

82-493

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

10502
NO.

PROSPECTING REPORT ON
THE
SHUKSAN GOLD PROPERTY

ATLIN MINING DIVISION, B.C.

NTS 104N/10-11

JUNE, 1982

A.G. TROUP, P.ENG.

<u>CLAIM NAME</u>	<u>UNITS</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>
JULIA 1	12	1383	JULY 29
JULIA 2	18	1362	JULY 28
JULIA 3	14	1363	JULY 28
JULIA 4	12	1384	JULY 29
KAREN 1	6	1364	JULY 28
KAREN 2	12	1365	JULY 28
KAREN 3	16	1366	JULY 28
KAREN 4	15	1367	JULY 28
KAREN 5	12	1368	JULY 28
KAREN 6	20	1369	JULY 28
KAREN 7	20	1370	JULY 28
KAREN 8	8	1371	JULY 28
KAREN 9	9	1372	JULY 28
SHUKSAN 1	12	1359	JULY 28
SHUKSAN 2	20	1360	JULY 28
SHUKSAN 3	3	1361	JULY 28

LOCATION: 59°35'N., 133°30'W.

OWNER: SURPRISE LAKE SYNDICATE

CONSULTANT: A.G. TROUP, ARCHEAN ENGINEERING LTD.

SHUKSAN GOLD PROPERTY
ATLIN MINING DIVISION B.C.

NTS 104N

SUMMARY

The Shuksan property is a gold prospect located in the Atlin placer mining camp. The property was staked in 1981 after Yukon Revenue Mines Ltd. reported discovering low grade gold values over an extensive carbonatized and silicified stockwork developed in andesites just 15 km east of Atlin.

In the fall of 1981 thirty man days were spent prospecting the Shuksan property. Several areas of quartz veining were discovered by this programme. The most interesting area is situated near the south end of the property about 1 km above the rich placer pay channel on Spruce Creek. Here, quartz veining often accompanied by pyrite chalcopyrite and occasionally by galena and mariposite occurs at several sites in the vicinity of an extensive manganese stream sediment anomaly. These results suggest that an important mineralized shear zone could exist in this area.

Additional exploration consisting of prospecting, trenching, detailed mapping, soil sampling, VLF-EM, EM-34 and possibly diamond drilling is recommended.

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SHUKSAN GOLD PROPERTY
Atlin Mining Division B.C.

1.0 INTRODUCTION

The Shuksan property is located in the heart of the Atlin placer gold camp in northwestern B.C. It was staked in July 1981 on the advice of Consulting Geologist, William T. Irvine after Yukon Revenue Mines Ltd. reported a large low-grade gold discovery in the area.

The property was visited briefly by the writer in September 1981 to instruct the owners on prospecting techniques. Between September 1 and October 3, 1981, the owners spent a total of thirty man days exploring the claims. This report discusses the results of that prospecting programme.

1.1 LOCATION AND ACCESS

The Shuksan property is comprised of 209 mineral units in two non-contiguous blocks of claims located approximately 10 km east of the community of Atlin, B.C., Fig. 1A. The northern block, consisting of the Julia 1 to 4 claims, covers an area of approximately 12 km² over the south and east slopes of Munro Mountain. The southern block, consisting of the Karen 1 to 9 and Shuksan 1 to 3 claims, covers approximately 37 km² over the south and west slopes of Spruce Creek. Access to the claims is provided by two good gravel roads that service placer mining properties along Spruce and Pine Creeks.

1.2 PHYSIOGRAPHY

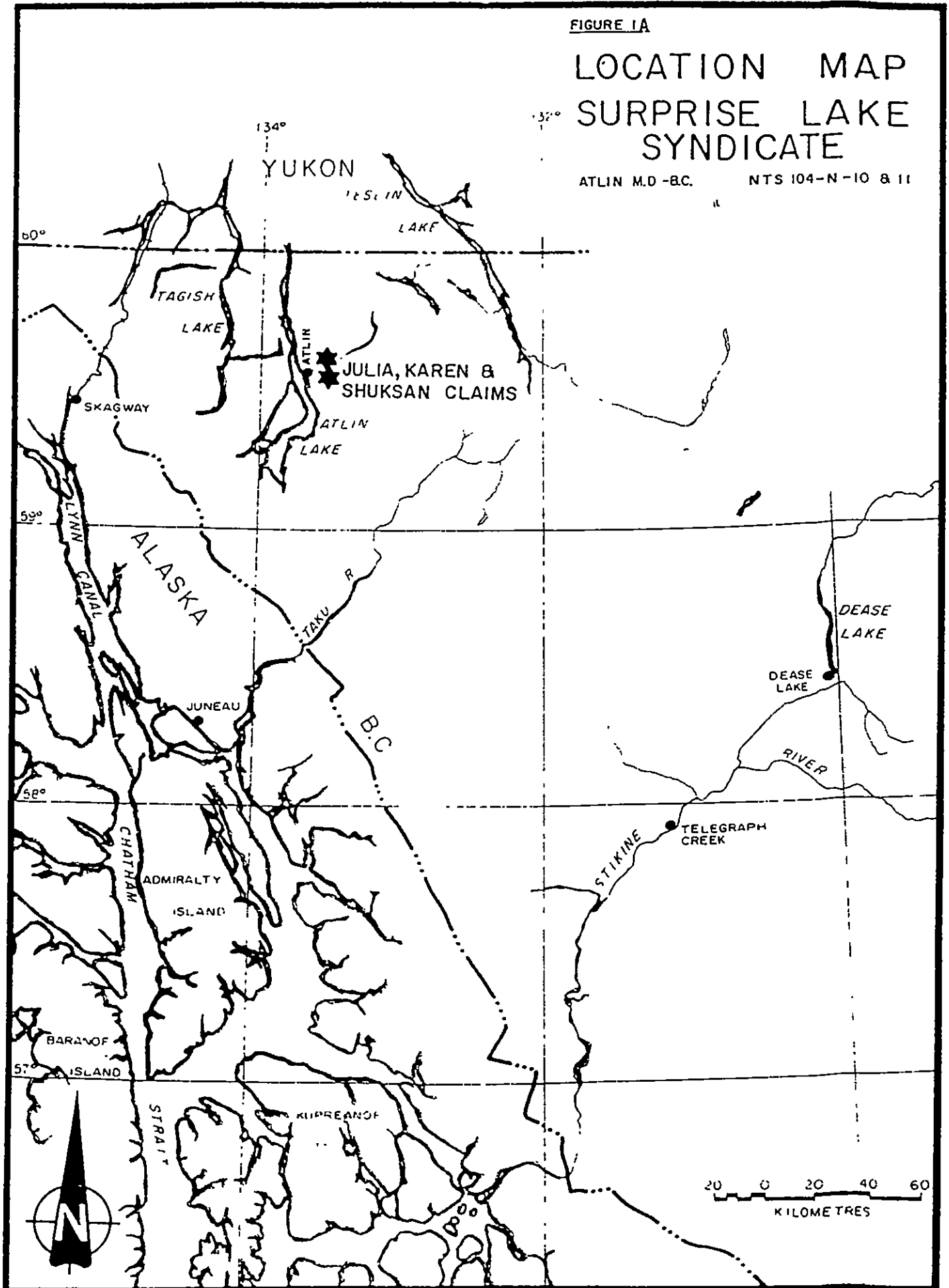
The Atlin area is located on the eastern margin of the Coast Mountains just southeast of the Yukon Plateau.

FIGURE 1A

LOCATION MAP SURPRISE LAKE SYNDICATE

ATLIN M.D.-B.C.

NTS 104-N-10 & 11



This is an area of wide, U-shaped valleys flanked by low, rounded mountains.

On the Shuksan property, there is approximately 2000 feet (610 m) of relief between the floor of Pine Creek at 3000 feet (915 m) and the crest of Spruce Mountain at approximately 5000 feet (1525 m). The tree line is at approximately 4000 feet (1220 m) on south facing slopes and somewhat lower on north slopes. Below 4000 feet (1220 m) the valleys are forested with black pine, white and black spruce, aspen and dwarf birch. Dense growths of willow and alder occur along streams, and on the hills above tree line, stunted buckbrush extends to about 4300 feet (1310 m).

1.3 CLAIM INFORMATION

The property is located in the Atlin Mining Division and consists of 16 modified grid claims comprised of 209 units. The claims are held for the Surprise Lake Syndicate by the Syndicate Manager, D. Purvis. Claim information is listed in Table 1.3.

TABLE 1.3

CLAIM STATUS

<u>CLAIM NAME</u>	<u>UNITS</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>
JULIA 1	12	1383	JULY 29
JULIA 2	18	1362	JULY 28
JULIA 3	14	1363	JULY 28
JULIA 4	12	1384	JULY 29
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KAREN 8	8	1371	JULY 28
KAREN 9	9	1372	JULY 28
SHUKSAN 1	12	1359	JULY 28
SHUKSAN 2	20	1360	JULY 28
SHUKSAN 3	3	1361	JULY 28

1.4 WORK BY THE SUPRISE LAKE SYNDICATE

The Shuksan property was prospected intermittently by members of the Surprise Lake Syndicate from September 1 to October 2, 1981. During this period the following work was completed:

1. A. Troup, P.Eng. with Archean Engineering Ltd. visited the property on September 1-2 to give advice on prospecting techniques to be used on the property.
2. G.R. Craft, a prospector and long time resident of the Atlin area was employed for three days, September 2-4, to help explore the claims.
3. Syndicate members D. Purvis and J. Engel prospected the property from September 1-4.
4. Syndicate members, D. Billingsley and G. Billingsley prospected the property from September 24 to October 2.
5. The Spruce Mountain area was explored by helicopter to determine if mineralized structures could be traced from the Yukon Revenue property on to the Shuksan property.

2.0 GEOLOGY

2.1 GENERAL GEOLOGY

The property is underlain by Cache Creek Group metavolcanics intruded by serpentized ultramafic bodies of Pennsylvanian and Permian Age (G.S.C. map 1082A).

The Cache Creek Group rocks are basaltic andesites ranging from grey green to almost black in colour. They consist of flows, tuffs and agglomerate and are highly altered to chlorite schist in many places. In the vicinity of the ultrabasic intrusives, the rocks have been carbonatized, serpentized and occasionally silicified.

The ultrabasic bodies are easily recognized by their characteristic rusty brown to grey coloration on weathered surfaces. These rocks are extensively altered and consist largely of serpentine, hornblende, chlorite and talc. Occasionally these ultrabasics are rich in magnetite and can cause compass deflections over short distances.

2.2 ECONOMIC GEOLOGY

2.2.1 PLACER GOLD DEPOSITS

A man named Miller discovered placer gold in the Atlin area in 1897 while he was driving cattle into Dawson. News of this find resulted in the first claims being staked on July 8th, 1898 and by the end of that season more than 3000 people were camped in the area.

Only eight creeks - Birch, Boulder, Ruby, Pine Spruce, Otter, Wright and McKee - have been important producers in the Atlin camp. All were discovered by the end of 1898 although overburden problems delayed production from Ruby Creek until 1906.

Uninterrupted placer mining in the Atlin camp has produced some one million ounces of gold since 1898. Spruce Creek, the richest stream in the camp, has yielded more than 40% of this gold. The pay streak along Spruce Creek is over 5 km long, approximately 2 m thick and up to 60 m wide. Near the southern end of the pay streak, the gravels are reported to have averaged about 2 oz of gold to the yard along a 600 m section of the creek. Figure 1 shows the productive pay streaks along the eight creeks. Table 2.2.1 gives the gold production from these creeks up to 1946, the last year for which individual creek recoveries were obtained.

All important placer gold production has been from rich tertiary gravels buried beneath a thick blanket of barren glacial till. On Spruce creek, which drains the Karen and Shuksan claims, valley glaciers have apparently scoured away the upper and lower ends of the pay streak. Along Pine Creek, however, the Tertiary gravels extend downstream beyond the western limit of economic gold values. Birch Creek, which drains the east end of the Julia claims was not exposed to valley glaciation but the rich Tertiary gravels along the lower section of this stream were apparently stripped away by the Pine Creek valley glacier. Upstream on Birch Creek the Tertiary gravels extend beyond the limit of economic gold values.

TABLE 2.2.1

Gold Recovery From Productive Creeks

In the Atlin Area, 1898 to 1946

<u>Stream Name</u>	<u>Ounces of Gold Produced From 1898 to 1946</u>
Spruce Creek	262,603
Pine Creek	138,144
Boulder Creek	67,811
Ruby Creek	55,272
McKee Creek	46,953
Otter Creek	20,113
Wright Creek	14,729
Birch Creek	12,898
All Others (21 Creeks)	<u>15,624</u>
	634,147

Note: B.C. Dept. of Mines records show that for this same period 705,229 ounces of gold was sold from the Atlin area suggesting that not all gold production was reported.

All gold recovered from the Atlin area is very coarse and many large nuggets have been found along both Birch and Spruce Creeks. The fine gold as well as the nuggets is often found inter-grown with quartz which, in many cases, occurs as euhedral crystals. The gold is generally stained with manganese especially near the upper ends of the pay streaks. Large nuggets are often coated with manganese oxide.

In 1948 and 1950, B.C. Department of Mines Geologist J.M. Black spent a total of 3½ months mapping and investigating the Atlin placer camp. Black proposed that two mineralized zones were responsible for most of the placer gold in the camp. He suggested that gold on McKee, Spruce, Otter and

Wright creeks came from a zone that extends across the upper parts of the four creeks as shown in Figure 1. He believed that the gold on Birch, Boulder and Ruby creeks came from a zone that extends across the heads of these creeks.

2.2.2 LODE GOLD SHOWINGS

Gold-bearing quartz veins were first discovered in the Atlin area in 1899 and by 1905 most of the known showings (Figure 1) had been discovered. Although the original showings have been repeatedly worked and re-examined there is no record of regional exploration for lode mineralization since 1905.

Over the known occurrences, free gold is found in quartz veins and in carbonatized or silicified fracture zones in the country rock. The mineralized veins and zones show no preferred orientation but generally strike NE or NW. Most showings occur in, or marginal to, serpentine intrusive bodies. In the veins, free gold occurs as fine disseminations usually stained or encrusted with manganese oxide. The veins generally carry disseminations of pyrite, chalcopyrite, galena, tetrahedrite and siderite and are occasionally streaked with mariposite.

From 1902 to 1905 three adjacent groups of claims, the Lakeview, White Star and Isabell and Barbara groups were staked on Star Mountain between Birch and Boulder Creeks. The three groups were amalgamated in 1905 to form the Lakeview property. The claims were staked over a series of quartz veins emplaced in carbonatized andesite adjacent to a serpentine intrusive. The property was tested intermittently from 1902 to 1933 with a series of test pits,

trenches, and adits. The largest quartz vein, striking 25° and varying from one to four feet in width, was explored with a 250 foot adit. It was found to be sparsely mineralized with galena, pyrite and the occasional speck of manganese oxide encrusted free gold. Assays were generally low but samples of highly mineralized material ranged from a trace to 1.4 oz/ton gold and from a trace to 30 oz/ton silver.

In 1981 the property was acquired and re-examined by Yukon Revenue Mines Ltd. Work by Yukon Revenue showed low grade gold values over an extensive carbonatized and silicified stockwork developed in andesite adjacent to the known veins.

The Shuksan property was staked to cover areas where geology similar to that on the Yukon Revenue claims occurs in the vicinity of important placer gold producing streams.

3.0 PROSPECTING

The present programme involved prospecting sections of the property that might have been the source of placer gold, found in Spruce, Birch or Pine Creeks. Wherever quartz veins, quartz float or gossanous material was found, the surrounding float and out crop was carefully checked for pyrite, galena, chalcopyrite and mariposite, the minerals usually associated with gold mineralization in the Atlin camp.

The areas prospected are shown in Figures 3 and 4. Traverses indicated are believed to be accurate but should not be considered exact. In most cases distances and locations were estimated.

On the Julia claims, attention was given to the Julia 4 claim near the head of the pay channel on Birch Creek and Julia 1 claim adjacent to the former Imperial gold mine. Nothing of importance was found. The only indications of mineralization were a few, scattered, $\frac{1}{4}$ ", mariposite bearing quartz veinlets found on the Julia 1 claim.

On the Karen and Shuksan claims, prospecting was carried out above the head of the pay channel on Spruce Creek and on Spruce Mountain, between the pay channels along Spruce and Pine Creeks. Particular attention was given to the Dominion Creek area. G. Craft, a former employee in the Noland Mine on Spruce Creek, reported that galena and mariposite bearing quartz float accompanied the gold in the pay channel. Craft believes the source of the gold and the mineralized boulders to be in the vicinity of Dominion Creek.

During the present programme, quartz veinlets up to one inch in width, accompanied by pyrite, galena, chalcopyrite and a green mineral thought to be mariposite, were found in rusty quartzite boulders along Dominion Creek. About 1 km to the east of Dominion Creek, similar mineralization was found in a small gossan on the Shuksan 2 claim. North of Spruce Creek on the Karen 7 claim, similar mineralization was found in andesite boulders cut by $\frac{1}{2}$ " quartz veinlets.

On the southwest slope of Spruce Mountain, angular quartz float up to 6 inches in diameter was found over an extensive area. No accompanying sulphides were seen but the existence of these boulders suggests potential for mineralized quartz veins in this area.

4.0 GEOCHEMISTRY

4.1 STREAM SEDIMENT SAMPLING

In 1977 regional geochemical sampling was carried out over the Atlin area as part of Canada's Uranium Reconnaissance Programme. Stream sediment samples were taken at a density of one sample in 13 km² over the area of the Shuksan property. All samples were routinely analysed for 13 elements including Cu, Pb and Mn, the three elements known to be associated with gold in the Atlin camp.

These data were reviewed during the preparation of this report.

4.1.1 PRESENTATION AND DISCUSSION OF RESULTS

Geochemical results of the above survey are available as a series of symbolized individual element maps at a scale of 1:250,000 (G.S.C. Open File 517). Because of the intimate association of manganese oxide with gold in this camp, Mn values from the survey have been replotted at a scale of 1:100,000 in Figure 2.

To aid interpretation of the results a log probability plot was prepared for 91 Mn values obtained over the Atlin camp. The results were then partitioned (Sinclair 1974) to separate background from anomalous values. Using the background population, threshold values were determined as the mean plus two standard deviations ($\bar{x} + 2s$) and highly anomalous values as the mean plus three standard deviations ($\bar{x} + 3s$) or greater. The threshold and anomalous levels determined from this study are given in Table 4.1.1. These data have been used to contour Mn values in Figure 2.

TABLE 4.1.1

Mean, threshold and anomalous Mn values in 91 stream sediment samples from the Atlin area.

<u>Mean (\bar{x})</u>	<u>Threshold ($\bar{x} + 2s$)</u>	<u>Anomalous ($x + 3s$)</u>
400 ppm	780 ppm	1100 ppm

Inspection of these results shows an extensive manganese anomaly just south of the rich placer pay streak on Spruce Creek. The anomalous drainage basin includes the three sites at which mineralized quartz veinlets were discovered during the present programme. The anomaly follows Dominion Creek to the south and Rant Creek to the north suggesting that a manganese-enriched, northeast-trending shear zone may underlie these two streams. The anomaly passes above the pay channel in McKee Creek to the south and projects toward the head of the pay channel in Otter Creek to the west. Because of the close association of manganese with gold seen in the Atlin area, this is considered an extremely important anomaly requiring further investigation.

Inspection of Cu and Pb results showed no significant association of these elements with gold-bearing streams or known gold veins in the area. The concentrations of these elements in the veins are possibly too low to give significant drainage anomalies.

5.0 CONCLUSIONS

The present prospecting programme successfully located several areas of quartz float and quartz veined boulders on the Shuksan property. At several locations the quartz veins are accompanied by pyrite, chalcopyrite and occasionally galena and mariposite. All of these minerals accompany gold bearing veins elsewhere in the Atlin camp suggesting potential for similar mineralization on the Shuksan property.

The area of greatest interest is situated near the south end of the property about 1 km above the head of the rich placer pay channel on Spruce Creek. Here, sulphide bearing quartz veinlets were found at several sites along an extensive manganese stream sediment anomaly. Manganese oxide shows an intimate association with gold elsewhere in the Atlin camp suggesting that this anomaly may overlie important mineralization.

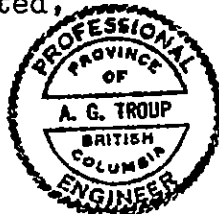
6.0 RECOMMENDATIONS

Additional exploration consisting of prospecting, trenching, detailed mapping, soil sampling, a VLF-EM survey and an EM-34 survey is recommended for the property. Details are given below.

1. The areas of mineralized quartz veining found during the present programme should be re-examined, trenched and assayed for gold.
2. Detailed mapping should be carried out over the entire Shuksan property with particular attention given to locating quartz veins and zones of carbonatization and silicifications.
3. Soil sampling should be carried out over the extensive manganese anomaly on Spruce Creek. In addition to gold, the samples should be analysed for all possible pathfinder elements such as Mn, As, Hg, Sb, Cu, Pb and Zn.
4. A VLF-EM survey should be carried out over this same area to define shear zones that could host gold mineralization.
5. An EM-34 survey should be carried out with the VLF survey to define areas of silification.
6. Any favourable anomalies defined by the above surveys should be tested by diamond drilling.

Respectfully submitted,

A. G. Troup
A.G. Troup, P.Eng.



7.0 BIBLIOGRAPHY

Aitkens, J.D., 1960: Map 1082A. Geology Atlin Cassiar District.

B.C. Minister of Mines, Annual Reports, 1898 to 1960.

Black, J.M., 1953: Report on the Atlin Placer Camp. Open File Report, B.C. Department of Mines.

Boyle, R.W., 1979: The geochemistry of gold and its deposits, G.S.C. Bulletin 280.

Geological Survey of Canada, Regional Stream Sediment Data, Open File 517.

Geological Survey of Canada, Summary Report 1925.

Proudlock, P.J. and Proudlock, W.M., 1976: Stratigraphy of the placers in the Atlin Placer Mining Camp, B.C. Open File Report, B.C. Department of Mines.

Sinclair, A.J., 1974: Selection of threshold values in geochemical data using probability graphs; J. Geochem. Expl. V3, No. 2, p. 129 - 149.

COSTS STATEMENT FOR
PROSPECTING ON THE
JULIA, KAREN AND SHUKSAN CLAIMS
1 SEPTEMBER - 3 OCTOBER 1981

<u>Salaries & Wages</u>	
5 men, 30 man days @ \$82.33	\$ 2,470.00
<u>Benefits</u>	
@ 20%	494.00
<u>Food & Accommodation</u>	
5 men, 30 man days @ \$16.90	507.00
<u>Supplies</u>	129.33
<u>Helicopter</u>	
Haida 206B, 3/4 hr. @ \$492.67	369.50
<u>Fixed Wing</u>	
C.P. Air, 4 men, VCR-WTHSE-RTN @ \$369.50	1,478.00
<u>Geochemical Analysis - Chemex Labs</u>	
1 rock for Ag, Au, Cu, Pb	8.80
<u>Rental Equipment</u>	
General Enterprises 4WD Camper, 1 WK	495.00
Tilden 4WD pickup, 9 days @ \$62.07	558.63
Personal Field Equipment, 30 man days @ \$3.00	90.00
<u>Consulting, Supervision and Report Preparation</u>	
Archean Engineering	<u>8,281.38</u>
<u>TOTAL COSTS</u>	<u>\$15,122.84</u>

COSTS APPORTIONED

TO CLAIMS

<u>Claim</u>	<u>Units</u>	<u>Total</u>
Julia 1	12	\$ 1,080.20
Julia 4	12	1,080.20
Shuksan 1	12	1,080.20
Shuksan 2	20	1,800.34
Karen 2	12	1,080.20
Karen 3	16	1,440.28
Karen 4	15	1,350.25
Karen 5	12	1,080.20
Karen 6	20	1,800.34
Karen 7	20	1,800.34
Karen 8	8	720.14
Karen 9	9	<u>810.15</u>
GRAND TOTAL		<u>\$15,122.84</u>

STATEMENT OF QUALIFICATIONS

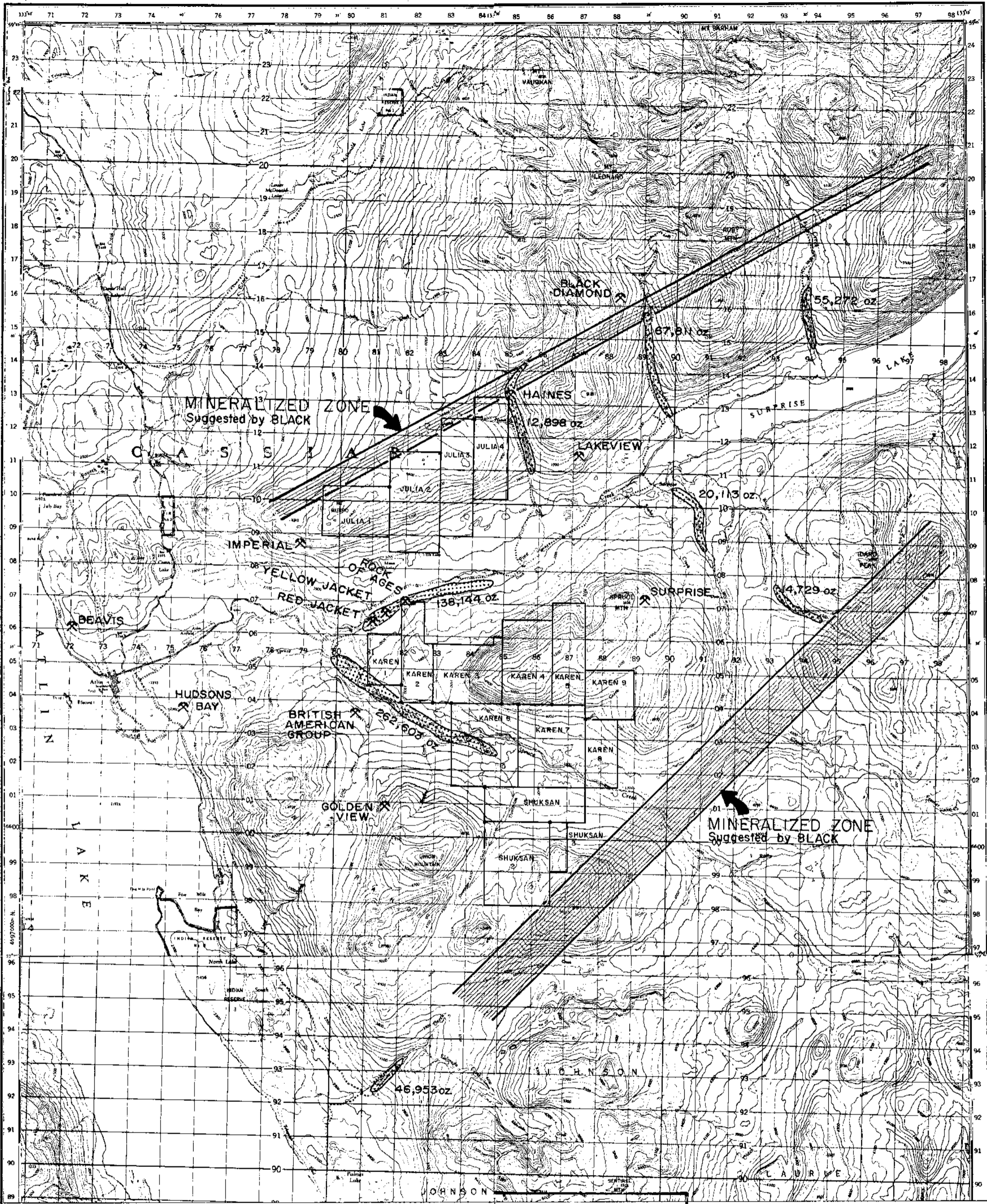
A. TROUP, P. ENG.

ACADEMIC

1967	B. Sc. Geology	McMaster University, Ontario
1969	M. Sc. Geochemistry	McMaster University, Ontario

PRACTICAL

1980 -	#45-4100 Salish Dr. Vancouver, B.C.	Consulting Geologist with Archean Engineering Ltd.
1977-1980	Geological Survey of Malaysia	Project Manager on a CIDA supported mineral explor- ation survey over peninsular Malaysia.
1969-1977	Rio Tinto Canadian Exploration Ltd. Vancouver, B.C.	Geologist involved in all aspects of mineral exploration in B.C., the Yukon and N.W.T.
1968 (summer)	McMaster University Dept. of Geology Hamilton, Ontario	M.Sc. thesis work. Reconnaissance mapping and geochemical study, Lake Shubenicadia area, Nova Scotia.
1967 (summer)	Canex Aerial Exploration Ltd. Toronto, Ontario	Geologist in charge of detailed mapping and reconnaissance geochemical program in Gaspé, Quebec
1966 (summer)	McMaster University Dept. of Geology, Hamilton, Ontario	Summer vacation work. Detailed and reconnaissance mapping in Northern Ontario.
1965 (summer)	International Nickel Co. of Canada Thompson, Manitoba	Summer vacation work. Detailed mapping in the Thompson Area, Manitoba.
1964 (summer)	Geological Survey of Canada Ottawa, Ontario	Summer vacation work. Regional geochemical survey in the Keno Hill area, Yukon.



LEGEND:



AREA OF PLACER PRODUCTION SHOWING GOLD PRODUCED IN THE PERIOD 1898-1946



LODE GOLD PROPERTIES

MINERAL RESOURCES BRANCH

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SURPRISE LAKE SYNDICATE

SHUKSAN PROPERTY ATLIN MD-BC.

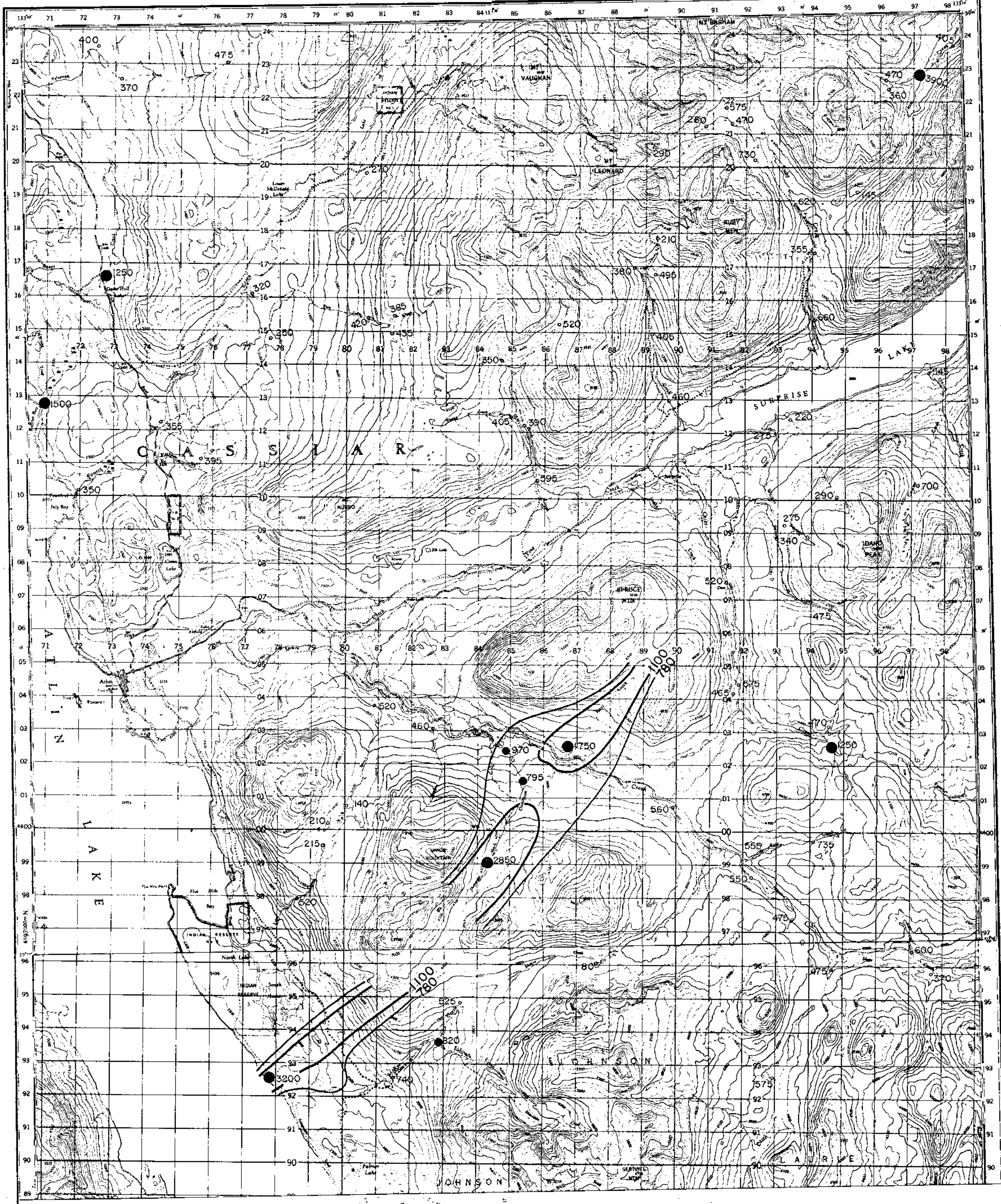
PROPERTY MAP

SHOWING - PLACER PRODUCTION,
LODE GOLD PROPERTIES

0 1000 2000 3000 4000 5000
METRES

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ARCHEAN ENGINEERING LTD.
A.G.Troup P.Eng.

NTS. 104-N-10,11
DATE: April 1982
FIGURE 1



LEGEND:

CONTOUR INTERVAL 780 & 1100 P.P.M.

- < 780 P.P.M. Manganese
- ≥ 780 P.P.M. Manganese
- ≥ 1100 " "

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SURPRISE LAKE SYNDICATE

SHUKSAN PROPERTY ATLIN MD-BC.

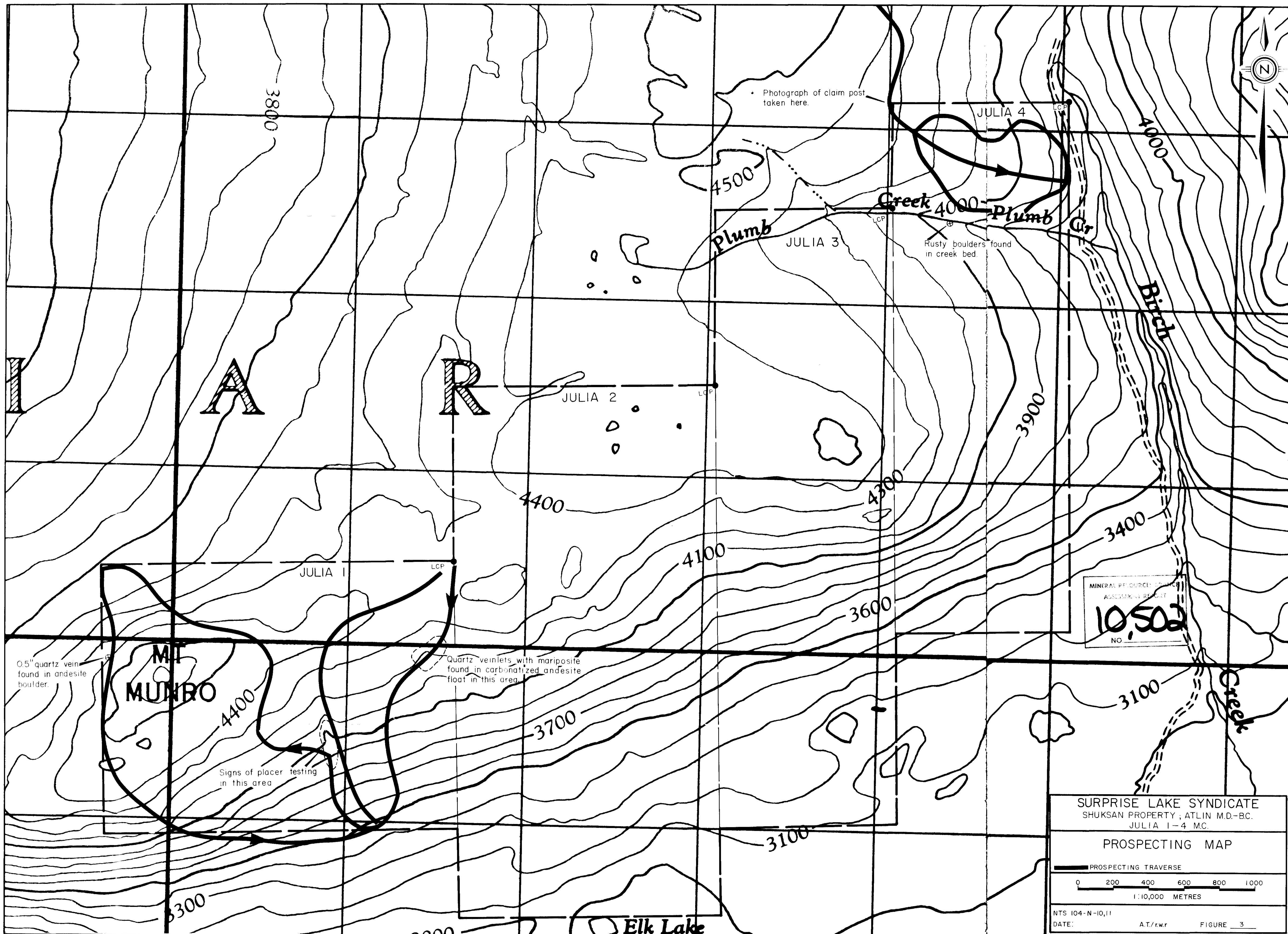
STREAM SEDIMENT GEOCHEM.
SURVEY

Mn RESULTS IN P.P.M.



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ARCHEAN ENGINEERING LTD.
A.G.Troup P.Eng.

NTS. 104-N-10,11
DATE April 1982
FIGURE 2



• Photograph of claim post taken here.

JULIA 4

Plumb

JULIA 3

Creek

Plumb Cr

Rusty boulders found in creek bed

Birch

JULIA 2

4400

4100

3600

3400

JULIA 1

0.5" quartz vein found in andesite boulder.

Mt MUNRO

Quartz veinlets with mariposite found in carbonatized andesite float in this area.

Signs of placer testing in this area

MINERAL PRODUCTION ASSESSMENT REPORT
NO. 10,502

3100

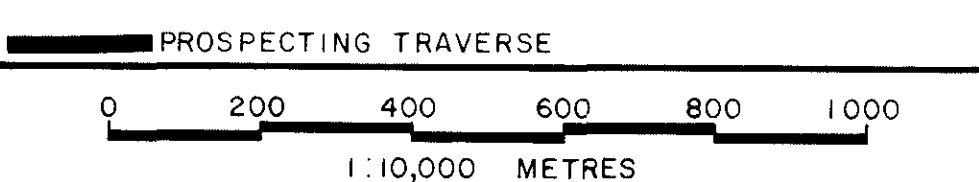
Creek

3100

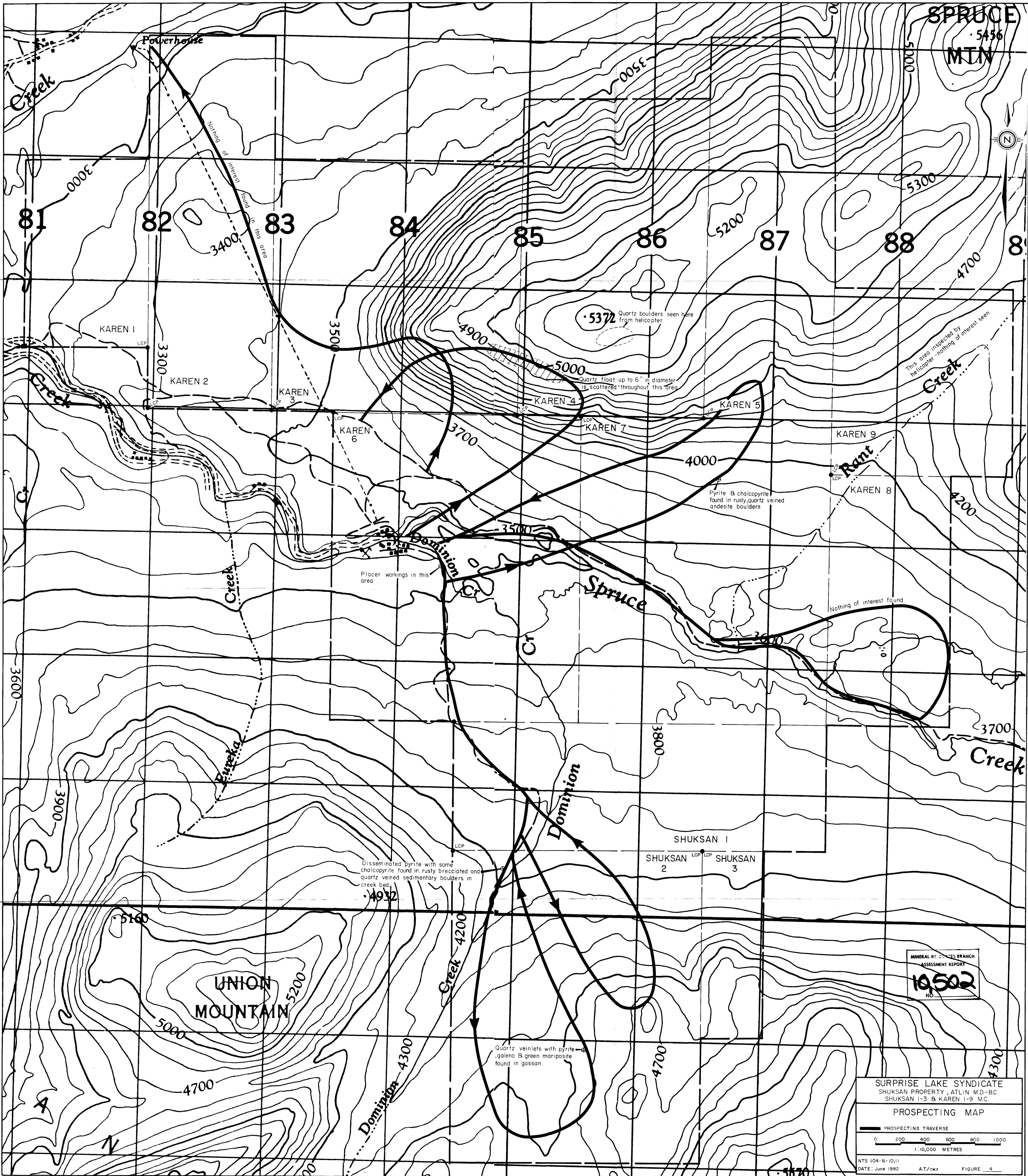
Elk Lake

SURPRISE LAKE SYNDICATE
SHUKSAN PROPERTY, ATLIN M.D.-B.C.
JULIA 1-4 M.C.

PROSPECTING MAP



NTS 104-N-10,11
DATE: A.T./r.w.r. FIGURE 3



SPRUCE
5456
MTN

Powerhouse

KAREN 1

KAREN 2

KAREN 3

KAREN 6

KAREN 4

KAREN 7

KAREN 5

KAREN 9

KAREN 8

SHUKSAN 1

SHUKSAN 2

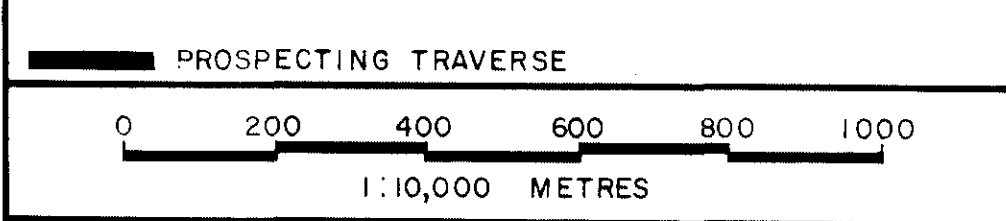
SHUKSAN 3

UNION
MOUNTAIN

MINERAL RESOURCES BRANCH
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SURPRISE LAKE SYNDICATE
SHUKSAN PROPERTY, ATLIN M.D.-B.C.
SHUKSAN 1-3 & KAREN 1-9 M.C.

PROSPECTING MAP



NTS 104-N-10,11
DATE: June 1982 A.T./c.w. FIGURE 4

5372 Quartz boulders seen here from helicopter.

Quartz float up to 6" in diameter is scattered throughout this area.

This area inspected by helicopter - nothing of interest seen.

Pyrite & chalcopyrite found in rusty, quartz veined andesite boulders

Placer workings in this area

Nothing of interest found

Disseminated pyrite with some chalcopyrite found in rusty brecciated and quartz veined sedimentary boulders in creek bed.

Quartz veinlets with pyrite, galena & green malachite found in gossan.