



52C16SE0006 63.3250 BENNETT

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REPORT ON A
RADEM AND MAGNETOMETER SURVEY
OF THE
REED LAKE-BENNETT TOWNSHIP CLAIMS
FOR
INTERNATIONAL CHEMALLOY CORP.

BY

A. C. A. HOWE INTERNATIONAL LIMITED

J. V. MCCARTHY

REPORT NO. 373
TORONTO, ONTARIO

MARCH 13, 1975

A. C. A. HOWE INTERNATIONAL LIMITED



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	<u>PAGE NO.</u>
SUMMARY	(i)
1.0 INTRODUCTION	1
2.0 PROPERTY	1
3.0 LOCATION AND ACCESS	2
4.0 TOPOGRAPHY AND VEGETATION	3
5.0 PREVIOUS WORK	3
6.0 GENERAL GEOLOGY	4
7.0 GEOLOGY OF THE PROPERTY	5
8.0 LINE CUTTING	6
9.0 GEOPHYSICAL SURVEYS	6
10.0 DISCUSSION OF MAGNETIC SURVEY	7
11.0 DISCUSSION OF RADEM (VLF-EM) SURVEY	9
12.0 CONCLUSIONS AND RECOMMENDATIONS	11
CERTIFICATE	
INSTRUMENT SPECIFICATIONS - SHARPE MF-1	
MAPS: Sheet 1 - Magnetometer survey, Reed Lake-Bennett Township area claims	
Sheet 2 - Radem, Fraser filter compilation of Reed Lake-Bennett Township area claims	
Sheet 3 - Radem, field strength contour of Reed Lake-Bennett Township area claims	
Sheet 4 - Radem, field strength and dip angle profiles of Reed Lake-Bennett Township area claims	
Sheet 5 - Plan of trenches of Bennett Township area claims, south sheet	
Sheet 6 - Plan of trenches of Bennett Township area claims, north sheet	

SUMMARY

International Chemalloy Corp. holds under an option agreement with Yeoman Mines Limited a gold prospect situated in the Bennett Township, Reed Lake area, Ontario.

The property is located 1 mile north of Bennett Lake, Bennett Township in the Kenora Mining Division, Rainy River District, Ontario.

During the period January 24, 1975 to March 1, 1975 a grid consisting of 18.06 line miles with lines established was cut at 400 foot intervals.

Subsequently geophysical work consisting of a magnetometer and an alectromagnetic survey was carried out.

The purpose of these was three fold:

1. To possibly outline an auriferous shear zone which had been previously trenched and sampled.
2. Outline lean iron formation which is suspected to underlie the property.
3. Investigation of the area for base metal deposits.

The surveys resulted in six magnetic anomalies being outlined, four of which are sufficiently interesting to warrant further investigation. The EM survey outlined eight anomalous areas, four of which were coincident with magnetic anomalies. These results are encouraging therefore it is proposed that a program be undertaken consisting of extension of present coverage to the north and west, reconnaissance geochemistry for gold and base metals over the entire claim group, detailed geophysics in the

(ii)

form of vertical and horizontal loop over specified anomalous areas and diamond drilling to substantiate any possible deposits.

The total cost of this program is estimated to be \$11,163.90.

1.0 INTRODUCTION

In January and February, 1975 a grid was cut over eighteen contiguous claims held by International Chemalloy Corp. under an option agreement with Yeoman Mines Limited. These claims are situated in the Reed Lake-Bennett Township area of the Kenora Mining Division, Ontario.

Two geophysical surveys, a Radem (VLF-EM) and a fluxgate magnetometer survey, were subsequently carried out over the grid area. These surveys, on which this report is based, had three main objectives which are as follows:

1. To locate shear zones which are believed to be favourable sites for gold deposition as was indicated by previous work.
2. To determine if the iron formation to the east and west of the claims crosses and joins on the property.
3. To evaluate this property and locate any base metal deposits within.

2.0 PROPERTY

International Chemalloy Corp. holds under option seventy-two contiguous mining claims situated in Lot 12 of Bennett Township, Ontario.

The claims may be more specifically described as follows:

K 345458-65	inclusive
K 345467-72	"
K 345474-77	"

K 358680-83 inclusive
K 358684-98 "
K 358707-18 "
K 359440-60 "

Of these seventy-two claims the following eighteen were investigated during January and February, 1975.

K 345460 - K 345465	inclusive	6	240
K 345467 - K 345474	"	8	320
K 345477 - K 345478	"	2	80
K 358681		1	40
K 358690		<u>1</u>	<u>40</u>
		18	720
		claims	acres

3.0 LOCATION AND ACCESS

The property is located within the Kenora Mining Division, Rainy River District, Ontario.

Approximate co-ordinates:

92° 16' W longitude
48° 14' N latitude

More specifically, the claim group is one mile north of Bennett Lake, Bennett Township.

Access from Atikokan, the nearest town, is west along Highway 11 for 35 miles to Crilly Road, then north along this road for 1 mile. At this point proceed northeast for 1 mile to a small northwest trending road which intersects Bennett Lake approximately 3/4 of a mile distant. From this point the property lies 1 1/4 miles to the north-northwest. Bennett Lake may be crossed by canoe in the summer and snowmobile in the winter, and is suitable for approach by small float or ski equipped aircraft.

4.0 TOPOGRAPHY AND VEGETATION

The topography of the south portion of the eighteen claims surveyed is relatively flat with a gentle slope southward. Vegetation consists primarily of coniferous trees with an average height of 40 feet. There is a small linear cedar swamp near the south edge of the grid. In addition there are a few beaver dams in the western portion of the claim group causing local swampy conditions.

To the north, the topography is gently rolling with a maximum change in elevation of 150 feet. The vegetation in this area is predominantly deciduous with trees having an average height of 40 feet.

5.0 PREVIOUS WORK

In 1896 the Independence Gold Mine, which was situated just east of the claim block, was opened and worked for a short period.

G. H. Miles (1936) worked on and in the vicinity of a gold showing located on the subject property (northeast of the claim post #4, claim no. 345465) for Cedar Lake Gold Mines. Ten trenches sampled by Miles across the shear zone for a total distance of 1,546 feet returned an 85 foot section averaging .15 oz Au/ton.

In 1973 E. J. Rivers collected chip samples from the two most southern trenches which are summarized as follows:

<u>Trench #</u>	<u>Au oz/Ton</u>	<u>Width</u>	
Trench #1	0.01	10'	
	0.02	20'	
Trench #2	Tr.	50'	
	0.01	20'	
	Tr.	13'	
	0.10	5')	0.06 oz/ton Au
	0.05	12')	across 27 feet
	0.06	10')	
	Tr.	10'	
	0.04	20'	
	Tr.	20'	
	0.02	12'	
	Tr.	18'	
Tr.	33'		

The gold showing is found on O.D.M. Map P293 (1965) and Map 2115 (1965).

In June, 1974, P. Huxhold examined the gold showing, mapped the trenches* and obtained 27 chip samples from six trenches of claim no. K 345467. The results of this examination are presented as follows:

<u>Sample No.</u>	<u>Location</u>	<u>Type</u>	<u>Length</u>	<u>Assay Au oz/Ton</u>
51E	Trench #1	chip	0'- 10'	.03
52E	"	"	10'- 20'	.02
55E	Trench #2	"	0'- 10'	.01
64E	"	"	90'-100'	.04
65E	"	"	100'-110'	.02
66E	"	"	110'-120'	.02
69E	"	"	134'-136'	.01
74E	Trench #5	"	0'- 9'	.01

6.0 GENERAL GEOLOGY

The Bennett Township property occurs in the Quetico sub-province of the Superior Province. The former extends from Rainy Lake eastward for approximately 500 miles to Kapuskasing and exhibits a maximum width of 60 miles.

* See maps at rear of report

The rocks are highly metamorphosed sediments, migmatites, granitized gneisses, and gneissic or massive granitic rocks of approximate granodiorite composition. In the western part of the belt sediments and their metamorphic equivalents are referred to as Couchiching, a name given by A.C. Lawson in 1888 to metamorphosed sediments below the Keewatin Lavas in the Rainy Lake area. In Bennett Township-Reed Lake area west of Atikokan, Couchiching-type rocks occur stratigraphically below and conformable with, basic and acidic lavas and appear to be the lowest unit of the Keewatin group.

Structure in the Quetico sub-province exhibits east-west trending folds conformable between the Keewatin-type lavas and sediments and Couchiching-type sediments. Faults are marked by wide shear zones containing chlorite and carbonate in volcanics and mylonite in more siliceous rocks and occur mainly between Couchiching-type sediments and Keewatin-type basic volcanics.

7.0 GEOLOGY OF THE PROPERTY*

The property is underlain by east-west trending Precambrian rocks. Diorite and granodiorite underlie the central and southern portions of the claim group while biotite schist (in some places gneissic) occupies the northern third. A narrow band of andesitic lava separates the two previous rock types and also underlies a large area in the southwestern portion of the property.

* As shown by O.D.M. Map No. 1960B

The axis of an east-west trending syncline crosses the northern part of the grid resulting in high angles of dip to both the north and south indicating both limbs of the fold.

Outcrop is extensive in the central and northern portions of the claim group with semi-continuous exposures bordering several of the open swampy areas.

8.0 LINE CUTTING

A grid was cut over the property prior to the geophysical surveys.

The grid consists of two east-west trending baselines, a tie line, and 15 north-south offsets. The offsets are 400 feet apart with stations at 100 foot intervals. The grid has 15.26 line miles of offsets and 2.80 line miles of baselines and tie lines for a total of 18.06 line miles.

Due to the high magnetics found within the property, a combination of compassing and back sighting was used to cut the lines. The lines were chained and picketed, and because of the frozen ground, the stations were also flagged and the nearest tree marked.

9.0 GEOPHYSICAL SURVEYS

The geophysical surveys conducted over the property in February 1975, consisted of a Radem (VLF-EM) and a fluxgate magnetometer survey.

The base station for both surveys was located on a

three foot high squared and marked stump located 20 feet west of line 4 west, station 27 south. The base station readings for the Radem and Magnetometer surveys were assigned the arbitrary values of 100 per cent and 1,000 gammas respectively.

The configuration of the grid yielded an area of influence for each reading of approximately 40,000 square feet.

The magnetometer readings were corrected for diurnal variation as were the Radem field strength readings.

10.0 DISCUSSION OF MAGNETIC SURVEY

The magnetic survey, using a Scintrex Sharpe MF-1 fluxgate magnetometer (Sr. No. 702258), outlined the following anomalous areas:

<u>Anomaly</u>		<u>Location</u>
A	B.L.A.	L's 20W, 24W, 28W Sta. 19-22N
B	B.L.A.	L's 12E, 8E, 4E, 0, 4W, 8W, 12W Sta. 2+50N-2S
C	B.L.A.	L's 24W, 28W Sta. 13-15N
D	B.L.B.	L's 4E, 0, 4W, 8W, 12W, 16W Sta. 2-10N
E	B.L.B.	L's 16W, 20W, 24W, 28W, 32W Sta. 1-10N
F	B.L.B.	L's 12E, 16E Sta. 9-10N

Anomaly A is a narrow lenticular band stretching for approximately

1,400 feet on an east-west strike with an average width of 400 feet. It has a peak of 4,600 gammas. It can be considered a near surface anomaly because of the sharp magnetic gradient.

Anomaly B is another lenticular shaped body found paralleling baseline A on the eastern side of the grid. It has a length of 2,700 feet and an average width of 400 feet. It has a high of 8,000 gammas with numerous readings of 6,000 gammas. Because of its sharp contrast with more normal readings, it is thought by the writer to be a near surface feature.

Anomaly C begins to develop in the western portion of the grid but was not fully outlined in this survey. It is again lenticular with a present length of 500 feet in an east-west direction and an apparent width of 200 feet. It has a high of 6,000 gammas.

Anomaly D is a large southwesterly trending body with highs of 8,175 and 6,000 gammas. It has a length of approximately 2,200 feet with an average width of 600 feet. It appears to be a relatively deeper feature than those previous with a southward dip and very little near surface expression.

Anomaly E is a very strong magnetic anomaly which is developing in the northwestern part of the grid. It has highs at present

of 15,925, 14,400 and 12,460 gammas and a size that may be substantially greater than outlined by the present grid. The distribution of readings seems to indicate a strong magnetic feature (possibly iron formation) near surface that may extend to depth on a southward dip.

Anomaly F appears as one reading in the far northern portion of the grid with a present high of 7,000 gammas.

11.0 DISCUSSION OF THE RADEM (VLF-EM) SURVEY

In conjunction with the magnetic survey, a VLF-EM survey using a Crone Radem unit (Sr. No. 134) was also conducted on the same grid.

The results were plotted on three maps (Sheets 2, 3, 4) to facilitate interpretation of the data. Map 2 shows dip angle profiles and profiles of corrected field strength readings. Map 3 is a contour presentation of field strength readings. Map 4 is a Fraser computation of the dip angles shown in contour form, better outlining anomalous areas.

Using these results, seven anomalies of varying size and intensity were outlined. Anomaly I is a 2,400 foot long, narrow body (average width 250 feet) extending from station 20 south on line 8 west to 20 south on line 32 west. It has coincident field strength and magnetic anomalies which are moderate to low in strength.

Just to the west of Anomaly I, Anomaly II begins to

develop. Its best response is located at station 23 south on line 40 west with a field strength reading of 175 per cent complimenting good dip angle response. The dip angle profile shows characteristics of a surficial conductor which is substantiated by a lack of magnetic response.

The pattern developed over Anomaly III resembles a branching fracture system extending 2,800 feet from just west of line 4 west to line 36 west. It appears as a single conductor until it reaches 10 south on line 20 west where it separates into Anomaly IIIA going toward the northeast and IIIB going toward the southwest. The best response for Anomaly IIIA of 170 per cent is found at 8 south on line 8 west, while a reading of 150 per cent at 14 south on line 12 west pin points Anomaly IIIB. Anomalies IIIA and IIIB are interpreted as local concentrations of sulphides of poor conductive quality since field strength and dip angle responses are low. This is substantiated by poor magnetics.

Anomaly IV is an east-west trending conductor between 600 and 1,000 feet north of baseline A extending 2,000 feet from line 4 east to line 12 west. It appears as two elliptical shaped features on the field strength contour with the best response at 210 per cent occurring coincidental with the best Fraser filter response at station 7 north on line 0. Non linear distribution of the field strength readings indicates a localized series of conductors. There is no associated magnetic response.

Anomaly V occurs as a series of small conductors

forming a southwesterly trending feature extending 2,000 feet from 25 north on line 12 east to 20 south on line 0 with a width of 300 feet. The field strength response is low and not as extensive as the Fraser filter anomaly. Because there is no magnetic response and the feature does not parallel general structure, it is thought to be a reflection of conductive overburden.

Anomaly VI occurs in the far northeastern portion of the grid extending from 9 north on line 20 east to 3 north on line 4 east and is opening toward the north. The anomaly shows a strong field strength response, also opening toward the north. The best field strength response occurs at 6 north on line 8 east. The radem anomaly overlaps in part magnetic anomaly F and extends further to the south.

Anomaly VII, the last of the radem anomalies, is located between 2 and 7 north from line 16 west through line 32 west and is open toward the west. Magnetics in this region are very strong and indicate the probable presence of iron formation. The radem anomaly overlaps the magnetic anomaly but extends further south and unlike the magnetics is closed toward the north.

12.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the geophysical surveys, it is concluded that further work is warranted on the Reed Lake, Bennett Township claims.

Since the main interests in the area are structures which may contain economic deposits of gold, anomalies for further work were chosen with this in mind. As gold has been found within iron formations in other parts of the province, this possibility was also considered. Possible occurrences of base metals, although not the main consideration, were also taken into account.

Of the seven radem anomalies outlined by the Fraser filter computation, four numbered I, III, VI and VII are considered targets for further work. Further work on the others (II, IV, V) is not warranted at this time, however, they would be considered if geology and geochemistry in their immediate vicinity prove interesting.

Four of the six magnetic anomalies (A, B, D, F) warrant further study whereas two (C, E) are excluded at this time.

The following table summarizes the anomalies and indicates the targets:

<u>Anomaly</u>	<u>Magnetics</u>	<u>Fraser Filter</u>	<u>Field Strength</u>	<u>Targets</u>
1	A	I	III	*
2	B		V	*
3	C			
4	D	VI	VIII	*
5	E			
6	F	VII	IX	*
7		II	II	
8		III	IV	*
9		IV	VI	
10		V	VII	
11			I	

Follow-up work will be done in two phases:

Phase I

- Detailed geology over grid and reconnaissance geology over the remainder of the claim group.
- Allow for bulldozer stripping of mineralized zones located geologically. Thirty hours of bulldozer time should be sufficient.
- Reconnaissance geochemistry for gold, copper, lead and zinc over the entire grid. Samples to be collected at 1/4 mile intervals on lines 1/4 mile apart.
- Extension of geophysics over anomalies which have not been closed off.
- Electromagnetic surveys using vertical and horizontal loop systems to detail conductors identified by the radem survey.

Phase II

- Diamond drilling, if results from Phase I are sufficiently interesting.

Costs of Phase I are estimated as follows:

Reconnaissance Geochemistry estimated \$4.15/sample for gold, copper, lead and zinc for 100 samples	\$ 415.00
Geophysics Extensions Magnetometer Survey 3.98 miles @ \$100/mile	398.00
Radem Survey 3.98 miles @ \$100/mile	398.00
Detailed Geophysics Horizontal Loop Survey 3.31 miles @ \$150/mile	497.00

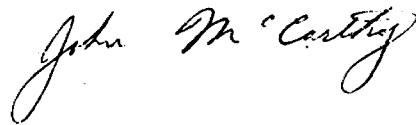
Vertical Loop Survey 3.31 miles @ \$150/mile	\$ 497.00
Rock Sampling & Geochemical Assaying (gold, copper, lead and zinc) estimated 30 samples @ \$19/sample	570.00
2 Geologists @ \$1,875/month for 1 month	3,750.00
1 Assistant @ \$70/day for 12 days	840.00
Board for 2 Geologists @ \$22/day for 30 days	1,320.00
Board for 1 Assistant @ \$22/day for 12 days	264.00
Stripping Bulldozer estimated 30 hours @ \$40/hour	<u>1,200.00</u>
	\$10,149.00
10% Contingencies	<u>1,014.90</u>
	<u>\$11,163.90</u>

Phase II

Should favourable drill targets be identified as a result of the above investigation, then a diamond drilling program would become feasible to determine the further merit of the claim group.

Respectfully submitted,

A. C. A. HOWE INTERNATIONAL LIMITED



J. McCarthy

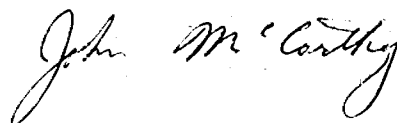
DATED AT TORONTO, ONTARIO THIS 13TH DAY OF MARCH, 1975.

C E R T I F I C A T E

I, John V. McCarthy of Nelson-Miramichi, Province of New Brunswick, hereby certify that:

1. I am a Geologist employed by A. C. A. Howe International Limited, Mining and Geological Consultants, with offices at Suite 826, 159 Bay Street, Toronto, Ontario.
2. I am a graduate of Saint Francis Xavier University, Antigonish, Nova Scotia, and hold a Bachelor of Science degree, major in Geology.
3. I am a member of the Prospectors and Developers Association.
4. I have no interest, direct or indirect, in either the property of securities of International Chemalloy Corp., nor do I expect to receive any such interest.
5. This report is based on knowledge of the property through personally conducting the magnetometer and radem surveys during the months of January and February 1975, and an examination of available reports and maps.

J. V. McCarthy



SHARPE VERTICAL INTENSITY FLUXGATE MAGNETOMETER MF-1

S P E C I F I C A T I O N S

MODEL MF-1 Standard surveying and prospecting magnetometer with self-levelling sensor.

Ranges: Plus or minus...

Sensitivity:

1,000 gammas f. sc.	20 gammas per div.
3,000 " "	50 " "
10,000 " "	200 " "
30,000 " "	500 " "
100,000 " "	2,000 " "

Meter: Taut-band suspension. 1,000 gamma scale: 1 7/8" long
- 50 div. 3,000 " " 1 11/16" long
- 60 div.

Accuracy: 1,000 to 10,000 gamma ranges + 0.5% of full scale
30,000 to 100,000 " " + 1% of full scale

Operating Temperature: - 40° C to 40° C
- 40° F to 100° F

Temperature Stability: Less than 2 gammas per °C (1 gamma/°F)

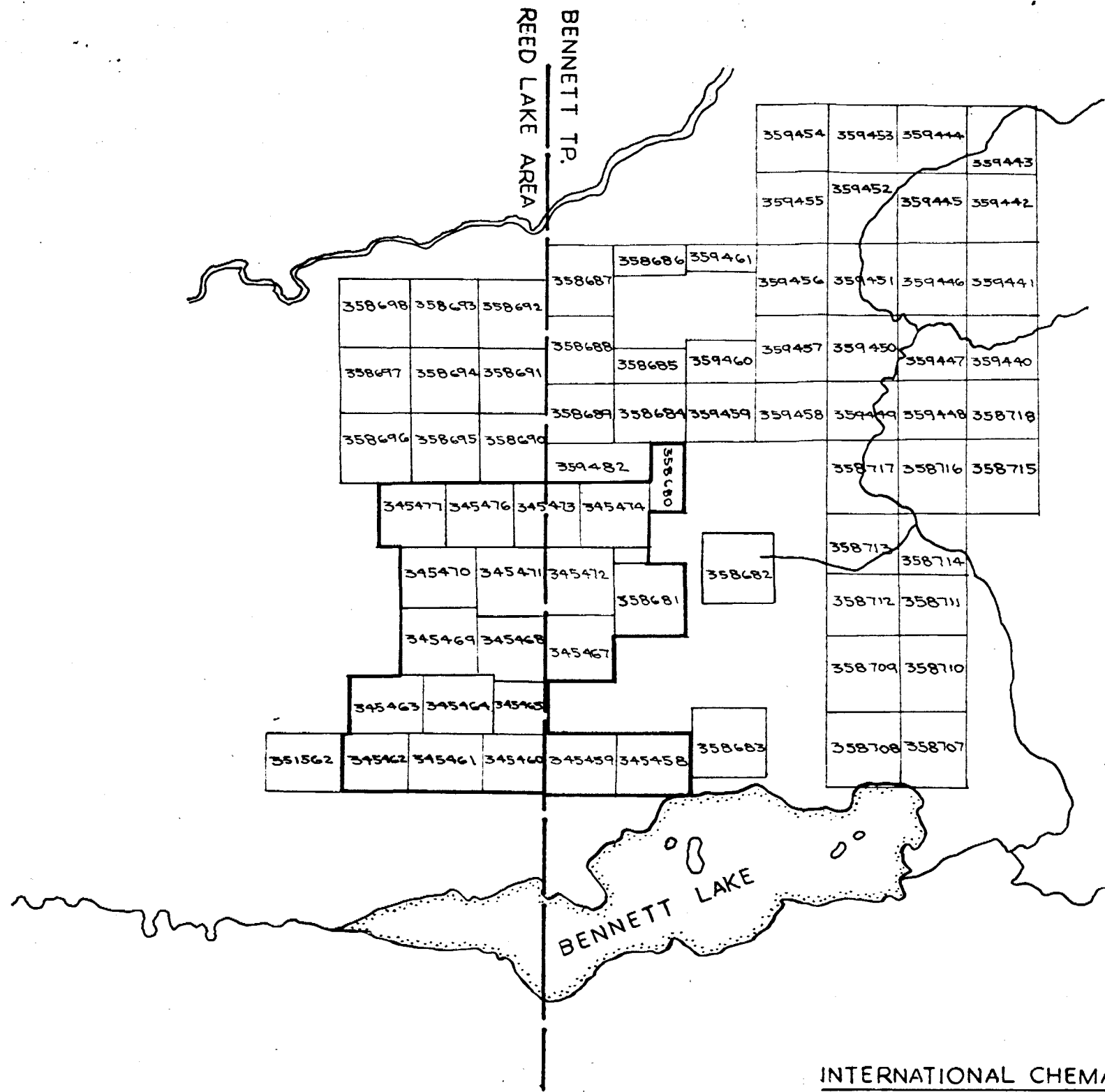
Bucking Adjustments: 10,000 to 75,000 gammas by 9 steps of
(Latitude) approximately 8,000 gammas and fine control by 10-turn potentiometer. Convertible for Southern hemisphere or + 30,000 gammas equatorial.

Batteries: 12 X 1.5 V-flashlight batteries ("C" cell type)
(AC Power supply available)

Consumption: 50 milliamperes

Dimensions: Instrument: 6 1/2" X 3 1/2" X 12 1/2" - 165 X 90 X 320 m.m.
Battery Pack: 4" X 2" X 7" - 100 X 50 X 180 m.m.
Shipping Container: 10"diam. X 16" - 255 mm. diam. X 410 m.m.

Weights: Instrument: 5 lbs. 12 oz. - 1.6 kg.
Battery Pack: 2 lbs. 4 oz. - 1 kg.
Shipping Container: 13 lbs.



INTERNATIONAL CHEMALLOY CORPORATION

BENNETT TP. PROJECT

PROPERTY LOCATION MAP

.25 0 .25 .5 .75

SCALE: 1 IN. = .25 MILES

JAN. 1975



52C16SE0006 63.3250 BENNETT

TO: International Chemalloy Corporation
FROM: A. C. A. Howe International Ltd.
RE: Chemalloy - Yeoman Mining - Bennett Tp. Property, Ontario
DATE: January 24, 1975

A-5

INTRODUCTION

During the period June 1-8, 1974, a preliminary examination of the Yeoman Mining Explorations Ltd. property was carried out. The objective of the examination was to locate and resample a series of north-south trending trenches situated in the western part of claim K345467 in order to confirm the 1973 assay results indicated by E. Rivers. These results returned an auriferous zone which averaged 0.06 oz/ton Au across 27 feet.

In addition the areas to the east and west of the trenches were reconnoitered in an attempt to trace the shear zones indicated in the trenches to these areas.

1.0 PROPERTY

The property consists of seventy-two contiguous unpatented mining claims situated in Bennett Township and extending into the unsurveyed area to the west.

The claims may be more fully described as follows:

- K345458-65)
- 345467-72) due July 17, 1974
- 345474-77)

- 358680-83) due July 31, 1974

- 358684-98)
- 358707-18) due August 20, 1974
- 359440-60)

2.0 PREVIOUS HISTORY

1. G. H. Miles (1936) describes the gold showing in part as follows:

"On claim F.F. 2486 is a large shearing in hornblende schist altered and sheared for a width of 1,000 feet. Through this shearing is considerable magnetic iron and hornblende, the magnetite has not been found in solid or concentrated form. Through this width of shearing are a great number of quartz veins and at places from six inches to twelve feet in width. The large quartz outcroppings form the contact between the greenstone schist and the magnetic hornblende schist."

Ten trenches blasted by Miles on behalf of Cedar Lake Gold Mines "along the shears zone for a distance of 1,546 feet" returned an eighty-five foot section averaging \$5.28 (@ \$35.00 gold which is equivalent to 0.15 oz/ton across eighty-five feet).

2. In 1973 chip samples collected by E. Rivers from the southern two-most trenches located in the western part of claim K345467 may be summarized as follows: (See Plan of Trenches, South Sheet, at rear)

	<u>Au oz/ton</u>	<u>Width</u>
Trench #1	0.01	10'
	0.02	20'
Trench #2	Tr.	50'
	.01	20'

<u>Au oz/ton</u>	<u>Width</u>	
Tr.	13'	
.10	5')	0.06 oz/ton Au
.05	12')	across 27 feet
.06	10')	
Tr.	10'	
.04	20'	
Tr.	20'	
.02	12'	
Tr.	18'	
Tr.	33'	

3. The gold showing is found on O.D.M. map P293 (1965) and map 2115 (1965).

3.0 GEOLOGY OF THE SHOWING

In the western part of claim K345467 a series of eight trenches is found cutting the strike of the schistosity of the country rock and having a combined length of about 1,000 feet. (See maps at rear.)

The country rock outcropping in the bottom of the trenches may be termed as banded siliceous-biotite schist. The rock consists of alternating bands of silica and biotite.

The siliceous bands range in width from about .01 inch to about 2-3 inches. The silica is a white-glassy looking variety and possesses an aplitic texture. Iron oxide and iron carbonate staining

is common along crystal planes in the wider bands.

The biotite bands range from about .01 inch to 1 inch in width or more.

The ratio of silica to biotite from place to place along the trenches is variable and ranges from about .1 biotite to .5 of silica.

The banded siliceous-biotite schists have been highly folded along an east-west axis. Schistosity strikes from 075° to about 095° and dips from $70-80^{\circ}$ to the south.

Locally, where the silica:biotite ratio is low, the rock is highly crenulated and drag folding is pronounced. In these areas where the folds are tight and isoclinal there is a definite flowage of silica to the crests of the folds creating a thickening of the siliceous bands and a narrowing or pinching of the bands down the limbs of the folds. The silica at the crests is generally vuggy and in some cases pyrite infillings as "nests" are present. These folds range from 1-4 inches wide and possess amplitudes ranging from 1-5 inches. In some areas where the silica:biotite ratio is low, small shear zones have developed. Seven shears were noted in the trenches examined. These shears are generally narrow and range from 1 inch to 4 feet wide. Some of the shears contain quartz veins. The vein material is commonly a white bull quartz, vuggy in places and generally devoid of accessory mineralization.

In an area located approximately 1,300 feet to the east of these trenches a dacite/banded siliceous-biotite schist contact

was found. The dacite occurs as a band approximately 70-100 feet wide, bounded on the south by banded siliceous-biotite schist and in the north (contact not seen) by a biotite-rich andesite. Pods, lenses and bands of a quartz - feldspar porphyry intrude the dacite.

The porphyry consists of quartz megacrysts (.1 inch to 2 inches in diameter) in a light brown-grey matrix. Pyrite disseminations (up to about .5%) are common accessories.

Locally, three sets of fracturing cut all of the rock types (150° , $050^\circ - 090^\circ$, and $000^\circ - 010^\circ$). Quartz veins and lenticular lenses are commonly found along these fractures.

The dacite/porphyry band is located in a low lying area (drained beaver bond) which may be traced westward to the area where the main trenches are located. It is possible that this band may extend westward and be located in the intervening area bounded by Trench #3 and 4.

4.0 SAMPLING RESULTS

Twenty-seven chip samples were collected by the writer from six of the trenches located in the western part of claim K345467. The results are shown on the sampling reports (attached).

All samples with the exception of a 30 foot section in Trench No. 2 contained low on trace values. The highest assay here was 0.04 oz/ton Au across 10 feet. This section may be related to the 5 foot section sampled by E. Rivers (1973) which assayed 0.10 oz/ton Au. It is suggested that these values may be attributed to the two 3 inch quartz veins found here in a 4 foot wide shear zone.

5.0 CONCLUSIONS AND RECOMMENDATIONS

It is concluded that:

1. The 1,000 foot wide shear zone of Miles (1935) is in fact a zone of highly crenulated banded siliceous-biotite schist. Shearing, where present, appears to be confined to narrow zones (1 inch to 4 feet) where the silica:biotite ratio of the schists is low.
2. The banded siliceous-biotite schist in the area sampled is generally mineralized with trace (less than 0.01 oz/ton) amounts of gold. Shear zones appear to be generally mineralized with higher amounts of gold (.02 to .04 oz/ton).
3. The area sampled represents the main workings of the Cedar Lake Gold Mines property of the 1930's (Miles, 1936). The gold showing located on O.D.M. maps P293 (1965) and 2115 (1965), is the area sampled by E. Rivers (1973) and therefore represents the best showing found on the property to date.
4. The presence of quartz-feldspar porphyry similar to the porphyry found near the Golden Star vein (approx. 15 miles to the west) which is reported to have produced gold valued at \$166,000.00 (@ \$20.00 gold) at the turn of the century suggests that similar veins may exist in the general area. (The Golden Star vein appears to be genetically related to the porphyry.)

In view of the above, it is recommended that the property

be more fully examined. A tentative exploration program may be summarized as follows:

Phase I

Line cutting - 20 line miles @ \$120.00/ line mile	\$2,400.00
Magnetometer survey - 20 miles @ \$100.00/ mile	2,000.00
Electromagnetometer survey - 20 miles @ \$100.00/mile	2,000.00
Vehicle rental and mileage	<u>600.00</u>
	<u>\$7,000.00</u>

Phase II

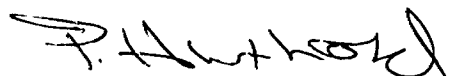
Reconnaissance geological mapping one geologist & one assistant for 6 weeks	\$5,035.00
Room & board for 2 men for 6 weeks	1,848.00
Assaying costs - allow \$800.00	800.00
Vehicle rental and mileage	<u>740.00</u>
	<u>\$8,423.00</u>

The overall costs of Phase I and Phase II of the exploration program is estimated to be \$15,423.00.

Should favourable drill targets be identified as a result of the above two phase investigation of the property, then a diamond drilling program would become feasible to determine the further merit of the claim group.

Respectfully submitted,

A. C. A. HOWE INTERNATIONAL LIMITED



P. Huxhold, B.Sc., Geologist

A. C. A. HOWE INTERNATIONAL LIMITED

MINING & GEOLOGICAL CONSULTANTS

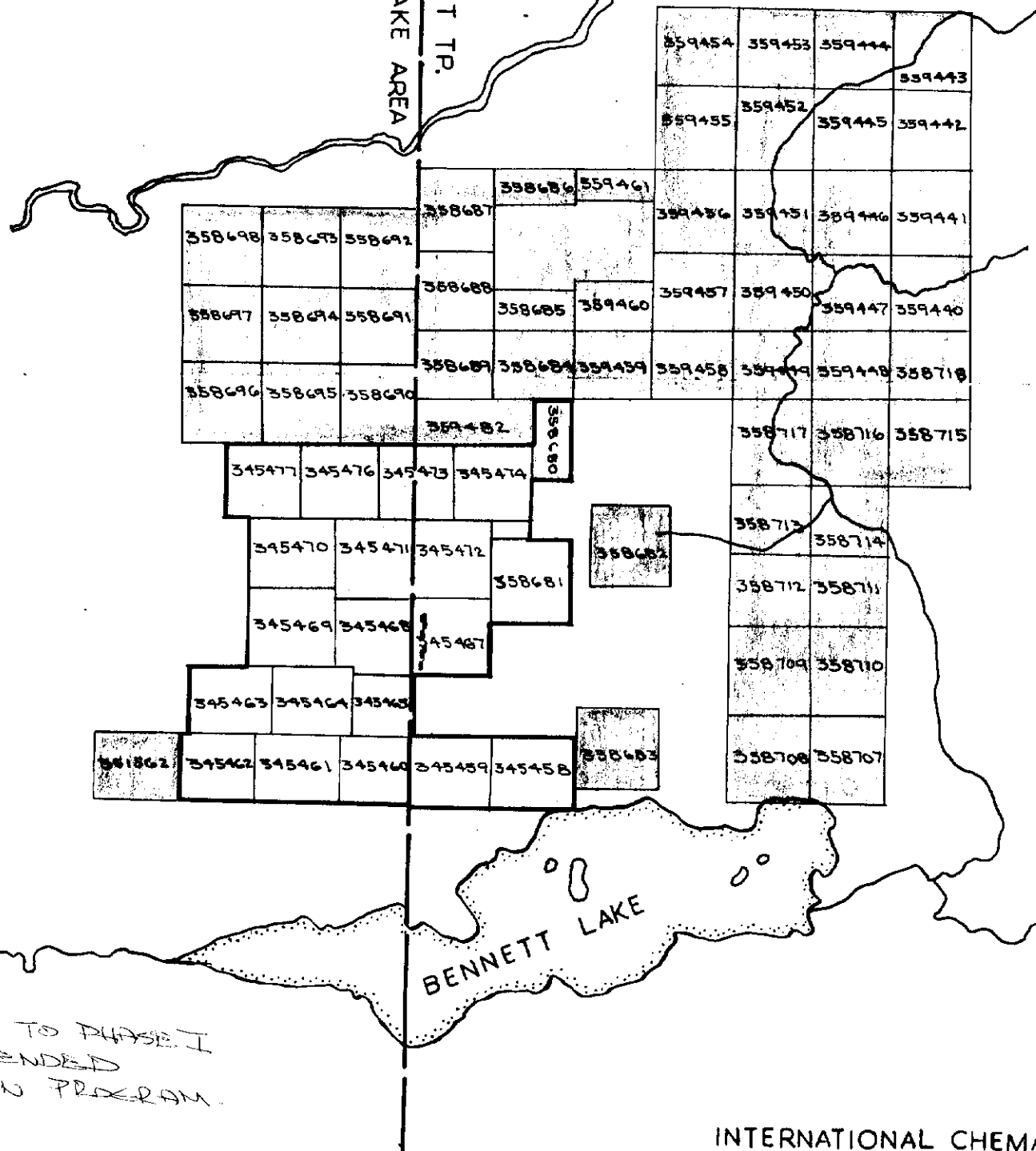
S A M P L I N G R E P O R T

PROJECT CHEMALLOY - RIVERS CLAIMS - BENNETT TP., ONTARIO

Samples sent to: X-RAY Via: _____ Date _____

SAMPLE NO.	LOCATION	TYPE	LENGTH	Au ASSAY oz/ton		REMARKS
51E	Trench #1	Chip	0-10'	.03		
52E	"	"	10-20'	.02		incl. two 1 inch shear zones
53E	"	"	20-30'	Tr.		
54E	"	"	30-38'	Tr.		
55E	Trench #2	Chip	0-10'	.01		
56E	"	"	10-20'	Tr.		
57E	"	"	20-26'	Tr.		
58E	"	"	30-40'	Tr.		
59E	"	"	40-50'	Tr.		
60E	"	"	54-60'	Tr.		
61E	"	"	60-70'	Tr.		
62E	"	"	70-80'	Tr.		
63E	"	"	80-90'	Tr.		
64E	"	"	90-100'	.04		incl. 2,3" qtz veins in 4'shear zone
65E	"	"	100-110'	.02		incl. 2" qtz vein & 2' shear zone
66E	"	"	110-120'	.02		incl. 1'shear zone
67E	"	"	120-130'	Tr.		
68E	"	"	130-134'	Tr.		
69E	"	"	134-136'	.01		quartz vein
70E	"	"	136-144'	Tr.		137'144' = qtz vein
71E	"	"	144-152'	Tr.		

BENNETT TP.
REED LAKE AREA



PERTAINING TO PHASE I
OF RECOMMENDED
EXPLORATION PROGRAM.

PERTAINING TO PHASE II
OF RECOMMENDED
EXPLORATION PROGRAM.

INTERNATIONAL CHEMALLOY CORPORATION
BENNETT TP. PROJECT
PROPERTY LOCATION MAP

.25 0 .25 .5 .75

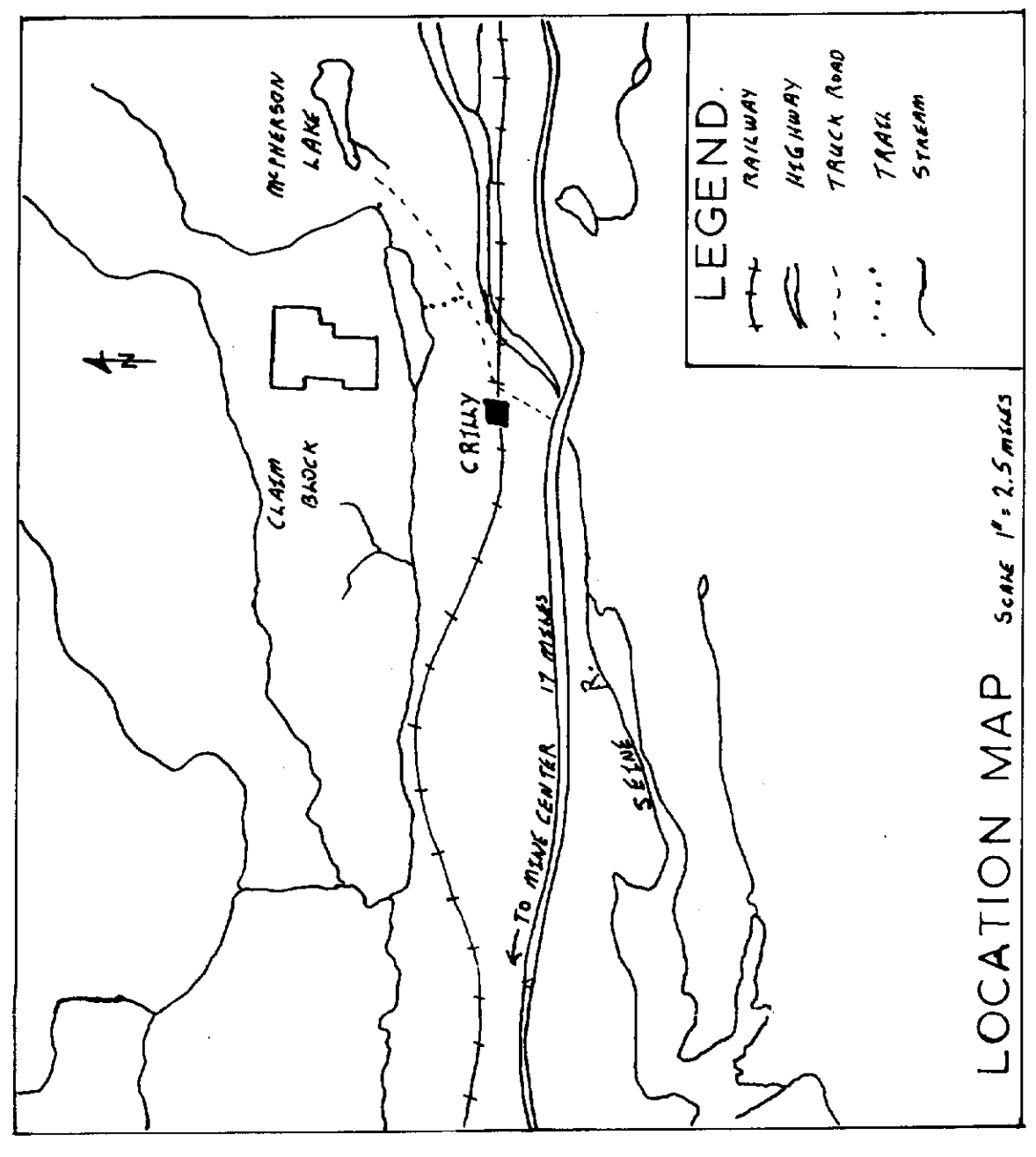
SCALE: 1 IN. = .25 MILES



52C16SE0006 63.3250 BENNETT

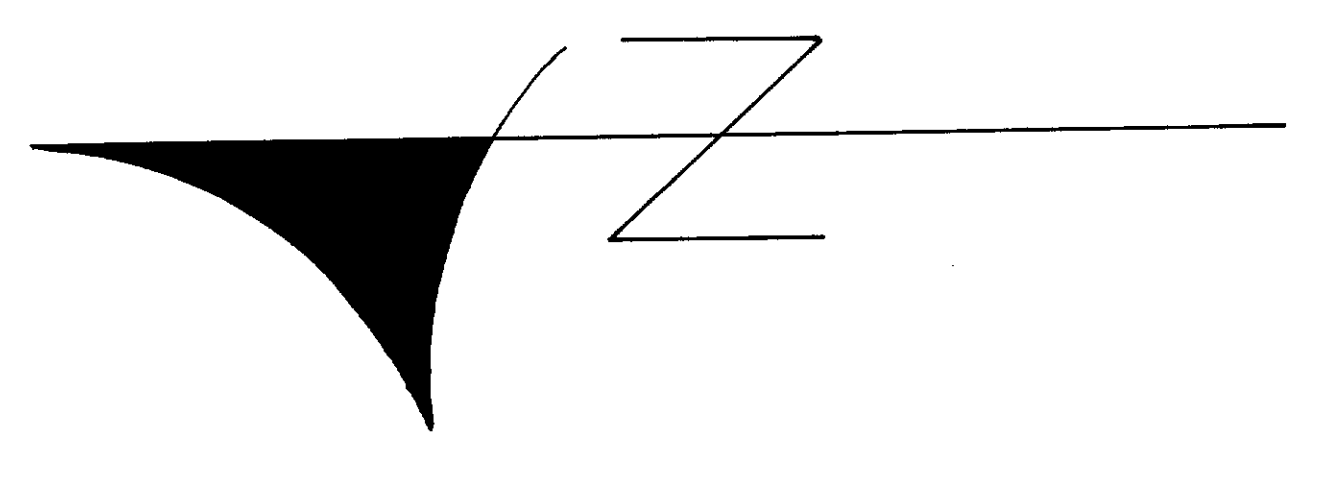
200

JAN. 1975

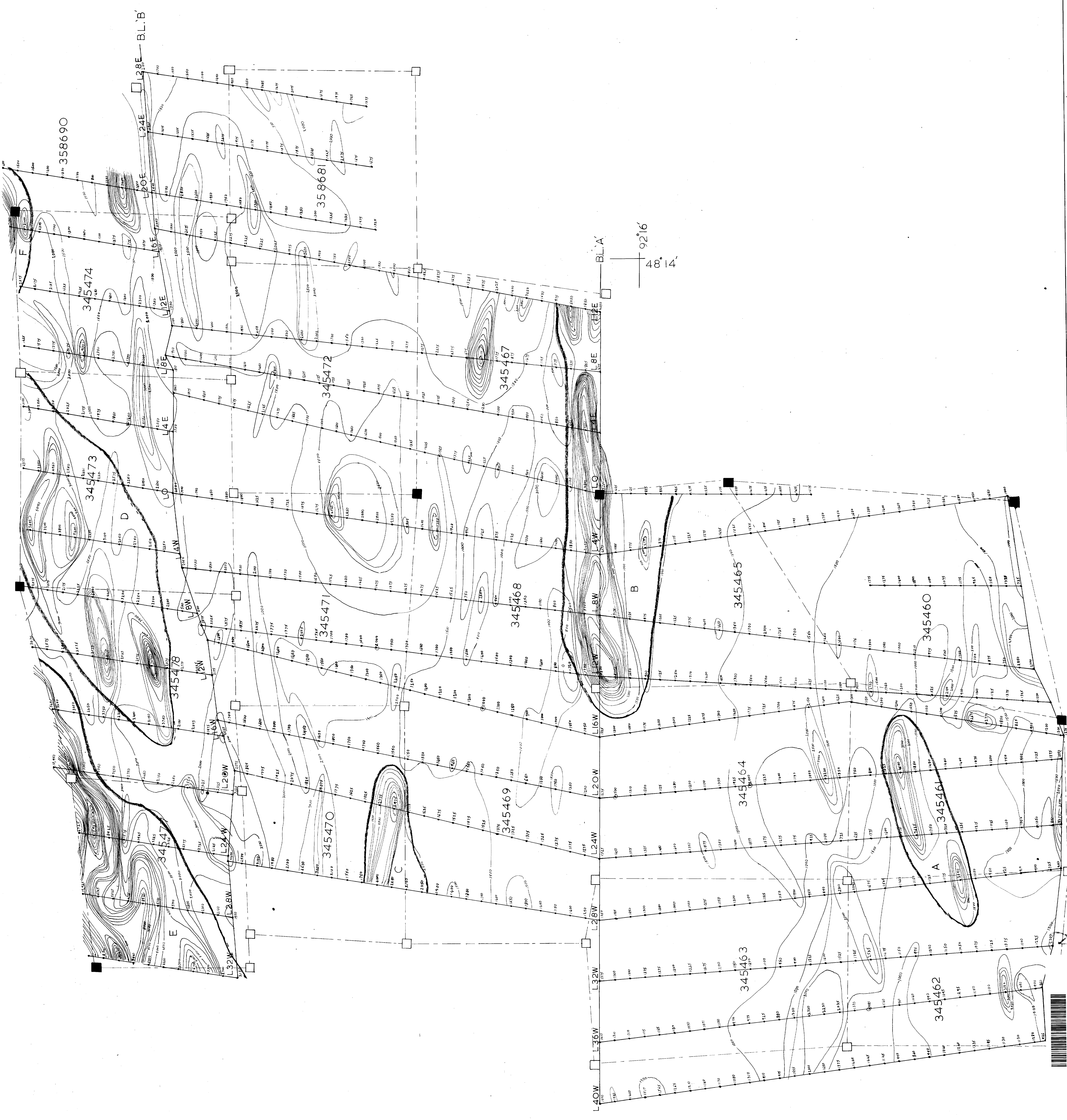
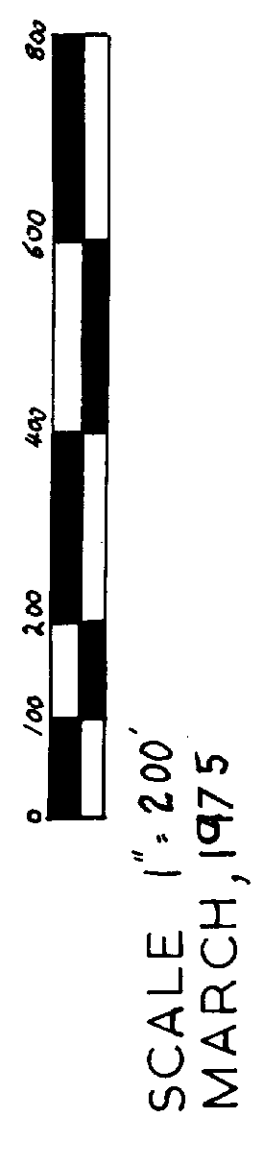


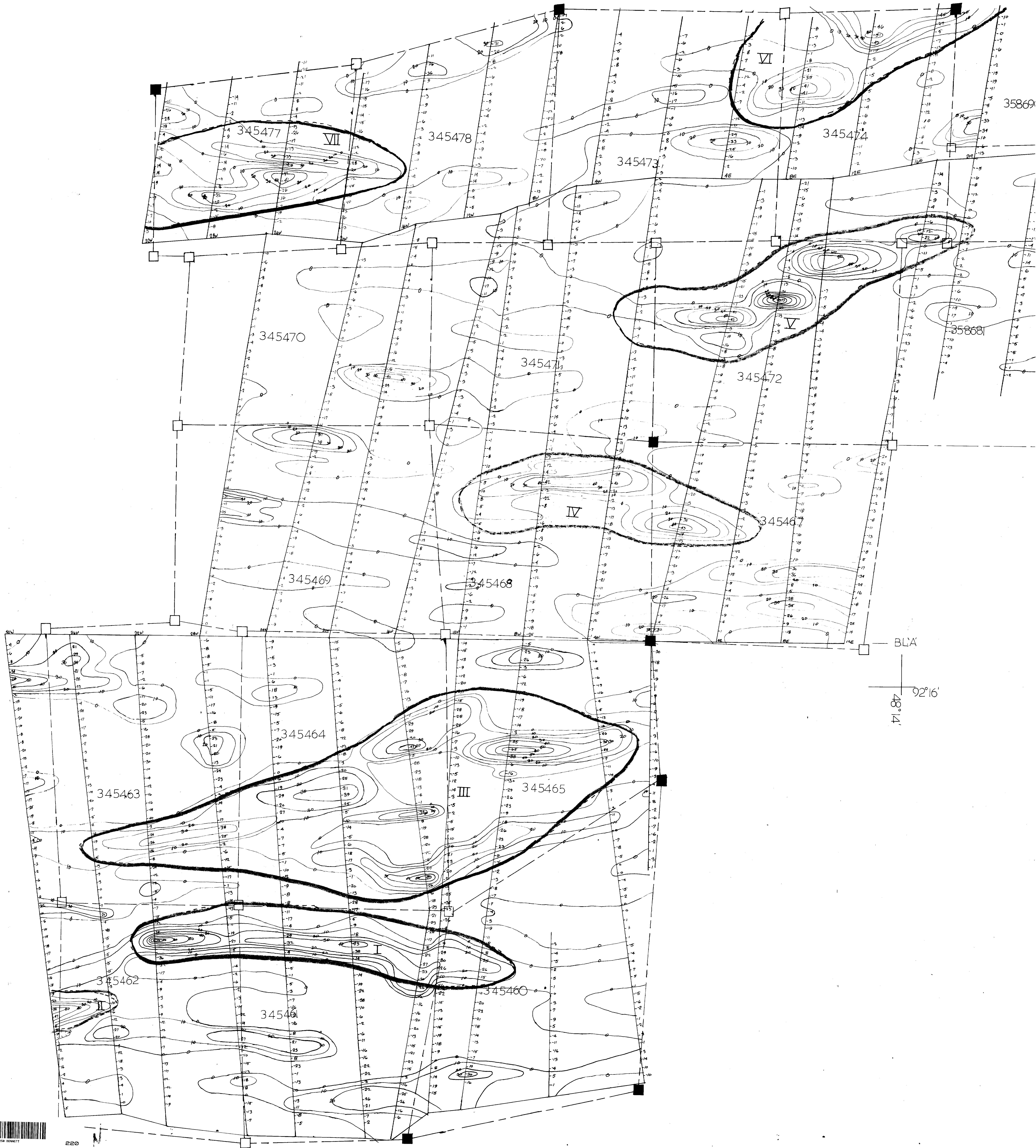
LEGEND

- GRID LINES
- CLAIM LINES
- CLAIM POSTS (OBS)
- CLAIM POSTS (ASS)
- CONTOUR INTERVAL = 500 GAMMAS
- DEPRESSION
- ANOMALY LOCATION
- CLAIM NUMBERS



FLUXGATE MAGNETOMETER SURVEY
 OF
 BENNETT LAKE CLAIMS
 FOR
 INTERNATIONAL CHEMALLOY INC
 BY
 A C A HOWE INTERNATIONAL





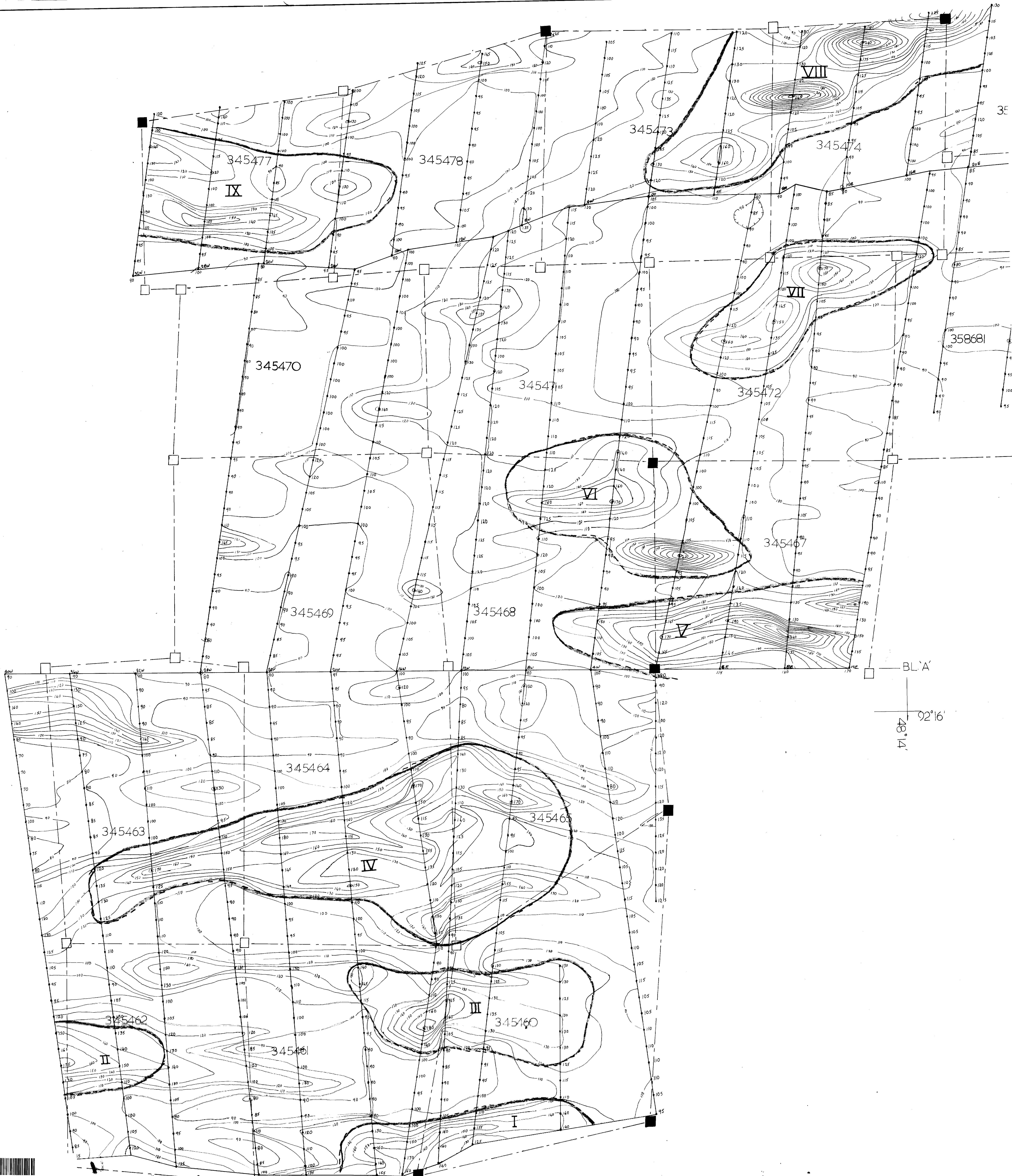
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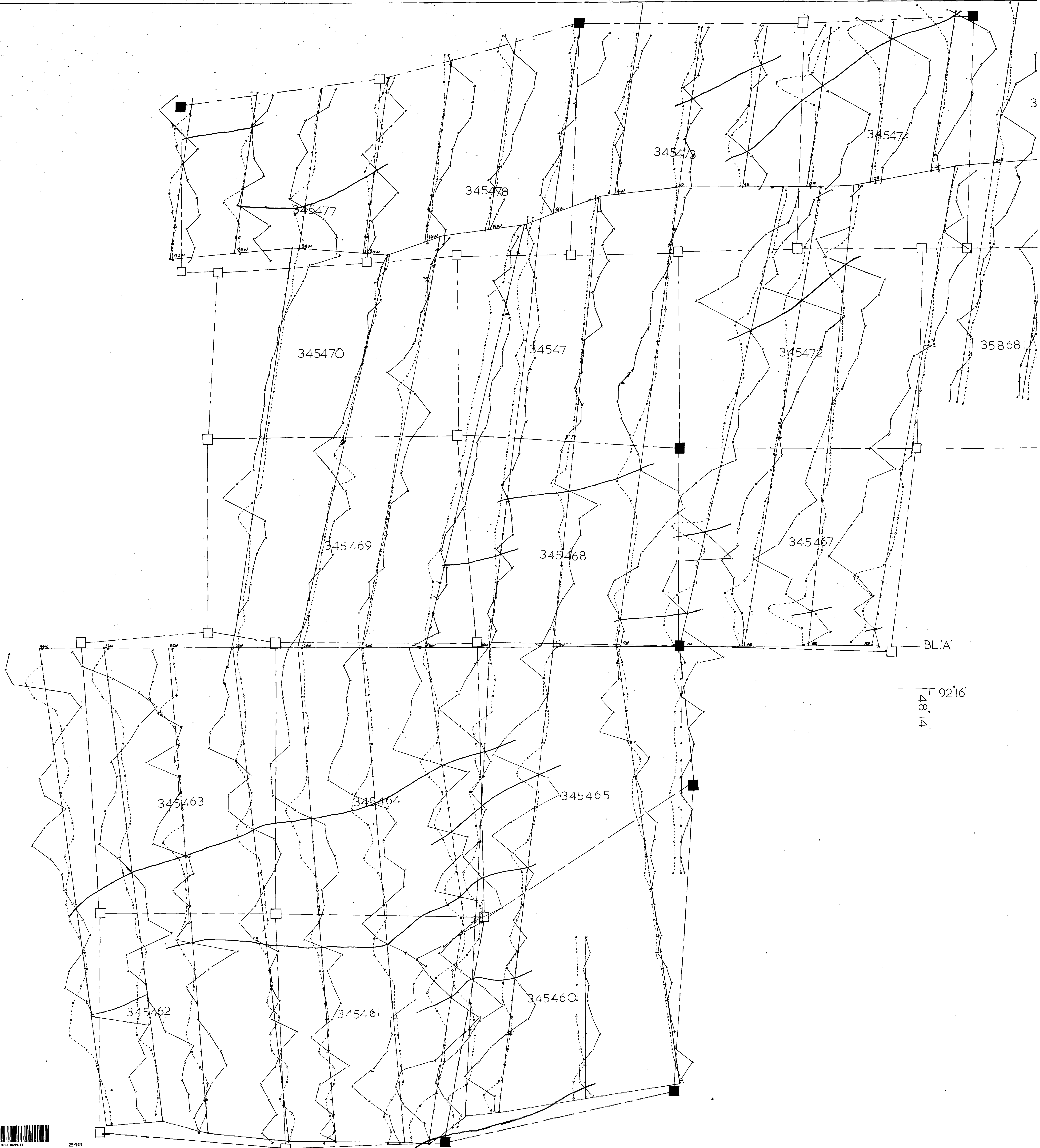
35868

BLA

92°16'
48'14"









345468 345467

TO ACCOMPANY REPORT BY *John McCull*

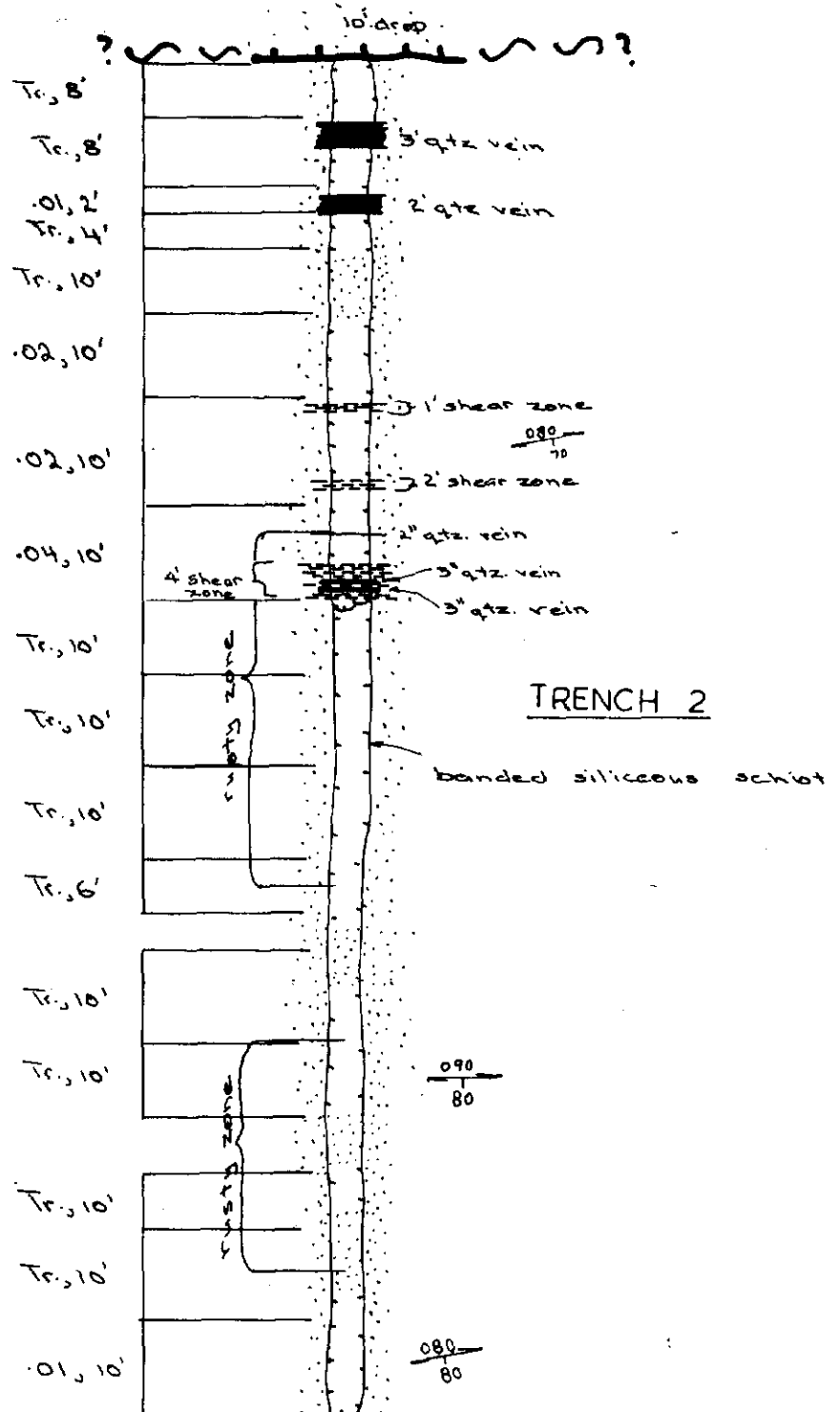
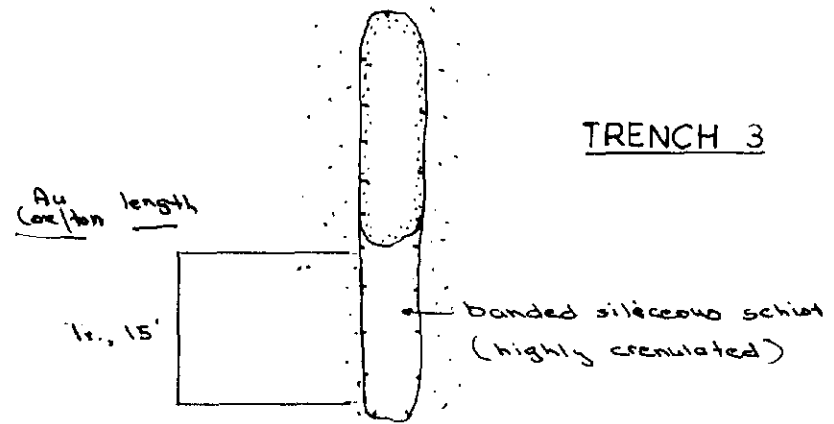
DATED March 13, 1975

South Sheet

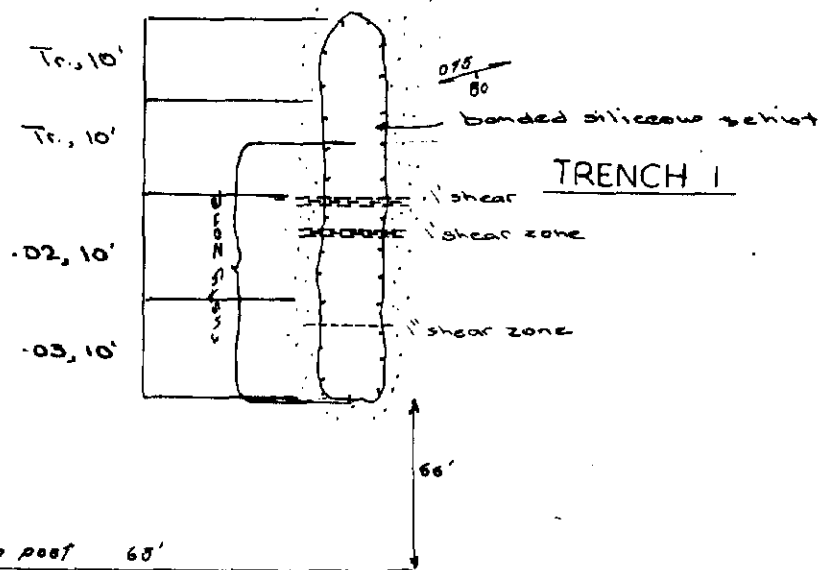
CHEMALLOY MINERALS LTD.
BENNETT TP. PROJECT
PLAN OF TRENCHES

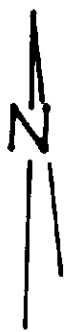
A.C.A. HOWE INTERNATIONAL LIMITED
SCALE 1"=20'

P. HUXHOLD



PIT





345468 345467

TO ACCOMPANY REPORT BY *J. M. Bennett*

DATED *March 13, 1975*

J. M. H.

North Sheet

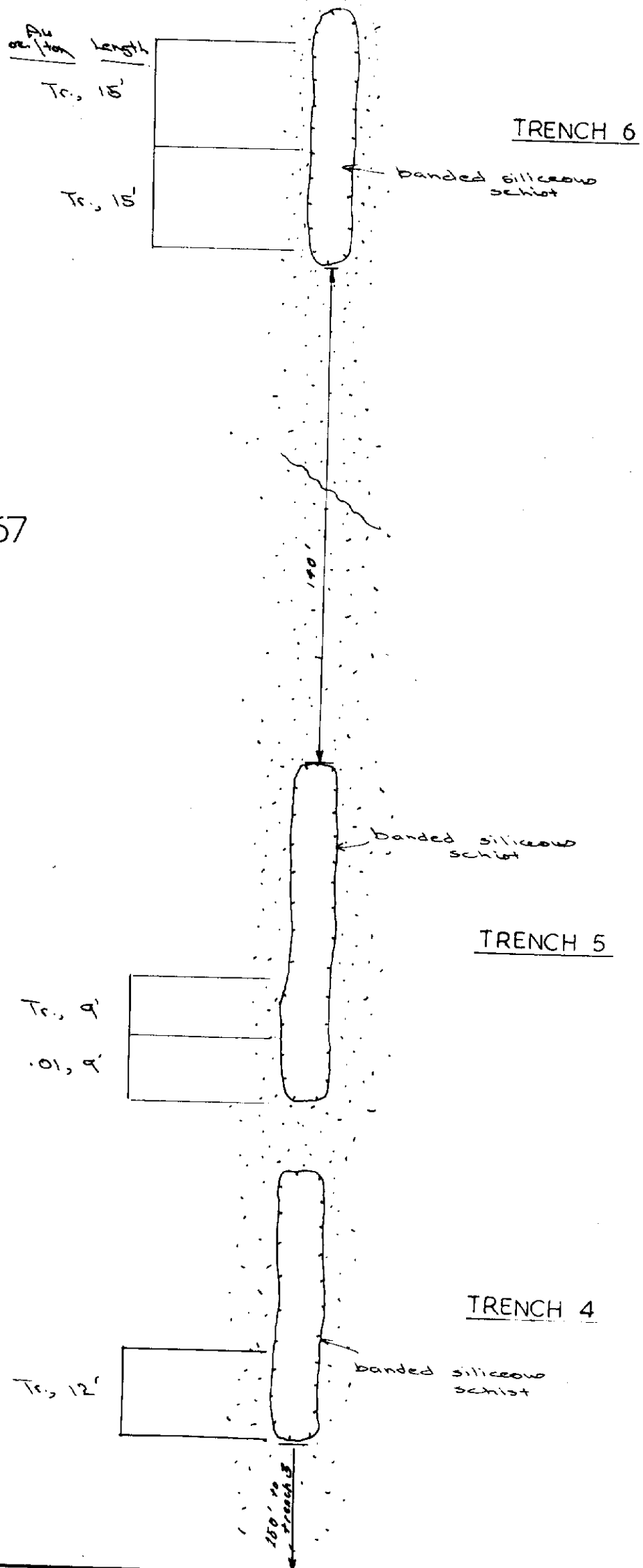
CHEMALLOY MINERALS LTD

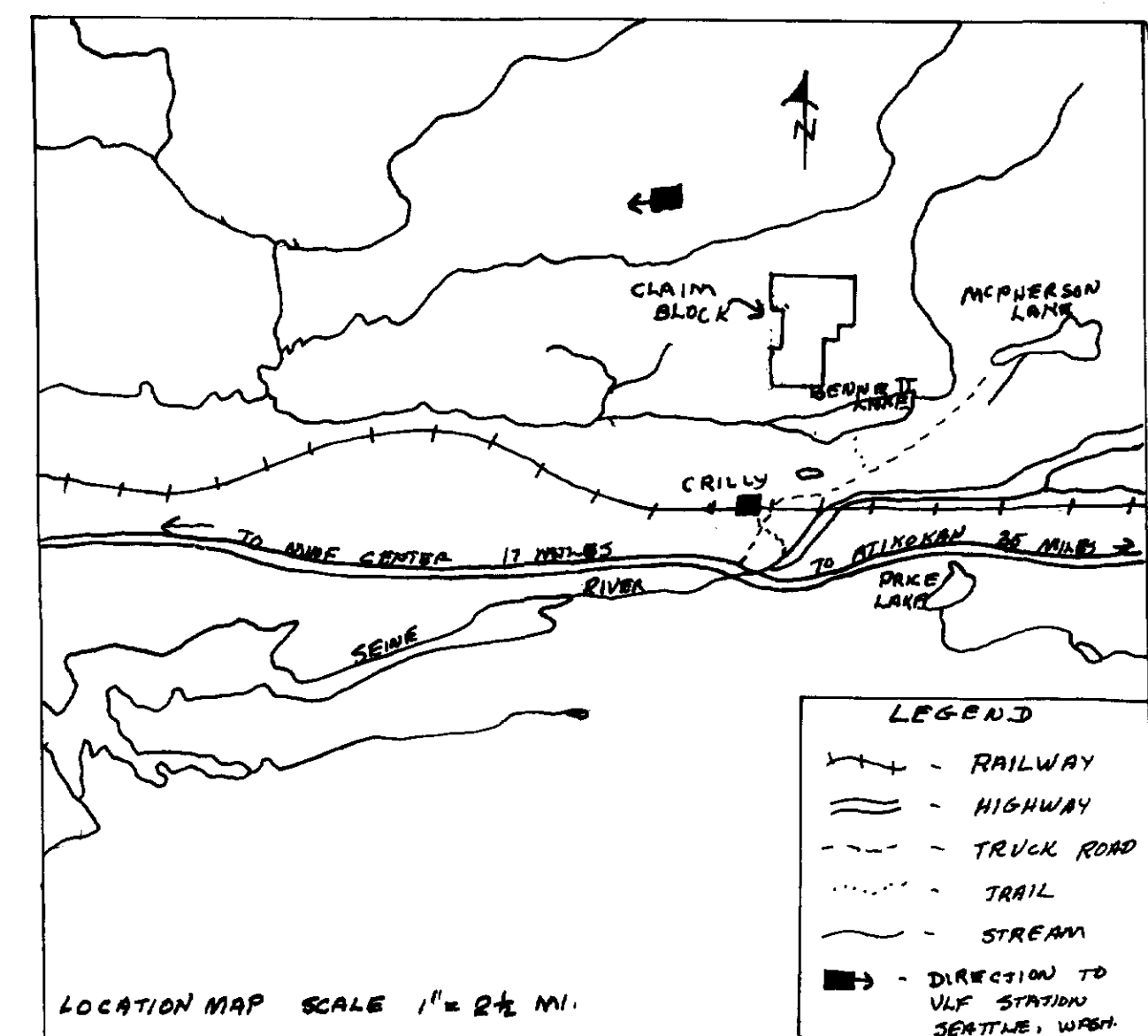
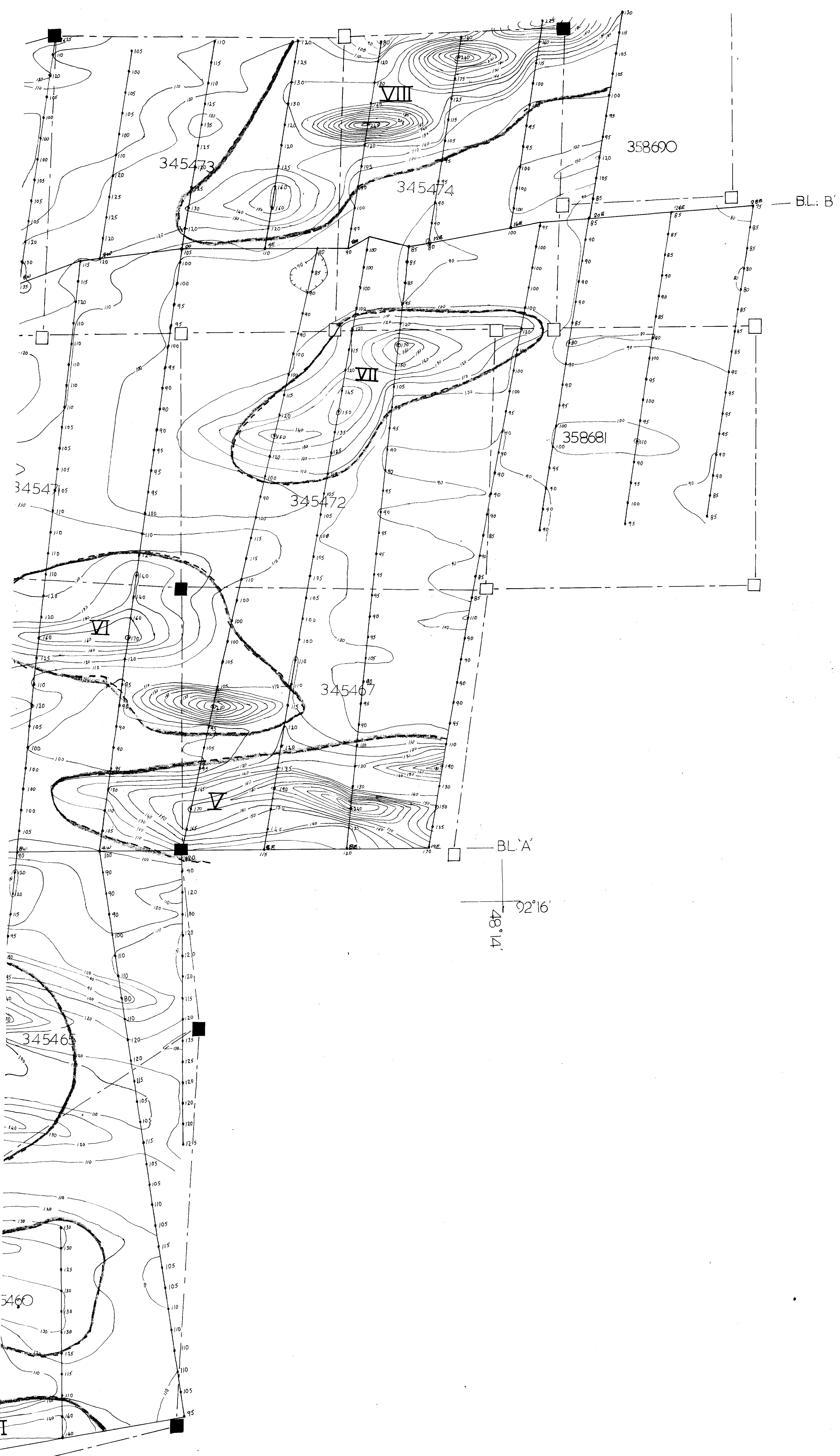
BENNETT TR. PROJECT

PLAN OF TRENCHES

A.C.A. HOWE INTERNATIONAL LIMITED
SCALE 1"=20'

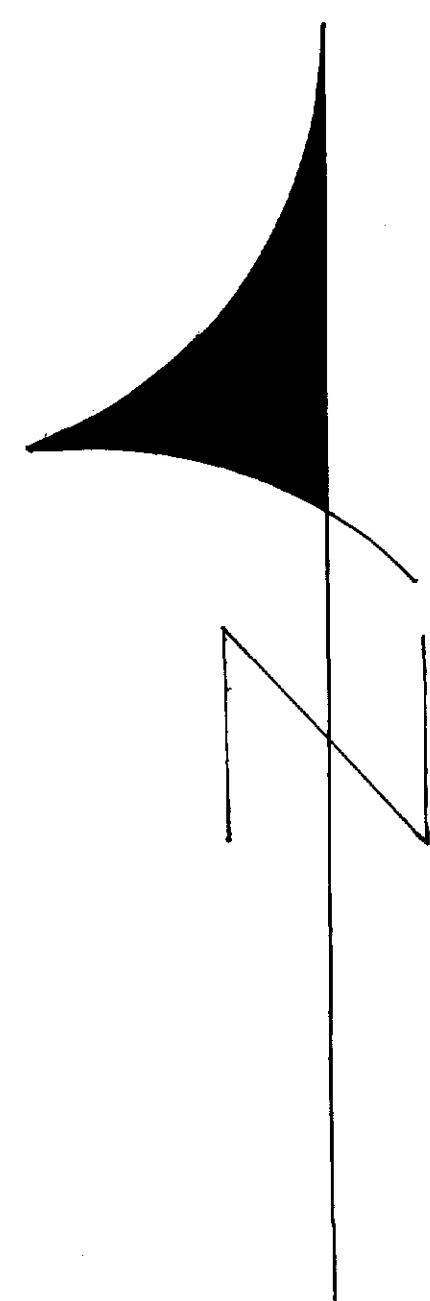
P. HUXHOLD





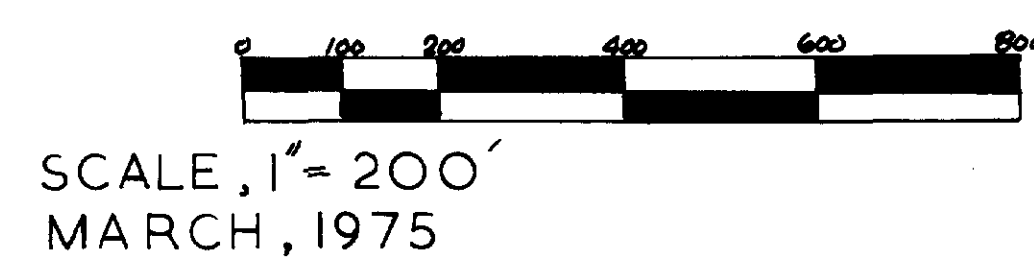
LEGEND

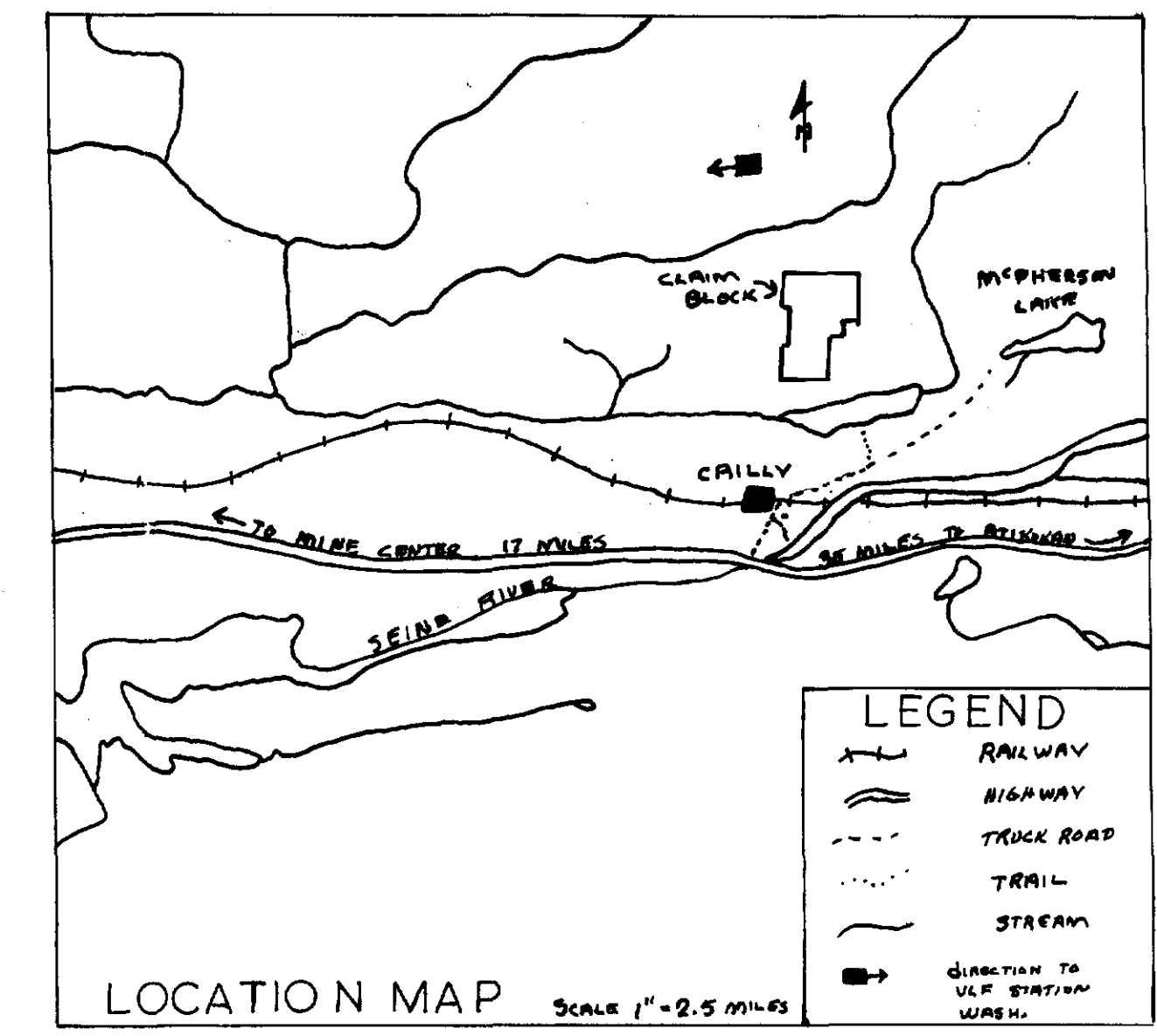
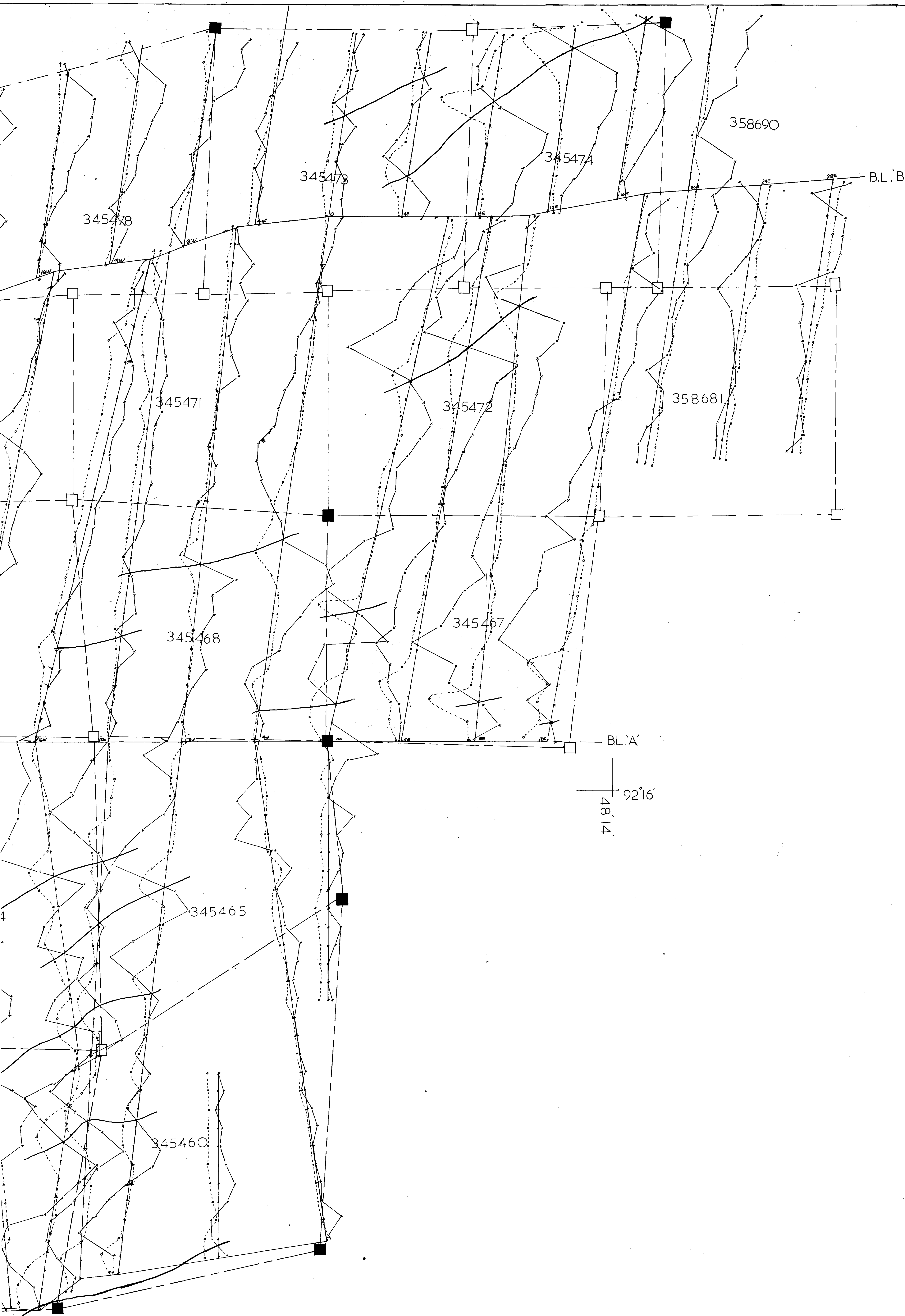
- GRID LINES - ———
- CLAIM LINES - - - - -
- CLAIM POSTS (BS) - ■
- CLAIM POSTS (AS) - □
- CONTOUR INTERVAL - 10%
- DEPRESSION - (Symbol)
- ANOMALY LOCATION - (Symbol)
- CLAIM NUMBERS - 345467



RADEM SURVEY
 FIELD STRENGTH CONTOUR
 of
 BENNETT LAKE CLAIMS
 for
 INTERNATIONAL CHEMALLOY INC

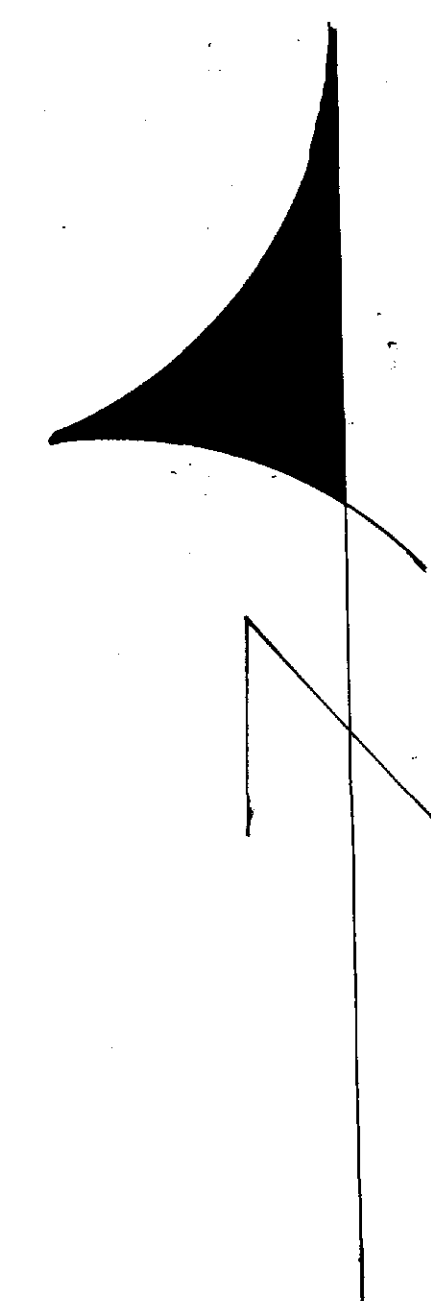
ACA. HOWE INTERNATIONAL





LEGEND

- GRID LINES
 - CLAIM LINES
 - CLAIM POSTS (OBS)
 - CLAIM POSTS (ASS)
- PROFILES
- FIELD STRENGTH
 - DIP ANGLE
 - CONDUCTOR
 - CLAIM NUMBERS 345467



RADEM SURVEY
 DIP ANGLE & FIELD STRENGTH
 PROFILES
 of
 BENNETT LAKE CLAIMS
 for
 INTERNATIONAL CHEMALLOW INC
 by
 A.C.A. HOWE INTERNATIONAL



SCALE 1" = 200'
 MARCH 1975