

GEOLOGICAL REPORT



42A02SE0002 2.14261 HOLMES

010

REGIONAL CONTEXT-

THE CLAIMS IN QUESTION LIE WITHIN & ALONG THE SOUTHERN & EASTERN CONTACTS OF THE CAIRO SYENITE STOCK. A SMALLER RELATED SYENITE STOCK EXISTS JUST TO THE EAST OF THIS AREA SEPARATED BY A NORTHWEST TRENDING ZONE OF ARCHEAN SEDIMENTS (CONGLOMERATE & WACKES) AND POSSIBLY A VOLCANIC INLIER. THE CAIRO STOCK IS COMMONLY PORPHYRITIC WITH MAFIC CONTENT IN THE 10-30% RANGE. HORNBLENDE, BIOTITE, CHLORITE & MAGNETITE ARE 1MM-5MM IN SIZE IN A BRICK RED TO PURPLE-PINK K-SPAR MATRIX.

TO THE SOUTH OF THE STOCK LIES A RHYOLITE-ANDESITE VOLCANIC SUITE. SEPARATING THE TWO LITHOLOGIES IS THE GALEY LAKE FAULT, A MAJOR LINEAMENT THOUGHT TO BE THE WESTERN EXTENSION OF THE KIRKLAND LAKE-LARDER LAKE BREAK. THIS BREAK STRIKES APPROXIMATELY 65° AND EVENTUALLY CUTS THROUGH THE SYENITE ON CLAIM 1048458. SUBPARALLEL ZONES OF MINERALIZATION ARE FOUND WITHIN THE STOCK AND IN SURROUNDING COUNTRY ROCKS TO THE SOUTH.

A NUMBER OF DIAMOND DRILL HOLES WERE DRILLED INTO THE VOLCANICS DUE TO A VERY HIGH MAG. READING RECORDED IN THE 1950'S AIRBORNE JUST TO THE SOUTH OF THE CLAIMS. HIGH MAGNETITE CONTENT WAS ATTRIBUTED TO BE THE CAUSE FOR THE ANOMALIE IN ONE OF THE VOLCANIC BEDS, THOUGH A HOLE DRILLED IN THE VICINITY ON THE STOCK CONTACT IN 1978 BY MINOREX YIELDED 60' OF "MASSIVE PYRRHOTITE-RICH ANDESITE IN CONTACT WITH THE SYENITE PORPHYRY". MINERALIZATION IS AS FOLLOWS:

JUL 30 1991

- #1 WHITE & GREY QUARTZ VEINS WITH OR WITHOUT TOURMALINE
- #2 QUARTZ-ANKERITE-CHLORITE ZONES MINING LANDS SECTION
- #3 HEMATITIC PYRITIC FRACTURING & FAULTING WITH ASSOCIATE BLEACHING OF SYENITE
- #4 SHEAR ZONES CONTAINING ABUNDANT SERICITE + FeS₂
- #5 TRACHYTE DYKE FRACTURING WITH QUARTZ VEIN STOCKWORKS
- #6 PORPHYRITIC SYENITE WITH SOME TRACHYTIC TEXTURES BOUNDED BY MAJOR FAULTS AND ALTERED WITH CHLORITE, FeS₂ & CHERTY GREY VEINING.

A COMMON OCCURRENCE WITHIN THE STOCKS IS THE ASSOCIATION OF GOLD AND CHALCOPYRITE. OTHER COMMON ASSOCIATE MINERALS REALISED ON THESE CLAIMS ARE TOURMALINE, MOLYBDENUM, GALENA, FLUORITE AND ~~REEDITE~~.

TOPOGRAPHY, VEGETATION & ACCESS

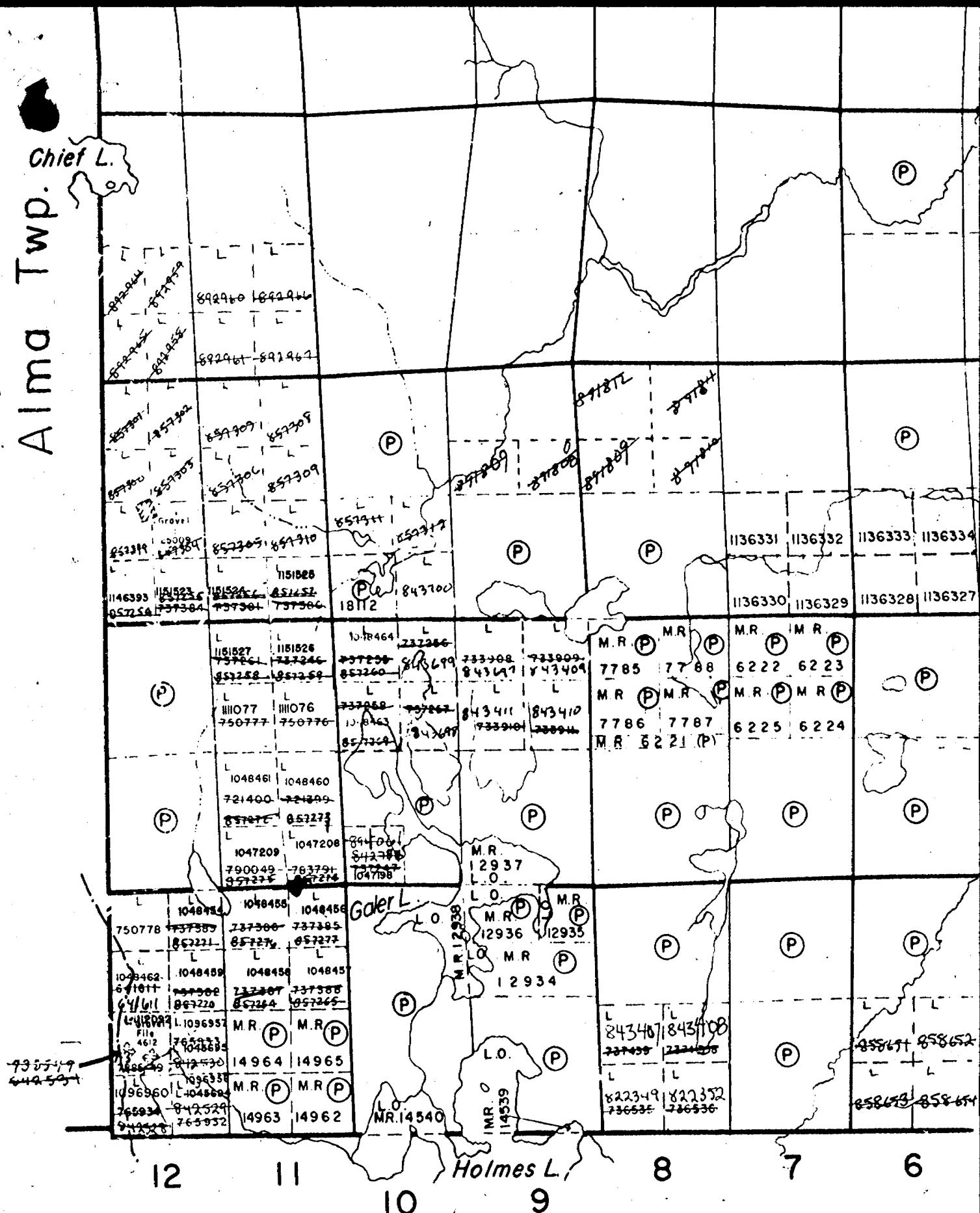
JUL 30 1991

THE CLAIMS ARE COVERED LARGELY BY SANDY MINING LANDS OVERBURDEN RANGING UP TO AT LEAST 60' IN DEPTH BUT THOUGHT TO AVERAGE ~10' WITH A THIN LAYER OF HUMUS ON TOP. Boulders are very common in overburden. There is ~ 5-10% OUTCROP. THE GROUND IS HILLY WITH ~30% SWAMPY LOW GROUND. THE CLAIMS ARE NOW LARGELY CLEAR CUT BUT HAD A COMBINATION OF BLACK SPRUCE, CEDAR, WHITE PINE, ALDER, BIRCH & POPLAR. ACCESS IS EXCELLENT ON WELL TRAVELED LOGGING ROADS JUST NORTH OF HIGHWAY

HOTEL ESPAGNE

Alma Twp. Ch

Chief L.



Flavelle T

LOCATION AND ACCESS

The property is located in Lots 10 and 11, Concession 1 and 2 of Holmes Township, Larder Lake Mining Division, as shown in Figure 3 of this report.

More specifically it is located 12.8 km northeast of the town of Matachewan and on the west side of Galer Lake. (Figures 1 and 2)

Access to the property is ideal year round as a good gravel road runs through the claim group. This gravel road runs north off of Highway 66 at Middleton lake. Refer to Figure 2 of this report.

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CLAIM GROUP

MINING LANDS SECTION

The claims covered by this current survey are shown in Figure 3 of this report and are as follows:

L1047208

L1048455

L1047209

L1048456

L1047198

L1048457

L1048458

The status of these claims were not known at the time of this writing.

ALMA TWP.

IV
III
II
I

HOLMES TWR

1047209 1047208 1047208
1048456 1048456
1048458 1048457

GALER
LAKE

HOLMES 9
LAKE

12

11

10

8

7

FLAVELLE TWP.



EXSICS EXPLORATION LTD.

P.O. Box 1880, P6N-7X1
Suite 13, Hollinger Bldg, Timmins Ont.
Telephone: 705-267-4151

CLIENT: HANSON - SUTTON CLAIMS

PROPERTY: HOLMES TOWNSHIP PROPERTY

TITLE:

CLAIM SKETCH

Date: JULY 1990

Scale: 1"=1/2 mile

NTS:

Drawn: P.G.

Interp:

Job No. IP-366

Fig. 3

GEOLOGY

A TRENCHING PROGRAM WAS UNDERTAKEN TO FOLLOW UP ON RESULTS FROM THE COMBINATION OF EARLIER STRIPPING AND DIAMOND DRILLING. THE INITIAL TRENCHING/STRIPPING USING A D-7 BULLDOZER PROVED LARGELY INADEQUATE DUE TO OVERTURDEN DEPTH. A 690 JOHN DEERE BACKHOE SUBSEQUENTLY ALLOWED US TO REACH BEDROCK IN ALL BUT ONE TRENCH. DUE TO THE PRESENCE OF LARGE BOULDERS IN THE OVERTURDEN AT TRENCH #22 (SEE GEOLOGICAL COMPILATION MAP FOR INDIVIDUAL TRENCH NUMBERS), THE TEETH WERE LEFT ON THE BACKHOE BUCKET. THIS NECESSITATED LATER CLEANING BY HAND. DEEP CUTS IN THE UNEVEN BEDROCK PROFILE COULD NOT ALWAYS BE REACHED. THE LARGEST PROBLEM WAS EXTREME RAINFALL IN SUMMER OF 1990. MANY TRENCHES WERE IN FAIRLY LOW AREAS AND THOUGH OVERTURDEN GENERALLY WAS 5-15 FEET IN DEPTH, PUMPING OF WATER WAS NEEDED TO SAMPLE BOTTOMS. THIS ARDUOUS TASK COULD NOT ALWAYS BE PERFORMED. CHANNEL SAMPLING BY ROCK SAW FOLLOWED.

AN I.P. GEOPHYSICAL SURVEY AND A MAG SURVEY PROVIDED FOR MANY OF THE TARGETS ATTEMPTED. A GRID SYSTEM WAS PUT IN PLACE WITH LINES EVERY 200' IN E-W DIRECTION AND STATIONS EVERY 100' N-S. THE FULL RESULTS OF THE I.P. SURVEY ARE BEING BROUGHT FORWARD FOR ASSESSMENT CREDIT UNDER THE NEW MINING ACT REGULATIONS BUT SOME RESULTS ARE INCLUDED HEREIN AS THEY HAVE A BEARING ON BOTH GEOLOGICAL INTERPRETATION AND TRENCHING.

RESULTS:

I.P. SURVEY

THE I.P. SURVEY SHOWED QUITE WELL THE WIDE ALTERATION ZONE IN TRACHYTE ON LINES 16-COW & 12-COW FROM 2N TO 2S (SEE CHARGEABILITY PROFILE). THIS ZONE COULD EXTEND TO 2000W BUT UNFORTUNATELY A DIABASE DIKE (SUBSEQUENTLY FOUND VIA TRENCHING) RUNS ALONG THIS LINE AND HAS OBSCURED THE READINGS. THE CHARGEABILITY PROFILE CLEARLY SHOWS THE RHODLITE-SYENITE

CONTACT WHEREIN IS LOCATED THE KIRKLAND LAKE-LARDER LAKE BREAK AT LINE 0, 11S TO LINE 800W, 13½S. THE BEST CONDUCTOR APPEARS NEAR THIS BREAK AT LINE 0, 9½S (AT DEPTH). WE PUT ACROSS A TRENCH ON SURFACE (DISCUSSED LATER) THE FAULT COULD CONTINUE, ACROSS THE CLAIMS SURVEYED, TO LINE 2400W, 18½S AS INDICATED BY A WEAK CONDUCTOR (COLOURED GREEN). THIS CONDUCTOR AND THE OVERLAPPING MAGNETIC LOW (SEE MAGNETIC SURVEY) DO NOT CORRESPOND WITH THE UNMINERALIZED FAULT STRIPPED BY SYLVA IN 1979 AND FOUND TO BE PRODUCING WATER. WE PUT A TRENCH ON EITHER SIDE OF THIS FAULT AND FOUND WATER PRODUCED IN BOTH (SEE COMPILATION MAP II). STRIPPING PRODUCED WHAT MIGHT BE THE FAULT AT 1100W, 16S WHERE A QUARTZ VEIN CARRYING TOURMALINE HAD PREVIOUSLY BEEN REALISED. A CHERTY GREY SILICIFIED VEIN FORMS THE WALL ROCK OF A FAULT (AND ASSAYED OVER 1.2 GRAMS/TONNE OVER 0.3 METRES), AND IS ADJACENT TO A PORPHYRITIC DYKE. THIS DYKE HAS SIMILARITIES TO ONE VIEWED THIS SUMMER ON THE SOUTH SHORE OF GALER LAKE WHERE A GOLD SHOWING IS LOCATED IN THE FAULT ZONE (WIDE HERE, HEAVY SHEARING - SEE HOLMES-BURT MAP #2078). SEVERAL OTHER ZONES WERE IDENTIFIED BY THE I.P. SURVEY AS BEING OF INTEREST AND MOST WERE TRENCHED WITH A BACKHOE.

MAGNETIC AND GEOLOGICAL SURVEY

A PROTON MAGNETOMETER AS SUPPLIED BY SERVICES EXPLORATION WAS USED OVER A 5 DAY PERIOD. CLAIM 1047198 WAS NOT SURVEYED DUE TO TIME LIMITS AND GENERAL LACK OF I.P. RESPONSE. LINE 1600W, Baseline was the point used as a reference point. Here readings were taken at the beginning and end of each day with the difference from the average plotted. Generally a highly magnetic zone is found in the northwest quadrant of the area of interest. This syenite which is full of magnetite, biotite, and chlorite is coloured brown, and is often rusted, has a very sharp north-south contact on line 1700W, 15N-2N and at line 1200W, 1S-15S. This most likely is a 360° fault which has upthrust one side or the other. This explains the sharp change in the I.P. profile of the Larder Lake-Kirkland Lake break, described above, from 0W, 11S ~~to~~^{and} 800W, 13½S to points west of there. It also explains the 360° swamp at 1000W, 15S-17S. The rhyolite outcrops only on the west side of this fault and thus no comparison can be made with that to the east. The syenite on either side is different generally, as that to the west is finer grained, contains much less mafic material, more hornblende, less chlorite and magnetite (although some exists), and no biotite. The only rusting is of the trachyte zone (site #7). Of major significance is the offsetting of this 360° fault at 1S to 2N between lines 1200W to 1700W (or 500') by the site #7 deform-

ATOMIC STRUCTURE. THIS MAJOR MOVEMENT (SINISTRAL) HAS IMPLICATIONS FOR CREEP DEPOSITION. A LIKELY STRIKE DIRECTION WOULD BE 80° (THAT OF THE VEINS). OF INTEREST ARE THE STRONG MAGNETIC LOWS AT 2000W, $3\frac{1}{2}S$ AND AT 400W, 1S - 200W, BASELINE AND MODERATE LOWS AT 1000W, 2S AND 1400W, $2\frac{1}{2}S$ WHICH ALIGN THEM UP AT 80° . THIS COULD BE A NEW ZONE.

ANOTHER PARALLEL ZONE OCCURS @ 1000W, BASELINE THROUGH 1200W, $\frac{1}{2}S$ AND THROUGH TO 2200W, 1S. YET ANOTHER PARALLEL ZONE IS @ 800W, 3N THROUGH 1400W, $1\frac{3}{4}N$ AND 1800W, $\frac{1}{2}N$.

THE MAG SURVEY BACKS UP THE I.P. SURVEY WITH THE RHYOLITE/SYENITE CONTACT AND THE CONGRUENT KIRKLAND LAKE - LARDER LAKE FAULT CLEARLY VISIBLE. THE EXTENSION OF THE FAULT WESTWARD CAN BE SEEN BY A MAGNETIC LOW AT 1200W, 16S THROUGH TO 2400W, 19S. THIS COULD BE A ZONE OF HIGH FLUID FLOW IN A SHEAR ZONE WITH POTENTIAL FOR A MINERAL DEPOSIT. UNFORTUNATELY, EITHER THE ROAD COVERS MOST OF THIS STRIKE OF 1200', OR SWAMP COVERS IT. WE COULD ONLY TRENCH ON THE LOCATION ALREADY NOTED (LINE 1100W, 16S) WHERE THE MAGNETIC LOW IS NOT AS PROMINENT.

AN INTERESTING FEATURE OF THE MAG SURVEY IS THAT IT DOES NOT PICK UP EITHER THE DIABASE DYKES ON LINES 2000W (EXCEPT FOR A WEAK HIGH AT $6\frac{1}{2}N$) OR 1200W (EXCEPT FOR 1N), OR THE RHYOLITE/SYENITE CONTACT (OTHER THAN FROM 0, $10\frac{1}{2}S$ TO 1000N, 15S. OBVIOUSLY THE SYENITE (THAT CONTAINS MAGNETITE) AND THE RHYOLITE ARE EQUALLY NON TO WEAKLY MAGNETIC. THE RHYOLITE DOES HOWEVER CONTAIN TWO STRONG, OPPOSITE ANOMALIES. AT THE EXTREME SOUTH (LINES 1200W-2000W @ 24S-26S) IS A VERY STRONG MAG LOW (STRONGEST ON PROPERTY). THIS COULD BE EXTENDED TO LINE 0, $21\frac{1}{2}S$ STRIKING PARALLEL TO THE SYENITE-RHYOLITE CONTACT. THE I.P. SURVEY DID NOT COVER THIS AREA IN THE EXTREME SOUTH AS IT WOULD HAVE REQUIRED ADDITIONAL LINE CUTTING INTO ADJACENT CLAIMS. A SHEAR ZONE IS A POSSIBILITY @ 80° OR 75° . THE SECOND ANOMALY IS A MAG HIGH (HIGHEST ON THE PROPERTY) AT LINE 0 INTO LINE 1000W ON THE EXTREME SOUTHERN EDGE. POSSIBLY A BIF IS LOCATED IN THE VOLCANICS OR A MAFIC VOLCANIC UNIT IS PRESENT. THE TREND IS AGAIN EAST-WEST; A DIABASE IS THUS UNLIKELY THE CAUSE.

THE GEOLOGICAL MAPPING SUCCESSFULLY OBTAINED 5-10² OUTCROP IN THE SYENITES BUT UNFORTUNATELY THE RHYOLITES OF THE SOUTH ARE ENTIRELY COVERED BY OVERBURDEN AND LOW, SOMETIMES SWAMPY, GROUND IS CHARACTERISTIC. TWO NEW MINERALIZED OUTCROPS WERE DISCOVERED DURING THE 1990 PROGRAM. THEY ARE SHOWN ON GEOLOGICAL COMPILATION MAP #1. WEST OF THE ACCESS LOGGING ROAD AND NW OF "SITE #6" AN OUTCROP OF SYENITE IS LACED WITH 90° STRIKING FRACTURES WHICH HAVE HEMATIZED AND/OR SILICIFIED THE COUNTRY ROCK AND BROUGHT IN 5-8% FINELY DISSEMINATED FeS₂. WE OB-

THROWN ASSAYS AS HIGH AS 1.35 g/t over 0.2 METRES. THESE FRACTURES CONTINUE ACROSS THE ROAD. THE SECOND SHOWING HAS SIMILAR FRACTURES IN SYENITE BUT THE WIDTH OF THE RESULTANT SHEARING IS UP TO (4 FEET) 1.2 METRES WIDE AND THE ALTERATION INCLUDES 5% CHALCOPYRITE, 5% FeS₂, 1% GALENA, AND SOME MOLYBDENUM. THE BEST ASSAY ATTAINED IN THIS 100° STRIKING ZONE WAS 8.84 g/t OVER 0.5 METRES.

TRENCHING:

THE RESULTS OF TRENCHING (CONSULT GEOLOGICAL COMPILATION MAPS I & II & INDIVIDUAL SITE MAPS) ARE AS FOLLOWS:

TRENCH 1 - PURPOSE - TO TRENCH POSSIBLE SHEAR - SAMPLES WERE PREVIOUSLY TAKEN ON WHAT COULD BE BOULDERS ALIGNED AT 80° AND ASSAYING UP TO 0.84 g/t OVER 0.3 METRES.

-RESULTS - NO MINERALIZATION BUT A 1.0 METRE SHEAR AT 90° STRIKE CONTAINS BARREN WHITE QUARTZ

TRENCH 2 & 3 - PURPOSE - 2 360° TRENCHES WERE FLAGGED TO CUT MINERALIZATION FURTHER WEST THAN ALREADY PROVEN; BACKHOE OPERATOR TRENCHED TO OPPOSITE FLAGS

-RESULTS - TRENCH 3 IS TOTALLY IN WATER; TRENCH 2 CONTAINS A TRACHYTIC SHEAR WHICH CONTAINS 10% FINE FeS₂ & ABUNDANT HEMATIZATION; ASSAYS OF 0.5 g/t OVER 0.7 METRES; NORTHERN MOST PART IS IN WATER

TRENCH 4 - PURPOSE - TO INTERSECT SOUTHERN MOST CHERTY VENING OF DDH 89-3

-RESULTS - THE SOUTHERN PORTION IS IN WATER; A 0.2 METRE QUARTZ VEIN CONTAINING 10% CHALCOPYRITE STRIKES PARALLEL TO THE CHERTY VEINS BUT ASSAYED ONLY 0.9/0.2

TRENCH 5 - PURPOSE - TO FURTHER DELINEATE ALTERATION ZONES - RESULTS - SEVERAL WIDE ZONES WERE UNCOVERED. THAT WHICH IN DDH 89-4 ASSAYED 2.0 g/t OVER 1.2 METRES WAS PICKED UP ON THE SOUTHERN END WITH BEST ASSAYS BEING 0.62 g/t OVER 0.3 METRES AND 0.61 g/t OVER 0.5 METRES. HEAVY ALTERATION IS PREVALENT AND 5-10% FeS₂ IS NOTED. TWO NEW ZONES 17 & 13 METRES NORTH OF THIS SOUTH ZONE ARE 2.2 AND 1.2 METRES WIDE. THE ONE FURTHEST NORTH AVERAGES 0.86 g/t OVER THE 2.2 METRES WITH A HIGH OF 1.49 g/t OVER 0.5 METRES. THE OTHER ONE HAS A HIGH OF 1.55 g/t OVER 0.3 METRES CENTRED ON A FAULT.

TRENCH 6 - PURPOSE - FOLLOW UP ON DDH 89-3 ASSAYS AT BEGINNING OF HOLE,

-RESULTS - THIS TRENCH UNEARTHED A VERY HIGHLY ALTERED TRACHYTE

W/ TWO VERY STRONG FAULTS ON THE SOUTH CONTACT EMANATING WATER. THIS ZONE IS AT LEAST 8 METRES wide up to the north where it is under water. THE ZONE AVERAGES 0.92 g/t over 6.2 METRES ON THE NORTH (0.04 oz/t over 20.3 FEET) WITH HIGHS OF 2.95 g/t over 0.3 METRES AND 1.51/0.3. SEVERAL CHERTY GREY VEINS ARE PRESENT.

TRENCH 7 - PURPOSE - TO EXTEND THE KNOWN ALTERATION OF DDH 89-3 NORTH AND TO UNCOVER THE MINERALIZATION ON SURFACE AT THE HOE COLLAR.

- RESULTS - THE SOUTHERN PART OF THE TRENCH IS IN WATER AND ALTHOUGH REPEATED ATTEMPTS WERE MADE TO UNCOVER BEDROCK, WATER IN-FLOW WAS TOO HEAVY IN THIS ERODED AREA. THE TRENCHING NORTH UNCOVERED MANY NARROW CHERTY GREY VEINS AND TRACHYTYC SHEARS. LOW ASSAYS WERE RETURNED. SEVERAL AREAS WHICH ARE ON STRIKE WITH KNOWN ZONES ARE ERODED TO CREVICE DEPTHS. DIGGING OUT OF THESE AREAS IN THIS ROUGH TOPOGRAPHY COULD NOT BE COMPLETED DUE TO TIME CONSTRAINTS.

TRENCHES 8, 9, 10, 11 - PURPOSE - AS ABOVE (DDH 89-3)

- RESULTS - THESE TRENCHES WERE ALL UNDER WATER. THE INITIAL HOPE WAS THAT TRENCHES 8 & 9 AT LEAST WERE ON DRY GROUND AND 6' OF OVERTBURDEN REMOVAL MIGHT NOT LEAD TO MUCH WATER INFILLING. DESPITE WATER PUMP USE, THE INFILLING WAS TOO HEAVY

TRENCH 12 - PURPOSE - SAME AS ABOVE

- RESULTS - MOST OF THE OUTCROP IS DIABASE WHICH HAS ALTERED THE SYENITE QUITE STRONGLY. A 1.0 METRE CHERTY WHITE QUARTZ VEIN WITH 5% FES₂ AND 2% CHALCOPYRITE STRIKES 80°. HIGHEST ASSAY ON IT WAS 0.3 g/t

TRENCH 13 - PURPOSE - EXTENSION OF MINERALIZATION EAST & SOUTH

- RESULTS - THE SYENITE IS HIGHLY FRACTURED CARRYING NUMEROUS TRACHYTIC SHEARS. THE BEST ASSAY WAS 0.96/0.3 ON THE SOUTHERN MOST EDGE WHERE A SHARP DROP-OFF OF 6' OCCURS (FAULT) AND WATER HAS INFILLED.

TRENCH 14 - PURPOSE - TO EXPOSE BEDROCK TO EXTEND ZONES SOUTH.

- RESULTS - BASIC SYENITE (UNALTERED) WAS UNEARTHED

TRENCH 15 & 16 - PURPOSE - LOCATED TO TEST FOR POSSIBLE TRACHYTIC ZONE (BOULDER FOUND NEXT TO SKIDDER ROAD TO THE SOUTH CONTAINED 10% FES₂ & ASSAYED 0.59 g/t) * APPEARED SIMILAR TO THE OUTCROPS ON THE ROAD.

- RESULTS - UNALTERED SYENITE NOT RUSTY IN APPEARANCE AND WITHOUT LARGE

MAGNETIC CRYSTALS PRESENT; NO STRUCTURE PRESENT.

TRENCH 17 - PURPOSE - EXPOSE POSSIBLE SHEAR ZONE NOTED IN I.P. SURVEY.
- RESULTS - 20' OVERTBURDEN; DID NOT HIT BEDROCK.

TRENCH 18 - PURPOSE - TO EXPOSE ANY STRUCTURE EVIDENT DOWN HILLSIDE AND ON
STRIKE WITH 2 E-W. TOPOGRAPHIC LOWS TO THE WEST

- RESULTS - CONSULT MAP #15; A CONTACT ZONE BETWEEN THE MAGNETITE
AND BIOTITE RICH, RUSTY SYENITE AND TRACHYTIC PORPHYRITIC SYENITE WAS
UNCOVERED AND STRIKES 65°. PARALLEL QUARTZ AND CHERTY VEINS OCCUR.
CHALCOPYRITE IS PRESENT (~5%). BLEACHING & ALTERATION IS NOTEABLE. AN INTER-
ESTING NOTE TOO IS THE PRESENCE OF ASBESTOS IN THE SYENITE ALONG
FRACTURES; THE BEST ASSAY WAS 0.8g/t OVER 0.5 METRES.

TRENCH 19 - PURPOSE - UNCOVER ZONE NEAR AT BEGINNING OF 89-2 CHARACTERIZED
BY QUARTZ-ANKERITE.

- RESULTS - SEVERAL THIN QUARTZ-ANKERITE VEINS WERE UNCOVERED. A WIDER
FRACTURED ZONE OF HIGH HEMATIZATION AND QUARTZ-ANKERITE VEINLETS IS PRESENT
WHICH ASSAYS 0.95g/t OVER 1.0 METRE. THE BEST OUTCROP ASSAY WAS 2.13/0.2
WHERE THERE IS HEAVY FeS₂ CONCENTRATIONS. PERHAPS THE MOST INTERESTING
RESULT WAS THE UNCOVERING OF A HUGE BOULDER WHICH IS COMPLETELY MINERAL-
IZED CHERTY VEINING AND SILICIFICATION CONTAINING 10% FeS₂ & 2% GALENA.
THIS MIGHT EXPLAIN THE RESULTS PREVIOUSLY REPORTED FROM THE NEARBY PIT.
WHERE IT IS FROM IS UNCERTAIN. THE MINERALIZATION PRESENT IS NOT
ECONOMICAL AND THE WIDER QUARTZ-ANKERITE FROM THE DDH MUST BE A FUNCTION
OF PINCHING & SWELLING.

TRENCH 20 - PURPOSE - TO FURTHER DELINEATE VEINING FROM DDH-2

- RESULTS - SYENITE IS UNALTERED EXCEPT AT THE SOUTH END WHERE A
SUDDEN DROP-OFF OCCURS; 3.4% FeS₂ IS ALONG 20° FRACTURES BUT DID NOT RUN.

TRENCH 21 - PURPOSE - TO INVESTIGATE THE BEST I.P. CONDUCTOR ON THESE CLAIMS ON
SURFACE (THOUGH IT IS AT DEPTH) TO FIND ITS EXPRESSION.

- RESULTS - THE SYENITE IS INTENSELY FOLIATED, HEMATIZED AND SHEARED (ALONG
CHLORITE SEAMS OF $\frac{1}{8}$ "") ON THE SOUTH SIDE OF THE TRENCH. THE ONLY MINERAL-
IZATION FOUND WAS A 0.7 METRE WIDE WHITE TO CLEAR QUARTZ VEIN CONTAINING
2% FINE FeS₂ THAT ASSAYED 0.16/0.7m.

TRENCH 22 - PURPOSE - TO INVESTIGATE THE RHYOLITE ON A SMALL HILL & TO FIND

~~MANY EXPRESSION OF THE LARDER LAKE - KIRKLAND LAKE FAULT (BREAK)~~
- RESULTS - NO BEDROCK WAS FOUND; THE HILL IS ALL GLACIAL TILL.

~~TRENCH #23, #24 & #25~~ - PURPOSE - TO INTERSECT THE FAULT IN THE OUTCROP IN ORDER TO SEE IF IT BECOMES MINERALIZED ALONG STRIKE.

- RESULTS - THE FAULT WAS INTERSECTED IN #23 & #24 AND PRODUCES WATER. ALL THREE TRENCHES WERE IN THE APHANITIC PALE GREY-LIGHT GREEN TO WHITE RHYOLITE AND NONE CONTAINED PYRITE OR ALTERATION ZONES, ALTHOUGH SHEARING AND FRACTURING WERE UNIQUitous.

~~TRENCH #26~~ - PURPOSE - TO CHECK I.P. CONTACT NOTED IN REPORT.

- RESULTS - DIABASE DYKE UNEARTHED

OTHER TRENCHING - ON CLAIM 1097198 (TO THE NORTHEAST OF THE MAGNETIC & GEOLOGICAL SURVEYS), A TRENCH WAS COMPLETED AS ORIGINALLY PROPOSED AT THE SITE OF A GROUPING OF ANCIENT TRENCHES. THE OVERTONED WAS TOO DEEP AT THE FIRST SITE AND 15' EXISTED AT THE SECOND. THE MINERALIZED BOULDERS FOUND EVERYWHERE IN THE IMMEDIATE AREA PROVED NOT TO BE FROM HERE AS UNALTERED PINK SYENITE WITH FRESH HORNBLENDE WAS FOUND.

ON CLAIM 641611, TRENCHES WERE DUG ON EITHER SIDE OF THE ROAD AT SITE #6 IN ORDER THAT THE HIGH-GRADE FRACTURE SYSTEM PREVALENT THERE MIGHT BE EXTENDED AND SAMPLED. THE BEDROCK TOPOGRAPHY IS VERY UNEVEN HERE AND NOT ALL CREVICES COULD BE FREED OF HUGE BOULDERS, HOWEVER TRENCHES WERE THOUGHT BETTER HERE THAN IN THE FOREST AS VALUABLE TIMBER WOULD HAVE HAD TO BE DESTROYED. - RESULTS - A 30.30 g/t OVER 0.2 METRES ASSAY WAS ATTAINED ON THE EAST SIDE OF THE ROAD (1.102 g/t) OPPOSITE TO THE 13.49 g/t OVER 0.2 METRE SAMPLE (0.396 g/t) ON THE WEST SIDE. AS WELL, SEVERAL NARROW QUARTZ-CHERTY VEINS AND FRACTURES WITH ABUNDANT FeS₂ ASSAYED ANOMALOUSLY (1.356%) FURTHER TO THE NORTH.

~~TRENCH #27~~ - PURPOSE - TO EVALUATE QUARTZ-TOURMALINE VEIN c 65° STRIKE. RESULTS - THE REAL LARDER LAKE - KIRKLAND LAKE BREAK WAS THOUGHT TO BE INTERSECTED (ON STRIKE WITH MAG & I.P. RESULTS INDICATIVE OF ZONE) CHERTY GREY VEINING ALONG PORPHYRITIC SYENITE DYKE & RHYOLITE CONTACT CARRIES 102 FINE DISSEMINATED FeS₂ & QUARTZ VEIN INTERSECTS THIS A LITTLE EAST (NOT VISIBLE) LOW 0.59 g/t ASSAYS IN CHERT.

CONCLUSIONS & RECOMMENDATIONS:

THE I.P. SURVEY INDICATES A WIDE ANOMALY AT LEAST 400 FEET X 400 FEET AND LOCATED ON LINES 1600W & 1200W CENTRED ON THE BASE LINE OVER THE ZONES OF CHERTY VEINING AND TRACHYTE SHEARING AND HEAVY ALTERATION. A DIABASE ON 2000W PRECLUDED EXTENDING IT WEST. A PLUNGE TO THE ZONE IS NOT YET APPARENT. A WEAK I.P. ZONE ON LINE 800W IS NOTED AT 1N & 2N, MAY EXTEND THE ZONE EAST. THE I.P. ZONE SURVEY COINCIDES WITH THE MAGNETIC SURVEY TO SHOW THE SYENITE-RHYOLITE CONTACT ALONG WHICH THE KIRKLAND LAKE-LARDER LAKE BREAK RUNS. THE BEST I.P. CONDUCTOR IS LOCATED NEAR THIS FAULT, AT DEPTH, ON LINE 0. THIS SHOULD BE DRILLED. AN I.P. TRACE OF ANOMALOUS CONDUCTOR HIGHS EXTEND THE FAULT TO THE EAST COINCIDING WITH MAG LOWS PARTICULARLY AT LINE 1200W, 16S AND 1600W, 17S. THE TWO POINTS RUN THROUGH A VERY ANOMALOUS MAG LOW AT 1400W, 16½S. THIS WOULD BE AN EXCELLENT DRILLING TARGET (TRENCHING CANNOT BE CARRIED OUT DUE TO SWAMP & ROAD LOCATIONS).

THE MAG SURVEY PROVIDES EVIDENCE FOR MOVEMENT ALONG THE SITE #7 TRACHYTE ALTERATION ZONES. THE SYENITE STOCK CAN BE SEEN AS BEING UP OR DOWNWARD THRUST BY A 360° FAULT FOLLOWED BY SINISTRAL MOVEMENT ALONG THE BASELINE. 80° FAULTS UNEARTHED BY STRIPPING (WHICH PRODUCE WATER) AND THE PRESENCE OF 80° MAGNETIC LOW HORIZONS ALONG THIS BASELINE SUBSTANTIATE THIS. TRENCHING INDICATES AT LEAST A 45 METRE (148 FEET) WIDE ZONE OF INTENSE ALTERATION CARRYING VALUES AVERAGING 0.5-10 GRAMS/TONNE IN THE INDIVIDUAL HORIZONS. ONE SUCH HORIZON AVERAGES 0.92/6.2 (OR 0.04 OZ/FT OVER 20.3'). THE HIGHEST ASSAY RECORDED HERE IN 1990 WAS 2.95 g/t OVER 0.3 METRE. THE CHERTY VEIN BOULDER FOUND IN 1988 WHICH ASSAYS 6.51/0.71 IS FROM THIS AREA BUT WILL REQUIRE DRILLING TO DELINEATE THE VEIN'S BEDROCK LOCATION. A CHALCOPYRITE-COVERED WHITE QUARTZ VEIN FOUND IN TRENCH #4, ALTHOUGH OF LOW ASSAY, GIVES AN ALTERNATE FOCUS FOR EXPLORATION. THE VEINS ON THE SOUTH END OF DDH 89-3 STILL REQUIRE DEFINITION AS THEY ASSAY IN THE 1.0-1.5 g/t RANGE. DRILLING IS NOW NEEDED IN THIS ENTIRE SITE #7 AREA.

OTHER TARGETS OF INTEREST WOULD INCLUDE THE MAG LOWS & HIGHS IN THE RHYOLITES ALONG THE SOUTHERN EDGE OF THE CLAIMS AS THEY ARE THE HIGHEST AND LOWEST MAG RESULTS AND COULD POSSIBLY INDICATE A BIF (OR MASSIVE SULPHIDE) AND SHEAR ZONE RESPECTIVELY. THE LOW (MAG) ALONG LINE 0, BASELINE TO LINE 100, 1S SHOULD BE DRILLED. THE EXTENSION OF THE HIGH GRADE ZONE ON THE ROAD ON CLAIM #6A16/11 WHICH ASSAYED 30.30/0.2 SHOULD BE THE OBJECT OF SHALLOW DRILL HOLES. A NEW ZONE WAS DISCOVERED

ON CLAIM #641611 WITH AN AVERAGE GRADE OF 8.6 g/t (0.07 oz) OVER 1.2 METRES (4 FEET) WITH A HIGH OF 8.84 g/t OVER 0.5 METRES. THIS ZONE IS A PRIORITY FOR EXPLORATION DURING 1991. THE ZONE'S GALENA, FeS₂, AND CHALCOPYRITE ARE IMPRESSIVE.

GEOPHYSICAL (MAGNETIC AND V.L.F.) SURVEYS WOULD BE HELPFUL ON CLAIMS #641611 AND #1047198, TO FURTHER DELINEATE THE SHEAR ZONES AND GOLD SHOWINGS LOCATED THERE.

M. J. Dutto B.S.C. - GEOLOGY



American Barrick Resources Corporation
HOLT-MCDERMOTT MINE

P.O. Box 278

• Kirkland Lake, Ontario

• P2N 3H7

Telephone: 1 (705) 567-9251

• Fax: 1 (705) 567-6867

September 26, 1990

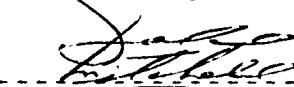
Receipt

=====

Payment for assays performed by American Barrick
Holt-McDermott Mine.

November 21, 1989	\$ 82.50
August 7, 1990	\$ 403.00
September 7, 1990	\$ 299.00

Received by:



Dale Miller

Chief Accountant

23385



SWASTIKA LABORATORIES

(A DIVISION OF ASSAYERS CORPORATION LIMITED)

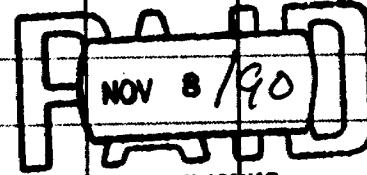
P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0
TELEPHONE: (705) 642-3244 FAX (705) 642-3300

VEN
VOL

Mr. M. Sutton
Box 534
Kirkland Lake, Ontario
P2N 3G3

**1.5% LATE CHARGE OVER 30
DAYS (ANNUAL RATE 18%)**

FACTURE/INVOICE ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS
ESTABLISHED 1928



~~WITH THANKS~~
TOTAL \$ 188.00

PER TOTAL ~~\$ 100.00~~

~~PER~~

TM O
CTA

Swastika Laboratories
P.O. Box 10
Swastika, Ontario
POK 1TO

INVOICE

NO: 23586

DATE: 11-05-90

PAGE: 1 of 1

TO:

M. Sutton
P.O. Box 534
Kirkland Lake, Ontario
P2N 3J5

SHIP TO:

Same

Q	QUANTITY	UNIT	DESCRIPTION	F	P	UNIT PRICE	AMOUNT
	2	1	Aut Assays				17.50
	2	1	Sample Handling				6.00
			Cert#OW-1685-RA1				
							190
							190
							PL
30 days						TOTAL ▶	23.50

23116

SWASTIKA LABORATORIES

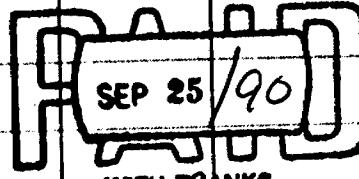
(A DIVISION OF ASSAYERS CORPORATION LIMITED)

P.O. BOX 10, SWASTIKA,
TELEPHONE: (705) 642-3244

Mr. M. Sutton
Box 534
Kirkland Lake, Ontario
P2N 3J5

**1.5% LATE CHARGE OVER 30
DAYS (ANNUAL RATE 18%)**

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22741

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P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0
TELEPHONE: (705) 642-3244 FAX (705) 642-3300

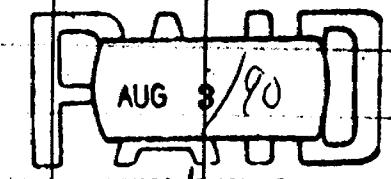
VENDU À → Mr. T. Hanson
30 Main St.
Kirkland Lake, Ontario
P2N 3E1

25 JULY 1990

1.5% LATE CHARGE OVER 30
DAYS (ANNUAL RATE 18%)

NO. D'EXEMPT. DE TAXE FED.	NO. D'EXEMPT. DE TAXE PROV.	VOUS NO. DE COMMANDE	NOTRE NO DE COMMANDE	CONDITIONS	NET 30 DAYS	SAISIE PAR
FED. LICENCE NO.	PROV. LICENCE NO.	YOUR ORDER NO.	OUR ORDER NO.	TERMS	TERMES	MONTANT
QUANTITE QUANTITY		DESCRIPTION		PRIX UNITAIRE UNIT PRICE		AMOUNT
6		Au assays		\$ 8.75		\$ 52.50
6		Ag assays		7.25		43.50
6		Sample Handling		3.00		18.00
		Cert#OW-1031-RA1 July 25, 1990				

SWASTIKA LABORATORIES



WITH THANKS
PFR
DeHardner

TOTAL... \$ 114.00

FACTURE/INVOICE ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS
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22778



SWASTIKA LABORATORIES

(A DIVISION OF ASSAYERS CORPORATION LIMITED)

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0
TELEPHONE: (705) 642-3244 FAX (705) 642-3300

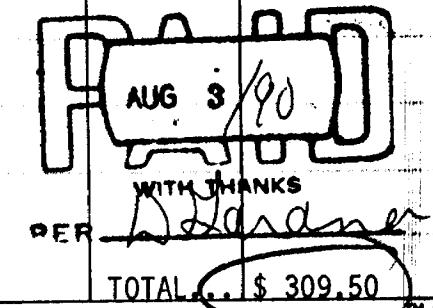
VENDU À
SOLD TO

Mr. T. Hanson
30 Main St.
Kirkland Lake, Ontario
P2N 3E1

1.5% LATE CHARGE OVER 30
DAYS (ANNUAL RATE 18%)

NO. D'EXEMPT. DE TAXE FED. FED. LICENCE NO.	NO. D'EXEMPT. DE TAXE PROV. PROV. LICENCE NO.	NOTRE NO. DE COMMANDE YOUR ORDER NO.	NOTRE NO. DE COMMANDE OUR ORDER NO.	CONDITIONS NET 30 DAYS TERMS	RÉTENTION SALES TAX MONTANT AMOUNT
QUANTITE QUANTITY		DESCRIPTION			
24	Au assays			\$ 8.75	\$ 210.00
1	Ag Cu Pb			19.25	19.25
1	M0			8.25	8.25
24	Sample Handling Cert.#OW-1043-RA1 JULY 27, 1990			3.00	.72.00

SWASTIKA LABORATORIES



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Assaying - Consulting - Representation

Assay Certificate

0W-1314-RA1

Company: MIKE SUTTON

Project:

Attn:

Date: SEP-12-90

Copy 1. BOX 534 KIRKLAND LAKE, ONT. P2N 3J5

We hereby certify the following Assay of 4 ROCK samples submitted SEP-05-90 by .

Sample Number	Au g/tonne	Au check g/tonne
121501	2.08	2.13
121502	Nil	
121503	1.28	
121504	Nil	

✓

Certified by

G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 FAX (705) 642-3300

HS - 1	0.66
- 2	0.54
- 3	0.35
- 4	0.37
- 5	0.92

AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine
P.O. Box 278, Kirkland Lake, Ont. P2N 3H7
Tel.: (705) 567-9291 FAX: (705) 567-6867

Assay Certificate

No. of Determinations: 18
Lab ID: 90717-1m

Date: July 17, 1990
Acct. No.: Mike Sutton

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
M - 1	0.70				
2	0.66				
3	0.53				
4	0.77				
5	0.58				
6	0.36				
7	0.07				
8	0.26				
10	0.31				
11	0.11				
12	0.75				
✓ 20	1.45 ✓				
✓ 21	0.71				
✓ 31	0.74				
✓ 32	0.27 ✓				
✓ 33	1.96 ✓				
✓ 34	1.40 ✓				
✓ 35	2.70 ✓				

ATM



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Assaying - Consulting - Representation

Assay Certificate

0W-1685-RA1

Company: M. SUTTON

Project:

Attn:

Date: NOV-05-90

Copy 1. P.O.BOX 534, KIRKLAND LAKE,ONT. P2N 3J5

We hereby certify the following Assay of 2 ROCK samples submitted OCT-30-90 by M. SUTTON.

Sample Number	Au g/tonne	Au check g/tonne
494648	0.41	
494629	0.38	0.53

✓

Certified by Lorraine Hardner



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Assaying - Consulting - Representation

Assay Certificate

0W-1539-RA1

Company: MIKE SUTTON

Date: OCT-16-90

Project:

Copy 1. BOX 534, KIRKLAND LAKE P2N 3G3

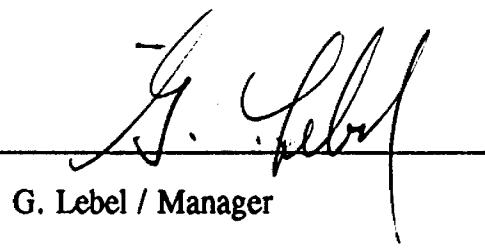
Attn:

We hereby certify the following Assay of 16 ROCK samples submitted OCT-10-90 by .

Sample Number	Au g/tonne	Au check g/tonne
124517	0.27	
124519	1.21	1.23
124520	0.20	
124521	0.84	0.79
124526	0.69	
124527	0.52	
124528	0.47	
124529	0.46	
124530	0.10	
124531	0.50	
124533	0.67	0.61
124535	0.22	
124538	0.19	
124539	0.14	
124542	0.33	

✓

Certified by



G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 FAX (705) 642-3300

EXTRACT

AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine
P.O. Box 278, Kirkland Lake, Ont. P2N 3H7
Tel:(705) 567-9251 FAX:(705) 567-6867

Assay Certificate

No. of Determinations: 28
Lab ID: 90829-1m

Date: Aug. 29, 1990
Acct. No.: Mike Sutton

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
108	0.39				
109	0.61				
110	0.22				
111	0.41				
112	0.26				
113	0.62				
114	0.21				
115	0.52				
116	0.38				
117	0.54				
118	0.14				
119	0.13				
120	0.18				
121	0.38				
122	1.55				
123	0.33				
124	0.30				
125	0.45				
126	0.85				
127	0.83				
128	0.94				
129	0.57				
130	1.44				
131	0.56				
132	1.49				
133	0.13				
134	0.15				
135	0.42				

BTL



AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine
P.O. Box 278, Kirkland Lake, Ont. P2N 3H7
Tel.: (705) 567-9251 FAX: (705) 567-6867

Assay Certificate

No. of Determinations: 6
Lab ID: 90824-1x

Date: Aug. 24, 1990
Acct. No.: Exploration

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
M 1485	0.58				
1	0.30				
2	0.45				
3	30.30				
4	36.10				
5	0.50				

BARRICK

AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine

P.O. Box 278, Kirkland Lake, Ont. P2N 3H7

Tel:(705) 567-9251 FAX:(705) 567-6867

Assay Certificate

No. of Determinations: 12
Lab ID: 90816-1m

Date: Aug. 16, 1990
Acct. No.: Mike Sutton

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
M 4451	0.21				
	0.16				
	8.84				
	0.15				
	0.37				
56.	0.31				
58.	0.18				
	0.16				
	0.13				
	0.47				
	0.37				
	0.33				



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Assaying - Consulting - Representation

Assay Certificate

0W-1043-RA1

Date: JUL-27-90

Copy 1. 30 Main St. Kirkland Lake, Ont P2N 3E1
2. fax to 567-6768

Company: Tim Hanson

Project:

Attn:

We hereby certify the following Assay of 24 rock samples submitted JUL-23-90 by .

Sample Number	Au oz/ton	Au check oz/ton	Au 2nd oz/ton	Ag oz/ton	Cu %	Mn %	Pb %
4407	0.036			0.02	0.01	0.002	0.42
4408	0.020						
4409	0.016						
4410	0.010						
4411	0.016						
4412	0.044	0.034					
4413	0.020						
4414	0.014						
4415	0.026						
4416	0.012						
4417	0.016						
4418	0.034						
4419	0.010						
4420	0.008						
4421 & 1424	0.010						
4422	0.004						
4423	0.086	0.084	0.086				
4425	0.016						
4426	0.008						
4427	0.024						
4428	0.002						
4429	0.010						
4430	0.002						
4435	0.002						

Certified by

G. Lebel / Manager



Swastika Laboratories

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Assay Certificate

0W-1031-RA1

Company: **TIM HANSON**

Date: JUL-25-90

Project:

Copy 1. 30 MAIN ST. KIRKLAND LAKE, ONT. P2N 3E1

Attn:

We hereby certify the following Assay of 6 ROCK samples
submitted JUL-20-90 by .

Sample Number	Au oz/ton	Au check oz/ton	Au 2nd oz/ton	Ag oz/ton
1401	0.002			0.01
1402	0.002			0.01
1403	0.090			0.01
LAD4	0.136	0.132	0.136	0.03
LAD5	0.038			0.02
1406	N/I			0.01

Certified by

G. Lebel / Manager

AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine
P.O. Box 278, Kirkland Lake, Ont. P2N 3H7
Tel.: (705) 567-9251 FAX: (705) 567-6867

Assay Certificate

No. of Determinations: 19
Lab ID: 90723-1m

Date: July 23, 1990
Acct. No.: Mike Sutton

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
M 143-1	0.14-				
38	0.19v				
39	0.27v				
40	0.80v				
M 143-2	0.10v				
37	0.16v				
38	0.09v				
39	0.11v				
40	0.07v				
41	0.18				
42	0.14				
43	0.12				
44	0.30				
45	0.75				
46	0.23				
47	0.95				
48	0.12				
49	0.28				
50	0.96				

AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine
P.O. Box 278, Kirkland Lake, Ont., P2N 3H7
Tel: (705) 567-9251 FAX: (705) 567-6867

Assay Certificate

No. of Determinations: 25
Lab ID: 90719-1m

Date: July 19, 1990
Acct. No.: Mike Sutton

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
M - 01	0.05				
02	0.09				
03	0.07				
04	0.14				
05	0.27				
06	0.43				
07	0.12				
08	0.16				
09	0.11				
10	0.07				
11	0.10				
12	0.22				
13	0.20				
14	0.36				
15	0.13				
16	0.10				
17	0.09				
18	0.15				
19	1.01				
20	2.34				
21	0.95				
22	0.16				
M - 17	1.96				
18	0.17				
19	1.66				



AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine
P.O. Box 278, Kirkland Lake, Ont. P2N 3H7
Tel.: (705) 567-9251 FAX: (705) 567-6867

Assay Certificate

No. of Determinations: 12
Lab ID: 90511-1x

Date: May 11, 1990
Acct. No.: Exploration

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
1	0.09				
2	0.19				
3	0.55				
4	1.21				
5	0.19				
6	0.15				
7	0.90				
8	0.40				
9	0.54				
10	0.47				
11	0.06				
12	1.50				
		Mike's Samples			

ADM



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Assay Certificate

0W-1454-RA1

Company: MICHAEL SUTTON

Project:

Attn:

Date: OCT-02-90

Copy 1. P.O.BOX 534, KIRKLAND LAKE, ONT. P2N 3J5

We hereby certify the following Assay of 8 ROCK samples submitted SEP-25-90 by MICHAEL SUTTON.

Sample Number	Au g/tonne	Au check g/tonne	Cu ppm
421505	1.35	1.33	
421506	0.91		
421507	0.35		
421508	0.53		23
421509	0.35		
121510 NOT REC'D			
421511	0.10		
421512	0.35	0.47	
421513	Ni 1		

Certified by

G. Lebel / Manager

AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine
P.O. Box 278, Kirkland Lake, Ont., P2N 3H7
Tel.: (705) 567-9251 FAX: (705) 567-6867

Assay Certificate

No. of Determinations: 10
Lab ID: 90522-1x

Date: May 22, 1990
Acct. No.: Exploration

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
H-12	0.33				
14	0.41				
45	1.36				
46	0.20				
47	0.32				
48	0.84				
49	0.58				
20	0.41				
21	0.19				
22	6.51				



AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine
P.O. Box 278, Kirkland Lake, Ont., P2N 3H7

Assay Certificate

No. of Determinations: 4
Lab ID: 89N14-1M

Date: Nov. 14, 1989
Acct. No.: Mike

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
M-91	4.03	92	3.13	93	0.32
94	0.54				

Signed - *H.R.*

AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine
P.O. Box 278, Kirkland Lake, Ont., P2N 3H7

Assay Certificate

No. of Determinations: 11
Lab ID: 89019-1m

Date: Oct. 19, 1988
Acct. No.: Mike

<u>SAMPLE</u>	<u>g/t Au</u>	<u>SAMPLE</u>	<u>g/t Au</u>	<u>SAMPLE</u>	<u>g/t Au</u>
M 60	0.39				
M 70	0.51				
71	0.17				
72	1.80				
73	0.68				
74	0.29				
75	0.69				
76	0.70				
77	0.46				
78	0.79				
79	0.71				

Mike

Signed

BARRICK

AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine
P.O. Box 278, Kirkland Lake, Ont., P2N 3H7

Assay Certificate

No. of Determinations: 12
Lab ID: 89012-1m

Date: Oct. 12, 1989
Acct. No.: McDermott

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
4-1	0.31				
2-	0.45				
1-	0.26				
4-	0.74				
24	0.41				
22	0.52				
23	0.84				
24	0.35				
26	0.54				
26	1.46				
43	0.16				
44	0.90				

Signed

BARRICK

AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine
P.O. Box 278, Kirkland Lake, Ont., P2N 3H7

Assay Certificate

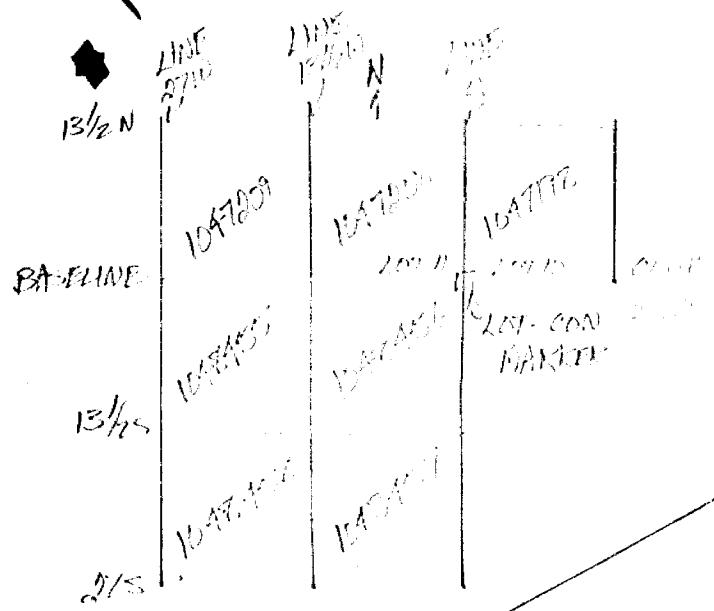
No. of Determinations: 13
Lab ID: 89002-1m

Date: Oct. 02, 1989
Acct. No.: Mike Sutton

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
M-7	0.63				
1	0.71				
2	0.45				
3	0.29				
4	0.76				
5	0.45				
6	0.54				
7	0.26				
8	1.04				
9	0.60				
10	1.10				
11	0.80				
12	0.48				

Signed

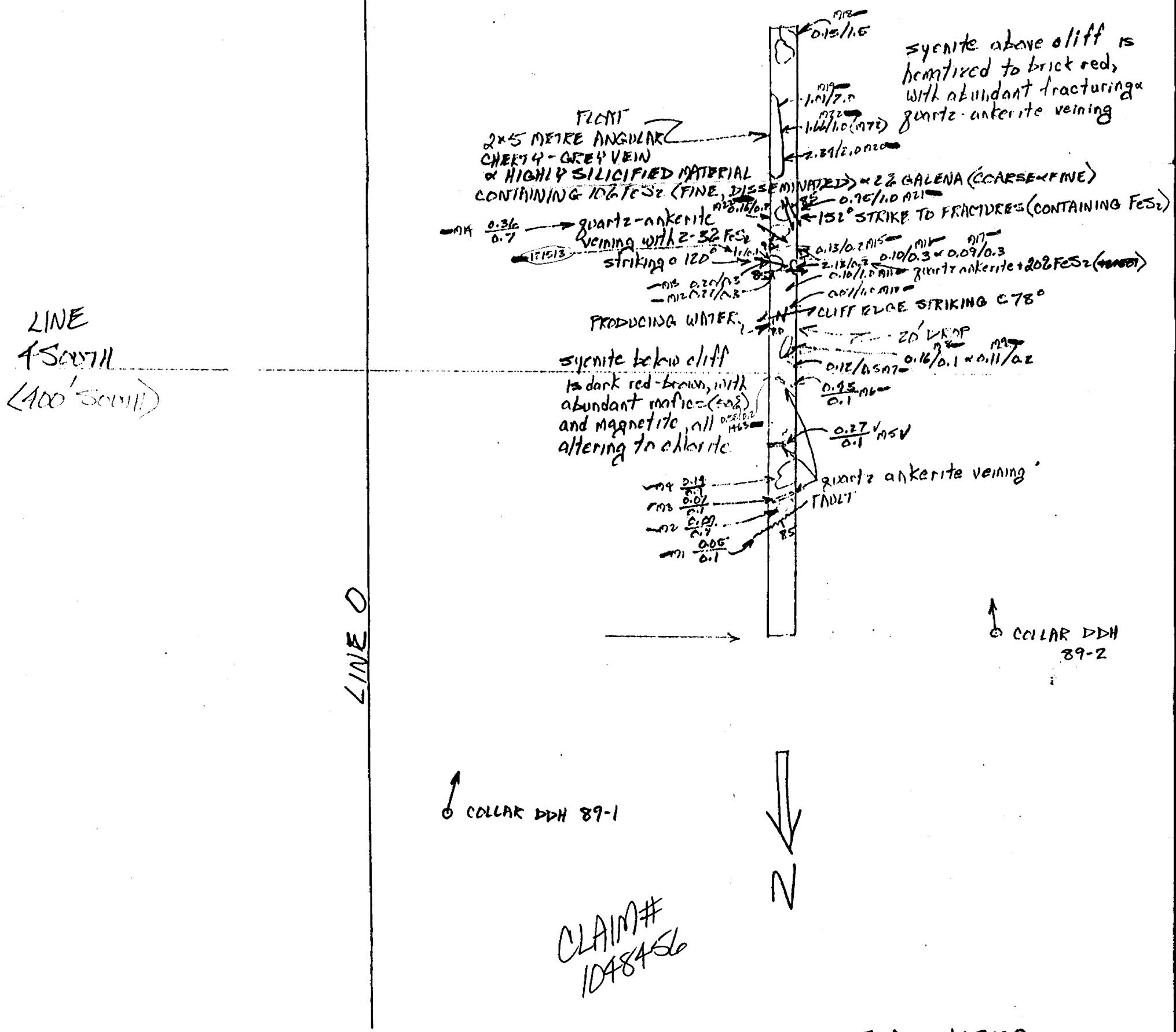
11/10/89



TRENCH #19

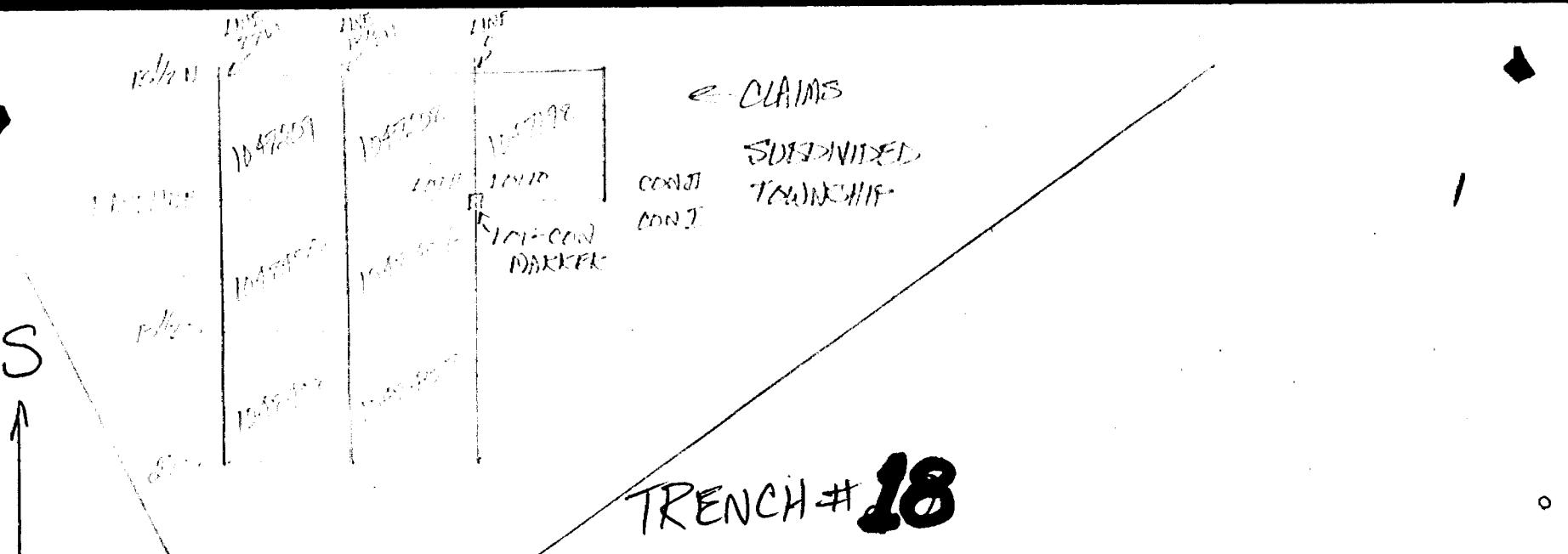
ASSAYS ON ASSAY SHEETS 70719-1M (M-01 TO M-72)

SITE #4



CLAIM #
104846a

SCALE 1:250



6" QUARTZ VEIN
M1455 0.37g/t x 0.12 m1457

MAP #15

(100' x 200' M)

LINE 2S ASSAYS FROM 90723-1m
M1451-M1490

SO2.5MILE (Biotite, Chlorite, Magnetite)
IN R.R. 7W BROWN SPERITE

FRACTURES CONTAIN ASBESTOS (BLUE-GREEN)

M1450 0.07/0.1, 0.11/0.1
GREY-WHITE QUARTZ VEIN
M1451 0.07/0.4
M1452 0.16/0.1 M1453 0.14/0.1 M1454
M1455 0.10/0.1
M1456 0.27/0.05
M1457 CHALCOPYRITE ZONE (52) 0.80/0.5 x 0.02 x 0.4
M1458 CHERTY VEIN, NOTED, VISIBLE 0.19/0.05 M1459
M1460 QUARTZ VEIN 0.41/0.1 M1461
M1462 WHITE-GREY; 12 FINE, DISSEMINATED FeS2

CORSE GRAINED
SINTERITE (GRANULITE)
WITH LARGE 0.5M MAFIC
CRYSTALS (CHAROILITE, AUGITE)

(100' x 200' M)

LINE 1S

15

LINE 200W

↓ N

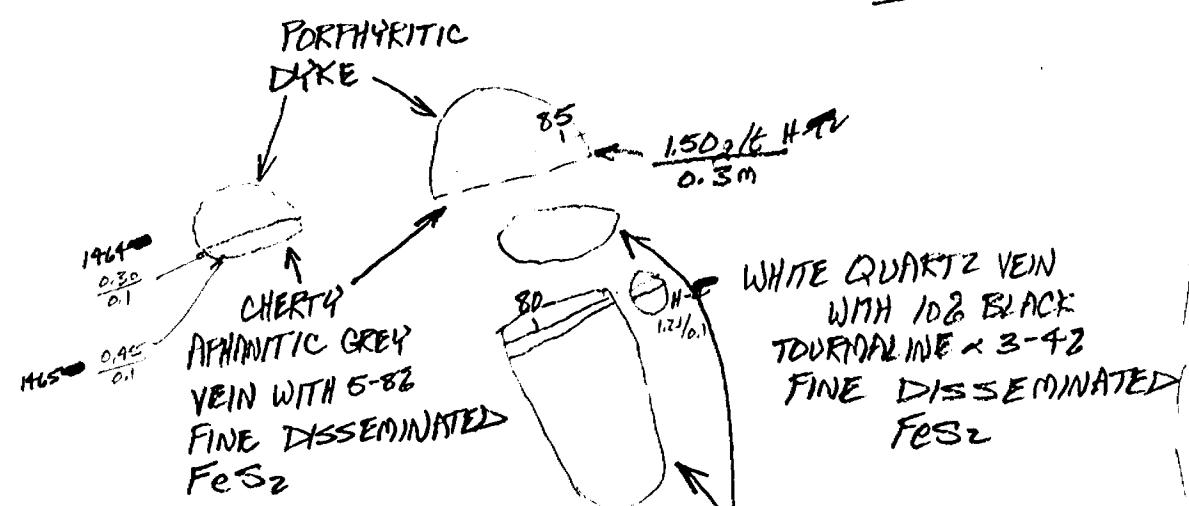
CLAIM #
1048456

SCALE 1:250
(1CM = 2.5 METRES)

A
POST
C135
(1048455
#1)

155

STRIPPED AREA
#27



RHYOLITE - APHANITIC
WITH TRACE-1% FeS₂
(COARSE, DISSEMINATED),
PINK-PAGE GREY SHEARED
WITH CHLORITE VENILETS (N32)

165

CLAIM #1048458 (B2 POST POINT)

PLEASE SEE GEOLOGICAL COMPILATION
FOR GRID LINE LOCATIONS V/S-A-V/S
CONCESSION - LOT MARKER (SUBDIVIDED TWP)

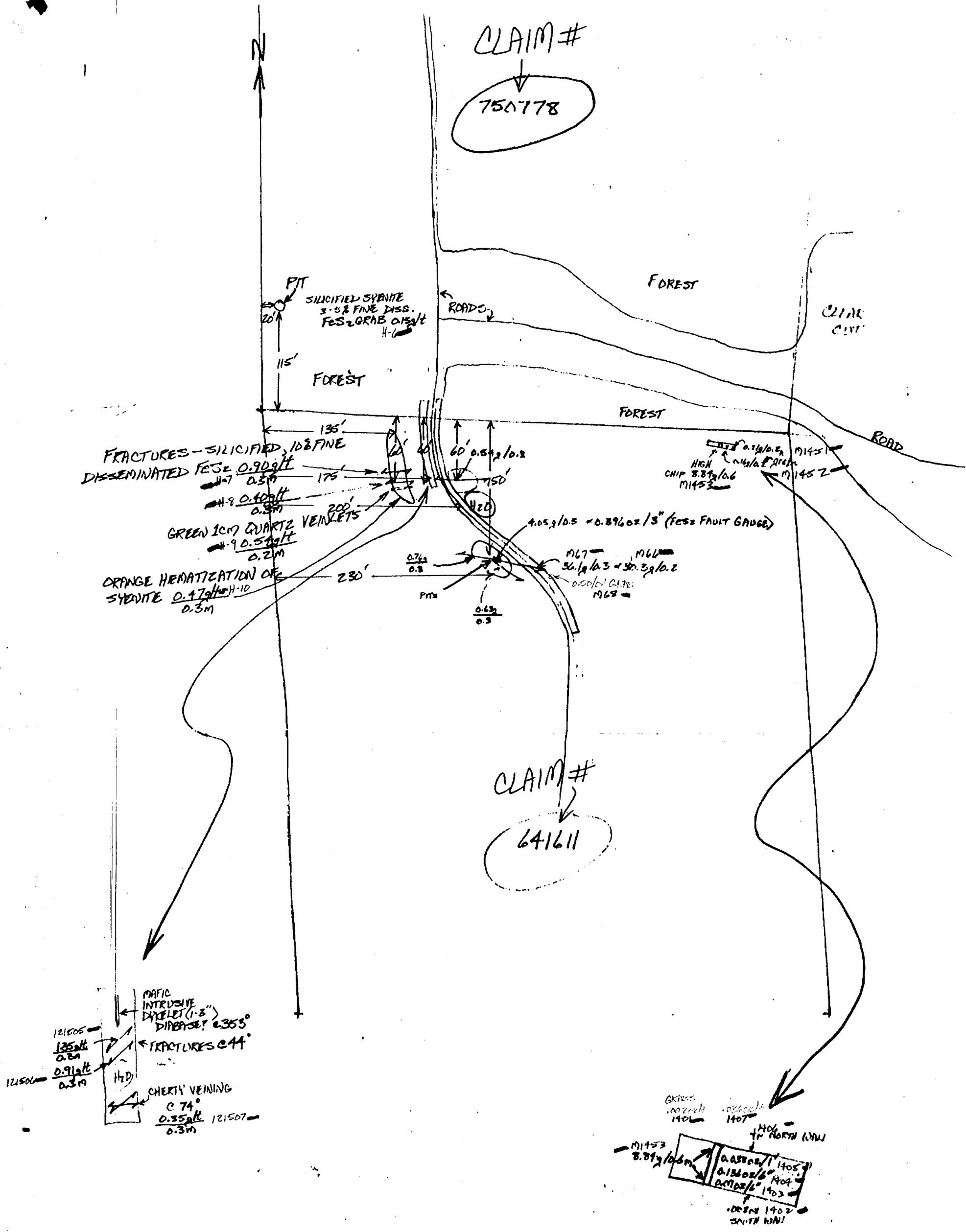
175

LINE
1200

LINE
1000

10 METRES

1:250



SCALE 1"-200'

g = grams per tonne
oz = ounces per ton

CLAIM#²'S

1111077

• CLAIM POSTS

MAGIC VOLCANICS

SYENITE

RUSTED
CONTACT
H-21 0.1M±
0.2M

1048464

1111077

1111076

1048463

1048461

1048460

TULLY

LAKE

ALTERED ZONE,
TRACHYTIC WITH
5-6% FINE
DISSIMINATED FEE

324'
0.55ft
0.5m H-13
540' H-13
0.19ft
0.5m S13
351 H-14

1350'

1047209

1047208

1047198

1" = 340'



Date

Oct. 15, 1991 W.9180.00282

Mining Recorder's Report of
Work No.

Recorded Holder

Michael W. Sutton; Tim Hanson

Township or Area

Holmes Township

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Other _____ days	\$ 0.00 spent on assaying samples taken from mining claims: L.1047209 1048455-456 641611 1048458
Section 77 (19) See "Mining Claims Assessed" column	0 days credit allowed which may be grouped in accordance with Section 76(6) of the Mining Act R.S.O. 1980.
Geological _____ days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input type="checkbox"/> Ground <input type="checkbox"/> <input type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

not sufficiently covered by the survey

insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geological - 40; Geochemical - 40; Section 77(19) - 60.



Date

Oct. 15, 1991

File No.
2-14261
Mining Recorder's Report of
Work No.
W.9180.00253

Recorded Holder

Michael W. Sutton

Township or Area

Holmes Township

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ 0 days	
Geochemical _____ days	
Man days <input type="checkbox"/> Airborne <input type="checkbox"/>	
Special provision <input type="checkbox"/> Ground <input type="checkbox"/>	
<input type="checkbox"/> Credits have been reduced because of partial coverage of claims.	
<input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

not sufficiently covered by the survey insufficient technical data filed

L. 1047208-209
1048455-458 incl.

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geological - 40; Geochemical - 40; Section 77(19) - 80.



Date

Mining Recorder's Report of
Work No.
Oct. 15, 1991 W.9180.00252

Recorded Holder

Michael W. Sutton

Township or Area

Holmes Township

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ days Magnetometer _____ 0 days Radiometric _____ days Induced polarization _____ days Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	
Geochemical _____ days	
Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input type="checkbox"/> Ground <input type="checkbox"/>	
<input type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

 not sufficiently covered by the survey insufficient technical data filedL.1047208-209
1048455-458 incl.Claims need identification on all maps.
Claim posts, claim lines and claim numbers
are needed.

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geological - 40; Geochemical - 40; Section 77(19) - 60.



Ontario

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Mining Lands Branch
Geoscience Approvals Section
159 Cedar Street, 4th Floor
Sudbury, Ontario
P3E 6A5

Toll Free: 1-800-465-3880
Telephone: (705) 670-7264
Fax: (705) 670-7262

November 15, 1991

AMENDED

Mining Recorder
Ministry of Northern Development
and Mines
4 Government Road East
Kirkland Lake, Ontario
P2N 1A2

Our File: 2.14261
Your File: W.9180.00282
W.9180.00252, 253

Dear Sir/Madam:

Please disregard the Notice of Intent of October 15, 1991 on these reports of work and all other correspondence.

The original assessment work credits filed on May 31, 1991 are to be approved.

Please indicate the approval in your records.

Yours sincerely,

Ron C. Gashinski
Senior Manager, Mining Lands Branch
Mines and Minerals Division

LJ/jl
Enclosures:

cc: Michael Sutton
Kirkland Lake, Ontario

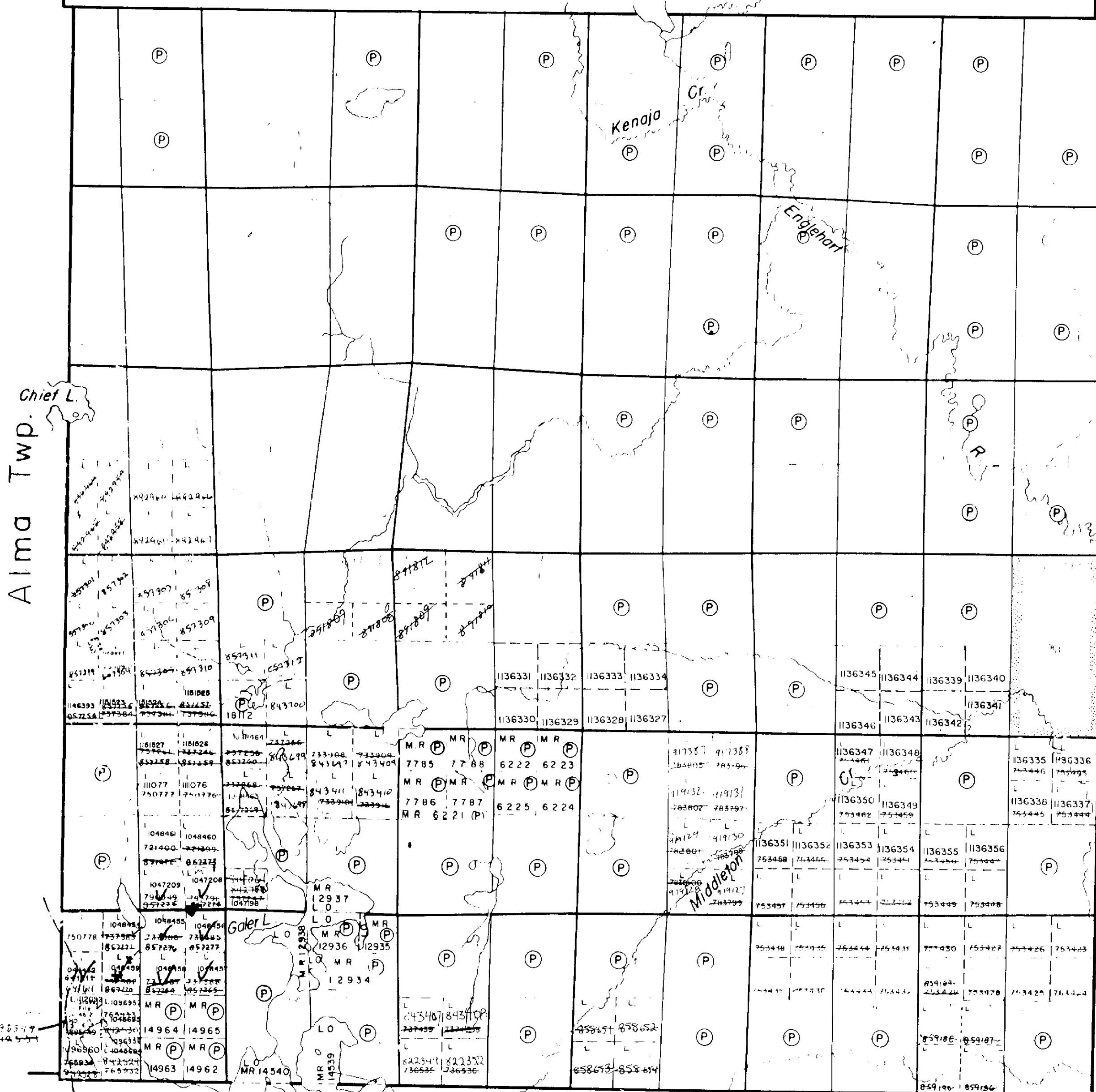
Tim Hanson
Kirkland Lake, Ontario

Assessment Files Office
Toronto, Ontario

Resident Geologist
Kirkland Lake, Ontario

(K)

Dunmore Twp.



THE TOWNSHIP
OF

HOLMES

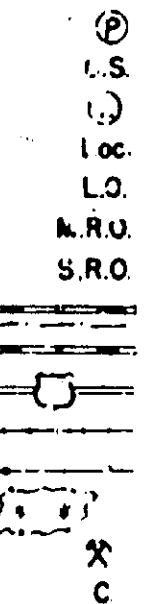
DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

PATENTED LAND
CROWN LAND SALE
LEASES
LOCATED LAND
LICENSE OF OCCUPATION
MINING RIGHTS ONLY
SURFACE RIGHTS ONLY
ROADS
IMPROVED ROADS
KING'S HIGHWAYS
RAILWAYS
POWER LINES
MARSH OR MUSKEG
MINES
CANCELLED



NOTES

400' Surface rights reservation around Lakes Erie

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. - MINING RIGHTS ONLY
S.R.O. - SURFACE RIGHTS ONLY
M.+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
1 SEC 36/80	8/24/82	29/II/82	S BMR	188322



THE INFORMATION THAT
APPEARS ON THIS MAP
HAS BEEN COMPILED
FROM VARIOUS SOURCES,
AND ACCURACY IS NOT
GUARANTEED. THOSE
WISHING TO STAKE MIN-
ING CLAIMS SHOULD CON-
SULT WITH THE MINING
RECORDER, MINISTRY OF
NORTHERN DEVELOP-
MENT AND MINES, FOR AD-
DITIONAL INFORMATION
ON THE STATUS OF THE
LANDS SHOWN HEREON

PLAN NO.- M.224

ONTARIO

MINISTRY OF NATURAL RESOURCES

SWIMS AND MARINE BRANCH



42A02SE0002 2.14261 HOLMES

ER R.
Suffolk

WINTER 1942

16-11-2014

ALTERED SENSES

1-3' DIFFERENT
CLEAR CUT
UNPREDICTED
VESTIGIAL SIGHTS.
SLICKEY ROCK
ORIGIN FROM
SUGAR MAPLES
BULL SHIRT CLOTHES
WASHED AWAY CHORTLE
SIGHTS

A faint, thin black line drawing of a zigzagging path or boundary line, starting from the left edge and extending towards the right. The line has several sharp turns, creating a stepped or jagged appearance.

4

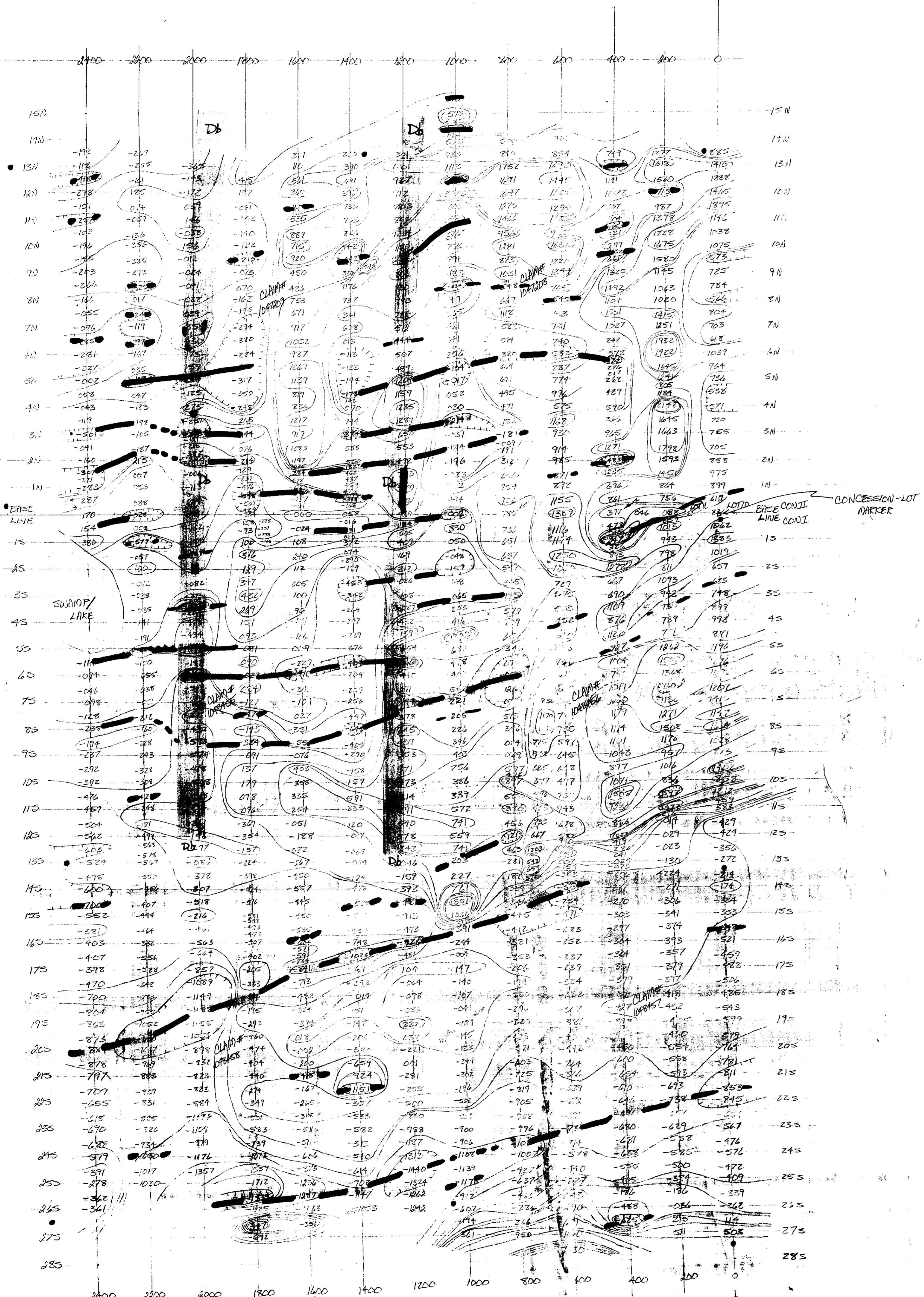
TREELINE CLEAREST 5-6' OVERHANG
(FALL + SPRING)

SISE LIN
100

1-200
6/20/2011

This image shows a single page from a handwritten document. The text is extremely faint and illegible, appearing as dark grey smudges against a light background. There are several distinct horizontal lines of text, with the first line being the longest and most prominent. To the right side of the page, there is a vertical column of text that appears slightly more legible than the rest. The overall quality is very poor, suggesting it might be a scan of a scan or a low-quality photocopy.

This image is a high-contrast, black-and-white scan of a document page. The left side is heavily shadowed and appears as a dark, mottled texture. The right side is brighter and shows some horizontal lines and a vertical structure, which could be a table or a diagram. The overall quality is grainy and lacks fine detail due to the high contrast.



MAGNETIC SURVEY

1 INCH = 100 FEET

-199 TO -1
-399 TO -200
-599 TO -400
-799 TO -600
-999 TO -800
-1199 TO -1000
-1399 TO -1200
ETC

0 TO 199
000 TO 399
400 TO 599
600 TO 799
800 TO 999
1000 TO 1199
1200 TO 1399
ETC

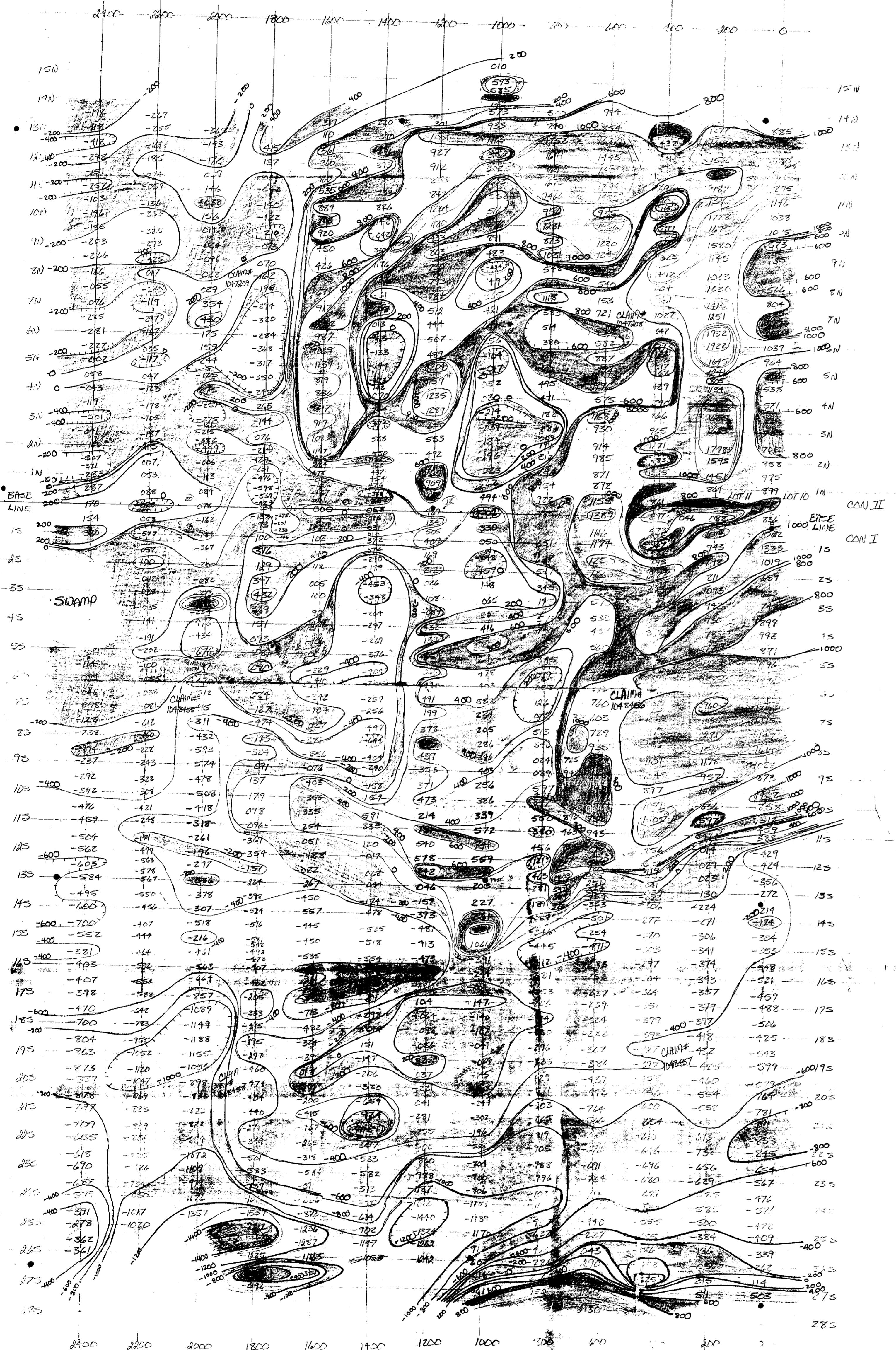
LOW

ALL POINTS RELATIVE TO LINE 16, BASELINE
G 58, 765 GAMMA
AVERAGE

2.14261

D16 ● LAKES (DAIRIES)
● CLAIM POSTS





MAGNETIC SURVEY

1 INCH = 100 FEET

2:14261

-199 TO -1
-399 TO -200
-599 TO -400
-799 TO -600
-999 TO -300
-1199 TO -1000
-1399 TO -1200
-1599 TO -1100
ETC 1400

• CLAIM POINTS

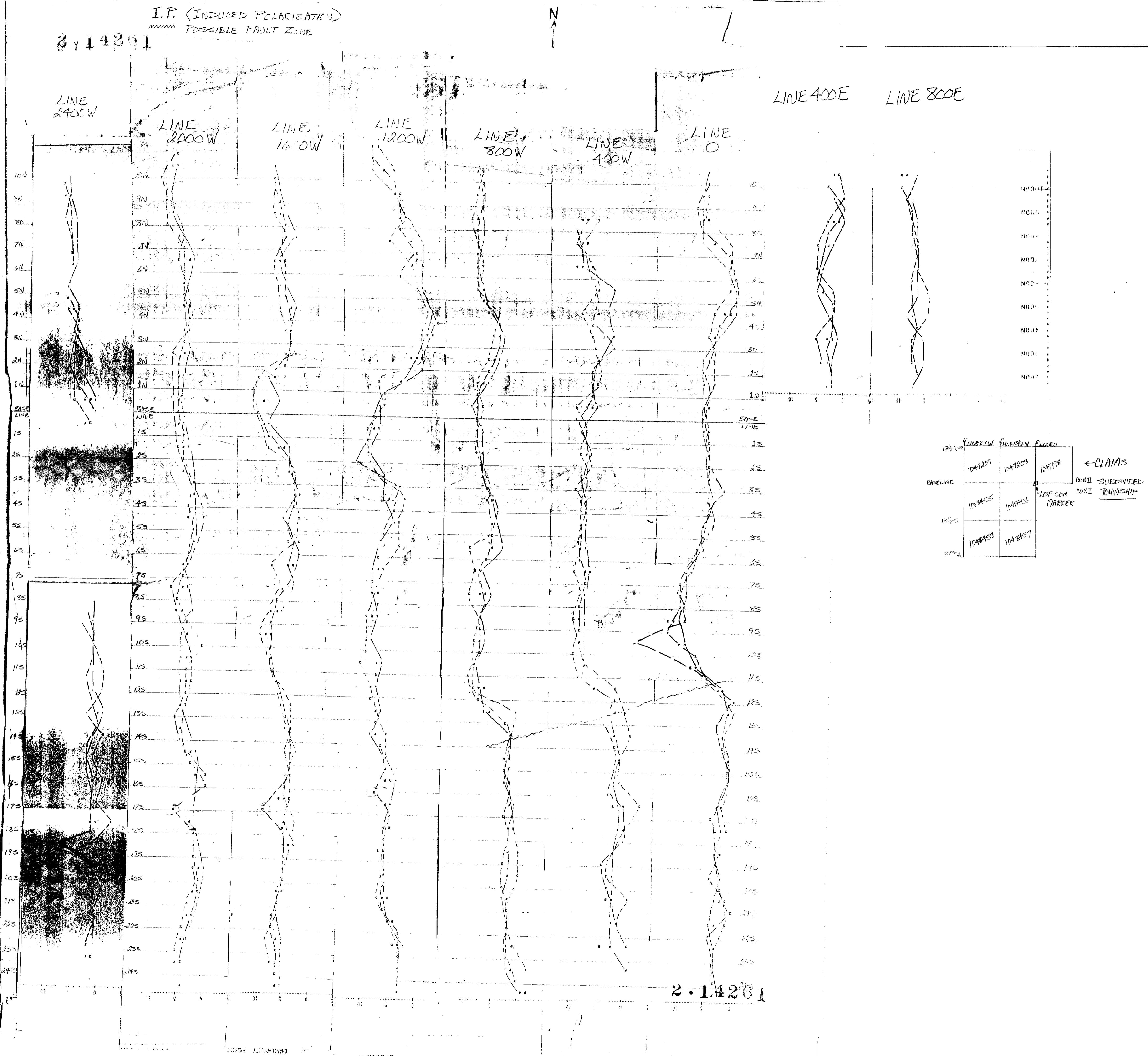
0 TO 199
200 TO 399
400 TO 599
600 TO 799
800 TO 999
1000 TO 1999
1200 TO 1599
1600 TO 2000
ETC

ALL POINTS RELATIVE TO LINE 16, BASELINE
C 58,765 GAUSS
AVERAGE

2:14261

I.P. (INDUCED POLARIZATION)
mmmm POSSIBLE FAULT ZONE

2 14261



2.14261

RESISTIVITY

LINE 24

LINE 2D

LINE 12

LINE 16

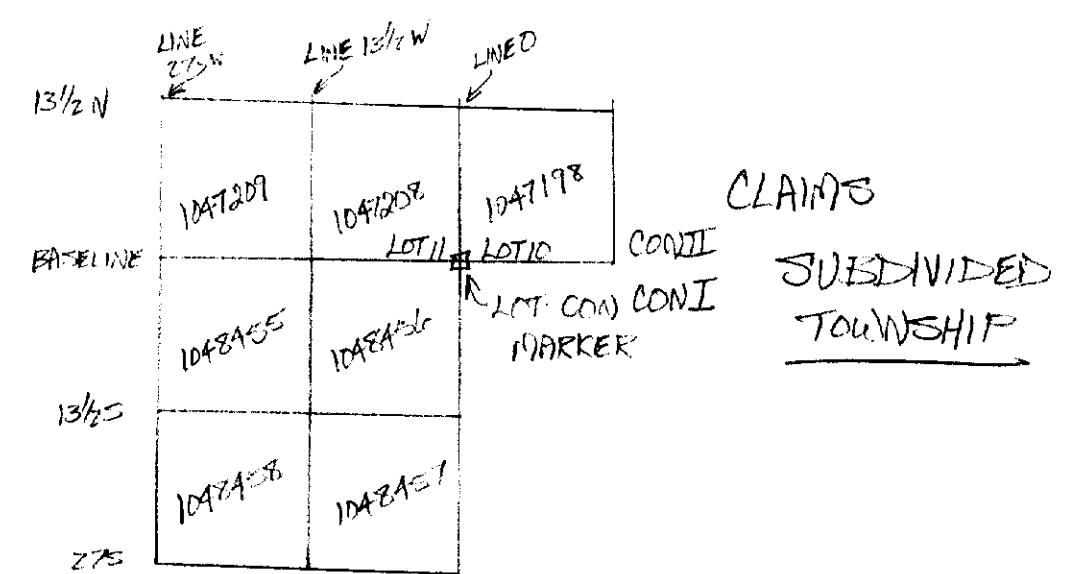
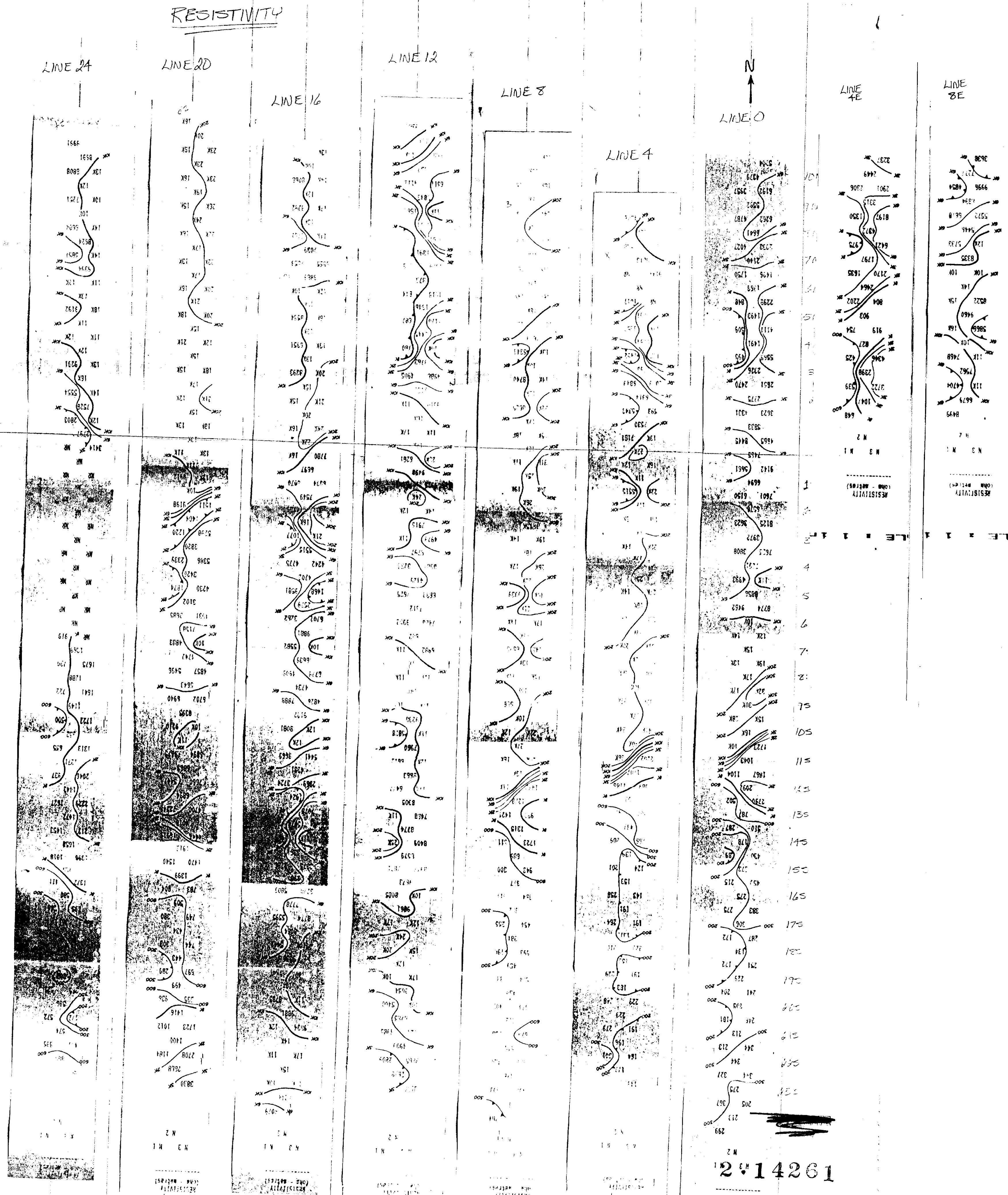
LINE 8

LINE 4

LINE 0

LINE 4E

LINE 8E

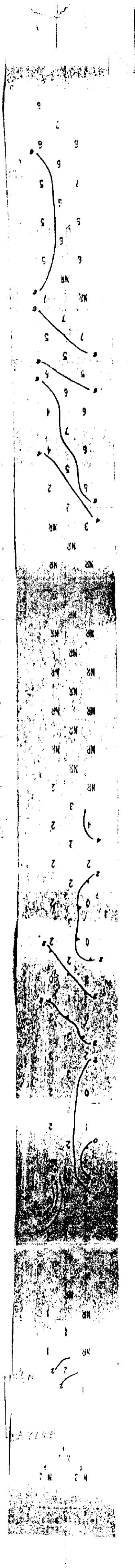


2 • 14261

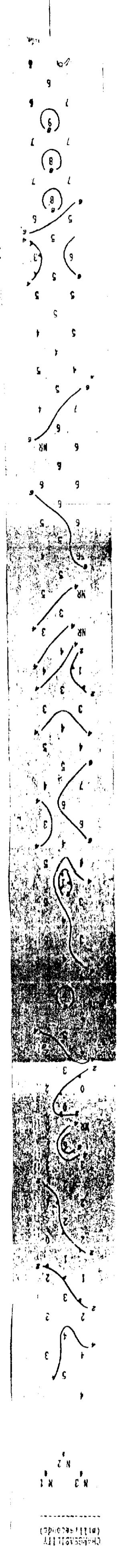


CHARGEABILITY

LINE 24



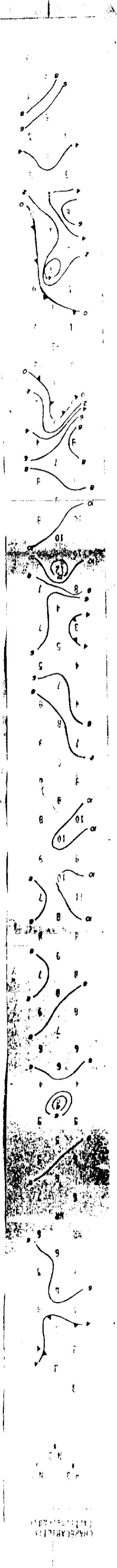
LINE 2D



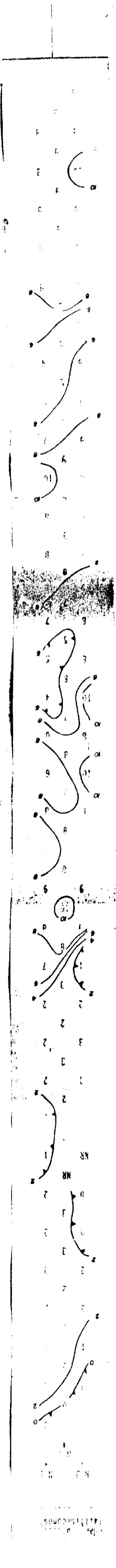
LINE 16



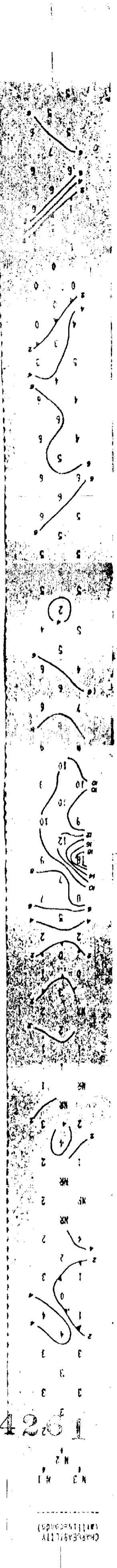
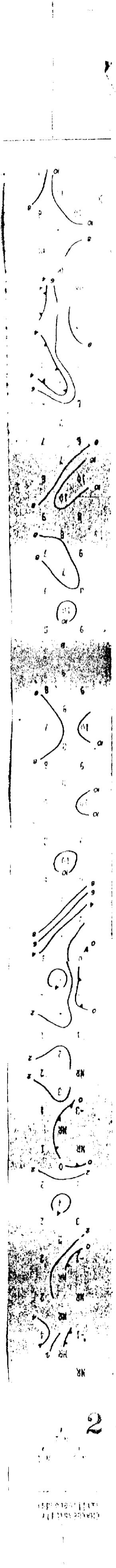
LIVE LI



LINE 8



LINE 4



LINE 4C



LINE 8E



2 · 14261