W.A. NO. 11W

NAME Geol Rpt.

SUBJECT

WINSLOW GOLD MINE

COMPILATION REPORT

WINSLOW GOLD MINE

TRANS-WESTERN OILS LIMITED

JAMES MILLAR & ASSOCIATES LTD.

December 11th. 1963.

INDEX

1. INTRODUCTION

This report is to serve as a compilation of available data on the Winslow claim group. The property was examined during September 1958 and October 1963. The report is based on the two examinations and a comprehensive search of the available geological and engineering reports. Due to the condition of the Winslow workings much of the report must depend upon the work of previous reporters. A bibliography of this material will be found in Appendix 1.

A number of maps are available of the Winslow underground workings, but they do not always agree in all details. A section showing the levels and the area of dispute is included in an envelope at the back of the report.

Any dollar values given are based on the following metal prices (August 1963).

Gold	$35.00 per ounce
Silver	1.29 " "
Lead	11-1/2¢ per pound
Zinc	12-1/2¢ " "

2. GENERAL STATEMENT

The Winslow group of claims lie in an area of favourable geological conditions and fairly wide spread mineralization. No geological work, diamond drilling or systematic evaluation has been done on the property in spite of the substantial widths and consistency of the auriferous quartz vein structure.

Inaccessibility had initially hindered development and since the improvement of transportation conditions the depressed gold mining situation has been no incentive toward exploration. The property fully warrants a properly conducted evaluation using modern methods. Very nominal expenditure would be necessary to provide adequate access for the exploration phase of the project.

The property must be considered a prospect and any exploration program laid out with this in mind.

The Winslow vein structure has been explored and mined to some extent and has the best possibility for the development of ore grade tonnage of the known showings.

3. RECOMMENDATIONS

The exploration program must be designed to commence with an evaluation of the potential of the Main Winslow Vein structure. Very little is known of the geology or distribution of values either underground or in the surface exposure.

The general geology of the balance of the claims group will offer help in evaluating the Winslow vein. In the course of this work the other veins, the Alice, Okanagan, Enderby, etc., will be appraised for their value.

The program should be laid out to carry out this initial evaluation during the three to four months available during the summer season.

1. A geological and prospecting program should be carried out over the entire property using air photo control. The areas containing the known showings and any discoveries made during this work should be mapped geologically and topographically by picket-line. This should be accompanied by thorough sampling of all surface showings at regular intervals rather than the selective methods used to date.

   This program should be commenced not later than the first of July to take advantage of the majority of the summer season.

2. Several men should be employed trenching and test pitting any showings considered worthy of additional investigation and evalutation. Old trenches that might be considered strategically located should be cleaned out.

3. The adits on all structures that are accessible should be mapped in detail and sampled regularly.

4. All caved adits should be surveyed for their value as information and the probable cost of re-opening. It is probable that the opening of Number Two adit should be completed to allow inspection.

5. Based on the surface evalutation and geology the opening of Number Four adit and retimbering should be done. To explore for structure ahead of the present Number Four adit at least three drill holes should be drilled. The object would not be to trace ore shoots, but to trace structure.

6. The Number Four adit should be extended to cross cut completely the vein structure. Predicated on geological evaluation, allowance should be made for drifting on the vein to explore the vertical extension of the original ore shoot developed in the upper levels. Geological conditions should be allowed to govern entirely this program.

7. Any advanced exploration of the other showings, known or discovered by the initial program, should be predicated on the results of investigation.

8. Estimated cost of Program.

   Phase I - Geological and Prospecting Program.

   Time - one month, including mobilization and setting up.

Crew	geologist @ $500/mth.	500.00	
	2 helpers @ $350/mth.	700.00	
	W.C.B. & U.I.C. @ 10%	120.00	
			$1320.00
Living Expenses	30 days @ $20, including rent and supplies		600.00

(Geological and Prospecting Program - cont.)

Balance Forward			$ 1920.00
Transportation	jeep rental	$ 250.00	
	expenses	200.00	450.00
Equipment	picks, shovels, sample sacks, etc.		100.00
Assaying	100 samples @ $7.50		750.00
Misc.	mail, communication, aerial photos, etc.		50.00
Allowance for contingency 10%			300.00
			$ 3570.00

Phase II - Trenching and Adit Opening

Time - three weeks.

Crew	3 men @ $15/day/21 days	$1035.00	
	W.C.B. & U.I.C.	105.00	$ 1140.00
Living Expenses (local labour) $8/day			170.00
Equipment and Supplies			200.00
Allowance for contingency			200.00
			$ 1710.00

Phase III - Diamond Drilling

Time - 2 weeks

Diamond Drilling Contract estimated, 600' @ $5/ft.			$ 3000.00
Supervision			
Geologist @	$250.00		
Helper	$200.00		
W.C.B. & U.I.C.	$ 50.00	$ 500.00	
Living Expenses, 14 @ $15		210.00	
Transportation		225.00	
Assaying, 20 @ $7.50		150.00	
Supplies, etc.		50.00	
Misc.		55.00	1190.00
Allowance for contingency			420.00
			$ 4610.00

Phase IV - Underground Work

No estimate is practical of the cost of this phase in consideration of the uncertainty of a number of factors.

Total cost of the recommended program is:

Phase I	$3570.00		
Phase II	1710.00		
Phase III	4610.00		
	$9890.00	say	$10,000.00

Phase I and II are recommended immediately with Phase III to be predicated on the results of Phases I and II.

9. Following the geological evaluation it will be possible to recommend intelligently a follow-up program. Particular attention should be paid to accurate and thorough sampling to allow a meaningful evaluation.

10. An additional 6 claims should be located to the north and northwest.

11. The present minority interests should be contacted in an attempt to purchase or option the interests to allow full control over title on the property.

12. In the area of the Winslow workings one of the main questions requiring clarification is the reason why the early operators did not drift on the vein to search for more ore shoots on the upper horizons. An examination of the geology on the northerly extension may offer some good reason for this.

4. MINERAL DEPOSITS

A. PROPERTY

Extent

The Winslow Group consists of the following mineral claims, all of which are contiguous except the Alice crown grant, lying about a mile and a half south.

Claim	Record No.	Registered Owner	Assessment or Tax Due Date
Winslow	L8680	Trans-Western Oils Ltd., et al.*	July 1, 1964
Gladhand	L8681	Trans-Western Oils Ltd., et al.*	July 1, 1964
Okanagan	L9127	Trans-Western Oils Ltd.	July 1, 1964
Enderby	L9128	Trans-Western Oils Ltd.	July 1, 1964
Alice	L7440	Trans-Western Oils Ltd.	July 1, 1964
Windslow 6	B2934	W.H. Patterson, in trust for Trans-Western Oils Ltd.	
Windslow 7	B2935	W.H. Patterson, in trust for Trans-Western Oils Ltd.	Nov. 15, 1964
Windslow 8	B2936	W.H. Patterson, in trust for Trans-Western Oils Ltd.	Nov. 15, 1964
Windslow 9	B2937	W.H. Patterson, in trust for Trans-Western Oils Ltd.	Nov. 15, 1964

Claim	Record No.	Registered Owner	Assessment or Tax Due Date
cont.			
Winext #1	4918	W.H. Patterson, in trust for Trans-Western Oils Ltd.	October 25, 1964
Winext #2	4919	W.H. Patterson, in Trust for Trans-Western Oils Ltd.	October 25, 1964
Winext #3	4920	W.H. Patterson, in trust for Trans-Western Oils Ltd.	October 25, 1964
Winext #4	4921	W.H. Patterson, in trust for Trans-Western Oils Ltd.	October 25, 1964
Winext Fraction	4932	W.H. Patterson, in trust for Trans-Western Oils Ltd.	October 25, 1964

* The following interests are held in the Winslow and Gladhand crown granted claims:-

Winslow: Trans-Western Oils Limited (NPL) 28/36th undivided interest

George Neil Bennett)
Fredrick William Bennett) 8/36th undivided interest
Katherine M.M. Bennett)
Sarah Evelyn Bennett)

Gladhand: Trans-Western Oils Limited (NPL) 20/32nds undivided interest

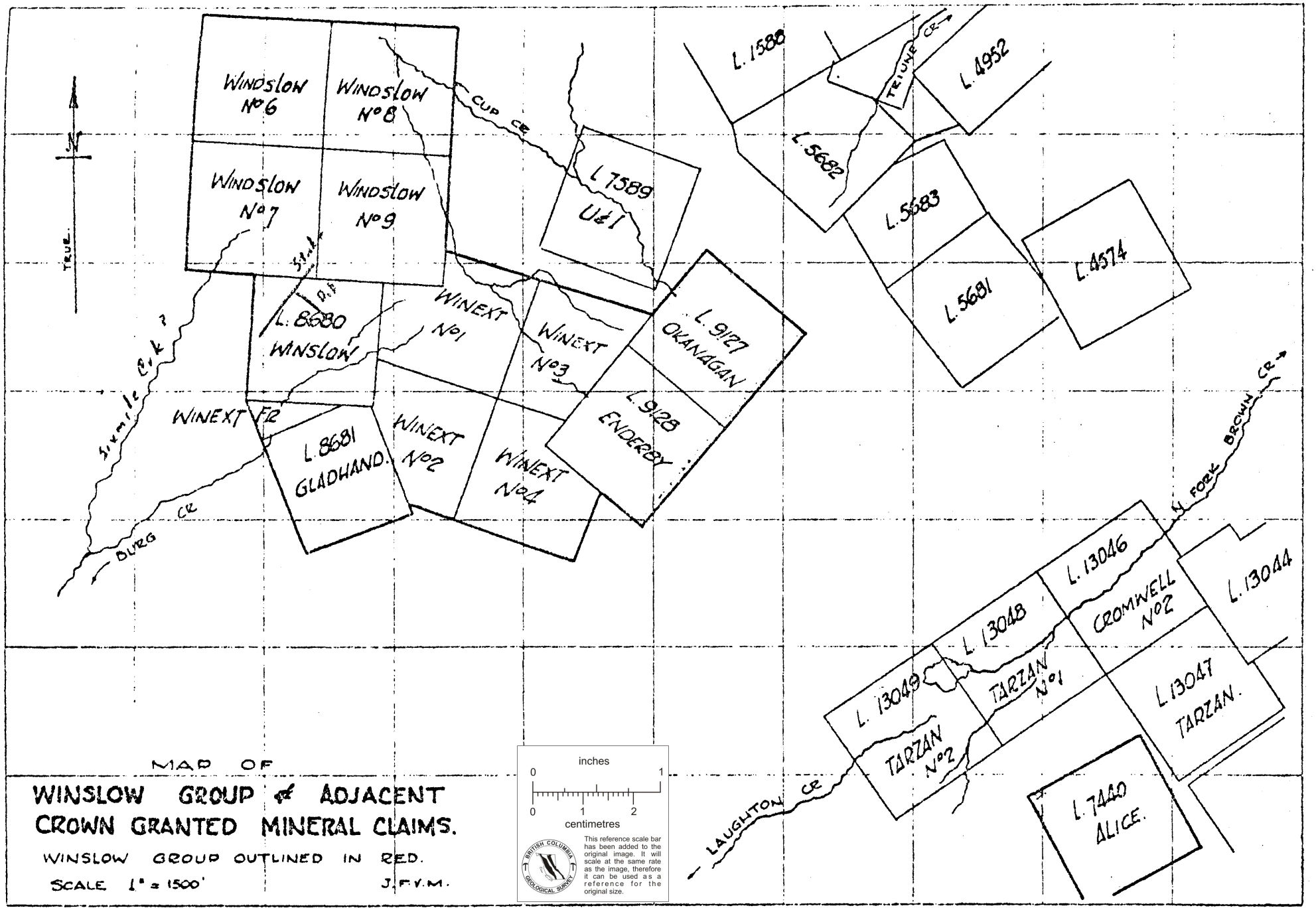
George Neil Bennett)
Fredrick William Bennett) 12/32nds undivided interest
Katherine Bennett)
Evelyn Myers)

Location

The property is located four miles northeast of Trout Lake in the Lardeau District of southeastern British Columbia. The village of Trout Lake lies seven miles northeast and at the north end of the Lake. Revelstoke, a Canadian Pacific Railway divisional point, is the closest town of any size and lies about 56 miles northerly.

The longitude of the claim group is 117°22' W and latitude 50°37' N. Elevations extend from 5500 to 7500 feet above sea level. The main Winslow showing lies from 5800 to 6800 feet above sea level or about 3400 to 4400 feet above Trout Lake.

Ingress and egress for production materials and shipments would depend on the source of equipment for construction and ultimate destination of concentrate from production. Three general routes are available now for concentrate shipment and two access routes are possible for equipment shipping.



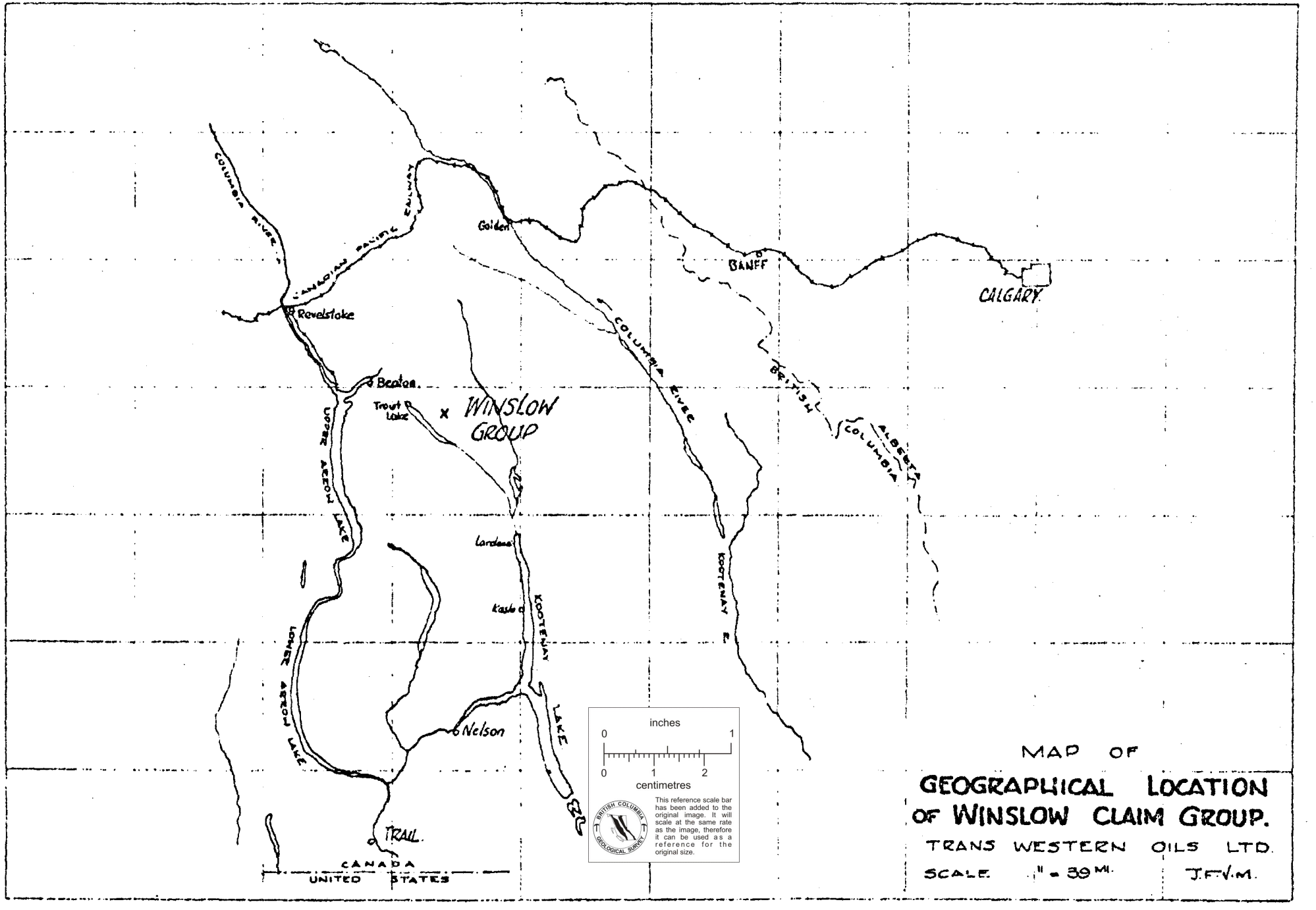
MAP OF

WINSLOW GROUP & ADJACENT CROWN GRANTED MINERAL CLAIMS.

WINSLOW GROUP OUTLINED IN RED.

SCALE 1" = 1500'

J.F.V.M.


COLUMBIA RIVER
CANADIAN PACIFIC RAILWAY
Golden
BANFF
CALGARY
Revelstoke
COLUMBIA RIVER
BRITISH COLUMBIA
ALBERTA
Beaton
Trout Lake
WINSLOW GROUP
UPPER ARROW LAKE
Lardeau
Kaslo
KOOTENAY R.
KOOTENAY LAKE
LOWER ARROW LAKE
Nelson
TRAIL
CANADA
UNITED STATES
inches
0
1
0
1
2
centimetres
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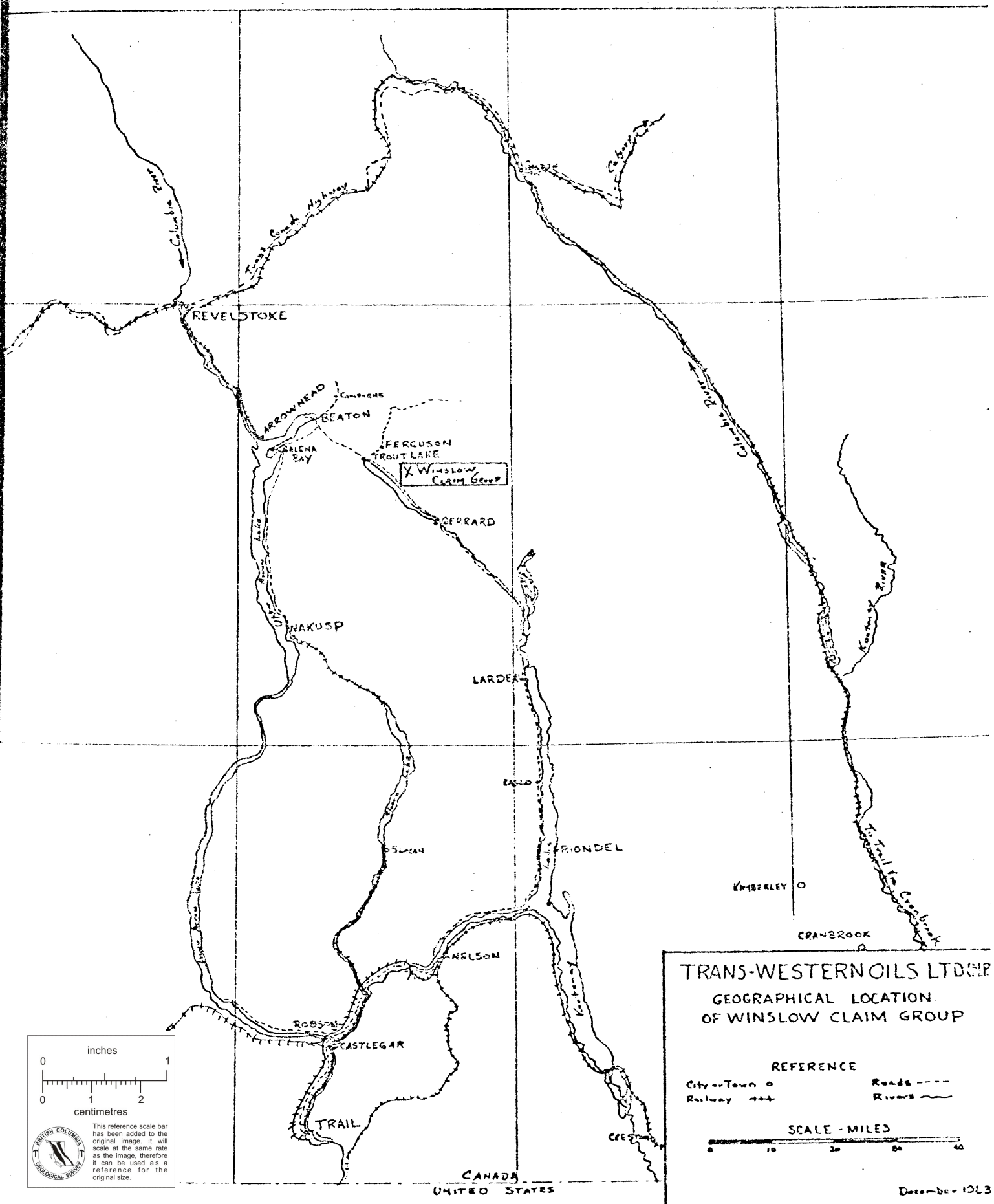
MAP OF
GEOGRAPHICAL LOCATION OF WINSLOW CLAIM GROUP.
TRANS WESTERN OILS LTD.
SCALE 1" = 39 MI.
J.F.V.M.



TRANS-WESTERN OILS LTD.

GEOGRAPHICAL LOCATION
OF WINSLOW CLAIM GROUP

REFERENCE

City or Town o — Roads ----

Railway +++ — Rivers ~~~

SCALE - MILES

0 10 20 30 40

December 1963

inches
0 1
0 1 2
centimetres

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BRITISH COLUMBIA GEOLOGICAL SURVEY

The southern route would involve shipping concentrates by truck directly to Trail via Gerard by gravel road, to Iardeau (33 miles) and to Kaslo (20 miles). A paved road 80 miles long connects with the lead-zinc smelter of Consolidated Mining and Smelting Co. of Canada at Trail, B. C.

An alternative route to Trail would be by truck to Beaton, 19 miles to loading into rail cars on barges. The barges could be towed to Nakusp, a railterminus on a CPR branch line, connected with the CPR Kettle Valley Line and thence to Trail.

For movement west or east, and for access for the purpose of examination, the most convenient route would be via Revelstoke, south to Arrowhead, 32 miles by road. A car ferry connects Arrowhead and Beaton with twice daily ferry service. From Beaton a good gravel road can be followed 18 miles south. From this point, a narrow jeep road extends to within 300 yards of the main workings on the Winslow mineral claims. Foot trails connect the Winslow with the Okanagan-Enderby and Alice mineral claims.

A forestry road constructed several years ago follows the side of Laughton Creek and should be suitable for access to the Alice area for exploration and mapping.

The route via Revelstoke would likely be the best for freight movement into or out of the property.

History

In 1865 four boats journeyed up Columbia River from Fort Caldwell to Goldstream River and French Creek and it is reported that some members of the expedition prospected the head of the Northeast Arm of the Upper Arrow Lake for placer gold.

In 1888 some $4 free milling gold quartz was reported, and by 1889 ten locations had been filed on the river flowing into the Northeast Arm.

In 1890-91 prospecting was reported in the Trout Lake area and in 1895 the True Fissure was bonded and the Silver Cup actively worked.

In July 1899 gold values from an assay on the Eva started a gold rush in the area. For eight years many gold claims were staked and developed. Four or five stamp mills were erected and the town of Camborne grew rapidly. The operations proved unprofitable, partly due to the low tenor of the ores, and partly due to poor management. In 1908 the camp was practically dormant.

The town of Ferguson grew steadily from 1893, due mainly to the Silver Cup and Nettie L mines. In 1903 a silver mill was erected at Fivemile, and is said to have operated for three or four years. It proved unsuitable for the ore and was later destroyed by fire.

Many properties of the camp proved amenable to 'direct shipping' in which a property is mined for the high grade portions, and sometimes aided by hand sorting, a product is shipped directly to the smelter. Generally, it requires an ore with high silver and/or gold values, such as some in the Central Belt, to support the high 'per ton' cost of such an operation.

Property

The Winslow was staked prior to 1904 and most of the development work was conducted prior to 1914.

Shortly after the property was discovered it was explored by extensive trenching and shallow tunnelling. In 1908 the No. 3 level was extended 150 feet with reportedly good results. Although the reports indicate a discovery of fair grade material, there are no shipments reported until 1918. The difficulties in transporting the ore from the property to the distant smelting facilities probably discouraged the early miners. From then until 1933 when the property was leased, very little was done. Shipments were reported in 1934-1938. In 1939 a mill of reported 40 ton a day capacity was installed which ran intermittently from May until the fall of 1940. Labour difficulties for gold mining activities during the Second World War caused the property to be inactive.

Other than various examinations and assessment work, development of the property has remained dormant from 1946 until the present time.

B. GENERAL NOTE

The mineralization found on these properties to date consists of well defined quartz-carbonate veins, some of which are found to cut directly across the schistosity of the rock and some of which lie conformably within the schistosity. The values are mainly in gold with minor silver, both of which are carried by pyrite either disseminated or in lenticular masses in the quartz, with some free gold reported.

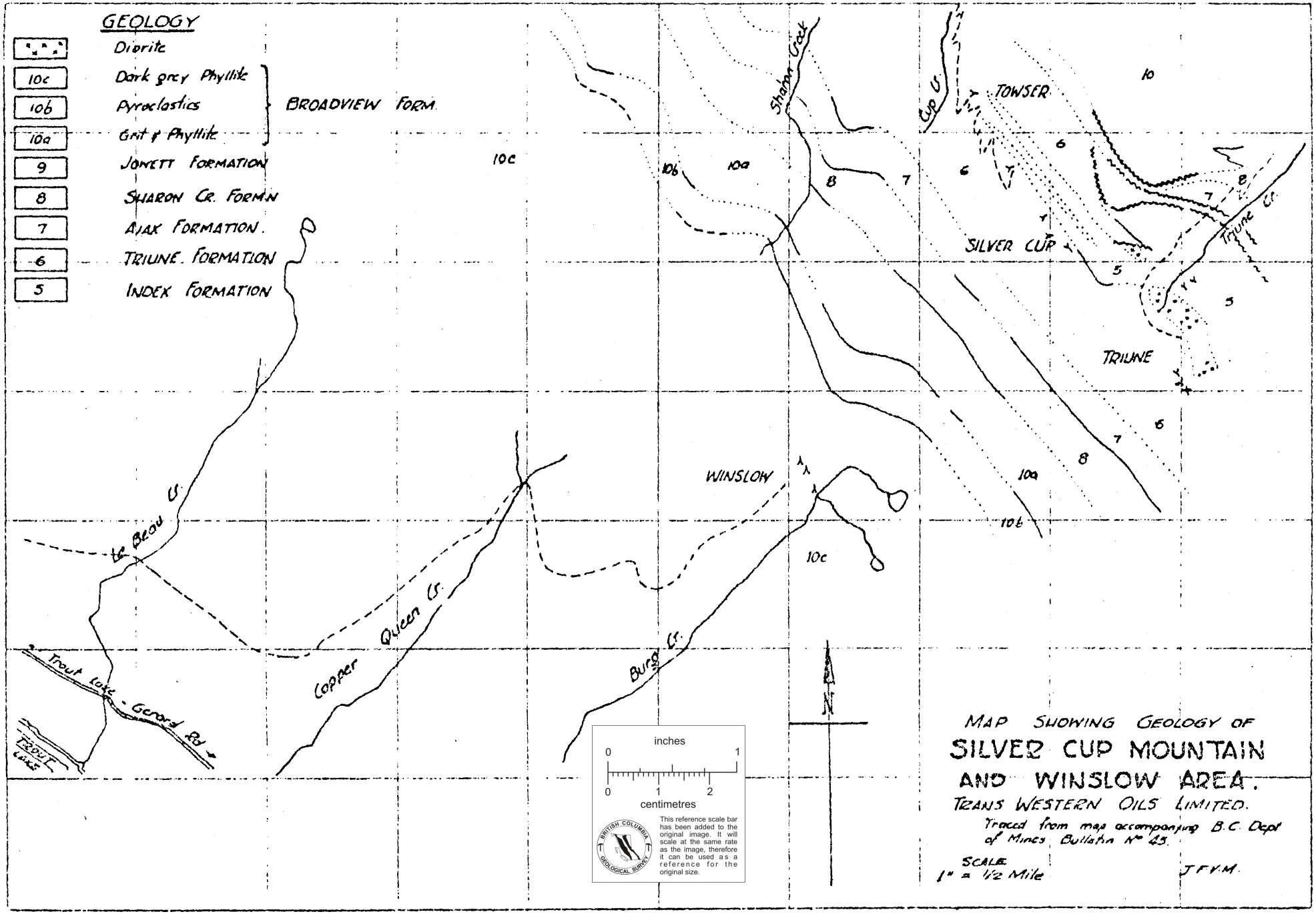
The Winslow Group of claims cover a number of known mineralized veins, of which only three have been explored to any significant extent. The Winslow Vein has a known width up to 12 feet (aggregate width of quartz) and has been explored in five adits. The Okanagan and Alice veins have had considerably less work. Some production has been taken from each.

C. GEOLOGY OF AREA

The Lardeau area is generally considered as that strip of mountainous country extending northwesterly from the north end of the Kootenay Lake to the north end of the Upper Arrow Lake. The Silver Cup mountains to the northeast of Trout Lake form the longitudinal axis of the area.

The southwest side of the area is underlain by granitic rocks of the Kuskanax Batholith. To the northeast an area of granite and gneissic sediments border the area towards the headwaters of the Duncan and Illecillewaet River. Occupying a great synclinal trough between the intrusives and older gneiss are thick sequences of highly deformed sedimentary-volcanic complex, with local small diorite intrusives. The sedimentary-volcanic complex is classified as late Precambrian and are correlated, stratigraphically, to the broad band of Proterozoic sediments extending north from the Pend Orielle area through the Salmo, Kootenay Lake, Bluebell to the Lardeau and have been tentatively traced north along the backbone of the Selkirk Mountains to the Columbia River.

The sedimentary-volcanic assembly has been divided into the following divisions.:


GEOLOGY
Diorite
10c
Dark grey Phyllite
10b
Pyroclastics
BROADVIEW FORM.
10a
Grit & Phyllite
9
JONETT FORMATION
8
SHARON CR. FORM.N
7
AJAX FORMATION.
6
TRIUNE FORMATION
5
INDEX FORMATION
Sharon Creek
Cup Cr.
TOWSER
SILVER CUP
TRIUNE
Triune Cr.
WINSLOW
to Bear Cr.
Copper Queen Cr.
Burgi Cr.
Trout Lake - Gerard Rd
TROUT LAKE
inches
centimetres
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.
BRITISH COLUMBIA GEOLOGICAL SURVEY
MAP SHOWING GEOLOGY OF
SILVER CUP MOUNTAIN
AND WINSLOW AREA.
TRANS WESTERN OILS LIMITED.
Traced from map accompanying B.C. Dept of Mines Bulletin No 25.
SCALE
1" = 1/2 Mile
J.F.V.M.

Milford	Slate, argillite, chert, limestone, pebble conglomerate
Lardeau Broadview	grey, green, grits and phyllite, minor pebble conglomerate and pyroclastic rocks
Jowett	mafic lavas, pyroclastics, argillite, minor limestone
Sharon Creek	dark grey to black siliceous argillite, slate, phyllite, minor grit
Ajax	massive grey quartzite
Triune	grey to black siliceous argillite
Index	dark grey and green phyllite, dark grey argillite, minor limestone and volcanic rocks
Badshot	grey limestone
Hamil Mohican	dark grey and green phyllite, minor limestone
Marsh-Adams	grey, brown and white quartzite, micaceous quartzite, minor phyllite
Mount Gainer	white to pinkish quartzite

The claims at the Winslow are mainly underlain by rocks of the Broadview and Sharon Creek formations. The Broadview, found on the Winslow and Okanagan, consists of a very thick sequence of grey and green unsorted quartzites, grits and phyllites. All rocks are gradational with all or most types found interbedded. The Alice claim is covering rock of the Wharon Creek formation, mainly dark grey to black siliceous argillite, slate and phyllite.

Mineralization is very widespread along three distinct bands or belts that trend roughly parallel to each other in a northwest direction conforming to the long axis of the area, the physiographic mountain and valley systems and are found in the parallel areas of similar geological conditions.

The northeast belt, the Lime Dyke Belt, extends from Duncan Lake northerly to the Incomapleaux River and consists chiefly of galena and sphalerite replacement in limestone. The southwest belt lies along the southwest side of the Lardeau area and immediately southwest of the Trout Lake-Lardeau River valley. The Central Mineral Belt lies along the Silver Cup Mountains and northerly through to Poole Creek on the Incomapleaux River.

Mineralization in theCentral Belt is mainly sulfides in quartz veins. To the northeast side of the ridge of the Silver Cup Mountains the mineralization is mainly silver and lead with minor gold and zinc values. The veins to the southwest side of the Silver Cup Mountains contain more pyrite and the main values are in gold with minor silver values. The silver-lead veins of the Central Belt have contributed the major portion of the production to date in the entire Lardeau area. Up to 5 ounces of silver to the unit of lead were shipped during the initial production.

Most of the productive deposits of the belt are associated with faulting or fracture zones associated with faulting. None of the leads are continuously mineralized, but ore grade mineralizatinn is found in shoots. In the Silver Cup the shoots are narrow and deep, the largest being about 300 feet long and 1200 feet deep. To the north of the belt, the ore bodies mined were relatively long and not too deep. No proof of zoning of minerals has been found in the area but the possibilities are interesting particularly in the Central Mineral Belt.

D. WINSLOW VEIN

The Winslow vein has been traced across the Winslow claim, almost from the south border northerly to the crest of the hill between Burg Creek and Sixmile Creek. The vein has been traced and explored underground for over 400 feet horizontally and over 300 feet vertically. The full width is exposed in only three places. The cross sections show an aggregate width of 12 feet of quartz in two veins separated by 1.5 to 4 feet of schistose material. The vein has an inconsistant strike of between North and N 20° E and a fairly steady dip of 55 - 60° East.

Mineralization is pretty well limited to the single ore shoot mined to date over the 300 foot depth. Mineralization is fairly lean throughout the remainder of the explored section of the vein. This is fairly characteristic of the high grade oreshoots in the Silver Cup - Triune properties a mile or so to the east. The vertical extent of the orebody has not been determined, but it would appear that the Winslow vein conforms to the local type of vein having limited horizontal extent but fair depth possibilities. Pyrite is the main sulfide present with minor amounts of galena, sphalerite and occasionally free gold.

The discovery apparently was made by tracing float up Burg Creek. The vein material at the surface and for a short distance down dip in the oreshoot consisted mainly of iron oxide derived from the oxidation of pyrite with significant amounts of free gold. A heavy water course follows the vein closely at all levels opened to date. This has promoted leaching down to a greater depth than normal for this climatic area and the general geology. The heavy flow of water and sludge from all levels has been sampled and has been found to be auriferous (A. Oakey-personal correspondence).

Gaul reports that he felt that the Winslow vein follows an old fault zone with little or no post mineralization movement and no significant cross faulting. The quartz fills the fissure or fault zone as it crosses the argillaceous and quartzitic schists. (A.J. Gaul, 1936).

Scorgie reports a total of 187038 ounces of gold were extracted from an estimated 400 tons of vein matter milled in the small gravity - amalgamation plant on the property. Reports indicate a probable 40 - 50% recovery in the plant. (MacDougall, 1944)

The gold values are partly present as free gold but more important are associated with the streaks and dissemination of pyrite. The values are limited to distinct shoots separated by low grade sections.

There is a possibility that the ore shoot in the Winslow vein is

partly at least due to the intersecting of the Winslow Vein with a cross vein S78W. Considerable mapping and additional work would be required to supply proof of this.

Development

Over 1000 feet of underground work has been done on this property, by hand methods. At least seven openings have been made, which all but the lower intersected the vein. Two upper openings, obviously the earliest work on the property, were badly caved in 1937. These openings were stoped to the surface over the length of the ore shoot.

Above No. 1 level, the ground surface rises on a steady 25 degrees to the plateau at the summit of the mountain, 7300 feet on strike of the vein.

The upper adit, No. 1A Level, at elevation 6780 feet is driven 178 feet along the footwall of the vein. The first 50 feet have been stoped to the surface. At a point 150 feet from portal, a Y raise has been driven along the footwall section. The left of the "Y" has a length of 32 feet with each upper arm of the raise, 50 feet long. This opening was actively mined during the milling operations of 1939 - 40 and was apparently open during the McDougall examination of 1946. Thehanging wall portion of the vein is exposed in two places on this level and is shown to be about the same average width as the footwall. All but the upper part of the very high grade ore shoot has been left in place.

Forty feet below No. 1A, at elevation 6740 feet, No. 1 Level was driven a reported 62 feet with the last 50 feet on the footwall vein. This section was on the 40 foot high grade shoot and the mined stope extends up from No. 1 Level right through to surface through 1A Level.

Most of the recovery to date originated above No. 1 Level. No. 1 Level was connected by surface tram with the coarse ore bin of the mill, 100 feet lower.

Syndicate records kept by W. S. Scorgie indicate the average of 47 samples from the level and small stopes averaged 0.62 ounces/ton over an average width of 5.5 feet.

At the same horizon as the coarse ore bin of the mill, the third adit, No.2 Level was driven as a crosscut for 160 feet, with a further 80 feet of drift. The vein aggregates between 6.5 and 10.0 feet in width with a similar but less well mineralized appearance than in the upper levels. It is reported (McDougall, 1946) that this level was also caved during 1946. The portal was cleared out and the level drained for access during the fall of 1963. The elevation of No. 2 Level is 6640 feet. An average of samples taken over the 80 feet drift section by the Winslow Syndicate (about 1936-7) returned 0.04 ounces per ton. A survey of geology and workings would indicate the direction in which the ore shoot (of No. 1 and 1A levels) should be located. MacDougall and Scorgie felt that it was probable that it lay to the left or south from the end of the crosscut whereas the 80 foot drift was driven to the right (northerly).

No. 2 Level has a particularly strong flow of water with much iron oxide in solution. The probability of secondary enrichment must be considered.

Gaul, in 1936, reported that the adit was caved and the adit filled with 'muck' and 'iron oxide'. He suggested that the 'muck' contained fine gold and should be washed through a sluice when the level was cleared out. There is no record of this work having been done.

No. 3 Level, approximately 100 feet below No. 2 level at elevation 6540 feet, was driven 300 feet from the narrow valley bottom of Burg Creek as a crosscut to the vein, adit cuts only footwall section as being 52 inches wide. At this point, the vein exhibits some sheeting, massive quartz and light pyrite mineralization. A very heavy flow of water is reported to have discouraged any amount of exploration at this point. The water apparently follows the original fault zone and is therefore closely associated with the vein structure. A sample was cut across the vein at this point during 1936-8 by the Syndicate and returned 0.05 ounces per ton. A report by an engineer reports that the vein intersected is similar to the upper intersections with some banding and disseminated pyrite (Gaul, 1936). A sample taken by W. Scorgie returned $20.65 per ton from this intersection. MacDougall (1946) reported 0.02 ounces per ton ($0.70 per ton).

No. 4 Level, elevation 6240 feet, was driven during 1914 in an attempt to explore the vein at the lowest point practical for an adit opening. The topography is such that the vein cuts obliquely across the valley of Burg creek. No. 4 level was driven from the lowest practical point to provide access to the vein. For additional depth an inordinately long crosscut or a winze would be required. The adit was collared on the Gladhand Mineral Claim very close to the Winslow boundary. The vein was not intersected but MacDougall (1946) estimates a further 100 feet of crosscut would be necessary to reach the projected location of the Winslow vein.

The area of No. 4 level would be ideal for the location of camp, mill and facilities. The completion of No. 4 level and the location of the structure at this horizon would give 'backs' above the opening to No. 1A Level of 500 feet and the total backs to the mountain top above No. 1 A Level of over 1000 feet. Timber is plentiful for mining and construction purposes. Road access would eliminate the more difficult sections of the present upper road.

Reserves

While it would be impossible to consider any Proven Ore Reserve figures at this stage on the basis of the data available, there are several notes that should be recorded.

1. Gaul, in 1936 calculated ore reserves on the Winslow as follows:

(a)	Above No. 1 Adit	2000 tons
(b)	Above No. 2 Adit	18000 tons
(c)	Above No. 3 Adit	12000 tons

Total reserves of 32,000 tons, not fully blocked out. As to grade, Gaul felt that "There is evidence that a grade of 0.4 ounces of gold per ton can be looked for in the ore in its primary state." He does not state what development may be necessary for this tonnage of this grade. There is also little record of what part of this tonnage was removed during the mining, high grading and milling operations of 1938 - 40.

2. For some reason no assay values are given for the hanging wall section of the vein. No stoping seems to have been done, so presumably the footwall ore shoot explored did not extend into the hanging wall veins.

3. The effect of dilution is difficult to assess. Much depends on the values to be expected in the hanging wall vein structure. The intervening 1-1/2 to 4 feet of sheared phyllite would likely have to be mined and removed.

E. OKANAGAN - ENDERBY VEIN SYSTEM

A large number of barren and mineralized quartz veins outcrop on the roughly glaciated gently sloping mountain top between Cup Creek and the Trout Lake slope. Most of the quartz veins have had little attention in spite of the relatively well exposed bedrock. The veins are either bedded in or cross cutting the schistosity of the argillaceous, carbonaceous or chloritic phyllites. Many have small to medium amounts of pyrite with smaller amounts of galena, sphalerite or chalcopyrite.

The general evaluation of the veins of this type in this area appears to be the attitude of the veins as compared to the enclosing rocks. Those cutting across the schistosity are more often of greater continuity and consistency whereas those following the schistosity are often found to be lenticular and variable in strike and dip.

The two veins prospected on the Okanagan-Enderby Section are quite different in attitude and mineralization, but both veins cut the schistosity.

Okanagan Vein - At an elevation of 7700 feet a strong quartz vein has been exposed by natural outcrop, two shallow 14 foot shafts and open cuts for a 200 foot length. The exposure is in a shallow basin on the summit of the mountain. The vein is well defined and well mineralized with pyrite, galena, and sphalerite. The shafts are inaccessible at present but MacDougall (1946) drained the northerly of the two and sampled the vein, and got a fair assay in gold.

1.68 oz/ton Au 1.2 feet

The vein lies in a slight arc with a change in strike from N 10°W (north) to N 33°W (south end) with observed dips of 57 - 65° East. The vein varies over the exposed section from 1.5 to 4.5 feet. The sulfides, mainly pyrite, are irregularly distributed through the quartz.

In an attempt to develop some vertical depth to the structure, a crosscut was started 200 feet south of the southerly shaft and 60 - 70 feet lower. According to MacDougall this would be the maximum practical vertical development by a level opening, that any more depth would require an excessively long crosscut or shaft. This crosscut was stopped some 10 - 20 feet short of the projected vein located for an unknown reason.

According to W. Scorgie, 1944, 200 tons of high grade ore material were stockpiled from the Okanagan ready for milling. In 1940, production reported to be 5 tons with aggregate value of $750 or $150 per ton.

According to the records of the Winslow Syndicate production was 2.77 tons with aggregate gold content of 10.128 ounces or 3.6 ounces per ton.

The following is a list of samples taken by various engineers:

Sampler	Width	Gold Oz.	Gold $	Silver Oz	Silver $
W. G. Wilkins	Grab at shaft	1.03	36.05		
W. G. Wilkins	Grab at shaft	2.71	94.85		
A. J. Gaul	Grab at shaft	2.22	77.70		
A. J. Gaul	3'0"	5.4	189.00	5	6.45
Emmons, N. (Gov't Eng.)	Specimen	13.7	392.00	67.9	87.50
	3'0"	1.9	66.50	2.9	3.74

MacDougall (1946) states that the vein appeared to pinch about 200 feet north of the workings. He also reports that the vein narrows to the south then gradually widens and can be traced for quite a distance. His sampling shows a decline in gold content from north to south between the two shafts.

The 1914 Minister of Mines report makes the following note: (quote)

"The quartz is mineralized with iron pyrites, which occurs both in bunches and as disseminated particles, and was said to be very rich in gold. To determine this, a sample free from quartz was obtained from the surface cuts, and examined for visible gold, without finding any, but on being assayed proved to contain: Gold 13.7 oz., Silver 7.9 oz. An average sample taken across the vein exposed in the prospect shaft over a width of 3 feet assayed; Gold 1.9 oz., Silver 2.9 oz."

Enderby Vein

Another vein on which some minor work has been done is located several hundred feet northwest of the witness post for the southeast corner post of the Enderby claim.

A quartz vein is reported to be 1.5 to 3 feet in width and on a fairly flat dip to the east. The vein is reported to strike N 55°E. A shallow shaft, filled with ice and snow, was sunk on the dip of the vein. Mineralization in dump material shows heavy galena with minor pyrite mineralization.

The following are a list of samples taken by various people:

Sampler	Width	Gold ozs.	Silver ozs.	Lead %
C.M. & S.	Grab from dump	0.065	35.2	33.5
A. J. Gaul	2'	0.04	46.83	43.43
A. J. Gaul	2.5'	0.07	7.3	
A. J. Gaul	14' trench (100' from shaft)	0.012	2.68	

The sampling indicates more important values in silver and lead. The character of the mineralization and vein is more like the Silver Cup structures than the Winslow-Okanagan-Alice structures.

F. ALICE VEIN SYSTEM

The Alice mineral claim is located in the precipitous glacial cirque area of the upper reaches of a northerly tributary of Laughton Creek. The claim is apparently one of the original claims of the Foggy Day Group and is so described in the Minister of Mines Reports. The Foggy Day Claim lapsed and was subsequently relocated as the Sunshine claim. A three mile trail connects the Alice workings and the Winslow mill.

The claim is underlain by the phyllites of the Sharon Creek formation but in the area of the main Alice vein the phyllite shows more deformation than elsewhere. A number of quartz veins, some of which are mineralized to some extent, have been noted on the property. The Alice vein is fairly consistent over the explored length and may be the same vein as that explored on the adjoining Sunshine claim (Foggy Day vein).

Alice Vein

This vein outcrops over a reported (W. Scorgie, 1945) 1500 feet on the Alice and Ellen Fraction mineral claims. The vein has a width of 2 to 5 feet, strike N 7°E with a dip of from 43° East varying to horizontal. The roll that appears on the dip is due to contortion of the enclosing phyllites, although the vein crosses the plane of schistosity. The average dip is 15°E increasing gradually down dip.

Four adits have explored the structure on the Alice and several pits on the Alice Fraction (Ellen Fraction). To the south, another adit on the Sunshine (Foggy Day) has been driven on a similar vein that may be a continuation of the structure in that direction.

The No. 1 Adit, lying to the east and the lowest of the four on the Alice, was driven as a crosscut for 60 feet and a 15 foot drift. The vein at this point has a width of 1.5 feet and shows only modest gold values.

Sampler	Width	Gold oz/ton	Silver oz/ton
B. W. W. McDougall	1.4'	0.01	Trace
B. W. W. McDougall	1.5'	0.05	1.4

The No. 2 Adit, lying 50 feet northwest of No. 1 and 15 feet higher, was driven as a crosscut for the first 23 feet and a drift for another 25 feet. Here the vein has a width of 2 to 2.5 feet. Following are samples from the vein:-

Sampler	No.	Width	Gold oz/ton	Silver oz/ton
B. W. W. McDougall (1946)	1	2.0	0.50	1.15
	2	2.5	1.14	3.40
	3	2.1	1.04	2.40
	4	1.9	0.19	0.20

The No. 3 Adit was driven from a point 25 feet northwest of No. 2 adit and 5 feet higher. The adit follows the vein for its full length of 35 feet. The vein has a width of 1.2 to 2.0 feet and fairly regular 12° dip easterly to the face where the vein rolls sharply to a steeper dip. Samples from this adit are as follows:-

Sampler	Width	Gold oz/ton	Silver oz/ton
B. W. W. McDougall (1946)	1.2	0.30	0.95
	1.9	1.54	2.6
	Grab samples of sorted rejects	3.50	9.80

The No. 4 Adit is the shortest, 12 feet in length, but the highest (5 feet higher and 35 feet northwest) of the Alice workings. The vein has a width of 8 inches at the face on a 10°E dip.

Sampler	No.	Width	Gold oz/ton	Silver oz/ton
B. W. W. McDougall	1	8"	0.40	0.40

These workings are all on the bed of a steep scarp and are at the head of a long talus slide. The cliff face cuts roughly perpendicularly across the vein giving a cross section to the structure. Most of the information in this report came from B. W. W. McDougall's report as only anomalous information is contained in the several other reports read.

Sunshine Vein (Foggy Day Vein)

Adjoining the Alice claim, the Sunshine claim covers the ground originally staked as the Foggy Day claim. The Sunshine vein has a better width but an overall character very similar to the Alice vein and Scorgie reports that the vein can be traced from one to the other. The vein appears to strike more west to east. The shallow dips at the vein would exaggerate the effect on the strike of any slight undulation or slow change in strike.

One adit was driven on the vein in a northeasterly direction as a drift on the vein for 77 feet. The vein varies from 2 - 5 feet in width. At the face the vein steepens from its usual dip of 12 - 20° E to 43° E. The following are a record of samples taken on the structure.

Sampler	No.	Width	Gold oz/ton	Silver oz/ton
B. W. W. McDougall (1946)	1	3.1	1.22	3.40
	2	4.0	0.06	Trace
	3	2.0	0.04	Trace
	4	2.4	0.15	Trace

A number of shipments are recorded from this vein just prior to 1920.

Date	Weight	Metal Content		
		Gold	Silver	Lead
2/11/17	19,500 lbs.	4.3 oz/ton	13.9 oz/ton	4.6%
17/1/18	wt.not given	37.11 "	118.58 "	
15/11/18	18,524	2.96 "	13.7 "	0.3%
7/3/19	wt.not given	27.416 "	126.89 "	56 lbs.

There does not seem to be any way of telling from which opening the shipments originated but at least a portion came from No. 3 adit on the Alice. A small pile of rejects remain at the portal from a sorting operation. Assays of sacked ore remaining at the property are as follows:-

No.	Gold	Silver
1.	1.90 oz/ton	6.00 oz/ton
2	2.70 "	17.60 "

A grab sample of rejects returned the assays of 3.5 oz/ton and 9.8 oz/ton. These could be considered as picked specimens.

5. DISCUSSIONS OF POSSIBILITIES

General

The properties and in particular the veins have never been subjected to any analytical geological work. No geological study has been made of the various openings that might answer some of the more obvious pertinent questions concerning distribution of values, origin of values, etc. No surveying has ever been done to connect any underground work. There has been no diamond drilling to investigate either values, distribution or structure.

The structure on which the major amount of work has been done and with the greatest potential is the Winslow vein. The Okanagan-Enderby and Alice veins could contribute some high grade to a mill but offer little indication that they could sustain a milling operation by themselves.

Winslow Vein

The Winslow vein has shown an excellent consistancy over the presently explored section. The size of the vein is such that mining costs would be reasonable and tonnage could be developed fairly rapidly. From the available information it appears that the lower level exploration is quite possibly well away from the downward extension of the 'ore shoot' mined in the upper levels. It is probable that the grade would be lower due to the reduction of surface enrichment.

The overburden masks most of the area on strike of the vein and the present workings explore a fairly small portion of the possible dimensions. The lowest, No. 5 adit, is aimed to explore the vein approximately 1000 feet below the outcrop, and is collared in an excellent location for mill construction, access and availability of water and timber.

It is possible that any ore bodies developed will be fairly short in lateral extent but may have fair vertical extent. The very high values of the upper part of the vein was probably due to secondary enrichment and it would be unlikely to expect ore of that tenure at depth.

The property warrants a sincere effort to assess the potential of the deposit.

The object of the initial exploration should be to investigate the general surface area at the property geologically and to explore the main Winslow vein in terms of this geological information. In general, the mining and metallurgical problems of the structure and material should be nominal.

Okanagan-Enderby Vein

The values are apparently fairly 'spotty' in the Okanagan vein and the vein itself is reported to lack continuity. The location of the property precludes exploration until late summer and would hinder production. The topography is such that to develop any depth on the vein an extremely long crosscut or shaft would be required.

The property warrants surface prospecting and a study of geology. At some time in the future it may be possible to recover some tonnage of high grade for milling.

Alice Vein

The property is located in very difficult country and at a high elevation. Although the Alice-Foggy Day vein has an apparently considerable length, it lies at a very difficult attitude for its width. It is very difficult to assess the values that may be found within the vein. It would also be very difficult to explore the vein by other than underground work. This would be expensive speculation work, due to location.

6. SPECIFIC CONDITIONS AFFECTING ECONOMICS

Transportation

The transportation problem will be somewhat minimized as it is probable that cyanide would be used to recover the gold values with the resulting gold brick recovery. It could be that a small percentage of sulfide would require shipping in concentrate form.

Sunshine Lardeau Mines Ltd., operating at Comaplix (five miles east of Beaton) shipped lead and zinc concentrates by truck to Nakusp, where the truck boxes were shipped to Trail, with the truck picking up the empty box on its return.

Mining Methods

The structure should present very little problem to mining. The dip of the vein is ideal for gravity mining. The width of the vein is sufficient to allow moderate cost of operation. It is probable that shrinkage methods would be satisfactory.

One problem that may offer some difficulty or increase in the operating cost, is that of the soft sheared phyllite lying between the two parts of the veins. The extent of the problem depends upon the values found in the upper vein (hanging wall section). The water problem might be expected and reduced by drilling and draining.

Power

It is unlikely that sufficient hydro-power would be available for development close to the Winslow. Although there is quite a flow and considerable head available in several creeks, the fluctuation of flow is too great. The possibility exists that in the future the power resources of the Duncan River - Trout Lake system will be developed.

At the present time, diesel power would be necessary.

Topography

The area is considered rough and mountainous. The Silver Cup Mountains form a part of the Selkirk chain. The deep main glacial valleys provide adequate access to most of the area. The subsidiary drainage is consequent and steep with most creeks originating in glacial cirques and flowing down hanging valleys. The valley of Burg Creek is deep and has a steep gradient but the headwaters are quite regular.

Cognizance of the problems associated with operating in such a country can minimize the adverse features and allow operators to capitalize on the favourable features.

CLIMATE

The annual precipitation at Ferguson is 49 inches which includes the water from 22 foot snowfalls. At the Winslow, 4000 feet above Ferguson, the annual precipitation is given as 58 inches and 34 feet of snow.

The area generally is considered a 'snow belt' having early snows and snow remaining to late in June on the upper slopes.

Temperatures are not severe in winter, with Trout Lake open until late in the year.

Year around underground operation is quite practical with proper preparations and facilities. Snow plowing of access roads regularly, and generally daily, is probably necessary.

Chemical Analysis

A chemical analysis of the direct shipping ore is as follows:

Au	0.61 %
Ag	0.8
S	0.8
SiO_2	94.7
Fe	2.3
CaO	0.3

7. GENERAL CONDITIONS AFFECTING ECONOMICS

Vegetation

Timberline is about 7000 feet with several balsam, juniper and alpine groves found on the rounded summits.

Commercial timber is found from Lake level up to about 5000 feet. Varieties include cedar, fir, spruce, pine and hemlock. Above 5000 feet hemlock and balsam predominate.

Ample timber for a mining operation can be obtained locally. Construction lumber and timber would be available from a large mill located at Arrowhead.

Labour

Some local labour would be available from the Beaton area where the Sunshine Lardeau Mines Ltd. operated. Although these men could form the nucleus of a la force, general labour would have to be imported.

Water

Burg Creek would have sufficient water for any probable mining and milling operation.

Communication

As the area is not serviced by telephone, it would be necessary to employ a radio telephone system tied to the Revelstoke exchange of the B. C. Telephone system.

JAMES MILLAR & ASSOCIATES LTD.

"J. F. V. Millar"

J. F. V. Millar, P. Eng.

December 11, 1963.

JFVM/gs

APPENDIX 1

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	Year	Page
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	1906	138
	1908	101
	1909	101
	1911	154
	1914	309
	1933	216
	1934	426
	1938	A 35
	1939	A 38, 78
	1940	25, 64
	1941	26, 62
Okanagan, Enderby		
	1914	310
	1915	450
	1918	156
Alice (Foggy Day)		
	1917	165
	1918	157
	1921	101
	1922	217
	1923	234
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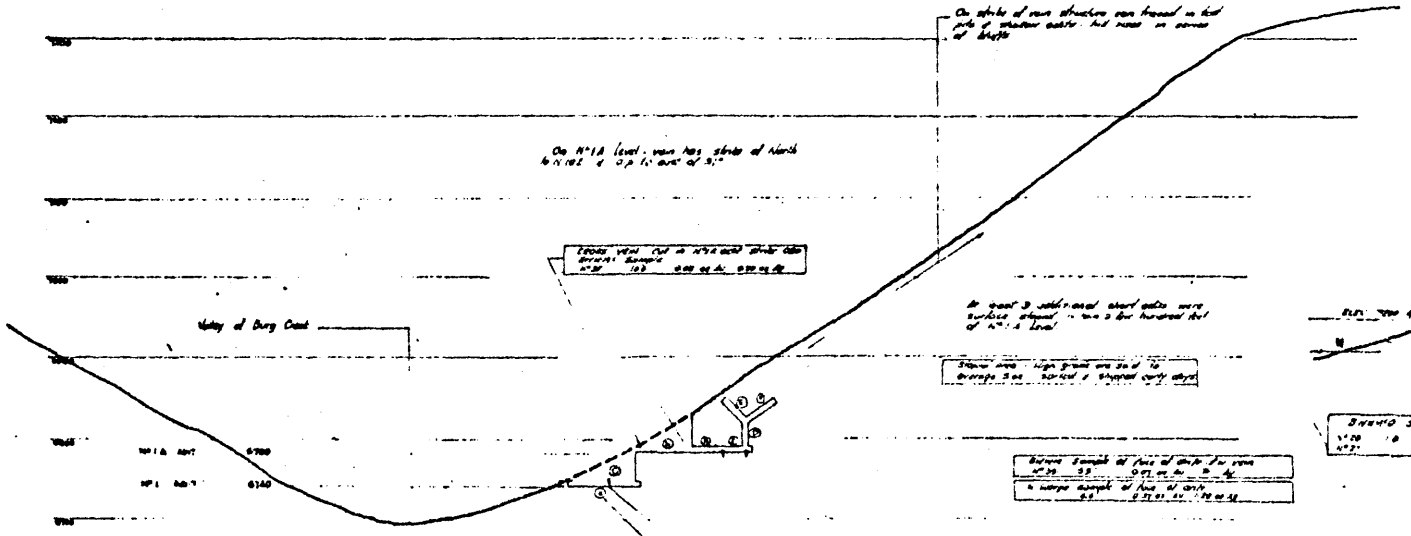

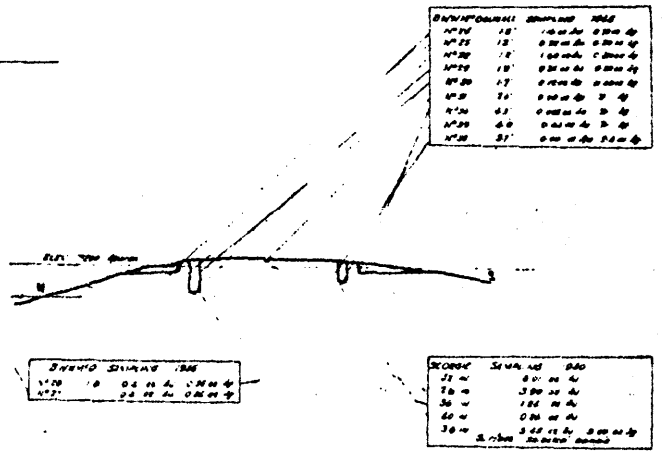

SCHEMATIC SECTION

WINSLOW VEIN WORKINGS

SCHEMATIC SECTION OF

OKANAGAN M.C.

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