

745

REPORT

ON

A GEOCHEMICAL SURVEY

OF A PORTION OF

THE KODILE GROUP

SREEKHA MINING DIVISION

## S U M M A R Y

A geochemical survey of a portion of the Mobile Group, near Stewart, B. C., was made in August 1965.

The group lies in a mountainous area at an average elevation of about 4,000 feet. The underlying rocks are predominantly argillites which have been cut by many major and minor faults. Coast Range intrusives outcrop about a mile to the southwest.

The mineralization consists of pyrite, galena, sphalerite, gold, argentite and proussite in a quartz gangue.

Soil samples were taken by an auger in an area of the Mobile No. 5 claim on which former owners drove five adits and did some surface trenching. Two hundred eighteen (218) samples were taken over an area approximately 1,200 feet by 900 feet.

The results of the survey show an anomalous area southwest of the old workings. This anomaly covers 100,000 square feet and has a northwest-southeast alignment.

Samples taken from rock exposures and the results of the geochemical survey suggest a series of mineralized lenses along a shear zone.

It is recommended that the surveyed area be regarded as unlikely to yield a major economic deposit but, if further exploration is decided upon, that diamond drilling be carried out to test the shear zone at depth.

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January 24, 1956.

**R E P O R T**  
**ON**  
**A GEOCHEMICAL SURVEY**  
**OF A PORTION OF**  
**THE NOBILE GROUP**  
**SKEENA MINING DIVISION**

**OBJECT**

This report is submitted for the purpose of recording the results of a geochemical survey carried out on a portion of the Nobile Group in the Skeena Mining Division in the summer of 1955, and for the purpose of presenting the conclusions drawn from these results.

**LOCATION**

The Nobile Group is located about four miles northeast of the village of Stewart at elevations which range from approximately 3,000 to 5,000 feet above sea level.

The Group straddles Big Gulch Creek along which the location line for the claims was run. (Map 1)

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TITLE

The claims under consideration in this report are held as follows:

<u>Claim</u>	<u>Record No.</u>	<u>Tax No.</u>	<u>Expiry Date</u>	<u>Title</u>
Mobile #1	23128	481999	April 7, 1966	G.H. Kendrick
Mobile #2	23129	482000	"	"
Mobile #3	23130	481995	"	"
Mobile #4	23131	481996	"	"
Mobile #5	23132	481997	"	"
Mobile #6	23133	481987	"	"
Mobile #7	23134	481988	"	"
Mobile #8	23135	481989	"	"
Mobile #9	23136	481990	"	"
Mobile #10	23137	481991	"	"

The claims were grouped as the Mobile Group on March 23, 1965.

TRANSPORTATION

The property is reached from Stewart by helicopter or on foot. By air the trip takes about 15 minutes; on foot it takes three or four hours of hard climbing.

Stewart is connected to Prince Rupert and Vancouver by daily air and weekly sea transportation services. There is also a road under construction which will eventually connect the village of Stewart with Cassiar and the Alcan Highway.

TOPOGRAPHY

The group straddles Big Gulch Creek and embraces the slopes on either side of the creek. The southeastern portion covers a ridge and extends down into the valley of Albany Creek. Both creeks flow northerly.

The area is generally rugged, varying from mountainous to precipitous. The creeks occupy deep valleys and canyons.

The vegetation is typical of that at elevations near the timberline. There are extensive open areas of sub-alpine grasses and flowers with wooded areas where the top soil is deeper. The trees are mainly spruce and are comparatively small.

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### CLIMATE

The climate is typical of that section of British Columbia - heavy snowfalls in the winter and much rain or low clouds in the summer.

### GEOLOGY

The group lies in an area of predominantly sedimentary rocks consisting of well-bedded argillites which have a strike of approximately N 20° W and a dip of about 50° to the southwest.

Coast Range intrusives of granite, granodiorite and quartz diorite outcrop about one mile to the southwest. These intrusives are probably the sources of the ore shoots found on the property.

The area is traversed by many major and minor faults which furnish structural controls for the introduction of ore deposits. Big Gulch Creek occupies one of the major faults. It strikes parallel to the argillite bedding although its dip appears to be much steeper. The observed mineralization is in shear zones which are subsidiary to the major faults. Much of the sheared material has been replaced by quartz.

The mineralization occurs in the quartz veins. It consists of pyrite, galena and sphalerite with minor occurrences of gold, argentite, tetrahedrite and proustite.

### SURVEY METHODS

A geochemical survey was made of the area of the showings, which occur on the Mobile No. 5 claim. These showings consist of five adits and numerous pits and trenches.

A base line was run in a southerly direction from a point approximately midway between Number 1 and Number 5 adits. This line was established by compass and tape. No corrections were made for slope. From the origin (designated Hub A) Hubs B, C, D, E and F were established at 200 foot intervals (slope distance). From these hubs cross lines were run approximately 600 feet in both directions and roughly normal to the base line. Pickets were at 100 foot intervals along the cross lines. (Map 2)

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Survey Methods (Continued)

Soil samples were taken with an auger at 50 foot intervals along the cross-lines. Where possible, these samples were taken at a depth of two feet below the surface. 151 samples were taken over an area approximately 1,200 feet by 900 feet.

The samples were sent to Technical Services Laboratories in Toronto where they were assayed by hot extraction for lead and zinc in parts per million.

When the assay results were plotted they indicated an anomalous area to the west of the base line. In order to further delineate this area, 36 more samples were taken on lines intermediate between the cross-lines. As a further check 31 more samples were taken across the anomalous area. These samples were taken along the original cross-lines.

FIELD PARTY

The work was done under the direction of Mr. M. L. Hill, P. Eng. of H. L. Hill & Associates Ltd., Consulting Engineers of Vancouver. Mr. R. Foster, an experienced exploration geologist, whose certificate of qualifications is attached, was in charge of the field party and personally took the samples. The other member of the party was R. Newton, who assisted R. Foster in the line-cutting and taking of samples.

Direct costs were as follows:

Labor	R. Foster	20 days	\$ 531.44
	R. Newton	18 days	222.76
Helicopter			115.83
Groceries @ \$4.00 per day			80.00
Assaying (218 samples @ \$1.65)			<u>359.70</u>
Total			\$1,309.73

The work commenced on August 5th and was completed on August 30th, 1965.

GEOLOGIC MAPPING AND SAMPLING

In order to assist in the evaluation of the geochemical results a limited amount of geologic mapping and sampling was done. Nos. 3, 4 and 5 adits and the "west showing" near No. 5 adit were surveyed by compass and tape. The "west showing" was chip sampled at the locations shown on the accompanying map.

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Survey Methods (Continued)

Soil samples were taken with an auger at 50 foot intervals along the cross-lines. Where possible, these samples were taken at a depth of two feet below the surface. Over an area approximately 1,200 feet by 500 feet 151 samples were taken.

The samples were sent to Technical Services Laboratories in Toronto where they were assayed by hot extraction for lead and zinc in parts per million.

When the results of the assays were plotted they indicated an anomalous area to the west of the base line. In order to further delineate this area, 36 more samples were taken on lines. As a further check 31 more samples were taken across the anomalous area. These samples were taken along the original cross-lines.

FIELD PARTY

The work was done under the direction of Mr. H. L. Hill, P. Eng. of H. L. Hill & Associates Ltd., Consulting Engineers of Vancouver. Mr. R. Foster, an experienced exploration geologist whose certificate of qualifications is attached, was in charge of the field part and personally took the samples. The other member of the party was R. Newton, who assisted R. Foster in the line-cutting and taking of samples.

Direct costs were as follows:

Labor	R. Foster	20 days	\$ 531.44
	R. Newton	16 days	222.76
Helicopter			115.83
Groceries @ \$4.00 per day			80.00
Assaying (218 samples @ \$1.65)			<u>359.70</u>
Total			\$1,309.73

The work commenced on August 5th and was completed on August 30th, 1965.

GEOLOGIC MAPPING AND SAMPLING

In order to assist in the evaluation of the geochemical results a limited amount of geologic mapping and sampling was done. Nos. 3, 4 and 5 adits and the "west showing" near No. 5 adit were surveyed by compass and tape. The "west showing" was chip sampled at the locations shown on the accompanying map.



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Geologic Mapping and Sampling (Continued)

The samples were assayed by Technical Services Laboratories with the following results:

<u>Sample No.</u>	<u>True Width Feet</u>	<u>Gold Oz/Ton</u>	<u>Silver Oz/Ton</u>	<u>Lead %</u>	<u>Zinc %</u>
70701	2.6	Trace	1.10	6.51	0.35
70702	7.5	Trace	Trace	Trace	Trace
70703	4.0	Trace	0.98	0.52	0.20
70704	3.0	Trace	Trace	0.15	0.15

RESULTS

The results of the survey are plotted on Map 2 to a scale of one inch to 100 feet. Readings over 500 parts per million in lead and over 600 parts per million in zinc are regarded as anomalous.

An anomalous area of approximately 100,000 square feet was located west of the base line. The check samples confirmed the earlier results. Readings ranged as high as 1,350 parts per million in zinc. Although irregular in shape, the anomaly has a definite northeast-southeast alignment.

CONCLUSIONS

The geochemical survey shows an anomalous area whose core is about 500 feet south of No. 5 adit and about 200 feet west of the base line.

This anomaly is closely associated with the stream in that part of the property and, undoubtedly, it is in part due to concentrations of heavy minerals caused by the action of surface waters and ground drift. However, one point of the anomalous area lies on the ridge between the stream and a water course lying 300 feet to the east. This point is also roughly on the strike of the mineralized shear zone revealed in the exposure to the west of No. 5 adit and could be indicative of another mineralized section of this zone. At a point about 300 feet southeast of the above-mentioned point there is a single anomalous reading which is also on the same strike.

These facts all indicate the existence of a mineralized shear zone extending from the exposure near No. 5 adit and running in a southeasterly direction through No. 5 adit and below the points mentioned above for a distance of 800 feet. No estimate can be made of the economic worth of this zone.

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**Conclusions (Continued)**

The sampling of the showing near No. 5 adit does not indicate any mineralization of commercial interest.

The spotty distribution of values, as indicated by the rock sampling of the exposure, mapping of the adits and soil sampling, suggests a series of lenses along the shear zone.

**RECOMMENDATIONS**

In accordance with the foregoing discussion, it is recommended that -

1. The area southeast of No. 5 adit be regarded as the most promising part of the area covered by this survey;
2. The mineralization be regarded as irregularly distributed along the shear zone and unlikely to constitute an economic deposit;
3. If it is decided to proceed with the exploration of this property, diamond drilling be carried out to test the shear zone at depth.

H. L. HILL & ASSOCIATES LTD.



H. K. Lorizer

HLL/mjr

This is to certify that I, Richard William Foster, of 844 W. Hastings St., Vancouver, B.C., have attended Dalhousie University for five years, majoring in Geology and have had approximately seven years experience in the mining industry of British Columbia, Ontario and Quebec. This experience includes five years in various supervisory capacities relevant to both surface and underground work.

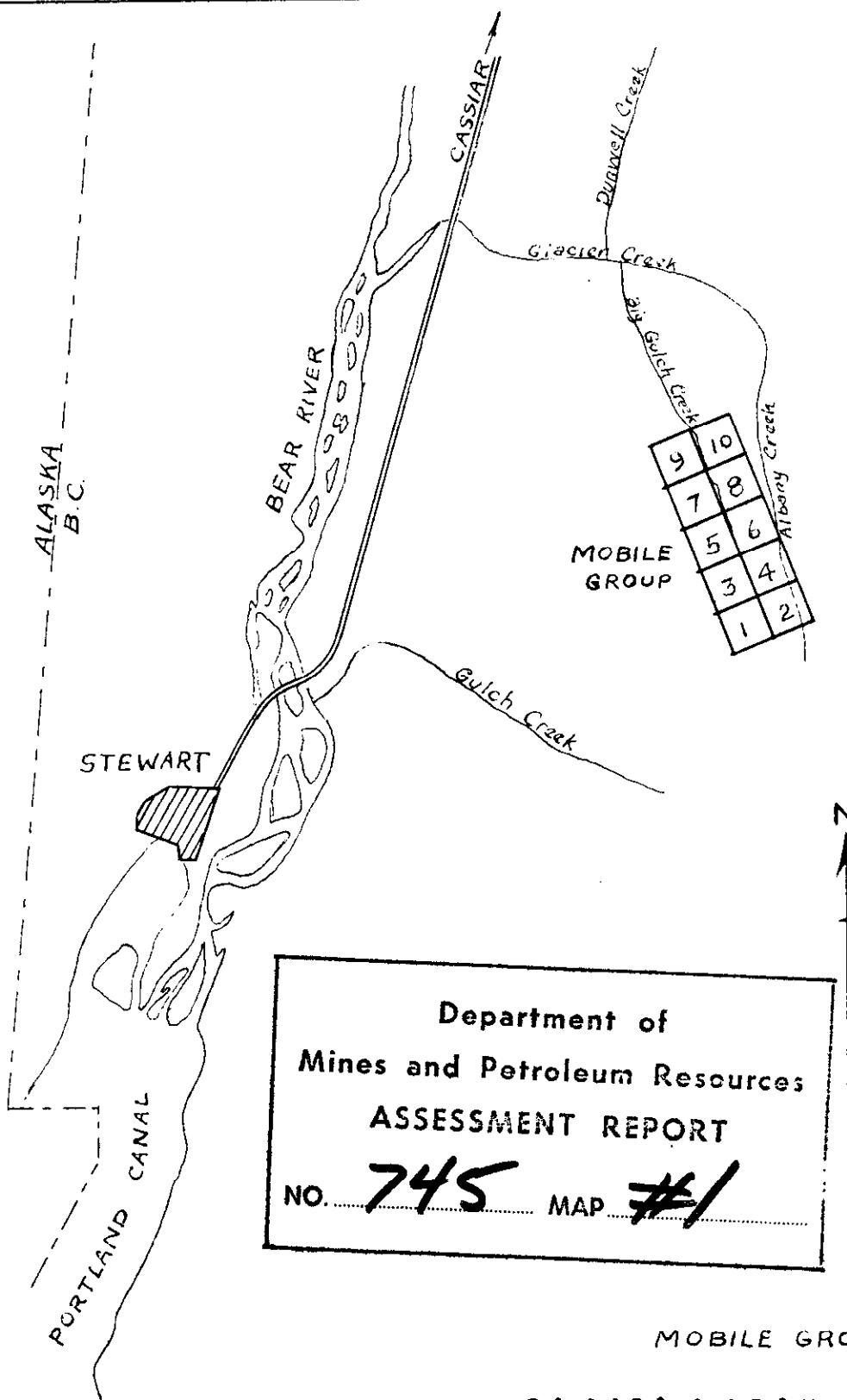
Pine Point, NWT  
Feb. 28th, 1966

*R. W. Foster*  
R.W. Foster

RECEIVED

MAR 3 1966

VANCOUVER OFFICE



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**ASSESSMENT REPORT**  
 NO. **745** MAP **#1**

MOBILE GROUP

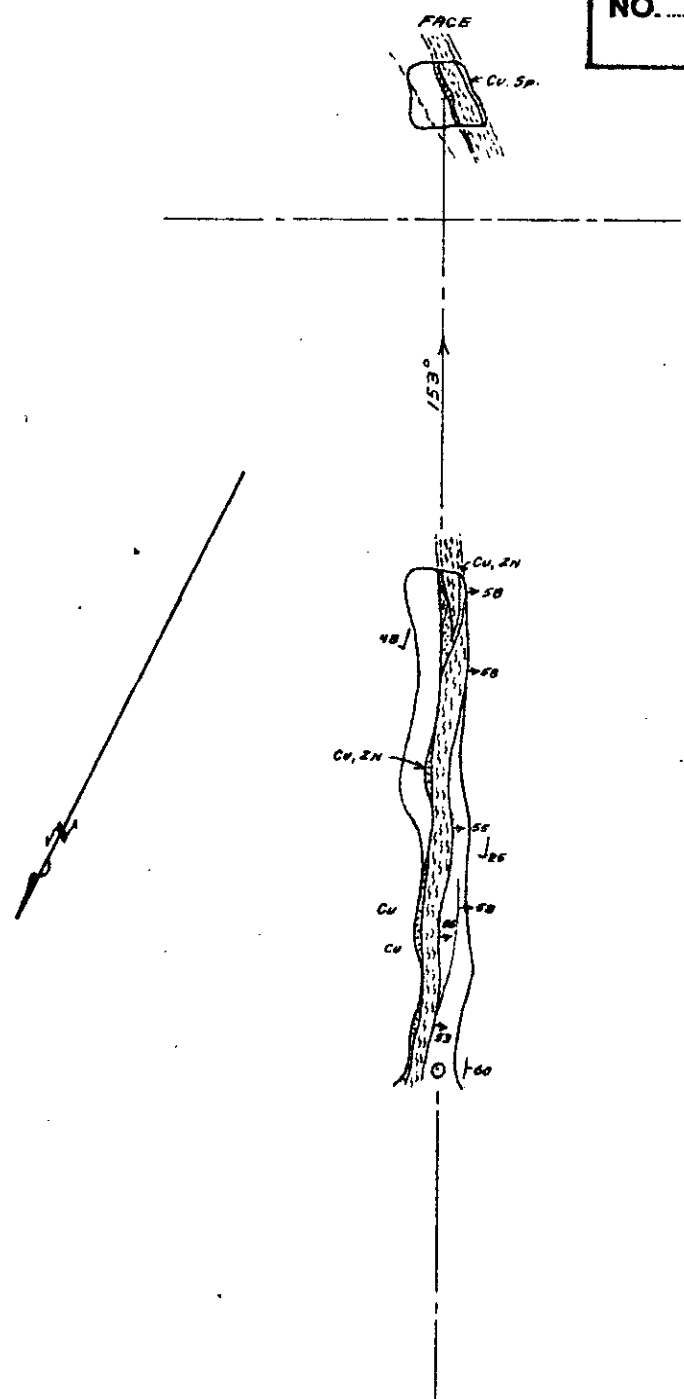
## CLAIM LOCATION MAP








Scale: 1" = 1 mi.

Drawn: M.K. Lorimer

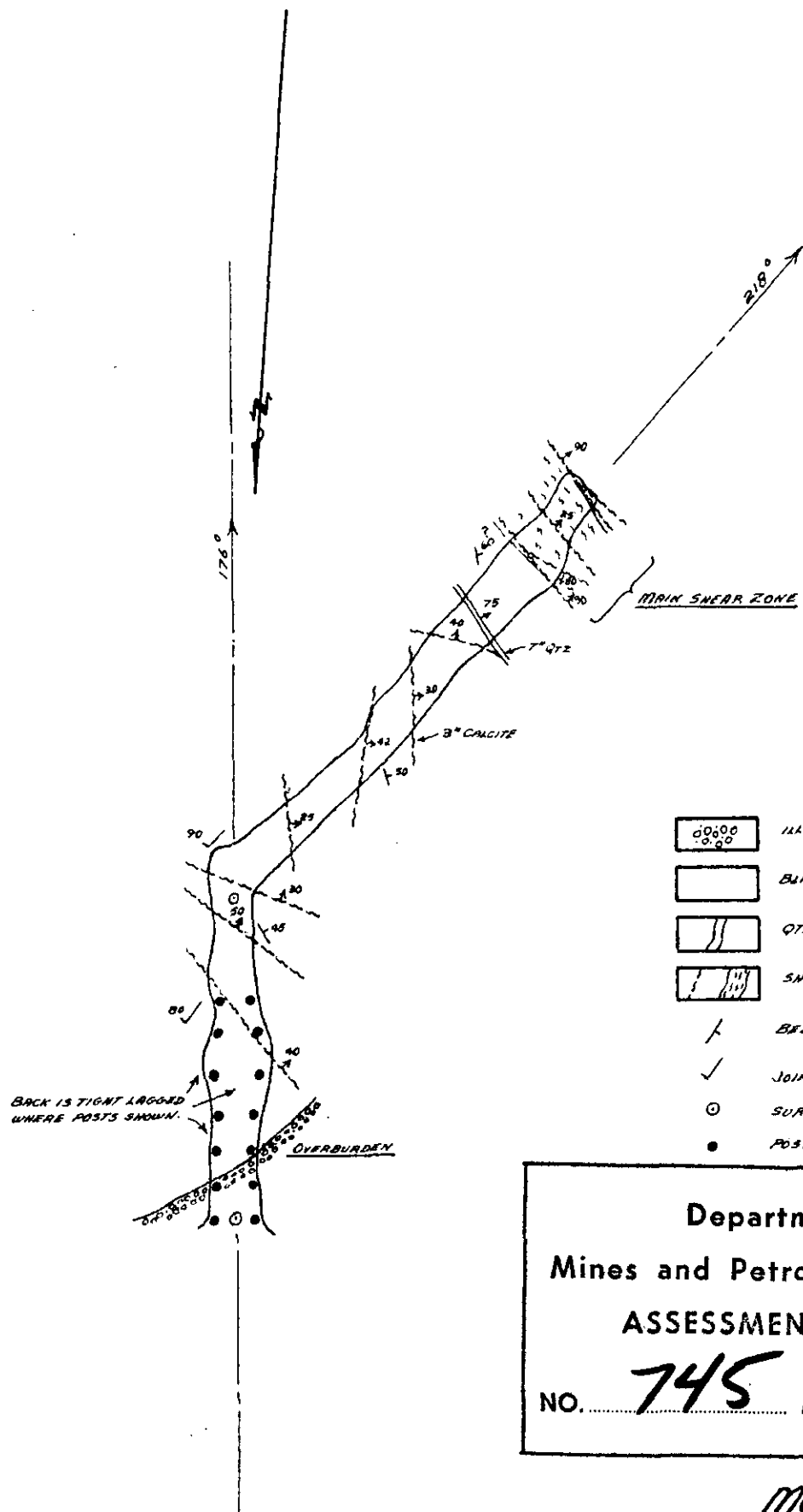
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






NO. **745** MAP **#3**



-  BLACK, THIN-BEDDED ARGILLITES
-  QTZ-SULPH. VEINS
-  QTZ BARCLIN VEINS (OFTEN VUGGY)
-  SHATTERING WITH MINOR QTZ
-  BEDDING
-  JOINTING
-  SURVEY STN.

MOBILE GROUP  
NO. 3 ADIT  
1"=20' MAP:

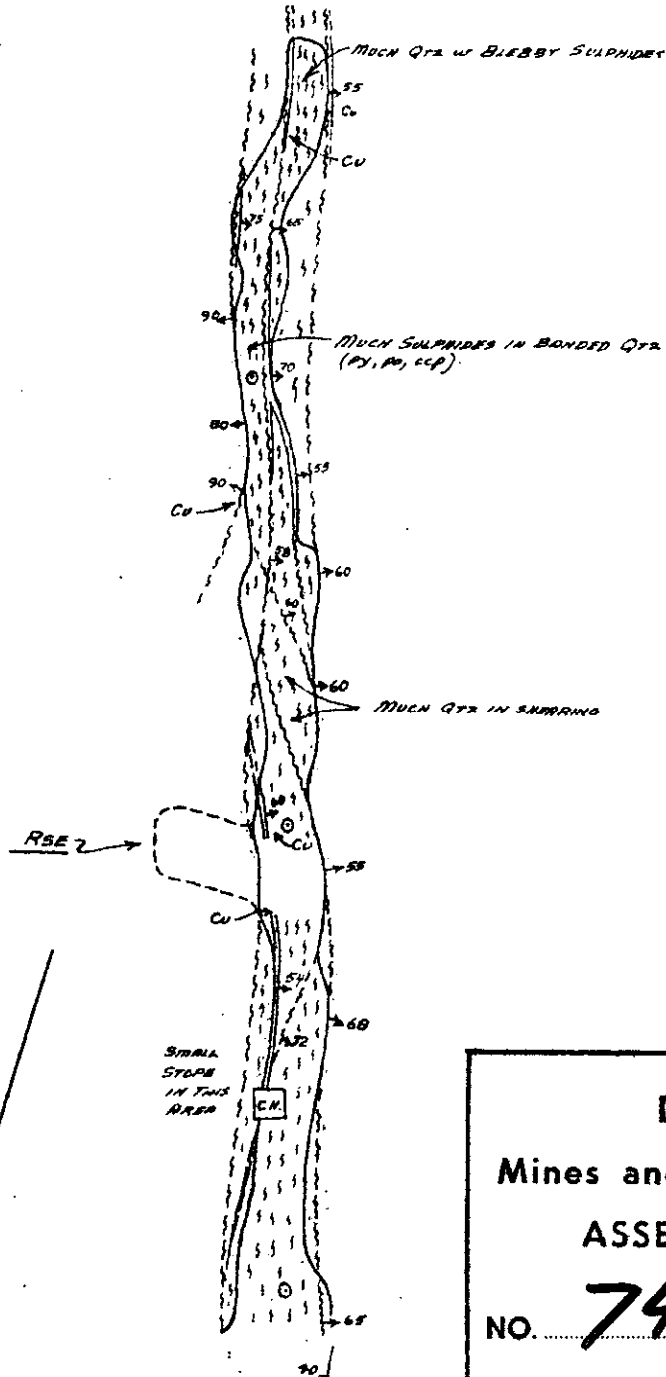
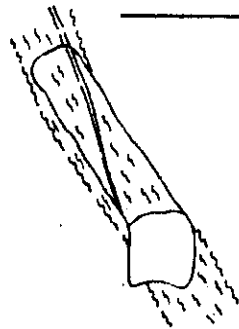



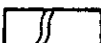
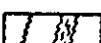



-  ILL-SORTED GLACIAL TILL & ALLUVIUM
-  BLACK ARGILLITE W/ MINOR QXITE
-  QTZ-CALCITE VEINS
-  SHEARING (TIGHT & WIDE ZONES)
-  BEDDING
-  JOINTING
-  SURVEY STK.
-  POST

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 NO. **745** MAP **#4**

MOBILE GROUP  
Nº 5 ADIT  
 11'-20' MAP

RSE SECTION (SOUTH WALL SHOWN)



-  BLACK, THIN BEDDED ARGILLITES
-  Qtz-SULPHIDE VEINS & STRINGERS
-  SWIRLING
-  JOINTS
-  SURVEY STN.
-  CHUTE

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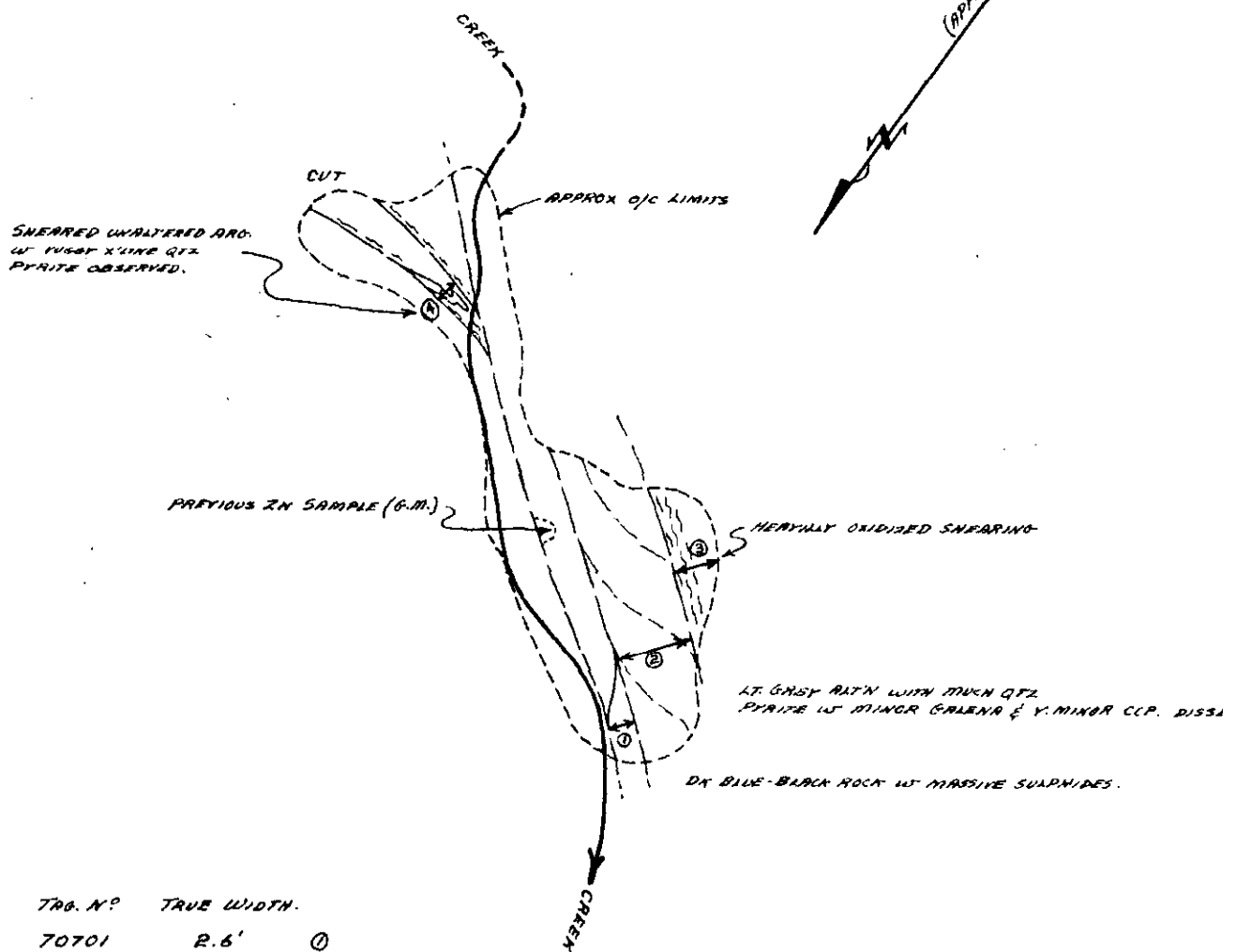
NO. **745** MAP **# 5**

MOBILE GROUP

Nº 4 ADIT MAP

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NO. 745 MAP #6

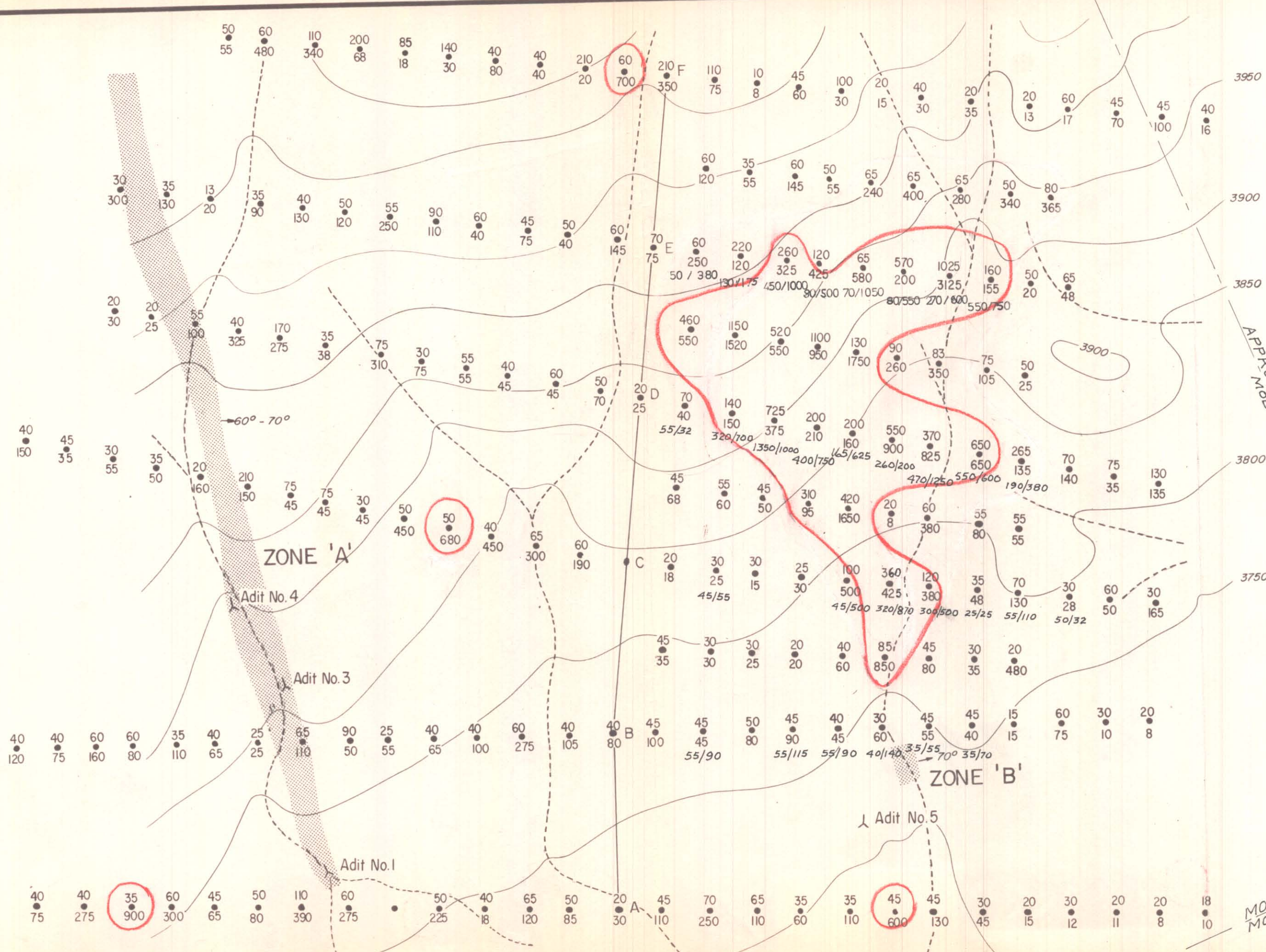


Tag. N <sup>o</sup>	TRUE WIDTH.	
70701	2.6'	①
70702	7.5'	②
70703	4.0'+	③
70704	3.0'	④

MOBILE GROUP  
SKETCH PLAN SHOWING LOCATION  
OF SAMPLES TAKEN ON "WEST  
SHOWING". ADJACENT TO N<sup>o</sup> 5 PIT.

APPROX 1" = 20'





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**ASSESSMENT REPORT**  
 NO. **745** MAP **#2**

20 Pb VALUES IN P.P.M. (HOT EXTRACTION)  
 50 Zn  
 20/50 CHECK SAMPLES

ANOMALOUS AREA  
 MINERALIZED ZONES

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**MOBILE PROPERTY**  
 GEOCHEMICAL PLAN

MOBILE #5  
MOBILE #7

SCALE 1 INCH = 100 FEET MAP 2