

2951

GEOCHEMICAL REPORT

ON THE
CRICK CLAIMS
AND

GUTS CLAIMS

Crick 1 - 30

Guts 1 - 18

Canyon Creek Area, B.C.

Latitude $49^{\circ} 27' N$, Longitude $118^{\circ} 54' W$

By

Dr. Peter J. Haman, P. Eng.

STEREOGRAMMETRY LTD.,

P. O. Box 997,

Calgary, Alberta

For

DeKalb Mining Corporation

Calgary, Alberta

Work done between:

July 10th and November 17, 1970

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INTRODUCTION

The Crick No. 1 - 30 claims (Record Nos. 32076 to 32105) were located by Mr. Koit Jurgens on the 17th, 18th, and 19th days of April, 1970 on behalf of Mr. Ronald A. Buckley, Calgary, Alberta.

The Guts No. 1 - 18 claims (Record Nos. 32106 to 32123) were located by Mr. Koit Jurgens on the 19th and 20th days of April, 1970 on behalf of Mr. Ronald A. Buckley, Calgary, Alberta.

The Crick claims and Guts claims were recorded at Grand Forks, B.C. on the 21st day of April, 1970.

Mr. Ronald A. Buckley took the Mineral Lease of the Robin Hood (Lot No. 989), Houston (Lot No. 2302), Fourth of July, (Lot No. 2638); Muldoon (Lot No. 2369); Colorado (Lot No. 2641); Idaho (Lot No. 2642); and Montana fraction (Lot No. 2645), on June 2nd, 1970.

The ownership of the Crick and Guts claims, and the Mineral Leases listed above was transferred by Bill of Sale recorded at Greenwood, B.C. on September 14th, 1970 from Mr. Ronald A. Buckley to DeKalb Mining Corporation.

Mr. A.P. Tiddens took the following Mineral Leases on behalf of DeKalb Mining Corporation: Mayflower (Lot No. 1284); Lillie May (Lot No. 1285); Montana (Lot No. 2640); 7:30 (Lot No. 1459); Jewel (Lot No. 2785); and Superior (Lot No. 2786). The position of the Crick and Guts Mineral Claims and of the Mineral Leases are shown on the accompanying Mineral Claim Map.

A geochemical soil sampling survey was carried out to cover the Crick and Guts claims and Mineral Leases listed above. This report was prepared to file assessment work on the Crick Claims, Guts Claims and Mineral Leases owned by DeKalb Mining Corporation.

Chapter I

THE CRICK CLAIMS

The Crick 1 - 30 claims are situated approximately 1 mile south of Triple Lakes. The northernmost Crick claims have partly overstaked the Mineral Leases: Kingston, Boston, Ring, and Champion.

The Mineral Leases: Houston, Superior, and Jewel, being owned by DeKalb Mining Corporation, are centrally located within the Crick claims.

Chapter II

THE GUTS CLAIMS

The Guts claims are located approximately two miles south of Triple Lakes. The following Mineral Leases fall partly or wholly within the Guts claim group: Robin Hood, Mayflower, Lillie May; Fourth of July; and Muldoon.

The Mineral Lease 7:30 is located to the east of the Guts claims, and the Montana fraction, Montana, Colorado; and the Idaho are located to the south of the Guts claims.

Chapter III

HISTORY

Prospecting in this general area has been carried out since the late 80's of the last century. Most of the activity centered in the area is immediately to the north of the Crick claims, and east of Triple Lakes. This area has been referred to as Horseshoe Mountain where the Mogul claim was staked in 1896. By 1898, most of the mineral claims, now shown as

Mineral Leases, were staked, and considerable surface and near surface work was done. By 1901, the activity had waned and no attention was being paid to this area until 1928. In 1933, after four or five tons of ore was shipped from the Mogul, work was stopped. In 1936, several Crown-granted claims had been leased, and several cars of sorted ore had been shipped. The mining activity continued intermittently until 1940. Since that time the mining activity has slowed down though some prospecting, and minor production has been reported until recent time.

The tonnage and the essential minerals mined, gold, silver, lead, zinc, and copper, are shown on the accompanying Mineral Claim Map (in Pocket No. 1). A list of the more important reports by the B.C. Minister of Mines are listed in the references.

Two reports of mineral leases taken by DeKalb Mining Corporation cover the Fourth of July and Montana Mineral Lease.

1. Fourth of July: B.C. Minister of Mines Report, 1900-01, page 1137. The report mentions that the country rock is of igneous origin, fine-grained and probably a diabase. Very little mineral was visible in a tunnel as far as could be inspected, but on the dump there was a quantity of pyrrhotite, said to have been found in the winze. A sample of this gave a value of \$2.50 gold per ton.

2. Montana: B.C. Minister of Mines Report, 1900 - 01, page 1136. It is reported that a tunnel has been driven in for 70 feet to the east, with a winze, which has been run in on about six feet of black, shaley material occurring between two slip-walls in a fine-grained, igneous country rock. The walls have a strike nearly E - W, with a dip of from 30° to 50° to the north, and the filling between them, as is the country

rock to a lesser extent, is mineralized with iron sulphides, while irregularly distributed through this filling are lenses of galena and zincblende. The values are said to have been chiefly in gold and silver. Samples from the dump assayed: gold \$8 per ton; silver 6 oz per ton.

Only traces of gold and .5 oz. silver per ton were found in an open cut, some hundred feet to the south.

In a further open cut, also parallel, there is a quartz lead about 24 inches wide, somewhat shattered, associated with calcite and having mineralization as in the tunnel. It was noted, however, that the country rock was here somewhat different, being a very fine-grained, acid igneous rock.

Mr. Roland Burke discovered some mine workings near the station of the regional soil sampling survey 800 S - 650 E. These workings probably fall into the Fourth of July claim.

A dug out pit was reported by the soil sampling crew near 400 E - 350 S, and another pit at 425 E - 300 S. These pits are probably located within the Superior Minerals Lease.

A number of recent trenches were observed in the vicinity of the station 600 E - 300 S. The mineral Claim Map of the Department of Mines and Petroleum Resources, Victoria, B.C. (October 15, 1969) shows the Canyon claims in the western part, and the Scott claims in the eastern part of the Crick and Guts claims. Both claim blocks had lapsed, however, when the Crick and Guts claims were located.

A claim post Sam No. 1 and 2 was discovered by the Induced Polarization crew, in the vicinity of the claim line of the Crick 25 - 28 claims.

The Sam claims were located by Mr. E. Bromley, agent for Mr. S. Rodvak, and the claims were located on August 21st, 1970. The Sam claims have overstaked the previously located Crick claims.

Chapter IV

PREPARATION OF THE BASE MAPS

A Photo Mosaic was constructed at an approximate scale: 1 inch = 1000 feet (in Pocket No. 1). This Photo Mosaic shows the soil survey lines of the Crick and Guts claims, and approximate position of claim posts and claim lines.

The Base Map was prepared at a scale: 1 inch = 500 feet, showing the E - W running lines, starting with 0 S at the north end, and up to 925 S at the south end. Soil samples were taken every 250 feet, and the stations were numbered 0 E at the west end, and are numbered up to 700 E at the eastern border of the map area.

The writer has plotted the exact location of several soil samples locations in the field by marking the location on aerial photographs with the aid of a pocket stereoscope. The position of other stations was reported by the crew, and unsurveyed stations were interpolated from the known locations, with the aid of topographic descriptions as supplied by the traverse reports of the soil sampling crew.

Chapter V

GEOCHEMICAL ANALYSIS

Soil Sampling

The soil sampling program commenced on July 10th, 1970 locating the lines by compass and chain. The samples were recovered by a specially constructed shovel, 3 feet long, with a pointed end. Samples were taken up to a maximum depth of 3 feet, from the "B" horizon (brown soil) and the "C" horizon, where possible.

The soil sample depth was recorded at every station and is shown on the Soil Sample Depth Map (in Pocket No. 2). The soil colour was reported by the sampling crew and is shown on the accompanying Soil Colour Map (in Pocket No. 2).

The samples were packaged in brown paper envelopes supplied by T.S.L. Laboratories Ltd., Vancouver, B.C.

Chemical Analysis of the Samples

The samples were sent to T.S.L. Laboratories Ltd., Vancouver, B.C. and analysed for lead, zinc, nickel, molybdenum, and copper. The samples were treated by hot aqua regia extraction and the metal content determined by atomic absorption. The analysis was supervised by Mr. R.B. Fletcher, T.S.L. Laboratories Ltd.

Chapter VI

RESULTS OF THE GEOCHEMICAL ANALYSIS

(Pocket No. 2)

Lead

The regional background of lead is approximately 10 ppm, and 5 ppm in the northernmost part of the map area. A number of small, isolated lead anomalies were discovered in the southern portion of the map. Lead concentrations in bedrock probably occur in fractures within sediments of the Anarchist group. Some of the anomalies were found near the location of major lineaments, as observed on aerial photographs, for example, the moderate anomaly at 550 E - 600 S, and a better anomaly at 675 E - 750 S, with 66 ppm Pb. A cluster of moderate anomalies, with up to 47 ppm Pb, between 550 E, and 700 E, 850 S and 875 S roughly follows an approximately East - West trending lineament.

The lead mineralization in fractured quartzites, cherts and sandstones may not be economical, though there may be some high ore grade mineralization locally.

Zinc

The regional background of zinc is approximately 25 ppm. The actual background value is rather difficult to determine, because of a very widely spread moderate zinc anomaly in the central portion of the map. The lowest values occur in the northern and southernmost portion. The central area shows very widely spread moderate zinc readings with values over 100 ppm, and the highest values with over 200 ppm are found along the northern border of the zinc anomaly, trending northeasterly. The zinc anomaly covers a relatively rugged, hilly terrain, with moderate

to steep slopes. A comparison with the Soil Sample Depth Map indicates that higher zinc values were obtained from samples taken at relatively shallow depth. Accordingly, we may infer that the widely spread zinc anomaly is mostly caused by a concentration of zinc in the uppermost organic soil layer. The zinc apparently was washed down from some minor zinc outcroppings in the sediments of the Anarchist group.

The northeast trending, and northermost part of the major zinc anomaly follows gently west to northerly sloping terrain and all samples were taken from a depth of one foot or less. The soil is better developed towards northwest, and samples taken at two or even three feet depth did not indicate any anomalous zinc values. Rock outcroppings in the vicinity of the zinc anomalies show quartzites, chert and some limestones of the Anarchist group. Though one may infer the zinc is slightly higher concentrated in this region, we cannot infer any economic zinc deposits within the Crick and Guts claims.

Nickel

The regional background of nickel is approximately 5 ppm and no nickel anomalies were found in the entire area.

Molybdenum

The regional background of molybdenum is .5 ppm, or less. A number of fairly good molybdenum anomalies were discovered within the map area. A good anomaly between 325 E and 350 E, 150 S and 200 S, shows up to 22.5 ppm Mo. The anomaly falls within a vegetation anomaly, showing very swampy, flat terrain. No rock outcroppings were reported from within the anomaly, and to the southeast are quartzitic sandstones of the Anarchist group.

A comparison with the Soil Colour Map and Sample Depth Map shows that the samples were recovered from dark brown and black, wet soil at a depth of two feet. The "C" horizon has not been evaluated to date. Resampling, by deepening the drill holes may possibly result in even higher molybdenum readings. The anomaly is interpreted to indicate molybdenum mineralization in place, probably near a granite contact.

The other molybdenum anomalies scattered throughout the area do not show as clear a relationship to soil colour and sample depth. A relatively widely spread anomaly runs approximately E - W, between the lines 600 S and 700 S, 0 E to 325 E. All the anomalies fall into areas lacking rock outcroppings, though quartzites, chert and porphyries are present in the vicinity. There is also an apparent relationship between high molybdenum readings, (up to 52 ppm Mo) to major lineaments as observed on aerial photographs. The anomaly is interpreted to indicate molybdenum mineralization in place, probably in highly fractured rock near an intrusive body.

The other more widely scattered anomalies, with up to 66 ppm Mo, are interpreted to reflect some molybdenum mineralization in fractures within sediments of the Anarchist group.

Copper

The regional background of copper is approximately 5 ppm. A considerable number of good copper anomalies were discovered within the map area, with readings up to 398 ppm Cu. Three more prominent clusters of copper anomalies have been mapped.

1. A number of moderate copper anomalies, up to 99 ppm Cu, are on either side of the 200 S line, between 0 E and 200 E. The anomalies were found on moderately to steeply east dipping terrain with abundant outcroppings of quartzitic sandstones of the Anarchist group. Northwest trending major lineaments were observed on the aerial photographs in the vicinity, and the anomalies are interpreted to indicate some copper concentrations in fractured bedrock.

2. A cluster of moderate copper anomalies is concentrated between the lines 100 E to 300 E, 475 S and 775 S. The terrain is hilly, with moderately east and south dipping slopes. The highest anomaly, with 109 ppm Cu, at 125 E - 600 S is located immediately east of a very steep cliff. Rock outcroppings to the west and north show quartzites of the Anarchist group, and some porphyries, probably porphyry volcanics, or Tertiary porphyry dykes. All copper anomalies fall into areas lacking outcroppings. The soil colour indicated for most of the higher copper readings is medium brown to dark brown. Sample depth was mostly shallow, because of rocky soil, though some of the copper anomalies are indicated by deeper samples, up to 2 feet depth. Evidence at hand at present is not conclusive whether the copper anomalies indicate copper mineralization in place, or whether some copper has been washed down the hill and precipitated in organic soil in lower terrain.

A comparison of the copper map with the molybdenum map appears to be most helpful. The copper anomalies coincide with relatively high molybdenum readings. Copper and molybdenum are both interpreted to be concentrated in bedrock, though host rock and nature of mineralization remains uncertain. The best interpretation is that the copper and molybdenum mineralization occurs in fractures near an intrusive contact zone.

3. The considerable concentration of more or less isolated copper anomalies, with values up to 398 ppm Cu, appear to run in a Northerly direction, between 450 E and 600 E, northward from 800 S. Most of the anomalies were found in gently west dipping terrain and in gullies. A comparison of the copper anomalies with the Soil Sample Depth Map shows a reasonably correlation, whereby the higher copper values were obtained at a shallow depth, in rocky soil. The soil colour from samples showing anomalous copper readings has a tendency to be medium brown to dark brown, and also black. Most of the copper anomalies fall into areas lacking rock outcroppings, though quartzites and cherts of the Anarchist group are usually immediately adjacent.

Geology, soil colour, and sample depth in relation to copper anomalies may tend to favour the interpretation that copper is concentrated in the surface within an organic layer ("A" horizon). The unusually high copper readings suggest, however, that copper concentrations are possibly present in the bedrock.

Comparison of the copper map with the molybdenum map demonstrates that most of the copper anomalies coincide with relatively low molybdenum values, though some isolated high molybdenum readings were noticed in the vicinity of the other copper anomalies. This third copper anomaly, with its length of approximately 6000 feet, and width of over 1000 feet, differs from the second copper anomaly discussed above.

A comparison of the molybdenum and copper maps also shows a small copper anomaly at the 325 E - 125 S, in the immediate vicinity of a relatively widely spread molybdenum anomaly. Both anomalies fall into a vegetal anomaly, with relatively thick organic, swampy soil. Sampling by deepening the drill holes is suggested, to evaluate the underlying "C" horizon.

Composite Geochemical Map

A Composite Geochemical Map was prepared by superimposing the contours for lead, zinc, nickel, molybdenum and copper. The map shows a regionally good concentration of essentially zinc, molybdenum, and copper. There appears to be a clear separation between the regional distribution of the three elements, zinc, molybdenum, and copper. Zinc is widely spread in the central part of the map area, whereas copper and molybdenum anomalies are usually immediately adjacent to the zinc anomalies.

Chapter VII

SUMMARY AND RECOMMENDATIONS

A regional soil sampling survey was carried out on the Crick and Guts claims. The lines are approximately 250 feet apart and samples were taken in 250 foot intervals.

Rock outcroppings throughout the map area show a wide spread of quartzites, and chert, with some minor limestones of the Anarchist group. Gneisses of an apparently older age were noticed in the northernmost part of the map area. Porphyries, either representing Phoenix volcanics, or Tertiary porphyry dyke are scattered throughout. Large areas are, however, unexposed.

Geochemical analysis indicated a very widely spread moderate zinc anomaly in the central portions of the map. Zinc may be concentrated in organic soil at the surface, with no economic zinc concentration actually occurring in bedrock.

A number of good molybdenum anomalies were discovered. Wide spread molybdenum soil anomalies in the northern part of the map area coincides with a vegetal and topographic anomaly and is interpreted to indicate molybdenum mineralization near the contact of a granite intrusive. A similar molybdenum deposit is inferred for the west-central part, whereby molybdenum may be concentrated in fractured rock near an intrusive contact.

Copper anomalies are concentrated in three areas.

Copper anomalies near the northwest corner of the map area may reflect some copper mineralization in fractured sedimentary rocks of the Anarchist group. There is a fairly good relationship between copper

anomalies and lineaments as observed on aerial photographs. The copper concentrations in the bedrock may not be of economic grade, since they probably occur in small fractures.

Fairly good copper anomalies coincide with molybdenum anomalies in the west central part of the map area. The copper will probably be found in fractured rock in the vicinity of an intrusive contact. Further work on this anomaly is recommended to evaluate the economic potential for copper and molybdenum mineralization.

A very long copper anomaly with a number of isolated high copper readings extends in approximately north-southerly direction, possibly exceeding 7000 feet in length. There are indications that copper may have been concentrated in organic soil at the surface and may not be directly related to copper mineralization in bedrock. The copper readings of up to 398 ppm Cu are, however, unusually high and some copper mineralization in bedrock must be present.

There is, regionally speaking, a clear separation between zinc anomalies and copper - molybdenum anomalies. Copper and molybdenum anomalies fall together in places and frequently are located at the flanks of major zinc anomalies.

The preparation of the Soil Sample Depth Maps and Soil Colour Maps proved to be very helpful for the interpretation.

This report is submitted to file assessment work for two years on both the Crick and Guts claims.

Respectfully,
Peter Haman



Dr. Peter Haman P. Eng.

Expiry Date March 26, 1971

Dated *March 12, 1971*

SALARIES AND EXPENSES

| | | |
|----|--|---------------|
| 1. | Salaries and Expenses for soil sampling crew at \$30.00 for each man per day, 139 days | \$ 4,170.00 |
| 2. | Professional services by Dr. Peter J. Haman, geological supervision, field mapping report writing, 30 days at \$140.00 per day | 4,200.00 |
| 3. | Sample Analysis by T.S.L. Laboratories Ltd. | 2,914.55 |
| 4. | Expenses for Field Office, accommodation, at \$40.00 per day for 20 days | 800.00 |
| 5. | Rental of 4-Wheel Drive and 2 Volkswagens, gas | <u>856.54</u> |
| | Total | \$ 12,941.09 |

GUTS CLAIMS

TIME SHEET

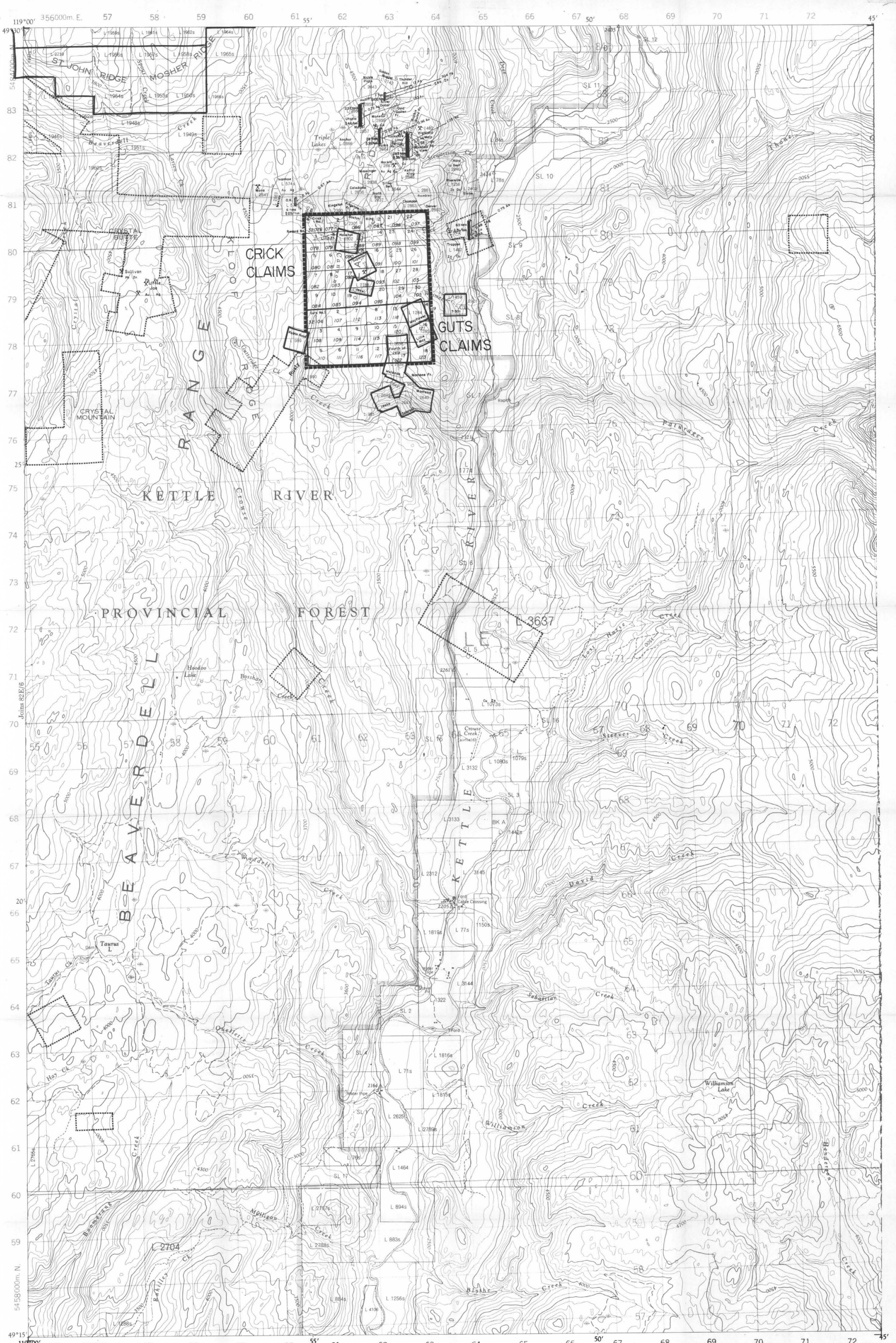
| | | | | # Men | |
|------|-------|----|--------|--|---|
| July | 10/70 | SS | 1 crew | J. McLeod, T. Morris, D. Ward, K. Jurgens | 4 |
| | 11/70 | SS | 1 crew | J. McLeod, T. Morris, D. Ward | 3 |
| | 12/70 | SS | 1 crew | J. McLeod, T. Morris, D. Ward | 3 |
| | 13/70 | SS | 1 crew | J. McLeod, T. Morris, D. Ward | 3 |
| | 14/70 | SS | 1 crew | J. McLeod, T. Morris, D. Ward | 3 |
| | 15/70 | SS | 1 crew | J. McLeod, T. Morris, D. Ward | 3 |
| | 16/70 | SS | 1 crew | J. McLeod, T. Morris, D. Ward | 3 |
| | 17/70 | SS | 1 crew | J. McLeod, T. Morris, D. Ward | 3 |
| | 18/70 | SS | 1 crew | J. McLeod, T. Morris, D. Ward | 3 |
| | 19/70 | SS | 1 crew | J. McLeod, T. Morris, D. Ward | 3 |
| | 20/70 | SS | 1 crew | J. McLeod, T. Morris, D. Ward | 3 |
| | 21/70 | SS | 1 crew | T. Morris, D. Ward, G. Shaw | 3 |
| | 22/70 | SS | 1 crew | T. Morris, D. Ward, G. Shaw | 3 |
| | 23/70 | SS | 1 crew | T. Morris, D. Ward, G. Shaw | 3 |
| | 24/70 | SS | 1 crew | D. Ward, T. Morris | 2 |
| | 25/70 | SS | 1 crew | D. Ward, T. Morris | 2 |
| | 26/70 | SS | 1 crew | D. Ward, T. Morris | 2 |
| | 27/70 | SS | 1 crew | D. Ward, T. Morris | 2 |
| | 28/70 | SS | 1 crew | D. Ward, T. Morris | 2 |
| | 29/70 | SS | 1 crew | T. Morris, D. Ward, J. McLeod | 3 |
| | 30/70 | SS | 1 crew | T. Morris, D. Ward, J. McLeod | 3 |
| | 31/70 | SS | 1 crew | T. Morris, D. Ward, J. McLeod | 3 |
| Aug | 1/70 | SS | 1 crew | T. Morris, D. Ward, J. McLeod | 3 |
| | 2/70 | SS | 1 crew | T. Morris, D. Ward, J. McLeod | 3 |
| | 3/70 | SS | 1 crew | T. Morris, D. Ward, J. McLeod | 3 |
| | 4/70 | SS | 1 crew | T. Morris, D. Ward, J. McLeod | 3 |
| | 5/70 | SS | 1 crew | T. Morris, D. Ward, J. McLeod | 3 |
| | 6/70 | SS | 1 crew | T. Morris, D. Ward, J. McLeod | 3 |
| | 7/70 | SS | 1 crew | T. Morris, D. Ward, J. McLeod | 3 |
| | 9/70 | SS | 1 crew | J. McLeod, D. Ward, B. Soelberg | 3 |
| | 10/70 | SS | 1 crew | R. Engel, T. Morris, D. Ward, J. McLeod | 4 |
| | 11/70 | SS | 1 crew | R. Engel, T. Morris, D. Ward, J. McLeod | 4 |
| Sept | 28/70 | SS | 1 crew | T. Morris, B. Rella | 2 |
| | 29/70 | SS | 1 crew | T. Morris | 1 |
| | 30/70 | SS | 1 crew | T. Morris, B. Rella | 2 |
| Oct. | 14/70 | SS | 1 crew | T. Morris, G. Mayne, K. Jurgens | 3 |
| | 17/70 | SS | 1 crew | K. Jurgens, G. Mayne, M. Harman, T. Morris | 4 |
| | 20/70 | SS | 1 crew | G. Mayne, T. Morris | 2 |
| | 30/70 | SS | 1 crew | K. Jurgens, M. Harman, G. Mayne, T. Morris | 4 |
| Nov. | 9/70 | SS | 1 crew | J. Donner, F. Madge, R. Burke | 3 |
| | 10/70 | SS | 1 crew | J. Donner, F. Madge, R. Burke | 3 |
| | 11/70 | SS | 1 crew | J. Donner, F. Madge, R. Burke | 3 |
| | 12/70 | SS | 1 crew | J. Donner, F. Madge, R. Burke | 3 |
| | 13/70 | SS | 1 crew | J. Donner, F. Madge, R. Burke | 3 |
| | 14/70 | SS | 1 crew | J. Donner, F. Madge, R. Burke | 3 |
| | 15/70 | SS | 1 crew | J. Donner, F. Madge, R. Burke | 3 |
| | 16/70 | SS | 1 crew | J. Donner, R. Burke, F. Madge | 3 |
| | 17/70 | SS | 1 crew | J. Donner, R. Burke, F. Madge | 3 |

*SS Soil Sampling

REFERENCES

CRICK AND GUTS CLAIMS

| | <u>Year</u> | <u>Page</u> |
|---------------------------------------|-------------|----------------------------------|
| B.C. Minister of Mines Annual Reports | 1900 - 01 | p 875, p 1137, p 1136, p 1134 |
| | 1913 | p K 160 |
| | 1917 | p F 205 |
| | 1928 | p C 254 |
| | 1931 | p A 124 |
| | 1932 | p A 129 |
| | 1938 | p D 17, D 19, p D 22, D 23 |
| | 1966 | p 193 |
| | 1967 | p 225 |

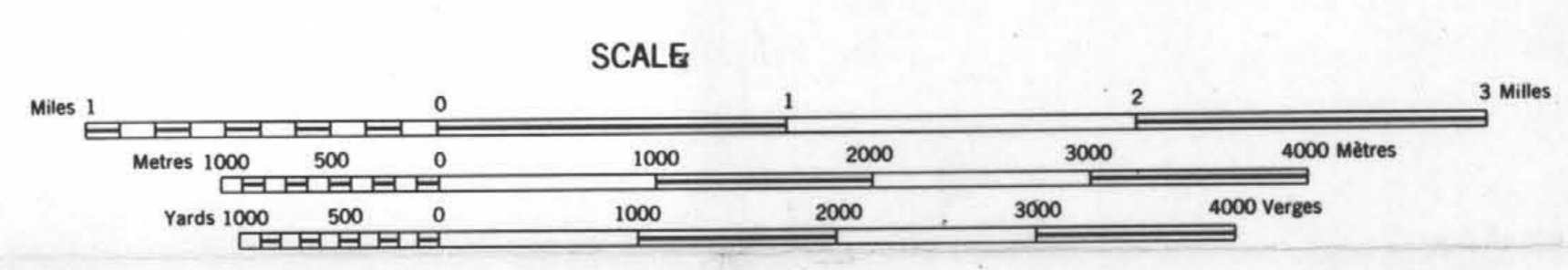


Roads: loose or stabilized surface, all weather..... Routes: loose surface, dry weather..... cart track..... trail or portage.....

Routes: gravier aggloméré, toute saison..... de gravier, période sèche..... sentier ou portage.....

2 lanes or more
2 voies ou plus

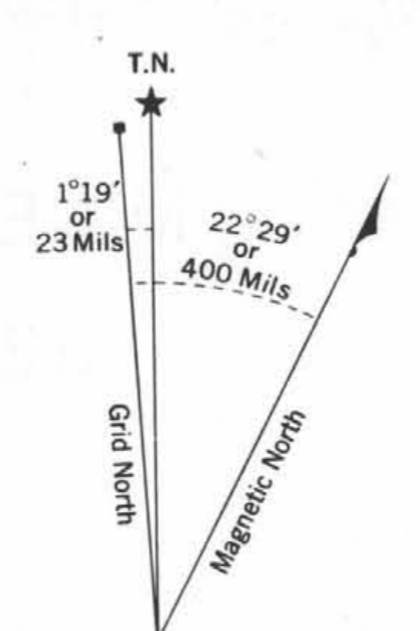
less than 2 lanes
moins de 2 voies



MINERAL MAP
82 E/7 W

M-1

2951



Use diagram only to obtain numerical values.
APPROXIMATE MEAN DECLINATION 1965
FOR CENTRE OF MAP
Annual change decreasing 2.9'

Mineral Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng., on the Crick and Guts claims, Canyon Creek area, B.C., Greenwood Mining Division.

Dated March 12, 1971
Signed Peter J. Haman

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2951 MAP #1



- LEGEND**
- claim post
 - claim line
 - claim border
 - geochemical survey line

**CRICK CLAIMS
GUTS CLAIMS**

Approx. Scale: 1 inch = 1000 feet

GEOCHEMICAL SURVEY LINES

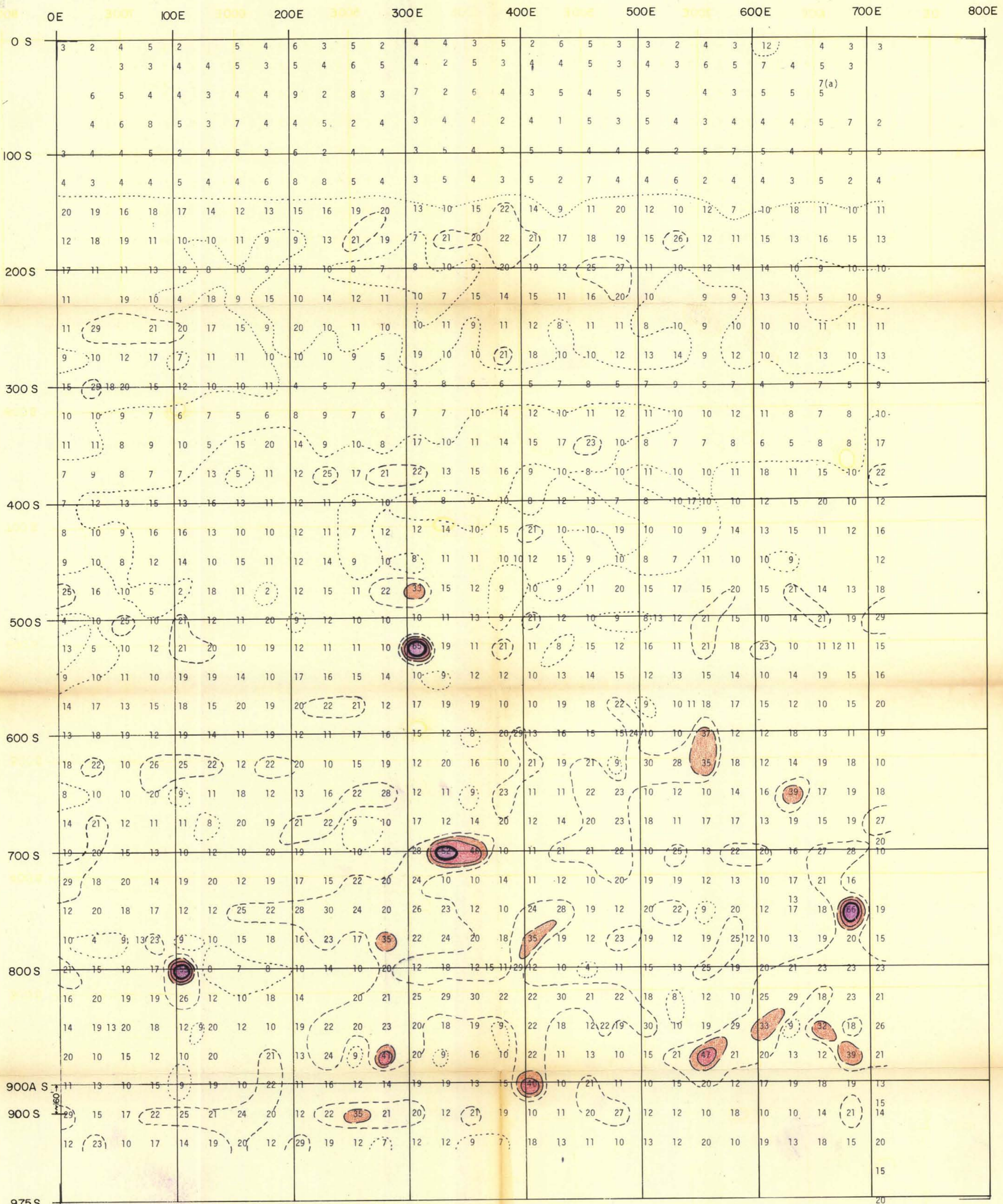
2951 M-2

Photo-Mosaic to accompany geochemical report by
Dr. Peter J. Haman, P. Eng., on the Crick and Guts
claims, Canyon Creek area, B. C., Greenwood Mining
Division.

Dated March 12, 1971

Signed Peter J. Haman

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2951 MAP # 2



LEGEND

- More than 50, 100, 250 ppm
- More than 40 ppm
- More than 30 "
- More than 20 "
- More than 10 "

CRICK and GUTS CLAIMS

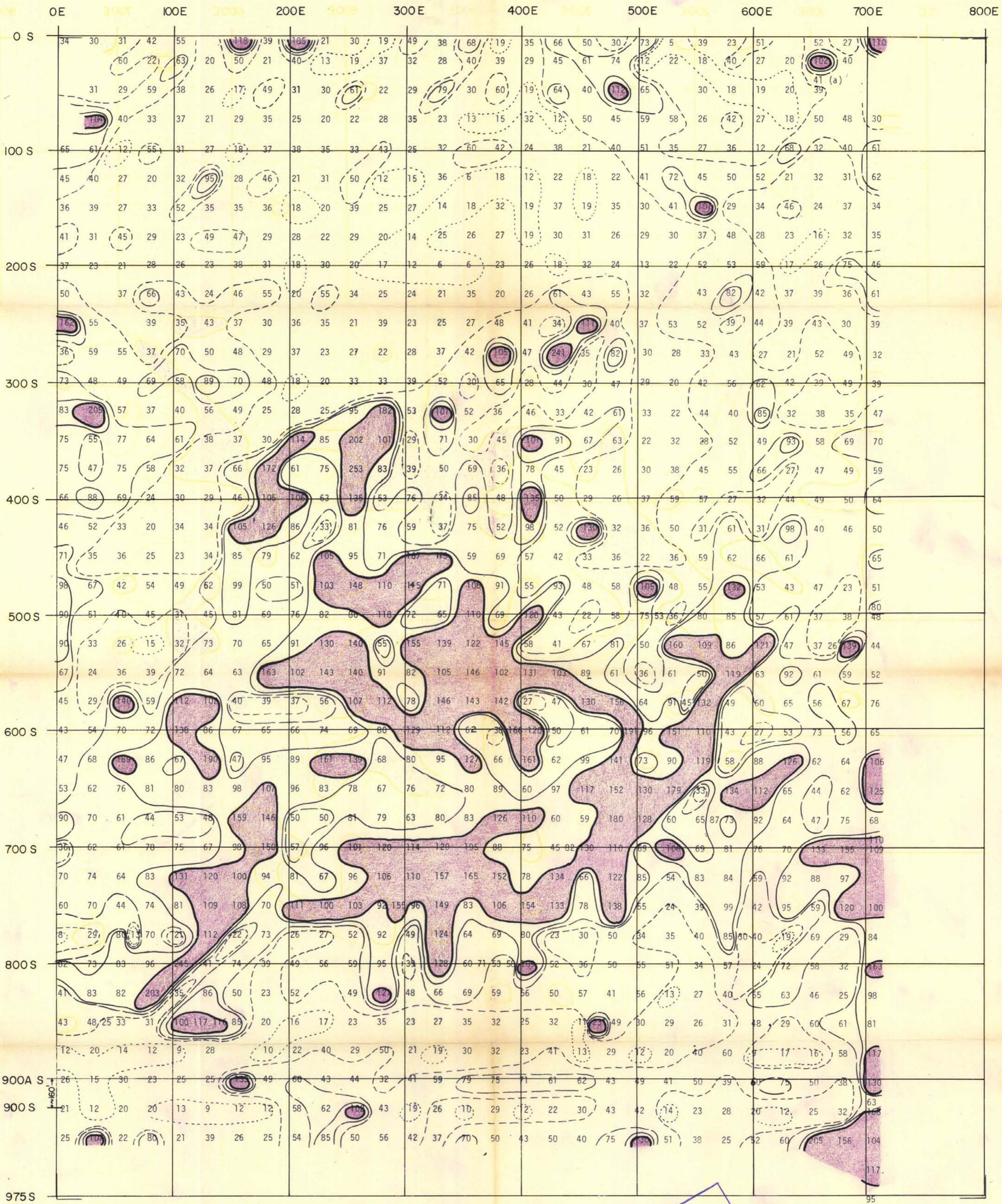
Scale: 1 inch = 500 feet
GEOCHEMICAL MAP

ppm LEAD

Department of
 Mines and Petroleum Resources
ASSESSMENT REPORT
 NO 2951 MAP #3

Geochemical Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng., on the Crick and Guts claims, Canyon Creek area, B. C., Greenwood Mining Division.

Dated March 12, 1971
 Signed Peter J. Haman

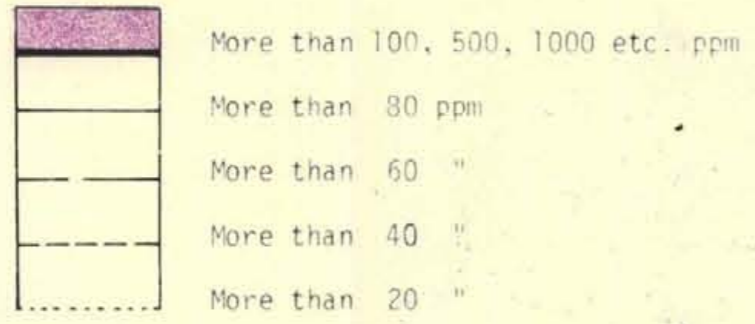


CRICK and GUTS CLAIMS

Scale: 1 inch = 500 feet

GEOCHEMICAL MAP

ppm ZINC



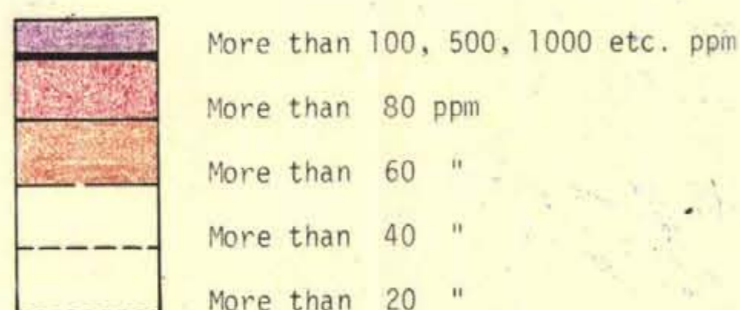
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2951 MAP # 4

Geochemical Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng., on the Crick and Guts claims, Canyon Creek area, B. C., Greenwood Mining Division.

Dated March 12, 1971

Signed Peter J. Haman

| | OE | 100E | 200E | 300E | 400E | 500E | 600E | 700E | 800E | | | | | | | | | | | | | | | | | | | | | |
|--------|----|------|------|------|------|------|------|------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------|----|----|----|----|
| 0 S | 7 | 10 | 6 | 8 | 11 | 15 | 10 | 10 | 19 | 12 | 8 | 6 | 6 | 6 | 5 | 10 | 4 | 11 | 10 | 7 | 6 | 3 | 5 | 6 | 10 | 4 | 2 | | | |
| | | | 9 | 5 | 6 | 2 | 5 | 7 | 4 | 6 | 5 | 5 | 9 | 9 | 10 | 6 | 3 | 7 | 8 | 7 | 10 | 10 | 9 | 5 | 6 | 10 | 9 | 6 | | |
| | | 5 | 7 | 15 | 7 | 9 | 12 | 8 | 12 | 11 | 10 | 10 | 9 | 8 | 7 | 8 | 9 | 10 | 4 | 10 | 10 | 11 | 6 | 13 | 6 | 9 (a) | 12 | | | |
| | | 13 | 6 | 10 | 9 | 4 | 6 | 10 | 9 | 9 | 10 | 12 | 14 | 8 | 8 | 9 | 8 | 5 | 7 | 8 | 10 | 10 | 4 | 10 | 9 | 11 | 10 | 10 | 8 | |
| 100 S | 15 | 20 | 12 | 8 | 10 | 7 | 6 | 13 | 9 | 8 | 10 | 7 | 5 | 5 | 12 | 10 | 9 | 11 | 10 | 10 | 7 | 3 | 7 | 9 | 9 | 10 | 7 | 9 | 7 | |
| | 9 | 7 | 10 | 8 | 10 | 12 | 7 | 6 | 9 | 10 | 9 | 8 | 8 | 6 | 9 | 10 | 8 | 5 | 12 | 10 | 9 | 11 | 9 | 9 | 8 | 12 | 10 | 12 | 9 | |
| | 8 | 4 | 8 | 12 | 7 | 14 | 8 | 10 | 21 | 12 | 9 | 8 | 8 | 4 | 5 | 7 | 17 | 10 | 9 | 12 | 10 | 10 | 9 | 7 | 11 | 9 | 10 | 8 | 10 | |
| | 9 | 8 | 10 | 7 | 12 | 6 | 11 | 14 | 7 | 6 | 13 | 4 | 3 | 2 | 4 | 7 | 8 | 11 | 7 | 5 | 9 | 11 | 6 | 4 | 6 | 9 | 16 | 5 | 8 | |
| 200 S | 7 | 10 | 7 | 3 | 8 | 8 | 9 | 7 | 15 | 10 | 2 | 2 | 5 | 2 | 1 | 11 | 3 | 4 | 7 | 9 | 2 | 4 | 5 | 3 | 8 | 3 | 10 | 8 | 5 | |
| | 6 | | 10 | 8 | 7 | 9 | 10 | 6 | 7 | 8 | 9 | 6 | 10 | 9 | 4 | 6 | 8 | 4 | 5 | 9 | 7 | | 5 | 8 | 7 | 5 | 7 | 9 | 6 | |
| | 16 | 9 | | 5 | 4 | 6 | 7 | 7 | 9 | 10 | 6 | 3 | 6 | 8 | 7 | 12 | 9 | 7 | 4 | 7 | 10 | 8 | 8 | 10 | 6 | 7 | 8 | 5 | 7 | |
| | 10 | 6 | 6 | 7 | 7 | 3 | 7 | 6 | 5 | 6 | 5 | 7 | 6 | 5 | 6 | 7 | 6 | 8 | 14 | 10 | 5 | 13 | 5 | 7 | 7 | 8 | 7 | 10 | 5 | |
| 300 S | 9 | 12 | 13 | 7 | 7 | 5 | 9 | 10 | 7 | 7 | 6 | 7 | 6 | 8 | 10 | 6 | 8 | 4 | 6 | 5 | 16 | 10 | 5 | 6 | 10 | 6 | 7 | 8 | 9 | 7 |
| | 7 | 10 | 7 | 6 | 5 | 8 | 11 | 9 | 10 | 8 | 10 | 7 | 8 | 14 | 7 | 8 | 5 | 7 | 6 | 19 | 7 | 15 | 10 | 8 | 15 | 6 | 7 | 7 | 9 | |
| | 3 | 8 | 7 | 5 | 5 | 8 | 7 | 6 | 7 | 7 | 10 | 5 | 7 | 13 | 5 | 4 | 23 | 25 | 20 | 8 | 9 | 12 | 6 | 9 | 6 | 8 | 8 | 7 | 5 | |
| | 10 | 10 | 9 | 8 | 7 | 10 | 14 | 20 | 7 | 8 | 12 | 7 | 10 | 6 | 5 | 12 | 15 | 8 | 4 | 5 | 7 | 10 | 6 | 17 | 13 | 5 | 7 | 5 | 12 | |
| 400 S | 3 | 4 | 5 | 8 | 5 | 3 | 7 | 9 | 9 | 11 | 7 | 8 | 6 | 4 | 13 | 7 | 14 | 4 | 7 | 7 | 6 | 9 | 11 | 7 | 6 | 6 | 7 | 7 | 6 | |
| | 6 | 7 | 5 | 10 | 10 | 7 | 20 | 9 | 5 | 4 | 7 | 8 | 5 | 8 | 8 | 10 | 9 | 6 | 22 | 7 | 5 | 6 | 13 | 7 | 6 | 7 | 8 | 8 | 4 | |
| | 6 | 4 | 8 | 10 | 6 | 4 | 10 | 7 | 8 | 5 | 4 | 10 | 12 | 4 | 10 | 7 | 13 | 12 | 7 | 11 | 17 | 15 | 16 | 12 | 10 | 7 | | 5 | | |
| | 7 | 3 | 5 | 15 | 10 | 5 | 7 | 8 | 5 | 13 | 6 | 10 | 9 | 5 | 6 | 8 | 5 | 5 | 6 | 12 | 13 | 32 | 4 | 17 | 3 | 11 | 6 | 9 | 6 | |
| 500 S | 9 | 9 | 5 | 8 | 9 | 6 | 7 | 7 | 10 | 5 | 5 | 8 | 4 | 7 | 6 | 6 | 4 | 5 | 10 | 8 | 7 | 7 | 5 | 15 | 7 | 7 | 7 | 5 | 4 | 6 |
| | 6 | 3 | 3 | 3 | 5 | 7 | 6 | 7 | 6 | 6 | 9 | 5 | 11 | 7 | 5 | 3 | 4 | 3 | 7 | 6 | 13 | 13 | 7 | 7 | 11 | 12 | 7 | 7 | 3 | |
| | 5 | 7 | 6 | 6 | 3 | 3 | 5 | 8 | 7 | 10 | 7 | 7 | 5 | 6 | 6 | 7 | 5 | 7 | 12 | 10 | 9 | 6 | 10 | 12 | 6 | 6 | 8 | 5 | 6 | |
| | 4 | 5 | 6 | 8 | 7 | 8 | 6 | 4 | 6 | 5 | 6 | 5 | 3 | 5 | 4 | 5 | 3 | 5 | 6 | 8 | 12 | 5 | 4 | 10 | 6 | 7 | 5 | 4 | 21 | 3 |
| 600 S | 3 | 5 | 6 | 6 | 7 | 7 | 3 | 6 | 3 | 3 | 4 | 7 | 9 | 7 | 3 | 6 | 11 | 6 | 7 | 7 | 8 | 8 | 7 | 6 | 4 | 4 | 4 | 5 | 8 | 12 |
| | 4 | 5 | 6 | 3 | 5 | 18 | 8 | 8 | 9 | 5 | 5 | 4 | 3 | 5 | 2 | 5 | 9 | 5 | 5 | 3 | 4 | 5 | 3 | 3 | 6 | 10 | 6 | 9 | 7 | |
| | 3 | 8 | 5 | 4 | 6 | 3 | 4 | 10 | 25 | 5 | 3 | 5 | 4 | 5 | 5 | 5 | 3 | 2 | 7 | 5 | 4 | 7 | 3 | 9 | 5 | 5 | 3 | 5 | 5 | |
| | 7 | 13 | 3 | 2 | 3 | 4 | 10 | 13 | 5 | 7 | 7 | 6 | 3 | 7 | 3 | 7 | 6 | 4 | 4 | 4 | 7 | 8 | 3 | 8 | 4 | 7 | 5 | 5 | 5 | 10 |
| 700 S | 4 | 3 | 3 | 8 | 9 | 4 | 4 | 10 | 8 | 10 | 4 | 4 | 3 | 8 | 9 | 3 | 6 | 3 | 5 | 2 | 3 | 7 | 6 | 7 | 6 | 6 | 8 | 10 | 12 | 9 |
| | 4 | 7 | 5 | 8 | 7 | 8 | 4 | 4 | 5 | 6 | 6 | 3 | 3 | 5 | 6 | 6 | 3 | 3 | 5 | 4 | 3 | 3 | 5 | 6 | 3 | 5 | 5 | 6 | | |
| | 6 | 6 | 6 | 5 | 5 | 9 | 7 | 3 | 7 | 10 | 7 | 3 | 12 | 11 | 10 | 4 | 3 | 13 | 9 | 9 | 9 | 2 | 7 | 8 | 9 | 6 | 10 | 9 | 8 | 9 |
| | 2 | 6 | 7 | 4 | 9 | 10 | 7 | 6 | 7 | 9 | 9 | 7 | 9 | 7 | 5 | 8 | 6 | 7 | 9 | 4 | 9 | 12 | 5 | 9 | 7 | 9 | 7 | 10 | 7 | 5 |
| 800 S | 11 | 12 | 12 | 11 | 13 | 10 | 6 | 10 | 10 | 11 | 9 | 9 | 8 | 10 | 12 | 10 | 9 | 9 | 8 | 7 | 9 | 6 | 9 | 8 | 9 | 10 | 6 | 5 | 8 | |
| | 7 | 19 | 11 | 20 | 10 | 11 | 12 | 7 | 11 | | 12 | 10 | 8 | 8 | 8 | 7 | 7 | 8 | 7 | 9 | 10 | 3 | 9 | 5 | 12 | 6 | 7 | 7 | 11 | |
| | 3 | 8 | 3 | 5 | 4 | 7 | 3 | 8 | 5 | 8 | 7 | 5 | 8 | 5 | 5 | 4 | 6 | 8 | 3 | 7 | 5 | 7 | 7 | 7 | 3 | 3 | 5 | 6 | 5 | |
| | 5 | 4 | 6 | 3 | 4 | 9 | | 5 | 7 | 5 | 5 | 8 | 7 | 7 | 10 | 7 | 5 | 7 | 7 | 5 | 5 | 7 | 9 | 7 | 3 | 2 | 3 | 3 | 10 | |
| 900A S | 10 | 9 | 7 | 6 | 8 | 12 | 11 | 7 | 19 | 4 | 5 | 4 | 11 | 8 | 10 | 6 | 3 | 7 | 19 | 9 | 11 | 8 | 7 | 8 | 7 | 7 | 8 | 4 | 7 | |
| 900 S | 10 | 7 | 11 | 8 | 10 | 8 | 9 | 12 | 8 | 9 | 7 | 7 | 9 | 7 | 3 | 6 | 3 | 5 | 10 | 7 | 8 | 7 | 7 | 10 | 5 | 5 | 6 | 5 | 6 | |
| | 6 | 9 | 6 | 10 | 5 | 6 | 6 | 7 | 5 | 5 | 5 | 4 | 7 | 5 | 4 | 5 | 7 | 6 | 5 | 5 | 4 | 7 | 4 | 2 | 3 | 5 | 4 | 2 | 9 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | |
| 975 S | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 | |



CRICK and GUTS CLAIMS

Scale: 1 inch = 500 feet

GEOCHEMICAL MAP

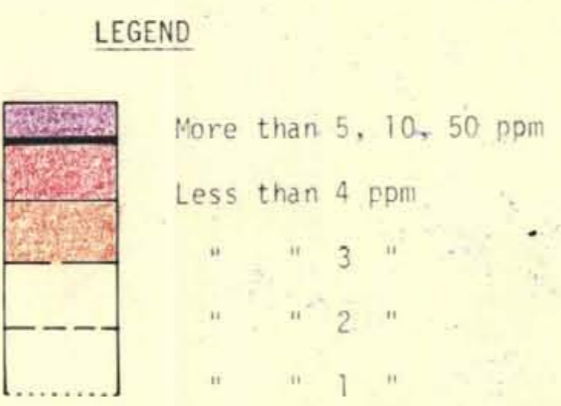
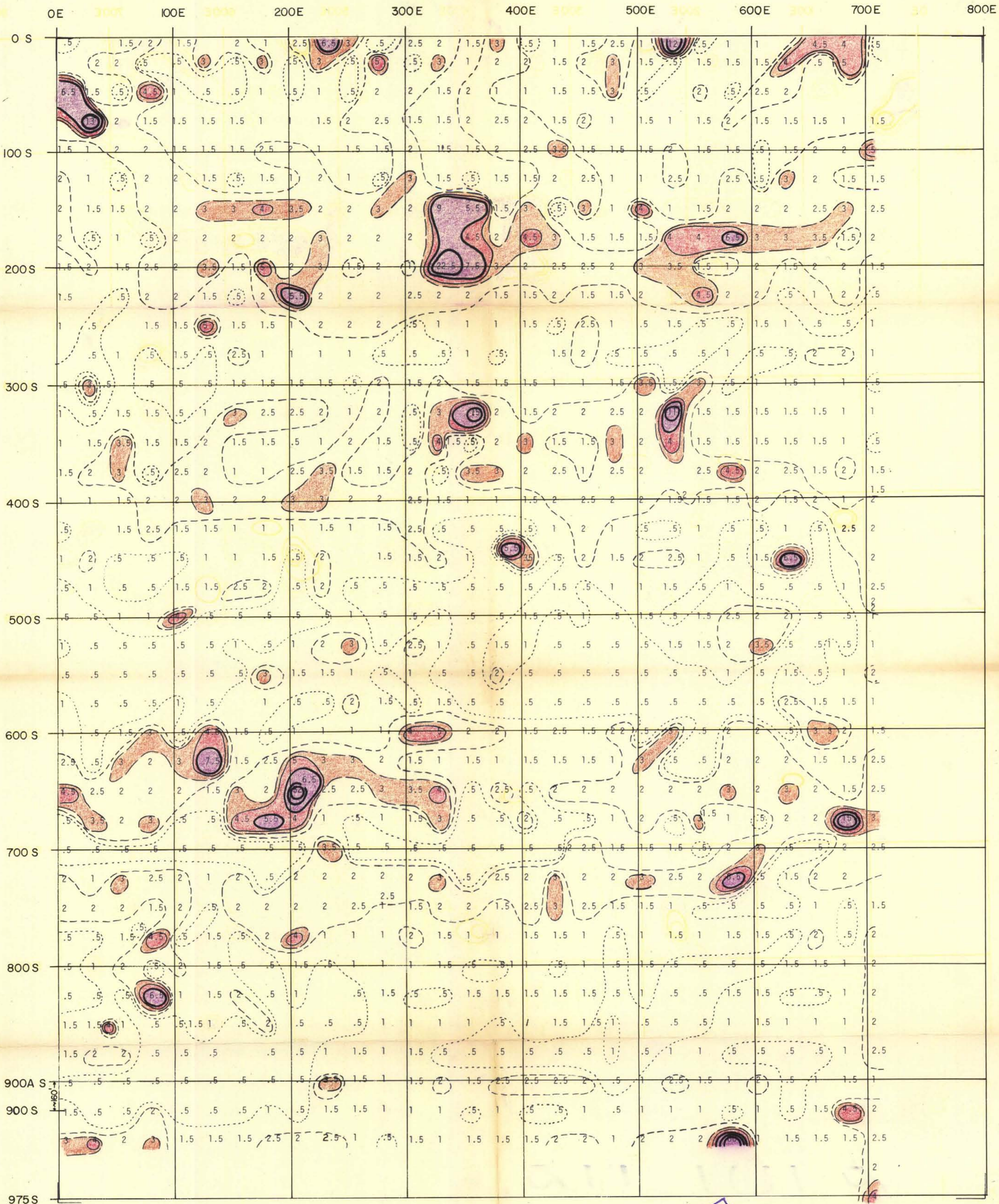
ppm NICKEL

Department of
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ASSESSMENT REPORT
NO. 2951 MAP #5

Geochemical Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng., on the Crick and Guts claims, Canyon Creek area, B. C., Greenwood Mining Division.

Dated March 12, 1971

Signed Peter J. Haman



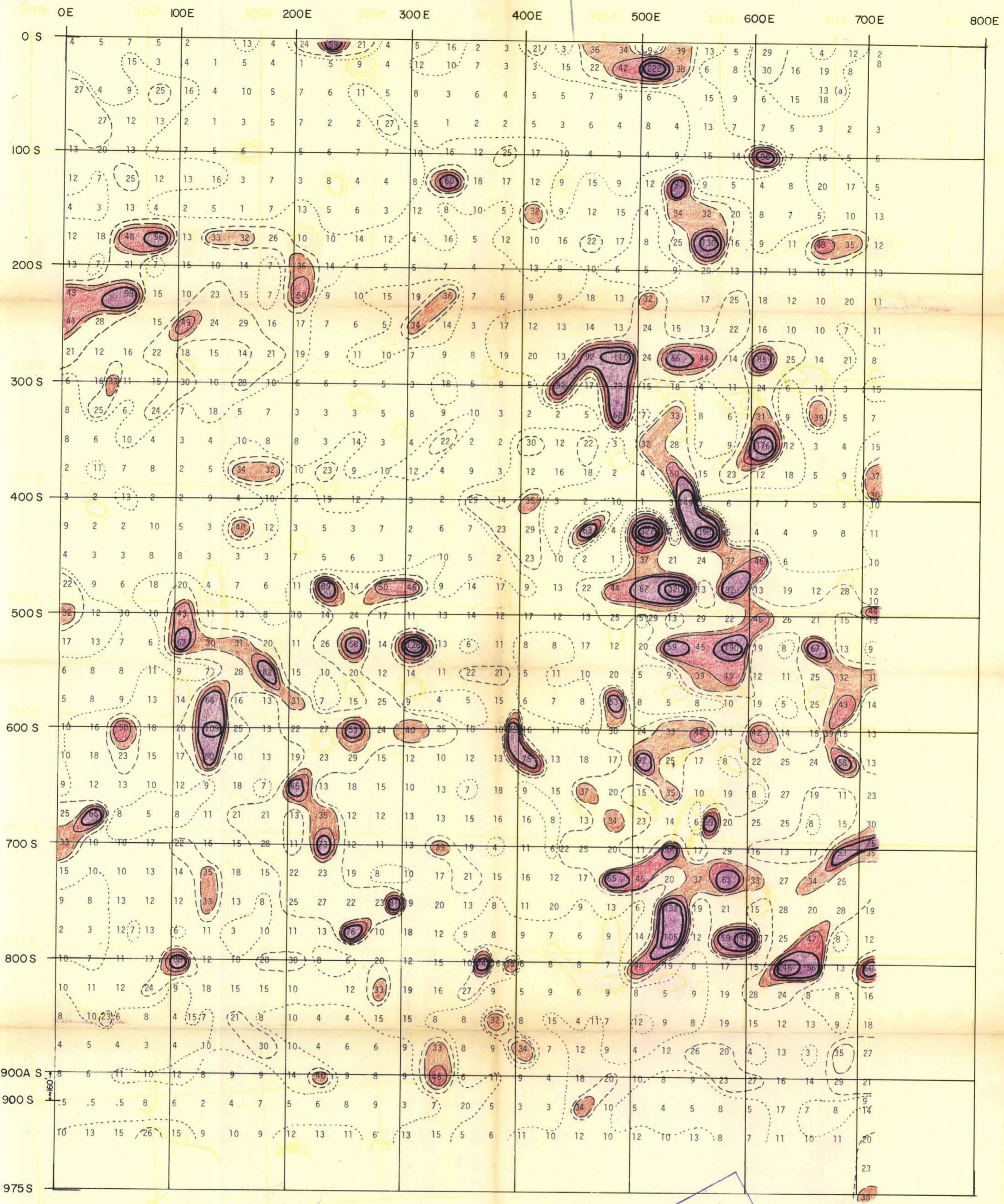
CRICK and GUTS CLAIMS
 Scale: 1 inch = 500 feet
GEOCHEMICAL MAP

ppm MOLYBDENUM

**Department of
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ASSESSMENT REPORT
 No. 2951 MAP #6

Geochemical Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng., on the Crick and Guts claims, Canyon Creek area, B. C., Greenwood Mining Division.

Dated March 12, 1971
 Signed Peter J. Haman



CRICK and GUTS CLAIMS

Scale: 1 inch = 500 feet

GEOCHEMICAL MAP

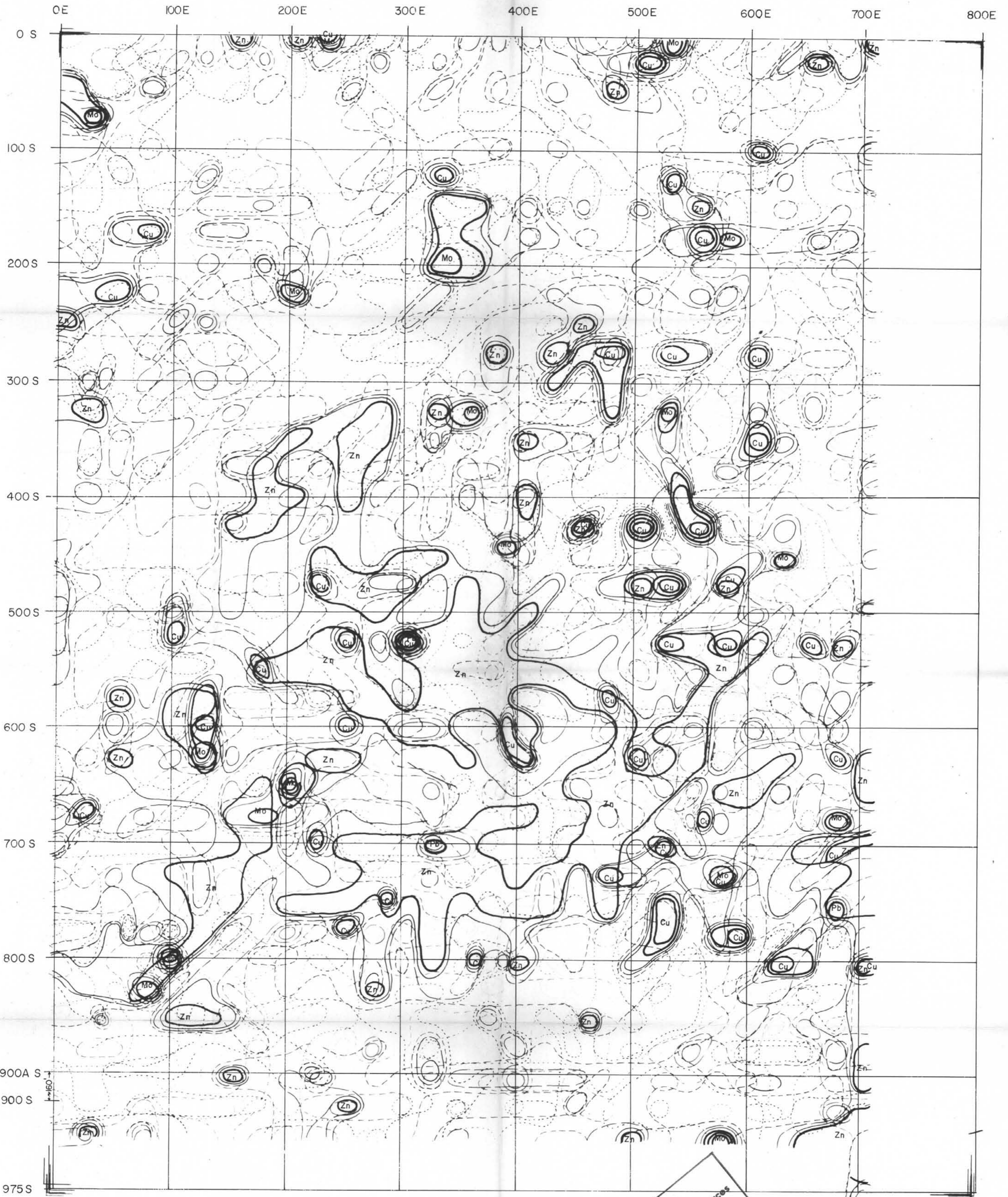
ppm COPPER

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ASSESSMENT REPORT
NO. 2951 MAP #7

Geochemical Map to accompany geochemical report
by Dr. Peter J. Haman, P. Eng., on the Crick and
Guts claims, Canyon Creek area, B. C., Greenwood
Mining Division.

Dated March 17, 1971

Signed Peter J. Haman



CRICK and GUTS CLAIMS

Scale: 1 inch = 500 feet

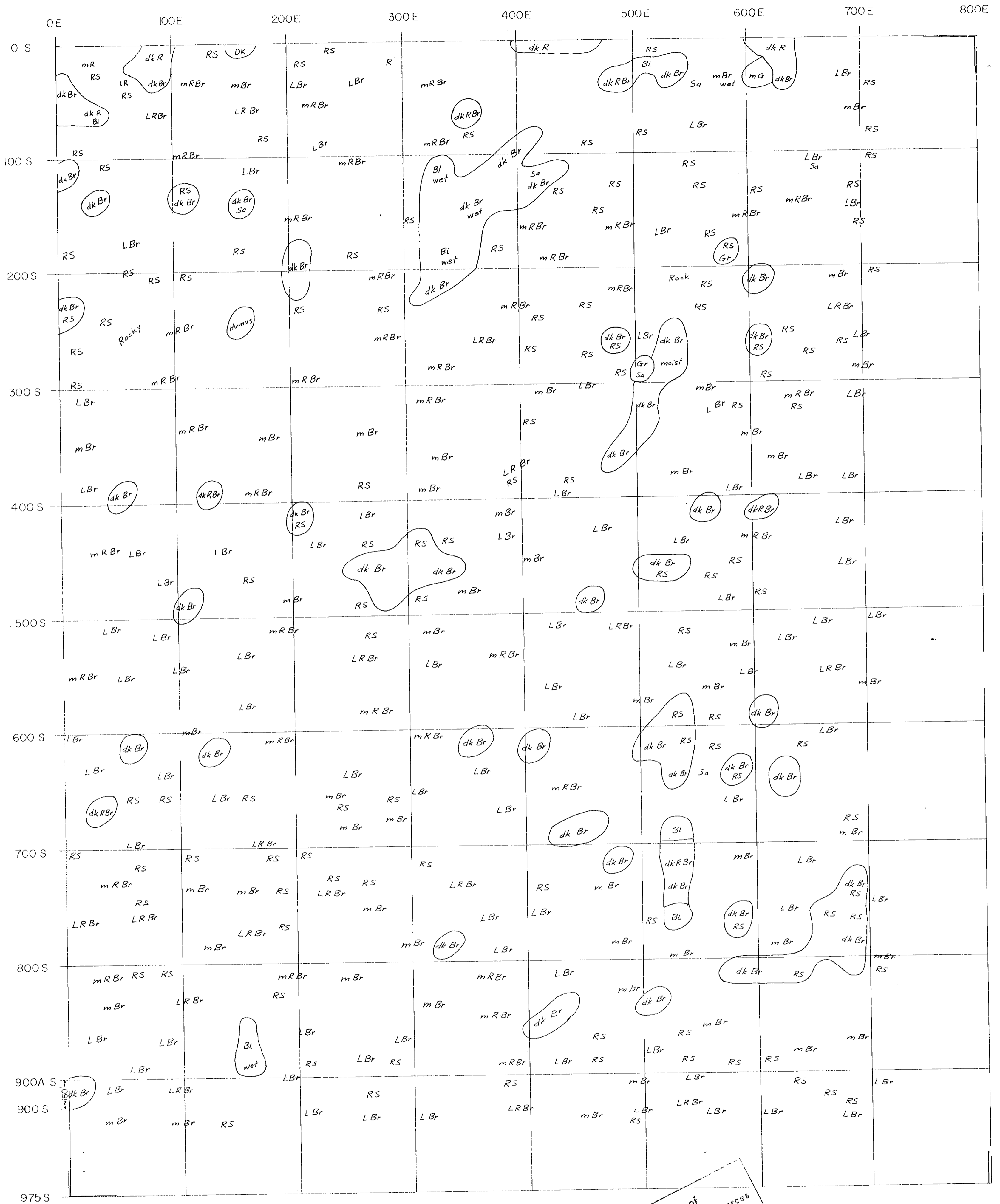
COMPOSITE GEOCHEMICAL MAP

Department of
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ASSESSMENT REPORT
NO. 2951 Map # 8

Composite Geochemical Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng. on the Crick and Guts claims, Canyon Creek area, B.C., Greenwood Mining Division.

Dated March 12, 1971.

Signed Peter J. Haman



LEGEND

| | | | |
|----|------------|----|--------|
| Br | Brown | Sa | Sandy |
| R | Red | L | Light |
| Bl | Black | M | Medium |
| RS | Rocky Soil | dk | Dark |

CRICK and GUTS CLAIMS

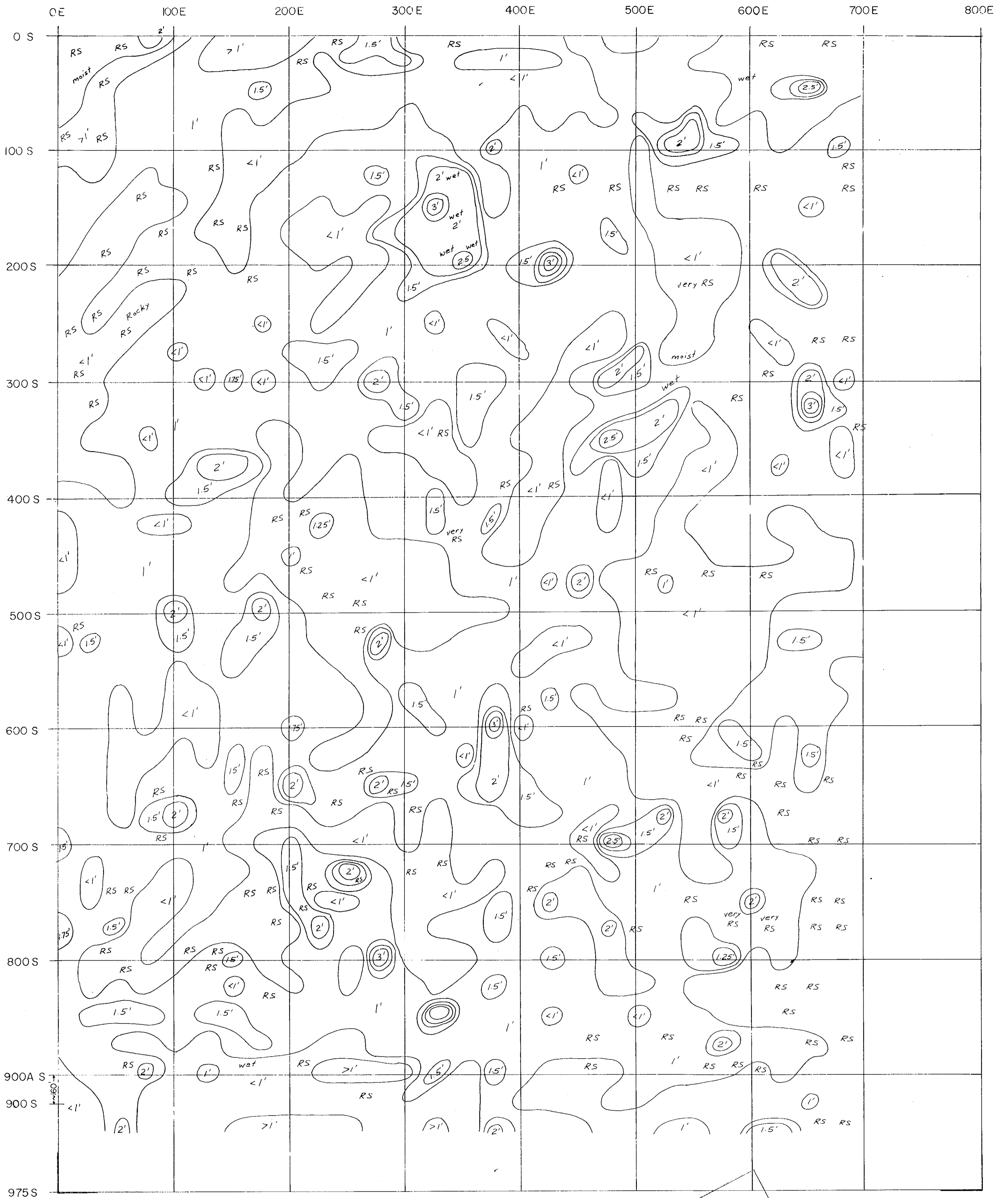
Scale: 1 inch = 500 feet

SOIL COLOUR MAP

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ASSESSMENT REPORT
 NO. 2951 MAP # 9

Soil Colour Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng., on the Crick and Guts Claims, Canyon Creek area, B. C., Greenwood Mining Division.

Dated March 12, 1971
 Signed Peter J. Haman



RS Rocky Soil

CRICK and GUTS CLAIMS

Scale: 1 inch = 500 feet

SOIL SAMPLE DEPTH MAP

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ASSESSMENT REPORT
NO. 2751 MAP 28/10

Soil Sample Depth Map to accompany geochemical report by Dr. Peter J. Haman, P. Eng., on the Crick and Guts claims, Canyon Creek area, B.C., Greenwood Mining Division.

Dated March 12, 1971

Signed Peter J. Haman