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REPORT
ON
STAVE LAKE MINING PROPERTY
NEW WESTMINSTER MINING DIVISION
BRITISH COLUMBIA

by

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Western Resources Consultants Ltd.

White Rock, B.C.

October, 1972.

Prepared For

Jason Explorers Ltd.

and

Western Exploration Company, Limited

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INTRODUCTION

General Statement.

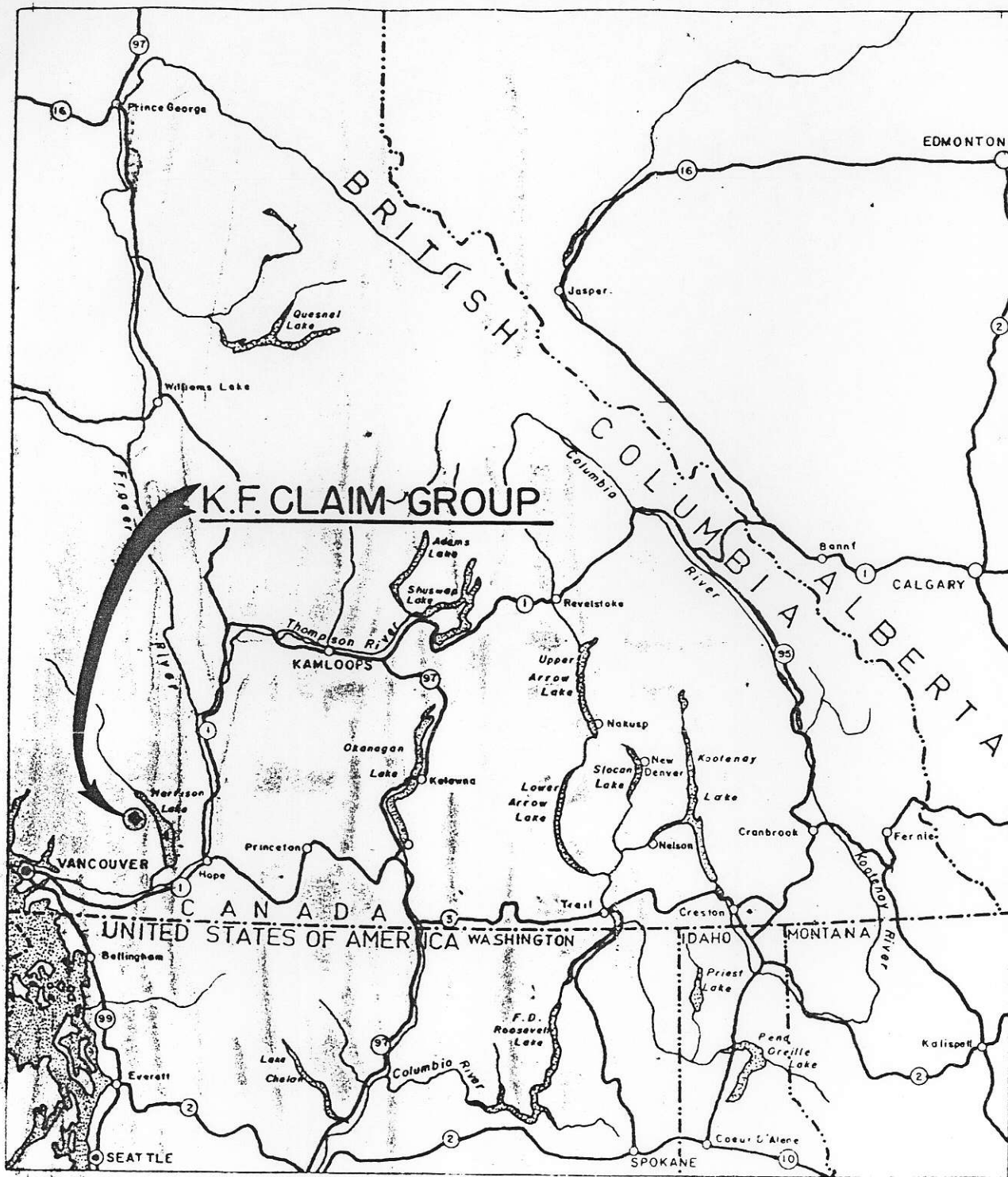
The following report on the Stave Lake copper-molybdenum property has been prepared at the request of Jason Explorers Ltd. and Western Exploration Company, Limited, co-optioners of the property and both of Vancouver, B.C.

The review includes brief discussions of the location, access, history and geology of the property with emphasis placed on the results of a geological examination and surface trenching program conducted by Western Resources Consultants Ltd. during the period August 21 to September 6, 1972.

The report is based upon the writers' experience on the property and upon maps and reports made available by Canex Aerial Exploration Limited. Canex conducted exploration on the claims during the summers of 1969 and 1970.

Location and Access.

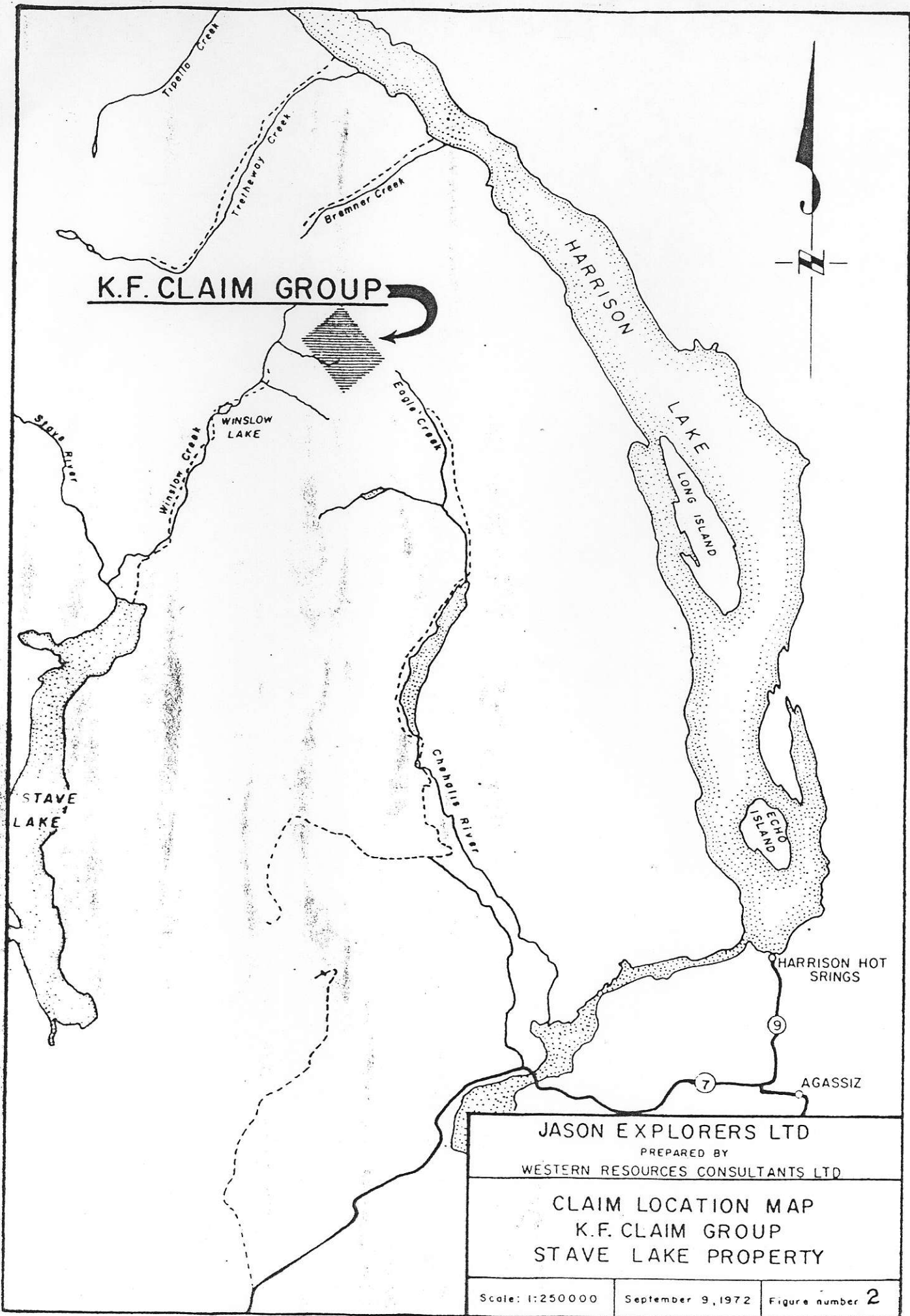
The Stave Lake property is located some ten miles northeast



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LOCATION MAP
 K.F. CLAIM GROUP
 STAVE LAKE PROPERTY

Scale: 1 inch = 64 miles September 9, 1972 Figure number 1



K.F. CLAIM GROUP

STAVE RIVER

Tipallo Creek
Trainway Creek
Bremner Creek

WINSLOW LAKE

Winslow Creek

Essie Creek

HARRISON LAKE

LONG ISLAND

STAVE LAKE

Chaholis River

ECHO ISLAND

HARRISON HOT SPRINGS

9

7

AGASSIZ

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CLAIM LOCATION MAP
K.F. CLAIM GROUP
STAVE LAKE PROPERTY

Scale: 1:250000 September 9, 1972 Figure number 2

of the north end of Stave Lake which, in turn, is situated north of the Fraser River and approximately fifty miles from the City of Vancouver, B.C. (figures 1. and 2.) The property, which consists of 30 contiguous located mineral claims (KF Nos. 1-30), covers the only known mineral occurrence in the immediate region.

Access to the claims is by helicopter as there are at present no roads leading in. A Jet Ranger 206-B machine, flying from the airfield at Mission, B.C., was utilized for the program described herein. The existing logging roads in the area could be used to shorten the air ferrying of material in a more prolonged job. One such road, the Chehalis Lake-Eagle Creek road, leads to within four miles of the showing. A less satisfactory alternate route is up Stave Lake by barge to the Warnick camp and thence by logging road to Winslow Lake which lies approximately three miles to the southwest of the property.

A small, fixed-wing craft air field at the Warnick camp is located within one day's walking distance of the property and can be used for emergency access.

Topography and Vegetation.

The Stave Lake showing is located on the north side of a cirque which lies at the head of the third major west flowing

tributary of Winslow Creek. Mineralized rock outcroppings occur between elevations of 5100 and 6000 feet. The mountainous terrain of the area is typical of the Coast Range with glacier-scoured slopes and steep cliffs. The mineral showing lies mainly above treeline although the more recently discovered western extensions are largely hidden by soil and vegetation, outcropping only in snowslide chutes and creek beds. Slopes across the showing vary from 20 to 40 degrees.

Adequate water for mining and camp purposes is available from the numerous snow-fed streams which drain the slopes. Weather in the region is moderate although often foggy during the summer months. It is estimated that the mineral deposit is largely snow covered from early October to mid-June of each year.

History.

The Stave Lake copper-molybdenum occurrence was first discovered in 1969 by Mr. L. Kiss who blasted and sampled several test pits on the showing. Canex Aerial Explorations Limited, encouraged by the assay results of this work, mapped the geology of the property and tested the central section of the occurrence by drilling seven N.Q. diamond drill holes (total

TRENCH NO. 1

%CU	%MOS	%CU	%MOS
0.17	0.02	0.13	0.04
0.11	0.03	0.20	0.08
0.16	0.07	0.23	0.16

SAMPLES TAKEN BY
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KF-4

TRENCH NO. 2

%CU	%MOS	%CU	%MOS
0.26	0.07		
0.09	0.17		
0.10	0.28		
0.09	0.19		
0.17	0.05		
0.23	0.03		
0.25	0.05		
0.23	0.04		

KF-3

KF-2

ODDH627

KF-1

SAMPLES TAKEN BY
WESTERN RESOURCES CONSULTANTS LTD.

%CU	%MOS	%CU	%MOS
0.37	0.03	0.39	0.14
0.12	0.01	0.18	0.04
		0.37	0.04
		0.20	0.01
		0.47	0.13
		0.58	0.07
		0.27	0.01
		0.40	0.01
		0.65	0.02
		0.90	0.02
		0.56	0.02
		0.74	0.02
		0.83	0.03

TRENCH NO. 3

M-3

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TRENCH LOCATIONS & ASSAYS

Note: This drawing is based on a map prepared by Canex Aerial Exploration Ltd. (File no. V-123, Fig. 3) and modified by Western Resources Consultants Ltd.

ODDH 142

Scale: 1" = 100'

September 9, 1972

Figure no. 4

3,652 feet) in 1970. Canex subsequently allowed their option to drop and the property remained idle until acquired in the summer of 1972 by Jason Explorers Ltd. and Western Exploration Company, Limited.

GEOLOGY

Regional Setting.

The Stave Lake deposit is in the south central Coast Range in an area underlain by the Mesozoic Coast Crystalline Belt which was mapped and studied by Roddick (1965). Roddick divided the plutonic rocks in the region into granite, granodiorite, etc. and then subdivided them on the basis of mafic content. The rocks outcropping on the Stave Lake claims are included in his prefix "h" series which consist of rocks with hornblende as the predominate mafic mineral. The quartz diorite stock, which forms this series, is approximately ten miles long and five miles wide and trends in a northwesterly direction. The adjacent rocks to the north, the west and the south consist of separate plutonic phases while the Jurassic "Fire Lake Group" of meta-sediments abuts to the east.

Numerous north or northeasterly trending lineaments, probably representing faults, are evident through and near the

property but their significance to the mineral occurrence, if any, is unknown.

Local Geology.

The Stave Lake mineral deposit is contained within an h-quartz diorite phase of the Coast Range plutonics. Quartz diorite and a porphyritic granodiorite are the two major rock types. The granodiorite is of limited and seemingly erratic distribution. The quartz diorite is a light grey weathering, medium-grained, subhedral-granular rock which, according to E.J. Standen (Canex report) has the following composition: plagioclase (30.7%), hornblende (4.0%), biotite (2.5%), quartz (30.7%), potassium feldspar (24.5%).

The rocks outcropping on the property are relatively fresh with little alteration evident megascopically. Standen noted, however, that on a microscopic scale hornblende and biotite are altered to chlorite and the more calcic zones in the plagioclase are saussuritized. It can be observed that the mafic minerals immediately adjacent to and in the mineralized fractured have been weakly chloritized and also that discontinuous silification along the fractures is present. The one to two inch thick alteration halos which envelop the fractures are readily evident due to resistant ridges, dark colouration and brownish

limonite stain. No sericite is visible megascopically.

There are two varieties of dykes present on the property. The aplite-pegmatite varieties trend east-west, are near vertical and vary from one half to six inches in width. The brown andesite dykes trend in a north-south direction and reach widths of three feet. Neither dykes show any association with the mineralization.

Mineralization.

The principal minerals of interest on the Stave Lake property are chalcopyrite, bornite and molybdenite. The associated minerals present are limonite, malachite, azurite, powellite, scheelite and ferromolybdate. Pyrite is absent from the mineral assemblage. The economic minerals are associated with a set of fractures which strike 110 to 115 degrees and dip steeply north at 65 to 75 degrees. The sulphide mineralization occurs in narrow quartz veins (hairline to three inches wide), as coatings on fractures and to a minor extent as disseminations between the fractures. Locally biotite forms the fracture filling and the associate for the sulphides, particularly with the chalcopyrite and bornite.

Canex mapped the distribution of the mineralized fractures on the basis of the number of fractures per ten foot interval. The accompanying map shows three arbitrary divisions--less than

five fractures per ten feet, five to ten and greater than ten (figure 3).

EXPLOATION RESULTS

Three zones of "10 plus" fractures per ten feet were defined by the Canex mapping in 1970 (figure 3). Each of the east-west trending zones is approximately 200 feet in width and is separated from the other parallel zones by some 150 feet of less well mineralized material. The trenching which was conducted in different sections of these zones in 1969 yielded the following average assays (figure 4).

<u>Trench No.</u>	<u>Width</u>	<u>Weighted Average Assays</u>	
		<u>Cu %</u>	<u>MoS₂ %</u>
1	30	0.19	0.19
2	80	0.18	0.11
3	130	0.50	0.05

In 1970 Canex carried out a diamond drilling program to test the central area of the three zones at depth. It consisted of seven N.Q. holes totalling 3,652 feet. The north zone was tested by one hole and the middle and south zones by three holes each (figure 3). In general, the drilling did not reflect the better mineralization that is apparent on surface.

The average assay results for the total of each of the holes drilled are tabulated below:

<u>Hole No.</u>	<u>Intersected Width Ft.</u>	<u>True Width Ft.</u>	<u>Average Metal Content</u>	
			<u>Cu %</u>	<u>MoS₂ %</u>
1	497	326	.065	.001
2	213	175	.024	.002
3	802	520	.053	.013
4	502	438	.080	.009
5	532	450	.036	.010

1972 PROGRAM

Western Resources Consultants Ltd., on behalf of Jason Explorers Ltd., and Western Exploration Company, Limited, conducted an exploration program on the Stave Lake property during the period August 21 to September 6, 1972. Two men were employed drilling and blasting shallow trenches across sections of the south zone in order to expose unoxidized surfaces for sampling. A total of 440 lineal feet of trench, averaging three feet wide by two feet deep, was blasted. The writers check mapped the zones, prospected the unmapped fringes of the mineralized area, check sampled sections of the Canex trenches, examined the diamond drill core which is stored at the camp site and channel sampled

the walls of the new trenches. The program was designed only as an assessment examination, as the property had not been previously visited by representatives of either Jason or Western Explorations.

The check mapping was found to closely correlate with that done by Canex. Although the precise contacts are somewhat arbitrary, the three "10 plus" mineral zones mapped by Canex are quite distinct and do form recognizable units. The immediate fringes of the mineralized area are largely masked by the presence of either overburden or snow. However, two distinct and separate bands of "10 plus" mineralization were found outcropping in creek beds to the southwest of those shown on the Canex maps (figure 3).

Check sample assays showed a reasonable correlation with those taken by Canex in 1969 (figure 4).

<u>W.R.C. Ltd. Check Sample Assay</u>		<u>Equivalent Canex Assay</u>	
<u>Cu %</u>	<u>MoS₂ %</u>	<u>Cu %</u>	<u>MoS₂ %</u>
0.17	0.08	0.13	0.04
0.21	0.05	0.20	0.08
0.16	0.02	0.23	0.46
0.32	0.03	0.39	0.14
0.12	0.01	0.18	0.08

The trenches excavated by Western Resources Consultants Ltd. are located so as to cross-cut the south mineral zone in three separate sections (figure 5). They do not, however, represent the true width of the zone as the trench locations were, to a degree, limited by topographic features.

The west trench across 55 feet of zone averaged: 0.54% Cu and 0.09% MoS₂. The width of zone in this area is partially covered by rock talus.

The middle trench, located 150 feet to the east of the west trench averaged: 0.63% Cu and 0.07% MoS₂ across a selected width of 69 feet.

The east trench, located 400 feet east of the middle trench, averaged: 0.24% Cu and 0.02% MoS₂ across 48 feet.

CONCLUSION

The central section of the Stave Lake mineral showing is very well exposed at the surface. At the time of examination, rubble and snow covered only 20% of the mineralized area. The readily apparent character, extent and relative uniformity of the mineralization over a large area of the surface constitutes an impressive mining prospect which gives every indication of

justifying intensive investigation. The over-all dimension in which mineralization has been found is some 5,000 feet long and 2,000 feet wide. To the east the zones are covered by glacial debris and snow. The nearest accessible rock outcroppings in this direction are approximately one mile away in the valley slopes of Eagle Creek, which were not examined. To the west the mineral zones trend into an area covered by overburden and vegetation with showings intermittently exposed in creek beds. The two parallel zones which were found in 1972 lie to the southwest of the central section, suggesting an overall en echelon pattern to the structure. In addition mineralized float which was found above the zones indicates the possibility of parallel zones to the north although in situ sulphides were not located in the more rugged peaks which lie in this direction.

The mapping done by Canex appears accurate and representative of the fracture count on the property but fails to take into account the aggregate amounts of mineral in those fractures. Locally, widely spaced but wider fractures were found to contain more sulphides than denser numbers of narrower fractures in another area of equivalent size. Check sampling of the Canex surface samples together with assay values in the new trenches

confirm, in general, the surface grades suggested by the initial Canex work.

The results of surface diamond drilling done by Canex in 1970 are difficult to reconcile with the indicated surface grades. Although located so as to intersect projections of the better zones which are apparent on surface, the drill holes do not reflect the surface grades. Core recovery in the competent quartz diorite was good with several of the holes recorded as having no lost or ground core. There is no record of sludge collection in connection with the drill program. An inconsistent feature of the drilling is the marked lack of quartz veining preserved in the core. This veining is a very pronounced characteristic of the surface rock overlying the holes. Fracture coatings, hair-line crack fillings and disseminations rather than quartz vein associations are the strikingly predominate mode of sulphide occurrence in the core. It is entirely possible that this relative absence of quartz veining in the drill core may have resulted from the shattering and grinding of the brittle quartz and accompanying sulphides with the resultant loss of this material. If this were the case, the drill hole assays would not truly represent the grade of the mineral zones which were cored.

If one can, to some degree, discount the assays from the diamond drilling program, then the results of the Canex surface exploration work, substantiated by the program described herein, suggest the presence of sizeable areas on the Stave Lake property with grades comparable to that of similar deposits which, at present, sustain commercial mining operations. It is concluded by the writers that the property warrants a more thorough and extensive investigation.

RECOMMENDATIONS

It is recommended that Jason Explorers Ltd. and Western Exploration Company, Limited, conduct further surface exploration work on the Stave Lake property before additional drilling is contemplated. The primary purpose of this work should be to confirm or, to a degree, discredit the diamond drill results from the 1970 Canex test project.

This end can be best achieved by a program of bulk sampling designed to correlate the assay results of large volume samples with those from the drill holes. Due to the restrictions of helicopter access and the resultant difficulty and expense of utilizing heavier equipment for the purposes of acquiring and

processing samples, the following method is proposed:

1. Bench deep slot trenches in cross sections over and in the same line as the diamond drill holes. Trenches should be four to five feet in depth so as to penetrate the zone of unoxidized mineralization. In sections where topography makes open trenching impractical, short slusher cross-cuts could be driven.
2. Collect the broken muck from these workings in units of five foot advance. Crush and riffle this muck to 100 pound samples which can be flown out for assay.

In addition to the above bulk sampling program, further shallow sample trenches should be excavated and channel sampled at systematic intervals across the established mineral zones of the property.

The assay results from the bulk sampling, the surface trench sampling and the existing diamond drilling should be compared and reconciled before more extensive test drilling, either percussion or diamond drill, is carried out.

In conjunction with the above program the fringe areas of the known and established mineral deposit should be more thoroughly

prospected and locally mapped geologically. Both the east and west projections of the zone are open to extension and the parallel margins to the north and south are also potentially mineral bearing. Further regional prospecting with stream sediment sampling appears to also be warranted. This phase of the program, in order to increase efficiency, should be supported by helicopter.

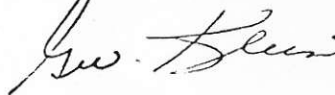
The size of the Stave Lake deposit and the scope of the program which will be required to fully assess it would indicate that Jason and Western Exploration should consider acquiring a partner in the venture with greater access to the technical specialization and resources necessary in the appraisal.

Respectfully submitted,

WESTERN RESOURCES CONSULTANTS LTD.



J.D. Guild, B.Sc.



G.W. Klein.