

Report on 1979 Summer Program
on the
CAPOOSE PROJECT

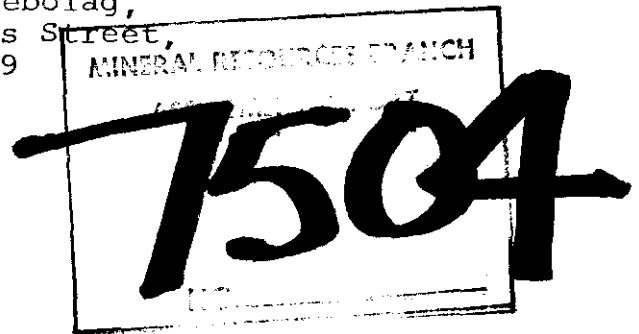
Includes:

Geochemical Soil Survey on Portions of Ned, "K", "L",
Ned 2 Fr. and Ned 3 Fr. Claims.
Geochemical Soil Survey on "O" and "P" Claims
Diamond Drilling Program on "E" Claim
Diamond Drilling Program on Ned 2 Fr. and Ned 3 Fr.

Omineca Mining Division
NTS 93F / 6E and W
Centered on Lat. $53^{\circ}17'$, Long. $125^{\circ}12'$

Owner and Operator:

Granges Exploration Aktiebolag,
1060 - 1055 West Hastings Street,
Vancouver, B. C., V6E 2E9



October 19, 1979

by:
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INTRODUCTION

The Capoose Project is an exploration joint venture by Scandinavian Minerals Syndicate (SMS) and Bethlehem Copper Corporation. Granges Exploration Aktiebolag, a participant and the manager of SMS, is managing the Capoose Project. The project is located 467 kilometers north-northwest of Vancouver, British Columbia, Canada.

The project contains two separate areas of interest. Widespread Ag values running approximately 45 g/T, with minor Pb, Zn and Au, occur on the "D" and "E" claims. There appears to be a good opportunity for developing ore if enough tonnage can be developed of this grade at present silver prices. Extensive soil geochemical anomalies in Mo and Cu occur approximately 6 kilometers to the west on the Ned, "J", "K", "L" and Ned 1 - 3 Frs. Some percussion drilling and limited diamond drilling have intersected marginal to submarginal values in MoS_2 .

The main effort of the 1979 program was a diamond drilling program completed on the "E" claim, the Ned No. 2 Fraction and the Ned No. 3 Fraction. In addition, a detailed soil geochemical survey for Mo, Cu, Ag and W was completed on parts of the Ned, "K", "L" and Ned 2 and 3 Frs. prior to diamond drilling.

The purpose of this report is to describe the work completed from May 31 through September 14, 1979. The following three

sections in this report and detailed cost statements are included specifically to satisfy Ministry of Energy, Mines and Petroleum Resources requirements for filing this report for assessment purposes.

LOCATION, PHYSIOGRAPHY AND ACCESS

The Capoose Project claims are located in Central British Columbia, 110 kilometers south-southeast of Burns Lake and 110 kilometers southwest of Vanderhoof. The property straddles the Fawnie Range. Slopes are generally very gentle to moderate except along the east and west edges of the Range, and along Green Lake which lies in a steep walled valley cutting through the Range. Elevations range from 1050 meters at the northwest corner of the property at Capoose Lake to 1900 meters along the height of the Fawnie Range.

A winter tractor road connects the property with Plateau Mills' Kluskus-Ootsa road, a distance of 26 kilometers from the end of the road at the northwest corner of the property at Capoose Lake. This road, the Capoose Lake Mining road, can be made passable to four-wheel drive vehicles during winter by plowing off the snow and letting it freeze. During the rest of the year it is only passable to tracked equipment and that usually with some difficulty due to swampy portions along the road. The road distance from the junction of the Capoose and Kluskus-Ootsa roads to Vanderhoof is 150 kilometers.

Another means of access is by float plane to Capoose Lake. Services out of Burns Lake and Tyhee Lake (Smithers) have been used.

From Capoose Lake, a helicopter move is required to reach the various work sites.

Material and equipment can be trucked down the Kluskus-Ootsa road to the Capoose road and then slung in by helicopter. Finally for small loads, such as weekly groceries, there is the option of direct helicopter flight to the job site from Houston, Burns Lake or Vanderhoof.

HISTORY AND PROPERTY DEFINITION(Claims)

Granges' interest in the Capoose area dates from 1973 when part of a regional geochemical silt sampling program revealed anomalous values in Mo, Cu, Pb, Zn and Ag there. Rio Tinto held the area at that time so no action was taken. Rio Tinto allowed their claims to lapse and Granges Exploration staked their first claims in the area in 1975. From 1976 through the winter of 1979 a considerable amount of work was completed. Beginning with grass roots type programs (soil geochemical surveys, magnetometer surveys, geologic surveys), the work progressed to more detailed surveys, as above, and some prospecting and hand trenching. Each year more claims were staked, enlarging the property. During 1978 and the winter of 1979 several percussion drilling programs were completed. The owner and operator of the property, on behalf of SMS and Bethlehem, is Granges Exploration Aktiebolag.

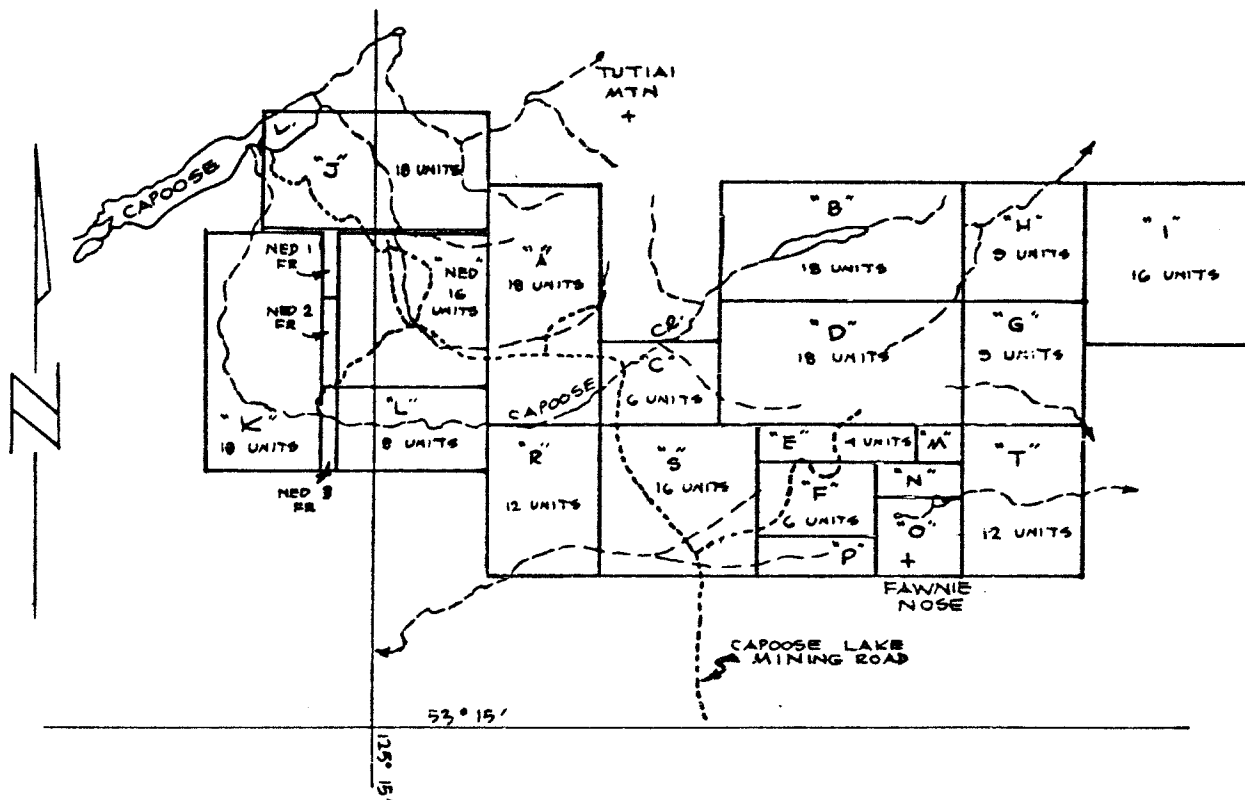
At this time, the possibilities of developing an economic

zone or zones, mainly in silver values, on the "E" claim appear good at the present silver price. Low grade, but theoretically ore grade, has been encountered. The requirement now is to develop tonnage until an ore body is proven.

The situation on the molybdenum area on the western end of the claim block is much less advanced. No economic zones have yet been found.

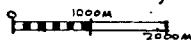
The property consists of 20 claims totalling 214 units, and three fractions as listed below:

<u>Name</u>	<u>Units</u>	<u>Record No.</u>	<u>Record Date</u>	<u>Expiry Date</u>
Ned	16	67(8)	August 7, 1975	1986
"A"	18	149(9)	September 26, 1975	1983
"B"	18	150(9)	September 26, 1975	1980
"C"	6	151(9)	September 26, 1975	1985
"D"	18	152(9)	September 26, 1975	1990
"E"	4	429(9)	September 23, 1976	1990
"F"	6	662(7)	July 4, 1977	1990
"G"	9	663(7)	July 4, 1977	1984
"H"	9	664(7)	July 4, 1977	1981
"I"	16	665(7)	July 4, 1977	1981
"J"	18	798(9)	September 23, 1977	1987
"K"	18	799(9)	September 23, 1977	1987
"L"	8	800(9)	September 23, 1977	1987
"M"	1	1237(7)	July 11, 1978	1990
"N"	2	1238(7)	July 11, 1978	1990
"O"	4	1916(7)	July 27, 1979	1981
"P"	3	1917(7)	July 27, 1979	1981
"R"	12		September 14, 1979	1980
"S"	16		September 14, 1979	1980
"T"	12		September 14, 1979	1980
Ned #1 Fr.		1815(6)	June 27, 1979	1987
Ned #2 Fr.		1816(6)	June 27, 1979	1987
Ned #3 Fr.		1817(6)	June 27, 1979	1987

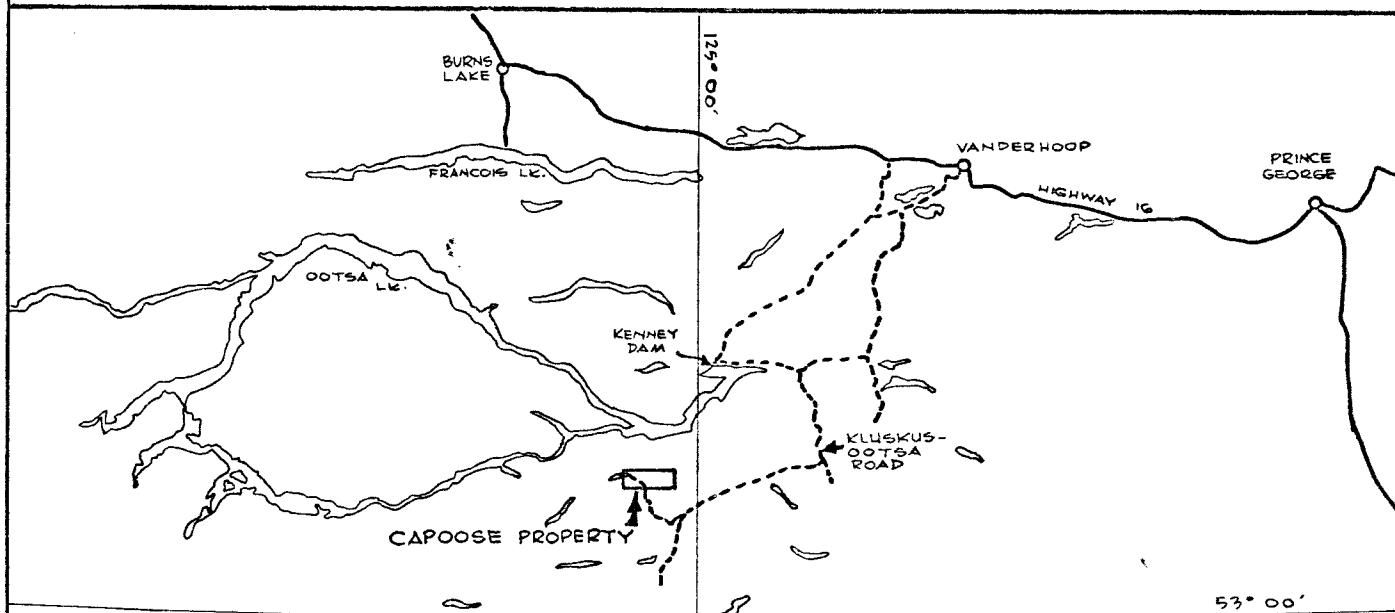


CLAIM MAP

SCALE 1:100,000



N.T.S. No 33 F-G



LOCATION MAP

SCALE 1:1,500,800

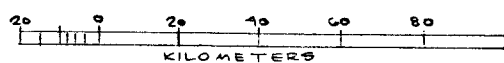


FIGURE 1

SUMMARY OF WORK AND SPECIFIC CLAIMS (Assessment Purposes)

Geochemical Soil Survey on Portions of the Ned, "K", "L" claims,

Ned No. 2 Fraction and Ned No. 3 Fraction:

Baselines and tie lines	6.00 km
Cross lines	<u>26.35 km</u>
Total	32.35 km

Soil samples collected and assayed
for Mo, Ag, Cu and W:

On Ned	36
On "K" and Ned 2 Fr.	278
On "L" and Ned 3 Fr.	<u>260</u>
Total	574

Geochemical Soil Survey on "O" and "P" claims:

Base lines	1.70 km
Cross lines	<u>9.60 km</u>
Total	11.30 km

Soil samples collected and assayed for Au, Ag and Zn	98
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Diamond Drilling on "E" claim:

Nine BQ sized holes totalling 1434.40 meters

Diamond Drilling on Ned No. 2 Fraction:

Two BQ sized holes totalling 228.60 meters

Diamond Drilling on Ned No. 3 Fraction:

One BQ sized hole totalling 124.05 meters

Twelve holes for total of 1787.05 meters

DESCRIPTION OF PROGRAM

Work completed during the 1979 summer program, and described in this report, is as follows. Three new camp sites were prepared and the old wharf was repositioned at the new landing on Capoose Lake. Roads and percussion drill sites completed during the previous winter were slashed. A detailed geochemical soil survey was completed over portions of the Ned, "K" and "L" claims and the Ned No. 2 and 3 Fractions. Five new claims, totalling 47 units, and three fractions were staked. A limited geochemical soil survey was completed over the "O" and "P" claims. A diamond drilling program was completed on the "E" claim, the Ned No. 2 fraction and the Ned No. 3 fraction. After the main program several days were spent on the property completing additional geologic mapping on the "E" claim.

During February and March of 1979, a program of percussion drilling and winter road construction was completed on the Ned, "J" and "L" claims. Slashing of the roads and drill sites was put off until the summer program. During the above program, the winter road was extended to Capoose Lake. Because of swampy ground around the old wharf and heliport on the lake shore, it was not practical to terminate the road there. Therefore the first requirement of the summer program was to move the old wharf to the new landing, build a camp site there and commence slashing along the new road.

Granges personnel left Vancouver on May 31, 1979, to

drive to Smithers, B.C., where Granges' field warehouse is located, and mobilization for the project was begun. On June 2nd an inspection tour of the project was made by helicopter to acquaint the diamond drill contractor with the many aspects and problems to be expected on the project. It was decided that Granges would fly in and construct plywood tent foundations for the required camps and that the contractor, D. W. Coates Enterprises, would provide for every other need related to the diamond drilling program except for helicopter transportation.

On June 4th a crew was flown by Otter to Capoose Lake to move and reset the old wharf at the new landing and commence construction of a new camp site there. On June 5th a crew of five was flown back in to stay. After tent foundation construction and camp set-up were completed, slashing was commenced along the new road. During this time, all materials needed to construct the two additional camp sites were flown in by Otter.

On June 9th a helicopter was used to transport materials and men to the "E" claim where tent foundations were constructed for the drilling program. Also, materials for the new camp site near the southwest corner of the Ned claim were transported to that site.

The crews and equipment of D. W. Coates Enterprises arrived in Vanderhoof on June 13th. On the 14th their equipment was transported via the Kluskus-Ootsa logging road to the junction with the Capoose Lake mining road. On June 15th the drill camp and equipment were moved to the "E" claim using an S-58 helicopter chartered from

Okanagan Helicopters. A 206B Helicopter, chartered from Alpine Helicopters, was used to move the five-man Granges crew, camp and equipment from the Capoose Lake shore to the Ned claim camp site. The 206B also assisted with the drillers' move to the "E" claim. The following day Coates' J.D. 450 bulldozer was driven to the "E" claim over the Capoose Lake mining road.

From the Ned camp site the five-man Granges crew completed the slashing and started the detailed geochemical soil survey. A good baseline was cut by power saw in a north-south direction along line 20W for 1.95 km. This base line was surveyed by transit and all cross lines were turned off the base line by transit. Cross lines and tie lines were run by compass and hip chainer, and marked by blazing and flagging. A total of 5.00 km of base lines and tie lines, and 26.35 km of cross lines was completed. Cross lines were 50 meters apart and samples were collected every 50 meters. A total of 574 samples was collected and assayed for Mo, Ag, Cu and W. The Ned 1 - 3 fractions were staked on June 24th. One of the five-man crew was transferred to the "E" claim to split core on June 22nd. The remaining four completed the soil survey on June 25th and moved out by helicopter and float plane to another Granges project on June 26th.

On the "E" claim, the drill camp set up and first drill set up were completed on June 17th. Two Coates supervisors aided in the move in but left the project on the 17th. The Coates crew consisted

of two drillers, two drill helpers and a cook. Granges personnel consisted of the writer, who was the geologist and manager of the project, and, from June 23rd, A. Montrose who split core. Coates supplied all materials, including food, and equipment, including a J.D. 450 bulldozer on the drill project. Granges was responsible for all helicopter transportation.

Drilling on the "E" claim was completed from June 18th through July 18th, 1979. Nine BQ diamond drill holes totalling 1434.40 meters were completed, (Cap D-1-79 to Cap D-9-79).

Two additional Granges employees were transported to the project on July 14th to assist in staking the "O" and "P" claims and then to complete a geochemical soil survey over them. With the assistance of the two men the writer staked the 3x1 unit "P" claim on July 15th and the 2x2 unit "O" claim on July 16th. The soil survey was completed on July 17th and 18th by D. Martin and C. Sheehan. A total of 1.70 km of baseline and 9.60 km of cross lines was completed. Lines were 100 meters apart and samples were collected every 100 meters along the lines. Lines were done by compass and hip chainer. The area is mostly above timberline and the lines were marked with pickets and flagging. There were 98 samples collected and assayed for Au, Ag and Zn.

On July 19th preparations were begun to move the drill camp and equipment to the south west corner of the Ned claim. The

camp was moved by helicopter on the 20th. Five additional Granges employees were brought in for the day to aid in the move and new camp set up. An Allis-Fiat HD 11 bulldozer was rented with driver to assist in moving the drilling equipment overland to the Ned No. 2 Fraction beginning on the afternoon of July 21st. The J.D. 450 pulled the smaller sloop and the HD 11 pulled the large sloop and drill in tandem. The crew got the equipment to the main road by nightfall and were taken to the Ned camp by helicopter. A crew was returned to the bulldozers the next morning by helicopter and the equipment arrived at the next drill site on the Ned No. 2 Fraction at about 2 p.m. on July 22nd. The HD 11 was then sent out.

Drilling commenced on the Ned No. 2 Fraction on July 23rd. Two BQ sized holes were completed totalling 228.60 meters (Ned D-1-79 and Ned D-2-79). Drilling was completed on July 28th and the drill was moved to the Ned No. 3 Fraction. A 700-meter drill road was completed, using the J.D. 450, from the main road to the Ned D-3-79 drill site.

The writer recorded the "O" and "P" claims on the 27th and returned by helicopter the same day. Montrose was sent to another Granges project on the 27th and the writer supervised the balance of the drilling program.

Hole Ned D-3-79 was completed at 124.05 meters on the Ned No. 3 Fraction on July 30th. July 31st was spent preparing to

move out. On August 1st, two helicopters were chartered from Alpine Helicopters and the camp and equipment were moved out. The J.D. 450 towing the drill skids went out over the Capoose Lake road.

The total diamond drilling on the project consisted of twelve BQ sized holes totalling 1787.05 meters. The core from holes Ned D-1-79 to Ned D-3-79 was left stacked on blocks at the respective holes. On the "E" claim all ore grade sections of core were removed to the company's warehouse in Vancouver. The remainder was stacked on blocks at the core shed on the "E" claim.

The B.C. Ministry of Energy, Mines and Petroleum Resources agreed that Dr. Neil Church, geologist, would aid in the geologic interpretation of the area along the top of the Fawnie Range. This area includes the mineralization drilled on the "E" claim. On August 19th the writer, with Dr. Church and his assistant, flew by helicopter to the "E" claim camp site. The core was inspected by Dr. Church. Eighty-one boxes of core, approximately 520 meters, were prepared for shipment to Granges' Vancouver warehouse. This core was moved to the Kluskus-Ootsa road by helicopter and on to Vancouver in the company truck. Several days were spent in geologic mapping. Dr. Church covered a large area while the writer concentrated on and around the zones of interest on the "E" claim. This crew left by helicopter on August 25th.

On September 9th K. Taylor with a crew of three men returned to the Capoose Project and staked three additional claims. The crew returned to Smithers on September 13th and the "R", "S" and "T" claims, totalling 40 units, were recorded on September 14th, 1979 (see Figure 1). This concluded work on the Capoose Project for 1979.

ASSAYER and METHOD of ANALYSES of SOIL SAMPLES

Acme Analytical Laboratories Ltd., of 852 East Hastings St., Vancouver, B.C., completed all assaying for the project.

All soil samples were obtained from the upper "B" horizon at an average depth of 0.3 meters with the use of augers. The samples were placed in kraft soil envelopes for delivery to the lab. The samples are dried for approximately 16 hours at 75° centigrade and sieved to -80 mesh. For Cu, Mo, Zn and Ag, a 0.5-gram sample is digested with diluted aqua regia in a hot water bath for one hour and diluted with demineralized water. The determination is by atomic absorption from the solution. The Ag is determined by atomic absorption using a background correction. For W, a 1-gram sample is fused with KCl, KNO₃ and Na₂CO₃ flux in a test tube, hot leached overnight, and then made up to 10 ml with water. An aliquot is used to develop a complex with SnCl₂ in HCl and KSCN which is extracted by n-tributylphosphate and carbon tetrachloride. For gold a 10-gram sample is ignited overnight at 600° centigrade. It is then digested with hot diluted aqua regia

and the clear solution is extracted with methyl isobutyl ketone. The determination is done by atomic absorption from the methyl isobutyl ketone extractant with background correction.

DESCRIPTION OF RESULTS

Geochemical Soil Survey on Ned, "K", "L", Ned 2 Fr. and Ned 3 Fr. for Mo, Ag, Cu and W:

No anomalous values in Cu were obtained from the survey. The few low order and scattered anomalous results in Ag and W are not considered to be of interest.

The survey was completed to obtain more detailed data over a previous soil survey done on a 100 by 100 meter sample spacing which disclosed interesting but disconnected anomalous zones in molybdenum. This survey covered one large area and three small areas to the northwest. The small areas were done to detail isolated small anomalies away from the more generally anomalous area. Results on Mo and Ag are shown on Figure 3, and results on Cu and W are shown on Figure 4, both enclosed in the back of this report.

The highest value obtained for Mo was 370 ppm. Several other high values are scattered over the survey area. The contour interval on Fig. 3 for Mo has been doubled from 10 ppm, that is, 10, 20, 40, 80 and so on. The anomalous areas are still mostly disconnected at the 10 ppm range. The anomalies display a strong alignment which suggests that the mineralization is controlled by fault zones. One alignment of anomalies trends north-south for some 1400 meters through

the largest survey area. This anomalous trend is offset at 11-S, 21-W which may indicate that the zone has been displaced by faulting. A second weaker trend runs northwest across the large area and is aligned with anomalies disclosed on two of the small areas to the northwest. The best assay results from the three diamond drill holes, in this area, were obtained within very gougy fault zones.

Geochemical Soil Survey on "O" and "P" for Au, Ag and Zn:

No anomalous values were returned by the survey. This survey indicates that the Zn anomaly extending well south into the "F" claim has been effectively delineated. Results are shown on Figure 5 enclosed at the back of this report.

Diamond Drilling Program on "E" Claim:

The diamond drilling program was carried out to test areas on the "E" claim on which previous work had indicated significant quantities of gold, silver, lead and zinc mineralization. Appendix A contains the logs and records (assays) of the individual holes. The location of the holes relative to the grid and claim boundaries may be seen on Figure 2, enclosed in the back of this report.

The geologic setting along the Fawnie Range consists of a volcanic pile of andesitic and rhyolitic rocks belonging to the Hazelton Group. Within the area of interest, the rock types are predominately rhyolite tuffs and breccia with very minor units of andesitic tuff and breccia. The host rocks for mineralization are rhyolitic tuff and breccia.

The diamond drill results are considered very encouraging. Several holes returned low grade but significant values in silver over long intersections. Very minor gold values are present. Lead and zinc values tend to be too low to be of interest except for very low values in two holes. The more interesting results are tabulated below:

Hole No.	Intercept Meters	Length Meters	Au g/t	Ag g/t	Pb %	Zn %
Cap D-1-79	15.24-144.48	129.24	.23	50.6		
Cap D-2-79	72.00-79.50	7.50	.32	45.9		
Cap D-3-79	33.0-69.0	36.00	.72	105.9		
"	30.0-143.42	113.42	.33	47.0		
Cap D-4-79	33.0-45.0	12.00	2.41	17.1		
"	120.0-156.0	36.00	.43	60.6		
"	69.0-156.0	87.00	.32	42.8		
Cap D-5-79	30.0-150.0	120.00	.15	46.3	.26	.39
Cap D-7-79	3.05-30.0	26.95	.80	47.8		
Cap D-8-79	145.25-159.0	13.75	.39	52.5		
"	189.34-200.34	12.00	.41	43.4		
Cap D-9-79	81.0-111.0	30.00	.11	52.2	.14	.17
"	45.0-111.0	66.00	.18	36.6	.24	.17

A zone has been indicated which trends through holes 1, 3, 4 and 5. It may possibly extend on through holes 7 and 8, but appears to be much smaller there. This zone appears to dip steeply to the east with holes 1 and 5 bottoming in an unmineralized rhyolite dike. Holes 4 and 8, which penetrated the dike, encountered some marginal values below the dike. Therefore, the full extent of the zone may not have been tested by holes 1 and 5. The results suggest continuity of silver values of approximately 45 g/T for a length of at least 300 meters and over a width of approximately 80 meters. Hole 1 indicates that these values persist at least 140 meters in depth. Re-evaluation of the outcrops in the area of Hole 5 suggest that the mineral zone continues for another 60 meters east

and northeast from that hole. Therefore hole 5 may have been collared near the middle of the zone and it may be substantially wider.

Hole 9 shows that significant values occur well outside of the zone described above.

A substantial amount of additional drilling will be required on the "E" claim to adequately delineate and evaluate the mineralization encountered to date.

Diamond Drilling Program on Ned 2 Fr. and Ned 3 Fr.

The drill area lies within the Capoose batholith. The rock types intersected by holes Ned 1 and 2 were relatively coarse-grained quartz monzonite. Ned 3 intersected quartz monzonite and medium-grained granodiorite.

The logs and assay results for Ned 1 - 3 are located in Appendix A and drill hole locations are on Figure 3 enclosed in the back of this report.

Hole Ned D-1-79 was drilled to investigate submarginal values, averaging .02% MoS₂, in percussion hole P-92. A section in Ned 1 from 45.0 - 103.72 averaged .02% MoS₂. Thus the grade was not improved. The last 2.63 meters of the hole returned .1% MoS₂ although it did not look significantly better than other mineralized sections.

Holes Ned D-2-79 and Ned D-3-79 were drilled to

test two interesting molybdenum soil anomalies. Results were disappointing although sufficient MoS_2 was intersected to explain the presence of the soil anomalies. The two holes returned the following sections with MoS_2 values:

	<u>Intercept - Meters</u>	<u>% MoS_2</u>
Ned 2	39.14 - 45.14	0.037
	96.42 - 96.82	0.485
Ned 3	26.52 - 29.57	0.098
	46.59 - 47.08	0.282

With the exception of the .1 assay at the end of Ned 1, better values were associated with highly chloritized gouge zones. These zones display intense lineation and contained, in places, numerous black slips which were originally thought to be mashed pyrite. It appears, from assays, that this black material is, at least in part, molybdenite. In all holes these structures cut the core at low angles, generally from 10° to 30° . Consequently any future inclined drilling should be directed in the opposite direction. Since mineralization appears to be fault control and soil anomalies suggest narrow linear features, any future percussion drilling should be done with fences of closely spaced holes.

Geology - "E" and "F" Claim Area:

Several days were spent, from August 19 - 25th, in re-mapping areas on the "E" and "F" claims. Dr. Neil Church was on the property with the writer during this time, and he made a more wide-ranging reconnaissance geological survey along the Fawnie Range from Fawnie Nose to the southern cliff overlooking Green Lake. He also

devoted some time to the mineral zones on the "E" claim.

Dr. Church believes that all the rock units from Fawnie Nose to Green Lake belong to the Hazelton Group. He found that the average glacial striae in this area are $N66^{\circ}E$. The most prominent set of jointing has an attitude of $N70^{\circ}E$ and dips $85^{\circ}N$. A secondary set strikes $N55^{\circ}E$ and dips $68^{\circ}SE$.

It was mentioned earlier in this report that the rock types along the Fawnie Range are andesitic and rhyolitic tuffs and breccias. There are only a very few, very limited areas where bedding was found. For the most part, the attitude of these volcanic units has been determined from observed flow banding. It would appear that a very minor portion of these volcanics was deposited in marine environment.

Observed flow banding and bedding along the range averaged $N56^{\circ}E$ with an average dip of $38^{\circ}SW$. Strikes varied from $S22^{\circ}E$ to $N85^{\circ}E$, and dips from 15° to $46^{\circ}SW$. Locally within the area of interest on the "E" claim the attitude of the flow banding is north-south with a vertical to near vertical dip.

The geology of the zones diamond drilled on the "E" claim is shown on Figure 2 enclosed in the back of this report. It shows that the attitude of the units mapped in that area in general conform to the regional trend. The alteration zones and geochemical anomalies cut across the units in the same direction as glaciation. One

would assume that the geochemical anomalies extending for 3.5 kilometers to the northeast have been caused by glaciation. Dr. Church has postulated that the mineralization probably has been implaced by ascending solutions and/or vapours moving up vertically more or less at right angles to the attitude of the units in the volcanic assemblage. By coincidence this direction is now the same as the direction of glaciation. One cannot disregard the geochemical anomalies to the northeast. In addition the most prominent jointing pattern coincides roughly with this trend.

Alteration in the mineralized zones is mainly silicification. Garnitization, while wide-spread and intense in some areas, can be totally absent in others. In unit 4a, the host for mineralization intersected in Hole D-5, the principal alteration is kaolinization.

The mineralization in and adjacent to unit 4a may indicate a more favourable host rock and thus the spreading out of mineralization from the postulated vertical columnar zone of ascending mineralizing solutions.

The predominant sulphide present in the drill core is pyrite. Very minor amounts of sphalerite were generally present. Only holes D-5 and 9 contained low but significant amounts of sphalerite and galena. Silver values do not necessarily increase with higher lead or zinc assays. A study of polished sections made two years ago suggests that the silver is present as argentian tetrahedrite, pyrargyrite and electrum. Disseminated crystals of arsenopyrite occurred throughout

the core in hole D-9. Minute amounts of chalcopyrite were observed in several holes. Some values are present as oxides in the upper portion of the holes. Assays suggest some enrichment at the base of the zone of oxidation.

COST STATEMENTS

Granges Exploration's accounting records show the following amounts spent in direct work on the Capoose Project from January 1st through August 31st, 1979:

Percussion Drilling	\$ 48,340.53
(not covered in this report)	
Diamond Drilling	193,603.18
Geochemical Surveying	12,689.50
Geological Mapping	<u>2,869.25</u>
	\$257,502.46

Cost statements, below, have been prepared to satisfy requirements for filing assessment on the following groups of claims:

"J", "K", Ned #1 Fr., Ned #2 Fr.

"L", Ned #3 Fr.

"D", "E", "F", "N", "M", "O", "P"

The breakdown of costs on this project is complicated for the following reasons. Transportation costs overlap because the geochemical surveys were being serviced at the same time as the diamond drilling. A significant portion of the drill contractors charges and other expenses on the program can only be related to the overall project and therefore must be apportioned to the several job sites. The drilling contractor's bill has been divided by the total meters drilled and apportioned to each area at that cost per meter. Their billing includes the cost of providing a J.D. 450 bulldozer at \$20/hour (not including operator), and board for Granges' personnel at \$8/meal. A portion of transportation costs was assigned to the geochemical surveys and the larger balance

has been apportioned to the drill areas on the basis of meters drilled in each area. The following figures show the costs that have been apportioned:

Diamond Drill Contractor's Total Bill = \$144,362.53

$$\frac{\$144,362.53}{1787.05 \text{ meters}} = \underline{\$80.78/\text{meter}}$$

Transportation:

Okanagan Helicopters - S 58, June 15th

7.3 hrs. x \$800 5,840.00

Fuel 101.43

Helicopter costs to
drill program \$5,941.43

Alpine Helicopters - Bell 206B and 47T, June 2, 9, 15
18, 22, 26; July 4, 7, 10, 14, 20 to
22, 26-27; Aug. 1

Bell 206B -- 46.2 hours

Less - 5.0 hours apportioned to Geochem
survey Ned, "K", "L" area

Less - 1.0 hour to Geochem "O" & "P"

40.2 x \$330/hr 13,266.00

Bell 47T 12.2 x 225/hr 2,745.00

Fuel 1,092.56

Helicopter costs to Drilling Program \$17,103.56

Smithers Air Service - Otter, June 4, 5, 6, 26

Total billings \$ 2,950.00

1/2 to Diamond Drilling 1,475.00

1/4 to Geochem Survey on Ned, "K",
"L", et al 737.50

TOTAL Transportation costs to Drilling Program \$24,519.99

Lumber \$1,532.77

Hardware 441.36 \$ 1,974.13

1/4 to Geochem Ned, "K", etc. 493.53

3/4 to Daimond Drilling 1,480.60

Mobilization for Diamond Drilling - H. H. Shear, June 1 - 14

14 days @ \$75.13 = \$1,051.82

Report and Maps - H. H. Shear, Oct. 5, 9-12, 15-7

8 days @ 107.35/day = \$ 858.80

1 day to Geochem Survey "D" & "P" claims 107.35

2 days to Geochem, Ned, "K", "L", et al 217.70

5 days to Diamond Drilling 536.75

Apportionment of Cost to Drill Areas: (Total drilling - 1787.05 meters)

Drilling on E claim $\frac{1434.40}{1787.05} = .80266$

Drilling on Ned 2 Fr. $\frac{228.60}{1787.05} = .12792$

Drilling on Ned 3 Fr. $\frac{124.05}{1787.05} = .06942$

Apportionment of Costs on Geochemical Survey:

among "K", Ned #2 Fr. and "L", Ned #3 Fr.

(Total soil samples -- 574)

on "K", Ned #2 Fr. = 278 -- $\frac{278}{574} = .48432$

on "L", Ned #3 Fr. = 260 -- $\frac{260}{574} = .45296$

The above computations are carried forward into the calculations of the various costs as factors.

COSTS - Diamond Drilling on "E" Claim June 15 - July 19, 1979

<u>Diamond Drilling</u> = 1434.40 x \$80.78/m	\$ 115,870.83
<u>Transportation</u> = 24519.99 x .80266	19,681.21
<u>Labour: H. H. Shear</u>	
Mobilization: June 1-14 1051.82 x .80266	844.25)
Supervision & Logging	
June 15-July 19 35 x 75.13/day	2,629.55)
Reports, Maps 536.75 x .80266	430.83)
<u>A. Montrose</u>	
Splitting core June 23-July 19 --	
27 days x 38.05	1,027.62)
Total Labour	4,932.25
<u>Assaying: Acme Analytical Labs Ltd.</u>	
108 (Au and Ag) x 8.25	891.00)
327 (Au, Ag, Pb, Sn) x 14.75	4,823.00)
5 (Cu) x 3.25	16.25
	5,730.25
<u>Lumber and Hardware</u>	
1480.60 x .80266	1,188.42
	\$ 147,402.96

COSTS - Diamond Drilling on Ned #2 Fr. July 20 - 28, 1979

<u>Diamond Drilling</u> = 228.60 x \$80.78/m	18,466.31
<u>Transportation</u> = 24519.99 x .12792	3,136.60
<u>Labour: H. H. Shear</u>	
Mobilization: June 1-14 --	
1051.82 x .12792 =	134.55)
Supervision and logging	
July 20-28 9 x 75.13 =	676.17)
Report and Maps 536.75 x .12792 =	68.66)
<u>A. Montrose</u>	
Splitting core July 20-27 8 x 36.06 =	288.48)
	1,167.86
<u>Assaying: Acme Analytical Labs Ltd.</u>	
36 (MoS ₂) x \$5.00	180.00)
2 (MoS ₂ , Au, Ag) x 11.50	23.00)
12 (MoS ₂ , Cu, Au, Ag) x 14.75	177.00)
	380.00
<u>Lumber and Hardware</u>	
1480.60 x .12792	189.40
	\$ 23,340.17

COSTS - Diamond Drilling on Ned #3 Fr. July 29 - 31, 1979

<u>Diamond Drilling</u> = 124.05 x \$80.78/m	\$	10,020.76
<u>Transportation</u> = 24,869.99 x .06942		1,702.18
<u>Labour: H. H. Shear</u>		
Mobilization: June 1 - 14		
1051.82 x .06942 = 73.02)		
Supervision & Logging		
July 29-31 3 x 75.13 = 225.39)		
Reports, Maps 536.75 x .06942 = 37.26)		335.67
<u>Assaying: Acme Analytical Labs Ltd.</u>		
9 (MoS ₂ , Cu, Au, Ag) x \$14.75		132.75
<u>Lumber & Hardware: 1480.60 x .06942</u>		102.78
	\$	12,294.14

COSTS - Geochemical Survey on Ned, "K", "L", Ned #2 Fr.
and Ned #3 Fr. - June 16-26, 1979

Labour:

K. Taylor, Foreman, June 16-26		
11 days x 54.47	599.17)	
R. Wintermeyer, Lead hand, June		
20-26, 7 x 54.44	381.08)	
D. Martin, labourer, June 20-26		
7 days x 48.98	342.86)	
D. Willson, labourer, June 16-26		
11 days x 48.98	538.78)	
A. Montrose, helper, June 16-22		
7 days x 38.06	266.42)	
H. H. Shear, Geologist, October		
2 days x \$107.35	214.70)	2,343.01

Transportation:

Alpine Helicopter, June 15-26		
5 Hrs. x \$330	1650.00	
Smithers Air Service, June 4-26		
1/4 of \$2,950.	737.50	2,387.50

<u>Groceries:</u> June 16-26 1/2 of 675.40	337.70
<u>Hardware:</u> June 16-26 1/4 of 441.36	110.34
<u>Lumber:</u> June 16-26 1/4 of 1532.77	383.19

\$ 5,561.74

continued

Costs to "K" and Ned #2 Fr.

\$5,561.74 x .48432	\$ 2,693.66
Assaying (Mo, Ag, Cu, W)	
278 x \$4.50/sample	<u>1,251.00</u>
	\$ 3,944.66

Costs to "L" and Ned #3 Fr.

\$5,561.74 x .45296	\$ 2,519.25
Assaying (Mo, Ag, Cu, W)	
260 x \$4.50/sample	<u>1,170.00</u>
	\$ 3,689.25

COSTS - Geochemical Survey on "O" and "P" Claims - July 17-18,
1979. Survey completed between the times claims
were staked (July 15-16) and recorded (July 27)

Labour:

D. Martin, labourer, July 17-18		
2 days x \$48.98	97.96)	
C. Sheehan, labourer, July 17-18		
2 days x \$38.06	76.12)	
M. Prew, geophysicist-draftsman		
Aug. 20, 1 x 114.42	114.42)	
H.H. Shear, geologist, reports		
Oct. 1 x 107.35	<u>107.35)</u>	\$ 395.85

Board:

Martin & Sheehan (D.W. Coates	
Enterprises) July 17-18	
4 man days x \$24	96.00

Transportation:

Alpine Helicopters, July 18 & 20	
1 hr. @ \$330/hr.	330.00

Assaying: Acme Analytical Labs Ltd.

98 (Au and Ag) x \$3.75/samp.	367.50)	
97 (Zn) x \$1.30/sample	<u>126.10)</u>	<u>493.60</u>
		\$ 1,315.45

Respectfully submitted;

H. H. Shear
H. H. Shear, P. Eng.

Oct. 19, 1979

STATEMENT OF QUALIFICATIONS

Name: Henry Herbert Shear

Profession: Exploration Geologist

Education: B. Sc. -- Geological Engineering (1959);
B. Sc. -- Mining Engineering (1960), both
from University of Arizona

Professional Associations: Member of the Association of Professional
Engineers of British Columbia

Member of The Canadian Institute of Mining
and Metallurgy

Experience: 4 years -- Field Geologist with various companies
in British Columbia

1 year -- Exploration Manager for General
Resources Ltd. in Australia

7 years -- Consulting Geologist and Project
Manager including 4 years with
Quintana Mineral Corp.

1 year -- Project Geologist with Giant Mascot
Mines, Ltd.

May, 1976, to present -- Project Geologist with
Granges Exploration AB

H. H. Shear
Oct. 19, 1979



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property . Capoose . Proj Project No . 70113 Depth . 149.66 (491') Date Began . June 17, 1979
Hole No . Cap. D-1-79 Co ord . 3 + 75.5 Horizontal Length . 45.4 Date Completed . June 20, 1979
Sheet No . 1 8 + 25 W Direction . S 88 E Drilled By . D. W. Coates . Drilling
Claim No . "E" Elevation . 1829 Angle . - 72° Logged By . J. V. S. Shum

METERS FOOTAGE	DESCRIPTION	ALTERATION										% REC'D CALC'D.
		FROM	TO									
0 - 3.05	Overburden (casing 0 - 3.66)											
3.05 - 12.80	Andesitic Agglomerate; and frag - rhy matrix; dark grey; slightly mag. 2-3% diss + veinlet py											
12.80 - 15.24	Transition or alteration zone; becomes lighter in color; chl alt in some fragments; 2-3% diss py.											
15.24 - 19.20	Rusty Rhyolite Agglomerate and white gouge, Rhy very soft; most of core lost; $\approx$ 1% py											
19.20 - 21.03	Rhyolite Agglom.; light grey (no rust); gougy; 2-3% py; minor amts bk mineral visible; very soft.											
21.03 - 25.53	Rhyolite Agglom.; white and rusty; very soft; white gouge at end of section - length unknown due to lost core.											
25.53 - 29.26	Rhyolite Tuft; light grey; vuggy; fractures and vugs lined or filled with limonite (commonly hematite colored) and manganese staining; hard; no py										3.05 29.26	51.8%
											29.26 60.05	97.7%
											60.05 65.23	74.0%
											65.23 86.72	98.0%
											86.72 88.08	74.0%
											88.08 98.45	99.0%
											98.45 101.19	88.0%
											101.19 119.48	97.4%
											119.48 120.70	77.0%
											120.70 135.03	97.2%
29.26 - 144.48	Mainly rhyolite agglomerate with minor rhy. tuft. Alternating sections of weathered (rusty) rhy and unweathered (light grey) Generally mineralized with py, sph. and minor amts of other bk mineral except in rusty sections. Py: 1-5%; sph 0-1% Detail of section follows on sheet 2											

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property *Campoose Proj.* Project No. *70113* Depth *149.66 (491')* Date Began *June 17, 1979*
Hole No. *Cap D-1-79* Co ord. *3+755* Horizontal Length *45.4* Date Completed *June 20, 1979*
Sheet No. *2* *8+25W* Direction *S88E* Drilled By *D.W. Coates Drilling*
Claim No. *"E"* Elevation *1829* Angle *-72°* Logged By *N.N. Sheen*

METERS FOOTAGE	DESCRIPTION	ALTERATION										% REC'Y CALC'D.
		FROM	TO									
29.26-144.48	(continued) Mainly rhyolite agglomerate with minor rhyolite tuff, light grey											
29.26-54.56	1-3% py, visible sph ($\approx 1\%$) numerous limonite fractures Best visual section: 43.28-43.89											
	@ 44.35 laminations @ 20° to core axis											
54.56-77.72	Very rusty sections											
54.56-56.08	gossanous											
56.08-57.30	2-3% sph; minor limonite											
57.30-57.61	abundant limonite											
57.61-62.03	a few lim. frags, 2-3% py only											
62.03-64.92	Ab. lim., minor py, 5 cm gouge @ 62.64											
64.92-67.66	gossanous											
67.66-69.49	mod. lim, minor py only											
69.49-70.41	a few lim. frags 2-3% py											
70.41-70.87	Ab. lim, minor py											
70.87-71.78	No lim., 3-4% py											
71.78-76.20	Ab. lim, leached, No sulphides 71.78-71.93 gouge											
76.20-76.66	rusty gouge											
76.66-77.72	Moderate lim. on frags, No sul.											
77.72-116.13	Lim. sections shorter and less intense but still scattered throughout.											
77.72-80.47	No lim.; 2-3% py; vis. sph ($\approx 1\%$) Best vis. sph. 79.86-80.47											
80.47-86.26	A few small limonitic zones and fractures; 2-3% py; minute sph vis.											
	@ 85.95 laminations @ 20° to core axis											
86.26-87.17	2-3% py, No lim., No vis sph.											

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property Copose Project Project No. 7012 Depth 149.46 (491') Date Began June 17, 1979
Hole No. Cap D-1-79 Co ord. 3+75.5 Horizontal Length 45.4 Date Completed June 20, 1979
Sheet No. 1 8+25W Direction 300°E Drilled By D.W. Coates
Claim No. E Elevation 1829 Angle -72° Logged By H. H. Sherry

METERS FOOTAGE	NUMBER	WIDTH	Au. g/t	Ag. g/t	Pb gwt	Zn.	WIDTH X ASSAY				AVERAGES					REMARKS Footage
											WIDTH	Au. g/t	Ag. g/t	Cu.	Zn.	
0 - 3.66	Casing	3.66														0 - 12
3.66 - 5.18	Waste	1.52														12 - 17
5.18 - 7.47	5091	2.29	.10	15.5												17.0 - 24.5
7.47 - 10.06	5092	2.59	.05	1.5												24.5 - 33.0
10.06 - 13.11	5093	3.05	.05	5.0												33.0 - 43.0
13.11 - 15.24	5094	2.13	.05	6.0												43.0 - 50.0
15.24 - 18.29	5001	3.05	.10	89.0	.24	.03	.305	271.45								50.0 - 60.0
18.29 - 21.03	5002	2.74	.10	26.5	.03	.02	.274	72.610								60.0 - 69.0
21.03 - 25.53	5003	4.50	.05	11.0	.02	.02	.225	49.50								69.0 - 83.75
25.53 - 28.65	5004	3.12	.10	71.5	.02	.01	.312	223.08								83.75 - 94.0
28.65 - 31.70	5005	3.05	.15	62.5	.02	.01	.458	190.625								94.0 - 104.0
31.70 - 34.75	5006	"	.10	25.5	.12	.10	.305	77.775								104.0 - 114.0
34.75 - 37.80	5007	"	.25	40.0	.15	.07	.763	122.00								114.0 - 124.0
37.80 - 40.84	5008	"	.30	25.5	.03	.01	.915	77.775								124.0 - 134.0
40.84 - 43.89	5009	"	.25	39.0	.18	.04	.763	118.95								134.0 - 144.0
43.89 - 46.94	5010	"	.20	17.5	.01	.01	.610	53.375								144.0 - 154.0
46.94 - 50.00	5011	"	.15	58.5	.02	.01	.458	178.425								154.0 - 164.0
50.00 - 53.04	5012	"	.05	53.0	.02	.01	.153	161.65								164.0 - 174.0
53.04 - 56.08	5013	"	.15	45.5	.04	.01	.458	138.775								174.0 - 184.0
56.08 - 59.13	5014	"	.20	53.0	.08	.08	.610	161.65								184.0 - 194.0
59.13 - 61.95	5015	2.82	.15	18.0	.01	.01	.423	50.76								194.0 - 203.25
61.95 - 65.23	5016	3.28	.25	52.0	.02	.01	.820	170.56								203.25 - 214.0
65.23 - 68.28	5017	3.05	1.20	201.0	.08	.01	3.660	613.05								214.0 - 224.0
68.28 - 71.32	5018	3.05	.10	45.0	.02	.01	.305	137.25								224.0 - 234.0
71.32 - 74.37	5019	"	.15	36.0	.01	.01	.458	109.80								234.0 - 244.0
74.37 - 77.42	5020	"	.05	28.5	.01	.01	.153	86.925								244.0 - 254.0
77.42 - 80.47	5021	"	.05	20.0	.05	.17	.153	61.000								254.0 - 264.0
80.47 - 83.52	5022	"	.10	24.5	.05	.23	.305	74.725								264.0 - 274.0
83.52 - 86.56	5023	"	.05	14.0	.01	.02	.153	42.700								274.0 - 284.0
86.56 - 89.61	5024	"	.05	39.0	.01	.02	.153	118.95								284.0 - 294.0
89.61 - 92.66	5025	"	.15	81.5	.01	.02	.458	248.575								294.0 - 304.0
92.66 - 95.71	5026	"	.10	112.0	.02	.01	.305	341.600								304.0 - 314.0
95.71 - 98.76	5027	3.05	.25	170.0	.06	.01	.763	518.50								314.0 - 324.0
98.76 - 100.89	5028	2.13	.30	158.0	.08	.01	.639	336.54								324.0 - 331.0
100.89 - 102.72	5029	1.83	.15	60.5	.18	.01	.275	110.715								331.0 - 337.0
102.72 - 105.77	5030	3.05	.05	23.0	.02	.01	.153	70.15								337.0 - 347.0
105.77 - 108.80	5031	2.43	.20	57.0	.04	.01	.486	138.51								347.0 - 355.0
108.80 - 108.58	5032	.38	3.60	114.0	.23	.03	1.368	43.32								355.0 - 356.2
108.58 - 110.79	5033	2.21	.15	33.5	.04	.01	.332	74.035								356.2 - 363.5
110.79 - 112.88	5034	2.29	.05	72.0	.04	.01	.115	164.88								363.5 - 371.0

16.16M .159 96.29
2.47 1355.93

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Property . . . *Lapease Project* . . . Project No. *70113* . . . Depth . *149.66 (1491')* . . . Date Began . . . *June 17, 1979* . . .
Hole No. *Cap D-1-79* . . . Co ord. . . . *3 + 35 S* . . . Horizontal Length . *45.4* . . . Date Completed . *June 20, 1979* . . .
Sheet No. . . . *2* . . . *8 + 25 W* . . . Direction . . . *S 88° E* . . . Drilled By. *Goates Enterprises* . . .
Claim No. . . . *"E"* . . . Elevation . *1829* . . . Angle . . . *- 72°* . . . Logged By. *S.V. Shea* . . .

METERS FOOTAGE	NUMBER	WIDTH	Au. g/t	Ag. g/t	Pb. Gr.	Zn.		WIDTH X ASSAY				AVERAGES					REMARKS
												WIDTH	Au. g/t	Ag. g/t	Cu.	Zn.	
118.00 - 118.10	5035	3.05	.05	35.0	.02	.01		.123	106.75								371.0 - 381.0
116.10 - 119.10	5036	3.05	.05	40.5	.01	.01		.123	123.525								381.0 - 391.0
119.10 - 122.22	5037	3.05	.20	52.0	.02	.01		.610	158.600								391.0 - 401.0
122.22 - 125.37	5038	3.05	.15	40.0	.04	.01		.458	122.00								401.0 - 411.0
125.37 - 128.32	5039	3.05	.05	20.0	.04	.06		.153	61.00								411.0 - 421.0
128.32 - 131.37	5040	3.05	.05	13.0	.05	.05		.153	39.65								421.0 - 431.0
131.37 - 134.42	5041	3.05	.10	11.5	.03	.02		.305	35.075								431.0 - 441.0
134.42 - 137.46	5042	3.05	.10	19.5	.10	.07		.305	59.475								441.0 - 451.0
137.46 - 140.51	5043	3.05	.05	19.0	.03	.01		.153	57.95								451.0 - 461.0
140.51 - 144.48	5044	3.97	2.35	87.0	.04	.03		9.330	345.39	129.24m	.23	50.6	(15.24 - 144.48)				461.0 - 474.0
144.48 - 146.76	5045	2.28	.05	7.0	.05	.02		.114	15.96								474.0 - 481.5
146.76 - 149.66	WASTE	2.90															481.5 - 491.0
END																	

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property *Capeose Proj.* Project No. *70113* Depth *99.67 (327')* Date Began *June 21, 1979*
Hole No. *CAP.D-2-79* Co ord. *0 + 83.5* Horizontal Length *55.0* Date Completed *June 23, 1979*
Sheet No. *1* *8 + 25 W* Direction *N 40 W* Drilled By *D. W. Coates Drilling*
Claim No. *"E"* Elevation *1898* Angle *-60°* Logged By *S. V. Allen*

METERS FOOTAGE	DESCRIPTION	ALTERATION										% RECY CALC'D.	
		FROM	TO										
0 - 3.05	Overburden; Casing 0-3.66												
3.05 - 23.16	Rhyolite Tuff and Agglomerate, Light Grey; Abundant lim. on fractures with Mn staining. Weathered and leached. Minor amts of hem. colored lim. Rock highly fractured and vuggy. 11.62-23.16 Ab. garnets on frac. + lining vugs 12.81-14.96 minor vis BK sal., 1% py Limonitic frac. at all angles to core.										3.05-7.62	60.6%	
23.16 - 24.51	Rhy.; Mostly limonitic gouge and breccia; No Mn stain; structure appears near parallel to core.											7.62-24.69	97.54%
24.51 - 37.07	Light grey rhyolite tuff; Ab. lim. lined fracs.; a few short rusty zones; No sal. - all leached out. Fracs oriented in all directions; @ 25.4° Lam. ? @ 50°												
37.07 - 39.38	Grey Rhy. ? ; very slightly mag.; minute py. vis.; less than 1% diss. py.; darker color may be due to light pervasive chl. alt.; minute amts bk sal. vis.; very minor lim.; minor blebs of garnet.												
39.38 - 41.53	Rhy.; Bleached, weathered and leached out; lim. stained; gangy seams; @ 30.0 : 6cm vein cuts core @ 30° vein: 10% qtz; 3-4% BK min.; minor py balance alt (bleached) Rhy.												
41.53 - 57.13	Mainly dark grey, slightly mag. and or chl. rhy.; minute diss. py.; py. + BK min. vis.											24.69-44.81	90.3%
57.13 - 57.90	Soft, white, bleached rhy.; 0.1 m of limonitic gouge at start of sec.												

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property . . . Capoose Proj. Project No. . . . 70113 . . . Depth . . . 99.67. (327') . . . Date Began . . . June 21, 1979 . . .
Hole No. . . . Cap D-2-79 . . . Co ord. 0 + 83.5 . . . Horizontal Length . . . 55.0 . . . Date Completed . . . June 23, 1979 . . .
Sheet No. 2 8 + 25 W . . . Direction . . . N 40 W . . . Drilled By . . . D. W. Coates Drilling . . .
Claim No. "E" . . . Elevation . . . 1898 . . . Angle . . . - 60° . . . Logged By . . . S. V. Shaw . . .

FOOTAGE	DESCRIPTION	ALTERATION										% REC'D CALC'D.
		FROM	TO									
57.90-70.11	Grey rhy.; 1% diss. py; diss. and blebs garnet; minute amts blk min.; minor lim on fracs; very hard + sil.; fracs crossing core 30° or greater.											
70.11-71.90	Bleached, leached, white rhy; Ab. lim.; Some brecciation.										44.81-71.63	94.3%
71.90-73.90	Fine grained white sil. rhy; 1% diss. py, garn. and blk min. Ab. lim on fracs.											
73.90-78.20	Course grained Rhy. Tuff; Mostly bleached with ab. lim. - diss t. on fracs; a few un- weathered spots with minor diss. py + blk min.											
78.20-84.10	Fine grained, white, sil., rhy. tuff; very hard Small wisps of blk min well diss through core (1-2%); minor diss. py + garn.; some short, leached limonitic seams; spotty chl. 82.4-82.5 limonitic breccia.										71.63-85.95	97.1%
84.10-86.0	Grey rhy. tuff; minor diss + veinlets of py and garn.; minute blk min.											
86.0-87.26	Same as above; core very shattered										85.95-89.00	74.4%
87.26-99.67	Cream white f.g. rhy.; Barren 87.26-89.0 very broken and gougy 92.68-94.1 Mostly fault gouge Acid Test 99.67 : apparent True - 61° = 54°										89.00-99.67	91.0%
											3.05-99.67	91.0%

7504



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property Copposo Prop. Project No. 7113 Depth 99.47 (327') Date Began June 21, 1979
Hole No. Cop D-2-79 Co ord. 0143.5 Horizontal Length 55.0 Date Completed June 23, 1979
Sheet No. 1 8125.14 Direction N 40° W Drilled By. D. W. Gatos Drilling
Claim No. E Elevation 1898 Angle -60° Logged By. N. H. Smead
S. V. S. Allen

METERS FOOTAGE	NUMBER	WIDTH	Au. 9/11	Ag. 9/11	Pb Gm	Zn.									AVERAGES					REMARKS	
															WIDTH	Au.g/t	Ag.g/t	Cu.	Zn.		
0 - 3.05	Casing	3.05																			
3.05 - 6.0	5306	2.95	.50	2.5																	
6.0 - 9.0	5307	3.0	.10	8.0																	
9.0 - 12.81	5308	3.81	.05	6.0																	
12.81 - 14.96	5046	2.15	.06	4.0	.01	.04															
14.96 - 18.00	5309	3.04	.05	22.5																	
18.00 - 21.0	5310	3.0	.05	27.0																	
21.00 - 24.0	5311	3.0	.05	15.0																	
24.0 - 27.0	5312	3.0	.05	11.0																	
27.0 - 30.0	5313	3.0	.05	19.5																	
30.0 - 33.0	5314	3.0	.05	12.0																	
33.0 - 37.07	5315	4.07	.05	12.5																	
37.07 - 38.57	5047	1.50	.05	6.0	.02	.23															
38.57 - 39.30	White	.73																			
39.30 - 40.0	5127	.70	.50	12.0	.02	.02															
40.0 - 40.23	5048	.23	3.9	27.3	.21	.02									23.4	3.9	27.3				
40.23 - 41.54	5128	1.31	.15	7.5	.07	.01															
41.54 - 42.50	White	6.96																			
42.5 - 51.5	5049	3.0	.05	9.0	.01	.42															
51.5 - 60.0	White	8.5																			
60.0 - 62.0	5050	3.0	.05	4.0	.01	.20															
62.0 - 66.0	5051	3.0	.10	9.0	.10	.12															
66.0 - 69.0	5052	3.0	.10	12.5	.46	.02															
69.0 - 72.0	5053	3.0	.05	5.0	.02	.09															
72.0 - 75.0	5054	3.0	.35	33.3	.12	.01	1.05	106.5													
75.0 - 78.0	5055	3.0	.20	37.7	.04	.01	.60	113.1							7.54	.32	45.9				
78.0 - 79.5	5056	1.5	.50	83.5	.05	.01	.75	125.73													
79.5 - 81.0	5057	1.5	.20	14.0	.03	.02															
81.0 - 82.5	5058	1.5	.20	12.5	.06	.42															
82.5 - 84.0	5059	1.5	.20	8.5	.01	.14															
84.0 - 87.0	5060	3.0	.10	2.5	.01	.05															
87.0 - 99.67	White	12.67																			
END																					

7504

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property . . . Capoose Proj. Project No. . . . 70113 Depth . . . 154.84 (508') Date Began . . . June 23, 1979 . . .
Hole No. . . . Cap D-3-79 Co ord. . . . 1 + 95 S Horizontal Length Date Completed . . . June 25, 1979 . . .
Sheet No. 1 8 + 00 W Direction Drilled By . . . D. W. Coates Drilling . . .
Claim No. . . . "E" Elevation . . . 1910 Angle . . . - 90 Logged By . . . N. J. V. Shear . . .

METERS FOOTAGE	DESCRIPTION	ALTERATION										% REC/Y CALC'D.
		FROM	TO									
0 - 3.05	Overburden and casing											
3.05 - 18.34	Light grey rhy. tuff; mostly intense breccia and gouge; 3.05 - 9.51 Ab. lim. mainly hem. colored; minor Mn staining; All sul. ox and leached out except 2 - 0.3m sec.s (1% py + minute bk min vis.)											3.05 - 5.18 60.1% 5.18 - 12.80 84.8% 12.80 - 35.66 99.2% 35.66 - 135.58 100%
18.34 - 26.60	Light grey rhy Tuff; mainly unoxidized and unweathered, diss. min. gives core spotted effect; 1-2% py, minor diss bk min and garnets											
26.60 - 30.20	White rhy. tuff; weathered, bleached, leached out, brecciated. Ab. lim, minor amts hem. colored. 5cm gossanous vein @ 26.70 @ 20° 2 - 5mm wide lim. frags @ 30° + 50° within section.											
30.20 - 68.58	Rhy. tuff, off white; Ab. lim in major portion of section; Un ox. sec.s - 1% py; No vis. values, garnets diss and lining vugs. 42.46 - 62.00 Ab. lim filled frags and vugs, minor por. hem. colored; No sul.											
68.58 - 76.20	White rhy. tuff; continuously mineralized with diss. py (2-3%) and bk min. (≅ 1%). Diss. min. gives core spotted effect. A few lim. filled frags.											
76.20 - 98.34	Light grey, coarse grained rhy. tuff continuously min. with veinlets and diss. - 2-3% py 1/2 - 1% bk min. Mod. amts garn. as diss and veinlets values appear to decrease toward lower end of section. Contact @ 98.34 @ 90° to core axis											

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property . Cape Rose Proj. Project No. 70113 Depth 154.84 (508') Date Began June 23, 1979
Hole No. C.R. D-3-79 Co ord. 14955 Horizontal Length - Date Completed June 25, 1979
Sheet No. 2 8+00 W Direction - Drilled By D.W. Coates Drilling
Claim No. "E" Elevation 1910 Angle -90° Logged By J.V. Allen

ELEVATION	DESCRIPTION	ALTERATION										% REC'D CALC'D.
		FROM	TO									
98.34-101.30	Grey cherty-looking rhy., very hard and sil. 1/2 to py as a few minor veinlets and diss. Minute amts diss. bk min. (sul.) More ab. diss. bk. min. probably mafic.											
101.30-108.90	Lt. grey, c.g. rhy tuff - same as 76-98 but less min.											
108.90-113.75	Greyish brown cherty-looking rhy, same as 98-101											
113.75-135.50	Lt grey c.g. rhy tuff, same as 76-98 occasional chl. fracture											
135.50-143.42	Same as above with occasional aggl. frag. Best mineralized section in hole. 2-3% sph., 2-3% py; chl. on frags. Sph. veinlets 1m - 4cm @ 0-90°										135.58-144.17	93.7%
143.42-151.18	Lt. grey c.g. rhy tuff (same as above) Diss. blcks, 1-2 mm dia., of py surrounded by garnet; py 5-1% occ. speck of chl. Section looks barren. 149-151.18 core highly shattered											
151.18-154.84	Cream white f.g. Rhy.; Barren; white specks (plag?) throughout Core highly shattered in places										144.17-154.84	99.3%
											3.05-154.84	98.8%
Acid Test:												
154.84 - ^{apparent} - 88° = ^{true} 87.5°												

7504



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property Cape Rose Project No. 70113 Depth 154.84 (500) Date Began June 23, 79
Hole No. CAP D-3-79 Co ord. 14955 Horizontal Length - Date Completed June 25, 79
Sheet No. 1 800W1 Direction - Drilled By D.W. Conner Drilling
Claim No. E Elevation 1910 Angle 90° Logged By H. H. Shear

METERS FOOTAGE	NUMBER	WIDTH	Au. g/t	Ag. g/t	Pb %	Zn.							AVERAGES					REMARKS
													WIDTH	Au. g/t	Ag. g/t	Cu.	Zn.	
0 - 3.05	Casing	3.05																
3.05 - 18.0	White	14.95																
18.0 - 21.0	S061	3.00	.15	30.5	.01	.01												
21.0 - 24.0	S062	3.00	.05	16.5	.01	.01												
24.0 - 26.6	S063	2.60	.05	10.0	.02	.03												
26.6 - 30.0	S213	3.40	.10	14.5	.07	.01												
30.0 - 33.0	S214	3.0	.15	25.5	.32	.01			.45	76.5								
33.0 - 36.0	S215	3.0	.05	37.0	.05	.01			.15	96.0								
36.0 - 39.0	S216	3.0	.05	32.5					.15	91.5								
39.0 - 42.0	S217	3.0	.15	52.5					.45	151.5								
42.0 - 45.0	S218	3.0	.10	84.5					.30	253.5								
45.0 - 48.0	S219	3.0	.10	165.0					.30	495.0								
48.0 - 51.0	S220	3.0	.25	72.5					.15	217.5								
51.0 - 54.0	S129	3.0	1.90	122.0	.25	.02			5.70	366.0			36M	0.72g	105.9g/t			
54.0 - 57.0	S130	3.0	.85	61.5	.22	.02			2.55	184.5								
57.0 - 60.0	S131	3.0	.10	37.5	.10	.03			.30	112.5								
60.0 - 63.0	S132	3.0	.10	17.5	.10	.06			.30	52.5								
63.0 - 66.0	S133	3.0	1.30	162.0	.48	.01			3.90	486.0								
66.0 - 69.0	S064	3.0	3.65	432.0	.74	.02			10.95	1296.00								
69.0 - 72.0	S065	3.0	.10	20.0	.07	.04			.30	60.00								
72.0 - 75.0	S066	3.0	.15	25.0	.08	.03			.45	75.00								
75.0 - 78.0	S067	3.0	.10	31.0	.18	.37			.30	93.00								
78.0 - 81.0	S068	3.0	.10	27.5	.25	.59			.30	82.5								
81.0 - 84.0	S069	3.0	.20	22.0	.10	.20			.60	66.0								
84.0 - 87.0	S070	3.0	.05	5.5	.02	.22			.15	16.5								
87.0 - 90.0	S071	3.0	.10	8.0	.02	.09			.30	24.0								
90.0 - 93.0	S072	3.0	.05	3.0	.01	.07			.15	9.0								
93.0 - 96.0	S073	3.0	.05	5.0	.02	.05			.15	15.0								
96.0 - 99.0	S074	3.0	.05	6.0	.01	.18			.15	18.0								
99.0 - 102.0	S075	3.0	.05	6.5	.03	.16			.15	19.5								
102.0 - 105.0	S076	3.0	.05	10.0	.02	.13			.15	30.0								
105.0 - 108.0	S077	3.0	.05	15.0	.01	.08			.15	45.0								
108.0 - 111.0	S078	3.0	.05	7.0	.01	.03			.15	21.0								
111.0 - 114.0	S079	3.0	.05	4.0	.01	.06			.15	12.0								
114.0 - 117.0	S080	3.0	.05	7.0	.01	.09			.15	21.0								
117.0 - 120.0	S081	3.0	.05	5.5	.01	.11			.15	16.5								
120.0 - 123.0	S082	3.0	.10	6.5	.01	.07			.30	19.5								
123.0 - 126.0	S083	3.0	.05	3.5	.01	.17			.15	10.5								
126.0 - 129.0	S084	3.0	.15	15.5	.01	.28			.45	46.5								
129.0 - 132.0	S085	3.0	.10	20.0	.18	.27			.30	60.0								

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property Capeosee Pte 1 Project No. 70113 Depth 154.84m. (508') Date Began June 23/79
Hole No. Cap D-3-79 Co ord. 14955 Horizontal Length — Date Completed June 25/79
Sheet No. 2 0+00 W Direction — Drilled By D. W. Conroy Drilling
Claim No. E Elevation 1910 Angle -90° Logged By H. H. Sherr
V. J. Sherr

METERS FOOTAGE	NUMBER	WIDTH	Au. g/t	Ag. g/t	Pb oz.	Zn.	WIDTH X ASSAY				AVERAGES					REMARKS
											WIDTH	Au. g/t	Ag. g/t	Cu.	Zn.	
132.0 - 135.5	5086	3.0	.40	64.0	.03	.13	1.20	192.0								
135.5 - 138.83	5087	3.33	.80	77.0	.19	1.38	2.664	256.41			11.42m	.49	59.8	(132.0 - 143.42)		
138.83 - 141.83	5088	3.0	.40	56.0	.05	.64	1.20	168.00								
141.83 - 143.42	5089	1.59	.35	42.0	.06	.72	.559	66.78			113.42m	.33	47.0	(30.0 - 143.42)		
143.42 - 146.42	5090	3.0	.05	2.0	.02	.07	.15	6.00								
146.42 - 154.84	WASTE	8.42														
END																
3.0 - 6.0	5258		.1	12.5												
6.0 - 9.0	5259		.05	3.0												
9.0 - 12.0	5260		.05	10.0												
12.0 - 15.0	5261		.05	8.5												
15.0 - 18.0	5262		.05	13.0												

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property ... Capoose Proj. ... Project No. 70113 ... Depth ... 206.35 (677') ... Date Began ... June 27, 1979.
Hole No. ... Cap D-4-79. Co ord. ... 2+50.5 ... Horizontal Length ... 131.5 ... Date Completed ... June 29, 1979.
Sheet No. ... 1 ... 7+25 W ... Direction ... West ... Drilled By ... D.W. Coates Drilling
Claim No. ... "E" ... Elevation ... Angle ... -55° ... Logged By ... S.V. Shen

Meters EQUIVALENT	DESCRIPTION	ALTERATION										% REC'D CALC'D.
		FROM	TO									
0 - 3.66	Casing											
3.66 - 22.85	Light grey Rhy. Tuff; ab. specks 1-2 mm of white plag.?; Mostly oxidized and leached; ab. lim. of frac.s and staining core in places; 1% py with garn diss. and minute bk min. vis in unox. sections. 22.35-22.85 Transition zone Rhy to and. @ 22.85 contact @ 60°										3.66 - 10.67	97.47%
22.85 - 26.96	Greenish-grey andesite; 1% py mostly with diss. garn. and on a few frac.; slightly mag. @ 23.31: 2 cm breccia zone @ 30° @ 23.71: 5 cm band of rhy @ 30° @ 26.96: contact @ 52°											
26.96 - 160.00	Light grey coarse grained rhy. tuff with short sections of f.g. lt. grey sil. rhy. t. 26.96 - 84.76: mostly weathered and leached; minor Mn. staining Ab. lim. varying in color from rust, hem. and ochrous red-orange. Unweathered sections 1-2 ft. py, diss. garn generally with py and minor ams bk min.; 30.5 - 34.2 core very shattered and lim. stained, last 2 cm gangue seam @ 25° 36.55 - 36.80 bleached white and gangy 42 - 45 Better vis min; diss. py with garn and bk min. dark wavy bands (1 cm) through rock 60.90 - 61.40 2 cm gossanous frac. paralleling core 63.40 - 64.5 minor streaks of sph.; diss. dendritic spots of bk min. @ 71.58 1 cm veinlet py with minor sph @ 30° 73.21 - 77.10 Better vis. min.; scattered blebs sph; well diss. bk min. gives core spotted effect. 76.20 - 76.50 5 cm wide frac. zone; ab. garn + lim. some bk min left @ 25° 81.70 - 84.76 Ab. gossanous frac with Mn. staining; No sal 84.13 - 84.43 bleached white and gangy										10.67 - 98.76 98.76 - 116.79	98.39% 92.87%

7504



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property . *Capeose Proj.* Project No. . *70113* Depth . *206.35 (677')* Date Began . *June 27, 1979*
Hole No. . *Cap D-4-79* Co ord. *2 + 50.5* Horizontal Length . *131.5* Date Completed . *June 29, 1979*
Sheet No. *2* *7 + 25 W* Direction *West* Drilled By. *D. W. Coates Drilling*
Claim No. *"E"* Elevation Angle *-55°* Logged By. *J. V. S. Allen*

ELEVANCE	DESCRIPTION	ALTERATION										% REC'Y CALC'D.
		FROM	TO									
26.76 - 160.00	(continued)										116.78 - 160.33	96.3%
	84.76 - 160.00 Unweathered rock predominates											
	Diss py (1-2%) generally with garn. and											
	diss bk. min.; occas. sec. lim on frags.											
	88.0 - 92.2 minor cp with py in veinlets											
	91.25 - 91.34 5.5cm vein of py with cp											
	@ 60°											
	101 - 122 core very shattered.											
	@ 103.63 green min. (smithsonite?)											
	102 - 108 bk min. as dk cloudy wisps through											
	core.											
	114 - 122.5 min weak to absent											
	122.5 - 124.0 Ab. lim on frags.											
	124.0 - 160.0 min. spotty and weak											
	occas. rty frags.											
	136.2 - 137.2 5% py in veins with											
	minor bk. min.											
	137.2 - 146; 153 - 155; Well min.											
	@ 160.00 contact @ 80°											
160.00 - 168.86	Cream white rhy tuft; Ab white plag.?											
	specks, unaltered; minute smears											
	of bk min on occas. hairline frags.											
168.86 - 175.78	Alt., bleached, wh. rhy T.; Ab. lim staining										168.86 - 197.21	94.1%
	core and on frags.; very soft;											
	secs. chalky in appearance; minor gouge											
	174.15 - 174.60 greenish colored and hard											
175.78 - 177.76	Alt. rhy. T.; greenish cast due to chl.?											
	alt; Ab. frags (≅ 1mm) with soft											
	bk min.											
	@ 177.76 contact irreg. due to brecciation											
	appears ≅ 50°											
177.76 - 206.35	Grey to dk grey rhy aggl.; pervasive chl.											
	alt. gives core dark color; 3-4% py as											
	veinlets and diss; minute and spotty											
	bk min. Well min. 177.76 - 182.43											

Acid Tests:
apparent True
121.92 -56° = 49°
206.35 -56° = 49°

7504



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property . . . *Capeose Project* . . . Project No. . . . *70113* . . . Depth . . . *206.35 (677')* . . . Date Began . . . *June 27, 1979* . . .
Hole No. . . . *Cape D-4-79* . . . Co ord. . . . *2 + 50.5* . . . Horizontal Length . . . *131.5* . . . Date Completed . . . *June 29, 1979* . . .
Sheet No. . . . *1* . . . *7 + 25 W* . . . Direction *West* . . . Drilled By . . . *D. W. Coates, Drilling* . . .
Claim No. . . . *"E"* . . . Elevation Angle *- 55°* . . . Logged By . . . *S. V. S. V. Allen* . . .

Meters Footage	NUMBER	WIDTH	Au. g/t	Ag. g/t	Pb g/t	Zn.								AVERAGES					REMARKS
														WIDTH	Au. g/t	Ag. g/t	Cu.	Zn.	
0 - 3.66	Casing	3.66																	
3.66 - 6.0	Waste	2.34																	
6.0 - 9.0	5095	3.00	.05	4.5															
9.0 - 12.0	5096	3.00	.05	7.5															
12.0 - 15.0	5097	3.00	.10	9.0															
15.0 - 18.0	5098	3.00	.05	1.5															
18.0 - 21.0	5099	3.00	.25	5.0	.01	.15													
21.0 - 22.85	5100	1.85	.15	6.5	.01	.26													
22.85 - 25.85	5101	3.00	.05	5.0	.01	.43													
25.85 - 27.0	5102	1.15	.05	2.0	.02	.98													
27.0 - 30.0	5103	3.00	.10	4.5	.01	.10													
30.0 - 33.0	5104	"	.65	10.5	.02	.02													
33.0 - 36.0	5105	"	2.55	12.5	.01	.01													
36.0 - 37.0	5106	"	1.30	15.5	.01	.03													
37.0 - 42.0	5107	"	1.50	20.5	.01	.08													
42.0 - 45.0	5108	"	4.30	20.0	.01	.06													
45.0 - 48.0	5109	"	.25	7.5	.01	.04													
48.0 - 51.0	5110	"	.45	4.0	.01	.07													
51.0 - 54.0	5111	"	.25	4.0	.01	.06													
54.0 - 57.0	5112	"	.20	11.5	.01	.02													
57.0 - 60.0	5113	"	.15	12.5	.01	.01													
60.0 - 63.0	5114	"	.10	15.0	.06	.01													
63.0 - 66.0	5115	"	.05	4.0	.01	.36													
66.0 - 69.0	5116	"	.05	4.5	.01	.06													
69.0 - 72.0	5117	"	.25	34.5	.03	.04													
72.0 - 75.0	5118	"	.20	35.0	.09	.21													
75.0 - 78.0	5119	"	.55	62.5	.13	.16													
78.0 - 81.0	5120	"	.15	400	.05	.01													
81.0 - 84.0	5121	"	.15	220	.09	.02													
84.0 - 87.0	5122	"	.10	14.0	.02	.01													
87.0 - 90.0	5123	"	.20	8.5	.01	.03													
90.0 - 93.0	5124	"	.30	10.5	.08	.02													
93.0 - 96.0	5125	"	.20	1240	.05	.17													
96.0 - 99.0	5126	"	.20	11.5	.02	.07													
99.0 - 102.0	5134	"	.15	20.0	.09	.01													
102.0 - 105.0	5135	"	.25	30.0	.04	.02													
105.0 - 108.0	5136	"	.10	10.0	.02	.05													
108.0 - 111.0	5137	"	.15	8.5	.01	.01													
111.0 - 114.0	5138	"	.10	28.5	.01	.01													

7504

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property . Capoose Project . Project No. 70113 . Depth . 206.35 (677') . Date Began . June 27, 1979 .
Hole No. . Cap D-4-79 . Co ord. . 2+50.5 . Horizontal Length . 131.5 . Date Completed . June 29, 1979 .
Sheet No. . 2 . 7+25 W . Direction . WEST . Drilled By . D.W. Coates Drilling .
Claim No. . "E" . Elevation . Angle . -55° . Logged By . N.Y. Shaw .

meters FOOTAGE	NUMBER	WIDTH	Au. g/t	Ag. g/t	Pb %	Zn.	WIDTH X ASSAY				AVERAGES					REMARKS
											WIDTH	Au. g/t	Ag. g/t	Cu.	Zn.	
117.0 - 120.0	5140	3.00	.30	26.5	.01	.04	.60	79.5								
120.0 - 123.0	5141	"	.15	40.5	.03	.02	.45	121.5								
123.0 - 126.0	5142	"	.25	32.5	.05	.10	.75	91.5								
126.0 - 129.0	5143	"	.15	44.0	.05	.05	.45	132.0								
129.0 - 132.0	5144	"	.15	25.0	.02	.03	.45	75.0								
132.0 - 135.0	5145	"	.45	85.0	.01	.01	1.35	255.0								
135.0 - 138.0	5146	"	.95	44.5	.01	.08	2.85	135.5								
138.0 - 141.0	5147	"	.55	82.0	.09	.17	1.65	246.0								
141.0 - 144.0	5148	"	.40	38.0	.08	.04	1.20	169.0								
144.0 - 147.0	5149	"	.35	19.5	.08	.04	1.05	58.5		36.4	.43	60.62	(120.0 - 156.0)			
147.0 - 150.0	5150	"	.20	5.5	.01	.01	.60	16.5								
150.0 - 153.0	5151	"	.50	13.0	.01	.01	1.50	39.0								
153.0 - 156.0	5152	"	1.05	280.0	.17	.30	3.15	840.0		87.0	.32	42.82	(69.0 - 156.0)			
156.0 - 159.0	5153	"	.25	9.5	.01	.01	.75	28.5								
159.0 - 169.76	waste	10.76														
169.76 - 172.76	5154	3.00	.05	1.5	.19	.01	.15	4.5								
172.76 - 175.78	5155	3.02	.05	1.0	.07	.01	.151	3.02								
175.78 - 177.76	5156	1.98	.05	1.5	.01	.02	.099	2.97								
177.76 - 180.76	5157	3.00	.20	35.0	.11	.11	.60	105.0								
180.76 - 182.48	5158	1.72	.15	27.5	.02	.33	.258	47.3								
182.48 - 185.48	5159	3.00	.10	5.5	.01	.02	.30	16.5								
185.48 - 188.48	5160	3.00	.20	13.5	.02	.02	.60	40.5								
188.48 - 191.48	5161	3.00	.05	3.5	.01	.03	.15	10.5								
191.48 - 194.48	5162	3.00	.05	4.0	.01	.01	.15	12.0								
194.48 - 197.48	5163	3.00	.05	14.5	.02	.01	.15	43.5								
197.48 - 200.48	5164	3.00	.05	4.5	.02	.01	.15	13.5								
200.48 - 203.48	5165	3.00	.05	7.5	.01	.02	.15	22.5								
203.48 - 206.35	5166	3.00	.30	19.5	.03	.13	.90	58.5								

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property . Capoose . Proj Project No . 70113 Depth . 161.24 (529') Date Began . July 1, 1979
Hole No . Cap D-5-79 Co ord . 4+50 S Horizontal Length . 106.2 Date Completed . July 3, 1979
Sheet No . 1 7+50 W Direction . West Drilled By . D.W. Coates, Drilling
Claim No . "E" Elevation . 1831 Angle . -50° Logged By . S.V. S.V. Shuman

METERS FOOTAGE	DESCRIPTION	ALTERATION										% RECY CALC'D.
		FROM	TO									
0 - 3.05	Overburden and casing											
3.05 - 7.32	Andesite; dark blackish green; minor py and garnets diss and in a few veinlets minute sph.?											
7.32 - 11.90	Grey rhy. Tuff and light grey rhy. aggl. Ab. lim. and minor unleached secs with blk min. 10.0 - 10.5 very shattered and gony 10.5 : contact @ 60°											
11.90 - 12.20	Andesite											
12.20 - 18.77	Light grey rhy. aggl.; sil. f.g. ground mass; Ab. lim in some frags but f.g. ground mass carries diss blk min.											
18.77 - 27.54	Mainly And. aggl., dark green. 20.20 - 20.78 rhy aggl. with and frags. 20.78 - 24.08 dark green and. with blackish green spots 27.54 contact @ 40°											
27.54 - 29.30	Rhy. aggl.; silicious; bleached; Ab. lim.											
29.30 - 30.04	Brecciated rhy and greenish tala, sec gony; minor lim											
30.04 - 30.27	Andesite											
30.27 - 45.77	Light grey rhy. aggl.; mostly Ox. and leached out; Ab. lim. on frags and vugs; lim. colors: rty., hem., red-orange; Mn. staining; Garnets lining vugs and on occa. frag. Rock is mottled various shades of brown to red due to lim and creamy white to light green with occa. dark spots.											
		39.50	43.80	Core highly shattered								
		43.80	45.42	LT grey to white sec.; very shattered and gony; Ab. lim.								

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property .. Capoose Proj. Project No. 70113 Depth 161.24 (529') Date Began July 1, 1979
Hole No. Cap. D-5-79 Co ord. 4+50.5 Horizontal Length 106.2 Date Completed July 3, 1979
Sheet No. 2 7+50 W Direction West Drilled By D. W. Coates Drilling
Claim No. "E" Elevation 1831 Angle -50° Logged By S. S. Sloan

Meters Interval	DESCRIPTION	ALTERATION										% RECY CALC'D.
		FROM	TO									
45.77-52.90	White rhy. aggl. with Ab. black spots due to mineralization, Py (2-3%) and bk. min. diss. in streaks and with garn. in vugs; Alteration: Ab. sil.; Ab. garn. diss and in vugs; minor greenish talc; Ab. white Kaolin? (clay min.)											
52.90-56.60	And. tuff; minor py, no vis. values; Small dark frag. give core spotted effect. 56.80: contact @ 25°											
56.60-96.45	Lt. grey to white rhy aggl.; well mineralized. 58.93-59.04: 9.5 cm vein of py, gal., sph and bk min. Secs: ab. f.g. diss. py (5%) with bk min with occa. veins up to 1 cm of garn. py + bk min. Secs: chalky white rhy aggl; ~1% py with bk min. smeared on frons. Secs: wh. rhy. with ab. blebs of blackish garnets in vugs and veinlets with bk min Secs.: mottled lt. grey and white, well min. with diss. and smears of bk min, 1% diss. py; occa. veinlet up to 2 cm of py, gal., sph and bk min.											
96.45-122.10	Rhy. aggl.; core black and white due to Kaolin? (clay min) alt. of rhy and diss., streaks and veinlets of bk min. consistently vis gal. and sph in veinlets; minor py mainly in veinlets											
122.10-136.55	Fine grained rhy. tuff, very light grey with lt. greenish tinges in spots; occa. hairline fracs., vug and very occa. veinlet up to 1 cm of garn. py, gal., sph and bk min.; minute ep; minute brown min. sid.?											

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Property . . . Capease Proj. Project No. . . 70113 . . . Depth . . 161.24 (529') . . . Date Began . July 1, 1979 . . .
Hole No. . . Cap D-5-79 . . . Co ord. . . . 4x505 . . . Horizontal Length . . 106.2 . . . Date Completed July 3, 1979 . . .
Sheet No. . . . 3 7x50w . . . Direction West . . . Drilled By. . D. W. Coates Drilling . . .
Claim No. . . . "E" . . . Elevation . . 1831 . . . Angle -50 . . . Logged By. . J. J. Shuman . . .

Meters Footage	Description	Alteration										% Rec'y Calc'd.
		From	To									
136.55-149.96	White chalky-looking rhy. aggl.; mineralized Same as above sec.											
	145.50-149.96 very shattered and gummy											
149.96-161.24	Cream white rhy tuff; greenish-yellow films of talc? on frans.; core stained lt. yellowish brown in places; secs with white specks of plag? and secs with green specks (plag techl.); core is barren.											
	153.32-154.32 fault gouge											
	154.32-159.11 core very shattered											
	159.11-161.24 core is small round pebbles											
	Hole abandoned due to bad caving and sticking rods (major fault?)											
	Acid Test: 124.05 ^{apparent} ^{true} - 55° = 48°											

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property .. Capoose Proj. .. Project No. 70113 .. Depth .. 161.24 (529') .. Date Began .. July 1, 1979 ..
Hole No. .. Cap. D-5-79 .. Co ord. .. 4+50 S .. Horizontal Length .. 106.2 .. Date Completed .. July 3, 1979 ..
Sheet No. .. 1 .. 7+50 W .. Direction .. West .. Drilled By .. D.W. Coates, D.R. Hing ..
Claim No. .. "E" .. Elevation .. 1831 .. Angle .. -50° .. Logged By .. S.L. Hing ..

METERS FOOTAGE	NUMBER	WIDTH	Au. g/t	Ag. g/t	Pb Cu	Zn.	WIDTH X ASSAY				AVERAGES					REMARKS
											WIDTH	Au. g/t	Ag. g/t	Cu.	Zn.	
0 - 3.05	Casing															
3.00 - 6.00	5202	3.00	.05	5.5	.05	.32										
6.00 - 9.00	5203	3.00	.05	11.5	.06	.11										
9.00 - 12.00	5204	3.00	.05	2.5	.01	.06										
12.00 - 15.00	5205	3.00	.05	9.5	.01	.09										
15.00 - 18.77	5206	3.77	.15	9.5	.05	.04										
18.77 - 27.54	Waste	8.77														
27.54 - 30.00	5207	2.46	.05	24.0	.11	.02										
30.00 - 33.00	5208	3.00	.05	55.0	.12	.04	1.50	165.0	.36	.12						
33.00 - 36.00	5209	"	.25	98.5	.06	.01	.750	295.5	.18	.03						
36.00 - 39.00	5210	"	.05	70.0	.03	.01	1.50	210.0	.09	.03						
39.00 - 42.00	5211	"	.05	20.0	.03	.01	1.50	60.0	.09	.03						
42.00 - 45.00	5212	"	.05	52.0	.05	.02	1.50	156.0	.15	.06	214	.109	110.5			
45.00 - 48.00	5167	"	.10	59.5	.23	.22	1.80	170.5	.69	.66						
48.00 - 51.00	5168	"	.15	50.5	.68	.36	4.50	175.5	2.04	1.68						
51.00 - 52.90	5169	1.90	.10	14.0	.25	4.13	.12	21.00	.47	.25						
52.90 - 56.6	Waste	3.7					0	0	0	0						
56.6 - 60.0	5170	3.29	.15	24.5	.10	.65	.493	80.6	.33	2.14						excluding 5171
58.93 - 59.04	5171	.11	2.80	1320.0	17.80	9.20	1.308	145.2	1.96	1.01						
60.0 - 63.0	5172	3.00	.20	20.5	.04	.33	.60	61.5	.12	.99						
63.0 - 66.0	5173	"	.80	165.0	.98	.95	2.4	465.0	2.94	2.85						
66.0 - 69.0	5174	"	.20	41.0	.08	.41	.60	123.0	.24	1.23						
69.0 - 72.0	5175	"	.25	53.0	.09	.38	.75	159.0	.27	1.14						
72.0 - 75.0	5176	"	.05	23.5	.03	.32	.15	70.5	.09	.96						
75.0 - 78.0	5177	"	.35	57.5	.24	.46	1.05	172.5	.72	1.38						
78.0 - 81.0	5178	"	.45	35.5	.28	.43	1.55	106.5	.84	1.29						
81.0 - 84.0	5179	"	.05	22.5	.12	.35	.15	67.5	.36	1.05						
84.0 - 87.0	5180	"	.15	55.0	.49	.44	.45	165.0	1.47	1.32						
87.0 - 90.0	5181	"	.20	42.0	1.32	.56	.60	126.0	3.66	1.68						
90.0 - 93.0	5182	"	.20	64.0	.24	.35	.60	162.0	.72	1.05						
93.0 - 96.0	5183	"	.35	43.0	1.14	1.42	1.05	179.0	3.42	4.26						
96.0 - 99.0	5184	"	.10	14.5	.05	.18	.30	43.5	.15	.54	934	0.17	44.2			
99.0 - 102.0	5185	"	.05	14.5	.03	.13	.15	43.5	.09	.39						
102.0 - 105.0	5186	"	.10	20.5	.13	.32	.30	61.5	.39	.96						
105.0 - 108.0	5187	"	.10	22.0	.12	.49	.30	81.0	.36	1.47						
108.0 - 111.0	5188	"	.20	64.0	.25	.47	.60	198.0	.75	1.41						
111.0 - 114.0	5189	"	.10	22.0	.09	.52	.30	66.0	.27	1.56						
114.0 - 117.0	5190	"	.05	17.5	.08	.38	.15	52.5	.24	1.14						
117.0 - 120.0	5191	"	.10	23.0	.19	.56	.30	69.0	.57	1.68						
120.0 - 123.0	5192	"	.10	26.5	.26	.96	.30	79.5	.78	2.88						

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Property . . . Capeose Proj. . . . Project No. 70113 . . . Depth 161.24 (529') . . . Date Began . . . July 1, 1979 . . .
Hole No. . . . Cap D-5-79 . . . Co ord. . . . 4+50.5 . . . Horizontal Length . . . 106.2 . . . Date Completed . . . July 3, 1979 . . .
Sheet No. . . . 2 7+50 W . . . Direction West . . . Drilled By. . . D.W. Coates Drilling . . .
Claim No. . . . "E" . . . Elevation . . . 1831 . . . Angle -50° . . . Logged By. . . J.V. Allen . . .

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property .. Capoose Proj. Project No. 70113 Depth 140.51 (461') Date Began July 5, 1979
Hole No. ... Cap. D-6-79 Co ord. 0 + 405 Horizontal Length 82.9 Date Completed July 9, 1979
Sheet No. 1 7 + 80 W Direction N 40° W Drilled By. D. W. Coates Entorp.
Claim No. "E" Elevation 1898 Angle - 55° Logged By. S. V. Sheen

meters FOOTAGE	DESCRIPTION	ALTERATION										% REC'Y CALC'D.
		FROM	TO									
0 - 4.57	Overburden; casing 0-5.49											
4.57- 14.23	Lt. grey to white rhy. aggl. Ab. lim. colored rhy, hem and orange-red. Minor Mn. stain, ab. leaching Garn. lining vugs and fractures. Numerous ganggy fractures.											
14.23- 17.73	Blackish-green andesite aggl. 1-2% po diss. and in veinlets; Ab. lim., core very broken											
17.73- 20.57	Grey rhy. aggl.; Ab. lim. and leaching; short gossanous seams and veinlets small to large (2cm) vugs filled with garn and lim.											
20.57- 31.09	Blackish-green andesite aggl.; occas sec. with rhy frags; Ab. lim. on frags. with minor Mn. staining. Ab. garn filled vugs with some lim.; minor py and po mainly on frags. and small veinlets.											
31.09- 42.73	Lt. grey rhy. tuff and aggl. Ab. lim. colored rhy, hem. and orange-red Ab. vugs and veinlets with lim. and garn. Ab. white alt spots 1-3 mm with lim in centers.											
42.73- 66.04	Black and. aggl.; secs mottled due to light colored rhy? frags. Ab. diss. po and py, vix. sph., minute gals; lim on occas. frags. Ab. garn as. diss., blocks and veinlets Spotty chb. alt.											

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property Capoose Proj. Project No. 70113 Depth 140.51 (461') Date Began July 5, 1979
Hole No. Cap. D-6-79 Co. ord. 0+405 Horizontal Length 82.9 Date Completed July 9, 1979
Sheet No. 2 7+80 W Direction N 40° W Drilled By. D. W. Coates, Entorp.
Claim No. "E" Elevation 1898 Angle -55° Logged By. N. S. Allen

Meters Footage	DESCRIPTION	ALTERATION										% REC'D CALC'D.
		FROM	TO									
66.04-81.74	Light grey rhy. tuff and aggl. ; mixed sections of ab. lim. and unweathered rock. Lim. secs. colored rtz, hem. red, and orange red. un ex. secs. carry diss. py, bk min and minor sph. ; minute amts of f. g. reddish min. ; minor chl. on frags. ; minor greenish tale on occa. frag. ; garn vis ; Some cherty-looking secs.											
81.74-82.60	.05m core recovered											
82.55-85.80	Rhy. aggl. with and. frags. ; intense chl. alt. on frags. ; spotty sph, 3-4% py. diss and veinlets 93.20 - 83.35 : solid sph vein with py, garn + minor gal. @ 83.2 contact irreg. ; @ 83.35 contact @ 25°.											
85.80-101.50	Cream white rhy. tuff ; white plag. ? specks ; a few secs of orange-red lim on hairline frags. ; minute py cubes specked through core. @ 85.5 lineation @ 90° 88.7-89.57 : ab. lim. 96.5-99.37 : rock altered pervasive light green color (epi ?) 95.4-101.5 core very shattered 98.5-99.3 core small round pebbles											
101.50-105.16	Grey rhy. aggl. ; ab. chl. alt. 101.5-103.0 good sph with garn in veinlets and blobs. 101.6-102.11 several 1cm veins of rtz @ 35° with centers of garn. py + minor sph. @ 102.9 : 3cm vein of sph @ 40°											
105.16-111.86	Dark grey and. aggl. ; slightly mag. ; secs with light colored frags. ; secs ab. diss py, po + sph. ; secs ab chl ; 1-4 mm veinlets of cal. on occa. frags ; Ab. garn diss and veinlets with minor py, po, + cal											

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property . . . Capoose Proj. Project No. . . . 70113 Depth . . . 140.51 (461') Date Began . . . July 5, 1977
Hole No. . . . Cap. D-6-79 Co ord. D + 40 S Horizontal Length . . . 82.9 Date Completed . . . July 9, 1977
Sheet No. 3 7 + 80 W Direction N 40° W Drilled By . . . D. W. Coates, Entrep.
Claim No. "E" Elevation 1898 Angle - 55° Logged By . . . S. V. Shea

Meters Footage	DESCRIPTION	ALTERATION										% REC'D CALC'D.
		FROM	TO									
111.86-132.69	Grey, cherty-looking rhy. Tuff and aggl. ; upper 1 m : a few 1 mm. cal. veinlets ; upper sec : f. g. diss garn with py, po and sph ; consistent chl. alt - strong on fr. + 1.945 through rock ; lower sec (119.6-132.69) good sph min. in veinlets, blebs and diss., also minor ep, at py in spots, spotty po, Intense chl. on fr. ; occas. fr. orange-red lim. @ 115.6 1 cm veinlet sph @ 35° @ 117.45 2 cm qtz vein with py + sph @ 35°											4.57-17.68 51.33 17.68-30.18 84.43 30.18-73.76 98.97 73.76 90.53 80.80 101.35 104.55 95.74 104.55 109.52 77.37 109.72 116.74 93.45 116.74 132.69 71.00 132.69 140.51 poor
132.69-133.78	Dark greenish bk gouge ; bk min vis ; intense chl alt.											
133.88-140.10	Black and. aggl. ; slightly mag. ; spotty diss. py ; cal. veinlets 1-2 mm. No visible values. 137.9-139.9 : core mainly small pebbles and gouge											
140.10-140.51	Argillite ? f. g. bk, hard and dense ; minor fine diss. py and po ; No bedding visible. Acid Test : 137.2 apparent True - 60° = 53°											

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property Capoose Proj. Project No. 70113 Depth 140.51 (461') Date Began July 5, 1979
Hole No. Cap. D-6-79 Co ord. 0 + 405 Horizontal Length 82.9 Date Completed July 9, 1979
Sheet No. 1 7 + 80 W Direction N. 40° W Drilled By D. W. Coates, Entern.
Claim No. "E" Elevation 1898 Angle - 55° Logged By S. J. Shum

Meters FOOTAGE	NUMBER	WIDTH	Au. g/t	Ag. g/t	Fe %	Zn.			WIDTH X ASSAY						AVERAGES						REMARKS	
									WIDTH	Au.	Ag.	Cu.	Zn.									
0 - 4.57	06.	4.57																				
4.57 - 8.00	5221	3.43	.05	10.0																		
8.00 - 11.00	5222	3.00	.05	10.5	.02	.01																
11.00 - 14.23	5223	3.23	.05	5.0	.05	.01																
14.23 - 17.73	5224	3.50	.05	12.0	.06	.18																
17.73 - 20.57	5225	2.84	.00	43.5	.29	.03																
20.57 - 23.57	5226	3.00	.05	5.0	.02	.15																
23.57 - 26.57	5227	3.00	.05	9.5	.03	.29																
26.57 - 28.83	5228	2.26	.05	4.0	.03	.28																
28.83 - 31.09	5229	2.26	.05	3.0	.01	.15																
31.09 - 34.09	5230	3.00	.05	7.0	.03	.07																
34.09 - 37.09	5231	3.00	.05	24.5	.07	.01																
37.09 - 40.09	5232	3.00	.10	16.5	.03	.06																
40.09 - 42.73	5233	2.64	.05	15.5	.03	.05																
42.73 - 45.73	5234	3.00	.05	16.5	.03	.25																
45.73 - 48.73	5235	3.00	.05	7.5	.01	.13																
48.73 - 51.73	5236	3.00	.05	3.0	.02	.11																
51.73 - 54.73	5237	3.00	.05	2.5	.02	.13																
54.73 - 57.73	5238	3.00	.05	1.0	.01	.13																
57.73 - 60.73	5239	3.00	.05	3.5	.01	.13																
60.73 - 63.73	5240	3.00	.05	3.0	.01	.12																
63.73 - 66.04	5241	2.31	.05	6.5	.01	.39																
66.04 - 69.0	5242	2.96	.60	19.0	.02	.30																
69.0 - 72.0	5243	3.00	.20	20.0	.03	.15																
72.0 - 75.5	5244	3.50	.05	11.0	.01	.11																
75.5 - 78.0	5245	2.50	.15	12.5	.01	.46																
78.0 - 81.0	5246	3.00	.05	12.0	.01	.28																
81.0 - 81.74	5247	.74	.05	2.5	.01	.24																
81.74 - 82.65	No core	.81																				
82.65 - 83.15	5248	.60	.55	19.0	.06	.70																
83.15 - 83.40	5249	.25	2.20	126.0	4.35	10.50																
83.40 - 85.80	5250	2.40	.40	18.5	.05	.56																
85.80 - 88.70	5251	2.90	.05	2.0	.03	.22																
88.70 - 89.57	5252	.87	.05	.5	.02	.26																
89.57 - 101.50	waste	11.93																				

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hi grade sph

hi grade sph

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Property . . . *Capoose Proj.* . . . Project No. *70113* . . . Depth *140.51 (461')* . . . Date Began . . . *July 5, 1979* . . .
Hole No. . . . *Cap D-6-79* . . . Co ord. . . . *D+405* . . . Horizontal Length . . . *82.9* . . . Date Completed . . . *July 9, 1979* . . .
Sheet No. . . . *2* . . . *7480 W* . . . Direction . . . *N 40° W* . . . Drilled By. *D.W. Coates Enterp.* . . .
Claim No. . . . *"E"* . . . Elevation *1898* . . . Angle . . . *-55°* . . . Logged By. *S.V. Shaw*

Meters Footage	NUMBER	WIDTH	Au. 9/4	Ag. 9/4	Pb Cu	Zn.	Cu	WIDTH X ASSAY										AVERAGES						REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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101.50-103.00	5253	1.5	2.05	63.0	.12	2.68		Te	.01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property . *Capoose Proj.* Project No. . *70113* Depth . *136.25 (447')* Date Began . . *July 10, 1979*
Hole No. . *Cap D-7-79* Co ord. *1450.5* Horizontal Length . . *77.6* Date Completed *July 12, 1979*
Sheet No. *1* *9+00 W* Direction *N 45° W* Drilled By. . *D.W. Coates, Entecorp.*
Claim No. *"E"* Elevation *1880* Angle *- 55°* Logged By. . . *S.V. S. Shuman*

Meters Footage	DESCRIPTION	ALTERATION										% REC'D CALC'D.
		FROM	TO									
0 - 3.05	Casing and overburden											
3.05 - 11.53	Lt. grey to wh. rhy. aggl. ; ex. and leached ; Ab. lim with minor garn. diss + veinlets lim. colors : rty, hem red and orange-red 10.86 - 11.00 : gossan											
11.53 - 36.60	Lt. grey rhy. aggl. ; 1-2% diss py ; vis blk min + sph. ; Ab. lim. on fractures with minor Mn. stain. ; little to No garn. 36.60 : contact @ 80°											
36.60 - 53.54	Cream wh. rhy. tuff ; alt. to lt. yellowish- brown through most of sec. ; wh. plug? specks which in places are alt to light green specks. Minor to mod. lim on fractures colored rty to orange-red. (hem. red lit m. at sec.) 36.60 - 36.70 solid hem-red lim. 39.0 - 53.54 very soft pink to intense pinkish-red min. on fractures, and slightly thru core in places - talc?											
53.54 - 74.08	Lt. grey to grey rhy. aggl. with minor tuff Occa. very broken sec with ab. lim colored rty, hem-red + orange-red. ; occa. frags. with lim. ; minor Mn. stain with lim secs + frags. Mineralized throughout - mainly diss in small 1-3 mm spots (py, garn, sph + blk min.) Occa. sec with min filled vugs up to 1 x .25 cm and occa. min. frags. ; occa. short sec. good vis diss min. + 2-3% py ; 55.54 - 58.54 good vis. min.											

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property *Capoose Proj.* Project No. *70113* Depth *136.25 (447')* Date Began *July 10, 1977*
Hole No. *C&P D-7-79* Co ord. *1+505* Horizontal Length *77.6* Date Completed *July 12, 1977*
Sheet No. *2* *9+00W* Direction *N 45° W* Drilled By. *D.W. Coates Entorp.*
Claim No. *"E"* Elevation *1880* Angle *-55°* Logged By. *S.V. St. Jean*

Meters Footage	DESCRIPTION	ALTERATION										% REC'Y CALC'D.
		FROM	TO									
74.08-106.37	Lt. grey rhy. aggl. ; cherty-looking, very hard, f.g. ground mass; Ab. garn in wavy bands up to 1cm wide; spotty chl. especially alt. whole frags.; garn + chl give mottled color to core.; minor blk min throughout as fine diss. 88.0-89.4 : Ab. lim (rtg + orange-red) 91.75-98.00 : very shattered with gony frags; Ab. chl. , poor core rec. ; 95.17-95.32 : gony											
106.37-112.00	Laminated rhytuff ; whitish to creamy yellow-wh. Lam. parallel to 20° with core axis; minor garn, py and blk min as diss.; minor talc (lt. green) ; occa. cal. veinlet 110.4-111.4 very shattered and gony											
112.0-113.20	Brecciated, gony rhy. ; minor garn, py + blk min. diss. Ab. wh. soft min. with gony (talc?)											
113.20-116.06	Lt. grey rhy aggl. ; ab. gony frags. up to 5cm; diss garn + py											
116.06-117.20	DK grey and. ; stly. mag. ; minor diss py + garn. ; occa. cal. veinlet on frag. 1-2 mm.											
117.20-118.44	Rhy ; ab. chl. throughout ; brecciated and re- solidified in places ; 2-3% py - diss and occa. veinlet ; minor diss. blk min. @ 117.46 : 2 cm cal vein with hi grade streaks of sph + gal on each side @ 50° @ 118.44 : contact 80°-85° (irrag.)											
118.44-127.90	DK. grey and. ; stly mag. ; ab. diss garn, py + py ; occa. cal. veinlet to 1cm ; ab. chl. 126.1-127.9											

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Property . . . *Carpooose Proj.* . . . Project No. *70113* . . . Depth . . . *136.25 (447')* . . . Date Began . . . *July 10, 1979*
Hole No. . . *Carp D-7-79* . . . Co ord. . . . *1+505* . . . Horizontal Length . . . *77.6* . . . Date Completed . . . *July 12, 1979*
Sheet No. *3* *9+00 W* . . . Direction . . . *N 45° W* . . . Drilled By. . . *D. W. Coates Enterp.*
Claim No. *"E"* . . . Elevation . . . *1880* . . . Angle . . . *-55°* . . . Logged By. . . *S. S. Shear*

Meters FOOTAGE	DESCRIPTION	ALTERATION										% REC'Y CALC'D.	
		FROM	TO										
127.90-130.95	Grey rhy with and. frags.; Ab. garn diss and veinlets; 1-3% diss py & po. 127.90-128.20 gouge with ab. chl. @ 130.95: contact @ 65°											3.05 - 5.18 5.18 - 51.82 51.82 - 53.34 53.34 - 71.32 71.32 - 91.75 91.75 - 114.00	72.77% 99.44% 55.92% 100% 95.35% 88.58%
130.95-136.25	DK gray and.; minor diss garn, py & po.; stly mag.; Occa. spots and streaks up to 1 cm wide of sil. alt with minor garn, chl., py & po.; Occa. col. veinlet; 134.74-135.45 highly sil. zone; minor diss. garn, py, po, & chl. Acid Test 136.25 ^{apparent True} - 62° = 55½°											114.00 - 118.26 very broken & gouge poor	

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property Campoose Proj. Project No. 70113 Depth 136.25 (447') Date Began July 10, 1979
Hole No. Camp D-7-79 Co ord. 1 + 50.5 Horizontal Length 77.6 Date Completed July 12, 1979
Sheet No. 1 9+00 W Direction N 45° W Drilled By. D. W. Coates Interp.
Claim No. "E" Elevation 1880 Angle - 55° Logged By. S. V. Sloan

Meters Footage	NUMBER	WIDTH	Au. g/t	Ag. g/t	Pb g/t	Zn.		WIDTH X ASSAY						AVERAGES					REMARKS	
														WIDTH	Au. g/t	Ag. g/t	Cu.	Zn.		
3.05 - 6.00	5274	2.95	.20	25.5																
6.0 - 9.0	5275	3.00	.25	10.0																
9.0 - 12.0	5276	"	1.30	87.5																
12.0 - 15.0	5277	"	.30	33.0																
15.0 - 18.0	5278	"	.15	24.5																
18.0 - 21.0	5279	"	.10	13.0																
21.0 - 24.0	5280	"	.35	26.0																
24.0 - 27.0	5281	"	4.10	160.0																
27.0 - 30.0	5282	"	.50	51.0											26.95	.80	47.8			
30.0 - 33.0	5283	"	.10	14.5																
33.0 - 36.60	5284	3.60	.10	18.0																
36.60 - 38.86	5285	2.26	.05	4.0																
38.86 - 44.50	WASTE	5.64																		
44.50 - 46.50	5286	2.00	.05	2.5																
46.50 - 48.50	5287	2.00	.05	2.0																
48.50 - 53.54	WASTE	15.04																		
53.54 - 56.54	5288	3.00	.05	21.5	.04	.17														
56.54 - 59.54	5289	"	.25	30.0	.16	.24														
59.54 - 62.54	5290	"	.15	37.0	.22	.55														
62.54 - 65.54	5291	"	.10	23.5	.13	.18														
65.54 - 68.54	5292	"	.05	21.0	.05	.35														
68.54 - 71.54	5293	"	.05	20.5	.10	.07				18.10			28.5							
71.54 - 74.54	5294	"	.10	14.0	.07	.04														
74.54 - 77.54	5295	"	.05	3.5	.01	.05														
77.54 - 80.62	5296	3.06	.05	6.5	.06	.18														
80.62 - 83.54	5297	2.94	.05	6.0	.07	.23														
83.54 - 86.54	5298	3.00	.05	5.0	.06	.15														
86.54 - 90.00	5299	3.46	.05	7.0	.06	.07														
90.00 - 92.54	5300	2.54	.05	11.0	.15	.19														
92.54 - 95.54	5301	3.00	.10	6.5	.06	.18														
95.54 - 98.54	5302	"	.05	4.0	.03	.16														
98.54 - 101.54	5303	"	.05	8.0	.10	.07														
101.54 - 104.54	5304	"	.05	5.5	.01	.06														
104.54 - 107.54	5305	"	.05	4.0	.01	.08														

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Property *Capoose Proj* Project No. *70113* Depth *136.25 (447')* Date Began *July 10, 1979*
Hole No. *Cap D-7-79* Co ord. *14505* Horizontal Length *77.6* Date Completed *July 12, 1979*
Sheet No. *2* *9+00 W* Direction *N 45° W* Drilled By *D.W. Coates Enterp.*
Claim No. *"E"* Elevation *1880* Angle *-55°* Logged By *SV SV Shear*

[illegible]



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property ... Capoose Proj. ... Project No. 70113 ... Depth 208.79 (685') ... Date Began July 13, 1979 ...
Hole No. Cap. D-8-79 Co. ord. 1+38 S ... Horizontal Length 118.1 ... Date Completed July 16, 1979 ...
Sheet No. 1 ... 7+20 W ... Direction West ... Drilled By. D. W. Coates Enterprises ...
Claim No. "E" ... Elevation 1917 ... Angle -55° ... Logged By. S.V. S.V. Shear

Meters Footage	DESCRIPTION	ALTERATION										% REC'D CALC'D.
		FROM	TO									
0 - 1.52	Casing											
1.52 - 32.15	Lt. grey coarse grained rhy. tuff; mod. amts diss bk-garn. in blebs 1-3 mm - gives core spotted look; minor diss. py; minute amts bk min; minor lim $\approx$ 1mm coatings on fraas 5 to 10 cm apart; very occa. garn filled up + veinlet 26.7 - 29.1 bleached wh, ab. lim.											
32.15 - 45.45	Lt. grey to grey rhy aggl., cherty-looking; minor to mod. amts diss po + py; stly mag.; occa. and frag.; minor diss garn.; very occa. vugs + veinlets with garn, po + py; lim on fraas with Mn. staining; minute bk-min, sph, gal and ap. observed.											
45.45 - 47.35	Very lt. grey to whitish rhy aggl., Ab. diss garn (bk+br); mod. diss py; minor lim on fraas; may be alt. zone											
47.35 - 49.80	Lt. grey to grey rhy aggl., cherty-looking; same as 32.15 - 45.45.											
49.80 - 52.26	Very lt. grey to whitish rhy aggl.; same as 45.45 - 47.35											
52.26 - 84.05	Lt. grey arg. rhy tuff; core mottled due to sil. and chl. alt.; fine disseminations of garn., py, sph. and bk min. 54.65 - 55.65 sil. vein with lim veinlets up to 1 cm; contact @ 54.65 = 5° and @ 55.65 = $\approx$ 80° In top half of sec very occa. qtz veinlet up to 1 cm @ 59.6 4 cm qtz vein with lim @ 40° core becomes harder and more brittle (sil.) at bottom of sec.											

750A



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property . . . Capaase . . . Proj. Project No. . . 70113 . . . Depth . . 208.79 . (685') . . Date Began . . July 13, 1979 . . .
Hole No. . . . Cap. D-8-79 . Co ord. 14.38.5 . . . Horizontal Length . . 118.1 . . . Date Completed . . July 16, 1979 . . .
Sheet No. 2 7+20 W . . . Direction West . . . Drilled By. . D. W. Coates Interp. . .
Claim No. "E" . . . Elevation . . . 1917 . . . Angle - 55° . . . Logged By. . S. V. Sherry . . .

Meters Footage	DESCRIPTION	ALTERATION										% REC'D CALC'D.
		FROM	TO									
74.05 - 86.95	Lt. grey to grey rhy aggl., hard and cherty-looking Same as 32.15 - 45.45 @ 86.95 contact @ 30°											
86.95 - 102.57	Very light grey to whitish rhy aggl.; similar to 45.45 - 47.35 Ab. bk specks and dendritic streaks (chl. or Mn. or ?) Similar to main rock type in Cap D-5-79 except harder. Alt. sil and kaolin; Ab. diss garn. Minor diss. py; Minor sph and py with garn on occa. veinlet. Minor lim. on a few frags. @ 89.75 1cm veinlet with aspx? @ 102.57 contact @ 70°											
102.57 - 103.37	Mixed Lt. grey - grey rhy aggl. and whitish rhy. aggl. (Same as 32.15 - 45.45 and 86.95 - 102.57) Occa. veinlet with garn, py, arpy? and sph. Mod. diss garn, minor diss py.											
103.37 - 107.92	Lt. grey - grey rhy aggl. (Same as 32.15 - 45.45) Occa. veinlet with garn, py, arpy? + sph.											
107.92 - 109.35	Whitish rhy aggl. (Same as 86.95 - 102.57)											
109.35 - 114.91	Lt. grey - grey rhy aggl. (Same as 32.15 - 45.45) Minute values observed											
114.91 - 144.76	Grey to dk greenish bk andesite aggl.; sees with rhy frags; stly mag. Minor to ab. diss garn, po and py Occa. veinlet with garn, po and py No vis values.											
144.76 - 173.13	Lt. grey rhy aggl.; frags usually less than 1cm (other aggl. units on prop. generally very coarse with numerous frags + 2 cm.) Mod diss garn, minor diss. py, minor sph. + bk mineral diss., minor lim. on some frags C. = 1, 1000 - 100. D. = 100. E. = 10. F. = 100. G. = 1000.											

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Property . . . Capeese Proj. Project No. 70113 Depth . 208.79 (685') Date Began . July 13, 1979

Hole No. . . Cape D-8-79 Co ord. . . 1+38.5 Horizontal Length . 118.1 Date Completed . July 16, 1979

Sheet No. . . 3 7+20 W Direction . . . west Drilled By. D.W. Coates Entorp.

Claim No. . . "E" Elevation . 1917 Angle . . . -55° Logged By. SV SV. Sloan

Meters FOOTAGE	DESCRIPTION	FROM	TO	ALTERATION								% REC'Y CALC'D.
173.13-188.34	Cream wh to lt yellowish rhy tuff; no wh. (plag?) specks as in other intersections; 1-2 mm qtz. eyes; barren @ 188.34 contact @ $\approx 90^\circ$ - very irregular										7.92 - 66.14 66.14 - 114.91 139.30 - 174.90	99.21% 99.00% 97.75%
188.34-208.79	lt. gray rhy. aggl. Minor diss. py and garn.; minute diss. sph and blk min.; very mica. veinlet with py, garn., + sph.; minute cm observed.											
	Acid Test: 185.93 $- 62^\circ = 55\frac{1}{2}^\circ$											

7504



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property . *Capoose Proj.* Project No. *70113* Depth . *208.79 (685')* Date Began . *July 13, 1979*
Hole No. . *Cap. D-8-79* Co ord. . *1+385* Horizontal Length . *118.1* Date Completed . *July 16, 1979*
Sheet No. . *1* *7+20W* Direction . *West* Drilled By. *D. W. Coates Enterp.*
Claim No. . *"E"* Elevation . *1917* Angle . *-55°* Logged By. *S. V. Shan*

Meters Footage	NUMBER	WIDTH	Au. g/t	Ag. g/t	Cu.	Zn.		WIDTH X ASSAY					AVERAGES					REMARKS
													WIDTH	Au.	Ag.	Cu.	Zn.	
0 - 1.52	Casing	1.52																
1.52 - 6.0	Waste	4.48																
6.0 - 9.0	5324	3.00	.05	4.5														
9.0 - 12.0	5325	"	.05	4.5														
12.0 - 15.0	5326	"	.05	6.0														
15.0 - 18.0	5327	"	.05	4.0														
18.0 - 21.0	5328	"	.05	3.5														
21.0 - 24.0	5329	"	.05	4.0														
24.0 - 27.0	5330	"	.05	3.0														
27.0 - 30.0	5331	"	.05	3.5														
30.0 - 33.0	5332	"	.05	4.0														
33.0 - 36.0	5333	"	.05	2.0														
36.0 - 39.0	5334	"	.05	1.0														
39.0 - 42.0	5335	"	.05	.5														
42.0 - 45.0	5336	"	.05	.5														
45.0 - 48.0	5337	"	.05	1.5														
48.0 - 51.0	5338	"	.05	2.5														
51.0 - 54.0	5339	"	.05	6.5														
54.0 - 57.0	5340	"	.05	17.0														
57.0 - 60.0	5341	"	.55	22.5														
60.0 - 63.0	5342	"	.05	10.5														
63.0 - 66.0	5343	"	.05	8.5														
66.0 - 69.0	5344	"	.10	14.0														
69.0 - 72.0	5345	"	.05	6.5														
72.0 - 75.0	5346	"	.05	4.5														
75.0 - 78.0	5347	"	.05	5.5														
78.0 - 81.0	5348	"	.05	4.0														
81.0 - 84.0	5349	"	.05	4.0														
84.0 - 87.0	5350	"	.05	1.5														
87.0 - 90.0	5351	"	.10	8.5														
90.0 - 93.0	5352	"	.05	2.5														
93.0 - 96.0	5353	"	.05	5.0														
96.0 - 99.0	5354	"	2.70	18.5														
99.0 - 102.0	5355	"	.50	89.0														
102.0 - 105.0	5356	"	.05	4.5														
105.0 - 108.0	5357	"	.10	2.0														
108.0 - 111.0	5358	"	.05	2.5														
111.0 - 114.0	5359	"	.05	1.0														
114.0 - 114.91	5360	.91	.05	6.0														

7504



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property ... Capoose Proj. ... Project No. 70113 ... Depth 208.79 (685') ... Date Began July 13, 1979 ...
Hole No. Cap D-8-79 ... Co ord. 1+38.5 ... Horizontal Length 118.1 ... Date Completed July 16, 1979 ...
Sheet No. 2 ... 7+20W ... Direction west ... Drilled By D.W. Coates, Entrep.
Claim No. "E" ... Elevation 1917 ... Angle -55° ... Logged By S.V. Sloan

Meters Footage	NUMBER	WIDTH	Au. g/t	Ag. g/t	Pb g/t	Zn.		WIDTH X ASSAY	AVERAGES						REMARKS
									WIDTH	Au. g/t	Ag. g/t	Cu.	Zn.		
114.91-117.0	5361	2.09	.05	3.5											
117.0-135.0	Waste	18.00													
135.0-138.0	5362	3.00	.10	4.5											
138.0-141.0	5363	"	.05	5.0											
141.0-144.0	5364	"	.05	6.5											
144.0-145.25	5365	1.25	.05	5.5											
145.25-147.00	5366	1.75	.35	68.0				.61 119.0							
147.0-150.0	5367	3.00	.40	24.0				1.20 77.0							
150.0-153.0	5368	"	.50	67.5				1.50 202.5							
153.0-156.0	5369	"	.10	40.5				.30 121.5							
156.0-159.0	5370	"	.60	65.0				1.80 707.0	13.75	.39	52.5				
159.0-162.0	5371	"	.35	14.5											
162.0-165.0	5372	"	.30	20.0											
165.0-168.0	5373	"	.60	8.0											
168.0-171.0	5374	"	.15	5.0											
171.0-173.13	5375	2.13	.20	11.5											
173.11-188.34	Waste	15.23	-	-											
188.34-191.34	5376	3.00	.10	25.0											
191.34-194.34	5377	"	.20	27.5											
194.34-197.34	5378	"	1.15	25.5	.77	.10									
197.34-200.34	5379	"	.20	21.5					12.0	.41	43.4				
200.34-203.34	5380	"	.05	15.0											
203.34-206.34	5381	"	.10	12.5											
206.34-208.79	5382	2.45	.20	11.5											

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Property . . . Capoose Proj. Project No. 70113 Depth . . . 177.09 (581') Date Began . . . July 17, 1979
Hole No. . . Cap D-9-79 Co ord. 4+02.5 Horizontal Length . . . 105.3 Date Completed . . . July 18, 1979
Sheet No. 1 11+61 W Direction N 40° W Drilled By. D. W. Coates Entrep.
Claim No. "E" Elevation 1855 Angle - 50° Logged By. 2/3/80

Meters Footage	DESCRIPTION	ALTERATION										% REC'D CALC'D.
		FROM	TO									
0 - 0.61	Overburden ; casing 0 - 1.22											
0.61 - 177.09	Lt. grey rhy. aggl. with occa. short sec. rhy. tuff.										3.35 - 44.20	95.35%
0.61 - 66.00	Mainly whitish, oxidized and leached; highly alt. : sil, Kae., ab. garn. Ab. lim colored rhy, hem.-red + orange red Occa. Mn. staining with lim. ; Ab. vugs Occa. unweathered sec : Lt. grey with ab. diss py + bk min ; Fair diss gal. + sph.										44.20 - 175.26	99.87%
66.00 - 155.0	Mainly unweathered and Lt grey. Ab. alt. : sil, Kae. + garn Ab. bk. min. ; Minor diss gal. + sph. Ab. vugs filled with garn, py, sph and gal. Gal. predominates over sph at top of sec and sph over gal. in bottom. Spotty minor to mod. diss aspy crystals											
155.0 - 161.0	Alt. and min. decreases											
161.0 - 177.09	Very Lt. gray rhy aggl. (ab. sil?) f.g. diss py and garn Minate diss. bk min + sph.											
	lineations(?) @ 9.1 25° 173.8 30°											
	Acid Test : 121.92 $\frac{\text{apparent}}{-62^\circ} = \frac{\text{true}}{55\frac{1}{2}^\circ}$											

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GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property . *Capease Proj.* Project No. *70113* Depth *177.09 (581')* Date Began . . *July 17, 1979*
Hole No. . . *Cape D-9-79* Co ord. *4 + 02.5* Horizontal Length *105.3* Date Completed . . *July 18, 1979*
Sheet No. *1* *11 + 61 W* Direction *N 40° W* Drilled By. . *D. W. Coates, Geotech.*
Claim No. *"E"* Elevation *1855* Angle *- 50°* Logged By. . *S. V. S. S. S.*

Meters Footage	NUMBER	WIDTH	Au. g/t	Ag. g/t	Pb %	Zn.									AVERAGES					REMARKS
															WIDTH	Au. g/t	Ag. g/t	Gr. Pb	Zn.	
0 - 0.61	overburden	.61																		
0.61 - 3.0	waste	2.39																		
3.0 - 6.0	5383	3.00	.10	10.0	.11	.01														
6.0 - 9.0	5384	"	.05	10.5	.20	.01														
9.0 - 12.0	5385	"	.10	11.0	.25	.08														
12.0 - 15.0	5386	"	.35	22.5	.23	.08														
15.0 - 18.0	5387	"	.25	5.5	.23	.06														
18.0 - 21.0	5388	"	.30	17.0	.23	.11														
21.0 - 24.0	5389	"	.35	23.0	.39	.13														
24.0 - 27.0	5390	"	.20	12.5	.30	.34														
27.0 - 30.0	5391	"	.10	9.0	.28	.02														
30.0 - 33.0	5392	"	.30	9.0	.36	.01														
33.0 - 36.0	5393	"	.25	12.0	.22	.05														
36.0 - 39.0	5394	"	.10	28.0	.50	.25														
39.0 - 42.0	5395	"	.10	11.5	.18	.01														
42.0 - 45.0	5396	"	.05	10.5	.06	.01									42.0	.186	13.7			
45.0 - 48.0	5397	"	.15	25.0	.25	.08														
48.0 - 51.0	5398	"	.25	25.5	.23	.09														
51.0 - 54.0	5399	"	.35	13.0	.31	.03														
54.0 - 57.0	5400	"	.30	26.5	.25	.08														
57.0 - 60.0	5401	"	.30	34.0	.50	.32														
60.0 - 63.0	5402	"	.10	19.0	.40	.39														
63.0 - 66.0	5403	"	.15	14.5	.31	.08														
66.0 - 69.0	5404	"	.15	13.0	.27	.13														
69.0 - 72.0	5405	"	.60	37.0	.59	.10														
72.0 - 75.0	5406	"	.35	25.5	.20	.23														
75.0 - 78.0	5407	"	.20	23.0	.24	.33														
78.0 - 81.0	5408	"	.20	27.0	.20	.10									36.0	.26	23.6	.32	.16	
81.0 - 84.0	5409	"	.30	37.5	.22	.11														
84.0 - 87.0	5410	"	.05	34.0	.14	.17														
87.0 - 90.0	5411	"	.10	51.0	.16	.15														
90.0 - 93.0	5412	"	.10	36.0	.13	.23														
93.0 - 96.0	5413	"	.05	25.5	.08	.22														
96.0 - 99.0	5414	"	.15	52.5	.19	.15														
99.0 - 102.0	5415	"	.10	64.0	.14	.25														
102.0 - 105.0	5416	"	.10	70.0	.15	.10									30.0	.11	52.2	.14	.17	(81 - 111)
105.0 - 108.0	5417	"	.10	88.5	.11	.13														
108.0 - 111.0	5418	"	.05	63.0	.09	.18									66.0	.18	36.6	.24	.17	(45 - 111)
111.0 - 114.0	5419	"	.05	8.5	.02	.16														
114.0 - 117.0	5420	"	.10	25.5	.15	.11														

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Property . Capoose Proj. Project No. 70113 Depth . 177.09 (581') Date Began . July 17, 1979
Hole No. . Cap. D-9-79 Co. ord. . 4+02.5 Horizontal Length . 105.3 Date Completed . July 18, 1979
Sheet No. . 2 11+61 W Direction . N 40° W Drilled By. D.W. Coates Intern.
Claim No. . "E" Elevation . 1855 Angle . -50° Logged By. SV SV H

[illegible]



Property .. *Capoase Proj.* .. Project No. *70113* .. Depth *128.93 (423')* .. Date Began .. *July 23, 1979* ..
Hole No. *Ned. D-1-79* .. Co ord. *9+66.5* .. Horizontal Length *69.1 m* .. Date Completed *July 25, 1979* ..
Sheet No. *1* .. *19+70W* .. Direction *N 35° E* .. Drilled By. *D. W. Coates, Entrep.* ..
Claim No. *Ned. 2. Fr.* .. Elevation .. Angle *- 60°* .. Logged By. *SV SV Shear* ..

[illegible]



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL RECORD

Property .. Capoose Proj. ... Project No. 70113 ... Depth 128.93 (423') ... Date Began July 23, 1979 ...
Hole No. Ned D-1-79 ... Co ord. 9 + 66.5 ... Horizontal Length 69.1 m ... Date Completed July 25, 1979 ...
Sheet No. 1 ... 19 + 70 W ... Direction N 35 E ... Drilled By D. W. Coates, Entorp ...
Claim No. Ned 2 Fr. ... Elevation ... Angle - 60° ... Logged By S. V. Shear

Meters Footage	NUMBER	WIDTH	Au.	Ag.	Cu.	Zn.	MoS ₂	WIDTH X ASSAY	AVERAGES						REMARKS
									WIDTH	Au.	Ag.	Cu.	Zn.	MoS ₂	
0 - 1.22	Casing	1.22													
1.22 - 6.0	Waste	4.78													
6.0 - 9.0	5440	3.00					.005								
9.0 - 12.0	Waste	3.00													
12.0 - 15.0	5441	"					.023								
15.0 - 18.0	5442	"					.009								
18.0 - 21.0	5443	"					.018								
21.0 - 24.0	5444	"					.003								
24.0 - 27.0	5445	"					.002								
27.0 - 30.0	5446	"					.003								
30.0 - 42.0	Waste	12.0													
42.0 - 45.0	5447	3.00					.005								
45.0 - 48.0	5448	"					.013	.039							
48.0 - 51.0	5449	"					.014	.042							
51.0 - 54.0	5450	"					.012	.036							
54.0 - 57.0	5451	"					.046	.138							
57.0 - 60.0	5452	"					.013	.039							
60.0 - 63.0	5453	"					.015	.045							
63.0 - 66.0	5454	"					.012	.036							
66.0 - 69.0	5455	"					.014	.042							
69.0 - 72.0	5456	"					.029	.087							
72.0 - 75.0	5457	"					.029	.087	68.72					.0203	
75.0 - 78.0	5458	"					.016	.048							
78.0 - 81.0	5459	"					.007	.021							
81.0 - 84.0	5460	"					.016	.048							
84.0 - 85.84	5461	1.84					.011	.020							
85.84 - 86.36	5462	.52	.05	.5			.190	.098							
86.36 - 89.36	5463	3.00					.050	.150							
89.36 - 92.97	5464	3.61					.014	.050							
92.97 - 93.72	5465	.75					.205	.153							
93.72 - 96.72	5466	3.00					.011	.033							
96.72 - 99.72	5467	3.00					.016	.048							
99.72 - 103.72	5468	4.00					.034	.136							
103.72 - 106.72	5469	3.00					.002								
106.72 - 110.36	5470	3.64					.005								
110.36 - 112.46	5471	2.10	.05	.5	.01		.024								
112.46 - 115.46	5472	3.00					.003								
115.46 - 118.46	5473	3.00					.001								
118.46 - 121.46	5474	3.00					.007								
121.46 - 124.65	5475	3.19					.015								

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Property . . . Carpooose Proj. . . . Project No. . . 70113 . . . Depth . . 128.93 (423') . . . Date Began . . July 23, 1979 . . .
Hole No. . . . Ned D-1-79 . . . Co ord. . . . 9+66 S . . . Horizontal Length . . 69.1m . . . Date Completed . . July 25, 1979 . . .
Sheet No. 2 19+70 W . . . Direction N 35° E . . . Drilled By. D. W. Coates Ent. . . .
Claim No. . . . Ned 2 Fr. . . . Elevation Angle - 60° . . . Logged By. S. V. S. Allen . . .

[illegible]



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property *Capeose Proj.* Project No. *70113* Depth *99.67 (327')* Date Began *July 27, 1977*
Hole No. *Ned. D-2-79* Co. ord. *20+00W* Horizontal Length *49.83* Date Completed *July 28, 1977*
Sheet No. *1* Direction *S 45° E* Drilled By *D.W. Coates Ent.*
Claim No. *Ned. 2 Fr.* Elevation Angle *-60°* Logged By *S.V. J. J. J.*

Meters Footage	DESCRIPTION	ALTERATION										% RECY CALC'D.
		FROM	TO									
0-3.96	Casing											
3.96-33.14	Coarse grained qtz. monz.; ab. bio.; accessory magnetite, mod. mag. spotty chl. alt. at bio.; fractures generally contain chl. Rock not fresh - stly bleached (Kao?) 12.00-17.10 Ab. rty to amber colored qtz veinlets 1-3 mm wide, vuggy; veinlets parallel to 20°; minor diss lim. in rock 17.10-24.08 gougy fault zones @ 20-30° with ab. chl.; intervening secs. highly chl. (gray-green) qtz monz. minor py diss as cubic; occa. blk smear on slickensides @ 28.96: 3 cm qtz-feld vein @ 20° 3.96-33.14: 8 hairline fractures with diss Mo - parallel to 35°											
33.14-58.40	Fault zone; intensely chloritized gouge + intensely chloritized qtz monz.; minor diss py on fractures + veinlets. @ 33.14: contact @ 25° @ 35.75: blk streak @ 25° 37.20-41.15: fractures, veinlets + slickensides parallel to core; minor Mo @ 41.35: 1 cm veinlet Mo ss @ 10° @ 58.40: contact @ 20°											
58.40-79.00	C. g. Qtz. Monz.; Ab. barren vuggy qtz veinlets - qtz lined flat vugs; occa. gougy fractures up to 3 cm; spotty chl. alt.; No vis Mo											

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Property . Carpooose Proj. Project No. 70113 Depth . 99.67 (327') Date Began . . July 27, 1979
Hole No. . Ned D-2-79 Co ord. . 20+00W Horizontal Length . 49.83 Date Completed . July 28, 1979
Sheet No. . 2 10+705 Direction . S 45 E Drilled By. D. W. Coates Ent.
Claim No. . Ned 2 Fr. Elevation Angle . -60° Logged By. J. V. Sullivan

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Property . . . Capeose Proj. . . . Project No. . . 20113 . . . Depth . . . 99.67 (327') . . . Date Began . . . July 27, 1979
Hole No. . . Ned D-2-79 . . . Co ord. . . 20+00W . . . Horizontal Length . . . 49.83 . . . Date Completed . . . July 28, 1979
Sheet No. . . 1 . . . 10+70S . . . Direction . . . S 45° E . . . Drilled By . . . D.W. Coates, Inc.
Claim No. . . Ned 2 Fr. . . . Elevation Angle . . . - 60° . . . Logged By . . . SV SV Shen

Meters Footage	NUMBER	WIDTH	Au. g/t	Ag. g/t	Cu.	Zn. g/t	WIDTH X ASSAY							AVERAGES					REMARKS	
							WIDTH	Au.	Ag.	Cu.	Zn.									
0 - 3.96	Casing	3.96																		
3.96 - 33.14	Waste	29.18																		
33.14 - 36.14	5478	3.00	.05	4.0	.01	.010														
36.14 - 39.14	5479	11	.05	1.0	.01	.003														
39.14 - 42.14	5480	11	.05	1.5	.01	.002														
42.14 - 45.14	5481	11	.05	3.0	.02	.003														
45.14 - 48.14	5482	11	.05	1.5	.01	.001														
48.14 - 51.14	5483	11	.05	1.5	.01	.001														
51.14 - 54.14	5484	11	.05	1.0	.01	.001														
54.14 - 57.14	5485	11	.05	1.0	.01	.002														
57.14 - 58.40	5486	1.26	.05	.5	.01	.001														
58.40 - 78.00	Waste	19.60																		
78.00 - 80.32	5487	2.32	.05	1.0	.01	.003														
80.32 - 82.64	5488	2.32	.05	.5	.01	.005														
82.64 - 96.42	Waste	13.78																		
96.42 - 96.82	5489	.40	.05	1.5	.01	.005														
96.82 - 99.67	Waste	2.85																		
						</														



GRANGES EXPLORATION AB
CANADIAN DIVISION
DIAMOND DRILL LOG

Property *Capeose Proj.* Project No. *70113* Depth *124.05 (407')* Date Began *July 29, 1979*
Hole No. *Ned D-3-79* Co ord. *19+00 W* Horizontal Length *62.02* Date Completed *July 31, 1979*
Sheet No. *1* *13+25.5* Direction *South* Drilled By *D.W. Coates Ent.*
Claim No. *Ned #3 Fr.* Elevation Angle *-60°* Logged By *S.V. Shear*

Meters FOOTAGE	DESCRIPTION	ALTERATION										% REC'Y CALC'D.
		FROM	TO									
0 - 2.74	Casing											
2.74 - 40.68	Granodiorite, medium grained; minor rel. f.g. ortho.; ab. bio; accessory mag. Occa. large frag. or cry. plag. up to 3 cm; Occa. amber qtz veinlet. Very occa. hairline fracs. with diss mo. from 30 - 40°. Occa. K. fold alt. surrounding fracs. Chl. on most fracs. Very occa. cal. veinlet 1-3 mm.											
	16.90 - 21.49 stly. chl., rock soft and gougy in spots; a few hairline fracs with minor mo.											
	26.52 - 29.57 stly. chl.; 3 gougy fault zones @ 30° with bk slips; minor mo.											
	35.05 - 40.68 chl. alt. + mashed; gougy in spots; occa. bk slips with mo. Slicken sides + bk slips @ 25° top, 20° bottom.											
40.68 - 44.90	Qtz. Monz.; a few sil. veinlets and hair- line fracs with mo.; coarse pheno plag. Kotho. @ 44.90 3 cm chl. gouge @ 20°											
44.90 - 83.12	Granodiorite; med. gr.; ab. bio; f.g. ortho in ground mass; Occa. fault gouge 2-5 cm @ 20 - 40°; Occa. vuggy amber qtz veinlet with cal.; 1-3 mm; vags. lined with qtz cryl.; Very occa. hairline fracs with mo - a few with K fold alt. bk and green chl. on fracs. Very occa. frac with diss. py. Bio. alt. to chl. in a few spots 82.45 - 83.12 fault zone; chloritized; gougy and broken; no vis min.											

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Property . . . Capeose Proj. . . . Project No. 70113 . . . Depth . . . 124.05 (407') . . . Date Began . . . July 29, 1979 . . .
Hole No. . . . Ned D-3-79 . . . Co ord. . . . 19+00 W . . . Horizontal Length . . . 62.02 . . . Date Completed . . . July 31, 1979 . . .
Sheet No. . . . 2 . . . 13+25 S . . . Direction . . . South . . . Drilled By . . . D. W. Conter Ent. . . .
Claim No. . . . Ned #3 Fr. . . . Elevation Angle . . . -60° . . . Logged By . . . S. V. Shea . . .

Meters Footage	DESCRIPTION	ALTERATION										% REC'D CALC'D.
		FROM	TO									
93.12-124.05	Qtz. Monz.; Ab. bio ocea. alt. tech.; mild pervasive chl. alt. in spots; Frees normally gangy; ocea. gouge seam to 2cm with alt. zone up to .2m either side Ocea. sil-cal. veinlet commonly rimmed by rt colored sil? Ocea. frs rimmed by K fold with center (1 mm) chl. - sil. very ocea. hair line frs with diss. Mo; Minor diss. py on a few frs. @ 92.67: 2-3 mm bk slip with Mo @ 55° 114.54-124.05: Fault zone; mod. chl. alt.; ab. mashed rock (soft) + slicken sides; ocea. gouge seam 1-2 cm.; minor epi; gouge seams and slicken sides @ 45°-60°; very minor amt of light bk smears.											

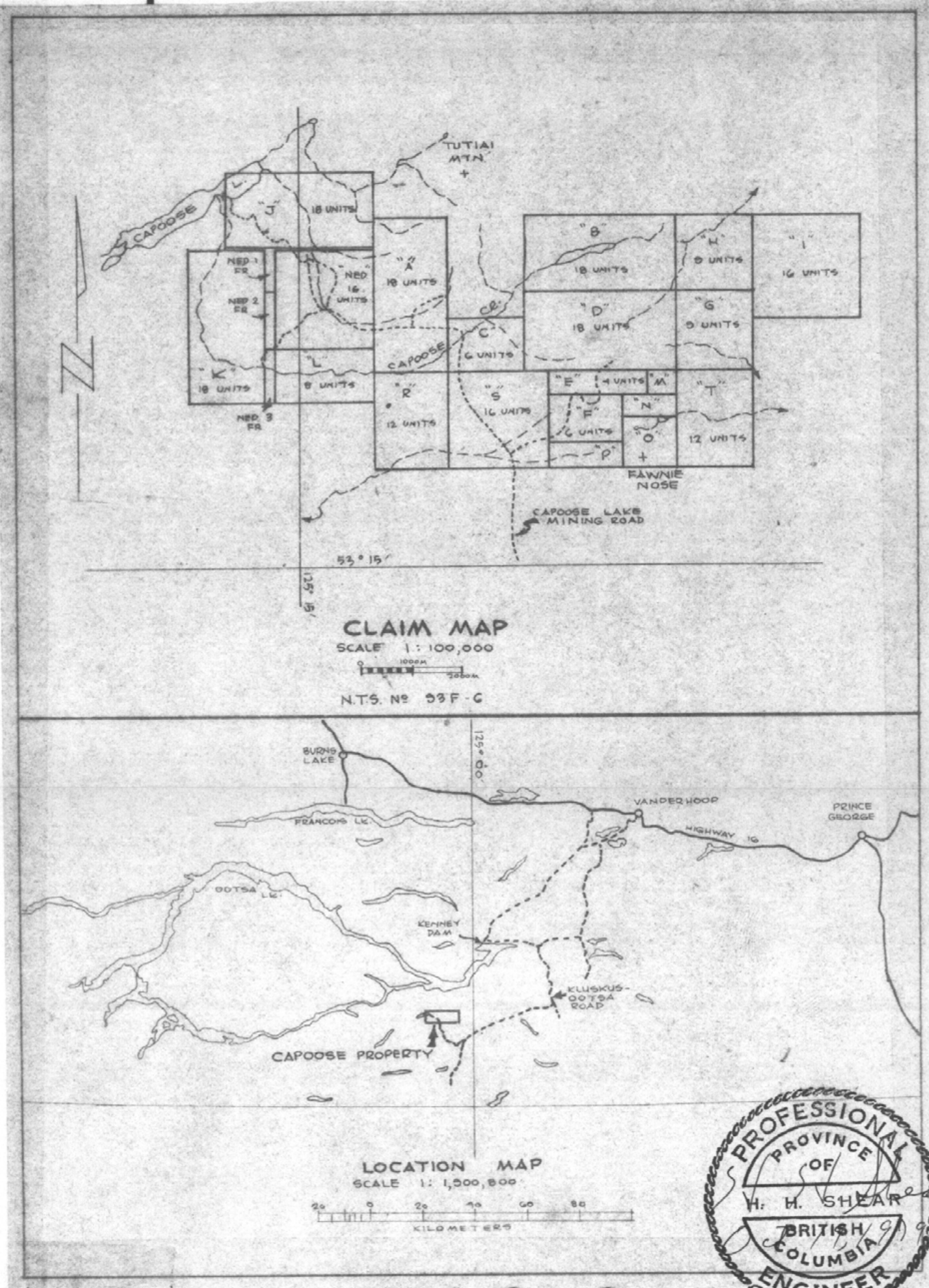
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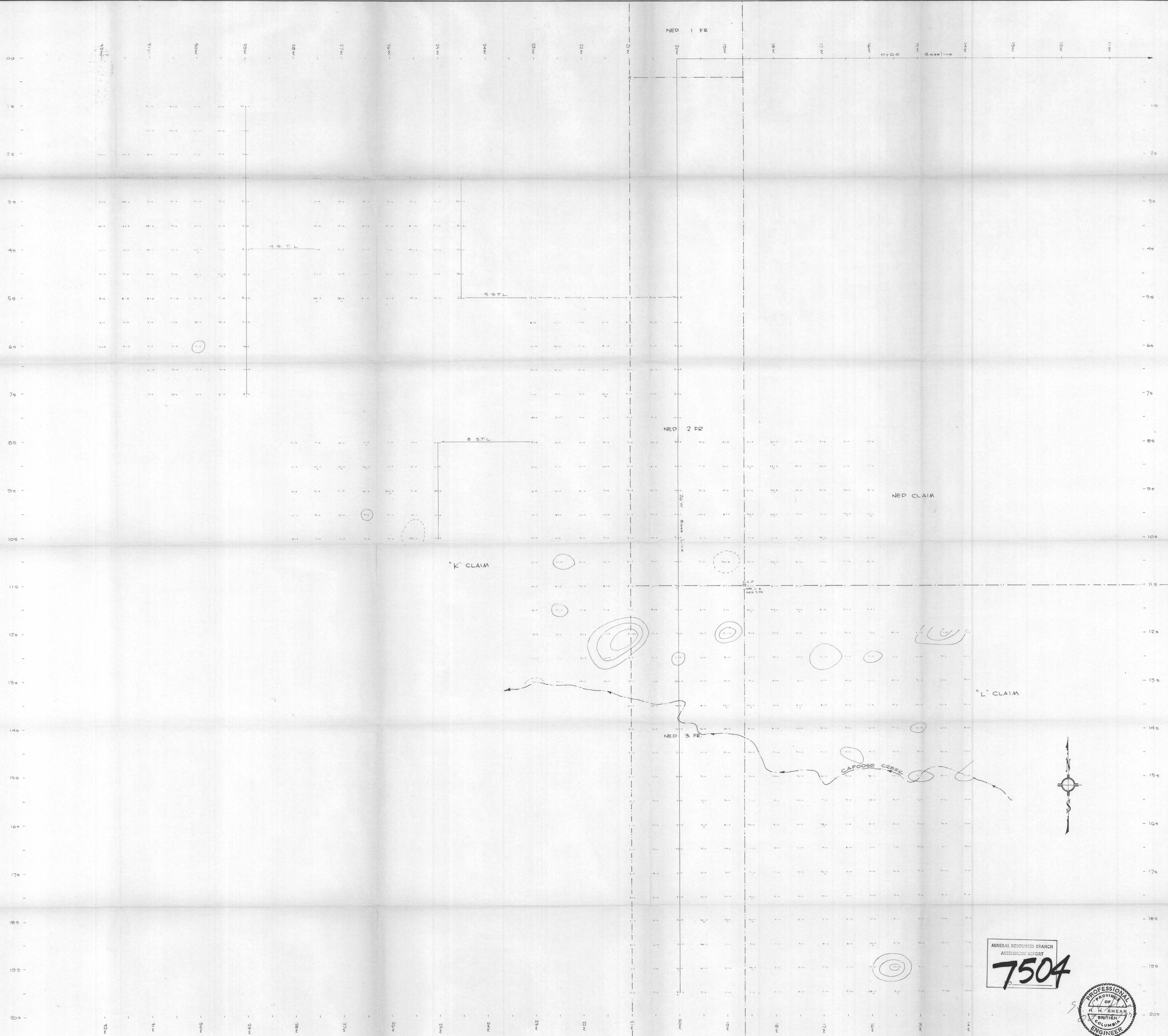


Property . . . *Carpenter Proj* . . . Project No. . . *70113* . . . Depth . . . *124.05 (407')* . . . Date Began . . . *July 29, 1979*
Hole No. . . *Ned D-3-79* . . . Co ord. . . *19 + 00 W* . . . Horizontal Length . . . *62.02* . . . Date Completed . . . *July 31, 1979*
Sheet No. . . *1* . . . *13 + 25 S* . . . Direction . . . *South* . . . Drilled By. . . *D. W. Coats Ent*
Claim No. . . *Ned #3 Fr* . . . Elevation . . . Angle . . . *-60°* . . . Logged By. . . *JV JV Sheen*

Meters Footage	NUMBER	WIDTH	Au. g/t	Ag. g/t	Cu.	Zn Mg								AVERAGES					REMARKS
														WIDTH	Au.	Ag.	Cu.	Zn.	
0 - 2.74	Casing																		
2.74 - 16.90	waste																		
16.90 - 19.90	5490	3.00	.05	.5	.01	.015													
19.90 - 21.49	5491	1.59	.05	.5	.01	.006													
21.49 - 26.52	waste	5.03																	
26.52 - 29.57	5492	3.05	.05	.5	.01	.098													
29.57 - 35.32	waste	5.75																	
35.32 - 38.32	5493	3.00	.05	3.0	.01	.009													
38.32 - 40.68	5494	2.36	.05	.5	.01	.006													
40.68 - 43.68	5495	3.00	.05	.5	.01	.003													
43.68 - 46.59	waste	2.91																	
46.59 - 47.08	5496	0.49	.05	1.5	.01	.282													
47.08 - 48.08	5497	1.00	.05	.5	.01	.025													
48.08 - 123.51	waste	75.43																	
123.51 - 124.05	5498	0.54	.05	.5	.01	.006													

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ALL LINES ESTABLISHED BY "H" CHAIN & COMPASS PER FIG 3 FOR LOCATION MAP

1:500	25M	0	100M	100M	150M
1:500	25M	0	100M	100M	150M
1:500	25M	0	100M	100M	150M
1:500	25M	0	100M	100M	150M

DRAWN BY: M.P.
DATE: JULY 1975

GRANGES EXPLORATION AB
CANADIAN DIVISION
VANCOUVER OFFICE

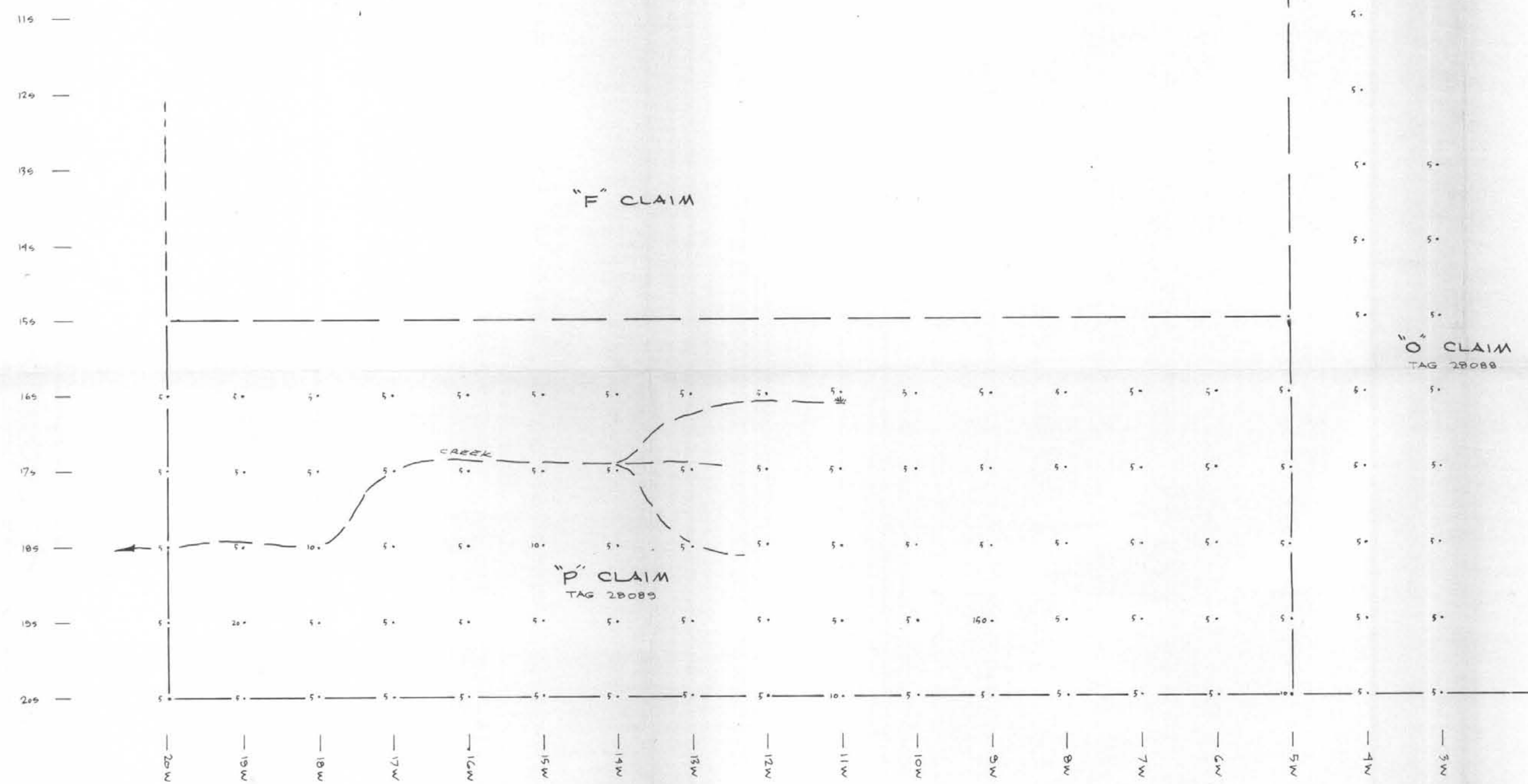
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
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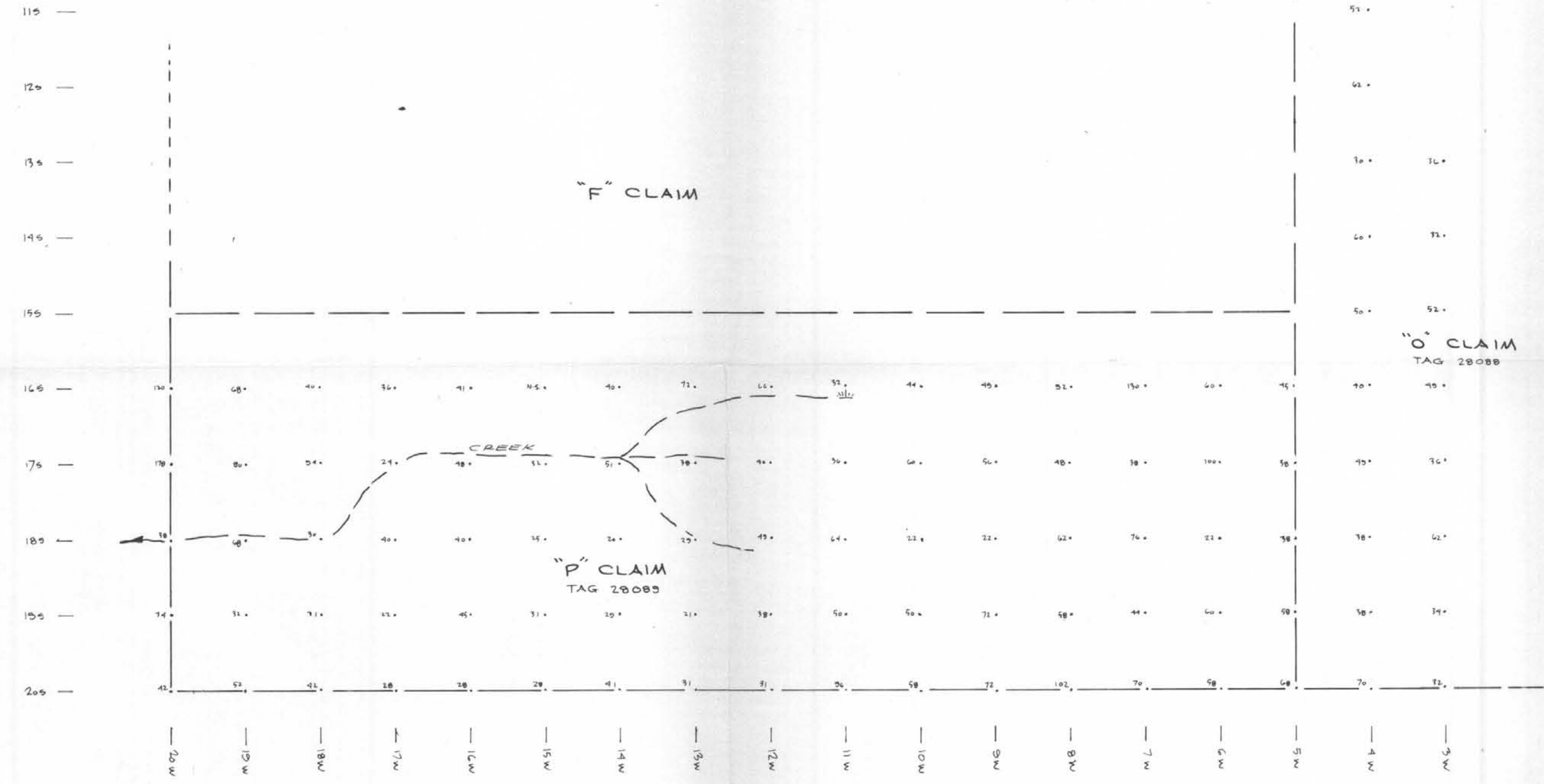
SOIL GEOCHEMICAL SURVEY FOR
COPPER & TUNGSTEN ON
CLAIMS "K", "L", NED 1 FR, NED 2 FR & NED 3 FR
CAPOOSE JOINT VENTURE
CAPOOSE LAKE AREA B.C.

SCALE: 1:2500
PROJECT No: 70113
N.T.S. No: 03 F-6

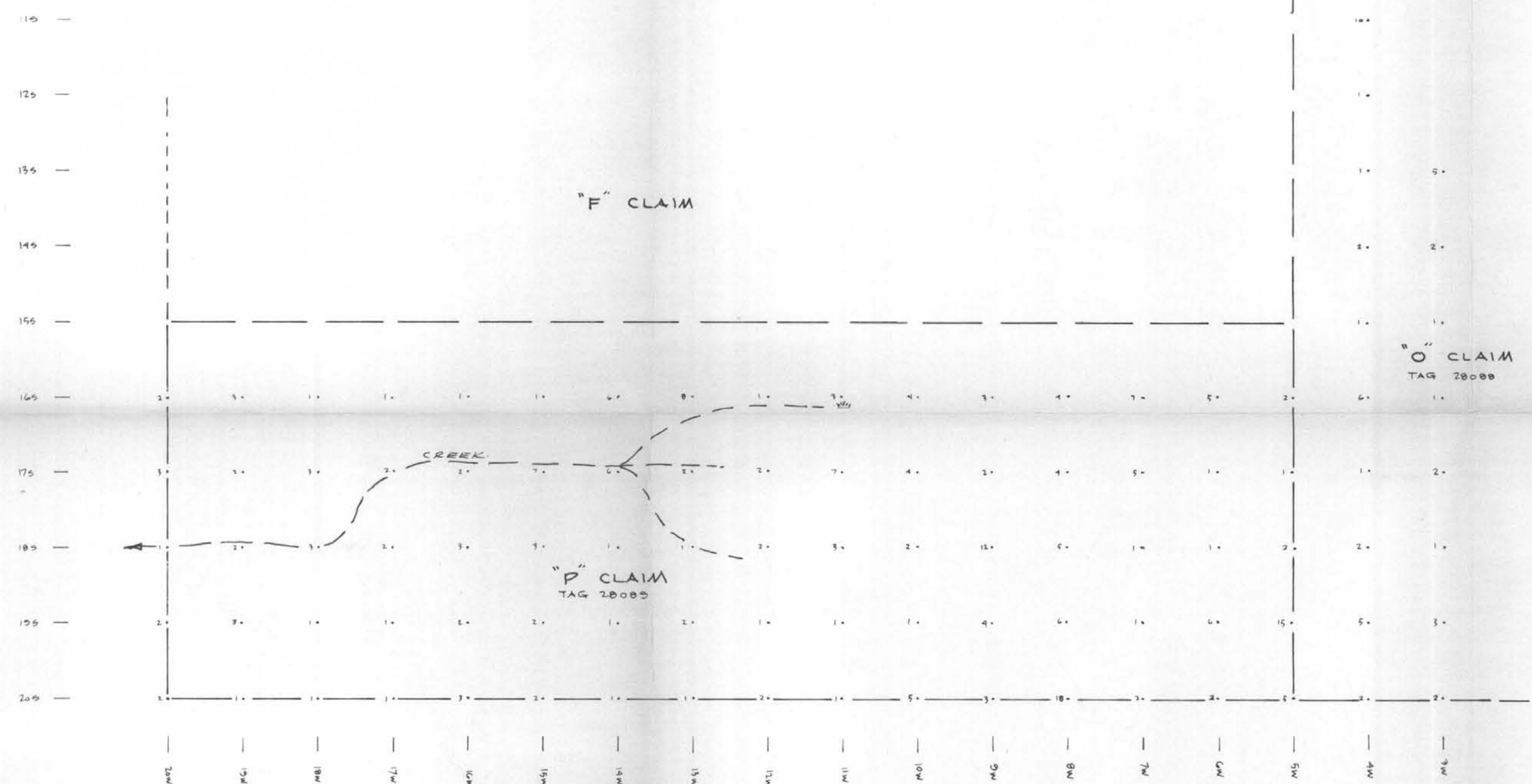
FIG. 4



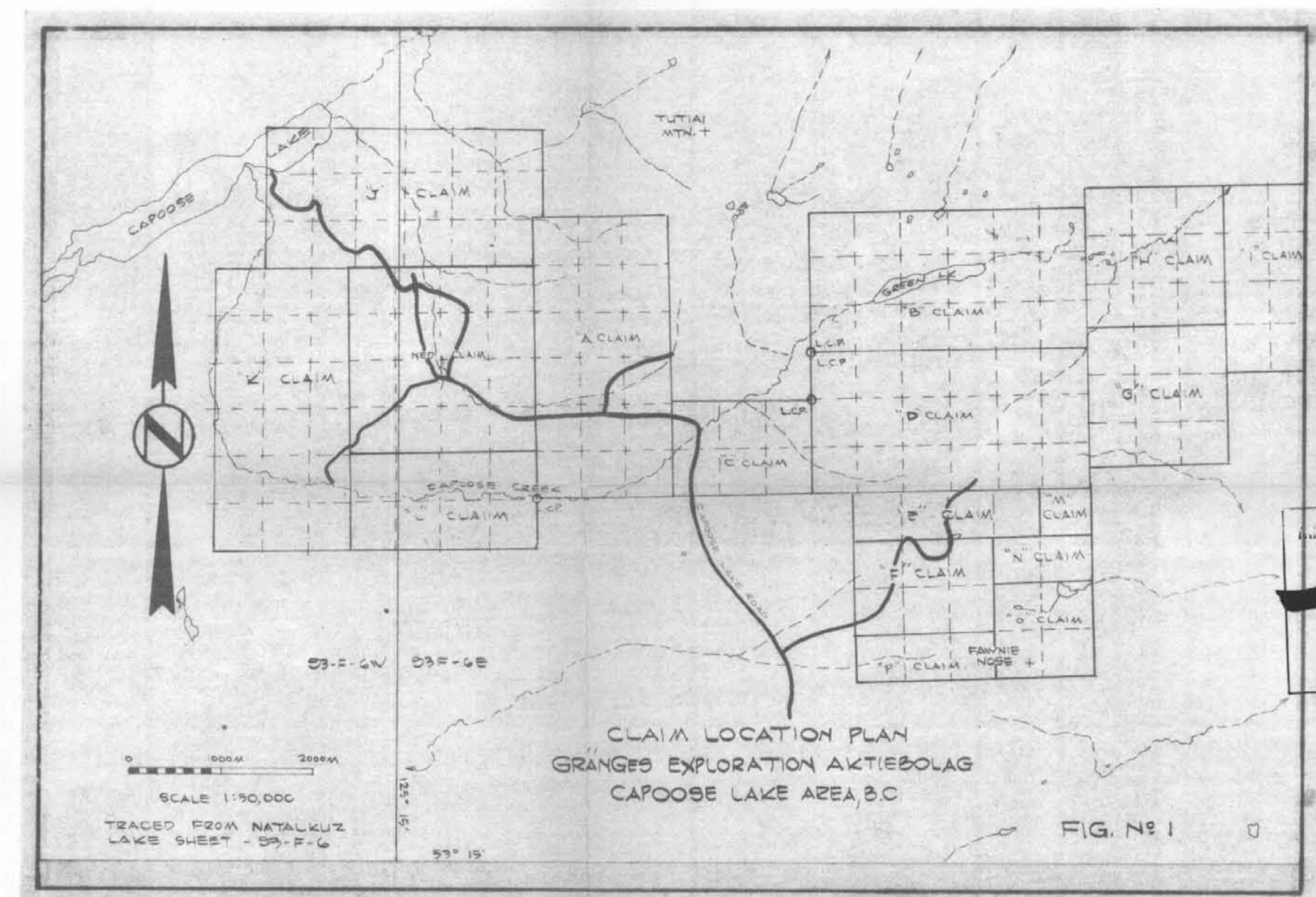
GOLD in p.p. billion.



ZINC in p.p.m.



SILVER in p.p. 10 million



MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
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NO.



FIG 5

100M 50M 0 100M 200M 300M
DRAWN BY: M.P.
DATE: AUG 1979
Assay 15 Sample location

GRANGES EXPLORATION AB
CANADIAN DIVISION
VANCOUVER OFFICE

SOILGEOCHEMICAL SURVEY FOR
GOLD, SILVER & ZINC ON
CLAIMS "P" & "O"
CAPOOSE JOINT VENTURE
CAPOOSE LAKE AREA, B.C.

SCALE: 1:5000
PROJECT No.: 70113
N.T.S. No.: 53 F - 6