

84-1008-13073

ASSESSMENT REPORT
DIAMOND DRILLING REPORT
ON THE
PORTLAND NO. 1 (L 1980) CLAIM,
INDIAN GROUP

SKEENA M.D.

NTS 104B/1E

Latitude 56° 05' N
Longitude 130° 02' W

by: Paul J. McGuigan

Operator: Esso Resources Canada Limited

Owner: Azure Resources Ltd.

November 13, 1984

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

13,073

SUMMARY

The Indian property is located in the Salmon River valley between the Premier and Big Missouri properties. The property is underlain by Lower Jurassic or Upper Triassic Hazelton group volcanic rocks. The rocks are mostly dacite and andesite tuffs, lapilli tuff and tuff breccia with lesser volcanic wacke. They are intruded by the high level, late Triassic Texas Creek granodiorite stock and its equivalent porphyritic dykes and sills. Young north-south trending faults cut the area and are intruded by andesite dykes.

Two general stages of alteration and mineralization are recognized on the property within the volcanic rocks. Prior to 1982, most of the work was done on late stage mineralization, as seen in the Indian mine and near the Upper and Lower North adits. Late stage mineralization is an infilling of fault breccia in the young fault zones. The mineralization consists of pyrite, galena, sphalerite, chalcopiyte and tetrahedrite in a gangue of quartz, calcite and/or K-feldspar. Coarse comb textures are common. The mineralized faults have narrow bands of sericite alteration in the walls. Early stage mineralization is present at the Silver Butte, Woodbine and Big Missouri properties. It is not common on the Indian property. It is characterized by chalcedonic quartz stockworks and an alteration assemblage which ranges between a silicification suite, a K-feldspar suite and a sericitic suite. Best precious metal grades are found in silicified stockworks. No zones of silicification have been found on the Indian property.

The Indian property is covered by a thin but almost continuous cover of till and talus. In part, soil geochemistry closely correlates with known late stage mineralization. Possibly not associated with the late stage sources are large areas of very strong soil anomalies in gold, lead, arsenic, and silver. Eight anomalous areas were outlined by the 1983 soil geochemistry. Four of those anomalies lie over rocks showing possible early stage alteration. Detailed soil sampling outlined three north trending anomalies which occur over propylitic or sericitic dacite lapilli tuff on the east side of the Indian-Woodier baseline. The soils there contain anomalies in gold (up to 17,000ppb), arsenic (up to 11,000ppm), lead (up to 1980ppm) and silver (up to 20.9ppm). A fourth anomaly correlates with the early stage sericitic and K-feldspar alteration on the north end of the Indian One grid baseline. It contains anomalies in gold (up to 64,000ppb), lead (up to 5200 ppm) and silver (up to 135 ppm).

A test induced polarization survey was conducted over the Indian Mine area. The survey detected the late stage Indian vein. It also detected an anomalous north trending zone (I.P. anomaly C) on the east side of the vein, in an overburden covered area. A geochemical anomaly is partly co-incident with the I.P. anomaly. Results from the geochemical and geophysical surveys are given in an assessment report dated Nov. 25, 1983 by P. McGuigan and L. Wilson.

Two diamond drill holes I-10 and 11 were collared at Line 4N, 3+00E of the Indian-Woodier grid. They were drilled to the west to test I.P. anomaly C and a geochemical anomaly. Hole I-11 was extended to test the I.P. anomaly near the Indian vein. The drilling intersected minor gold mineralization in the Indian vein, but no other significant intersections were obtained. The centre of the chargeability anomaly C contained chlorite-altered dacite lapilli tuff with disseminated pyrite and trace sphalerite.

TABLE OF CONTENTS

	Page No.
A. INTRODUCTION	1
1. Target	1
2. Location and Access	1
3. Land	1
4. History	1
5. Work Done in 1983	1
B. 1983 DRILL PROGRAM	2
1. Regional Geology	2
2. Property Geology	3
a. Surficial Geology	3
b. Lithologies	3
c. Alteration, Veining, Mineralization	4
3. 1983 Diamond Drill Program	4
C. RECOMMENDATIONS	6
D. REFERENCES	7

LIST OF FIGURES

	Figure No.
Location Map	1

APPENDICES

Appendix One	- List of Claims - Indian Group
Appendix Two	- Drill Logs DDH I-10,-11.
Appendix Three	- Cost Statement
Appendix Four	- Statement of Qualifications

LIST OF MAPS

	Map No.
Indian Group Claim map	1
Geology, 1:2500 scale, (2500-B2)	2
Geology, 1:500 scale (500-A2)	3
" " (500-A3)	4
Drill Section, I-10,-11	5

A. INTRODUCTION

A.1. Target

The target on the Indian property is high-grade epithermal precious metal deposit in Lower Jurassic volcanic rocks

A.2. Location and Access

The Indian claim group is located approximately 15 miles by road, northwest of Stewart, B.C. The group includes the claim over the abandoned Indian Mine. It lies in the drainages of the Salmon River and Cascade Creek. See Figure 1. Access to the area is by all-weather gravel road from Stewart, via Hyder, Alaska. Most work in 1983 was done on foot by trails from the Granduc and Cascade Creek roads.

A.3. Land

The land worked under the Indian Project is held under agreements between Esso Resources Canada Limited, Houston International Minerals Corporation (HIMCO) and Azure Resources Ltd. The parcel includes 54 crown-granted claims, most of which lie near the abandoned Indian Mine. The claims are listed in Appendix One. Map 1 shows the claim position in the Salmon River Valley.

A.4. History

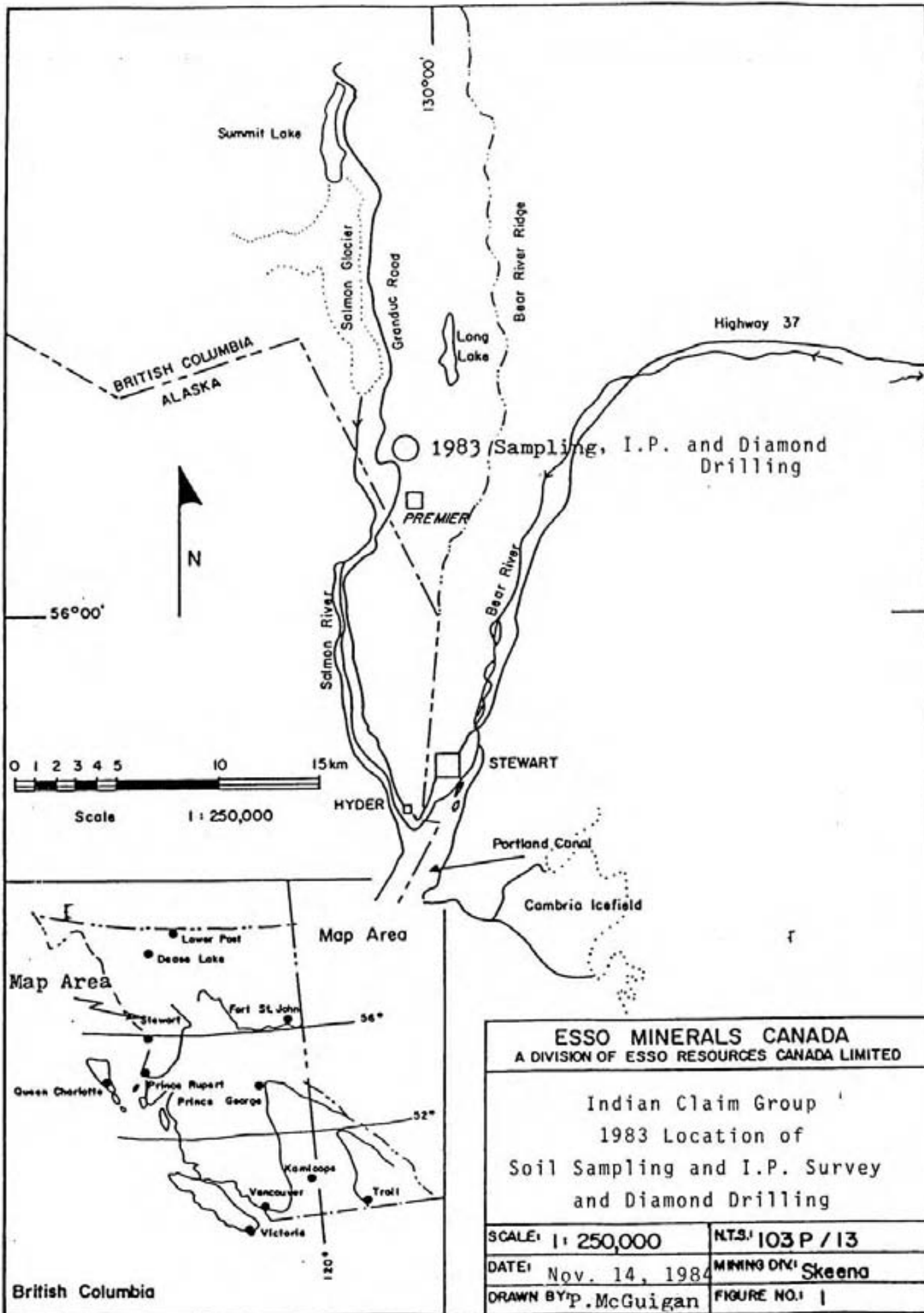
The Indian Mine produced minor amounts of ore between 1925 and 1953, with the product shipped to the Premier mill. Production totalled 14,100 tons, grading 4.4% lead, 5.5% zinc, 3.44 oz/ ton silver and 0.089 oz/ton gold. See Grove (1971).

Recent activity in the claim area included exploration programs by Windy Point Minerals Ltd. (subsidiary of Houston International Minerals Co.) in 1980 and 1981. A grid was established, called the "Indian-Woodier" grid, which extends north and west of the Indian Mine. Soil geochemistry, a magnetometer survey, geological mapping and some diamond drilling were done. See Foye (1982) and various assessment reports for the Woodier group for details.

Esso Resources Canada Limited established the "Indian One" grid in 1982 which ties onto the east side of the "Indian-Woodier" grid and extends east to Cascade Creek. Geological mapping, trenching and geochemical soil sampling were done. See McGuigan (1982), three reports.

A.5. Work done in 1983

The 1983 Exploration Program of Esso included a test induced polarization survey over the Indian Mine and geochemical soil sampling over three grids. The induced polarization work was conducted to test the response of known sulphide mineralization in the Indian Mine. A total of 600 meters of time domain I.P. survey was run.



ESSO MINERALS CANADA A DIVISION OF ESSO RESOURCES CANADA LIMITED	
Indian Claim Group 1983 Location of Soil Sampling and I.P. Survey and Diamond Drilling	
SCALE: 1:250,000	NTS: 103 P / 13
DATE: Nov. 14, 1984	MINING DIV: Skeena
DRAWN BY: P. McGuigan	FIGURE NO: 1

Geochemical soil surveys were run in three areas. Detailed sampling over the Indian Mine area (Indian-Woodier grid) was done to repeat and fill in 1980-81 sampling by Windy Point Ltd.; 729 samples were collected. Of those, 69 samples were also run for cold extractable metal contents and for total extraction with analysis done by induction coupled plasma technique (ICP). The 1983 sampling was on the Portland No. 2 (L1979) and Portland No. 1 (L1980) and Morn (L4064) crown granted claims.

The second area worked is the previously sampled Indian One grid (1982). The pulps from 539 samples were analysed for gold, mercury and arsenic. The area covered by this work was the Payroll No. 3 (L5524), O'Brien Fr. (L4441), Maggie Jiggs (L4442), Brookland (L511), Fortyfive (L512), Fritz (L1982), Portland No. 2 (L1979), Portland No. 1 (L1980) and Morn (L4064) crown-granted claims.

The third area is the Bush-Cobalt adit area. Two kilometers of flagged line were added to the existing Indian Two grid. 50 soil samples were collected. This work was done in the area of the Winner (L4116), Cobalt (L4053), and Cobalt No.2 (L4054) crown-granted claims.

A drillers camp was established in the fall of 1983 at the No. 2 Portal of the Indian Mine. Ultramobile Diamond Drilling Ltd. of Surrey B.C. was contracted for the drilling program. A modified JKS 300 diamond drill was lifted on to the property using helicopters. Diamond drilling was done, using a thin-wall drilling string. A non-standard size core (designated B-DB-GM) was extracted which is between NQ and BQ in size. Two holes (I-10, -11) were drilled, totalling 189 metres in length.

Core from the drilling program and rejects from the assaying are stored in a warehouse in Stewart owned by Esso Minerals Canada.

The results from the induced polarization survey and the geochemical soil sampling are given in an assessment report dated Nov. 25, 1983 by P. McGuigan and L. Wilson. The results of the diamond drill program are given in this report.

B. 1983 DRILL PROGRAM

B.1. Regional Geology

The geology of the Salmon River Valley is described in the 1982 Summary Report of the Salmon - Indian Project that report contains geology maps and sections at 1:5000 and 1:2500 scale for the area worked in 1983. One revised geology map (Map 2) is included in this report.

A revised stratigraphic-structural interpretation is in preparation. However, the changes do not affect the area worked in 1983. For a general description of the units on the 1:2500 geological map, see the 1982 report.

B.2. Property Geology

B.2a. Surficial Geology

The Big Missouri ridge passes through the Indian-Woodier (I-W) and Indian One grid area. The ridge is covered with a thin mixture of till from valley glaciation and talus. The overburden cover is almost continuous but it is usually only 1-2 metres thick. Talus fans are up to 10m thick.

B.2b. Lithologies

The rocks of the I-W and Indian One grids are described in the 1982 report. Some aspects of the geology are described in this section.

Unit 1 Rocks, are fine-grained green and grey dacite tuff which is interbedded with grey and black volcanic siltstone and argillite. Most of the unit is strongly fractured and weathers to a buff colour. Unit one rocks strike between north and north-northwest and dip steeply eastward.

Unit 2 Rocks, consist of a narrow band of north-south striking greyish green dacite lapilli tuff and lesser dacite tuff breccia. The Unit crops out east of the Indian Fault Zone. The dacite lapilli tuff is irregularly altered with chlorite "mottling" which occurs preferentially in the matrix.

Unit Three Rocks, are correlated with the main volcanic unit which hosts the Premier, Big Missouri and Silver Butte mineralization. On the Indian property the Unit Three consists of mostly green andesite lapilli tuff with lesser andesite tuff and andesite tuff breccia. Minor maroon or green wacke is present.

Texas Creek Granodiorite, consists of fine to medium grained plagioclase, hornblende and/or sanadine porphyritic granodiorite and granodiorite porphyry. Bodies on the west side of the Indian Fault are interpreted as a stock. The porphyritic Texas Creek granodiorite to the east of the fault are interpreted as sills.

B.2c. Alteration, Veining, Mineralization

Alteration and stockwork veining at Indian occurred during two stages which are greatly separated in age. The best example of the late stage vein/alteration suite at Indian is the main vein at Indian Mine. The main vein is a quartz + carbonate + K-feldspar infilled fault breccia. The breccia fragments and wall rocks are sericite altered. Comb textured quartz is common. The vein/alteration suite commonly is less than the width of the fault breccia and gouge. Widths vary between 2-5 metres. Heavy disseminated and open space filling pyrite, sphalerite, galena and trace tetrahedrite are present.

The Indian vein and other late stage veins are controlled by the north-south striking Indian fault. These veins were discounted in 1982 as favourable targets. Grades are low (less than 8 g/t gold), vein widths are narrow and continuity is low.

The Unit Two dacite lapilli tuff is weakly to moderately chlorite altered with minor sericite, possibly due to an early stage propylitic alteration. The unit contains 5% disseminated and fracture coating pyrite and traces of disseminated sphalerite and galena.

The Unit Three rocks are weakly propylitic altered, with small areas of sericitic alteration near Indian One baseline, Line 5N area.

The Texas Creek granodiorite sills are strongly k-feldspar altered and quartz veined in many of the exposures occurring east of the Indian Fault Zone. No significant mineralization has been found to date in the Texas Creek granodiorite sills.

B.3. 1983 Diamond Drill Program

Diamond drill holes I-10 and I-11 were completed in September-October 1983 to test chargeability anomalies "B" and "C" of the 1983 test induced polarization survey. I-10 and I-11 were collared at the centre of a geochemical anomaly and drilled westward. See Maps 3, 4 and 5. The only outcroppings over the I.P. anomalies were small exposures of Texas creek granodiorite and pyritic quartz-veined dacite lapilli tuff.

Both 1983 holes cut pyritic, sericite-chlorite altered dacite lapilli tuff. The tuff is cut by east dipping, early, stage Texas Creek granodiorite sills. A west dipping, late andesite dyke was also cut by the drilling. The dyke correlates with an andesite dyke mapped on the No.3 level of the Indian Mine, see Map 5.

Chargeability anomaly "C" was the main target of drill holes I-10 and I-11. At n=2,3, an anomaly of 45+mv/v was measured. This was the strongest response in the Indian I.P. test survey. Dacite tuffs in the centre of the anomaly contain 3-10% disseminated pyrite. No significant gold mineralization was intersected in the area of the chargeability anomaly.

An intersection of the Indian Vein was obtained by the extension of 1983 hole I-11 into the mine workings. The hole cut 8.95 metres true thickness of quartz-dolomite-K-feldspar stockwork. The stockwork contains 10% pyrite and 2% galena. Assays average 2.14 g/t gold and 57.9 g/t silver across the stockwork.

Mapping in 1983 of the No.3 level did not show the stockwork to extend down to that level. Past reports for New Indian Mines noted a west dipping, cross-cutting fault which cut off the No.1 - No. 2 level mineralization at depth. The andesite dyke which was drilled in holes I-10 and I-11 is probably an infilling of that cross-cutting fault.

C. RECOMMENDATIONS

- Induced polarization surveys should be extended to the north of the 1983 test survey area up to Line 26N on the Indian Woodier Grid.
- Diamond drilling of induced polarization anomalies is not recommended unless co-incident soil geochemical responses and gold mineralized outcrop is found.
- No more diamond drilling should be done in the area of Holes I-10 and-I-11.

Respectfully submitted,

Paul J. McGuigan

Paul J. McGuigan

D. REFERENCES

- Foye, G. (1982) Salmon River Project, 1981 Exploration Summary. Windy Point Minerals Ltd. Company Report.
- Grove, E.W. (1971) Geology and Mineral Deposits of the Stewart Area, British Columbia. Bull. No. 58, B.C. Department of Mines and Petroleum Resources.
- McGuigan, P.J.(1982) Geochemical Report on a Soil Survey, Boundary Group. Assessment Report.
- McGuigan, P.J. (1982) Geochemical Report on a Soil Survey, Munro Group. Assessment Report.
- McGuigan, P.J. (1982) Geochemical Report on a Soil Survey, Slate Group. Assessment Report.
- McGuigan, P.J. (1983) 1982 Summary Report, Salmon-Indian Project. Esso Minerals Canada, Company Report.
- McGuigan, P.J. (1983) Geochemical Report on a Soil Survey, Munro Group. Assessment Report.
- McGuigan, P.J. and Wilson L.(1983)Geochemical and Geophysical Report on a Soil Survey and Test I.P. Survey, Indian Group. Assessment Report.
- McGuigan, P.J. and Wilson, L.(1984) Indian Project, 1983 Summary Report, Esso Minerals Canada, Company Report.

<u>Claim</u>	<u>Units</u>	<u>Month of Record</u>	<u>Record Number</u>
Cobalt			L4053
Cobalt No. 2			L4054
Winner			L4116
Maple Leaf No. 5			L4447
Maple Leaf No. 3			L4449
Maple Leaf No. 2			L4450
Maple Leaf No. 1			L4451
M.L. Fr.			L4452
XIOU 8 No. 4			L5183
XIOU 8 No. 5			L5184
Three			L5188
Three Fr.			L5189
One Fr.			L5190
Four Fr.			L5191
Five Fr.			L5192
Extra			L5193
Shure	1	9	697
Double 0 No. 6	1	10	3240
Silver Fr.	1	9	1841
Sullivan	1	9	740
Daly, Vandal Fr.	1	9	741
Money & Start No. 6 Fr.	1	9	742
Lakeshore	1	9	743
Maple Leaf No. 4	1	9	744
Bush No. 1	1	9	745
Bush No. 2	1	9	746
Bush No. 3	1	9	747
Bush No. 4	1	9	748
Start No. 2	1	9	749
Start No. 3	1	9	750
Start No. 5	1	9	751
Star Extension No. 1	1	9	752
OB, OB No. 1, OB No. 2	1	9	753
OB No 4, OB No. 2 Fr.	1	9	754
OB Fr.	1	9	755
Start Fr.	1	9	756
Valley Fr.	1	9	757
OB No. 1 Fr.	1	9	758
Star Extension	1	10	782
Slate 1	1	10	793
Slate 2	1	10	794

APPENDIX ONE

INDIAN GROUP

<u>Claim</u>	<u>Units</u>	<u>Month of Record</u>	<u>Record Number</u>
Payroll No. 4			L5525
Payroll No. 3			L5524
Missing Link Fr.			L2316
Boundary No. 1	1	9	735
Boston Fr. No. 2	1	9	739
Bean Fr.	1	9	738
Knob Hill	1	9	736
Boston Fr.	1	9	737
Glacier	1	9	730
Cascade Fr.	1	9	2554
Wolfgang Fr.	1	9	2573
Amadeus Fr.	1	9	2574
Morn			L4064
Munro No. 2 & No. 3	1	8	1644
Munro No. 1	1	8	1645
Big Chief No. 2	1	8	1646
Big Chief No. 3	1	8	1647
Munro No. 4, Munro No. 5 & Boundary	1	8	1648
Firn	2	10	2616
Firn Fr.	1	10	2617
Snow 1	3	9	1837
Snow 2	15	9	1838
Snow 3 Fr.	1	9	1839
Snow 4 Fr.	1	9	1840
Salmon Fr.	1	9	2591
Boundary No. 2			L2315
Portland No. 2			L1979
Portland No. 1			L1980
Fritz			L1982
A.M. Fr.			L4440
Obrien Fr.			L4441
Maggie Jiggs Fr.			L4442
Brookland			L 511
Fortyfive			L 512
Exchange No. 1			L1843
Exchange No. 2			L1844
Exchange No. 3			L1845
Exchange No. 4			L1846
Exchange Fr.			L1848

DRILL LOG


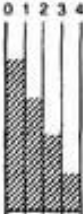
PROJECT INDIAN	GROUND ELEV. 2410' (FROM 1:2500 CONTOUR MAP)
HOLE NO. I-10	BEARING AZ. 260°
LOCATION INDIAN GRID: 4+36 N 2+95E	DIP -40
	TOTAL LENGTH 67.06 m.
LOGGED BY G. DAWSON	HORIZONTAL PROJECT 51.37m
DATE OCTOBER 9, 1983	VERTICAL PROJECT 43.11m
CONTRACTOR ULTRA-MOBILE DIAMOND DRILLING LTD	<p>ALTERATION SCALE</p> <p>absent slight WEAK moderate intense STRONG</p>
CORE SIZE B-PB-GM	
DATE STARTED SEPTEMBER 23, 1983	<p>TOTAL SULPHIDE SCALE</p> <p>traces only <1% <1% 1-4% 1% - 3% 5-10% 3% - 10% 11-50% >10% >50%</p>
DATE COMPLETED SEPTEMBER 26, 1983	
DIP TESTS (ACID) 67.06 meters - 38°	
COMMENTS see page 3 for graphic logs	<p>LEGEND</p> <p>TUFF LAPILLI-TUFF ^ ^ ^ TUFF BRECCIA ^ ^ ^ FLOWS v v v FLOW BRECCIA v v INTRUSIVES + +</p> <p>SILICIFICATION MODERATE STRONG SERICITIZATION CHLORITIZATION CARBONITIZATION QUARTZ VEINS SULFIDES</p> <p>FAULTS BROKEN CORE FRACTURES BRECCIATED (TECTONIC, ETC)</p> <p>FELDSPAR PHENOS AMPHIBOLE PHENOS</p>

PAGE 1 OF 8		PROJECT: INDIAN			HOLE NO. I-10						
DEPTH (FEET)	% Core Recy	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACT INTENSITY	
					sil A	ser B	chl C	cb D	E		
				0 - 1.15 m OVERBURDEN							
				1.15 - 6.65 m; MODERATE SERICITE - CHLORITE ALTERED DACITE TUFF, (LAPILLI TUFF) massive, grey and green mottled moderate sericite - chlorite altered fg. dacite (lapilli) tuff; 0.5 - 1.0 mm sericite altered feldspars throughout; lapilli 0.5 - 1.0 cm diameter average selectively chlorite altered (dark green)							
				1.15 m - 3.05 m, broken and fractured core, weathered							
				5.18 m, 45°, pyrite coated fracture							
				5.40 m, 30°, Mn coated fract, open							
				5.80 m, 20°, 40° Mn + lim fract.							
				6.10 m, 70°, " "							
				6.30 m, 25°, 70°, " "							
				6.40 m, 55°, " "							
				6.50 m, 25°, " "							
				1mm clay gouge							
				6.65 - 10.20 m MEDIUM GRAINED TEXAS CREEK GRANODIORITE							
				massive, greyish green medium grained intergranular Texas Creek granodiorite, minor 0.5 - 1.0 cm euhedral sanidine phenocrysts							
				6.95 m, 40°, lim fract.							
				8.75 m, 90°, " "							
				8.80 m, 75°, " " open							
				9.90 m, 30°, " " 10cm							
				open - vuggy altered zone							
				10.20 m, 40°, " " kt							
				10.20 - 10.60 m ANDESITE DYKE							
				massive dark green fg andesite dyke, 0.5 - 1.0 mm white feldspars throughout, 1cm lighter green chilled upper & lower contacts.							
				10.35 m, 40°, lim + Mn fract							
				10.60 m, 40°, 1ct lim fract.							

DEPTH (m)	RQD	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ
						sil A	ser B	chl C	cb D	E		
10.60 - 22.60					MODERATE SERKITE - CHLORITE ALTERED DACITE TUFF (LAPILLI-TUFF) fractured grey and green moderate sericite altered by dacite tuff with lesser lapilli tuff darker green chlorite selectively altered lapilli and as fracture controlled zones resulting in a mottled texture;		///	///				
11.50 m					60° Mn fract.							
11.80 m					60° 50' Mn fract.							
12.12 m					70° lim + Mn fract.							
12.20 m					85° "							
13.40 m					60° calc. fract.	///		///	///			
13.55 m					55° "							
13.80 m					50° Mn + lim fract.							
14.00 m					60° " open	///		///	///			
14.20 m					45° lim fract.							
14.50 m					50° "							
14.70 m					20° " " 10cm broken core	///		///	///			
15.20 m					25° " " "							
17.50 - 17.98 m					25° brecciated section with qty ± calc infilling and quartz fragments							
21.15 m					30° lim. fract.	///						
21.45 m					30° lim. fract.							
22.60 m					40° let, lim fract.							
22.60 - 35.80 m					MEDIUM GRAINED TEXAS CREEK GRANODIORITE similar to 6.65 - 10.20 m							
23.47 m					65° calc. slip							
25.00 m					60° Mn fract.							
26.80 - 26.21 m					50° 3 x 2.5mm yellow dolomite stringers with assoc. altered wall rock.							
28.40 m					60° lim fract, 10cm broken core							
28.80 m					0-10° lim fract.							
29.00 m					40° " " "							
28.50 - 29.00 m					0-10° " " "							
29.80 m					50° " " "							
30.50 - 30.90 m					70° fault zone, broken core, 5mm clay gouge.							

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ
					sil A	ser B	chl C	cb D	E		
22.60 - 35.80 m				MEDIUM GRAINED TEXAS CREEK GRANODIORITE CONTINUED.							
				31.40 m, 60°, lim fract.							
				31.60 m, 80°, 1cm t qtz + calc, chl vein							
				31.95 m, 80°, lim fract							
				32.30 - .61 m, lim fract of broken core							
				34.40 m, 30°, lim fract.							
				35.30 m, 25°, lim fract.							
35.80 - 51.00 m				MODERATE CHLORITE - CALCITE - SILICIFIED ALTERED DACITE LAPILLI TUFF. brecciated dark green chlorite altered dacite lapilli and select ively altered zones in a grey fy dacitic tuff matrix resulting in a "modelled" texture; calcite to yellow dolomite stringers and infillings; grey quartz (silicified) dacite areas throughout;							
				36.30 m, 30°, chl slip							
				37.00 m, 30°, 90°, lim + Mn fract							
				37.85 m, 40°, lim fract.							
				40.30 m - .50 m, 15°, fract, vuggy wall rock.							
				41.65 m, 35°, lim fract							
				42.30 - .50 m, broken core							
				43.60 - .90 m, lim fract and broken core							
				44.70 - 45.00 m, broken and fract. core							
				45.35 m, 30°, lim fract.							
				45.85 m, 50°, lim and calc. fract.							
				46.40 - .60 m, 35°, lim fract core,							
				47.00 m, 30°							
				47.24 m, 20°, lim + calc fract							
				47.90 m, 30°, lim fract.							
				48.20 m, 55°, lim + Mn fract							
				48.60 m, 65°, lim fract.							
				49.70 - .80 m, 40°, calc ± chl vein							
				49.80 - 51.00 m, 70°, lct, fractured lim clay gouge.							

DRILL LOG

PROJECT INDIAN	GROUND ELEV. 2410' (FROM 1:2500 CONTOUR MAP)
HOLE NO. I-11	BEARING A? 260°
LOCATION INDIAN GRID: 4+36N 2+95E	DIP -55°
	TOTAL LENGTH 121.92 meters
LOGGED BY G. Dawson	HORIZONTAL PROJECT 69.36 meters
DATE OCTOBER 11, 1983	VERTICAL PROJECT 49.87 meters
CONTRACTOR ULTRA-MOBILE DIAMOND DRILLING LIMITED	ALTERATION SCALE  <p>absent slight WEAK moderate intense STRONG</p>
CORE SIZE B-DB-GM	
DATE STARTED SEPTEMBER 27, 1983	TOTAL SULPHIDE SCALE  <p>traces only <1% ≤1% 1-4% 1% - 3% 5-10% 3% - 10% 11-50% >10% >50%</p>
DATE COMPLETED SEPTEMBER 29, 1983	
DIP TESTS (ACID) 60.96 meters: 51° 121.92 meters: 48°	
COMMENTS	LEGEND TUFF LAPILLI TUFF ^ ^ ^ TUFF BRECCIA Δ Δ Δ FLOWS v v FLOW BRECCIA v v INTRUSIVES * * SILICIFICATION : : : : MODERATE STRONG SERICITIZATION : : : : CHLORITIZATION : : : : CARBONITIZATION : : : : QUARTZ VEINS SULFIDES FAULTS --- BROKEN CORE ≈ FRACTURES / BRECCIATED (TECTONIC, ETC.) () FELDSPAR PHENOS. ○ ○ AMPHIBOLE PHENOS. □ □

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		% Cu	% Pb	% Zn	g/t Ag	g/t Au
1.75 - 6.80 m 10-15% disseminated fg - mg brown pyrite		1.75	4.75	3.00	16567				4.1	0.10
		4.75	6.80	2.05	16568				3.4	0.14
6.80 - 14.35 m 1% diss and stringers fg py trace gn.										

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.
					sil A	Ser B	chl C	cb D	E		
14.35 - 14.60m	100	And	And	ANDESITE DYKE massive, dark green fg andesite dyke; lct fractured (healed, vuggy);	/						
14.60 - 25.25m	100	And	And	MODERATE SERICITE - CHLORITE - PYRITE ALTERED DACITE TUFF in situ brecciated, dark green moderate chlorite altered "zones" in a grey sericite altered dacite tuff matrix resulting in a "modelled" texture; 1-02 mm calcite stringers and breccia infillings throughout, 2% volume, no preferred orientation;							
15.50m				50° alteration "banding" and stringers brn sp.							
16.40 - 19.65m				grey & white banded, strong sericite altered dacite tuff, stringers and veins grey qtz, chl. and pyrite; banding 20-30°							
16.30m				30° lin + Mn fracture							
16.95m				60° "							
17.40m				15° lin fract							
17.80 - 18.10m				lin fract & broken core							
20.10m				30° "banding"							
21.34m				40° 10 cm band grey strong silicified dacite, micro crystalline							
23.20m				40° lin fract							
23.75m				30° " "							
23.90m				30° " "							
24.10m				30° " "							
24.38m				20° 1cm qtz vein ± calc							
25.25m				70° lct, Mn fract, vuggy							
25.25 - 31.20m				WEAK CALCITE - CHLORITE ALTERED TEXAS CREEK GRANODIORITE massive, green and white weak calcite - chlorite altered medium grained Texas Creek Granodiorite, 0.5 cm euhedral sanidine phenocrysts.							

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.
					sil A	ser B	chl C	cb D	E		
				25.25-31.20m CONTINUED							
				26.50-26.90m, yellowish grey dolomite altered area, gradational contacts							
				26.60m, 50°, 2cm chl. vein							
				26.75m, 60°, 3cm mixed qtz vein + yel. dolomite center							
				27.90m, 50°, 5mm calc. + dol. stringers							
				28.55m, 60°, 2cm qtz vein ± chl, red hematite							
				28.90m, 60°, 15mm qtz + calc + dol vein							
				31.20m, 65°, lct, calc - chl. fract							
				31.20-35.90 MODERATE SERICITE - CHLORITE ALTERED DACITE TUFF							
				greenish grey, moderate sericite-chlorite altered by dacite tuff, brecciated in part, dark green chl. along microfractures (of foliation) and as infillings in brecciated areas							
				31.20-.60m, 70-90°, broken and fract core, 2cm gouge @ 31.60m							
				31.90m, 30°, 2.5cm qtz + calc + chl vein							
				32.30m, 0-30°, lim fract							
				32.40m, 55°, Mn fract.							
				32.50m, 55°, lim + Mn fract.							
				32.70m, 70°, lim + chl. fract							
				32.85m, 50°, "							
				33.22m, 50°, chl slip, slickensides							
				33.65m, 20°, chl + lim slip "							
				34.10m, 30°, 3mm lim gouge, 20cm healed slip zone, vuggy.							
				34.35-.44m, 40°, broken core, minor gouge							
				34.55m, 50°, lim fract							
				34.75m, 40°, lim fract.							
				35.20m, 40°, chl. stringers							
				35.90m, gradational let over 30cm.							

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		% Cu	% Fe	% Zn	g/t Ag	g/t Au
31.20 - 35.90 m		31.20	34.20	3.00	16573				6.5	0.31
5% mafic stringers & infillings brown of pyrite		34.20	35.90	1.70	16574				6.9	0.10

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ
					sl A	ser B	chl C	cb D	E		
				35.90-38.70m WEAK CALCITE ALTERED TEXAS CREEK GRANODIORITE massive, green weak calcite altered mg. Texas Creek Granodiorite							
				36.20 m, 50°, 2cm qtz vein ± calc. 37.00 m, 55°, 1cm "							
				37.10-.30 m, 20-90°, grey calc + chl-qtz vein							
				38.40-.50m, 40° qtz vein 38.70m, 35°, 1ct, limi fract.							
				38.70-76.85m MODERATE SERICITE - CHLORITE - CALCITE ALTERED DACITE LAPILLI TUFF dark green and grey moderate sericite chlorite - calcite altered fg dacitic lapilli tuff, chlorite exists as dark green altered lapilli, veins and "patches" in grey sericite altered matrix resulting in a "modelled texture". lapilli are subangular, no consistent alignment; diss. brown fg-mg pyrite associated with chlorite							
				38.70-40.30m, contact zone, vuggy, altered. 39.00m, Mn+lim infilled vug 39.20m, 35°, Mn fract. 39.30m, 50° " 39.40-.85m, lim fract. & broken core 40.10m, 30°, limi fract. 40.25m, 50° "							
				43.65m, 40°, 5mm qtz vein ± calc. 43.85m, 40°, limi fract. 60.00m, 0-30°, fract 60.50m, 60°, py. fract. 52.00m, 40°, limi fract. 52.40-.50m, brecciated, with cream dolomite and qtz infilling 52.50-.60m, broken core 53.60m, 20°, 50° limi and chl fract. 53.75m, 40°, chl. stringers 54.15m, 30°, chl. & py slip, minor gouge							

MINERALIZATION DESCRIPTION	TOTAL SULPHIDE	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		% Cu	% Pb	% Zn	g/t Ag	g/t Au
35.90 - 38.70m minor diss. fg - mg pyrite										
38.70 - 76.85m 5-10% diss. brown fg - mg pyrite trace sp		38.70	41.70	3.00	16575				11.0	0.05
		41.70	44.70	3.00	16576				7.9	0.10
		44.70	47.70	3.00	16577				1.4	0.38
		47.70	50.70	3.00	16578				1.0	0.27
		50.70	53.70	3.00	16579				1.0	0.21
		53.70	56.70	3.00	16580				2.1	0.14
		56.70	59.70	3.00	16581				1.7	0.34
		59.70	62.70	3.00	16582				1.0	0.21
		62.70	65.70	3.00	16583				3.1	0.17
		65.70	68.70	3.00	16584				1.7	0.10
		68.70	71.70	3.00	16585				97.0	0.38
		71.70	74.70	3.00	16586				5.8	0.21
		74.70	76.85	2.15	16587				2.1	0.07

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION					FRACTURE INTENSITY	% VEIN QTZ.
					sil A	ser B	chl C	cb D	E		
				38.70-76.85m CONTINUED							
				54.60 m, 60°, lim fract							
				54.85-55.00m, lim fract & broken core							
				55.20m, 20°, fract							
				55.65m, 30° & 80°, lim fract.							
				57.10m, 60°, " "							
				57.45m, 40°, " "							
				57.75m, 30°, " "							
				59.20m, 30°, lim. shear.							
				59.20-.35m, qtz + calc + chl. infilled brecciated zone							
				60.20-.70m broken & fract core							
				61.00m, 20°, py & calc fract.							
				61.70m, 40°, chl fract.							
				62.50m, 50°, lim & Mn slip, minor gauge							
				62.50-.90m, 40-60°, broken and fract core (< 10 cm peices)							
				65.10m, 50°, py fract.							
				65.60m, 30°, py & chl fract.							
				66.00m, 50°, lim fract.							
				66.70m, 50°, calc & chl fract.							
				67.45m, 40°, chl. and calc fract.							
				69.55m, 20°, calc, chl slip, slickensides							
				69.10-70.10m 70-80° broken & chl. fract core, minor gauge							
				71.60m, 30°, 3cm calc vein & infilling							
				73.40m, 70°, chl and py fract.							
				73.60m, 60°, " "							
				73.95m, 30°, " "							
				74.50m, 40°, 3cm calc + py vein							
				75.60m, 50°, chl. fract.							
				76.85m, 50°, kt, fract.							
				76.85-86.80m QUARTZ-CALCITE VEINED SANADINE							
				PORPHYRITIC TEXAS CREEK GRAND-DIORITE							
				massive, green and white quartz and calc. veined sanadine							
				porphyritic fg-mg Texas Creek Granddiorite, weakly silicified in part, sanadine phenocrysts approx 5% volume, 5mm dia. average; qtz + calc veins 1-10 mm, 5-10% volume, no preferred orientation							

APPENDIX THREE

COST STATEMENT

The diamond drilling and associated surface mapping cost in excess of \$32,559.

1. Drill Contractor charges at field cost rates	\$4,914
2. Drill Contractor charges at footage rates	9,320
3. Demobilization of Drill	2,500
4. Helicopter, to move drill, establish and supply drill camp	2,112
5. Sperry Sun down hole survey instrument - rental	788
6. Cooks wages Sept 15 to Sept 30	1,125
7. Camp supplies, food, in excess of:	<u>1,800</u>
	5,759
TOTAL	\$32,559

Paul J. McGuigan

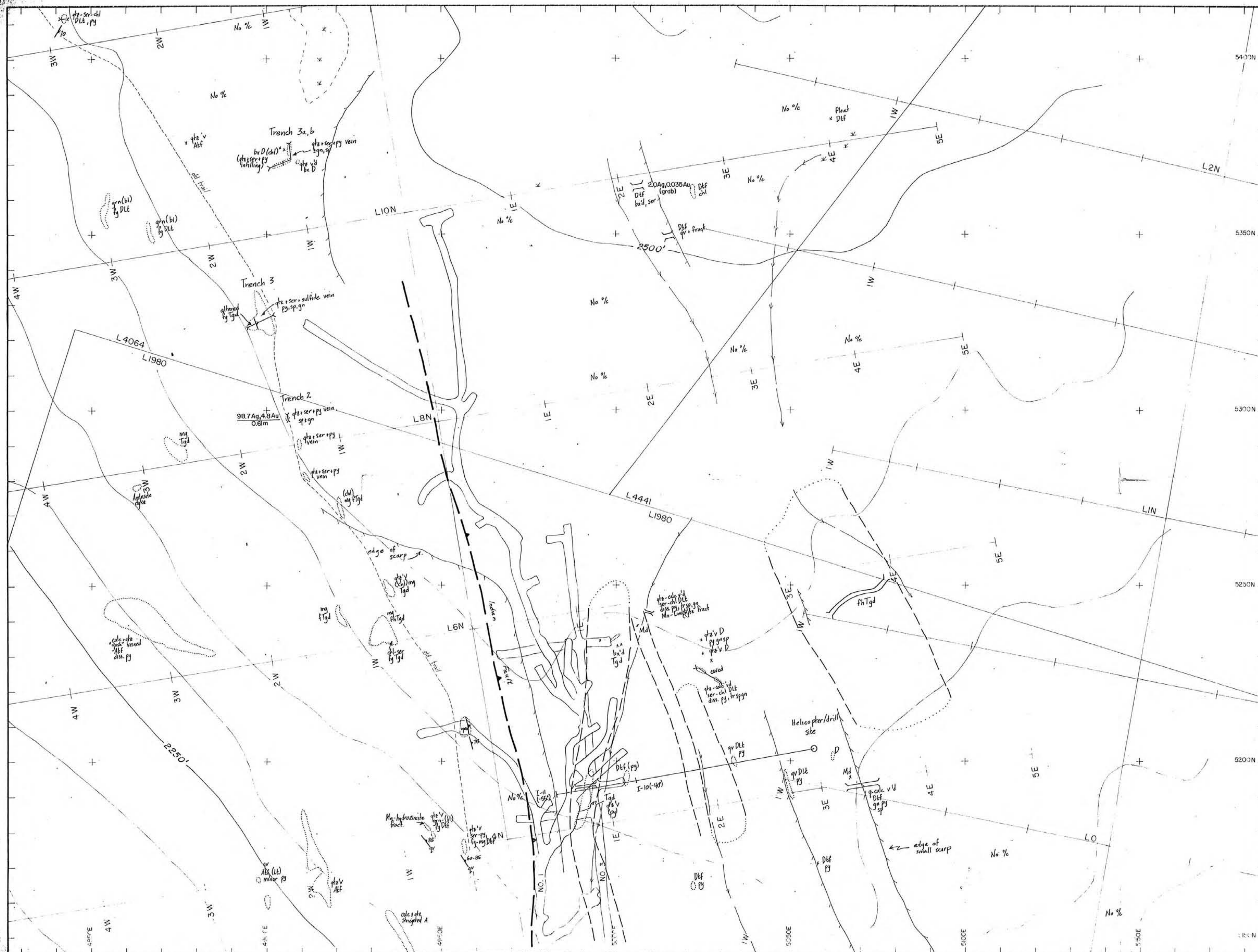
Paul J. McGuigan

APPENDIX FOUR

Statement Of Qualifications

I, Paul J. McGuigan, of Stewart B.C., do hereby certify that:

- 1) I graduated with a Bachelor of Science (Honours) Degree in Geology from the University of British Columbia in 1974.
- 2) I have been employed since that time as an exploration geologist in minerals. Since 1976, I have been employed by Esso Resources Canada Limited, mostly in British Columbia.



Abbreviations & Symbols Used

Sediments	Argillite	Arg	
	Wacke	W	
	Limestone	Ls	
	Chert	C	
Volcanics	Rhyolite	R	
	Rhyodacite	RD	
	Dacite	D	
	Andesite	A	
	Basalt	B	
Intrusions	Granodiorite	gd	
	Quartz monzonite	qm	
	Diorite	d	
	Alaskite	a	
	etc.....		
Volcanic Classification			
Pyroclastic			
Tuff	tt		
Lapilli tuff	lt		
Lopilli stone	ls		
Tuff breccia	tbx		
Breccia	bx		
Autoclastics and Flow			
Flow	fl		
Flow breccia	fbx		
Alteration			
Silicification	sil		
Sericitization	ser		
K-feldspar	k-spr		
Chlorite	chl		
Carbonitization	cb		
Mineralization			
1-3g/t Au			
3-10g/t Au			
10g/t Au			
Other Abbreviations			
Green	grn	Sphalerite	sp
Black	bl	Galena	gn
Grey	gr	Chalcopyrite	cp
Marron	m	Pyrite	py
Hornblende	h	Trace	tr
Feldspar	f	Vein	v
Chalcedony	chalc	Glacial till	g
Quartz	qtz	Float	x
Calcite	calc		
Epidote	ep		
Limonite	lim		
Manganese	Mn		
Structure			
Foliation			
Bedding			
Fault			
defined			
approximate			
assumed			
slickensides			
altitude			
Joint			
Fracture			
Broken core			

Ag, Au assays reported in grams/tonne
Cu, Pb, Zn reported in %

SHEET INDEX

3	4
2	1
2	1

Sheet 500-A-3

0 5 10 SCALE 20 30
meters

ESSO MINERALS CANADA
A DIVISION OF ESSO RESOURCES CANADA LIMITED

INDIAN PROJECT
Indian Mine Area

GEOLOGY & ASSAY SUMMARY

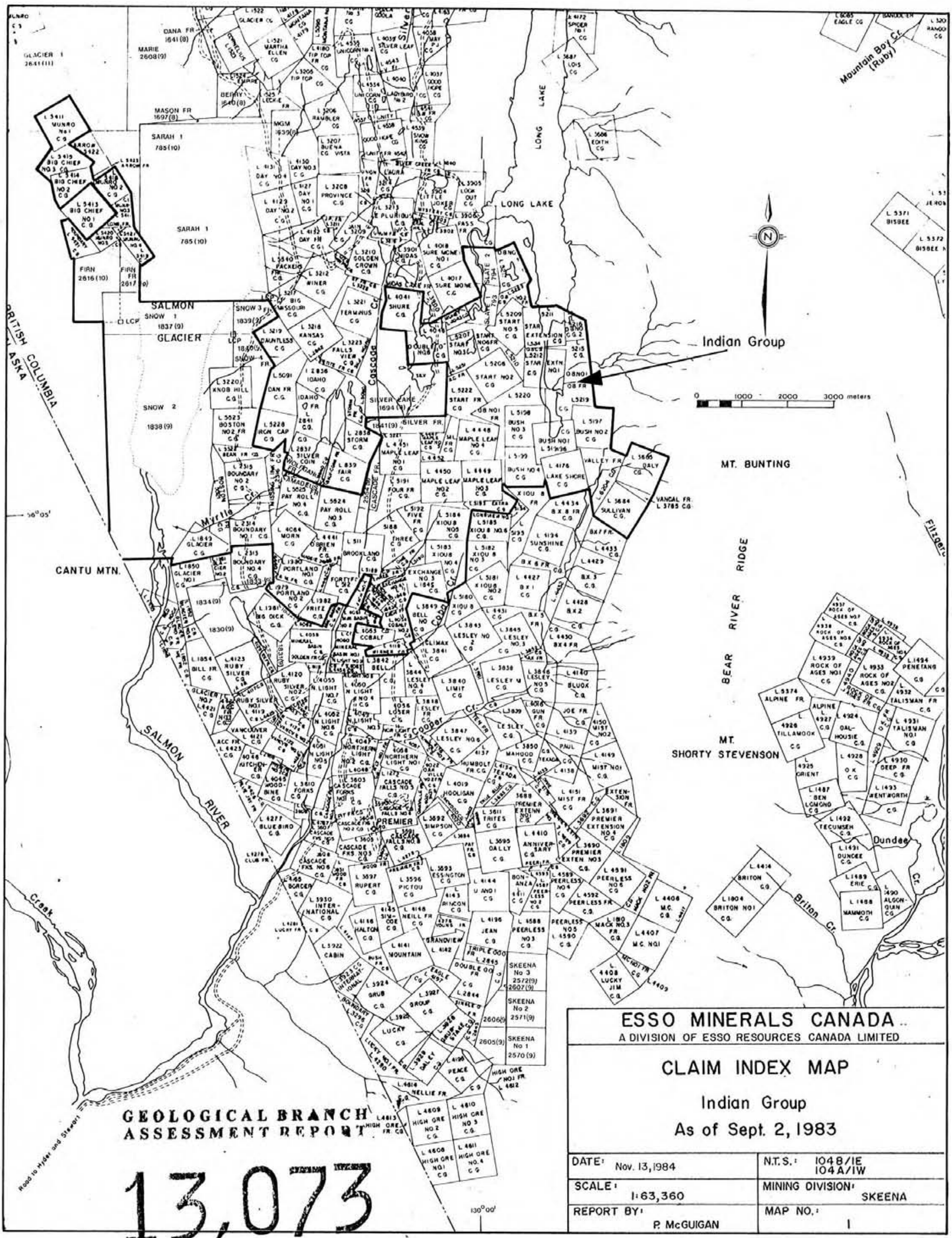
To accompany a report by P. McGuigan dated Nov. 13, 1984

(Claim boundaries from enlargement of 1:50000 map by E. Grove, 1971, Bulletin 58)

SCALE	1:500	N.T.S.	104B/1E
DATE	Nov. 13, 1984	MINING DIVISION	Skeena
BY	G. Dawson, P. McGuigan	MAP NO.	3

13,073

11111111



GEOLOGICAL BRANCH ASSESSMENT REPORT

13,073

ESSO MINERALS CANADA
A DIVISION OF ESSO RESOURCES CANADA LIMITED

CLAIM INDEX MAP

Indian Group
As of Sept. 2, 1983

DATE: Nov. 13, 1984	N.T.S.: I04B/IE I04A/IW
SCALE: 1:63,360	MINING DIVISION: SKEENA
REPORT BY: P. McGUIGAN	MAP NO.: 1



LEGEND

TERTIARY

Intrusive Rocks

6 Hydr. Quartz Monzonite, (Granodiorite), massive unaltered biotite-hornblende rich mg-cq quartz monzonite.

5 Diorite Dyke, massive unaltered fg-mg diorite dyke.

— Intrusive Contact —

LOWER JURASSIC OR OLDER

Intrusive Rocks

4 Texas Creek Granodiorite, massive feldspar and amphibole porphyritic fg-mg granodiorite including sandstone phenocryst rich phases, some quartz-k-feldspar altered zones.

— Intrusive Contact —

LOWER JURASSIC OR OLDER

Hazleton Volcanics

3 Green Andesite Pyroclastics, andesite tuff, lapilli tuff, minor tuff breccia and maroon wacke. Contains quartz-sericite-pyrite altered zones.

2 Grayish Green Dacite Lapilli tuff, minor dacite tuff breccia, porphyritic altered containing 2-5% pyrite, trace sphalerite, galena.

1 Interbedded Green-Gray-Black Dacite Tuff, Volcanic Siltstone and Argillite.

Abbreviations & Symbols Used

Sediments	Argillite	Arg
	Wacke	W
	Limestone	Ls
	Chert	C
Volcanics	Rhyolite	R
	Rhyodacite	RD
	Dacite	D
	Andesite	A
	Basalt	B
Intrusions	Granodiorite	gd
	Quartz monzonite	qm
	Diorite	d
	Alaskite	a
	etc.	
Volcanic Classification	Pyroclastic	pc
	Tuff	tf
	Lapilli tuff	lt
	Lapilli stone	ls
	Tuff breccia	tbx
	Breccia	bx
	Autoclastics and Flow	af
	Flow	f
	Flow breccia	fbx
Alteration	Silicification	sil
	Sericitization	ser
	K-feldspar	k-spar
	Chlorite	chl
	Carbonitization	cb
Mineralization	1-3g/t Au	
	3-10g/t Au	
	10g/t Au	
Other Abbreviations	Green	gm
	Black	bl
	Gray	gr
	Maroon	m
	Hornblende	h
	Feldspar	f
	Chalcocopyrite	chalc
	Quartz	qtz, q
	Episite	ep
	Calcite	calc
	Episite	ep
	Limonite	lim
	Manganese	Mn
	Sphalerite	sp
	Galena	gn
	Chalcocopyrite	cp
	Pyrite	py
	Trace	tr
	Van	v
	Glacial till	g
	Float	x
Structure	Foliation	
	Bedding	
	Fault	
	defined	
	approximate	
	assumed	
	strike-sides	
	altitude	
	Joint	
	Fracture	
	Broken core	

GEOLOGICAL BRANCH ASSESSMENT REPORT

13,073

0 50 100 150 200 METERS

ESSO MINERALS CANADA
A DIVISION OF ESSO RESOURCES CANADA LIMITED

INDIAN-SALMON PROJECT

GEOLOGY

To accompany a report by P. McGuigan dated Nov. 13, 1984

(Claim boundaries from enlargement of 1:50000 map by E. Grove, 1971, Bulletin 58)

SCALE: 1:2500	N.T.S.: 1048/IE
DATE: Nov. 13, 1984	MINING DIVISION: Skeena
DRAWN BY: G. Dawson	MAP NO.: 2