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REPORT ON

THE

1981 DRILLING PROGRAMME

STURGEON LAKE BASE METAL PROPERTY

PATRICIA MINING DIVISION ONTARIO

FOR

SEAGULL RESOURCES LTD

June 1, 1981

W.G. Timmins Exploration & Development Ltd

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SUMMARY AND CONCLUSIONS

The Seagull Resources Ltd. 1981 diamond drilling program on the Sturgeon Lake base metal property consists of a total of 11,345 feet in 14 holes. The majority of these holes were drilled to test and extend a mineralized horizon located in previous drilling. The remainder were drilled to test I.P. targets.

There are intersections of significant mineralization in nine holes, including one of a one foot band of massive sulphide, the first to be found on the property.

The possibility of a distal type of massive sulphide deposit is indicated, and a further program of work is recommended. This should be done in three phases: geologic mapping, followed by compilation and analysis of all available data, and then further diamond drilling.

INTRODUCTION

At the request of the Board of Directors of Seagull Resources Ltd. a diamond drilling program was carried out on the Sturgeon Lake base metal property, with core logging and geological supervision by the writer. A program of deep-penetration I.P. and lake-bottom sediment sampling was carried out concurrently by Geo. F. Beier and Associates under the supervision of T.R. Gledhill, P. Eng.

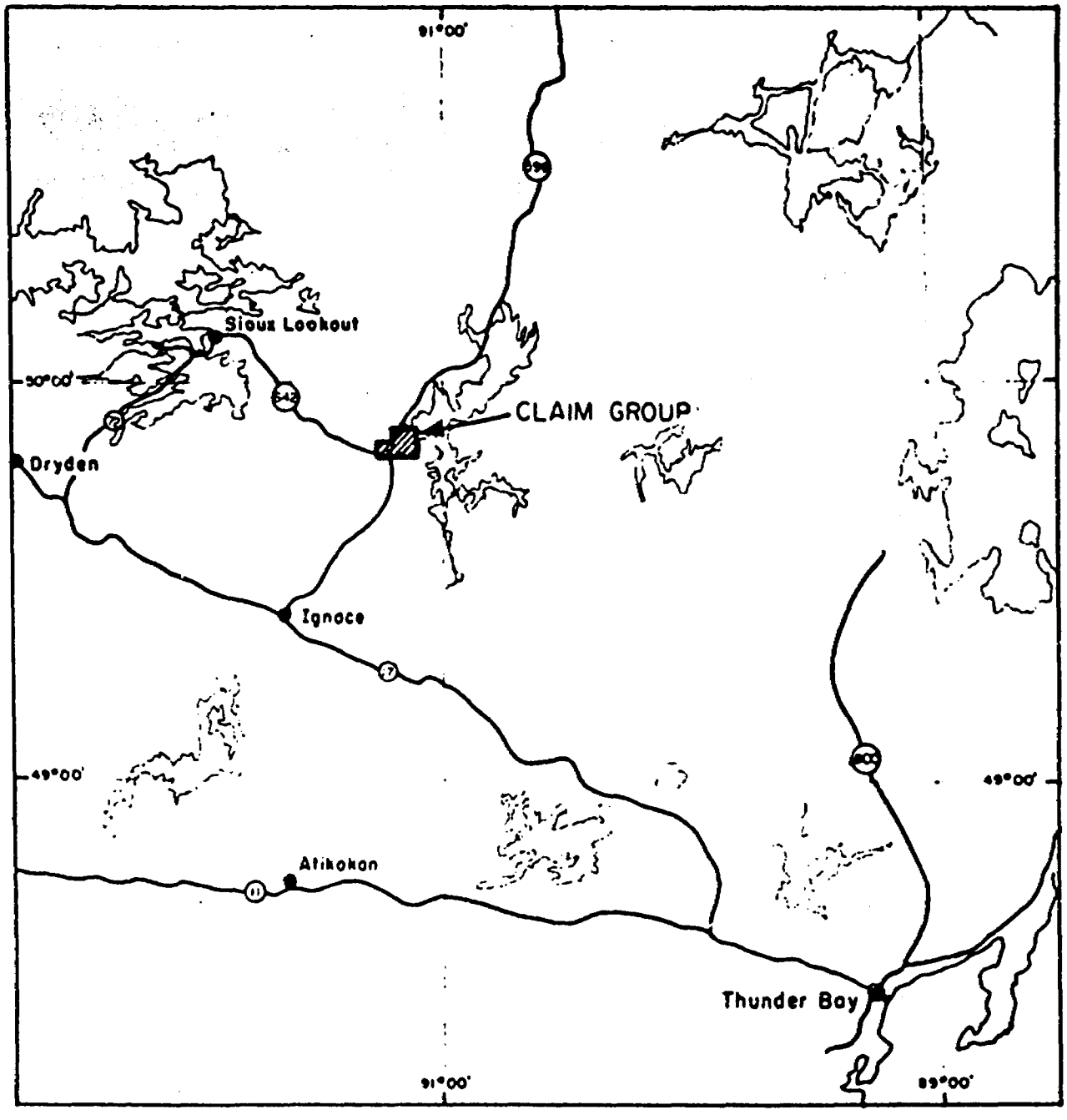
The details of this drilling program and the results obtained are the subject of this report, as are the results of the lake sediment geochemistry. The results of the I.P.survey will be referred on only where pertinent to the drilling. A program of further work is recommended.

PROPERTY, LOCATION AND ACCESS

The property consists of 320 contiquous mining claims, as shown on plans M-2257, Penassi Lake and M-2052, Valora Lake, District of Kenora, Patricia Mining Division, Province of Ontario. A legal survey of the claims has been made in preparation for taking them to lease. A list of claims appears as an appendix to this report. All claims are held by Seagull Resources Ltd.

The property is located in the Bell Lake-Sturgeon Lake map area (O.D.M. maps 2268&2269), in the District of Kenora, Patricia Mining Division, Ontario. The property is 42 miles by road southeast of the town of Sioux Lookout, by way of Highway 542, and about 35 miles north of the town of Ignace, by way of Highway 599. The paved highway serving Mattabi, Lyon Lake, and Sturgeon Lake Mines (now shut down) passes along the south shore of Sturgeon Lake, and cuts through a portion of the claims. There are a number of tractor roads giving access to the shoreline within the property, which are generally passable by four-wheel drive vehicle execpt during spring break-up. Sturgeon Lake and some smaller lakes occupy a large part of the property, and relatively easy access can be gained by boat in summer and snow vehicle in winter

Charter aircraft are available in Ignace and Sioux Lookout, and scheduled airlines link Dryden and Thunder Bay to the major cities. Rental vehicles are available in Thunder Bay, about four hours drive from the property. The Canadian National Railway line from Sioux Lookout to Thunder Bay passes about 3 miles southwest of the property, and a spur line serves the Mattabi mine.



STURGEON LAKE PROPERTY

LOCATION MAP

SEAGULL RESOURCES LTD.

PATRICIA MINING DIVISION, ONTARIO

PHYSIOGRAPHY AND VEGETATION

Maximum local relief is never more than 200 feet above the level of Sturgeon Lake (1342 feet a.s.l.). Generally the relief reflects the distribution of glacial deposits such as till, moraines, and eskers. Some higher knobs reflect bedrock topography, such as at the site of the Darkwater mine, and on Mountain Island. Outcrop is generally quite sparse within the property, and is often subdued topographically so that it is easily overlooked. In addition, the glacial overburden contains many very large boulders which, if partially buried, can be mistaken for outcrop. The best bedrock exposures are on the shorelines (particularly of the islands in Sturgeon Lake), and along the Mattabi Highway.

Most of the land is heavily forested by white and black spruce, birch, poplar, and white pine, with some willows and underbrush, especially near the shorelines. The forest is dense enough to prevent vehicle traffic except by road, but is not so dense as to impede travel by foot. There are a number of low-lying swampy areas.

HISTORY

Gold bearing quartz veins were discovered in the Sturgeon Lake area in the summer of 1898. Intermittent and temporary exploration activity followed. Darkwater Gold Mines Limited was formed in October, 1935, to develop auriferous quartz veins in a granodiorite body south of Beidelman Bay. Underground development began in 1936 and a mining plant was installed. Operations were suspended in 1937 - because of low, erratic gold distribution. (Horwood O.D.M. - 1937b,P 26,29,32)

During 1966-67 Steep Rock Iron Mines carried out a program consisting of geological and geophysical surveys followed by trenching and diamond drilling to evaluate a copper-molybdenum occurrence located in the Beidelman Bay area.

In October, 1969 - Mattagami Lake Mines Limited discovered a major base metal - sulphide deposit on Block No. 7 of the Abitibi Paper Company Limited. Following this discovery exploration activity throughout the entire area expanded considerably. As the area is extensively covered by water and glacial till, the major effort involved the diamond drilling of geophysical targets. To date this effort has resulted in the discovery of four major base metal orebodies - two of which are being mined and the fourth (F. orebody) being put into production. Falconbridge Copper Ltd. Sturgeon Lake Mines was shut down in November 1980 upon exhaustion

of ore reserves.

GEOLOGY OF THE PROPERTY

The Seagull Resources Ltd. Sturgeon Lake property is underlain primarily by Archean meta volcanic and meta-sedimentary rocks of the South Sturgeon Lake Greenstone Belt. This is the same stratigraphic sequence that host the orebodies at "F" zone, Mattabi Mines, Lyon Lake Mines, and Sturgeon Lake Mines. The southern part of the property is underlain by an apparently conformable intrusive body known as the Beidelman Bay Complex, which contains sub-economic copper - molybdenum mineralization with some of the characteristics of porphyry-type copper - molybdenum deposits. In addition, this igneous body is cut by a gold - bearing quartz-tourmaline vein which was explored in the 1930's as the Darkwater Mine. Development work was done, but aside from bulk samples, no production is known to have been carried out. These occurrences of gold and copper - molybdenum are of only peripheral significance to the objective of the current program, which is to locate a massive sulphide orebody in the rhyolites of the South Sturgeon Lake Greenstone Belt. The geology of this greenstone belt has been well summarized by A.D. Hunter and G.F. Archibald in their January, 1981 report for Seagull Resources Ltd., and the reader is urged to refer to this report for a detailed description.

The rocks represent three major cycles of volcanism, ideally mafic at the base and felsic at the top. The lowest cycle of the three is itself subdivided, with the lower member hosting the "F" zone and Mattabi massive sulphide deposits. The strike extension of this horizon trends onto the Seagull property, and this conclusion is substantially borne out by the drilling.

In theory, the volcanic sequences are clear-cut, and the various types of rock quite distinctive. In actual practice, the variations sought are quite subtle, and partially obscured by greenschist facies metamorphism and a moderate to intense foliation caused by deformation of the volcanic sequence in the Kenoran orogeny. As a study of the drill logs will indicate, the rocks can vary wildly in textural and chemical characteristics over a short stratigraphic distance, and furthermore, correlation of units between holes on the same or adjacent sections varies from poor to fair. This is due in part no doubt to the necessarily subjective character of the descriptions in the core logs, but facies changes along strike or down dip appear to also be important.

The best key to the location of the "grey fragmental - foot-wall breccia" contact appears to be the copper geochemistry

as described elsewhere in this report under the heading "Results of Statistical Treatment of Drill Core Data". The massive suphide intersection of hole SG81-5 occurs at an apparently lower stratigraphic level than the stringer chalcopyrite of the other holes. This indicates the possibility that the massive sulphides were transported some distance from their source at a hydrothermal vent, ending up in a depression on the sea floor. This is in contrast to the Mattabi deposit, where the massive sulphides overlie an intensely altered pipe-like zone which is considered to be the channel followed by the metal-bearing fluids.

OBJECTIVES OF 1981 DRILLING PROGRAMS

The Seagull Resources Ltd. 1981 Sturgeon Lake drilling program was carried out with two objectives: the primary one being to follow-up the mineralization located by New Insco Mines Ltd. in their 1977 drilling (specifically N77-3 & N77-4) and to increase geologic knowledge of this zone by drilling down dip and along strike of the mineralized horizon; and the second objective being to test targets designated by I.P. and EM surveys.

(See Diamond Drill Plan - in pocket)

Drill holes No. SG81-1 to SG81-6, SG81-8, SG81-13 & SG81-14 were drilled in furtherance of the first objective, and holes Nos. SG81-7, & SG81-9 to SG81-12 were drilled in furtherance of the second objective. As the true strike of the Archean volcanics in the property area has been generally interpreted to be within 10° to 20° of due east, all drill holes in this program were drilled on an azimuth of 180° (due south), so as to most nearly crosscut stratigraphy and to facilitate subsequent plotting. As flattening of drill holes (a progressive decrease in inclination) is known to be pronounced in the area the initial inclination of the holes was set at -65° for all but the last 2 holes, which were drilled at -80° in order to test greater depths. Hole No. SG81-7 was drilled using a stabilized core barrel, which reduced the

flattening somewhat, but probably not enough to justify the extra cost.

RESULTS OF THE 1981 PROGRAM

All holes except for SG81-4 & SG81-10 reached target depth or greater. The former was stopped when acid tests indicated that it was flattening excessively and would pass too close to SG81-2 if allowed to continue. Hole No. SG81-10 was lost due to caving in overburden. Considerable casing and rods were lost in this hole. SG81-12 was spotted a few feet north of SG81-10, and successfully reached the target area.

All other holes can be said to have given a fair test of the target area, with the possible exception of hole SG81-11 which tested the peripheral part of an I.P. high rather than the centre; this being due to excessively deep water in the area where a hole would have to be collared in order to hit the centre. There is no indication that any of the holes deviated along strike to any great extent. A table summarizing the drilling can be found as an appendix.

GEOLOGIC INTERPRETATION OF DRILLING

The drilling has confirmed some previously held theories of the property geology, and has brought to light some new features. The strike of the volcanics has generally been

interpreted as easterly with a northerly dip. Drilling has shown this to be, at least in the eastern part of the property, the main area of interest, essentially correct; with a strike of 090° and a dip of 70° north being a good approximation, at least as applied to foliation. Foliation generally is parallel or nearly parallel to bedding (compositional layering), but in a few instances it is discordant. Hole No. SG81-12 cut through a sequence of rocks that appears to be repeated in reverse order, which strongly indicates the existence of a medium - scale fold, with an amplitude of several hundred feet. Such medium -scale deformation is to be expected with the observed intensity of major deformation. Such features as minor shears, joints, and kink-banding are further evidence of this deformation.

The "Mattabi- F zone" horizon has been traced or located in drill holes for a strike length of 1600 feet at this time. This will be discussed further under the heading of mineralization.

The I.P. survey carried out during the course of the drilling program delinated a number of areas with sufficiently anomalous resistivity or frequency effect to be considered anomalous. Resistivity contoured on N=5 indicated a strong northeasterly trend to the causative source(s). Three of the anomalous areas were selected as drill targets. These were tested by holes SG81-9, 10, 11, & 12. None of these holes encountered

more mineralization than a few percent of disseminated pyrite, and the rocks generally differ from those cut by the other holes. A brief description of each hole, as well as detailed logs can be found as appendices.

MINERALIZATION

Significant mineralization was cut in nine of the fourteen holes drilled. In most cases, mineralized intersections are in the form of chalcopyrite stringer zones, with chalcopyrite forming narrow veinlets, generally along foliation, or in the matrix of breccias.

The more significant sulphide intersections are tabled overleaf.

In hole #SG81-3, the 5 foot interval 327.3-332.7 assayed 452 ppb gold, and 22700 ppb silver - equivalent to about 0.014 oz/ton and 0.70 oz/ton, respectively. In hole #SG81-6, the interval of 5 feet from 583.0 - 588.0 assayed 26800 ppb silver, approximately 0.83 oz/ton. Other intervals contain only nominal amounts of precious metals.

It appears likely that should massive sulphides of ore potential occur on the property, there is potential for sufficient silver to be of economic significance.

HOLE	FROM	TO	WIDTH	% CU	% Zn	NOTES
SG81-1	477.1	487.1	10.0'	0.45	0.83	Stringer & dissem.
SG81-1	499.2	501.4	2.2'	0.07	1.20	" "
SG81-2	331.5	352.5	21.0'	0.57	0.05	Stringer chalcopyrite
SG81-2	601.0	602.0	1.0'	1.23	0.18	Stringer Chalcopyrite
SG81-3	327.7	332.7	5.0'	2.56	0.98	Bedded? Chalcopyrite
SG81-3	524.3	539.8	14.5'	0.17	0.10	Stringer chalcopyrite
SG81-4	446.0	448.4	2.4'	0.60	0.02	Stringer chalcopyrite
SG81-4	479-7	497.0	17.3'	0.13	0.05	Stringer chalcopyrite
SG81-4	532.0	534.0	2.7'	0.43	0.05	Stringer chalcopyrite
SG81-5	737.0	744.5	7.5'	0.13	0.27	Stringer & dissem.
SG81-5	749.0	750.7	1.7'	0.05	2.41	Dissem. sphalerite
SG81-5	750.7	751.7	1.0'	1.79	35.1	Massive sulphide
SG81-5	751.7	753.9	2.2'	0.06	1.48	Dissem. sphalerite
SG81-6	583.0	593.0	10.0'	0.40	0.63	Stringer chalcopyrite
SG81-7	767.0	772.0	5.0'	0.30	0.14	Stringer chalcopyrite
SG81-7	947.0	957.0	10.0'	0.49	0.15	Stringer chalcopyrite
SG81-7	1141.6	1148.6	7.0'	0.47	0.20	Stringer chalcopyrite
SG81-8	675.0	685.0	10.0'	0.15	0.08	Stringer chalcopyrite
SG81-8	715.0	717.0	2.0'	0.57	0.19	Stringer chalcopyrite
SG81-8	1029.0	1032.0	3.0'	1.02	0.08	Stringer chalcopyrite
SG81-13	218.0	223.0	3.0'	0.10	0.98	Dissem. sphalerite
SG81-13	248.7	250.9	2.2'	0.005	2.04	Dissem. sphalerite
SG81-13	395.0	405.0	10.0'	0.16	0.05	Stringer chalcopyrite

The economic sulphides are confined to those holes which test the "grey-fragmental - footwall breccia" contact, using the terminology of Sakrison. Hole #SG81-7 was drilled primarily to test possible deep EM response, but cut several zones of stringer chalcopyrite that seem to define this horizon.

Drill holes SG81-9, 10, 11 and 12 were targeted on I.P. responses, and disseminated pyrite logged in these holes is sufficient to explain the I.P. response. The rocks cut by these holes differ from those in main area of interest, and this fact may help direct further exploration for extensions of the mineralized horizon.

A contour diagram (Fig. 1) showing displacement of the main copper horizon relative to a plane striking due east and dipping at 70°N has been constructed to show the morphology of the copper horizon. This indicates that the mineralized horizon has the form of anticlinal surface plunging to the north about 25° - 30° at a bearing of 355°. This structure may be due to a second period of regional deformation or to paleotopography or perhaps both, but the former is the most likely cause. In any event, knowledge of this structure will be of use in planning future drill holes, and predicting the depths at which mineralized intersections may be observed.

Massive sulphides were cut only in one drill hole and it cannot be determined if they follow a similar structural pattern.

STATISTICAL TREATMENT OF DRILL CORE DATA

Samples of drill core were cut at frequent intervals for major element geochemical analysis, and mineralized sections were cut for assays of copper, zinc, gold and silver. The samples cut for major element analysis were also analyzed for copper and zinc.

The sampling program generated a large amount of data, which has been treated statistically by computer. The mean, standard deviation, and threshold anomalous values equal to the mean +/- 2 S.D. were calculated and printed out, both hole by hole and for drilling in total. Data values hole by hole are presented by depth, to aid in identifying trends. Computations were done using both raw data (as percent or ppm or ppb) and the natural logarithm of data values, since some elements occur in a normal distribution, and others in a log-normal distribution, depending primarily on how close the value can approach zero. For each statistical computation, the computer also generated a classification of data values, by breaking the data range into 12 equal divisions (the 2 end divisions being open) and counting the number of data points falling into each class. This procedure makes it simple to construct histograms to show graphically the distribution of values.

RESULTS OF STATISTICAL TREATMENT OF DRILL CORE ANALYSIS

Some elements have been found to vary erratically with depth in holes, others vary more systematically, and still others remain in fairly constant. Distribution of zinc appears to be fairly erratic, with no clear-cut trends in evidence. Copper, on the other hand, varies erratically, but a trend is noticeable in those holes where mineralization was encountered. In these holes, a point can be found below which the copper value rarely exceeds the mean, and above which, it frequently does so. (Fig 2) (This applies specifically to the logarithm of copper concentration). In some cases, this point is quite distinctive, with a run of high values succeeded by a run of low values. This crossing point usually correlates very closely with the "footwall contact" noted in the geologic log, and provides confirmation of the existence of such a contact.

The content of iron (as $Fe_2 O_3$) tends to vary erratically, with the odd high value corresponding with a logged mafic dike. Iron appears to be of little use as a guide to mineralization. Manganese (as Mn 0) appears to be slightly increased in the mineralized zone, but it generally varies but little from the mean. Sodium is slightly depleted, and potassium slightly enriched in the mineralized zone. The sodium/potassium ratio may be a useful indicator for the mineralized horizon.

LAKE-BOTTOM SEDIMENTS

Lake sediment samples taken in the course of the I.P. survey were analyzed for copper and zinc. The results of these analyses were examined statistically as follows:

The mean , standard deviation, and a threshold value equal to the mean +2 S.D. were calculated for the natural logarithms of the copper and zinc values in ppm. The log transform of the data was used because experience has shown that populations of relatively low numbers bounded on the lower side by zero generally have a log-normal distribution. The actual values corresponding to the means of logarithms and threshold values were then computed, giving the geometric means, and threshold anomalous concentrations for copper and zinc.

These values are tabled below:

ELEMENT	GEOMETRIC MEAN	THRESHOLD ANOMALOUS VALUE
Copper	12 ppm	49 ppm
Zinc	42 ppm	127 ppm

No copper values exceeded this threshold, and only one zinc value did so (148ppm) In the case of zinc, the presence of one value above the threshold level cannot be considered

statistically significant since the "tails" of the distribution curve extend considerably further than 2 standard deviations away from the mean. A true anomaly should appear as a cluster of high values, spatially related. The conclusion to be derived from the lake sediment analysis is either that there is no anomalous concentration of copper or zinc in the lake sediments of the area surveyed or that, due to sampling technique, or chemical and physical conditions within the lake, the chemistry of the sediment does not accurately reflect the bedrock geochemistry. It is probably the latter condition that prevails, as the survey area has been in effect "bracketed" by diamond-drilled areas, where geochemically high copper and zinc have been recorded in numerous holes. Logs of holes drilled in the lake generally indicate a deep layer of glacial drift, as is commonly seen on shore. Records of the sampling show that many samples could not be taken, due either to hard bottom or to water depth in excess of line available. It is suggested that the paucity of geochemical anomalies in sediment is more probably due to the difficulty of prevailing conditions rather than the absence of geochemically anomalous bedrock. The ultimate conclusion in this matter is that the sampling technique, (a G.S.C. pattern gravity bottom corer lowered through a hole in the ice by rope) is not suited for the conditions prevailing in this part of Sturgeon Lake. A technique for sampling bedrock of sediments on bedrock is required.

CONCLUSIONS AND RECOMMENDATIONS

The Seagull Resources Ltd. 1981 drilling program on the Sturgeon Lake base metal property has been successful to the extent that mineralized intersections of greater length and higher grade have been cut than were previously known on the property; and that massive sulphides have been identified on the property for the first time. The geologic picture is far from simple, and there is good reason to believe that the massive sulphide intersection cut in hole SG81-5 is not genetically related to the stringer chalcopyrite cut in other holes. At other deposits in the Sturgeon Lake base metal camp, stringer chalcopyrite is recognized in the immediate footwall to the massive sulphide orebodies, whereas in the present exploration area, the stringer chalcopyrite occurs alone, with no massive sulphides in the hanging wall, and the massive sulphide occurrence is stratigraphically several hundred feet lower than the stringer chalcopyrite. There are two spatial types of massive sulphide deposits; proximal and distal. In the former, the massive sulphide body overlies the alteration pipe that presumably represents the channelway of the mineralizing fluids. In the distal type, the massive sulphides are precipitated (or at least sedimented) at some distance from the hydrothermal vent, and footwall alteration is minimal or absent altogether. The massive sulphide intersection in SG81-5 may represent a distal type deposit, which

complicates exploration as there may be no distinct geochemical signature.

It is recommended that the exploration program on this property be continued, as there is significant base metal mineralization, and there is considerable room for further exploration both on this horizon and elsewhere in the stratigraphy.

There should be further drilling, with two objectives: one being to cut the massive sulphides of SG81-5, and the other being to extend the horizon of stringer chalcopyrite and to search for massive sulphides that theoretically should overlie the stringer zone. Drilling to accomplish the former objective should be directed updip and along strike, and stepouts should be fairly short at first. Holes spotted to test the massive sulphide target will also yeild information on the chalcopyrite stringer zone.

There should be a detailed study of all the avialable data and maps in order to produce a synthesis of the geology upon which to base further exploration. There is a large volume of data on hand, in the form of drill logs, geologic mapping, and ground and airborne geophysical surveys. Collating and digesting all this data could shed light on the western extent of the mineralized horizon, and save considerable expense in drilling.

In addition, the property should be geologically mapped in detail during the summer or fall season, with closely - spaced traverses through the forested areas, and by boat around the lakeshore and on the islands. Samples of outcrop should be taken for rock geochem. The results of this could be compared with the drill core geochemistry in an effort to identify stratigraphic horizons. Further study of the drill core geochemistry will be necessary to get the most value from this work.

A three - phase program is recommended:

1. Detailed geologic mapping and sampling for rock geochemistry. The mapping should cover throughly the area from the contact on the south with the Beidelman Bay intrusive to Mountain Island on the North.

2. Collating and synthesizing the data from phase 1 along with all previous data in order to pool all known information about the property geology.

3. Upon completion of phases 1 & 2, phase 3, further diamond drilling, should be carried out. This would include follow-up drilling on the mineralization found in the 1981 program, as described above, and possibly the

drilling of one more fences of holes to establish geologic cross-sections in the central and western portions of the property.

Respectfully submitted,

Gordon Richmond

June 1, 1981 Gordon S. Richmond, B.Sc.

GSR/sb

CERTIFICATE

I, GORDON S. RICHMOND, employed by W. G. Timmins Exploration & Development Ltd., with offices at 502 900 6th Ave. S. W., Calgary, Alberta do hereby certify that:

1. I am a graduate of the University of British Columbia holding the degree of B.Sc. in Geology.

2. I have been employed in my present position for 23 months.

3. I have no interest direct or indirect in the property or securities of Seagull Resources Ltd., nor do I expect to receive any such interest.

4. This report is based on a study of government and private reports, and on logging and assaying of diamond drill core from holes drilled on the property during the period from February to April, 1981

Dated at Calgary, Alberta the 2nd day of June, 1981

Gordon Richmond

Gordon S. Richmond, B.Sc.

CERTIFICATE

I, WILLIAM G. TIMMINS, maintaining offices at 502 900 6th Avenue, S. W., Calgary, Alberta do hereby certify that:

1. I am a geologist having been practising my profession for seventeen years.

2. I am a graduate of the Provincial Institute of Mining, Haileybury, Ontario, and have attended Michigan Technological University, Houghton, Michigan.

3. I am a member in good standing of the Association of Professional Engineers of British Columbia, and of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.

4. I have no interest direct or indirect in the property or securities of Seagull Resources Ltd., nor do I expect to receive any such interest.

5. This report is based on a core logging and sampling programme carried out by Mr. G. Richmond, B.Sc. Geology during the period February, 1981 to April, 1981, also three personal visits to the property during that period.

Dated at Calgary, Alberta the 2nd day of June, 1981

W. G. Timmins P. Geol
Consulting Geologist

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD.

CONSULTING GEOLOGISTS

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ACKNOWLEDGEMENTS

To A. Doug Hunter, of Nuinsco Mines Ltd., for giving the writer the benefit of his experience in massive sulfide geology, and for his invaluable assistance in logging and interpreting the initial drill holes.

To Tim Steves, of Graycom Systems Ltd., Calgary, for his patience in developing a computer program to handle the variety of assay and geochem data resulting from the drilling program.

SUMMARY OF DRILL HOLES

APPENDIX II

HOLE NO.	LATITUDE	DEPARTURE	AZIMUTH	INCLINATION AT COLLAR	TOTAL DEPTH	PURPOSE & RESULT
SG81-1	18 + 50N	112 + 00E	180°	-65°	597'	To undercut mineralization located in New Insco N77-3 - successful
SG81-2	18 + 50N	116 + 00E	180°	-65°	847'	To undercut N77-4- located stringer chalcopyrit
SG81-3	18 + 50N	114 + 00E	180°	-65°	697'	To test mineralization located in SG81-1 & SG81-2
SG81-4	20 + 50N	116 + 00E	180°	-65°	556'	To undercut SG81-2 - deviated , but located sulfides
SG81-5	18 + 50N	118 + 00E	180°	-65°	857'	To test horizon east along strike - located massive sulphide intersectio
SG81-6	20 + 50N	118 + 00	180°	-65°	1127'	To test intersection of SG81-5 - located only stringer chalcopyrite
SG81-7	22 + 50N	128 + 00E	180°	-65°	1467'	To test deep EM anomaly - located several chalcopyrite stringer zones
SG81-8	22 + 50N	116 + 00E	180°	-65°	1107'	To undercut SG81-4 and test stringer zone. Located stringer zone successfully
SG81-9	6 + 005	4 + 00E	180°	-65°	827'	To test I.P. anomaly. No commercial mineralization
SG81-10	37 + 00N	120 + 00E	180°	-65°	297'	To test I.P. anomaly. Lost hole at 297'

HOLE NO.	LATITUDE	DEPARTURE	AZIMUTH	INCLINATION AT COLLAR	TOTAL DEPTH	PURPOSE & RESULT
SG81-11	7 + OOS	40 + OOE	180°	-65°	835'	To test I.P.anomaly. No commercial mineralization
SG81-12	37 + 62N	120 + OOE	180°	-65°	637'	To test same anomaly as SG81-10. No commercial mineralization
SG81-13	18 + 50N	115 + OOE	180°	-80°	857'	To extend previous intersections. Cut stringer chalcopyrite
SG81-14	16 + 50N	119 + OOE	180°	-80°	847'	To test massive sulphides of SG81-5. No intersection.

APPENDIX V

ASSAY CERTIFICATES

APPENDIX IV

COMPUTER LISTINGS OF ASSAY INTERVALS

APPENDIX VII

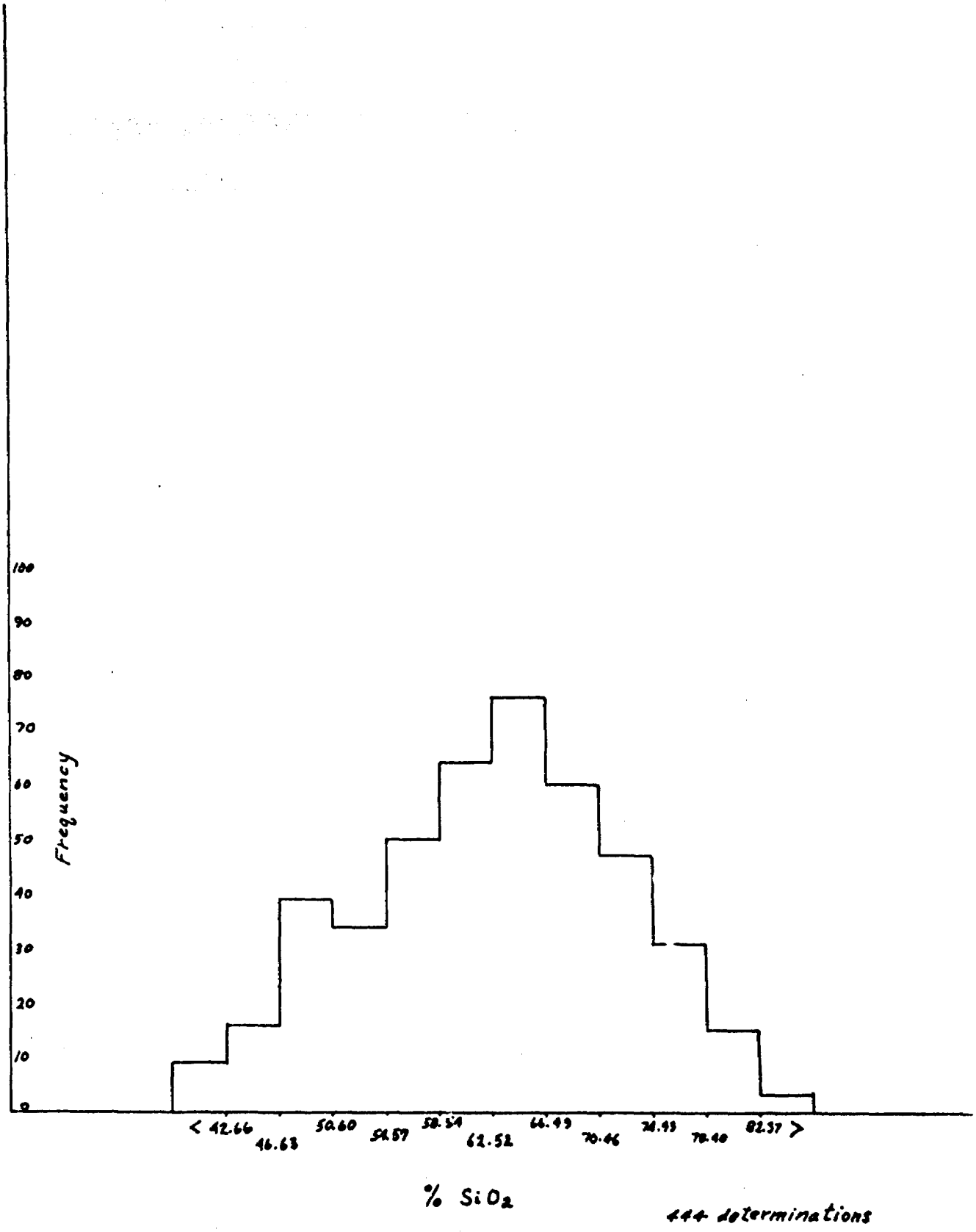
List of Mineral Claims comprising the Seagull Resources Ltd. Sturgeon Lake Property:

Claim No.	No. of Claims	Held By
Pa637939 to 53800 incl.	62	Seagull Resources Ltd.
Pa537930 and 537931	2	" " "
Pa537936 to 537938 incl.	3	" " "
Pa 362352	1	" " "
Pa 362369	1	" " "
Pa 362374	1	" " "
Pa 362376	1	" " "
Pa 229511 to 229567 incl.	57	" " "
Pa 229099 to 229105 incl.	7	" " "
Pa229160 to 229175 incl.	16	" " "
Pa 229251 and 229252	2	" " "
Pa 229477 to 229486 incl.	10	" " "
Pa 243893 to 243917 incl.	25	" " "
Pa 243798 to 243801 incl.	4	" " "
Pa 243802 to 243816 incl.	15	" " "
Pa 210834 to 210948 incl.	15	" " "
Pa 204788 and 204789	2	" " "
Pa 210497	1	" " "
Pa 204791 and 204792	2	" " "
Pa 205497 to 205503 incl.	7	" " "
Pa 222238 to 222240 incl.	3	" " "
Pa 227061 to 227080 incl.	20	" " "
Pa 221618 and 221619	2	" " "
Pa 436735 to 436752 incl.	18	" " "
Pa 227110 and 227111	2	" " "
Pa 227085 to 227093 incl.	9	" " "
Pa 227119 to 227123 incl.	5	" " "
Pa 227187 to 227190 incl.	4	" " "
Pa 227193 to 227198 incl.	6	" " "
Pa 227160 and 227161	2	" " "
Pa 347175	1	" " "
Pa 210614 to 210616 incl.	3	" " "
Pa 210418 to 210423 incl.	6	" " "
Pa 211162 to 211164 incl.	3	" " "
Pa 211166 and 211167	2	" " "
TOTAL:	320	

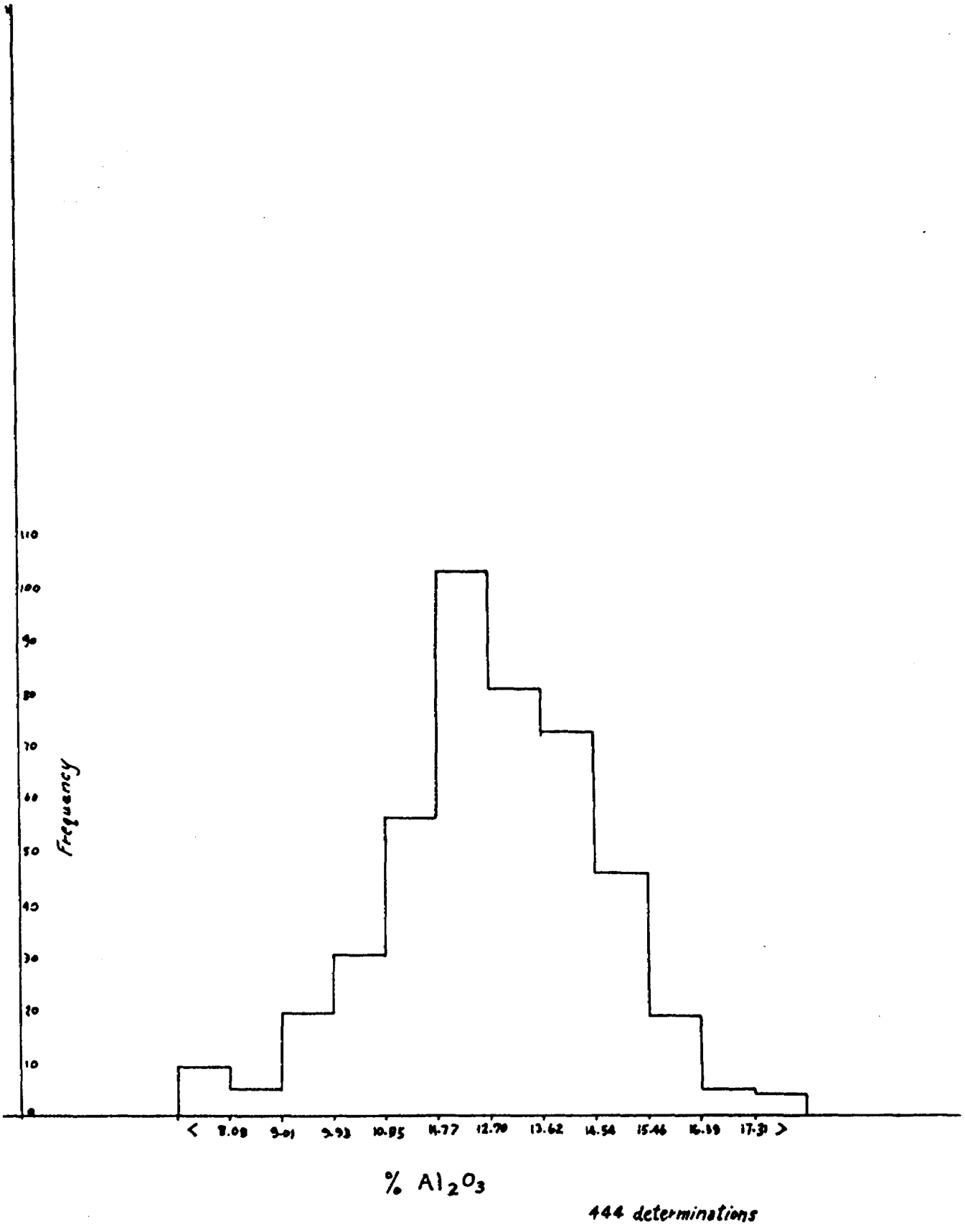
APPENDIX VI

HISTOGRAMS OF ELEMENT DISTRIBUTIONS

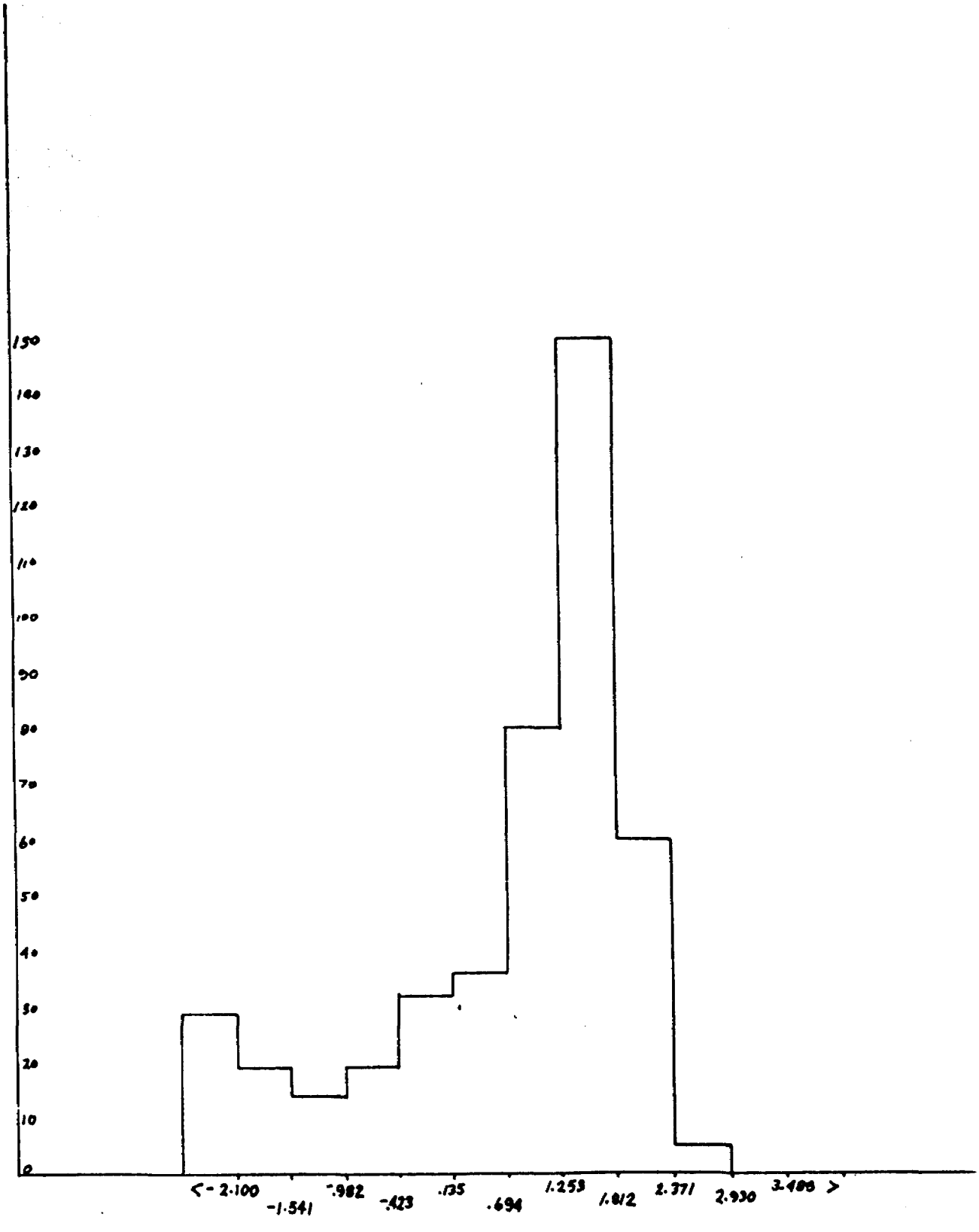
The ten pages following are histograms (frequency diagrams) of 8 major elements plus copper and zinc. Si_2O_3 and Al_2O_3 are plotted using the actual values of concentration as the basis of ranking, while the remainder are ranked on the natural logarithm of concentration. This is because silica and alumina rarely tend toward zero, and fall into a fairly narrow range, while the other elements can vary widely. Histograms are not plotted for gold or silver because these elements were assayed for only when copper and zinc were found to be high, and thus the results would tend to be skewed toward the high side. Lead was assayed for along with copper and zinc, but the values are uniformly low, and of little exploration value.



444 determinations

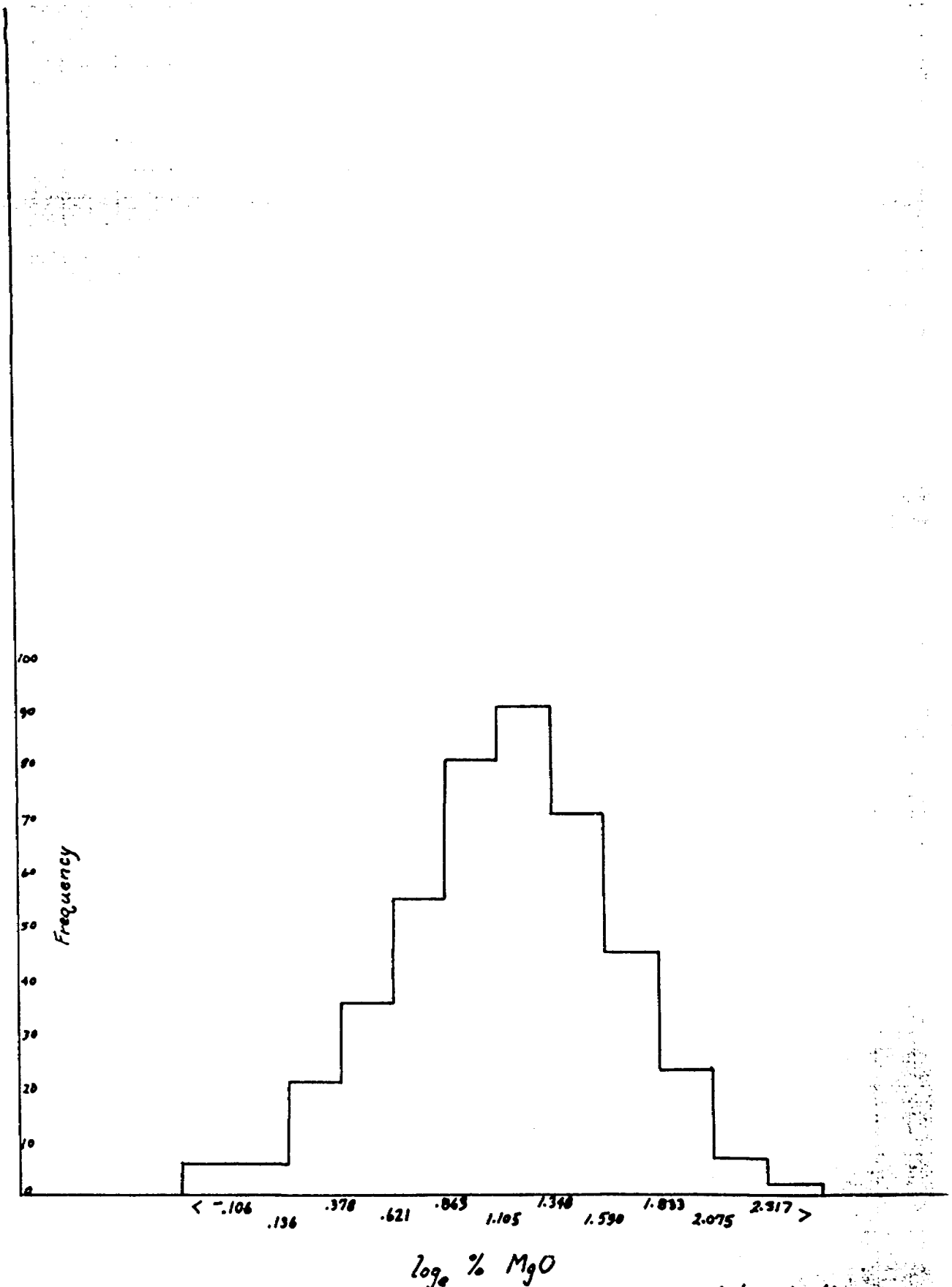


444 determinations

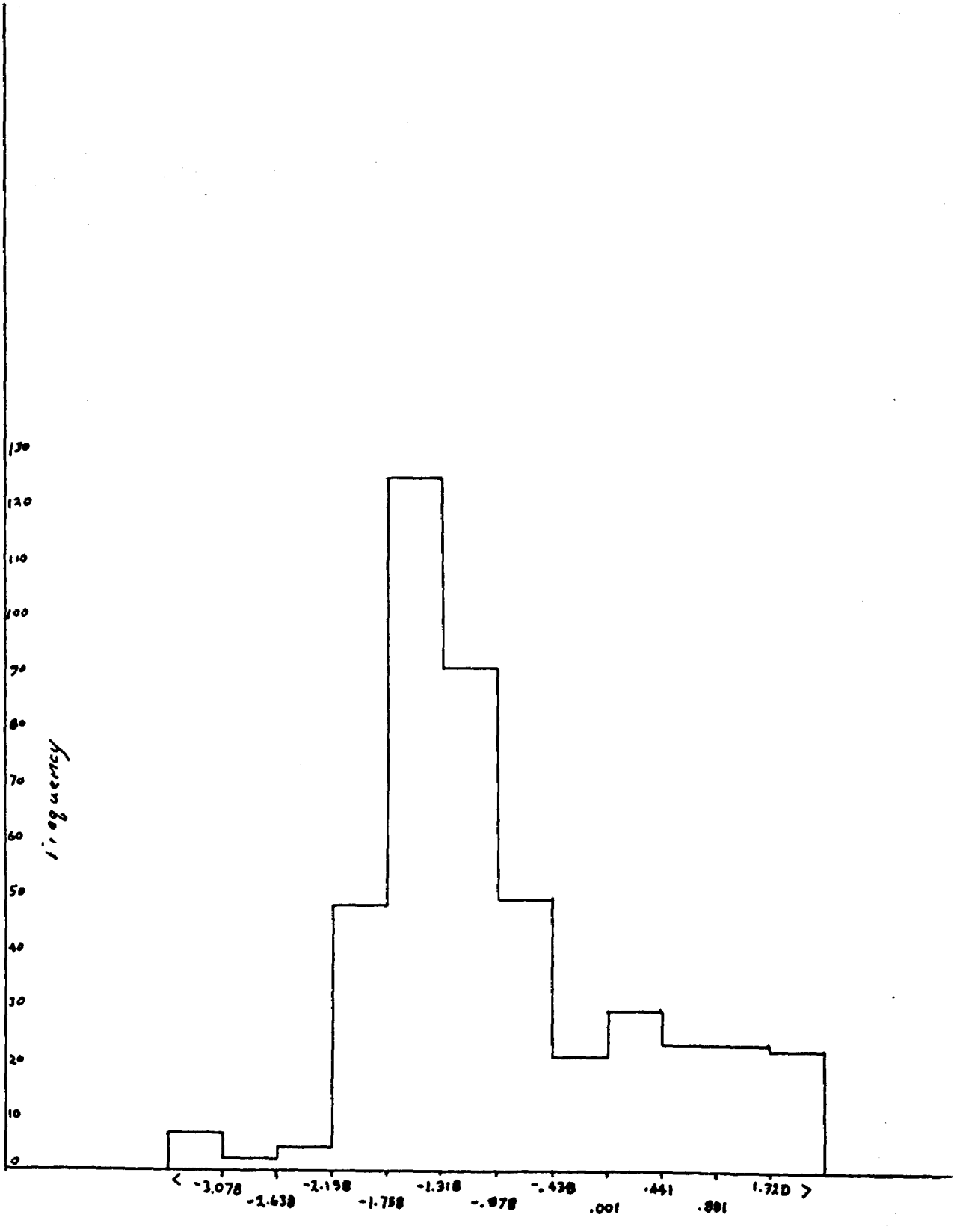


$\log_e$ % CaO

444 determinations

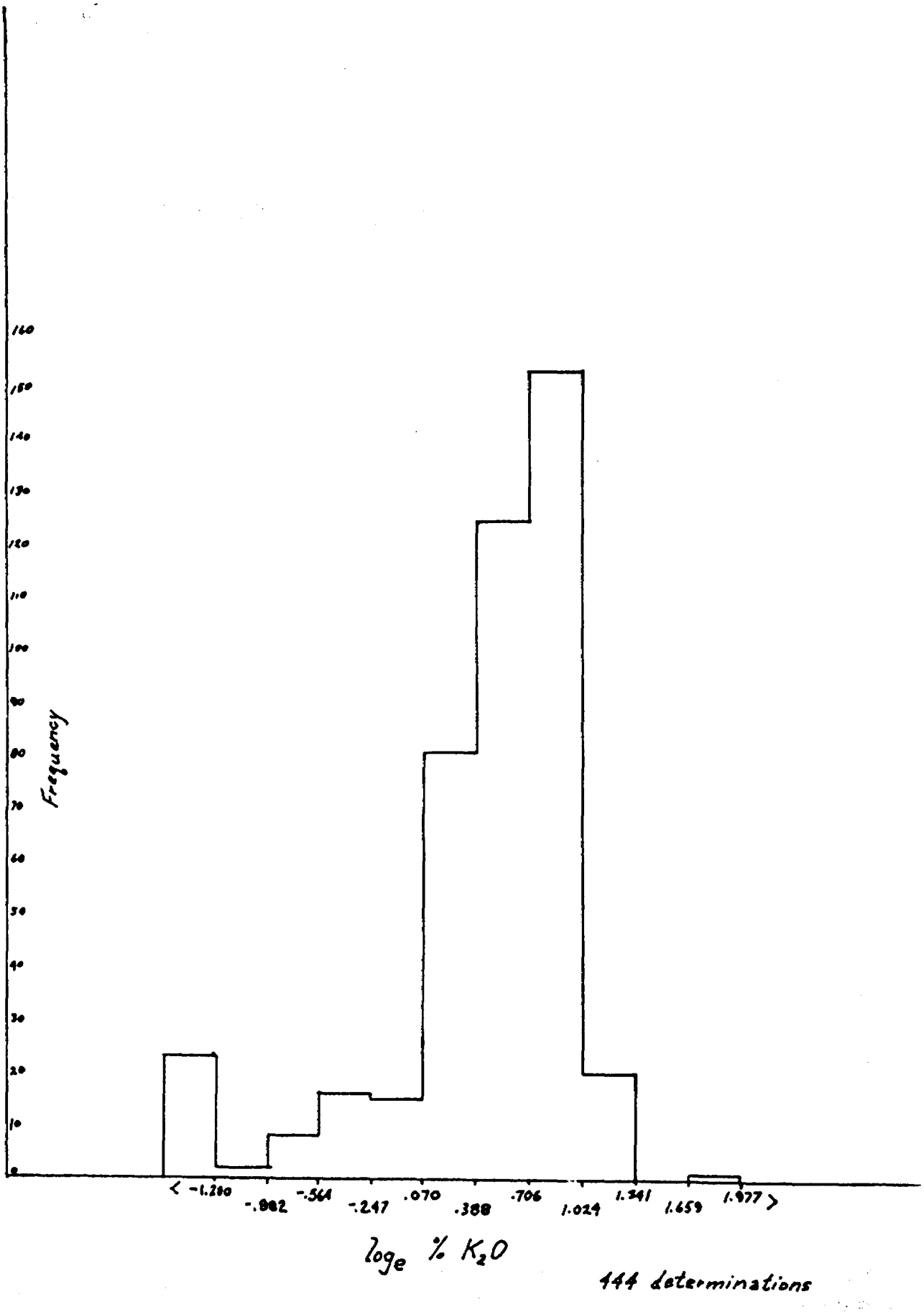


444 determinations

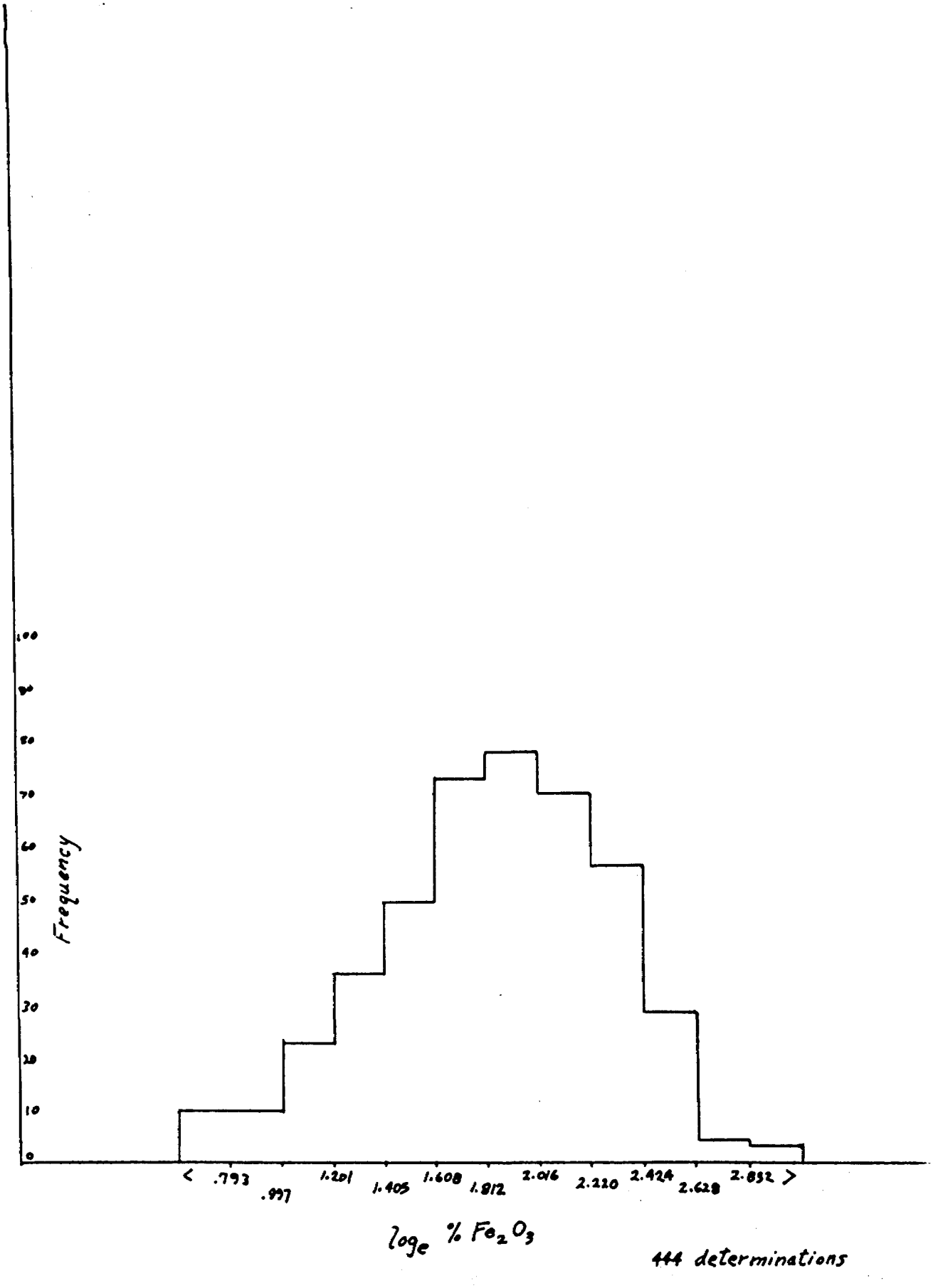


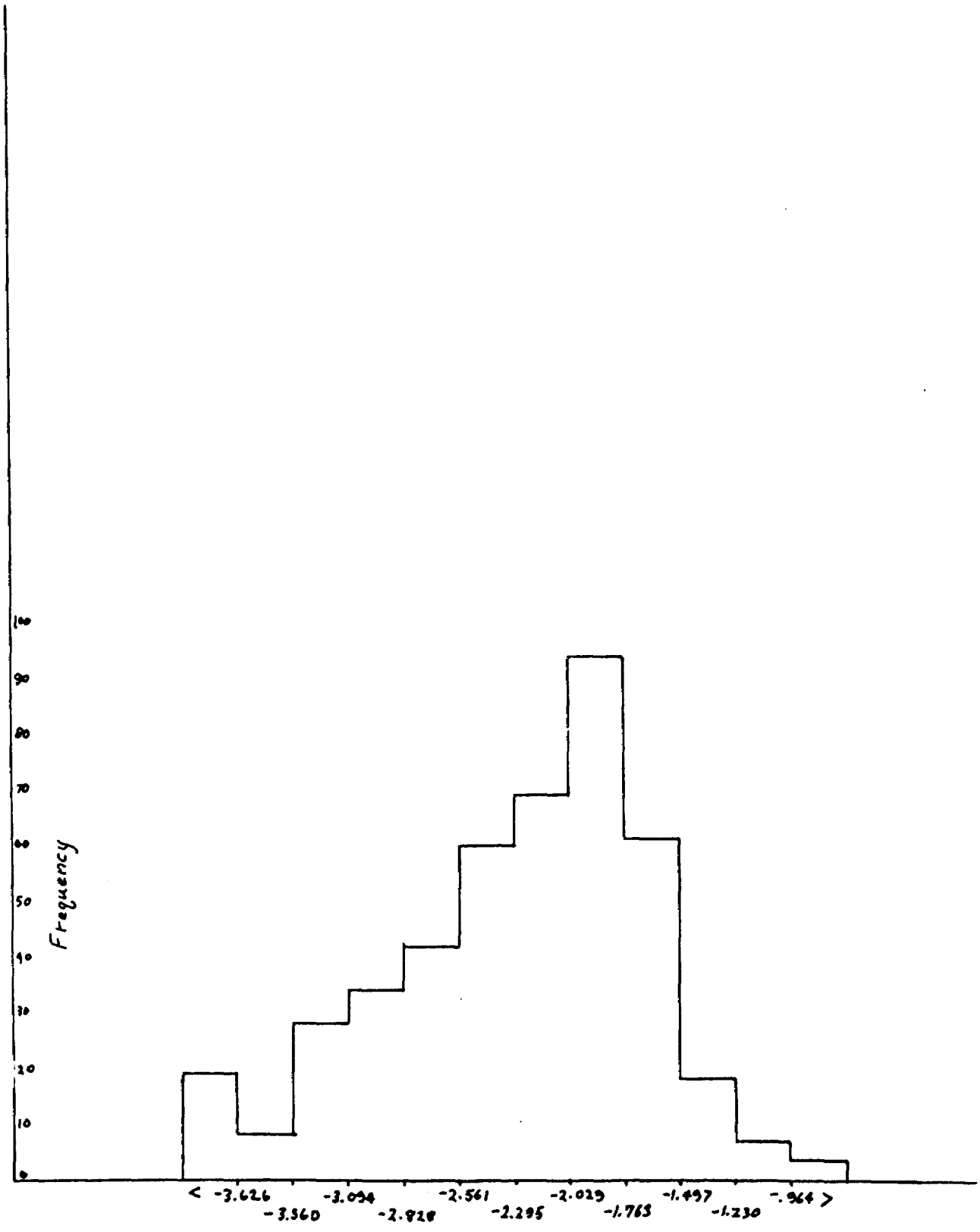
$\log_e$ % Na_2O

444 determinations

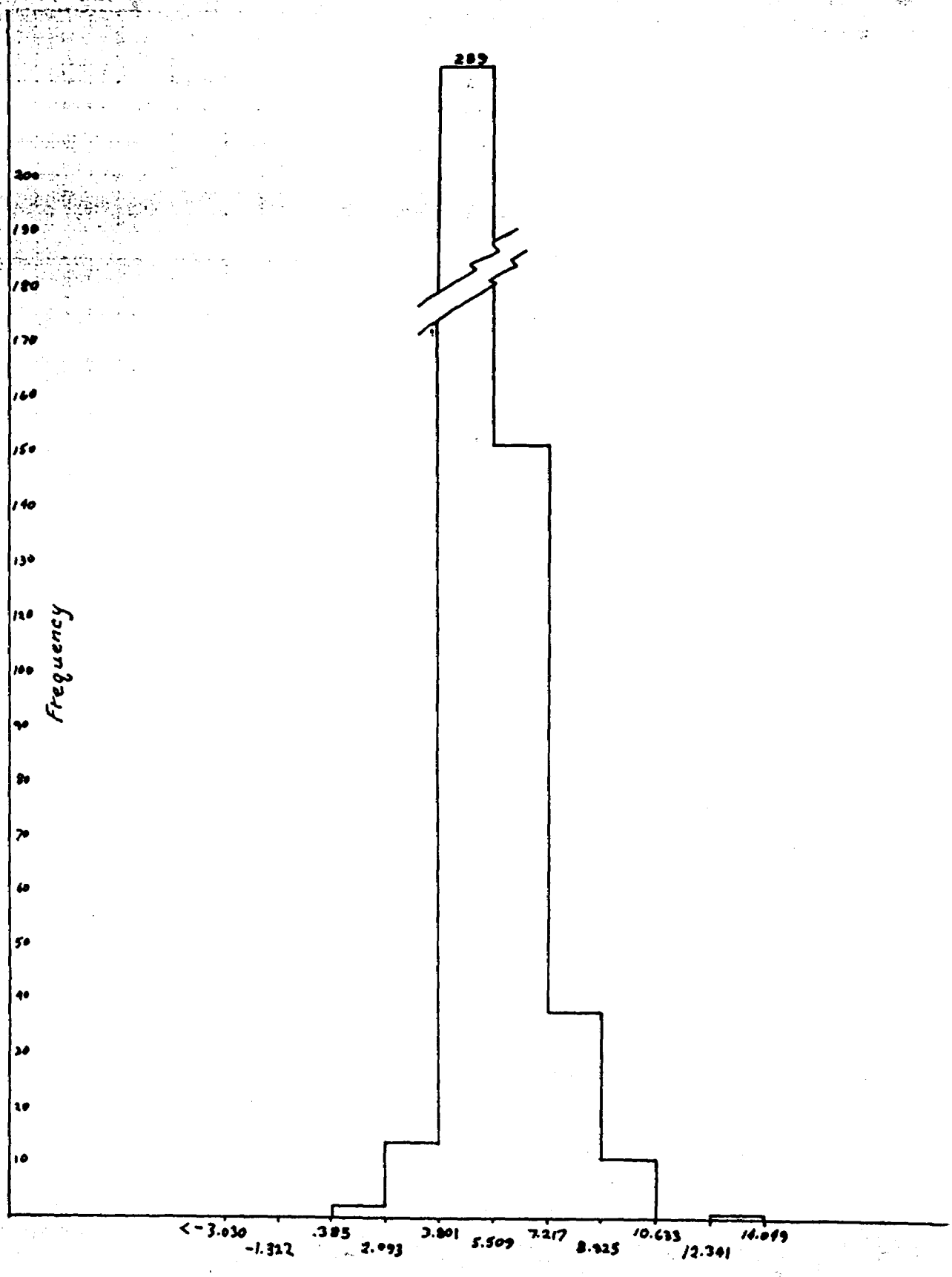


144 determinations


Frequency
0
10
20
30
40
50
60
70
80
90
100
< .793
.997
1.201
1.405
1.608
1.812
2.016
2.220
2.424
2.628
2.832 >
log_e % Fe2O3
444 determinations

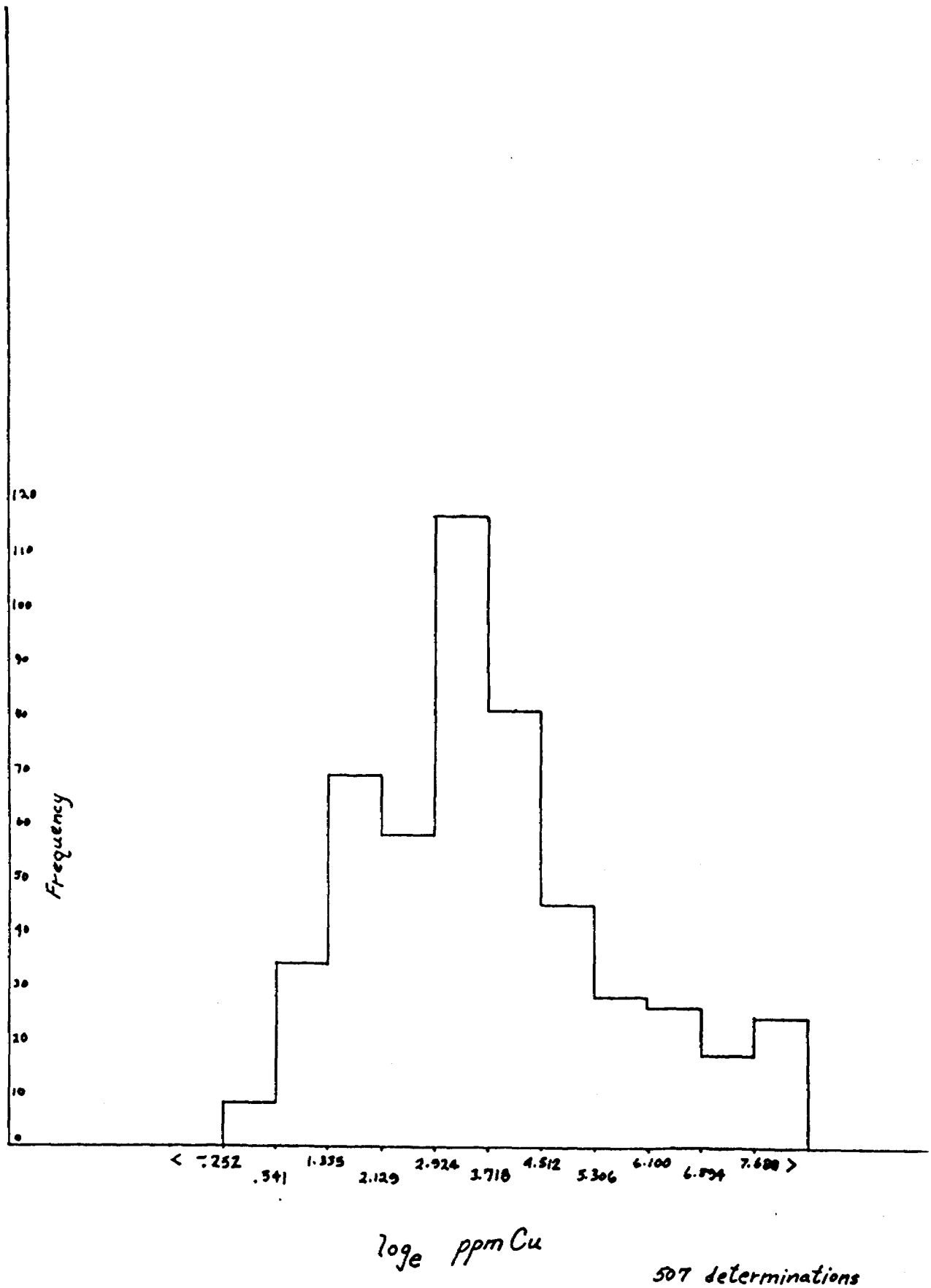


444 determinations



loge ppm Zn

507 determinations



507 determinations

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81- 1 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3001	69.0	70.0	1.0
3002	87.0	88.0	1.0
3003	110.0	111.0	1.0
3004	143.0	144.0	1.0
3005	166.0	167.0	1.0
3101	191.0	192.0	1.0
3006	209.0	211.0	2.0
3007	225.0	226.0	1.0
3008	249.0	250.0	1.0
3102	298.0	299.0	1.0
3009	301.0	302.0	1.0
3010	308.0	309.0	1.0
3011	314.0	315.0	1.0
3012	333.0	334.0	1.0
3013	344.0	345.0	1.0
3014	366.0	367.0	1.0
3015	384.0	386.0	2.0
3016	397.0	398.0	1.0
3130	406.4	410.1	1.7
3017	417.3	418.5	1.7
3103	429.0	430.0	1.0
3018	449.5	450.5	1.0
3019	469.0	470.0	1.0
3104	471.1	477.1	5.0
3105	477.1	482.1	5.0
3106	482.1	487.1	5.0
3107	487.1	489.1	2.0
3020	491.0	492.0	1.0
3109	499.2	501.4	2.2
3198	501.5	504.5	3.0
3021	504.5	505.4	0.9
3199	505.3	507.0	1.7
3022	507.0	508.1	1.1
3200	508.1	509.5	1.4
3109	509.5	512.2	2.7
3301	512.0	517.7	5.7
3110	514.0	515.0	1.0
3023	518.0	520.0	2.0
3302	518.7	522.5	3.8
3024	541.0	542.0	1.0
3025	575.0	576.0	1.0
3026	594.0	596.0	2.0

M. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81- 2 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3027	55.0	56.0	1.0
3028	67.0	68.0	1.0
3111	69.0	71.5	2.5
3112	78.0	98.0	20.0
3029	100.0	101.0	1.0
3030	123.0	124.0	1.0
3031	162.0	163.5	1.5
3032	184.5	185.5	1.0
3033	217.5	218.5	1.0
3113	219.5	221.5	2.0
3114	256.0	257.5	1.5
3034	262.0	263.0	1.0
3035	321.0	322.0	1.0
3115	331.5	336.5	5.0
3116	336.5	341.5	5.0
3117	341.5	345.0	3.5
3118	345.0	350.0	5.0
3119	350.0	352.5	2.5
3036	360.0	361.0	1.0
3037	388.0	389.0	1.0
3038	405.5	407.0	1.5
3039	425.8	427.0	1.2
3040	455.0	456.0	1.0
3041	477.0	477.7	0.7
3042	517.5	518.5	1.0
3043	545.0	546.0	1.0
3044	574.5	575.0	0.5
3327	596.0	601.0	5.0
3045	598.5	599.3	0.8
3120	601.0	602.0	1.0
3328	602.0	607.0	5.0
3046	613.0	613.5	0.5
3047	625.5	626.7	1.2
3048	645.7	646.7	1.0
3049	662.0	663.2	1.2
3050	678.0	679.2	1.2
3051	731.0	732.0	1.0
3052	740.0	740.7	0.7
3121	764.0	767.0	3.0
3056	770.3	771.3	1.0
3053	809.0	810.0	1.0
3054	823.2	824.5	1.3
3055	845.0	846.0	1.0

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81- 3 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3057	88.3	89.2	0.9
3058	118.9	120.0	1.1
3122	127.0	128.0	1.0
3123	130.0	131.8	1.8
3059	138.4	139.1	0.7
3060	155.7	156.3	0.6
3124	160.2	165.2	5.0
3061	177.3	178.0	0.7
3062	198.9	199.7	0.8
3063	235.9	236.5	0.6
3125	240.3	242.7	2.4
3064	305.1	306.1	1.0
3126	316.3	321.3	5.0
3306	323.8	325.8	2.0
3127	325.8	327.7	1.9
3304	325.8	327.7	1.9
3128	327.7	332.7	5.0
3305	332.7	337.0	4.3
3129	337.0	340.5	3.5
3065	344.7	345.4	0.7
3066	357.0	358.2	1.2
3067	358.5	359.3	0.8
3068	367.4	369.0	1.6
3069	412.0	413.0	1.0
3070	452.0	452.9	0.9
3071	468.2	469.0	0.8
3072	490.5	491.3	0.7
3073	514.8	515.6	0.8
3131	524.3	526.2	1.9
3325	526.2	533.9	3.7
3132	534.4	535.0	0.7
3326	535.0	539.8	4.2
3133	539.8	540.7	0.9
3074	543.7	544.8	1.1
3075	557.0	558.0	1.0
3076	536.1	586.8	0.7
3077	607.0	608.3	1.3
3078	628.4	629.4	1.0
3079	655.4	656.5	1.1
3080	678.4	679.4	1.0

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81- 4 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3081	87.0	88.1	1.1
3082	120.7	121.4	0.7
3083	139.5	140.2	0.7
3084	182.0	183.1	1.1
3085	207.0	207.9	0.9
3086	233.2	234.2	1.0
3087	276.5	277.4	0.9
3088	299.5	300.0	0.5
3134	303.9	306.0	2.1
3135	313.0	315.0	2.0
3136	327.0	329.0	2.0
3137	329.8	333.0	3.2
3138	336.0	340.2	4.2
3139	348.3	350.1	1.8
3140	360.5	362.3	1.8
3089	364.5	366.0	1.5
3090	398.5	399.7	1.2
3141	446.0	448.4	2.4
3142	458.6	461.0	2.4
3091	474.0	476.0	2.0
3143	479.7	482.0	2.3
3144	482.0	487.0	5.0
3145	487.0	492.0	5.0
3146	492.0	497.0	5.0
3147	497.0	502.0	5.0
3148	502.0	507.0	5.0
3149	507.0	512.0	5.0
3150	512.0	517.0	5.0
3092	528.5	529.3	0.8
3151	532.0	534.7	2.7
3152	546.5	547.6	1.1
3093	551.0	552.8	1.8

HOLE NO: SG-81-5

W. G. TIMMINS EXP & DEV LTD.
SAMPLE LISTING - BY HOLE

APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3094	39.3	40.8	1.5
3095	93.0	94.0	1.0
3096	128.0	129.0	1.0
3153	140.2	142.8	2.6
3154	145.0	147.0	2.0
3155	185.6	190.6	5.0
3156	190.6	195.6	5.0
3157	195.6	200.6	5.0
3158	200.6	205.6	5.0
3097	229.0	230.1	1.1
3098	277.3	278.5	1.2
3099	383.2	384.2	1.0
3100	410.0	411.1	1.1
3201	424.3	425.3	1.0
3202	447.0	448.1	1.1
3203	462.0	463.5	1.5
3204	486.0	487.0	1.0
3205	509.2	510.5	1.3
3206	533.7	534.9	1.2
3207	553.4	554.0	0.6
3208	572.4	573.4	1.0
3209	602.0	603.0	1.0
3210	525.5	526.5	0.4
3211	545.0	546.0	1.0
3212	571.0	572.0	1.0
3213	699.7	701.7	2.0
3214	728.0	729.0	1.0
3159	737.0	739.8	2.8
3160	739.8	744.5	4.7
3161	745.0	749.0	4.0
3162	749.0	750.7	1.7
3163	750.7	751.7	1.0
3164	751.7	753.9	2.2
3312	753.7	754.4	0.7
3215	754.5	755.5	1.0
3216	777.0	778.0	1.0
3217	804.9	806.6	1.7
3218	824.2	825.5	1.3
3219	841.2	842.5	~~1.3~~ 1.3

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81- 6 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3220	68.1	69.0	0.9
3221	110.8	111.5	0.7
3165	132.4	133.7	1.3
3222	141.5	142.1	0.6
3166	142.2	146.7	4.5
3167	173.0	174.5	1.5
3223	174.5	175.3	0.8
3224	207.2	208.2	1.0
3225	255.5	256.4	0.9
3226	266.8	267.8	1.0
3168	291.0	296.0	5.0
3227	304.8	306.0	1.2
3228	337.0	338.0	1.0
3229	368.9	369.8	0.9
3230	401.9	402.7	0.8
3231	435.9	437.0	1.1
3232	450.0	451.0	1.0
3233	474.1	475.2	1.1
3234	531.5	532.8	1.3
3235	555.0	555.9	0.9
3169	571.3	573.6	2.3
3170	581.3	582.3	1.0
3171	583.0	588.0	5.0
3172	588.0	593.0	5.0
3236	613.3	614.0	0.7
3173	639.0	641.4	2.4
3237	647.0	648.0	1.0
3238	687.0	687.8	0.8
3239	736.2	737.0	0.8
3240	776.2	777.0	0.8
3241	817.0	817.8	0.8
3242	847.0	848.0	1.0
3243	877.0	877.8	0.8
3244	925.9	927.0	1.1
3245	957.0	958.0	1.0
3246	987.0	987.8	0.8
3247	1.021.4	1.022.2	0.8
3248	1.037.0	1.037.8	0.8
3249	1.077.0	1.077.9	0.9
3250	1.097.0	1.097.1	0.1

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81- 7 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3251	63.0	64.1	1.1
3252	132.5	133.2	0.7
3174	139.7	142.0	2.3
3253	167.0	168.0	1.0
3254	196.3	197.0	0.7
3175	224.8	232.0	7.2
3255	234.9	236.0	1.1
3256	267.0	267.9	0.9
3176	270.0	275.0	5.0
3257	317.0	318.3	1.3
3258	347.0	348.2	1.2
3259	387.0	387.7	0.7
3260	427.0	427.6	0.6
3261	466.0	467.0	1.0
3177	470.5	475.3	4.8
3262	505.1	506.3	1.2
3178	522.0	527.0	5.0
3263	545.9	547.0	1.1
3179	552.0	557.0	5.0
3264	567.0	568.0	1.0
3265	601.9	602.2	0.3
3266	624.5	625.4	0.9
3267	655.9	657.0	1.1
3268	697.0	698.3	1.3
3269	737.0	738.0	1.0
3180	738.0	743.0	5.0
3181	762.0	767.0	5.0
3182	767.0	772.0	5.0
3270	775.7	776.8	1.1
3271	807.0	808.0	1.0
3272	826.0	827.0	1.0
3273	856.2	857.0	0.8
3274	876.0	877.0	1.0
3275	895.0	895.9	0.9
3276	914.8	916.0	1.2
3277	917.0	918.3	1.3
3183	927.0	932.0	5.0
3184	932.0	936.2	4.2
3278	936.2	937.2	1.0
3279	945.9	947.0	1.1
3185	947.0	957.0	10.0
3280	957.0	958.2	1.2
3281	988.5	989.4	0.9
3282	1,016.0	1,017.0	1.0
3283	1,049.2	1,050.4	1.2
3284	1,077.0	1,078.0	1.0
3285	1,107.0	1,108.0	1.0
3286	1,134.1	1,135.0	0.9
3186	1,141.6	1,148.6	7.0
3287	1,167.0	1,167.9	0.9
3288	1,196.3	1,197.0	0.7
3289	1,206.3	1,207.0	0.7
3290	1,224.1	1,225.1	1.0
3291	1,236.7	1,237.6	0.9

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81- 7 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3292	1,255.0	1,256.0	1.0
3293	1,293.0	1,294.0	1.0
3319	1,332.0	1,337.0	5.0
3294	1,337.0	1,338.0	1.0
3320	1,338.0	1,343.0	5.0
3295	1,376.1	1,377.0	0.9
3296	1,434.5	1,435.5	1.0

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81- 8 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3297	127.0	128.1	1.1
3298	156.0	157.0	1.0
3299	167.0	167.9	0.9
3300	177.0	178.0	1.0
3401	191.2	192.0	0.8
3402	195.5	196.4	0.9
3403	226.0	227.0	1.0
3404	258.0	259.0	1.0
3405	283.4	284.4	1.0
3406	327.0	327.9	0.9
3407	348.1	349.0	0.9
3408	377.0	378.0	1.0
3409	419.0	420.0	1.0
3410	457.1	458.1	1.0
3411	487.0	487.7	0.7
3187	502.0	507.0	5.0
3412	517.0	517.7	0.7
3413	526.1	527.0	0.9
3414	554.2	555.3	1.1
3415	588.2	589.2	1.0
3416	625.0	625.7	0.7
3417	654.1	655.0	0.9
3321	655.0	665.0	10.0
3322	665.0	675.0	10.0
3188	675.0	685.0	10.0
3189	685.0	687.0	2.0
3418	687.0	687.9	0.9
3190	687.9	695.0	7.1
3191	695.0	705.0	10.0
3192	705.0	715.0	10.0
3193	715.0	717.0	2.0
3419	717.0	718.1	1.1
3194	718.1	725.0	6.9
3195	725.0	735.0	10.0
3323	734.3	736.1	1.8
3420	736.1	737.0	0.9
3324	737.0	745.0	8.0
3421	766.1	767.0	0.9
3422	793.5	794.5	1.0
3423	817.0	818.0	1.0
3424	837.0	838.0	1.0
3425	867.0	868.0	1.0
3426	916.0	917.0	1.0
3427	949.0	950.0	1.0
3428	997.0	998.0	1.0
3196	1,029.0	1,032.0	3.0
3429	1,032.0	1,033.0	1.0
3430	1,066.2	1,067.0	0.8
3431	1,097.9	1,099.0	1.1

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81- 9 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3432	107.7	108.8	1.1
3433	131.1	132.0	0.9
3434	169.5	170.5	1.0
3435	184.0	184.8	0.8
3197	217.0	221.0	4.0
3436	221.0	222.1	1.1
3303	227.0	237.0	10.0
3437	267.6	267.7	0.1
3438	290.2	291.4	1.2
3439	302.8	303.8	1.0
3440	346.0	347.0	1.0
3445	374.5	375.5	1.0
3446	407.9	408.9	1.0
3447	445.9	447.9	1.0
3448	475.4	476.4	1.0
3449	505.2	506.0	0.8
3454	532.0	533.0	1.0
3453	549.5	550.5	1.0
3455	611.2	612.3	1.1
3456	637.0	637.8	0.8
3457	643.5	644.5	1.0
3458	656.0	657.0	1.0
3459	685.8	687.0	1.2
3460	712.0	712.9	0.9
3461	735.9	737.0	1.1
3462	753.2	753.9	0.7
3463	773.2	774.0	0.8
3464	801.4	802.4	1.0

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81-10 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3441	124.2	125.2	1.0
3442	145.8	146.8	1.0
3443	167.0	168.0	1.0
3444	193.0	193.9	0.9
3450	216.0	217.0	1.0
3451	243.0	244.0	1.0
3452	285.6	286.6	1.0

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81-11 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3465	175.7	176.7	1.0
3466	185.0	186.0	1.0
3467	215.0	216.0	1.0
3468	255.0	256.2	1.2
3469	270.1	271.1	1.0
3470	274.8	275.8	1.0
3471	303.9	305.0	1.1
3472	337.6	338.6	1.0
3473	365.0	366.0	1.0
3477	408.2	409.2	1.0
3474	416.1	417.1	1.0
3475	447.0	448.0	1.0
3476	481.2	482.2	1.0
3478	518.0	519.0	1.0
3479	525.0	526.1	1.1
3490	560.0	560.9	0.9
3491	597.0	598.0	1.0
3492	617.0	618.1	1.1
3493	657.0	657.9	0.9
3801	683.9	684.8	0.9
3802	714.8	715.8	1.0
3803	750.1	751.2	1.1
3804	787.4	788.4	1.0
3805	831.6	832.5	0.9

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81-12 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3480	133.0	134.0	1.0
3481	170.0	170.7	0.7
3482	188.9	189.8	0.9
3811	205.8	206.6	0.8
3483	215.9	216.9	1.0
3484	232.0	232.9	0.9
3485	251.3	252.2	0.9
3486	274.8	276.0	1.2
3487	295.0	296.0	1.0
3488	317.0	318.0	1.0
3489	334.7	335.7	1.0
3494	357.0	357.8	0.8
3495	389.1	390.1	1.0
3496	417.0	417.8	0.8
3497	433.0	433.8	0.8
3498	447.0	448.0	1.0
3499	488.0	489.0	1.0
3500	505.0	506.1	1.1
3806	524.0	524.9	0.9
3307	542.0	548.0	6.0
3807	550.0	551.2	1.2
3808	558.5	559.5	1.0
3809	580.0	580.9	0.9
3810	634.5	635.5	1.0

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81-13 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3812	66.0	67.0	1.0
3813	97.0	98.0	1.0
3814	117.0	118.0	1.0
3815	157.0	157.9	0.9
3816	189.0	190.0	1.0
3817	217.0	218.0	1.0
3308	218.0	223.0	5.0
3309	240.0	243.0	3.0
3818	247.6	248.7	1.1
3310	248.7	250.9	2.2
3819	267.0	268.0	1.0
3820	303.0	304.1	1.1
3821	322.1	323.1	1.0
3822	339.8	340.8	1.0
3823	356.0	357.0	1.0
3824	376.0	377.0	1.0
3825	393.9	395.0	1.1
3311	395.0	405.0	10.0
3826	405.0	406.0	1.0
3827	437.0	438.0	1.0
3828	475.0	475.9	0.9
3829	507.0	508.0	1.0
3830	537.0	538.0	1.0
3831	566.1	567.0	0.9
3832	581.5	582.5	1.0
3833	595.1	596.3	1.2
3834	628.4	629.3	0.9
3835	645.8	647.0	1.2
3836	667.0	668.0	1.0
3837	687.0	688.0	1.0
3838	701.0	702.1	1.1
3839	714.9	715.9	1.0
3840	720.8	721.8	1.0
3841	761.9	762.7	0.8
3842	777.0	778.0	1.0
3843	796.1	797.0	0.9
3844	815.8	817.0	1.2
3845	855.1	856.2	1.1

W. G. TIMMINS EXP & DEV LTD.

HOLE NO: SG-81-14 SAMPLE LISTING - BY HOLE APR 24/81

SAMPLE	DEPTH FROM	DEPTH TO	LENGTH
3846	41.0	42.0	1.0
3847	65.9	67.0	1.1
3848	87.0	88.0	1.0
3849	94.3	95.2	0.9
3850	108.8	109.7	0.9
3851	119.0	119.9	0.9
3852	122.3	123.0	0.7
3853	147.0	148.1	1.1
3854	174.0	175.0	1.0
3855	186.7	187.7	1.0
3313	205.0	208.0	3.0
3856	208.0	208.9	0.9
3314	209.0	213.0	4.0
3315	213.0	223.0	10.0
3857	235.0	236.0	1.0
3858	267.0	268.1	1.1
3859	307.0	308.0	1.0
3860	336.0	337.0	1.0
3861	357.0	358.1	1.1
3862	360.6	361.6	1.0
3863	387.0	388.0	1.0
3864	416.0	417.0	1.0
3865	457.0	458.0	1.0
3866	500.0	501.1	1.1
3867	511.6	512.7	1.1
3868	547.0	547.8	0.8
3869	576.0	577.0	1.0
3870	606.0	607.0	1.0
3871	627.0	628.0	1.0
3872	653.5	654.4	0.9
3316	654.4	658.5	4.1
3873	668.4	669.4	1.0
3874	705.9	707.0	1.1
3875	727.0	728.0	1.0
3876	757.0	757.9	0.9
3877	784.1	785.0	0.9
3878	807.0	808.0	1.0
3317	808.0	815.0	7.0
3318	815.0	822.4	7.4
3879	822.4	823.4	1.0
3880	843.5	844.5	1.0

	Client No. DRILL CORE	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3001	50.8	12.1	7.26	4.61	1.11	1.57	8.79	0.178		27	82			
2	3002	52.4	13.7	4.13	4.68	1.05	0.675	8.97	0.105		18	144			
3	3003	52.4	13.1	6.44	4.87	0.607	0.241	8.95	0.143		66	113			
4	3004	43.1	14.6	7.59	5.80	0.607	0.518	11.8	0.178		13	160			
5	3005	74.4	9.88	0.957	1.46	0.445	2.23	2.25	0.023		3	50			
6	3006	60.3	13.8	3.29	2.54	0.526	2.58	4.18	0.074		59	98			
7	3007	53.7	13.2	5.18	2.14	0.472	2.12	6.88	0.161		18	94			
8	3008	61.4	13.9	2.69	1.79	0.431	1.59	6.94	0.078		51	167			
9	3009	72.6	11.3	2.61	1.43	0.485	2.69	3.19	0.083		56	135			
0	3010	69.1	8.92	5.05	1.77	0.445	2.13	3.53	0.160		3	66			
1	3011	67.1	10.5	2.77	1.39	0.472	2.21	3.63	0.094		63	110			
2	3012	68.1	12.2	3.48	2.17	0.863	2.23	3.17	0.059		2	89			
3	3013	69.9	11.4	2.74	2.07	0.647	2.17	3.53	0.052		3	124			
4	3014	65.1	11.8	3.58	2.35	0.661	2.30	4.03	0.077		2	162			
5	3015	65.7	14.7	2.25	1.87	0.499	3.69	3.19	0.057		9	161			
6	3016	65.0	12.5	3.20	3.15	0.256	2.88	5.59	0.088		4	247			
7	3017	59.7	12.1	4.66	2.95	0.337	2.74	5.65	0.173		25	280			
8	3018	65.2	12.0	0.891	2.84	0.202	1.95	7.06	0.090		500	3380			
9															
0															

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3019	68.0	9.96	2.89	3.15	0.175	1.88	5.43	0.147		26	800			
2	3020	45.9	11.3	9.24	5.62	0.243	2.48	6.22	0.391		23	165			
3	3021	61.7	12.6	0.776	3.61	0.162	1.71	9.68	0.159		570	5700			
4	3022	61.3	12.5	0.710	3.38	0.162	1.77	9.32	0.147		810	4800			
5	3023	61.5	12.1	1.21	3.56	0.202	2.41	6.98	0.194		193	3060			
6	3024	64.4	10.9	0.413	2.93	0.189	1.78	7.51	0.108		63	410			
7	3025	59.7	11.7	1.06	3.53	0.148	1.52	8.72	0.158		78	5400			
8	3026	58.5	11.9	0.842	3.12	0.188	1.61	8.61	0.094		4	580			
9	3027	50.1	15.2	0.825	7.13	0.148	0.807	13.3	0.111		181	480			
0	3028	47.1	28.7	1.87	1.11	1.39	6.15	2.20	0.015		21	71			
1	3029	75.5	11.4	0.099	0.912	0.512	2.82	2.00	0.010		11	220			
2	3030	77.6	9.27	0.380	1.13	0.418	2.27	1.16	0.019		34	4100			
3	3031	74.9	10.6	0.101	3.15	0.324	1.71	3.29	0.056		31	162			
4	3032	80.0	0.189	0.012	0.017	0.013	0.048	0.343	0.006		2	5			
5	3033	74.7	10.5	0.086	2.75	0.243	2.27	2.96	0.046		4	122			
6	3034	75.5	11.5	0.017	2.07	0.283	2.78	2.22	0.021		3	105			
7	3035	87.7	0.604	0.010	0.166	0.404	0.205	0.486	0.009		2	10			
8	3036	73.3	10.8	0.121	1.96	0.189	2.52	4.32	0.072		100	270			
9															
0															

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3037	69.4	11.7	2.13	2.42	0.229	3.01	3.23	0.094		15	148			
2	3038	71.5	11.9	0.809	2.84	0.324	2.55	4.20	0.066		2	191			
3	3039	72.5	12.3	0.330	2.98	0.229	2.47	3.93	0.037		20	274			
4	3040	69.4	11.2	2.48	2.52	0.229	2.59	4.65	0.152		68	670			
5	3041	71.5	12.5	0.891	3.05	0.229	2.36	5.08	0.066		3	323			
6	3042	59.7	13.1	6.41	3.81	0.580	2.72	4.43	0.125		2	133			
7	3043	67.0	11.8	4.03	2.44	0.324	1.88	5.36	0.145		20	152			
8	3044	55.0	9.27	3.07	1.87	0.350	1.75	3.59	0.112		14	120			
9	3045	66.0	12.3	3.60	2.50	0.526	1.96	5.13	0.125		2	215			
0	3046	62.9	13.5	4.37	1.74	0.714	3.48	2.93	0.137		5	37			
1	3047	64.8	12.2	1.88	3.45	0.300	0.723	8.29	0.116		18	660			
2	3048	64.0	12.4	3.80	3.42	0.795	1.72	4.95	0.094		2	310			
3	3049	61.7	12.5	4.67	3.73	0.714	1.48	5.83	0.139		5	300			
4	3050	59.1	12.4	4.29	3.71	0.580	1.34	5.46	0.130		123	266			
5	3051	58.3	13.2	5.38	4.44	0.472	1.16	6.35	0.174		4	305			
6	3052	54.8	12.7	5.71	4.49	0.607	1.07	5.98	0.165		3	310			
7	3053	54.6	14.7	6.27	3.40	0.944	1.16	7.15	0.155		13	185			
8	3054	60.5	12.3	5.20	2.70	0.687	1.12	5.62	0.137		7	152			
9															
0															

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3055	59.3	12.7	5.45	3.35	0.431	1.35	6.12	0.196		13	249			
2	3056	54.0	13.3	6.60	4.05	0.687	0.868	6.15	0.192		3	247			
3	3057	58.3	12.4	4.89	4.76	0.350	0.578	7.81	0.133		25	136			
4	3058	46.3	11.9	7.92	5.62	0.135	0.795	11.5	0.201		26	157			
5	3059	52.2	12.0	6.03	4.33	0.162	1.47	9.21	0.199		31	230			
6	3060	75.9	9.69	1.42	2.06	0.500	1.71	2.03	0.079		5	91			
7	3061	72.9	9.56	2.36	2.25	0.350	1.83	3.13	0.146		14	135			
8	3062	64.0	14.3	3.63	2.72	0.728	2.89	3.46	0.086		6	164			
9	3063	78.0	11.4	0.124	1.36	0.404	2.45	2.66	0.022		194	270			
0	3064	71.1	11.2	0.512	2.55	0.202	2.29	4.29	0.059		35	510			
1	3065	76.7	10.8	0.122	1.36	0.216	2.88	3.47	0.061		16	172			
2	3066	72.1	11.1	0.347	2.24	0.148	2.22	5.62	0.094		161	405			
3	3067	64.0	10.9	4.06	2.49	0.216	2.69	4.55	0.221		2	162			
4	3068	71.1	11.4	0.446	2.39	0.162	1.94	6.21	0.074		134	318			
5	3069	69.2	11.8	0.201	3.00	0.148	1.64	7.58	0.112		68	430			
6	3070	56.6	13.6	4.46	3.95	0.404	2.48	5.68	0.181		126	277			
7	3071	57.7	13.5	4.70	3.30	0.350	2.07	5.81	0.191		48	262			
8	3072	57.3	13.9	2.64	3.91	0.283	2.24	7.06	0.187		63	550			
9															
0															

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm	Pb ppm	Au ppb	Ag ppb
1	3073	65.0	11.9	0.545	3.88	0.202	1.99	6.32	0.167		4	310			
2	3074	62.1	12.2	1.83	3.38	0.445	2.22	6.16	0.185		10	440			
3	3075	61.9	11.8	1.37	4.31	0.162	1.36	8.67	0.124		21	570			
4	3076	64.4	12.0	0.644	3.23	0.189	1.65	7.95	0.128		350	450			
5	3077	62.9	15.0	1.67	2.60	0.391	2.45	5.69	0.108		5	237			
6	3078	62.1	12.3	4.95	3.03	0.337	1.39	5.65	0.137		4	120			
7	3079	57.0	13.4	5.86	3.15	0.499	0.711	6.79	0.181		4	133			
8	3080	55.6	13.5	5.96	3.35	0.485	1.04	6.61	0.196		4	142			
9	3101	42.6	11.1	3.38	3.07	0.553	1.51	12.4	0.077		100	86	1	40	600
0	3102	72.1	8.24	2.03	1.39	0.310	1.88	3.72	0.068		320	1570	15	10	1020
1	3103	63.7	12.2	0.660	2.90	0.175	1.86	7.58	0.067		42	9800	21	6	170
2	3104	49.7	13.6	5.25	4.23	0.216	2.59	8.32	0.238		380	1410	2	4	560
3	3105	64.4	10.4	2.10	2.67	0.175	2.08	5.72	0.121		1290	8900	1	10	1960
4	3106	57.9	10.8	2.25	3.70	0.135	1.61	8.99	0.221		7700	7700	1	68	19000
5	3107	52.8	13.3	5.94	4.89	0.216	2.53	6.44	0.259		55	210	< 1	< 2	340
6	3108	47.8	11.4	3.48	7.46	0.040	0.554	13.2	0.473		720	12000	< 1	8	1100
7	3109	58.5	11.9	0.924	3.43	0.135	1.57	9.47	0.183		1270	480	< 1	10	1370
8	3110	64.0	11.5	1.34	3.33	0.162	2.06	6.15	0.146		310	4800	< 1	2	400
9															
0															

TML **TERRAMIN RESEARCH LABS LTD.**

JOB # 81-18-B

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm	Pb ppm	Au ppb	Ag ppb
1	3111	45.3	19.3	0.891	7.13	0.377	1.57	12.8	0.161		1050	460	1	8	960
2	3112 (1) don't enter these	75.1	11.7	0.297	2.25	0.404	2.13	3.09	0.044		15	870	7	2	180
3	3112 (2)	79.0	11.3	0.122	1.59	0.404	2.23	2.65	0.037		33	820	6	2	300
4	3113	76.9	11.1	0.107	2.88	0.229	2.11	3.05	0.066		25	131	14	< 2	80
5	3114	75.5	10.9	0.107	2.88	0.229	2.11	3.15	0.065		17	148	< 1	< 2	10
6	3115	78.6	9.09	0.038	2.77	0.162	1.54	3.00	0.034		2800	410	3	< 2	1510
7	3116	76.5	10.1	0.089	1.82	0.162	2.17	4.49	0.079		8600	470	14	30	6230
8	3117	68.8	9.48	0.229	2.92	0.135	1.70	6.88	0.236		4200	440	9	50	2230
9	3118	73 5	9.71	0.106	2.07	0.148	1.84	5.59	0.116		7500	630	27	70	11700
0	3119	74.9	8.59	0.071	2.12	0.108	1.47	5.43	0.077		4700	415	2	14	1540
1	3120	68.6	11.3	0.380	2.11	0.337	1.90	5.29	0.056		12300	1830	34	78	13500
2	3121	67.2	14.0	3.53	1.34	1.08	2.98	2.72	0.101		30	44	2	< 2	10
3	3122	59.3	14.3	4.92	3.50	0.517	0.807	6.46	0.181		9	268	< 1	< 2	30
4	3123	48.7	13.1	6.54	4.81	0.162	1.18	10.8	0.177		30	188	< 1	2	260
5	3124	51.0	12.9	5.94	4.87	0.162	1.19	11.4	0.172		33	217	< 1	< 2	180
6	3125	78.4	10.2	1.22	1.92	0.377	1.78	2.97	0.090		16	111	6	< 2	100
7	3126	78.6	11.1	0.677	2.12	0.189	2.48	3.89	0.066		118	230	< 1	< 2	140
8	3128	74.9	7.65	0.132	0.812	0.135	1.88	5.08	0.040		25600	9800	25	452	22700
9	3127 enter nothing.	N.S.													
0	3112 average enter this	77.1	11.5	.210	1.92	.404	2.18	2.87	.041		24	845	6	2	240

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm	Pb ppm	Au ppb	Ag ppb
1	3129	79.8	8.84	0.163	1.26	0.162	2.27	3.05	0.071		410	191	< 1	< 2	370
2	3130	71.1	11.8	0.198	3.02	0.135	1.57	7.75	0.114		810	520	< 1	< 2	640
3	3131	70.6	9.82	0.198	2.47	0.162	1.60	6.16	0.075		8700	1370	11	42	11800
4	3132	68.2	12.5	0.743	2.64	0.256	2.27	6.69	0.134		3100	1760	< 1	74	6030
5	3133	81.8	6.95	0.974	1.39	0.162	1.37	3.60	0.066		400	1380	< 1	< 2	650
6	3134	79.6	10.6	0.149	1.81	0.350	2.18	2.63	0.023		8	204	3	< 2	180
7	3135	73.1	11.7	0.479	2.39	0.324	2.37	3.93	0.037		12	395	24	< 2	4930
8	3136	70.2	11.2	0.092	1.59	0.310	2.64	2.13	0.019		6	234	3	< 2	190
9	3137	74.9	11.7	0.074	2.54	0.256	2.41	3.90	0.037		25	760	4	< 2	170
0	3138	73.1	11.1	0.182	2.90	0.229	2.14	4.30	0.085		31	325	3	< 2	160
1	3139	62.3	15.0	1.02	5.01	0.243	2.31	6.18	0.128		30	420	6	< 2	330
2	3140	59.9	14.2	3.68	4.00	0.324	2.58	6.29	0.263		65	233	32	< 2	190
3															
4															
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0															

	Client No. DRILL CORE	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm		Zn ppm		
1	3081	49.3	13.9	4.47	5.31	3.01	0.904	8.82	0.065		54		133		
2	3082	60.7	14.3	4.77	2.27	1.42	2.27	3.33	0.062		6		30		
3	3083	46.1	12.9	7.76	4.24	1.52	1.39	9.01	0.146		17		103		
4	3084	51.4	13.6	6.52	4.11	0.337	1.19	7.44	0.143		42		100		
5	3085	51.4	13.7	6.77	4.19	0.337	1.17	7.82	0.152		99		99		
6	3086	50.3	13.7	5.40	4.28	0.202	0.518	10.8	0.172		86		203		
7	3087	45.1	13.6	8.42	6.28	0.418	2.59	5.91	0.338		6		335		
8	3088	45.1	13.5	8.42	6.33	0.418	2.58	6.02	0.346		5		335		
9	3089	60.9	13.3	3.38	3.48	0.297	2.52	5.51	0.221		40		175		
0	3090	49.9	14.7	3.93	7.30	0.229	1.82	7.18	0.176		5		500		
1	3091	68.0	10.7	0.264	3.56	0.135	1.82	5.92	0.179		330		387		
2	3092	66.4	10.7	0.109	2.06	0.148	2.01	5.69	0.146		630		334		
3	3093	70.4	11.7	1.77	2.37	0.189	2.69	4.09	0.101		320		930		
4	3094	52.8	13.9	4.70	5.87	0.310	0.662	8.38	0.147		12		126		
5	3095	57.9	15.8	3.17	3.55	0.233	1.13	7.79	0.101		24		96		
6	3096	52.4	13.5	4.18	6.15	0.189	1.88	8.15	0.176		25		190		
7	3097	92.4	0.397	0.119	0.216	0.013	0.084	0.586	0.013		4		11		
8	3098	55.0	13.8	4.34	4.41	0.458	1.94	7.04	0.142		7		158		
9															
0															

	Client No.	SiO %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm		Zn ppm		
1	3099	73.1	13.2	0.231	4.43	0.243	2.27	4.43	0.044		1		343		
2	3100	61.3	13.1	4.72	3.76	0.297	2.81	5.42	0.212		45		190		
3	3201	56.4	7.88	0.957	2.44	0.148	1.30	4.16	0.088		5		333		
4	3202	69.0	11.6	3.30	2.88	0.243	2.43	5.03	0.187		100		156		
5	3203	93.8	0.170	0.045	0.033	0.013	0.060	0.472	0.017		3		5		
6	3204	66.2	12.5	4.37	3.71	0.229	1.93	5.45	0.174		15		204		
7	3205	73.1	11.2	3.62	2.42	0.256	2.28	3.58	0.086		2		98		
8	3206	70.0	12.1	3.20	2.27	0.189	1.93	4.52	0.123		5		127		
9	3207	69.6	11.7	3.95	2.37	0.229	2.29	4.12	0.133		4		103		
0	3208	60.9	13.3	4.46	3.18	0.175	1.66	5.75	0.138		9		144		
1	3209	64.8	12.9	4.92	2.97	0.175	1.52	5.85	0.136		21		120		
2	3210	62.9	13.0	4.72	3.07	0.189	1.57	5.52	0.134		12		129		
3	3211	64.2	10.1	6.60	3.51	0.162	1.36	5.01	0.155		12		103		
4	3212	58.9	13.9	6.11	3.42	0.216	1.84	6.05	0.151		38		135		
5	3213	69.6	12.5	3.50	2.74	0.270	2.35	4.60	0.088		22		156		
6	3214	66.2	12.6	4.44	2.82	0.391	2.45	5.19	0.142		20		185		
7	3215	66.2	12.2	3.40	2.88	0.270	2.07	6.36	0.141		340		1180		
8	3216	67.6	12.5	4.14	2.72	0.256	2.02	5.41	0.132		32		216		
9															
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TERRAMIN RESEARCH LABS LTD.

JOB # 81-20-B

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm		Zn ppm		
1	3217	65.4	12.1	4.23	2.82	0.216	1.16	5.43	0.106		5		141		
2	3218	64.2	12.1	4.92	2.92	0.256	1.31	5.38	0.108		24		124		
3	3219	63.1	12.4	5.46	3.20	0.324	1.23	5.62	0.099		25		114		
4	3220	52.4	11.8	7.76	4.94	0.350	0.145	8.34	0.152		33		100		
5	3221	57.3	14.1	3.83	5.37	0.337	0.145	3.06	0.085		73		185		
6	3222	66.8	17.4	1.11	3.28	1.01	0.687	5.03	0.031		22		170		
7	3223	79.6	12.2	0.127	1.69	0.485	2.53	2.55	0.012		11		198		
8	3224	57.0	15.0	1.80	5.97	0.206	1.57	8.87	0.097		48		350		
9	3225	55.2	13.9	4.42	4.48	0.243	1.51	9.98	0.164		50		160		
0	3226	49.9	11.8	6.93	5.22	0.175	1.13	11.1	0.217		62		155		
1	3227	77.3	9.77	0.129	2.62	0.256	1.78	3.26	0.027		28		105		
2	3228	72.5	9.80	0.013	2.67	0.229	1.88	3.33	0.052		20		130		
3	3229	74.5	11.8	0.125	2.98	0.283	2.43	3.80	0.018		5		152		
4	3230	68.8	13.4	2.64	1.31	5.04	1.67	2.27	0.076		1		16		
5	3231	61.5	15.4	0.380	6.13	0.364	2.08	6.74	0.059		94		370		
6	3232	50.6	14.8	6.09	3.98	2.26	3.17	4.89	0.137		25		83		
7	3233	48.5	13.8	7.75	4.79	0.418	2.76	6.15	0.183		101		140		
8	3234	70.2	10.8	2.20	2.07	0.404	2.29	3.16	0.103		17		117		
9															
0															

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Pb ppm	Zn ppm	Au ppb	Ag ppb
1	3235	69.8	11.2	2.79	2.49	0.283	2.43	4.15	0.136		186		395		
2	3236	58.3	11.8	6.44	3.80	0.350	2.29	5.76	0.259		3		172		
3	3237	63.3	12.2	4.09	3.28	0.283	2.16	5.58	0.194		156		1100		
4	3238	64.0	12.0	4.04	3.10	0.256	1.96	5.43	0.186		6		395		
5	3239	64.6	11.9	4.69	2.70	0.175	1.45	5.66	0.185		55		208		
6															
7	3141	72.3	11.0	1.17	1.82	0.216	2.71	3.83	0.052		6000	6	280	58	5500
8	3142	78.8	9.58	0.061	2.19	0.216	2.04	4.06	0.065		710	< 1	490	16	990
9	3143	74.9	11.3	0.130	2.24	0.216	2.63	4.30	0.133		1190	< 1	261	12	250
0	3144	67.2	11.4	0.137	1.99	0.202	2.74	4.00	0.083		720	1	295	12	210
1	3145	76.7	10.4	0.127	2.21	0.162	2.05	5.22	0.088		1940	9	960	10	1410
2	3146	71.3	11.4	0.134	2.25	0.175	2.35	4.90	0.094		1240	< 1	335	4	510
3	3147	75.5	10.1	0.132	1.89	0.162	2.19	4.19	0.079		280	< 1	276	< 2	170
4	3148	73.5	9.31	0.330	1.92	0.148	1.90	4.46	0.097		770	< 1	263	6	440
5	3149	76.9	9.82	0.097	2.02	0.175	2.12	4.78	0.146		520	< 1	244	< 2	410
6	3150	75.3	10.5	0.109	1.86	0.175	2.22	4.36	0.088		490	< 1	260	2	700
7	3151	71.1	11.3	0.198	1.94	0.175	2.24	5.93	0.132		4300	< 1	520	12	1740
8	3152	72.7	12.0	0.611	1.84	0.202	2.74	4.09	0.062		320	6	369	< 2	90
9															
0															

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Pb ppm	Zn ppm	Au ppb	Ag ppb
		(1)										(2)			
		(3)										(4)			(5)
1	3153	55.2	9.35	0.429	4.36	0.081	0.735	13.7	0.059		43	< 1	175	2	160
2	3154	50.3	11.2	0.512	4.89	0.121	1.11	16.7	0.124		81	< 1	194	2	200
3	3155	79.6	12.0	0.104	2.79	0.350	2.31	3.47	0.022		18	< 1	112	2	80
4	3156	74.3	10.8	0.264	3.18	0.297	1.87	3.86	0.034		23	< 1	140	< 2	630
5	3157	79.2	11.5	0.061	3.71	0.283	1.92	3.47	0.026		5	< 1	170	2	70
6	3158	74.3	11.5	0.627	3.71	0.270	1.98	4.23	0.045		13	3	156	< 2	110
7	3159	52.6	16.1	1.98	4.38	0.148	1.51	13.6	0.263		1730	< 1	2970	6	2400
8	3160	55.4	16.5	1.29	4.08	0.162	1.61	12.8	0.192		1150	< 1	2680	< 2	1210
9	3161	73.1	11.8	0.825	2.32	0.216	1.86	6.18	0.071		440	< 1	2240	6	490
0	3162	72.3	10.6	1.24	2.02	0.216	1.88	4.89	0.056		540	< 1	24100	8	540
1	3163	12.0	2.36	2.15	1.74	0.013	0.036	6.58	0.115		17900	< 1	351000 ~~35.1%~~	104	4800
2	3164	67.2	12.7	0.858	2.16	0.256	2.22	5.43	0.049		680	< 1	14800	6	750
3	3165	44.7	15.7	4.84	3.95	0.903	1.02	11.9	0.098		28	< 1	146	18	450
4															
5															
6															
7															
8															
9															
0															

	Client No. Drill Core	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3240	65.0	12.4	3.88	2.50	0.216	2.01	6.46	0.200		36	151			
2	3241	62.6	13.8	4.00	3.07	0.310	2.46	6.59	0.216		35	156			
3	3242	62.0	12.4	4.62	3.66	0.216	1.30	7.44	0.212		4	157			
4	3243	65.4	13.5	3.48	2.57	0.270	2.23	6.89	0.185		7	188			
5	3244	61.4	13.6	4.94	3.37	0.350	1.35	7.52	0.223		78	227			
6	3245	58.7	13.2	4.02	4.46	0.243	1.57	8.44	0.225		7	278			
7	3246	66.5	12.1	1.14	3.50	0.121	1.10	10.4	0.213		14	388			
8	3247	62.4	12.9	1.95	4.86	0.162	1.42	10.3	0.222		25	540			
9	3248	60.8	13.6	2.57	5.32	0.216	1.47	9.22	0.199		34	410			
0	3249	54.5	15.6	1.51	6.22	0.175	1.17	14.0	0.164		19	720			
1	3250	63.6	13.4	3.71	2.47	0.377	1.51	7.18	0.158		3	119			
2	3251	49.0	14.1	4.68	5.89	1.71	2.19	9.87	0.134		54	108			
3	3252	49.2	14.6	4.79	5.55	0.310	2.37	11.6	0.086		48	130			
4	3253	50.4	13.9	4.83	5.09	0.310	2.28	10.5	0.120		42	116			
5	3254	53.2	12.4	5.88	4.10	0.458	1.98	9.65	0.137		36	104			
6	3255	50.6	14.5	4.11	4.13	0.297	2.17	11.8	0.132		5	150			
7	3256	52.0	14.6	6.05	4.39	1.27	0.747	9.91	0.136		26	88			
8	3257	41.3	11.7	8.31	9.45	0.243	0.747	11.8	0.284		4	185			
9															
0															

TERRAMIN RESEARCH LABS LTD.

JOB # 81-21-B

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3258	52.4	12.7	4.72	5.09	0.270	1.37	9.67	0.168		157	115			
2	3259	52.0	13.2	5.79	4.97	0.256	1.42	9.47	0.172		28	105			
3	3260	61.2	12.8	2.79	5.16	0.283	1.30	8.14	0.101		37	159			
4	3261	77.2	11.1	0.277	2.40	0.310	1.65	5.22	0.033		29	128			
5	3262	52.4	16.0	2.15	8.29	0.337	1.24	10.6	0.103		5	480			
6	3263	71.9	12.8	1.65	1.66	0.324	2.84	4.55	0.079		5	80			
7	3264	69.5	9.77	3.66	2.50	0.243	2.39	4.88	0.145		50	790			
8	3265	64.4	13.0	3.05	2.32	0.270	2.30	6.91	0.092		30	137			
9	3266	64.6	11.9	3.49	2.07	0.243	2.40	6.33	0.085		17	107			
0	3267	69.5	11.5	3.65	2.16	0.256	2.49	5.28	0.080		18	87			
1	3268	67.7	12.7	2.20	1.99	0.283	2.69	4.86	0.054		46	108			
2	3269	60.8	12.1	4.68	3.18	0.297	3.11	4.98	0.090		3	90			
3	3270	48.6	14.4	3.69	6.32	0.148	1.76	12.2	0.306		88	1590			
4	3271	68.5	11.9	2.20	2.49	0.216	2.93	5.51	0.139		6	200			
5	3272	63.8	12.4	1.39	3.55	0.175	1.89	9.35	0.099		800	1910			
6	3273	67.3	11.6	1.12	2.84	0.216	1.60	9.37	0.092		112	1520			
7	3274	37.2	7.14	11.5	13.8	0.013	0.012	8.47	0.245		10	570			
8	3275	45.3	8.39	7.54	6.32	0.054	0.506	14.2	0.502		99	810			
9															
0															

(1) (3)

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3276	65.8	12.5	1.65	3.18	0.256	1.99	8.35	0.094		670	550			
2	3277 ✓	41.5	11.1	10.0	6.96	0.216	1.77	10.4	0.338		9	418			
3	~~3278~~ 3278 ✓	66.0	12.8	0.600	3.58	0.189	1.57	9.57	0.065		113	720			
4	3279	61.6	14.2	1.72	3.55	0.175	1.39	11.0	0.158		175	600			
5	3280	65.0	12.8	2.95	3.03	0.229	2.10	6.82	0.158		58	262			
6	3281	63.6	12.8	3.09	3.10	0.243	2.10	6.92	0.164		56	279			
7	3282	65.2	12.2	3.37	3.38	0.216	1.46	7.22	0.169		32	287			
8	3283	64.2	13.2	3.28	3.70	0.175	0.880	8.18	0.145		22	185			
9	3284	65.0	13.4	0.877	3.96	0.148	1.47	10.5	0.173		340	5800			
0	3285	55.5	13.9	0.800	5.09	0.175	1.64	13.1	0.337		16	510			
1	3286	60.8	13.4	1.40	4.31	0.202	1.39	10.1	0.217		126	3260			
2	3287	58.5	13.3	4.46	3.32	1.08	1.27	7.71	0.152		29	188			
3	3288	54.9	12.5	5.69	3.48	1.42	1.14	7.95	0.203		28	195			
4	3289	42.3	12.5	10.0	5.77	0.88	1.64	9.27	0.198		12	132			
5	3290	47.4	14.9	6.77	4.81	1.27	1.28	9.32	0.226		34	195			
6	3291	39.4	10.7	10.6	7.46	0.324	1.45	9.38	0.288		8	227			
7															
8															
9															
0															

	Client No. Drill Core		(1) Cu ppm		(2) Pb ppm		(3) Zn ppm		(4) Au ppb		(5) Ag ppb				
1	3166		81		10		136		2		230				
2	3167		56		12		136		2		550				
3	3168		66		2		175		2		140				
4	3169		4100		22		340		2		2630				
5	3170		7200		23		630		24		5130				
6	3171		4000		118		12100		84		26800				
7	3172		4100		15		600		2		3730				
8	3173		1560		5		1050		2		1680				
9	3174		96		2		87		2		90				
0	3175		29		1		159		2		40				
1	3176		133		1		76		2		90				
2	3177		310		2		180		2		240				
3	3178		22		4		240		2		100				
4	3179		610		19		2200		2		1520				
5	3180		7		3		175		2		90				
6	3181		135		3		1980		6		1200				
7	3182		3000		10		1420		2		3230				
8	3183		176		1		610		2		260				
9	3184		850		2		370		2		620				
U															

3185 - 3195 missing

TERRAMIN RESEARCH LABS LTD.

3292 → 3428

JOB # 81-27

(1) (3) Page 1/3

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3292	55.9	13.4	4.07	4.64	1.69	0.916	7.08	0.164		54	205			
2	3293	58.5	13.4	3.29	4.36	1.27	0.747	6.68	0.225		5	360			
3	3294	58.5	14.9	0.588	5.50	0.755	1.25	9.92	0.159		2200	540			
4	3295	62.5	14.5	0.546	5.32	0.458	2.04	6.89	0.134		76	360			
5	3296	63.5	13.2	2.88	4.39	1.42	1.14	6.35	0.192		36	355			
6	3297	49.1	15.3	7.13	5.70	6.34	0.988	6.58	0.129		60	85			
7	3298	49.9	13.6	8.39	6.83	3.90	0.518	7.87	0.170		9	116			
8	3299	65.3	15.5	2.34	1.26	6.61	2.13	3.85	0.043		27	47			
9	3300	64.9	15.5	1.93	1.66	8.09	0.349	3.68	0.040		22	63			
0	3401	61.1	14.9	4.99	1.39	3.68	3.04	3.69	0.049		145	48			
1	3402	46.2	14.0	7.27	8.46	3.95	0.711	7.79	0.136		3	120			
2	3403	62.5	14.7	3.54	2.14	4.61	2.29	3.42	0.067		9	46			
3	3404	52.9	14.4	4.24	4.59	4.81	0.458	8.94	0.120		29	105			
4	3405	51.9	15.3	2.67	5.70	3.92	0.446	10.2	0.096		42	154			
5	3406	49.3	14.9	4.97	4.94	1.15	0.928	10.7	0.155		38	158			
6	3407	62.9	15.1	4.62	2.60	1.69	1.63	3.83	0.085		3	32			
7	3408	52.3	13.6	5.64	4.18	0.216	0.217	12.0	0.223		46	161			
8	3409	51.5	12.1	3.71	5.22	0.054	0.108	17.7	0.230		31	261			
9	3410	73.4	10.8	2.24	2.25	0.256	1.75	3.98	0.088		5	92			
0	3411	65.7	11.3	0.574	1.82	0.324	2.05	2.97	0.046		50	107			

TML

TERRAMIN RESEARCH LABS LTD.

JOB # 81-27

(1) (3)

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3412	51.1	15.7	5.27	4.29	0.377	2.14	8.81	0.253		37	152			
2	3413	59.3	15.9	3.46	3.45	0.431	1.99	7.59	0.139		42	169			
3	3414	57.3	16.2	2.20	4.18	0.337	2.87	7.69	0.167		112	490			
4	3415	55.7	15.7	3.46	4.94	1.32	2.60	6.82	0.132		4	570			
5	3416	72.2	13.2	1.45	1.96	0.350	3.11	3.68	0.111		12	162			
6	3417	75.6	12.7	1.40	1.59	0.499	3.12	3.09	0.085		38	1220			
7	3418	45.8	13.2	7.83	6.38	0.256	2.24	9.12	0.293		66	3640			
8	3419	73.4	12.3	0.294	2.42	0.174	2.19	6.28	0.093		700	405			
9	3420	62.5	12.1	0.266	4.00	0.202	1.65	11.1	0.368		172	3440			
0	3421	64.3	12.3	0.979	4.84	0.121	1.00	9.54	0.185		5	540			
1	3422	63.7	13.6	1.26	4.29	0.162	1.21	10.7	0.163		129	620			
2	3424	60.7	16.1	2.77	2.77	0.350	1.90	7.48	0.165		22	201			
3	3425	61.1	12.1	2.83	2.74	0.216	1.27	6.91	0.156		6	196			
4	3426	65.1	12.7	3.06	2.88	0.499	1.19	5.68	0.116		28	206			
5	3427	60.7	13.6	4.64	3.38	0.324	0.831	6.78	0.158		24	252			
6	3428	70.0	13.2	1.99	2.17	0.350	2.21	4.16	0.089		5	152			
7															
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TERRAMIN RESEARCH LABS LTD.

ANALYTICAL REPORT

Job # 81-27 W.G. Timmins Expl. & Dev't. Date Apr.8,1981

Client Project Sturgeon Lake Page 3/3

Sample No.	Cu (1) ppm	Pb (2) ppm	Zn (3) ppm	Au (4) ppb	Ag (5) ppb
3185	4900	2	1510	80	4600
3186	4700	2	2080	14	1960
3187	210	3	385	10	190
3188	1520	6	850	12	1000
3189	680	6	780	12	550
3190	640	3	590	2	440
3191	1380	1	1110	8	880
3192	980	2	1360	12	340
3193	5700	7	1930	24	8700
3194	320	2	265	18	260
3195	700	1	405	10	460

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TERRAMIN RESEARCH LABS LTD.

ANALYTICAL REPORT W.G. Timmins

Job # 81-36 Date Apr.28,1981

Client Project Sturgeon Lake Page 1/5

Sample No. Drill Core	Cu ppm	Pb ppm	Zn ppm	Au ppb	Ag ppb
3196	10200	2	860	158	8700
3197	1080	19	1380	8	3300
3198	192	2	8700	4	410
3199	153	1	1390	2	220
3200	230	< 1	480	2	300
3301	154	1	1050	< 2	170
3302	43	2	940	< 2	100
3303	240	360	1620	2	960
3304	1100	4	520	2	630
3305	490	4	303	< 2	360
3306	21	3	246	< 2	30

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TERRAMIN RESEARCH LABS LTD.

JOB # 81-36

	Client No. Drill Core	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3423	45.3	12.7	8.94	7.11	0.391	2.23	9.08	0.188		3	181			
2	3429	53.4	12.5	6.06	4.92	0.216	1.74	12.5	0.223		50	600			
3	3430	58.8	14.7	4.94	3.22	0.162	1.10	10.1	0.128		3	173			
4	3431	64.4	14.5	3.71	2.54	0.350	1.78	7.61	0.085		2	153			
5	3432	48.8	16.9	4.83	4.18	5.69	0.639	11.6	0.089		19	126			
6	3433	55.2	16.1	3.76	3.22	1.01	2.45	9.87	0.096		5	93			
7	3434	60.4	14.5	5.11	2.24	1.74	2.02	6.78	0.053		209	91			
8	3435	49.0	15.4	6.32	4.44	3.95	1.04	10.1	0.096		10	135			
9	3436	43.1	11.4	11.0	4.48	0.580	2.06	13.0	0.271		410	1430			
0	3437	52.6	14.1	6.21	4.15	1.32	1.65	10.9	0.119		7	110			
1	3438	61.4	15.8	2.53	2.07	6.61	1.31	5.23	0.039		4	71			
2	3439	42.5	11.4	9.39	9.05	2.90	0.241	11.5	0.124		71	99			
3	3440	50.4	13.6	7.61	4.13	0.863	1.84	11.1	0.124		16	126			
4	3441	50.4	13.1	6.32	5.70	5.18	0.241	8.54	0.086		31	100			
5	3442	48.4	13.4	8.09	6.07	3.44	0.060	11.7	0.121		58	129			
6	3443	49.8	12.7	8.59	5.24	2.60	0.024	13.6	0.147		95	107			
7	3444	49.6	12.7	8.80	5.84	1.56	2.21	11.9	0.160		106	87			
8	3445	68.4	12.5	3.90	1.82	1.40	2.01	4.99	0.056		220	45			
9															
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TERRAMIN RESEARCH LABS LTD.

JOB # 81-36

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3446	67.7	15.2	4.28	2.44	1.85	1.88	5.09	0.052		4	55			
2	3447	51.6	14.0	8.60	4.24	1.13	1.70	12.0	0.129		76	137			
3	3448	53.0	14.3	6.90	3.75	0.809	2.19	14.7	0.128		54	144			
4	3449	63.7	14.1	5.57	2.57	1.42	2.19	9.51	0.173		21	104			
5	3450	50.2	14.1	9.53	6.23	2.75	0.603	11.2	0.141		80	89			
6	3451	45.9	9.97	14.8	12.4	0.445	0.229	10.2	0.176		71	81			
7	3452	48.2	14.0	8.90	6.90	1.63	0.603	12.0	0.143		53	90			
8	3453	74.0	13.6	4.17	1.92	1.56	2.11	5.29	0.062		9	83			
9	3454	70.8	15.1	4.41	1.82	2.67	2.65	4.66	0.040		16	43			
0	3455	71.8	14.1	4.56	2.21	2.95	1.78	5.29	0.048		83	70			
1	3456	67.8	14.3	3.93	1.77	2.22	2.47	4.68	0.043		4	53			
2	3457	47.8	11.6	10.1	7.38	0.580	1.33	7.82	0.112		6	174			
3	3458	62.2	13.8	4.62	2.57	1.15	1.95	6.39	0.062		45	100			
4	3459	67.4	12.5	4.53	1.81	2.51	1.52	4.18	0.046		9	53			
5	3460	65.8	14.7	3.53	1.76	3.36	1.94	4.43	0.040		21	58			
6	3461	65.4	14.7	3.83	1.71	2.62	1.82	4.46	0.049		14	53			
7	3462	67.8	14.3	5.82	2.55	2.43	2.72	5.95	0.049		29	56			
8	3463	66.4	14.5	3.57	1.72	2.32	2.46	4.52	0.043		26	138			
9															
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TERRAMIN RESEARCH LABS LTD.

JOB # 81-36

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3464	69.8	14.5	3.60	1.49	4.42	1.22	7.45	0.036		29	60			
2	3465	70.0	14.1	4.35	1.71	3.60	1.60	6.33	0.048		4	81			
3	3466	70.0	15.1	3.61	1.66	4.41	1.55	5.78	0.041		14	115			
4	3467	70.0	15.2	3.05	1.87	3.48	2.21	5.33	0.040		61	93			
5	3468	68.2	14.5	4.24	1.72	3.45	2.06	4.90	0.052		21	121			
6	3469	50.6	14.1	8.14	5.99	2.32	0.289	12.1	0.134		82	182			
7	3470	69.8	14.7	3.20	1.74	5.38	1.25	4.40	0.040		19	102			
8	3471	70.2	15.1	3.46	1.69	5.28	1.21	4.55	0.045		21	122			
9	3472	69.8	14.9	3.53	1.62	4.19	1.65	4.19	0.043		23	91			
0	3473	68.2	14.7	3.13	1.66	4.06	1.53	4.39	0.041		5	131			
1	3474	57.8	13.2	3.34	1.16	4.19	1.54	3.83	0.039		2	59			
2	3475	66.2	14.5	4.24	1.46	2.91	2.17	3.96	0.053		8	74			
3	3476	61.6	13.8	3.29	1.13	3.19	1.93	3.53	0.046		12	64			
4	3477	72.6	13.8	3.43	1.54	4.00	1.58	3.42	0.043		5	59			
5	3478	73.6	14.0	2.63	1.39	3.64	2.18	3.27	0.036		48	32			
6	3479	49.8	14.7	8.03	7.00	4.12	0.566	6.76	0.076		40	127			
7	3480	80.3	9.79	1.76	1.01	0.580	2.46	2.59	0.025		3	46			
8	3481	62.0	14.3	5.34	2.04	1.47	2.40	8.65	0.083		69	67			
9															
0															

	Client No.	SiO_2 %	Al_2O_{32} %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm	Zn ppm			
1	3482	45.9	12.9	9.95	7.33	1.83	1.27	8.54	0.114		9	105			
2	3483	50.0	14.3	7.64	8.47	3.48	0.313	7.95	0.081		4	120			
3	3484	52.4	14.3	9.01	6.53	2.35	0.048	12.3	0.124		125	96			
4	3485	54.6	15.1	5.36	5.14	1.79	0.145	18.0	0.196		25	165			
5	3486	60.4	15.1	7.15	5.67	2.99	0.036	11.0	0.123		109	78			
6	3487	49.8	15.1	9.02	7.33	3.17	0.048	10.8	0.142		76	91			
7	3488	49.0	12.0	11.6	8.77	1.73	0.169	10.1	0.150		64	108			
8	3489	56.8	16.0	8.45	8.29	1.19	0.024	12.5	0.143		71	85			
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TERRAMIN RESEARCH LABS LTD.

ANALYTICAL REPORT

Job # 81-40 Date Mar.30,1981

Client Project Seagull - Additional assays done on all samples greater than 0.05% Cu and 0.1% Zn Page 1/1

Sample No.		Au ppb	Ag ppb
from 81-18-B	3018	12	800
	3021	< 2	690
	3022	< 2	810
	3023	< 2	310
	3025	< 2	120
	3030	< 2	130
from 81-20-B	3091	4	210
	3092	2	320
	3093	< 2	90
	3215	4	360
from 81-21-B	3270	< 2	440
	3272	2	590
	3273	2	60
	3276	2	200
	3284	2	250
	3286	< 2	70

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TERRAMIN RESEARCH LABS LTD.

ANALYTICAL REPORT

Job # 81-55 W.G. Timmins Date May 13,1981

Client Project Seagull - Sturgeon Lake Page 1/6

Sample No.	Cu ppm	Pb ppm	Zn ppm	Au ppb	Ag ppb
3307	33	5	108	2	310
3308	1060	15	9800	4	1740
3309	108	18	330	2	830
3310	54	10	20400	2	740
3311	1600	1	530	2	840
3312	60	1	1240	2	50
3313	28	1	238	2	100
3314	2	1	240	2	10
3315	47	1	300	2	60
3316	330	1	320	2	210
3317	10	1	260	2	10
3318	760	1	260	2	380

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(403) 276-8668 Telex 03-821172 CGY

	Client No. Drill Core	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm		Zn ppm		
1	3801	70.6	12.2	3.72	1.54	0.658	2.54	4.92	0.065		38		73		
2	3802	66.6	14.4	4.07	1.99	1.47	2.34	4.40	0.057		4		48		
3	3803	58.0	14.1	5.46	3.95	1.21	1.47	7.64	0.120		12		138		
4	3804	54.6	15.2	8.37	4.16	1.95	1.17	7.15	0.077		84		63		
5	3805	66.2	15.2	5.33	2.65	1.86	1.43	5.42	0.052		42		51		
6	3806	78.5	10.5	1.43	1.19	0.290	2.17	5.72	0.099		30		170		
7	3807	77.9	11.2	0.727	1.21	0.299	2.52	5.30	0.037		35		107		
8	3808	52.1	12.2	6.70	7.86	2.56	0.592	6.16	0.096		2		200		
9	3809	80.2	10.6	0.881	0.879	0.294	2.83	2.63	0.030		7		78		
0	3810	58.6	13.9	3.02	2.45	0.998	2.28	10.4	0.133		50		122		
1	3811	62.6	14.8	4.99	1.38	1.82	2.12	7.04	0.086		25		17		
2	3812	55.7	16.2	4.94	3.88	0.437	1.57	11.1	0.123		132		188		
3	3813	56.1	13.6	3.72	3.56	0.270	1.42	10.1	0.102		240		209		
4	3814	50.2	12.5	6.53	4.19	0.213	0.686	10.9	0.159		32		206		
5	3815	56.7	14.4	1.57	3.25	0.344	2.10	12.2	0.099		33		420		
6	3816	70.7	12.5	0.741	2.64	0.243	2.23	4.78	0.062		19		330		
7	3817	70.7	11.3	0.042	3.75	0.175	1.64	6.51	0.053		27		3300		
8	3818	70.1	11.3	0.028	1.56	0.268	2.35	6.98	0.021		18		540		
9	3819	55.9	17.0	1.15	5.01	0.257	2.42	9.88	0.274		30		2900		
0	3820	41.1	13.2	9.16	6.80	0.280	2.33	8.51	0.269		4		260		

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm		Zn ppm		
1	3821	57.5	16.3	1.57	4.97	0.216	2.70	9.48	0.077		25		460		
2	3822	44.1	13.0	7.34	7.39	2.16	1.08	8.64	0.156		20		400		
3	3823	70.3	12.3	0.308	2.64	0.275	2.12	9.08	0.108		11		370		
4	3824	73.3	10.6	0.014	2.50	0.109	1.67	8.32	0.085		350		780		
5	3825	74.3	11.4	0.098	3.30	0.164	2.41	5.90	0.103		10		620		
6	3826	79.6	11.2	0.153	2.06	0.170	2.33	6.74	0.125		72		230		
7	3827	68.9	11.8	2.43	2.40	0.218	2.60	6.04	0.165		42		890		
8	3828	74.8	13.5	0.266	1.62	0.241	2.66	6.76	0.037		69		1870		
9	3829	64.7	13.5	4.60	2.93	0.264	1.96	7.00	0.169		34		2100		
0	3830	58.8	14.3	4.36	3.07	0.326	2.39	8.45	0.192		19		300		
1	3831	58.6	14.3	4.64	3.56	0.239	1.80	9.47	0.187		1100		290		
2	3832	50.2	13.5	7.15	4.94	0.243	1.21	9.10	0.243		410		230		
3	3833	65.9	11.0	0.392	3.33	0.094	1.10	10.7	0.105		4800		640		
4	3834	66.4	12.4	0.434	4.00	0.139	1.16	10.9	0.075		19		690		
5	3835	65.5	12.2	0.364	3.17	0.226	1.92	8.11	0.089		4		320		
6	3836	59.4	12.4	1.29	4.46	0.173	1.42	10.4	0.083		5		480		
7	3837	65.7	12.2	0.224	3.40	0.197	1.81	8.84	0.088		6		340		
8	3838	50.4	14.1	0.965	6.33	0.009	1.24	20.9	0.186		39		870		
9	3839	57.8	14.1	5.75	3.45	0.434	2.95	5.35	0.160		9		135		
0	3840	60.7	13.3	3.57	4.06	0.299	1.99	8.30	0.151		5		420		

TERRAMIN RESEARCH LABS LTD.

JOB # 81-55

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm		Zn ppm		
1	3841	60.7	14.3	2.64	3.60	0.398	2.10	7.84	0.145		156		600		
2	3842	55.0	13.5	4.98	4.00	0.608	1.88	7.54	0.133		27		300		
3	3843	53.6	14.6	5.34	3.33	0.427	1.27	8.66	0.132		8		202		
4	3844	60.5	12.2	4.83	3.10	0.418	1.23	6.65	0.108		1		152		
5	3845	56.5	12.7	5.72	3.40	1.02	1.28	7.07	0.136		33		190		
6	3846	50.9	13.5	5.19	3.98	0.249	1.16	10.7	0.128		48		124		
7	3847	58.2	9.88	6.74	4.21	0.212	1.19	8.69	0.194		2		108		
8	3848	59.9	14.4	4.46	3.91	0.369	1.21	9.62	0.107		43		132		
9	3849	64.3	14.6	3.34	3.73	0.465	1.40	9.35	0.076		130		150		
0	3850	69.9	10.6	2.06	2.93	0.360	1.21	7.70	0.052		7		154		
1	3851	60.1	14.1	4.32	3.30	0.491	2.60	7.66	0.103		1		170		
2	3852	71.0	14.1	3.62	1.21	1.37	2.52	3.84	0.071		1		24		
3	3853	58.6	16.0	4.69	2.88	0.466	2.40	8.00	0.107		22		98		
4	3854	64.7	16.9	3.15	2.42	0.411	1.98	8.17	0.084		4		110		
5	3855	58.2	14.6	5.19	3.53	0.479	1.83	8.47	0.116		35		138		
6	3856	66.6	14.1	2.07	4.64	0.249	2.34	7.22	0.065		2		220		
7	3857	79.4	12.4	0.755	2.47	0.263	2.41	4.11	0.059		1		179		
8	3858	77.7	12.4	1.89	2.24	0.256	2.82	3.66	0.046		1		134		
9	3859	51.2	9.82	11.5	6.07	0.187	1.81	8.32	0.470		260		156		
0	3860	76.9	12.5	2.73	2.01	0.328	2.65	4.89	0.103		24		210		

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm		Zn ppm		
1	3861	71.8	12.0	3.79	2.07	0.201	1.95	5.26	0.103		35		105		
2	3862	57.3	13.3	7.29	3.63	0.372	2.89	5.50	0.136		25		101		
3	3863	74.1	13.1	1.78	1.28	0.189	2.00	5.53	0.062		690		109		
4	3864	60.1	11.0	2.46	1.71	0.128	1.48	5.50	0.081		19		174		
5	3865	69.7	13.1	5.44	2.67	0.174	1.89	6.62	0.112		29		180		
6	3866	67.2	13.3	3.47	2.93	0.155	1.52	7.00	0.114		50		146		
7	3867	65.9	13.7	4.43	3.05	0.174	1.60	7.36	0.101		75		158		
8	3868	75.6	13.3	2.83	2.11	0.224	1.42	5.74	0.066		10		143		
9	3869	65.1	12.5	4.55	2.74	0.156	1.35	6.73	0.115		22		142		
0	3870	69.5	13.5	3.93	2.77	0.208	1.15	7.00	0.114		65		193		
1	3871	63.0	14.1	2.14	3.13	0.170	1.08	6.82	0.076		118		170		
2	3872	66.8	13.1	3.23	3.78	0.182	1.34	6.80	0.101		67		215		
3	3873	51.0	14.4	7.30	4.94	0.663	1.71	7.19	0.129		7		124		
4	3874	67.8	13.5	2.73	3.61	0.218	1.74	6.10	0.110		10		230		
5	3875	66.2	13.3	3.53	3.68	0.206	1.61	6.46	0.114		2		172		
6	3876	62.6	12.4	4.76	4.54	0.251	2.28	6.04	0.159		30		198		
7	3877	62.4	14.6	3.44	4.61	0.279	2.33	7.63	0.130		14		220		
8	3878	62.3	13.3	3.06	5.54	0.224	1.35	8.75	0.132		68		270		
9	3879	59.9	13.1	5.22	5.21	0.272	1.77	7.57	0.185		370		210		
0	3880	60.9	11.6	4.76	4.38	0.276	1.17	5.84	0.139		26		160		

TML

TERRAMIN RESEARCH LABS LTD.

JOB # 81-55

	Client No.	SiO_2 %	Al_2O_3 %	CaO %	MgO %	Na_2O %	K_2O %	Fe_2O_3 %	MnO %		Cu ppm		Zn ppm		
1	3490	65.1	13.3	3.37	3.40	0.647	2.49	5.68	0.062		96		138		
2	3491	77.1	12.2	1.11	2.75	0.903	2.18	3.26	0.030		31		94		
3	3492	71.0	10.6	2.78	3.51	0.678	1.53	4.41	0.062		24		128		
4	3493	66.2	13.9	4.03	2.85	1.42	2.24	2.64	0.040		2		35		
5	3494	58.2	13.9	3.90	3.88	2.21	2.31	7.84	0.059		11		52		
6	3495	59.2	14.6	4.39	2.88	2.22	1.94	7.36	0.084		84		66		
7	3496	54.6	13.9	5.39	3.22	2.83	1.15	7.42	0.071		19		62		
8	3497	57.5	15.0	3.99	3.40	1.40	1.45	8.69	0.106		33		113		
9	3498	65.5	13.9	3.43	1.67	1.73	1.65	2.78	0.041		1		23		
0	3499	73.5	10.8	1.47	1.46	0.445	2.22	3.42	0.031		7		96		
1	3500	68.5	10.1	1.02	0.990	0.450	2.19	2.33	0.023		54		97		
2															
3															
4															
5															
6															
7															
8															
9															
0															

TERRAMIN RESEARCH LABS LTD.

ANALYTICAL REPORT

Job # 81-56 W.G. Timmins Date May 13,1981

Client Project Seagull - Sturgeon Lake Page 1/1

Sample No.	Cu ppm	Pb ppm	Zn ppm	Au ppb	Ag ppb
3319	202	1	470	2	410
3320	38	1	460	2	50
3321	11	1	193	3	10
3322	30	1	600	2	30
3323	860	1	650	4	1550
3324	186	1	1580	2	240
3325	115	1	1000	2	170
3326	1650	1	750	108	630
3327	10	1	202	2	20
3328	7	1	44	2	10

14, 2235 - 30th Avenue N.E., Calgary, Alberta T2E 7C7
(403) 276-8668 Telex 03-821172 CGY

To: W.G. TIMMINS EXPLORATION & DEVELOPMENT LTD.,
502, 900 - 6th Avenue S.W.,
Calgary, Alberta T2P 3K2

ATTN: W.G. Timmins

File No. 21344
Date April 8, 1981
Samples Crushed Reject

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	OZ./TON GOLD	OZ./TON SILVER	% Cu	% Zn
3159	Trace	.12	.13	.19
3160	Trace	.06	.11	.27
3161	Trace	.02	.04	.15
3162	Trace	Trace	.08	2.40
3163	.010	.30	2.49	45.46
3164	Trace	.04	.08	1.25
3165	Trace	.02	.02	.05

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.

Pulps Retained one month unless specific arrangements made in advance.

D. Enderle

Assayer

To: W.G. TIMMINS EXPLORATION & DEVELOPMENT LTD.,
502, 900 - 6th Avenue S.W.,
Calgary, Alberta T2P 3K2

ATTN: W.G. Timmins

File No. 2134-1
Date April 9, 1981
Samples Pulp.

Certificate of ASSAY

LORING LABORATORIES LTD.

Page # 2

SAMPLE No.	% Cu	% Zn
3159	.19	.26
3160	.13	.24
3161	.05	.20
3162	.07	2.20
3163	2.05	41.90
3164	.10	1.60
3165	.02	.07

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.
Pulps Retained one month unless specific arrangements made in advance.

Assayer

To: W.G. TIMMINS EXPLORATION & DEVELOPMENT LTD.,
502, 900 - 6th Avenue S.W.,
Calgary, Alberta T2P 3K2

ATTN: W.G. Timmins

File No. 2134-1
Date April 9, 1981
Samples Pulp

Certificate of ASSAY

LORING LABORATORIES LTD.

SAMPLE No.	% Cu	% Zn
"Pulp Samples"		
3102	.05	.16
3103	.01	.94
3104	.04	.13
3105	.12	.78
3106	.98	.81
3107	.02	.03
3109	.13	.04
3115	.33	.04
3116	1.10	.06
3117	.52	.05
3118	.88	.06
3119	.54	.04
3120	1.55 *	.18
3128	3.05	1.03
3129	.06	.02
3130	.09	.05
3131	1.03	.13
3132	.35	.18
3133	.05	.14

*Copper Double Checked

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.
Pulps Retained one month unless specific arrangements made in advance.

D. Eades

Assayer

To: W.G. TIMMINS EXPLORATION & DEVELOPMENT LTD.,
502, 900 - 6th Avenue S.W.,
Calgary, Alberta T2P 3K2

ATTN: W.G. Timmins

File No. 21344
Date April 8, 1981
Samples Crushed Reject

Certificate of ASSAY

LORING LABORATORIES LTD.

Page # 1

SAMPLE No.	OZ./TON GOLD	OZ./TON SILVER	% Cu	% Zn
"Crushed Rejects"				
3102	.005	.14	.05	.14
3103	Trace	.04	.01	.74
3104	Trace	.02	.05	.23
3105	Trace	.10	.12	1.01
3106	Trace	1.08	.95	.74
3107	Trace	.10	.02	.03
3109	Trace	.08	.14	.04
3115	Trace	.06	.24	.03
3116	.005	.16	1.15	.06
3117	Trace	.10	.36	.04
3118	.005	.20	.65	.05
3119	Trace	.02	.60	.04
3120	.020	.36	.81	.14
3128	.010	.50	2.20	.68
3129	Trace	.04	.06	.02
3130	Trace	.02	.12	.05
3131	.010	.68	1.05	.17
3132	.020	.26	.40	.38
3133	.010	.12	.06	.09

I Hereby Certify THAT THE ABOVE RESULTS ARE THOSE ASSAYS MADE BY ME UPON THE HEREIN DESCRIBED SAMPLES . . . .

Rejects Retained one month.

Pulps Retained one month unless specific arrangements made in advance.

D. Eades

Assayer

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE 18 + 50N STARTED February 13, 1981

DEPARTURE 112 + 00E FINISHED February 18, 1981

ELEVATION TOTAL LENGTH 597

DEPTH	DIP	AZI.
COLLAR	65	180
57	63	
157	61	
257	59	
357	50	
457	46	

D.D.Co.

DEPTH	DIP	AZI.
557	42	

HOLE NO. SG 81-1

LOGGED BY Doug Hunter

CORE SIZE BQ

SECTION 112E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH	Cu ppm	Zn ppm	Ag ppb	Au ppb
0	55	Casing in overburden								
55	70	Light pink-grey lapilli-tuff. Chlorite in siliceous fragments and throughout ground mass. Generally massive with hints of bedding only. Strong foliation c.a. = 45°.								
70		Green, chloritic lapilli-tuff with white siliceous fragments, local lenses, generally massive. Becomes massive, grey tuff-lapilli tuff at approximately 100'. Well foliated chloritic tuff and lapilli								
	154	tuff near end of section. Foliation c.a. = 38°. Quartz-carbonate-tourmaline vein at 154-159'.	3101			191.0 192.0	100	86		
154		Very well bedded fine grained tuff and atgillaceous tuff. Very distinct thin beds and laminations, some chloritic, others very siliceous. Bedding locally folded, with foliation appearing axialplanar to folds.	3101			191.0 192.0	100	86		
	355	Local pyrite-rich band sampled for assay. Extremely siliceous section 283-330', this carries pyrite 'lenses' from 297-310'. Bedding and cleavage essentially parallel, c.a. = 44°.	3102			298.0 299.0	320	1570		
355	407	Grey-green, massive tuff, lapilli tuff with bedding distinct from place to place, although beds thicker than previous section. At 391.5 a 2cm. bed carrying 15% CPy disseminated. At 315 foliation c.a. = 44°.	3103			429.0 430.0	42	9800		
407		Grey, massive lapilli tuff distinguished by wispy and lensy mafic fragments throughout. Bedding present, but not so pronounced as in previous sections. Extremely siliceous sections in tuff-breccia with minute iridescent milky blue quartz eyes. Sulphides conspicuous at 448'. 'Heaviest' over 472-487' where pyrite and CPy occur disseminated (2-5%) and in chlorite stringers and quartz-carbonate	3104			471.1 477.1	380	1410		
			3105			477.1 482.1	1290	8900	1960	10
			3106			482.1 487.1	7700	7700	19000	68
			3107			487.1 489.1				

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. BG 81-1

LOGGED BY Doug Hunter

CORE SIZE

SECTION

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH	Cu ppm	Zn ppm	Ag ppb	Au ppb
	495	Very chloritic lapilli tuff, tuff breccia begins at 495' (FwBx?). Graded bed over 1.5' at 492-493.5' indicated 'tops' north.	3108			499.2 501.4	720	12000	1100	8
495	597	Dark, green-grey lapilli tuff, tuff breccia (FwBx?). Layering not common, quite massive, white siliceous clasts, blebs and lenses in chloritic matrix.	3109			509.5 512.2	1270	480	1370	10
			3110			514.0 512.0	310	4800		
end of hole										

PROPERTY Seagull Sturgeon CLAIM

ATITUDE 18 + 50N STARTED Feb 17, 1981

EPARTURE 116E FINISHED Feb 21, 1981

LEVATION TOTAL LENGTH 847

DEPTH	DIP	AZI	DEPTH	DIP	AZI
collar	65	180			
157	62				
300	57				
467	52				
600	53				
757	52				
837	50.5				

HOLE NO. SG 81-2

LOGGED BY D. Hunter

CORE SIZE BQ

SECTION 116E

LEVEL

ORE FOOTAGE from	to	DESCRIPTION	Sample No.	from	to	Length	Cu ppm	Zn ppm	Ag ppb	Au ppb
0	53	Casing in overburden								
53	79	Green chloritic tuff, lapilli tuff with narrow pinkish sericitic tuff beds up to 1.0'.	3111	69.0	71.5	1.5	1050	460	960	8
79	138	Fine Grained yellow-grey tuff-bedded tuff with uniform 2% disseminated pyrite and pyrite stringers, patchy stringers, patchy carbonate. Foliation at 42° t.c.a.	3112	78.0	98.0	20.0	24	845	180	2
138	165	Abrupt contact with darker grey lapilli tuff-tuff, bedding locally distinct. Local carbonate-hematitic patches and stringers.								
165		Uniform medium grey tuff with distinct bedding throughout, contorted. Siliceous sections, e.g. at 215'. Pyrite tr.-1% sometimes vuggy carbonate-quartz veins with 20% pyrite over 1 cm. Oxidized limonite -	3113	219.5	221.5	2.0	25	131		
	299	carbonate zone 192-196' (fracture zone?)	3114	256.0	257.5	1.5	17	148		
299	317	Well foliated lt-green-grey rock (tuff or dike?), locally pink hematitic.								
317		Well-bedded grey-cream coloured very fine-grained tuff, darker chloritic layers define bedding here whereas at 79-138' the tuff is uniform with very little chlorite, thus bedding is indistinct. Grey 'speckled' tuff and lapilli tuff with less distinct bedding from 365', local 0.5' section laminated tuff. Chalcopyrite-pyrite stringers from 331-352', up to 2 cm across, but averaging 3mm. These occur in a very distinct thin bedded-laminated cream-grey coloured tuff.	3115	331.5	336.5	5.0	2800	410	1510	2
			3116	336.5	341.5	5.0	8600	470	6230	30
			3117	341.5	345.0	3.5	4200	440	2230	50
			3118	345.0	350.0	5.0	7500	630	11700	70
	487		3119	350.0	352.0	2.0	4700	415	1540	14

PROPERTY Seagull Sturgeon CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI	DEPTH	DIP	AZI

HOLE NO. SG 81-2

LOGGED BY D. Hunter

CORE SIZE

SECTION

LEVEL

CORE FOOTAGE from	to	DESCRIPTION	Sample No.	from	to	Length	Cu ppm	Zn ppm	Ag ppb	Au ppb
487	502	Distinct grey lapilli tuff with chloritic fragments and wisps as in SG 81-1 (407-495')								
502	602	Grey-dark grey massive lapilli-tuff, and tuff, well bedded green at 568-569.5'. Foliation 53° to c.a. @ 568'.	3120	601.0	602.0	1.0	1230	1830	30500	7
602	614	Siliceous, finely laminated, very light yellow to pink (oxidized) tuff. Up to 2-3% quartz eyes less than 1mm. Perhaps 2% disseminated pyrite. Perhaps the hardest rock in the hole.								
614	701	Green-grey lapilli tuff as at 502', local chloritic sections in general massive, with massive tuff beds up to 3' thick at 654'. Not very chloritic, intermediate in composition, closely resembles last 60' of SG 81-1.								
701	709	Chloritic unit, dike?								
709	847	Massive grey lapilli-tuff as in previous section 614-701'. Locally characteristic of the "Fwbx"; contact must be arbitrarily drawn 635' (?)	3121	764.0	767.0	3.0	30	44		
end of hole										

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE 18 + 50N STARTED Feb 19, 1981

DEPARTURE 114 + 00E FINISHED Feb 22, 1981

ELEVATION TOTAL LENGTH 697

DEPTH	DIP	AZI	DEPTH	DIP	AZI
collar	65	180			
57	63				
237	59				
337	57				
357	55				
597	35				
697	30				

HOLE NO. BG 81-3

LOGGED BY D. Hunter

CORE SIZE BQ

SECTION 114E

LEVEL

CORE FOOTAGE from	to	DESCRIPTION	Sample No.	from	to	Length	Cu ppm	Zn ppm	Ag ppb	Au ppb
0	48.5	Casing in lake and overburden								
48.5		Massive green-grey lapilli tuff. Some chloritic sections over 5' e.g. 107-112 and siliceous sections, e.g. at 140-143'. Hints of very siliceous contorted beds at 142'. Narrow, 1-2 ft. sections with 3%	3122	127.0	128.0	1.0	30	188		
	145	disseminated pyrite (assayed).	3123	130.0	131.8	1.8	33	217		
145		Light grey siliceous lapilli tuff with pink, hematitic stringers throughout. This unit may be carbonate-rich locally. Seems to grade into a distinctive tuff.								
	158	This lapilli tuff occurs at 138-165' in SG 81-2.								
158		Very fine grained yellow grey pyritic tuff, bedding present but is not distinct until about 175', where the tuff is thin-bedded to laminated. Disseminated and lensy pyrite conspicuous to about 195'. From 158-172', 3-5% disseminated pyrite. Same unit occurs	3124	160.2	165.2	5.0	33	217		
	200	at 75-138' in SG 81-2.								
200		From 200 - light green thin bedded-laminated tuff, siliceous-sericitic layers alternate with chloritic ones. Siliceous section 239.5-242.5 contains conspic-	3125	240.3	242.7	2.4	16	111		
		uous chalcopyrite. Matches rock in SG 81-1 between	3126	316.3	321.5	5.2	118	230		
		154-355 (check?) Chalcopyrite beds and stringers from	3127	325.8	327.7	1.9				
		326-333', 1 band 1" wide, also, disseminations, blebs	3304							
	338	and fine stringers.	3128	327.7	332.7	5.0	256	0980	02270	0 4

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI	DEPTH	DIP	AZI

HOLE NO. SG 81-3

LOGGED BY

CORE SIZE

SECTION 114 E

LEVEL

CORE FOOTAGE from	to	DESCRIPTION	Sample No.	from	to	Length	Cu ppm	Zn ppm	Ag ppb	Au ppb
338		More massive grey tuff, lapilli-tuff with indistinct bedding and patchy siliceous nature, as towards bottom of other 2 (previous) holes. Local well-bedded horizons throughout. After 575' massive lapilli-tuff (good FwBx). Local blebs and stringers of chalcopyrite, perhaps some honey sphalerite in one 0.5' section (to be assayed)	3305	332.7	337.0	4.3				
			3129	387.0	390.5	3.5	410	191		
			3130	408.4	410.1	1.7	810	520		
	575		3131	524.3	526.2	1.9	8700	1370	1800	47
575		Log incomplete: essentially the same as SG 81-2 637-847.5". Richmond	3132	534.9	535.6	0.7	3100	1760	6030	74
			3133	539.8	540.7	0.9	400	1380	4930	2
end of hole										

PROPERTY Sedgett Sturgeon Lake CLAIM

LATITUDE 20 + 50N STARTED Feb 21, 1981

DEPARTURE 116 + 00E FINISHED Feb 24,1981

ELEVATION TOTAL LENGTH 556

DEPTH	DIP	AZI	DEPTH	DIP	AZI
collar	66	180	556	46	
100	58				
177	54				
357	48				
457	43				

HOLE NO. SG 81-4

LOGGED BY D. Hunter

CORE SIZE BQ

SECTION 116E

LEVEL

CORE FOOTAGE from	to	DESCRIPTION	Sample No.	from	to	Length	Cu ppm	Zn ppm	Ag ppb	Au ppb
0	72	Casing in overburden								
72	94	Massive, green very well foliated lapilli-tuff as in the top of SG 81-1 (?) Foliation ∢ c.a. about 45°.								
94	300	Dark grey-green and grey massive lapilli-tuff. Hints of bedding and/or breccia-size fragments at 145-159'. Felsite dike at 110-122'. Some narrow (2-4") quartz carbonate-tourmaline veins.								
300	446	Fine-grained sericitic tuffwith hematitic bands and stringers to 333. From 333 the tuff is green-grey and thinly bedded to laminated, with the bedding largely disrupted (contorted and chopped up). At about 375', some thicker beds of green and grey tuff appear, bedding not as well defined as 333-375'. Well-bedded light grey siliceous tuff appears at about 430'. Mafic dyke at 435-445'								
446	517	Conspicuous chalcopyrite appears at 496'. Very fine grained thin-bedded to laminated siliceous tuff as in mineralized zone in SG 81-2 and SG 81-3. Chalcopyrite as blebs, stringers, and in bands.								
517	556	Massive grey tuff and lapilli-tuff with hints of bedding locally. Siliceous with local disseminated pyrite and chalcopyrite.								
End of hole										

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE 18 + 50N STARTED Feb 23, 1981

DEPARTURE 118 + 00E FINISHED Feb 27, 1981

ELEVATION TOTAL LENGTH 857

DEPTH	DIP	AZI.
collar	65	180
49	63.5	
217	53	
307	47	
400	39	

DEPTH	DIP	AZI.
497	31	
607	31	
707	29	
807	31	

D.D.Co.

HOLE NO. SG-81-5

LOGGED BY D. Hunter to 2 D. Richmond 21

CORE SIZE BQ

SECTION 118E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
0	39	Casing to bedrock				
39	169	Massive, green-grey and green tuff and lapilli-tuff with only a hint of bedding. Locally, "heavy" disseminated pyrite in chloritic tuff from 140-198 in up to 3' bands (assayed) Foliation ∢ c.a. about 45°, not pronounced; bad ground; chopped up and oxidized 67-71', 100-106', 146-154'.				
169	214	At 169' a very fine-grained light-grey to cream coloured tuff with disseminated pyrite and thin bands of pyrite appears. This tuff resembles rock in other holes, particularly SG 81 2 (79-138') and SG 81 3 (158-175') Assays over 5'. Foliation 40° to c.a. at 172' and 62° (wavy) at 213'				
214	340	Well-bedded, well-foliated tuff and lapilli-tuff, occasional massive bands, highly chloritic over most of the section. 220-235' approximately is a fairly constent lapilli tuff unit. From 287-237 rock consists of wispy grey fragments in a green matrix. Fragments could be lapilli or disrupted beds, probably the latter. Beds are often highly contorted. Pink hematite staining in bands and patches distinguishes the above interval. Some bleaching about a section of ground core at 312 indicates a groundwater channel. Little core lost. A few stringers of pyrite in section Foliation: 58° at 255', 55° at 322', 60° at 336'.				
340	353	Indistinctly bedded to massive tuff, quite chloritic. some lapilli. A gradational change from above. Foliation about 60° to c.a.				

IOPERTY Seagull Sturgeon Lake CLAIM _____

ATITUDE _____ STARTED _____

EPARTURE _____ FINISHED _____

.EVATION _____ TOTAL LENGTH _____

PAGE 2 - 2

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co. _____

HOLE NO. SG 81-5

LOGGED BY _____

CORE SIZE _____

SECTION 118 E

LEVEL _____

RE FOOTAGE FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
353	356.5	Pink felsic dike cut by some quartz veins, sharp upper contact at 50° to c.a., crosscuts bedding at 10-20°. Chilled contact? Bottom somewhat disrupted, perhaps 40° to c.a. Foliation is 62° at 354.				
356.5	732	Grey massive tuff to lapilli-tuff, some sections vaguely bedded. Some short, distinctly banded sections may be tuff or intermediate porphyry dikes. Most of the interval is grey siliceous fragmental rock, with fragments varying from vague to distinct. Some fine-grained massive bands be intermediate tuff or intrusions. Lower contact of this unit is fairly distinct. Foliation: 63° at 384', 61° at 462', 80° at 510', 80° at 600', 70° at 729'. A few blebs and disseminated grains of sulfides. Patches of carbonate alteration throughout.				
732	745	Green chloritic fine-grained banded tuff. Moderate pyrite>chalcopyrite disseminated along foliation. Foliation about 45° to c.a.				
745	857	Massive grey fragmental as 356.5-732'. Contacts of sulfide band are highly contorted. Band of massive sphalerite>chalcopyrite at 750.4-751.4, carbonate alteration if anything more intense in f.w. to sulfide zone. Doug Hunter notes: "up to 25% t. yellow "buff" coloured carbonate, check chemistry (L.O.I.-fe_2O_3)"				
end of hole						

PERTY Seagull Sturgeon Lake CLAIM

ITUDE 20 + 50 N STARTED Feb 26/81

PARTURE 118 + 00E FINISHED Mar 3/81

EVATION TOTAL LENGTH 1127

DEPTH	DIP	AZI.
collar	65°	180
100	58	
200	54	
300	52	
400	49	

DEPTH	DIP	AZI.
501'	47°	
600'	49°	
Bearing		180°

D.D.Co.

HOLE NO. SG 81-6

LOGGED BY G. Richmond

CORE SIZE BQ

SECTION 118E

LEVEL

E FOOTAGE OM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
0	66.0	Casing in overburden				
.0	132	Grey to greenish grey bedded tuff to lapilli tuff. Some met. qz-carb veins. Quartz-tourmaline-carbonate veins more common near bottom of interval. Minor dissem. & stringer pyrite. Some fe-carb alteration. Blocky core. Foliation @ about 40° - 35°.				
2	152	Grey to purplish grey lapilli tuff, some more massive. Lapilli usually very distinct. Appears to be more siliceous, also considerable sericite and possibly chloritoid. Some conformable bands of fine grained semi-massive pyrite, also high dissem. pyrite. Assays. Blocky core, often vuggy & broken. Foliation 40° - 45°.				
2	169	Massive green tuff to lapilli tuff, altered and vuggy in spots. May include some intermediate intrusive. Minor dissem. pyrite. Foliation about 45°.				
9	202	Grey to buff fine grained siliceous tuff, bedding fairly distinct Includes some fine lapilli tuff. Numerous narrow stringers of pyrite along foliation. Foliation 40°.				
2	291	Greenish grey lapilli tuff. Some fairly large fragments, but most < 1 cm. Well foliated. A few specks of dissem. pyrite, trace chalcopyrite. Foliation 45°.				
1	320	Fine grained siliceous massive tuff and lapilli tuff. Some wispy bands and patches of fine grained pyrite. Assays. Foliation about 45°.				
0	399	Greenish grey to green massive tuff to fine lapilli tuff. Some sections fairly distinctly bedded. A number of metamorphic quartz & quartz - carb. veins, some are vuggy. A little ground core. Last 2½ feet altered. Minor dissem. pyrite. foliation 45° - 50°.				

PERTY Seagull Sturgeon Lake CLAIM

TUDE 20 + 50 N STARTED

RTURE 118 + 00E FINISHED

ATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-6

LOGGED BY

CORE SIZE BQ

SECTION 118E

LEVEL

FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
9 410.5	Fine grained pink felsic intrusive - "aplite". Includes 2' of altered tuff? 405 - 407. Chilled contacts and baking? of wall rock. Some pyrite on fracture surface. Foliation about 60° - 65°				
0.5 460	Dark green to pale green massive to lapilli. Strongly bleached and pinkened from 450 - 454. May be aplite dike but texture looks like tuff. Abundant patches and bands of fine grained pyrite ± chalcopyrite & sphalerite from 446.5 - 450. Assay. Foliation about 65°.				
0 542	Grey fragmental white to buff large lapilli in grey to greenish grey matrix. Appears quite siliceous. Some bands of fine grained tuff in sections. Looks like ore hosting? Horizon from other holes. Trace fine grained dissem. pyrite in massive bands (to 542). Foliation 60° - 65°.				
	- as above -				
2 710	Grey fragmental, prominent white lapilli 563 -567, elsewhere varies from bedded to massive; some narrow green fine grained bands may be int. dikes of fine grained tuff. gradational change 570 - 603 scattered stringers of chalcopyrite & 1" band of granular pyrite @ 582. Foliation 65° - 70°.				
0 850	Massive grey tuff - lapilli and/or bedding indistinct and rarely seen. Otherwise quite similar to unit above. Scattered wispy patched of dissem. pyrite. Very sparse overall. Foliation from 75° - 90° usually 80°.				
0 1023	Grey fragmental? to massive grey tuff becoming more chloritic toward bottom of section. Some fine grained tuff layers and some zones of distinct lapilli. No great change from previous section As above. Foliation 70° - 80°.				
23 1127	as above foliation 80° - 85°				

PERTY Seagull Sturgeon Lake CLAIM

ITUDE 22 + 50N STARTED Feb 27/81

ARTURE 128 + 00E FINISHED Mar 9/81

VATION TOTAL LENGTH 1467

DEPTH	DIP	AZI.
collar	65°	180°
97	59°	
197	59°	
297	58°	
397	53°	
497	48°	
607	46°	
D.D.Co.		

DEPTH	DIP	AZI.
707	45°	
807	43°	
907	41°	
1007	37°	
1107	35°	
1207	34°	
1307	31°	
1400	29°	

HOLE NO. SG 81-7

LOGGED BY G. Richmond

CORE SIZE BQ

SECTION 128E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
0	57	Casing				
57	132	Coarse lapilli tuff. Large white lapilli in a dark green chloritic matrix. Very distinctive. Minor pyrite association with quartz veins. Foliation 35° - 45°.				
		— gradational contact —				
32	240	Fine lapilli tuff. As above but lapilli smaller. Some appears bedded. Lapilli more wispy and indistinct than in above section. Minor pyrite with quartz veins. Dissem pyrite & magnetite? in bleached zone about 0.4 @ 142. Some dissem chalcopyrite @ 225-230. Assay. Foliation 35° - 45°. Foliation about 45° @ 240.				
40	306	Lapilli tuff to wispy chloritic fragmental. No sharp division from previous section. Few fine grained bands; virtually all is distinctly fragmental. Possible f.w. lapilli tuff. Indistinct bedding. Few quartz veins of any size. Trace dissem. chalcopyrite 270 - 275. Foliation about 45°.				
06	360	Wispy tuff - fine grained bedded tuff, bedding quite distinct in places. Some vaguely fragmental bands, some just massive. becoming less chloritic and more heterogeneous upper contact marked by sudden absence of distinct lapilli. A number of quartz veins some contorted little or no sulfides visible. Foliation 50° - 50°.				
60	476	"Grey fragmental"? More siliceous than above unit, with wispy chloritic and rarely distinct fragments. Some quartz veins minor dissem. pyrite. Assay. Foliation about 50°.				
76	535	Heterogeneous fragments and bedded units. varies from pale to grey to dark green. Some well developed beddings. Some bands of pyrite. Assay. Foliation about 60°.				

PERTY Seagull Sturgeon Lake CLAIM

ITUDE 22 + 50N STARTED

ARTURE 128 + 00E FINISHED

VATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-7

LOGGED BY

CORE SIZE BQ

SECTION 128E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH
535	600	Fine grained siliceous tuff, weakly to distinctly bedded. Contacts with underlying and overlying units are gradational & arbitrarily set. Bands and patches of wispy fine grained pyrite, and traces of chalcopyrite. Bedding & foliation about 60° to c.a. no contorted bedding noticeable.	X			
600	650	Massive grey tuff. Bedding rarely seen, and no lapilli evident. Fairly siliceous. Trace dissem. pyrite. Foliation weak.				
650	690	Grey lapilli tuff - tuff breccia. Cream fragments in a grey matrix, some fragments fairly large. Fragments often distinct. Moderately siliceous, more than unit above. A few wispy bands of pyrite. Foliation about 70°.				
		- fairly abrupt contact -	X			
690	743	Graphitic banded tuff? Fine grained siliceous tuff with contorted dark bands, presumably graphite, that give it a marble-like appearance in places. Some sections highly siliceous. Distinctly bedded in places. A laminated section 738 - 743, contains mod. finely laminated pyrite. Bedding minutely contorted. Foliation about 60°.				
locky round and rilled - ver core bout 697-	707					
743	807	Grey lapilli tuff. Moderately siliceous. Possibly graphitic. Lapilli vague to distinct, some contorted bedding at about 20° Minor stringer chalcopyrite from about 760 - 770. Bedding about 20°? Foliation 60° - 70°.				
807	960	Massive tuff with occasional fine grained bedded layers. No distinct lapilli. Somewhat more chloritic. Lower contact not defined as yet. Minor stringer and dissem. pyrite stringer chalcopyrite dissem 927 - 936 & 947 - 957. Assays. Foliation @ about 70° to core axis.				
ound & illed over re 879 -	887					
705-707						

PERTY Seagull Sturgeon Lake CLAIM

ITUDE 22 + 50N STARTED

ARTURE 118 + 00E FINISHED

VATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 87-7

LOGGED BY

CORE SIZE BQ

SECTION 128E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
60	1197	Massive grey tuff to lapilli tuff. Lapilli not abundant above 960 - vary from scarce to common and distinct between 960 and 1110 - otherwise this unit is similar to the one above. Fairly chloritic. A few small quartz veins; moderate carbonate alteration? A bit less chloritic below 1152, patchy carbonate alteration, not obvious - should be relogged after core oxidises. Some narrow stringers of chalcopyrite ± qz. 1135 - 1150. one 7' Assay - low angle to core axis. Foliation average about 75°.				
		- rather indistinct (gradational?) contact -				
97	1255	Indistinctly bedded to delicately laminated tuff ± sediments, moderately to highly chloritic. Includes some fine grained massive bands that may be flows or dikes (intermediate) some well-displayed contorted bedding. Some fairly narrow lapilli bands, and some quartz veins. 0.6 pink aplite dike at 1244.5. Some blebs and dissem. pyrite. Foliation about 75°				
55	1466	Chloritic massive tuff to lapilli tuff, bedding rarely discernable. Mostly lapilli tuff towards bottom of section. Some small stringers of chalcopyrite starting at about 1235 some lapilli contain pyrite. Foliation 75° - 80°.				
	END					

PERTY Seagull Sturgeon Lake CLAIM

ITUDE 22 + 50 N STARTED Mar 4/81

ARTURE 116 + 00E FINISHED Mar 12/81

VATION TOTAL LENGTH 1107

DEPTH	DIP	AZI.
collar	65	180
100	58	
200	57	
300	49	
400	49	
500	49	
600	43	

D.D.Co.

DEPTH	DIP	AZI.
700	40	
800	39	
900	37	
1000	35	
1100	33	

HOLE NO. SG 81-8

LOGGED BY G. Richmond

CORE SIZE BQ

SECTION 116E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH
0	115	Casing in lake & overburden				
5	155	Intermediate tuff & lapilli tuff, blackish lapilli conspicuous in some sections Top 25' weathered. Some possible int. flows. Trace dissem. pyrite. Foliation about 60°.				
5	225	Intermediate massive tuff, mod chloritic, some fine textured lapilli tuff, Some contorted quartz carbonate veins. Some blebs of chalcopyrite in quartz veins. Foliation about 65°.				
5	247	Hetergeneous zone - chloritic to siliceous? massive tuff, and lahar-like breccia, some minor lapilli bands, and some contorted and cutoff quartz veins. Hematite staining. Minor dissem. pyrite. Foliation about 60°.				
7	330	Intermediate massive to lapilli tuff, generally lapilli tuff predominates. Lapilli generally rhyolitic vary from distinct to quite wispy. 0.2' qz-pyrite-TØ-carbonate vein @ 312. Foliation about 50° - 60°.				
0	343	Finely laminated to thin bedded tuff and/or sediments, often contorted bedding. Several qz-carb. - tø veins, contacts not distinct. Some blebs of pyrite in qz veins. Foliation 45° - 50°.				
3	360	Light grey siliceous tuff, indistinctly bedded. A few qz-carb-tø veins. Trace of dissem. pyrite along foliation. Foliation about 45°.				
0	437	Massive grey fragmental, some lapilli tuff. Several QZ-carb-tø veins. Weakly to mod. foliated. Trace pyrite, very sparse. Foliation 70° - 90°.				

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE 22 + 50N STARTED

DEPARTURE 116 + 00E FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-8

LOGGED BY

CORE SIZE BQ

SECTION 116E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
37	575	Siliceous, sericitic sometimes moderately chloritic, bedded tuff - lapilli tuff. Lapilli tuff more as a chloritic break in an otherwise siliceous sequence. (Lapilli most common from 545 - 560) Fine stringers and wispy lenses of pyrite along foliation. One short zone about 2' with some chalcopyrite. Assay. Foliation about 60°.				
5	612	Siliceous and sericitic; + hematite stained massive tuff and bedded tuff. A few lapilli and breccia bands, gradational contacts in and out. Fine stingers and wispy lenses of pyrite along foliation. Foliation about 70°.				
2	665	Grey tuff varies from cream to grey mottled (obscure lapilli?) to distinctly bedded. Lower part of unit speckled with little wisps of chlorite that are probably tiny lapilli. As above, but somewhat less pyrite. Foliation mod. 70° - 75°.				
5	750	Heterogeneous grey fragmental. Varies from distinctly bedded to fairly distinct lapilli. Mostly siliceous, but some chloritic beds, especially where chalcopyrite is more abundant. Stringers of chalcopyrite and pyrite. fairly low grade overall but assayed from 675 to 735 - 60'. Foliation typically about 70°. cut a 1' qz-carb-tø zone @ 685.				
0 ound & illed over re	850 775-778	Grey fragmental commences to be more chloritic. Grey fragmental varies from fine grained massive tuff to indistinctly bedded (foliated?) fine grained tuff to lapilli tuff. Lapilli tuff predominates in section. Some sections chloritic overall. Sparse and rare stringers of pyrite and chalcopyrite. Foliation about 70°.				
0	1107	Grey fragmental is more siliceous varies from massive, featureless overall to bedded tuff and lapilli tuff from 920 - 933. Rock is qn				

ERTY Seagull Sturgeon Lake CLAIM

'UDE STARTED

RTURE FINISHED

ATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. BG81-8

LOGGED BY

CORE SIZE

SECTION

LEVEL

FOOTAGE TO	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH
	the whole fine textured, although much is indistinctly mottled-lapilli texture. Carbonate and chloritoid in lower part of section from 1025 - 1032 a very chloriti- band with significant chalcopyrite from 1029 - 1032 Patches & stringers of chalcopyrite 1029 - 1032 Assay. Foliation 80° - 90°.				

PERTY Seagull Sturgeon Lake CLAIM

ITUDE 6 + 00S STARTED Mar. 11 /81

ARTURE 4 + 00E FINISHED Mar. 18/81

VATION TOTAL LENGTH 827

DEPTH	DIP	AZI.
collar	65°	180
107	61	
200	55	
300	53	
407	51	

D.D.Co.

DEPTH	DIP	AZI.
497	50	
707	37	
807	35	

HOLE NO. SG 81-9

LOGGED BY G. Richmond

CORE SIZE BQ

SECTION 4E

LEVEL

E FOOTAGE FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
0	100	Casing in lake and overburden				
00	120	Grey massive tuff, moderate chloritic, a few quartz carbonate veins. A number of stringers and blebs of pyrite. Foliation about 45° A c.a.				
20 170	177	Intermediate to acid bedded tuff, some lapilli bands; most of section highly sericitic - blocky core. A number of stringers and blebs of pyrite - quite high overall. Foliation at 45° - 50°.				
77 177	195	Intermediate lapilli tuff, lapilli small & white in a chloritic matrix. Trace dissem. pyrite. FOliation continues about 50°.				
95 195	276	Siliceous? and sericitic bedded tuff, grading downwards into lapilli tuff. Light to med. grey in color, some qz-carbonate veins. Foliation pretty consistent at 45°. High dissem. and stringer pyrite up to 10%? Trace chalcopyrite as isolated blebs, and fine grained sphalerite? in pyrite bands (may be magnetite?) Matrix of lapilli tuff quite chloritic from 266 - 276		217	221	4.0
76 276	299	Siliceous? and sericitic banded tuff to massive tuff. Some stringers and large blebs of pyrite. Foliation very strong at about 60° Trace chalcopyrite 294-297 brecciated by qz-TØ veins.				
99 299	315	Andesitic flow of fine grained uniform tuff, chloritic matrix with white speckles contacts fairly sharp. Foliation weaker about 70° - 80°.				
15 315	341	Grey massive tuff to bedded tuff. Quite sericitic in places. Some fine lapilli bands. Blocky core: foliation strong at about 60° to c.a.				
		gradual contact.				

PERTY Seagull Sturgeon Lake CLAIM

ITUDE 6 + 00S STARTED

ARTURE 4 + 00 FINISHED

VATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-9

LOGGED BY G. Richmond

CORE SIZE BQ

SECTION

LEVEL

FOOTAGE FM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
1	362	Chloritic lapilli tuff, lapilli to 2-3 cm. Some lapilli highly pyritized. Foliation at 60° to c.a. Foliation varies from 45° - 60°.				
2	444	Siliceous and strongly sericitic bedded tuff, a few small pale lapilli and some bands of chlorite. Possibly traces of graphite A few stringers, disseminated grains, and wispy patches of pyrite but fairly sparse overall. Foliation quite strong at about 50°.				
		dist contact				
4	495	Chloritic lapilli tuff, quite uniform, mean lapilli size about 1 cm. Broken by a few later qz veins. Foliation quite strong about 60°. Blocky core 485-495. A number of bands of fine grained pyrite 472 - 486, elsewhere a few dissem grains.				
5	535	Lapilli tuff, matrix less chloritic and lapilli much larger and more varied in size. Quite sericitic in places. Lapilli up to 2" or more (tuff brxx) Only traces of pyrite. Foliation quite strong at 60° - 70° to c.a.				
5	565	Bedded sericitic tuff, some hematite staining, a few small lapilli. Section heterogeneous - varies from finely bedded to lapilli tuff to tuff breccia rather erratically. Perhaps at transition zone between units above and below. Strong foliation @ 70°. Sulfides very sparse.				
5	587	Siliceous and sericitic fine bedded tuff. Some wisps of chlorite and a few small indistinct lapilli. Core undersize from 567-577- burnt bit? Rather indistinct contacts of an interfingering nature? Core blocky - Foliation strong @ about 70°.				
7		Quartz crystal rich lapilli tuff - quartz eye fragmental. Some sections of sil-sericitic bedded tuff as well, but lapilli tuff predominates More distinctly rhyolite. Foliation still About 70°				

PERTY Seagull Sturgeon Lake CLAIM

ITUDE 6 + 00S STARTED

ARTURE 4 + 00 FINISHED

VATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-9

LOGGED BY

CORE SIZE

SECTION

LEVEL

E FOOTAGE M	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
		but weaker, except in sericitic bands. Some bands and dissem. pyrite also a few grains chalcopyrite. Int. sills? 644.5-645.7 and 647.8-651.2 (approx. footages) - May be near a lower contact as qz-sericite tuff, increasing again.				
37	827 END	Above description amended: sequence is intercalated qz-sericite bedded tuff, and lapilli tuffs often with (mud chips) and quartz -crystal rich fragmentals: Some quartz crystals are blue quartz "eyes". Ratio of bedded tuffs to fragmentals tends to increase with depth. A few later quartz veins; one at 685 contains a bleb of chalcopyrite. Otherwise little visible sulfides except the occasional stringer and minor dissem. pyrite. Foliation quite strong, from 70° - 80° c.a.				
		ground & drilled over core 666 - 670 extremely blocky 770-778				

)PERTY Seagull Sturgeon Lake CLAIM

TITUDE 37 + 00N STARTED March 13/81

PARTURE 120 + 60E FINISHED March 16/81

VATION TOTAL LENGTH 297

DEPTH	DIP	AZI.
collar	65°	
100	65°	
200	62°	
297	59°	

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-10

LOGGED BY G. Richmond

CORE SIZE BQ

SECTION 120E

LEVEL

F FOOTAGE OM	TO	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH
0	110	casing in lake overburden				
10	195	Intermediate massive to lapilli tuff, First two boxes quite weathered and hematite stained. Ground core 123 - 124, 110 - 123 very blocky, some ground. Blocky core 137 - 139, 142 - 144. Lower contact of unit is gradual. Strong foliation @ 40° to c.a. Strong hematite stain 189 - 195.				
95	212	Similar to above but fairly well-bedded. Foliation strong at about 40°. Traces only of pyrite.				
12	297	Highly chloritic andesite? Flows, in places amygdaloidal. May be a few tuff bands. Textures not well preserved. Heavily dotted with minute white specks of clay minerals, and specks of dissem. pyrite near bottom. Met. qz-carb veins common.				
		LOST HOLE				

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE 7 + 00S STARTED Mar 18, 1981

DEPARTURE 40 + 00E FINISHED Mar 25, 1981

ELEVATION TOTAL LENGTH 835

DEPTH	DIP	AZI.
collar	65	180
200	70	
300	67	
400	62	
500	58	

DEPTH	DIP	AZI.
600	53	
700	59	
800	50	

D.D.Co.

HOLE NO. SG 81-11

LOGGED BY G. Richmond

CORE SIZE BQ

SECTION 40E

LEVEL

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
0	159	casing in lake; overburden. Lake = 63' along casing				
159	172	Mafic fragmental volcanic, blocky core. Essentially nil sulfides.				
172	212	Weakly to moderately foliated feldspar porphyritic monzonite? Feldspars slightly saussuritized? Matrix strongly chloritized little or no quartz. Some sections fine grained massive (matrix).				
212	264	Essentially same rock as above, but more or less pinkened, probably by hematite. 216-220 appears same composition, but fine grained and highly foliated. Maybe a dike.				
264	330	Feldspar porphyritic monzonite; phenocrysts up to 1cm, but most about 0.25cm. Not notably pinkened. Feldspar alteration varies from weak to moderate. Section fairly uniform, but scarce grains of disseminated pyrite, often on fracture surfaces. Minor qz. veining. Andesite dikes: 269.6-271.0 (WR) 272.0-272.2, 273.0-273.2, 328.8-329.0, 329.5-329.7				
330	367	Transitional to rhyolite? qz eyes becoming much more numerous, last box of lot probably same unit as above but more intensely foliated. A few large qz. eyes. Traces of pyrite, some bleaching and pinkening. Feldspars more altered and flattened, resembles fine lapilli tuff, but too uniform? Andesite dike 347.5-399				

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.

D.D.Co.

DEPTH	DIP	AZI.

HOLE NO. SG 81-11

LOGGED BY

CORE SIZE

SECTION 40E

LEVEL

CORE FOOTAGE FROM	CORE FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
367	406	Feldspar porphyritic monzonite. Phenocrysts somewhat saussuritized, variably corroded. A few qz eyes < 1%. Chloritic matrix. Moderately foliated @ about 45° to c.a. Trace only of pyrite				
406	420	Contact zone of intrusion? Becoming bleached and pinkened, and more highly altered. Contact with lower unit indistinct. Becoming more blocky, foliation at 50° - 60° to c.a. strong fracture (minor fault?) at about 5° to c.a. has broken up core badly. 0.5cm qz. vein @ 415 with blebs of pyrite, trace chalcopyrite.				
420	469	Siliceous bedded tuff and lapilli tuff, some sericite. Strongly foliated at 45°-50° to c.a. Cream to pale pink in colour, small white lapilli. Minor disseminated pyrite, and a few small quartz eyes. Grades? Into unit below, poor contact.				
469	479	Amygdaloidal and massive intermediate to acid flows. Amygdaloidal 469-474 and 477-479. Tuff band 476.7-477.0 Amygdales white carbonate; samples 471, 476 (specimen) Foliation continues strong at about 50°, Only traces of pyrite.				
479	493	Siliceous tuff, possibly some ryholite flows? Fine grained, sericitic, some flattened white lapilli and a few wisps of chlorite. Trace disseminated pyrite. Foliation strong at 50°-60° to c.a. Similar to unit logged as 'speckled tuff' in holes on shore.				
493	507	Qz-eye siliceous tuff. Colour cream to grey to pinkish. Abundant quartz eyes up to 5mm. - eyes slightly squarish (β qz) somewhat larger chlorite wisps as well. Trace only of disseminated pyrite. Foliation about 60° to c.a.				

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-11

LOGGED BY

CORE SIZE

SECTION 40E

LEVEL

FROM	TO	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH
507	550	Heterogeneous tuff zone. Varies from massive siliceous tuff to qz eye tuff to chloritic tuff. Some sections strongly pinkened. Poker chip core. 515-517, ground about 1½' near 517. Foliation very strong, closer to 70° lower contact rather arbitrary.				
550	585	Well bedded grey siliceous tuff. A few quartz eyes and indistinct lapilli in places. At 565 a 1-2' band, quite light in colour, with quartz-rimmed carbonate and pyrite grains. Moderate sericite in section, however at about 584 there is a quartz carbonate vein with massive sericite in selvage. Trace disseminated pyrite. Foliation moderate-strong at 65° - 70°, gradational contact.				
585	630	Chloritic and sericitic tuff. Still moderately siliceous. Minor qz-carbonate veining. Similar to "wispy chlorite fragmental". A few blebs and lenses of fine grained pyrite. Foliation continues moderate to strong at 65° - 70°. Lower contact fairly sharp-sudden absence of chlorite.				
630	660	Vaguely bedded to massive qz-sericite tuff. A few indistinct lapilli. A few qz. and tourmaline veins, notably at 646 and 652 the latter contains a few grains of chalcopyrite & bornite. Section as a whole is very uniform, with a sort of waxy yellowish-grey colour.				
660	686	Grey fragmental? Vague to distinct lapilli tuff. With siliceous sericitic matrix, with both siliceous and chloritic fragments, the latter by far most abundant. Moderate foliation about 70° to core axis.				

PROPERTY Seagull Sturgeon Lake CLAIM _____

LATITUDE _____ STARTED _____

DEPARTURE _____ FINISHED _____

ELEVATION _____ TOTAL LENGTH _____

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co. _____

HOLE NO. SG 81-11

LOGGED BY _____

CORE SIZE _____

SECTION 40E

LEVEL _____

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
686	717	Bedded to massive siliceous and sericite tuff, a few quartz eyes and indistinct lapilli 707 - 712 slightly pinkened. Foliation strong at about 70°. Some kinking at 708				
717	835	Vaguely bedded to indistinct lapilli tuff, grey green in colour moderate siliceous 750-757 has a few stringers and lenses of pyrite, little elsewhere. Character of rock becomes bedded towards 815'. Foliation strong to intense -varies from 60°-70°- lower contact arbitrary.				
815	835	Very blocky: light to moderate grey massive to bedded quartz eye siliceous tuff. Foliation intense at 70°-80°. Traces of disseminated pyrite. Poker chip core, about 1' ground.				
End of hole						

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE 37 + 62N STARTED Mar 20, 1981

DEPARTURE 120 + 00E FINISHED Mar 25, 1981

ELEVATION TOTAL LENGTH 637

DEPTH	DIP	AZI.
collar	65	
127	63	
217	56	
307	54	
407	49	

DEPTH	DIP	AZI.
500	47	

D.D.Co.

HOLE NO. SG 81-12

LOGGED BY G. Richmond

CORE SIZE BQ

SECTION 120E

LEVEL

CORE FOOTAGE FROM	CORE FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
0	121	Casing in Sturgeon Lake & overburden				
121	147	Poker chip quartz eyes siliceous tuff. Very delicately banded in colours of hem. pink, green & white foliation intense at 45° to core axis. Strong kink banding in places in a plane parallel to the long axis of the intersection ellipse and varying from 0-15°? to core axis. 2 uncut core specimens 142 & 143.5 very blocky ground between 135 & 140? little or no sulfides.				
147	164	Rather indistinct contact, becomes gradually more massive and chloritic. 147-157 appears rather bleached. Amygdaloidal 149-152 and 157-158 - probably a section of basaltic or andesite flows, highly sheared and altered. Foliation continues very strong at 45° to c.a. and kink banding continues, through less distinct (due to more massive character of rock?) also higher angle to c.a. & ellipse of intersection.				
164	195	Amygdaloidal to massive flows (andesitic or more mafic) may include fine grained bedded tuffs. Carbonate veining moderate to intense along foliation. No great break from unit above. Rock is so intensely sheared and chloritized that exact I.D. is very nearly impossible. Kink banding seen at diverse angles - 90° to c.a. and a very low angle. Conjugate kinking? Long specimen 190.0 about 192.0 - not cut.				

:OPERTY Seagull Sturgeon Lake CLAIM _____

.TITUDE _____ STARTED _____

:PARTURE _____ FINISHED _____

.EVATION _____ TOTAL LENGTH _____

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co. _____

HOLE NO. SG 81-11

LOGGED BY _____

CORE SIZE _____

SECTION 120E

LEVEL _____

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
-195	210	Bedded tuff? varies from obviously chloritic to possibly moderately siliceous. Most of this unit is very fine grained, and hematite stained. Veinlets and lenses of magnetite along foliation - some ptygmatically folded magnetite stringers. Upper contact of zone denoted by first magnetite stringer, lower by sharp colour change. 1 section to be done for W.R.				
210	229	Bedded intermediate tuff, possibly some thin flows. Some bands hematite stained around 217 & 231. Foliation quite strong at about 45°. A few small quartz eyes and the usual foliation veining. Ptygmatic quartz stringer about 218'. Very sparse disseminated pyrite.				
229	286	Amygdaloidal to massive andesite flows, (doubtful dike?) Quite a bright green colour, due no doubt to chlorite. A number of patches and veins of quartz or carbonate. Epidote in a fracture zone at 280, elsewhere as a few disseminated grains. Sparse to moderate disseminated pyrite and magnetite COLOUR BREAK Foliation weak to moderate at 45°.				
286	307	Massive dark green andesite, possibly andesitic tuff, contains fine grains of a buff coloured mineral that may be carbonate or possibly leucoxene. Foliation weak to moderate at 45° - Traces of disseminated pyrite & magnetite.				
307	320	Bedded intermediate tuff, possibly thin flows. Highly chloritic, considerable pinkish carbonate in lower 4'. Qz-TØ vein at 309 along foliation; moderate to strong @ 45°.				

IOPERTY Seagull Sturgeon Lake CLAIM

ATITUDE STARTED

PARTURE FINISHED

EVATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-11

LOGGED BY

CORE SIZE

SECTION 120E

LEVEL

RE FOOTAGE FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
320	328	Andesite flow? Dark green highly chloritic, many irregular wisps of carbonate that may be deformed amygdales. Foliation moderate about 50°-60°. Very minor disseminated pyrite & magnetite.				
328	355	Gabbro sill or massive andesite flow. Weakly foliated, more equigranular texture with grain size about 0.5mm. Little or no noticeable structure. A few carbonate and quartz carbonate veins, at odd angles to core axis, but general sub-parallel to foliation. At 337 a patch of fine grained epidote containing chloritized crystals of amphibole? Rock contains little magnetite or pyrite.				
355	360	Andesite flow? - same as 320-328 - both these units may be sheared contacts of gabbro sill.				
360	445	Intermediate tuffs, possibly some small flows. Generally distinctly bedded, may be some argillic sediments and greywacke. Probably all of volcanic origin. Interfingers to some extent with lower unit. Foliation quite strong at 45° to c.a., with locally some jointing at about 50° to core axis, facing the other way (i.e. rotated about core axis about 140°). Some hematite staining.				
445	500	"Poker chip" siliceous and sericitic to moderately chloritic quartz-eye bedded tuff. Chloritic sections a little more competent, all intensely foliated, with kink banding common, hematite stain common throughout sub-paralle to core axis. Traces of fine grained disseminated pyrite, quartz eyes small and scarce in chloritic zones, larger and abundant in sil-sericitic. Foliation intense at about 50° - lower contact arbitrary				

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-11

LOGGED BY

CORE SIZE

SECTION 120E

LEVEL

CORE FOOTAGE FROM	CORE FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
500	551	Upper contact of this unit is arbitrary, marked by absence of conspicuous quartz eyes - Multicoloured banded tuff. Varies from white to cherty through shades of pink to distinctly green and chloritic. Some very delicate colour banding (=bedding) quartz eyes scarce to absent otherwise vey like above unit. 544-550 has high - moderate disseminated pyrite, Assayed - kink banding not well developed, some shearing in the same direction.				
551	609	Mostly "poker chip" siliceous and sericitic bedded quartz-eye tuff, intensely foliated at about 50° to core axis, very blocky core. Several small amygdaloidal andesite flows? between 551 & 560. Kink banding not well developed, but fracturing and shearing at low angles to core axis can be seen reflecting stresses in the same general direction. Well laced with small quartz eyes little or no sulfides.				
609	637	Rather imperceptible change from unit above. Lapilli just slowly grow more abundant and bedding becomes indistinct. "heteroclastic" lapilli tuff. A variety of white, green and pinkish lapilli in a grey matrix. A variety in size as well as colour. Still slightly siliceous. No noticeable sulfides.				
End of hole						

IOPERTY Seagull Sturgeon Lake CLAIM _____

ITITUDE _____ STARTED _____

EPARTURE _____ FINISHED _____

.EVATION _____ TOTAL LENGTH _____

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co. _____

HOLE NO. SG 81-11

LOGGED BY _____

CORE SIZE _____

SECTION 120E

LEVEL _____

RE FOOTAGE IOM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
500	551	Upper contact of this unit is arbitrary, marked by absence of conspicuous quartz eyes - Multicoloured banded tuff. Varies from white to cherty through shades of pink to distinctly green and chloritic. Some very delicate colour banding (=bedding) quartz eyes scarce to absent otherwise vey like above unit. 544-550 has high - moderate disseminated pyrite, Assayed - kink banding not well developed, some shearing in the same direction.				
51	609	Mostly "poker chip" siliceous and sericitic bedded quartz-eye tuff, intensely foliated at about 50° to core axis, very blocky core. Several small amygdaloidal andesite flows? between 551 & 560. Kink banding not well developed, but fracturing and shearing at low angles to core axis can be seen reflecting stresses in the same general direction. Well laced with small quartz eyes little or no sulfides.				
09	637	Rather imperceptible change from unit above. Lapilli just slowly grow more abundant and bedding becomes indistinct. "heteroclastic" lapilli tuff. A variety of white, green and pinkish lapilli in a grey matrix. A variety in size as well as colour. Still slightly siliceous. No noticeable sulfides.				
nd of hole						

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE 18 + 50N STARTED Mar 26, 1981

DEPARTURE 115 + 00E FINISHED Mar 30, 1981

ELEVATION TOTAL LENGTH 857

DEPTH	DIP	AZI.
collar	80	180
200	73	
300	65	
400	59	
500	52	

DEPTH	DIP	AZI.
600	47	
700	45	
800	43	

D.D.Co.

HOLE NO. SG 81-13

LOGGED BY G. Richmond

CORE SIZE BQ

SECTION 115 East

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
0	50	Casing				
50	102	Moderately chloritic tuff and lapilli tuff. Foliation moderate to strong about 40° to c.a. Quite fractured, blocky core. Vuggy quartz veins, - ground water leaching of pyrite.				
102	153	Grey to greenish grey massive tuff and lapilli tuff, moderately chloritic. Disseminated and stringer pyrite throughout. Foliation weak 35°-40°. A few quartz stringers containing grains of pyrite and rare chalcopyrite. Overall considerable carbonate?				
153	166.7	Grey green cherty tuff with wisps of chlorite abundant along foliation (about 40° to c.a.) Carbonate distinct in places, probably more than meets the eye. Pyrite quite high as stringers and disseminated grains.				
166.7	169.1	Massive moderate to fine grained greenish grey andesite? Possibly a flow, as lower contact appears chilled, and the upper one is not. Grains of disseminated pyrite - most likely a dike.				
169.1	171.3	Grey green cherty tuff as above.				
171.3	175.2	Andesite as abcve, probably a dike or sill.				
175.2	176.1	Grey green cherty tuff as above				
176.1	178.2	Andesite? as above - sill or dike				

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-13

LOGGED BY

CORE SIZE

SECTION 115 E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH
178.2	187	Cherty tuff with wispy chlorite as above, but stained to pink by hematite. Pyrite as stringers, disseminated grains and wispy fine grained patches. Foliation strong at about 40°, blocky in places.				
187	247	Imperceptible change from above unit. Cherty tuff, a bit more chloritic than above and chlorite less wispy -more diffuse. Pyrite continues high as stringers and disseminated grains. Some quartz-carbonate and qz-carb. - TØ veins with a few contained grains of chalcopyrite. Foliation moderate at about 45°.				
247	257	Cherty tuff with high pyrite, not distinctly bedded- generally stained pink with hematite. Foliation moderate at 40°-45° to c.a.				
257	302	Somewhat less siliceous and more chloritic massive tuff and lapilli tuff. Possibly bedded in places, but neither bedding nor lapilli are any place distinct. Presents a generally mottled and marbleized appearance. Probably contains considerable carbonate alt'n. Foliation weak about 50° + ? often breaks across foliation. Minor disseminated pyrite, a few qz-carb veins along foliation, especially in the last 10' or so, which is fractured and blocky with signs of ground water leaching.				
302		Generally confused succession of cherty tuffs as above and intermediate flows or intrusions, probably flows. (or both) Intermediates vary in grain size sometimes show chilled contacts, sometimes not. Some quartz stringers across foliation. Some sections appear to be bedded, and there are numerous pink carbonate bands. Some material appears amygdaloidal. Andesitic material				

PROPERTY Seagull Strugeon Lake CLAIM _____

LATITUDE _____ STARTED _____

DEPARTURE _____ FINISHED _____

ELEVATION _____ TOTAL LENGTH _____

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co. _____

HOLE NO. SG 81-1

LOGGED BY _____

CORE SIZE _____

SECTION 115 E

LEVEL _____

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
360	405	Massive (lapilli??) tuff, generally grey, with wispy chlorite. Not so patchy in appearance as tuffs above. Pyrite moderate to high, especially 366.8-nearly massive. Foliation weak at 45° to c.a. Becomes very siliceous about 395-402 with stringers and patches of chalcopyrite. Assay 395-405, 2" qz-carb-tø veins at 395.5 with minor chalcopyrite. Main chalcopyrite zone is quite cherty, almost a blue grey colour.				
405	490	Grey fragmental, usually recognizable lapilli tuff. A little darker in colour than unit above. Lapilli most distinct at top of section, gradually becoming indistinct, with a few exceptional zones. Much of this zone is quite massive. Sparse sulfides, mainly pyrite as blebs or disseminated grains. A few small qz-carb veins along foliation, which is weak to moderate at 45° to c.a. Intermediate dike with chilled contacts 442.8-444.5 from 470-490, grey fragmental is essentially massive.				
490	526	Rather sharp upper contacts; distinct lapilli visible in grey fragmental below 490. Change appears to be mainly textural. Continues to be moderately siliceous. Chloritoid begins to be noticeable, often as a few grains within single lapilli, and notably as a diffuse vein about 15° to c.a. @ 552. Foliation weak at about 50° - rock often breaks across it. Sulfides generally quite sparse. Minor chalcopyrite in ½" qz vein at 523'.				
526	542	Dike zone: Massive and lapilli tuff as above cut by a number of intermediate dikes with chilled contacts. Curiously, the two larger dikes (527-528.4) & (532.5-534.1) are neatly bisected by qz-carb veins.				

PROPERTY Seagull Strugeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-13

LOGGED BY

CORE SIZE

SECTION 115 E

LEVEL

CORE FOOTAGE FROM	CORE FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
542	563	Upper contact sharply marked by sudden absence of lapilli: Virtually featureless massive grey tuff; could possibly be flow. Qz.-filled tension veins about 0-5° to c.a. at 543 most noticeable feature. Lower contact abrupt.				
563	586	Lapilli-chloritoid zone. Well developed lapilli tuff with pervasively disseminated grains of choritoid. Very weak foliation Lapilli quite variable in size, mostly pale in a grey green matrix. Lower contact quite sharp.				
86	668	Massive tuff, grey to green grey, lapilli visible. Rock appears more basic than above. Indistinct banding noticeable about 606. Foliation weak to moderate @ 45°±. 594-597 a few very narrow stringers of pyrite and chalcopyrite along foliation. Most included in W.R.A. Below 597, a number of small qz-carb veins mostly along foliation but some apparently younger are contrary esp. at 606.5 where foliation & foliation veins are about 50°± and a cross cutting tension vein is at about 35° to c.a. and rotated about 85° from foliation (Foliation $\frac{090}{70N}$, tension 160/55E)				
68	672	Fine grained pale green dike or sill. Mafic minerals appear as needles of chlorite along foliation. Rock was perhaps porphyritic ground mass very fine grained. Foliation weak about 70° to c.a. Slightly chilled contacts.				
72	678.5	Chloritic vague lapilli tuff. Appears to be slightly more mafic than average at 556-668. Weakly foliated A about 70°.				

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-13

LOGGED BY

CORE SIZE

SECTION 115 E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
678.5	680.5	Intrusion as in 668-672 - probably a sill. Chilled contacts, some possible bleaching of wall rock. Intrusion contains very minor disseminated pyrite. Contacts very irregular (fracture).				
680.5	698.0	Chloritic massive to vague lapilli tuff. Much as 672-678.5. Foliation-controlled: qz-carb veins are about 40° to c.a.				
698.0	703.0	Fine grained amygdaloidal (in places) mafic flows. Very fine grained highly chloritic rock, a few possible amygdales of carbonate. A few blebs and grains of chalcopyrite and pyrite especially in contacts. Contacts within this zone appear to run at 35°-45° to c.a. while foliation is weak at 60°. Relationship would indicate an easterly plunge of ~15°.				
703.0	709.0	Chloritic fragmental. Foliation weak about 50°?				
709.0	718.8	Pale green fine grained, slightly porphyritic dike. Would appear to be at least as acid as andesite. Dacite? Upper contact (w.r.t. hole) is chilled, with 1" bleached wall rock, lower contact obscured by qz-carbonate vein along it. Contacts are both about 35° to c.a. Foliation within dike is weak at about 60°-65°. There appears to be another fabric at about 35° marked by pale bands, possibly old joints? Suite specimen is characteristic (714.9-715.9).				
718.8	743.0	Chloritic vague fragmental massive - no distinct lapilli -appears to be made up of mostly chlorite and carbonate. Not too dissimilar to fragmentals above. Foliation is weak at 50°-60°. No significant sulfides.				

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-13

LOGGED BY

CORE SIZE

SECTION 115 E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
743.0	745.0	Intensely cloritic shear zone? At about 5-10° at c.a. Boudinaged carbonate stringers, and some clay minerals. Foliation carbonate vein @ about 45° cross cuts.				
745.0	787.0	Grey fragmental? Massive and lapilli tuff, lapilli often quite distinct, grey to greenish grey in colour. Distinctly different from 718.8-743.0. Strongly foliated (45°) and blocky 775-777. Appears to be getting more siliceous with depth. Lower contact purely arbitrary on the basis of noticeable chloritoid.				
787.0	827.0	Chloritoid rich grey fragmental lapilli tuff to massive tuff. Chloritoid as wispy stringers and disseminated grains (porphyroblasts). Rock is foliated @ about 45° to c.a., as often as not breaks contrary. Little or no sulfides, carbonate abundant: Contacts are arbitrary in the basis of noticeable chloritoid.				
827		Wispy chlorite fragmental. Massive to lapilli tuff, wispy chlorite along foliation, which is still about 45°. Rock appears to be high in carbonate. Last 8 feet orso are increasingly hematite stained and vuggy, probably due to ground water leaching. Contains traces of disseminated pyrite.				
End of hole						

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE 16 + 50N STARTED Mar 31, 1981

DEPARTURE 119E FINISHED Apr 4, 1981

ELEVATION TOTAL LENGTH 847

DEPTH	DIP	AZI.
collar	80	180
97	77	
200	74	
300	70	
407	66	

DEPTH	DIP	AZI.
507	61	
600	59	
700	55	

D.D.Co.

HOLE NO. SG 81-14

LOGGED BY G. Richmond

CORE SIZE BQ

SECTION 119E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
0	37	Casing in overburden				
37	52	Moderately siliceous grey lapilli tuff. Foliation fairly weak & varies 35°-45° to core axis. A few small quartz & qz-carb veins, one of which, at 46' has a small stringer of chalcopyrite. There are also some large blebs of pyrite, which appears to fragments. Lower contact not distinct.				
52	75	Vague lapilli to indistincly bedded cherty tuff. Mottled appearance varies from green to grey to yellowish white, some iron staining. Foliation continues to be fairly weak at 40°. Still a few quartz carbonate veins; should be fairly siliceous. Both contacts of this unit are rather arbitrary based on lapilli and colour.				
75	92	Grey lapill tuff. Pale lapilli in a grey matrix. Foliation weak to moderate at about 45° to c.a. Trace disseminated pyrite, and a few grey cherty layers- ?exhalites?				
92	106	Bedded to massive tuff. Upper contact quite sharp, lower also. Fine grained, grey, bedding distinct to vague, a few zones possible lapilli. Bedding and foliation essentially = at 45°.				

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-14

LOGGED BY

CORE SIZE

SECTION 119 E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
106	194.2	Fine grained disseminated pyrite, and hematite stain is common. Foliation appears to be moderate to strong at 45°. From 119-124 is rhyolite tuff? with bleached wall rock contacts, grain size is very small, with minor disseminated pyrite, and the odd quartz eye. Sill? is highly limonite stained at contacts and along fractures. Could possibly be a cherty tuff, less likely intrusion. From about 180-194 there are stringers or wisps of fine grained pyrite with occasional traces of chalcopyrite that may be fragments of bedded sulfides.				
194.2	197.5	Fine grained massive pale greenish grey rock, uniformly foliated at about 45°. Bleaching within unit at contacts suggests chilled margins; this is probably a dike or sill.				
197.5	225	Hematite stained bedded tuff. Interval contains several small intrusions similar to unit above. Bedding varies from relatively undisturbed to highly contorted over intervals as short as 0.5' suggesting the possibility at least of soft sediment deformation. Rock contains dark green highly chloritic bands and white to pink bands rich in quartz or carbonate and stained by hematite, giving a very distinctive marbleized look. Included in this unit is a zone of disrupted beds of fine grained pyrite and possibly sphalerite, from about 204-207. Elsewhere wisps of fine grained sulfides. Foliation is about 43° to c.a.	3313 3314	205-208 209-213		
225		Vaguely bedded siliceous tuff to tuff breccia. Only a few large fragments. At 237 some funny granular - looking carbonate fragments with disseminated pyrite similar to ones seen at 767 in hole 8. Most of unit is a pale grey cherty (cont'd. next page)				

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-14

LOGGED BY

CORE SIZE

SECTION 119 E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
	287	matrix with wisps or ill-defined bands of chloritic material; fairly siliceous overall. Massive band from 260.5-263.5 may be rhyolite flow. Coarse grained intermediate flow from 265.1-268.8 with coarse grained pyrite. Below 267, rock appears the same composition, but a generally fine texture. Foliation weak-moderate at about 45°. Lower contact arbitrary				
287	357.5	Grey massive tuff to lapilli tuff. Bedding usually vague or nil. Foliiation generally weak to moderate at 45° - 50°. Layering or banding (bedding) is at a lower angle, often nearly 0°, some rounded blebs of carbonate that may be lapilli and some ptygmatic quartz-carbonate veins with minor pyrite & chalcopyrite. Some carbonate stringers contain chloritoid. Overall quite siliceous. From 324.5-328.0 there is a sill or dike of gneissic intrusive rock, possibly quartz monzonite? Upper contact badly fractured, lower is about 35° to core axis and rotated about 120° (counter clockwise) from foliation, looking down the hole (135/90)				
57.5	363.4	Fairly sharp upper contact to this zone: Finely laminated siliceous sericitic tuff. Intensely foliated at 45° to core axis. Distinct crenulation, with axial traces of crenulation about 20° from the long axis of the foliation ellipse, viewed in plane of foliation. (I would estimate the axial plane of crenulation to strike N20 (± 10) E and dip 75° - 85° W) lower contact also sharp.				
63.4		Massive and structureless grey siliceous tuff, with locally a few wisps o stringers of chlorite. Weakly foliated about 50° to c.a. a few blebs of pyrite and chalcopyrite, but overall less than 1% sulfides.				

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.

DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81 -14

LOGGED BY

CORE SIZE

SECTION 119 E

LEVEL

FROM	TO	DESCRIPTION	SAMPLE NO.	FROM	TO	LENGTH
	487	Pale coloured lapilli become fairly distinct locally below 400', and there are a few stringers? of chlorite with associated sulfides but on the whole sulfides are next to nil. At 461 there is a highly contorted qz-carb chlorite vein with minor pyrite & chalcopyrite. The quartz is exceptionally glassy and transparent. The lower contact of this unit is gradational & arbitrary.				
487	542	Chloritoid Zone. The same rock essentially as above, but with conspicuous to abundant chloritoid, giving a definitely speckled appearance. There appears to be no preferred orientation, as is the case with wisps of chlorite. A few lapilli visible in lower part of section. Lower contact fairly sharp.				
542	560	Sudden absence of chloritoid. Grey massive - structureless tuff as in 363.4-487. Still quite highly siliceous Weakly foliated at about 50°. Lower contact fairly sharp (over about 1').				
560	580	Chloritoid bearing lapilli tuff as in 487-542, lower contact indistinct and gradational.				
580	666.1	Grey massive tuff, the only structures commonly seen being quartz carbonate veins along foliation, and occasional clusters & stringers of chloritoid grains. Chloritoid much reduced from previous section, but visible because of bland backgrounds. A zone from 554-558.8 appears to be lapilli tuff, and has some blebs and minute stringers of chalcopyrite 558.3 - 559.5 is massive, very fine grained rhyolite - may be a dike or sill, as contacts appear slightly chilled.	3316	554.4 558.5		

PROPERTY Seagull Sturgeon Lake CLAIM

LATITUDE STARTED

DEPARTURE FINISHED

ELEVATION TOTAL LENGTH

DEPTH	DIP	AZI.	DEPTH	DIP	AZI.

D.D.Co.

HOLE NO. SG 81-14

LOGGED BY

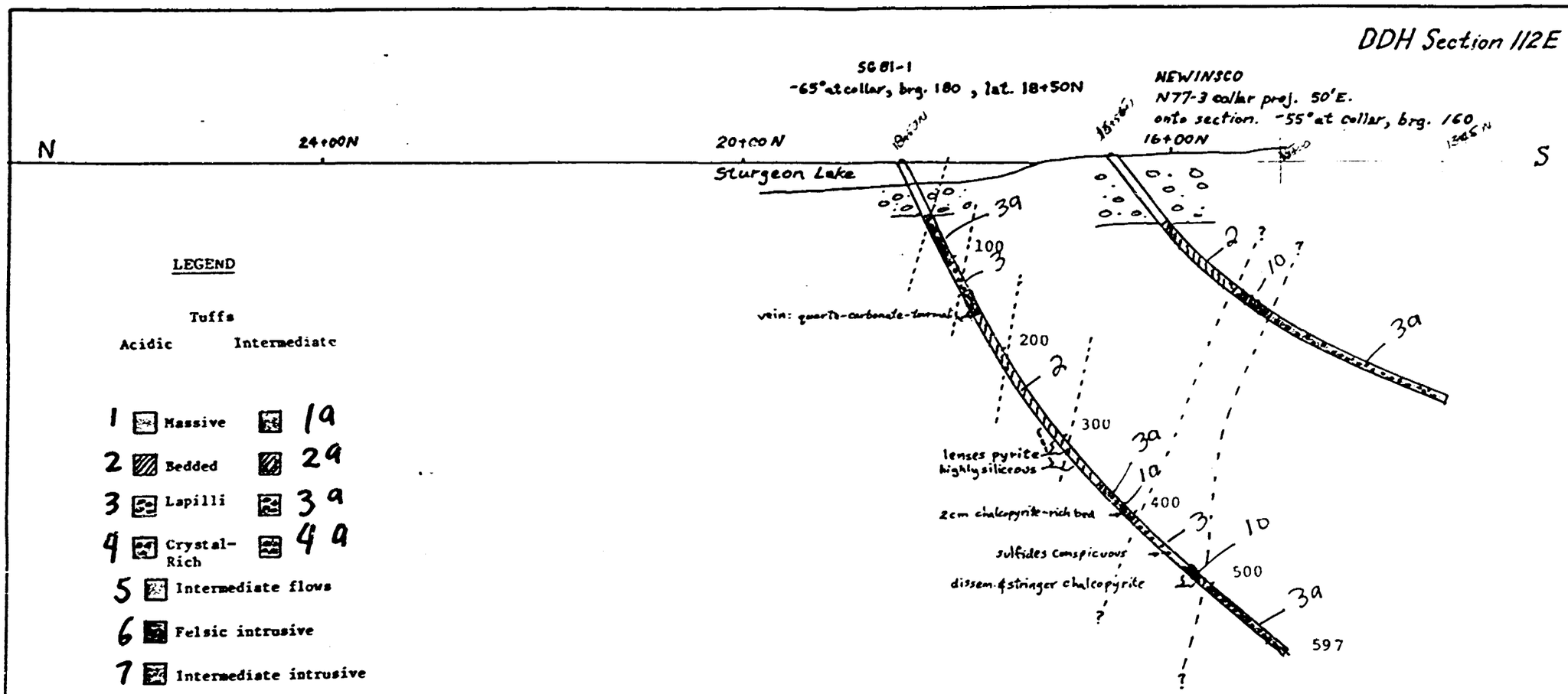
CORE SIZE

SECTION 119 E

LEVEL

FOOTAGE FROM	FOOTAGE TO	DESCRIPTION	SAMPLE NO	FROM	TO	LENGTH
666.1	676.8	Fine grained massive grey tuff, with a few small quartz eyes much less than 1%. Foliation weak, about 60°.				
676.8	760	Siliceous vague lapilli tuff. Blocky and hematite stained 680-683, and 686-687 is quite siliceous and indistinctly bedded. Locally a few wispy patches of fine grained pyrite. Foliation varies from 45° - 60° to c.a. and is weak, which probably explains the variation.				
760	776	Heterogeneous zone. Bedded to massive tuff, including lapilli tuff, some ribboned and simple quartz-carb-chlorite veins, and some minor dykes. Chloritoid is abudant locally, elsewhere absent. Grey siliceous massive tuff to lapilli tuff, chloritoid apparent in last 10-20'. Several very small intermediate dikes.	808-815	3317		
	847	Quartz-carbonate-chlorite vein at 809-810 contains minor pyrite & chalcopyrite, and disseminated grains of pyrite & chalcopyrite can be seen at 817-820.	815 - 882.4	3318		
		End of hole				

DDH Section 112E



LEGEND

Tuffs

	Acidic		Intermediate
1	Massive		1a
2	Bedded		2a
3	Lapilli		3a
4	Crystal-Rich		4a

5 Intermediate flows

6 Felsic intrusive

7 Intermediate intrusive

8 Granitic intrusive

9 Basic intrusive

10 Mineralized section

Trace of foliation, or other structure if so marked.

Horizontal and vertical scale:
1" = 100' (1:1200)

scale
100'

2.6226

DDH Section 114E

N

24+00N

20+00N

18+50N

Sturgeon Lake

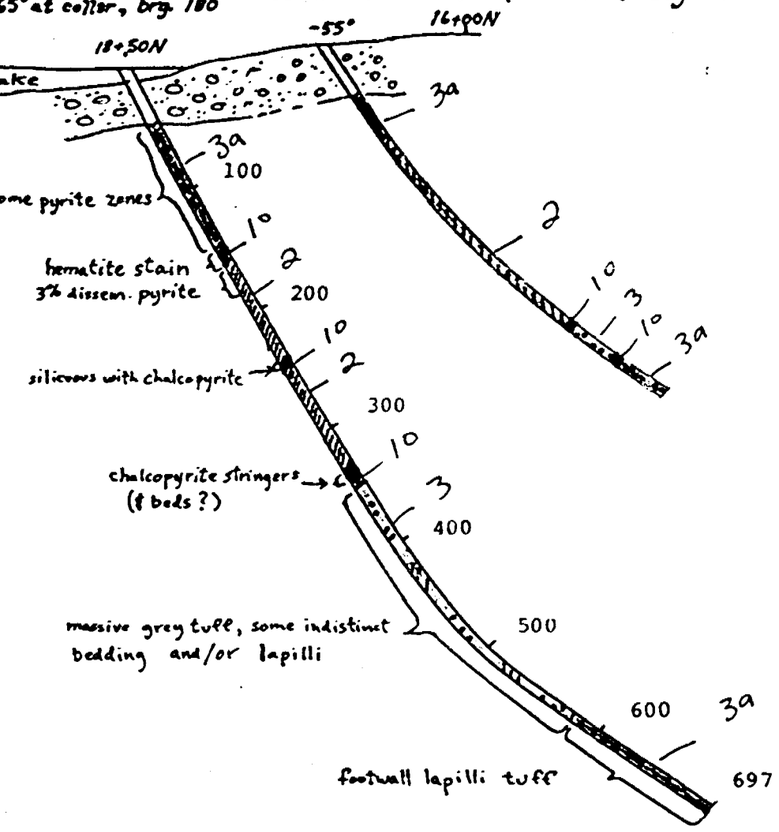
SB 81-3
-65° at collar, brg. 180

NEWINSCO N77-4 projected
30' W. onto section (at collar) brg. = 160

-55°

16+00N

S



LEGEND

Tuffs

	Acidic	Intermediate
1	Massive	1a
2	Bedded	2a
3	Lapilli	3a
4	Crystal-Rich	4a

5 Intermediate flows

6 Felsic intrusive

7 Intermediate intrusive

8 Granitic intrusive

9 Basic intrusive

10 Mineralized section

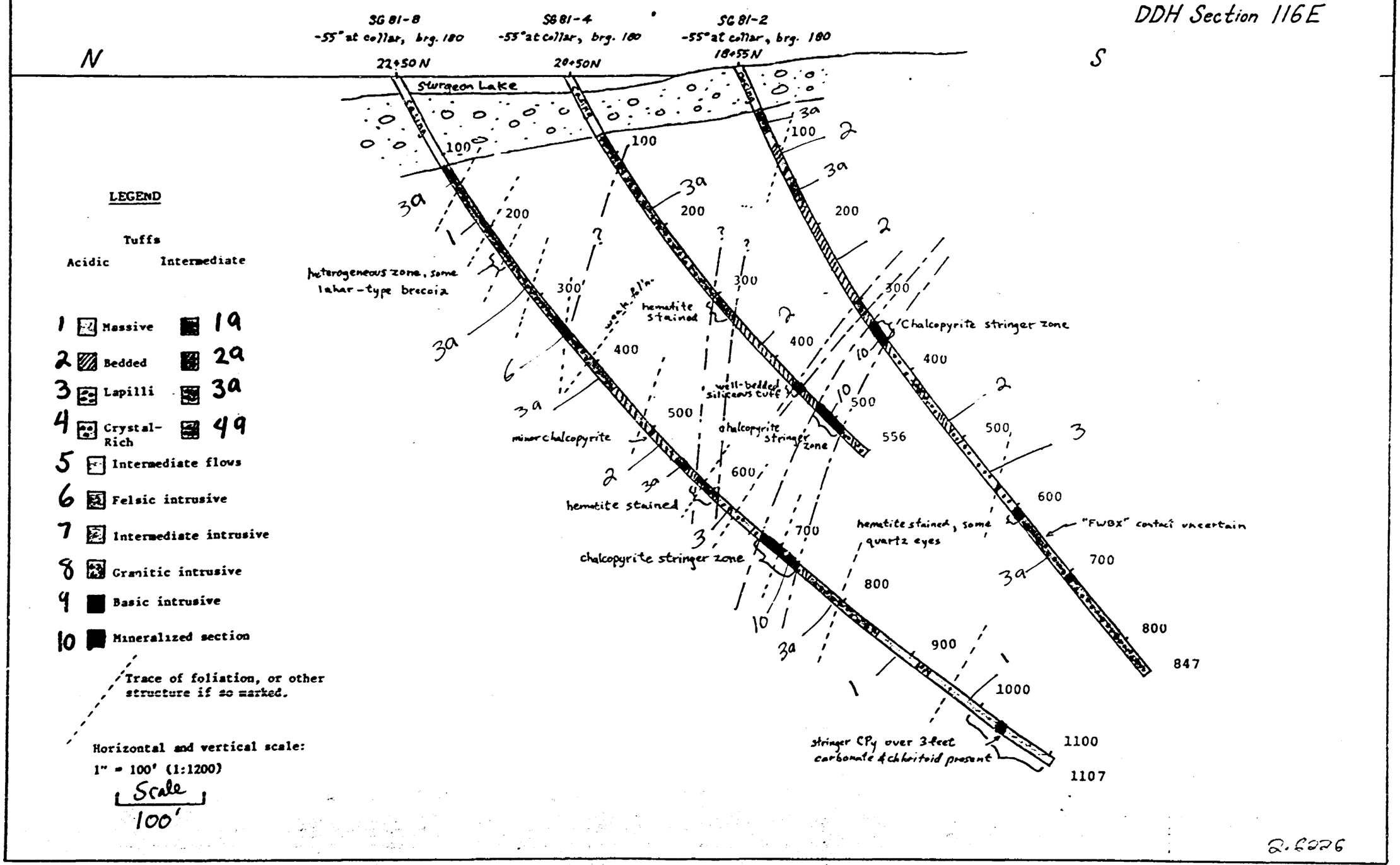
Trace of foliation, or other structure if so marked.

Horizontal and vertical scale:
1" = 100' (1:1200)

scale
100'

2.C22C

DDH Section 116E



LEGEND

Tuffs

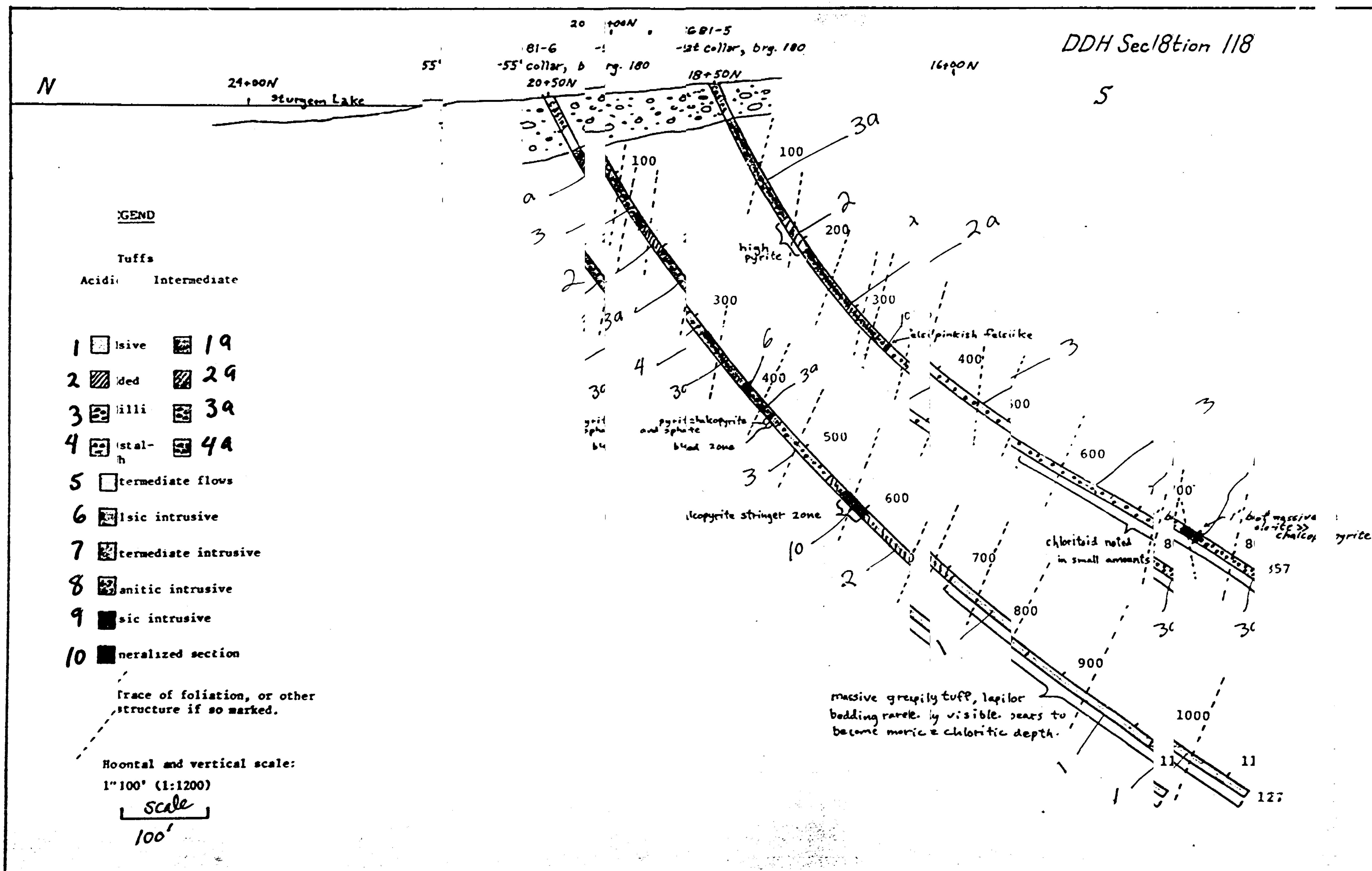
Acidic		Intermediate
1	Massive	1a
2	Bedded	2a
3	Lapilli	3a
4	Crystal-Rich	4a
5	Intermediate flows	
6	Felsic intrusive	
7	Intermediate intrusive	
8	Granitic intrusive	
9	Basic intrusive	
10	Mineralized section	

Trace of foliation, or other structure if so marked.

Horizontal and vertical scale:
1" = 100' (1:1200)

Scale
100'

2.6026

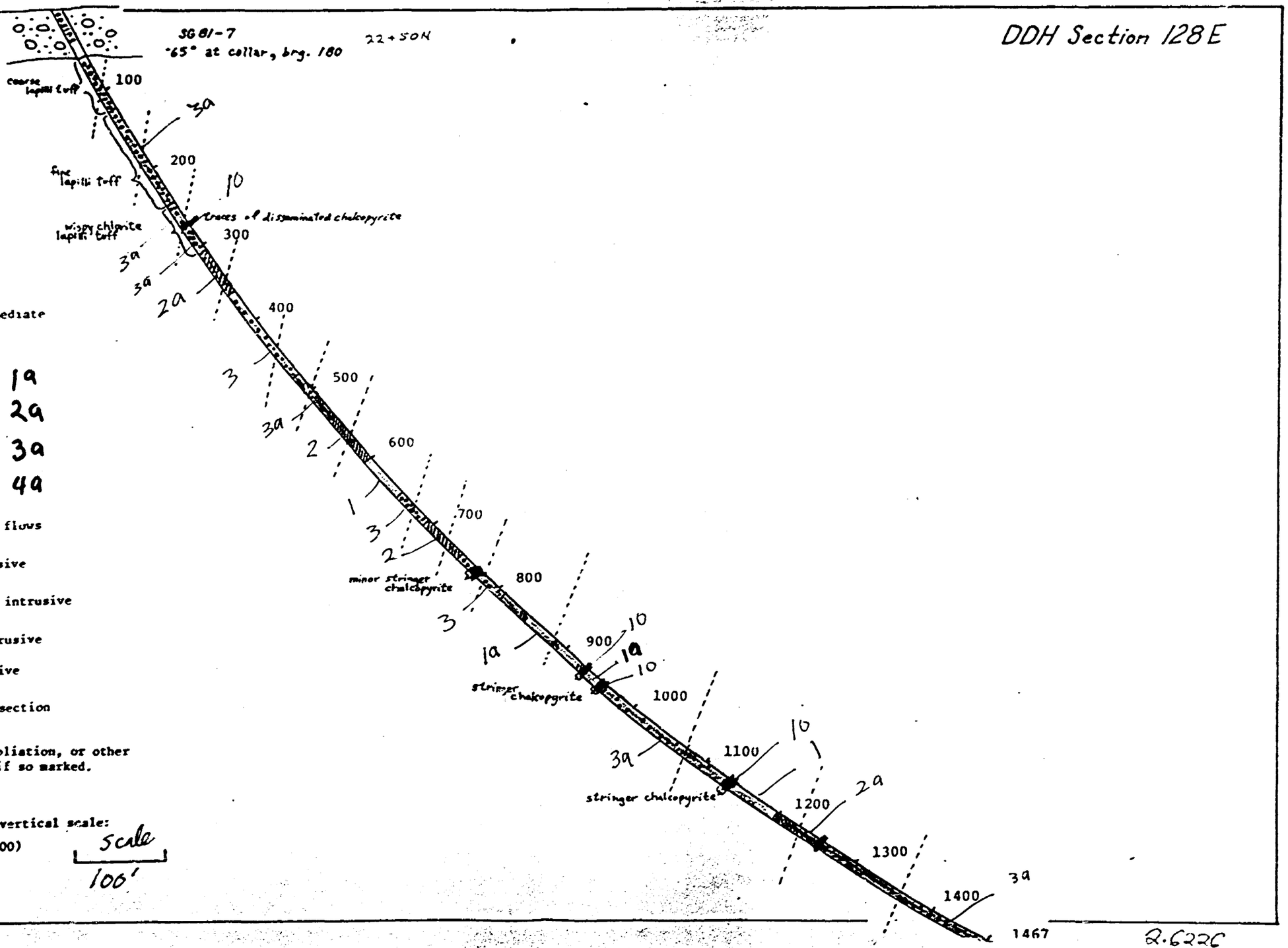

DDH Sec18tion 118
S
N
24+00N
Sturgeon Lake
81-6
-55' collar, b rg. 180
20+50N
681-5
-55' collar, brg. 180
18+50N
16+00N
100
200
300
400
500
600
700
800
900
1000
3a
2
2a
3
high pyrite
pinkish felsite
chloritoid noted in small amounts
massive grey pily tuff, lapilor bedding rarely visible
copyrite stringer zone
GEND
Tuffs
Acidi
Intermediate
1 sive 1a
2 ded 2a
3 illi 3a
4 stal- 4a
5 termediate flows
6 lsic intrusive
7 termediate intrusive
8 anitic intrusive
9 sic intrusive
10 neralized section
Trace of foliation, or other structure if so marked.
Hoontal and vertical scale:
1"100' (1:1200)
scale
100'

2. 2.227

DDH Section 128E

SG81-7
-65° at collar, brg. 180

22+50N



LEGEND

Tuffs

	Acidic	Intermediate
1	Massive	1a
2	Bedded	2a
3	Lapilli	3a
4	Crystal-Rich	4a

5 Intermediate flows

6 Felsic intrusive

7 Intermediate intrusive

8 Granitic intrusive

9 Basic intrusive

10 Mineralized section

Trace of foliation, or other structure if so marked.

Horizontal and vertical scale:
1" = 100' (1:1200)

Scale
100'

Q.622C

DDH Section 4E

N

4+00S

SB 81-9
-65° at collar, brg. 180, Sec. 6+00S

8+00S

12+00S

S

Sturgeon Lake

Lake bottom

0.0

casing

100

200

pyritic zone

300

400

500

pyrite bands

hematitic bands

600

700

800

827

LEGEND

Tuffs

Acidic		Intermediate
1	Massive	19
2	Bedded	29
3	Lapilli	39
4	Crystal-Rich	49
5	Intermediate flows	
6	Felsic intrusive	
7	Intermediate intrusive	
8	Granitic intrusive	
9	Basic intrusive	
10	Mineralized section	

Trace of foliation, or other structure if so marked.

Horizontal and vertical scale:
1" = 100' (1:1200)

scale
100'

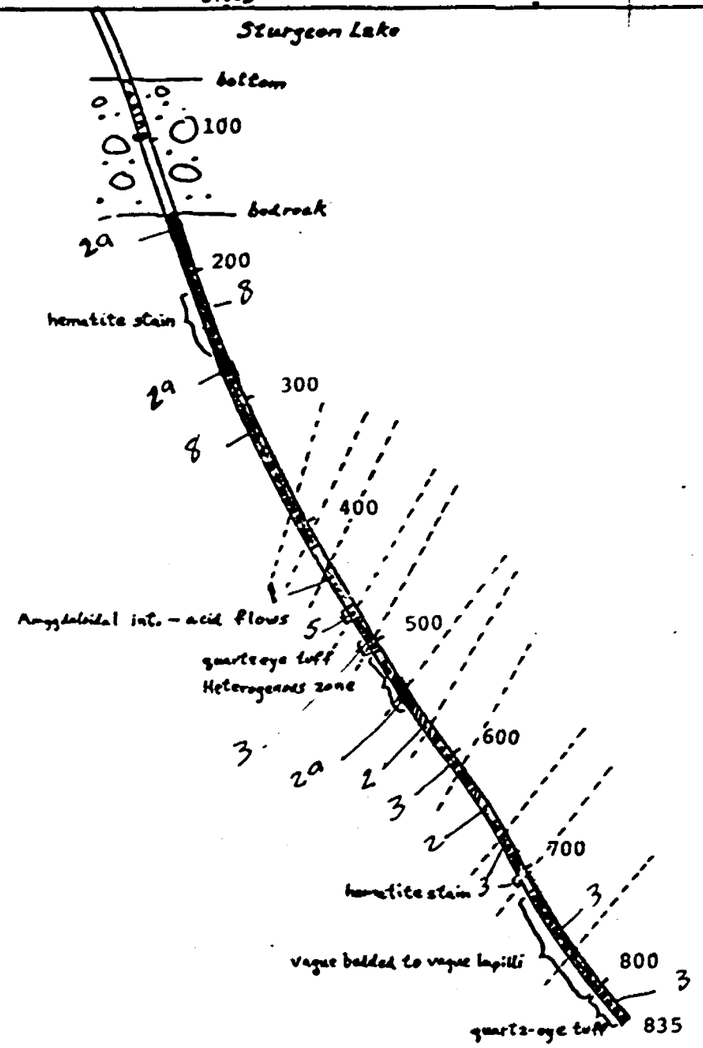
2.6226

DDH Section 40E

N — S

SG 81-11
-65° at collar, brg. 180, Tel. 7+00 S

4+00S | 8+00S | 12+00S



LEGEND

Tuffs

	Acidic	Intermediate
1 Massive		1a
2 Bedded		2a
3 Lapilli		3a
4 Crystal-Rich		4a

5 Intermediate flows

6 Felsic intrusive

7 Intermediate intrusive

8 Granitic intrusive

9 Basic intrusive

10 Mineralized section

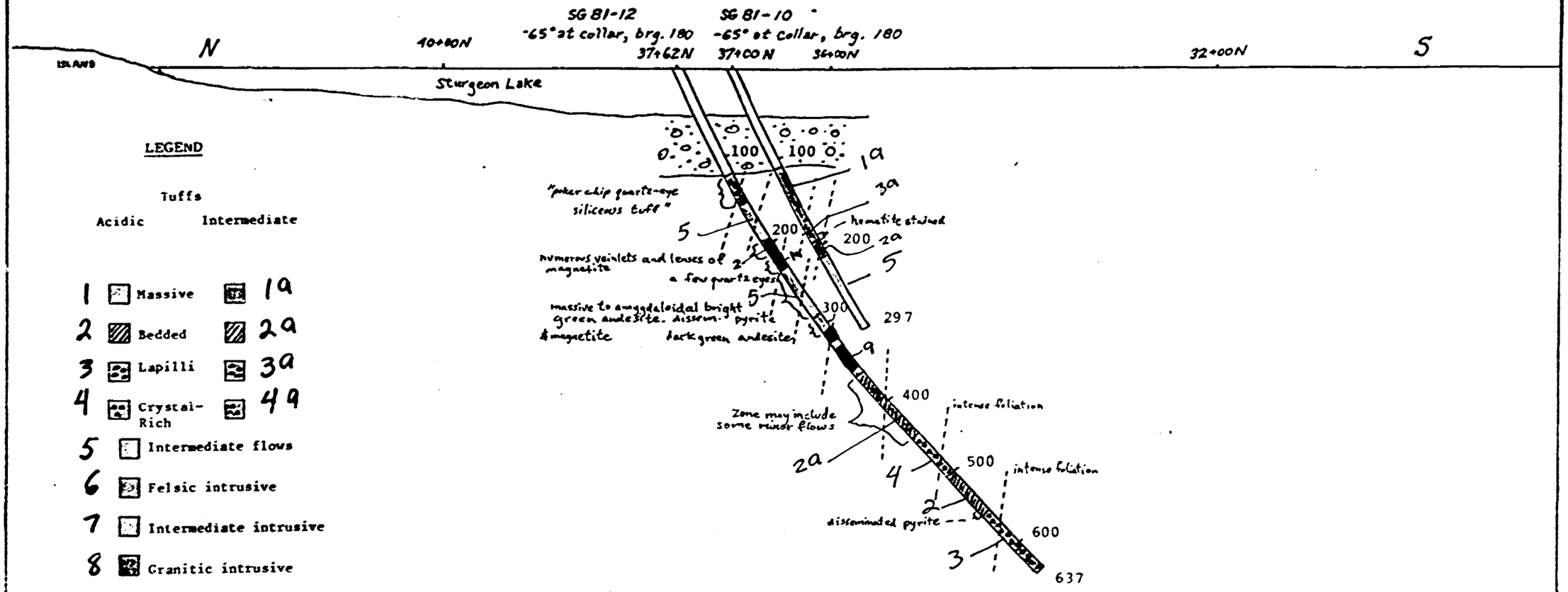
Trace of foliation, or other structure if so marked.

Horizontal and vertical scale:
1" = 100' (1:1200)

Scale
100'

2.6226

DDH Section 120E



LEGEND

Tuffs

Acidic		Intermediate
1	Massive	1a
2	Bedded	2a
3	Lapilli	3a
4	Crystal-Rich	4a

5 Intermediate flows

6 Felsic intrusive

7 Intermediate intrusive

8 Granitic intrusive

9 Basic intrusive

10 Mineralized section

Trace of foliation, or other structure if so marked.

Horizontal and vertical scale:
1" = 100' (1:1200)

scale
100'

2.6226

DDH Section 119E

LEGEND

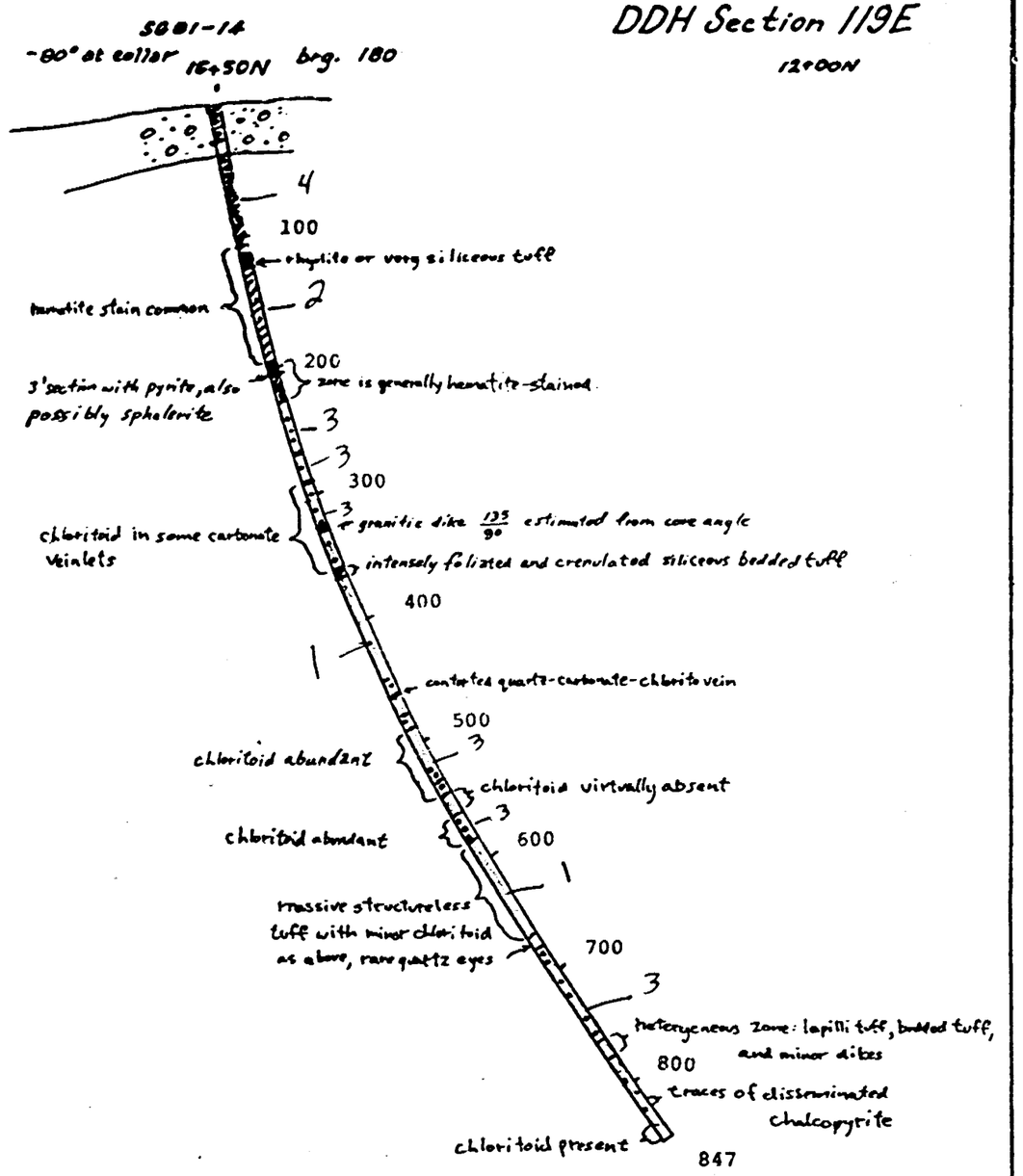
Tuffs

	Acidic		Intermediate
1	Massive		1a
2	Bedded		2a
3	Lapilli		3a
4	Crystal-Rich		4a
5	Intermediate flows		
6	Felsic intrusive		
7	Intermediate intrusive		
8	Granitic intrusive		
9	Basic intrusive		
10	Mineralized section		

Trace of foliation, or other structure if so marked.

Horizontal and vertical scale:
1" = 100' (1:1200)

Scale
100'



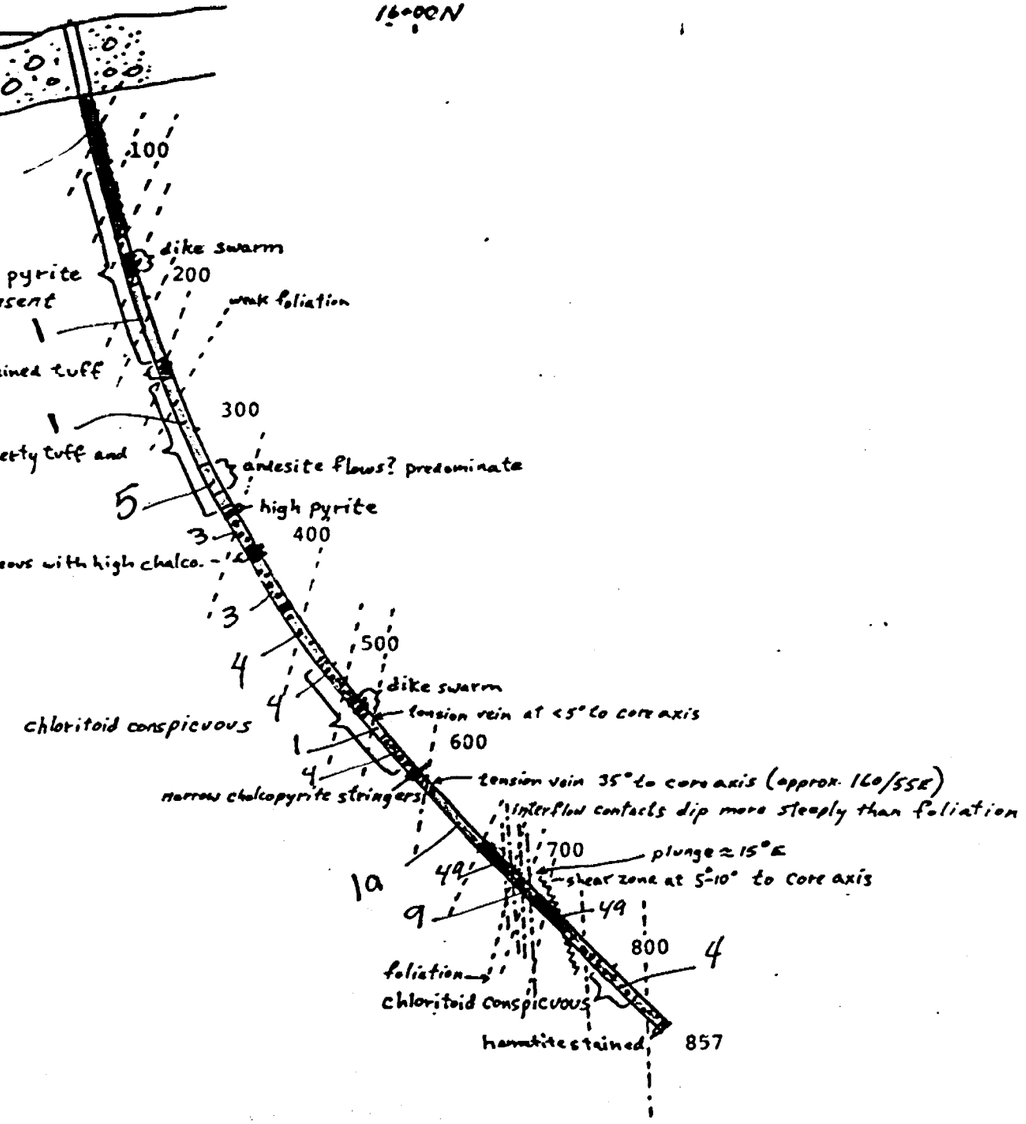
2-6226

DDH Section 115E

SG 81-19
-80° at collar, brg. 180
Est. = 18+50N

N — S

20+00N — Sturgeon Lake — 16+00N



LEGEND

Tuffs

	Acidic		Intermediate
1	Massive	19	
2	Bedded	29	
3	Lapilli	39	
4	Crystal-Rich	49	
5	Intermediate flows		
6	Felsic intrusive		
7	Intermediate intrusive		
8	Granitic intrusive		
9	Basic intrusive		
10	Mineralized section		

Trace of foliation, or other structure if so marked.

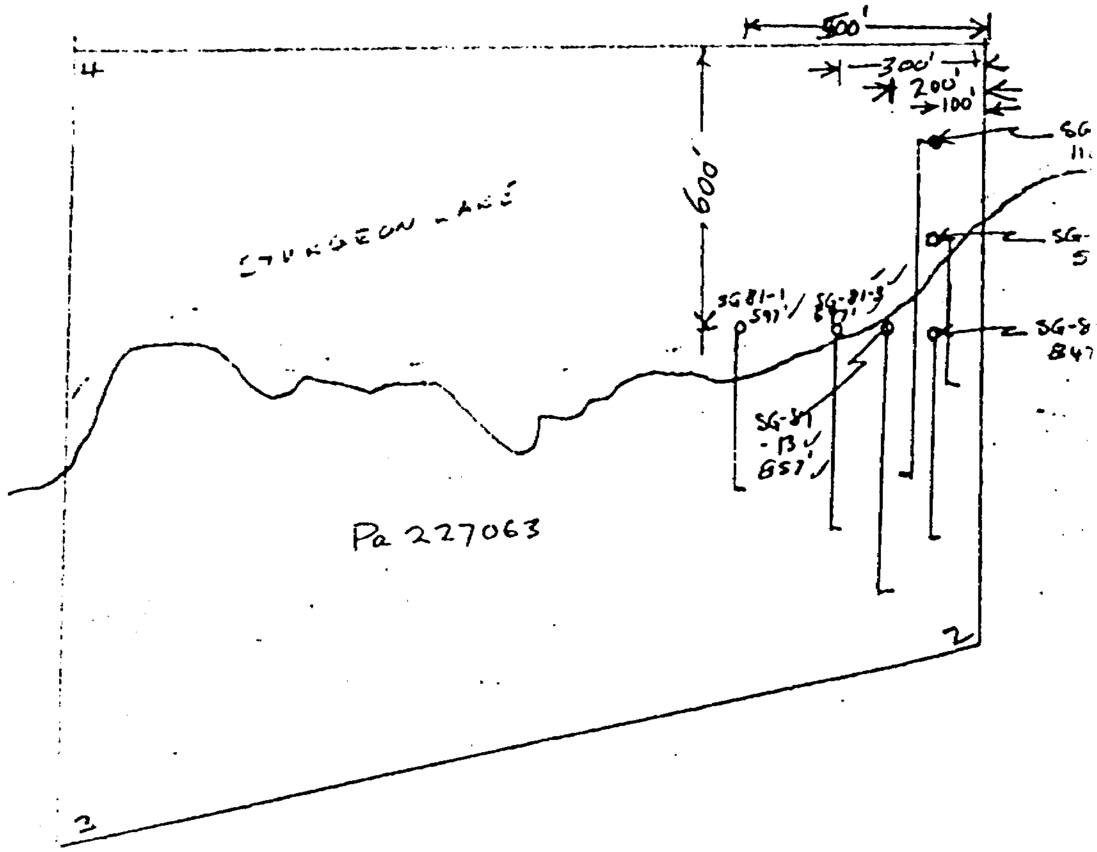
Horizontal and vertical scale:
1" = 100' (1:1200)

Scale
100'

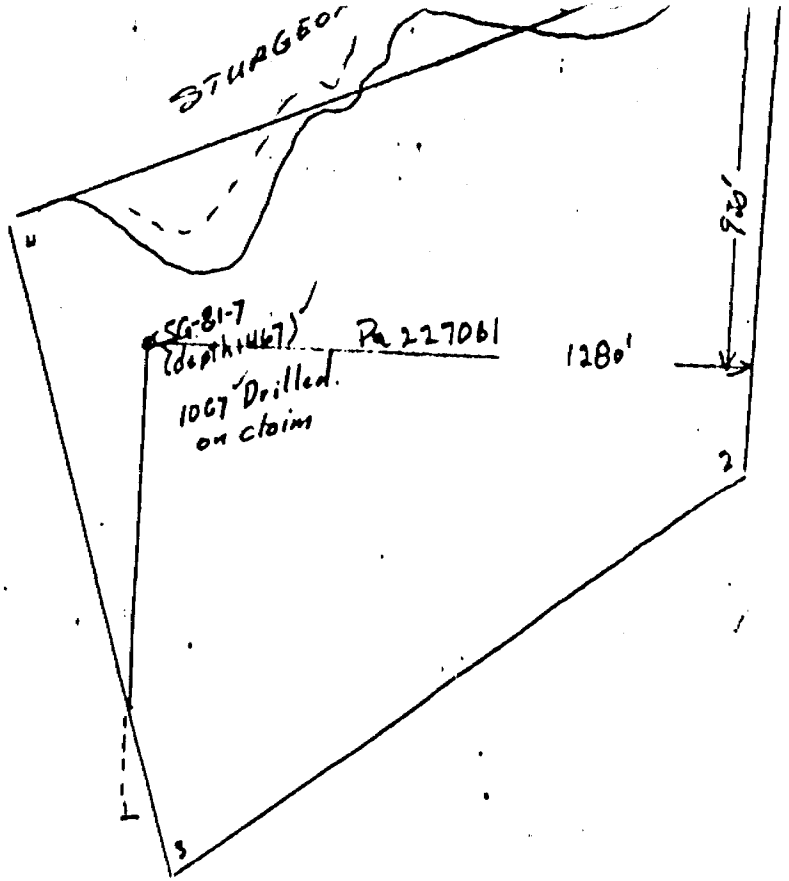
2.6226

52 G/14 SE (100)

2.6226

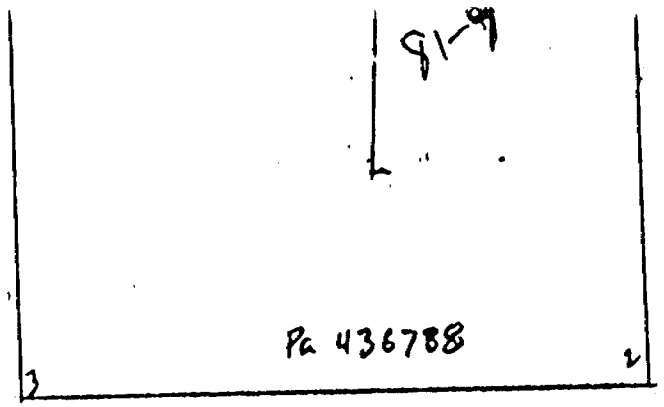


2.6226



Scale
400'

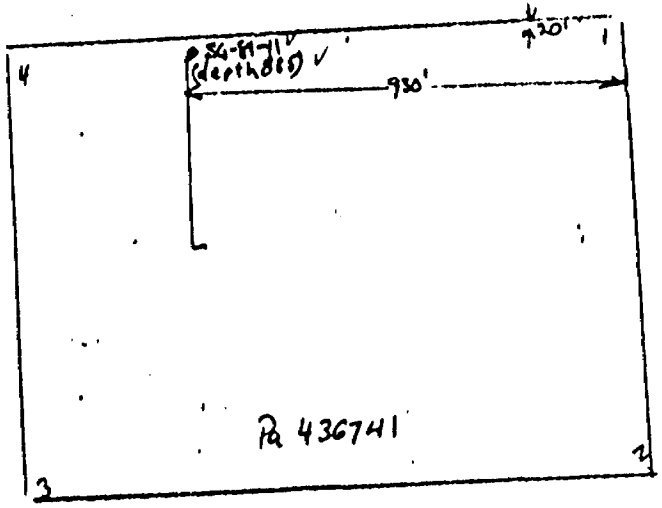
Scale
1" = 400'



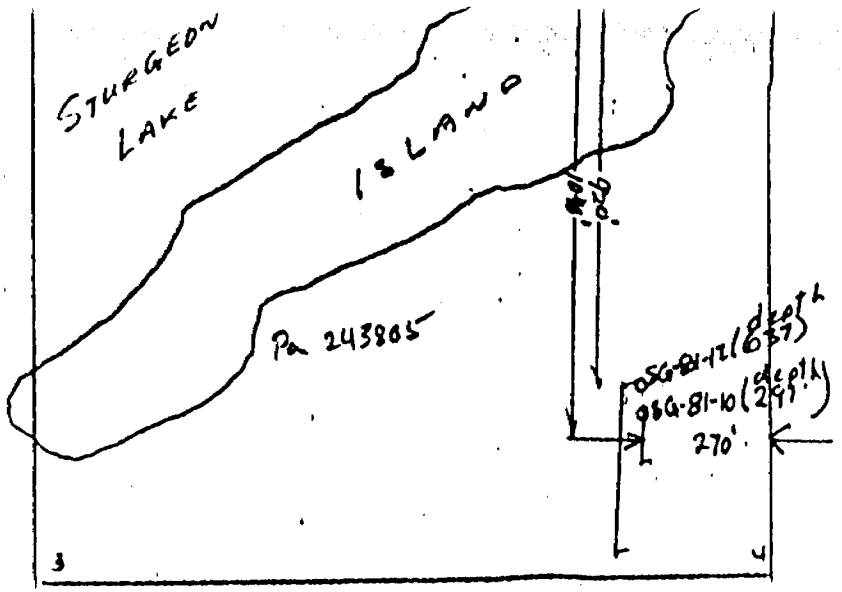
scale

400'

1" = 400'



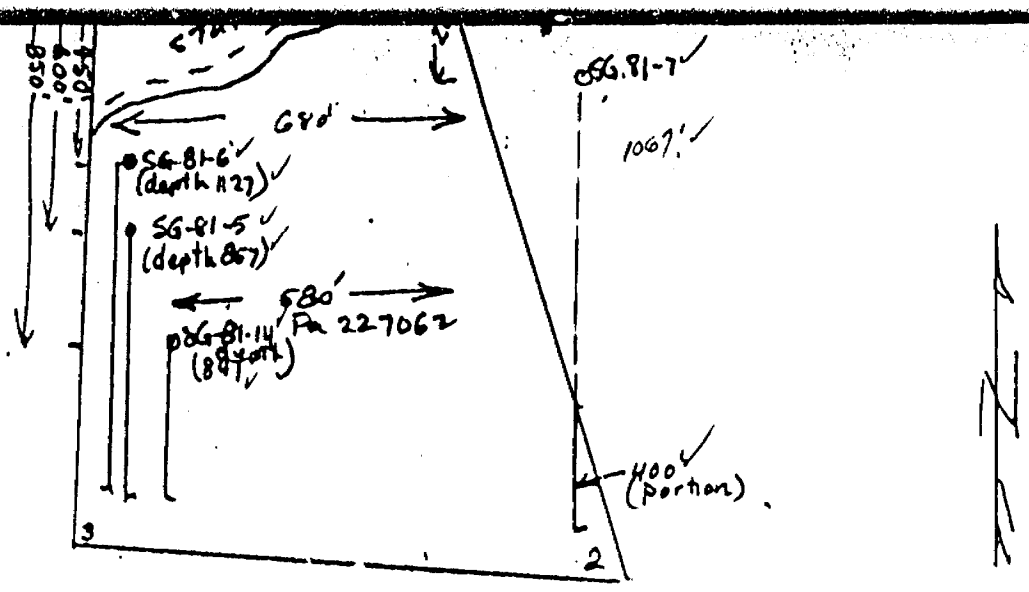
2.6226



Scale

400'

2.62226



scale

400'

REGISTERED PROFESSIONAL ENGINEER
TOM GLADWELL
10/6/82
PROVINCE OF ONTARIO

2.62226

Tom Gladwell 1" = 400'

FIG. 1

Structure Contour Diagram
of
Copper Horizon

the reference plane strikes 090 and dips 70°N, passing through the elevation of Sturgeon Lake at grid latitude 11+00 N.

- = copper intersection

■ = massive sulfide intersection

(81-6) = hole no.

0 25 50 100 Feet

down-dip distance

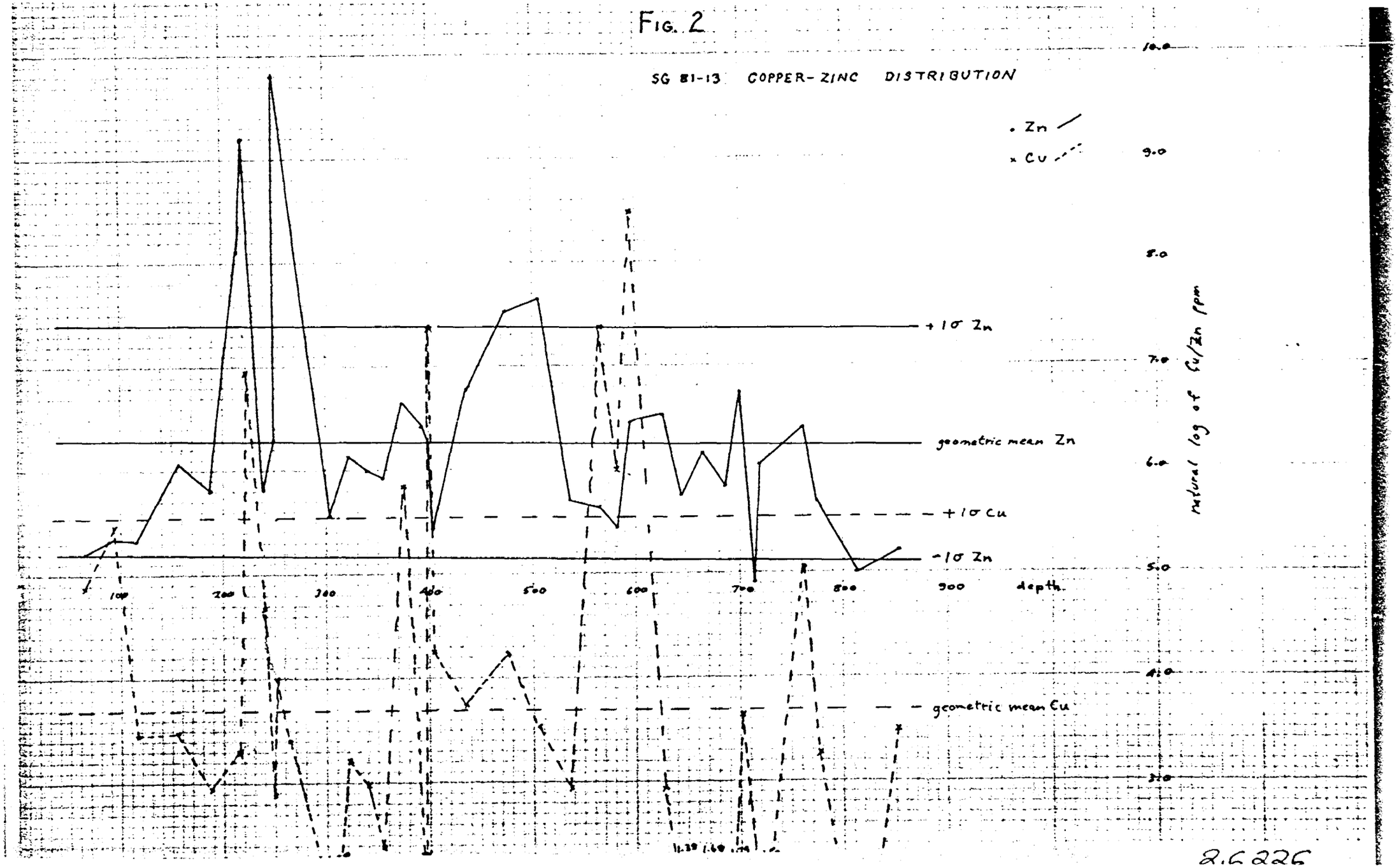
900
800
700
600
500
400
300
200
100

360 (81-1)
440 (81-3)
450 (81-15)
440 (81-2)
470 (81-4)
470 (81-9)
450
410 (81-5)
380 (81-6)
350
300
250
290 (77-4)
340 (77-3)
240
240

11+26E 11+36E 11+46E 11+56E 11+66E 11+76E 11+86E 11+96E

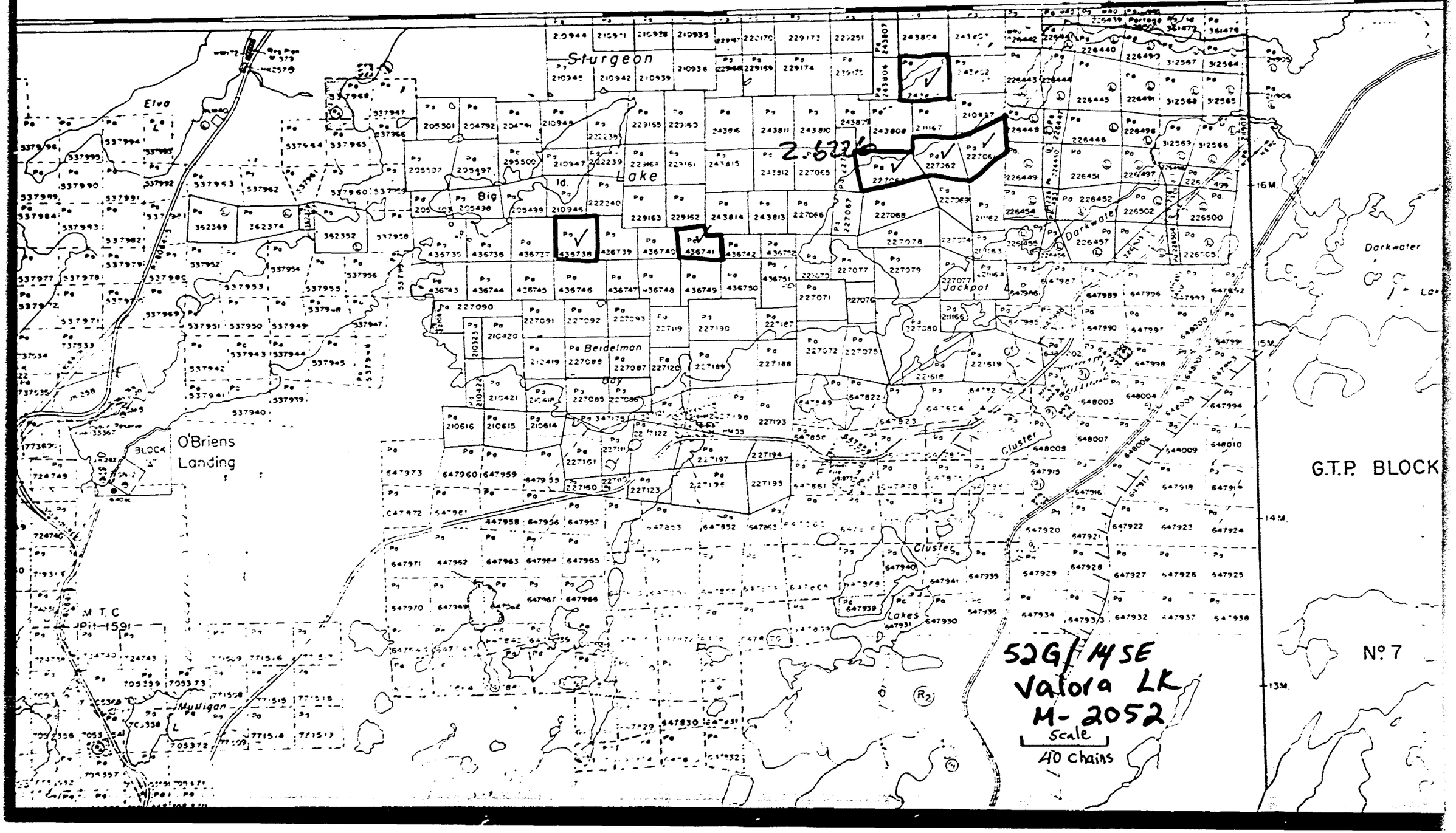
Lake level at 11+00N

FIG. 2


SG 81-13 COPPER-ZINC DISTRIBUTION
. Zn
x Cu
+1σ Zn
geometric mean Zn
+1σ Cu
-1σ Zn
geometric mean Cu
depth
natural log of Cu/Zn ppm
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
100
200
300
400
500
600
700
800
900

2.C226

PENASSI LAKE M.2257



Ministry of Natural Resources Ontario

F.D.M.

Report of Work

(Geophysical, Geological, Geochemical and Expenditures)

The Mining Act

Amended Report delivered to Jno. Whitney Black 23/12/83

March 5 '84

Sheet # 1

Mining Lands # 84-1

Instructions: – Please type or print. – If number of mining claims traversed exceeds space on this form, attach a list.

Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns. – Do not use shaded areas below.

900

Type of Survey(s): Expenditures 2.6226

Township or Area: Valora L. M2052

Claim Holder(s): Seagull Resources Ltd.

Prospector's Licence No.: T-927

Address: % Gledhill Consultant Inc 21 Sandalwood Place

Date of Survey (from & to): 1 12 80 – 6 12 83 (Day | Mo. | Yr.)

Total Miles of line Cut: N/A

Name and Address of Author (of Geo-Technical report): "DON MILLS, Ontario M3B1L5"

52G14SE9168 2.6226 VALORA LAKE

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
...ey:	Electromagnetic	
...days. (This ...ine cutting)	Magnetometer	
...itional survey: ...e grid:	Radiometric	
...days (for each)	Other	
	Geological	
	Geochemical	

	Geophysical	Days per Claim
...erse side	Electromagnetic	
	Magnetometer	
	Radiometric	
	Other	
	Geological	
	Geochemical	

PATRICIA MINING DIV. RECEIVED JAN - 3 1984 A.M. P.M. 7,8,9,10,11,12,1,2,3,4,5,6

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Expenditures (excludes power stripping)

Type of Work Performed: Geochemical Sect. 77-19

Performed on Claim(s): Pa 227061, 436738, 436741, 243805, 227062, & 227063

Calculation of Expenditure Days Credits

Total Expenditures $ 9592.72 ÷ 15 = Total Days Credits ~~708~~ 640

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence)

Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
Pa	436735	7	Pa	544433	7
	436736	7		544434	7
	436737	7		544435	7
	436738	7		544438	7
	436739	7		537939	7
	436740	7		537940	7
	436741	7		537941	7
	436742	7		537942	7
	436743	7		537943	7
	436744	7		537944	7
	436745	7		537945	7
	436746	7		537946	7
	436747	7		537947	7
	436748	7		537948	7
	436749	7		537949	7
	436750	7		537950	7
	436751	7		537951	7
	436752	7		537952	7
	537930	7		537953	7
	537936	7		537954	7
	537937	7		537955	7
	537931	7		537956	7
	537938	7		537957	7

(623)

Pa. 436735

Total number of mining claims covered by this report of work: See Sheet #2

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
640	Jan. 3, 1984	[signature]
	Date Approved as Recorded: 84.4.25	Branch Director: [signature]

Date: Dec 15, 1983

Recorded Holder or Agent (Signature): Tom Gledhill

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: Tom Gledhill 21 Sandalwood Place, Don Mills Ont M3B1L5

Date Certified: Dec 15/83

Certified by (Signature): Tom Gledhill

1362 (81/9)

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

Amended #84-1 cont'd

Sheet # 2

The Mining Act

Instructions: - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

Type of Survey(s)

Township or Area: Valora Lake M-2052

Claim Holder(s): Seagull Resources Ltd.

Prospector's Licence No.

Address

Survey Company

Date of Survey (from & to): Day | Mo. | Yr. | Day | Mo. | Yr.

Total Miles of line Cut

Name and Address of Author (of Geo-Technical report)

Credits Requested per Each Claim in Columns at right

Special Provisions		D.
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	· Electromagnetic	
	· Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	· Radiometric	
	· Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	· Electromagnetic	
	· Magnetometer	
	· Radiometric	
	· Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

PATRICIA MINING DIV.
RECEIVED
JAN - 3 1984
A.M. P.M.
7 8 9 10 11 12 1 2 3 4 5 6

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
Pa	537958	7
	537959	7
	537960	7
	537961	7
	537962	7
	537963	7
	537964	7
	537965	7
	537966	7
	537967	7
	537968	7
	537969	7
	537970	7
	537971	7
	537972	7
	537973	7
	537974	7
	537975	7
	537976	7
	537977	7
	537978	7
	537979	7
	537980	7

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	537981	7
	537982	7
	537983	7
	537984	7
	537985	7
	537986	7
	537987	7
	537988	7
	537989	7
	537990	7
	537991	7
	537992	7
	537993	7
	537994	7
	537995	7
	537996	7
	537997	7
	537998	7
	537999	7
	538000	7

Total number of mining claims covered by this report of work: 89

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s): All page #1

Calculation of Expenditure Days Credits

Total Expenditures: $ 9592.72 + 15 = Total Days Credits: 108

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date: Dec 15, 1983

Recorded Holder or Agent (Signature): Tom Gledhill

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: Tom Gledhill 21 Soudalwood Place, Don Mills, Ont M3B1L5

Date Certified: Dec 15/83

Certified by (Signature): Tom Gledhill

1362 (81/9)

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

The Mining Act

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s): Expenditures
Township or Area: Valora L. M2052
Claim Holder(s): Seagull Resources Ltd.
Prospector's Licence No.: T-927
Address: % Gledhill Consultant Inc 21 Sandalwood Place
Survey Company
Date of Survey (from & to): Day 1 Mo. 12 Yr. 80 — Day 6 Mo. 12 Yr. 83
Total Miles of line Cut: N/A
Name and Address of Author (of Geo-Technical report): DON MILLS, Ontario M3B1L5

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	· Electromagnetic	
	· Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	· Radiometric	
	· Other	
	Geological	
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	· Electromagnetic	
	· Magnetometer	
	· Radiometric	
	· Other	
	Geological	
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
Pa	436735	7	Pa	544433	7
	436736	7		544434	7
	436737	7		644435	7
	436738	7		544438	7
	436739	7		5379 39	7
	436740	7		5379 40	7
	436741	7		5379 41	7
	436742	7		5379 42	7
	436743	7		5379 43	7
	436744	7		5379 44	7
	436745	7		5379 45	7
	436746	7		5379 46	7
	436747	7		5379 47	7
	436748	7		5379 48	7
	436749	7		5379 49	7
	436750	7		5379 50	7
	436751	7		5379 51	7
	436752	7		5379 52	7
	537930	7		5379 53	7
	537936	7		5379 54	7
	537937	7		5379 55	7
	537931	7		5379 56	7
	537938	7		5379 57	7

Total number of mining claims covered by this report of work: See Sheet #2

COPY

Expenditures (excludes power stripping)

Type of Work Performed: Geochemical
Performed on Claim(s): Pa 227061, 436738, 436741
243805, 227062, 227063
Calculation of Expenditure Days Credits
Total Expenditures: $ 9592.72 + 15 = Total Days Credits: 108
Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date: Dec 15, 1983
Recorded Holder or Agent (Signature): Tom Gledhill

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: Tom Gledhill 21 Sandalwood Place, Don Mills Ont M3B1L5

Date Certified: Dec 16/83
Certified by (Signature): Tom Gledhill

1362 (81/9)

Sheet #2

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

The Mining Act

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s)	Township or Area
	Virlogo Lake
Claim Holder(s) Seagull Resources Ltd.	Prospector's Licence No.
Address	
Survey Company	Date of Survey (from & to) Day / Mo. / Yr. – Day / Mo. / Yr.
	Total Miles of line Cut
Name and Address of Author (of Geo-Technical report)	

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	· Electromagnetic	
For each additional survey: using the same grid: Enter 20 days (for each)	· Magnetometer	
	· Radiometric	
	· Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	· Electromagnetic	
	· Magnetometer	
	· Radiometric	
	· Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
Pa	537958	7
	537959	7
	537960	7
	537961	7
	537962	7
	537963	7
	537964	7
	537965	7
	537966	7
	537967	7
	537968	7
	537969	7
	537970	7
	537971	7
	537972	7
	537973	7
	537974	7
	537975	7
	537976	7
	537977	7
	537978	7
	537979	7
	537980	7

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	537981	7
	537982	7
	537983	7
	537984	7
	537985	7
	537986	7
	537987	7
	537988	7
	537989	7
	537990	7
	537991	7
	537992	7
	537993	7
	537994	7
	537995	7
	537996	7
	537997	7
	537998	7
	537999	7
	538000	7

Total number of mining claims covered by this report of work: 89

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s) See page #1

Calculation of Expenditure Days Credits

Total Expenditures: $ 9592.72 + 15 = Total Days Credits: 108

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only		
Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Branch Director

Date	Recorded Holder or Agent (Signature)
Dec 15, 1983	Tom Gledhill

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying	Date Certified	Certified by (Signature)
Tom Gledhill 21 Sandalwood Place, Don Mills, Ont M3B1L5	Dec 15/83	Tom Gledhill

1362 (81/9)

Initial Check — Jan 16, 84 M. Andersen.

Assessed

Approved Reports of Work sent out

Notice of Intent filed

Approval after Notice of Intent sent out

Duplicate sent to Resident Geologist

Duplicate sent to A.F.R.O.

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.6226

Mining Lands Comments

No copy - duplicates now here

☐ To: Geophysics

Comments

☐ Approved ☐ Wish to see again with corrections	Date	Signature

☑ To: Geology - Expenditures Mr. C Kustra

Comments

☒ Approved ☐ Wish to see again with corrections	Date Jan 20/84	Signature C Kustra

☐ To: Geochemistry

Comments

L.D.

☐ Approved ☐ Wish to see again with corrections	Date	Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

52 G/14 SE (100)

Nov. 30, 1983

Seagull Resources Ltd.
Sturgeon Lake Property
Valora Lake Area, Ontario

2.6326

Summary

The writer is in the process of summarizing the work to date on the above property. The company has the desire to file the work on geochemical analysis.

The company has chosen at this time to file only $ 9592.72 of work made up of geochem assaying and computer ~~analysis~~ analysis. There are other charges, engineering time, assays, drafting induced polarization surveys and gravity surveys which have not been included. These results will be in the summary report.

Respect fully submitted

Tom Gledhill P.Eng.

1 copy of report available now,
2nd copy available in January/84.

Invoice –

Terranuis Research Labs. Ltd.	5437.75
	236.40
	4812.45
Laval Univ. Centre - data processing	1920.12
	$9592.72

Tom Caldwell P. Eng.

TerraMin Research Labs Ltd.
14 - 2235 30th Ave. N.E.
Calgary, Alberta
T2E 7C7

13666

SOLD TO W.G. Timmins Expl. & Dev't. Ltd.

502 - 200 6th Ave. S.W.

Calgary, Alberta T2P 3K2

SHIP TO

DATE	SHIPPED VIA	FED. LICENCE NO.	PROV. LICENCE NO.	YOUR ORDER NO.	OUR ORDER NO.	TERMS	SALESMAN
Apr.9,1981	courier				81-30	30 days	

BACK ORDERED	QUAN. ORDERED	DESCRIPTION	QUAN. SHIPPED	UNIT PRICE	AMOUNT
		Sediment sample preparation and Cu, Zn, Ag analysis	33	3.75	123 75
		Re: Sturgeon Lake Project			

E & O E

DATE SHIPPED	B.O. FROM	B.O. TO
Apr.8,1981		

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE UNLESS WE ARE OTHERWISE ADVISED
N/A ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

INVOICE

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Sturgeon

13667

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DATE	SHIPPED VIA	FED LICENCE NO	PROV LICENCE NO	YOUR ORDER NO	OUR ORDER NO	TERMS	SALESMAN
Apr.8,1981	courier				81-36-A	30 days	

NO. ORDERED	QUAN ORDERED	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
		Sediment sample preparation and			
		Cu, Zn, Ag analysis	28	3.75	$ 105 00
		Re: Sturgeon Lake Project - Seagull			

E & O E

DATE SHIPPED: Apr. 9,1981

B/O FROM

B/O TO

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE
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NO ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

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DATE	SHIPPED VIA	FED LICENCE NO	PROV LICENCE NO	YOUR ORDER NO	OUR ORDER NO	TERMS	SALESMAN
Apr.8,1981	courier				81-27	30 days	

B/O UNDERED	QUAN ORDERED	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
		Drill Core sample preparation and			
		Si, Al, Ca, Mg, Na, K, Fe, Mn, Cu, Zn	36	12.00	432 00
		Drill Core sample preparation and			
		Cu, Pb, Zn	11	5.75	63 25
		Au, Ag (fire assay/AA)	11	6.50	71 50
					466 75
		Greyhound Express - sample shipment			32 65
					$ 599 40
		Re: Sturgeon Lake Project - Seagull			

E & O E | DATE SHIPPED | B/O TO ROW | B/O TO

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE UNLESS WE ARE OTHERWISE ADVISED
N/A ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

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DATE	SHIPPED VIA	FED LICENCE NO	PROV LICENCE NO	YOUR ORDER NO	OUR ORDER NO	TERMS	SALESMAN
Mar.26,1981	courier				81-20-B	30 days	

B/O ORDERED	QUAN ORDERED	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
		Core sample preparation plus:			
		Si, Al, Ca, Mg, Na, K, Fe, Mn, Cu, Zn	59	12.00	708 00
		Core sample preparation plus			
		Si, Al, Ca, Mg, Na, K, Fe, Mn, Cu, Zn, Pb	25	12.00	300 00
		Gold & Silver (FA/AA)	25	6.50	162 50
					1170 50
		Greyhound Express - sample shipment			37 45
					$1207 95

E & O E

DATE SHIPPED: Mar.26, 1981

B/O FROM

B/O TO

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE UNLESS WE ARE OTHERWISE ADVISED.
N/A ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

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Calgary, Alberta T2P 3K2

SHIP TO

DATE	SHIPPED VIA	FED LICENCE NO	PROV LICENCE NO	YOUR ORDER NO	OUR ORDER NO	TERMS	SALESMAN
Mar.23,1981	courier				81-18-B	30 days	

B/O ORDERED	QUAN ORDERED	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
		Re: Sturgeon Lake Proj. - Seagull Resources			
		Core sample preparation and			
		Si, Al, Ca, Mg, Na, K, Fe, Mn, Cu, Zn, Pb	40	12.00	480 00
		Au, Ag (Fire assay/AA)	40	6.50	260 00
		Core sample preparation and			
		Si, Al, Ca, Mg, Na, K, Fe, Mn, Cu, Zn	80	12.00	960 00
		Greyhound Express: sample bag shipment to Ignace, Ontario Feb.9			21 40
		sample shipment from Ignace, Ontario Mar.3			58 55
					$ 1779 95

E & O E

DATE SHIPPED: Mar. 23,1981

B/O FROM

B/O TO

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE UNLESS WE ARE OTHERWISE ADVISED

N/A ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

TerraMin Research Labs Ltd.
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Calgary, Alberta T2P 3K2

SHIP TO

DATE	SHIPPED VIA	FED. LICENCE NO	PROV. LICENCE NO	YOUR ORDER NO	OUR ORDER NO	TERMS	SALESMAN
Mar.30.1981	courier				81-21-B	30 days	

B/O QUAN ORDERED	QUAN ORDERED	✓	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
			Re: Seagull Project			
			Drill Core sample preparation plus			
			Si, Al, Ca, Mg, Na, K, Fe, Mn, Cu, Zn	52	12.00	624 00
			Drill Core sample preparation, Cu, Pb, Zn	19	5.75	109 25
			Au, Ag (fire assay/AA)	19	6.50	123 50
						856 75
			Greyhound Express - sample shipment			35 65
						$ 892 40

E & O E

DATE SHIPPED	B.O FROM	B/O TO
Mar. 30, 1981		

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE UNLESS WE ARE OTHERWISE ADVISED
N/A ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

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SHIP TO

DATE	SHIPPED VIA	FED LICENCE NO	PROV LICENCE NO	YOUR ORDER NO	OUR ORDER NO	TERMS	SALESMAN
Mar.30,1981	courier				81-40	30 days	

BACKORDERED	QUAN ORDERED	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
		Additional work done on samples with greater than 0.05% Cu and/or 0.1% Zn as requested by telephone.			
		Gold, silver analysis (Fire assay/AA)	16	6.50	104 00

E & O E

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE UNLESS WE ARE OTHERWISE ADVISED.
N/A ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

DATE SHIPPED	B/O FROM	B/O TO
Mar.30,1981		

TerraMin Research Labs Ltd.
14 - 2235 30th Ave. N.E.
Calgary, Alberta
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Calgary, Alberta

SHIP TO

DATE	SHIPPED VIA	FED LICENCE NO	PROV LICENCE NO	YOUR ORDER NO	OUR ORDER NO	TERMS	SALESMAN
Mar.13,1981	courier				81-21-A	30 days	

BACK ORDERED	QUAN ORDERED	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
		Sediment sample preparation	40	3.75	$ 150 00
		Re: Seagull Proj.			

#336. 3/4/81

E & O E | DATE SHIPPED | B.O FROM | B.O TO
Mar.16,1981

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE UNLESS WE ARE OTHERWISE ADVISED
N/A ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

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14 - 2235 30th Ave. N.E.
Calgary, Alberta
T2E 7C7

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Calgary, Alberta

SHIP TO

DATE	SHIPPED VIA	FED LICENCE NO	PROV LICENCE NO	YOUR ORDER NO	OUR ORDER NO	TERMS	SALESMAN
Mar.13,1981	courier				81-20-A	30 days	

BACK ORDERED	QUAN ORDERED	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
		Sediment sample preparation			
		Cu, Zn, Ag analysis	45	3.75	$ 168 75
		#336	3/4/81		

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE UNLESS WE ARE OTHERWISE ADVISED
N/A ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

E & O E	DATE SHIPPED	B/O FROM	B O TO
	Mar.13,1981		

TerraMin Research Labs Ltd.
14 - 2235 30th Ave. N.E.
Calgary, Alberta
T2E 7C7

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Calgary, Alberta

SHIP TO

DATE	SHIPPED VIA	FED LICENCE NO	PROV LICENCE NO	YOUR ORDER NO	OUR ORDER NO	TERMS	SALESMAN
Mar.13,1981	courier				81-18-A	30 days	

BACK ORDERED	QUAN ORDERED	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
		Sediment sample preparation			
		Cu, Zn, Ag analysis	60	3.75	$ 225 00

#336. 3/4/81

E & OE

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE UNLESS WE ARE OTHERWISE ADVISED
N/A ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

DATE SHIPPED	B/O FROM	B/O TO
Mar.13,1981		

13687

TerraMin Research Labs Ltd.
#4 - 2235 30th Ave. N.E.
Calgary, Alberta
T2E 7C7

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502 - 900 6th Ave. S.W.

Calgary, Alberta T2P 3K2

SHIP TO SAME

DATE	SHIPPED VIA	FED LICENCE NO	PROV LICENCE NO	YOUR ORDER NO	OUR ORDER NO.	TERMS	SALESMAN
May 13,1981	post				81-55	30 days	

BACK ORDERED	QUAN ORDERED	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
		Rock sample preparation plus			
		Si, Al, Ca, Mg, Na, K, Fe, Mn, Cu, Zn	91	12.00	1092 00
		Rock sample preparation plus	12	2.50	30 00
		Cu, Pb, Zn	12	2.25	27 00
		Au, Ag (FA/AA)	12	6.50	78 00
					1227 00
		Greyhound - waybill # D-136212 shipment			44 25
					$1271 25

#5041
5½/81

E & O E

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE UNLESS WE ARE OTHERWISE ADVISED.

N/A ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

DATE SHIPPED	B/O FROM	B/O TO
May 13, 1981		

13688

Terra Min Research Labs Ltd.
14 - 2235 30th Ave. N.E.
Calgary, Alberta
T2E 7C7

SOLD TO: W.G. Timmins Expl. & Dev't. Ltd.
502 - 900 6th Ave. S.W.
Calgary, Alberta

SHIP TO: SAME

DATE	SHIPPED VIA	FED LICENCE NO	PROV LICENCE NO	YOUR ORDER NO	OUR ORDER NO	TERMS	SALESMAN
May 13,1981	post				81-56	30 days	

BACK ORDERED	QUAN ORDERED	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
		Rock sample preparation	10	2.50	25 00
		Cu, Pb, Zn	10	2.25	22 50
		Au, Ag (FA/AA)	10	6.50	65 00
					112 50
		Greyhound Express Waybill # D-136213			19 65
					$ 132 15

E & O E

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE UNLESS WE ARE OTHERWISE ADVISED
N/A ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

DATE SHIPPED	B/O FROM	B/O TO
May 13,1981		

REORDER 7501SE MOORE BUSINESS FORMS

INVOICE

TerraMin Research Labs Ltd.
14 - 2235 30th Ave. N.E.
Calgary, Alberta
T2E 7C7

B Turgeon

13672

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502 - 900 6th Ave. S.W.

Calgary, Alberta

SHIP TO SAME

DATE	SHIPPED VIA	FED LICENCE NO	PROV LICENCE NO	YOUR ORDER NO	OUR ORDER NO	TERMS	SALESMAN
Apr.28,1981	courier				81-36-B	30 days	

BACK ORDERED	QUAN ORDERED	DESCRIPTION	QUAN SHIPPED	UNIT PRICE	AMOUNT
		Core sample preparation plus			
		Si, Al, Ca, Mg, Na, K, Fe, Mn, Cu, Zn	62	12.00	744 00
		Au, Ag (FA/AA)	11	6.50	71 50
		Cu, Pb, Zn	11	5.75	63 25
					$ 878 75
		Sample shipment via Greyhound Express			34 25
					$ 913 00
		Re: Seagull - Sturgeon Lake Project			

E & O E

DATE SHIPPED: Apr.28,1981

B/O FROM

B/O TO

BACK ORDERED ITEMS WILL BE SHIPPED AS SOON AS AVAILABLE UNLESS WE ARE OTHERWISE ADVISED

N/A ITEMS ARE NOT AVAILABLE AND HAVE NOT BEEN BACK ORDERED

LAVALIN CENTRE
201 909 - 5TH AVENUE SW
CALGARY ALBERTA T2P 3G5

To G. TIMMINS EXP & DEV LTD.

INVOICE NO: 81-05-027
INVOICE DATE: MAY 31/81

DATA PROCESSING SERVICES FOR THE MONTH OF MAY 1981

COMPUTER/TERMINAL USAGE			665.23
1 MAGNETIC TAPE			20.00
PAPER USAGE			41.14
DATA ENTRY		7.50 HRS @ 20.00/HR	150.00
OPERATING	T STEEVES	20.50 HRS @ 30.00/HR	615.00
PROGRAMMING	T STEEVES	11.25 HRS @ 35.00/HR	393.75
SYSTEM DESIGN	T STEEVES	1.00 HRS @ 35.00/HR	35.00
		TOTAL INVOICE	1,920.12

W. G. TIMMINS EXPLORATION & DEVELOPMENT LTD. № 336

~~901 - 909 - 5TH AVENUE S.W.~~
CALGARY, ALBERTA
PHONE 264-1415
502 900 6th Ave S.W.

April 6, 19 18

PAY TO THE ORDER OF TerraMin Lads Ltd $ 543.75

Five Hundred & Forty Three . 75 ----------- /100 DOLLARS

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CALGARY, ALBERTA T2P 3G5

13744, 13747, 13745

⑆02239⑈003⑆ 125⑈350⑈9⑈ ⑈0000051325⑈

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19

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PHONE 264-1415

02239-003 THE ROYAL BANK OF CANADA 5TH AVE. & 8TH ST. BRANCH MAY 1981 CALGARY 02239-003

May 5th 19

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/100 DOLLARS

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⑆02239⑈003⑆ 125⑈350⑈9⑈ ⑈0000181215⑈

FOR DEPOSIT ONLY

TERRAMIN RESEARCH LABS LTD.
14, 2235 - 30th AVENUE N.E.
CALGARY, ALBERTA T2E 7C7
(403) 276-8668

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CALGARY, ALTA.

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00059 010

JY '81 20
ROYAL BANK
ALBERTA CPC

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CALGARY, ALBERTA T2E 7C7
(403) 276-8668

39-3
MY '81 20
ROYAL BANK
ALBERTA CPC

13666
13667
13665
13658
13750
13660
13661

Your File: 83-118(TB)
Our File: 2.6226

January 5, 1984

Seagull Resources Ltd
c/o Gledhill Consultants Inc
21 Sandalwood Place
Don Mills, Ontario
M3B 1L5

Dear Sirs:

We have received data for Assaying submitted under Section 77(19) of the Mining Act R.S.O. for Mining Claims TB 436735 to 52 inclusive and PA 436735 et al in the Area of Valora Lake.

However, we have not received a duplicate. Please submit another copy to this office.

Upon receipt of the above information a statement of assessment work credits will be issued.

Yours very truly,

J.R. Morton
Acting Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

D. Kinvig:mc

cc: Mining Recorder
Sioux Lookout, Ontario

cc: Mining Recorder
Thunder Bay, Ontario

1984 01 10

Your File: 83-118
Our File: 2.6226

Mrs. Audrey Hayes
Mining Recorder
Ministry of Natural Resources
P.O. Box 5000
Thunder Bay, Ontario
P7C 5G6

Dear Madam:

We have received data for Assaying submitted under Section 77(19) of the Mining Act. R.SO. 1980 for Mining Claims TB 436735 to 52 inclusive in the Area of Valora Lake.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

J.R. Morton
Acting Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

A. Barr:mc

cc: Seagull Resources Ltd
c/o Gledhill Consultants Inc
21 Sandalwood Place
Don Mills, Ontario
M3B 1L5

1984 01 10 Our File: 2.6226

Mr. Albert Hanson
Mining Recorder
Ministry of Natural Resources
P.O. Box 669
Sioux Lookout, Ontario
P0V 2T0

Dear Sir:

We have received data for Assaying submitted under Section 77(19) of the Mining Act R.S.O. 1980 for Mining Claims PA 436735 et al in the Area of Valora Lake.

This material will be examined and assessed and a statement of assessment work credits will be issued.

We do not have a copy of the report of work which is normally filed by you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours very truly,

J.R. Morton
Acting Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

D. Kinvig:mc

cc: Seagull Resources Ltd
c/o Gledhill Consultants Inc
21 Sandwood Place
Don Mills, Ontario
M3B 1L5

April 5, 1984 Our File: 2.6226

Seagull Resources Ltd
c/o Gledhill Consultants Inc
21 Saaddlwood Place
Don Mills, Ontario
M3B 1L5

Dear Sirs:

RE: Data for Assaying submitted on Mining Claims
TB 436735 et al in the Area of Valora Lake

We have not received receipts or cancelled cheques required in order to assess work performed on Mining Claims listed above. Please provide receipts verifying payment of the expenditure of $22,500.00 and $9592.72 for Geochemical Analysis as soon as possible.

For further information, please contact Mr. F.W. Matthews at (416)965-8918.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-6918

M.E. Anderson:mc

cc: Mining Recorder
Sioux Lookout, Ontario

April 13, 1984 Our File: 2.6226

Seagull Resources Ltd
c/o GledHill Consultants Inc
21 Sandalwood Place
Don Mills, Ontario
M3B 1L5

Dear Sirs:

RE: Data for Assaying submitted on Mining Claims
TB 436735 et al in the Area of Valora Lake

Enclosed are the plans in duplicate for the above-mentioned survey. Please show all claim lines and numbers, and have the author of the report sign each map.

Also, we have received verification for expenses totalling $9592.72, but have not yet received receipts or cancelled cheques for the $22,500.00 expenditure claimed. This information is required (in duplicate) in order to assess the work performed.

When submitting this information, please quote file 2.6226.

For further information, please contact Mr. F.W. Matthews at (416)965-6918.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-6918

S. Hurst:mc

Encl.

FOR ADDITIONAL INFORMATION SEE MAPS:

52G/14SE-0063 #1-2

BIG ISLAND

STURGEON LAKE

MAINLAND

N

40W 36W 32W 28W 24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E

81-9

81-11

SEAGULL RESOURCES LTD.

DIAMOND DRILL PLAN

STURGEON LAKE BASE METAL PROPERTY

W. G. Timmins Exploration and Development Ltd.

1" = 100'

LEGEND

Tuffs

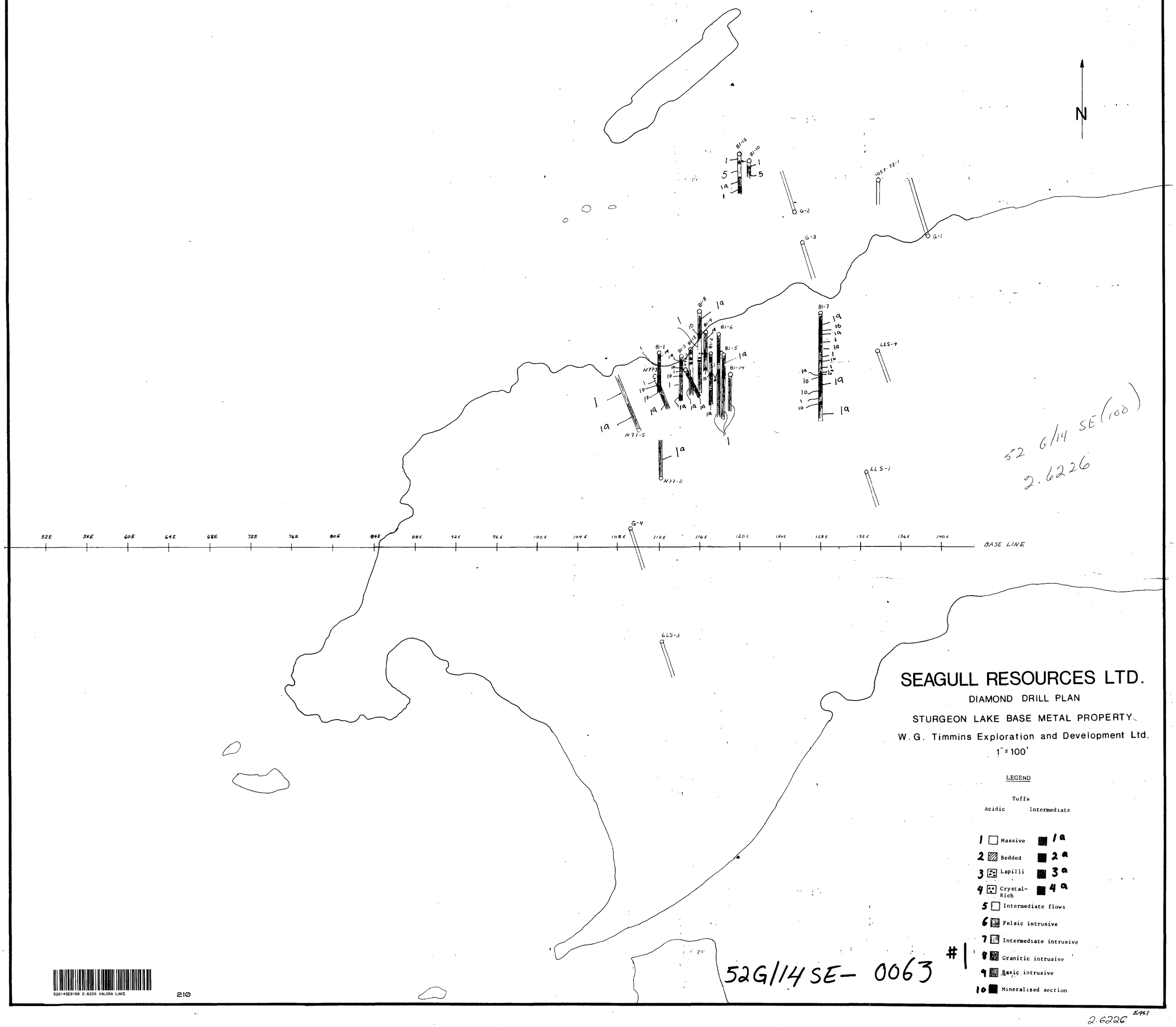
	Acidic	Intermediate
1	Massive	1a
2	Bedded	2a
3	Lapilli	3a
4	Crystal-Rich	4a
5	Intermediate flows	
6	Felsic intrusive	
7	Intermediate intrusive	
8	Granitic intrusive	
9	Basic intrusive	
10	Mineralized section	

200

52G/14SE-0063 #2.

WEST

2.6226



52 G/14 SE (100)
2.6226

SEAGULL RESOURCES LTD.

DIAMOND DRILL PLAN

STURGEON LAKE BASE METAL PROPERTY

W. G. Timmins Exploration and Development Ltd.

1" = 100'

LEGEND

	Tuffs	
	Acidic	Intermediate
1	Massive	1a
2	Bedded	2a
3	Lapilli	3a
4	Crystal-Rich	4a
5	Intermediate flows	
6	Felsic intrusive	
7	Intermediate intrusive	
8	Granitic intrusive	
9	Basic intrusive	
10	Mineralized section	

52G/14SE- 0063 #1

2.6226 E467