'79-#517-#7598

DRILLING REPORT

ON THE

I.R.A.5 MINERAL CLAIM

Lat. 59 47.5; Long 133 15'

N.T.S 104N/14W

For

R.H. Seraphim. P. Eng

316-470 Granville Street, Vancouver, B.C,

Work Completed between July 19/79
Sept. 7/79

by

T.E.Lisle, P. Eng.

October 18, 1979

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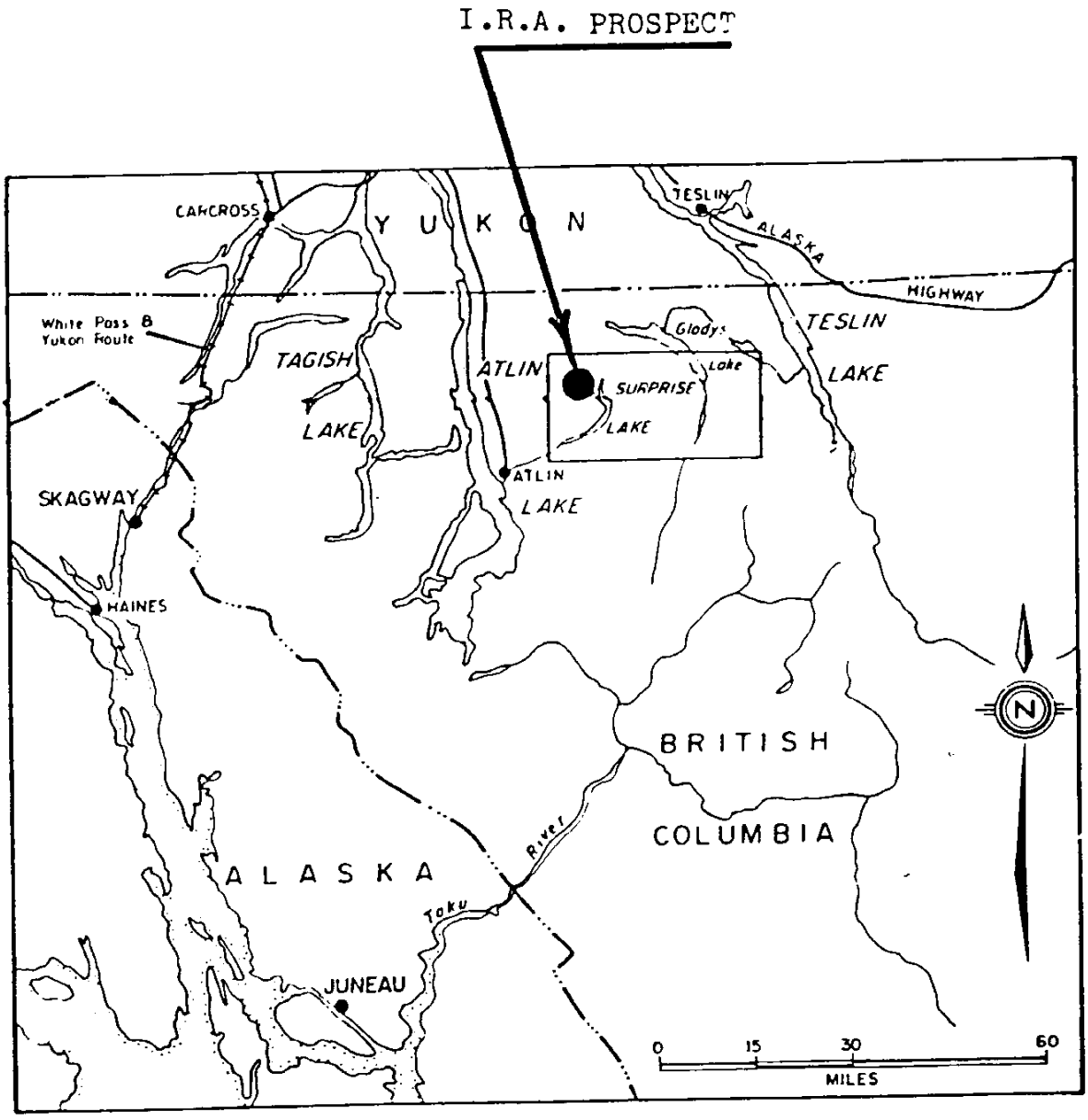


R.H. SERAPHIM ENGINEERING LTD.

LOCATION MAP, I.R.A. PROSPECT

ATLIN MINING DIVISION, NTS 104N

Map 1

October, 1979

SUMMARY & CONCLUSIONS:

The I.R.A. cirque prospect is on the I.R.A. No. 5 mineral claim approximately 34 kilometers (21 miles) northeast of Atlin in the Atlin Mining Division.

Prospecting in 1978 disclosed an occurrence of kasolite associated with fluorite and guartz veining in a cirque north of Mount Edmond.

Three shallow B.Q. drill holes aggregating 448 meters were completed during August and September, 1979 to test the surface showings at depth. This work failed to locate additional uranium mineralization and the drill core showed background radiometric response.

Seven short sections of core were split from the three holes and these assayed between 0.001% and 0.006% $U_3 O_8$ with low amounts of tin and tungsten.

The position of the drill holes was determined mainly by the topography in the cirque area. The rocks are generally well fractured and limonitic and the trend to the geology is northeast. The drill holes bottomed approximately 200 to 350 feet below the surface still in oxidized rock.

If the oxidized-fresh rock horizon is to be considered a potential target area, then testing would have to be by deeper drilling than completed to date. Before such

an undertaking the geology, geochemistry and radiometrics of the prospect should be completed.

INTRODUCTION

R.H. Seraphim optioned the I.R.A. group on mineral claims in 1978. During August and September, 1978, the claims were prospected, and partial geochemical and geological surveys completed. This work resulted in the discovery of uranium mineralization (kasolite) in a precipitous limonitic cirque area on the I.R.A. 5 mineral claim.

During August and September, 1979 three shallow B.Q. drill holes aggregating 448 meters were completed to test the mineralization at depth.

The result of the drilling are described in the logs of the holes accompanying this report and their location is shown on the attached map Number 5.

Drill core is stored at the drill sites.

LOCATION AND ACCESS

The I.R.A. prospect is situated to the west of the north end of Surprise Lake some 34 Km northeast of Atlin. The claims are centered roughly on Lat. 59° 47.5'; Long. 133° 15' and are in NTS 104N, 14E and 14W. Access is presently by helicopter from Atlin, B.C.

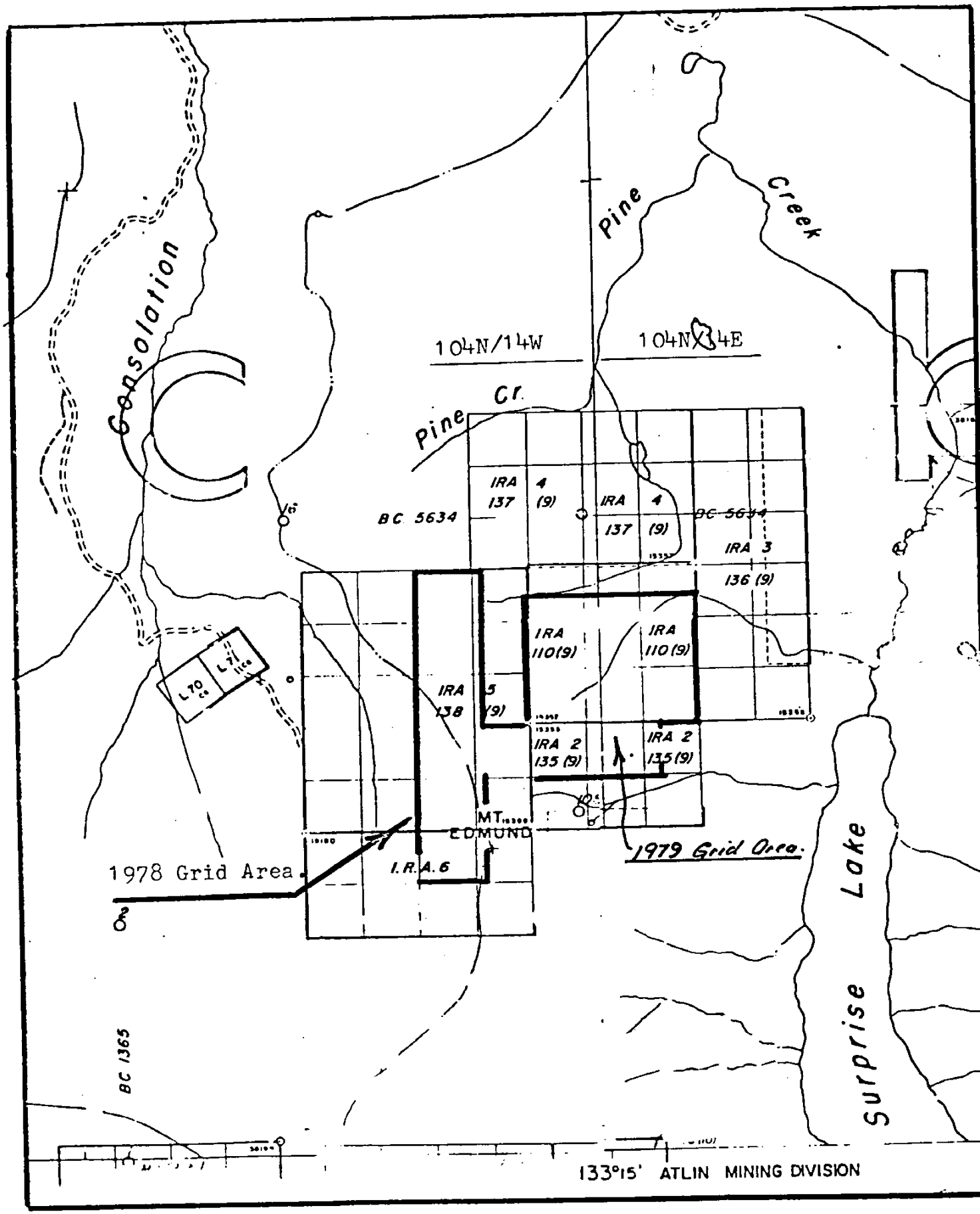
Elevations range from approximately 1,000 to greater than 1,800 meters above sea level. The terrain is generally subdued however the eastern slopes of Mt. Edmund are steep and precipitous.

CLAIMS

The prospect is comprised of six I.R.A. claims in the Atlin Mining Division. Pertinent data is as follows:

Name	Record	No. Units	Group	Anniversary
IRA	110 [9]	9	IRA East	Sept. 7, 1981*
IRA 2	135 [9]	6	"	Sept. 17, 1981*
IRA 3	136 [9]	12	"	Sept. 17, 1980*
IRA 4	137 [9]	12	IRA West	Sept. 17, 1984*
IRA 5	138 [9]	20	IRA West	Sept. 17, 1984*
IRA 6	158 [10]	8	"	Oct. 8, 1984*

* On acceptance of assessment reports.



MAP 2

I.R.A. PROSPECT- INDEX MAP.

R.H.SERAPHIM ENGINEERING LTD.

SCALE, 1:50,000 Oct. 1979

WORK PROGRAM

Between July 19, 1979 and August 2, 1979 a three man crew camped at the I.R.A. prospect and prepared drill sites for the drilling program.

The diamond drill was mobilized via helicopter to the sites on August 19, 1979 and the drilling completed on September 7, 1979.

The costs of the program are itemized in the Appendix 1 of this report.

HISTORY

Claim post evidence indicates that the claim area was staked in the 1954-55 and 1967-69 periods. The ground was possibly investigated respectively for uranium and molybdenum as those periods coincide with exploration activity for those metals in the area.

In 1976 Malabar Mines Ltd. acquired the current property on the strength of geochemistry and investigated it for silver, lead and uranium by radiometrics, limited trenching, and further geochemical surveys.

Seraphim Engineering optioned the property in the summer of 1978 and undertook geological and geochemical surveys. In 1979, geochemical surveys were extended, and radiometric data collected from the same grid.

GENERAL GEOLOGY

The I.R.A. prospect is situated near the western margins of the Surprise Lake alaskite batholith. This intrusion is Cretaceous ? in age, is elongate east-west and is locally disjointed by northeasterly trending faults.

The alaskite is 'phasey' with textures varying from fine to coarse grain in porphyritic and non-porphyritic rocks. It contains a low mafic content, mainly biotite; has abundant smoky quartz, minor amounts of muscovite, fluorite, apatite, beryl, and rare topaz and allanite. Narrow zones of simple pegmatite and quartz veining are also evident. The intrusion is locally limonitic due, in part, to the weathering of minor pyrite, chalcopyrite, arseno-pyrite and magnetite, and also to the mafic breakdown.

The intrusion is of interest in that it contains anomalous values in zinc, lead, fluorite, tungsten, molybdenum and uranium [Open File 517]. Because of this it has been intensively explored in the past. The large Adanac porphyry molybdenum deposit was recently outlined in a younger ? Tertiary aged alaskite stock a few kilometers southwest of the I.R.A. prospect.

GEOLOGY, I.R.A. GRID

The I.R.A. prospect is underlain almost entirely by alaskite, and by a few late porphyry and basaltic dikes. The claims cover Mt. Edmund and adjacent areas which are locally marked by weak to strong gossans.

Fine grained alaskite usually has a recognizable groundmass of quartz, feldspar and biotite. It may contain 5 to 10% quartz phenocrysts to 1 cm., or feldspar phenocrysts to 2 cm., or a combination of both. The coarse alaskite on the other hand commonly forms a crowded mosaic of quartz, feldspar [to 3 cm.] and up to 5%, but commonly less biotite. Textures may be porphyritic or non-porphyritic and the quartz is often smoky. Contacts between the fine and coarser alaskite may be gradational over narrow widths or relatively sharp. In the latter case the fine grained alaskite is intrusive into the coarser material.

Quartz porphyry, quartz feldspar porphyry and basaltic dikes up to a few meters wide have been mapped within the grid. The porphyry dikes are recognizable by the prominent quartz or quartz and feldspar phenocrysts set in a fine grain aphanitic groundmass. Contacts are not often exposed but field evidence suggests an east-northeasterly strike.

Most outcrops show evidence of strong northeasterly sheeting. Fractures are commonly 0.1 to 0.5 meters apart and strike in the 50 to 70 degree range with moderate to steep dips to the southeast. These structures appear to be superimposed on a widely developed northwesterly trending [$\pm$N25W] shear and fracture system, although in one or two instances the north-easterly fractures are apparently offset by the latter.

A number of N10 to 25E fractures, local shears, and topographic lineaments are also evident in the eastern section of the grid. These structures may be later than the stronger sets noted above, however direct evidence supporting this is lacking.

DRILL PROGRAM

Uranium mineralization occurs near the head of a cirque on the I.R.A. 5 mineral claim where quartz veins form a persistent northeasterly trending zone. Kasolite ($Pb(UO_2)(SiO_3)(OH_2)$) is associated with some of the veins, and also to a lesser extent on adjacent wallrock.

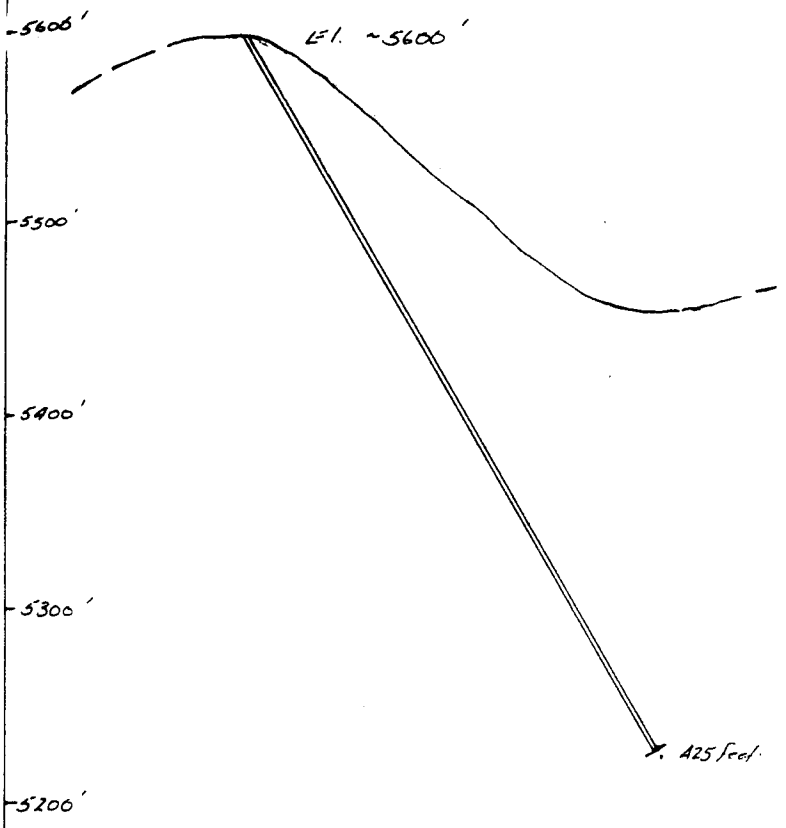
The quartz veins trend about N60°E, vary to approximately 0.7 meters wide, locally contain limonite, hematite and manganese, and are vuggy in places. The veins commonly dip southeast, and are largely coincident with the strong northeasterly sheeting evident in the area. Strong stockworks are formed locally.

Fluorite is present as discrete veins and with quartz veins. It varies from colourless to green to purple, and to very dark purple at the southwest end of the zone where it is associated with kasolite.

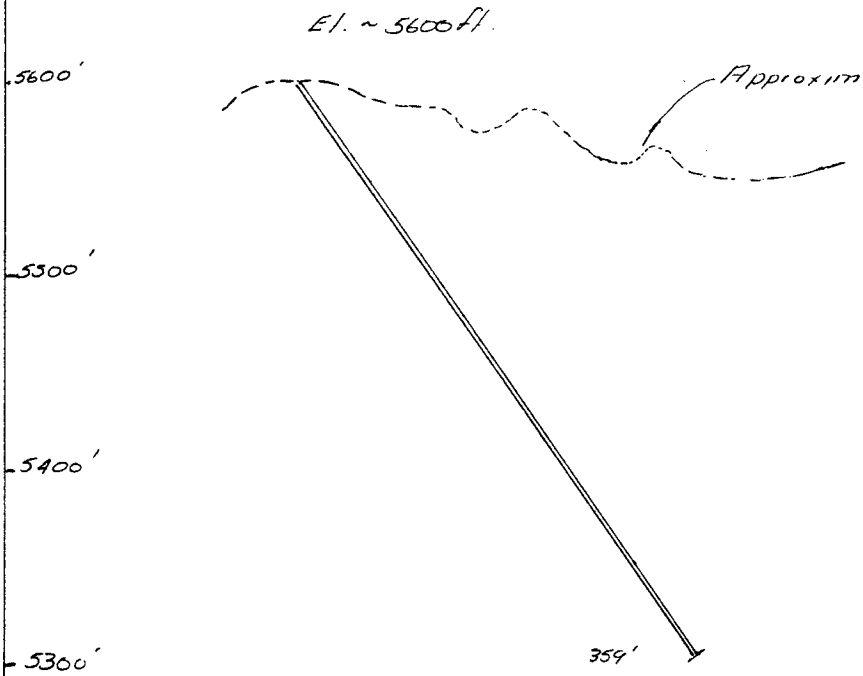
The alaskite in the cirque area is commonly stained greenish-yellow and in many places the feldspar is highly altered to kaolin or to a soft waxy green mineral thought to be illite. The kasolite-fluorite areas described above are locally hematitic and manganiferous. The entire area is generally strongly fractured in northeast and northwesterly directions.

The drill program was laid out to test the mineralization at depth.

T.E. LISLE, P.Eng.



I.R.A. DRILL HOLE # 1
425 feet at -60°



I.R.A. DRILL HOLE # 2
359 feet @ -55°

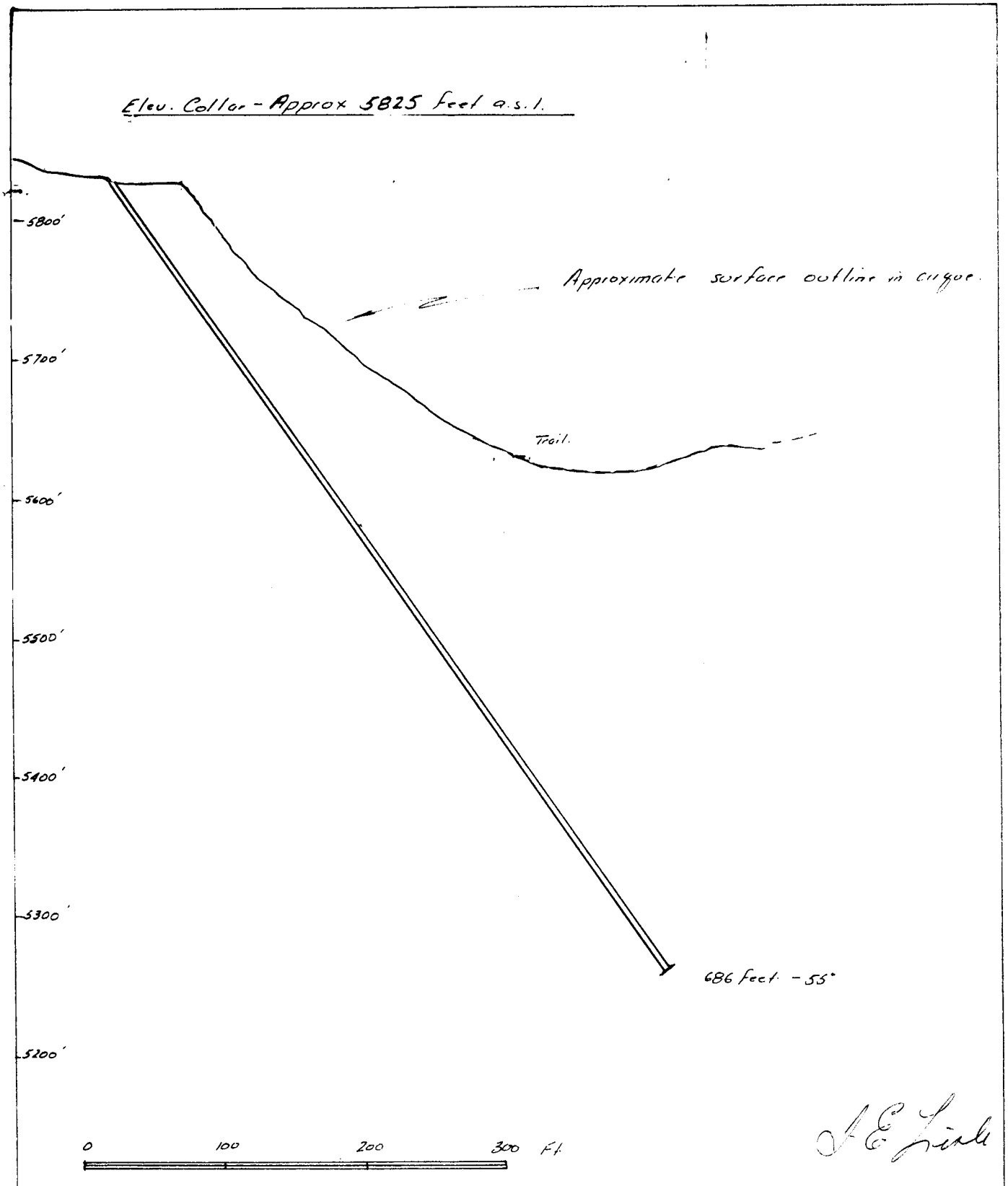
R.H. SERAPHIM ENGINEERING LTD.

I.R.A. PROSPECT. - ATLIN M.D.

SKETCH OF DRILL HOLES 1 & 2.

Scale 1" = 100 ft. OCT/79.

MAP 3



R.H. SERAPHIM ENGINEERING LTD.

I.R.A. PROSPECT

ATLIN MINING DIVISION

DRILL HOLE 3

Scale 1" = 100 feet. Oct/79.

MAP 4

APPENDIX 1

I.R.A. DRILLING PROJECT 1979

WAGES:	B. McKee - Driller & Blaster July 19 to August 2, 1979	11 days @ $75.00	$ 825.00
	D. Fennings - July 19 to August 2, 1979	11 days @ $60.00	660.00
	J. Taulor - July 19 to August 2, 1979	9 days @ $55.00	495.00
	D. Kronig - Geologist August 22 to September 7, 1979		1200.00
CAMP COSTS:	McKee, Taylor, Fennings	31 @ $20.00	620.00
DRILL RENTAL & EXPLOSIVES:	Estimate		500.00

TRANSPORTATION:

Helicopter - Hughes 500:

July 19	$ 322.50	
July 27	123.50	
August 1	184.50	
August 20	491.60	
August 23	553.50	
August 24	430.00	
August 28	154.00	
September 1	462.00	
September 2	215.00	
September 3	399.50	
September 5	215.00	
September 6	431.50	
		$ 3,982.60

Helicopter - Bell 206B
August 19, 31 & September 7
18.6 hours @ $375.00/hr. & Fuel $7,490.16
Less: 308.00 — 7,182.16

Arctic Diamond Drilling - Invoice #2084 — 40,074.26

$55,549.02

CERTIFICATE OF QUALIFICATION

I, T.E. Lisle of 145 West Rockland Road, North Vancouver, B.C. declare that:

1. The work described in this report was carried out by me and by the personnel listed in Appendix under my supervision between July 19 and September 7, 1979

2. I am a graduate of the University of British Columbia with a B.Sc. 1964.

3. I have worked intermittently in exploration geology for several years prior to 1964, and have worked continuously in the same field since that date.

4. I am a member of the following organizations:

   [a] Canadian Institute of mining & Metallurgy

   [b] Geological Association of Canada

   [c] Association of Professional Engineers of B.C.

T.E. Lisle, P.Eng.
October 18,1979

D.M. Kronig- MSc. Geology and Geophysics, University of Minnesota.

Experience, Geologist,

Cotter Corp, Mapco Inc., Seraphim Engineering.

CLAIM NO. I.R.A.5

DIAMOND DRILL RECORD

PROPERTY I.R.A. HOLE NO. I.R.A. 1

LATITUDE ELEVATION 5600' approx. BEARING North DEPTH 425' STARTED COMPLETED

DEPARTURE SECTION DIP -60 degrees DRILLED BY Arctic Diamond Drilling LOGGED BY Kronig

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
0 to 6	Casing					
6-14 Ft	Fine grained alaskite porphyry with abundant limonitic staining from 6 to 7.5 and 9.0 to 14.0'					
	Green alteration of feldspar (saussuritization) from 6 to 9'. Partial (Green rimmed crysts) at 7'; Also at 7' a grey 2.5 cm. 0.2 cm thick					
	mass of of Mn. Tin(?), or Tungsten(?) Recovery good.					
14 - 27	Fine grained alaskite porphyry with quartz and feldspar crysts.					
	Strong limonitic stain from 18 to 20, 21 to 25 . Feldspar s are moderately sausseritized from 25 to 27. Core recovery good 15 to					
	17; fair 21' to 24'					
27 to 30	~~Fine Grain alaskite, moderate limonite stain, Recovery fair to good.~~					
30 to 34.5	Fine grained Quartz-Feldspar Porphyry. Intense limonitic stain					
	32' to 33; Recovery 30' to 32' F to G. 32' to 34.5 Good.					
34.4 38	~~Crowded Porphyry, abundant quartz and feldspar phenocrysts.~~ Moderate limonitic stain. Saussuritized (?) 37' to 37.5' and bluish - green tint (alteration)?. ~~Limonite intense from 37.5' to 38'~~					
38 to 49.5	F.G. alaskite porphyry(feldspar phenocrysts); Sausseritized ~~39.5 to 40.5. weathered to a soft crumbly clay at 46.5. Mn. at~~ 38.5'. Intense Limonite from 38' to 39.5', 40.5 to 41', Moderate ~~limonite 41' to 49'. Core Rec. Good 38'-40', 47'-49.5 and~~ fair 40'- 47' At 40' sparse bright red (cinnabar colour) ~~coating on tarnished biotite. At 49' narrow quartz fr. @ 60deg.~~					
49.5-62'	F.G. Quartz- Feldspar porphyry. Quartz and feldspar crysts to 1.2 cm.					
	Mod. to intense limonitic alt. Excellent core recovery, broken at 53.5'. Quartz vein 1.25cm. at 60° @ 53'; 0.7 cm @ 59'					
62 - 63'	Coarse Grained alaskite porphyry. Bluish tint to feldspars. C.R. excellent.					
63'-122'	F.G. alaskite porphyry. Blue-green tint from 63'-66', 75.5-78',.					
	Greenish-yellow feldspar alteration 66'-69'. Quartz crysts to 1 cm. 92'-98'. Crumbly clay weathering 91.0' & 96.5- 97'.					
	Saussuratization 92'-94', 97.5'-100', 104'-107'. Mn. 72'-74',					
	Limonite, ~~Intense 75'-75.5', 79.5'-80.0', 88'-104' except at 89.7'~~ 104'-122'. Mod. to Intense 69.5-75', 94'-98'. Moderate, 97.5'- 99' 104'-107'.; ~~Slight 75.5-78'.~~					

WESTERN MINER PRESS LTD. STANDARD FORM NO. 502

CLAIM NO.....

DIAMOND DRILL RECORD

PROPERTY..... HOLE NO. I.R.A. 1

LATITUDE..... ELEVATION..... BEARING..... DEPTH..... STARTED..... COMPLETED.....

DEPARTURE..... SECTION..... DIP..... DRILLED BY..... LOGGED BY..... (E)

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS U308%	ASSAYS Sn.%	ASSAYS WO3%
63-122	12.5 vuggy, Xtalline qtz. vein at 65', 2mm-60° vein at 67.7'. 2mm-90° veins @ 74', 75'. 75.5', & 80'. 5mm veins @ 81' & 91' @ 45° & 90°. 2-10 cm veins 96.5-97' @ 45°-60°,. Abundant veins at 108-109' and also at 119-119.5 with hematite at 45°. Specs of light green mineral @ 92.5'. Tr of Fluorite @ 116.3' Hematite from 109-111', 113', 118-118.5' Recovery, E to 104'. G from 107-115'&121-122', FtoG 116-120', P 115-116', & 120-121'. Core locally well broken.							
122-140'	Alaskite Porphyry (Sparse), Qtz,& Feldspar crysts to 5mm.Mod. to Intense limonite 122-127', 129-129.5, 131-133',; Mod. 136.5-140', Slight 135-136.5; Mn. blebs @ 129' & 135-136' 2-5mm qtz. veins @ 70° from 125.50127'. Soft yellow-green clay alt. with abundant Mn., Lim., & qtz.. Recovery Good, Loc. broken.							
140-158'	As above. Mod. to Intense Lim. on fractures, with Mn.Sporadic qtz. veins, 2-5mm @ 60°, Purple Fluorite in vein @ 142'. Green waxy clay alt. 139-140.5' & 148.5' and minor green mineral on Mn.-Lim. Fractures 148-158'. Recovery Good.							
158-190.5	As Above , Feldspar crysts to 2.5 cm. 171-177'. Slt. to mod. weathering and clay altered feldspar 164-177~178-179. Strong " and " " shear @ 45° with Mn & Lim. 166-168'. Intense qtz. veins 164-177, 2-5mm most common. Mod veins 160-164'. & 177-196'. I. lim.with Mn. stain commonly assoc. with veins Bright yellow-green waxy clay alt. with lim. in veins 161&175'. Purple Fluorite in 50° veins 173-176'. C.R. Good.	20001	185-187'		2.0	0.001	0.03	<0.01
190.5-191	and 193-193.5'. Crowded Porphyry, abundant qtz, cysts. Int. saussuritization 194-194.5.							
191-193'	Sparse Porphyry.							
193.5-196	As above. Hairline to 5 cm. qtz. veins @ 50-70°. veins shattered 195-196' Recovery good.							
196- 204.5	F.G.Alaskite Porphyry. (Sparse) with clay alt. Feldspar. Mod. lim. and n. stain. 2-10mm veins 201-204'locally with Mn. and Lim. in crumbly weathered veins, Traces of purple Fl. C.R. Good.							

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. I.R.A.1 3

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
204-204.5	Grey shattered quartz vein.					
204.5- 215.5	F.G. Alaskite. Olive green saussuritization 204.5-207. Clay weathering 207-215.5 . Moderate Lim. and Mn. , intense along fractures 208-215.5 with green sauss. alt. Fractures common at 10°. 45° & 70° Intense 2-4mm veining 204.5-207 with 10 cm. vein(grey qtz)@205.5 Excellent C.R.					
215.5-230	As above. Weak clay Alt. Mod to locally intense Mn with qtz. veins, intense at 225.5. Quartz veins < 2mm- 224-224.5 ; Qtz vein with Mn. 226-228', with Lim. hematite and Fluorite 230-231. Core Recov. Excellent. Broken 218 &228'.					
230-236	F.G.Porphyry (sparse), Qtz. and Feldspar crysts to 5mm. 50° and 70° veins with Fluorite specs 232-233.5. 2mm qtz, veins @80° with Mn. and Lim. at234.5 C.R. Good.					

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO.....

DIAMOND DRILL RECORD

PROPERTY..... HOLE NO. 1

LATITUDE..... ELEVATION..... BEARING..... DEPTH..... STARTED..... COMPLETED.....

DEPARTURE..... SECTION..... DIP..... DRILLED BY..... LOGGED BY.....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
236.5 - 273	Medium Grained Alaskite Porphyry (Crowded) - feldspars to 2cm.					
	236.5-253 Sausseritized feldspar, 270-270.2. Clay weathering					
	slight 268.5-269, strong 270-273. Limonite and Manganese 263-265.5					
	271.5- 272 , very intense 257-258. Slight to mod. veining(qtz)					
	236.5-253, (2-6mm), 18mm@ 261; 265 to 272 veins to 2.5 cm. at					
	50 to 75 degrees , small amts. of fluorite and hematite in veins.					
	Core recovery poor 244 and 250.5-251 , excellent 253-273					
273-289	Fine to Med. Grain alaskite porphyry.; 274-274.3 Fault Zone ?					
	274.3-276 Crumbled , shattered with lim. Mn. clay rock chips. Mod to					
	intense Mn. and Lim.. Moderate qtz veining ; 4 cm. vein at 277					
	279. Intense veins 284-285. Slt clay weathering and hematite. Core Rec. good.					
289-311	Fault Zone 1 foot core recovered. with Mn. Lim. hematite					
	Clay weathered alaskite porphyry.					
311-390	Fine Grain alaskite (sparsely porphyritic), varying to med. grain					
	porphyry 346.5-352.5. Core moderate to intensely weathered and					
	crumbly and broken. Pale waxy green feldspar 346-346.5. Clay					
	weathering slight to moderately intense. Fractures common at 30					
	and 45 degrees to core. Limonite stain and manganese slight to					
	locally intense on fractures. 352.5-371 intense lim. stain on sur-					
	face and fr. . slt. to mod Mn. stain in fractures. Abundant Mn. patches					
	346.5-352.5 Slight veins to 0.5 cm. 330-332, 351-352 and sporadic					
	veins 361-370. 311.5-328.5 Bright yellow green specs waxy green					
	mineral. Hematite occasionally with limonite on fractures.					
	Core Recovery 311-352.5 Good. 352.5-390 Excellent. Broken					
	388.5- 390					

WESTERN MINER PRESS LTD. STANDARD FORM NO. 502

DIAMOND DRILL RECORD

CLAIM NO. ..... PROPERTY ..... HOLE NO. I.R.A. !

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS U308%	Sn %	WO3 %
390-425	Fine Grain alaskite, Moderately porphyritic. Blue Green colouration ~~398-404, 405.5-409, 409-411.5, 413.5- 415.~~ Pale Green Saussertization 391-394. and 409-423 (yellow-green). Intense Limonite, Mod. ~~Manganese 409-425. Mod. wtz. veins 391-394, (2-12mm.)@65degrees.~~ 404.5-405.5, <2mm.; 416-423 mainly 2mm. 422- 2.5 cm. 422.8 - 1cm. ~~Traces Py. Po. at 393. Hematite locally present with limonitic fractures.~~ Traces of Purple Fluorite. ~~Core Recovery 390-398 Excellent, Broken 398-409 and 424-424.5~~ Otherwise excellent.	20002	421-423		2.0'	0.002	<0.01	<0.01

MINERAL RESOURCES BRANCH
7598

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. I?R.A.5

DIAMOND DRILL RECORD

PROPERTY ..... HOLE NO. [illegible] (1)

LATITUDE ..... ELEVATION ~5600 ft. a.s.l. BEARING 302 DEPTH 359' STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP -50 DRILLED BY Arctic LOGGED BY Kronig

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS U_3O_8 %	Sn %	WO_3 %
0- 6	Casing							
6- 72	F. G. Alaskite Porphyry (sparse). Slight to Moderate clay alteration of Feldspar, Intense 23-25, 27-28. Saussuritization slt. to Mod. Mn. stain slight. Mod. to Intense Limonite mainly on fractures. Quartz Veining 2mm slight 25-27; 28-47 (45-75)degrees 57.3-57.7 @75°; 2.5 cm vein at 27; 12mm vein at 35 at 47-75° 57.3-57.7 quartz is dark grey , sulfosalts ? Where clay alteration intense waxy pale green mineral on slickensides. Hematite intense 37-38.5, 42 and locally intense with limonitic fractures. At 67,5 Lim. hem intense, fault ? Recovery 6-13 good, 13-25 Fair , Broken, 25-28 Good-Broken 28-72 Good , Broken 50-51, 64-65, 65-67.5.							
72-73	Medium to Coarse Grain Alaskite Porphyry, Good Recovery.							
73-80	As in 6 to 72, Recovery good, Broken 76-76.5, 77.5-78.							
80-81	As in 72-73.							
81-82	As in 6-72.							
82-208.5	F.G.Alaskite porphyry. (sparse) Clay alteration moderate 82-115, Slt. to Mod. 115-132.5, Mod. to intense 132.5-208.5.Saussuritization mod. 82-115, Slt. to mod. 115-132.5 and 151-208, Mod. 132.5-151. Limonite , Intense 85-90, 91-92,94-106 with hematite96-106, 114-115,120.5-125, 128-137,143-151,188-191.5. Slight to mod. 106-111 and 180-181, Slight 111-114. Mn.slt. to mod. 82-98, Intense 111.5-111.8, Moderate 125-128 and 151-208. Quartz veining with crystalline quartz limonite , manganese and hematite86-90. Slt. to mod. veining 115-132.5.	20003	122	125	3	0.005	0.04	<0.01

[illegible]

7598

WES STAI

CLAIM NO.....

DIAMOND DRILL RECORD

PROPERTY..... HOLE NO. T.R.A.2

LATITUDE..... ELEVATION..... BEARING..... DEPTH..... STARTED..... COMPLETED.....

DEPARTURE..... SECTION..... DIP..... DRILLED BY..... LOGGED BY.....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
82-208.5	Con't.					
	Qtz veins intense 126-127', 129-130.5'. Slight veining 132.5'-147'.					
	25cm vein @ 149' in qtz vein zone between 147'-149.5' with					
	limonite & manganese. Veins 137.5'-138.5'. Slight veining					
	@ 178', moderate veining 180.5'-200'					
	137'-143'- Pale white clay in green waxy saussuritized feldspar.					
	Faults? 154.5'-158.5', 167'-175', strong clay alteration					
	Fluorite-minor 190.5'-192'					
	197-208.5 7 feet lost core- Recovery good to 154.5' but					
	core broken 65'-67.5', 76'-76.5', 77.5'-78', 82'-86', 94'-98', 120.5-121,					
	125-125.5', 129-130.5' (fault), 132.5'-137.5', 144, 145-146, 149-151					
	Recovery Poor 154.5'-158', (fault)? 167-175 (fault)					
	Recovery good 180.5'-197'.					
208.5-211.5	Fault.? Mud - grey. brown to pale blue.					
211.5-213	Alaskite Porphyry - Medium to Coarse grained (crowded) - Moderate					
	limonite 208.5-211.5'. Mn. locally intense on fractures.					
213-230	Alaskite Porphyry - Fine to Medium Grained. Saussuritization					
	intense 214-217, otherwise Moderate to intense. - Intense limonite					
	217-230, - Fault? 221-226' 5 feet lost core.					

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. IRA. 2. (3)

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
230-248'	Alaskite Porphyry - Fine to Med. grained, moderately crowded. Saussuritization Slight. Intense limonite - Intense Mn. along fractures and between 245-245.5' - Veins (qtz) absent. Abundant fractures 40°-60°. Recovery Excellent. Blue-green colouration 230.5-231.5'.					
248-257	As Above.					
257-258 and 259-259.5'	Crowded Porphyry. Medium to Coarse Grain. limonite with hematite (intense on fractures)? Core recovery excellent.					
261.5-263.5'	Crowded Porphyry (Blue-green colouration) 249-253. Intense limonite.					
258-259;	259.5-261.5, 263.5-268. F.G. Sparse porphyry.					
268-278	Crowded Porphyry, med. grain. Moderately saussuritized. Intense limonite of fractures except 268-271.5. 6mm qtz vein @ 272' @ 70°					
278-359.	Crowded Porphyry - Fine to Medium grained Feldspar crysts locally to 2 cm. - Saussuritization slight to moderate; locally intense. Clay alteration moderate to Intense.					

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

DIAMOND DRILL RECORD

CLAIM NO. ..... PROPERTY ..... HOLE NO. IRA 2. (4)

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS U_3O_8 %	ASSAYS % Sn %	ASSAYS WO_3 %
278-359.	Limonite intense on fractures except 278-279.5, 282.5-283.5 intense Mn & limonite 283.5-301. limonite intense 301-320 except 303.5-308.5, 312-313, 314-314.5 where blue-green colouration prevalent. Limonite intense 320-340 340-342, 343.5-346.5, 348-348.5, moderate 342-343.5. Elsewhere core has blue-Green colouration. and moderately saussuratized to 345.5'. Manganese intense on core at 331 and 335-336.							
	Quartz Veins. < 5mm, 280-282.5 @ 60°, 287.5-288.5 2mm veins 1 vein to 2.5 cm.; 311-312 - 5mm veins (& 315, 318. 330-339 veins 2mm to 5 cm. locally intense.	20004	332	334	2.0'	0.006	0.02	< 0.01
	341.5, 345-346 veins moderate to 2.5 cm. ~~veins~~ otherwise very sparse < 2mm.							
	Hematite locally intense on fractures							
	Core Recovery excellent.							
	359 - END.							

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. I.R.A. 5. **DIAMOND DRILL RECORD** PROPERTY I.R.A (Atlin) HOLE NO. IRA3 D

LATITUDE ..... ELEVATION ~ 5825' BEARING 012° DEPTH 686' STARTED Aug 31/79 COMPLETED Sept 6/79

DEPARTURE ..... SECTION ..... DIP -55° DRILLED BY Arctic D.D. LOGGED BY Konig - Lisle

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
0 - 16	Casing.					
16 - 29	Alaskite - Crowded coarse feldspar crysts. Massive. Occasional limonitic fractures @ 45°. 1% biotite?					
29 - 47	As above - feldspar to 2.5 cm. Massive - lim. fractures 30°-45° to C.A. - Pink cast - Broken lim. fracture 29-31'. C.R. excellent.					
47 - 66	As above. Massive to 56' Clay (saussuritization) 55.5 - 56', 65.5 - 66' otherwise slight clay throughout. Mod. to intense limonite - broken 49-51, 55.5 - 58.5, 62 - 64, 65.5 - 66. 3% biotite. abundant smoky qtz. Core Recovery excellent.					
66 - 85.5	Alaskite coarse crysts, Pinkish cast. Intense saussuritization? 82-83 moderate 80-85.5. limonitic fractures 8 ± 45° to CA. some at 70° - Grey fine grained inclusion stray contacts at 10°-15° 76-77'; 7mm qtz vein @ 82.5' - Hematite with limonite 83-84 Recovery good but loudly broken.					
85.5 - 86.5	As above with					
86.5 - 90'	Fine Grained Alaskite with sparse limonitic fractures @ ~60° - Small Coarse Grained inclusion @ 89' contact ± 25°					

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. IRA 3 (2)

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
90-104.5	Coarse grained Alaskite. Saussuritized. 93-94 associated with narrow f.g. aplitic dikes ∥ @ 103' @ 30° 86-86.2, 86.5-88.4, 88.6-88.7, 89-89.6., 93.5-93.7, 103.3 as above. Core broken 91.1-91.5, 93.5-95.0. Excellent C.R. except in broken areas @ 50%-70%.					
104.5-117	Coarse Alaskite - Weak to Moderate limonitic fract @ 30° Transition to f.g. alaskite @ 117.5. Mod to slight limonite on fractures. - Broken core 106.2-106.7, 110-110.5 otherwise C.R. excellent. No veins.					
117.5-145	F.G. alaskite - clay altered. - Quartz veins intense 118-119.5 and moderate 118.5-126 - Veins 40° to 75° locally to 90°. and some with strong limonite. Veins 2mm to 0.15M locally with minor fluorite. local Mn Stain. Saussuritized 123.0-123.5. At 126 more medium grained becoming darker grey @ 134'-145'. local strong fractures 10° 40°-50° with weak green alt. - Core badly broken. 128-129.					

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. T.C.A. 3 (3)

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
145 - 156.	F.G. Alaskite, sparsely porphyritic - Intensely limonitic strongly fractured zone (shear)? Major fractures 30°-40° to C.A. - ⅓ m qtz Fluorite zone 154-155 - Other veins 151.5 - 155. - Fault? 150.5 - 151.5 @ 30° - Green clay alt. (Saussuritization) 142-145, 152-153					
156 - 167	F.G. Alaskite, Porphyritic - Grey-green alteration slickensided fractures @ 30° or ~45° to C.A. - Minor qtz veining 158.5 and slight Clay alt. 156-161					
167 - 169	As above - Badly broken. local limonite - clay alteration - (Saussuritization)					
169 - 181	Crowded Alaskite Porphyry - Coarse grained. 178' a 15cm qtz vein - pitted with limonite. Core recovery excellent.					
181 - 200.5	Med. to Coarse Gr Alaskite. - Strongly limonitic to 191, 193 - 193.5', Quartz Veins 2.5cm @ 193.5' & 186, 5mm vein @ 45° to C.A. @ 200. Other veins 182-182.5, 186.5 - 187.5 & 193.5 - to 194. Clay alteration & Saussuritization 182, 187, 193-194, 197-198, Moderate 191-200.					

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. IRA 3

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS U_3O_8 %	ASSAYS Sn %	ASSAYS WO_3 %
200·5 - 218·5	As above to 202.							
	202-203 V.F.G. Alaskite. 203-206 Crowded Porph.							
	206-208 F.G. Alaskite. 208-218 Sparse porphyry.							
	15cm qtz vein 60° @ 203·5. Intense veins 210-213, 214-216·5	20005	210·5	212·5	2·0'	0·003	0·04	<0·01
	Limonite to 20% intense. Shiny green alt (Sauss.) @ 203·5.							
	Minor Fluorite @ 201·5 - Recovery good.							
218·5 - 262·5	F.G. sparse porphyry - Generally mottled. - Quartz vein to 2·5cm							
	40° or 60° 229-230·5; At 240 - 5cm vein at 50°, 70°-80° 245-246. otherwise small							
	veins scattered to 5mm. Core broken - 5 feet missing between.							
	246-254 (Fault?). Limonite moderate to locally intense.							
	Fluorite at 242.							
262·5 - 289·5	F.G. Sparse Porphyry - Gouge 3mm 270-272, 278-280·5 and							
	clay alt. 281·5 - 289·5 (locally intense) - Fractures							
	common @ 45° - Slight qtz veining to 2mm.							
	265·5 - 272', 1 foot missing; 272-280·5, 5·5' missing. Faults?							
	280·5 - 287 1·5 feet missing. Otherwise recovery good.							

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. IRA 3

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
289.5 - 303	Med grain alaskite. - Slight to moderate clay alt.					
303 - 368	F.G. Sparse porphyry - 2-12 mm qtz veins at 309 - 310, veins at 317 (2.5 cm with fluorite), 317.5', 323, 327.5' Clay alteration 317 - 317.5', 320, 323.5', 325', 326, elsewhere slight. Core broken where weathered & clay alt. Recovery good. At 368 siliceous contact @ ~45° over 10 cm.					
368 - 396	Med to Coarse grained Alaskite. Clay alteration intense 363-64, 368-70, 390.5'. Limonite intense 374-379, Moderate on fractures with manganese. 2.5 cm qtz vein @ 394 @ 45° - Recovery Good.					
396 - 414.5	F.G. alaskite porphyry (sparse) - No qtz veins. Fractures @ 45° to C.A. Moderate to Intense limonite and Manganese and moderate green alteration. Recovery Good.					
414.5 - 450	F.G. Porphyry (sparse) - Andesite dike. @50° from 416' - 420'. Trace Fluorite 446' - Lower Contact with Coarse alaskite at 60° - Recovery 414.5 - 416.5' 50% otherwise excellent.					

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
7598

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. IRH 3 (C)

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS U_3O_8%	Sn %	WO_3
414.5 - 450	Cont,							
	Qtz veins - 2.5 cm @ 450.5', 6mm @ 444.3.							
	Core pale green to brown							
450 - 472	Medium to Coarse Grain alaskite. 2.5 cm qtz vein at							
	456 @ 45° with limonite. Limonitic gouge veins @ 464.5							
	2mm @ 10°. Intense limonitic weathered gouge 469-469.5							
	Moderate manganese and moderate to locally intense							
	limonite. 98% core recovery							
472 - 473	Fine Grained alaskite.							
473 - 493	Medium Grained alaskite, moderately porphyritic							
	and mottled, and finer grained 488.5' - 489'	20006	479	481	2.0'	0.003	< 0.01	< 0.01
	Core Recovery - 479 - 486, 2' missing. 486-490, 1' missing.							
	otherwise good							
	479 - 480 quartz vein 2.5 cm with Fluorite. At 489 - 12MM							
	vein, elsewhere slight to moderate.							
	Clay alteration intense 489-490 - 35° fractures common							
493 - 511.5	As Above. 7mm qtz vein @ 70° @ 508' 4cm vein @ 50°							
	at 510 - 511 - Coarse feldspar crysts - Bright green							
	clay, white clay moderate on fractures. Intense limonite							
	on fractures. - Manganese locally intense							

7598

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. IRA 3 (7)

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
515-551	Rhyolite, medium to coarse grain, moderately porphyritic. Slight to moderate green alteration. Clay alteration 537.8-542.3. Limonite. Slight to moderate limonite 513-516 otherwise intense. Manganese moderate to locally intense. - Quartz veins 527.5' - 5cm vein @ 90° Others 536.5 - 2mm, 537-537.4 up to 2.5 cm., 545 - ~~2~~ 7mm. Limonitic Fractures 45°-60° locally 10° to C.A. Recovery 1' missing in clay altered zone 528-531 otherwise good.					
551-567.5	As above - Dark chloritic? alteration slight. Green waxy alteration slight. Intense limonite on fractures. Moderate Manganese. 12mm qtz vein @ 75° @ 554'; 5 cm vein @ 559' 552-555 shatter zone with above vein. - Core generally broken but recovery good.					
567.5-596.	As above with abundant 35°-40° limonitic fractures. Green alteration to 572. - Mod. to intense limonite and Mn. 570-571 Thin qtz veins to 2mm. - Clay on fractures. Recovery good.					

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. ..... **DIAMOND DRILL RECORD** PROPERTY ..... HOLE NO. TRA 3

LATITUDE ..... ELEVATION ..... BEARING ..... DEPTH ..... STARTED ..... COMPLETED .....

DEPARTURE ..... SECTION ..... DIP ..... DRILLED BY ..... LOGGED BY .....

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS
596- 625	Fine Grain Alaskite, locally porphyritic V. Slight green alt and chlorite to 596.5' - Intense clay alt 615.5' - 617 with limonite. Moderate to intense limonite and Manganese, on many fractures. - Quartz veins - 5mm @ 598.5, 2mm @ 600 with limonite & clay, 12mm vein @ 604' with clay & limonite. Numerous veinlets 613.5 - 614. to 5mm. 45-50 cm vein with limonite 615.5 - 617. Pale blue Colour. Specs of purple fluorite in veins. 3% Biotite - Dark green chlorite alt. 621 - 622.5 and 623.5 - 625 Coarse grained alaskite. Core Recovery Good.					
625- 643	Alaskite Porphyry, medium grained. V. Slight clay and green waxy alteration and slight dark green chlorite. Blue green colouration 631.5 - 632.5 - Pale yellow-green waxy coating 635 - 635.4. - Limonite intense except 631.5 - 632.5 and 639 - 641. - Mn - intense on fractures. - Quartz Vein 638.5 - 639 2mm. Core massive and generally unfractured Recovery Good.					

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

CLAIM NO. _____ **DIAMOND DRILL RECORD** PROPERTY _____ HOLE NO. ERA 3 (P)

LATITUDE _____ ELEVATION _____ BEARING _____ DEPTH _____ STARTED _____ COMPLETED _____

DEPARTURE _____ SECTION _____ DIP _____ DRILLED BY _____ LOGGED BY _____

DEPTH FEET	FORMATION	SAMPLE NO.	FROM	TO	WIDTH	ASSAYS U_3O_8 %	Sn %	WO_3 %
643-662.5	Fine to Med Grained Alaskite with Coarse feldspar crysts. Pale blue-green coloration to 644. Intense limonite and Manganese on fractures (657.5-661) - Quartz Veins 5mm 647.5 - 655 - 655.5. Recovery 657.5 to 662.5 - 70% Otherwise excellent.							
662.5-686.	As above. Slight to moderate saussertization and dark green chlorite (?) Manganese and hematite intense on fractures. - limonite locally intense. Hairline q.v. fractures throughout - Veins @ 663.5 - 8mm., 678 - 2mm., 681.3 - <2mm. - Abundant smoky quartz, 2% Biotite. Core Recovery - 5' missing 670-677, otherwise 80% to 90%. Broken. 664.5 zone clay altered. 669, 670-670.5, 682-683, 685-686.	20007	683	686	3.0'	0.003	0.04%	<0.01
686	END.							

WESTERN MINER-PRESS LTD.
STANDARD FORM NO. 502

7598


IR.A 4
1977 'B' GRID
Trench.
baseline
I.R.A.
I.R.A3
I.R.A. 5
I.R.A. 6
I.R.A. 2
Cirque
Area
Mixed 3 & 4
Some Quartz Veining
Fluorite & Manganese & limonite
quartz magnetite vein Tr. hematite
MAP 6
ROCK GLACIER
Limonitic
Limonitic
Limonitic
Creek
chloritized
minor quartz stringers
Scattered quartz veinlets
gossan area
local quartz veinlets
quartz vein
outcrop
minor quartz magnetite veinlets
sheared direction
Weak N-S foliation
Phaser
quartz vein
Pits
Phaser contact
Mainly float
fine to med grain
Massive
3+4
Phaser
Bright Gossan
Bi-rich zone
1300 N
1100 N
900 N
700 N
500 N
300 N
100 N
00
100 S
300 S
500 S
700 S
900 S
1100 S
1300 S
1500 S
1500
1100W 1000W 900W 800W 700W 600W 500W 400W 300W 200W 100W
100E 200E 300E 400E 500E 600E 700E 800E 900E 1000E 1100E 1200E 1300E 1400E 1500E
MAP REVISED TO SHOW 1979 DRILL HOLE LOCATIONS
LEGEND
1 Quartz porphyry - Quartz-Feldspar porphyry.
2 Green andesitic dikes
3 Alaskite - fine grained
4 Alaskite medium & coarse grained
Prominent fractures
Shear zone
Fault
Topographic lineament
x x Float
Outcrop area
U Uranium F Fluorite
Mn Manganese
Drill hole
MINERAL RESOURCES BRANCH ASSESSMENT REPORT
7598
To accompany report by T.E. Kuel
SCALE
50 100 150 200 250 300 350 meters.
R.H. SERAPHIM ENGINEERING LTD.
I.R.A. PROSPECT.
GEOLOGY
Scale: 1:5000
Sept./78
MAP 4
Revised Oct/79

To accompany drilling report on the I.R.A. No 5 mineral claim, Atlin Mining Division

by J.E. Fisk, Oct 18, 1979

7598

I.R.A. PROSPECT – DDH # 3, 1979.

SURPRISE LAKE AREA – ATLIN M.D.

RADIOMETRIC LOG.

Wyoming Minerals

DDH #3 (-55°) 6 Sept. 8 AM.

(Total Count – Multiplier 1)