GEOLOGICAL REPORT

ON THE

CLINE LAKE PROPERTY

OF

ROK ENGINEERING CONSTRUCTION

SEPTEMBER - DECEMBER 1982

L.D.S. Winter
B.A.Sc., M.Sc., F.G.A.C.
January 4, 1983

TABLE OF CONTENTS

1. INTRODUCTION

In September 1982 Rok Engineering Construction started an exploration program on 6 claims held under a licence of exploration in Jacobson Township, District of Algoma, Ontario, approximately 30 miles (50 km) northeast of Wawa. During the following three month period to mid-December 1982 the following exploration work was undertaken on the property.

1. Line-cutting: A base line and north-south picket lines at 200 ft. intervals were cut.
2. Magnetometer survey.
3. Geological mapping of the western part of the property and the stripped area adjacent to the adit.
4. Power stripping with a backhoe and bulldozer.
5. Percussion drilling of mineralized zones.
6. Sampling of mineralized zones.

This report summmarizes the geological aspects of this work and proposes some further work based on the results to date.

2. SUMMARY AND RECOMMENDATIONS

2.1 The property lies on the north limits of a major regional anticline and consists of a sequence of dominantly mafic metavolcanic flows striking approximately east-west and dipping north which are intruded by gabbro sills and felsite dikes. There are two major structural trends, one being west-northwest and the other east-northeast.

2.2 The gold mineralization appears to be associated with the west-northwest trending faults and zones of silicification and carbonate and pyrite alteration.

2.3 Within the mineralized zones the gold values are erratically distributed and appear to show a significant nugget effect. At this point it is not known if there is any surface enrichment occuring in the zones and thus the high surface values must be viewed with caution.

2.4 Exploration work to date by Rok has identified four zones on surface, which to a depth of 50 feet would give 2500 tons averaging 0.318 oz. Au/T. before dilution.

The grade could be increased and the tonnage reduced by eliminating some lower grade material from this calculation.

2.5 Previous work by Pick Mines Limited outlined an additional surface zone in the adit area and to the west, and a second zone underground, which may be the down dip projection of one of the surface zones.

2.6 It is considered that the #10 vein has considerable potential for the development of gold deposits and it could be stripped further to the east and/or drilled off at 25 ft. centres towards the east with the hydromatic drill.

2.7 The geological mapping done to date plus the magnetometer survey indicates a number of potentially interesting geological targets along west-northwest trending structures.

It is recommended that an exploration program of soil geochemistry , IP surveys and mapping be undertaken to better outline areas of gold mineralization. The estimated cost of this work is $25,000. Stripping drilling, sampling etc. would follow in areas of interest.

3. PROPERTY

3.1 CLAIM GROUP AND OWNERSHIP

The property consists of 6 claims SSM 2185, SSM 2186, SSM 2188, SSM 2189, SSM 2190 and SSM 2271.held under an exploratory licence of occupation from the Ontario Ministry of Natural Resources. The licence of occupation is for a 3 year period with renewal on a yearly basis being dependent on the expenditure of $71,500 in the first year, $125,000 in the second year and $240,000 in the third year. After the expenditure of $436,500 Rok Engineering Construction will have the right to convert to a 21 year lease.

3.2 LOCATION AND ACCESS

The property is located in central Jacobson Township, Michipicten Area, District of Algoma at lat. 48°-20'N: long. 84°-22'W., approximately 30 miles (50 km) northeast of Wawa, and 6 miles (10 km) west of Lochalsh on the main line of the C.P.R.

Access is from highway #17 east, approximately 24 miles (40 km) north of Wawa, to the village of Dubreuilville and then by forest access road east and south to the Lochalsh-Goudreau road which leads to the mine property.

4. PREVIOUS WORK

Gold was first discovered on claim SSM 2188 by James Cline in May 1918. In 1924 the property was optioned by Cline Canadian Gold Mines Limited, buildings were ere cted and the #1 shaft was sunk to a depth of 140 ft. on claim SSM 2186. At a depth of 80 feet there was 80 feet of drifting to the east and 20 feet to the west. #2 shaft on claim SSM 2185 was sunk during the summer of 1925 to a depth of 215 feet on an incline of 70 degrees. At the 100 foot level crosscuts were driven 19 feet

north and 20 feet south and at the 200 foot horizon 40 feet of crosscutting was done. Work was discontinued in May 1926 and the property reverted to the owner. In 1927 Cline Mines Limited, was formed and the #3 shaft on SSM 2185 was sunk to 115 feet.

Cline Lake Gold Mines Limited was formed in 1932 and a new vein was discovered on SSM 2271 in 1933. O'Brien Gold Mines Limited took control of the property in 1936 and began development with the #4 shaft on claim SSM 2271. This shaft was originally sunk to 522 feet with levels at 125, 250, 400, and 500 feet. Later this shaft was deepened to 1,196 feet. A 200 TPD mill began operation in July 1938 and operated until 1942. The property was reopened in 1947 but closed again in 1948. Over this 10 year period the mill treated 331,842 tons of ore with an average recovered grade of 0.191 oz Au/T

In the early to mid-1960's Pick Mines Limited gained control of the property and did considerable exploration work in the area east of the #3 shaft. This work consisted of driving an adit on the #3 zone, (30 vein of Rok) drifting and cross-cutting on the 100 foot level from the #3 shaft, plus surface and underground drilling. It is reported that a few tens of tons of ore were milled at this time.

The mill was removed from the property in the late 1970's by E. J. Blanchard of Sudbury.

5. GEOPHYSICS-MAGNETOMETER SURVEY

5.1 FIELD WORK

The property was surveyed using a Scintrex-MF-1 Fluxgate magnetometer during mid-October 1982 on north-south picket lines 200 foot apart and with readings being taken along the lines at 50 foot

intervals. A base station of 320nT. was established at L17E at the base line and all readings were tied into this base. This was accomplished by surveying the baseline and establishing secondary base stations where each picket line intersected the base line. The readings on each picket line were then tied into these secondary base stations.

The results are presented in map CL-002, Magnetometer Survey, with the values being contoured.

5.2 RESULTS

The general trends as indicated by the magnetic patterns are;

1. approximately east-west which is considered to represent the trend of the volcanics in the area,
2. a west-northwest trend which appears to coincide with zones of faulting, and shearing and felsic dike intrusion and,
3. an east-northeast trend which in part coincides with a quartz-carbonate shear zone reported in #4 shaft area.

The volcanics are represented by the lower values in the magnetics (<+500nT) with the higher values representing magnetite rich gabbro sills and/or magnetite rich portions of mafic metavolcanic flows. Some of the smaller more isolated magnetic highs may represent local concentrations of pyrrhotite.

The lower values (<-1000nT) are considered to be due to felsic metavolcanics, felsic sills and zones of carbonatization and silicification of mafic metavolcanics.

6. GEOLOGY

6.1 REGIONAL GEOLOGY

The Cline Lake property lies within an approximately

east-west trending steeply dipping band of intermediate to mafic metavolcanics. Regional geological studies place the property approximately mid-way between the Centre Lake anticline to the south and the North Range syncline along the northern boundary of Jacobson Township (Twp 48). This band of intermediate to mafic metavolcanics is underlain by felsic metavolcanics to the south and sediments to the north. About 3 miles (5 km) to the west in central Township 49 is a stock of granite.

6.2 PROPERTY GEOLOGY

During October and early-November 1982 the western part of the property was mapped, being mainly claims SSM 2185 and SSM 2186, as well as the area that had been stripped in the adit area between lines 15E and 19E. The results of the mapping of claims SSM 2185 and SSM 2186 is presented in map CL003 and the geology of the stripped area in map CL004.

6.2.1 ROCK TYPES

The dominant metavolcanic is mafic in composition, fine grained dark green, chloritized and foliated and usually contains a small amount of disseminated pyrite.

The intermediate metavolcanics are much less abundant than the mafic ones. They are generally green-grey in colour, very fine grained and usually show a well developed foliation.

There are two rock types grouped under felsic metavolcanics. The first is a medium-grained rock labelled quartz-eye phorphyry . This unit is light coloured and consists of white feldspar, some sericite and grey to blue quartz eyes up to 3-4 mm. in diameter. This rock shows an east-west foliation

and is best exposed south of #2 and #3 shafts and east of Cline Lake on L29E at 12N.and at L11E at the base line. At this time it appears to be conformable with the volcanics but whether it is intrusive or of volcanic origin is not known.

The second felsic metavolcanic is a fine grained, light coloured, generally slightly foliated rock. It appears to be silica rich, may contain quartz eyes, usually contains iron carbonate, varying amounts of pyrite, and weathers to limonite. In the area of the old open stope this rock was called granodiorite by the workers in the 1930's. This rock can also be seen in the stripped area near the adit and here this rock appears to coincide with a zone of shearing in the mafic metavolcanics adjacent to the gabbro to the north. Similarly on the south shore of Cline Lake on lines 17E and 19E this rock is present and appears to grade northeastward into sheared mafic metavolcanics. Although this rock has been called a granodiorite by earlier workers the author suggests that this rock may be an alteration product representing silicification and carbonatization of mafic metavolcanics. Further work could resolve this problem. It is considered that this differentiation is important since the gold mineralization appears to be related, at least in part, to this rock type.

On L3E at 1N and also in L17E at 5N on the edge of the stripped area a chert-carbonate sedimentary unit is exposed. This unit which is 10 feet thick in the first location and at least 30 feet thick in the second, is interbedded with the volcanic flows, strikes approximately east-west and dips about 60° north.

A common rock type on the property is the felsic dikes. To date they have been noted in all parts of the property and are typically associated with west-northwest trending structures. They are particularly well developed in the area about the adit which has been stripped. (see map CL-004)

There appears to be at least three types of felsite dikes; quartz porphyry, felsite and feldspar porphyry. They are all very similar and so at this point in time are grouped under the one term of felsite dikes.

The quartz porphyry is light-buff to grey in colour and shows quartz and feldspar phenocrysts in a finer grained matrix. The felsite is very fine grained and grey to greenish-grey in colour. The feldspar porphyry contains phenocrysts of white to grey feldspar in a fine grained grey groundmass.

The felsite dikes have intruded west-northwest trending faults, and are in turn cut by these faults. suggesting a continuous period of intrusion and faulting.

6.2.2 STRUCTURE

As indicated above the property lies on the northern limits of a east-west trending anticline with the dip of the volcanics being steeply north.

The east-northeast trending and north dipping quartz-carbonate zone lying just north of the #4 shaft appears to represent one structural trend. The magnetics suggest there may be other zones on the property with this same trend.

The dominant structural feature is considered to be the west-northwest trending and north dipping faults cross-cutting the volcanics. This trend shows up very well in the magnetics map CL-002, and is well illustrated by the geology in map CL-003 and CL-004. It is this structural trend that appears to have the silification and carbonate and pyrite alteration associated with it as well as the gold mineralization.

Other fault directions are also indicated. In the adit area the mapping has shown a fault striking north-south and dipping about 50° east. This fault displaces

the mineralized zones in this area but the direction of movement is not known at this time. Another direction of faulting, northeast, is interpreted from the magnetics. Here the movement appears to be left-handed ,i.e., west side has moved southwest.

7. ECONOMIC GEOLOGY

The mineralization in the #4 shaft area mined by Cline Lake Gold Mines Limited is described by Bruce (1940).

> "The vein systems of the Cline Lake mine are apparently the result of disturbances related to the development of the great shear zone that lies south of the shaft. This zone contains sheared, silicified, and carbonated rocks of various types. The ore bodies at present being worked lie in subsidiary zones, which branch off from this main shear zone or lie roughly parallel to it.
>
> The ore bodies vary in character depending upon the kind of rock in which they occur. In the greenstone they are definite and easily recognized, lenticular quartz veins. In the granodiorite and quartz porphyry they are zones of shearing that have been impregnated by quartz. Usually these zones are narrower in quartz porphyry than they are in granodiorite. In both these rocks ore is not easily distinguished from material below ore grade, and the walls are assay walls. Widths normally range from 4 to 8 feet; in rare cases they are even greater. In general, individual shoots are short, the lengths depending upon the distance for which the fault has granodiorite or quartz porphyry as one or both walls.
>
> The "A vein is the most important vein yet found in the mine. It had material of ore grade in it for a length of 500 feet on the surface and has continued to the deepest levels yet opened in the mine. It is actually a series of veins lying in a zone along the "A" fault, which forms the footwall. The hanging wall is an assay wall. In the vein zone, granodiorite and quartz porphyry have been sheared and silicified. Into this material narrow quartz veins, which carry considerable gold, have been introduced. The ore shoot ends irregularly at both ends where the "A" fault passes out into andesite."

From the available information it appears that mining only took place to a depth of about 500 feet but development was done to lower levels. Bruce (1948) states that little ore was found below the fifth level.

In the adit area, work by Pick Mines Limited produced a number of ore grade intersections in surface and underground drill holes and drifting. Stripping by Rok Engineering Construction has exposed 4 zones in this area on surface (Map CL-005). The mineralization is of three types. The first type is illustrated by Vein Zone #10. This zone has given mineralization grading 0.160 oz. Au/T over an average width of 10.25 ft. for a strike length of 31 feet and consists of two parallel zones separated by a narrow low grade section. The narrower higher grade sections give an average of 0.183 oz Au/T over 42" on the northern edge of the zone and 0.269 oz Au/T over 38" in the southern edge. This structure continues to the east on an azimuth of 110^{o}-115^{o} and is considered to be very favourable for mineralization. It appears to consist of a shear zone with associated silicification and carbonate and pyrite alteration of mafic metavolcanics. The western end of zone #10 appears to be cut off by a north-south striking and east dipping fault. The displaced portion of this zone should lie west of the north-south fault.

The second type of mineralization occurs in vein or zone #30. This zone consists of a shear zone containing felsite dikes. The mineralization occurs in a strongly chloritized shear on the southern edge of this zone often characterized by a fine yellowish mica (?). Sampling has indicated a strike length of 63 feet of material grading 0.529 oz Au/T across an average width of 14 inches. This vein strikes 100^{o} and dips 75^{o}-80^{o}N.

The third type of mineralization occurs in zones or veins #20 and #40.
These veins are narrow, generally contain some quartz veining and trend at 120^{o} and dip north at 60^{o}-80^{o}. #20 vein assays 0.587 oz Au/T over 13 inches for a strike length of 123 feet and vein #40 gives 0.297 oz Au/T over 12 inches for a strike length of 102 feet.

Other zones of mineralization have been indicated by previous owners but available information does not permit one to calculate tonnages and grades. A summary of the various zones of mineralization is presented in Table 1..

In considering these results one must be aware of some potential problems.

1. The surface samples may show some surface enrichment.
2. The values appear to be erratically distributed within the vein and show a significant nugget effect.

The first problem could be resolved by blasting a trench along the vein and thus sampling the fresh rock.. A better appreciation of the second could be obtained by taking a bulk sample.from some or all of the zones.

In summary the property appears to have potential for mineralization of the following types:

1. High grade, narrow veins or zones such as the #20, #30, and #40 zones.
2. Wider zones showing silicification and carbonate alteration plus disseminated pyrite. It is considered that these zones could average in the 0.15± oz Au/T range.
3. Mineralization similar to 2, above but with a grade less than 0.10 oz Au/T., possibly in the order of 0.05 oz Au/T. If these zones are at least 10 feet wide and if the mineralization was amenable to leaching either a pad or in a silo, they could be economically viable with a gold price of CAN $500+

It is suggested that the objectives of the exploration program should be to outline zones of the above types of mineralization.

TABLE 1

SUMMARY OF MINERALIZED ZONES - CLINE LAKE PROPERTY

ZONE	LOCATION	LENGTH (ft.)	WIDTH (in.)	GRADE‡ oz Au/T	TONS+
#10	Surface: adit area	31	123 10.25 ft	0.160	1288*
#20	Surface: adit area	123	13	0.587	540*
#30	Surface: adit area	63	14	0.529	322*
#40	Surface: adit area	102	12	0.297	437*

Zone from caved area in adit through adit portal and to west. The sampling by Pick Mines Limited indicates a zone similar to #30 vein (Pick Mines #3 Vein). This zone has also been developed on the 100 foot level drift from #3 shaft. No tonnage or grade calculations are available.

Possible mineralized zones in the #1 and #2 shaft areas.

Mineralized zone at #3 shaft on 100 foot level.

Partially developed stopes on the Q zone of Pick Mines Limited above 400 foot level drift from #4 shaft.This would require dewatering 4 shaft to below the 400 foot level.

NOTES: ‡ All assays over 1 oz cut to 1 oz for calculations.

* Tonnage calculated to 50 feet below surface.

\+ No factor for dilution included.

8. DRILLING

A number of 2½" and 3" diameter percussion holes were drilled using the Gardner-Denver hydromatic dust-collector equipped drill. The location of the holes is shown on map CL-006 and in Table 2 and a cross-section of each hole showing the assays on the drill cuttings is presented in Figures 1 to 9. The assays represent the values from cuttings from 2 or 3 foot sections in the holes.

To date no ore grade intersections have been obtained using the drill. The possible reason for this are presented below.

1. No ore grade sections have been intersected in the drilling even though mineralized structures have been drilled. The holes could have penetrated low grade sections within the structures.
2. The gold is being trapped in the dust filter. The filter from holes #1,2 and 3 was ashed and assayed and the results were 0.002 oz Au/T. This would suggest that gold is not being removed in this way.
3. Mixing of cuttings is taking place in the hole so that high grade values are being diluted by cuttings from lower grade sections. This appears to be the case when water is encountered since the sample size appears to vary under these circumstances. In dry holes there appears to be less of a problem in the variation of sample size.

Perhaps the drilling of a number of holes through a known zone should be done to test the validity of the samples obtained by this method.

9. EXPLORATION POTENTIAL

The work to date indicates that the gold mineralization is occurring in structures trending west-northwest and steeply dipping. The mineralization is associated with shearing and zones of alteration, particularly

TABLE 2

CLINE LAKE PROPERTY-PERCUSSION DRILL HOLES

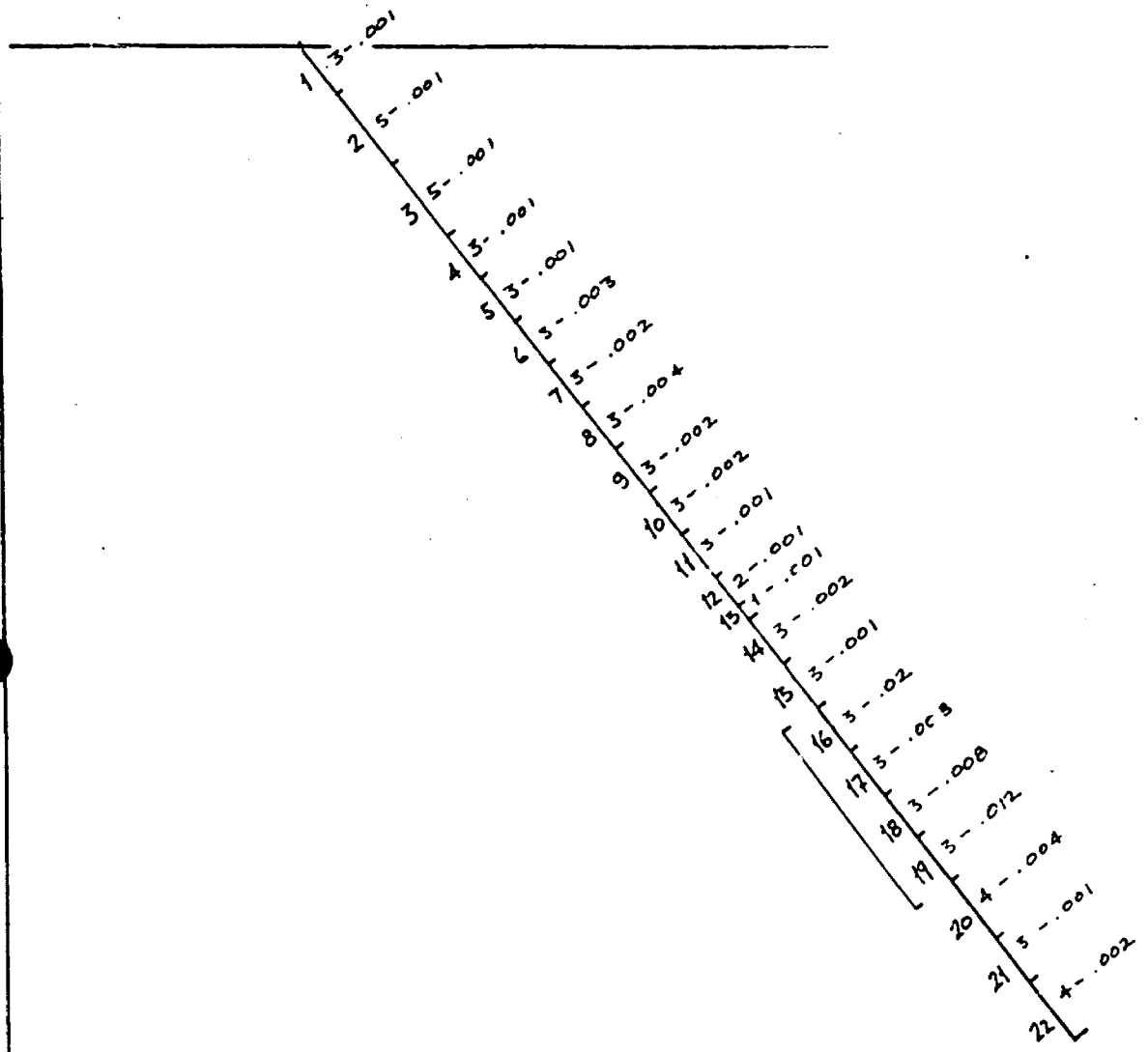
Hole	Location	Azimuth	Inclination	length
R1	6+35N:16+50E	200	-48°	69
R2	6+55N:16+30E	200	-45°	97
R3	5+80N:16+00E	200	-50°	39
R4	5+90N:17+70E	014	-50°	49
R5	5+90N:17+70E	205	-55°	39
R6	0+50N:31+85E	215	-50°	49
R7	0+50N:31+85E	035	-50°	10
R8	0+70N:30-20E	016	-42°	49
R9	7+50N:24+50E(?)	200(?)	-50°(?)	52

carbonatization and silicification with disseminated pyrite. It is considered that these structures and favourable areas are indicated by magnetic lows and the mapping and magnetics indicate a number of west-northwest trending zones or structures which are considered to have the potential for gold mineralization. These structures and areas of interest are indicated on map. CL-003.

To outline these potential areas of interest the following exploration program is proposed.

1. Geochemical exploration program. Sampling of surface materials for gold and probably copper and arsenic as pathfinder elements. It is suggested that an orientation survey be done to test the validity of the method.
2. Induced Polarization (IP) survey to locate areas of disseminated sulphides. To date, gold mineralization appears to be associated with disseminated pyrite.
3. Complete the geological mapping of the property.
4. Stripping of areas of interest as indicated by the geochemical and/or IP work.
5. Mapping and sampling of the stripped area.

#1 DRILL HOLE



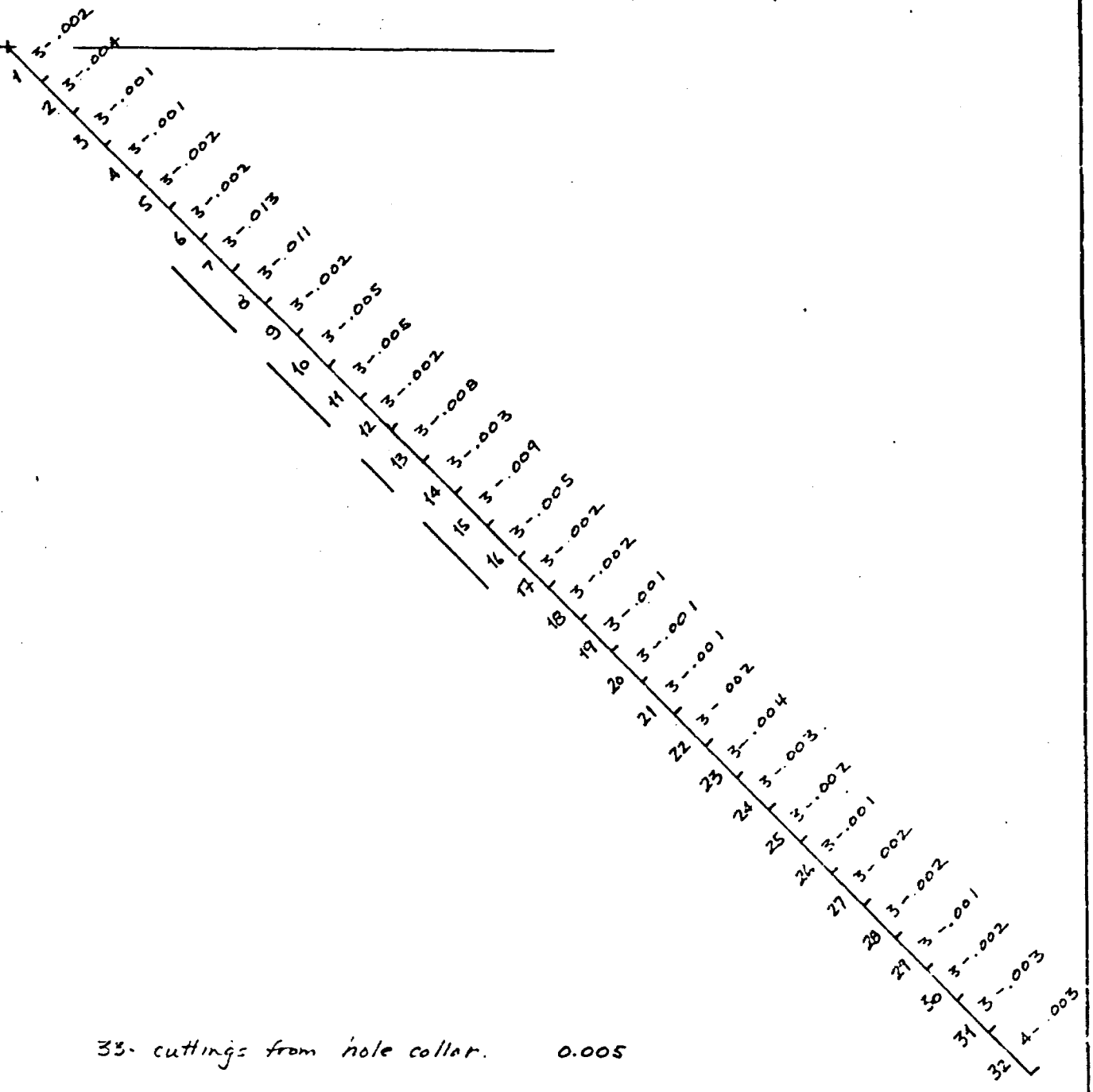
All values in oz Au/T.

1" = 10'

ROY ENGINEERING		
CLINE LAKE		
R-1 DH- ASSAYS		
1" = 10'	OCT 52	520.

#2 DRILL HOLE

016°



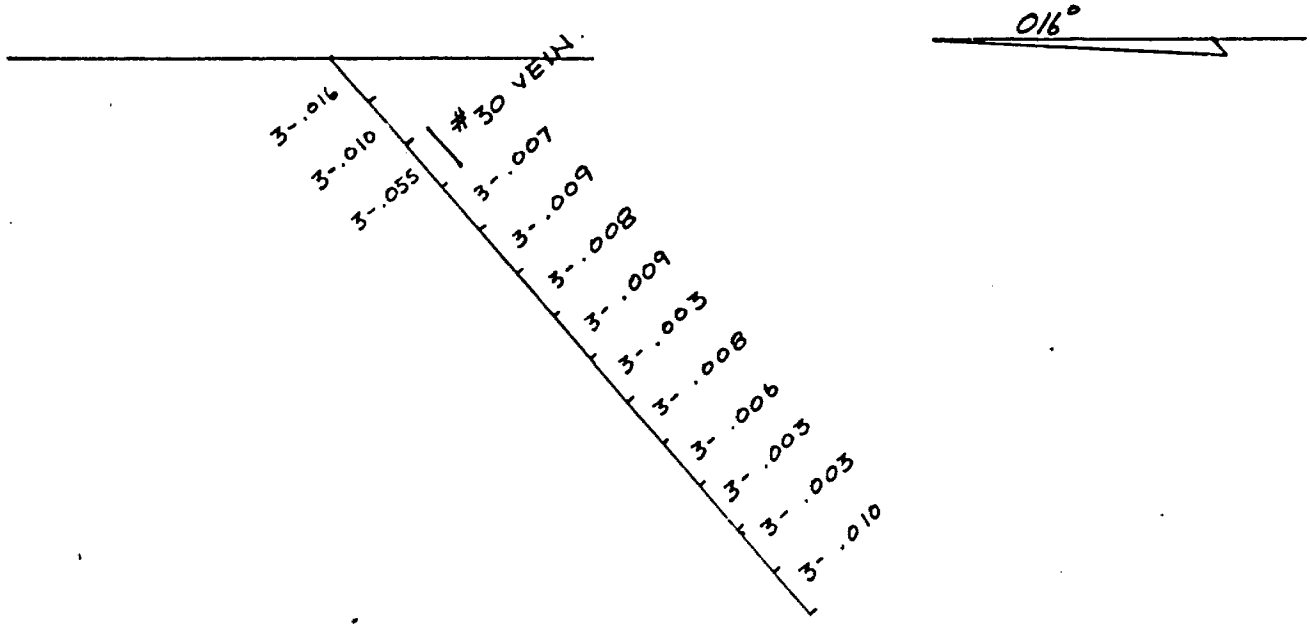
33- cuttings from hole collar. 0.005

All values in oz Au/T

1" = 10'

ROK ENGINEERING		
CLINE LAKE		
R-2 DH- ASSAYS		
1" = 10'	OCT. 82	[illegible]

#3 DRILL HOLE

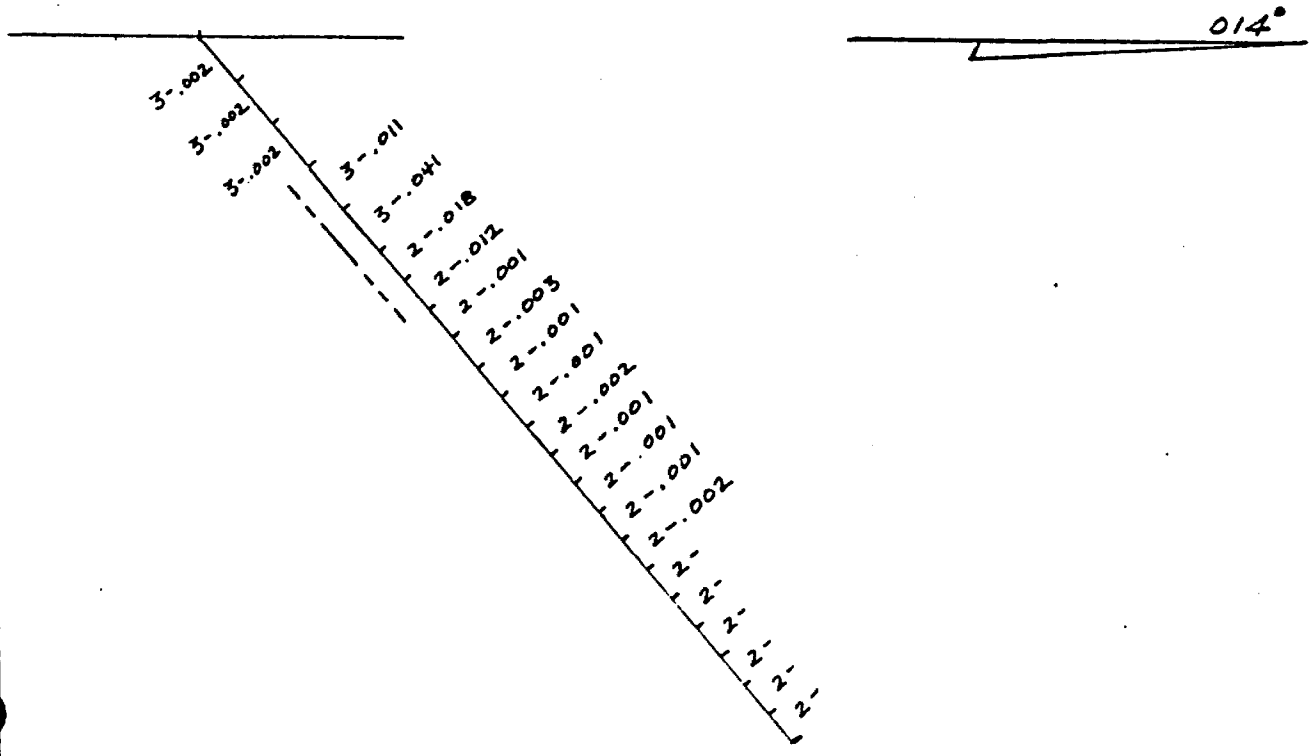


All values in oz Au/T.

1"=10'

ROK ENGINEERING		
CLINE LAKE		
R-3 DH ASSAYS		
1" = 10'	DEC. 52	[illegible]

4 DRILL HOLE

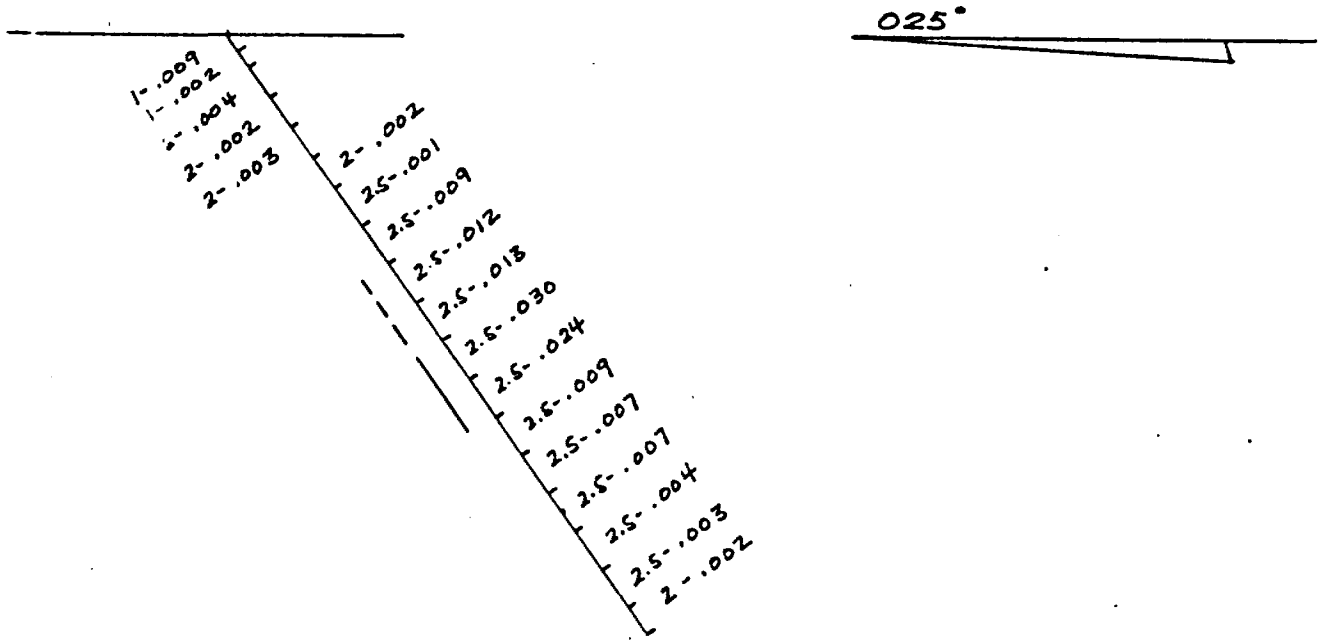


All values in oz. Au/T.

1" = 10'

ROK ENGINEERING		
CLINE LAKE		
R-4DH ASSAYS		
1" = 10'	DEC. 82	SJS

5 DRILL HOLE

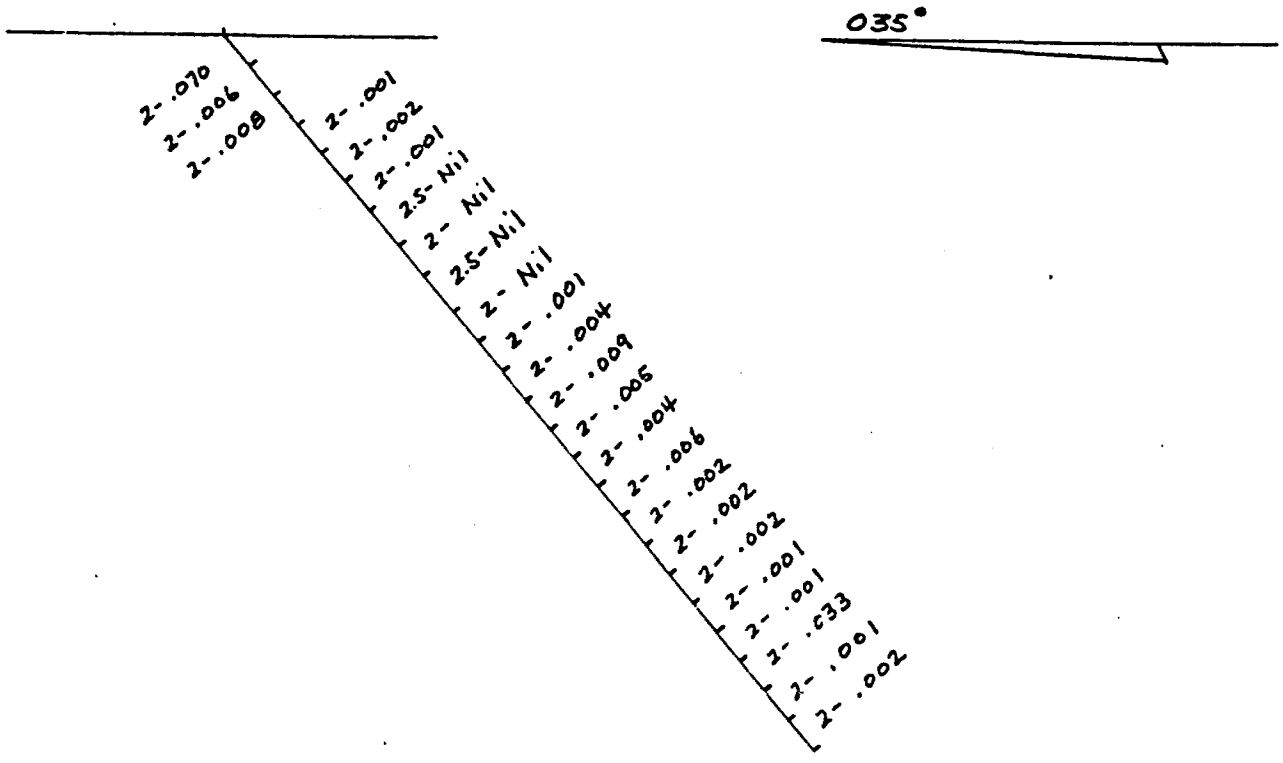


All value: in oz. Au/T.

1" = 10'

ROK ENGINEERING		
CLINE LAKE		
R-5 DH ASSAYS		
1" = 10'	DEC. 82	#30

#6 DRILL HOLE



All values in oz. Au/T.

1" = 10'

ROK ENGINEERING		
CLINE LAKE		
R-6 DH ASSAYS		
1" = 10'	DEC. 82	mjv

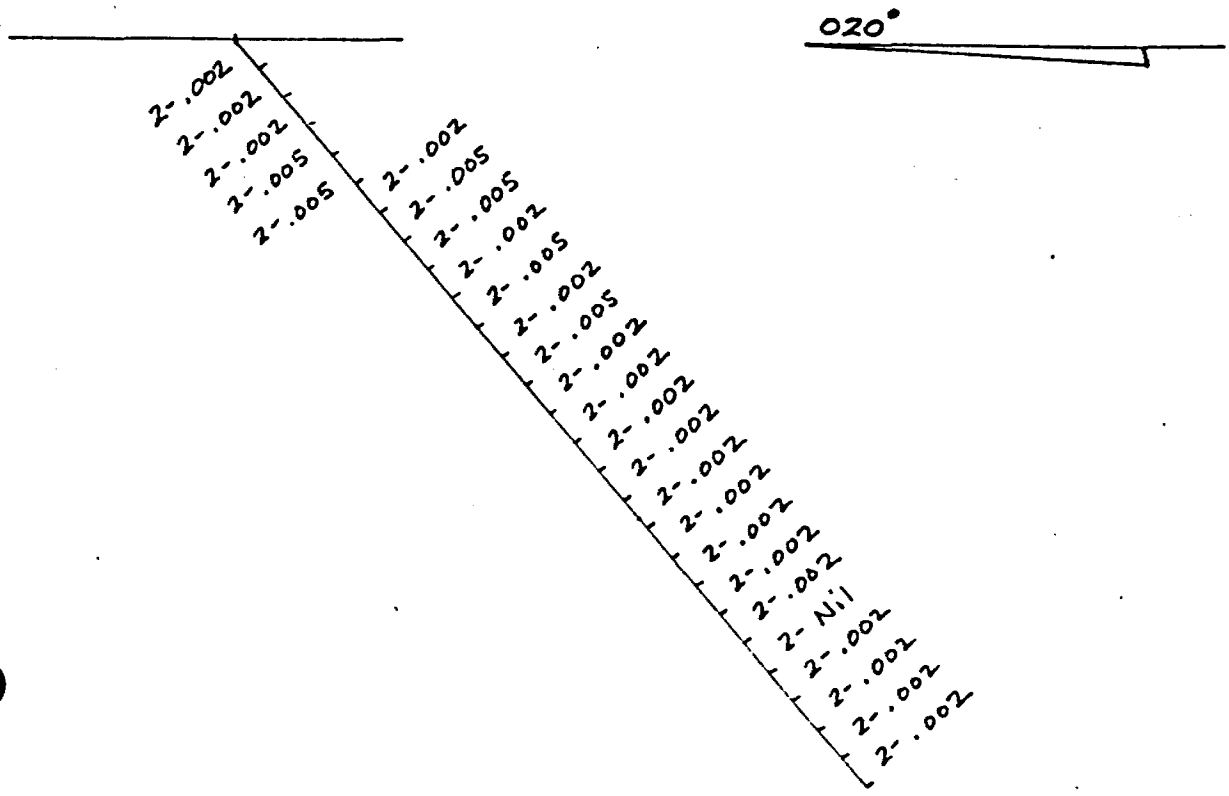
#7 DRILL HOLE

All values in oz. Au/T.

1"=10'

ROK ENGINEERING		
CLINE LAKE		
R-7 DH ASSAYS		
1" = 10'	DEC 82	JW

9 DRILL HOLE



All values in oz. Au/T.

1" = 10'

ROK ENGINEERING		
CLINE LAKE		
R-90H ASSAYS		
1" = 10'	DEC 82	AH

The estimated costs of this program are;

Geochemical survey	$9000
IP survey	$9000
Mapping	$3000
Sampling and assaying	$4000
Total	$25,000

At present a number of areas can be picked out as interesting geological targets but it is suggested that the geochemical and IP work would better define potential targets for stripping, sampling, drilling etc. thus making further work more efficient.

The #10 vein could be stripped for a short distance to the west of the fault that appears to cut it off in the pit just east of L15E at 6+75N. The #10 vein could also be stripped and drilled east of its presently exposed location. An alternative might be to drill this zone off with the hydromatic drill on 25 foot centres east from where it is presently exposed at about L18E.

In general, it is considered that there is considerable potential for the localization of gold mineralization on the property and that the proposed program should be able to locate those areas with the highest economic potential.

Respectfully submitted,

L. D. S. Winter

L. D. S. Winter
B.A.Sc., M.Sc., F.G.A.C.
January 4, 1983.

GEOLOGICAL ASSOCIATION OF CANADA · FELLOW · L. D. S. Winter

REFERENCES

Bruce, E.L.,(1940); Geology of the Goudreau-Lochalsh Area, Ontario Dept. of Mines, Vol. 49, pt. 3, p. 33-41.

Bruce, E.L.,(1948); Cline Lake Mine; Structural Geology of Canadian Ore Deposits, CIM Jubilee Volume, p. 433-435.

CERTIFICATE OF QUALIFICATION

I, Lionel Donald Stewart Winter do hereby certify

1. that I am a geologist and reside at 1849 Oriole Drive, Sudbury, Ontario,

2. that I am a Fellow of the Geological Association of Canada,

3. that I graduated from the University of Toronto in Mining Engineering in 1957 with a Bachelor of Applied Science and from McGill University, Montreal in 1961 with a Master of Science(Applied) in geology,

4. that I have practised my profession continuously since 1961,

5. that my report on the Cline Lake Property of Rok Engineering Construction is based on field work carried out and/or supervised by me and on published and unpublished reports on the property.

L.D.S. Winter
B.A.Sc., M.Sc., F.G.A.C.
January 4, 1983.

L. D. S. Winter

APPENDIX

ASSAY RESULTS

SURFACE CHIP SAMPLES

Nov. 12, 1982.

CLINE LAKE PROPERTY
SURFACE SAMPLES - #3 ZONE - ADIT AREA.

SAMPLE NO.	ASSAY NO.	LENGH. (IN.)	oz. Au/T.
1.	501	12	.003
	502	7	.370
	503	12	.003
2.	504	12	.008
	505	9	.120
	506	8	.010
	507	10	.017
	508	12	.007
3.	509	12	.001
	510	4	.001
	511	12	.001
4.	512	12	.001
	513	30	NIL
	514	12	.001
5.	515	12	.008
	516	7	.130
	517	12	.006
6.	518	12	.002
	519	21	.120
	520	13	.005
	521	12	.004
7.	522	17	.005
	523	16	.012
	524	12	.002
8.	525	12	.001
	526	17	.600
	527	19	.004
	528	10	.005
	529	12	.002

Note: See last page for position of each Sample in each channel sample.

SAMPLE NO.	ASSAY NO	LENGTH (IN.)	oz. Au/T.
9.	530	12	.001
	531	9	.052
	532	12	.011
10.	533	12	.011
	534	12	.840
	535	36	.014
	536	24	.032
	537	48	.025
11.	538	36	.002
	539	18	.026
	540	12	.041
12.	541	12	.019
	542	24	.040
	543	12	.012
13.	544	12	.001
	545	10	1.06
	546	24	.006
	547	36	.019
14.	551	12	.009
	552	14	.009
	553	12	.002
15	554	30	.006
	555	22	.490
	556	36	.018
18	548	12	.005
	549	6	.004
	550	12	.005

SAMPLE NO.	ASSAY NO.	LENGTH (IN.)	OZ. Au/T.
19.	561	12	.014
	562	14	.008
	563	15	.050
	564	12	.151
	565	57	.075
20.	566	12	.007
	567	8	.084
	568	12	.007
21.	569	12	.001
	570	8	.014
	571	40	.002
	572	4	.014
	573	12	.002
22.	574	12	.002
	575	24	1.210
	576	12	.009
23.	577	12	.014
	578	24	.012
	579	12	.002
24.	580	12	.002
	581	30	.625
	582	12	.024
	583	12	.022
25.	584	12	.007
	585	16	.600
	586	16	.096
	587	12	.048

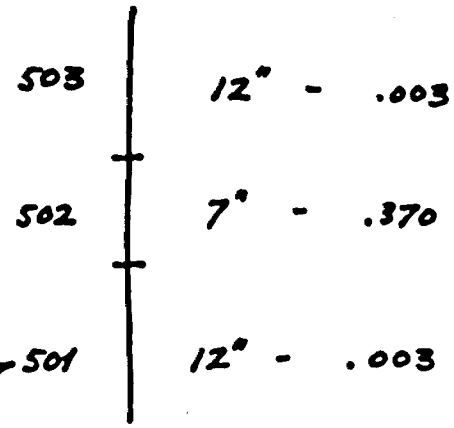
SAMPLE NO	ASSAY NO	LENGTH (IN.)	OZ. Au/T.
26.	588	12	.007
	594	12	2.410
	595	17	.026
	596	12	.010
27.	589	12	.002
	590	6	.014
	591	38	.001
	592	9	.017
	593	12	.063
28.	597	12	.002
	598	17	.004
	599	6	.375
	600	10	.003
	601	17	.002
	602	8	.034
	603	12	.002
29.	694	12	.003
	695	8	.010
	696	60	.004
	697	15	.094
	698	22	.016
	699	12	1.310
	700	12	.016
30.	604	12	.040
	605	16	.240
	606	12	.003
31.	607	12	.001
	608	12	.004
	609	12	.004

SAMPLE NO.	ASSAY NO.	LENGTH (IN.)	OZ. Au/T.
32.	610	12	.002
	611	15	.204
	612	12	.008
33.	613	12	.005
	614	8	.019
	615	33	.003
	616	9	.100
	617	12	.012
34.	618	12	.001
	619	13	.007
	620	24	.001
	621	31	.020
	622	12	.002
35.	623	2"	.001
36.	624	12	.001
	625	18	.002
	626	12	.001
37.	627	12	.004
	628	12	.005
	629	12	.002
38.	630	12	.012
	631	11	.034
	632	21	.004
	633	12	.002
39.	634	12	.002
	635	38	.026
	636	12	.008
	637	12	.025

SAMPLE NO	ASSAY NO.	LENGTH (IN.)	OZ. Au/T.
40.	638	20	.325
	639	24	.220
	640	14	.003
	641	48	.115
42	642	42	.003
	643	24	.070
	644	32	.270
	645	24	.012
	646	48	.060
	647	36	.275
	648	12	.017
43.	691	12	.007
	692	6	.435
	693	12	.039
44.	649	14	.001
	650	24	NIL
	651	12	NIL
45.	652	12	.001
	653	10	.006
	654	12	.001
46.	655	18	.001
	656	11	.002
	657	12	.001
47.	658	12	.001
	659	11	.002
	660	15	.001
	661	12	NIL

SAMPLE NO	ASSAY NO.	LENGTH (IN.)	oz. Au/T.
48.	662	12	.001
	663	11	.037
	664	12	.003
49.	665	12	NIL
	666	15	.002
	667	12	.002
50.	668	12	.002
	669	16	.028
	670	12	NIL
	671	12	.002
51.	672	10	.036
	673	36	.008
	674	10	.885
	675	12	.005
52.	676	12	.003
	677	27	.012
	678	12	.775
	679	12	.012
53.	680	12	.001
	681	8	.067
	682	14	.019
	683	42	.076
	684	17	37.59
	685	12	.014
54.	686	12	.092
	687	18	.007
	688	36	.032
	689	14	.600
	690	12.	.012

2g.



Lowest or first number always on south end of sample.

(1)

Ministry of Natural Resources
Ontario

900

Your file:

Our file: 3.20

Ontario Government Building
199 Larch Street
Sudbury, Ontario, P3E 5P9

April 13th, 1983

MEMORANDUM TO:

Assessment Files Research Office
77 Grenville Street
Toronto, Ontario
M5S 1B3

RE: ROK ENGINEERING EXPLORATORY LICENCE #14893

Enclosed is a Geological Report on the Cline Lake property for assessment files.

A second copy of the Report has been forwarded to Gerry Bennett, Resident Geologist, Sault Ste. Marie for his files.

Please enter the Report into your files and indicate by return mail the appropriate file number for our future reference.

for W. G. Cleaveley
Regional Director
Northeastern Region

D.T. Pudge/kg

Encl.

c.c. -Gerry Bennett, Resident Geologist, S.S.M.

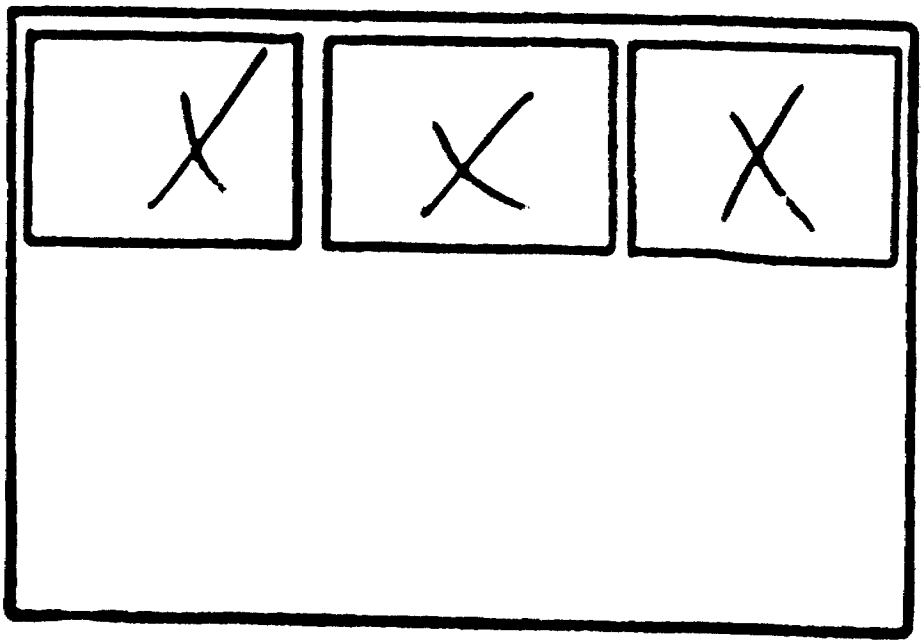
SEE ACCOMPANYING MAP(S) IDENTIFIED AS

JACOBSON-0049 #1

#2

#3

LOCATED IN THE MAP CHANNEL IN THE FOLLOWING SEQUENCE (X)



FOR ADDITIONAL INFORMATION SEE MAPS:

JACOBSON 0049 #4

5

6

DDH -32°

PIT

ADIT PORTAL

CAVED AREA

#1

#2

#3

OUTLINE OF STRIPPED AREA

(10) SAMPLE LOCATION & NUMBER

LITE

7400N

6400N

5400N

4400N

PIT & WATER

ROK. ENGINEERING & CONSTRUCTION

SCALE: 1in. = 20FT.	APPROVED BY:	DRAWN BY: JW.
DATE: NOV. 12/82		REVISED

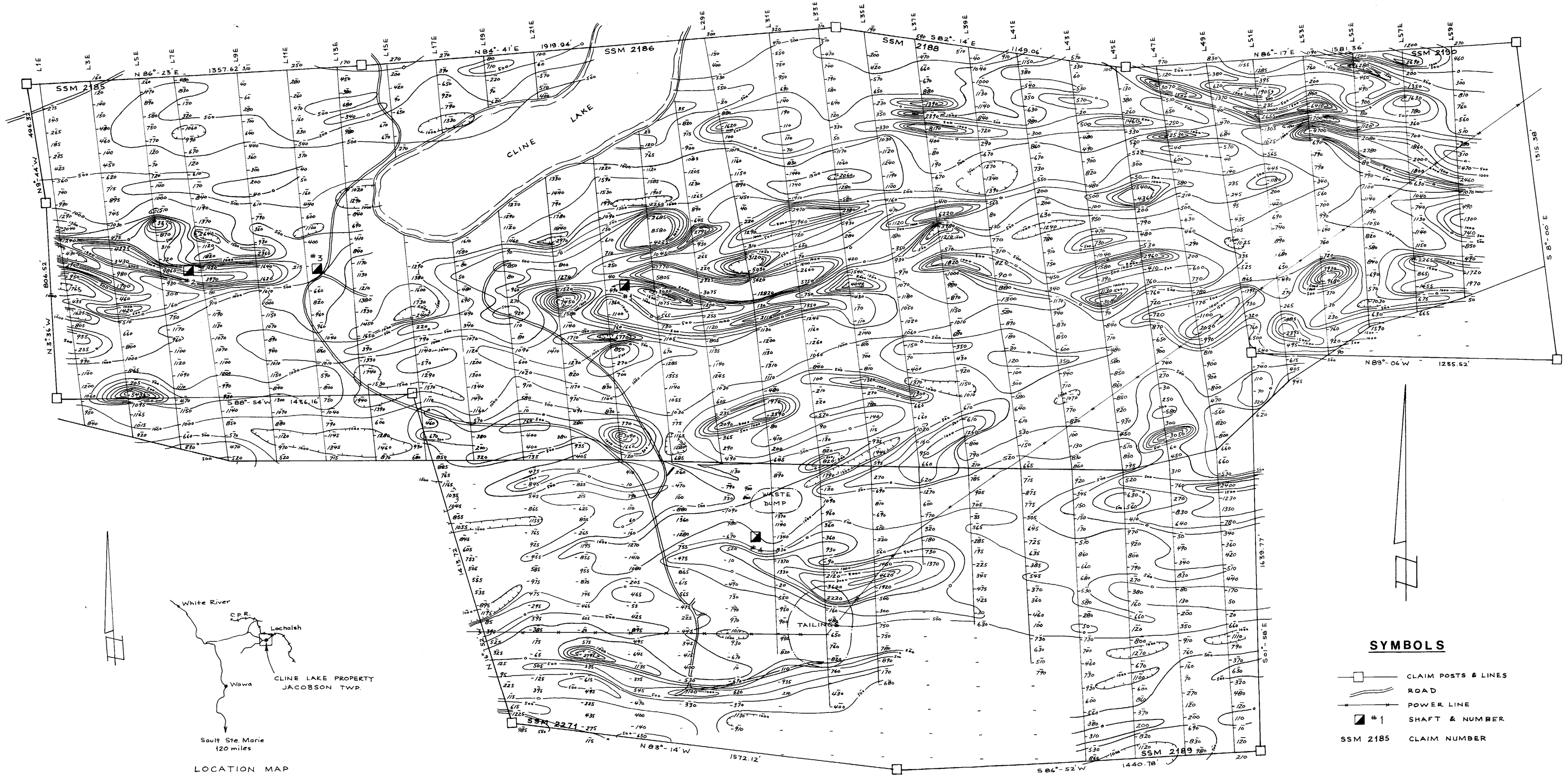
ASSAY LOCATIONS - CLINE LAKE

PROPERTY - ADIT AREA

DRAWING NUMBER: CL-001

GEOLOGICAL ASSOCIATION OF CANADA · FELLOW · L. D. S. Winter

JACOBSON-0049 #1



LOCATION MAP
SCALE: 1" = 20 mi.

LEGEND

MAGNETIC CONTOUR LINE

READINGS
560 POSITIVE
230 NEGATIVE

500 nT. CONTOUR INTERVAL

MAGNETIC LOW

BASE STATION: L17E: 0+00N 320 nT.

INSTRUMENT: SCINTREX MF-1

SYMBOLS

CLAIM POSTS & LINES

ROAD

POWER LINE

#1 SHAFT & NUMBER

SSM 2185 CLAIM NUMBER

JACOBSON-0049 #2

ROK ENGINEERING & CONSTRUCTION

CLINE LAKE PROPERTY
JACOBSON TWP.

MAGNETOMETER SURVEY

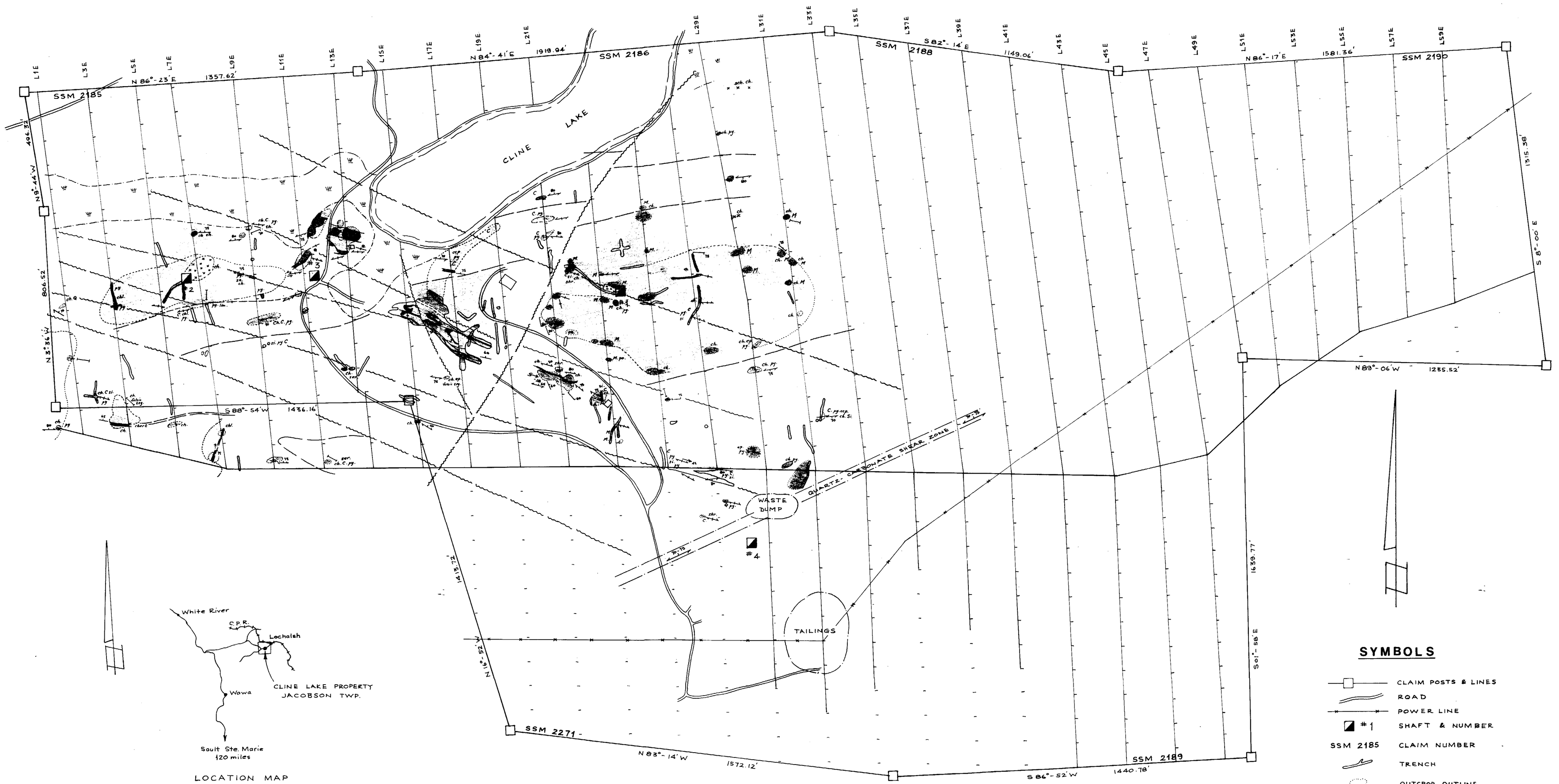
SCALE: 1 IN. = 200 FT.

DATE: DECEMBER 20: 82

L. D. S. Winter
GEOLOGICAL ASSOCIATION OF CANADA FELLOW

DRAWN BY: S. WINTER

NO: CL-002



LOCATION MAP
SCALE: 1" = 20 MI.

LEGEND

- GABBRO
- QUARTZ EYE PORPHYRY
- FELSIC DIKE
- FELSIC METAVOLCANIC
- INTERMEDIATE METAVOLCANIC
- MAFIC METAVOLCANIC
- CHERT - CARBONATE UNIT

- py. PYRITE
- ccp. CHALCOPYRITE
- po. PYRRHOTITE
- M MAGNETITE
- C. CARBONATE
- ch. CHLORITE
- ep. EPIDOTE
- Q. QUARTZ
- si. SILICIFICATION
- ser. SERICITE
- shr. SHEARING - SCHISTOSITY

- STRIKE & DIP : VEINS, BEDDING ETC.
- FOLIATION : VERTICAL
- : INCLINED
- CLEAVAGE : VERTICAL
- : INCLINED
- SMALL FOLD: DIRECTION & PLUNGE
- FAULT - OBSERVED
- - INTERPRETED
- GEOLOGICAL CONTACT -, OBSERVED
- - INTERPRETED

SYMBOLS

- CLAIM POSTS & LINES
- ROAD
- POWER LINE
- #1 SHAFT & NUMBER
- SSM 2185 CLAIM NUMBER
- TRENCH
- OUTCROP OUTLINE
- BROKEN ROCK
- SWAMP

JACOBSON 0049 #3

ROK ENGINEERING & CONSTRUCTION

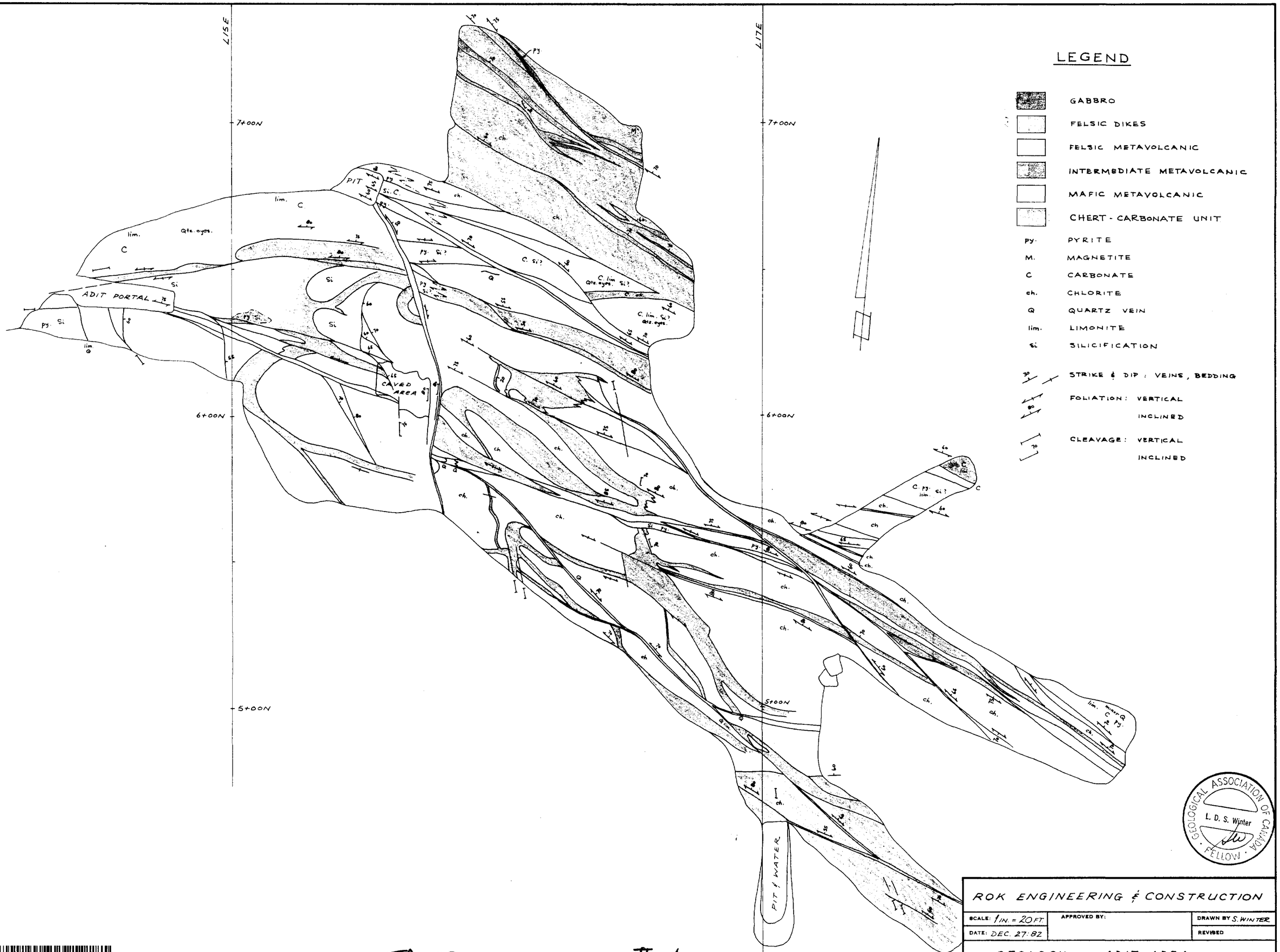
CLINE LAKE PROPERTY
JACOBSON TWP.

GEOLOGY

SCALE: 1 IN. = 200 FT.
DATE: DECEMBER 20: 82

GEOLOGICAL ASSOCIATION OF CANADA
L.D.S. Winter
FELLOW

DRAWN BY: S. WINTER
NO: CL-003



GEOLOGICAL ASSOCIATION OF CANADA
L. D. S. Winter
FELLOW

ROK ENGINEERING & CONSTRUCTION		
SCALE: 1 IN. = 20 FT.	APPROVED BY:	DRAWN BY S. WINTER
DATE: DEC. 27/82		REVISED
GEOLOGY - ADIT AREA		
CLINE LAKE PROPERTY		DRAWING NUMBER CL-004

JACOBSON-0049 #4

375' from sta. 7N on a 290° bearing to shaft #3

7+00N

10 VEIN
34' @ 0.160 over
1288 T.
10.25' Av. W.

OVERBURDEN PIT

ADIT PORTAL

THIS ZONE NOT SAMPLED DUE TO THIN BACKS OVER ADIT.

CAVED AREA

FAULT

6+00N

R-1
R-2
R-3
R-4
R-5

20 VEIN
123' @ 0.587 over 15" Av. W.
540 T.

65' @ 0.529 over 14" Av. W.
322 T.
#30 VEIN

102' @ 0.297 over 12" Av. W.
437 T.
#40 VEIN

5+00N

L15E

L17E

PIT

SAMPLE: 8 - 1.730
WIDTH INCHES — oz. Au/T.

TONNAGE BASED ON 50 FOOT DEPTH OF VEIN BELOW SURFACE

DRILL HOLE R-1

GEOLOGICAL ASSOCIATION OF CANADA
L. D. S. Winter
FELLOW

ROK ENGINEERING & CONSTRUCTION

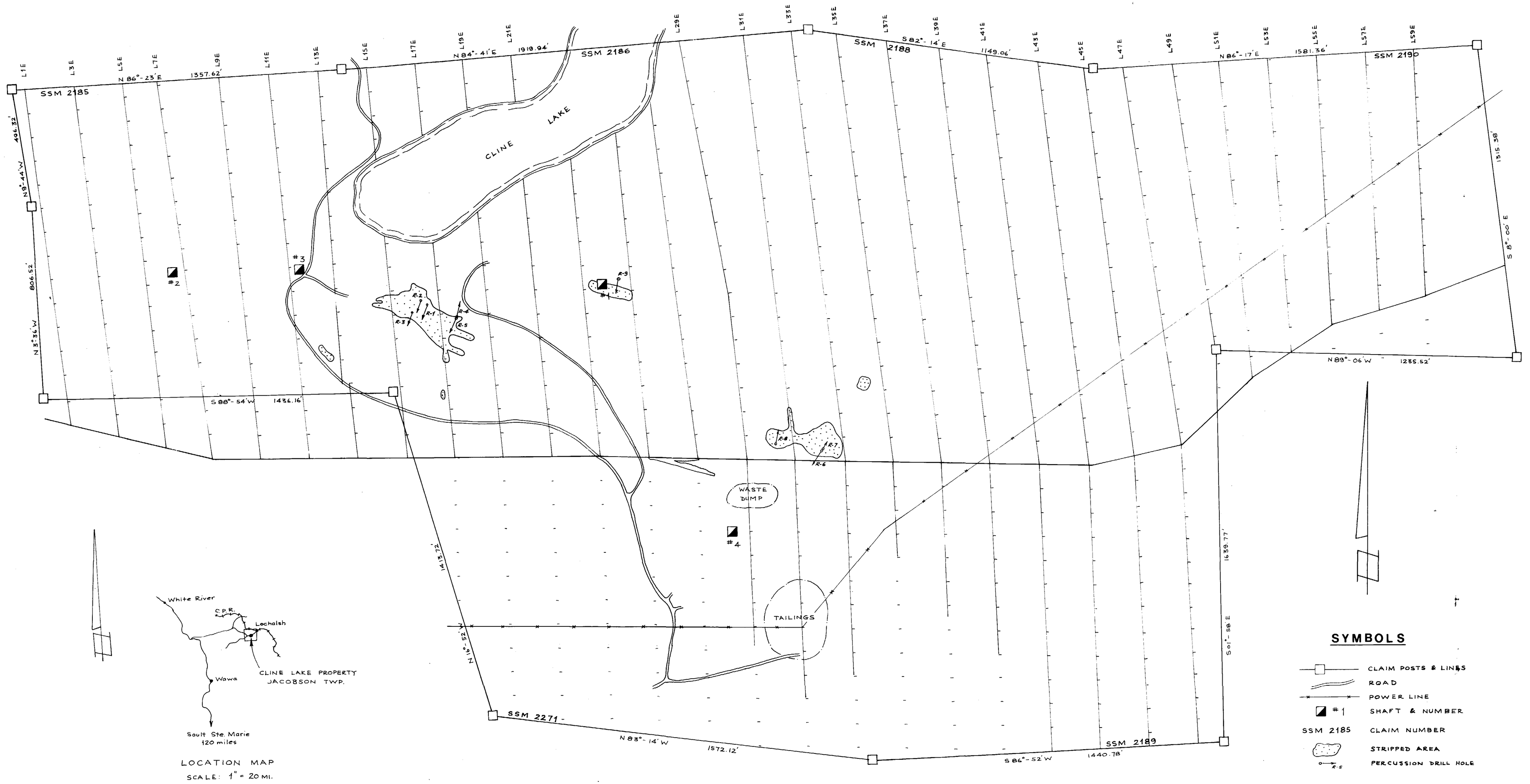
SCALE: 1 IN. = 20 FT.	APPROVED BY:	DRAWN BY S. WINTER
DATE: DEC. 20: 82		REVISED

CLINE LAKE PROPERTY - ASSAY VALUES

SURFACE ZONES - ADIT AREA

DRAWING NUMBER CL-005

JACOBSON-0049 #5



LOCATION MAP
SCALE: 1" = 20 MI.

SYMBOLS

- CLAIM POSTS & LINES
- ROAD
- POWER LINE
- #1 SHAFT & NUMBER
- SSM 2185 CLAIM NUMBER
- STRIPPED AREA
- P.6 PERCUSSION DRILL HOLE

JACOBSON-0049 #6.

ROK ENGINEERING & CONSTRUCTION

CLINE LAKE PROPERTY
JACOBSON TWP.

STRIPPING & DRILL HOLE LOCATION

SCALE: 1 IN. = 200 FT.
DATE: DEC. 28: 82

GEOLOGICAL ASSOCIATION OF CANADA · FELLOW · E. D. S. Winter

DRAWN BY: S. WINTER
NO: CL-006