

827

GEOCHEMICAL AND MAGNOTOMETER SURVEY

- TIO BURACHO GROUP

NORTH END OF PHOENIX CAMP  
(49° 118° S.E.)

by

H. H. SHEAR, P. Eng.

Owners:	M - 138:	H. H. Shear
	Tio Buracho 1 - 6:	I. McCallum
	Tio Buracho Fr.:	I. McCallum
	Glenside Fr.:	I. McCallum

Work Completed:

July 18 - October 20, 1966

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# 7, 8

## INTRODUCTION

The purpose of this report is to describe a work program carried out on the Tio Buracho Group, and to present and interpret the data collected. This data consists of a magnetometer and geochemical survey. Control for this survey was the location of Providence Lake. None of the old Crown Grant corners could be located, consequently the location of claims with respect to picket lines is not precise. Results obtained from mag and soil assay data seem fairly inter-dependent, therefore interpretation of the data is combined in one section.

## CLAIMS DATA

The Tio Buracho Group consists of the following:

Leases: M - 138 (Brandon - L.2382, Brandon Fr. - L. 2403,  
Marshall - L. 2388, Little Annie - L.2389,  
Little Brown - L. 2390, Custer Fr. - L. 1605)  
owner - H. H. Shear  
due date - October 22, 1966

M - 229 (Marshall Fr. - L. 2404)  
owner - H. H. Shear  
due date - April 21, 1967

### Claims:

<u>Name</u>	<u>Expiry Date</u>	<u>Tag No.</u>	<u>Record No.</u>	<u>Owner</u>
Tio Buracho #1	Feb. 11, 1967	652807	22631	I. McCallum
Tio Buracho #2	Feb. 11, 1967	652808	22632	I. McCallum
Tio Buracho #3	Feb. 11, 1967	652809	22633	I. McCallum
Tio Buracho #4	Feb. 11, 1967	652810	22634	I. McCallum
Tio Buracho #5	Feb. 11, 1967	652811	22635	I. McCallum
Tio Buracho #6	Feb. 11, 1967	652812	22636	I. McCallum
Tio Buracho Fr.	Feb. 11, 1967	652813	22637	I. McCallum
Glenside Fr.	Feb. 11, 1967	652806	22638	I. McCallum

## GEOCHEMICAL METHOD

The method used is a determination of copper in parts per million (P.P.M.) using 2,2 - biquinoline and digestion of the sample with hot nitric acid (hot extraction). A 0.01% 2,2 - biquinoline solution is used. It is prepared by dissolving 0.01 grams of 2,2 - biquinoline with 1,000 ml. of isoamyl alcohol.

The soil sample is taken just below the grass roots, where possible, and is dried and screened through a minus 80 mesh sieve. A 0.6 gram sample is taken and added, with 4 ml. of 1:3 nitric acid (conc. nitric acid diluted with 2 parts metal free water to 1 part acid), to a test tube. Simmer for one hour and dilute the sample to 6 ml. with metal free water. A 2 ml. portion of the test solution is drawn and placed in a second test tube. To this is added 4 ml. of 0.01% 2,2 - biquinoline solution and 10 ml. of a prepared buffer solution. The test tube is then shaken vigorously for 30 seconds.

The 0.01% 2,2 - biquinoline reacts with any copper present to form a complex ion which, if present, in sufficient quantity displays a pinkish color. As more copper is present, this color increases in intensity until it can become deep violet. The biquinoline solution (isoamyl alcohol) separates into a separate layer after shaking the test tube. The sample is compared with a set of prepared standard samples to determine the parts per million copper present by color comparison.

The buffer solution, mentioned above, is prepared by dissolving 100 grams of hydrous sodium acetate, 25 grams of hydrous sodium tartrate,

and 5 grams of hydroxylamine hydrochloride in 250 ml. of metal free water. This solution is purified from any contaminating copper by shaking it with a 0.01% dithizone in a carbon tetrachloride solution.

#### MAGNETOMETER : TYPE AND SURVEY METHOD

The instrument used is a Sharpe A-3 Reconnaissance Magnetometer. This instrument measures the vertical component of the earth's magnetic field and can be used as a self-leveling, self-orienting dip needle. Charts supplied with the instrument are used to convert readings to absolute gamma values.

On this project, the instrument was used to make a rapid check of the magnetic properties of the property. To save time, traverses were not looped or closed. It has been indicated on Map No. 1 and in the data tabulation as to where the survey was broken. It is assumed broken at the extremity of all cross-lines. However, where this occurs within a line, the continuity of the cross-section of gamma values is disrupted.

#### WORK PROGRAM

The cutting of picket lines on the Tio Buracho Group commenced on July 18, 1966. During the cutting of these lines, soil samples were collected, dried, and screened to -80 mesh. A sample of the -80 mesh material was placed in a small envelope and retained for assay. Original samples were also stored.

A north - south base line was cut from 0 N, just north of Providence Lake, to 45 N. Cross-lines were cut initially at 400 feet

intervals off the base line. This first phase of work ended August 25, 1966.

Geochemical equipment and chemicals were purchased and a small laboratory for processing the soil samples was set up at the author's home. First assays were commenced on September 12, 1966. The author with prospector, I. McCallum, proceeded to run the first phase samples. This was completed September 20, 1966.

A second program was planned and then carried out. This consisted of extending lines, cutting others at 200 foot intervals, taking more soil samples and running a reconnaissance magnetometer survey. This work took place from September 26 to October 12, 1966. Second phase soil samples were assayed from October 14 - 17, 1966. Results of all work are shown on Maps 1 and 2 in the envelope in the back of this report.

Final work consisted of data compilation, map preparation and report writing, completed from October 18 - 21, 1966.

A breakdown of men and time follows:

H. H. Shear, P. Eng. :

Program organization: July 16 - 17, 1966	1/2 day
Geochemistry Lab. organization: Sept. 4, 9 - 11	2 days
Program extension: Sept. 20	1/2 day
Report c/w maps: Oct. 18 - 20	3 days
Consulting (\$100.00/day)	6 days
Geochemical assaying: Sept. 12 - 19, 1966 (at normal rate \$25.00/day)	8 days

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Ian R. McCallum, prospector - foreman  
wage calc. at \$550.00 per 22 day mo. = \$25.00/day

Line cutting, soil sampling, screening  
Soil samples: July 18 - Aug. 25;  
Sept. 26 - 30;  
Oct. 2 - 12, 1966 48 days  
Geochemical assaying: Sept. 15 - 20;  
Oct. 14 - 17, 1966 10 days  
Data compilation: Oct. 19 - 20, 1966 2 days  
60 days

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John M. MacLean, prospector  
rate - \$25.00/day

Line cutting: Sept. 26 - 30; Oct. 3 - 4, 1966 7 days  
Magnetometer survey: Oct. 6-7; 12-14, 1966 5 days  
12 days

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Alex Von Heyking, student assistant  
rate \$16.00/day

Line cutting, soil sampling, screening:  
July 18 - August 25 32 days

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Frank Horvatin, assistant  
rate \$20.00/day

Line cutting: Sept. 26 - 30; Oct. 3 - 4,  
1966 7 days

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The program involved cutting 58,400 feet of picket lines or approximately 11 miles. A total of 550 magnetometer readings were taken. 606 soil samples were taken and analysed. Some checks were also run with satisfactory results. All work was completed under the author's close supervision.

## INTERPRETATION OF SURVEY

Anomalous results on the property are very sporadic. With regard to soil assays, old workings and logging roads could give rise to a certain amount of contamination.

The prominent trend on the property is NE - SW, as inferred by the map and geochem survey to date. This trend is suggested mainly by mag highs and lows. Geochemical results only vaguely indicate this trend. Geochemical highs are associated with both mag highs and mag lows, but a combination mag high and low with soil highs seems to constitute the stronger anomalous areas.

A few isolated one station mag and soil anomalous results occur unassociated across the property. Groups of anomalous mag readings and soil highs do occur in association with one another but not dramatically. These groups occur in four zones.

The most prominent zone lies from the SW corner through the NE corner of the Marshall - L.2388. It continues to the NE into the Little Annie, where it seems to dissipate upon reaching the Little Annie - Custer Fraction border. Although the zone is composed of discontinuous soil highs and spotty mag highs and lows, it is easily traceable as seen on Map No. 1. This zone is characterized by strong but only occasional mag highs (highest, 6000 gammas above back ground), lensy, discontinuous mag lows with sporadic soil highs associated with the general zone. Old workings carrying pyrrhotite are associated with the southern part of this zone. This zone probably represents an altered shear zone with pods of pyrrhotite and/or magnetite associated with it. Soil samples indicate some copper to be present though any mineralization



would be sporadic. In relation to the grid system this zone lies from 10W, 0 N to a point centered roughly at 10E, 20N.

A second zone, a mag low with minor soil highs, passes from the NW corner of the Marshall claim, ENE along the southern border of the Denver c.g., and dissipates upon reaching the Denver - Custer Fraction - Little Annie borders, merging with the first mentioned zone. This trend probably represents an altered shear zone.

A third zone occurs on the SE section of the Tiger c.g. A low order high is associated with several soil highs. this area is in line with the first and second zones and is possibly an extension of them.

The fourth zone lies on the SE section of the Glenside Fraction. This anomaly contains the best soil assay results, and the weakest mag anomalies of all zones. This zone, located on the grid at lines 20N and 24N from 30E to 34E, could possibly be a window in surrounding volcanics as no trends are obvious from the data.

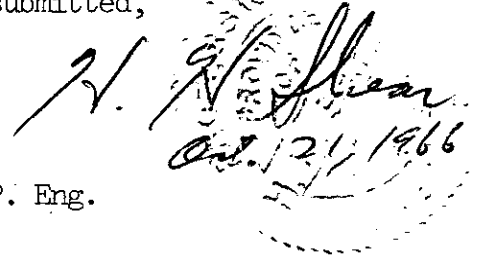
No attempt was made to contour anomalous results because of the erratic anomalies and the nature of the mag survey. The sporadic nature of the anomalies could indicate windows of mineral bearing rocks overlain by barren volcanics. Pyrrhotite zones exist on the southern portion of the Marshall and pyrite occurs over most of the property. The Knob Hill formation, a chert and chert conglomerate, covers most of the western portion of the property. Volcanics were observed along Glenside Creek. Limestone outcrops were observed on the Marshall Fraction and Little Annie. Approximately 30% of the property contains outcrops. Some scarn was observed at 16N, 5E.

RECOMMENDATIONS

Even though trends are not strong, they should be tested by trenching. The property adjoins Granby's Phoenix operation on the north. Results could be sporadic due to windows of mineralization.

The two zones lying within the Tio Buracho Group boundary, the first and fourth discussed, should be opened by bulldozer trenching. At least one week's work with a small bulldozer should be carried out to test these two zones in several places.

Respectfully submitted,



*H. H. Shear*  
Oct. 21, 1966

H. H. Shear, P. Eng.

APPENDIX

Base Line

Station	Geochemical Data P.P.M.	Station	Geochemical Data P.P.M.
00 North	5	23 N	15
1 N	5	24 N	10
2 N	15	25 N	10
3 N	40	26 N	15
4 N	40	27 N	40
5 N	20	28 N	5
6 N	15	29 N	15
7 N	1	30 N	10
8 N	40	31 N	20
9 N	45	32 N	15
10 N	15	33 N	10
11 N	60	34 N	20
12 N	30	35 N	15
13 N	15	36 N	10
14 N	10	37 N	20
15 N	10	38 N	20
16 N	10	39 N	30
17 N	10	40 N	25
18 N	5	41 N	5
19 N	1	42 N	10
20 N	15	43 N	20
21 N	1	44 N	45
22 N	35	45 N	10

Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.
<u>Line 0 N</u>			
B.L. 00 N	2248	54128	5
1 W	2242	53972	25
2 W	2252	54232	15
3 W	2251	54206	20
4 W	2259	54466	10
5 W	2258	54388	15
6 W	2255	54310	20
7 W	2252	54232	55
8 W	2257	54362	10
9 W	2443	59550	35
10 W	2262	54492	30
11 W	2305	55630	60
12 W	2251	54206	25
13 W	2250	54180	50
14 W	2245	54050	35
1 E			
2 E			
3 E			15
4 E			15
5 E			25
<u>Line 2 N</u>			
B.L. 2 N	2252	54232	15
1 W	2250	54180	20
2 W	2310	55700	35
3 W	2259	54466	10
4 W	2251	54206	10
5 W	2250	54180	10
6 W	2270	54700	10
7 W	2255	54310	10
8 W	2483	60700	35
9 W	2225	53550	15
10 W	2242	53972	10
11 W	2249	54154	5
12 W	2252	54232	5
13 W	2254	54284	15
14 W	2256	54376	10
15 W	2257	54402	10

Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.
<u>Line 4 N</u>			
1 W	2253	54258	20
2 W	2250	54180	15
3 W	2253	54258	10
4 W	2251	54206	1
5 W	2255	54310	5
6 W	2249	54154	150
7 W	2213	53262	1
8 W	2251	54206	110
9 W	2239	53894	15
10 W	2246	54076	40
11 W	2259	54466	5
12 W	2251	54262	30
13 W	2255	54310	15
14 W	2256	54336	15
15 W	2259	54414	1
B.L. 4 N	2221	53454	40
1 E	2224	53526	5
2 E	2225	53550	20
3 E	2230	53680	10
4 E	2234	53776	15
5 E	2229	53656	10
6 E	2227	53598	25
7 E	2236	53824	10
8 E	2231	53704	15
9 E	2235	53800	10
10 E	2225	53550	15
11 E	2243	53998	5
12 E	2220	53430	10
13 E	2235	53800	10
14 E	2251	54206	10

Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.
<u>Line 6 N</u>			
B.L. 6 N	2247	54102	15
1 W	2248	54128	10
2 W	2247	54102	20
3 W	2248	54128	10
4 W	2251	54206	10
5 W	2246	54076	15
6 W	2246	54076	10
7 W	2249	54154	20
8 W	2241	53946	20
9 W	2252	54232	10
10 W	2248	54128	20
11 W	2241	53946	15
12 W	2243	53998	5
13 W	2248	54128	5
14 W	2247	54102	5
15 W	2250	54180	15
<u>Line 8 N</u>			
B.L. 8 N	2238	53868	40
1 W	2239	53894	15
2 W	2237	53848	15
3 W	2241	53946	5
4 W	2231	53704	10
5 W	2248	54128	10
6 W	2245	54050	10
7 W	2244	54024	15
8 W	2241	53946	5
9 W	2248	54128	5
10 W	2243	53998	5
11 W	2244	54024	30
12 W	2242	53972	15
13 W	2244	54024	5
14 W	2249	54154	1
15 W	2246	54076	10
16 W	2250	54180	10

Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.
<u>Line 8 N Continued</u>			
1 E	2252	54232	70
2 E	2247	54102	15
3 E	2254	54284	15
4 E	2238	53868	10
5 E	2233	53752	15
6 E	2250	53680	15
7 E	2237	53848	20
8 E	2246	54076	20
9 E	2244	54024	20
10 E	2264	54544	10
11 E	2241	53946	20
12 E	2250	54180	10
13 E	2241	53946	10
14 E	2232	53728	5
15 E	2235	53800	10
<u>Line 10 N</u>			
B.L. 10 N	2264	54544	15
1 W	2270	54700	15
2 W	2270	54700	1
3 W	2241	53946	5
4 W	2244	54024	10
5 W	2232	53728	5
6 W	2250	54180	5
7 W	2260	54440	10
8 W	2255	54310	5
9 W	2247	54102	10
10 W	2249	54154	15
1 E	2261	54466	30
2 E	2240	53920	10
3 E	2245	54050	5
4 E	2251	54206	5
5 E	2246	54076	10
6 E	2242	53972	5
7 E	2251	54206	15
8 E	2238	53868	10
9 E	2247	54102	5
10 E	2242	53972	15

Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.
<u>Line 12 N</u>			
1 W	2247	54102	5
2 W	2248	54128	10
3 W	2247	54102	5
4 W	2236	53824	10
5 W	2248	54128	10
6 W	2248	54128	30
7 W	2251	54206	15
8 W	2246	54076	10
9 W	2243	53998	10
10 W	2250	54180	20
11 W	2226	53574	30
12 W	2226	53574	5
13 W	2235	53800	10
14 W	2240	53920	15
15 W	2244	54024	20
16 W	2249	54154	25
17 W	2254	54284	15
18 W	2242	53972	5
19 W	2247	54102	10
20 W	2248	54128	20
21 W	2249	54154	10
22 W	2254	54284	15
23 W	2240	53920	30
24 W	2260	54440	15
25 W	2240	53920	10
26 W	2244	54024	15
<hr/>			
B.L. 12 N	2233	53752	30
1 E	2250	54180	10
2 E	2237	53848	15
3 E	2242	53972	1
4 E	2249	54154	10
5 E	2251	54206	15
6 E	2249	54154	10
7 E	2235	53800	10
8 E	2251	54206	5
9 E	2253	54258	1
10 E	2243	53998	1
11 E	2243	53998	10
12 E	2234	53776	15
13 E	2238	53868	10
14 E	2231	53704	1
15 E	2238	53868	1
16 E	2236	53824	20
17 E	2246	54076	15
18 E	2144	51596	15



Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.

Line 12 N Continued

19 E	2250	54180	5
20 E	2247	54102	1
21 E	2229	53656	30
22 E	2236	53824	25
23 E	2254	54284	15
24 E	2246	54076	10
25 E	2251	54206	10
26 E	2260	54440	10
27 E	2249	54154	20

Line 14 N

B.L. 14 N	2258	54388	10
1 E	2240	53920	5
2 E	2242	53972	5
3 E	2244	54024	5
4 E	2252	54232	1
5 E	2267	54622	10
6 E	2253	54258	10
7 E	2250	54180	5
8 E	2246	54076	10
9 E	2240	53920	10
10 E	2240	53920	10
11 E	2244	54024	5
12 E	2241	53946	5
13 E	2249	54154	5
14 E	2236	53824	10
15 E	2241	53946	5
16 E	2245	54050	5
17 E	2245	54050	1
18 E	2243	53998	1
19 E	2248	54128	1
20 E	2257	54362	15

Line 16 N

1 W	2170	52220	15
2 W	2161	52004	10
3 W	2160	51980	45
4 W	2208	53142	10
5 W	2154	51836	50
6 W	2160	51980	15
7 W	2116	50900	25
8 W	2194	52806	25
9 W	2203	53022	20
10 W	2188	52652	5

Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.

Line 16 N Continued

11 W	2186	52604	5
12 W	2202	52998	1
13 W	2198	52902	15
14 W	2201	52974	10
15 W	2194	52806	20
16 W	2199	52926	15
17 W	2198	52900	10
18 W	2184	52556	20
19 W	2190	52700	15
20 W	2198	52900	10
21 W	2207	53118	10
22 W	2200	52950	10
23 W	2201	52974	15
24 W	2193	52772	20
25 W	2221	53454	15
26 W	2206	53094	40
27 W	2218	53382	20
28 W	2226	53574	10
29 W	2210	53190	15
30 W	2225	53550	5

B.L. 16 N	2247	54102	30
1 E	2236	53824	15
2 E	2241	53946	15
3 E	2210	53190	10
4 E	2207	53118	10
5 E	2339	56510	55
6 E	2253	54258	10
7 E	2205	53070	15
8 E	2251	54206	15
9 E	2232	53728	80
10 E	2244	54024	55
11 E	2248	54128	35
12 E	2240	53920	1
13 E	2241	53946	15
14 E	2241	53946	15
15 E	2244	54024	45
16 E	2262	54492	25
17 E	2260	54440	30
18 E	2247	54102	10
19 E	2248	54128	15
20 E	2257	54362	5
21 E	2275	54830	5
22 E	2257	54362	1
23 E	2261	54466	35
24 E	2252	54232	15
25 E	2261	54466	25

Station                      Magnetometer Data                      Geochemical Data

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   Reading                      Gamma Value                      P.P.M.

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Line No. 16 N    Continued

26 E	2252	54232	15
27 E	2254	54284	10
28 E	2248	54128	30
29 E	2252	54232	25
30 E	2244	54024	15

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Line No. 20 N

1 W	2244	54024	15
2 W	2245	54050	5
3 W	2219	53406	10
4 W	2225	53550	5
5 W	2251	54206	15
6 W	2230	53680	10
7 W	2244	54024	10
8 W	2234	53776	10
9 W	2246	54076	10
10 W	2274	54804	15
11 W	2240	53920	10
12 W	2242	53972	1
13 W	2246	54076	5
14 W	2255	54310	10
15 W	2259	54414	5
16 W	2262	54492	5
17 W	2238	53872	5
18 W	2316	55900	10
19 W	2256	54336	1
20 W	2256	54336	5
21 W	2267	54622	20
22 W	2285	55090	10
23 W	2285	55090	10
24 W	2303	55558	35
25 W	2278	54908	15
26 W	2286	55100	10
27 W	2281	54980	10
28 W	2285	55100	20
29 W	2285	55100	15
30 W	2285	55100	10

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Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.
<u>Line 20 N Continued</u>			
B.L. 20 N	2230	53680	15
1 E	2233	53752	5
2 E	2218	53382	20
3 E	2214	53286	5
4 E	2226	53574	20
5 E	2214	53286	10
6 E	2223	53502	15
7 E	2213	53262	20
8 E	2222	53478	90
9 E	2230	53680	25
10 E	2216	53334	10
11 E	2229	53656	15
12 E	2235	53800	20
13 E	2254	54284	10
14 E	2448	59600	15
15 E	2354	56900	15
16 E	2253	54258	15
17 E	2212	53238	10
18 E	2222	53478	15
19 E	2233	53752	10
20 E	2235	53800	10
21 E	2223	53502	10
22 E	2240	53920	15
23 E	2240	53920	10
24 E	2233	53752	1
25 E	2230	53680	10
26 E	2225	53550	35
27 E	2229	53656	5
28 E	2246	54076	15
29 E	2228	53622	10
30 E	2246	54076	40
31 E	2234	53776	40
32 E	2218	53382	40
33 E	2238	53872	30
34 E	2246	54076	30
35 E	2250	54180	5
36 E	2232	53728	5
37 E	2248	54128	15
38 E	2256	54336	35
39 E	2248	54128	5
40 E	2227	53598	8
41 E	2227	53598	1
42 E	2225	53550	1
43 E	2247	54102	1
44 E	2238	53872	1

Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.
<u>Line 22N</u>			
26 E	2224	53526	5
27 E	2224	53526	20
28 E	2200	52950	20
29 E	2255	54310	80
30 E	2186	55116	10
31 E	2196	52854	10
32 E	2222	53478	30
33 E	2222	53478	10
34 E	2231	53704	15
35 E	2235	53800	10
36 E	2196	52854	35
37 E	2180	52460	1
38 E	2174	52316	5
39 E	2200	52950	10
40 E	2218	53382	10
41 E	2221	53454	5
42 E	2214	53286	5
43 E	2216	53334	5

Line 24 N

1 W	2187	52628	15
2 W	2195	52830	15
3 W	2185	52580	80
4 W	2184	52556	10
5 W	2198	52902	10
6 W	2185	52580	1
7 W	2199	52926	5
8 W	2178	52412	20
9 W	2199	52926	5
10 W	2190	52700	20
11 W	2194	52806	15
12 W	2180	52460	15
13 W	2193	52782	15
14 W	2187	52628	15
15 W	2191	52724	20
16 W	2192	52748	5
17 W	2194	52806	15
18 W	2203	53022	15
19 W	2187	52628	1
20 W	2197	52878	10
21 W	2183	52532	10
22 W	2201	52974	40
23 W	2208	53142	10
24 W	2187	52628	1
25 W	2202	52998	20

Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.
<u>Line 24 N Continued</u>			
26 W	2177	52388	15
27 W	2200	52950	5
28 W	2199	52926	10
29 W	2197	52878	15
30 W	2191	52724	20
31 W	2196	52854	15
32 W	2213	53262	1
33 W	2205	53070	1
34 W	2198	52902	10
35 W	2178	52412	15
36 W	2191	52724	10
37 W	2224	53526	5
38 W	2185	52580	1
39 W	2188	52652	10
40 W	2185	52580	10

B.L. 24 N	2196	52854	10
1 E	2206	53094	25
2 E	2198	52902	15
3 E	2193	52782	50
4 E	2192	52748	15
5 E	2218	53382	10
6 E	2205	53070	5
7 E	2200	52950	30
8 E	2213	53262	25
9 E	2202	52998	5
10 E	2202	52998	10
11 E	2208	53142	15
12 E	2221	53454	5
13 E	2212	53238	5
14 E	2208	53142	5
15 E	2214	53286	10
16 E	2227	53598	5
17 E	2217	53358	5
18 E	2227	53598	45
19 E	2283	55038	10
20 E	2282	55012	5
21 E	2289	55194	10
22 E	2287	55142	15
23 E	2287	55142	10
24 E	2298	55428	5
25 E	2310	55700	5
26 E	2272	54752	15
27 E	2270	54700	20
28 E	2284	55064	15

Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.
<u>Line 24 N Continued</u>			
2850 E			10
29 E	2278	54908	30
2950 E			5
3000 E	2288	55168	180
3050 E			40
31 E	2278	54908	70
3150 E			40
32 E	2286	55116	80
3250 E			45
33 E	2287	55142	60
3350 E			15
34 E	2292	55272	360
3450 E			15
35 E	2301	55506	15
3550 E			20
36 E	2302	55532	20
3650 E			20
37 E	2284	55064	45
3750 E			10
38 E	2292	55272	50
3850 E			15
39 E	2283	55038	10
3950 E			5
40 E	2284	55064	5
4050 E			5
41 E	2293	55298	5
4150 E			5
42 E	2257	54362	5

Line 26 N

25 E	2304	55584	1
26 E	2284	55064	15
27 E	2286	55116	20
28 E	2287	55142	10
29 E	2284	55064	5
30 E	2293	55298	20
31 E	2291	55246	15
32 E	2298	55428	20
33 E	2290	55220	10
34 E	2292	55272	10
35 E	2289	55194	25
36 E	2294	55324	10
37 E	2296	55376	15
38 E	2293	55298	20

Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.
<u>Line 28 N</u>			
B.L. 28 N	2228	53632	5
1 W	2199	52926	5
2 W	2181	52484	1
3 W	2211	53214	1
4 W	2203	53022	1
5 W	2193	52782	5
6 W	2198	52902	10
7 W	2205	53070	5
8 W	2182	52508	10
9 W	2214	53286	20
10 W	2215	53310	10
11 W	2205	53070	15
12 W	2220	53430	5
13 W	2230	53680	30
14 W	2206	53094	5
15 W	2222	53478	15
16 W	2221	53454	5
17 W	2219	53406	20
18 W	2225	53550	10
19 W	2216	53334	40
20 W	2229	53656	10
21 W	2209	53166	20
22 W	2229	53656	25
23 W	2211	53214	5
24 W	2219	53406	10
25 W	2219	53406	10
26 W	2204	53036	15
27 W	2212	53238	1
28 W	2240	53920	15
29 W	2217	53358	35
30 W	2211	53214	45
<hr/>			
1 E	2275	54830	5
2 E	2300	55480	1
3 E	2283	55038	1
4 E	2288	55168	1
5 E	2282	55012	1
6 E	2285	55090	10
7 E	2291	55246	1
8 E	2286	55116	1
9 E	2278	54908	1
10 E	2281	54986	10



Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.

Line 28 N Continued

11 E	2289	55194	1
12 E	2281	54986	1
13 E	2283	55038	5
14 E	2290	55220	15
15 E	2282	55012	15
16 E	2283	55038	1
17 E	2293	55298	10
18 E	2290	55220	5
19 E	2294	55324	1
20 E	2297	55402	10
21 E	2297	55402	5
22 E	2275	54830	20
23 E	2284	55064	5
24 E	2285	55090	5
25 E	2310	55700	5
26 E	2285	55090	8
27 E	2276	54856	15
28 E	2273	54778	5
29 E	2282	55012	5
30 E	2294	55324	10
31 E	2275	54830	5
32 E	2300	55480	5
33 E	2295	55350	15
34 E	2302	55532	5
35 E	2295	55350	10
36 E	2293	55298	25
37 E	2296	55376	15
38 E	2296	55376	10
39 E	2294	55324	5

Line 30 N

20 E	2284	55064	10
21 E	2311	55726	30
22 E	2274	54804	1
23 E	2257	54362	50
24 E	2307	55662	5
25 E	2289	55194	1
26 E	2281	54986	15
27 E	2266	54596	10
28 E	2273	54778	1
29 E	2274	54804	5
30 E	2279	54934	5
31 E	2293	55298	5
32 E	2276	54856	15
33 E	2275	54830	5
34 E	2277	54882	15
35 E	2285	55090	15
36 E	2279	54934	10

Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.
<u>Line 30 N Continued</u>			
37 E	2297	55402	15
38 E	2256	54336	15
39 E	2253	54258	10

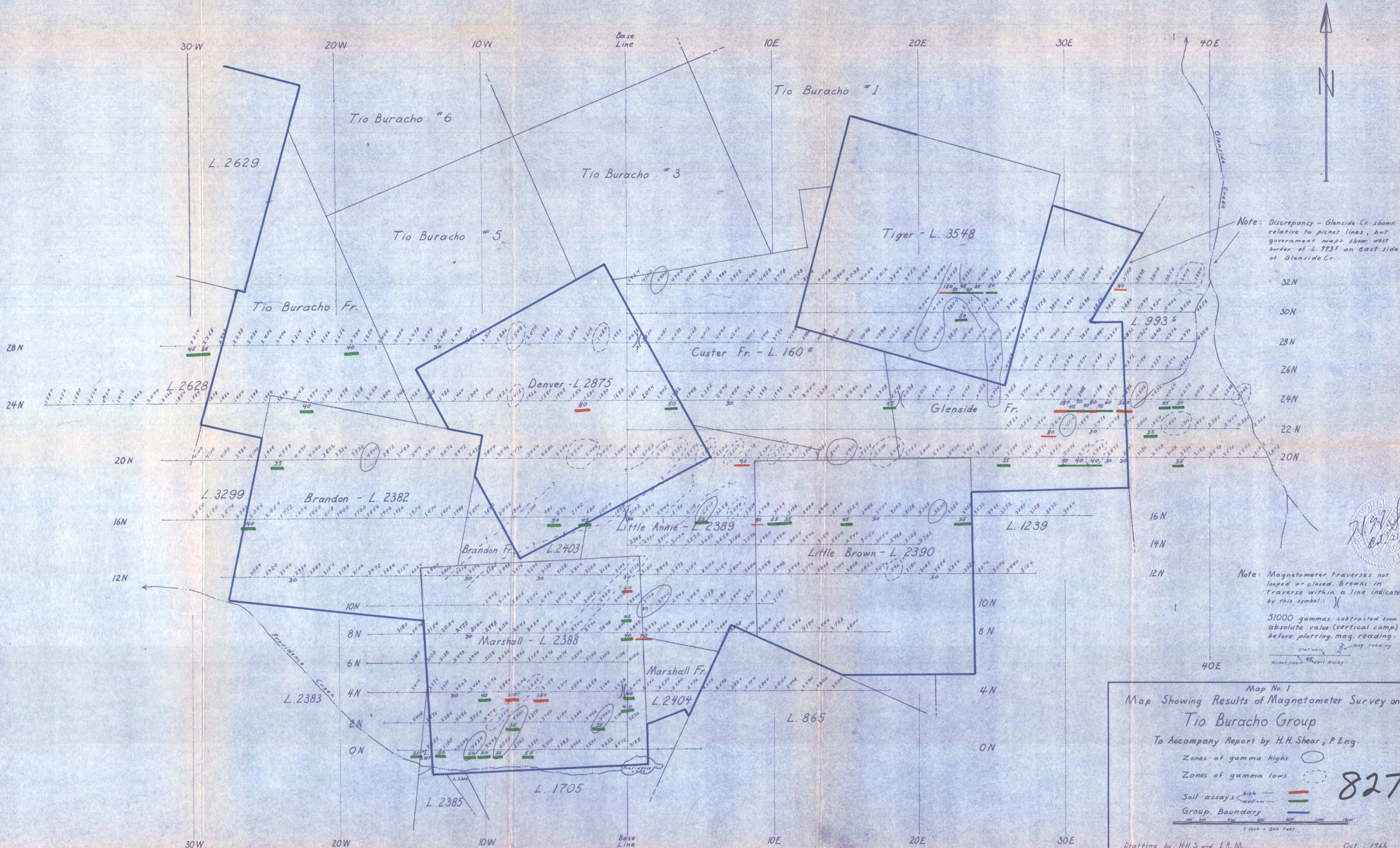
Line 32 N

B.L. 32 N	2279	54934	
1 E	2286	55100	15
2 E	2316	55900	5
3 E	2310	55700	5
4 E	2284	55064	15
5 E	2279	54934	15
6 E	2281	54986	10
7 E	2278	54908	5
8 E	2284	55064	5
9 E	2298	55428	5
10 E	2273	54778	5
11 E	2283	55038	10
12 E	2269	54674	15
13 E	2285	55090	5
14 E	2280	54960	15
15 E	2283	55038	5
16 E	2284	55064	15
17 E	2282	55012	5
18 E	2264	54544	10
19 E	2272	54752	5
20 E	2284	55064	5
21 E	2285	55090	15
22 E	2298	55428	120
2250 E			50
23 E	2290	55220	45
2350 E			60
24 E	2284	55064	35
2450 E			25
25 E	2267	54622	50
2550 E			10
26 E	2274	54804	15
2650 E			10
27 E	2278	54908	20
2750 E			20
28 E	2276	54856	20
2850 E			25
29 E	2267	54622	15
30 E	2274	54804	10
31 E	2280	54960	15
32 E	2284	55064	5
33 E	2284	55064	5

Station	Magnetometer Data		Geochemical Data
	Reading	Gamma Value	P.P.M.

Line 32 N Continued

34 E	2273	54778	90
35 E	2268	54648	5
36 E	2278	54908	15
37 E	2276	54856	10
38 E	2259	54414	15
39 E	2254	54284	15
3950 E			10



Note: Discrepancy - Glenside Cr shown relative to picket lines, but government maps show west border of L. 993 on east side of Glenside Cr.

Note: Magnetometer traverses not looped or closed. Breaks in traverse within a line indicated by this symbol: X  
 51000 gammas subtracted from absolute value (vertical comp) before plotting mag. reading.  
 station mag reading  
 next line 45 soil assay

Map No. 1  
 Map Showing Results of Magnetometer Survey on  
 Tio Buracho Group  
 To Accompany Report by H.H. Shear, P. Eng.

Zones of gamma highs ○  
 Zones of gamma lows ○

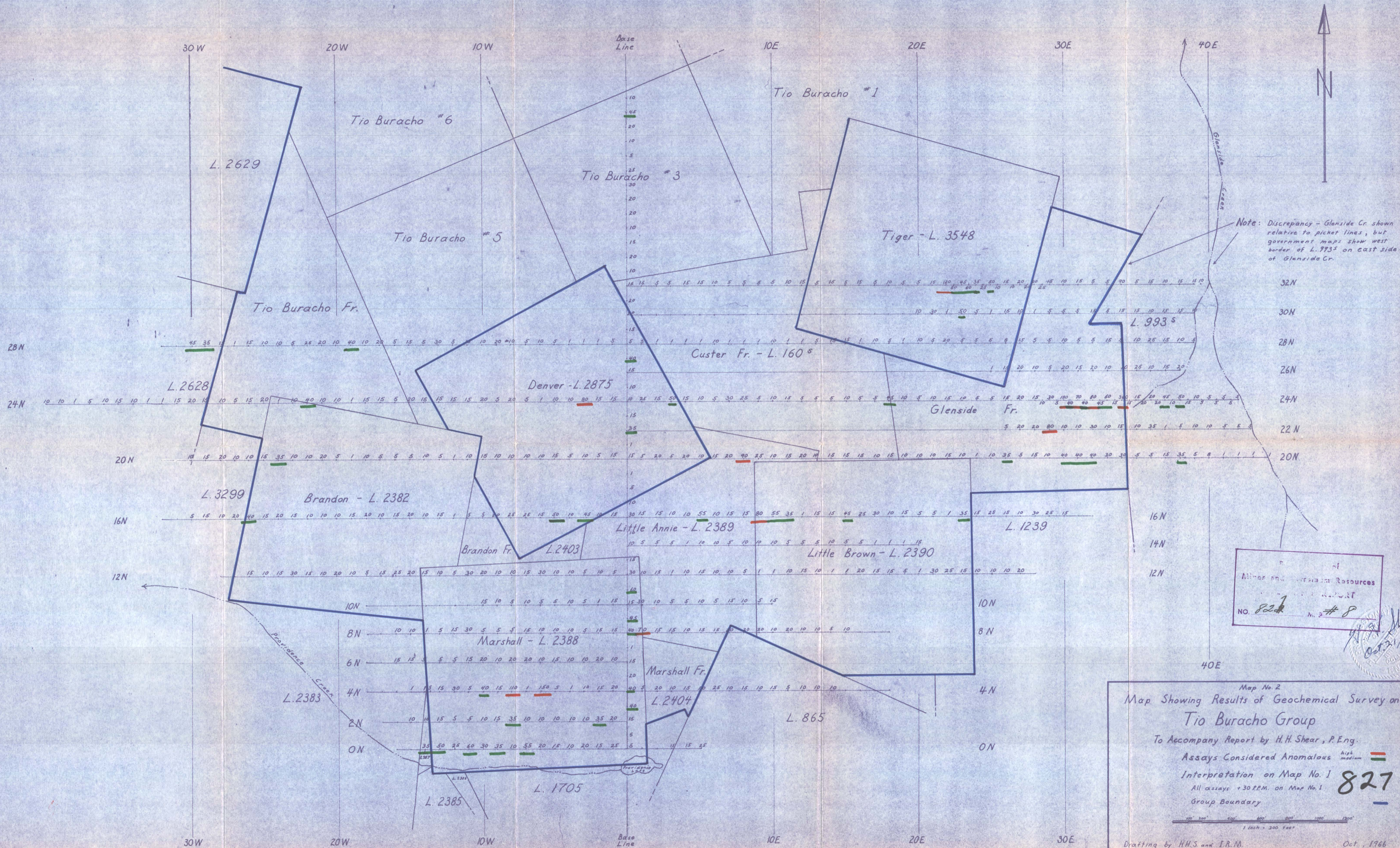
Soil assays — high — medium — low

Group Boundary —

1 inch = 300 feet

Drafting by H.H.S. and I.R.M. Oct. 1966

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Note: Discrepancy - Glenside Cr. shown relative to picket lines, but government maps show west border of L. 993 on east side of Glenside Cr.

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 # 8

Map No. 2  
 Map Showing Results of Geochemical Survey on  
 Tio Buracho Group  
 To Accompany Report by H.H. Shear, P. Eng.  
 Assays Considered Anomalous ■ ■ ■  
 Interpretation on Map No. 1  
 All assays +30 P.P.M. on Map No. 1  
 Group Boundary —  
 1 inch = 300 Feet  
 Drafting by H.H.S. and I.R.M. Oct., 1966

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