

COMBINED GEOLOGICAL, GEOCHEMICAL  
AND GEOPHYSICAL REPORT

DEER PARK GROUPS 1 AND 2

TRAIL CREEK MINING DIVISION

NTS 82E/8 E

LAT.  $49^{\circ}20'N$ ; LONG.  $118^{\circ}02'W$

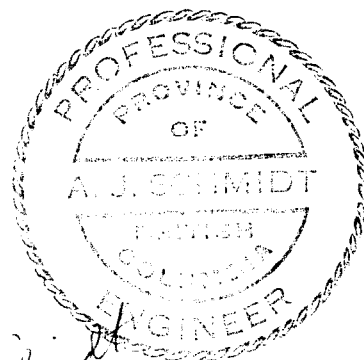
OWNERS: Bill and Carol Ann Botel  
Heinz Veerman

OPERATOR: Utah Mines Ltd.  
1600 - 1050 West Pender St.  
Vancouver, B. C.

By: George Norman, B.Sc.

July 13, 1979

7367



*A. Schmidt*  
*July 13/79*

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APPENDIX I

Thin Section Descriptions by Dr. P. E. Fox,  
Ph.D., P.Eng. - Consultant

APPENDIX II

Geochemical Values - Cu, Mo, W, Sn F  
Geological and Geochemical Core Logs

DP-1971 - 1	Diamond Drill Logs	Map Pocket
2	Diamond Drill Logs	Map Pocket
3	Diamond Drill Logs	Map Pocket
4	Diamond Drill Logs	Map Pocket
6	Diamond Drill Logs	Map Pocket
7	Diamond Drill Logs	Map Pocket
DP-1974 - 1	Diamond Drill Logs	Map Pocket
2	Diamond Drill Logs	Map Pocket
3	Diamond Drill Logs	Map Pocket
4	Diamond Drill Logs	Map Pocket
5	Diamond Drill Logs	Map Pocket

MAPS

Geology	1:2500	Map Pocket
Rock Geochemistry	1:2500	Map Pocket
Topography	1:2500	Map Pocket

## SUMMARY

Utah Mines Ltd. completed exploration on Deer Park Groups 1 and 2 during May and June, 1979. The claims are located approximately 29 kilometres west of the town of Castlegar, B. C. The field work was performed by a crew that varied from six to three men. The 1979 work program included geological mapping, geological core logging, geochemical rock chip and core sampling and an altimeter survey.

The Deer Park property is underlain by a variety of intrusive rock types including leucocratic monzonite, hornblende biotite monzonite, aphanitic quartz monzonite porphyry and alaskite. A poly lithic breccia trends east-west across the intrusive grain. A dominantly north west striking, near-vertical, swarm of feldspar porphyry, andesite, lamprophyre and dacite dikes cut all the above rock types.

Molybdenite is associated with the pink/grey porphyry, dark grey feldspar porphyry and dark grey quartz monzonite porphyry dike units. The breccia also contains molybdenite as matrix disseminations and vug fillings with magnetite, hematite and pyrite.

## INTRODUCTION

From the 19th of May to the 24th of June, geological, geochemical and geophysical surveys were done on the Deer Park Groups 1 and 2. The claims specifically covered by this work include Deer 1, 27, 29, 31, 33, 34; Deer Fraction, Park 5 Fraction, Camel 1, Drom 1 and Bar. The field work was undertaken by G. Norman, Geologist; B. Bowen, Geologist; J. Deighton, Geologist; I. Coster, Geological Assistant; M. Ball, Prospector; D. Dunn, Prospector; and J. Howe, Geologist's Assistant.

## LOCATION AND ACCESS

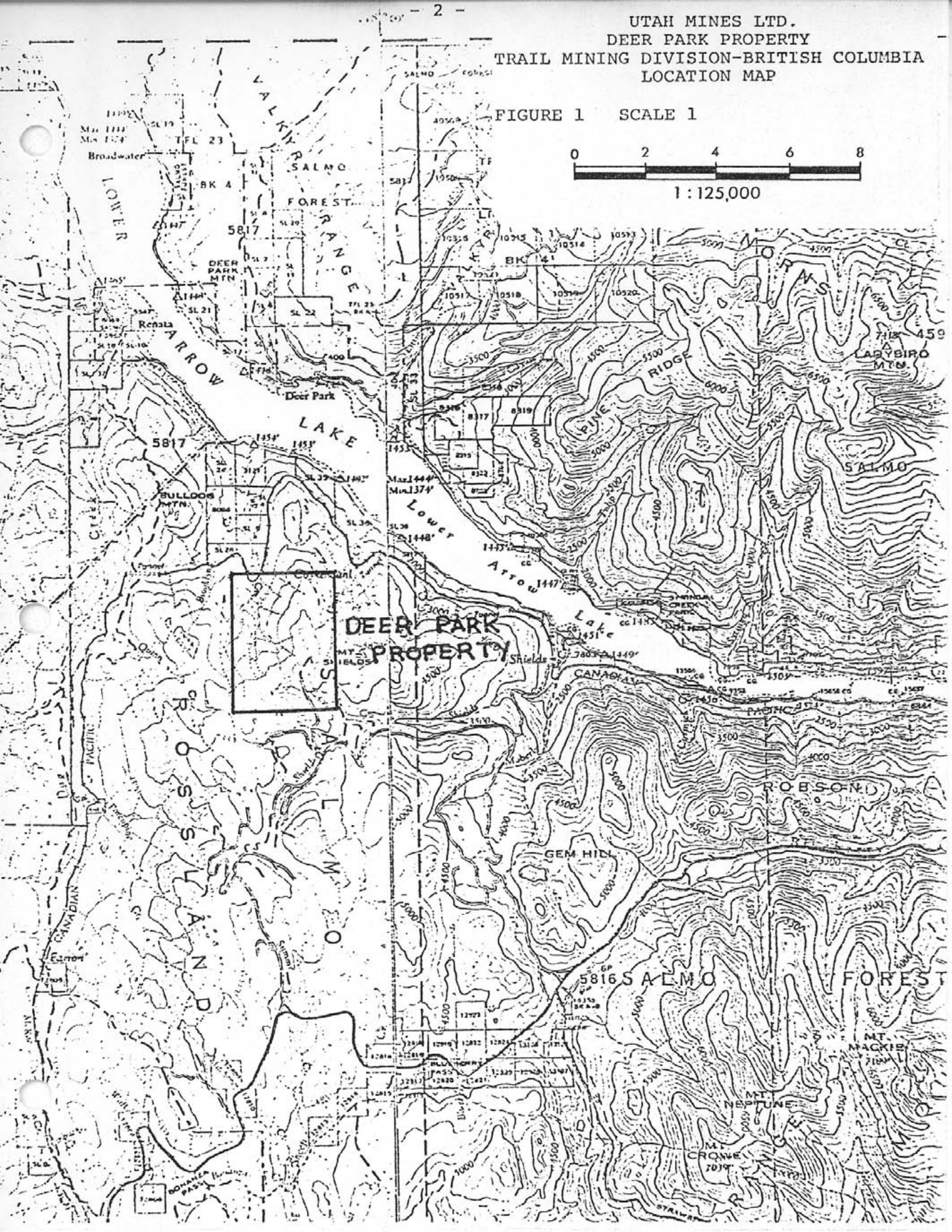
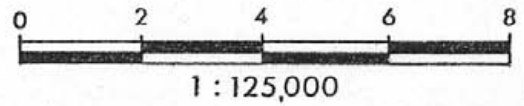
The Deer Park property is located in the Monashee Mountains, approximately 29 air kilometres west of Castlegar, B.C. The claims lie within the Kettle River map sheet, NTS 82 E/8, at latitude  $49^{\circ} 20'N$  and longitude  $118^{\circ} 02'W$ . Access to the claims is good, via either of two gravel roads which branch off Highway No. 3 in a northerly direction. The first route is 31 kilometres west along Highway No. 3 from Castlegar, then north along a gravel road for approximately 8 kilometres, the second route is 41 kilometres west along Highway No. 3 from Castlegar and then 12 kilometres north on a gravel road.

## HISTORY

Previous exploration work dates back to the early 1900's when some short adits and shafts were driven on mineralized quartz veins. The property was then known as the Midas Group. More recent work by West Coast Mining and Exploration and Amax Ltd.

UTAH MINES LTD.  
DEER PARK PROPERTY  
TRAIL MINING DIVISION-BRITISH COLUMBIA  
LOCATION MAP

FIGURE 1 SCALE 1



includes geological mapping, soil sampling, geophysical surveys and diamond drilling. In 1971 West Coast Mining drilled seven holes totalling 549 metres and during 1974 Amax drilled six holes totalling 1582 metres. To date, a total of 2131 metres has been drilled in two programs.

The property, which presently includes 33 claims, is now under the ownership of Bill and Carol Ann Botel and Heinz Veerman.

CLAIMS

<u>Claim No.</u>	<u>Record No.</u>	<u>Claim No.</u>	<u>Record No.</u>
Deer 1	316	Deer 34	4494
Deer 2	319	Deer 35	4495
Deer 3	320	Deer 36	4496
Deer 4	321	Park 5 Fr.	4466
Deer 5	322	Park 6	4458
Deer 6	317	Park 7	4459
Deer 7	318	Park 9	4461
Deer 11	4481	Park Fr.	4465
Deer 12	4482	Teddy	323
Deer 13	4483	Camel 1	5148
Deer 14	4484	Camel 25	5219
Deer 15	4485	Camel 26	5220
Deer 16	4486	Deer Fr.	327
Deer 27	4515	Drom 1	342
Deer 29	4491	Drom 2	343
Deer 31	4492	Bar	307
Deer 33	4493		

## PHYSIOGRAPHY

The claims lie within the Christina Range of the Monashee Mountains, and are characterized by moderate to gentle relief in the central grid area, but very strong relief in the northern part of the claims. Elevations range from 1050 to 1700 metres. Mount Shields is a prominent landmark and rises to 1790 metres.

The region is generally heavily timbered with north facing slopes supporting thick stands while south facing slopes support more open stands of lodgepole pine. Second growth and windfall makes travel very slow in the western part of the grid.

## WORK PROGRAM 1979

The 1979 field work by Utah Mines Ltd. on the Deer Park property consisted of geological remapping, diamond drill core relogging, geochemical diamond drill core sampling and geochemical surface rock sampling and an altimeter survey. The table below gives a summary of the above work.

<u>Type of Work</u>	<u>Scale</u>	<u>Line Kilometres Mapped or Surveyed</u>	<u>Meterage Logged</u>	<u>No. of Samples</u>
Geological Mapping	1:2500	23		
Geological Core Logging	1cm:1m		1294	
Grid Re- Establishment Station Interval	30.5m	23		
Geochemical Core Sampling				64



<u>Type of Work</u>	<u>Scale</u>	<u>Line Kilometres Mapped or Surveyed</u>	<u>Meterage Logged</u>	<u>No. of Samples</u>
Geochemical Surface Rock Sampling				34
Altimeter Survey		23		

### GEOLOGICAL SURVEY

#### Regional Geology

The area in the vicinity of the Deer Park Property is underlain by Nelson Intrusions (granodiorite, granite, monzonite and quartz monzonite) of Cretaceous age which have been intruded by Valhalla granites (Cretaceous), and Paleocene Coryell syenite, monzonite and granite.

The oldest rocks within the Kettle River map sheet (east half) are the Monashee and Grand Forks groups which include paragneiss of pre-Pennsylvanian age, minor crystalline limestone and pegmatite. These rocks occur northwest and southwest of the property. Mount Robert's formation and Anarchist rocks of probable Pennsylvanian/Permian age include greywacke, greenstone and limestone. The Rosslund group is composed of a volcanic suite of rocks which are Jurassic in age and are exposed southeast of Christina Lake.

The above late Paleozoic to Jurassic age rocks are intruded by serpentinized ultrabasic bodies which are in turn cut by Nelson granodiorite.

Acidic tuff, conglomerate and sandstone of the Kettle River formation are overlain by the Phoenix volcanic group. Both groups are considered to be Paleocene or Eocene in age.

In the extreme northwest part of the map sheet, extensive flat-lying Miocene basalt and olivine basalt flows overlie all older formations.

All formations except the Miocene basalts have experienced some deformation. The north-south valleys of Christina Lake - Sander Creek and Lower Granby River - Burrell Creek valleys clearly define faults that have been initiated after the intrusion of the Nelson batholith.

#### Local Geology

The map area is underlain by a variety of intrusive rocks which range considerably in grain size, texture and composition. A leucocratic monzonite and a fresher looking hornblende biotite monzonite are separated by a north west trending, 600 metres wide, aphanitic quartz monzonite porphyry which is intruded by irregular medium grained alaskite bodies in the northern section.

A polyolithic breccia zone trends east-west across the intrusive grain. The approximate dimensions are 1200 metres x 300 metres. Contacts with enclosing rocks are variable and can be gradational. Fragment size varies from 1mm particles to large 10 metre blocks. The presence of breccia fragments that do not represent the adjoining country rocks suggests some transportation of the fragments.

A dominantly northeast striking, near-vertical swarm of feldspar porphyry, andesite, lamprophyre and dacite dikes cut most of the above units. The dikes are both pre and post brecciation. 'Molybdenum positive' dikes are the only dikes that are contemporaneous with brecciation.

#### MINERALIZATION AND ALTERATION

Molybdenite, chalcopyrite, fluorite, scheelite, galena and sphalerite are present in variable amounts within the above rocks. Molybdenite is the only mineral of economic importance. It has been found associated with pink/grey feldspar porphyry, dark grey quartz monzonite porphyry and dark grey feldspar porphyry dikes within the vicinity of the breccia bodies. Molybdenite mineralization is also found within the matrix of the breccia and as vug fillings with magnetite, specularite and pyrite.

A strong magnetite-quartz stockwork is developed near the southwest corner of the west breccia zone.

Little  $\text{MoS}_2$  mineralization has found on surface and to date only short, sporadically mineralized, sections have been encountered in diamond drilling by both West Coast Mining and Exploration and Amax. Best intersection is 15.2 metres in DP 71-7 containing 0.22% Mo. Minor amounts of copper and zinc mineralization were also encountered.

A weak clay-pyrite alteration halo is coincident with the west breccia and centered around a small, but strong, quartz-sericite-pyrite zone centered at 73+00E and 68+00N. The

quartz-sericite pyrite forms the matrix to the breccia at this locality. Some disseminated  $\text{MoS}_2$  was also conspicuous with this alteration.

A small clay-pyrite zone was noted on the east breccia.

#### DESCRIPTION OF ROCK TYPES

Leucocratic Monzonite (unit 1) is the oldest rock type on the property and is exposed in the southwestern and western extremities of the map area, and as small pendants within the aphanitic quartz monzonite porphyry. It is a coarse grained, leucocratic, igneous rock composed of 40% white to pale grey feldspar and 10% fine grained mafic minerals that occur in clusters interstitial to the feldspar. Magnetite occurs with clusters of the mafic minerals.

Aphanitic Quartz Monzonite Porphyry (unit 2, 2a, 2b and 2c) underlies a 600 metre wide band within the central grid area. These rocks exhibit medium to fine grained porphyritic igneous textures with subhedral to euhedral feldspar phenocrysts in quantities up to 30%. They are contained in a fine grained, grey ground mass of quartz and feldspar. Quartz content varies but it is usually within the 20-30% range. Unit 2d was termed a grey aphanitic rhyolite feldspar porphyry because of its extremely high quartz content. Other varieties show variations in colour, percent phenocrysts and cross-cutting relationships.

Coarse Grained Hornblende Biotite Monzonite (unit 3) underlies the northeastern portion of the grid. It is equigranular to subporphyritic in texture and composed of 80% feldspar and

5-10% quartz. Contacts with the aphanitic quartz monzonite porphyry appear to be quartz rich.

A Medium Grained Alaskite (unit 4) cuts the aphanitic quartz monzonite porphyry as small irregular masses with sharp to faint contacts. It is pale white in colour, equigranular in texture, and composed of feldspar, plagioclase, and up to 40% wormy quartz. Quartz, pyrite, magnetite, galena, fluorite and molybdenite are found as fracture fills. A strong magnetite-quartz stockwork is developed within this unit near DP 74-5.

Andesite and Lamprophyre Dikes (unit 5 and 5a - 5c) range in age from pre to post breccia. The andesites are typically dark, fine grained, biotite-rich units which locally contain K-feldspar phenocrysts. Lamprophyres (unit 5d) typically contain biotite phenocrysts set in a dark, soft, very fine grained matrix. Most dikes of both andesite and lamprophyre contain very finely disseminated magnetite.

A chloritic dacite dike (unit 5e) cuts unit 3 near the southeast extremity of the map area and contains 1-2% quartz eyes set in a fine grained, chloritic matrix.

Porphyritic Quartz Diorite Dikes (unit 6) are found as fragments within the breccia and as dikes cross-cutting the breccia. It is typified by white rectangular feldspar phenocrysts and is somewhat glomeraporphyritic in texture. It contains approximately 5-10% biotite and disseminated pyrite and magnetite.

Pink/White Feldspar Biotite Porphyry Dikes (unit 7) contain pink/white anhedral feldspar phenocrysts set in a light grey matrix which is speckled with small biotite books.

Dark Grey Quartz Monzonite Porphyry Dikes (unit 8) are both pre and post breccia and also form the matrix to the breccia. They show a medium grained, strongly porphyritic, igneous texture. Large phenocrysts are clusters of dark grey feldspar and have white feldspar rims. Smaller phenocrysts of white feldspar are subhedral to almost fragmental in nature and are set in a dark grey matrix. Biotite is present as is fine grained disseminated magnetite. Disseminations of fluorite and  $\text{MoS}_2$  have also been noted.

Pink Quartz Monzonite (units 9, 9a) is medium to coarse grained in texture with a definite pink colouration. It contains 60-70% anhedral to subhedral 3-4mm pink feldspar crystals with 15-20% grey interstitial quartz. Total mafic content is 10-15% with some 1mm amphibole laths. Magnetite is found as discrete grains after mafics and as weak fracture fills with quartz and pyrite. Minor disseminated pyrite is found locally as well as some quartz veins containing molybdenite, chalcopyrite and pyrite.

Unit 9a is similar to above but also has the presence of wormy quartz.

Dark Grey Feldspar Porphyry (unit 10) contains 30% subrounded to subangular, coarse to medium grained, feldspar phenocrysts set in an aphanitic medium dark grey matrix. Biotite occurs as 1-2mm books. The rock often displays a glomeroporphyritic texture. Xenoliths up to 0.5 metres in diameter are not uncommon and in places the rock merges into a breccia texture.

The unit contains spotty disseminated  $\text{MoS}_2$ , galena and pyrite.

Polyolithic Breccia (unit 11) varies greatly in particle size, and composition of both fragments and the matrix. The main fragment types are of the surrounding country rock but extraneous varieties suggest some transportation. Many dike rocks are both fragments within the breccia or show cross-cutting relationships. The breccia can be very tight with a quartz rich matrix or an intrusive matrix, or very open with partially filled vugs containing magnetite, specularite, pyrite, calcite or quartz. Molybdenum is associated with the quartz rich matrix or as vug fills with pyrite, magnetite and specularite.

Pink/Grey Feldspar Porphyry Dikes (units 12, 12a, 12b, and 12c) have been subdivided on the colour and texture of the feldspar phenocrysts. Pink/grey feldspar porphyry (unit 12) contains 50% anhedral to subhedral, or rounded, cream to white, feldspar phenocrysts. The feldspar phenocrysts are 4-10mm in size and have dark grey cores with cream coloured rims and are set in a light grey speckled ground mass. Magnetite is disseminated throughout the unit with local disseminations or fracture fills of chalcopyrite, minor pyrite and traces of  $\text{MoS}_2$ . Medium grey feldspar porphyry (unit 12a) is distinguishable from the above unit by grey feldspar phenocrysts and  $\text{MoS}_2$  occurring only as fracture fills. Unit 12b contains grey feldspar phenocrysts with minor pink rims, 5-10% fine biotite and very minor visible quartz grains. Molybdenite, pyrite, magnetite and fluorite occur as both disseminations and fracture fills. This dike cross-cuts and is matrix to the breccia. Unit 24c is distinguished by feldspar phenocrysts with grey cores and pink rims. It is subglomeroporphyritic in texture with a fine grained, brownish ground mass and no visible disseminated  $\text{MoS}_2$ .

Dark Grey Andesite Feldspar Porphyry (unit 13) contains 30% 2-3mm to 10mm irregular shaped and zoned feldspar phenocrysts (creamy rim, grey lustrous centre), and 10-15% bookish biotite set in a fine grained, dark grey, groundmass. The unit is moderately magnetic, containing disseminated magnetite and pyrite.

Light Grey Feldspar Porphyry (unit 14) cuts the above unit and is similar to it, but displays a fine grained groundmass with abundant feldspar grains. Rare fluorite was noted in the groundmass.

Porphyritic Syenite Dike (unit 15) contains up to 1cm long, moderately corroded, white feldspar phenocrysts set in a pinkish-brown, fine grained, groundmass. The rock displays a subglomeroporphyritic texture.

Aphanitic Biotite Feldspar Porphyry (unit 16) shows a seriate texture and is somewhat glomeroporphyritic. Approximately 20% pinkish feldspar are about 1.0cm in diameter and euhedral to anhedral in shape. Approximately 20-30% feldspar phenocrysts range from less than 1mm to 1cm in diameter. The phenocrysts are set in a aphanitic siliceous groundmass with approximately 5-10% mafics. The unit contains disseminated pyrite, fracture magnetite, pyrite and chlorite and a trace of fluorine.

Quartz Feldspar Porphyry (unit 17a) contains approximately 10-15% whitish feldspar phenocrysts and approximately 2% 3mm quartz eyes. The phenocrysts are set in a fine grained matrix.



Quartz Eye Porphyry (unit 17) contains up to 3% 1mm quartz eyes set in a light green, clay-altered, matrix. This unit locally contains vuggy quartz veins and up to 2% disseminated pyrite cubes. Manganese staining is conspicuous on many fractures.

Porphyritic Syenite Dike (unit 18), locally contains 2-3% pyrite and 30-40% irregularly rounded feldspar phenocrysts. The phenocrysts are 2-3mm in diameter and have grey cores (clay alteration) with cream rims. They are set in a pink aphanitic groundmass.

Medium Grey Porphyritic Syenite Dike (unit 19) contains 25% coarse to medium grained feldspar phenocrysts with medium grey coloured cores and light pinkish rims. The phenocrysts are set in a dark grey matrix with minor biotite.

Porphyritic Syenite Dikes (unit 20) contains 1-2cm feldspar phenocrysts displaying a glomeroporphyritic texture. The phenocrysts are zoned with grey cores and pink rims. 5% biotite is set in an aphanitic, medium grained, groundmass. No mineralization present.

Porphyritic Syenite Dike (unit 20b) contains 20% 6-7mm anhedral to subhedral feldspar phenocrysts; some with altered cores, set in a fine grained, greenish-beige matrix of feldspar, which is weakly sericitized.

Porphyritic Syenite Dike (unit 30c) is characterized by 20% large rounded feldspar phenocrysts up to 1cm in diameter and 10% subordinate 1-2mm rounded phenocrysts. 10-15% fine biotite is set in an aphanitic, light greyish buff, groundmass.

Minor fractures contain pyrite and chlorite and a trace of fluorine.

### GEOCHEMICAL SURVEY

A total of 68 geochemical core samples and 34 geochemical surface rock chip samples were collected from specific rock units located within the map area.

The geochemical core samples represent a 3 metre split section of drill core. Where the core had been previously split, the remaining core was quartered. Each sample contains only one rock type. The samples were stored in plastic bags with each sample weighing approximately 3 lbs. The surface rock chip samples represent 12-15 5-7cm size rock chips that were taken from various parts of the outcrop to give a representative rock unit sample. The samples were sent to Chemex Labs Ltd., 212 Brooksbank Avenue, North Vancouver, B.C. for analysis. After grinding and screening, the minus 80 mesh fraction was analyzed for Cu, Mo, W, Sn and F. The following chemical procedures were used in the analysis of the samples:

#### Sample Analyses

PPM Copper and Molybdenum: A 1.0 gm portion of sample is digested in conc. perchloric-nitric acid ( $\text{HClO}_4\text{-HNO}_3$ ) for approximately 2 hours. The digested sample is cooled and made up to 25 mls with distilled water. The solution is mixed and solids are allowed to settle. Copper and molybdenum are determined by atomic absorption techniques.

PPM Tungsten: 0.50 gm sample is fused with potassium bisulfate and leached with hydrochloric acid. The reduced form of tungsten is complexed with toluene 3,4 dithiol and extracted into an organic phase. The resulting colour is visually compared to similarly prepared standards.

PPM Tin: 1.00 gm of sample is sintered with ammonium iodide. The resulting tin iodide is leached with dilute HCL-ascorbic acid solution. The TOPO complex is then extracted in MIBK and analyzed via A.A.

PPM Fluorine: 0.25 gms is fused with a 2:1  $\text{NaCO}_3\text{-KNO}_3$  mixture. The melt leached with water and citric acid, adjusted to pH 5.5 and the activity measured with a fluoride specific ion electrode.

Statistical analysis on 102 rock geochemical samples indicate that effective threshold values for the various minerals analyzed are: Mo, 50ppm; Cu, 65ppm; W, 40ppm; and F, 2000ppm. The fluorine analysis indicates that a bimodal distribution is present with a second, much higher, threshold of 3000ppm F. Statistical procedures were not used in the case of Sn, as only one sample was anomalous, i.e. 13ppm, whereas all other samples contained 1-2ppm.

Table 2 shows average values for most rock units and indicates the following rock units have anomalous values of either Cu, Mo, W, Sn or F:

TABLE 1

<u>Rock Type</u>	<u>Anomalous Metals</u> (Averages)
West Breccia	Cu, Mo, F
East Breccia	Cu, Mo, F
Unit 3 (near contact)	Cu, Mo
Unit 4	Mo, Sn
Unit 5	F
Unit 5b	F
Unit 6	W
Unit 7	Cu, W
Unit 8	Cu, Mo, F
Unit 9	Mo W
Unit 9a	Mo
Unit 10	Cu, Mo, F
Unit 12	Cu, Mo
Unit 12b	Cu, Mo
Unit 13	F
Unit 18	Cu

Table 3 shows anomalous geochemical relationships and indicates that the most common mineral assemblage or association is Cu, Mo, F and this is typified by the breccia unit.

Although there is a weak correlation between anomalous Mo-W values and Cu-W within the rock units there is no Cu-Mo-W associations within a single rock unit. The tungsten, for the most part, appears to be associated with specific rock units that contain W as an anomalous mineral ie. units 9, 12b, 4 and 8. Anomalous fluorine values are contained in a wide variety of rock types. There are no rock types that contain anomalous values Cu, Mo, W, F within the same sample.

TABLE 2  
Averages (ppm)

Rock Type	Cu	Mo	W	Sn	F
West Breccia (22)	86*	87*	25	1	2104*
East Breccia (7)	80*	100*	28	1	2443*
Unit 1 <sup>3</sup>	25	11	5	1	1840
Unit 2 <sup>3</sup>	13	10	11	1	540
Unit 2a <sup>1</sup>	10	14	12	1	1480
Unit 3 <sup>1</sup> near contact	174*	106*	30	1	1280
Unit 3 <sup>3</sup>	16	7	18	1	1360
Unit 4 <sup>6</sup>	60	64*	25	3*	589
Unit 5 <sup>2</sup>	24	4	9	1	2305*
Unit 5b <sup>1</sup>	32	28	25	1	2450
Unit 6 <sup>4</sup>	39	11	43*	1	1655
Unit 7 <sup>1</sup>	196*	14	40*	1	1400
Unit 8 <sup>5</sup>	88*	174*	37	1	2587*
Unit 9 <sup>4</sup>	39	50*	39*	1	1757
Unit 9a <sup>1</sup>	30	64*	17	1	1490
Unit 10 <sup>3</sup>	180*	129*	18	1	2649*
Unit 11 - see above					
Unit 12 <sup>2</sup>	202*	133*	15	1	1230
Unit 12a <sup>3</sup>	25	33	13	1	990
Unit 12b <sup>9</sup>	65*	488*	29	1	1796
Unit 12c <sup>5</sup>	135	19	8	1	1308
Unit 13 <sup>1</sup>	18	21	14	1	2650*
Unit 14 <sup>1</sup>	22	3	5	1	1710
Unit 15 <sup>0</sup>					
Unit 16 <sup>1</sup>	46	22	25	1	1410
Unit 17 <sup>5</sup>	7	10	6	1	964
Unit 17a <sup>1</sup>	6	5	4	1	990

Rock Type	Cu	Mo	W	Sn	F
Unit 18 <sup>1</sup>	114*	15	15	1	830
Unit 19 <sup>0</sup>					
Unit 20 <sup>0</sup>					
Unit 20a <sup>2</sup>	26	15	18	1	1295
Unit 20b <sup>0</sup>					
Unit 20c <sup>1</sup>	10	7	10	1	740

9<sup>2</sup> - the 2 denotes number of samples

\* represents anomalous values

TABLE 3  
ANOMALOUS GEOCHEMICAL RELATIONSHIPS

Cu F	Mo W	Cu Mo	Cu W F	Cu 4 <sup>1</sup>	Mo 11 <sup>3</sup>	Cu Mo F	Mo W F	W 9 <sup>1</sup>	F Mo	Cu W	F W	F
11 <sup>2</sup>	11 <sup>1</sup>	12 <sup>2</sup>	11 <sup>1</sup>	4 <sup>1</sup>	11 <sup>3</sup>	11 <sup>5</sup>	5 <sup>1</sup>	9 <sup>1</sup>	9 <sup>1</sup>	7 <sup>1</sup>	11 <sup>1</sup>	11 <sup>1</sup>
10 <sup>1</sup>	12b <sup>1</sup>	12b <sup>1</sup>			9a <sup>1</sup>	12b <sup>4</sup>		12b	11 <sup>4</sup>	6a	2 <sup>2</sup>	12b <sup>2</sup>
18 <sup>1</sup>		3 <sup>1</sup>			12b <sup>3</sup>	10 <sup>2</sup>		4 <sup>1</sup>	8 <sup>1</sup>		6 <sup>1</sup>	13 <sup>1</sup>
		11 <sup>2</sup>			12a <sup>1</sup>	5 <sup>1</sup>		8 <sup>2</sup>			9 <sup>1</sup>	12c <sup>2</sup>
					4 <sup>2</sup>	8 <sup>1</sup>						1 <sup>1</sup>
												5 <sup>1</sup>
												5b <sup>1</sup>

Note:

- 11<sup>2</sup> - the lower number (11) represents the rock unit
- the upper number (2) represents the number of anomalous occurrences.

## ALTIMETER SURVEY

A total of 4 man days were spent collecting elevation readings on 23 kilometres of grid line within the immediate map area.

A Thommen altimeter, accurate to  $\pm 1$  metre, was used to take readings at 30.5m (100 feet) station intervals along picket lines spaced 61m (200 feet) apart.

Station BL 70+00N and 82+00E was used as the base station for the survey. All other stations were measured relative to it. Stations along baseline 70+00N between 43+00E and 114+00E were established first, then loops were run off the baseline making sure to tie back into known stations. Variations in pressure change were accounted for by noting the time at each station reading and plotting time versus reading change graphically for each particular loop. A plus or minus correction would then be taken into account for each station.

The survey was tied into a horizontal control point located at the summit of Mount Shields. A 206 B Jet Ranger was used for transportation for this part of the survey. The base station was found to be 220 metres lower in elevation than that point. The horizontal control point is at an elevation of 1788.6 metres.



## CONCLUSIONS AND RECOMMENDATIONS

The Deer Park property is underlain by a variety of intrusive rock types including leucocratic monzonite, hornblende biotite monzonite, aphanitic quartz monzonite and alaskite. A polyolithic breccia zone (1200m x 300m) trends east west across the intrusive grain. A dominantly north west striking, near vertical, swarm of feldspar porphyry, andesite, lamprophyre and dacite dikes cut many of the above rock types.

Molybdenite is associated with the pink/grey porphyry, dark grey feldspar porphyry and dark grey quartz monzonite porphyry dikes. Molybdenite is also found with magnetite, specularite and pyrite as vug fillings within the breccia and as disseminations in the matrix of the breccia.

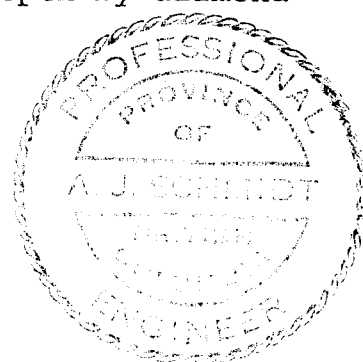
The pink quartz monzonite (unit 9, 9a) contains geochemical anomalous values in Mo and above background values in W.

Geochemically, highest average values for W were from units 6 and 7. Highest average values for Mo were reported from units 12, 12b, 8 and 10; all feldspar porphyry dikes.

Both east and west breccia contain geochemically anomalous values in Cu, Mo and F.

In conclusion it is the opinion of the author that molybdenite is associated with a feldspar porphyry dike complex that is localized within an intrusive breccia zone. The breccia is the result of forceful escape of gas, volatiles and magma material from a deeper source. The feldspar porphyry units represent dikes from that source.

It is recommended that the zone be tested at depth by diamond drilling.



STATEMENT OF COSTS

1) Salaries

<u>Name</u>	<u>Title</u>	<u>Man Days</u>	<u>\$/Day</u>	<u>Subtotal</u>	<u>Total</u>
G. Norman	Geologist	45 @	\$72.69	\$3271.05	
B. Bowen	Geologist	27 @	\$80.00	\$2160.00	
I. Coster	Geological Assistant	38 @	\$33.65	\$1278.70	
D. Crowe	Geologist	12 @	\$57.69	\$ 692.31	
M. Ball	Prospector	8 @	\$45.19	\$ 361.54	
D. Dunn	Prospector	3 @	\$49.04	\$ 147.12	
J. Deighton	Geologist	2 @	\$85.00	\$ 170.00	
J. Howe	Geologist's Assistant	2 @	\$38.46	\$ 76.92	
					\$8157.64

2) Food Costs

112 man days @ \$15.00/day \$1680.00 \$1680.00

3) Motel Costs

112 man days @ \$11.00/day \$1232.00 \$1232.00

4) Vehicle Costs

1 - GMC 4 X 4 3/4 ton pick-up

a) Rental 39 days @ \$21.60/day \$ 842.66  
b) Gas & Maintenance \$ 342.15

1 - Ford 4 X 4 3/4 ton pick-up

a) Rental 21 days @ \$23.53/day \$ 494.20  
b) Gas & Maintenance \$ 161.49

\$1840.50

5) Helicopter Costs

Highland Helicopters Ltd.

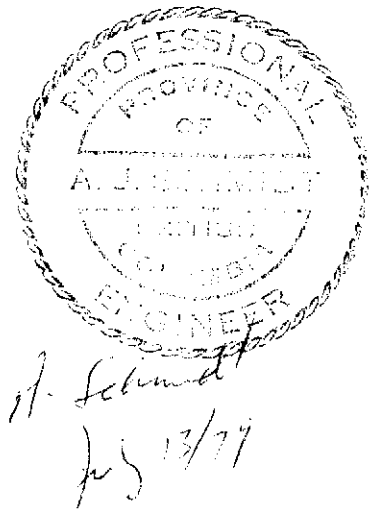
206B Jet Ranger .6 hr @ \$315.00/hr \$ 189.00  
fuel \$ 25.00

\$ 214.00

STATEMENT OF COSTS - CONTINUED

	<u>Subtotal</u>	<u>Total</u>
6) <u>Shipping Charges</u>		
Pacific Western Airlines	\$ 46.14	\$ 46.14
7) <u>Geochemical Analysis</u>		
Rock Geochem. for Cu, Mo, Sn, W & F 102 Samples @ \$10.72/sample	\$1,093.44	\$ 1,093.44
8) <u>Thin Section Costs</u>		
Peter Fox - Consultant Preparation & Report 30 thin sections @ \$30.00/sample	\$ 900.00	\$ 900.00
9) <u>Map and Reproduction Costs</u>	\$ 300.00	\$ 300.00
		<hr/>
	GRAND TOTAL	\$15,463.72
		<hr/> <hr/>

*G. Norman July 13/79*



## STATEMENT OF QUALIFICATIONS

The field work and report preparation was done by the following persons whose qualifications are outlined below.

G. Norman, Geologist for Utah Mines Ltd., Vancouver, British Columbia: Professional Geologist of Alberta, member of the Association of Professional Engineers, Geologist and Geophysicists of Alberta. Completed B.Sc. (Honours Geology) at the University of Alberta in 1973; employed by Imperial Oil during the 1972 field season as a geologist's assistant; employed by Canadian Superior Ltd. from May, 1973 to October, 1973 as a field geologist; employed by Kaiser Exploration Ltd. from November, 1973 to December, 1974 as a field geologist; employed by Utah Mines Ltd. from April, 1975 to September, 1975 as a field geologist, under the supervision of M.J. Young, P.Eng., attaining permanent staff status in January, 1976, under the supervision of A.J. Schmidt, P.Eng.

B. Bowen, P.Eng., Geologist for Utah Mines Ltd., Vancouver, British Columbia. Completed B.A.Sc. at the University of British Columbia in 1970; worked as a student during the summer field seasons with Cominco Ltd. in 1967 and 1968 and with Wayland S. Read, Consulting Geologist, Vancouver, British Columbia in 1969; employed as a field geologist, Gibraltar property, May 1970 to October, 1970 by Placer Development Ltd.; employed as a field geologist, Alice Spring, N.T., Australia, from March, 1971 to December, 1971 by Central Pacific Minerals, N.L.; employed as mine geologist, Tungsten, Northwest Territories, Canada from May, 1972 to March, 1974 by Canada Tungsten Mining Corporation; employed by Utah Mines Ltd. from March, 1974 to date as a geologist under the supervision of A.J. Schmidt, P. Eng.

Don Crowe, Temporary geologist, Utah Mines Ltd., Vancouver, British Columbia. Completed B.Sc. at the University of British Columbia in 1976; employed by Cominco Ltd., Canex Placer Ltd. and Utah Mines Ltd. in the summers of 1973, 1974 and 1975-78 respectively as an assistant geologist; employed by Utah Mines Ltd. as of April, 1979 as a field geologist, under the supervision of A. J. Schmidt, P.Eng.



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• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

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### CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 47919

JUL 9 - 1979

TO: Utah Mines Ltd.,  
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INVOICE NO. 30880

UTAH MINES LTD.  
 EXPLORATION DEPT.

RECEIVED

June 25/79

ATTN:

ROCKS

ANALYSED

July 2/79

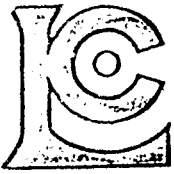
SAMPLE NO. :	PPM Cu	PPM Mo	PPM W	PPM Sn	PPM F
72751	38	12	4	1	1700
72752	42	12	5	1	2080
72753	26	16	3	1	1100
72754	24	12	5	1	1530
72755	56	19	8	1	1620
72756	104	66	7	1	1300
72757	40	20	10	1	1610
72758	300	>200 *	22	1	1160
72765	112	49	60 *	1	2650
72766	24	85	65 *	1	1520
72767	26	59	60 *	1	1650
72768	12	39	17	1	2200
72769	52	124	12	1	1970
72770	56	41	40	1	2980 *
72771	74	38	25	1	3080 *
72772	84	112	25	1	2750
72773	88	>200 *	14	1	1080
72774	88	85	15	1	2510
72775	205	>200 *	17	1	2690
72776	205	35	20	1	2810
72777	130	152	17	1	2410
72778	18	21	14	1	2650
72779	22	3	5	1	1710
72780	34	47	70 *	2	1640
72781	26	48	14	1	2110
72782	42	27	12	1	3950 *
72783	10	7	10	1	740
72784	22	14	15	1	970
72785	114	15	15	1	830
72786	12	12	75 *	1	2430
72787	28	32	36	2	1550
72788	56	70	12	1	2080
72789	34	5	15	1	2990 *
72790	40	62	75 *	1	2610
72791	186	200 *	15	1	2880
72792	170	82	25	13	1260
72793	68	14	14	2	350
72794	46	22	25	2	1410
72795	174	106	30	1	1280
72796	30	13	17	1	1640



MEMBER  
 CANADIAN TESTING  
 ASSOCIATION

CERTIFIED BY:

*Norman G. McPherson*



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INVOICE NO. 30880

RECEIVED

June 25/79

ANALYSED

July 2/79

#### ROCKS

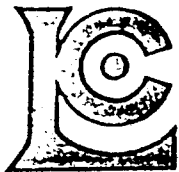
SAMPLE NO. :	PPM	PPM	PPM	PPM	PPM
	Cu	Mo	W	Sn	F
72797	100	120	20	2	2490
72798	196	14	40	1	1400
72799	122	20	70 *	1	1490
72800	30	64	17	1	1930
72801	6	104	55 *	2	900
72802	12	80	17	1	200
72803	28	17	20	1	1350
72804	22	5	8	1	170
72805	14	2	2	1	1620
72806	10	1	1	1	2610
72807	6	2	2	1	870
72808	18	28	12	1	340
72809	6	1	12	1	1640
72810	66	38	14	1	1690
72811	56	88	55 *	1	2410
72812	40	30	12	1	2310
72813	6	5	10	1	1500
72814	58	15	60 *	1	3040 *
72815	6	5	4	1	990
72816	82	>200 *	12	1	2690
72817	4	4	4	1	1050
72818	10	44	40	1	350
72819	12	48	20	1	250
72826	14	52	30	1	680
72827	10	5	5	1	1390
72828	22	4	2	1	960
72829	14	4	4	1	1010
72830	10	1	1	1	560
72831	106	12	10	1	470
72832	6	3	1	1	750
72833	8	10	10	1	400
72834	12	9	35	2	530
72835	22	10	40	1	680
72836	40	>200 *	20	1	285
72837	46	66	14	1	430
73838	12	3	27	1	1300
72839	8	38	3	1	760
73851	410	>200 *	17	2	3800 *
72852	14	200 *	12	2	1970
72853	52	70	30	1	340



MEMBER  
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CERTIFIED BY:

*Norman T. Lyfaldson*



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 Vancouver, B.C.  
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 EXPLORATION DEPT.

CERTIFICATE NO. 47921  
 INVOICE NO. 30880  
 RECEIVED June 25/79  
 ANALYSED July 2/79

ATTN: ROCKS

SAMPLE NO. :	PPM Cu	PPM Mo	PPM W	PPM Sn	PPM F
72854	10	14	12	1	1480
72855	8	16	14	1	1050
72856	6	154	20	1	600
62857	470	140	20	1	730
72858	88	152	20	2	1850
72859	16	9	14	1	1060
72860	32	28	25	1	2450
72861	70	78	25	1	2780
72862	30	74	25	1	2850
72863	128	34	20	1	3720 *
72864	30	13	35	1	1620
72865	42	12	45	1	1850
72866	52	20	65 *	1	2680
72867	14	>200 *	30	2	2870



MEMBER  
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 ASSOCIATION

CERTIFIED BY: *Shirley A. Malcolm*





# CHEMEX LABS LTD.

217 BROOKSBANK AVE.  
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 AREA CODE: 604  
 TELEX: 043-52597

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## CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 48060

TO: Utah Mines Ltd.  
 1600 - 1050 W. Pender St.  
 Vancouver, B.C.  
 V6E 3S7

INVOICE NO. 30923  
 RECEIVED June 29/79  
 ANALYSED July 7/79

ATTN: Mr. George Norman ROCKS

SAMPLE NO. :	PPM Cu	PPM Mo	PPM W	PPM Sn	PPM F
72868	72	190	30	2	1770
72869	168	>250	35	1	3510
72870	146	>250	25	1	>4000
72871	110	>250	20	1	>4000
72872	34	>250	22	1	3630
72873	285	>250	32	1	3380
72874	42	49	60	1	1930
72875	54	30	40	1	2530

# RECEIVED

JUL 11 1979

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CERTIFIED BY: Hart Bielle



HOLE NO.: DP-71-4

PROJECT: DEER PARK

PAGE NO.: 1 OF 10

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED: July 28/71

REF. TO CLAIM CORNER:

COORDINATES:

N. 63+16 E. 77+74

DATE FINISHED: Aug 4/71

SCALE: 1cm: 1m

INCLINATION: 57 SW

BEARING:

TOTAL DEPTH: 14.4 m

LOGGED BY: GEN May 1979.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE RECY/HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% RECY. SAMP. INT.	ESTIMATED
	silica	sericite	clay	chlorite												
0							0-0.6 OVER BURDEN									
0							<p>2b blk alter sericite</p> <p>27 dk filling sericite, clay</p> <p>sharp</p> <p>2b similar to below descrip. only doesn't have the green porph. fields par.</p> <p>sericite, f-v biot. infilling.</p> <p>sharp 45°</p>	<p>0.6 - 5.25 <u>POLYLITHIC BRECCIA</u> (11)</p> <p>- variable frag size 1mm - 21mm, vuggy w/ hematite, py, sericite biot, clay alter.</p> <p>- strong vuggy to weakly vuggy.</p> <p>27- ccm. size frag 15% upto 0.5cm whitish feldspar phenos. w/ aphanitic gndmass. grey (w/ finely disseminated mag. mafic → Mt)</p>								
0								<p>5.25 - 6.0 <u>LAMPROPHYRE</u> (5b)</p> <p>m-f-g biot, and mod mt. bio → sep</p> <p>soft - qtz deficient.</p>								
0							<p>6.0 - 10.3 <u>POLYLITHIC BRECCIA</u> (11)</p> <p>some prevassively clay alter'd frag.</p> <p>19. 30-40% wht blocky to lath. feld phenos.</p> <p>f-g grey gndmass. 5% mafic, disseminated mag.</p>									
0							<p>19</p> <p>Porph. and. dike? frag?</p> <p>disseminated mt.</p> <p>2b seric clay alter in matrix</p> <p>str spec. py filling str clay alter</p>									
0							<p>augite → sep</p>	<p>10.3 - 10.7 <u>LAMPROPHYRE</u> (5b)</p> <p>m-g augite lamprophyte f. biot, mod mt.</p>								
0							<p>str spec. py lim. ser. clay</p> <p>str clay alter of frag</p>	<p>10.7 - 11.8 <u>POLYLITHIC BRECCIA</u> (11)</p>								
0							<p>disseminated mt. fluidal text. w/ lath. hb.</p>	<p>11.8 - 12.6 <u>PORPHYRITIC ANDESITE</u> (5b)</p> <p>± 5% sub rounded wht feld phenos w/ Ab, bio f-g mass</p>								
0							<p>disseminated py w/ peacock tonish covellite?</p> <p>py, F, specularite, clay</p> <p>spec, py ser, clay vug filling</p>	<p>12.6 - 14.9 <u>POLYLITHIC BRECCIA</u> (11)</p>								
0																
5																
10																
15																

7367

BQWL

7-10









HOLE NO.: DP-71-4

PROJECT: DEER PARK

PAGE NO.: 6 OF 10

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE: 1cm:1m

INCLINATION:

BEARING:

TOTAL DEPTH: 141.4 m

LOGGED BY: GEN

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED	
	Silica	Sericite	clay	chlorite													
75					mod. str.	Mt	<p>dissem mag biot → mag Mt, chl, MA vnt's</p> <p>tight, minor vugs Trace MoS<sub>2</sub>, F</p> <p>vug w/ wk qtz, calc lining minor open vugs.</p>										
80					wt.	Mt	<p>2mm calc vnt 6/0.5m.</p>	<p>79.1 - 82.8 <u>ANDESITE DIKE (5b)</u> biotite, hb andesite f-m-g w/ some sections w/ up to 5% feldspar phenos, mod mag.</p>									
85					str	Mt	<p>chl, Mt and Fr. hairline Mt, calc.</p> <p>(6) vuggy but open</p> <p>(2b) tight w/ siliceous frag. str qtz cement w/ dissem Mt. ave frag size 2-0.5cm.</p> <p>tight, mostly siliceous frag. dissem Mt</p>	<p>open vuggy breccia wk. Mt. (11)</p> <p>Grey Aphanitic Qtz-Monzonite Porphyry. (2b) - 30% rounded to blocky pinkish feldspar up to 1cm in gray v-siliceous groundmass 5% mafics biot, hb. some dissem Mt.</p>									
90					wt.	Mt		<p>89.6 - <u>Porphyritic Andesite (5b)</u> similar to above dike.</p>									

BOUL

(11)

79.1 - 82.8 ANDESITE DIKE (5b)

Grey Aphanitic Qtz-Monzonite Porphyry.

(2b) - 30% rounded to blocky pinkish feldspar up to 1cm in gray v-siliceous groundmass 5% mafics biot, hb. some dissem Mt.

89.6 - Porphyritic Andesite (5b) similar to above dike.





HOLE NO.: DP-71-4

PROJECT: DEER PARK

PAGE NO.: 8 OF 10

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE: 1cm:1m

INCLINATION:

BEARING:

TOTAL DEPTH: 141.4 m

LOGGED BY: GEN

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	Silica	Sericite	clay	chlorite												
105					str	py, ser, h, mt	<p>(11) POLYLITHIC BRECCIA.</p> <p>large frag. of rhyolite feldspar porph.</p> <p>split</p> <p>spec. hem + py on Fr.</p> <p>clay alter'n out from Mt unit.</p> <p>py, hem, mag stockwork</p> <p>chl, mt, Fr.</p>		1							
110					mod str	mt	<p>Mt, chl, py on Fr.</p> <p>dkf-g and. dike? frag.</p> <p>large agglom pheno.</p> <p>vuggy open, minor qtz cement</p> <p>micro breccia str qtz cement</p> <p>2cm mag in minor chl</p> <p>biot → Mt, hairline Mt vnlts</p> <p>3mm mt</p>		2%	8 1/4						
115					str	mt	<p>open breccia vuggy.</p> <p>ser? minor silica cement</p> <p>str dissom Mt plus pervasive clay alter'n of f-g groundmass</p> <p>open vuggy breccia w/ minor partial calc lining.</p> <p>similar to ab but brn. matrix coloration.</p> <p>qtz, chl calcite infilling</p> <p>! partial lining of vugs.</p> <p>specks Fw/calc</p> <p>vuggy in spots, wk chl lining.</p>		3%							
							1150-116.1 str broken rock poor recovery.		1-2							
							119.0-119.3 fine Gr. Andesite. dike		2							
120									24							



























HOLE NO.: DP-71-1

COLLAR ELEV.:

COORDINATES:

INCLINATION: -45°

GROUND ELEV.:

N. 67+10

E. 70+57

BEARING: 270° Az.

PROJECT: Deer Park

DATE STARTED: July 15, 1971

DATE FINISHED: July 20, 1971

TOTAL DEPTH: 67.7 m

PAGE NO.: 1 OF 5

REF. TO CLAIM CORNER:

SCALE: 1cm : 1m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTI-MATED
	Silica	Sericite	Clay	Chlorite												
0								0-0.61 OVERBURDEN								
								0.61-1.8 BRECCIA (II) Aphanitic Feld. porph frag; Qtz-Mt. veinlets oxidized								
								1.8-2.7 Porphyritic Andesite Dh. (5b)								
								2.7-3.2 Aphanitic Qtz-Monzonite Porph. (2) Flow band? Lt. grey siliceous groundmass 5-10% 1-2 mm Anhedra! Spar phenos								
								3.2-4.6 Porphyritic Andesite Dh. (5b) ; Frag. of aphanitic spar porphyry Moderately altered lower contact								
5								4.6-7.6 Aphanitic Qtz-Monz. Porph. (2) fine disseminated by throughout; some minor patchy clay alteration								
								7.6-9.0 Breccia Zone (II?) Siliceous frags + disc. Py; siliceous groundmass; Aphanitic Spar porph frag; tight breccia → siliceous + pyritic groundmass; Also (18a or b) type frags								
								9.0-9.9 Aphanitic Qtz-Monz. Porph (2) 80° to C.A.								
10								9.9- Aphanitic Qtz-Monz. Porph (2a) 40-50 white Spar phenos; Glomero-porph (1-4mm) Aphanitic groundmass < 5% fine 1mm fine mafics (some) Zenoliths of fine buff frags.								
								12-15 Frac. @ 70° to C.A.								

7367

EQWL

12-15

HOLE NO.: DP-71-1

COLLAR ELEV.:

COORDINATES:

INCLINATION: -45°

GROUND ELEV.:

N. 67+10 E. 70+57

BEARING: 270° Az.

PROJECT: Deer Park

DATE STARTED: July 15, 1971

DATE FINISHED: July 20, 1971

TOTAL DEPTH: 67.7 m

PAGE NO.: 2 OF 5

REF. TO CLAIM CORNER:

SCALE: 1cm:1m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	Mt. % <sup>max</sup> SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	Silica	Sericite	Clay	Chlorite												
15							70° zenoliths of fine buff frags	-18.6 Aphanitic Qtz-Monz. Porph. (2a)								
20							70° Frags of glomero porphyritic andesite contact fr. carry F lower contact @ 55° to C.A.	18.6-22.3 Porphyritic Andesite (5b) Glomero-porphyritic (in part) w/ fspars → chlorite or epidote; (epidote alt.); glomerals up to 0.9 mm; phenos 1-2 mm; aphanitic grey-green groundmass w/ < 5%; moderately magnetic								
25							Py veinlets; Mt. Py + speck py in fractures (60° to C.A.) 3mm py vein tight breccia lower contact @ 20° to C.A.	22.3-27.2 Breccia (11) Frags mostly (18), andesite; aphanitic fspars porphyry, somewhat vuggy w/ py-Mt. infilling vugs; also chlorite as matrix; some py veinlets; Mt-py + speck py in fractures								
							Py veinlets lower contact @ 30° to C.A.	27.2 - 27.7 Fine grained Andesite (5) dark grey, aphanitic								
30							3cm wide Qtz, Py, Mo brecciated contact with frags of (26c) and (26) upper contact chilled	27.7-28.9 Buff Aphanitic Qtz-Monz. Porph. (2c) Buff silicious frag, aphanitic gm. mass 1-5% Feld phenos 1-2 mm; < 1% fine diss. Mt.; also hairline Mt.								

BQWL

29-32





















HOLE NO.: DP-71-2

PROJECT: Deer Park

PAGE NO.: 1 OF 6

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED: July 20, 1971

REF. TO CLAIM CORNER:

COORDINATES:

N. 67+10

E. 70+60

DATE FINISHED: July 26, 1971

SCALE: 1cm:1m

INCLINATION: -50°

BEARING: 70°

TOTAL DEPTH: 89.9m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	Mt. & Hemm.	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED				
	Silica	Sericite	Clay	Chlorite																	
0								0.0-1.0 Overburden													
5					Mod To Strong	Py Mt	<p>MoS<sub>2</sub> veinlet 1mm cuts matrix + frags. speck of MoS<sub>2</sub></p> <p>some Mt. in fractures</p> <p>more frags of (1) 50% 4.4-6.0 frag of (2) w/ diss Mt. + Py + fine hairline fractures w/ Mt. greenish-br. sericite alt. of matrix</p> <p>strong Py frac. @ 40° Mt. veinlets stop at frac. Py veinlet 6mm, also Py-sericite veinlets</p> <p>moderate-strength Py veinlets</p> <p>MoS<sub>2</sub> in vug and fracture</p> <p>60°</p> <p>50°</p>	<p>1.0-8.0 Breccia (11)</p> <p>silicious matrix w/ Qtz, Py, Sericite; most frags of (2), some frags altered;</p> <p>may be small silicious frags w/ very fine MoS<sub>2</sub>; frags fresh esp. (19) where biotites only slightly attacked and altered to chlorite; some corrosion of Fragg edges by alt.</p> <p>6.2-8.0</p> <p>mostly frags of (1), and smaller frags of (2); strong Py + minor Mt. matrix w/ specks of MoS<sub>2</sub>; one piece of core at end of section showing volcanic And. brecciating (26) frags and again brecciated by Andesite</p> <p>8.0-9.0 Aphanitic Qtz-Monz. Porphyry (2a) w/ Qtz-Sericite-Py Alteration</p> <p>9.0-9.4 Breccia (11)</p> <p>chlorite-Mt. fracture veinlet in frags; Kspar alter. within breccia; also Qtz near contact; Mins: Mt, Py, Mo</p> <p>9.4-10.8 Fine Grained Andesite (5)</p> <p>Fine grain, dark green, moderately Magnetic</p> <p>10.8-Aphanitic Qtz-Monz. Porphyry (2)</p> <p>30% 2-3mm pink anhedral Kspar phenos in greyish silicious aphanitic matrix containing fine Py disc; hairline Py-sericite veinlets; some diss Mt. (occasionally hairline)</p>													
10					Mod To Strong	Py															
15					Mod To Strong	Py Mt															

BQWL

3-6

HOLE NO.: DP-71-2

PROJECT: Deer Park

PAGE NO.: 2 OF 6

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1cm : 1m

INCLINATION:

BEARING:

TOTAL DEPTH: 89.9 m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTIMATED	
	Silica	Sericite	Clay	Chlorite													
15						Mt, Py	Chlorite - Mt. Fractures occas. Qtz - Mt veinlet on frac. w/envelope of sericite @ 45° on veinlet frag of porph. Andesite.  2mm Qtz-Mt. veinlet @ 60° w/Py, Mt + Py on fractures	- 18.0 Aphanitic Qtz-Monz Porph (2) continued									
20						Mt, Ca, Fe	chlorite on fractures contact @ 60° occasional Chlorite - Mt. on fractures  Calcite fractures both contacts @ 40° to C.A.	18.0 - 18.7 Fine grain Andesite Dike (5) moderately magnetic  18.9 - 20.0 Aphanitic Biotite Fspar Porph. (16) up to 1cm 5% glomero-porph; 2-3mm, 15% euhedral; < 5% mafic (1mm) in siliceous medium grey groundmass; whitish-pink Fspars									
25						Mt, Fe, Py	Qtz-sericite-Py vein, strong, 1cm @ 50° as above, 4cm, Kspar? @ 60° fine bluish tinge: MoS <sub>2</sub> ? as above w/ vuggy Qtz brecciated rx. 5cm @ 70° as above, 1cm @ 60° w/ MoS <sub>2</sub> in frac. cutting @ 90° to frac. fine hairline fractures to contact Mt-sericite? 30 fractures/meter	20.0 - 21.0 fine grained Andesite Dike (5) moderately magnetic  21.0 - 26.8 Aphanitic Qtz-Monz. Porphyry (2)									
						Py, Fe, Ca	weak calcite fractures  7cm clay alt. band w/discontinuous Qtz-Mt vein 1mm Qtz veinlets @ 50° MoS <sub>2</sub> on contact contact indistinct @ 60° over 2cm	26.8 - 27.7 Porphyritic Fspar Biotite Andesite (5c) glomero-porph. Fspars up to 1/2cm; some epidote alteration; moderately magnetic; cuts (2) w/ brecciation along contact  27.7 - 29.0 Aphanitic Qtz-Monz. Porphyry (2) some clay alteration									
-30								29.0 - Grey Aphanitic Rhyolite Porph. (2d)									

7M @

HOLE NO.: DP-71-2

PROJECT: Deer Park

PAGE NO.: 3 OF 6

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1cm:1m

INCLINATION:

BEARING:

TOTAL DEPTH: 89.9 m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	Mt. % Hem SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTI-MATED	
	Silica	Sericite	Clay	chlorite													
30								Mt-chlorite-Py fractures									
								- 31.4 Grey Aphanitic Rhyolite Porphyry (2d) grey-green silicious aphanitic groundmass, 10% 2mm fleshy phenocrysts anhedral; minor diss. Mt.									
								? contact @ 50° chlorite - Mt. fractures									
								contact @ 45° w/banding Py-Mt Fracs @ 50°									
35								FI-Ser-Mt-Cl-Qtz 1/2 cm @ 40° strongly in Fracs w/ Mt and Mt-Qtz stockwork of ser-Qtz-py PY 2-3% @ 35° Qtz-Fpy-Mt @ 10° (2-3mm)									
								open fractures @ 30° py + minor Mt.									
								contact ragged @ 40°									
								? contact @ 60°									
								35.6-38.3 Aphanitic Qtz-Monz Porphyry (2a) very similar to above w/ xenoliths of (2) up to 2-3cm; Mt veinlets discontinuous and sparse									
								38.3-38.7 Fine grained Andesite (5)									
40								37.4-41.8 mod-strong alt. silicified rx Qtz-ser. MoS <sub>2</sub> Frac. @ 70° Qtz + Qtz-Mt veins cut Frags + alter. Frag of (1) cpy + MoS <sub>2</sub> specks occ. MoS <sub>2</sub> Frac. fill Qtz-ser vein @ 60° w/chl-Mt. 2-4mm Qtz-Ser. vein // C.A. 44.0-45.6 Frac. w/chl. + mod. to strong Qtz-Mt + Py; 4-5% Mt < 1% Py.									
								38.9-45.6 Breccia (1) w/ Frags of (2) + (1); mod to strong alter. Qtz, Py, Ser, minor Mt.; Split core from 38.9-43.6									
45																	

BQWL

39.4-41.8

pinkish coating due to kspar alter.

HOLE NO.: DP-71-2

PROJECT: Deer Park

PAGE NO.: 4 OF 6

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1cm:1m

INCLINATION:

BEARING:

TOTAL DEPTH: 89.9 m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	Mt. % Hem SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	Silica	Sericite	Clay	Chlorite												
45																
								sharp contact @ 60°								
								45.6-49.6 Porphyritic Andesite Dike (5b) somewhat glomero porphyritic texture; phenos up to 1cm; 5% phenos								
50								Calcite fracture fill								
								contact @ 50°								
								Weak calcite + chlorite on fractures								
								50.9-51.0 Porphyritic Andesite Dike (5b)								
								51.0-53.7 Porphyritic Qtz-Diorite (6) as @ 49.6-50.9 but also chlorite on fractures								
								53.7-54.0 Porphyritic Andesite Dike (5b)								
55								54.0-57.6 Porphyritic (Qtz-Diorite (6) as @ 49.6-50.9 but more chlorite near lower contact								
								contact @ 85° to C.A.								
								57.9-58.2 non-porph.								
								57.6- Porphyritic Andesite Dike (5) + (5b)								
								59.2-59.7 non-porph								
60																

BQWL

46-49

54-57

HOLE NO.: DP-71-2

COLLAR ELEV.:

COORDINATES:

INCLINATION:

GROUND ELEV.:

N. E.

BEARING:

PROJECT: Deer Park

DATE STARTED:

DATE FINISHED:

TOTAL DEPTH: 89.9 m

PAGE NO.: 5 of 6

REF. TO CLAIM CORNER:

SCALE: 1 cm : 1 m

LOGGED BY: G.F.N

SECTION	ALTERATION				MINERAL GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	Mt. % Hem SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	Silica	Sericite	Clay	Chlorite										
60					FRACTURING Strong	60.5-62.5 Fine calcite Fracture fills approaching stock work								
					Mod	4cm frag. of porph. And. diss. chlorite  chilled contact	62.5-64.7 Porphyritic Qtz-Diorite (2) Strongly chloritized							
65					Low Mo, Py, Mo, Fl, Py	64.7-66.0 mod. Py stockwork  15cm And. dike; lower contact @ 75° w/ trace Fl. in Qtz vein @ contact 10cm porph. And. Dike 0.9m finely brecciated area w/ matrix of Qtz, chlorite + MoS <sub>2</sub> ; lower contact @ 60°	64.7- Aphanitic Qtz-Monz. Porphyry (2) Strong frac. w/ Py stockwork							
					Mod to Strong Mo, Py, Ni	67.4-72.8 strongly frac. w/ chlorite ± Py; diss MoS <sub>2</sub> + finely diss Mt.; frac. @ 80°  1.2m bleached alteration 2cm silicified band @ 40° w/ altered envelopes  contact @ 30° dark f. gr. Andesite Dike  contact @ 40° diss. Py								
70					Strong Mo, Py, Ni									
75					Py, Fl									

BWL

<1%  
<1%

HOLE NO.: DP-71-2

PROJECT: Deer Park

PAGE NO.: 6 OF 6

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE: 1cm:1m

INCLINATION:

BEARING:

TOTAL DEPTH: 89.9 m

LOGGED BY: G.F.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE RECY / HOLE	Mt. % Heavy SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% RECY SAMP. INT.	ESTI-MATED
	Silica	Sericite	Clay	Chlorite												
75					Mod to Strong	Py FI		<p>Dior. Py Py on Frac's @ 60° w/ weak Fl. on Frac's 16 frac's / 1/2 m contact @ 80° to C.A. 15cm chilled margin contact @ 60° contact @ 60°</p>		<1%						
80					Mod			<p>77.6 - 78.5 Porph. Qtz-Diorite (6) 78.5 - 79.0 Porphyritic Andesite (5b) 79.0 - 79.7 Porphyritic Qtz-Diorite (6) 79.7 - 80.0 Porphyritic Andesite (5b) 80.0 - 82.6 Porphyritic Qtz-Diorite (6)</p>								
85					Mod to Strong	Py		<p>82.6 - 89.9 (Weakly) Porph. Andesite (5b) 1.1m slight greenish color 1mm Py frac. fill @ 10° 83.2 - 88.0 Aphanitic Qtz-Monz. Porph. (2) hairline fracture fill of chlorite and minor Mt. and minor Py</p>		<1% Mt <1% Py						
90					Mod to Strong	Mt. FI.		<p>Mt-Qtz veinlets @ 40° minor Fl. on fractures contact distinct @ 50° dk. f.g.v. weakly porph. And. (0.5 m) Feldspar phenos → Epidote Fractures @ 10° + 40° w/Py + chlorite (weak) E.O.H. @ 89.9 m</p>								

REVIEW















HOLE NO.: DP-71-3

COLLAR ELEV.:

COORDINATES:

INCLINATION: -90°

GROUND ELEV.:

N. 67. + 10      E. 70 + 58

BEARING: 90°

PROJECT: Deer Park

DATE STARTED: JULY 26, 1971

DATE FINISHED: JULY 27, 1971

TOTAL DEPTH: 28.3 m

PAGE NO.: 1 OF 2

REF. TO CLAIM CORNER:

SCALE: 1cm: 1m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE RECY / HOLE	Mt. % Hem. SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% RECY. SAMP. INT.	ESTI-MATED
	Silica	Sericite	Clay	Chlorite												
0								0.0 - 1.5 Overburden								
5							Fractures @ 90°	1.5 - 7.5 Breccia (11) limonitic to 4.0 m; MoS <sub>2</sub> + Py silicious matrix; frags contain sericitized fsparr flooding into fresh pinkish fsparr; green sericitic alteration around frags; clay alt. around frags? vuggy in places frags mostly (26) but 10% (18)		5-6% Py < 1/4 MoS <sub>2</sub>						
10							contains frags of breccia on upper contact (20b)	7.5 - Porphyritic Andesite (5b)								
15					Mod to Strong								BQWL			

HOLE NO.: DP-71-3

PROJECT: Deer Park

PAGE NO.: 2 OF 2

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1cm: 1m

INCLINATION:

BEARING:

TOTAL DEPTH: 28.3 m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE RECY / HOLE	Mt. % Horn. SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% RECY. SAMP. INT.	ESTI-MATED
	Silica	Sericite	Clay	Chlorite												
15								<p>-23.8 Porphyritic Andesite (5<sup>b</sup>) (continued)</p>								
20																
25								<p>lower contact @ 30° core split from contact to 27.8 m chlorite on Frac. @ 90°</p> <p>23.8-28.0 Leucocratic Monzonite (1) white fspar 90%, mafics 10% (biotite or hornblend) pyrite after mafics, some diss. Py</p>								
								<p>-2.3 mm wide Py-Mt vein parallel to C.A.</p> <p>contact @ 15° to C.A.</p> <p>28.0-28.3 Aphanitic Biotite fspar Porph (16) weakly magnetic minor diss. Pyrite</p>								
-30								<p>EOH @ 28.3 m</p>								

BOWL

Py 2-3% Py

<1% Mt 2% Py

HOLE NO.: DP-71-6

COLLAR ELEV.:

COORDINATES:

INCLINATION: -47°E

GROUND ELEV.:

N. 62+76

E. 89+70

BEARING: 90°

PROJECT: Deer Park

DATE STARTED: Aug. 8, 1971

DATE FINISHED: Aug. 10, 1971

TOTAL DEPTH: 87.5 m

PAGE NO.: 1 OF 6

REF. TO CLAIM CORNER:

SCALE: 1cm:1m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	Mt. % Hem SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	Silica	Sericite	Clay	Chlorite												
0								0.0-0.8 Overburden								
					Nod			0.8-2.0 Porphyritic Qtz-Diorite (6) Fspar porph. w/ white sub-cuboidal Fspar phenos; locally mod. Mt. stockwork		<1%						
							minor Qtz-Mt vein contact @60°	2.0-2.5 Porphyritic And. (5b) w/occ. Py Frac. fill		<1%						
							minor Qtz-Mt veining @60°	2.5-2.6 (6) as to 0.8-2.0		<1%						
							Mt. stockwork w/ strong Qtz	2.6-3.0 Biotite Andesite Dike (5a) Weakly chloritized								
5								3.0-4.1 Aphanitic Qtz-Monz. Porphyry (2) locally Qtz rich								
								4.1-4.6 lamprophyre (5d)								
								4.6- Porphyritic Syenite Dike (20a) large Fspar phenos w/ white rims and grey cores; no sulphides post-mineral dike								
					Very Weak											
10								Fractures @40° w/ minor Mt-Chlorite								
15																

7367

BQWL

9-12

HOLE NO.: DP-71-6

COLLAR ELEV.:

COORDINATES:

INCLINATION:

GROUND ELEV.:

N. E.

BEARING:

PROJECT: Deer Park

DATE STARTED:

DATE FINISHED:

TOTAL DEPTH: 87.5 m

PAGE NO.: 2 of 6

REF. TO CLAIM CORNER:

SCALE: 1cm:1m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	Mt. % Hcm SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	Silica	Sericite	Clay	Chlorite												
15								fractures @ 40° w/ minor Mt-chlorite								
20					Very Weak			Mt-Qtz-cPy vein @ 40° vuggy Mt-Qtz-cPy-Py vein subparallel to C.A. broken core over 5cm Fl. veinlet								
25					Mod 6-7/8m			fractures @ 45° w/ Mt, Py, limonite + MnO <sub>2</sub> occ. Frag								
30																

## DESCRIPTIVE GEOLOGY

-17.1 Porphyritic Syenite Dike (20a) continued

17.1 Dark grey Qtz-Monz Porphyry (8) locally brecciated @ lower 1/3 of section; increase in ratio of frags to dike towards lower contact; post (2) gradual into breccia proper w/ abundant dk. grey fspars phenos at first, then decreasing; weak fracture filling w/ Mt, Py, limonite + pyrolusite; oxide on fractures to 41.0 m; trace diss. Py; rock is relatively fresh

BQWL

25-28



HOLE NO.: DP-71-6

PROJECT: Deer Park

PAGE NO.: 3 OF 6

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE: 1cm: 1m

INCLINATION:

BEARING:

TOTAL DEPTH: 87.5 m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	Mt. % Hem. SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	Silica	Sericite	Clay	Chlorite												
30																
								DESCRIPTIVE GEOLOGY								
								Dk. grey Qtz-Monzonite Porph. (8) (continued)								
35																
40								Fractures @ 45° w/ Mt, Py, limonite + MnO <sub>2</sub>								
								Frag. content increasing								
								8cm And. dikelet @ 40°								
45																

RQWL 35-38



HOLE NO.: DP-71-6

COLLAR ELEV.:

COORDINATES:

INCLINATION:

GROUND ELEV.:

N. E.

BEARING:

PROJECT: Deer Park

DATE STARTED:

DATE FINISHED:

TOTAL DEPTH: 87.5 m

PAGE NO.: 5 of 6

REF. TO CLAIM CORNER:

SCALE: 1 cm: 1 m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	Mt % Horn SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	Silica	sericite	Clay	Chlorite												
60						M <sub>3</sub>		MoS <sub>2</sub> in vugs and frac.	-73.7 Breccia (11)							
						Mt			continued							
						M <sub>2</sub> Mt		MoS <sub>2</sub> in fracture	60.6 - 64.0 split core							
65						M <sub>2</sub> Mt		chlorite-Mt in vugs								
						Mod										
						M <sub>2</sub> Fl.		Fl. and MoS <sub>2</sub> in vug								
						M <sub>2</sub> Mt										
70						M <sub>2</sub> Mt		0.5m Andesite dike dark green w/a 20%+ of 1mm biotite; ~30%+ of fine spars with chlorite after magics and spars; spars → clay + chl. contacts @ 15°								
						Mt		0.6m dikelet of (8) fresh and barren								
						Mod										
75									73.7 - Dark grey Qtz-Monz. Porph (8)							

BQWL

HOLE NO.: DP-71-6

PROJECT: Deer Park

PAGE NO.: 6 OF 6

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1cm = 1m

INCLINATION:

BEARING:

TOTAL DEPTH: 87.5 m

LOGGED BY: G.E.N.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE RECY / HOLE	M.F. & Hem SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% RECY. SAMP. INT.	ESTI-MATED
	Silica	Sericite	Clay	Chlorite												
75						Mt		<p>2cm. Mt. veinlet w/ minor Qtz. + fsp. @ 30°</p> <p>minor carbonate in vugs</p> <p>Carbonate + minor hematite frac. fill @ 60°</p>								
80						Ca, Fl		<p>Carbonate + trace Fl. as frac. fill @ 60°</p>								
85						Ca, Fl		<p>Carbonate + trace Fl. as frac. fill @ 60°</p>								
90								<p>E.O.H @ 87.5m</p>								
								<p>86.5-87.5 Monzanite (similar to (3)) large grey fsp. phenos; blotchy, also 1mm rounded white pink; 30% groundmass w/ 10% biotite</p>								

BOWL















HOLE NO.: DDH 71-7

COLLAR ELEV.:

COORDINATES:

INCLINATION: -70°

GROUND ELEV.:

N. 72+22 E. 76+12

BEARING: 360° Az.

PROJECT: DEER PARK

DATE STARTED: Aug. 12, 1971

DATE FINISHED: Aug. 17, 1971

TOTAL DEPTH: 85.9 m

PAGE NO.: 1 OF 6

REF. TO CLAIM CORNER:

SCALE: 1 cm = 1 m 1:100

LOGGED BY: P. Brien + G. Harman

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTI-MATED
	silica	sericite	clay	chlorite												
0								0-2 Strongly oxidized rock.								
5							<p>2.0-9.4 <u>Tufaceous Breccias (II)</u>            Top color, fragment size 2mm-4cm.            larger fragments by <u>Feldspar porphyry</u> w/ aphanitic gndmass.            mod to str siliceous, feldspar phenos &lt; 2m → clay minor ser            size 34cm-1.3mm - most frag. appear to be this type 85%            of <u>Feldspar Rich intrusive</u> w/ mafic → magnetite some chl. 40%            of <u>Minor Andesite</u> fragments - 5% feldspar → w/ clay.</p> <p>(5) gndmass - mod siliceous w/ clay alter'd phenos of            feldspar.</p>		2%							
10							<p>9.4-9.5 <u>Andesite Dike - f-g chl mafics</u>            dk. green color</p>		4%							
15							<p>9.5-17.1 <u>Intrusive Breccia (II)</u>            as above.            some area have a high % of matrix.</p>		4%							

BOWL

10-13

HOLE NO.: DP 71-7

COLLAR ELEV.:

COORDINATES:

INCLINATION:

GROUND ELEV.:

N. E.

BEARING:

PROJECT: Deer Park

DATE STARTED:

DATE FINISHED:

TOTAL DEPTH: 85.9 m

PAGE NO.: 2 of 6

REF. TO CLAIM CORNER:

SCALE: 1 cm : 1 m

LOGGED BY: GEN + BKB

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP INT.	ESTIMATED	
	silica	sericite	clay	chlorite													
15							<p>sp. fluorite, py (11) <u>Intrusive Breccia</u> Contd.</p> <p>MoS<sub>2</sub> veins.</p> <p>py, MoS<sub>2</sub>, minor fluorite</p> <p>dissem MoS<sub>2</sub>, fluorite in matrix material</p> <p>andesite frag.</p> <p>aph. pelph. peph.</p> <p>sil frags.</p> <p>dissem MoS<sub>2</sub>.</p> <p>MoS<sub>2</sub> stringer</p>		3%								
20					moderate	MoS <sub>2</sub> py.	<p>dissem fluorite, MoS<sub>2</sub></p> <p>py.</p> <p>sil frags w/ 2mm feldspar phenos.</p> <p>17.1-22.6 <u>Porphyritic Qtz. Monz.</u> - There appears to be (2) a gradual increase in % fragments. This rock unit is the matrix of the above breccia. Rock is distinctly porphyritic - feldspar phenos are altered to clay w/ minor sericite gives brnish appearance - and chlorite although some subhedral xls quite siliceous groundmass. MoS<sub>2</sub> is dissem. within this unit as well as py. Rx frags still are conspicuous although</p>		4%						17-20		
25						Fluorite	<p>frag. - tk sil clay alter</p> <p>dissem MoS<sub>2</sub> py.</p> <p>calc py. fluorite.</p> <p>minor specks MoS<sub>2</sub>.</p> <p>siliceous frag.</p> <p>MoS<sub>2</sub> point, py</p> <p>vug infill w/ calc, fluorite</p> <p>py MoS<sub>2</sub> clay</p> <p>6cm angular por and frag</p> <p>vug w/ spec hem, laths</p> <p>clay, py MoS<sub>2</sub> fluorite</p> <p>sulphide poor</p> <p>good dissem.</p> <p>MoS<sub>2</sub> py, some dissem Fluorite</p> <p>magnetite → hemd.</p> <p>pyt magnetite - cpy</p>		4-5%								
30							<p>22.6-22.7 <u>Andesite dyke</u> - (5)</p> <p>22.7-28.7 <u>Porphyritic Qtz Monzonite</u>.</p> <p>- 40% - anhedral feldspar phenos ~ 2-4mm some larger ones up to 1cm, in mod sil ground mass, some biot.</p> <p>(2) 23.5 dk feldspar phenos → ser, some biotite in matrix &amp; in feldspar (secondary)? MoS<sub>2</sub>, py dissemi.</p> <p>24.7 Brown mottled texture from feldspar → clay, sericite</p> <p>25. MoS<sub>2</sub> concentrated around siliceous fragment</p> <p>25.9-26.8 <u>Porphyritic Intrusive</u> - only larger phenos up to 1cm, sil matrix, weaker alter'n no bio.</p> <p>28.7-28.9 <u>Andesite dyke</u> - Biotite, hb &amp; feldspar phenos in a feldsp chl grnd mass. (5c)</p> <p>28.9-32.0 (2) <u>Porphyritic Qtz Monzonite</u>.</p>										

BQWL

23.5-26.5

29-32





HOLE NO.: DP-71-7

COLLAR ELEV.:

COORDINATES:

INCLINATION:

GROUND ELEV.:

N. E.

BEARING:

PROJECT: Deer Park

DATE STARTED:

DATE FINISHED:

TOTAL DEPTH: 85.9 m

PAGE NO.: 5 OF 6

REF. TO CLAIM CORNER:

SCALE: 1 cm : 1 m

LOGGED BY: GEM + EK3

SECTION	ALTERATION				FRACTURING	MINERAL GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTI-MATED	
	SILICA	EPIDOTE	CLAY	CHLORITE												
60							<p>1/2 Mt vhs.</p> <p><u>INTRUSIVE Biotite And. 61.3 - 63.6 (11)</u>                      Irreg. blue frag. in chl. Mt. matrix, felsic frags may be associated w/ felsic unit below. 1/2 Mt vhs.</p>			1/2						
							<p><u>ANDSITE 61.3 - 63.6 (fine grained) (5)</u>                      Dk. grn. f. gr. w/ occ. pink tan-white subtidal (?) inclusions (fragments?). Prev chl. after gm.</p>			1/2						
							<p><u>FELSITE 63.6 - 67.6 (?)</u>                      Creamish cold aplastic to f. gr. d., occ. vague poss. Qtz eye. Also grad'd short sections of mafic dkg. int. w/ occ. Qtz. Wk. med. ser-sil. pervasive, lined by grey Qtz segregations, irregular, few are across. Wkt fract. attributed to 1/2 fr. w/ R<sub>2</sub> &amp; R<sub>1</sub>.</p>			1/2						
65							<p>Irreg Qtz segregations.</p>			1/2						
							<p><u>(5a) 67.6 - 73.6 Biotite Andesite</u>                      As per 61.3 - 63.6, but andesite nomenclature wrong, in fact consists of fine 10% Bi, speckled 30% of back set in grey aplastic matrix, 5% siliceous. Occ. irreg. frag phenos. May in fact be lamprophyre.                      @ 68.5 4 cm dikelet of 10% Bi, 30% Qtz, 60% pink fsp (also @ 69.1)</p>			1/2+						
70							<p>8cm dikelet                      Irreg masses of R<sub>2</sub> Mt. chl. (Cp1)                      2mm Qtz-Mt x-cut by 2cm dikelet x-cut by Carb. w/ R<sub>2</sub> Mt.</p>									
							<p>Sharp but 11-150 @ roughly 20°</p> <p>At contact R<sub>2</sub> Mt. H. H. w/ pink cav. terminate.</p>									
							<p><u>Pink Qtz-Monzonite 73.6 - 86.0 (9)</u>                      - see descrip. next page.</p>									
75																

BOWL

63.6 - 66.6

HOLE NO.: DD-71-7

PROJECT: DEER PARK

PAGE NO.: 6 OF 6

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1cm: 1m

INCLINATION:

BEARING:

TOTAL DEPTH: 85.9 m

LOGGED BY: B.T.B.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP INT.	ESTI-MATED
	SILICA	SERICITE	CLAY	CHLORITE												
75								<p>Pink Qtz - Monzonite - <u>cont'd.</u> (9)</p> <p>Use grid, locally porphyritic, or subhedral tan and pink fspat planes to 1cm? 15 mm Bi in matrix, which has locally fine abundant Qtz. Makes ch'd. etc. f. fresh.</p>								
80								<p>81.2 1st app. of 1-3 mm carb VHS, 30-60°C. which x-cut Py-Mt Hb VHS. Contain <u>Py-F-MoS<sub>2</sub></u></p>								
85								<p>And frags.</p> <p>And frags.</p> <p>last 15 cm of hole finer grained than above vague contact, pass. dike unit, x-cut by gray fspat porph, 20°C last piece of core. V. sil gm.</p>								

7 1/2 Mt-B VHS.

And frags.

And frags.

1/2"

BQWL

80-83















HOLE NO.: DP 74-1

PROJECT: DEER PARK.

PAGE NO.: 1 OF 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED: June 30, 1974

REF. TO CLAIM CORNER:

COORDINATES:

N. 75+22 E. 78+00

DATE FINISHED: July 5, 1974

SCALE: 1 cm = 1 m

INCLINATION: -44.5°

BEARING: 190°

TOTAL DEPTH: 152.4 m (500')

LOGGED BY: F. K. Bowd

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED	
	SILICA	SERICITE	CLAY	CHLORITE													
0								OVERBURDEN 0-2.4									
								Mt. a: distinct grains and after mafics.									
								2.4 - 3.9 Pink Qtz-Monzonite (9)									
								Amph. Pink intr w/ fine mafics. Mag. as subhedral, 3-4 mm, pink 30-70%; dk grey interstitial, 15-20%; mafics → chl, 1 mm <sup>2</sup> ; some amphibole lathes, 10-15%.									
5								3.9 - 5.0 DK. GREY Andesite, Fspar Porph. (13)						3.9-5.0			
								Fspar phenos, 30%, 2-3 up to 1 mm, mag. sharp, zoned cores in grey lustrous matrix; Bt 1-2 mm, biotite 10-15%; set in figs. dk grey gm w/ wk-mad chl. and mod. mag. F. int. 3' prob. distribute to dk grey col. Amph limited to w/ grey cores of fspars. (sericite?)									
								3m chill margin.									
								5.0-12.0 LT. GREY FSPAR PORPHYRY. (14)									
								V. similar text. to above unit, except gm slt finer gr'd, w/ abundant fpar grains which impart lighter colour. Mod mag. - Mt. distinct 1mm - also extremely fig. ch.									
								vd. w/ 2-3 mm <sup>2</sup> gouge and (R)									
								Spec floor.									
								1mm w/ (R)									
								sharp @ 30° C.									
								4m chill margin.									
								12.0-12.5 DK. GREY Andesite Fspar Porph. (13)									
								As per 3.9-5.0									
								12.5- Pink Qtz Monzonite (9)									
								Pink intr w/ fine mafics as per 2.4 to 3.9									
								2x10mm w/ Qtz.									
								2x10mm w/ P. Mt-F									

7367

HOLE NO.: DP 7A-1

PROJECT: DEER MARK

PAGE NO.: 2 OF 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1 cm = 1 m

INCLINATION:

BEARING:

TOTAL DEPTH: 152.4 m

LOGGED BY: BCB

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE RECY / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% RECY SAMP. INT.	ESTI-MATED
	SILICA	SERICITE	CLAY	CHLORITE												
15								-20.1 Pink Qtz-Monzonite (9) continued								
							1/2 w/p 2/10 cm. 2x 3mm w/p. P. 1/2 w/p 6/10 cm. Stamp @ 40			LI						
20							Tr. diss. P. Mod mag.	20.1 - 20.6 dk GRAY Andesite Fspar Porph. (13)								
								20.6 - 28.4 Pink Qtz-Monzonite (9) Pink intr. w/ fine mafic.								
25							Stamp @ 40									
								28.4 dk GRAY ANDESITE FSPAR Porphyry (13)								
30							2x 1/2 w/p F.									

BOWL

SP/4







HOLE NO.: DP 74-1

PROJECT: DEER PARK

PAGE NO.: 5 OF 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE:

INCLINATION:

BEARING:

TOTAL DEPTH: 152.4 m

LOGGED BY: EKB

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	SILICA	SERICITE	CLAY	CHLORITE												
60							<p>Dikelet.</p> <p>Vuggy H. w/ 0.3m partly sil'ed w/ P<sub>g</sub> (F)</p> <p>2cm Mt. P<sub>g</sub></p>									
65					Gen Mt. med, 3-6/A.		<p>P<sub>g</sub> - (F) ass'd w/ Mt H/L vtt.</p> <p>H/L w/ Mt. (F) MoS<sub>2</sub></p>									
70							<p>1-2 cm w/ P<sub>g</sub>.</p> <p>70.1- Crackle zone - str. H/L fract @ 40° 2 dip &amp; irreg. w/ dirty yellow fill. soft - ?</p> <p>@ 70.4 10 cm w/ broken case. Minor clay att'.</p>									
75							<p>1mm w/ P<sub>g</sub> - Mt - Tr MoS<sub>2</sub>?</p> <p>1/2 crackle zone.</p> <p>Vuggy Qtz.</p> <p>(+) fine H= A white cellular (F?)</p> <p>73-74 Broken core - spars med. str. clay att' w. Minor shear.</p>									

DESCRIPTIVE GEOLOGY

Pink Qtz-Monzonite (9)

Pink intr. w/ fine matrix - continued

@ 60.5 10 cm dikelet, H. creamish-pink, f. gr'd equi-granular assembl. of Epax - S - mafics - Mt. Contact x-cut by P<sub>g</sub>-Mt H.

P<sub>g</sub> - (F) ass'd w/ Mt H/L vtt.

1/2 in fract. / Tr. dikelet.

65-68



HOLE NO.: DP 7A-1

PROJECT: DEER PARK.

PAGE NO.: 7 OF 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1cm = 1m

INCLINATION:

BEARING:

TOTAL DEPTH: 152.4

LOGGED BY: RKB

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP INT.	ESTI-MATED		
	SILICA	SERICITE	CLAY	CALCIPITIC.														
90								-102.3 Pink Qtz-Monzonite (9)										
							<p>2mm w/Py - MoS<sub>2</sub> (salvage) - F</p> <p>2mm w/ v. Mn. Tr MoS<sub>2</sub> - Gpy.</p> <p>2x 1cm w/ str. MoS<sub>2</sub> - Tr Py. - F.</p> <p>2x 1mm w/P - Mn F. MoS<sub>2</sub> - Gpy</p> <p>2x 1mm w/Py - MoS<sub>2</sub> - Tr Gpy.</p> <p>8x dikelet w/ str. Mn. Py - Mn. (Gpy) F</p> <p>3x 1mm w/Py - F. Tr MoS<sub>2</sub></p> <p>8x dikelet w/ str. Py &amp; minor Mn. F MoS<sub>2</sub> - Gpy</p> <p>4 1/2 ft. w/ Mn - S - F v. minor MoS<sub>2</sub> - Gpy.</p> <p>sharp @ 55°.</p> <p>5cm andesite.</p> <p>fract w/ v. sparse filling Py - Mn - F. (MoS<sub>2</sub> - Gpy)</p>											
95								96.5-98 increase in sucrose IP in gm w/ incr. in Qtz vhs.										
100								No increase fract. imm. adj to breccia.										
								102.5-103 8x interstitial open vuggy w/ P - S - Mn - minor MoS <sub>2</sub> - F										
								<b>BRECCIA 102.3 - (11)</b>										
								And., pink intr. w/ fine matrix.										
								103-104 And - Andesite fippt porph - (dk gray fippt porph)										
								Sim. to dk gray fippt porph. Int gm. more sil. H. gray. glom. fippt 10-15cm w/ minor quartz fippt in matrix. Similar to 102.3 but H. more sil. matrix.										
105																		

Mn - Mn - F - MoS<sub>2</sub> - Gpy

5A @ 35

1" mostly in fract, v. little dis. d

FRAGMENT 528

BANK

95-98



HOLE NO.: DP 7A-1

PROJECT: DEER PARK.

PAGE NO.: 9 OF 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1:100 = 10'

INCLINATION:

BEARING:

TOTAL DEPTH: 152.4 m

LOGGED BY: BKS.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP INT.	ESTI-MATED	
	SILICA	EPIDICITE	CLAY	CHALCOPRITE													
120								<p>Polytomic Breccia 120-120.5 (11)</p> <p>120.5-130 Med. grey Fspar Porphyry (12a)</p> <p>Med. crowded fspar porph dike. Med grey in color. fspars 2-4 mm, all subhedral, blocky, mostly dk grey some creamish. 4%, set in light grey sil matrix. B host 5%. Tr. P<sub>2</sub> diss. NH 23% diss. Unit</p>									
125								<p>Mo Positive Dike</p>									
130								<p>125-130 Contact grad'ly. increase in no. of frags incorporated into EW of dike.</p> <p>? ? ? ?</p> <p>130-133.5 POLYLTINIC BRECCIA (11)</p> <p>Frags angular to sub-ang Br 'tight' because dike material as per 120.5-130 is interstitial.</p> <p>132.5</p> <p>loc. in ss 1/2 w/ fspars P<sub>2</sub></p> <p>1/2 to 2mm w/ P<sub>2</sub>-M<sub>2</sub>S<sub>2</sub></p> <p>Ep-F. Tr. M<sub>2</sub>S<sub>2</sub></p> <p>Tr. M<sub>2</sub>S<sub>2</sub> diss.</p> <p>Contact sharp @ 130.</p>									
135								<p>133.5-135 Pink/Grey fspar Porphyry (12)</p> <p>Fspars an-subhedral block 3-mm to glomstophorphy 1cm<sup>2</sup> set in light cream speckled sil matrix w/ fine acc. Qtz and 5-10% matrix. Tr. M<sub>2</sub>S<sub>2</sub> diss.</p>									

FRESH

FRESH

V WE - E/F max  
 NW - P<sub>2</sub> - M<sub>2</sub>S<sub>2</sub> - Ep - F  
 Ep.  
 P<sub>2</sub> - M<sub>2</sub>S<sub>2</sub> - Ep - F  
 P<sub>2</sub> - M<sub>2</sub>S<sub>2</sub> - Ep - F

2-3mm to 10mm  
 2000 m<sup>2</sup>

BRWL

124

121

127-130

127-130

130-133.5

133.5-135



































HOLE NO.: DP-74-2

PROJECT: DEER PARK

PAGE NO.: 3 of 15

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE: 1cm = 1m

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: GEN.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE RECY / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% RECY. SAMP. INT.	ESTI-MATED	
	Silica	Sericite	Clay	Chlorite													
30								<p>Grey/Pink Fspar Porphyry (12b) 40-50% 4-7mm feldspar phenos, some w/ lighter rims in groundmass of. fine feldspar &amp; 5-10% fine matrics (biot) ~ 1mm. V. unnoticeable Qtz<sup>grains</sup> although groundmass mod. siliceous. Biot → magnetite + dissem. Rock is unalter'd. has a fleshy grey color.</p>			4%				30-33		
35							<p>1-3 silic fragm py MoS<sub>2</sub> on Fr. specks dissem F speck MoS<sub>2</sub>.</p>										
40							<p>py w/ MoS<sub>2</sub> point. py w/ speck MoS<sub>2</sub> Fr sp. 5cm w/ py py + MoS<sub>2</sub>.</p>				5%						
45							<p>specks Mo w/ py py specks dissem MoS<sub>2</sub> MoS<sub>2</sub> point dissem py. dissem. MoS<sub>2</sub>, py. vug w/ py &amp; MoS<sub>2</sub> and frag</p>								40-43		

Mo Positive Dike

BOWL

NO. E NO.: DP-74-2

PROJECT: DEER PARK

PAGE NO.: 4 OF 15

COLLAR ELEV.: GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES: N. E.

DATE FINISHED:

SCALE: 1cm:1m.

INCLINATION: BEARING:

TOTAL DEPTH:

LOGGED BY: GEN.

SECTION	ALTERATION				FRACTURING	MINERAL GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTI-MATED
	silicea	sericite	clay	chlorite											
45							(12b) CONT'D - similar to above, odd qtz eye is conspicuous. Gndm. mod siliceous, some minor clay alter'n of larger phenos.		5%						
50						dissem py, MoS <sub>2</sub> , cpy. speck F vug w/ py, F, mag py vug py MoS <sub>2</sub> . py, F, mag. dissem py MoS <sub>2</sub> py, MoS <sub>2</sub> , Fr dissem py cpy mag minor specks MoS <sub>2</sub> dissem py, mag cpy calc, chl. dissem py mag. MoS <sub>2</sub> . good MoS <sub>2</sub> cpy faint but definite pinkish grey. 15% feld phenos. dissem py.	52.3 - 53.0 BRECCIA (II)		2-3%						
55						small grey rhy. frag. (1cm) redd. 7cm rhy. py, mag, F MoS <sub>2</sub> paint, py mag 4cm and sub ang. frag. porph syenitic int. biot, mag. MoS <sub>2</sub> paint, mag. dk grey felds par porph. alyke or frag? py, qtz, F col vnt. 3mm w/ F specks grey rhy w/ 15 feld phenos.	53.0 - 53.6 Fine Gr. Andesite (S) Grey black. f-g andesite w/ biot; minor feld phenos, dissem py. 53.6- BRECCIA (II) Breccia as before is tight, fragments subrounded to rounded to angular ! size from 5cm to 4mm. Some rare 0.5m frag of mafic intrusive.		3%						
60									2-3%						

BOWL

49-52

54-57



HOLE NO.: DP-74-2

PROJECT: DEER PARK

PAGE NO.: 5 OF 15

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE:

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: GEN.

SECTION	ALTERATION				MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED	
	silica	sericite	clay	chlorite												
60							(11) BRECCIA CONT'D									
						<p>f-m-g. equigranular syenite w/ 5% f. bio porph syenite (prev not colored)</p> <p>mag after mafics</p> <p>large frag of whitish mafic intrusive (60cm)</p> <p>locat.</p> <p>porph (feld) rhy w/ 5-10% wht phenos f-g pinkish silic rx</p> <p>py, mag F, Fr fillings.</p> <p>30% euhedral feldsp. phenos. f-g gndmass visible biot. &lt; 1mm, 5%, dissem py, mag.</p> <p>hair line calc w/ some grains F</p> <p>thin salvage.</p>										
65						<p>f-g equigranular salt &amp; pepper textured intrusive rx, f-mafic → mag.</p>										
70						<p>salt &amp; pepper text intrusive.</p> <p>5-10% 1cm phenos - 70-2-3mm</p> <p>feld phenos. 10% biot. m-g.</p> <p>spck MoS<sub>2</sub></p> <p>py, mag, granular Qtz</p> <p>py Mag. MoS<sub>2</sub> F Uog. Matrix</p> <p>grey aphan matrix w/ 30% 2mm. phenos. 3% fine mafics</p> <p>py</p> <p>py, mag specks. MoS<sub>2</sub>.</p> <p>MoS<sub>2</sub> conc in hole around Frag</p>										
75						<p>py mag, gran. Qtz specks</p> <p>5-10% 1cm feld phenos. 70% 1-3mm feld 10% biot.</p> <p>py Mag granular Qtz</p>	73.6 - 74.0 Porphyritic Qtz-Diorite (6)									
						<p>30-40% euhedral to sub euhedral rectangular feld. phenos f-g grey gndmas. 10% biot 1-2mm</p> <p>some chl. py mag</p>										

BQWL

70-73

3%

4%



HOLE NO.: DP-7A-1

PROJECT: DEER PARK

PAGE NO.: 7 OF 15

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE:

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: GEN.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP INT.	ESTIMATED		
	silica	sericite	clay	chlorite														
90					mod		<ul style="list-style-type: none"> <li>- carb. cuts py</li> <li>- hairline py vnt</li> <li>- 1.7cm dk f-g and. w/ minor wht feld phenos.</li> <li>- platy py</li> <li>- py mag specks Mosz.</li> <li>- Qtz, py, mag vnt, cuts py mag Qtz</li> <li>- irreg Qtz py mag Mosz.</li> <li>- Fr sp 2"</li> </ul>											
95					mod		<ul style="list-style-type: none"> <li>- wk chl, py</li> <li>- irreg mag chl ep vntls</li> <li>- py</li> <li>- py, mag, specks F, ep Qtz</li> <li>- vug filling of above minerals.</li> <li>- 14 F/meter</li> <li>- mag, py specks F filling around breccia frag.</li> <li>- 6 Fr/m cuts betw Fr fill</li> <li>- Qtz py, mag ep</li> <li>- mag, ep</li> <li>- py, calc, chl mag</li> </ul>											
100					mod		<ul style="list-style-type: none"> <li>- mag biot ep.</li> <li>- calc py chl, mag.</li> <li>- 1cm py Qtz mag ep.</li> <li>- platy py</li> <li>- ep Qtz, py, mag</li> <li>- mag py.</li> <li>- calc, py mag chl.</li> <li>- 16/meter.</li> </ul>											
105							<ul style="list-style-type: none"> <li>- dissem py mag</li> <li>- py, some v-f. Mosz.</li> </ul>	104.4-										

Fine Grained ANDESITE (5)

Dark grey f-g andesite dyke, 10-15% mafic clots 2mm → mag also dissemi magnetite & wk chl of mafics.

BQWL

75-98

see next page for descript.

HOLE NO.: DP-74-2

PROJECT: DEER PARK.

PAGE NO.: 8 of 15

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE:

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: GEN.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED	
	silica	sericite	clay	chlorite													
105							<p>py, qtz on fract. py, MoS<sub>2</sub></p> <p>breccia 3cm from vn w/ qtz</p> <p>MoS<sub>2</sub> point. MoS<sub>2</sub> in l.v.</p> <p>py, MoS<sub>2</sub></p> <p>py, qtz, specks MoS<sub>2</sub>, F</p> <p>vug F</p> <p>py, MoS<sub>2</sub></p>										
110							<p>py, mag, F, calc</p> <p>yellow-green clay.</p> <p>py MoS<sub>2</sub>.</p> <p>hair line py.</p> <p>dissem py, mag</p> <p>hair line fr w/ calc (dol, qtz)</p>	<p>Aphanitic Qtz-Monz. PORPHYRY</p> <p>30% 1-2mm whitish pink blocky.</p> <p>(2) feldspar phenos set in a grey-pinkish siliceous aphan. ground mass, 21% dissem.</p> <p>py some mag → hematite.</p> <p>1065-10665 <u>Alter'd section.</u></p> <p>white sugar text'd silica rich felsic rx.</p> <p>- 4-5% dissem sulphides py, mag</p> <p>&amp; v-f. MoS<sub>2</sub> f-vuggy text</p>									
115							<p>hair line fract. w/ py fab and col.</p> <p>mag py trac filling.</p> <p>2cm f-g dk grey and dke w/ and feldspar phenos.</p> <p>platy py.</p> <p>vuggy qtz</p> <p>hair line qtz vults</p> <p>6cm dk - dk grey and on rim w/ por reddish core</p> <p>core missing.</p>										
120																	

Bowl



HOLE NO.: DP-74-2

PROJECT: DEER PARK

PAGE NO.: 10 OF 15

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE:

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: GEN.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	Silica	Sericite	clay	chlorite												
135					Strong	py mag	2mm Qtz mag py vnh chl py Qtz mag Qtz py untk. stockwork (mod strong)	(2)		5%						
140					Strong	py mag	chl, py Qtz, calc. s/a sm. 7cm porph. and. hairline mag str chl, py mag infill instr fract v.f.			4%						
145					mod- str.	py	str fract. brecc v/ chl, py mag stockw 13cm porph and. sharp slip w/ calc, F sharp 5cm calc, chl - MoSe brecc. 2cm grey Feldspar porphy. patchy clay ser atkin.	(5) 44.7-45.2 Andesite - dk f-g w/ irreg pink ch feldspar phenos.		21%						
150					mod- str.	py	py, F + MoSe minor clay 10cm porph and. v-f hairline mag untk upto 8/5cm.	(2)		3%						

BQVJL

NO. E NO.: DP-74-2

PROJECT: DEER PARK

PAGE NO.: 11 OF 15

COLLAR ELEV.: GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES: N. E.

DATE FINISHED:

SCALE:

INCLINATION: BEARING:

TOTAL DEPTH:

LOGGED BY: G.F.V.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	silica	sericit	clay	chlorite												
150					mod to strong	py, MoS <sub>2</sub>	<p>Aphanitic Qtz-Monz. PORPHYRY cont</p> <p>(2)</p> <p>1cm calc mag, py F MoS<sub>2</sub></p> <p>qtz vn imm w/ MoS<sub>2</sub> cpy, py</p> <p>hair line mag vntls.</p> <p>qtz w/ f MoS<sub>2</sub>.</p> <p>Mag, cpy qtz F</p> <p>sh</p>		2%							
155					mod.	py, MoS <sub>2</sub>	<p>53.7-55.2 F. qtz. ANDESITE (5)</p> <p>f-g dk and w/ irreg spotty pinkish feld phenos up to 1cm (anhedral)</p> <p>mod mag. f felt gndmass w/ biot</p> <p>qtz, cpy. 2cm zone along Fr</p> <p>minor calc F py mag vntls 4m.</p> <p>1.5cm col, py mag.</p> <p>MoS<sub>2</sub> point.</p> <p>2cm py, mag un.</p>		4%							
160					strong	F, py mag MoS <sub>2</sub>	<p>irreg. py, Mag. calc</p> <p>qtz, F, MoS<sub>2</sub> in some</p> <p>case rims above nichriet</p> <p>infilling.</p> <p>calc, F, calc, qtz py F, MoS<sub>2</sub></p> <p>upto 4/30cm. (2)</p>		7%							
165					strong	MoS <sub>2</sub> cpy.	<p>calc qtz py F w/ MoS<sub>2</sub> on rim</p> <p>qtz MoS<sub>2</sub> py cpy</p> <p>calc, py mag cpy qtz F</p> <p>2cm</p> <p>chl and. 1mm qtz, MoS<sub>2</sub> vntls.</p> <p>3m py qtz calc MoS<sub>2</sub></p> <p>col py mag py</p> <p>irreg py F qtz MoS<sub>2</sub>.</p>		7%							













PAGE NO.: 2 OF 7

CASING COLLAR ELEV.:

COORDINATES:

INCLINATION:

GROUND ELEV.:

N. E.

BEARING:

PROJECT: Deer Park

DATE STARTED:

DATE FINISHED:

TOTAL DEPTH: 212.0m

HOLE NO.: DP-74-2

REF. TO CLAIM CORNER:

SCALE: 1cm: 1m

LOGGED BY: G.E.N.

CORE

SLUDGE

Rock Geochemistry ASSAY PPM

Cu Mo W Sn Pb

15

20

25

30

22 25 72766 24 85 65 1 1520











PAGE NO.: 7 OF 7

PROJECT: Deer Park

HOLE NO.: DP-74-2

CASING COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE: 1cm: 1m

INCLINATION:

BEARING:

TOTAL DEPTH: 212.0m

LOGGED BY: G.E.N.

CORE

SLUDGE

Rock Geochem ASSAY PPM

Cu Mo W Sn F

90

95

100

105

95 98 72789 34 5 15 1 2990

HOLE NO.: DP 74-3

COLLAR ELEV.:

COORDINATES:

INCLINATION: 695' 45"

0° 42.5'

GROUND ELEV.:

N. 71+00 E. 106+00

BEARING: 112° SOUTH

PROJECT: DEER PARK

DATE STARTED: JULY 6, 1971

DATE FINISHED: JULY 12, 1971

TOTAL DEPTH: 695' (211.8m)

PAGE NO.: 1 OF 14

REF. TO CLAIM CORNER:

SCALE: 1 cm = 100'

LOGGED BY: R. K. BROWN

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	SILICA	SERPENTINE	CLAY	CHL - EP.												
0							0-6.7 OVERBURDEN									
5							<p style="text-align: center; font-size: 48pt; font-weight: bold;">7367</p>									
10						<p>6.7-32.1 HYDROTHERMAL SERPENTINIZATION (II)</p> <p>Mod. H<sub>2</sub>O fract. w/ sparse Mt-Py and rare MoS<sub>2</sub>. Occ. rug w/ Mt-Py.</p> <p>2cm w/ clay (P<sub>1</sub>) .3m dia of (C)</p> <p>Py-Py along vein</p> <p>Dikelet of zone from serpent. 3cm @ 60°</p> <p>Numerous ophiolitic reprecipitated frags.</p> <p>TR. MoS<sub>2</sub> on fract.</p> <p>Mt interst. w/ Py.</p>										
15																

Log 11120 4-6/74  
 Mt-Py - 71, 106-52

1%+  
 Variable, from 0 to .5m  
 BQWL

HOLE NO.: LP 74-3

PROJECT: DEER PARK.

PAGE NO.: 2 OF 14

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1 cm = 1 m

INCLINATION:

BEARING:

TOTAL DEPTH: 211.8 m

LOGGED BY: EKB

SECTION	ALTERATION			FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED		
	SILICA	CHLORITE	CLAY														
15							<p>POLYETHIC BRECCIA - CONT'D (11)</p> <p>Locally small frags w/ Py-Mt Chl of matrix in intr. frags.</p> <p>17.1 8cm dikelet of aphanitic fine gr. py. Tr. Py.</p> <p>prob. represent aphan. type II.</p>										
20							<p>20-50 cm L. vuggy, w/ some vugs up to 1-2cm w/ sil' as sec. gangue in sulphide vts and also as vug coatings.</p> <p>20-25 vug-like sec w/ 10% 1mm B-Py vug-filling. " " " " 1 gte eye noted.</p>										
25							<p>0.3m frag.</p> <p>0.2m "</p> <p>(2b)</p> <p>1/2 w/ a-Mt.</p> <p>Mt-Py in vug.</p> <p>3cm dikelet @ 40° Ch. Matrix rich w/ st. dikelet Py-Mt.</p>										
30							<p>Mt. Py.</p> <p>Numerous small vugs w/ Py-Gy-Mt-(MnS<sub>2</sub>). Also mod. B lining vugs.</p>										

2%  
pyel. in matrix.  
2-3 mm to 2 m.

3-4%  
clay in matrix.

BOWL

15-18







HOLE NO.: DP 74-3

PROJECT: DEER PARK.

PAGE NO.: 6 OF 14

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE: 1 CM = 100

INCLINATION:

BEARING:

TOTAL DEPTH: 211.8 m

LOGGED BY: BKB.

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE RECY / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% RECY. SAMP. INT.	ESTIMATED
	SILICA	SERICATE	CHL	EP.												
75					13/4	Pg-Mt.		<p>73.8 - 76.5 Porphyritic Syonite Dike (20a)</p> <p>W. of fracture to 134. TR. Pg on sub fracture.</p> <p>20% 6-8 mm un-subbed spars, some w/ chld cokes set in f. of g. granitic-basaltic matrix of host, fine gr. of host → H.M. P.S. &amp; G. mass w/ chld set? Lower cont. chilled.</p>						73.5-76.5		
80					6/4	Pg-Mt-TR MoS <sub>2</sub>		<p>76.5 - 82.3 POLYLTIC BRECCIA. (11)</p> <p>Locally vuggy w/ lining of Chl-Pg-Mt.</p> <p>Spec. from, indistinct, possibly fine 2 B' intermixed</p> <p>20% 1-2 mm dikelet, as per 82.3-84. 84.2 interst. 1-3 mm 10-15%.</p>						79-82		
85					5/4	Pg-Mt-TR MoS <sub>2</sub>		<p>82.3 - 84 Grey/Pink Spar Porphyry Dike (12b)</p> <p>35 pct (12b) Minor MoS<sub>2</sub> dikelet. W/ chld prop? Chl - minor Ep. (Mo Positive Dike)</p>					82.8-84			
90					1.2A 400	Mt.		<p>84.9 - 87 Porphyritic Qtz-Diorite (6)</p> <p>sharp @ 30</p> <p>n.f. on fract.</p> <p>Spar porph w/ 10-15% inclusions in gm</p>								
					6/4	Pg-Mt		<p>87 - 101.4 POLYLTIC BRECCIA. (11)</p> <p>Locally vuggy w/ sparse filling of Mt - (Pg-Pg)</p> <p>sharp @ 30.</p> <p>Loc. vugs w/ Mt filling.</p> <p>TR. Mt-Pg on 1100 Fract.</p> <p>Spec MoS<sub>2</sub>.</p>								
								<p>82.7 - 88.9 Komatophyre w/ 30% 2-3 mm B' phenocr.</p>						89-92		

















HOLE NO.: DP 74-3

PROJECT: DEER PARK

PAGE NO.: 14 OF 14

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE: 1 cm = 100

INCLINATION:

BEARING:

TOTAL DEPTH: 211.8

LOGGED BY: BKB

SECTION	ALTERATION				FRACTURING	MINERAL GEOLOGY	COMMENTS:	AVE CORE RECY / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED		
	SILICA	EPIDOTE	CLAY	CHL-EPI.													
195							<p>195-196 w/ Fract.</p> <p>POLYLITHIC BX - CONT (11)</p>										
							<p>196-197 Porphyritic Qtz-Diorite (6)</p> <p>Porphyritic dike similar to (6), characterized by large plagioclase phenocrysts with fine interstitial plagioclase.</p>										
							<p>197- POLYLITHIC BRECCIA (11)</p>										
200							<p>198-198.7</p> <p>Large frag of int. sim. to (11) (w/ fine matrix) except typical grey or pink.</p> <p>200-201.3 Porphyritic dike similar to (13) with 2% Py disc and trace disc. <math>MoS_2</math>.</p>										
							<p>Most 1/4 Fract w/ Mt ± Q-Chl-Py - (Gp) - Tr. <math>MoS_2</math> + F.</p>										
							<p>Frag similar to No. positive suite (Gp) phenocr. interstitial w/ quartz and w/ minor Py and Tr Gp disc.</p>										
205							<p>As per imm. above except no Gp.</p> <p>197: E.C.H. Some sections broken core w/ abundant CN on slips.</p> <p>Less variety in fragment type.</p>										
							<p>210-211.8 E.C.H. as per above.</p>										
210													207-210				























PAGE NO.: 10 of 11

PROJECT: Deer Park

HOLE NO.: DP-74-3

CASING COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE: 1cm: 1m

INCLINATION:

BEARING:

TOTAL DEPTH:

211.8m

LOGGED BY: B.K.B.

180

185

190

195

DEPTH INTERVAL		CORE									DEPTH INTERVAL		SLUDGE					
FROM	TO	SAMPLE NO.	INCHES REC.	% REC.	Rock Geochem <del>ANAL</del> PPM					FROM	TO	SAMPLE NO.	LBS. REC.	% REC.	ASSAY			
					Cu	Mo	W	Su	F									
180.7	182	72776			205	35	20	1	2810									
190.6	192.8				130	152	17	1	2410									



HOLE NO.: DP-74-4

COLLAR ELEV.:

COORDINATES:

INCLINATION: 0-45°

GROUND ELEV.:

N. 49° 20' 30" E. 118° 01' 30"

BEARING: Due South

PROJECT: DEER PARK

DATE STARTED: JULY 14, 1974

DATE FINISHED: JULY 17, 1974

TOTAL DEPTH: 153 m

PAGE NO.: 1 OF 11

REF. TO CLAIM CORNER:

SCALE: 1 cm = 1 m

LOGGED BY: DBC

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	silica	sericite	clay	chlorite												
0								0-86. Overburden (?) start of hole								
5								1 - colour for soft, waxy bright apple green clay mud.								
100							<p>HE → mostly sand</p> <p>v.f.g. pale red 'gritly' clast</p> <p>HE</p> <p>And.</p> <p>HE + cubes, note v.f.g. above</p> <p>F - aug. kpy = (19) sl. soft on</p> <p>green clay, nodules</p> <p>HE</p> <p>sl. comp. poly. like frags, non-14m, aphanitic white, no phos</p> <p>DR F pyg dominant</p>	<p>8.6-12.6 - Highly clay altered and oxidized (II)</p> <p>Poly lithic breccia w/ str (mainly) zones interstitial HE/D mgite</p> <p>&gt; 70% is v. coarse FPPY: white irreg. blocky phenos 35% in v.f.g. tan-oxidized giness w/ scattered fine BT.</p>								
15							<p>12.6-15.3 : clay alted, oxid to 14.2 as above, but v. lit aphanitic frags appear with dk gray (f.g. popwoeny giness w/ pink s.s. spars) or ppy as dom. fragg. Mgite present but less than before.</p> <p>(III)</p>							12-15		

BQWL



HOLE NO.: DP-74-4

PROJECT: Deer Park

PAGE NO.: 3 of 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1cm:1m

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: Dan P. Coyle

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED			
	Shear	Diagenetic	Silica	Chlorite															
330								<p>PINK &amp; GREY FROTH minor breccia</p> <p>← Sample (4)</p>											
330					moderate			<p>SHARP CONTACT w/ grey -brown lamprophyre (5d)</p> <p>CSE FELDSPAR PORPHYRY ANDRESITE DIKE - (5b)</p>											
320								<p>UNIT (19) 500 below</p>											
370								<p>AND 36 in box</p> <p>(18) steep contact</p> <p>← xenolithic contact:</p> <p>(19) steep contact</p>											
400								<p>25% cse</p> <p>MED. GREY PORPHYRYTIC SYENITE DIKE (19)</p> <p>5 in gr. phenos: med grey core, H. pink rim in and to dk grey matrix w/ minor ST. Some sections similar to 26 but decidedly (less euhedral) and more zoned phenos</p> <p>Later than 36, and unit ± 24: pink - grs rich, vaguely defined phenos</p> <p>BRECCIA (11)</p> <p>U ase</p> <p>PINK SY PORPH</p> <p>less porphyritic than (2) predom. Euhedral off- white phenos in H grey nearly aphanitic matrix (extremely fine minor ST) = G</p>											
450					mod-stn			<p>mod unit</p> <p>ARMY PRY 2 in x 2 frags (19) frag</p>											

BQWL



HOLE NO.: DP-74-4

PROJECT: Deer Park

PAGE NO.: 5 OF 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE: 1 cm = 1 m

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: D.P. Crane

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE RECY/HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% RECY. SAMP. INT.	ESTI-MATED
	Silica	Ser	Clay	Calcite												
60								<p>← zoned like → frags very rounded</p> <p>← f.g. pebbly</p> <p>FINE GRAINED ANDESITE - f.g. but not aphanitic (5) dike</p> <p>Lt. Med. grey</p>		16.5						
63								<p>← has vein structure of mass replacement by MG</p> <p>← unit 4 dike 10cm chill margin</p>		15						
66								<p>← f.g. aphanitic BI andes.</p> <p>← fine MG (ultr) has veins</p> <p>← malachite penetrates gmass partially</p>		16						
69								<p>← diss py</p> <p>v. narrow zone fresh rock</p>		16						
72								<p>← gtz smoky envelope</p> <p>← Drusy gtz w/ FL, MG xtls</p> <p>UNIT 4 DIKE: A fine slope frag &amp; finer grain chill margin; confirm this</p> <p>← py w/ moly on frac greater in dike than (6) unit</p>		15						
75										12.4						



HOLE NO.: DP-74-4

PROJECT: Deer Park

PAGE NO.: 6 OF 11

COLLAR ELEV.: GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES: N. E.

DATE FINISHED:

SCALE: 1cm: 1m

INCLINATION: BEARING:

TOTAL DEPTH:

LOGGED BY: D.B.C.

SECTION	ALTERATION				FRACTURING	MINERAL GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED	
	Silica	Serpentine	CLay	Chlorite												
75							<p>continued single irregular bot (6) shows 4 or 5 chill masses</p> <p>FAULT: - strands of fsp in mgfs - CL + silica matrix</p> <p>(Sb) embayed contact white, bleached (4)</p> <p>(9a) - Si embayed contact, silicage not apparent in</p> <p>Flow fold - wavy fringes, etc</p> <p>3 BEDS CL, str. similar to some flow</p> <p>Approx alt in change</p> <p>Bleached white @ contact</p> <p>fault breccia cemented w/ CL - mgfs</p>									
73							<p>RSE PORPHYRITIC ANDESITE (5b)</p> <p>prot (4) V.C.S.E phenos</p> <p>matrix (near aphanitic)</p> <p>HIGHLY ALTID F-MG (4) DIKE</p> <p>Epidote - chlorite - calcite silicified</p> <p><u>Alaskite</u></p>									
31							<p>Py chill masses</p> <p>(20b)</p> <p>spec. MoS<sub>2</sub> w/ HE</p> <p>in CB - Fe - HE veins</p> <p>Calcite</p> <p>stack on frac.</p>									
34							<p>Pyrrhotite</p> <p>Pink Qtz - Monzonite</p> <p>(9a) - crowded m-cse smearing ill-defined pink fspans with interstitial Qtz ≥ 15% and slightly less BI. The more visible waxy Qtz separates (9a) from similar (9)</p>									
87							<p>40 cm long streaks of inner clear Qtz 2-3mm wide Py - Mg</p> <p>5cm wide silin zone</p> <p>STR Qtz - Fe CB - calcite alteration</p>									
90																

Bowl

HOLE NO.: DP-74-4  
 COLLAR ELEV.:                      GROUND ELEV.:  
 COORDINATES:                      N.                      E.  
 INCLINATION:                      BEARING:

PROJECT: Deer Park  
 DATE STARTED:  
 DATE FINISHED:  
 TOTAL DEPTH:

PAGE NO.: 7 OF 11  
 REF. TO CLAIM CORNER:  
 SCALE: 1cm:1m  
 LOGGED BY: D.B.C

SECTION	ALTERATION		FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	Silica	Other												
90						Pink Qtz - Monzonite (9b)								
13						<p>Porphyritic Syenite Dike            CSE PINK FP: - Zoned, subhedral            DIKE phenos (green-beige) in f.g. reddish            matrix with spots of m.g. BT bubbles            (1-2%) Chills to dk brown-gray            (20a)</p>								
96						<p>Pink Qtz - Monzonite (9a)            Fin. of diss. speulite (HE stain)            wormy to clotted Qtz ≥ 15%            (20a)</p>								
99						<p>M-CSE Pink Qtz - Monzonite (9a)            Breccia: polyhedral w/ color phenos            3 phases, 2cm wide            spots            mass of white lth. v.            3cm wide mid gran peppery            dike            dike-like segregation of            micrographic Qtz            BRECCIA: 1cm wide; dk            cement as above            CPV clots in mpt. v. cuts previous            BRECCIA: as above, 2cm wide            V. fine CB vills cut            Q-HE ham vills.            2-3mm            provide rare di-line            Str. CL-CB veining</p>								
62														

BQWL  
 196-99



HOLE NO. DP-74-A

COLLAR ELEV.:

COORDINATES:

INCLINATION:

GROUND ELEV.:

N. E.

BEARING:

PROJECT: Deer Park

DATE STARTED:

DATE FINISHED:

TOTAL DEPTH:

PAGE NO.: 9 OF 11

REF. TO CLAIM CORNER:

SCALE: 1 cm = 1 m

LOGGED BY: DBC

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTI-MATED
	Silica	Sulphide	Clay	Chloride												
120							<p>22 23 19b: definitely truncated breccia frag frag. - (9) family; v. little glz crowded with FP scat'd fine GA</p>									
123							<p>19a lot GA Sh = ZnS Mo in 19b matrix v. round (4) frag *124.2: v. round frag (4) Rusty py &amp; 2% 1-2% GA ± Mo (?) → unhololy. brns shot through the woody g'mass</p>	(11)								
126							<p>glz floating quartz Breccia frags. in matrix of dr BI and site</p>	<p>POLYLITHIC BRECCIA: dr matrix; euhed FP, BI i.e. 19b &amp; ga.</p> <p>Dark grey Fspar Porphyry (10)</p> <p>etc than down section 2b to Euhedral-Subhedral m. c. s. 19b green-pink phenos in 50% matrix (19b phos w/ 5% fresh BI appearance up section)</p>								
129								<p>POLYLITHIC BRECCIA (10) FP</p>								
								<p>POLYLITHIC BRECCIA - (11) Frags ≥ 22 by far most common i.e. hazy crowded pink FP</p>								
132							<p>vein of g'mass drs Ma into matrix</p>	<p>(11) DARK FELDSPAR BRECCIA: few lge frags Fg broken shards subaligned in places in dr andesitic matrix. Tuff- breccia appearance</p> <p>(10) Brown stained w/ pyg Galena common but &lt; 1% vein &amp; dissem. in g'mass</p>								
135							<p>Matrix disc specks } specks diss Galena (Pb + Fe) str py</p>	<p>Dk. grey Fspar Porphyry</p>								

BQUL

134-  
137





























HOLE NO.: DP-74-5

PROJECT: DEER PARK

PAGE NO.: 1 OF 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED: July 18/74

REF. TO CLAIM CORNER:

COORDINATES:

N. 67+44 E. 90+18

DATE FINISHED: July 22/74

SCALE: 1cm: 1m

INCLINATION:

0 - 45.5°  
500 - 46'

BEARING: 180°

TOTAL DEPTH: 152.4 m

LOGGED BY: GEN

June 1979

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	silica	sericite	clay	chlorite												
0								0 - 5.4 <u>OVERBURDEN</u>								
								qtz rich intrusive ~ 20% qtz. 80% whitish feldspar → clay minor mafics.								
								appears to be a boulder - 22. Fresh. fine matrix intrusive - 10% f-mafics biot. ~ 90% Feldspar including 30% gray lum. phenos, 10% reddish 30% yellow-brn. phenos, 50% of matrix. brn feldspar & 5% inter qtz.								
5								5.4 - 39. <u>Alaskite</u> (4)								
								qtz vns. & segreg w/ py. mag.								
								patchy calc. F. dissem. unts. vuggy clay. speck spec hem								
								calc. vnl. w/ trace mag. & py. mag calc qtz								
								2mm qtz, calc ± py ± mag								
10								brnish alter'n clay? 1/2 cm qtz, calc py trace								
								dissom py trace cop. 2mm mag → hem unts.								
								3cm qtz vn.								
								qtz mag trace galena.								
								dissem spec hem., graph? trace galena								
15								calc. qtz vns. 4mm trace Galena								

**7367**

RQV/L

12-15

HOLE NO.: DP-74-5

PROJECT: DEER PARK

PAGE NO.: 2 OF 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1cm: 1m

INCLINATION:

BEARING:

TOTAL DEPTH: 152.4

LOGGED BY: GEN

SECTION	ALTERATION				FRACTURING	MINERAL GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED	
	silica	sericite	clay	chlorite												
15					mod-str	F	<p>calc, F same time as p 0.5cm qtz calc F py = mag = vn.</p> <p>qtz segreg. py hairline vnlts</p> <p>dissem py. clay alter minor Hem.</p> <p>0.5cm qtz, py, Pls.</p> <p>qtz, py Mt, galena, F vn.</p>									
20					str	py Mt, F										
25					mod-str		<p>2mm qtz vns - dissem py</p> <p>4cm qtz vn. py - trace Pls.</p> <p>hem hairline vnts.</p> <p>str py, qtz.</p> <p>qtz, dol, F.</p> <p>small slip</p> <p>0.4m mt, qtz, py F vn cop</p> <p>str Mt vnlts xlt qtz vns</p> <p>2cm vuggy qtz vn w/ py cop</p>									
30					str		<p>27.5 - 27.9 Andesite dike (5?)</p>									

Alaskite (cont) (4)

brnsh coloration of feldspar.  
appears to be a clay alteration.

BOWL

HOLE NO.: DP-74-5

PROJECT: DEER PARK

PAGE NO.: 3 OF 11

COLLAR ELEV.: GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES: N. E.

DATE FINISHED:

SCALE: 1cm: 1m

INCLINATION: BEARING:

TOTAL DEPTH: 152.4

LOGGED BY: GEN

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP INT.	ESTI-MATED		
	silica	Ksp	clay	chlorite														
30					mod str	Mt, py	<p>str Mt stock work</p> <p>wispy Ksp vnlts, some Ks</p> <p>3mm qtz, mt vln.</p> <p>Mt, qtz, py - specks fbs, <sup>2</sup>lls<sup>2</sup></p> <p>feldspar → Ksp</p> <p>qtz, mt alt set by Mt, qtz vln</p> <p>1-2</p>											
35					intense	Mt, py	<p>1-hair line Mt stock work</p> <p>0.5 qtz, Mt vlns.</p> <p>2mm qtz vln.</p> <p>str qtz vning</p> <p>390 Alaskite (4)</p>											
40					intense	Mt, py	<p>390-562 Aphanitic Qtz Menzoniite Porph (2)</p> <p>Greyish aphanitic siliceous groundmass</p> <p>10-15% block 1-2mm feldspar phenos, str magnetite qtz-stock work.</p>											
45					intense	Mt, py	<p>Ksp patches of some feldspar are pinkish.</p> <p>feldspar phenos → clay.</p> <p>15 mt-qtz vnlts/10cm</p> <p>wispy vnlts Ksp</p> <p>intense Mt, qt vnlts &amp; mt vnlts.</p> <p>comple</p>											

BQW

34-37

HOLE NO.: DP-74-5

PROJECT: DEER PARK

PAGE NO.: 4 OF 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE: 1cm:1m

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: GEN.

SECTION	ALTERATION				FRACTURING	MINERAL GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED	
	silica	sericite	clay	chlorite												
45							<p>Aphanitic Qtz-Monz. PORPHYRY</p> <p>CONT'D</p> <p>(2)</p> <p>1cm mt, qtz vult</p> <p>mt, chl stark work</p> <p>1cm mt vns</p> <p>v-str mt / mt-qtz stark w</p> <p>Mt-qtz</p>									
50					str		<p>pinkish feldspar rims.</p> <p>altern envelopes from mt vn + dissem. clay.</p> <p>mt, py clay.</p> <p>vuggy qtz, speck F</p> <p>py stark work only within 2cm altered section.</p> <p>py qtz, chl mt. on Fr.</p> <p>Mt, py chl. 1/0.5m</p>									
55					mod.		<p>chl, spec horn, mt, cpy - speck galena w/ chli</p>									
					med		<p>56.2-57.6 Alaskite (4)</p> <p>Equigranular qtz-feldspar dike?</p> <p>40% qtz 60% feldspar intergrowth w/ minor mafic spec.</p>									
					thin		<p>57.6-59.4 Fine-gr. ANDESITE DIKE (5)</p> <p>f-g andesite chloritized; ap. mafics moderately magnetic.</p>									
60							<p>15° sharp</p> <p>chilled.</p> <p>30° sharp</p> <p>45° sharp.</p> <p>59.4-60.0 - Alaskite Equigranular qtz-feld intrus? dike. (4)</p>									

BOWL

HOLE NO.: DP-74-5

PROJECT: DEER PARK

PAGE NO.: 5 OF 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES: N. E.

DATE FINISHED:

SCALE: 1cm=1m

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: GEN

SECTION	ALTERATION				FRACTURING	MINERAL GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTI-MATED
	silica	sp. 57.6-59.4	clay	chlorite											
60					wt		<p>60.0 - 61.9 <u>ANDESITE DIKE (5)</u>                      as per 57.6-59.4                      - mod. magnetic.</p>								
					mod		<p>61.9 - 63.8 <u>Aphanitic Qtz-Monz. PORPHYRY</u>                      (2) - moderate to wk. mt vnlts.                      - feldspar phenos have pinkish rims.</p>								
				ep	wt		<p>63.8 - 64.9 <u>ANDESITE DIKE (5)</u>                      as above -</p>								
65					wt		<p>64.9 - 65.2 <u>SPHAPIC INTRUSIVE (4)</u>  <u>Alaskite</u></p>								
					mod		<p>65.2 - 69.4 <u>Porphyritic Syenite Dike (20a)</u>                      (somewhat similar to 34)                      - 30% some what zoned feldspar phenos.                      rounded to blotchy. 5-10% biot phenos.                      in grey brown f-g groundmass. mod dissem.                      f-Mt. Moderately fractured-dry.</p>								
					mod		<p>69.4 - 71.5 <u>ALASKITE (4)</u>                      Qtz-40%</p>								
70					mod		<p>70.5 - 70.7 section which is coarser grained                      w/ feldspar phenos - greenish 3mm</p>								
					mod		<p>71.5 - 73.5 <u>Aphanitic Qtz-Monz. Porphyry (2)</u>                      - pin pricks dissem. MoS<sub>2</sub> 72.6; 73.2.</p>								
					mod		<p>73.5 - 76.8 <u>ALASKITE (4)</u>                      Qtz, feldspar rich rt graphic                      texture Qtz - 40% Feld - 60%                      Possible. - Kspar altern. of Feldspar</p>								
75					mod		<p>Kspar altern Feldspa.                      2mm Qtz py MoS<sub>2</sub> vn.                      1mm Qtz py vnlts.                      20.8 chl Qtz py Mt vn.</p>								

BQW



HOLE NO.: DP-74-5

PROJECT: DEER PARK

PAGE NO.: 7 OF 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N.

E.

DATE FINISHED:

SCALE: 1cm/1m

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: GEN

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE RECY / HOLE	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y SAMP. INT.	ESTIMATED	
	Silica	Asph	clay	chlorite												
90								<p>✓-f mafics → chl.</p> <p>→ 35°</p> <p>Mt, py, chl</p> <p>calc Trace F</p> <p>qtz, Mt.</p> <p>spec. horn, Mt</p>								
95							<p>qtz, Mt, dikelets in &amp; And.</p> <p>→ 50° sharp</p> <p>calc. F.</p>	<p>FINE GRAINED <u>ANDESITE</u> CONT'D</p> <p>- microdioritic. (5)</p> <p>(16) 91.3-96.6 Aphanitic Biotite Fspar Porph. shows a seriate texture although about 20% whitish feldspar phenos 1/2 cm. euhedral. some what glomeroporphyritic (1.5mm) 20-30% phenos range from 2/1mm to 1cm. anhedral → euhedral. ~ 5-10% mafics 1-2mm plagi → chl mafics → chl, py mt. some xenoliths grey brn aphan. groundmass. rare qtz grains</p>								
							<p>Trace F.</p> <p>small slips graphite py.</p>	<p>96.6-97.4 Fine Grained Andesite (5)</p> <p>as per 88.2-91.3 chl mafic blotches ✓-f. mafics; ✓-f dissemt Mt.</p>								
							<p>Trace F.</p> <p>small slips graphite py.</p> <p>f.g no phenos.</p>	<p>97.4-99.5 Aphanitic Qtz-Monz PORPHYRY (2)</p> <p>10-15% 1-2mm rounded feldspar phenos. set in a greyish siliceous groundmass.</p>								
100							<p>andesite xenoliths mafic → py.</p> <p>1cm feldspar rich v. dikelet.</p> <p>faint. 50°</p>	<p>99.5-101.0 PINK Qtz-Monzanite (9)</p> <p>70% pinkish feldspar intersit. to 20% grey-yellow plagi 2-3mm. - old dots 5mm phenos. 10-15% interst. qtz ~ 5% mafic ~ 2mm.</p>								
							<p>vuggy chl Mt K.</p> <p>faint.</p> <p>Kspar soaking; along Fr</p>	<p>101.0-102.7 Aphanitic Qtz-Monz. PORPHYRY (2)</p>								
							<p>qtz-seg</p> <p>→ sharp 25°</p>	<p>102.7-108.5 <u>ALASKITE</u> (4) appears to have cut below dike.</p>								
							<p>1.5cm qtz un.</p> <p>calc py</p> <p>→ has cut dike</p>	<p>103.5-104.5 <u>ANDESITE</u> (5a)</p> <p>dk f.g biot. andesite.</p>								
105								<p>104.5- Coarse Gr. Biotite Hornblend Monz. (3)</p>								

CORJL 12-95







NO. E. NO.: DP-7A-5

PROJECT: DEER PARK

PAGE NO.: 10 OF 11

COLLAR ELEV.:

GROUND ELEV.:

DATE STARTED:

REF. TO CLAIM CORNER:

COORDINATES:

N. E.

DATE FINISHED:

SCALE: 1 cm: 1 m

INCLINATION:

BEARING:

TOTAL DEPTH:

LOGGED BY: GEN

SECTION	ALTERATION				FRACTURING	MINERAL	GEOLOGY	COMMENTS:	AVE CORE REC'Y / HOLE	% SULPHIDES	DRILLING INTERVAL	% CORE RECOVERED	CORE SIZE	SAMPLE INTERVAL	% REC'Y. SAMP. INT.	ESTI-MATED
	silica	sericite	clay	chlorite												
135					wt 5-10/M	Mt		<p>feldspar → chl</p> <p>Trace F. dissemin py to cspg.</p>		214	215					
140					wt 5-6/M	Mt		<p>xenolith end.</p>		Trace	Trace					
145					wt 12/M	Mt		<p>0.75 cm qtz, Mt</p> <p>cpj trace</p>		Trace	Trace					
150					wt 12/M	Mt		<p>3mm qtz Mt Vn</p> <p>magics → chl Mt.</p> <p>plag - indistinct clay</p>		Trace	Trace					

BOWL

140-143

























PETROGRAPHIC REPORTS ON THE  
DEER LAKE PROSPECT

By

P.E. Fox PhD. P.Eng.  
Fox Geological Consultants Ltd  
Vancouver, BC

For

UTAH MINES LTD  
Vancouver, BC

August 15, 1979

PETROGRAPHIC REPORT

CLASSIFICATION

Granite porphyry

Spec. No. E6 254 ft. ....  
Date 8-7-1979 .....

MEGASCOPIIC DESCRIPTION

Pink feldspar up to 20mm set in a very fine grained matrix.

MICROSCOPIC DESCRIPTION

Texture

Porphyritic texture: blocky, microperthite and quartz phenocrysts set in a very fine grained matrix of anhedral alkali-feldspar grains, quartz, plagioclase, biotite, accessory zircon, apatite, opaques grains and sphene. Pseudomorphs of chlorite, calcite and epidote.

Minerals & Habits

Microperthite phenocrysts (30%): tabular crystals up to 2cm.

Quartz (20%): anhedral fine grained crystals in matrix, medium grained, sub-hedral phenocrysts.

Biotite (15%): fine grained subhedral grains.

Orthoclase (35%): very fine grained anhedral crystals in matrix.

Chlorite (5%): fine grained aggregates.

Calcite (5%): anhedral granules

Accessory zircon, apatite, sphene and opaques.

COMMENTS

Biotite partly altered to chlorite.

Secondary calcite, epidote, chlorite, replace primary biotite (?). Weak argillic and calcite alternation of alkali feldspars.

PETROGRAPHIC REPORT

F6-181 ft

Spec. No. ....

Date ..... 8-7-1979

CLASSIFICATION

Alkali-feldspar porphyry

MEGASCOPIC DESCRIPTION

Porphyritic granite: K-feldspar and biotite phenocrysts set in a very fine grained matrix.

MICROSCOPIC DESCRIPTION

Texture

Blocky, microperthite phenocrysts, 1-10mm thick, set in a very fine grained matrix of alkali-feldspar, quartz, granular opaques, biotite, secondary calcite and accessory apatite and zircon.

Minerals & Habits

Microperthite phenocrysts (30%): medium to coarse grained blocky crystals.

Alkali-feldspar (30%): irregular aggregates in matrix.

Quartz (20%): fine grained, subhedral, microphenocrysts and interstitial aggregates in matrix.

Biotite (5%): fine grained flakes and very fine grained granules in matrix.

Calcite (5%): fine grained granules.

Accessory opaques, apatite and zircon.

COMMENTS

Microperthite phenocrysts weakly altered to sericite.



## PETROGRAPHIC REPORT

71-7 54.1 m

Spec. No. ....

Date ...8-7-1979.....

CLASSIFICATION

Granite porphyry

MEGASCOPIIC DESCRIPTION

Pink feldspar porphyry consisting of K-feldspar phenocrysts 1-5mm set in a compact fine grained matrix. Disseminated, fine grained grains of pyrite and magnetite common.

MICROSCOPIC DESCRIPTIONTexture

Porphyritic texture consisting of medium to coarse grained phenocrysts of microperthite and microcline set in a very fine to fine grained matrix of alkali-feldspar, quartz, biotite and accessory opaques, apatite, zircon. Secondary, chlorite, calcite, fluorite and pyrite common throughout.

Minerals & Habits

Microperthite phenocrysts (30%): blocky, subhedral to anhedral crystals, 1-5mm.  
Alkali-feldspar microlites (35%): elongate to equant fine grained crystals.  
Quartz (15%): fine to very fine grained anhedral crystals, micrographic intergrowths with K-feldspar.  
Albite (10%): fine grained tabular, zoned crystals.  
Biotite (5%): fine grained anhedral flakes.  
Chlorite (5%): microcrystalline aggregates and fracture fillings.  
Accessory pyrite, magnetite, fluorite, apatite, and zircon.

COMMENTS

Weak argillic alteration.

## PETROGRAPHIC REPORT

CLASSIFICATIONSpec. No. .... 71-7 63.7 m .....  
Date .... 8-7-1979 .....

Felsite (microsyenite)

MEGASCOPIIC DESCRIPTION

Beige, speckled black, very fine grained, compact felsic rock with quartz aggregates 1-3mm. Thin, feldspar-rich fractures containing pyrite. Disseminated pyrite and magnetite common.

MICROSCOPIC DESCRIPTIONTexture

Sericite texture consisting of very fine grained, allotriomorphic-granular mosaic of equant sericite orthoclase, albite, and minor quartz. Irregular grains of quartz and microperthite common. Abundant sphene (3%), apatite, opaques. Secondary calcite, chlorite and pyrite.

Minerals & Habits

Orthoclase (70%): very fine grained granules.

Albite (10%): very fine grained, zoned, anhedral crystals intergrown with orthoclase.

Quartz (15%): fine grained, anhedral crystals and poikilitic crystal aggregates

Sphene (30%): very fine grained granular crystals.

Accessory (2%): pyrite, biotite, apatite and zircon.

COMMENTS

Feldspar altered to clay minerals, sericite and calcite.

Calcite also occurs in microfractures.

PETROGRAPHIC REPORT

CLASSIFICATION

Granite porphyry

Spec. No. 71-7...83.4m.....

Date ..8-7-1979.....

MEGASCOPIC DESCRIPTION

Pink to buff feldspar porphyry, consisting of K-feldspar phenocrysts up to 10mm , set in a fine grained matrix. Pyrite fracture fillings common.

MICROSCOPIC DESCRIPTION

Texture

Subporphyritic texture consisting of blocky, microperthite crystals, anhedral plagioclase, interstitial quartz and anhedral pseudomorphs of chlorite. Accessory zircon, apatite and sphene. Pyrite, chlorite, sphalerite, biotite, and calcite fracture fillings about 1mm thick. Local aggregates of epidote.

Minerals & Habits

Microperthite (60%): medium to coarse grained, blocky crystals.

Plagioclase (15%): albite (An<sub>7</sub>), fine grained tabular crystals.

Chlorite (5%): irregular, ragged, pseudomorphs of biotite, fracture fillings.

Quartz (20%): fine grained anhedral grains.

Accessory apatite, opaques, zircon and sphene.

COMMENTS

Biotite replaced by chlorite, calcite, opaques, and epidote.

K-feldspar weakly altered to clay minerals.

## PETROGRAPHIC REPORT

CLASSIFICATION

Feldspar-porphyry

Spec. No. ....71-2...54.6.m...

Date ...8-7-1979.....

MEGASCOPIC DESCRIPTION

Feldspar porphyry consisting of K-feldspar and plagioclase phenocrysts 1-5mm, set in a very fine grained, feldspar-rich matrix.

MICROSCOPIC DESCRIPTIONTexture

Porphyritic: subhedral, poikilitic, microperthite and plagioclase phenocrysts set in a fine grained matrix of alkali-feldspar, plagioclase, quartz granules, opaques, and secondary chlorite pseudomorphs after biotite. Accessory apatite, zircon, and sphene.

Minerals & Habits

Microperthite phenocrysts (25%): 1-5mm, subhedral blocky crystals.  
Albite phenocrysts (10%):  $An_6$ , blocky, in K-feldspar, and isolated crystals.  
Alkali-feldspar microlites (30%): anhedral grains.  
Quartz (20%): very fine grained, anhedral.  
Chlorite and Epidote (5%): replacement of primary biotite.  
Calcite (5%): thin fracture fillings and anhedral granules in matrix.

COMMENTS

Feldspar partly altered to calcite and clay minerals.  
Biotite altered to chlorite and epidote.

## PETROGRAPHIC REPORT

CLASSIFICATION

Quartz Syenite porphyry

Spec. No. ....74-1 8.8m.....  
Date .....8-6-1979.....MEGASCOPIC DESCRIPTION

Speckled, pink, grey and black k-feldspar porphyry. Feldspar phenocrysts set in a fine grained feldspar-rich, micaceous matrix. Rare quartz phenocrysts. Disseminated pyrite.

MICROSCOPIC DESCRIPTIONTexture

Porphyritic texture: microperthite phenocrysts (15%) set in a fine grained allotriomorphic-granular matrix of microperthite, biotite laths, secondary calcite and interstitial quartz, chlorite and accessory pyrite, apatite and zircon.

Minerals & Habits

Microperthite phenocrysts (15%): elongate to blocky crystals, altered to calcite and sericite.  
Microperthite microlites (50%): ragged, anhedral crystals intergrown with albite.  
Plagioclase (20%): An<sub>10</sub>, fine grained, subhedral blocky crystals.  
Biotite (5%): elongate flakes up to 1mm.  
Quartz (5%): fine grained interstitial crystals  
Calcite (5%): irregular, fine grained aggregates replacing feldspar.  
Accessory pyrite, apatite, and zircon.

COMMENTS

Secondary chlorite after biotite, Weak phyllic alteration.

PETROGRAPHIC REPORT

CLASSIFICATION

Syenite porphyry

Spec. No. .... 74-1 20.5 m .....  
Date ..... 8-6-1979 .....

MEGASCOPIIC DESCRIPTION

Feldspar porphyry consisting of equant alkali-feldspar phenocrysts up to 5 mm, set in a fine grained matrix. Acicular mafic crystals (1mm) common in matrix.

MICROSCOPIC DESCRIPTION

Texture

Porphyritic: blocky, subhedral, microperthite phenocrysts set in a matrix of fine grained elongate biotite crystals, alkali-feldspar, and interstitial quartz, chlorite, calcite and accessory opaques, apatite, sphene and zircon.

Minerals & Habits

- Microperthite (15%): subhedral, blocky crystals, 1-5 mm.
- Alkali-feldspar (70%): elongate, very fine grained, anhedral crystals.
- Biotite (5%): elongate, subhedral, fine grained crystals.
- Quartz (5 -10%): fine grained, interstitial crystals.
- Accessories (2%): apatite, sphene, zircon, opaque grains.

COMMENTS

Secondary calcite (5%), chlorite, sericite and epidote in the matrix.

## PETROGRAPHIC REPORT

CLASSIFICATION

Granite porphyry

Spec. No. .... 71-1 30.5mm .....

Date ..... 8-8-1979 .....

MEGASCOPIC DESCRIPTION

Beige, leucocratic, medium to fine grained porphyritic rock consisting of K-feldspar phenocrysts set in a fine grained granitic matrix.

MICROSCOPIC DESCRIPTIONTexture

Porphyritic: microperthite phenocrysts set in a fine grained, micrographic matrix composed of elongate alkali-feldspar crystals, interstitial quartz, fine grained blocky plagioclase, biotite and accessory apatite, opaques, zircon, fluorite and secondary calcite, and sericite.

Minerals & Habits

Microperthite phenocrysts (20%): equant, blocky crystals, 1-2mm.

Albite, An<sub>80</sub> (10%): fine grained equant crystals in the matrix.

Orthoclase microlites (30%): very fine grained, elongate, subhedral crystals.

Quartz (35%): very fine grained, interstitial crystals in matrix.

Biotite (2%): largely altered to aggregates of epidote, sericite opaques, chlorite, less than 1mm.

COMMENTS

Feldspar weakly altered to sericite.

## PETROGRAPHIC REPORT

74-1 35.7m

Spec. No. ....

Date ..... 8-6-1979 .....

CLASSIFICATION

Granite porphyry

MEGASCOPIC DESCRIPTION

Pink, feldspar porphyry consisting of zoned K-feldspar phenocrysts (40%) set in a fine grained hypidiomorphic-granular matrix of quartz, K-feldspar, albite, biotite and disseminated pyrite.

MICROSCOPIC DESCRIPTIONTexture

Porphyritic texture: perthitic microcline phenocrysts set in a micrographic matrix of quartz, plagioclase ( $An_{12}$ ), orthoclase, greenish uralite (?) and irregular, ragged biotite grains.

Accessory apatite, zircon, sphene, and pyrite.

Minerals & Habits

Microcline perthite (50%): subhedral zoned, blocky phenocrysts and anhedral, tabular crystals in matrix. Albite rims common.

Plagioclase (20%):  $An_{12}$ , fine grained, subhedral blocky crystals.

Quartz (25%): subhedral micrographic intergrowths.

Biotite (3%): fine grained, ragged laths.

Uralite ? (2%): green lathlike aggregates replacing hornblende.

Accessory: sphene, pyrite, apatite and zircon.

COMMENTS

Weak argillic alteration.



## PETROGRAPHIC REPORT

CLASSIFICATION

Quartz syenite porphyry

Spec. No. ....74-1.125.3 m....

Date .....8-8-1979.....

MEGASCOPIIC DESCRIPTION

Mauve-coloured feldspar porphyry consisting of K-feldspar phenocrysts set in a very fine grained matrix rich in K-feldspar and biotite. Disseminated pyrite and magnetite aggregates, chlorite-filled fractures.

MICROSCOPIC DESCRIPTIONTexture

Porphyritic: microperthite phenocrysts (1-5mm) set in a fine grained matrix of microphenocrysts of amphibole, biotite, albite, microperthite and microclines of alkali-feldspar. Accessory magnetite, pyrite, quartz, sphene, apatite and zircon. Secondary chlorite and epidote.

Minerals & Habits

Microperthite (15%): blocky, 1-5mm, subhedral crystals, "corroded" rims.

Microcline microperthite (60%) occurs as very fine grained, equant crystals in matrix.

Albite (5%): fine grained tabular crystals.

Quartz (10%): fine grained equant grains, microphenocrysts to 1mm.

Hornblende (3%): fine grained, colorless, subhedral to prismatic microphenocrysts.

Biotite (2%): very fine grained anhedral granules.

Others (5%): pyrite, magnetite, sphene, secondary chlorite, epidote.

COMMENTS

PETROGRAPHIC REPORT

Spec. No. 74-1...134.0 m.....

Date .....8-6-1979.....

CLASSIFICATION

Quartz syenite porphyry

MEGASCOPIC DESCRIPTION

Feldspar porphyry consisting of blocky, zoned K-feldspar phenocrysts set in a fine grained hypidiomorphic-granular matrix of K-feldspar, quartz and mica.

MICROSCOPIC DESCRIPTION

Texture

Porphyritic: microperthite phenocrysts (35%) up to 10mm set in a fine grained matrix of albite, microperthite, quartz, biotite and accessory opaques, sphene, zircon and apatite.

Minerals & Habits

Microperthite (35%): blocky, subhedral crystals, inclusions of sphene and biotite.

Microcline & albite (45%): fine grained, anhedral equant crystals.

Quartz (15%): fine grained equant crystals.

Biotite (4%): anhedral, fine grained laths.

Accessory: apatite, opaques, zircon, sphene.

COMMENTS

## PETROGRAPHIC REPORT

CLASSIFICATION

Granite porphyry

Spec. No. .... 74-1 147.1m .....  
Date ..... 8-8-1979 .....MEGASCOPIC DESCRIPTION

Mottled pink feldspar porphyry consisting of feldspar phenocrysts (2-10mm) set in a fine grained feldspar-rich matrix.

Chlorite-filled fractures, and disseminated pyrite aggregates.

MICROSCOPIC DESCRIPTIONTexture

Porphyritic microperthite phenocrysts set in fine grained matrix of plagioclase, orthoclase, quartz and biotite. Accessory sphene, magnetite, apatite, zircon, and secondary chlorite, epidote and calcite.

Minerals & Habits

Microperthite phenocrysts (25%): medium to coarse grained, blocky, poikilitic crystals.

Plagioclase An<sub>12</sub> (10%): fine grained tabular crystals in matrix.

Microcline (35%): fine grained anhedral equant crystals, intergrown with quartz.

Quartz (25%): fine grained interstitial crystals.

Biotite (5%): fine grained anhedral granules.

COMMENTS

K-feldspar is moderately altered to clay minerals. Biotite partly altered to chlorite.

PETROGRAPHIC REPORT

Spec. No. 74-2 74.0 m .....  
Date ....8-6-1979.....

CLASSIFICATION

Syenite porphyry

MEGASCOPIIC DESCRIPTION

Pinkish feldspar porphyry consisting of blocky, K-feldspar phenocrysts (2-10mm), set in a fine grained micaceous matrix. Disseminated pyrite and magnetite throughout.

MICROSCOPIC DESCRIPTION

Texture

Porphyritic: blocky, microcline and micoperthite phenocrysts (35%) set in an allotriomorphic granular matrix of albite, K-feldspar, chlorite, biotite and accessory fluorite, pyrite and apatite.

Minerals & Habits

Microperthite (35%): blocky, subhedral crystals.

Microcline (50%): fine grained, subhedral crystals intergrown with biotite and quartz.

Quartz (10%): fine grained interstitial grains.

Biotite (5%): fine grained, euhedral laths and chloritized aggregates.

Accessory apatite, zircon, pyrite, and fluorite.

COMMENTS

Clusters of secondary opaques, chlorite, epidote and fluorite locally. Argillic alteration of feldspar.

## PETROGRAPHIC REPORT

CLASSIFICATION

Granite Porphyry

Spec. No. .... 74-2 138.6 .....  
Date .... 8-8-1979 .....MEGASCOPIIC DESCRIPTION

Beige to pink, leucocratic porphyry, K-feldspar phenocrysts (1-3mm) set in a very fine grained feldspar-rich matrix. Interstitial chlorite less than 1mm. Numerous chlorite fracture fillings.

MICROSCOPIC DESCRIPTIONTexture

Porphyritic: microperthite and plagioclase phenocrysts set in a very fine grained, allotriomorphic-granular matrix of quartz, alkali-feldspar granules, chlorite, calcite and opaque aggregates. Calcite-chlorite-pyrite fracture fillings.

Minerals & Habits

Microperthite phenocrysts (10%): subhedral blocky crystals.  
Plagioclase phenocrysts (5%): subhedral fine grained crystals, An<sub>5</sub>-An<sub>12</sub>.  
Quartz (25%): very fine grained interstitial grains, intergrown with subhedral orthoclase.  
Orthoclase microlites (55%): very fine grained subhedral equant crystals.  
Biotite (5%): fine grained flakes largely altered to secondary chlorite and opaques.  
Accessory apatite and zircon.

COMMENTS

Plagioclase is weakly altered to sericite and calcite.  
Quartz-pyrite fractures are offset by chlorite-pyrite-calcite fractures.

PETROGRAPHIC REPORT

74-3 40m

Spec. No. ....

Date .....8-6-1979.....

CLASSIFICATION

Syenite porphyry

MEGASCOPIIC DESCRIPTION

Beige, speckled black porphyry consisting of irregular K-feldspar megacrysts 2-10mm set in a fine grained feldspathic matrix. Small amounts of biotite.

MICROSCOPIC DESCRIPTION

Texture

Porphyritic: microperthite phenocrysts (25%) set in a felted matrix of alkali-feldspar, biotite laths, interstitial quartz, secondary calcite, limonite and epidote, and accessory pyrite, apatite, fluorite and zircon.

Minerals & Habits

Microperthite (25%): subhedral to anhedral blocky crystals 10mm across.

Alkali-feldspar (55%): intergrown subhedral, crystals.

Quartz (10%): interstitial grains.

Biotite (5%): fine grained flakes, apatite and zircon inclusions.

Calcite (5%): fine grained poikilitic crystals.

COMMENTS

Secondary calcite in matrix, K-feldspar phenocrysts altered to sericite and calcite. Weak phyllic alteration.

## PETROGRAPHIC REPORT

CLASSIFICATION

Syenite porphyry

Spec. No. .... 74-3 160.0 m .....

Date ..... 8-6-1979 .....

MEGASCOPIC DESCRIPTION

Blocky, subhedral. K-feldspar phenocrysts set in a K-feldspar-rich, fine grained matrix. Disseminated mafic crystals less than 1mm across.

MICROSCOPIC DESCRIPTIONTexture

Porphyritic: blocky K-feldspar phenocrysts set in a fine grained matrix of anhedral alkali-feldspar, biotite, interstitial quartz<sup>and</sup> aggregates of biotite and opaque grains.

Minerals & Habits

Accessories: fine grained pyrite cubes and grains, and apatite.

K-feldspar (25%): blocky, subhedral perthitic crystals up to 4mm. and anhedral grains in matrix.

Biotite (5%): ragged anhedral laths.

Quartz (10%): interstitial grains.

COMMENTS

K-feldspar phenocrysts show moderate alteration to clays and sericite. Biotite is partly altered to chlorite. Weak phyllic alteration.

## PETROGRAPHIC REPORT

CLASSIFICATION

Syenite porphyry

Spec. No. 74.3 175.0  
Date 8-1-79MEGASCOPIIC DESCRIPTION

Pinkish feldspar porphyry consisting of 30% tabular K-feldspar phenocrysts (zoned) set in a fine grained matrix of subhedral biotite (1mm), quartz (10%) and alkali feldspar. Trace amounts of disseminated chalcopyrite and pyrite.

MICROSCOPIC DESCRIPTION

Texture Porphyritic: large, blocky alkali feldspar phenocrysts up to 1cm enclosed by oppressed microlites and tabular grains of K-feldspar, quartz aggregates and subhedral books of biotite up to 1mm. Feldspar phenocrysts are zoned - K-rich rims, intensely altered to "dusting" of clay minerals, and sericite.

Minerals & Habits

Alkali feldspar (78%): blocky microperthite phenocrysts, oppressed microlites in matrix. Phenocrysts zoned.  
 Biotite (10%): anhedral aggregates in matrix.  
 Sericite-clay: alteration product of alkali feldspar phenocrysts, very fine grained aggregates.  
 Opaque grains (2%): fine grained crystals in matrix.  
 Accessory apatite.

COMMENTS

"Megaporphyry" consisting of large alkali feldspar phenocrysts (microperthite) enclosed by K-rich matrix. Disseminated sulphides (pyrite, chalcopyrite). Quartz entirely in matrix. Weak phyllic alteration.



## PETROGRAPHIC REPORT

CLASSIFICATION

Granite porphyry

Spec. No. 74-4 32.5m  
Date 8-6-1979MEGASCOPIIC DESCRIPTION

Pink, speckled-black, crowded, K-feldspar porphyry consisting of 40% blocky phenocrysts set in a fine grained alkali-feldspar rich matrix. Biotite flakes to 1mm.

MICROSCOPIC DESCRIPTIONTexture

Porphyritic: orthoclase phenocrysts (1-5mm) set in a very fine grained allotriomorphic-granular matrix of alkali-feldspar, quartz, ragged biotite flakes, opaques and limonite aggregates. Pyrite-limonite fracture fillings common.

Minerals & Habits

Orthoclase phenocrysts (30%): blocky to irregular, 1 to 5 mm.

Micropegmatite (65%): granular alkali-feldspar and quartz intergrowths.

Biotite (5%): fine grained, green to brown, ragged flakes.

Pyrite occurs as granular aggregates, and fracture-fillings and as very fine grained cubes.

Accessory rutile, apatite and zircon.

Matrix contains about 50% quartz

COMMENTS

PETROGRAPHIC REPORT

CLASSIFICATION

Granite

Spec. No. .... 74-4 97.5m .....  
Date ..... 8-7-1979 .....

MEGASCOPIIC DESCRIPTION

Pink, medium to coarse grained, inequigranular leucocratic granite.

MICROSCOPIC DESCRIPTION

Texture

Massive, hypidiomorphic-granular, medium to coarse grained rock. Consists of blocky microperthite, plagioclase, interstitial quartz, irregular chlorite pseudomorphs, relief biotite, secondary calcite and accessory amounts of sphene, opaque grains and apatite.

Minerals & Habits

Microperthite (65%): poikilitic megacrysts 2-10mm.

Albite (10%): blocky, medium grained crystals.

Quartz (20%): interstitial aggregates.

Biotite/chlorite (5%): fine grained, ragged laths.

Calcite (5%): fine grained aggregates replacing feldspar interstitial aggregates and fracture fillings.

Accessory opaques, apatite and sphene.

COMMENTS

WEak argillic alteration.

## PETROGRAPHIC REPORT

CLASSIFICATION

Granite Porphyry

Spec. No. .... 74-2 43m .....

Date .... 8-8-1979 .....

MEGASCOPIC DESCRIPTION

Crowded prophyry, consisting of zoned K-feldspar phenocrysts set in a fine grained feldspar-chlorite-quartz matrix. Disseminated pyrite and magnetite.

MICROSCOPIC DESCRIPTIONTexture

Porphyritic; phenocrysts of microperthite set in a fine grained hypidiomorphic-granular matrix composed of microperthite, plagioclase, biotite, interstitial quartz and accessory fluorite, zircon, sphene, apatite, opaques and secondary chlorite, calcite and sericite.

Minerals & Habits

Microperthite phenocrysts (55%); blocky, subhedral crystals. Also forms tabular crystals up to 1mm in the matrix.  
Plagioclase  $An_6$ - $An_{12}$  (10%): tabular, fine grained crystals.  
Quartz (20%): fine grained interstitial grains.  
Biotite (5%): fine grained, subhedral flakes.  
Accessory fluorite, chlorite, opaques and sphene.

COMMENTS

PETROGRAPHIC REPORT

CLASSIFICATION

Quartz syenite porphyry

Spec. No. ....74-2..74..0m....

Date .....8-8-1979.....

MEGASCOPIIC DESCRIPTION

Porphyritic rock consisting of K-feldspar and plagioclase phenocrysts set in a fine grained matrix of K-feldspar, biotite, quartz and plagioclase. Disseminated pyrite and magnetite.

MICROSCOPIC DESCRIPTION

Texture

Porphyritic: microperthite and plagioclase phenocrysts set in a fine grained, allotriomorphic-granular matrix of K-feldspar, quartz, biotite, and accessory opaques, apatite, sphene and secondary calcite, chlorite and epidote.

Minerals & Habits

Microperthite phenocrysts (20%): subhedral, blocky crystals, 2-5mm.

Plagioclase (10%): elongate, tabular phenocrysts of albite (An<sub>7</sub>).

Alkali feldspar microlites (50%): very fine grained anhedral granules.

Quartz (15%): very fine grained granules in the matrix.

Biotite (5%): fine grained subhedral flakes and disseminated fine grained granules.

Accessory apatite, pyrite, magnetite, fluorite, sphene and zircon.

COMMENTS

Secondary epidote granules in matrix.

## PETROGRAPHIC REPORT

CLASSIFICATION

Syenite

Spec. No. ....74-2 86.2m.....

Date .....8-8-1979.....

MEGASCOPIIC DESCRIPTION

Mottled pink coarse grained rock consisting of blocky K-feldspar crystals (5-10mm) and interstitial dark green mafics. Disseminated pyrite and magnetite.

MICROSCOPIC DESCRIPTIONTexture

Coarse grained equigranular texture: blocky, subhedral microperthite crystals and interstitial aggregates of biotite, opaques, quartz, apatite, fluorite and chlorite. Pyrite-alkali feldspar fracture fillings.

Minerals & Habits

Microperthite (75%): 2-10mm equant, anhedral crystals

Biotite (20%): very fine to medium grained anhedral flakes forming aggregates between feldspar crystals. Also occurs as fine granules on feldspar cleavage surfaces.

Accessory grains (5%): quartz, pyrite, magnetite, fluorite, zircon, chlorite, apatite and sphene.

COMMENTS

Alkali-feldspar crystals altered to clay minerals, minor secondary sericite and calcite.

## PETROGRAPHIC REPORT

Spec. No. .... 74-5 141.0m .....  
Date ..... 8-6-1979 .....CLASSIFICATION

Syenite porphyry

MEGASCOPIC DESCRIPTION

Feldspar porphyry consisting of crowded, blocky K-feldspar megacrysts up to 10 mm.  
Inclusion of feldspar porphyry.

MICROSCOPIC DESCRIPTIONTexture

Porphyritic: microperthite megacrysts (2 - 10 mm) and interstitial quartz, hornblende, and accessory opaques, sphene, biotite and apatite. Inclusion is porphyritic, consists of poikilitic microperthite (2mm), green hornblende, ragged biotite, sphene, apatite, opaques, zircon, and secondary sericite.

Minerals & Habits

Microperthite (80%): blocky, subhedral crystals inclusions of clay minerals, sericite and calcite.

Hornblende (5%): green prismatic, subhedral crystals.

Biotite (5%): fine grained, anhedral grains, altered to chlorite and epidote.

Quartz (5%): fine grained, interstitial grains.

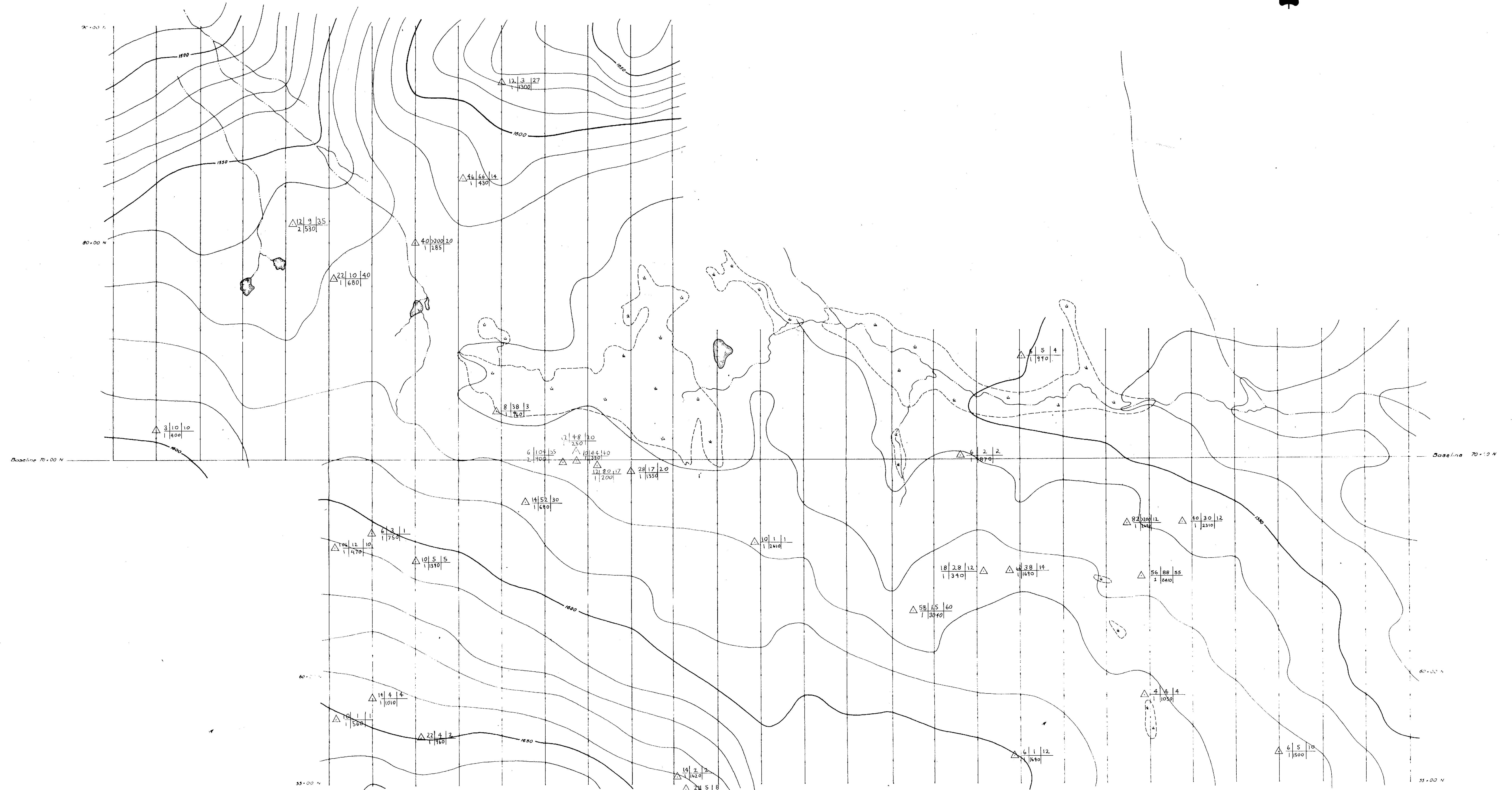
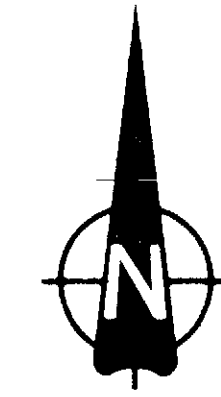
Accessories (5%): sphene, apatite, opaques and zircon.

COMMENTS

Biotite partly altered to chlorite and epidote.

Weak phyllic alteration.

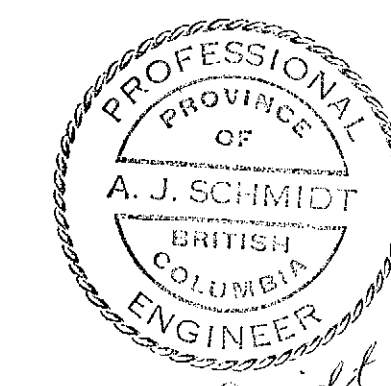




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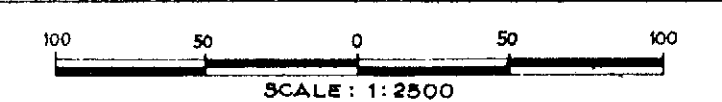
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- Swamp
- Creek
- Rock geochem. - sample locations  
(Values in ppm)



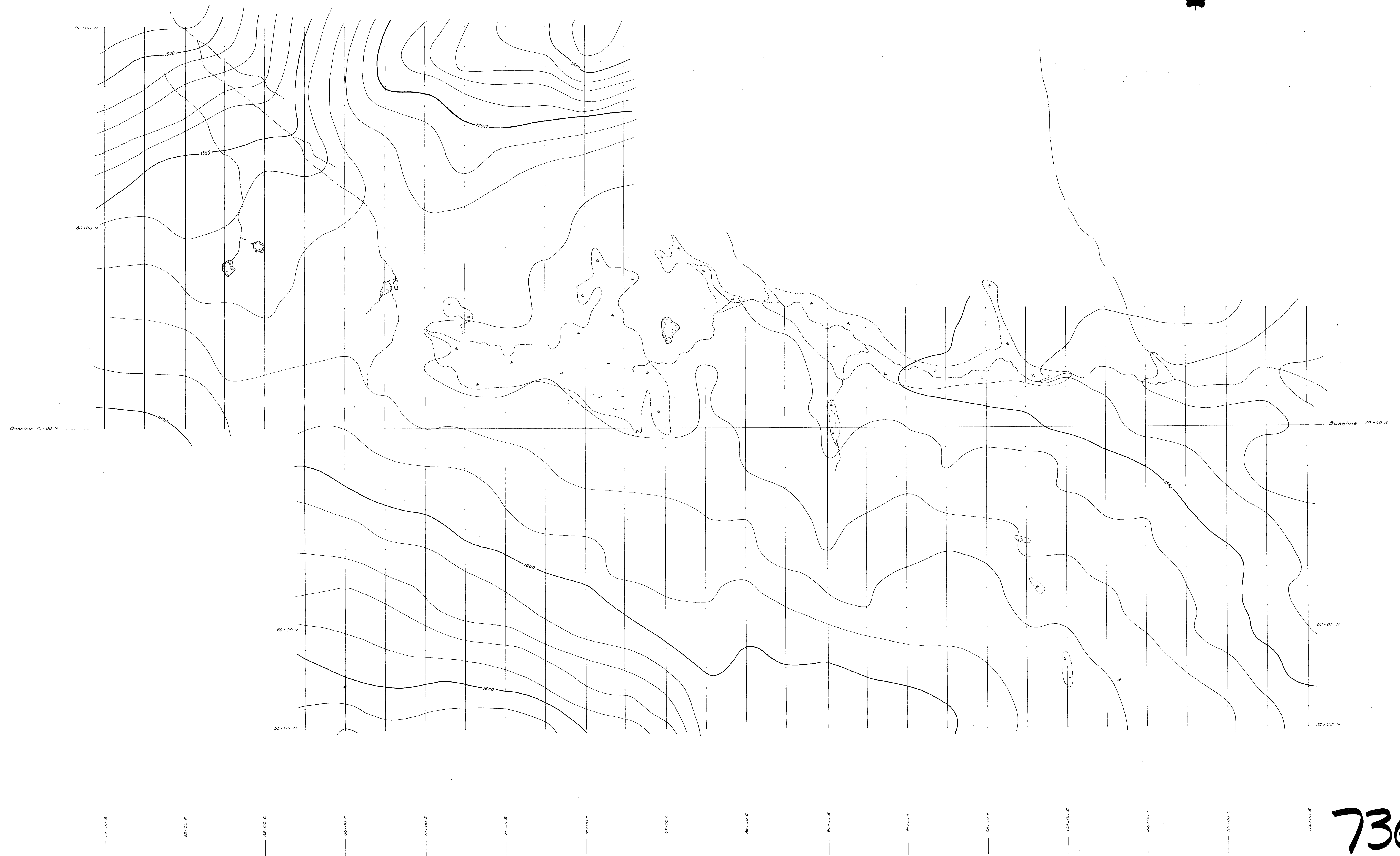
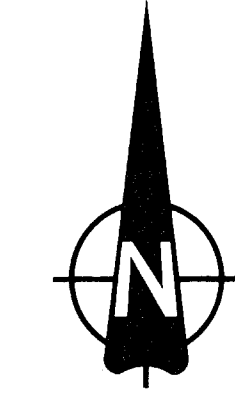
UTAH MINES LTD.  
EXPLORATION DEPARTMENT  
VANCOUVER BRITISH COLUMBIA

**DEER PARK Mo PROSPECT**  
**ROCK GEOCHEMISTRY**

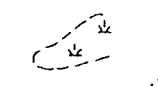

Work by: J. Cofer Date: July 1979 NTS Ref: 82 E - 8  
Drawn by: C.D. Revised

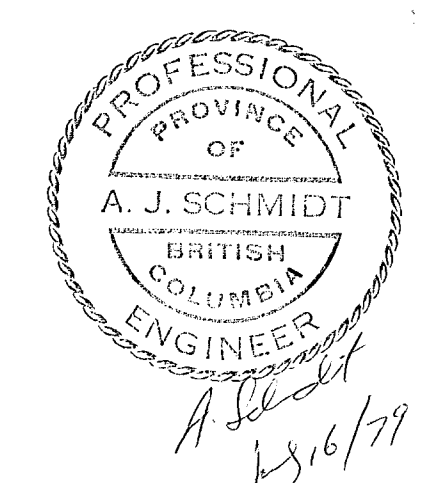






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LEGEND:  
Contour Interval 10 Meters  
 Swamp  
 Creek



UTAH MINES LTD.  
EXPLORATION DEPARTMENT  
VANCOUVER BRITISH COLUMBIA

**DEER PARK Mo PROSPECT**

**TOPOGRAPHY**

Work by: I. Cooper	Date: July 1979	NTS Ref: 82 E - 0(E)
Drawn by: C. D.	Revised:	

100 50 0 50 100  
SCALE: 1:2500