MAP NO.: 115 I 7

ASSESSMENT REPORT X
PROSPECTUS
CONFIDENTIAL X
OPEN FILE

DOCUMENT NO: 092944
MINING DISTRICT: WHITEHORSE
TYPE OF WORK: DIAMOND DRILLING

REPORT FILED UNDER: WESTERN COPPER HOLDINGS

DATE PERFORMED: OCT - NOV, 1990 DATE FILED: FEB, 1991

LOCATION: LAT.: 62°21'N AREA: WILLIAMS CREEK

LONG.: 136°41'W VALUE $: 26,800

CLAIM NAME & NO.: BOY 20, 22,24, 51-51, 83, 85
DUN 1F-3F
WAR 22
AC 2F-3F, W 1-49

WORK DONE BY: ARCHER, CATHRO & ASSOCIATES (1981) LTD

WORK DONE FOR: WESTERN COPPER HOLDINGS LIMITED

DATE TO GOOD STANDING:

REMARKS: Western Copper Holdings funded 1055 feet of Diamond Drilling in three NQ holes on the Williams Creek no. 1 Zone, a steep dipping tabular zone of weakly schistose rock. The rock is diortic in composition and is enclosed by Triassic or older granodiorite. DDH-18 intersected 102 feet of 2.28% total copper. DDH-19 intersected 50 feet of 1.38% and DDH-20 intersected 48 feet of 1.16% and 76 feet of 1.80%.

Indian and Northern Affairs Canada / Affaires indiennes et du Nord Canada

M.R. file no.

R.M.M.R. file no.

Date forwarded 20 Feb 1991

TRANSMITTAL FORM

From ▶ Mining Recorder at: Whitehorse

To ▶ Regional Manager, Mineral Rights at Whitehorse, Y.T.

OFFICE OF THE REGIONAL MANAGER MINERAL RIGHTS FEB 20 1991 WHITEHORSE YUKON TERRITORY

For action are:

- ☐ NEW APPLICATION FOR PLACER LEASE TO PROSPECT — Name
- ☐ RENEWAL APPLICATION PLACER LEASE TO PROSPECT — Name — Lease no.
- ☐ AFFIDAVIT OF EXPENDITURE ON PLACER LEASE — Name — Lease no.
- ☐ SECURITY DEPOSIT
- ☐ FINANCIAL ABILITY
- ☐ ASSIGNMENT OF PLACER LEASE NO. — From — To
- ☐ GROUPING APPLICATION UNDER SEC. 52(2) PLACER MINING ACT. — Owner
- ☑ DIAMOND DRILL LOGS — Claims: Boy, Dun, War, AC, W1-49 — Claim sheet no.: 115-1-7
- ☐ QUARTZ ASSESSMENT REPORT — Claims — Claim sheet no.

* Please number and send 1 copy back. Thanks.

Type of report — Submitted by

Cls. work performed on — $ req. for ren. application: 26,800

H Southwick
Signature

Date returned

REPLY ACTION

092G 4 4

Signature

802-37 (7-88)

ARCHER, CATHRO
& ASSOCIATES (1981) LIMITED
CONSULTING GEOLOGICAL ENGINEERS

1016 - 510 WEST HASTINGS STREET
VANCOUVER, B. C. V6B 1L8

(604) 688-2568

CONFIDENTIAL

ASSESSMENT REPORT

WILLIAMS CREEK PROPERTY

Boy 20	Y51118
22	Y51120
24	Y51122
51-58	Y51149-Y51156
83	Y51181
85	Y51183
Dun 1F-3F	Y59382-Y59384
War 22	Y59373
AC 2F-3F	Y91722-Y91723
W 1-49	YB26708-YB26756

WHITEHORSE MINING DISTRICT

Latitude 62°21'N; Longitude 136°41'W

NTS 115I/7

092944

WESTERN COPPER HOLDINGS LIMITED

February, 1991

A.R. Archer, B.A.Sc., P.Eng.

For diamond drilling conducted between October 25 and November 5, 1990 on Dun 2F claim

BOX 4127, 3125 THIRD AVENUE, WHITEHORSE, Y. T. Y1A 3S9

(403) 667-4415

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APPENDIX

FIGURES

INTRODUCTION

The Williams Creek copper deposit was found and staked in 1970 by prospector G. Wing. The property was optioned by Dawson Range Joint Venture (Straus Exploration Inc., Great Plains Development of Canada Ltd., Trojan Consolidated Minerals Ltd. and Molybdenum Corporation of America) in September 1970 and explored during the period 1970 to 1972 with grid soil sampling, geophysical surveys, trenching and 23,379 feet of diamond drilling. The joint venture abandoned its interest in the property to Archer, Cathro & Associates Limited in 1982, which later sold its interest to Archer, Cathro & Associates (1981) Limited.

In August, 1989, Archer, Cathro optioned the property to Western Copper Holdings Limited, which conducted metallurgical tests that year and upgraded the access road in September, 1990. In October, 1990, Western Copper funded 1055 feet of diamond drilling in three holes on the Williams Creek No. 1 Zone under the management of Archer, Cathro and direct supervision of the writer, the results of which are the subject of this report.

LOCATION AND ACCESS

The Williams Creek property is located at latitude 62°21'N and longitude 136°41'W on NTS claim sheet 115I/7, as illustrated on Figure 1 on the following page.

The Williams Creek No. 1 Zone is accessible by a seven mile long summer road north from Mile 22 on the secondary, government-maintained Freegold Road that extends west of Carmacks. Carmacks lies some 109 road miles north of Whitehorse.

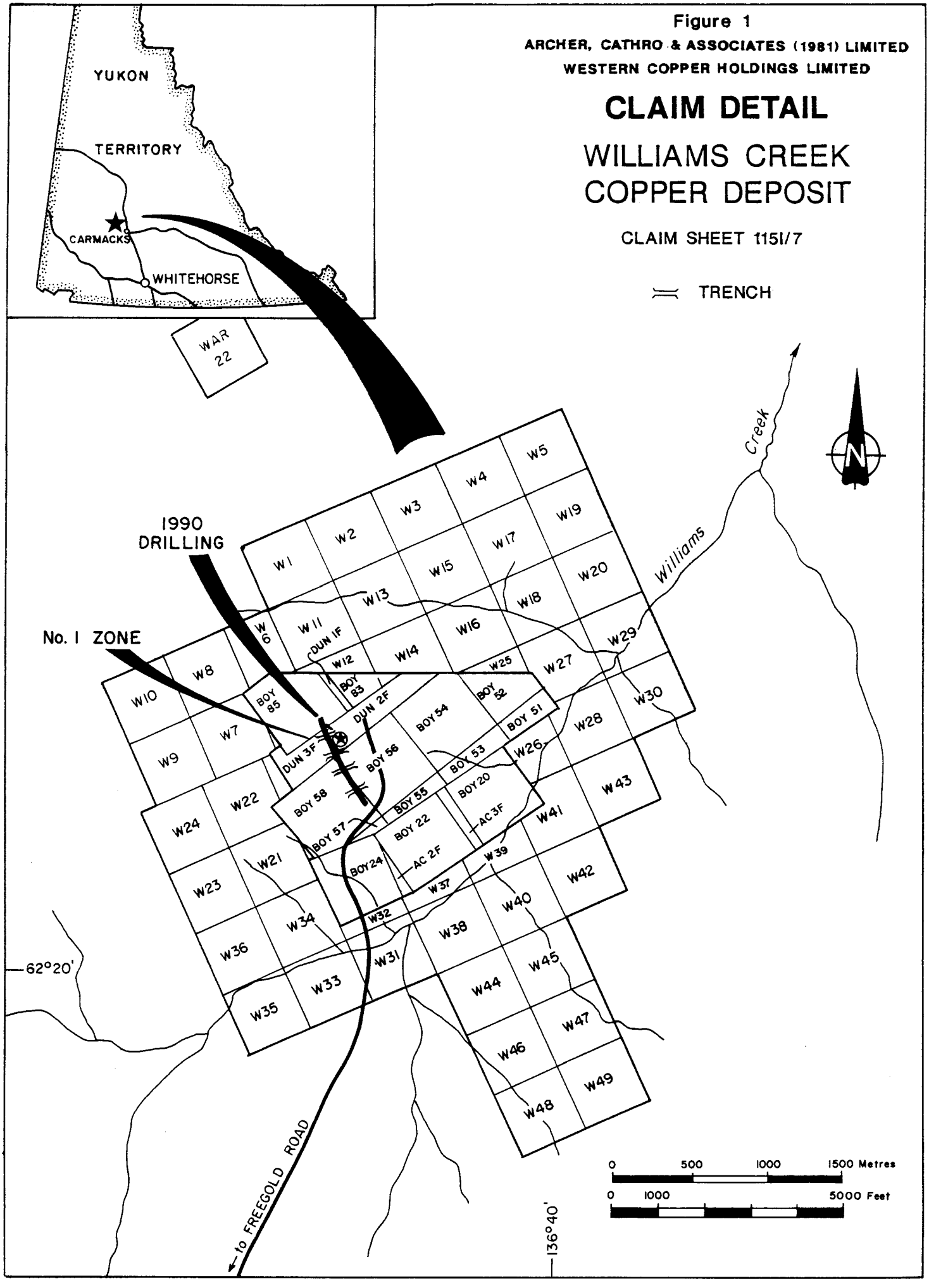
Figure 1
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
WESTERN COPPER HOLDINGS LIMITED
CLAIM DETAIL
WILLIAMS CREEK
COPPER DEPOSIT
CLAIM SHEET 115I/7
TRENCH
YUKON
TERRITORY
CARMACKS
WHITEHORSE
WAR 22
1990 DRILLING
No. 1 ZONE
Williams Creek
N
W1
W2
W3
W4
W5
W6
W7
W8
W9
W10
W11
W12
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W42
W43
W44
W45
W46
W47
W48
W49
DUN 1F
DUN 2F
DUN 3F
BOY 85
BOY 83
BOY 54
BOY 52
BOY 51
BOY 56
BOY 53
BOY 20
BOY 58
BOY 55
BOY 57
BOY 22
AC 3F
BOY 24
AC 2F
62°20'
136°40'
to FREEGOLD ROAD
0 500 1000 1500 Metres
0 1000 5000 Feet

CLAIM STATUS

The Williams Creek property consists of 68 full size and fracture mineral claims, of which all but one (War 22) are contiguous. The claims are recorded in the Whitehorse Mining District as follows.

Claim Name	Grant Numbers	Expiry Date
Boy 20	Y51118	March 9, 1995
22	Y51120	March 9, 1995
24	Y51122	March 9, 1995
51-58	Y51149-Y51156	March 9, 1995
83	Y51181	March 9, 1995
85	Y51183	March 9, 1995
Dun 1F-3F	Y59382-Y59384	March 9, 1995
War 22	Y59373	March 9, 1995
AC 2F-3F	Y91722-Y91723	March 9, 1995
W 1-49	YB26708-YB26756	August 31, 1992

GEOLOGY AND MINERALIZATION

The Williams Creek No. 1 Zone is a steep-dipping (-70° east) tabular zone of weakly schistose rock of diorite composition enclosed by Triassic or older granodiorite. It is believed to be a recrystallized roof pendant of Triassic Mt. Nansen volcanic rocks. The deposit has a sharp footwall contact and a less well defined, somewhat gradational, hanging wall contact. It has a strike length of 1800 feet at surface, reducing to 1100 feet at a depth of 1200 feet below surface and has an average width of 96 feet.

Drilling at approximately 400 foot centres in 1970 to 1972 has traced the deposit to 1500 feet below surface and shows that it terminates to the north by absorption into the granodiorite and to the south by an assay cutoff due to increasing pyrite. Mineralization consists of disseminated bornite, chalcopyrite and pyrite with the occasional irregular veinlet of bornite and chalcopyrite and is best developed in the footwall portion of the deposit. Minor gold and silver values are present and appear to be preferentially contained in the bornite. Small quantities of molybdenite are also present.

Drill indicated reserves, using a 0.6% Cu cutoff grade, are 9.36 million tons grading 1.34% Cu in a footwall zone averaging 53 feet wide, plus an additional 6.97 million tons grading 0.78% Cu in an irregular hanging wall zone. About half of this reserve is in oxide form as surface oxidation has converted most of the sulphide copper minerals to malachite and azurite to 800 feet below surface.

1990 DRILL PROGRAM

The purpose of the 1990 drilling was to test the width and grade of the No. 1 Zone between surface and the two best drill intersections obtained in the 1970-72 drill program. Drilling was contracted to E. Caron Diamond Drilling Limited of Whitehorse and three holes (90W1-18 to 90W1-20) were drilled with NQ equipment over the period October 25 to November 5, 1990. The drill program was supervised on site by geological engineer K. Sax who stayed in a tent camp on the property. The diamond drillers stayed in a hotel in Carmacks and drove to work each day. Cold weather necessitated the use of a water truck rather than surface water lines. Otherwise, no unusual problems were encountered.

After drilling was completed, the core was transported to the H.S. Bostock Core Library in Whitehorse and logged by K. Sax. Mineralized sections were split and sent to Chemex Labs Ltd., North Vancouver, B.C. where they were assayed for total copper and oxide copper by standard assay techniques and gold and silver by fire assay. Sulphide copper assays were determined by subtracting the oxide copper assay from the total copper assay. Copies of the drill logs with assays are given in Appendix I.

The three holes were drilled at a -50° dip about 150 feet apart on the Dun 2F claim designed to intersect the footwall of the No. 1 Zone about 300 feet below surface. The location and assay summaries of the holes are shown in section on Figure W25 and in cross section on Figures W20A, W21A and W34, all in the pockets. The three holes intercepted the No. 1 Zone where expected and all three returned better than anticipated assay results based on previous assays from nearby drill holes and surface trenches.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

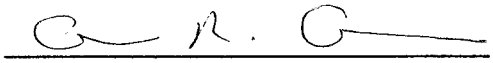
A.R. Archer, B.A.Sc., P.Eng.

/mc

STATEMENT OF QUALIFICATIONS

I, Alan R. Archer, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia, and residential address in West Vancouver, British Columbia, do hereby declare:

1. I am a 1957 graduate of the University of British Columbia in geological engineering.
2. I have been engaged in geological engineering for over twenty-five years, the past twenty of which have been as a consultant.
3. I am a registered professional engineer in British Columbia and in Yukon Territory.
4. I have supervised the work described in this report.



Alan R. Archer, B.A.Sc., P.Eng.

APPENDIX I

DRILL LOGS WITH ASSAYS

Archer, Cathro & Associates (1981) Limited **WILLIAMS CREEK** HOLE No. 90WI-18 DDH-90WC-1 Page 1 of 3

COORDINATES 1510' N 200' E	DATE STARTED 29-10-90	DEPTH	COLLAR				
ELEVATION	DATE COMPLETED 31-10-90	DIP	-50				
CORE SIZE NQ	FINAL DEPTH 359'	AZIMUTH	246				

DEPTH	COMMENTS	MINERALS					SAMPLES					Cu %	Cu Ox. %	Cu Sul. %	Au g/t	Ag g/t
		Py.	Cp.	Bo.	Col. Ox.	Blk. Ox.	FROM	TO	INTERVAL	Rec. %	SAMPLE No.					
	overburden															
10																
	hornblende diorite															
20																
30	granodiorite															
40	mod fol. 15°															
	mod fol 0°															
50																
60	porphyry dike															
70	granodiorite															
80	K spar porphyry dike 80°															
	weak fol. 30°															
90																
100	granodiorite															
110																

DEPTH	COMMENTS	MINERALS Py.	Cp.	Bo.	Col. Ox.	Blk. Ox.	SAMPLES FROM	TO	INTERVAL	Rec. %	SAMPLE No.	Cu %	Cu Ox. %	Cu Sul. %	Au g/t	Ag g/t
	granodiorite															
130	} faulted & argillic altered granodiorite															
140					1		139	149	10	80	T12552	0.56	0.48	0.08	.008	.06
	hornblende biotite diorite, fine gr.				1/2					100 100						
150	granodiorite						149	159	10	100	T12553	0.37	0.33	0.04	.004	.02
	hornblende biotite diorite, fine gr. mod. fol 60°				2											
160			tr	tr			159	169	10	100	T12554	0.37	0.35	0.02	.002	.03
170					1		169	179	10	100	T12555	0.46	0.40	0.06	.004	.04
	mod fol 45°															
180	granodiorite						179	189	10	100	T12556	0.35	0.32	0.03	.002	.04
										60						
190	strong fol 45°				1		189	199	10	100	T12557	0.45	0.41	0.04	.004	.05
200	granodiorite						199	209	10	100	T12558	0.44	0.41	0.03	.004	.04
210	hornblende biotite diorite, coarse gr.						209	219	10	100	T12559	1.03	0.88	0.15	.008	.10
220	hornblende biotite diorite, fine gr				4	1	219	229	10	100	T12560	1.78	1.50	0.28	.010	.12
230	anastomosing veinlets & dissem cpy, py, & Cu wad	tr					229	241	12	100	T12561	1.28	1.31	-0.03	.008	.09
240			1		3	1	241	246	5	100	T12546	4.09	4.00	0.09	.026	.26
	gouge						246	251	5	100	T12547	2.62	2.45	0.17	.020	.20

PTH	COMMENTS	MINERALS Py.	Cp.	Bo.	Col. Ox.	Blk. Ox.	SAMPLES FROM	TO	INTERVAL	Rec. %	SAMPLE No.	Cu %	Cu Ox. %	Cu Sul. %	Au g/t	Ag g/t
	HBD, fine gr.						251	256	5	100	T12548	1.80	1.84	-0.04	.010	.07
	Tr matrix Cu(?)				3		256	264	5	100	T12549	4.95	4.70	0.25	.022	.23
260			tr			tr										
	hornblende biotite diorite, coarse gr.						264	274	10		T12550	2.05	1.9V	0.13	.028	.2V
270							274	284	10		T12551	2.91	2.70	0.21	.04V	.47
280					5											
	hornblende biotite diorite, fine gr.						284	294	10		T12562	2.54	2.2V	0.3V	.053	.67
290							294	304	10		T12563	2.26	1.93	0.33	.054	.43
300																
					5		304	314	10		T12564	2.41	2.18	0.23	.028	.27
310																
							314	324	10		T12565	1.58	1.35	0.23	.028	.30
320																
							324	333	9		T12566	2.18	2.05	0.13	.030	.35
330			tr		3											
							333									
	coarse gr weathered granodiorite															
340																
	moderate vn fracturing				1											
350																
					tr											
	EOH 359'															

Archer, Cathro & Associates (1981) Limited **WILLIAMS CREEK** HOLE No. 90W1-19 DDH-90WC-2 Page 1 of 3

COORDINATES	1350' N 230' E	DATE STARTED	1-11-90	DEPTH	COLLAR		
ELEVATION		DATE COMPLETED	3-11-90	DIP	-50		
CORE SIZE	NQ	FINAL DEPTH	345'	AZIMUTH	246		

DEPTH ft	COMMENTS	MINERALS					SAMPLES					Cu %	Cu Ox. %	Cu Sul. %	Au g/t	Ag g/t
		Py.	Cp.	Bo.	Col. Ox.	Blk. Ox.	FROM	TO	INTERVAL	Rec. %	SAMPLE No.					
	overburden															
10	granodiorite															
20	fault, limonitic															
	fault gouge															
30																
40																
50																
60	fault, limonitic gouge (45°?)															
70	hornblende diorite															
80	granodiorite															
90	qtz feldspar veinlets, 30°&10°															
100																
110																

PTH	COMMENTS	MINERALS Py.	Cp.	Bo.	Col. Ox.	Blk. Ox.	SAMPLES FROM	TO	INTERVAL	Rec. %	SAMPLE No.	Cu %	Cu Ox. %	Cu Sul. %	Au g/t	Ag g/t
	faulted + broken ground															
130	granodiorite															
140																
	hornblende biotite diorite, fine gr.															
150	granodiorite															
160																
	hornblende biotite diorite, fine gr.															
	granodiorite															
170	hornblende biotite diorite, fine gr.				Tr.		171.6	181.6	10	81	T12567	0.81	0.68	0.13	.006	.09
	porphyry dike					2										
	HBD, fine gr. granodiorite						181.6	191.6	10	86	T12568	1.58	1.39	0.19	.008	.12
180																
190	mod fol 50°				2		191.6	201.6	10	96	T12569	1.00	0.94	0.06	.004	.06
200							201.6	211.6	10	94	T12570	0.56	0.50	0.06	.006	.07
	banded chloritic (?)					1										
210							211.6	222	10.4	93	T12571	0.36	0.34	0.02	.001	.03
					3											
220							222	226	4	65	T12572	0.12	0.11	0.01	TR	TR
	porphyry dike				Tr.											
	HBD, med to coarse gr.				1	1/2	226	236	10	88	T12573	0.70	0.67	0.03	.006	.07
230	mod fol 45°															
	mod to strong fol 65°	Tr	1			1	236	246	10	74	T12574	0.67	0.64	0.03	.008	.08
240																
							246	256	10	80	T12575	0.42	0.39	0.03	.004	.07
256																

rcher, Cathro & Associates (1981) Limited — **WILLIAMS CREEK** — HOLE No. 90W1-19 DDH-90WC-2 — Page 3 of 3

PTH	COMMENTS	MINERALS Py.	Cp.	Bo.	Col. Ox.	Blk. Ox.	SAMPLES FROM	TO	INTERVAL	Rec. %	SAMPLE No.	Cu %	Cu Ox. %	Cu Sul. %	Au g/t	Ag g/t
	hornblende biotite dacite, mod. to coarse qtz. with occ. malachite stained qtz/fracturing						256	266	10	82 88	T12576	0.52	0.46	0.06	.012	.15
260							266	276	10	96 88	T12577	0.84	0.79	0.05	.038	.29
270							276	286	10	87	T12578	2.60	2.51	0.09	.074	.59
280					2		286	296	10	96 100	T12579	3.12	3.05	0.07	.057	.66
290	HBD, fine qtz stwng fol 40°				3		296	306	10	95 100	T12580	0.78	0.74	0.04	TR	.01
300							306	316	10	92 93	T12581	0.78	0.74	0.04	TR	.01
310	weak fol 70°						316	326	10	94 86 92	T12582	0.33	0.33	NIL	TR	TR
320	qtz & k-spar flooding				10		326	335	9	87 100 93 82 82 90	T12583	0.56	0.56	NIL	TR	TR
330							335									
340	end Cu zone contorted bands of granodiorite unmineralized HBD															
	EOH 345'															

Archer, Cathro & Associates (1981) Limited **WILLIAMS CREEK** HOLE No. 90W1-20 OOH-90WC-3 Page 1 of 3

COORDINATES	1200' N 260' E	DATE STARTED	3-11-90	DEPTH	COLLAR		
ELEVATION		DATE COMPLETED	5-11-90	DIP	-50		
CORE SIZE	NQ	FINAL DEPTH	351'	AZIMUTH	246		

DEPTH	COMMENTS	MINERALS					SAMPLES					Cu %	Cu Ox. %	Cu Sul. %	Au g/t	Ag g/t
		Py.	Cp.	Bo.	Col. Ox.	Blk. Ox.	FROM	TO	INTERVAL	Rec. %	SAMPLE No.					
	overburden															
10	hornblende diorite															
20	porphyry dike															
30	hornblende diorite															
40																
50																
	porphyry dike															
60	granodiorite															
70	intense qtz-flooding															
80																
90	hornblende biotite diorite, fine gr. granodiorite															
100																
110																

DEPTH	COMMENTS	MINERALS Py.	Cp.	Bo.	Col. Ox.	Blk. Ox.	SAMPLES FROM	TO	INTERVAL	Rec. %	SAMPLE No.	Cu %	Cu Ox. %	Cu Sul. %	Au g/t	Ag g/t
130	granodiorite															
140	porphyry dike															
150	hornblende diorite, coarse qtz.															
160																
170																
180																
190	weak fol 60°															
200	hornblende biotite diorite, fine to coarse qtz. Local qtz flooding	tr			tr		199.5	209.5	10	92	T12584	1.58	1.36	0.22	.27	4.7
210	strong fol 40° fault gouge	tr			½		209.5	219.5	10	78 80	T12585	1.15	1.08	0.07	.24	5.4
220		tr			1		219.5	229.5	10	62 88	T12586	0.64	0.59	0.05	.21	2.0
230					1		229.5	237	7.5	94 91	T12587	0.61	0.54	0.07	.21	1.8
240	hornblende biotite diorite, fine qtz, locally fsx, weak fol.	tr			½	1	237	246	9	90	T12588	1.73	1.37	0.36	.55	5.7
250					2		246	256	10	90	T12589	1.18	1.05	0.13	.34	4.4

Archer, Cathro & Associates (1981) Limited — **WILLIAMS CREEK** — HOLE No. 90WI-20 DDH-90WC-3 — Page 3 of 3

DEPTH	COMMENTS	MINERALS Py.	Cp.	Bo.	Col. Ox.	Blk. Ox.	SAMPLES FROM	TO	INTERVAL	Rec. %	SAMPLE No.	Cu %	Cu Ox. %	Cu Sul. %	Au g/t	Ag g/t
250	hornblende biotite diorite fine to med gr. weak to mod fol				2					95						
260							256	266	10	90	T12590	3.39	3.09	0.30	1.75	15.2
270							266	269	3	100	T12591	4.44	4.23	0.21	3.05	28.5
							269	276	7		T12592	0.85	0.82	0.03	0.14	1.2
	porphyry dike				2		276	285	9	100	T12593	1.38	1.24	0.14	0.41	1.3
280	HBD, fine to med gr.		1/2			1										
	hornblende biotite diorite, coarse gr.						285	295	10	100	T12594	1.82	1.80	0.02	0.34	5.3
290										91						
	porphyry dike		tr			2	295	305	10	99	T12595	3.93	1.96	1.97	1.54	24.6
300										100						
					5		305	315	10		T12596	2.39	2.31	0.08	0.14	2.2
310	strong fol 30°									95						
							315	325	10	92	T12597	0.56	0.53	0.03	TR	0.3
320										90						
							325	335	10	100	T12598	0.50	0.41	0.09	TR	0.3
xxxx 330	coarse gr. bx, qtz flooding	1	2													
	and Cu zone 335'						335	345'	10	92	T12599	0.23	0.20	0.03	TR	TR
340	granodiorite with molybdenite in fractures				tr					95						
										80						
350	EOH 351'				tr											

092944

1971 - DIAMOND DRILL HOLE ASSAYS

HOLE No.	WALL	TRUE WIDTH (FT)	TOTAL COPPER %	OXIDE COPPER %	SULFIDE COPPER %	SILVER oz/ton	GOLD oz/ton
1 & 2		1970 X-RAY HOLES, ASSAYS NOT RELIABLE					
3	HW	40	1.50	1.47	.04	0.29	0.016
	FW	24	0.20	0.13	0.7	NA	NA
4	HW	33	0.97	0.94	.03	0.165	0.02
	FW	33	0.41	0.34	07	0.11	0.01
5	HW	66	0.82	0.67	0.15	0.15	0.017
	FW	70	2.86	2.42	0.44	0.476	0.05
6	HW	17	0.61	0.50	0.11	0.16	.003
	FW	86	.654	587	0.067	0.178	.009
7	HW	41	0.77	NIL	0.77	0.144	0.016
	FW	63	1.57	NIL	1.57	0.172	0.017
8		UNMINERALIZED					
9	HW	28	0.85	0.70	0.15	0.04	0.01
	FW	16	0.05	NA	NA	NA	NA
10	HW	57	0.82	0.75	0.07	0.13	0.03
	FW	48	1.87	1.78	0.09	0.17	0.03
11	HW	71	0.60	NIL	0.60	0.02	0.01
	FW	25	1.35	NIL	1.35	0.04	0.01
12	HW	44	0.55	0.35	0.20	0.02	0.01
	FW	20	1.44	0.79	0.65	0.10	0.015
13	HW	89	0.274				
	FW	36	0.67	NOT A SSAYED			
14	HW		TRACES OF MINERALIZATION				
	FW	18	0.41	NOT ASSAYED			
15	HW	39	0.68	NIL	0.68	0.10	0.01
	FW	105	1.24	NIL	1.24	0.02	0.01
16	HW	44	0.30	0.21	0.09	NOT ASSAYED	
	FW	29	1.27	1.08	0.19	0.02	0.01
17	HW	32	0.19	NIL	0.18	NOT ASSAYED	
	FW		TRACES OF MINERALIZATION				

1990 - DIAMOND DRILL HOLE ASSAYS

18	HW	56	0.43	0.39	0.04	0.04	0.004
	FW	102	2.26	2.10	0.18	0.28	0.027
19	HW	89	0.72	0.66	0.06	0.10	0.009
	FW	50	1.38	1.34	0.04	0.22	0.022
20	HW	48	1.16	1.01	0.15	0.12	0.009
	FW	76	1.80	1.49	0.31	0.19	0.017

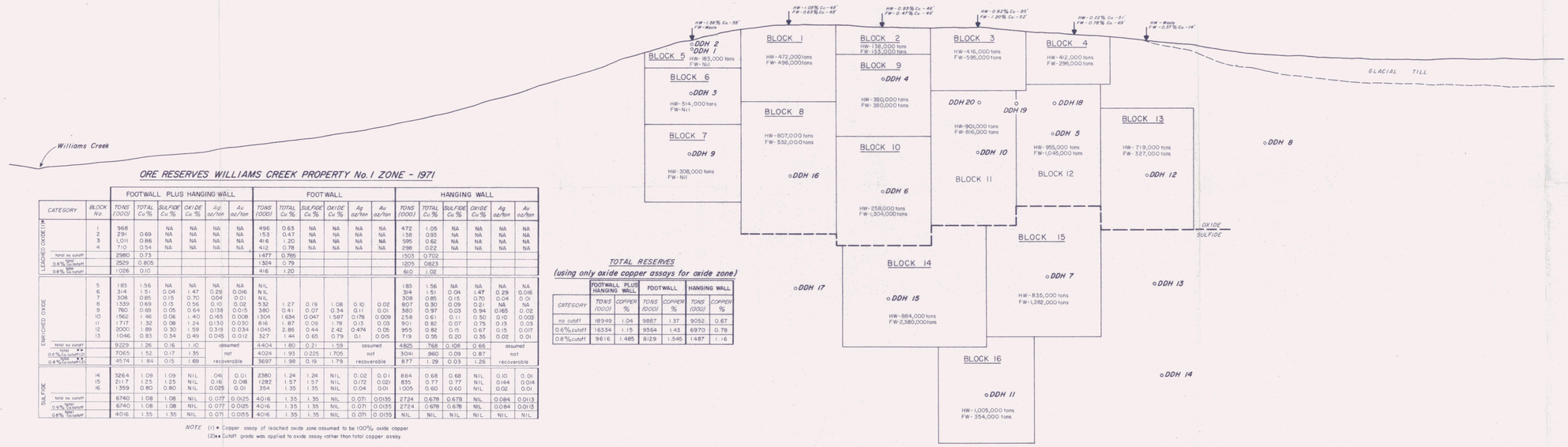
ORE RESERVES WILLIAMS CREEK PROPERTY No.1 ZONE - 1971

CATEGORY	BLOCK No.	FOOTWALL PLUS HANGING WALL TONS (000)	TOTAL Cu %	SULFIDE Cu %	OXIDE Cu %	Ag oz/ton	Au oz/ton	FOOTWALL TONS (000)	TOTAL Cu %	SULFIDE Cu %	OXIDE Cu %	Ag oz/ton	Au oz/ton	HANGING WALL TONS (000)	TOTAL Cu %	SULFIDE Cu %	OXIDE Cu %	Ag oz/ton	Au oz/ton
LEACHED OXIDE (1)★	1	968		NA	NA	NA	NA	496	0.63	NA	NA	NA	NA	472	1.05	NA	NA	NA	NA
	2	291	0.69	NA	NA	NA	NA	153	0.47	NA	NA	NA	NA	138	0.93	NA	NA	NA	NA
	3	1,011	0.86	NA	NA	NA	NA	416	1.20	NA	NA	NA	NA	595	0.62	NA	NA	NA	NA
	4	710	0.54	NA	NA	NA	NA	412	0.78	NA	NA	NA	NA	298	0.22	NA	NA	NA	NA
	total no cutoff	2980	0.73					1477	0.785					1503	0.702				
	NPV 0.6% Cu cutoff	2529	0.805					1324	0.79					1205	0823				
	NPV 0.8% Cu cutoff	1026	0.10					416	1.20					610	1.02				
ENRICHED OXIDE	5	183	1.56	NA	NA	NA	NA	NIL						183	1.56	NA	NA	NA	NA
	6	314	1.51	0.04	1.47	0.28	0.016	NIL						314	1.51	0.04	1.47	0.29	0.016
	7	308	0.85	0.15	0.70	0.04	0.01	NIL						308	0.85	0.15	0.70	0.04	0.01
	8	1339	0.69	0.13	0.56	0.10	0.02	532	1.27	0.19	1.08	0.10	0.02	807	0.30	0.09	0.21	NA	NA
	9	760	0.69	0.05	0.64	0.138	0.015	380	0.41	0.07	0.34	0.11	0.01	380	0.97	0.03	0.94	0.165	0.02
	10	1562	1.46	0.06	1.40	0.165	0.008	1304	1.634	0.047	1.587	0.178	0.009	258	0.61	0.11	0.50	0.10	0.002
	11	1717	1.32	0.08	1.24	0.130	0.030	816	1.87	0.09	1.78	0.13	0.03	901	0.82	0.07	0.75	0.13	0.03
	12	2000	0.89	0.30	1.59	0.319	0.034	1045	2.86	0.44	2.42	0.474	0.05	955	0.82	0.15	0.67	0.15	0.017
	13	1046	0.83	0.34	0.49	0.045	0.012	327	1.44	0.65	0.79	0.1	0.015	719	0.56	0.20	0.35	0.02	0.01
	total no cutoff	8229	1.26	0.16	1.10	assumed not recoverable		4404	1.80	0.21	1.59	assumed not recoverable		4825	768	0.108	0.66	assumed not recoverable	
	NPV 0.4% Cu cutoff (2)★★	7065	1.52	0.17	1.35			4024	1.93	0.225	1.705			3041	960	0.09	0.87		
	NPV 0.8% Cu cutoff (2)	4574	1.84	0.15	1.69			3697	1.98	0.19	1.79			877	1.29	0.03	1.26		
SULFIDE	14	3264	1.09	1.09	NIL	041	0.01	2380	1.24	1.24	NIL	0.02	0.01	884	0.68	0.68	NIL	0.10	0.01
	15	2117	1.25	1.25	NIL	0.16	0.018	1282	1.57	1.57	NIL	0.172	0.021	835	0.77	0.77	NIL	0.144	0.014
	16	1359	0.80	0.80	NIL	0.025	0.01	354	1.35	1.35	NIL	0.04	0.01	1005	0.60	0.60	NIL	0.02	0.01
	total no cutoff	6740	1.08	1.08	NIL	0.077	0.0125	4016	1.35	1.35	NIL	0.071	0.0135	2724	0.678	0.678	NIL	0.084	0.0113
	NPV 0.6% Cu cutoff	6740	1.08	1.08	NIL	0.077	0.0125	4016	1.35	1.35	NIL	0.071	0.0135	2724	0.678	0.678	NIL	0.084	0.0113
	NPV 0.8% Cu cutoff	4016	1.35	1.35	NIL	0.071	0.0135	4016	1.35	1.35	NIL	0.071	0.0135	NIL	NIL	NIL	NIL	NIL	NIL

NOTE (1) ★ Copper assay of leached oxide zone assumed to be 100% oxide copper
(2) ★★ Cutoff grade was applied to oxide assay rather than total copper assay

TOTAL RESERVES
(using only oxide copper assays for oxide zone)

CATEGORY	FOOTWALL PLUS HANGING WALL TONS (000)	COPPER %	FOOTWALL TONS (000)	COPPER %	HANGING WALL TONS (000)	COPPER %
no cutoff	18949	1.04	9887	1.37	9052	0.67
0.6% cutoff	16334	1.15	9364	1.43	6970	0.78
0.8% cutoff	9616	1.485	8129	1.545	1487	1.16



NOTE - Base elevation of 2800' obtained by aneroid barometer assuming Yukon River at Carmacks at 1550' above sea level

* Section is on the plane of the footwall

LEGEND

- ← Assays from surface trenching
- o Hole location on footwall of zone
- NA - Not assayed
- HW - Hanging wall
- FW - Footwall

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FIG. W 25

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

ORTHOGONAL LONGITUDINAL SECTION * ORE RESERVES No.1 ZONE

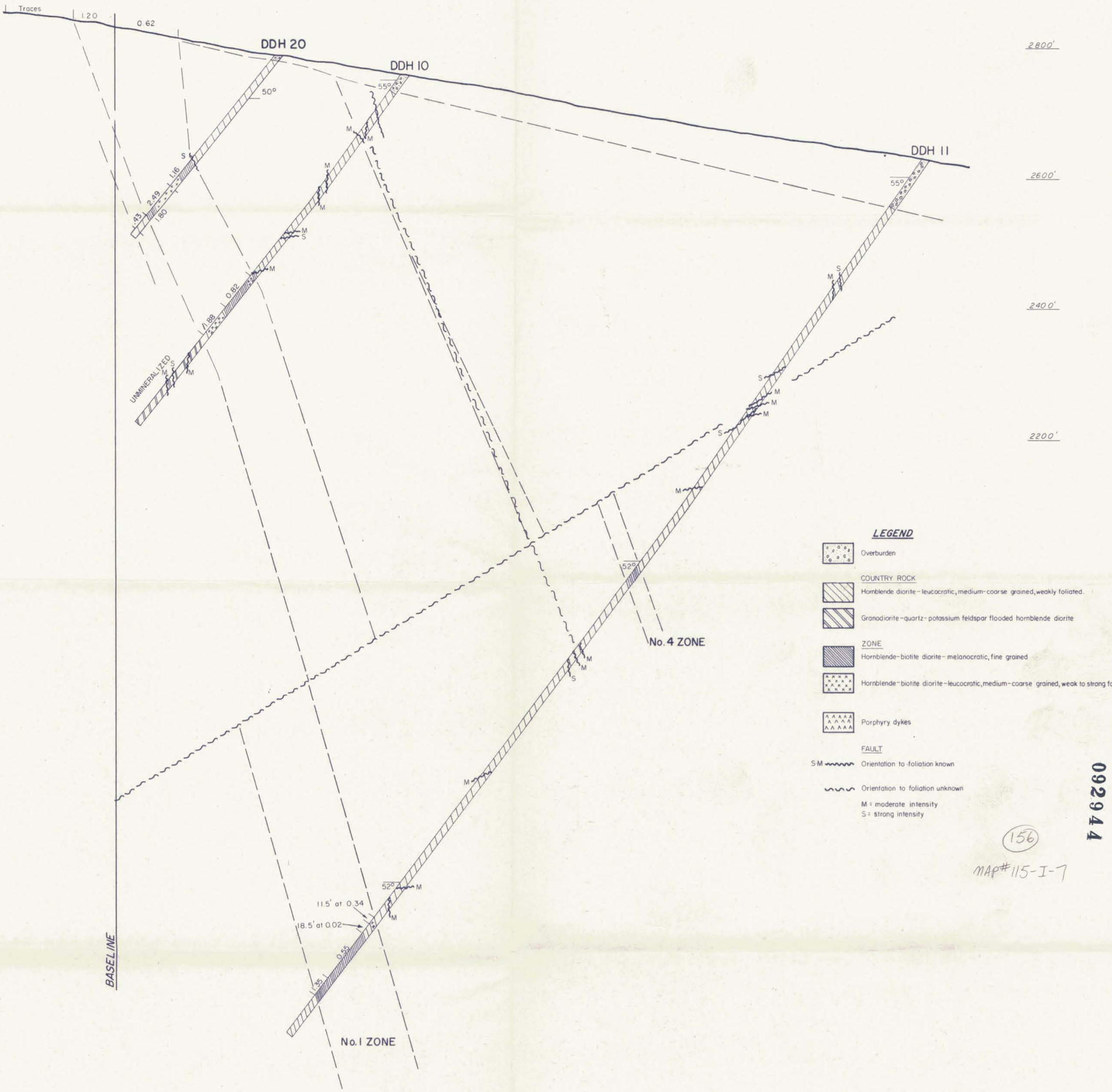
WILLIAMS CREEK PROPERTY

HORIZONTAL SCALE IN FEET

200 0 200 400 800

Revised December, 1990

SECTION 1200 NORTH



LEGEND

- Overburden
- COUNTRY ROCK
  - Hornblende diorite – leucocratic, medium-coarse grained, weakly foliated.
  - Granodiorite – quartz – potassium feldspar flooded hornblende diorite
- ZONE
  - Hornblende-biotite diorite – melanocratic, fine grained
  - Hornblende-biotite diorite – leucocratic, medium-coarse grained, weak to strong foliated
- Porphyry dykes
- FAULT
  - S-M — Orientation to foliation known
  - Orientation to foliation unknown
- M = moderate intensity
- S = strong intensity

092944

(156)

MAP#115-I-7

NOTE:

DDH 11 intersection is 35' north of section

All sections looking northwest

Baseline and surface profile from 1971 surveyed baseline cut at N 25° W from base station 100,000E, 100,000N at trench 0+00

FIG W 20 A

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

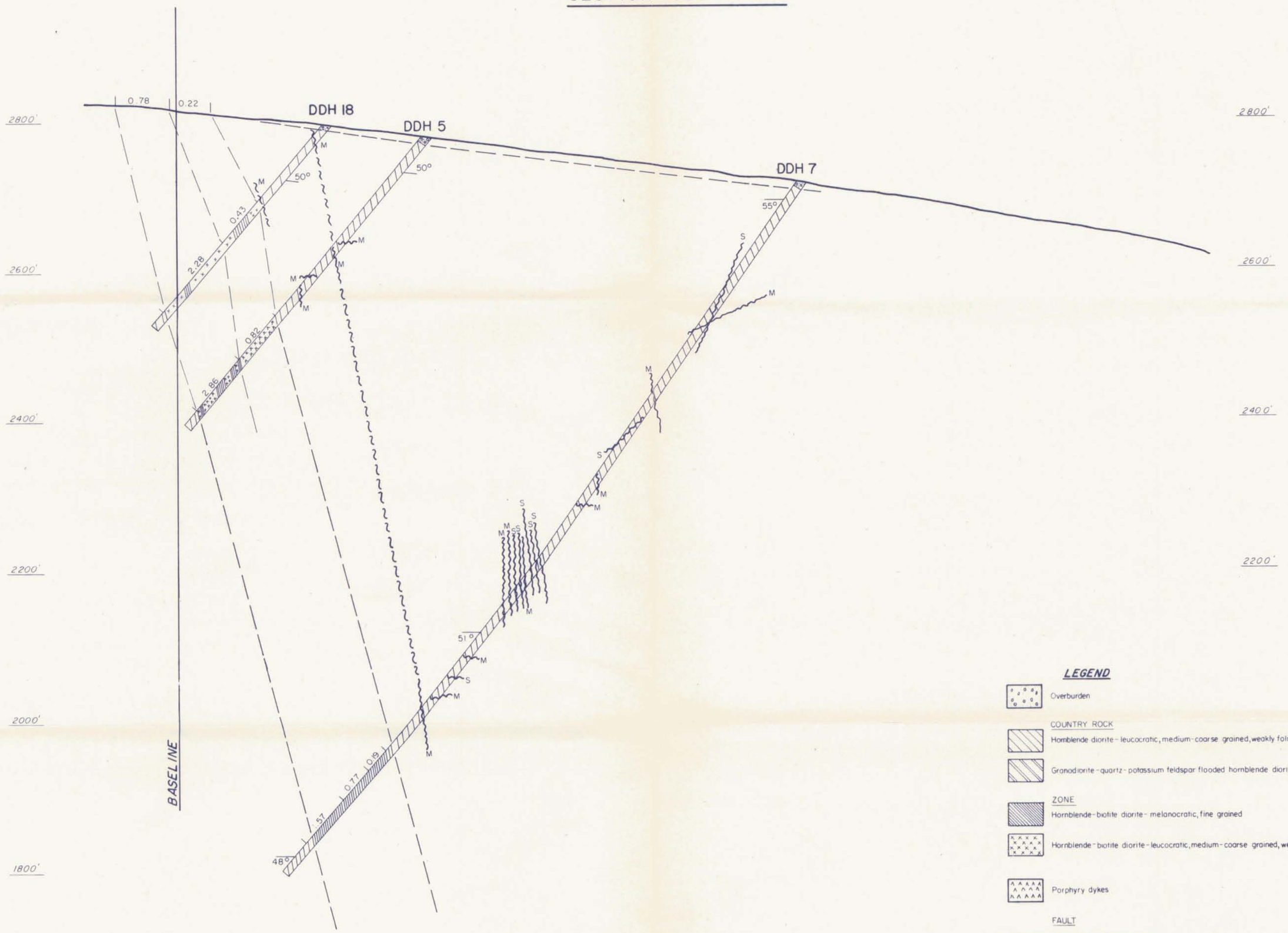
SECTION 1200 NORTH
No. 1 ZONE
WILLIAMS CREEK PROPERTY

SCALE IN FEET (VERTICAL & HORIZONTAL)

100 0 100 200 300

(7-1M

SECTION 1500 NORTH



LEGEND

- Overburden
- COUNTRY ROCK
  - Hornblende diorite - leucocratic, medium-coarse grained, weakly foliated.
  - Granodiorite - quartz - potassium feldspar flooded hornblende diorite
- ZONE
  - Hornblende-biotite diorite - melanocratic, fine grained
  - Hornblende - biotite diorite - leucocratic, medium-coarse grained, weak to strong foliated
- Porphyry dykes
- FAULT
  - S-M Orientation to foliation known
  - Orientation to foliation unknown

M = moderate intensity
S = strong intensity

NOTE

All sections looking northwest
Baseline and surface profile from 1971 surveyed baseline cut at N 25° W from base station 100,000E, 100,000N at trench 0+00

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FIG W 21A

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

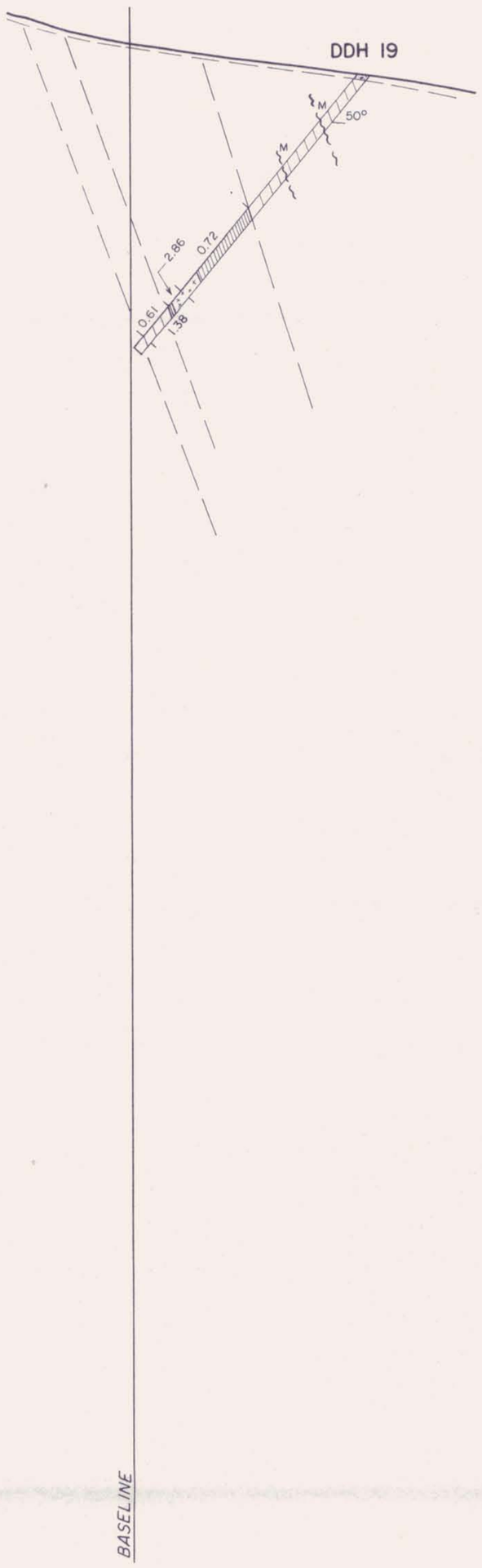
SECTION 1500 NORTH
No. 1 ZONE
WILLIAMS CREEK PROPERTY

SCALE IN FEET (VERTICAL & HORIZONTAL)

100 0 100 200 300

67-IP

SECTION 1350 NORTH



092944
(155)
MAP# 115-I-7

LEGEND

- Overburden
- COUNTRY ROCK
  - Hornblende diorite-leucocratic, medium-coarse grained, weakly foliated.
  - Granodiorite-quartz-potassium feldspar flooded hornblende diorite.
- ZONE
  - Hornblende-biotite diorite - melanocratic, fine-grained
  - Hornblende-biotite diorite-leucocratic, medium-coarse grained, weak to strong foliated
- Porphyry dykes
- FAULT
  - S-M Orientation to foliation known
  - Orientation to foliation unknown
  - M = moderate intensity
  - S = strong intensity

NOTE:

All sections looking northwest
Baseline and surface profile from 1971 surveyed baseline cut at N25°W from base station 100,000E, 100,000N at trench 0+00

FIG. W34

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SECTION 1350 NORTH
No.1 ZONE
WILLIAMS CREEK PROPERTY

SCALE IN FEET
100 0 100 200 300 Ft