REPORT

ON

KETZA RIVER PROPERTY, YUKON

FOR

SILVER KEY MINES LTD.

&

STUMP MINES LTD.

DECEMBER 15, 1967

Alan R. Archer Consultant Whitehorse, Y. T.

Report

SUMMARY

Silver Key Mines Limited and Stump Mines Ltd. together control a contiguous block of 226 unpatented mineral claims or approximately 16 square miles of property near the head-waters of the Ketza 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.

The Silver-Lead mineralization occurs as galena veins cutting a variety of sedimentary rocks. Over 20 separate silver-lead veins have been found throughout the property and many more are indicated by mineralized float in the road cuts. The most continuously mineralized structure, the "A" zone, has been explored by bulldozer, trenching and diamond drilling. Trenching has indicated an 810 foot length of mineralization grading 24.9 ounces of silver per ton and 22.2% lead over a 4.0 foot width and diamond drilling has confirmed continuity to at least 100 feet below surface. Work on the "A" zone has shown that continuous mineralized vein faults can be found and that the area to be considered a silver-lead camp with production possibilities.

The next two logical steps in the exploration of the Silver Key-Stump property is (1) to examine the mining possibilities of the area in general and the "A" zone in particular and (2) to outline ore reserves to justify production at the rate of 200 tons per day.

It is proposed to undertake underground development of the "A" zone 150 feet below the trenched area, by means of an adit into the mountain side. The cost of the mining program is estimated to be $150,000.00.

INTRODUCTION

The writer is familiar with the Silver Key Mines Ltd. and Stump Mines Ltd. property in the Ketza 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 December 15th, 1967. A summary of the claims and ownership is as follows:-

Silver Key Mines Ltd.

Wholly owned

Claim name	Number of claims
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
Mona 4 - 6	3
Lucky 1-8	8
Tor 1-15 & 17-24	23
Tor Fr. 16	1
total	130

Optioned claims

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

Stump Mines Ltd.

Claim name	Number of claims
Eva 1-24	24
Tip 1-15, 24-26	18
Marion 1-16	16
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 Ketza 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 use only, is located near the centre of the property.

Road access to Whitehorse via Ross River Settlement

and Carmacks will be available in the fall of 1968. 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 centre of the property at the junction of Cache Creek and the Ketza River.

HISTORY

The first discovery of silver-lead mineralization was made in 1946 by prospectors working for Hudsons 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 during 1964 to 1967 has consisted of prospecting, bulldozer stripping, diamond drilling and geo-chemical surveys. In addition, Silver Key has upgraded the tote road and established an excellent camp in the Ketza 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.

GEOLOGICAL SETTING

The property is located at the head of the Ketza 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.

Mineralization occurs as open-space filling in vein faults that generally strike northerly and dip steeply west. Ore minerals are argentiferous galena, freibergite and minor arsenopyrite, quartz and 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.

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. Although core recovery was very poor, silver-lead mineralization was intersected in each hole.

Results of drilling are summarized as follows:-

HOLE	INTERVAL (FT.)	RECOVERY (FT.)	SILVER(OZ/TON)	LEAD %
S - 1	hole lost before vein intersected			
S - 2	134 - 136	0.15 (8%)	30.2	46.7
	139 - 142	1.0 (33%)	5.3	6.5
	146.5-148	0.75 (50%)	0.8	0.6
	148 - 153	2.0 (40%)	1.0	0.1
S - 3	125.5-128	1.25 (50%)	6.7	6.0
	128 -131.7	2.7 (73%)	26.0	23.2
S - 4	124 - 126	0.8 (40%)	14.2	5.7
S - 5	111 - 113	0.15 (8%)	50.6	37.1
	113 - 116	3.0 (100%)	1.2	1.0
	116 - 119	3.0 (100%)	5.4	2.5
	119 - 122	1.9 (64%)	1.0	0.7

Sludge samples could not be obtained from any of the vein intersections due to a loss of return water after the first fifty feet in each hole.

CONCLUSIONS AND RECOMMENDATIONS

The Silver Key-Stump property has indications of developing into a silver-lead camp with potential for a mining operation at a rate of 200 tons or more per day. Exploration effort should now be directed toward providing 200,000 tons of ore, initially from the "A" zone, to justify a mining operation.

The next logical step is underground development aimed toward proving the tonnage and grade required for a profitable mining operation. An adit should be collared 150 feet below the surface showing to explore the "A" zone in this area and if results are favourable, drifting should be continued under the soil anomaly on Silver Key ground.

A two year program of surface exploration to locate other vein systems and the underground development of other zones, such as the Lap 10 and F 3 should be started during the 1968 field season. In addition, all presently exposed showings should be further explored in detail.

ESTIMATED BUDGET

The following budget is prepared assuming that the adit will be collared in the early part of 1968 using the

present Silver Key camp as a base of operations.

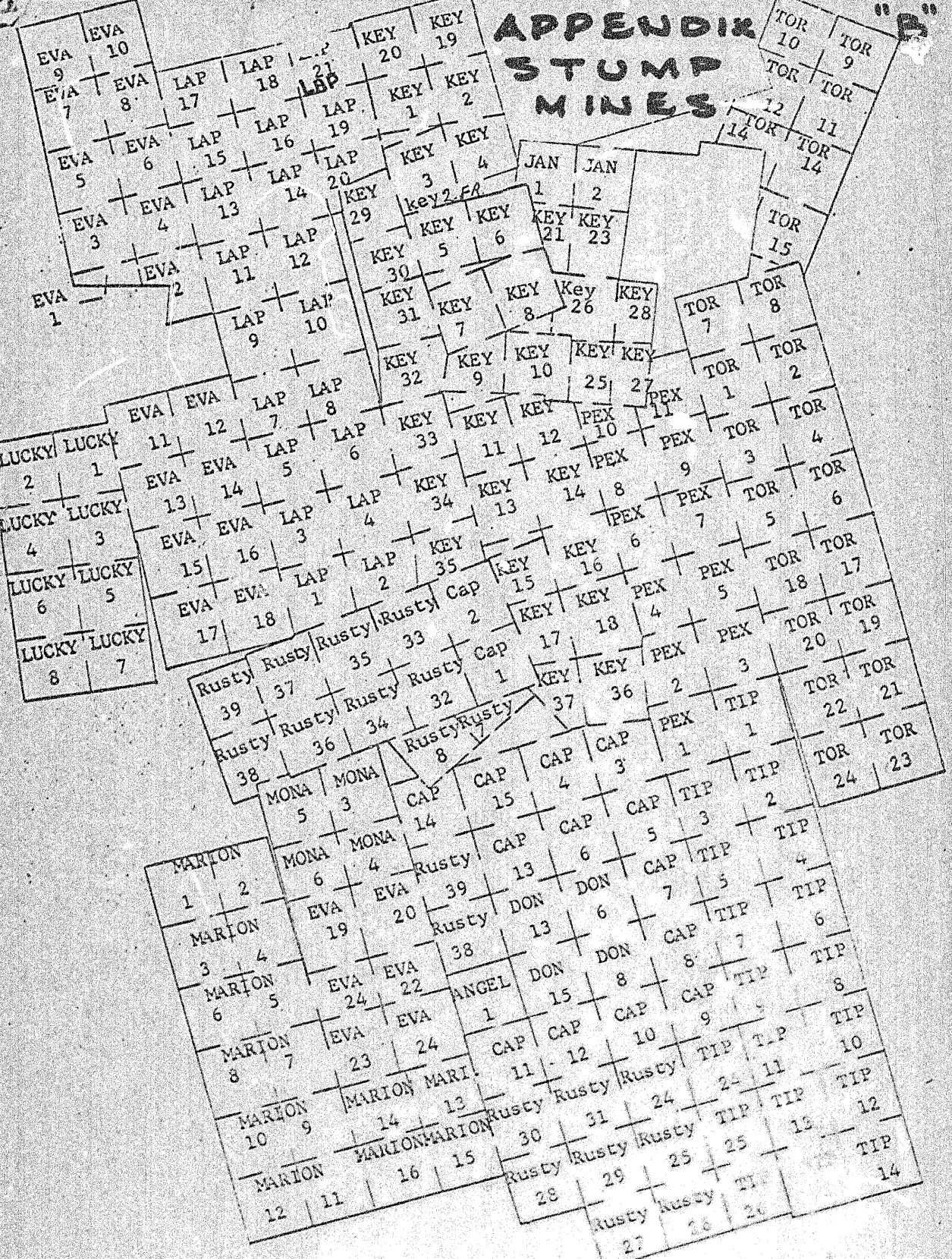
Direct and indirect cost of 450 feet of cross-cutting and 800 feet of drifting	$125,000.00
Reserve for underground drilling.....	13,000.00
Consulting fees, general office expenses	5,000.00
	$143,000.00
plus contingencies	7,000.00
	$150,000.00

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES LTD.

" A. R. ARCHER"

A. R. ARCHER, BA. SC., P. ENG.



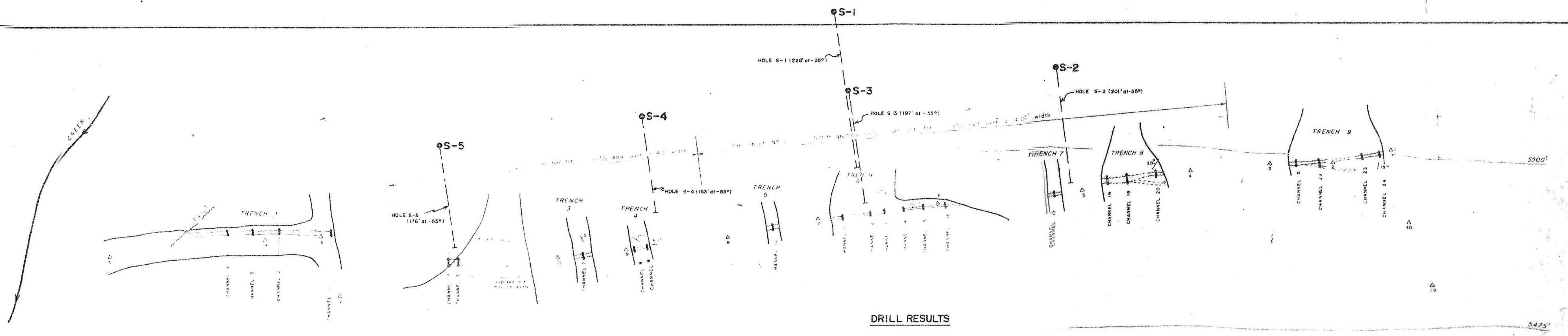
SILVER KEY MINES LTD. and STUMP MINES LTD.

Claim Holdings

Ketza River Property, Yukon

Feb. 11 , 1969 Traced from ... at 105F - 9

Scale ... 1 inch



DRILL RESULTS

HOLE No.	SAMPLE INTERVAL (Ft.)	CORE RECOVERY (Ft.)	SILVER (Oz./ton)	LEAD (%)
S-1 — Hole lost before vein intersected				
S-2	134 - 136	0.15 (8%)	30.2	46.7
	139 - 142	1.0 (33%)	5.3	6.5
	146.5 - 148	0.75 (50%)	0.8	0.6
	148 - 153	2.0 (40%)	1.0	0.1
S-3	125.5 - 128	1.25 (50%)	6.7	6.0
	128 - 131.7	2.7 (73%)	26.0	23.2
S-4	124 - 126	0.8 (40%)	14.2	5.7
S-5	111 - 113	0.15 (8%)	50.6	37.1
	113 - 116	3.0 (100%)	1.2	1.0
	116 - 119	3.0 (100%)	5.4	2.8
	119 - 122	1.9 (64%)	1.0	0.7

Legend

EXPOSED VEIN
VEIN NOT EXPOSED
BEDDING ATTITUDE
SURVEY STATION

Assays

	WIDTH (Ft.)	SILVER (Oz./ton)	LEAD (%)
CHANNEL 1 —	0.5	14.0	10.2
	3.0	1.6	1.2
	2.5	1.2	0.6
CHANNEL 2 —	2.0	0.4	0.3
CHANNEL 3 —	1.5	7.5	5.6
	1.0	5.8	6.9
	2.0	7.1	2.2
CHANNEL 4 —	1.0	34.6	23.4
	2.0	2.6	2.4
CHANNEL 5 —	2.0	56.3	49.5
	5.0	20.8	14.3
CHANNEL 6	2.0	102.[illegible]	67.0
	4.5	21.3	14.0
CHANNEL 7 —	1.0	9.7	9.7
	2.2	50.3	45.5
	1.0	5.4	5.5
CHANNEL 8	1.0	[illegible]	12.1
	1.6	53.9	56.5
	1.0	11.9	9.1
CHANNEL 9	1.5	0.6	TR.
	0.5	31.4	36.2
	1.5	4.6	3.3
CHANNEL 10	1.5	16.9	16.6
	2.0	22.6	27.9
	1.2	1.8	0.1
CHANNEL 11	1.5	1.0	TR
	2.0	40.7	38.3
	1.5	13.5	18.2
CHANNEL 12 —	1.5	2.8	2.3
	2.4	44.6	40.9
	1.5	9.1	9.6

	WIDTH (Ft.)	SILVER (Oz./ton)	LEAD (%)
CHANNEL 13 —	1.5	3.7	[illegible]
	2.4	39.3	33.2
	1.5	8.8	[illegible]
CHANNEL 14 —	1.5	4.0	[illegible]
	2.2	46.9	[illegible]
	1.5	25.6	25.6
CHANNEL 15 —	1.8	9.3	8.7
	1.8	46.1	39
	1.5	5.8	[illegible]
CHANNEL 16 —	2.0	2.4	[illegible]
	1.5	22.8	[illegible]
	1.0	0.7	[illegible]
CHANNEL 17 —	2.0	3.0	[illegible]
	2.5	49.6	[illegible]
	2.0	4.0	[illegible]
CHANNEL 18 —	2.0	1.4	TR
	1.7	40.7	[illegible]
	3.0	8.3	[illegible]
CHANNEL 19 —	0.5	17.6	[illegible]
	1.0	52.8	44.6
	1.0	35.3	30.8
	1.0	28.6	28.0
	2.0	38.0	38.9
CHANNEL 20 —	2.0	2.9	[illegible]
	3.0	25.9	19.2
	1.0	7.5	10.0
CHANNEL 21 —	1.5	0.3	TR
	4.0	7.6	7.2
	2.0	0.6	TR
CHANNEL 22 —	2.0	0.1	TR
	3.5	3.2	2.4
	4.0	0.2	TR
	2.0	0.3	TR
	1.5	0.3	TR
CHANNEL 23 —	2.0	0.26	TR
	3.5	3.3	3.2
	2.0	[illegible]24	TR
CHANNEL 24 —	4.0	1.1	TR
	3.0	8.4	7.5
	4.0	1.4	TR

NOTE: — All sample directions from hangingwall to footwall
— Channels 1-6 sampled October 13, 1966
— Channel 19 sampled July 29, 1967
— Channels 7-18, 20-24 sampled August 4, 1967

SURVEY STATIONS LOCATED BY BRUNTON COMPASS & TAPE - ELEVATIONS CALCULATED ASSUMING STA. 1 AT 5500'

CHANNEL SAMPLING A1 VEIN
STUMP MINES LTD.
KETZA RIVER AREA, YUKON

ARCHER & CATHRO
Consulting Geological Engineers

DATE	8 Aug. 1967	DRILL DATA ADDED Oct 15, 1967
DRAWN	[signature]	
SCALE	1" = 50'	DWG.