

1000 1/2 100 # 100 16

BRITISH COLUMBIA

OMINECA M.D. - 93/L

SUMMIT (Burbridge Lake) PROJECT

1000 1/2 100 # 100 16

10 August 1977

6386

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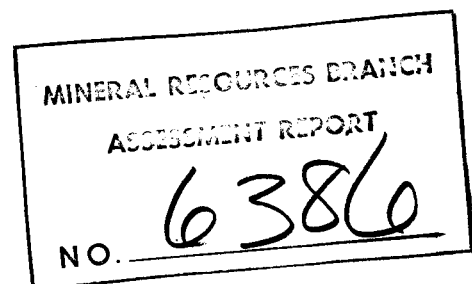


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BRITISH COLUMBIA

OMINECA M.D. - 93/L

SUMMIT (Burbridge Lake) PROJECT

SUMMARY

Between June 14 and June 29, 1977, Asarco did 650m (2130 feet) of diamond drilling (BQ wireline) on the Burbridge Lake (Summit) Prospect under option from Mel Chapman of Smithers. Six holes were completed at a cost of \$ 27,690.00.

Results of the drilling program confirmed the theory that the dioritic intrusion, previously interpreted to be a steeply dipping, crosscutting body by Cities Service (1974), and Hudson's Bay Oil and Gas (1973), is actually a sill which dips between 25° to 45° to the southwest. The upper part of the sill is porphyritic, approaches granodiorite to quartz monzonite in composition and is pervasively altered to clay-chlorite-carbonate-sericite and quartz with 10-15% disseminated and fracture controlled pyrite. Drill holes 77-1, 2, 3, 4 and 6 intersected a zone of intense stockwork fracturing and veining, within the altered zone, which contained low grade concentrations of Cu and Mo. This zone is approximately 76 to 92m (250 to 300 feet) thick, extends for at least 365m (1200 feet) along the strike of the sill and extends for an unknown distance to the west and down dip. Average grade within the stockwork zone is approximately 0.2% Cu. The best grade material occurs in the bottom 15 to 30m (50 to 100 feet) of the stockwork zone which averages between 0.24 to 0.38% Cu and 0.02 to 0.03% MoS₂.

LOCATION AND ACCESS

The Burbridge Lake (Summit) Prospect is situated in West Central B.C. at Latitude $54^{\circ}43'N$, and longitude $126^{\circ}45'W$. The main area of interest is located 245m (800 feet) south of Burbridge Lake (Figure 1) at an elevation of approximately 1190m (3900 feet).

The Prospect is accessible via Woodmere Road, which joins Highway 16 approximately 1.6 km (1 mile) south of the town of Telkwa, and thence via 11.3 km (7 miles) of 4 x 4 access road to Burbridge Lake.

During the program, Smithers situated 12.9 km (8 miles) north of Telkwa, was used as a base for accommodation and supplies.

HISTORY

The Burbridge Lake (Summit) Prospect was staked by Mel Chapman in 1969. In 1973, the property was optioned by Hudson's Bay Oil and Gas, who carried out a program of geological mapping a ground magnetic survey, geochemical soil sampling and 366m (1200 feet) of diamond drilling in 3 holes. Although one of these holes intersected 49m (160 feet) of 0.38% Cu, the option agreement was terminated. In 1974, Cities Service took an option on the property, and in the same year completed IP and magnetometer surveys and did 495m (1622 feet) of diamond drilling in two holes. The diamond drilling failed to encounter any significant copper mineralization and the option was terminated.

In June 1976, the author examined the Burbridge Lake Prospect for Asarco. A cursory examination of the structural and stratigraphic setting of the zone of mineralization, and review of available data, suggested a dip to the southwest, with the host dioritic

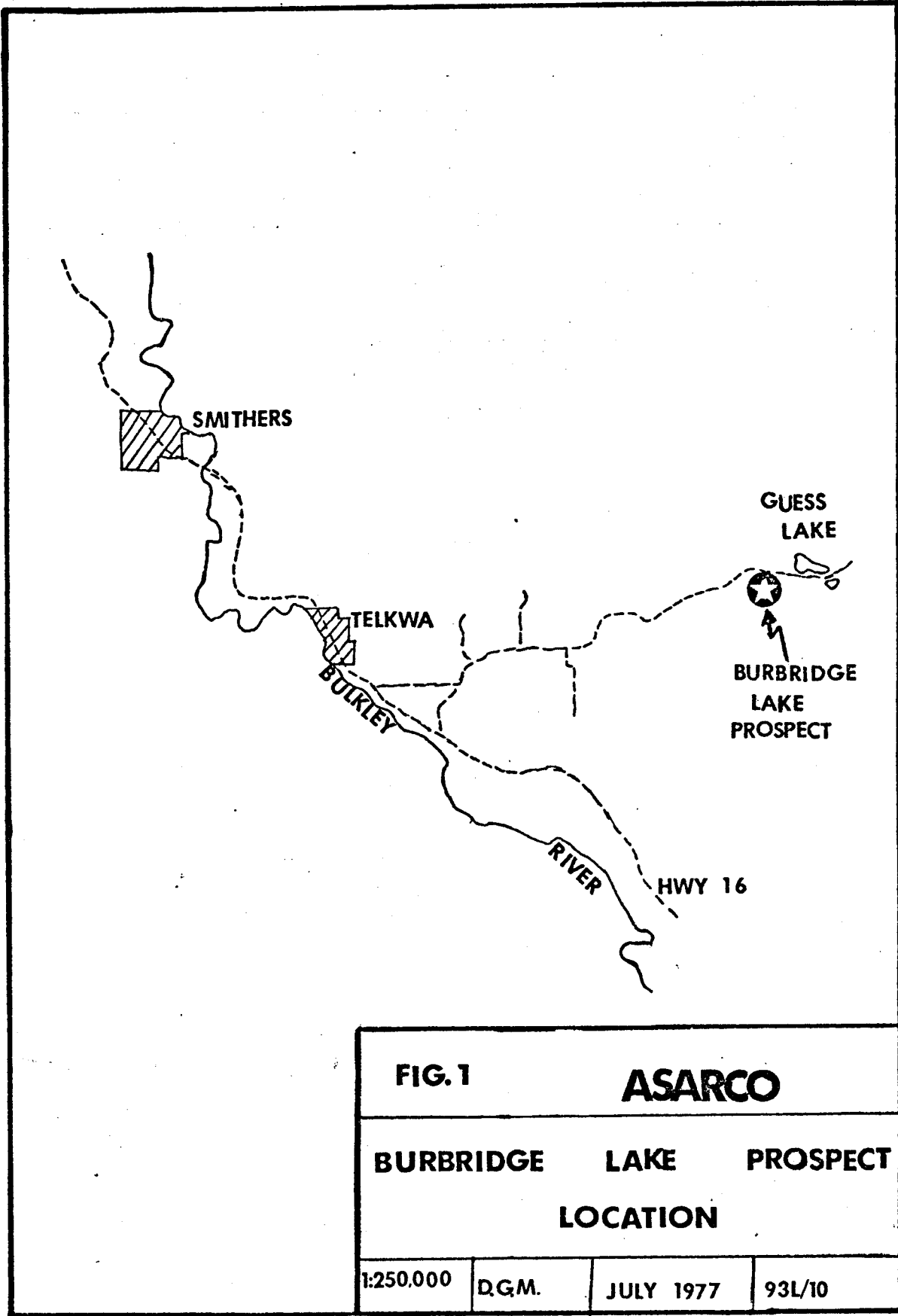


FIG. 1		ASARCO	
BURBRIDGE LAKE PROSPECT			
LOCATION			
1:250,000	D.G.M.	JULY 1977	93L/10

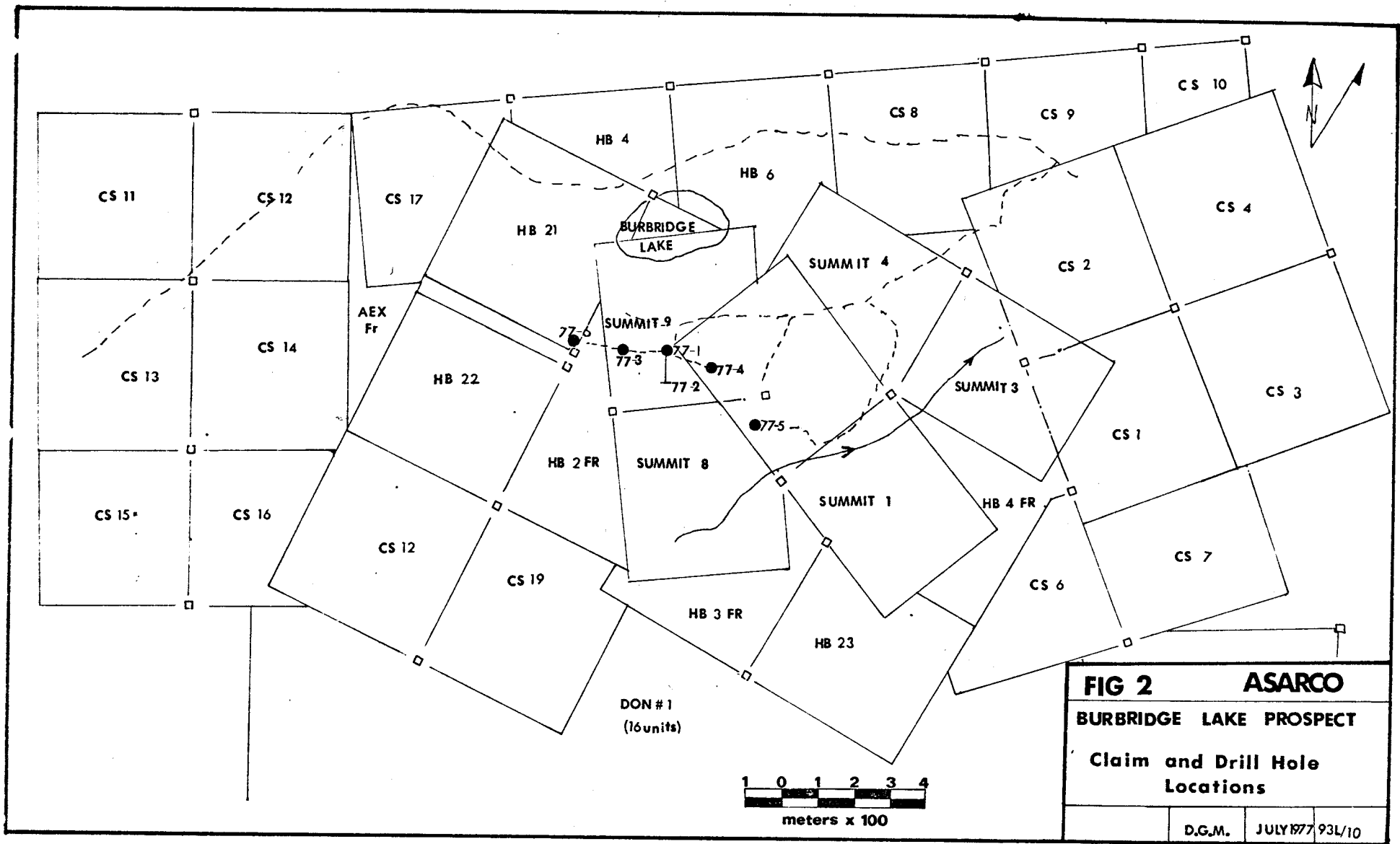


FIG 2 ASARCO
BURBRIDGE LAKE PROSPECT
Claim and Drill Hole
Locations

D.G.M.	JULY 1977 93L/10
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intrusion occurring as a sill within the volcanic succession. Both the Cities Service and Hudson's Bay Oil and Gas drill holes were inclined between 45 to 55° to the south, and, therefore, were essentially parallel to, rather than crosscutting the zone of interest. On this basis, it was recommended that Asarco take an option on the prospect.

REGIONAL GEOLOGIC SETTING

The Burbridge Lake (Summit) Prospect is situated along the western margin of the Babine Range, within a block of uplifted rhyolitic to andesitic volcanic rocks of Jurassic Age. These rocks are part of the Telkwa Formation of the Hazelton Group and have been subjected to regional greenschist metamorphism. Major NE and NNW-trending linears intersect in the vicinity of the Burbridge Lake Prospect and probably represent high angle faults.

PROPERTY GEOLOGY

The Burbridge Lake (Summit) Prospect is underlain by rhyolitic dacitic and andesitic tuffs and flows of the Telkwa Formation. These rocks have been regionally metamorphosed to the greenschist facies and are strongly foliated in places, with the foliation occurring along bedding planes. The general trend of the foliation is to the northwest with variable dips to the southwest. Eutaxitic textures are common in the more siliceous crystal and lapilli-tuff units.

In the vicinity of Burbridge Lake, the Telkwa Formation is intruded by a sill-like complex which is between 150 to 200m thick, and at least 1500m in length. The upper part of the sill is porphyritic and approaches granodiorite in composition. Towards the

bottom contact, the sill becomes more mafic-rich and equigranular, with a well developed dioritic texture. The sill is foliated and metamorphosed to the same intensity and degree as the volcanic country rocks which suggests that the sill is of approximately the same age as these rocks, i.e., Jurassic.

ALTERATION AND MINERALIZATION

Both the upper and lower contacts of the dioritic sill are bounded by zones of hydrothermal alteration and sulfide mineralization. The upper zone is exposed along the ridge south of Burbridge Lake, and is characterized by pervasive phyllic and argillic alteration with greater than 10 to 15% disseminated and fracture-controlled pyrite. Within the upper part of the dioritic sill, and immediately south of Burbridge Lake, is an area of pervasive argillic alteration associated with stockwork fracturing and veining containing finely disseminated chalcopyrite and fracture coatings of molybdenite. The western and down dip extent of this zone has not yet been defined. This Cu/Mo zone was the main exploration target on the Burbridge Lake property in 1977.

Although the lower part of the dioritic sill is mineralized with 3-10% disseminated pyrite, only sporadic copper mineralization has been observed in this zone. The lower zone was intersected by the Cities Service drill holes which were collared too far north to intersect the upper zone.

The top of the upper zone is characterized by intense epidote concentration in the volcanic rocks, mainly as spherical masses enclosing massive pyrite and/or magnetite. The best exposures of this part of the

upper zone occur along the crest of the ridge southeast of Burbridge Lake and in the Adit Zone. The latter contains minor concentrations of Cu associated with coarse-grained pyrite in quartz and massive lenses of magnetite, all within a fine-grained green dacitic tuff unit. Minor gold values, up to .009 Oz/T, occur within these rocks. The massive pyrite lenses exposed in the Adit Zone and in trenches along the crest of the ridge north of the Adit Zone appear to be stratabound and could be of a volcanic exhalitive origin. A sample from one of these pyrite lenses assayed .41% Cu, .95% Zn, .11 Oz/T Ag and .009 Oz/T Au.

1977 Drilling Program

Between June 14 and June 29, 1977, 650m (2130 feet) of diamond drilling (BQ wireline) was completed on the Burbridge Lake Prospect. The work was done by J.T. Thomas Diamond Drilling Limited of Smithers, B.C. The drill contract and costs are given in Appendix "A" and drill logs, sections and assay results are given in Appendix "B". Drill hole locations are shown in Figures 2 and 9. (Fig. #9 in pocket)

DDH 77-1 - This hole was collared in a small trench 61m (200 feet) south of Hudson's Bay Oil and Gas' Hole 73-2. The purpose of Hole 77-1 was to test the idea that the copper zone intersected in the top of the Hudson's Bay Oil and Gas hole dipped to the south and that copper mineralization in the trench was part of this zone. Both of these ideas were confirmed by the drilling. The top 49m (160 feet) of the hole averaged 0.18% Cu and .015% MoS₂ (0.25% Cu equivalent), with low Ag and Au values. Between 52 and 67m (170 to 220 feet), a higher grade zone was intersected which averaged 0.38% Cu and .027% MoS₂ (0.51% Cu

equivalent). Below 67m (220 feet) the copper and molybdenum grades drop suddenly, corresponding to a change from pervasive clay-chlorite-sericite-carbonate-quartz alteration associated with stockwork fracturing and veining to pervasive propylitic alteration of a weakly mineralized diorite. The transition is marked by the presence of white irregular quartz veins carrying the occasional coarse bleb of chalcopyrite. There is a good correlation between holes 73-2 and 77-1, as shown in Figure 3. The data suggests that the zone of copper and molybdenum mineralization dips between 25 to 30° to the south and is at least 76m (250 feet) thick.

DDH 77-2 - This hole was inclined 45° to the south and drilled from the same setup as DDH 77-1. The purpose of this hole was to test the down dip continuity of the mineralization intersected in hole 77-1. The hole intersected intense pyrite mineralization and pervasive argillic alteration from surface to the bottom of the hole at 142m (465 feet). However, only the top 82m (270 feet) contained any chalcopyrite or molybdenite, with this part of the hole averaging 0.18% Cu and 0.01% MoS₂ (0.23% Cu equivalent). The higher grade zone encountered in hole 77-1 was not intersected in 77-2. However, this may be due to the fact that the hole began to flatten out at depth and may have been more or less parallel to the zone of better grade copper mineralization by the time it reached the projected point of intersection. The drop in grade towards the bottom of the hole is perplexing in view of the grades encountered in drill hole 77-1. This suggests that there is either a trend to lower grades to the south or that a fault offsets the zones of mineralization in some manner.

DDH 77-3 - This hole was drilled 122m (400 feet) west of DDH 77-1 and went to a depth of 94m (307 feet). The hole was very similar to DDH 77-1, intersecting the same type of alteration and low grade Cu mineralization. The top 64m (210 feet) of this hole averaged 0.18% Cu and 0.02% MoS₂ (0.28% Cu equivalent). A small, higher grade zone, approximately 6m (20 feet) thick, and averaging 0.35% Cu, was intersected between 73 to 79m (240 to 260 feet). Below this zone the rock becomes more dioritic with weak to moderate prophylic alteration and only sporadic pyrite mineralization.

DDH 77-4 - This hole was drilled 122m (400 feet) E and 30m (100 feet) S of DDH 77-1. The hole was drilled vertically to a depth of 93.6m (307 feet) and encountered alteration and mineralization similar to that in Hole 77-1. However, the grade of copper and molybdenum was significantly lower, averaging .06% Cu and .007% MoS₂ from surface to 64m (210 feet). From 64m (210 feet) to 82.3m (270 feet), a higher grade zone was intersected which averaged 0.19% Cu. Below 82.3m (270 feet), the Cu grade drops off sharply, corresponding to a change to moderate to weak propylitic alteration of the host diorite. The lower grades intersected in DDH 77-4 and in 77-3, located approximately 128m (420 feet) to the east, suggest that the Cu-Mo zone pinches out in this direction.

DDH 77-5 - This hole was drilled 122m (400 feet) east and 153m (500 feet) south of hole 77-4, on the crest of an east-west-trending ridge. The purpose of this hole was to test the top half of the Upper Zone. The hole was collared in fine-grained green dacitic tuff with patchy epidote alteration. The epidote occurs as massive dots

enclosing pyrite and/or magnetite. The tuff is locally intensely foliated at 30° to the core axis and is crosscut by quartz and pyrite veins and veinlets. Around 45m (150 feet), the alteration changes to pervasive argillic with 10-15% pyrite. The pyrite typically occurs as massive lenses parallel to the foliation and as very fine-grained disseminations. The only significant copper mineralization intersected was between 73 to 79m (240 to 260 feet) which averaged 0.27% Cu. Below 79m (260 feet), Cu and Mo grades are very low in spite of the intensity of argillic alteration and the presence of 10 to 15% pyrite.

DDH 77-6 - This hole was drilled 122m (400 feet) west and 30m (100 feet) north of DDH 77-3. The purpose of this hole, which was drilled vertically to a depth of 106m (347 feet), was to test the westward extension of the Cu-Mo zone intersected in holes 77-1, 2 and 3. DDH 77-6 did contain low grade Cu and Mo mineralization from top to bottom, averaging 0.17% Cu over 98m (320 feet). The best grade material was intersected from 79 to 98m (260 to 320 feet) which averaged 0.25% Cu and 0.036% MoS₂ (0.42% Cu equivalent).

Although the nature of the alteration and sulfide mineralization intersected in DDH 77-6 is comparable to that intersected in DDH 77-1, 2 & 3, the host rock is much more porphyritic. The porphyry is foliated in places, with the foliation dipping between 40 to 60° to the core axis. Although the Cu grades intersected in DDH -6 are slightly lower than adjacent holes, the MoS₂ content is slightly higher.

CONCLUSIONS

The 1977 drilling program on the Burbridge Lake (Summit) Prospect has confirmed that the diorite is a sill-like body dipping moderately to the southwest. The upper contact of the diorite complex is bounded by a zone of pervasive hydrothermal alteration containing 10-15% disseminated and fracture-filling pyrite. Within this zone is an area of stockwork fracturing and veining with pervasive clay-chlorite-carbonate-sericite-quartz alteration that contains low grade concentrations of Cu and Mo. This Cu-Mo zone is between 75 to 90m (250 to 300 feet) thick and at least 370m (1200 feet) long, extending for an unknown distance down dip. The average copper grade within the area tested by drilling is calculated to be 0.20% Cu.

D. G. MacIntyre

D.G. MacIntyre.

DGMacI:sm

APPENDIX "A"

1977 DRILL JOB SUMMARY AND INVOICE

1977 BURBRIDGE LAKE (SUMMIT) PROJECT

DRILL CONTRACT SUMMARY

CONTRACTOR J.T. Thomas Diamond Drilling Limited
PO Box 394, Smithers, B.C.

PERSONNEL J. Thomas, G. Shaw (runner), M. Beddoes (helper)

EQUIPMENT Longyear Super 38, BQ Wireline

JOB STARTED 13 June/77

JOB COMPLETED 28 June/77

SHIFTS 1 - 12 hour shift per day

TOTAL 650m (2130 feet)

AVE/SHIFT 54m (177 feet)

NO. OF HOLES Six

<u>Hole No.</u>	<u>Attitude</u>	<u>Depth</u>
77-1	90°	90.6m (297 feet)
77-2	45°S	141.8m (465 feet)
77-3	90°	93.6m (307 feet)
77-4	90°	93.6m (307 feet)
77-5	90°	124.1m (407 feet)
77-6	90°	105.8m (347 feet)
TOTAL		<u>649.5m (2130 feet)</u>

DRILL SITES PREPARED - 5

ACCESS ROAD CONSTRUCTION - 488m (1600 feet)

CAMP Drillers provided own accommodation in Smithers.

DRILLING CONDITIONS Upper 30 to 80m broken ground due to solution of gypsum. Below this level, the rock is healed by gypsum and is relatively competent.

90% of the runs were 3m (10 feet). Core recovery was close to 100%.

CORE STORAGE

Presently at 1637 Queens Street, Smithers, B.C.

COST/FOOT

\$ 13.00/foot all inclusive.

TOTAL COST

\$ 27,690.00

J.T. THOMAS DIAMOND DRILLING LTD.

P.O. Box 394, Smithers, B.C.

Invoice No. 77-1-A

Property Summit
Size - B.Q.

To: ASARCO EXPLORATION CO. OF CANADA LTD.
Suite 504 - 535 Thurlow Street
Vancouver, B. C.
V6E 3L2

This invoice is for diamond drilling and other services on the above property per contract.

Hole No.	Date		Overburden		Coring		Total Footage	Rate	Amount
	From	To	From	To	From	To			
77-1	June 13-15		0	7	7	297	297	\$13.00	\$3,861.00
77-2	15-17		0	7	7	465	465	13.00	6,045.00
77-3	17-19		0	30	30	307	307	13.00	3,991.00
77-4	19-20		0	20	20	307	307	13.00	3,991.00
77-5	20-23		0	7	7	407	407	13.00	5,291.00
77-6	23-28		0	20	20	347	<u>347</u>	13.00	4,511.00

Total = 2,130 ft @ \$13.00 per foot

Mobilization:

Demobilization:

Moving Costs:

Mud Costs:

Cementing Costs:

Tractor Rentals:

Core Box:

Testing Hole:

Casing and Shoes Left in Hole:

Camp Provision:

Downtime:

Flytime:

Other:

Invoice Total

\$27,690.00

The above calculations are agreed to by:

Company Representative

J.T. Thomas Diamond Drilling Ltd.

APPENDIX "B"

CORE LOGS AND ASSAY RESULTS

<u>CORE STORAGE</u>	Presently at 1637 Queens Street, Smithers, B.C.	
<u>COST/FOOT</u>	\$ 13.00/foot, all inclusive.	
<u>TOTAL COST DRILLING</u>		\$ 27,690.00
<u>ADDITIONAL COSTS</u>		
Accommodation @ \$ 135/week		270.00
Meals @ \$ 10/man-day		450.00
Assay - Min-En Labs, North Vancouver, B.C.		2,213.00
Truck Rental		275.00
Core Racks		100.00
Salaries - D.G. MacIntyre		840.00
- D. Atkinson		675.00
- S. Morris		300.00
		<hr/>
TOTAL COST		\$ 32,813.00
		<hr/> <hr/>

CLAIM NO.

DIAMOND DRILL RECORDPROPERTY Burbridge Lake (Summit) HOLE NO. 77-1LATITUDE ELEVATION 1223m (4010 Ft) BEARING DEPTH 90.6 (297') STARTED 2:30 June 14/77 COMPLETED 2:30 June 15/77DEPARTURE SECTION L 100E/2S DIP 90° collar/83° bottom DRILLED BY J.T. Thomas LOGGED BY D. Atkinson

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS			
						% Cu	% MoS ₂	Oz/T Ag	Oz/TAu
0-2.1 2.1 - 5.2	Overburden porphyry Medium grained /granodiorite. Pervasive clay-chlorite alteration.	4617	2-6	7-20	62%	.192	.012)	
	Qtz.-chlorite stringers containing pyrite, chalcopyrite. 10-15%	4618	6-9	20-30	95%	.192	.013)	
	Finely dissem. pyrite, chalcopyrite with malachite on fracture. Vuggy	4619	9-12	30-40	100%	.091	.017)	.02 .005
	fracture at variable angles to core axis.	4620	12-15	40-50	100%	.078	.015)	
5.2-6.7	Same with more chlorite, less clay alteration	4621	15-18	50-60	100%	.133	.012)	
6.7-9.7	Broken core with limonite on fracture	4622	18-21	60-70	100%	.139	.010)	
	Slikensides on fracture planes	4623	21-24	70-80	100%	.408	.043)	
9.7-12.8	Fine grained siliceous rocks with 10-15% disseminated pyrite and Trace	4624	24-27	80-90	100%	.187	.015)	.02 .004
	chalcopyrite, molybdenite. Some coarse-grained pyrite veins parallel to core	4625	27-30	90-100	100%	.191	.013)	
	axis. Malachite, limonite on fracture plane.	4626	30-33	100-110	100%	.242	.007)	
12.8-14.3	Less altered porphyry granodiorite with 10-15% disseminated pyrite.	4627	33-37	110-120	100%	.151	.006)	
		4628	37-40	120-130	100%	.124	.008)	
14.3-15.8	Same as 32-42	4629	40-43	130-140	100%	.220	.011)	.13 .004
15.8-23.5	Fine-grained diorite. Pervasive clay-sericite-quartz	4630	93-46	140-150	100%	.157	.020)	
	chlorite alteration. Rocks cut by chlorite-quartz-pyrite	4631	46-49	150-160	100%	.195	.025)	
	stringer stockwork. 10-15% disseminated pyrite with Trace chalcopyrite.	4632	49-52	160-170	100%	.178	.012)	
	Minor molybdenite on fracture	4633	52-55	170-180	100%	.288	.035)	
	63-64 gouge zone. Some pyrite-rich veins parallel to core axis.	4634	55-58	180-190	100%	.448	.053)	.11 .003
	Chalcopyrite picks up around 77'.	4635	58-61	190-200	100%	.375	.029)	
		4636	61-64	200-210	100%	.419	.011)	

CLAIM NO.

DIAMOND DRILL RECORDPROPERTY Burbridge Lake (Summit) HOLE NO. 77-2LATITUDE ELEVATION 1223m (4010') BEARING Due S DEPTH 465' STARTED 5 PM, June/16/77 COMPLETED 7 PM, June 17/77DEPARTURE SECTION DIP 45°collar/33°bottom DRILLED BY Jim Thomas LOGGED BY D. Atkinson

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS			
						% Cu	% MoS ₂	O/T Ag	Oz/T Au
0 -2.1	Casing								
2.1-7.9	Coarse-grained porphyritic ^{quartz} diorite. Disseminated pyrite, chalco- pyrite. Fractures	4646	2-6	7-20	13	.193	.020)		
		4647	6-9	20-30	10	.347	.022)		
	Quartz, quartz-chlorite with pyrite, chalcopyrite. Altered kaolin on feld- spar, chlorite, some silicic. Limonite and malachite on weathered fracture	4648	9-12	30-40	10	.150	.018)	.11	.004
		4649	12-15	40-50	10	.167	.010)		
7.9-9.1	Fine-grained diorite. Disseminated fine-grained pyrite, chalcopyrite, MoS ₂ . Fractures chlorite, quartz - chlorite with pyrite, chalcopyrite.	4650	15-18	50-60	10	.110	.015)		
		4651	18-21	60-70	10	.148	.010)		
	Altered dominant chlorite producing dark green color. Limonite on weathered fractures.	4652	21-24	70-80	10	.210	.007)		
		4653	24-27	80- 90	10	.249	.008)	.13	.004
9.1-10.7	Medium-grained ^{diorite} Disseminated fine-grained pyrite, minor chalcopyrite & MoS ₂ . Fractures quartz, quartz-chlorite and pyrite, occasional chalcopyrite.	4654	27-30	90-100	10	.401	.010)		
		4655	30-33	100-110	10	.149	.010)		
10.7-12.8	Limonite on fractures - white, fine-grained diorite, pervasive kaolin Fine veinlet stockwork alteration. Disseminated pyrite, chalcopyrite and MoS ₂ of qtz with py, cpy & MoS ₂	4656	33-37	110-120	10	.200	.013)		
		4657	37-40	120-130	10	.140	.010)		
12.8-25.6	Medium-fine-grained diorite. Disseminated pyrite, chalcopyrite, MoS ₂ . Fractures, quartz, qtz-chlorite in pyrite, chalcopyrite & MoS ₂ & pyrite. Alteration variable kaolin & chlorite. Highly fractured core.	4658	40-43	130-140	10	.148	.008)	.12	.003
		4659	43-46	140-150	10	.133	.018)		
		4660	46-49	150-160	10	.173	.012)		
18.3-25.6	Green medium-grained diorite. Well developed stockwork of chlorite-quartz stringers with pyrite, chalcopyrite and MoS ₂ . Disseminated pyrite, 10% minor chalcopyrite.	4661	49-52	160-170	10	.189	.008)		
		4662	52-55	170-180	10	.151	.007)		
		4663	55-58	180-190	10	.161	.008)	.09	.002
25.6-29.3	Green-grey medium-grained diorite. Disseminated pyrite 10-15% with good chalcopyrite & MoS ₂ . Altered pervasive chlorite. Fractures quartz, Occasional vuggy quartz, quartz-chlorite-pyrite with chalcopyrite and MoS ₂ .	4664	58-61	190-200	10	.204	.005)		
		4665	61-64	200-210	10	.188	.010)		

CLAIM NO.

DIAMOND DRILL RECORDPROPERTY Burbridge Lake (Summit)HOLE NO. 72-2

(Page 2 of 3)

LATITUDE ELEVATION BEARING DEPTH STARTED COMPLETED
 DEPARTURE SECTION DIP DRILLED BY LOGGED BY D. Atkinson

DEPTH FEET	FORMATION	SAMPLE NO.	FROM (M)	TO (Ft)	WIDTH	ASSAYS			
						% Cu	% MoS ₂	Ag Oz/T	Au Oz/T
	Occasional silicic zones of alteration.								
29.3-34.1	Green-grey medium fine-grained diorite with stockwork fractures of quartz, quartz-chlore with pyrite, chalcopyrite, MoS ₂ - Chlorite and silicic alt.	4666	64-67	210-220	10	.201	.005)		
	Disseminated pyrite 5%, chalcopyrite, coarse pyrite veins at 99'-110' with rich chalcopyrite and trace MoS ₂ .	4667	67-70	220-230	10	.147	.007)		
		4668	70-73	230-240	10	.128	.005)	.11	.004
34.1-36.6	Medium-grained diorite. Kaolin and chlorite alteration. Chlorite and quartz with pyrite, chalcopyrite, MoS ₂ fractures. Disseminated pyrite, chalcopyrite Trace MoS ₂ .	4669	73-76	240-250	10	.121	.003)		
		4670	76-79	250-260	10	.143	.005)		
36.6-39.6	Medium-coarse-grained porphyry diorite, chlorite and kaolin alteration. Disseminated pyrite, trace chalcopyrite. Fractures quartz, quartz-chlorite pyrite, trace chalcopyrite, MoS ₂	4671	79-82	260-270	10	.139	.003)		
		4672	82-85	270-280	10	.079	.005)		
39.6-61.0	Medium-grained porphyry diorite with chlorite & some kaolin. Disseminated pyrite-15%, chalcopyrite, MoS ₂ . Fractures with quartz, quartz-chlorite, pyrite, chalcopyrite, MoS ₂ . 132' vugs and vuggy veins. 135-137 stockwork fractures with chlorite-quartz-pyrite and hematite on fracture.	4673	85-88	280-290	10	.081	.012)	.10	.003
		4674	88-92	290-300	10	.062	.005)		
		4675	92-95	300-310	10	.101	.003)		
61-71.7	Medium-grained diorite, with chlorite & some kaolin alteration. Pink feldspar at 201' - fine stockwork fractures with quartz-chlorite-pyrite, chalcopyrite, trace MoS ₂ . Disseminated pyrite 15-20%. Good chalcopyrite, Trace MoS ₂ . Coarse pyrite in fractures at 214'.	4676	95-98	310-320	10	.051	.003)		
		4677	98-101	320-330	10	.043	.005)		
71.7-74.1	Medium-grained porphyry diorite with chlorite & some kaolin alteration. Disseminated pyrite - 15%, trace chalcopyrite, trace MoS ₂ . Fractures chlorite-quartz-pyrite with some chalcopyrite, trace MoS ₂ .	4678	101-104	330-340	10	.051	.002)	.09	.003
		4679	104-107	340-350	10	.032	.005)		
74.1-77.8	Medium-grained diorite with stockwork of chlorite-quartz-pyrite, trace chalcopyrite, trace MoS ₂ . Disseminated pyrite 20%. Hematite on fractures at 248'.	4680	107-110	350-360	10	.031	.002)		
		4681	110-113	360-370	10	.024	.002)		
77.8-85.4	White, fine-medium-grained diorite. Pervasive kaolin-clay & chlorite alteration. Fine fractures with quartz, quartz-chlorite, quartz-chlorite-pyrite. Trace chalcopyrite, trace MoS ₂ . Hematite on fractures	4682	113-116	370-380	10	.029	.003)		
		4683	116-119	380-390	10	.044	.002)	.01	.003
		4684	119-122	390-400	10	.041	.007)		
		4685	122-125	400-410	10	.050	.003)		

CLAIM NO.....

DIAMOND DRILL RECORD

PROPERTY Burbridge Lake (Summit) HOLE NO. 77-3.....

LATITUDE ELEVATION 1228m (4025') BEARING DEPTH 93.6m (307) STARTED 9-AM, 18-June/77 COMPLETED 1:30 PM 19-June/77

DEPARTURE SECTION L 96E/2S DIP 90° at collar/85° DRILLED BY J. Thomas LOGGED BY D. Atkinson

DEPTH FEET	FORMATION	SAMPLE NO.	FROM (M)	TO (Ft)	WIDTH %	ASSAYS			
						% Cu	% MoS ₂	Oz/T Ag	Oz/T Au
0-9	Casing	4692	9-12	30-40	100	.115	.048)		
9-30	Coarse porphyritic diorite, phenocrysts tabular, altered feldspar, 3mm, quartz eyes, pervasive kaolin alteration, chlorite alteration, disseminated pyrite	4693	12-15	40-50	100	.250	.017)		
	1- 5%, disseminated chalcopyrite associated with quartz eyes. Fractures	4694	15-18	50-60	100	.188	.013)	.02	.004
	quartz, quartz-chlorite-pyrite with chalcopyrite and MoS ₂ . Gouge zone 38-39'.	4695	18-21	60-70	100	.183	.013)		
	Limonite on fractures 62-70' and 80-100'.	4696	21-24	70-80	100	.172	.061)		
		4697	24-27	80-90	100	.210	.020)		
30-38	Green medium-grained diorite with stringer stockwork. Fractures quartz, chlorite-quartz-pyrite, chalcopyrite.	4698	27-30	90-100	100	.257	.022)	.07	.003
	Tr MoS ₂ . Disseminated pyrite 1-5%, disseminated chalcopyrite, Trace disseminated MoS ₂ . Pervasive chlorite and kaolinite alteration.	4699	30-33	100-110	100	.222	.015)		
38-40	Medium-grained diorite with 1-5% disseminated pyrite, Tr Chalcopyrite	4700	33-37	110-120	100	.167	.012)		
40-60	MoS ₂ . Fractures, quartz- quartz-chlorite-pyrite. Quartz eyes.	4701	37-40	120-130	100	.131	.018))		
	Medium grained diorite with stringer stockwork. Fractures quartz, quartz-chlorite-pyrite-chalcopyrite-MoS ₂ .	4702	40-43	130-140	100	.133	.007))		
	Pervasive chlorite and kaolin alteration. Quartz eye texture. Disseminated pyrite 1-5% with disseminated chalcopyrite, Tr MoS ₂ . Feldspar phenocryst at 174-175, very broken at 176, 177.	4703	43-46	140-150	100	.176	.012))	.02	.003
60-69	Weakly fol. diorite, 600 to core. Qtz eyes. Pervasive chlorite & kaolin alt. Fractures, quartz-chlorite-pyrite-chalcopyrite-MoS ₂ . Good MoS ₂ fractures. Disseminated pyrite 1-3%, disseminated chalcopyrite, Tr MoS ₂ .	4704	46-49	150-160	100	.153	.012))		
69-72	Weakly foliated diorite, 800 to core. Pervasive chlorite, kaolin some Qtz alt. Fracture gypsum, quartz-pyrite, chlorite-quartz-pyrite- Tr. Chalcopyrite.	4705	49-52	160-170	100	.164	.012))		
	Disseminated pyrite 10-15%, Trace chalcopyrite.	4706	52-55	170-180	100	.213	.028)		
72-76	As above with stockwork fracturing and disseminated chalcopyrite and chalcopyrite fractures.	4707	55-58	180-190	100	.223	.015)		
77-80	Coarse-medium grained diorite. Chlorite and kaolin alteration. Fractures, quartz, quartz-chlorite-pyrite, often coarse-grained, chalcopyrite, Trace	4708	58-61	190-200	100	.196	.022)	.04	.004
	MoS ₂ , gypsum often parallel to core. Disseminated pyrite 5-10% disseminated	4709	61-64	200-210	100	.164	.017)		
	chalcopyrite. Quartz eye texture.	4710	64-67	210-220	100	.213	.013)		
		4711	67-70	220-230	100	.145	.012)		

CLAIM NO.

DIAMOND DRILL RECORDPROPERTY Burbridge Lake (Summit)HOLE NO. 77-4

(Page 1 of 2)

LATITUDE ELEVATION 1228 m (4025') BEARING DEPTH 93.6m(307') STARTED 3:30 PM June 19. COMPLETED 2:45 PM June 20DEPARTURE SECTION L104E - 3 + 00S DIP 82° Bottom
90° collar DRILLED BY J.T. Thomas LOGGED BY D. Atkinson

DEPTH FEET	FORMATION	SAMPLE NO.	FROM (M)	TO (Ft)	WIDTH	ASSAYS			
						% Cu	% MoS ₂	Ag Oz/T	Au Oz/T
0-6	Overburden	4720	6-9	20-30	100	.119	.017)		
6-12	White medium-grained diorite with pervasive kaolin alteration. Disseminated pyrite 5%, Trace disseminated chalcopyrite and MoS ₂ . Fractures quartz-pyrite-MoS ₂ , Trace chalcopyrite, limonite on fractures to 25'	4721	9-12	30-40	100	.091	.008)		
		4722	12-15	40-50	100	.068	.010)	.03	.004
		4723	15-18	50-60	100	.089	.007)		
12-43	Light grey medium-grained diorite with pervasive kaolin and chlorite alteration	4724	18-21	60-70	70	.076	.005)		
	Disseminated pyrite 5-10%, Trace disseminated chalcopyrite and MoS ₂ . Fractures quartz-chlorite-pyrite, often coarse with minor chalcopyrite and MoS ₂ .	4725	21-24	70-80	40	.059	.005))		
	Very broken core - dissolved gypsum. 80' bornite.	4726	24-27	80-90	100	.068	.005))		
43-61	As above with gypsum veining.	4727	27-30	90-100	100	.060	.008))	.01	.004
61-79	Green medium-grained diorite. Pervasive chlorite & kaolin alteration. Disseminated pyrite 10-20%. Disseminated chalcopyrite 1-2%	4728	30-33	100-110	100	.041	.007))		
	Trace MoS ₂ . Fractures are gypsum, quartz with coarse pyrite, chlorite-quartz-pyrite-chalcopyrite, Trace MoS ₂ . 250' specular hematite.	4729	33-37	110-120	100	.042	.008))		
		4730	37-40	120-130	100	.047	.007)		
79-86	Green medium-grained diorite. Pervasive chlorite & kaolin alt. Dissem py 10-15%. Trace chalcopyrite MoS ₂ . Fractures gypsum, quartz-pyrite, Trace chalcopyrite, quartz-chlorite-pyrite, Trace chalcopyrite.	4731	40-43	130-140	100	.028	.008)		
		4732	43-46	140-150	100	.050	.007)	.01	.002
86- 94	Green fol. diorite. Clay alteration. Green medium grained diorite, rare disseminated pyrite. Epidote-chlorite alteration - veins quartz with chalcopyrite and pyrite. Argillic salvages. Hematite on fractures.	4733	46-49	150-160	100	.048	.003)		
		4734	49-52	160-170	100	.062	.005)		
		4735	52-55	170-180	100	.059	.007))		
	END OF HOLE 93.6 (307')	4736	55-58	180-190	100	.090	.013))		
		4737	58-61	190-200	100	.030	.005))	.06	.005
		4738	61-64	200-210	100	.078	.005))		
		4739	64-67	210-220	100	.163	.010))		

CLAIM NO.

DIAMOND DRILL RECORDPROPERTY Burbridge Lake (Summit) HOLE NO. 77-5

(Page 1 of 2)

LATITUDE ELEVATION 1266m (4150') BEARING DEPTH 142m (465') STARTED 2PM, 21 June/77 COMPLETED 11 AM 23 June/77DEPARTURE SECTION L108E/8S DIP 83° at bottom DRILLED BY J.T. Thomas LOGGED BY D. Atkinson

DEPTH FEET	FORMATION	SAMPLE NO.	FROM (M)	TO (Ft)	WIDTH	ASSAYS			
						%MoS ₂	% Cu	Ag Oz/T	Au Oz/T
0-3	Casing	4749	3-6	10-20	100	.001	.028)		
3-12	Green crystal tuff. Pervasive epidote alteration, some chlorite and kaolin.	4750	6-9	20-30	100	.001	.038)		
	Variable disseminated pyrite, 5-15%. Fractures quartz, quartz-pyrite intense limonite fracture coatings, pervasive limonite alteration.	4751	9-12	30-40	100	.001	.022)	.01	.004
12-18	Local quartz eyes, 1 mm. Thin black quartz tension gashes. Crystal tuff, dacitic? Pervasive epidote-chlorite alteration.	4752	12-15	40-50	100	.001	.022)		
	Disseminated pyrite 1-5%. Fractures pyrite, epidote, chlorite. Limonite fracture coatings.	4753	15-18	50-60	100	.001	.018)		
18-19	Mixed epidote - magnetite - pyrite.	4754	18-21	60-70	100	.001	.015))		
19-20	Pale green fine-grained tuff, fine quartz veins	4755	21-24	70-80	100	.001	.039))		
20-21	Same, very broken up.	4756	24-27	80-90	100	.001	.049))	.01	.003
21-24	Pale green fine-grained tuff with 5-10% disseminated pyrite, fine quartz-chlorite-epidote-pyrite veins. Limonite on fractures. Epidote surrounds pyrite clots.	4757	27-30	90-100	100	.002	.030))		
		4758	30-33	100-110	100	.001	.022))		
24-46	Green tuff, pervasive epidote-chlorite 10% disseminated pyrite. Trace chalcopryrite. Fractures quartz-epidote-chlorite-pyrite. Limonite coatings on fractures. Pyrite clots with epidote alteration. Vuggy quartz veins 105'. Trace chalcopryrite 144.'	4759	33-37	110-120	100	.001	.023)		
		4760	37-40	120-130	100	.001	.013)		
		4761	40-43	130-140	100	.001	.029)	.01	.003
46-64	Fine-grained grey-green tuff. Disseminated pyrite 10-15%. Altered kaolin-epidote-chlorite. Fractures pyrite, often parallel to foliation of tuff, 30° to core, epidote alteration blebs, some quartz veins. 160-168 very broken ore.	4762	43-46	140-150	100	.002	.049)		
		4763	46-49	150-160	100	.002	.061)		
64-75	Green tuff (?) fragments kaolin altered feldspar and epidote. Chlorite matrix, fractures quartz + pyrite, epidote and pyrite commonly parallel to foliation. 90° to core. Trace disseminated pyrite.	4764	49-52	160-170	100	.005	.029))		
		4765	52-55	170-180	100	.001	.048))		
	Occasional vuggy quartz veins. 225-245 hematite on fracture.	4766	55-58	180-190	100	.001	.011)	.02	.004
		4767	58-61	190-200	100	.001	.058))		
		4768	61-64	200-210	100	.005	.066))		

CLAIM NO.

DIAMOND DRILL RECORDPROPERTY Burbridge Lake (Summit)HOLE NO. 77-5

(Page 2 of 2)

LATITUDE ELEVATION BEARING DEPTH STARTED COMPLETED

DEPARTURE SECTION DIP DRILLED BY LOGGED BY D. Atkinson

DEPTH FEET	FORMATION	SAMPLE NO.	FROM (M)	TO (Ft)	WIDTH %	ASSAYS			
						% Cu	% MoS ₂	Ag Oz/T	Au Oz/T
75-78	Green foliated tuff. Chlorite alteration interbanded pyrite with chalcopyrite.	4769	64-67	210-220	100	.019	.005)		
	Pyrite with chalcopyrite fractures, occasional quartz veins. Disseminated	4770	67-70	220-230	100	.012	.005)		
	pyrite 5-10%. Total sulfides 40% of rock.	4771	70-73	230-240	100	.051	.005)	.02	.002
78-107	Light grey fol. tuff, kaolin alteration - minor chlorite and epidote.	4772	73-76	240-250	100	.157	.003)		
	Disseminated pyrite 10-15%. Pyrite on fractures 278', 4" massive pyrite.	4773	76-79	250-260	100	.366	.003)		
	312-370 hematite on fractures.	4774	79-82	260-270	100	.008	.001))		
107-124	Green tuff, chlorite alteration, minor epidote, kaolin and silicic.	4775	82-85	270-280	100	.007	.003))		
	Disseminated pyrite 5-10%, fractures of gypsum often with hematite,	4776	85-88	280-290	100	.013	.003))	.01	.003
	quartz, pyrite, commonly coarse-grained.	4777	88-91	290-300	100	.010	.001))		
		4778	91-94	300-310	100	.010	.003))		
		4779	94-98	310-320	100	.012	.005)		
	END OF HOLE 124m (407')	4780	98-101	320-330	100	.002	.005)		
		4781	101-104	330-340	100	.003	.005)	.01	.002
		4782	104-107	340-350	100	.010	.005)		
		4783	107-110	350-360	100	.012	.007)		
		4784	110-113	360-37	100	.007	.005)		
		4785	113-116	370-380	100	.003	.005)		
		4786	116-119	380-390	100	.004	.005)	.01	.003
		4787	119-122	390-400	100	.001	.005)		
		4788	122-124	400-407	100	.003	.003)		

CLAIM NO.....

DIAMOND DRILL RECORDPROPERTY Burbridge Lake (Summit)HOLE NO. 77-6

LATITUDE

ELEVATION

BEARING

106 m
DEPTH - 347'

10:30 AM

STARTED 28 June/77COMPLETED 11 AM, 29 June/77

DEPARTURE

SECTION L92/E/1 + 00 S90° at collar
DIP 85° at bottom

DRILLED BY

Jim Thomas

LOGGED BY

D. Atkinson

DEPTH FEET	FORMATION	SAMPLE NO.	FROM (M)	TO (Ft)	WIDTH %	ASSAYS			
						% Cu	% MoS ₂	Ag Oz/T	Au Oz/T
0-6	Casing	4789	6-9	20-30	100	.145	.007)		
6-14	Porphyry diorite. Pervasive kaolin & chlorite alteration. Feldspar phenos are .5 cm, may form 40% of rock. Pervasive alteration to kaolin. Rare quartz eyes. Disseminated pyrite 1-5%. Trace chalcopyrite. Fractures are quartz, chlorite, with pyrite, chalcopyrite and MoS ₂ .	4790	9-12	30-40	100	.168	.015)		
		4791	12-15	40-50	100	.160	.012)	.09	.004
		4792	15-18	50-60	100	.143	.013)		
		4793	18-21	60-70	100	.123	.010)		
14-30	As above - intermixed fol. diorite and diorite with pervasive kaolin alteration. Fol. is 50-60° to core. Pyrite veins often 2 cm wide. Hematite on fractures 60-70', 95-100'. Limonite on fractures and very broken core 80-100'.	4794	21-24	70-80	100	.133	.007))		
		4795	24-27	80-90	100	.132	.008))		
		4796	27-30	90-100	100	.132	.007))	.03	.003
		4797	30-34	100-110	100	.082	.005))		
30-45	Green porphyry diorite. Pervasive chlorite alteration with kaolin and epidote. Feldspar phenos .5 -1 cm, altered to epidote and kaolin. Fractures are calcite often 2-5 cm wide veins, quartz with pyrite, Trace chalcopyrite. Limonite on fractures.	4798	34-37	110-120	100	.055	.008))		
		4799	37-40	120-130	100	.073	.008)		
		4800	40-43	130-140	100	.128	.005)		
		4801	43-46	140-150	100	.110	.005)	.08	.004
45-47	Diabase Dyke	4802	46-49	150-160	100	.083	.005)		
47-67	Fol. porphyry diorite. Pervasive kaolin, chlorite alteration. Fol. 50° to core. Disseminated pyrite 1-2%. Fractures chlorite, quartz, pyrite, Trace chalcopyrite, MoS ₂ . Hematite on fractures 210-215.	4803	49-52	160-170	100	.193	.007)		
		4804	52-55	170-180	100	.192	.033))		
		4805	55-58	180-190	100	.168	.012))		
67-94	Medium-coarse -grained diorite. Pervasive argillic-kaolin alteration with chl. Disseminated pyrite 1-5%, Trace disseminated chalcopyrite and MoS ₂ . Fractures quartz, quartz-chlorite, with pyrite, chalcopyrite and MoS ₂ . 220-290 very broken core.	4806	58-61	190-200	100	.166	.005))	.27	.003
		4807	61-64	200-210	100	.212	.012))		
		4808	64-67	210-220	100	.252	.013))		

MIN-EN LABORATORIES LTD.

705 WEST 15TH STREET
 NORTH VANCOUVER, B.C.
 Phone: 980-5814

Certificate of Assay

TO: Asarco Explorations,
504-535 Thurlow St.,
Vancouver, B.C.

Attn: PROJECT No. D. McIntyre
 DATE June 21/77.
 File No. 4224

SAMPLE No.	MoS ₂ %	Cu %		
4627	.006	.151		
28	.008	.124		
29	.011	.220		
30	.020	.157		
31	.025	.195		
32	.012	.178		
33	.035	.288		
34	.053	.448		
35	.029	.375		
36	.011	.419		
37	.006	.349		
38	.005	.082		
39	.003	.040		
40	.003	.038		
41	.008	.032		
42	.003	.031		
43	.006	.033		
44	.003	.027		
4645	.001	.021		

MIN-EN Laboratories Ltd.

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705 WEST 15TH STREET
 NORTH VANCOUVER, B.C.
 Phone: 980-5814

Certificate of Assay

Attn:

TO: Asarco Explorations,

PROJECT No. D. MacIntyre

504-535 Thurlow St.,

DATE June 23/77.

Vancouver, B.C.

File No. 4233

SAMPLE No.	MoS ₂ %	Cu %		
4646	.020	.193		
47	.022	.347		
48	.013	.150		
49	.010	.167		
50	.015	.110		
51	.010	.148		
52	.007	.210		
53	.008	.249		
54	.010	.401		
55	.010	.149		
56	.013	.200		
57	.010	.140		
58	.008	.148		
59	.018	.133		
60	.012	.173		
61	.008	.189		
67	.007	.151		
63	.008	.161		
64	.005	.204		
65	.010	.188		
66	.005	.201		
4667	.007	.147		

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705 WEST 15TH STREET
 NORTH VANCOUVER, B.C.
 Phone: 980-5814

Certificate of Assay

TO: Asarco Explorations,

PROJECT No. _____

504-535 Thurlow St.,

DATE June 27/77.

Vancouver, B.C.

File No. 4242

SAMPLE No.	MoS ₂ %	Cu %		
4683	.002	.044		
84	.007	.041		
85	.003	.050		
86	.003	.040		
87	.005	.022		
88	.007	.042		
89	.003	.035		
90	.010	.036		
91	.003	.020		
92	.048	.115		
93	.017	.250		
94	.013	.188		
95	.013	.183		
96	.061	.172		
97	.020	.210		
98	.022	.257		
4699	.015	.222		
4700	.012	.167		
01	.018	.131		
02	.007	.133		
03	.012	.176		
4704	.012	.153		

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[Signature]

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705 WEST 15TH STREET
 NORTH VANCOUVER, B.C.
 Phone: 980-5814

Certificate of Assay

TO: Asarco Explorations, PROJECT No. _____

504-535 Thurlow St., DATE: June 27/77.

Vancouver, B.C. File No. 4242

SAMPLE No.	MoS ₂ %	Cu %		
4705	.012	.164		
06	.028	.213		
07	.015	.223		
08	.022	.196		
09	.017	.164		
10	.013	.213		
11	.012	.145		
12	.023	.212		
13	.008	.286		
14	.013	.420		
15	.005	.111		
16	.002	.032		
17	.002	.009		
18	.002	.010		
4719	.002	.020		

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CERTIFIED BY *J. H. Cairns*

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705 WEST 15TH STREET
 NORTH VANCOUVER, B.C.
 Phone: 980-5814

Certificate of Assay

TO: Asarco Explorations,
504-535 Thurlow St.,
Vancouver, B.C.

PROJECT No. _____

DATE June 28/77.

File No. 4254

SAMPLE No.	MoS ₂ %	Cu %		
4720	.017	.119		
21	.008	.091		
22	.010	.068		
23	.007	.089		
24	.005	.076		
25	.005	.059		
26	.005	.068		
27	.008	.060		
28	.007	.041		
29	.023	.042		
30	.007	.047		
31	.008	.028		
32	.007	.050		
33	.008	.048		
34	.005	.062		
35	.007	.059		
36	.013	.090		
37	.005	.030		
38	.005	.078		
39	.010	.163		
40	.005	.243		
4741	.007	.298		

MIN-EN Laboratories Ltd.

CERTIFIED BY *[Signature]*

MIN-EN LABORATORIES LTD.

705 WEST 15TH STREET
 NORTH VANCOUVER, B.C.
 Phone: 980-5814

Certificate of Assay

TO: Asarco Explorations,

PROJECT No. _____

504-535 Thurlow St.,

DATE June 28/77.

Vancouver, B.C.

File No. 4254

SAMPLE No.	MoS ₂ %	Cu %		
4742	.007	.213		
43	.005	.141		
44	.013	.100		
45	.012	.083		
46	.003	.021		
47	.007	.011		
48	.003	.015		
49	.001	.028		
50	.001	.038		
51	.001	.022		
52	.001	.022		
53	∠.001	.018		
54	∠.001	.015		
55	∠.001	.039		
56	.001	.049		
57	.002	.030		
58	.001	.022		
59	.001	.023		
60	∠.001	.013		
61	.001	.029		
62	.002	.049		
4763	.002	.061		

MIN-EN Laboratories Ltd.

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[Signature]

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705 WEST 15TH STREET
 NORTH VANCOUVER, B.C.
 Phone: 980-5814

Certificate of Assay

TO: Asarco Explorations,
504-535 Thurlow St.,
Vancouver, B.C.

PROJECT No. _____

DATE June 28/77.

File No. 4254

SAMPLE No.	MoS ₂ %	Cu %		
4764	.005	.029		
65	.001	.048		
66	.001	.011		
67	.001	.058		
68	.005	.066		
69	.005	.019		
70	.005	.012		
71	.005	.051		
72	.003	.157		
73	.003	.366		
74	.001	.008		
75	.003	.007		
76	.003	.013		
77	.001	.010		
78	.003	.010		
79	.005	.012		
80	.005	.002		
81	.005	.003		
82	.005	.010		
83	.007	.012		
84	.005	.007		
4785	.005	.003		

MIN-EN Laboratories Ltd.

CERTIFIED BY

[Signature]

MIN-EN LABORATORIES LTD.

705 WEST 15TH STREET
 NORTH VANCOUVER, B.C.
 Phone: 980-5814

Certificate of Assay

TO: Asarco Explorations,
504-535 Thurlow St.,
Vancouver, B.C.

PROJECT No. _____
 DATE July 6/77.
 File No. 4282

SAMPLE No.	MoS ₂ %	Cu %		
4789	.007	.145		
90	.015	.168		
91	.012	.160		
92	.013	.143		
93	.010	.123		
94	.007	.133		
95	.008	.132		
96	.007	.132		
97	.005	.082		
98	.008	.055		
4799	.008	.073		
4800	.005	.128		
01	.005	.110		
02	.005	.083		
03	.007	.193		
04	.033	.192		
05	.012	.168		
06	.005	.166		
07	.012	.212		
08	.013	.252		
09	.020	.342		
4810	.022	.182		

MIN-EN Laboratories Ltd.

CERTIFIED BY *J. McNeil*

MIN-EN LABORATORIES LTD.

705 WEST 15TH STREET
 NORTH VANCOUVER, B.C.
 Phone: 980-5814

Certificate of Assay

TO: Asarco Explorations, PROJECT No. _____
504-535 Thurlow St., DATE June 29/77.
Vancouver, B.C. File No. 4259

SAMPLE No.	Ag	Au		
	oz/ton	oz/ton		
4681-85	.01	.003		
4686-91	.07	.005		
4692-95	.02	.004		
4696-4700	.07	.003		
4701-05	.02	.003		
4706-11	.04	.004		
4712-16	.05	.005		
4717-19	.01	.003		
4720-24	.03	.004		
4725-4729	.01	.004		
4730-34	.01	.002		
4735-39	.06	.005		
4740-44	.19	.004		
4745-48	.01	.005		
4749-53	.01	.004		
4754-58	.01	.003		
4759-63	.01	.003		
4764-68	.02	.004		
4769-73	.02	.002		
4774-78	.01	.003		
4779-83	.01	.002		
4784-88	.01	.003		

MIN-EN Laboratories Ltd.

CERTIFIED BY *[Signature]*

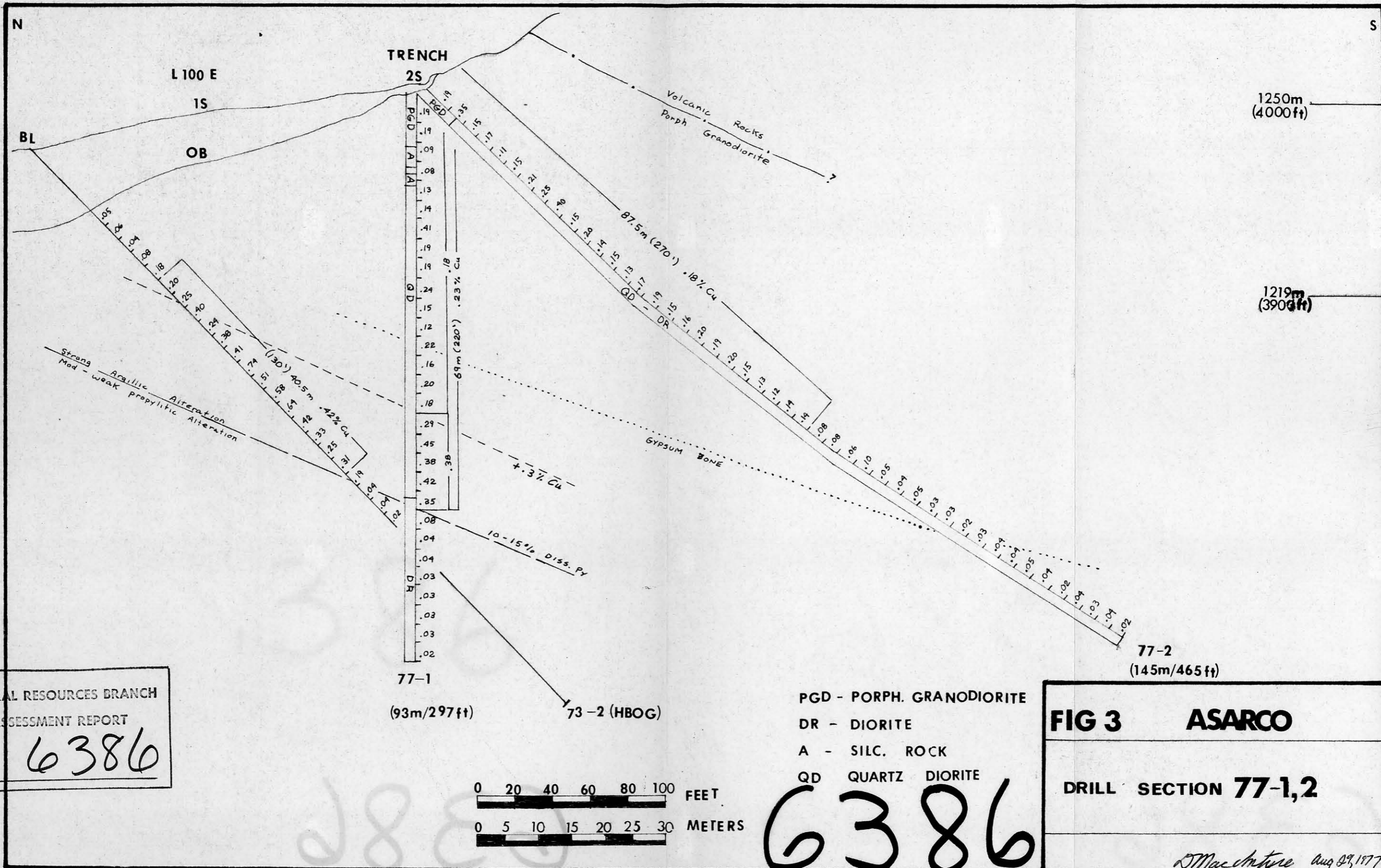
STATEMENT OF QUALIFICATIONS

I, Donald G. MacIntyre, of 6020 Kalamalka Crescent,
Richmond, B.C., certify that:

- (1) I am a graduate of the University of British Columbia with a Bachelor of Science degree in Honors Geology, 1971.
- (2) I am a graduate of the University of Western Ontario with Master of Science (1974) and PhD (1977) degrees in Economic Geology.
- (3) I have ten years field experience in mineral exploration in British Columbia and the Yukon Territory.
- (4) The information contained in this report was compiled by myself and that the program described was under my direct supervision.

D. G. MacIntyre

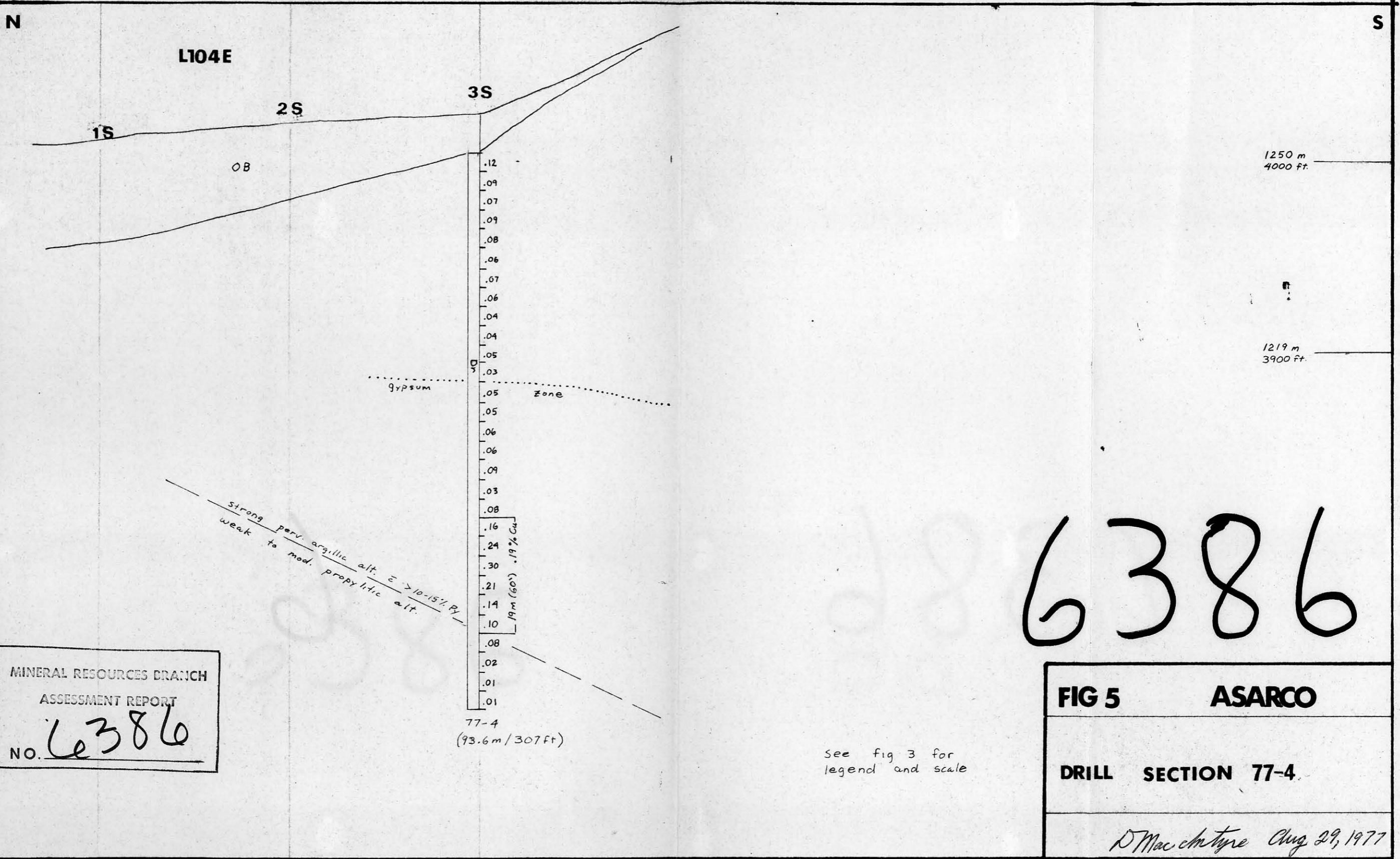
D.G. MacIntyre, PhD.,
Geologist,
Asarco Exploration Company
of Canada Limited.



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. **6386**

FIG 3 ASARCO
DRILL SECTION 77-1,2
J MacIntyre Aug 29, 1977

6386



N

L108E

8S

S

7S

6S

5S

4S

OB

4616
.013 % MoS₂
.052 % Cu

1281 m
4100 ft

1250 m
4000 ft

1219 m
3900 ft

mass mt.

.03
.04
.02
.02
.04
.05
.02
.02
.03
.05
.06
.03
.05
.01
.06
GTF
.02
.01
.05
.16
.37
GTF
.01
mass py.
.01
.01
.01
.01
.01
.01
Gypsum
Zone
.01
Zone
.01
Zone
.01
Zone
.01
Zone
.01
Zone

Py-ep clots & uns.
> 10-15% Diss. PY

Green Dacitic Tuff
Porph. Granodiorite

Patchy ep-chl alt
Strong perv. argillic alt.

Perv. argillic alt. weak to mod.
> 10-15% Diss. PY.
propylitic alt.



GTF = f. gr. green dacitic tuff
6386

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NO. **6386**

FIG 6 ASARCO
DRILL SECTION 77-5
D MacIntyre Aug 29, 1977

77-5
(124 m / 407 ft)

73-3 (HBOG)

N

S

L92E

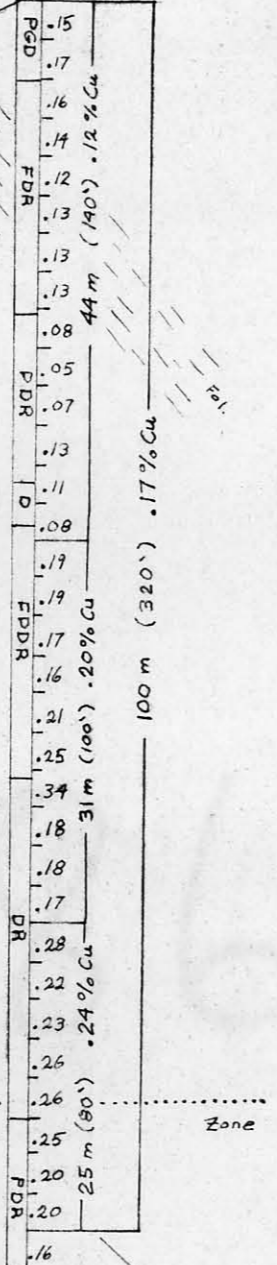
1S

BL

OB

Volcanic Rocks
Parph. Granodiorite

Strong perv. argillite alt. $E > 10-15\% Pt.$
Mod - weak propylitic alt.



FPDR = foliated porphyritic diorite
 FDR = foliated diorite
 PDR = porphyritic diorite
 D = diabase

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77-6
 (105.8 m / 347 ft)

see fig 3 for
 legend and scale

FIG 7 ASARCO

DRILL SECTION 77-6

DMacIntyre Aug 29, 1977

E

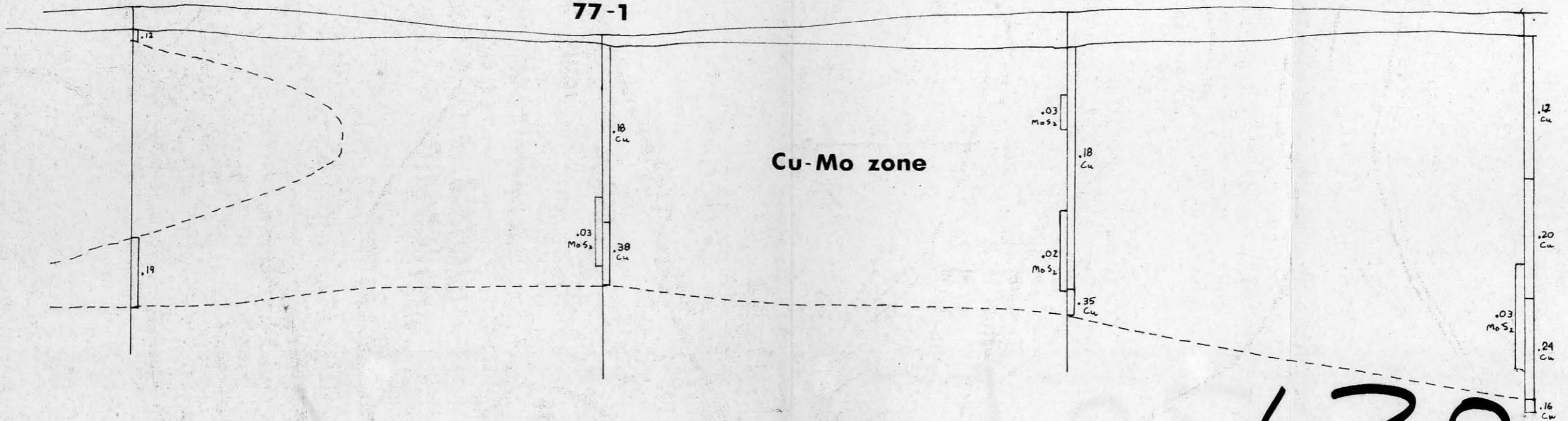
W

77-4

77-1

77-3

77-6



Cu-Mo zone

diorite

6386

FIG 8

ASARCO

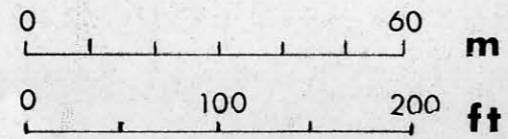
E-W

DRILL SECTION

DMacIntyre Aug 29, 1977

MINERAL RESOURCES BRANCH
STATEMENT REPORT

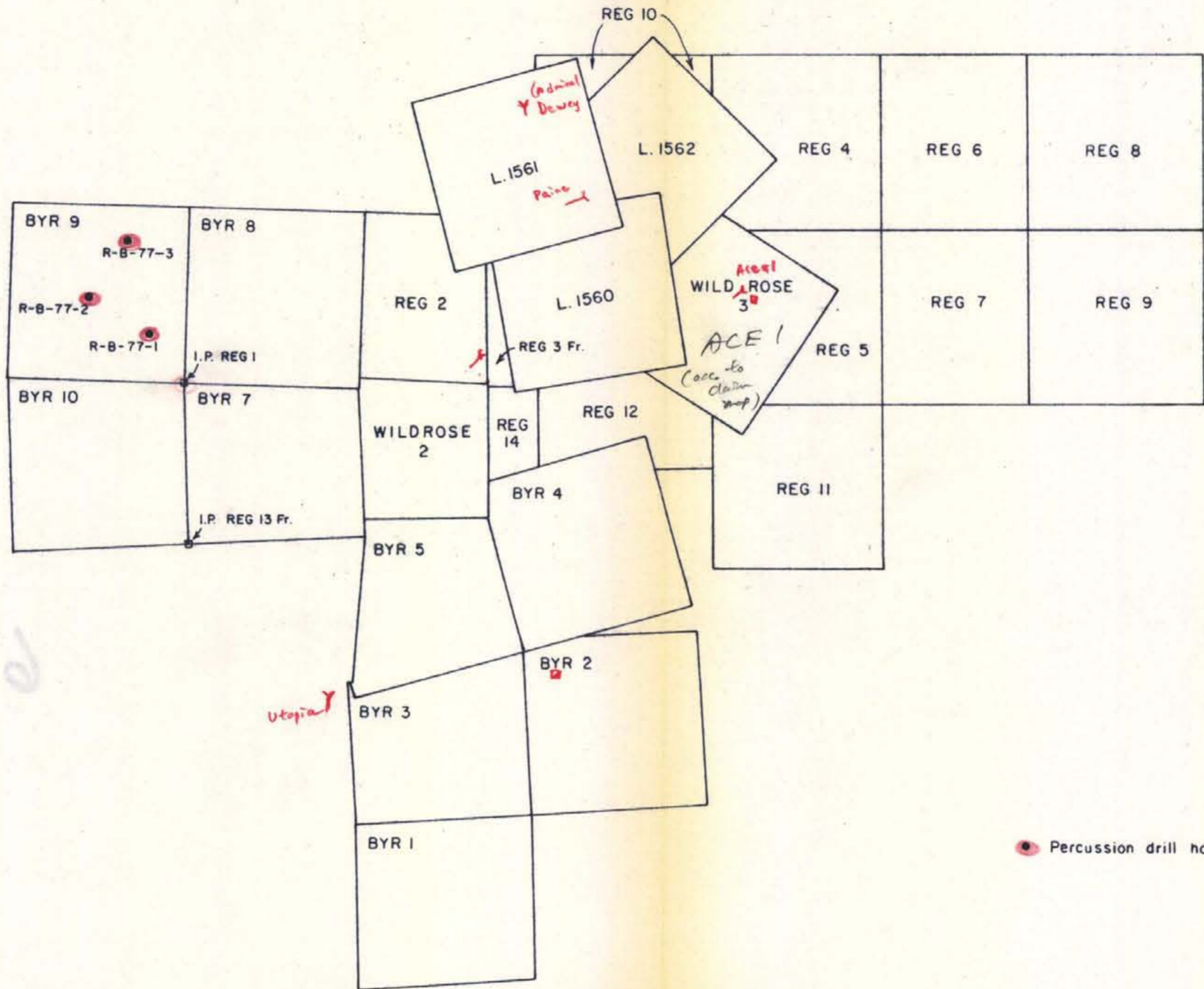
NO. 6386



See also
Ass-Rpt. 2143



0 Baseline

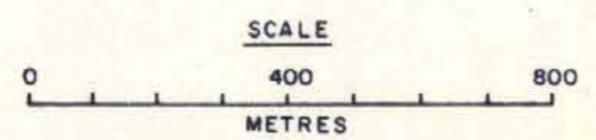


2880

50 S

MINERAL RESOURCES BRANCH
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NO. **6385**

● Percussion drill hole



L 40 W

0 + 00

L 40 E

R. Brown

REG - BYR OPTION



Drawn by:		Traced by: <i>R. Brown</i>	
Revised by	Date	Revised by	Date

Claim Map

Scale: 1" = 1000' Date: AUGUST, 1977 Plate: