

GEOLOGICAL
AND
GEOCHEMICAL REPORT

on the

CH 1 to 224 and Reuben 1 to 6

Mineral Claims

by

T. R. Scott

This report has been examined by the Geological Survey of Canada and is recommended to be considered as a valid report of the work of the Survey.

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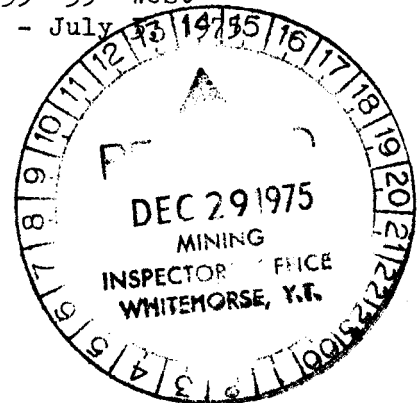
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Considered as representation work under
Section 53 (4) Yukon Quartz Mining Act.

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Sheets 106-D-4 and 105-M+13

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SUMMARY

The CH 1-224 Mineral Claims were staked in a geologically favorable area thought to contain the northern anticlinal limb of quartzites in the Galena Hill-Keno Hill area.

Late in 1974 the Reuben 1-6 Mineral Claims were added. These claims adjoin the CH group on the southwest, and cover favorable quartzites containing known mineralized veins and the former Shanghai mine.

The majority of the claim block lies on the main and northern portions of what is known as Chambers Hill. The area is heavily wooded and moss covered and contains less than 2% outcrop.

Geological mapping was conducted on the Reuben claims and in favorable areas of the CH group which were not completely covered the previous year. Mineralized veins and showings were examined and sampled.

Reconnaissance and some detailed geochemical soil sampling was successfully conducted on the Reuben claims to trace known and inferred vein zones.

On the CH group reconnaissance soil sampling was done in favorable areas not covered last year. Follow-up detail sampling was completed in several areas to further delineate soil anomalies of the previous year.

A four man crew, consisting of a party chief and three soil samplers commenced work on the two claim groups on May 27, 1975. A field supervisor was also on the property for a portion of the program. Field work was concluded on July 3, 1975.

HISTORY

The first known activity in the Chambers Hill area would seem to be the prospecting of a Mr. Chambers in the Shanghai area in the early 1930's, although it is probable that cursuary examinations of the area were made before then.

In 1961, the Shanghai and U.R. properties (Northlimb) were staked by C. Poli and A. Aho. During the next six years, Silver Titan Mines, with various partners did considerable work in the area. Several northeast trending vein faults were found in a section of "Keno Hill Quartzite" and greenstone comparable in thickness and character to that on Galena Hill. (A. E. Aho, 1964). On the U.R. Group, a northeast vein fault was trenched and traced for about a mile, but major mineralization was not found. On the Shanghai Group, following soil sampling, trenching and diamond drilling over several vein zones, underground exploration and development was conducted on the main vein zone. Approximately 2,200 feet of underground workings were driven on this vein by late 1964. With the exception of a few minor high-grade silver indications and an ore shoot containing 10-20% zinc, economic mineralization was not developed at that time. (Green and Godwin, 1962, 1963; Green, 1964, 1965; Findlay, 1966). Many of the Shanghai and all of the U.R. claims were lapsed by 1969 and little work was done in Chambers Hill area until 1974.

In early 1974, the CH 1-224 Claims were staked by United Keno Hill Mines covering the Chambers Hill area and northwest to Lynx Creek. A program of mapping and soil sampling was carried out over much of the claim group during the summer of 1974. Further trenching of the old U.R. vein fault revealed silver mineralization in fractures associated with the main fault, but failed to reach bedrock on the main fault itself. Several old showings were examined, but no new indications of major mineralization were found. In late 1974, the Reuben 1-6 Claims (former Tex 1-6) were staked adjoining the CH Group on Chambers Hill.

PROPERTY

The CH Group of Mineral Claims were staked for and are held by United Keno Hill Mines Limited. They were staked between February 25 and March 12, 1974 and consist of the following claims:

- CH 1-114 Grant Nos. Y87340-Y87453 (recorded on March 14, 1974.)
- CH 133-154 Grant Nos. Y87595-Y87616 (recorded on March 25, 1974.)
- CH 166-180 Grant Nos. Y87628-Y87642 (recorded on March 25, 1974.)
- CH 184 Grant No. Y87646 (recorded on March 25, 1974.)
- CH 186 Grant No. Y87648 (recorded on March 25, 1974.)
- CH 188-224 Grant Nos. Y87650-Y87686 (recorded on March 25, 1974.)

The Reuben 1-6 Mineral Claims were staked for and are held by United Keno Hill Mines Limited. They were staked in December 1974, and consist of the following claims:

REUBEN 1-6 Grant Nos. Y97213-Y97218 (recorded on December 15, 1974.)

LOCATION AND ACCESS

The CH Claim Block is situated on Chambers Hill, Mayo Mining District (claim sheets 105-M-13 and 106-D-4), and is bounded by the South McQuesten River to the south, Shanghai Creek to the west, and Lynx Creek to the north. The claims are approximately six miles northwest of Elsa, Yukon Territory.

The Reuben 1-6 Claims adjoin the CH Group on the southwest corner of Chambers Hill.

Access to the claim block is mainly by helicopter. Two 4-wheel drive trails, one from the South McQuesten Road to the Shanghai workings and one from the Hansen Lake Road to the vicinity of the old U.R. Group, do provide access to near the southern claim group boundary, but these are in poor condition at present.

TOPOGRAPHY AND VEGETATION

The claim groups lie entirely below treeline with elevations ranging from 2100 to 3900 feet. Most of the claim group is relatively gentle in relief at higher elevations, but steep slopes are encountered in most major drainage basins.

Vegetation consists mainly of crab spruce with considerable buckbrush and willow, especially near creek beds. A deep moss covering is universally present. There is less than 2% outcrop on the claim block.

GENERAL GEOLOGY

The general geology of the area has been described in part by Bostock (1943), Green and Roddick (1962), and Boyle (1965). The consolidated rocks underlying the CH Group belong to the Yukon Group, and are Cretaceous (?) in age. The metamorphosed sediments consist of graphite schist, quartz-sericite schist, thick and thin-bedded quartzites, and minor limestone. These are intruded by small stocks of granodiorite, occasional sills of quartz-feldspar porphyry, and biotite lamprophyre, and numerous sill-like bodies of greenstone (altered gabbro or diorite).

I. GEOLOGICAL SURVEY

A. GENERAL

The CH 1-224 and Reuben 1-6 claims were staked to cover the favorable "Central Quartzite Formation" as depicted on G.S.C. Map 1147A (Boyle, 1965). It has long been inferred that the geologic sequence present on Chambers Hill represents the north limb of an anticline, the axis of which trends parallel to the South McQueston River valley, and the south limb of which occurs on Galena Hill (Boyle, 1965). Templeman-Kluit (1971) envisages a somewhat similar relationship, except that he theorizes a high angle normal fault sub-parallel to the anticlinal axis between Galena Hill and Chambers Hill.

As a result of the 1974-75 field work, the areal exposure of the quartzite formation was found to be much more restricted than previously thought, and a more complex structural style would also seem to be indicated. The sequence of geological units mapped closely resembles that found on Galena Hill and it is almost certain that the Chambers Hill quartzites represent the anticlinal repetition of quartzites exposed in the Galena Hill-Keno Hill area.

B. DETAILED GEOLOGY

Approximately 98% of the claim group is drift covered. Areas of little topographical relief are swampy and heavily moss covered. Therefore, the geological mapping was concentrated on the steeper slopes and along stream drainage in an attempt to piece together the sequence of stratigraphic units included within the claim groups. Outcrop mapping was done with as much detail as possible for a working map scale. Geological unit boundaries are interpreted on the basis of strike projection, structural relationships, examined rock type similarities between individual beds, and data from examining local float where possible. Mapping was hampered in most cases by lack of outcrop and by dense willow and buckbrush on the southeast-facing slope of Chambers Hill.

The regional strike of the beds in the southwestern portion of the claim group is northeast to east with dips of 10 to 35 degrees northwest, with local variations. Moving east from the vicinity of CH 19-21, the strike gradually swings to north-northwest and dips to the west-southwest in the Lynx Creek area. This change in strike is thought to occur at a fold intersection (possibly between the McQueston and Lynx Creek anticlines), and it seems that a gentle northwest plunging synclinal crumple has developed in the area of this intersection.

Rocks occurring on the claim group are:

Unit 1	Quartzite (thick and thin-bedded types)
Unit 2	Graphitic Quartzite
Unit 3	Graphitic Schist
Unit 4, 4A	Quartz-sericite schist, coarse siliceous schist.
Unit 5	Limestone
Unit 6	Skarn

Unit 7	Granodiorite
Unit 8	Quartz-feldspar Porphyry
Unit 9, 9A	Greenstone, altered greenstone
Unit 10	Biotite Lamprophyre

For a detailed description of the individual rock units the reader is referred to the "Geological and Geochemical Report on the CH 1-224 Mineral Claims" (T.R. Scott, 1974, pp. 4-9).

On the Reuben 1-6 claims a thick sequence of thick-bedded quartzites interbedded with sericite schists is exposed. These quartzites are overlain by a thick schist sequence and would seem to correlate to the upper boundary of the "Central Quartzite Formation". Within the quartzite sequence, quartz-feldspar porphyry, biotite lamprophyre and greenstone sills are exposed which may be continuous with similar exposures on the Shanghai property to the west and the CH group to the east.

Further east on CH 15-18 fill-in mapping further delineated the upper boundary of the quartzite formation near the base of the hillside. The main vein (old U.R. vein) on CH 21 brings a lower horizon of quartzite into faulted contact with the "Upper Schist"; and further mapping in this area extended the prominent greenstone and quartz-feldspar porphyry sills another 1500 feet east of the trenched area. Quartzite was found to be continuous to the east end of the claim block. The lower boundary of this formation in contact with schist of the "Lower Schist" formation was found on CH 68. Several large greenstone sills are exposed in the lower part of the quartzite and upper part of the schist formations. As noted before the quartzite swings north under an area of deeper overburden and is exposed again in the Skate Creek area. The upper "Lower Schist" contact could not be traced far to the north and the thickness of this formation is unknown.

C. STRUCTURE

Due to the heavy overburden cover on much of the claim group it is difficult to evaluate structural trends except on the steeper slopes or where drainage enhances the structural style of the area. Aerial photo interpretation of the area suggests three major structural trends. The approximate strike of these trends is northeast-southwest, north-south, and northwest-southeast. Geological investigation of some of these lineations is not conclusive, but some interpretations may be made for specific areas.

On the Shanghai 14 and 16 claims and CH 69-71 two unmineralized and what appear to be major crossfaults have a northwest trend, with apparent horizontal right-hand movement of a few hundred feet. A small vertical component would also seem to be apparent. On the Reuben claims two mineralized vein faults with a northeast strike occur, and as many as three additional sub-parallel veins are indicated by this season's field work. The main vein on CH 19 and 21 has an indicated northeast trending strike length of over 3000 feet and several hangingwall splits have been noted. Both of the above vein faults dip northwest and a left-hand horizontal movement is indicated, although displacement could not be measured. Approximately 3000 feet west on CH 15 and 16

another northeast trending fault is topographically expressed. These faults as well as other lineations of similar northeast trend seem to occur in a quite regularly spaced pattern along the whole length of the southeast slope of Chambers Hill. The north-south lineations in some cases appear to be crossfaults but lack of outcrop exposure in these areas prevents positive correlation at the present time.

Bedding plane low angle faults were observed directly only in three localities, but it is probable that these are much more common in the areathan is indicated.

A distinct schistosity is present in most rock types which very nearly parallels inferred bedding planes in the metamorphosed sediments. A wrinkle lineation also occurs in many of the schists with a predominant southwest plunge. Small scale drag and isoclinal folds were examined and found to have their axial planes nearly parallel to the bedding and foliation of the enclosing rock. Much of this internal structure is probably due to large scale folding. Drag folds associated with faulting were also noted in many localities. Medium scale folding is probable in some areas in the claim group and may explain sudden changes in bedding attitude and rock type distribution, but folds of this scale were not observed directly and remain only as possibilities.

It is difficult to relate all the measured structural data in the area to larger scale regional structural features. Several episodes of deformation of regional scale are indicated within the rock units, but these are greatly complicated by local faulting and folding. At the present extent of geological knowledge and information of both the specific claim groups and the general area as a whole, structural interpretations cannot be considered conclusive.

D. MINERALIZATION

Geological mapping and prospecting during the course of the 1975 field season did not reveal any new showings of silver-lead-zinc mineralization on the CH group that were not examined the previous year.

On the newly acquired Reuben claims several indications of mineralization were examined in outcrop, trenches, and on old shaft and adit dumps. The former Shanghai mine, with approximately 2200 feet of underground workings on the No. 1 vein zone, is located wholly within the Reuben claim group. Surface examination indicates that two mineralized vein faults, two additional sub-parallel veins and numerous crossfaults are present. According to old assay plans and records the No. 1 vein was a strong break with a strike of N 45°E and a dip of 70-80 degrees NW, and indicated left lateral movement. An ore shoot high in zinc was found near the portal, but the rest of the vein was poorly mineralized. Three interesting high-grade silver intersections were found by diamond drilling in the hanging wall. The No. 2 vein lies a couple hundred feet southeast

and is heavily mineralized with pyrite and lesser amounts of galena and sphalerite in surface trenches. One to three tons of highgrade silver ore remain on dumps near the lower adit portal. Numerous rusty fracture containing siderite are also present in outcrops on the property.

Brief descriptions of the showings examined and corresponding assay results are given on the following chart "CH and REUBEN ROCK ASSAYS". All assays were done at the Elsa Assay Laboratory under the supervision of Mr. Fred Burgess, Chief Chemist for U.K. H.M.

CH AND REUBEN ROCK ASSAYS

<u>Sample No.</u>	<u>Location</u>	<u>Description</u>	<u>Ag oz./ton</u>	<u>Pb %</u>	<u>Zn %</u>	<u>Cu %</u>
06577	Reuben No. 5 M.C.	-grab near upper adit, lim., trace PbS, ZnS	8.3	8.57	5.51	
09148	Reuben No. 6 M.C.	-grab from lower adit dump, steel PbS	185.8	58.60	3.53	
09149	Reuben No. 6 M.C.	-grab from lower adit dump, PbS, ZnS	62.3	35.30	4.86	
09052	Reuben No. 4 M.C.	-Fe-Mn stained qtz. from 3' vein in trench	0.9	0.08	0.60	
09053	Reuben No. 4 M.C.	-rusty qtz. veinlets in outcrop, lim.	0.2	0.04	0.12	
09054	Reuben No. 4 M.C.	-Fe stained qtz. with pyrite in outcrop	0.5	0.03	0.07	
09055	Reuben No. 4 M.C.	-qtz. vein with pyrite and lim. in trench	3.5	0.16	0.68	0.56
09056	Reuben No. 4 M.C.	-Mn stained qtz. from crossfault shear in outcrop	2.7	0.08	0.40	
07475	CH No. 21 M.C.	-character sample of PbS, ZnS in fractures in trench # 4	19.3	24.70	17.40	
07476	CH No. 21 M.C.	-character sample of PbS, ZnS in trench # 4	21.0	25.90	15.90	
09057	CH No. 104&106 M.C.	-Fe stained qtz. from veinlet in outcrop	0.5	0.06	0.04	
09058	CH No. 2 M.C.	-qtz. with limonite from outcrop	0.3	0.04	0.05	

II. GEOCHEMICAL SURVEY

A. GENERAL

The claim baselines were again used for control for the soil sampling grid. Fill in sampling was done on the southeast facing slope of Chambers Hill in areas not completed the previous year. Sampling in these areas (see location map of 1975 sampling) was done on a 300 foot line spacing with samples taken every 100 feet on the lines. The Reuben 1-6 claims were similarly sampled and Reuben #4 mineral claim was detail sampled on a 100 foot X 100 foot grid.

The detail baseline in the vicinity of CH 21,23 was extended along vein strike. Also short fill-in lines were sampled in various areas of anomalous 1974 soil sample results.

A total of 2,345 soil samples were taken in the course of the work and these were analyzed for silver, lead and zinc. Samples of approximately one cup in size were taken using a mattock from holes 6 inch - 18 inches deep, depending upon permafrost conditions, to as closely as possible represent the "B" (organic free) soil horizon.

B. LAB. PROCEDURE

Sample analysis were carried out at the Elsa Assay Laboratory under the direction of Mr. Fred Burgess, Chief Chemist for United Keno Hill Mines Limited.

The samples were dried and screened through a -80 mesh standard nylon screen. 1.000 grams of the minus 80 mesh material was digested in a solution of HNO_3 and HCl (Aqua Regia) for a minimum of 8.0 hours under heat lamps. After cooling, the samples were brought up to a 20 ml. volume with deionized water and were analyzed for silver, lead and zinc by a "Perkin Elmer 303" atomic absorption spectrophotometer. Results were obtained in parts per million. A split of all samples was kept for further reference.

C. INTERPRETATION OF RESULTS

Previous work in the Galena Hill - Keno Hill region has proven soil sampling to be an effective exploration tool for locating vein zones in areas of relatively shallow overburden (to 10 feet). A three-metal determination (Ag., Pb., Zn.) was done on all soil samples. Experience has shown that lead is the most reliable indicator element due to its low mobility in the chemical-physical environment of this area. Therefore highly anomalous lead values should indicate a nearby source for this element and heaviest emphasis is placed on the resultant lead plots. The mobility of both Ag & Zn and the geochemical results for these elements are more widespread and erratic, making overall interpretation more difficult.

The variety of materials sampled also complicates interpretation.

In some cases the ideal depth for sample material could not be reached due to excessive permafrost conditions; and often samples of this type were too organic for proper evaluation. Samples taken from residual soils were generally considered reliable. But samples from tills and clayey bog-type soils have many complicating characteristics. If the till cover is very shallow and of local origin, the geochemical response of these soils may be of some value; but if deep overburden exists, soil analysis will not reflect bedrock characteristics. The half-bog soils often show a slight enrichment of silver and zinc relative to residual soils. These elements would seem to be accumulated in organic material and by iron and manganese oxides and hydroxides in the clay minerals. A more total chemical attack, such as potassium bisulfate fusions, may have proved slightly more reliable in analysis of these soils. Generally it is not felt that samples taken from deep tills or bog-type soils will reflect the presence of any underlying mineralization.

Another problem seems to be apparent as a result of this years sampling. Fill-in sampling and resampling in many of the same areas as 1974 sampling resulted in many widespread low-order anomalies which were not apparent last year, (using the same numerical parameters for anomalies as were used in 1974.) The distribution and geometry of these low-order anomalies suggests that they actually represent background values and cannot be considered anomalies. Since methods of sampling and analysis were the same throughout both seasons' sampling, the only plausible explanation for yearly differences in background would seem to be actual differences in metal content in the near surface soils at the time they were sampled.

The best explanation for these differences would seem to be the phenomenon of "flushing" of soils in permafrost areas (Levinson, 1974). During the winter months there is an upward ionic diffusion of metals which accumulate at the surface of the soil under the snow. Thus, during spring thaw, widespread false anomalies may exist which are in reality only concentrations of normal background values. As runoff progresses the ions are flushed out of the soils, especially on well-drained slopes, effectively reducing the contrast of anomalies. False anomalies may then exist in bog areas or at the base of slopes, but in general both background and anomalous values on the slopes will be slightly lower than before flushing. Therefore within the areas of questionable low-order anomalies in 1975, it can be shown that these areas were sampled relatively early in the spring, probably at least before the process of flushing was complete. Conversely, many of these same areas were sampled in mid to late summer in 1974, when the general background values would be at their lowest. Many other factors such as bedrock differences, soil differences, etc. may be involved in the different threshold values in 1974 and 1975; but in many areas exhibiting these differences, almost all parameters may be considered equal except the time of the year when the sampling took place. Therefore, it is assumed that "flushing" does take place and as a result, all low-order anomalies of 1975 must be interpreted with this in mind.

There is also probably considerable background variation for all metals due to the differences in underlying rock types. Generally background values are lower in quartzite areas than in schist areas. Soils above graphitic schist may have higher than normal background values for some metals, reflecting the higher concentrations of these metals in that rock type.

In contouring, lead values in excess of 50 p.p.m. have arbitrarily been selected as being anomalous. Silver is contoured above 1.0 p.p.m. and zinc above 100 p.p.m. It should be noted that in specific areas, lower values might also be considered anomalous and may give better definition of anomalous trends or vein extensions. The reverse is probably true in some drainage areas.

ANOMALY DESCRIPTIONS

(1). Soil Sample Plots for REUBEN 1-6

Anomaly 20.- This is a moderate silver-zinc anomaly with sub-anomalous lead support. It has a northeast indicated strike length of approximately 800 feet and is sub-parallel to and 600 feet uphill of the #1 vein zone. It may represent a hanging wall split of the #1 vein.

Anomaly 21.-This is a high lead-zinc anomaly, somewhat segmented, which overlies the surface trace of the northeast trending #1 vein zone. The geochemically indicated strike length is approximately 1600 feet. Anomalous values terminate abruptly to the northeast at a mapped crossfault; and values seem to die off to the southwest where deeper overburden is encountered.

Anomaly 22.- This discontinuous high-order lead-zinc-silver anomaly lies on and below the surface trace of the northeast trending #2 vein zone. The indicated strike length is at least 2,600 feet. The high zone of zinc to the southwest may represent the uphill outcrop of a high zinc oreshoot on the #1 vein indicated on old underground assay plans and is probably also complicated by dump contamination downhill. Higher anomalous values are also localized on the northeast side of the same cross-fault that cuts off the #1 vein anomaly. Deeper overburden to the southwest and northeast of indicated values seems to mask any further extension of this vein.

Anomaly 23.-This lead-zinc-silver anomaly would seem to represent the mapped and topographically indicated #3 vein zone. A 400 foot strike length is indicated, with values again cut off to the southwest by the projection of the same crossfault mentioned in Anomalies 21 and 22. The anomaly 200 feet to the southwest may be an extension of this vein across the crossfault.

Anomaly 24.-This lead-zinc-silver anomaly lies downhill of the #3 vein zone and falls in a 1550 foot topographical break which is thought to be another northeast fault sub-parallel to the others. A 200-300 foot strike length is geochemically indicated immediately northeast of the same major crossfault.

(2). Soil Sample Plots for CH 1-180

Anomaly 25.-This low order segmented silver-zinc anomaly may reflect geologically inferred northeast faulting in the area.

Anomaly 26.-This is an isolated silver-lead anomaly occurring in an area of massive quartzites. No preferred trend is indicated and no interpretation is attempted without further investigation.

Anomaly 27.-This is a relatively high zinc anomaly with a 400 foot northeast trend. Nearby isolated silver highs may support a structural interpretation, but further investigation is also needed in this area. It should be noted that a large area to the north has widespread low order anomalous silver values only erratically supported by lead and zinc. These anomalies may be significant, but at the present state of investigation would seem to represent a higher background in 1975 sampling and no structural interpretation of the area is possible.

Follow-up on 1974 Anomalies

Several anomalies, as indicated by the 1974 soil sample plots, were resampled in detail during the 1975 program. The following comments and observations refer to specific numbered anomalies as indicated in the "Anomaly Descriptions of Soil Sample Plots for CH 1-180" in the 1974 report on the CH property. (T.R. Scott, 1974).

Anomaly 3.-Follow-up sampling failed to delineate any extensions.

Anomalies 4 and 8.-Follow-up sampling in this area of widespread and erratic low order anomalies failed to delineate any higher zones or expected trends. Many anomalies were further restricted as a result of this year's work.

Anomaly 9.-This low silver-zinc anomaly was further restricted by follow-up sampling.

Anomaly 10.-This silver anomaly was greatly expanded by low order anomalous silver values in the follow-up work. No trend is recognizable and the expanded anomaly seems to be due to exclusively to this year's values. Background again would seem to be higher this year in this area.

Anomaly 11.-Follow-up sampling in this area restricted the high lead-zinc anomaly of last year. Four more isolated zinc anomalies are indicated nearby, but no structural trends can be inferred from the present information.

Anomaly 17.-Follow-up sampling in this area was to test north-east of the main U.R. vein. Anomalous lead values were restricted

from last year. Anomalous silver again was widespread, but thought generally to be due to higher background. A zinc anomaly, along with a few isolated silver values may reflect the possible extension of this vein a further 400 feet.

Anomaly 19. -Follow-up work on this anomaly resulted in no expansion of anomalous lead, but a possible northeast trend of zinc values which cross the stream. This is weakly supported by silver values, but still no definite structural interpretation can be made.

CONCLUSIONS

Most of the claim block is till covered and there is less than 2% outcrop exposure.

Geological mapping was valuable in delineating the major favorable quartzite horizons on the claim groups. Valuable information was also obtained on the distribution of all rock types and the apparent structural complexities of the area.

The geological section examined would seem to represent an anticlinal repetition of a similar section found on Galena Hill. Intervening structural relationships in the South McQueston River valley can only be theorized.

Numerous vein faults, crossfaults, and low angle bedding faults similar to those found on Galena Hill are present on the claim groups, but further investigation is needed to understand the complexities and prove the possible economic potential of these faults.

Silver-lead-zinc mineralization has been found in three major locations on the property, all of which have received varying amounts of exploration and development in the past.

Two mineralized vein faults occur in quartzite horizons on the Reuben claims and as many as three more sub-parallel veins are indicated by mapping, soil sampling, and topography.

The lack of outcrop exposure between the quartzites on the Reuben claims and the major quartzite formation on the CH group to the east prevents positive correlation of the two.

Geochemical soil sampling was generally disappointing; but it was thought to be an effective exploration tool on the Reuben claims and in the northwestern portion of the CH group.

On the Reuben group, in areas of shallow soils and good drainage, the geochemical reflection of near-surface vein zones was good. The major crossfault on the Reuben group may have had a localizing effect on ore deposition in four veins, as reflected in the soil sample results.

Lead is more restricted than silver and zinc, and is more reliable for geochemical interpretation of the soil sample results.

Geochemical "flushing" during spring run-off is thought to be responsible for the seemingly higher than normal background values in much of the 1975 soil sampling.

RECOMMENDATIONS

- (1) That geochemical anomalies 11, 19, and 27 be investigated by detailed prospecting and bulldozer trenching.
- (2) That a program of overburden drilling be initiated to test known vein structures in detail, especially the Reuben and U.R. veins, topography permitting.
- (3) That the southwest projection of the U.R. vein be drilled at the edge of the valley floor to test for an extension of the quartzite in this area.
- (4) That a widespaced grid of overburden drilling be initiated on the thick quartzite formation exposed on the slope between Poli and Hex Creeks in the eastern portion of the CH group.

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CH GROUP - REUBEN GROUP

STATEMENT OF COSTS

Salaries and Overhead

1 Geologist @ \$35.00/day for 10 days . . .	\$ 350.00
1 Party Chief @ \$31.00/day for 37 days . .	\$ 1147.00
3 Field Helpers @ \$28.00/day for 37 days. .	<u>\$ 3108.00</u>
	\$ 4605.00
Camp Equipment and Supplies	\$ 578.00
Food	\$ 944.00
Fuel	\$ 387.00
Helicopter Charter	\$ 3044.00
Total	<u>\$ 9558.00</u>

Soil Analysis and Rock Assays

Total Soil Samples	2,345	
Analysis for Ag, Pb, Zn @ \$0.75/determination. .		\$ 5276.25
Total Rock Assays	31	
31 determinations (Ag,Pb,Zn) @ \$1.00/determination		<u>\$ 31.00</u>
Total Assaying Costs		\$ 5307.25
OVERALL COST OF PROJECT		<u>\$ 14,865.25</u>

DISTRIBUTION OF GEOLOGICAL AND GEOCHEMICAL WORKON THE CH GROUP AND REUBEN GROUP

<u>Claim</u>	<u>Grant Nos.</u>	<u>Renewal Period / Claim</u>	<u>Claim Years</u>
CH No. 5 - 47	Y87344-Y87386	1 year	43
CH No. 69 - 114	Y87408-Y87453	1 year	46
CH No. 133 - 154	Y87595-Y87616	1 year	22
CH No. 166 - 180	Y87628-Y87642	1 year	15
CH No. 189 - 198	Y87651-Y87660	1 year	10
Reuben No. 1 - 6	Y97213-Y97218	2 years	12
		TOTAL	<u>148</u>

A F F I D A V I T

I, Randy Scott, of Elsa, in the Yukon Territory, Exploration Geologist, do solemnly declare:

1. I have caused the above mentioned work to be performed to the best of my ability and have a personal knowledge of the facts and matters herein declared.
2. I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

Declared before me at

Elsa, in

the Yukon Territory,

this 26th day of

November, 1975.

Randy Scott

Shirley Pranic

Notary Public in and for the

Yukon Territory.

December 11, 1975

CERTIFICATION

I am a registered member, in good standing, of the Association of Professional Engineers of the Province of Ontario, and a member of the Canadian Institute of Mining and Metallurgy (1948).

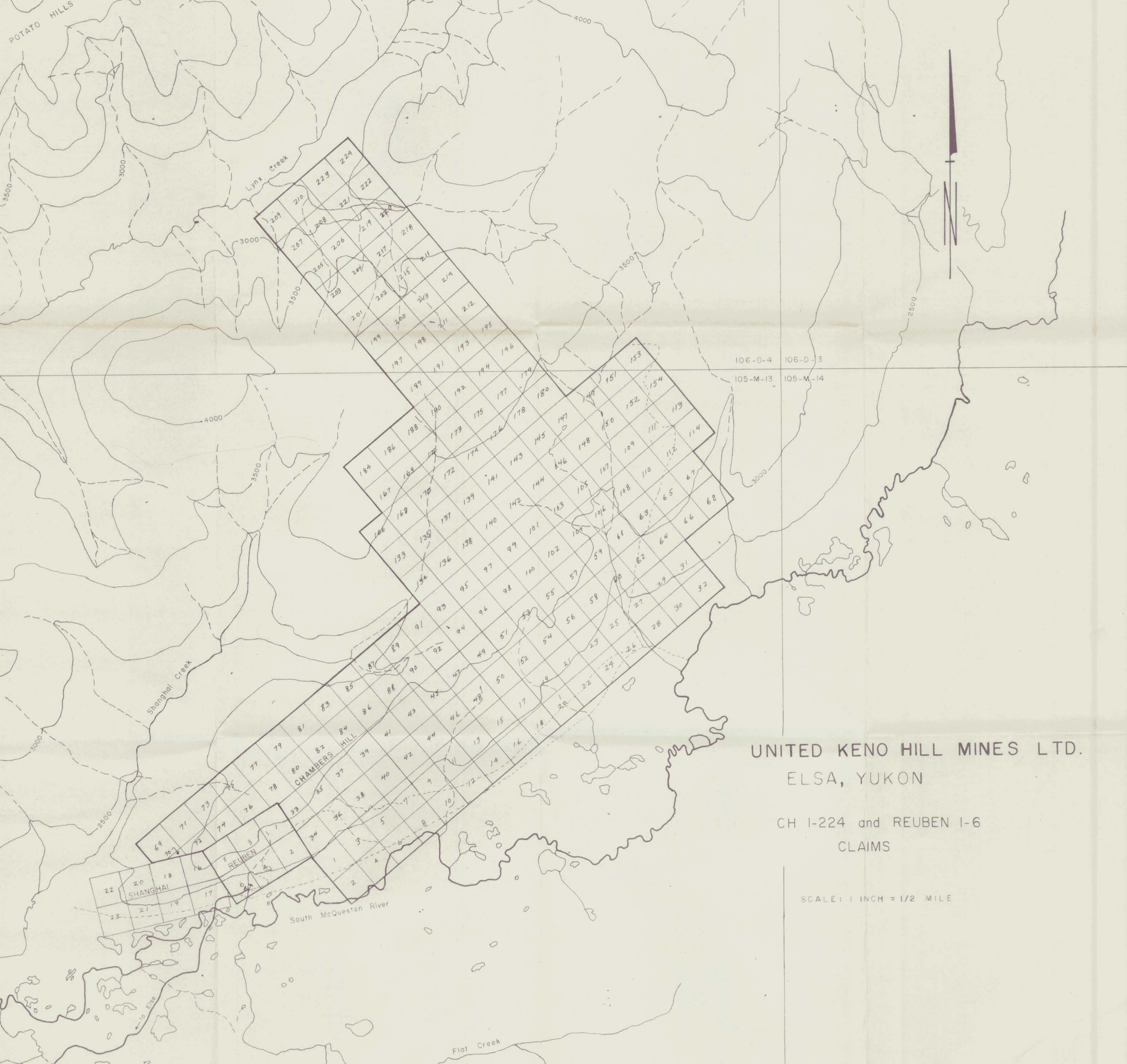
I have continuously been working in the mining industry in an Engineering, Supervisory and Executive capacity since 1946.



A handwritten signature in cursive script, reading "G. S. Dundas".

G. S. Dundas, P. Eng.
Mine Manager
United Keno Hill Mines Limited

POTATO HILLS



106-D-4 106-D-3
 105-M-13 105-M-14

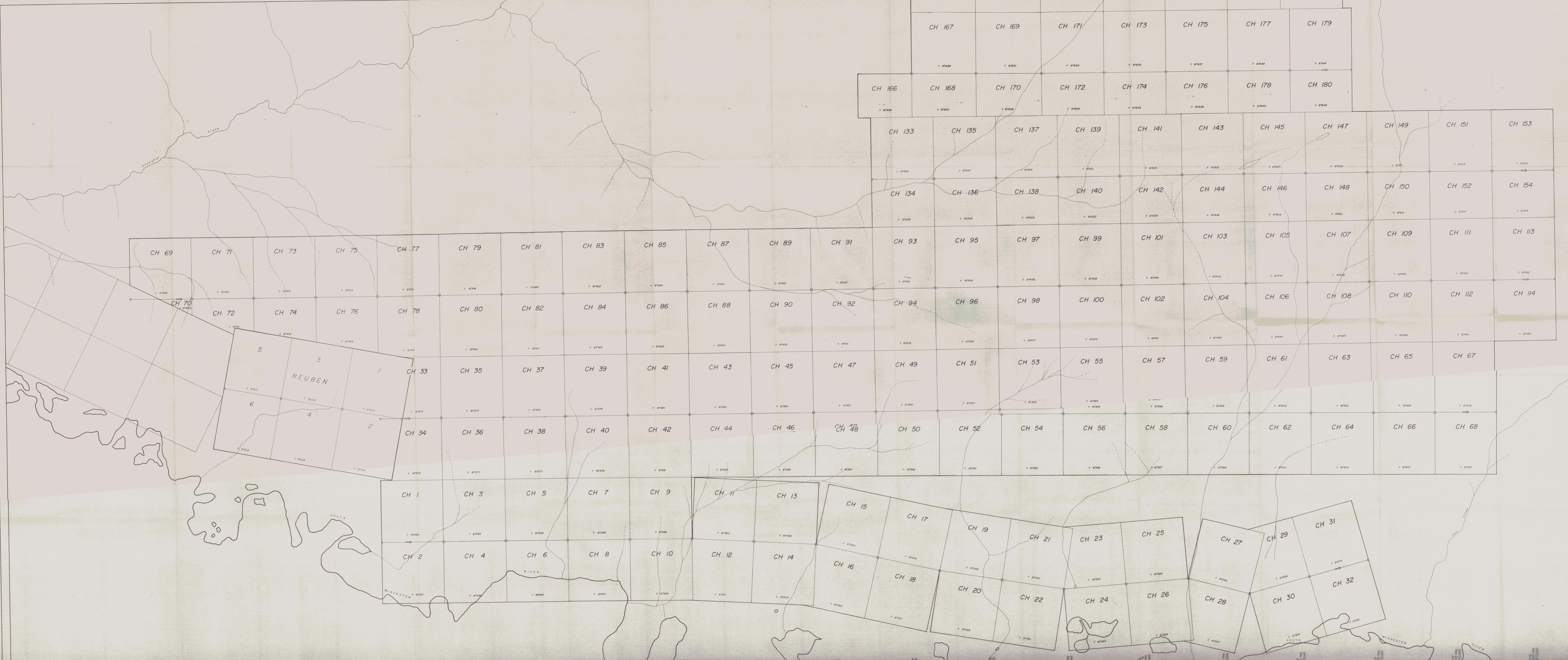
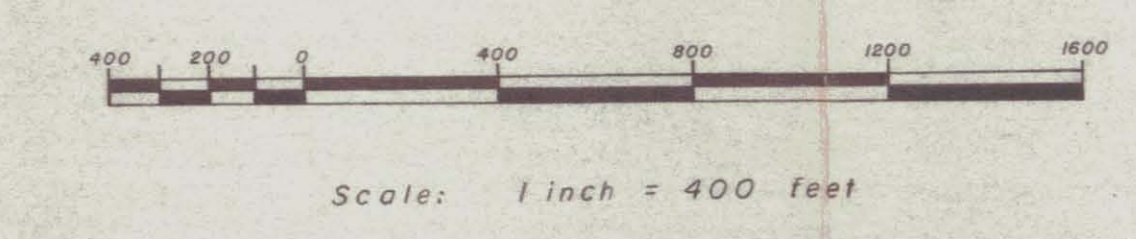
UNITED KENO HILL MINES LTD.
 ELSA, YUKON

CH I-224 and REUBEN I-6
 CLAIMS

SCALE: 1 INCH = 1/2 MILE

UNITED KENO HILL MINES LIMITED
ELSA YUKON
EXPLORATION DEPARTMENT

PLAN MAP
OF THE
CH MINERAL CLAIMS 1-180



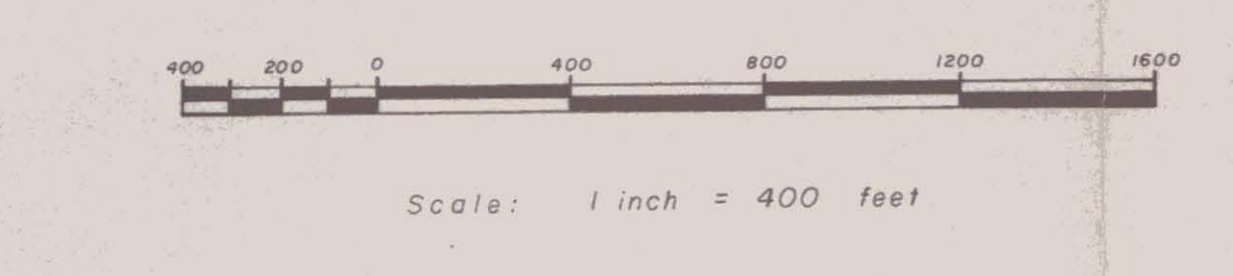
UNITED KENO HILL MINES LIMITED
 ELSA YUKON
 EXPLORATION DEPARTMENT

GEOLOGY MAP
 OF THE
 CH MINERAL CLAIMS 1-180

SURFACE LEGEND

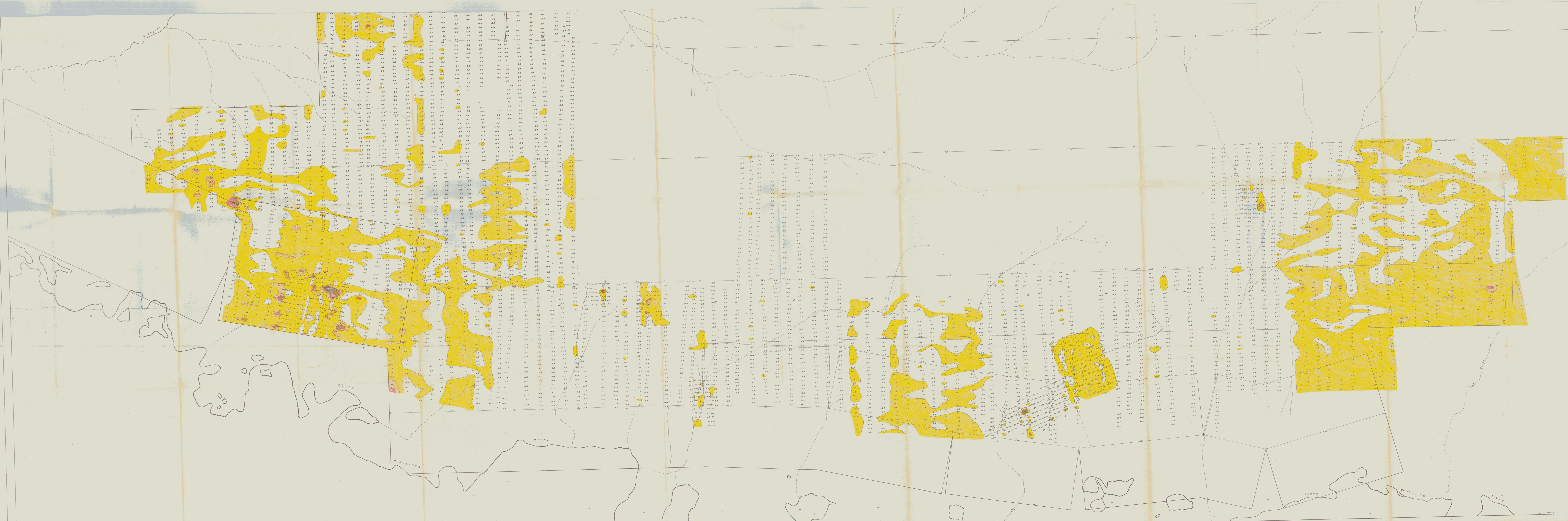
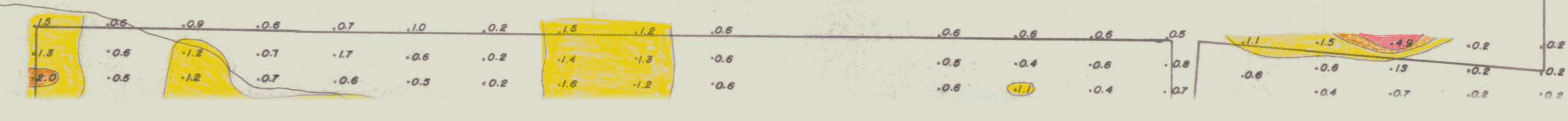
- Pleistocene Sediments
 - Quartzite
 - Graphitic Quartzite
 - Graphitic Schist
 - Quartz-kerolite Schist, Charnockite Schist
 - Limestone
 - Sand
 - Shales
 - Gneiss
 - Quartz-feldspar Porphyry
 - Greenstone, altered
 - Gneiss, Lamprophyre
 - Vein Material
 - Quartz
 - Cobble
 - Surficial
 - Fair Breccia (without visible surficial)
-
- Outcrop
 - Trench, Area of Inlet Road
 - Geologic contact (observed)
 - Geologic contact (projected or assumed)
 - Vein Fault (observed)
 - Vein Fault (projected or assumed)
 - Fault (observed)
 - Fault (projected or assumed)
 - Bedding
 - Schistosity
 - Lamination
 - Fracture or joint (inclined, vertical)
 - Trench
 - Head Trench, Prospect Pit
 - Adit
 - Shaft
 - Diamond Drill Hole
 - U.K.M.M. Campsite, O.M. Campsite

- Lake or Slough
- River
- Creek, Intermittent



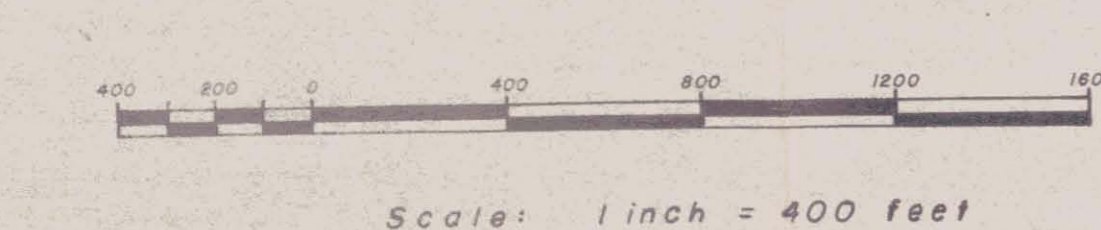
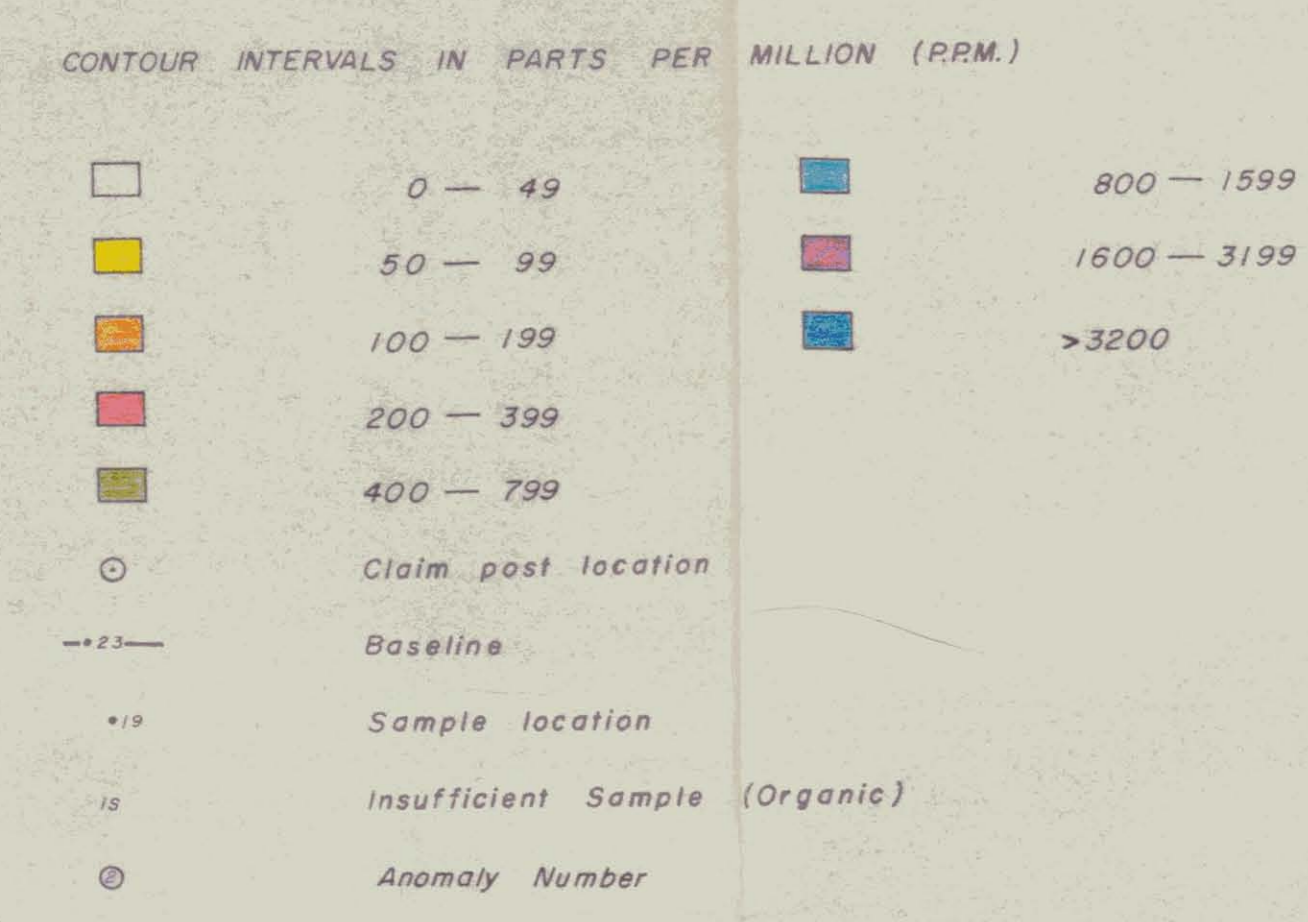
SOIL SAMPLING
SILVER PLOT
OF THE
CH MINERAL CLAIMS 1-180

- CONTOUR INTERVALS IN PARTS PER MILLION (PPM)
- | | |
|------------|-------------|
| 0.1 - 0.9 | 16.0 - 31.9 |
| 1.0 - 1.9 | > 32.0 |
| 2.0 - 3.9 | |
| 4.0 - 7.9 | |
| 8.0 - 15.9 | |
- Camp post location
● Sample location
○ Insufficient Sample (Organic)
○ Assay Number



UNITED KENO HILL MINES LIMITED
 ELSA YUKON
 EXPLORATION DEPARTMENT

SOIL SAMPLING
 LEAD PLOT
 OF THE
 CH MINERAL CLAIMS 1-180



UNITED KENO HILL MINES LIMITED
ELSA YUKON
EXPLORATION DEPARTMENT

SOIL SAMPLING
ZINC PLOT
OF THE
CH MINERAL CLAIMS 1-180

