A REPORT ON TRENCHING AND GEOCHEMICAL ORIENTATION ON THE FRIDAY CLAIMS

BY

GREGG JILSON

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COVERING

FRIDAY 1-46 AND FRIDAY 1FR-17FR

54 MILES N.W. OF SMITHERS, B. C.

OMINECA MINING DIVISION

LAT. 55°20'W, LONG. 126°12'W

FOR

CALIENTE MINING CORPORATION

BY

GREGG JILSON

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INTRODUCTION

This report deals with road building, trenching, geochemical orientation and reconnaissance geology done on the Friday claims by Caliente Mining Corporation from 16 October, 1971 to 29 October, 1971.

LOCATION AND ACCESS

The Friday claims are 54 miles northeast of Smithers in the Omineca Mining Division approximately half way between Friday Lake and the north end of the Northwest Arm of Takla Lake. Sinta Creek flows easterly through the centre of the claim block.

Access is by helicopter from Smithers or Houston or by a newly constructed extension of the tote road to Noranda's Nak claims from Hatchery Arm.

PHYSIOGRAPHY, VEGETATION AND DRAINAGE

There is approximately 1000' of relief on the property. The area consists of two levels of rolling hills separated by a 500' escarpment running northerly through the centre of the claims. Sinta Creek is incised on both levels and forms a steep-walled canyon.

Most of the area has been burned off leaving great numbers of deadfall. Scattered small jack pine have grown back in the burn; thick balsam forest makes up the remainder of the tree-covered ground. There is a large swamp at the east end of the property.

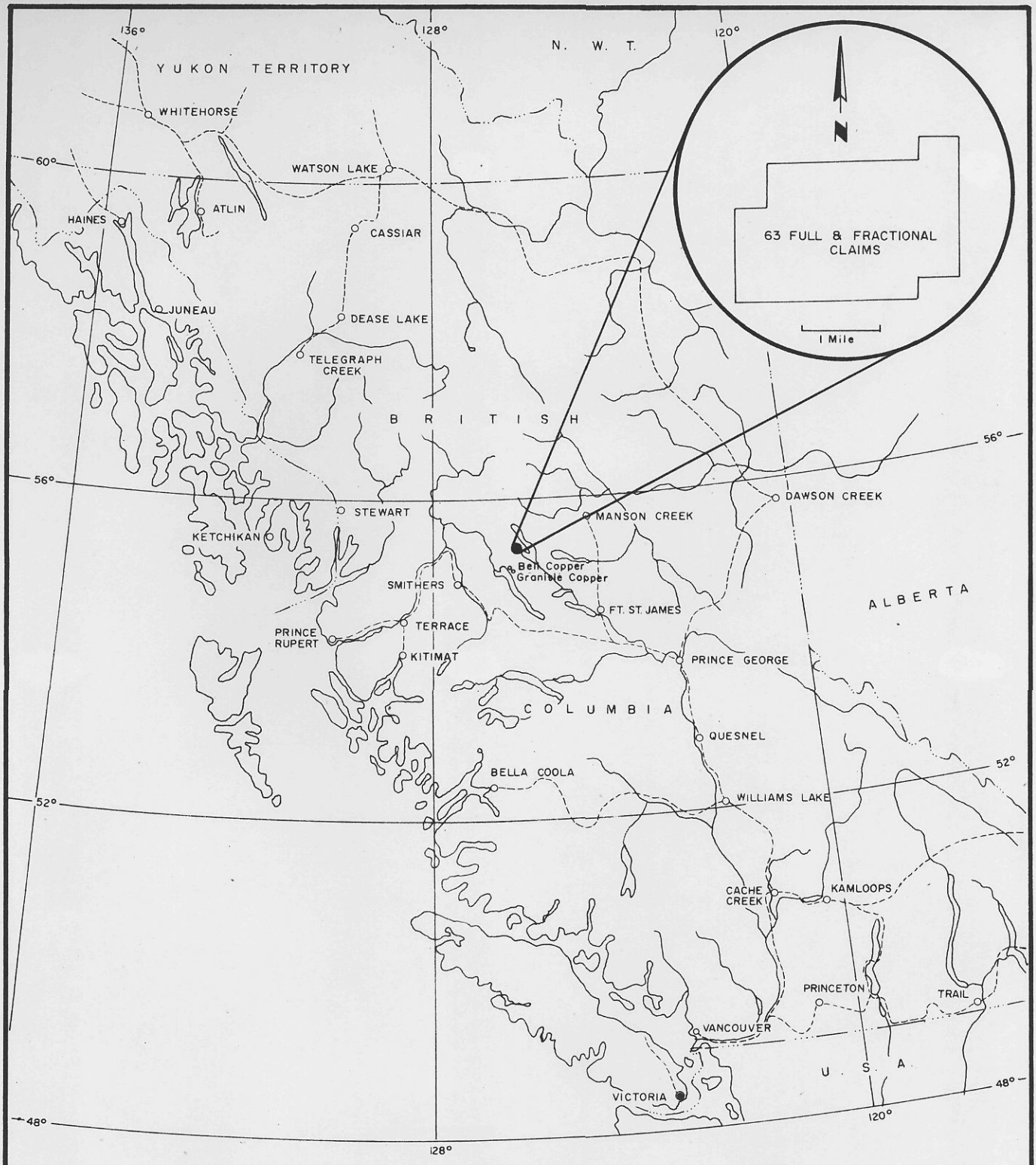
Drainage is fairly good with the exception of local swampy accumulations on the upper topographic level and the large swamp noted above on the lower. All drainage is into Sinta Creek and thence into the Northwest Arm of Takla Lake.

CLAIMS

The property consists of 46 Full size and 17 Fractional mineral claims in two groups, the Red and Green.

Red Group

Claim Name	Record Number	Record Date	Expiry Date
Friday 1-12 incl.	96387R-96398R incl.	16 Dec. 1970	16 Dec. 1972
Friday 19-30 incl.	97966D-97977D incl.	6 April 1971	6 April 1973
Friday 33	99504G	23 June 1971	23 June 1972
Friday 3 Fr.-8 Fr. incl.	97982D-97987D incl.	6 April 1971	6 April 1973



CALIENTE MINING CORPORATION

FRIDAY CLAIMS

PROPERTY LOCATION MAP

BRITISH COLUMBIA

SCALE : 1" = 125 MILES

Green Group

Claim Name	Record Number	Record Date	Expiry Date
Friday 13-18 incl.	97960D-97965D incl.	6 April 1971	6 April 1973
Friday 31 & 32	97978D & 97979D	6 April 1971	6 April 1973
Friday 34-46 incl.	99505G-99517G incl.	23 June 1971	23 June 1972
Friday 1 Fr. & 2 Fr.	97980D & 97981D	6 April 1971	6 April 1973
Friday 9 Fr. & 10 Fr.	97988D & 97989D	6 April 1971	6 April 1973
Friday 11 Fr.-17 Fr. incl.	99518G-99524G incl.	23 June 1971	23 June 1972

The earliest expiry date is 23 June 1972.

PREVIOUS WORK ON CLAIMS AND IN AREA

The Friday claims were located by David Minerals Ltd. to cover a possible northern extension of mineralization on the Ducanex-Twin Peaks, North Dorothy property and to cover a magnetic low on government high level maps. The magnetic low is similar to one on the North Dorothy property where Ducanex-Twin Peaks drilling has shown extensive low grade copper associated with biotite feldspar porphyry. Prospecting by David Minerals showed feldspar biotite porphyry float with minor chalcopyrite near the centre of the magnetic low. Soils and silts taken by David Minerals showed generally negative results with the exception of a sample from a spring draining the magnetic anomaly and another silt from a creek draining a portion of the North Dorothy property.

Adjoining the Friday claims to the south is another Twin Peak's property, the Lynn claims, where a magnetic high is being investigated. It is rumoured that good I.P., magnetic and geochemical responses are being obtained and that encouraging float has been found.

Other noteworthy properties in the area are Texas Gulf Sulphur's Trail Peak property 7 miles NNW and Noranda's Nak property 4 miles SSW. At both of these properties mineralization appears to be associated with feldspar biotite porphyry.

PHYSICAL WORK

Approximately 7 miles of access road was built of which 3 miles is on the property, and approximately 30,000 square feet of trenching was done using a D7E tractor. Six of the ten trenches reached bedrock.

GEOLOGY

The western portion of the claim block is underlain by flat-lying to gently-dipping mudstones, sandstones and tuffs which are intruded by a

variety of small felsite and porphyry dikes. The sediments appear to be folded into a broad, open, doubly-plunging synform with a northeast-southwest trending axis. Several small faults cut the sediments.

The eastern portion of the property is underlain by a sequence of green and grey tuffaceous and agglomeratic volcanic rocks in fault contact with the sediments. The volcanic sequence is probably also nearly flat-lying or gently-dipping but the structure is quite uncertain. The bounding fault trends NNW and shows on the ground as a bleached silicified and slightly pyritized zone one to two hundred feet wide.

The following is a more detailed description of the trenches:

Trench A - approximately 3' of cover. Unaltered magnetic, feldspar biotite porphyry dike with trace of chalcopyrite. The dike is 5 feet thick and pinches out 100' to the north of its thickest point; it trends N53^{o}E and is vertical. The dike is intruded into mudstone which is unaltered and free of pyrite in the immediate vicinity of the dike. Approximately 200' east of the dike the mudstone carries a few percent pyrite on fracture faces but shows no alteration except a possible slight overall silicification and minor introduction of silica along fractures. No chalcopyrite was noted with the pyrite in the mudstone. The pyritized mudstone east of the trench is nearly flat-lying.

Trench B - 4' of overburden. Grey feldspar porphyry dike of unknown extent or trend. The dike is barren and unaltered but carries minor disseminated pyrite.

Trench C - 6' of overburden. Highly fractured mudstone - unaltered with no visible pyrite but there are several very rusty zones along fractures. A spring flowing a few gallons per minute was uncovered in this trench.

Trench D - No outcrop - 8' deep.

Trench E - No outcrop - 7' deep.

Trench F - No outcrop - 9' deep.

Trench G - No outcrop - 3' deep.

Trench H - Trench H is a cut into the north bank of Sinta Creek. The trench exposes flat-lying mudstone with minor tuff cut by a vertical fault trending northeast, along which is intruded a barren pink felsite dike with minor pyrite. The dike is about 4' thick. Drag folding indicates the northwest side has dropped down relative to the southeast side but slickensides indicate nearly horizontal strike slip movement. To the southeast of the fault is a small irregular shaped area of very magnetic basalt.

Trench I - Trench I is a cut a few hundred feet west of H in the nose of the ridge formed by the forks of Sinta Creek. The rock is again flat-lying mudstone. The mudstone is cut by two parallel northwesterly trending dikes of very fine grained dark grey siliceous vesicular rock. A concretionary mass of nearly solid pyrite occurred with its flat section lying in a rusty zone parallel to the bedding. A similar rusty zone parallel to bedding cuts across the dike but does not contain pyrite masses similar to the above.

Between trenches H and I is a complex zone where a northwesterly trending white felsite has brecciated and intricately intruded the mudstone. The mudstone and felsite are barren and unaltered, with only minor pyrite.

Trench J - Trench J is a long cut south of Sinta Creek over a subtle magnetic high. The rock is unaltered and unmineralized mudstone with minor tuff and sandstone cut by a feldspar porphyry dike about 20' wide. The dike trends northwesterly. The feldspar porphyry is very magnetic, barren and unmineralized. It lies approximately beneath the mag. high. The mudstone dips south at about 30° at the west end of the trench and northwesterly at about 15° at the east end. Also exposed is a 6' wide shear zone striking 150° and dipping 50° west with only minor displacement.

GEOPHYSICS

A major feature of interest on the property is a magnetic low on the government aeromagnetic map. The low is slightly smaller and more intense than the one on the Dorothy claims. Trenching did not disclose an altered zone under the magnetic low, thus the concept of an alteration low is untenable. The most likely explanation of the low is that it is due to reversed magnetization of the underlying porphyry dikes. The biotite feldspar porphyry dikes are generally accepted to be of Tertiary age. The intensity of the anomaly suggests that more porphyry dikes are present than the trenching has exposed.

GEOCHEMISTRY

Soil samples were taken from the top of the B horizon along part of the main access road and soil profile samples were taken from some of the trenches.

The samples were analysed in Vancouver by Barringer Research for total copper using $HClO_4$ extraction and atomic absorption.

The samples from the top of the B horizon are mostly quite low in copper. The profile samples generally show an increase in copper with depth and clay content. The profiles suggest that the top of the B horizon

is considerably leached and oxidized and that further sampling should be done below the visibly oxidized portion of the B.

Many of the trenches show a considerable thickness of clay-rich overburden which may prevent groundwater from establishing hydromorphic anomalies in the overlying transported overburden. Thus routine grid sampling of the B horizon may show little or no correlation with the copper content of the underlying rock.

Future geochemical studies on this property should concentrate on careful sampling of all seepages. Two such seepages sampled to date show considerably higher values than the overlying soils, i.e. the spring sampled by David Minerals 178 ppm and the spring in trench C 145 ppm.

The following are the results of the profile sampling.

	Depth	Color	Other	Cu (ppm)
Trench A	5"	Orange brown		19
0N 2W	8"	Yellow brown		30
	20"	Medium brown	Clayey	52
	40"	Medium brown	Clayey	50
Trench B	4"	Orange brown		29
0N 3W	12"	Medium brown	Clayey	45
Trench C	5"	Orange brown		22
0N 4+60W	14"	Yellow brown		36
	24"	Medium brown		63
	7'	Medium brown	- just above spring outlet	90
	7' 4"		- fine mudstone fragments just below spring outlet	145
Trench D	4"	Light orange brown		25
9+20W 2S	30"	Medium brown	Alluvial material - sandy	58
	55"	Medium brown	Alluvial material - clayey	73
Trench F				
9+20W 5+50S	4"	Orange brown		28
	14"	Yellow brown	Alluvial material - gravelly	52
	26"	Medium brown	Alluvial - clayey	65
	40"	Medium brown	Alluvial - clayey	63
	52"	Medium brown	Alluvial - clayey	70

9+20W 2N	14"	Medium brown	Damp clay	16
	16"	Light medium brown	Wet sandy clay	27
ON 4E	8"	Orange brown		35
	30"	Medium brown		69

CONCLUSIONS AND RECOMMENDATIONS

The rocks uncovered by the trenching and the natural outcrop present in the area severely limit the potential of a good portion of the claims. However the presence of feldspar biotite porphyry with a trace of chalcopyrite and fracture-bound pyrite in the sediments suggests a dike swarm could occur somewhere in the overburden-covered area particularly to the west and north of the claims or that at a deeper level there may be more intrusive material. A ground magnetometer survey may be of considerable help in evaluating this possibility.

The portion of the claims north of the North Dorothy property has not been examined. Although there are no distinctive mag targets and only a moderately high silt sample result from this area it should be investigated further on the strength of its location.

A reasonable and economical program might be:

(1) Magnetometer survey on grid.

(2) Detailed prospecting and silting.

(3) Geological mapping of claims and adjacent areas to give a background for the above.

The property will be a difficult one to work on during the summer on a grid basis, thus the magnetometer survey could be done most economically on the snow during late winter or early spring.

Respectfully submitted,

Gregg Jilson

inches
0 1
0 1 2
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

126° 10'

4000

RED GROUP

										11	12
21	4	23	5	25	6	27	7	29	8	9	10
22	FR.	24	FR.	26	FR.	28	FR.	30	FR.	7	8
44	16	20	3 CLAIMS	18	2	16	11	14	9	31	10	2	1
43	FR.	19	FR.	17	FR.	15	FR.	13	FR.	32	FR.	4	3
46	17	33	11	35	12	37	13	39	14	41	15	6	5
45	FR.	34	FR.	36	FR.	38	FR.	40	FR.	42	FR.		

N

TAKLA LAKE
5 MILES

55° 20'

55°20'

3000

SINTA CREEK

3500

4500

GREEN GROUP

4500

4000

ROAD

3500

4000

3500

126° 10'

3000

CALIENTE MINING CORP.

FRIDAY CLAIMS

CLAIM MAP

SCALE: 1" = APPROX. ½ MILE

TRENCH

FRIDAY

LYNN

DOROTHY

NORANDA

4000

4500

5000

5500

6000

6500

3000

3500

55° 20'

126° 10'

Sinta Creek

CAMP

Cu

Ducanex / Twin Peaks discovery

N

LEGEND

1 Sediments — mainly mudstone

2 Volcanics — mainly andesite tuffs

3 Biotite feldspar porphyry

4 Feldspar porphyry

5 Felsite

6 Monzonite, quartz monzonite

28 Inclined

Horizontal

Bedding

Fault

Contact

Road

Trench

Aeromagnetic contour

100 γ

500 γ

Approximate claim boundry

inches

0 1

0 1 2

centimetres

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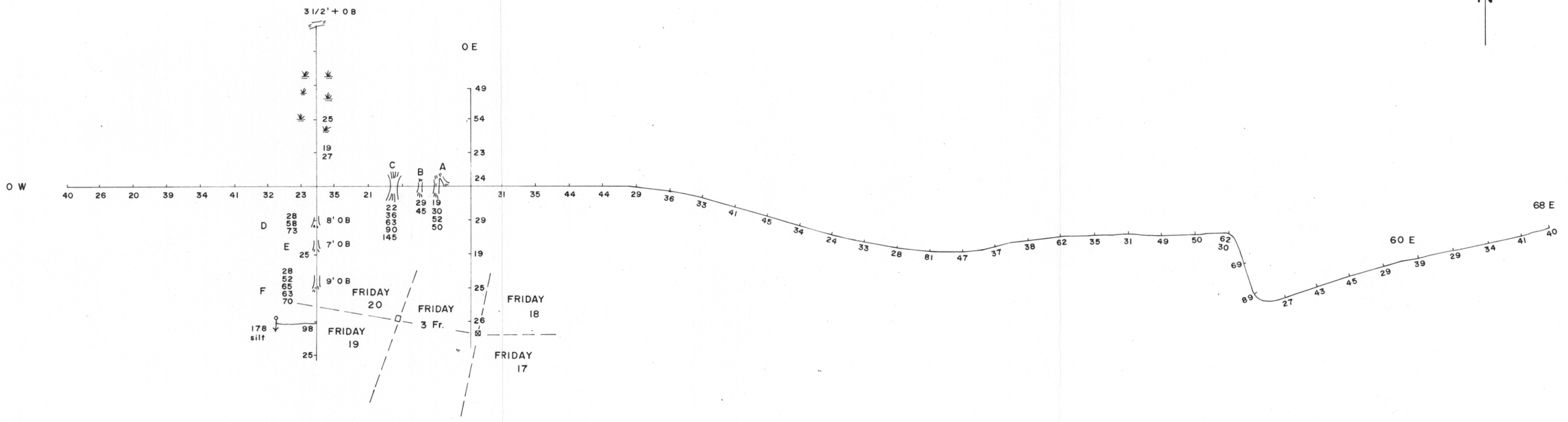
CALIENTE MINING CORPORATION LTD.

FRIDAY CLAIMS

DESIGNED	SCALE: 1" = Approx 1 Mi
DRAWN C.L.C.	DATE: JAN. 1972



$HClO_4$ extractable Cu in - 80 mesh fraction of top of B horizon (except profiles)

CALIENTE MINING CORRORATION

FRIDAY CLAIMS

Copper in Soils

SCALE: 1" = 500'

Drawn by C.L.C.

inches 0 1 0 1 2 centimetres

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