

REPORT
ON
KETZA RIVER PROPERTY, YUKON
FOR
SILVER KEY MINES LTD.
&
STUMP MINES LTD.

July 1, 1968

Alan R. Archer

Consultant

Whitehorse, Yukon

Silver Key Mines Ltd. and Stump Mines Ltd. together control a contiguous block of 225 unpatented mineral claims or approximately 16 square miles of property near the headwaters of the Ketzka River, Yukon Territory. The property is well located with respect to existing and planned transportation routes. An access road 24 miles long connects with the main Watson Lake - Ross River Highway. An excellent townsite location with more than adequate water and timber is found near the centre of the property.

Over 20 separate silver-lead veins have been found throughout the property and more are indicated by mineralized float in road cuts. The most continuously mineralized structure, the A zone, has been explored by bulldozer trenching, drilling and drifting. Trenching has indicated an 810 foot length of mineralization grading 24.9 ounces silver per ton and 22.2% lead. Drifting about 120 feet below surface has proven continuity of mineralization but over a narrower width and consequently a lower grade. Of the 664 feet drifted to July 1, 1968, the best section averages 15.3 ounces silver per ton and 10.3% lead over a 4.0 foot width for a length of 192 feet.

The excellent exploration potential of the property and proven continuity of mineralization in the A zone combine to indicate the Stump-Silver Key property has the potential for a profitable mining operation. A vigorous exploration and development program at a total cost of \$510,000.00 is recommended. This program includes additional drill and drift development of the A zone, underground development of the Lap 10 zone where surface trenching indicates 410 feet grading 35 ounces silver per ton and 38% lead over a 3.5 foot width, and geochemical sampling of the property followed by bulldozer trenching of anomalous areas.

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INTRODUCTION

The writer is familiar with the Silver Key Mines Ltd. and Stump Mines Ltd. property in the Ketzka River area, Yukon, having supervised their exploration since late 1966. Information for this report is derived from the writer's personal observations on numerous trips to the area, data submitted by both companies and Geological Survey of Canada Map 7 - 1960.

PROPERTY

The property consists of 188 wholly owned unpatented mineral claims and 38 optioned unpatented mineral claims that together form a single sub-rectangular block. The claims are registered at Watson Lake, Yukon Territory, and were all in good standing as of July 1, 1968. A summary of the claims and ownership is as follows:

Silver Key Mines Ltd.

Wholly owned

<u>Claim Name</u>	<u>Number of Claims</u>
Key 1 - 37	37
Key Fr. 1 - 5	5
Jan 1 & 2	2
Lap 1 - 21	21
Pex 1 - 11	11
North Key 1 - 16	16
Angel 1	1
Mona Fr. 1 & 3	2

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Mona 4 - 6	3
Lucky 1 - 8	8
Tor 1 - 15 & 17 - 24	23
Tor Fr. 16	<u>1</u>
total-----	130

Optioned claims

Rusty 7 - 8 & 24 - 39	18
Cap 1 - 15	15
Don 6, 8, 13 & 15	4
Cap Fr. 1	<u>1</u>
total-----	38

Stump Mines Ltd.

<u>Claim Name</u>	<u>Number of Claims</u>
Eva 1 - 24	24
Tip 1 - 15, 24 - 26	18
Marion 1 - 16	<u>16</u>
total-----	58

Silver Key Mines Ltd. retain a 10% assessable interest in the Tip 1 - 15 and 24 - 26 claims.

LOCATION AND ACCESSIBILITY

The property is located 120 air miles northeast of Whitehorse, near the headwaters of the Ketz River. Access is by 24 miles of tote road turning south from the Watson Lake-Ross River road eleven miles southeast of Ross River Settlement. Ross River Settlement is connected to Johnson's Crossing on the Alaska Highway by the all-weather Canol road. A bush air strip, suitable for winter

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use only, is located near the center of the property.

Road access to Whitehorse via Ross River Settlement and Carmacks will be available in the summer of 1969. This road is being rushed to completion as part of a government aid program to assist Anvil Mining Corp. in bringing its Faro ore body into production. Total road distance from the property to Whitehorse via this improved route will be 260 miles.

An excellent townsite location with more than adequate water and timber is found near the center of the property at the junction of Cache Creek and the Ketzza River.

HISTORY

The first discovery of silver-lead mineralization was made in 1946 by prospectors working for Hudson Bay Mining and Smelting Co. Further discoveries in 1954 attracted Conwest Exploration Co. Ltd. to the area and during the period 1954 to 1957 Conwest did surface stripping, mapping, minor diamond drilling and drove three short adits on a mineralized vein structure. Conwest dropped the property in 1957 and no further significant work was done until 1959 when the property was optioned to Ketzakey Silver Mines Ltd. During 1960 - 1961 this company built a tote road to the property and stripped and shipped 13 tons of silver-lead mineralization to Trail, B.C.

In 1964 Silver Key Mines Ltd. acquired the 44 claims held by Ketzakey Silver Mines Ltd. and subsequently optioned 38 adjoining claims and staked a further 86 claims. Exploration by Silver Key

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from 1964 to 1967 consisted of prospecting, bulldozer stripping, diamond drilling and geochemical surveys. In addition, Silver Key upgraded the tote road and established an excellent camp in the Ketzá River valley. Stump Mines Ltd. acquired property adjoining Silver Key and in 1966 conducted a soil sampling survey over the Eva 20 claim in conjunction with a similar survey on part of the Silver Key property. A number of soil anomalies were found and follow-up bulldozer trenching located a mineralized vein (the A vein) that was further explored by diamond drilling in 1967. An adit was collared on the A vein in April 1968 and by July 1, 1968 had drifted the vein for a length of 664 feet.

GEOLOGICAL SETTING

The property is located at the head of the Ketzá River in the rugged St. Cyr Range. Annual precipitation is light and freezing temperatures can be expected from late September to early May. Overburden cover is mostly residual material consisting of decomposed and frost broken rock. Permafrost is prevalent and solifluction has been intensified by frost action.

The geology of the district has been mapped by the Geological Survey of Canada on a scale of 1 inch to 4 miles. A wide variety of metamorphosed sedimentary and volcanic rocks, from the lower Cambrian to Mississippian, have been complexly faulted and folded. The most common rock types are bedded silty dolomite, phyllite, greenstone and quartzite.

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Mineralization occurs as open-space filling in vein faults that generally strike northerly and dip steeply west. Ore minerals are argentiferous galena and freibergite and gangue minerals are pyrite, siderite, arsenopyrite and quartz mixed with fragmented country rock. Silver-lead ratios vary widely but are usually consistent within each vein. The range is from 0.2 to 4.0 and approximately half the showings have a ratio slightly greater than 1.0.

EXPLORATION RESULTS

Mineralized vein faults are extensive throughout the property and more than twenty separate showings have been partially exposed and more are indicated by the presence of float in road cuts. The most significant are the "A" showings located on Stump Mines property and the Lap 10 and F3 showings on Silver Key Mines property. The Lap 10 vein has been intermittently exposed by hand and bulldozer trenching for 410 feet. The indicated grade of this length, based on channel sampling of the limited exposures by G.C. McCartney, consulting geologist, and Mr. T. Patching, Professor of Mining, University of Alberta, is 35 ounces of silver per ton and 38% lead over a 3.5 foot width. The F3 vein is located about one mile southeast of the Lap 10 on the claims optioned by Silver Key. The vein has been exposed by bulldozing for a length of 500 feet of which a mineralized zone 120 feet long, sampled by Mr. McCartney and Mr. Patching, grades 86 ounces silver per ton and 50% lead over a 5.0 foot width.

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The most continuously mineralized vein found in the district to date is the A vein. This vein, explored 2,800 feet along strike by soil sampling during 1966, lies about 4,000 feet due south of the F3 and could be part of the same vein-fault system. The northernmost 600 feet of explored vein is on the Silver Key option while the remainder is on Stump Mines Ltd. property. Two soil anomalies were located, one 600 feet in length on the south end of the survey area (on Stump Mines ground) and the other 1,200 feet long at the north end (half on Silver Key Mines ground). Bulldozing the Stump anomaly during 1966 and 1967 exposed a zone of mineralization 810 feet long that was channel. sampled by the writer on August 4, 1967, and found to grade 24.9 ounces silver per ton and 22.2% lead over a 4.0 foot width. Bulldozer trenching on the northernmost soil anomaly on the Silver Key ground failed to reach bedrock because of deep overburden and permafrost.

The mineralized zone on the A vein was explored to depth by five diamond drill holes in September, 1967. The first hole was abandoned due to caving before the vein was intersected. The remaining four holes, each drilled 200 feet apart along strike, intersected the vein approximately 80 feet below surface. Silver-lead mineralization was intersected in each hole but poor core recovery prevented an accurate estimation of width and grade.

In April 1968 a crosscut was driven 413 feet to intersect the A vein (about 90 feet below surface) immediately south of the surface mineralization. The vein was drifted north and to July 1, 1968, had advanced 664 feet from the cross-cut to a point about 130 feet vertically below surface. Assay results

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arithmetically averaged to a 4.0 width, based on detailed chip samples at 5 foot intervals, are summarized as follows:

<u>Distance from Cross-cut (ft.)</u>	<u>Length (ft.)</u>	<u>Silver Assay (oz./ton)</u>	<u>Lead Assay (%)</u>
0-43	43	9.7	9.6
43-126	83	4.5	2.5
126-177	51	22.2	12.8
177-211	34	10.1	5.9
211-318	107	13.7	10.6
318-340	22	6.0	6.6
340-404	64	11.1	9.3
404-421	17	7.2	9.3
421-664	243	6.2	5.5

Mineralization consists of a zone of massive galena varying in width from several inches to several feet in a gangue of siderite, minor pyrite and broken country rock. The continuity of the galena is remarkable for a vein type deposit. Although timbering is required in the drift, the wall rocks are considered competent enough to allow cut and fill sloping to a 4.0 foot mining width.

CONCLUSIONS AND RECOMMENDATIONS

The numerous mineral showings, the excellent exploration potential of the property, and the proven continuity of mineralization in the A zone combine to indicate that the Silver Key-Stump property has the potential for a mining operation at the rate of 200 tons per day or more. It is the writer's belief that at present metal prices mineralization in the Ketzka River area grading 10 ounces of silver per ton and 8% lead can be considered ore grade if continuity over a mining width can be established.

Further development of the property should be directed

first, toward proving the tonnage and grade required for a profitable mining operation and second, toward an integrated program of surface exploration.

The A zone between the adit level and surface has an indicated potential of 35,000 tons grading in excess of 15 ounces silver per ton and 10% lead. Two raises should be driven from the adit level to surface to establish a proven reserve and to provide bulk samples for metallurgical testing. The drifted zone should be drilled to depth and the soil anomaly on the strike extension of the A zone, on Silver Key ground, should be drilled to locate the vein prior to extending the drift in this direction.

In conjunction with the above program, the Lap 10 zone should be explored by drifting and the entire property explored by soil geochemistry followed by surface trenching and possibly adit development on new discoveries.

BUDGET

The following budget is prepared assuming a continuous program through 1968 to summer 1969:

1. - A Zone Development

Surface drilling, 4000 feet BQ wireline	\$60,000.
Raising, 250 feet single stull.....	25,000.
Continuation of adit level 1500 feet north	<u>225,000.</u>
	\$310,000.

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2. - Lap 10 Development

Road Repair, portal preparation.....	\$10,000.	
600 feet drifting.....	<u>90,000.</u>	\$100,000.


3. - Surface Exploration

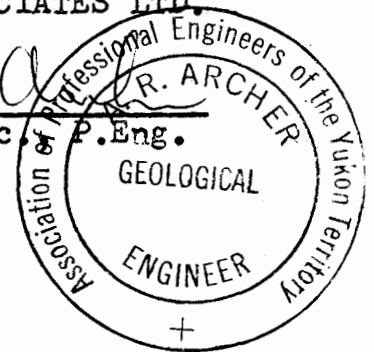
Geochemical surveys.....	\$40,000.	
Follow-up bulldozer trenching.....	<u>60,000.</u>	\$100,000.

Total.....\$510,000.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES LTD.


Alan R. Archer, B.A.Sc. P.Eng.



STUMP MINES - SILVER KEY MINES

INTERIM

SOIL SAMPLING REPORT

ROY MCGECHAEN : PARTY CHIEF

JULY 14, 1968

LOCATION: Work location is at two grids: One surrounding on three sides, the geochem work done in August, 1966, and the other surrounding on three sides the mountain containing the Lap and Key Claim Groups.

NO. OF SAMPLES: The former grid consists of about 3,200 samples: The latter of about 2,000 samples. The number of samples taken to date is about 3,800.

PROJECT DATES: The work was begun on July 1, 1968 and the estimated date of completion is July 31, 1968.

PERSONNEL and

METHOD:

The soil sampling crew consists of five men and the sample stations are located by pacing and Brunton compass when between baselines and by chain and Brunton compass when outside a baseline. Each station is marked by a wooden picket.

STUMP MINES - SILVER KEY MINES

INTERIM

UNDERGROUND PROGRESS REPORT

FOR PERIOD ENDING

JULY 14, 1968

GENERAL:

Progress for this period has been relatively slow, due to heavy water seepage and highly faulted and loose ground.

ADVANCEMENT:

There has been 135 feet of drifting and X-Cut completed since the previous month end. The advancement is in the order of 10 feet per every 24 hours.

MINING DEVELOPMENT:

On July 10th a blast knocked out C timber sets, resulting in about 40 feet of the drift from the face to cave. Consequently a drift by-pass was decided and started to return to the vein by X-cutting once the caved area is passed.

The parallel drift will also be used for testing the vein structure by diamond drilling.

VEIN GEOLOGY:

Ore shoot was intersected approximately 100 feet south of the caved area. This sector is by far the most promising part of the vein exposed to date. A well mineralized sector was drifted along for 70 feet and is estimated to be in excess of 8 feet wide.

Test holes were drilled in the footwall and siderite and galena were recovered for an additional 7 feet. The composition of this vein was mainly siderite from 15% to 40% galena, with some pyrite and tetrahedrite.

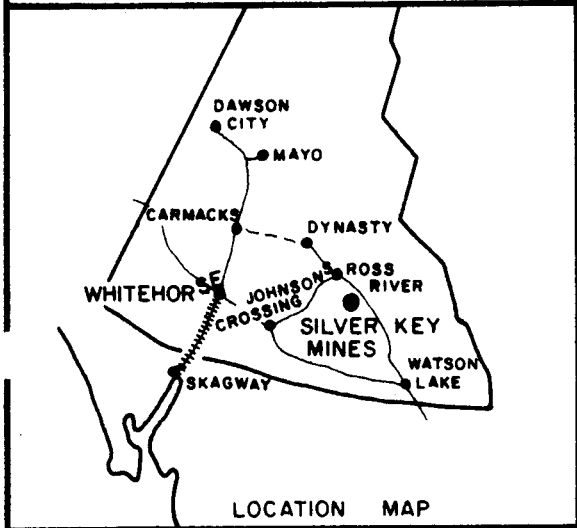
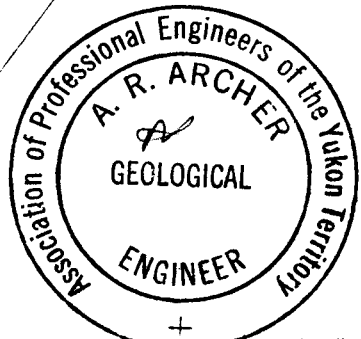
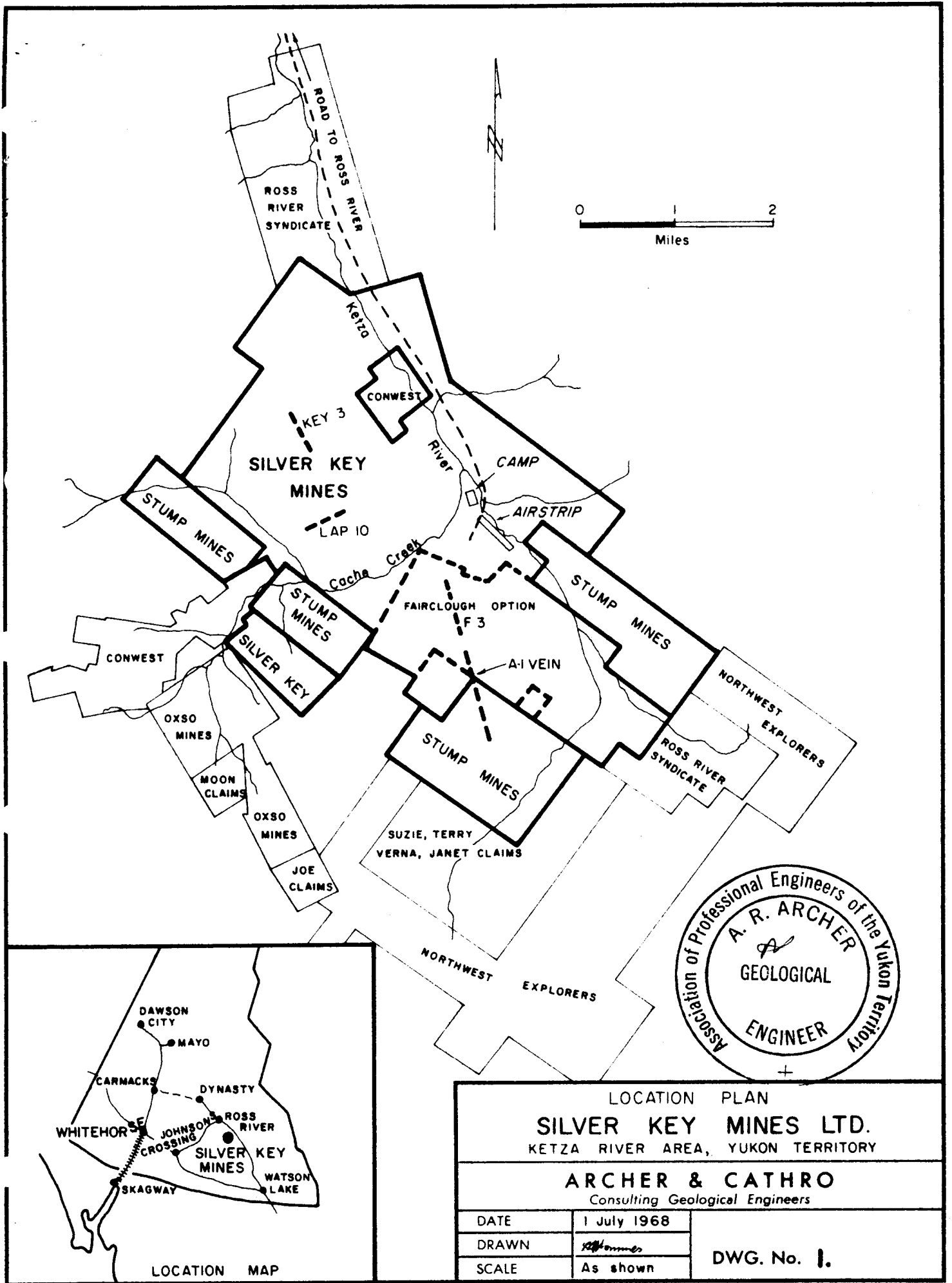
The last 30 feet of drifting (now caved) showed strong vein structure but minor mineral content.

ASSAYS:

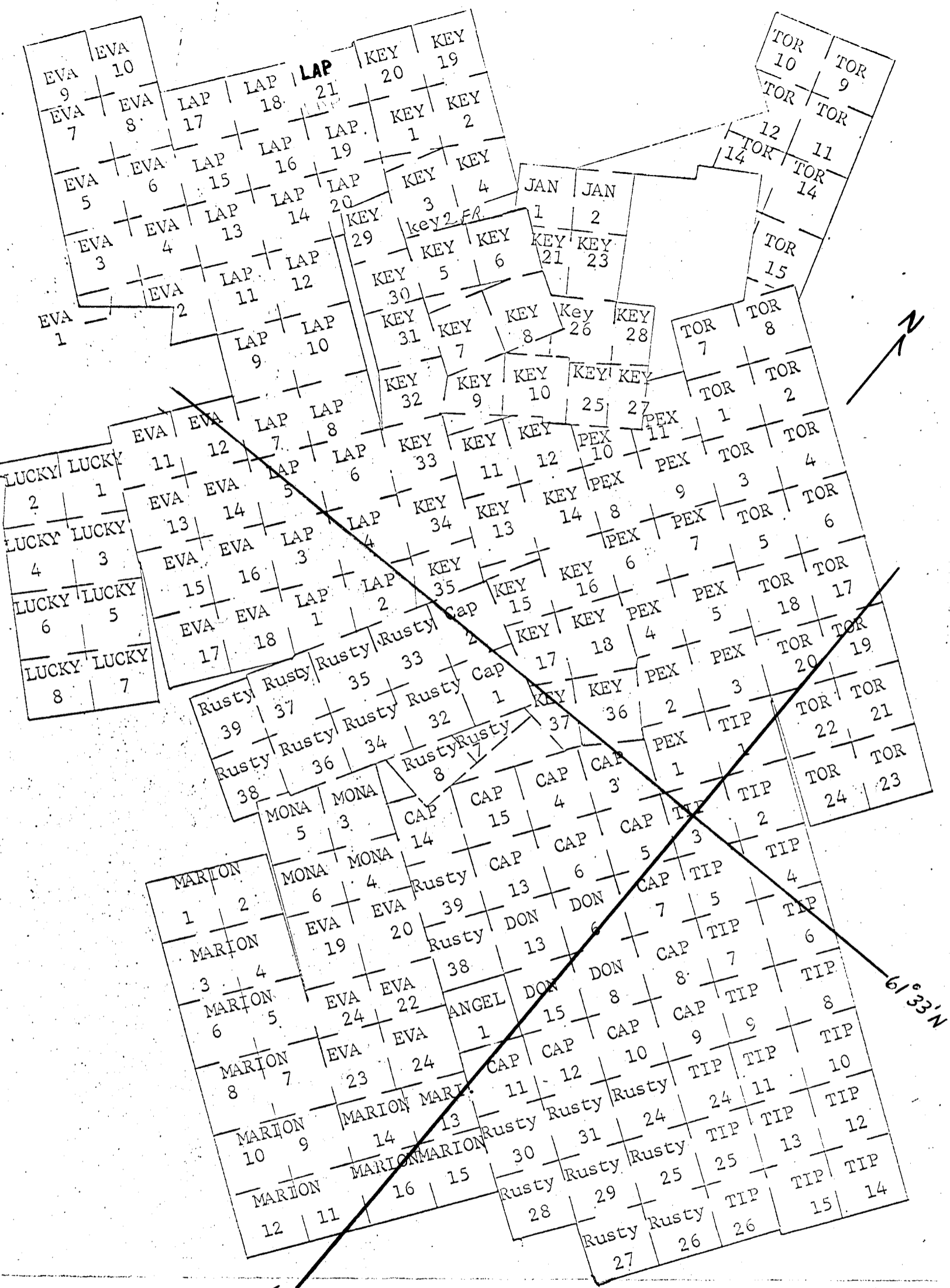
Assays for the last 150 feet have not been received.

Respectfully submitted,

Wm. McKenzie,
Project Engineer



LOCATION PLAN SILVER KEY MINES LTD. KETZA RIVER AREA, YUKON TERRITORY		
ARCHER & CATHRO <i>Consulting Geological Engineers</i>		
DATE	1 July 1968	DWG. No. 1.
DRAWN	<i>SCM</i>	
SCALE	As shown	



SILVER KEY MINES LTD. and STUMP MINES LTD.

Claim Holdings

Ketza River Property, Yukon

Feb. 11, 1969

Traced from Sheet 105F - 9

Scale 1/2 mile = 1 inch

DATE:	1/10/78
DRAWN:	
SCALE:	1" = 30'
DWG. NO.:	016

PLAN AND VERTICAL LONGITUDINAL SECTION SHOWING SURFACE AND UNDERGROUND WORKINGS A-1 VEIN

STAMP: MINES LTD.

10,000 E

250' Level Adit

0 1/4

0 1/2

1 1/2

2 1/2

3 1/2

4 1/2

5 1/2

6 1/2

7 1/2

8 1/2

9 1/2

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