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PROJECTS
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52G14SE0068 52G14SE0067 VALORA LAKE

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NEW CALUMET MINES LIMITED
ZENMAC METAL MINES LIMITED

Valora Property, Sturgeon Lake Area, Ontario

Geophysical Surveys and Diamond Drilling,

October, 1970 to January, 1971

by

PIONEER CONSULTANTS LIMITED

Halleybury, Ontario.

April 16, 1971.





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Drill Logs and Sections, Holes 1 to 5 incl.

Assessment Work Details - Surveys.

In Map Pocket:

Electromagnetic Survey - Profiles.

Scale: 1" = 200'

Magnetometer Survey - Contours.

Scale: 1" = 200'

S U M M A R Y

Electromagnetic and magnetometer ground surveys were performed on part of the 94 claim property held by New Calumet Mines Limited in the Valora area, southwest of Sturgeon Lake, during the period October 13th to November 14th, 1970. This work was undertaken on a joint venture basis by New Calumet Mines Limited and Zenmac Metal Mines Limited. The ground surveys were limited to coverage of a one-mile length of a series of parallel airborne EM conductors striking easterly across the southern section of the property, which coincide roughly with two known sedimentary horizons, mapped as garnet biotite schist. Sulphide mineralization in the form of disseminated to massive pyrrhotite, with associated pyrite, and minor chalcopyrite, is associated with both schist zones, over widths of up to 25 feet.

The purpose of the surveys was to trace the location of the sulphide zones along selected sections of the schist horizons in areas where apparent northwest striking faults caused displacements or distortions. Following the surveys, drill targets were established in each conductor and five holes were completed by mid January, 1971, which established zones of sulphides in an intermediate to acid volcanic environment, associated with the schist horizons.

Further ground geophysical surveys are recommended to cover an additional 115 claims of the property by the same methods, at an estimated cost of \$40,000.00.

I. INTRODUCTION

Following the discovery of a base metal deposit by Mattagami Lake Mines in the northern part of Block 7, south of Sturgeon Lake, Ontario, New Calumet Mines Limited and Zenmac Metal Mines Limited jointly acquired 100% interest in a block of 70 claims in the Clarkdon area, about 12 miles southwest of the Mattagami discovery. The claims, recorded in November, 1969, are located near the southern margin of an extensive belt of basic to intermediate metavolcanics which extend through Sioux Lookout to the west, and include Sturgeon Lake and the Mattagami discovery to the northeast. The New Calumet-Zenmac group is immediately north of a regional mass of granite and granite gneisses and one mile east of an intrusive plug of metagabbro. Two parallel zones of altered sediments and garnet biotite schist are known to cross the property parallel to the granite contact, and have been displaced by at least one northwest striking fault. Sulphide mineralization, mainly pyrrhotite and pyrite is associated with the sedimentary bands, and exploration efforts have been concentrated in areas of faulting along the schist horizons.

An airborne Input EM and Magnetometer survey in February, 1970, indicated a series of parallel conductors, some of which coincide with the sedimentary bands. An additional 24 claims were purchased on the south boundary, and an 81-claim block to the east was optioned to cover extensions of the anomalies. Ground geophysical surveys in October and November, 1970, established two strongly conductive zones over a mile in length, with varying coincident magnetic anomalies. Prospecting revealed the presence of heavily disseminated sulphides in a strong silicified shear zone associated with biotite schist on one of the conductors.

Five drill holes were completed on both conductors in January, 1971, and encountered widths of 15 to 30 feet of disseminated to massive pyrrhotite and pyrite in an intermediate volcanic horizon adjacent to the schist bands. Minor amounts of copper are present with the sulphides. A northwest-striking fault zone was indicated, which displaces one of the conductors about 100 feet.

This report describes the procedures and results of the ground geophysical surveys, and includes results of the drilling completed to date.

II. LOCATION OF PROPERTY, ACCESS AND DESCRIPTION

The claim group is located approximately 30 miles north of the town of Ignace, Ontario, and is readily accessible by a paved highway, number 599, which extends from highway 17 at Ignace, north to Savant Lake. The eastern end of the 81-claim Block "B" straddles highway 599. A branch line of the C.N. Railway cuts diagonally northwest through the centre of Block "A", the western group of 94 claims. On a gravel road branching from number 599, and traversing part of the southern part of the property, is situated the Railway centre of Valora, composed of a station and about

six houses occupied by Railway employees. Accommodation in Valora was obtained for the survey crew in one of these houses, owned by Martin Kostjuk.

The property occupies an area of fairly low relief, with ridges of gravel and occasional outcrops rising perhaps 75 feet above numerous swampy areas. A few streams and beaver ponds provide adequate sources of water for summer drilling, but water for winter drilling is scarce in some areas. Timber is plentiful, and varies from scrubby second growth to limited amounts of merchantable spruce and pine.

Of the original 94 claims in Block "A", owned outright by New Calumet-Zenmac, 80 claims have been retained after allowing 14 claims along the south boundary to lapse. These claims are numbered as follows:

K.246781 to K.246800 incl., K.247368 to K.247400 incl.,
K.248401, K.248438 to K.248453 incl., K.241980,
K.246812, K.246851, K.257429, K.257430, K.257656,
K.257664, K.257665, K.257670, K.257671.

Block "B", held under option by New Calumet-Zenmac, contains 81 claims as follows:

K.203298 to K.203318 incl., K.203483 to K.203502 incl.,
K.203751 to K.203770 incl., and K.250130 to K.250149 incl.

III. GENERAL GEOLOGY

The New Calumet-Zenmac property is located near the southern margin of an extensive belt of Archaean basic to acid metavolcanics with minor interflow metasediments intruded by metagabbro, metadiorite, granite and granodiorite gneiss. The rocks have been tilted and folded isoclinally, about east-west to northeast axes, and have been metamorphosed to upper greenschist to lower almandine amphibolite facies. Shearing and metamorphism have destroyed most of the primary structures in the metavolcanics, and complicate interpretations of folding.

The original base-metal discovery by Mattagami Lake Mines, located in Block 7 south of Sturgeon Lake, occurs as disseminated chalcopyrite and sphalerite in a rhyolite fragmental, overlying rhyolites, welded tuffs, dacites, and basic volcanics, all dipping steeply north. Although the east and west extensions of this apparent contact between acid and basic volcanics has received the most intense exploration attention, it has become more apparent that intermediate to felsic interflows occur in other sections of the main basic volcanic unit, and provide attractive areas for exploration if they can be accurately delineated.

The area covered by the New Calumet-Zenmac property, in the region east and west of Clarkdon along the general trend of the granite contact exhibits strong schistosity parallel to the contact. More pronounced

foliation is developed along two known bands of metasediments, mapped as garnet-biotite schist which cross the railway near Clarkdon, and are known to extend for at least two miles to the east. These zones are accompanied by strong shearing, in intermediate metavolcanics, with associated sulphides, mainly pyrrhotite and pyrite, particularly along the south side of the sedimentary bands. An assumed fault striking N30°W, apparently displaces at least one of the biotite-schist bands approximately 1,000 feet, east side north. The fault is assumed to be 2 miles east of Clarkdon, passing through the northeastern corner of Block "A". Additional faulting with a displacement of 100 feet was established by drilling 3/4 mile east of Clarkdon.

The granite contact between Clarkdon and Valora is not clearly established, due to local folding, and phases of the granitic complex including migmatite, granite gneiss, and granodiorite gneiss which occur as injections, and surround inclusions of metavolcanics in the contact zone.

A small stock of metagabbro is located 1 1/2 miles northeast of Valora, within the granite, and its age relationship with the granite is not clearly established. A larger body of metagabbro lies 3 miles west of Clarkdon, intruding metavolcanics. Both of these intrusives are well indicated by aeromagnetic data.

IV. GEOPHYSICAL SURVEYS

An airborne Input EM and Magnetometer survey performed on the original 70 claims of Block "A", in February 1970, indicated a series of parallel conductors in the southern part of the property, striking slightly north of east, and roughly coincident with the known sedimentary schist zones. Due to magnetic variation and changes in strike and conductivity on some sections of the long conductors, further ground work was recommended. Several isolated conductors south of the main zones were also selected for further investigation.

Preliminary ground EM and Magnetometer traverses were run in April, 1970, which confirmed the airborne conductors and traced the Questor anomalies "C" and "D" for a length of 1,200 feet, each. A Ronka VLF EM 16 unit showed a strong response over these conductors, and this was supported by check traverses with a Ronka horizontal loop unit.

Sections of the airborne conductors in the eastern half of Block "A" were selected for more detailed surveys, due to more attractive magnetic correlation, and a suggestion of fault displacement of the conductors. The two most prominent conductors were designated "C" and "D", corresponding to the Questor designation. Two picket line grids were cut to cover a length of 6,000 feet of these conductors, also including a weaker trend north of Conductor "D" and several isolated anomalies south of Conductor "C".

EM and Magnetometer readings were taken at 100-foot intervals on 21 miles of picket lines spaced at 300 feet on these grids, with

additional readings in anomalous areas. A Sharpe SE-200 vertical loop EM unit was used in the "broadside" configuration, recording tilt angles shown as profiles on the accompanying plan at 1 inch to 200 feet. Additional detail work was done at the eastern end of grids "C" and "D", with the transmitter fixed over the conductor axis. Conductors marked on the plan are adjusted to the crossovers obtained from the detail surveys. The magnetometer survey was performed with a Sharpe MF-1 fluxgate unit at the same spacing, with readings at 20 foot intervals in some anomalous areas. The magnetic results in gammas are contoured at appropriate intervals on the plan of the survey at 1 inch to 200 feet.

V. RESULTS OF SURVEYS

Geophysical work on the southern grid "C" revealed a long, almost continuous conductor, very well defined, over a length of 6,000 feet, with coincident magnetic anomalies of varying width over an approximate length of 1,800 feet at the east end of the conductor. The isolated airborne EM conductors south of this zone at the east boundary were not revealed by the ground survey.

The survey work on the northern grid outlined Conductor "D" as an equally strong but less continuous zone, interrupted at its junction with the railway. An outcrop on the railway on strike of the conductor contains a strong fracture zone of schisted greywacke and argillite interbedded with volcanics, with narrow bands of rusty biotite schist. No sulphides or graphite were observed in this outcrop. Conductor "D" has a very definite displacement of 100 feet, east side north between lines 3+00W and 6+00W in an area of variable magnetic intensities, suggesting a northwest striking fault, which could be projected through a similar magnetic low at the east end of Conductor "C" between lines 6+00E and 9+00E.

Prospecting and test pitting along the strike of both conductors indicated no outcrop on the actual strike of the zones, other than the outcrop on the railway at Conductor "D". At the west end of Conductor "C", at 47+20W, 2+00S, trenching in shallow overburden revealed a sulphide zone of disseminated to massive pyrrhotite with associated disseminated pyrite over a width of 14 feet. The sulphides were located precisely with the EM and Magnetometer at this point, with the magnetic anomaly limited to little more than the width of the zone. The sulphides occur in a siliceous shear at a contact with schisted volcanics (andesite) on the south, and a dark green altered biotite schist on the north wall. The zone dips at 80° to the north, and strikes N 80° E. The wall rocks are very lightly mineralized. Impure quartz stringers up to 6 inches in width occur irregularly over a width of 2 feet near the footwall. Cross fracturing and contortions in the quartz stringers were very evident. A rock trench 2 feet deep and 2 feet wide was blasted across the width of the zone. Two representative chip samples ran 0.02% Cu over 9 feet and 0.04% Cu over 5 feet, and nil or trace in nickel, gold and silver. Work was suspended at this point pending a decision on drilling the two conductors.

VI. DIAMOND DRILLING

When it had been established that Conductor "C" represented a long consistent zone of sulphide mineralization over generally narrow widths, the approach was to test areas of the conductor where broad or variable magnetic intensities occurred, suggesting lower proportions of pyrrhotite, replaced by pyrite or chalcopyrite. Magnetic anomalies show widths of up to 200 feet over Conductor "C" for a length of 1,800 feet from 9W to 9E, and on Conductor "D" for 1,200 feet from 24W to 12W, and 600 feet from 6W to line O.

The first drill hole, at 3W, 7N on grid "C" drilled south to 348 feet, encountered heavy sulphides over 19 feet, from 257.5' to 276', in an altered horizon of acid to intermediate volcanics along the south contact of a broad band of biotite-quartz schist. The mineralized host is an acid fragmental or agglomerate within a tuff member, containing approximately 30% sulphides. By alignment with the conductor axis, the zone appears to dip steeply south. Copper and nickel values were negligible.

Drill Hole No. 2, 750 feet to the east, was drilled north for 371 feet from 3+80N, 4+50E, and passed from basic metavolcanics through the same acid horizon, finishing in biotite-quartz schist. Sulphides were lightly scattered over a width of 41 feet, and the core was not sampled.

The third and fourth holes were drilled on the north Conductor "D" in the area of the fault displacement, at 6W, 7+50S, and 4+50W, 7+20S. Hole No. 3, north at -50°, intersected heavily disseminated to massive pyrrhotite, with a few minor streaks of chalcopyrite, from 116' to 132', in schistated siliceous volcanics, varying from tuffs to dacite to rhyolite. A 5-foot section at 117' to 122' ran 0.16% Cu and 0.03% Ni. The fourth hole, passing through a fault zone at 244', crossed zones of sulphides in rhyolitic tuff at 127' - 136', and 291' to 306'. The second zone is assumed to be a faulted extension of the same conductor. A distinctly banded tuff, with green bands of chlorite schist, is interbedded with rhyolite and tuffs in this area. The dark hornblende-biotite-quartz schist zone associated with the sulphides in the south conductor was not encountered at Conductor "D".

Hole No. 5 was located 900 feet west of No. 3, at 15W, 10+20S, to test a very pronounced magnetic anomaly on Conductor "D". Bands of sulphides were encountered between 261' and 293', in a siliceous tuff. The best section assayed contained 0.25% Cu, 0.05% Ni, over 4 feet, from 261.3' to 265.3'..

Drilling of the north Conductor "D" indicated rocks of a much more acid nature, tentatively designated tuffs and rhyolites, although in most cases, alteration and schistosity make it difficult to firmly identify and correlate these rocks between holes. It is significant, however, that there is a similarity to the unaltered rhyolites and

tuffs associated with the Mattagam Lake Mines' orebody.

VII. CONCLUSIONS AND RECOMMENDATIONS


The ground geophysical surveys and 5 drill holes have clearly confirmed two zones of sulphide mineralization in silicified shear zones within intermediate to acid volcanic rocks. The southern zone, Conductor "C", lies along the south margin of a distinct band of hornblende-biotite-quartz schist which apparently extends for at least two miles across the property. The northern conductor, "D", with slightly better copper values, is more intermediate, and is displaced by at least one northwest-striking fault. This conductor occurs in an environment of altered rhyolites and banded tuffs, which may be more favourable host rocks than the slightly more basic volcanics to the south.

These extensive sulphide zones appear to continue to the east, where no exploration work has been done. An additional mile of the airborne conductors extend to the western boundary of the property and have not been tested by ground surveys. The presence of substantial widths of sulphides in strong shear zones within acid volcanic members demands further exploration by ground surveys and further drilling on the untested areas of this large property.

It is recommended that electromagnetic and magnetometer surveys be performed over the untested 81 claim group to the east, and the remaining part of the original 80 claim Block "A". The known conductors responded well to three types of EM equipment, with the vertical loop unit slightly preferred for its accuracy in locating the exact conductor axis. By eliminating part of the granite areas of Block "B", the coverage could be reduced to a total of 115 claims. The cost of linecutting, surveys, and reports, is estimated at \$25,000.00. An additional allowance of \$5,000.00 should be assigned for prospecting, trenching and reconnaissance mapping, for a total cost of \$40,000.00, for an initial program.

Respectfully submitted,

PICHEE CONSULTANTS LIMITED


G. R. C. Dunlop, F.Eng.

Toronto, Ontario,
April 16, 1971.

COMPANY New Calumet Mines Limited

DIAMOND DRILL RECORD

HOLE NO. D.D.R. 1

PROPERTY Valora, Sturgeon L. Area, Ontario

SHEET NO. 1

DATE Dec. 17, 1970

DIP ANGLES	BEARING	LATITUDE	STARTED
Collar -45°	South Ast.	Line 3+00W	Dec. 1/70
106' -38°	LENGTH 348'	DEPARTURE 7+00 N	STOPPED Dec. 11/70
200' -36°	LOCATION Claim K247390	Grid "C"	LOGGED BY G.R. Dunlop
316' -34°			

ROCK			CORE SAMPLES					
FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	ASSAY	ASSAY	ASSAY
0 - 96'	Casing	Overburden - Sand and Gravel, scattered boulders up to 2' in diameter.						
96' - 213'	Metasediments	<p><u>Hornblende-biotite- quartz schist.</u> Dark, medium grained, foliated schist. Elongated, smeared hornblende and chlorite crystals with biotite, in siliceous matrix, scattered minor garnet. Occasional grey-white quartz stringers 1/8" to 2", all at 40° to 50° to C.A. Foliation varies from almost massive to distinct banding and shearing. Variable chlorite in fine needles and irregular patches, less than 1/16". Occasional very fine specks of pyrite and pyrrhotite.</p> <p>At 187'-188', 1/2" quartz stringer with ghost fragments, parallel to C.A.</p> <p>Scattered massive fine grained sections 2" to 12" wide with concentrations of garnet and biotite, and minor pyrr.</p> <p>Below 190', gradually becomes more siliceous less foliated, with increasing quartz and garnet.</p> <p>At 213', heavy pyrrhotite 2 1/2" wide at apparent contact zone.</p>						
213' - 329.5'	Metavolcanics	<p><u>Acid to Intermediate banded Tuff and Dacite.</u> Fine grained, less schistose than first unit, very siliceous, with frequent quartz stringers. Distinctly banded in most sections with grey impure quartz and dark green chlorite-biotite stripes at 50° to C.A. Frequent garnetiferous zones with fine grained bands of mauve garnets densely packed. Scattered irregular zones of heavily disseminated pyrrhotite, with increasing quartz content.</p> <p>240'-241' - Irregular zone of 30% pyrite, pyrr.</p> <p>257.5 - 265' - Heavily diss. pyrrhotite, with minor pyrite in streaks and blebs parallel to weak</p>						

COMPANY New Calumet Mines Limited

DIAMOND DRILL RECORD

HOLE NO. DDH 1PROPERTY Valora

SHEET NO. 2

DATE Dec 17/70

DIP ANGLES		BEARING	LATITUDE	STARTED				
		LENGTH	DEPARTURE	STOPPED				
		LOCATION	ELEVATION	LOGGED BY				
ROCK				CORE SAMPLES				
FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	ASSAY Cu %	ASSAY Ni %	ASSAY Zn %
213' - 329.5'	(cont'd)	- lomerate with quartz fragments, within the tuff member. Approximately 30% sulphides	1013	8.5'	257.5 - 266'	0.02	0.02	
		265' - 266' Stringers of pyrr. in quartz, $\frac{1}{4}$ " wide	1011	5.0'	266-271	0.02	0.02	Nil
		266' - 276' - Very heavily mineralized with pyrr. in siliceous zone. Quartz injections and irregular fragments. Approx. 40% sulphides, mostly pyrr. with smaller proportion of pyrite (10% of sulphides). No visible chalcopyrite.	1012	5.0'	271-276	0.05	0.03	Nil
		The sulphide zone is followed by a heavily silicified section, strongly banded with quartz (grey) and green bands of chlorite and biotite. Generally banding is at 55° to C.A., with numerous contortions around siliceous bombs up to 1.5" in diam. Occasional concentrations of pyrr. 1" to 3" wide, as well as finely disseminated sparse py. and pyrr.						
329.5-334.5'	Agglomerate	Quartz agglomerate - Pink, impure, with subangular digested fragments of feldspar. Occasional fine threads of pyrr.						
334.5 - 348'	Amphibolite	Mafic Metavolcanic - Black, medium grained, faintly foliated, spotted with 1/16" hornblende crystals, with irregular fine particles of quartz and biotite. Sparsely mineralized with specks of pyrrhotite and pyrite.						
348'		End of hole Casing left in hole, producing water. Core stored at shed of M. Kostiuik in Valora.						
	<u>SUMMARY</u>	This hole was designed to intersect a strong EM conductor at 5+40N on Line 3+00W, Grid "C", and a fairly broad magnetic anomaly extending from 4+00N to 5+50N						

COMPANY New Calumet Mines Ltd

DIAMOND DRILL RECORD

HOLE NO. 1

PROPERTY Valora

SHEET NO. 3

DATE

DIP ANGLES	BEARING	LATITUDE	STARTED
	LENGTH	DEPARTURE	STOPPED
	LOCATION	ELEVATION	LOGGED BY G.R. Dunlop

ROCK				CORE SAMPLES			
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FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	ASSAY	ASSAY	ASSAY
		<p>SUMMARY (cont') The sulphide zone 257.5-276' corresponds to the EM conductor, if a dip of 75° to the south is assumed. It is highly possible that the dip is more nearly vertical, and that the EM conductor represents a parallel sulphide zone shifted farther north near surface. The magnetic anomaly overlies this zone, and part of the mafic horizon south of the sulphide zone.</p> <p>The sulphides occur in an altered horizon of acid to intermediate volcanics along the south contact of a regional band of hornblende-biotite gneisses and schists. The airborne EM conductors evidently represent these sulphide zones, and not the adjacent schist bands.</p>						

G.R. Dunlop

COMPANY New Calumet Mines Limited

DIAMOND DRILL RECORD

HOLE NO. D.D.H. 2PROPERTY Valora, Sturgeon L. Area, OntarioSHEET NO. 1DATE Dec. 17/70

DIP ANGLES Collar -45°	BEARING North Ast.	LATITUDE 3-80 N	STARTED Dec. 12/70
100' -39°	LENGTH 371'	DEPARTURE 4-50 E Grid "C"	STOPPED Dec. 15/70
200' -38°	LOCATION Claim K 203756	ELEVATION	LOGGED BY G.R. Dunlop
300' -33°			

ROCK			CORE SAMPLES					
FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	ASSAY	ASSAY	ASSAY
0 - 84'	Casing	Overburden - Sand and gravel						
84 - 137'	Mafic Meta-volcanics	<u>Amphibolite Schist</u> Black, medium grained sheared rock, micaceous, with smeared hornblende crystals. Occasional 2"-6" quartz stringers and minor disseminated pyrrhotite. Impure pink to green quartz vein or quartz agglomerate from 114'-117', and smaller silicified zones to 137'. This member is similar to the amphibolite encountered at the bottom of hole #1.						
137' - 268'	Metavolcanic	<u>Banded tuff and dacite</u> - Banded, siliceous, schistose, light coloured with prominent bands of grey impure quartz, and green bands of biotite, sericite(?) and chlorite. Very lightly mineralized with pyrr. and occasional garnetiferous bands. Banding varies from 30° to 45° to C.A. Possible fine grained massive spotted intrusive at upper contact from 124-137. Spotted quartz-eye zone 169-171. Below 171, increasing sulphides- pyrite and pyrr. in narrow irregular quartz veinlets at 196', 203', 186.5' 203'-203.8' - 4"qtz. vein plus 3" massive pyrr. Pyrrhotite in disseminations and streaks from 194'-212', with average content less than 5% sulphides. From 214', rock becomes more massive, dark, with rapidly diminishing banding. Appearance of a basic volcanic, but still micaceous. Strong siliceous banding 40 to C.A. from 263' to 265'. Possible contact about 268'.						
268 - 322'	Metasediments	<u>Hornblende-biotite schist</u> - Rock becomes more speckled with smeared mafics, biotite, in numerous seams and disseminations. Minor garnet content.						
322 - 329'	Quartz-eye Flow.	- Fine grained massive, with scattered siliceous						

COMPANY New Calimet Mines Ltd.

DIAMOND DRILL RECORD

HOLE NO. 2

PROPERTY Valora

SHEET NO. 2

DATE Dec. 17/70

DIP ANGLES	BEARING	LATITUDE	STARTED
	LENGTH	DEPARTURE	STOPPED
	LOCATION	ELEVATION	LOGGED BY <u>G.R. Dunlop</u>

ROCK	CORE SAMPLES
------	--------------

FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	CORE SAMPLES		
						ASSAY	ASSAY	ASSAY
322 - 329'	Qtz-eye Flow	(cont'd) - amygdules or eyes.						
329 - 371'	Metasediments	<u>Hornblende-Biotite Schist.</u> Gradual increase in silicification with minor pyrite at 325'. Pink to green impure quartz and feldspar band at 333' (may be cherty tuff). Very little mineralization in fairly massive dark horn.-biotite schist to end of hole.						
371'		<u>End of Hole.</u> Casing left in hole, Core stored at shed of M. Kostiuik in Valora.						
	<u>SUMMARY</u>	This hole was intended to be a further test of Conductor "C" 750' East of hole #1. The sulphides encountered were much less concentrated than in the first hole, but were encountered in the same intermediate tuff or dacite horizon, south of the sedimentary schist horizon. The mafic amphibolite schist contains finely disseminated pyrrhotite, which probably accounts for the broad magnetic anomaly surrounding the E.M. conductor at 5+30 N. It would appear that the sulphide zone is variable in width and concentration. Since the E.M. indication on this section is equal or greater than the conductor strength at hole # 1, yet the zone is weaker at depth.						

G.R. Dunlop

COMPANY New Calumet Mines Limited and
Zenmac Metal Mines Limited
 PROPERTY Valora Property

DIAMOND DRILL RECORD

HOLE NO. 3

SHEET NO. 1

DATE January 11, 1971

DIP ANGLES 0 - 50° 440' - 34°	BEARING	Due North Ast.	LATITUDE	Line 6'0 West	STARTED	January 6, 1971
	LENGTH	440'	DEPARTURE	7 + 50 South	STOPPED	January 11, 1971
	LOCATION	Claim No. K-247371	ELEVATION	Grid D	LOGGED BY	J. A. Pollock

ROCK			CORE SAMPLES					
FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	ASSAY	ASSAY	ASSAY
0 - 14	Metavolcanics	Casing. Overburden. Sand and Gravel.						
14 - 52.6	"	Andesitic tuff. Well banded, dark to medium gray andesitic tuff. Fine grained quartz and biotite bands, some chlorite and irregular quartz bombs or lapilli. Banding 60° to axis of core.						
52.6-70.6	"	Andesitic tuff. Well banded, dark, basic shearing with bedding, also at 60°. More frequent quartz stringers than first unit.						
70.6-159	"	Andesitic tuff, felsitic inclusions quartz up to 1/2". Zones almost rhyolitic in texture or acid fragmental. 113' - 138' Bands of sulphides. 120' - 120.5' 6" stringer massive pyrrhotite with quartz eyes up to 4 mill. 122' chalcocite 1/2". Split 117 - 122. 122 - 127.6 same as 117 - 122. 120.5 - 132 heavy to massive pyrrhotite and pyrite, some biotite, quartz and garnet bands. Zone is acid fragmental, quartz cuts axis at 60°. Split 127.6 - 132.6	1020	5'	117' - 122'	Cu 0.16	Ni 0.03	
159 - 183.6	"	Moderately packed, rhyolitic dacite-tuff light coloured, quartz eyes, med. grained, minor sulphides, fine even banding 60° to axis of core. This member is the same as 127 - 136 in Hole #4.						

COMPANY New Calumet Mines Limited and
Zenmac Metal Mines Limited
 PROPERTY Valora Property

DIAMOND DRILL RECORD

HOLE NO. 3

SHEET NO. 2

DATE January 11, 1971

DIP ANGLES 0 - 50° 440' - 34°	BEARING <u>Due North Ast.</u>	LATITUDE <u>Line 600 West</u>	STARTED <u>January 6, 1971</u>
	LENGTH <u>440'</u>	DEPARTURE <u>7 + 50 South</u>	STOPPED <u>January 11, 1971</u>
	LOCATION <u>Claim No. K-247371</u>	ELEVATION <u>Grid D</u>	LOGGED BY <u>J. A. Pollock</u>

ROCK			CORE SAMPLES					
FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	ASSAY	ASSAY	ASSAY
183.6-199.5	Metavolcanics	Andesitic tuff. Same as 70.6 - 159.						
199.5-202.5	"	Rhyolitic dacite tuff as 159 - 183.6						
202.5-209.5	"	Andesitic tuff as 70.6 - 159.						
209.5-225	"	Rhyolitic dacite tuff as 199.5 - 202.5						
225 - 245	"	Andesitic tuff as 202.5 - 209.5						
245 - 247	"	Rhyolite, fine grained, light coloured.						
247 - 257	"	Andesitic tuff. Pale green, fine grained.						
257 - 265	"	Rhyolitic dacite tuff as 159 - 183.6						
265 - 289	"	Andesitic tuff - as above						
289 - 290	"	Band light rhyolite or quartz (264' in Hole #4)						
290 - 440	"	Andesite tuff. Pale green, fine grained, occasional bands of darker green graphitic material. Quartz stringers at 60° to core axis. Very little sulphides.						
440		End of Hole.						
		Core in Valora at M. Kostiuik's house.						

COMPANY New Calumet Mines Limited and
Zenmac Metal Mines Limited.
 PROPERTY Valora Property

DIAMOND DRILL RECORD

HOLE NO. 3

SHEET NO. 3

DATE January 11, 1971

DIP ANGLES 0 - 50° 440' - 34°	BEARING	Due North Ast.	LATITUDE	Line 600 West	STARTED	January 6, 1971
	LENGTH	440'	DEPARTURE	7 + 50 South	STOPPED	January 11, 1971
	LOCATION	Claim No. K-247371	ELEVATION	Grid D	LOGGED BY	J. A. Pollock

ROCK _____ CORE SAMPLES _____

FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	ASSAY		
						ASSAY	ASSAY	ASSAY
		<p>Conclusion:</p> <p>This hole was designed to intersect the ends of the conductor where it is displaced by an apparent fault. The most southerly conductor was intersected at approximately 70' to 135'. Apparently the northerly end of the conductor was missed at this depth as there was no indication of it up to 440'. Conductor is pyrrhotite, pyrite and possibly some chalcopyrite.</p>						

COMPANY New Calumet Mines Limited and
Zenmac Metal Mines Limited
 PROPERTY Valora Property

DIAMOND DRILL RECORD

HOLE NO. 4

SHEET NO. 1

DATE January 16, 1971

DIP ANGLES 0 - 50° 352' - 33°	BEARING	Due North Ast.	LATITUDE	Line 450 West	STARTED	January 11, 1971
	LENGTH	352' AXT (1 5/16")	DEPARTURE	7 + 20 South	STOPPED	January 14, 1971
	LOCATION	Claim No.K-247371	ELEVATION	Grid "D"	LOGGED BY	J. A. Pollock

ROCK			CORE SAMPLES					
FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	ASSAY	ASSAY	ASSAY
0 - 12	Metavolcanics	Casing. Gravel boulders.						
12 - 113	"	Banded tuff. Well banded, green-gray fine grained light coloured, irregular gray impure quartz bands at 60° to core axis. Bands of biotite, chlorite and sericite. Some darker bands possibly graphitic. Very minor sulphide mineralization.						
113 - 121	"	Dacitic Tuff. Gray light coloured moderately packed dacite tuff, few (4) quartz bands. Very silicious and hard.						
121 - 127	"	Banded Tuff. As above.						
127 - 136	"	Rhyolitic Tuff, loosely packed, bands of sulphides pyrite, pyrrhotite. Very hard silicious. Banding at 60° to core axis. Sections of almost pure quartz. 127 - 136 Split.	1016	9'	127-136	Cu .11	Ni .02	
136 - 178	"	Banded Tuff. Same as above with occasional quartz stringers, pale green, fine. Some zones up to 3' lacking any quartz stringers.						
178 - 186	"	Rhyolitic Tuff. Light coloured, silicious, densely packed quartz pebbles up to 2/10" diameter, almost a porphritic texture. Fine mineralization.						

COMPANY New Calumet Mines Limited and
Zenmac Metal Mines Limited
 PROPERTY Valora property

DIAMOND DRILL RECORD

HOLE NO. 4

SHEET NO. 2

DATE Jan. 16, 1971

DIP ANGLES 0 - 50° 352' - 33°	BEARING	Due North Ast.	LATITUDE	Line 450 West	STARTED	January 11, 1971
	LENGTH	352' AXT (1 3/16")	DEPARTURE	7 + 20 South	STOPPED	January 14, 1971
	LOCATION	Claim No. K-247371	ELEVATION	Grid D	LOGGED BY	J. A. Pollock

ROCK			CORE SAMPLES					
FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	ASSAY	ASSAY	ASSAY
186 - 188	Metavolcanics	Banded Tuff, as above						
188 - 201	"	Rhyolitic Tuff, as above.						
201 - 268.6	"	Banded Tuff. Some bands dark green, massive all at 60° to core axis. 24.4' open fault zone.						
268.6-269.6	"	Quartz or rhyolite band at 60° to core axis.						
269.6-291	"	Banded Tuff. Typical varying silicious bands, light green, some heavy biotite bands, occasional garnets.						
291 - 306	"	Rhyolitic Tuff. Very silicious bands of heavy to massive pyrrhotite and pyrite. Split sections 303.5 - 304.8., 302 - 302.6						
306 - 334	"	Banded Tuff. Typical pale green, fine silicious bands at 60° to core axis.						
334 - 339	"	Banded Tuff. Dark biotite bands, some small quartz eyes almost like a biotite schist, but contains quartz inclusions.						
339 - 352	"	Banded Tuff. Typical banded green, silicious bands etc.						

COMPANY New Calumet Mines Limited and
Zenmac Metal Mines Limited
 PROPERTY Valora Property

DIAMOND DRILL RECORD

HOLE NO. 4

SHEET NO. 3

DATE January 16, 1971

DIP ANGLES 0 -50° 352' -33°	BEARING	Due North Ast.	LATITUDE	Line 450 West	STARTED	January 11, 1971
	LENGTH	352' AXT (1 5/16")	DEPARTURE	7 + 20 South	STOPPED	January 14, 1971
	LOCATION	Claim No. K-247371	ELEVATION	Grid "D"	LOGGED BY	J. A. Pollock

ROCK _____ CORE SAMPLES _____

FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	CORE SAMPLES		
						ASSAY	ASSAY	ASSAY
		<p>Conclusions:</p> <p>This hole was designed to test the Conductor "D" at the point where it is displaced by an apparent fault. A section of pyrrhotite and pyrite was encountered at 125 - 135', an open seam was encountered at 244'. Our next pyrrhotite and pyrite zone was encountered at 290 - 310 which was the northerly zone. It appears that the sulphide zone is displaced as shown by the mag. and E.M. survey and there is a fault zone as indicated.</p>						

COMPANY New Calumet Mines Limited and
Zenmac Metal Mines Limited
 PROPERTY Valora Property

DIAMOND DRILL RECORD

HOLE NO. 5

SHEET NO. 1

DATE January 20, 1971

DIP ANGLES 0 -50° 341' -34°	BEARING Due North Ast.	LATITUDE Line 1500 W	STARTED January 17, 1971
	LENGTH 341'	DEPARTURE 10 + 20 S	STOPPED January 20, 1971
	LOCATION Claim No. K-247389	ELEVATION Grid D	LOGGED BY J. A. Pollock

ROCK			CORE SAMPLES					
FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	ASSAY	ASSAY	ASSAY
0 - 16	Casing	Gravel Boulders.						
16 - 36.6	Metavolcanics	Banded Tuff. Silicious pale green, fine grained, quartz stringers at 50° to core axis.						
36.6 - 38	"	Gray, silicious rhyolitic dacite tuff 1/2" quartz inclusions.						
38 - 55	"	Banded Tuff.						
55 - 70	"	As 36.6 - 38. Rhyolitic dacite tuff.						
70 - 106.5	"	Very silicious andesitic tuff? Well banded, fine grained, pale green, minor zones of darker (hornblende or biotite) quartz eyes up to 2/10".						
106.5-115	"	Dark, fine grained, intense fine bedding. Rhyolitic dacite tuff, quartz eyes very numerous.						
115 - 210	"	Pale green silicious more dacitic with depth. Well banded with quartz chlorite hornblende sections, almost white to pale green. No mineralization. 170 - 180 black, finely bedded, hard, fine grained some minor pyrrhotite and pyrite with the bedding. Zones of fine 2/10" quartz eyes and some sections without.						

COMPANY
PROPERTY

New Calumet Mines Limited and
Zenmac Metal Mines Limited.
Valora Property

DIAMOND DRILL RECORD

HOLE NO. 5

SHEET NO. 2

DATE January 20, 1970

DIP ANGLES 0 -50° 341' -34°	BEARING Due North Ast,	LATITUDE Line 1500 W	STARTED January 17, 1971
	LENGTH 341'	DEPARTURE 10 + 20 S	STOPPED January 20, 1971
	LOCATION Claim No. K-247389	ELEVATION Grid D	LOGGED BY J. A. Pollock

ROCK _____ CORE SAMPLES _____

FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	ASSAY		
						ASSAY	ASSAY	ASSAY
210 - 235	Metavolcanics	Silicious, green gray (sample). Very hard, no bedding, minor pyrite and pyrrhotite.						
235 - 251	"	Banded Tuff. Fine grained, silicious green gray, poorly banded at 60° to core axis.						
251 - 251.6	"	Quartz stringer.						
251.6-261	"	Banded Tuff. Two zones 2/10" quartz eyes loosely packed.						
261 - 269	"	Split. Fine grained. Zones having pyrrhotite and pyrite. Fine quartz stringers, very hard to split. 261 - 69 Split.	1018 1024	4' 4'	261.3 - 265.3 265.3 - 269	Cu .25 Not assayed	Ni .05	
269 - 304	"	Rhyolitic dacite tuff, fine, dark, intense fine bedding, little quartz stringers. Heavy mineralization 297.8 - 293.11. Split 289 - 296. Split 302.5 - 309. Very fine scattered bands of mineralization	1023 1021 1022 1019	1 1/2' 2' 1'8" 1'3"	291.2 - 299.8 293.11 - 295.11 302.6 - 309.8 292.8 - 293.11	.09 .11 .07 .15	.01 .03 .02 .05	
304 - 341	"	Andesitic tuff. Fine bedding, some scattered quartz. No mineralization. Bedding at 50-60° to core.						
341		End of Hole.						

COMPANY New Calumet Mines Limited and
Zenmac Metal Mines Limited
 PROPERTY Valora Property

DIAMOND DRILL RECORD

HOLE NO. 5

SHEET NO. 3

DATE January 20, 1970

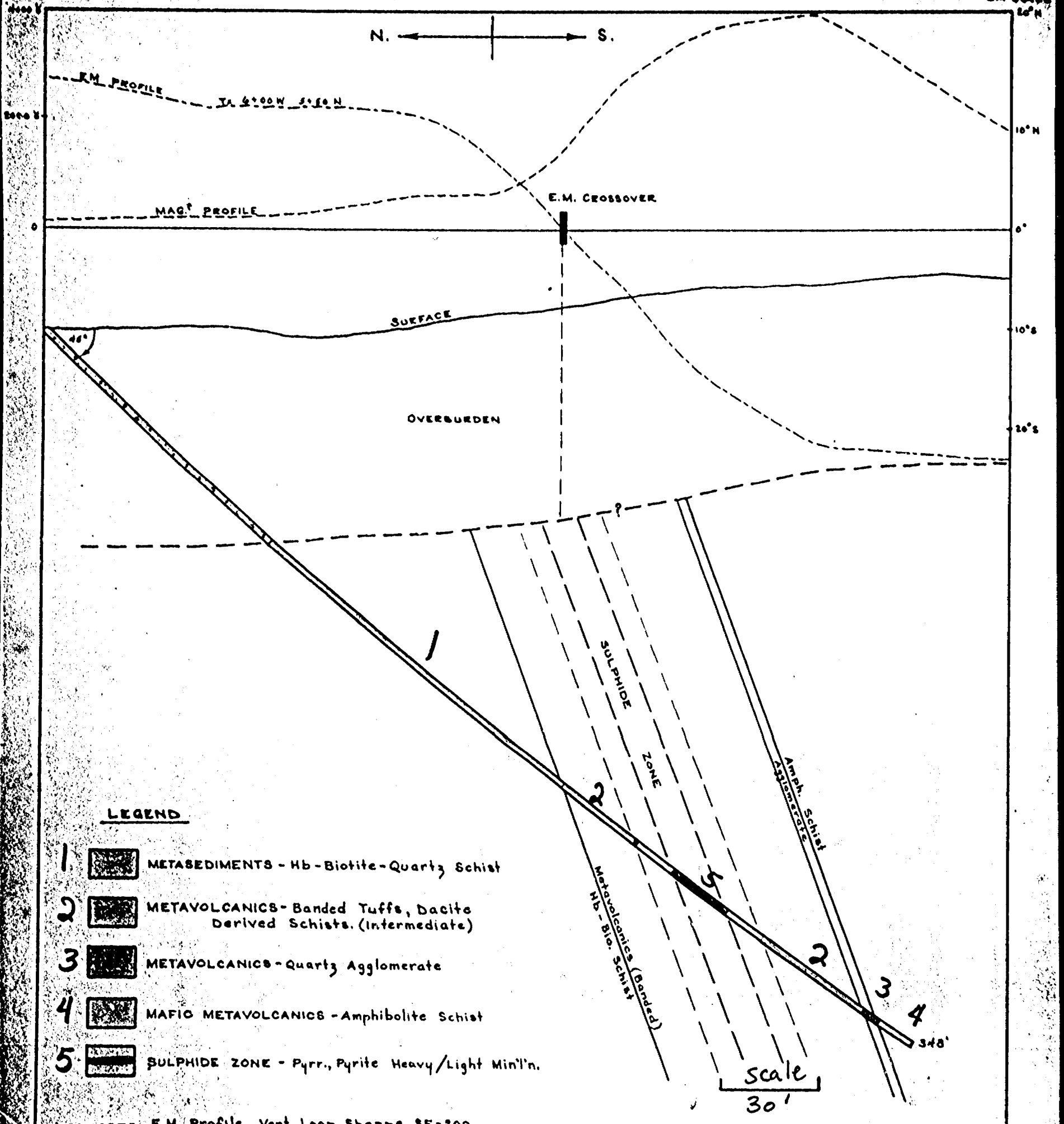
DIP ANGLES 0 -50° 341' -34°	BEARING	Due North Ast.	LATITUDE	Line 1500 W	STARTED	January 17, 1971
	LENGTH	341'	DEPARTURE	10 + 20 S	STOPPED	January 20, 1971
	LOCATION	Claim No, K-247389	ELEVATION	Grid D	LOGGED BY	J. A. Pollock

ROCK			CORE SAMPLES					
FOOTAGE	NAME OF ROCK	DESCRIPTION	SAMPLE NO.	WIDTH	FOOTAGE	ASSAY	ASSAY	ASSAY
		<p>Conclusion:</p> <p>This hole was planned to sample the broad magnetic high as well as the E.M. conductor. The conductor proved to be several bands of pyrrhotite and pyrite.</p>						

MAG SCALE

EM SCALE

N. ← | → S.

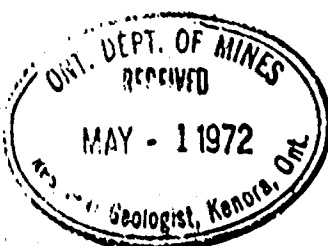


LEGEND

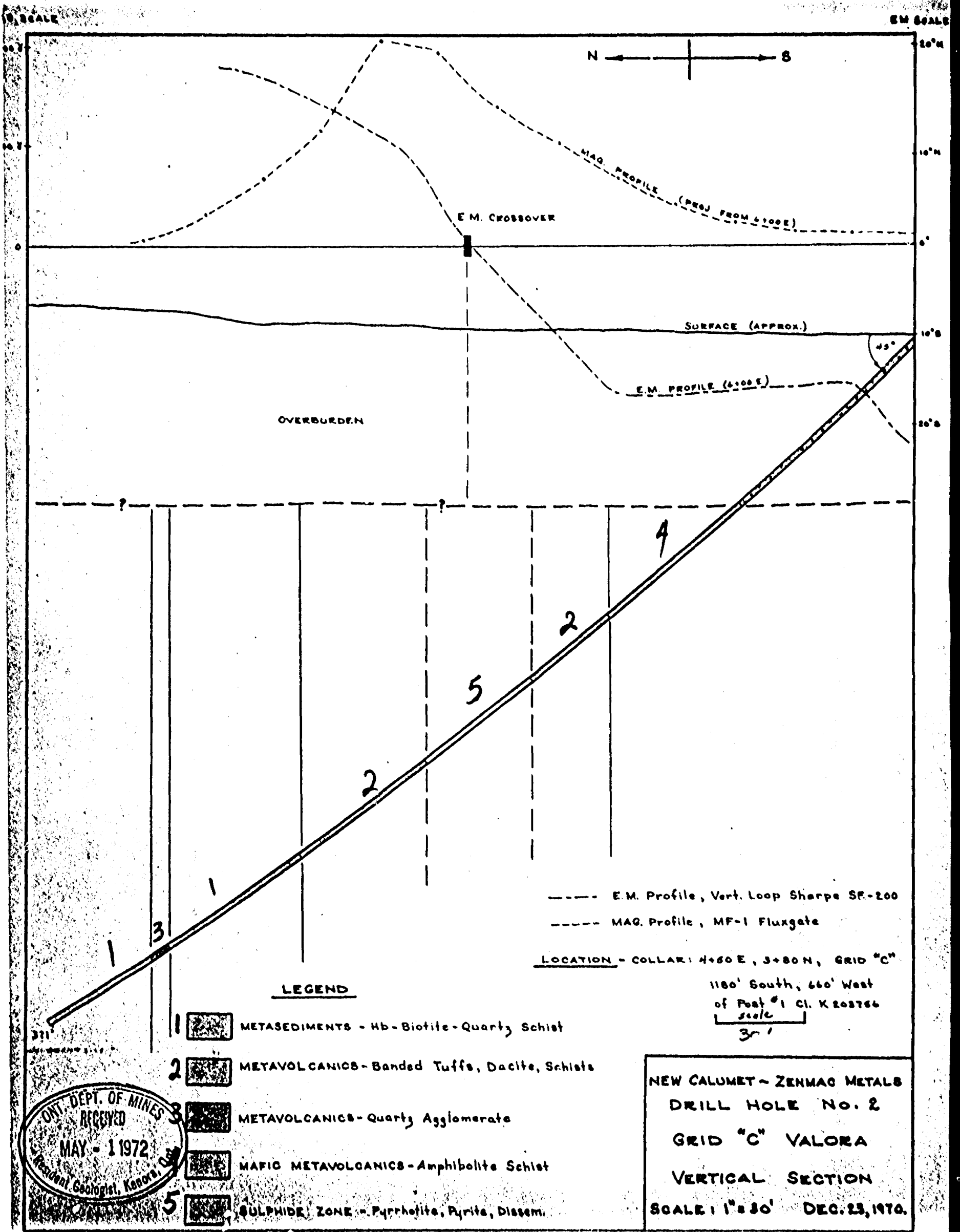
- 1 METASEDIMENTS - Hb-Biotite-Quartz Schist
- 2 METAVOLCANICS - Banded Tuffs, Dacite Derived Schists. (Intermediate)
- 3 METAVOLCANICS - Quartz Agglomerate
- 4 MAFIC METAVOLCANICS - Amphibolite Schist
- 5 SULPHIDE ZONE - Pyrr., Pyrite Heavy/Light Min'l'n.

----- E.M. Profile, Vert. Loop Sharpe SE-200
 ----- MAG Profile, MF-1 Fluxgate

LOCATION - COLLAR: 3+00W, 7+00N, GRID "C"
 450' South, 400' West
 of Post #1 Cl. K 247390



NEW CALUMET - ZENMAC METALS
 DRILL HOLE No. 1
 GRID "C" VALORA
 VERTICAL SECTION
 SCALE: 1"=30' DEC. 17, 1970.



N ————— S

MAG. PROFILE (PROJ FROM 6100E)

E.M. CROSSOVER

SURFACE (APPROX.)

E.M. PROFILE (6100E)

OVERBURDEN

--- E.M. Profile, Vert. Loop Sharpe SF-200
 --- MAG. Profile, MF-1 Fluxgate

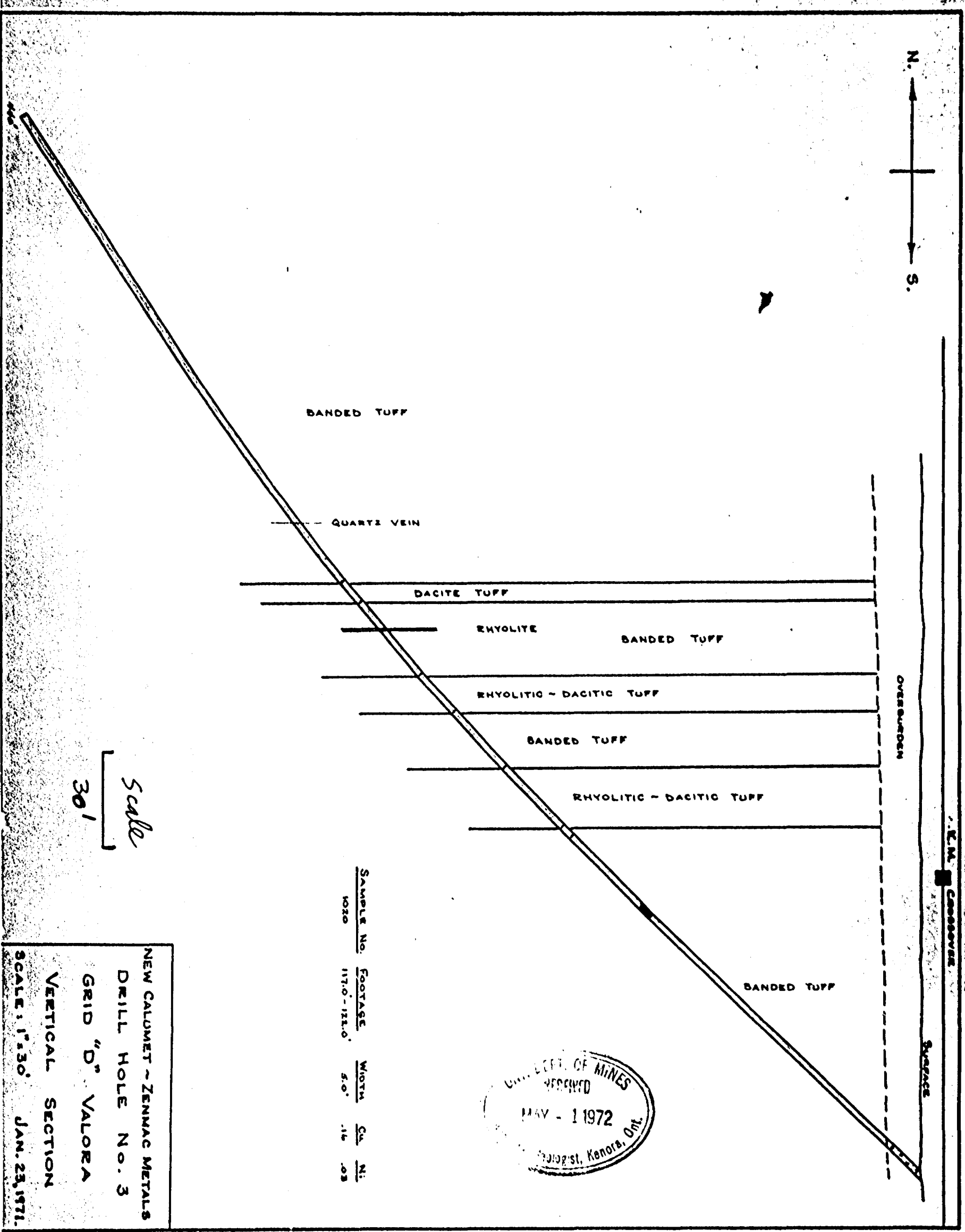
LOCATION - COLLAR: 4+50 E, 3+80 N, GRID "C"
 1150' South, 660' West
 of Post #1 cl. K 208764
 scale 30'

LEGEND

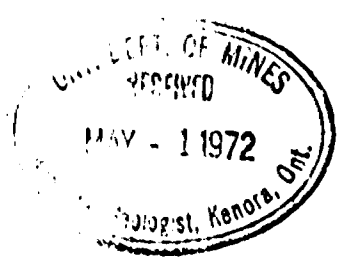
- 1 [Pattern] METASEDIMENTS - Hb-Biotite-Quartz Schist
- 2 [Pattern] METAVOLCANICS - Banded Tuffs, Dacite, Schists
- 3 [Pattern] METAVOLCANICS - Quartz Agglomerate
- 4 [Pattern] MAFIC METAVOLCANICS - Amphibolite Schist
- 5 [Pattern] SULPHIDE ZONE - Pyrrhotite, Pyrite, Dissemin.

NEW CALUMET - ZENMAC METALS
 DRILL HOLE NO. 2
 GRID "C" VALORA
 VERTICAL SECTION
 SCALE 1" = 30' DEC. 23, 1970.





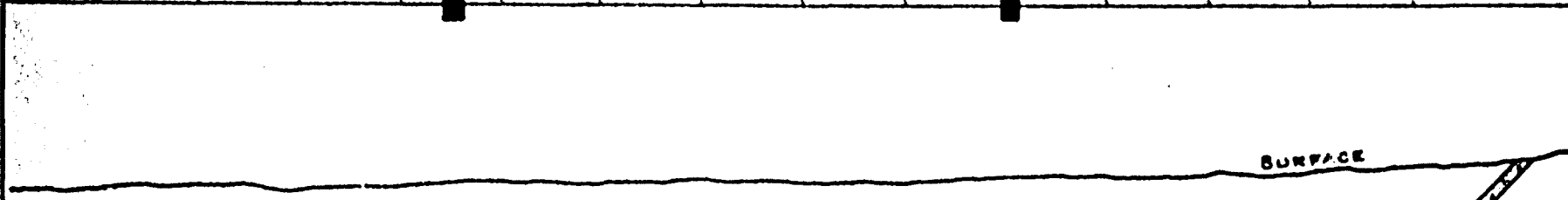
SAMPLE No.	FOOTAGE	WIDTH	CU.	NI.
1020	117.0-122.0'	5.0'	.16	.03



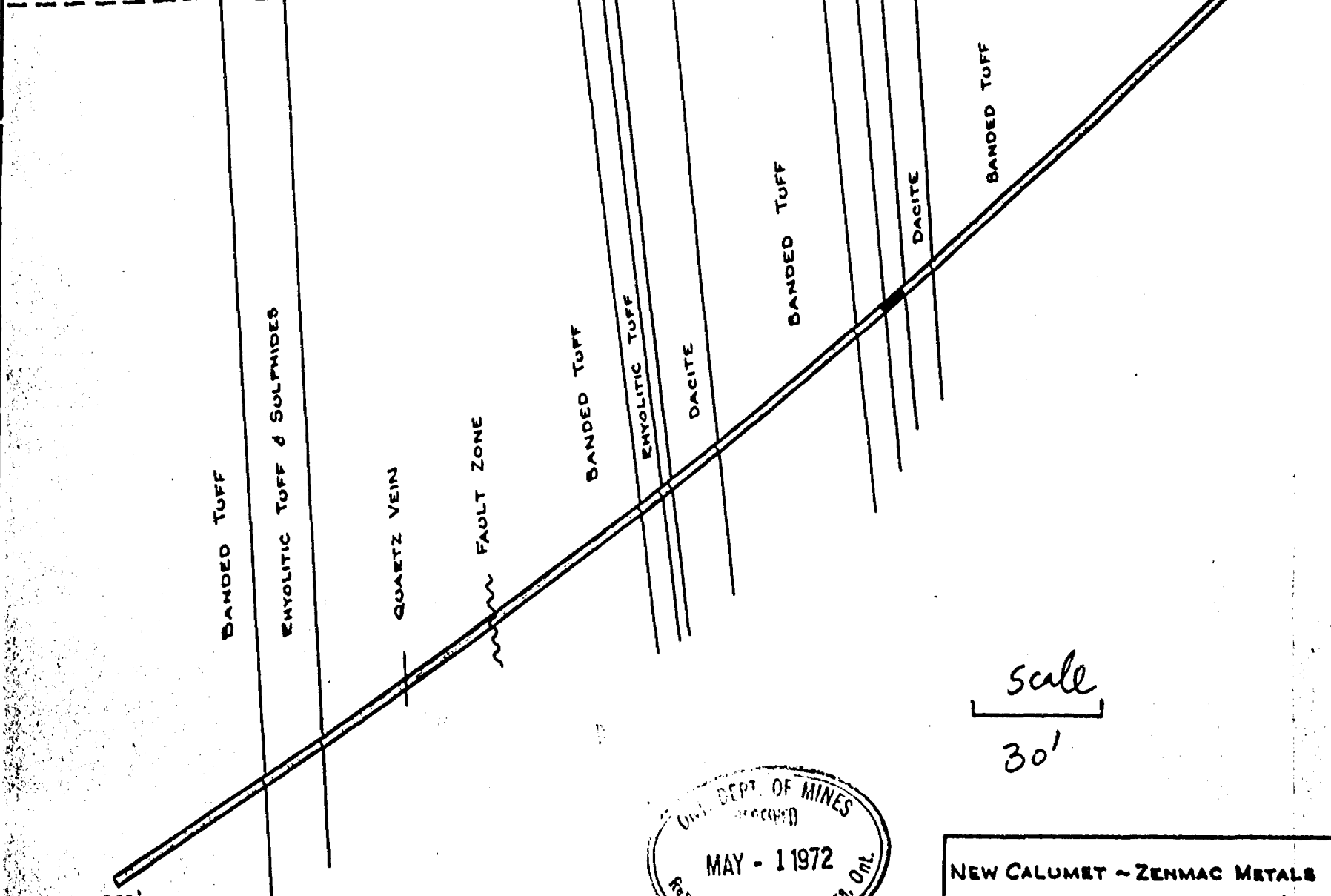
NEW CALUMET - ZENNAC METALS
 DRILL HOLE No. 3
 GRID "D" VALORA
 VERTICAL SECTION
 SCALE: 1" = 30'
 JAN. 23, 1971.



Line Y

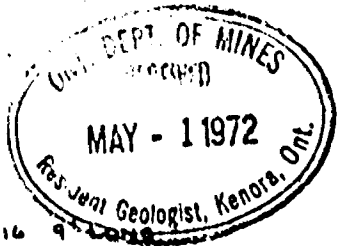


OVERBURDEN



352'

scale
30'



SAMPLE No. 1016
127'-136' CU = .11 NI = .02

NEW CALUMET - ZENMAC METALS
DRILL HOLE No. 4
GRID "D" VALORA
VERTICAL SECTION
SCALE: 1" = 30' JAN. 23, 1971.



MAG. PROFILE

E.M. CROSSOVER

SURFACE

OVERBURDEN

BANDED TUFF

ENYOLITIC TUFF

DACITIC TUFF

BANDED TUFF

QUARTZ VEIN

ENYOLITE & DACITE TUFF

BANDED TUFF

ENYOLITE & DACITE TUFF

BANDED TUFF

ENYOLITE & DACITE TUFF

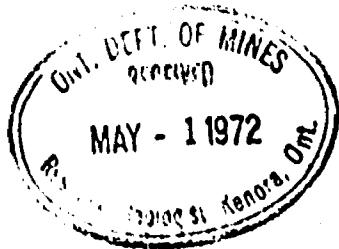
BANDED TUFF

ENYOLITE & DACITE TUFF

BANDED TUFF

SAMPLE No.	FOOTAGE	WIDTH	CU	NI
1018	241.3'-266.3'	4.0'	.28	.05
1023	291.1'-292.6'	1.8'	.09	.01
1019	292.6'-293.9'	1.3'	.16	.06
1021	293.9'-298.9'	2.0'	.11	.03
1022	302.6'-304.1'	1.6'	.07	.02

Scale
30'



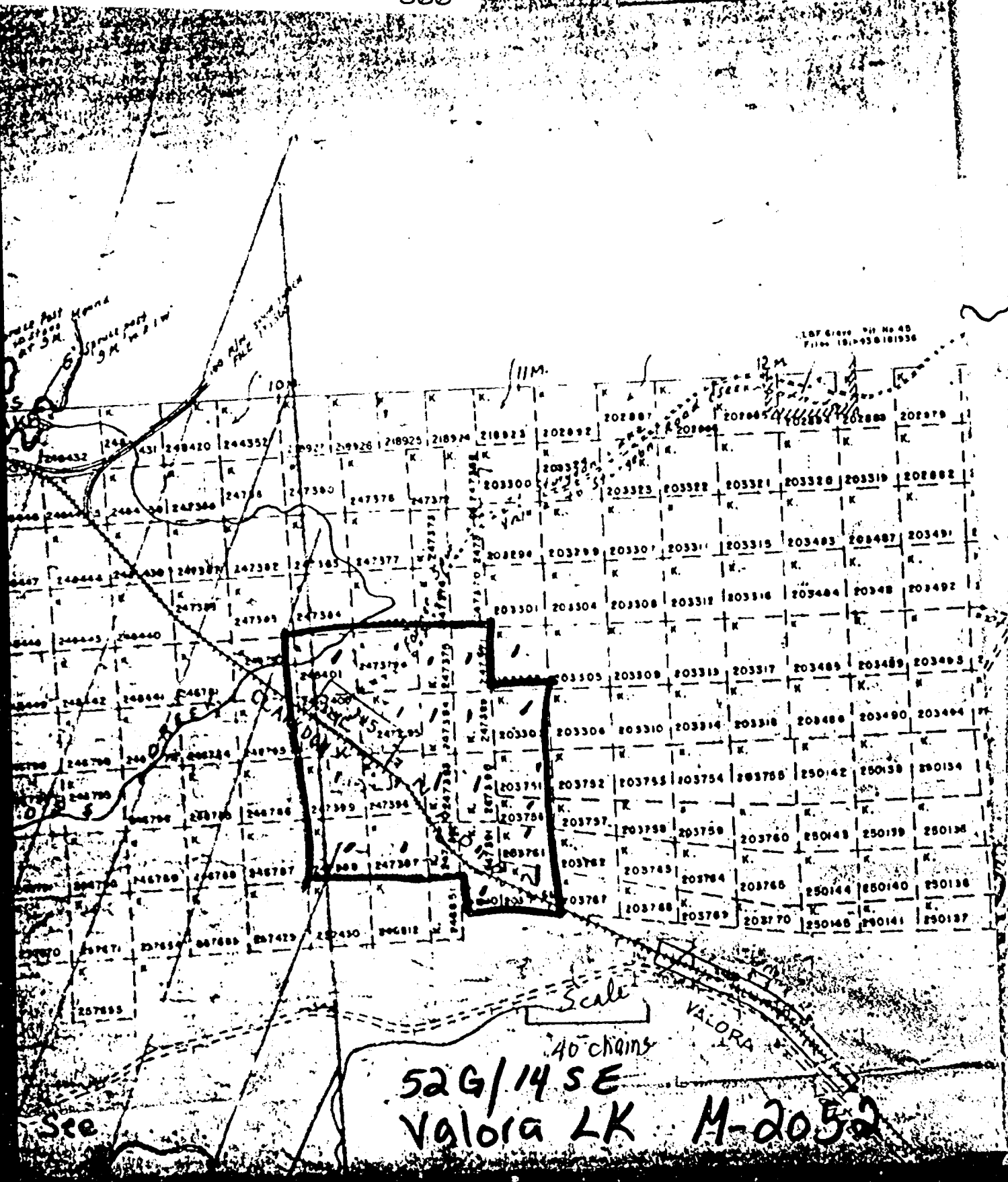
NEW CALUMET - ZENMAC METALS
 DRILL HOLE No. 6
 GRID "D" VALORA
 VERTICAL SECTION
 SCALE: 1"=30' JAN. 25, 1971.



52G14SE0068 52G14SE0067 VALORA LAKE

900

AREA



ASSESSMENT WORK DETAILS

Type of Survey Magnetometer
A separate form is required for each type of survey

Township or Area Valara and Unaka

Chief Line Cutter D. MacVeigh
Name
Halleybury, Ontario
Address

Party Chief J. A. Pollock, P. Eng.
Name
Halleybury, Ontario
Address

Consultant Pioneer Consultants Limited
Name
Halleybury, Ontario
Address

Geological field mapping by _____
Name

Address

COVERING DATES

Line Cutting October 15 - November 5, 1970

Field November 1 - 7, 1970
Instrument work, geological mapping, sampling etc.

Office April 1 - 10 (Drafting) April 10 - 16 (Report)

INSTRUMENT DATA

Make, Model and Type Sharpe MF-1 Magnetometer

Scale Constant or Sensitivity Readability 5 gamma
Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count _____

Number of Stations Within Claim Group 862

Number of Readings Within Claim Group 925

Number of Miles of Line cut Within Claim Group 21.2

Number of Samples Collected Within Claim Group _____

CREDITS REQUESTED

20 DAYS per claim 40 DAYS per claim Includes (Line cutting)

Geological Survey Show Check ✓

Geophysical Survey

Geochemical Survey

DATE Nov. 25, 1971 SIGNED G. R. Cunningham-Dunlop

SPECIAL PROVISION CREDITS for PERFORMANCE & COVERAGE	
MINING CLAIMS TRAVERSED List numerically	
.....	247371 ✓
.....	247375 ✓
.....	247379 ✓
.....	247389 ✓
.....	247390 1/2 ✓
.....	247391 ✓
.....	247392 1/2 ✓
.....	247393 1/2 ✓
.....	247394 ✓
.....	247395 ✓
.....	247397 1/2 ✓
.....	247398 3/4 ✓
.....	247400 1/2 ✓
.....	247401 1/2 ✓
.....	8
.....	(Area traversed 3 3/4 claims = 33 days per claim)
TOTAL CLAIMS <u>14</u>	

If space insufficient, attach list

Send in Duplicate to:
 FRED W. MATTHEWS
 SUPERVISOR-PROJECTS SECTION
 DEPARTMENT OF MINES & NORTHERN AFFAIRS
 WHITNEY BLOCK
 QUEEN'S PARK
 TORONTO, ONTARIO
RECEIVED
 NOV 29 1971
 PROJECTS SECTION

Performance and coverage credits do not apply to airborne surveys

ASSESSMENT WORK DETAILS

Type Survey Electromagnetic
A separate form is required for each type of survey

Township or Area Valora and Unaka

Chief Line Cutter D. MacVaigh
Name
 or Contractor (Reported for magnetometer Survey)
Address

Party Chief J. A. Pollock, P.Eng.
Name
Halleybury, Ontario.
Address

Consultant Pioneer Consultants Limited
Name
Halleybury, Ontario
Address

Geological field mapping by _____
Name

Address

COVERING DATES

Line Cutting (Reported for Mag. Survey)

Field November 6 - 12, 1970
Instrument work, geological mapping, sampling etc.

Office March 20 - 30, 1971

INSTRUMENT DATA

Make, Model and Type Sharp SE-200

Scale Constant or Sensitivity Vertical loop - dip angle
Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count _____

Number of Stations Within Claim Group 862

Number of Readings Within Claim Group 862

Number of Miles of Line cut Within Claim Group 21.2

Number of Samples Collected Within Claim Group _____

CREDITS REQUESTED

	<u>20 DAYS</u> per claim	<u>40 DAYS</u> per claim Includes (Line cutting)
Geological Survey	<input type="checkbox"/>	<input type="checkbox"/>	
Geophysical Survey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Show Check ✓
Geochemical Survey	<input type="checkbox"/>	<input type="checkbox"/>	

DATE Nov. 23, 1971. SIGNED G. R. Cunningham-Dunlop

SPECIAL PROVISION CREDITS for PERFORMANCE & COVERAGE	
MINING CLAIMS TRAVERSED List numerically	
.....	247371
.....	247375
.....	247379
.....	247389
.....	247390
.....	247391
.....	247392
.....	247393
.....	247394
.....	247395
.....	247397
.....	247398
.....	247400
.....	247501
<i>16 days per cl</i>	
<i>fr</i>	
TOTAL CLAIMS <u>14</u>	

If space insufficient, attach list

Send in Duplicate to:
 FRED W. MATTHEWS
 SUPERVISOR-PROJECTS SECTION
 DEPARTMENT OF MINING
 NORTHERN AFFAIRS
 WHITNEY BLOCK
 QUEEN'S PARK
 TORONTO, ONTARIO

RECEIVED
 NOV 29 1971

PROJECTS
SECTION

November 26, 1971.

Mr. H. L. Ball,
Mining Recorder,
Department of Mines & Northern Affairs,
808 Robertson Street,
Kenora, Ontario.

Dear Sir:

Re: New Calumet Claims 247371 et al.
Valora-Unsku Area.

We are forwarding herewith reports of performance of work for geophysical surveys covering 14 claims, performed in October and November 1970. Through our oversight, this work was not reported earlier this year. We are also submitting reports for special provision credits of 20 days and 40 days per claim to Mr. F. W. Matthews.

The coverage of the surveys in some cases is less than the total area of the claims, and we expect the credits will be reduced pro rata.

I trust these reports will reach your office in time to be acceptable, as the recording date of the claims was November 19, 1969.

Yours very truly,

NEW CALUMET MINES LIMITED

G. R. C. Dunlop
G. R. C-Dunlop.

GRC-D:rh
Encs.

c.c. Mr. F. W. Matthews





ONTARIO

Ministry
of Natural
Resources

Room W 1617, Parliament Buildings
Queen's Park, Toronto 182

April 27, 1972

Dear Sir:

Re: Mining Claims K. 247371 et al, Valora Area
File 2.731

The Geophysical (Magnetometer and Electromagnetic) assessment work credits as listed with my Notice of Intent dated April 6, 1972 have been approved as of the date above. Please inform the recorded holder and so indicate on your records.

Yours very truly,

Fred W. Matthews
Supervisor
Projects Section

OJ/mw

cc: New Calumet Mines Limited

cc: Resident Geologist
Kenora, Ontario ✓



Telephone 416:965-6918 When replying, kindly quote this file number: 2.731

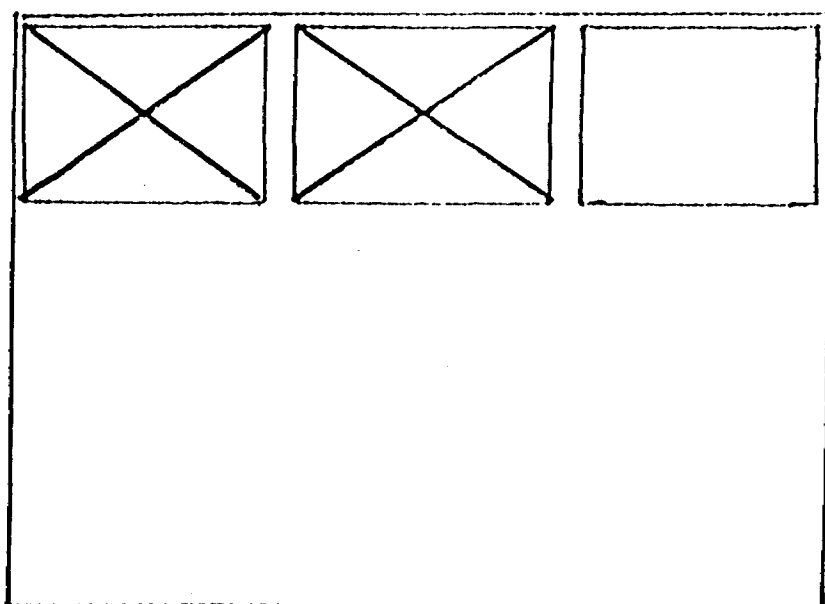
Mr. H. L. Bell
Mining Recorder
808 Robertson Street
Kenora, Ontario

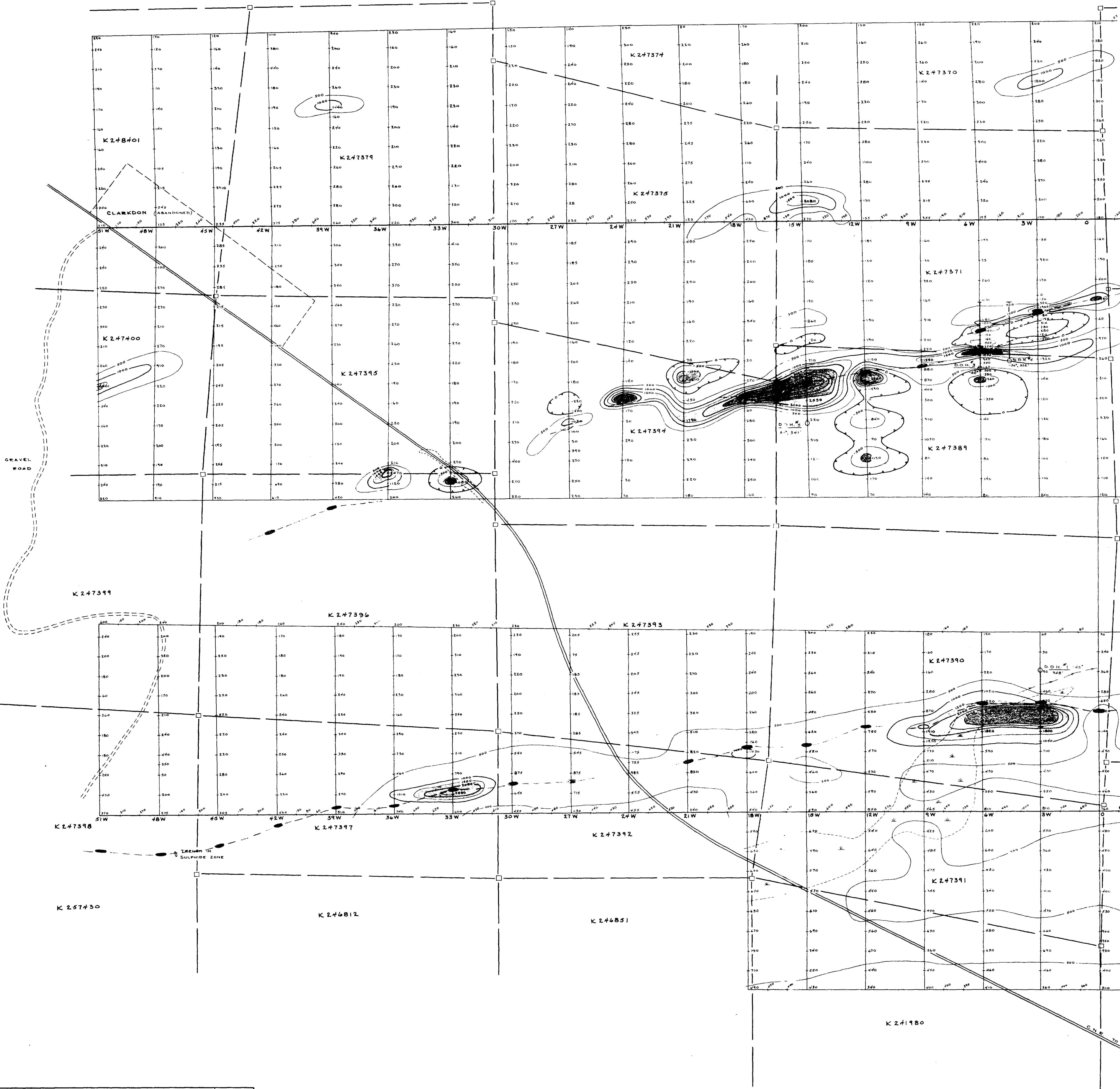
SEE ACCOMPANYING
MAP(S) IDENTIFIED AS

52G/14SE-0067 #1-2

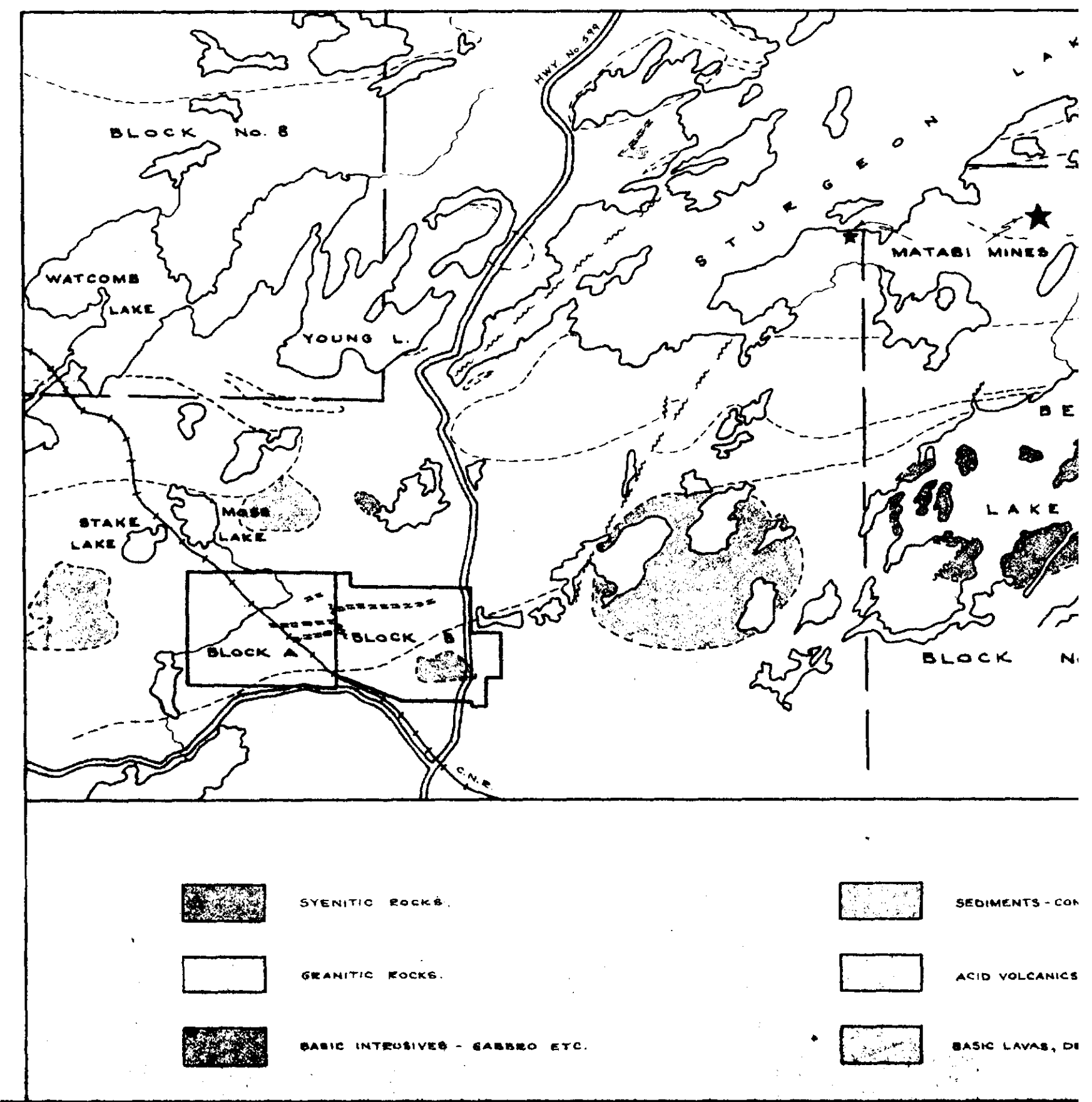
LOCATED IN THE MAP
CHANNEL IN THE
FOLLOWING SEQUENCE

(X)



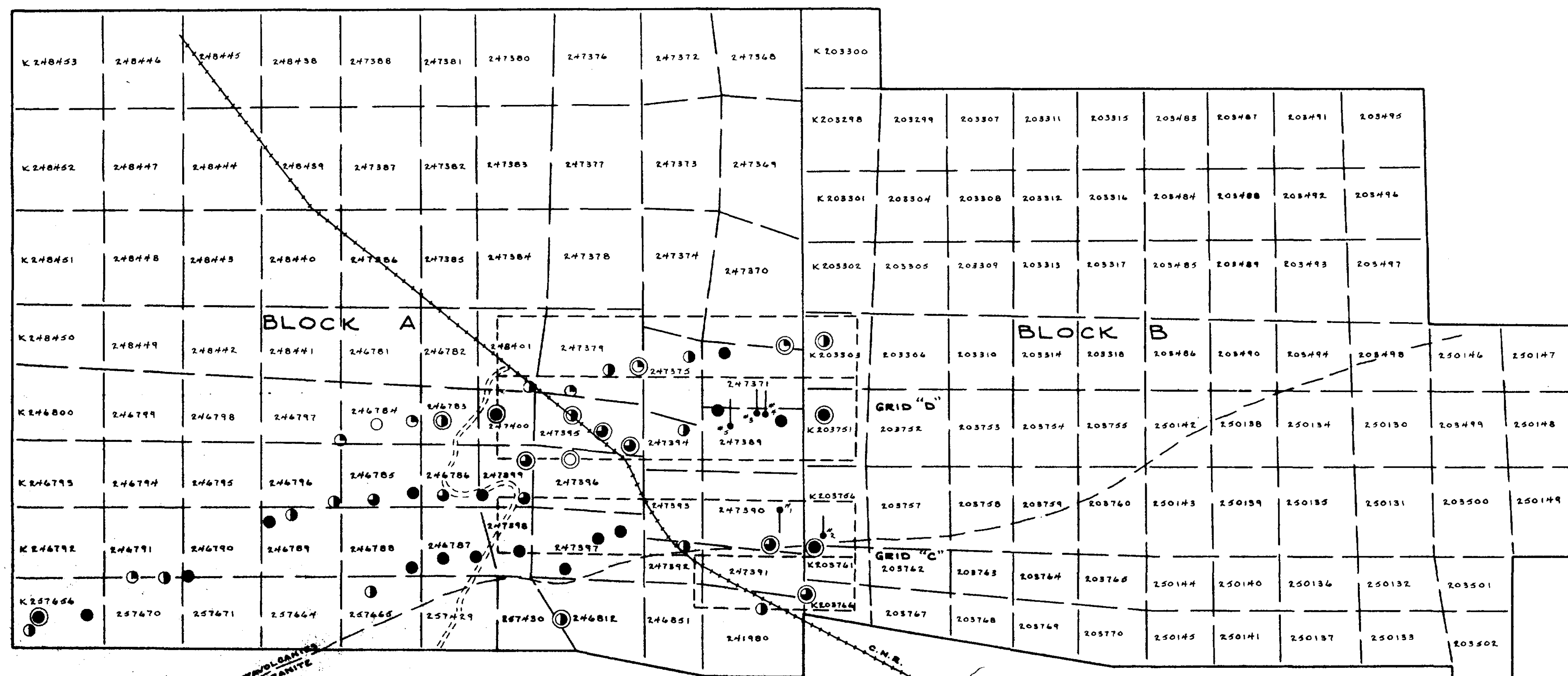
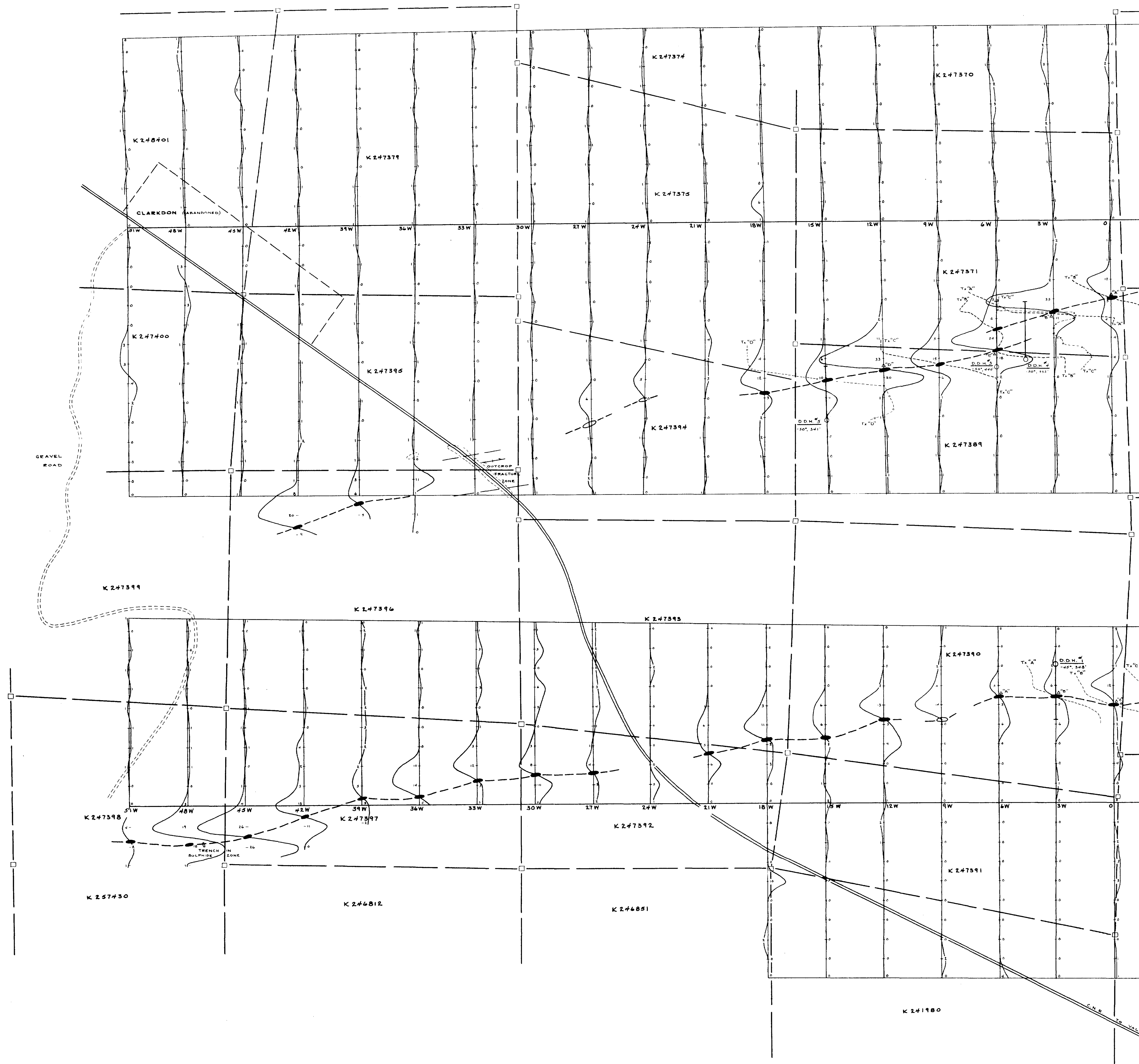


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K 246851	246858	246855	246860	247386	247385	247384	247378	247374	247370	K 203301
K 246850	246859	246852	246861	246781	246782	246781	247379	247375	247371	K 203302
K 246800	246799	246798	246797	246784	246783	246782	247376	247372	247368	K 203303
K 246795	246794	246795	246796	246785	246786	246787	247381	247377	247373	K 203304
K 246791	246791	246790	246789	246788	246787	246786	247382	247378	247374	K 203305
K 246786	246787	246786	246785	246784	246783	246782	247383	247379	247375	K 203306
										K 203307
										K 203308
										K 203309
										K 203310
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										K 203312
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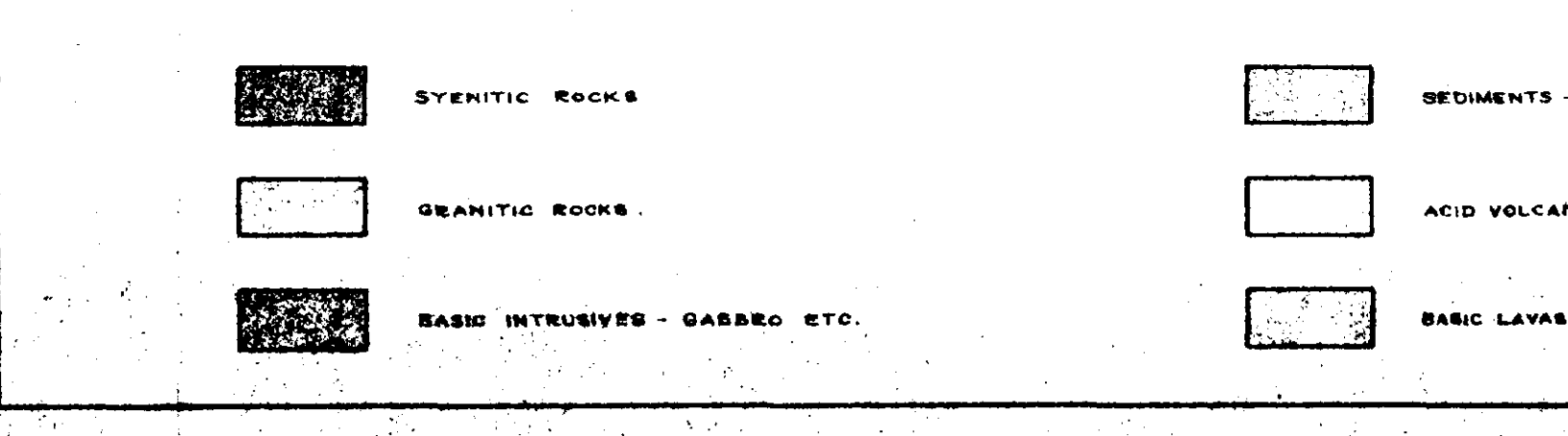
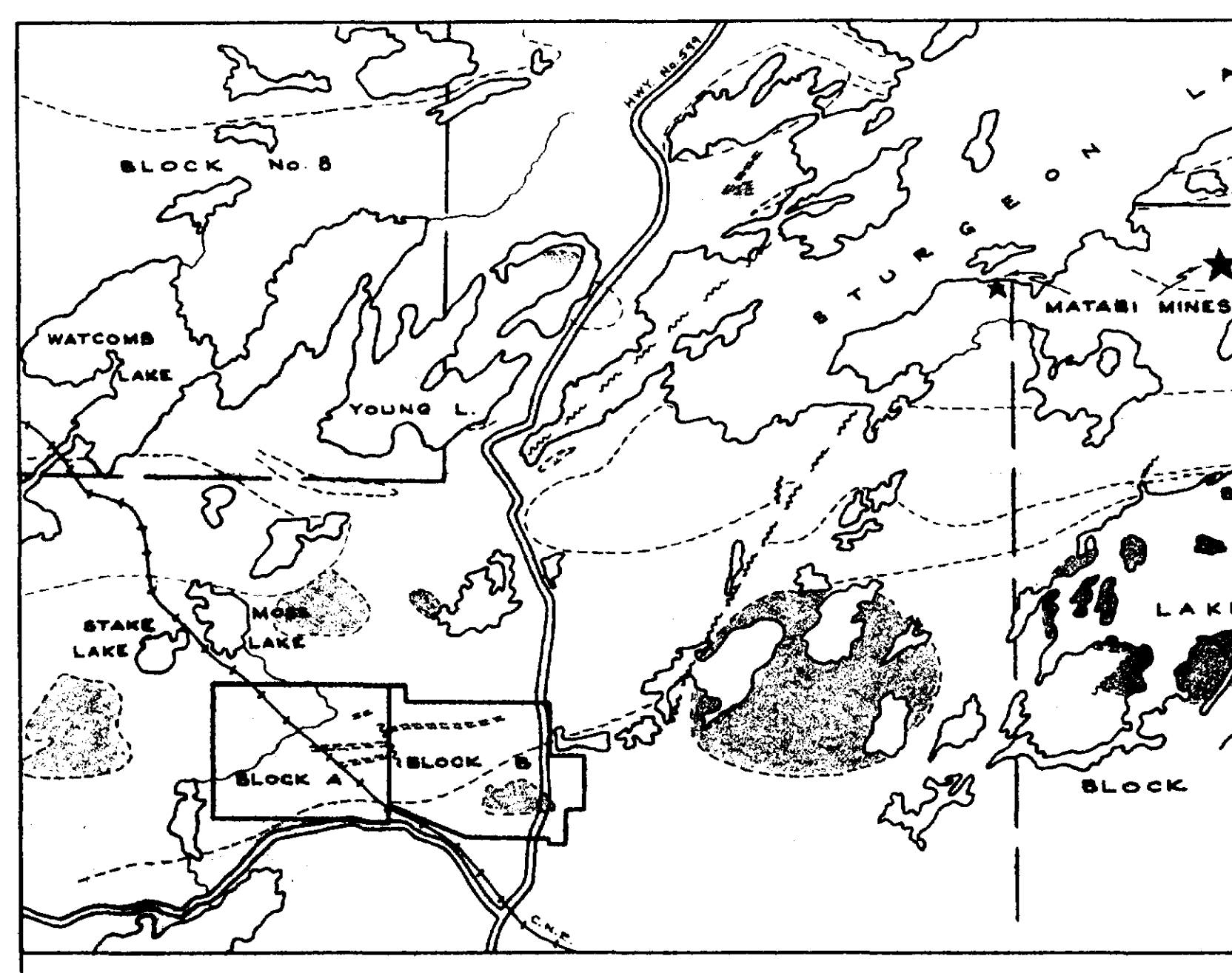


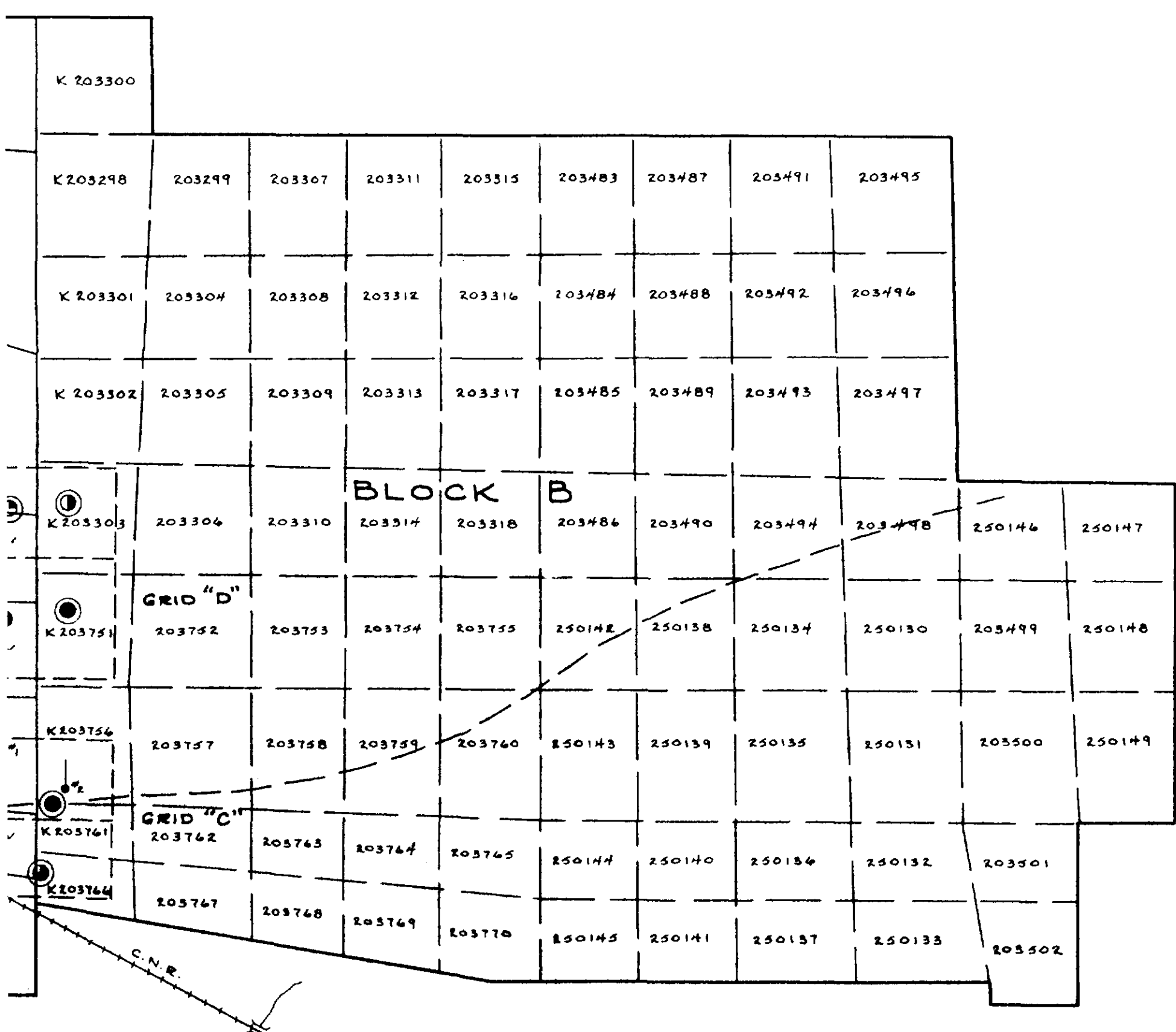
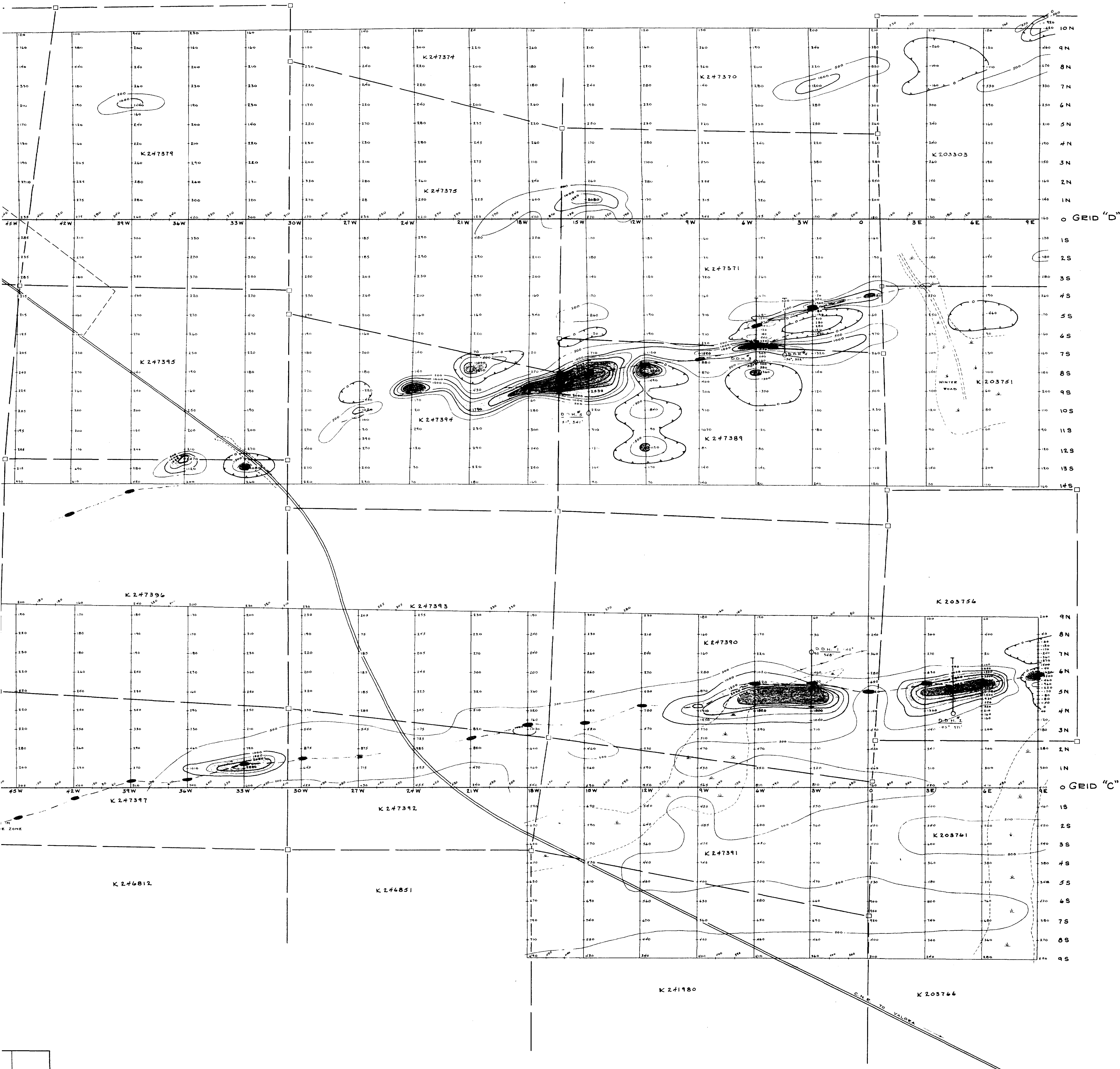
PROPERTY PLAN
SCALE: 1" = 1/4 MILE

APPROXIMATE CONTACT
MAP P. 252
UNCONFORMABLE
GABBRO

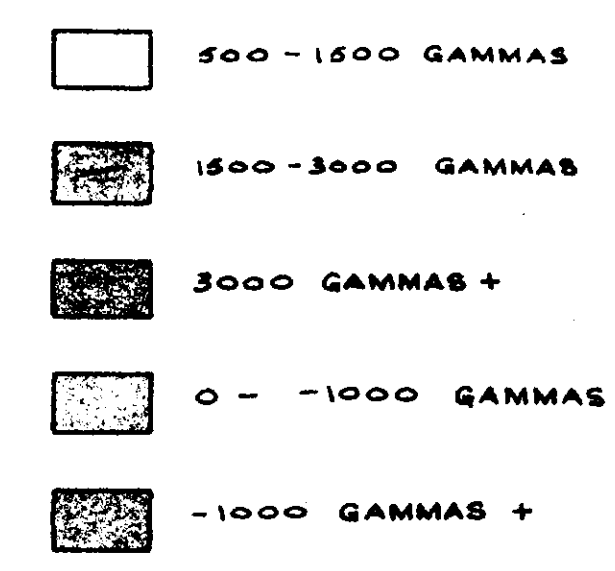
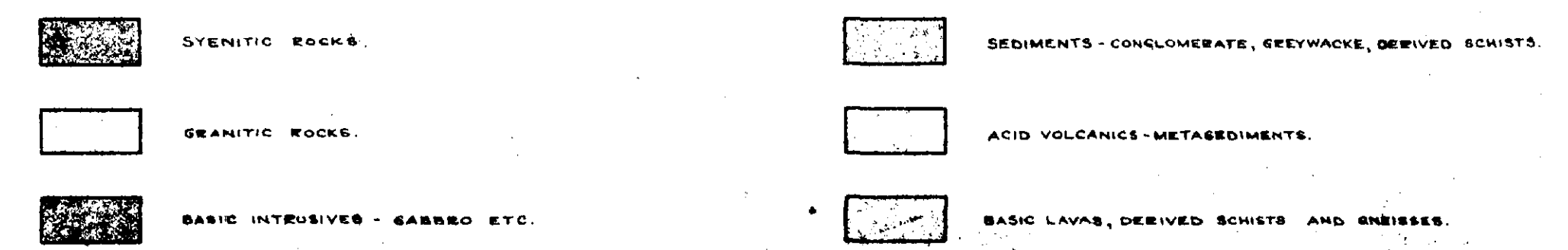
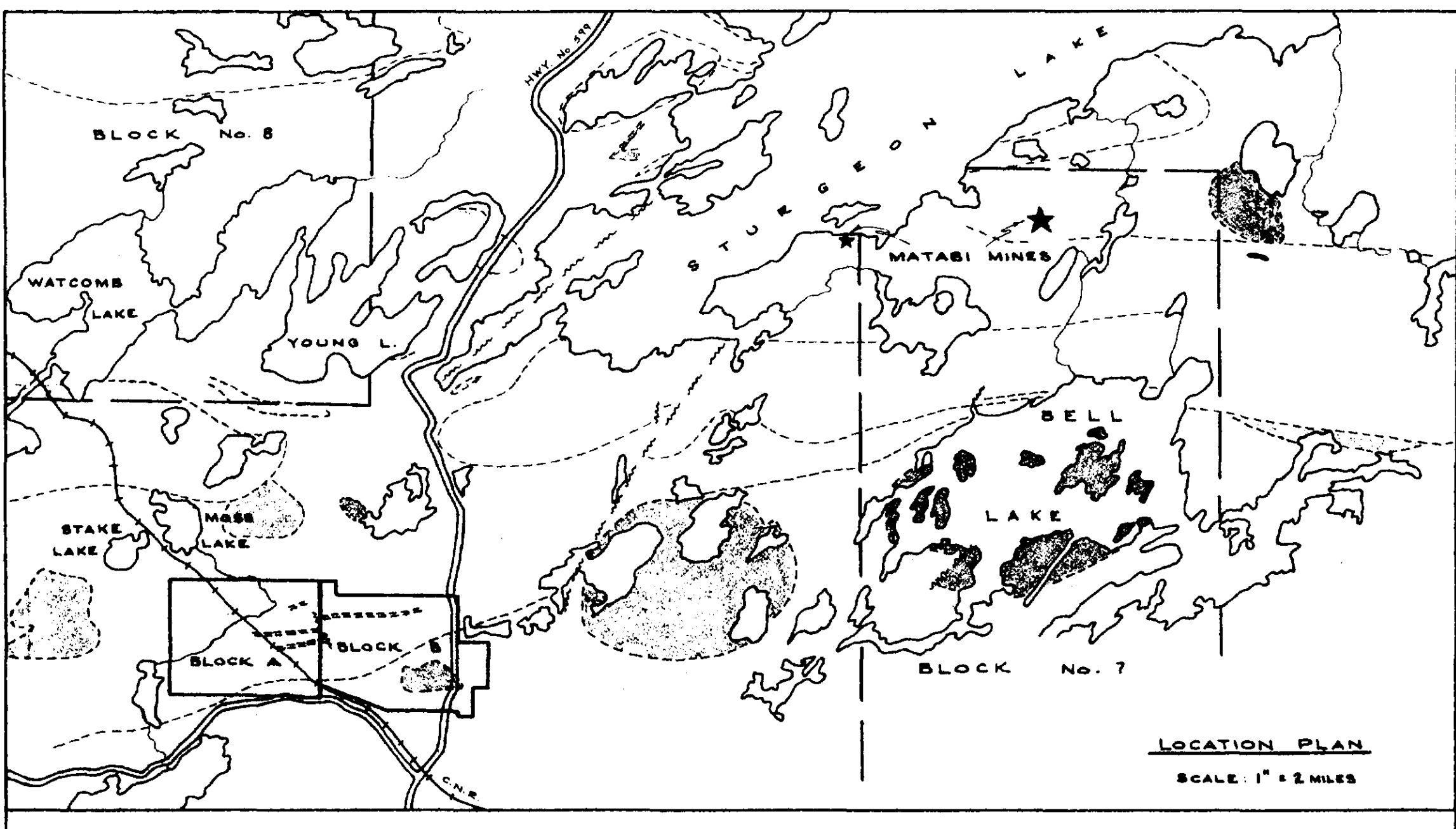


PROPERTY PLAN
SCALE: 1" = 1/4 MILE



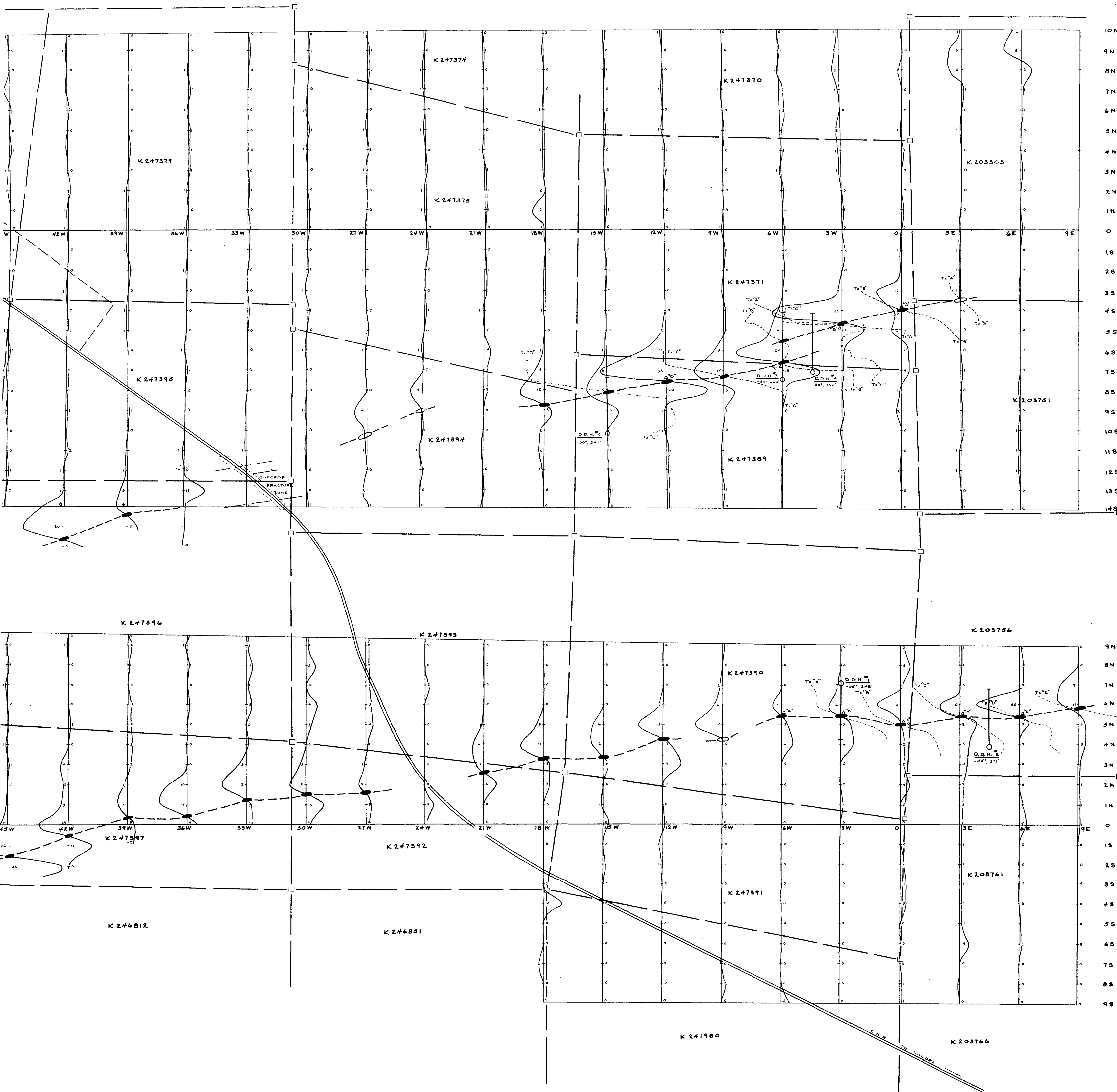


PROPERTY PLAN
SCALE: 1" = 1/4 MILE



NEW CALUMET - ZENMAC METAL MINES
 CLARKDON - VALORA PROPERTY
 STURGEON LAKE AREA
MAGNETOMETER SURVEY
 SCALE: 1 INCH = 200 FEET NOV. 1970.
 PIONEER CONSULTANTS LIMITED

1# 5000 - 524128-005

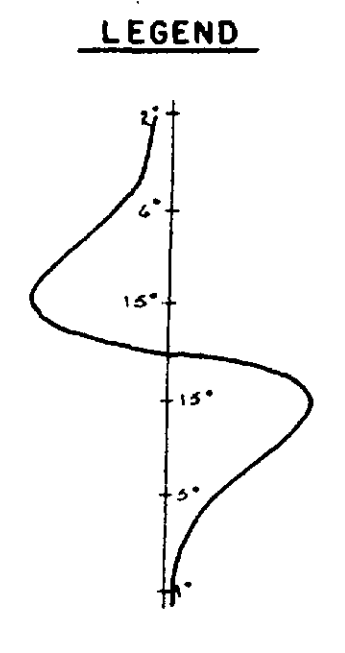


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11S
12S
13S
14S

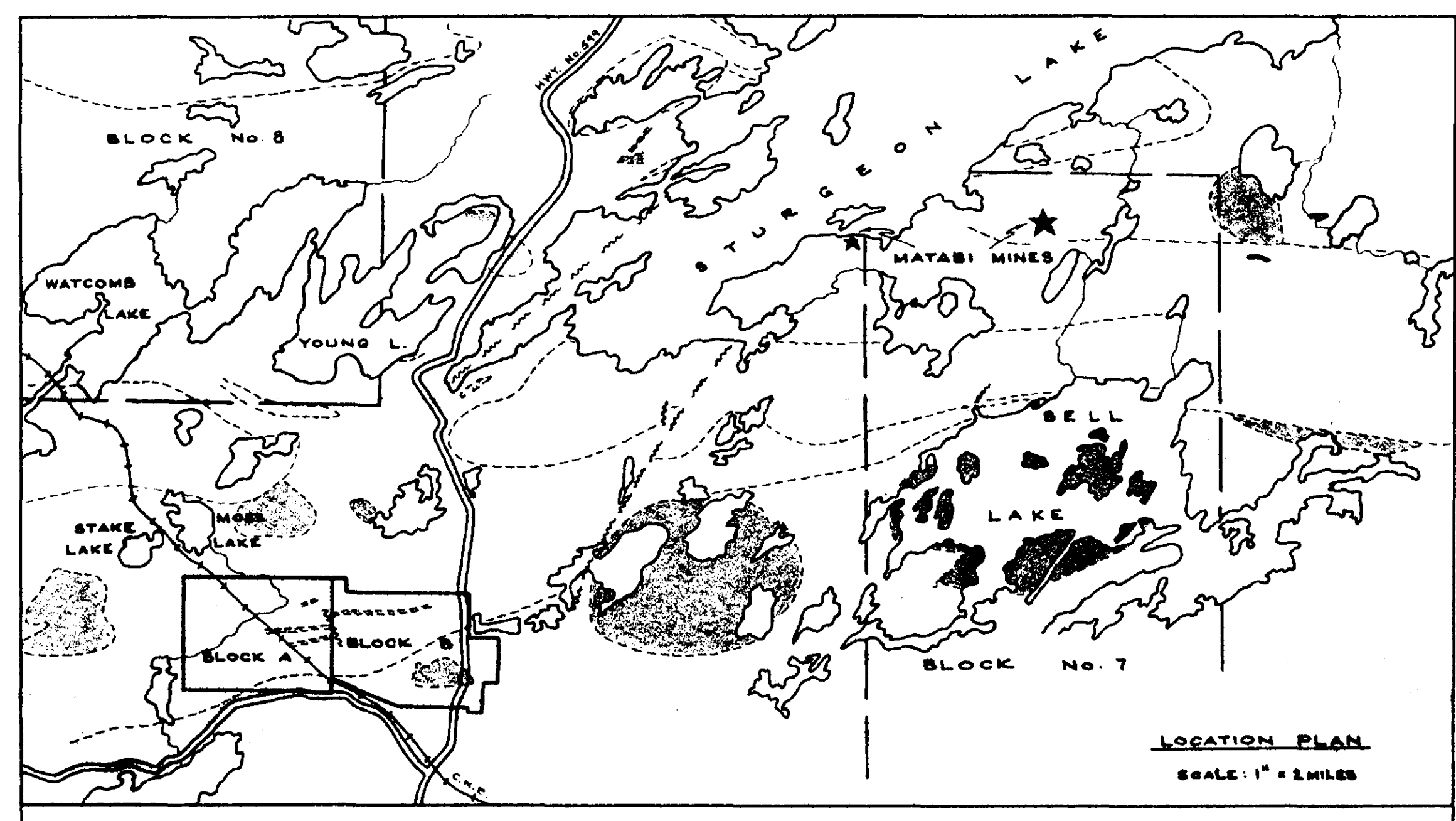
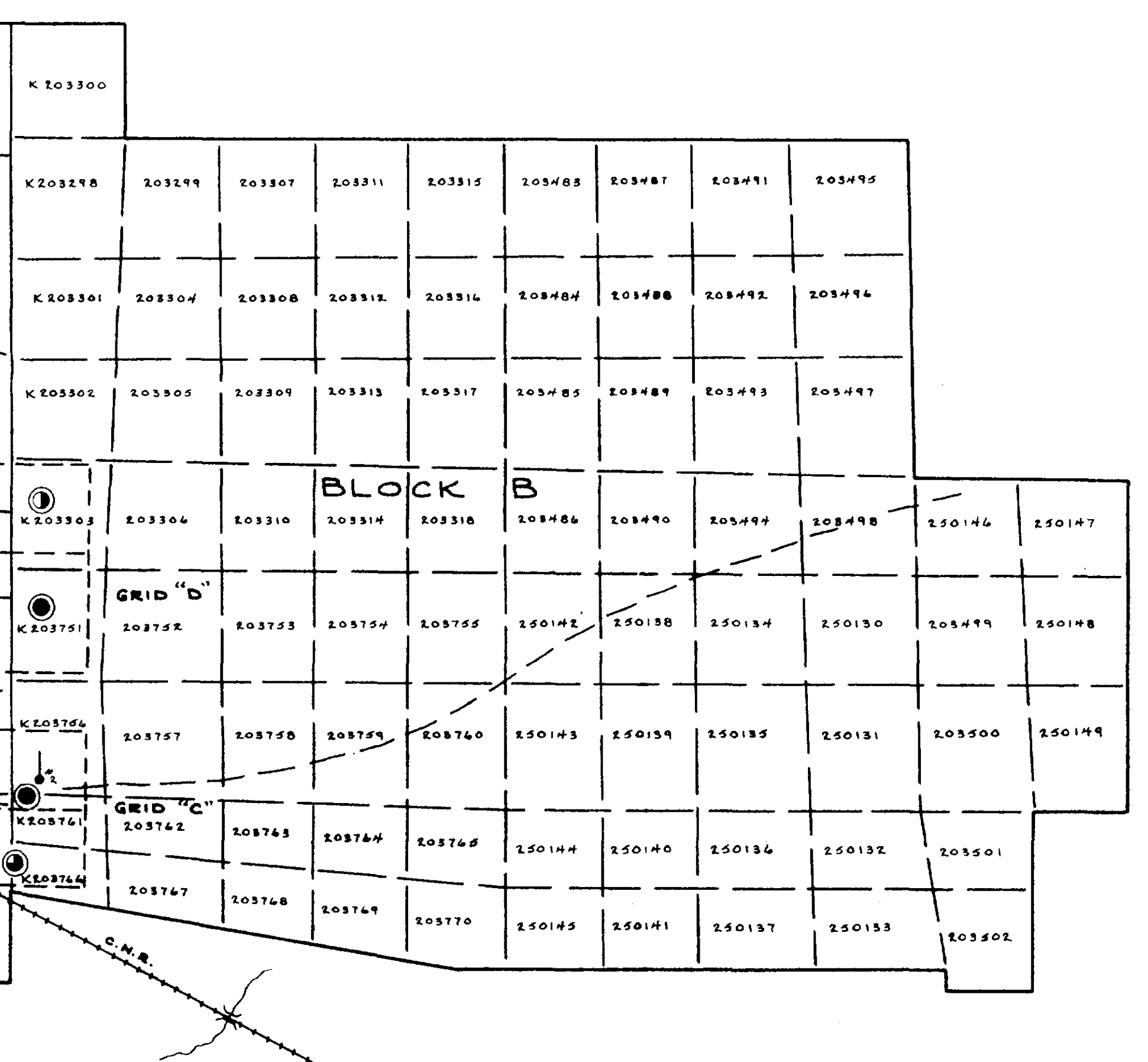
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3S
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5S
6S
7S
8S
9S

GRID "C"



- INST. SHARPE SE-200 VERTICAL LOOP
- BROADSIDE METHOD
TRANS. 300' EAST OF RECEIVER
- DETAIL METHOD
TRANS. FIXED ON CONDUCTOR AT 7"
- CONDUCTOR AXIS
- DRILL HOLE COMPLETED



- SYENITIC ROCKS
- GRANITIC ROCKS
- BASIC INTRUSIVES - GABBRO ETC.
- SEDIMENTS - CONGLOMERATE, GYPSUMS, DERIVED SCHISTS
- ACID VOLCANICS - METASEDIMENTS
- BASIC LAMAE, DERIVED SCHISTS AND GNEISSES

NEW CALUMET - ZENMAC METAL MINES
CLARKDON - VALORA PROPERTY
STURGEON LAKE AREA
ELECTROMAGNETIC SURVEY
 SCALE: 1 INCH = 200 FEET
 NOV. 1970.
 PIONEER CONSULTANTS LIMITED

