

018923

ORCAN MINERAL ASSOCIATES LTD.
CONSULTING ENGINEERS

SUITE 1417 - 409 GRANVILLE STREET
VANCOUVER, CANADA V6C 1T2
TELEPHONE (604) 662-3722

Star One Resources Inc.

Review of the
MINERAL HILL PROPERTY
Hyder, Alaska

12, April 1988

C.R. Saunders, P.Eng.

Vancouver, Canada

ORCAN MINERAL ASSOCIATES LTD.
CONSULTING ENGINEERS

SUITE 1417 - 409 GRANVILLE STREET
VANCOUVER, CANADA V6C 1T2
TELEPHONE (604) 662-3722

16 May, 1988

Mr. Travnik
President
Star One Resources Inc.
570 - 789 West Pender Street
Vancouver, B.C.
V6C 1Y2

Dear Mr. Travnik:

RE: Report on the Mineral Hill Property

Herewith are four copies of our report entitled "Review of the Mineral Hill Property, Hyder, Alaska", dated 12 April, 1988.

Yours very truly,

ORCAN MINERAL ASSOCIATES LTD.



C. Raymond Saunders, P.Eng.

CRS/cc
Encl.

ORCAN MINERAL ASSOCIATES LTD.
CONSULTING ENGINEERS

SUITE 1417 - 409 GRANVILLE STREET
VANCOUVER, CANADA V6C 1T2
TELEPHONE (604) 662-3722

16 May, 1988

Mr. Travnik
President
Star One Resources Inc.
570 - 789 West Pender Street
Vancouver, B.C.
V6C 1Y2

Dear Mr. Travnik:

RE: Report on the Mineral Hill Property

Herewith are four copies of our report entitled "Review of the Mineral Hill Property, Hyder, Alaska", dated 12 April, 1988.

Yours very truly,

ORCAN MINERAL ASSOCIATES LTD.



C. Raymond Saunders, P.Eng.

CRS/cc
Encl.

TABLE OF CONTENTS

	<u>Page</u>
SUMMARY	1
INTRODUCTION	2
Location	2
Property	3
History	4
Recent Exploration	5
References	6
GEOLOGICAL SETTING	
Regional and District Geology	7
Property Geology	8
MINERAL OCCURRENCES	10
Salmon River Fault Occurrence	10
Virginia (97)	10
Middle Andesite Tuff Occurrences	11
Daly Alaska (Lower) (101)	11
Daly Alaska (Upper) (104)	11
Alaska Premier (105)	12
Hobo (108)	13
Kline (111)	13
Hyder Skoodum (114)	13
Boundary Creek Occurrences	14
Stoner (100)	14
Stoner-Clegg-O'Rourke (102)	14
Hoosier (103)	15

Table of Contents (Cont'd.)

	<u>Page</u>
MINERAL OCCURRENCES (Cont'd.)	
Fault Related Occurrences	15
Zebra Veins (112)	15
Titan Adit (115)	15
Iron Deposits	15
Shasta (120)	16
No. 1 Iron Deposit (123)	16
No. 2 Iron Deposit (117)	16
No. 3 Iron Deposit (116)	17
No. 4 Iron Deposit (119)	17
Roanan-Monarch Area	17
Olympia 8 and 9 Adits	18
Roanan Area (122)	19
Monarch Adit (118)	20
Roanan Copper	20
Airborne Geophysical Survey Results	20
ORE DEPOSIT EXAMPLES	22
Premier Model	22
Scottie Gold Model	23
Big Missouri Model	24
PROPOSED EXPLORATION	25
CONCLUSIONS	27
Recommendations	28
CERTIFICATE	30

LIST OF ILLUSTRATIONS

		<u>Following Page</u>
Figure 1	Location Map	6
Figure 2	Property Map	6
Figure 3	Geological Setting	8
Figure 4	Mineral Occurrences	21

SUMMARY

The Mineral Hill property of Star One Resources Inc., comprising 144 claims (approximately 1,000 hectares), is located in southern Alaska near the towns of Hyder, Alaska and Stewart, B.C. The property, and the mineral district, have been intermittently explored for gold and silver since the beginning of this century. Numerous mineral occurrences and deposits have been discovered and several have been mined, notably Premier, Big Missouri and Scottie Gold, all in British Columbia. The Stewart-Hyder district is again active, with considerable exploration underway, and two of the old producers, Premier and Big Missouri, again being readied for production.

The district is situated along the contact area between Coast Plutonic Complex to the west and Mesozoic volcanic and sedimentary units to the east. Faulting is intense.

The Mineral Hill property is underlain predominantly by andesite tuff units and lesser siltstone members of the Unuk River Formation. Tertiary and Jurassic intrusive bodies are present on and to the west of the property. The eastern andesite tuff unit is host to the Premier deposit (about a kilometre to the north) and the Big Missouri deposit. The western andesite tuff unit hosts the Scottie Gold deposits. Mineral deposit models based on these three main producers in the district are applicable to the Mineral Hill property.

There are at least 17 mineral occurrences on the property, most reported to have trenches and adits on them. The host rocks, intrusives, structure, widespread gold-silver occurrences, nearby location of the Premier deposit, and potential for at least three mineral deposit type (models), make the Mineral Hill property highly prospective for gold-silver deposits. It is concluded that the property merits extensive detailed exploration.

A two-stage exploration program is outlined; estimated costs are:

Stage I	\$ 435,000
Stage II	<u>800,000</u>
TOTAL	<u>\$ 1,235,000</u>

INTRODUCTION

The purpose of this report is to review the geology, mineral occurrences and exploration results on and about the Mineral Hill property, to indicate the mineral potential of the property, and to outline further exploration work.

The report is based on historical exploration and mining records, government publications, and the results of more recent exploration conducted in 1981, 1983 and 1984. The author is familiar with the area, having managed an exploration program, which included several visits, in 1981 on a large property in the same general area. A portion of that earlier property is now encompassed by the present Mineral Hill property.

Location

The Mineral Hill property is located in southeastern Alaska near the head of the Portland Canal (Figure 1). It is within ten kilometres of the small towns of Hyder, Alaska and Stewart, British Columbia. These towns are serviced by air and water from Prince Rupert, British Columbia, and Ketchikan, Alaska, and are connected by road to Highway 16 in central British Columbia. The service and distribution centre of Terrace, British Columbia is 330 road kilometres from Stewart.

The property is situated on the northwestern flank of Mt. Welker, partially encompassing a subsidiary ridge. Elevations range from about 100 metres along the Salmon River to 1,370 metres on the upper slopes of the mountain.

A good gravel road along the east side of the Salmon River provides access from Hyder and Stewart, directly to the north end of the property and indirectly to the south end by a steep bush road passable to four-wheel drive vehicles. However, at the present time, sizable areas of the property can be reached only by foot.

Except along the ridge top, topography is very steep and locally precipitous. Two streams, Fish Creek and Skookum Creek, drain the southern half of the property. Important salmon spawning beds are present in the lower part of Fish Creek. Several

smaller streams drain to the west into the Salmon River. Precipitation is heavy, averaging in excess of 350 centimetres per year. Snowfall is variable by elevation but probably averages greater than 500 centimetres throughout the area.

Much of the property is heavily forested by first growth timber consisting of hemlock and lesser spruce. Thick undergrowth, typical of the West Coast rain forest, is common below 750 metres elevation. Travel about the property is considerably hampered by the undergrowth and steep topography.

Rock outcroppings are sparse to moderate due to the vegetation and overburden cover; they occur mostly along creeks and in precipitous areas. Overburden thickness is in the order of one to five metres over most of the claims. It is thinnest along the gentler slopes of the ridge crest. The overburden and vegetation cover considerably hindered exploration in the past with the result that most of the known mineral occurrences are situated in creeks or along roads in natural and artificial exposures. The fact that several large areas on the property apparently contain no mineral occurrences may be attributed in part to a lack of natural rock exposures, and to a means of prospecting through the vegetation/overburden cover during earlier periods of exploration.

Property

The Mineral Hill property consists of 127 located Federal and State mineral claims that encompass an area of approximately 1,000 hectares (2,470 acres). Included in the property is a group of 17 older claims (the 'Finger Group'), which are difficult to locate on the ground and are of uncertain status (Figure 2). Claim names, and the jurisdictions in which they lie, are:

New Claims (staked 17 April, 1987)

PO 1 - 96	96 Federal claims
PO 29A, 65A, 77A	3 Federal claims
OP 1 - 28	<u>28</u> State claims
	127 claims

ORCAN MINERAL ASSOCIATES LTD.

Finger Group (old claims)

Mineral Ventures 3 - 9	7 Federal claims
U-Ray 1 - 10	<u>10</u> Federal claims
	17 claims

History

Mineral exploration in the Stewart-Hyder area began in 1898 when a party of adventurers arrived from Seattle seeking placer gold deposits which they had been led to believe were equal to those of the Klondike goldfields in Yukon Territory. Although they did not find any placer deposits, they did find mineralized float and vein material which eventually led to the discovery of the vein occurrences. The area received little attention and only sparse activity until 1909 when a minor prospecting and staking rush took place. However, it was not until 1917 that the area could be termed a significant 'mineral district'. In that year, some rich silver mineralization was found on the Canadian side of the border and, in 1918, the first commercial deposit, the Premier Mine, was discovered, also on the Canadian side.

Since 1918, precious metals production has been obtained from more than fifty properties in the Stewart-Hyder area with aggregate production to date, excluding the large tonnage Granduc copper mine, in excess of six million tonnes. Metals of significant value from these properties are gold, silver, copper, lead, zinc and tungsten.

The district once again is very active; numerous properties are being explored for gold and silver and several are being prepared for production. Most deposits are high grade vein type of comparatively small tonnage, but two, the Big Missouri and the Premier, the latter within one kilometre of the Mineral Hill property, are being jointly developed as larger tonnage, lower grade open pit operations (1.6 million tonnes at 0.105 oz gold/tonne and 5.9 million tonnes at 0.063 oz gold/tonne, respectively).

Production data from the more notable producers are as follows

Name	Production Period	Production (tonnes)	Grade			
			Gold (gm/T)	Silver (gm/T)	Lead (%)	Zinc (%)
Scottie Gold	1981-85	197,522	16.50	16.00		
Big Missouri	1938-42	768,943	2.37	2.13	trace	trace
Indian	1925, 1952	12,870	3.04	119.70	4.40	5.50
Premier Group	1919-53, 1959-68	4,276,714	13.00	274.00	0.66	0.20
Riverside	1925, 1927, 1941-50	26,437	2.89	102.10	3.90	trace

The present Mineral Hill property encompasses a number of old workings (pits, trenches, adits) that are the result of exploration done during earlier periods of activity. It is doubtful that any achieved production beyond a few tonnes of hand-cobbed ore.

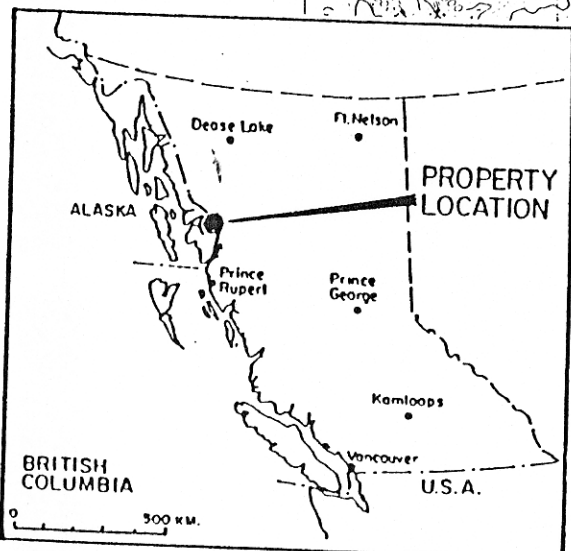
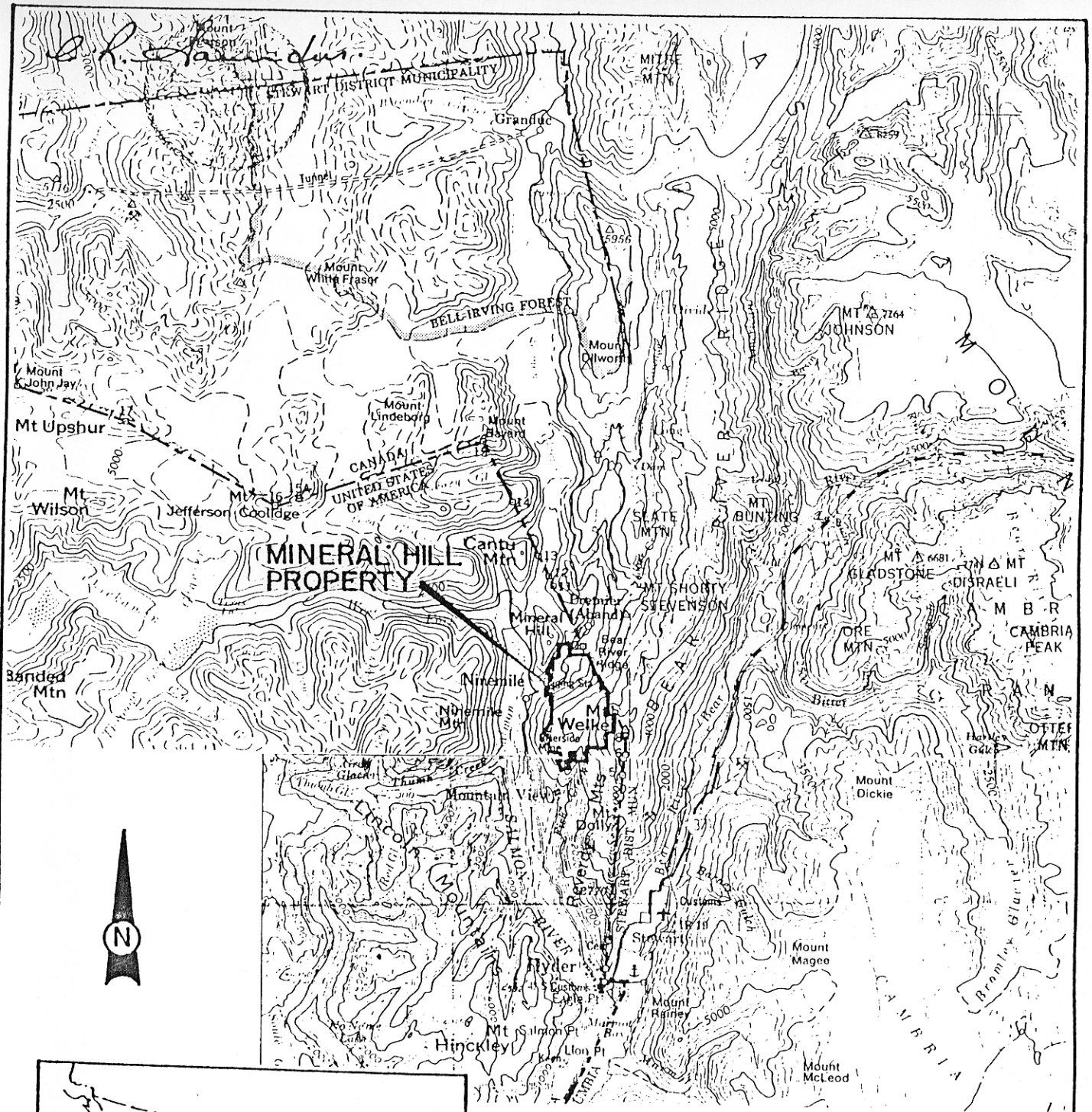
Recent Exploration

Recent exploration is known to have been done only on the finger of the old claims (U-Ray/Mineral Ventures Group) that angles southwesterly across the southern part of the property (Figure 2). In 1981, this area, along with considerably more claimed ground to the south of the Mineral Hill property, was geologically mapped, soil and rock sampled, and covered by magnetic and VLF-EM surveys. Little detailed or 'target' exploration was done.

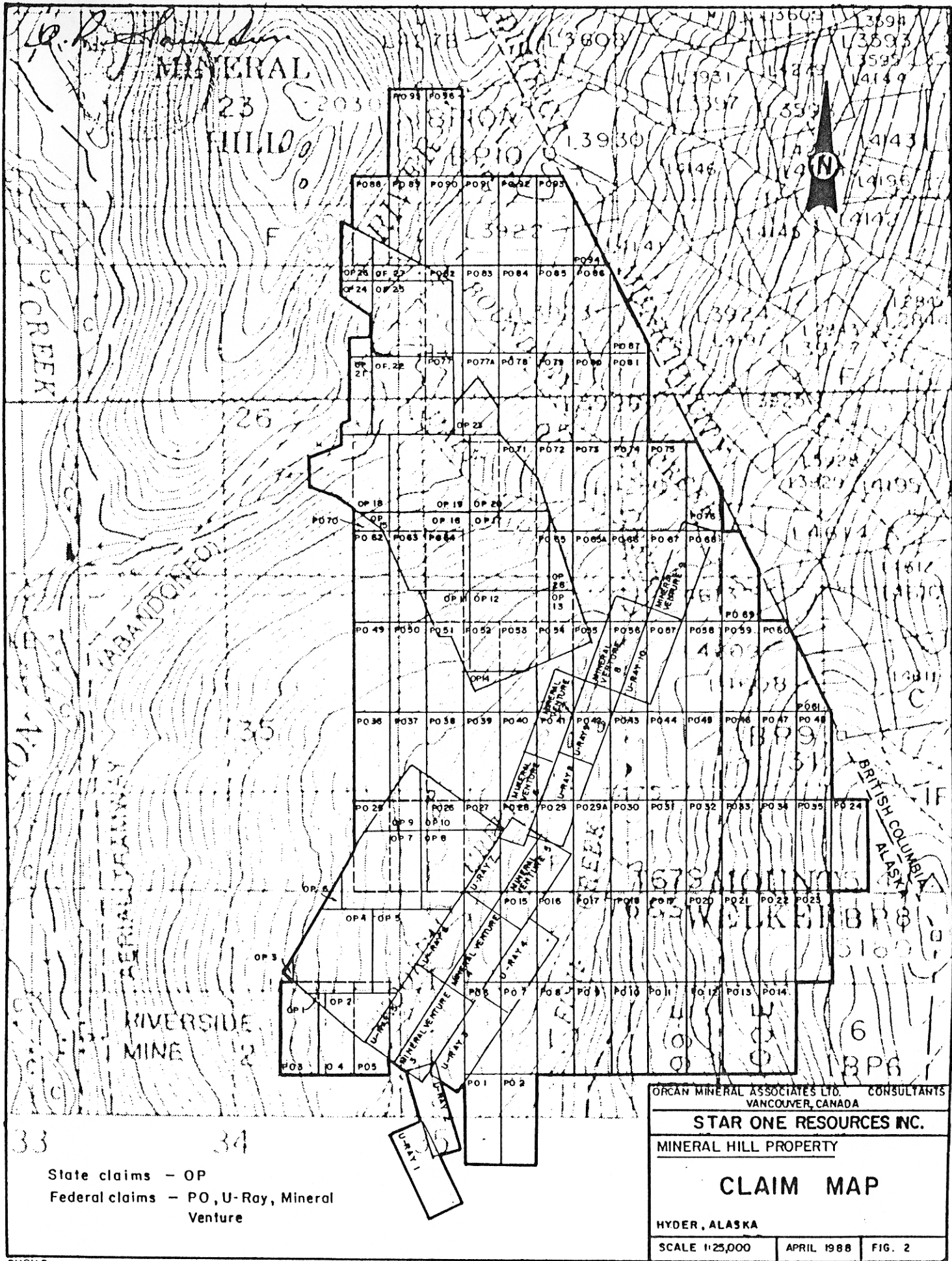
In 1983, a sampling and mapping program was conducted on several showings including some in the Finger Group. Some of the showings were tested by diamond drilling. Locations and results are unavailable. Further work was done in 1984, again, some of it on the Finger Group. Apparently a lack of funds precluded the processing of much of the data collected (including sample analyses) and, consequently, results of this work, for the most part, also are unavailable.

References

- Alldrick, D.J.; Geology and Mineral Deposits of the Salmon River Valley, Stewart Area; Open File Map 1987-22, B.C. Ministry of Energy, Mines and Petroleum Resources.
- Alldrick, D.J.; Geological Setting of the Precious Metal Deposits in the Stewart Area; B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 1984-1.
- Buddington, A.F.; Geology of Hyder and Vicinity, Southeastern Alaska; U.S.G.S. Bulletin 802, 1929.
- Burton, A.; Report of the Hyder, Alaska Property; for Pulsar Energy & Resources Inc., July, 1987.
- de Carle, R.J.; Combined Helicopter Borne Magnetic, Electromagnetic and VLF Surveys, Mount Welker Property, Stewart Area, British Columbia; Geophysical Report for Pulsar Energy & Resources Inc., 26 January, 1988.
- Dykes, S.M., H.D. Meade and A. Galley; Big Missouri Precious Metal Deposit, Northwest British Columbia; Mineral Deposits of Northern Cordillera, pp 202-215.
- Grove, E.W.; Geology and Mineral Deposits of the Stewart Area, Northwestern British Columbia; B.C. Ministry of Energy, Mines and Petroleum Resources, Bulletin 58, 1971.
- Nowak, D.J.; Alaska Star Property; Report for Cube Resources Ltd., July, 1984.
- Nowak, D.J.; Project Geologist's Reports; for Pulsar Energy & Resources Inc.; July and August, 1984.
- Rockel, E.R.; Letter report reviewing Aerodat Limited Airborne Geophysical Data and Report; 8 February, 1988.
- Saunders, C.R.; Mt. Welker Project, Hyder, Alaska; Report for Pulsar Energy & Resources Inc., 1 April, 1982.
- Thompson, W.H.; Mineral Hill Property; Report for Star One Resources Inc., 8 December, 1987.
- Walcott, P.E.; Electromagnetic and Induced Polarization Surveys, Hyder, Alaska; Geophysical Report for Pulsar Energy & Resources Inc., January, 1982.



ORCAN MINERAL ASSOCIATES LTD.		CONSULTANTS
VANCOUVER, CANADA		
STAR ONE RESOURCES INC.		
MINERAL HILL PROPERTY		
LOCATION MAP		
HYDER, ALASKA		
SCALE 1:250,000	APRIL 1988	FIG. 1



GEOLOGICAL SETTING

Regional and District Geology

The Stewart-Hyder mineral district is situated along the contact area between Coast Plutonic Complex to the west and Mesozoic volcanic and sedimentary units to the east (Figure 3A).

The oldest rocks in the district are Hazelton Group volcanic clastics and sedimentary strata of Upper Triassic to Middle Jurassic age. They have been divided into several formations by age and composition (Figure 3B): (1) Upper Triassic-Lower Jurassic andesite sequence (Unuk River Formation), (2) Lower Jurassic coarse clastic sequence (Betty Creek Formation), (3) Lower Jurassic felsic volcanic sequence (Mount Dilworth Formation), (4) Middle Jurassic siltstone sequence (Salmon River Formation). The Unuk River Formation, which underlies most of the Mineral Hill property, is the host for the Premier, Big Missouri and Scottie gold-silver deposits.

Two ages of intrusive rocks are present in the Stewart-Hyder area. The older is represented by the Texas Creek Batholith of Early Jurassic age, a granodiorite body situated mostly west of the Salmon River. Younger Tertiary age intrusives, termed the Hyder Quartz Monzonite Suite, occur as smaller stocks and dykes within the volcanic and sedimentary units, and as a larger stock mostly within the Texas Creek Batholith.

The major fault set in the district is north-northeasterly striking in the Premier-Mineral Hill area but swings to a northerly strike near the Big Missouri and farther north. A number of the individual faults are more than ten kilometres in length and locally consist of mylonite zones of considerable width (10 to 50 metres).

There are more than 100 precious metal occurrences in the district, including several producers. Most are simple quartz-breccia and transitional vein-replacement systems which contain irregular lenses and shoots of sulphide mineralization. The primary sulphide minerals are pyrite, galena and sphalerite, with accessory gold and silver minerals. Native silver, electrum and gold are locally important. Recent work

ORCAN MINERAL ASSOCIATES LTD.

by Westmin Resources has indicated that the Big Missouri deposit comprises stratabound precious and base metals in siliceous cherty tuff layers within andesitic volcani-clastic units; a syngenetic submarine exhalative origin is postulated. Mineralization consists of pyrite, sphalerite, galena and chalcopyrite with significant gold and silver.

Property Geology

Very little of the Mineral Hill property has been geologically mapped at a detailed scale (1:5,000). The most comprehensive mapping has been done by Alldrick of the B.C. Ministry of Energy, Mines and Petroleum Resources and published as Open File Map 1987-22 at a scale of 1:50,000. It is Alldrick's geology, with minor alterations, that is shown on Figure 3c.

The property is predominantly underlain by the andesite sequence of the Unuk River Formation. Hyder intrusives are present only in the extreme northwestern part of the claims and as a few northerly to northwesterly striking granodiorite dykes. Texas Creek granodiorite is present within the southwest corner of the property. The Unuk River Formation is host to the Premier, Big Missouri and Scottie Gold mineral deposits, the first two within the Upper Andesite Tuff unit and the latter in the Middle Andesite Tuff unit.

The volcani-clastic and sedimentary units underlying the property have a general northerly strike and steep dips, although distortions due to faulting and folding are common. The individual units which comprise the andesite sequence are oldest to the west and progressively younger to the east. Brief descriptions follow:

- 1a Lower Andesite Tuffs - ash tuffs.
- 1b Lower Siltstone Member - carbonaceous thin-bedded argillite and siltstone.
- 1c Middle Andesite Tuffs - mainly ash tuffs, lesser lapilli tuffs and augite porphyry; two feldspar porphyry flows; minor graded sandstone and siltstone; host unit for Scottie Gold deposit.

- 1d Upper Siltstone Member - carbonaceous thin-bedded argillite, siltstone, sandstone, with local basal conglomerate; local limestone.
- 1e Upper Andesite Tuffs - dust, ash, crystal and lapilli tuff and tuff breccia, local welded tuff; intercalated hematitic sedimentary lenses; basal unit in black, carbonaceous andesitic ash tuff and lapilli tuff; host unit for several major precious metal deposits in the Stewart district.
- 1f Premier Porphyry Flows - feldspar-hornblende porphyritic andesite; fine groundmass; local tuff and breccia facies.

East of the property are andesitic to dacitic tuffs and flows and, more commonly, fine to coarse sedimentary rocks of the Betty Creek Formation (coarse clastic sequence).

Three north-northeasterly striking faults cross the Mineral Hill property. All are of considerable magnitude as evidenced by their length and, for the Fish Creek and Skookum Creek faults, by extensive mylonitized zones. The easterly Salmon River Fault exhibits right-hand displacement of up to one kilometre; the Fish Creek and Skookum Creek faults show only small left-hand displacement. Other faults on and near the property are postulated from topographic lineaments.

There are numerous mineral occurrences on the Mineral Hill property (Figure 4), most of which have received some exploration in the past. They consist of sulphide bearing quartz-carbonate veins, sulphide concentrations in fractures and small masses within volcanic rocks, sulphides concentrated in bands in volcanic rocks (tuffs?), and sulphides, commonly erratic in distribution, associated with shears and mylonitic zones. Common minerals are pyrite, pyrrhotite, chalcopyrite, sphalerite and galena. Individual occurrences are described in the following section.

MINERAL OCCURRENCES

The following descriptions of mineral occurrences have been gleaned from a number of maps and reports. They indicate the widespread nature of the mineralization and give some idea of its character and mode of deposition. The bracketed numbers with the occurrence names are the numbers used by Aldrick on Open File Map 1987-22.

An attempt has been made to group the occurrences on the basis of broad geological settings in order to provide a more comprehensible picture of the property. No doubt some changes and, perhaps, new groupings will evolve as both the property geology and mineral occurrence become better understood through further exploration. Locations, as shown on Figure 4, are approximate.

Salmon River Fault Occurrence

Virginia (97) - This occurrence is allowed to stand alone because, although it lies within the Middle Andesite Tuff unit, it is quite near the Salmon River Fault and an intrusion of Hyder quartz monzonite. It is considered to be a good exploration prospect, particularly for vein/shear type deposits. The best available description is by Buddington (1929).

". . . On the banks of Cascade Creek a crosscut adit has been driven 50 feet to a mineralized body and a drift extended 225 feet to the southeast and 30 feet to the northwest. The mineralized shoot strikes N. 50° W., dips south, and is in a highly altered basic porphyry or porphyritic greenstone, and is in a sheared zone several feet thick exposed along the northwest end of the drift for about 50 feet. At the northwest face of the drift there is a shoot of almost solid sulphide, consisting of pyrrhotite, sphalerite, pyrite, and a little galena in a quartz gangue. A little tetrahedrite is also present. To the southeast, mineralized bands are exposed in the roof of the drift, and quartz veins and calcite seams are common. . . . Selected samples of ore are reported to have run as high as 4½ ounces of gold to the ton. . . . southeast of the adit, an open cut . . . has been made on altered porphyritic greenstone. This exposure shows numerous stringers of barren to sparsely mineralized glassy quartz, fractures faced with sphalerite, and stringers, threads, and blebs of galena and pyrite. About 150 feet upstream from the portal of the adit another adit has been started in mineralized

greenstone, which contains many seams and stringers consisting mostly of pyrrhotite, with some pyrite and a little chalcopyrite and sparse sphalerite and galena, and which also shows a notable quantity of epidote in bands and veins. Two other open cuts have been made on the property on schistose bands of greenstone mineralized with disseminated deposits and veinlets of pyrite and a little pyrrhotite and locally a little sphalerite and galena . . ."

Middle Andesite Tuff Occurrences

All of these occurrences are within Alldrick's Middle Andesite Tuff unit between the Salmon River Fault and the Skookum Creek Fault. More local groupings may derive from further exploration work.

Daly Alaska (Lower) (101) - Apparently a considerable amount of underground work was done but amounts and descriptions are not available. Dump material includes "pyrrhotite, sphalerite, pyrite, galena, tetrahedrite and chalcopyrite. Some of the tetrahedrite is the silver-rich variety freibergite. Assays of selected samples are reported to have yielded as high as 500 ounces of silver to the ton".

Daly Alaska (Upper) (104) -

"An open cut has been made at an altitude of about 1,500 feet. The porphyry here is highly silicified, with associated seams and disseminations of pyrite, a few gash veins of milky quartz or of calcite, and locally a little sphalerite. About 50 feet below the open cut is an adit 150 feet in length with 15 feet of drift about 75 feet in from the portal. The drift appears to be on a shoot mineralized predominantly with pyrite but with some spalerite and galena. A careful examination also reveals the presence of tetrahedrite, chalcopyrite, pyrrhotite, and arsenopyrite.

At an altitude about 60 feet lower than this adit is another one about 220 feet in length. Westgate describes the first 114 feet of the adit, driven before 1921, as follows:

For the first 50 feet from the portal the rock is a light greenish-gray fine-grained rock, here more siliceous, there more calcareous, and everywhere somewhat pyritized. Then follows 27 feet of a similar rock containing bands and patches of sulphides (sphalerite, galena, and pyrite). This is followed in turn by 15 feet of less mineralized rock and 10 feet of mineralized rock. The remainder of the tunnel is barren rock like that at

the entrance. The rock structure at the entrance strikes N. 80° E. and has a nearly vertical dip, and the indistinct banding farther in agrees with this attitude." (Buddington, 1929).

Several open cuts were made on the property exposing quartz-carbonate-sulphide veins up to three feet in width. Mineralization consists of granular galena, pyrrhotite, sphalerite, pyrite (in some places mostly pyrite), some chalcopyrite and a little arsenopyrite. One vein has an attitude of N 60° W/60° S and is "reported" to average 30 to 40 ounces silver per ton.

Alaska Premier (105) -

"The general country rock is greenstone with intercalated beds of slate and greywacke. Three sheets of felsite occur within the greenstone and the sedimentary rocks. It is not certain whether these are intrusive quartz porphyry sills or facies of the greenstone. . . . The northern sheet . . . is about 40 feet thick, strikes about N. 60° W., and dips 50° E. A short prospect tunnel 15 feet long, at an altitude of 1,400 feet, has been driven on a mineralized zone in the sheared felsite. Veinlets of quartz several inches thick containing pyrite, sphalerite, galena, and a little pyrrhotite and carrying considerable gold have been found. On the . . . second sheet of felsite . . . open cuts have been made and a tunnel has been driven. At about 40 feet above the tunnel an open cut was made on a very rich pocket of altered felsite. The rock is shattered, veined with quartz, and much silicified. Veinlets and blebs of sulphides occur throughout the pocket and comprise pyrite, sphalerite, galena, and a little pyrrhotite and chalcopyrite. As much as 35 ounces of gold to the ton is reported to have been obtained on assays of selected specimens. A crosscut tunnel at an altitude of about 1,300 feet driven to cut the felsite sheet goes in about 200 feet and has cut about 30 feet of the felsite. The country rock at the entrance to the tunnel is a dark-grey to brown hornlike stone of uncertain origin. The tunnel passed through about 50 feet of a light-colored granodiorite porphyry dike, belonging to the Hyder batholith, which does not show at the surface. The whole zone of felsite is fractured, and the fractures are faced with small pyrite cubes. These small cubes are also disseminated throughout the felsite. Rarely a bleb of pyrrhotite occurs. Such rock is reported to average \$2 to \$3 in gold (0.10 - 0.15 oz/ton) and about 1 ounce of silver to the ton.

In the bed of the gulch . . . there is a mineralized shear zone striking east-west at an altitude of about 1,215 feet. The sulphide-bearing sheet is about 3 feet wide and comprises pyrite, galena, sphalerite, chalcopyrite, tetrahedrite, pyrrhotite, and arsenopyrite." (Buddington, 1929)

Hobo (108) - The old workings consist of three adits, two of five metres and one of 65 metres length, and a few surface pits. Mineralization at surface occurs in four bands in carbonate altered dacitic to andesitic volcanic rocks. The bands range in thickness from one to three metres; strike is 100° with a near vertical dip. Mineralization in dumps comprises sphalerite, galena, pyrrhotite and chalcopyrite with massive banded textures. The long adit does not intersect any significant mineralization, thereby suggesting a lensy or faulted geometry for the mineralized bands.

Selected samples have assayed up to 2.69 oz Au per ton, 4.16 oz Ag per ton.

No!
D.J.A.
Kline (111) - The Kline showing comprises two old workings, a trench four metres in length and, 160 metres to the north, a five metre adit. Both are in sheared volcanic rocks (~~mylonite~~) and neither contains any significant veining. Some minor limonite staining is present in the adit. Small pyrite cubes are present in amounts of 0-2%.

Of five samples taken from the adit and one from the trench, none returned assays of any consequence.

The adit is located within a small copper, lead and zinc geochemical soil anomaly. Both workings are near the juncture of postulated faults.

Hyder Skookum (114) -

". . . At an altitude of about 3,200 feet there are two very strongly defined approximately parallel quartz veins striking northwest and dipping steeply to the south. Both veins locally form a breccia with the country rock. The southern vein is in part in a dike of porphyry belonging to the Texas Creek batholith and in part in greenstone of the Hazelton group. A small stringer in the greenstone carries a little disseminated sulphide. The northern vein is wholly in the greenstone. Locally fragments of country rock, forming a breccia with the quartz, are impregnated with pyrite. The veins have a width of as much as 7 feet. As exposed at the surface they carry a little calcite but are mostly barren of sulphides.

. . . an open cut has been made on a sulphide replacement deposit in a schistose zone in greenstone near the contact with a dike of porphyry of the Texas Creek batholith. The sulphides occur as solid masses and seams in the greenstone and as disseminated deposits in quartz within the zone. Pyrrhotite predominates, and with it are associated a little chalcopyrite and arsenopyrite. The vein is 1½ feet wide, strikes N. 50° W., and dips 60° S." (Buddington, 1929)

Boundary Creek Occurrences

Of this group of three occurrences, two are within the Lower Andesite Tuffs and one, the Hoosier, appears to be located within the Upper Siltstone Member. However, the description of the Hoosier, which is very brief, suggests it may lie within an andesite unit.

Stoner (100) - The Stoner workings consist of two adits, one shaft and three pits. The host rock is a dacitic to andesitic volcanic rock that generally is fine-grained although locally porphyritic. Carbonate alteration varies from moderate in the wall-rock to intense in the mineralized zones. Sulphide mineralization typically occurs as bands and disseminations of pyrite (30%), galena (20%), pyrrhotite (5%). One zone of highly altered (carbonate) volcanics is adjacent to a fault; it is about ten metres wide and has an orientation of N 43° E/64°S. The mineralization is predominantly pyrite in bands and disseminations. Values up to a half ounce gold per ton and one ounce silver per ton have been reported.

Stoner-Clegg-O'Rourke (102)

". . . on the bank of a gulch, at an altitude of about 1,350 feet, a tunnel 75 feet long has been driven N. 65°E. in greenstone. The material on the dump shows veinlets of calcite with sphalerite, pyrite and galena. Small amounts of pyrrhotite, chalcopyrite, and tetrahedrite are also present. Open cuts have been made at other localities on bands in the greenstone carrying disseminated pyrite and pyrrhotite and seams of calcite, sphalerite, pyrite, and galena." (Buddington, 1929)

Hoosier (103) - "A 10-foot opening has been made on a silicified greenstone. No well-defined structure was noted in the country rock, nor any distinction between vein and wall. Some of the silicified rock carries the usual sulphides." (Brooks, 1920)

Fault Related Occurrences

These two occurrences are situated near the contact between the Upper Siltstone Member and the Middle Andesite Tuffs, and appear to be within the influence of the Skookum Creek-Fish Creek fault zones.

Zebra Veins (112) - The Zebra vein or veins consist of white quartz/carbonate veins that occur intermittently for several hundred metres in andesitic volcanics along a strike averaging about 165° ; dip is 80° - 85° east. Sulphides occur within the veins as pyrite in clots and disseminations; no significant assays have been obtained from the veins.

Titan Adit (115) - The adit strikes approximately 105° and is of uncertain length; from the size of the dump it could be more than 30 metres long. It is located in siliceous andesitic volcanics and is directed towards a surface exposure that is pink in colour from the oxidation of contained sulphides. The sulphides are mainly pyrite and pyrrhotite with minor chalcopyrite. Of several samples taken in 1984 (presumably selected samples from the dump), the highest assay obtained was 0.34 oz gold per ton and 0.51 oz silver per ton.

Iron Deposits

The following occurrences are all located between the Skookum Creek and Fish Creek faults. They have been termed 'Iron Deposits' because the sulphides are predominantly pyrite and pyrrhotite; base metals are less common than in most other occurrences on the Mineral Hill property.

See underground map for higher Channel Sample Assay

Shasta (120) - This occurrence is also known as the Shaft Creek Copper Deposit. It consists of pits and trenches containing massive pyrrhotite. The showings are in border phase granodiorite and/or diorite, a fine grained rock that is altered by green chlorite-sericite. The mineralization, which consists of chalcopyrite with the pyrrhotite, is erratic in outline and distribution. It does not appear to be related to shearing although some distinct but small scale faulting is apparent. Brecciation and fracturing are present in the host rocks.

Geochemical and geophysical surveys were conducted in the vicinity of the Shaft Creek showings in 1984, but response was mostly poor. Only the induced polarization gave positive results. The showings are located within a much larger area of positive conductivity. The relationship may be indirect in that the survey reflects higher than background metallic content, possibly copper sulphides in part, and the showings may be local concentrations of the same metals.

Results are available from 21 samples taken from the showings in 1981 and 1987; six are grabs and 15 are chips. Only one sample did not detect gold. Values for gold and silver range from 0.001 to 0.350 oz gold per ton, and 0.01 to 1.90 oz silver per ton. The arithmetic average of these samples is 0.135 oz gold per ton and 0.63 oz silver per ton.

No. 1 Iron Deposit (123) - This mineral occurrence consists of a vein of massive sulphides (length and width not stated) that include pyrite, pyrrhotite and chalcopyrite. Galena and sphalerite float are present in a creek flowing through the exposure. The host rock is an andesitic volcanic. Of several samples taken in 1987, the best returned values of 0.016 oz gold per ton and 1.62 oz silver per ton.

No. 2 Iron Deposit (117) - This occurrence comprises a sequence of erratic sulphide mineralization in andesitic volcanic rocks. Some of the mineralization is fault controlled into narrow veins, the longest of which can be traced for about 120 metres. Other, more variable areas, appear to be associated with a harder phase of granitic rocks. Samples collected in 1984 and 1987, 21 in all, gave assays ranging from 0.001 to

0.234 oz gold per ton and 0.03 to 0.55 oz silver per ton. The arithmetic average of these samples is 0.052 oz gold per ton and 0.20 oz silver per ton.

No. 3 Iron Deposit (116) - This occurrence is exposed in a series of pits and trenches, with most of the mineralization confined to two main pits. In the northeast pit, mineralization occurs in fractures and as disseminations in dacitic to andesitic volcanic rocks. The volcanics are variable in degree of silification and sulphide content. The more siliceous volcanics tend to be mineralized with equal amounts (2 percent each) of pyrite and pyrrhotite. Mineralization in the less siliceous material is predominantly pyrrhotite (1.5 percent) with minor pyrite (0.5 percent).

The southwest pit has fracture controlled mineralization in the same volcanic unit. Three veins are exposed that contain 4 - 6 percent pyrrhotite and four percent pyrite. A monzonite dyke, exposed in a nearby road-cut, contains up to two percent pyrite and may be the source of the mineralization in the pit.

No significant assays were obtained from 14 samples taken within the area of the No. 3 Iron Deposit.

No. 4 Iron Deposit (119) - The mineralization occurs in bands of volcanics that interfinger with 'Premier Porphyry'. There are three main bands which range in width from 0.3 to 3 metres and have a maximum length of about 30 metres; general attitude is 100°/75N. Mineralization consists of about 30 percent massive to disseminated sulphides, including pyrrhotite, pyrite, arsenopyrite and chalcopyrite in decreasing order. The occurrence was sampled but results have not been plotted. The best assay result (1984) was 0.49 oz gold per ton and 0.78 oz silver per ton (width unknown).

Roanan-Monarch Area

(see all 40 gold sample)

These mineral showings and old workings are east of the Skookum Creek fault within Texas Creek granodiorite. They are in the extreme southwest corner of the Mineral Hill property; some of the old workings, the Olympia 8 and 9 and the Monarch adits, are all just outside the property boundary.

Workings on the Roanan-Monarch system consist of five accessible adits, one collapsed adit, and numerous pits and trenches. Two adits, Olympia 8 and Olympia 9, are in Skookum Creek approximately on strike with the Roanan workings to the northwest. Apparently they are designed to intersect the possible southeasterly extension of the Roanan vein. The Upper and Lower Roanan adits intersect the Roanan Vein and are connected by a short raise. The Monarch Adit is more than 300 metres northwest of the Roanan showings and is only postulated to be on the same structure. The main surface trenches are located near the two Roanan adits.

All of the adits and trenches are located in granodiorite, except the Olympia 8 adit which is in mylonite. The granodiorite is typically medium to coarse grained, generally equigranular, and contains a few small quartz veins. In some places, such as in the Upper Roanan Adit, the quartz content is very low and the rock is more correctly termed a diorite. The 'granodiorite' commonly contains some chlorite alteration. Near the veins or shear zones, it is sheared and mylonitized to varying degrees. The mylonite in the Olympia 8 Adit probably is intensely mylonitized granodiorite.

Olympia 8 and 9 Adits - These two adits, which are immediately south of the Mineral Hill property, contain no noteworthy features. The Olympia 8 is totally barren of veining or sulphides, other than rare small quartz veins which are present in similar quantities in many places on the property. A number of samples have been taken but only exceedingly low assays have been obtained.

The Olympia 9 contains some quartz veining in one patch and minor associated pyrite. A shear zone, striking approximately N45°E, is present in the adit face. Results of six samples were negative.

ORCAN MINERAL ASSOCIATES LTD.

Roanan Area (122) - The Upper and Lower Roanan adits and the trenches above them constitute the primary area of interest on the Roanan-Monarch Vein. In fact, considering that the Olympia adits contain no veining and are barren, and the Monarch Adit is well-removed to the northwest and almost equally barren, the Roanan workings represent almost the only area of economic interest on the Vein.

The vein is a quartz-filled fault zone with sulphides occurring with, and mostly in, the quartz. The vein has an attitude of N 60° W/45° NE. Average dip is probably about 60°. The vein, or the quartz in it, varies in width from ten centimetres to two metres. Total length between exposed extremities is approximately 125 metres; known vertical extent is in the order of 30 metres. Approximately 50 metres of the vein were drifted on the Upper Level and 32 metres on the Lower Level. Mineralization consists of pyrite, chalcopyrite, galena, tetrahedrite, sphalerite and rare free gold.

Considerable sampling has been done on the vein, both in the surface trenches and in the underground workings. As is common with other showings in the area, there appears to be a consistent difference between older and recent sample results: the older assays are higher grade and more commonly contain values in gold and silver (there are fewer waste or very low grade samples). However, results obtained in 1981 contain some interesting grades and, considering the difficulties of obtaining representative results by chip sampling, particularly when free gold is involved, they may be significant. They certainly confirm the presence of potentially economic values in gold and silver. The better results range up to an ounce of gold and 35-40 ounces of silver per ton. They appear to be erratically distributed along the vein and thus, to obtain potential reserves, it may be necessary to carefully sample the vein at closely spaced intervals.

Why? where is the vein?

The vein was tested with several short diamond drill holes in late 1983 but assay results are not available. It is reported that of eleven holes drilled in the Roanan and Skookum veins, nine obtained weak to heavy sulphide intersections. (The Skookum vein is a considerable distance south of the present Mineral Hill property.)

The strength of the shear zone and vein is a positive feature of the Roanan occurrence. The erratic assay values, including many of low grade, are a somewhat

negative feature, although gold-silver mineralization in quartz veins commonly is erratic in distribution.

Monarch Adit (118) - The Monarch Adit, just west of the property boundary, is located in a small linear depression that may be the surface expression of the shear zone exposed in the adit. The adit, 15 metres in length, was driven along a shear zone in granodiorite. The shear zone consists of fractures (faults) beside and within a mylonite zone that averages one metre in width. The zone strikes N60°W and dips 60° - 80° northeast. A narrow quartz vein is present on the hanging wall of the zone for about half the length of the adit. Very minor pyrite, chalcopyrite and galena occur with the quartz and in the mylonite. Sampling results were poor.

There are no anomalies, geochemical or geophysical, between the Monarch and Roanan workings.

Roanan Copper - The Roanan Copper area consists of pyrite and chalcopyrite in irregularly spaced shears, veinlets and disseminations in granodiorite and diorite host rocks. The mineralized area as presently known is approximately 50 by 50 metres in size. There is irregular silicification and chloritization associated with this mineralization as well as some shearing and local, light brecciation. Pyrite, chlorite and quartz veining are locally present outside the copper mineralized area. Four of nine trenches sampled in 1981 returned interesting copper and weak silver values. The average grades (seven samples) are: 0.40 percent copper and 0.466 oz/ton silver. A geochemical soil survey and geophysical surveys (induced potential, CEM, VLF-EM) conducted over the mineralized zone and the surrounding area produced negative results.

Airborne Geophysical Survey Results

An airborne geophysical survey was conducted over the Mineral Hill property by Aerodat Limited during the period 29 November to 16 December, 1987. Systems employed were electromagnetic (three frequency and VLF) and magnetic. Interpreted results are shown on Figure 4. Locations are imprecise and will have to be determined in the field by reference to the photo-mosaic base map. Consequently, for this report,

detailed discussion about individual anomalies or even groups of anomalies is of little value. However, some general comments are appropriate.

The electromagnetic results are thought to reflect small, narrow sulphide bodies, typical of much of the mineralization on the property. Thus, even comparatively weak responses could represent attractive targets. This survey is also useful for defining possible faults (not shown on Figure 4 because of doubtful locations).

The areas of low resistivity may reflect a lower bedrock resistivity (rather than overburden effects) due to disseminated sulphides. Such mineralized areas occur on the property and thus low resistivity zones may prove useful in locating new mineralized zones or outlining limits of known zones.

ORE DEPOSIT EXAMPLES

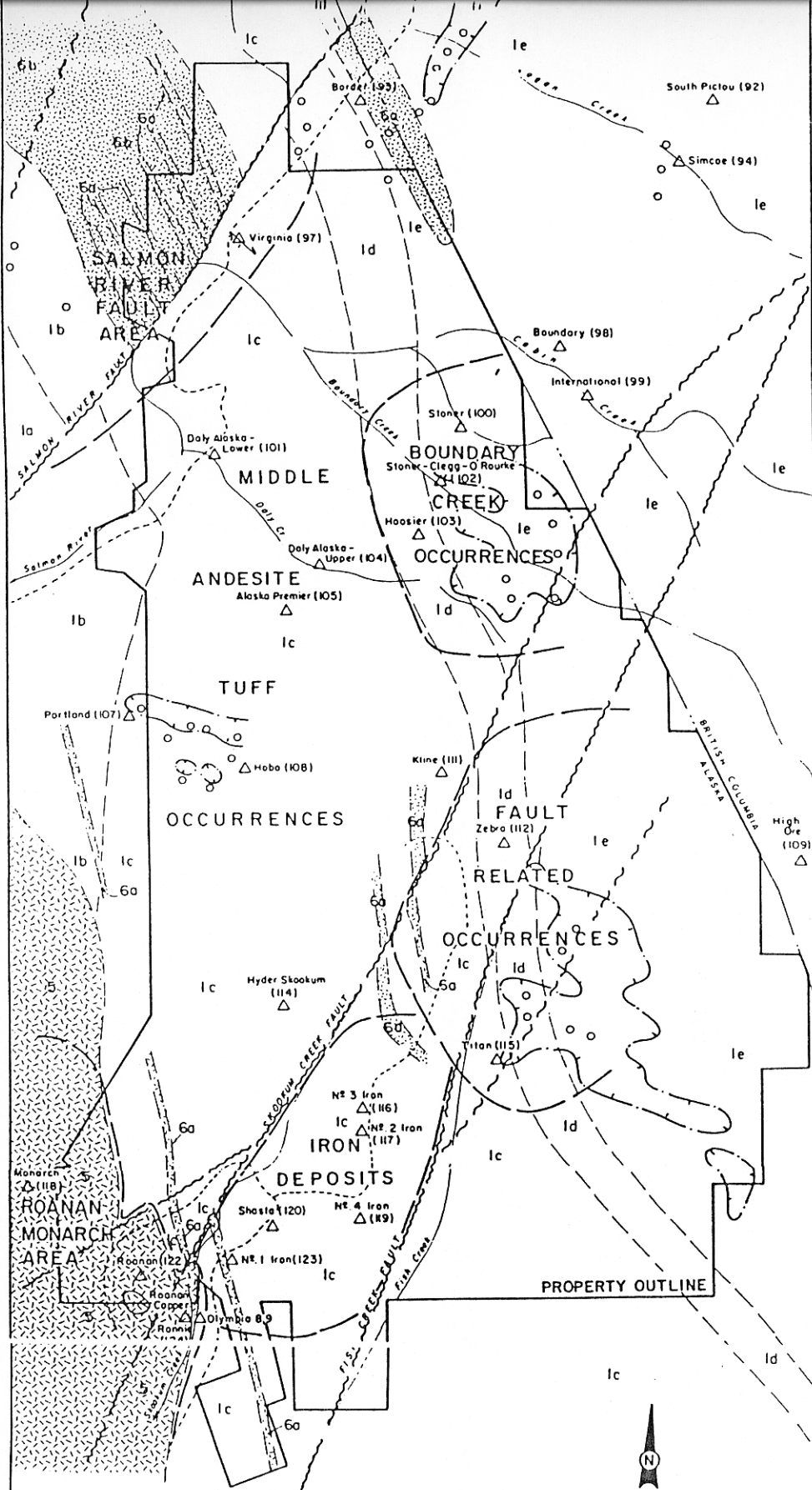
Most precious metal deposits in the Canadian Cordillera are of epigenetic origin, and probably fit within some aspect of an epithermal mineral deposit model. The primary requirements for such deposits are a source of fluids or heat (intrusives), host rocks capable of sustaining structural openings (andesitic volcanics), and considerable structural disturbance (faults). All of the characteristics are present in the Stewart area and on the Mineral Hill property.

Premier Model

On a local basis, the characteristics of the Premier deposit, which is situated immediately north of the Mineral Hill, may be helpful in exploring the Star One property. The Premier property is underlain by a sequence of fine grained to aphanitic green andesites, i.e. unit 1e of the Unuk River Formation. This unit is present on the eastern side of the Mineral Hill property. A series of porphyritic dykes and sills, probably related to the Texas Creek and/or the Hyder intrusives, are prominent on both the Premier and Mineral Hill properties (only the largest are shown on Figure 3).

Mineralized zones are both concordant and discordant with host andesite, and show a spatial association with structurally controlled porphyry intrusions. The Main zone follows a moderate to steep northwest-dipping porphyry sill. Maximum ore widths occur where the sill converges with a porphyry dyke of similar strike but divergent dip.

At least four fault sets are identified at the Silbak Premier deposit. The youngest movement appears to be on north-trending faults that dip steeply west; they exhibit strike-slip displacement and truncate moderately dipping faults. Vertical east-west structures are a less common young fault set. Two older fault trends are recognized: northeast with moderate to steep northwest dip, and northwest with moderate southwest dip.



- TERTIARY**
- Hyder quartz monzonite suite
 - Mineral Hill Stock
 - Hyder dykes
- EARLY JURASSIC**
- Texas Creek Fm.
- TRIASSIC - JURASSIC**
- Uman River Fm. (andesite sequence)
 - Upper andesite tuffs
 - Upper siltstone
 - Middle andesite tuffs
 - Lower siltstone
 - Lower andesite tuffs
- Geological contact
 - - - - - Fault
 - - - - - Road

- Mineral occurrence (location approx.)
- Electromagnetic anomaly (location approx.)
- Possible low bedrock resistivity (location approx.)

0 200 400 800 metres

ORCAN MINERAL ASSOCIATES LTD		CONSULTANTS
VANCOUVER, CANADA		
STAR ONE RESOURCES INC.		
MINERAL HILL PROPERTY		
MINERAL OCCURRENCES GEOPHYSICAL ANOMALIES		
HYDER, ALASKA		
SCALE 1:12,500	APRIL 1988	FIG 4

Mineralization consists of quartz-feldspar-carbonate-sulphide vein and breccia zones, peripheral stockwork veining and locally crustiform banded veins. Mineralized breccia zones occur at andesite/porphyry contacts within porphyry, and also transgress from porphyry into andesite. Pervasive sericite forms a halo to siliceous low sulphide ore zones but is less extensive about semi-massive sulphide zones. Cross-cutting vein and breccia relationships indicate a multi-stage history of fracturing and mineralization.

The main sulphide minerals are pyrite, sphalerite and galena. Locally, gold appears to be contained within pyrite, but in general the main gold mineral is electrum, which is associated with galena and silver minerals. Silver minerals are generally too fine to be identified by eye but are probably electrum, tetrahedrite and polybasite. Pyrargyrite, a ruby silver, is locally prominent. Arsenopyrite is rare, occurring peripheral to precious metal zones. Coarsely bladed barite occurs locally with base and precious metals.

Breccia zones commonly are vuggy, and fragments may have sulphide mineral rims. Late veins are coarse, comb structured and contain quartz, calcite, chlorite and rhodochrosite.

Scottie Gold Model

The gold-silver mineralization at Scottie Gold occurs as parallel veins of massive pyrrhotite and pyrrhotite-pyrite in andesitic tuff and tuff breccia, the same unit (1c of the Unuk River Formation) that underlies much of the Mineral Hill property. The veins have associated base metal sulphide mineralization disseminated in envelopes of intense chlorite and hematitic siliceous alteration. The main veins lie in subparallel fault or shear zones that trend 110° and dip $75^{\circ} - 80^{\circ}$ north.

The moderately high grade (0.5 oz gold per ton, 0.5 oz silver per ton) pyrrhotite veins have been interpreted as epigenetic mesothermal veins that may have originated from the nearby Summit Lake stock. It has been suggested that the deposits could represent original 'epithermal' veins that have been recrystallized and possibly remobilized during intrusion of the granodiorite stock.

Big Missouri Model

The Big Missouri model, as postulated by Westmin Resources, is of a syngenetic deposit formed by volcanic exhalative activity.

Pyrite, sphalerite, galena and chalcopyrite with significant gold and silver occur in siliceous cherty tuff layers within a siliceous and sericitic andesite flow, tuff and agglomerate unit, within Aldrick's Upper Andesite Tuff unit (ie, Unuk River Formation). Three mineralized horizons, each consisting of several cherty tuff layers with disseminated sulphides to semi-massive sulphide lenses, are recognized. Electrum, acanthite, native silver and tetrahedrite occur as small grains on grain boundaries and fractures in the sulphides and within quartz gangue.

Precious-base metal mineralization in the cherty tuff, and silica and sericite alteration of the andesite are interpreted to have formed on or near the seafloor as the result of submarine exhalative activity. Cherty layers and sulphide lenses were deposited during periods of quiescence. Distribution of sulphide mineralization is stratigraphically controlled and is associated with footwall quartz-sulphide stringer zones (vents). Favourable topographic traps on the seafloor near these vents resulted in sulphide-rich accumulations of chemical sediment.

PROPOSED EXPLORATION

Considering the current state of knowledge about the Mineral Hill property, the next stage of exploration should have two main objectives: (1) build a thorough data base for the property, and (2) conduct more detailed work on the known mineral occurrences and old workings. Results of this work will almost certainly lead to a second stage of more definitive exploration (trenching, drilling) on the better mineral occurrences.

The data base acquisition, it can be termed Phase A of Stage I, should include the following:

- Assemble and organize all of the available historical and recent data into appropriate files.
- Produce a detailed topographic base map at a scale of 1:5,000.
- Establish a control grid on the property; cut and survey at least two north-south base lines, put in cross lines by compass and topofil at 200 m spacing.
- Geologically map the property at a scale of 1:2,500.
- Conduct a geochemical soil survey on the 200 m grid lines, collecting samples at 20 m intervals; assay alternate samples (except in areas of known mineralization); do 10 element ICP analyses for silver, copper, lead, zinc, arsenic, manganese, barium, tungsten and cobalt; gold by a more precise detection method.
- Conduct magnetic and VLF-EM surveys over 200 m grid using an integrated geophysical system.

The work on the mineral occurrences, Phase B of Stage I, should include the following:

ORCAN MINERAL ASSOCIATES LTD.

- Careful location and orientation with respect to the control grid.
- Clean out old trenches (by hand and possibly by backhoe) and open portals for underground access.
- Detailed geological mapping, including underground where possible, of all mineral showings.
- Sample exposed mineral occurrences.
- Closer spaced geochemical sampling (tighter line spacing, samples at 10 m intervals) of anomalous areas indicated by initial soil sampling, and of mineral occurrences.
- Integrate the geology and sampling results with any useful previous data.

The next stage of exploration (Stage II) will be contingent on the results obtained from Stage I work, but, from current knowledge about the mineral occurrences, it is almost certain that some definitive exploration will be warranted. It will comprise trenching (hand, backhoe, blasting), diamond drilling and related road building.

CONCLUSIONS

The Mineral Hill property of Star One Resources Inc. is an excellent prospect for gold-silver mineral deposits. It is a large property containing numerous mineral occurrences in favourable geological settings.

The eastern third of the property is underlain by the host unit for the Premier and Big Missouri mines, contains at least two mineral showings, is traversed by two major faults, and contains two areas of positive electromagnetic and low resistivity response. The Premier Mine, which Westmin is bringing back into production, lies one to two kilometres (depending on strike projection) to the north. Furthermore, the recent hypothesized Big Missouri model expands the mineral deposit potential of this geologic unit.

The western 60 percent of the property is underlain by the host unit for the Scottie Gold deposits. Additionally, it is traversed by three major faults and contains more than a dozen mineral occurrences. Some positive electromagnetic and low resistivity response has been obtained from an airborne geophysical survey. These features, along with its location adjacent or near to Tertiary and Jurassic intrusive bodies, makes it a highly prospective geologic unit for vein type epigenetic deposits.

The exploration potential of the individual mineral showings is difficult to rate on the basis of old data, but general groupings of higher, intermediate and lower potential are:

Higher potential - Virginia, Alaska Premier, Boundary Creek Occurrences

Intermediate potential - Daly Alaska (Lower), Hobo, Hyder Skookum, Iron Deposits, Roanan-Monarch Area

Lower potential - Daly Alaska (Upper), Fault Related Occurrences, Kline

It is concluded that the Mineral Hill property merits extensive detailed exploration for gold-silver deposits.

Recommendations

It is recommended that the exploration discussed under the section 'Proposed Exploration' be carried out on the Mineral Hill property. The exploration should be done in two stages, Stage I comprising acquisition of basic property and mineral occurrence data, and Stage II consisting of trenching, diamond drilling, access road building, and related work.

PROPOSED EXPLORATION PROGRAM

Stage I

Topographic Base Map		\$ 5,000
Road Repair		15,000
Grid Establishment		20,000
Rehabilitate Old Workings, Trenches		25,000
Sampling		32,000
Property Geochemistry	20,000	
Mineral Occurrence	12,000	
IGS Survey (Magnetic & VLF-EM)		20,000
Geological Mapping (Property, Showings)		45,000
Assaying		50,000
Geochemical	35,000	
Rock	15,000	
Camp & Maintenance		37,000
House Rental (Stewart)	4,000	
Fly Camp	3,000	
Board	30,000	
Transportation		20,000
Trucks (2 - 4X4, rent & operation)	8,000	
Helicopter (20 hours)	12,000	
Support Items		38,000
Expediting	25,000	
Travel	9,000	
Communications, Freight	3,000	
Material & Supplies	1,000	
Office Work		37,000
Preseason Preparation	5,000	
Post Season Data Compilation, Reports	25,000	
Draughting	5,000	
Word Processing, Reproductions, Etc.	2,000	
Consulting		12,000
Management		38,000
Contingency		<u>41,000</u>
Total Stage I		435,000

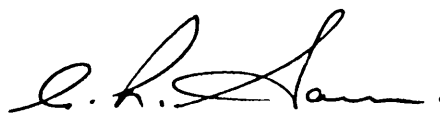
ORCAN MINERAL ASSOCIATES LTD.

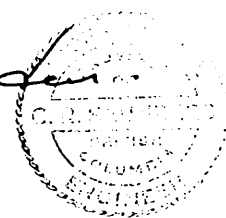
Stage 2

Diamond Drilling (3,000 m @ \$100/m)	300,000
Trenching	50,000
Road Building	150,000
Sampling, Assaying	20,000
General Support	60,000
Consulting, Supervision	60,000
Management, Miscellaneous	80,000
Contingency	80,000
Total Stage 2	<u>800,000</u>
TOTAL COST STAGES 1 & 2	<u><u>\$1,235,000</u></u>

Although Stage II work is contingent on positive results from Stage I, it is almost certain, on the basis of present information, that some Stage II exploration work will be warranted. Also, the timing of Stage I and Stage II does not have to be totally sequential. If some positive results are obtained from a mineral occurrence before all Stage I work is completed, Stage II work could immediately be initiated on that occurrence.

Respectfully submitted,
ORCAN MINERAL ASSOCIATES LTD.


C. Raymond Saunders, P.Eng.



CERTIFICATE

I, C. Raymond Saunders of 666 St. Ives Crescent, North Vancouver, Canada, do hereby certify that:

1. I am a graduate of the University of British Columbia, (B.A.Sc. in Geological Engineering, 1956).
2. I am a registered Professional Engineer of the Province of British Columbia (registration number 6498).
3. From 1956 until 1967, I was engaged in mining and mining exploration in Canada for a number of companies; positions included mine geologist, mine engineer and and chief geologist for underground and open pit operations. Since 1967 I have been practising as a consulting geological engineer in minerals exploration, property development and deposit evaluation in Canada and other countries.
4. I have examined a portion of the property reported upon herein.
5. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the properties or securities of Star One Resources Inc., or any associate or affiliate of Star One Resources Inc.
6. I do not have a direct or indirect interest in, nor do I beneficially own, directly or indirectly, any securities of Star One Resources Inc. or any associate or affiliate of Star One Resources Inc.

Respectfully submitted,



C. Raymond Saunders, B.A.Sc., P. Eng.

Vancouver, Canada

