

ASSESSMENT REPORTS

MAP No. 105-7-7

TYPE OF WORK: Geological and Geochemical

REPORT FILED UNDER	Silver Key Mines Ltd. and Stump Mines Ltd.	
DATE PERFORMED	DATE FILED: September 1968	
LOCATION - LAT.	61°35'	Ketza River Y.T.
LONG.	132°7'30"	
CLAIM Nos.	See Rock	
WORK DONE BY	Alan P. Archer, of Archer, Cathro and Associates	
WORK DONE FOR	Silver Key Mines Ltd. and Stump Mines Ltd.	
REMARKS	The area is a wide variety of metamorphosed sedimentary and volcanic rocks that have been complexly faulted and folded. The most common rock types are bedded silty dolomite, phyllite, greenstone and quartzite.	
		over

Samples of the area were taken and assay results are included. Also included is a plan and vertical longitudinal section showing surface and underground workings. Soil sampling located 12 significant anomalies. One of the anomalies is a vein with 8' width of mineralization of silver and lead.

Claim Name

Silver Key Claims

Key 1-37
Key Fr. 1-5
Jan 1 & 2
Lap 1-21
Pex 1-11
Northkey 1-16
Angel 1

Mona Fr. 1&3
Mona 4-6
Lucky 1-8
Tor 1-15 & 17-24
Tor Fr. 16

Optioned Claims

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

Stump Mines Ltd.

Eva 1-24
Tip 1-15, 24-26
Marion 1-16

APPENDIX "A"
STUMP MINES
FEB. 11/69

REPORT

ON

KETZA RIVER PROPERTY, YUKON

FOR

SILVER KEY MINES LTD.

AND

STUMP MINES LTD.

September 1, 1968

Alan R. Archer

Consultant

Whitehorse, Y.T.

SUMMARY

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 center of the property.

Over 20 separate silver-lead veins have been found throughout the property and more are indicated by float and geochemical surveys. The most continuously mineralized structure, the A zone, has been explored by bulldozer trenching, drilling, drifting and raising. Trenching has indicated an 810 foot length of mineralization grading 24.9 ounces silver per ton and 22.2% lead. Drifting about 130 feet below surface has proven continuity of mineralization but over a narrower width and consequently a lower grade. Of the 784 feet drifted to September 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. Raising from this zone to surface indicates a grade comparable to the surface assays.

Soil sampling of approximately 50 claims on Silver Key property has located twelve significant anomalies. Bulldozer

trenching on one of the anomalies has located a new vein, the Key 18B, that contains an 8.0 foot width of mineralization grading 55 ounces silver per ton and 49% lead.

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 \$530,000.00 is recommended. This program includes additional drill and drift development of the A zone, underground development of the F3 zone where surface trenching indicates 120 feet grading 86 ounces silver per ton and 50% lead over a 5.0 foot width, adit development of the Key 18B zone and bulldozer trenching of geochemical anomalies.

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 September 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 I - 37	37
Key Fr. I - 5	5
Jan I & 2	2
Lap I - 21	21
Pex I - 11	11
North Key I - 16	16
Angel I	1
Mona Fr. I & 3	2

(2)

Mona 4 - 6	3
Lucky I - 8	8
Tor I - 15 & 17 - 24	23
Tor Fr. 16	<u>1</u>
	130
Optioned claims	
Rusty 7 - 8 & 24 - 39	18
Cap I - 15	15
Don 6, 8, 13 & 15	4
Cap Fr. I	<u>1</u>
	38
<u>Stump Mines Ltd.</u>	
Eva I - 24	24
Tip I - 15, 24 - 26	18
Marion I - 16	<u>16</u>
	58

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

LOCATION AND ACCESSIBILITY

The property is located 120 air miles northeast of Whitehorse, near the headwaters of the Ketzka 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

(3)

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 Ketzra 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 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 Ketzka River valley. Stump Mines Ltd. acquired property adjoining Silver Key and in 1966 conducted a soil sampling 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 784 feet of drifting had been completed by September 1, 1968. Approximately 50 of the Silver Key claims were soil sampled in July 1968 and follow-up bulldozer trenching was started in August.

GEOLOGICAL SETTING

The property is located at the head of the Ketzka 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.

(5)

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 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 F3 showing on Silver Key Mines property. The F3 vein is located about one mile north of the A showing 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. G.C. McCartney, consulting geologist, and Mr. T.

Patching, Professor of Mining, University of Alberta, 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, could be part of the same vein-fault system as the F3. 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). Bulldozer trenching on 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

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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 September 1, 1968, had advanced 784 feet from the crosscut to a point about 150 feet vertically below surface. Assay results arithmetically averaged to a 4.0 width, based on detailed chip sampling at 5 foot intervals, are summarized as follows:

<u>Distance from Crosscut (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
664-684	20	18.0	13.2
684-720	36	3.4	2.5
720-784	64	0.4	0.4

A raise collared at 232 feet from the crosscut was completed to within 5 feet of surface by September 1. Assays for the first 67 feet averaged 20.6 ounces silver per ton over a 4.8 foot width and the remaining 63 feet is visually estimated to be a similar grade. Mineralization in the drift 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,

(8)

the wall rocks are considered competent enough to allow cut and fill sloping to a 4.0 foot mining width.

Approximately 50 of the Silver Key claims were soil sampled during July, 1968, and twelve separate anomalies were located that are equal or greater in intensity and size to the anomaly discovered in 1966 that led to the discovery of the A vein. Follow-up bulldozer trenching was started in late August and by September 1 a new vein, called the Key 183 vein, had been located. The new vein as exposed in the discovery trench is 14 feet wide of which the hanging-wall 8.0 feet assays 55 ounces silver per ton and 49% lead and the footwall 6.0 feet assays 6.5 ounces silver per ton and 3.2% lead.

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 Ketz 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 ore reserves required for a profit-

able 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. Additional raising should be driven from the adit level to surface to establish a proven reserve. The drifted zone should be drilled to depth prior to lower level development 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 F3 and the Key I8B zones should be explored by drifting and the geochemical anomalies explored by surface trenching.

BUDGET

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

I. A Zone Development

Surface drilling, 4,000 ft. BQ wireline-----	\$ 60,000.
Raising, 250 ft. single stull-----	25,000.
Continuation of adit level I, 500 ft. north-----	<u>225,000.</u>

\$310,000.

2. F3 and Key I8B Development

Road repair, portal preparation-----	\$ 10,000.
600 ft. drifting. F3 zone-----	90,000.

(10)

350 ft. drifting Key 18B zone----- 45,000.

\$145,000.

3. Surface Exploration

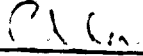
Mapping and control surveys-----\$ 15,000.

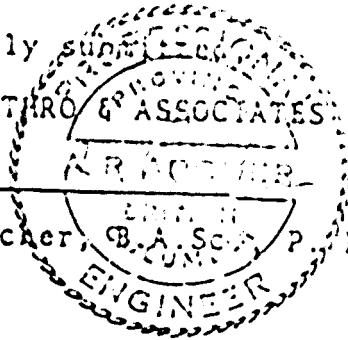
Follow-up bulldozer trenching----- 60,000.

\$ 75,000.

Total-----\$530,000.

Respectfully submitted,
ARCHER, CATIRO & ASSOCIATES LTD.


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



SILVER KEY MINES LIMITED

PROGRESS REPORT

Nov. 1968

SUMMARY OF MINERAL HOLDINGS:

NORTH RIVER - YUKON:

<u>CLAIMS</u>	<u>FRACTIONS</u>	<u>NO. CLAIMS</u>	<u>EXPIRY DATES</u>
KEY 1-1		4	November 28, 1968
KEY 5-16		14	November 28, 1968
KEY 19-20		2	November 28, 1968
KEY 21-23		8	November 28, 1968
KEY 29-30		2	November 28, 1968
KEY 31-37		7	November 28, 1968
JAN 1 & 2		2	November 28, 1968
	KEY 1 {		November 28, 1968
	KEY 2-5 {4}		November 28, 1968
CAP 1-21		21	February 15, 1969
DEX 1-21		21	February 15, 1969
NORTH KEY 1-16		16	August 30, 1968
ANGEL - 1		1	October 18, 1968
	XONA 1 & 3 (2)		November 28, 1968
XONA 4-6		3	November 28, 1968
BUCKY 1-6		6	April 21, 1969
TOR 1-15		15	April 21, 1969
TOR 17-24		8	April 21, 1969
	TOR 16 (1)		

TOTAL NO. OWNED: - (8) 122

SUMMARY OF MINERAL OPTIONS:

RUSTY 7 & 8		2	December 19, 1968
RUSTY 24 - 31		8	December 19, 1968
RUSTY 32 - 39		8	December 19, 1968
CAP 1-5		15	December 19, 1968
DEX 6-15		2	December 19, 1968
DEX 13 & 15		2	December 19, 1968
	CAP 1 (1)		
	<u>1</u>	<u>37</u>	

COMPANY'S TOTAL PROPERTY HOLDINGS: 9 Fractions, 159 Claims

NOTE: 3 years work filed on October 10, 1968

Waiting work certificates from Mine Recorder's Office in Watson Lake.

STAMP MINES LTD.

PROGRESS REPORT

1968

SUMMARY OF MINERAL HOLDINGS:

KETCHIKAN RIVER - YUKON TERRITORY

<u>NAME</u>	<u>NO. OF CLAIMS</u>	<u>EXPIRY DATE</u>
EVA 1 to 24	24	March 10th, 1969
*TIP 1 to 15 (90% interest)	15	December 1st, 1968
*TIP 24 to 26 (90% interest)	3	December 1st, 1968
YARZON 1 to 16	16	November 16th, 1969
Total:	<u>58</u>	

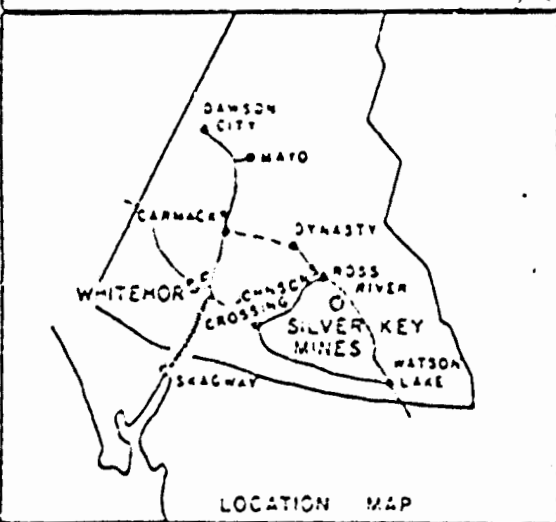
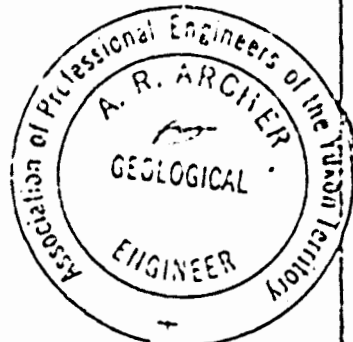
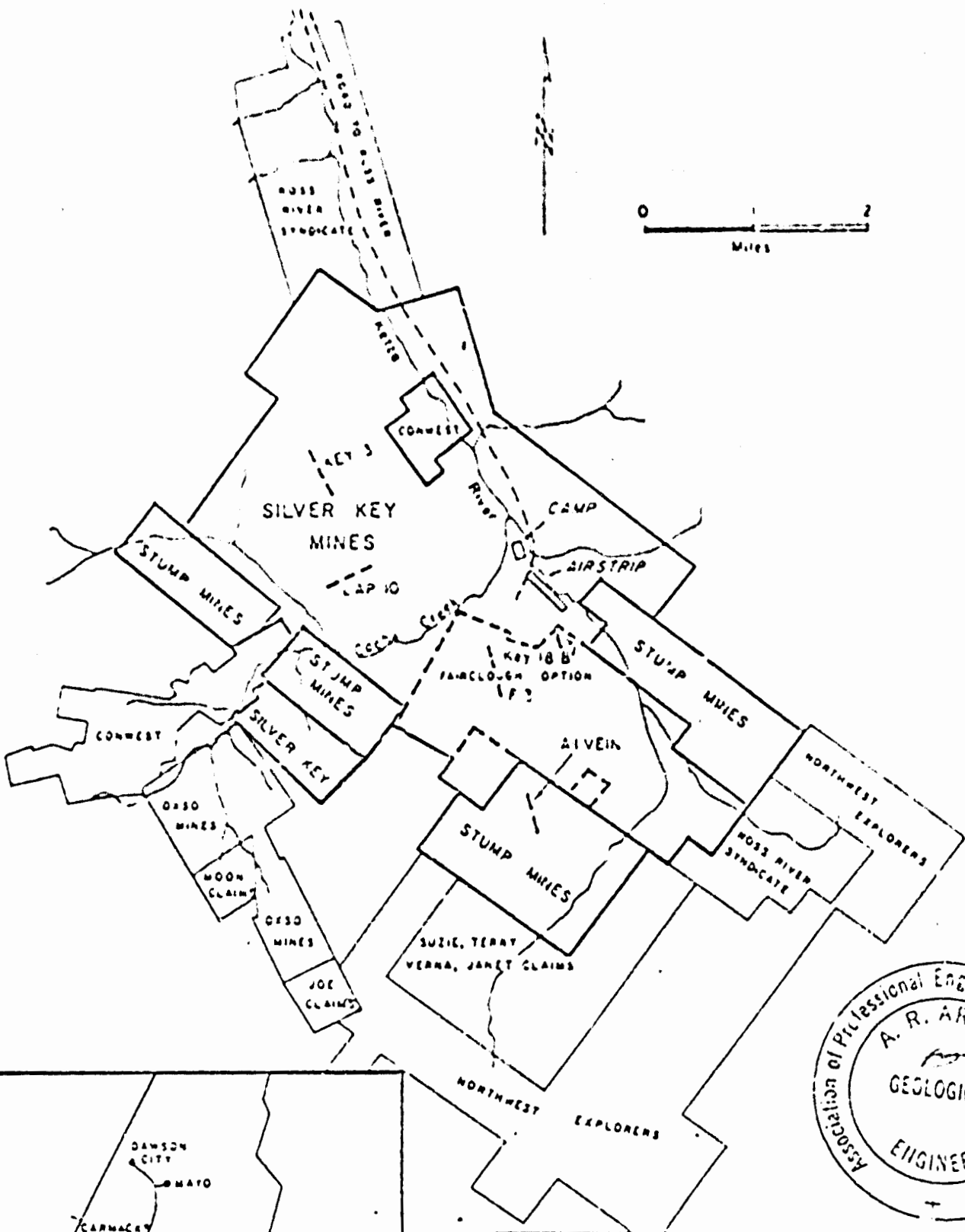
*Silver Key has a 10% interest in these claims

PARSON COPPER - BRITISH COLUMBIA

LAPEX 2 to 9 8 October 7, 1969

NOTE: 3 years' worked filed on October 10th, 1968

Waiting work certificates from Mine Recorder's Office
in Watson Lake.











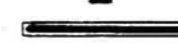
LOCATION PLAN SILVER KEY MINES LTD. KETZA RIVER AREA, YUKON TERRITORY		
ARCHER & CATHRO Consulting Geological Engineers		
DATE	1 Sept. 1968	DWG. No. 1.
DRAWN	<i>R. Thomas</i>	
SCALE	As shown	

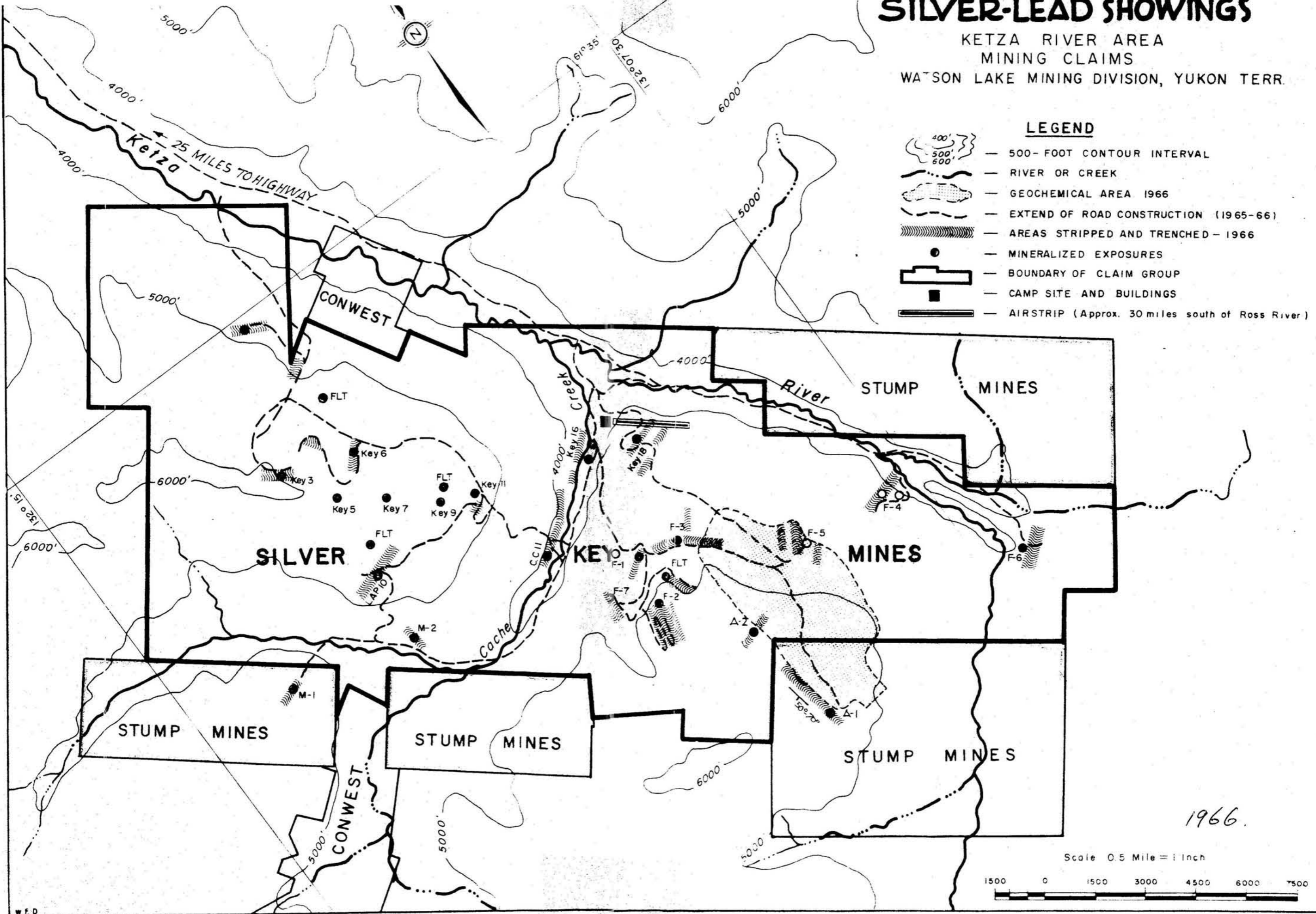
SILVER-LEAD SHOWINGS

KETZA RIVER AREA
MINING CLAIMS

WATSON LAKE MINING DIVISION, YUKON TERR.

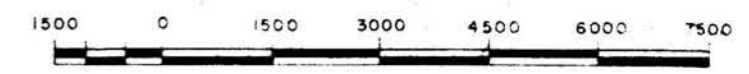
LEGEND

-  — 500- FOOT CONTOUR INTERVAL
-  — RIVER OR CREEK
-  — GEOCHEMICAL AREA 1966
-  — EXTEND OF ROAD CONSTRUCTION (1965-66)
-  — AREAS STRIPPED AND TRENCHED - 1966
-  — MINERALIZED EXPOSURES
-  — BOUNDARY OF CLAIM GROUP
-  — CAMP SITE AND BUILDINGS
-  — AIRSTRIP (Approx. 30 miles south of Ross River)

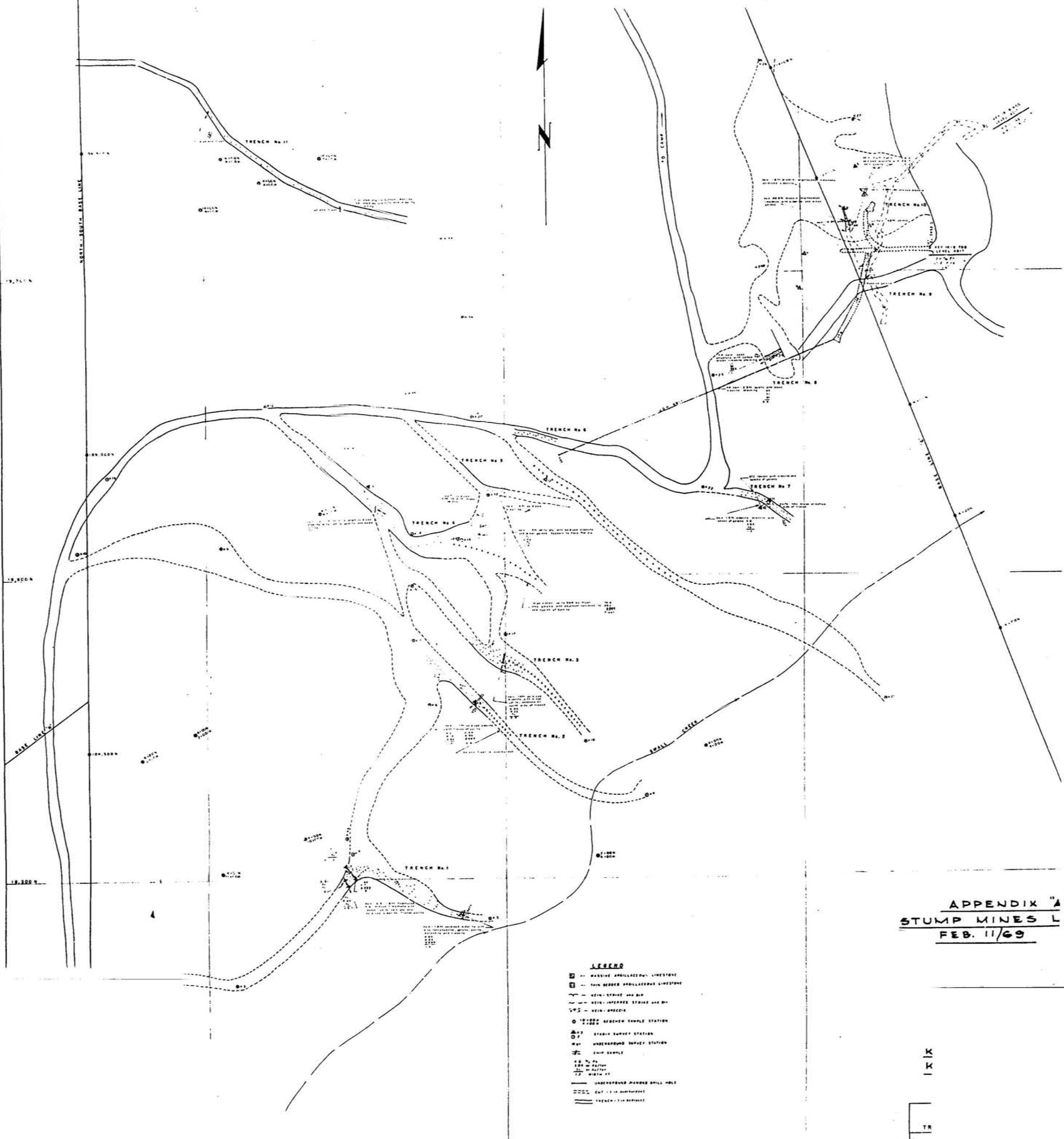


1966.

Scale 0.5 Mile = 1 Inch



107

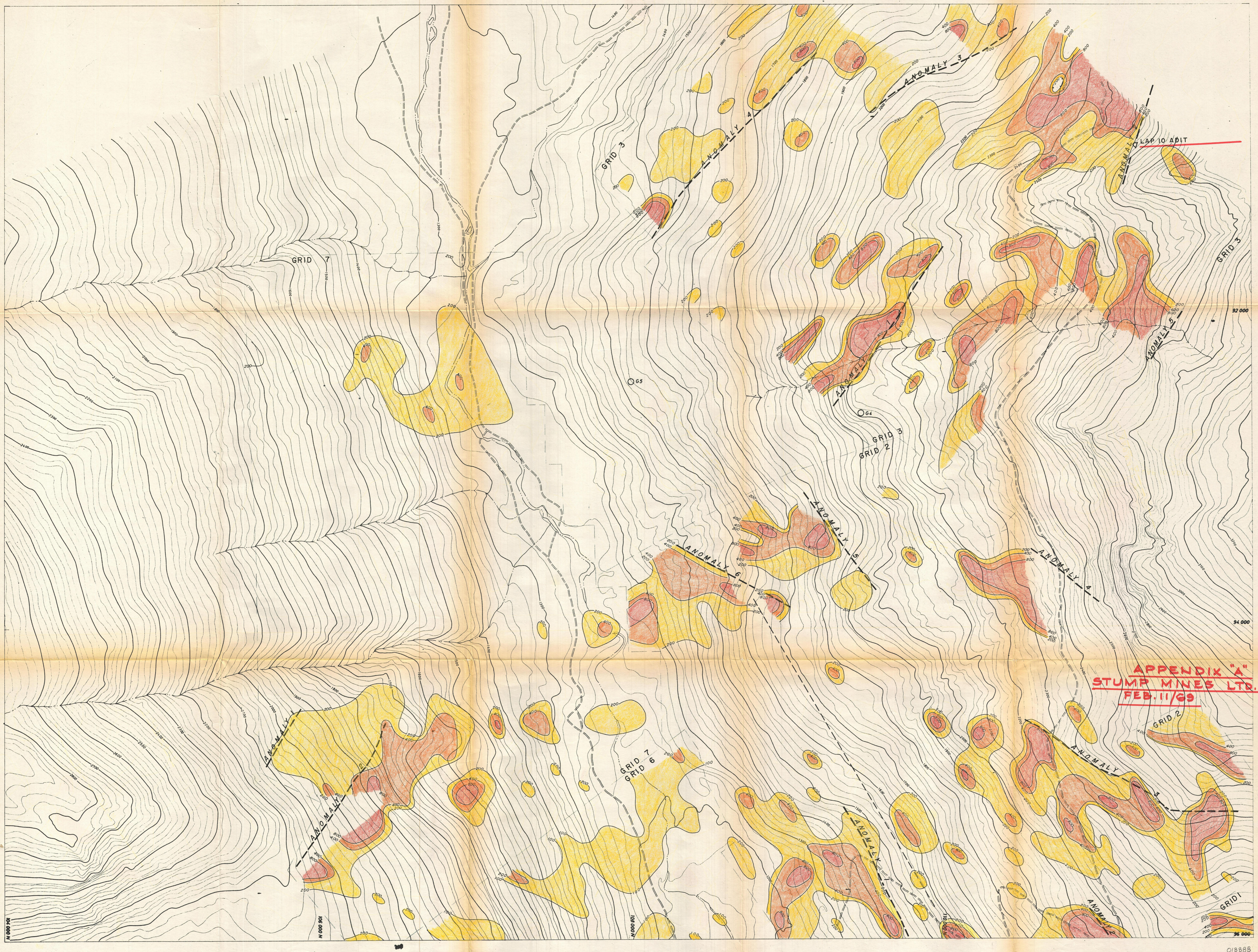


- LEGEND**
- MASSIVE ANHILLACEDUS LIMESTONE
 - ▨ THIN BEDDED ANHILLACEDUS LIMESTONE
 - VEIN - STRIKE AND DIP
 - VEIN - INTERSECT STRIKE AND DIP
 - VEIN - BRECCIA
 - 1000' GEOPHYSICAL SAMPLE STATION
 - △ STATION SURVEY STATION
 - SURVEY STATION
 - UNDERGROUND IMPACT STATION
 - CHIP SAMPLE
 - 100' DIAMETER
 - 100' DIAMETER
 - 100' DIAMETER
 - UNDERGROUND HANDED DRILL HOLE
 - CUT - 1/2" DIAMETER
 - TRENCH - 1/2" DEPTH

APPENDIX "A"
STUMP MINES L
FEB. 11/69

IXIX

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APPENDIX "A"
STUMP MINES LTD.
FEB. 11/69

STUMP MINES - SILVER KEY MINES
KETZA RIVER - Y.T.

Scale: 1:200

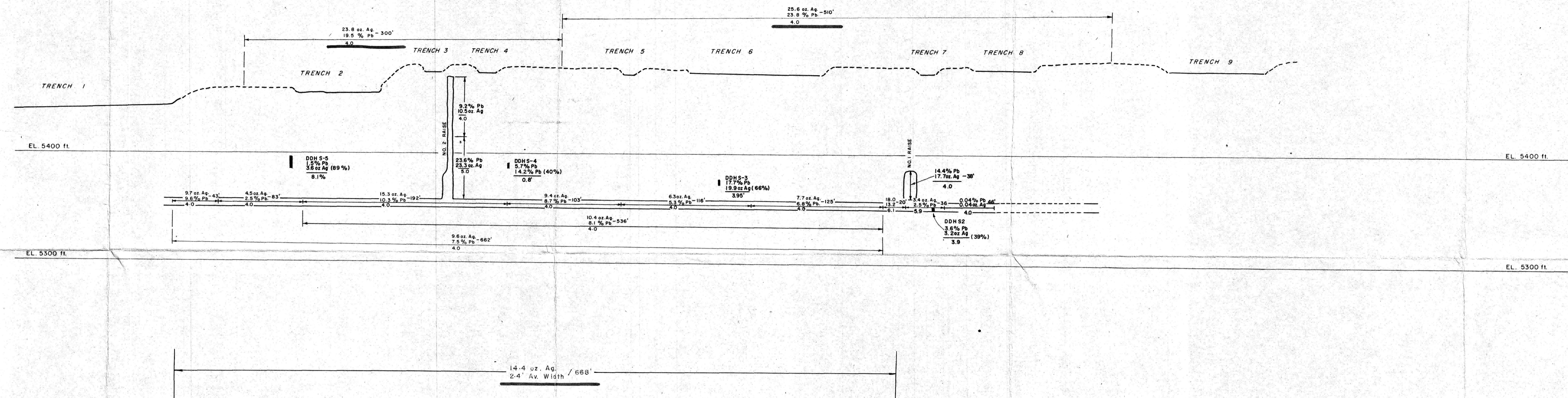
LEGEND
 Grids 2, 3, 7 Hot Acid Extraction Grids 1 & 6
 200-400 p.p.m. 100-200 p.p.m.
 400-800 p.p.m. 200-400 p.p.m.
 800+ p.p.m. 400+ p.p.m.
 Possible vein

C	F	K
B	G	J
A	H	I

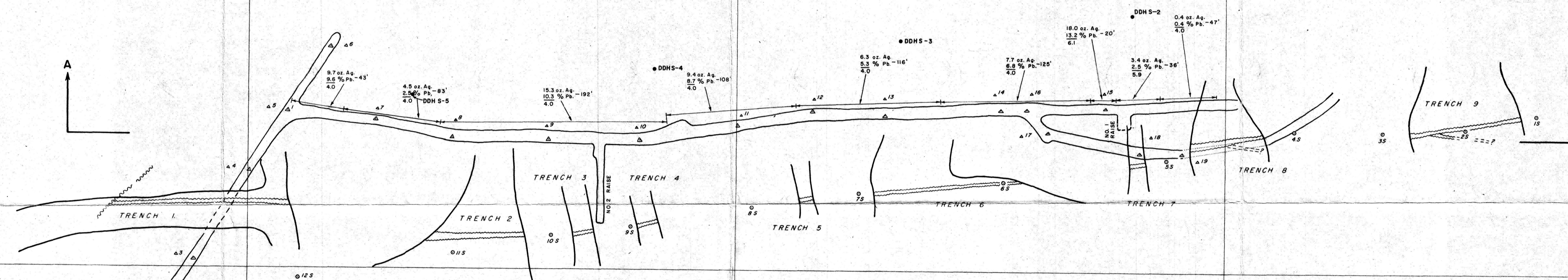
ROADS & TRAILS
 TRENCHES
 CUT LINES
 BUILDINGS
 CONTROL MONUMENTS
 HYDROGRAPHY
 GRID TARGETS
 ADIT PORTALS

PRODUCED BY
 NORTHWEST SURVEY CORP LTD
 THROUGH PHOTOGRAMMETRIC METHODS
 FROM AERIAL PHOTOGRAPHY, AUGUST 1968

01888B



VERTICAL-LONGITUDINAL SECTION A-B



APPENDIX "A" STUMP MINES LTD. FEB. 11/69

LEGEND
 Diamond drill hole — DDH-3-5
 Intersection of vein — 1.5% Pb
 3.6oz Ag (139%) — % Pb
 87 — 82 Ag / Ton (% Recovery)
 Recovery in test

PLAN

018688

PLAN AND VERTICAL LONGITUDINAL SECTION SHOWING SURFACE AND UNDERGROUND WORKINGS A-1 VEIN STUMP MINES LTD.	
ARCHER, CATHRO & ASSOC. LTD. Consulting Geological Engineers	
DATE	2 Oct. 1968
DRAWN	[Signature]
SCALE	1" = 50' DWG.

250' Level Adit

10,000 N

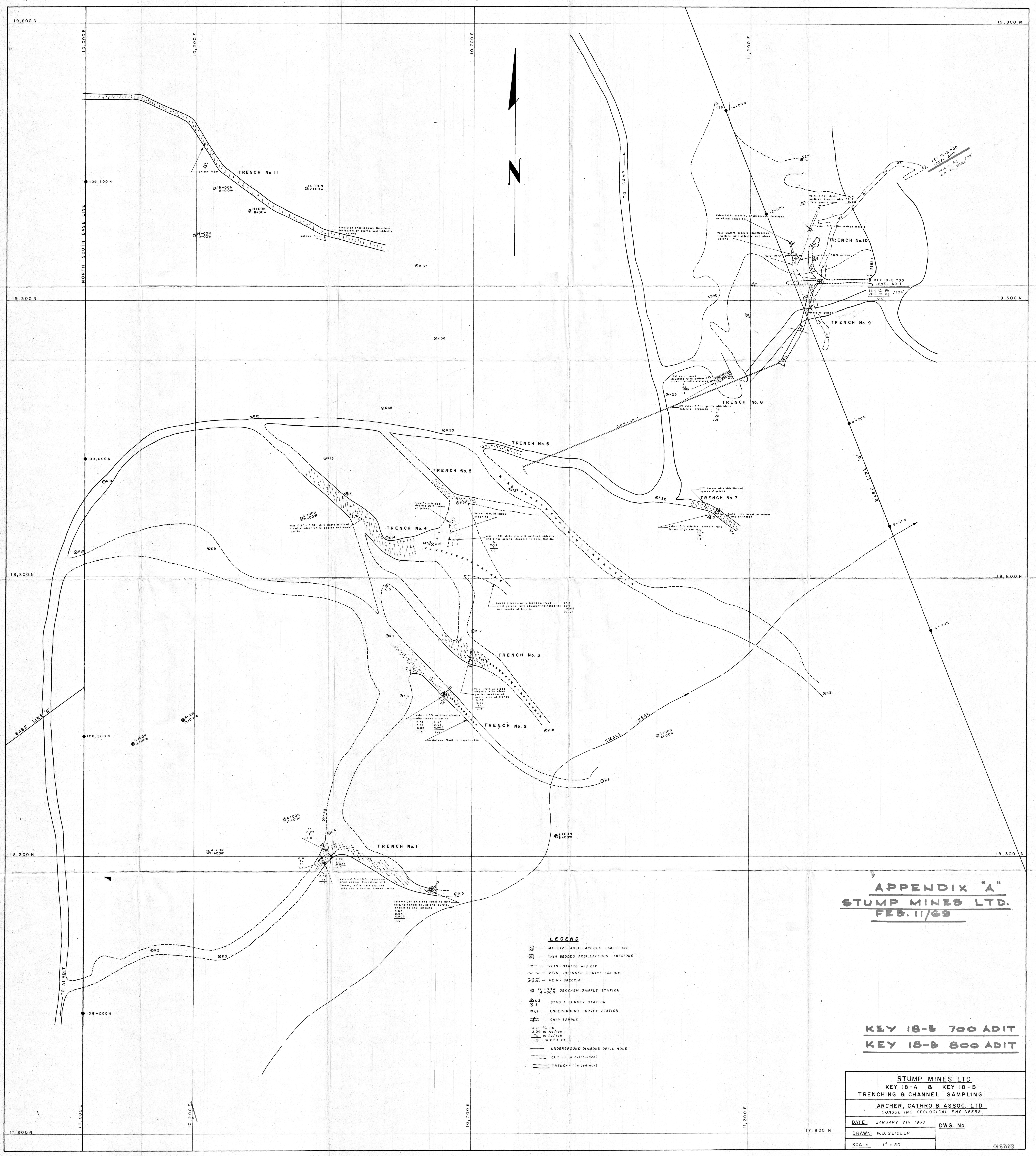
10,400 N

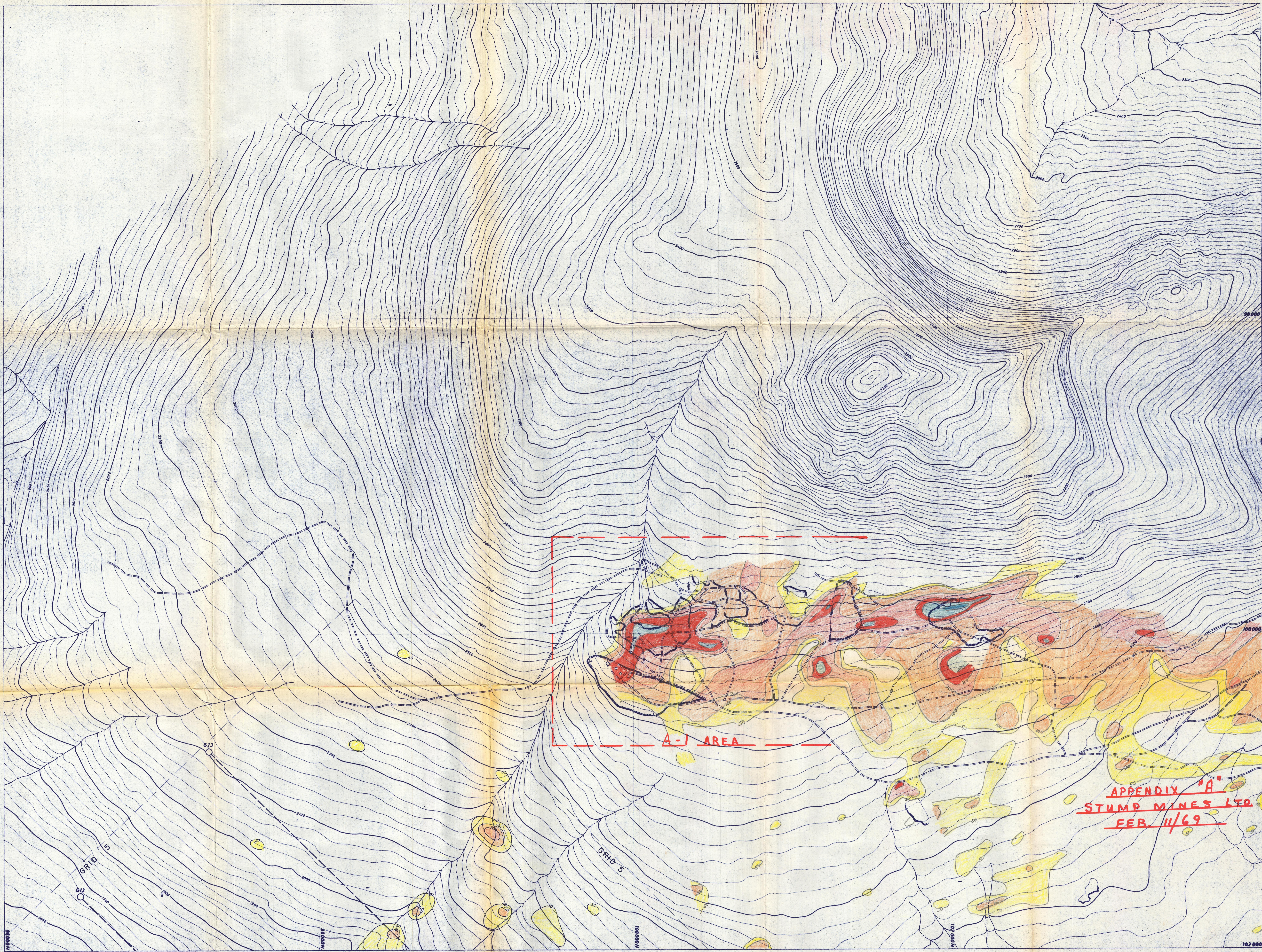
10,800 N

11,200 N

9,600 E

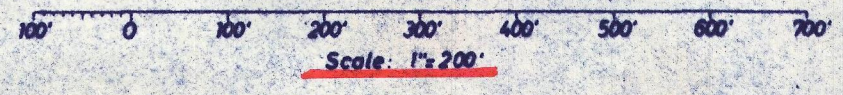
10,000 E





APPENDIX "A"
 STUMP MINES LTD.
 FEB. 11/69

STUMP MINES - SILVER KEY MINES
 KETZA RIVER - Y.T.



- LEGEND
- Hot Acid Extraction
 - 50 - 100 ppm
 - 100 - 200 ppm
 - 200 + ppm
 - Possible vein
 - 800 + P.P.M.

C	F	K
B	G	J
A	H	I

- ROADS & TRAILS
- FENCES
- CUT LINES
- BUILDINGS
- CONTROL POINTS
- MONUMENTS
- GRID MARKERS
- ADIT PORTALS

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 NORTHWEST SURVEY CORP LTD
 THROUGH PHOTOGRAMMETRIC METHODS
 FROM AERIAL PHOTOGRAPHY, AUGUST 1968

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