

90H/12E
GEOLOGICAL, GEOCHEMICAL, &
GEOPHYSICAL

REPORT

ON

THE 316 GROUP
Area 7
HARRISON LAKE AREA, B.C.

(49°N, 121°W)

by

R.A. GONZALEZ, (Geologist)

endorsed by

WALTER E. CLARKE, B.Sc., P. Eng.

for

GIANT EXPLORATIONS LIMITED (N.P.L.)
Suite 2410, Pacific Centre
700 West Georgia Street,
Vancouver 1, B.C.

December 18, 1972

4071

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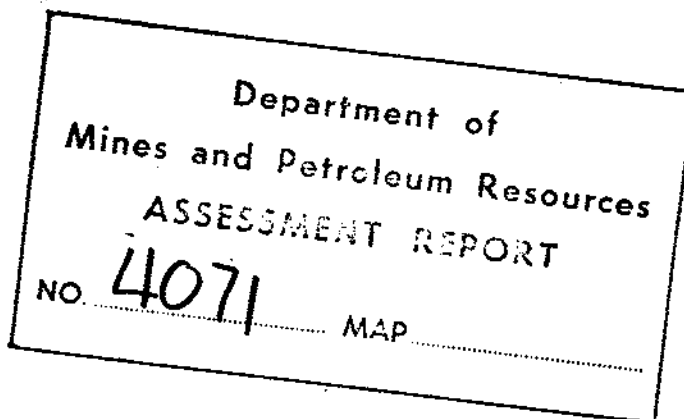


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INTRODUCTION

Giant Explorations Limited (N.P.L.) and Mascot Copper Mines Limited (N.P.L.) are carrying out a comprehensive exploration program in the area surrounding the Old Settler Mountain. The property consists of 530 mineral claims, and it is bounded on the west by Harrison Lake, on the south by Bear Creek, on the north by the Cogburn Creek Valley, and on the east by the Giant Nickel Mine.

As a result of exploration work carried out in 1970 and 1971, seven target areas were chosen for detailed investigation in the 1971 season, detailed work was completed on six of the areas. The last area, outlined late in the 1971 season, was examined in 1972, and one of the completed six target areas was re-examined. Surveyed grids were established and this was followed by geological mapping, together with geochemical and geophysical surveys.

This report describes that portion of the 1972 detailed work program completed on target area No. 7. between May 23, 1972 and October 15, 1972.

MAP AND GRID CO-ORDINATE SYSTEMS

The co-ordinate system used on the maps which accompany this report are north and west extrapolations of the Giant Nickel Mine co-ordinates. The numbers on the map represent the distance in feet north (N) and west (W) of the zero point established at the mine site.

The surveyed line grids use a five digit computer format for each station location. The first digit represents the target area number, the second two digits represent the line number and the last two digits represent the station number. For example, 7-34-05 represents Station No. 5 on line 34 in grid area No. 7.

LINE CUTTING

The surveyed grids on each target area were established in the following manner:

An initial base station point was chosen which could be located accurately on air photos and government topographic maps. From this base station, base lines were surveyed using a compass transit with tripod and a survey chain. The base line was cut with axes and marked with colour coded ribbons and parallel lines established at 400 ft. horizontal intervals. Each grid line was run from the base line using a compass, a chain and a clinometer for slope corrections. The grid lines were blazed and flagged and undergrowth cut where

necessary. Individual stations were established at 100 ft. intervals along the grid lines with pickets and colour coded ribbon. Elevations were taken at each station using Thommen altimeters. Claim posts adjacent to grid lines were tied into the grid.

GEOCHEMICAL SURVEY

Geochemical soil samples were taken at 200 ft. intervals along the cross lines. In addition, silt samples were taken at streams which crossed the grid lines. The B soil horizon was sampled wherever possible. A mattock was used for trenching and the sample was placed in Kraft wet-strength envelopes using a trowel. All sample locations were flagged and marked with colour coded ribbon and numbered according to the grid co-ordinate system.

Fraser Laboratories Ltd., 1175 West 15th., Street, North Vancouver, assayed the samples for total nickel and copper using the following procedure: One-half gram of the -80 mesh fraction was digested with nitric and perchloric acid. The samples were heated until the perchloric acid was consumed. This was followed by bulking the sample to standard volume. Values for nickel and copper were obtained with an atomic absorption spectrometer.

MAGNETOMETER SURVEY

The magnetometer surveys of the grid areas were carried out using a MacPhar M700 magnetometer as a field instrument and a "Sharpe" Model A2 vertical force magnetometer as a base station control instrument. The base station instrument was located at the base camp well away from any metallic objects and variable power sources. This instrument was read hourly. A reading was taken at each 100 ft. station on the grid lines with the field instrument. The time was noted for each reading in the field book. At the end of each survey day the field readings were corrected using the diurnal graph plotted from the base station data.

GEOLOGICAL MAPPING

Geological mapping on the target area was carried out by Mr. R. Gonzalez, B.Sc., M.Sc. (Geology) and Mr. B. Yorston, B.Sc. (Geology). A summary of their combined work on Area 7, as written by Mr. Gonzalez, follows:

INTRODUCTION

Geological mapping of Area 7 has been completed on a detail target-area basis using both grid-line and loop traverses. Because the topography is rugged, with abundant cliffs, the use of grid lines for mapping control was limited to the valley bottom and lower slopes. Daily loop traverses, from a fly camp, using aerial photographs and compass and chain for control, were used to map the ridge tops and upper slopes. This report deals only with the lower part of Area 7 that is covered with grid lines.

Sulfide mineralization, pyrrhotite and chalcopyrite, occurs as disseminated and interstitial grains within bodies of hornblende pyroxenite.

LOCATION AND ACCESS

Area 7 is located on the south side of Cogburn Creek just west of Area 4. Elevations vary from 1200 feet to over 3500 feet.

Access to the area is by foot along an old logging road that is over-grown by 8-10 year old alder trees. In mid-October this road was bulldozed open by the logging operation to gain access to a fire; vehicle access to Area 7 is now available.

GEOLOGY - ROCK TYPES

Although examination of Area 7 has indicated scattered outcrops, a fairly detailed mapping of the rocks and structures and general prospecting have been conducted. Rock exposures amount to less than 5 percent of the total areal extent of the area.

DIORITE

This unit is the most abundant rock type, and represents more than 90% of the exposed rock. The diorite is not much unlike the diorite found in other target areas. It is generally gray, medium-grained, equigranular, hornblende diorite, the hornblende content varies from 40 to 80%, usually about 50%. Magnetite is usually absent, but locally shows sporadic distribution. It is interesting to note that the diorite becomes more leucocratic away from the diorite-pyroxenite contacts.

PYROXENITE

Pyroxenite is the next most common rock type. Generally it occurs as small isolated bodies or as large elongate bodies. For the most part the elongate bodies are made up of the hornblendic phase. It is coarse-grained and dark brownish black hornblende pyroxenite. The poikilitic texture

is commonly visible, and the poikilitic hornblende crystals are unaltered. Non-poikilitic hornblende crystals may locally show minor chlorite alteration. Sulfides are commonly present only in the hornblende pyroxenites. Sulfide mineralization is impressive, both pyrrhotite and chalcopyrite are present. Pyrrhotite occurs as lacy interstitial material and as clusters, disseminated pyrrhotite is rare. Chalcopyrite is only associated with pyrrhotite and almost exclusively found in the centre of the pyrrhotite.

HORNBLENDITE

There are probably at least two types of hornblendite. The most common type is composed of large, 5 mm., black hornblende crystals with plagioclase feldspar filling the remaining spaces. This rock type appears to occupy a contact zone between the diorite and pyroxenite; it is usually slightly mineralized. Hornblendite dykes are found cutting the pyroxenites. The composition and textures of the dykes vary from almost entirely fine- to coarse-grained black hornblende to coarse-grained black hornblende with interstitial gray coloured plagioclase. Normally the dykes are unmineralized.

INTERPRETATION OF RESULTS

Geochemical Survey

High values in nickel and copper occur at several localities and are anomalous for this area. For the most part these anomalous areas outline the near surface existence of nickel-copper mineralization concentrated in ultrabasic rocks.

Geophysical Survey

The magnetometer survey indicated a strong north-south trend within the area. This trend maybe caused by either structures or more likely by long narrow ultramafic bodies.

Geological Mapping

Although outcrops are few and scattered it is suggested that ultramafics are present in two forms; isolated bodies a few tens of feet in diameter and as long narrow bodies with their long axis trending north-south.

Conclusion

A ground Turam Survey over Area 7 outlined several anomalous areas. These anomalous areas also have coincident high geochemical values and high magnetometer response; they are also on or near geologically favourable ground. One such coincident anomaly was drilled with two short X-ray drill holes, and the results are favourable enough to warrant more drilling.

PERSONNEL

Line cutting and geological mapping, on part of 316 Group, was carried out under the writer's supervision from May 23, 1972 to August 9, 1972. The personnel were as follows:

Harry Bruce	4474 W 5th., Ave., Vancouver, B.C.
Gill Gesser	5012 Roslyn Ave., Montreal, Quebec.
Dorothy Gonzalez	#1-1621 St. Georges Ave., North Van., B.C.
Ralph Gonzalez	#1-1621 St. Georges Ave., North Van., B.C.
Michael Rosentzveig	4805 Circle Road, Montreal, Quebec.
Dave Marley	588 Alpine Cresnet, North Vancouver, B.C.
Bob Yorston	10045 - 161 Street, Surrey, B.C.

The personnel involved with the Geochemical and Magnetometer survey were as follows: (Aug., 31, - Sept., 27, 1972)

Brad Hoglan	c/o Pretty's Timber Ltd., Harrison Lake, B.C.
Don McCool	2073 West Keith Rd., North Vancouver, B.C.
Doug MacKinnon	2949 West 4th., Ave., Vancouver, B.C.
Bob Yorston	10045 - 161 Street, Surrey, B.C.

EXPENDITURES

A cost statement regarding work done on the 316 Group.

Geological mapping and line cutting,
May 23rd, to August 9th, 1972.

Crew

Harry Bruce	13 days @ \$24/day	\$312.00
Gill Gesser	17 days @ \$22/day	374.00
Dorothy Gonzalez	2 days @ \$20/day	40.00
Ralph Gonzalez	10 days @ \$40/day	400.00
Dave Marley	1 day @ \$22/day	22.00
Michael Rosentzveig	13 days @ \$22/day	286.00
Bob Yorston	1 day @ \$34/day	34.00
	Labour costs	<u>\$1,468.00</u>

Geochemical and Geophysical Surveys

August 31, - September 2nd. September 22, - September 27.

Brad Hoglan	4 days @ \$20/day	\$ 80.00
Don McCool	3 days @ \$20/day	60.00
Doug MacKinnon	3 days @ \$20/day	60.00
Bob Yorston	4 days @ \$34/day	136.00

GEOLOGICAL MAPPING & LINE CUTTING

Vehicle Rental

Truck rental	17 days @ \$9/day	\$153.00
Room and Board 45 man days	@\$17/day	765.00
Labour (Line cutting)		<u>1,012.00</u>
		\$1,930.00

\$1,930.00 x 0.6 (spent on M708-710 Fr claims) = \$1,158.00

Labour (Geological mapping)		400.00
\$400.00 x 0.6 (spent on M708-710 Fr claims) =		240.00
(Geological Mapping)		<u>54.00</u>
		\$1,452.00

GEOCHEMISTRY AND GEOPHYSICS

Vehicle Rental	Truck rental 7 days @ \$9/day	\$ 63.00
Room and board	14 man days @\$17/day	238.00
Labour		336.00
Assaying	90 soil samples @\$1.70/sample assayed for Ni & Cu	153.00
Report preparation R. Gonzalez 2 days	@ \$40/day	<u>80.00</u>
		\$870.00

Declared before me at the

City

of *Vancouver*, in the

Province of British Columbia, this *27*

day of *December 1972* A.D.

Ralph Gonzalez

Jill Turner

A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.
Sub-mining Recorder


CERTIFICATE

I, Ralph A. Gonzalez of the city of North Vancouver
in the Province of British Columbia hereby certify:

1. That I am engaged in work as a Geologist and reside at #1-1621 St. Georges Ave., North Vancouver, British Columbia.
2. That I am presently employed by Giant Mascot Mines Limited.
3. That I have personally done work on the 316 Group of claims.
4. That I have practiced as a geologist in British Columbia for over four years.
5. That I am a graduate of the University of New Mexico with both a Bachelor of Science and a Master of Science degree in Geology.

DATED this eighteenth day of December , 1972.

Signed



Ralph A. Gonzalez
Geologist.

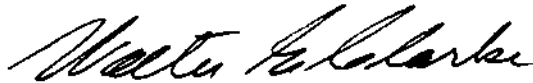
Submitted on behalf of

GIANT EXPLORATIONS LIMITED (N.P.L.)

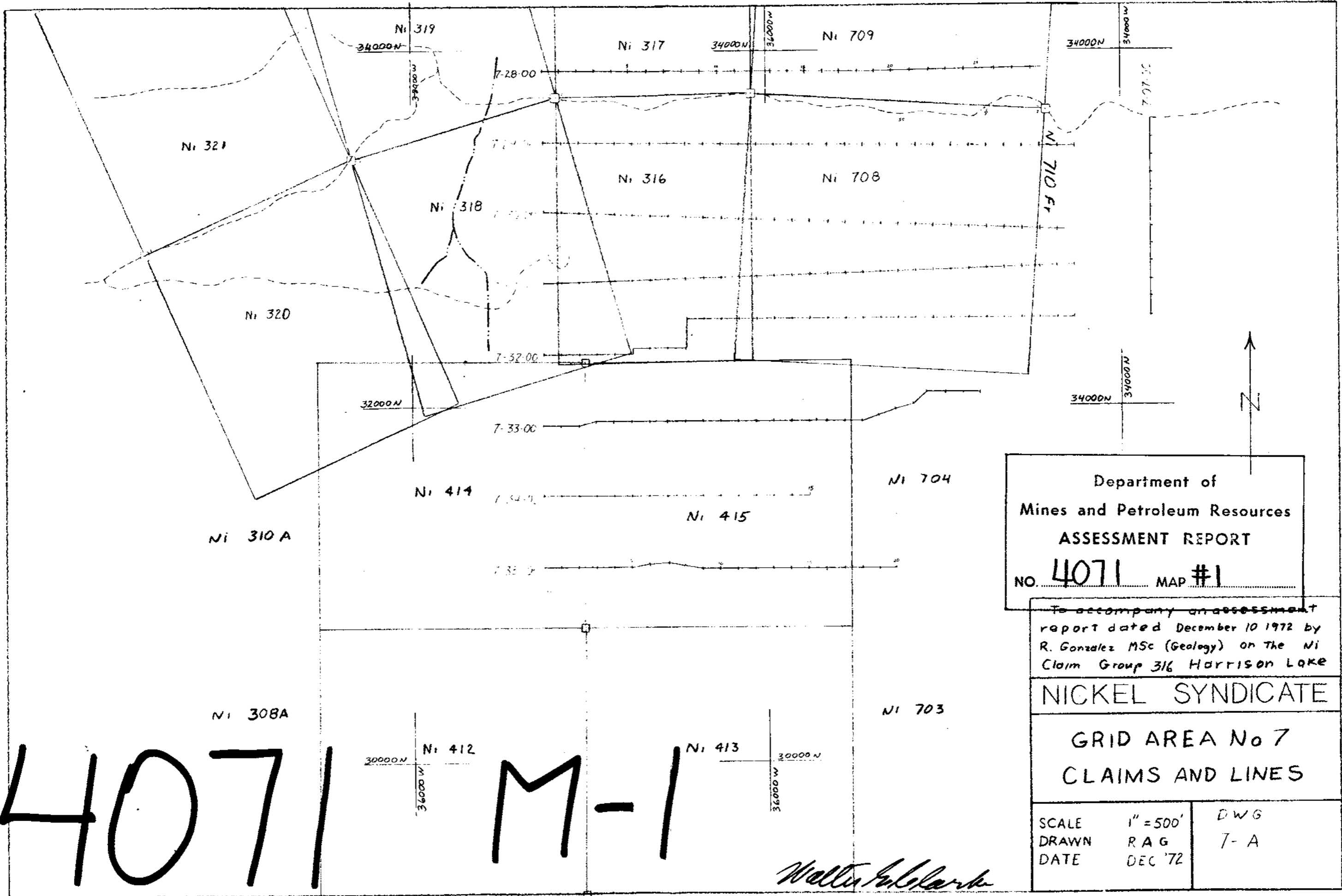


Ralph Gonzalez

Endorsed by



W. E. Clarke, B.Sc., P.Eng.



Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 4071 MAP #1

To accompany an assessment
 report dated December 10 1972 by
 R. Gonzalez MSc (Geology) on the Ni
 Claim Group 316 Harrison Lake

NICKEL SYNDICATE

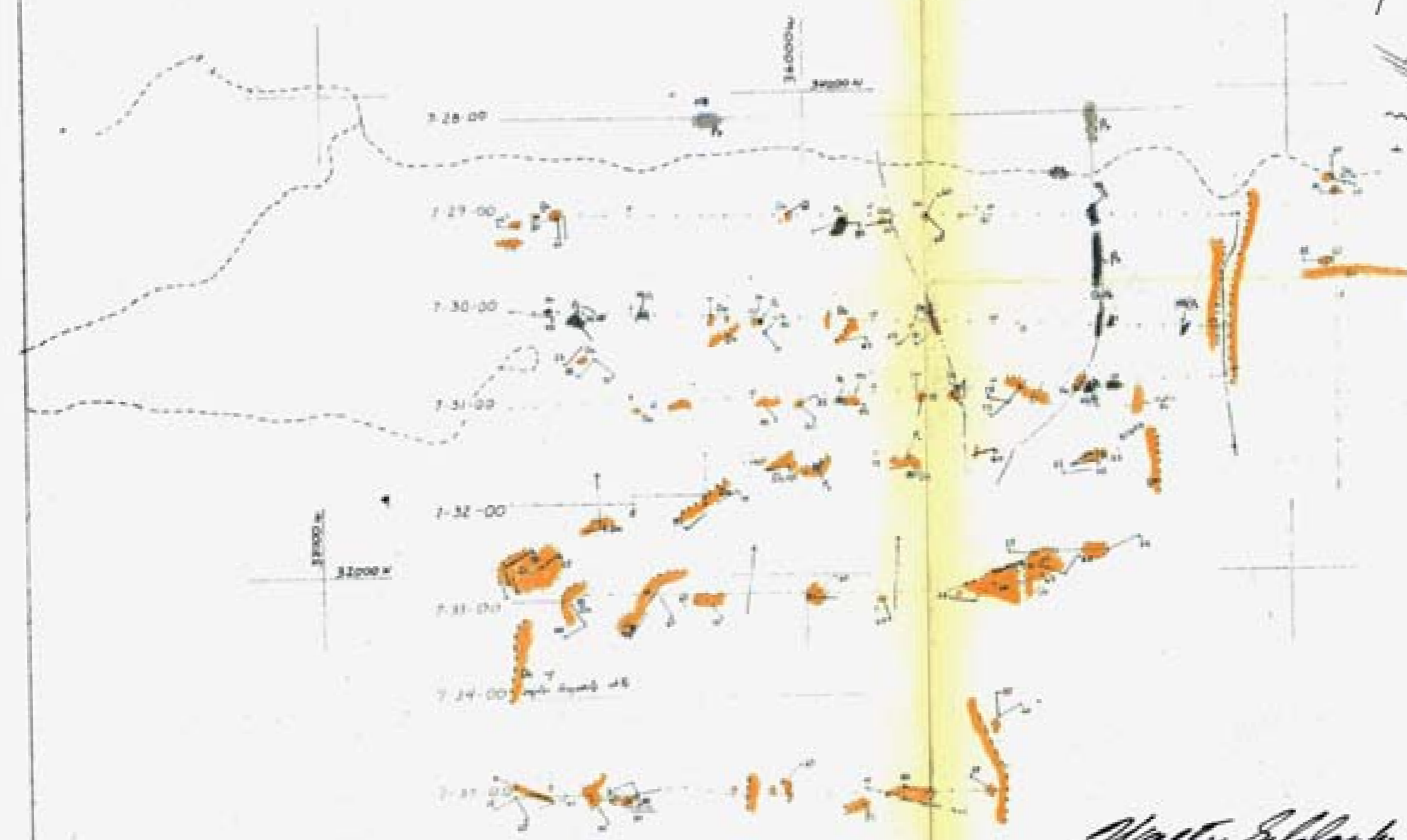
GRID AREA No 7
 CLAIMS AND LINES

SCALE	1" = 500'	DWG
DRAWN	RAG	7-A
DATE	DEC '72	

Walter A. Clark

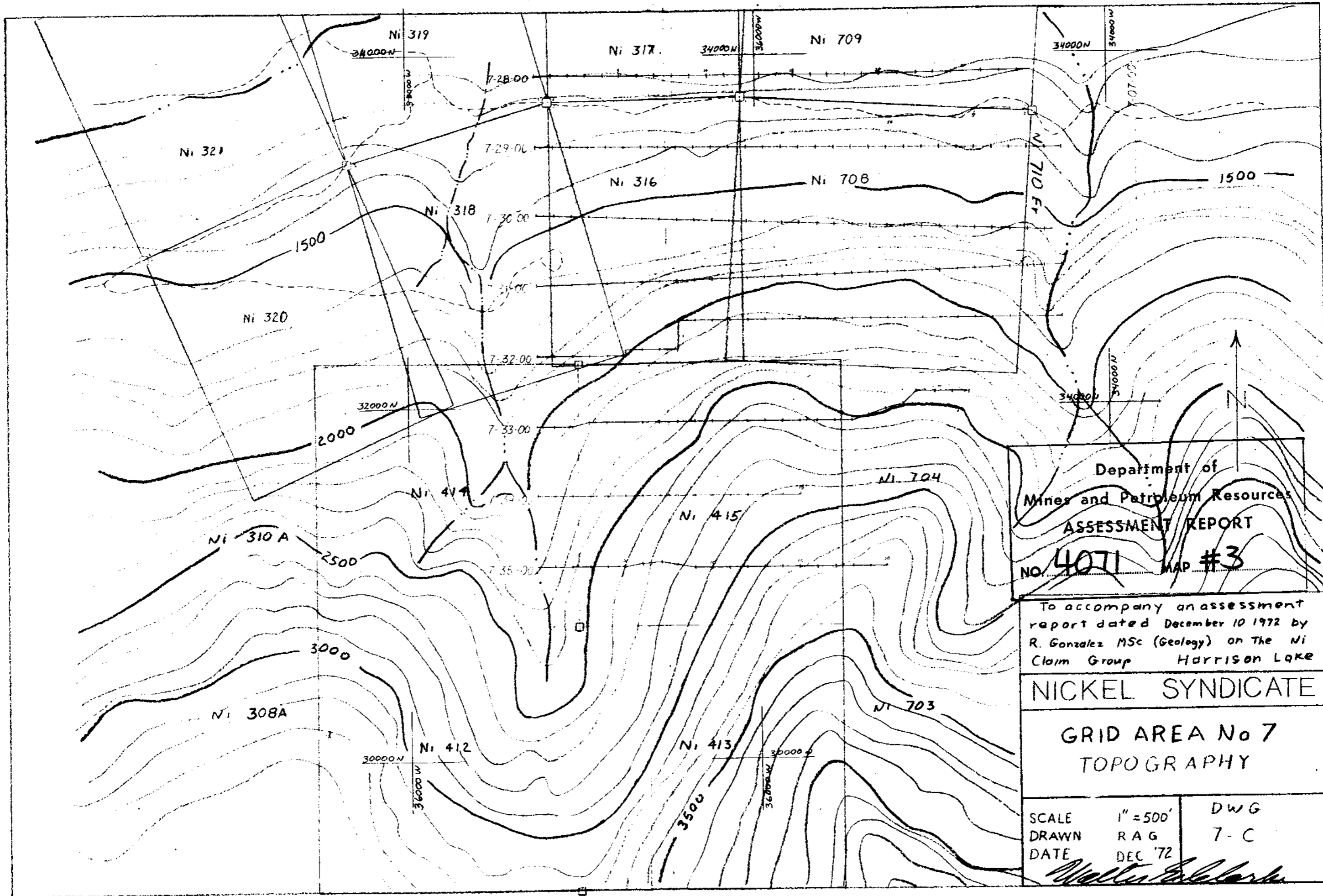
LEGEND

- D_o Diorite
- P_o Pyroxenite
- H_o Hornblende Pyroxenite
- H_o Hornblendite
- Outcrop
- / Joints
- /// Close-spaced Joints
- Faults
- - - Cliff



Department of Mines and Petroleum Resources ASSESSMENT REPORT 4071 #2		
NGR accompany an assessment report dated December 10, 1972 by R. Gonzalez MSc (Geology) on the Ni Claim Group Harrison Lake		
NICKEL SYNDICATE		
GEOLOGY—AREA 7		
SCALE DRAWN DATE	1" = 500' R.A.G. DEC 72	DWG 7-B

Walter Schlarke



Department of
 Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. **4071** MAP #3

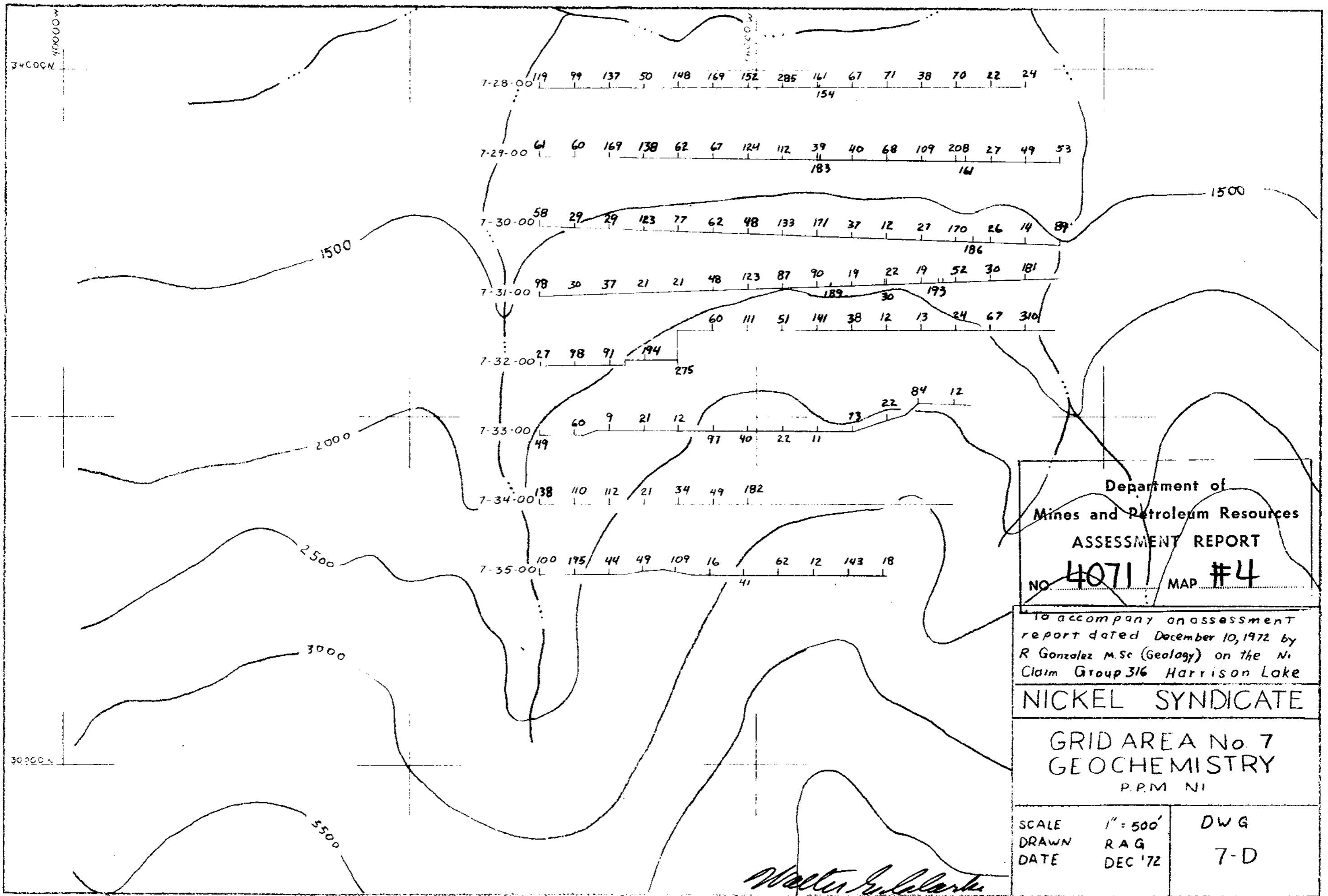
To accompany an assessment
 report dated December 10 1972 by
 R. Gonzalez MSc (Geology) on The Ni
 Claim Group Harrison Lake

NICKEL SYNDICATE

GRID AREA No 7
TOPOGRAPHY

SCALE	1" = 500'	DWG
DRAWN	RAG	7-C
DATE	DEC '72	

Walter J. ...



Department of
Mines and Petroleum Resources

ASSESSMENT REPORT

NO. **4071** MAP **#4**

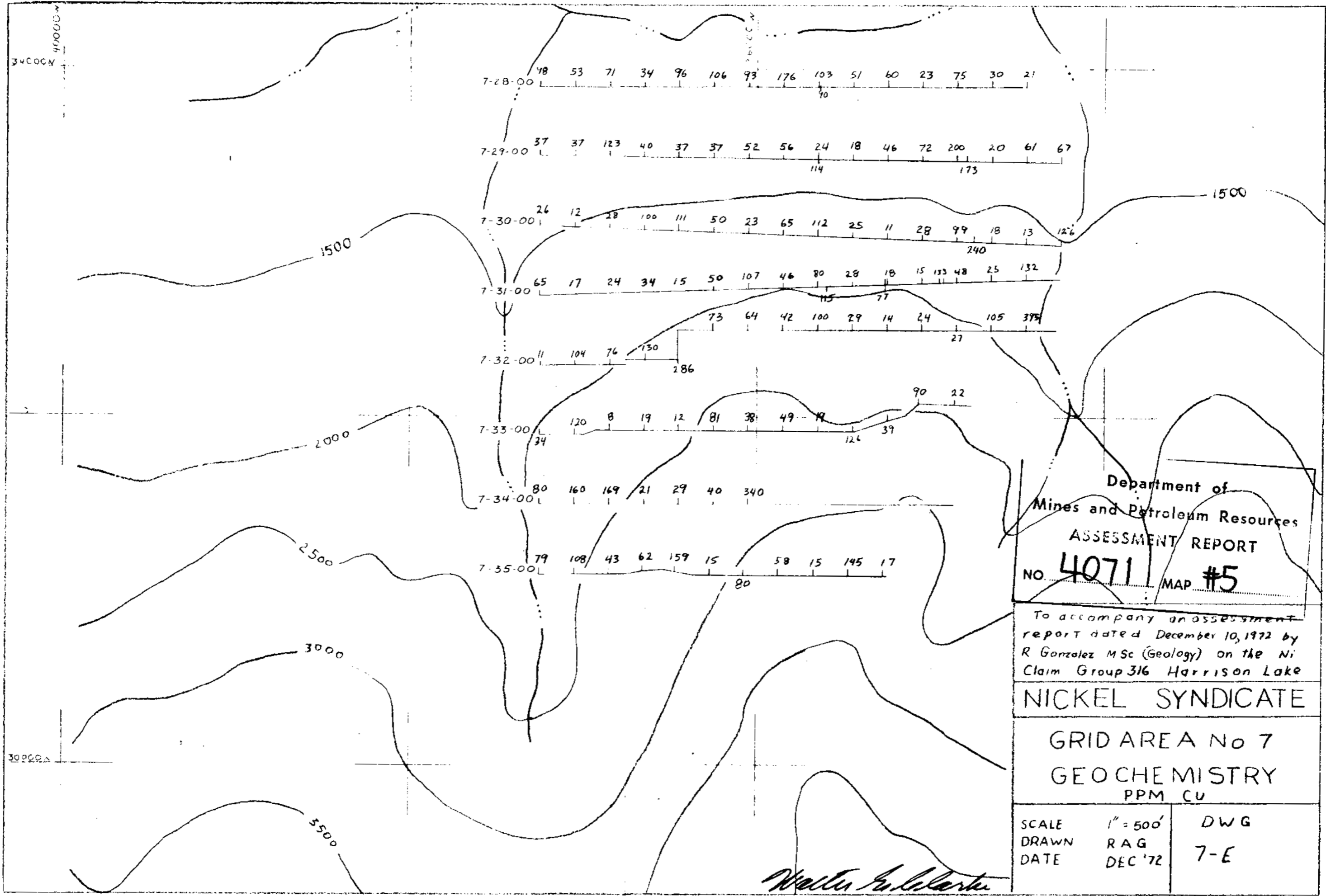
To accompany an assessment
report dated December 10, 1972 by
R. Gonzalez M.Sc. (Geology) on the Ni
Claim Group 316 Harrison Lake

NICKEL SYNDICATE

GRID AREA No. 7
GEOCHEMISTRY
P.P.M. NI

SCALE	1" = 500'	DWG
DRAWN	RAG	
DATE	DEC '72	7-D

Walter S. Lelander



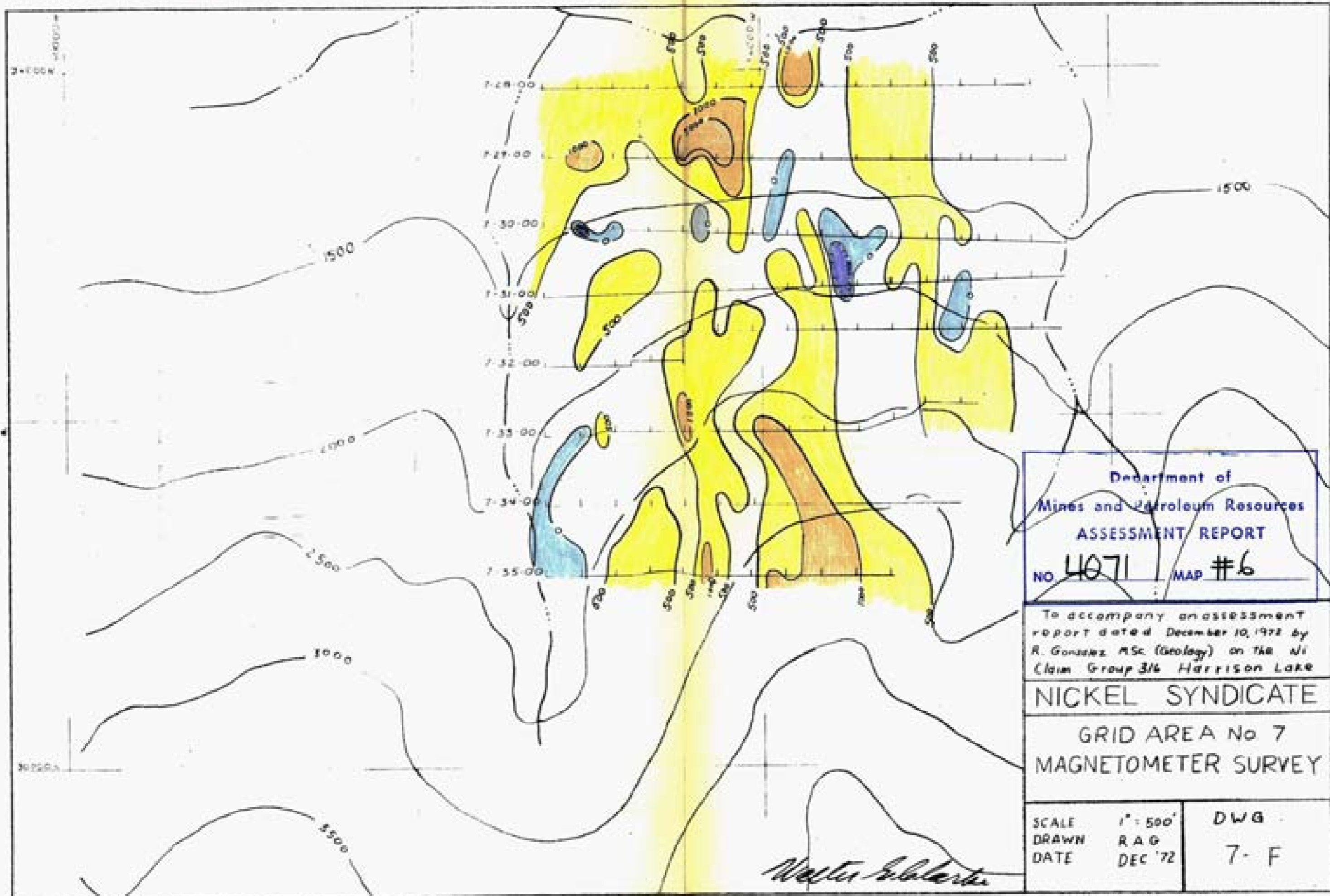
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 4071 MAP #5

To accompany an assessment
report dated December 10, 1972 by
R. Gonzalez MSc (Geology) on the Ni
Claim Group 316 Harrison Lake

NICKEL SYNDICATE

GRID AREA No 7
GEOCHEMISTRY
PPM CU

SCALE	1" = 500'	DWG
DRAWN	RAG	7-E
DATE	DEC '72	



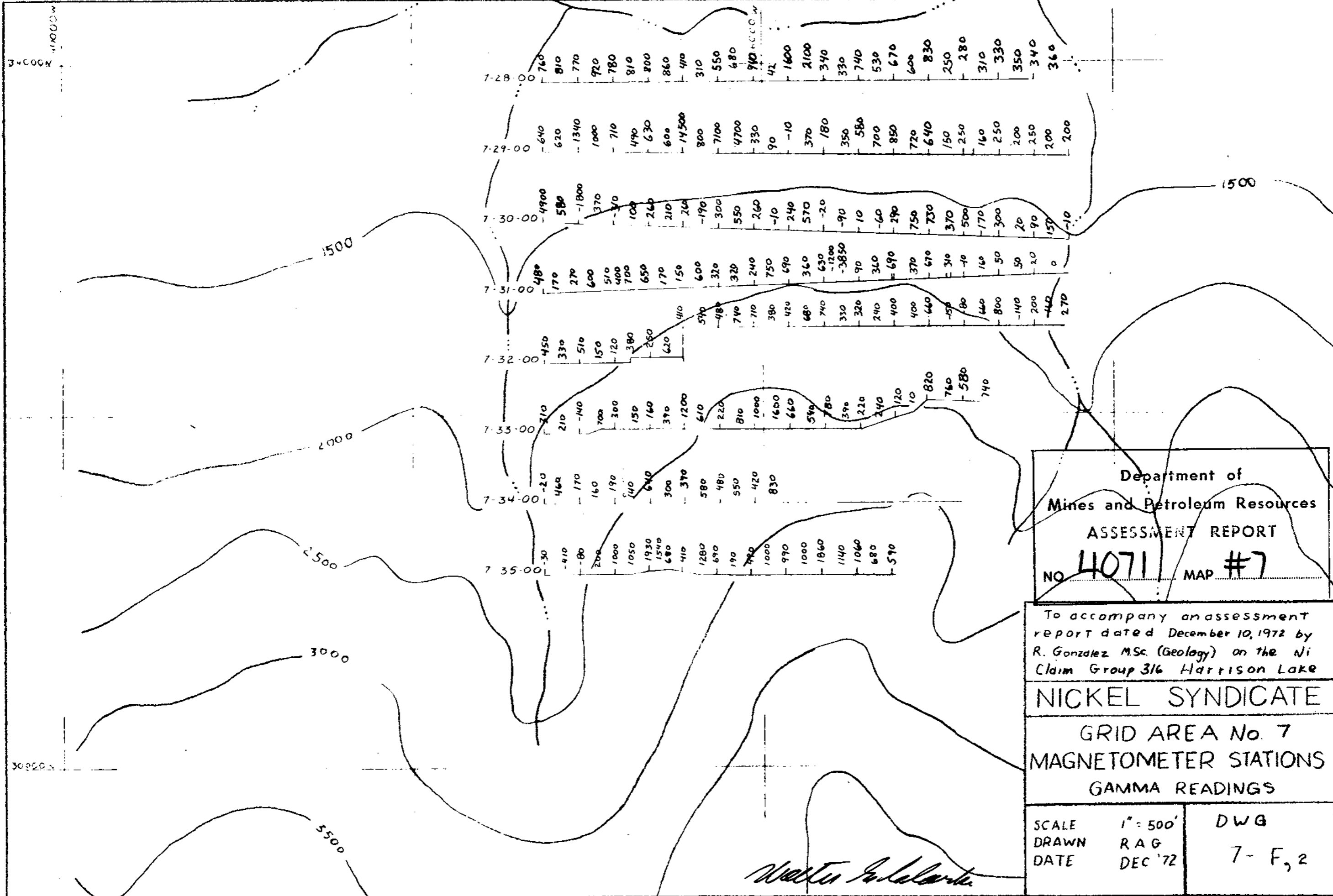
Department of
 Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. 4071 MAP #6

To accompany an assessment
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 R. Gonzalez MSc (Geology) on the Ni
 Claim Group 316 Harrison Lake

NICKEL SYNDICATE

GRID AREA No 7
MAGNETOMETER SURVEY

SCALE	1" = 500'	DWG
DRAWN	RAG	
DATE	DEC '72	7-F



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **44071** MAP # **7**

To accompany an assessment
report dated December 10, 1972 by
R. Gonzalez M.Sc. (Geology) on the Ni
Claim Group 316 Harrison Lake

NICKEL SYNDICATE
GRID AREA No. 7
MAGNETOMETER STATIONS
GAMMA READINGS

SCALE	1" = 500'	DWG 7-F, 2
DRAWN	RAG	
DATE	DEC '72	