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53° 08' ; 128° 17'

Reference - G.S.C. Paper 710
- May 23 - 1972

HUNTER GROUP
KHUTZE RIVER
BRITISH COLUMBIA



I. S. PARRISH
[Handwritten signature]

August 1980
Golden, Colorado

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SUMMARY

The Hunter Group, south of Kitimat, British Columbia, contains gold mineralization in persistent quartz and pyrite veins. Several veins have been exposed and two have had limited underground development. The property has never been drilled so that reserve estimates are premature, but a target of 50,000 tons grading 0.40 oz. Au/ton would appear not unreasonable. Further exploration is warranted and alternative programs of \$50,000, \$100,000 and \$300,000 are outlined.

INTRODUCTION

The Hunter Group of mining claims, situated high in the Coast Range of British Columbia, covers quartz showings with gold mineralization in sulfides. The claims were brought to the attention of Derry, Michener & Booth, (DMB) by Dr. A. P. Fawley of Vancouver. Messrs. I. S. Parrish, Geologist and J.O.C. Kerr, Mining Engineer, were assigned to research and evaluate the economic potential of the Hunter claims and, if warranted, to outline an exploration program for the area.

Parrish and Kerr met with Dr. Fawley on July 15, 1980 in Vancouver. Fawley supplied the following reports (listed chronologically) for the property:

- Davidson, E. G., 1930, The Hunter Groups of Mineral Claims, Khutze Inlet, B.C. August 6, 1930 and September 5, 1930.
- Dolmage, Victor, 1931, Hunter Group.
- Mandy, J. T., 1931, Preliminary Report - Hunter Group of Mineral Claims, Khutze River Area, British Columbia.
- Mandy, J. T., 1932, Hunter in B.C. Dept. Mines Bull. 1-32, pp. 34-37 (Lode Gold Deposits of British Columbia).
- Warren, H. V. and Cummings, J. M., 1936, Mineralogy of the Surf Point and Hunter Veins, Journal unknown.
- Borup, E. L., 1939, Report on Results of Preliminary Work on the Hunter Property Khutze Inlet, B.C. and conclusions based on findings.
- Fawley, A. P., 1963, Hunter Group of Mineral Claims, Skeena Mining Division, British Columbia.

Additional notes and correspondence dealing with the Hunter Group were found in the files of Silbak Premier Mines, Stewart, B. C.

On Wednesday, July 16, Parrish, Kerr and Fawley held discussions with the owners of the Hunter Group, Mr. Milton Meldrum and his son Mr. Robert Meldrum of Vancouver. In the afternoon Mr. Parrish, Mr. Kerr and the Meldrums, along with I. S. Thompson of DMB flew to Terrace, B. C. The elder Mr. Meldrum had spent considerable time in his youth prospecting and exploring the Hunter area. His knowledge and experience were invaluable in aiding our examination of the property. Thursday, July 17, we flew via an Okanogan Helicopter Bell Long Ranger into the Hunter property.

Location and Access (Figure 1)

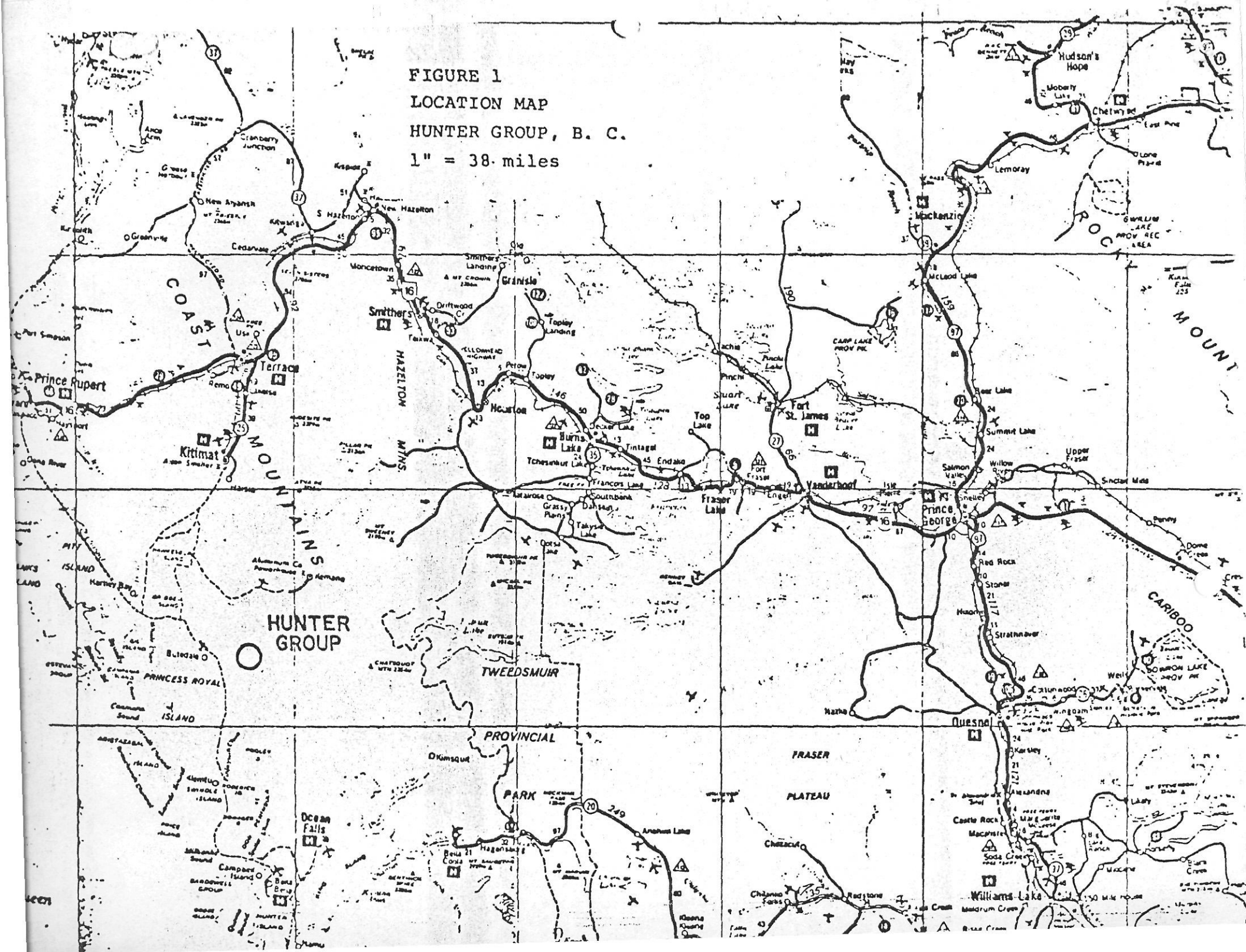
The Hunter Group consists of 17 claims in the Skeena Mining Division. The claims are located 12 miles north of the head of Khutze Inlet and 60 miles south of Kitimat, B.C.

Access is best by helicopter from Terrace, although as in the early exploration period (1920-1941) access is possible by foot or pack train over a trail that begins at the head of Khutze Inlet (16 miles above Butedale) and follows an abandoned railway for 4 miles then an 8 mile trappers trail, with two cable crossings up the north branch of the Khutze River.

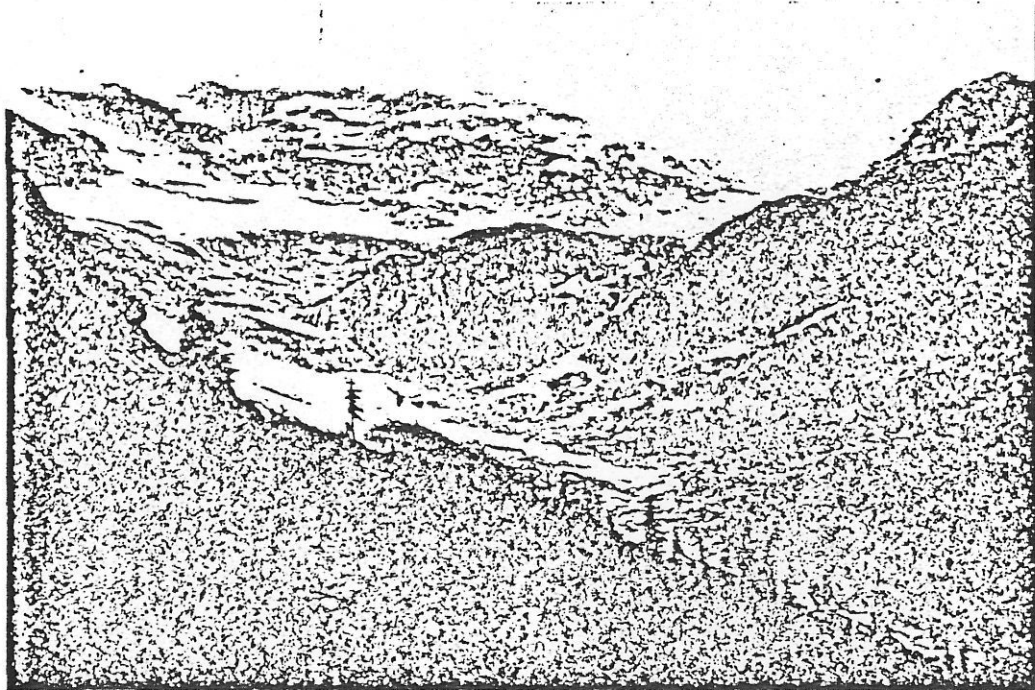
Topography and Climate (Plate 1)

The property lies on both sides of the north branch of the Khutze River which flows south along a U-shaped glacial valley. The steep sided valley rises to over 6000' A.S.L. more than 5000' above the valley floor. The area is rugged with spectacular gorges, fiords, hanging valleys, waterfalls, glacial lakes and small glaciers.

FIGURE 1
LOCATION MAP
HUNTER GROUP, B. C.
1" = 38 miles



Photograph C - General topography looking north from area of
Photograph B.



Photograph D - General topography looking east from Main Vein
adit over dump.

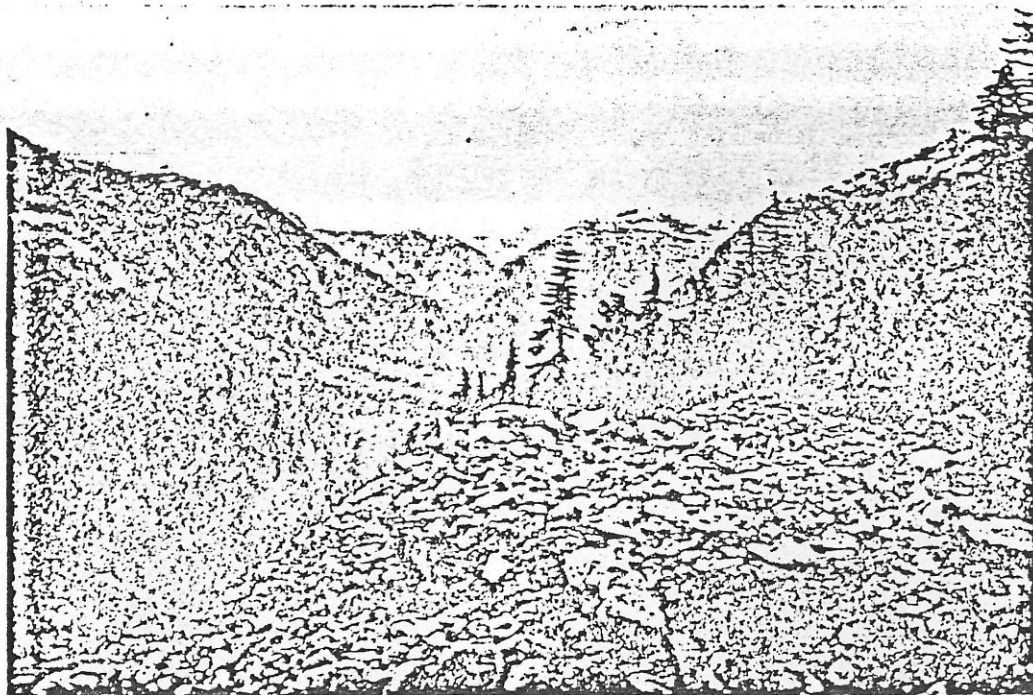
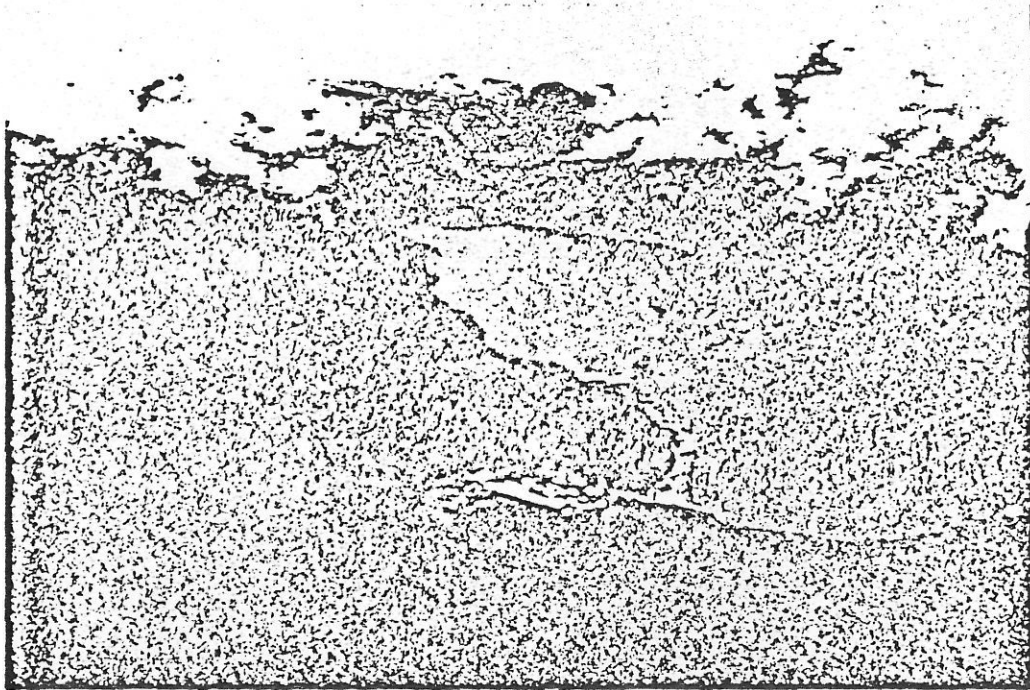
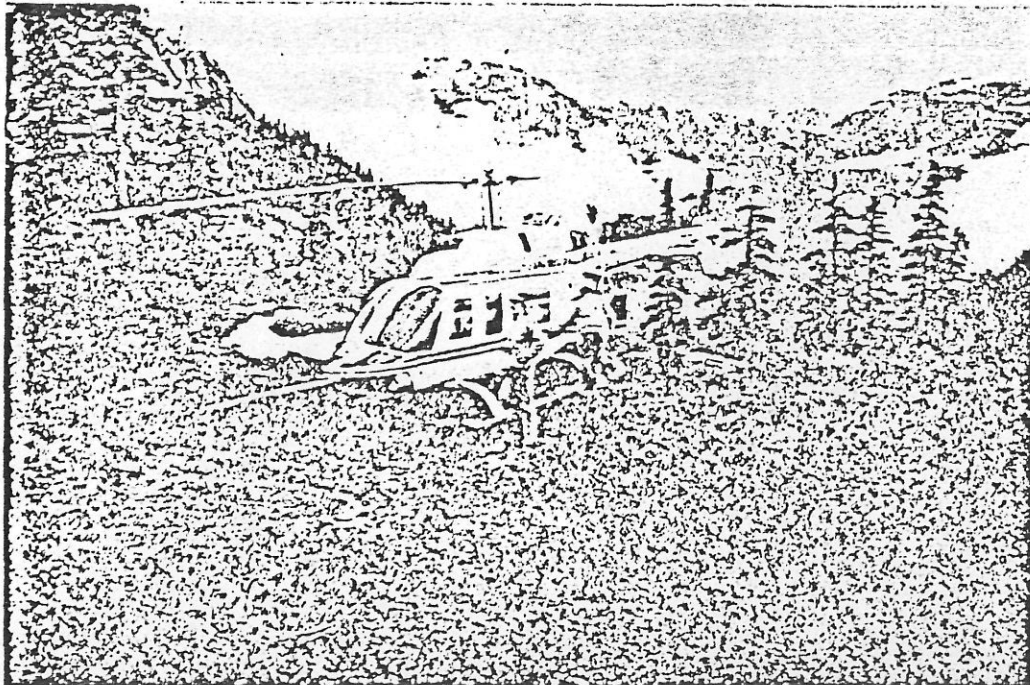


PLATE 1

Photograph A - Aerial view of Butedale, B. C., nearest settlement to the Hunter Group.



Photograph B - Bell Long Ranger helicopter at one of few level areas between Mine and Power Creeks.



Rainfall is over 100 inches per year with mild summers and cold wet winters. Vegetation is heavy with good quantities of timber on the mountain slopes and luxuriant ferns and undergrowth in the valleys. Mountain tops stand in stark contrast as bare gray rock exposures above the timber line with blue-white glacial snow in protected areas. Fast flowing mountain streams draining from the snows expose underlying rocks and afford excellent prospecting media in areas otherwise covered by thick overburden and vegetation.

Animal life is common. Deer, goat, black and grizzly bear, were seen during our one day visit. Insects, mosquitoes for the most part, were present but are not as dense as in the eastern Canadian bush.

Butedale, the only settlement in the region, once served a prolific fishing and canning industry which has all but disappeared. Only three people live there now. No one lives along the Khutze River. No lumbering is done in this area due to its remoteness. The Western Detroit base metal copper mine operated for a short period in the 1920's and 1930's on the south branch of the Khutze and the Reserve Gold mine on Khutze Inlet was also active pre-1930, but excluding these short-lived efforts and some occasional fur trapping there has been no economic exploitation of the area.

Ownership

We have not substantiated the ownership of the group, but it would appear that the Meldrums are the legal owners of the claims which are shown on Figure 2.

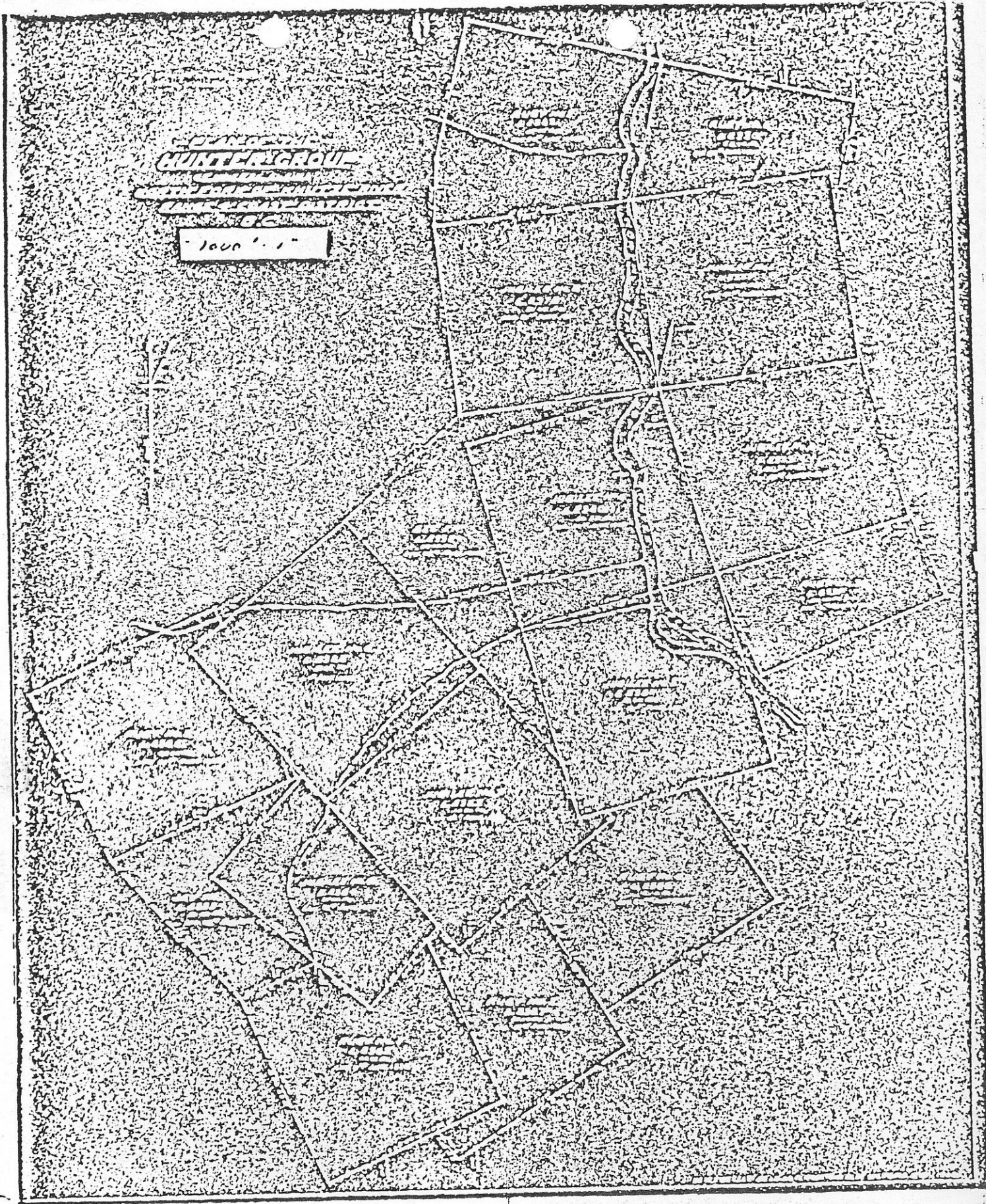


FIGURE 2

History

The discovery and early history of the Hunter Group is not entirely certain. Mr. Meldrum asserts that the prospect was first found in 1925 by his late father who earlier (in 1904) had located the Western Detroit. Data in the files of Silbak Premier indicate that a gold prospect along the Khutze River had been sampled as early as 1919.

Nevertheless, other than surface prospecting and trenching, very little work was done before 1933. A 3-ton test shipment was taken from the River Vein in the valley and packed out for treatment at the Tacoma smelter in 1933. It assayed 9.29 oz. gold, 4.02 oz. silver and 1.37% copper per ton.

Underground work was started in the late 1930's and continued intermittently until 1941. From 1934 to 1941, a 471 foot tunnel was driven on the Main Vein at elevation 2335 parallel to Mine Creek. The River Vein on the east shore of the north branch of the Khutze River was tested by a 150 foot inclined shaft sunk along the vein and two drifts reportedly followed the vein for 100 feet in each direction from the bottom of the shaft. This last work was done under the direction of P. Racey and E. Borup of Spud Valley interests. The shaft was allowed to flood, however, before either man could survey or sample the drifts. Records of the work are from other contract employees.

The 471' tunnel was driven with hand steel in two periods. The first, under the direction of R. C. McCorkell, in the late 30's saw the tunnel end at 135'. Most reports previous to our visit had inspected and sampled only this portion of the tunnel. The tunnel was completed in 1941

The veins themselves are sharp walled thin (up to 18") quartz-pyrite fillings of minor fractures marked by relatively little movement. Thin (0-3") sheets of sheared wall rock or gouge are found discontinuously along either hanging or foot wall of the veins. Wall rocks show little or no alteration excepting a local intensification of the mafic content. Metal values do not extend into the walls.

The veins are composed predominantly of white, milky quartz, with occasional patches of gray chert quartz and some clear quartz crystals as vug-fillings. Pyrite free quartz is generally barren of metal value. Pyrite occurs as blobs, grains and occasionally large (2-4") cubes making as much as 50% of the vein, but averages in the order of 10-20%. Pyrite-rich areas carry high values in gold and silver on a 1 to 1.5 ratio. Native gold, tellurides and silver sulfides have been reported, but these are uncommon in hand specimens. Chalcopyrite in small amounts can be found. Arkerite although reported was not seen during our visit. No hydromica, chlorite, fuchsite, tourmaline or related "gold-guide" minerals were noted. The veins are essentially sharp walled white quartz-pyrite stringers.

The number of veins differs from report to report, ranging from 5-11. We examined only two, the River and the Main. An attempt to reach the Cross Vein was unsuccessful as it has apparently been covered by stream wash and overburden. The River and Main are, however, the richest of the known veins, as well as being the best exposed and most easily reached.

The veins range in dip from 30°E to 80°E , but average about 70°E . There appear to be two principal strike directions, one N15E as at the River, Main, Burnt Tree,

and Parallel veins and another at N15W as at the Cross Vein. There is some evidence that the Cross Vein cuts off the Main Vein and it has been postulated that the River Vein is an offset continuation of the Main Vein. Inspection of the aerial photographs suggests that the Main and River may be part of a general N-S break, but actual consanguinity cannot be supported at present.

The following paragraphs describing the veins are based on data from various sources augmented by our own observations.

River Vein (N5-15°E 55-70°E)

The River Vein (#1 or Camp of some reports) is exposed in a series of trenches and cuts extending from the east bank of the north branch of the Khutze River at 880' A.S.L. to 50 feet east of the inclined shaft, a distance of about 550'. For the greater part of this distance it is obscured by overburden and vegetation. We check sampled the vein at three locations, (samples H 14, H 15, H 16) and recorded assays of over an ounce of gold at each location.

Figure 4 from Borup and provided by Dr. Fawley illustrates the distribution of sampled sections on the River Vein. The figure also gives the assay averages of samples taken in the shaft and reported from the flooded level development. All values on the figure are uncut weighted averages calculated on \$35 gold. We have added in brackets the equivalent ounces in gold. Some of the values may be from silver. Our records are incomplete and we have elected to express the stated average values in terms of gold. Both gold and silver have increased

about 15 times in values so using the gold reference is appropriate. The average of the surface samples is 3.90 ounces over 6.05" of vein or .65 ounces over 36 inch minimum mining width. Calculations by Borup prior to shaft sinking gave 3.09 ounces over 6.92". The shaft yielded 1.56 ounces over 7" or .30 oz. over 36" and the drifts .88 ounces over 8" or .20 over 36 inches. Check sampling of the drifts by Mr. Norrie in 1941 gave 1.68 ounces over 10" or .46 oz. over 36" mining width. Norrie excluded 30 feet of evidently lower grade vein.

A letter in the Silbak Premier files dated October 1941, quotes slightly different grades for the drift and the shaft. Source of their data is not given. They indicate .93 ounces over 9.5" for 70 feet of drift, equivalent to .25 oz. over 36 inches, and somewhat higher values for the shaft sampling (7-71' down running 9" @ 1.87 oz. or .47 over 36" and from 130 to 150' running 9" @ 1.20 oz. or .30 over 36").

The data on the River Vein suggests that the vein is persistent along strike and may be expected to be in the order of 1000 feet or more in length. The shaft development indicates that the vein also persists vertically for at least 150 feet and may well extend deeper. Assay values indicate that metal distribution is spotty and only a portion of the vein will carry ore. Sampling to date does not allow estimation of the proportion of enriched ground. It would appear, however, that mineralization at surface is considerably richer than at depth. Average grade at surface being nearly twice that at 150'. The sample points, however, are too few to allow for definitive statements. It is perhaps more noteworthy to observe that the one test of the vein at depth (in the 150 level drifts) exposed 70 feet of vein that averaged over minimum mining width .46 ounces by one source and .25 by a second.

If we were to consider as mineralized one half of the block of ground currently outlined on two sides (on surface 550' and by shaft 150') we may calculate a possible tonnage (at 36" width) of 10,300 tons. Let us further assume an average grade of 0.5 ounces (approximated from surface (0.65) and drift sampling (0.35 avg.)), which would then indicate a content of about 5,000 ounces of gold in the River Block. With gold at \$500 an ounce we have a gross indicated inventory valued at about 2.5 million dollars.

?

The block is, of course, open to both sides and depth.

In summary:

River Vein:

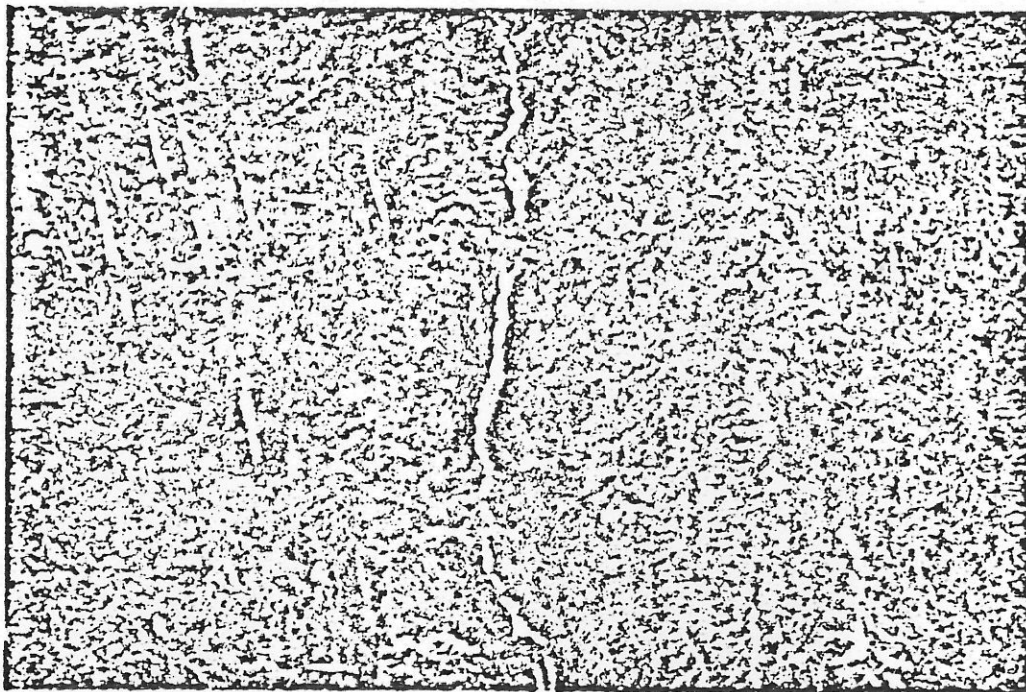
Length (known)	550'
Ore Length (Est.)	275'
Depth (known)	150'
Width (Meas. Av.)	7-9"
Mining Width	36"
Grade	.50 oz. Au
Surface	.65 oz. Au
Shaft	.30 oz. Au
Drifts (70')	.35 oz. Au (avg. of .46 and .25 data) <i>0.18/48"</i>
Tonnage approx.	10,000
Ounces	5,000
Value Au at \$500/oz.	2.5mm (U.S.)

Main Vein (N21°E, 30-80°E) (Plate 2)

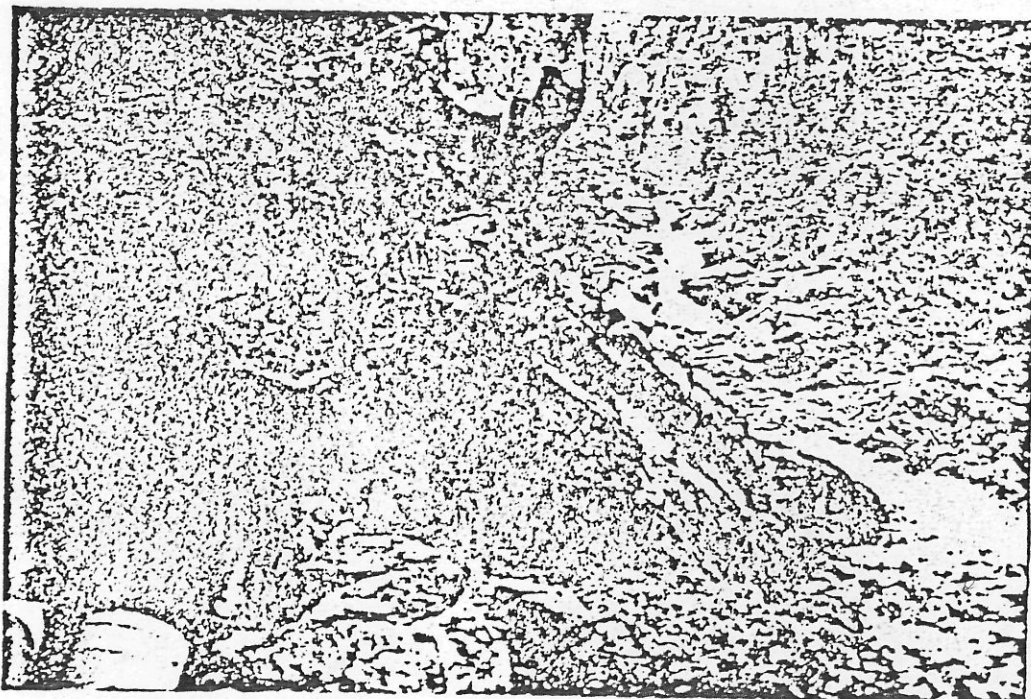
The Main or #3 Vein is exposed intermittently along Mine Creek from 2,500' A.S.L. to 1,875' A.S.L. It has been drifted on for 471' from a portal located at 2,335'.

PLATE 2

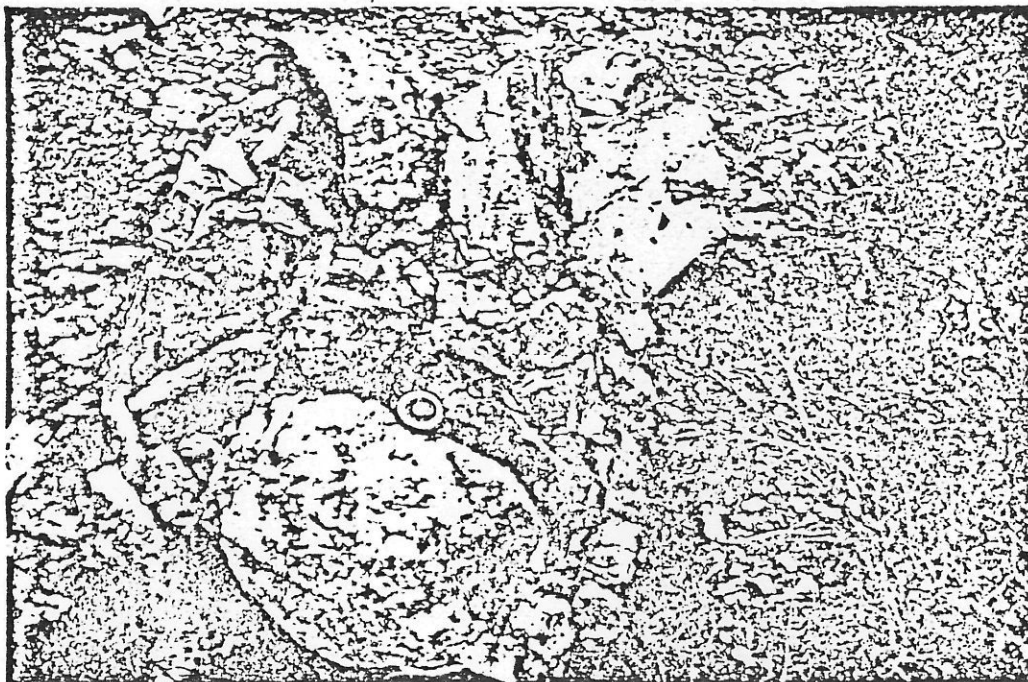
Photograph A - Aerial view of Mine Creek. Adit is at left side of creek near center of photograph.



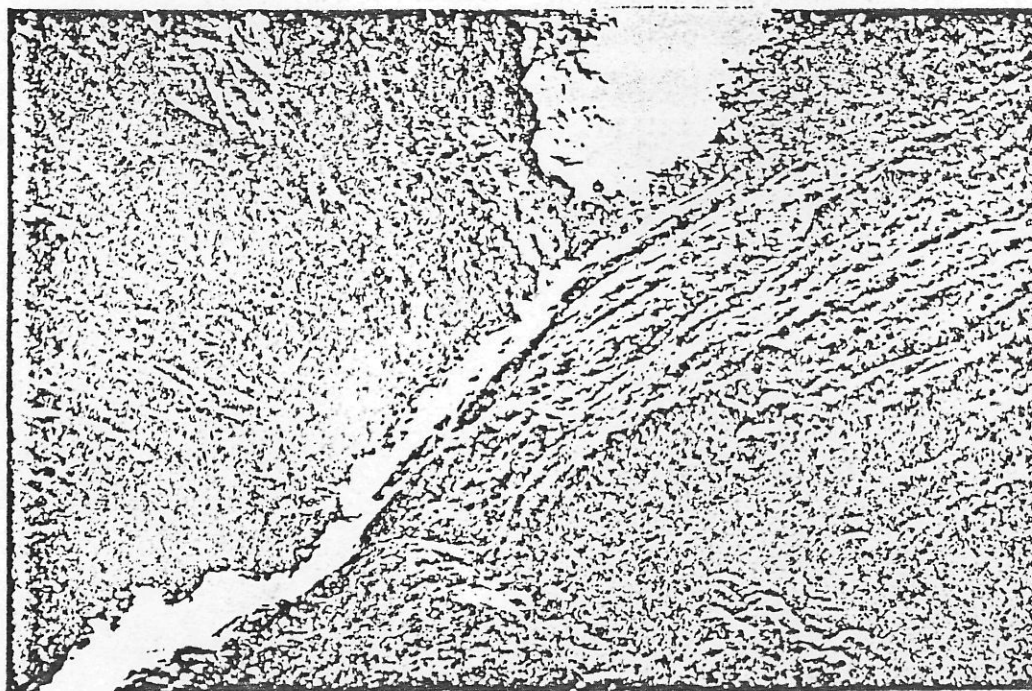
Photograph B - View looking west towards adit portal and upstream at Mine Creek.



Photograph C "Ore" dump at Main Vein lit.



Photograph D - Mine Creek near Cross Vein area. Rusty zone with barely distinguishable Quartz Vein (Parallel Vein) part way up left wall near center of photograph.



We prepared a tape and compass survey, Figure 3, of the adit and sampled the vein at various points as indicated on Table 1.

Figure 5, provided by Dr. Fawley, is from Borup's 1941 notes and is a profile illustrating the data at that time. His data coupled with our own survey indicate a probable strike length in excess of 1,600' and height in excess of 600 feet. Surface average of sampled sections is 2.24 ounces over an 8" average width or .50 ounces over 36" minimum mining width.

The most representative sampling of the Main Vein adit is the work done by DMB during our one day visit. Even this is not a complete and accurate sample. We took grabs, bulks and channels from the vein at indiscriminate intervals in the adit (Figure 3). Our sampling was aimed at testing the general tenor of the vein and not to support reserve calculations. Nonetheless, the eleven samples remain the best data available.

Table 1 lists the samples (H 3 through H 13) and their pertinent data. The right side of the table shows the silver and gold content per sample and as diluted to minimum mining width of 36". The sample results support the observation that gold and silver are tied to the sulfides. Sulfide-poor quartz yielding low gold and silver assays at best.

Table 2 averages the results of samples H 3 through H 13. The arithmetic average over vein width is 2.00 oz. Ag and 1.33 oz. Au per ton. Average calculations of each sample over 36" minimum mining width is .34 oz. Ag and .23 oz. Au. If we weight the mining width assays by the represented length of vein (considering each assay as

relevant half the distance to the next assay) the overall grade for the 471 feet of adit is .26 ounces Ag and .16 ounces Au per ton.

TABLE 2

Averages for Samples H 3 through H 13, Main Vein Adit

	<u>Avg. Width</u>	<u>oz. Ag/T</u>	<u>oz. Au/T</u>
Arithmetic	7.7	2.00	1.33
Diluted	36.0	.34	.23
Weighted	36.0	.26	.16

A grab sample (H 17) from an ore dump outside of the portal ran 8.03 oz. Ag and 5.54 oz. Au per ton, but is not considered as representative.

Our sampling indicates a considerable reduction in grade from surface to underground. This may reflect a surface weathering effect enhancing metal values. The sampling does show that values are present at about 100 feet below surface. The sampling does not indicate what portion of the vein is mineralized, nor the lengths of the mineralized sections. To determine this a more extensive systematic sampling would be needed. Mineralization does appear to be spotty and effective evaluation by drilling would require a considerable number of holes.

The Main Vein is remarkably persistent, but like the River Vein does not carry ore throughout its length. In order to establish an inventory of gold and included gross value, we will consider the vein to have a strike length of 1500 feet and a height of 500 feet, both assumptions being supported by the exposures along Mine Creek. The average width is 8". If we postulate that one half of this block is mineralized and that we will mine a 3 foot minimum

stope we arrive at 1500 x 500 x 3 + 2 + 12 (c.f.t.) for 93,750 tons. Let us assign a grade of .35 oz. Au based on surface (36" @ 0.50) and adit averages (36" @ .23). This results in a gross inventory of 33,750 ounces of gold. Our sampling supports the historic ratio at the Hunter of about 1x1+ gold to silver so we can assume 30,000 to 40,000 ounces of silver. The value of this inventory would be \$525,000 (35,000 oz. Ag) and \$16,875,000 (33,750 oz. Au) or a total of about 17.5 million dollars.

The block is open to both sides and depth. We must point out, however, that we have made some serious assumptions as to the portion of mineralized versus unmineralized vein, which assumptions must be tested in the future.

In summary:

Main Vein:

Length (known)	1,500'
Ore Length (Est.)	750'
Depth (inferred)	500'
Width (Meas.Av.)	8"
Mining Width	36"
Grade	.23 oz. Au plus silver

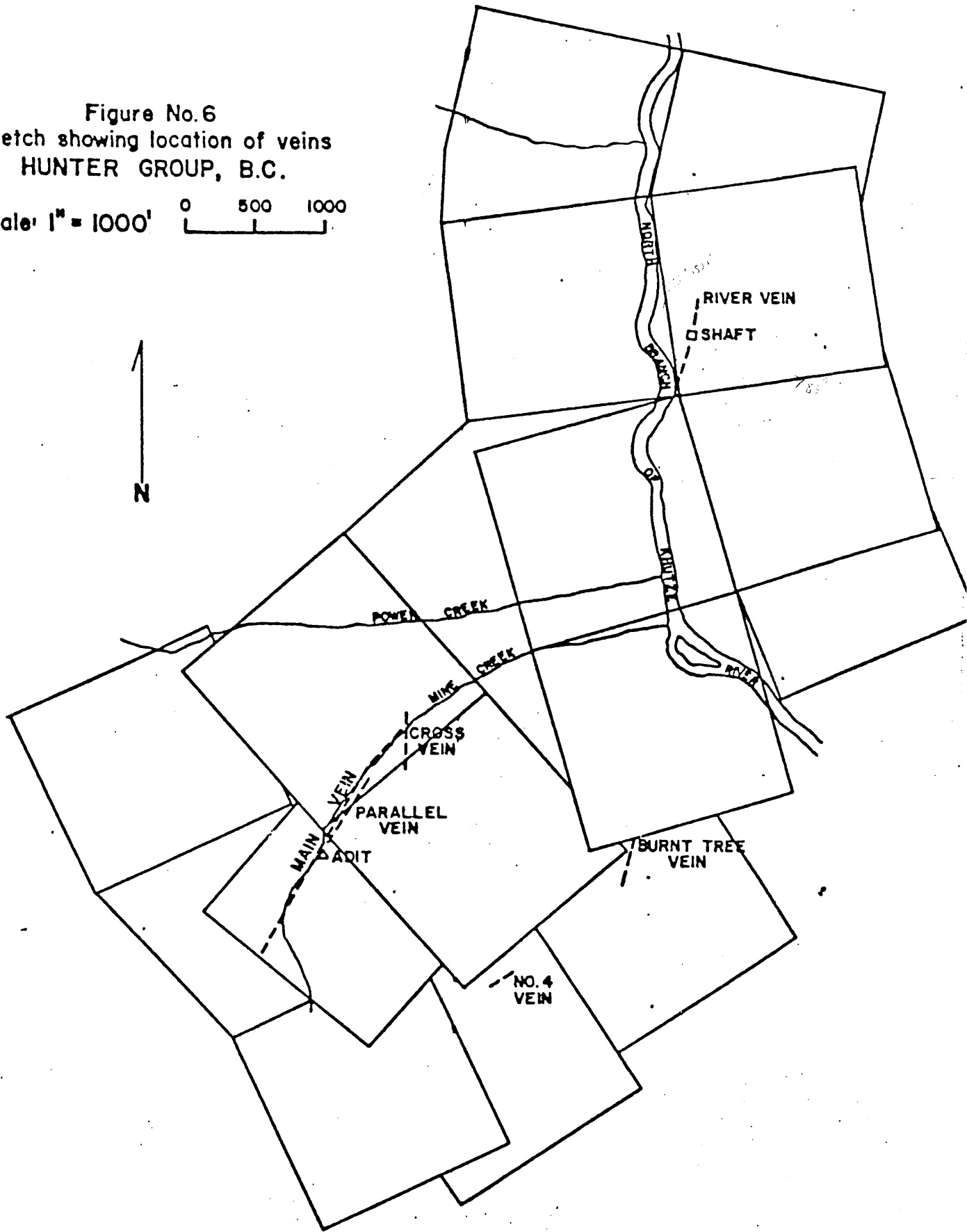
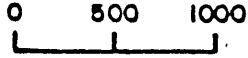
or 0.173%

Parallel, Cross, Burnt Tree and #4 Veins (Figure 6)

These veins were not inspected during our one day visit. We saw the Parallel in a cliff face above the Main Vein in Mine Creek, but could not reach it for sampling. (See Plate 3) Borup and others have sampled the Parallel and Cross Veins as shown on Figure 6. They each average .50 ounces over a 36" mining width, but have

Figure No.6
Sketch showing location of veins
HUNTER GROUP, B.C.

Scale: 1" = 1000'



not been prospected sufficiently for tonnage and inventory calculations or to allow comment upon their persistence. At this point we only wish to locate the Parallel vein about 30' in the hanging wall of the Main Vein at Mine Creek and the Cross Vein as crossing and terminating both Main and Parallel Veins at Mine Creek elevation 1,875'.

Burnt Tree Vein is located on the west bank of the north branch of the Khutze River about 2,000' south of Mine Creek at 1,230' A.S.L. One sample taken by Davidson returned 6.56 oz. Au over 13 inches. Borup visited the site, but noted that heavy overburden prevented his sampling the vein.

The #4 Vein of Dolmage is evidently located up canyon from the Burnt Tree. They may be the same vein, but are several hundreds of feet apart. Dolmage notes a sample of 1.5 ounces gold over 12 inches on this vein, but fails to locate it accurately.

As noted above, data is too scarce to allow for even an inventory estimate of values in the Parallel, Cross, Burnt Tree and #4 Veins. The fact that gold does occur in each of these structures is, however, indicative of additional values to be found on the Hunter Group both within known, but unexplored veins and within as yet undiscovered structures.

Minimum Exploration Target

It is essential to consider a minimum or "break even" number of ounces of gold needed to have on hand to pay back or cover the minimum investment required to develop and start up a small mining operation in the remote and rugged Khutze Inlet region.

If the planned exploration program has no likelihood of attaining this break even number of ounces to at least pay back the total development costs to put this small mine into production then the exploration program should not be embarked upon.

An exploration program should have a good chance to locate ore sufficient to pay back the investment cost to cover exploration, total mine development, mill, auxiliary facilities (power, water, roads, etc.) housing and accommodation, working capital, etc.

No details on proposed operation for the Hunter are available at this time, of course, so that we have had to make order-of-magnitude assumptions. Such assumptions will provide a reasonable initial number, which can be later modified.

We would consider that the conceptual operations would be small, probably in the order of 100 tons per day. A mining crew using conventional track and shrinkage methods would access the mountain via adits. It is possible that a decline using trackless methods might exploit the River System. A small cyanidation mill with a power generating plant would be constructed. The operation would be supplied by access road or helicopter as determined by costs.

We have estimated that approximately 10 million dollars would cover the total preproduction investment including site costs for this mine. Assuming gold at \$500 per ounce:

$$\text{Break even ounces} = \frac{\$10,000,000}{500} = 20,000 \text{ oz. Au}$$

If ore grade is 0.5 oz/ton, this is equivalent to 40,000 tons of ore. Allowing for loss, assume 50,000 ore tons.

Therefore, an exploration program should conceivably aim for 50,000 tons of 0.4 oz/T Au at the Hunter Claim Group. It should be stressed that this is a theoretical minimum with no allowance for profit. The program should aim higher.

Assuming 250 working days per year, would permit return of investment in two years.

$$\frac{50,000}{100} = 500 \text{ days or } 2 \text{ years}$$

Access Road to Property

The Hunter Claim Group, as previously described, is located in extremely precipitous and rugged country. High mountains, glaciers, deep valleys, deep snow, spring run-off and heavy rain concentrate heavy water flows which at times would undoubtedly make maintenance of roads very costly. In addition, stream beds deeply cut potential road terrain in places so that road construction is difficult and costly due to either necessary fill or bridge construction. Costs may be offset somewhat by provincial grants for road construction.

The route, which was covered on foot and by pack horse by the earlier prospectors, consists of an old rail bed from tide water at Khutze Inlet up to the old Reserve Mine for 4 miles and onward by foot trail for the last 8 miles which includes crossing some deep stream gullies by cable.

In flying out from the property after our visit, the helicopter flew low along this early access route. Even in July, we could still see that parts of the valley flat were very wet. In the Spring the whole valley must be flooded at times by heavy, fast moving, spring run-off waters from the high mountain valleys. Very large boulders in the stream bed have been rounded attesting to the power of the valley streams.

Many sections of a future permanent road might have to be raised up above the flooded level.

The former trail section appeared better where the valley became wider and flatter as we neared the inlet itself. All in all, the gradient appeared reasonable.

In summary, it was our impression that a permanent access road from the inlet to the mine site would be costly to build and also to maintain year after year.

One would need to examine the terrain on foot, consult topographical maps, weather data, etc. before evaluating all of the costs and problems involved.

OBSERVATIONS AND RECOMMENDATIONS

From the foregoing review, it would appear that the data available on the Hunter Group indicates the possibility of a profitable mining operation. The review, however, presupposes much in the way of vein continuity and average grade. Our study cannot be used to justify development of the Hunter, but serves rather to justify a modest exploration program to prove, or disprove the quantity, quality and distribution of the ore veins.

The Hunter property contains two veins with surface sections of minable grade and length. Four other veins are known which contain ore grade material.

None of these veins has been adequately explored on either strike or dip. The only underground tests have been by an adit on the Main Vein and a short shaft and drifts on the River Vein. In both cases the tests successfully encountered vein with ore grade mineralization.

Our studies have shown that the Hunter has the potential to support a small conventional and profitable mining venture. To prove this potential we recommend securing an option on the property from the present owners and initiating a modest exploration program.

PROPOSED EXPLORATION PROGRAMS

The scope of an exploration program for the Hunter is dependent in large part upon the finances available. Three schemes are proposed here for budgets of about \$300,000, \$100,000 and \$50,000.

Program A, the most extensive program we have budgeted, involves mapping, sampling and drilling as follows:

We recommend setting up a base camp along Power Creek, the main drainage north of Mine Creek. A drill program should be initiated to test the vertical continuity and grade of the Main Vein. The initial drilling should be on 200 foot centers with holes piercing the Main Vein 150' below surface and the Parallel Vein about 200' below surface. A second tier of holes piercing the veins at about 350' and 400' down should also be considered. Ten holes are recommended with a probable total length of 3500'.

Drilling of the River Vein is also recommended with a fence of 4 holes piercing the vein at the 150' level 200 and 400 feet ahead of the present drift faces, and a second fence of 5 holes to cut the vein on the 300 foot level. The 9 holes would require about 3000' of total footage.

Prior to drilling some clearing should be done around each of the 6 main veins to allow for additional sampling. An aerial survey should be done and a topographic map prepared with the showings located. The inclined shaft and drifts should be dewatered, mapped and sampled.

It is estimated that the entire program of bush clearing, aerial survey, topographic plotting, drilling, assaying and geology will cost in the vicinity of \$300,000.

Clearing	10,000
Photography & Mapping	7,500
Travel & Support	20,000
Camp for 3 months	20,000
Drilling 6500' @ \$30	195,000
Geology & Assaying	<u>15,000</u>
	267,500
Contingencies @ 10%	<u>26,750</u>
	294,250
SAY -----	300,000

Program B:

An alternative program of escalated expenditures would be to first drill the veins using a lightweight portable drill capable of testing the Main and River Veins at depths less than or up to 150'. The inclined shaft and drifts could be dewatered, mapped and sampled. Additional

samples could be cut at the Main Vein adit and possibly on the Parallel, Cross and Burnt Tree showings. Should these tests be encouraging, a modified Program A as described above could then be initiated. In Program B we envisage drilling of say 10 shallow (200') holes utilizing two drills, dewatering, mapping, etc. which would require about one month and a cost of about \$100,000.

Costs are estimated at:

Drilling 2000' @ \$20	40,000
Travel & Support	10,000
Camp for 1 month	15,000
Geology & Assaying	10,000
Clearing	<u>5,000</u>
	80,000
Contingencies @ 10%	<u>8,000</u>
	88,000
SAY -----	90,000

Program C:

If exploration ^ufinds are limited, then a \$50,000 program aimed principally at taking definitive samples in the two underground openings should be undertaken. This sampling would establish vertical and horizontal continuity of mineralization.

The Main Vein adit should be back sampled every 5 feet to determine length of ore-grade sections. The inclined shaft and drifts should be dewatered, mapped and sampled. There is at present no record of the individual samples over the 150 level. Clearing over the Parallel, Burnt Tree, #4 and Cross Veins should be done so as to

allow systematic sampling. Aerial photography and preparation of a topographic map is also recommended.

A month long program would cost:

Photography & Mapping	7,500
Travel & Support	5,000
Camp for one month	7,000
Geology & Assaying	10,000
Cleaning	<u>6,000</u>
	35,500
Contingencies @ 10%	<u>3,550</u>
	39,050

It may be possible to invest \$10,000 in a few short drill holes testing the veins below surface, but finding companies interested in such small contracts may be difficult.

Program C would assemble enough data to allow for a better assessment of the Hunter potential. The information from Program C could also be used to interest other companies into funding further and more costly exploration. Just providing a base map and detailed sample record would indicate the need for drilling the Hunter. As noted earlier, the spotty nature of the mineralization dictates for an extensive drill program in order to increase the probability of intersecting ore. Drilling and camp costs for this remote area are going to be high, so that cost sharing or "farming out" of interest may be considered. Program C is aimed at facilitating this "farm out".

CONCLUSION

Review of the data and examination of the Hunter property on the Khutze River in the Skeena Mining Division

suggests that a small, but profitable, mining venture could be organized here. The area contains narrow, but persistent, veins with gold values averaging near 0.40 oz. over minimum mining widths. The area has never been adequately tested and, indeed, has never been drilled. We recommend securing an option on the property and initiating a modest exploration program to determine the true potential of the Hunter property.

TABLE 1

Sample #	Location	Dip Mag. Strike	Thickness	Description	Assay Results		Oz/Ton Dil. to 36"	
					Ag	Au	Ag	Au
H-1	165' S of portal on west bank Mine Creek (25' vertical diff).	65-70 166°	12 - 14"	Qtz. 10 to 15% pyrite (massive sulfides) 2-3" gouge on footwall separate vein from hornblende granite footwall. Sample is of gouge (red-gray fine-grained sulfide rich).	.1	.018	NA	NA
H-2	165' S of portal see H-1.	65-70 166°	12 - 14"	Qtz. and pyrite from H-1 vein material.	9.3	5.44	3.1	.42
H-3	443' in adit 430' from portal	60°	4"	Qtz. vein 30% pyrite. Pyrite in blebs to 6". Sampled over 12" strike length of vein.	6.85	3.82	.76	.42
H-4	371' in adit from portal.			40% pyrite in qtz. vein. Channeled	4.03	2.99	.22	.17
H-5	337' from portal.		12"	Qtz. vein with ½" gouge on hanging wall. Footwall is a gray granite. Vein covered by rust and particularly in F.W. 3".	.25	.16	.08	.05
H-6	282" from portal	70°	5"	White qtz. sharp walled only 10% pyrite.	.11	.10	.02	.01
H-7	222		6"	Bull qtz. with 2 small pyrite stringers.	.25	.138	.04	.02
H-8	202' from portal	80°	8 - 10"	30-50% pyrite minor chalcopyrite. Probably high grade over about 35'.	7.90	5.97	1.98	1.49
H-9	192' from portal	70°	14"	5 lb. grab sample of bull qtz. across vein and 6" of strike length 10-20% py in blebs.	.28	.192	.11	.07
H-10	142' from portal		8"	Bull qtz., no pyrite.	.07	.039	.02	.01
H-11	112' from portal	70°	8"	Qtz. and pyrite (20%) in blebs.	1.26	.795	.28	.18
H-12	77' from portal		9" assume		.97	.412	.24	.10
H-13	17' from portal	40°	8"	10% py in bull qtz. as vein rolls in dip.	.01	.012	--	--
H-14	Telluride cut just N of shaft.	45° NE 310°	10"	Vein avgs 10% in 30 x 7' trench with over- hang. Tellurides reported.	.70	1.41	.19	.39
H-15	Alex cut just S of shaft			Rough grab from badly broken vein in old	1.55	1.49		
H-16	River cut	70° E 178°		Grab off wall 10-20% py.	.46	1.03		
H-17	Ore dump at adit			Grab of material qtz. and 50% py from dump	8.03	5.54	--	--

MEMORANDUM

To: J. K. B. Booth
I. S. Thompson
J. O. C. Kerr

Date January 26, 1981

From: W. N. Pearson

Re: Hunter Group 1980 Programme

From September 20th to October 14th, 1980, the following programme was completed at the Hunter Group.

(1) The old shaft and drifts on the River Vein were dewatered and the shaft man-way rehabilitated. The vein exposed along the north wall of the shaft and in the north and south drifts was mapped and channel sampled at 5 ft. intervals using a pneumatic chip sampler. Wall rock was sampled every 10 ft. where possible;

(2) Surface trenches along the River Vein were cleared out as much as possible and the vein mapped and channel sampled at 5 ft. intervals.

(3) The Main Vein adit was mapped and channel sampled at 5 ft. intervals. Surface exposures of vein adjacent to Mine Creek were also sampled.

RIVER VEIN

The River Vein is exposed in a series of trenches and cuts extending from the east bank of the north branch of the Khutze River at 880 ft. above sea level to about 110 ft. north of the inclined shaft for a total exposed strike length of about 480 ft. The inclined shaft is 148 ft. long at an average inclination of 55°. The back closely follows the hanging wall of the River Vein. There are two drifts; one to the north which is 100 ft. long and the second to the south which is 79 ft. long. The most continuous surface exposure of the River Vein is located about 150 ft. south of the inclined shaft where the vein is exposed over about a 100 ft. strike length.

The weighted average grade for 26 samples along the shaft is 1.48 oz. Au/ton, 0.75 oz. Ag/ton over an average width of 0.61 ft. This result is comparable to previously reported values, e.g. Borupp obtained an average grade of 1.56 oz. Au/ton over 0.6 ft. and British Silbak Premier Mines Ltd. reported an average grade of 1.87 oz. Au/ton over 0.75 ft. width from 7 ft. to 71 ft. down the shaft and 1.20 oz. Au/ton over 0.75 ft. from 130 ft. to 150 ft. along the shaft. The best intersection in the shaft is from 50 ft. to 85 ft. below the surface which grades 2.95 oz. Au/ton, 1.70 oz. Ag/ton over an average width of 0.71 ft.

Within the drifts, the average grade of the vein is significantly lower than that of the shaft; from station 20S in the south drift to the end of the north drift, the average grade is 0.77 oz. Au/ton, 0.35 oz. Ag/ton over an average width of 0.56 ft. This strike length includes a higher grade intersection from 25N to 50N along the north drift which grades 1.18 oz. Au/ton, 0.50 oz. Ag/ton over an average width of 0.63 ft. The vein in most of the south drift is poorly mineralized and is pinched out in several places.

Surface sampling to the north and south of the shaft suggests that the vein is probably continuous from the surface to the underground workings. Based on this assumption, a block of possible ore 150 ft. long, 120 ft. wide with a vertical extent of 94 ft. can be delimited. Using a 4 ft mining width, zero grade dilution and a 10 cubic ft./ton tonnage factor, this block is estimated to contain 7,200 tons grading 0.17 oz. Au/ton and 0.082 oz. Ag/ton; this includes a possible high grade ore shoot with a rake of about 60° containing 600 tons grading 0.32 oz. Au/ton and 0.10 oz. Ag/ton. The larger block is open to the north and both blocks are open to depth.

The average grade of the River Vein, as exposed on the surface 150 ft. to 250 ft. south of the shaft, is 0.62 oz. Au/ton and 0.29 oz. Ag/ton over an average width of 0.46 ft. This includes a 45 ft. long section grading 1.09 oz. Au/ton and 0.48 oz. Ag/ton over an average width of 0.42 ft. Assuming that the vein here extends down dip to 150 ft. as in the inclined shaft and that the grade at this depth is approximately one-half the surface grade, a possible ore block of 5,400 tons grading 0.052 oz. Au/ton and 0.025 oz. Ag/ton can be outlined. This larger block includes a possible higher grade block containing 2,700 tons grading 0.086 oz. Au/ton and 0.075 oz. Ag/ton based on the previous assumptions. These blocks are open to the south and at depth; however, their northern extensions are limited because of the poor results in the south drift.

MAIN VEIN

The Main Vein is exposed intermittently along Mine Creek and has been drifted on for 471 ft. from a portal located at 2,335' above sea level. In the adit, the vein is remarkably consistent; however, the mineralization is very erratic and concentrated in only a few shoots. The three most significant intersections are from 60 ft. to 105 ft., 165 ft. to 210 ft. and 300 ft. to 370 ft. along the drift. These grade 0.58 oz. Au/ton, 0.95 oz. Ag/ton over 0.86 ft.; 0.50 oz. Au/ton, 1.35 oz. Ag/ton over 0.75 ft.; and 1.09 oz. Au/ton, 2.15 oz. Ag/ton over 0.85 ft., respectively. Using a 4 ft. mining width and zero dilution, the diluted grades are as follows: 0.12 oz. Au/ton, 0.20 oz. Ag/ton; 0.09 oz. Au/ton, 0.25 oz. Ag/ton; and 0.23 oz. Au/ton, 0.45 oz. Ag/ton respectively. The 60 ft. to 105 ft. intersection appears to correlate with a rich surface exposure that grades 1.83 oz. Au/ton, 4.26 oz. Ag/ton over a 0.84 ft. width and a 40 ft. length. The much lower grade down dip suggests that surface enrichment has occurred. The section from 300 ft. to 471 ft. including the previously mentioned intersection grades 0.49 oz. Au/ton, 0.98 oz. Ag/ton over a width of 0.73 ft.. When diluted to a 4 ft. mining width this section has an average grade of 0.09 oz. Au/ton and 0.18 oz. Ag/ton.

CROSS VEIN

The Cross Vein was briefly examined by C. E. Barnwell, who took two grab samples of pyritic quartz vein material. These assayed 0.028 oz. Au/ton and 0.01 oz. Ag/ton and 0.016 oz. Au/ton and 0.01 oz. Ag/ton. A helicopter reconnaissance of the Cross Vein area suggests that it extends from Mine Creek northwards to Power Creek, hence may be much more significant than these few samples would suggest.

CONCLUSIONS

The target at the Hunter Group is relatively high grade, narrow, steeply dipping auriferous shoots within extensive quartz veins. Closely spaced drill holes will be required to confidently delineate these shoots. Additionally, surface stripping, particularly on the River Vein, would be useful in locating new areas of mineralization within the vein.

W. N. Pearson

WNP/jj