REPORT ON THE 1979 FIELD PROGRAM
JOVE 1-6, 12, 55-58,
69-72, 79-84,
119F, 120F
DAWSON MINING DISTRICT
CLAIM SHEETS 115N/9, 115N/10
115N/15, 115N/16

Lat. 63°43'N Long. 140°31'W

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 $ 97,400.00

Resident Geologist or
Resident Mining Engineer

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

B. R. BAXTER
Supervising Mining Recorder

per Commissioner of Yukon Territory

090657
January 1980

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I - GENERAL

1.1 Introduction

The JOVE property consists of 370 contiguous mineral claims located at the headwaters of Glazy Creek approximately 40 kilometres southwest of Dawson City, Yukon. The claim group is centered on $63^{\circ}44'$ North Latitude at $140^{\circ}31'$ West Longitude and is located on claim map sheets 115N/9, N/10, N/15 and N/16.

Initially 16 claims were staked in 1977. These were examined late in 1977 and an additional 116 claims were subsequently added in 1978. The ground work carried out in 1977 was extended in 1978 to cover an additional 36 claims. Assessment reports for both programs have been filed with the Mining Recorder's office in Dawson City.

1.2 Previous work

The geology of the area was mapped by D.J. Tempelman-Kluit and reported in G.S.C. Paper 73-41, entitled "Reconnaissance Geology of Aishihik Lake, Snag and Part of Stewart River Map Areas, West-Central Yukon". A previous survey within the general JOVE area located 40 samples greater than 12 ppm U with the highest reading 171 ppm U.

Eleven of these were on drainages from what is now the JOVE showing and ranged from 610 to 171.0 ppm U. In

1977, an Archer-Cathro crew accompanied by an Eldorado geologist and Eldorado's District Geologist examined the area. The initial JOVE showing was picked up by an airborne hounddogging radiometric survey and on the ground recorded 2,600 cps over a background of 170 counts. A seep at this location analysed 57 ppb in water. In the immediate JOVE area, twenty water samples were collected which ranged from 0.2 to 67.0 ppb. Thirteen of these analysed greater than 5 ppb U. Thirty-six stream silts were collected in this same area, nineteen of which analysed greater than 10 ppm U with the highest value being 308 ppm. A semi-detailed soil-geochemical survey and radiometric survey on a 100 metre grid located an anomaly centered on the original airborne high. Reconnaissance work in the area around the claims was carried out and an investigation of a second airborne anomaly close to the original claims returned soil values of 545, 765 and 935 ppm U. A further eight claims were staked to cover this occurrence.

A semi-detailed radiometric/soil geochemical survey on a 100m x 100m grid in 1978 located several strong radiometric and geochemical anomalies on the property. The highest radiometric response was 550 cps while the highest geochemical value was 1350 ppm U.

1.3 Claims

The JOVE claim block has been acquired through the staking of 5 groups of claims. JOVE 1-8 was initially staked in May of 1977 followed by JOVE 9-16 in September

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1977. In May 1978, JOVE 17-132 were acquired. Work on the property in early 1979 indicated a fraction was present between JOVE 1-8 and JOVE 9-16, so claims JOVE 119F to 122F were acquired. Towards the end of the 1979 field season, a decision was made to extend the JOVE boundaries by 238 additional claims. An error in numbering the claims resulted in 2 claim blocks numbering JOVE 123-132. The second group was renamed JOVE 363-370 to avoid any confusion at a future date. Table I outlines the JOVE claim block by name, recording data and expiry date.

TABLE I

Claim Name	Grant Number	Recording Date	Expiry Date
JOVE 1-8	YA10220-YA10227	June 7, 1977	March 9, 1985
JOVE 9-16	YA10756-YA10763	August 27, 1977	March 9, 1985
JOVE 17-132	YA29892-YA31007	June 9, 1978	March 9, 1985
JOVE 119F-121F	YA32578-YA32581	June 8, 1979	June 8, 1985
JOVE 133-370	YA47337-YA47574	Sept. 3, 1979	Sept. 3, 1984

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II - THE 1979 FIELD PROGRAM

2.1 Introduction

The work on the JOVE property consisted of a resistivity survey combined with an EM-16 survey, detailed radiometric and soil geochemical surveys, a trenching program combined with diamond drilling.

The geophysical portion of the program (excluding the radiometric survey) was carried out in early June. The geochemical work, trenching and diamond drilling phase took place in August and September.

2.2 Logistics

2.2.1 Location and Access

The JOVE property consists of 370 contiguous mineral claims staked near the headwaters of Glazy Creek, a tributary of Matson Creek located approximately 40 miles southwest of Dawson City. Access to the property is by helicopter from Dawson City, by cat road from mile 12 of the Taylor Highway or by helicopter from the Matson Creek air strip.

2.2.2 Mobilization and Contractors

The work in June was carried out from a thirteen man camp established at Mile 36 of the Taylor Highway. Daily mobilization to the property was by Hughes 500C

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Name	Position	Status	Dates worked on JOVE claims in 1979
W. Olsson	Project Geologist	permanent	June 3, Aug. 8-Sept. 14
G. Delaney	Geologist	temporary	June 2, 3, 12
B. Duncan	Geologist	temporary	June 2-6, 8-10, 12, 14
G. Owsiacki	Assistant	temporary	June 2-5, 8, 10-14
J. Crux	Assistant	temporary	June 3, 4, 11-14
A. Pasitchwiak	Assistant	temporary	June 2, 11, 12, 14
E. Connell	Assistant	temporary	June 2, 3, 11
B. Skelly	Assistant	temporary	June 3, 4, 11
Resistivity crew	Contractors		June 6-June 13
J. Fisher	Technician	temporary	Aug. 7-Sept. 8
C. Gleeson	Geochemist	consultant	Sept. 6

TABLE II A Summary of Dates Personnel Worked on the JOVE Property in 1979.

Helicopter flown under contract to LiftAir International of Calgary, Alberta, and flown by pilot/engineer Bert Edwards. Heavy equipment required for the program in August and September was mobilized by Nodwell, owned and operated by DynaHaul Limited of Calgary, Alberta. Camp gear, personnel and fuel supplies were ferried in by a Gazelle Helicopter, owned and operated by Shirley Helicopters of Edmonton, Alberta.

Contractors on the property included Mertens-MacNeil, Geophysical Contractors of Guelph, Ontario for the resistivity survey; E. Caron Diamond Drilling Limited of Whitehorse, Yukon performed the diamond drilling; LiftAir International of Calgary, Alberta provided helicopter support at various times as did Trans North Turbo Air of Whitehorse, Yukon; Resources Expediting of Dawson City provided necessary logistical support in August and September. Dr. C.F. Gleeson, Consulting Geochemist, provided technical assistance to the project.

2.2.3 Crew

All work in June was performed out of a thirteen man camp located on the Taylor Highway whereas that in August and September was done from a camp established on the property. Table lists the names of individuals who worked on the JOVE property along with dates involved.

2.2.4 Permits and Licences

Land Use Permits were required for the camp established on the Taylor Highway as well as for mobilizing the equipment by Nodwell into the property. The camp established on the property in August did not require a Land Use Permit, nor did the trenching, however, a Water

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Use Permit was issued for the drilling. Table summarizes the permits issued along with the purpose and issuing office.

2.3 1979 Program

2.3.1 Objectives

The objectives of the 1979 field work done on the JOVE property were threefold:

(1) By obtaining geochemical samples in a detailed manner, we hoped to fully understand the surficial geochemical environment of the JOVE property as well as identify the manner in which uranium is being transported through this environment.

(2) Assess several geophysical and geochemical techniques available to us as a means of delineating potentially mineralized zones.

(3) Test the 3 most important soil anomalies initially by trenching followed by diamond drilling.

The work on the JOVE property was carried out in 2 phases. Phase I, run early in the season, involved a dipole-dipole resistivity survey over the area of influence governing the anomalous zones on the property. Phase II was a trenching and diamond drilling program undertaken late in the season to evaluate the best geochemical anomalies.

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2.3.2 Geophysics

A dipole-dipole apparent resistivity survey, a VLF-EM 16 survey and a detailed scintillometer survey were undertaken on the JOVE property in 1979. The combined objectives of these surveys were:

(1) to test the feasibility of using the dipole-dipole resistivity method in locating porous, structural features within the bedrock,

(2) to test the feasibility of using a VLF-EM 16 instrument as a tool in identifying conductive structural features in the bedrock,

(3) to compare the results of the VLF-EM 16 survey with those of the resistivity survey to see if they are coincident with one another,

(4) to obtain a detailed radiometric signature of the 2 strongest uranium-in-soil anomalies on the property.

(i) Dipole-Dipole Apparent Resistivity

The resistivity work was contracted to Mertens-MacNeil Geophysical Contractors. A dipole spread of 50 metres was employed and readings were taken to the 5th separation. Lines 28+00N, 35+00N and 40+00N were run from station 22+50W to station 52+50W. Calculations involving the field data were made daily and the results were plotted in profile form at a scale of 1:2,500.

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(ii) VLF-EM 16

The VLF-EM 16 survey was completed by Eldorado personnel utilizing a Geonics VLF-EM 16 instrument owned by Eldorado. The Seattle station NLK (18.6 kHz) was employed as a transmitter and readings were recorded at 25 metre intervals. Both in-phase and out-of-phase readings were plotted in profile form on a daily basis at a scale of 1:5,000. The survey was run along lines 28+00N, 35+00N, 40+00N and 42+00N between stations 22+00W and 54+00W while line 31+00N was run between stations 22+00W and 42+00W. Reading of line 31+00N was terminated prematurely due to inclement weather conditions.

(iii) Radiometric

A detailed radiometric survey was completed over the 2 major soil anomalies on the JOVE property. Scintrex BGS-1SL total count scintillometers were used. Readings in counts per second were recorded every 10 metres along lines 50 metres apart.

2.3.3 Geochemistry

An integrated program involving water sampling, soil sampling, rock analysis and soil gas sampling was carried out over portions of the JOVE property in 1979. The combined objectives of these techniques were:

(1) to carry out sufficient sampling and analysis to fully evaluate the geochemical environment of the JOVE claim group,

(2) to test the applicability of radon gas analysis in delineating areas of possible uranium mineralization,

(3) to delineate in greater detail the uranium-in-soil anomalies present in the eastern and central draws of the JOVE property,

(4) to compare the uranium and thorium content of soils and of rocks.

All soil and rock samples were submitted to Chemex Labs of North Vancouver for analysis. Bulk water samples, taken for radium and radon analysis were shipped to the Bondar-Clegg labs in Ottawa, Ontario.

(i) Hydro

Bulk water samples were obtained from the central draw on JOVE and submitted for total dissolved solids analysis which included Eh, K, Ca, U, Co_3, Cl, SiO_2, SO_4 and PO_4 contents as well as pH, specific conductivity and uranium content. Late in the season, additional samples were obtained from the property. They were submitted for the following analysis: U, F, HCO_3, Na, Ca, Mg, PO_4, Rn, Ra, Cl and SO_4.

(ii) Rocks

All rocks collected in conjunction with the geochemical soil survey were submitted for U and Th analysis.

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(iii) Soils

The soil geochemical work performed on the JOVE property was divided into three phases:

1 - All soil sample splits retained from previous work were analyzed for their thorium content.

2 - Three soil pits were dug, profiled and sampled on the JOVE EASTERN anomaly.

3 - Soil samples were obtained from the CENTRAL and EASTERN anomalies every 50 metres along lines 50m apart. Over the radiometric anomalies, the sample interval was reduced to 25 metres. These samples were submitted for uranium analysis only.

(iv) Soil Gas

Several test lines were completed using alpha meters. Stations were chosen to cover known anomalies as well as non-anomalous areas in order to obtain a contrast between the 2 zones. Meters were left in position or a 24-hour period following which measurements were made and recorded.

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2.3.4 Trenching

(i) Introduction

In August, prior to diamond drilling the JOVE property, a D-6E cat was employed in trenching the central anomaly. The cat work was carried under contract to E. Caron Diamond Drilling Contractors of Whitehorse, Yukon Territory. Initially plans required trenching to be undertaken in the eastern, central and western anomalies, however, due to numerous breakdowns resulting from the difficult trenching conditions, no work was initiated on the eastern anomaly.

(ii) Trench Location

A total of 4 trenches were dug on the JOVE property in 1979. Table III summarizes the locations, orientation and trench number.

TABLE III

Summary of Trenches - JOVE Property 1979

Trench	Location	Approximate Orientation	Line	Station to Station	
JT-1	Central Anomaly	E-W	28+00N	39+00W	41+65W
JT-2	"	E-W	29+00N	38+70W	41+50W
JT-3	Western Anomaly	E-W	35+00N	49+00W	50+50W
JT-4	"	N-S	50+10W	34+05N	36+80N

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(iii) Surveys

Once each trench was completed, the following surveys were performed:

a) radiometrics
b) soil profiling
c) geological mapping.

(a) Radiometric

Detailed radiometrics were measured in each trench, using Scintrex BGS-1SL total count scintillometer. Lines were at 5 metre intervals and ground level readings were recorded every 1 metre.

(b) Soil profiling

Samples of the various soil horizons were obtained on sections 10 metres apart. The A_o, A, B and C horizons were all sampled. (In areas of a large C horizon, 2 samples were obtained.) Across the radiometric anomalies defined by the scintillometer survey of the trench, the profile interval was reduced to 5 metres.

(c) Geological mapping

A geological map of all trenches was drawn up. Data is plotted at a scale of 1:1,000.

2.3.5 <u>Diamond Drilling</u>

(i) Introduction

Approximately 3000 feet (915m) of BQ size core diamond drilling was completed on the JOVE property in 1979. The drilling was contracted to E. Caron Diamond Drilling Ltd. of Whitehorse, Yukon. Logistical support was provided by

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TABLE IV

Drill Hole	Anomaly Location	Co-ordinates	Dip	Az	Depth Feet	Metres
522-79-26-J-1	Central	40+75W 28+00N	-50°	110°	453	138.1
522-79-26-J-2	"	40+60W 29+00N	-50°	290°	502	153.0
522-79-26-J-3	"	40+70W 29+00N	-60°	110°	403	122.8
522-79-26-J-4	Western	35+75N 50+25W	-60°	065°	332	101.2
522-79-26-J-5	"	35+25N 50+75W	-60°	065°	362	110.3
522-79-26-J-6	Central	41+50W 27+90N	-60°	110°	549	167.3
522-79-26-J-7	"	41+16W 29+20N	-60°	110°	502	153.0

Summary of Diamond Drill Hole Logistical
Statistics - JOVE Property 1979

Resources Expediting of Dawson City, Yukon, Dyna-Haul Ltd. of Calgary, Alberta, Shirley Helicopters of Whitehorse, Yukon, and Trans North Turbo Air Ltd. of Whitehorse, Yukon.

(ii) Drill Hole Locations

There were 7 diamond drill holes collared and completed on the JOVE property in 1979. Table IV summarizes the locations and depths of each hole.

(iii) Geochemical Analysis

During casing operations and until the water return was lost, a sludge sample was taken for every 5 foot run. These samples were submitted for analysis and results are reported as % U_3O_8. All radioactive core was split, with half retained in the field and the other portion submitted for % U_3O_8 analysis. Non-radioactive sections of core were sampled every 5 feet and submitted for uranium and thorium analysis. All analytical work was handled by Chemex Labs in their North Vancouver laboratories.

All drill holes were probed through the casing, using a Mount Sopris G-375 down hole probe connected to a Mount Sopris 1000 recorder. The results of the probing dictated whether or not core was to be split and submitted for a % U_3O_8 analysis or simply sampled every 5 feet for uranium and thorium analysis.

2.4 Discussion of Results

2.4.1 Geophysics

(a) Dipole-dipole resistivity

The dipole-dipole apparent resistivity survey completed on the JOVE property outlined four possible anomalous zones of low resistivity measurements. For simplicity's sake, these zones have been designated as A, B, C and D.

Zone A lies parallel to and beneath the major north trending tributary that flows through the western end of the property. The profiled data indicates the anomaly to be deeply seated and its coincidence with the water course suggests the anomaly represents a major structure.

Zone B is interpreted as representing a deeply seated source that grades southward into a surficial anomaly. Although the interpretation is tentative, the significance of such a structure lies in the fact its south end coincides with the geochemical anomaly referred to as the JOVE CENTRAL anomaly.

Zones C and D are 2 short anomalies lying in the eastern half of the property. Zone C may represent a deep source but more than likely is reflecting surficial conditions. Zone D is also a probable surficial reflection. Zones C and D lie east of the geochemical anomaly referred to as the JOVE EASTERN anomaly.

A more detailed evaluation of the dipole-dipole resistivity survey has been written by Gerry Mitchell, Staff Geophysicst, Eldorado Nuclear Limited. His report has been included in the Appendix for this volume.

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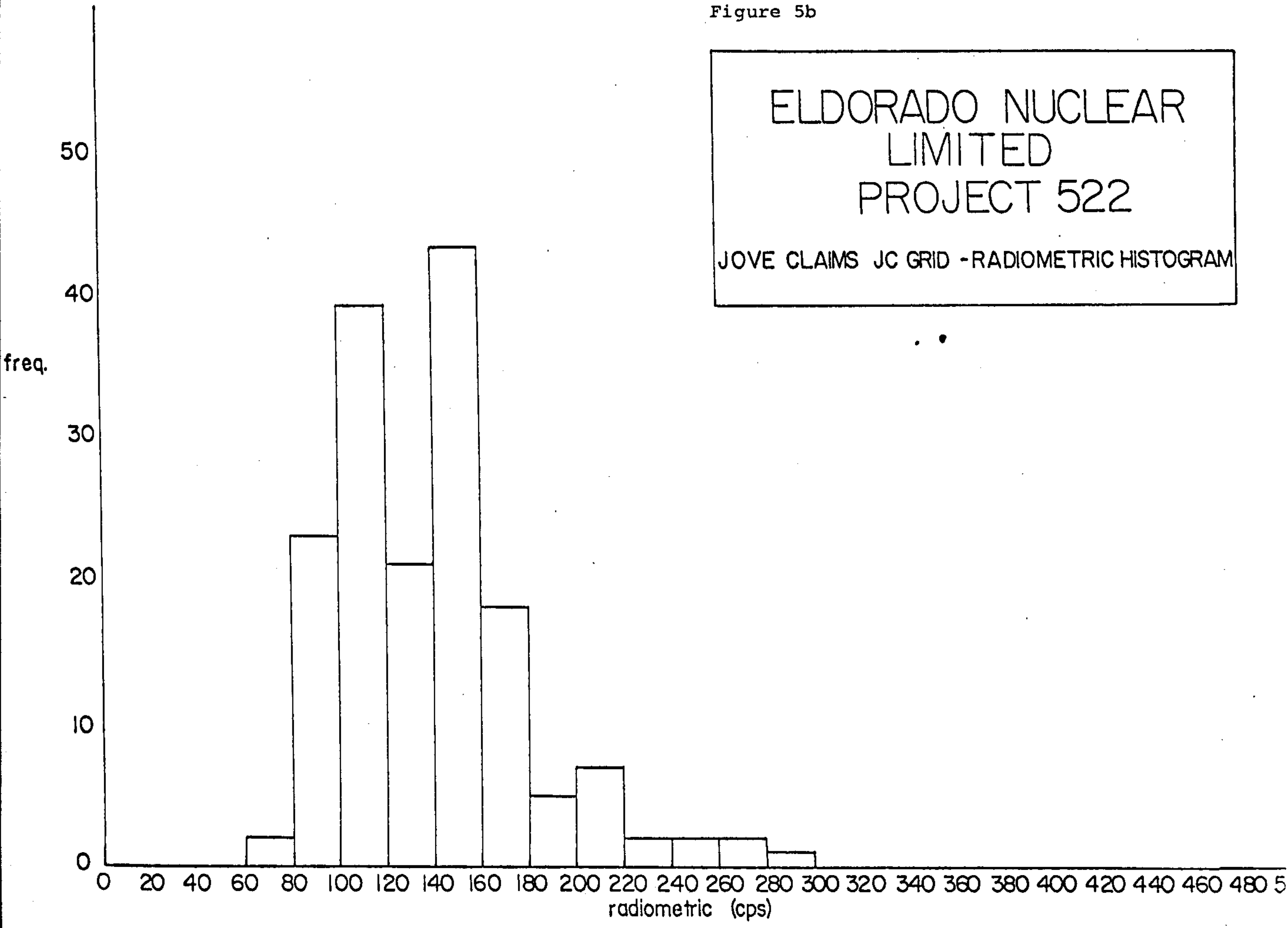
Figure 5b



ELDORADO NUCLEAR
LIMITED
PROJECT 522
JOVE CLAIMS JC GRID - RADIOMETRIC HISTOGRAM
freq.
50
40
30
20
10
0
0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440 460 480 5
radiometric (cps)

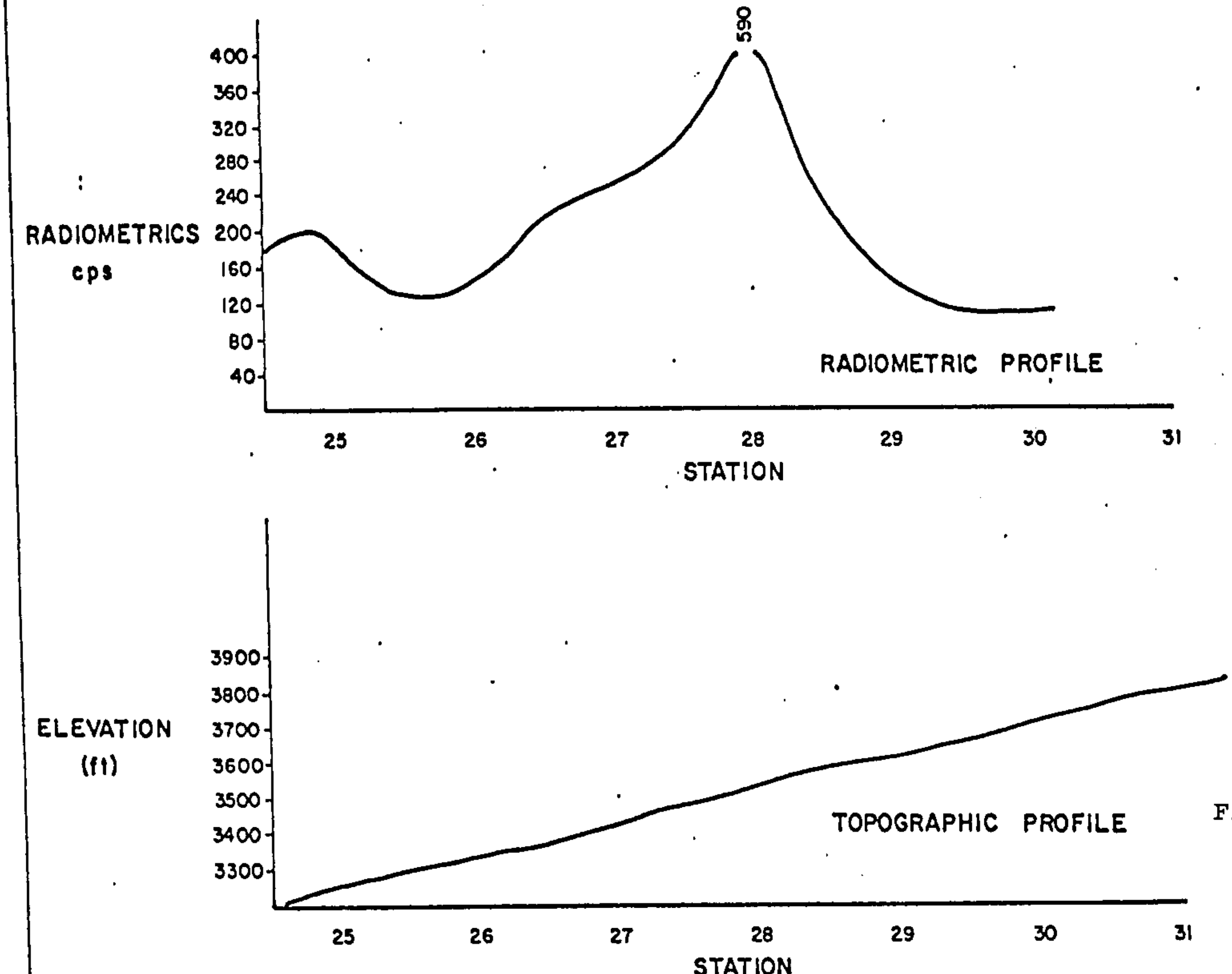


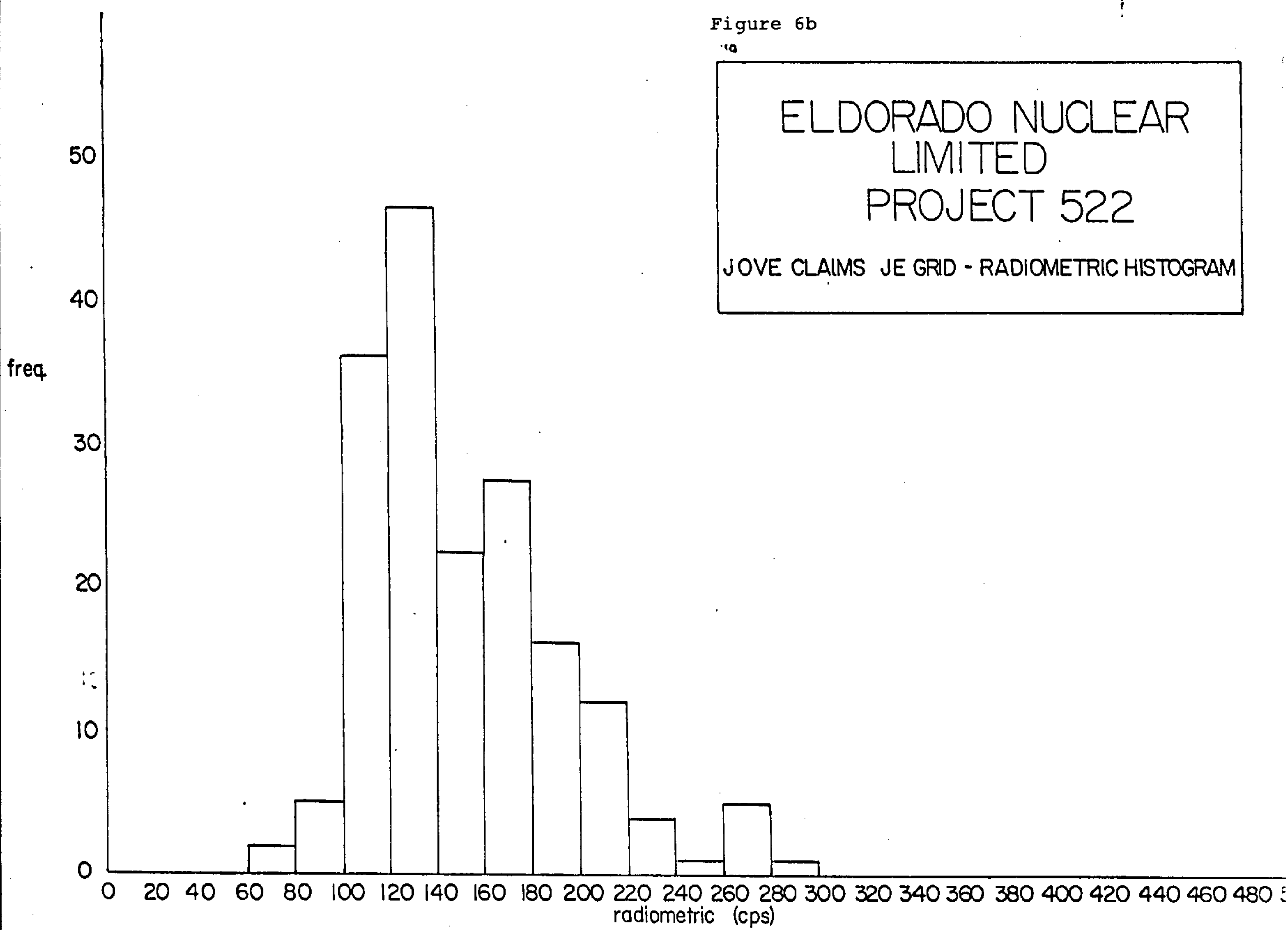
Figure 5c

ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS JC GRID
41+00 W PROFILE
SCALE 1:5000

Figure 6b

ELDORADO NUCLEAR LIMITED
PROJECT 522

JOVE CLAIMS JE GRID - RADIOMETRIC HISTOGRAM



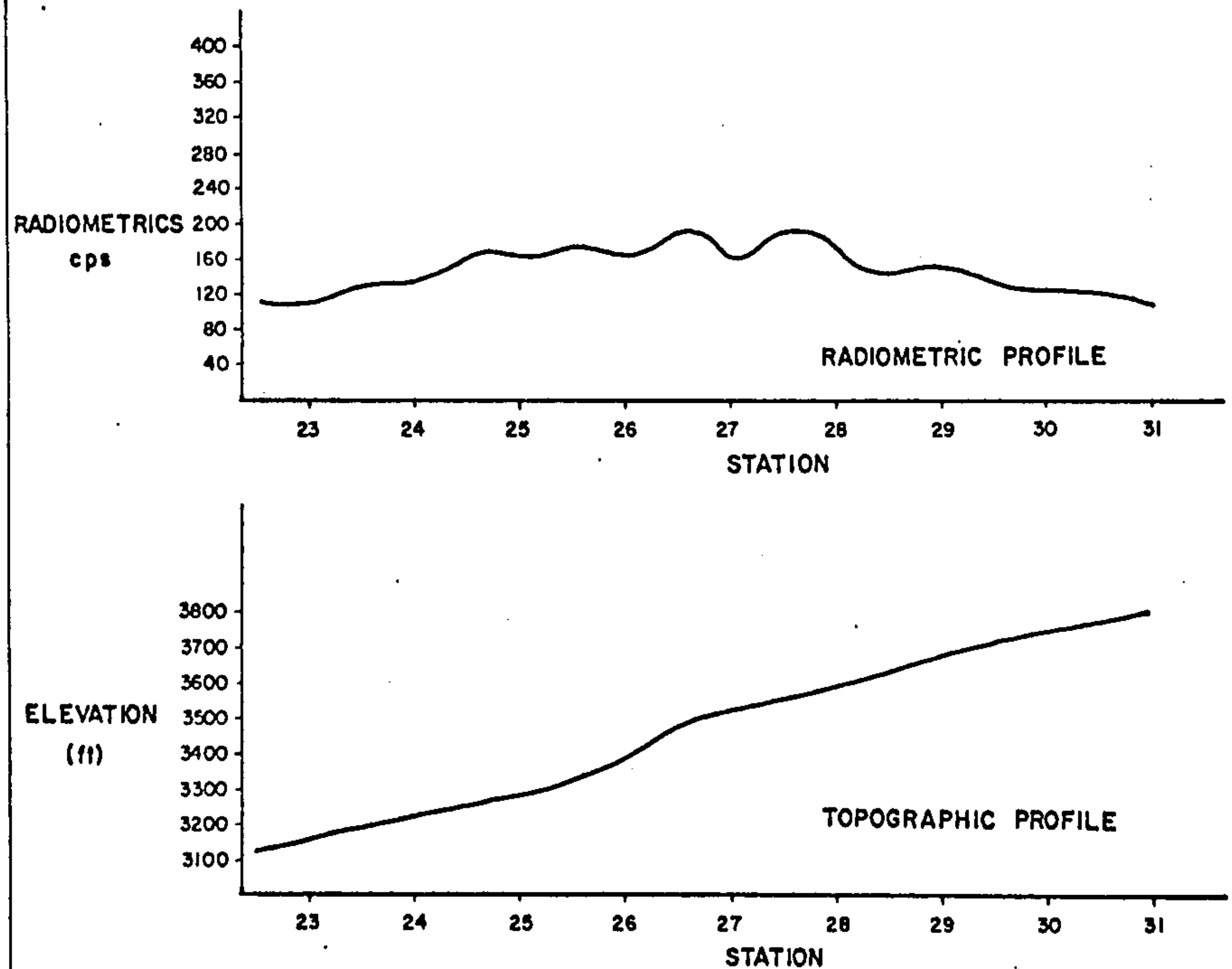


Figure 6c

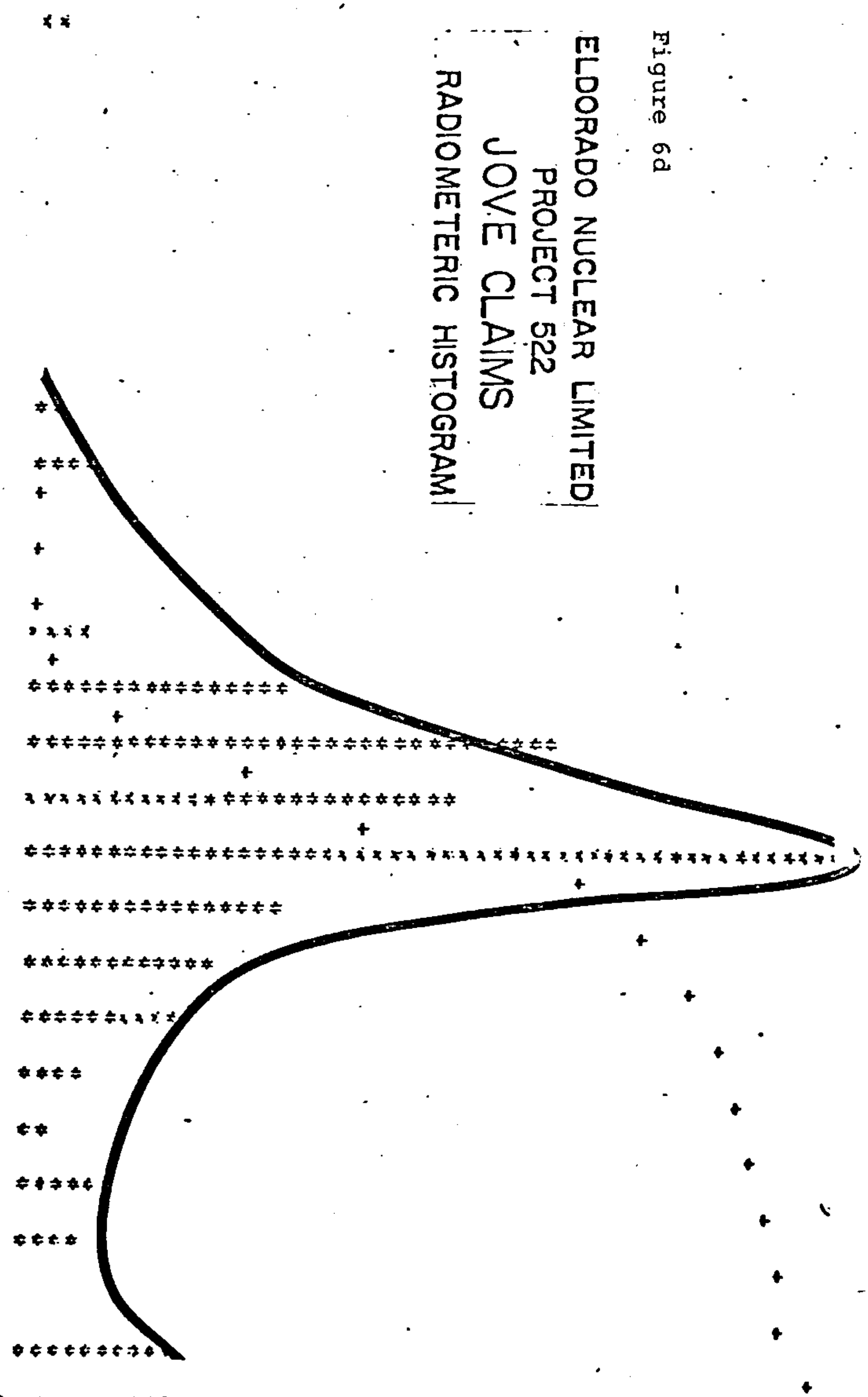
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS JE GRID
32+75 W PROFILE
SCALE 1:5000

Figure 6d

ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS
RADIOMETERIC HISTOGRAM

AREA 18 YUKON STREAM GEOCHEMICAL SURVEY PROJECT 522
P-RK HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV CPS	SAMPLES	CUM FR %
	0	
1.00		0.0
	0	
25.00		0.0
	1	
28.00		0.99
	0	
32.00		0.99
	0	
36.00		0.99
	0	
40.00		0.99
	0	
45.00		0.99
	0	
50.00		0.99
	0	
56.00		0.99
	1	
63.00		1.98
	2	
71.00		3.96
	0	
80.00		3.96
	0	
90.00		3.96
	2	
100.00		5.94
	8	
112.00		13.86
	16	
125.00		29.70
	13	
140.00		42.57
	26	
160.00		68.32
	8	
180.00		76.24
	6	
200.00		82.18
	5	
225.00		87.13
	2	
250.00		89.11
	1	
280.00		90.10
	3	
320.00		93.07
	2	
360.00		95.05
	0	
400.00		95.05
	6	
9999.00		100.00



TOTAL SAMPLES= 101 VALUES < DETECTION = 0 RANGE= 25.000 TO 500.00

(b) VLF-EM 16

The results of the VLF-EM 16 survey are presented as Figure 7-12. The data is plotted in profile form and apart from the apparent activity recorded west of 47+00W, there do not appear to be any conductive structures cutting the JOVE property. Spurious readings where the inphase measurements drastically deviated from the local trend, were observed at several locations such as station 44+50W along line 28+00N. These measurements are attributed to intense instrument noise, operator error or a combination thereof. Eldorado's Staff Geophysicist, Gerry Mitchell, suggests there are not any conductive structures evident from the VLF-EM 16 data. He has further commented that additional testing be undertaken using a smaller line spacing and shorter station interval before the technique can be conclusively discounted.

(c) Radiometric

The contoured results from the radiometric survey that was completed on the JOVE CENTRAL and JOVE EASTERN anomalies, are presented as Figures 7-13a and 7-14a. Histograms of the same data are presented as Figures 7-13b and 7-14b.

A long, linear radiometric response lies over the JOVE CENTRAL grid between lines 24+50N and 28+75N. The average width of this anomaly is 75 metres. Counts greater than 150 cps define the shape of the anomaly. The histogram derived from this radiometric data has 3 peak values: 110 cps is the lowest; 150 cps is the second lowest and 210 cps represents the highest. A count rate of 110 cps is considered to be representative of the background for the JOVE CENTRAL anomaly. A rate of 150 cps represents the threshold level while 210 cps or greater is definitely anomalous. A long-

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itudinal profile of the radiometric data (Figure 7-13c) exhibits a peak reading of 660 cps at 28+50N with a gradual progression downwards in the downhill direction. This feature is characteristic of a seepage anomaly and the highest radiometric value is located at the point where the seepage occurs and is due to presences of an excess of daughter products. The significance of this observation will be further explained with the discussion on the soil geochemistry.

A linear response similar in shape to the radiometric response over the JOVE CENTRAL anomaly, lies over the JOVE EASTERN anomaly. However, this response is longer (22+50N to 30+00N) and tends to be wider with an average thickness of 125 metres. The histogram for the same data has 3 peaks: the lowest at 130 cps, the intermediate at 170 cps and the highest at 270 cps. These values are significantly higher than those related to the JOVE CENTRAL grid (corresponding values are 110 cps, 150 cps and 210 cps). The radiometric threshold value for the JOVE EASTERN grid is the same as for the JOVE CENTRAL grid, namely 150 cps. The background though is higher at 130 cps. Values greater than 170 cps are considered anomalous and those above 270 cps are definitely anomalous. A longitudinal profile of the radiometric response over the JOVE EASTERN grid exhibits a peak value at 30+00N with a fluctuating downwards progression in a downhill direction in a similar fashion as the data from the JOVE CENTRAL anomaly.

The sharp, linear radiometric anomaly lying over the JOVE CENTRAL grid coincides with the extrapolation of resistivity zone B as outlined in G. Mitchell's report. (There is not a similar relationship between the resistivity anomaly and the radiometric anomaly over the JOVE EASTERN grid.) Zone B is described as "...due to a deep source.

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To the south...there are anomalies on lines 35N and 28N... ... appear to be due to zones of low resistivity surficial material". The deep seated source to the north with a shallowing to the south could account for the abrupt cutoff in the radiometric response at 30+00N. This cutoff could be due not to the termination of possible mineralization in an uphill direction, but rather it may represent a situation whereby a mineralized portion of a structure extends horizontally into the mountain and, therefore, is not discernable by surface radioactivity.

2.4.2 Geochemistry

(a) Hydro

The following table lists the results of the semi-quantitative spectrographic analysis done on a silt sample obtained from the JOVE CENTRAL anomaly.

TABLE V

element	detection limit	analytical result
Barium	5 ppm	300 ppm
Calcium	0.05%	1%
Chromium	10 ppm	30 ppm
Copper	1 ppm	5 ppm
Gallium	5 ppm	10 ppm
Iron	0.05%	0.5%
Lead	5 ppm	30 ppm
Magnesium	0.02%	0.1%
Manganese	5 ppm	150 ppm
Nickel	5 ppm	5 ppm
Titanium	5 ppm	500 ppm

Summary of Quantitative Spectrographic Analysis on a Bulk Silt Sample from JOVE - 1979

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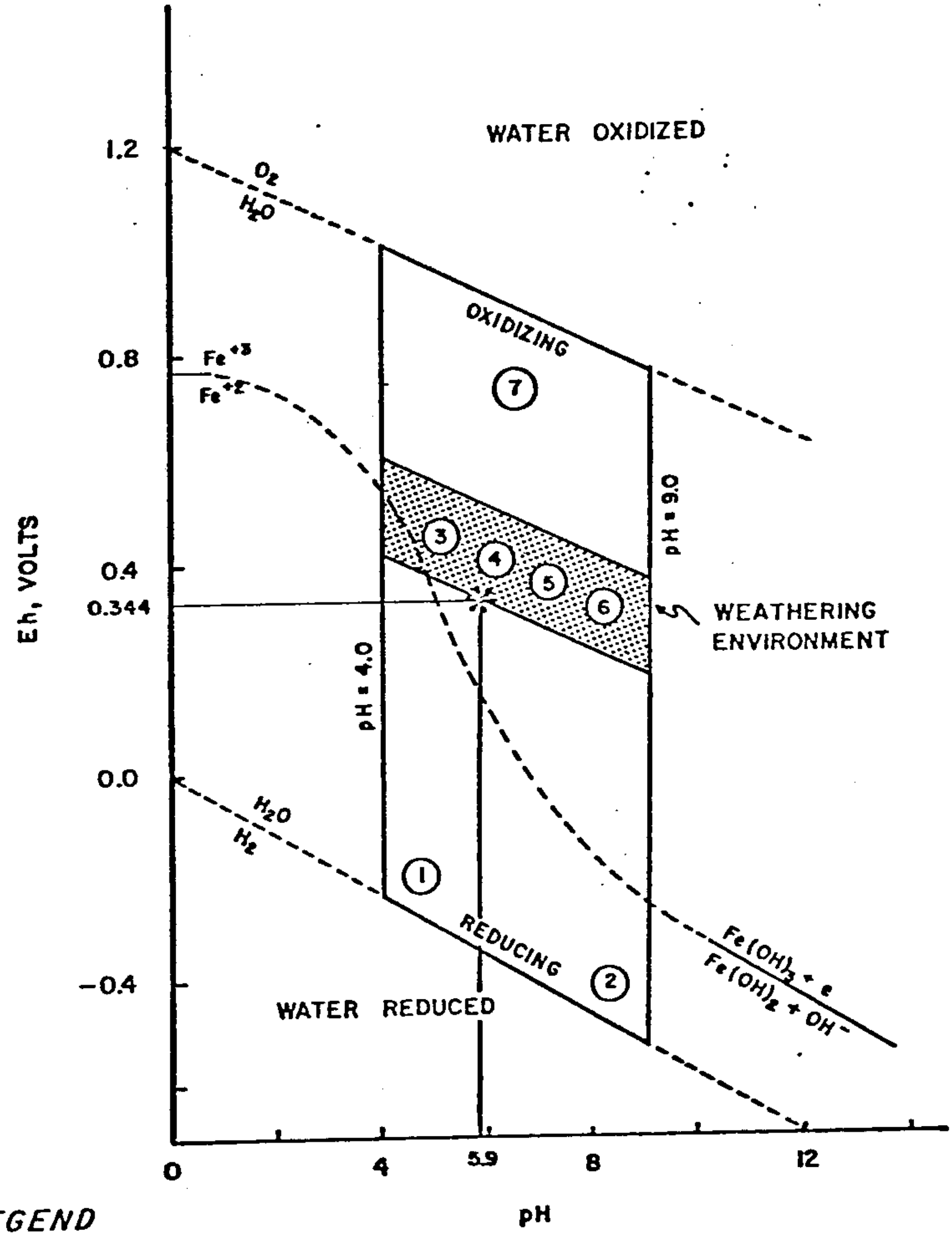


LEGEND

1	BOGS AND WATERLOGGED SOILS
2	REDUCING MARINE SEDIMENTS
3	ACID MINE WATERS
4	RAIN
5	RIVER WATER
6	OCEAN WATER
7	OXIDIZING LEAD SULFIDE DEPOSITS
*	BULK SAMPLE PLOT

Fig 7

ELDORADO NUCLEAR LIMITED

PROJECT 522

Eh – pH DIAGRIAM SHOWING PLOT OF JOVE CENTRAL BULK WATER SAMPLE

AREA 19 YUKON STREAM GEOCHEMICAL SURVEY PROJECT 522

U-RK HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV PPM	SAMPLES	CUM FR %
0.50	13	13.54
0.50	0	13.54
1.00	13	27.08
1.50	21	48.96
2.00	19	68.75
2.50	7	76.04
3.00	2	78.12
3.50	3	81.25
4.00	4	85.42
4.50	4	89.58
5.00	4	93.75
5.50	0	93.75
6.00	0	93.75
7.00	1	94.79
8.00	0	94.79
9.00	0	94.79
10.00	1	95.83
11.00	0	95.83
12.50	1	96.87
14.00	0	96.87
16.00	0	96.87
18.00	0	96.87
20.00	0	96.87
22.50	3	100.00
25.00	0	100.00
28.00	0	100.00
99999.00	0	100.00

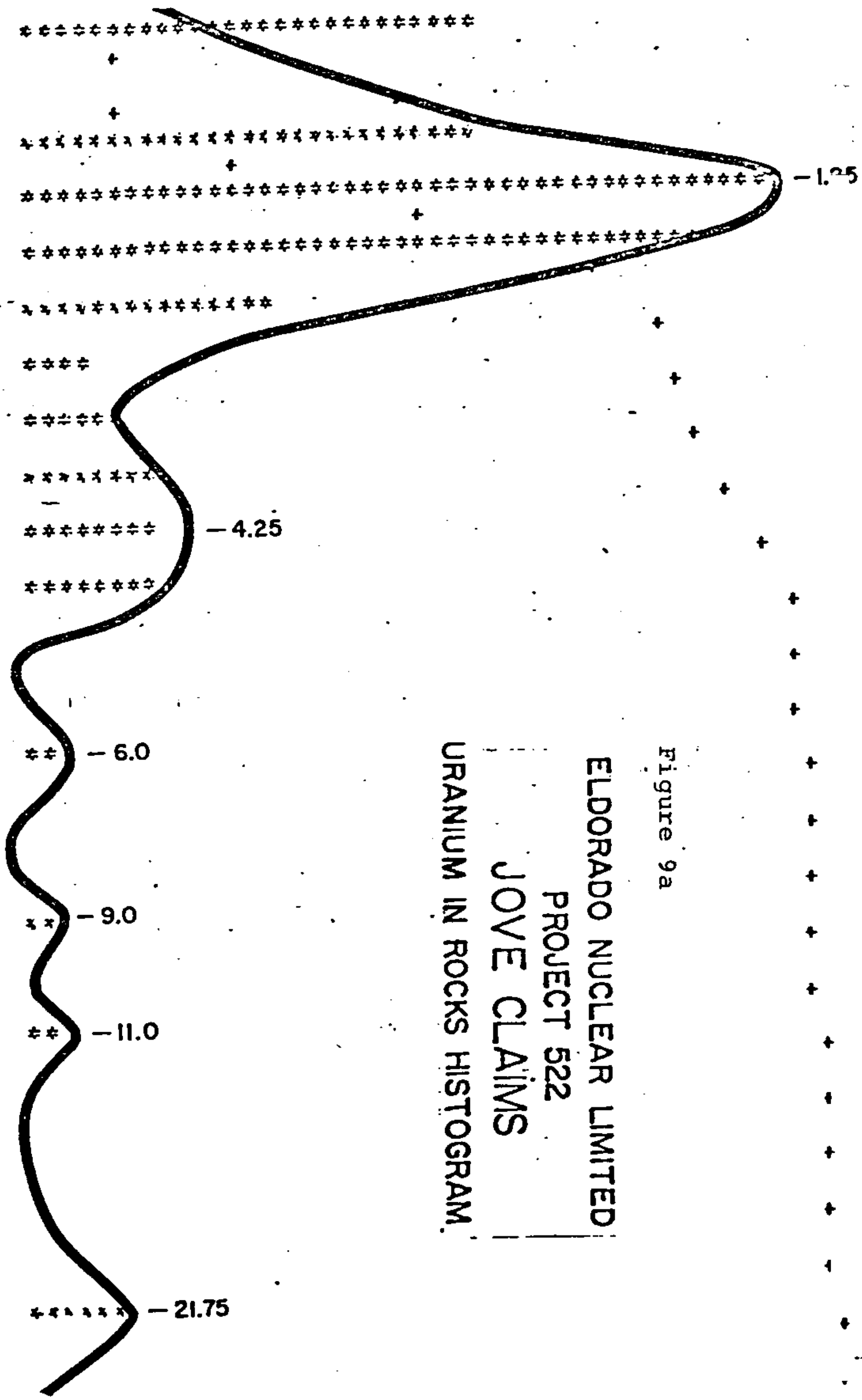


Figure 9a

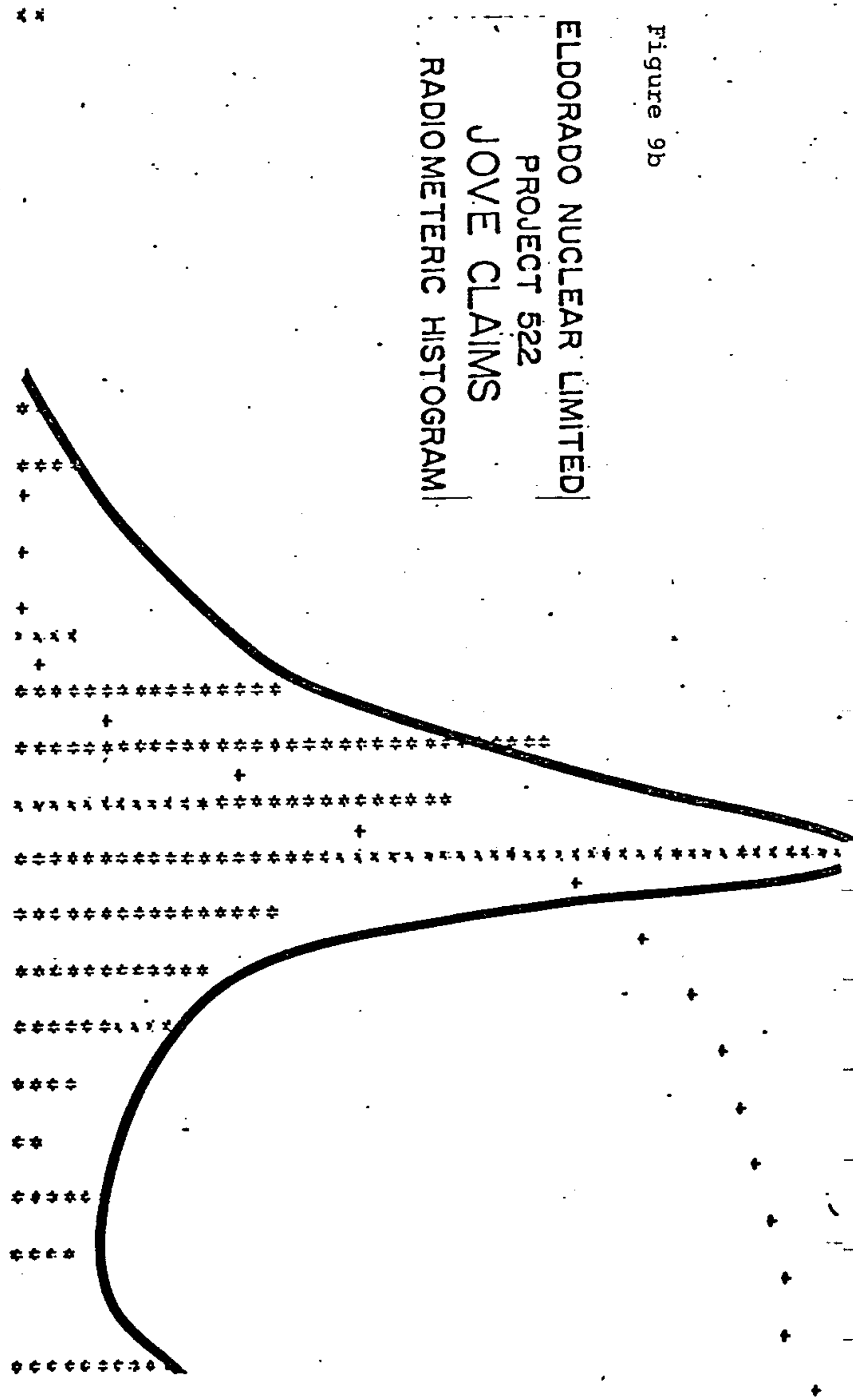
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS
URANIUM IN ROCKS HISTOGRAM.

TOTAL SAMPLES= 96 VALUES < DETECTION = 13 RANGE= 0.200 TO 22.00

AREA 18 YUKON STREAM GEOCHEMICAL SURVEY PROJECT 522

P-RK HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV CPS	SAMPLES	CUM FR %
	0	
1.00		0.0
	0	
25.00		0.0
	1	
28.00		0.99
	0	
32.00		0.99
	0	
36.00		0.99
	0	
40.00		0.99
	0	
45.00		0.99
	0	
50.00		0.99
	0	
56.00		0.99
	1	
63.00		1.98
	2	
71.00		3.96
	0	
80.00		3.96
	0	
90.00		3.96
	2	
100.00		5.94
	8	
112.00		13.86
	16	
125.00		29.70
	13	
140.00		42.57
	26	
160.00		68.32
	8	
180.00		76.24
	6	
200.00		82.18
	5	
225.00		87.13
	2	
250.00		89.11
	1	
280.00		90.10
	3	
320.00		93.07
	2	
360.00		95.05
	0	
400.00		95.05
	5	
9999.00		100.00



TOTAL SAMPLES= 101 VALUES < DETECTION = 0 RANGE= 25.000 TO 500.00

Figure 9b

ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS
RADIOMETERIC HISTOGRAM

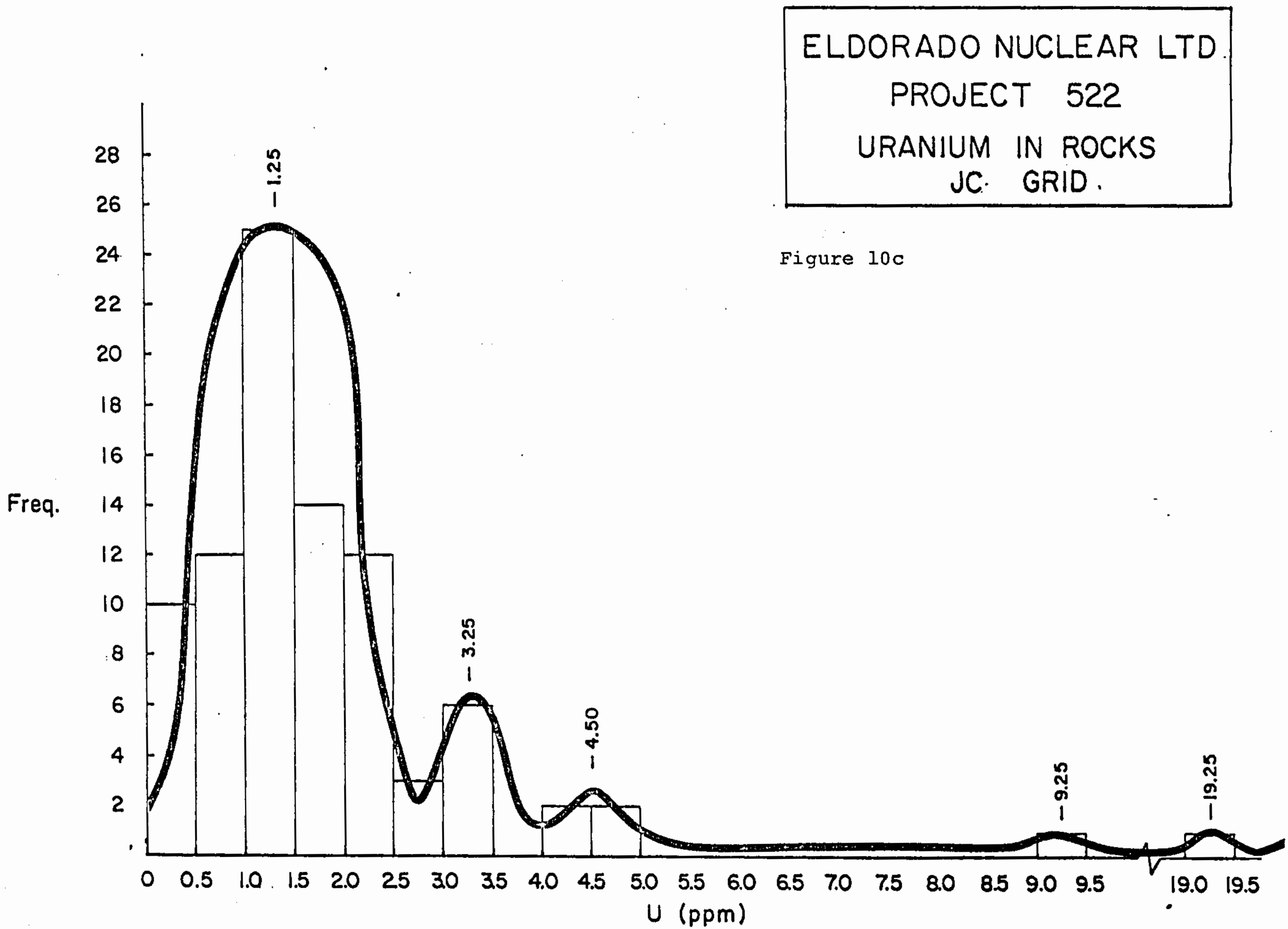
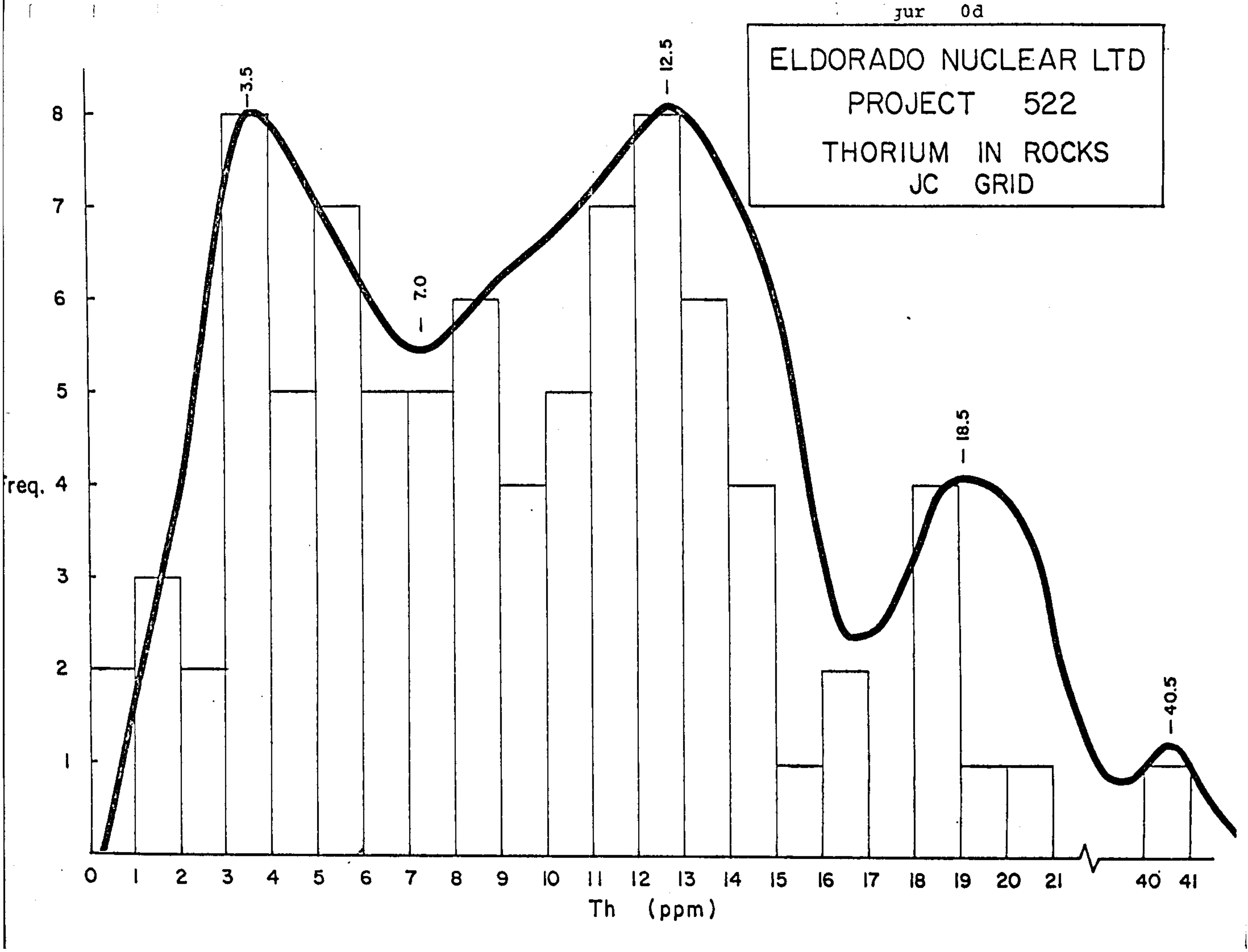

ELDORADO NUCLEAR LTD.
PROJECT 522
URANIUM IN ROCKS
JC GRID.
Freq.
28
26
24
22
20
18
16
14
12
10
8
6
4
2
1.25
3.25
4.50
9.25
19.25
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
9.5
19.0
19.5
U (ppm)

Figure 10c


jur 0d
ELDORADO NUCLEAR LTD
PROJECT 522
THORIUM IN ROCKS
JC GRID
3.5
7.0
12.5
18.5
40.5
Freq.
1
2
3
4
5
6
7
8
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 40 41
Th (ppm)

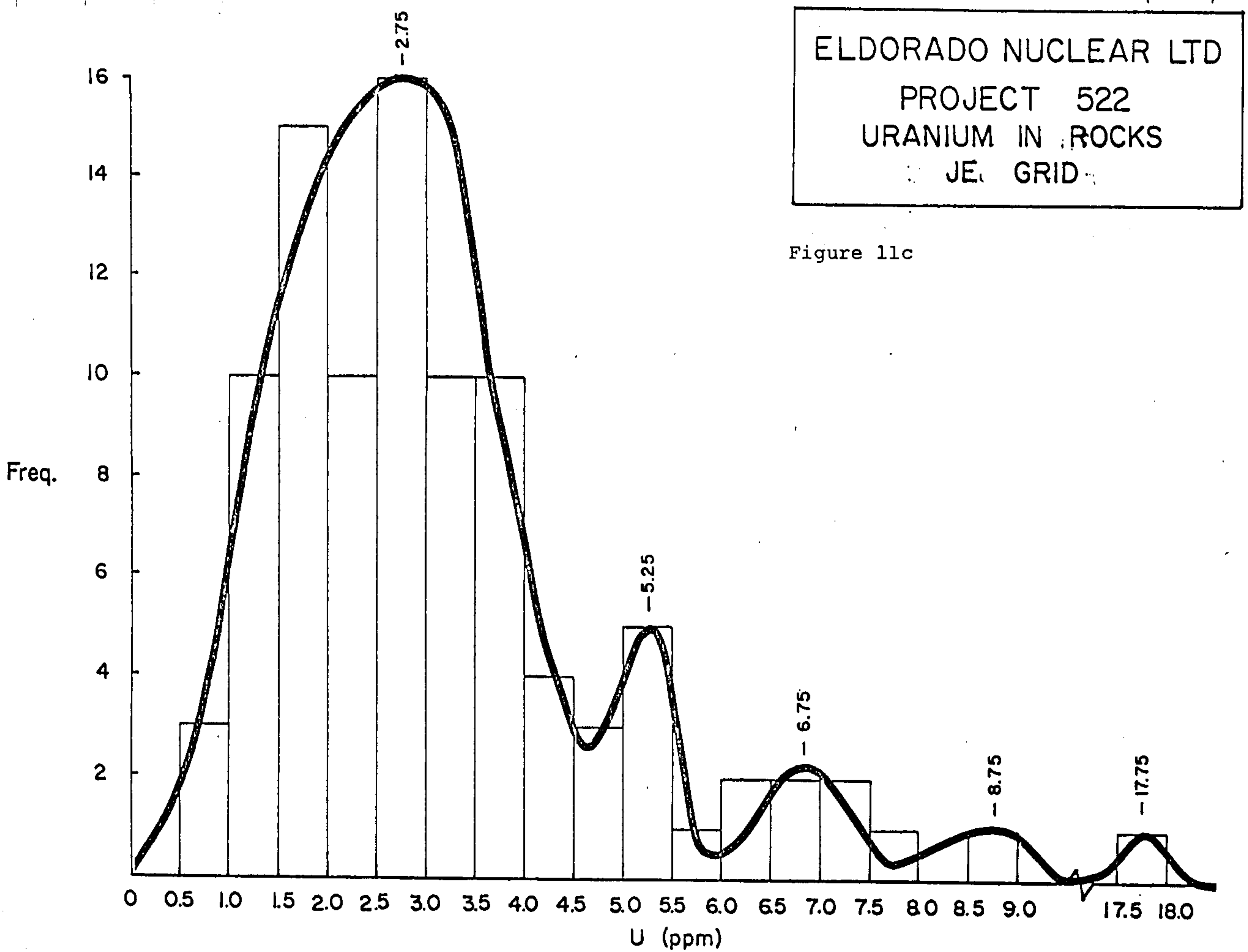

ELDORADO NUCLEAR LTD
PROJECT 522
URANIUM IN ROCKS
JE GRID
Freq.
U (ppm)
2.75
5.25
6.75
8.75
17.75
0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
9.0
17.5
18.0
2
4
6
8
10
12
14
16

Figure 11c

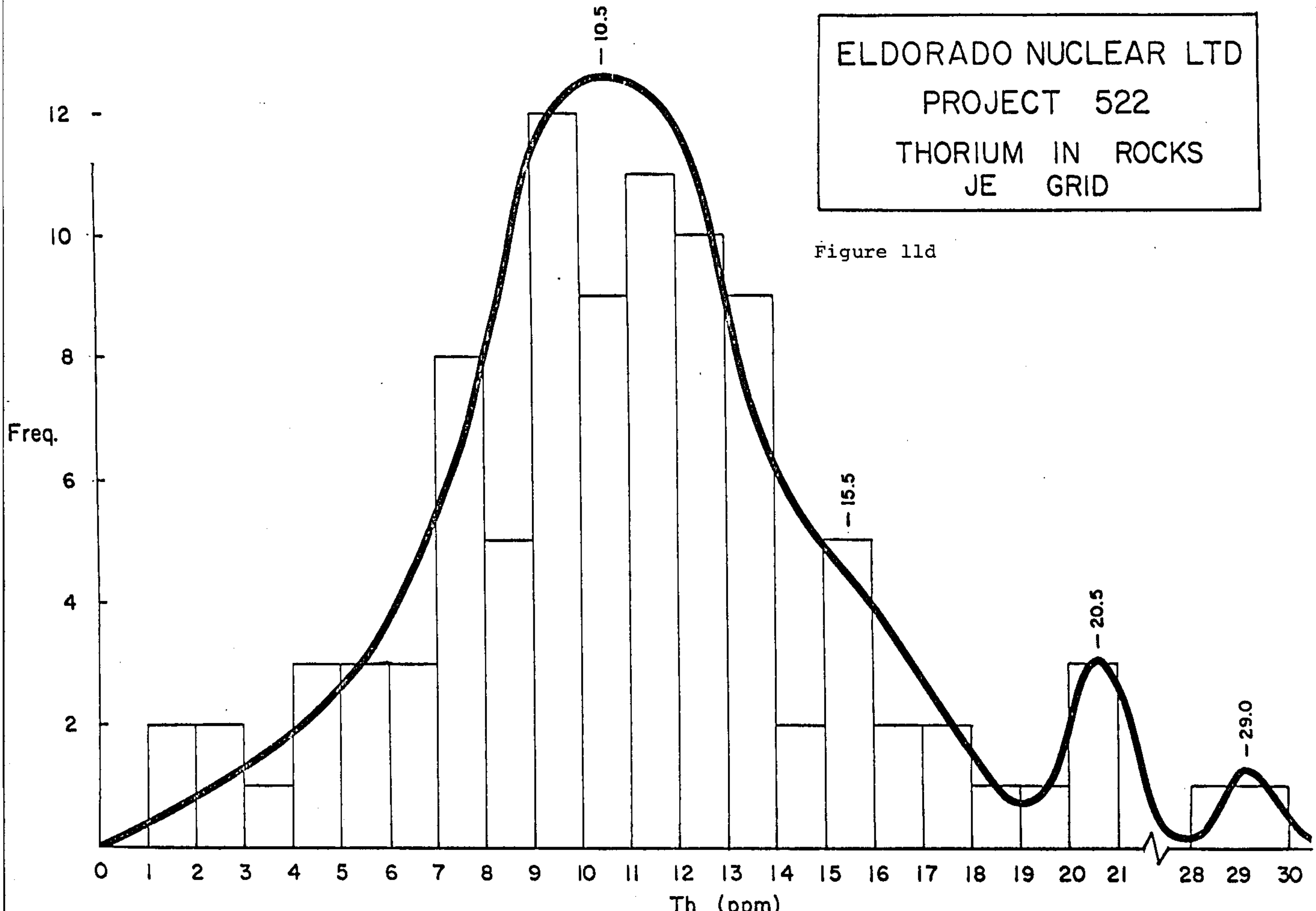

ELDORADO NUCLEAR LTD
PROJECT 522
THORIUM IN ROCKS
JE GRID
Freq.
Th (ppm)
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
28
29
30
10.5
15.5
20.5
29.0

Figure 11d

If one examines the above data and evaluates the various contents with respect to their detection limits, one would note that the bulk silt has a relatively high amount of barium and titanium, a moderate amount of calcium, iron and manganese, and a low amount of chromium, copper, gallium, lead, magnesium and nickel. The barium may indicate the presence of low-temperature hydrothermal alteration in the area, whereas the manganese value is indicative of an intrusive terrane.

The analysis of the bulk water sample obtained in conjunction with the bulk silt sample is presented in the following table.

TABLE VI

Summary of Total Analysis of a Bulk Water Sample from JOVE - 1979

element or measurement	value
pH	5.9
Specific Conductivity	20 micromohs/cm
Eh	.344 volts
Potassium	0.20 ppm
Calcium	2.2 ppm
Vanadium	<0.10 ppm
Carbonate	7.6 ppm
Chlorine	0.6 ppm
Silicate	11.0 ppm
Sulphate	<2.0 ppm
Phosphate	<0.01 ppm
Uranium	15.2 ppb

The Eh and pH relationship for the above sample is representative of surface runoff of rain water. This may also explain why the sample appears to be "chemically clean". At this point, it is difficult to identify the manner in which the uranium is being transported. Likely possibilities

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that do exist are as a carbonate complex or as a phosphate complex as an analytical value of <0.01 ppm PO_4 is within the concentration limits that would affect such a union.

The analysis of waters sampled following the trenching operation is discussed separately in section 4.3.3 of this report.

The analytical data from a heavy mineral sample taken from Glazy Creek downstream from the main anomalies on the property are presented as Table VII.

TABLE VII

Summary of Analytical Data of a Heavy Mineral Sample Taken Downstream from the JOVE Anomalies

element	analytical result	microscopic description
Lead	20.0 ppm	- over 40% of the sample is made up of pyroxene and amphibole; garnet comprises for 50%, while minor amounts of apatite, biotite, epidote, goethite, magnetite and muscovite are present.
Tungsten	4.0 ppm	
Uranium	66.0 ppm	

The preceding analytical results show that uranium is being transported chemically (in the case of waters) and mechanically (ie. heavy mineral sample) from the JOVE property. The significance of this point will be discussed in section 2.4.5.

(b) Rocks

CENTRAL ZONE

The uranium content of rocks obtained from the CENTRAL anomaly is shown on a contoured map as Figure 7-18a and in a histogram as Figure 7-18c. The histogram resembles a normal distribution curve with a mean values of 1.25 ppm U. Additional peaks are present as 3.25 ppm U, 4.50 ppm U, 9.25 ppm U and at 19.25 ppm U. The map has been contoured using these intervals and the results indicate a linear trend exists in the uranium content of the rocks. This trend follows the linear trend defined by both the radiometric and the soil geochemical data.

The thorium content of these same samples is presented in contour form as Figure 7-18b and as a histogram in Figure 7-18d. The histogram suggests the data follows a bimodal normal distribution with one mean at 3.5 ppm and the other at 12.5 ppm. The low between the graphical representation of the 2 populations is 7.5 ppm. A third peak is observed at 18.5 ppm Th and a fourth occurs at 40.5 ppm Th. The contoured map was drawn up on the basis of these values. The contours are aligned in a northerly direction with one anomalous value located in the vicinity of the highest radiometric value (40+50W, 28+50N). Of significance is a linear feature described by the contours on the eastern side of the CENTRAL grid. The centre of the linear contours is characterized by values in the 13.0 ppm to 41.0 ppm range. This area is void of any definitive trend to or anomalous values in the radiometric data.

In summary, rocks from the CENTRAL grid have uranium and thorium contents that follow a normal distribution. The uranium population is modal while the thorium population is bimodal. Both populations define linear north-south trends when contoured. The radiometric data can be correlated with

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the uranium trend but not with the thorium patterns. A general conclusion here is to suggest the radioactivity detected over the CENTRAL anomaly is likely due to the generation of daughter products through the radioactive decay of uranium as opposed to the breakdown of unrelated thorium.

EASTERN ZONE

The uranium content of rocks from the EASTERN anomaly is presented in contour form as Figure 7-19a and as a histogram in Figure 7-19c. Uranium data follows a normal distribution pattern with a mean value of 2.75 ppm and peaks observed at 5.25 ppm, 6.75 ppm, 8.75 ppm and 17.75 ppm. The data has been contoured using these values. A weak north-south linear trend is evident, however the pattern does not coincide directly with the radiometric signature and with the soil geochemical anomaly.

The thorium content of the rocks from the EASTERN grid is presented as Figure 7-19b (contoured) and as Figure 7-19d (histogram). The histogram reflects a single population that is normally distributed about a mean of 10.5 ppm U. Anomalous peaks can be observed at the 15.5 ppm U, 20.5 ppm U and 29.0 ppm U levels. The contoured map was drawn up based on the aforementioned levels and the pattern presented shows a crude, somewhat linear feature trending in a northerly direction. This trend runs almost coincident with the radiometric anomaly defined over the EASTERN grid.

DISCUSSION

Figures 7-17a and 7-17b consist of histograms describing the uranium content of rocks and the radiometrics related to the same rocks that were obtained during the 1978

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field season. The uranium in rocks has a normal distribution with a mean of 1.25 ppm and anomalous peaks at the 4.25 ppm, 6.0 ppm, 9.0 ppm, 11.0 ppm and 21.75 ppm levels. The radiometrics have a normal distribution with a mean of 150 cps.

The average uranium content of 1.25 ppm and the average radiometric reading of 150 cps are both very low values for an intrusive terrane (expected values are 4.0 ppm and +200 cps). These low values therefore imply the uranium

either

a) never was there, suggesting the magma was depleted in uranium

or

b) the uranium in the magma was differentiated out before daughter products had an opportunity to develop (∴ low U and low radiometrics).

Statement a is the more unlikely of the 2 statements when relating the JOVE property to similar terranes elsewhere.

The histogram of uranium in rocks from the CENTRAL anomaly has a mean similar to that of Figure 7-17a. It would appear, therefore, that the rocks taken from the CENTRAL zone suggest there is no concentration of uranium at that location => the CENTRAL anomaly is due to seepage.

On the other hand, the histogram showing the distribution of U in rocks for the EASTERN zone shows a sharp deviation from the regional trend. This increase in uranium can be explained by considering the EASTERN anomaly to be a zone of uranium enrichment on the JOVE property.

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AREA 18 YUKON STREAM GEOCHEMICAL SURVEY PROJECT 522

U-SO HISTOGRAM AND CUMULATIVE FREQUENCY

INTERV PPM	SAMPLES	CUM FR %
	229	
0.50		23.83
	157	
1.00		40.17
	152	
1.50		55.98
$\bar{X} = 1.98$	82	
2.00		64.52
	63	
2.50		71.07
	38	
3.00		75.03
	34	
3.50		78.56
	28	
4.00		81.48
	26	
4.50		84.18
	13	
5.00		85.54
	16	
5.50		87.20
	10	
6.00		88.24
	15	
7.00		89.80
	12	
8.00		91.05
	15	
9.00		92.61
	4	
10.00		93.03
	5	
11.00		93.55
	4	
12.50		93.96
	4	
14.00		94.38
16	9	
16.00		95.21
	10	
18.00		96.25
	4	
20.00		96.67
	4	
22.50		97.09
	2	
25.00		97.30
	3	
28.00		97.61
	5	
32.00		98.13
	18	
99999.00		100.00

TOTAL SAMPLES= 961 VALUES < DETECTION = 229 RANGE= 0.200 TO 92.00

Figure 12c

ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS
SOIL GEOCHEMISTRY HISTOGRAM

The bimodal distribution of thorium in rocks from the CENTRAL anomaly is interpreted as meaning there are 2 sources for the thorium. One (12.5 ppm) is genetically related to the development of the intrusive (and, therefore, to the uranium in rocks); the other (3.5 ppm) represents thorium that is moving either mechanically and/or chemically in the secondary environment. The normal distribution of the thorium in rocks from the EASTERN anomaly is simply reflecting thorium related to the bedrock.

(c) Soils

Phase I

Figures 7-20a and 7-20b represent a compilation of all uranium-in-soil and thorium-in-soil data to date from the JOVE property. The 1979 soil data obtained from the CENTRAL and EASTERN anomalies is presented in contoured form as Figures 7-21a and 7-22a respectively and in histogram form as Figures 7-21b and 7-22b respectively.

The mean value for the thorium-in-soils is 9.26 ppm and the standard deviation estimate is 3.67 ppm. A level of 20.0 ppm Th or greater is therefore considered to be significantly anomalous ($\bar{X}$+3+).

The individual thorium anomalies have been grouped together into anomalous areas. These areas are tabulated in Table VIII by location, thorium values and size.

<u>TABLE VIII</u> - Soils Anomalous in Th on the JOVE Claims

Anomalous Area	Location	Thorium Values	Size
TH-1	47+00N 42+00W	11-31 ppm	1200mx500m
TH-2	45+00N 52+00W	5-28 ppm	500mx300m
TH-3	Follows Line 47+00W between 18+00N and 35+00W	4-38 ppm	2000mx400m
TH-4	28+00N 40+00W	8-48 ppm	800mx400m
TH-5	28+00N 31+00W	5-54 ppm	1000mx1000m

Uranium-in-soil values above 10.0 ppm are considered to be anomalous while those over 20 ppm U are definitely anomalous. Individual uranium anomalies have been grouped into anomalous areas. These are tabulated in a similar fashion as the thorium data under Table

TABLE IX - Uranium-in-Soil Anomalies in the JOVE Claims

Anomalous Area	Location of Centre	Uranium Values	Size
U-1	27+00N 40+00W	tr-950 ppm	900mx500m
U-2	27+00N 32+00W	tr-3788 ppm	1000mx500m
U-3	follows the western creek from 30+00N to 47+00N	2.0-416 ppm	1800mx300m
U-4	27+00N 52+00W	6.0-174.0 ppm	400mx200
U-5	22+00N 53+00W	24.0-36.0 ppm	500mx100m
U-6	22+00N 47+00W	10.0-15.0 ppm	500mx300m
U-7	34+00N 43+00W	16.0 ppm	spot anomaly
U-8	35+00N 38+00W	tr-14.0 ppm	800mx200m
U-9	34+00N 33+00W	5.0-20.0 ppm	300mx100m

Before a comparison can be made between the uranium-in-soils data and the thorium-in-soils data, it must be emphasized that thorium is very immobile in the secondary environment relative to uranium. Assuming the uranium and thorium in soils are derived from the same source, this means a thorium anomaly should appear closer to the source than the uranium anomaly.

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A comparison of the U-in-soils data with the Th-in-soils data reveals several interesting relationships exist between the uranium anomalies and the areas anomalous in thorium.

First of all, there are no uranium anomalies that can be directly related to anomalous area TH-1. Area TH-1 is situated on the top of the ridge where soil cover is at a minimum and any uranium that should be in the soil has been moved by weathering process. Therefore, it is not unexpected to have thorium anomalies in that area and no uranium anomalies.

Uranium anomaly U-3 is simply a series of smaller anomalies lying along the western creek in a pater-noster fashion. It is believed at least some of these individual anomalies represent a form of seepage anomaly and, therefore, are not related to underlying mineralization. It should be noted that uranium anomaly U-3 has been referred to as the WESTERN anomaly and was trenched in 1979. The sampling of the trenches confirmed the anomaly at that location is a seepage anomaly. Thorium anomaly TH-2 lies at the upper end of uranium anomaly U-3. A lateral digression of the thorium anomaly in a westerly direction may indicate the uranium also came from that direction.

Anomalous area TH-3 covers a large zone which in turn is partially covered by the lower end of anomaly U-3, parts of anomalies U-4 and U-5, and all of anomaly U-6. Anomalous areas TH-4 and TH-5 correspond to the main uranium anomalies U-1 and U-2 plus the immediate surrounding areas.

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An obvious feature of the uranium anomalies relative to the thorium anomalies is the actual thorium anomalies do not correspond to areas covered by the strong uranium anomalies. This is interpreted as a reflection of the differences in the chemical nature of the 2 elements in the secondary environment. However, the significance of this relationship is that by combining

(a) the location of the thorium anomalies with respect to the uranium anomalies

with

(b) the orientation of the individual thorium anomalies,

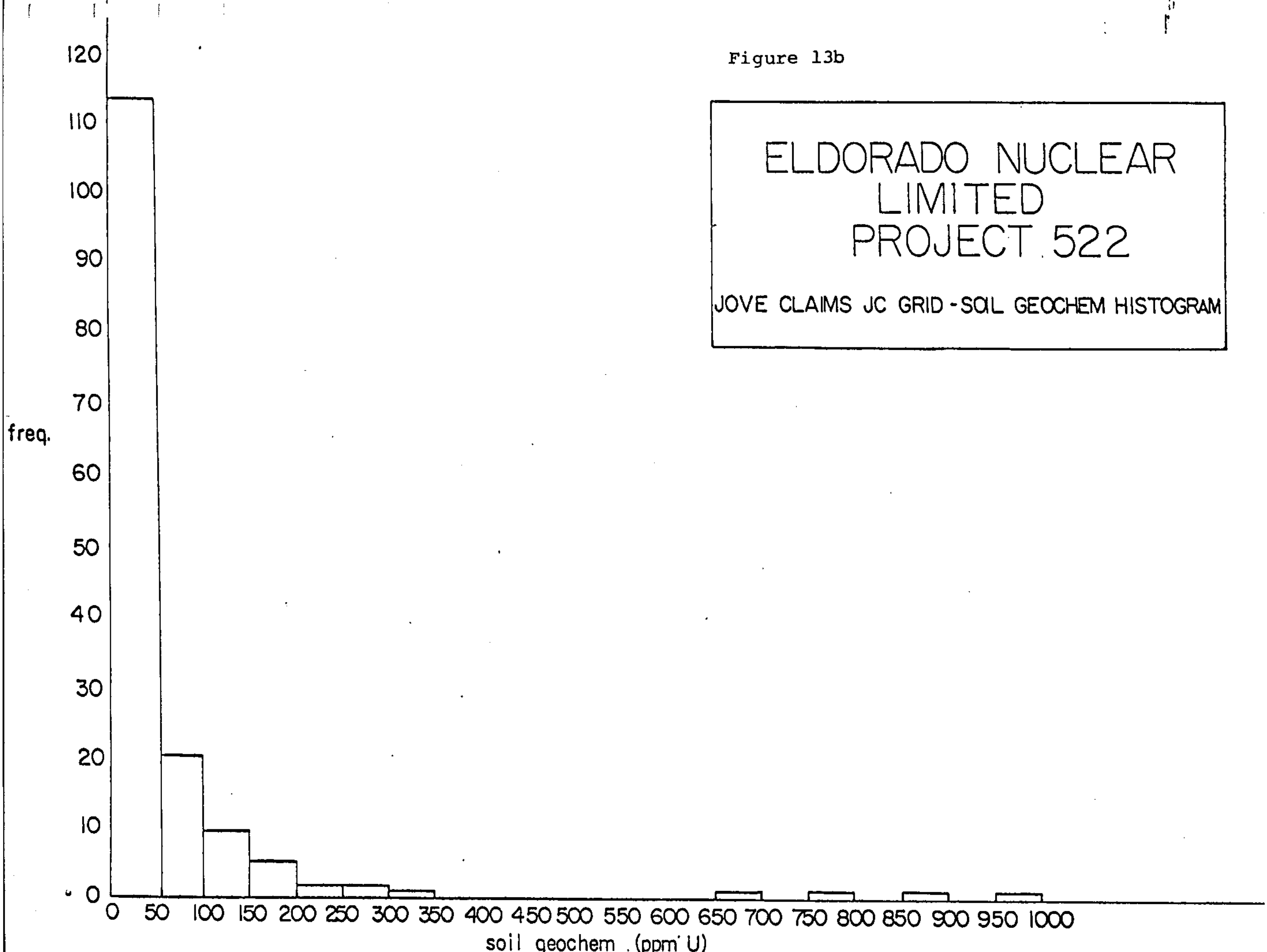
we are presented with a direction in which to focus our search for zones of possible uranium mineralization.

Phase II

The analytical results of the samples taken from the pits dug on the JOVE EASTERN grid are illustrated by Figures 7-22e, f and g. Pits 2 and 3 were dug on "radiometric highs" whereas pit 1 was dug 15 metres east of pit 2 in a radiometric low within the anomaly. The analytical results for all pits are very encouraging as all horizons in pits 2 and 3 returned values of +400 ppm U while horizons exposed in pit 1 have a uranium content ranging from 19.5 ppm U to 109 ppm U. A rock chip obtained from the C horizon contains 15.0 ppm U. When the values reported from pit 1 are related to the individual horizons, the uranium values increase with depth. This is indicative of the uranium originating from the in situ weathering of the rock as opposed to having its origin related to the hydromorphic transportation of uranium. In the latter case, the uranium content of the various horizons drops off sharply with depth.

......27

Figure 13b


ELDORADO NUCLEAR
LIMITED
PROJECT 522
JOVE CLAIMS JC GRID - SOIL GEOCHEM HISTOGRAM
freq.
120
110
100
90
80
70
60
50
40
30
20
10
0
0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000
soil geochem . (ppm U)

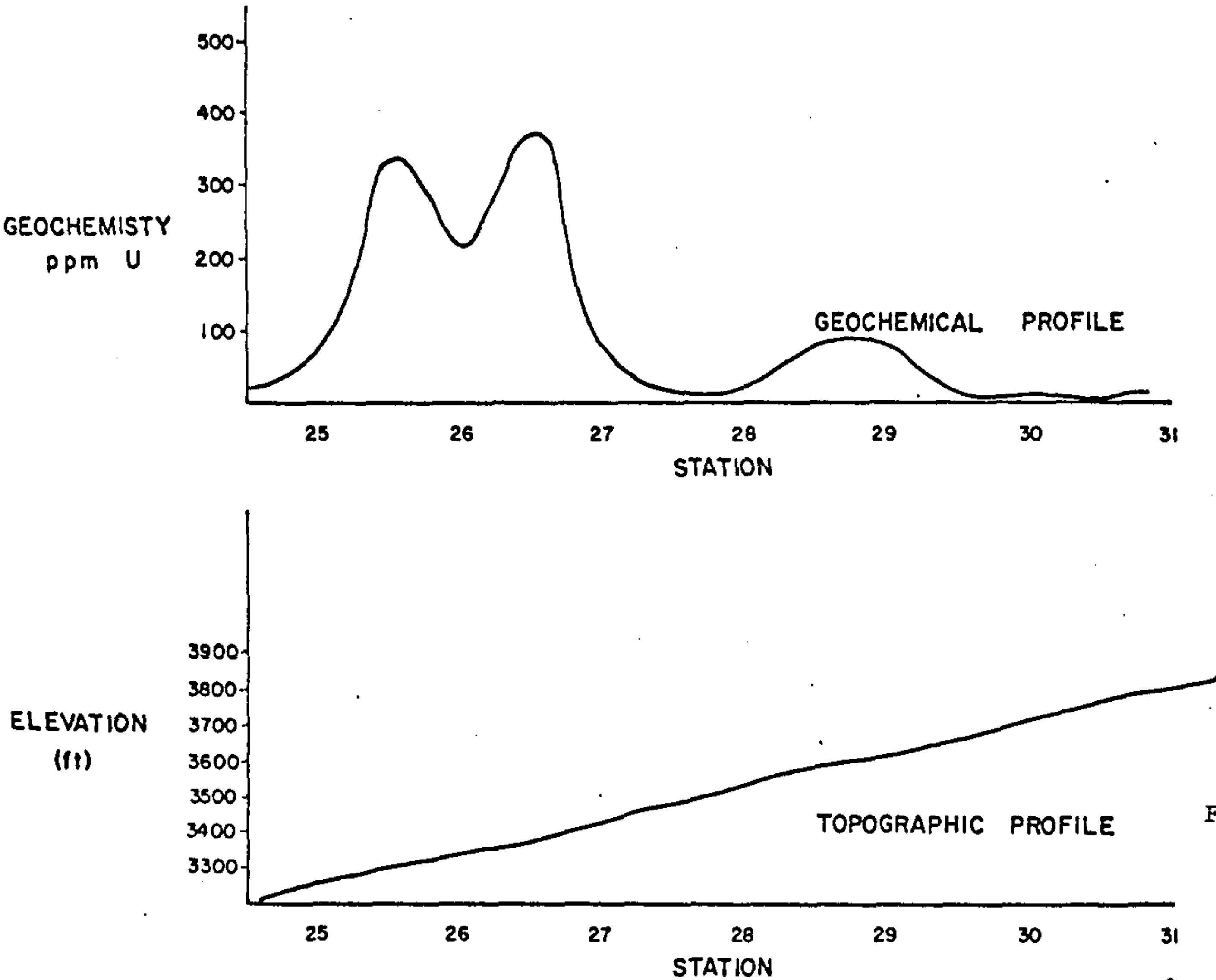


Figure 13c

ELDORADO NUCLEAR LIMITED

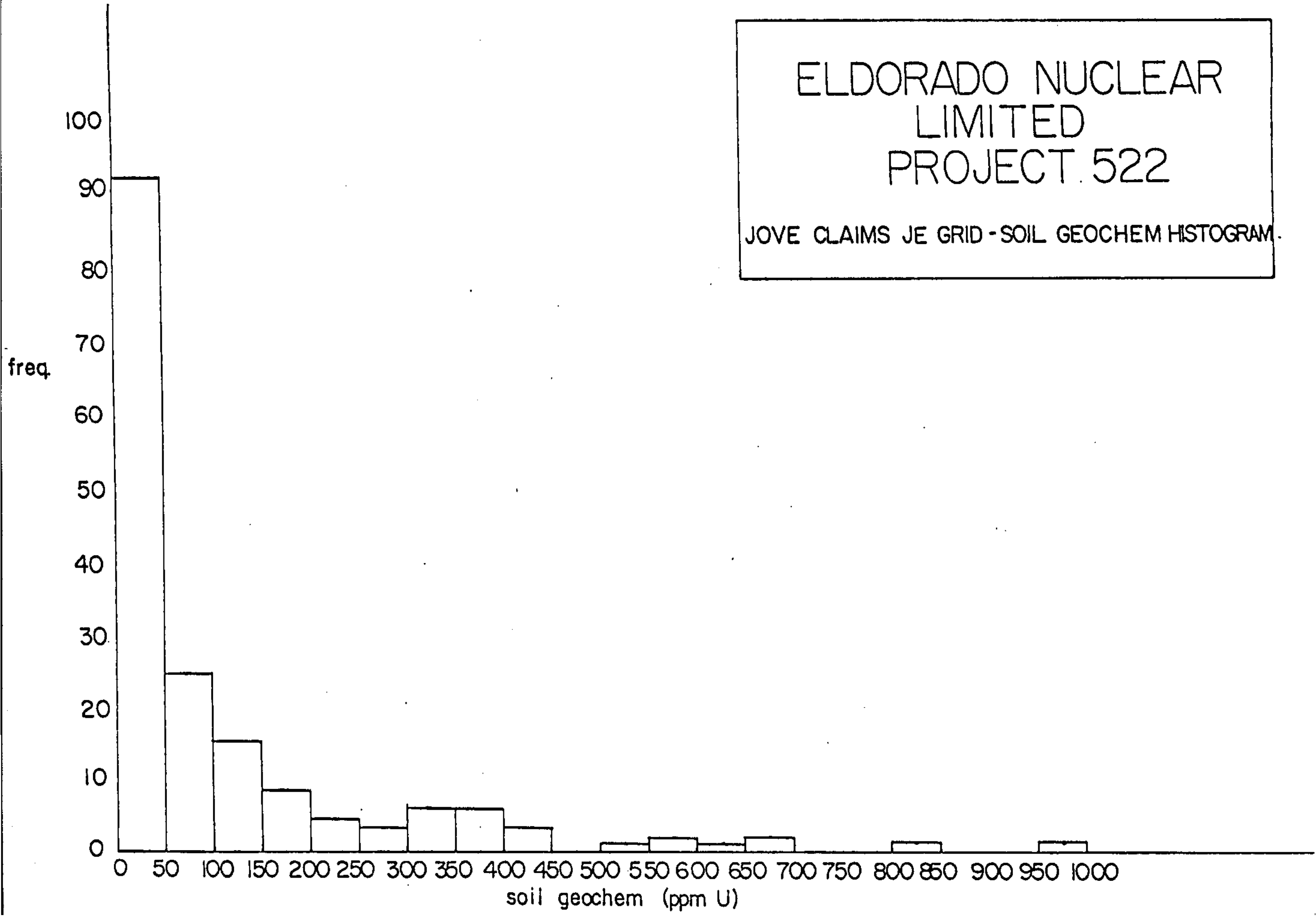
PROJECT 522

JOVE CLAIMS JC GRID

41+00 W PROFILE

SCALE 1:5000

Figure 14b



ELDORADO NUCLEAR LIMITED PROJECT 522
JOVE CLAIMS JE GRID - SOIL GEOCHEM HISTOGRAM.
freq.
0
10
20
30
40
50
60
70
80
90
100
0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000
soil geochem (ppm U)

Samples from pits 2 and 3 are reported as +400 ppm U while a rock chip from pit 3 has a uranium content of 47.0 ppm. When further analytical results are available, the significance of the data will be further evaluated and an addendum to this section will be submitted.

Phase III

The contoured, uranium-in-soil data obtained in 1979 from the CENTRAL and EASTERN anomalies is presented as Figure 7-21a and 7-22a. Histograms to accompany these illustrations are shown as Figures 7-21b and 7-22b respectively. The shape of the histograms indicates the uranium-in-soil values for the JOVE property are log normally distributed. A comparison with the histogram provided by L. Martin (Figure 7-20c) from previous data confirms this distribution. The histogram provided by L. Martin is also a cumulative frequency diagram for the same data. Using the 95% level of 16.0 ppm U, all values from the CENTRAL and EASTERN anomalies above this level are considered to be significant.

The soil anomaly on the JOVE CENTRAL grid is 400 metres long and averages 200 metres wide in the lower 300 metres. Values in the anomaly vary from 31.0 ppm U to 958 ppm U. The final line sampled in 1979 indicates the anomaly is open to the south, however, Glazy Creek flows across the toe of the anomaly, essentially terminating it. Data obtained south of Glazy Creek in years previous to 1979 suggest the anomaly, as it appears on the north bank of Glazy Creek, does not extend south across the Creek. Although the sampling interval on record for the south bank of Glazy Creek is appreciably wider than our final line on the north bank (100m spacing x 25m spacing); the size of the anomaly as determined by the 1979 work (200 metres) should have been detected by at least one sample on the south bank, if in fact the anomaly does extend across Glazy Creek.

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The portion of the valley directly affected by Glazy Creek itself is approximately 100 metres wide at the CENTRAL grid area. An area of influence that size should lead to the deposition of alluvial material as the creek carves its channel downstream. The alluvial cover should, therefore, mask any geochemical anomaly that has developed as a result of the weathering of underlying mineralization. With respect to the CENTRAL anomaly, this is not the case. The uranium-in-soil values are not only anomalous right to Glazy Creek, but the highest values are from samples obtained closest to the creek. There are, therefore, 2 possible explanations for this feature.

Either

(1) Glazy Creek is not carrying alluvial material and leaving it in the old creek bed

or

(2) the uranium values we observe in the soils are not due to underlying mineralization, but instead are a result of hydromorphically transported uranium being deposited in the surficial environment and covering the alluvial material left behind in the old stream bed.

Possibility (1) seems very unlikely in view of the fact large boulders and other alluvial material can be observed in the present-day creek bed. Therefore, possibility (2) is the more likely of the 2 situations and suggests the soil anomaly is in fact a strong seepage anomaly. Figure 7-21c illustrates a plot of the geochemical

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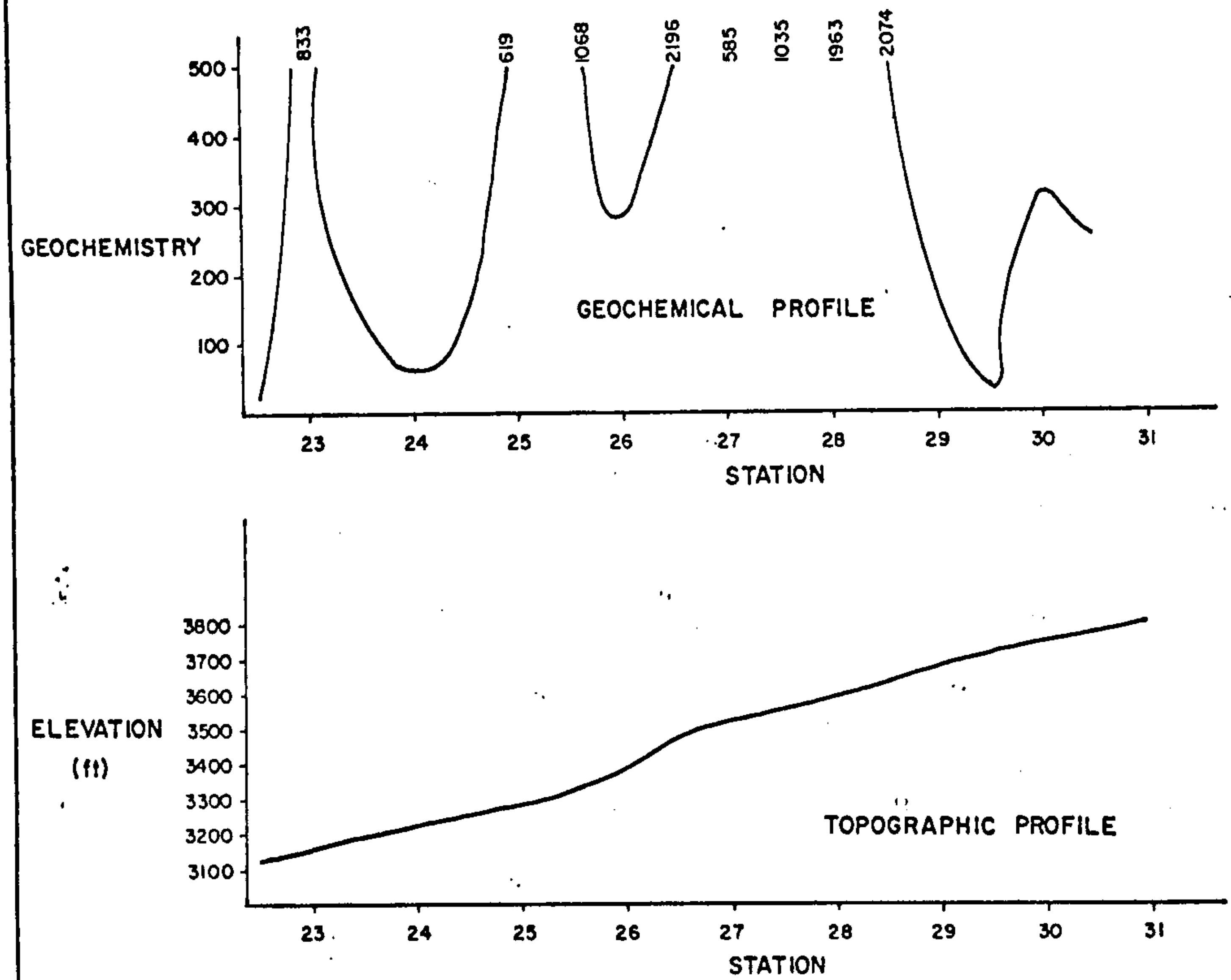
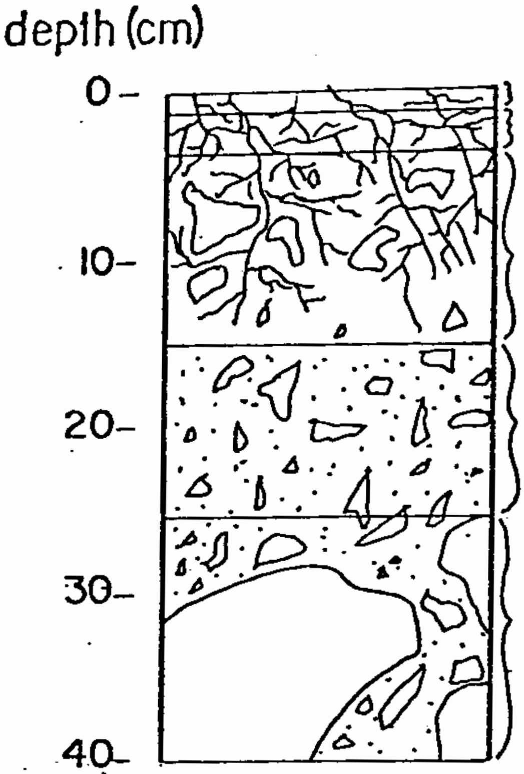


Figure 14c

ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS JE GRID
32+75 W PROFILE
SCALE 1:5000

32+15W 24+90N



8765-E - A_0 Horizon, black organic material
8765-D - A Horizon, pale grey

8765-C - B Horizon, roots, silty, fine-grained with some rock chips

8765-B - Upper C Horizon
- boundary with B Horizon very gradational

8765-A - C Horizon, gravelly sand
- large boulders several feet in diameter

Note: 22-8765, rock chip from bottom of pit (15.0 ppm U)

Radioactivity:

8765E	150 cps	19.5 ppm U
8765D	150 cps	23.0 ppm U
8765C	160 cps	38.0 ppm U
8765B	210 cps	71.0 ppm U
8765A	230 cps	109 ppm U

Figure 14e

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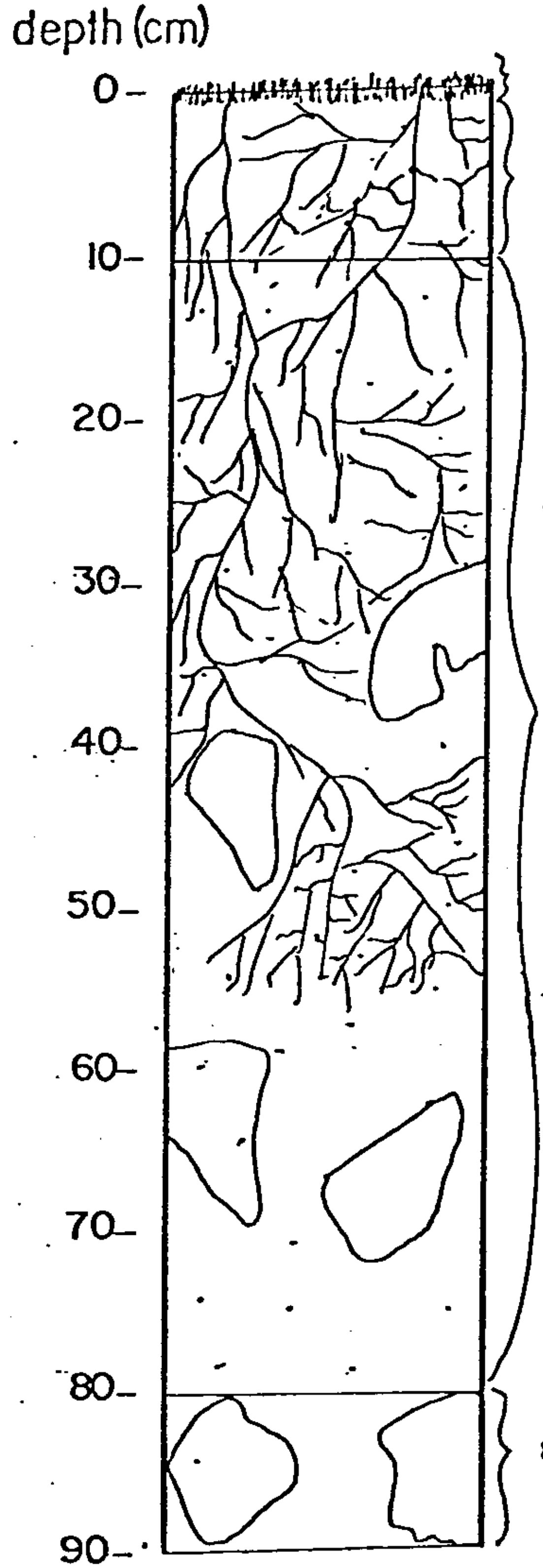
PROJECT 522

PIT I - JE

SOIL PROFILES

1979

24+90N 32+30W



8766D - Fresh organic vegetation, surface

8766C - A_o Horizon

Water level

8766B - B Horizon, silty with some sand and large boulders
- taken from rock surface
- grey/brown colour
- often has clay and roots

Figure 14f

8766A
- beige/brown colour, large boulders
- C Horizon, clay-rich, represents a silt rather than soil

Water sample: 42-JE-1

Radioactivity:

8766D	420 cps	+400 ppm U
8766C	500 cps	+400 ppm U
8766B	550 cps	+400 ppm U
8766A	800 cps	+400 ppm U

ELDORADO NUCLEAR LIMITED

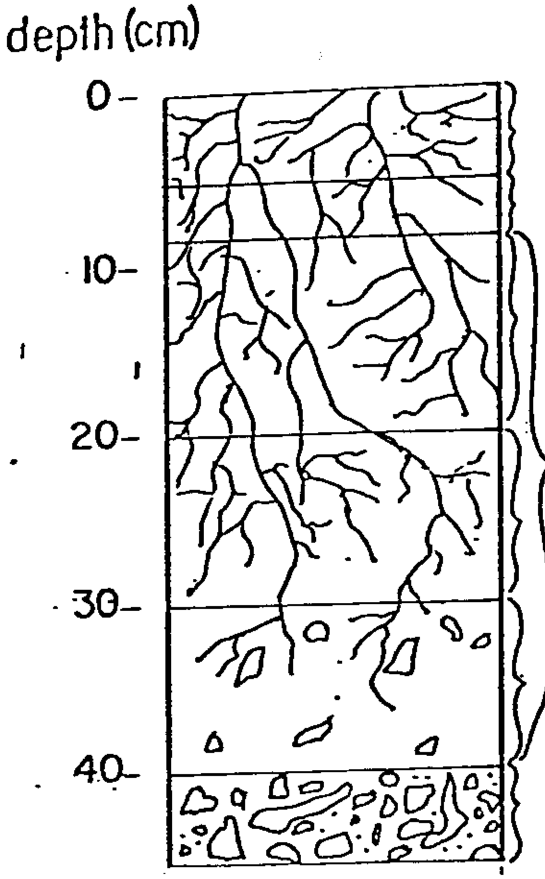
PROJECT 522

PIT 2 - JE

SOIL PROFILES

1979

28+00N 32+80W



8596-F - A_0 Horizon, black to brown, fine-grained
- numerous roots

8596-E - A Horizon, grey/brown, some "B" intermixed, lots of roots

8596-D - Upper B Horizon, grey/brown, roots
- silt-sized particles

8596-C - B Horizon, fine-grained, roots

8596-B - Lower B Horizon, some roots
- dark brown, silty, few rock chips

8596-A - C Horizon, gravelly, rock chips
- brown

Note: 22-8596;rock chips from bottom (740 cps) (47.0 ppm U)

Radioactivity:

8596F	600 cps	+400 ppm U
8596E	680 cps	+400 ppm U
8596D	800 cps	+400 ppm U
8596C	900 cps	+400 ppm U
8596B	840 cps	+400 ppm U
8596A	740 cps	+400 ppm U

Figure 14g

ELDORADO NUCLEAR LIMITED

PROJECT 522

PIT 3 - JE

SOIL PROFILES

1979

values in a longitudinal profile along the axis of the main soil anomaly on section 41+00W. The geochemical profile shows a slight increase in uranium at 29+00N followed by a decrease until 27+00N where uranium begins to accumulate between stations 25+00N and 27+00N. The initial increase in uranium is interpreted as being the location at which the seepage occurs. The subsequent decrease is due to uranium being transported hydromorphically, probably by water, and the buildup near the base of the slope indicates the uranium is coming out of solution chemically or is being scavenged by clay and silt particles.

The major point to be recognized by the preceding observations is the soil geochemical anomaly, present on the CENTRAL grid, is for all intents and purposes a seepage anomaly whose uranium content has been derived from some source located uphill from line 29+00N.

The uranium-in-soil anomaly present on the EASTERN grid, measures 800 metres long and has a width varying from 75 metres to 300 metres. Values range from 58.0 ppm U to 8015.0 ppm U. There are 20 soil samples lying in a linear trend 25 metres wide between lines 25+00N and 29+00N, that have values in excess of 1000 ppm U. Samples taken along line 22+50N (the southernmost line of the anomaly) range from 91.0 ppm U to 334.0 ppm U - sgnificantly lower than the +1000 ppm U observed elsewhere but still anomalous. There is, therefore, a distinct possibility the anomaly continues south of Glazy Creek in view of the fact the next geochemical data we have south of 22+50N is along line 21+00N west of 32+00W.

Figure 7-22c illustrates the uranium-in-soil profile with relation to the topographic profile along 32+75W between 22+50N and 31+00N. An increase in uranium is observed at 30+00N, followed by a sharp decrease at 29+50N and then by a very high increase existing down to 24+50N. A slight drop in uranium at 26+00N corresponds to a slight increase in the

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slope. The subsequent increase in water flow would result in a leaching of uranium from silts which would be reflected in a decrease in the uranium content of a sample taken there. The high values observed between 25+00N and 29+00N are believed to be related to underlying mineralization. The low value at 24+00N followed by an increase at 23+00N suggest that portion of the anomaly is due to seepage and is similar to the situation previously described for the CENTRAL anomaly. Figure 7-22d illustrates a second profile running the length of the EASTERN anomaly, only this time the profile follows 31+50W. The geochemical profile illustrates characteristics of a seepage anomaly - namely a sharp increase in uranium in soils towards the lower end of the slope.

In summary, the JOVE CENTRAL anomaly exhibits features typical of a seepage anomaly. The EASTERN anomaly on the other hand, possesses characteristics of both a seepage anomaly and a residual anomaly.

(d) Soil gas

The distribution of radon gas in the CENTRAL anomaly is illustrated by Figure 7-23. The plotted data has been corrected for a proper correlation between stations (see Appendix 7). The count rate of alpha particles varies from 44 cph to 26,801 cph. The background for the area is below 500 cph, counts of 1000 cph are considered to be significant and values greater than 10,000 cph are definitely anomalous.

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The areas of high alpha particle activity are concentrated near 41+00W and 29+50N and are located approximately 100 metres northwest of the highest radiometric value. There appears to be a northeast trend to some of the anomalies, along with a northwest trend. However, the station interval is too sparse to confirm these attitudes with any degree of certainty.

A second, more subtle feature is the apparent reduction in radon gas towards the south end of the CENTRAL grid. The highest observed values lie north of 29+50N, whereas the radiometric and geochemical anomalies both have thin northern limits south of 28+50N.

The fact radon is concentrated north (uphill) of the geochemical and radiometric anomalies, and the amount of radon gas being detected decreases as stations are located over the geochemical and radiometric anomalies, lend support to the soil geochemical anomaly on the CENTRAL grid is in fact a seepage anomaly.

2.4.3 Trenching

(a) Radiometrics

The contoured data from the detailed radiometric survey completed over trenches JT-1 and JT-2 are presented as Figures 7-25a and 7-26a respectively. Readings in excess of 200 cps are considered anomalous. Table X outlines the anomalies detected over the 2 trenches giving their boundaries along with average and maximum values observed.

TABLE X - Radiometric Anomalies in JOVE Trenches JT-1 and JT-2

Trench	Anomaly	Eastern Limit	Western Limit	Minimum Value	Maximum Value
JT-1	R-1	39+15W	39+35W	200 cps	225 cps
	R-2	40+10W	40+64W	200 cps	2500 cps
JT-2	R-3	39+20W	39+70W	190 cps	300 cps
	R-4	40+10W	40+20W	210 cps	250 cps
	R-5	40+45W	40+55W	200 cps	425 cps
	R-6	40+70W	41+60W	230 cps	350 cps
	R-7	41+75W	41+85W	210 cps	250 cps

In trench JT-1, anomaly R-1 is a weak, narrow zone located on the eastern limb of the trench above the CENTRAL gully. Anomaly R-2, the strongest response observed in all the trenches, is located in the bottom of the gully and lies west of the main water course in the gully. Trenching did open up several seeps in the zone and the strongest response (2500 cps at 40+50W) is characterized by one of these seeps.

There are more anomalies in trench JT-2 than in trench JT-1, however, they are of a much lower magnitude. The strongest radiometric response in trench JT-2 is at 40+50W where a peak value of 425 cps was observed.

On a correlative basis, anomaly R-1 is downhill from anomaly R-3 while anomaly R-2 is located downslope of anomalies R-4 and R-5. The 2 remaining radioactive zones in trench JT-2 (R-6 and R-7) do not have any apparent corresponding response in trench JT-1

Four radioactive zones have been outlined over trenches JT-3 and JT-4. These are outlined in Table XI.

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TABLE XI - Radiometric Anomalies in JOVE Trenches JT-3 and JT-4

Trench	Anomaly	Eastern or Northern Limit	Western or Southern Limit	Min Man Values	
JT-3	R-8	49+90W	50+00W	200 cps	240 cps
	R-9	50+30W	50+40W	175 cps	230 cps
JT-4	R-10	36+35N	36+45N	190 cps	230 cps
	R-11	35+15N	35+35N	200 cps	245 cps

Anomaly R-8 is the weakest of the 4 anomalies and lies at a point where a small trickle of water flows into trench JT-3. Anomaly R-9, located 30 metres west of anomaly R-8, coincides with a major water flow entering the trench at that location. The elongation of the anomaly in a south-east direction reflects the direction in which the water is flowing.

Anomaly R-10 lies at a point of influx of a water flowage into the northern end of trench JT-4. As was the case for anomaly R-9, the elongated shape to the radiometric anomaly reflects the water course. This stream is the same system responsible for anomaly R-9.

Anomaly R-11 is due to the radiometric response of the bedrock rather than being related to a water seepage. The values coincide with the accepted average radiometric response of an intrusive terrane.

(b) Geochemistry

All horizons exposed in trenches JT-1 and JT-2 were sampled. In the case of JT-3 and JT-4, only grab samples were obtained as the trenching was unable to clearly expose the various horizons. It appears most of the soil in trenches JT-3 and JT-4 is actually transported silt.

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Profile sketches with geochemical results are filed in the appendix to this volume. For trench JT-1, all sections sampled between 39+00W and 40+00W (with the exception of 39+60W) have geochem results either increasing with depth or at least remaining constant with depth. A similar situation exists for the interval 40+60W to 41+60W (with the exception of 41+00W). All horizons sampled from 40+10W to 40+55W (at 5 metre intervals) have geochemical results that decrease with depth. The former case is interpreted as representing residual uranium-in-soil values whereas the latter is characteristic of a seepage anomaly. The soil horizons sampled in trench JT-2 have a somewhat similar characteristic. The sections 40+30W, 40+50W and 40+80W are typical seepage anomalies while data from all other sections represent residual values. Figures 7-25c and 7-26c illustrate a compilation of the geochemical data from trenches JT-1 and JT-2 in cross-sectional form. In the case of trench JT-1, the highest uranium in soil values are present in the A horizon. The anomaly is largest in this medium as well. The uranium values obviously drop off with depth, with the lowest (albeit anomalous) values located in the lower C horizon. A similar situation is evident in trench JT-2.

Horizons were not exposed and, therefore, not sampled in trenches JT-3 and JT-4. The soil at those locations is believed to be transported silt. Figures 7-27 and 7-28 illustrate the geochemical values of the grab samples taken from these trenches. All anomalous values coincide with one water seepage that enters the system at the north end of trench JT-4. The one peak value present in trench JT-3 coincides with the point of inflow of water originating from the uraniferous seepage located at the north end of JT-4.

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TABLE XII

Trench + Sample #	Sample Location	pH	ppb U	ppb F	ppm HCO_3	ppm Na	ppm Ca	ppm Mg	ppb PO_4	Rn PCi/l	Ra pCi/l	Cl Mg/l	SO_4 Mg/l
JT-1-1	40+00W	6.1	1.63	25	22	2.4	3.0	0.65	31	33290	19	-	-
-2	40+15W	6.5	5.97	25	14	1.8	2.3	0.43	122	2845	-	-	-
-3	40+35W	6.4	48.9	40	27	2.2	5.1	0.65	214	1910	15	17.5	-
-4	40+47W	6.1	44.9	35	27	2.2	5.5	0.65	306	16860	15	-	-
JT-2-1	40+20W	6.2	6.12	20	17	1.8	2.4	0.48	214	82890	-	10.5	-
-2	40+57W	5.8	7.85	25	21	1.7	3.2	0.65	367	9710	-	-	-
JT-3-1	50+00W	6.2	0.22	20	18	1.4	2.9	0.54	31	134200	-	-	-
JT-4-1	36+00N	6.8	0.21	20	15	1.3	1.9	0.38	92	791	5	-	-

Analytical Data of Waters Obtained from the JOVE Trenches

The analytical data obtained from the waters taken from all seeps exposed by trenching is presented as Table XII.

All waters from the trenches have similar pH and specific conductivity measurements. Uranium values are observed to vary dramatically and a closer inspection shows a somewhat subtle but corresponding variation in the fluorine, bicarbonate, calcium and phosphate content of the same waters. The radon values vary dramatically as well, but appear to be independent of the uranium content. Phosphate is believed to be the main compound complexing with uranium in solution, however, fluorine, bicarbonate and calcium may also be playing a somewhat lesser role in the transportation of uranium on the JOVE property.

Sample JT-1-1 from station 40+00W had one of the highest radon contents of all the samples obtained from the CENTRAL zone. It should be noted the sample was taken from water running over the surface at a location 50m east of where the zone of autunite has been located. The drainage in the draw is to the south and, therefore, the high radon value obtained at 40+00W must have an origin that cannot be related to the known zone of autunite.

Sample JT-2-1 was obtained uphill and from the same water channel as sample JT-1-1. The radon content is more than twice that observed in JT-1-1 and, therefore, the assumption can be made that at least a loss of 50% of radon in waters can be expected when the waters flow for a distance of 100m over a surface with an incline of approximately 10^{o} to 15^{o}. Furthermore, there is a source of

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radon located uphill from trenches JT-1 and JT-2, that is contributing almost 5 times as much radon into the surface water system than the zone of autunite is releasing.

The radon values of waters taken in trenches JT-3 and JT-4 reveal extremely large amounts of radon are present in the water system. However, further detailed work will have to be carried out before any additional relationship can be recognized.

(c) Geological mapping

Figures 7-25b, 7-26b, 7-27 and 7-28 present the geological information observed in all trenches. The most significant observation was the presence of sub-bedrock on the limbs of trenches JT-1 and JT-2 and the lack of identifiable basement in the central portions. The geology consists of a fine- to coarse-grained, locally well foliated, muscovite-biotite quartz monzonite/granodiorite complex. Pegmatitic material is observed cutting the unit. When weathered, the complex is coated with iron and the radioactive zones correspond to the intensely weathered portions of the trenches. Inclusions of Paleozoic feldspar gneiss were also observed in the trenches. Structural trends observed in the sub-outcrop are to the north, dipping to the west on the east arm and vice versa for the west limb.

With the exception of the westernmost arm of trench JT-3, trenches JT-3 and JT-4 were filled with large boulders. The geology is based on these boulders and consists of a quartz monzonite/granodiorite complex exhibiting secondary muscovite and smokey quartz grains. Some limonitic staining is evident but not nearly to the same extent as was observed in the CENTRAL zone.

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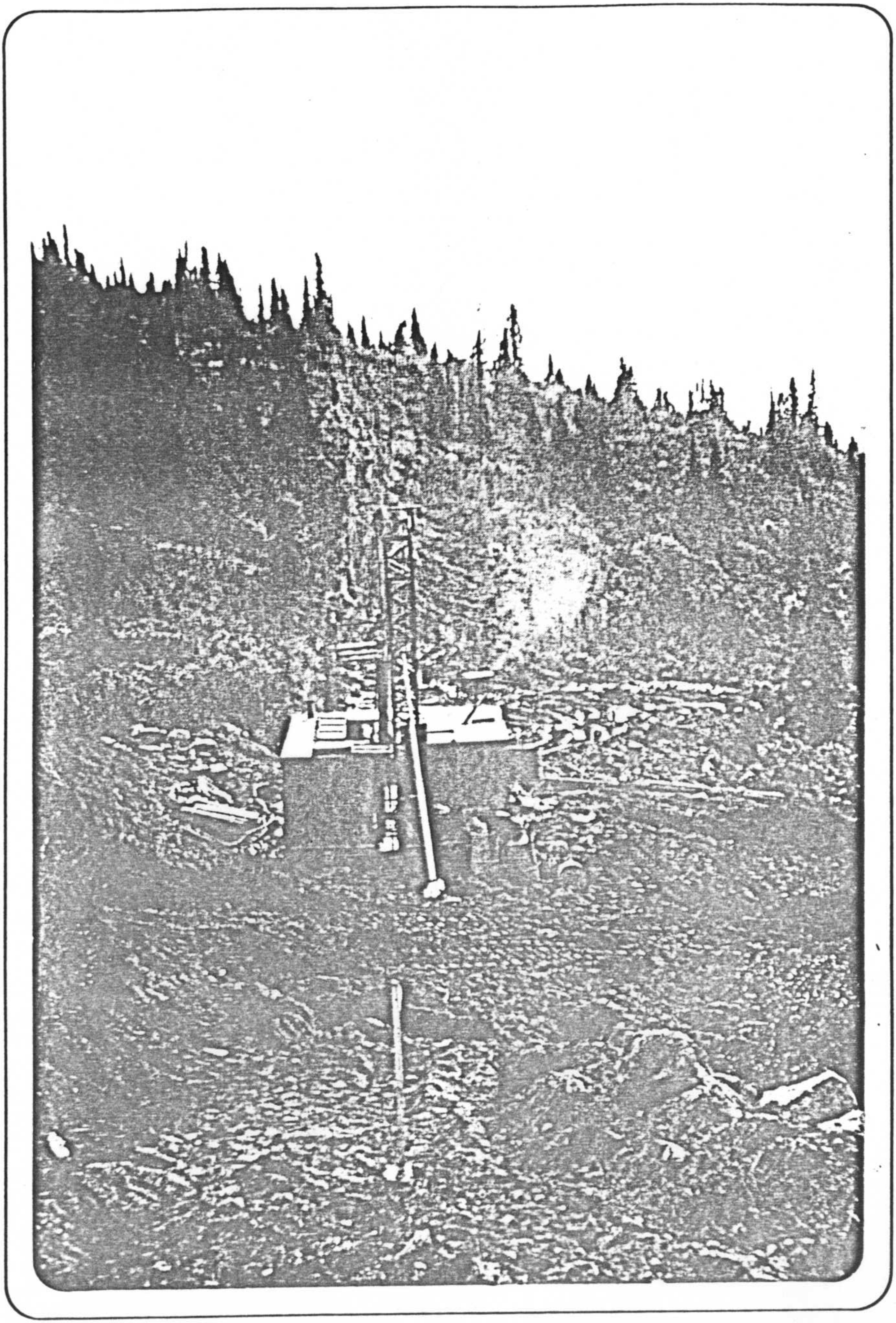

Figure 21 . Drill Rig Collared on Hole 522-79-26-J-1, JOVE Claims

2.4.4 Diamond drilling

Diamond drill holes (522-79-26) -J-1 to -J-3, -J-6 and -J-7 were collared in the CENTRAL zone. Holes (522-79-26) -J-4 and -J-5 were drilled on the WESTERN anomaly. All results have been plotted and are presented for each hole. Data from holes (522-79-26) -J-4 and -J-5 are negative so the discussion will centre on the results from the other holes. These results will be discussed under the following headings:

a) Radiometric response
b) Geochemistry
c) Petrology

(a) Radiometric Response

The down hole probe log for each hole has been filed in the appendix for this volume. The radiometric response of the fresh quartz monzonite is 50 cps while for the weathered zone, it is 125 cps. The highest reading (14,400 cps) was taken in hole J-1 at the 98 foot mark. Equivalent geochemical assays from the down hole probe results have been calculated for each hole and are presented with each diamond drill hole log.

(b) Geochemistry

The geochemistry related to the diamond drilling is discussed under the following headings:

(i) sludge samples
(ii) core analysis
(iii) core assay

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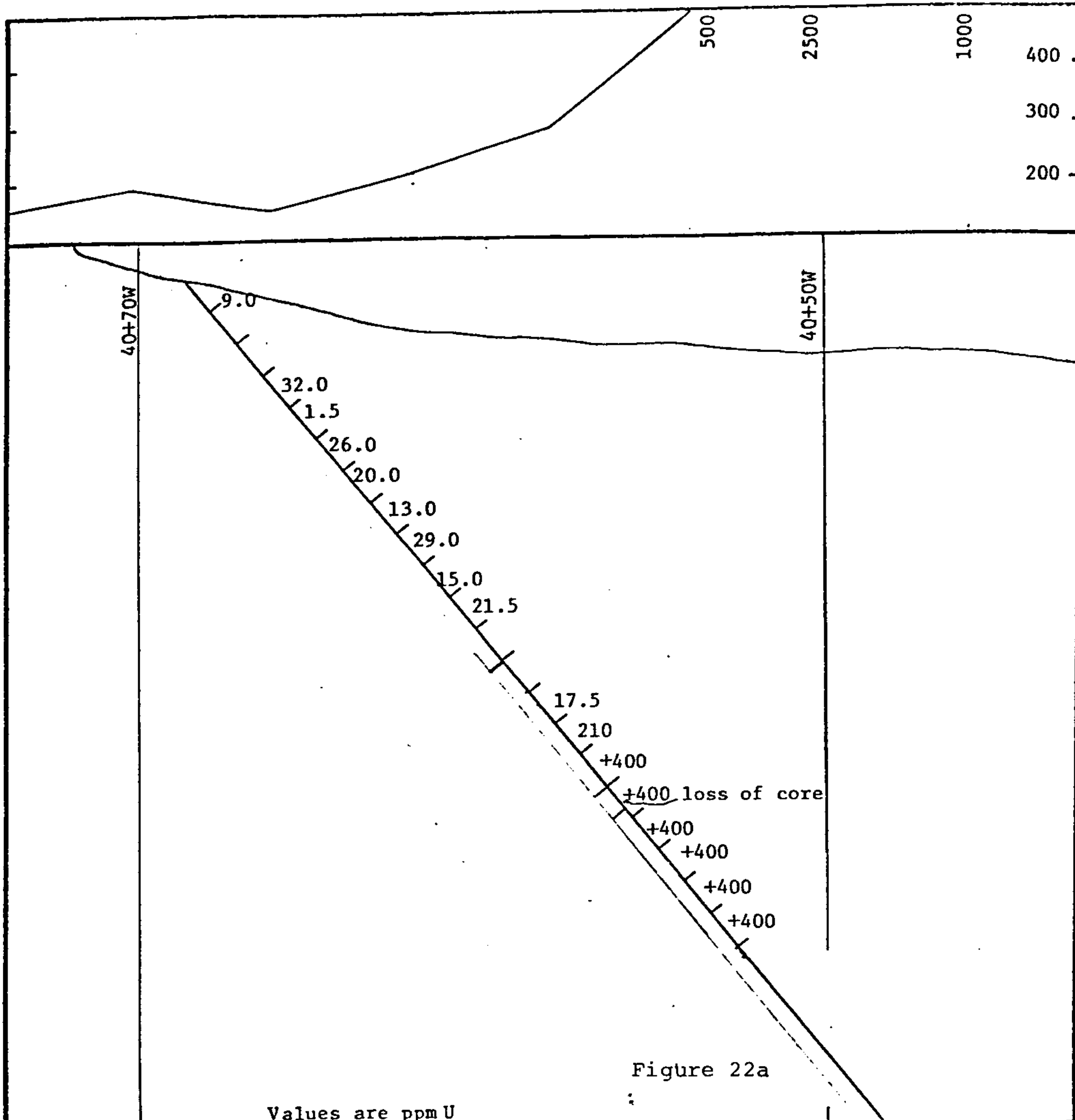
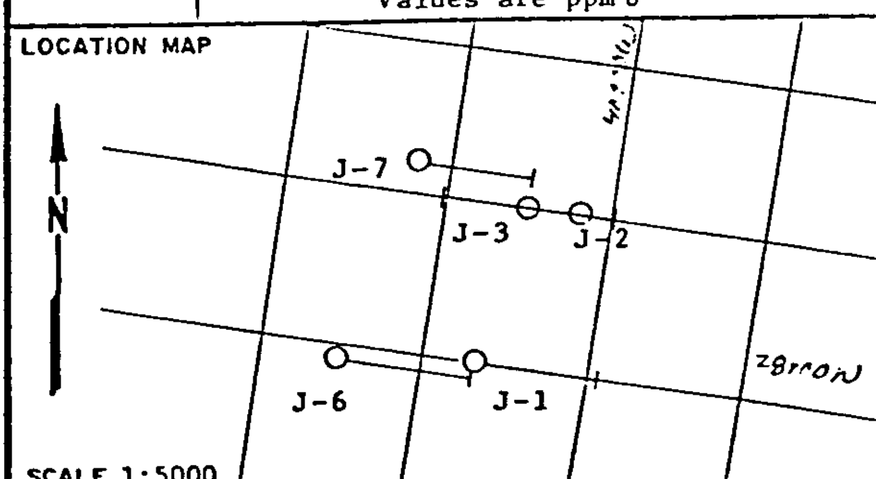


Figure 22a



ELDORADO NUCLEAR LIMITED

PROJECT	522
DISPOSITION	JOVE Claims
SECTION	28+00N
HOLE	26-J-1-Sludge Samples
COMPLETED	August 18, 1979
LOGGED BY	W.J. Olsson
SCALE	1:200

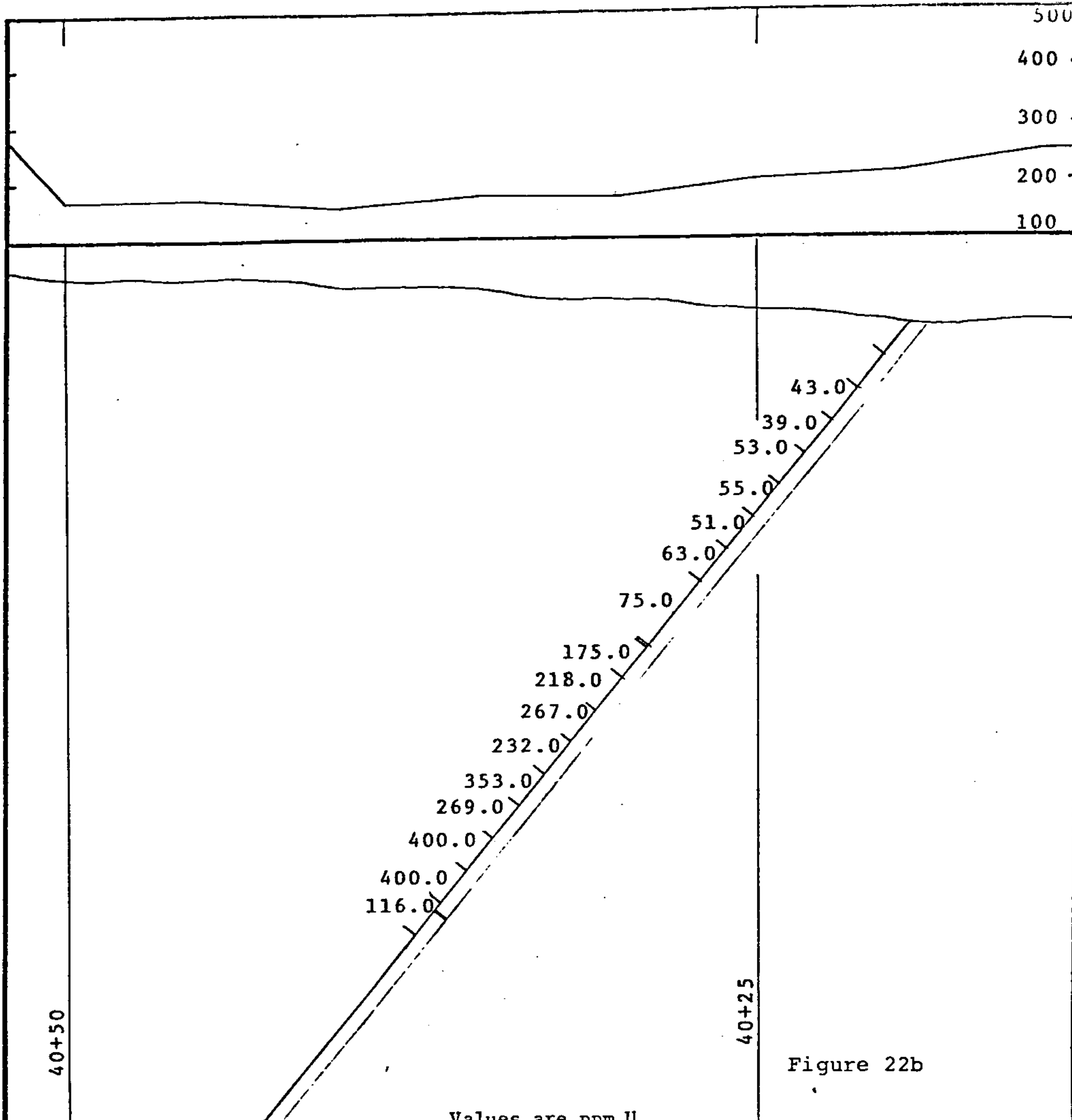
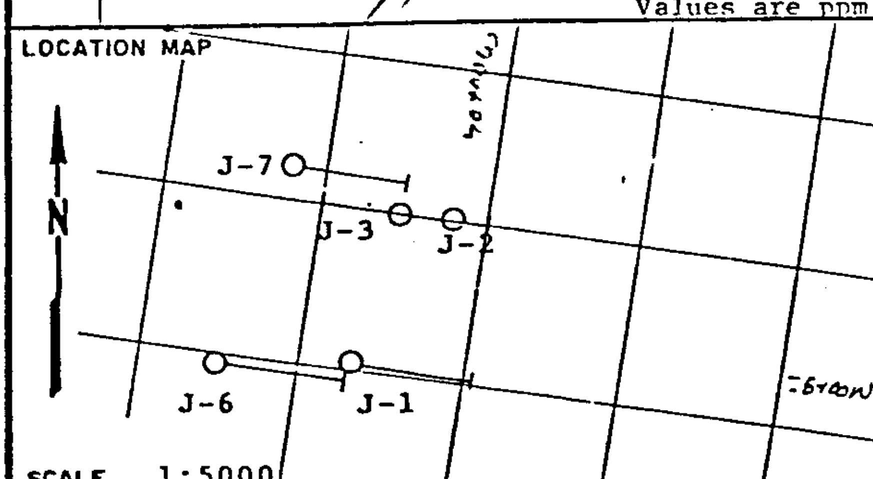


Figure 22b



ELDORADO NUCLEAR LIMITED

PROJECT 522

DISPOSITION JOVE Claims

SECTION 29+00N

HOLE 26-J-2 Sludge Samples

COMPLETED August 23, 1979

LOGGED BY W.J. Olsson

SCALE 1:200

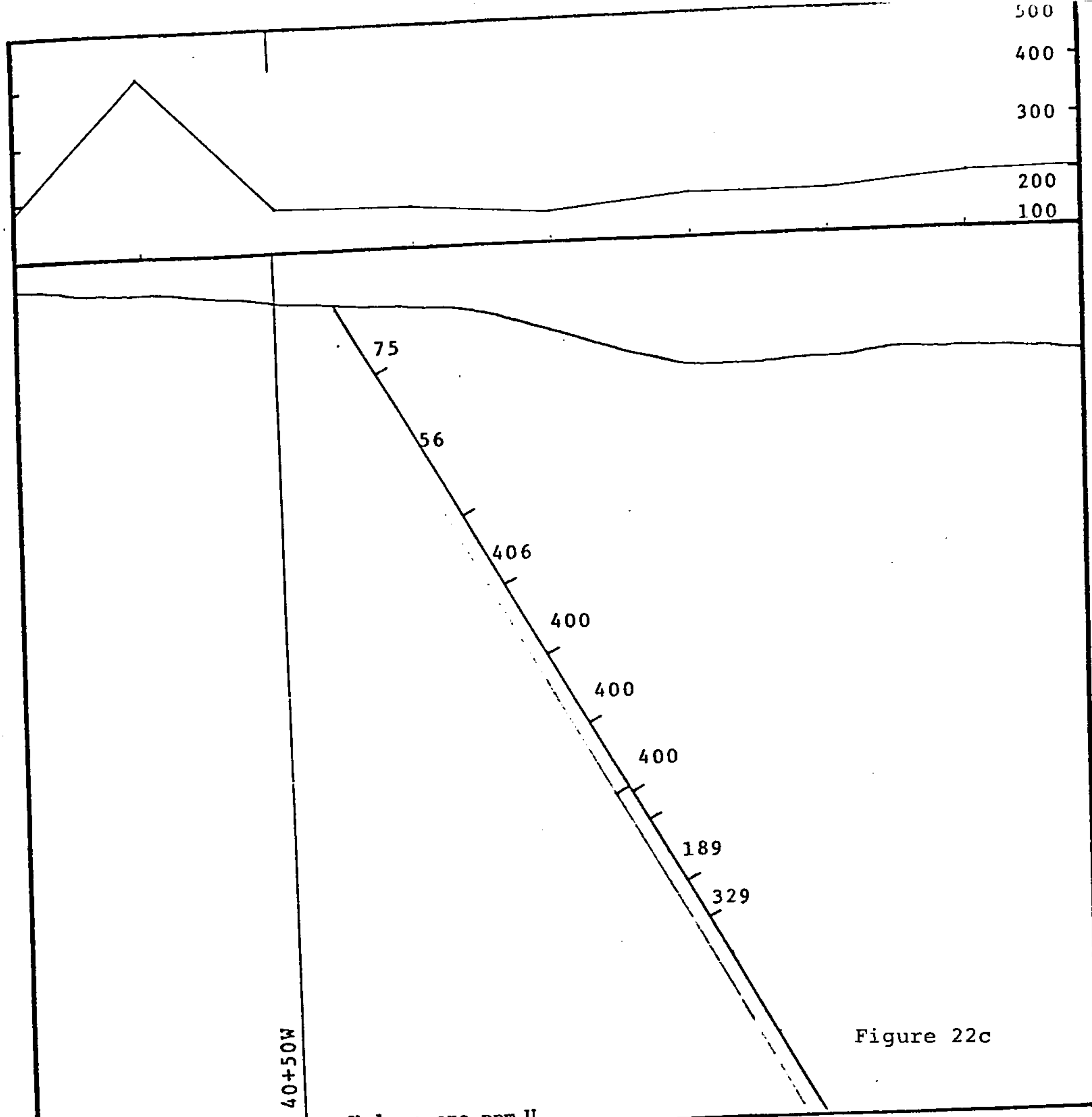
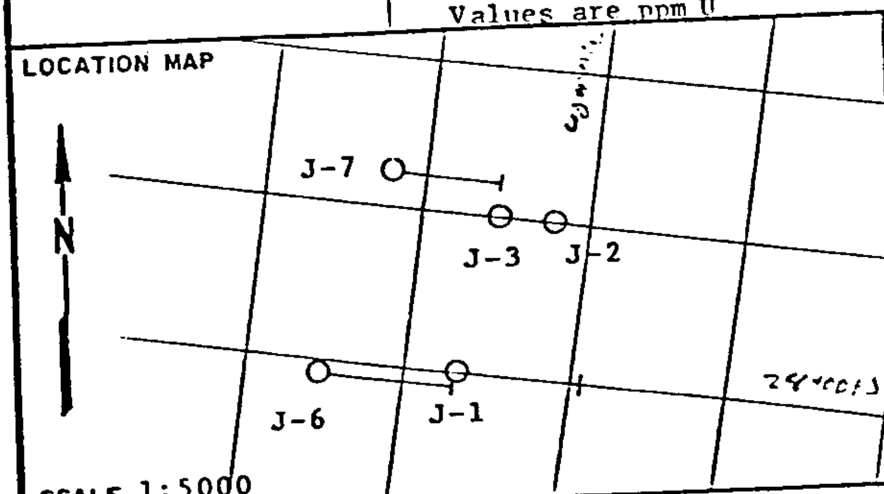


Figure 22c

Values are ppm U



ELDORADO NUCLEAR LIMITED

PROJECT 522

DISPOSITION JOVE Claims

SECTION 28+00N

HOLE 26-J-3 Sludge Samples

COMPLETED August 25, 1979

LOGGED BY W.J. Olsson

SCALE 1:200

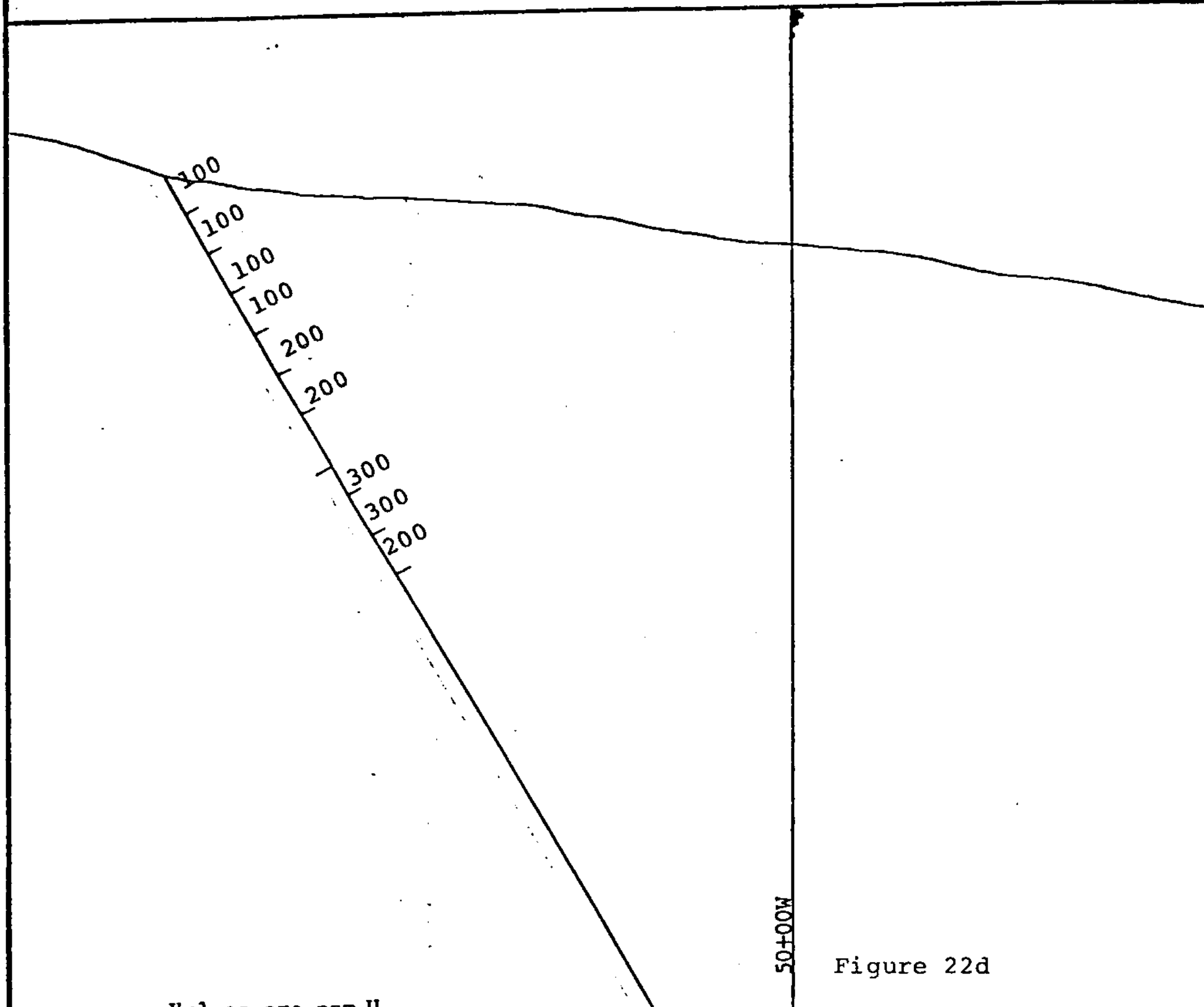
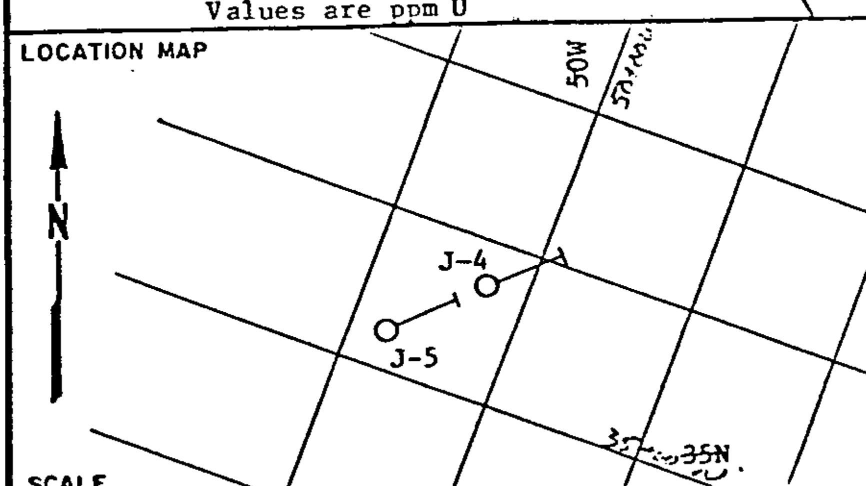


Figure 22d

Values are ppm U



ELDORADO NUCLEAR LIMITED

PROJECT 522

DISPOSITION JOVE Claims

SECTION Off Section

HOLE 26-J-4 Sludge Samples

COMPLETED September 5/79

LOGGED BY B. Oakes

SCALE 1:500

(i) Sludge samples

Figures 7-29a to 7-29d inclusive document the analytical results related to the sludge samples collected. The solid line across each hole represents the point at which core recovery commenced. However, due to the unconsolidated condition of the sub-bedrock observed in the trenches, the actual bedrock may be closer to the collar of the holes than is shown.

The uranium values of the sludge samples remain constant to a certain depth and then increase sharply by a factor of 3 to 10. The point at which these increases occur is interpreted as representing the true bedrock-overburden interface. Sludge samples from holes J-2 and J-3 drop sharply in uranium content where core recovery begins, whereas those from hole J-1 increase sharply. The latter occurs where mineralized core was recovered and, therefore, represents true mineralization. In the former cases, mineralized bedrock was encountered deeper in the hole, suggesting a drop in uranium content of the sludge samples would be expected. The high uranium values observed immediately up-hole from the point of core recovery represent accumulation due to circulating uraniferous groundwater.

(ii) Core analysis

The fresh quartz monzonite has a uranium content of about 1.5 ppm U whereas the crushed, weathered zone returned values averaging 12 ppm U. This variation is in sharp contrast to the thorium content which seems to average 17.0 ppm to 15.0 ppm - values considered correlative to most quartz monzonite bodies.

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(iii) Core assay

The highest geochemical assay value is 0.10% U_3O_8 over 1 foot and was obtained from hole 522-79-26-J-1. The location of this sample coincided with the radiometric reading of 14,400 cps which has an equivalent U_3O_8 value of 0.41% U_3O_8 over 5.5 feet. The lack of correlation between the geochemical assays and radiometric assays is considered to be due to the removal of the uranium mineralization during drilling in view of the friable nature of the autunite and the rock observed in the core.

Figures 7-30a to 7-30g comprise a set of diagrams illustrating the correlation of all geochemical data with the radiometric response and petrology observed in each hole. A close examination of these figures leads to the following observations:

(1) A poor correlation exists between the geochemical assay and radiometric assay of the core. The radiometric assay tends to be up to 22 times greater than the geochemical value.

(2) The thorium content of the quartz monzonite reflects the average content expected for that type of rock. The uranium content of the fresh quartz monzonite is nearly ½ of what the expected value should be, implying the intrusive is depleted in uranium.

(3) The crushed, weathered quartz monzonite has a uranium content in the 12.0 ppm to 15.0 ppm range. This reflects a concentration of uranium as the rock is being weathered.

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(c) Petrology

The CENTRAL anomaly is underlain by massive to poorly foliated quartz monzonite that can be divided into 2 subunits:

(i) weathered
(ii) fresh

(i) Weathered

The weathered quartz monzonite is a grey to brown coloured, fine- to medium-grained, crudely foliated quartz monzonite that appears to be kaolinized and sericitized. Microscopic examination has shown these apparent alteration products to be crushed as opposed to altered feldspar. The weathered subunit consists of 30% K-feldsapr, 25% plagioclase, 25% quartz and 20% mica minerals. The contact with the fresh unit is usually marked by a fault zone. The weathered zone tends to be highly fractured, friable and extends to a vertical depth of 75 metres. Mineralization in the form of meta-autunite has filled some fractures cutting the core at 45-60^{o}, whereas those fracture systems lying near parallel to the core axis have been filled with stilbite. The radiometric response of the weathered quartz monzonite is 125 cps.

(ii) Fresh

The fresh quartz monzonite is a grey to white, medium-grained, locally fractured unit consisting of 40% K-feldspar, 30% plagioclase, 20% smokey quartz and 10% mica minerals. The unit is locally cut by pegmatite dykes containing almandine garnets. Although fracturing is present in this subunit, the degree is not as high as observed in the weathered portions of the hole.

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(iii) Discussion

A more detailed report by Dr. J.D. Scott, Research and Development Division, Eldorado Nuclear, on the petrology of the JOVE CENTRAL zone is included in the appendix for this volume. The following discussion will, in part, deal with Dr. Scott's report as well as with observations made in the field.

At initial glance, there appeared to be 2 rock units in the drill core from the CENTRAL zone. The upper portions of the hole resembled an altered granite with the majority of the feldspar being K-feldspar. However, when the unit was stained for feldspar content, the percentages of plagioclase (25%) and K-feldspar (30%) are characteristic of quartz monzonite. The chalk-white appearance of the unit suggested the rock had undergone kaolinization. X-ray powder patterns taken on an apparently kaolinized specimen reveal only a trace of sericite or chlorite in the feldspar. The white chalky substance is in fact crushed, fractured potash feldspar that has been altered by circulating ground water as opposed to hydrothermal solutions.

A sample of meta-autunite taken from hole 522-79-26-J-1 was identified and its overall gamma activity was measured to determine its state of equilibrium. The results of this study are compiled in an in-house report by Dr. D. Francis, Research and Development Division, Eldorado Nuclear Limited. The following is a summary of Dr. Francis' report:

(1) The meta-autunite is in secular equilibrium up to and including thorium 230. This infers a "minimum age" of 800,000 years for the mineral.

(2) The meta-autunite is out of secular equilibrium with respect to U238 for Ra226 and all subsequent daughters.

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TABLE XIII

Hole #	Footage	Thickness	Radio. Assay ppm U	Chem. Assay ppm U	Radio./Chem.
J-1	67.0-200.0	133'	281	41	6.9
	220.0-225.0	5'	60	5	12.0
	295.0-297.0	2'	170	9	18.9
J-2	36.0-118.0	82'	207	40	5.2
	134.0-165.0	31'	172	79	2.2
	178.0-186.0	8'	33	7	4.7
J-3	29.0-140.0	111'	133	42	3.2
	173.0-185.0	12'	68	29	2.3
	212.0-224.0	12'	28	23	1.2
	240.0-250.0	10'	42	11	3.8
J-6	197.0-200.0	3'	46	14	3.3
	248.0-250.0	2'	20	9	2.2
J-7	130.0-211.0	81'	152	78	2.0
	223.0-225.0	2'	46	21	2.2

Summary of Radioactive Drill Footages, JOVE Claims

(3) In the R226 series, all daughters including Pb210, are in secular equilibrium with Ra226, implying no recent large Rn222 emanation has occurred and that Ra226 has been leached from the sample.

As the entire geochemical environment at JOVE is not completely understood, the "minimum age" of 800,000 years must be taken with a grain of salt as the chemical addition or leaching of one or more elements could affect the secular equilibrium of the sample and, therefore, have a bearing on its apparent age.

The mineralized zones intersected by diamond drilling appear to be related to one set of fractures that are transverse to the core axis. Table XIII summarizes the holes showing footages, radiometric assay, geochemical assay and a ratio of radiometric results with geochemical results.

Holes J-6 and J-7 were drilled with mud, whereas holes J-1, J-2 and J-3 were not. The ratios of radiometric assays to chemical assays for the former 2 holes appear to be constant at 2.0-3.0. The same ratios for holes J-1 to J-3 vary widely from 1.2 to 18.9. It appears that drilling with mud will at best provide us with a consistent factor to compare the radiometric assay with the geochemical assay. However, there are difficulties that may arise due to the use of drill muds and additives. A test carried out in the field on a water sample with a pH of 6.2 and specific conductivity of 20 micromohs/cm, showed a pH of over 9 and a specific conductivity of over 400 micromohs/cm will result when the water is mixed with drill mud. Autunite is stable under the former conditions but would very likely be washed out given the latter conditions. The dilemna is, therefore, do we drill with mud and risk leaching any mineralization out

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or do we drill with water and mechanically remove mineralization? The radiometric to chemical ratios support drilling with mud, however, an attempt to keep the pH around 6.0 would have to be made to minimize chemical leaching.

2.4.5 Discussion

The following is a summary of significant points relating to the JOVE property.

Fact One: There are several zones of low resistivity underlying the JOVE property.

Fact Two: Uranium is present in extremely highly anomalous amounts within the secondary environment on the JOVE property.

Fact Three: Uranium is presently moving both chemically and mechanically in anomalous amounts within the secondary environment.

Fact Four: Radon gas is present in highly anomalous amounts dissolved in ground and surface waters and as soil gas.

Fact Five: Uranium mineralization is present in the form of meta-autunite in fractures cutting the weathered quartz monzonite.

Fact Six: No uranium mineralization was recognized in the fresh quartz monzonite.

Fact Seven: The fresh quartz monzonite appears to be depleted in uranium content.

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The significance of the above 7 points lies in their relationship to one another. For instance, one of the resistivity anomalies coincides with the geochemical anomaly defined in the CENTRAL zone. The uranium in the secondary environment on the CENTRAL zone appears to be related to a seepage anomaly rather than to underlying mineralization. The resistivity anomaly has been described as "deep seated to the north and coming to surface at the south end". Where it comes to surface is the location of the geochemical seepage anomaly. It would, therefore, appear the "deep seated" anomaly to the north is a prime target for locating primary mineralization.

Radon-in-water values from the CENTRAL zone increase to the north and are stronger in waters unrelated to the zone of autunite. It would then appear a source that is contributing 5 times as much radon as the autunite zone is emanating, lies uphill from the CENTRAL zone.

The autunite mineralization is spatially restricted to the weathered quartz monzonite. As this weathered unit is interpreted as resulting from circulating ground waters, and the autunite is felt to be due to fluctuating ground water levels, the autunite is in fact a "geochemical anomaly". Even though fresh quartz monzonite is depleted in uranium, it cannot be the direct source of the uranium in the ground water as, if that was the case, there should be evidence of some uranium in the fresh unit. There is no such evidence. In fact, the low, consistent background for the quartz monzonite (50 cps) and the absence of autunite in the fractures cutting the fresh unit suggests the autunite has some source other than the quartz monzonite.

The fresh quartz monzonite exhibits characteristics of some hydrothermal event in the past (chloritization of biotite). This event may have leached the uranium from the rock and concentrated it within porous structural zones.

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The above discussions have focussed on the CENTRAL zone as most of the data is from that area. The same type of comparison could easily be made for the EASTERN grid. Although we haven't trenched or drilled the EASTERN anomaly, a comparison of the surface anomaly with that located on the CENTRAL zone shows the EASTERN anomaly may be related to mineralization in the bedrock underlying the anomaly.

2.5 Conclusions

The following is a list of conclusions by activity that have resulted from the 1979 program on the JOVE property.

2.5.1 Geophysics

(1) There are 1 definite, 1 probable and 2 possible low resistivity anomalies on the JOVE property.

(2) The definite and probable anomalies are spatially related to soil geochemical anomalies.

(3) The CENTRAL and EASTERN zones are characterized by strong linear radiometric anomalies.

(4) The VLF-EM 16 survey results are inconclusive in determining whether or not that technique can be used in delineating possible structures underlying the JOVE property.

(5) Scintillometer readings every 10 metres along lines 50 metres apart will sharply define any radiometric anomaly on the JOVE property.

......47

2.5.2 Geochemistry

(i) Hydro

(1) Anomalous amounts of uranium and radon are present in the surface waters on JOVE.

(2) Uranium is probably moving as a phosphate complex in ground waters on JOVE.

(3) Uranium is being transported chemically and mechanically in the secondary environment of JOVE.

(4) Water draining the JOVE property is essentially "chemically clean".

(ii) Rocks

(1) The overall uranium content of the rocks obtained from the JOVE property in 1978 suggests the quartz monzonite is depleted in uranium with respect to the norm expected for such an intrusive.

(2) The uranium content of rocks from the CENTRAL zone reflects the overall uranium content of rocks from the JOVE property. This enhances the hypothesis that the JOVE CENTRAL anomaly is a seepage anomaly.

...... 48

(3) The uranium content of rocks from the EASTERN zone is higher than the average for the JOVE property and, therefore, may be indicative of a zone enriched in uranium.

(4) The thorium content of rocks obtained from the CENTRAL anomaly is bimodially distributed due to 2 separate sources for the thorium. One source is related to the hydromorphic environment, the other to the primary origin related to the quartz monzonite.

(5) A contoured map of the uranium content of rocks from the JOVE property, illustrates a trend similar to the radiometric anomaly over the CENTRAL and EASTERN anomalies.

(iii) Soils

(1) The uranium-in-soil anomaly on the CENTRAL zone is a seepage anomaly.

(2) The uranium-in-soil anomaly on the EASTERN grid appears to be related to the underlying bedrock.

(3) The soil anomalies on the CENTRAL and EASTERN grids coincide with the radiometric anomalies of each.

(4) A sample interval of 50 metres along lines 50 metres apart well defines the soil anomalies on JOVE.

......49

(5) A crude spatial relationship exists between the thorium values and uranium values in soil on the JOVE property.

(iv) Soil Gas

(1) Radon soil gas is present in anomalous quantities on the JOVE property.

(2) A station density of 25m by 25m would serve to clearly define radon soil gas anomalies on the JOVE property using alpha metres.

2.5.3 Trenching

(i) Radiometrics

(1) A scintillometer survey with stations 1m apart along lines 5m apart, clearly defines any radiometric anomaly present in trenches on the JOVE property.

(ii) Geochemistry

(1) The uranium-in-soil values from the CENTRAL grid decrease with depth.

(2) Waters obtained from the trenches contain anomalous amounts of uranium and radon.

(iii) Geology

(1) The limbs of the trenches are underlain by residual sub-bedrock.

...... 50

(2) The central portion of the trenches in the CENTRAL draw is underlain by boulder-filled overburden too thick to allow exposing the bedrock or sub-bedrock.

(3) The overburden conditions that exist on the JOVE property are too rugged to undertake a trenching program with a D-6 cat.

(4) The WESTERN geochemical anomaly is comprised of silt washed down from the west.

2.5.4 Diamond drilling

(1) The CENTRAL zone is underlain by quartz monzonite cut locally by pegmatite dykes.

(2) The upper 75 metres of quartz monzonite is intensely crushed and weathered.

(3) The fresh quartz monzonite is depleted in uranium but contains normal amounts of thorium.

(4) The presence of secondary muscovite in the weathered and fresh quartz monzonite as well as the apparent development of K-feldspar at the expense of plagioclase suggests the terrane has been inundated by deuteric or pneumatolytic solutions.

(5) Meta-autunite is within the weathered quartz monzonite.

...... 51

(6) The autunite is out of secular equilibrium with all daughter products beyond Th230.

(7) The meta-autunite has a minimum age of 800,000 years.

(8) The meta-autunite precipitated out of uraniferous ground water and originally was derived from a primary source located uphill.

(9) Theoretically there is a possibility of an economic accumulation of autunite near Glazy Creek.

(10) The extreme friable nature of the autunite mineralization and weathered rock along with the porous nature of the weathered quartz monzonite has resulted in the partial washing out of the autunite by the water during drilling.

(11) The radiometric assay to chemical assay ratio for holes drilled with mud are more consistent and lower than those same ratios related to holes drilled with water alone.

2.6 Recommendations

The following is a list of recommendations derived from the 1979 program on the JOVE property.

(1) The dipole-dipole resistivity technique should be further tested using a shorter electrode interval and a smaller line spacing.

...... 52

(2) A VLF-EM 16 test survey should be completed using a much smaller line spacing.

(3) The area between the CENTRAL and EASTERN grids as well as that area immediately south of them, should undergo a detailed radiometric/ /soil geochemical survey.

(4) All grids should be systematically water sampled and the samples should be analyzed for radon and radium. The sampling should progress in an uphill fashion.

(5) A soil-gas survey should be undertaken to compliment recommendation (4).

(6) The areas uphill from the CENTRAL and EASTERN zones should undergo a detailed radiometric survey.

(7) The results from recommendation (6) should guide any soil sampling that may be undertaken in those areas.

(8) The JOVE CENTRAL anomaly should be trenched at 100 metre intervals to Glazy Creek. The entire JOVE EASTERN anomaly should be trenched at 100 metre intervals.

......53

(9) All trenches should undergo detailed scintillometer surveys, soil horizon sampling and geological mapping.

(10) The extent of trenching should be guided by results from preceding trenching.

(11) The best targets defined by trenching should be investigated by diamond drilling.

William Olsson

William Olsson
Project Geologist

WO/bd

JOVE SOILS

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 ANALYSIS

CERTIFICATE NO. SP0895
INVOICE NO. 30859
RECEIVED June 28/79
ANALYSED July 4/79

TO: Eldorado Nuclear Ltd.
Ste. 400 - 255 Albert St.
Ottawa, Ont.
K1P 6A9
ATTN: Area Jove

CC: W. OLSSON

SAMPLE NO. :	Lower Concentration Limit (PPM)	41-2555
Antimony	50	bcl
Arsenic	50	bcl
Barium	5	300
Beryllium	5	bcl
Bismuth	5	bcl
Boron	20	bcl
Cadmium	20	bcl
Calcium	0.05%	1%
Chromium	10	30
Cobalt	10	bcl
Copper	1	5
Gallium	5	10
Germanium	20	bcl
Indium	50	bcl
Iron	0.05%	0.5%
Lead	5	30
Magnesium	0.02%	0.1%
Manganese	5	150
Molybdenum	10	bcl
Nickel	5	5
Niobium	50	bcl
Silver	1	bcl
Strontium	2	100
Tellurium	200	bcl
Thorium	200	<200
Tin	10	bcl
Titanium	5	500
Vanadium	20	<20
Zinc	50	bcl
Zirconium	20	bcl

SEMI QUANTITATIVE SPECTROGRAPHIC ANALYSES

>5000 ppm => 5000 ppm		50 ppm	= 25–100 ppm
5000 ppm =	2500–10000 ppm	20 ppm	= 10–50 ppm
2000 ppm =	1000–4000 ppm	10 ppm	= 5–20 ppm
1000 ppm =	500–2000 ppm	5 ppm	= 2–10 ppm
500 ppm =	250–1000 ppm	2 ppm	= 1–4 ppm
200 ppm =	100–400 ppm	1 ppm	= 0.5–2 ppm
100 ppm =	50–200 ppm	bcl	= below concentration limit

Ranges for Iron, Calcium & Magnesium are reported in %

CTA
MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY: ....

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 48632

INVOICE NO. 31651

RECEIVED

ANALYSED

TO: Eldorado Nuclear Ltd.
Ste. 400 - 255 Albert St.
Ottawa, Ont.
K1P 6A9

ATTN:

SAMPLE NO. :	PPM U (checks)
40-1131	3.0
41-1152	3.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bickle

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 ANALYSIS

CERTIFICATE NO. 47890

INVOICE NO. 30870

RECEIVED June 25/79

ANALYSED July 3/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: Mr. William Olsson

JOVE - Soil

SAMPLE NO. :	PPM U
PREFIX 40	
2556	+400
2557	+400

MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Tommy T. Madsen

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604
TELEX: 043-52597

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CERTIFICATE OF ASSAY

CERTIFICATE NO. 65518
INVOICE NO. 31202
RECEIVED July 6, 1979
ANALYSED July 19, 1979

TO: Eldorado Nuclear Ltd.,
Ste 400 - 255 Albert St.,
Ottawa, Ont.,
ATTN: K1P 6A9

C.C. Whitehorse, Y.T.
JOVE - SOILS

SAMPLE NO. :	PPM U
40 - 2556	432
40 - 2557	2798

From Geochem certificate #47890

B L Twaite
REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

MEMBER CANADIAN TESTING ASSOCIATION
CTA

CENTRAL SOILS

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 ANALYSIS

CERTIFICATE NO. 50776

INVOICE NO. 33025

RECEIVED Sept. 19/79

ANALYSED Oct. 4/79

TO: Eldorado Nuclear Ltd.
255 Albert St., St. 400
Ottawa, Ontario K1P 6A9

ATTN: Mr. W. Olsson PROJECT: 522 - Area - JC

SAMPLE NO. :	PPM U
40 - 8541	7.5
8542	169
8543	52
8544	30
8545	276
8546	292
40 - 8547	49
40 - 8801	33
8802	114
8803	4.5
8804	27
8805	40
8806	12.0
8807	39
8808	15.0
8809	58
8810	28
8811	11.5
8812	69
8813	8.0
8814	35
8815	10.5
8816	79
8817	54
8818	78
8819	9.5
8820	2.5
8821	1.5
8822	3.5
8823	1.5
8824	1.5
8825	13.0
8826	5.5
8827	3.0
8828	1.5
8829	2.5
8830	1.0
8831	3.0
8832	2.5
40 - 8833	1.5

CERTIFIED BY: Hart Bichle

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 ANALYSIS

CERTIFICATE NO. 50777

INVOICE NO. 33025

RECEIVED Sept. 19/79

ANALYSED Oct. 4/79

TO: Eldorado Nuclear Ltd.
255 Albert St., St. 400
Ottawa, Ontario K1P 6A9

ATTN: Mr. W. Olsson PROJECT: - 522 - Area - JC

SAMPLE NO. :	PPM U
40 - 8834	2.5
8835	1.5
8836	2.0
8837	2.0
8838	5.0
8839	3.5
8840	3.5
8841	4.0
8842	85
8843	4.5
8844	8.0
8845	4.0
8846	3.0
8847	9.5
8848	3.0
8849	15.0
8850	28
8851	38
8852	1.5
8853	4.5
8854	5.0
8855	5.5
8856	22.0
8857	18.5
8858	135
40 - 8859	147

CERTIFIED BY: Hart Bichle

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 ANALYSIS

CERTIFICATE NO. 50781

INVOICE NO. 33045

RECEIVED Sept. 19/79

ANALYSED Oct. 4/79

TO: Eldorado Nuclear Ltd.
255 Albert St., St. 400
Ottawa, Ontario K1P 6A9

ATTN: PROJECT: Area - JC Mr. Olsson (522)

SAMPLE NO. :	PPM U	
40 - 8548	105	
8549	16.5	
8550	4.5	
8551	5.0	
8552	1.5	
8553	2.0	
8554	173	
8555	5.0	
8556	4.0	
8557	2.5	
8558	1.5	
8559	0.5	
8560	52	
8561	4.5	
8562	9.0	
8563	0.5	
8564	6.5	
8565	6.0	
8566	1.0	
8567	0.5	
8568	2.5	
8569	2.5	
8570	2.5	
8571	10.0	
8572	45	
8573	328	
8574	>400	*
8575	101	
8576	367	
8577	775	
8731	221	
8734	30	
8732	80	
8733	4.5	
8873	172	
8874	203	
8933	5.0	
8934	62	
8935	148	
40 - 8936	81	

CTA
MEMBER
CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichle

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 ANALYSIS

CERTIFICATE NO. 50782

INVOICE NO. 33045

RECEIVED Sept. 19/79

ANALYSED Oct. 4/79

TO: Eldorado Nuclear Ltd.
255 Albert St., St. 400
Ottawa, Ontario K1P 6A9

ATTN:
PROJECT: Area - JC (522) Mr. Olsson

SAMPLE NO. :	PPM U	
40 - 8970	343	
8971	56	
8972	152	
8973	175	
8974	178	
8975	127	
8976	77	
8977	8.0	
8978	4.5	
8979	45	
8980	63	
8981	2.0	
8982	2.5	
8983	288	
8984	>400	*
8985	61	
8986	54	
8987	38	
8988	18.5	
8989	4.0	
8990	14.0	
8991	1.5	
8992	56	
8993	41	
8994	25	
8995	32	
8996	>400	*
8997	>400	*
8998	>400	*
8999	>400	*
40 - 9000	>400	*

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

CENTRAL ROCK

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 ANALYSIS

CERTIFICATE NO. 48650
INVOICE NO. 31524
RECEIVED July 16/79
ANALYSED July 31/79

TO: Eldorado Nuclear Ltd.,
255 Albert St., STe. 400
Ottawa, Ont.
K1P 6A9

CC. W. Olsson

ATTN: No work area

ROCKS

SAMPLE NO. :	PPM U
PREFIX 22	
38 73A	1.0
38 73B	2.5

NOTE: - DENOTES LESS THAN

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichle

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 ANALYSIS

CERTIFICATE NO. 50773
INVOICE NO. 33548 (Th) 33225 (U)
RECEIVED September, 1979
ANALYSED October 30, 1979

TO: Eldorado Nuclear Mines
400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9
ATTN:

AREA JC - ROCK

SAMPLE NO. :	PPM U	PPM Th
22 - 8501	0.5	12
8503	19.5	12
8504	2.0	7
8506	3.5	13
8507	2.0	14
8510	2.5	13
8511	1.5	13
8512	2.0	6
8513	2.0	7
8520	0.5	9
8523	2.5	4
8524	2.5	10
8525	3.5	9
8526	0.5	21
8527	2.5	15
8534	1.0	5
8536	1.0	8
8538	1.5	8
8540	1.0	4
8541	2.5	16
8542	3.5	14
8543	3.5	13
8544	2.0	4
8545	4.5	7
8802	3.0	7
8803	1.5	20
8805	0.5	2
8806	1.5	12
8807	2.0	3
8808	4.5	11
8810	2.0	5
8811	1.5	8
8813	0.5	1
8815	0.5	2
8816	2.5	4
8819	3.0	6
8820	1.0	
8821	1.5	4
8822	1.5	19
22- 8823	2.0	41

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50774

TO: Eldorado Nuclear Mines
400 - 255 Albert St.,
Ottawa, Ont.
ATTN: K1P 6A9

INVOICE NO. 33225 (u)
33548 (Th)
RECEIVED September 19, 1979
ANALYSED October 30, 1979

AREA JC - ROCK

SAMPLE NO. :	PPM U	PPM Th
22 - 8824	3.5	8
8825	1.5	12
8826	3.5	19
8827	2.5	17
8828	1.0	6
8829	2.0	19
8831	0.5	6
8835	2.0	5
8836	1.5	14
8838	1.5	13
8840	2.0	19
8841	1.0	4
8843	2.5	3
8844	1.5	6
8846	0.5	14
8847	1.5	4
8849	1.5	15
8850	1.5	12
8852	0.5	17
8855	0.5	6
8857	0.5	12
22 - 8858	5.0	8

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

••ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50775

INVOICE NO. 33025

RECEIVED Sept. 19/79

ANALYSED Oct. 4/79

TO: Eldorado Nuclear Ltd.
255 Albert Street, St. 400
Ottawa, Ontario K1P 6A9

ATTN: Mr. W. Olsson PROJECT: 522 - Area - JC

SAMPLE NO. :	PPM U
40 - 8501	6.5
8502	54
8503	250
8504	36
8505	94
8506	1.5
8507	9.5
8508	1.5
8509	7.5
8510	6.5
8511	6.5
8512	12.5
8513	10.5
8514	6.5
8515	4.5
8516	5.5
8517	5.5
8518	5.5
8519	5.5
8520	3.0
8521	4.0
8522	2.0
8523	8.5
8524	8.0
8525	13.5
8526	5.5
8527	3.5
8528	27
8529	35
8530	2.0
8531	1.5
8532	2.5
8533	2.5
8534	2.0
8535	2.5
8536	2.0
8537	2.0
8538	4.5
8539	99
40 - 8540	2.0

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50780

INVOICE NO. 33225 (U)
34011 (Th)

RECEIVED September, 19, 19

ANALYSED Nov. 26/79

TO: Eldorado Nuclear Mines
400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN:

Proj. - 522 "Rocks"

AREA JC - ROCK

SAMPLE NO. :	PPM U	PPM Th	
22 - 8548	9.5	9	
8550	1.5	5	
8551	1.5	10	
8552	1.5	12	
8556	1.5	7	
8557	1.0	13	
8558	3.0	9	
8562	1.0	12	
8563	1.5	15	
8564	2.0	2	
8567	1.5	4	
8568	2.0	11	ref + p
8569	2.5	13	
8570	1.0	9	
8571	1.5	15	
22 - 8575	5.0	11	
22 - 8934	2.5	9	
8971	1.5	1	
8977	2.5	6	
8978	1.5	10	
8981	1.0	11	
8988	1.5	14	ref + p
8991	2.0	12	
8992	1.5	11	
22 - 8994	2.5	5	

CERTIFIED BY: ....

EASTERN SOILS

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50724
INVOICE NO. 32999
RECEIVED Sept. 18/79
ANALYSED Oct. 2/79

TO: Eldorado Nulcear Ltd.
Ste. 400 - 255 Albert Street
Ottawa, Ontario K1P 6A9

ATTN: PROJECT: AREA JE (SOILS) CC: Olsson

SAMPLE NO. :	PPM U	
40 - 5701	26	
5702	91	
5703	91	
5704	248	
5705	131	
5706	43	
5707	71	
5708	>400	* ✓
5709	187	
5710	33	
5711	65	
5712	18.5	
5713	9.5	
5714	6.5	
5715	154	
5716	2.4	
5717	11.5	
5718	1.5	
5719	1.5	
5720	2.5	
5721	0.5	
5722	0.5	
5723	57	
5724	3.0	
5725	3.5	
5726	400	
5727	>400	* ✓
5728	7.0	
5729	53	
5730	2.0	
5731	12.0	
5732	164	
5733	150	
5734	>400	* ✓
5735	149	
5736	23.0	
5738	112	
5739	6.5	
5740	62	
40 - 5741	>400	* ✓

OCT 10 1979

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50725
INVOICE NO. 32999
RECEIVED Sept. 18/79
ANALYSED Oct. 2/79

TO: Eldorado Nuclear Ltd.
Ste. 400 - 255 Albert Street
Ottawa, Ontario K1P 6A9

ATTN: PROJECT: AREA JE (SOILS) CC: Olsson

SAMPLE NO. :	PPM U	
40 - 5742	>400	* ✓
5743	>400	* ✓
5744	392	
5745	>400	* ✓
5746	>400	* ✓
5747	81	
5748	7.5	
5749	99	
5750	>400	* ✓
5751	8.0	
5752	7.0	
5753	4.0	
5754	>400	* ✓
5755	339	
5756	76	
5757	16.5	
5758	19.0	
5759	85	
5761	145	
5762	322	
5763	24.0	
5764	174	
5765	43	
5766	53	
5767	16.0	
5768	23.5	
5769	139	
5797	>400	* ✓
5811	>400	* ✓
5812	9.0	
5813	345	
5814	62	
5815	27	
5852	23.0	
5853	59	
5854	>400	* ✓
5855	125	
5856	>400	* ✓
5857	37	
40 - 5858	27	

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: ....

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 ANALYSIS

TO: Eldorado Nuclear Ltd.
Ste. 400 - 255 Albert Street
Ottawa, Ontario K1P 6A9

CERTIFICATE NO. 50726
INVOICE NO. 32999
RECEIVED Sept. 18/79
ANALYSED Oct. 2/79

ATTN: PROJECT: AREA JE (SOILS) CC: Olsson

SAMPLE NO. :	PPM U	
40 - 5859	107	
5860	331	
5861	>400	*
5862	>400	*
5863	359	
5864	62	
5865	97	
5866	>400	*
8875	>400	*
8876	334	
8877	211	
8878	93	
8879	134	
8880	157	
8881	129	
8882	>400	*
8883	123	
8884	1.5	
8885	1.5	
8886	5.0	
8887	2.5	
8888	2.5	
8889	8.5	
8890	3.5	
8891	2.0	
8892	14.0	
8893	2.5	
8894	4.0	
8895	5.5	
8896	6.5	
8897	6.5	
8898	6.5	
8899	5.0	
8900	10.5	
8901	6.0	
8902	3.0	
8903	8.5	
8904	4.0	
8905	1.5	
40 - 8906	10.5	

EXPLORATION DIVISION
OCT 10 1979

CERTIFIED BY: ....

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 ANALYSIS

CERTIFICATE NO. 50727
INVOICE NO. 32999
RECEIVED Sept. 18/79
ANALYSED Oct. 2/79

TO: Eldorado Nuclear Ltd.
Ste. 400 - 255 Albert Street
Ottawa, Ontario K1P 6A9

ATTN: PROJECT: AREA JE (SOILS) CC: Olsson

SAMPLE NO. :	PPM U	
40 - 8907	350	
8908	203	
8909	1.0	
8910	16.0	
8911	4.5	
8912	3.5	
8913	1.0	
8914	9.5	
8915	110	
8916	49	
8917	48	
8918	2.0	
8919	36	
8920	22.5	
8921	113	
8922	6.0	
8923	>400	*
8924	158	
8925	69	
8926	65	
8927	28	
8928	137	
40 - 8929	123	

EXPLORATION
DIVISION
OCT 10 1979

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

••ANALYTICAL CHEMISTS ••GEOCHEMISTS •• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50784

INVOICE NO. 33045

RECEIVED Sept. 19/79

ANALYSED Oct. 4/79

TO: Eldorado Nuclear Ltd.
255 Albert St., St. 400
Ottawa, Ontario K1P 6A9

ATTN: PROJECT: Area - JE Mr. Olsson

SAMPLE NO. :	PPM U	
40 - 6500	>400	*
6501	277	
6502	>400	*
6503	>400	*
6504	3.5	
6505	44	
6506	391	
6507	111	
6508	28	
6509	96	
40 - 6510	9.5	
40 - 8735	1.5	
8736	17.5	
8737	8.5	
8738	61	
8739	206	
8740	13.5	
8741	2.0	
8742	10.0	
8743	58	
40 - 8744	>400	*
40 - 8860	266	
8861	3.5	
8862	3.0	
8863	2.0	
8864	4.0	
8865	7.0	
8866	11.0	
8867	3.5	
8868	42	
8869	275	
8870	>400	*
8871	>400	*
40 - 8872	364	
40 - 8943	>400	*
8944	167	
8945	>400	*

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

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 ANALYSIS

CERTIFICATE NO. 50832

INVOICE NO. 33165

RECEIVED September 21, 197

ANALYSED October 11, 1979

TO: Eldorado Nuclear Ltd.,
400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN:

AREA JE - SOILS

SAMPLE NO. :	PPM U	
40 - 5760	364	
5867	>400	*
5868	192	
8578	199	
8579	54	
8580	178	
8581	>400	*
8582	171	
8583	332	
8584	368	
8585	9.0	
8586	141	
8587	20.0	
8588	>400	*
8589	>400	*
8590	105	
8591	36	
8592	21.5	
8593	>400	*
8594	>400	*
8595	14.5	
8930	>400	*
8931	91	
8932	282	
8937A	>400	*
8937B	>400	*
8966	19.5	JC
8967	31	
8968	31	
40-8969	76	

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 66501
INVOICE NO. 33336
RECEIVED Oct. 3/79
ANALYSED Oct. 19/79

TO: Eldorado Nuclear Ltd.
Ste. 400 - 255 Albert St.
Ottawa, Ont.
K1P 6A9

ATTN: AREA JE (soils)

SAMPLE NO. :	PPM U
40-5708	831 ✓
5727	627 ✓
5734	1110 ✓
5741	1127 ✓
5742	2068 ✓
5743	2051 ✓
5745	576 ✓
5746	1958 ✓
5750	1102 ✓
5754	669 ✓
5797	1644 ✓
5811	1653 ✓
5854	1203 ✓
5856	1627 ✓
5861	1059 ✓
5862	7992 ✓
5866	1068 ✓
8875	1008 ✓
8882	568 ✓
40-8923	1237 ✓

plotted.
rep

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

CTA
MEMBER
CANADIAN TESTING
ASSOCIATION

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

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, ONt.
K1P 6A9

ATTN: AREA JE soils

CERTIFICATE NO. 66501
INVOICE NO. 33103
RECEIVED Oct. 3/79
ANALYSED Oct. 9/79

SAMPLE NO. :	% U308 (N.A.)	to convert 10000 ÷ .8 ppm U
40-5708	0.098	833
5727	0.074	629
5734	0.131	1113.5
5741	0.133	1130
5742	0.244	2074
5743	0.242	2057
5745	0.068	578
5746	0.231	1963
5750	0.130	1105
5754	0.079	671
5797	0.194	1650
5811	0.195	1650
5854	0.142	1207
5856	0.192	1632
5861	0.125	1062
5862	0.943	8015
5866	0.126	1071
8875	0.119	1011
8882	0.067	569
40-8923	0.146	1241

Plotted REP

DATA ON THESE SHEETS NOT TRANSFERRED YET.

CTA MEMBER CANADIAN TESTING ASSOCIATION

B. Twaites

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

EASTERN ROCKS

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 ANALYSIS

CERTIFICATE NO. 50729

TO: Eldorado Nuclear Ltd.
Ste. 400 - 255 Albert Street
Ottawa, Ontario K1P 6A9

INVOICE NO. 32999
33521-Th

RECEIVED Sept. 18/79

ANALYSED Oct. 2/79

ATTN: PROJECT: AREA JE (ROCKS) CC: Olsson

SAMPLE NO. :	PPM U	PPM Th
22 - 5702	3.0	8
5703	5.0	9
5713	4.0	30
5714	3.0	8
5718	3.0	8
5720	2.0	12
5721	2.5	11
5725	4.0	9
5726	7.0	12
5732	1.5	10
5733	3.0	11
5734	4.5	7
5738	2.0	9
5744	3.5	11
5745	3.5	11
5748	2.5	12
5751	5.5	13
5762	8.0	29
5763	9.0	18
5769	6.5	15
5812	5.5	12
5854	7.0	10
5860	3.0	19
5861	4.5	19
5864	3.5	16
5865	2.0	3
5866	18.0	16
8875	20.5	13
8878	4.0	21
8879	7.5	10
8880	2.5	13
8881	5.5	13
8883	4.0	8
8884	2.0	11
8885	3.0	13
8889	2.0	9
8891	2.0	10
8892	2.5	13
8893	3.0	12
22 - 8894	2.0	8

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS •• GEOCHEMISTS •• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50730
33521-Th
INVOICE NO. 32999
RECEIVED Sept. 18/79
ANALYSED Oct. 2/79

TO: Eldorado Nuclear Ltd.
Ste. 400 - 255 Albert Street
Ottawa, Ontario K1P 6A9

ATTN: PROJECT: AREA JE (ROCKS) CC: Olsson

SAMPLE NO. :	PPM U	PPM Th
22-8897	3.0	12
8898	4.0	7
8899	6.0	11
8900	4.0	12
8905	2.5	10
8906	5.5	13
8908	3.5	8
8909	3.5	14
8911	1.0	8
8912	1.5	6
8913	1.5	13
8914	2.0	16
8915	4.5	15
8916	3.5	16
8917	5.0	9
8918	1.0	14
8919	1.5	12
8920	4.5	14
8921	5.0	13
8922	2.0	10
8924	2.5	11
8925	1.5	14
8926	4.0	13
22-8927	4.0	12

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA ~~V7J 2C1~~
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS •• GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50783

TO: Eldorado Nuclear Mines Ltd.,
400 - 255 Albert St.,
Ottawa, Ont.
ATTN: K1P 6A9

"ROCKS"
AREA JE

INVOICE NO. 33226 (U)
34011 (Th)
RECEIVED September 19, 1979
ANALYSED Nov. 26/79

SAMPLE NO. :	PPM U	PPM Th	
22 - 6503	4.0	6	
6504	1.0	5	
6507	1.5	12	
6508	2.0	13	
6509	3.5	11	
6510	1.5	10	
8733	1.5	14	
8735	5.5	10	
8736	2.5	10	
8738	3.0	7	pr
8740	6.5	6	
8741	2.0	8	
8743	2.0	5	
8861	3.5	11	
8863	2.0	5	
8864	2.5	4	
8865	1.5	9	
8868	3.0	11	
8869	2.5	7	
8872	2.5	12	
8944	3.5	12	
22 - 8945	3.5	17	p

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: D.J. Ifadan

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 ANALYSIS

CERTIFICATE NO. 50833

TO: Eldorado Nuclear Ltd.,
STe. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: W. Olsson AREA JE-ROCKS

INVOICE NO. 33305
34011 (Th)

RECEIVED Sept. 21/79

ANALYSED Oct. 19/79

SAMPLE NO. :	PPM U	PPM Th
22-5760	3.0	17
5867	1.5	9
5868	2.0	10
8578	2.0	7
8580	4.0	20
8585	3.0	10
8586	1.5	14
8589	7.5	14
8590	3.0	21
8591	3.0	21
8595	2.5	18
8930	3.0	14
22-8937	12.0	20

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J. F. [illegible signature]

JT-1 SOILS

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 ANALYSIS

CERTIFICATE NO. 50096
INVOICE NO. 32508
RECEIVED Aug. 27/79
ANALYSED Sept. 10/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9
ATTN: Project #522 Area J-1 CC. W.Olsson

SAMPLE NO. :	PPM U
40 - 12501	9.0
12502	32.0
12503	1.5
12504	26
12505	20.0
12506	13.0
12507	29.0
12508	15.0
12509	21.5
12510	17.5
12511	210
12512	> 400
12513	> 400
12514	> 400
12515	> 400
12516	> 400
40 - 12517	> 400

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

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 ANALYSIS

CERTIFICATE NO. 50098
INVOICE NO. 32508
RECEIVED Aug. 27/79
ANALYSED Sept. 10/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: Area #522 JT1

CC. W.Olsson

SAMPLE NO. :	PPM U
40-1202-1	1.5
40-1202-2	5.0
40-1203-1	7.5
2	6.0
3	4.0
40-1203-4	1.0
40-1204-1	8.5
2	3.5
40-1204-3	0.5
40-1205-1	6.5
40-1205-2	5.5
40-1206-1	12.0
2	12.5
40-1206-3	14.5
40-1207-1	17.0
2	17.0
3	8.0
40-1207-4	8.0
40-1208-1	57
2	34
40-1208-3	25
40-1209-1	28
40-1209-2	23.0
40-1210-1	44
2	64
3	60
40-1210-4	52
40-1211-1	50
2	64
3	69
40-1211-4	95
40-1212-1	86
2	93
3	87
40-1212-4	166
40-1213-1	206
2	182
3	164
40-1213-4	256
40-1214-1	88

report.

CERTIFIED BY:

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50099
INVOICE NO. 32508
RECEIVED Aug. 27/79
ANALYSED Sept. 10/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: Project #522 Area JT1 CC. W.Olsson

SAMPLE NO. :	PPM U
40-1214-2	212
3	> 400
40-1214-4	332
40-1215-1	159
2	240
3	> 400
40-1215-4	> 400
40-1216-1	87
2	371
3	> 400
40-1216-4	> 400
40-1217-1	291
2	> 400
3	> 400
40-1217-4	> 400
40-1218-1	76
2	90
3	> 400
40-1218-4	> 400
40-1219-1	46
2	62
3	108
40-1219-4	> 400
40-1220-1	88
2	66
3	60
40-1220-4	17.0
40-1221-1	7.0
40-1221-2	18.0
40-1222-1	25
40-1222-2	62
40-1223-1	3.5
2	2.5
40-1223-3	1.0
40-1224-1	7.5
2	9.0
3	4.0
40-1224-4	1.5
40-1225-1	10.5
40-1225-2	2.0

Report

CERTIFIED BY: Hart Bickle

JT-2 SOILS

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50094
INVOICE NO. 32468
RECEIVED Aug. 27/79
ANALYSED Sept. 7/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: Project 522 Area JT-2 CC. W. Olsson

SAMPLE NO. :	PPM U
40-1226-JT2-1	6.0
2	6.5
3	3.0
40-1226-JT2-4	0.5
40-1227-JT2-1	9.0
2	4.0
3	3.0
40-1227-JT2-4	7.0
40-1228-JT2-1	11.5
2	8.0
3	11.5
40-1228-JT2-4	1.5
40-1229-JT2-1	18.0
2	7.0
3	3.0
40-1229-JT2-4	1.0
40-1230-JT2-1	3.5
2	3.5
3	3.5
40-1230-JT2-4	2.0
40-1231-JT2-1	4.5
2	6.0
3	5.0
40-1231-JT2-4	4.5
40-1232-JT2-1	45
2	37
3	18.5
40-1232-JT2-4	30
40-1233-JT2-1	16.5
2	10.0
3	24.5
40-1233-JT2-4	14.5
40-1234-JT2-1	15.5
2	28
3	35
40-1234-JT2-4	50
40-1235-JT2-1	30
2	34
3	23.0
40-1235-JT2-4	11.0

report

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY:

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 ANALYSIS

CERTIFICATE NO. 50095

INVOICE NO. 32508

RECEIVED Aug. 27/79

ANALYSED Sept. 10/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

CC. W. Olsson

ATTN: Project #522 Area JT2

SAMPLE NO. :	PPM U
40-1236-JT2-1	2.5
2	4.0
3	5.0
4	< 0.5
40-1236-JT2-5	3.0
40-1237-JT2-1	8.0
2	4.5
40-1237-JT2-3	7.5
40-1238-JT2-1	3.5
2	3.0
3	2.5
40-1238-JT2-4	0.5
40-1239-JT2-1	18.5
2	16.5
3	31
40-1239-JT2-4	223
40-1240-JT2-1	29
2	14.5
3	1.0
40-1240-JT2-4	1.5
40-1241-JT2-1	16.5
2	9.5
3	2.0
40-1241-JT2-4	< 0.5
40-1242-JT2-1	16.0
2	15.0
3	5.5
40-1242-JT2-4	11.5
40-1243-JT2-1	13.0
40-1243-JT2-2	5.5

report

CERTIFIED BY: Hart Bichle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50097
INVOICE NO. 32508
RECEIVED Aug. 27/79
ANALYSED Sept. 10/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: Project #522 Area J-2 CC. W. Olsson

SAMPLE NO. :	PPM U
40 - 12620	43
12621	39
12622	53
12623	55
12624	51
12625	63
12626	75
12627	175
12628	218
12629	267
12630	232
12631	353
12632	269
12633	400
12634	>400
40 - 12635	116

CTA
MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY: Hart Bichler

JT-3 SOILS

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50504
INVOICE NO. 32855
RECEIVED September 9, 1979
ANALYSED September 26, 1979

TO: Eldorado Nuclear Mines Ltd.,
255 Albert St., Suite 400
Ottawa, Ont.
K1P 6A9
ATTN:

c.c. W. Olsson
AREA j-3

SAMPLE NO. :	PPM U
40-12734	75
12735	56
12736	406
12737	>400
12738	>400
12739	>400
12740	189
12741	329
40-12742	359

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichle

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 ANALYSIS

CERTIFICATE NO. 50530

INVOICE NO. 32855

RECEIVED September 11, 1979

ANALYSED September 26, 1979

TO: Eldorado Nuclear Mines Ltd.,
255 Albert St., Suite 400
Ottawa, Ont.
K1P 6A9

ATTN:

c.c. W. Olsson
AREA JT-3

SAMPLE NO. :	PPM U
40-1126	0.5
1147	2.5
1272	14.5
1273	10.0
1274	8.5
1275	10.5
1276	11.0
1277	30
1278	47
1279	119
1280	2.0
1281	3.5
1282	1.0
1283	3.0
40-1284	4.0

CERTIFIED BY: Hart Bichle

Hydrogeochemistry

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 47894
INVOICE NO. 30812
RECEIVED June 25/79
ANALYSED June 29/79

TO: Eldorado Nuclear Ltd.
255 Albert St., St. 400
Ottawa, Ont.
K1P 6A9
ATTN:
PROJECT: JOVE - WATER WATERS
CC: W. Olsson

SAMPLE NO. :	PPB U
42-2555	15.2

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 48064
INVOICE NO. 31568
RECEIVED June 29, 1979
ANALYSED August 2, 1979

TO: Eldorado Nuclear Ltd.,
400 - 255 Albert St.,
Ottawa, Ont.
ATTN: K1P 6A9

WATERS
Project JOVE
c.c. Mr. W. Olsson

SAMPLE NO. :	mV Eh	PPM K	PPM Ca	PPM V	PPM CO_3	PPM Cl	PPM SiO_2	PPM SO_4	PPM PO_4
42-2555	344	0.20	2.2	<0.10	7.6	0.6	11	<2	<0.01

MEMBER CANADIAN TESTING ASSOCIATION

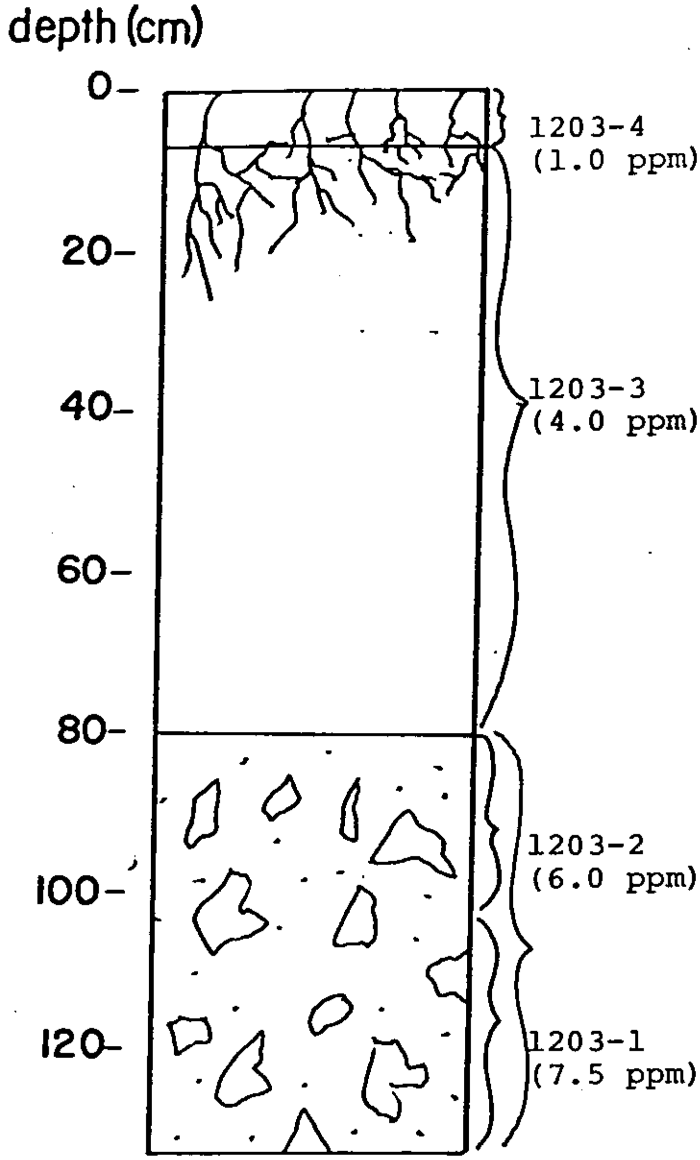
CERTIFIED BY: M. Caldwell

JT-4 SOILS

TRENCH SOIL PROFILES

JT-1

39+00W



- A Horizon

- B Horizon
- rusty brown, silty
- some red/brown sand intermixed

- C Horizon, grey sand
- high content of 8cm, jagged rock chips

"C" Horizon exposed by digging 55cm pit down from "B" Horizon.

ELDORADO NUCLEAR LIMITED

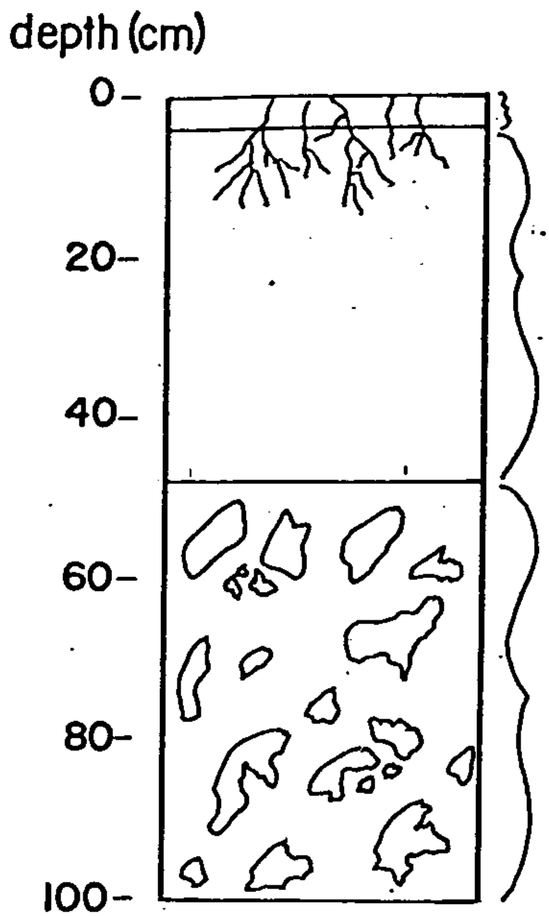
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

39+20W



1204-3 (.5 ppm) - A Horizon, leached

1204-2 (3.5 ppm) - B Horizon, rusty brown
- silty with roots

1204-1 (8.5 ppm) - C Horizon, sandy
- high content of jagged, 8cm rocks

ELDORADO NUCLEAR LIMITED

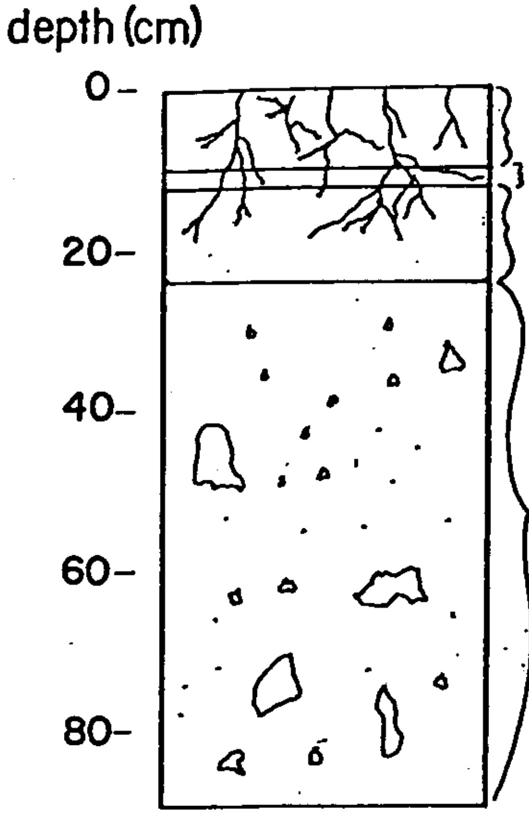
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

39+60W



1206-3 (14.5 ppm)
- A_0 Horizon, roots and organics
- black to brown

- A Horizon, grey, leached

1206-2 (12.5 ppm)
- B Horizon, brown to black
- silty, some clay, roots

1206-1 (12 ppm)
- C Horizon, sandy
- rock chips and pebbles
- dark brown to grey at bottom

ELDORADO NUCLEAR LIMITED

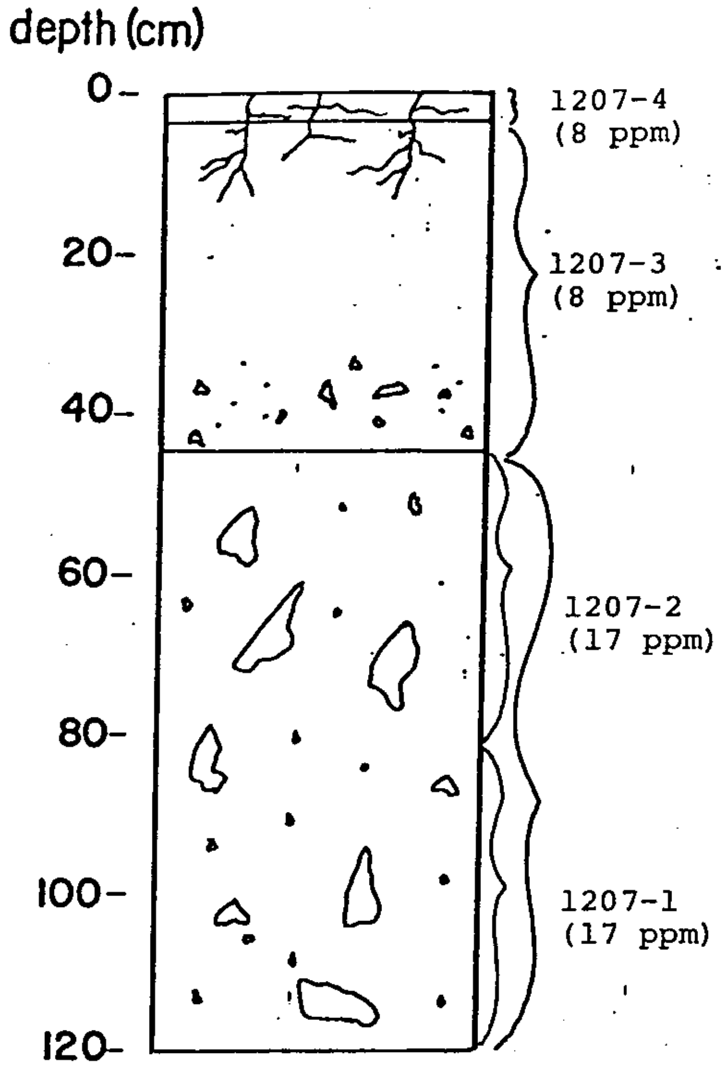
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

39+80W



- A Horizon, leached

- B Horizon, rusty brown
- silty with roots, some pebble

- C Horizon, grey-brown
- sandy, 6cm rock chips

ELDORADO NUCLEAR LIMITED

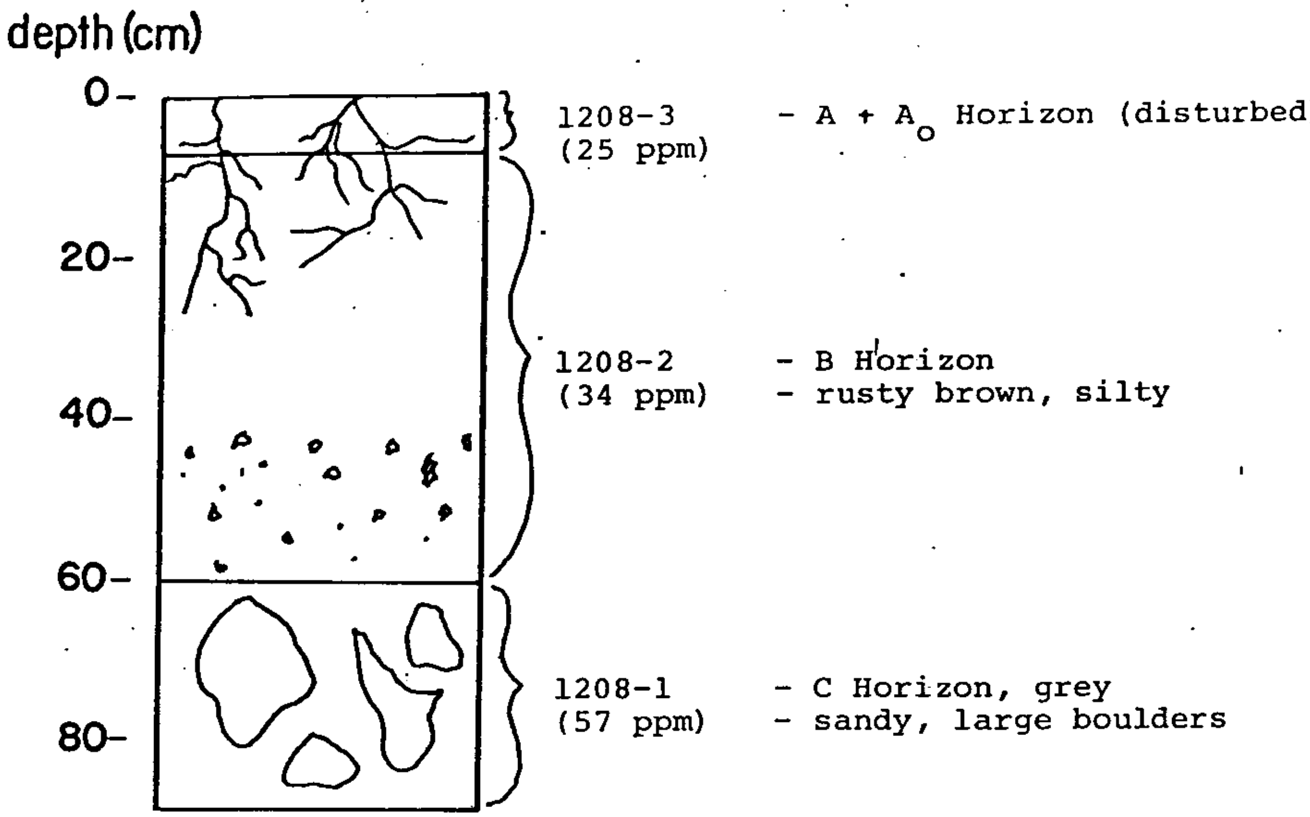
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

40+00W



ELDORADO NUCLEAR LIMITED

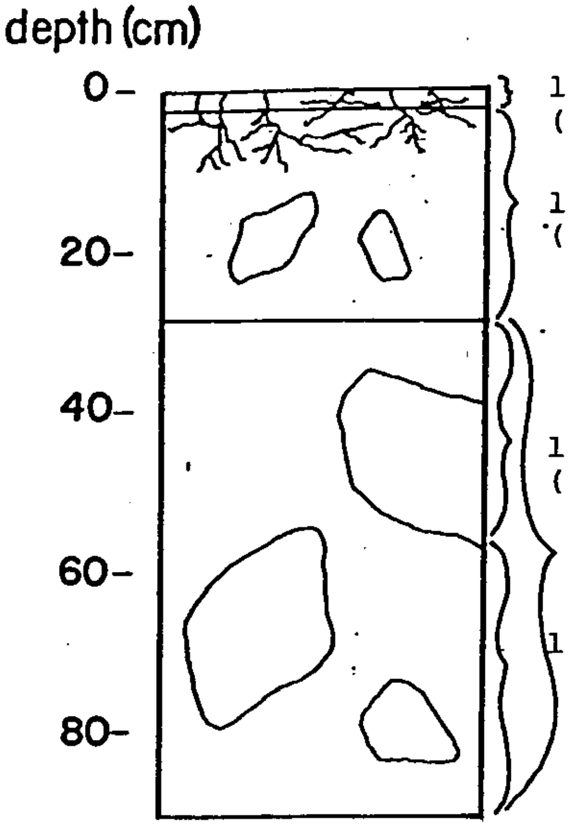
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-1

40+10W



1210-4 (52 ppm) - A Horizon

1210-3 (60 ppm) - B Horizon
- black/brown, silty, some clay
- some boulders

1210-2 (64 ppm)

- C Horizon, grey, sandy
- large boulders

1210-1 (44 ppm)

ELDORADO NUCLEAR LIMITED

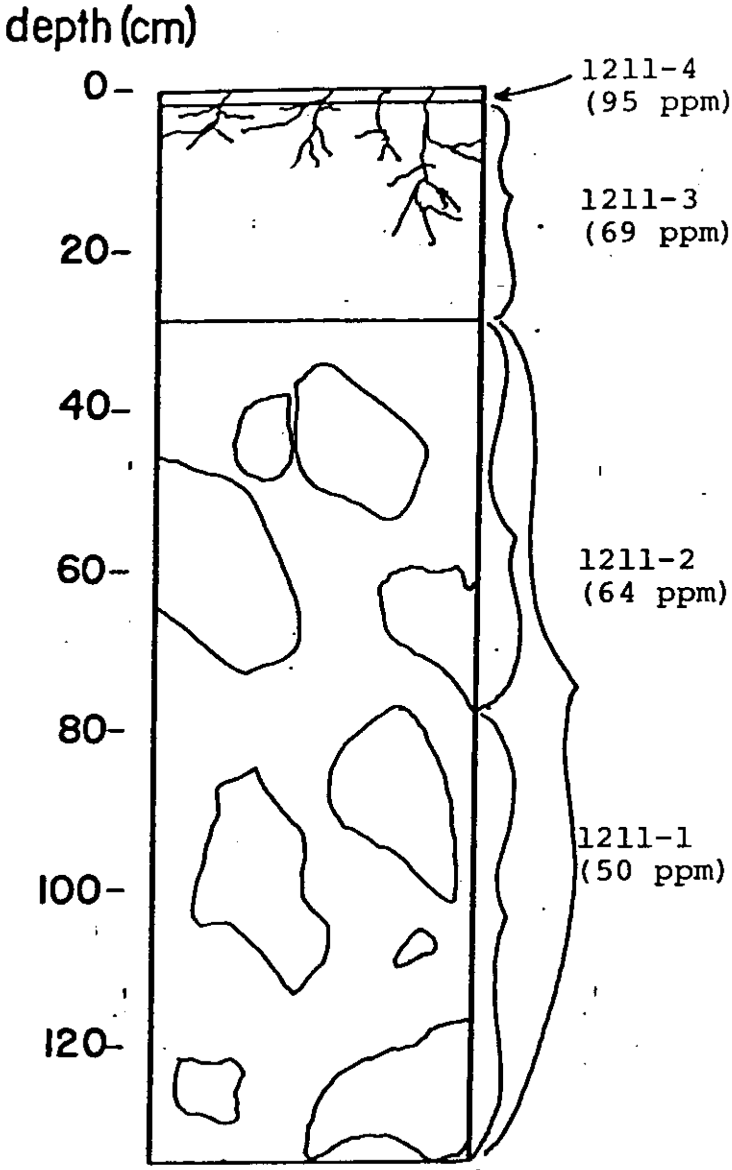
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

40+15W



- A Horizon

- B Horizon, dark brown
- silty, some roots

- C Horizon
- large boulders in a grey-brown, sandy matrix

ELDORADO NUCLEAR LIMITED

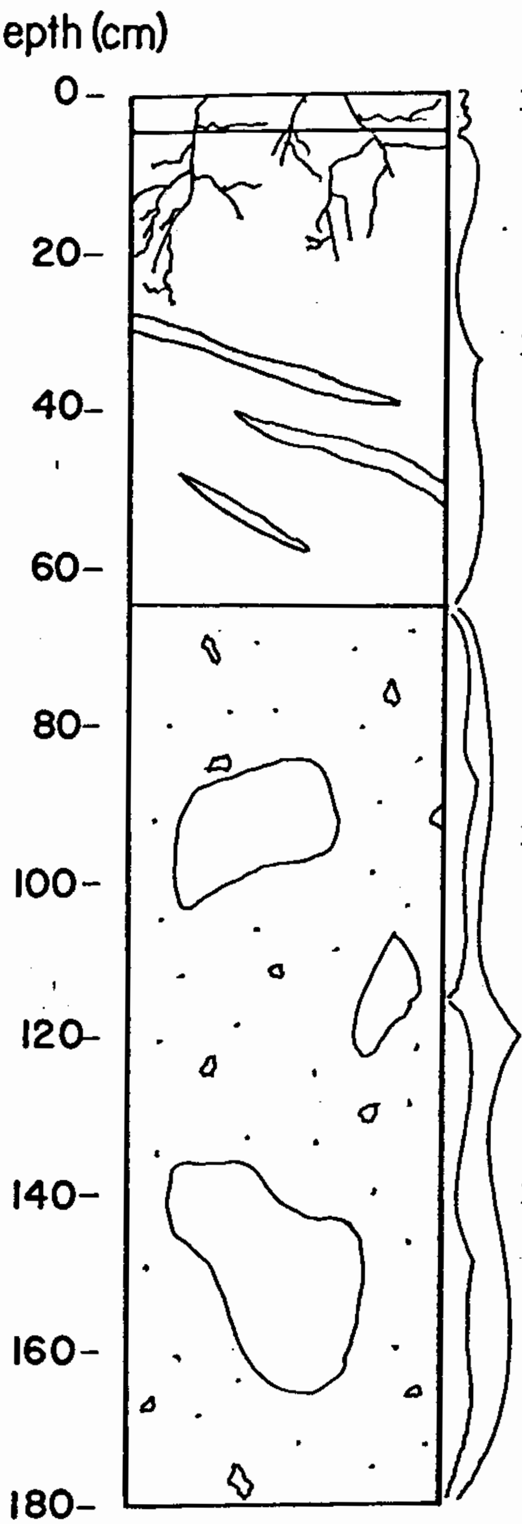
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

40+20W



1212-4
(167 ppm)

- A Horizon, leached

1212-3
(87 ppm)

- B Horizon, dark brown, silty
- alternating with 2cm wide layers of rusty brown, silty
- some clay and roots

1212-2
(93 ppm)

- C Horizon
- medium brown, sandy
- pebbles and boulders

1212-1
(86 ppm)

ELDORADO NUCLEAR LIMITED

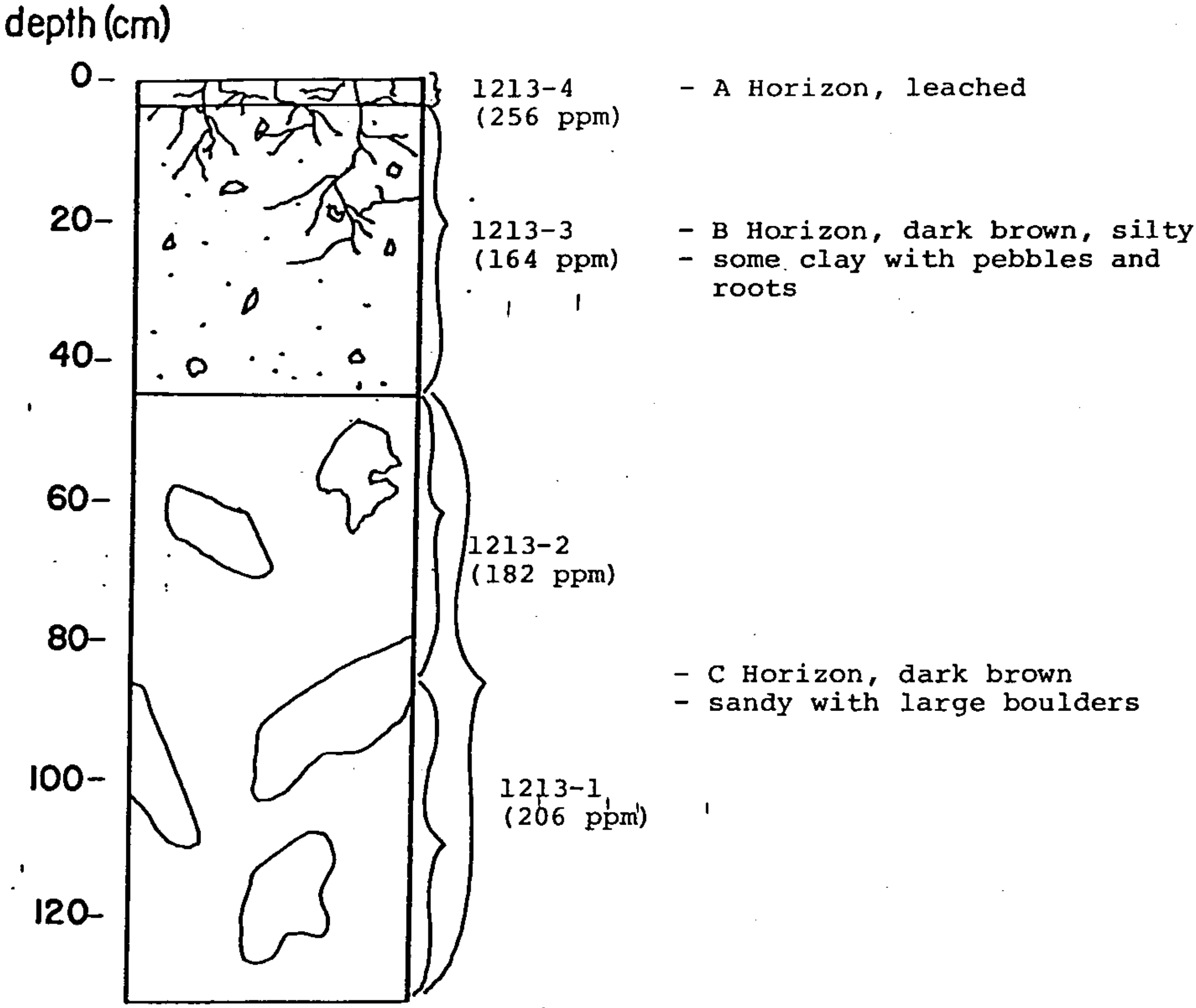
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - I

40+25W



ELDORADO NUCLEAR LIMITED

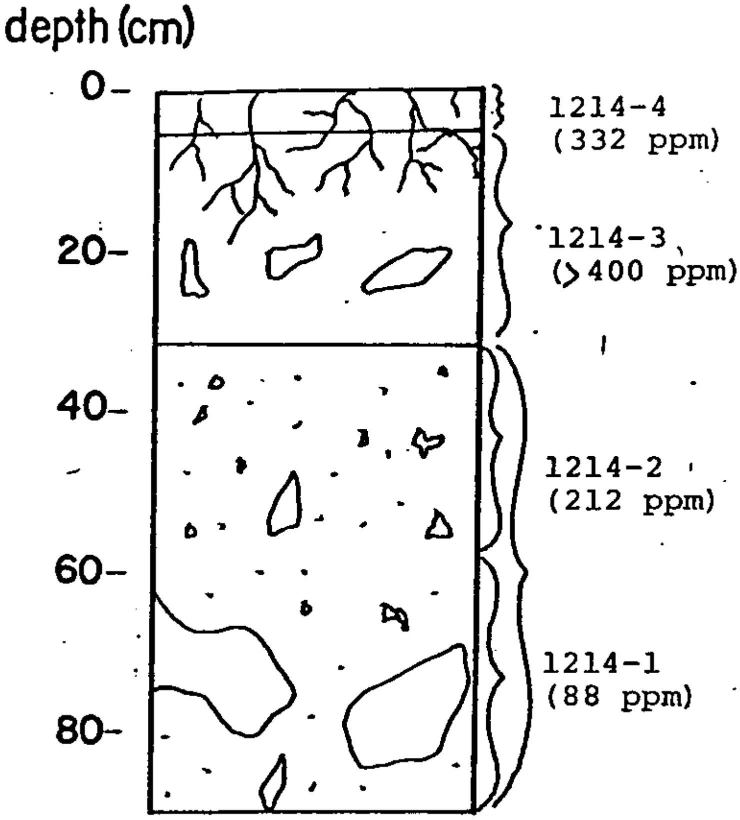
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

40+30W



- A Horizon

- B Horizon, black to brown
- silty, some clay, some rock chips

- C Horizon, grey, sandy
- some pebbles and boulders

ELDORADO NUCLEAR LIMITED

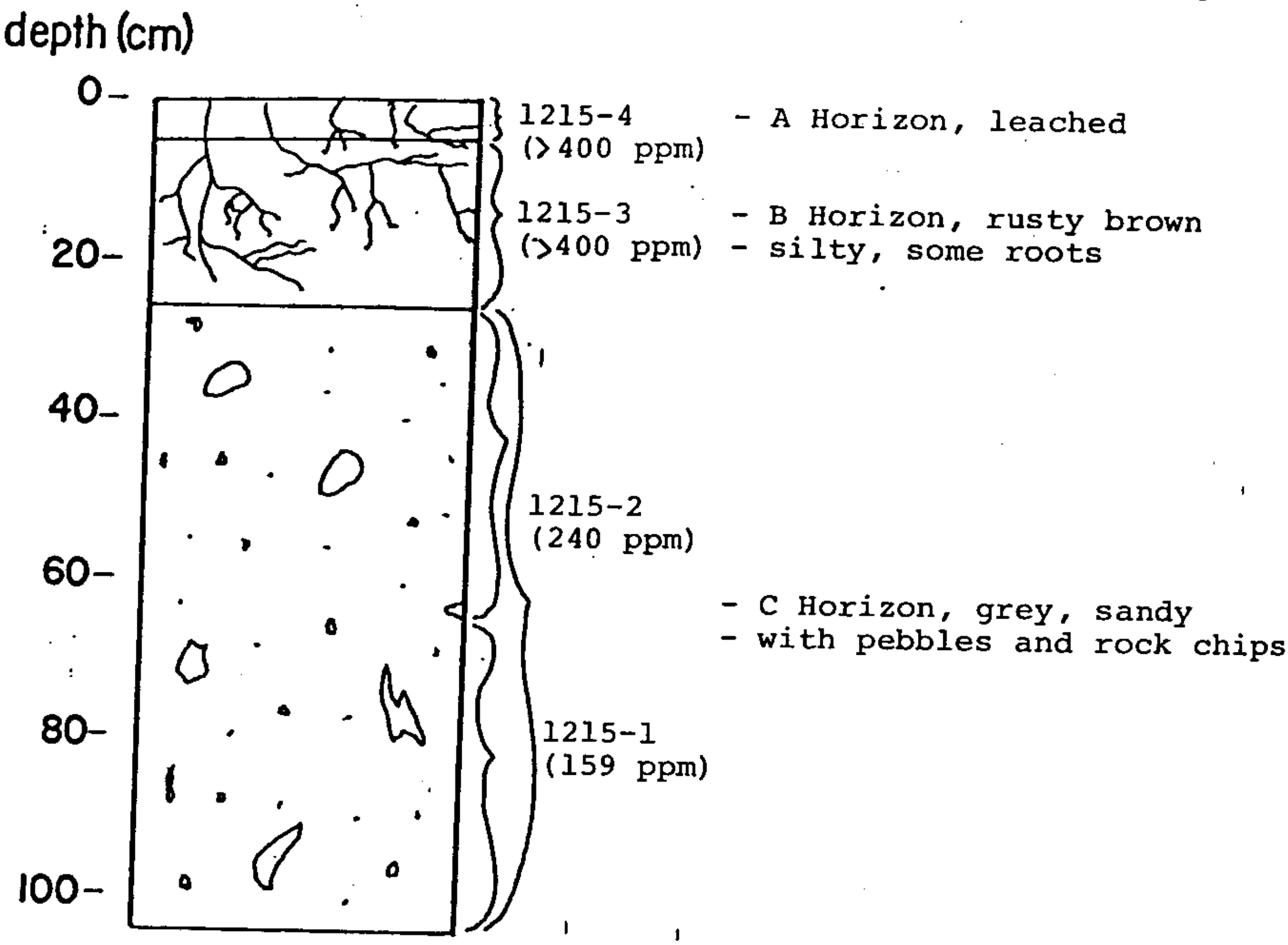
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

40+35W



ELDORADO NUCLEAR LIMITED

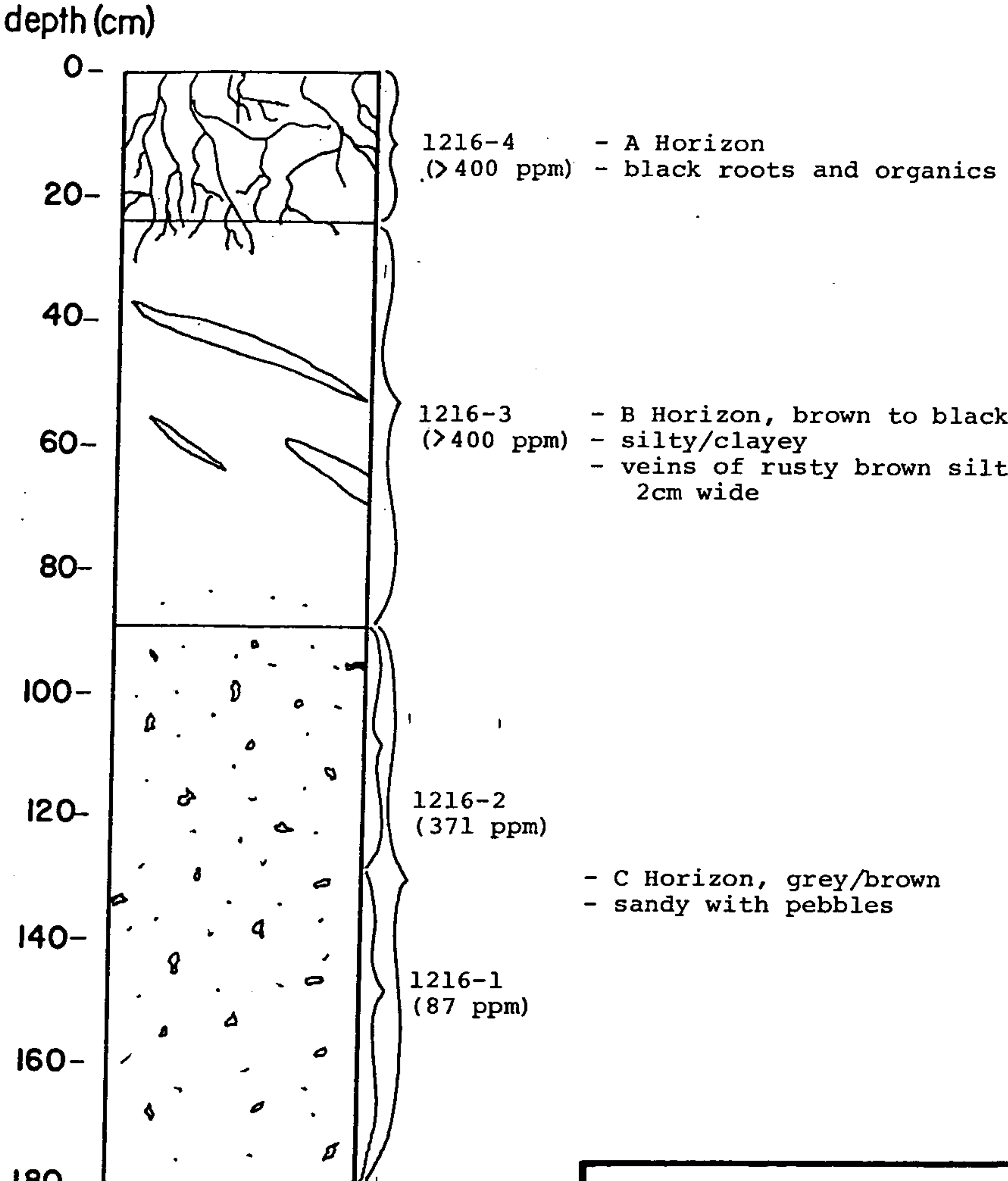
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

40+40W



ELDORADO NUCLEAR LIMITED

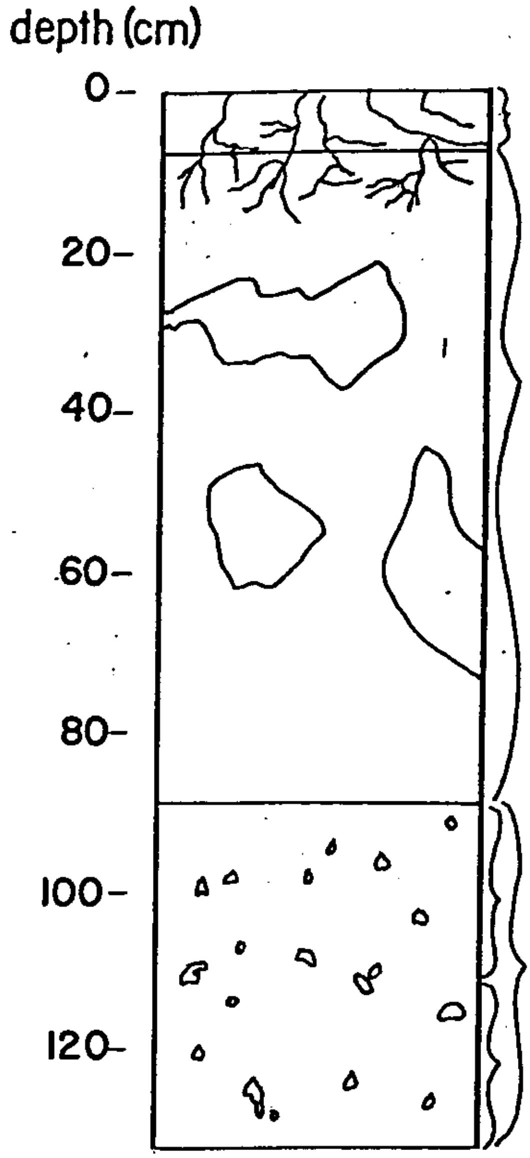
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

40+45W



1217-4
(>400 ppm)
- A Horizon

1217-3
(>400 ppm)
- B Horizon, black
- silty/clayey with boulders

1217-2
(>400 ppm)

1217-1
(291 ppm)
- C Horizon, brown to black
- sandy with pebbles

ELDORADO NUCLEAR LIMITED

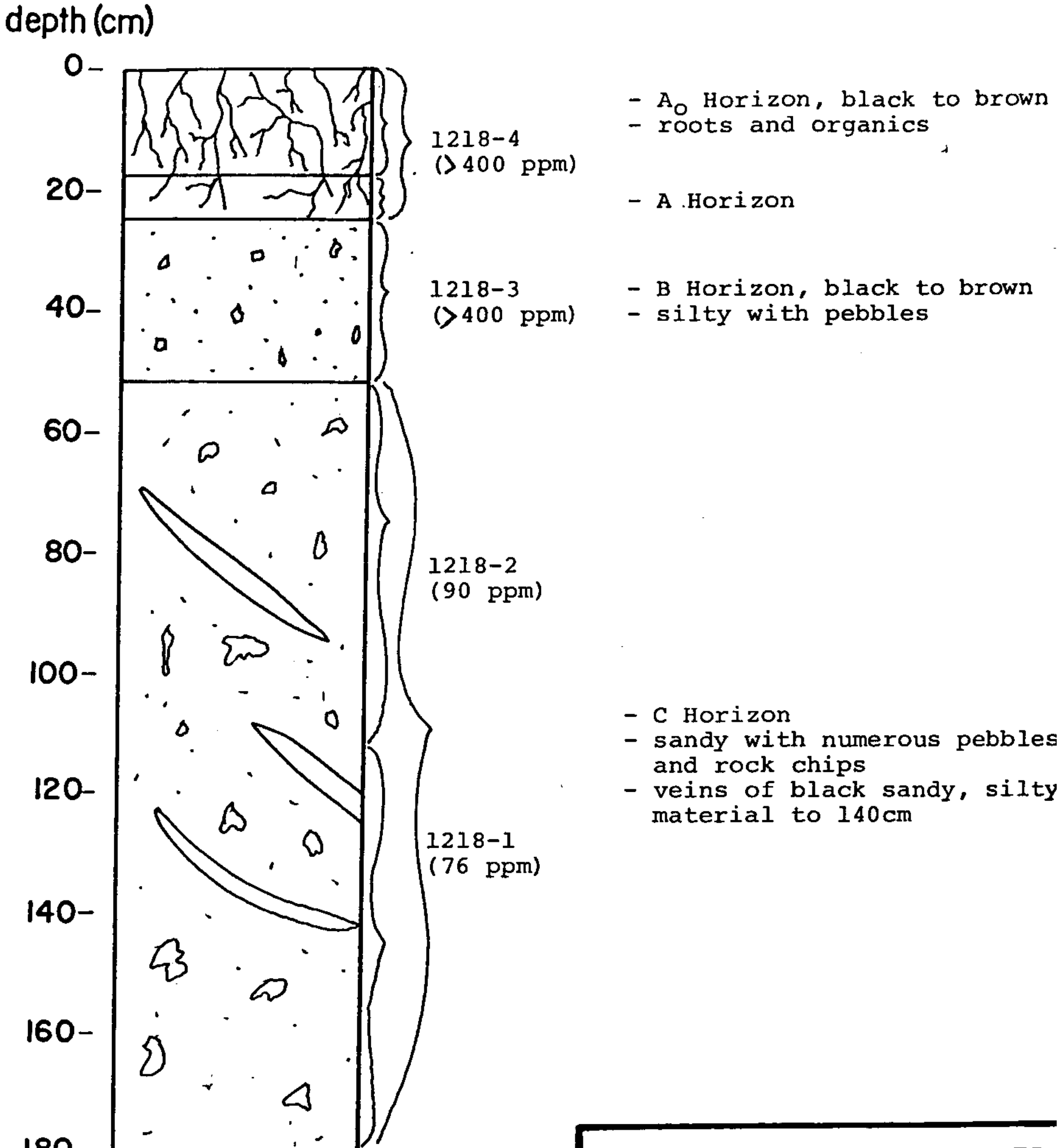
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

40+50W



ELDORADO NUCLEAR LIMITED

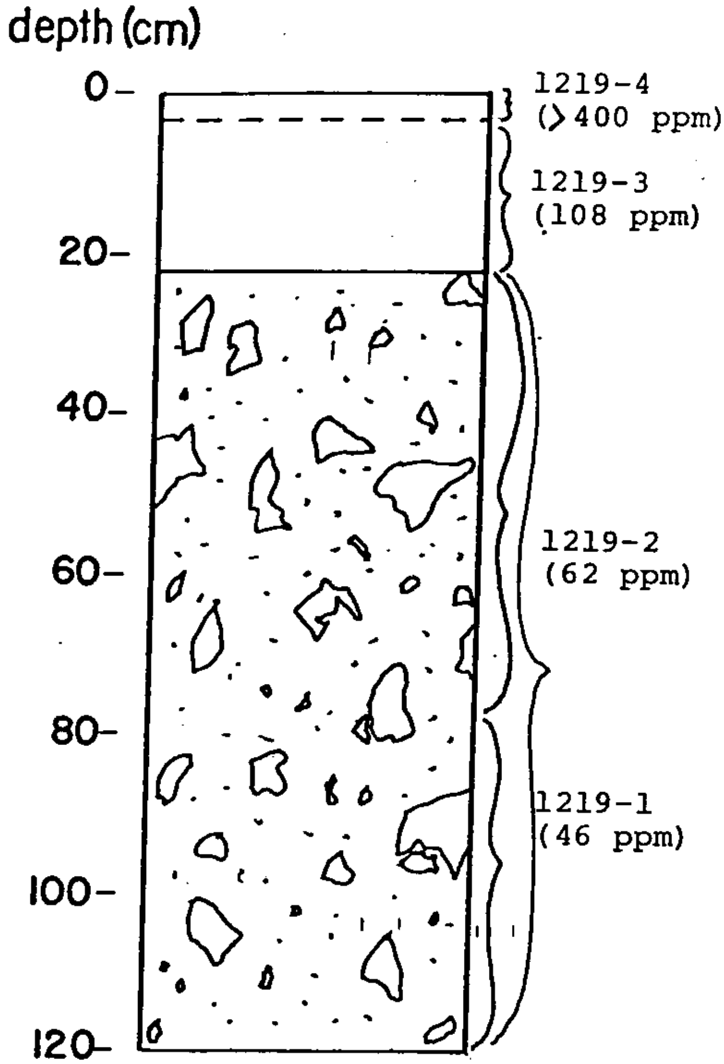
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - I

40+55W



- A Horizon (disturbed)

- B Horizon, brown to black
- silty/clayey

- C Horizon, brown to grey
- sandy
- numerous pebbles and rocks

ELDORADO NUCLEAR LIMITED

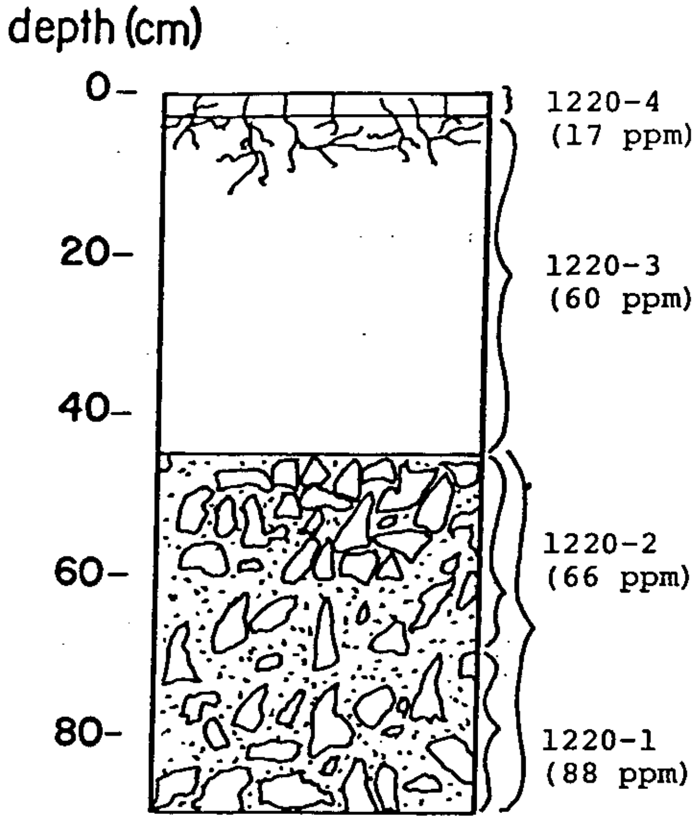
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

40-60W



- A Horizon

- B Horizon
- dark brown, silty
- occasional fine roots

- C Horizon, light brown
- coarse sand, many 8cm rock chips

ELDORADO NUCLEAR LIMITED

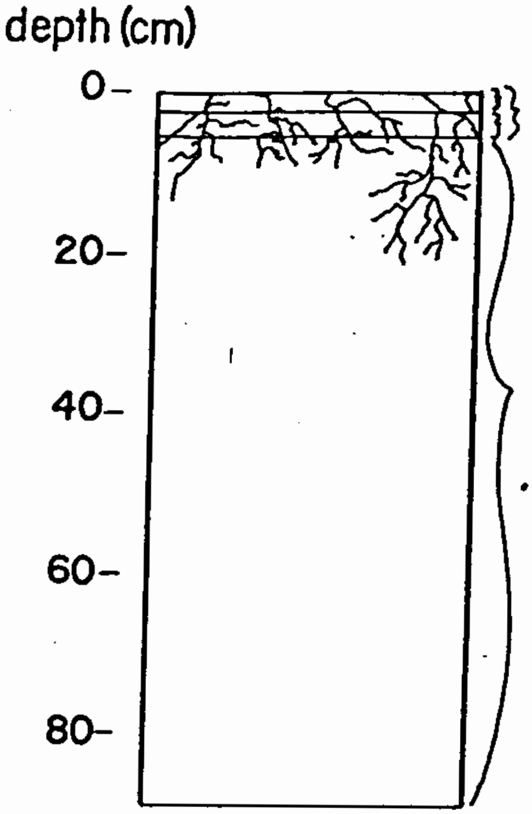
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

41+00W



1222-2
(62 ppm)
- A Horizon, roots and organics

1222-1
(25 ppm)
- B Horizon, rusty brown
- silty, free from pebbles and rocks

ELDORADO NUCLEAR LIMITED

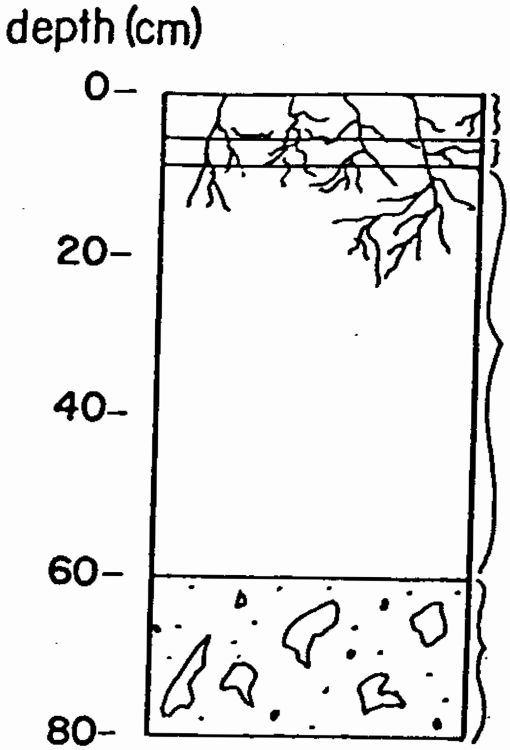
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-1

41+20W



1223-3
(1 ppm)

- A_0 Horizon, black, organics
- A Horizon, grey, leached

1223-2
(2.5 ppm)

- B Horizon, rusty brown, silty

1223-1
(3.5 ppm)

- C Horizon, grey, sandy
- several rock chips

ELDORADO NUCLEAR LIMITED

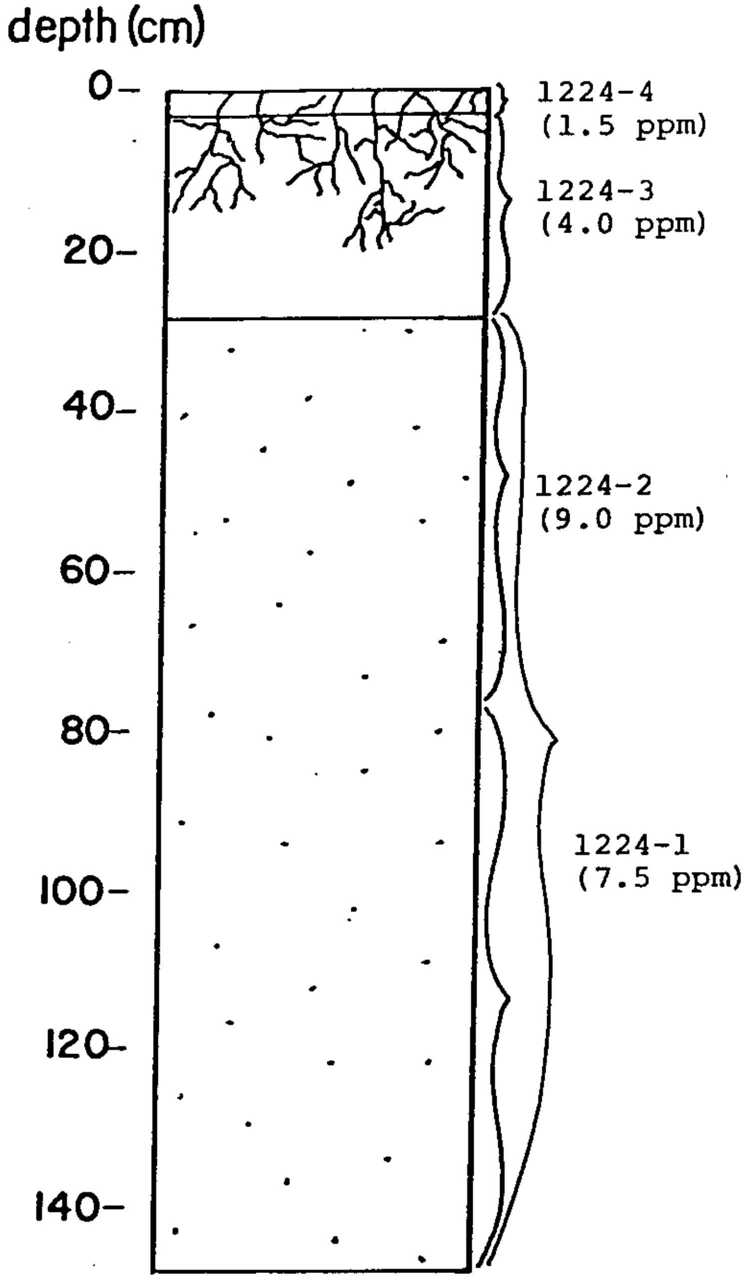
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT - 1

41+40W



- A Horizon, grey, leached
- B Horizon, dark brown
- silty, with roots

- C Horizon
- dark brown to grey
- sandy with no rocks

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

SOIL PROFILES

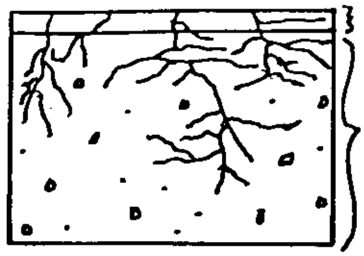
JT - 1

41+60W

depth (cm)

0–

20–



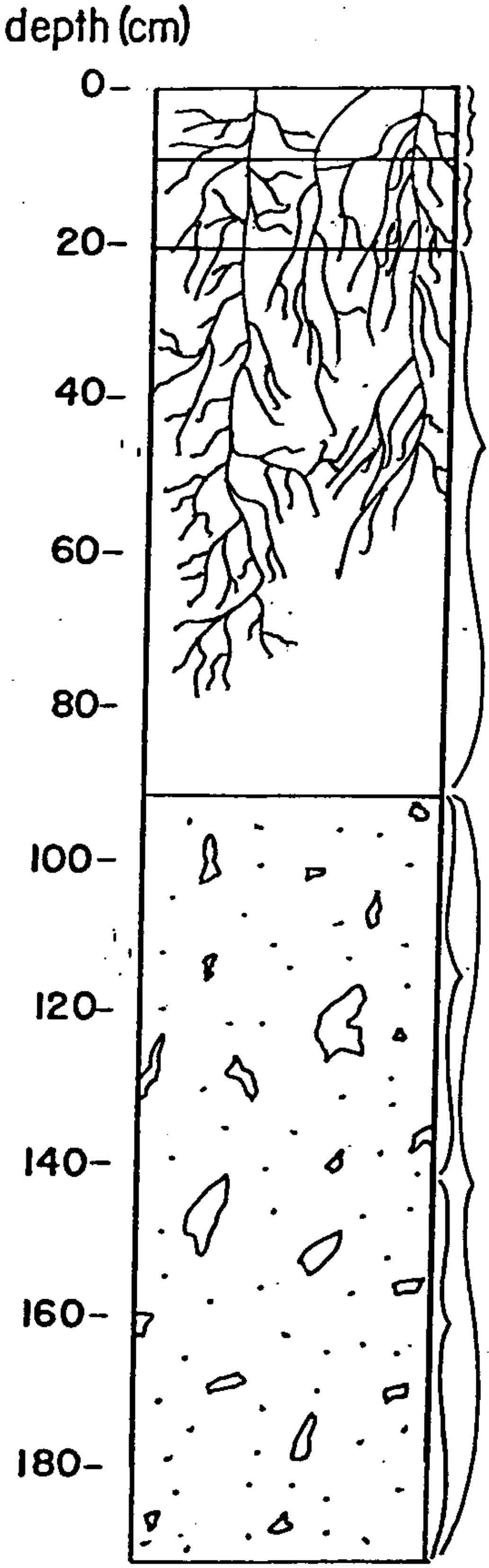
1225-2 (2.0 ppm) – A Horizon, grey, leached

1225-1 (10.5 ppm) – B Horizon, rusty brown, silty
– some pebbles

ELDORADO NUCLEAR LIMITED

JT-2

38+80W



1238-4
(.5 ppm)

1238-3
(2.5 ppm)

1238-2
(3 ppm)

1238-1
(3.5 ppm)

- A_o Horizon, organics
- A Horizon, leached

- B Horizon
- rusty brown, silty
- some roots

- C Horizon
- grey/brown, sandy
- few small rocks

ELDORADO NUCLEAR LIMITED

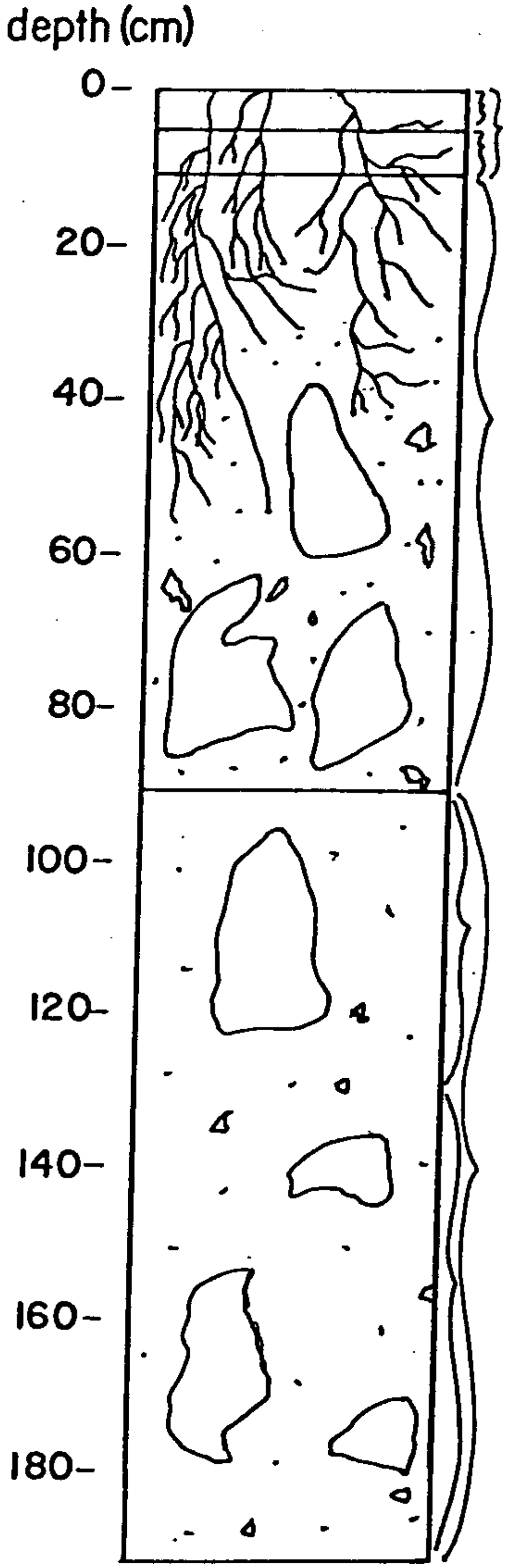
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

39+00W



1226-4
(.5 ppm)

- A_o Horizon
- A Horizon, leached

1226-3
(3 ppm)

- B Horizon, rusty brown
- silty with roots and large boulders

1226-2
(6.5 ppm)

- C Horizon
- sandy, brown/grey
- large boulders

1226-1
(6 ppm)

ELDORADO NUCLEAR LIMITED

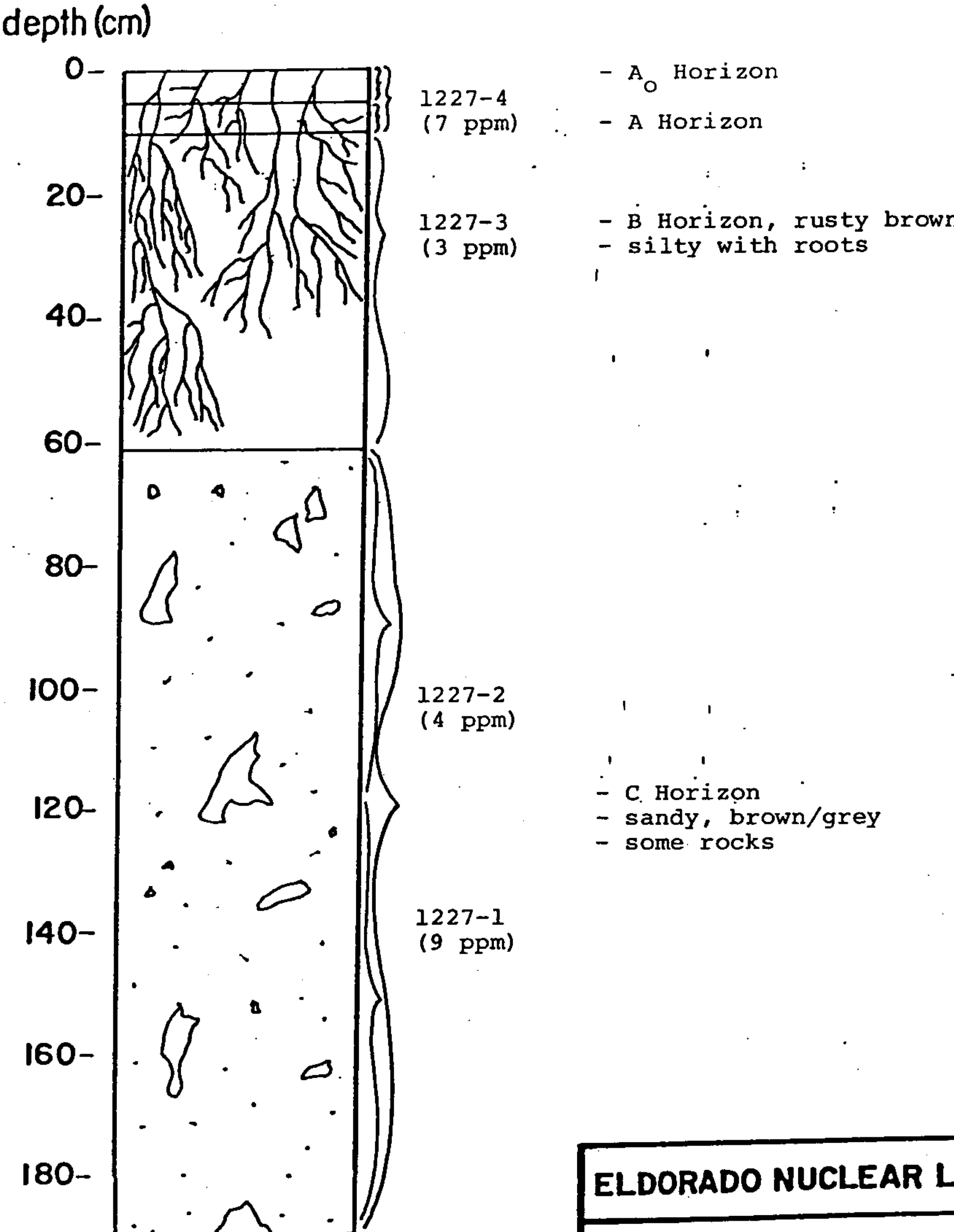
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT -2

39+20W



ELDORADO NUCLEAR LIMITED

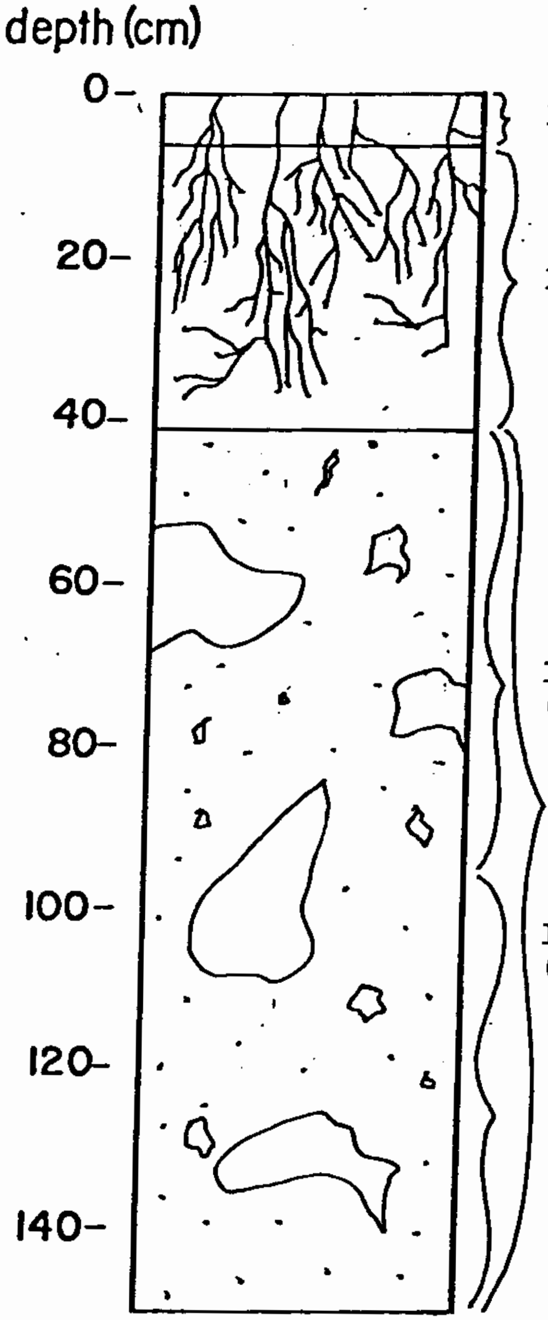
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

39+40W



1228-4
(1.5 ppm)

- A Horizon

1228-3
(11.5 ppm)

- B Horizon, rusty brown
- silty, with roots

1228-2
(8 ppm)

- C Horizon
- grey, sandy, with some
  boulders

1228-1
(11.5 ppm)

ELDORADO NUCLEAR LIMITED

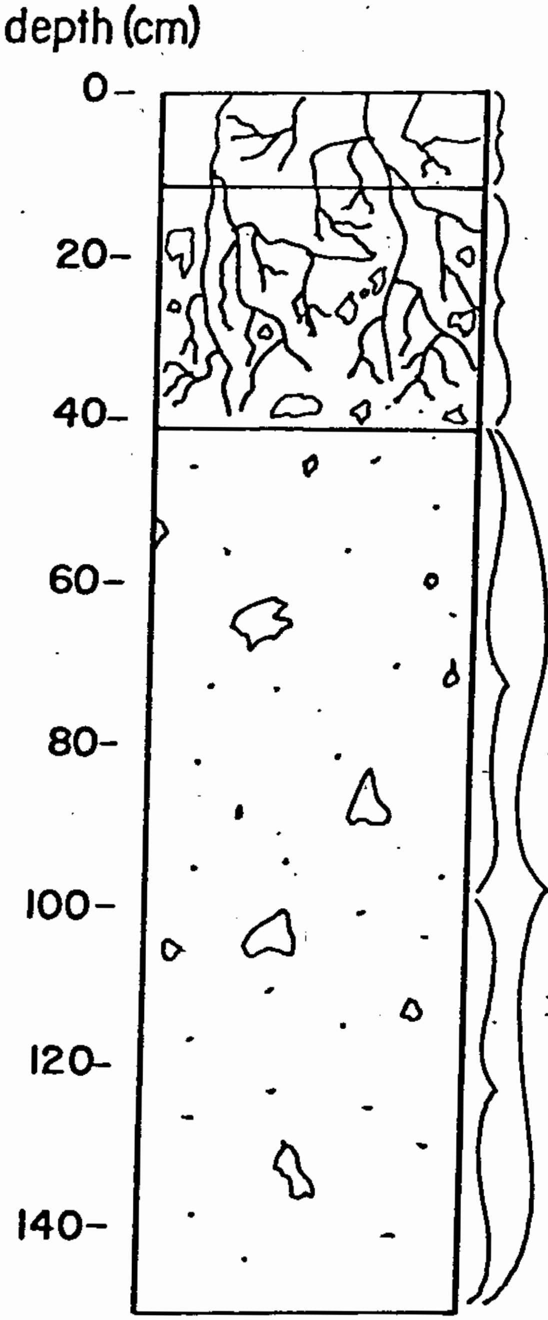
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

39+60W



1229-4
(1 ppm)

- A Horizon

1229-3
(3 ppm)

- B Horizon
- rusty brown, silty, with rocks

1229-2
(7 ppm)

1229-1
(18 ppm)

- C Horizon, grey, sandy
- few small rocks

ELDORADO NUCLEAR LIMITED

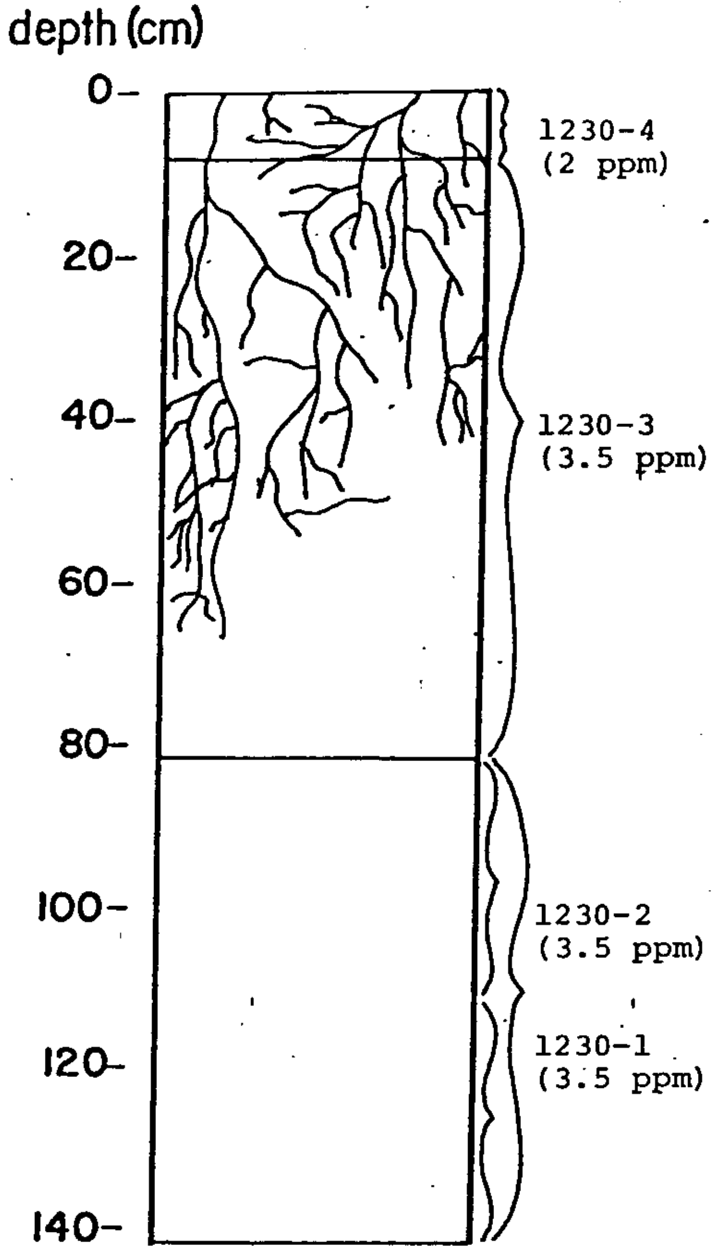
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

39+80W



- A Horizon
- B Horizon, rusty brown, silty
- C Horizon, somewhat clayey, dark grey

ELDORADO NUCLEAR LIMITED

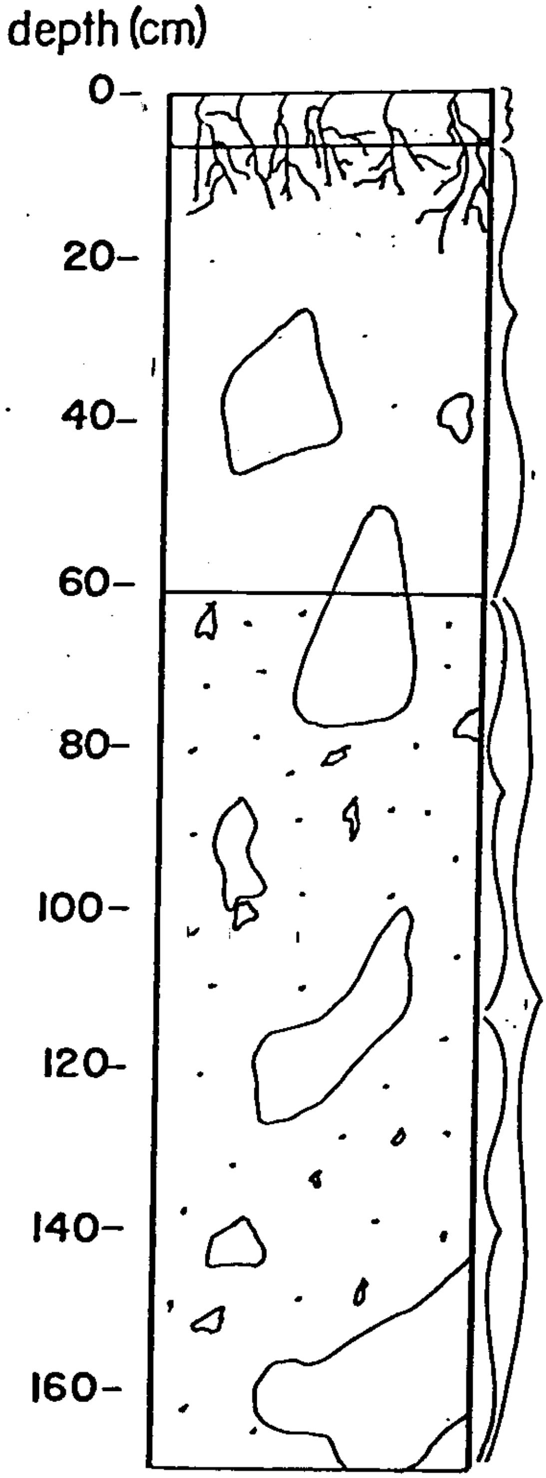
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

40+00W



1231-4
(4.5 ppm) - A Horizon

1231-3
(5 ppm)

- B Horizon
- dark brown, silty
- numerous boulders

1231-2
(6 ppm)

- C Horizon
- sandy with numerous boulders

1231-1
(4.5 ppm)

ELDORADO NUCLEAR LIMITED

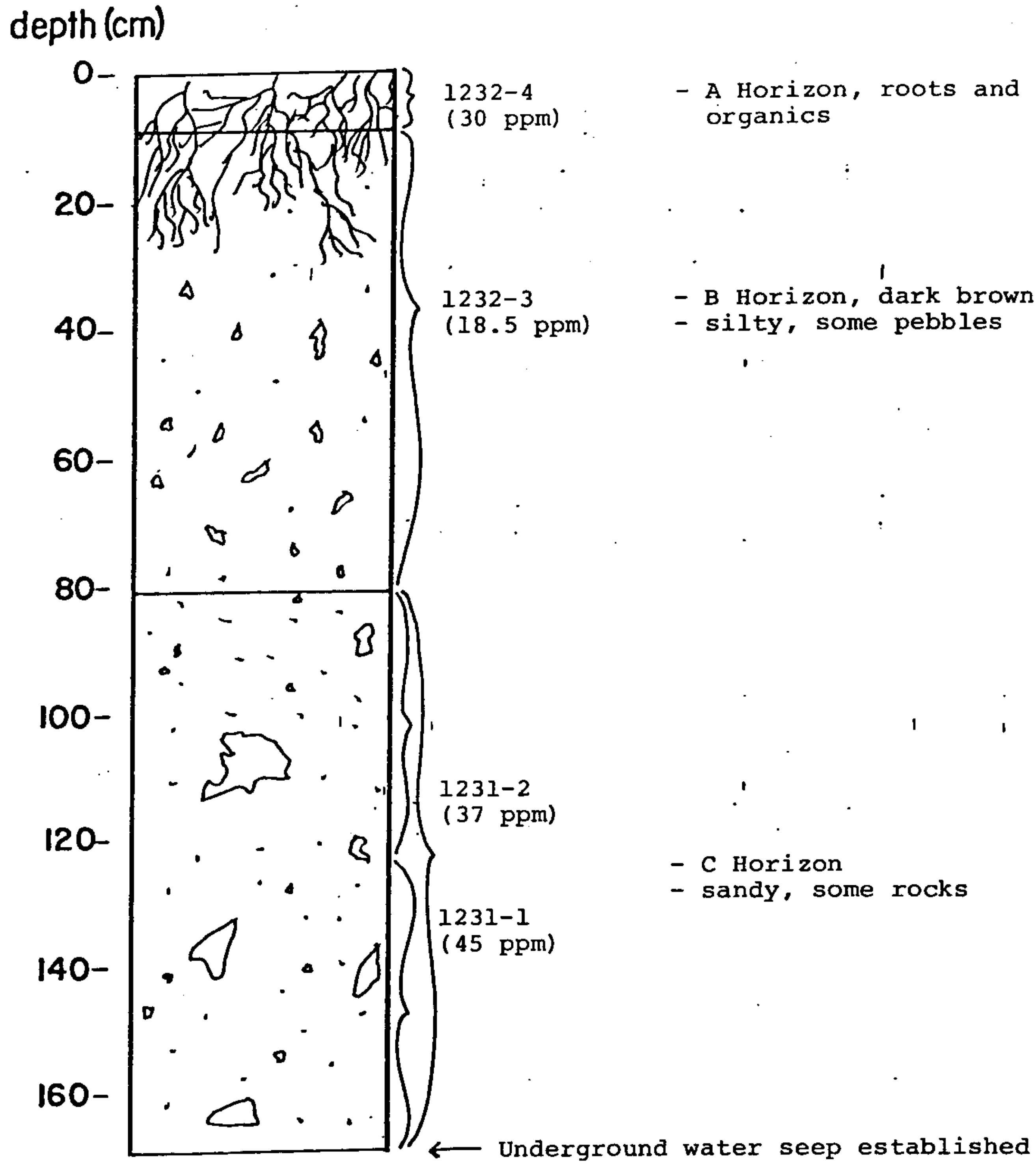
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

40+10W



ELDORADO NUCLEAR LIMITED

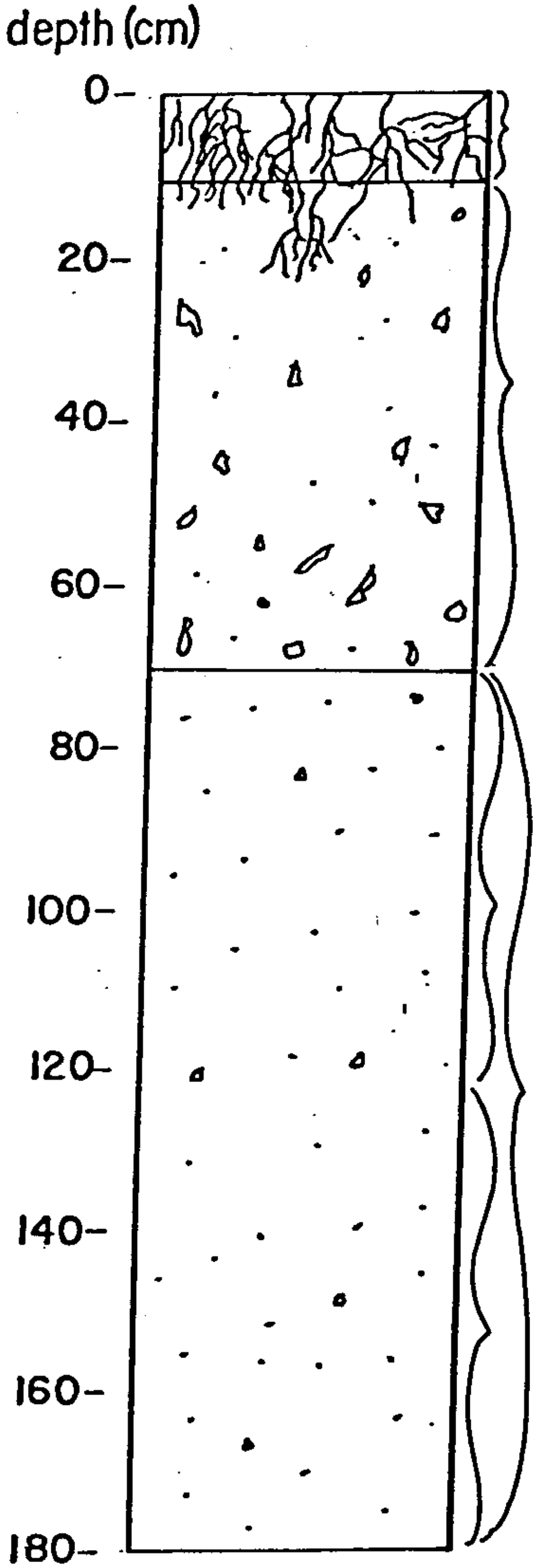
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

40+20W



1233-4
(14.5 ppm)
- A Horizon

1233-3
(24.5 ppm)
- B Horizon, brown, silty
- few pebbles

1233-2
(10 ppm)

- C Horizon
- light brown, sandy
- free from boulders and rocks

1233-1
(16.5 ppm)

ELDORADO NUCLEAR LIMITED

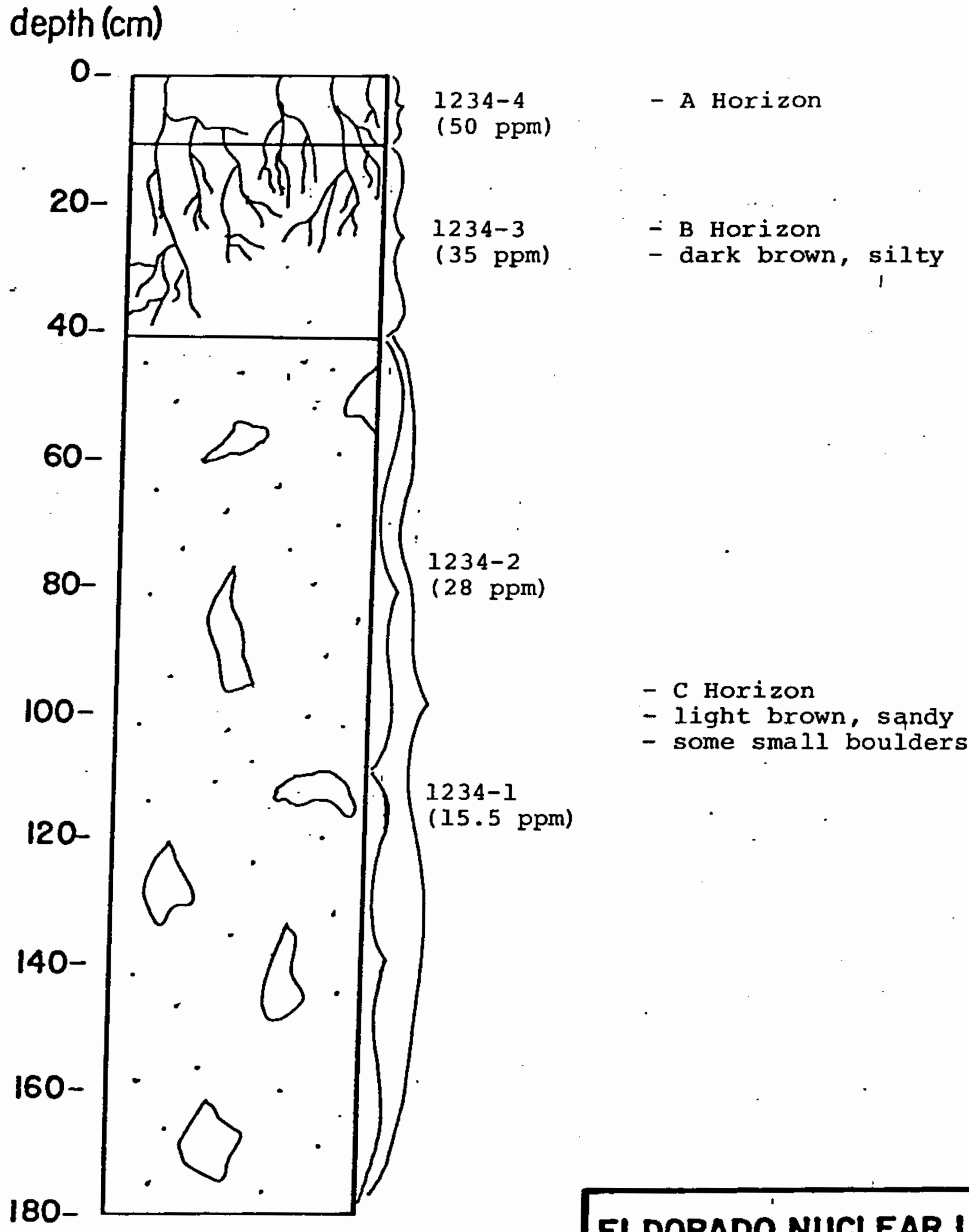
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

40+30W



ELDORADO NUCLEAR LIMITED

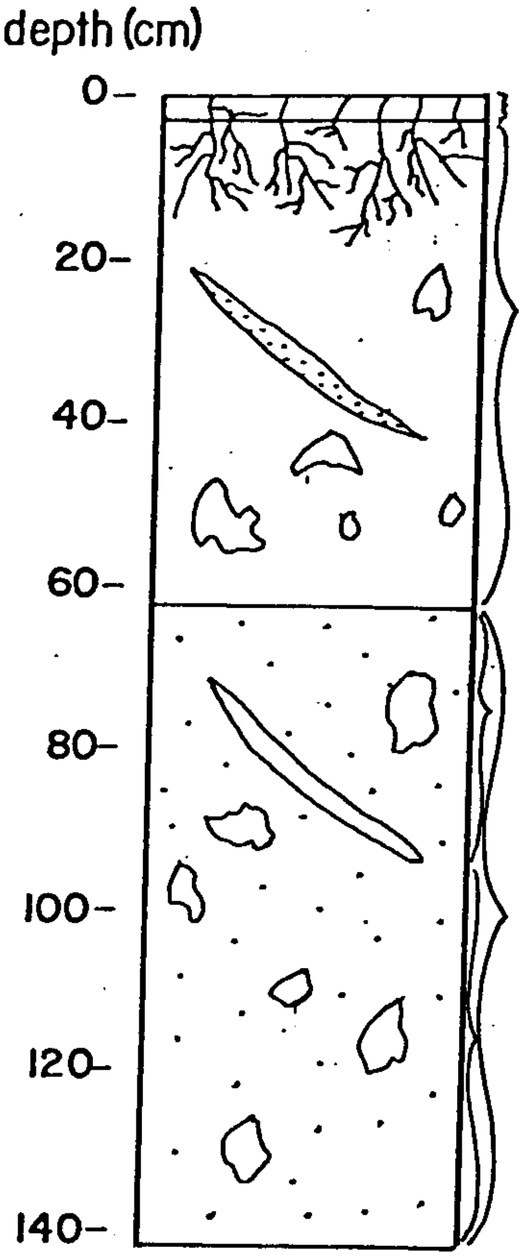
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT -2

40+40W



1235-4
(11 ppm)

- A and A_o Horizon

1235-3
(23 ppm)

- B Horizon
- brown, silty
- intermixed with C, and rocks
- lens of sand

1235-2
(34 ppm)

- C Horizon
- some rocks
- lens of silty material

1235-1
(30 ppm)

<u>Note</u> - "A" Horizon and 20cm of "B" were stripped off by cat. 1235-4 was taken from 3 metres west of station.

ELDORADO NUCLEAR LIMITED

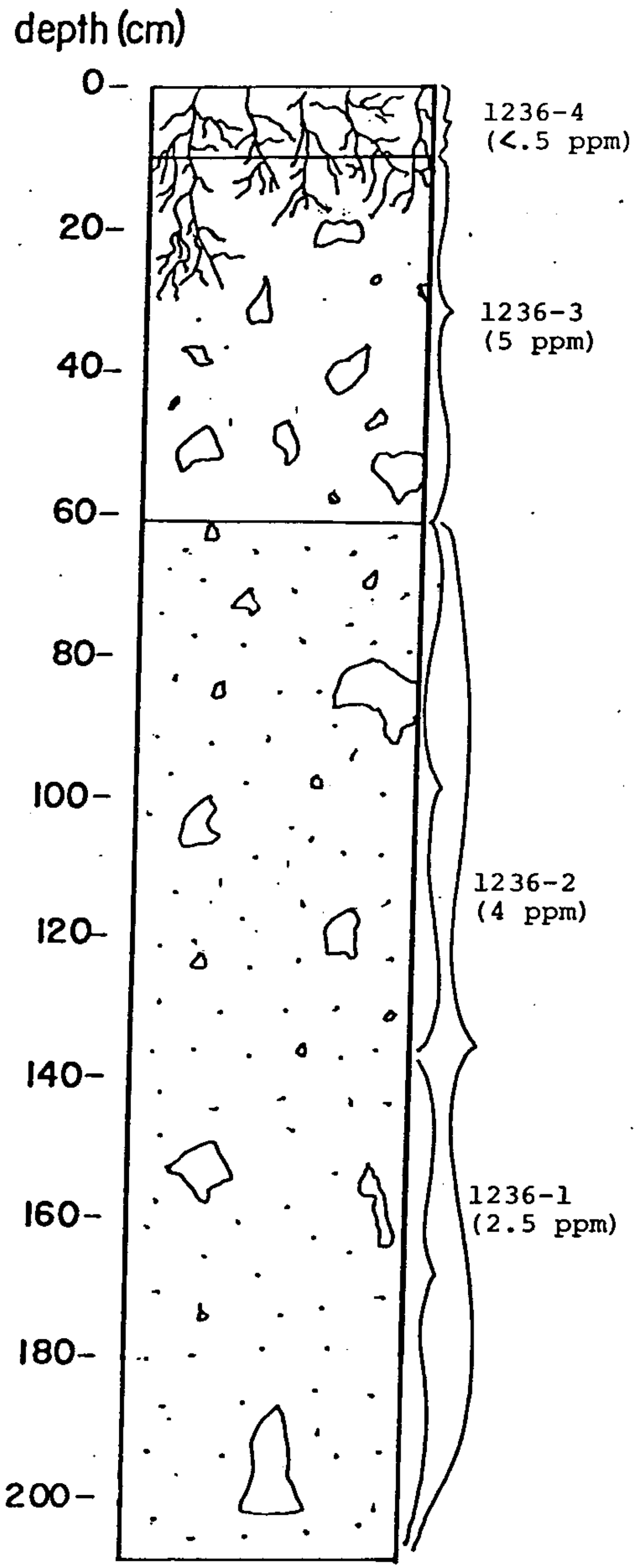
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT -2

40+50W



ELDORADO NUCLEAR LIMITED

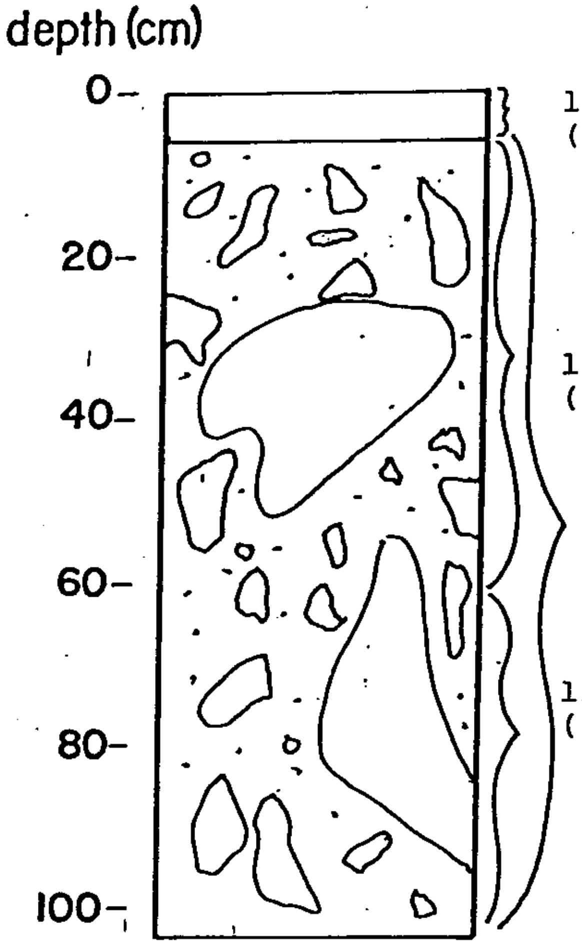
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

40+60W



1237-3 (7.5 ppm)
- B Horizon
- dark brown, silty

1237-2 (4.5 ppm)
- C Horizon
- medium brown, sandy
- large boulders occur with many rocks

1237-1 (8 ppm)

<u>Note:</u> A and B Horizons are absent since about 60cm of soil was removed by the cat for up to 10 metres on all sides of station.

ELDORADO NUCLEAR LIMITED

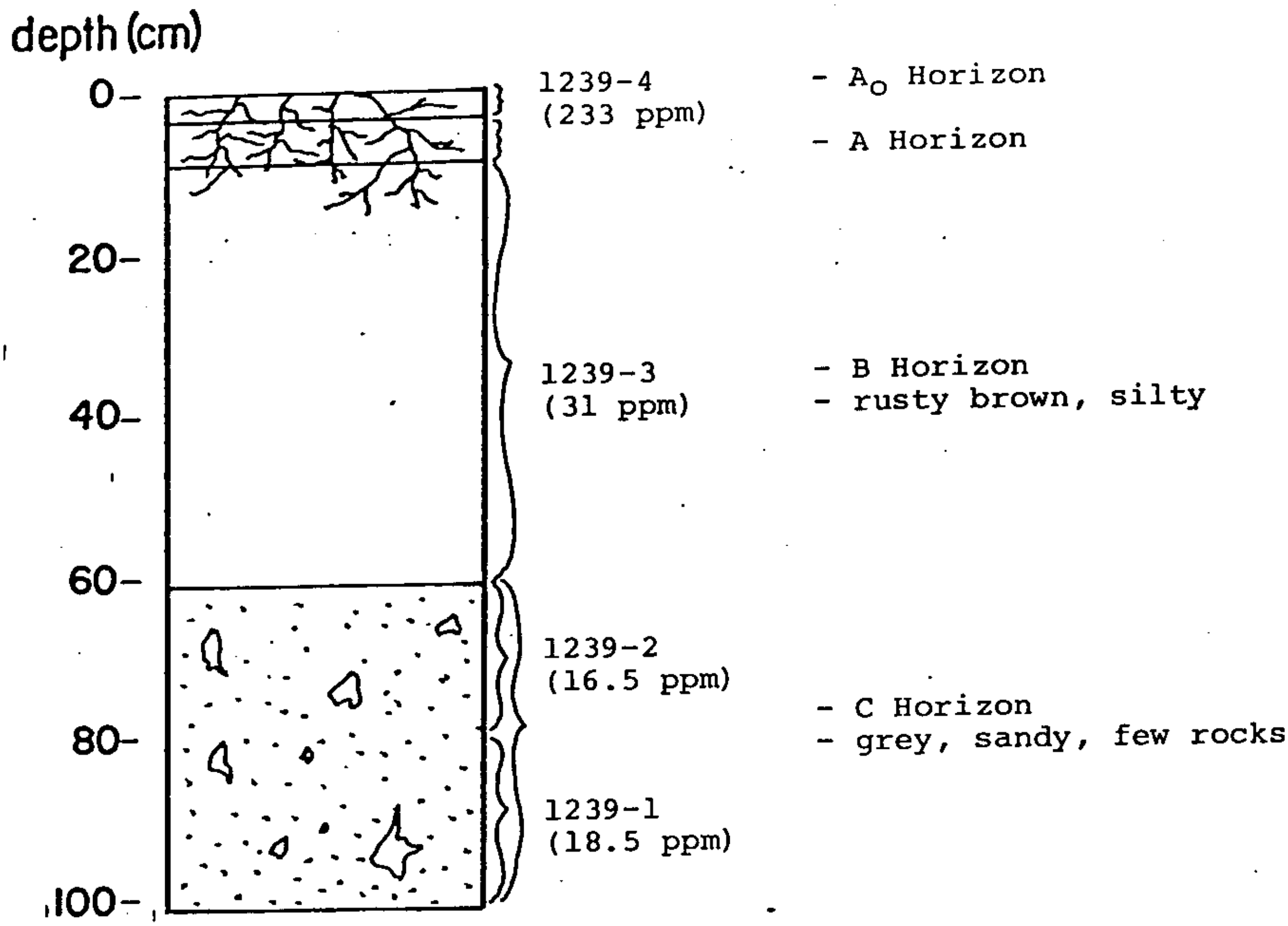
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

40+80W



ELDORADO NUCLEAR LIMITED

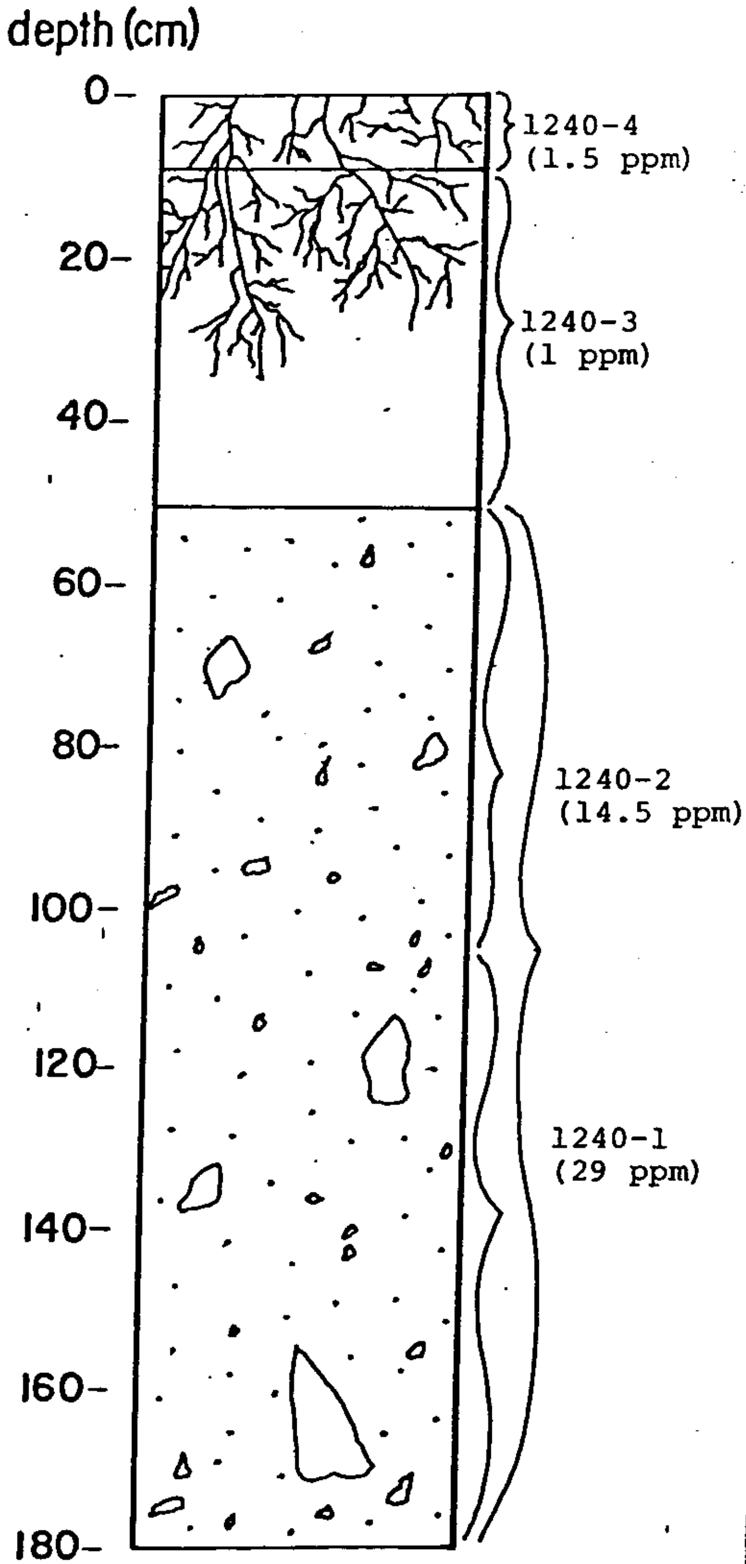
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

41+30W



- A Horizon

- B Horizon
- rusty brown, silty

- C Horizon
- grey, sandy
- very coarse towards bottom
- few small rocks and pebbles

Note: 41+30W was mapped instead of 41+20W. 41+20W was disturbed in all horizons.

ELDORADO NUCLEAR LIMITED

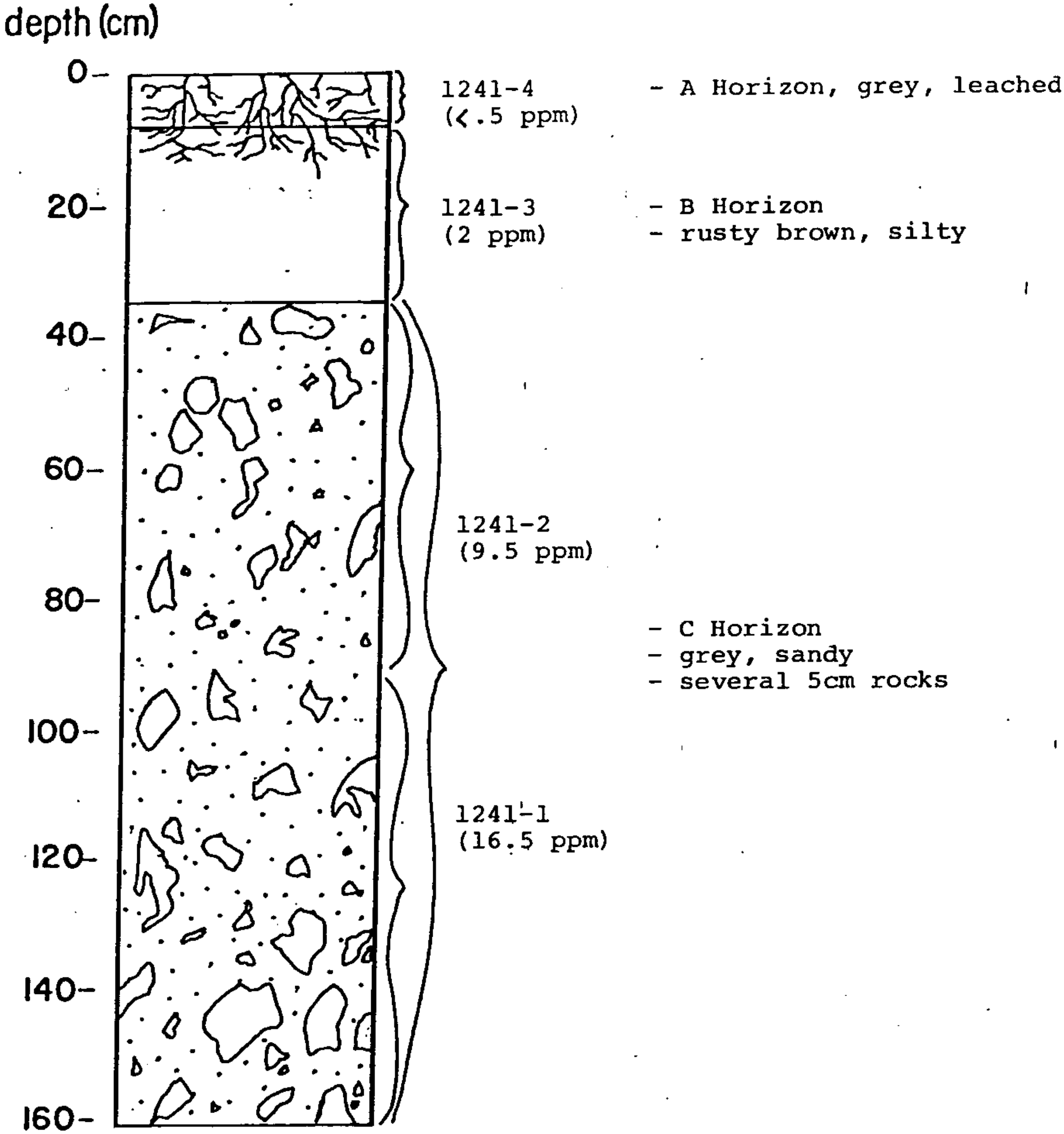
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

41+40W



ELDORADO NUCLEAR LIMITED

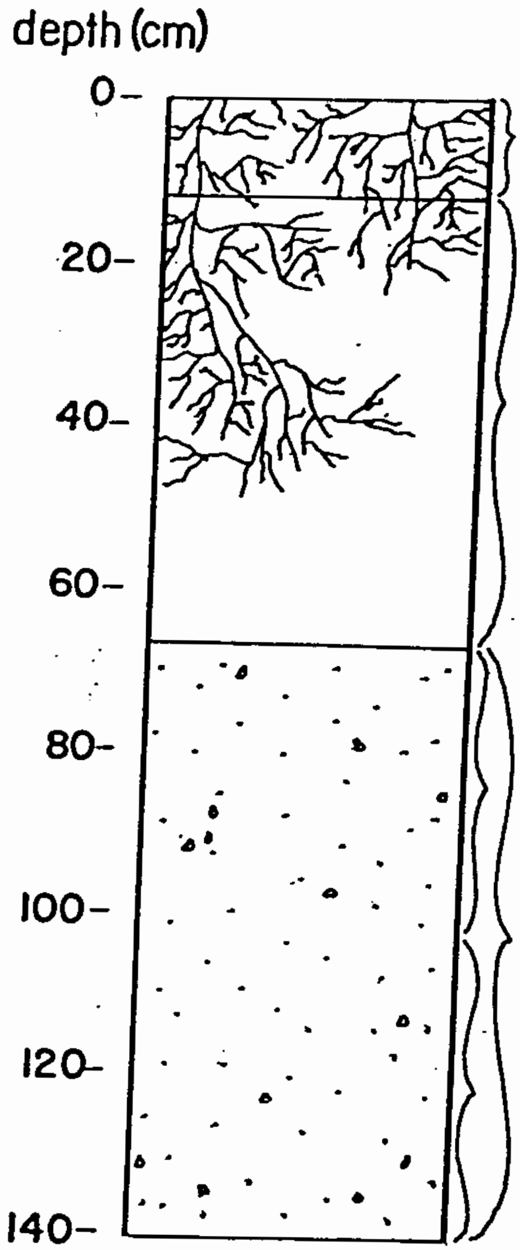
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

41 + 60W



1242-4
(11.5 ppm)
- A Horizon

1242-3
(5.5 ppm)
- B Horizon
- rusty brown, silty
- some roots

1242-2
(15 ppm)

- C Horizon
- grey/red, sandy
- greyest at bottom
- free from rocks

1242-1
(16 ppm)

ELDORADO NUCLEAR LIMITED

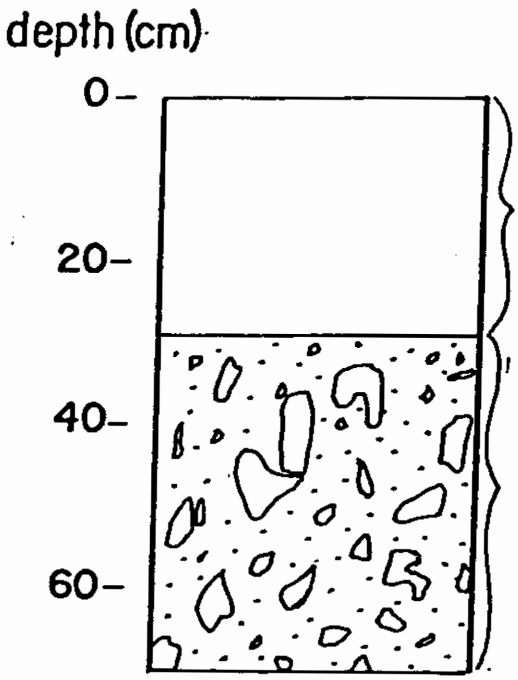
PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

41+80W



1243-2
(5.5 ppm)

- B Horizon
- rusty brown, silty

1243-1
(13 ppm)

- C Horizon
- grey sandy, with pebbles and rocks

Note: The "A" and most of "B" Horizons were stripped off by the cat.

ELDORADO NUCLEAR LIMITED

PROJECT 522

JOVE CLAIMS

SOIL PROFILES

JT-2

HEAVY MINERAL DATA

SAMPLE NUMBER	AREA	ANOM.	HEAVY MINERALS																					GEOCHEMICAL ANALYSIS					
			AMPH	APTT	BRTE	BTTE	CHLT	CHPY	EPDT	FLRT	GOLD	GRNT	GTHT	ILMN	MGNT	MSCT	PRTE	PRXN	SCHT	SPHN	TPAZ	TRML	ZRCN	U	Sn	W	Pb	Sb	Th
1015		NEF	1	12		Tr			2			1	20		60								3	82	3	14	190		1030
1029-1		HASL	21						23			-1	3		40		1	12		1				485	5	37	60		
1029-2		HASL	5	Tr	Tr				10			5	10	Tr	50			12		10				850	7	70	152		
1030		3-2 MANY	10			Tr	Tr		4			1	Tr		55			5		20				740	NSS	80	54		
1036	6D		25									9			35		4	15				Tr	Tr	3	2	25			
1042		J7-A	10	Tr	2	2				2		Tr	15		38			20		1			8	115	—	NSS			
1043		J7-A	15	Tr					5	1			10		22			35		2			10	70	140	35			
1044		J7-A	69	Tr		2			Tr			Tr			22	Tr	4	3				Tr	Tr	15.5	215	30			
1045		J7-A	60	25		Tr						Tr			5			10						1.5	2	10			
1046		J7-A	30	1					1			Tr	29		10			25		Tr			Tr	62	340	175			
1061		HASL	30	Tr					60			6			3			1						7.5	2	7	10		
1062		HASL	35	1					40			8			5			10						8.5	1	3	6		
1063		HASL	50	Tr	Tr	Tr			30			10	Tr		3	Tr		7					Tr	3.1	2	1	10		
1064		HASL	40	Tr	1				40			2			2	Tr	Tr	15		Tr		Tr		21	1	1	12		
1065		HASL	28			Tr			4			10	3		8	Tr		10						2.5	1	8	2		
1066		HASL	30						40			8	2		5		Tr	6					Tr	2	1	45	2		
1067		HASL	10	Tr		1	Tr		74			8	1		-1	Tr		5						4	2	2	16		
1068		J7-A				38				1			30		30			-1					Tr	112	372	40		0.2	
1069		J7-A	55			4			1	Tr		Tr	18		20			2		Tr				33	125	95		2.0	
1079		G8-A	40						1			15			2	3	1	8						4.5	1	16		1.8	
1080		G8-A	40	10					3			30	5		3		-1	10					Tr	4.5	3	500		0.1	
1081		G8-A	50			3						2	1		40	Tr		5						9	84	150		0.1	
1082		G8-A	10			6	Tr			Tr			30		30			20					4	42	210	20		0.2	
1083		G8-A	13			75	Tr			Tr		Tr			10			2						11	250	175		.1	
1091		G8-A	80		Tr	7						Tr			8		1	2						9	280	175		.1	
1092		G8-A	40			12									28			20		Tr	Tr			12	88	35		.1	
1093		G8-A	70			10	Tr					Tr			10			10						14.5	72	45		.1	

SAMPLE NUMBER	AREA	ANOM.	HEAVY MINERALS																					GEOCHEMICAL ANALYSIS					
			AMPH	APTT	BRTE	BTTE	CHLT	CHPY	EPDT	FLRT	GOLD	GRNT	GTHT	ILMN	MGNT	MSCT	PRTE	PRXN	SCHT	SPHN	TPAZ	TRML	ZRCN	U	Sn	W	Pb	Sb	Th
1094		G8-A	70	Tr		10	Tr		Tr			Tr			10			10		Tr				23	150	50		.1	
1095		G8-A	30	1		30			2			Tr			25		Tr	12				Tr		26	380	500		.1	
1096		G8-A	70	Tr		15			Tr			Tr			8	Tr	3	4						11.5	77	30		.1	
1097		G8-A	43			35						1			15	Tr	1	5						18.5	54	100		.1	
1098		G8-A	50	Tr		32						Tr			15	Tr	1	1		1				33	110	45		.1	
1099		G8-A	50		-1	15						Tr			30	Tr		5		Tr				4.5	69	30		.1	
1514		NEF	-1						4			15	2		45	Tr	30	Tr		3			Tr	65	168	13	168		NSS
1633		3-2 MANY	25	4		3			45			5			12	1	2	3						620	4	45	72		
1634		3-2 MANY	37	2		1			55			2			3	Tr	Tr	1						16.5	3	14	18		
1635		NEF	18						70			3			5		2	2						200	4	2	16		
1636		NEF	20	2					60			4			8		2	4						60	3	12	22		
2072		N9-2	40	Tr	Tr	1			25	.1		10	2		3			20						3.5	1	6	20		84
2084		N9-6	10	1		Tr			15			5	Tr		4			65						1	1	1	1		7
2529		N9-3	75						2			6			Tr	Tr	1	15					Tr	4.5	2	14	10		19
3469		N9-3	50	1					8			25			3		Tr	8	Tr					33	21	13	4		210
3472		N10-2	60	3					3			2	1		2			30	Tr					14.5	4	8	2		76
3522		N9-3	60	1					4			8	1		Tr	Tr		26	Tr					18	1	2	1		31
3555		N9-1	1	3					50			20	5		2			20	Tr					7	2	3	6		45
3566		N16-2	35	Tr	-1	1			10	Tr		40			2			10	Tr				-1	22	3	4	8		142
4251		J7-A	2	Tr		5							10	Tr	70			5		5			5	31	340	15			
4252		J7-A	Tr	Tr		2			5				15		70			4		Tr			4	37	120	15			
4253		J7-A	Tr			2			2				15	Tr	60			8		2			10	41	210	15			
4254		J7-A	Tr			2			2				7		70			10					10	25	330	15			
4255		J7-A	16	1		4						Tr	Tr		70		5	1			Tr		3	54	110	1			
4256		J7-A	3	Tr		5					Tr		20		60		3	3		3			3	65	390	35			
4257		J7-A		Tr		5							25		40			20		1			10	132	920	40			
4258		J7-A				10			10				15		30		3	20		3			10	193	108	70			
4259		J7-A							1				12	2	20		5	20		10			30	30	115	50			

SAMPLE NUMBER	AREA	ANOM.	HEAVY MINERALS																					GEOCHEMICAL ANALYSIS					
			AMPH	APTT	BRTE	BTTE	CHLT	CHPY	EPDT	FLRT	GOLD	GRNT	GTHT	ILMN	MGNT	MSCT	PRTE	PRXN	SCHT	SPHN	TPAZ	TRML	ZRCN	U	Sn	W	Pb	Sb	Th
4260		J7-A	2			15						15			18		10	20	Tr	Tr			20	177	850	35			
4261		J7-A	Tr			5						Tr	Tr		60		5	10		Tr			20	71	160	20			
4262		J7-A	5			5									50		10		Tr	10			18	116	130	35			
4273		J7-A	3			8				1		Tr	18		55			10					5	272	380	28			
4274		J7-A				10				10			35		30		3	12	Tr					128	110	14			
4275		J7-A	1			1	Tr			Tr		Tr	77		18			3						52	140	40	460		
4276		J7-A	5	1		Tr				3			60		3			18		Tr			10	116	235	55			
4277		J7-A		NSS						NSS			NSS					NSS					NSS	106	250	30	252		
4278		J7-A		NSS						NSS			NSS					NSS					NSS	132	NSS	85			
4279		J7-A	5			2				Tr		1			48	Tr	1	20		1			22	46	780	35			
4281		J7-A	-1	Tr		7						2	5		55		Tr	20					10	30	1500	40			
4282		J7-A	2	Tr		Tr	Tr		8			35	10		20	Tr		25						2.5	120	12			
4397		N9-6	20						15	Tr		40			4		1	20						1	1	1	1		5
4507		N9-3	65	2					8	Tr		5	1		Tr	Tr		20						25	1	3	4		17
4521		N9-1	15	-1		1			4			50	-1		3	Tr		28					Tr	66	NSS	4	20		NSS
4760		SB	10			20	Tr		20			5	10		35			Tr		3				5.5	31	35	38	1.6	
5001		SB				10			15			10			37		3	25						17.5	4	12	28	2.4	
5029		SB	20					-1	10			15			30			30						23.5	1	5	8	.6	
5037		SB	20									18	5		20			35						6.5	1	3	34	1.4	
5068		SB	20			10			10			10			12		3	35						14	4	5	54	1.2	
5085		SB		3					5			15	15		25		10	30						10	1	5	72	470	
5089		SB	8			10						18			30		4	35						6	1	1	48	5.4	
JT-1		JOVE	30	4		1				3		35			6	Tr	1	20		1				184	12	22	12	.1	240
JT-2		JOVE	19	6		1			3	15		25			25	Tr	Tr	10						400	16	3	24	.1	390
JT3-4		JOVE	38	6		10			Tr	1		1			4		2	39						64	1	6	28		

Thin Section Reports

Jove

Specimen No. - 100006

Rock name - foliated and strained looking muscovite granite

Mineralogy - essential - K-feldspar - 30%
plagioclase - An_{23} - 30%
quartz - 25%
muscovite - 15%

accessory - apatite

secondary - sericite

Description - This rock is predominantly coarse grained, allotriomorphic granular. It is composed predominantly of K-feldspar and calcic oligoclase, in approximately equal proportions, with slightly lower amounts of quartz, and a fair amount of muscovite. The quartz and feldspar form an interlocking mosaic of irregularily shaped anhedra. At one end of the section the rock is clearly coarse grained, but a shear zone cuts across the section, composed of medium to fine grained material. In this zone the quartz is broken down into a highly sutured and strained looking interlocking mosaic, while the feldspar crystals are strained looking, and often partially fractured. The muscovite in this zone is relatively fine grained and strictly aligned along the plane of shear.

Over most of the section, quartz occurs in patches of irregularily shaped, quite strongly strained looking, anhedra. K-feldspar anhedra zre also irregularily shaped, frequently show microcline twinning, is infrequently slightly perthitic, and is fresh to very slightly turbid in appearance. K-feldspar crystals enclose occasinnal small crystals of plagioclase, and there is a little development of myrmekite at the junction of these two minerals. Where K-feldspar is cut by fracture planes, it is often cut across by zones filled by fine grained quartz. Plagioclase anhedra are compact, typically fresh, but sometimes contain a trace of secondary sericite, particularily along cracks in the crystals. The plagioclase often has a rather strained appearance, sometimes with stringers of quartz filling fractures which run across the crystals. In one or two cases, plagioclase crystals contain scattered patches of K-feldspar which are in optical continuity with each other. This suggests some replacement of plagioclase by K-feldspar, but quantitatively this is of very minor importance in this section. The plagioclase in this rock is unzoned.

(continued overleaf)

Specimen No. - 100006 (continued)

The muscovite in this rock is typically coarse grained, with the exception of the flakes in the sheared zone. The coarse grained flakes are compact, very fresh looking, sometimes slightly bent, and show a fairly well developed preferred orientation within the area of the thin section.

The only accessory mineral noted in this section was apatite, in very rare tiny euhedral crystals.

As regards the genesis of this rock, there is no evidence to suggest that it is anything other than a magmatic granite which is mineralogically fresh, but has undergone some strain.

Jove

Specimen No. - 100007

Rock name - fresh microgranite, possibly of metasomatic origin

Mineralogy - essential - quartz - 35%
K-feldspar - 35%
plagioclase - 15%
biotite - 10%

accessory - epidote
magnetite
zircon

Description - This rock is fine grained, allotriomorphic granular, with an average grain size of around 0.5 - 1.0 mm. It is composed of an interlocking mosaic of smooth sided anhedra of quartz and feldspar, dotted throughout by a low proportion of biotite flakes. The grain size in this rock is rather patchily variable from a maximum of about 2 mm down to a minimum of about 0.2 mm.

The quartz in this rock occurs in irregularily shaped anhedra, and patches of anhedra, of irregular form. The crystals are moderately strained. At one side of the section there is a fairly large patch, rich in quartz, in which the quartz is rather coarser than in the rest of the rock. This patch contains scattered biotite flakes, but lacks feldspar. K-feldspar in this rock frequently shows microcline twinning, but is only rarely perthitic. It forms compact anhedra which contain occasional small inclusions of the other rock minerals, and is typically very fresh. Plagioclase also forms compact anhedra, which are frequently untwinned. The twinning which is present is usually unsuitable for compositional determination, but the composition is probably around intermediate oligoclase. The plagioclase is typically very fresh. There is some development of myrmekite where plagioclase abuts onto K-feldspar. The plagioclase is quite unzoned. Biotite forms scattered, small, compact, fresh looking flakes which show a moderately developed preferred orientation. There is a tendency for the elongation of quartz anhedra, and quartz crystal aggregates, to parallel this orientation direction of the biotite.

Accessory amounts of magnetite are present, in small compact crystals. A few small crystals of epidote occur throughout the rock, often associated with biotite, and there are also scattered grains of zircon which sometimes occur in clots of several crystals.

(continued overleaf)

Specimen No. 100007 - continued

While it is not possible to determine the origin of this rock definitely, on petrographic evidence alone, it appears possible that it is of metasomatic rather than igneous origin. The texture is typically metamorphic, with the interlocking mosaic texture so reminiscent of schists and gneisses, and this rock completely lacks any suggestion of crystal form in plagioclase which is usually present in acid rocks of magmatic origin. In addition, the fact that plagioclase is frequently untwinned, and the type of twinning that is present, is more typical of metamorphic than magmatic rocks, as is the lack of zoning in plagioclase. The presence of a quartzose segregation, lacking feldspar, is also a common metamorphic feature, although it can also be encountered in magmatic rocks.

N.B. The hand specimen contains a clot (?xenolith) of more basic material, but this was not included within the this section.

Jove
April
21 ...

Specimen No. - 100008

Rock name - two sections were made from this specimen - one is of a coarse grained granitic segment; the second includes the contact between a mica-free microgranite, and a muscovite-biotite microgranite.

Section "A" - muscovite granite

Mineralogy - plagioclase
quartz
K-feldspar
muscovite

this rock is too coarse for an estimate of relative proportions to be feasible

Description - This rock is coarse grained and consists of an interlocking mosaic of feldspar and quartz anhedra, dotted through by relatively abundant large flakes of muscovite. The quartz often occurs in patches of crystals which form a highly sutured mosaic. The crystals are quite strongly strained looking. The K-feldspar are also rather strained looking, form large anhedra which often show microcline twinning and are only sparsely perthitic; they sometimes contain scattered inclusions of small plagioclase crystals. The K-feldspar is essentially fresh, the only alteration being a very slight turbidity in some crystals. The plagioclase crystals are also fresh, the only alteration being very occasional small flakes of sericite along cracks in the crystals. The composition is calcic oligoclase, around An_{24}. The crystals are unzoned, but rather strained looking. There is some development of myrmekite where plagioclase abuts onto K-feldspar.
The muscovite crystals are in the form of large, fresh looking, compact flakes which are often somewhat bent looking. They show a rather poorly developed preferred orientation.
This whole section has a rather strained appearance. No accessory minerals were identified in this section.

(for Section "B" see overleaf)

Specimen No. - 100008 - continued

Section "B" - contact between mica-free microgranite and biotite-muscovite microgranite

(N.B. in hand specimen the mica-free microgranite can be seen to be bordered on each side by muscovite-biotite microgranite. It forms a band about 2 cm wide)

a) mica-free microgranite

Mineralogy -	essential -	plagioclase -40%	mon3
		K-feldspar - 30%	
		quartz - 25%	
	accessory -	biotite	
		muscovite	
		zircon	

Description - This rock is fine grained, allotriomorphic granular, with an average grain size of around 0.5 mm. It is composed essentially of an interlocking mosaic of smooth sided anhedra of quartz and feldspar, of more or less even grain. The quartz forms lobate anhedra which often occur in elongate patches, and are moderately strained. K-feldspar forms equidimensional anhedra, which are typically untwinned, and only rarely perthitic. They are very fresh. Plagioclase also forms equidimensional anhedra which are typically fresh, frequently untwinned, unzoned, and often myrmekitic where they abut onto K-feldspar. Twinning suitable for compositional determinations is difficult to fine, but the composition appears to be about calcic oligoclase. They only other minerals present in this part of the section are a few small flakes of biotite and muscovite, and very rare small crystals of zircon.

b) muscovite-biotite microgranite

Mineralogy - this is similar to the mica free material, except that there is about 10% of biotite and about 5% of muscovite scattered through the rock.

Description - The texture and mineralogy of this part of the section are identical to that of the mica free part of the section, except for the presence of scattered flakes of biotite and muscovite. These form compact flakes, which are typically fresh and show little or no preferred orientation of their long axes. A very few small crystals of epidote also occur in this part of the section. The junction between the two types of microgranite is quite abrupt, but neither shows any change towards the contact. At the very edge of the section, the micaceous microgranite contains a somewhat coarser grained portion.

(continued overleaf)

Specimen No. - 100008 - continued

The texture and mineralogy of this rock are somewhat suggestive of a metasomatic, rather than an igneous, origin. The presence of bands of differing composition; the lack of any crystal form in plagioclase; the absence of zoning and the lack of twinning in plagioclase; and the general interlocking mosaic texture of the rock, are all indications of a possible metasomatic origin. However, none of these characteristics are definitive, and the suggestion that the rock may be of metasomatic origin can be no more than a hypothesis without further evidence such as might be obtained from field data.

Specimen No. - 100073

Rock name - moderately altered granite

Mineralogy - essential - K-feldspar - 45%
quartz - 30%
plagioclase - 15%
biotite - 5%

accessory - magnetite
apatite
sphene
hornblende

secondary - sericite
clinozoisite
chlorite
argillaceous material

Description - This rock is medium to coarse grained, hypidiomorphic granular. It consists essentially of large anhedra of K-feldspar and quartz, intermingled with clots of tabular subhedra of plagioclase which tend to be somewhat smaller than the K-feldspar crystals. A low proportion of biotite flakes is scattered through the section.

The quartz forms irregularily shaped anhedra which often form patches of several crystals, which are quite heavily strained looking. K-feldspar anhedra are often very large (up to at least 1 cm long) and frequently contain numerous small plagioclase subhedra. The K-feldspar is typically strongly perthitic, and sometimes shows microcline twinning. It is quite turbid looking, as a result of a dusting by very fine alteration products, probably argillaceous in nature. Plagioclase crystals are typically medium grained, often form clots of several crystals, and are usually in the form of tabular anhedra. Many of the plagioclase crystals are quite strongly zoned. The composition ranges from about An_{16} to An_{26}. Most of the plagioclase crystals are fairly heavily altered to a mixture of very fine sericitic material and subsidiary amounts of finely granular clinozoisite. The degree of alteration ranges from about 10% to about 75%. Small compact flakes of biotite tend to occur in clots of severalflakes, sometimes enclosed within K-feldspar crystals. Much of the biotite is fresh, but some crystals are quite heavily chloritised. Small compact crystals of magnetite occur in accessory amounts, often associated with the biotite. A few very small anhedra of hornblende were also noted. These are quite fresh. Small euhedra of apatite, and anhedra of sphene, are present in accessory amounts.

(continued overleaf)

Specimen No. - 100073 - continued

The texture and mineralogy of this rock are typical of a magmatic granite, with subhedral plagioclase showing compositional zoning as is commonly found in acid magmatic rocks. There is no evidence to suggest a metasomatic origin for this rock petrographically.

D.F

5A

Specimen No. - 100141

mon zonite

Rock name - medium grained granite crossed by irregular aplitic zone

Mineralogy - essential - plagioclase - 40%
K-feldspar - 30%
quartz - 20%
biotite - 5%

accessory - magnetite
sphene
muscovite
apatite
zircon

secondary - sericite
clinozoisite
chlorite

Description - This rock is a medium grained, non-porphyritic, hypidiomorphic granular granite, which is cut across by a zone of fine grained aplitic material. This zone is of variable width, and peters out over short distances.

The main part of the rock shows a typically granitic mineralogy and texture. It consists essentially of subhedra of plagioclase surrounded by interstitial anhedra of K-feldspar and quartz, and with a low proportion of biotite flakes scattered throughout. The quartz forms irregularily shaped anhedra, which usually moderately strained looking. It forms an interlocking mosaic with the anhedra of K-feldspar. The latter is typically perthitic and frequently shows microcline twinning. K-feldspar crystals rather infrequently contain inclusions of plagioclase. They are fresh to very slightly turbid, but the turbid material is too fine grained to be identified positively. It is probably argillaceous in nature. Plagioclase crystals typically forms subhedral tabular crystals. These are quite often slightly zoned. The composition is predominantly intermediate oligoclase, around An_{20} The plagioclase shows moderate alteration, particularily in the cores of the crystals. Much of the alteration is extremely fine grained, in the form of a very fine 'dust', but in some cases it can be resolved into a fine mass of sericitic material intermingled with subsidiary amounts of finely granular clinozoisite. The degree of alteration ranges from virtually none to about 30% of the crystal. Biotite flakes are scattered through the rock, in low proportions. They are of compact form, often occur in clusters of several crystals, and tend to be associated with small grains of sphene and/or magnetite. The biotite is usually fresh, but some crystals show partial chloritisation. The rock also contains accessory amounts of apatite, in small euhedra, and occasional small anhedra of zircon.

(continued overleaf)

Specimen No. - 100141 (continued)

The aplitic zone which cuts across the section ranges in width from a maximum of about 3 mm down to zero, occurring in lenses which swell out and thin down again across the section, and sometimes curve around a large crystal of the coarser granite. The grain size of this material averages around 0.1 - 0.5 mm, in contrast to the rest of the rock which averages around 2-4 mm. The fine material has a typically aplitic texture, with an interlocking mosaic of small anhedra of quartz, K-feldspar and plagioclase. Biotite is virtually absent from the aplitic material, while K-feldspar is probably a little more abundant than in the main part of the rock. The degree of alteration is similar in the aplite, to that in the rest of the rock, and there is no change whatever in the medium grained granite in the vicinity of the aplite.

The main part of this section has the typical mineralogy and texture of a magmatic granite, with the subhedral zoned plagioclase, and the interstitial anhedra of K-feldspar and quartz. There is no petrographic evidence to suggest any other mode of origin. As the aplitic material cuts right across the section, it probably represents a late stage crystallisation of the same magma, which penetrated along a plane of weakness in the previously crystallised material. This must have happened while the rock was still hot, as there is no sign of chilling along the contact, although it is quite sharp.

NEF

5A

Specimen No. - 100148

Rock name -hornblende biotite schist

Mineralogy - essential -	quartz	-	35%
	plagioclase	-	35%
	biotite	-	10%
	hornblende	-	10%
	epidote	-	5%
accessory -	magnetite		
	sphene		
	apatite		
	zircon		
	K-feldspar		

Description - This rock is fine grained allotriomorphic granular, with an average grain size of around 0.5 mm. It consists essentially of an interlocking mosaic of quartz and plagioclase anhedra, throughout which is scattered a low proportion of biotite and hornblende crystals, along with a little epidote. The biotite, and to some degree the hornblende, show a preferred orientation which gives a schistosity to the rock. The hand specimen includes a band, very rich in biotite, at one side of the specimen but this is not included within the area of the thin section.

The quartz in this rock occurs in irregularily shaped, but fairly smooth sided, anhedra which often occur in clusters of several crystals and form an interlocking mosaic with the neighbouring plagioclase anhedra. Quartz crystals, and patches of crystals, show a slight tendency to be elongated within the plane of schistosity. They are typically unstrained, or only slightly strained. Plagioclase crystals typically form more or less equidimensional anhedra of very irregular form. They quite often contain small inclusions of quartz. They are frequently untwinned, and quite unzoned. Twinning suitable for compositional determination is not present, but the relief indicates a fairly sodic composition, probably around albite-oligoclase. In a few crystals there are scattered inclusions of K-feldspar, in optical continuity with each other, forming a 'pseudo-antiperthite'. Most of the plagioclase crystals are rather patchily turbid; in most cases the turbid material is too fine grained to be identified. In some cases the turbid material can be partially resolved into tiny anhedra of biotite, hornblende or epidote.

Biotite flakes, usually of compact form, are scattered through the rock, often in stringers within the plane of schistosity. The biotite is typically very fresh. Hornblende, also in compact anhedra, is often associated

(continued overleaf)

with the biotite, but shows a less well developed preferred orientation than the former. It is a deep green variety, and is also very fresh. There are also occasional clusters, often with a radiating form, of an amphibole with a needle-like habit and a slightly lighter colour, probably actinolitic in composition. These generally occur as inclusions within plagioclase crystals. Small granular anhedra of epidote are dotted throughout the rock in low proportion, sometimes but not always associated with hornblende. As well as these discreet crystals, there are also occasional masses of very fine grained epidote, usually within plagioclase crystals. Sphene is a noticeable accessory mineral, in compact anhedra. There are occasional small masses of magnetite, some limonitised, and small amounts of apatite and zircon.

Although the mineralogy of this rock is close to that of a tonalite, it is almost certainly of metamorphic origin, and represents a metamorphosed sediment. The relatively high proportion of quartz, untwinned and unzoned character of the plagioclase, and the relatively high proportion of epidote all tend to support a metamorphic origin. The presence of incipient biotite, amphibole, and epidote within plagioclase, add the radiating actinolitic nature of this amphibole, indicates a late stage of metamorphism, which appears to have been stress free and and was probably of thermal origin, possibly as a result of the intrusion of some of the neighbouring granites. This rock appears to have been regionally metamorphosed to the epidote-amphibolite facies, and was originally an arkose with some carbonate material, most probably.

Jnl.
10 p. M
62 T

Specimen no. - 100260

Rock name - moderately sericitised medium grained granite

Mineralogy -	essential -	quartz	- 30%
		K-feldspar	- 25%
		plagioclase	- 25%
		muscovite	- 15%
	accessory -	apatite	
		zircon	
	secondary -	sericite	
		limonite	

Description - This rock is medium grained, hypidiomorphic granular, and non-porphyritic. It consists essentially of a mosaic of quartz and K-feldspar anhedra, dotted through by plagioclase crystals which are sometimes tabular subhedra. A fair amount of muscovite flakes are dotted through the rock. The plagioclase is quite heavily sericitised.

The quartz in this rock occurs in extremely irregularily shaped anhedra which are very highly strained looking, and tend to have highly sutured margins, patricularily against other quartz crystals. The K-feldspar also forms very irregularily shaped anhedra which tend to be somewhat strained looking, and often contain small inclusions of quartz. They are typically non-perthitic, and occasionally show microcline twinning. The are mineralogically fresh, being only occasionally slightly turbid. Some K-feldspar crystals are cut across by stringers, and contain patches, of densely matted sericite often stained by limonite. Plagioclase crystals are often anhedral, but sometimes have a subhedral tabular form. They are typically unzoned, and have a composition of about calcic oligoclase An_{24}. The plagioclase crystals range from moderately to densely sericitised, and the more altered crystals also often contain masses and finely disseminated granules of limonite, giving them a brownish appearance in plain light. Discreet, compact, flakes of muscovite are relatively common. These mostly occur in masses and stringers of flakes interstitial to the quartz and feldspar crystals, but they sometimes cut across, or are included within, plagioclase crystals. In these cases they are often surrounded by dense masses of sericite. The muscovite shows a rather poorly developed preferred orientation. Much of the muscovite is probably of primary origin, but some of the flakes, surrounded by sericite, may be of secondary origin. It is difficult to estimate what proportion of each is present. The only accessory minerals in this rock are a very little apatite and zircon.

(continued overleaf)

Specimen No. - 100260 (continued)

The origin of this rock is most probably magmatic, although the evidence is less clear petrographically than in some of the other rock of this series. The texture and mineralogy are compatable with a magmatic origin, while there is no real evidence to suggest a metamorphic one. The rock appears to have undergone some strain, and alteration, with sericitisation of plagioclase and probably some recrystallisation of muscovite, concomitantly with the stress.

Craig

Specimen No. - 100270

Rock name - medium grained, foliated, muscovite granite

Mineralogy - essential - K-feldspar - 30%
quartz - 25%
plagioclase - 20%
muscovite - 15%
biotite - 5%

accessory - zircon

secondary - sericite

Description - This rock is medium grained, allotriomorphic granular, with a rather irregular and confused looking texture. It consists of a mosaic of very irregularily shaped anhedra of quartz and feldspar, of rather variable grain size, dotted throughout by flakes of muscovite which show a moderately well developed preferred orientation. The rock is essentially fresh.

The quartz in this rock occurs usually in patches of several crystals which form an interlocking sutured mosaic of strained looking anhedra of variable size. The quartz is intermingled with anhedra of K-feldspar. The latter also have a very irregular form in most cases, and quite often contain inclusions of plagioclase and quartz. The K-feldspar is typically untwinned, non-perthitic, and very fresh. Occasionally it shows simple twinning. Plagioclase crystals tend to be somewhat larger than the K-feldspar and quartz. They are usually anhedral in detail, but show a tendency towards a generally tabular form. The majority of the feldspar crystals show some compositional zoning, particularily the larger crystals. The composition ranges from calcic to sodic oligoclase. Most of the plagioclase shows some alteration, which ranges from a slight turbidity to moderate sericitisation. Flakes of muscovite, often quite large (up to about 3 mm long) are relatively abundant. They occur in masses of flakes, and stringers, which show a moderately well developed preferred orientation which gives a foliation to the rock. The muscovite is often intergrown with subsidiary amounts of small biotite flakes, and narrow stringers of fine biotite tend to lie within irregular fractures which cut across the rock parallel to the foliation. The biotite is fresh. Small amounts of myrmekite were noted occasionally where plagioclase abuts onto K-feldspar. Zircon was the only accessory mineral identified.

(continued overleaf)

Specimen no. - 100270 (continued)

This rock appears to be most probably of magmatic origin. Although a magmatic order of crystallisation is not very clearly developed, the fact that the plagioclase does show a tendency towards a crystal form and also shows frequent compositional zoning does tend to point towards a magmatic origin. There is no textural evidence to suggest a replacement relationship between plagioclase and K-feldspar, such as is often found in replacement granites. The quartz does have a very strained appearance, and the foliation and development of the micas may have been produced at a late stage in the crystallisation as a result of some stress in the rock.

Craig

Specimen No. - 100275

Rock name - foliated, medium grained, muscovite granite

Mineralogy -	essential -	K-feldspar	- 30%
		quartz	- 25%
		plagioclase	- 20%
		muscovite	- 10%
		biotite	- 5%
	accessory -	apatite	
		zircon	
	secondary -	sericite	
		chlorite	

Description - This rock is medium grained, hypidiomorphic granular, non-porphyritic. It consists essentially of tabular subhedra of plagioclase, surrounded by a strained looking mixture of quartz and K-feldspar anhedra. Throughout this quartzo-feldspathic base there are scattered flakes of muscovite, and a little biotite, with a moderately well developed preferred orientation, giving the foliation to the rock.

The quartz in this rock occurs in patches of highly sutured mosaic with a strained appearance. Individual anhedra have a very irregular form. The quartz patches are intermingled with anhedra of K-feldspar, which tend to be somewhat larger than the quartz crystals and are usually more or less equidimensional. The K-feldspar is usually finely perthitic, occasionally contains small inclusions of quartz and plagioclase, and is untwinned. It has a rather strained looking extinction pattern, but is mineralogically fresh to very slightly turbid. The turbid material is too fine grained to be identified. Plagioclase crystals are of similar size to the K-feldspar and range from anhedra to tabular subhedra, usually with irregular margins in detail. The are quite often zoned, with a composition ranging from calcic to sodic oligoclase. Occasionally there is a very slight development of myrmekite where plagioclase abuts onto K-feldspar. Flakes of muscovite and biotite are closely intermingled, and tend to occur in stringers elongated within the plane of the foliation. Sometimes these stringers lie within fractures which cut across the thin section from one side to the other. The elongation of quartzose patches also tends to lie parallel to the foliation. Muscovite is very fresh looking, biotite occasionally shows a very little chloritisation. Plagioclase is usually somewhat turbid, particularily in the cores of the crystals and, in some cases, the alteration material can be distinguished as extremely fine grained sericite. The only accessory minerals in this rock are very occasional tiny crystals of apatite and zircon.

(continued overleaf)

Specimen No. - 100275

This is probably a granite of magmatic origin. Although the magmatic order of crystallisation is not very pronounced, the plagioclase does show a tendency towards a subhedral habit, and is often zoned. There is no evidence to suggest a replacement origin, petrographically, such as veining of plagioclase by K-feldspar. The rock appears to have undergone some stress, with crystallisation of the micas during the stress period. Both quartz and K-feldspar show evidence of strain, and the micas are aligned within the same plane, and along discreet fractures in the rock. This probably took place at a late stage in the formation of the granite.

Crag.

Specimen No. - 100279

Rock name - strained looking, medium grained, biotite-muscovite granite

Mineralogy - essential - K-feldspar - 30%
quartz - 30%
plagioclase - 20%
muscovite - 10%
biotite - 5%

accessory - apatite
zircon
garnet

secondary - sericite
limonite

Description - This rock is medium grained, allotriomorphic granular, with a very irregular, jumbled looking, texture. It consists of an irregular mosaic of K-feldspar and quartz anhedra, with a strained appearance, dotted through by plagioclase crystals which are usually anhedral, but occasionally subhedral. A noticeable amount of muscovite flakes, and smaller amounts of biotite, are scattered through the rock.

The quartz in this rock occurs in patches of very strained looking, sutured mosaic which have the appearance of having been formed by the breaking down of originally larger crystals. K-feldspar crystals are of very variable size, although mostly of fairly compact form. They are typically untwinned, sometimes finely perthitic, and some contain small inclusions of quartz and plagioclase. Many of the crystals show strained looking extinction patterns. The size of the K-feldspar crystals ranges from about 4 mm across, down to as small as .01 mm (in small areas where it is finely intermingled with quartz - these probably represent some marginal granulation of the larger crystals). Mineralogically the K-feldspar is quite fresh; the only alteration is a lsight turbidity of some crystals. Plagioclase crystals are typically anhedral, but some do show a tendency towards a tabular subhedral form. They are also of variable size, and sometimes contain bleb like inclusions of quartz. They are occasionally slightly zoned. Very few crystals show twinning suitable for compositional determination, but the composition appears to be around sodic oligoclase. Plagioclase crystals do not usually show strained extinction patterns, but some crystals are crossed by narrow fractures, usually filled by quartz, with the two halves of the plagioclase crystal somewhat offset from each other. In some parts of the section there are small confused looking areas composed of intimately intermingled quartz, K-feldspar and plagioclase. Mineralogically the plagioclase is fairly fresh. It is somewhat more turbid than the K-feldspar, and some crystals are finely flecked by sericite, some of which is limonite stained.

(continued overleaf)

Specimen No. - 100279 (continued)

Muscovite and biotite flakes are intimately intermingled in this rock, occurring in small clots of compact flakes which show no apparent preferred orientation within the plane of the section. The micaceous minerals sometimes tend to rim the relatively large feldspar crystals. They are typically fresh. There are relatively abundant amounts of myrmekite in this rock, where plagioclase abuts onto K-feldspar.

Small amounts of accessory apatite and zircon are present, and one crystal of garnet was also noted.

The origin of this granite is not clear. The relatively large proportion of quartz, and the irregular texture of the rock, along with a fairly high proportion of micaceous minerals, could possibly indicate a replacement origin. These are, however, only indications rather than proof of origin, and there is nothing in the rock which would clearly refute a magmatic origin for it. The rock has clearly undergone some strain, but little mineralogical alteration since consolidation as a granite.

Craig

Specimen No. - 100292

Rock name - muscovite granite with biotitic (?xenolithic) clot

Mineralogy - essential - plagioclase
quartz
K-feldspar
muscovite

listed in order of decreasing abundance

accessory - biotite (in clot)
limonite
leucoxene
garnet
zircon
apatite

secondary - sericite

N.B. owing to the coares grain of the rock it is not feasible to estimate relative percentages of the constituent minerals. Quartz, plagioclase and K-feldspar are all abundant; muscovite is relatively sparse.

Description - This rock consists of a coarse grained granite, with a biotite-rich clot at one side of the section, probably of xenolithic origin.

The coarse granitic material is allotriomorphic granular, consisting of an interlocking mosaic of quartz, K-feldspar and plagioclase anhedra. Quartz occurs in patches of sutured mosaic, with a rather strained appearance. Individual crystals have an extremely irregular form, and tend to be smaller than the feldspar crystals. Plagioclase crystals also have a very irregular form, and are frequently anti-perthitic. The K-feldspar intergrowths in the antiperthite are often rather irregular, and are probably of replacement origin, possibly as a result of the diffusion of material from the adjacent xenolith. Much of the plagioclase is fresh to very slightly turbid, but some crystals show slight sericitisation. The crystals are unzoned, but often show rather strained looking extinction patterns. Twinning suitable for compositional determinations is virtually absent, but the composition appears to be sodic oligoclase, probably close to albite. Discreet crystals of K-feldspar are considerably less abundant than plagioclase. They are typically untwinned, and non-perthitic. K-feldspar is very fresh looking but often has rather strained looking extinction. There is ually some development of myrmekite where plagioclase abuts onto K-feldspar. Large, compact, fresh looking, flakes of muscovite are dotted throughout the rock, in relatively small amounts. They are frequently somewhat 'bent' looking.

(continued overleaf)

Specimen No. - 100292 (continued)

One irregular crystal of garnet was noted within the granitic material, while there are also accessory amounts of apatite and zircon, and very occasional small irregular patches of limonite.

The biotitic clot runs along one side of the section. It is of medium to fine grain size, and the grain size is rather variable. It consists of a mosaic of compact, often untwinned, anhedra of plagioclase, intermingled with some subsidiary quartz, throughout which is dotted a relatively high proportion of small, compact, muscovite flakes. Throughout this base there are scattered patches of relatively large, very fresh looking, reddish brown biotite flakes. There are often associated with a little leucoxene. Accessory zircon is particularily noticeable in this fine grained clot. The contact between the 'clot' and the surrounding granite is rather diffuse, and zones of the coarser granitic material cut across the 'clot'.

This rock appears to repreeent a granite, most probably of magmatic origin, which contains a patch of more basic material probably of xenolithic origin. The antiperthitic nature of the plagioclase is probably the result of some inequilibrium in the granite because of the presence of the xenolith.

Hole 522-79-26-J-1

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PROJ. 522

DIP TESTS

TEST	METRES FROM	TO	TOTAL	DIP	CORR.	LATITUDE	CUM.	DEPARTURE	CUM.
llar	0	102	102		-50°	65.56		78.14	
3'	102	328	226		-58°	119.76	185.32	191.66	269.80
3	328	453	125		-55°	71.70	257.02	102.39	372.19

LOCATION 40+75W
SECTION 28+00N
LATITUDE
DEPARTURE
ELEVATION
CORE BQ
STORAGE PROPERTY

HOLE No. 522-79-26-J-1
AZIMUTH 110°
DIP -50°
LENGTH 453'
PURPOSE EXPLORATION
COMPLETED Aug. 18/79
LOGGED BY W.J. OLSSON

METRES FROM	TO	DESCRIPTION
0 (0)	60.0 (18.3)	Casing
60.0 (18.3)	299.0 (91.1)	Weathered, Biotite, Muscovite Quartz Monzonite

Colour: Various shades of grey and brown. Brown is more prevalent in the upper half while grey is more prevalent in the lower half.

Hardness: 5

Composition:
25% quartz (smokey)
60% K-spar
5-10% plagioclase
5-10% muscovite
5% biotite

Texture: Fine to medium-grained. The quartz and feldspar crystals tend to be anhedral while biotite and muscovite form euhedral books.

Structure: A crude foliation as defined by the orientation of the biotite flakes cuts the core at 80°. Overall the unit is badly broken and faulted as follows:
81.0-81.1 (24.68-24.71), 85.0-91.0 (25.91-27.74),
85.0-91.0 (25.91-27.74), 92.0-92.5 (28.0-28.2),
103.0-103.3 (31.4-31.5), 106.3-106.5 (32.4-32.5),
157.5-158.0 (48.0-48.2), 168.0-168.4 (51.2-51.3),
170.3-173.0 (51.9-52.7), 180.0-181.0 (54.9-55.2),
191.0-192.0 (58.2-58.5), 197.0-198.0 (60.1-60.4),
200.5-201.0 (61.1-61.3), 217.5-218.0 (66.3-66.5),
222.0-223.0 (67.7-68.0), 298.0-299.0 (90.8-91.1)

CORE SAMPLES

FROM	TO	WIDTH	%		AVERAGES
0' (0)	5' (1.5)	SEE ACCOMPANYING LISTS			
15' (4.6)	20' (6.1)				
20' (6.1)	25' (7.6)				
25' (7.6)	30' (9.1)				
30' (9.1)	35' (10.7)				
35' (10.7)	40' (12.2)				
40' (12.2)	45' (13.7)				
45' (13.7)	50' (15.2)				
50' (15.2)	55' (16.8)				
55' (16.8)	60' (18.3)				
60' (18.2)	65' (19.8)				
65' (19.8)	70' (21.3)				

HOLE NO. 79-J-1

METRES FROM	METRES TO	DESCRIPTION

Structure: (Cont'd) A foot of broken core marks the contact with the next unit. Fracture patterns cut the core at 0-10°, 20°, 45°, 60° and 80°.

Alteration: The feldspars have been kaolinized and/or sericitized giving the core a white chalky appearance when dry. Biotite flakes have some local limonitic stain around them. Biotite also shows some evidence of chloritization. Locally, biotite may show some intense hematitization. Quartz crystals are corroded and are smokey.

Gummite is present along fracture surfaces, varying in colour from a bright yellow to an orange-green yellow. It appears as a fine powder-like coating or in some instances as fans of mica-like crystals (autunite).

Fractures lower in the unit usually are coated with a white, clay-like substance, probably a result of the weathering of feldspars. Mn stains are present locally on some of the fractures.

Secondary muscovite is very widespread throughout the unit both parallel to the faint foliation as well as at right angles to it.

Radioactivity: These values correspond to values on the scint over the core. For a more detailed view, see drill hole log. As detected by BGS-1SL:

88.0- 88.5	(26.8-27.0)	250 cps
88.5- 89.0	(27.0-27.1)	200 cps
91.0- 92.0	(27.7-28.0)	300 cps
102.0-103.0	(31.1-31.4)	300 cps
106.0-107.0	(32.3-32.6)	250 cps
110.0-110.5	(33.5-33.7)	250 cps
132.0-133.0	(40.2-40.5)	300 cps
155.0-156.5	(47.2-47.7)	250 cps

All of the radioactive zones are characterized by gummite on fracture surfaces which cut the core at 0-10° or at 60°. Most zones are also badly broken, suggesting intense fracturing and/or faulting.

CORE SAMPLES

FROM	TO	WIDTH	%	AVERAGES
70' (21.3)	75' (22.9)			
75' (22.9)	80' (24.4)			
80' (24.4)	85' (25.9)			
85' (25.9)	90' (27.4)			
90' (27.4)	95' (28.9)			
95' (38.9)	100' (30.5)			
100' (20.5)	105' (32.0)			
66.5 (20.3)	67.5 (20.6)			
67.5 (20.6)	68.5 (20.9)			
68.5 (20.9)	69.5 (21.2)			
78.0 (23.8)	79.0 (24.1)			
79.0 (24.1)	80.0 (24.4)			
80.0 (24.4)	81.0 (24.7)			
86.0 (26.2)	87.0 (26.5)			

DRILL HOLE LOG

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METRES FROM	METRES TO	DESCRIPTION
.0 (.3)	81.0 (24.7)	The core is in 1" to 6" pieces. The unit appears to be quite porous with secondary muscovite very prominent (up to 10%) as euhedral crystals up to 5mm across. The feldspars have been altered to kaolinite(?) imparting a very white appearance to the unit when dry. Biotite is coated and fringed by limonite, especially between 68.0' and 70.0' (20.7m-21.3m). At 81.0' (24.7m), the core is very broken and crushed for 2", suggesting a fault or intense fracture system cutting the core at close to 80°.
.0 (.7)	84.0 (25.6)	Loss of core
.0 (.6)	96.0 (29.3)	Generally this part of the unit is more competent than the previous section. Mineralization in the form of gummite and autunite appears on fractures cutting the core at 5-10° at 88.0-89.0 (26.8-27.1) and at 91.0-92.0 (27.7-28.0). The core is very badly broken from 89.0 to 91.0 (27.1-27.7). At 95.0 (29.0), there is a small section of broken core, suggesting a fracture zone cutting the core at 60°. Some minor gummite appears to coat the fracture as well as limonitic stain.
.0 (.3)	111.0 (33.8)	The unit is coarser-grained than in the previous sections. The broken, intensely fractured appearance to the rock continues. Colour continues to be a brown-white hue due to the mixture of the clay minerals (white) with limonite (brown). Some traces of gummite are mixed with fault gouge at 96.0 (29.3). This system cuts the core at 60°. At 101.5' (30.9m), more fault gouge mixed with gummite cuts the core at 30°. Between 107.0 and 109.0 (32.6m-33.2m), the core is in 1" to 2" pieces. The grain size is slightly coarser at this point. Good crystals of autunite are present at 108.5 (33.1m). (Sample was obtained at this point for example.) A fracture at 110.0' (33.5m) cutting the core at 15° to 20°, is covered with gummite. Muscovite is prominent in this section (up to 10%).
.0 (3.8)	119.0 (36.3)	The unit is more competent in this section. Core is present as 8" to 10" pieces. The unit has more of a grey hue to it, implying the weathering is not as intense as in previous sections.
.0 (.3)	122.0 (37.2)	Badly broken core with gummite present at 119.0' (36.3m) and at 120.0' (36.6m).
.0 (.2)	129.5 (39.5)	The core appears in 6" to 8" (15cm-20cm) pieces. Fractures generally cut the core at 80° with some at 10-20°.

CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
87.0 (26.5)	88.0 (26.8)		.019	
89.0 (27.1)	90.0 (27.4)		.005	
90.0 (27.4)	91.0 (27.7)		.003	
91.0 (27.7)	92.0 (28.0)		.036	
92.0 (28.0)	93.0 (28.4)		.024	
93.0 (28.4)	94.0 (28.7)		.002	
94.0 (28.7)	95.0 (29.0)		.002	
95.0 (29.0)	96.0 (29.3)		.100	
96.0 (29.3)	97.0 (29.6)		.017	
97.0 (29.6)	98.0 (29.9)		.002	
98.0 (29.9)	99.0 (30.2)		.001	
99.0 (30.2)	100.0 (30.5)		.002	
100.0' (30.5)	101.0' (30.8)		.001	
101.0' (30.8)	102.0' (31.1)		.009	

METRES FROM	METRES TO	DESCRIPTION
129.5 (39.5)	143.0 (43.6)	The core is badly broken with fractures cutting the core at 0-5°, 30°, 45° and 60°. At 129.8' (39.6m), a 60° fracture is filled with fault gouge ¼" thick. Some gummite is present on fractures cutting the core at 45° and at 60° at 137.0' (41.8m). A ½" (1cm), band of coarse pegmatite material is present at 137.5' (41.9m), cutting the core at 45°. Large books of muscovite (up to 1cm) are present in the band. The unit has a bleached appearance to it due to the alteration of the feldspars. At 140.0' 42.7m), some hematitization is present in a band of sub-pegmatitic material cutting the core at 15° to 20°. At 141.0' (43.0m), a fracture running at 0° to 5° to the core is filled with 1-2mm of clay material.
143.0 43.6)	299.0 (91.1)	The core is competent with the exception of the section of broken core outlined earlier. Fracturing is somewhat subdued with respect to the rest of the unit. Those present cut the core at 5-10°, 30° and at 80°. No gummite was present although the downhope probe indicates there is radioactivity from 295.0' (89.9m) to 296.5' (90.2m). Some minor limonitic staining is present. Muscovite is less than 5% of the unit - somewhat reduced from the previous sections. Faults are present at 168.0' (51.2m), 170.0' (51.8m), 191.5' (58.4m), 201.0' (61.3m), 222.8' (67.9 m) and 298.0' (90.1m).
299.0 91.1)	453.0 (138.1)	Name: <u>Quartz Monzonite</u> Colour: Grey to white Hardness: 6-7 Composition: 30% plagioclase 40% K-feldspar 20% quartz (smokey) 5-10% biotite 0-5% muscovite Texture: Medium-grained. The feldspar and quartz crystals are anhedral while biotite and muscovite are euhedral. Structure: Fractures cut the core at 30°, 45° and 80°. A 6" pegmatite vein at 323' (98.5m) cuts the core at 40-45°. A second 4" pegmatite vein cutting the core at 90° is at 362' (110.3m). Intense bleaching and

CORE SAMPLES

FROM	TO	WIDTH	%	AVERAGES
102.0 (31.1)	103.0 (31.4)		.094	
103.0 (31.4)	104.0 (41.7)		.006	
104.0 (31.7)	105.0 (37.0)		.002	
105.0 (32.0)	106.0 (32.3)		.002	
106.0 (32.3)	107.0 (32.6)		.040	
107.0 (32.6)	108.0 (32.9)		.013	
108.0 (32.9)	109.0 (33.2)		.003	
109.0 (33.2)	110.0 (33.5)		.017	
110.0 (33.5)	111.0 (33.8)		tr	
111.0 (33.8)	112.0 (34.1)		tr	
116.0 (35.4)	117.0 (35.7)		tr	
117.0 (35.7)	118.0 (36.0)		.013	
190.0 (57.9)	191.0 (58.2)		.002	

METRES FROM	METRES TO	DESCRIPTION
		Structure: (Cont'd) closely spaced fractures occur at 334' (101.8m), suggesting a fault. Fault gouge at 350' (106.7m) to 352' (107.3m). Intense fracturing cuts the core at 380'-381' (115.8-116.1m).
		Alteration: Biotite is partially altered to chlorite. Feldspars have been kaolinized. Clay minerals coat some fractures as well as some carbonate material. These fractures cut the core at 30° to 40°. Bleaching occurs in the vicinity of intense fracturing and fault areas (350-352' (106.7-107.1m)) as well as some limonitic staining.
		Radioactivity: No radioactivity was detected using a BGS-1SL scint. However, see downhole probe results for a more definitive survey. Background is 50 cps.
299.0 (91.1)	453.0 (138.1)	The unit is fresh-looking WRT the granite unit. Also the unit is slightly coarser-grained than the granite. No foliation is readily visible. There is less secondary muscovite than in the previous unit. Two veins of pegmatite material cut the core. Fractures generally are tighter in this unit.
		END OF HOLE

CORE SAMPLES

FROM	TO	WIDTH	%	AVERAGES
191.0 (58.2)	192.0 (58.5)		.012	
192.0 (58.5)	193.0 (58.8)		.007	
193.0 (58.8)	194.0 (59.1)		.002	
194.0 (59.1)	195.0 (59.4)		tr	
195.0 (59.4)	196.0 (59.8)		tr	
196.0 (59.8)	197.0 (60.1)		tr	
197.0 (60.1)	198.0 (60.4)		tr	
218.0 (66.5)	219.0 (66.9)		tr	
219.0 (66.9)	220.0 (67.2)		tr	
220.0 (67.2)	221.0 (67.5)		tr	
221.0 (67.5)	222.0 (67.8)		tr	
222.0 (67.8)	223.0 (68.1)		.035	
223.0 (68.1)	224.0 (68.4)		.095	
224.0 (68.4)	225.0 (68.7)		.010	

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
			225.0 (68.7)	226.0 (69.0)		.006	
			295.0 (89.9)	296.0 (90.2)		.002	
			296.0 (90.2)	297.0 (90.5)		.007	
			297.0 (90.5)	298.0 (90.8)		.015	
			298.0 (90.8)	299.0 (91.2)		.002	

ANALYTICAL RESULTS　　DDH 522-79-26-J-1

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
12501	0-5			9.0	
12502	15-20			32.0	
12503	20-25			1.5	
12504	25-30			26.0	
12505	30-35			20.0	
12506	35-40			13.0	
12507	40-45			29.0	
12508	45-50			15.0	
12509	50-55			21.5	
111103	62			13.5	11.0
12510	65-66				
12518	66-67		.001		
12519	67-68	.004	.001	17.5	
12520	68-69		.001		
	69-70				
12511	70-75			210	
12512	75-76				
	76-77				
	77-78			400	
12521	78-79		.002		
12522	79-80	0.10	.002		
12523	80-81		.002	400	
12513	81-85				
	85-86				
12524	86-87	0.41	.001		
12525	87-88		.019		
	88-89				
12526	89-90		.005		
12527	90-91	0.11	.003		
12528	91-92		.036		
12529	92-93		.024	400	
12530	93-94		.002		
12531	94-95		.002		
12532	95-96		.100		
12533	96-97	0.14	.017	400	
12534	97-98		.002		
12535	98-99		.001		
12536	99-100		.002		

ANALYTICAL RESULTS DDH 522-79-26-J-1

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
12536	99-100		.002		
12537	100-101		.001		
12538	101-102		.009		
12539	102-103	0.05	.094	400	
12540	103-104		.006		
12541	104-105		.002		
12542	105-106		.002		
12543	106-107		.040		
12544	107-108	0.07	.013		
12545	108-109		.003		
12546	109-110		.017		
12547	110-111		.001		
12548	111-112		.001		
11104	114			5.0	1.5
12548	116-117		.001		
.2550	117-118		.013		
12551	118-119		.002		
.2552	119-120		.012		
12553	120-121		.007		
.2554	121-122		.002		
12555	122-123	0.06	.001		
.2556	123-124		.001		
12557	124-125		.001		
12558	125-126		.001		
.2559	126-127		.001		
12560	127-128		.001		
.2561	128-129		.001		
12562	129-130		.001		
.2563	130-131		.001		
12564	131-132		.035		
.2565	132-133		.095		
12566	133-134		.010		
2567	134-135		.006		
2568	135-136	.004	.002		
12569	136-137		.007		
2570	137-138		.015		
12571	138-139		.002		

ANALYTICAL RESULTS   DDH 522-79-26-J-1

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
12572	139-140		.001		
12573	140-141		.004		
12574	141-142		.002		
12575	142-143		.004		
12576	143-144	0.02	.001		
12577	144-145		.001		
12578	145-146		.001		
12579	146-147		.001		
12580	150-151		.001		
12581	151-152	0.01	.001		
12582	152-153		.001		
12583	153-154		.001		
12584	154-155	0.06	.001		
12585	155-156		.001		
12586	156-157		.001		
12587	157-158		.001		
111105	164			6.0	15.0
12588	170-171		.001		
12589	171-172		.001		
12590	172-173		.001		
12591	173-174	0.007	.001		
12592	174-175		.001		
12593	175-176		.001		
12594	176-177		.001		
12595	177-178	0.02	.001		
12596	178-179		.001		
12597	179-180		.001		
12598	180-181		.001		
111106	185			5.5	12.0
12599	188-189		.002		
12600	189-190		.004		
12601	190-191		.001		
12602	191-192		.006		
12603	192-193	0.009	.002		
12604	193-194		.001		
12605	194-195		.001		
12606	195-196		.001		

ANALYTICAL RESULTS DDH 522-79-26-J-1

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
12607	196-197		.001		
12608	197-198		.001		
111107	203			3.0	13.0
111108	207			4.0	13.0
111109	212			4.5	17.0
12609	218-219		.001		
12610	219-220		.001		
12611	220-221		.001		
12612	221-222	0.007	.001		
12613	222-223		.001		
12614	223-224		.001		
12615	224-225		.001		
111110	230		.001		
111111	235			5.0	18.0
111112	239			4.5	16.0
111113	244			6.0	13.0
111114	249			6.0	16.0
111115	253			3.5	12.0
111116	257			3.5	13.0
111117	262			1.5	15.0
111118	267			1.5	14.0
111119	272			2.5	17.0
111120	277			2.5	4.0
111121	282			2.0	3.0
111122	287			2.0	3.0
111123	291			3.5	12.0
12616	295-296		.001		
12617	296-297	0.02	.001		
12618	297-298		.001		
12619	298-299		.001		
111124	304			0.5	12.0
111125	309			0.5	11.0
111126	334			0.4	13.0
111127	319			0.5	15.0
111128	324			1.0	13.0
111129	329			1.0	13.0
111130	334			2.0	12.0

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
14682	164-165	.0494	.003		
14683	165-166	.0494	.003		
14684	166-167		.010		
14685	167-168		.003		
4686	168-169		.001		
14687	169-170		.001		
4688	170-171		.001		
14689	171-172		.001		
4690	172-173		.001		
14691	173-174	.02	.008		
4692	174-175		.001		
14693	175-176		.001		
4694	176-177		.001		
14695	177-178		.001		
14696	178-179		.001		
4697	179-180	.008	.001		
14698	180-181		.001		
4699	181-182		.001		
14700	182-183		.001		
4701	183-184		.001		
14702	184-185		.001		
4703	185-186		.001		
14704	186-187	.0667	.001		
4705	187-188		.002		
14708	190-191		.029		
14709	191-192		.003		
4710	192-193		.002		
14711	193-194		.002		
4712	194-195		.001		
14713	195-196		.001		
4714	196-197		.001		
14715	197-198		.002		
4716	198-199		.002		
14717	199-200		.001		
14718	200-201		.015		
14719	201-202		.012		
14720	202-203	.0382	.015		
4721	203-204		.019		

ANALYTICAL RESULTS DDH 522-79-26-J-7

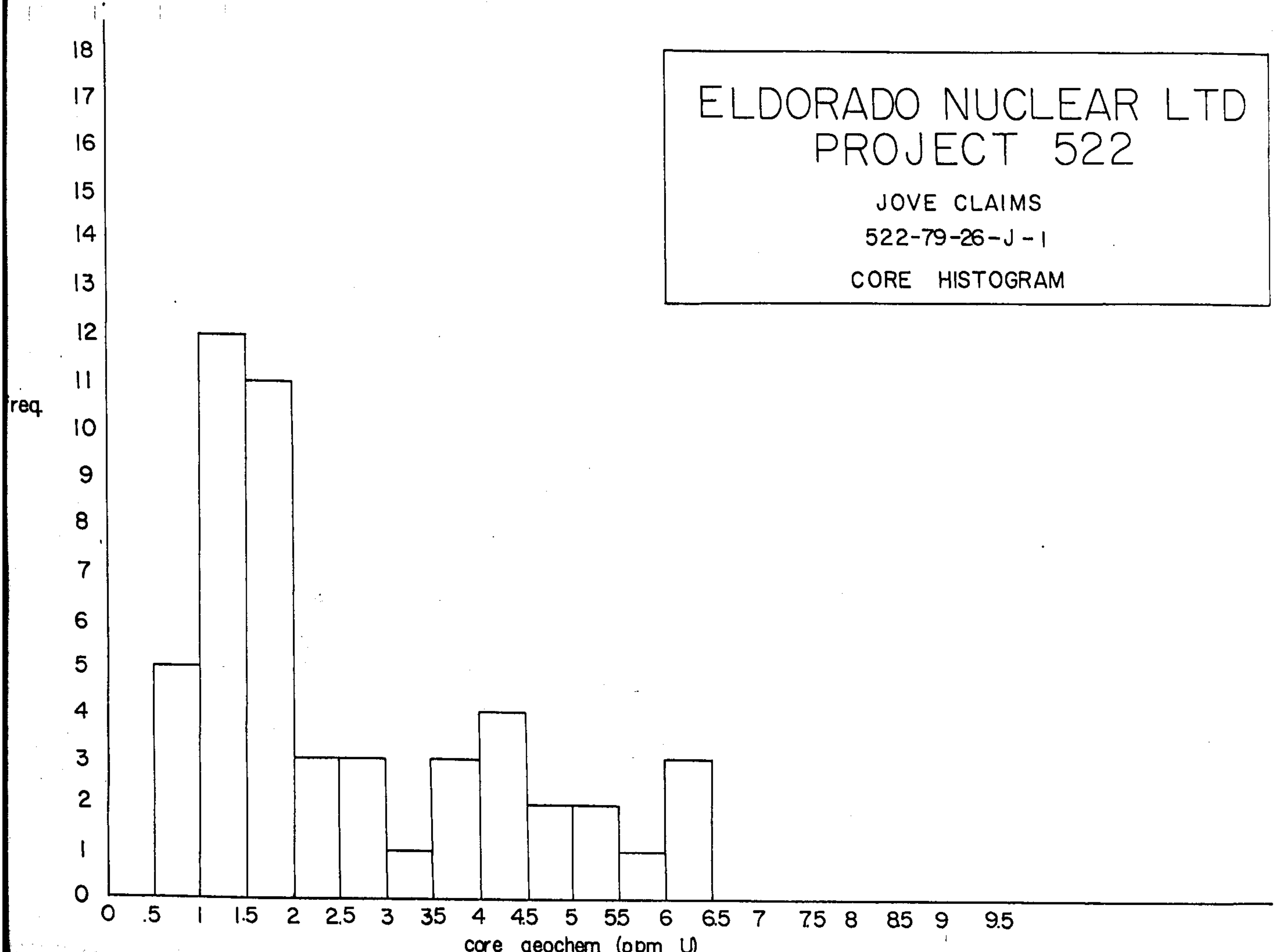
SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
14722	204-205		.004		
4723	205-206		.007		
4724	206-207		.034		
14725	207-208		.005		
4726	208-209		.004		
14727	209-210		.003		
4728	210-211		.002		
14729	211-212		.001		
11529	215			6.5	15
111530	220			14.0	14
730	222-223		.002		
14731	223-224	.00545	.002		
4732	224-225		.003		
11531	230			9.5	16
111532	235			8.0	18
1533	240			8.5	16
111534	245			12.5	16
1535	250			7.5	16
111536	255			8.5	11
1537	260			1.0	14
111538	265			1.0	14
1539	270			.5	15
11540	275			.5	13
1541	280			.5	6
1542	285			1.0	7
111543	290			.5	16
1544	295			1.5	12
111545	300			1.0	13
1546	305			1.0	15
111547	210			1.0	16
1548	315			1.0	14
111549	320			1.5	12
1550	325			1.0	14
11551	330			1.5	14
1552	335			.5	14
1553	340			1.0	14
111554	345			1.0	14
1555	350			1.0	14

PROJECT 522
ANALYTICAL RESULTS DDH 522-79-26-J-1

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
111131	339			1.0	12.0
111132	344			2.5	16.0
111133	349			4.0	10.0
111134	354			1.0	11.0
111135	359			1.0	14.0
111136	364			1.0	13.0
111137	369			1.5	15.0
111138	374			1.0	12.0
111139	379			1.5	12.0
111140	384			0.5	12.0
111141	389			1.0	8.0
111142	394			1.5	12.0
111143	399			2.0	6.0
111144	404			1.0	12.0
111145	409			1.0	10.0
111146	414			1.5	14.0
111147	419			1.0	13.0
111148	424			1.5	13.0
111149	429			1.5	11.0
111150	434			1.0	13.0
111151	439			1.5	14.0
111152	444			1.5	12.0
111153	449			1.5	11.0

ANALYTICAL RESULTS DDH 522-79-26-J-7

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
111556	355			1.0	12
111557	360			1.0	12
11558	365			1.0	14
111559	370			1.0	15
11560	375			1.0	13
111561	380			1.0	13
11562	385			1.0	14
111563	390			1.5	13
11564	395			1.5	16
111565	400			3.0	5
11566	405			1.5	15
111567	410			1.5	15
111568	415			1.0	14
11569	420			1.5	15
111570	425			3.0	16
1571	430			1.5	16
111572	435			1.5	15
1573	440			1.0	12
111574	445			1.5	13
1575	450			1.0	15
111576	455			1.0	15
1 1577	460			1.0	16
1 1578	465			1.0	17
111579	470			2.0	14
1 1580	475			2.0	15
111581	480			1.0	14
1 1582	485			1.5	15
111583	490			1.0	14
1 1584	495			1.5	15
111585	500			1.5	20


ELDORADO NUCLEAR LTD
PROJECT 522
JOVE CLAIMS
522-79-26-J-1
CORE HISTOGRAM
freq.
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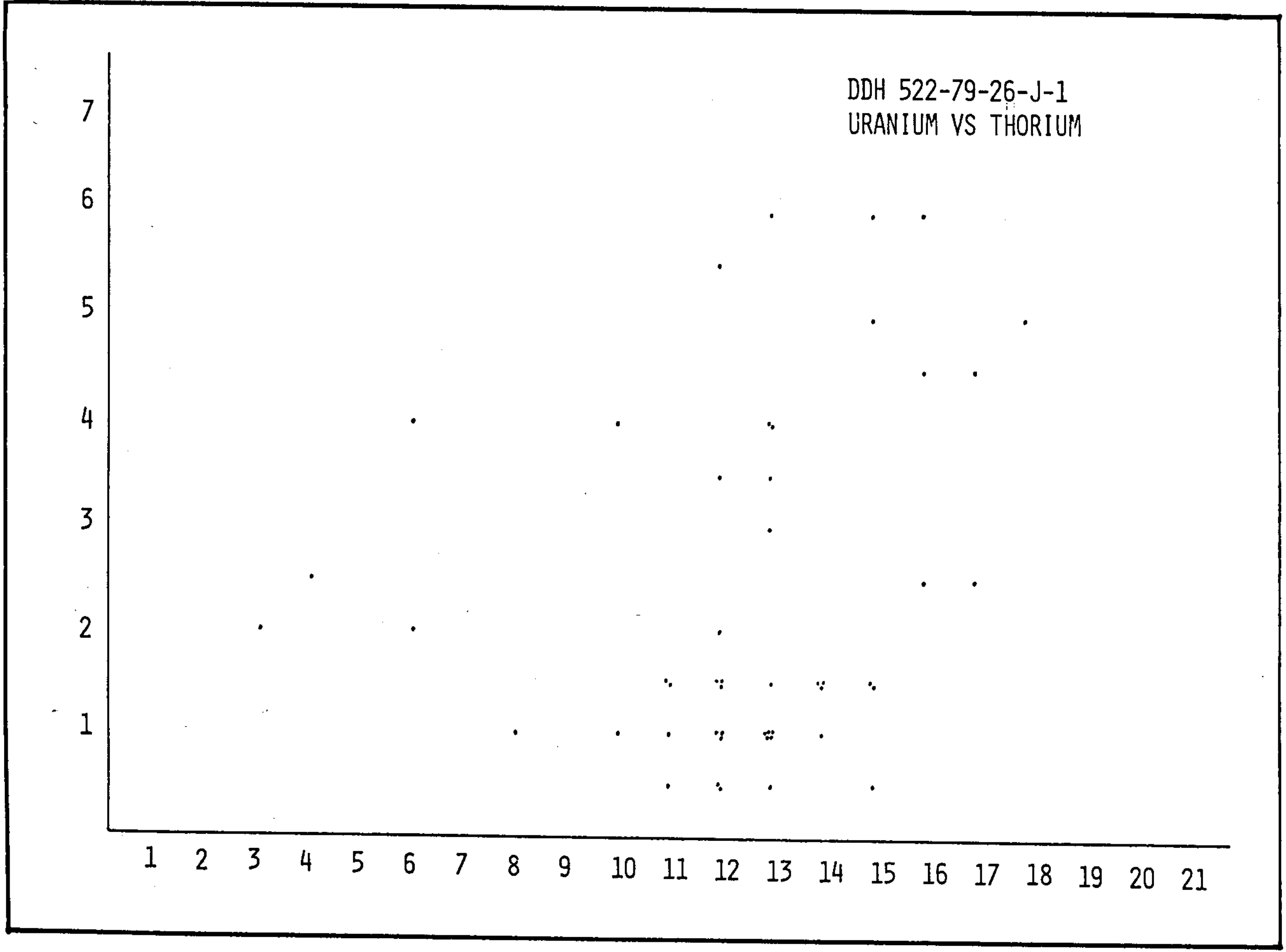
DDH 522-79-26-J-1
URANIUM VS THORIUM
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50483

INVOICE NO. 32772
33133 - Th

RECEIVED Sept. 7/79

ANALYSED Sept. 21/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

in report

ATTN: Area-J-1 P#522

ROCKS

SAMPLE NO. :	PPM U	PPM Th
111103	13.5	11
111104	5.0	15
111105	6.0	15
111106	5.5	12
111107	3.0	13
111108	4.0	13
111109	4.5	17
111110	4.0	13
111111	5.0	18
111112	4.5	16
111113	6.0	13
111114	6.0	16
111115	3.5	12
111116	3.5	13
111117	1.5	15
111118	1.5	14
111119	2.5	17
111120	2.5	4
111121	2.0	3
111122	3.5	12
111123	4.0	6
111124	0.5	12
111125	0.5	11
111126	0.5	13
111127	0.5	15
111128	1.0	13
111129	1.0	13
111130	2.0	12
111131	1.0	12
111132	2.5	16
111133	4.0	10
111134	1.0	11
111135	1.0	14
111136	1.0	13
111137	1.5	15
111138	1.0	12
111139	1.5	12
111140	0.5	12
111141	1.0	8
111142	1.5	12

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

in report

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9
ATTN: Area J-1 P#522

CERTIFICATE NO. 50484
INVOICE NO. 33133 - Th
32772
RECEIVED Sept. 7/79
ANALYSED Sept. 21/79

ROCKS

SAMPLE NO. :	PPM U	PPM Th
111143	2.0	6
111144	1.0	12
111145	1.0	10
111146	1.5	14
111147	1.0	13
111148	1.5	13
111149	1.5	11
111150	1.0	13
111151	1.5	14
111152	1.5	12
111153	1.5	11

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

CHEMEX LABS LTD.
212 BROOKSBANK AVENUE
NORTH VANCOUVER B.C. CANADA

CLIENT : ELDORADO NUCLEAR

ATTN. : PROJ #522 AREA: J-1

SAMPLES RECEIVED : 16-NOV-79
ANALYSIS COMPLETED : 18-NOV-79
NOVATRACK CERT. NO.: A79202.
CHEMEX CERT. NO. : ASSAY 6689
INVOICE NO. : 33937

SAMPLE ID	U308 PERCENT
40-12512	0.301
40-12513	0.444
40-12514	0.799
40-12515	0.186
40-12516	0.622
40-12517	0.247

ref

CONVERSION FACTOR: $\%U_3O_8 \rightarrow$ ppm U

$\%U_3O_8$ X 0.84802 X 10,000 = ppm U

NOTE: Assay uraniums are normally reported as $\%U_3O_8$. In the interest of increasing efficiences and standardizing assay procedures in this lab a conversion factor will be provided to those clients requesting any of their assays reported in an alternate form.

CERTIFIED BY ....

ANALYSIS PERFORMED BY NOVATRACK ANALYSTS LTD.
A SUBSIDARY COMPANY OF CHEMEX LABS LTD.
SPECIALIZING IN NEUTRON ACTIVATION ANALYSIS

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 964-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50096

INVOICE NO. 32508

RECEIVED Aug. 27/79

ANALYSED Sept. 10/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: Project #522 Area J-1 CC. W.Olsson

SAMPLE NO. :	PPM U
40 - 12501	9.0
12502	32.0
12503	1.5
12504	26
12505	20.0
12506	13.0
12507	29.0
12508	15.0
12509	21.5
12510	17.5
12511	210
12512	> 400
12513	> 400
12514	> 400
12515	> 400
12516	> 400
40 - 12517	> 400

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichle

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 66087
INVOICE NO. 32380
RECEIVED Aug. 27/79
ANALYSED Sept. 4/79

TO: Eldorado Nuclear Ltd.
Ste. 400 - 255 Albert St.
Ottawa, Ont.
K1P 6A9

ATTN: PROJECT #522, Area J-1 CC: W. Olsson

SAMPLE NO. :	% U_3O_8
26-12518	<0.001
12519	<0.001
12520	0.001
12521	0.002
12522	0.002
12523	0.002
12524	0.001
12525	0.019
12526	0.005
12527	0.003
12528	0.036
12529	0.024
12530	0.002
12531	0.002
12532	0.100
12533	0.017
12534	0.002
12535	0.001
12536	0.002
12537	0.001
12538	0.009
12539	0.094
12540	0.006
12541	0.002
12542	0.002
12543	0.040
12544	0.013
12545	0.003
12546	0.017
12547	<0.001
12548	<0.001
12549	<0.001
12550	0.013
12551	0.002
12552	0.012
12553	0.007
12554	0.002
12555	<0.001
12556	<0.001
26-12557	<0.001

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: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ASSAY

CERTIFICATE NO. 66088
INVOICE NO. 32362
RECEIVED Aug. 27/79
ANALYSED Sept. 4/79

TO: Eldorado Nuclear Ltd.
Ste. 400 - 255 Albert St.
Ottawa, Ont.
K1P 6A9

ATTN: PROJECT: #522, Area J-1 CC: W. Olsson

SAMPLE NO. :	% U_3O_8
26-12558	<0.001
12559	<0.001
12560	<0.001
12561	<0.001
12562	<0.001
12563	<0.001
12564	0.035
12565	0.095
12566	0.010
12567	0.006
12568	0.002
12569	0.007
12570	0.015
12571	0.002
12572	0.001
12573	0.004
12574	0.002
12575	0.004
12576	0.001
12577	0.001
12578	<0.001
12579	<0.001
12580	<0.001
12581	<0.001
12582	<0.001
12583	<0.001
12584	<0.001
12585	<0.001
12586	<0.001
12587	0.001
12588	0.001
12589	0.001
12590	0.001
12591	0.001
12592	<0.001
12593	<0.001
12594	0.001
12595	<0.001
12596	<0.001
26-12597	<0.001

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 ANALYSIS

CERTIFICATE NO. 66089
INVOICE NO. 32362
RECEIVED Aug. 27/79
ANALYSED Sept. 4/79

TO: Eldorado Nuclear Ltd.
Ste. 400 - 255 Albert St.
Ottawa, Ont.
K1P 6A9

ATTN:
PROJECT: #522, Area J-1 CC: W. Olsson

SAMPLE NO. :	% U_3O_8
26-12598	0.001
12599	0.002
12600	0.004
12601	0.001
12602	0.006
12603	0.002
12604	0.001
12605	0.001
12606	0.001
12607	0.001
12608	0.001
12609	<0.001
12610	<0.001
12611	<0.001
12612	0.001
12613	0.001
12614	<0.001
12615	0.001
12616	0.001
12617	0.001
12618	<0.001
26-12619	<0.001

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: B. L. Twaites

Hole 522-79-26-J-2

DI... H... LC

ELDORADO
ELDORADO NUCLEAR LIMITED

...OJE...

DIP TESTS

METRES				DIP		LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL		CORR.		CUM.		CUM.
COLLAR	0	125		50^{o}		80.35		95.76	
	125	314		60^{o}		94.50		163.68	
	314	503		56^{o}		105.69	280.54	156.69	416.13

LOCATION 40+60W
SECTION 29+00N
LATITUDE
DEPARTURE
ELEVATION
CORE BQ
STORAGE PROPERTY

HOLE No. 522-79-26-J-2
AZIMUTH 290^{o}
DIP -50^{o}
LENGTH 502'
PURPOSE EXPLORATION
COMPLETED AUGUST 23/79
LOGGED BY W.J. OLSSON

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
0.0 (0)	90.0 (27.4)	CASING This interval contains samples of cored boulders and overburden. The boulders are a badly weathered granite that is highly fractured and porous. The overburden consists of fine sand. Radioactivity over this interval is above the background of 125 cps (BGS-1SL). Readings vary from 175 cps to 225 cps. The higher readings are from sand between 41.0' (12.5m) and 45.0' (13.7m).					
90.0 (27.4)	253.5 (77.27)	Name: BADLY WEATHERED, FOLIATED BIOTITE, MUSCOVITE QUARTZ MONZONITE Colour: White with a brownish tinge in the upper half and a greyish shade in the lower half. Hardness: 4 to 5 Composition: 50% K-feldspar 20% quartz 15% plagioclase 5-10% biotite 5-10% muscovite Texture: Medium-grained. The quartz and feldspar crystals are anhedral while biotite and muscovite are subhedral to euhedral. The quartz and feldspar grains are 2 to 4mm in size, the biotite is 1-2mm and muscovite is variable at 1 to 4mm. Structure: A foliation cuts the core at 30^{o} to 45^{o}. It is defined by biotite flakes and the elongation of quartz and feldspar grains. There are numerous zones of fracturing and/or faulting as follows: 102.0'-103.0' (31.1-31.4m) Fracturing cuts the core at $0-5^{o}$ and at 90^{o}. Some gouge is present.					

Structure (Cont'd):

103.0'-112.0' (31.4-34.1m)	The core is very soft due to weathering and fracturing. Eight (8) feet of core were lost in this interval. Ground gouge from 110' to 112' (-34.1m).
118'-119' (36.0-36.3m)	Some fault gouge is present in a badly weathered granite. Fractures cut the core at 70° to 90°.
138'-139' (42.1-42.4m)	Ground core associated with fractures cutting the core at 45° and at 60°.
146'-147' (44.5-44.8m)	Broken core with last 3" ground. Fractures cut the core at 60°.
148'-153' (45.1-46.6m)	Very badly bleached and broken core. There is a 15cm section of breccia whereby fragments of smokey quartz are in a white quartz matrix. The zone cuts the core at 45°.
159'-160' (48.5-48.8m)	Very badly broken core associated with fractures running 90° to the core.
165'-166' (50.1-50.6m)	Fractured zone with gummite cuts the core at 60°.
214'-215.5' (65.2-65.7m)	Broken core associated with fractures cutting the core at 0-5°.
223'-223.3' (68.0-68.1m)	Local broken core with gouge cutting the core at 60°.
223.5'-227.0' (68.1-68.2m)	Broken core with gouge at 225' and 226' (68.6m, 68.9m). Structures cut the core at 0-5°.
229'-230' (69.8-70.1m)	Broken core and gouge associated with a structure cutting the core at 0° to 5°.
242' (73.8m)	Broken core accompanying fractures at 30° and 60° to the core.

HOLE NO. J-2

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

Structure (Cont'd):

246' (75.0m) — Broken core associated with fractures cutting the core at 45° and 60°.

251' (76.5m) — Bleached rock with broken core. Fractures cut the core at 0° and at 30°.

Generally fracturing tends to cut the core at 0-5°, 60°, 90° and parallel to the foliation. Grains of feldspar and quartz are somewhat elongated and help to define the foliation. The porosity of the unit appears high to 119' (36.3m) but becomes more moderate from 119' to 166' (36.3-50.1m).

Alteration: The feldspars have been kaolinized and this imparts a white chalky apperance to the core. Limonitic staining is present, related to biotite crystals, especially in the initial 120'. Most fractures have some secondary gummite - a fleck or two. Intense gummite is present on a fracture cutting the core at 60° to 80° at 164.5' (50.1m). Some limonitic stain is mixed with it. The brown hue to the unit is due to limonitic stain. The quartz is corroded and tends to be smokey.

Mineralization: The only good indication of mineralization is at 164.5' (50.1m) where ½ inch of gummite coats the fracture (500 cps on BGS-1SL). Most other fractures have a fleck or two of gummite (see probe results for location).

Radioactivity: See probe results.

90.0'-101.0' (27.4-30.8m) — The unit is a porous, relatively competent rock (core sections are 15cm sections) with a brown to white hue. Fractures cut the core at 80° or 90° except at 99.0' (30.2m) where they lie at 15°.

101.0'-119.0' (30.8-36.3m) — Badly broken, fractured core. Rock is very bleached. Fractures cut the core at 0-5° and at 80°. The unit is very porous and brownish-white in colour due to limonite.

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		119.0'-123.0' (36.3-37.5m) The unit is more competent than the previous interval. Fractures are shallow to the core (0-5°) and at 80°-90°. Broken core is usually associated with the former set.					
		123.0'-166.0' (37.5-50.6m) The unit is competent. Some local sections of broken core are present. Fractures cut the core at 0-15°. Some minor fractures are at 45° and 90° to the core. Minor gouge is associated with the latter set. There is badly broken core at 159.0' to 160.0' (48.5-48.8m). Gummite on a fracture 60° to the core at 164.5' (50.1m).					
		166.0'-214.0' (50.6-65.2m) The unit is very competent (core pieces are 5 to 1m in length). Some minor fractures cut the core at 60°.					
		214'-216' (65.2-65.8m) Broken core with fault gouge related to fractures running 0-5° to the core.					
		216'-223' (65.8-68.0m) Competent core similar to the section previous to the fault.					
		223'-227' (68.0-69.2m) Fault zone. Badly broken core. Fractures cut the core at 30° and at 0-5°. Unit is very porous and bleached.					
		227'-251' (69.2-76.5m) Core is competent and fresher-looking. Limonitic alteration is at a minimum.					
		251'-253.5' (76.5-77.3m) A bleached, gneissic-looking zone that may represent and old fault zone. The yellow-brown colour is due to limonitization and chloritization. Fracturing is near parallel to the core. The contact with the next unit is sharp at 253.5' (77.3m).					

RES FROM	TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
253.5 (77.3)	502.0 (153)	Name:	Medium-grained, BIOTITE, QUARTZ MONZONITE with APHANITIC ZONES.					
		Colour:	Grey to white					
		Hardness:	6-7					
		Composition:	40% K-feldspar 30% plagioclase 20% quartz 5-10% biotite 5-10% muscovite					
		Texture:	Medium-grained. The feldspar and quartz are equigranular and anhedral. Biotite is euhedral to subhedral. The odd feldspar grain is larger than quartz and rounded phenocrysts of feldspar up to 1cm in size are present but rare. The biotite grains are very fine while euhedral muscovite grains are up to 5mm in size.					
		Structure:	Several fault/fracture zones exist but overall the unit is more competent than the previous unit.					
		275' (83.8m)	Fractures are at 80° to the core.					
		280' (85.3m)	Broken core relation to fractures. Fractures 20-30° to the core. Zone is limonitic with mud and sand present.					
		301'-302' (91.7-92.1m)	Gouge present in fracture 30° to the core.					
		306'-320' (93.3-97.5m)	Loss of 10' of core due to grinding.					
		339'-340' (103.3-103.6m)	Fractures lie 0-10° to the core.					
		348'-349' (106.1-106.4m)	Broken core present related to fractures cutting the core at 45°.					

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

<u>Structure (Cont'd)</u>:

383'-383.6' (116.7-116.9m)	Broken core with fracture @ 45°.
401'-402' (122.2-122.5m)	Broken core with fracture @ 20°.
406'-407' (123.8-124.1m)	Broken core with fracture @ 15°.
439'-443' (133.8-135.1m)	Loss of core due to grinding.
456'-473' (139.0-144.2m)	Core is in 6cm length. Fractures are at 90° to the core.
492'-494' (150.0-150.6m)	The unit is bleached. Some gouge is present associated with fractures cutting the core @ 90° and @ 20°.
494'-500' (150.6-152.4m)	The core is a brown-yellow colour and appears gneissic. Possibly it represents an old fault. The unit is quite siliceous at this point.

Generally fractures are at 0-15°, 20-30°, 45°, 60° and at 90°. Badly broken sections are usually due to the presence of shallow fractures.

<u>Alteration</u>: The feldspars have been kaolinized. Secondary muscovite is present (up to 10% of the unit). Silicification(?) is present at 410.5'-412.2' (125.1-125.6m), at 500.0'-502.0' (152.4-153.0m), 335'-336' (102.1-102.4m) and at 349'-350.5' (106.4-106.8m). Generally the biotite shows little signs of alteration (except 494'-499' where the biotite is entirely alterd to limonite). Chlorite is visible on some fractures.

<u>Mineralization</u>: None visible.

<u>Radioactivity</u>: None detected with BGS-1SL. See down hole probe results.

METRES		DESCRIPTION		CORE SAMPLES				
FROM	TO			FROM	TO	WIDTH	%	AVERAGES
		254.5'-502.0' (77.6-153m)	The unit is more competent and fresher than the previous unit as is indicated by the increase in hardness and the tendency for the core to be in long pieces. The fine-grained aplitic zones 335'-336' (102.1-102.4m), 349.0'-350.5' (106.4-106.8m), 410.5'-412.2' (125.1-125.6m) and 500'-502' (152.4-153.0m) may be related to late magmatic processes. The altered zone at 494'-499' (150.6-152.0m) may represent an old fault zone that has been healed by siliceous solutions. Chlorite is found along fractures while micas tend to concentrate along fractures as well.					
		END OF HOLE						

PROJECT 522

ANALYTICAL RESULTS DDH 522-79-26-J-2

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
12620	10-15			43	
12621	15-20			39	
12622	20-25			53	
12623	25-30			55	
12636	33-34		.003		
12624	30-35			51	
12625	35-40			63	
12637	41-42		.005		
12638	44-45		.026		
12639	45-46		.037		
12640	46-47		.064		
12641	47-48		.029		
12642	48-49		.037		
12643	49-50	.03	.043		
12626	40-50			75	
12644	50-51		.077		
12627	51-56			175	
12628	56-61			218	
12629	61-66			267	
12630	66-71			232	
12631	71-76			353	
12632	76-81			269	
12633	81-86			400	
12645	88-89		.007		
12646	89-90		.005		
12647	90-91		.002		
12634	86-91			400	
12648	91-92	.007	.002		
2649	92-93		.002		
12650	93-94		.002		
2651	94-95		.002		
12652	95-96		.001		
2635	91-96			116	
12653	101-102		.001		
2654	102-103		.001		
12655	103-104	.0053	.002		

PROJECT 522
ANALYTICAL RESULTS DDH 522-79-26-J-2

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
12656	104-105		.002		
12657	105-106		.002		
12658	106-107		.002		
	107-110				
12659	110-111		.003		
12660	111-112		.004		
.2661	112-113	.02	.004		
	113-114				
.2662	114-115		.004		
12663	115-116		.008		
2664	117-118		.006		
2665	118-119		.007		
12666	119-120		.002		
2666	120-121		.001		
111252	127			5.5	15
2668	130-131		.001		
12669	134-135		.001		
2670	135-136		.001		
12671	136-137		.002		
2672	137-138	.00529	.002		
12673	138-139		.002		
2674	139-140		.002		
2675	140-141		.002		
12676	141-142		.002		
2677	142-143		.002		
12678	143-144		.003		
679	144-145		.002		
12680	145-146		.002		
681	146-147		.002		
12682	147-148		.003		
1 683	148-149		.003		
12684	149-150	.03	.004		
1 685	150-151		.005		
1 686	151-152		.003		
12687	152-153		.002		
1 688	153-154		.001		
12689	154-155		.002		
1 690	155-156		.001		

PROJECT 522
ANALYTICAL RESULTS DDH 522-79-26-J-2

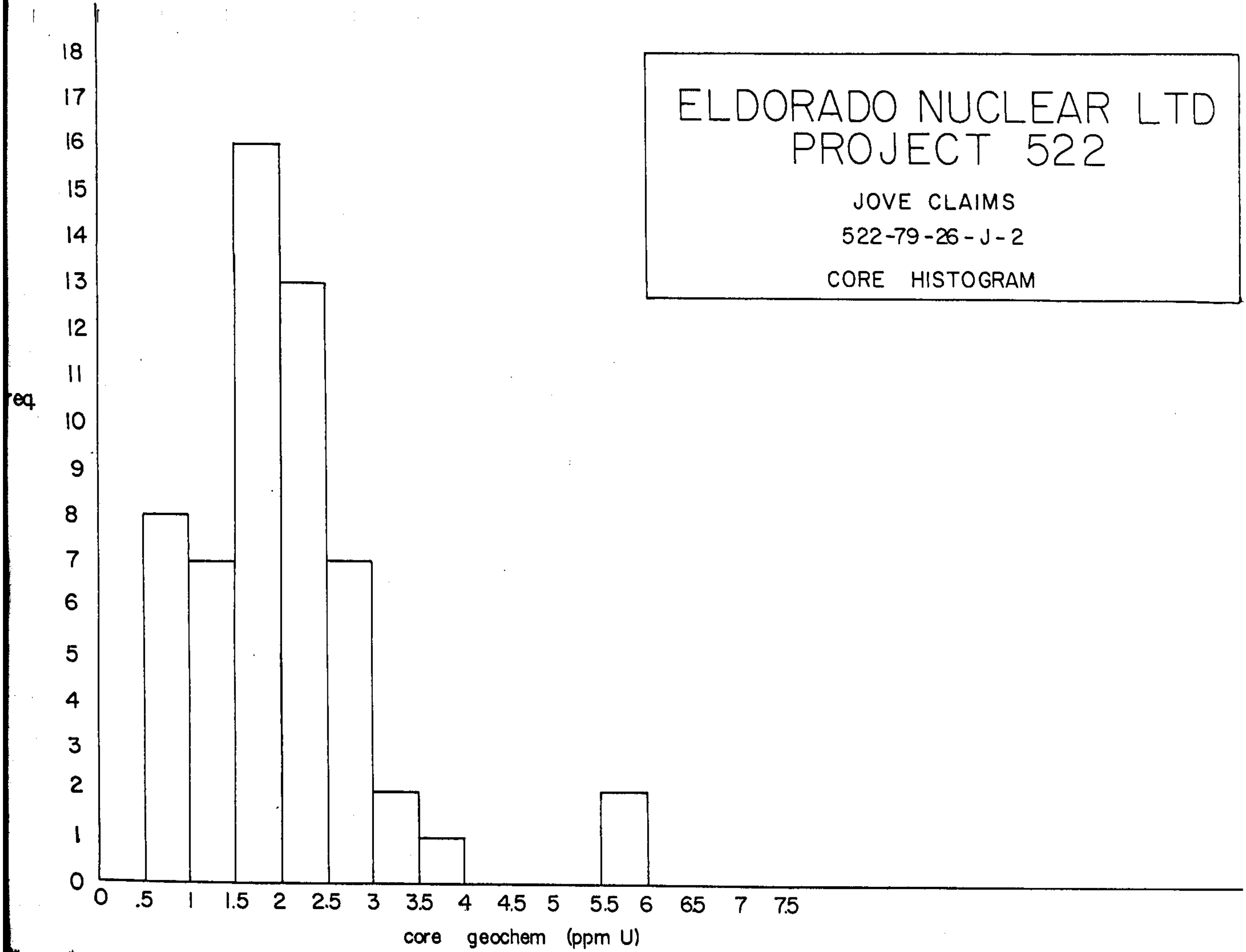
SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY %U_3O_4	GEOCHEMICAL ASSAY %U_3O_4	ppm U	ppm Th
12691	156-157		.001		
1 692	157-158	.02	.001		
12693	158-159		.002		
1 694	159-160		.003		
12695	162-163		.001		
1 696	163-164	.13	.001		
12697	164-165		.231		
1 698	165-166		.004		
12699	166-167		.013		
1 1253				2.0	16
1 700	175-176		.002		
12701	176-177		.001		
1 702	177-178	.0042	.001		
12703	178-179		.001		
1 704	179-180		.001		
12705	180-181	.0042	.004		
1 706	181-182		.001		
12707	182-183		tr		
1 708	183-184		tr		
12709	184-185		tr		
12710	.0032		.002		
12711	186-187		.001		
12712	187-188		.001		
1 13	188-189		tr		
111254	194			2.0	15
11 255	199			3.5	18
111256	203			3.0	18
11 257	208			1.5	19
12714	212-213		tr		
12 15	213-214		.001		
12716	214-215	.0016	tr		
12717	215-216		.001		
12 18	216-217		tr		
111258	218			.5	15
11 259	227			1.0	15
111260	232			.5	13
11 261	237		.5	16	

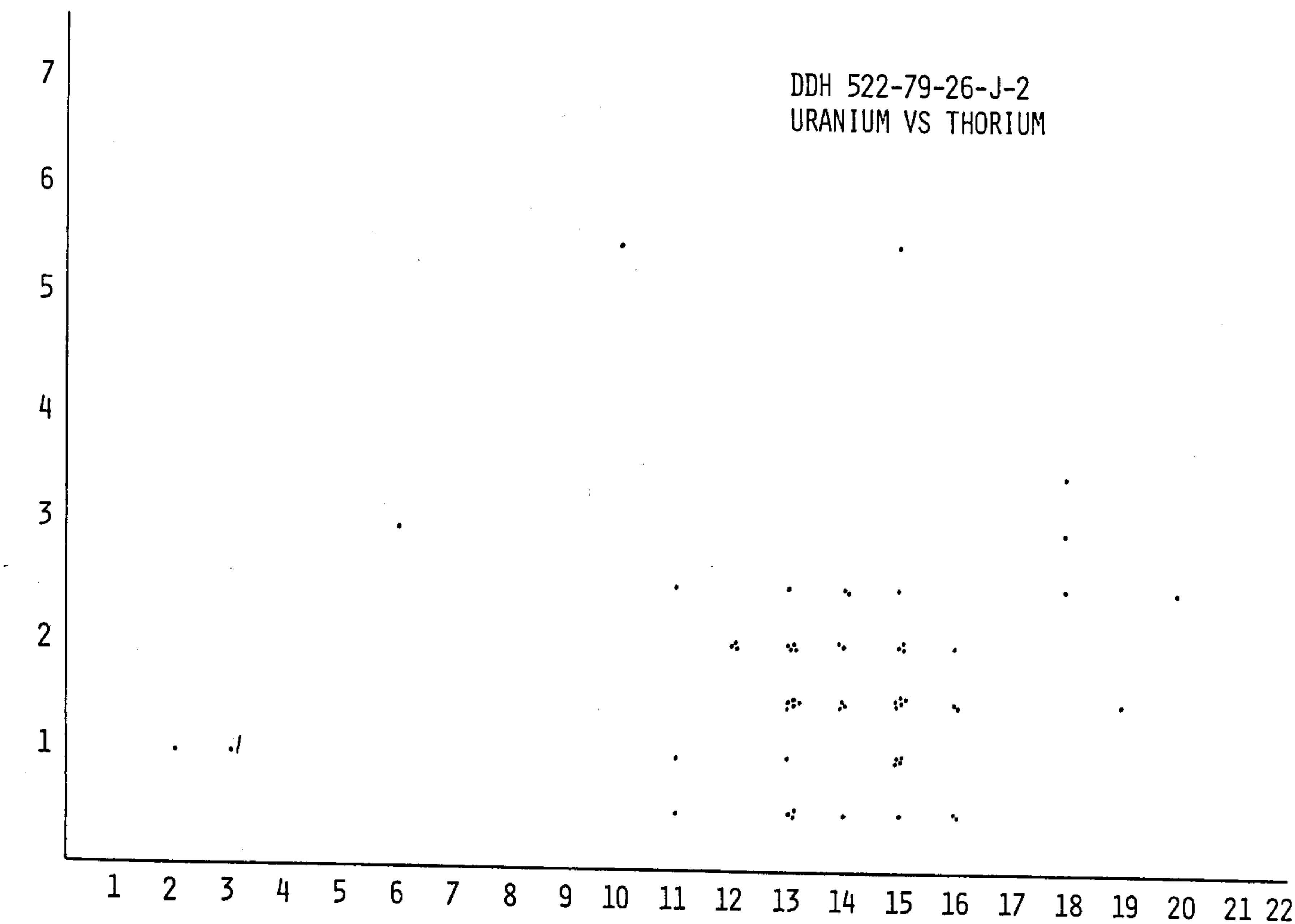
PROJECT 522
ANALYTICAL RESULTS DDH 522-79-26-J-2

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY %U_3O_4	GEOCHEMICAL ASSAY %U_3O_4	ppm U	ppm Th
111262	241			1.0	15
1: .263	246			.5	16
12719	247-248		tr		
1: 20	248-249		tr		
12721	249-250	.0033	tr		
1: 22	250-251 251-252	.0033	.001		
12723	251-252		.001		
1: 24	252-253		.001		
111264	264			.5	11
11 265	268			.5	14
111266	272			1.5	13
11 267	276			1.5	14
111268	281			1.0	11
11269	286			2.0	12
11_270	290			1.5	15
111271	295			1.5	15
11 272	300			1.5	14
111273	315			1.5	15
11: 274	320			1.0	2
111275	325			2.5	15
12 5	330-331		tr		
12726	331-332	.0016	tr		
.2: 7	332-333		tr		
.2728	333-334		tr		
.2729	334-335		tr		
11_76	335			2.5	20
11277	340			1.5	13
11 78	345			1.5	15
11279	350			3.0	6
11 30	354			2.0	13
11281	361			2.5	18
11 32	364			1.5	16
11283	369			.5	13
11 34	373			2.0	13
11285	379			1.5	16
11286	382			1.0	13

PROJECT 522
ANALTYICAL RESULTS DDH 522-79-26-J-2

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
111287	387			1.0	15
111288	392			1.5	13
111289	397			1.5	13
1 1290	400			2.4	13
111291	406			2.0	13
1 1292	411			.5	13
111293	416			1.5	15
1 1294	420			1.5	14
111295	425			1.5	13
1 1296	429			1.0	15
111297	434			2.0	13
111298	438			2.0	12
1 1299	443			2.0	15
111300	447			2.5	14
1 1301	452			2.0	14
111302	458			2.5	11
1 1303	463			2.5	14
111304	473			2.0	15
1 1305	478			2.0	12
111306	483			2.0	12
1 730	493-494		tr		
1 731	494-495	.0034	tr		
1 732	495-496		tr		
1 733	496-497		.001		
111307	500			5.5	10


ELDORADO NUCLEAR LTD
PROJECT 522
JOVE CLAIMS
522-79-26-J-2
CORE HISTOGRAM
freq.
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
0 .5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7 7.5
core geochem (ppm U)


DDH 522-79-26-J-2
URANIUM VS THORIUM
1
2
3
4
5
6
7
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 964-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

•• ANALYTICAL CHEMISTS •• GEOCHEMISTS •• REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50097
INVOICE NO. 32508
RECEIVED Aug. 27/79
ANALYSED Sept. 10/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: Project #522 Area J-2 CC. W. Olsson

SAMPLE NO. :	PPM U
40 - 12620	43
12621	39
12622	53
12623	55
12624	51
12625	63
12626	75
12627	175
12628	218
12629	267
12630	232
12631	353
12632	269
12633	400
12634	>400
40 - 12635	116

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: [illegible]

CERTIFICATE OF ANALYSIS
CHEMEX LABS LTD.
212 BROOKSBANK AVENUE
NORTH VANCOUVER B.C. CANADA

CLIENT : ELDORADO NUCLEAR

ATTN. : PROJ #522 AREA: J-2

SAMPLES RECEIVED : 16-NOV-79
ANALYSIS COMPLETED : 18-NOV-79
NOVATRACK CERT. NO.: A79206.
CHEMEX CERT. NO. : ASSAY 668
INVOICE NO. : 33937

SAMPLE ID	U308 PERCENT
40-12634	0.234

CONVERSION FACTOR: $\%U_3O_8 \rightarrow$ ppm U

$\%U_3O_8 \times 0.84802 \times 10{,}000 =$ ppm U

NOTE: Assay uraniums are normally reported as $\%U_3O_8$. In the interest of increasing efficiences and standardizing assay procedures in this lab a conversion factor will be provided to those clients requesting any of their assays reported in an alternate form.

CERTIFIED BY ....

ANALYSIS PERFORMED BY NOVATRACK ANALYSTS LTD.
A SUBSIDARY COMPANY OF CHEMEX LABS LTD.
SPECIALIZING IN NEUTRON ACTIVATION ANALYSIS

CERTIFICATE OF ANALYSIS

CHEMEX LABS LTD.
212 BROOKSBANK AVENUE
NORTH VANCOUVER B.C. CANADA

CLIENT : ELDORADO NUCLEAR
PROJECT # 522 J-2

ATTN. : W. OLSON, WHITEHORSE YT.

SAMPLES RECEIVED : 12-SEP-79
ANALYSIS COMPLETED : 17-SEP-79
NOVATRACK CERT. NO.: B90076.
CHEMEX CERT. NO. : ASSAY 661
INVOICE NO. :

SAMPLE ID	U3O8 PERCENT
26-12636-J-2	0.003
26-12637-J-2	0.005
26-12638-J-2	0.026
26-12639-J-2	0.037
26-12640-J-2	0.064
26-12641-J-2	0.029
26-12642-J-2	0.037
26-12643-J-2	0.043
26-12644-J-2	0.077
26-12645-J-2	0.007
26-12646-J-2	0.005
26-12647-J-2	0.002
26-12648-J-2	0.002
26-12649-J-2	0.002
26-12650-J-2	0.002
26-12651-J-2	0.001
26-12652-J-2	0.001
26-12653-J-2	0.001
26-12654-J-2	0.001
26-12655-J-2	0.002
26-12656-J-2	0.002
26-12657-J-2	0.002
26-12658-J-2	0.002
26-12659-J-2	0.003
26-12660-J-2	0.004
26-12661-J-2	0.004
26-12662-J-2	0.004
26-12663-J-2	0.008
26-12664-J-2	0.006
26-12665-J-2	0.007
26-12666-J-2	0.002
26-12667-J-2	0.001
26-12668-J-2	0.001
26-12669-J-2	0.001
26-12670-J-2	0.001
26-12671-J-2	0.002
26-12672-J-2	0.002
26-12673-J-2	0.002
26-12674-J-2	0.002
26-12675-J-2	0.002

CERTIFIED BY ....

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CERTIFICATE OF ANALYSIS
CHEMEX LABS LTD.
212 BROOKSBANK AVENUE
NORTH VANCOUVER B.C. CANADA

CLIENT : ELDORADO NUCLEAR
PROJECT 522 J-2

ATTN. : W. OLSON, WHITEHORSE YT.

SAMPLES RECEIVED : 12-SEP-79
ANALYSIS COMPLETED : 17-SEP-79
NOVATRACK CERT. NO. : B90077.
CHEMEX CERT. NO. : ASSAY 6619
INVOICE NO. :

SAMPLE ID	U3O8 PERCENT
26-12676-J-2	0.002
26-12677-J-2	0.002
26-12678-J-2	0.003
26-12679-J-2	0.002
26-12680-J-2	0.002
26-12681-J-2	0.002
26-12682-J-2	0.003
26-12683-J-2	0.003
26-12684-J-2	0.004
26-12685-J-2	0.005
26-12686-J-2	0.003
26-12687-J-2	0.002
26-12688-J-2	0.001
26-12689-J-2	0.002
26-12690-J-2	0.001
26-12691-J-2	0.001
26-12692-J-2	0.001
26-12693-J-2	0.002
26-12694-J-2	0.003
26-12695-J-2	0.001
26-12696-J-2	0.001
26-12697-J-2	0.231 —
26-12698-J-2	0.004
26-12699-J-2	0.013
26-12700-J-2	0.002
26-12701-J-2	0.001
26-12702-J-2	0.001
26-12703-J-2	0.001
26-12704-J-2	0.001
26-12705-J-2	0.004
26-12706-J-2	0.001
26-12707-J-2	< 0.001
26-12708-J-2	< 0.001
26-12709-J-2	< 0.001
26-12710-J-2	0.002
26-12711-J-2	0.001
26-12712-J-2	0.001
26-12713-J-2	< 0.001
26-12714-J-2	< 0.001
26-12715-J-2	0.001

CERTIFIED BY ....

ANALYSIS PERFORMED BY NOVATRACK ANALYSTS LTD.
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CERTIFICATE OF ANALYSIS
CHEMEX LABS LTD.
212 BROOKSBANK AVENUE
NORTH VANCOUVER B.C. CANADA

CLIENT : ELDORADO NUCLEAR
PROJECT 522 J-2

ATTN. : W. OLSON WHITEHORSE YT.

SAMPLES RECEIVED : 12-SEP-79
ANALYSIS COMPLETED : 17-SEP-79
NOVATRACK CERT. NO.: B90078.
CHEMEX CERT. NO. : ASSAY 6619
INVOICE NO. :

SAMPLE ID	U3O8 PERCENT
26-12716-J-2	< 0.001
26-12717-J-2	0.001
26-12718-J-2	< 0.001
26-12719-J-2	< 0.001
26-12720-J-2	< 0.001
26-12721-J-2	< 0.001
26-12722-J-2	0.001
26-12723-J-2	0.001
26-12724-J-2	0.001
26-12725-J-2	< 0.001
26-12726-J-2	< 0.001
26-12727-J-2	< 0.001
26-12728-J-2	< 0.001
26-12729-J-2	< 0.001
26-12730-J-2	< 0.001
26-12731-J-2	< 0.001
26-12732-J-2	< 0.001
26-12733-J-2	0.001

CERTIFIED BY ....HBah......

ANALYSIS PERFORMED BY NOVATRACK ANALYSTS LTD.
A SUBSIDARY COMPANY OF CHEMEX LABS LTD.

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 ANALYSIS

CERTIFICATE NO. 50485
INVOICE NO. 32772
33217 - Th
RECEIVED Sept. 7/79
ANALYSED Sept. 21/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9
ATTN:
Area J-2 P#522

ROCKS

SAMPLE NO. :	PPM U	PPM Th
111252	5.5	15
111253	2.0	16
111254	2.0	15
111255	3.5	18
111256	3.0	18
111257	1.5	19
111258	0.5	15
111259	1.0	15
111260	0.5	13
111261	0.5	16
111262	1.0	15
111263	0.5	16
111264	0.5	11
111265	0.5	14
111266	1.5	13
111267	1.5	14
111268	1.0	11
111269	2.0	12
111270	1.5	15
111271	1.5	15
111272	1.5	14
111273	1.5	15
111274	1.0	2
111275	2.5	15
111276	2.5	20
111277	1.5	13
111278	1.5	15
111279	3.0	6
111280	2.0	13
111281	2.5	18
111282	1.5	16
111283	0.5	13
111284	2.0	13
111285	1.5	16
111286	1.0	13
111287	1.0	15
111288	1.5	13
111289	1.5	13
111290	2.5	13
111291	2.0	13

CERTIFIED BY: ....

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 ANALYSIS

CERTIFICATE NO. 50486
INVOICE NO. 32772
33217 - Th
RECEIVED Sept. 7/79
ANALYSED Sept. 21/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: Area J-2 P#522 ROCKS

SAMPLE NO. :	PPM U	PPM Th
111292	0.5	13
111293	1.5	15
111294	1.5	14
111295	1.5	13
111296	1.0	15
111297	2.0	13
111298	2.0	12
111299	2.0	15
111300	2.5	14
111301	2.0	14
111302	2.5	11
111303	2.5	14
111304	2.0	15
111305	2.0	13
111306	2.0	12
111307	5.5	10

report

CERTIFIED BY:

Hole 522-79-26-J-3

DRILL HOLE LOG

ELDORADO
ELDORADO NUCLEAR LIMITED

PROJECT 522

DIP TESTS

METRES				DIP		LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL		CORR.		CUM.		CUM.
@COLLAR	0	100	100	-60		50	50	86.60	86.60
@200	100	300	200'		-66	81.35	131.35	182.71	269.31
@403	300	403	103'		-66	41.89	173.24	94.10	363.41

LOCATION 40+70W
SECTION 29+00N
LATITUDE
DEPARTURE
ELEVATION
CORE BQ
STORAGE PROPERTY

HOLE No. 522-79-26-J-3
AZIMUTH 110°
DIP -60°
LENGTH 403'
PURPOSE EXPLORATION
COMPLETED AUGUST 25/79
LOGGED BY W.J. OLSSON

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
0 (0)	68.0 (20.7)	CASING Several boulders of monzonite and granite were cored. There is intense hematitization and limonitic staining present at 32' (9.8m). A sand seam is present at 62.0' to 68.0'	SEE	ACCOMPANYING		LISTS	
68.0 (20.7)	271.0 (82.6)	Medium-grained. ALTERED BIOTITE-MUSCOVITE QUARTZ MONZONITE Colour: White to brown Hardness: 5 Composition: 50% K-feldspar 20% quartz 10-15% plagioclase 10% biotite 5-10% muscovite Texture: The unit is medium-grained. Quartz and feldspar grains are anhedral. Mica crystals are euhedral. The quartz and feldspar grains for the most part are larger than the mica crystals. Structure: A crude foliation cuts the core at 80° to 90° and is imparted by the elongation of quartz grains and by the orientation of biotite flakes. There are zones of broken core suggesting fault or fracture zones as follows: 79.0'-80.0' (24.1-24.4m): Badly broken and gouge associated with fractures cutting the core at 30° and 80°. Sand was encountered in this interval. 134.0'-134.3' (40.1-40.9m): Fractures cutting the core at 0-10° have limonitic stain associated with some gouge.					

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

Structure (Cont'd):

155.0' (47.2m) — Gouge is present in a tight fracture cutting the core at 30°.

169.0' (51.5m) — Gouge is present in fractures cutting the core at 80°.

175.0'-180.0' (53.3-54.9m) — Badly broken core with gouge on some fractures cutting the core at 30°. There is a high clay content to the gouge.

185.0'-187.0' (56.4-57.0m) — Badly broken and ground core.

190.0'-191.0' (57.9-58.2m) — Badly broken ground.

205.0'-206.0' (62.5-62.8m) — Sand seam.

242.0'-258.0' (73.8-78.6m) — Intensive fault zone. Badly broken core, sand and fault gouge to 249' (75.9m).

258'-271' (78.6-82.6m) — Broken core - probably a continuation of the above fault zone.

Generally fracturing cuts the core at 5-10°, 45°, 80° and 90°. Compared with J-1 and J-2, the unit is not as badly fractured.

Alteration: The quartz is smokey, feldspars are kaolinized and/or sericitized. Biotite has been altered to muscovite, chlorite and limonite. Other secondary muscovite is present. Secondary gummite is present on fractures (see section on mineralization) between 108.0'-110.0' (32.9-33.5m), at 112' (34.1m) and from 126.0'-136.0' (38.4-41.6m). Talc is present on fractures at 271' (82.6m).

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

Alteration (Cont'd): The fault zones have a fair bit of mud, gouge and sand associated with them. These have a high clay content due to the feldspar alteration. Epidote is present in fractures cutting the core at 20° to 30°. The fault zone between 243' and 249' (74.1-75.9m) is badly bleached and very broken. A smokey quartz vein cuts the core at 30° at 232' (70.7m). Some very fine-grained phologopite is present at 147' (44.8m).

Radioactivity: For a more detailed analysis, see the down hole probe results.

108.0'-110.0' (32.9-33.5m) — 200 cps (peaks of 250 cps on gummite fracture)

127.0'-129.0' (38.7-39.3m) — 200 cps (peaks of 300 cps on gummite fracture)

131.0'-136.0' (39.9-41.5m) — 200 cps (peaks of 400 cps on gummite fracture)

Mineralization: Secondary gummite is present along fractures as follows:

108.0'-110.0' (32.9-33.5m)
- along fractures 60° to the core
- yellow-orange-green in colour
- some limonite stain

111.0' (33.8m)
- in fractures at 45° to the core
- orange-yellow in colour

126.0'-128.0' (38.4-39.0m)
- in fractures cutting the core at 45°, 60° and 80°

131.0'-132.0' (39.9-40.2m)
- minor gummite in fracture cutting the core at 80°

134.0'-135.0' (40.1-41.1m)
- minor gummite with gouge in fracture cutting the core at 5° to 10°

141.0' (43.0m)
- minor gummite along a fracture cutting the core at 80°

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		General:					
		68.0'-81.0' (20.7-24.7m) - badly weathered, faulted granite with fractures cutting the core at 60° and 80° to 90°.					
		81.0'-240.0' (24.7-73.2m) - the unit is competent with fracture and fault zones as previously described.					
		- The unit is coarse-grained (sub-pegmatite) between 173.0' and 186.0' (52.7-56.7m). This phase cuts the core at 30°. The down hole side contact is marked by a fault zone. Intense alteration of biotite to limonite occurs between 203.0' and 218.0' (61.9-66.5m).					
		240.0'-271.0' (73.2-82.6m) - a major fault zone with epidote on fractures 30° to the core - the feldspar minerals are pink - the unit is siliceous in places - there is badly broken ground rock and gouge between 243' and 249' (74.1-75.9m) - sand present at 257' (78.3m)					
271.0' (82.6)	403.0' (122.8)	Medium-grained MUSCOVITE BIOTITE QUARTZ MONZONITE.					
		Colour: Steel grey to white.					
		Hardness: 7-8					
		Composition: 40% K-feldspar 30% plagioclase 20% quartz 5-10% biotite 5-10% muscovite					
		Texture: - medium-grained - the quartz grains are larger than the feldspar grains - biotite flakes are fine-grained - muscovite varies between very fine-grained up to 5mm in size					

METRES FROM	METRES TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		Structure:	The unit is very competent with fault and fractures as follows:					
		275.0'-276.0' (83.8-84.1m)	Fractures with broken core cut core at 10°, 30° and 45°.					
		283.5'-284.0' (86.4-86.6m)	Broken core associated with fractures lying 30° to the hole.					
		288.0'-289.0' (87.8-88.1m)	Broken core where 15° fractures intersect 30° fractures.					
		292.0' (89.0m)	Broken core from fractures lying near parallel to the core (0-5°).					
		356.0'-358.0' (108.5-109.1m)	Broken core with fractures cutting at 15°.					
		373.0'-375.0' (113.7-114.3m)	Fractures cut the core at 0-10° and at 30°. Carbonate material on 30° fracture.					
		379.0'-380.0' (115.5-115.8m)	Broken core near fracture lying at 15° to the hole. Carbonate material fills this fracture.					
		395.0'-396.0' (120.4-120.7m)	Ground and broken core related to fractures cutting the core at 10° and at 45°.					
		401.0'-402.0' (122.2-122.5m)	Ground and broken core along fractures 30° to the core.					
		Alteration:	The feldspars are kaolinited/sericitized, quartz grains are smokey, biotite is moderately to intensely chloritized, secondary muscovite is present and epidote and carbonate material fill some of the fractures. There is some minor limonitic staining associated with the biotite.					
		Radioactivity:	No radioactivity was detected with a BGS-1SL in the core. See the drill hole probe results for a more detailed analysis.					
		Mineralization:	None.					

METRES FROM	METRES TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		271'-403' (82.6-122.8m)	The unit is more competent and more siliceous than the previous unit. The muscovite content remains the same however. The biotite is heavily chloritized and the feldspars are not as altered, except in the vicinity of the granite. Epidote appears in fractures at 288.0' (87.8m).					
		<u>END OF HOLE</u>						

PROJECT 522

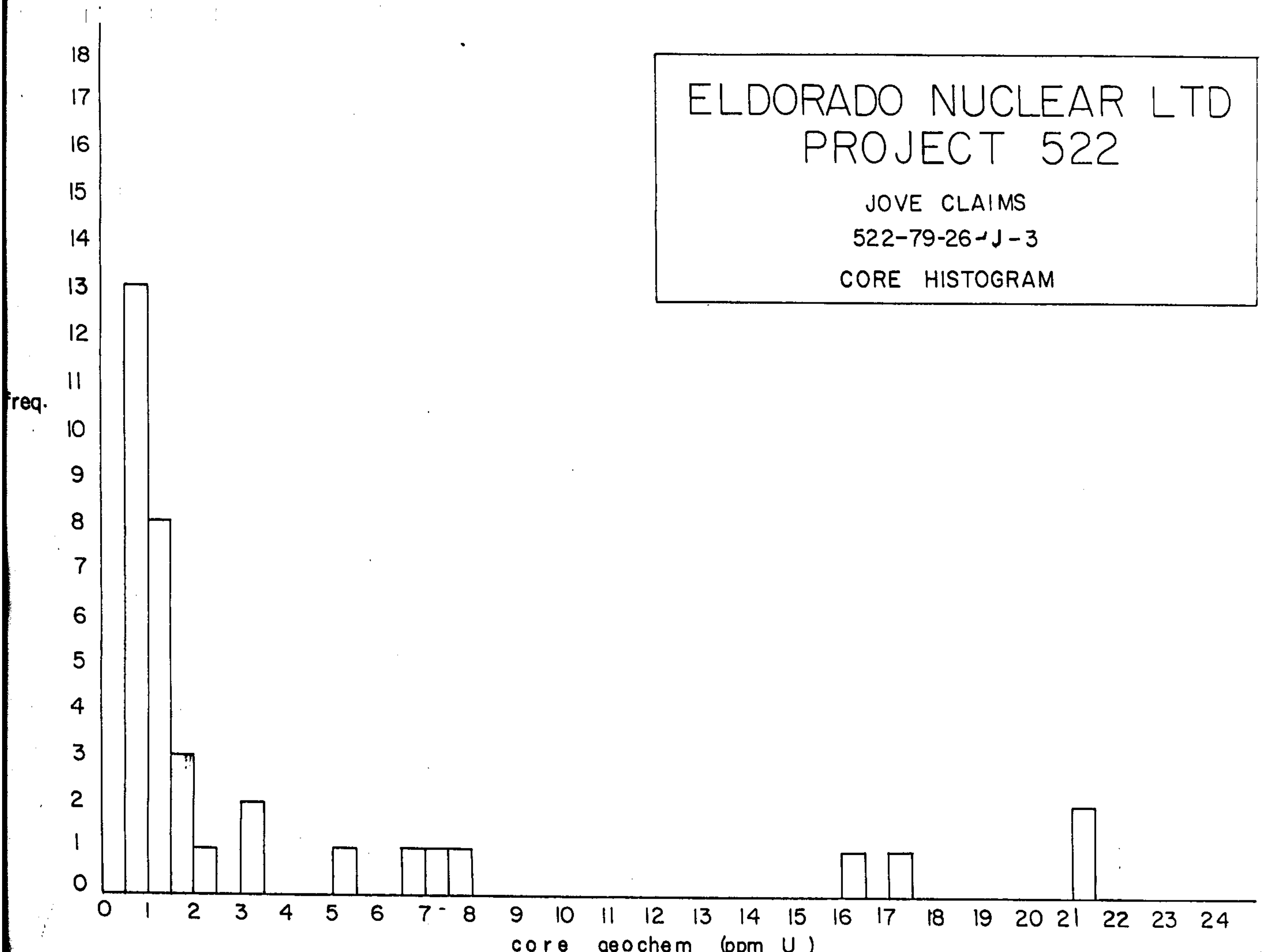
Diamond Drill Hole 522-79-26-J-3

Sample number	Footage	Radiometric assay % U_3O_8	Geochemical assay % U_3O_8	ppm U	ppm Th
12734	0 - 10			75	
12735	10 - 30	0.004		56	
12736	30 - 40			406	
111400	32			21.0	18
12737	40 - 50	0.023		>400	
12738	50 - 60			>400	
12739	60 - 70			>400	
111401	69			25.0	18
12740	74 - 83			189	
111402	76			17.0	18
12741	83 - 88	0.013		329	
12742	88 - 93			359	
111403	89			16.0	16.
12743	90 - 91		0.001		
12744	91 - 92		0.001		
12745	92 - 93		0.003		
12746	93 - 94		0.001		
12747	94 - 95		0.002		
14501	95 - 96		0.002		
14502	96 - 97		0.002		
14503	97 - 98	0.018	0.002		
14504	98 - 99		0.003		
14505	99 - 100		0.002		
14506	106 - 107		0.001		
14507	107 - 108		0.001		
14508	108 - 109		0.019		
14509	109 - 110	0.032	0.003		
14510	110 - 111		0.018		
14511	111 - 112		0.010		
14512	117 - 118		0.001		
14513	118 - 119	0.023	0.001		
14514	119 - 120		0.001		

Sample number	Footage	Radiometric	Geochemical	ppm U	ppm Th
14515	124 - 125		0.002		
14516	125 - 126	0.023	0.002		
14517	126 - 127		0.028		
14518	127 - 128		0.005		
14519	128 - 129		0.004		
14520	129 - 130		0.002		
14521	130 - 131		0.002		
14522	131 - 132	0.033	0.064		
14523	132 - 133		0.033		
14525	133 - 134		0.006		
14525	134 - 135		0.023		
14526	138 - 139		0.004		
14527	139 - 140	0.03	0.002		
14528	140 - 141		0.003		
14529	141 - 142		0.010		
14530	142 - 143		0.001		
14531	146 - 147		0.001		
14532	147 - 148	0.002	0.001		
14533	148 - 149		0.001		
14534	149 - 150		0.011		
111404	155			21.0	22
11405	161			3.0	20
14535	166 - 167		0.001		
14536	167 - 168	0.003	0.001		
14537	168 - 169		0.002		
14538	169 - 170		0.002		
14539	173 - 174		0.001		
14540	174 - 175		0.001		
14541	175 - 176		0.004		
14542	176 - 177		0.003		
14543	177 - 178		0.006		
14544	178 - 179	0.008	NO SAMPLE - GROUND CORE		
14545	179 - 180				
14546	180 - 181		0.004		
14547	181 - 182		0.003		
14548	182 - 182		0.008		
14549	183 - 184		0.007		
14550	184 - 185		0.004		
111406	191			25.0	15
111407	197			6.5	19
.11408	202			7.0	17
.11409	207			7.5	20
14551	211 - 212		0.003		
.4552	212 - 213		0.002		
.4553	213 - 214		0.002		
14554	214 - 215	0.004	0.002		

Sample Number	Footage	Radiometric	Geochemical	ppm U	ppm Th
14555	215 - 216		0.003		
14556	216 - 217		0.002		
14557	217 - 218		0.001		
14558	218 - 219		0.001		
14559	219 - 220	0.004	0.002		
14560	220 - 221		0.009		
14561	221 - 222		0.004		
14562	222 - 223		0.002		
14563	223 - 224	0.002	0.002		
14564	224 - 225		0.002		
111410	230			3.0	19
111411	234			2.0	20
14565	237 - 238		0.001		
14566	238 - 239		0.001		
14567	239 - 240		0.001		
14568	240 - 241		0.001		
14569	241 - 242		0.001		
14570	242 - 243		0.001		
14571	243 - 244	0.005	0.002		
14572	244 - 245				
14573	245 - 246		NO SAMPLE - GROUND CORE		
14574	246 - 247				
14575	247 - 248				
14576	248 - 249		0.002		
14577	249 - 250		0.001		
14578	250 - 251		0.001		
111412	271			5.0	18
111413	274			1.5	17
111414	280			1.5	18
111415	284			1.0	19
111416	289			0.5	17
111417	293			0.5	
111418	298			1.0	20
111419	303			1.0	18
14579	305 - 306		0.001		
14580	306 - 307	0.001	0.001		
14581	307 - 308		0.001		
14582	308 - 309		0.001		
111420	313			1.0	17
111421	319			0.5	17
111422	324			0.5	17
111423	329			0.5	15
111424	334			1.0	13
111425	339			0.5	16
111526	343			0.5	15
111427	349			0.5	16
111428	355			0.5	17
111429	360			0.5	17
111430	366			1.0	16
111431	370			1.5	15
111432	374			1.0	15
111433	378			0.5	17

Sample Number	Footage	Radiometric	Geochemical	ppm U	ppm Th
111434	383			0.5	15
111435	388	0.001		0.5	16
111436	393			1.0	17
14583	397 - 398		0.001		
14584	398 - 399		0.001		
14585	399 - 400		0.001		
14586	400 - 401		0.001		
14587	401 - 402		0.001		


ELDORADO NUCLEAR LTD
PROJECT 522
JOVE CLAIMS
522-79-26-J-3
CORE HISTOGRAM
freq.
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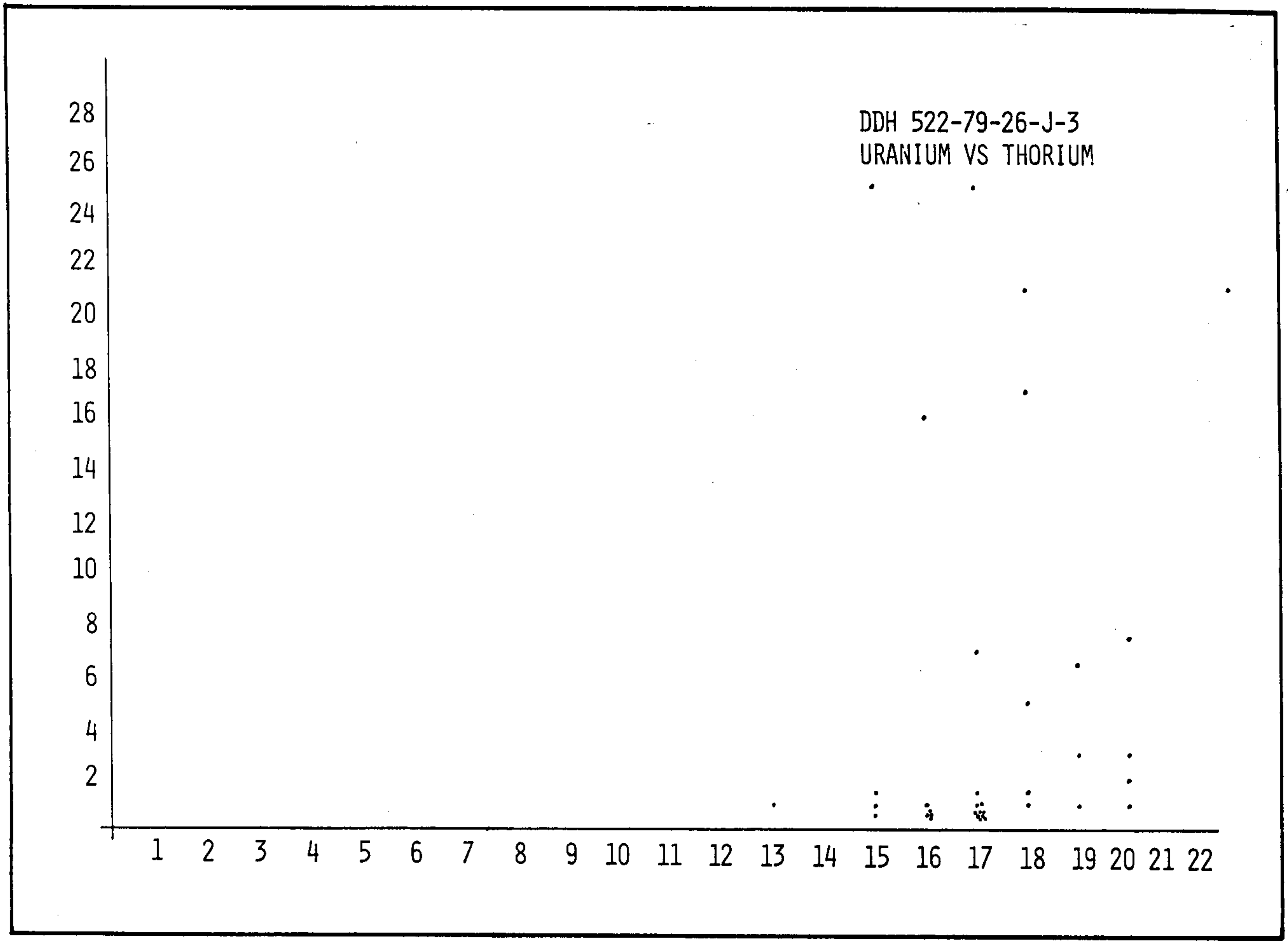
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
core geochem (ppm U)



DDH 522-79-26-J-3
URANIUM VS THORIUM
28
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CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50598

TO: Eldorado Nuclear Ltd.
255 Albert St., St. 400
Ottawa, Ontario KIP 6A9

INVOICE NO. 32904
33517-Thorium

(ROCKS)

RECEIVED Sept. 17/79

ATTN: PROJECT: Work Area J-4/3 Mr. C.J. Riley CC: Olsson

ANALYSED Sept. 27/79

SAMPLE NO. :	PPM U	PPM Th
26-114640	7.0	17
114641	4.5	18
114642	2.0	17
114643	6.0	17
114644	1.0	17
114645	1.5	13
114646	4.0	17
114647	1.5	17
114648	3.0	15
114649	1.5	18
114650	5.5	17
114651	3.0	14
114652	3.0	18
114653	1.0	17
114654	2.0	16
114655	4.0	18
114656	10.5	19
114657	9.5	15
114658	5.0	17
114659	4.5	17
111400	21.0	18
111401	25	17
111402	17.0	18
111403	16.0	16
111404	21.0	22
111405	3.0	20
111406	25	15
111407	6.5	19
111408	7.0	17
111409	7.5	20
111410	3.0	19
111411	2.0	20
111412	5.0	18
111413	1.5	17
111414	1.5	18
111415	1.0	19
111416	0.5	17
111417	0.5	17
111418	1.0	20
26-111419	1.0	18

in 58

54

rel 53

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

CHEMEX LABS LTD.

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CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50599

INVOICE NO. 33517-Thorium
32904

RECEIVED Sept. 17/79

ANALYSED Sept. 27/79

TO: Eldorado Nuclear Ltd.
255 Albert St., St. 400
Ottawa, Ontario KIP 6A9

(ROCKS)

ATTN: PROJECT: Work Area J-3 Mr. C.J. Riley CC: Olsson

SAMPLE NO. :	PPM U	PPM Th
26-111420	1.0	17
111421	0.5	17
111422	0.5	17
111423	0.5	15
111424	1.0	13
111425	0.5	16
111426	0.5	15
111427	0.5	16
111428	0.5	17
111429	0.5	17
111430	1.0	16
111431	1.5	15
111432	1.0	15
111433	0.5	17
111434	0.5	15
111435	0.5	16
26-111436	1.0	17

in 1Q

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: Hart Bichler

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50504
INVOICE NO. 32855
RECEIVED September 9, 1979
ANALYSED September 26, 1979

TO: Eldorado Nuclear Mines Ltd.,
255 Albert St., Suite 400
Ottawa, Ont.
K1P 6A9
ATTN:

c.c. W. Olsson
AREA j-3

SAMPLE NO. :	PPM U
40-12734	75
12735	56
12736	406
12737	>400
12738	>400
12739	>400
12740	189
12741	329
40-12742	359

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: [illegible]

CHEMEX LABS LTD.
212 BROOKSBANK AVENUE
NORTH VANCOUVER B.C. CANADA

CLIENT : ELDORADO NUCLEAR
AREA J3

ATTN. : W OLSON, WHITEHORSE Y.T.

SAMPLES RECEIVED : 20-SEP-79
ANALYSIS COMPLETED : 22-SEP-79
NOVATRACK CERT. NO. : B90089.
CHEMEX CERT. NO. : ASSAY 663
INVOICE NO. :

SAMPLE ID	U_3O_8 PERCENT
26-14501	0.002
26-14502	0.002
26-14503	0.002
26-14504	0.003
26-14505	0.002
26-14506	0.001
26-14507	0.001
26-14508	0.019
26-14509	0.003
26-14510	0.018
26-14511	0.010
26-14512	0.001
26-14513	0.001
26-14514	0.001
26-14515	0.002
26-14516	0.002
26-14517	0.028
26-14518	0.005
26-14519	0.004
26-14520	0.002
26-14521	0.002
26-14522	0.064
26-14523	0.033
26-14524	0.006
26-14525	0.023
26-14526	0.004
26-14527	0.002
26-14528	0.003
26-14529	0.010
26-14530	0.001
26-14531	0.001
26-14532	0.001
26-14533	0.001
26-14534	0.011
26-14535	0.001
26-14536	0.001
26-14537	0.002
26-14538	0.002
26-14539	0.001
26-14540	0.001

CERTIFIED BY ....

ANALYSIS PERFORMED BY NOVATRACK ANALYSIS LTD.
A SUBSIDIARY COMPANY OF CHEMEX LABS LTD.
SPECIALIZING IN NEUTRON ACTIVATION ANALYSIS

CHEMEX LABS LTD.
212 BROOKSBANK AVENUE
NORTH VANCOUVER B.C. CANADA

CLIENT : ELDORADO NUCLEAR
AREA J-3

ATTN. : W. OLSON, WHITEHORSE Y.T.

SAMPLES RECEIVED : 20-SEP-77
ANALYSIS COMPLETED : 22-SEP-77
NOVATRACK CERT. NO. : B90090.
CHEMEX CERT. NO. : ASSAY 663
INVOICE NO. :

SAMPLE ID	U3O8 PERCENT
26-14541	0.004
26-14542	0.003
26-14543	0.006
26-14546	0.004
26-14547	0.003
26-14548	0.008
26-14549	0.007
26-14550	0.004
26-14551	0.003
26-14552	0.002
26-14553	0.002
26-14554	0.002
26-14555	0.003
26-14556	0.002
26-14557	0.001
26-14558	0.001
26-14559	0.002
26-14560	0.009
26-14561	0.004
26-14562	0.002
26-14563	0.002
26-14564	0.002
26-14565	0.001
26-14566	0.001
26-14567	0.001
26-14568	0.001
26-14569	0.001
26-14570	0.001
26-14571	0.002
26-14576	0.002
26-14577	0.001
26-14578	0.001
26-14579	0.001
26-14580	0.001
26-14581	0.001
26-14582	0.001
26-14583	0.001
26-14584	0.001
26-14585	0.001
26-14586	0.001

CERTIFIED BY .....C.T.Bld.........

ANALYSIS PERFORMED BY NOVATRACK ANALYSTS LTD.
A SUBSIDIARY COMPANY OF CHEMEX LABS LTD.
SPECIALIZING IN NEUTRON ACTIVATION ANALYSIS

CHEMEX LABS LTD.
212 BROOKSBANK AVENUE
NORTH VANCOUVER B.C. CANADA

CLIENT : ELDORADO NUCLEAR
AREA J-3

ATTN. : W. OLSON, WHITEHORSE Y.T.

SAMPLES RECEIVED : 20-SEP-77
ANALYSIS COMPLETED : 22-SEP-77
NOVATRACK CERT. NO. : 870091.
CHEMEX CERT. NO. : ASSAY 663
INVOICE NO. :

SAMPLE ID	U_3O_8 PERCENT
26-14587	0.001
26-12743	0.001
26-12744	0.001
26-12745	0.003
26-12746	0.001
26-12747	0.002

CERTIFIED BY ....

ANALYSIS PERFORMED BY NOVATRACK ANALYSTS LTD.
A SUBSIDIARY COMPANY OF CHEMEX LABS LTD.
SPECIALIZING IN NEUTRON ACTIVATION ANALYSIS

CHEMEX LABS LTD.
212 BROOKSBANK AVENUE
NORTH VANCOUVER B.C. CANADA

CLIENT : ELDORADO NUCLEAR

ATTN. : AREA J-3

SAMPLES RECEIVED : 16-NOV-79
ANALYSIS COMPLETED : 18-NOV-79
NOVATRACK CERT. NO.: A79204.
CHEMEX CERT. NO. : ASSAY 668
INVOICE NO. : 33937

SAMPLE ID	U3O8 PERCENT
40-12737	0.085
40-12738	0.088
40-12739	0.122

rep.

CONVERSION FACTOR: $\%U_3O_8 \rightarrow$ ppm U

$$\%U_3O_8 \times 0.84802 \times 10{,}000 = \text{ppm U}$$

NOTE: Assay uraniums are normally reported as $\%U_3O_8$. In the interest of increasing efficiences and standardizing assay procedures in this lab a conversion factor will be provided to those clients requesting any of their assays reported in an alternate form.

CERTIFIED BY ....GHBloh..........

ANALYSIS PERFORMED BY NOVATRACK ANALYSTS LTD.
A SUBSIDARY COMPANY OF CHEMEX LABS LTD.
SPECIALIZING IN NEUTRON ACTIVATION ANALYSIS

Hole 522-79-26-J-4

DRILL HOLE LOG

ELDORADO
ELDORADO NUCLEAR LIMITED

PROJECT 522

DIP TESTS

METRES				DIP		LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL		CORR.		CUM.		CUM.
Collar	0	166	166		-60°	83.0	83.0	143.76	143.76
	166	332	166'		-63°	75.36	158.36	147.91	291.67

LOCATION JOVE CLAIMS
SECTION 35+.75N
LATITUDE 50+25W
DEPARTURE
ELEVATION
CORE BQ
STORAGE PROPERTY

HOLE No. 528-79-26-J-4
AZIMUTH 065°
DIP -60°
LENGTH 332' (101.2m)
PURPOSE Exploration
COMPLETED 05/09/79
LOGGED BY BARRIE W. OAKES

METRES FROM	METRES TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
0 (0)	36' (11.0)	CASING						
36' (11.0)	67' (20.4)	QUARTZ MONZONITE:	Heavily weathered, crumbly, creamy white colour, feldspar kaolinized. Rock medium-grained, non-foliated. Muscovite and/or phlogopite abundant - coarse to medium-grained (2ndary). Biotite fresh to slightly chloritized.					
67' (20.4)	81' (24.7)	QUARTZ MONZONITE:	Massive, unweathered. Quartz of two types, clear; medium-grained and rounded; coarse-grained, smokey quartz. Muscovite can be splendent (resembles phlogopite). Bands of pegmatoid containing white feldspar, smokey quartz and muscovite. These bands are up to 2cm wide with graphic quartz in the feldspar c.a. 45°. This unit is slightly foliated.					
		77-77.5' (23.5-23.6m)	Open fractures c.a. 24°. Feldspar kaolinized beige and biotite sericitized.					
81' (24.7)	89' (27.1)	FOLIATED GRANODIORITE:	Biotite preferentially oriented. Abundant muscovite (phlogopite) and is more prevalent than biotite; biotite fresh. Phenocrysts of feldspar (0.75cm x 0.5cm) in a medium-grained matrix. Matrix appears granular and may be cataclastic. Coarse-grained, rounded smokey quartz dispersed in matrix.					
		88-88.5' (26.8-27.0m)	Fractures c.a. 14°, 29°; open, clean with abundant smokey quartz adjacent to fractures.					
		88.5' (27.0m)	Hairline fracture c.a. 25° filled with epidote.					

HOLE NO. J-4

METRES FROM	METRES TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		89-90.5' (27.1-27.6m)	Lost core.					
90.5' (27.6)	91.5' (27.9)	PEGMATOID:	Contains smokey quartz, feldspar and muscovite. Graphic quartz in feldspar. Contact diffuse.					
91.5' (27.9)	92.0' (28.0)	QUARTZ MONZONITE:	Massive, non-foliated, abundant phlogopite more prevalent than biotite. Occasional Kspar phenocrysts in a medium-grained matrix. Biotite with an iron oxide halo and partially chloritized.					
		91.0' (27.7m)	Open fracture c.a. 30°, no gouge.					
92.0' (28.0)	93.0' (28.3)	FOLIATED GRANODIORITE:	Biotite-oriented, feldspar partially kaolinized, creamy white. Biotite dominant over muscovite (phlogopite).					
		92.0' (28.0m)	Fractures open, sub-parallel to core.					
		92.5' (28.2m)	Shear zone, biotite schist 0.5cm wide. Core broken-up over 10cm. Schistosity c.a. 64°.					
93.0' (28.3)	96.0' (29.3)	MIXED QUARTZ MONZONITE & FOLIATED GRANODIORITE:	Gradational into each other medium-grained granodiorite and medium to coarse-grained quartz monzonite.					
		94.5-99.5' (28.8-38.3m)	Foliated quartz monzonite, medium to coarse-grained.					
		95.0-96.0' (29.0-29.3m)	Metasomatic pink Kspar associated with fractures sub-parallel to core.					
96.0' (29.3)	332.0' (101.2)	QUARTZ MONZONITE:	Massive, slightly foliated to non-foliated. Coarse-grained; contains rounded to subrounded smokey quartz grains. Phlogopite is abundant and fresh biotite. Fractures open throughout section c.a. $\approx 50^{\circ}$. Some sections grey-beige colour but mostly pale grey.					

DRILL HOLE LOG

ELDORADO
ELDORADO NUCLEAR LIMITED

PROJECT

PAGE 3

METRES FROM	TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		99.5' (30.3m)	10cm cataclasite; tending to mylonite with elongated quartz; matrix fine-grained; feldspar kaolinized and biotite sericitized.					
		101.5-102.5' (30.9-31.2m)	Heavily fractured and broken-up, fracture surfaces coated with iron oxide c.a. 35° and sub-parallel to core.					
		108-110' (32.9-33.5m)	Fractures in core sub-parallel to core and 12°.					
		112-113' (34.1-34.4m)	Fractures with metasomatic Kspar to 1.5cm each side of fracture c.a. 35°.					
		114-116' (34.7-35.4m)	Alteration zone with fractures. Feldspars kaolinized and biotite sericitized; also, kaolinite-sericite gouge in fractures c.a. 30°. Rock beige-coloured with some elongated quartz.					
		116-118.5' (35.4-36.1m)	More massive quartz monzonite, grey to grey-beige. Feldspar kaolinized, appears cataclastic with broken-up grains and slightly foliated. Some metasomatic Kspar up to 1cm bordering some fractures. Abundant smokey quartz.					
		119.5-121' (36.4-36.9m)	Coarse-grained quartz monzonite. Hairline fractures. Colour pale grey to pale beige.					
		121.0-121.5' (36.9-37.0m)	Core broken-up, crumbly. Feldspar kaolinized and biotite sericitized.					
		121.5-126.0' (37.0-38.4m)	Massive quartz monzonite slightly foliated to non-foliated. Abundant biotite, fresh. Rounded smokey quartz, grains somewhat elongated. Occasional Kspar phenocrysts 0.5cm x 0.3cm.					
		126.0' (38.4m)	Onwards less foliated. Otherwise, same as above.					
		127.0' (38.7m)	4cm. Pegmatoid, diffuse contact, Kspar, quartz (smokey) and muscovite.					

HOLE NO. J-4

METRES FROM	METRES TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		127.0-129.0' (38.7-39.3m)	Fracture zone, rock friable, feldspar completely kaolinized and biotite sericitized. Occasional patches of massive hematite. Fracture surfaces coated with gouge of kaolinite and sericite c.a. 26°, 15°.					
		129.0-130.5' (39.3-39.8m)	Tending to foliated. Beige-grey colour with some pinkish beige Kspar and white plagioclase phenocrysts 0.75cm x 0.5cm.					
		130.5-131.0' (39.8-39.9m)	Colour pale grey.					
		131.0' (39.9m)	Fracture c.a. 22° with sericite gouge.					
		130.5-131.75' (39.8-40.2m)	Progressively more pale grey in colour, biotite less abundant, medium-grained, less fractured.					
		133.5-134' (40.7-40.8m)	Fracture zone. Kaolinite gouge and ground-up quartz c.a. 14°, 20°. Slight development of metasomatic Kspar associated with fractures.					
		136.5-139.0' (41.6-42.4m)	Series of open fractures with extensive metasomatic Kspar up to 3cm bordering fractures coarse-grained. Pale green sericite, chlorite coating fractures and brownish-red hematite, slickensides, c.a. 33°. Stringers of epidote sub-parallel to fractures, c.a. 30°.					
		152.5-155.5' (46.5-47.4m)	Fracture zone, rock friable, fresh euhedral muscovite and phlogopite. Feldspar kaolinized and forms gouge c.a. 5°, 21°. Tension gashes at c.a. 50°.					
		182.5' (55.6m)	10cm area of metasomatic pink Kspar fractures sub-parallel to core.					
		202.0-205.5' (61.7-62.7m)	Broken-up pegmatoid with pink Kspar, muscovite and smokey quartz.					
		205.5-206.0' (62.7-62.8m)	Friable quartz monzonite. Feldspar completely kaolinized.					

METRES FROM	METRES TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		206.0-207.0' (62.8-63.1m)	Pegmatoid (quartz smokey, pink Kspar and muscovite).					
		207.0-208.0' (63.1-63.4m)	Friable quartz monzonite, feldspar completely kaolinized, biotite sericitized. Fractures c.a. 10°.					
		208.0-212.0' (63.4-64.6m)	Core progressively more broken-up. Fractures with kaolinite, sericite gouge c.a. 12°. Colour beige-brown with some unaltered Kspar.					
		212.0-216.0' (64.6-65.8m)	Massive quartz monzonite with fractures containing kaolinite, sericite gouge c.a. 10°.					
		216.0-217.0' (65.8-66.1m)	Metasomatic Kspar bordering fractures sub-parallel to core.					
		218.0-221' (66.4-67.4m)	Beige grey colour, broken-up, feldspar altered (kaolinized), biotite sericitized, cataclastic.					
		247.5-248.5' (75.4-75.7m)	Pegmatoid same as above.					
		228.0-228.75' (69.5-69.7m) 248.5-250.5' (75.7-76.4m)	Kaolinization of feldspar and sericitization of biotite, core friable.					
		250.5-332.0' (76.4-101.2m)	Massive quartz monzonite, medium grey, slight migmatitic texture development at 254.5-255.5' (77.6-77.9m). Open fractures at 324.5-325.0' (98.9-99.1m) c.a. 21°.					
	332' (101.2)	END OF HOLE						

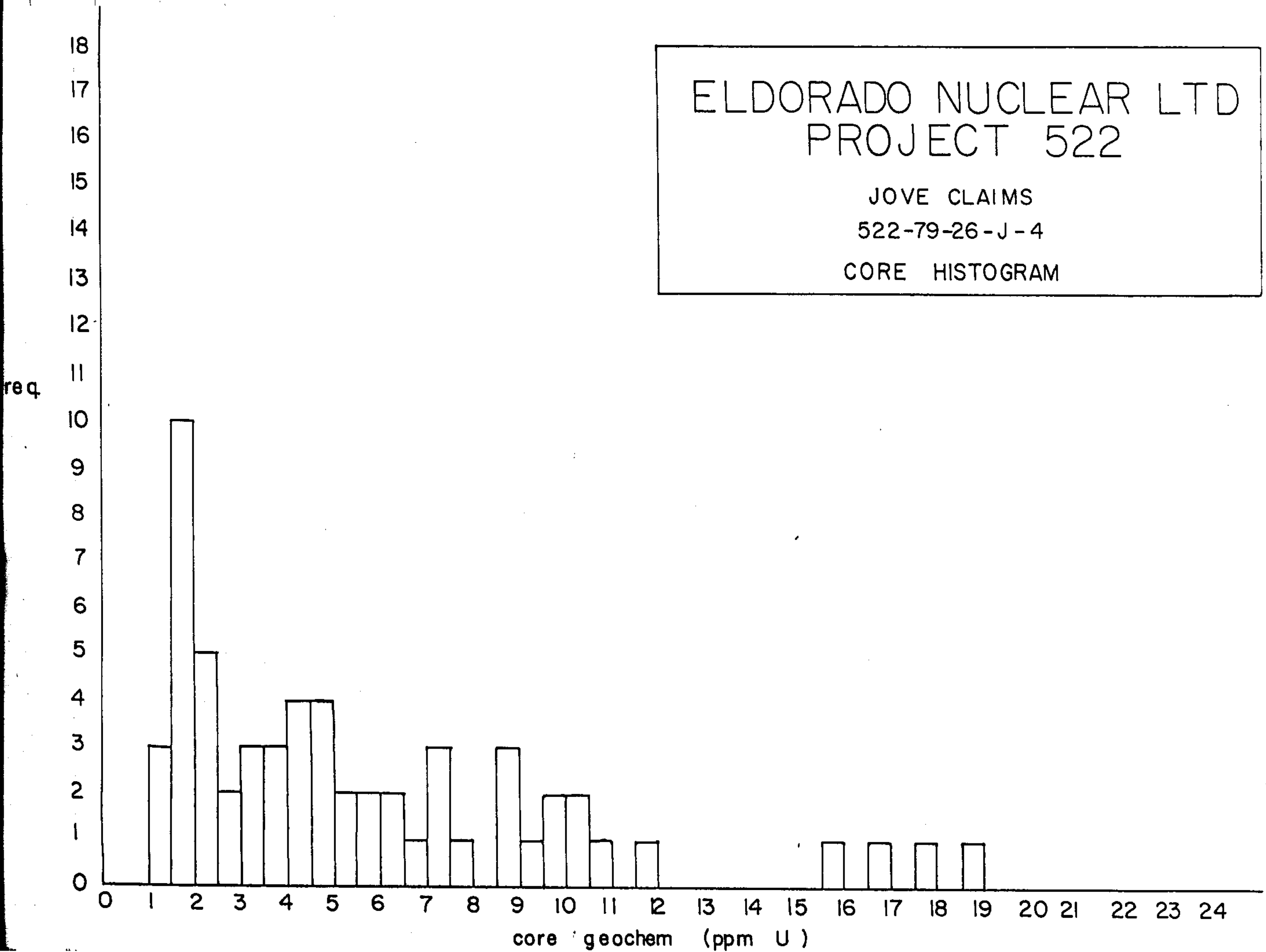
HOLE NO. J-4

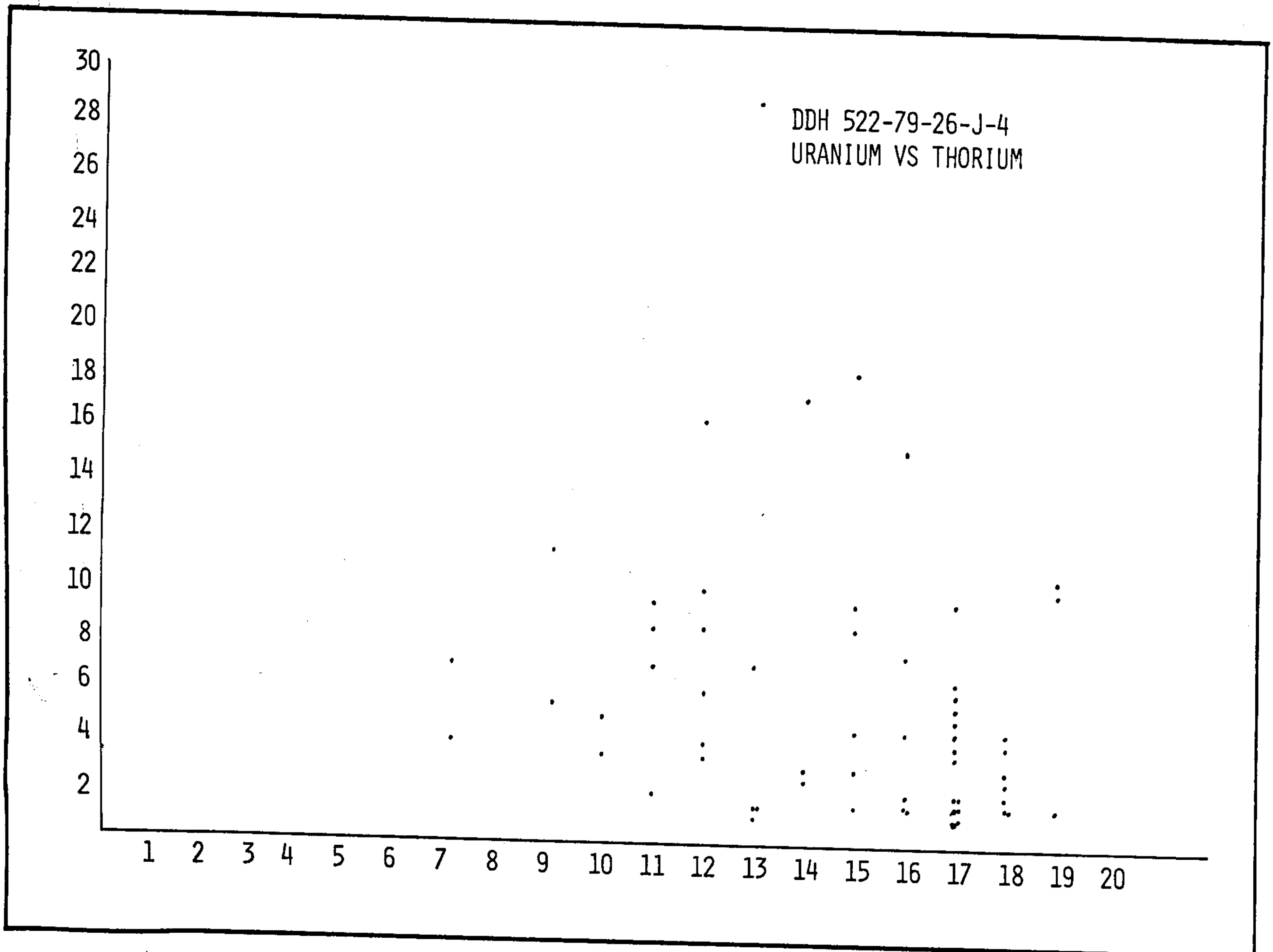
ANALYTICAL RESULTS DDH 522-79-26-J-4

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
14588	0-5		.001		
14589	5-10		.001		
14590	10-15		.001		
14591	15-20		.001		
14592	20-25		.002		
14593	25-30		.002		
114600	36			2.0	
14594	30-40		.003		
114601	41			4.0	7
14595	40-45		.003		
114602	46			6.5	7
14596	45-50		.002		
114603	51			11.5	9
14604	56			16.5	12
14605	61			18.5	15
114606	66			17.5	14
114607	71			7.5	16
114608	76			6.0	12
114609	81			8.5	11
114610	86			7.0	11
114611	91			5.0	10
114612	96			5.5	9
114613	101			8.5	12
114614	106			1.5	13
114615	111			4.5	16
114616	116			29.0	13
114617	121			10.0	12
114618	126			9.0	11
114619	131			4.0	12
114620	136			7.0	13
114621	141			1.5	15
114622	146			2.5	14
114623	151			1.6	16
14624	156			1.0	13
114625	161			2.5	18
14626	166			1.5	18
114627	171			1.5	16

ANALYTICAL RESULTS DDH 522-79-26-J-4

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
114628	176			4.5	15
114629	181			2.0	17
114630	186			1.5	19
114631	191			2.0	18
114632	196			3.5	17
114633	201			1.5	17
114634	206			3.5	12
114635	211			9.5	17
114636	216			10.0	19
114637	221			15.5	16
114638	226			8.5	15
114639	231			3.5	10
114640	236			7.0	17
114641	241			4.5	18
114642	246			2.0	17
114643	251			6.0	17
114644	256			1.0	17
114645	261			1.5	13
114646	266			4.0	17
114647	271			1.5	17
114648	276			3.0	15
114649	281			1.5	18
114650	286			5.5	17
114651	291			3.0	14
114652	296			3.0	18
114653	301			1.0	17
114654	306			2.0	16
114655	311			4.0	18
114656	316			10.5	19
114657	321			9.5	15
114658	326			5.0	17
114659	331			4.5	17


ELDORADO NUCLEAR LTD
PROJECT 522
JOVE CLAIMS
522-79-26-J-4
CORE HISTOGRAM
req.
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
core geochem (ppm U)


DDH 522-79-26-J-4
URANIUM VS THORIUM
30
28
26
24
22
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2
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

•ANALYTICAL CHEMISTS •GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50596
INVOICE NO. 32706
RECEIVED Sept. 17/79
ANALYSED Sept. 19/79

TO: Eldorado Nuclear Ltd.
255 Albert St., St. 400
Ottawa, Ontario K1P 6A9

ATTN: Mr. Colin Riley (water) CC: Olsson

SAMPLE NO. :	PPB U
41-J-4	1.4

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: ....

CHEMEX LABS LTD.
212 BROOKSBANK AVENUE
NORTH VANCOUVER B.C. CANADA

CLIENT : ELDORADO NUCLEAR
AREA ~~1-3~~ J-4

ATTN. : W. OLSON, WHITEHORSE Y.T.

SAMPLES RECEIVED : 20-SEP-79
ANALYSIS COMPLETED : 22-SEP-79
NOVATRACK CERT. NO.: B90091.
CHEMEX CERT. NO. : ASSAY 662
INVOICE NO. :

SAMPLE ID	U3O8 PERCENT
26-14588	0.001
26-14589	0.001
26-14590	0.001
26-14591	0.001
26-14592	0.002
26-14593	0.002
26-14594	0.003
26-14595	0.003
26-14596	0.002

CERTIFIED BY ....

ANALYSIS PERFORMED BY NOVATRACK ANALYSTS LTD.
A SUBSIDARY COMPANY OF CHEMEX LABS LTD.
SPECIALIZING IN NEUTRON ACTIVATION ANALYSIS

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: [redacted] 984-0221
AREA CODE: 604
TELEX: 043-52597

CHEMEX LABS LTD.

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50597
INVOICE NO. 32904
RECEIVED Sept. 17/79
ANALYSED Sept. 27/79

TO: Eldorado Nuclear Ltd.
255 Albert St., St. 400
Ottawa, Ontario KIP 6A9 (ROCKS)

ATTN: PROJECT: Work Area J-~~3~~4 Mr. C.J. Riley CC: Olsson

SAMPLE NO. : J-4	PPM U	PPM Th
26-114600	2.0	
114601	4.0	
114602	6.5	
114603	11.5	
114604	16.5	
114605	18.5	
114606	17.5	
114607	7.5	
114608	6.0	
114609	8.5	
114610	7.0	
114611	5.0	
114612	5.5	
114613	8.5	
114614	1.5	
114615	4.5	
114616	29	
114617	10.0	
114618	9.0	
114619	4.0	
114620	7.0	
114621	1.5	
114622	2.5	
114623	1.6	
114624	1.0	
114625	2.5	
114626	1.5	
114627	1.5	
114628	4.5	
114629	2.0	
114630	1.5	
114631	2.0	
114632	3.5	
114633	1.5	
114634	3.5	
114635	9.5	
114636	10.0	
114637	15.5	
114638	8.5	
26-114639	3.5	

CERTIFIED BY: Hart Bichler

Hole 522-79-26-J-5

DRILL HOLE LOG

ELDORADO
ELDORADO NUCLEAR LIMITED

OJE 522

DIP TESTS

METRES				DIP	LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL	CORR.		CUM.		CUM.
Collar	0	181	181	-60°	90.50	90.50	156.75	156.75
	181	362	181	-70°	61.91	152.41	170.08	326.83

LOCATION JOVE CLAIMS
SECTION 35 + 25N
LATITUDE 50 + 75W
DEPARTURE
ELEVATION
CORE BQ
STORAGE PROPERTY

HOLE No. 522-79-26-J-5
AZIMUTH 065°
DIP -60°
LENGTH 362'
PURPOSE EXPLORATION
COMPLETED Sept. 7, 1979
LOGGED BY W.J. OLSSON

METRES FROM	METRES TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
0	26.0' (2.9)	CASING:	This section consists of 3' (0.9) of broken core from 0-17' (0-5.2) and then sand and gravel to 26.0' (7.9). They represent overburden or boulders in the overburden.	SEE ACCOMPANYING LISTS				
26.0' (7.9)	112.0' (34.1)	Name:	WEAKLY FOLIATED, MEDIUM TO FINE-GRAINED GRANITE.					
		Colour:	Buff-brown to white.					
		Hardness:	4-5					
		Composition:	30% quartz 40% Kspar 15% plagioclase 10% biotite 5% muscovite and accessories.					
		Texture:	Medium to fine-grained. The mica crystals are euhedral while quartz and feldspar are sub to anhedral. The mica vary from very fine-grained to coarse-grained.					
		Structure:	The unit is very broken-up and fractured. Numerous fault zones and fracture zones are present. A crude foliation cuts the core at 80-90° and is defined by the alignment of biotite flakes. Muscovite crystals are at various angles to this foliation, implying a secondary origin. Generally, fractures cut the core at 0°, 30°, 45° and at 80-90°. Others are not recognizable due to the badly broken nature of the core. Significant fault zones (ie. zones with badly broken core and/or sand) are as follows:					

METRES FROM	METRES TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		30.0' (9.1)	Ground core and a little gouge.					
		33.0' (10.1)	1" fracture with gouge cutting the core at 30°.					
		35.0-36.0' (10.7-11.0)	Broken core.					
		43.5' (13.3)	A sharp fracture with gouge cutting the core at 30°.					
		46.0' (14.0)	1" gouge, sandy buff.					
		57.0' (17.4)	Fractures near parallel to the core (0-10°) intersecting fractures at 30°. Some sludge.					
		61.5-62.5' (18.6-19.1)	Badly broken ground core with sludge.					
		65.0-66.0' (19.8-20.1)	Badly broken ground core. Very weathered.					
		69.0-70.0' (21.0-21.3)	Some gouge and badly weathered rock.					
		72.0' (21.9)	Sand seam.					
		73.0-74.0' (22.3-22.6)	Gouge and broken core.					
		81.0-82.0' (24.7-25.0)	Very badly decomposed and broken core.					
		83-83.5' (25.3-25.5)	Badly broken and weathered rock.					
		85-86.0' (25.9-26.2)	Fractures cut the core at 0-10°. Pink and yellow grains are present in a green-coloured gouge badly broken core after it.					

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

97.0-98.0 (29.6-29.9) Very badly broken core.

102.0' (31.1) Sand seam.

106.0-107.0' (32.3-32.6) Very badly broken and decomposed core.

107.0-112' (32.6-34.1) A series of fracture patterns lying near-parallel to the core. Some gouge present. The rock is badly weathered and decomposed.

The contact with the next unit is sharp. The unit cores in pieces up to 1.5' (0.5) in length away from the faults and fractures. The foliation imparted by the biotite is intermittent throughout the unit. The core is bleached and decomposed in areas of intense faulting.

Loss of Core:	Feet	Metres	Percentage
	26- 32	7.9-9.8	20%
	52- 62	15.8-18.9	20%
	67- 77	20.4-23.5	60%
	82- 87	25.0-26.5	20%
	87- 92	26.5-28.0	40%
	97-102	29.6-31.1	60%
	102-107	31.1-32.6	40%
	107-112	32.6-34.1	20%
	117-122	35.7-37.2	20%
	137-142	41.8-43.3	20%
	160-165	48.8-50.3	20%
	171-174	52.1-53.0	30%
	174-177	53.0-53.9	30%
	191-192	58.2-58.5	50%
	217-222	66.1-67.7	20%
	229-232	69.8-70.7	15%
	271-274	82.6-83.5	30%
	289-298	88.1-90.8	25%
	298-304	90.8-92.7	15%
	319-325	97.2-99.1	85%
	325-330	99.1-100.6	80%

METRES		DESCRIPTION	CORE SAMPLES				
FROM	TO		FROM	TO	WIDTH	%	AVERAGES

Loss of Core: (Cont'd)

Feet	Metres	Percentage
330-332	100.6-101.2	20%
342-349	104.2-108.4	25%
351-353	107.0-107.6	50%

All other footages had 95% or better recovery.

Alteration: The biotite is brownish in colour and in places has limonitic halos around it. Elsewhere, it is chloritized or fresh. The quartz is smokey. The plagioclase is grey in colour - sometimes sericitized to clay white; the Kspars are all kaolinized to a white, chalky colour. Inclusions of biotite are present in some muscovite flakes. Most muscovite grains have no orientation, implying a secondary origin. The unit is bleached in zones of faulting and fracturing. When mud and sand appear, it is a buff-tan colour. The feldspar is a rose colour at 85' (25.9) - gouge is a green colour.

Radioactivity: None detected by BGS-1SL or by the downhole probe.

Mineralization: None.

26.0-37.0' (7.9-11.3) Very badly weathered granite, brown-white in colour, soft, decomposed, friable. White-buff mud in fractures. Feldspar is intensely altered to clay minerals. Biotite is moderately fresh, quartz is fine-grained. Several fracture/fault zones cut this section.

37.0-43.0' (11.3-13.1) The sub-unit is similar to the previous sub-unit, only fresher-looking. It has a steel-blue-grey colour to it.

43.0-49.0' (13.1-14.9) The unit is similar to the first sub-unit with a brown-white colour to it. The feldspars are intensely altered. A fault with brown gouge cuts the core at 30° at 43.5' (13.3)

49.0-53.0' (14.9-16.2) Fresher-looking unit with a steel-blue-grey colour. Fractures cut the core at 30° and contain brown limonitic stain.

METRES FROM	METRES TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		53.0-112.0' (16.2-34.1)	This is basically a major fractured zone with broken ground core as previously described. The unit is a chalky brown-white colour with a bleached appearance imparted to the core in the downhole side of the fractures. Some limonitic staining in the fractures is very intense, imprating a vivid orange-yellow colour to some fractures (a local feature). Section 107-112' (32.6-34.1) is cut by a fracture lying near-parallel to the core. Some slickensides are present (weak) and are coated with chlorite and manganese stains. Some serpentinization present too					
112.0' (34.1)	363.0' (110.6)	Name:	BADLY FAULTED, MEDIUM-GRAINED QUARTZ MONZONITE. INTERMIXED WITH ZONES OF FELDSPATHIZED PORPHYRO-CLASTIC GRANITE.					
		Colour:	Steel-grey through pink-orange to whitish grey (fault zones).					
		Hardness:	5-7					
		Composition:	40% plagioclase 20% Kspar 30% quartz 5-10% biotite 0-5% muscovite (feldspar content can be variable).					
		Texture:	Medium-grained to 160' (48.8). Medium to fine-grained to 197' (60.0). Some coarse sections present. Fine-grained sections appear near faults (due to grinding and movement along the faults?). The quartz and feldspar are sub-to anhedral, biotite is fine and euhedral and muscovite is medium to coarse and euhedral.					

HOLE NO. J-5

METRES		DESCRIPTION	CORE SAMPLES				
FROM	TO		FROM	TO	WIDTH	%	AVERAGES

Structure: The unit is badly faulted and fractured. Fracture patterns cut the core at 0-10°, 28-30°, 45°, 80-90°. Fault zones are as follows:

140.0-142.0' (42.7-43.3) — Bleached core with fractures at 60° and 90° to the core.

172-194' (52.4-59.1) — Very badly broken core associated with a series of fractures accompanied by feldspathization cutting the core at 20°.

204.0-205.0' (62.2-62.5) — Badly broken core.

221.0-224.0' (67.4-68.3) — Feldspathized porphyroclastic, broken core. Fractures cutting the core at 20-30°.

231.0' (70.4) — Ground material in fractures cutting the core at 45°.

249-252' (75.9-76.8) — Very badly broken core with 1-2' (.3-.6) of gouge and decomposed rock. Bleached to a grey-green colour.

257-268' (78.3-81.7) — Badly broken, ground core. A series of fractures cut the core at 45°. Contain carbonate material.

272-274' (82.9-83.5) — Feldspathized zone, badly broken in the final 1'(.3)

291-292' (88.7-89.9) — Sand with broken, bleached core. Some fractures with sand cut the core at 45°.

303-304' (92.4-92.7) — Badly broken core associated with fractures cutting the core at 0-10°.

311-315' (94.8-96.0) — Badly broken, ground core. Lots of gouge present.

319-330' (92.2-100.6) — A major fault zone with a large loss of core. Badly broken and sand seam reported with poor core recovery. Sand seam at the bottom as well.

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

343-353' (104.5-107.6) — Badly broken, poor core recovery; sand at 349' (very blocky ground.

356-358' (108.5-109.1) — Badly broken with a high percentage of core lost. Fractures are near parallel to the core.

Alteration: The feldspars have been partially altered, except in the vicinity of faults and fractures where they are intensely altered to kaolin and sericite. The biotite generally is fresh, but locally is chloritized. Quartz is smokey and secondary muscovite is present. Feldspar is pink around some faults and fracture zones (Feldspathization of old fault zones?). Some fractures have limonite stains along them, giving an orange-brown colour to the fracture surfaces. Some manganese and epidote appear along fractures in zones that have been feldspathized. Some porphyroclasts are evident. Minor hematitization is evident around these zones. White to slightly smokey quartz is present from 222-223' (67.7-68.0)
Intense chloritization and serpentinization at 234' (71.3). Hematitization and chloritization at 274' (83.5); sand at 291' (88.7)(orange-tan colour).
274-292'(88.5-89.0) Fractures are orange-tan colour and only prevalent here. Below this point, the fractures are grey to white to 342' (104.2) where once again they are orange-tan to 349' (75.9).

Radioactivity: None detected by BGS-1SL or downhole probe.

Mineralization: None.

112-160' (34.1-48.8) — Medium to fine-grained monzonite with fault zones as previously described. Generally competent.

160-194' (48.8-59.1) — Broken, feldspathized, fractured zone with epidote and limonite along most fractures. Feldspar is generally pink in colour and core is broken.

DRILL HOLE LOG

ELDORADO

ELDORADO NUCLEAR LIMITED

PROJECT 577

PAGE 8

METRES FROM	METRES TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		194-222' (59.1-67.7)	Medium to coarse-grained quartz monzonite, some broken zones, only biotite and some feldspar altered.					
		222-228' (67.7-69.5)	Broken, feldspathized porphyroclastic zone - old fault zone? Fractures are shallow to the core.					
		228-272' (69.5-82.9)	Badly broken, highly fractured, fault zone. Numerous zones of gouge, sand, ground and friable core. Fractures are near-parallel to the core and at 30°. Gouge is buff-grey-green colour.					
		272-294' (82.9-89.6)	Feldspathized fracture zone - old fault? Fractures have an orange-buff colour to them. Sand seam @ 294' (89.6).					
		294-303' (89.6-92.4)	Competent medium to coarse-grained quartz monzonite.					
		303-332' (92.4-101.2)	Badly broken, friable, decomposed zone.					
		332-342' (101.2-104.2)	Competent quartz monzonite, medium-grained - minor zones of feldspathization.					
		342-351' (104.2-107.0)	Fractured feldspathized zones are pink-orange-tan colour. Sand seam @ 349' (106.4).					
		351-363' (107.0-110.6)	Medium-grained quartz monzonite. Fractured and broken core; 357-358' (108.8-109.1) :Fractures are near-parallel to the core. Gouge is white to green in colour.					
		END OF HOLE.						

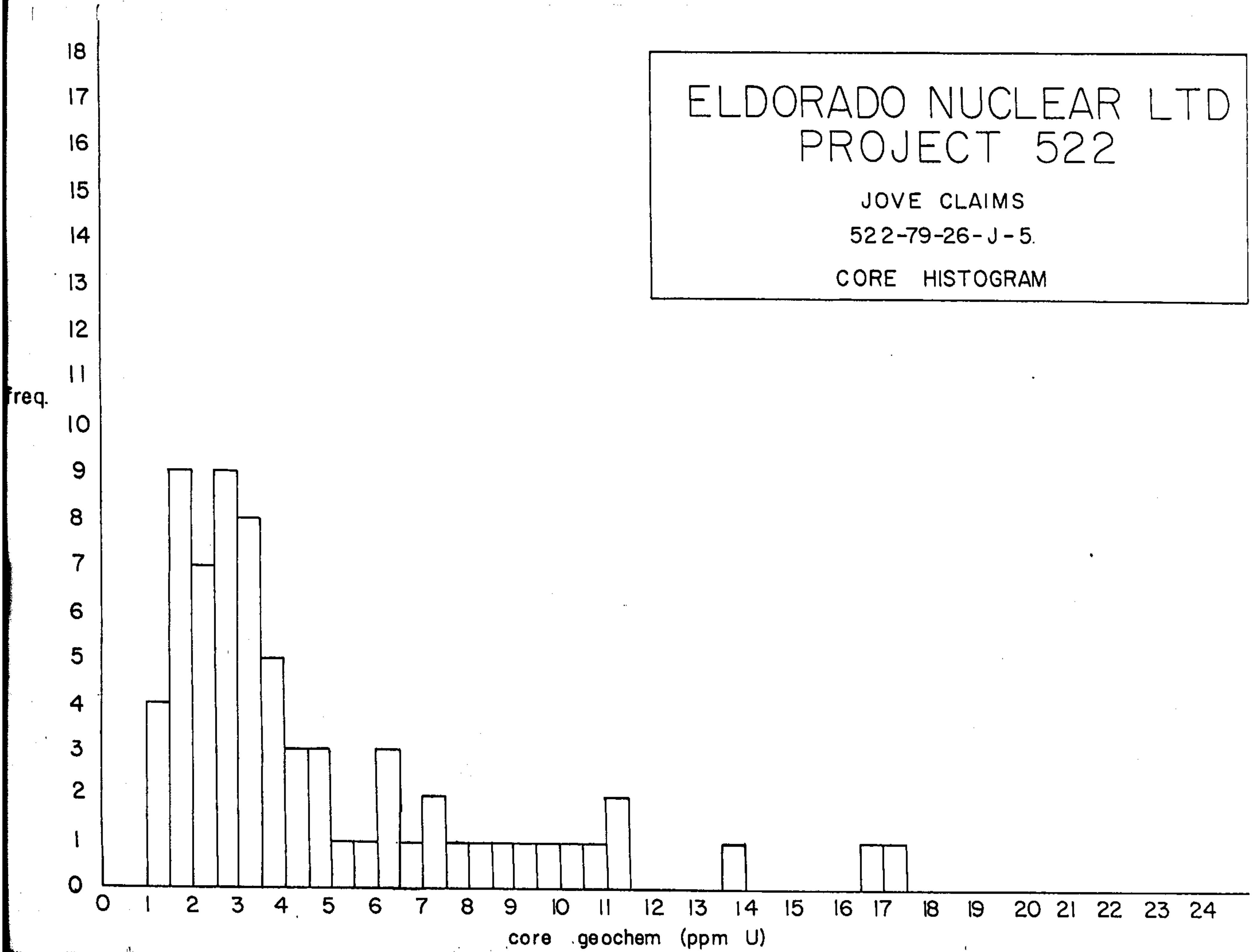
HOLE NO. J-5

PROJECT 522 DIAMOND DRILL HOLE 522-79-26-J-5

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
111437	32			2.5	15
111438	37			3.0	15
111439	42			2.5	17
111440	47			3.5	12
111441	52			3.0	15
111442	57			8.5	15
.11443	62			7.0	15
111444	67			6.0	15
.11445	72			6.0	16
111446	77			3.5	13
11447	82			10.0	11
111448	87			7.5	15
11449	92			4.0	16
ı11450	97			6.5	14
'11451	102			7.0	16
_11452	107			13.5	15
111453	112			3.0	15
11454	117			3.5	14
: .1456	127			2.0	12
111455	122			3.0	10
111457	132			4.5	13
: 1458	137			3.5	14
111459	142			17.0	14
1 1460	147			3.5	16
1.1461	152			3.0	13
1'1462	157			3.0	15
1 1463	162			10.5	13
111464	167			4.0	8
1 1465	172			4.0	12
111466	177			9.5	13
1 :467	182			4.5	9
111468	187			11.0	15
1. .469	192			5.5	12
111470	197			1.0	19
1: 471	202			2.5	8
11-472	207			1.5	14
11'473	212			1.5	13

PROJECT 522
ANALYTICAL RESULTS DDH 522-79-26-J-5

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
111474	217			1.5	14
111475	222			2.0	2
111476	227			2.0	9
111477	232			1.5	15
111478	237			1.5	16
111479	242			2.0	17
111480	247			2.5	14
111481	252			1.5	12
111482	257			1.0	12
111483	262			1.5	12
111484	267			2.5	13
111485	272			6.0	13
111486	277			16.5	12
111487	282			2.5	13
111488	287			8.0	13
111489	292			4.5	13
111490	297			2.5	13
111491	302			1.5	13
111492	307			11.0	13
111493	312			3.0	13
111494	317			2.5	14
111495	322			2.0	13
111496	327			1.0	13
111497	332			1.0	13
111498	337			2.0	12
111499	337			5.0	12
111500	342			9.0	12
111501	347			2.0	11
111502	352			3.0	12
111503	357			1.5	14
111504	362			2.5	10



ELDORADO NUCLEAR LTD
PROJECT 522
JOVE CLAIMS
522-79-26-J-5.
CORE HISTOGRAM
freq.
0
1
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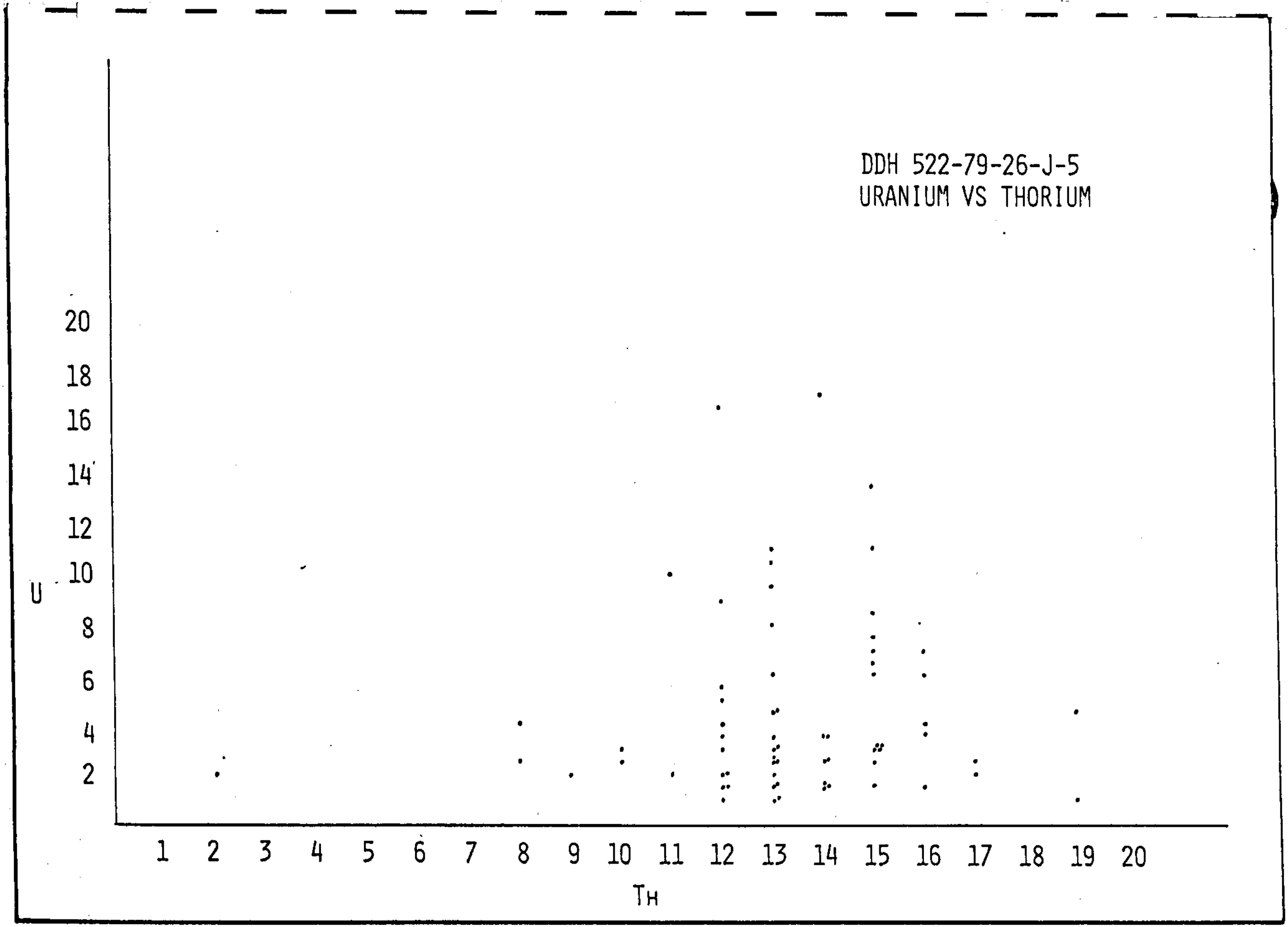
18
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
core geochem (ppm U)



DDH 522-79-26-J-5
URANIUM VS THORIUM
U
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16
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
TH

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 ANALYSIS

55

CERTIFICATE NO. 50778

TO: Eldorado Nuclear Mines
400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN:

PROJECT -522 "ROCKS"

PROJECT J-5 - ROCK

INVOICE NO. 33225 (U)
34011 (Th)

RECEIVED September 19, 1979

ANALYSED Nov. 26/79

SAMPLE NO. :	PPM U	PPM Th
111437	2.5	15
111438	3.0	15
111439	2.5	17
111440	3.5	12
111441	3.0	15
111442	8.5	15
111443	7.0	15
111444	6.0	15
111445	6.0	16
111446	3.5	13
111447	10.0	11
111448	7.5	15
111449	4.0	16
111450	6.5	14
111451	7.0	16
111452	13.5	15
111453	3.0	15
111454	3.5	14
111455	3.0	10
111456	2.0	12
111457	4.5	13
111458	3.5	14
111459	17.0	14
111460	3.5	16
111461	3.0	13
111462	3.0	15
111463	10.5	13
111464	4.0	8
111465	4.0	12
111466	9.5	13
111467	4.5	9
111468	11.0	15
111469	5.5	12
111470	1.0	19
111471	2.5	8
111472	1.5	14
111473	1.5	13
111474	1.5	14
111475	2.0	2
111476	2.0	9

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 ANALYSIS

J5

CERTIFICATE NO. 50779

INVOICE NO. 33225 (U)
34011 (Th)

RECEIVED September 19, 197

ANALYSED Nov. 26/79

TO: Eldorado Nuclear Mines
400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN:

Proj.- 522 "ROCKS"
PROJECT J-5 - ROCK

SAMPLE NO. :	PPM U	PPM Th
22 - 111477	1.5	15
111478	1.5	16
111479	2.0	17
111480	2.5	14
111481	1.5	12
111482	1.0	12
111483	1.5	12
111484	2.5	13
111485	6.0	13
111486	16.5	12
111487	2.5	13
111488	8.0	13
111489	4.5	13
111490	2.5	13
111491	1.5	13
111492	11.0	13
111493	3.0	13
111494	2.5	14
111495	2.0	13
111496	1.0	13
111497	1.0	13
111498	2.0	12
111499	5.0	12
111500	9.0	12
111501	2.0	11
111502	3.0	12
111503	1.5	14
22 - 111504	2.5	10

CERTIFIED BY: [signature]

Hole 522-79-26-J-6

DR HO LOG

ELDORADO
ELDORADO NUCLEAR LIMITED

PROJECT 522

DIP TESTS

METRES					DIP	LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL		CORR.		CUM.		CUM.
llar	0	125	125		-50°	80.35	80.35	95.76	95.76
50'	125	375	250		-60°	125.00	205.35	216.51	312.27
00'	375	549	174'		-63°	78.99	284.34	155.04	467.31

LOCATION Jove Claims
SECTION 27 OON (m)
LATITUDE
DEPARTURE
ELEVATION 968.32M
CORE BQ
STORAGE Property

HOLE No. 522-79-26-J.6
AZIMUTH 110°
DIP -60°
LENGTH 549
PURPOSE Exploration
COMPLETED Sept. 12, 1979
LOGGED BY W.J. Olsson

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
	20.0 (6.1)	Casing — Weathered boulders of altered quartz, monzonite were cored from 10.0° to 20.0° (Name)	SEE ACCOMPANYING LISTS				
.0 (.1)	353.0 (107.6)	Medium grained, Foliated, Altered, Biotite - MUSCOVITE - QUARTZ MONZONITE					

MUSCOVITE - QUARTZ MONZONITE

Colour: The colour varies from a brown white to a greyish brown white

Hardness: 5-7

Composition:
20% K-Feldspar
35% Plagioclase
30% Quartz
10% Muscovite
5% Biotite

Texture: Fine to medium grained. The quartz and feldspar crystals are sub to anhedral with grains 1mm to 3mm in size.

Muscovite is euhedral and is medium to coarse, while euhedral biotite is fine grained.

Structure: There are several sand seams and 3 zones of intensely broken core present at the following footages:

54.4 -55.0	ground core
(16.6-16.8)	ground core
56.0 - 58.0	ground core
(17.1 - 17.7)	ground core
66.0 - 67.0	ground core
(20.1 - 20.4)	ground core

2/....

METRES FROM	TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		74.0-76.0	ground core					
		(22.6-23.2)	ground core					
		103.0-104.0	ground core					
		(31.4-31.71)	ground core					
		123.0-131.0	intensely fractured					
		(37.5-39.9)	core					
		138.0	sand seam					
		(42.1)						
		141.0-142.0	fractured core					
		(43.0-43.3)						
		143.0-156.0	sand is reported 151.0' ( )					
		(43.6-47.5)	There is a 88% loss of core in this interval.					
		162.0-168.0	sand seam at 168.0					
		(49.4-51.2)						
		174.0-177.0	sand seam at 176					
		(53.0-53.9)						
		178.0-179.0	ground core					
		(54.3-62.5)						
		188.0-205.0	badly faulted, sand at 196'					
		(57.3-62.5)	( ) 68% loss of core					
		228.0-229.0	ground core					
		(69.5-69.8)						
		232.0-233.0	ground core					
		(70.7-71.0)						
		251.0-251.6	ground core					
		(76.5-76.7)						
55.0	256.0	ground core Of all the shear zones present the most significant one is the interval 188.0 to 205.0 (57.3-62.5). A loss of core for this section is 68%. A crude foliations diferred by the orientation of biotite grains and elongated quartz grains, cuts the core at 70° to 90°. Fracture patterns tend to cut the core at 80 to 90° down to the 66' (20.1) mark. At that point a second set cutting the core at 45° appears. These patterns continue to 120' (36.6) where a 30° pattern appears. At the 200' (61.0) mark, only the 80-90° pattern remains with a few 30° fractures present. The loss of core encountered in this hole is as follows.						

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

46.0-56.0	(14.0-17.1)	10%
66.0-71.0	(20.1-21.6)	10%
104.0-114.0	(31.7-34.7)	20%
114.0-119.0	(34.7-36.3)	10%
119.0-123.0	(36.3-37.5)	25%
123.0-124.0	(37.5-38.7)	20%
124.0-127.0	(37.8-38.7)	50%
133.0-139.0	(40.5-42.4)	67%
139.0-143.0	(42.4-43.6	25%
143.0-155.0	(43.6047.2)	88%
156.0-161.0	(47.5-49.1)	50%
161.0-168.0	(49.1-51.2)	70%
168.0-169.0	(51.2-51.5)	25%
169.0-172.0	(51.5-52.4)	15%
172.0-177.0	(52.4-53.9)	40%
177.0-188.	53.9-56.4	50%
190.0-205.0	(57.9-62.5)	68%
207-216	(63.1-65.8)	45%
265.0-276.0	(80.8-84.1)	65%

Elsewhere there was 95-100% recovery

Alteration:

The feldspars have been kaolinized/sericitized while biotite has been chloritized. Biotite is also remined by limonite. Staining of the unit suggests the K-spar is a result of a metasomatic alteration of plagioclase. (Uneven crystal faces, inclusions of plagioclase in K-spar grains) The fractures tend to be covered with chlorite and/or limonite. The unit has a very bleached appearance in the vicinity of faults due to intense alteration of the feldspars In some instances, the Feldspar has been almost weathered out completely leaving a friable quartz-rich zone: There are minor traces of gummite at 215.0' (76.5). Epidote is present on fractures at 128' (39.0).

Generally the section is more weathered near the top of the hole.

4/....

METRES FROM	TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
		Radioactivity: There is a slight bit of radioactivity detected by the BGS-1SL at 196.0' (195/175cps). See the downhole probe for more significant data.					
		Mineralization: Spots of gummite (autunite) are present at 196.0' (59.7)and at 251.0' (76.5).					
.0	123.0	(6.1-37.5) Competant weathered quartz monzonite. Some fractures are present and have ground core associated with them. The weathering of the feldspars has imparted a very chalky appearance to this section.					
3.0	216.0	(37.5-65.8) This zone is badly fractured and faulted quartz monzonite. There are numerous sand seams as reported earlier. Faults are represented by very friable, "decomposed"- looking core.					
6.0	352.0	65.8-107.3 Competant quartz monzonite with some fracturing. The unit is not as weathered as the previous intervals.					
3.0 (07.3)	549.0 (167.3)	MEDIUM BRAINED BIOTITE MUSCOVITE - QUARTZ MONZONITE					
		Colour: steel grey - blue					
		Hardness 6-7					
		Composition 40% plagioclase 30% quartz 20% K-feldspar 5-10% biotite 5-10% muscovite					
		Texture: Medium to coarse grained. The feldspar grains are anhedral to subhedral and up to 5mm in size. Quartz is also anhedral to subhedral but only 2-3 mm in size. Biotite is euhedral to subhedral (1-2mm in size) while Muscovite is also euhedral to subhedral but up to 5mm in size.					

5/....

METRES FROM	TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES

Structure: The unit is generally massive with a local crude foliation cutting the core at 70°. This foliation is defined by elongated grains of quartz. Fracture patterns out the core at 30°, 45°and 60°-80°. Significant fault zones are as follows;

361.0-365.0 (110.0-113.0)	clay in fractures cutting the core at 30° to 45°
463.0-467.0 (141.1-142.3)	fractured, broken core
474.4-474.8 (144.6-144.7)	badly broken core
498.0-498.5 (151.8-151.9)	ground core
511.5-512.0 (155.9-156.1)	ground core

The interval 458' to 485' (139.6-147.8) is very fine grained and has a porphyroclastic appearance to it. This represent an old fault zone, a 10cm section of pegmatite is present at 433.0 (135.0)

Alteration: Biotite is chloritized ans some fractures are covered with chlorite and serpentine. Below 399.0' (171.6) carbonate material fills most fractures above that point stilbite has filled the fractures. Large pods of garnet are associated with the pegmatite vein at 443.0 (135.0). Generally this unit is fresher looking than the previous unit.

Radioactivity: none

Mineralization: none

353.0-365.0 (107.6-111.3) Badly broken core associated with fractures cutting the core at 30° and at 45°.

Clay material is present in some fractures.

6/....

DRILL HOLE LOG

ELDORADO
ELDORADO NUCLEAR LIMITED

PROJECT 522
PAGE 6

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
5.0 11.3	458.0 139.6)	Medium grained quartz monzonite with carbonate material appearing at 399.0 (171.6)					
8.0 39.6	485.0 147.8)	Very fine grained zoa with some porphyroclasts (up to 3mm) which may signifiy an old fault zone. The contact with the next sub unit is very sharp.					
5.0 47.8	541.0 164.9)	Medium grained quartz monzonite. The quartz content appears to be decreasing at 536'(163.4) while the feldspar content is increasing.					
1.0 64,9	549.0 167.3)	This sub-unit has close to 10% quartz and is so tending to be syenitic. There is up to 10% carbonate material present-most is tied up in fracturer.					

Note: The following samples were taken from this hole for mineralogical study.

Sample #	footage
1294	443.0' (135.0)
1295	460.0' (140.2)
1296	536.0' (163.4)
1297	545.0' (166.1)

HOLE NO.

ANALYTICAL RESULTS DDH 522-79-26-J-6

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
114661	10			5.0	18
114662	15			3.5	9
114663	20			5.0	15
114664	25			3.0	14
114665	30			3.0	15
114666	35			2.0	14
114667	40			1.0	15
114668	45			2.0	13
114669	50			2.0	12
114670	55			2.0	15
114671	60			2.0	17
114672	65			2.5	14
114673	70			5.0	15
114674	75			4.5	14
114675	80			6.5	14
14676	85			6.5	9
114677	90			2.0	12
14678	95			2.0	14
114679	100			2.5	15
14680	105			4.0	16
114681	110			3.5	8
14682	115			5.0	14
114683	120			2.0	16
14684	125			9.5	12
14685	130			7.0	12
114686	135			9.0	15
14687	140			9.0	13
114688	145			12.0	8
14689	150			14.0	11
114690	155			12.5	16
14691	160			8.5	14
114692	165			19.0	13
14693	170			10.5	14
114694	175			15.5	14
114695	180			21.5	13
14696	185			7.0	15
114697	190			17.5	14

ANALYTICAL RESULTS
DDH 522-79-26-J-6

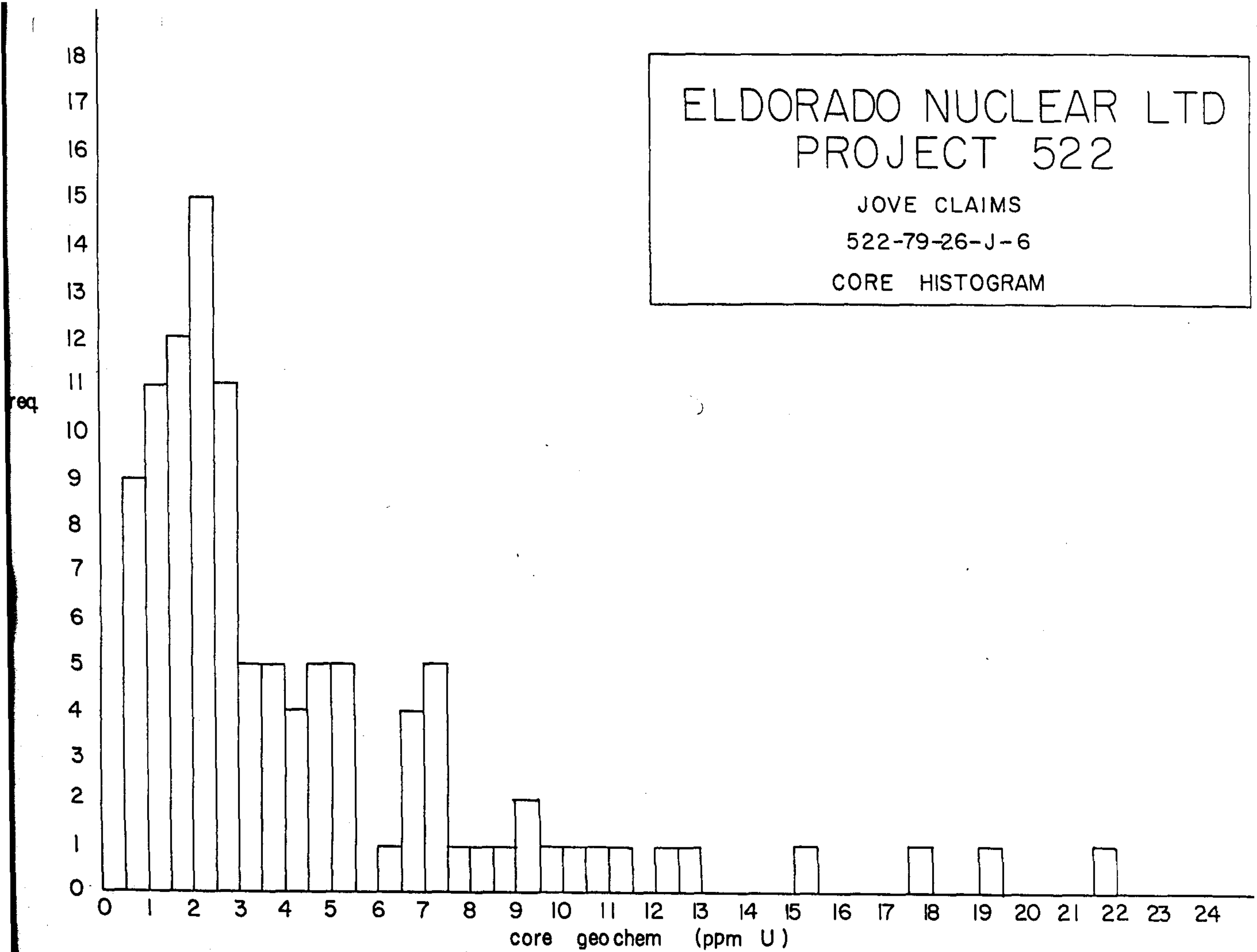
SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
14601	192-193		.002		
14602	193-195		.002		
14603	195-196		.002		
14604	196-199		.002		
4605	199-208	.00544	.001		
14606	203-204		.001		
4607	204-205		.001		
114698	205			7.0	13
14699	210			7.0	14
114700	215			11.0	13
14701	220			4.5	16
114702	225			3.5	15
14703	230			8.0	14
14704	235			4.5	13
114705	240			2.5	15
14706	245			4.0	12
14608	246-247		.001		
4609	247-248		.001		
14610	248-249	.0024	.001		
4611	249-250		.001		
14612	250-251		.001		
4613	251-252		.010		
14614	252-253		.002		
114707	255			7.5	16
14708	260			3.5	17
114709	265			4.5	15
14710	270			3.0	12
114711	275			3.5	14
14712	280			2.5	14
114713	285			2.5	15
14714	290			4.0	17
114715	295			6.5	16
14716	300			2.5	17
114717	305			5.0	14
114718	310			1.5	16
14719	315			6.5	17
114720	320			2.0	16

ANALYTICAL RESULTS DDH 522-79-26-J-6

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
114721	325			7.0	15
114722	330			2.0	12
114723	335			3.0	12
114724	340			3.0	16
114725	345			6.0	19
114726	350			4.0	14
114727	355			1.5	16
114728	360			2.5	15
114729	365			10.0	15
114730	370			1.5	14
114731	375			1.0	14
114732	380			4.5	17
114733	385			2.0	19
114734	390			1.0	12
114735	395			2.0	18
114736	400			1.5	15
114737	405			2.5	15
114738	310			2.5	14
114739	415			1.0	12
114740	420			.5	12
114741	425			2.5	19
114742	430			2.0	14
114743	435			2.5	16
114744	440			1.0	15
114745	445			1.0	14
114746	450			1.0	17
114747	455			1.0	15
114748	460			.5	17
14748	460			.5	15
114749	465			.5	15
14750	470			1.0	6
114751	475			1.5	7
14752	480			1.5	6
114753	485			1.5	9
14754	490			.5	14
114755	495			.5	12
114756	500			.5	13

PROJECT 522
ANALYTICAL RESULTS DDH 522-79-26-J-6

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
114757	505			.5	12
114758	510			.5	11
114759	515			1.5	13
114760	520			1.0	11
114761	525			.5	13
114762	530			1.5	16
114763	535			1.0	17
114764	540			2.0	12
114765	545			1.5	14


ELDORADO NUCLEAR LTD
PROJECT 522
JOVE CLAIMS
522-79-26-J-6
CORE HISTOGRAM
freq
0
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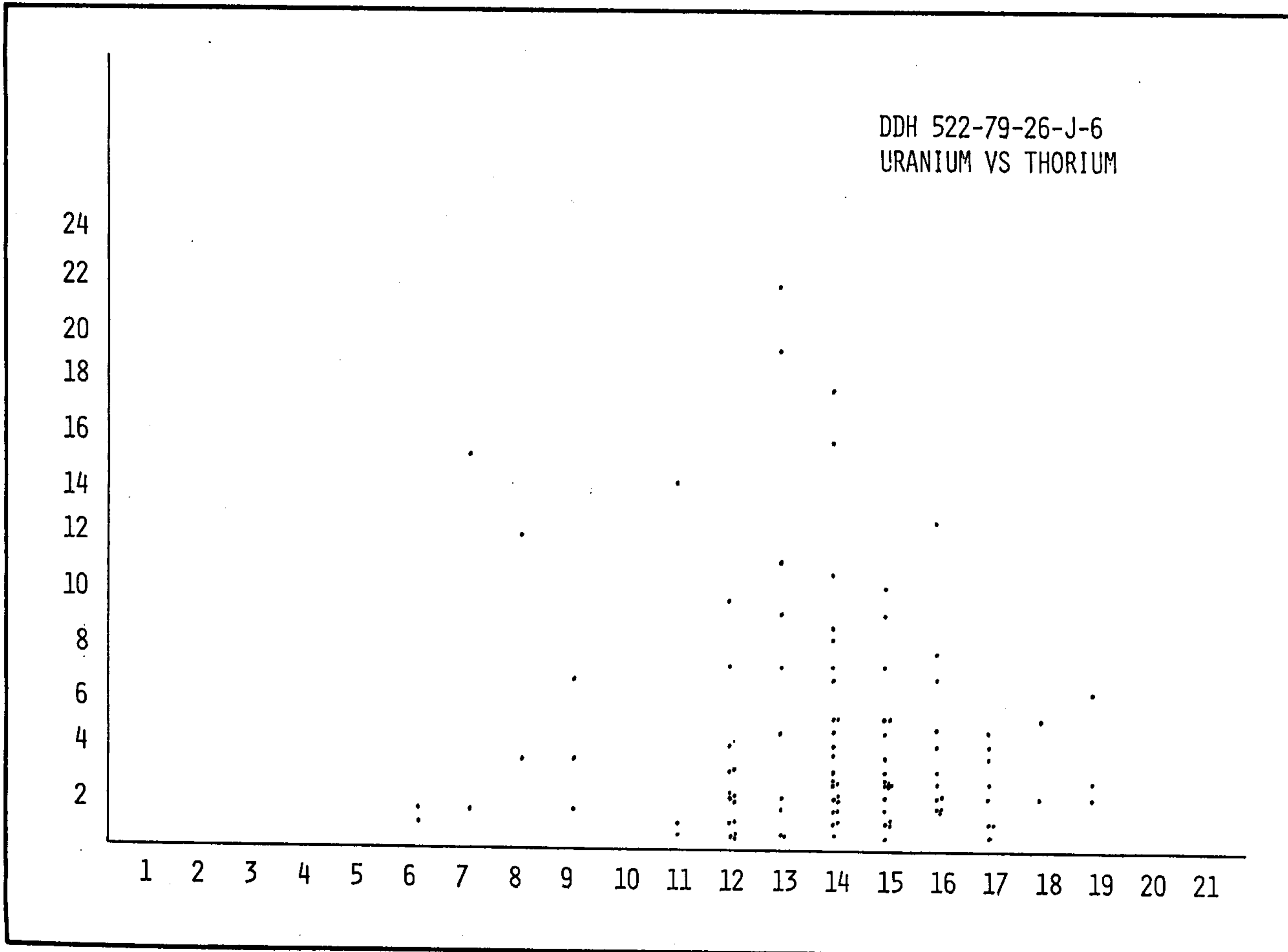
16
17
18
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
core geochem (ppm U)


DDH 522-79-26-J-6
URANIUM VS THORIUM
24
22
20
18
16
14
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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: ~~925-0648~~ 984-0221
AREA CODE: [redacted] 604
TELEX: 043-52597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50817
INVOICE NO. 33587
RECEIVED Sept.21/79
ANALYSED Nov.2/79

TO: Eldorado Nuclear Ltd.
Ste.400 - 255 Albert St.
Ottawa, Ont.
K1P 6A9

cc: W. Olsson

ATTN: PROJ. 522

SAMPLE NO. :	PPB U	PPB F	PPM HCO_3	PPM Cl	PPM SO_4	Mg/L PO_4
42 - J - 6	16.8	105	95	12	39	10
42 - J - 7	21.2	115	160	4.4	55	25

CERTIFIED BY: Carolyn Law

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

J6

ATTN: PROJECT 522 ROCKS Mr. W. Olsson

CERTIFICATE NO. 50818
INVOICE NO. 33221- U
34061-Th
RECEIVED Sept. 21/79
ANALYSED Oct. 16/79

SAMPLE NO. :	PPM U	PPM Th
26-114661	5.0	18
114662	3.5	9
114663	5.0	15
114664	3.0	14
114665	3.0	15
114666	2.0	14
114667	1.0	15
114668	2.0	13
114669	2.0	12
114670	2.0	15
114671	2.0	17
114672	2.5	14
114673	5.0	15
114674	4.5	14
114675	6.5	14
114676	6.5	9
114677	2.0	12
114678	2.0	14
114679	2.5	15
114680	4.0	16
114681	3.5	8
114682	5.0	14
114683	2.0	16
114684	9.5	12
114685	7.0	12
114686	9.0	15
114687	9.0	13
114688	12.0	8
114689	1.40	11
114690	12.5	16
114691	8.5	14
114692	19.0	13
114693	10.5	14
114694	15.5	14
114695	21.5	13
114696	7.0	15
114697	17.5	14
114698	7.0	13
114699	7.0	14
26-114700	11.0	13

ref

CERTIFIED BY: [illegible signature]

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

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CERTIFICATE OF ANALYSIS

J6

CERTIFICATE NO. 50828
INVOICE NO. 33221 - U
34061-Th
RECEIVED Sept. 21/79
ANALYSED Oct. 16/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
ATTN: K1P 6A9
Project 522 ROCKS Mr. W. Olsson

SAMPLE NO. :	PPM U	PPM Th
26-114701	4.5	16
114702	3.5	15
114703	8.0	14
114704	4.5	13
114705	2.5	15
114706	4.0	12
114707	7.5	16
114708	3.5	17
114709	4.5	15
114710	3.0	12
114711	3.5	14
114712	2.5	14
114713	2.5	15
114714	4.0	17
114715	6.5	16
114716	2.5	17
114717	5.0	14
114718	1.5	16
114719	6.5	17
114720	2.0	16
114721	7.0	15
114722	2.0	12
114723	3.0	12
114724	3.0	16
114725	6.0	19
114726	4.0	14
114727	1.5	16
114728	2.5	15
114729	10.0	15
114730	1.5	14
114731	1.0	14
114732	4.5	17
114733	2.0	19
114734	1.0	12
114735	2.0	18
114736	1.5	15
114737	2.5	15
114738	2.5	14
114739	1.0	12
26-114740	0.5	12

rep

CTA MEMBER CANADIAN TESTING ASSOCIATION

CERTIFIED BY: J.G. Hilldan

Hole 522-79-26-J-7

DRILL HOLE LOG

ELDORADO

ELDORADO NUCLEAR LIMITED

PROJECT 522

DIP TESTS

METRES				DIP		LATITUDE		DEPARTURE	
TEST	FROM	TO	TOTAL		CORR.		CUM.		CUM.
COLLAR	0	125	125		60°	62.50	62.50	108.25	108.15
	125	377	252'		63°	114.41	176.91	224.53	332.78
	377	502	126		60°	63.00	239.91	109.12	441.9

LOCATION 41+20W

SECTION 29+00N

LATITUDE

DEPARTURE

ELEVATION

CORE BQ

STORAGE PROPERTY

HOLE No. 522-79-26-J-7

AZIMUTH 110°

DIP -60°

LENGTH 502'

PURPOSE EXPLORATION

COMPLETED 16/09/79

LOGGED BY W.J. OLSSON

METRES FROM	METRES TO	DESCRIPTION		CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
0'	20.0' 6.1	CASING		SEE	ACCOMPANYING	LISTS		
20.0' 6.1	260.0' 79.3	NAME:	BADLY WEATHERED LIMONITIC BIOTITE-MUSCOVITE QUARTZ MONZONITE					
		Colour:	brownish-white					
		Hardness:	4-6					
		Composition:	30% K-feldspar 25% plagioclase 25% quartz 10% biotite 10% muscovite					
		Texture:	Medium to coarse-grained. Feldspar grains are up to 5mm in size, the quartz is 2 to 3mm, and the muscovite is up to 7mm. Quartz and feldspar grains are subhedral to anhedral while the muscovite and biotite are euhedral to subhedral.					
		Structure:	A crude foliation, defined by the orientation of biotite and the elongation of quartz grains. Several fault and fracture zones are present at the following footages:					
		28.0' 8.5	Gouge in fracture cutting the core at 45°.					
		33.0' 10.1	Gouge similar to above.					
		44.0-48.0' 13.4-14.6	Sand seam.					

DRILL HOLE LOG

ELDORADO
ELDORADO NUCLEAR LIMITED

PROJECT 522
PAGE 2

METRES		DESCRIPTION	CORE SAMPLES				
FROM	TO		FROM	TO	WIDTH	%	AVERAGES

51.7-54.0' 15.8-16.5	Sand seam.
54.0-57.0' 16.5-17.4	Broken core with fractures cutting the hole at 30° and at 45°.
61.0-63.0' 18.6-19.2	Sand seam.
80.0-80.5' 24.4-24.5	Broken core.
103.9-104.4' 31.7-31.8	Broken core.
110.0-118.7' 33.5-36.2	Broken core, ground core 110-111'
120.0' 36.6	2" (5cm.) gouge cutting the core at 60°.
121.0-121.5' 36.9-37.0	Ground and broken core associated with fractures at 30° to the hole.
134.0-136.0' 40.8-41.5	Broken core accompanying fractures 45° to the hole.
145.0-146.0' 44.2-44.5	Similar to above.
150.0-151.0' 25.7-26.0	Similar to above.
156.0-158.0' 47.5-58.2	Fractures cut the core at 0°, 30° and 90°.
166.0-167.0' 50.6-50.9	Broken and ground core.
180.0-182.0' 54.9-55.5	A pegmatite vein is associated with a zone of broken core and fractures running 0° and 30° to the hole.

HOLE NO. I-7

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

188.0-188.5' Broken core.
57.3-57.5

189.5-190.0' Broken core with fractures lying 60° to the hole.
57.8-57.9

197.5-198.0' Broken core accompanying fractures 60° to the core.
60.2-60.4

203.0-204.0' Gouge in fractures lying 10° and 45° to the hole.
61.9-62.2

209.0-210.0' Broken core with fractures at 0° and 30° to the hole.
63.7-64.0

218.5-220.0' Broken core accompanying fractures at 0° to the hole.
66.6-67.1

224.0-227.0' Broken core with smokey quartz veins.
68.3-69.2

253.0-256.0' Very hard and badly broken core accompanying fractures lying 20° and 45° to the hole.
77.1-78.0

These are several zones of poor recovery as follows:

Footage	Meterage	Loss of Core
43.0- 48.0	13.1-14.6	90%
51.0- 54.0	15.5-16.5	93%
61.0- 62.0	18.6-18.9	50%
76.0- 81.0	23.2-24.7	20%
96.0-101.0	29.3-30.8	10%
176.0-181.0	53.6-55.2	20%
224.0-227.0	68.3-69.2	80%
253.0-256.0	77.1-78.0	33%

Generally fractures tend to cut the core at 30° and 45° throughout the unit.

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

Alteration: The biotite is rimmed by limonite imparting the brown hue to the colour. Staining suggests the K-feldspar formed at the expense of the plagioclase. The feldspars have been altered to sericite and kaolinite, which impart the white to the colour. Limonite is present on most fractures and is accompanied in some cases by manganese. Secondary uranium oxides (gummite) are present at 190.9' (58.2) and 201.5' (61.4). Flakes of gummite are alos present along fractures between 130.0' (39.6) and 211.0'(64.3).

Radioactivity: The core from 130.0' (39.6) to 211.0' (64.3) reads 125 to 175 cps over a background of 100 cps. The highs coincided with gummite-coated fractures at 190.9' (58.2) and 201.5' (61.4) giving a reading of 250 cps.

Mineralization: Gummite is present on fractures at 190.9' (58.2) (45° to core) and at 201.5' (61.4) (60° to the core) cutting the hole at 60°.

20.0-260.0' The unit is very weathered and possesses a chalky-brown colour due to the alteration products. The pegmatite vein cutting the core at 180' (54.9) contains 2 minerals: One is clear with striations (iron-free tourmaline?) and the second is brown-black and in the centre of a garnet(rutile?). There is a chill margin of 6" (15cm) or so on the downhole side of the vein which lies at 30° to the core.
Although only 2 fractures have a large amount of gummite in them (190.9' (58.2) and 201.5' (61.4)), most other fractures between 130.0' (39.6) and 211.0' (64.3) have some traces of U-oxides along them.
A vein of very smokey quartz, which cored very poorly, is present at 224.0' (68.3) to 227.0' (69.2).
The bottom of the unit is marked by a fracture zone which is coated with epidote/serpentine.

METRES FROM	METRES TO	DESCRIPTION	CORE SAMPLES FROM	TO	WIDTH	%	AVERAGES
60.0'	502.0'	NAME: MUSCOVITE-BIOTITE-QUARTZ MONZONITE					

NAME: MUSCOVITE-BIOTITE-QUARTZ MONZONITE

Colour: Steel blue grey

Hardness: 6-8

Composition:
40% plagioclase
20% K-feldspar
25% quartz
5-10% muscovite
5-10% biotite

Texture: Medium to coarse-grained.
The feldspar and quartz crystals are anhedral and are up to 5mm in size. Biotite tends to be anhedral to subhedral and very fine-grained, while muscovite crystals are euhedral to subhedral and up to 8mm in size.

Structure: Fractures tend to cut the core at 30°, 45° and 60°. No major faults are present in this unit. Broken core signifying fractured zones appears as follows:

282.0' (86.0): Broken core.
334.0' (101.8): Broken core with some gouge.
360.0-363.0' (109.7-110.6): 3' (0.9) of caved material.
395.0-396.0' (120.4-120.7): Broken core with fractures lying 45° to the hole.

There are 2 bands of dark, smokey quartz at 360.0' (109.7) and at 396.0' (120.7). In both instances, some loss of core accompanies these footages.
Several veins of pegmatite are present as follows:
280.0' (85.3); 396.0-397.0' (120.7-121.0); 475.0-477.0' (144.8-145.4); 493.0-494.0' (150.3-150.6); 502.0' (153.0).

Loss of core within the unit is as follows:

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

Footage	Meterage	Loss of Core
285.0-287.0	86.9-87.5	25%
287.0-292.0	87.5-89.0	20%
334.0-340.0	101.8-103.6	17%
360.0-365.0	109.7-111.3	20%
395.0-397.0	120.4-121.0	25%

All other footages had less than a 5% loss of core.

Alteration: Biotite has been partially altered to chlorite while the feldspars have been partially altered to sericite and kaolin. The plagioclase appears to be less altered than the K-feldspar. The quartz veins are comprised of very smokey quartz, pitch black in colour. Stilbite is present in the shallow dipping fractures.

Radioactivity: None detected by the BGS-1SL or the downhole probe.

Mineralization: None

260.0-502.0'
79.2-153.0

The unit is quite fresh-looking compared to the previous unit. It is competent with 4' (1.2) sections of core not uncommon. Fractures tend to be tight. The smokey quartz veins are prominent but there is no radioactivity associated with them.

END OF HOLE.

PROJECT 522

ANALYTICAL RESULTS DDH 522-79-26-J-7

SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY $\%U_3O_4$	GEOCHEMICAL ASSAY $\%U_3O_4$	ppm U	ppm Th
111523	105			7.0	15
111524	110			19.5	12
111525	115			8.0	15
111526	120			42.0	13
111527	125			15.0	16
111528	130			5.5	15
14651	133-134		.003		
14652	134-135	.017			
14653	135-136		.078		
14654	136-137		.004		
14655	137-138		.004		
14656	138-139		.002		
14657	139-140		.003		
14658	140-141		.003		
14659	141-142		.003		
14660	142-143	.0078	.002		
14661	143-144		.002		
14662	144-145		.004		
14663	145-146		.008		
14664	146-147		.004		
14665	147-148		.010		
14666	148-149		.003		
14667	149-150		.002		
14668	150-151		.004		
14669	151-152		.014		
14670	152-153		.001		
14671	153-154		.001		
14672	154-155		.001		
14673	155-156		.002		
14674	156-157		.007		
14675	157-158		.004		
14676	158-159	.0064	.002		
14677	159-160		.002		
14678	160-161		.002		
14679	161-162		.002		
14680	162-163		.002		
14681	163-164		.002		

ANALYTICAL RESULTS
DDH 522-79-26-J-7

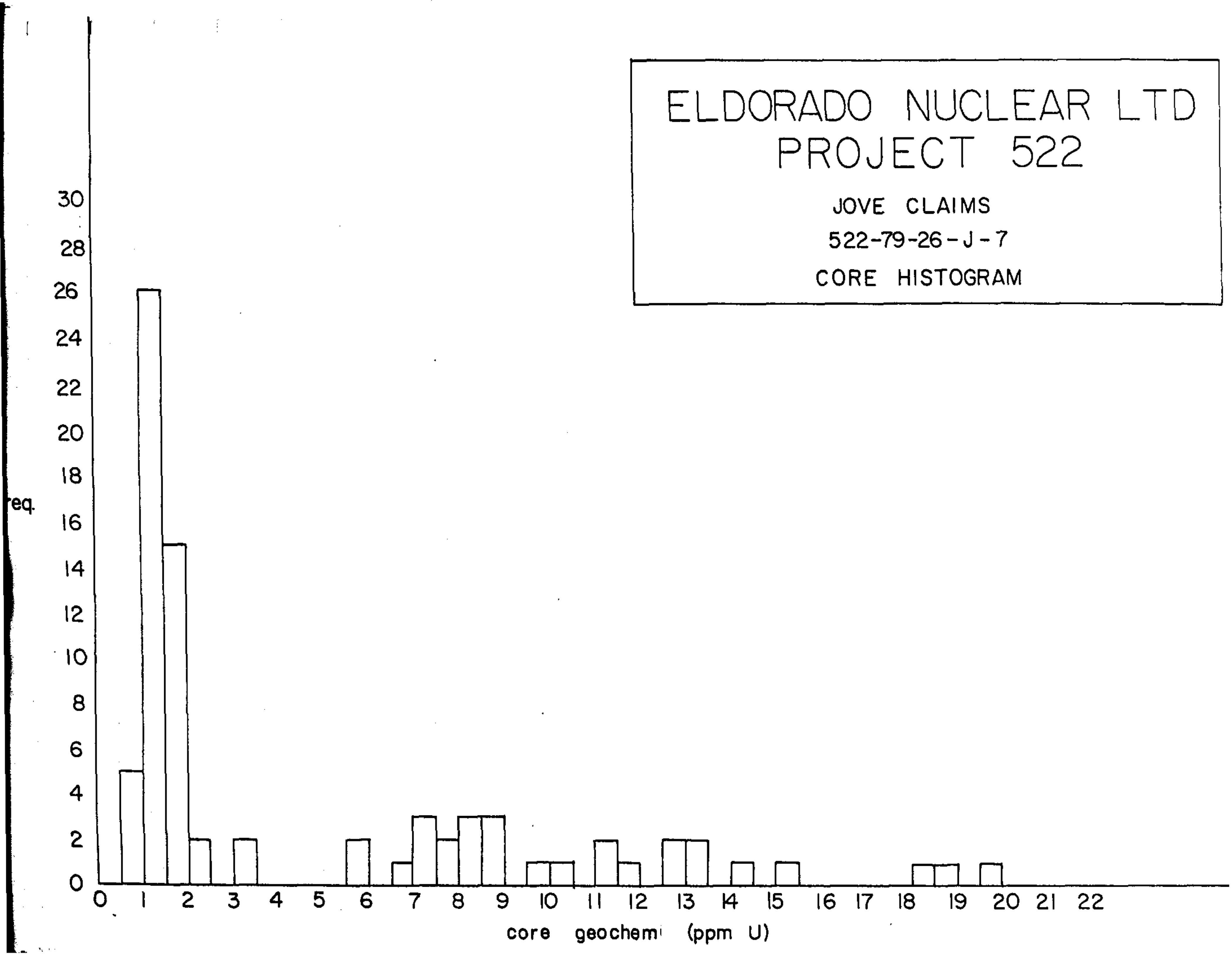
SAMPLE NUMBER	FOOTAGE	RADIOMETRIC ASSAY %U_3O_4	GEOCHEMICAL ASSAY %U_3O_4	ppm U	ppm Th
14615	0-5				
14616	5-10				
14617	10-15				
14718	15-20				
111506	20			2.0	2
14619	20-25				
111507	25			53.0	13
14620	25-30				
111508	30			7.0	15
14621	30-35				
111509	35			11.0	15
14622	35-40				
111510	40			7.5	16
14623	40-45				
111511	45			13.0	15
14624	45-50				
111512	50			12.5	16
14625	50-55				
111513	55			18.5	15
14626	55-60				
111514	60			18.0	15
14627	60-65				
111515	65			7.0	14
14628	65-70				
111516	70			11.5	13
14629	70-75				
111517	75			8.0	15
14630	75-80				
111518	80			11.0	17
14631	80-85				
111519	85			8.5	14
14632	85-90				
111520	90			13.0	13
14633	90-95				
111521	95			10.0	14
14634	95-100				
111522	100			5.5	13

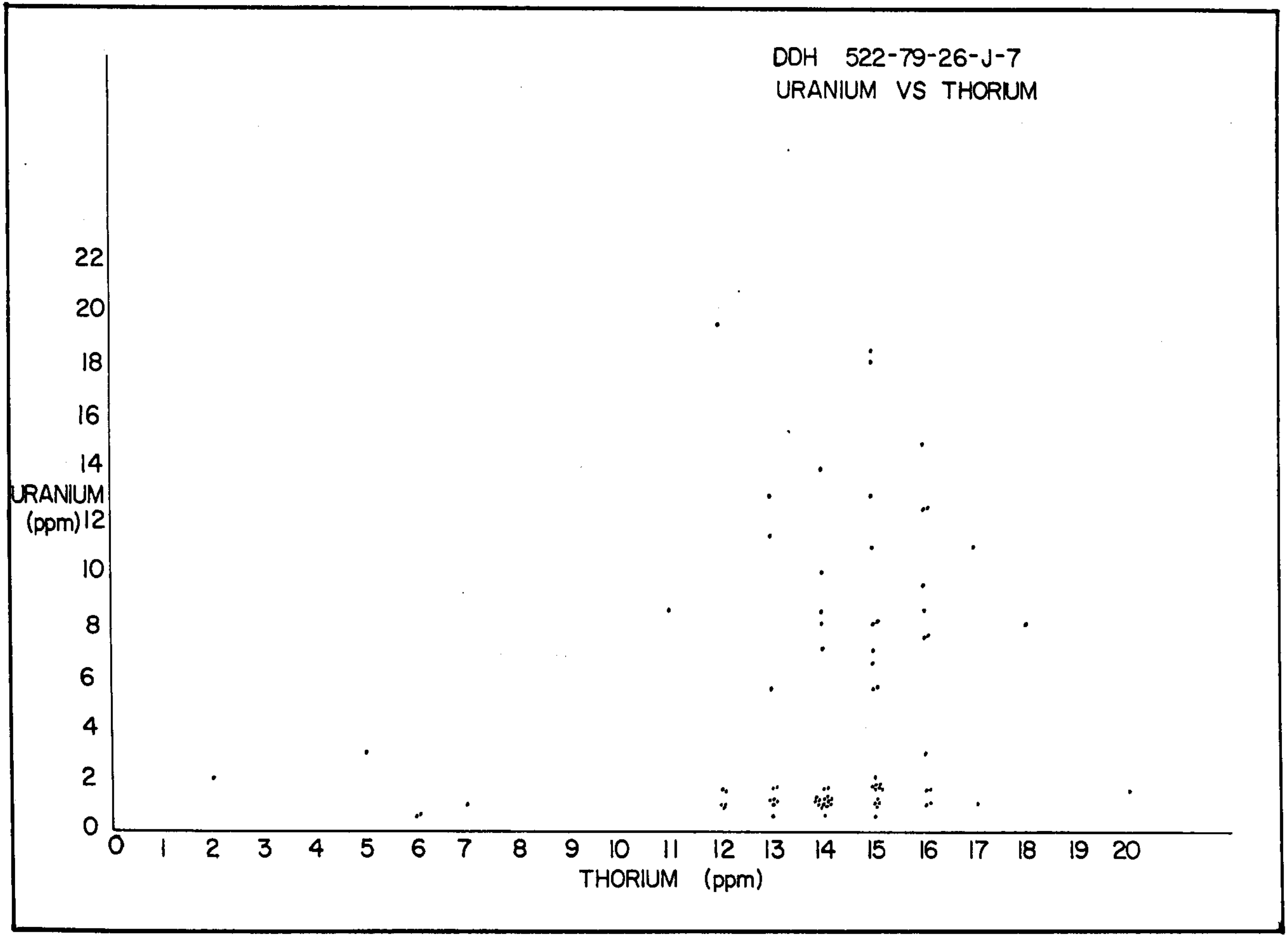
ELDORADO NUCLEAR LTD
PROJECT 522

JOVE CLAIMS

522-79-26-J-7

CORE HISTOGRAM





DDH 522-79-26-J-7
URANIUM VS THORIUM
URANIUM (ppm)
0
2
4
6
8
10
12
14
16
18
20
22
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
THORIUM (ppm)

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 ANALYSIS

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9
ATTN: Project 522 ROCKS

J6/J7

CERTIFICATE NO. 50829
INVOICE NO. 33230-U
34061-Th
RECEIVED Sept. 21/79
ANALYSED Oct. 16/79

SAMPLE NO. :	PPM U	PPM Th
26-114741	2.5	19
114742	2.0	14
114743	2.5	16
114744	1.0	15
114745	1.0	14
114746	1.0	17
114747	1.0	15
114748	0.5	17
114749	0.5	15
114750	1.0	6
114751	1.5	7
114752	1.5	6
114753	1.5	9
114754	0.5	14
114755	0.5	12
114756	0.5	13
114757	0.5	12
114758	0.5	11
114759	1.5	13
114760	1.0	11
114761	0.5	13
114762	1.5	16
114763	1.0	17
114764	2.0	12
114765	1.5	14
111537	1.0	14
111538	1.0	14
111539	0.5	15
111540	0.5	13
111541	0.5	6
111542	1.0	7
111543	0.5	16
111544	1.5	12
111545	1.0	13
111546	1.0	15
111547	1.0	16
111548	1.0	14
111549	1.5	12
111550	1.0	14
26-111551	1.5	14

J-6

J-7

CERTIFIED BY: [signature]

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 ANALYSIS

TO: Eldorado Nuclear Ltd.,
STe. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: Project 522 - Rocks

CERTIFICATE NO. 50830
INVOICE NO. 33230 -U
34061 -Th
RECEIVED Sept. 21/79
ANALYSED Oct. 16/79

SAMPLE NO. :	PPM U	PPM Th
26-111552	0.5	14
111553	1.0	14
111554	1.0	14
111555	1.0	14
111556	1.0	12
111557	1.0	12
111558	1.0	14
111559	1.0	15
111560	1.0	13
111561	1.0	13
111562	1.0	14
111563	1.5	13
111564	1.5	16
111565	3.0	5
111566	1.5	15
111567	1.5	15
111568	1.0	14
111569	1.5	15
111570	3.0	16
111571	1.5	16
111572	1.5	15
111573	1.0	12
111574	1.5	13
111575	1.0	15
111576	1.0	15
111577	1.0	16
111578	1.0	17
111579	1.5	14
111580	2.0	15
111581	1.0	14
111582	1.5	15
111583	1.0	14
111584	1.5	15
26-111585	1.5	20

CERTIFIED BY: D.F. McGladrey

CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J2C1
TELEPHONE: 984-0221
AREA CODE: 604
TELEX: 04-352597

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 50950

INVOICE NO. 33274 - U
34061-Th

RECEIVED September 21, 19

ANALYSED October 18, 1979

TO: Eldorado Nuclear Ltd.,
Ste. 400 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: C.C & INV. W. olsson Rocks

SAMPLE NO. :	PPM U	PPM Th
26 - 111506	2.0	2
111507	53	13
111508	7.0	15
111509	11.0	15
111510	7.5	16
111511	13.0	15
111512	12.5	16
111513	18.5	15
111514	18.0	15
111515	7.0	14
111516	11.5	13
111517	8.0	15
111518	11.0	17
111519	8.5	14
111520	13.0	13
111521	10.0	14
111522	5.5	13
111523	7.0	15
111524	19.5	12
111525	8.0	15
111526	42	13
111527	15.0	16
111528	5.5	15
111529	6.5	15
111530	14.0	14
111531	9.5	16
111532	8.0	18
111533	8.5	16
111534	12.5	16
111535	7.5	16
26 - 111536	8.5	11

CERTIFIED BY: D.F. McGoldrin

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. 66482
INVOICE NO. 33192
RECEIVED Sept. 21/79
ANALYSED Oct. 15/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: Project - 522

J7

SAMPLE NO. :	% U308 (N.A.)
14597	0.001
14598	0.001
14599	0.002
14600	0.001
14601	0.002
14602	0.002
14603	0.002
14604	0.002
14605	0.001
14606	0.001
14607	0.001
14608	0.001
14609	0.001
14610	0.001
14611	0.001
14612	0.001
14613	0.010
14614	0.002
14651	0.003
14652	0.078
14653	0.051
14654	0.004
14655	0.004
14656	0.002
14657	0.003
14658	0.003
14659	0.003
14660	0.002
14661	0.002
14662	0.004
14663	0.008
14664	0.004
14665	0.010
14666	0.003
14667	0.002
14668	0.004
14669	0.014
14670	0.001
14671	0.001
14672	0.001

J-6

in reports

B L Twaite
REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

CTA
MEMBER
CANADIAN TESTING
ASSOCIATION

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. 66483
INVOICE NO. 33192
RECEIVED Sept. 21/79
ANALYSED Oct. 15/79

TO: Eldorado Nuclear Ltd.,
Ste. 400 - 255 Albert St.,
Ottawa, Ont.
K1P 6A9

ATTN: Project - 522

5-7

SAMPLE NO. :	% U308 (N.A.)
14673	0.002
14674	0.007
14675	0.004
14676	0.002
14677	0.002
14678	0.002
14679	0.002
14680	0.002
14681	0.002
14682	0.003
14683	0.003
14684	0.010
14685	0.003
14686	0.001
14687	0.001
14688	0.001
14689	0.001
14690	0.001
14691	0.008
14692	0.001
14693	0.001
14694	0.001
14695	0.001
14696	0.001
14697	0.001
14698	0.001
14699	0.001
14700	0.001
14701	0.001
14702	0.001
14703	0.001
14704	0.001
14705	0.002
14706	0.054
14707	0.182
14708	0.029
14709	0.003
14710	0.002
14711	0.002
14712	0.001

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

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Ottawa, Ont.
K1P 6A9
ATTN: Project - 522

5-7

SAMPLE NO. :	% U_3O_8 (N.A.)
14713	0.001
14714	0.001
14715	0.002
14716	0.002
14717	0.001
14718	0.015
14719	0.012
14720	0.015
14721	0.019
14722	0.004
14723	0.007
14724	0.034
14725	0.005
14726	0.004
14727	0.003
14728	0.002
14729	0.001
14730	0.002
14731	0.002
14732	0.003

CTA MEMBER CANADIAN TESTING ASSOCIATION

REGISTERED ASSAYER, PROVINCE OF BRITISH COLUMBIA

DISPOSITION SUMMARY

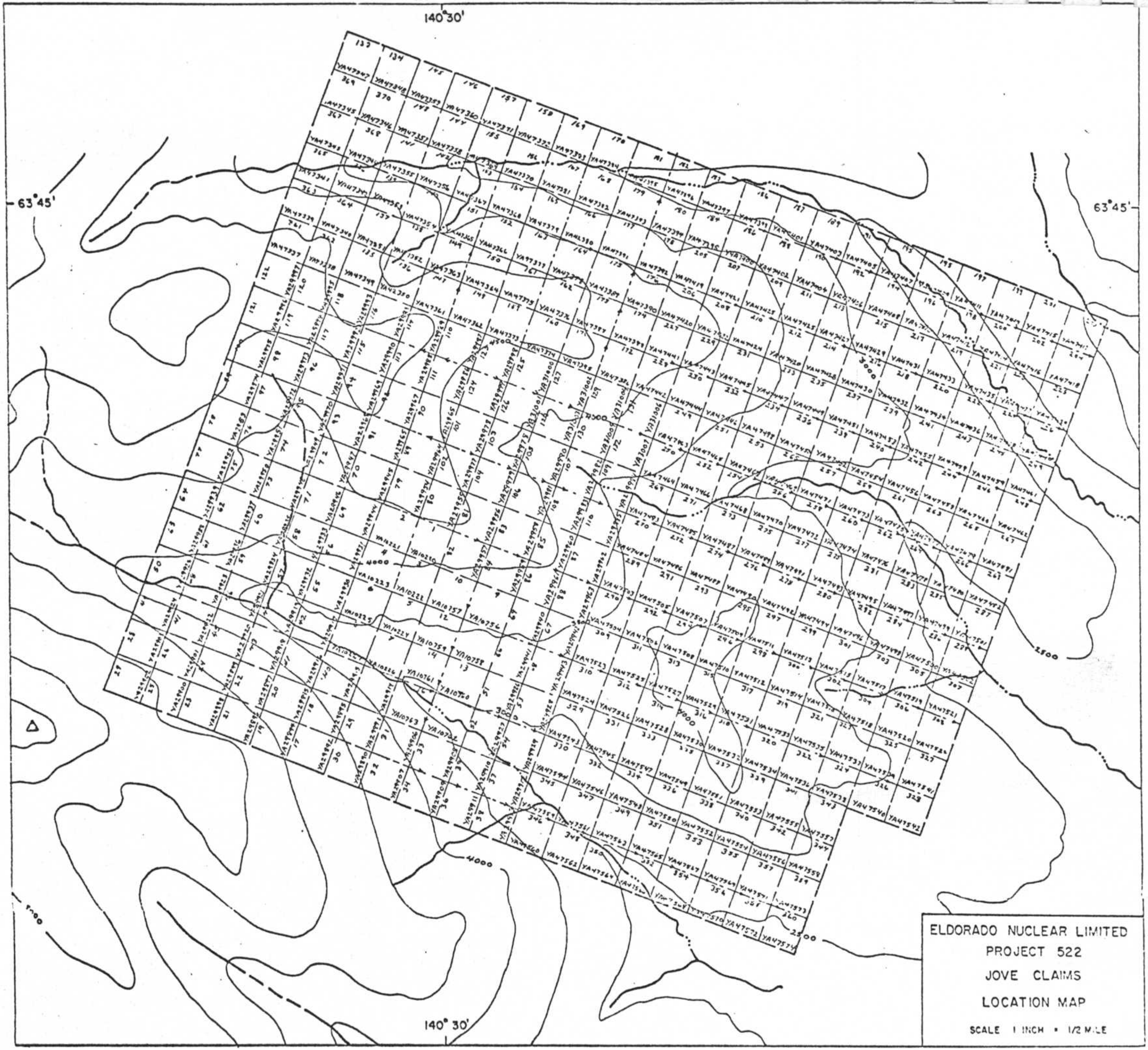
JOVE 1-370

JOVE CLAIMS

CLAIMS	GRANT NUMBER	RECORDING DATE	*EXPIRY DATE
JOVE 1-8	YA10220-YA10227	June 7/77	June 8/83
JOVE 9-16	YA10756-YA10763	Aug.27/77	Mar. 9/81
JOVE 17-132	YA29892-YA31007	June 9/78	Mar. 9/81
JOVE 119-122F	YA32578-YA32581	June 8/79	June 8/80
JOVE 133-360	YA47347-YA47574	Sept.3/79	Sept.3/80
JOVE 361-370	YA47337-YA47338	Sept.3/79	Sept.3/80

* The Expiry Date shown is based on the Certificates of Work on hand in Eldorado's files. Work from 1979 will be submitted later in the spring to revise the dates.

Acreage = 19,146 acres.



ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS
LOCATION MAP

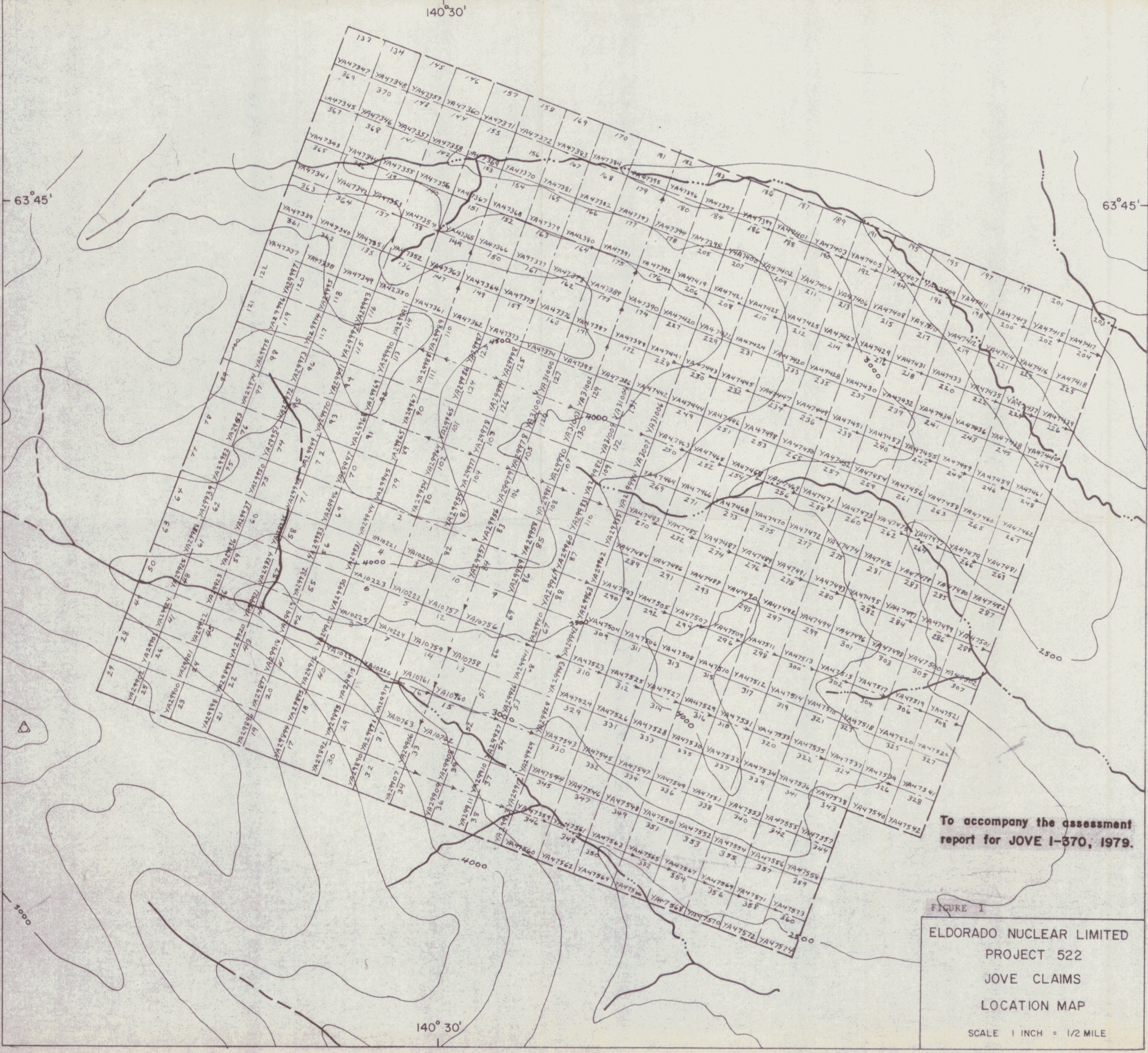
SCALE 1 INCH = 1/2 MILE

MAPS TO ACCOMPANY THE

ASSESSMENT REPORT

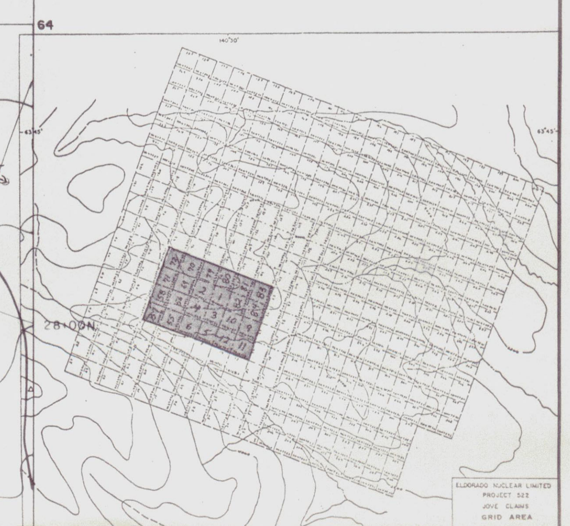
ON JOVE MINERAL CLAIMS 1979

090657



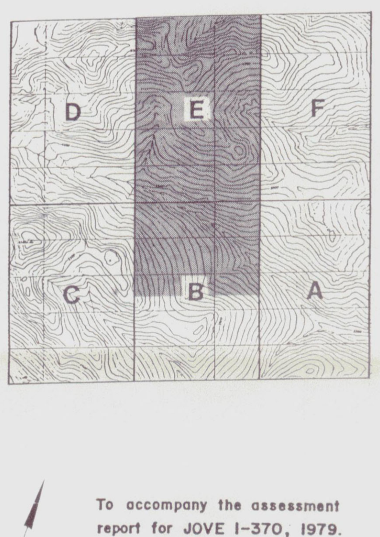
140°30'
63°45'
63°45'
140°30'
To accompany the assessment report for JOVE 1-370, 1979.
FIGURE 1
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS
LOCATION MAP
SCALE 1 INCH = 1/2 MILE

090657



LEGEND

DEFINITE ANOMALY
PROBABLE ANOMALY
POSSIBLE ANOMALY



To accompany the assessment report for JOVE 1-370, 1979.

Fig. 3a

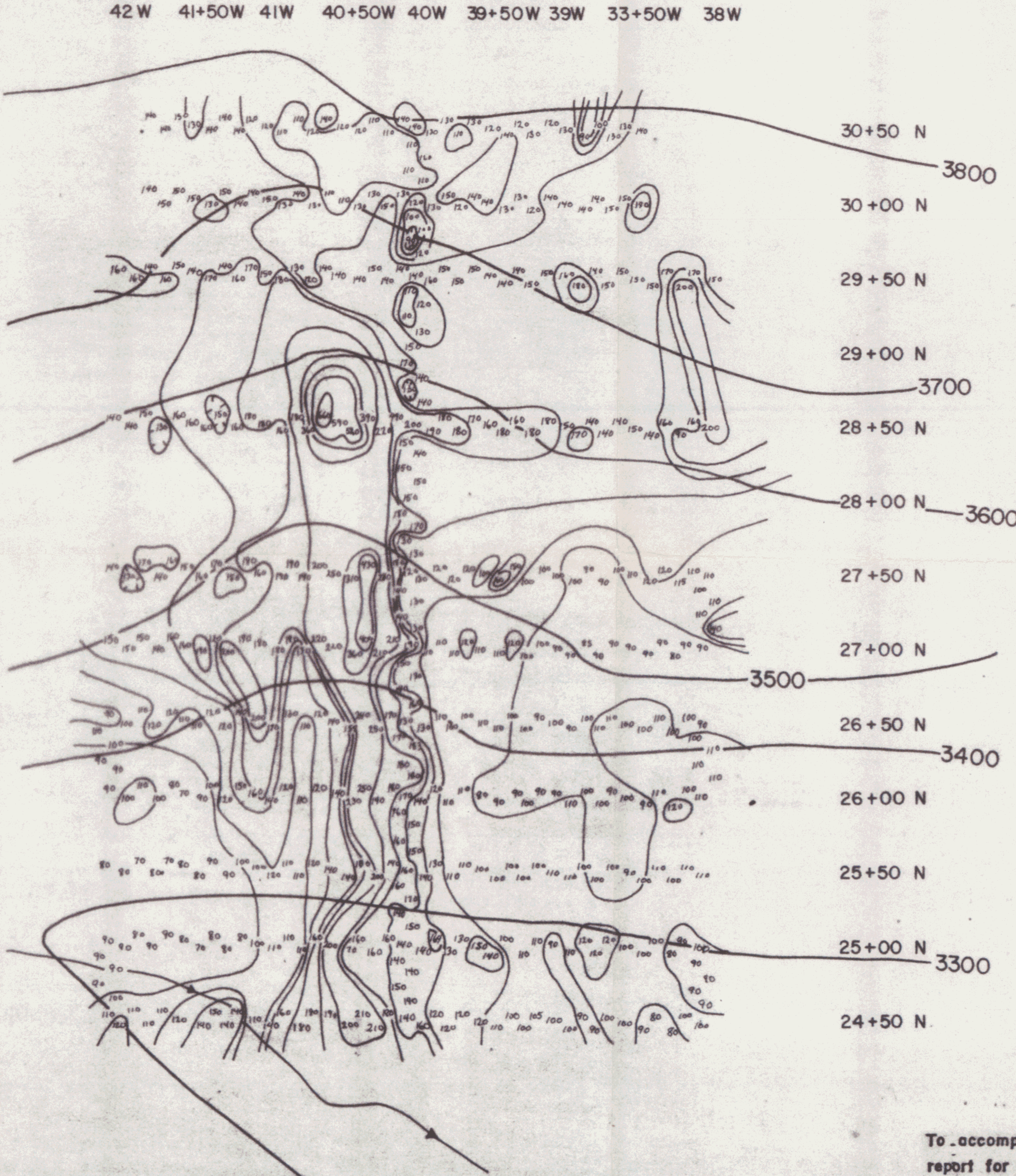
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS

QUADRANTS E & B

09065+

SCALE 1:5000

100 50 0 100 200 300m



To accompany the assessment report for JOVE 1-370, 1979.

CONTOUR INTERVAL

	-	100 ppm
100	-	120 "
120	-	140 "
140	-	160 "
160	-	180 "
180	-	200 "
200	-	300 "
300	-	400 "
400	-	500 "
500	-	600 "
	-600	

Fig 5a

ELDORADO NUCLEAR LTD

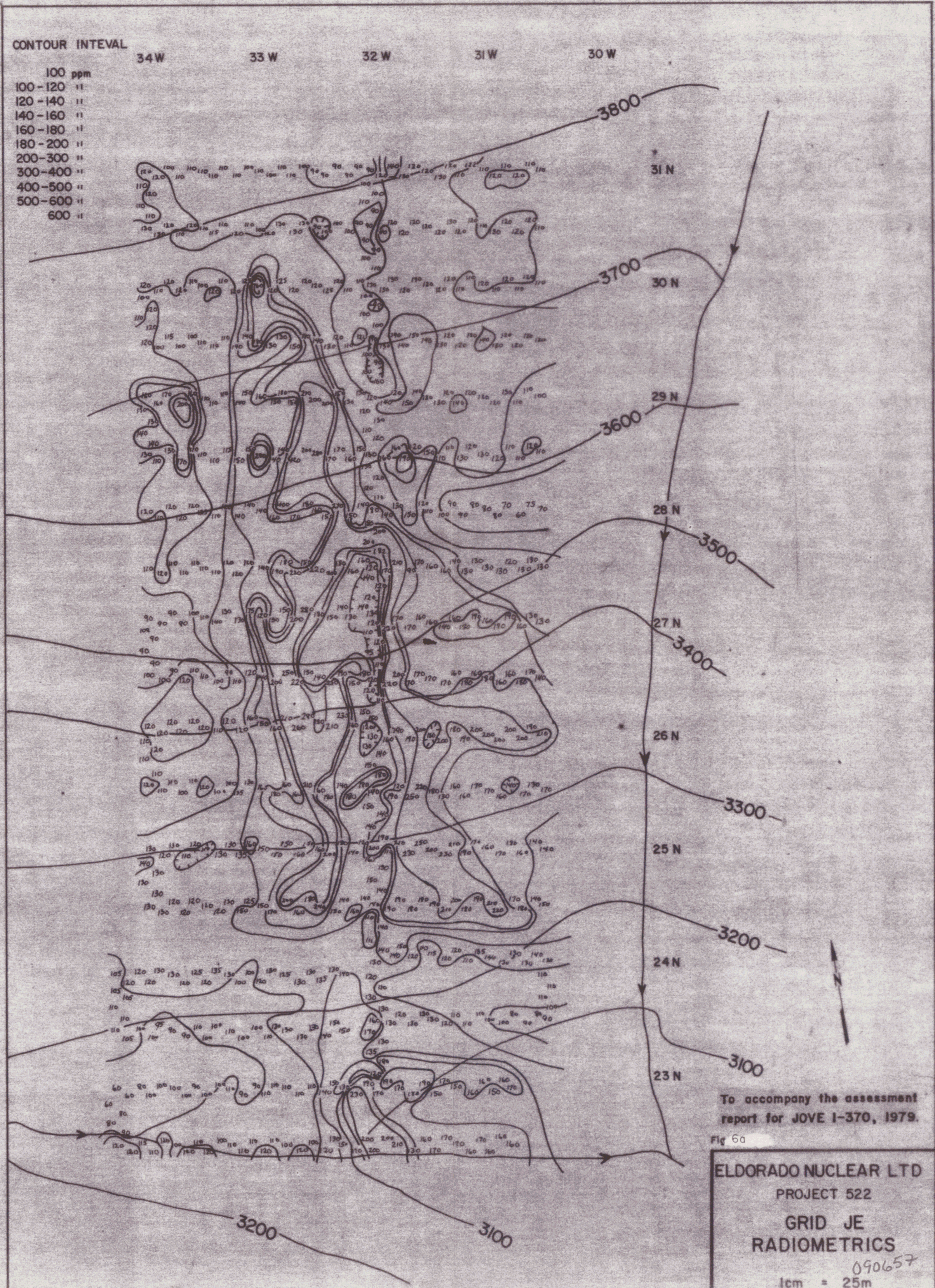
PROJECT 522

GRID JC
RADIOMETRICS

1cm = 25m

1979

090657


CONTOUR INTEVAL
100 ppm
100-120 "
120-140 "
140-160 "
160-180 "
180-200 "
200-300 "
300-400 "
400-500 "
500-600 "
600 "
34W
33 W
32 W
31 W
30 W
31 N
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
3800
3700
3600
3500
3400
3300
3200
3100
N
To accompany the assessment report for JOVE I-370, 1979.
Fig 6a
ELDORADO NUCLEAR LTD
PROJECT 522
GRID JE
RADIOMETRICS
090657
1cm = 25m
1979

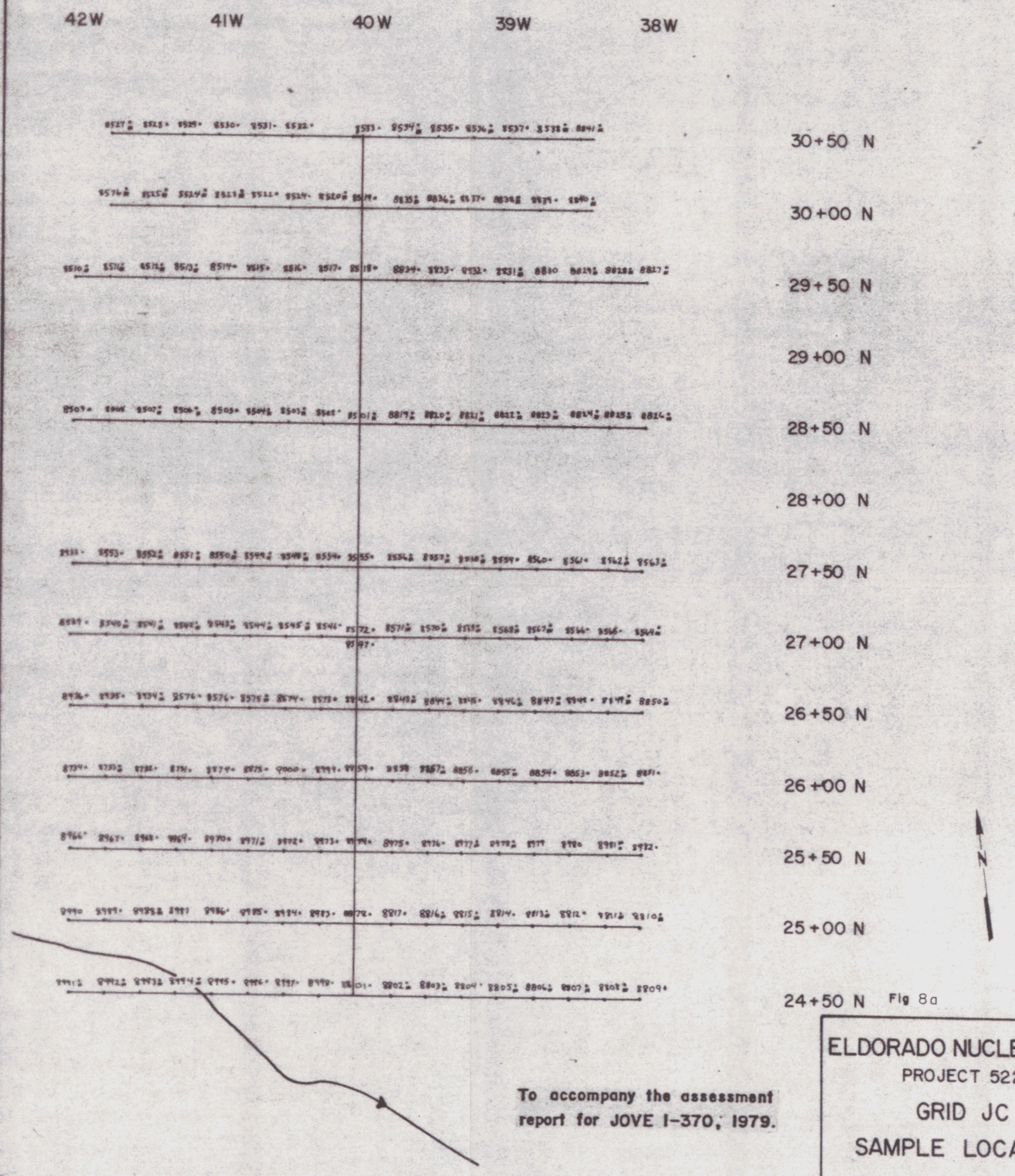


Fig 8a

To accompany the assessment report for JOVE 1-370, 1979.

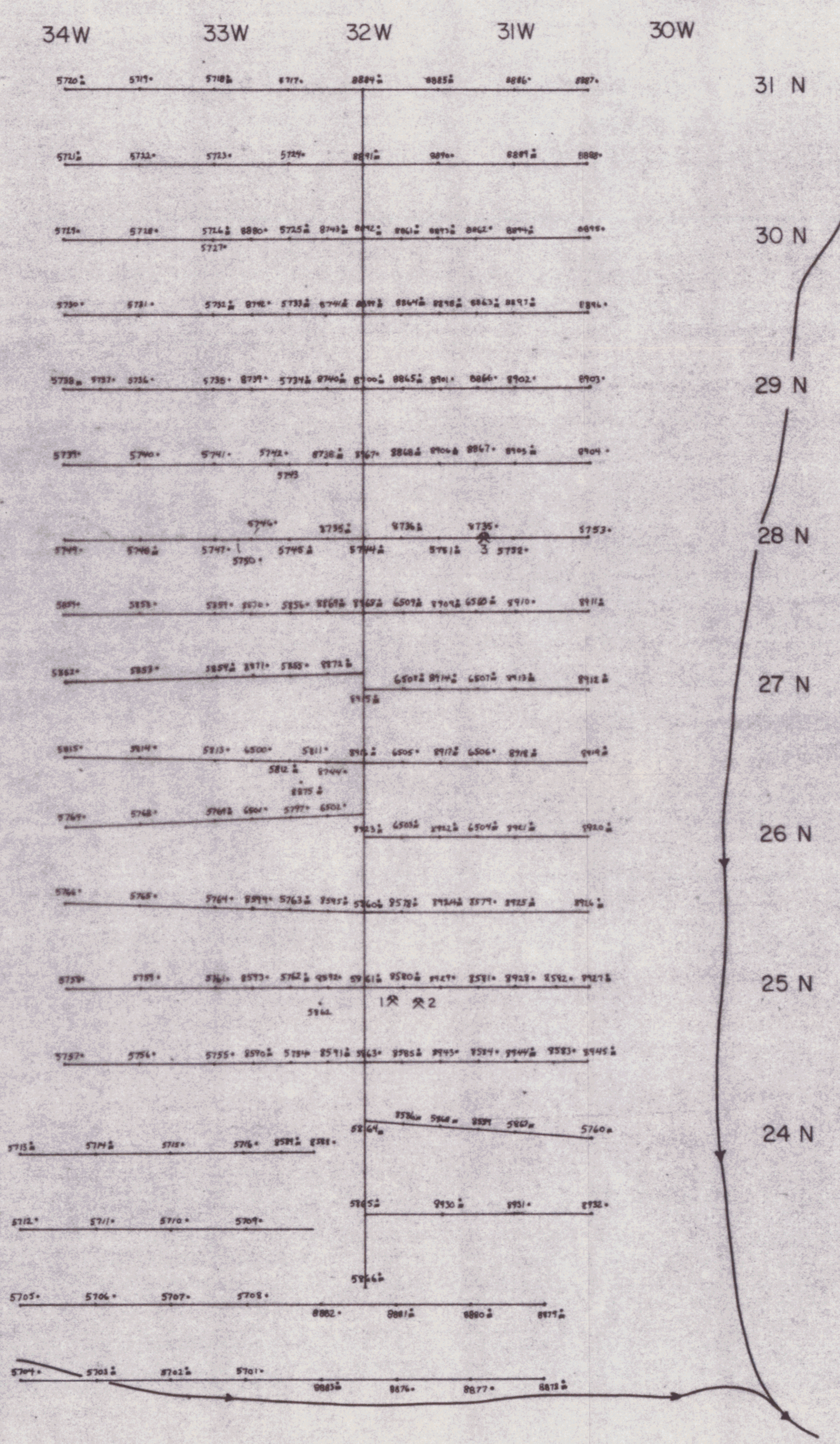
ELDORADO NUCLEAR LTD
PROJECT 522

GRID JC
SAMPLE LOCATIONS

1cm = 25m

1979

090657



LEGEND

⚒ SOIL PIT & NUMBER

To accompany the assessment report for JOVE 1-370, 1979.

Fig 8b

ELDORADO NUCLEAR LTD

PROJECT 522

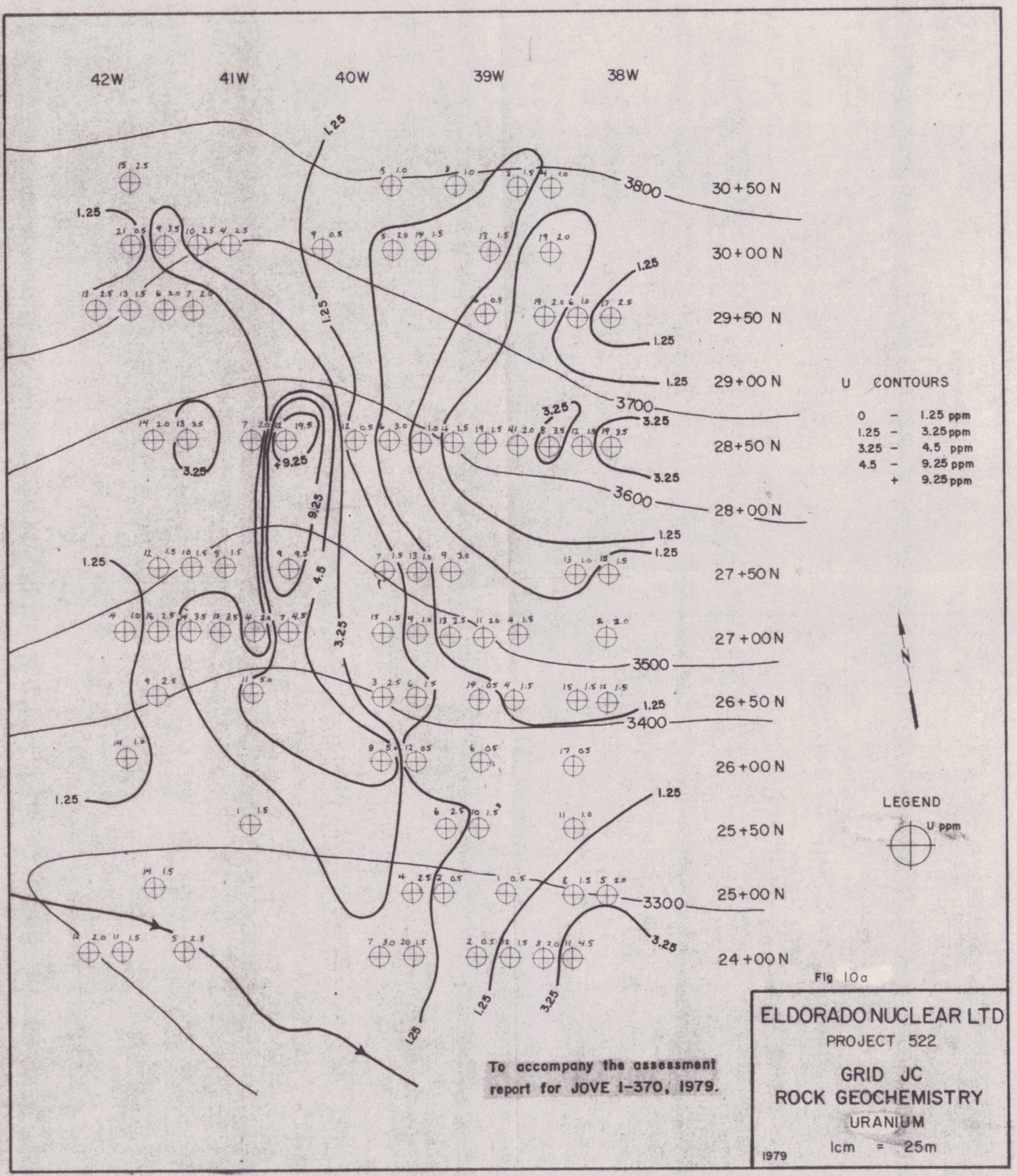
GRID JE

SAMPLE LOCATIONS

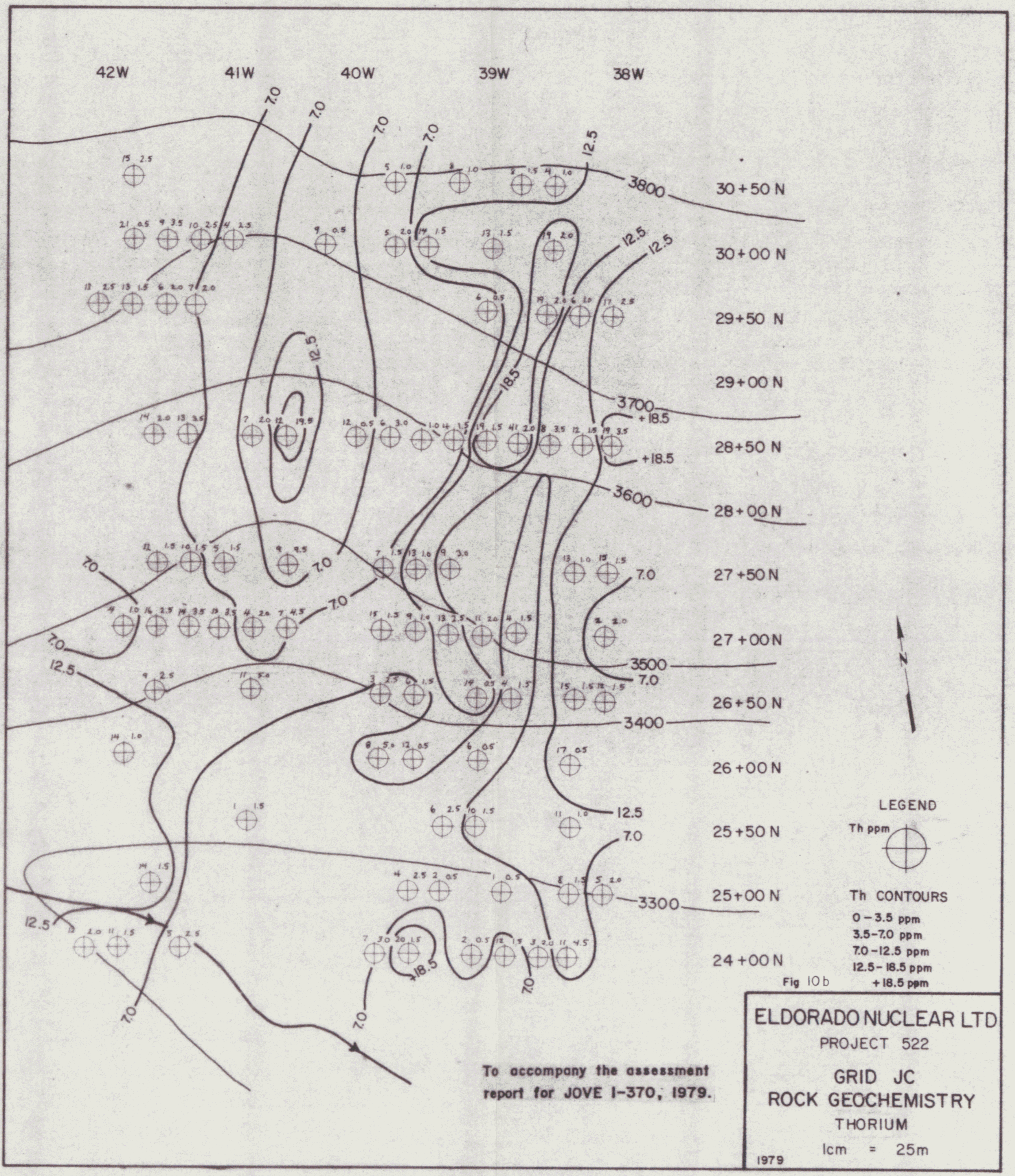
1cm = 25m

1979

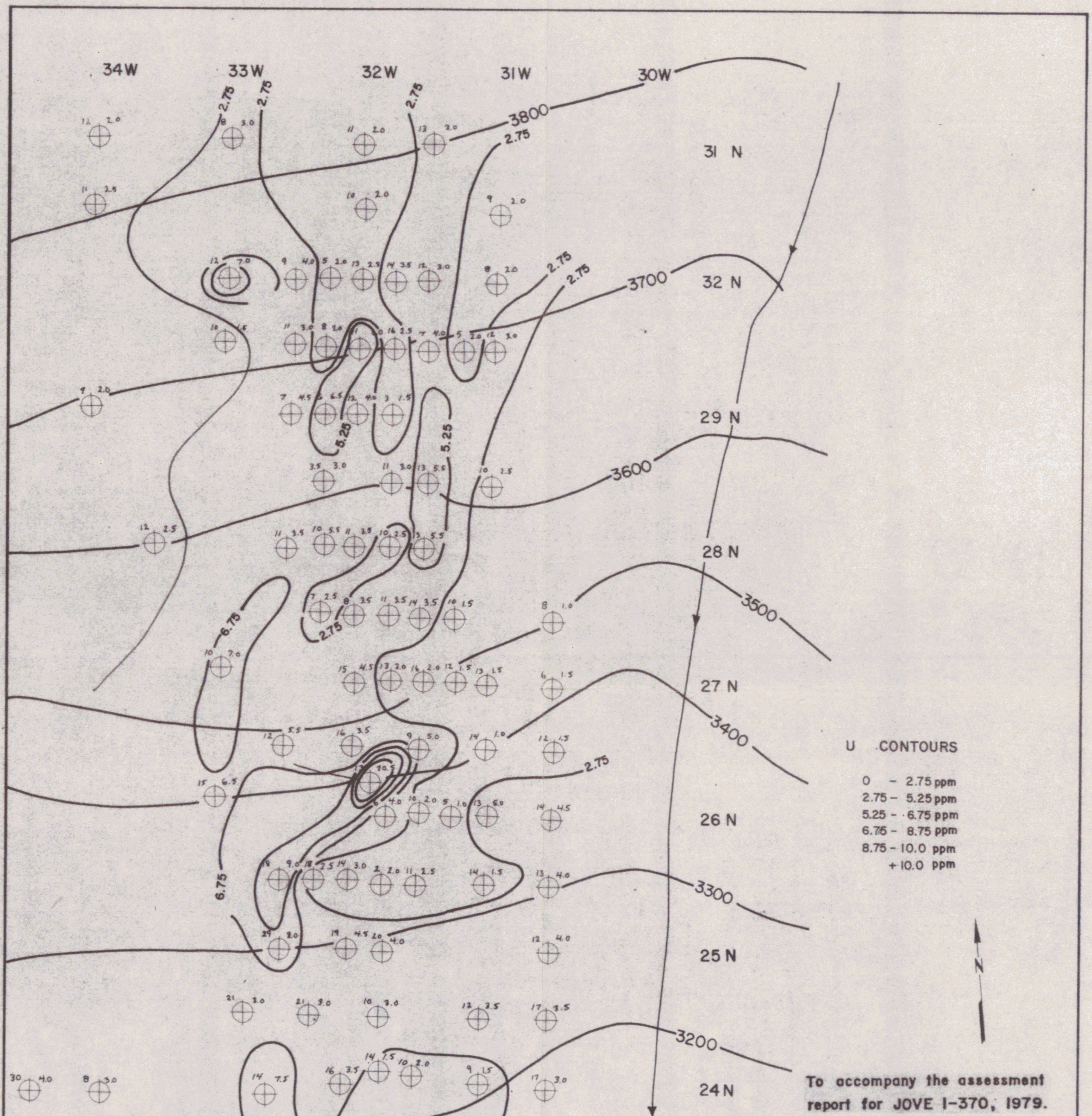
090657


42W
41W
40W
39W
38W
30+50 N
30+00 N
29+50 N
29+00 N
28+50 N
28+00 N
27+50 N
27+00 N
26+50 N
26+00 N
25+50 N
25+00 N
24+00 N
3800
3700
3600
3500
3400
3300
U CONTOURS
0 - 1.25 ppm
1.25 - 3.25 ppm
3.25 - 4.5 ppm
4.5 - 9.25 ppm
+ 9.25 ppm
N
LEGEND
U ppm
Fig 10a
To accompany the assessment report for JOVE 1-370, 1979.
ELDORADO NUCLEAR LTD
PROJECT 522
GRID JC
ROCK GEOCHEMISTRY
URANIUM
1979
1cm = 25m

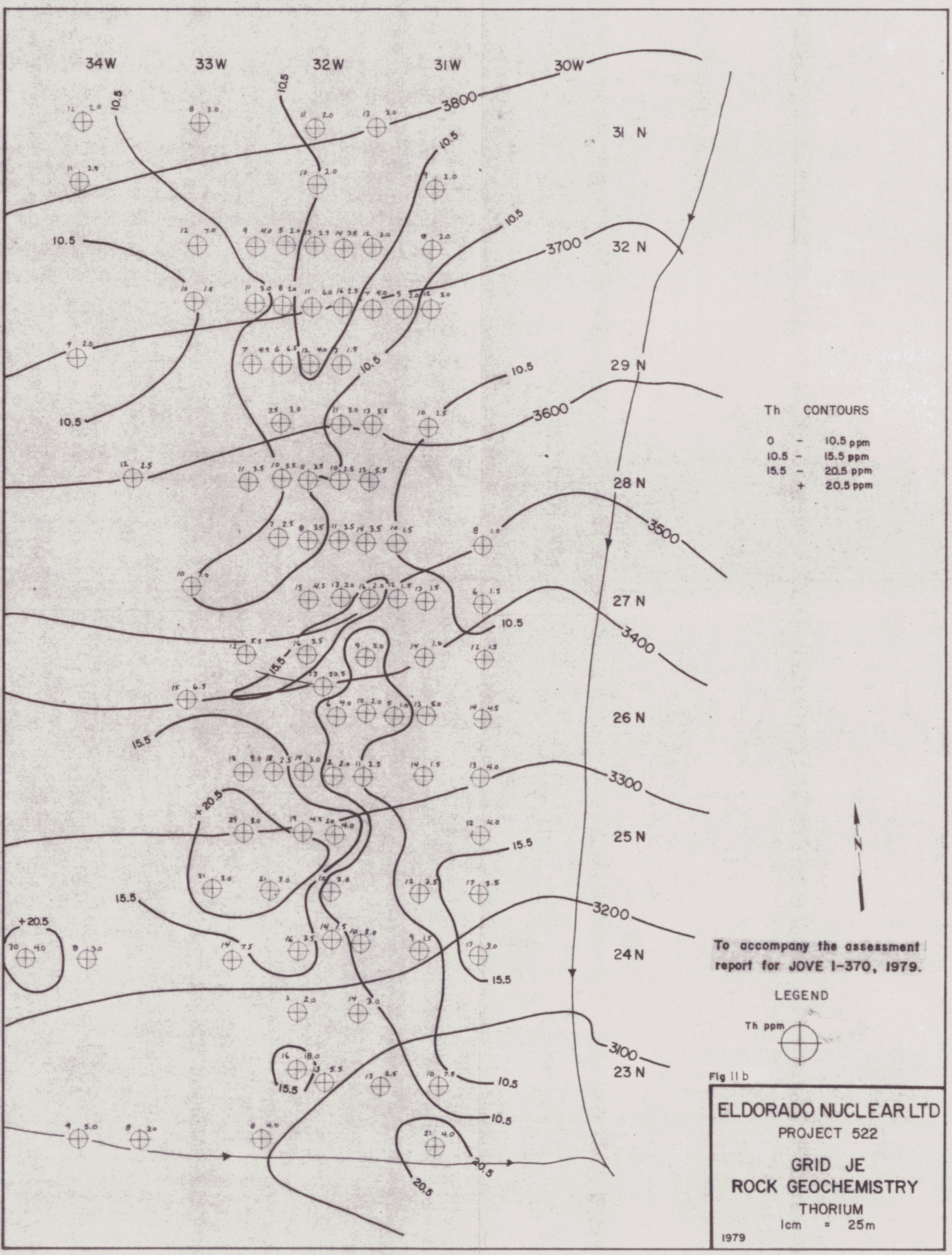
090657


42W
41W
40W
39W
38W
30+50 N
30+00 N
29+50 N
29+00 N
28+50 N
28+00 N
27+50 N
27+00 N
26+50 N
26+00 N
25+50 N
25+00 N
24+00 N
3800
3700
3600
3500
3400
3300
LEGEND
Th ppm
Th CONTOURS
0 - 3.5 ppm
3.5-7.0 ppm
7.0-12.5 ppm
12.5-18.5 ppm
+18.5 ppm
N
Fig 10b
To accompany the assessment report for JOVE 1-370, 1979.
ELDORADO NUCLEAR LTD
PROJECT 522
GRID JC
ROCK GEOCHEMISTRY
THORIUM
1cm = 25m
1979

090657


34W
33W
32W
31W
30W
31 N
32 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
3800
3700
3600
3500
3400
3300
3200
3100
2.75
5.25
6.75
U CONTOURS
0 - 2.75 ppm
2.75 - 5.25 ppm
5.25 - 6.75 ppm
6.75 - 8.75 ppm
8.75 - 10.0 ppm
+10.0 ppm
N
To accompany the assessment report for JOVE 1-370, 1979.
LEGEND
U ppm
Fig 11a
ELDORADO NUCLEAR LTD
PROJECT 522
GRID JE
ROCK GEOCHEMISTRY
URANIUM
1cm = 25m
1979

090657



To accompany the assessment report for JOVE 1-370, 1979.

Fig 11 b

ELDORADO NUCLEAR LTD
PROJECT 522

GRID JE
ROCK GEOCHEMISTRY
THORIUM
1cm = 25m

1979

090657


U-1
U-2
U-3
U-4
U-5
U-6
U-7
U-8
U-9
URANIUM ANOMALY
SYMBOLS
Data from 1977 (sample location)
" " 1978 " "
" " 1979 " "
" " 1980 " "
To accompany the assessment report for JOVE 1-370, 1979.
D
E
F
C
B
A
CONTOURS
< 1
1 - 5
5 - 10
10 - 20
20 - 50
50 - 100
100 >
Fig 12a
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS
QUADRANTS E & B
DATA COMPILATION - URANIUM IN SOILS
SCALE 1:5000
100 50 0 100 200 300m
1979
28+00N
23+00N
18+00N
13+00N
35+00W
30+00W
25+00W
20+00W
15+00W
10+00W
090657

Fig 12b

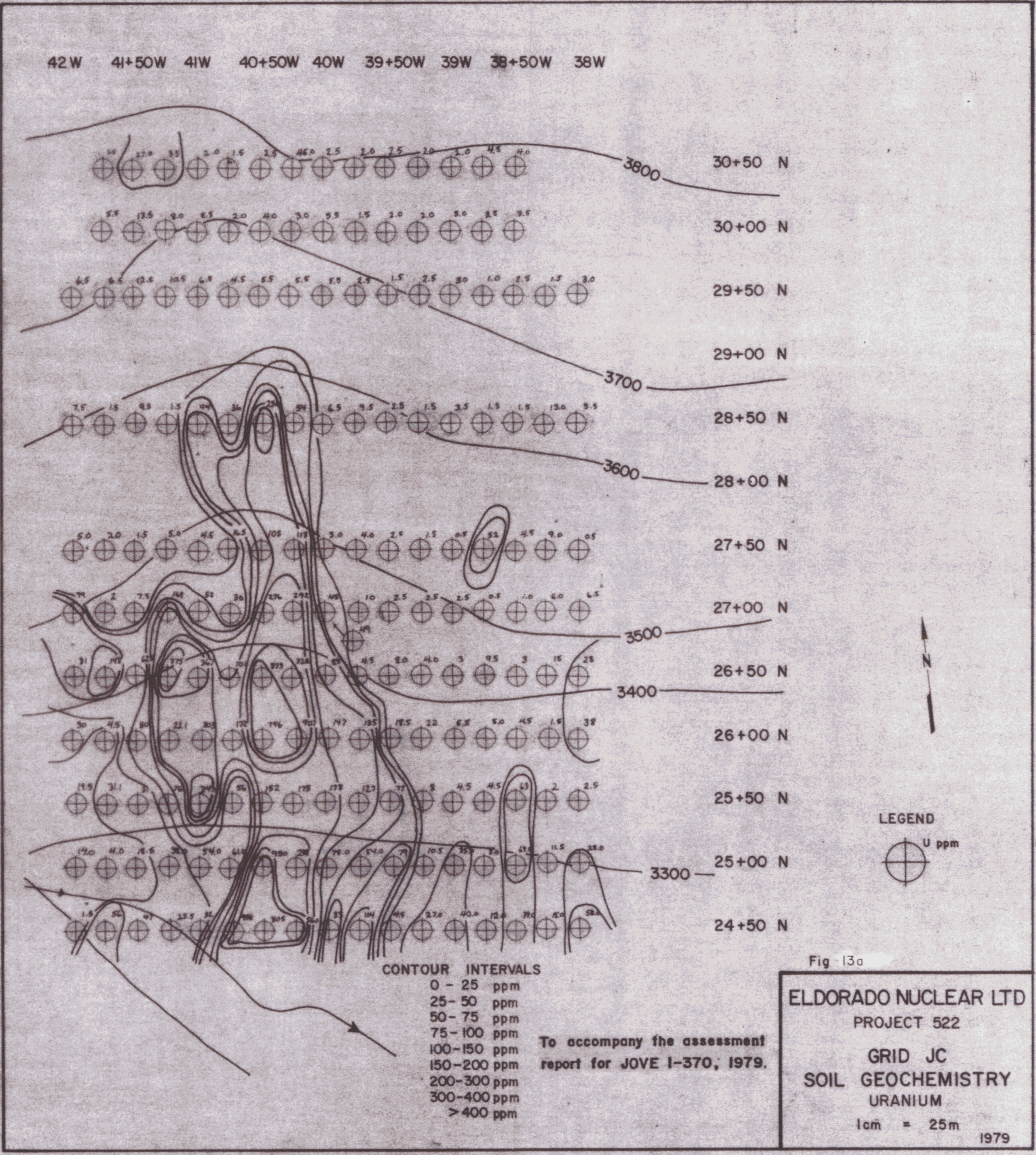
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS
QUADRANTS E & B

DATA COMPILATION – THORIUM IN SOILS

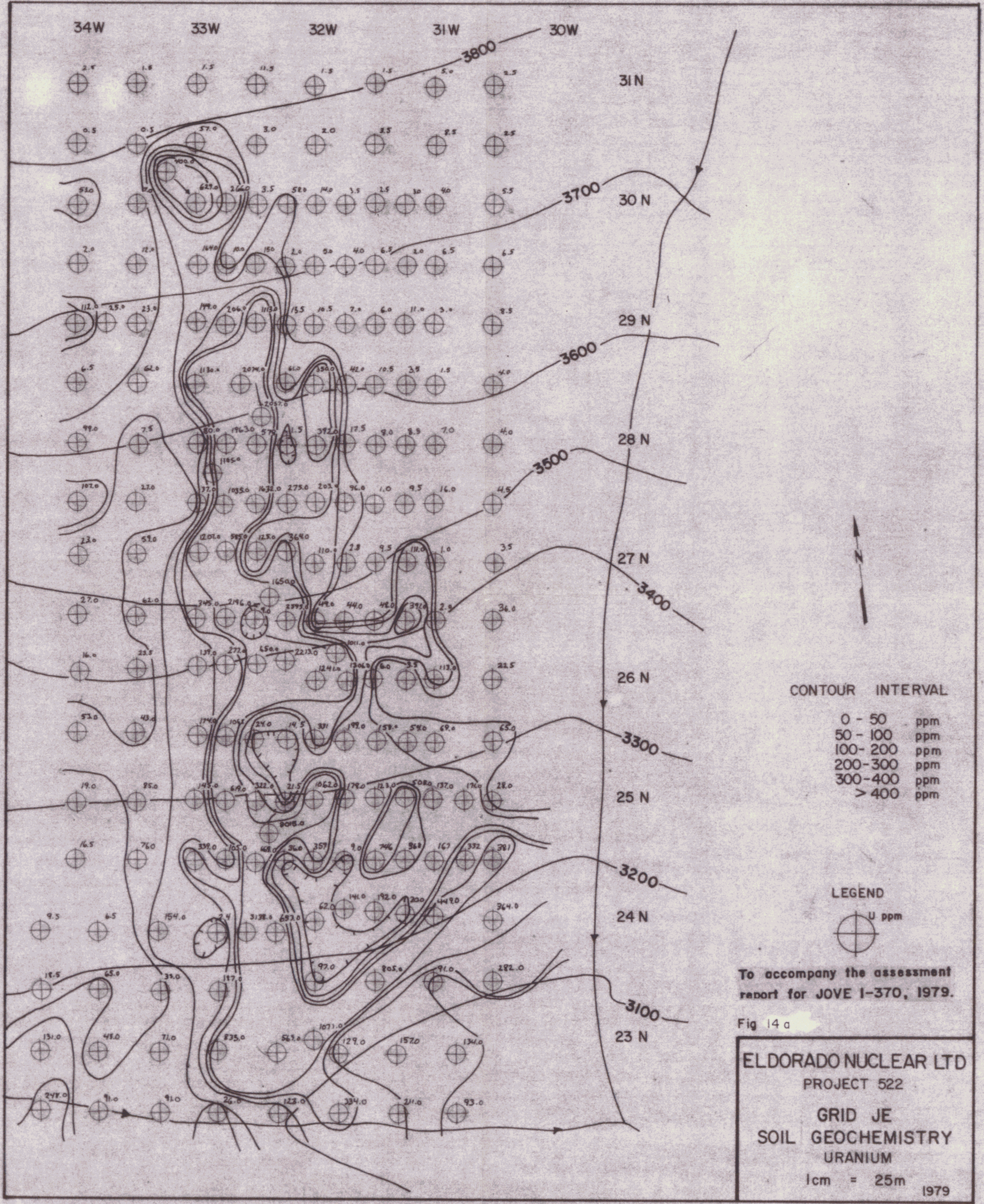
SCALE 1:5000

1979

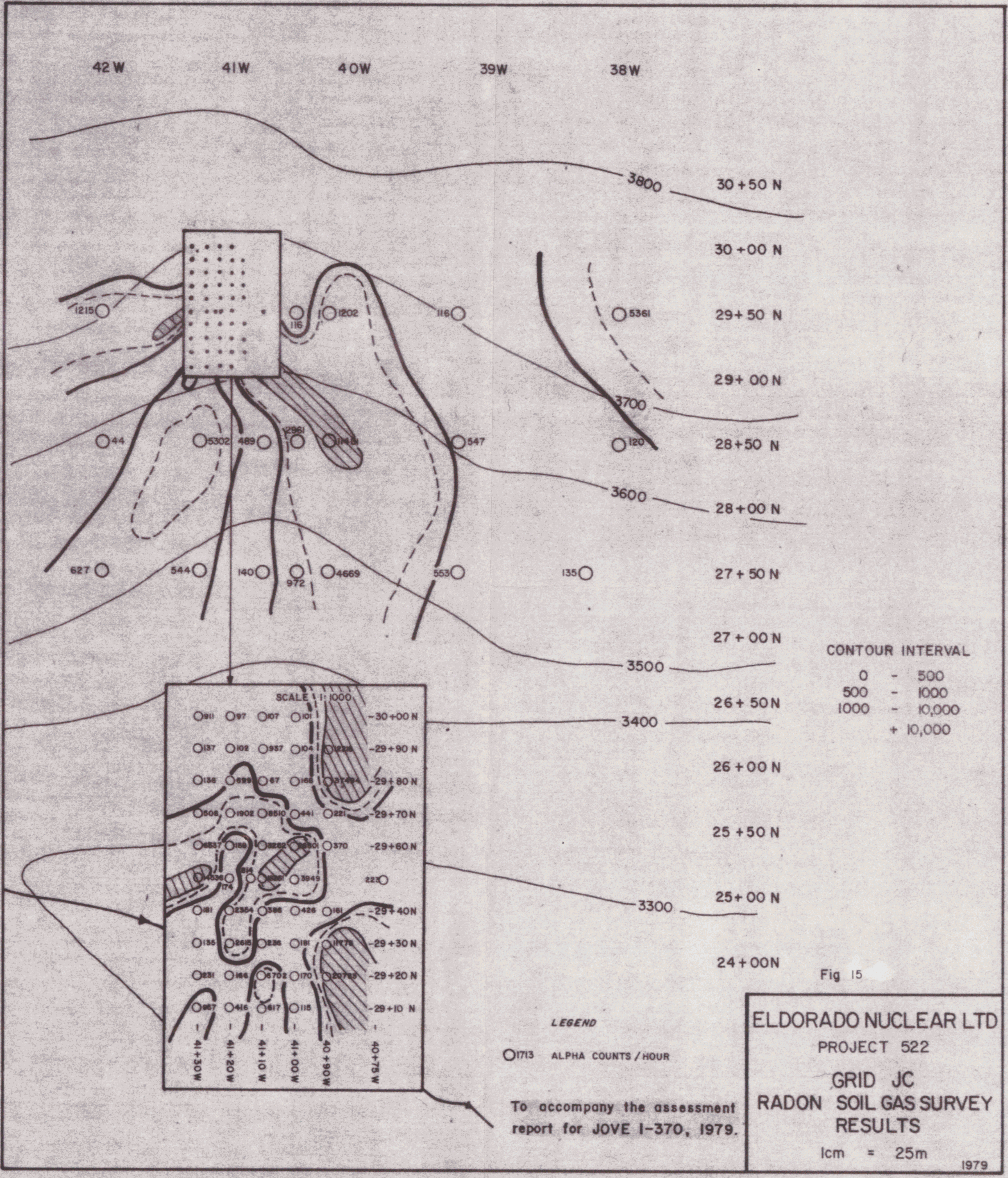
050657


42W
41+50W
41W
40+50W
40W
39+50W
39W
38+50W
38W
30+50 N
30+00 N
29+50 N
29+00 N
28+50 N
28+00 N
27+50 N
27+00 N
26+50 N
26+00 N
25+50 N
25+00 N
24+50 N
3800
3700
3600
3500
3400
3300
N
LEGEND
U ppm
CONTOUR INTERVALS
0 - 25 ppm
25 - 50 ppm
50 - 75 ppm
75 - 100 ppm
100 - 150 ppm
150 - 200 ppm
200 - 300 ppm
300 - 400 ppm
>400 ppm
To accompany the assessment report for JOVE 1-370, 1979.
Fig 13a
ELDORADO NUCLEAR LTD
PROJECT 522
GRID JC
SOIL GEOCHEMISTRY
URANIUM
1cm = 25m
1979

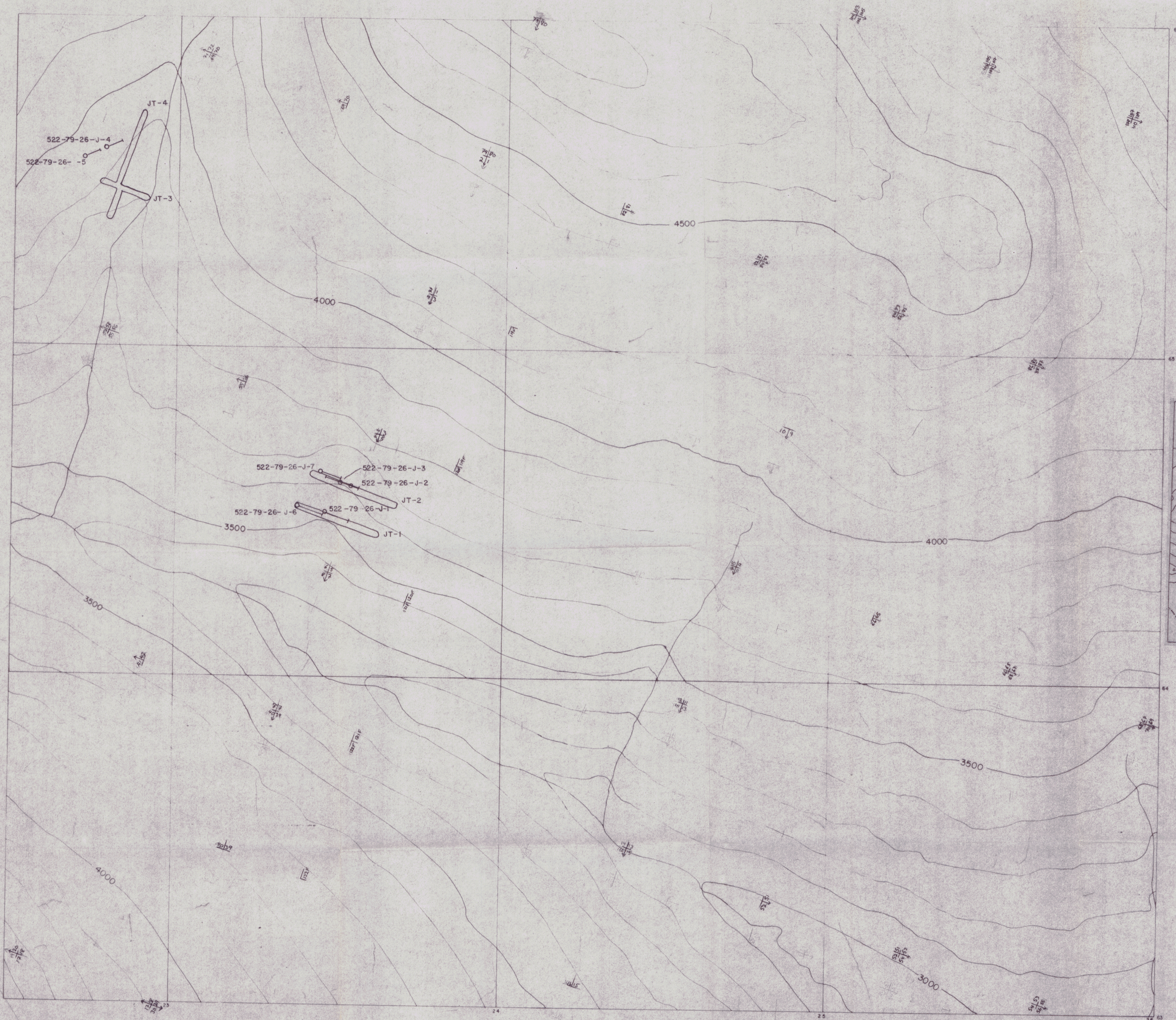
090657

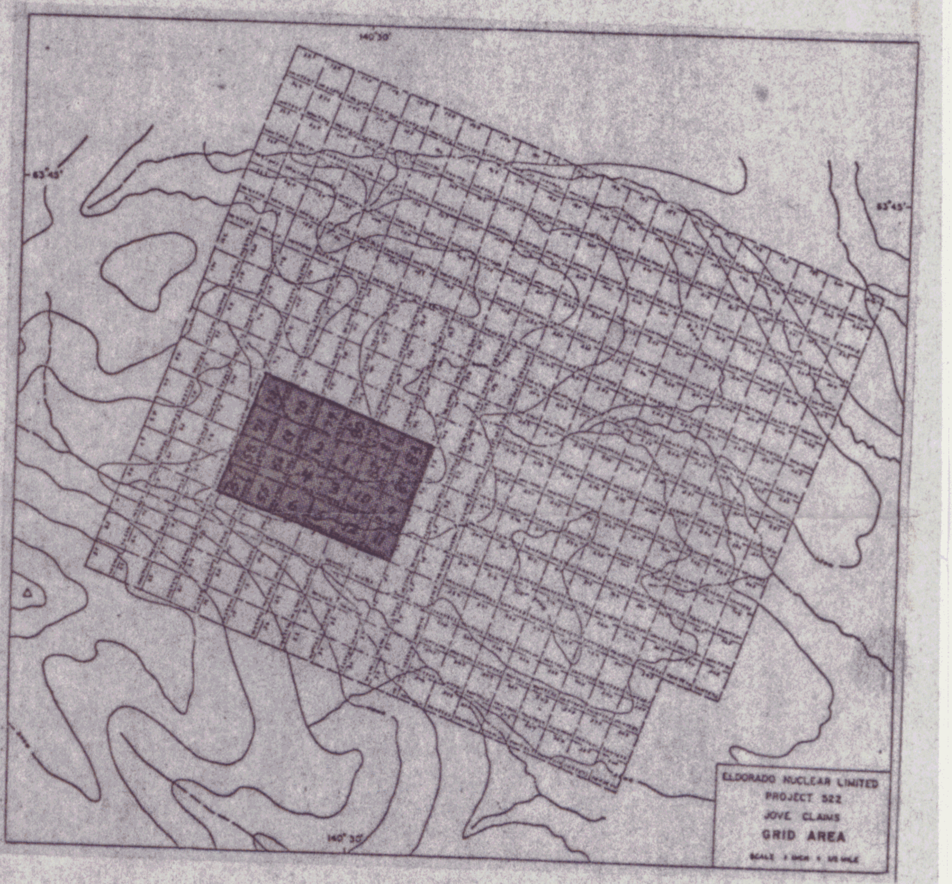

34W
33W
32W
31W
30W
31 N
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
3800
3700
3600
3500
3400
3300
3200
3100
N
CONTOUR INTERVAL
0 - 50 ppm
50 - 100 ppm
100 - 200 ppm
200 - 300 ppm
300 - 400 ppm
> 400 ppm
LEGEND
U ppm
To accompany the assessment report for JOVE 1-370, 1979.
Fig 14 a
ELDORADO NUCLEAR LTD
PROJECT 522
GRID JE
SOIL GEOCHEMISTRY
URANIUM
1cm = 25m
1979

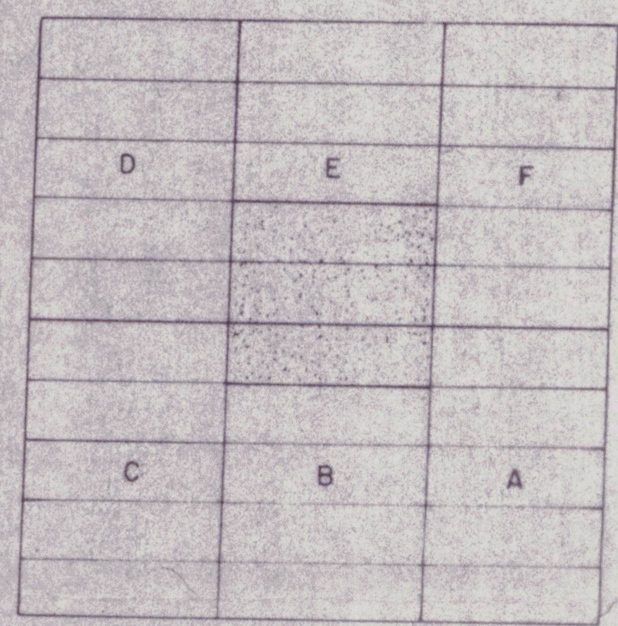
090657


42 W
41W
40W
39W
38W
3800
30 + 50 N
30 + 00 N
29 + 50 N
29 + 00 N
3700
28 + 50 N
3600
28 + 00 N
27 + 50 N
27 + 00 N
3500
26 + 50 N
3400
26 + 00 N
25 + 50 N
25 + 00 N
3300
24 + 00N
1215
116
1202
116
5361
44
5302
489
2961
11481
547
120
627
544
140
972
4669
553
135
SCALE 1:1000
-30+00 N
-29+90 N
-29+80 N
-29+70 N
-29+60 N
-29+40N
-29+30 N
-29+20 N
-29+10 N
41+30W
41+20W
41+10W
41+00W
40+90W
40+75W
CONTOUR INTERVAL
0 - 500
500 - 1000
1000 - 10,000
+ 10,000
Fig 15
LEGEND
1713 ALPHA COUNTS / HOUR
To accompany the assessment report for JOVE I-370, 1979.
ELDORADO NUCLEAR LTD
PROJECT 522
GRID JC
RADON SOIL GAS SURVEY
RESULTS
1cm = 25m
1979

090657







To accompany the assessment report for JOVE I-370, 1979.

Fig 16

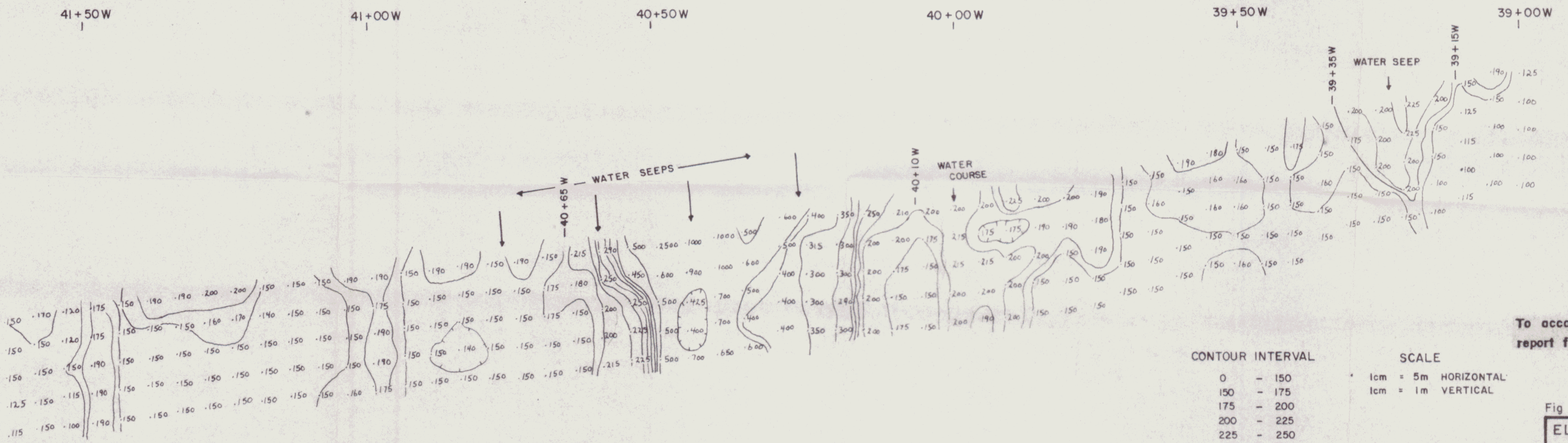
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE CLAIMS
QUADRANT B & E

TRENCH & DRILL HOLE LOCATION

SCALE 1 5000

1979

090657



To accompany the assessment report for JOVE I-370, 1979.

CONTOUR INTERVAL

0	-	150
150	-	175
175	-	200
200	-	225
225	-	250
275	-	300
300	-	325
325	-	350
350	-	400
400	-	425
425	-	450
450	-	475
	>	500

SCALE

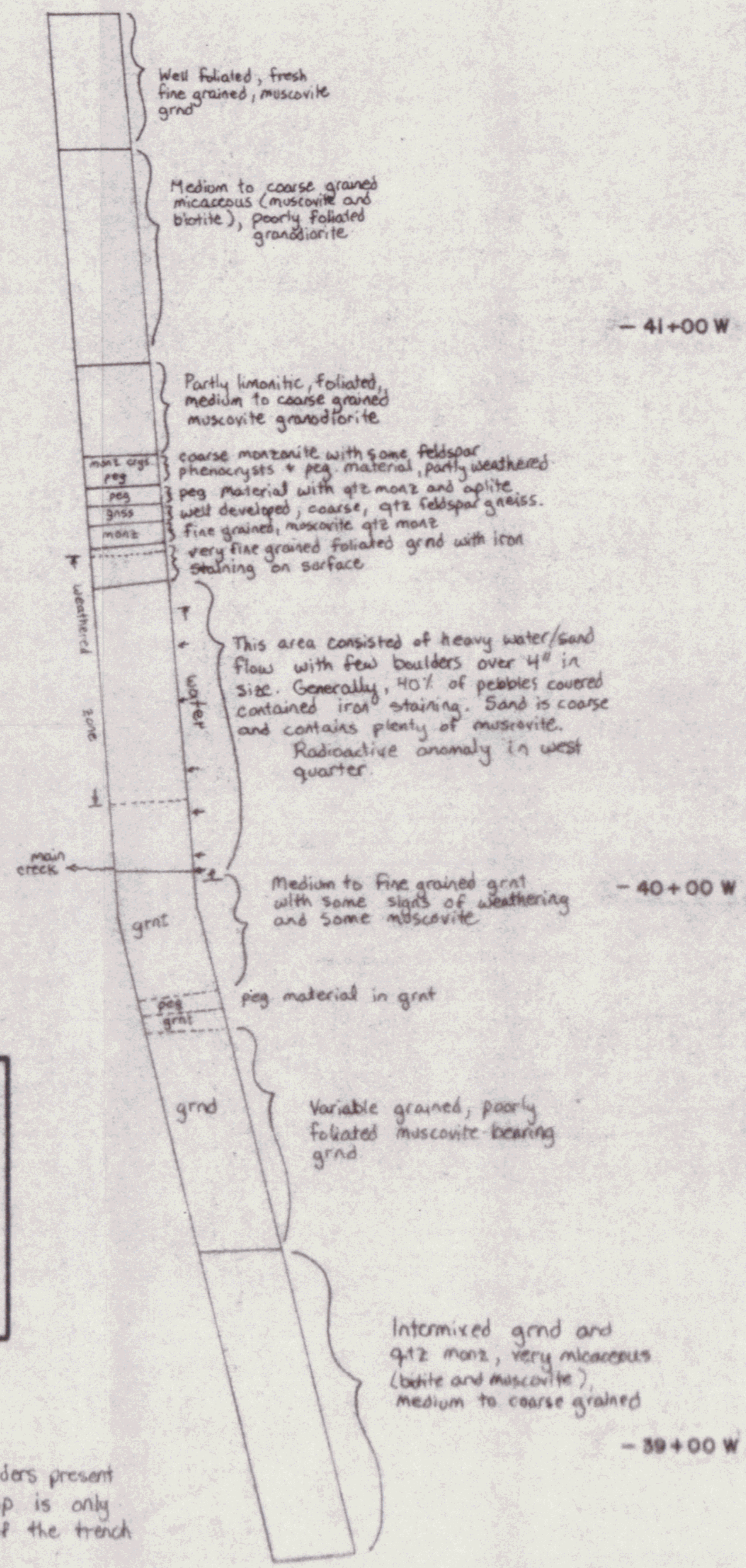
1cm = 5m HORIZONTAL
1cm = 1m VERTICAL

Fig 17a

ELDORADO NUCLEAR LTD
PROJECT 522
JOVE CLAIMS
TRENCH JT-1
RADIOMETERICS

1979

090657



To accompany the assessment report for JOVE 1-370, 1979.

Fig 17b

ELDORADO NUCLEAR LTD
PROJECT 522

JOVE CLAIMS
JT-1
GEOLOGY

SCALE 1:1000

1979

090657

The geology is based on the predominant boulders present in the location. Anything resembling outcrop is only present on the outer 40 or 50 metres of the trench

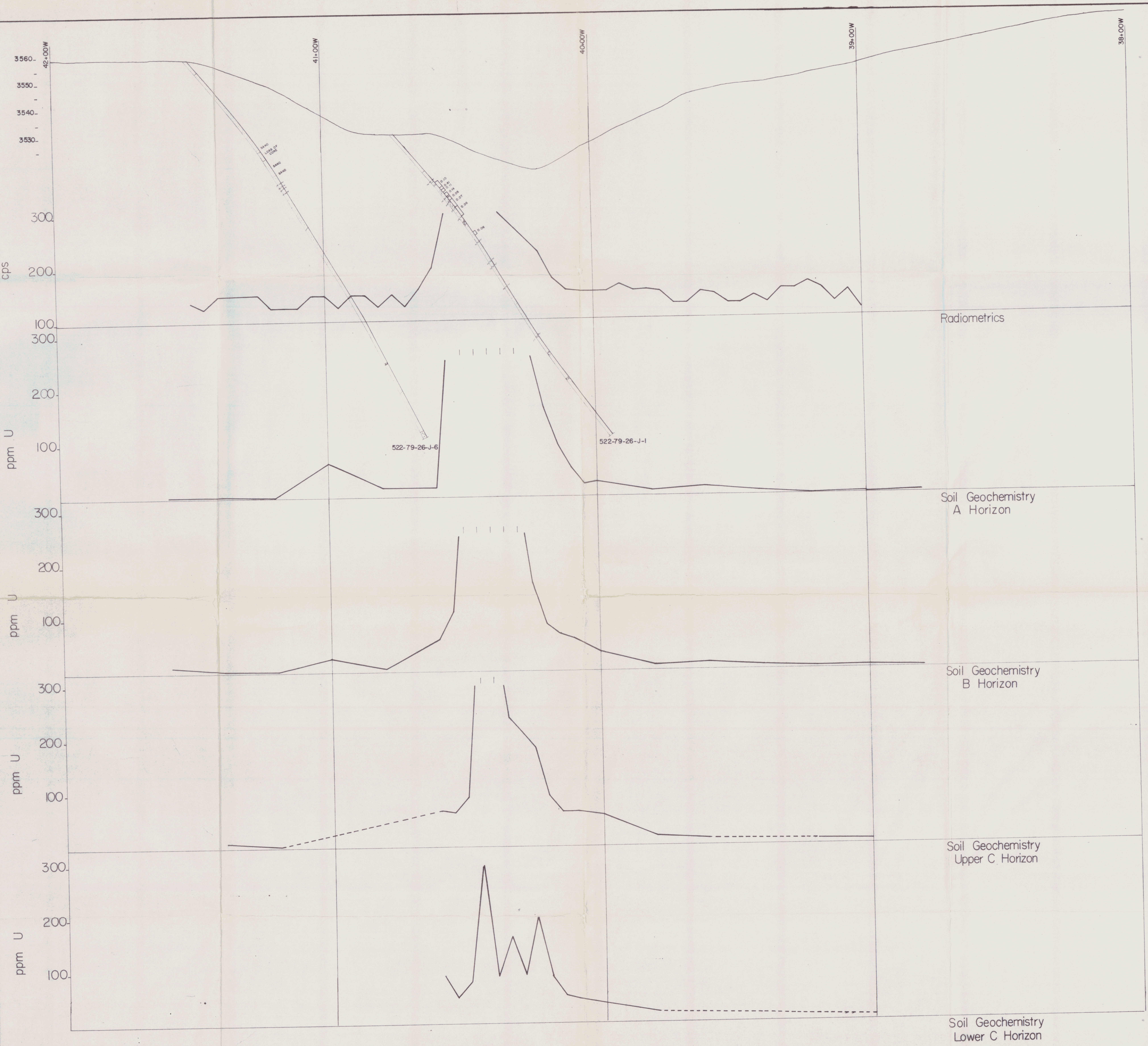


Fig 17c

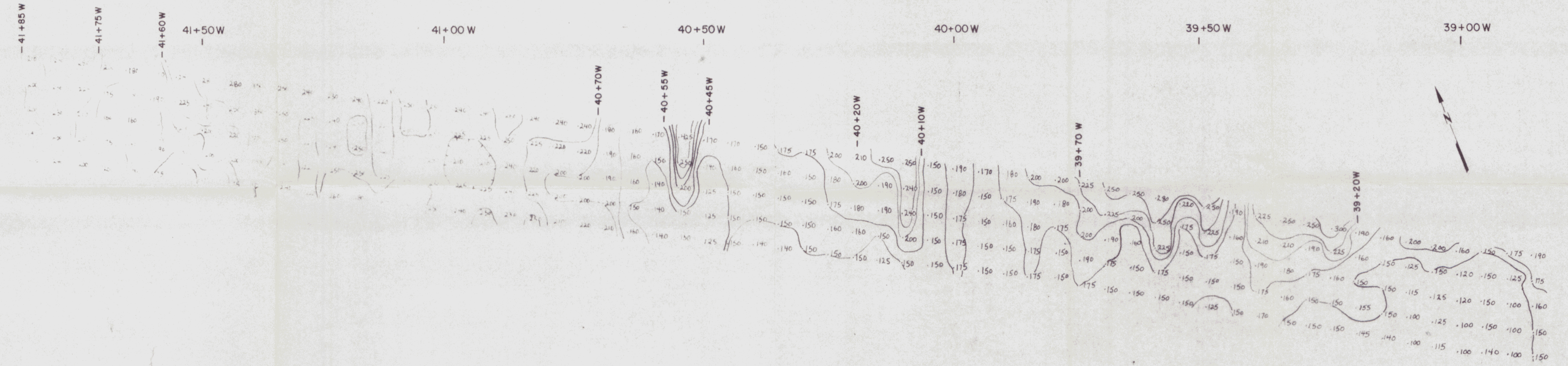
ELDORADO NUCLEAR LTD.
PROJECT 522
Jove Claims
Section 28+00N

SCALE

1979 10 0 10 20 30 metres

To accompany the assessment report for JOVE I-370, 1979.

090657



SCALE

1cm = 5cm HORIZONTAL
1cm = 1cm VERTICAL

CONTOUR INTERVAL (cps)

0 - 150
150 - 175
175 - 200
200 - 225
225 - 250
≥250

To accompany the assessment report for JOVE 1-370, 1979.

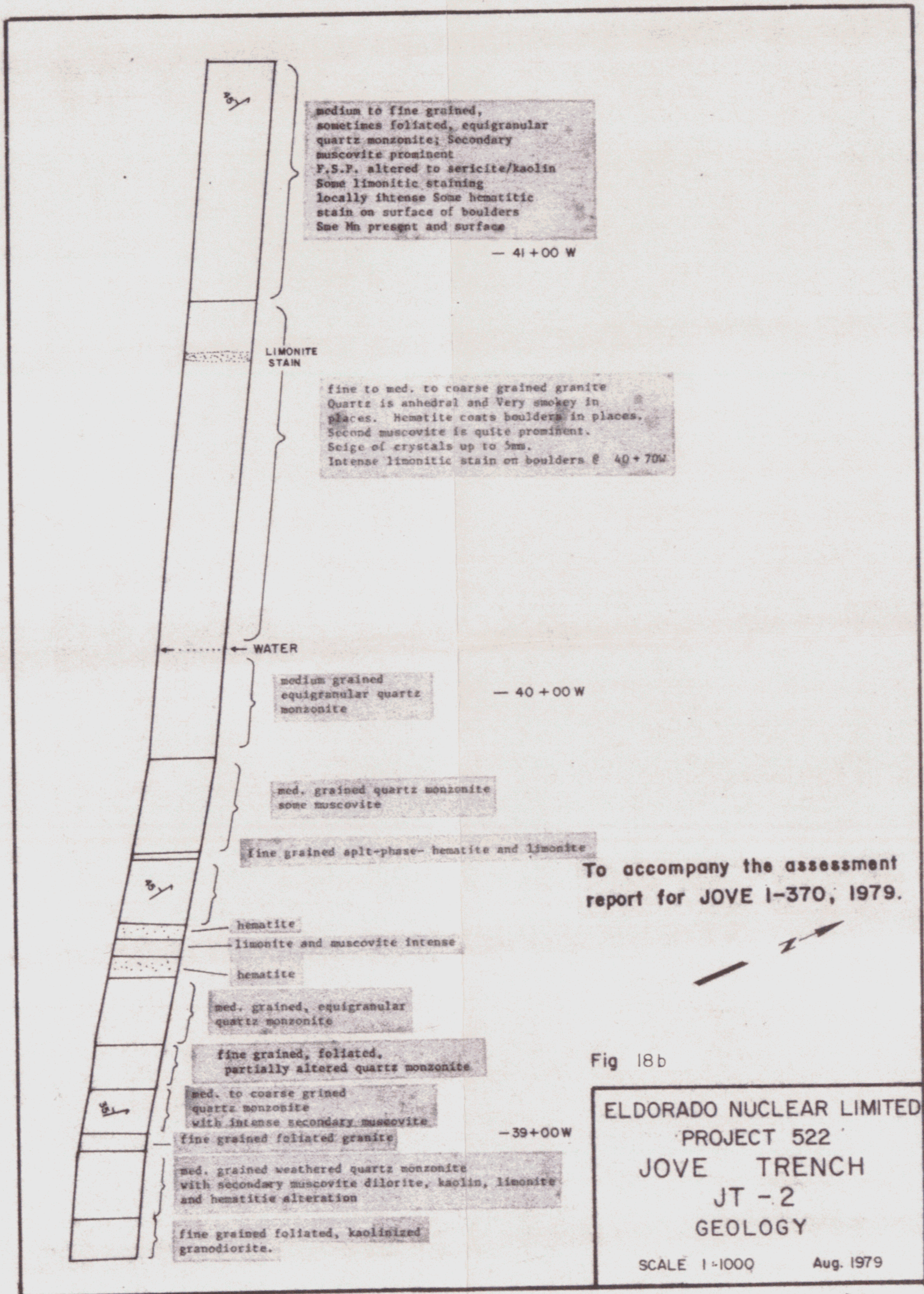
Fig 18a

ELDORADO NUCLEAR LTD
PROJECT 522

JOVE CLAIMS
TRENCH JT-2

GEOPHYSICS RADIOMETERICS
1979

090657


medium to fine grained,
sometimes foliated, equigranular
quartz monzonite; Secondary
muscovite prominent
F.S.P. altered to sericite/kaolin
Some limonitic staining
locally ihtense Some hematitic
stain on surface of boulders
Sme Mn presegnt and surface
— 41 + 00 W
LIMONITE STAIN
fine to med. to coarse grained granite
Quartz is anhedral and Very smokey in
places. Hematite coats boulders in places.
Second muscovite is quite prominent.
Seige of crystals up to 5mm.
Intense limonitic stain on boulders @ 40 + 70W
WATER
medium grained
equigranular quartz
monzonite
— 40 + 00 W
med. grained quartz monzonite
some muscovite
fine grained aplt-phase- hematite and limonite
To accompany the assessment
report for JOVE 1-370, 1979.
hematite
limonite and muscovite intense
hematite
med. grained, equigranular
quartz monzonite
fine grained, foliated,
partially altered quartz monzonite
med. to coarse grined
quartz monzonite
with intense secondary muscovite
fine grained foliated granite
—39+00W
med. grained weathered quartz monzonite
with secondary muscovite dilorite, kaolin, limonite
and hematitie alteration
fine grained foliated, kaolinized
granodiorite.
Fig 18b
ELDORADO NUCLEAR LIMITED
PROJECT 522
JOVE TRENCH
JT - 2
GEOLOGY
SCALE 1 : 1000
Aug. 1979

090657

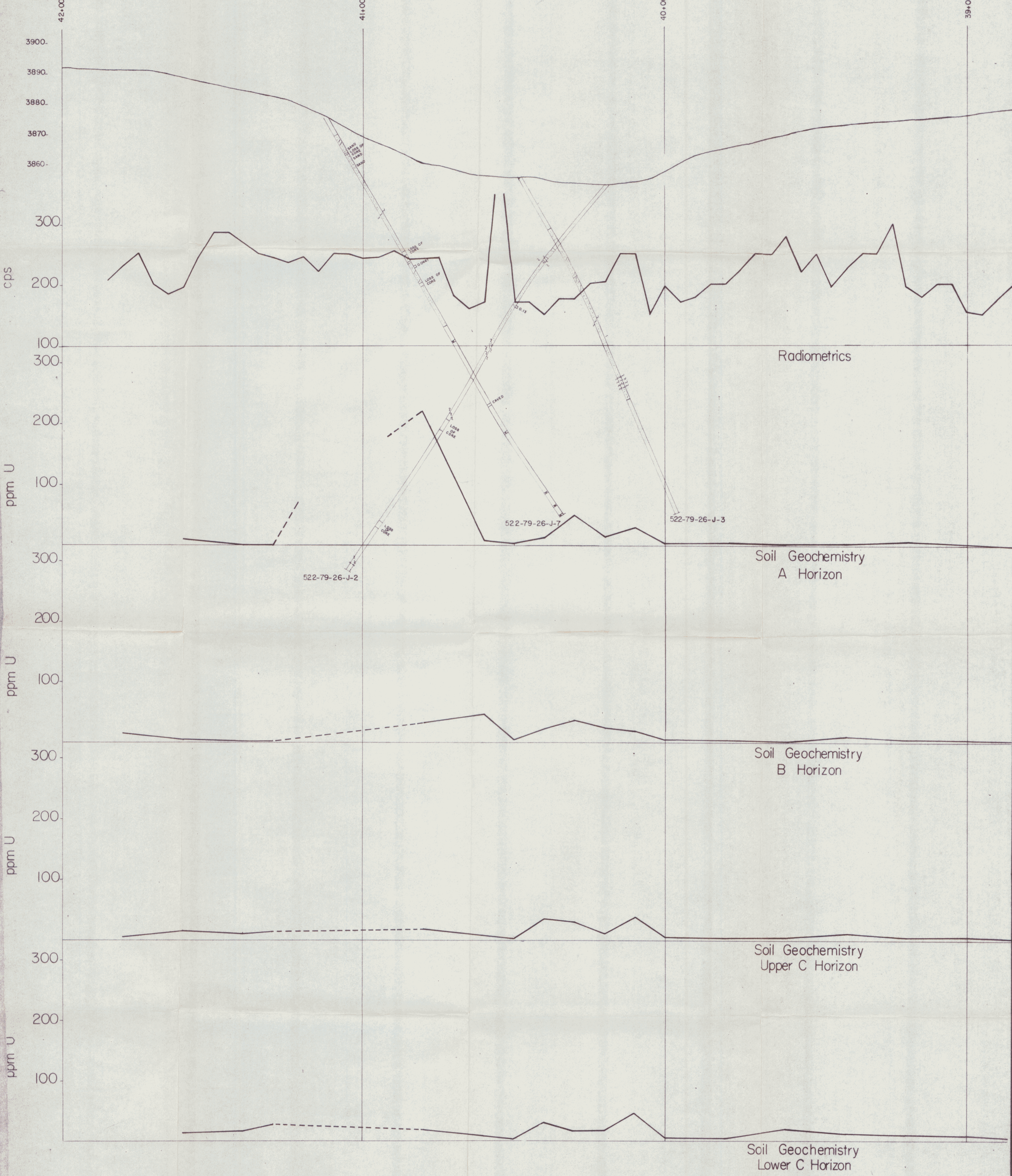


Fig. 18c

ELDORADO NUCLEAR LTD.
PROJECT 522
Jove Claims
Section 29+00N

SCALE

1979 10 0 10 20 30 metres

To accompany the assessment report for JOVE I-370, 1979.

090657

090657

Fig 19 a

ELDORADO NUCLEAR LTD
PROJECT 522
JOVE CLAIMS
TRENCH JT-3
SECTION 35+00N
1979

CONTOUR INTERVALS (cps)

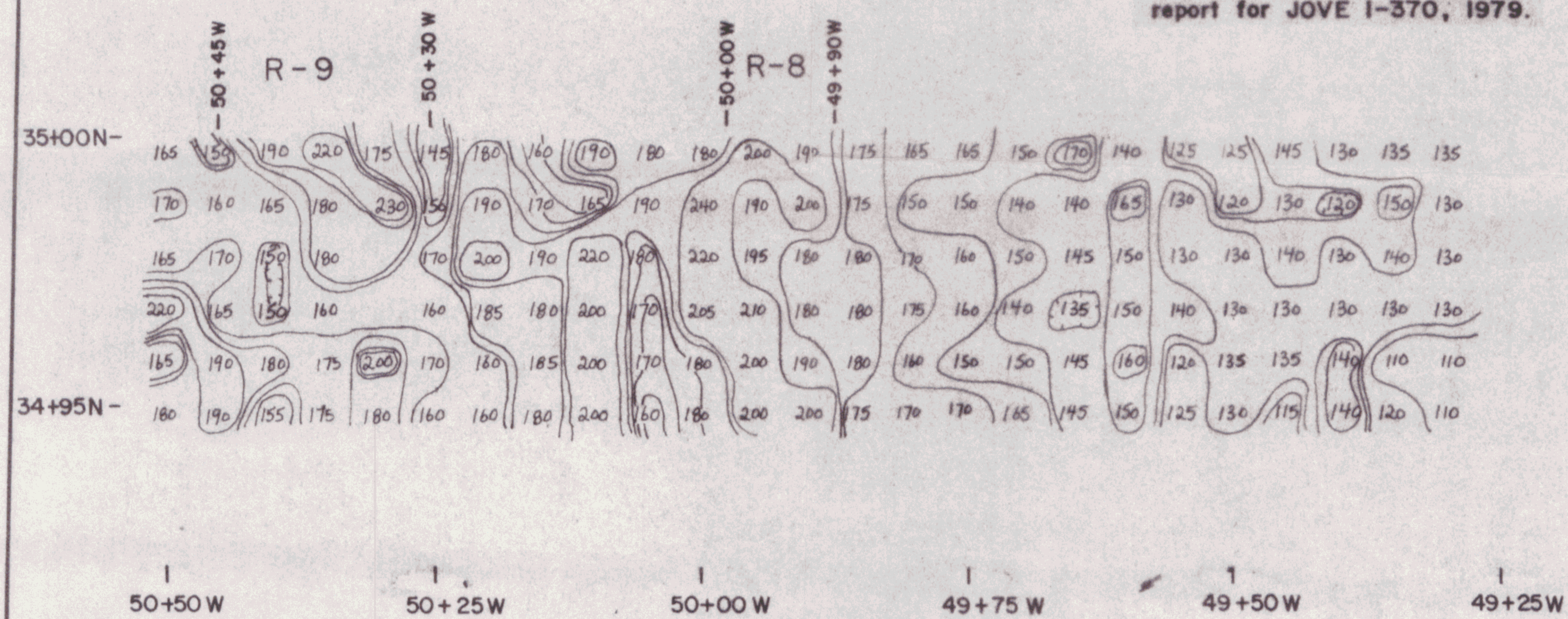
0 - 99
100 - 109
110 - 119
120 - 129
130 - 139
140 - 149
150 - 159
160 - 169
170 - 179
180 - 189
190 - 199
≥200

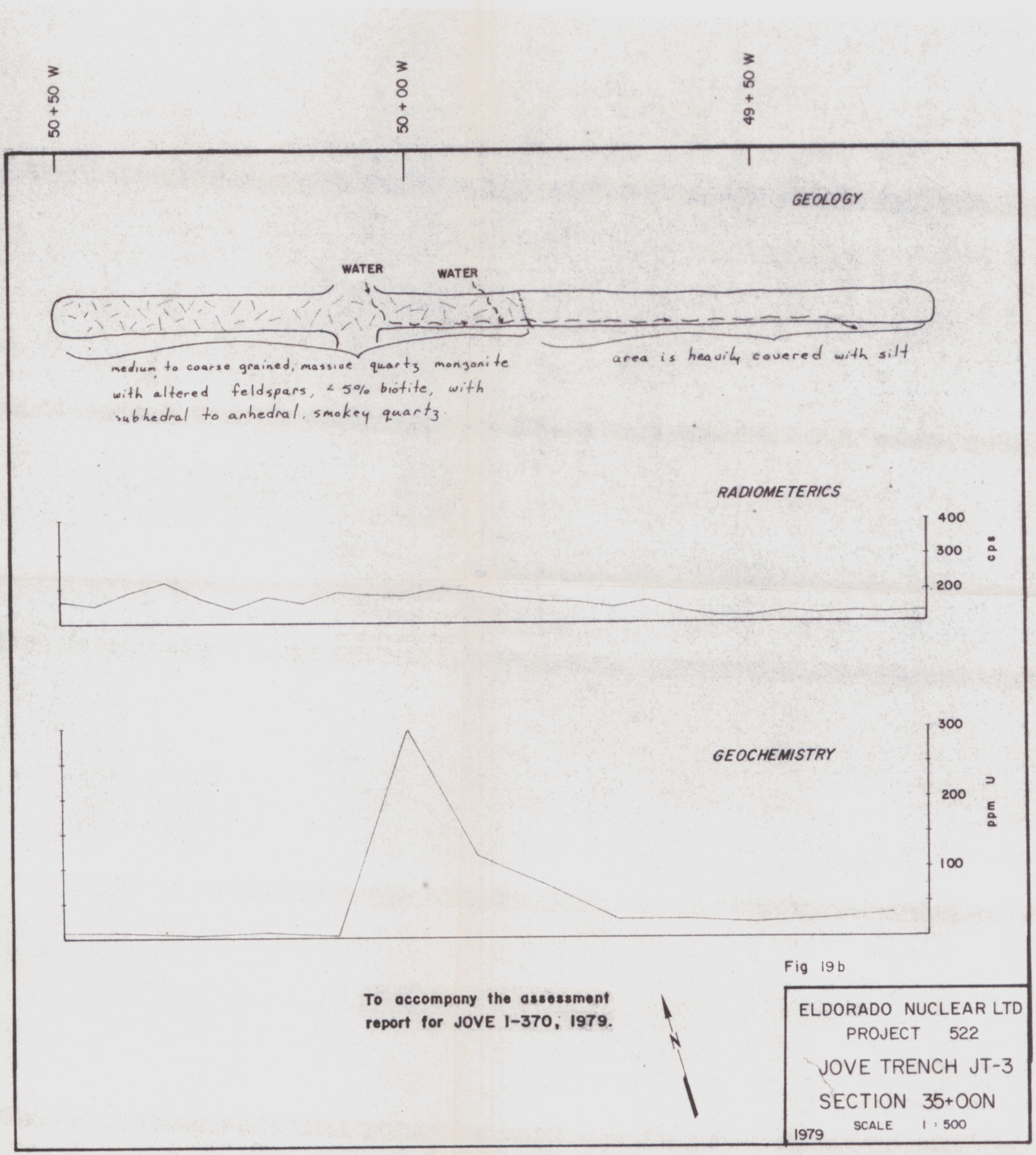
SCALE

1cm = 5m HORIZONTAL
1cm = 1m VERTICAL

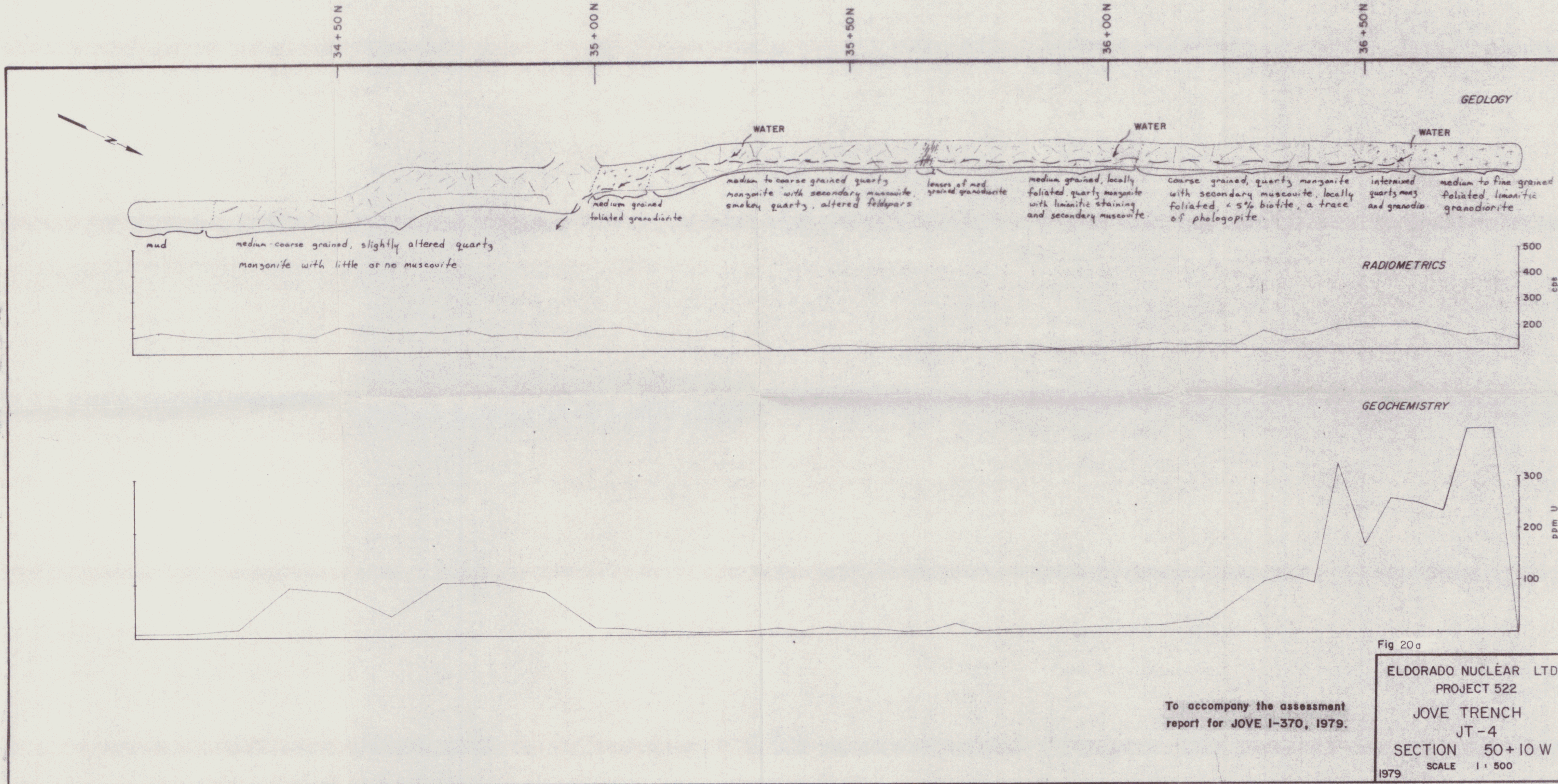
N

To accompany the assessment report for JOVE 1-370, 1979.



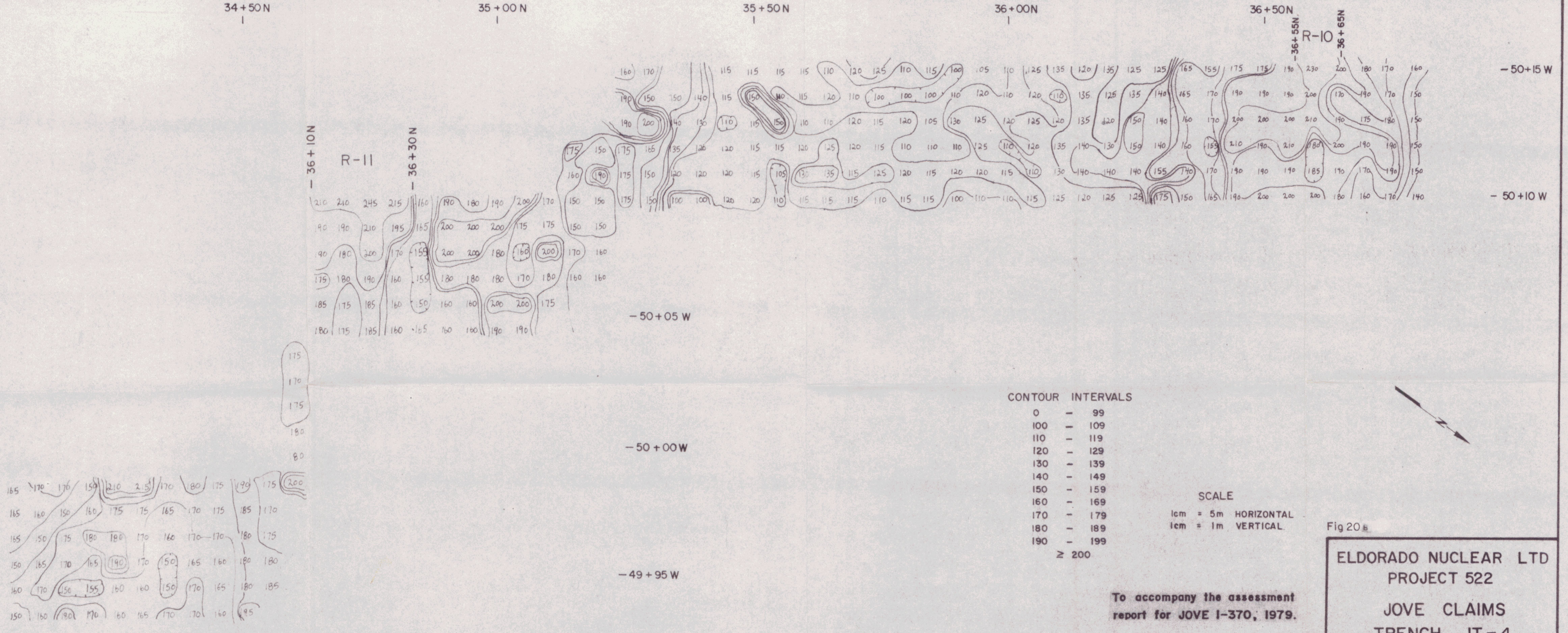

50 + 50 W
50 + 00 W
49 + 50 W
GEOLOGY
WATER
WATER
medium to coarse grained, massive quartz monzonite
with altered feldspars, < 5% biotite, with
subhedral to anhedral, smokey quartz
area is heavily covered with silt
RADIOMETERICS
400
300
200
cps
GEOCHEMISTRY
300
200
100
ppm U
Fig 19b
To accompany the assessment
report for JOVE 1-370, 1979.
N
ELDORADO NUCLEAR LTD
PROJECT 522
JOVE TRENCH JT-3
SECTION 35+00N
SCALE 1 : 500
1979

090657



34 + 50 N
35 + 00 N
35 + 50 N
36 + 00 N
36 + 50 N
GEOLOGY
N
WATER
WATER
WATER
mud
medium-coarse grained, slightly altered quartz monzonite with little or no muscovite
medium grained foliated granodiorite
medium to coarse grained quartz monzonite with secondary muscovite, smokey quartz, altered feldspars
lenses of med grained granodiorite
medium grained, locally foliated quartz monzonite with limonitic staining and secondary muscovite.
coarse grained, quartz monzonite with secondary muscovite, locally foliated, < 5% biotite, a trace of phologopite.
intermixed quartz monz and granodio
medium to fine grained foliated limonitic granodiorite
RADIOMETRICS
500
400
300
200
cps
GEOCHEMISTRY
300
200
100
ppm U
Fig 20a
To accompany the assessment report for JOVE I-370, 1979.
ELDORADO NUCLEAR LTD
PROJECT 522
JOVE TRENCH
JT-4
SECTION 50+10 W
SCALE 1 : 500
1979

090657



CONTOUR INTERVALS

0	–	99
100	–	109
110	–	119
120	–	129
130	–	139
140	–	149
150	–	159
160	–	169
170	–	179
180	–	189
190	–	199
$\geq$ 200		

SCALE

1cm = 5m HORIZONTAL
1cm = 1m VERTICAL

Fig 20 B

To accompany the assessment report for JOVE 1-370, 1979.

ELDORADO NUCLEAR LTD
PROJECT 522

JOVE CLAIMS
TRENCH JT-4

RADIOMETERICS

1979

090657

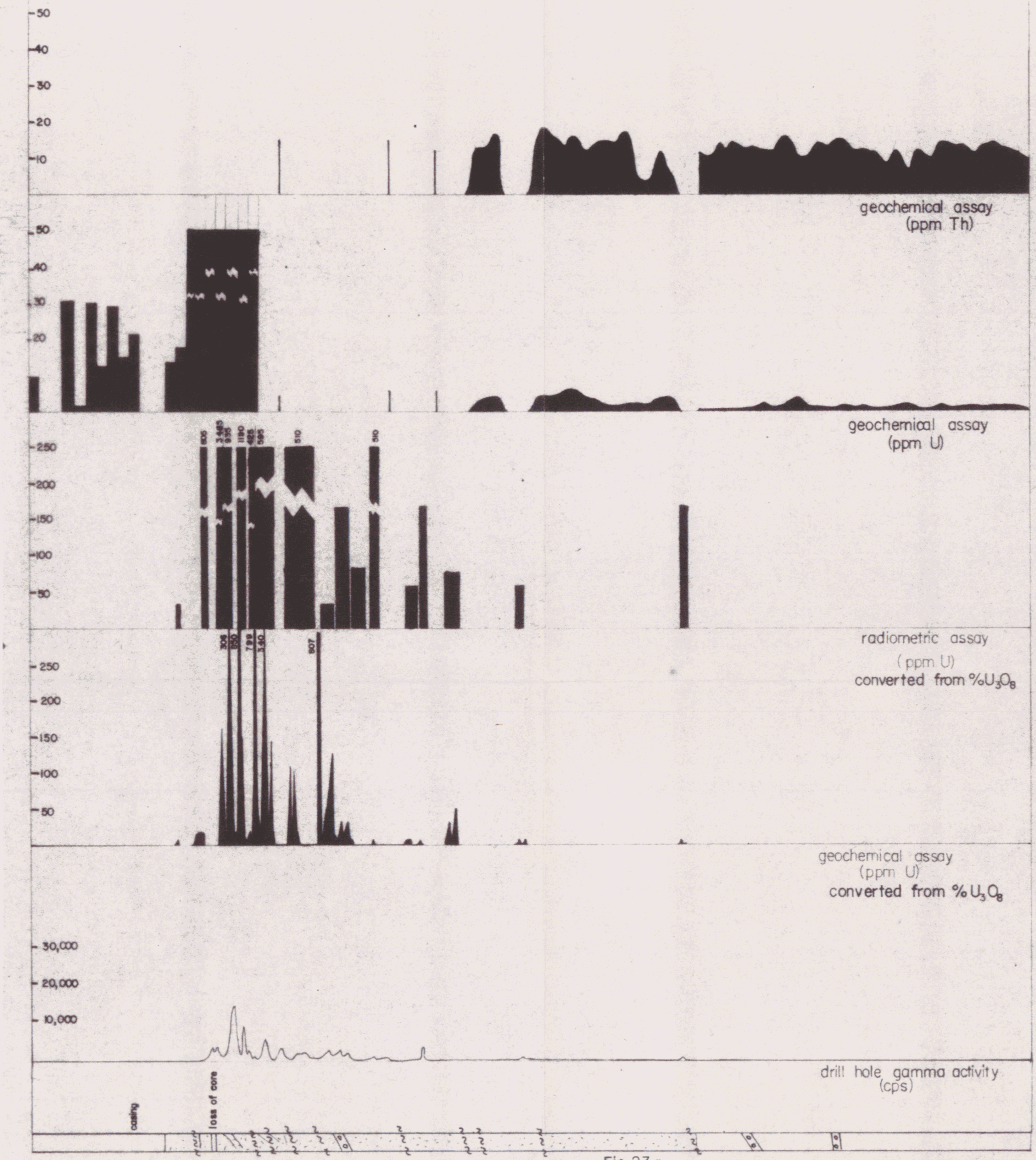


Fig 23a

To accompany the assessment report for JOVE 1-370, 1979.

ELDORADO NUCLEAR LIMITED

PROJECT 522

DDH 522-79-26-J-1

geology, radiometrics, geochemistry

5 0 5 10 15

SCALE: 1cm = 5m

1979

090657

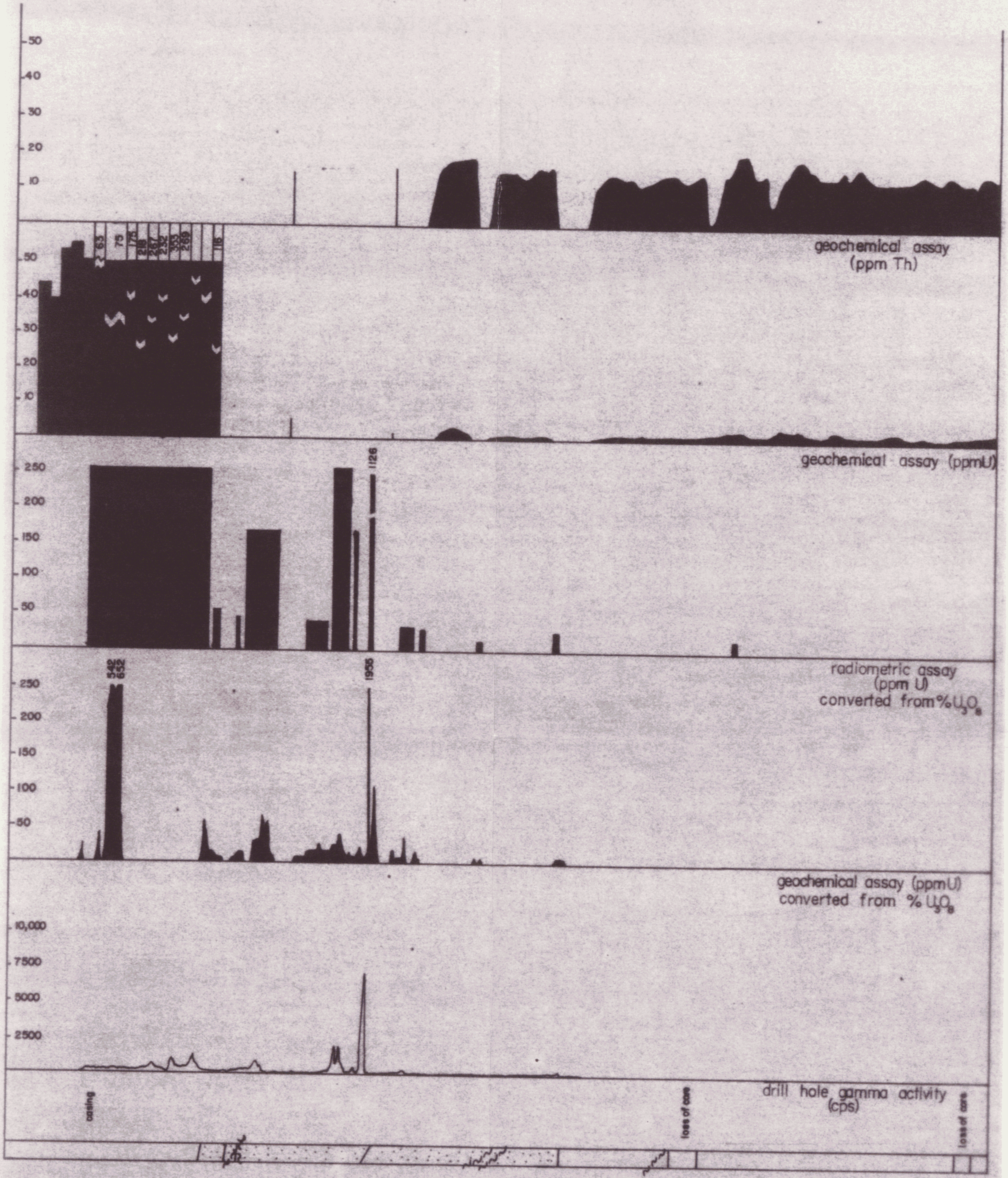


Fig 23b

ELDORADO NUCLEAR LIMITED

PROJECT 522

DDH 522-79-26-J-2

geology, radiometrics, geochemistry

SCALE: 1cm = 5m (5 0 5 10 15 metres)

1979

To accompany the assessment report for JOVE 1-370, 1979.

OG0657

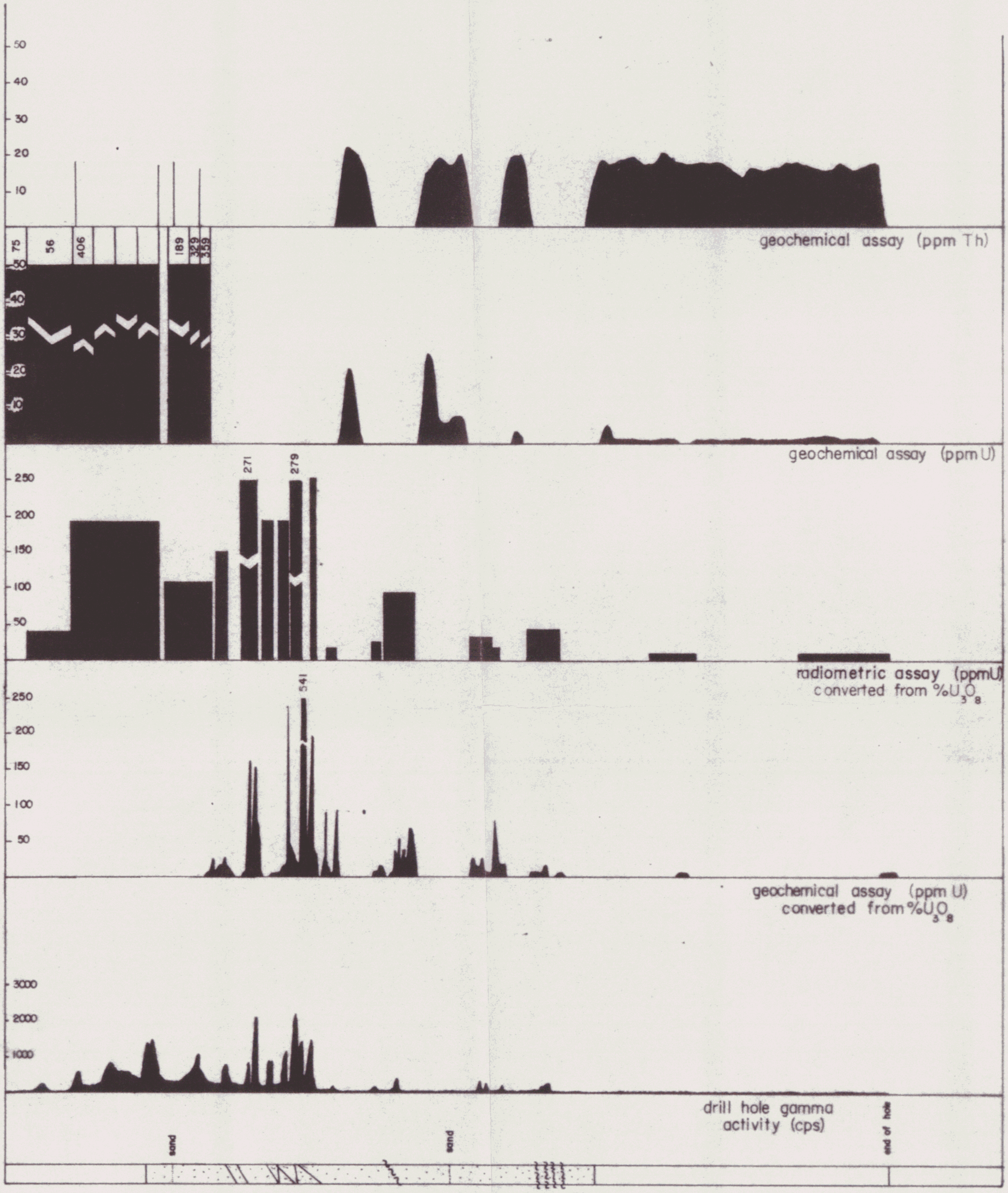


Fig 23c

To accompany the assessment report for JOVE 1-370, 1979.

ELDORADO NUCLEAR LIMITED

PROJECT 522

DDH 522 - 79 - 26 - J - 3

geology, radiometrics, geochemistry

1979

5 0 5 10 15

SCALE: 1cm= 5m

090657

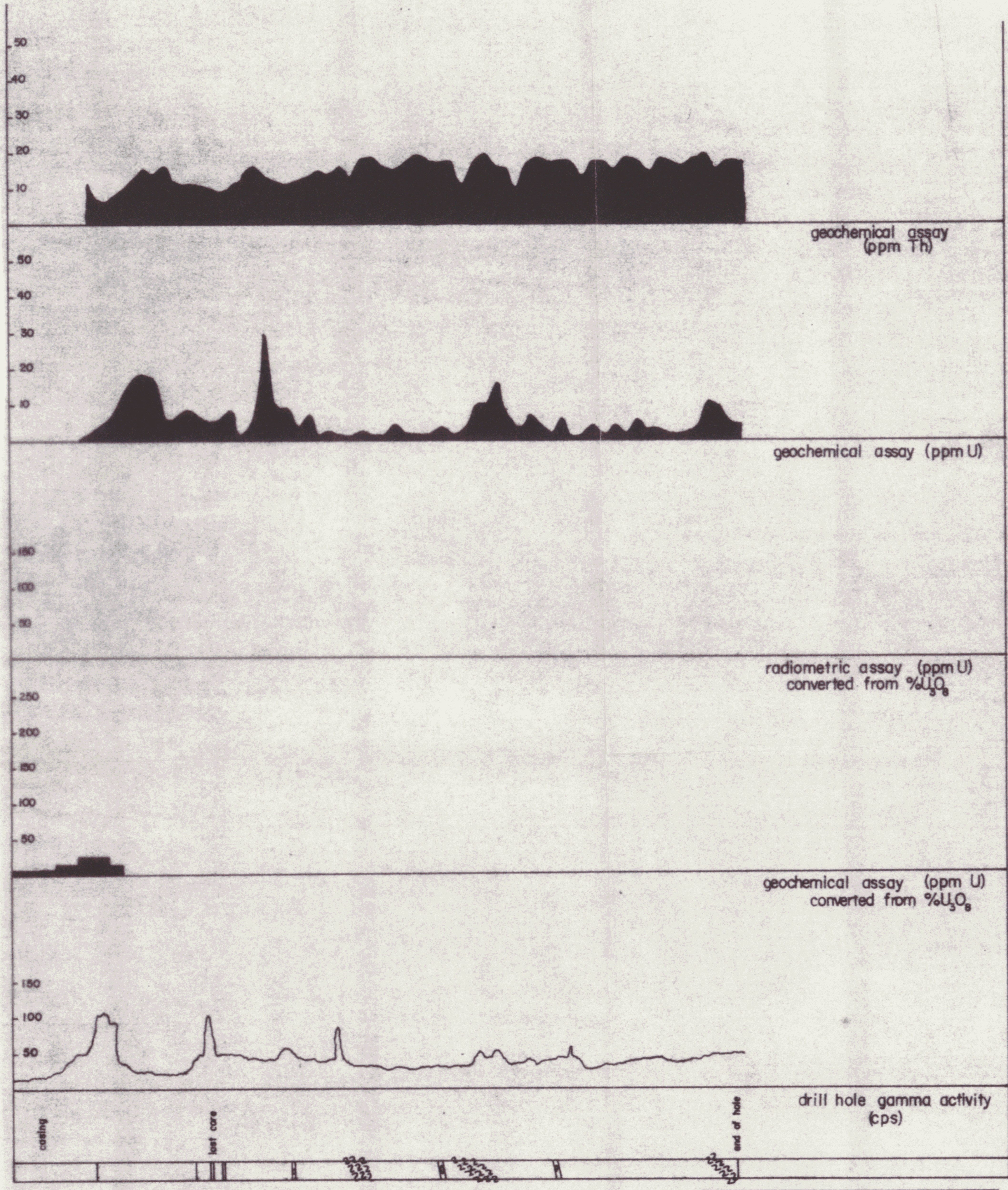


Fig 23d

ELDORADO NUCLEAR LIMITED

PROJECT 522

DDH 522-79-26-J-4

geology, radiometrics, geochemistry

5 0 5 10 15

SCALE: 1cm = 5m

1979

To accompany the assessment report for JOVE 1-370, 1979.

090657

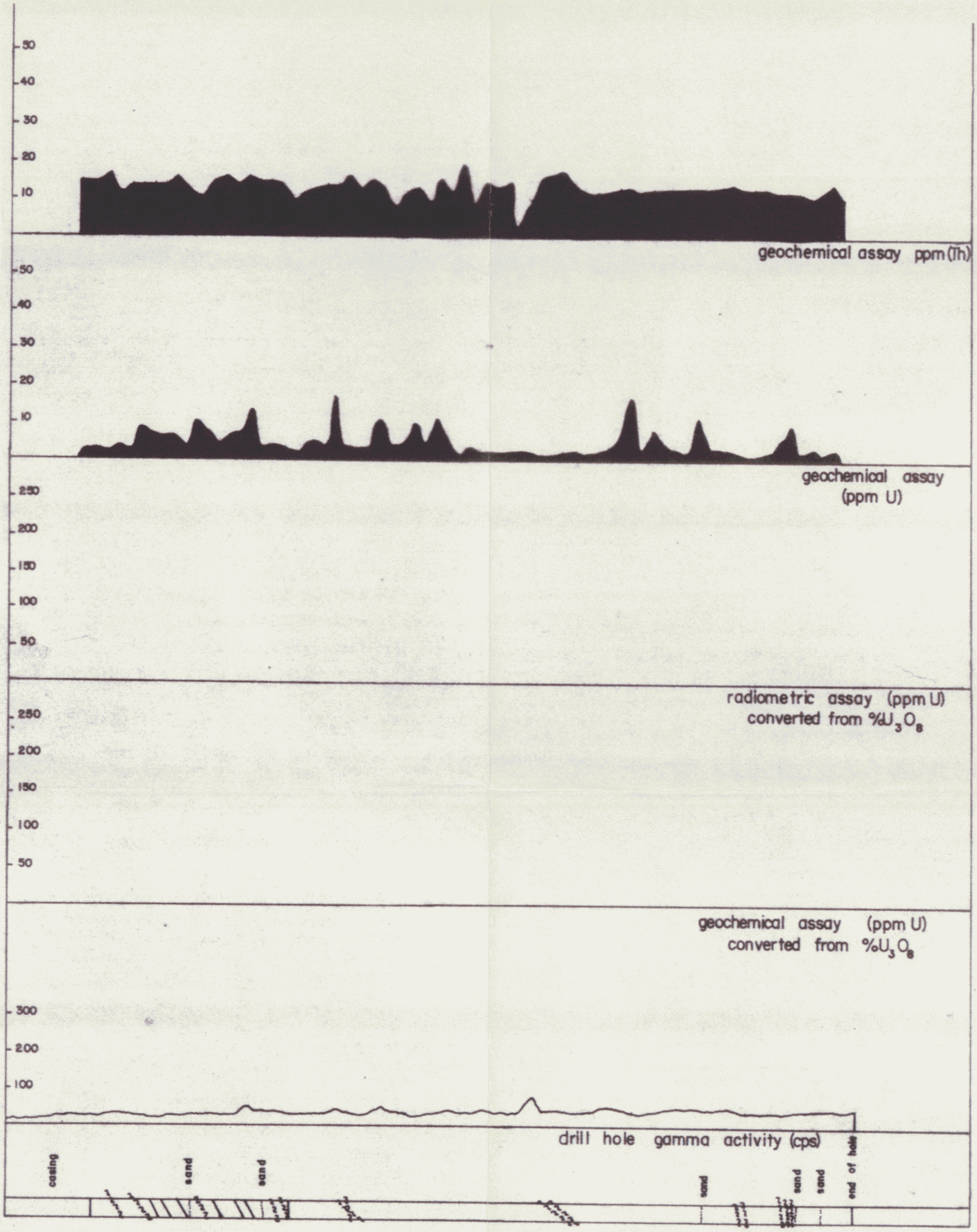


Fig 23e

To accompany the assessment
report for JOVE 1-370, 1979.

ELDORADO NUCLEAR LIMITED

PROJECT 522

DDH 522-79-26-J-5

geology, radiometrics, geochemistry

1979

5 0 5 10 15

SCALE: 1 cm = 5 m

090657

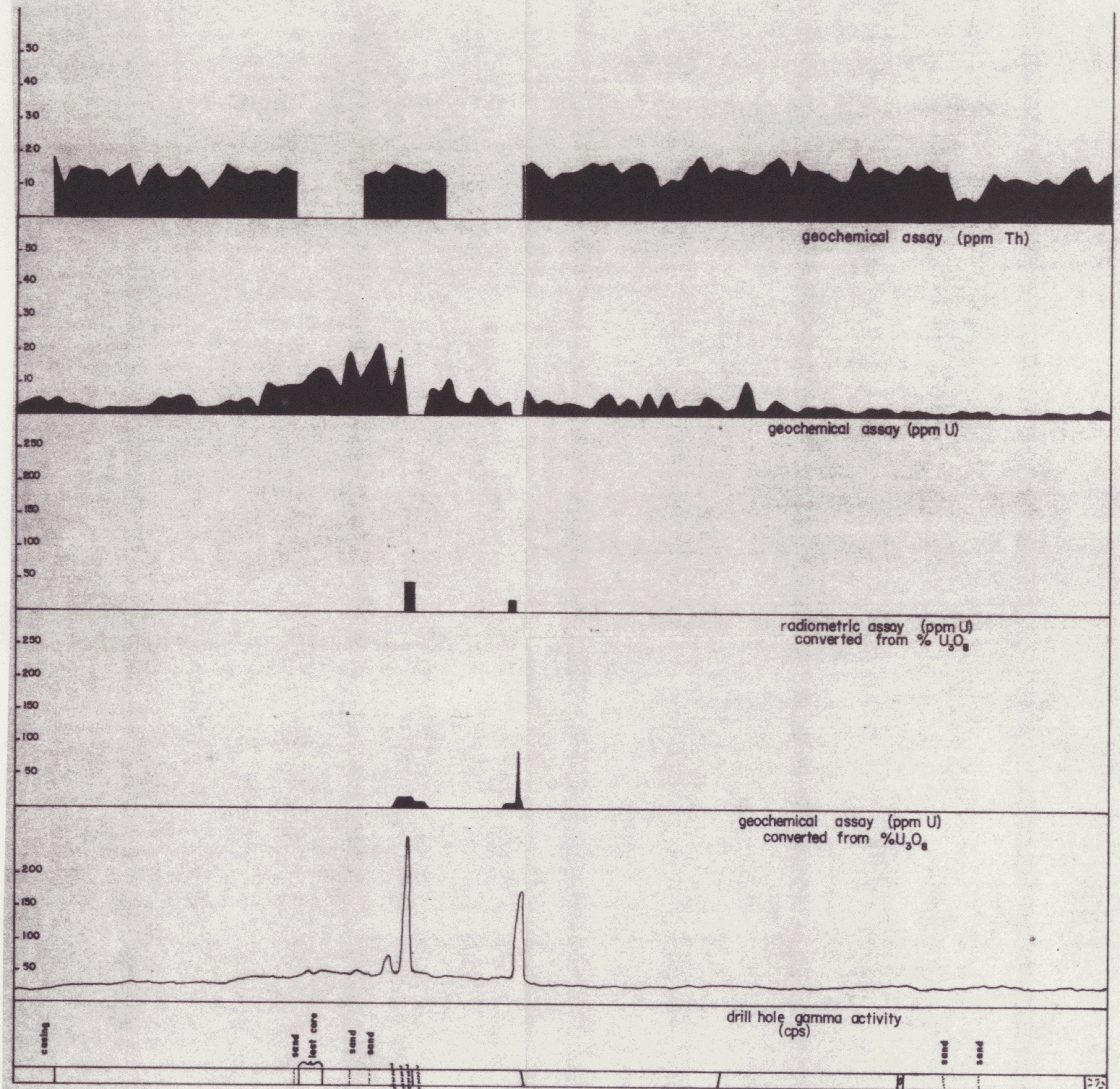


Fig 23f

To accompany the assessment report for JOVE 1-370, 1979.

ELDORADO NUCLEAR LIMITED

PROJECT 522

DDH 522-79-26-J-6

geology, radiometrics, geochemistry

5 0 5 10 15

SCALE: 1 cm = 5 m

1979

090657

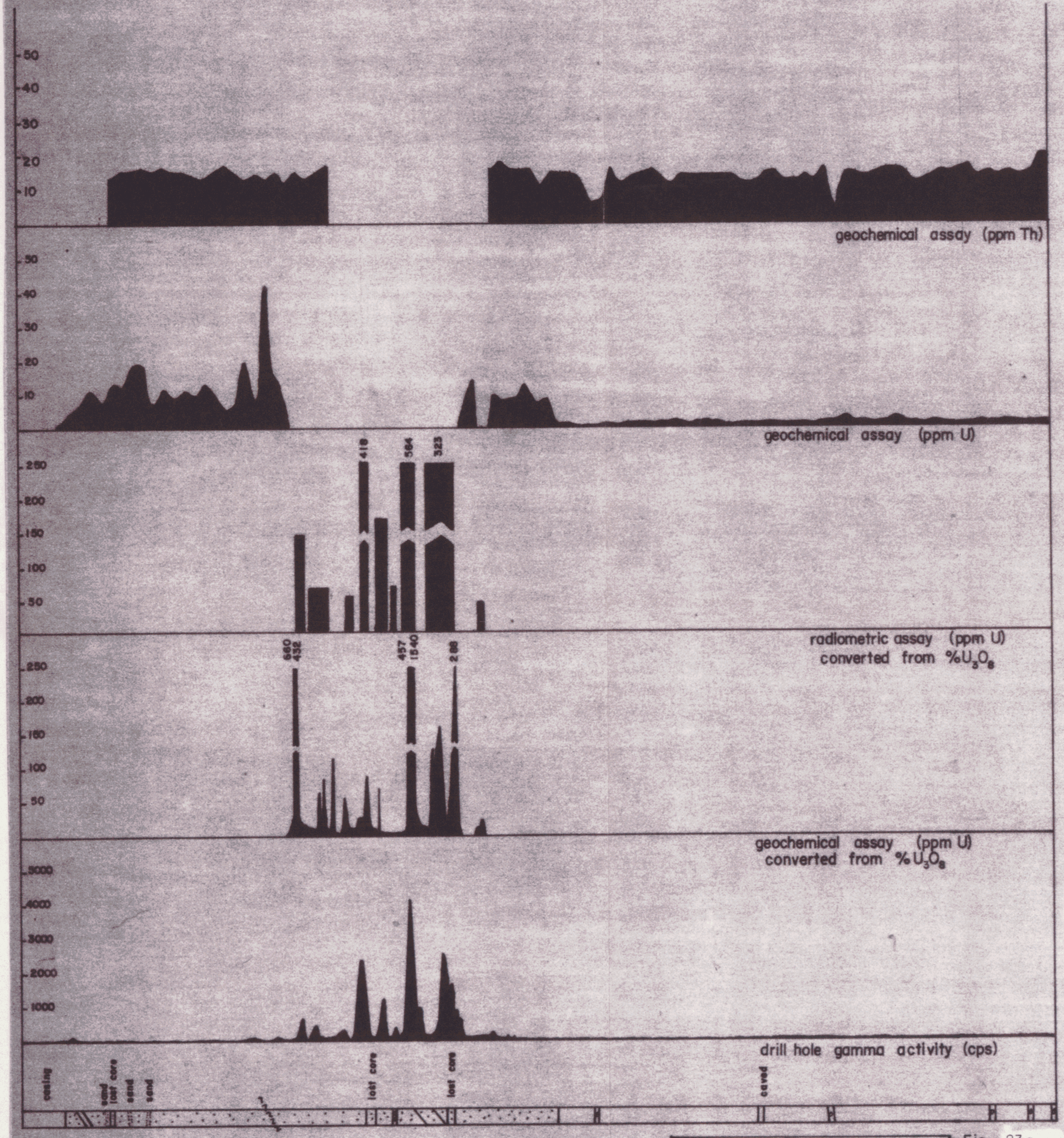


Fig 23g

To accompany the assessment report for JOVE 1-370, 1979.

ELDORADO NUCLEAR LIMITED

PROJECT 522

DDH 522-79-26-J-7

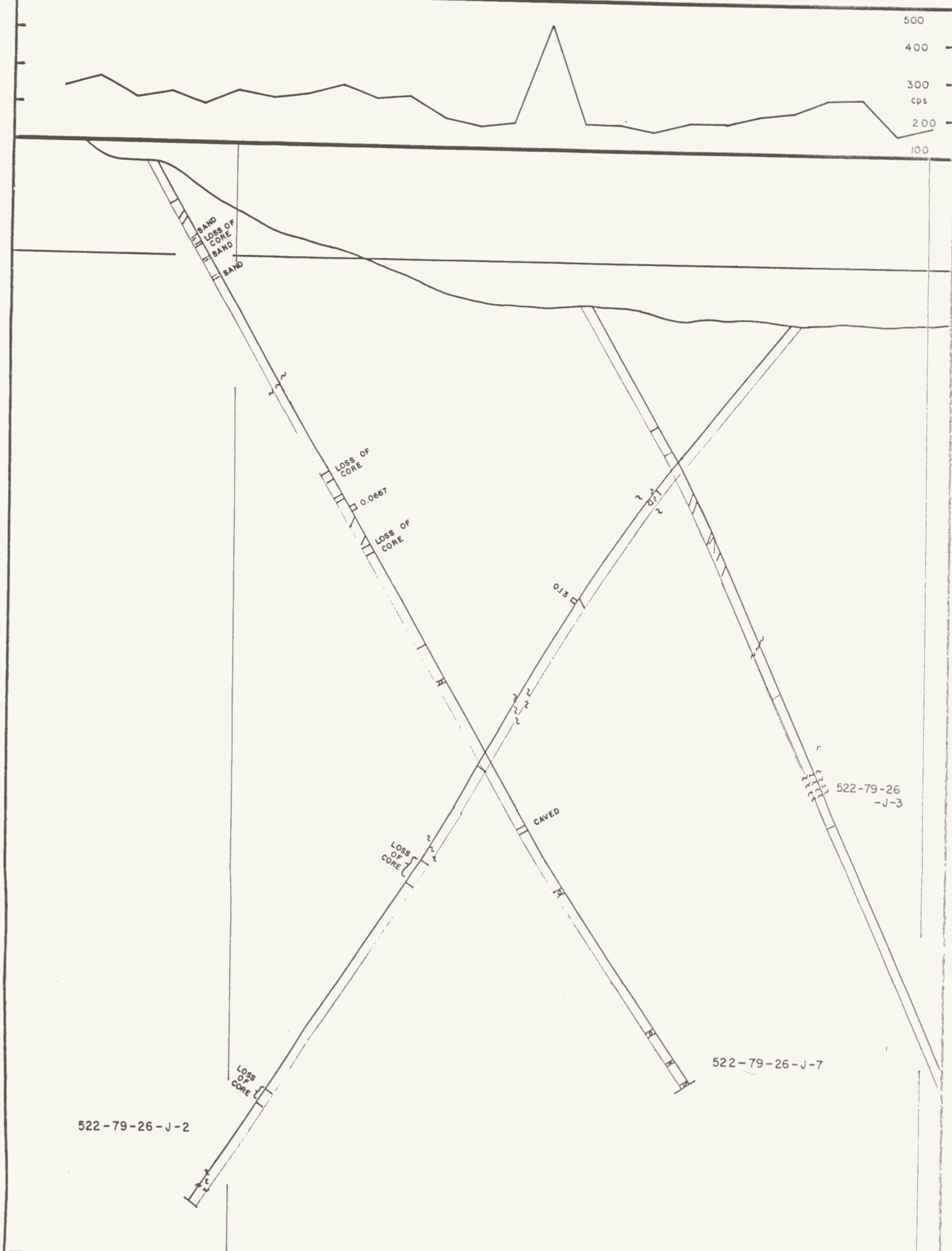
geology, radiometrics, geochemistry

090657

1979

5 0 5 10 15

SCALE: 1cm = 5m



ELDORADO NUCLEAR LIMITED

PROJECT 522

DISPOSITION JOVE CLAIMS

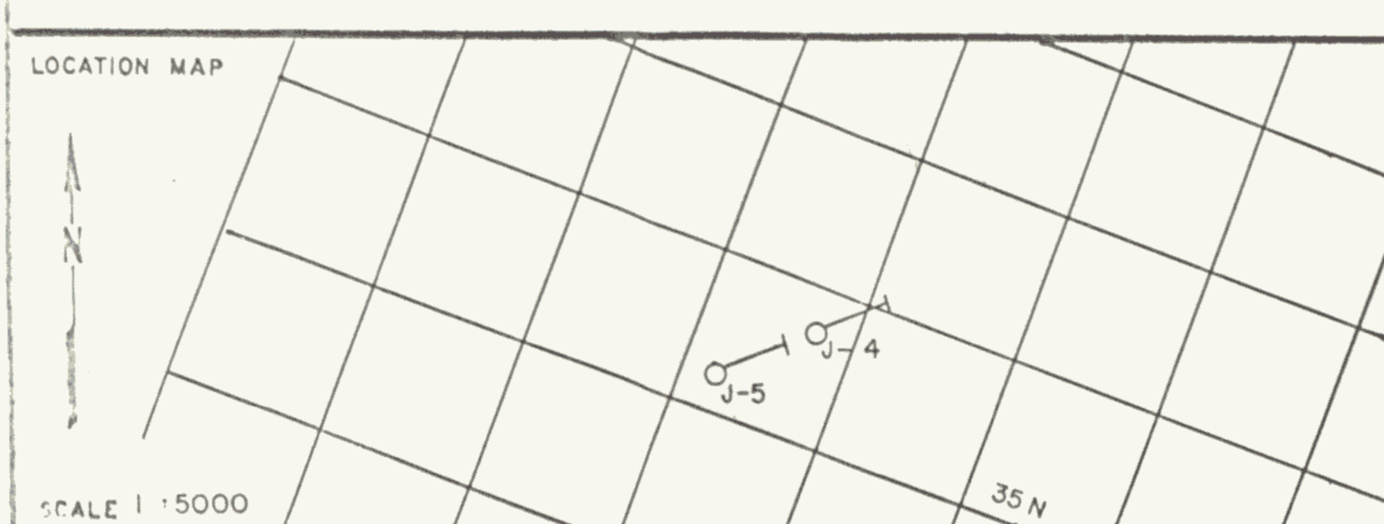
SECTION 29+00 N

HOLE 522-79-26-J-2; J-3; J-7

COMPLETED AUGUST 23, 1979

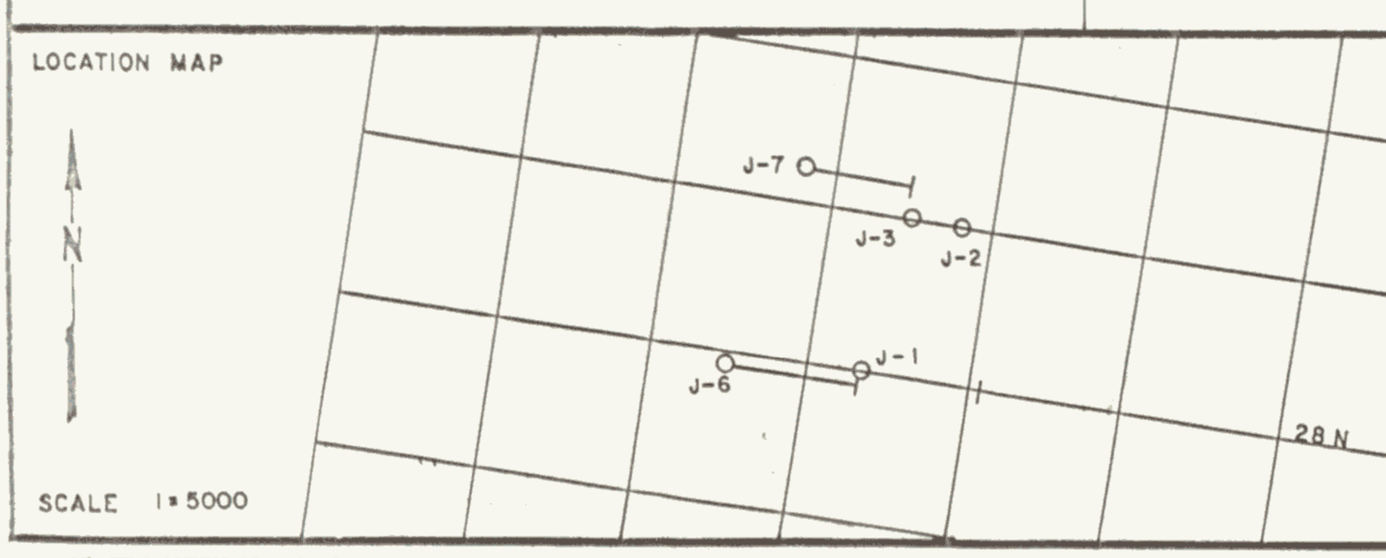
LOGGED BY W.J. OLSSON

SCALE 1:500



ELDORADO NUCLEAR LIMITED

PROJECT 522
DISPOSITION JOVE CLAIMS
SECTION NOT ON SECTION
HOLE 522-79-26-J-4; J-5
COMPLETED
LOGGED BY W.J. OLSSON B. OAKES
SCALE 1:50



ELDORADO NUCLEAR LIMITED

PROJECT 522
DISPOSITION JOVE CLAIMS
SECTION 28+00 N
HOLE 522-79-26 J-6; J-1
COMPLETED SEPT. 12/79 - AUG. 18/79
LOGGED BY W.J. OLSSON
SCALE 1:500

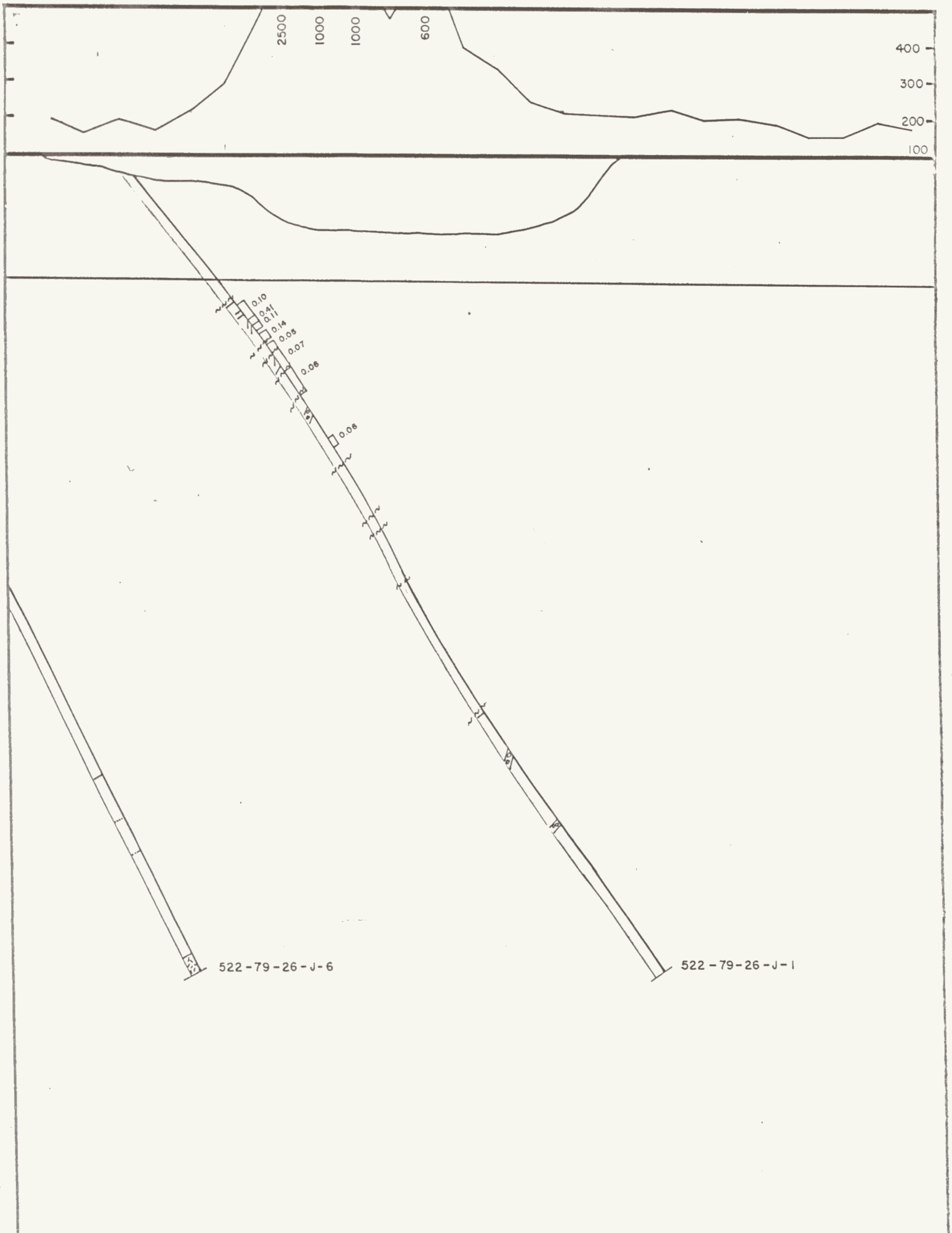
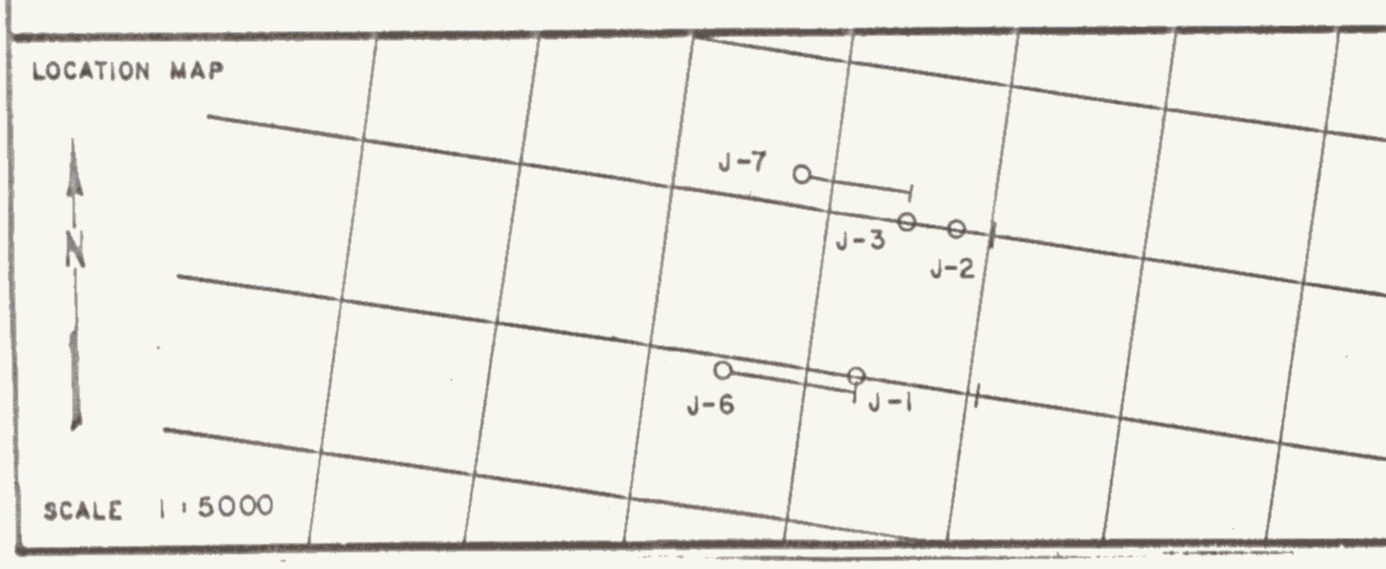
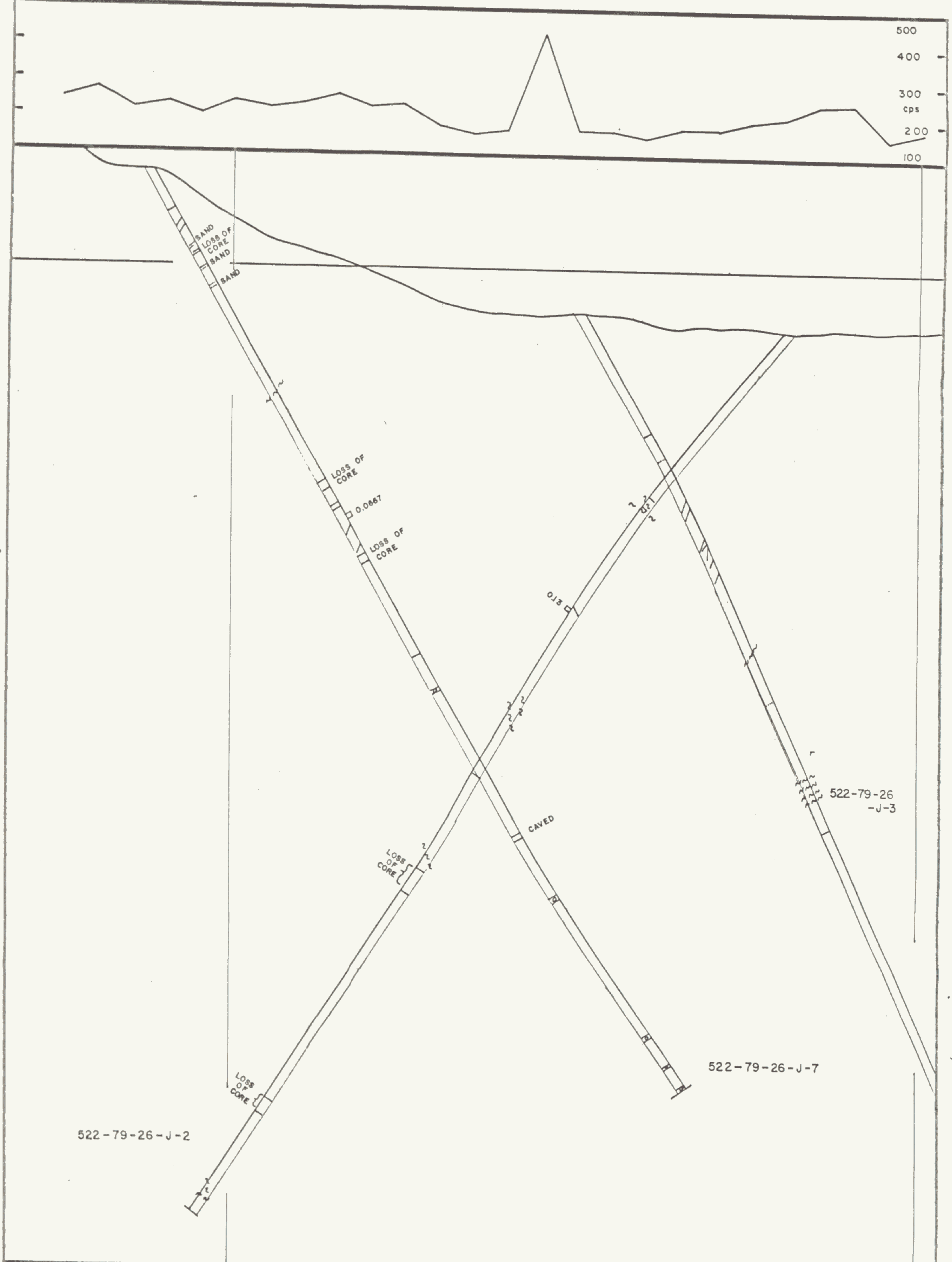


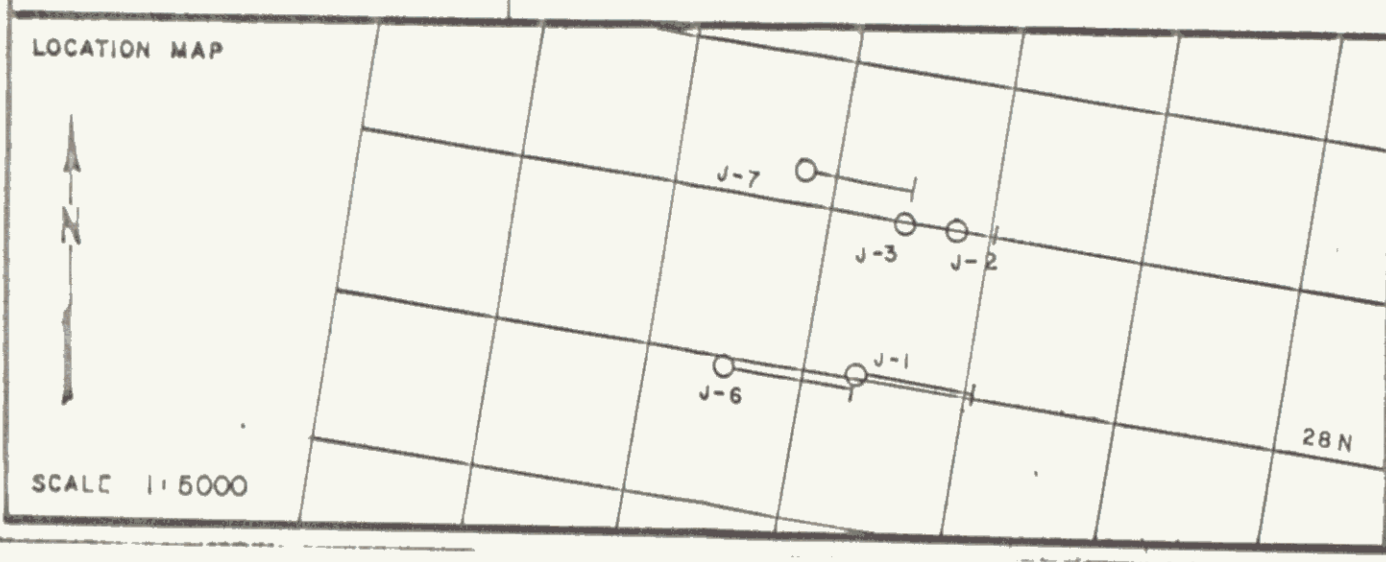
Fig 7-



ELDORADO NUCLEAR LIMITED

PROJECT 522
DISPOSITION JOVE CLAIMS
SECTION 28+00 N
HOLE 522-79-26-J-1, J-6
COMPLETED AUG. 18/79, SEPT. 12/79
LOGGED BY W.J. OLSSON
SCALE 1 : 500





ELDORADO NUCLEAR LIMITED

PROJECT 522
DISPOSITION JOVE CLAIMS
SECTION 29+00 N
HOLE 522-79-26-J-2; J-3; J-7
COMPLETED AUGUST 23, 1979
LOGGED BY W.J. OLSSON
SCALE 1:500

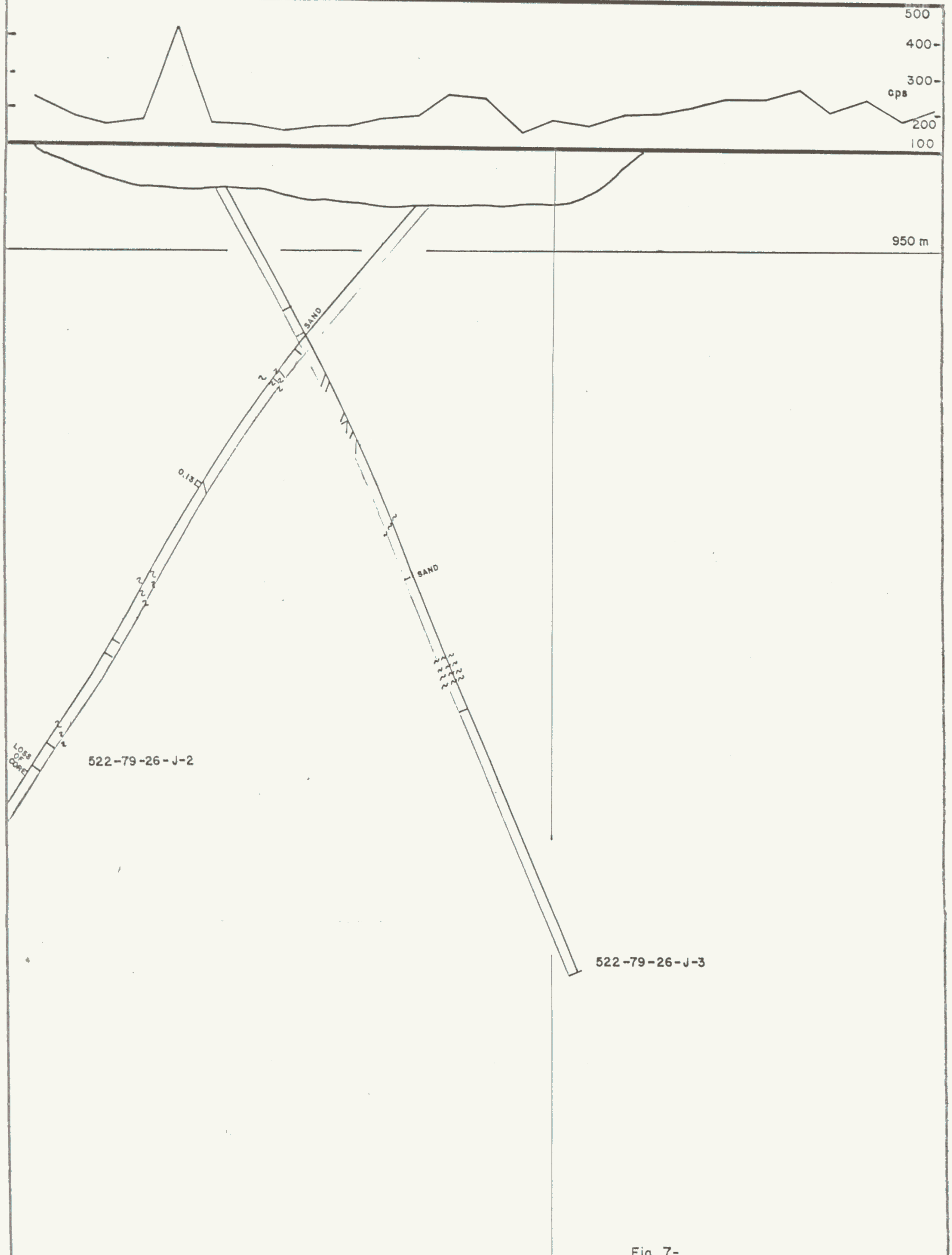
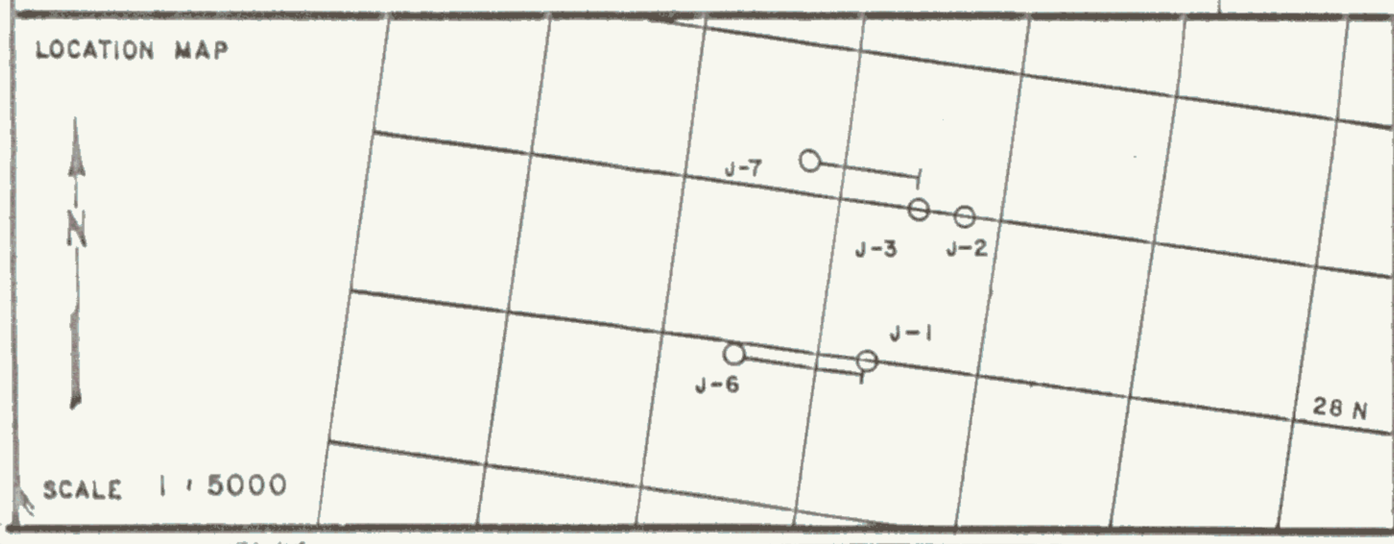


Fig 7-



ELDORADO NUCLEAR LIMITED

PROJECT 522

DISPOSITION JOVE CLAIMS

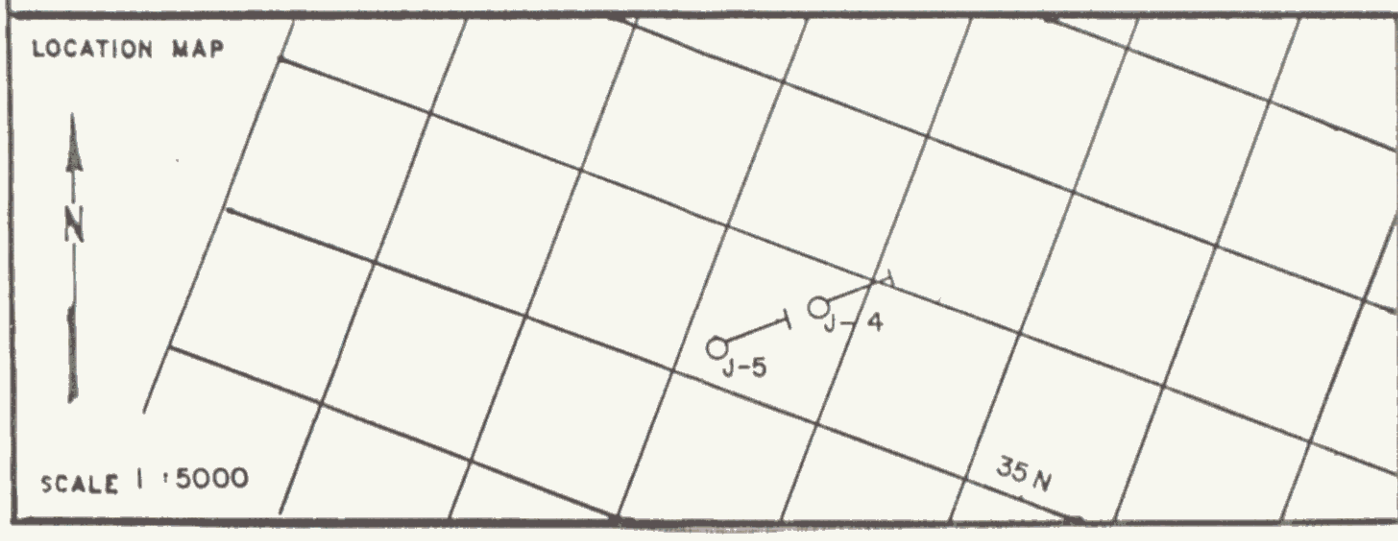
SECTION 29+00 N

HOLE 522-79-26-J-2; J-3

COMPLETED AUGUST 25. 1979

LOGGED BY W.J. OLSSON

SCALE 1 : 50



ELDORADO NUCLEAR LIMITED

PROJECT 522

DISPOSITION JOVE CLAIMS

SECTION NOT ON SECTION

HOLE 522-79-26-J-4; J-5

COMPLETED

LOGGED BY W.J. OLSSON B. OAKES

SCALE 1 : 50