is no corresponding radiometric anomaly associated with this station but there is a radoniferous seep located 150m away on an azimuth of 022°.

3.4.5 Water Geochemistry

A very dry season limited the number of seeps that could be sampled on JOVE-6. Sampling was also restricted only to the north grid where alpha meter results indicated anomalous amounts of radon as previously mentioned, time constraints did not permit sampling on the south grid. The analytical results of these waters are plotted on Figure 49.

The pH value of the waters is much higher (7.5-8.2) than is usual for the JOVE area (5.0-6.0). Specific conductivity measurements remain average (10-20). The uranium content of the waters is remarkably constant at 0.2 ppb whereas the radon content averages between 12 and 158 pc/l with the exception of one sample that returned a value of 50,250 pc/l. Although time did not permit resampling of this location, our experience with the RE 279 radon counter has shown analytical errors of this magnitude cannot be expected. It is interpreted that the 50,250 pc/l value is valid.

3.4.6 Summation

As was the case for JOVE-5, detailed geological mapping of the JOVE-6 grid was not included in the final program approved by the Management Committee in early 1980.

Observations by field personnel in 1980 as well as those recorded in previous seasons indicate the terrane of JOVE-6 consists of quartz monzonite intermixed with Pelly Gneiss. Secondary muscovite has been observed in the quartz monzonite. A difference between the JOVE-6 and the JOVE-1 and -2 terrane is the amount of Pelly Gneiss present on the grids. JOVE-6 consists of close to 50% Pelly Gneiss while the JOVE-1 and -2 areas are covered by approximately 10% Pelly Gneiss. This is interpreted to mean JOVE-6 is located close to the edge of the intrusive body whereas JOVE-1 and -2 are located closer to the center.

The radiometric data gathered from JOVE-6 in 1980 is on the average, higher than that observed over JOVE-1 and -2 grids (see Figure 10b and Figure 46 for comparison). The radiometric response observed in the trenches on JOVE-1 and -2 resembles that present on JOVE-6 implying the poor soil cover observed on the south half of the JOVE-6 grid is largely responsible for the higher radiometric data on the grid. The one water sample that returned a very high radon value suggests the radiometric readings may be due to a build-up of radon daughter products as was interpreted for the JOVE-1 and -2 grids. The lack of uranium present in the soil and waters seems to support this theory. The low geochemical response observed on the JOVE-6 grid combined with the apparent similar geological environment as is present on the JOVE-1 and -2 grids diminishes the potential of a uranium deposit occurring on JOVE-6.

IV DISCUSSION OF RESULTS

4.1 JOVE-1 and -2 Grids

The geochemistry of the streams that are peripheral to the JOVE-1 and -2 grids indicates anomalous amounts of uranium are present in both the silts and waters in those drainages. The most significant influx of uranium occurs at points related to the JOVE-1 and JOVE-2 grids. The stream geochemistry results suggest additional sources of uranium, other than the JOVE-1 and JOVE-2 anomalies may exist in the area. Only additional follow-up work will reveal whether or not these other anomalies actually are significant.

The radiometric response observed over the JOVE-1 and -2 grids do not reflect the uranium content of soils. This radioactivity is felt to be primarily due to radon gas and its daughter products as most radioactive seeps sampled also contain significant amounts of radon.

Radon values of waters obtained from the southern half of the JOVE-1 and -2 grids tended to be extremely anomalous whereas those obtained from the northern half of the grids had significantly lower radon contents. This difference is attributed to the former waters representing groundwater seeps while the latter represent surface or near-surface water flowage. Waters from the groundwater table are assumed to have flowed through a radoniferous source while surface or near-surface flowage is interpreted to have flowed over a radon source. The resultant is groundwaters are expected to have a radon content several magnitudes higher than surface or near-surface waters. In the latter instance, the radon content will only reflect that radon which was able to diffuse to the surface environment and be taken into solution.

The sporadic results obtained with the alpha meters on the JOVE property are a reflection on the fluctuations of radon emanation due to physical parameters such as air pressure, etc. rather than on the limitations of the instruments. In most instances measurements were repeatable at selected sites. The survey did reveal excessive quantities of radon gas are present and thus detectable at the surface in specific areas of the property. The alpha meters are best utilized in close association with the radon-in-water determinations otherwise their results are difficult to interpret.

Soil samples from the "Inverted T" area did not produce any new soil anomalies on the property. Essentially the results from this part of the program indicated there are no "missed" anomalies located between the central and eastern zones. Nor did either of the two main anomalies extend south beyond Glazy Creek.

Mapping, trenching and drilling of the main JOVE property has provided considerable data on the JOVE-1 and -2 grid areas. The following interpretations are based upon the data to date.

There is little evidence to support any classic hydrothermal alteration of the JOVE property - namely the alteration of wall rock by the reaction of hydrothermal water with pre-existing solids (Dr. Scott personal communication). However, deuteric alteration as represented by secondary muscovite, myrmekite development and the apparent replacement of plagioclase by K-feldspar, has occurred in the terrane around and including the JOVE property. Furthermore, the biotite observed in fresh quartz monzonite has been partially or severely chloritized with some hairline fractures completely chloritized. Deer, Howie and Zussman (An Introduction to the Rock Forming Minerals, pg. 239) states "Chlorite is a common product of the hydrothermal alteration of pyroxenes, amphiboles and biotite in igneous rocks". Therefore, it can be stated some low temperature, hydrothermal activity has inundated the JOVE property.

The K/Ar date of approximately 100 m.y.b.p. of "leucocratic sill material" as defined by Tempelman-Kluit and Wanless actually dates the last significant "thermal" event for the area as opposed to establishing an age for the intrusion. Combined with later uranium/lead isotope work on zircon which established an older age of 375 m.y.b.p., these dates suggest the intrusion at JOVE is early Devonian in age but underwent a thermal event approximately 100 m.y. ago. This event probably included a partial melting of the Devonian complex thereby creating a "younger" quartz monzonite and associated pegmatitic and aplitic dykes. The question at this point is "If the Devonian complex was enriched in uranium, what happened to this uranium during the recrystallization processes?" There are two possibilities:

(1) The uranium was remobilized and flushed out of the system.

(2) The uranium was remobilized and trapped in a pre-existing structuring.

The apparent depletion (1.0-2.0ppm U vs 4.0-6.0 ppm U for world averages) in uranium of the quartz monzonite as indicated by the geochemical analysis of drill core suggests that labile uranium has been leached from the weathered rock and possibly remobilized.

R.A. Price and R.J. Douglas note in "Variations in Tectonic Styles in Canada" (Pg. 54) "Most of the plutons in the Omenica Belt are post-tectonic..." This infers major structural features were present prior to the event of 100 m.y. ago which is thought to have remobilized the uranium emplaced in Devonian time. The remobilized uranium therefore may have moved along structural channelways possibly to a site possessing chemical and/or physical conditions favourable for precipitation of primary uranium mineralization.

Massive and faulted/foliated varieties of quartz monzonite suggest the intrusive developed during the period of tectonic activity and continued to develop once the activity was complete.

Approximately 40 miles northeast of the JOVE property lies the Tintina Trench - a right lateral transcurrent fault system that developed in the Jurassic-Cretaceous time period. The trend of the Tintina Trench is to the northwest. A right-hand movement in that direction would create a maximum pressure imparted to the JOVE area from the southeast. The structural analysis of fractures and joints measured on JOVE (Figure 9) indicates their formation is related to pressure from the southeast and are interpreted to be a result of the regional stress imparted when the Tintina Trench formed or possibly related to a period of later rejuvenation.

The crushed/shatter zone exposed in the JOVE trenches and intersected by diamond drilling is interpreted to be related to northeast trending structures and is a conduit carrying uraniferous solutions.

Another consideration is that the area has been exposed to weathering processes for at least 5 m.y. and has not undergone any glaciation, it would be reasonable to expect that if any primary uranium mineralization had existed on surface it would have been significantly leached during that period. Should any residual primary mineralization be present, it would be expected to lie below the paleo water table.

The autunite zone, as defined by diamond drilling, is located within bedrock that has been altered by groundwater movement. The effect of groundwater as interpreted by the presence of limonite on fractures in the quartz monzonite extends to a depth of 50m below the surface. The fractures extend to greater depths in the major shear zone. Autunite appears as a coating on fractures, is not interstitial to mineral grains and it is not present below the water table even though fracture systems do extend to lower depths (MNR79-1). Scott also interprets that due to the lack of alteration, autunite must have been transported to its present location as opposed to forming in situ from the weathering of primary mineralization. Also, in trench JT-11, the material filling the radioactive fractures exposed in the trench have in excess of 200 ppm U. Here the uranium is associated with the iron oxides which are present as grain coatings and may have acted as scavengers and trapped some of the uranium from the groundwater flowing through the system. The geochemistry of the bulk water samples shows a good correlation between the iron content and uranium content of the samples and supports this hypothesis.

A scenario describing the development of uranium on the JOVE property is as follows:

(1) The evolution of a Devonian granite which is considered to be the provenance for the uranium on JOVE.

(2) The development of a regional structural fabric during early Cretaceous.

(3) The melting of the Devonian complex by a magma chamber released with the tectonic activity in the area (100 m.y.a.).

(4) The liberation of uranium from the Devonian complex by a thermal event (step 3) dated 100 m.y. ago and migration of uraniferous solutions along structural conduits.

(5) The quartz monzonite solidifies from a melt now depleted in uranium.

(6) Circulating groundwaters remobilize the concentrated uranium and transport it laterally along the structures.

(7) The development of autunite above the present day water table from the groundwater as the water table is depressed.

(8) The development of uranium-in-soil anomalies from uraniferous waters flowing out into the surficial environment as seeps.

4.2 JOVE-5 Grid

The detailed stream traverses along anomaly 115N9-3 were successful in locating a point at which an increase in the uranium content of silts and waters is observed. Work done in 1980 was centered near this point (JOVE-5 grid). The lack of a strong radiometric response combined with the absence of any significant uraniumin-soil anomalies did not enhance the property. The high radon content of waters flowing into the west side of the grid suggest a possible source to the west.

4.3 JOVE-6 Grid

The detailed stream sampling of anomaly 115N16-1 located a point at which a sharp influx of uranium into the geochemical environment is observed. The work on JOVE-6 located a possible area of provenance for the uranium.

The radiometric response of the terrane on JOVE-6 is on the average higher than that observed anywhere else on the JOVE property. The lack of significant soil anomalies plus the presence of large amounts of radon in waters suggest the radiometric response is reflecting the radon anomaly as opposed to uranium mineralization. In this respect, JOVE-6 is considered to be similar to the JOVE-1 and JOVE-2 grids. No in situ primary mineralization was identified on the JOVE-6 grid.

4.4 General

Work on the project during 1980 has indicated large amounts of uranium are present in the geochemical environment in and around the JOVE property. The purpose of the field work was to examine the economic potential of the autunite zone discovered in 1979 and to locate a possible uphill source for the uranium. The autunite zone located on the JOVE property in 1979 was thoroughly investigated in 1980 with discouraging results. Although the soil anomalies on JOVE-2 are interpreted to be an extension of the autunite zone, the two holes drilled at the apparent cutoff point of the radiometric anomalies in trenches failed to detect primary uranium mineralization at depth but succeeded in intersecting the structural zone that is considered to be carrying the uraniferous waters.

The possibility that primary mineralization may be present at depth uphill from the autunite still exists, however the results have severely diminished this possibility and suggest that the uranium is too deep to be economically viable.

It is interpreted that another source for the uranium at JOVE is the leaching of the quartz monzonite by regional groundwaters. Structures cutting the intrusion act as conduits for the mobilization of uraniferous waters. From September to April of each year, this water is likely to be trapped in the ground as the near-surface environment is frozen during that time period. This period would allow time for appreciable amounts of uranium and radium to be brought into solution by the trapped water. During the summer months when the ground thaws, this water flows to the surface producing uraniferous seeps. The radium is also precipitated at these outlets thereby creating a source for the radon anomalies.

V CONCLUSIONS

The conclusions developed from the 1980 field program are presented in point form according to work areas.

5.1 JOVE-1 and JOVE-2 Grids

1: The best geochemical anomalies on the JOVE property correspond to the JOVE-1 and -2 grids.

2: The geochemistry of Glazy and West Creeks suggests other uranium sources are present on the JOVE property besides the anomalies on JOVE-1 and JOVE-2.

3: The soil anomalies on JOVE-1 and -2 are isolated anomalies and do not extend to the south bank of Glazy Creek.

4: The radiometric anomalies on the grids correspond to radon anomalies, suggesting the radiometrics are reflecting areas of radon emanation rather than uranium mineralization. The radon is believed to have developed from the radium that has concentrated where uraniferous seeps flow into the surficial environment.

5: The soil anomalies have developed as a result of uraniferous waters percolating through the soil horizons from structures in the underlying bedrock.

6: The autunite has formed where the shattered mylonitic zone merges with a porous fracture zone.

7: The autunite zone is of insufficient size and concentration to be of economic interest.

8: The ultimate source of the uranium found in both the autunite zone and the soil anomalies has yet to be determined. Technical evidence suggests either a source lies deeper in the hill and to the north of 34 00N, or the uranium has been derived from the in situ leaching of the quartz monzonite by circulating groundwaters.

5.2 JOVE-5 Grid

1: The source of anomaly 115N9-3 has yet to be located.

2: Water data suggests this source may lie upstream from the present grid location.

5.3 JOVE-6 Grid

1: The source for anomaly 115N16-1 has been located north (and possibly south) of the main stream.

2: The magnitude of the analytical data does not warrant further investigations to be carried out on the grid at this time.

5.4 General

1: Anomalous amounts of mobile uranium are present in the streams draining the JOVE area.

2: A possible location for an accumulation of this uranium lies 5 miles east of JOVE in the Tertiary Basin.

3: The 1980 work on JOVE-5, JOVE-6, and CRAG did not enhance any of the properties to the same level of significance as the main JOVE property.

4: Work carried out on MAT in 1980 produced results whose magnitudes are lower than those observed on JOVE-1 and JOVE-2 but when considered with respect to the clay content of soils from the property, are of sufficient value to warrant a further examination of the property.

5: Radiometric anomalies are due to the response of radium, radon and their daughter products and not to uranium mineralization. The radium is believed to have concentrated from water seepage during the summer months.

6: No primary uranium mineralization has been identified on surface or at depth on the JOVE property.

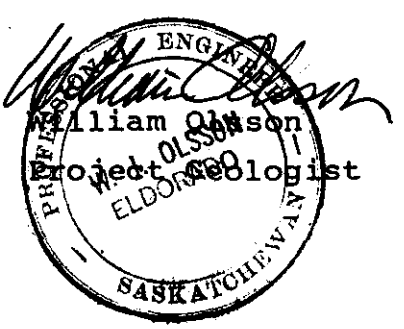
VI RECOMMENDATIONS

(1) An evaluation and testing of all potentially useful geophysical methods be done to determine which one(s) would best outline the structural zone on JOVE.

(2) If success is achieved with the geophysics, a deep diamond drilling program should be implemented to evaluate this structure at depth below the zone of influence of groundwater.

(3) If the drilling is successful, all other anomalies on JOVE and all other properties should be covered with the geophysics and subsequent targets should be drilled.

January 1981



William Olsson
Project Geologist

Office of the Supervising Mining Recorder
MAR 2 1981
WHITEHORSE
Yukon Territory

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DAWSON, Y.T.
I.A. & N.D.

PROJECT 522
APPENDIX TO FINAL REPORT
OF ACTIVITIES FOR 1980

090762

APPENDIX A

Diamond Drill Hole Logs and Sections

1980

EL DORADO
ELDORADO NUCLEAR LIMITED

DIP TESTS

METRES				DIP		LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL		CORR.		CUM.		CUM.
Collar	0.0	45.8	45.8		-55	26.11		37.56	
91.6	45.8	91.6	45.8		-58	24.27		38.93	
							50.38		76.49

LOCATION JOVE-2S
SECTION 30+00N
LATITUDE 40+25W
DEPARTURE
ELEVATION
CORE NQ
STORAGE Property

HOLE No. 522-80-26-J-1
AZIMUTH 292°
DIP -55
LENGTH 91.6m
PURPOSE Exploration
COMPLETED July 3, 1980
LOGGED BY W.J. Olsson

METRES FROM	METRES TO	DESCRIPTION
0.0	9.4	NAME: ORANGE TO BROWN QUARTZ-MONZONITE This interval represents boulders encountered in the overburden. Radioactivity is 180 cps/160 cps.
9.4	24.7	Casing - No core recovered.
24.7	52.5	Name: BADLY WEATHERED, FRACTURED AND FAULTED. ALTERED QUARTZ MONZONITE. Colour: White to cream with a brown tinge and spotted with grey. Hardness: 3-4 Composition: 45% plagioclase 5-10% biotite 25% K-feldspar 5-10% muscovite and accessories 10% quartz Texture: Medium-grained, equigranular. Pegmatitic veins at 30.7m, 32.3m, 39.9m. Structure: The unit is badly fractured. Major fault/fracture zones cut the core and are characterized by badly ground core. These are located at the following intervals: 27.9-28.2m, 32.2-32.3m, 33.8m, 36.9m, 41.4m, 46.1-46.5m, 49.0-52.5m. Several fracture patterns cut the core at various angles. They are (in order of prominence) at 40°, 60°, 30° and 90° to the core. The steep fractures are invariably tight while the shallow ones usually contain material such as stilbite or chlorite. Autunite appears to prefer fractures cutting the core at 40° or 60°.

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

Alteration: Feldspars have been altered to a chalky-cream/pinkish colour, especially in the vicinity of fractures. Areas of faulting are characterized by limonitic-stained fault gouge. The limonite has probably originated from the biotite which tends to be ringed by iron oxides. In places the biotite has been chloritized as well. Secondary muscovite is present throughout the unit as tiny to large euhedral flakes and books. Quartz grains tend to be smokey.

Mineralization: The core contains uranium mineralization in the form of autunite - a uranium phosphate hydrous mineral. The autunite is present mainly along fractures as euhedral lime green crystals or as a fine yellow-green powder. Autunite has a preference for the fractures cutting the core at 40° and at 60°.

Radioactivity: See downhole probe results.
Scinting of the core with an Urtec unit produced the following readings:

24.7-26.2	220/180	(highest reading/avg.)
26.2-27.2	230/190	
27.7-29.3	240/210	
29.3-30.8	280/220	
30.8-32.3	230/190	
32.3-33.8	250/180	
33.8-35.4	240/200	
35.4-36.9	230/180	
36.9-38.4	260/210	
38.4-39.9	300/210	
39.9-41.4	300/210	
41.4-42.7	860/240	
42.7-44.5	790/230	
44.5-46.0	420/250	
46.6-47.6	620/260	
47.6-49.0	380/220	
49.0-50.6	480/280	
50.6-52.5	502/250	

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	CORE SAMPLES TO	CORE SAMPLES WIDTH	CORE SAMPLES %	CORE SAMPLES AVERAGES

Loss of core: Core recovery for this unit is as follows:

0-24.7	5%
24.7-26.2	80%
26.2-27.7	80%
27.7-29.3	40%
29.3-30.8	80%
30.8-32.3	60%
32.3-33.8	90%
33.8-35.4	80%
35.4-36.9	100%
36.9-38.4	100%
38.4-39.9	100%
39.9-41.4	90%
41.4-42.7	70%
42.7-46.0	100%
46.0-47.5	20%
47.5-49.1	100%
49.1-50.6	80%
50.6-52.5	40%

24.7-26.2m: The core is very friable - resembles coarse sand and probably represents the lower C horizon (weathered bedrock) rather than a fault zone.

26.2-30.8m: The core is friable but competent. The unit is unfoliated, and has a minor amount of limonite stain in it. Fracturing tends to be 40° and 60° to the core. Minor traces of autunite are present. A pegmatite vein is present at 27.7m and has some minor mineralization associated with it. Some medium to dark brown clay material coats a fracture at 30.8m. Some autunite is present with thin gouge-like material.

30.8-32.2m: Finer grained quartz monzonite containing secondary muscovite with zones high in feldspar content. The muscovite is up to 1cm in size. Limonite stain surrounds the biotite.

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	CORE SAMPLES TO	CORE SAMPLES WIDTH	CORE SAMPLES %	CORE SAMPLES AVERAGES
		32.2-32.3m: Coarse-grained pegmatite vein - badly broken. Feldspar crystals are up to 3cm in size and are accompanied by large books of muscovite.					
		32.3-33.8m: Weathered quartz monzonite with a tight fractured zone cutting the core at 90° from 32.8 to 33.0m.					
		33.8-35.4m: Medium-grained quartz monzonite with autunite on fractures at 34.2m. These fractures cut the core at 40°. A friable vein of pegmatite lies at 35.1m. A series of fractures lying 30°, 40° and 60° to the core transect the unit from 35.0 to 35.4m.					
		35.4-36.9m: Competent quartz monzonite similar to above. Contains a fracture zone 40-50° to the core at 35.8m.					
		36.9-41.4m: The quartz monzonite is fairly competent, transected by several fractures coated in autunite. The dominant pattern lies at 30° to the core while another lies at 60°. A tight gouge-filled fracture lies at 40° to the core at 39.5m. The thickness is 1/2cm and specks of autunite are visible. A 5cm thick pegmatite vein lies at 40.2m. Chlorite appears in fractures at 40.0m and below that point the biotite is extensively chloritized. Badly broken/ground core is present at 41.4m.					
		41.4-41.7m: Weathered, fractured quartz monzonite. Brown gouge fills a fracture lying at 40° to the core. Some autunite is present. Broken core is present for 15cm past the fracture on the downhole side. Specks of autunite are visible on the pieces of rock in this interval.					
		41.7-42.7m: Very badly broken core with gouge-like material present. Limonitic stain coats most pieces beginning at 42.3m. Autunite is present on most fractures and appears to be disseminated in some pieces.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	CORE SAMPLES TO	CORE SAMPLES WIDTH	CORE SAMPLES %	CORE SAMPLES AVERAGES

42.7-44.5m: The core is broken and coated with autunite. The feldspars are pink/orange in colour and in places can be coarse-grained - surrounding the quartz grains present. Secondary muscovite is present in this section and manganese and hematite staining is evident at the end of this section.

44.5-46.1m: Medium to coarse-grained quartz monzonite with minor traces of autunite on fractures cutting the core at 50° and at 70°.

46.1-49.0m: The unit consists of quartz monzonite with pink feldspar similar to the 42.7-44.5m section. Fractures are coated with orange mud and autunite. Some pale green chlorite is present and garnets appear at 48.9m. Fractures with a high amount of autunite are located from 46.1 to 46.5m. Those appearing between 46.5 and 49.0m contain only traces of mineralization.

49.0-52.5m: This section represents a major fault zone and is characterized by badly broken core that is brown in colour and very friable. Autunite is present on broken pieces between 52.1 and 52.3m. No brown/orange stain is evident with this autunite zone.
Some gouge is present from 52.3 to 52.5m and is hematitic and limonitic with traces of autunite.

General Comment:

The highest radioactive zones correspond to the sections of core with the poorest recovery.

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
52.5	91.6						

Name: QUARTZ MONZONITE.

Colour: White to cream grey.

Hardness: 6-7

Composition: 40% plagioclase 5-10% biotite
30% K-feldspar 0-5% muscovite
20% quartz

Texture: Medium-grained.

Structure: A crude foliation cuts the core at 40° and is defined by the orientation of biotite and the elongation of quartz grains. Compared to the previous unit, this unit is more competent. However, fracture patterns are present with the intense zones as follows:

53.8-53.9m	62.8m	69.0-70.2m
54.7-55.2m	68.5-68.6m	70.3-70.6m
56.0-56.2m	68.9-69.0m	70.9-80.0m

These fracture patterns cut the core at 60°, 30°, 80° and 40°. Generally these zones are void of any secondary material. There is gouge present at 53.9m, 54.8-55.0m, 56.0-56.2m, 58.2m and 59.2m. Pegmatite zones are present at 55.7-55.8m, 56.0-56.3m, 63.1-63.2m, 67.3-67.4m, 68.7-69.0m, 80.5-80.9m, 88.6-88.7m.

Alteration: The unit has undergone some alteration processes. The feldspar is a white to cream colour in the vicinity of fractures and fault zones. Generally the biotite is fresh with local signs of chloritization. In fault zones there is some minor limonitic colours surrounding biotite. A few spots of autunite have been observed on fractures to the 60m mark (see mineralization).
Secondary muscovite is present throughout the unit.

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

Mineralization: Uranium is present in the form of autunite down to the 60.0m level. Significant amounts of autunite are present at 54.6-54.9m, 56.0-56.2m, 58.2-58.4m, 67.3-67.4m. These zones correspond to some of the fracture/fault zones described previously.

Radioactivity: (See downhole probe results).
Scint values of the core taken using an Urtec unit are as follows:

52.5-53.6m	260/180
53.6-55.2m	250/180
55.2-56.6m	280/200
56.6-58.2m	260/210
58.2-59.7m	450/200
59.7-61.2m	230/180
61.2-62.8m	180/160
62.8-64.3m	205/170
64.3-65.8m	195/180
65.8-67.4m	190/170
67.4-68.4m	180/160
68.4-91.6m	180/150

Loss of core: Generally recovery of core stood at 90-100% for the interval. However, the following intervals are below the norm:

53.6-55.2m	60%
56.0-56.6m	40%

52.5-53.6m: This interval is a poorly foliated quartz monzonite with fractures at 52.6m cutting the core at 20°. Pink stilbite fills these fractures.
Fractures lying 30° to the core transect at 53.0m. The feldspar adjacent to these fractures is white/pink in colour up to 3cm from the fractures. Chlorite (dark green variety) is present in the fractures. The unit is very altered and broken at 53.6m and is cut by fractures lying 60° to the core.

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		53.6-55.2m: Quartz monzonite with the biotite partially altered to chlorite. A trace of limonite trims some of the biotite. Feldspars are pink/orange at 59.6m and are accompanied by a zone of broken, reddish orange core ⇒ fault zone. Autunite coats fractures lying 20° to the core.					
		55.2-56.5m: Altered quartz monzonite with fractures lying 10° to the core at 55.3m. Fractures are filled with pink stilbite with some specks of autunite visible. A minor amount of limonite is present on fractures as well. These fractures are intersected by a set lying 30° to the core and contains the same material. A small, unmineralized pegmatite is present at 55.7-55.8m. From 56.0 to 56.2m lies a coarse, broken pegmatite zone that is mineralized with autunite. The autunite is present on the uphole side of the dike but not on the downhole side. The core is relatively fresh-looking on the downhole side. Chloritization of the biotite has taken place.					
		56.5-56.6m: Unmineralized pegmatite.					
		56.6-58.2m: Chloritized quartz monzonite. Locally the feldspars are pinkish in colour - usually in proximity to fractures that are filled with pale green chlorite. Fractures are 70-90° to the core.					
		58.2-59.7m: Foliated quartz monzonite with fractures 70° to the core at 58.2-58.4m. Feldspars adjacent to these fractures are pink to white. Limonite is present on all fractures that cut the core at 30°. There is a minor trace of autunite present. In some instances the feldspar grains are well rounded ⇒ porphyroclasts from very old fault movement.					
		59.7-65.0m: Fresh quartz monzonite with a weak foliation present. Small fractures are accompanied by bleached zones and muscovite is present throughout. Clean fractures cut the core at 30° and at 70°.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		65.0-69.0m: Quartz monzonite with the biotite moderately to intensely chloritized. There is a tendency for the feldspars to be rounded ⇒porphyroclasts. Fractures are 60-80° to the core. Chloritization begins sharply at 65.0m and terminates against a dyke of pegmatite at 69.0m that cuts the core at 40°.					
		69.0-73.5m: The feldspars are altered to a white colour in proximity to fractures. They have a porphyroclastic habit to them. Chlorite and stilbite fill the fractures.					
		73.5-91.6m: Competent quartz monzonite with a foliation defined by biotite and elongated quartz grains. It cuts the core at 40°. Chlorite is present in some fractures.					
		END OF HOLE					

DRI HO LOG

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DIP TESTS

METRES				DIP		LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL		CORR.		CUM.		CUM.
ollar	0	81.7	81.7		-55°	46.57		66.99	
							46.57		66.99

LOCATION JOVE 2 - South
SECTION 27+00N
LATITUDE 40+25W
DEPARTURE
ELEVATION
CORE NQ
STORAGE Property

HOLE No. 522-80-26-J-2
AZIMUTH 292°
DIP -55
LENGTH 81.7m
PURPOSE Exploration
COMPLETED July 5, 1980
LOGGED BY W.J. Olsson

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
0	21.0	NAME: WEATHERED QUARTZ MONZONITE					

Colour: brown to orange with grey spots

Hardness: 4 to 5

Composition: 40% plagioclase
30% k feldspar
20% quartz
5% biotite
5% muscovite

Texture: medium grained, subequigranular

Structure: The unit is badly broken. Fractures cut the core at 60° and at 90°. Core is ground 19.8-20.0.

Alteration: The feldspars are a rusty-brown colour. The biotite is moderatelv fresh with some evidence of chloritization. Chlorite coats some of the fractures. The feldspars have a "blacked" appearance in places.

Radioactivity: None

0.21-0 The section represents boulders present in the overburden. Loss of core = 95%.

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
20.1	68.9	Name: BADLY ALTERED QUARTZ MONZONITE Colour: White to grey with local tinges of pink, orange and green. Hardness: 3-5 Composition: 35% plagioclase 25% k-fleldpar 20% quartz 10-15% biotite 5-10% muscovite 0-57% accessories Texture: medium grained with zones of pemagtite as follows: 35.8-35.9, 39.0-39.2, 39.4-39.7, 41.3, 62.5-62.9, 63.9-64.1, 64.4-64.5, 69.2-69.5 Structure: The unit is cut by zones of faulting and fracturing. Faults are characterized by badly ground core and poor recover. These zones are as follows: 25.9-27.1, 30.7-30.8, 32.1-32.3, 39.9, 47.4-47.5, 48.6-49.1, 50.5-50.6, 58.2-58.5, 67.1-68.1. Zones of intense fracturing are as follows: 22.4-22.6, 23.3-23.5, 23.6-23.7, 27.6-28.0, 28.6-29.1, 29.5-29.8, 31.0-31.3, 32.4-33.2, 36.3-36.8, 47.4-47.5, 52.1-52.5, 53.4-53.6, 55.4-55.5, 56.8-56.9, 57.6-57.8, 59.7-59.9, 64.4-65.0, 68.3-68.9. This unit is more frectured below 43 m and the trend of the pattern is 40° or 90° to the core axis. Alteration: There is a bleached appearance to the core due to the alteration of feldspar. This is prominent in the vicinity of faults and fractures. There is a greenish tinge to the core - possibly due to sericitization. Most fractures are filled with stilbite. Feldspar also					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	CORE SAMPLES TO	CORE SAMPLES WIDTH	CORE SAMPLES %	CORE SAMPLES AVERAGES
		appears pink/orange near some fractures but not as intense as seen previously in other holes. Some minor limonite/hematitization is present in some fractures.					
		Loss of core: Generally the core is 90% recovered or greater except in the vicinity of fractures and faults where up to 60% loss of core was encountered.					
		Mineralization: Autunite is present on fractures at 33.0-33.2m plus along all radioactive fractures.					
		Radioactivity: (See downhole probe results). The background for the core is 110-120 cps. Zones higher than this are as follows: 33.1-33.2m (160 cps) 33.5-33.7m (170 cps) 35.4-35.5m (190 cps) 48.3-49.1m (150 cps) 50.9-51.1m (120 cps) Radioactivity is associated with fractures cutting the core at 60-80°. Of interest is 1cm of mud present with the zone 33.1-33.2m.					
		20.1-25.9m: This subunit consists of competent quartz monzonite with fractures at 60° or 20° to the core. A small zone of unconsolidated breccia is present at 23.5m associated with a 60° fracture.					
		25.9-27.1m: Fault zone consisting of ground core and sand.					
		27.1-29.3m: Fractured zone with pink alteration along fractures trending 80°, 60° or 30° to the core. Some green alteration of the feldspars centered about fractures - secondary muscovite is present as well. There is intense pink alteration along a 1cm thick fracture trending 80° to the core at 28.4m.					
		29.3-32.1m: Competent quartz monzonite.					
		32.1-32.3m: Fault zone - crushed rock and sand.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		32.3-30.9m: The quartz monzonite is white and is cut by several radioactive fractures as outlined above. These fractures are accompanied by green material - possibly sericite, chlorite and serpentine.					
		30.9-54.7m: The quartz monzonite is cut by pegmatite dykes as outlined earlier. These dykes cut the core at 30° and at 70°. The unit is fractured and in places faulted, but is not as friable as seen in other holes. Fracturing is moderate to minor between 30.9 and 43.0m but increases below 43.0m cutting the core at 40°, 90° and a few at 20°. The core is pale green to white in close proximity to faults and fractures which tend to be filled with stilbite and/or light green chlorite. Hematite is present at 40.1m and imparts an orange-red colour to the core. There appears to be green stilbite at 50.9-51.0m which is accompanied by traces of autunite.					
		54.7-58.2m: Competent quartz monzonite - altered as previously described.					
		58.2-58.5m: Fault zone with badly broken core and some hematite/limonite staining.					
		58.5-60.0m: Competent quartz monzonite with orange stained feldspar and some fracturing.					
		60.0-60.5m: A zone of pegmatite cuts the quartz monzonite. Feldspar crystals are up to 5cm. Books of biotite and muscovite are present. Hematite is present on the unit on the uphole side only of the pegmatite.					
		60.5-62.5m: Competent quartz monzonite with secondary muscovite. The feldspars have a porphyroclastic appearance to them.					
		62.5-63.0m: Coarse pegmatite.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		63.0-63.8m: Competent quartz monzonite with books of biotite up to 1cm across. Finely disseminated garnet (almandite) present. Limonite coats most of the biotite flakes.					
		63.8-64.7m: A fracture zone with green sericite/chlorite coating the surfaces. The feldspars are orange-pink in colour and are cut by the 40° fractures. A small section of pegmatite cuts the core at 64.2 to 64.4m.					
		64.7-67.4m: Competent quartz monzonite with white to pink coloured feldspars. Fractures at 66.3-66.4m are coated with stilbite while those between 67.0 and 67.4m cut the core at 60° and 40°, are intersecting each other and are coated with chlorite/sericite.					
		67.4-68.1m: Fault zone consists of badly ground core.					
		68.1-68.9m: Badly fractured quartz monzonite probably related to the preceeding fault. The fractures are coated with green chlorite and pink to white stilbite.					
68.9	74.7	Name: QUARTZ MONZONITE.					
		Colour: Grey to white.					
		Hardness: 5-7					
		Composition: 40% plagioclase, 30% K-feldspar, 20% quartz, 5-10% biotite, 5% muscovite					
		Texture: Medium to coarse-grained with quartz larger than feldspar.					
		Structure: The unit is competent with few fractures present. A fault is present at 70.4m while other fractures cut the core at 30° and 40°.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		Alteration: Feldspars tend to be bleached around fractures. Biotite flakes are chloritized while ringed by limonite. Stilbite is present in the 30° fractures.					
		Radioactivity: None.					
		68.9-74.7m: Competent quartz monzonite with fine disseminated secondary muscovite.					
		74.4-74.7m: Fault zone consisting of broken and ground core. This marks the contact with the next unit and is high in stilbite, chlorite (pale green) and serpentine??					
74.7	79.6	**Name:** Porphyroclastic mylonitic quartz monzonite.					
		Colour: Pale flesh to pink.					
		Hardness: 7-8					
		Composition: 30% plagioclase 10-15% chlorite and biotite 30% K-feldspar 0-5% accessories 25% quartz					
		Texture: Fine-grained and porphyroclastic.					
		Structure: A gneissocity is defined by thin biotite lamellae and cuts the core by 50°. This is accentuated by the elongation of quartz grains. Fractures cut the core at 60° and 30°. Intense fracturing is present between 78.2 and 78.4m.					
		Alteration: Chlorite and serpentine are present in fractures while hematite and limonite spot the core with minute specks. The biotite flakes are chloritized while feldspars are pink.					
		Radioactivity: None.					
		74.6-79.6m: The unit is fault-controlled with the uphole side the most prominent and most altered. The porphyroclasts are 1-3mm in diameter.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
79.6	81.7	Name: QUARTZ MONZONITE. This unit is a continuation of the unit described before the mylonite. END OF HOLE.					

DRILL HOLE LOG

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PROJECT 5
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DIP TESTS

METRES TEST	FROM	TO	TOTAL	DIP	DIP CORR.	LATITUDE	LATITUDE CUM.	DEPARTURE	DEPARTURE CUM.
Collar	0	54.7	54.7		-55°	31.18		44.85	
109.4	54.7	109.4	54.7		-57°	29.54		45.95	
							60.72		90.80

LOCATION JOVE-1 South
SECTION 29+00N
LATITUDE 32+05W
DEPARTURE
ELEVATION
CORE NQ
STORAGE PROPERTY

HOLE No. 522-80-26-J-3
AZIMUTH 292°
DIP -55°
LENGTH 109-4m
PURPOSE Exploration
COMPLETED July 8, 1980
LOGGED BY W.J. OLSSON

METRES FROM	METRES TO	DESCRIPTION
0	1.5	CASING
1.5	16.2	Name: FINE-GRAINED, FOLIATED, MAFIC-RICH QUARTZ MONZONITE.
		Colour: Dirty grey with black-brown shades.
		Hardness: 6-7
		Composition: 40% plagioclase 10% quartz 30% K-feldspar 5% muscovite 15% biotite
		Texture: Fine-grained.
		Structure: A crude foliation cuts the core at 60° to 30° and is defined by the elongation of quartz grains and the orientation of mica minerals. Fractures cut the core at 30° (the most prevalent) and by 60°. Most fractures are tight and void of any intense alteration. (Probably represent jointing.) The unit has a porphyroclast appearance to it with clasts up to 3mm in size. Possible fault zones are present as follows: 2.9-3.1m, 5.5-5.8m, 12.6-13.1m. These zones are characterized by badly broken core and/or gouge/sand.
		Core Recovery: 1.5-2.7m - 90% 7.6-10.7m - 90% 2.7-4.0m - 95% 10.7-13.1m - 80% 4.0-5.8m - 90% 13.1-14.6m - 95% 5.8-6.4m - 100% 14.6-16.2m - 100% 6.4-7.6m - 85%

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		Alteration: Feldspars are whitish in colour and are bleached in the vicinity of fractures and faults (especially the latter). Biotite flakes are rimmed with limonite/hematite stain. Biotite is also altered to chlorite. Intense limonite staining of the unit from 2.7 to 4.0m, 6.4 to 8.5m and 11.6 to 14.6m has imparted a brown-orange colour to the rock. The core is also a yellowish colour at 11.6 to 14.6m due to a mixture of chlorite and talc. Orange to pink stilbite is present locally on some fractures. Zones with intense bleaching of feldspars combined with talc on the fractures represent zones of hydrothermal alteration. Some subsequent hairline fractures cutting the core at 60° have bleached the altered core up to 2cm away from the fractures and are obviously related to a post-hydrothermal stage. Muscovite is fine-grained and interstitial to the quartz and feldspar grains.					
		Radioactivity: None.					
		1.5-2.9m: Grey, whitish brown, slightly porphyroclastic quartz monzonite.					
		2.9-3.2m: Fault zone with 2cm of unconsolidated gouge cutting the core at 30°. The feldspar crystals are cream-white, badly bleached and are somewhat coarser-grained than in the previous section.					
		3.2-5.5m: Fine-grained, foliated quartz monzonite. The foliation is at 30° to the core. Some bleaching of the feldspar grains occurs at 4.0 to 4.1m. Above that point the unit is a brownish colour - below it a greyish colour.					
		5.5-5.8m: Fault zone with broken core and angular pieces.					
		5.8-6.4m: Porphyroclastic quartz monzonite. Competent rock with no fracturing.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		6.4-8.3m: Intensely altered quartz monzonite with a gneissic appearance to it. Porphyroclasts are present. Hairline fractures criss cross the core. Limonite from biotite stains the rock an orange-brown colour. Other alteration products present are chlorite, talc, manganese and hematite.					
		8.3-10.7m: Greyish to white porphyroclastic quartz monzonite.					
		10.7-14.6m: Intensely altered porphyroclastic, gneissic quartz monzonite. Numerous hairline fractures cross the core and contain sericite and/or chlorite. Biotite has liberated limonite, imparting an orange/brown stain to the feldspars. In addition feldspars also appear very bleached. Periodically gouge and mud cut the core at 30°. Manganese is present on some of these fractures. at 14.1 to 14.2m, orange-coloured gouge fills a fracture cutting the core at 30°. Other fractures containing chlorite cut the core after the main period of alteration and they themselves have bleached feldspars for 2cm on both sides.					
		14.6-16.2m: Slightly altered, porphyroclastic quartz monzonite with fractures cutting the core at 30° to 60°. Chlorite is present in these fractures and feldspars are bleached along both sides.					
16.2	29.9	Name: INTENSELY ALTERED, BADLY FRACTURED QUARTZ FELDSPAR GNEISS CUT BY VUGGY QUARTZ VEINS.					
		Colour: Orange red to flesh pink.					
		Hardness: 7-8					
		Composition: plagioclase, quartz, K-feldspar, alteration products					
		Texture: Variable but generally fine to medium-grained.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	CORE SAMPLES TO	CORE SAMPLES WIDTH	CORE SAMPLES %	CORE SAMPLES AVERAGES

Structure: The unit represents a massive crushed zone healed by quartz. Porphyroclasts are abundant. Numerous vuggy quartz fractures cut the unit. They are filled by sericite and white pyrite. Hematite is present in hairline fractures. These quartz veins cross the core at 30° and at 60°.
Fault zones characterized by badly broken core and gouge/sand are as follows: 17.5-17.6m, 18.0-18.6m, 20.6-20.7m, 21.2-21.5m, 23.6-23.9m, 25.7-25.8m, 28.7m.

Alteration: The feldspars have been bleached and subsequently coated with a yellow to brown colour due to the presence of limonite and sericite. Sericite appears as a light to dark green, sugar-like substance on fractures.
Hematite coats most of the hairline fractures but is somewhat subdued towards the end of the unit.

Core Recovery:

16.2-17.7m - 90%	20.8-21.3m - 60%
17.7-19.2m - 95%	21.3-25.9m - 75%
19.2-20.8m - 90%	25.9-29.9m - 100%

Radioactivity: None.

16.2-17.5m: Very competent, slightly fractured, altered gneiss with minor quartz veining.

17.5-17.7m: Fault zone.

17.7-18.6m: Broken, fractured rock representing a fracture zone. No vuggy quartz material visible.

18.6-29.9m: The unit is crossed by numerous vuggy quartz veins. Some pink stilbite coats fractures. Dark green sericite accompanies quartz vugs as does white pyrite. Quartz vugs are coated with black, non-radioactive mineral.
The feldspars exhibit 2 periods of alteration. The final one is bleaching in the vicinity of fractures.
There is an intense bleaching of the feldspars at 24.7m.

METRES FROM	METRES TO	DESCRIPTION
29.9	109.6	**Name:** QUARTZ MONZONITE.
		Colour: Greyish brown with bleached zones flesh to brown in colour.
		Hardness: 5-6
		Composition: 50% plagioclase, 40% K-feldspar, 5% quartz, 5% biotite/muscovite
		Texture: Fine to medium-grained.
		Structure: The unit is locally porphyroclastic and overall is competent. Fault zones characterized by broken core and gouge lie at 36.0 to 37.2m and 42.2 to 42.4m, 52.9-53.0m, 62.7-62.8m, 65.8-66.3m, 69.3-69.6m, 71.2-71.4m, 71.7-71.9m, 76.4-76.5m, 80.1-80.3m, 82.0-82.6m. Fractures tend to cut the core at 40° to 60° to 36.0m and then 30°, 0-10°, 20° as well as 40-60°. Zones of closely spaced fractures are 42.2 to 42.4m, 47.5 to 47.8m, 59.5-59.7m, 62.8-63.4m, 66.7-66.9m, 68.1-68.2m, 76.1-76.2m, 84.7-84.9m, 88.9-89.4m, 91.1-91.7m, 92.8-93.0m.
		Alteration: The feldspars are bleached in the vicinity of fractures and faults. Sericite is present on some fractures. Biotite has been chloritized while limonite has rimmed the flakes. Generally the core has a very fresh appearance. Chlorite appears in hairline fractures cutting the core at 60°. Some old fault zones are intensely altered by limonite/hematite. These are at 51.2 to 53.6m, 65.7 to 66.4m.
		Core Recovery: Generally the core recovery stood at 90% to 100% with the exception of the following intervals: 36.0-37.2m - 50%; 51.2-52.4m - 60%; 79.6-80.0m - 20%; 80.0-80.8m - 70%.

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

Radioactivity: These are radioactive fractures as follows:

76.5-76.6m: 240/150 cps.
Autunite on fractures cutting the core 40-60° where they intersect a fracture lying 20° to the core.

82.6m: 190/150 cps.
In fracture at 40° to the core.

88.2m: 220/150 cps.
On fracture at 20° to the core.

90.4m: 175/150 cps.
In fracture 30° to the core.

Mineralization: Autunite is present as yellow to lime green flakes speckled along fractures with chlorite/sericite.

29.9-36.0m: Fresh quartz monzonite with fractures at 30° and 60° to the core.

36.0-37.2m: Fault zone with badly broken core accompanied by gouge.

37.2-42.2m: Competent quartz monzonite. Porphyroclasts are visible - bleaching of feldspars occurs near small tight fractures. Overall the subunit is dirty-brown due to limonitic biotite. Secondary fine-grained muscovite is present.

42.2-51.2m: Partially bleached quartz monzonite with limonite rimming the biotite.
Fractures are tight and at 50.0m there is white stilbite in a fracture cutting the core at 30°.

51.2-53.6m: Intensely altered, porphyroclastic zone - probably represents an old fault zone. Limonite and manganese staining is present.

53.6-65.8m: Quartz monzonite that is locally bleached near fractures. Dark green chlorite is present in tight fractures while talc is visible on open fractures.

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		65.8-66.5m: Fault zone coated with talc and hematite,					
		66.5-109.6m: Porphyroclastic quartz monzonite with clasts up to 2cm. Talc and chlorite appear on some fractures.					
		END OF HOLE					

DRILL HOLE LOG

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PROJECT 522

DIP TESTS

METRES				DIP		LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL		CORR.		CUM.		CUM.
Collar	0	35.2	35.2		-55°	20.06		28.86	
70.4	35.2	70.4	35.2		-62°	16.54		31.68	
							36.60		60.54

LOCATION JOVE CLAIMS
SECTION 30+00N
LATITUDE 32+85W
DEPARTURE
ELEVATION
CORE NQ
STORAGE PROPERTY

HOLE No. 522-80-26-J-4
AZIMUTH 292°
DIP -55°
LENGTH 70.4m
PURPOSE Exploration
COMPLETED July 11, 1980
LOGGED BY W.J. OLSSON

METRES FROM	METRES TO	DESCRIPTION
0	1.5	CASING
1.5	70.4	Name: FOLIATED, FINE-GRAINED QUARTZ MONZONITE.
		Colour: Brown grey.
		Hardness: 5-6
		Composition: 50% plagioclase 5-10% biotite 30% K-spar 5-10% muscovite 10% quartz
		Texture: Fine-grained.
		Structure: Fracturing cuts the core at 40° and parallels a crude foliation that is defined by the orientation of the micas. Additional fracturing cuts the core at 20° and at 10°. Generally these fractures are tight and the unit is competent. Porphyroclasts 2-3mm in size are present in the unit. A possible fault zone characterized by badly broken core with gouge is present at 7.2 to 7.9m. Zones of intense fracturing occur at 16.7 to 16.8m and 28.9 to 29.3m.
		Alteration: Biotites have been altered to limonite on the edges and are almost entirely chloritized. Chlorite/talc material is present on some fractures as is a deep green colour chlorite.

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	CORE SAMPLES TO	CORE SAMPLES WIDTH	CORE SAMPLES %	CORE SAMPLES AVERAGES
		Radioactivity:					
		17.7-17.9m: 203/150 cps. Related to fractures cutting the core at 40° to 60°. Core is broken here, talc is present on fractures.					
		20.2-20.4m: 195/150 cps. Related to a fracture cutting the core at 0-10°.					
		48.2-48.7m: 196/150 cps. Related to 6 parallel fractures cutting the core at 40°.					
		56.1-56.2m: 180/150 cps. Related to a fracture cutting the core at 30° and is filled with deep brown-green material.					
		Mineralization: No visible mineralization is present on any of the radioactive fractures.					
		1.5-70.4m: The unit is a homogeneous, fresh-looking, unaltered prophyroclastic quartz monzonite. Fracturing is generally very tight throughout.					
		END OF HOLE					

DRILL HOLE LOG

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PROJECT 522
PAGE 1 of 3

DIP TESTS

METRES TEST	FROM	TO	TOTAL	DIP	DIP CORR.	LATITUDE	LATITUDE CUM.	DEPARTURE	DEPARTURE CUM.
Collar	0	62.5	62.5		-55	35.63		51.25	
							35.63		51.25

LOCATION JOVE
SECTION 27+00N
LATITUDE 38+70W
DEPARTURE
ELEVATION
CORE NQ
STORAGE PROPERTY

HOLE No. 522-80-26-J-5
AZIMUTH 292°
DIP -55°
LENGTH 62.5m
PURPOSE Exploration
COMPLETED July 13, 1980
LOGGED BY W.J. Olsson

METRES FROM	TO	DESCRIPTION
0	5.4	CASING
5.4	62.5	Name: WEATHERED, MEDIUM TO FINE-GRAINED, SLIGHTLY FOLIATED QUARTZ MONZONITE.
		Colour: White to brownish grey.
		Hardness: 4-6
		Composition: 50% plagioclase; 20% K-feldspar; 10-15% quartz; 10-15% biotite; 5% muscovite
		Texture: Fine to medium-grained; inequigranular with feldspar grains larger than quartz grains. The plagioclase tends to be greater in size than the K-feldspar. Biotite flakes are variable in size.
		Structure: Locally a crude foliation is defined by the orientation of micas and elongated quartz grains. This foliation cuts the core at 30-40°. Fracturing cuts the core at 40°, 30°, 80° and 0-10°. Zones of intense fracturing are as follows: 15.2-15.5m (10° to core), 15.5-20.2m (a series of clean fractures cutting the core at 60° initially and 5-10° in the final metre), 29.3-32.3m (fractures are 60° and 80° and are associated with a fault), 37.1-37.6m (fractures are 30° and contain stilbite). An intensely fractured zone healed by dark chlorite cuts the core between 27.3 and 30.8m. Fault zones characterized by gouge and broken core are as follows: 6.4-11.0m, 19.8-20.2m, 30.6-30.9m, 34.4-34.9m, 39.5-39.9m, 51.3-52.1m.

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		Core Recovery: Generally recovery is between 90% and 100% except for the following intervals: 0-11.0m - 40% 29.3-30.8m - 20% 30.8-32.3m - 50% 32.3-35.1m - 85%					
		Alteration: Feldspars are bleached white. Biotite is chloritized and rimmed by limonite. The amount of limonitic alteration is directly proportional to the fracturing. Green talc coats fractures cutting the core at 30°. Fractures lying at 60° and 80° are clean. Chlorite and pink alteration of feldspars occurs near most faults. There is ¼" of pink stilbite (?) present at 31.1m in a fracture lying 60° to the core. A silicified fault zone is present at 27.3 to 30.8m where dark chlorite has filled the fractures.					
		0-11.0m: This section consists of broken core and reflects boulders within the overburden.					
		11.0-19.9m: Weathered brown-grey quartz monzonite with limonitic coated fractures.					
		19.9-27.5m: Competent quartz monzonite with a fault at 23.1m. A small pegmatite dyke cuts the core at 26.1m. All fractures in this interval are clean.					
		27.5-30.9m: Fault zone with intensely altered siliceous core and broken ground. Talc and chlorite are associated with fractures.					
		30.9-32.7m: Fractured quartz monzonite related to the previously described fault zone. Pink stilbite along a fracture at 31.2m.					
		32.7-34.2m: Competent quartz monzonite partially altered but fresh looking.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	CORE SAMPLES TO	CORE SAMPLES WIDTH	CORE SAMPLES %	CORE SAMPLES AVERAGES
		34.2-35.1m: Fault zone with broken core.					
		35.1-62.5m: This unit is quartz monzonite with a slight sign of alteration around fractures and faults.					
		END OF HOLE.					

DRILL HOLE LOG

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PROJECT 522

DIP TESTS

METRES				DIP	LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL	CORR.		CUM.		CUM.
Collar	0	38.59	38.59	-55°	22.20		31.61	
	38.59	77.9	39.31	-57°	21.41		32.97	
						43.61		64.58

LOCATION JOVE CLAIMS
SECTION 29+00N
LATITUDE 38+80W
DEPARTURE
ELEVATION
CORE NQ
STORAGE Property

HOLE No. 522-80-26-J-6
AZIMUTH 292°
DIP -55°
LENGTH 77.9m
PURPOSE Exploration
COMPLETED July 15, 1980
LOGGED BY S.G. McAllister

METRES FROM	METRES TO	DESCRIPTION
0	9.1	CASING.
9.1	15.4	NAME: WEATHERED, MEDIUM-GRAINED QUARTZ MONZONITE. This section represents boulders present in the overburden that have been weathered and altered.
15.4	77.9	Weathered to fresh, massive to foliated quartz monzonite. Colour: White-grey to greenish grey. Hardness: 4-6 Composition: 40% plagioclase, 30% K-feldspar, 15% quartz, 10% biotite, 5% alteration products - muscovite - chlorite Texture: Medium-grained, locally fine-grained or pegmatitic. Inequigranular. Structure: A weak to moderate foliation defined by the alignment of biotite flakes and the elongation of quartz grains cuts the core at 30-50°. Locally the unit is massive. Fractures vary from 0-10°, 30°, 45° and 60° to the core. Pegmatite dykes are present at the following locations: 17.9m — 1-2cm wide — 70° to the core 20.1m — " " — 50° to the core 22.8-23.0m — broken 27.2-27.7m — 35° to the core 39.7m — 1cm wide — 50° to the core

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		Alteration: Chlorite is evident along most fractures. Limonite is present along some fractures and was probably derived from the biotite. Stilbite coats many fractures. Sericite is evident on some fractures (with talc?).					
		Radioactivity: None.					
		15.4-17.4m: Weathered quartz monzonite with secondary muscovite. Fractures criss-crossing the unit are filled with chlorite. Fractures range from 30-50° to the core.					
		17.4-21.6m: Medium-grained foliated quartz monzonite cut by small pegmatite dykes at 17.9 and 20.1m.					
		21.6-24.4m: Weathered quartz monzonite exhibiting limonite staining from the biotite at 22.3-22.4m. Pegmatite is present at 22.8-23.0m.					
		24.4-46.1m: Quartz monzonite with some local limonitic staining. Pegmatite dykes are present at 27.2-27.7m, and 39.7m. Intense limonitic staining present at 28.0-28.6m, 31.4-32.1m, and 41.0-43.0m. The section is fractured with fractures lying 30° to the core.					
		46.1-47.1m: Quartz monzonite cut by numerous veinlets containing chlorite, talc and sericite.					
		47.1-47.9m: Limonitic stained quartz monzonite.					
		47.9-56.5m: Foliated and fractured (40° to the core) quartz monzonite.					
		56.5-57.6m: Apilitic, massive quartz monzonite cut by a limonitic stained, fractured and crushed zone at 57.4-57.6m (dips 10° to the core).					
		57.6-65.5m: Foliated quartz monzonite that is friable and weathered looking.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		65.5-65.8m: Altered, greenish quartz monzonite with a foliation near 50° to the core.					
		65.8-77.9m: Fractured quartz monzonite with crushed feldspar in fractures.					
		END OF HOLE.					

DRILL HOLE LOG

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DIP TESTS

METRES				DIP	LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL	CORR.		CUM.		CUM.
Collar	0	64.3	64.3	-55	36.65		52.73	

LOCATION JOVE CLAIMS
SECTION 28+00N
LATITUDE 40+32W
DEPARTURE
ELEVATION
CORE NQ
STORAGE Property

HOLE No. 522-80-26-J-7
AZIMUTH 292°
DIP -55°
LENGTH 64.3m
PURPOSE Exploration
COMPLETED July 16, 1980
LOGGED BY W.J. Olsson

METRES FROM	METRES TO	DESCRIPTION
0	6.5	CASING
6.5	9.4	Name: RUSTY QUARTZ MONZONITE. This unit represents boulders present in the overburden.
9.4	20.1	Name: BADLY WEATHERED, FRIABLE QUARTZ MONZONITE. Colour: Brown. Hardness: The matrix is soft at 1 to 2 and the grains are 4 to 5. Composition: 40% plagioclase 15% quartz 30% K-feldspar 15% biotite Texture: Medium-grained. Structure: Some fracturing is evident cutting the core at 90°. Generally the unit represents unconsolidated bedrock. Alteration: The unit has been badly altered by surface/ground water. Limonitic staining originating from the biotite has given the unit its brown colour. Radioactivity: None. Core Recovery: 0- 6.5m 0% 6.5- 9.4m 20% 9.4-12.5m 10% 12.5-15.5m 20% 15.5-17.1m 40% 17.1-18.6m 80% 18.6-20.1m 95%

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

METRES FROM	METRES TO	DESCRIPTION
		9.4-20.1m: This unit represents weathered unconsolidated bedrock which is comprised of quartz monzonite. The badly decomposed and friable nature of the unit is the result of circulating surface/ground waters.
20.1	64.3	Name: WEATHERED QUARTZ MONZONITE.
		Colour: Chalk white to grey white.
		Hardness: 4-6
		Composition: 40% plagioclase, 30% K-feldspar, 15% quartz, 10% biotite, 5% muscovite
		Texture: Medium-grained, inequigranular. Feldspars are variable in size W.R.T. themselves and quartz.
		Structure: The unit is massive with fractures cutting the core at 0-10°, 30°, 60° and 90°. Fault zones characterized by badly broken, gouge-like core are present at the following intervals: 21.5-25.9m, 28.2-28.5m, 31.3-31.7m, 34.2-34.7m, 35.8-36.7m, 37.5-37.8m, 52.2-52.4m. Zones of medium to coarse-grained pegmatite are at the following intervals: 40.7-51.2m, 61.6-61.7m. Zones of fracturing that are characterized by broken angular core are at the following intervals: 27.0-27.4m, 31.7-32.3m, 40.8-41.5m, 43.0-43.6m, 47.5-52.2m, 58.4-58.6m, 59.4-59.8m.
		Alteration: Feldspars have been bleached, imparting a chalk white colour to the unit. Biotite has been chloritized and subsequently limonitized. This is especially evident in the vicinity of faults and fractures where the unit has been weathered by ground water. There is a trace of talc minerals on some fractures, while others are coated in stilbite. The muscovite is secondary in origin.

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		Radioactivity: (See the downhole probe results as well.) The following intervals are radioactive: 31.3-31.4m 205/120 cps 34.2-34.5m 170/120 cps 34.5-34.8m 200/120 cps 35.5-36.7m 190/120 cps 37.3-37.8m 200/120 cps 45.0-51.0m 180/120 cps. **Mineralization:** All of the radioactive sections are accompanied by fracturing 90° to the core or by fault zones speckled by autunite. All of these zones have undergone widespread weathering due to ground water movement - the probable source of the autunite. 20.1-25.9m: Badly weathered, broken quartz monzonite stained brown by limonite. A fault is present at 21.5-25.9m. 25.9-28.2m: Competent quartz monzonite that is cut by clean fractures and is white-brown in colour. 28.2-28.5m: Fault zone. 28.5-31.3m: Competent quartz monzonite cut by clean, tight fractures lying 30° and 80-90° to the core. 31.3-32.2m: Fault/fracture zone with specks of autunite visible with the gouge etc. on fracture surfaces. 32.2-33.9m: Competent quartz monzonite with clean fractures. 33.9-37.9m: Several fracture/fault zones that contain autunite. Limonite has given this subunit a dirty brown colour. 37.9-64.3m: Competent quartz monzonite cut by clean fractures lying 0-10°, and 30° to the core. A crude foliation is identifiable at 30° to the core. A fracture zone is present from 48.7 to 51.2m.					

DRILL HOLE LOG

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METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	CORE SAMPLES TO	CORE SAMPLES WIDTH	CORE SAMPLES %	CORE SAMPLES AVERAGES
		Core Recovery: 20.1-21.6m 80% 21.6-23.2m 30% 23.2-24.6m 40% 24.6-34.7m 90% 34.7-35.1m 20% 35.1-47.6m 90% 47.6-51.2m 80% 51.2-64.3m 95%					
		END OF HOLE.					

DRILL HOLE LOG

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PROJECT ---

DIP TESTS

METRES				DIP	LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL	CORR.		CUM.		CUM.
Collar	0	57.6	57.6	-55°	32.83		47.23	
						32.83		47.23

LOCATION JOVE CLAIMS
SECTION 29+00N
LATITUDE 40+65W
DEPARTURE
ELEVATION
CORE NQ
STORAGE Property

HOLE No. 522-80-26-J-8
AZIMUTH 242°
DIP -55°
LENGTH 57.6m
PURPOSE Exploration
COMPLETED July 18, 1980
LOGGED BY W.J. OLSSON

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
0	9.1	CASING					
9.1	13.8	OVERBURDEN. This portion of the hole is characterized by boulders of weathered limonitic quartz monzonite and unconsolidated, friable quartz monzonite which represents the transition zone from overburden to bedrock. The lower 2.8m is radioactive (150/120 cps) due to the presence of autunite deposited by circulating ground waters.					
13.8	57.6	Name: WEATHERED QUARTZ MONZONITE. Colour: White to grey. Hardness: 4-6 Composition: 45% plagioclase, 30% K-feldspar, 15% quartz, 5-10% biotite, 0-5% muscovite Texture: Medium-grained. Structure: A crude foliation cuts the core at 30° and is defined by elongated quartz grains and the orientation of the micas. This foliation is only locally developed. Fault zones characterized by badly altered and crushed core are as follows: 18.7-19.2m, 27.3-29.3m, 35.0-36.9m, 53.0-53.6m, 54.8-55.4m, 56.3-56.4m. They are typically brownish in colour resulting from the biotite altering to chlorite. Pegmatite zones are present at 27.7-28.0m, 28.8-29.1m and 48.5-48.8m.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

Structure: (cont'd)

Fractures lie at 30°, 60° and 0-10° to the core. Except in the vicinity of the fault zones, these fractures are not intense.

Alteration:

The feldspars have been altered to a chalk-white colour. Biotites are chloritized and limonitized. Secondary muscovite dots the core. Generally the fault zones have been altered by ground water activity. There is no visible evidence to suggest hydrothermal alteration has taken place anywhere. Most fractures are clean, however, stilbite is present on those lying 30° to the core.

Radioactivity:

The following intervals are radioactive:

27.2-29.3m: 200/120 cps.
Associated with a fault.

35.6-36.9m: 300/120 cps.
Associated with a fault.

38.9-39.4m: 200/120 cps.
Associated with a fault cutting the core at 80°.

48.7-48.9m: 160/120 cps.
Associated with a fracture zone.

Mineralization:

Fine specks of autunite are visible along fractures and in fault gouge in the radioactive zones. Appearances suggest the autunite precipitated from ground water solutions.

Core Recovery:

0- 9.1m	0%
9.1-13.8m	30%
13.8-18.3m	95%
18.3-19.2m	70%
19.2-20.7m	60%
20.7-21.6m	80%
21.6-35.4m	90%
35.4-36.9m	80%
36.9-57.6m	90%

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		13.8-18.9m: Competent, weathered quartz monzonite with very little fracturing.					
		18.9-19.2m: Fault zone. Black-grey, very broken core with a low percentage of recovered core.					
		19.2-27.3m: Weathered quartz monzonite cut by fractures lying 0° and $30\text{-}40^{\circ}$ to the core.					
		27.3-29.3m: Fault zone. Broken pieces of pegmatite are present. The radioactivity reported here is due to autunite. The pegmatite appears to be quite fresh and unaltered.					
		29.3-34.8m: Crudely foliated, competent quartz monzonite with fractures lying $30\text{-}40^{\circ}$ to the core and some at 60°.					
		34.8-36.9m: Fault zone. The core is a brown colour due to limonite. The radioactivity is related to specks of autunite present in the interval. Minor manganese is present as well.					
		36.9-39.0m: Competent quartz monzonite with 2cm wide pegmatite dykes cutting the core at 37.3 and 37.8m.					
		39.0-39.3m: Fractures cut the core at 60° and 90°. Autunite is found along the 90° fracture.					
		39.3-48.0m: Competent, massive quartz monzonite with very little fracturing evident.					
		48.0-57.6m: Fractured quartz monzonite with a pegmatite dyke at 48.7m and coincides with a minor radioactive section. Green talc is visible on fractures. The fault at 56.3m lies at 45° to the core and is chalk white.					
		END OF HOLE.					

DRILL HOLE LOG

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PROJECT 522

DIP TESTS

METRES				DIP	LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL	CORR.		CUM.		CUM.
Collar	0	47.5		-55°	27.08		38.95	
						27.08		38.95

LOCATION JOVE CLAIMS
SECTION 30+00N
LATITUDE 40+60W
DEPARTURE
ELEVATION
CORE NQ
STORAGE PROPERTY

HOLE No. 522-80-26-J-9
AZIMUTH 292°
DIP -55°
LENGTH 47.5m
PURPOSE Exploration
COMPLETED July 20, 1980
LOGGED BY W.J. OLSSON

METRES FROM	METRES TO	DESCRIPTION
0	9.2	CASING
9.2	28.7	Name: MASSIVE, LOCALLY PORPHYROCLASTIC, WEATHERED QUARTZ MONZONITE.
		Colour: Pale green-orange to dirty grey.
		Hardness: 5-6
		Composition: 30% plagioclase, 40% K-feldspar, 15% quartz, 10% biotite and muscovite, 5% secondary minerals
		Texture: Medium to coarse-grained and inequigranular,
		Structure: The unit is badly broken and fractured to 19.5m. A possible fault zone characterized by orange-brown gouge cuts the core at 30° from 13.3 to 13.5m. Also from 14.0 to 19.5m, the unit is very fractured and has gouge at 15.5m. Fractures lie at 30°, 60°, and 80° to the core, The 60° fracture is the most prominent set. These fractures are usually clean or thinly coated with chlorite and manganese. Quartz veining intersects the unit at 13.8 to 14.4m, 24.6-24.7m, and 28.6-28.7m. This unit has the appearance of an old fault zone with the porphyroclasts and a slight localy mylonitic development. Pegmatite dykes lie at 15.5-18.6m, and 22.7-23.2m. A few small, vuggy fractures are present at 19.5m cutting the core at 30°. Other hairline fractures parallel this attitude and contain chlorite with some specks of autunite.

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	CORE SAMPLES TO	CORE SAMPLES WIDTH	CORE SAMPLES %	CORE SAMPLES AVERAGES

Alteration: The plagioclase is stained by limonite and is pink to orange in colour. The K-feldspars have a green tinge to them probably due to sericitization. Light green chlorite is evident on fractures that criss-cross the unit. Limonite has stained the gouge present at 30°. The shallow fractures have manganese, hematite and limonite stains on them. Locally fine-grained euhedral crystals of almandite cut the core in elongated bands lying 40° to the core.

Radioactivity: The unit has a radioactive background of 165 cps compared to 130 cps for the camp area. Radiometric peaks are as follows: 14.3-14.6m (195 cps), 29.5-29.7m (185 cps).

Mineralization: Autunite is present as tiny, euhedral, lime green specks along most hairline fractures and may account for the high radiometric background observed.

Core Recovery:

9.2-11.3m	50%
11.3-14.3m	65%
14.3-15.5m	25%
15.5-17.1m	45%
17.1-18.6m	60%
18.6-19.5m	75%
19.5-20.7m	85%
20.7-21.6m	90%
21.6-23.2m	60%
23.2-24.4m	95%
24.4-25.9m	90%
25.9-28.7m	95%

9.2-13.7m: Badly weathered, porphyroclastic, fractured quartz monzonite. Pegmatite dykes cut the unit at 11.2-11.3m. Muscovite is up to 5% of the rock and the feldspars are a chalky white colour. Some autunite is present on hairline fractures lying 60° to the core.

13.7-14.3m: Massive, grey to smokey quartz veins.

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		14.3-17.1m: Badly broken, faulted quartz monzonite. Feldspars have been altered to orange to pale yellow/green to white in colour. A small section of black smokey quartz is present at 15.7m. The core is badly broken at this location.					
		17.1-28.7m: Intensely altered, fractured quartz monzonite. Most fractures are healed by dark chlorite, however, some remain open (=>2 periods of fracturing). Feldspars are altered to orange-pink-green colour. Porphyroclasts vary up to several cm in size. Radioactive zones are related to fractures cutting the core at 60° to 80° and contain significant amounts of autunite along with green-yellow talc-like material.					
28.7	47.5	Name: MEDIUM-GRAINED, MASSIVE TO WELL FOLIATED, LOCALLY ALTERED QUARTZ MONZONITE.					
		Colour: Brown-grey to orange-green.					
		Hardness: 4-6					
		Composition: 40-45% K-feldspar; 25-30% plagioclase; 15% quartz; 5% biotite; 5% muscovite; 5% alteration products					
		Texture: Medium-grained.					
		Structure: The foliation is defined by the orientation of mica minerals and the elongation of quartz grains. Muscovite is post-foliation as it lies at various angles to the foliation. Fracturing cuts the core at 60°, 80°, 30° and 0-10°. The foliation lies 30-40° to the core. Pegmatite zones lie at 34.3m, 37.2-37.6m, 44.2-44.5m. Fault or possible fault zones are at 35.2 to 35.7m and 41.5 to 41.9m.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

Alteration: Biotite is altered to chlorite and limonite. Feldspars are cream to green/orange in colour due to weathering by ground water.
Fractures lying 60° to the core are filled by dark green chlorite. The feldspars are bleached up to 2cm into the wall rock of these fractures. Generally, the intense alteration coincides with faulted/fractured zones. The feldspars invariably are orange in colour in these zones, most notably 35.7-35.9m, 37.1-37.5m, 39.0-39.6m, 40.0-40.8m, 41.7-42.2m, 43.0-44.6m.
Of note is the presence of vugs in the core between 43.3 and 44.3m.
Graphite appears at 40.1m on a fracture 90° to the core.

Radioactivity: Overall the unit has a high background of 160 cps/135 cps. This is due to the presence of tiny specks of autunite in the hairline fractures that criss-cross the core.
Peaks are located at the following positions:

37.8-38.0m	350 cps	Fracture is 40° to the core
39.0-39.3m	275 cps	Fracture is 80° to the core
40.5-40.6m	930 cps	Fracture lying 80° to the core truncates one lying 10° to the core
42.8-43.0m	225 cps	Fracture is 80° to the core and truncates one 10° to the core
44.0-44.2m	500 cps	Fractures lying 80° and 30° to the core intersect at the contact with a pegmatite body.

Mineralization: Autunite is the only uraniferous mineral identified in the core. However, the highly radioactive fractures are not entirely coated with autunite as the radiometrics imply suggesting an additional source for the radioactivity.

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		Core Recovery: With the exception of the interval 43.3-44.5m (80%), the rest of the unit experienced 90% or greater core recovery.					
		28.7-35.2m: Medium-grained, foliated quartz monzonite with secondary muscovite up to 5mm in size dotting the core. Feldspars are white to cream, fractures lie at 60° to the core and are filled with dark green chlorite. The wall rock is "bleached" adjacent to these fractures.					
		35.2-35.7m: Fault zone.					
		35.7-37.1m: Foliated quartz monzonite. Limonitic staining is more prevalent here than before the fault zone.					
		37.1-37.8m: Pegmatite cutting the core at 60° in a direction opposite to that of the foliation. Numerous hairline fractures cut the core suggesting the pegmatite was sheared.					
		37.8-41.6m: Massive to foliated quartz monzonite with several faulted-fractured zones. Radioactive zones are related to fractures cutting the core at 80-90°. Intense alteration of feldspars by iron stain usually accompanies these fractures. Graphite is present on a fracture filled with 1.5cm of gouge at 40.1m. This fracture cuts the core at 90°. The highest radioactive zone (930 cps @ 40.3m) coincides with the intersection of a fracture cutting the core at 90° and a fracture lying 10° to the core.					
		41.6-41.8m: Porphyroclastic, almost brecciated mylonitic-looking zone probably representing an early fault that has been healed by quartz.					
		41.8-44.1m: Dirty brown, greenish grey quartz monzonite cut by a crude foliation and by several hairline fractures. This is probably an extension of the previously described fault zone. The feldspar has been intensely stained by limonite from 43.1 to 44.1m.					

METRES FROM	METRES TO	DESCRIPTION
		41.8-44.1m: (Cont'd) A zone from 43.3 to 44.3m is very pitted/vuggy. A sample was taken for mineralogical examination. The radioactive fractures at 44.1m mark the contact with an altered pegmatite body.
		44.1-44.6m: Coarse-grained pegmatite. Minor autunite is present.
		44.6-47.5m: Foliated quartz monzonite exhibiting some minor alteration in the vicinity of fractures which generally are clean. Some minor talc is visible however.
		END OF HOLE.

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

DRILL HOLE LOG

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PROJECT 522
PAGE 1 of 6

DIP TESTS

METRES				DIP	LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL	CORR.		CUM.		CUM.
Collar	0	38.1	38.1	-55	21.72		31.24	
	38.1	124.95	86.85	-57	46.90		72.95	
	124.95	173.7	48.75	-64	21.45		43.88	
						90.07		148.07

LOCATION JOVE
SECTION 34+00N
LATITUDE 42+12W
DEPARTURE
ELEVATION
CORE NQ
STORAGE PROPERTY

HOLE No. 522-80-26-J-10
AZIMUTH 292°
DIP -55°
LENGTH 177.1m
PURPOSE Exploration
COMPLETED July 24, 1980
LOGGED BY W.J. Olsson

METRES FROM	METRES TO	DESCRIPTION
0	1.0	CASING
1.0	52.3	Name: FINE-GRAINED, ALTERED, FRACTURED QUARTZ MONZONITE.
		Colour: Varies from grey through greyish brown to brown.
		Hardness: 4-6
		Composition: 45% K-feldspar, 25% plagioclase, 10-15% quartz, 10% biotite, 0-5% alteration
		Texture: Fine-grained, moderately equigranular with Kspar the largest (2-3mm) and all other minerals about the same size (1-2mm).
		Structure: A very crude foliation has developed locally, cutting the core at 30°, and is defined by the alignment of biotite grains. Faults are as follows: 3.4m, 8.7m, 11.7m, 14.3m, 14.6m, 42.7m, 48.5m. These faults/shear zones are characterized by broken/ground core with some evidence of gouge present. Fracturing tends to be tight-cutting core primarily at 60° with others recorded at 80°, 10°, 0° and 30°.
		Alteration: Most fractures are clean and void of any definite alteration. Faults tend to be brown in colour due to limonitic staining. Some dark chlorite is present in fractures close to fault zones. These fractures tend to be hairline and criss-cross the core in no apparent regular fashion.

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		Alteration: (Cont'd) 23.2-29.3m - Faults are usually limonitic resulting in a brown-orange colour imparted to the unit. 33.2-42.7m - Fractures are coated with talc, chlorite, limonite and autunite. Limonite is most notable on 80° fracture whereas talc appears on shallow farctures. Some tourmaline is present at 20.1m.					
		Radioactivity: See downhole probe results. The following intervals are radioactive as detected by a Urtec UG-130:					
		31.9-41.1m: 160 to 180 cps over a background of 130 cps.					
		33.1m: A peak of 210 cps related to a fracture lying 30° to the core.					
		Mineralization: The radioactive zone has autunite present on most fractures. Only the main fractures have it visible by eye, however, all other fractures do have autunite as detected by black light.					
		Core Recovery: Generally the recovery is over 90% except in the vicinity of faults where recovery is anywhere from 30-60%.					
		1.0-3.4m: Weathered, porphyroclastic-looking, medium-grained quartz monzonite.					
		3.4-8.6m: Weathered quartz monzonite cut by clean fractures lying 30° and 80° to the core.					
		8.6-8.8m: Fault.					
		8.8-9.2m: Weathered quartz monzonite.					
		9.2-17.1m: Limonitic, fine-grained quartz monzonite. A small gouge-filled fracture cuts the core at 60° at 11.7m. The unit is badly fractured from 13.8 to 14.6m with gouge crossing at 14.4m in fractures lying 30° to 60° to the core.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		17.1-19.4m: Grey to brown, competent quartz monzonite with a few fractures cutting the core at 45°.					
		19.4-25.8m: Badly altered, brownish quartz monzonite. Fractures cut the core at various angles and are coated with limonite/talc material. Hairline fractures criss-cross the core and are filled with dark green chlorite. This is probably an old fracture/fault zone.					
		25.8-27.7m: Slightly fractured, competent quartz monzonite.					
		27.7-31.7m: Fractured quartz monzonite with some alteration associated with the fractures.					
		31.7-42.6m: Badly altered, fractured quartz monzonite, brownish in colour. The unit is criss-crossed by numerous fractures most of which have autunite along them. This zone has a higher radiometric response - probably due to the autunite that has been deposited on most fractures. The fractures are also coated with talc, chlorite, manganese, and/or limonite/hematite.					
		42.6-42.7m: Fault zone.					
		42.7-44.0m: Slightly altered, brown-grey quartz monzonite.					
		44.0-45.4m: Badly altered brown to yellowish, fractured quartz monzonite. Fractures lie 80° to the core. Numerous hairline fractures filled with dark green chlorite criss-cross the core.					
		45.4-47.2m: Brownish grey, competent quartz monzonite.					
		47.2-48.4m: Brown altered, slightly broken quartz monzonite with fractures filled with green chlorite lying 30° to the core.					
		48.4-48.5m: Fault zone.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		48.5-52.3m: Highly fractured, altered quartz monzonite brown in colour. Fractures are green-yellow due to chlorite/talc material and they cut the core at 30° and 60°. Patterns are 2-3cm apart. Section 50.2-50.5m escaped any significant alteration. The contact with the next unit is gradational over 10cm.					
52.3	177.4	Name: FINE-GRAINED, FRESH QUARTZ MONZONITE WITH SOME LOCAL FRACTURING AND ASSOCIATED ALTERATION.					
		Colour: Grey.					
		Hardness: 6-7					
		Composition: 40% plagioclase 15% quartz 30% K-feldspar 15% biotite					
		Texture: Fine-grained with some sections that are medium-grained. The unit is moderately equigranular.					
		Structure: Generally the unit is massive. Some apparent foliation accompanies the altered zones. Generally fracturing is minor except at the following fault-like zones: 71.3m, 76.0-78.9m, 83.0-84.1m, 106.8-107.0m, 118.4-118.6m, 138.1-138.2m, 139.9-140.0m, which are characterized by badly broken core and intensely fractured rock. Fracturing cuts the core at 60°, 40°, 30° and 0-10° and is intense in the vicinity of the faults. Pegmatite dykes cut the unit at 64.3-64.5m (30° to core), 86.8-86.9m, 164.1-164.6m, 165.8-165.9m. The unit has a porphyroclastic appearance to it with grains of rounded feldspar 1-2mm in diameter.					
		Alteration: The core is fresh, showing little evidence of alteration except in the vicinity of faults and fractures where the unit adopts a brownish colour due to limonite (from biotite). Intense limonite staining accompanies fractures at 114.6-115.5m that lie 40° to the core.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		Radioactivity: See downhole probe results. The limonitic zone 114.6-115.5m has a reading of 160 cps/130 cps (Urtec 130) with a peak of 200 cps at 115.0m.					
		Mineralization: No visible autunite is present on the fracture at 115.0m, however, the black light revealed some smeared along the zone.					
		52.3-76.0m: Fresh, fine-grained quartz monzonite with very little fracturing except the fault at 71.3m. A pegmatite dyke is present at 64.3-64.5m and cuts the core at 30°.					
		76.0-79.8m: Badly faulted, fractured, altered quartz monzonite. Secondary muscovite is present as fine euhedral crystals. The unit is brown-orange-yellow in colour, is criss-crossed by numerous hairline, chlorite-filled fractures, and is porphyroclastic and siliceous. The unit is bleached in the vicinity of chlorite-filled fractures.					
		79.8-83.3m: Grey quartz monzonite.					
		83.3-84.1m: Fault zone.					
		84.1-88.8m: Fractured, limonitic stained quartz monzonite, orange-brown in colour. Fractures lie 80°, 90°, 30° and 0-10° to the core. Pegmatite dykes are at 84.6m, 85.9m, 87.4m, 85.6m and 86.8m.					
		88.8-95.0m: Fresh quartz monzonite with fracturing at 80-90°, 60°, 30°. Fractures at 30° and 90° have some minor limonitic staining associated with them.					
		95.0-97.5m: Altered quartz monzonite with fractures lying 10° to the core.					
		97.5-99.2m: Fresh quartz monzonite.					

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		99.2-100.7m: Altered quartz monzonite with fractures lying 0-10° to the core and coated in talc.					
		100.7-104.1m: Fractured quartz monzonite with minor limonite and chlorite present.					
		104.1-112.9m: Fresh quartz monzonite.					
		112.9-115.5m: Fractured, altered quartz monzonite. Fractures lie parallel to the core at 30° and at 60°. The 60° fractures are altered for 10cm on either side (intense limonite). The radioactive section at 115.2m contains autunite only visible by black light. It is associated with a biotite-rich shear zone lying 60° to the core.					
		115.5-138.0m: Fresh quartz monzonite with intense fracturing at 118.4-118.6m, and 121.4-121.6m. Gouge is visible at 121.4m but no alteration is evident with this zone.					
		138.0-139.9m: Fault zone.					
		139.9-177.1m: Fresh quartz monzonite with some talc on fractures between 141.5-142.0m. Pegmatite dykes are present at 164.1-164.6m and 165.8-165.9m. Stilbite is present on fractures which lie at 30° and 45° to the core.					
		END OF HOLE.					

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PAGE 1 of 3

DIP TESTS

METRES				DIP	LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL	CORR.		CUM.		CUM.
Collar	0	78.0	78.0	-60°	39.00		67.86	
						39.00		67.86

LOCATION JOVE
SECTION 34+00N
LATITUDE 42+95W
DEPARTURE
ELEVATION
CORE NQ
STORAGE Property

HOLE No. 522-80-26-J-11
AZIMUTH 292°
DIP -60°
LENGTH 78.0
PURPOSE Exploration
COMPLETED July 26, 1980
LOGGED BY W.J. Olsson

METRES FROM	METRES TO	DESCRIPTION
0	1.0	CASING
1.0	78.0	Name: WEATHERED TO FRESH, FINE TO MEDIUM-GRAINED QUARTZ MONZONITE.
		Colour: The fresh unit is grey, the weathered and altered zones are grey-brown to brown.
		Hardness: 4-7
		Composition: 30-40% plagioclase 15% quartz 30-40% K-feldspar 10% biotite 5% muscovite
		Texture: Fine to medium-grained.
		Structure: Generally the unit is massive, however, locally a foliation is evident defined by the orientation of biotite minerals and cuts the core at 20-35°. This is most evident from 35.1 to 38.3m and from 48.1 to 53.0m. Fracturing in the fresh quartz monzonite is minimal and cuts the core at 40°, 60°, 30° and 10°. Several weathered zones that correspond to faulted/fractured zones are at the following locations: 4.6-4.9m, 6.7-10.3m, 15.2-18.0m, 26.2-32.9m, 33.3-33.8m. All these zones are characterized by badly broken core, and moderate to intense fracturing accompanied by intense alteration by ground water. Pegmatite dykes are present at the following locations: 36.6m, 37.1-37.2m, 40.4-40.5m, 49.8-49.9m, 52.6-52.8m, 53.8-57.0m, 58.9-59.3m, 64.6-65.2m.

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		Radioactivity: (See the downhole probe). Two zones of discernable radioactivity are present. They are 15.8-16.6m (165/130 cps), and 25.5-30.5m (180/130 cps).					
		Mineralization: Fine specks of autunite are present along fractures in the zones of radioactivity.					
		Core Recovery: The recovery is 90-95% in the fresh unit and is 30-60% in the major fault zones.					
		1.0-4.9m: Weathered quartz monzonite with a brown tinge to the core. Broken core is at 2.8-3.4m and 4.6-4.9m.					
		4.9-6.6m: Fresh competent quartz monzonite with a few fractures cutting the core at 30°. These fractures are clean.					
		6.6-10.3m: Fault/fracture zone with orange-brown coloured quartz monzonite criss-crossed by chlorite-filled hairline fractures. Talc material appears on fractures lying 60-80° to the core. Manganese, hematite and limonite gouge is visible at 8.0-8.1m, 8.2-8.5m, 8.8-8.9m, 9.8-10.2m.					
		10.3-14.9m: Fresh quartz monzonite with broken core at 14.3-14.6m.					
		14.9-18.0m: Badly altered, fractured quartz monzonite. Strong limonite staining accompanied by manganese and talc coats fractures at 16.2-16.6m that cut the core at 0-10°. Some minor vuggy quartz (very minor) lies in a thin band cutting the core at 30° at 17.9m. The radioactivity in this section is related to the talc-covered fractures.					
		18.0-25.1m: Fresh, competent quartz monzonite cut by clean fractures lying 40° to the core.					

METRES FROM	TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		25.1-34.8m: Badly altered, fractured and faulted quartz monzonite. The unit is foliated (30-40°) and criss-crossed by numerous chlorite-filled hairline fractures. The core is an orange-brown colour due to the hematite/limonite staining. Fractures coated with talc are at 27.1-27.5m, 28.0-28.4m, 31.3-31.5m, 32.3-32.9m. The brown limonitic alteration terminates against a fracture lying 80° to the core at 31.9m. Below that point, the feldspars have a bleached appearance to them.					
		34.8-62.1m: Fresh quartz monzonite cut by several pegmatite dykes. The subunit is competent with minor fracturing (30-40°) visible. A crude foliation lies 30-40° to the core. Numerous fine garnets accompany the pegmatites at 56.8 and 58.9m.					
		62.1-70.4m: Badly altered, fractured quartz monzonite. The rock is a dirty brown colour - pegmatite dykes are present. The feldspars are orange to pink in colour especially below 68.9m. Chlorite and stilbite appear on fractures.					
		70.4-78.0m: Fresh quartz monzonite with the feldspars bleached locally. Stilbite fills fractures 30° to the core. Chlorite is also on fractures followed by detritic spots of manganese. A 3mm tight zone of sheared biotite is present at 77.4 and 77.6m. Both lie 45° to the core.					
		END OF HOLE.					

APPENDIX B

Surveyor's Notes

1980

August 1980

TRENCH ELEVATIONS

TRENCH JT-5
27 00N

WESTING	ELEVATIONS
38+00	998.38
38+10	997.03
38+20	996.78
38+40	996.25
38+50	995.61
38+70	994.70
38+90	991.56
39+10	989.99
39+30	988.94
39+40	985.39
39+60	979.47
39+80	977.82
40+00	976.30
40+10	975.87
40+40	977.07
40+70	978.62
41+00	980.36
41+20	982.81
41+30	984.11
41+50	985.33
41+70	986.23
41+80	988.53

Drill Holes

DDHJ-5-Elevation 994.650
26+95.4N
38+64.0W

DDHJ-2-Elevation 976.310
26+97.6N
40+00.8W

TRENCH JT-1
28+00N

JT-1 Centre Line
26+37.5N
39+87.2W
-to-
28+00.0N
41+41.1W

WESTINGS	ELEVATIONS
38+50	1026.55
38+60	1025.35
38+70	1024.75
38+90	1022.75
39+10	1018.35
39+20	1016.16
39+30	1013.56
39+40	1009.55
39+50	1008.10
39+70	1003.98
39+80	1002.23
40+00	999.38
40+30	998.04
40+50	999.59
40+60	1002.89
40+80	1004.69
40+90	1005.85
41+10	1012.35
41+20	1016.20
41+30	1018.11
41+40	1022.56
41+50	1023.23
41+60	1023.46

Drill Holes

DDHJ-7-Elevation 998.080
27+94.8N
40+29.6W

TRENCH JT-2
29+00N

JT-2 Centre Line
28+54.7N
38+58.4W
-to-
29+27.6N
41+40.6W

Drill Holes

DDHJ-6-Elevation 1039.335
28+65.3N
38+88.1W

DDHJ-8-Elevation 1023.955
29+04.7N
40+64.8W

WESTING	ELEVATIONS
38+50	1042.04
38+60	1041.54
38+70	1039.79
38+80	1039.34
39+00	1037.16
39+10	1034.81
39+20	1033.01
39+30	1032.06
39+50	1026.84
39+60	1024.57
39+70	1023.12
39+80	1021.57
40+00	1020.37
40+10	1020.77
40+20	1021.42
40+30	1021.67
40+50	1023.97
40+70	1029.05
40+90	1035.23
41+10	1041.10
41+30	1044.05
41+50	1049.72
41+60	1051.97

TRENCH JT-11
30+00N

JT-11 Centre Line
29+89.7N
38+65.1W
-to-
29+98.6N
41+97.0W

Drill Holes

DDHJ-9-Elevation 1052.925
29+97.7N
40+56.2W

DDHJ-1-Elevation 1053.395
29+95.7N
40+25.0W

WESTING	ELEVATIONS
38+20	1071.95
38+30	1071.35
38+40	1070.95
38+50	1070.60
38+60	1069.85
38+70	1069.55
38+80	1069.15
38+90	1066.52
39+00	1063.12
39+10	1060.97
39+20	1058.28
39+40	1057.48
39+60	1057.18
39+70	1057.13
39+80	1055.78
39+90	1054.83
40+20	1053.40
40+50	1052.93
40+80	1053.14
40+90	1054.93
41+00	1056.28
41+20	1062.72
41+50	1066.22
41+90	1066.37
42+15	1067.57

WESTINGS	ELEVATIONS
41+00	1144.37
41+30	1144.82
41+40	1145.57
41+60	1145.42
41+90	1143.87
42+10	1143.81
42+30	1144.57
42+50	1144.27
42+90	1142.57
43+10	1141.07
43+50	1140.07
43+70	1138.07
44+00	1136.72
44+15	1136.67

TRENCH JT-14
34+00N

JT-14 Centre Line
33+96.1N
41+05.6W
-to-
34+05.3N
44+06.8W

Drill Holes

DDHJ-10 Elevation 1143.810
33+98.9N
42+08.6W

DDHJ-11 Elevation 1142.590
34+00.7N
42+84.5W

TRENCH JT-8

WESTINGS	ELEVATIONS
31+50	1041.96
31+70	1042.46
31+80	1043.56
32+00	1044.71
32+30	1045.56
32+60	1046.00
32+80	1047.25
33+00	1048.00
33+30	1048.45
33+60	1049.00
33+70	1049.25
33+80	1050.85
33+95	1050.45

Note - Staked as 29+00N
Actually = 28+91N
Note - Cut Line staked-32+00W
Actually 32+10W
Note - Trenching Westings
listed as staked,
not corrected 10m

Drill Hole

DDHJ-3 Elevation 1044.905
28+91.9N
32+19.5W
Actual ties i.e. corrected

TRENCH JT-12

WESTING	ELEVATIONS
31+50	1063.23
31+60	1063.13
32+00	1065.37
32+30	1066.32
32+40	1067.27
32+70	1068.07
33+00	1069.27
33+10	1068.87
33+30	1069.52
33+40	1069.57
33+50	1069.97
33+60	1070.02
33+70	1070.22
33+80	1070.82

Note - Staked as 30+00N
Actually = 29+91.0N
Note - Cut line staked as
32+00W.
Acutally = 32+10W
Note - Trench Westing listed
as staked, not
corrected 10m.

Drill Hole

DDHJ-4 Elevation 1068.610
29+85.3N
32+95.3W
Actual ties, i.e. corrected

ADDITIONAL TOPOGRAPHIC INFORAMTION

Centre Line Trench JT-17

31+08.1N
41+32.3W
-to-
21+17.8N
42+99.4W

Centre Line Trench JT-13

31+97.9N
41+00.5W
-to-
32+04.7N
44+03.0W

Co-Ordinates	Elevation	
Rock @ 28+00N, 40+03W	1000.000	B.M.#1
29+00N, 40+00W	1024.125	
29+85.5N, 40+00W	1054.750	
31+00N, 40+00W	1087.145	
32+00N, 40+00W	1106.285	
34+00N, 40+00W		

APPENDIX C

Field Measurements Used for a Structural Analysis of JOVE-1 and JOVE-2 Grids 1980

FIELD MEASUREMENTS		ATTITUDE OF POLES		FIELD MEASUREMENTS		ATTITUDE OF POLES	
035°	83NW	305°	07°	025°	62SE	115°	28°
327	88NE	057	02	052	88SE	142	02
321	87NE	051	03	302	81NE	032	09
321	71NE	051	19	059	88SE	149	02
035	80NW	305	10	010	79SE	100	11
003	47SE	093	43	360	71E	90	19
038	68SE	308	22	347	76NE	077	14
055	84NW	325	06	032	80SE	122	10
310	77NE	040	13	341	75NE	071	15
324	84NE	054	16	275	71NE	005	19
052	57SE	142	33	065	69SE	155	21
310	78NE	040	12	325	60NE	055	30
034	77NW	304	13	047	57SE	137	33
310	78NE	040	12	089	62SE	179	28
295	75NE	025	15	077	67SE	167	23
309	78NE	039	12	306	59NE	036	31
305	68NE	035	22	299	44SW	210	46
045	87NW	315	03	045	74SE	135	16
107	78NE	017	12	301	52NE	031	38
052	78SE	142	12	352	88SW	262	02
036	75SE	126	15	008	64NW	278	26
302	75NE	032	15	302	83SW	212	07
298	63NE	028	27	005	40SE	095	50
050	77NW	320	13	097	84SW	187	06
298	88NE	028	02	080	85SE	170	05
330	70NE	060	20	347	87SW	257	03
308	83NE	038	07	031	81SE	121	09
045	68SE	135	22	324	48NE	054	42
318	74NE	048	16	311	50SW	221	40

.....2

FIELD MEASUREMENTS		ATTITUDE OF POLES		FIELD MEASUREMENTS		ATTITUDE OF POLES	
167°	65NE	077°	25°	024°	10NW	294°	80°
002	84SE	092	06	028	54NW	298	36
122	74SW	212	16	300	76NE	030	14
078	52SE	168	38	015	85NW	285	05
010	84SE	100	06	055	14SE	145	76
182	86SE	092	04	048	47SE	138	43
170	83NE	080	07	024	62NW	294	28
077	68SE	167	22	050	37SE	140	53
008	88SE	98	02	050	65SE	140	25
079	56SE	169	34	026	84SE	116	06
168	84NE	078	06	305	76SW	215	14
085	54SE	175	36	334	66NE	064	24
089	50SE	179	40	013	66NE	103	24
154	74NE	064	16	090	76S	180	14
012	84SE	102	06	098	80SW	188	10
304	84NE	034	06	038	66NW	308	24
316	82NE	046	08	055	45NW	325	45
005	73SE	95	17	117	88SW	207	02
328	87NE	058	03	067	61SE	157	29
346	83NE	076	07	143	87SW	233	03
338	85NE	068	05	133	80SW	223	10
002	80SE	92	10	141	77SW	231	13
347	88NE	077	02	145	78SW	235	12
335	86NE	065	04	050	43NW	320	47
055	82SE	145	08	135	75SW	225	15
295	78NE	025	12	135	74SW	225	16
016	58SE	106	32	138	65SW	228	25
345	82NE	075	08	135	72SW	225	18
294	81SW	204	09	098	86NE	008	04
014	84SE	104	06	172	43NE	82	47
335	84NE	065	06	092	42SW	182	48

.....3

FIELD MEASUREMENTS		ATTITUDE OF POLES		FIELD MEASUREMENTS		ATTITUDE OF POLES	
052°	82SE	142°	08°	110°	81NW	290°	09°
108	65NE	018	25	297	83NE	027	07
172	69NE	082	21	078	30NW	348	60
135	78SW	225	12	305	67NE	035	23
115	83NE	025	07	004	72SE	94	18
059	50SE	149	40	306	72NE	036	18
093	70SW	183	20	055	66NW	325	24
005	78SE	95	12	044	62NW	314	28
059	78SE	149	12	287	87NE	017	03
010	60SE	100	30	010	84NW	280	06
160	74NE	070	16	009	86NW	279	04
175	84SW	265	06	308	70NE	035	20
155	77NW	245	13	218	19SE	125	71
058	77NW	328	13	036	53SE	126	37
075	76SE	165	14	306	74NE	036	16
172	88SW	262	02	043	75NW	313	15
118	79SW	208	11	107	84SW	197	06
020	10SE	110	80	341	84NE	071	06
070	67SE	160	23	300	66NE	030	24
110	74NE	020	16	109	68SW	199	22
138	73SW	228	17	324	36SW	234	54
120	75SW	210	15	300	82NE	030	08
048	84SE	138	6	023	73SE	113	17
173	71SW	263	19	298	81NE	028	09
060	88SE	150	02	057	65SE	147	25
166	34NE	076	56	076	72NW	346	18
161	72NE	071	18	037	89SE	307	01
112	⊥	-	0	311	81NE	041	09
156	64NE	066	26	350	87NE	080	03
084	68SE	174	22	060	81SE	150	09
360	74W	270	16	008	72NW	278	18

.....4

FIELD MEASUREMENTS		ATTITUDE OF POLES		FIELD MEASUREMENTS		ATTITUDE OF POLES	
300°	66NE	030°	24°	019°	82SE	109°	08°
355	56NE	085	34	318	67SW	228	23
065	68SE	155	22	046	72NW	316	18
085	⊥	-	-	036	79SE	126	11
353	88NE	083	02	307	74NE	037	16
306	80NE	036	10	078	54SE	168	36
358	78SW	268	12	048	78SE	138	12
104	70SW	194	20	327	46SW	237	44
048	18SE	138	72	318	56NE	048	34
087	88SE	177	2	024	78SE	114	12
306	82NE	036	8	032	86SE	122	04
008	47SE	98	43	032	88NW	302	02
302	36SW	212	54	338	74NE	068	16
027	88NW	297	02	046	86NW	316	04
289	52NE	019	38	340	61NE	070	29
352	63NE	082	27	058	78NW	328	12
061	78NW	331	12	308	63NE	038	27
298	78SW	208	12	340	68NE	070	22
006	80NW	276	10	038	41SE	128	49
047	88NW	317	02	087	88NW	357	02
004	62NW	274	28	354	28SW	264	62
311	89NE	041	01	335	56NE	065	34
087	88SE	177	02	022	89SE	112	01
039	88SE	129	02	286	81SW	196	09
002	47SE	092	43	328	69SW	238	21
098	70SW	188	20	290	48SW	200	42
067	55NW	337	35	057	65SE	147	25
048	67NW	318	23	054	43NW	324	47
041	80NW	311	10	308	86SE	128	04
043	75NW	313	15	312	66SW	222	24
065	72NW	335	18	027	87SE	117	03
055	64NW	325	26	219	73NE	129	17
048	81NW	318	09	355	56SW	265	34

.....5

FIELD MEASUREMENTS		ATTITUDE OF POLES		FIELD MEASUREMENTS		ATTITUDE OF POLES	
051°	75NW	321°	15°	016°	88SE	106°	02°
112	85SW	202	05	038	48SE	128	42
051	83NW	321	07	304	76NE	034	14
338	86SW	248	04	076	69SE	166	21
342	65NE	072	25	004	56SE	94	34
076	52NW	346	38	007	78SE	97	12
023	85NW	293	05	035	31SE	125	59
308	82SW	218	08	082	86SE	172	04
084	48NW	354	42	090	82N	360	08
067	47SE	157	43	081	86SE	171	04
342	24SW	252	66	313	86NE	043	04
343	69NE	073	21	075	83NW	345	07
323	35NE	053	55	083	63SE	173	27
324	77NE	054	13	341	53NE	071	37
328	66NE	058	24	083	81SE	173	09
085	56SE	355	34	358	85NE	088	05
054	61SE	144	29	302	70NE	032	20
293	76NE	023	14	083	75SE	173	15
039	87SE	129	03	338	67SW	248	23
302	56NE	032	34	022	48SE	112	42
084	65SE	174	25	332	51NE	062	39
329	78NE	059	12	102	61SW	192	29
077	56SE	167	34	302	82SW	212	08
307	79NE	037	11	095	81SW	185	09
077	48SE	107	42	308	47NE	038	43
318	64NE	048	26	011	40SE	101	50
084	56SE	174	34	007	59SE	97	31
324	73NE	054	17	297	37NE	027	53
080	55SE	170	35	028	50SE	118	40
320	75NE	050	15	327	75NE	057	15

.....6

FIELD MEASUREMENTS		ATTITUDE OF POLES		FIELD MEASUREMENTS		ATTITUDE OF POLES	
051°	75NW	321°	15°	016°	88SE	106°	02°
112	85SW	202	05	038	48SE	128	42
051	83NW	321	07	304	76NE	034	14
338	86SW	248	04	076	69SE	166	21
342	65NE	072	25	004	56SE	94	34
076	52NW	346	38	007	78SE	97	12
023	85NW	293	05	035	31SE	125	59
308	82SW	218	08	082	86SE	172	04
084	48NW	354	42	090	82N	360	08
067	47SE	157	43	081	86SE	171	04
342	24SW	252	66	313	86NE	043	04
343	69NE	073	21	075	83NW	345	07
323	35NE	053	55	083	63SE	173	27
324	77NE	054	13	341	53NE	071	37
328	66NE	058	24	083	81SE	173	09
085	56SE	355	34	358	85NE	088	05
054	61SE	144	29	302	70NE	032	20
293	76NE	023	14	083	75SE	173	15
039	87SE	129	03	338	67SW	248	23
302	56NE	032	34	022	48SE	112	42
084	65SE	174	25	332	51NE	062	39
329	78NE	059	12	102	61SW	192	29
077	56SE	167	34	302	82SW	212	08
307	79NE	037	11	095	81SW	185	09
077	48SE	107	42	308	47NE	038	43
318	64NE	048	26	011	40SE	101	50
084	56SE	174	34	007	59SE	97	31
324	73NE	054	17	297	37NE	027	53
080	55SE	170	35	028	50SE	118	40
320	75NE	050	15	327	75NE	057	15

.....6

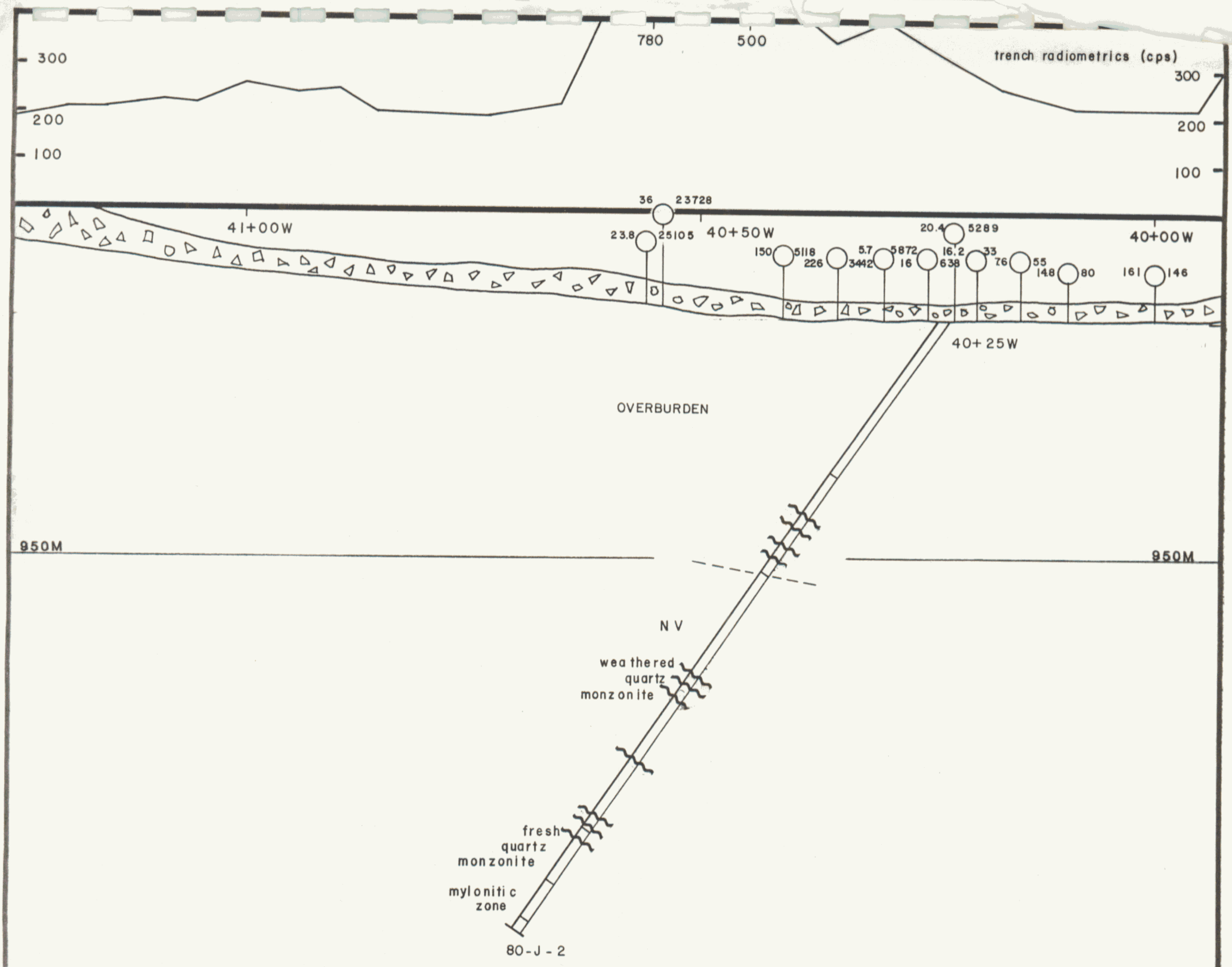
FIELD MEASUREMENTS		ATTITUDE OF POLES		FIELD MEASUREMENTS		ATTITUDE OF POLES	
086°	88SE	176°	02°	328°	67NE	058°	23°
288	73NE	018	17	312	31NE	042	59
066	41SE	156	49	348	73SW	258	17
067	77SE	157	13	020	85NW	290	05
345	61NE	075	29	299	57NE	029	33
313	68NE	043	22	316	76NE	046	14
034	60SE	124	30	309	50NE	039	40
298	46NE	028	44	305	79NE	035	11
344	39SW	254	51	337	60NE	067	30
050	84NW	320	06	092	74NE	02	16
321	30SW	231	60	074	53SE	164	37
325	76SW	235	14	312	80NE	042	10
042	67NW	312	23	332	28NE	062	62
079	75NW	349	15	047	87SE	137	03
327	31SW	237	59	060	79NW	330	11
328	53SW	237	37	325	78SW	235	12
054	83NW	324	07	034	82SE	124	08
056	82NW	326	08	100	66NE	010	24
312	39SW	222	51	067	81SE	157	09
022	83SE	112	07	341	57NE	071	33
322	73NE	052	17	334	67NE	064	23
348	67NE	078	23	305	63NE	035	27
101	88NE	011	02	025	14NW	295	76
044	86NW	314	04	322	79SW	232	11
346	72NE	076	18	042	70NW	312	20
052	83NW	322	07	314	72NE	044	18
332	57NE	062	33	056	86SE	146	04
052	67SE	142	23	053	84NW	323	06
015	72SE	105	18	053	64NW	323	26
359	89SW	271	01	321	60NE	051	30
333	70SW	243	20	334	84NE	064	06
345	64SW	245	26	052	82SE	142	08
311	67NE	041	23	045	65NW	315	25

.....7

FIELD MEASUREMENTS		ATTITUDE OF POLES		FIELD MEASUREMENTS		ATTITUDE OF POLES	
086°	88SE	176°	02°	328°	67NE	058°	23°
288	73NE	018	17	312	31NE	042	59
066	41SE	156	49	348	73SW	258	17
067	77SE	157	13	020	85NW	290	05
345	61NE	075	29	299	57NE	029	33
313	68NE	043	22	316	76NE	046	14
034	60SE	124	30	309	50NE	039	40
298	46NE	028	44	305	79NE	035	11
344	39SW	254	51	337	60NE	067	30
050	84NW	320	06	092	74NE	02	16
321	30SW	231	60	074	53SE	164	37
325	76SW	235	14	312	80NE	042	10
042	67NW	312	23	332	28NE	062	62
079	75NW	349	15	047	87SE	137	03
327	31SW	237	59	060	79NW	330	11
328	53SW	237	37	325	78SW	235	12
054	83NW	324	07	034	82SE	124	08
056	82NW	326	08	100	66NE	010	24
312	39SW	222	51	067	81SE	157	09
022	83SE	112	07	341	57NE	071	33
322	73NE	052	17	334	67NE	064	23
348	67NE	078	23	305	63NE	035	27
101	88NE	011	02	025	14NW	295	76
044	86NW	314	04	322	79SW	232	11
346	72NE	076	18	042	70NW	312	20
052	83NW	322	07	314	72NE	044	18
332	57NE	062	33	056	86SE	146	04
052	67SE	142	23	053	84NW	323	06
015	72SE	105	18	053	64NW	323	26
359	89SW	271	01	321	60NE	051	30
333	70SW	243	20	334	84NE	064	06
345	64SW	245	26	052	82SE	142	08
311	67NE	041	23	045	65NW	315	25

.....7

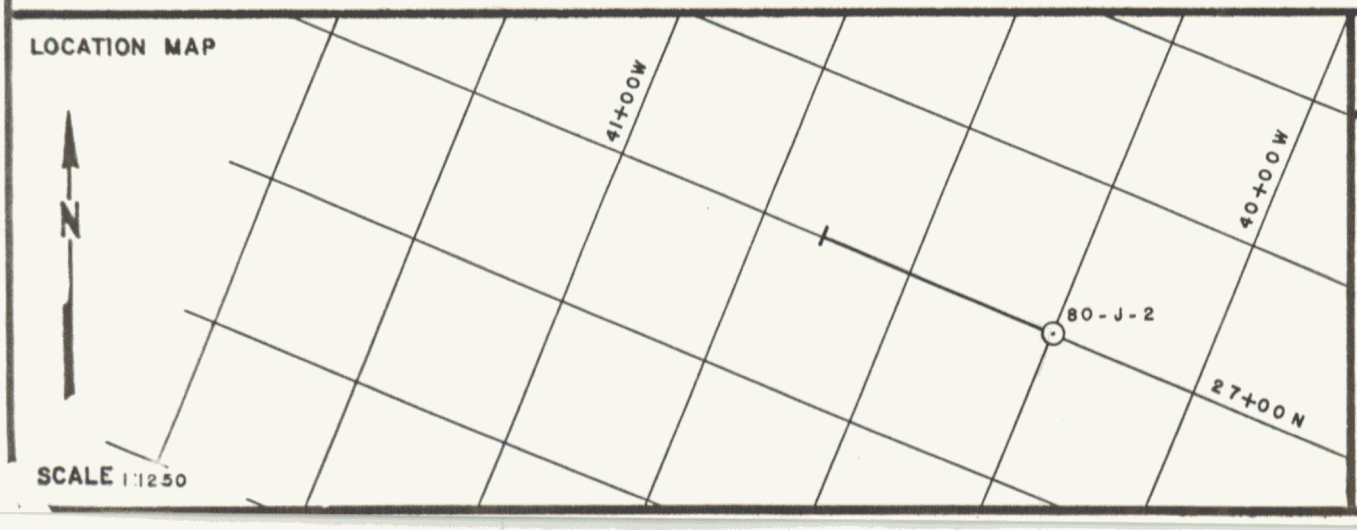
FIELD MEASUREMENTS		ATTITUDE OF POLES	
010°	80SE	280°	10°
360	80E	090	10
328	64NE	058	26
323	64NE	053	26
335	71NE	065	19
350	63NE	080	27
345	65NE	075	25
320	50NE	050	40
065	77SE	155	13
340	63SW	250	27
075	80SE	165	10
305	79NE	035	11
060	76NW	330	14
055	80SE	145	10
048	78SE	138	12
285	56NE	015	34
350	89SW	260	01
075	55SE	165	35
330	73NE	060	17
280	80NE	010	10
338	60NE	068	40
348	76NE	078	14
350	75NE	080	15
340	75NE	080	15
315	77NE	045	13
310	60NE	040	30
340	78NE	080	12
345	72NE	075	18
360	⊥	-	-
345	70NE	075	20
050	78NW	320	12
080	38NW	350	52



LEGEND

- TRENCH WALL GEOLOGY
- .02 — CORE ASSAY % U_3O_8
- U ppb / Rn pc/l — WATER SEEP
- 1500 — ALPHA NUCLEAR METER READING (cph)
- NV — NO CORE ASSAY VALUES
- ● .005% U_3O_8
- FRACTURE ZONES INTERSECTED BY DRILLING

LOCATION MAP



ELDORADO NUCLEAR LIMITED

PROJECT	522
DISPOSITION	JOVE 2 SOUTH
SECTION	27+00N TRENCH-5
HOLE	80-J-2
COMPLETED	7/5/80
LOGGED BY	W.J.OLSSON
SCALE	1:500

trench radiometrics (cps)

300
200
100

39+50 W

39+00W

1000M

1000M

1439

3457

38+70 W

badly weathered quartz monzonite

NV

slightly weathered quartz monzonite

80-J-5

LEGEND

TRENCH WALL GEOLOGY

.02 CORE ASSAY % U_3O_8

U ppb Ra pc/l WATER SEEP

1500 ALPHA NUCLEAR METER READING (cph)

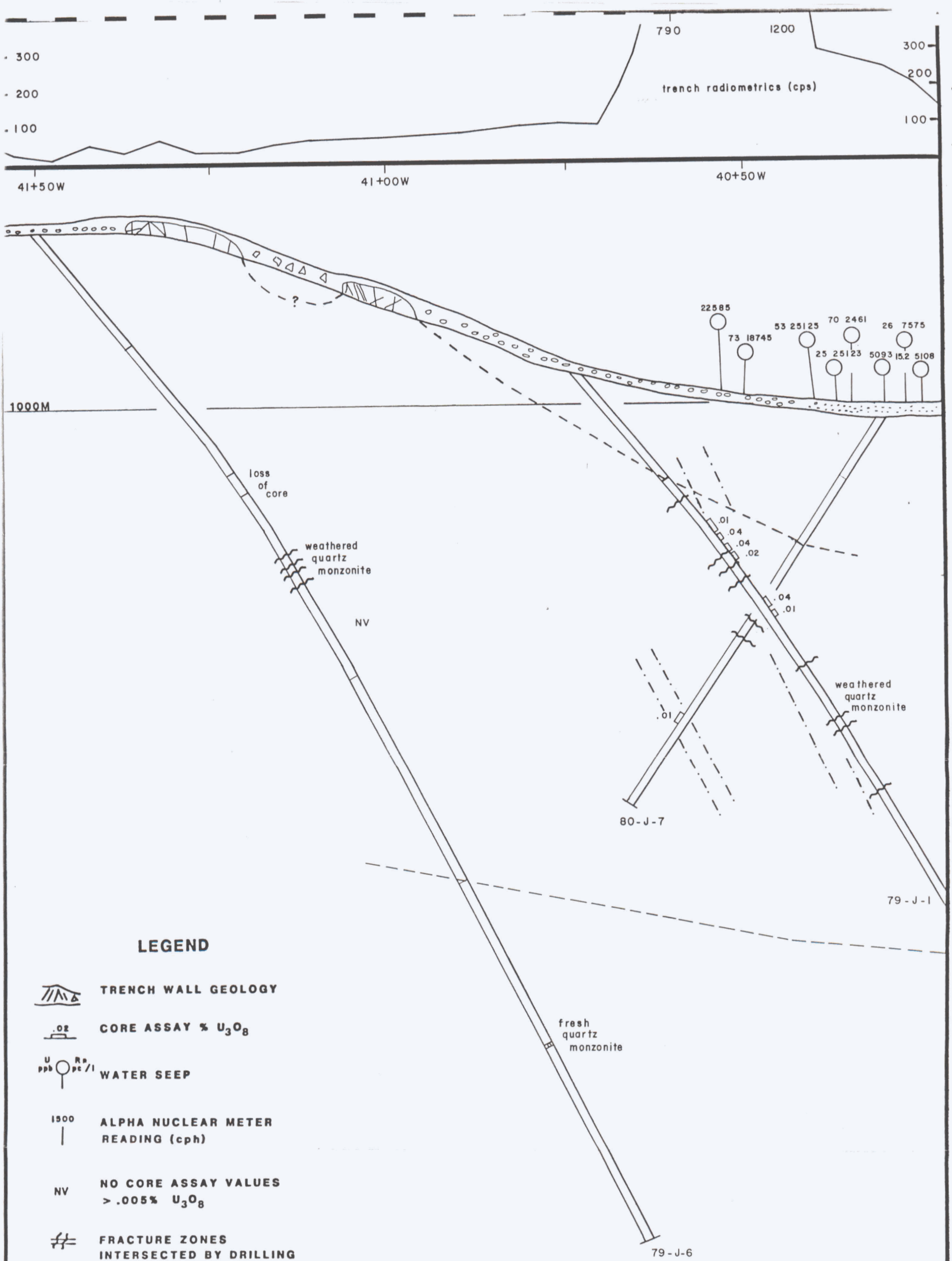
NV NO CORE ASSAY VALUES > .005% U_3O_8

FRACTURE ZONES INTERSECTED BY DRILLING

LOCATION MAP

ELDORADO NUCLEAR LIMITED

PROJECT 522
DISPOSITION JOVE 2 SOUTH
SECTION 27+00 N TRENCH-5
HOLE 80-J-5
COMPLETED 13/7/80
LOGGED BY W.J.OLSSON
SCALE 1:500



LEGEND

TRENCH WALL GEOLOGY

.02 CORE ASSAY % U_3O_8

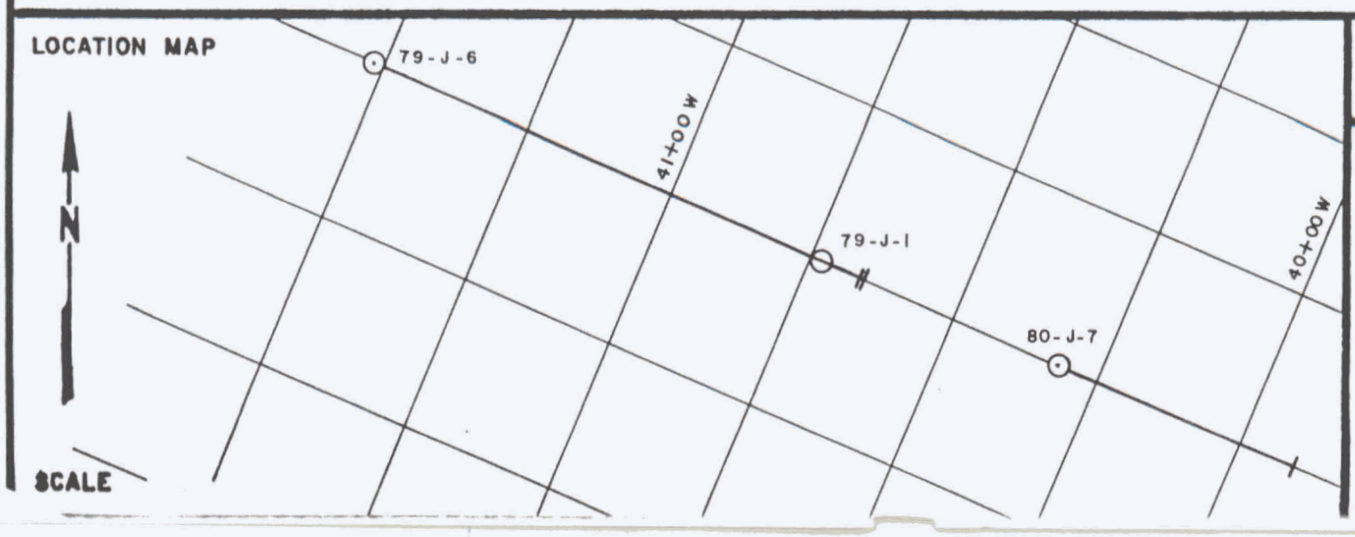
U ppb, Rn pc/l — WATER SEEP

1500 — ALPHA NUCLEAR METER READING (cph)

NV — NO CORE ASSAY VALUES > .005% U_3O_8

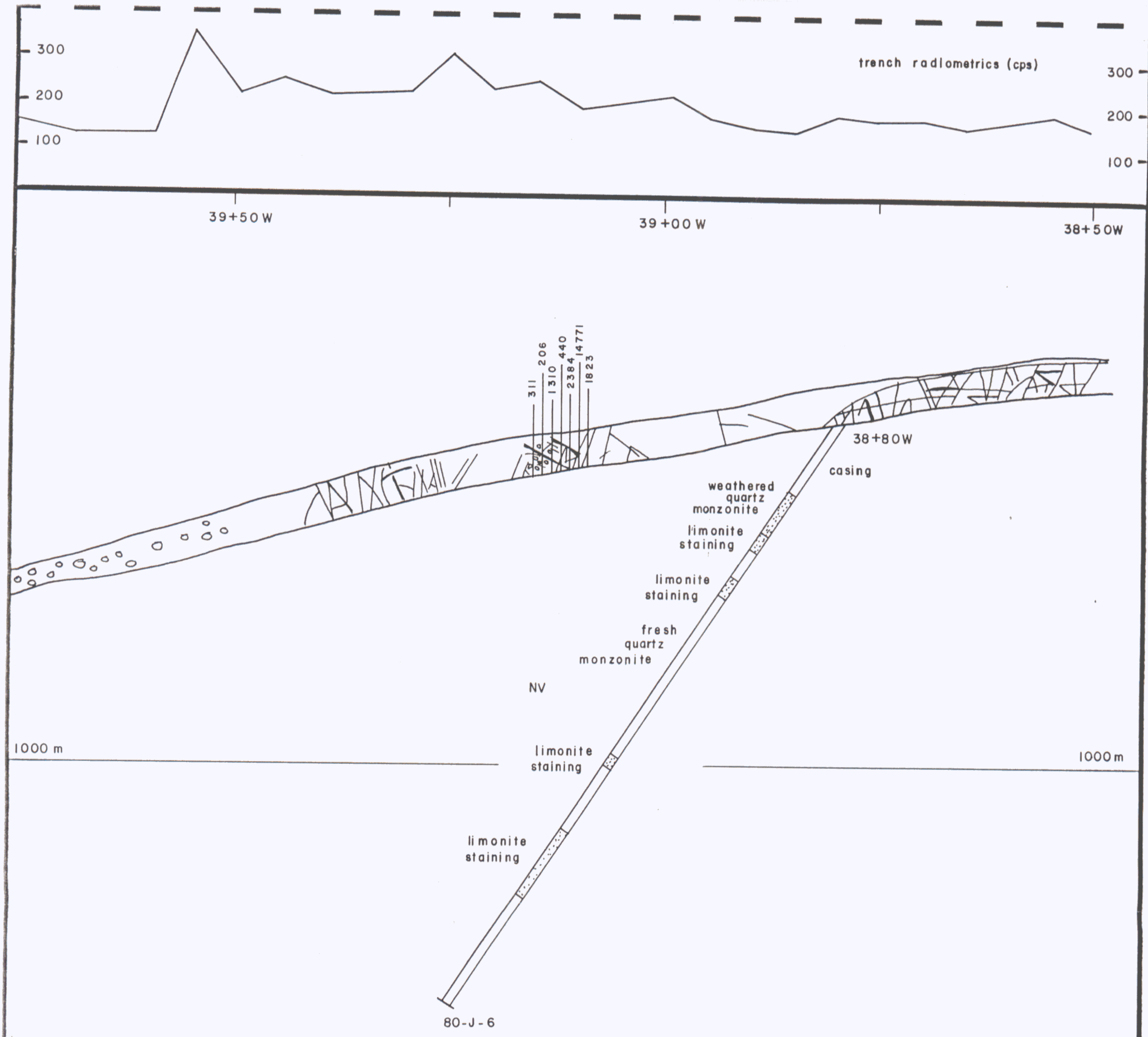
FRACTURE ZONES INTERSECTED BY DRILLING

LOCATION MAP



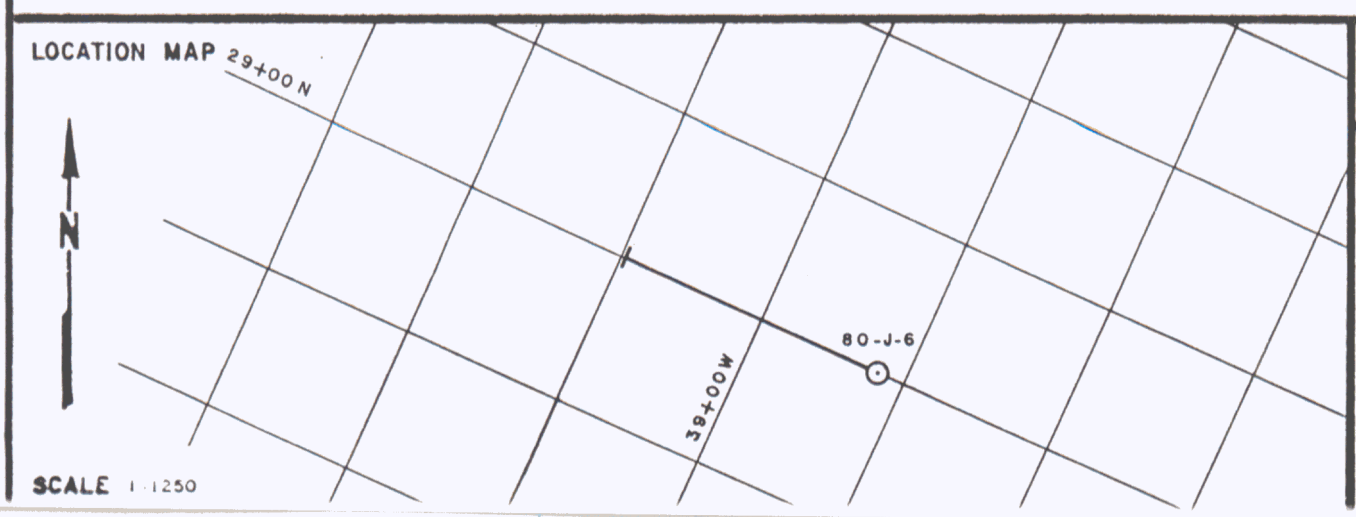
ELDORADO NUCLEAR LIMITED

PROJECT	522
DISPOSITION	JOVE 2 SOUTH
SECTION	28+00 TRENCH I
HOLE	79-J-1, 79-J-6, 80-J-7
COMPLETED	16/7/80
LOGGED BY	W.J.OLSSON
SCALE	1:500



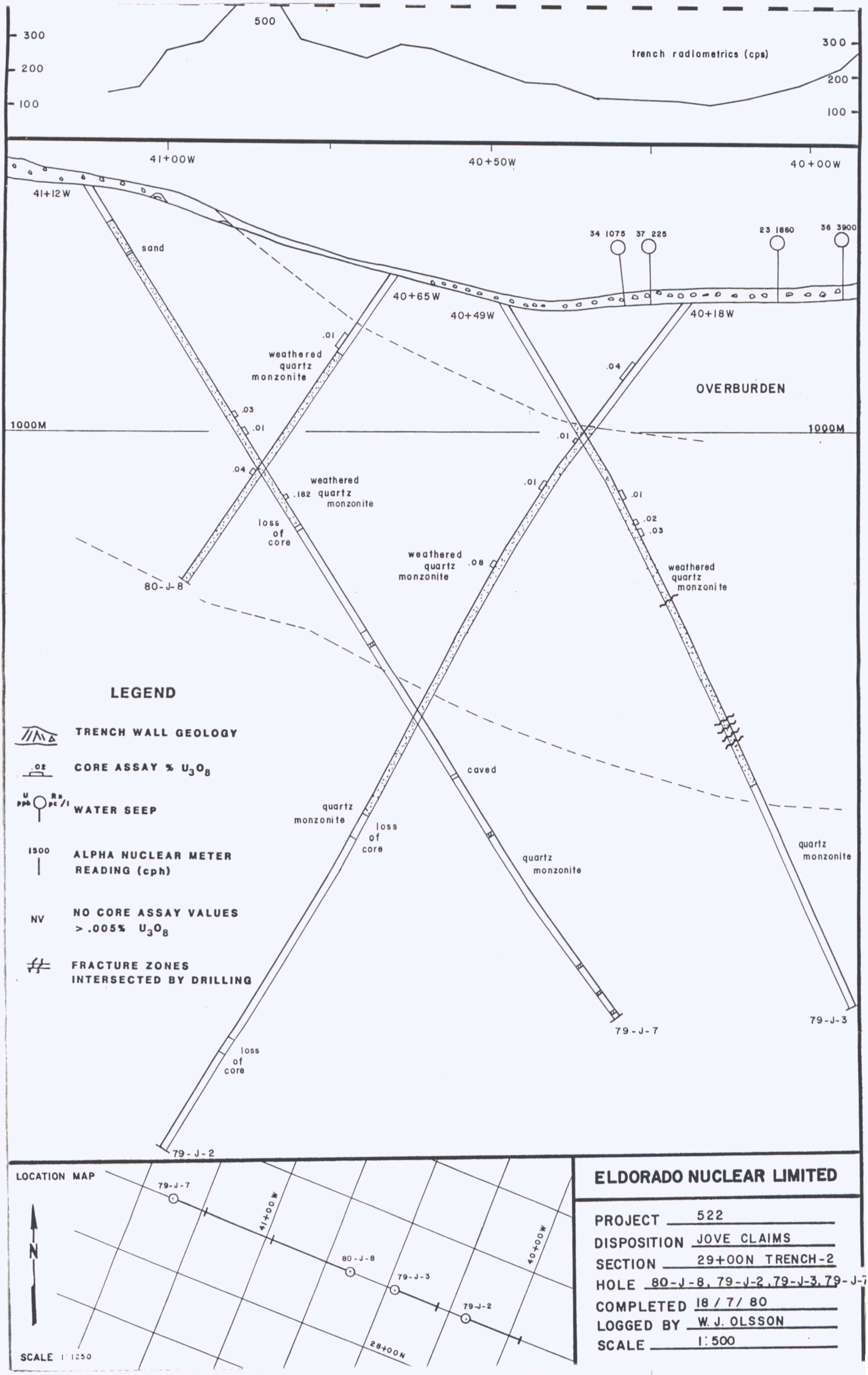
LEGEND

- TRENCH WALL GEOLOGY
- .02 — CORE ASSAY % U_3O_8
- U ppb / Ra pc/l — WATER SEEP
- 1500 — ALPHA NUCLEAR METER READING (cph)
- NV — NO CORE ASSAY VALUES > .005% U_3O_8
- FRACTURE ZONES INTERSECTED BY DRILLING



ELDORADO NUCLEAR LIMITED

PROJECT	522
DISPOSITION	JOVE 2 SOUTH
SECTION	29+00 N TRENCH-2
HOLE	80-J-6
COMPLETED	15/7/80
LOGGED BY	W.J.OLSSON
SCALE	1:500


500
300
200
100
trench radiometrics (cps)
41+00W
40+50W
40+00W
41+12W
sand
34 1075
37 225
23 1860
36 3900
40+65W
40+49W
40+18W
.01
weathered quartz monzonite
.04
OVERBURDEN
1000M
.03
.01
.01
.04
.182
weathered quartz monzonite
loss of core
80-J-8
.01
.01
.08
weathered quartz monzonite
.01
.02
.03
weathered quartz monzonite
caved
quartz monzonite
loss of core
quartz monzonite
quartz monzonite
79-J-7
79-J-3
loss of core
79-J-2
LEGEND
TRENCH WALL GEOLOGY
.02 CORE ASSAY % U_3O_8
U ppb Rn pc/l WATER SEEP
1500 ALPHA NUCLEAR METER READING (cph)
NV NO CORE ASSAY VALUES > .005% U_3O_8
FRACTURE ZONES INTERSECTED BY DRILLING
LOCATION MAP
79-J-7
41+00 W
80-J-8
79-J-3
79-J-2
40+00 W
28+00N
N
SCALE 1:1250
ELDORADO NUCLEAR LIMITED
PROJECT 522
DISPOSITION JOVE CLAIMS
SECTION 29+00N TRENCH-2
HOLE 80-J-8, 79-J-2, 79-J-3, 79-J-7
COMPLETED 18 / 7 / 80
LOGGED BY W. J. OLSSON
SCALE 1:500

trench radiometrics (cps)

300
200
100

33+00W
32+50W
32+00W

12.4 101
9 114
92 2947
271 12563
71 9663
113 9738

32+05W
casing
mafic-rich quartz monzonite
zone with vuggy quartz veins
quartz monzonite
limonitic staining
NV

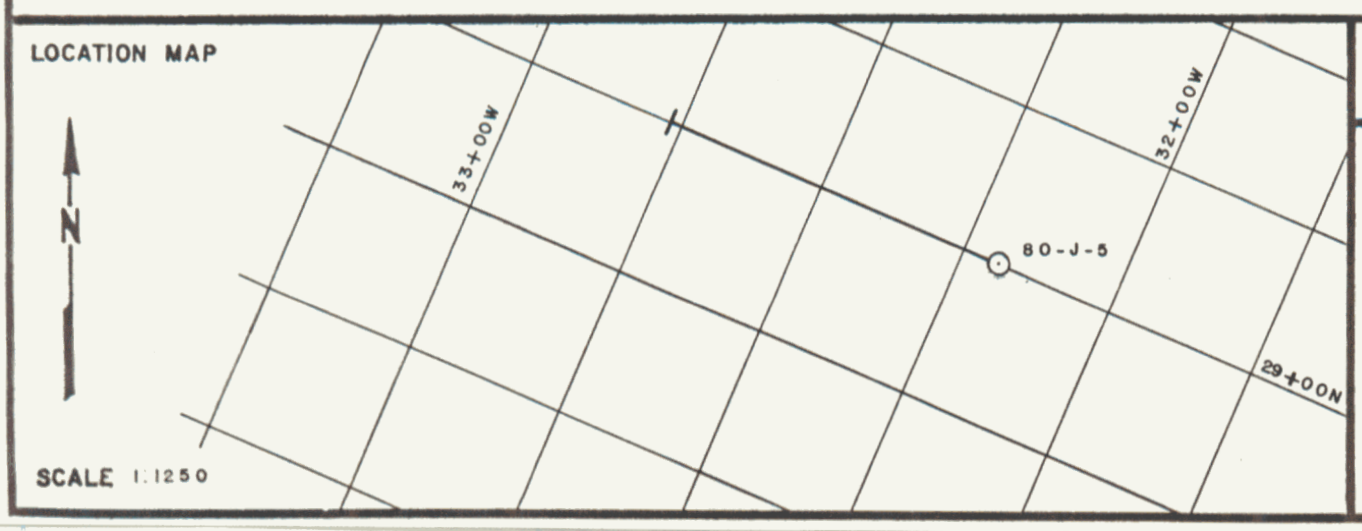
1000m
1000m

80-J-3

LEGEND

- TRENCH WALL GEOLOGY
- .02 CORE ASSAY % U_3O_8
- U ppb / Rn pc/l WATER SEEP
- 1500 ALPHA NUCLEAR METER READING (cph)
- NV NO CORE ASSAY VALUES > .005% U_3O_8
- FRACTURE ZONES INTERSECTED BY DRILLING

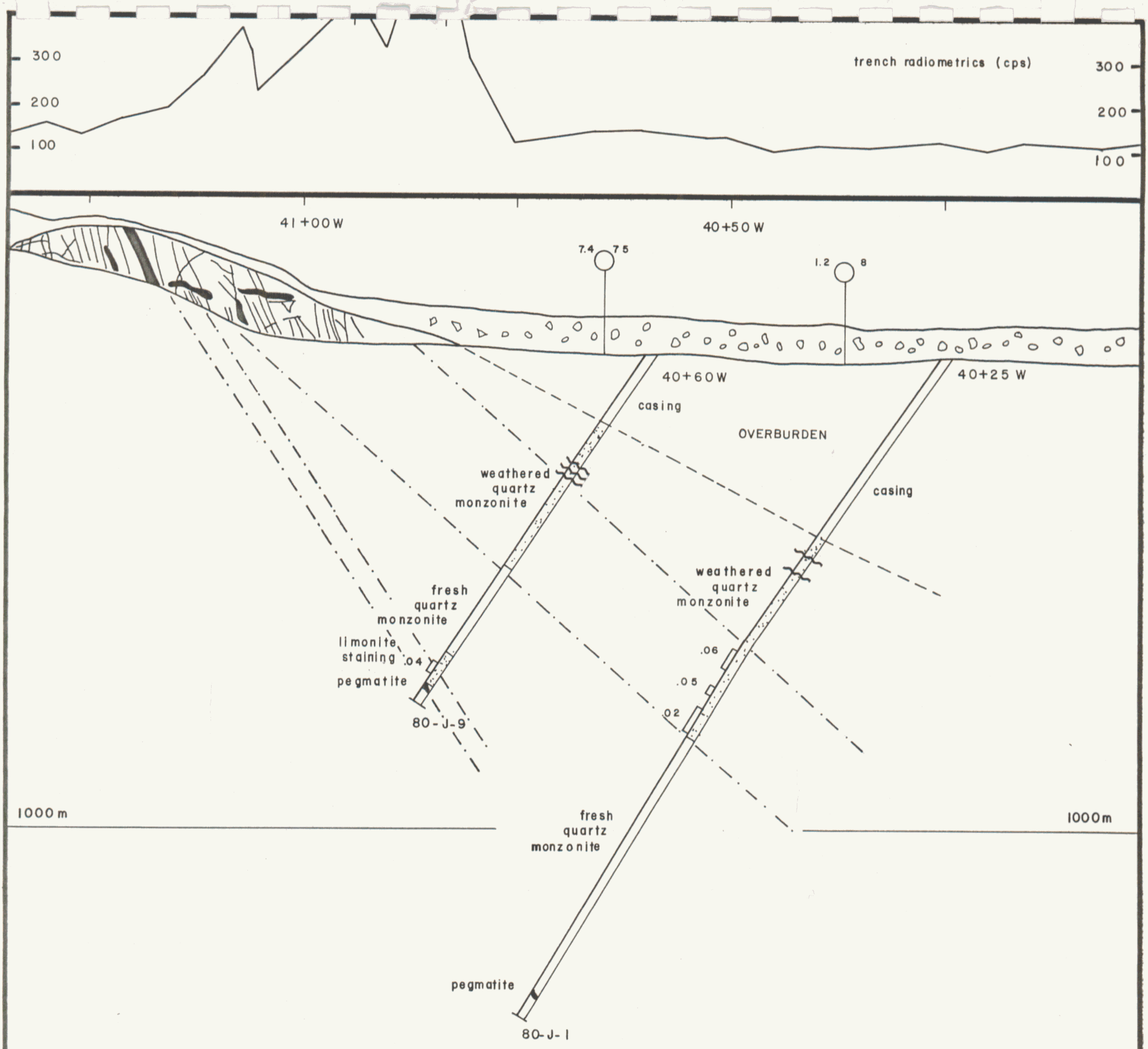
LOCATION MAP



SCALE 1:1250

ELDORADO NUCLEAR LIMITED

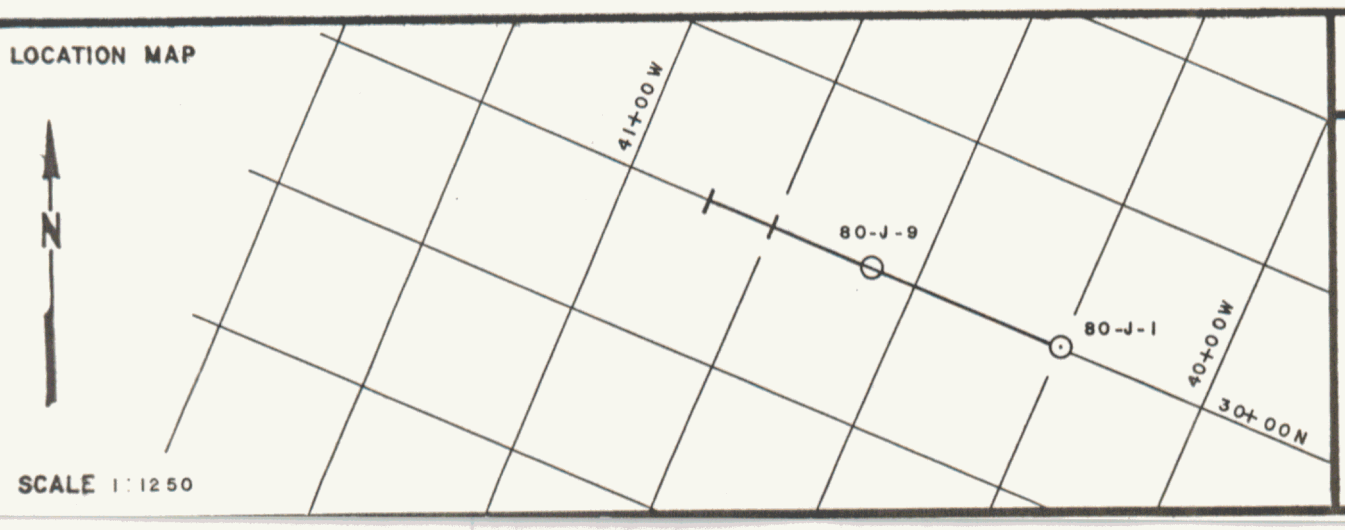
PROJECT	522
DISPOSITION	JOVE I SOUTH
SECTION	29+00N TRENCH-8
HOLE	80-J-3
COMPLETED	9/7/80
LOGGED BY	W.J. OLSSON
SCALE	1:500



LEGEND

- TRENCH WALL GEOLOGY
- .02 — CORE ASSAY % U_3O_8
- U ppb / Rn pc/l — WATER SEEP
- 1500 — ALPHA NUCLEAR METER READING (cph)
- NV — NO CORE ASSAY VALUES > .005% U_3O_8
- FRACTURE ZONES INTERSECTED BY DRILLING

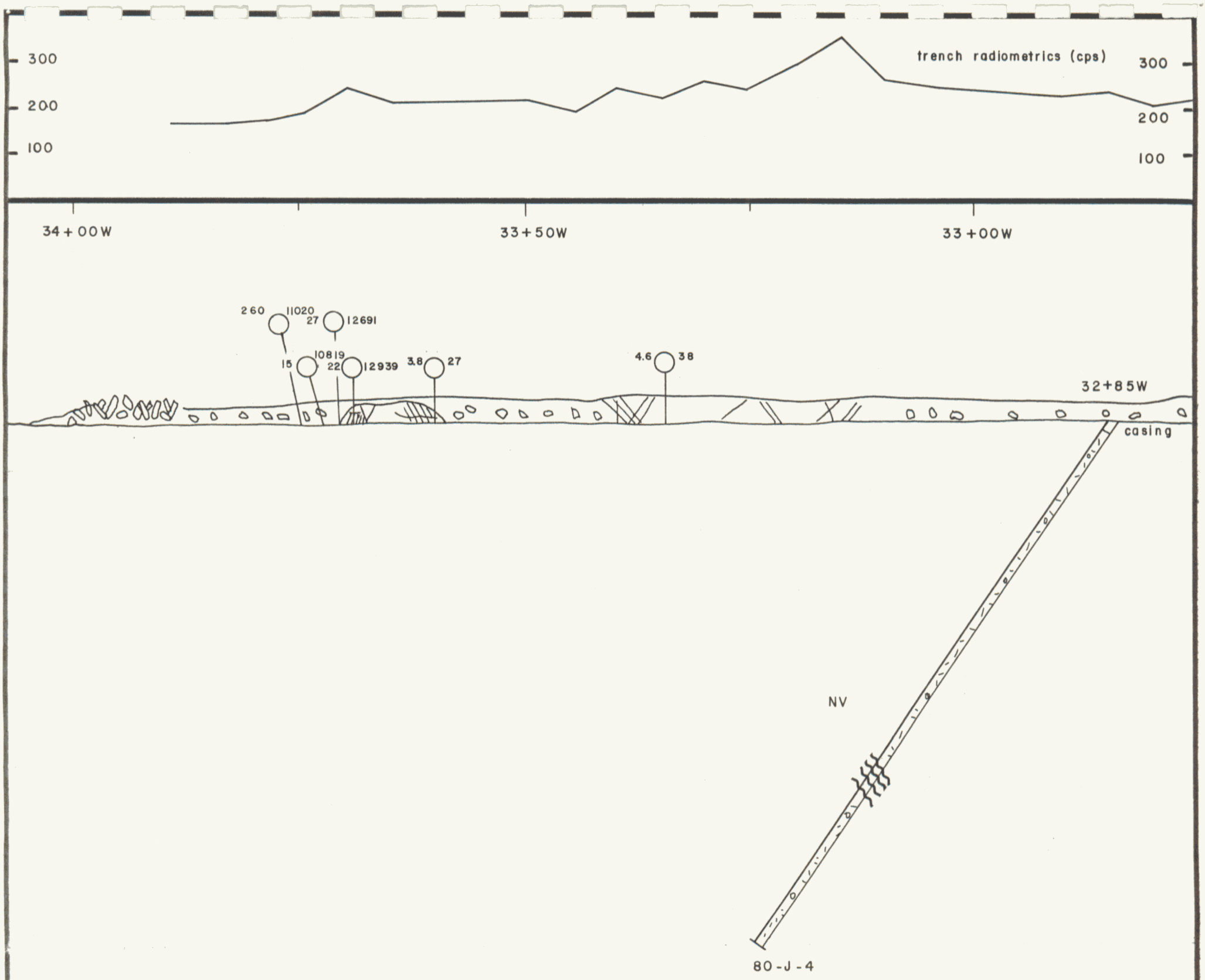
LOCATION MAP



SCALE 1:1250

ELDORADO NUCLEAR LIMITED

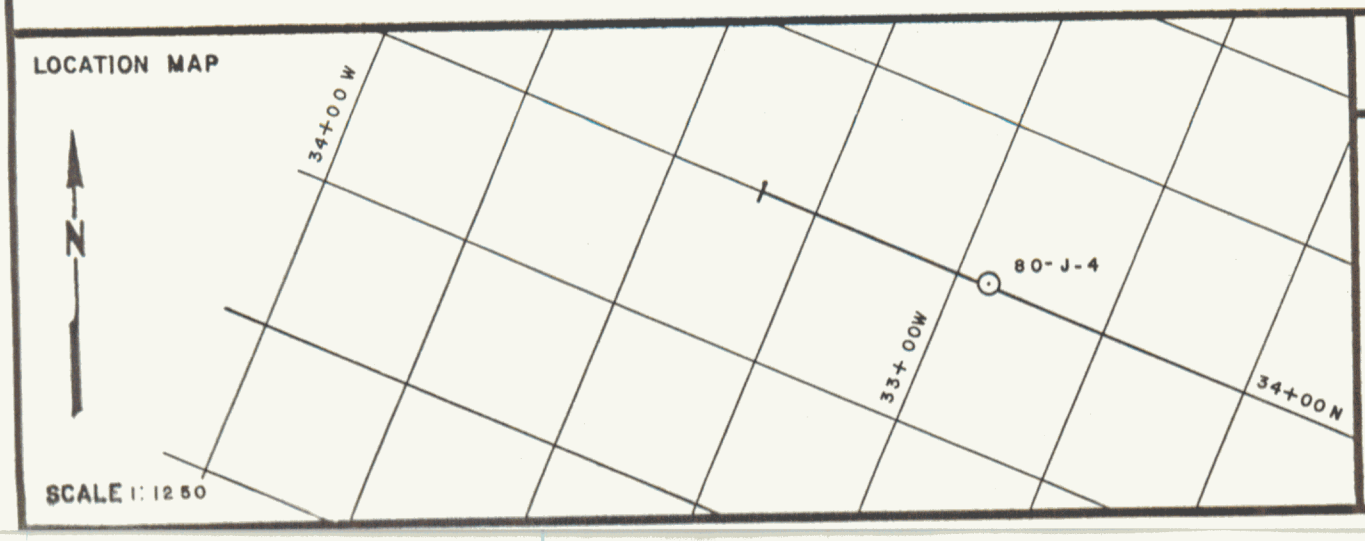
PROJECT	522
DISPOSITION	JOVE 2 SOUTH
SECTION	30+00N TRENCH-II
HOLE	80-J-1, 80-J-9
COMPLETED	20/7/80
LOGGED BY	W.J. OLSSON
SCALE	1:500



LEGEND

- TRENCH WALL GEOLOGY
- .02 — CORE ASSAY % U_3O_8
- U ppb / Rn pc/l — WATER SEEP
- 1500 — ALPHA NUCLEAR METER READING (cph)
- NV — NO CORE ASSAY VALUES > .005% U_3O_8
- FRACTURE ZONES INTERSECTED BY DRILLING

LOCATION MAP



SCALE 1:1250

ELDORADO NUCLEAR LIMITED

PROJECT	522
DISPOSITION	JOVE I SOUTH
SECTION	30+00N TRENCH-12
HOLE	80-J-4
COMPLETED	11/7/80
LOGGED BY	W.J. OLSSON
SCALE	1:500

400
300
200
100

trench radiometrics (cps)

400
300
200
100

43+00W

42+50W

42+95W

42+12W

limonitic stain

limonitic stain

NV

limonitic stain

fresh quartz monzonite

weathered quartz monzonite

fresh quartz monzonite

NV

80-J-11

limonitic staining

limonitic staining

limonitic staining

limonitic staining

fresh quartz monzonite

1000M

80-J-10

LEGEND

TRENCH WALL GEOLOGY

.02 CORE ASSAY % U_3O_8

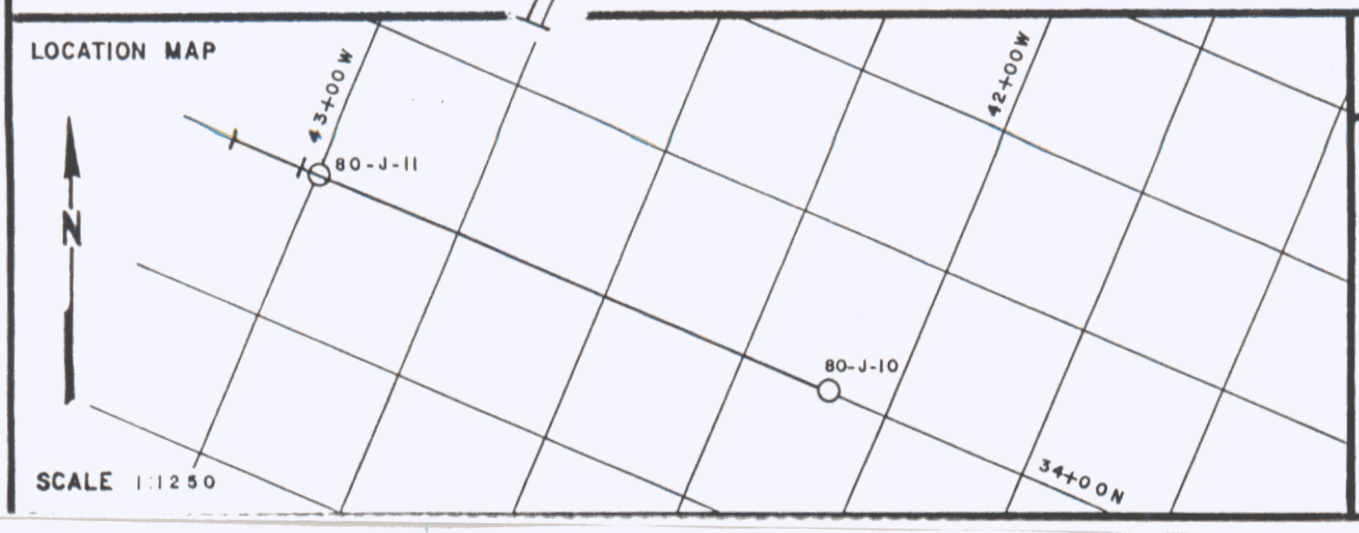
U ppb, Rn pc/l WATER SEEP

1500 ALPHA NUCLEAR METER READING (cph)

NV NO CORE ASSAY VALUES > .005% U_3O_8

FRACTURE ZONES INTERSECTED BY DRILLING

LOCATION MAP



SCALE 1:1250

ELDORADO NUCLEAR LIMITED

PROJECT 522
DISPOSITION JOVE 2 NORTH
SECTION 34+00N TRENCH JT-14
HOLE 80-J-10, 80-J-11
COMPLETED 26/7/8
LOGGED BY W.J. OLSSON
SCALE 1:500

STATEMENT OF EXPENDITURES
JOVE 1-370
1980

Direct Costs to
Eldorado Nuclear:

Salaries:	W. Olsson	92 @ $150	13,800	
	S. McAllister	83 @ $100	8,300	
	J. Mulvie	53 @ $100	5,300	
	D. Melling	53 @ $ 85	4,505	
	B. Fischer	73 @ $ 85	6,205	
	B. Garey	8 @ $ 85	680	
	P. Hobbs	8 @ $ 85	680	
	T. Madore	56 @ $ 85	4,760	
				$44,230

Contractor Costs:

Activity	Supplier	Amount	
Line cutting	M.J. Moreau	$3,459.50	
			$47,689.50
Trenching	Kolody Enterprises	$4,207.50	
		7,106.00	
		8,508.50	
		9,570.00	
		3,498.00	
		$32,890.00	$80,579.50
Helicopter	Frontier-TNTA	$10,930.50	
		18,443.54	
		$29,374.04	
	CanWest	$ 5,528.16	
		848.61	
		1,408.90	
		1,428.48	
		$ 9,214.15	
	Shirley	$ 673.40	
		1,420.92	
		494.92	
		396.06	
		396.06	
		1,040.72	
		396.06	
		644.66	
		1,189.88	
		445.78	
		2,383.84	
		1,147.77	
		2,969.01	
		220.73	
		$13,819.81	
			$132,987.50

Analytical Charges:

2000 soils @ 2.60	$5,200	
1000 rocks @ 3.80	3,800	
600 sludges @ 2.60	1,560	
400 waters @ 2.80	1,120	
	$11,680	$144,667.50

Instrument Rentals

Re 279 from Bondar-Clegg
rate = 562.50/mo.

1 for 4 months 1 for 3 months	$ 3,937.50	
75 Alpha Meters for 4 months rate = 75/mo.	22,500.00	
	$26,437.50	
TOTAL:		$171,105

The above costs are a true and accurate compilation of expenditures that were incurred in carrying out the field work on the JOVE 1-370 claim block between May 1 and August 29, 1980.

William Olsson,
Project Geologist

PROFESSIONAL ENGINEER
W. J. OLSSON
ELDORADO
SASKATCHEWAN

Sworn before me
in Ottawa, Ontario
on the 6th day
of February, 1981.

I, William Olsson, do hereby certify I am a geologist, having graduated from Queen's University in Kingston, Ontario and hold the degree of Bachelor of Applied Science. I am also registered as a Professional Engineer with the Professional Engineers of Saskatchewan.

I have practised my profession for seven years and am presently employed by Eldorado Nuclear Limited, 400 - 255 Albert Street, Ottawa, Ontario.

I certify that I have no direct or indirect interest in this property, nor do I anticipate receiving any in the near future.

William Olsson

PROFESSIONAL ENGINEER
W. J. OLSSON
ELDORADO
SASKATCHEWAN

INVOICE

NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS •• REGISTERED ASSAYERS

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

ATTN: William Olsson

Soil / Sludges

CERTIFICATE NO. 53528 - 53530
INVOICE NO. 36446
DATE June 24/80

	DESCRIPTION	SUB-TOTAL	TOTAL
105	Analysed for U @ $2.75	$288.75	
105	Prepared @ $0.50	52.50	
		341.25	
	Less 20%	-68.25	
			$273.0

020-80-522-40-195
William Olsson

INVOICE DATE YR.	MO.	DAY	REGISTER		VENDOR	INVOICE NO
80	6	24	Nº 55824			36446
DUE PER.	BANK	DIV.	C. CTR.	ORDER NO.	C. EL.	AMOUNT
8030	2	020	80	522 40	195	273.00
DISCOUNT						
AMOUNT 273.00						
VOUCHER No.						
GOODS SERV PRICE						
AUDITED BL						

EXPLORATION DIVISION
JUL 21 1980
APPROVED FOR PAYMENT

[illegible] HELICOPTERS LTD.

Abbotsford International Airport

Box 220, Abbotsford, B.C. Canada V2S 4N9
Telephone: Abbotsford 604-853-5887
Vancouver 604-526-0400
Watson Lake 403-536-7766

In Account With

Eldorado Nuclear Ltd.
400 - 255 Albert Street
Ottawa, Ontario

EXPLORATION
DIVISION
JUN 27 1980

INVOICE Nº 1456

Date: May 31, 1980

Reference Number: 1047

TERMS: *Due when rendered. An interest charge of 2% per month will be charged on all past due accounts.*

ITEM	SERVICES PERFORMED	AMOUNT
	C-GINQ	
y 21	Flight Report # 3247	$1 810.05
22	# 3248	4 292.25
23	# 3249	6 882.25
27	# 3258	5 458.99
	NVOICE	$18 443.54

INVOICE DATE YR.	MO.	DAY	REGISTER			VENDOR	INVOICE NO.
80	5	31	Nº 48745				1456
DUE PER.	BANK		DIV.	C. CTR.	ORDER NO.	C. EL.	AMOUNT
8028	2		220	80	522 53	171	18,443.54
DISCOUNT							
AMOUNT							
18,443.54							
VOUCHER NO.							
GOODS SERV PRICE							
AUDITED							

EXPLORATION
DIVISION
JUN 27 1980
APPROVED FOR
PAYMENT

FRONTIER HELICOPTERS LTD.

Abbotsford International Airport

Box 220, Abbotsford, B.C. Canada V2S 4N9
Telephone: Abbotsford 604-853-5887
Vancouver 604-526-0400
Watson Lake 403-536-7766

In Account With

Eldorado Nuclear Ltd.
400 - 255 Albert Street
Ottawa, Ontario

INVOICE № 1499

Date: August 31, 1980

Reference Number: 1047

TERMS: *Due when rendered. An interest charge of 2% per month will be charged on all past due accounts.*

ITEM	SERVICES PERFORMED	AMOUNT
	GTNQ	
	Flight Report #5116	$ 5 640.25
	#5117	5 290.25

EXPLORATION
DIVISION
OCT 3 1980

020-80-522-26-171

William Olsen

AMOUNT OF INVOICE $10 930.50

INVOICE DATE YR.	MO	DAY	REGISTER	VENDOR	INVOICE NO
			NO 66340		1499

INVOICE

CHEMEX LABS LTD.

NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

TO: Eldorado Nuclear Ltd.
Ste. 400 - 255 Albert St.
Ottowa, Ontario K1P 6A9

CERTIFICATE NO. A8010331-001-A
INVOICE NO. 38803
DATE Sept. 17/80

ATTN: WATERS

	DESCRIPTION	SUB-TOTAL	TOTAL
124	Analyzed for U @ $3.50	$434.00	
	Less 20%	86.80	
			$347.20

020-80-522-42-195

William Adam

INVOICE DATE YR.	MO	DAY	REGISTER	VENDOR	INVOICE NO.
80	9	17	No. 66112		38803

DIV.	C. CTR.	ORDER NO.	C. EL.	AMOUNT
020	80	522	42 195	347.20

DUE PER. 9040 | BANK 2

DISCOUNT

AMOUNT 347.20

EXPLORATION DIVISION
SEP 23 1980
APPROVED FOR PAYMENT

AUDITED B.L.

Shirley
Helicopters Ltd.

Hangar No. 6A, Municipal Airport
Edmonton, Alberta T5G 2Z3
Phone 453-5121

July 29, 1980

TO
Eldorado Nuclear,
400 - 255 Albert Street,
Ottawa, Ontario

ACCOUNTS DUE WHEN RENDERED

PAYABLE AT PAR EDMONTON

CUSTOMER'S ORDER NUMBER	HELICOPTERS	PILOT
	C-GSHZ	Myers

DESCRIPTION	CHARGES
July 13, 1980 74610 .8 hrs. @ $445. per hr.	$ 356.00
Plus Fuel @ $1.70 per gal for 23g.	39.10
Plus Oil @ $1.20 perhr.	.96
	$396.06

EXPLORATION
DIVISION
AUG 1 1980

INVOICE DATE YR.	MO	DAY	REGISTER	VENDOR	INVOICE NO
80	7	29	Nº 56711		A 12671

DIV.	C. CTR.	ORDER NO	C. EL.	AMOUNT
020	80	522	53 171	396-06

DUE PER. 8032 | BANK 2

DISCOUNT

AMOUNT 396-06

VOUCHER NO:

GOODS SERV. PRICE

AUDITED

EXPLORATION DIVISION
AUG 5 1980.
APPROVED FOR PAYMENT

A 12671

Shirley Helicopters Ltd.

INVOICE 70

Hangar No. 6A, Municipal Airport
Edmonton, Alberta T5G 2Z3
Phone 453-5121

July 31, 1980

TO:
Eldorado Nuclear,
400 - 255 Albert Street,
Ottawa, Ontario

ACCOUNTS DUE WHEN RENDERED		PAYABLE AT PAR EDMONTON
CUSTOMER'S ORDER NUMBER	HELICOPTERS: C-GSHZ	PILOT: Myers

DESCRIPTION		CHARGES
July 17, 1980 74615	2.1 hrs. @ $445. per hr.	$ 934.50
	Plus Fuel @ $1.70 per gal for 61g.	103.70
	Plus Oil @ $1.20 per hr.	2.52
		$1,040.72

INVOICE DATE YR.	MO	DAY	REGISTER	VENDOR	INVOICE NO.
80	7	31	Nº 56128		12713

DIV.	C. CTR.	ORDER NO	C. EL.	AMOUNT
020	80	522	53 171	1,040.72

DUE PER. 8034 BANK 2

DISCOUNT

AMOUNT 1040.72

VOUCHER NO.

GOODS SERV PRICE

AUDITED BC

EXPLORATION DIVISION
AUG 15 1980
APPROVED FOR PAYMENT

V.P.

LORATION
IVISION
UG 15 1980

A 12713

Shirley Helicopters Ltd.

INVOICE

Hangar No. 6A, Municipal Airport
Edmonton, Alberta T5G 2Z3
Phone 453-5121

July 31, 1980

TO

Eldorado Nuclear,
400 - 255 Albert Street,
Ottawa, Ontario

ACCOUNTS DUE WHEN RENDERED		PAYABLE AT PAR EDMONTON
CUSTOMER'S ORDER NUMBER	HELICOPTERS	PILOT
	C-GSHZ	Myers

DESCRIPTION	CHARGES
July 20, 1980 74618 .8 hrs. @ $445. per hr.	$356.00
Plus Fuel @ $1.70 per gal for 23g.	39.10
Plus Oil @ $1.20 per hr.	.96
	$396.06

INVOICE DATE YR.	MO.	DAY	REGISTER			VENDOR	INVOICE NO.
80	7	31	Nº 56129				12716
DUE PER.	BANK		DIV	C. CTR.	ORDER NO.	C. EL.	AMOUNT
8034	2		000	80	522 53	171	396-06
DISCOUNT							
AMOUNT 396.06							
VOUCHER NO.							
GOODS SERV/PRICE							
AUDITED							

EXPLORATION DIVISION
AUG 15 1980
APPROVED FOR PAYMENT

EXPLORATIO DIVISION
AUG 15 1980

A 12716

OFFICE COPY

Shirley
Helicopters Ltd.

INVOICE

7,

Hangar No. 6A, Municipal Airpc
Edmonton, Alberta T5G 2Z3
Phone 453-5121

July 31, 1980

TO

Eldorado Nuclear,
400 - 255 Albert Street,
Ottawa, Ontario

ACCOUNTS DUE WHEN RENDERED		PAYABLE AT PAR EDMONTON
CUSTOMER'S ORDER NUMBER	HELICOPTERS	PILOT
	C-GSHZ	Myers

DESCRIPTION	CHARGES
July 24, 1980 74622 1.3 hrs. @ $445. per hr.	$578.50
Plus Fuel @ $1.70 per gal for 38g.	64.60
Plus Oil @ $1.20 per hr.	1.56
	$644.66

INVOICE DATE YR.	MO.	DAY	REGISTER		VENDOR	INVOICE NO.
80	7	31	No 56130			12120
DUE PER.	BANK	DIV.	C. CTR.	ORDER NO.	C. EL.	AMOUNT
8034	2	020	80	522	53171	$ 644.66
DISCOUNT						
AMOUNT 644.66						
VOUCHER NO.						
GOODS/SERV/PRICE						
AUDITED BL						

EXPLORATION DIVISION
AUG 15 1980
APPROVED FOR PAYMENT

RATION
ISION
15 1980

A 12720

Shirley Helicopters Ltd.

INVOICE

14

Hangar No. 6A, Municipal Airport
Edmonton, Alberta T5G 2Z3
Phone 453-5121

July 31, 1980

TO

Eldorado Nuclear,
400 - 255 Albert Street,
Ottawa, Ontario

ACCOUNTS DUE WHEN RENDERED		PAYABLE AT PAR EDMONTON
CUSTOMER'S ORDER NUMBER	HELICOPTERS	PILOT
	C-GSHZ	Myers

DESCRIPTION	CHARGES
July 30, 1980 74631 2.4 hrs. @ $445. per hr.	$1,068.00
Plus Fuel @ $1.70 per gal for 70g.	119.00
Plus Oil @ $1.20 per hr.	2.88
	$1,189.88

INVOICE DATE YR.	MO.	DAY	REGISTER	VENDOR	INVOICE NO.
80	7	31	Nº 56149		12731

DIV.	C. CTR.	ORDER NO		C. EL.	AMOUNT
020	80	522	53	171	1,189.88

DUE PER. 8035 BANK 2

DISCOUNT

AMOUNT 1,189.88

VOUCHER NO.

GOODS SERV/PRICE

AUDITED B.L.

EXPLORATION DIVISION
AUG 20 1980
APPROVED FOR PAYMENT

K.D.

A 12731

Shirley Helicopters Ltd.

INVOICE

70

Hangar No. 6A, Municipal Airport
Edmonton, Alberta T5G 2Z3
Phone 453-5121

July 31, 1980

TO:
Eldorado Nuclear,
400 - 255 Albert Street,
Ottawa, Ontario

ACCOUNTS DUE WHEN RENDERED		PAYABLE AT PAR EDMONTON
CUSTOMER'S ORDER NUMBER	HELICOPTERS: C-GSHZ	PILOT: Myers

DESCRIPTION	CHARGES
July 17, 1980 74615 2.1 hrs. @ $445. per hr.	$ 934.50
Plus Fuel @ $1.70 per gal for 61g.	103.70
Plus Oil @ $1.20 per hr.	2.52
	$1,040.72

INVOICE DATE YR.	MO	DAY	REGISTER	VENDOR	INVOICE NO.
80	7	31	Nº 56128		12713

DIV.	C. CTR.	ORDER NO	C. EL.	AMOUNT
020	80	522 53	171	1,040.72

DUE PER. 8034 BANK 2

DISCOUNT

AMOUNT 1040.72

VOUCHER NO.

GOODS SERV PRICE

AUDITED B.C.

EXPLORATION DIVISION
AUG 15 1980
APPROVED FOR PAYMENT

EXPLORATION DIVISION
AUG 15 1980

A 12713

Shirley Helicopters Ltd.

INVOICE

Hangar No. 6A, Municipal Airport
Edmonton, Alberta T5G 2Z3
Phone 453-5121

July 31, 1980

TO

Eldorado Nuclear,
400 - 255 Albert Street,
Ottawa, Ontario

ACCOUNTS DUE WHEN RENDERED		PAYABLE AT PAR EDMONTON
CUSTOMER'S ORDER NUMBER	HELICOPTERS	PILOT
	C-GSHZ	Myers

DESCRIPTION	CHARGES
July 20, 1980 74618 .8 hrs. @ $445. per hr.	$356.00
Plus Fuel @ $1.70 per gal for 23g.	39.10
Plus Oil @ $1.20 per hr.	.96
	$396.06

INVOICE DATE YR.	MO.	DAY	REGISTER	VENDOR	INVOICE NO.
80	1	31	Nº 56129		12716

DIV	C. CTR.	ORDER NO.	C. EL.	AMOUNT
220	80	522	53	171 396-06

DUE PER. 8034 BANK 2

DISCOUNT

AMOUNT 396.06

VOUCHER NO.

GOODS SERV/PRICE

AUDITED B.C.

EXPLORATION DIVISION

AUG 15 1980

APPROVED FOR PAYMENT

EXPLORATION DIVISION
AUG 15 1980

A 12716

OFFICE COPY

Shirley
Helicopters Ltd.

INVOICE

7

Hangar No. 6A, Municipal Airpo
Edmonton, Alberta T5G 2Z3
Phone 453-5121

July 31, 1980

TO

Eldorado Nuclear,
400 - 255 Albert Street,
Ottawa, Ontario

ACCOUNTS DUE WHEN RENDERED		PAYABLE AT PAR EDMONTON
CUSTOMER'S ORDER NUMBER	HELICOPTERS	PILOT
	C-GSHZ	Myers

DESCRIPTION	CHARGES
July 24, 1980 74622 1.3 hrs. @ $445. per hr.	$578.50
Plus Fuel @ $1.70 per gal for 38g.	64.60
Plus Oil @ $1.20 per hr.	1.56
	$644.66

INVOICE DATE YR.	MO.	DAY	REGISTER			VENDOR	INVOICE No.
80	7	31	No 56130				12720
DUE PER.	BANK		DIV.	C. CTR.	ORDER NO.	C. EL.	AMOUNT
8034	2		220	80	5aa	53171	644.66
DISCOUNT							
AMOUNT 644.66							
VOUCHER NO.							
GOODS/SERV/PRICE							
AUDITED							

EXPLORATION DIVISION
AUG 15 1980
APPROVED FOR PAYMENT

RATION
ISION
15 1980

A 12720

Shirley Helicopters Ltd.

INVOICE 14

Hangar No. 6A, Municipal Airport
Edmonton, Alberta T5G 2Z3
Phone 453-5121

July 31, 1980

TO

Eldorado Nuclear,
400 - 255 Albert Street,
Ottawa, Ontario

ACCOUNTS DUE WHEN RENDERED		PAYABLE AT PAR EDMONTON
CUSTOMER'S ORDER NUMBER	HELICOPTERS	PILOT
	C-GSHZ	Myers

DESCRIPTION	CHARGES
July 30, 1980 74631 2.4 hrs. @ $445. per hr.	$1,068.00
Plus Fuel @ $1.70 per gal for 70g.	119.00
Plus Oil @ $1.20 per hr.	2.88
	$1,189.88

INVOICE DATE YR.	MO.	DAY	REGISTER	VENDOR	INVOICE NO.
80	7	31	Nº 56149		12731

DUE PER.	BANK
8035	2

DISCOUNT

AMOUNT 1,189.88

VOUCHER NO.

GOODS SERV/PRICE

AUDITED B.L.

DIV.	C. CTR.	ORDER NO	C. EL.	AMOUNT
020	80	522	53 171	1,189.88

K.D.

EXPLORATION DIVISION
AUG 20 1980
APPROVED FOR PAYMENT

A 12731

Shirley Helicopters Ltd.

INVOICE 74

Hangar No. 6A, Municipal Airport
Edmonton, Alberta T5G 2Z3
Phone 453-5121

July 31, 1980

TO

Eldorado Nuclear,
400 - 255 Albert Street,
Ottawa, Ontario

ACCOUNTS DUE WHEN RENDERED		PAYABLE AT PAR EDMONTON
CUSTOMER'S ORDER NUMBER	HELICOPTERS: C-GSHZ	PILOT: Myers

DESCRIPTION	CHARGES
July 31, 1980 74632 .9 hrs. @ $445. per hr.	$400.50
Plus Fuel @ $1.70 per gal for 26g.	44.20
Plus Oil @ $1.20 per hr.	1.08
	$445.78

INVOICE DATE YR.	MO	DAY	REGISTER	VENDOR	INVOICE NO.
80	7	31	Nº 56148		12732

DIV.	C. CTR.	ORDER NO	C. EL.	AMOUNT
020	80	522	53 171	$445.78

DUE PER. 8035 BANK 2

DISCOUNT

AMOUNT $445.78

VOUCHER NO.

GOODS/SERV/PRICE

AUDITED B.L.

EXPLORATION DIVISION
AUG 20 1980
APPROVED FOR PAYMENT

A 12732

OFFICE COPY

INVOICE

Hangar No. 6A, Municipal Airpc
Edmonton, Alberta T5G 2Z3
Phone 453-5121

.td.

EXPLORATION DIVISION

August 29, 1980

.uclear,
.s Albert Street,
, Ontario

SEP 11 19[illegible]

[redacted]

ACCOUNTS DUE WHEN RENDERED	HELICOPTERS	PAYABLE AT PAR EDMONTON
CUSTOMER'S ORDER NUMBER	C-GSHH	PILOT Thompson

DESCRIPTION	CHARGES
August 6, 1980 75189 .5 hrs. @ $400. per hr.	$200.00
Plus Fuel @ $1.75 per gal for 11.5g.	20.13
Plus Oil @ $1.20 per hr.	.60
	$220.73

Total Sum = $15476.88

Charge as follows

020-80-522-53-171 : [redacted] 9543.91
020-80-522-70-171 3320.62
020-90-[redacted]-09-171 2612.35

William Olsen.

A 13235

TERMS NET 30 DAYS — 2% PER MONTH CHARGED ON OVERDUE ACCOUNTS.

INVOICE

Hangar No. 6A, Municipal Airport
Edmonton, Alberta T5G 2Z3
Phone 453-5121

Ltd.

August 29, 1980

Nuclear,
,5 Albert Street,
, Ontario

ACCOUNTS DUE WHEN RENDERED — PAYABLE AT PAR EDMONTON

CUSTOMER'S ORDER NUMBER	HELICOPTERS	PILOT
	C-GSHH	Thompson

		DESCRIPTION	CHARGES
August 23, 1980	76174	2.9 hrs. @ $400. per hr.	$1,160.00
JOOE		Plus Fuel @ $1.75 per gal for 66.7g.	116.73
		Plus Oil @ $1.20 per hr.	3.48
August 24, 1980	76175	2.5 hrs. @ $400. per hr.	1,000.00
JOOE		Plus Fuel @ $1.75 per gal for 57.5g.	100.63
		Plus Oil @ $1.20 per hr.	3.00
			$2,383.84

A 13263

TERMS NET 30 DAYS — 2% PER MONTH CHARGED ON OVERDUE ACCOUNTS.

INVOICE

Hangar No. 6A, Municipal Airpo
Edmonton, Alberta T5G 2Z3
Phone 453-5121

ers Ltd.

August 29, 1980

Eldorado Nuclear,
400 - 255 Albert Street,
Ottawa, Ontario

ACCOUNTS DUE WHEN RENDERED		PAYABLE AT PAR EDMONTON
CUSTOMER'S ORDER NUMBER	HELICOPTERS: C-GSHH	PILOT: Thompson

DESCRIPTION			CHARGES
August 25, 1980	69928	2.6 hrs. @ $400. per hr.	$1,040.00
		Plus Fuel @ $1.75 per gal for 59.8g.	104.65
		Plus Oil @ $1.20 per hr.	3.12
August 26, 1980	69929	2.5 hrs. @ $400. per hr.	1,000.00
		Plus Fuel @ $1.75 per gal for 57.5g.	100.63
		Plus Oil @ $1.20 per hr.	3.00
August 27, 1980	69930	5.0 hrs. @ $400. per hr.	2,000.00
		Plus Oil @ $1.20 per hr.	6.00
			$4,257.40

A 13266

TERMS NET 30 DAYS — 2% PER MONTH CHARGED ON OVERDUE ACCOUNTS.

INVOICE

Hangar No. 6A, Municipal Airport
Edmonton, Alberta T5G 2Z3
Phone 453-5121

...ters Ltd.

August 29, 1980

Eldorado Nuclear,
400 - 255 Albert Street,
Ottawa, Ontario

ACCOUNTS DUE WHEN RENDERED		PAYABLE AT PAR EDMONTON
CUSTOMER'S ORDER NUMBER	HELICOPTERS	PILOT
	C-GSHH	Thompson

DESCRIPTION		CHARGES
August 29, 1980 69935	7.3 hrs. @ $400. per hr.	$2,920.00
	Plus Fuel @ $1.75 per gal for 23g.	40.25
	Plus Oil @ $1.20 per hr.	8.76
		$2,969.01

A 13269

TERMS NET 30 DAYS — 2% PER MONTH CHARGED ON OVERDUE ACCOUNTS.

P.O Box 5282
WHITEHORSE, YUKON Y1A4Z2

SOLD TO ELDORADO NUCLEAR LTD
SUITE 400, 255 ALBERT ST.
OTTAWA, ONTARIO

SHIP TO

MAY 7, 1980

DATE	SHIPPED VIA	FED. LICENCE NO	PROV. LICENCE NO	YOUR ORDER NO	OUR ORDER NO	TERMS	SALESMAN

BACK ORDERED	QUAN. ORDERED	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
	~~27~~	KILOMETRE OF LINES CUT			
	18.5 Km	AT $187.00 PER KILOMETRE		$ 3459.50	
		PROJECT 523			
		JOVE CLAIMS			

EXPLORATION DIVISION
MAY 15 1980

Pls have $3459.50 placed directly into the following acct:
CIBC in Whitehorse
acct 60-01815
M.J. Moreau Enterprise
William Olson

020-80-522-74-128
William Olson

B/O TO

REORDER FORM 7881N

INVOICE DATE YR.	MO.	DAY	REGISTER	VENDOR	INVOICE NO.
80	05	07	Nº 46099		105304

DUE PER.	BANK	DIV.	C. CTR.	ORDER NO.		C. EL.	AMOUNT
		020	080	522	74	128	$ 3459.50

DISCOUNT

AMOUNT $ 3459.50

VOUCHER NO.

GOODS/SERV/PRICE

AUDITED

EXPLORATION DIVISION
JUN 12 1980
APPROVED FOR PAYMENT

- wired 80/06/12 d.D.

XXXXXXXXXXXXXXXXXX Box 4488
Whitehorse, Yukon XXXXXXX
Y1A 2R8
Phone 668-5186

INVOICE NO 3679

SHIPPED TO

SAMPLE

LD TO • Eldorado Nuclear Limited
Suite 400
• 255 Albert Street
Ottawa, Ontario
• K1P 6A9

DATE	YOUR ORDER NO	FOB	TERMS
June 24, 1980			2% charged over 30 days

OUR ORDER NO	SALESMAN	DATE SHIPPED	SHIPPED VIA	F.S.T.	P.S.T

JAN ORDERED	QUAN SHIPPED	DESCRIPTION	UNIT-PRICE	UNIT	AMOUNT
		RENTAL of one D8 Cat from June 1 to June 8/80			
		45 hours @ $110.00 per hour			$4,950 00
		LESS 15% holdback			742 50
		TOTAL			$4,207 50

Arctic Star Printing Inc.

INVOICE NO. 3681

Whitehorse, Yukon XXX XXX
Y1A 2R8
Phone 668-5186

SOLD TO: Eldorado Nuclear Limited
Suite 400
255 Albert Street
Ottawa, Ontario
K1P 6A9

SHIPPED TO: SAME

DATE	YOUR ORDER NO	FOB	TERMS
June 24, 1980			2% charged over 30 days

OUR ORDER NO	SALESMAN	DATE SHIPPED	SHIPPED VIA	F.S.T.	P.S.T

QUAN. ORDERED	QUAN. SHIPPED	DESCRIPTION	UNIT-PRICE	UNIT	AMOUNT
		RENTAL of one D8 Cat from June 9 to June 15/80			
		76 hours @ $110.00 per hour			$8,360 00
		LESS 15% holdback			1,254 00
		TOTAL			$7,106 00

EXPLORATION DIVISION
JUN 30 1980

Arctic Star Printing Inc.

KOLODY ENTERPRISES LTD.

~~9024 Alaska Highway~~ Box 4488
Whitehorse, Yukon ~~Y1A 2R8~~
Y1A 2R8

Phone 668-5186

INVOICE NO 3714

EXPLORATION DIVISION

JUL-9 1980

SAME

SOLD TO • Eldorado Nuclear Limited
255 Albert Street, Suite 400
• Ottawa, Ontario
K1P 6A9
•

SHIPPED TO

DATE	YOUR ORDER NO.	FOB	TERMS
July 7, 1980			2% charged over 30 days

OUR ORDER NO.	SALESMAN	DATE SHIPPED	SHIPPED VIA	F.S.T.	P.S.T.

QUAN. ORDERED	QUAN. SHIPPED	DESCRIPTION	UNIT-PRICE	UNIT	AMOUNT
		RENTAL of one D8-K Cat from June 16 to June 25, 1980			
		91 hours @ $110.00 per hour			$10,010 00
		Less 15% holdback			1,501 50
		TOTAL			$ 8,508 50

IV

Arctic Star Printing Inc.

9174 Alaska Highway
Whitehorse, Yukon Y1A 2R8
Box 4488
Y1A 2R8
Phone 668-5186

INVOICE NO 3741

SOLD TO • Eldorado Nuclear Limited
Suite 400
• 255 Albert Street
Ottawa, Ontario, K1P 6A9
•

SHIPPED TO

DATE	YOUR ORDER NO	FOB	TERMS
July 28, 1980			2% charged over 30 days

OUR ORDER NO	SALESMAN	DATE SHIPPED	SHIPPED VIA	F.S.T.	P.S.T.

QUAN ORDERED	QUAN SHIPPED	DESCRIPTION	UNIT-PRICE	UNIT	AMOUNT
		Trenching Contract - Jove property			
		Rental of one D8 Cat from July 9 to July 19/80			
		87 hours @ $110.00 per hour			$9,570 00

020-80-522-22-128

William Olsen

SINV

rctic Star Printing Inc.

INVOICE DATE YR.	MO.	DAY	REGISTER	VENDOR	INVOICE NO
80	07	28	No 55095		3741

DIV.	C. CTR.	ORDER NO.	C. EL.	AMOUNT
020	080	522 22	128	$9,570.00

DUE PER. 8032 BANK 2

DISCOUNT

AMOUNT $9,570.00

VOUCHER NO.

GOODS SERV PRICE

AUDITED K.D.

EXPLORATION DIVISION
AUG 5 1980
APPROVED FOR PAYMENT

KOLODY ENTERPRISES LTD.
[redacted] Box 4488
Whitehorse, Yukon [redacted]
Y1A 2R8

Phone 668-5186

INVOICE NO 3745

SOLD TO • Eldorado Nuclear Limited
Suite 400
• 255 Albert Street
Ottawa, Ontario, K1P 6A9
•

SHIPPED TO

DATE	YOUR ORDER NO	FOB	TERMS
July 28, 1980			2% charged over 30 days

OUR ORDER NO	SALESMAN	DATE SHIPPED	SHIPPED VIA	FST	PST

QUAN. ORDERED	QUAN. SHIPPED	DESCRIPTION	UNIT PRICE	UNIT	AMOUNT
		Trenching Contract re Jove property			
		To invoice you for the Rental of one D8 Cat from June 26 to July 8, 1980			
		Standby time - 13 days @ 8 hrs. per day	$75.00	104	$7,800 0

020-80-522-22-128

William Olsen.

Arctic Star Printing

INVOICE DATE YR.	MO.	DAY	REC'D NO.	VENDOR	INVOICE NO
80	7	28	N° 56126		3745

DUE PER.	BANK	DIV.	C. CTR	ORDER NO	C. EL.	AMOUNT
8034	2	020	80	522 22	128	7,800.00

DISCOUNT

AMOUNT 1,800-00

VOUCHER NO

EXPLORATION DIVISION
AUG 15 1980
APPROVED FOR PAYMENT

GOODS SER. PRICE

AUDITED B.L.

KOLODY ENTERPRISES LTD.
Box 4488
Whitehorse, Yukon
Y1A 2R8
Phone 668-5186

INVOICE NO. 3746

LD TO • Eldorado Nuclear Limited
Suite 400
• 255 Albert Street
Ottawa, Ontario, K1P 6A9
•

SHIPPED TO

DATE	YOUR ORDER NO	FOB	TERMS
July 28, 1980			2% charged over 30 days

OUR ORDER NO	SALESMAN	DATE SHIPPED	SHIPPED VIA	F.S.T	P.S.T

QUAN ORDERED	QUAN SHIPPED	DESCRIPTION	UNIT-PRICE	UNIT	AMOUNT
		Trenching Contract - Jove Property			
		To invoice you for 15% holdbacks on our invoices #3679			$ 742.50
		#3681			1,254 00
		#3714			1,501 50
		TOTAL			$3,498 00

020-80-522-22-128

William Olson

Arctic Star Printing Inc.

INVOICE DATE YR.	MO	DAY	REGISTER	VENDOR	INVOICE NO.
80	07	28	No 55094		3746

DUE PER.	BANK	DIV.	C. CTR.	ORDER NO.		C. EL.	AMOUNT
8032	2	020	080	522	22	128	$3,498.00

DISCOUNT

AMOUNT $3,498.00

VOUCHER NO.

GOODS SERV PRICE

AUDITED

EXPLORATION DIVISION
AUG 5 1980
APPROVED FOR PAYMENT

S S Robinson

Office of the Supervising Mining Recorder
MAR 2 1981
WHITEHORSE
Yukon Territory

RECEIVED
FEB 20 1981
MINING RECORDER
DAWSON, Y.T.
I.A. & N.D.

APPENDIX D

Chemex Certificates of Analysis

090762

PROFESSIONAL ENGINEER
W. J. OLSSON
ELDORADO
SASKATCHEWAN

JM

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53282

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.

INVOICE NO. 36211

RECEIVED June 2, 1980

ATTN: W.J. Olsson

ANALYSED June 13, 1980

SAMPLE NO. :	PPM U
41 - 1002	4.5
1004	5.0
1005	3.5
1006	2.5
1007	4.0
1008	9.0
1009	10.0
1010	22.0
1011	32
1012	24.5
1013	39
1014	38
1015	358
1016	16.0
1017	25
1018	26
1019	49
1020	42
1021	86
1022	111
1023	117
1024	6.0
1036	5.5
1037	39
1038	33
1039	45
1040	33
1041	44
1042	38
1043	61
1044	116
1045	68
1046	43
1047	43
1048	44
1049	56
1050	61
1051	44
1052	45
41 - 1053	13.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

JM

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53283

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.

INVOICE NO. 36211

RECEIVED June 2, 1980

ATTN: W.J. Olsson

ANALYSED June 13, 1980

SAMPLE NO. :	PPM U
41 - 1054	13.5
1055	21.5
1056	5.5
1057	38
1058	98
1059	23.5
1060	50
1061	22.0
1062	91
1063	82
1064	26
1065	16.5
1066	34
1067	36
1068	68
1069	57
1070	36
1071	28
1072	23
1073	34
1074	51
1075	42
1076	71
1077	40
1078	15.5
1079	23.0
1080	16.0
1081	10.5
1082	34
1083	22.5
41 - 1084	26

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

DMV

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53284
INVOICE NO. 36093
RECEIVED June 2, 1980
ANALYSED June 9, 1980

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon

ATTN: W.J. Olsson

WATERS

SAMPLE NO. :	PPB U	
42 - 1001	0.2	ED-1 + ES-1
1002	0.4	
1003	0.2	
1004	0.4	
1005	0.2	
1006	<0.2	
1007	<0.2	
1008	0.4	
1009	1.0	115 N9-3
1010	1.6	
1011	1.4	
1012	2.2	
1013	2.2	
1014	2.2	
1015	2.4	
1016	25	
1017	3.6	
1018	3.6	
1019	3.8	
1020	3.8	
1021	3.8	
1022	4.4	
1023	5.6	
1024	6.0	
1036	0.2	EB-1 + EJ-1
1037	1.8	
1038	1.4	West Creek
1039	1.6	
1040	2.0	
1041	1.4	
1042	2.0	
1043	2.2	
1044	2.6	
1045	3.2	
1046	3.6	
1047	3.2	
1048	2.8	
1049	3.0	
1050	2.6	
42 - 1051	3.2	

∴ transfered to traverse reports + plotted on 1:50,000 map June 16/80 SMA

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53285

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon

INVOICE NO. 36093

RECEIVED June 2, 1980

ATTN: W.J. Olsson

WATERS

ANALYSED June 9, 1980

SAMPLE NO. :	PPB U
42 - 1052	2.8
1053	1.2
1054	1.0
1055	1.0
1056	1.0
1057	1.0
1058	1.6
1059	1.4
1060	<0.2
1061	1.6
1062	2.8
1063	1.8
1064	2.4
1065	2.8
1066	2.8
1067	2.4
1068	4.2
1069	3.8
1070	3.8
1071	2.8
1072	4.0
1073	2.8
1074	3.0
1075	4.0
1076	3.6
1077	2.4
1078	3.6
1079	3.8
1080	3.4
1081	3.8
1082	3.8
1083	3.8
42 - 1084	3.8

EJ-1 + EB-1

EJ-2

115N16-2

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53360

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.

WATERS

INVOICE NO. 36125

RECEIVED June 5, 1980

ATTN: Project No. 522, Area EC, W.J. Olsson

ANALYSED June 10, 1980

SAMPLE NO. :	PPB U
42 - 1025EC	-0.2
1026	0.4
1027	0.8
1028	1.0
1029	1.0
1030	1.0
1031	1.2
1032	1.4
1033	1.4
1034	0.8
1035	1.2
1085	0.4
1086	1.0
1087	2.4
1088	3.4
1089	3.2
1090	2.6
1091	3.2
1092	3.8
1093	4.0
1094	6.0
1095	5.2
1096	5.4
1097	5.2
1098	5.0
1099	4.6
1100	5.0
1101	4.8
1102	5.2
1103	4.2
1104	4.0
1105	3.8
1106	3.2
1107	2.6
1108	3.2
1109	2.6
1110	2.4
1111	2.4
1112	2.2
42- 1113EC	2.4

Note: - Denotes less than

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

BM J

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53361

TO: Eldorado Nuclear Limited
Bag # 3000
Dawson City, Y.T.

INVOICE NO. 36125

RECEIVED June 5, 1980

ATTN: Project No. 522, Area EC, W.J. Olsson

ANALYSED June 10, 1980

SAMPLE NO. :	PPB U
42-1114EC	2.6
1115	2.2
1116	2.4
1117	2.0
1118	2.0
1119	1.6
1120	1.8
1121	2.0
1122	2.2
42-1123EC	2.6

Note: - Denotes Less than

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

D.M.

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53365

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.

INVOICE NO. 36248

RECEIVED June 5, 1980

ATTN: Project No. 522, Area EC

ANALYSED June 16, 1980

SAMPLE NO. :	PPM U
41 - 1025 EC	4.0
1026	3.0
1027	2.5
1028	11.5
1029	5.0
1030	4.0
1031	9.0
1032	6.5
1033	6.5
1034	5.0
1085	4.5
1086	5.0
1087	12.0
1088	7.5
1089	11.5
1090	10.5
1091	12.5
1092	14.5
1093 EC	13.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53366

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.

INVOICE NO. 36248

RECEIVED June 5, 1980

ATTN: Project No. 522, Area GC

ANALYSED June 16, 1980

SAMPLE NO. :	PPM U
41 - 1094 GC	34
1095	7.5
1096	99
1097	26
1098	64
1099	63
1100	132
1101	87
1102	139
1103	61
1104	84
1105	88
1106	81
1107	89
1108	83
1109	134
1110	79
1111	87
1112	114
1113	59
1114	87
1115	30
1116	51
1117	169
1118	56
1119	84
1120	65
1121	47
1122	32
1123	47
41 - 1124 GC	+400

Note: + Denotes Greater Than

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

SMV

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54991

INVOICE NO. 37679

RECEIVED July 27/80

ANALYSED Aug. 11/80

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: Project #522 Work Area GC

Silts not rocks!

SAMPLE NO. :	PPM U	Percent U308	
41-1126	6.5		ROCK
1127	56.0		
1128		0.013	
1129		0.015	
1130	7.5		ROCK
1131	5.0		ROCK
1132	70.0		
1133	6.0		ROCK
1134	57.0		
1135	5.0		ROCK
1136	64.0		
1137	6.0		ROCK
1138	9.0		ROCK
1139	5.0		ROCK
1140	7.5		ROCK
1141	16.5		
1142	10.0		ROCK
1143	4.5		ROCK
41-1144	7.5		ROCK

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54991

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa,Ontario
K1P 6A9

INVOICE NO. 37679 - B

RECEIVED July 27/80

ATTN: William Olsson PROJECT 522 Work Area GC

ANALYSED Sept. 26/80

SAMPLE NO. :	U ppm Fluor
41-1126	3.5
1127	54
1130	5.0
1131	2.5
1132	79
1133	3.5
1134	52
1135	1.5
1136	64
1137	3.0
1138	5.0
1139	2.0
1140	5.5
1141	51
1142	5.5
1143	2.5
41-1144	2.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

SMV

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54993

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 37610

RECEIVED July 27/80

ATTN: W. J. Olsson WATERS Project #522 Work Area GC

ANALYSED Aug. 7/80

SAMPLE NO. :	PPB U
42-1126	0.60
1127	0.40
1128	0.40
1129	0.40
1130	0.60
1131	0.40
1132	-0.20
1133	0.40
1134	0.40
1135	0.60
1136	-0.20
1137	-0.20
1138	-0.20
1139	0.40
1140	0.40
1141	-0.20
1142	-0.20
1143	0.20
42-1144	-0.20

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Ian Bielle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55208

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 38275 - B

RECEIVED Aug. 1/80

ANALYSED Sept. 26/80

ATTN: William Olsson PROJECT 522

SAMPLE NO. :	U ppm Fluor
40-1155 J6	1.0
1156	1.0
1157	3.0
1158	1.0
1159	1.0
1160	2.5
1161	4.5
1162	4.5
1163	1.5
1164	0.5
1165	4.5
1166	4.5
1167	5.0
1168	5.0
1169	4.5
1170	2.5
1171	2.5
1172	2.5
1173	3.5
1174	4.5
1175	4.5
1176	3.5
1177	2.5
1178	4.5
1179	4.5
1180	4.0
1181	5.5
1182	2.0
1183	1.0
1184	1.5
1185	3.5
1186	5.0
1187	4.5
1188	3.0
1189	8.0
1190	4.0
1191	6.0
1192	4.5
1193	5.5
40-1194 J6	3.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55209

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
ATTN: K1P 6A9
William Olsson PROJECT 522

INVOICE NO. 38275 - B
RECEIVED Aug. 1/80
ANALYSED Sept. 26/80

SAMPLE NO. :	U ppm Fluor
40-1195 J6	2.5
1196	2.5
1197	6.0
1198	2.0
1199	6.0
1200	3.5
1201	4.0
1202	6.5
1203	9.0
1204	2.5
1205	1.5
1206	3.0
1207	2.5
1208	1.0
1209	1.5
1210	4.5
1211	3.0
1212	3.5
1213	5.0
1214	3.5
1215	3.5
1216	2.5
1217	5.0
1218	3.0
1219	4.0
1220	1.5
1221	4.0
1222	0.5
1223	1.5
1224	1.0
1225	2.0
1226	4.5
1227	4.5
1228	3.0
1229	4.0
1230	4.0
1231	1.0
1232	2.5
1233	4.5
40-1234 J6	1.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55210

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 38275 - B

RECEIVED Aug. 1/80

ANALYSED Sept. 26/80

ATTN: William Olsson PROJECT 522

SAMPLE NO. :	U ppm Fluor
40-1235 J6	4.5
1236	4.5
1237	6.5
1238	1.5
1239	3.5
1240	2.5
1241	4.5
1242	4.0
1243	4.5
1244	4.0
1245	4.0
1246	5.5
1247	5.0
1248	4.0
40-1256 J6	4.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McGrath

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

SMV

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55211

INVOICE NO. 37610

RECEIVED Aug. 1/80

ANALYSED Aug. 7/80

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: W. J. Olsson WATERS Project #522

SAMPLE NO. :	PPB U
42-1249-J6	0.20
1250	0.20
1251	0.20
1252	0.20
1253	0.20
1254	0.20
1255	0.20

fly comp

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55533

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38501

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
1249	5.5
1250	5.5
1251	5.5
1252	9.0
1253	8.5
1254	16.0
1255	12.5
1256	19.0
1257	10.5
1258	8.5
1259	5.0
1260	12.5
1261	9.0
1262	6.5
1263	6.5
1264	5.5
1265	5.5
1266	5.5
1267	10.5
1268	5.5
1269	9.5
1270	20.0
1271	14.5
1272	15.5
1273	24.0
1274	22.0
1275	6.0
1276	5.5
1277	11.0
1278	7.5
1279	3.5
1280	5.0
1281	5.0
1282	6.5
1283	7.0
1284	3.5
1285	4.5
1286	7.0
1287	16.5
1288	10.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55533

INVOICE NO. 39247

RECEIVED Aug. 13/80

ANALYSED Sept. 30/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson

SAMPLE NO. :	U ppm Fluor
1249	2.0
1250	1.0
1251	1.5
1252	4.0
1253	5.0
1254	11.5
1255	6.0
1256	13.5
1257	6.0
1258	3.0
1259	0.5
1260	7.0
1261	5.5
1262	2.0
1263	2.5
1264	2.0
1265	1.0
1266	2.5
1267	6.0
1268	1.5
1269	7.5
1270	16.0
1271	13.0
1272	14.5
1273	19.0
1274	25
1275	2.5
1276	2.0
1277	8.5
1278	5.5
1279	2.0
1280	2.0
1281	3.0
1282	1.5
1283	3.0
1284	1.0
1285	0.5
1286	4.5
1287	10.5
1288	8.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55534

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38501

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
1289	9.0
1290	5.5
1291	20.0
1292	4.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biesinger

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55534

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 39247

RECEIVED Aug. 13/80

ANALYSED Sept. 30/80

ATTN: William Olsson

SAMPLE NO. :	U ppm Fluor
1289	6.0
1290	6.0
1291	19.5
1292	5.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55535

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38089

RECEIVED Aug. 13/80

ANALYSED Aug. 21/80

SAMPLE NO. :	PPB U
1273	0.75
1293	1.80
1294	10.20
1295	0.60
1296	0.75
1297	0.45
1298	12.60
1299	1.80
1300	2.55
1301	2.70
1303	0.15
1304	2.85
1305	4.05
1306	1.80
1307	2.25
1308	0.90
1309	0.60
1310	0.30
1311	0.15

CTA MEMBER CANADIAN TESTING

CERTIFIED BY: Hart Biddle

NOVATRACK ANALYSTS LTD.
4004 WESBROOK MALL
UNIVERSITY OF B.C. CAMPUS
VANCOUVER B.C. V6T 2A3
TELEPHONE (604) 224-2388

CERTIFICATE OF ANALYSIS — CERTIFICATE # A8001962

CLIENT : ELDORADO NUCLEAR

ATTN. : W. J. Olsson

SAMPLES RECEIVED : 23-AUG-80
ANALYSIS COMPLETED : 23-AUG-80
NUMBER OF SAMPLES : 40
CLIENT P.O. NUMBER : 55208
INVOICE NO. : 38275

Project 522

SAMPLE ID	U PPM
40-1155-J6	4.0
40-1156-J6	4.5
)-1157-J6	7.0
40-1158-J6	7.5
40-1159-J6	7.5
)-1160-J6	1.0
J-1161-J6	1.5
40-1162-J6	5.0
)-1163-J6	7.0
)-1164-J6	7.0
40-1165-J6	6.0
40-1166-J6	6.0
)-1167-J6	7.5
J-1168-J6	6.5
40-1169-J6	6.0
)-1170-J6	2.0
)-1171-J6	2.5
40-1172-J6	3.0
)-1173-J6	6.0
)-1174-J6	8.0
40-1175-J6	6.0
40-1176-J6	6.0
)-1177-J6	9.5
J-1178-J6	9.0
40-1179-J6	7.0
)-1180-J6	7.0
)-1181-J6	8.0
40-1182-J6	3.5
)-1183-J6	3.5
)-1184-J6	1.5
40-1185-J6	5.0
40-1186-J6	8.0
)-1187-J6	9.0
J-1188-J6	7.0
40-1189-J6	17.0
)-1190-J6	7.5
)-1191-J6	8.0
40-1192-J6	8.0
)-1193-J6	8.0
)-1194-J6	5.0

CERTIFIED BY Hart Biddle

NOVATRACK ANALYSTS LTD.
4004 WESBROOK MALL
UNIVERSITY OF B.C. CAMPUS
VANCOUVER B.C. V6T 2A3
TELEPHONE (604) 224-2388

CERTIFICATE OF ANALYSIS — CERTIFICATE # A8001984

CLIENT : ELDORADO NUCLEAR

ATTN. : W. J. Olsson

SAMPLES RECEIVED : 23-AUG-80
ANALYSIS COMPLETED : 23-AUG-80
NUMBER OF SAMPLES : 40
CLIENT P.O. NUMBER : 55209
INVOICE NO. : 38275

Project 522

SAMPLE ID	U PPM
40-1195-J6	6.0
40-1196-J6	3.0
)-1197-J6	6.0
J-1198-J6	2.0
40-1199-J6	8.0
)-1200-J6	3.0
)-1201-J6	7.0
40-1202-J6	8.0
)-1203-J6	9.0
)-1204-J6	6.5
40-1205-J6	6.0
40-1206-J6	8.0
)-1207-J6	5.5
J-1208-J6	3.0
40-1209-J6	4.5
)-1210-J6	8.5
)-1211-J6	6.0
40-1212-J6	7.0
)-1213-J6	8.5
)-1214-J6	5.5
40-1215-J6	7.0
40-1216-J6	5.0
)-1217-J6	7.5
J-1218-J6	5.0
40-1219-J6	6.5
)-1220-J6	4.0
)-1221-J6	6.5
40-1222-J6	2.5
)-1223-J6	3.0
)-1224-J6	4.0
40-1225-J6	8.0
40-1226-J6	7.0
)-1227-J6	6.5
J-1228-J6	7.5
40-1229-J6	6.5
)-1230-J6	9.0
)-1231-J6	2.0
40-1232-J6	4.0
)-1233-J6	6.5
)-1234-J6	3.5

CERTIFIED BY Hart Biddle

NOVATRACK ANALYSTS LTD.
4004 WESBROOK MALL
UNIVERSITY OF B.C. CAMPUS
VANCOUVER B.C. V6T 2A3
TELEPHONE (604) 224-2388

CERTIFICATE OF ANALYSIS — CERTIFICATE # A8001983

CLIENT : ELDORADO NUCLEAR

ATTN. : **W. J. Olsson**

SAMPLES RECEIVED : 23-AUG-80
ANALYSIS COMPLETED : 23-AUG-80
NUMBER OF SAMPLES : 15
CLIENT P.O. NUMBER : 55210
INVOICE NO. : **38275**

Project 522

SAMPLE ID	U PPM
40-1235-J6	8.0
)-1236-J6	7.0
)-1237-J6	9.0
40-1238-J6	2.0
)-1239-J6	9.0
)-1240-J6	6.5
40-1241-J6	6.5
40-1242-J6	7.0
)-1243-J6	8.5
)-1244-J6	8.0
40-1245-J6	8.5
)-1246-J6	7.0
)-1247-J6	7.0
40-1248-J6	7.0
40-1256-J6	8.5

CERTIFIED BY ... Hart Biddle ...

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010083-1

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38494

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
22-2044	3.0
2045	5.0
2046	2.5
2047	2.0
2048	4.0
2049	2.5
2050	5.5
2051	2.5
2052	2.5
2053	1.0
2054	1.5
2055	3.0
2056	3.5
2057	2.5
2058	3.0
2059	3.5
2060	3.0
2061	3.0
2062	3.0
2063	4.0
2064	3.0
2071	< 0.5
2072	2.0
2073	5.5
2074	2.5
2075	3.0
22- 2076	4.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010084-1

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38494

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
22-2065	3.5
2066	3.5
2067	1.5
2068	4.0
2069	4.5
2070	2.5
2077	3.0
2078	3.0
2079	4.0
2080	3.0
22-2081	2.5

MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hans Riddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010087-1

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38494

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
22-201	5.5
202	5.0
203	5.0
204	5.5
205	3.5
206	6.5
207	6.0
208	12.0
209	12.5
210	23.0
211	12.5
22-212	12.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biddle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : ELDORADO NUCLEAR LTD
STE 400 255 ALBERT ST
OTTAWA, ONT
K1P 6A9

CERT. # : A8010091-001-A
INVOICE # : 39378
DATE : 06-OCT-80

WORK AREA J2S

Sample description	Prep code	U ppm					
22-2002	205	4.5	--	--	--	--	--
22-2003	205	3.0	--	--	--	--	--
22-2004	205	7.0	--	--	--	--	--
22-2005	205	2.5	--	--	--	--	--
22-2006	205	2.5	--	--	--	--	--
22-2007	205	3.0	--	--	--	--	--
22-2008	205	1.0	--	--	--	--	--
22-2009	205	9.0	--	--	--	--	--
22-2010	205	2.0	--	--	--	--	--
22-2011	205	2.0	--	--	--	--	--
22-2012	205	2.5	--	--	--	--	--
22-2013	205	2.0	--	--	--	--	--
22-2014	205	2.0	--	--	--	--	--
22-2015	205	2.0	--	--	--	--	--
22-2016	205	2.0	--	--	--	--	--
22-2017	205	3.0	--	--	--	--	--
22-2018	205	3.0	--	--	--	--	--
22-2019	205	1.5	--	--	--	--	--
22-2020	205	1.5	--	--	--	--	--
22-2021	205	2.0	--	--	--	--	--
22-2022	205	2.0	--	--	--	--	--
22-2023	205	2.0	--	--	--	--	--
22-2024	205	2.5	--	--	--	--	--
22-2025	205	1.0	--	--	--	--	--
22-2026	205	1.5	--	--	--	--	--
22-2027	205	2.0	--	--	--	--	--
22-2028	205	1.5	--	--	--	--	--
22-2029	205	1.5	--	--	--	--	--
22-2030	205	2.0	--	--	--	--	--
22-2031	205	2.5	--	--	--	--	--
22-2032	205	3.0	--	--	--	--	--
22-2033	205	1.5	--	--	--	--	--
22-2034	205	1.0	--	--	--	--	--
22-2035	205	1.5	--	--	--	--	--
22-2036	205	2.0	--	--	--	--	--
22-2037	205	2.5	--	--	--	--	--
22-2038	205	1.5	--	--	--	--	--
22-2039	205	2.0	--	--	--	--	--
22-2040	205	6.0	--	--	--	--	--
22-2041	205	2.0	--	--	--	--	--

Certified by .....

CTA MEMBER CANADIAN TESTING ASSOCIATION

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

) : ELDORADO NUCLEAR LTD
STE 400 255 ALBERT ST
OTTAWA, ONT
K1P 6A9

CERT. # : A8010081-002-A
INVOICE # : 39378
DATE : 06-OCT-80

WORK AREA J2S

Sample description	Prep code	U ppm					
22-2042	205	1.0	--	--	--	--	--
22-2043	205	1.5	--	--	--	--	--

Certified by .....D. McKay.....

CTA MEMBER CANADIAN TESTING ASSOCIATION

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010190-001-A

TO: ELDORADO NUCLEAR LIMITED
Ste.400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39502

RECEIVED Aug. 26/80

ANALYSED Oct. 10/80

SAMPLE NO. :	U (Fluor.) ppm
22-2082	2.5
22-2083	0.5
22-2084	2.0
22-2085	0.5
22-2086	1.0
22-2087	1.0
22-2088	23.5
22-2089	20.0
22-2090	1.0
22-2091	1.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: D. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010191-001-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39502

RECEIVED Aug. 26/80

ANALYSED Oct. 10/80

SAMPLE NO. :	U (Fluor.) ppm
22-2092	2.5
22-2093	1.0
22-2094	1.0
22-2095	2.5
22-2096	2.0
22-2097	7.0
22-2098	-0.5
22-2099	1.5
22-2100	0.5
22-2101	0.5
22-2102	-0.5
22-2103	1.0
22-2104	0.5
22-2105	1.0
22-2106	3.5

CTA MEMBER CANADIAN TESTING

CERTIFIED BY: D. Lefc Kay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010083-001

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: Mr. William Olsson

INVOICE NO. 39539

RECEIVED Aug. 21/80

ANALYSED Oct. 9/80

SAMPLE NO. :	U ppm
22-2044	1.0
22-2045	2.5
22-2046	1.0
22-2047	1.0
22-2048	2.0
22-2049	1.0
22-2050	2.5
22-2051	1.0
22-2052	1.0
22-2053	1.0
22-2054	1.5
22-2055	1.0
22-2056	1.5
22-2057	1.5
22-2058	2.5
22-2059	1.5
22-2060	1.0
22-2061	1.0
22-2062	1.5
22-2063	2.0
22-2064	2.0
22-2071	0.5
22-2072	2.0
22-2073	4.0
22-2074	1.0
22-2075	1.5
22-2076	1.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: D. G. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010084-001
INVOICE NO. 39539
RECEIVED Aug. 21/80
ANALYSED Oct. 9/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9
ATTN: Mr. William Olsson

SAMPLE NO. :	U ppm
22-2065	1.0
22-2066	2.0
22-2067	1.5
22-2068	1.0
22-2069	2.0
22-2070	1.0
22-2077	1.0
22-2078	2.0
22-2079	2.0
22-2080	1.5
22-2081	2.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McThay

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010246-001-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39740

RECEIVED Aug.28/80

ANALYSED Oct. 17/80

SAMPLE NO. :	U ppm Fluor
22-2107	1.5
22-2108	1.5
22-2109	1.5
22-2110	0.5
22-2111	1.5
22-2112	1.0
22-2113	1.0
22-2114	1.5
22-2115	1.0
22-2116	1.0
22-2117	2.0
22-2118	1.5
22-2119	1.5
22-2120	1.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010247-001-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39740

RECEIVED Aug. 28/80

ANALYSED Oct. 17/80

SAMPLE NO. :	U ppm Fluor
22-2121	1.5
22-2122	1.0
22-2123	1.0
22-2124	1.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hawk Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010248-001-A

TO: ELDOR ADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 39740

RECEIVED Aug. 28/80

ATTN: Mr. W. Olsson "ROCK"

ANALYSED Oct. 17/80

SAMPLE NO. :	U ppm Fluor
22-7-JT-15	1.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53362

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.

INVOICE NO. 30248

RECEIVED June 5, 1980

ATTN: Project No. 522 Area IT

ANALYSED June 16, 1980

SAMPLE NO. :	PPM U
40 - 3001 IT	4.5
3002	6.0
3003	4.0
3004	9.5
3005	3.5
3006	5.0
3007	13.0
3008	16.5
3009	11.5
3010	6.5
3011	3.0
3012	5.0
3013	4.5
3014	4.0
3015	3.5
3016	6.0
3017	5.5
3018	6.5
3019	14.0
3020	4.0
3021	9.0
3022	3.0
3023	8.5
3024	8.0
3025	6.5
3026	21.0
3027	3.5
3028	6.5
3029	5.5
3030	7.0
3031	4.5
3032	5.5
3033	7.5
3034	15.5
3035	7.0
3036	5.5
3037	10.5
3038	4.5
3039	30
40 - 3040 IT	41

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hans Bielle

D.M.

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53363

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.

INVOICE NO. 36248

RECEIVED June 5, 1980

ATTN: Project No. 522, Area IT

ANALYSED June 16, 1980

SAMPLE NO. :	PPM U
40 - 3041 IT	7.5
3042	3.0
3043	2.0
3044	2.0
3045	2.0
3046	1.5
3047	4.0
3048	6.0
3049	5.5
3050	3.5
3051	3.0
40 - 3052 IT	2.0
40 - 3101 IT	6.5
3102	6.5
3103	3.0
3104	3.0
3105	3.5
3106	6.5
3107	5.5
3108	7.0
3109	11.0
3110	12.0
3111	5.5
3112	2.5
3113	3.5
3114	2.0
3115	12.0
3116	10.0
3117	48
3118	20.0
3119	7.5
3120	3.0
3121	3.5
3122	5.5
3123	12.5
3124	8.0
3125	44
3126	40
3127	3.5
40 - 3128 IT	11.0

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53364

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.

INVOICE NO. 36248

RECEIVED June 5, 1980

ATTN: Project No. 522, Area IT

ANALYSED June 16, 1980

SAMPLE NO. :	PPM U
40 - 3129 IT	4.0
3130	29
3131	5.0
3132	9.5
3133	4.5
3134	16.0
3135	5.0
3136	3.5
3137	9.0
3138	7.5
3139	15.5
3140	11.5
3141	7.0
3142	6.0
3143	3.5
3144	3.5
3145	5.0
3146	5.5
3147	2.5
3148	3.0
3149	2.5
3150	6.5
40 - 3151 IT	3.5

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

DMV

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS •• GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53528

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 36446

RECEIVED June 14/80

ANALYSED June 24/80

ATTN: William Olseon

SAMPLE NO. :	PPM U
40-3053 It	75
3054	140
3055	26
3056	37
3057	24
3058	72
3059	245
3060	19.5
3061	10.5
3062	25
3063	49
3064	239
3065	409
3066	33
3067	260
3068	184
3069	109
3070	306
3071	270
3072	253
3073	41
3074	6.0
3075	3.5
3076	5.5
3077	3.5
3078	3.5
3079	2.5
3080	1.0
3081	1.5
3082	2.0
3083	1.5
3084	3.5
3085	2.0
3086	2.0
3087	1.5
3088	2.5
3089	2.0
3090	3.0
3091	4.5
40-3092 It	5.5

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

DNV

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53529

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 36446

RECEIVED June 14/80

ATTN: W. Olsson

ANALYSED June 24/80

SAMPLE NO. :	PPM U
40-3093 It	7.0
3094	4.0
3095	3.5
3096	2.0
3097	2.5
3098	4.5
3099	2.5
3100	4.0
3152	4.0
3153	2.0
3154	4.0
3155	1.5
3156	6.0
3157	7.5
3158	4.0
3159	4.5
3160	3.0
3161	4.0
3162	6.5
3163	3.0
3164	5.0
3165	3.0
3166	2.5
3167	3.5
3168	2.5
3169	3.0
3170	5.0
3171	5.0
3172	1.5
3173	3.5
3174	5.0
3175	87
3176	4.5
3177	9.0
3178	3.0
3179	3.0
3180	8.5
3181	3.5
3182	5.0
40-3183 It	8.0

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

DM

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53530

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 36446

RECEIVED June 14/80

ATTN: W. Olsson

ANALYSED June 24/80

SAMPLE NO. :	PPM U
40-3184 It	2.0
3185	2.5
3186	3.0
3187	7.0
3188	3.0
3189	3.0
3190	5.5
3191	4.0
3192	1.5
3193	4.0
3194	4.0
3195	3.0
3196	5.5
3197	2.0
3198	3.0
3199	5.5
3200	5.0
3201	4.0
3202	5.0
3203	6.5
3204	7.0
3205	5.5
3206	4.0
3207	11.0
40-3208 It	3.0

COPY

CTA MEMBER CANADIAN TESTING

CERTIFIED BY: Hart Biddle

DM✓

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53672

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 36482

RECEIVED June 17/80

ATTN: W. J. Olsson

PROJECT No. 522

ANALYSED June 25/80

SAMPLE NO. :	PPM U
40-3209-JT-5	2.5
3210	2.5
3211	5.0
3212	11.0
3213	7.5
3214	2.5
3215	1.5
3216	18.5
3217	20.5
3218	15.0
3219	13.5
3220	18.0
40-3221-JT-5	15.5
40-3222-JT-5	9.0
3223	9.5
3224	15.0
3225	24.0
3226	27
3227	25
3228	33
3229	20.5
3230	28
3231	45
3232	85
3233	47
3234	18.5
3235	17.5
3236	20.0
3237	7.5
3238	13.0
3239	18.0
3240	17.0
3241	19.5
3242	16.5
3243	30
3244	19.5
3245	37
3246	55
3247	53
40-3248-JT-5	75

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

DMv

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53673

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 36482

RECEIVED June 17/80

ATTN: W. J. Olsson

Project No. 522

ANALYSED June 25/80

SAMPLE NO. :	PPM U
40-3249-JT-5	24.0
3250	31
3251	38
3253	66
3254	34
3255	26
3256	29
3257	131
3258	+400
3259	15.5
3260	17.5
3261	21.0
3262	52
3263	19.0
3264	8.0
3265	12.5
3266	16.0
3267	16.5
3268	63
3269	27
3270	75
3271	188
3272	111
3273	169
3274	57
3275	72
3276	159
3277	379
3278	+400
3279	83
3280	63
3281	313
3282	+400
3283	+400
3284	75
3285	160
3286	+400
3287	338
40-3288-JT-5	218
40-3252-JT-5	20.5

COPY

NOTE: + denotes greater than.

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

DMJ

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53674

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 36482

RECEIVED June 17/80

ATTN: W. J. Olsson

ANALYSED June 25/80

Project No. 522

SAMPLE NO. :	PPM U
40-3289-JT-5	58
3290	192
3291	244
3292	351
3293	+400
3294	52
3295	46
3296	296
3297	396
3298	+400
3299	115
3300	67
3301	217
3302	113
3303	+400
3304	165
3305	191
3306	199
3307	228
3308	+400
3309	71
3310	131
3311	234
3312	127
3313	258
3314	141
3315	91
3316	118
3317	103
3318	186
3319	64
3320	33
3321	54
3322	60
3323	91
3324	38
3325	33
3326	61
3327	32
40-3328-JT-5	78

Note: + denotes greater than

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

DMV

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53675

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 36482

RECEIVED June 17/80

ATTN: W. J. Olsson

ANALYSED June 25/80

Project #522

SAMPLE NO. :	PPM U
40-3329-JT-5	13.5
3330	15.0
3331	29
3332	19.5
3333	48
3334	13.5
3335	8.5
3336	10.0
3337	7.5
3338	30
3339	28
3340	7.0
3341	7.0
3342	3.0
3343	9.5
3344	38
3345	8.0
3346	7.0
3347	7.5
3348	6.5
3349	13.0
3350	16.5
3351	10.5
3352	5.0
3353	9.0
3354	7.5
3355	14.5
3356	11.0
3357	4.0
3358	1.5
3359	14.5
3360	5.5
3361	4.0
3362	1.5
3363	1.5
3364	4.5
3365	5.5
3366	3.5
3367	3.0
40-3368-JT-5	3.0

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Bickle

DMV

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53676

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 36482

RECEIVED June 17/80

ATTN: W. J. Olsson

ANALYSED June 25/80

Project No. 522

SAMPLE NO. :	PPM U
40-3369-JT-5	7.5
3370	5.5
3371	6.5
3372	3.0
3373	3.5
3374	7.0
3375	12.0
3376	9.0
3377	2.5
3378	2.5
3379	12.5
3380	13.0
40-3381-JT-5	8.5
3382	3.5
3383	4.5
3384	9.0
3385	8.5
3386	8.5
3387	5.0
40-3388-JT-5	5.0

COPY

CTA MEMBER CANADIAN TESTING

CERTIFIED BY: Hart Biddle

DMJ ✓

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54006

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
William Olsson

INVOICE NO. 36964

RECEIVED July 1/80

ANALYSED July 16/80

ATTN:

SAMPLE NO. :	PPM U
40-3389-JT-11	32
3390	8.5
3391	5.0
3392	4.5
3393	6.5
3394	19.5
3395	13.0
3396	5.0
3397	5.5
3398	7.5
3399	7.0
3400	6.5
3401	6.0
3402	4.0
3403	15.5
3404	9.0
3405	10.5
3406	16.0
3407	9.5
3408	48
3409	11.5
3410	9.0
3411	7.0
3412	13.0
3413	43
3414	5.0
3415	12.0
3416	9.0
3417	31
3418	59
3419	6.0
3420	5.5
3421	6.5
3422	5.0
3423	18.5
3424	7.0
3425	5.0
3426	7.5
3427	4.0
3428-JT-11	6.0

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CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

DMJ

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54007

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
ATTN: William Olsson

INVOICE NO. 36964

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ANALYSED July 16/80

SAMPLE NO. :	PPM U
40-3429-JT-11	20.5
3430	5.5
3431	6.0
3432	10.5
3433	28
3434	11.5
3435	5.5
3436	6.0
3437	7.5
3438	10.0
3439	39
3440	6.5
3441	5.0
3442	10.0
3443	10.5
3444	49
3445	5.5
3446	2.5
3447	1.5
3448	2.0
3449	10.5
3450	6.5
3451	2.5
3452	3.5
3453	4.5
3454	7.5
3455	7.0
3456	4.5
3457	3.5
3458	5.5
3459	3.5
3460	3.0
3461	2.5
3462	3.0
3463	3.5
3464	2.5
3465	3.5
3466	3.5
3467	3.5
3468-JT-11	9.0

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54008

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
ATTN: William Olsson

INVOICE NO. 36964

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ANALYSED July 16/80

SAMPLE NO. :	PPM U
40-3469-JT-11	3.5
3470	3.5
3471	3.0
3472	3.5
3473	7.0
3474	3.5
3475	5.0
3476	2.0
3477	3.5
3478	5.5
3479	3.5
3480	4.0
3481	4.0
3482	2.5
3483	9.5
3484	2.5
3485	1.5
3486	2.5
3487	5.0
3488	3.5
3489	1.5
3490	2.5
3491	1.5
3492	3.0
3493	2.5
3494	2.0
3495	1.5
3496	2.0
3497	4.5
3498	2.5
3499	1.0
3500	2.5
3501	2.5
3502	Missing
3503	9.0
3504	2.5
3505	3.0
3506	3.0
3507	6.5
40-3508-JT-11	4.5

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TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54009

TO: EldoradoNuclear Ltd.,
Bag #3000
Dawson City, Y.T.
Y0B 1G0

INVOICE NO. 37047

RECEIVED July 1/80

ATTN: W. J. Olsson

ANALYSED July 18/80

SAMPLE NO. :	PPM U
40-3509 JT-11	6.0
3510	7.5
3511	11.5
3512	5.0
3513	3.5
3514	6.5
3515	5.5
3516	7.5
3517	4.5
3518	2.5
3519	4.5
3520	7.5
3521	4.5
3522	3.0
3523	2.0
40-3524 JT-11	3.0
40-3525 JT-6	7.0
3526	11.0
3527	32
3528	56
3529	10.0
3530	44
3531	91
3532	16.0
3533	27
3534	37
3535	118
3536	42
3537	124
3538	125
3539	16.0
3540	246
3541	+400
3542	36
3543	234
3544	+400
3545	64
3546	222
3547	211
40-3548 JT-6	14.6

Note: + denotes greater than

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

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TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54010

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.
Y0B 1G0

ATTN: W. J. Olsson

INVOICE NO. 37047

RECEIVED July 1/80

ANALYSED July 18/80

SAMPLE NO. :	PPM U
40-3549 JT-6	39
3550	196
3551	15.5
3552	87
3553	252
3554	74
3555	86
3556	249
3557	343
3558	+400
3559	225
3560	+400
3561	194
3562	+400
3563	62
3564	122
3565	117
3566	61
3567	200
3568	+400
3564	108
3570	145
3571	+400
3572	32
3573	112
3574	52
3575	225
3576	17.0
3577	61
3578	45
3579	40
3580	58
3581	+400
3582	27
3583	30
3584	46
40-3585 JT-6	220
40-3586JT-7	20.0
3587	62
40-3588 JT-7	339

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Note: + denotes greater than

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biella

DMV

CHEMEX LABS LTD.

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AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54011

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.
YOB 1GO

ATTN: W. J. Olsson

INVOICE NO. 37047

RECEIVED July 1/80

ANALYSED July 18/80

SAMPLE NO. :	PPM U
40-3589 JT-7	13.5
3590	82
3591	258
3592	88
3593	6.5
3594	56
3595	241
3596	145
3597	104
3598	179
3599	79
3600	129
3601	+400
3602	45
3603	126
3604	+400
3605	129
3606	178
3607	+400
3608	78
3609	209
3610	+400
3611	274
3612	69
3613	300
3614	+400
3615	103
3616	195
3617	+400
3618	24.5
3619	23.5
3620	227
3621	30
3622	47
3623	56
3624	242
3625	28
3626	61
3627	272
40-3628 JT-7	33

Note: + denotes greater than

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CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

CHEMEX LABS LTD.

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TELEPHONE: 984-0221
AREA CODE: 604
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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54012

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.
Y0B 1G0

ATTN: W. J. Olsson

INVOICE NO. 37047

RECEIVED July 1/80

ANALYSED July 18/80

SAMPLE NO. :	PPM U
40-3629 JT-7	+400
3630	37
3631	61
3632	136
3633	26
40-3634 JT-7	81

Note: + denotes greater than

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CERTIFIED BY: Hart Biddle

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54207

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.

INVOICE NO. 37099

RECEIVED July 5/80

ATTN: W. J. Olsson

ANALYSED July 21/80

SAMPLE NO. :	PPM U
3876-40 JT-8	18.0
3877	33
3878	50
3879	51
3880	136
3881	19.5
3882	26
3883	21.5
3884	62
3885	+400
3886	16.5
3887	11.5
3888	14.0
3889	21.0
3890	64
3891	18.5
3892	32
3893	14.0
3894	8.0
3895	21.0
3896	26
3897	27
3898	33
3899	19.5
3900	31
3901	31
3902	43
3903	47
3904	47
3905	20.5
3906	39
3907	31
3908	54
3909	65
3910	147
3911	112
3912	152
3913	142
3914	+400
3915-40 JT-8	+400

Note: + denotes greater than

ED-31

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CTA MEMBER CANADIAN TESTING

CERTIFIED BY: Hart Biddle

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TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54208

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.

INVOICE NO. 37099

RECEIVED July 5/80

ATTN: W. J. Olsson

ANALYSED July 21/80

SAMPLE NO. :	PPM U
3916-40 JT-8	113
3917	350
3918	205
3919	156
3920	+400
3921	112
3922	232
3923	169
3924	+400
3925	+400
3926	138
3927	197
3928	171
3929	340
3930	363
3931	111
3932	204
3933	170
3934	113
3935	293
3936	201
3937	279
3938	131
3939	9.0
3940	100
3941	396
3942	243
3943	60
3944	41
3945	68
3946	177
3947	250
3948	303
3949	+400
3950	+400
3951	105
3952	+400
3953	346
3954	360
3955-40 JT-8	+400

ED-31

Partial

ED-32

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Note: + denotes greater than

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

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TELEPHONE: 984-0221
AREA CODE: 604
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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54209

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.

INVOICE NO. 37099

RECEIVED July 5/80

ATTN: W. J. Olsson

ANALYSED July 21/80

SAMPLE NO. :	PPM U
3956-40 JT-8	256
3957	196
3958	+400
3959	200
3960	+400
3961	366
3962	+400
3963	+400
3964	161
3965	+400
3966	112
3967	+400
3968	+400
3969	329
3970	+400
3971	138
3972	223
3973	+400
3974	+400
3975	+400
3976	+400
3977	+400
3978	143
3979	296
3980	+400
3981	146
3982	285
3983	400
3984	+400
3985	+400
3986	201
3987	200
3988	54
3989	49
3990	162
3991	159
3992	551
3993	194
3994	289
3995-40 JT-8	374

ED-32

Plotted

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Note: + denotes greater than

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

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CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54210

TO: Eldorado Nuclear Ltd.,
Bag #3000,
Dawson City, Y.T.

INVOICE NO. 37099

RECEIVED July 5/80

ATTN: W. J. Olsson

ANALYSED July 21/80

SAMPLE NO. :	PPM U
3732-40 JT-9	14.0
3733	25
3734	46
3735	79
3736	15.0
3737	30
3738	41
3739	85
3740	10.0
3741	33
3742	77
3743	104
3744	22.5
3745	31
3746	46
3747	108
3748	21.5
3749	30
3750	32
3751	3
3752	13.5
3753	14.0
3754	16.0
3755	32
3756	11.0
3757	21.0
3758	10.0
3759	32
3760	27
3761	44
3762	28
3763	49
3764	47
3765	32
3766	102
3767	75
3768	69
3769	74
3770	81
3771-40 JT-9	287

EB-12

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54211

TO: Eldorado Nuclear Ltd.,
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INVOICE NO. 37099

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ATTN: W. J. Olsson

ANALYSED July 21/80

SAMPLE NO. :	PPM U
3772-40 JT-9	109
3773	160
3774	177
3775	130
3776	97
3777	+400
3778	+400
3779	253
3780	259
3781	+400
3782	+400
3783	263
3784	168
3785	42
3786	+400
3787	+400
3788	+400
3789	8.5
3790	20.5
3791	+400
3792	243
3793	7.5
3794	7.0
3795	98
3796	142
3797	+400
3798	370
3799	+400
3800	145
3801	228
3802	+400
3804	+400
3805	+400
3806	237
3807	118
3808	105
3809	6.0
3810	9.5
3811-40 JT-9	190

EB-12

EB-13

JT-9

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Note: + denotes greater than

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54212
INVOICE NO. 37099
RECEIVED July 5/80
ANALYSED July 21/80

TO: Eldorado Nuclear Ltd.,
Bag #3000,
Dawson City, Y.T.

ATTN: W. J. Olsson

SAMPLE NO. :	PPM U
3812-40 JT-9	+400
3813	372
3814	+400
3815	66
3816	183
3817	250
3818	+400
3819	+400
3820	186
3821	+400
3822	210
3823	+400
3824	+400
3825	246
3826	+400
3827	286
3828	113
3829	176
3830	+400
3831	+400
3832	11.0
3833	8.0
3834	119
3835	313
3836	142
3837	187
3838	218
3839	+400
3840	120
3841	39
3842	6.5
3843	19.0
3844	+400
3845	210
3846	9.5
3847	23.5
3848	153
3849	180
3850	366
3851-40 JT-9	+400

EB-13

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NOTE: + denotes greater than

CTA MEMBER

CERTIFIED BY: Hart Biehle

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TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ASSAY

CERTIFICATE NO. 62006

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 37107

RECEIVED July 19/80

ANALYSED July 19/80

SAMPLE NO. :	Percent U3O8
1022-41	0.011 ED-1 115N4-3
1023-41	0.016 ED-1 "
1044-41	0.014 EJ-1 WC
1100-41 GC	0.019 EJ-5 115N18-9
1102-41 GC	0.017 "
1100	0.017 ED-5 GC
1112	0.019 EJ-5
1117	0.019 ED-5 GC
1124-41 GC	0.068 EJ-5 GC
3054-40 IT	0.022 ED-7
3059	0.046
3064	0.055
3065	0.077
3067	0.044
3068	0.038
3069	0.017
3070	0.065
3071	0.053
3072-40 IT	0.035
3257-40 JT-5	0.021
3258	0.058 ED-17
3271	0.023 JT-5
3272	0.014
3273	0.021
3276	0.020
3277	0.044 ED-18
3278	0.280 JT5
3281	0.036
3282	0.051
3283	0.094
3285	0.015
3286	0.044
3287	0.037
3288	0.037
3290	0.027
3291	0.030
3292	0.050
3293	0.110
3296-40 JT-5	0.037

Data Transferred to TR dwg 3180 SMCA

B. Stewart

CTA MEMBER CANADIAN TESTING

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ASSAY

CERTIFICATE NO. 69007
INVOICE NO. 37167
RECEIVED July 10, 1980
ANALYSED July 23, 1980

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.

ATTN: William Olsson

SAMPLE NO. :	Percent U308	soils
40-3297-JT5	0.047	
3298	0.094	
3299	0.017	
3301	0.029	
3302	0.016	
3303	0.143	
3304	0.026	
3305	0.026	
3306	0.027	ED-18
3307	0.032	
3308	0.090	
3310	0.021	ED-19
3311	0.034	
3312	0.017	
3313	0.039	
3314	0.019	
3316	0.016	
3317	0.014	
40-3318-JT5	0.026	

data transferred to traverse reports aug 3 SMCG

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[signature]
REGISTERED ASSAYER, CHEMIST

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54213

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

INVOICE NO. 37495

RECEIVED July 5/80

ANALYSED Sept. 24/80

ATTN: William Olsson

Area JT 9 Soils

SAMPLE NO. :	U ppm	Fluor.
40-3853JT-9	47	
54	24.0	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54213

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 37495

RECEIVED July 5/80

ATTN: W.J. Olsson Area JT-9 - Soils

ANALYSED Aug. 1/80

SAMPLE NO. :	PPM U (NAA)	PERCENT U_3O_8 (NAA)
Prefix 40, Suffix JT-9		
3852		0.014
3853	65	
3854	34	
3855		0.023
3856		0.021
3857		0.013
3858		0.015
3859		0.043

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CERTIFIED BY: Hart Biddle

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212 BROOKSBANK AVE.
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TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 69217
INVOICE NO. 37566
RECEIVED July 21/80
ANALYSED Aug. 5/80

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

ATTN: W. J. Olsson

Project Area JT-8 Soils

SAMPLE NO. :	Percent U308
40-3880-JT8	0.020
3885	0.072
3910	0.016
3911	0.013
3912	0.024
3913	0.022
3914	0.062
3915	0.097
3916	0.016
3917	0.040
3918	0.025
3919	0.022
3920	0.070
3921	0.014
3922	0.025
3923	0.021
3924	0.052
3925	0.083
3926	0.018
3927	0.017
3928	0.021
3929	0.040
3930	0.040
3931	0.015
3932	0.027
3933	0.019
3934	0.015
3935	0.037
3936	0.025
3937	0.033
3938	0.018
3940	0.015
3941	0.042
3942	0.028
3946	0.022
3947	0.029
3948	0.034
3949	0.059
3950	0.095
3951	0.012

COPY

CTA MEMBER CANADIAN TESTING

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54217

INVOICE NO. 37495

RECEIVED July 5/80

ANALYSED Aug. 1/80

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: W.J. Olsson Area JT-12 - Soil

SAMPLE NO. :	PPM U (NAA)	PEREENT U_3O_8 (NAA)
Prefix 40, Suffix JT-12		
3635	15	
3636	15	
3637	28	
3638	15	
3639	9	
3640	7	
3641	43	
3642	19	
3643	10	
3644	8	
3645	37	
3646	18	
3647	15	
3648	14	
3649	31	
3650	19	
3651	17	
3652	12	
3653	31	
3654	79	
3655	53	
5656	19	
3657	18	
3658	6	
3659		0.018
3660		0.021
3661		0.018
3662		0.049
3663		0.045
3664		0.033
3665		0.014
3666		0.012
3667		0.053
3668		0.025
3669		0.032
3670		0.014
3671		0.014
3672		0.092
3673		0.014
3674	99	

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54218

INVOICE NO. 37495

RECEIVED July 5/80

ANALYSED Sept. 24/80

TO: ELDORADO NUCLEAR LTD.
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson AREA JT 12 Soils

SAMPLE NO. :	U ppm Fluor.
40-3678 JT-12	93
3679	93
3682	124
3683	70
3684	23.0
3688	16.0
3692	24.0
3693	42
3696	41
3697	21.0
3699	87
3701	64
3703	78
3705	97
3706	25
3708	30
3709	26
3710	32
3712	21
3713	15.0
40-3714 JT-12	11.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Bickle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54218

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 37495

RECEIVED July 5/80

ATTN: W.J. Olsson

ANALYSED Aug. 1/80

Area JT-12 - Soils

SAMPLE NO. :	PPM U (NAA)	PERCENT U_3O_8 (NAA)
Prefix 40, Suffix 12		
3675		0.053
3676		0.117
3677		0.039
3678	76	
3679	73	
3680		0.015
3681		0.027
3682	99	
3683	58	
3684	35	
3685		0.035
3686		0.014
3687		0.012
3688	24	
3689		0.036
3690		0.021
3691		0.012
3692	46	
3693	51	
3694		0.018
3695		0.023
3696	50	
3697	28	
3698		0.022
3699	91	
3700		0.016
3701	73	
3702		0.019
3703	86	
3704		0.025
3705	75	
3706	40	
3707		0.020
3708	40	
3709	35	
3710	38	
3711		0.013
3712	24	
3713	21	
3714	17	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54219

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9 AREA JT-12 Soils

INVOICE NO. 37495

RECEIVED July 5/80

ATTN: William Olsson

ANALYSED Sept. 24/80

SAMPLE NO. :	U ppm Fluor.
40 3715-JT-12	36
3716	12.0
3717	14.0
3718	9.0
3719	41
3720	10.5
3721	10.0
3722	19.0
3723	34
3724	23.5
3725	22.0
3726	11.0
3728	11.0
3729	7.6
3730	12.0
40 3731 JT-12	7.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54219

INVOICE NO. 37495

RECEIVED July 5/80

ANALYSED Aug. 1/80

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: W.J. Olsson

Area JT-12 - Soils

SAMPLE NO. :	PPM U (NAA)	PERCENT U_3O_8 (NAA)
Prefix 40, Suffix JT-12		
3715	36	
3716	17	
3717	17	
3718	21	
3719	46	
3720	13	
3721	15	
3722	23	
3723	82	
3724	33	
3725	25	
3726	23	
3727		0.013
3728	15	
3729	11	
3730	17	
3731	10	

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 69213

INVOICE NO. 37663

RECEIVED July 21/80

ANALYSED Aug. 11/80

TO: Eldorado Nuclear Ltd.,
Bag #3000,
Dawson City, Yukon
Y30 1G0

ATTN: Area JT8 Soils

SAMPLE NO. :	Percent U308
40-3952-JT8	0.059
3953	0.036
3954	0.040
3955	0.123
3956	0.030
3957	0.025
3958	0.059
3959	0.025
3960	0.078
3961	0.036
3962	0.055
3963	0.061
3964	0.020
3965	0.056
3966	0.014
3967	0.069
3968	0.044
3969	0.036
3970	0.217
3971	0.017
3972	0.030
3973	0.092
3974	0.058
3975	0.313
3976	0.072
3977	0.070
3978	0.018
3979	0.029
3980	0.150
3981	0.017
3982	0.030
3983	0.044
3984	0.057
3985	0.146
3986	0.022
3987	0.020
3990	0.020
3991	0.020
3992	0.050
40-3993-JT8	0.020

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CTA MEMBER CANADIAN TESTING ASSOCIATION

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648 984-0221
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ASSAY

CERTIFICATE NO. 69219

INVOICE NO. 37663

RECEIVED July 21/80

ANALYSED Aug. 11/80

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: Area JT 8 & 9 Soils

SAMPLE NO. :	Percent U308
40-3994-JT8	0.038
3995	0.044
3743-JT9	0.013
3747	0.012
3766	0.033
3771	0.033
3772	0.013
3773	0.011
3774	0.026
3775	0.015
3777	0.049
3778	0.055
3779	0.030
3780	0.027
3781	0.115
3782	0.172
3783	0.025
3784	0.018
3786	0.041
3787	0.050
3788	0.113
3791	0.082
3796	0.027
3797	0.050
3798	0.036
3799	0.059
3800	0.021
3801	0.031
3802	0.063
3804	0.126
3805	0.030
3806	0.022
3807	0.014
3808	0.012
3811	0.024
3812	0.045
3813	0.046
3814	0.073
3816	0.022
40-3792-JT9	0.037

COPY

CTA MEMBER CANADIAN TESTING

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 69220
INVOICE NO. 37663
RECEIVED July 21/80
ANALYSED Aug. 11/80

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: Area JT9 Soils

SAMPLE NO. :	Percent U_3O_8
40-3817-JT9	0.033
3818	0.103
3819	0.285
3820	0.026
3821	0.051
3822	0.024
3823	0.066
3824	0.078
3825	0.028
3826	0.181
3827	0.030
3828	0.014
3829	0.022
3830	0.117
3831	0.054
3834	0.014
3835	0.024
3836	0.018
3837	0.023
3838	0.026
3839	0.059
3840	0.015
3844	0.052
3845	0.025
3848	0.018
3849	0.021
3850	0.040
40-3851-JT9	0.076

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CTA MEMBER CANADIAN TESTING ASSOCIATION

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 69434

TO: Eldorado Nuclear Limited
Bag 13000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 38106

RECEIVED Aug. 1/80

ATTN: W. J. Olsson

ANALYSED Aug. 21/80

SAMPLE NO. :	Percent U308
40-3541-JT-6	Not sufficient sample
3544	NSS
3558	NSS
3560	NSS
3562	0.133
3568	0.084
3571	0.057
3581	0.050
3601	0.063
3604	0.060
3607	0.051
3610	0.072
3614	0.152
3617	0.056
3629-JT-7	NSS
3885-JT-8	0.073
3914	0.067
3920	NSS
3915	NSS
3924	0.052
3925	NSS
3949	0.057
3950	NSS
3952	0.059
3955	NSS
3958	0.059
3960	0.076
3962	0.055
3963	0.060
3965	0.062
3967	0.067
3968	0.043
3970	0.207
3973	0.087
3974	0.059
3975	0.300
3976	0.066
3977	0.069
3980	0.149
40-3984-JT-8	0.057

CTA MEMBER CANADIAN TESTING ASSOCIATION

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 69435

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 38106

RECEIVED Aug. 1/80

ATTN: W. J. Olsson

ANALYSED Aug. 21/80

SAMPLE NO. :	Percent U308
40-3955-JT-8	Not sufficient sample
3777-JT-9	0.050
3778	NSS
3781	0.117
3782	0.167
3786	0.041
3787	0.047
3788	0.111
3791	0.081
3797	0.050
3799	0.059
3802	0.062
3804	0.123
3805	0.029
3812	NSS
3814	0.068
3818	NSS
3819	NSS
3821	0.050
3823	0.068
3824	NSS
3826	0.173
3830	NSS
3831	NSS
3839	NSS
3844	0.051
40-3851-JT-9	0.075

MEMBER
CANADIAN TESTING
ASSOCIATION

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010091-1

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.
Y30 1Go

ATTN: W. J. Olsson

INVOICE NO. 38494

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
22-3419	5.5
3424	7.0
3429	30.0
3434	13.0
22-3439	50.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54217

INVOICE NO. 39247

RECEIVED July 5/80

ANALYSED Sept. 30/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson AREA JT-12 Soils

SAMPLE NO. :	U ppm Fluor
40-3635 JT-12	12.5
3636	4.5
3637	5.5
3639	10.0
3640	5.5
3641	3.5
3642	40
3643	14.0
3644	5.0
3645	5.0
3646	31
3647	14.5
3648	11.5
3649	8.0
3650	25
3651	16.0
3652	13.5
3653	8.5
3654	30
3655	76
3656	49
3657	19.5
3658	12.5
3659	8.5
3660	75
3661	193
3662	149
3663	348
3664	+ 400
3665	282
3666	124
3667	100
3668	+ 400
3669	239
3670	307
3671	124
3672	+ 400
3673	124
40-3674 JT-12	99

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : ELDORADO NUCLEAR LTD
STE 400 255 ALBERT ST
OTTAWA, ONT
K1P 6A9

CERT. # : A8010088-001-A
INVOICE # : 39381
DATE : 06-OCT-80

WORK AREA JT-5

Sample description	Prep code	U ppm					
22-501	205	2.5	--	--	--	--	--
22-502	205	1.5	--	--	--	--	--
22-503	205	2.5	--	--	--	--	--
22-3384	205	4.5	--	--	--	--	--
22-3379	205	5.0	--	--	--	--	--
22-3374	205	4.5	--	--	--	--	--
22-3369	205	3.5	--	--	--	--	--

Certified by ..... J. McKay .....

CTA
MEMBER
CANADIAN TESTING
ASSOCIATION

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010091-001

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: Attention: Mr. W. Olsson

INVOICE NO. 39539

RECEIVED Aug. 21/80

ANALYSED Oct. 9/80

SAMPLE NO. :	U ppm
22-3419	4.0
22-3424	5.0
33-2429	30
22-3434	11.0
22-3439	49

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: D. McCray

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010332-007-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39738

RECEIVED Sept. 3/80

ANALYSED Oct. 17/80

"SOIL"

SAMPLE NO. :	U ppm Fluor
5746	4.0
5747	3.0
40-3541-JT-6	+400
40-3544-JT-6	+400
40-3558-JT-6	+400
40-3560-JT-6	+400
40-3629-JT-7	163

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Ivan Bible

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53531

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City. Y.T.

INVOICE NO. 36299

RECEIVED June 14, 1980

ATTN: W.J. Olsson

ANALYSED June 17, 1980

WATERS

SAMPLE NO. :	PPB U
42 - 0001 SG	1.4
42 - 0002 SG	0.6
42 - 4001 J1-2S	73
4002	53
4003	70
4004	15.2
4005	18.8
4006	17.2
4007	6.2
4008	6.4
4009	7.6
4010	16.2
4011	16.6
4012	33
4013	17.6
4014	19.0
4015	16.0
4016	11.6
4017	13.4
4018	23.0
4019	20.0
4020	36
4021	23.0
4022	37
4023	34
4024	3.8
4025	63
4026	116
4027	1.8
4028	0.8
4029	1.0
4030	18.2
4031	15.2
4032	24.4
4033	1.0
4034	1.0
4035	1.4
4036	1.4
4037	1.8
42 - 4038 J1-2S	0.8

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53532

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.

INVOICE NO. 36299

RECEIVED June 14, 1980

ATTN: W.J. Olsson

WATERS

ANALYSED June 17, 1980

SAMPLE NO. :	PPB U	
42 - 4039 - J1-2S	1.0	
4040	1.0	
42 - 4041 - J1-2S	1.0	
42-J3	22.6	
42-J6	5.2	Oil in Water
42-J7	79	Oil in Water

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biddle

DMJ

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 53677

INVOICE NO. 36449

RECEIVED June 17, 1980

ANALYSED June 24, 1980

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.

ATTN: Project #522 WATERS

SAMPLE NO. :	PPB U
42 - 4042 - J2S	23.8
4043	36
4044	150
4045	266
4046	57
4047	20.4
4048	14.8
4049	50
4050	26
4051	22.4
4052	276
4053	46
4054	4.4
4055	18.2
4056	4.6
4057	12.8
4058	17.4
4059	20.4
4060	28
4061	27
4062	70
4063	94
42 - 4064 - J2S	30

CTA MEMBER CANADIAN TESTING

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
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CANADA V7J 2C1
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AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54003

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: WATERS

INVOICE NO. 36761

RECEIVED July 1/80

ANALYSED July 10/80

SAMPLE NO. :	PPB U
42-4065 J1-25	4.6
4066	114
4067	56
4068	70
4069	111
4070	96
4071	24.8
4072	8.4
4073	1.8
4074	1.2
4075	1.2
4076	20.6
4077	6.8
4078	2.6
4079	1.2
4080	1.6
4081	1.8
4082	3.8
4083	4.6
4084	0.8
42-4085 J-2S	11.8
4086	10.8
4087	6.2
4088	1.2
4089	2.0
4090	1.8
4091	1.2
4092	7.4
4093	29
4094	3.2
4095	43
4096	20.0
4097	83
4098	190
4099	107
4100	378
4101	40
4102	52
42-4103 J-2S	161
42-4104 J-1N	13.6

Bill O. June 23/80

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CERTIFIED BY: Hart Biddle

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NORTH VANCOUVER, B.C.
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TELEPHONE: 984-0221
AREA CODE: 604
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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54004

INVOICE NO. 36761

RECEIVED July 1/80

ANALYSED July 10/80

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: W. J. Olsson

WATER3

SAMPLE NO. :	PPB U
42-4105 J-2N	4.8
4106	1.8
4107	37
4108	5.2
4109	2.4
4110	2.2
4111	2.2
4112	1.6
4113	1.6
4114	3.0
4115	2.8
4116	1.8
4117 J-2N	8.6
42-4118 J-1N	1.8
42-4119 J-1N	1.2
42-4120J-2N	1.8
4121	2.2
4122	2.2
4123	1.2
4124	2.2
4125	2.0
4126	2.4
4127	1.6
4128	2.2
4129	2.2
4130	1.2
4131	1.6
4132	1.8
4133	2.0
4134	2.4
4135	1.6
4136	2.0
4137	4.2
4138	2.8
42-4139 J-2N	2.8

EJ-27

D. Melling

EJ-28

EJ-29

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54220

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

WATERS

INVOICE NO. 36963

RECEIVED July 5/80

ANALYSED July 16/80

ATTN: William Olsson Area JIS-Waters

SAMPLE NO. :	PPB U
42-4141-JIS	26
4143	473
4144	27
4145	15.0
4146	5.8
4147	7.0
4148	4.8
4149	12.8
4150	4.4
4151	5.2
4152	6.0
4153	15.2
4154	13.4
4155	13.0
4156	8.8
4157	12.4
4158	92
4159	271
4160	71
4161	113
42-4162-JIS	52

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CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Frank Bickle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54221

INVOICE NO. 36963

RECEIVED July 5/80

ANALYSED July 16/80

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
William Olsson

WATERS

ATTN: Area JIN-Waters

SAMPLE NO. :	PPB U
42-4142-JIN	102
4163	16.2
4164	14.0
4165	1.2
4166	3.0
4167	1.0
4168	1.0
4169	4.0
4170	4.6
4171	3.8
4172	1.2
4173	2.2
4174	1.2
4175	1.4
4176	1.2
4177	0.8
4178	1.8
4179	1.0
4180	1.4
4181	2.4
42-4182-JIN	1.2

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CTA MEMBER CANADIAN TESTING

CERTIFIED BY: Hart Biddle

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NORTH VANCOUVER, B.C.
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TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54915

INVOICE NO. 37610

RECEIVED July 24/80

ANALYSED Aug. 7/80

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: W. J. Olsson

Project #522 Work Area J-2N

SAMPLE NO. :	PPB U Waters
42-4197-J2N	168
4198	64
4199	35
4200	2.80
4201	51
4202	77
4203	30
4204	53
4205	20
4206	3.60
4207	0.40
4208	0.60
4209	0.60
4210	1.20
4211	0.80
4212	22
42-4213-J-2N	0.40

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CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54994

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 37610

RECEIVED July 27/80

ATTN: W. J. Olsson WATERS Project #522 Work Area J1N

ANALYSED Aug. 7/80

SAMPLE NO. :	PPB U
42-4140	22

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CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54995

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 37610

RECEIVED July 27/80

ATTN: W. J. Olsson WATERS Project #522, Work Area J2N

ANALYSED Aug. 7/80

SAMPLE NO. :	PPB U
42-4183	1.40
4184	1.20
4185	1.60
4186	0.80
4187	0.40
4188	0.40
4189	0.60
4190	0.40
4191	0.60
4192	0.60
4193	0.40
4194	0.80

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54992

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 37679

RECEIVED July 27/80

ANALYSED Aug. 11/80

ATTN: Project #522 Work Area J1N

SAMPLE NO. :	Percent U308
41-4104	0.082

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CTA MEMBER CANADIAN TESTING

CERTIFIED BY: Hart Biddle

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212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Y.T.

CERT. # : A8010093-001-A
INVOICE # : 38515
DATE : 06-SEP-80

WORK AREA JIN

Sample cription	U PPB			
2 4222	3.2	--	--	--
2-4223	1.2	--	--	--
2-4224	15.8	--	--	--
2 4225	1.6	--	--	--
2-4226	1.3	--	--	--
2-4227	1.0	--	--	--
2 4228	1.0	--	--	--

Certified by Hart Biddle

MEMBER
CANADIAN TESTING
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212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Y.T.

CERT. # : A8010196-001-A
INVOICE # : 38576
DATE : 09-SEP-80

PROJECT 522 J2N

ple escription	U PPB			
2-4229	2.4	--	--	--
4230	1.8	--	--	--
4231	2.2	--	--	--
2-4232	18.8	--	--	--
4233	2.4	--	--	--
4234	3.8	--	--	--
2-4235	10.5	--	--	--
4236	15.8	--	--	--
4237	113.0	--	--	--
2-4238	5.0	--	--	--
2-4239	5.2	--	--	--
4240	2.2	--	--	--
4241	4.8	--	--	--
2-4242	2.6	--	--	--

Certified by ..Hart Biddle.....

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

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CERTIFICATE OF ANALYSIS

C : Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Y.T.

CERT. # : A8010239-001-A
INVOICE # : 30796
DATE : 15-SEP-80

PROJ 522 J2N

ample scription	U PPB			
2-4243	2.2	--	--	--
2-4444	5.0	--	--	--
-4445	5.6	--	--	--

Certified by .....Hart Biddle.....

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ASSOCIATION

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54214

INVOICE NO. 37495

RECEIVED July 5/80

ANALYSED Sept. 24/80

TO: ELDORADO NUCLEAR LTD.
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson Area JT 20 Soils

SAMPLE NO. :	U ppm	Fluor.
40-5001 JT-10	43	
5002	44	
5005	59	
5006	51	
5009	81	
5010	94	
5013	15.5	
5014	16.5	
5017	103	
5019	60	
5024	66	
5028	81	
5030	76	
5038	72	
5039	12.0	
40-5040 JT-10	54	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biesse

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54214

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 37495

RECEIVED July 5/80

ANALYSED Aug. 1/80

ATTN: W.J. Olsson Area JT-10 - Soils

SAMPLE NO. :	PPM U (NAA)	PERCENT U_3O_8 (NAA)
Prefix 40, Suffix JT-10		
5001	55	
5002	54	
5003		0.025
5004		0.050
5005	68	
5006	54	
5007		0.015
5008		0.040
5009	80	
5010	94	
5011		0.014
5012		0.024
5013	21	
5014	95	
5015		0.071
5016		0.012
5017	98	
5018		0.017
5019	88	
5020		0.039
5021		0.028
5022		0.035
5023		0.051
5024	75	
5025		0.013
5026		0.020
5027		0.038
5028	95	
5029		0.024
5030	87	
5031		0.040
5032		0.066
5033		0.021
5034		0.025
5035		0.022
5036		0.017
5037		0.039
5038	64	
5039	15	
5040	57	

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CERTIFIED BY: Hart Biddle

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54215

INVOICE NO. 37495

RECEIVED July 5/80

ANALYSED Sept. 24/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson AREA JT-10 Soils

SAMPLE NO. :	U Fluor. ppm
40-5053 JT-10	97
5059	100
5065	49
5070	80
5073	49
40-5074 JT-10	40

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54215

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 37495

RECEIVED July 5/80

ATTN: W.J. Olsson

ANALYSED Aug. 1/80

Area JT-10 - Soils

SAMPLE NO. :	PPM U (NAA)	PERCENT U_3O_8 (NAA)
Prefix 40, Suffix JT-10		
5041		0.013
5042		0.059
5043		0.195
5044		0.329
5045		0.014
5046		0.111
5047		0.130
5048		0.323
5049		0.052
5050		0.181
5051		0.062
5052		0.119
5053	96	
5054		0.015
5055		0.045
5056		0.066
5057		0.013
5058		0.017
5059	92	
5060		0.169
5061		0.013
5062		0.065
5063		0.029
5064		0.033
5065	54	
5066		0.023
5067		0.052
5068		0.039
5069		0.160
5070	88	
5071		0.026
5072		0.041
5073	60	
5074	46	
5075		0.012
5076		0.033
5077		0.012
5078		0.018
5079		0.035
5080		0.024

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54216

TO: ELDORADO NUCLEAR LIMITED
Ste. 400, 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 37495

RECEIVED July 5/80

ATTN: William Olsson Area JT 10 Soils

ANALYSED Sept. 24/80

SAMPLE NO. :	U ppm	Fluor.
40-5081 JT-10	35	
5082	81	
5083	93	
5085	40	
5086	28	
5087	37	
5089	25	
5090	53	
5091	36	
5092	71	
5093	13.5	
5094	21.0	
5095	21.5	
5096	42	
5097	19.0	
5098	15.0	
5099	21.0	
5100	44	
5101	12.0	
5102	9.5	
5103	10.0	
5104	31	
5105	33	
5106	10.5	
5107	12.0	
5108	17.5	
40-5109 JT-10	23.5	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

CHEMEX LABS LTD.

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54216

INVOICE NO. 37495

RECEIVED July 5/80

ANALYSED Aug. 1/80

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: W.J. Olsson

Area JT-10 - Soils

SAMPLE NO. :	PPM U (NAA)	PERCENT U_3O_8 (NAA)
Prefix 40, Suffix 10		
5081	33	
5082	78	
5083	87	
5084		0.020
5085	40	
5086	44	
5087	38	
5088		0.014
5089	24	
5090	48	
5091	37	
5092	61	
5093	17	
5094	37	
5095	22	
5096	37	
5097	18	
5098	24	
5099	28	
5100	56	
5101	19	
5102	13	
5103	17	
5104	37	
5105	37	
5106	16	
5107	16	
5108	17	
5109	26	

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CERTIFIED BY: Hart Biddle

CHEMEX LABS LTD.

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TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010094-1

TO: Eldorado Nuclear Limited
Bag #3000
Dawson city, Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38495

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
40-5110	11.0
5111	1.20
5112	25.0
5113	22.0
5114	11.0
5115	12.0
5116	6.0
5117	25.0
5118	8.0
5119	8.5
5120	12.5
5121	19.0
5122	10.0
5123	7.0
5124	19.0
5125	21.0
5126	8.5
5127	7.5
5128	10.0
5129	17.5
5130	9.5
5131	7.5
5132	9.5
5133	16.0
5134	8.5
5135	7.0
5136	3.0
5137	24.0
5138	8.0
5139	14.5
5140	15.0
5141	22.0
5142	8.0
5143	9.5
5144	4.5
5145	24.0
5146	12.0
5147	9.0
5148	13.5
40-5149	26.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010096-1

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38495

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
40-5458	8.0
5459	8.5
5460	4.5
5461	11.0
5462	8.5
5463	6.5
5464	4.5
5465	12.0
5466	12.0
5467	8.5
5468	5.0
5469	3.0
5470	10.0
5471	9.0
5472	25.0
5473	19.0
5474	8.0
5475	9.0
5476	4.5
5477	14.0
5486	10.5
5487	7.0
5488	7.0
5489	7.0
5490	10.5
5491	9.5
5492	4.5
5493	11.5
5494	10.5
5495	10.5
5496	4.5
5497	16.0
5498	15.0
5499	21.0
5500	6.5
5501	17.0
5502	12.5
5503	14.0
5504	12.0
40-5505	38.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Stewart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010096-2

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.t.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38495

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
40-5506	15.0
5507	23.0
5508	9.0
5509	44.0
5510	14.0
5511	18.0
5512	13.5
5513	2.0
5514	13.0
5515	15.0
5516	12.0
5517	13.5
5518	12.0
5519	14.0
5520	22.0
5521	28.0
5522	10.5
5523	5.0
5524	3.5
5525	4.0
5526	12.0
5527	11.5
5528	4.5
5529	12.5
5530	10.0
5531	12.0
5532	3.0
5533	4.5
5534	12.0
5535	10.0
5536	4.5
5537	4.5
5538	14.0
5539	12.5
5540	6.5
5541	1.5
5542	14.5
5543	11.0
5544	7.5
40-5545	1.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hawk Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010096-3

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38495

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
40-5546	13.0
5547	12.5
5548	7.0
5549	3.0
5550	15.0
5551	9.5
5552	3.5
5553	12.5
5554	14.5
5555	61.0
5556	35.0
5557	9.5
5558	10.0
5559	36.0
5560	50.0
5561	10.0
5562	10.5
5563	13.5
5564	27.0
5565	10.5
5566	11.0
5567	11.5
40-5568	28.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010097-1

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38495

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
40-5399	12.0
5400	8.5
5401	3.0
5402	1.5
5403	9.0
5404	8.5
5405	7.0
5406	8.5
5407	8.5
5408	7.5
5409	7.0
5410	25.0
5411	8.0
5412	5.0
5413	8.5
5414	22.5
5415	7.0
5416	7.0
5417	52.0
5418	59.0
5419	7.0
5420	7.5
5421	7.0
5422	30.0
5423	7.5
5424	7.0
5425	11.5
5426	20.0
5427	6.0
5428	4.5
5429	17.5
54305	15.5
5431	7.5
5432	16.5
5433	3.5
5434	3.5
5435	7.5
5436	5.0
5437	5.5
40-5438	4.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010097-2

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38495

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
40-5439	10.0
5440	13.5
5441	5.0
5442	9.0
5443	12.0
5444	7.5
5445	13.0
5446	9.0
5447	10.0
5448	22.5
5449	26.0
5450	7.0
5451	8.0
5452	19.0
5453	13.0
5454	7.5
5455	8.5
5456	3.0
5457	4.0
5478	10.0
5479	10.5
5480	10.0
5481	10.0
5482	12.5
5483	7.0
5484	7.0
40-5485	14.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010095-003-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 38723

RECEIVED Aug. 21/80

ANALYSED Oct. 21/80

SOIL

SAMPLE NO. :	U ppm Fluor
40-5352	9.0
40-5353	4.0
40-5354	24.0
40-5355	10.0
40-5356	7.0
40-5357	14.0
40-5358	18.5
40-5359	17.5
40-5360	12.0
40-5361	19.0
40-5362	52
40-5363	10.5
40-5364	17.5
40-5365	30
40-5366	38
40-5367	10.5
40-5368	11.5
40-5369	13.0
40-5370	32
40-5371	12.5
40-5372	11.0
40-5373	7.0
40-5374	34
40-5375	17.0
40-5376	12.5
40-5377	24.5
40-5378	42
40-5379	5.0
40-5380	7.0
40-5381	15.5
40-5382	17.0
40-5383	7.0
40-5384	4.0
40-5385	7.5
40-5386	9.5
40-5387	5.0
40-5388	5.0
40-5389	5.5
40-5390	6.5
40-5391	5.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8002099

TO: ELDORADO NUCLEAR LTD.
Ste. 400, 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson

INVOICE NO. 38723

RECEIVED Aug. 27, 1980

ANALYSED Sept. 8, 1980

SAMPLE NO. :	U ppm
40-5188	6.0
40-5189	1.0
40-5190	9.0
40-5191	9.5
40-5192	5.0
40-5193	5.5
40-5194	6.5
40-5195	10.5
40-5196	6.0
40-5197	5.0
40-5198	8.0
40-5199	10.5
40-5200	6.0
40-5201	7.0
40-5202	11.5
40-5203	12.5
40-5204	5.5
40-5205	6.5
40-5206	3.5
40-5207	15.0
40-5208	7.0
40-5209	5.0
40-5210	2.0
40-5211	2.5
40-5212	6.5
40-5213	9.0
40-5214	7.0
40-5215	8.5
40-5216	8.0
40-5217	9.0
40-5218	15.5
40-5219	22.0
40-5220	7.5
40-5221	7.5
40-5222	14.5
40-5223	20.0
40-5224	9.5
40-5225	9.5
40-5226	2.0
40-5227	3.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hans Bielle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8002100

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 38723

RECEIVED Aug. 27, 1980

ATTN: Mr. William Olsson

ANALYSED Sept. 8, 1980

SAMPLE NO. :	U ppm
40-5312	8.0
40-5313	9.0
40-5314	2.0
40-5315	2.5
40-5316	11.0
40-5317	7.5
40-5318	3.0
40-5319	3.0
40-5320	10.0
40-5321	6.5
40-5322	3.5
40-5323	2.5
40-5324	10.5
40-5325	8.0
40-5326	6.0
40-5327	4.0
40-5328	9.0
40-5329	12.0
40-5330	2.5
40-5331	10.0
40-5332	7.5
40-5333	11.0
40-5334	6.0
40-5335	7.0
40-5336	19.0
40-5337	11.5
40-5338	9.5
40-5339	14.0
40-5340	34.0
40-5341	17.0
40-5342	15.5
40-5343	48.0
40-5344	11.0
40-5345	10.5
40-5346	32.0
40-5347	15.0
40-5348	11.0
40-5349	7.0
40-5350	20.0
40-5351	10.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8002102

TO: ELDORADO NUCLEAR LTD.
Ste. 400 - 255 Albert Street
Ottawa, Ontario
ATTN: K1P 6A9
Mr. William Olsson

INVOICE NO. 38723

RECEIVED Aug. 27, 1980

ANALYSED Sept. 8, 1980

SAMPLE NO. :	U ppm
40-5352	16.0
40-5353	8.0
40-5354	30.0
40-5355	16.0
40-5356	12.0
40-5357	18.0
40-5358	24.0
40-5359	22.0
40-5360	15.5
40-5361	20.0
40-5362	55.0
40-5363	18.5
40-5364	21.0
40-5365	36.0
40-5366	53.0
40-5367	17.0
40-5368	15.0
40-5369	18.0
40-5370	32.0
40-5371	19.0
40-5372	12.0
40-5373	11.0
40-5374	32.0
40-5375	21.0
40-5376	15.5
40-5377	25.0
40-5378	39.0
40-5379	9.5
40-5380	12.0
40-5381	14.0
40-5382	17.0
40-5383	11.5
40-5384	7.5
40-5385	11.5
40-5386	11.5
40-5387	9.0
40-5388	7.0
40-5389	7.0
40-5390	7.5
40-5391	8.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8002101
INVOICE NO. 38723
RECEIVED Aug. 27, 1980
ANALYSED Sept. 8, 1980

TO: ELDORADO NUCLEAR LTD.
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9
ATTN: William Olsson

SAMPLE NO. :	U ppm
40-5150	9.5
40-5151	8.0
40-5152	5.0
40-5153	15.5
40-5154	6.5
40-5155	9.5
40-5156	7.5
40-5157	14.0
40-5158	6.5
40-5159	6.0
40-5160	7.5
40-5161	12.0
40-5162	6.5
40-5163	6.0
40-5164	8.5
40-5165	15.5
40-5166	6.0
40-5167	6.5
40-5168	7.5
40-5169	5.0
40-5170	6.5
40-5171	7.0
40-5172	6.5
40-5173	18.5
40-5174	5.5
40-5175	5.5
40-5176	9.5
40-5177	11.5
40-5178	5.5
40-5179	4.5
40-5180	5.5
40-5181	6.0
40-5182	8.5
40-5183	10.5
40-5184	5.0
40-5185	5.5
40-5186	7.0
40-5187	12.0

CTA. MEMBER

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010095-004

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson

INVOICE NO. 39407

RECEIVED Aug. 21/80

ANALYSED Oct. 3/80

SAMPLE NO. :	U (Fluor) ppm
5392	3.5
5393	3.0
5394	5.0
5395	5.0
5396	3.5
5397	4.0
5398	8.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010095-001

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson

INVOICE NO. 39407

RECEIVED Aug. 21/80

ANALYSED Oct. 3/80

SAMPLE NO. :	U (Fluor) ppm
40 - 5272	8.0
5273	2.5
5274	10.0
5275	11.0
5276	9.5
5277	3.5
5278	12.0
5279	13.0
5280	10.0
5281	12.0
5282	8.0
5283	12.5
5284	6.0
5285	3.0
5286	1.5
5287	9.5
5288	5.0
5289	6.0
5290	32
5291	21.5
5292	9.0
5293	5.5
5294	5.5
5295	24.5
5296	12.0
5297	11.5
5298	4.0
5299	17.0
5300	12.5
5301	8.5
5302	14.5
5303	43
5304	5.0
5305	4.0
5306	2.0
5307	9.0
5308	6.0
5309	2.5
5310	1.5
40 -5311	0.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKinley

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010093-003

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson

INVOICE NO. 39407

RECEIVED Aug. 21/80

ANALYSED Oct. 3/80

SAMPLE NO. :	U (Fluor) ppm
40- 5268	4.0
5269	2.0
5270	3.0
40- 5271	7.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. Ostfeld

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010093-002
INVOICE NO. 39407
RECEIVED Aug. 21/80
ANALYSED Oct. 3/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9
ATTN: William Olsson

SAMPLE NO. :	U (Fluor) ppm
40- 5228	2.0
5229	1.5
5230	1.5
5231	2.0
5232	5.0
5233	3.5
5234	1.0
5235	5.0
5236	4.0
5237	3.0
5238	4.5
5239	9.5
5240	3.0
5241	2.0
5242	3.5
5243	6.0
5244	8.0
5245	7.5
5246	3.5
5247	3.5
5248	14.0
5249	10.0
5250	2.5
5251	1.0
5252	1.0
5253	7.5
5254	6.0
5255	12.5
5256	7.5
5257	19.5
5258	3.0
5259	4.5
5260	12.5
5261	8.0
5262	14.0
5263	11.5
5264	4.0
5265	2.0
5266	2.5
40- 5267	8.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McHay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010187-001-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39501

RECEIVED Aug. 26/80

ANALYSED Oct. 10/80

SAMPLE NO. :	U (Fluor.) ppm
40-5569	5.5
40-5570	5.0
40-5571	3.5
40-5572	30
40-5573	2.5
40-5574	1.0
40-5575	0.5
40-5576	0.5
40-5577	2.5
40-5578	2.5
40-5579	0.5
40-5580	14.0
40-5581	6.0
40-5582	4.5
40-5583	4.0
40-5584	1.0
40-5585	5.0
40-5586	5.5
40-5587	15.0
40-5588	3.5
40-5589	6.5
40-5590	6.0
40-5591	2.5
40-5592	1.5
40-5593	3.5
40-5594	1.5
40-5595	1.5
40-5596	1.5
40-5597	2.5
40-5598	3.5
40-5599	2.0
40-5600	28
40-5601	4.5
40-5602	5.0
40-5603	26
40-5604	44
40-5605	4.0
40-5606	5.5
40-5607	12.0
40-5608	28

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. Leichay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010187-002-A

INVOICE NO. 39501

RECEIVED Aug. 26/80

ANALYSED Oct. 10/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

SAMPLE NO. :	U (Fluor) ppm
40-5609	7.5
40-5610	11.5
40-5611	36

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McGray

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010188-001-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39501

RECEIVED Aug. 26/80

ANALYSED Oct. 10/80

SAMPLE NO. :	U (Fluor.) ppm
40-5612	9.5
40-5613	9.0
40-5614	3.0
40-5615	32
40-5616	6.5
40-5617	9.5
40-5618	7.0
40-5619	13.5
40-5620	7.0
40-5621	6.5
40-5622	2.5
40-5623	N S S
40-5624	8.0
40-5625	9.5
40-5626	9.5
40-5627	24.5
40-5628	7.5
40-5629	7.0
40-5630	12.0
40-5631	35
40-5632	6.0
40-5633	4.5
40-5634	2.0
40-5635	13.5
40-5636	7.5
40-5637	6.5
40-5638	8.5
40-5639	23.0
40-5640	11.0
40-5641	6.0
40-5642	16.5
40-5643	49
40-5644	12.0
40-5645	10.0
40-5646	8.0
40-5647	14.0
40-5648	11.5
40-5649	40
40-5650	58
40-5651	48

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010188-002-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39501

RECEIVED Aug. 26/80

ANALYSED Oct. 10/80

SAMPLE NO. :	U ppm (Fluor.)
40-5652	10.5
40-5653	13.0
40-5654	4.5
40-5655	8.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McDay.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010192-001-A
INVOICE NO. 39503
RECEIVED Aug. 26/80
ANALYSED Oct. 10/80

TO:
ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
ATTN: K1P 6A9
Mr. W. Olsson

SAMPLE NO. :	U (Fluor.) ppm
40-5656	5.5
40-5657	8.0
40-5658	2.5
40-5659	35
40-5660	6.5
40-5661	10.0
40-5662	9.0
40-5663	55
40-5664	8.0
40-5665	4.5
40-5666	7.0
40-5667	13.0
40-5668	8.5
40-5669	9.0
40-5670	38
40-5671	14.5
40-5672	8.0
40-5673	13.5
40-5674	36
40-5675	26

MEMBER
CANADIAN TESTING

CERTIFIED BY: J. Kilchay

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010197-001-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6a9

ATTN: Mr. W. Olsson

INVOICE NO. 39504

RECEIVED Aug. 26/80

ANALYSED Oct. 10/80

SAMPLE NO. :	U (Fluor.) ppm
22-5399	0.5
22-5403	1.5
22-5407	1.0
22-5411	0.5
22-5415	1.5
22-5419	1.0
22-5423	1.0
22-5427	1.0
22-5431	1.0
22-5435	0.5
22-5438	1.0
22-5442	1.0
22-5446	2.0
22-5450	1.5
22-5454	2.0
22-5458	1.0
22-5462	1.0
22-5466	0.5
22-5470	2.0
22-5474	2.0
22-5478	1.0
22-5482	1.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010993-001

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39539

RECEIVED Aug. 21/80

ANALYSED Oct. 9/80

SAMPLE NO. :	U ppm
40-5188	3.5
40-5189	1.5
40-5190	4.0
40-5191	4.0
40-5192	1.0
40-5193	1.0
40-5194	1.5
40-5195	6.5
40-5196	3.0
40-5197	2.0
40-5198	4.5
40-5199	7.0
40-5200	3.5
40-5201	4.0
40-5202	7.5
40-5203	10.5
40-5204	4.0
40-5205	3.5
40-5206	1.0
40-5207	13.0
40-5208	4.0
40-5209	3.0
40-5210	1.0
40-5211	1.0
40-5212	3.0
40-5213	3.0
40-5214	4.0
40-5215	7.0
40-5216	4.0
40-5217	5.0
40-5218	15.0
40-5219	20.5
40-5220	6.0
40-5221	3.0
40-5222	12.0
40-5223	19.0
40-5224	5.0
40-5225	5.5
40-5226	3.5
40-5227	2.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: D. McKinney

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010094-001

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: Mr. William Olsson

INVOICE NO. 39539

RECEIVED Aug. 21/80

ANALYSED Oct. 9/80

SAMPLE NO. :	U ppm
40-5110	4.5
40-5111	5.5
40-5112	16.0
40-5113	13.0
40-5114	4.5
40-5115	7.0
40-5116	2.5
40-5117	18.5
40-5118	4.0
40-5119	3.5
40-5120	7.0
40-5121	12.0
40-5122	5.0
40-5123	3.0
40-5124	14.0
40-5125	18.5
40-5126	4.5
40-5127	3.0
40-5128	6.0
40-5129	14.5
40-5130	4.5
40-5131	4.5
40-5132	6.0
40-5133	11.5
40-5134	5.0
40-5135	3.5
40-5136	< 0.5
40-5137	19.0
40-5138	4.5
40-5139	10.5
40-5140	18.0
40-5141	19.5
40-5142	6.0
40-5143	6.0
40-5144	3.5
40-5145	15.0
40-5146	4.5
40-5147	5.5
40-5148	9.5
40-5149	16.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010094-002

TO: ELDORADO NUCLEAR LTD.
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: Mr. William Olsson

INVOICE NO. 39539

RECEIVED Aug. 21/80

ANALYSED Oct. 9/80

SAMPLE NO. :	U ppm
40-5150	4.0
40-5151	4.5
40-5152	3.0
40-5153	11.5
40-5154	4.0
40-5155	5.5
40-5156	4.0
40-5157	12.0
40-5158	3.5
40-5159	3.0
40-5160	4.0
40-5161	9.5
40-5162	4.0
40-5163	4.0
40-5164	7.0
40-5165	13.5
40-5166	3.0
40-5167	3.5
40-5168	5.0
40-5169	3.0
40-5170	5.0
40-5171	4.5
40-5172	12.0
40-5173	16.5
40-5174	3.0
40-5175	4.0
40-5176	7.5
40-5177	9.5
40-5178	4.0
40-5179	3.5
40-5180	2.5
40-5181	4.0
40-5182	7.5
40-5183	7.5
40-5184	1.5
40-5185	1.5
40-5186	2.5
40-5187	8.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. Kay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010095-002

TO: ELDORADO NUCLEAR LTD.
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39539

RECEIVED Aug. 21/80

ANALYSED Oct. 10/80

SAMPLE NO. :	U ppm
40-5312	5.5
40-5313	6.5
40-5314	1.0
40-5315	1.5
40-5316	7.0
40-5317	5.5
40-5318	0.5
40-5319	0.5
40-5320	6.0
40-5321	4.0
40-5322	1.0
40-5323	1.0
40-5324	8.5
40-5325	4.5
40-5326	3.5
40-5327	2.5
40-5328	5.5
40-5329	10.5
40-5330	1.0
40-5331	7.0
40-5332	4.0
40-5333	6.5
40-5334	3.0
40-5335	3.5
40-5336	14.5
40-5337	8.5
40-5338	6.0
40-5339	11.0
40-5340	29
40-5341	11.5
40-5342	8.5
40-5343	43
40-5344	8.0
40-5345	7.0
40-5346	26
40-5347	8.0
40-5348	6.0
40-5349	2.4
40-5350	14.5
40-5351	5.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: D. G. Ray

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010245-001-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson "SOIL"

INVOICE NO. 39739

RECEIVED Aug. 28/80

ANALYSED Oct. 17/80

SAMPLE NO. :	U ppm Fluor
40-5676	10.0
40-5677	4.5
40-5678	4.5
40-5679	4.0
40-5680	4.0
40-5681	N S S
40-5682	4.0
40-5683	6.0
40-5684	4.5
40-5685	3.5
40-5686	2.0
40-5687	1.0
40-5688	56
40-5689	2.0
40-5690	5.5
40-5691	1.0
40-5694	1.0
40-5695	1.0
40-5696	2.5
40-5698	5.0
40-5700	0.5
40-5701	0.5
40-5702	19.5
40-5703	4.5
40-5704	6.0
40-5705	7.5
40-5706	0.5
40-5707	18.0
40-5708	N S S
40-5709	5.0
40-5710	1.5
40-5711	8.0
40-5712	0.5
40-5713	1.5
40-5714	21.0
40-5715	8.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010245-002-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
k1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39739

RECEIVED Aug. 28/80

ANALYSED Oct. 17/80

SAMPLE NO. :	U ppm Fluor
40-5716	N S S
40-5717	5.0
40-5718	11.5
40-5719	1.0
40-5720	11.0
40-5721	6.0
40-5722	10.5
40-5724	14.0
40-5726	5.0
40-5727	2.0
40-5728	4.0
40-5729	2.5
40-5730	4.5
40-5731	12.0
40-5732	11.0
40-5733	3.0
40-5734	3.0
40-5735	12.5
40-5740	8.5
40-5741	10.0
40-5742	8.5
40-5743	N S S
40-5748	9.0
40-5749	4.5
40-5750	12.0
40-5828	2.0
40-5829	3.0
40-5830	2.0
40-5831	7.0
40-5832	5.5
40-5833	2.5
40-5835	3.0
40-5836	2.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010245-003-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39739

RECEIVED Aug. 28/80

ANALYSED Oct. 17/80

SAMPLE NO. :	U ppm Fluor
40-5837	2.0
40-5838	1.5
40-5839	2.0
40-5840	2.0
40-5841	2.0
40-5842	1.5
40-5843	2.0
40-5844	20.0
40-5845	2.5
40-5846	1.0
40-5847	1.5
40-5848	4.5
40-5849	2.0
40-5850	2.5
40-5851	5.5
40-5852	1.5
40-5853	2.0
40-5854	2.5
40-5855	4.5
40-5856	1.5
40-5857	16.0
40-5858	1.5
40-5859	5.0
40-5860	5.0
40-5861	1.0
40-5862	4.0
40-5752	22.0
40-5753	21.0
40-5754	1.5
40-5755	1.5
40-5756	1.0
40-5757	5.0
40-5758	19.5
40-5760	1.0
40-5761	1.5
40-5762	10.0
40-5763	4.0
40-5764	1.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010245-004-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson

INVOICE NO. 39739

RECEIVED Aug. 28/80

ANALYSED Oct. 17/80

SAMPLE NO. :	U ppm Fluor
40-5765	3.5
40-5766	5.0
40-5767	18.5
40-5768	3.5
40-5769	8.5
40-5770	7.5
40-5771	3.0
40-5772	1.5
40-5773	6.5
40-5774	13.5
40-5775	4.5
40-5776	3.5
40-5777	4.0
40-5778	4.0
40-5779	6.5
40-5780	1.5
40-5781	13.5
40-5782	1.5
40-5783	7.5
40-5784	1.0
40-5785	32
40-5786	6.0
40-5787	4.0
40-5788	2.5
40-5789	2.5
40-5790	2.0
40-5791	2.5
40-5792	3.0
40-5793	3.0
40-5794	2.0
40-5795	3.0
40-5796	16.5
40-5797	2.5
40-5798	2.0
40-5799	19.0
40-5800	5.5
40-5801	7.5
40-5802	5.0
40-5803	9.0
40-5804	3.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Stan Bielle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. A8010245-005-A

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: Mr. W. Olsson "SOIL"

INVOICE NO. 39739

RECEIVED Aug. 28/80

ANALYSED Oct. 17/80

SAMPLE NO. :	U ppm Fluor
40-5805	2.5
40-5806	10.5
40-5807	3.5
40-5808	5.0
40-5809	5.0
40-5810	0.5
40-5811	2.5
40-5812	5.0
40-5813	21.5
40-5814	13.0
40-5815	5.5
40-5816	4.0
40-5817	13.5
40-5818	10.0
40-5819	36
40-5820	8.5
40-5821	4.5
40-5822	9.5
40-5823	2.5
40-5824	3.0
40-5825	7.0
40-5826	6.0
40-5827	1.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hans Tiedle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54222

INVOICE NO. 37495

RECEIVED July 5/80

ANALYSED Sept. 24/80

TO: ELDORADO NUCLEAR LTD.
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson

AREA J-1 Sludge from Drill

SAMPLE NO. :	U ppm	Fluor.
27-18501-J1	2.5	
18502	2.5	
18503	2.5	
18504	3.0	
18505	7.0	
18506	9.5	
18507	18.5	
18508	25	
18509	22.0	
18510	19.5	
18511	14.0	
18512	20.0	
18513	61	
18516	41	
18517	39	
18520	47	
18521	68	
18522	43	
18523	23.0	
18524	20.0	
18525	63	
18526	71	
18527	68	
18535	41	
27-18538-J1	78	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54222

INVOICE NO. 37495

RECEIVED July 5/80

ANALYSED Aug. 1/80

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

ROCKS

ATTN: W.J. Olsson

Area J-1 - Sludge From Drill

SAMPLE NO. :	PPM $U_{(NAA)}$	PERCENT $U_3O_{8(NAA)}$
Prefix 27, Suffix J1		
18501	4	
18502	6	
18503	6	
18504	5	
18505	10	
18506	18	
18507	29	
18508	44	
18509	31	
18510	34	
18511	24	
18512	25	
18513	74	
18514		0.028
18515		0.038
18516	54	
18517	53	
18518		0.023
18519		0.011
18520	55	
18521	85	
18522	52	
18523	33	
18524	29	
18525	68	
18526	88	
18527	83	
18528		0.056
18529		0.072
18530		0.021
18531		0.069
18532		0.092
18533		0.039
18534		0.043
18535	49	
18536		0.186
18537		0.029
18538	93	

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54461

TO: ELDORADO NUCLEAR LTD.
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9 PROJECT 522 Work Area J-1

ATTN: William Olsson

INVOICE NO. 37495

RECEIVED July 11/80

ANALYSED Sept. 24/80

SAMPLE NO. :	U ppm	Fluor.
26-18561	3.0	
18562	5.5	
18563	32	
18564	30	
18565	17.0	
18566	31	
18567	29	
18568	77	
18569	94	
18570	27	
18571	19.0	
18572	48	
18578	40	
18579	24.0	
18580	14.0	
18581	51	
18584	51	
18585	36	
18586	92	
18591	27	
18592	3.5	
18593	5.0	
18594	8.5	
18595	37	
18596	10.0	
18597	3.0	
18598	3.0	
18599	11.5	
18600	65	
26-18601	2.0	

CTA MEMBER CANADIAN TESTING ASSOCIATION

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54461

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 37495

RECEIVED July 11/80

ATTN: W.J. Olsson

ANALYSED Aug. 1/80

Project #522 Work Area J-1 ROCKS

SAMPLE NO. :	PPM U (NAA)	PERCENT U_3O_8 (NAA)
Prefix 26		
18561	5	
18562	8	
18563	44	
18564	34	
18565	20	
18566	43	
18567	30	
18568	79	
18569	97	
18570	33	
18571	23	
18572	47	
18574		0.0220
18575		0.0490
18576		0.1410
18577		0.0430
18578	46	
18579	26	
18580	16	
18581	60	
18582		0.0520
18583		0.0550
18584	51	
18585	37	
18586	83	
18587		0.0170
18588		0.0130
18589		0.0190
18590		0.0270
18591	30	
18592	5	
18593	8	
18594	12	
18595	38	
18596	12	
18597	5	
18598	5	
18599	15	
18600	61	
18601	3	

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54462

TO: ELDORADO NUCLEAR LTD.
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9 PROJECT 522 Work Area J-1

ATTN: William Olsson

INVOICE NO. 37495

RECEIVED July 11/80

ANALYSED Sept. 24/80

SAMPLE NO. :	U ppm	Fluor.
26-18602	1.5	
18603	1.5	
18604	5.0	
18605	4.0	
18606	10.5	
18607	7.2	
18608	1.5	
18609	1.5	
18610	2.5	
18611	1.5	
18612	1.5	
18613	1.5	
18614	1.5	
18615	1.5	
26-18616	1.5	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biddle

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54662

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 37495

RECEIVED July 11/80

ATTN: W.J. Olsson Project #522 Work Area J-1 ROCKS

ANALYSED Aug. 1/80

SAMPLE NO. :	PPM U (NAA)
Prefix 26	
18602	3.0
18603	3.5
18604	8.0
18605	7.5
18606	13.0
13607	10.0
18608	3.5
18609	4.5
18610	5.5
18611	4.0
18612	5.5
18613	3.0
18614	3.5
18615	4.0
18616	4.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

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CANADA V7J 2C1
TELEPHONE: 984-0221
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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54463

TO: ELDORADO NUCLEAR LTD.
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9 PROJECT 522 Work Area J-2

INVOICE NO. 37495

RECEIVED July 11/80

ATTN: William Olsson

ANALYSED Sept. 24/80

SAMPLE NO. :	U ppm Fluor.
26-18668	66
18669	34
18670	14.5
18671	16.5
18672	13.0
18673	30
18674	16.5
18675	23.5
18676	22.5
18677	41
18678	11.0
18679	21.0
18680	20.5
18681	11.5
18682	10.5
18683	16.5
18684	8.5
18685	14.5
18686	15.5
18687	35
18688	20.0
18689	23.0
18690	14.5
18691	6.0
18692	8.0
18693	13.0
18694	12.5
18695	8.5
18696	6.0
18697	5.0
18698	4.5
18699	3.0
18700	3.0
18701	4.5
18702	2.5
18703	2.5
18704	2.0
18705	4.0
18706	5.5
18707	5.5
26-18708	5.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

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CERTIFICATE NO. 54463
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ANALYSED Aug. 1/80

TO: Eldorado Nuclear Ltd.
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Dawson City, Yukon
Y30 1G0

ATTN: W.J. Olsson Project #522 Work Area J-2 ROCKS

SAMPLE NO. :	PPM U (NAA)
Prefix 26	
18668	64.0
18669	38.0
18670	17.0
18671	19.0
18672	16.0
18673	33.0
18674	20.0
18675	26.0
18676	24.0
18677	42.0
18678	13.0
18679	26.0
18680	23.0
18681	14.0
18682	12.0
18683	20.0
18684	13.0
18685	16.0
18686	18.0
18687	38.0
18688	24.0
18689	28.0
18690	17.0
18691	8.0
18692	11.0
18693	15.0
18694	16.0
18695	10.0
18696	8.0
18697	5.0
18698	5.5
18699	6.5
18700	5.5
18701	8.5
18702	4.5
18703	3.0
18704	4.0
18705	6.0
18706	8.0
18707	9.5
18708	6.0

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CERTIFIED BY: Hank Biesle

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TELEPHONE: 984-0221
AREA CODE: 604
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INVOICE NO. 37495

RECEIVED July 11/80

ANALYSED Sept. 24/80

TO: ELDORADO NUCLEAR LTD.
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson

Project 522 Work Area J1

SAMPLE NO. :	U ppm	Fluor.
26-18709	2.5	
26-13710	3.0	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

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CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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ANALYSED Aug. 1/80

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: W.J. Olsson

Project #522 Work Area J

SAMPLE NO. :	PPM U (NAA)
Prefix 26	
18709	4.5
18710	4.0

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TELEPHONE: 984-0221
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CERTIFICATE NO. 54465

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Ste. 400, 255 Albert St.
Ottawa, Ontario
K1P 6A9 Project 522 Work Area J-1

INVOICE NO. 37564

RECEIVED July 11/80

ATTN: William Olsson

ANALYSED Sept. 24/80

SAMPLE NO. :	U ppm	Fluor.
27-18540	43	
18541	50	
18542	64	
18543	32	
18544	14.5	
18545	22.0	
18546	34	
18547	57	
18548	25	
18549	69	
18550	34	
18551	40	
18552	52	
18553	36	
18554	61	
18556	66	
18557	64	
18558	51	
18559	73	
27-18560	38	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54465

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, yukon

INVOICE NO. 37564

RECEIVED July 11/80

ANALYSED Aug. 5/80

ATTN: W. J. Olsson

Project #522 Work Area J-1 ROCKS

SAMPLE NO. :	PPM U	Percent U308
27-18539		0.041
18540	52.0	
18541	51.0	
18542	71.0	
18543	62.0	
18544	17.0	
18545	27.0	
18546	35.0	
18547	62.0	
18548	26.0	
18549	74.0	
18550	34.0	
18551	34.0	
18552	46.0	
18553	34.0	
18554	58.0	
18555		0.012
18556	63.0	
18557	59.0	
18558	44.0	
18559	68.0	
18560	38.0	

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CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biedler

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NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54466
INVOICE NO. 37564
RECEIVED July 11/80
ANALYSED Aug. 5/80

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

ATTN: W. J. Olsson

Project #522 Work Area J-2 ROCKS

SAMPLE NO. :	PPM U	Percent U308
27-18617	28.0	
18618	38.0	
18619	45.0	
18620	35.0	
18621	25.0	
18622	48.0	
18623	40.0	
18624	48.0	
18625	64.0	
18626	97.0	
18627		0.012
18628	54.0	
18629	21.0	
18630	16.0	
18631	18.0	
18632	70.0	
18633	25.0	
18634	25.0	
18635	33.0	
18636		0.013
18637	20.0	
18638	41.0	
18639	35.0	
18640	31.0	
18641	16.0	
18642	30.0	
18643	42.0	
18644	13.0	
18645	25.0	
18646	20.0	
18647	25.0	
18648	32.0	
18649	25.0	
18650	16.0	
18651	13.0	
18652	22.0	
18653	19.0	
18654	17.0	
18655	22.0	
18656	22.0	

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CERTIFIED BY: Hart Biddle

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CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54465

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9 Project: 522 Work Area J-2

INVOICE NO. 37564 - B

RECEIVED July 11/80

ATTN: William Olsson

ANALYSED Sept. 25/80

SAMPLE NO. :	U ppm Fluor
27-18617	32
18618	49
18619	51
18620	34
18621	23
18622	39
18623	34
18624	41
18625	55
18626	89
18628	45
18629	18.5
18630	12.5
18631	13.5
18632	71
18633	23.5
18634	22.0
18635	28
18637	15.5
18638	36
18639	30
18640	30
18641	13.0
18642	26
18643	37
18644	11.5
18645	20.0
18646	17.5
18647	20.0
18648	29
18649	18.0
18650	12.0
18651	9.5
18652	18.5
18653	16.5
18654	18.0
18655	15.0
17-18656	18.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. M/c Hay

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CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54467

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 37564

RECEIVED July 11/80

ANALYSED Aug. 5/80

ATTN: W. J. Olsson

Project #522 Work Area J-2 ROCKS

SAMPLE NO. :	PPM U
27-18657	18.0
18658	12.0
18659	12.0
18660	10.0
18661	10.0
18662	15.0
18663	11.0
18664	14.0
18665	12.0
18666	11.0
18667	12.0

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CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biddle

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TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54467

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

INVOICE NO. 37564 - B

RECEIVED July 11/80

Project: 522 Work Area J-2

ATTN: William Olsson

ANALYSED Sept. 25/80

SAMPLE NO. :	U ppm Fluor
27-28657	18.5
18658	12.0
18659	8.0
18660	3.5
18661	10.5
18662	8.0
18663	9.0
18664	6.0
18665	8.5
18666	6.5
27-18667	5.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. Mc Kay.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
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TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54584

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 37564

RECEIVED July 20/80

ATTN: W. J. Olsson

ANALYSED Aug. 5/80

Project #522 Work Area J-3 ROCKS

SAMPLE NO. :	PPM U
27-18711-J3	10.0
18712	10.0
18713	11.0
18714	10.0
18715	18.0
18716	8.0
18717	12.0
18718	12.0
18719	11.0
18720	14.0
18721	15.0
18722	18.0
18723	27.0
18724	22.0
18725	16.0
18726	14.0
18727	13.0
18728	13.0
18729	17.0
18730	26.0
18731	11.0
18732	46.0
18733	29.0
18734	37.0
18735	23.0
18736	19.0
18737	15.0
18738	8.0
18739	19.0
18740	17.0
18741	12.0
18742	13.0
18743	27.0
18744	15.0
18745	16.0
18746	15.0
18747	12.0
18748	14.0
18749	13.0
18750	14.0

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CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

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NORTH VANCOUVER, B.C.
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TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54585

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 37564

RECEIVED July 20/80

ATTN: W. J. Olsson

ANALYSED Aug. 5/80

Project #522 Work Area J-3 ROCKS

SAMPLE NO. :	PPM U	Percent U3O8
27-18751-J3	15.0	
18752	36.0	
18753	16.0	
18754		0.012
18755		0.014
18756	11.0	
18757	8.0	
18758	40.0	
18759	63.0	
18760	27.0	
18761	21.0	
18762		0.013
18763	88.0	
18764	27.0	
18765	22.0	
18766	11.0	
18767		0.015
18768	42.0	
18769	26.0	
18770	17.0	
18771	14.0	
18772	11.0	
18773	13.0	
18774	86.0	
18775		0.014
18776	18.0	
18777	13.0	
18778	47.0	
18779	16.0	

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CTA MEMBER CANADIAN TESTING

CERTIFIED BY: Hans Bickle

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
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TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54585

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 37564 - B

RECEIVED July 15/80

ATTN: William Olsson Work Area J-3

ANALYSED Sept. 26/80

SAMPLE NO. :	U ppm	Fluor
27-18751 J-3	15.0	
18752	25	
18753	19.0	
18754	12.5	
18755	12.0	
18756	9.5	
18757	9.5	
18758	18.5	
18759	22.5	
18760	9.5	
18761	43	
18762	29	
18763	35	
18764	23.0	
18765	16.0	
18766	11.5	
18767	19.5	
18768	17.0	
18769	11.0	
18770	12.5	
18771	23.0	
18772	13.0	
18773	8.5	
18774	88	
18775	100	
18776	14.0	
18777	10.0	
18778	34	
27-18779 J-3	11.0	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54693

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 37564

RECEIVED July 18/80

ANALYSED Aug. 5/80

ATTN: W. J. Olsson

Project #522 Work Area J-3 ROCKS

SAMPLE NO. :	PPM U
26-18780-J3	10.0
18781	9.0
18782	7.0
18783	7.0
18784	12.0
18785	12.0
18786	11.0
18787	9.0
18788	11.0
18789	8.0
18790	6.0
18791	10.0
18792	11.0
18793	14.0
18794	11.0
18795	12.0
18796	10.0
18797	15.0
18798	13.0
18799	14.0
18800	11.0
18801	8.0
18802	11.0
18803	8.0
18804	13.0
18805	13.0
18806	8.0
18807	15.0
18808	12.0
18809	11.0
18810	12.0
18811	11.0
18812	15.0
18813	11.0
18814	22.0
18815	18.0
18816	9.0
18817	12.0
18818	10.0
18819	10.0

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54693

TO: ELDORADO NUCLEAR LIMITED
Ste. 400, 255 Albert St.
Ottawa, Ontario
K1P 6A9 PROJECT 522 Work Area J-3

ATTN: William Olsson

INVOICE NO. 37564 - B

RECEIVED July 18/80

ANALYSED Sept. 25/80

SAMPLE NO. :	U ppm Fluor
26-18780 J-3	4.0
18781	4.5
18782	4.0
18783	3.5
18784	3.0
18785	7.0
18786	7.5
18787	7.0
18788	7.5
18789	4.5
18790	3.0
18791	4.5
18792	6.5
18793	8.0
18794	7.0
18795	8.5
18796	5.5
18797	9.0
18798	10.0
18799	10.0
18800	7.0
18801	3.5
18802	6.5
18803	4.0
18804	8.5
18805	10.0
18806	5.5
18807	11.0
18808	8.5
18809	9.5
18810	10.0
18811	8.5
18812	10.5
18813	10.0
18814	17.0
18815	11.5
18816	3.5
18817	6.0
18818	4.5
26-18819 J-3	5.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54694

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 37564

RECEIVED July 18/80

ATTN: W. J. Olsson Project #522 Work Area J-3 ROCKS

ANALYSED Aug. 5/80

SAMPLE NO. :	PPM U
26-18820-J3	11.0
18821	12.0
18822	2.0
18823	24.0
18824	34.0
18825	12.0
18826	19.0
18827	36.0
18828	8.0
18829	6.0
18830	14.0
18831	40.0
18832	13.0
18833	15.0
18834	30.0
18835	14.0
18836	47.0
18837	13.0
18838	10.0
18839	8.0
18840	80.0
18841	33.0
18842	16.0
18843	14.0
18844	10.0
18845	16.0
18846	11.0
18847	9.0
18848	10.0
18849	9.0
18850	10.0
18851	9.0

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CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Bickle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54694

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9 Project: 522 Work Area J-3

INVOICE NO. 37564 - B

RECEIVED July 18/80

ANALYSED Sept. 25/80

ATTN: William Olsson

SAMPLE NO. :	U ppm	Fluor
26-18820 J-3	6.0	
18821	8.0	
18822	7.5	
18823	7.5	
18824	26	
18825	6.5	
18826	13.5	
18827	26	
18828	3.5	
18829	2.5	
18830	8.5	
18831	37	
18832	9.5	
18833	10.0	
18834	21.5	
18835	9.0	
18836	40	
18837	8.5	
18838	6.5	
18839	3.0	
18840	78	
18841	27	
18842	11.0	
18843	8.0	
18844	6.0	
18845	12.5	
18846	7.5	
18847	6.5	
18848	4.5	
18849	5.0	
18850	6.0	
26-18851 J-3	7.5	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54695

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 37564

RECEIVED July 18/80

ATTN: W. J. Olsson

Project #522 Work Area J-4 ROCKS

ANALYSED Aug. 5/80

SAMPLE NO. :	PPM U
27-18852-J4	14.0
18853	8.0
18854	9.0
18855	8.0
18856	16.0
18857	13.0
18858	16.0
18859	20.0
18860	20.0
18861	28.0
18862	15.0
18863	23.0
18864	8.0
18865	10.0
18866	21.0
18867	15.0
18868	20.0
18869	14.0
18870	9.0
18871	11.0
18872	8.0
18873	5.0
18874	7.0
18875	10.0
18876	8.0
18877	5.0
18878	9.0
18879	74.0
18880	24.0
18881	16.0
18882	19.0
18883	22.0
18884	21.0
18885	17.0
18886	18.0
18887	22.0
18888	20.0
18889	23.0
18890	14.0
18891	31.0

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54695

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert St.
Ottawa, Ontario
K1P 6A9

Project: 522 Work Area J-4

ATTN: William Olsson

INVOICE NO. 37564 - B

RECEIVED July 13/80

ANALYSED Sept. 25/80

SAMPLE NO. :	U ppm Fluor
27-18852 J-4	3.0
18853	5.0
18854	6.0
18855	6.5
18856	12.0
18857	10.5
18858	12.0
18859	15.5
18860	15.5
18861	25
18862	15.5
18863	13.5
18864	4.5
18865	8.0
18866	18.5
18867	14.5
18868	15.5
18869	10.0
18870	5.5
18871	7.5
18872	7.0
18873	3.0
18874	5.0
18875	8.0
18876	4.5
18877	3.0
18878	6.0
18879	72
18880	22.0
18881	13.5
18882	44
18883	49
18884	16.5
18885	17.5
18886	13.5
18887	19.0
18888	18.0
18889	19.5
18890	12.0
27-18891 J-4	30

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54696

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Yukon

INVOICE NO. 37564

RECEIVED July 18/80

ATTN: W. J. Olsson

ANALYSED Aug. 5/80

Project #522 Work Area J-4 ROCKS

SAMPLE NO. :	PPM U
27-18892-J4	14.0

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54696

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9 PROJECT 522 Work Area J-4

ATTN: William Olsson

INVOICE NO. 37564 - B

RECEIVED July 13/80

ANALYSED Sept. 25/80

SAMPLE NO. :	U ppm Fluor
27-13892 J-4	9.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55200

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 38119 - B

RECEIVED Aug. 1/80

ATTN: William Olsson PROJECT 522

ANALYSED Sept. 26/80

SAMPLE NO. :	U ppm Fluor
26-19064 J-6	1.5
19065	15.5
19066	9.0
19067	11.5
19068	5.0
19069	3.0
19070	4.5
19071	14.0
19072	5.0
19073	3.0
19074	3.0
19075	3.5
19076	1.0
19077	4.5
19078	2.0
19079	3.5
19080	3.0
19081	3.0
19082	1.5
19083	5.5
19084	8.0
19085	1.5
19086	0.5
19087	9.0
19088	2.0
19089	1.0
19090	1.0
19091	1.5
19092	3.0
19093	4.0
19094	11.0
19095	12.5
19096	12.5
19097	6.0
19098	8.0
19099	4.5
19100	3.5
19101	3.0
26-19102 J-6	4.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. G. Hall

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55201
INVOICE NO. 3819
RECEIVED Aug. 1/80
ANALYSED Aug. 21/80

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: Project 522 ROCK

SAMPLE NO. :	PPM U
26-19103-J6	4.0
19104	5.0
19105	6.0
26-19106-J6	5.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Frank Bidlo

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55201

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson PROJECT 522

INVOICE NO. 38119 - B

RECEIVED Aug. 1/80

ANALYSED Sept. 26/80

SAMPLE NO. :	U ppm Fluor
26-19103 J-6	4.5
19104	3.5
19105	4.5
26-19[illegible] J-6	3.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55202

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 38119

RECEIVED Aug. 1/80

ANALYSED Aug. 21/80

ATTN: Project 522 ROCK

SAMPLE NO. :	PPM U
26-19146-J7	54.0
19147	85.0
19148	57.0
19149	1.0
19150	24.0
19151	18.5
19152	15.0
19153	12.0
19154	14.0
19155	32.0
19156	24.0
19157	28.0
19158	24.0
19159	46.0
19160	7.5
19161	10.5
19162	8.0
19163	13.5
19164	8.0
19165	6.0
19166	67.0
19167	90.0
19168	37.0
19169	26.0
19170	8.0
19171	8.0
19172	7.0
19173	7.0
19174	6.5
19175	4.5
26-19176-J7	5.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biesinger

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55203

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 38119

RECEIVED Aug. 1/80

ATTN: Project 522 ROCK

ANALYSED Aug. 21/80

SAMPLE NO. :	PPM U	Percent U308
27-19107-J7	43.0	
19108	83.0	
19109		0.012
19110	58.0	
19111	49.0	
19112	81.0	
19113	68.0	
19114	88.0	
19115		0.015
19116	58.0	
19117		0.023
19118	37.0	
19119	29.0	
19120	27.0	
19121		0.027
19122		0.025
19123		0.101
19124		0.037
19125	30.0	
19126	45.0	
19127		0.018
19128		0.029
19129	20.0	
19130	24.0	
19131	17.0	
19132	29.0	
19133	19.0	
19134	16.0	
19135		0.012
19136		0.066
19137		0.015
19138		0.015
19139	26.0	
19140	12.5	
19141	12.5	
19142	13.5	
19143	19.5	
19144	11.5	
19145	14.0	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55203

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 38119 - B

RECEIVED Aug. 1. 80

ANALYSED Sept. 26/80

ATTN: William Olsson Work Area PROJECT 522

SAMPLE NO. :	U ppm Fluor
27-19107 J-7	35
19108	79
19110	53
19111	45
19112	82
19113	69
19114	88
19116	53
19118	29
19119	23.5
19120	23.5
19125	27
19126	35
19129	14.0
19130	21.0
19131	12.0
19132	23.0
19133	15.5
19134	11.0
19139	22.0
19140	9.5
19141	7.5
19142	9.5
19143	14.0
19144	7.0
27-19145 J-7	9.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55204
INVOICE NO. 38119
RECEIVED Aug. 1/80
ANALYSED Aug. 21/80

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: Project 522 ROCK

SAMPLE NO. :	PPM U	Percent U308
27-19177-J8	19.0	
19178	58.0	
19179	68.0	
19180		0.013
19181		0.026
19182		0.034
19183		0.012
19184	69.0	
19185	93.0	
19186	43.0	
19187	75.0	
19188	73.0	
19189	22.0	
19190	82.0	
19191	29.0	
19192	73.0	
19193		0.028
19194		0.014
19195		0.017
19196		0.214
19197		0.027
19198		0.035
19199	88.0	
19200	91.0	
19201	60.0	
19202	66.0	
19203	28.0	
19204	59.0	
19205		0.068
19206	96.0	
19207		0.029
19208		0.017
19209	85.0	
19210	38.0	
19211	24.0	
27-19212	30.0	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55204
INVOICE NO. 38119 - B
RECEIVED Aug. 1/80
ANALYSED Sept. 26/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson PROJECT 522

SAMPLE NO. :	U ppm Fluor
27-19177- J8	17.0
19178	63
19179	81
19184	75
19185	100
19186	35
19187	74
19188	60
19189	20.5
19190	76
19191	24.0
19192	65
19199	79
19200	89
19201	54
19202	60
19203	16.0
19204	52
19206	84
19209	86
19210	33
19211	23.0
27-19212- J8	25

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54724

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon

INVOICE NO. 37564

RECEIVED July 20/80

ANALYSED Aug. 5/80

ATTN: W. J. Olsson Project #522 ROCKS

SAMPLE NO. :	PPM U
27-18937-J5	4.0
18938	6.0
18939	6.0
18940	4.5
18941	10.0
18942	8.0
18943	9.5
18944	8.5
18945	7.5
18946	7.0
18947	6.5
18948	8.0
18949	8.0
18950	6.0
18951	5.0
18952	6.0
18953	9.5
18954	10.0
18955	6.0
18956	5.0
18957	6.0
18958	5.0
18959	6.0
18960	6.0
18961	10.0
18962	6.0
18963	6.0
18964	19.5
18965	8.0
18966	7.5
18967	10.0
18968	18.5
18969	10.0
18970	5.5
18971	6.0
18972	6.5
18973	10.0
18974	7.5
18975	10.5

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54724

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9 PROJECT 522

ATTN: William Olsson

INVOICE NO. 37564 - B

RECEIVED July 20/80

ANALYSED Sept. 25/80

SAMPLE NO. :	U ppm Fluor
27-18937-J5	1.5
18938	3.0
18939	3.0
18940	2.0
18941	7.5
18942	5.5
18943	4.5
18944	4.5
18945	4.0
18946	3.5
18947	3.5
18948	3.5
18949	3.5
18950	2.5
18951	2.0
18952	3.5
18953	5.5
18954	6.0
18955	2.5
18956	2.5
18957	2.5
18958	2.5
18959	4.0
18960	3.5
18961	6.0
18962	3.0
18963	4.0
18964	16.5
18965	4.0
18966	4.5
18967	5.5
18968	15.5
18969	7.0
18970	3.5
18971	3.0
18972	3.5
18973	6.5
18974	4.5
27-18975-J5	6.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. Dale Kay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54810

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Yukon

INVOICE NO. 37564

RECEIVED July 21/80

ATTN: W. J. Olsson Proj. #522 Work Area J-4 ROCKS

ANALYSED Aug. 5/80

SAMPLE NO. :	PPM U
26-18893-J4	9.0
18894	10.5
18895	4.5
18896	6.5
18897	5.0
18898	5.0
18899	7.5
18900	5.5
18901	18.5
18902	40.0
18903	15.5
18904	17.5
18905	5.0
18906	4.5
18907	13.0
18908	13.5
18909	9.0
18910	10.0
18911	5.5
18912	5.0
18913	5.0
18914	4.0
26-18915-J4	4.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Bickle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54911

INVOICE NO. 37679

RECEIVED July 24/80

ANALYSED Aug. 11/80

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN:

Project #522 Work Area J-6 ROCKS

SAMPLE NO. :	PPM U
27-19013-J6	5.0
19014	4.0
19015	4.5
19016	6.0
19017	5.0
19018	8.0
19019	25.0
19020	13.5
19021	17.0
19022	14.0
19023	14.0
19024	5.5
19025	7.0
19026	10.0
19027	15.5
19028	8.5
19029	8.0
19030	7.0
19031	7.0
19032	7.0
19033	9.5
19034	6.0
19035	6.5
19036	9.0
19037	7.0
19038	5.0
19039	6.5
19040	3.0
19041	6.0
19042	5.0
19043	23.0
19044	8.0
19045	7.0
19046	4.0
19047	3.5
19048	5.5
19049	7.5
19050	9.0
19051	13.5
27-19052-J6	19.0

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54911

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 37679 - B

RECEIVED July 24/80

ANALYSED Sept. 26/80

ATTN: William Olsson PROJECT 522 Work Area J-6

SAMPLE NO. :	U ppm Fluor
27-19013 J-6	2.0
19014	2.5
19015	2.5
19016	3.0
19017	2.0
19018	5.5
19019	16.5
19020	11.0
19021	14.5
19022	12.0
19023	9.5
19024	3.5
19025	4.5
19026	6.0
19027	13.5
19028	6.5
19029	4.5
19030	4.5
19031	4.5
19032	3.5
19033	6.5
19034	3.5
19035	3.5
19036	5.0
19037	4.5
19038	3.5
19039	3.0
19040	2.5
19041	3.5
19042	2.5
19043	21.0
19044	5.5
19045	3.5
19046	10.0
19047	2.5
19048	3.5
19049	3.5
19050	6.5
19051	10.5
27-19052 J-6	13.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. Wang

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54912
INVOICE NO. 37679
RECEIVED July 24/80
ANALYSED Aug. 11/80

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: Project #522 Work Area J-6 ROCKS

SAMPLE NO. :	PPM U
27-19053-J6	11.0
19054	10.5
19055	12.0
19056	7.0
19057	8.0
19058	8.0
19059	8.5
19060	7.0
19061	7.0
19062	7.5
27-19063-J6	5.0

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54912

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 37679 - B

RECEIVED July 24/80

ANALYSED Sept. 26/80

ATTN: William Olsson PROJECT 522 Work Area J-6

SAMPLE NO. :	U ppm Fluor
27-19053 J-6	6.5
19056	6.0
19055	8.0
19058	4.0
19057	4.0
19060	3.5
19059	5.0
19061	4.5
19061	3.0
19062	3.0
27-19063 J-6	2.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. Wilson

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54913

TO: Eldorado Nuclear Ltd.
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 37679

RECEIVED July 24/80

ANALYSED Aug. 11/80

ATTN: Project #522 Work Area J-4 ROCKS

SAMPLE NO. :	PPM U
26-13916-J4	4.0
13917	4.0
13918	3.5
13919	4.5
13920	43.0
13921	16.5
13922	11.5
13923	10.0
13924	9.5
13925	13.5
18926	13.0
18927	11.0
18928	11.5
18929	8.5
18930	9.0
18931	12.0
18932	10.5
18933	6.5
18934	10.5
18935	13.0
26-18936-J4	19.0

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: [signature]

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54913

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 37679 - B

RECEIVED July 24/80

ANALYSED Sept. 25/80

ATTN: William Olsson PROJECT 522 Work Area J-4

SAMPLE NO. :	U ppm Fluor
26-18916 J-4	1.5
18917	1.5
18918	1.5
18919	4.0
18920	40
18921	15.5
18922	9.5
18923	10.0
18924	8.0
18925	10.0
18926	9.0
18927	10.0
18928	10.0
18929	5.0
18930	6.0
18931	10.0
18932	6.0
18933	5.0
18934	7.0
18935	11.0
26-18936 J-4	15.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54914

TO: Eldorado Nuclear Ltd.,
Bag #3000,
Dawson City, Y.T.
Y0B 1G0

INVOICE NO. 37805

RECEIVED July 24/80

ATTN: W. J. Olsson Project #522 Work Area J-5 ROCKS

ANALYSED Aug. 11/80

SAMPLE NO. :	PPM U
26 18976-J5	5.5
18977	8.5
18978	10.0
18979	6.0
18980	7.0
18981	6.0
18982	5.0
18983	7.0
18984	4.5
18985	5.0
18986	5.0
18987	4.0
18988	3.0
18989	4.5
18990	6.0
18991	11.5
18992	4.5
18993	4.5
18994	3.0
18995	3.0
18996	5.0
18997	4.5
18998	6.0
18999	5.0
19000	5.0
19001	7.0
19002	6.5
19003	5.0
19004	7.5
19005	10.0
19006	7.0
19007	6.0
19008	5.0
19009	4.5
19010	8.5
19011	4.0
26 19012-J5	6.5

COPY

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54914

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson PROJECT 522 Work Area J-5

INVOICE NO. 37805 - B

RECEIVED July 24/80

ANALYSED Sept. 25/80

SAMPLE NO. :	U ppm Fluor
26-18976 J-5	2.0
18977	5.5
18978	7.5
18979	3.5
18980	2.5
18981	3.0
18982	2.0
18983	3.0
18984	1.5
18985	0.5
18986	1.0
18987	1.0
18988	1.0
18989	1.5
18990	4.0
18991	8.5
18992	2.0
18993	2.0
18994	1.0
18995	1.0
18996	1.5
18997	1.5
18998	3.5
18999	1.5
19000	2.0
19001	4.0
19002	2.0
19003	2.5
19004	3.5
19005	6.5
19006	4.0
19007	2.5
19008	1.5
19009	1.5
19010	5.5
19011	1.5
26-19012 J-5	3.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55200

INVOICE NO. 38119

RECEIVED Aug. 1/80

ANALYSED Aug. 21/80

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: Project 522 ROCK

SAMPLE NO. :	PPM U
26-19064-J6	4.5
19065	19.0
19066	11.0
19067	13.0
19068	5.0
19069	6.0
19070	8.0
19071	17.0
19072	9.0
19073	7.0
19074	4.0
19075	6.0
19076	3.5
19077	7.0
19078	6.0
19079	5.0
19080	5.5
19081	7.0
19082	5.0
19083	8.0
19084	10.0
19085	4.5
19086	3.0
19087	11.0
19088	5.5
19089	1.0
19090	4.0
19091	4.5
19092	5.0
19093	7.0
19094	15.0
19095	14.0
19096	14.0
19097	7.5
19098	9.0
19099	6.0
19100	4.5
19101	5.5
19102	5.0

CTA MEMBER CANADIAN TESTING

CERTIFIED BY: Hank Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55529

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.
Y30 1G0

INVOICE NO. 38501

RECEIVED Aug. 21/80

ATTN: W. J. Olsson

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
27-19367-J10A	7.5
19368	7.0
19369	8.5
19370	10.5
19371	7.0
19372	6.5
19373	6.5
19374	6.5
19375	11.0
19376	19.0
19377	6.5
19378	9.5
19379	8.5
19380	13.5
19381	5.5
19382	6.5
19383	8.0
19384	14.0
19385	10.0
19386	10.0
19387	12.0
19388	6.5
19389	8.5
19390	7.0
19391	6.5
19392	18.5
19393	7.0
19394	8.0
27-19395-J10A	18.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Ridley

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55530

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38501

RECEIVED Aug. 21/30

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U	% U308
26-19259-J9	12.5	
19260	17.5	
19261	22.0	
19262	27.0	
19263	37.0	
19264	17.0	
19265	28.0	
19266	33.0	
19267	14.5	
19268	27.0	
19269	18.0	
19270	18.0	
19271	31.0	
19272	21.0	
19273	17.5	
19274	20.0	
19275	15.0	
19276	9.5	
19277	5.0	
19278	6.0	
19279	14.5	
19280	12.5	
19281	54.0	
19282	35.0	
19283		0.012
19284		0.051
19285	13.0	
26-19286-J9	9.5	
26-19396-J10	7.5	
19397	10.5	
19398	9.0	
19399	13.5	
19400	17.5	
19401	7.5	
19402	10.0	
19403	7.5	
19404	19.0	
19405	11.0	
19406	9.0	
26-19407-J10	6.5	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hank Biesinger

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55531

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City, Y,T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38501

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	ppm U
27-19408-J10	8.0
19409	10.0
19410	12.0
19411	20.0
19412	12.5
19413	7.5
19414	9.0
19415	11.0
19416	13.5
19417	19.5
19418	17.5
19419	23.0
19420	18.5
19421	16.5
19422	14.0
19423	7.5
19424	18.0
19425	14.0
19426	16.0
19427	8.0
19428	9.5
19429	8.0
19430	11.0
19431	8.5
19432	6.5
19433	4.5
19434	5.0
19435	4.5
19436	5.0
19437	5.5
19438	5.0
19439	4.5
19440	4.5
19441	5.5
19442	5.0
19443	5.5
19444	5.0
19445	7.0
19446	6.5
27-19447-J10	5.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55532

TO: Eldorado Nuclear Ltd.,
Bag #3000
Dawson City,Y.T.
Y30 1G0

ATTN: W. J. Olsson

INVOICE NO. 38501

RECEIVED Aug. 21/80

ANALYSED Sept. 4/80

SAMPLE NO. :	PPM U
27-19448-J10	7.0
19449	7.0
19450	7.5
19451	8.5
19452	3.5
19453	6.5
19454	9.0
19455	8.0
27-19456-J10	12.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hawksley

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55202

INVOICE NO. 39247

RECEIVED Aug. 1/80

ANALYSED Sept. 30/80

TO: [illegible] NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson PROJECT 522

SAMPLE NO. :	U ppm Fluor
26-19146-J7	54
19147	88
19148	61
19149	1.5
19150	24.0
19151	17.0
19152	14.5
19153	12.0
19154	9.5
19155	28
19156	20.5
19157	28
19158	24.5
19159	47
19160	6.0
19161	9.0
19162	8.5
19163	13.0
19164	8.0
19165	6.0
19166	79
19167	100
19168	32
19169	23.0
19170	6.0
19171	6.0
19172	4.5
19173	5.0
19174	4.0
19175	3.0
26-19176-J7	3.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: [signature]

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 54584

INVOICE NO. 39247

RECEIVED July 15/80

ANALYSED Sept. 30/80

TO: [illegible] NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson PROJECT 522 Work Area J-3

SAMPLE NO. :	U ppm Fluor
27 18711 J-3	11.0
18712	9.5
18713	6.0
18714	9.0
18715	7.6
18716	8.5
18717	16.5
18718	5.0
18719	9.0
18720	10.0
18721	15.5
18722	11.5
18723	17.5
18724	27.0
18725	14.5
18726	18.0
18727	13.5
18728	12.5
18729	11.0
18730	14.5
18731	26.0
18732	12.0
18733	48
18734	32
18735	35
18736	18.5
18737	15.0
18738	12.0
18739	20.5
18740	16.0
18741	11.5
18742	12.5
18743	21.5
18744	13.5
18745	14.5
18746	11.0
18747	9.0
18748	13.5
18749	11.0
27-18750 J-3	13.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. Leigh Kay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55527
INVOICE NO. 39247
RECEIVED Aug. 13/80
ANALYSED Sept. 30/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson PROJECT NO. 522

SAMPLE NO. :	U ppm Fluor
27-19287 J10	10.0
19288	42
19289	11.5
19290	7.0
19291	7.5
19292	10.0
19293	22.5
19293	9.5
19295	5.0
19296	7.0
19297	11.5
19298	10.0
19299	20.5
19300	11.0
19301	5.5
19302	8.0
19303	14.5
19304	9.0
19305	28
19306	22.0
19307	15.5
19308	14.0
19309	10.0
19310	14.5
19311	7.5
19312	9.0
19313	12.0
19314	6.5
19315	7.0
19316	6.5
19317	9.5
19318	4.0
19319	4.0
19320	3.0
19321	2.5
19322	3.0
19323	2.5
19324	4.0
19325	3.0
27-19326-J10	4.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McPhay

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55528
INVOICE NO. 39247
RECEIVED Aug. 13/80
ANALYSED Sept. 30/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9
ATTN: William Olsson PROJECT NO. 522

SAMPLE NO. :	U ppm Fluor
27-19327-J10	4.5
19328	2.5
19329	2.0
19330	5.5
19331	4.0
19332	3.0
19333	5.0
19334	7.0
19335	2.5
19336	9.5
19337	5.5
19338	7.0
19339	7.5
19340	10.5
19341	17.5
19342	13.5
19343	7.5
19344	9.5
19345	7.0
19346	8.5
19347	5.0
19348	9.5
19349	8.0
19350	8.5
19351	13.5
19352	6.5
19353	5.0
19354	4.5
19355	3.5
19356	8.0
19357	24.5
19358	6.5
19359	4.5
19360	4.0
19361	5.5
19362	4.5
19363	7.5
19364	15.5
19365	5.0
27-19366 J10	9.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: [signature]

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55529

INVOICE NO. 39247

RECEIVED Aug. 13/80

ANALYSED Sept. 30/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson PROJECT NO. 522

SAMPLE NO. :	U ppm Fluor
27-19367 J10	3.0
19368	3.5
19369	5.5
19370	2.0
19371	3.0
19372	1.5
19373	2.5
19374	3.0
19375	6.0
19376	14.5
19377	4.5
19378	6.0
19379	4.0
19380	8.5
19381	2.0
19382	3.0
19383	4.5
19384	10.0
19385	5.5
19386	6.5
19387	10.5
19388	4.5
19389	5.0
19390	4.5
19391	4.5
19392	18.5
19393	4.0
19394	4.5
27-19395 J10A	15.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: D. Peter Hoffman

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55530
INVOICE NO. 39247
RECEIVED Aug. 13/80
ANALYSED Sept. 30/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson PROJECT NO. 522

SAMPLE NO. :	U ppm Fluor
26-19259-J9	10.0
19260	17.0
19261	13.5
19262	25
19263	42
19264	16.5
19265	31
19266	31
19267	13.5
19268	25
19269	17.0
19270	13.5
19271	26
19272	14.5
19273	18.5
19274	15.5
19275	14.5
19276	6.0
19277	3.5
19278	3.5
19279	11.5
19280	9.0
19281	52
19282	34
19283	97
19284	+ 400
19285	13.0
26-19286-J9	6.5
26-19396-J10	13.0
19397	7.5
19398	7.0
19399	13.0
19400	16.0
19401	6.5
19402	7.5
19403	5.5
19404	17.5
19405	9.5
19406	8.0
26-19407 J10	4.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: A. J. Chung

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55531
INVOICE NO. 39247
RECEIVED Aug. 13/80
ANALYSED Sept. 30/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: William Olsson PROJECT NO. 522

SAMPLE NO. :	U ppm Fluor
27-19408 J10	6.5
19409	10.0
19410	10.5
19411	18.5
19412	10.0
19413	5.5
19414	7.0
19415	8.0
19416	8.5
19417	15.0
19418	16.0
19419	20.0
19420	15.5
19421	12.0
19422	10.0
19423	4.5
19424	13.0
19425	10.0
19426	13.0
19427	4.5
19428	5.5
19429	8.0
19430	7.0
19431	6.0
19432	3.0
19433	2.0
19434	2.0
19435	2.0
19436	2.0
19437	2.0
19438	2.0
19439	2.0
19440	2.0
19441	3.0
19442	2.5
19443	2.5
19444	3.0
19445	2.5
19446	4.0
27-19447 J10	3.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: [signature]

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55532

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

INVOICE NO. 39247

RECEIVED Aug. 13/80

ATTN: William Olsson PROJECT NO. 522

ANALYSED Sept. 30/80

SAMPLE NO. :	U ppm Fluor
27-19448 J10	4.5
19449	5.0
19450	5.5
19451	5.5
19452	3.0
19453	3.5
19454	7.0
19455	2.5
27-19456 J10	5.5

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : ELDORADO NUCLEAR LTD
STE 400 255 ALBERT ST
OTTAWA, ONT
K1P 6A9

CERT. # : A8010079-001-A
INVOICE # : 39376
DATE : 06-OCT-80

WORK AREA J-10

Sample description	Prep code	U ppm					
26-19457	205	9.0	--	--	--	--	--
26-19458	205	9.5	--	--	--	--	--
26-19459	205	5.0	--	--	--	--	--
26-19460	205	7.5	--	--	--	--	--
26-19461	205	3.5	--	--	--	--	--
26-19462	205	4.0	--	--	--	--	--
26-19463	205	4.5	--	--	--	--	--
26-19464	205	3.5	--	--	--	--	--
26-19465	205	2.5	--	--	--	--	--
26-19466	205	3.5	--	--	--	--	--
26-19468	205	3.0	--	--	--	--	--
26-19469	205	3.5	--	--	--	--	--
26-19470	205	6.5	--	--	--	--	--
26-19471	205	3.5	--	--	--	--	--
26-19472	205	3.0	--	--	--	--	--
26-19473	205	3.0	--	--	--	--	--
26-19474	205	2.0	--	--	--	--	--
26-19475	205	2.5	--	--	--	--	--
26-19476	205	2.0	--	--	--	--	--
26-19477	205	2.5	--	--	--	--	--
26-19478	205	21.5	--	--	--	--	--
26-19479	205	6.0	--	--	--	--	--
26-19480	205	1.5	--	--	--	--	--
26-19481	205	1.5	--	--	--	--	--
26-19482	205	2.0	--	--	--	--	--
26-19483	205	1.5	--	--	--	--	--
26-19484	205	9.5	--	--	--	--	--
26-19485	205	13.5	--	--	--	--	--
26-19486	205	2.0	--	--	--	--	--
26-19487	205	2.5	--	--	--	--	--
26-19488	205	1.5	--	--	--	--	--
26-19489	205	2.0	--	--	--	--	--
26-19490	205	2.5	--	--	--	--	--
26-19491	205	3.5	--	--	--	--	--
26-19492	205	1.5	--	--	--	--	--
26-19493	205	2.0	--	--	--	--	--
26-19494	205	2.5	--	--	--	--	--
26-19495	205	2.0	--	--	--	--	--
26-19496	205	3.0	--	--	--	--	--
26-19497	205	2.5	--	--	--	--	--

Certified by D. McKay

CTA MEMBER CANADIAN TESTING ASSOCIATION

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : ELDORADO NUCLEAR LTD
STE 400 255 ALBERT ST
OTTAWA, ONT
K1P 6A9

CERT. # : A8010079-002-A
INVOICE # : 39376
DATE : 06-OCT-80

WORK AREA J-10

Sample description	Prep code	U ppm					
26-19498	205	2.0	--	--	--	--	--
26-19499	205	16.0	--	--	--	--	--
26-19500	205	2.0	--	--	--	--	--
26-19501	205	1.5	--	--	--	--	--
26-19502	205	2.5	--	--	--	--	--
26-19503	205	2.5	--	--	--	--	--
26-19504	205	1.5	--	--	--	--	--
26-19505	205	2.0	--	--	--	--	--
26-19506	205	4.5	--	--	--	--	--
26-19508	205	2.0	--	--	--	--	--
26-19509	205	2.5	--	--	--	--	--
26-19510	205	8.0	--	--	--	--	--
26-19511	205	2.5	--	--	--	--	--
26-19512	205	5.0	--	--	--	--	--
26-19513	205	2.5	--	--	--	--	--
26-19514	205	3.5	--	--	--	--	--
26-19515	205	7.0	--	--	--	--	--
26-19516	205	3.5	--	--	--	--	--
26-19517	205	2.5	--	--	--	--	--
26-19518	205	2.5	--	--	--	--	--

Certified by .....D. McKay.....

CTA MEMBER CANADIAN TESTING ASSOCIATION

NOVATRACK ANALYSTS LTD.
4004 WESBROOK MALL
UNIVERSITY OF B.C. CAMPUS
VANCOUVER B.C. V6T 2A3
TELEPHONE (604) 224-2388

CERTIFICATE OF ANALYSIS — CERTIFICATE # A8002048

1415

CLIENT : ELDORADO NUCLEAR

SAMPLES RECEIVED : 27-AUG-80
ANALYSIS COMPLETED : 27-AUG-80
NUMBER OF SAMPLES : 40
CLIENT P.O. NUMBER : 55527
INVOICE NO. : 39367

ATTN. : Project No. 522

SAMPLE ID	U PPM
Z -19287-J10	14.0
27-19288-J10	46.0
Z -19289-J10	15.5
Z -19290-J10	11.0
27-19291-J10	10.5
Z -19292-J10	13.5
Z -19293-J10	22.0
27-19294-J10	10.0
27-19295-J10	7.5
Z -19296-J10	11.0
Z -19297-J10	14.0
27-19298-J10	14.5
Z -19299-J10	26.0
Z -19300-J10	14.0
27-19301-J10	9.5
Z -19302-J10	11.5
Z -19303-J10	18.0
27-19304-J10	13.5
27-19305-J10	35.0
Z -19306-J10	24.0
Z -19307-J10	16.0
27-19308-J10	17.0
Z -19309-J10	14.0
Z -19310-J10	19.0
27-19311-J10	12.0
Z -19312-J10	12.0
Z -19313-J10	18.0
27-19314-J10	9.0
27-19315-J10	10.5
Z -19316-J10	12.0
Z -19317-J10	13.0
27-19318-J10	8.0
Z -19319-J10	8.0
Z -19320-J10	8.0
27-19321-J10	6.5
27-19322-J10	6.5
Z -19323-J10	8.0
27-19324-J10	8.5
27-19325-J10	7.0
Z -19326-J10	9.5

CERTIFIED BY Hank Biddle

NOVATRACK ANALYSTS LTD.
4004 WESBROOK MALL
UNIVERSITY OF B.C. CAMPUS
VANCOUVER B.C. V6T 2A3
TELEPHONE (604) 224-2388

RTIFICATE OF ANALYSIS — CERTIFICATE # A8002049

CLIENT : ELDORADO NUCLEAR

ATTN. : Project No. 522

1415
SAMPLES RECEIVED : 27-AUG-80
ANALYSIS COMPLETED : 27-AUG-80
NUMBER OF SAMPLES : 40
CLIENT P.O. NUMBER : 35528
INVOICE NO. : 30367

AMPLE ID	U PPM
-19327-J10	9.0
-19328-J10	8.0
9329-J10	6.0
.9330-J10	9.0
-19331-J10	8.0
9332-J10	7.0
9333-J10	7.0
-19334-J10	12.5
-19335-J10	10.5
.9336-J10	12.5
-19337-J10	9.0
-19338-J10	9.5
9339-J10	10.0
.9340-J10	14.0
-19341-J10	21.6
.9342-J10	17.0
.9343-J10	11.5
-19344-J10	13.0
-19345-J10	13.0
.9346-J10	12.5
-19347-J10	7.5
-19348-J10	9.5
.9349-J10	11.0
.9350-J10	14.5
-19351-J10	16.5
19352-J10	9.5
19353-J10	8.5
-19354-J10	7.0
19355-J10	7.0
19356-J10	10.0
-19357-J10	27.0
-19358-J10	9.0
19359-J10	7.5
-19360-J10	6.0
-19361-J10	7.0
19362-J10	7.0
19363-J10	10.5
-19364-J10	18.5
19365-J10	6.0
19366-J10	10.0

CERTIFIED BY

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55205

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

INVOICE NO. 38119

RECEIVED Aug. 1/80

ATTN: Project 522 ROCK

ANALYSED Aug. 22/80

SAMPLE NO. :	PPM U	Percent U308
26-19213-J8	41.0	
19214	41.0	
19215		0.012
19216	8.5	
19217	12.0	
19218	7.0	
19219	13.5	
19220	14.0	
19221	9.5	
19222	10.0	
19223	9.0	
19224	8.5	
19225	16.0	
19226	51.0	
19227	17.0	
19228	9.0	
19229	10.0	
19230	37.0	
19231		0.042
19232	17.5	
19233	12.0	
19234	11.0	
19235	6.0	
19236	-1.0	
19237	7.5	
19238	27.0	
19239	10.5	
19240	15.0	
19241	10.0	
19242	11.5	
19243	10.0	
19244	9.0	
19245	10.0	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Ian Bielle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55205

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Otawa, Ontario
K1P 6A9

INVOICE NO. 38119 - B

RECEIVED Aug. 1/80

ANALYSED Sept. 25/80

ATTN: William Olsson PROJECT 522

SAMPLE NO. :	U ppm Fluor
26-19213 J8	45
19214	43
19216	14.0
19217	11.5
19218	7.0
19219	13.5
19220	14.0
19221	8.5
19222	9.0
19223	8.5
19224	8.0
19225	14.5
19226	53
19227	17.0
19228	4.5
19229	6.0
19230	33
19232	12.5
19233	10.0
19234	6.0
19235	3.5
19236	2.5
19237	2.0
19238	4.5
19239	27
19240	6.5
19241	12.0
19242	8.0
19243	10.0
19244	8.0
26-19245 J8	8.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. Mc Kay

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55206

INVOICE NO. 38119

RECEIVED Aug. 1/80

ANALYSED Aug. 21/80

TO: Eldorado Nuclear Limited
Bag #3000
Dawson City, Yukon
Y30 1G0

ATTN: Project 522 ROCK

SAMPLE NO. :	PPM U	Percent U308
27-19246-J9	5.5	
19247	12.0	
19248	30.0	
19249	38.0	
19250	13.0	
19251	17.5	
19252	19.0	
19253	29.0	
19254		0.013
19255	46.0	
19256	48.0	
19257	21.0	
19258	46.0	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Biddle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 55206
INVOICE NO. 38119 - B
RECEIVED Aug. 1/80
ANALYSED Sept. 26/80

TO: ELDORADO NUCLEAR LIMITED
Ste. 400 - 255 Albert Street
Ottawa, Ontario
K1P 6A9

ATTN: Wiliam Olsson PROJECT 522

SAMPLE NO. :	U ppm Fluor
27-19246 J9	4.0
19247	8.0
19248	35
19249	37
[illegible]	12.5
19251	14.5
19252	18.5
19253	31
19255	44
19256	52
19257	19.5
27-19258 J9	39

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. McKay

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : ELDORADO NUCLEAR LTD
STE 400 255 ALBERT ST
OTTAWA, ONT
K1P 6A9

CERT. # : A8010080-001-A
INVOICE # : 39377
DATE : 06-OCT-80

WORK AREA J-11

Sample description	Prep code	U ppm					
26-19566	205	2.5	--	--	--	--	--
26-19567	205	5.0	--	--	--	--	--
26-19568	205	6.0	--	--	--	--	--
26-19569	205	2.0	--	--	--	--	--
26-19570	205	11.5	--	--	--	--	--
26-19571	205	15.0	--	--	--	--	--
26-19572+19573	205	14.0	--	--	--	--	--
26-19574	205	2.5	--	--	--	--	--
26-19575	205	2.5	--	--	--	--	--
26-19576	205	16.5	--	--	--	--	--
26-19577	205	21.0	--	--	--	--	--
26-19578	205	4.5	--	--	--	--	--

Certified by ..J. McKay.....

MEMBER
CANADIAN TESTING
ASSOCIATION

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

) : ELDORADO NUCLEAR LTD
STE 400 255 ALBERT ST
OTTAWA, ONT
K1P 6A9

CERT. # : A8019113-001-A
INVOICE # : 39498
DATE : 15-OCT-80

Sample description	Prep code	U ppm					
19519	205	5.0	--	--	--	--	--
19520	205	20.5	--	--	--	--	--
19521	205	17.0	--	--	--	--	--
19522	205	13.0	--	--	--	--	--
19523	205	4.5	--	--	--	--	--
19524	205	10.5	--	--	--	--	--
19525	205	19.0	--	--	--	--	--
19526	205	44.0	--	--	--	--	--
19527	205	50.0	--	--	--	--	--
19528	205	16.0	--	--	--	--	--
19529	205	7.5	--	--	--	--	--
19530	205	4.5	--	--	--	--	--
19531	205	17.0	--	--	--	--	--
19532	205	6.5	--	--	--	--	--
19533	205	48.0	--	--	--	--	--
19534	205	44.0	--	--	--	--	--
19535	205	28.0	--	--	--	--	--
19536	205	16.0	--	--	--	--	--
19537	205	11.5	--	--	--	--	--
19538	205	7.0	--	--	--	--	--
19539	205	4.0	--	--	--	--	--
19540	205	5.0	--	--	--	--	--
19541	205	4.5	--	--	--	--	--
19542	205	5.0	--	--	--	--	--
19543	205	5.0	--	--	--	--	--
19544	205	2.5	--	--	--	--	--
19545	205	3.0	--	--	--	--	--
19546	205	3.5	--	--	--	--	--
19547	205	5.5	--	--	--	--	--
19548	205	2.5	--	--	--	--	--
19549	205	6.0	--	--	--	--	--
19550	205	3.5	--	--	--	--	--
19551	205	2.5	--	--	--	--	--
19552	205	3.5	--	--	--	--	--
19553	205	6.5	--	--	--	--	--
19554	205	4.5	--	--	--	--	--
19555	205	6.5	--	--	--	--	--
19556	205	6.5	--	--	--	--	--
19557	205	7.5	--	--	--	--	--
19558	205	7.5	--	--	--	--	--

Certified by ...Hart Bickle...

CTA MEMBER CANADIAN TESTING ASSOCIATION

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO : ELDORADO NUCLEAR LTD
STE 400 255 ALBERT ST
OTTAWA, ONT
K1P 6A9

CERT. # : A8010119-002-A
INVOICE # : 39498
DATE : 15-OCT-80

Sample description	Prep code	U ppm					
19559	205	4.0	--	--	--	--	--
19560	205	6.0	--	--	--	--	--
19561	205	3.5	--	--	--	--	--
19562	205	2.5	--	--	--	--	--
19563	205	4.5	--	--	--	--	--
19564	205	3.0	--	--	--	--	--
19565	205	5.5	--	--	--	--	--

Certified by ...Hart Bickle...

CTA MEMBER CANADIAN TESTING ASSOCIATION

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: (604)984-0221
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

J : ELDORADO NUCLEAR LTD
STE 400 255 ALBERT ST
OTTAWA, ONT
K1P 6A9

CERT. # : A8010184-001-A
INVOICE # : 39493
DATE : 15-OCT-80

PROJ. 522-J-11

Sample description	Prep code	U ppm					
26-19579	205	3.0	--	--	--	--	--
26-19580	205	3.0	--	--	--	--	--
26-19581	205	3.5	--	--	--	--	--
26-19582	205	2.5	--	--	--	--	--
26-19583	205	3.0	--	--	--	--	--
26-19584	205	21.5	--	--	--	--	--
26-19585	205	32.0	--	--	--	--	--
26-19586	205	14.0	--	--	--	--	--
26-19587	205	16.0	--	--	--	--	--
26-19588	205	12.0	--	--	--	--	--
26-19589	205	5.5	--	--	--	--	--
26-19590	205	5.0	--	--	--	--	--
26-19591	205	3.5	--	--	--	--	--
26-19592	205	2.5	--	--	--	--	--
26-19593	205	1.5	--	--	--	--	--
26-19594	205	1.5	--	--	--	--	--
26-19595	205	2.0	--	--	--	--	--
26-19596	205	2.0	--	--	--	--	--
26-19597	205	2.5	--	--	--	--	--
26-19598	205	3.0	--	--	--	--	--
26-19599	205	3.5	--	--	--	--	--
26-19600	205	2.5	--	--	--	--	--
26-19601	205	2.0	--	--	--	--	--
26-19602	205	3.0	--	--	--	--	--
26-19603	205	2.0	--	--	--	--	--
26-19604	205	3.0	--	--	--	--	--
26-19605	205	3.0	--	--	--	--	--
26-19606	205	2.5	--	--	--	--	--
26-19607	205	4.0	--	--	--	--	--
26-19608	205	4.5	--	--	--	--	--
26-19609	205	6.0	--	--	--	--	--
26-19610	205	5.5	--	--	--	--	--
26-19611	205	8.8	--	--	--	--	--
26-19612	205	4.0	--	--	--	--	--
26-19613	205	3.5	--	--	--	--	--
26-19614	205	2.0	--	--	--	--	--
26-19615	205	2.0	--	--	--	--	--
26-19616	205	6.5	--	--	--	--	--
26-19617	205	3.0	--	--	--	--	--
26-19618	205	3.5	--	--	--	--	--

Certified by ...Hart Fiddler...

MEMBER
CANADIAN TESTING
ASSOCIATION

APPENDIX E

Sample Location Maps
1980 Field Work

45+00 W | BL 40+00 W | 35+00 W | BL 32+00 W | 30+00 W | 25+00 W

40+00N
38+00N
36+00N
35+00N
34+00N
32+00N
30+00N
28+00N
26+00N
25+00N
24+00N
22+00N
20+00N

JT-16
JT-15
JT-14
JT-13
JT-17
JT-11
JT-2
JT-1
JT-5
JT-6
JT-7
JT-18
JT-12
JT-8
JT-9
JT-10

80-J-11
80-J-10
80-J-9
80-J-1
80-J-8
80-J-6
79-J-7
79-J-3
79-J-2
80-J-7
79-J-6
79-J-1
80-J-2
80-J-5
80-J-4
80-J-3

119F
120F
121F
122F

4500
4000
3500

EAST CREEK
GLAZY CREEK

NOTE: ELEVATION CONTOURS ARE IN FEET

LEGEND

- CLAIM POST
- GRID BOUNDARY
- CUT LINE
- TRENCH
- ACTIVE WATERCOURSE
- 1979 DRILL HOLE
- 1980 DRILL HOLE

Fig. 6

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS 090762

JOVE 1 & 2 GRIDS

GRID, TRENCH & DRILL HOLE LOCATIONS

50 0 50 100 150 m

Scale 1: 2500

1980

140°40'
140°30'
140°20'
63°45'
63°40'
115 N 16-1
115 N 9-3
West Creek
East Cr.
Glazy Creek
Matson Creek
JOVE PROPERTY
MAT PROPERTY
NOTE: STREAM SAMPLES FROM MAT PROPERTY TAKEN IN 1979.
LEGEND
pH ⊕ ppb U
Spec. Cond.
○ >
1000 m 0 1 2 3 km
Scale 1:50 000
Fig. 7a
ELDORADO NUCLEAR LIMITED
PROJECT 522
REGIONAL GEOCHEMISTRY
WATER
1980

140°40'
140°30'
140°20'
63°45'
63°40'

115N 16-1

115N 9-3

West Creek

East Cr.

Glozy Creek

Matson Creek

JOVE PROPERTY

MAT PROPERTY

NOTE: STREAM SAMPLES FROM MAT PROPERTY TAKEN IN 1979.

LEGEND

○ ppm U

○ >

Fig. 7b

ELDORADO NUCLEAR LIMITED

PROJECT 522

REGIONAL GEOCHEMISTRY SILT

1000m 0 1 2 3km

Scale 1:50 000

1980

090-762

BASE LINE 40 40+00SW

BASE LINE 32

45+00W 40+00W 35+00W 30+00W 25+00W

40+00N 35+00N 30+00N 25+00N 20+00N

JT-16 JT-15 JT-14 JT-13 JT-17 JT-11 JT-2 JT-1 JT-5 JT-6 JT-7 JT-18 JT-12 JT-8 JT-9 JT-10

80-J-11 80-J-10 80-J-9 80-J-1 80-J-8 80-J-6 80-J-7 80-J-2 80-J-5 80-J-4 80-J-3

79-J-7 79-J-8 79-J-3 79-J-2 79-J-6 79-J-1

4000 3500 3100

LEGEND

1 Massive, grey weathering, medium to coarse-grained, leucocratic biotite-muscovite quartz monzonite locally foliated. Xenoliths of Pelly Gneiss are common. Typically with a hypidiomorphic granular texture characterized by a mosaic of anhedra composed of quartz and K-feldspar.

2 Foliated, grey weathering, fine to medium-grained leucocratic biotite-muscovite quartz monzonite. Foliation is attributed to tectonic movement. Xenoliths of Pelly Gneiss are present. For all intents and purposes this is mineralogically the same as Unit 1, only it is well foliated with the foliation defined by the elongation of quartz grains, the orientation of biotite grains and in some instances, the orientation of feldspar grains.

3 Foliated to massive, medium to coarse-grained biotite quartz monzonite. The texture is typically intrusive, however, the unit is composed of up to 30% biotite and lacks any visible muscovite. It is interpreted that this unit represents a "transition zone" with mineralogical features of both the intrusive complex and the metamorphic complex.

4 Pelly Gneiss which is represented by augen gneiss, amphibolite gneiss and granodiorite gneiss. Xenoliths of this unit are commonly found in Units 1 and 2.

Zones cut by dykes of pegmatite consisting of a graphic intergrowth of quartz and feldspar complemented by large books of coarse muscovite. Tourmaline and almandine are common accessory minerals.

SYMBOLS

- outline of felsenmeer boulder field
- geological contact assumed, inferred
- attitude of foliation with dip
- attitude of joint with dip
- lineament identified in aerial photographs
- fault inferred from aerial photographs
- zone of intense fracturing
- zone of shattered bedrock characterized by intense fracturing and jointing
- 2052 rock sample location
- diamond drill hole lcoation with horizontal projection
- DDH intersection greater than .01% U308 as determined by core, sludge or radiometric assay
- outline of trench
- baseline
- active water course
- S highly radioactive seep

NOTE: ELEVATION CONTOURS ARE IN FEET

Fig. 8a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

JOVE 1 & 2 GRIDS

GEOLOGY

50 0 50 100 150

Scale 1: 2500

1980

45+00W BL

40+00W BL

35+00W BL

32+00W BL

30+00W

25+00W

40+00N

35+00N

30+00N

25+00N

20+00N

JT-16

JT-15

JT-14

JT-18

JT-13

JT-17

JT-11

JT-12

JT-2

JT-8

JT-1

JT-9

JT-5

JT-10

JT-6

JT-7

4500

4000

3500

GLAZY CREEK

EAST CREEK

LEGEND

ppm U

TRENCH OUTLINE

ACTIVE WATERWAY

NOTE: ELEVATION CONTOURS ARE IN FEET

Fig. 8b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

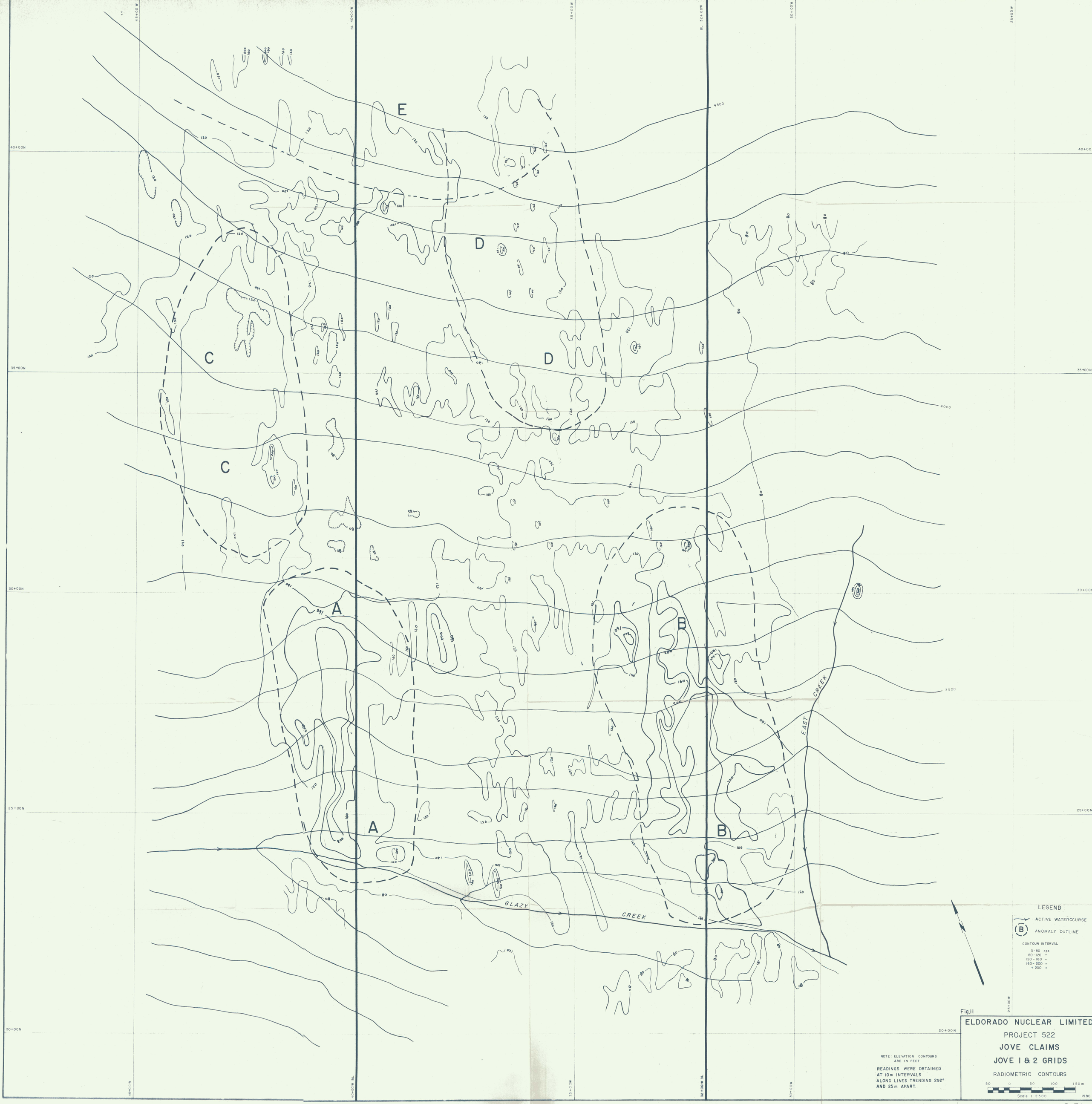
JOVE 1 & 2 GRIDS

ROCK GEOCHEMISTRY 090762

50 0 50 100 150m

Scale 1: 2500

1980


45+00 W
BL 40+00 W
35+00 W
BL 32+00W
30+00W
25+00W
40+00N
35+00N
30+00N
25+00N
20+00N
A
B
C
D
E
4500
4000
3500
GLAZY
CREEK
EAST
CREEK
LEGEND
ACTIVE WATERCOURSE
ANOMALY OUTLINE
CONTOUR INTERVAL
0-80 cps
80-120 "
120-160 "
160-200 "
+200 "
NOTE: ELEVATION CONTOURS ARE IN FEET
READINGS WERE OBTAINED AT 10m INTERVALS ALONG LINES TRENDING 292° AND 25m APART.
Fig.11
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS
JOVE 1 & 2 GRIDS
RADIOMETRIC CONTOURS
50 0 50 100 150m
Scale 1:2500
1980

090762

45+00E BL. 40+00W 35+00W BL. 32+00W 30+00W 25+00W

40+00N

35+00N

30+00N

25+00N

20+00N

ppm U

CONTOUR INTERVAL

0-3	ppm U
3-5	"
5-7	"
7-10	"
10-20	"
20-40	"
40-100	"
100-1000	"
+ 1000	"

NOTE : ELEVATION CONTOURS ARE IN FEET

DATA OBTAINED IN 1977, 1978 & 1980

Fig. 12

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

JOVE 1 & 2 GRIDS 090762

SOIL GEOCHEMISTRY - URANIUM

50 0 50 100 150

Scale 1: 2500

1980

45+00W
40+00W BL
35+00W
32+00W BL
30+00W
25+00W
40+00N
35+00N
30+00N
25+00N
20+00N
4500
4000
3500
A
B
C
D
E
F
G
EAST CREEK
GLAZY CREEK
LEGEND
123 Counts/hour
(245) Repeated reading
ACTIVE WATERCOURSE
(B) ANOMALY OUTLINE
NOTE: ELEVATION CONTOURS ARE IN FEET
Fig.13
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS
090702
JOVE 1 & 2 GRIDS
GEOCHEMISTRY - RADON GAS
ALPHA METER SURVEY RESULTS
50 0 50 100 150m
Scale 1:2500
1980

45+00W

40+00W BL

35+00W

32+00W BL

30+00W

25+00W

40+00N

35+00N

30+00N

25+00N

20+00N

JT-1

JT-2

JT-5

JT-6

JT-7

JT-8

JT-9

JT-10

JT-11

JT-12

JT-13

JT-14

JT-15

JT-16

JT-17

JT-18

S

4500

4000

3500

GLAZY CREEK

EAST CREEK

NOTE: ELEVATION CONTOURS ARE IN FEET

LEGEND

ppb U ○ pc/l Rn
pH ○ Spec. Cond.
○ >

S HIGHLY RADIOACTIVE SEEP

Fig. 15

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

JOVE 1 & 2 GRIDS

GEOCHEMISTRY - WATER

50 0 50 100 150m

Scale 1: 2500

1980

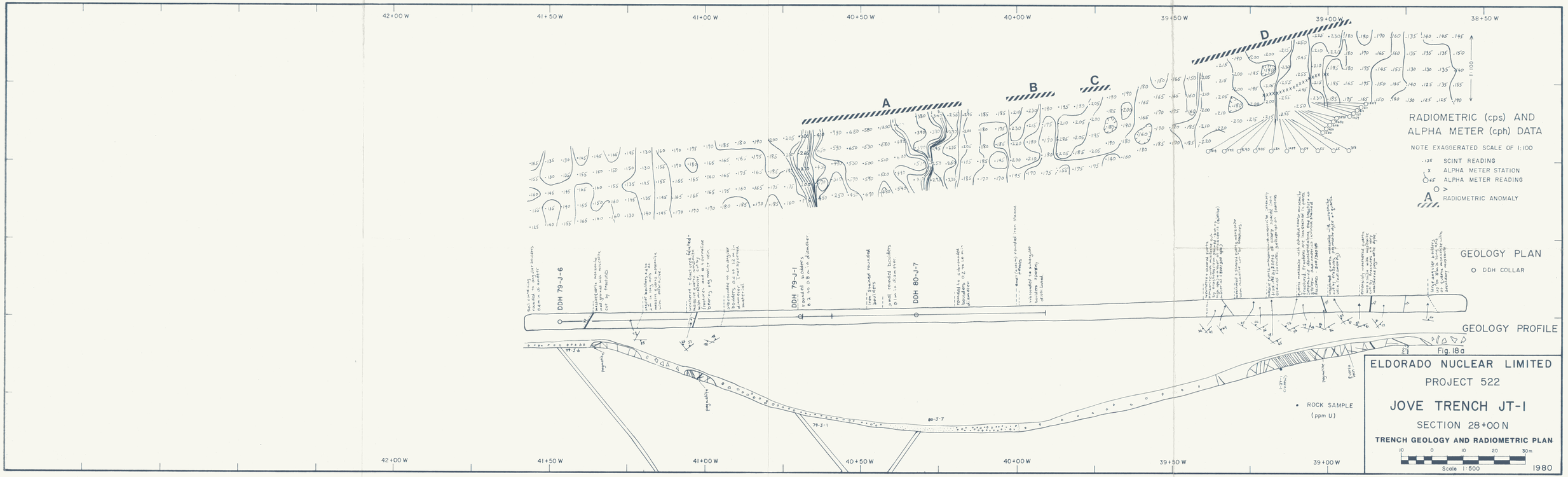


Fig. 18a

090762

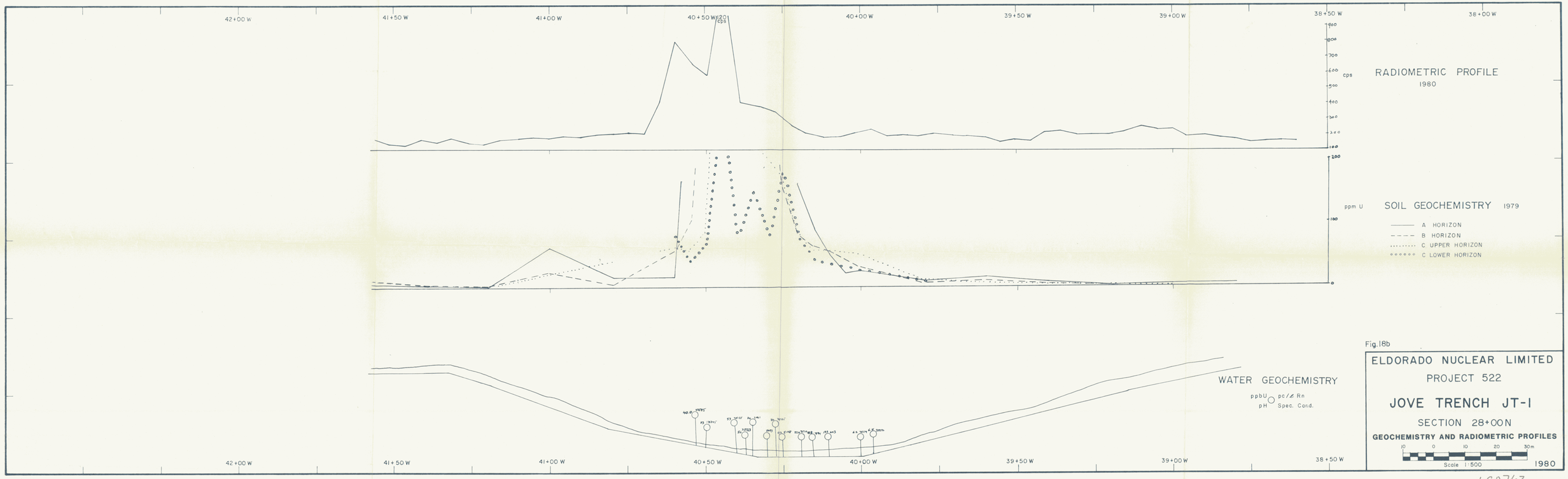


Fig.18b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-1

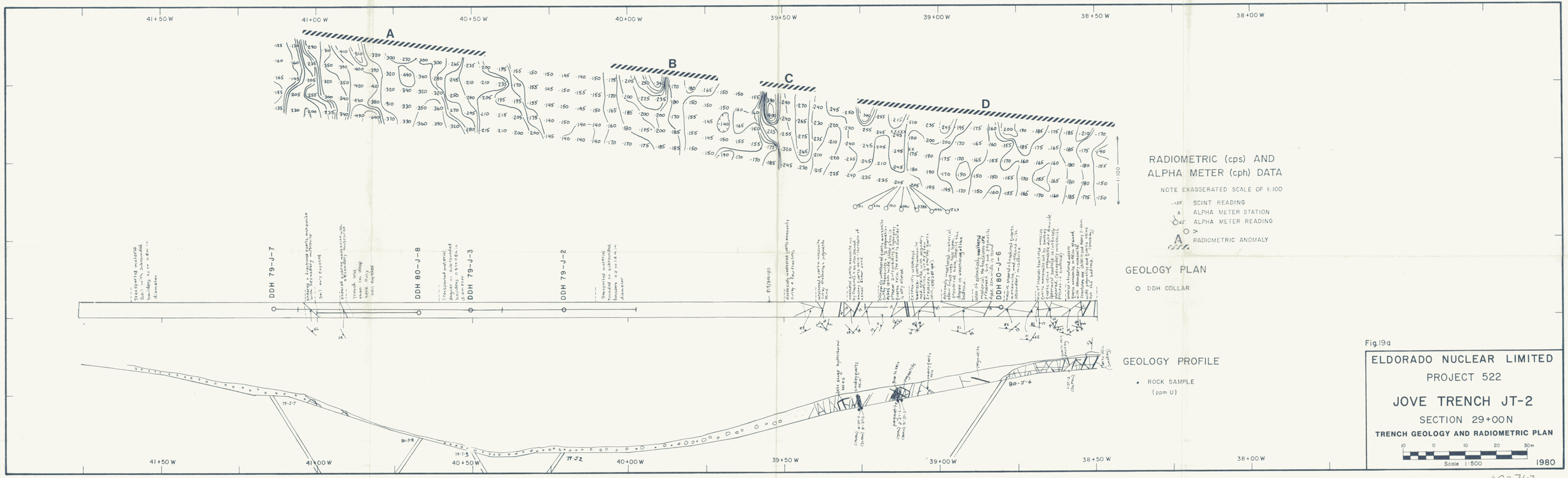
SECTION 28+00N

GEOCHEMISTRY AND RADIOMETRIC PROFILES

Scale 1:500

1980

090762


41+50 W
41+00 W
40+50 W
40+00 W
39+50 W
39+00 W
38+50 W
38+00 W
A
B
C
D
DDH 79-J-7
DDH 80-J-8
DDH 79-J-3
DDH 79-J-2
DDH 80-J-6
1:100
RADIOMETRIC (cps) AND ALPHA METER (cph) DATA
NOTE EXAGGERATED SCALE OF 1:100
.135 SCINT READING
x ALPHA METER STATION
65 ALPHA METER READING
A RADIOMETRIC ANOMALY
GEOLOGY PLAN
DDH COLLAR
GEOLOGY PROFILE
ROCK SAMPLE
(ppm U)
Fig.19a
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE TRENCH JT-2
SECTION 29+00N
TRENCH GEOLOGY AND RADIOMETRIC PLAN
10 0 10 20 30m
Scale 1:500
1980

090762

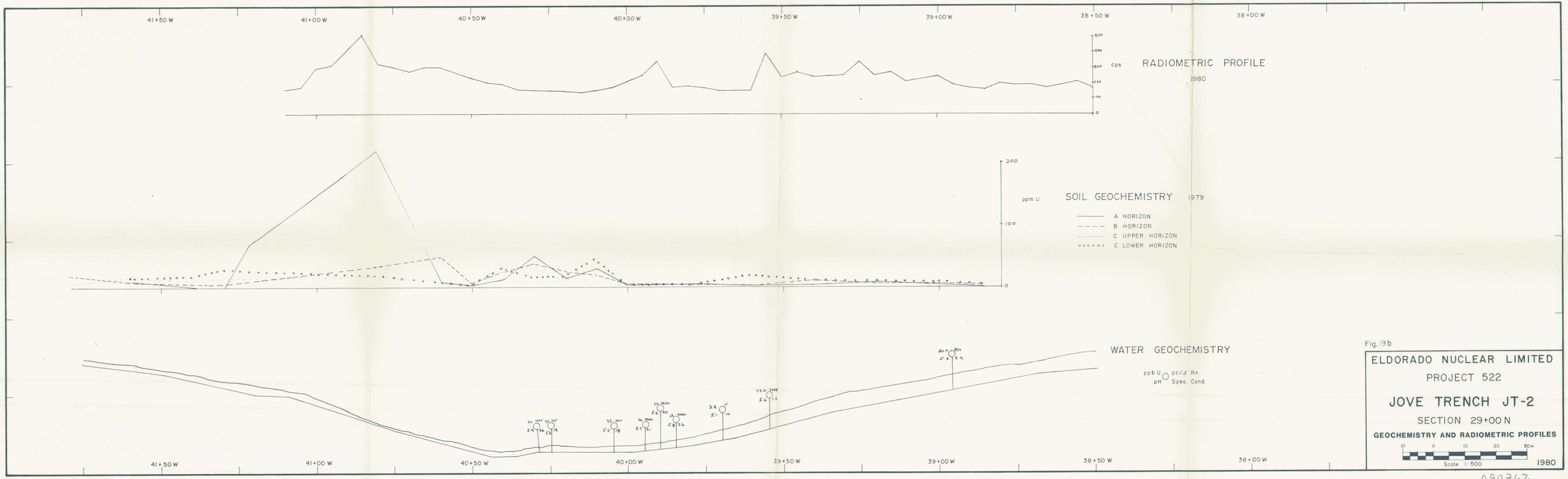


Fig. 19b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-2

SECTION 29+00 N

GEOCHEMISTRY AND RADIOMETRIC PROFILES

Scale 1:500

1980

090762

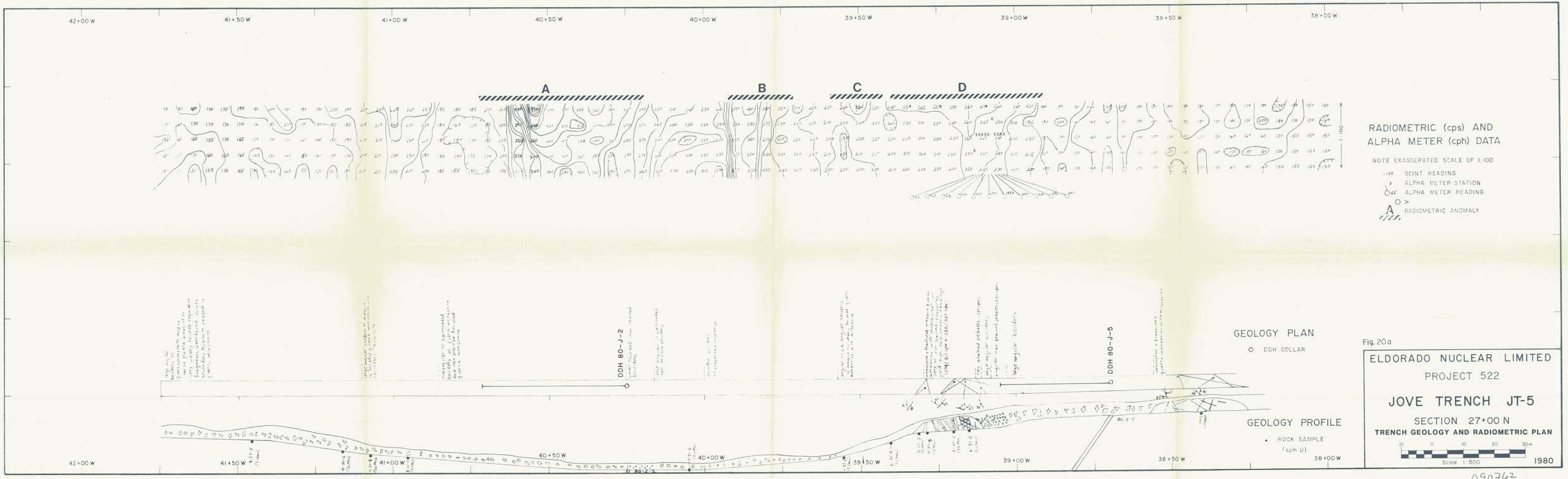


Fig. 20a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-5

SECTION 27+00 N

TRENCH GEOLOGY AND RADIOMETRIC PLAN

10 0 10 20 30m

Scale 1:500

1980

090762

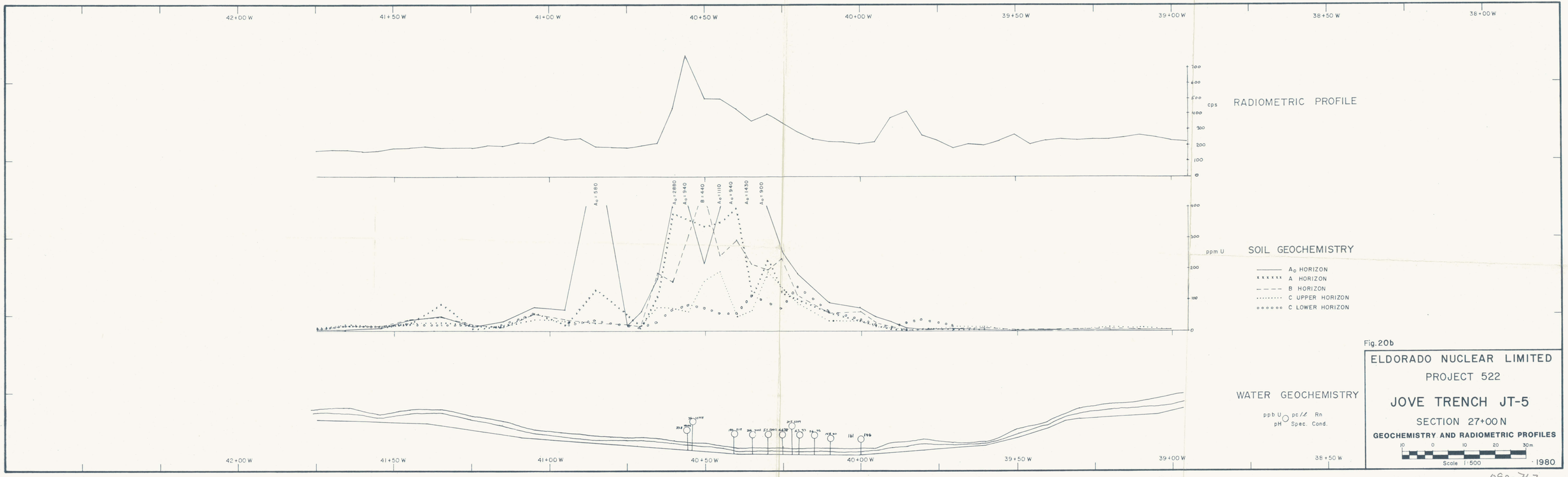


Fig. 20b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-5

SECTION 27+00 N

GEOCHEMISTRY AND RADIOMETRIC PROFILES

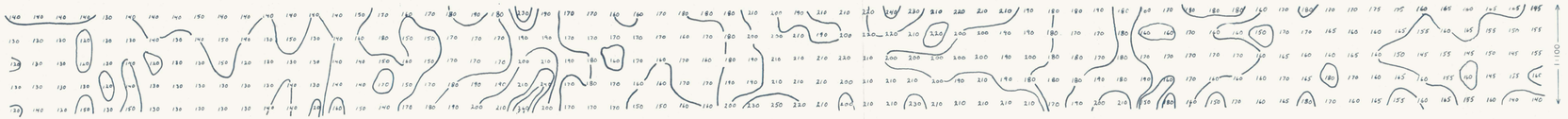
10 0 10 20 30m

Scale 1:500

1980

090-762

42+00 W | 41+50 W | 41+00 W | 40+50 W | 40+00 W | 39+50 W | 39+00 W | 38+50 W | 38+00 W



1:100

RADIOMETRIC (cps) DATA

NOTE EXAGGERATED SCALE OF 1:100

.135 SCINT READING

FROZEN, TRANSPORTED OVERBURDEN EXPOSED IN TRENCH

42+00 W | 41+50 W | 41+00 W | 40+50 W | 40+00 W | 39+50 W | 39+00 W | 38+50 W

Fig. 21a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-6

SECTION 26+00N

TRENCH GEOLOGY AND RADIOMETRIC PLAN

10 0 10 20 30m

Scale 1:500

1980

090 762

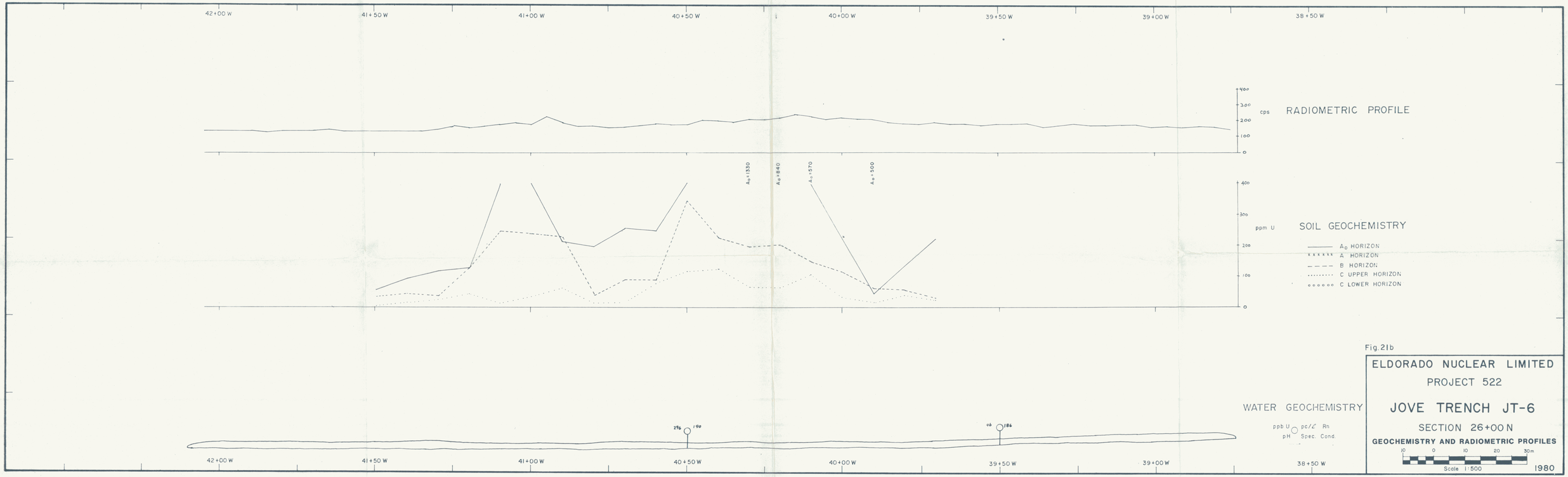


Fig. 21b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-6

SECTION 26+00 N

GEOCHEMISTRY AND RADIOMETRIC PROFILES

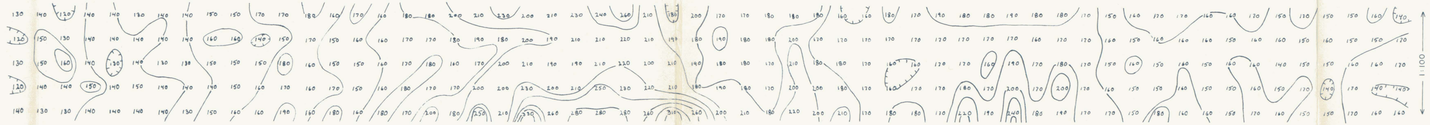
10 0 10 20 30m

Scale 1:500

1980

090702

42+00 W 41+50 W 41+00 W 40+50 W 40+00 W 39+50 W 39+00 W 38+50 W 38+00 W



1:100

RADIOMETRIC (cps) DATA

NOTE EXAGGERATED SCALE OF 1:100

.125 SCINT READING

42+00 W 41+50 W 41+00 W 40+50 W 40+00 W 39+50 W 39+00 W 38+50 W

Fig.22a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-7

SECTION 25+00 N

TRENCH GEOLOGY AND RADIOMETRIC PLAN

10 0 10 20 30m

Scale 1:500

1980

090762

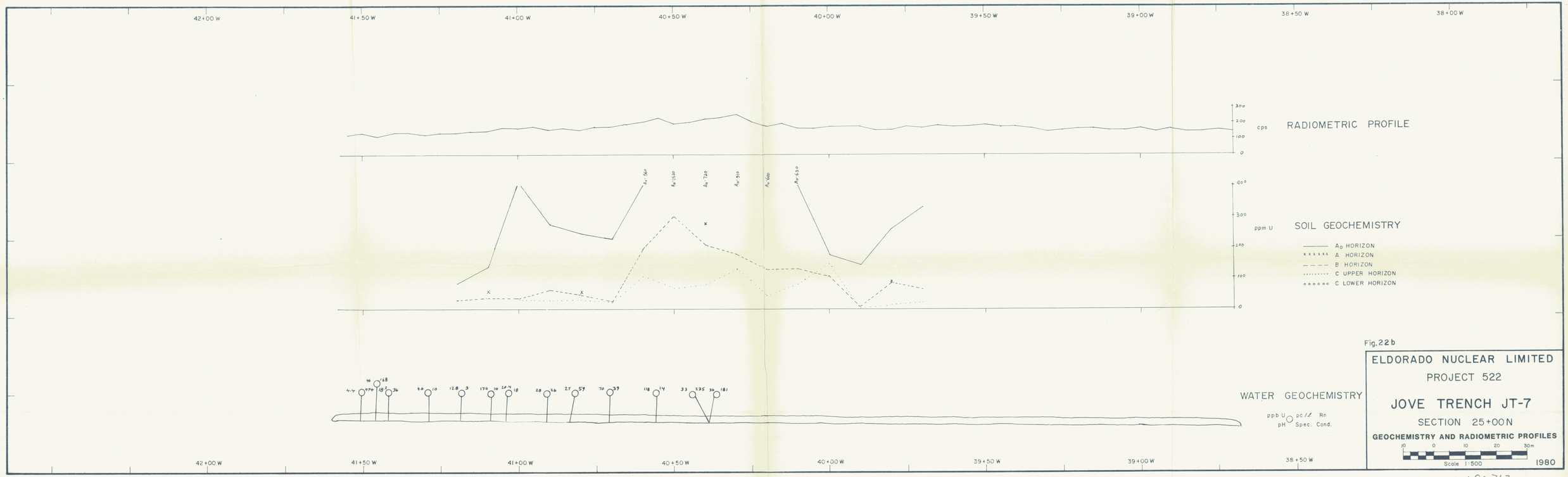


Fig. 22b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-7

SECTION 25+00N

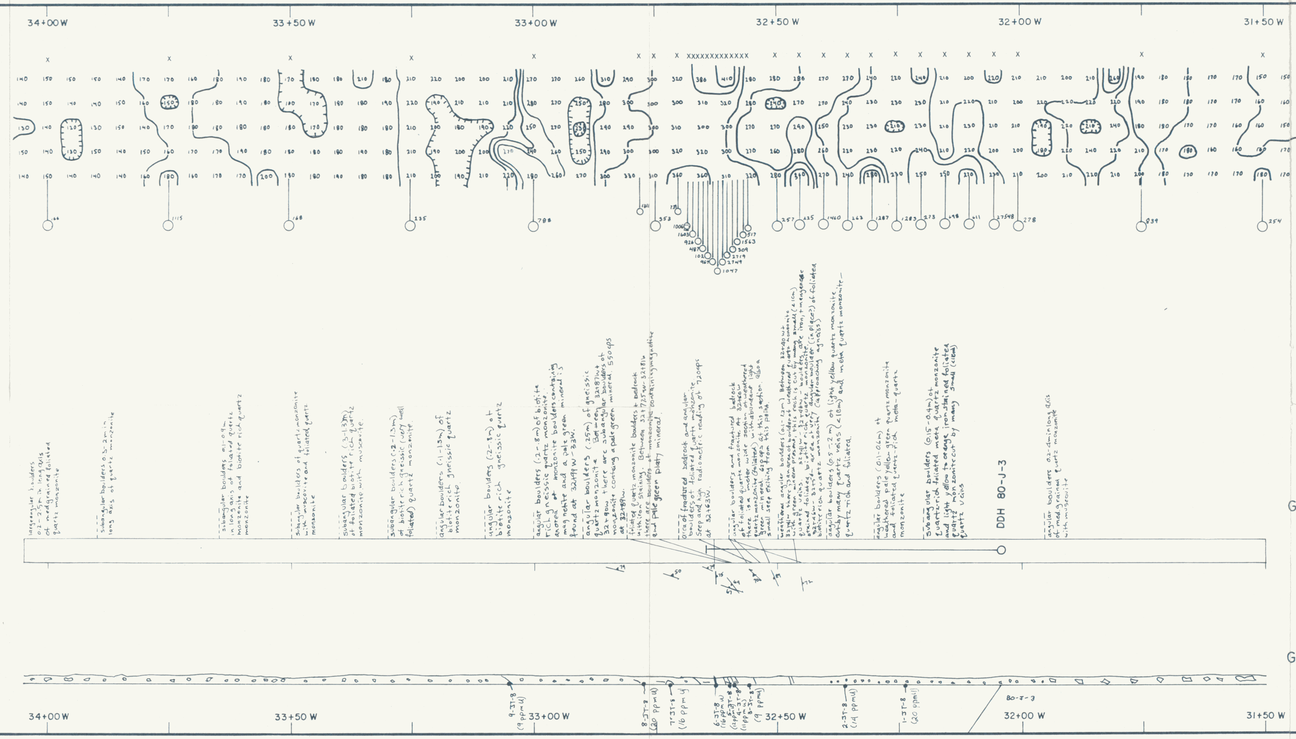
GEOCHEMISTRY AND RADIOMETRIC PROFILES

10 0 10 20 30m

Scale 1:500

1980

090762



RADIOMETRIC (cps) AND ALPHA METER (cph) DATA

NOTE EXAGGERATED SCALE OF 1:100

.125 SCINT READING

x ALPHA METER STATION

65 ALPHA METER READING

GEOLOGY PLAN

O DDH COLLAR

GEOLOGY PROFILE

• ROCK SAMPLE (ppm U)

Fig.23a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-8

SECTION 29+00N

TRENCH GEOLOGY AND RADIOMETRIC PLAN

10 0 10 20 30m

Scale 1:500

1980

090762

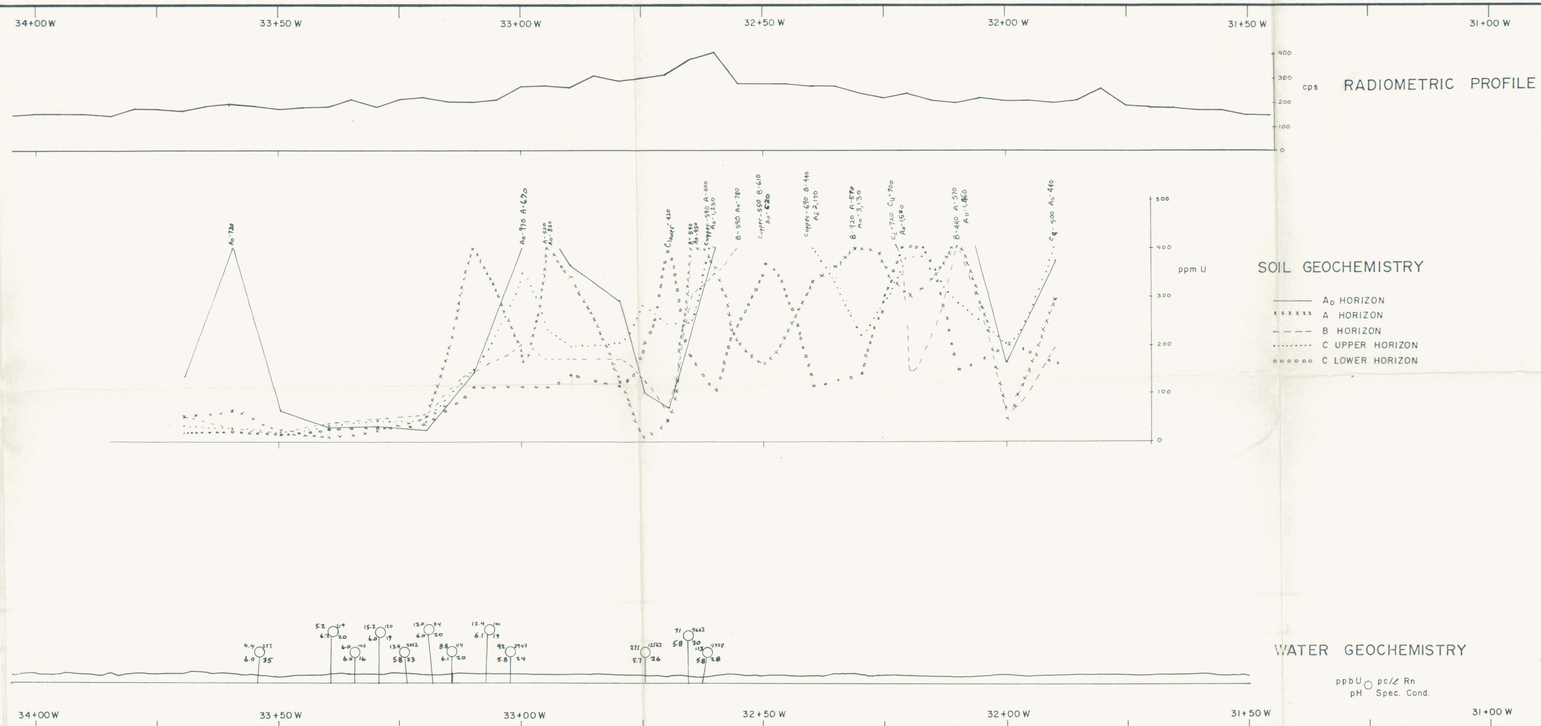


Fig. 23b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-8

SECTION 29+00 N

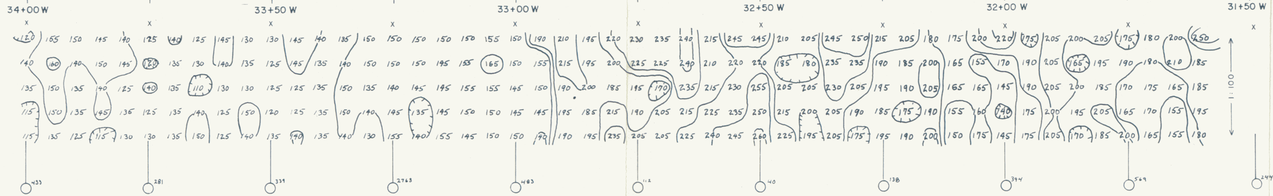
GEOCHEMISTRY AND RADIOMETRIC PROFILES

10 0 10 20 30m

Scale 1:500

1980

090762



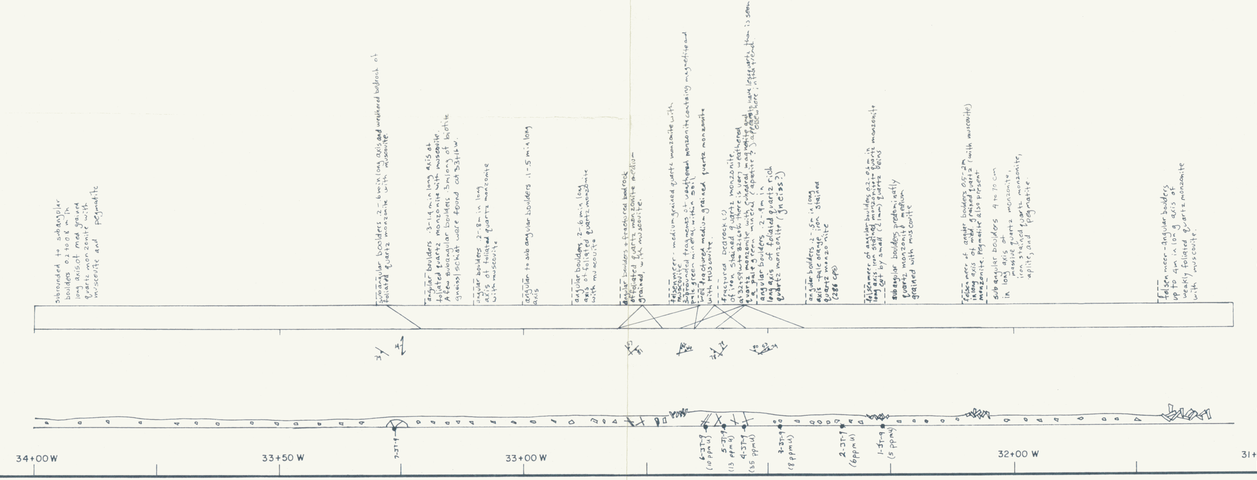
RADIOMETRIC (cps) AND ALPHA METER (cph) DATA

NOTE EXAGGERATED SCALE OF 1:100

.135 SCINT READING

x ALPHA METER STATION

65 ALPHA METER READING



GEOLOGY PLAN

GEOLOGY PROFILE

• ROCK SAMPLE (ppm U)

Fig.24a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-9

SECTION 28+00N

TRENCH GEOLOGY AND RADIOMETRIC PLAN

10 0 10 20 30m

Scale 1:500

1980

090762

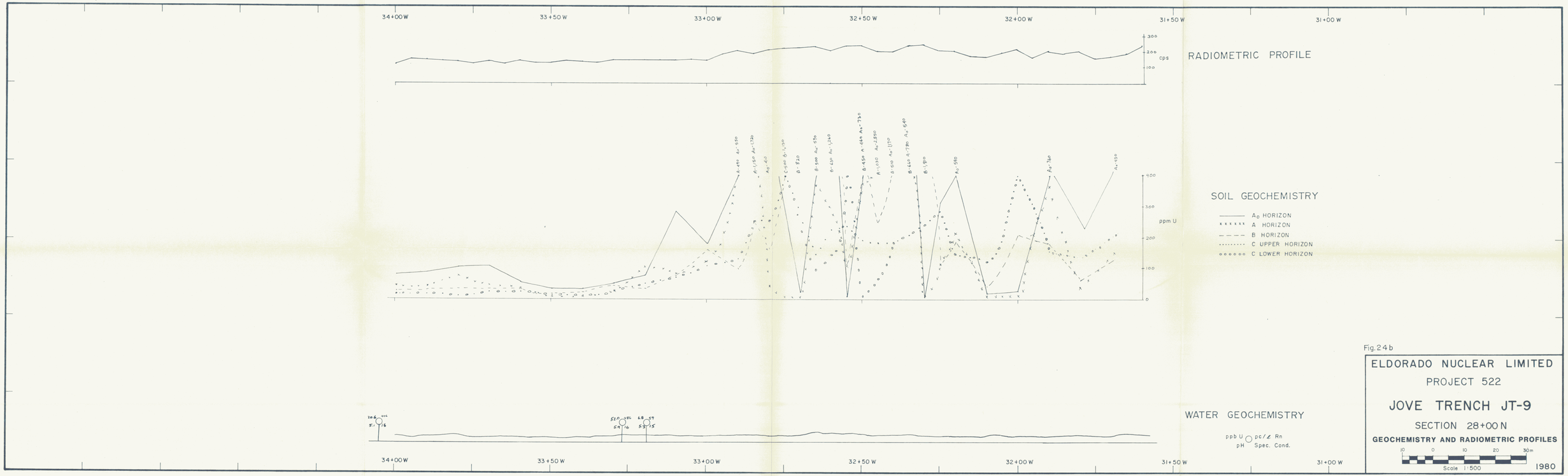


Fig. 24 b

ELDORADO NUCLEAR LIMITED

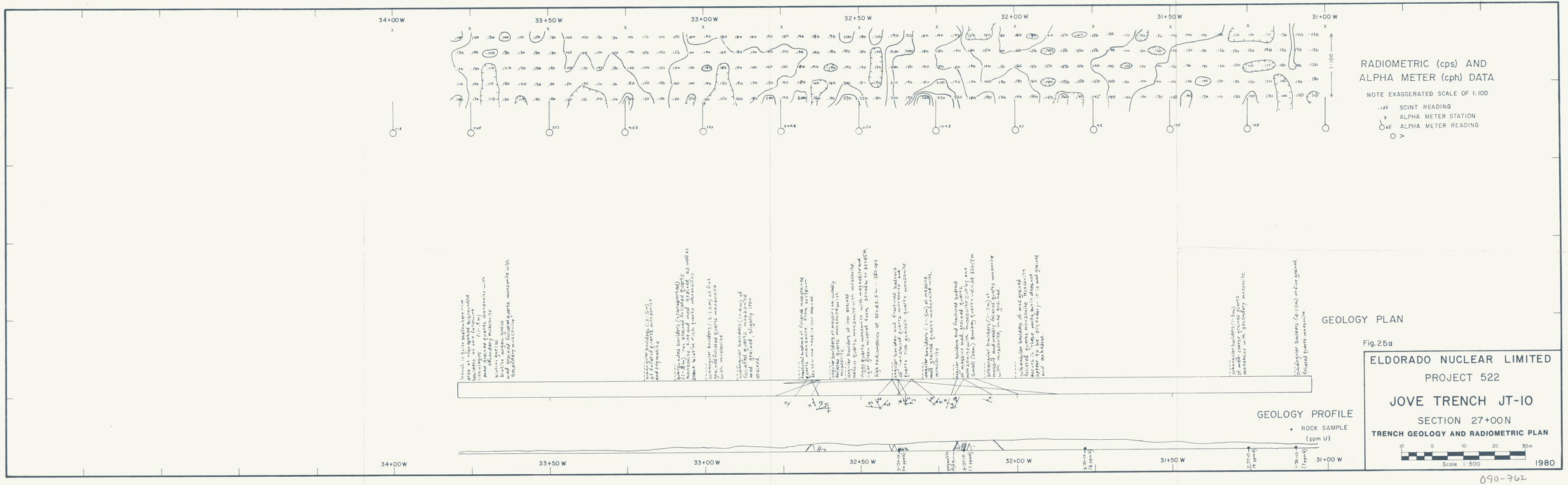
PROJECT 522

JOVE TRENCH JT-9

SECTION 28+00 N

GEOCHEMISTRY AND RADIOMETRIC PROFILES

090 762


34+00 W
33+50 W
33+00 W
32+50 W
32+00 W
31+50 W
31+00 W
RADIOMETRIC (cps) AND
ALPHA METER (cph) DATA
NOTE EXAGGERATED SCALE OF 1:100
-125 SCINT READING
x ALPHA METER STATION
65 ALPHA METER READING
1:100
GEOLOGY PLAN
GEOLOGY PROFILE
• ROCK SAMPLE
(ppm U)
Fig.25a
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE TRENCH JT-10
SECTION 27+00N
TRENCH GEOLOGY AND RADIOMETRIC PLAN
10 0 10 20 30m
Scale 1:500
1980

090-762

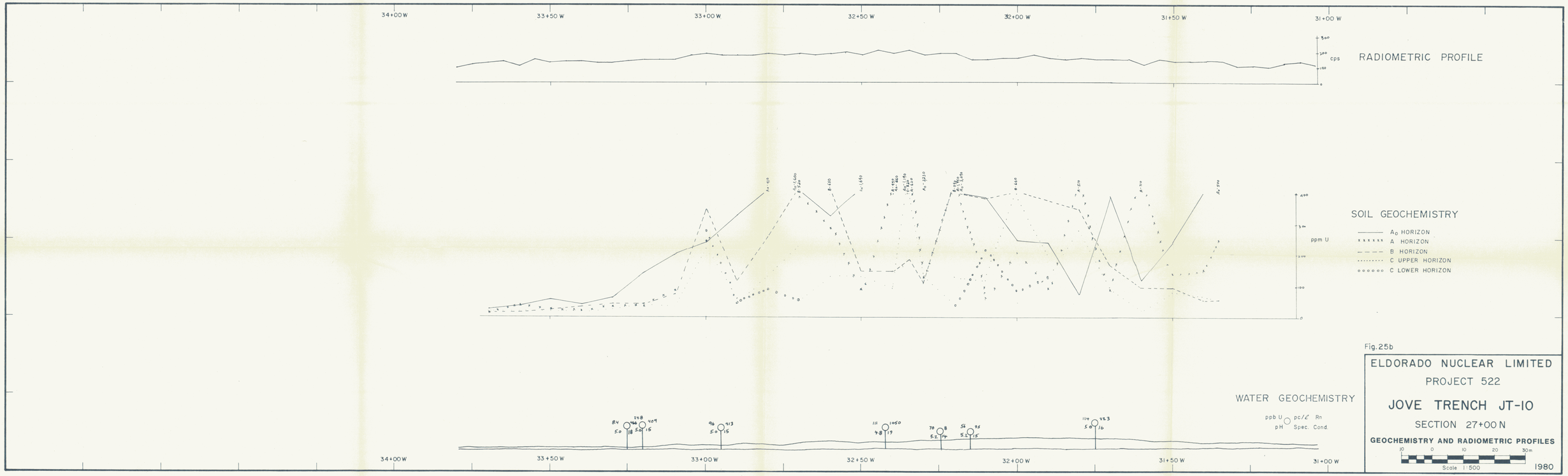


Fig. 25b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-10

SECTION 27+00 N

GEOCHEMISTRY AND RADIOMETRIC PROFILES

Scale 1:500

1980

090762

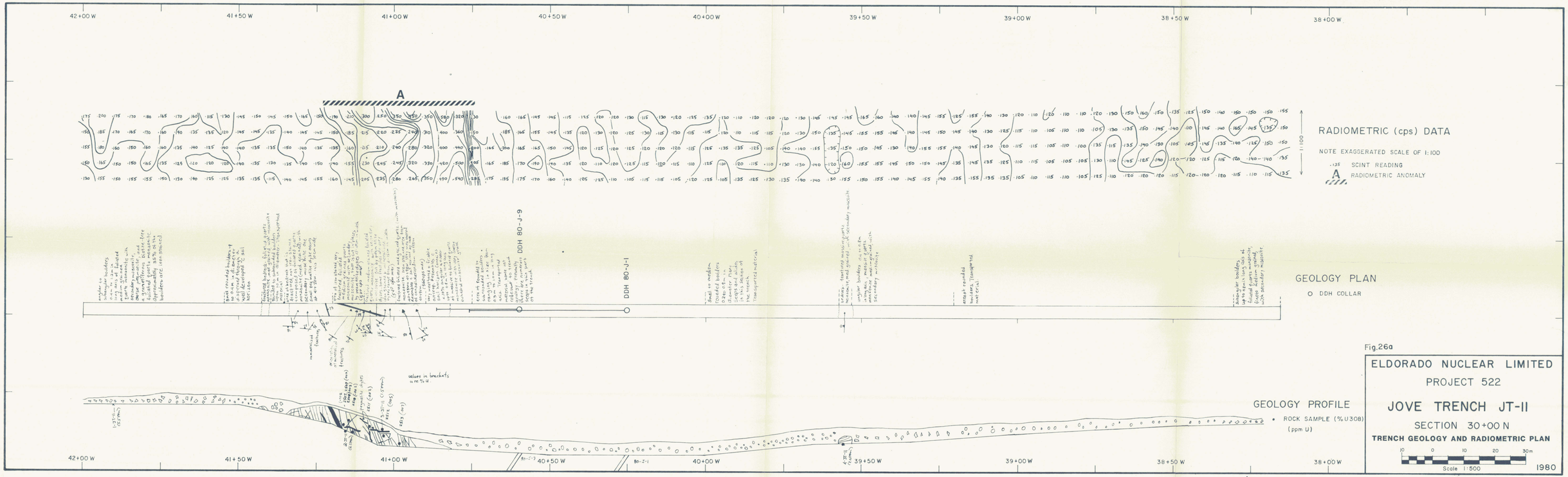


Fig.26a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-II

SECTION 30+00 N

TRENCH GEOLOGY AND RADIOMETRIC PLAN

10 0 10 20 30m

Scale 1:500

1980

090-762

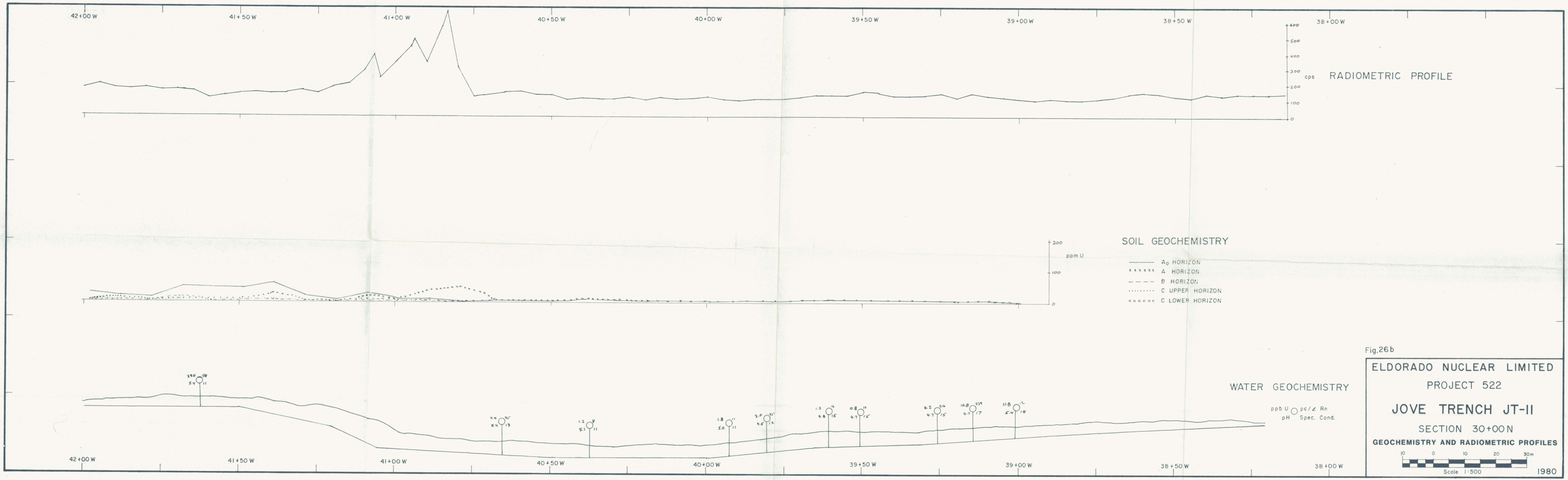


Fig.26b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-II

SECTION 30+00N

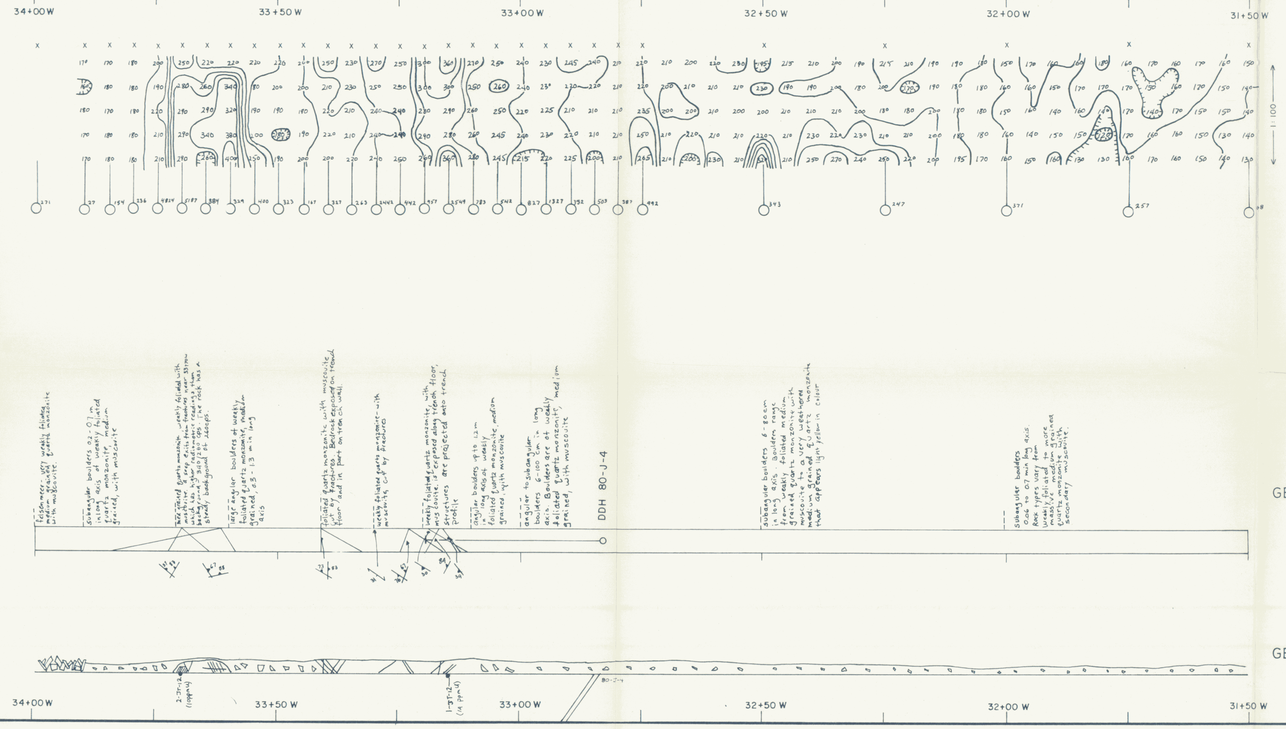
GEOCHEMISTRY AND RADIOMETRIC PROFILES

10 0 10 20 30m

Scale 1:500

1980

090-762



RADIOMETRIC (cps) AND
ALPHA METER (cph) DATA

NOTE EXAGGERATED SCALE OF 1:100

.135 SCINT READING

x ALPHA METER STATION

0.65 ALPHA METER READING

GEOLOGY PLAN

O DDH COLLAR

GEOLOGY PROFILE

• ROCK SAMPLE
(ppm U)

Fig.27a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-12

SECTION 30+00N

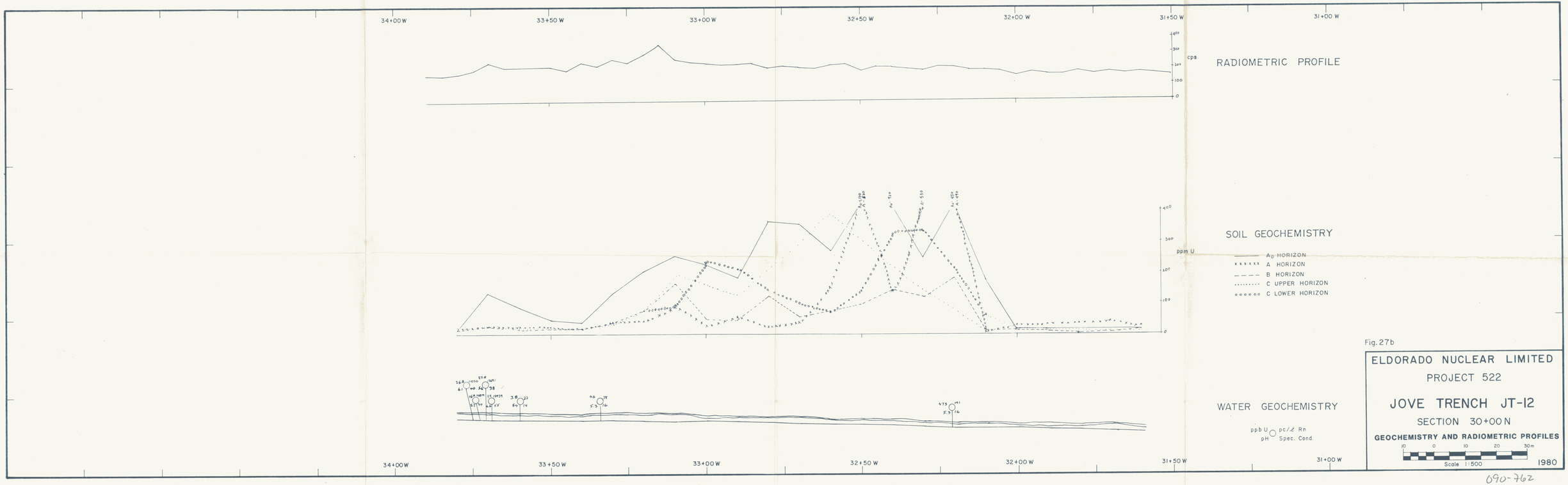
TRENCH GEOLOGY AND RADIOMETRIC PLAN

10 0 10 20 30m

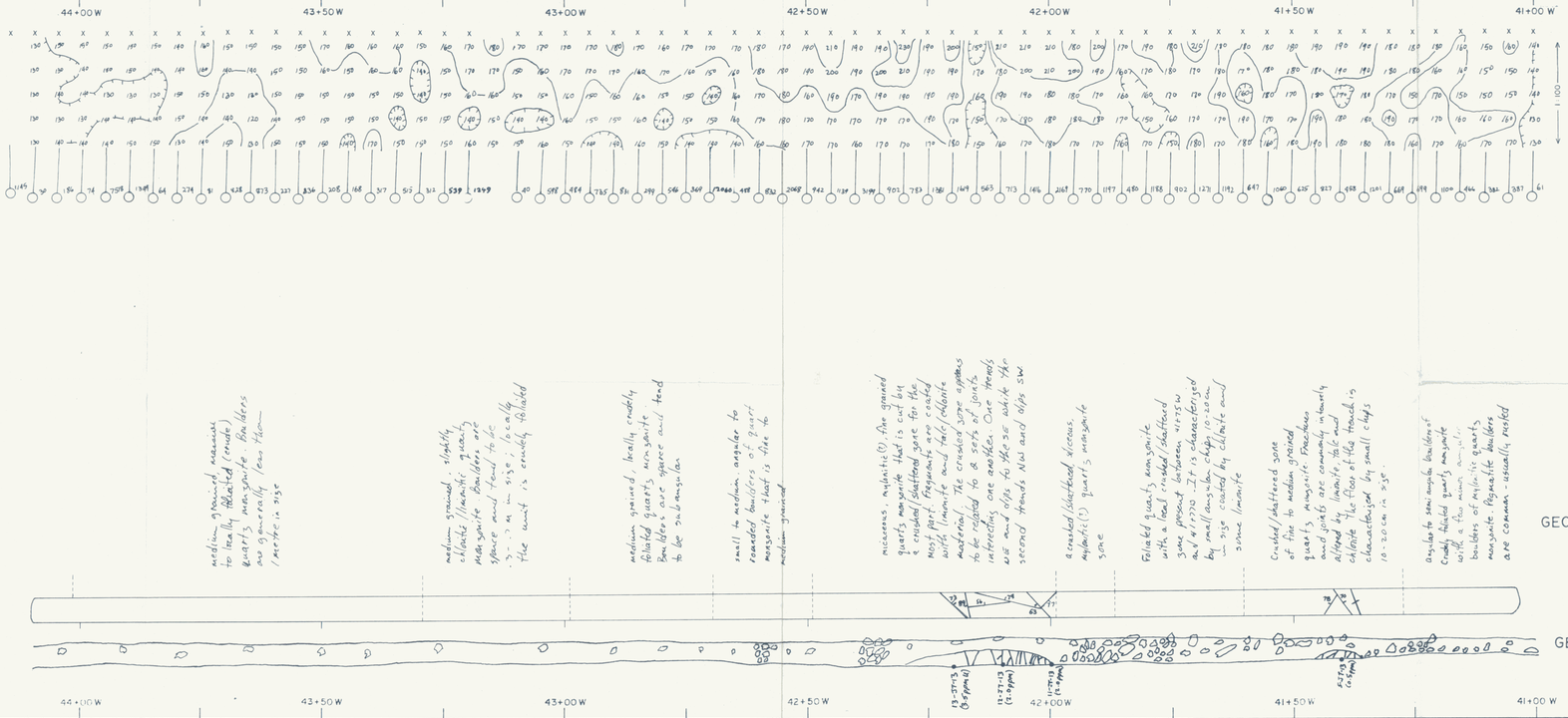
Scale 1:500

1980

090-762


34+00 W
33+50 W
33+00 W
32+50 W
32+00 W
31+50 W
31+00 W
cps
RADIOMETRIC PROFILE
ppm U
SOIL GEOCHEMISTRY
A_0 HORIZON
A HORIZON
B HORIZON
C UPPER HORIZON
C LOWER HORIZON
WATER GEOCHEMISTRY
ppb U
pc/ℓ Rn
pH
Spec. Cond.
Fig. 27b
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE TRENCH JT-12
SECTION 30+00 N
GEOCHEMISTRY AND RADIOMETRIC PROFILES
Scale 1:500
1980

090-762


44+00W
43+50W
43+00W
42+50W
42+00W
41+50W
41+00W
medium grained massive to locally foliated (crude) quartz monzonite. Boulders are generally less than 1 metre in size
medium grained, slightly chloritic/limonitic quartz monzonite. Boulders are sparse and tend to be 2-3 m in size, locally the unit is crudely foliated
medium grained, locally crudely foliated quartz monzonite. Boulders are sparse and tend to be sub-angular
small to medium angular to rounded boulders of quartz monzonite that is fine to medium grained
micaceous, aplanitic(?), fine grained quartz monzonite that is cut by a crushed/shattered zone (to the left). Most part fragments are coated with limonite and talc/chlorite material. The crushed zone appears to be related to a set of joints intersecting one another. One trends NW and dips SW, second trends NW and dips SW.
a crushed/shattered viscous, aplanitic(?) quartz monzonite zone
Foliated quartz monzonite with a local crushed/shattered zone present between it and #1770. It is characterized by small angular chips (0.2 to 1 cm) coated by chlorite and some limonite
Crushed/shattered zone of fine to medium grained quartz monzonite fragments and joints are commonly coated/filled by limonite, talc and chlorite. The floor of the trench is characterized by small chips 10-20 cm in size.
Angular to semi-angular boulders of crudely foliated quartz monzonite with a few minor aplanitic boulders of massive quartz monzonite. Pegmatite boulders are common - usually rusted
13-27-13 (0.5ppm U)
11-27-13 (2.4ppm U)
11-27-13 (1.4ppm U)
11-27-13 (0.4ppm U)
GEOLOGY PLAN
GEOLOGY PROFILE
• ROCK SAMPLE (ppm U)
RADIOMETRIC (cps) AND ALPHA METER (cph) DATA
NOTE EXAGGERATED SCALE OF 1:100
.125 SCINT READING
x ALPHA METER STATION
65 ALPHA METER READING
1:100
Fig.28a
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE TRENCH JT-13
SECTION 32+00N
TRENCH GEOLOGY AND RADIOMETRIC PLAN
10 0 10 20 30m
Scale 1:500
1980

090-762

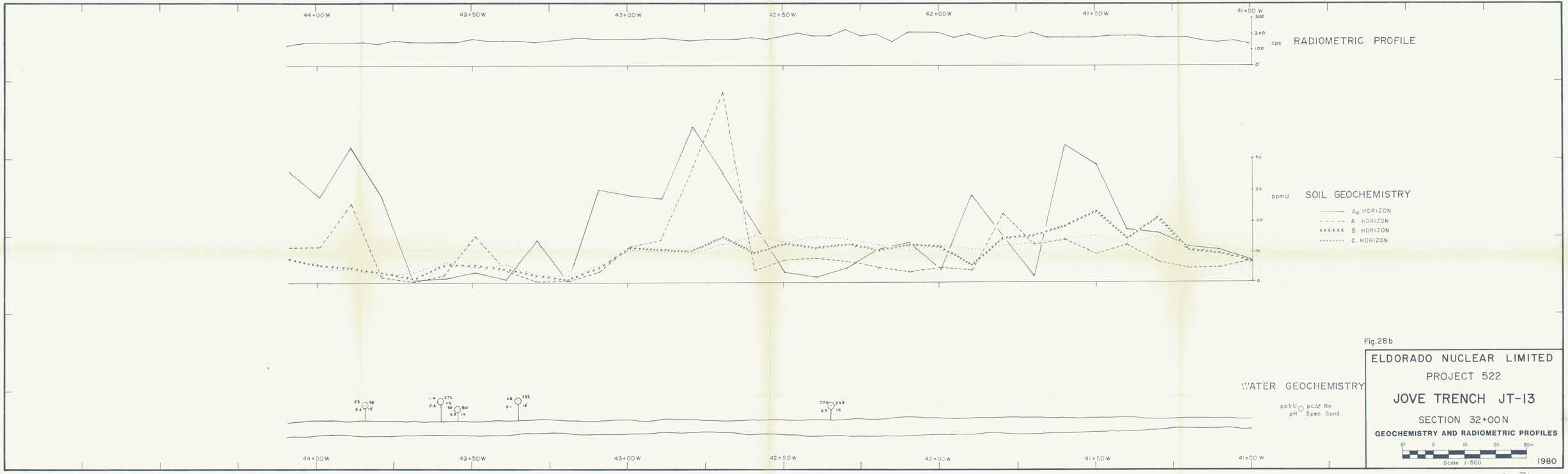


Fig.28b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-13

SECTION 32+00N

GEOCHEMISTRY AND RADIOMETRIC PROFILES

10 0 10 20 30m

Scale 1:500

1980

090-762

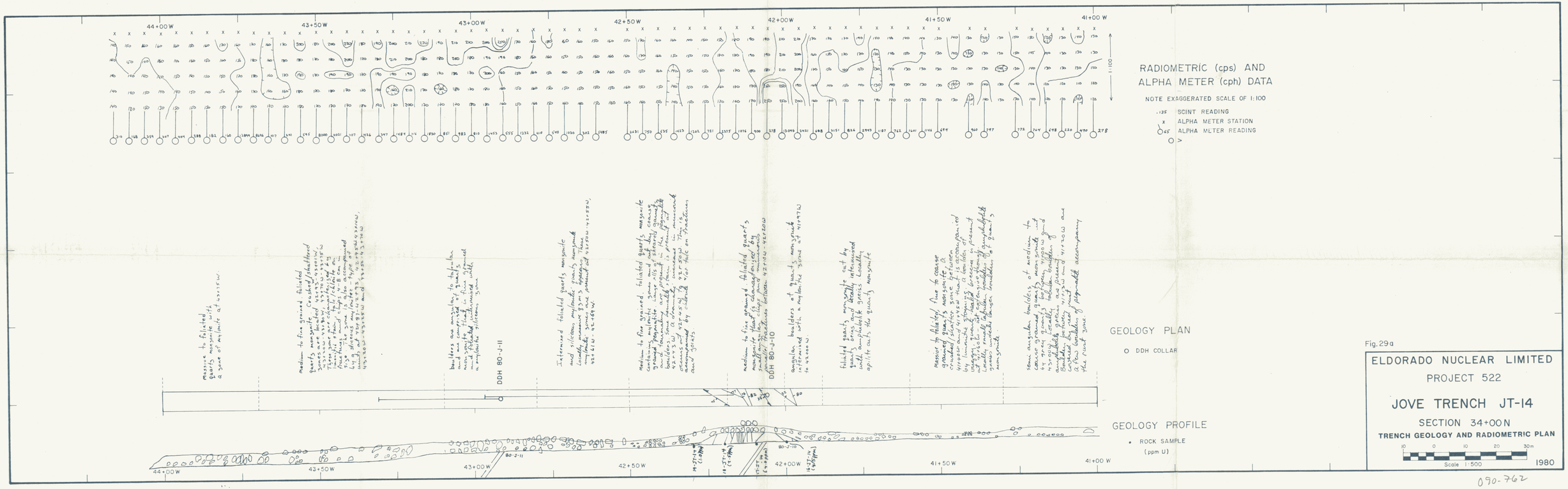


Fig. 29a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-14

SECTION 34+00N

TRENCH GEOLOGY AND RADIOMETRIC PLAN

10 0 10 20 30m

Scale 1:500

1980

090-762

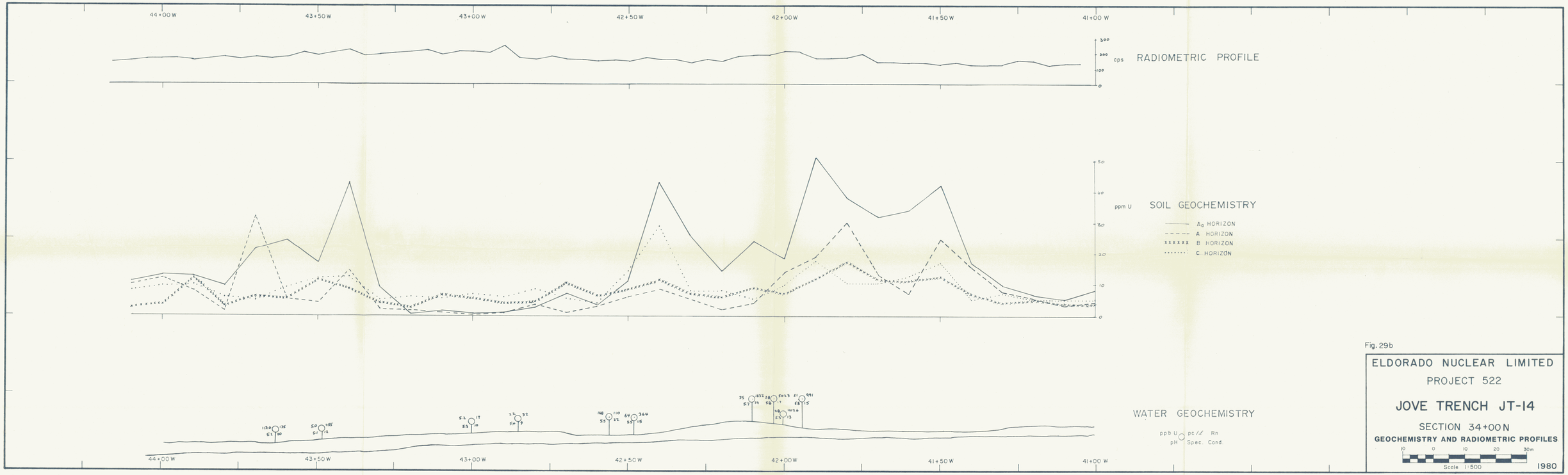


Fig. 29b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-14

SECTION 34+00N

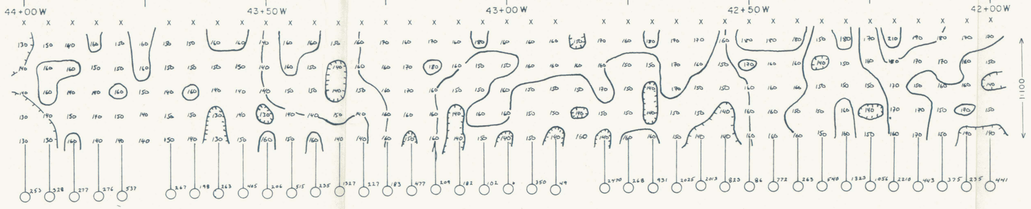
GEOCHEMISTRY AND RADIOMETRIC PROFILES

10 0 10 20 30m

Scale 1:500

1980

090-762



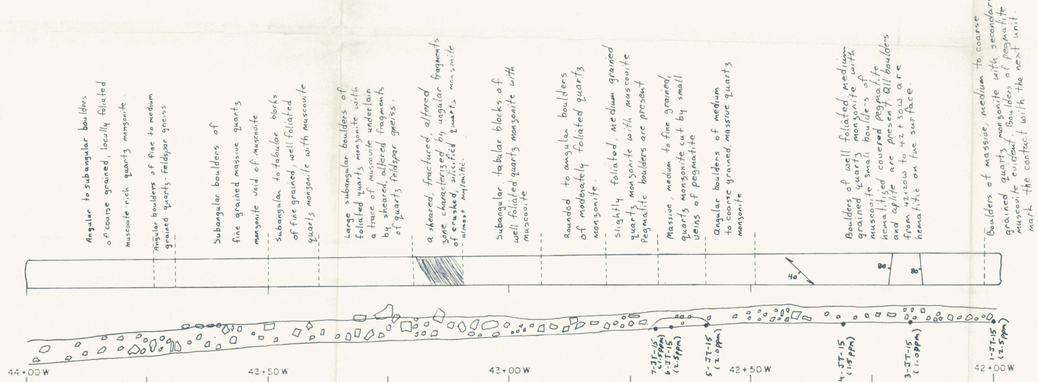
RADIOMETRIC (cps) AND ALPHA METER (cph) DATA

NOTE EXAGGERATED SCALE OF 1:100

.125 SCINT READING

x ALPHA METER STATION

65 ALPHA METER READING



GEOLOGY PLAN

GEOLOGY PROFILE

• ROCK SAMPLE (ppm U)

Fig. 30a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-15

SECTION 36+00N

TRENCH GEOLOGY AND RADIOMETRIC PLAN

10 0 10 20 30m

Scale 1:500

1980

690-762

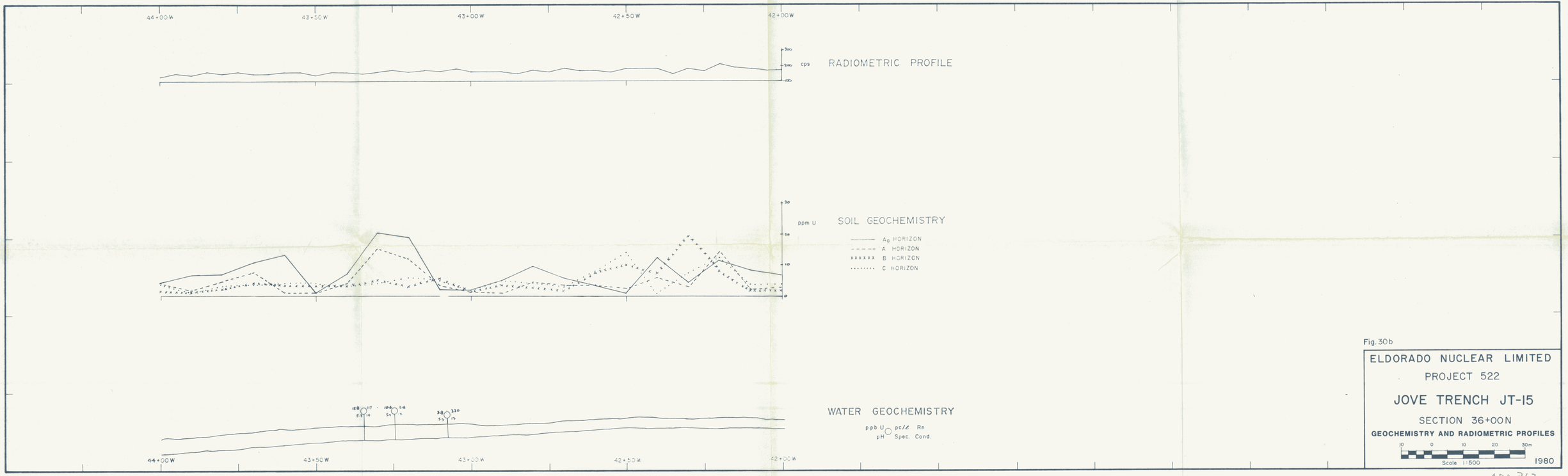


Fig. 30b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-15

SECTION 36+00N

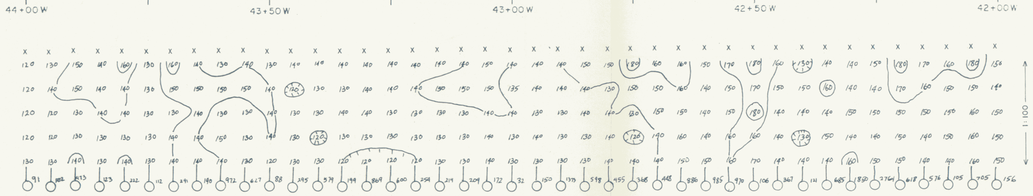
GEOCHEMISTRY AND RADIOMETRIC PROFILES

10 0 10 20 30m

Scale 1:500

1980

090-762



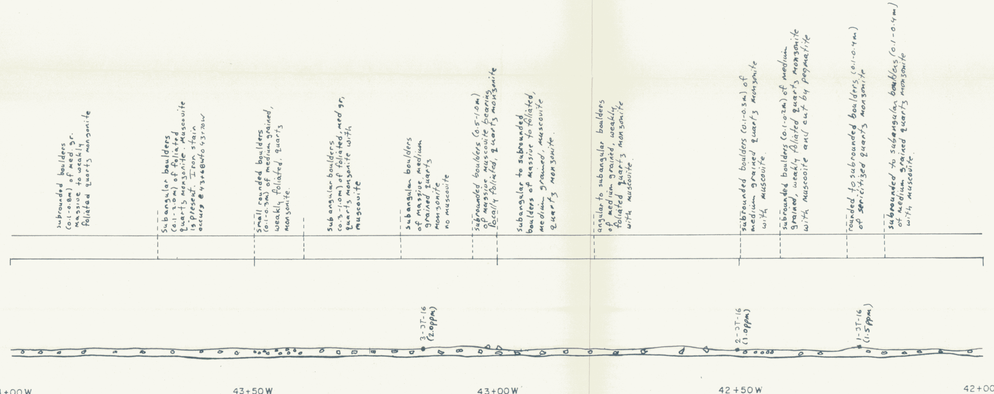
RADIOMETRIC (cps) AND ALPHA METER (cph) DATA

NOTE EXAGGERATED SCALE OF 1:100

.125 SCINT READING

x ALPHA METER STATION

65 ALPHA METER READING



GEOLOGY PLAN

GEOLOGY PROFILE

• ROCK SAMPLE (ppm U)

Fig. 31a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-16

SECTION 37+00N

TRENCH GEOLOGY AND RADIOMETRIC PLAN

10 0 10 20 30m

Scale 1:500

1980

090-762

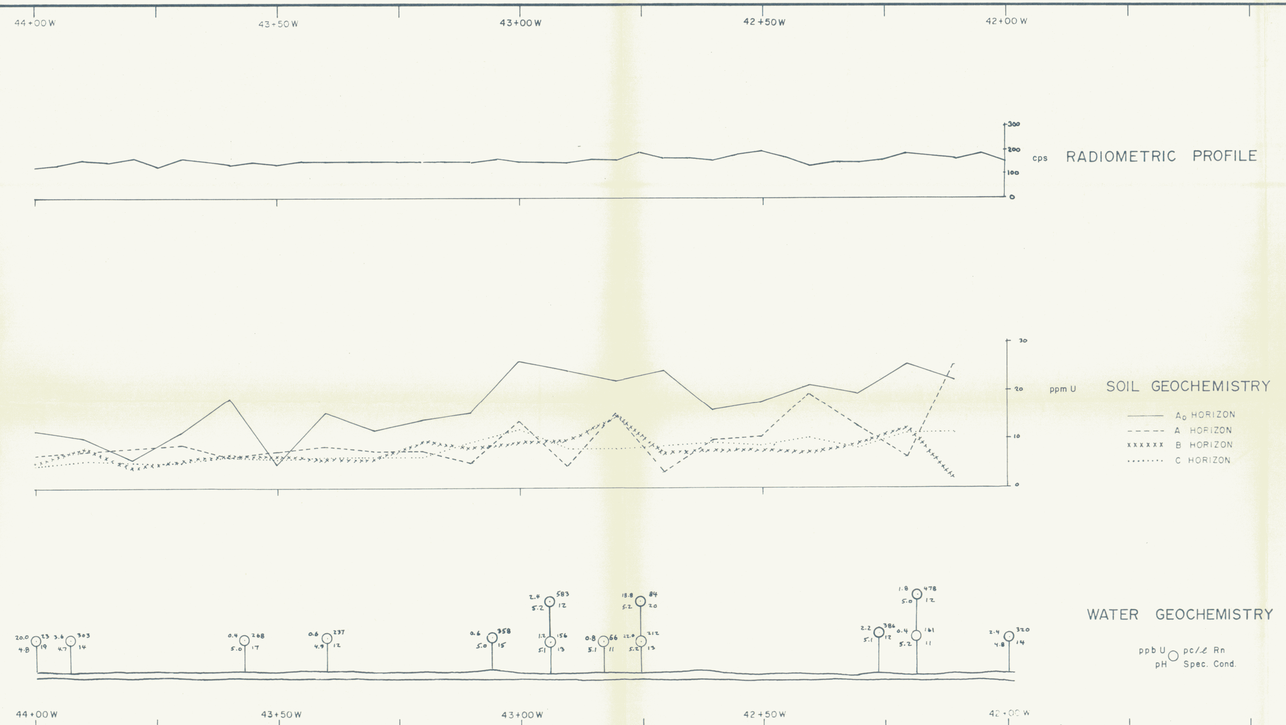


Fig. 31b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-16

SECTION 37+00N

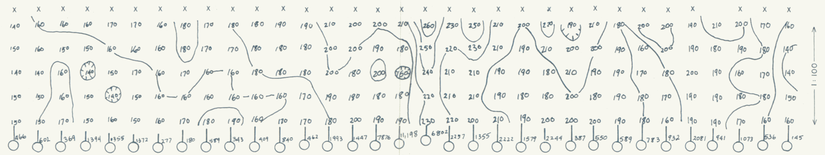
GEOCHEMISTRY AND RADIOMETRIC PROFILES

10 0 10 20 30m

Scale 1:500

1980

090-762



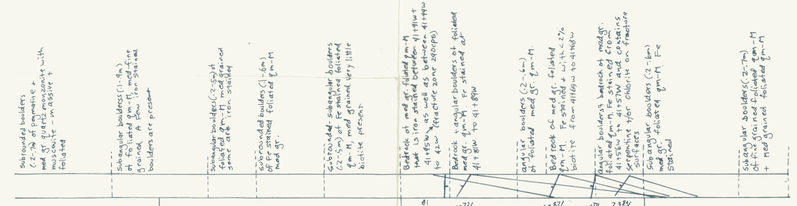
RADIOMETRIC (cps) AND ALPHA METER (cph) DATA

NOTE EXAGGERATED SCALE OF 1:100

.135 SCINT READING

x ALPHA METER STATION

65 ALPHA METER READING



GEOLOGY PLAN

GEOLOGY PROFILE

• ROCK SAMPLE (ppm U)

Fig. 32a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-17

SECTION 31+00 N

TRENCH GEOLOGY AND RADIOMETRIC PLAN

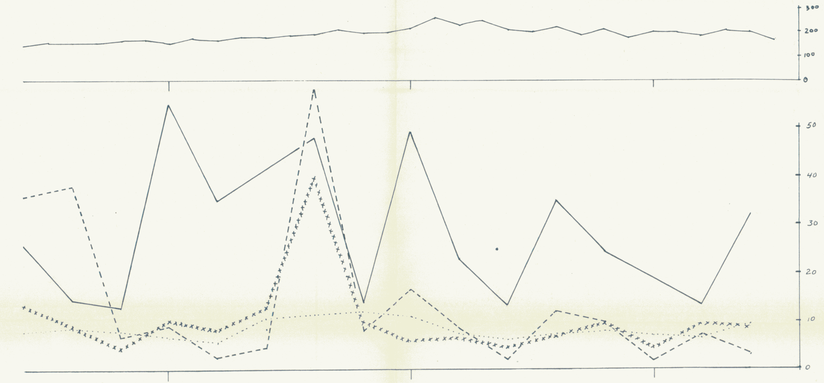
10 0 10 20 30m

Scale 1:500

1980

690-762

43+00W 42+50W 42+00W 41+50W 41+00W



RADIOMETRIC PROFILE

SOIL GEOCHEMISTRY

A_0 HORIZON
A HORIZON
B HORIZON
C HORIZON

WATER GEOCHEMISTRY

ppb U ○ pc/ℓ Rn
pH ○ Spec. Cond.

43+00W 42+50W 42+00W 41+50W 41+00W

Fig. 32 b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-17

SECTION 31+00N

GEOCHEMISTRY AND RADIOMETRIC PROFILES

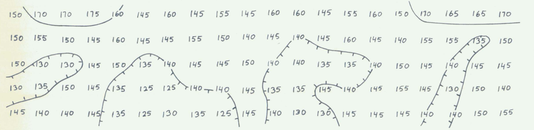
10 0 10 20 30m

Scale 1:500

1980

090-762

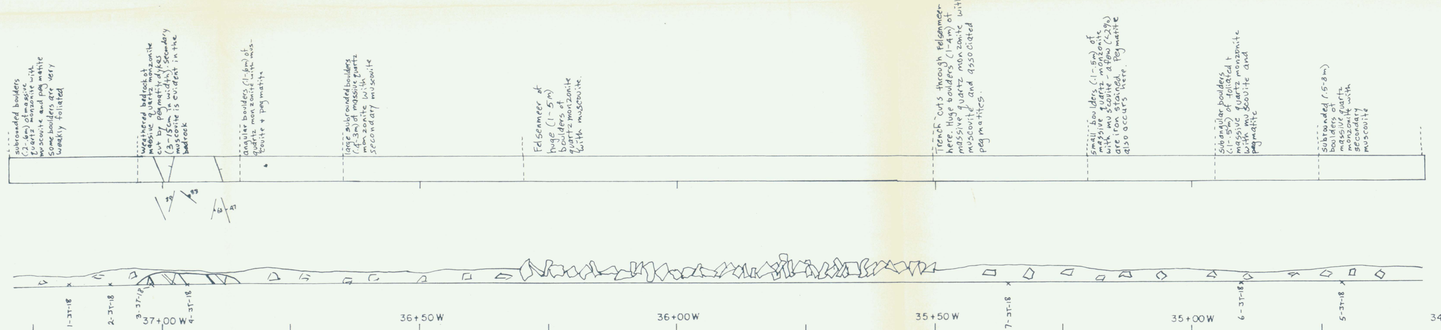
LARGE FELSENMEER FIELD
NO TRENCH



RADIOMETRIC (cps) DATA

NOTE EXAGGERATED SCALE OF 1:100

.135 SCINT READING



GEOLOGY PLAN

GEOLOGY PROFILE

• ROCK SAMPLE
(ppm U)

Fig. 33a

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-18

SECTION 34+00 N

TRENCH GEOLOGY AND RADIOMETRIC PLAN

10 0 10 20 30m

Scale 1:500

1980

090-762

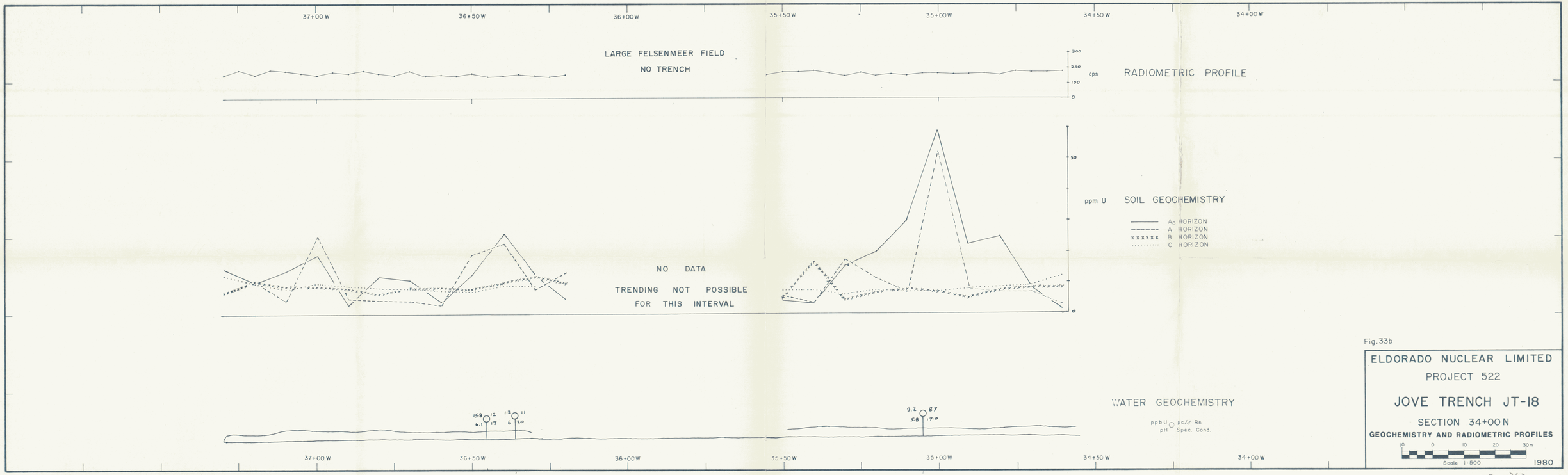


Fig. 33b

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE TRENCH JT-18

SECTION 34+00N

GEOCHEMISTRY AND RADIOMETRIC PROFILES

10 0 10 20 30m

Scale 1:500

1980

090-762

L 50+00N

L 45+00N

L 15+00W

L 10+00W

L 5+00W

3800

3500

3200

4000

NOTE: READINGS WERE OBTAINED
AT 10m INTERVALS
ALONG LINES TRENDING 292°
AND 25m APART.

ELEVATION CONTOURS ARE IN FEET.

CONTOUR INTERVAL
0-100 cps
100-140 "
140-180 "
+180 "

Fig.40

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE-5 GRID

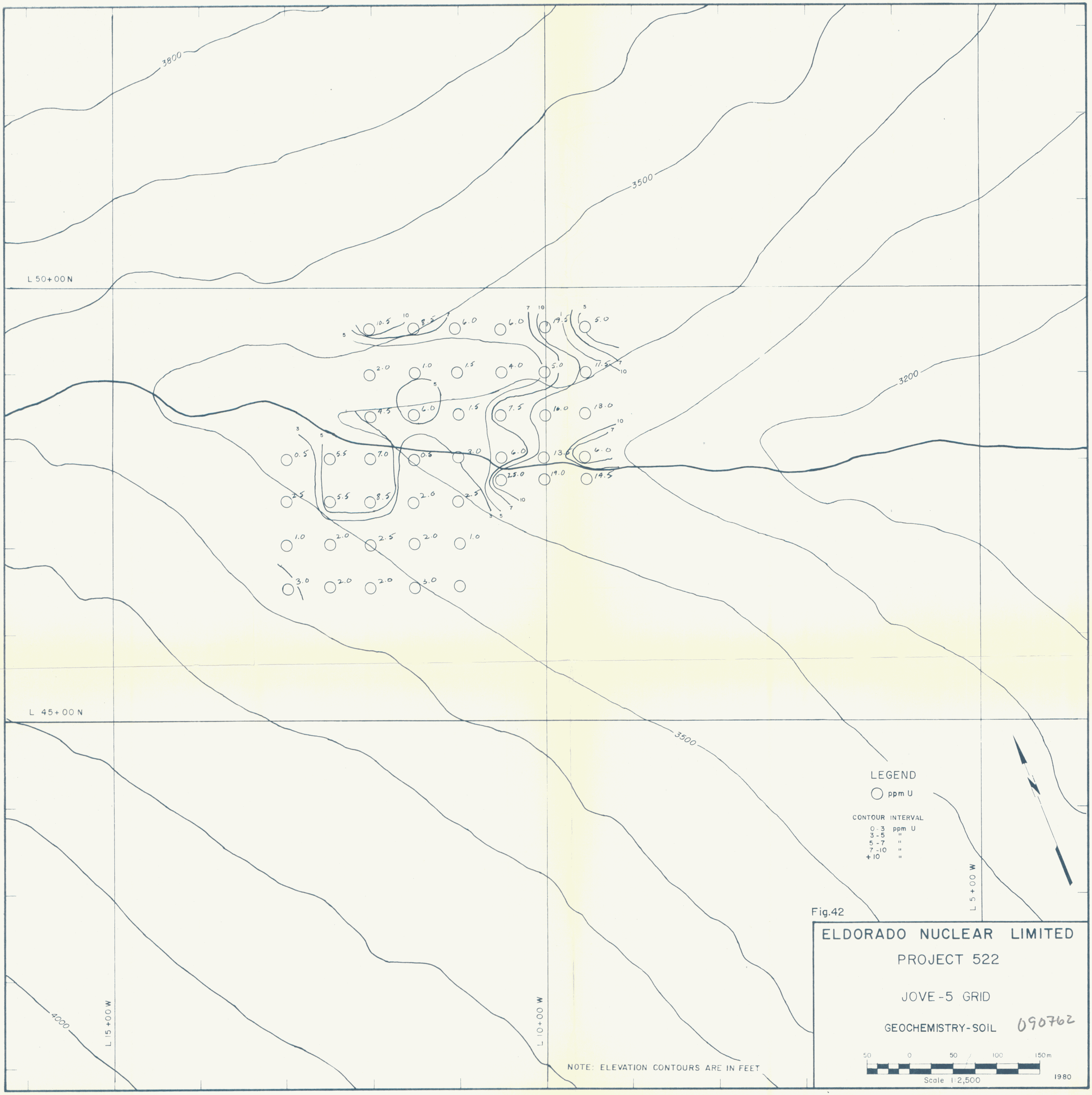
GEOPHYSICS RADIOMETRICS

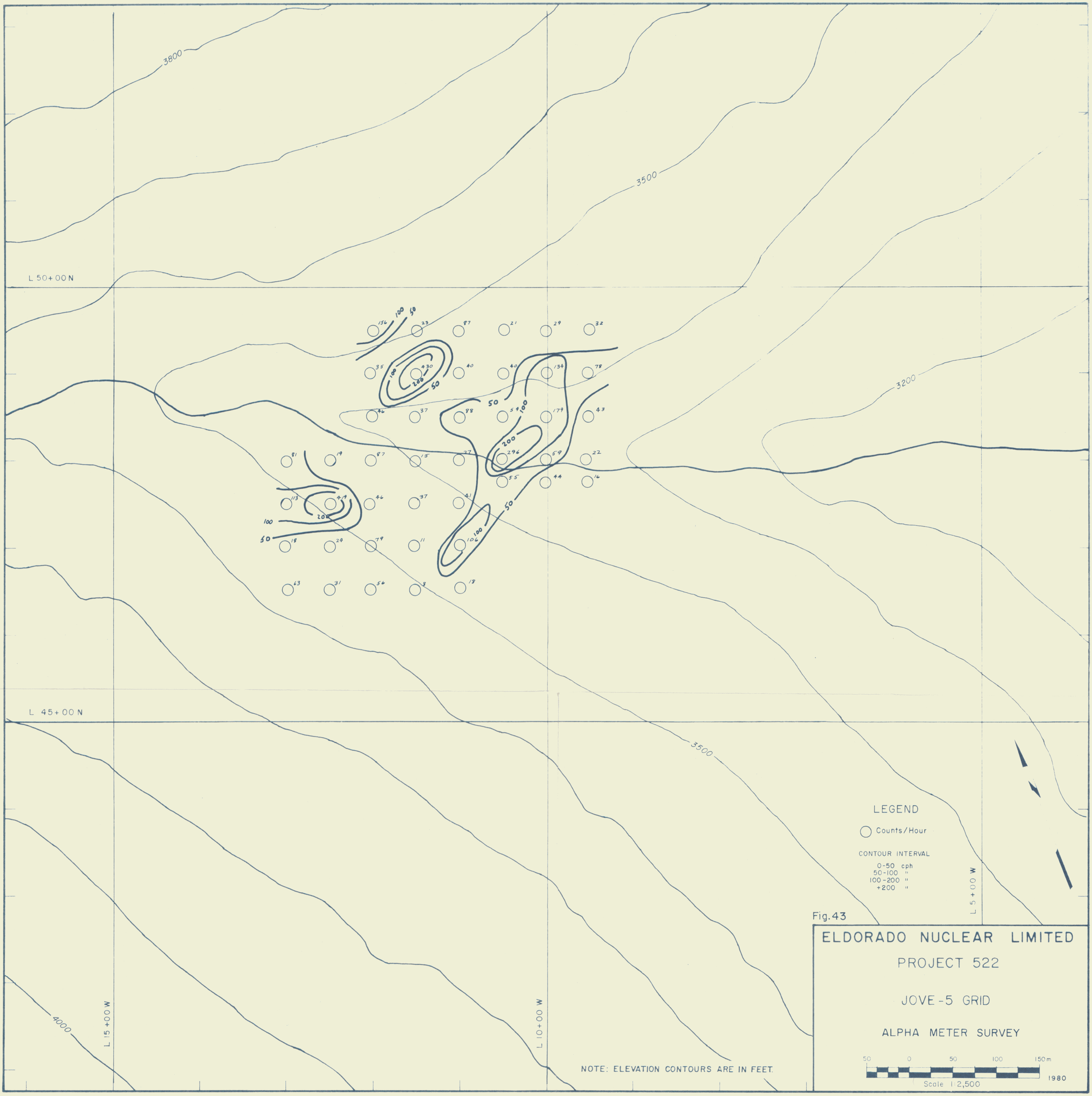
50 0 50 100 150m

Scale 1:2,500

1980

090762


3800
3500
3200
4000
L 50+00N
L 45+00N
L 15+00W
L 10+00W
L 5+00W
10.5
8.5
6.0
6.0
19.5
5.0
2.0
1.0
1.5
4.0
5.0
11.5
4.5
6.0
1.5
7.5
16.0
13.0
0.5
5.5
7.0
0.5
3.0
6.0
13.5
6.0
25.0
19.0
14.5
2.5
5.5
8.5
2.0
2.5
1.0
2.0
2.5
2.0
1.0
3.0
2.0
2.0
3.0
LEGEND
ppm U
CONTOUR INTERVAL
0-3 ppm U
3-5 "
5-7 "
7-10 "
+10 "
NOTE: ELEVATION CONTOURS ARE IN FEET
Fig.42
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE-5 GRID
GEOCHEMISTRY-SOIL
090762
50 0 50 100 150m
Scale 1:2,500
1980


3800
3500
3200
3500
4000
L 50+00 N
L 45+00 N
L 15+00 W
L 10+00 W
L 5+00 W
156
100
50
23
87
21
29
32
35
100
430
200
50
40
40
134
78
46
37
88
59
100
179
43
50
100
200
81
19
87
15
27
296
59
22
55
44
16
113
419
46
37
41
200
100
50
18
24
79
11
106
100
50
63
31
56
8
18
LEGEND
Counts/Hour
CONTOUR INTERVAL
0-50 cph
50-100 "
100-200 "
+200 "
NOTE: ELEVATION CONTOURS ARE IN FEET.
Fig. 43
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE-5 GRID
ALPHA METER SURVEY
50 0 50 100 150m
Scale 1:2,500
1980

090762

L 50+00 N

L 45+00 N

L 15+00 W

L 10+00 W

L 5+00 W

3800

3500

3200

4000

NOTE: ELEVATION CONTOURS ARE IN FEET

LEGEND

ppb U / pH — pc/l Rn / Spec. Cond.

Fig.44

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE-5 GRID

GEOCHEMISTRY – WATER

50 0 50 100 150m

Scale 1:2,500

1980

090762

L 85+00 N

L 80+00 N

L 75+00 N

L 55+00 W

BL 53+00 W

L 50+00 W

4500

4000

3800

Alluvium

NOTE: READINGS WERE OBTAINED
AT 10m INTERVALS
ALONG LINES TRENDING 292°
AND 100m APART.

ELEVATION CONTOURS ARE IN FEET.

CONTOUR INTERVAL

0 - 100	cps
100 - 140	"
140 - 180	"
180 - 220	"
220 - 260	"
260 - 300	"
+ 300	"

Fig. 45

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE GRID 6

RADIOMETRIC SURVEY

CONTOURS

50 0 50 100 150m

Scale 1:2,500

1980

L 85+00 N

L 80+00 N

L 75+00 N

L 55+00 W

BL 53+00 W

L 50+00 W

4500

4000

3800

Alluvium

NOTE: ELEVATION CONTOURS ARE IN FEET

LEGEND

ppm U

CONTOUR INTERVAL

0-3	ppm U
3-5	"
5-7	"
7-10	"
+10	"

Fig.47

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE GRID 6

GEOCHEMISTRY-SOIL

090-762

50 0 50 100 150m

Scale 1:2,500

1980

L 85+00 N

L 80+00 N

L 75+00 N

L 55+00 W

BL 53+00 W

L 50+00 W

4500

4000

3800

Alluvium

LEGEND

Counts/Hour

CONTOUR INTERVAL

0-100 cph
100-150 "
150-250 "
250-500 "
500-6,000 "
6,000-10,000 "
+10,000 "

NOTE: ELEVATION CONTOURS ARE IN FEET

Fig.48

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE GRID 6

ALPHA METER SURVEY

50 0 50 100 150m

Scale 1:2,500

1980

090-962

L 85+00 N

L 80+00 N

L 75+00 N

L 55+00 W

BL 53+00W

L 50+00 W

4500

4000

3800

Alluvium

0.2 207 8.2 15
0.2 158 7.8 14
0.2 74 8.1 14
0.2 20 7.4 17
0.2 51 8.1 15
0.2 12 7.5 13
0.2 50 250 7.8 12
2.8 6.4 11
3.8 6.4 10
4.2 6.3 10
3.8 6.4 10
2.8 6.4 9
2.4 6.2 10
1.6 6.3 10
4.2 6.4 8
1.4 6.3 9
1.6 6.3 8

NOTE: ELEVATION CONTOURS ARE IN FEET.

LEGEND

ppb U pc/l Rn
pH Spec. Cond.

Fig.49

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE GRID 6 090762

GEOCHEMISTRY - WATER

50 0 50 100 150m

Scale 1:2,500

1980

APPENDIX F

Raw Geophysical Data
1980 Field Work

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

JOVE-1 & 2 GRIDS

SAMPLE LOCATIONS

Scale 1:5,000

1980

090762

10+00 W

50+00 N

45+00 N

1295 1294 1293 1296 1297 1310 1287 1288 1289 1290 1291 1292 1249 1250 1251 1252 1253 1254 1286 1267 1268 1269 1270 1298 1271 1285 1261 1260 1259 1258 1257 1256 1255 1274 1273 1272 1266 1278 1277 1276 1275 1303 1301 1304 1306 1305 1307 1300 1284 1262 1263 1264 1265 1299 1308 1283 1279 1309 1280 1281 1282 1311

• soil
× water

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

JOVE-5 GRID

SAMPLE LOCATIONS

50 0 50 100 150m

Scale 1:2,500

1980

090762

50+00N

45+00N

BL 10+00W

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

JOVE-5 GRID

RADIOMETRIC DATA

50 0 50 100 150m

Scale 1:2,500

1980

090762

56+00W 55+00W 54+00W 53+00W 52+00W 51+00W 50+00N

87+00N 86+00N 85+00N 84+00N 83+00N 82+00N

.1248 .1247 .1246 .1245 (1249X)

.1241 .1242 .1243 .1244

.1240 (1250X) .1239 (1251X) .1238 .1237

.1232 (1252X) .1233 .1235 .1236 .1256

.1234 .1231 .1230 .1229 .1228

.1223 .1224 .1225 .1226 .1227

.1222 .1221 .1220 (1254X) .1219

.1218 .1219 .1216 .1215

.1209 .1210 .1211 .1212 .1213 .1214

.1208 .1209 .1206 .1205 .1204 .1203

.1197 .1198 .1199 .1200 .1201 .1202

.1196 .1195 .1194 .1193 .1192 .1191 .1190

.1184 (1253X) .1185 .1186 .1187 (1255X) .1188 .1189

.1183 .1182 .1181 .1180 .1179 .1178

.1172 .1173 .1174 .1175 .1176 .1177

.1171 .1170 .1169 .1168 .1169 .1166

.1161 .1162 .1163 .1164 .1165

.1160 .1159 .1158

.1155 .1156 .1159

• soil

× water

N

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

JOVE-6 GRID

SAMPLE LOCATIONS

50 0 50 100 150m

Scale 1:2,500

1980

090762

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

JOVE- 6 GRID

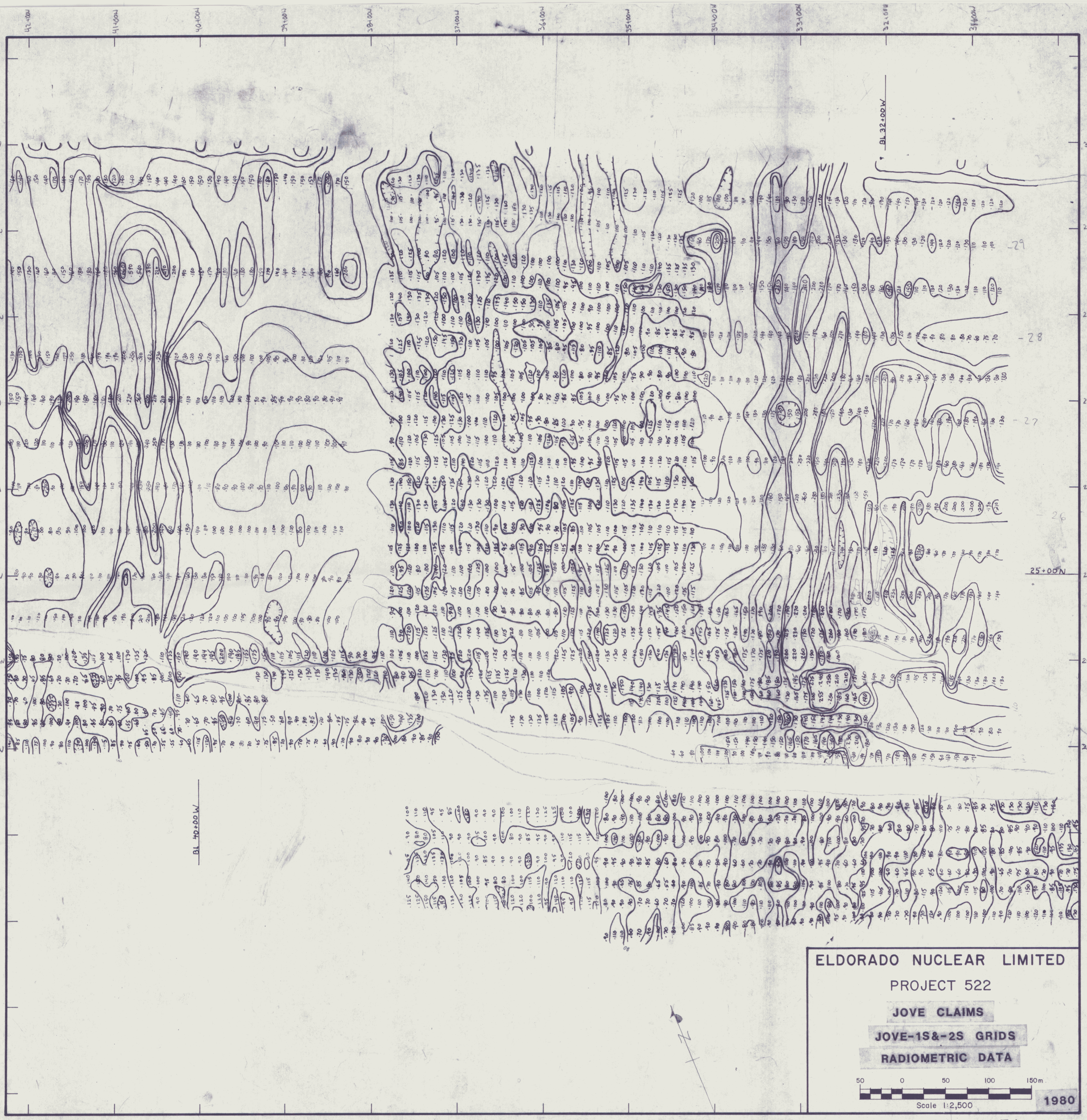
RADIOMETRIC DATA

50 0 50 100 150m.

Scale 1:2,500

1980

090762


42+00W
41+00W
40+00W
39+00W
38+00W
37+00W
36+00W
35+00W
34+00W
33+00W
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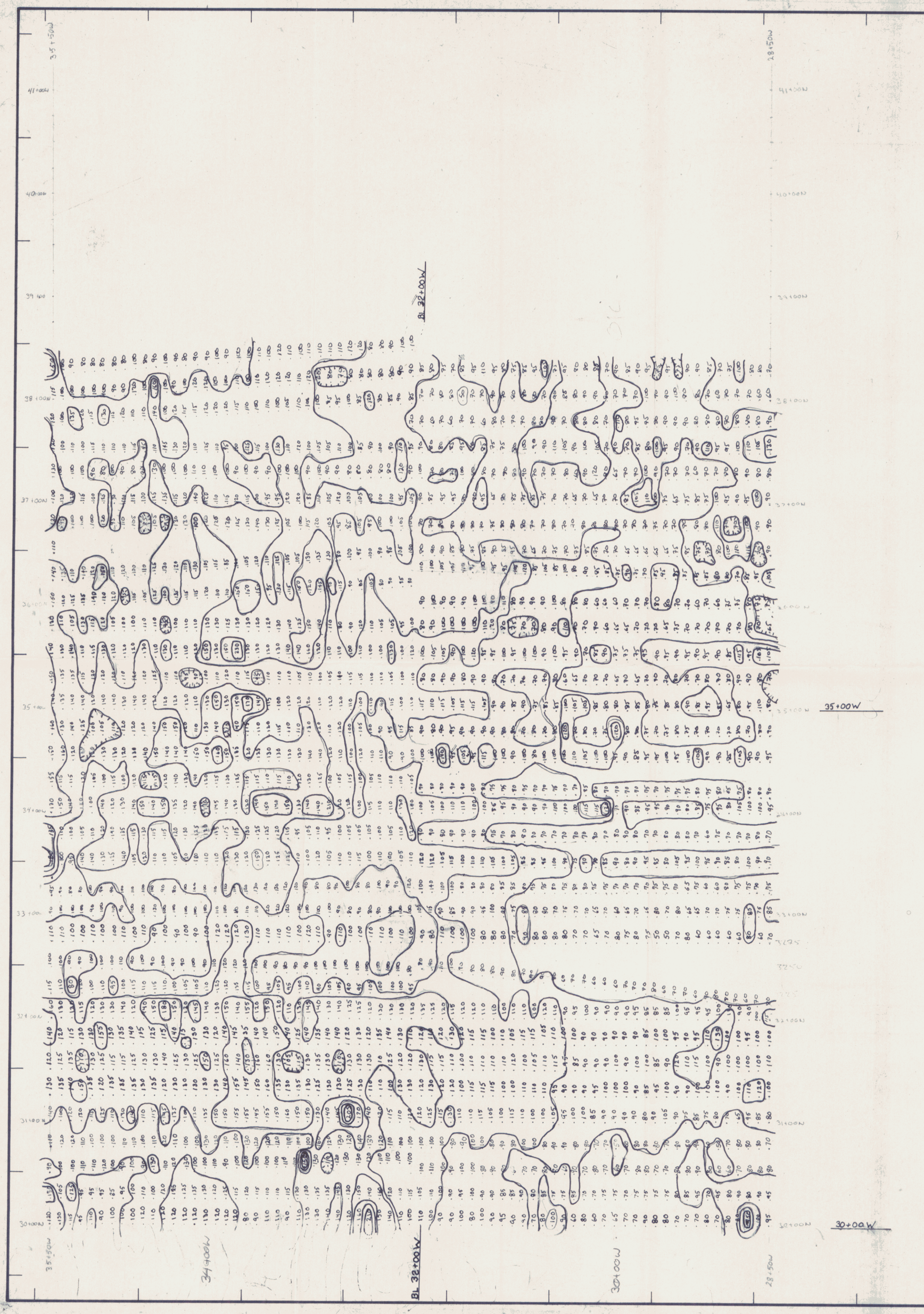
31+00W
30+00N
29+00N
28+00N
27+00N
26+00N
25+00N
24+00N
23+00N
BL 32+00W
BL 40+00W
-29
-28
-27
-26
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS
JOVE-1S&-2S GRIDS
RADIOMETRIC DATA
50 0 50 100 150m
Scale 1:2,500
1980
090762



ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

JOVE-1NORTH GRID

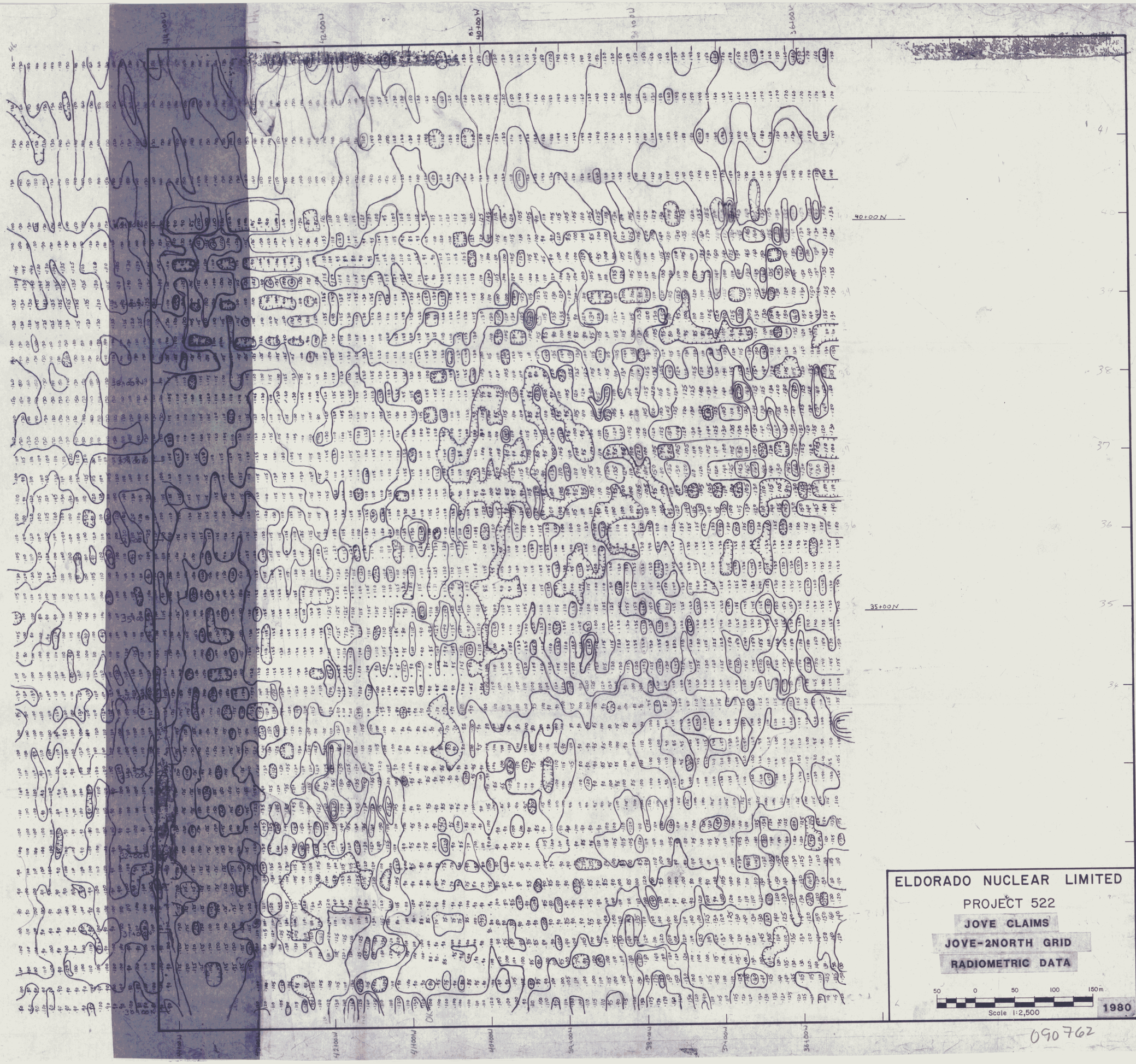
RADIOMETRIC DATA

50 0 50 100 150m

Scale 1:2,500

1980

090762



ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

JOVE-2NORTH GRID

RADIOMETRIC DATA

50 0 50 100 150m

Scale 1:2,500

1980

090762

APPENDIX G

Report MNR79-1 by Dr. J.D. Scott
with a 1980 Memo Appended

MNR79-1

PROJECT 522:
MINERALOGY AND PETROLOGY OF DDH J-7

by

J. Douglas Scott

November, 1979
Ottawa, Ontario

Approved:

Research and Development Division

ELDORADO
ELDORADO NUCLEAR LIMITED

PROJECT 522: MINERALOGY AND PETROLOGY OF DDH J-7

by

J. Douglas Scott

ABSTRACT

Autunite is the only uranium mineral present, as crystalline patches and veins to 1 mm thick; it is concentrated in those fractures which are transverse to the core axis and has been deposited from groundwater. The biotite quartz monzonite host of DDH J-7 is fresh throughout but has been slightly weathered by groundwater circulation through the fracture system. Final-stage solutions released by fracturing of the pegmatites are the source of the stilbite veins found in the axial set of fractures.

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INTRODUCTION

Twenty-one samples of drill core from Project 522 were received from the Exploration Division in September 1979, with a request for mineralogical studies. The samples are listed in Table 1, and include 2 samples from DDH J-1, 4 from J-6 and 15 from J-7.

Oriented thin sections were prepared from all specimens, many of the phases present were identified by x-ray powder diffraction, all cores were examined under ultraviolet light, and bulk densities were determined for selected core samples.

In the course of these studies, numerous unusual and significant features of the host rock of the deposit were observed. The present report, therefore, includes a description of the petrology of the samples as well as of their uranium mineralogy. Taken together, the petrological and mineralogical findings suggest a deposit model for Project 522.

PETROLOGY

Rock types observed in this study are listed in Table 1. The strongly altered appearance of some hand specimens proved deceptive. X-ray powder patterns taken on the soft crumbly feldspars of the apparently kaolinized specimens (Table 2) show only a trace of sericite or chlorite in the feldspar. In thin section, the "alteration"

Table 1. Samples supplied

Sample No.	Hole No.	Depth (ft)	Rock Type	Remarks
12951	J-1	108	quartz monzonite	autunite crystals
12952	J-1	213	quartz monzonite	stilbite vein, fresh
1294	J-6	443	pegmatite	large sheared garnets, stibitic
1295	J-6	460	quartz monzonite	fine grained, fresh
1296	J-6	536	transitional syenite-monzonite	chloritized, sericitized
1297	J-6	545	syenite	sericitized, chloritized
1298	J-7	33	quartz monzonite	weathered, sheared
1299	J-7	61	pegmatite	much muscovite
1188	J-7	109	quartz monzonite	weathered
8938	J-7	137	quartz monzonite	weathered
1189	J-7	181	pegmatite	small garnets, stilbitic
1190	J-7	191	quartz monzonite	weathered, autunite vein
1191	J-7	201	quartz monzonite	weathered
1192	J-7	219	quartz monzonite	weathered
1193	J-7	254	proto-mylonite	heavily chloritized, tight rock

(continued)

Table 1. Samples supplied (continued)

1194	J-7	280	pegmatite	stilbitic microcline
1195	J-7	354	quartz monzonite	fresh
1196	J-7	360	smokey quartz	
1197	J-7	395	quartz monzonite	slightly weathered
1198	J-7	477	pegmatite	tourmatine, apatite
1199	J-7	497	quartz monzonite	fresh

Table 2. X-ray Identifications

Sample	DDH	Depth	Material Examined	Identification
12951	J-1	108	green xline axial fracture (fl green)	meta-autunite
12952		213	white xline axial fracture filling	stilbite
1294a	J-6	443'	clear pale brown garnet, sheared	almandine (a=11.575Å)
b			creamy white feldspar cleavage	orthoclase
1295		460	greasy white cross-fracture filling	muscovite (sericite)
1296		536	crumbly white'altered' feldspar	oligoclase (+ mr amorphous?)
1298a	J-7	33	'mud' fracture-filling axial	quartz+oligoclase+mr montmorillonite
b			altered feldspar	oligoclase (+ mr quartz & amorphous)
1299a		61	dark brown flakey scales on feldspar	saponite
b			soft white 'altered' feldspar	oligoclase
1188		109	'altered' feldspar	oligoclase
8938a		137	soft white transverse-fracture filling	quartz + mr chlorite
b			yellow plates in fracture (fl green)	meta-autunite
1189a		181	yellow plate in crack in feldspar	meta-autunite
b			soft white alteration(?) layer in microcline	stilbite
c			garnet crystal	almandine (a=11.57Å)
1190a		191	yellow xls in transverse fracture	meta-autunite
b			soft white material in same fracture	quartz + oligoclase
1191a		201	yellow xls in transverse fracture	meta-autunite
b			soft white material in axial fracture	saponite + quartz + trace stilbite
1192a		219	soft white axial-fracture filling	stilbite + saponite
b			pale 'waxy' brown layer under (a)	saponite
1193		254	pale green greasy material	muscovite
1194		280	white xline layers along feldspar cleavage	stilbite
1195		354	pale greenish axial fracture filling	stilbite (+ trace chlorite)
1197a		395	as for 1195 but slickensided	quartz + feldspar + chlorite
b			soft white 'altered' feldspar (fl orange LW)	orthoclase (anorthoclase??)
1198a		477	pale greenish xls (fl bright orange)	fluorapatite
b			hard white feldspar (fl pale red)	albite
c			hard black crystals	tourmaline

of the feldspar is seen (Figure 1) to consist of a network of compression fractures, mainly in the potash feldspars. These fractures are only slightly sericitized, and the chloritized biotites in the rock are somewhat limonitized. Since the feldspars have not in fact been kaolinized, the apparent alteration must be due to a groundwater weathering process related to the intense shearing of the rocks, as opposed to a hydrothermal event. The rock should, therefore, be classed as fresh, not altered.

The host rock cut by DDH J-7 is a biotite quartz monzonite with minor (<1%) accessory apatite. Given the extensive overprinting of the rocks by muscovite, the severe chloritization of the biotite and the apparent absence of relict amphiboles, it is presently unknown whether this rock represents the altered phase of a granite or whether it is an original intrusion. There is minimal sericitization of the feldspars, but in view of the cloudy appearance of much of the potash feldspar and the apparent replacement of some of the plagioclase by orthoclase (Figure 1), it is probable that an early hydrothermal potassic alteration affected the entire unit. In general, the host rock strongly resembles that found on the fringes of a porphyry copper system (J.L. Jambor, personal communication): this rock, however, contains no sulfides whatsoever. The numerous pegmatitic zones appear to be genetically related to this hydrothermal event, as it is certain that they were extremely hydrous and cooled slowly.

Figure 1. 522-1188 80X (crossed nicols)

Fractured orthoclase, in part replacing plagioclase (lower right) which shows minor sericitization (white) along twin planes. The anastomosing fractures appear black due to a trace of limonitization; only very minor sericite has developed in some of the fractures.

Two significant fracturing episodes occurred in two major conjugate directions, one roughly axial to the core and the other transverse (Table 3). The mineralogy of the fracture fillings (Table 3) is dramatically different for the two directions. The axial set contains gouge or stilbite ($NaCa_2(Al_5Si_{13})O_{36}\cdot 14H_2O$) and in DDH J-6 is reported also to contain carbonate at depth (W.J. Olsson, personal communication), whereas the transverse set contains gouge and autunite. In the pegmatites, the feldspars, especially the microcline, occasionally contain elongate subparallel inclusions of stilbite (Figure 2), inclined at about 25° to the core axis. Since these inclusions are pure stilbite, the crystallization temperature both of these inclusions and of the fracture fillings must have been below 150°C (Liou 1971; Juan & Lo 1973). It is hypothesized that the residual liquid in the pegmatite was shock-released by the formation of the axial set of fractures; this fluid then deposited stilbite in cracks in the feldspars (and also in the cracked garnet of 1294, DDH J-6) and in the open fractures, in most cases completely filling them. The transverse set of fractures must have occurred later, because they sometimes cut the axial stilbite veins. The latter episode resulted in crushing of the feldspars and opened channelways for subsequent circulation of uranium-bearing groundwater.

The host rock cut by DDH J-6 is quantitatively different from that described above for DDH J-7. The J-6 pegmatite (sample 1294) contains large, sheared, subhedral phenocrysts of almandine garnet ($Fe_3Al_2(SiO_4)_3$) with thin films of stilbite in their fractures. Three

Table 3. Fracture-filling materials.

Sample	Fracture Angle	Mineralogy
1294	60°	muscovite, chlorite
1295	50°	muscovite
1298	25°	gouge
8938	80°	quartz, chlorite, autunite
8938	25°	gouge
1189	30°	trace stilbite (tight fracture), trace autunite
1190	50°	autunite growing on quartz + oligoclase gouge
1191	25°	saponite + quartz + trace stilbite, autunite
1191	80°	autunite
1192	10°	stilbite underlain by saponite, trace autunite
1193	30°	muscovite
1194	45°	muscovite, chlorite, stilbite
1195	10°	stilbite, trace chlorite
1197	10°	chloritic slickensided gouge
1198	30°	muscovite, stilbite
12952	15°	stilbite

Figure 2. 522-1194 30X (crossed nicols)

Stilbite veinlets (white) filling late-stage fractures in a microcline crystal. The axis of the core is vertical; these fractures are clearly related to the ≈25° set of axial fractures containing stilbite veins.

other rock types were also observed: 1295 is a fine-grained "fresh" quartz monzonite; 1296 contains less quartz and more sericite, and appears to be transitional to a syenite; and 1297 is a sericitized syenite. All observed fracturing is transverse, and only muscovite (sericite) has developed. No uranium minerals were observed in the four samples from DDH J-6.

Since some of the core boxes seemed to be heavier than expected in the field (W.J. Olsson, personal communication), bulk densities were taken on selected "fresh" core specimens (Table 4). Only the garnet-rich pegmatite is significantly denser than the other rocks.

URANIUM MINERALOGY

The only uranium mineral observed in Project 522 material examined to date is meta-autunite: $Ca(UO_2)_2(PO_4)_2 \cdot 6H_2O$. Its distribution, determined on the basis of its fluorescence in short-wave ultraviolet light, is given in Table 5. It is concentrated in the transverse fractures with only minor amounts occuring in axial fractures (Table 3). Autoradiographs of the sawn core of the most radioactive samples, 1190 and 1191 (Figure 3), show that there are only trace amounts of uranium mineralization within the rock. These areas are always associated with mica books in small open pockets in the rock, and are usually concentrated close to transverse fractures (e.g., sample 1191 in Figure 3).

Table 4 Measured densities of drill core

sample	density	rock type
1294	2.76	pegmatite (garnet)
1295	2.62	fresh monzonite
1194	2.53	pegmatite (stilbitic)
1195	2.54	slightly "altered" quartz monzonite
1198	2.62	pegmatite (tourmaline)
1199	2.61	fresh quartz monzonite

Note: Measurements made by volume displacement of acetone on 200g samples of solid core; estimated error is ±0.02 g/cc.

Table 5 Observed fluorescence (short wave UV)

sample	DDH	depth	remarks
1298	J-7	33'	two dull green specks on muscovite
1299		61	several dull green speck on mica
1188		109	rare green specks on mica
8938		137	numerous vivid green specks/patches of meta-autunite on gouge in cross-fracture, one large crystal on gouge in axial fract.
1189		181	rare vivid green meta-autunite crystals on axial fracture
1190		191	1 mm vivid green vein of meta-autunite crystals in transverse fracture; rare specks throughout rock.
1191		201	vivid green patches of meta-autunite on transverse fracture, rare specks on axial fracture, common specks throughout rock.
1192		219	very rare tiny green specks on axial fract.
1198		477	rare 2 mm apatite crystals fluoresce bright orange, the unaltered oligoclase fluoresces pale red.

Note: In general the meta-autunite is concentrated on those fractures which are transverse (45-90°) to the core axis.

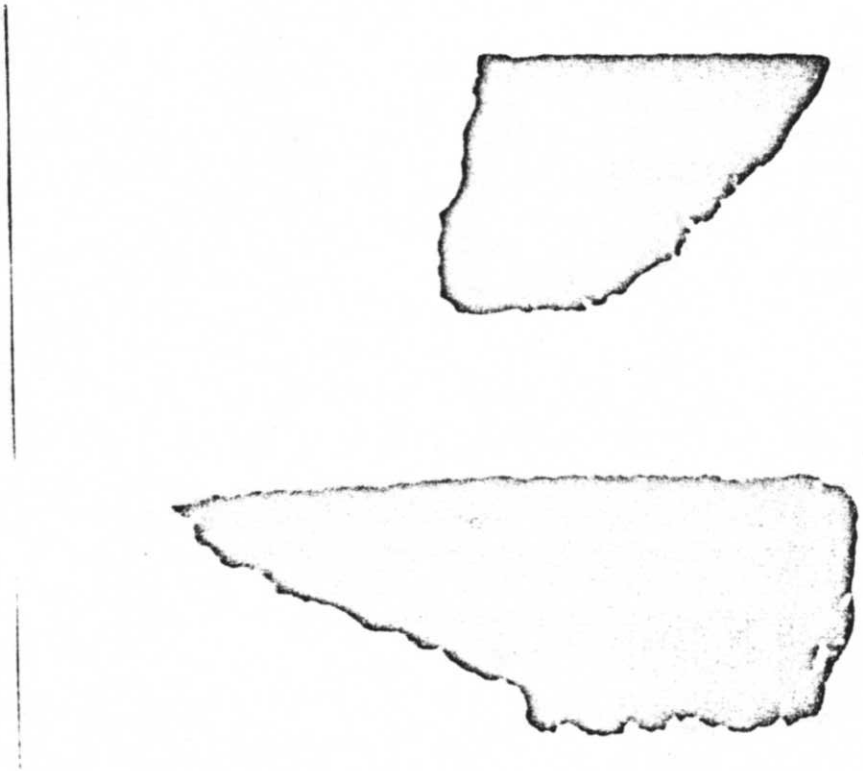

Figure 3.

Autoradiograph (72 hours) of sawn core samples 522-1190 (above) and 522-1191 (below). Autunite-vein mineralization occurs along the transverse fracture (right hand end) in both cases; note the development of minor patches of radioactivity (white) within sample 1191, parallel to this fracture.

DISCUSSION

The occurrence of a deposit in which primary autunite is the only uraniferous species, with no associated uranium oxide minerals, is extremely unusual. The only known case of a commercial deposit which is not in sandstone is that of the Daybreak mine, Washington (Norman 1957, Leo 1960). The Daybreak deposit produced about 60,000 pounds of U_3O_8 up to 1966, when it was mined out (Milne 1978), and has considerable similarity to that shown in DDH J-7, both in host rocks and ore location, the major difference being the presence of kaolinized feldspars at Daybreak. The Daybreak orebody thus has been presumed to have been formed by deposition from ascendant juvenile waters.

For the anomaly explored in Project 522, it is proposed that weakly acid, phosphatic, flowing groundwater deposited primary autunite directly in open fractures above the water table. The evidence supporting this hypothesis follows:

(1) Autunite, growing in "open" fractures, is the only uranium mineral present in the core, and calcite is absent in the mineralized area.

(2) Water samples taken from seeps in trenches JT1 to JT4 have an average composition of HCO_3 20 ppm, PO_4 172 ppm, Si 11 ppm and Ca 3.3 ppm, with a pH range of 6.1 to 6.5 and an Eh of +0.344 volts.

(3) The work of Langmuir (1978) and Shcherbina and Ignatova (1956) has shown that the stability field of autunite lies between pH 5 and 7 in groundwater similar to the above composition. Above pH 7, autunite dissolves with the formation of phosphuranylite, uranophane and calcite; autunite will not form below pH 5.

(4) The occurrence of autunite crystals emplaced on unaltered stilbite indicates that the temperature of autunite deposition was less than 70°C (Liou 1971).

CONCLUSIONS

Given that autunite forms only above the permanent water table (Wright & Emerson 1957), that the uranium in the autunite is in a state of disequilibrium with respect to the daughter products radium and beyond (D.J. Francis, personal communication), and that the observed groundwaters are of ideal character to dissolve uraninite, transport uranium and deposit autunite (Langmuir 1978), a local upslope source for the uranium found in Project 522 appears most likely.

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Form 5

ELDORADO

ELDORADO NUCLEAR LIMITED

INTER-OFFICE

Date November 5, 1980

To: D.M. Ward

From: J.D. Scott 452.02

Subject: Project 522 Core and Trench Samples, JOVE Group

A total of 56 additional samples from JOVE, comprising 48 drill core specimens and 8 bulk samples were received in July and August (memo: DMW to JDS, July 7 and 17, August 6 and 11), 1980; as well, three heavy mineral separates relevant to this discussion were reported on in July (memo: JDS to EENS, July 4).

An extremely puzzling feature of these samples is that the three groups, viz. core, bulk and heavy mineral, appear to bear no relationship to each other! They are discussed separately below.

No new features were observed in the drill-core samples beyond those previously described in MNR79-1. The only uranium mineral present is meta-autunite as coastings in and dissemination adjacent to fractures. Numerous scans across crystals from many samples revealed no trace of Mg and there is thus no saleeite present in the deposit. Careful examination of the apatite crystals present in the core (fortuitously fluorescent bright orange) showed them to be fresh and sharp, without visible leaching; they are not perhaps as widespread as was supposed, being present only in samples 14764, 14772, 14776(tr), 14789 and 14796(tr).

The seven "bulk" samples taken from the trench at 30 + 00 N in the central draw were analyzed for uranium, as requested. Some 1-2% Rb is present in all samples.

Sample	%U	% Y
2507	0.002	<0.001
2508	0.003	"
2509	0.004	"
2510	0.002	"
2511	0.002	"
2512	0.005	"
2513	0.007	"

The samples were also checked for the obvious presence of xenotime, with negative results. Portions were then crushed, concentrated and reexamined; the heavy mineral suite found bears no relationship to that of sample 44-JT-2, consisting mainly of garnet, tourmaline and apatite, with minor magnetite and hematite. Augite, olivine, xenotime and columbite (all noted in 44-JT-2) were conspicuous by their absence. Apatite crystals recovered from these concentrates (specifically from sample 2511) were examined on the SEM; these showed (SEM report 10-80-54) that the crystals are only slightly rounded and have suffered only minimal surface dissolution along fracture nets. This conclusively rules out the possibility that local apatite dissolution is providing the necessary phosphorous for precipitation. It would appear that both U and P were travelling together in the parent solution; however, there are indications that the fault geuge on the fractures in the drill core is depleted in Ca relative to the adjacent host-rock . It is thus possible that a local source of soluble calcium was the trigger for autunite precipitation. It is also noteworthy that no trace of autunite was detected in any of the bulk samples; however, especially in sample 12954, minor amounts of vividly green fluorescent smokey quartz was found. This quartz appears to contain minor uranium in opaline intergrowths; it is not autunite and the U content of such quartz is <0.001%.

When the discrepancy between the bulk samples and heavy mineral samples 44-JT-1,2,3, and 4 was noted, sample 44-JT-2 was reexamined in more detail with the result that trace monazite rutile, both in euhedral prismatic crystals, can be added to the list of minerals present. These heavy samples are at complete variance with all other samples from JOVE, both in their major and their minor consituents; where, for example, are all the euhedral olivine crystals coming from?

In summary, the current work has confirmed the previous conclusion that the uranium mineralization present in the drill core is the result of local precipitation of uraniferous solutions which have migrated into the area from elsewhere. It has also raised serious questions as to the provinance of the heavy mineral samples.

J.D. Scott

EXPLORATION DIVISION

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c.c.: EENS
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