

41P06NE2013 2.21009 NORTH WILLIAMS

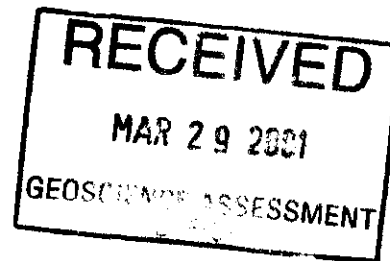
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2.21009

## **2000 Report of Work on the North Williams Barite Property**

North Williams Township,  
Ontario



By: Ann Larocque  
Date: December 8, 2000

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## 1.0 INTRODUCTION

The North Williams property, a barite prospect, is currently being evaluated by Highwood Resources Ltd. This report summarizes work carried out on the property during the first year of Highwood's tenure of the property, as required by an option agreement.

An exploration program was carried out in the summer of 2000 to test the continuity of the barite vein currently being mined by Extender Minerals. The work done and described by this report includes line cutting, geophysical surveys, geological mapping, trenching and diamond drilling.

## 2.0 LOCATION and ACCESS

The North Williams Property is centered on UTM coordinates 498060mE and 5250850mN, in North Williams Township, Ontario.

The property is located approximately 52km, by road, southeast of the village of Shinning Tree. Access is by 2 wheel drive vehicle proceeding south from Shinning Tree on Highway 560 for ~8.0km, then west on the Sandy Falls forestry road, to the end of the road at a T junction, then south to the power line adjacent Extender Minerals Mine site.

## 3.0 PROPERTY DESCRIPTION

The property consists of 5 mineral claim units located in North Williams Township (G 3694), Larder Lake Mining Division as listed on Table 1 below, and depicted on Figure 1, Appendix A.

**Table 1: List of Mining Claims**

Claim No.	Recording Date	Due Date	Record Holder	Unit Size
1224513	Aug 10, 1998	Aug 10, 2004	100% Roy Annett	1
1226517	Feb 14, 2000	Feb 14, 2002	100% Joe-Anne G. Salo	fraction
1234962	Feb 14, 2000	Feb 14, 2002	100% Joe-Ann G. Salo	1
1234963	Feb 14, 2000	Feb 14, 2002	100% Joe-Ann G. Salo	1
1234964	Feb 16, 2000	Feb 16, 2002	100% Joe-Ann G. Salo	6
1234965	Feb 16, 2000	Feb 16, 2002	100% Joe-Ann G. Salo	7
1240673	June 08, 2000	June 08, 2002	100% Highwood Resources Ltd.	1
1240674	June 08, 2000	June 08, 2002	100% Highwood Resources Ltd.	2

The address of Record claim holders are as follows;  
 Joe-Ann G. Salo 491 Finn Rd, Connaught, ON, P0N 1A0  
 Roy Annett RR#1 Parry Sound, ON, P2A 2W7

## 4.0 PREVIOUS WORK

In 1999, the owner of the property carried out an exploration program to test the continuity of the barite vein currently being mined by Extender Minerals. Work included limited sampling, one diamond drill hole (346') and five areas of trenching where only one of the areas reached bedrock. There is no record of any other previous work.

## **5.0 GEOLOGICAL DESCRIPTION**

### **5.1 Regional Geology**

Archean rocks underlie the area and are overlain by a veneer of Pleistocene fluvial and lacustrine strata with superimposed aeolian deposits. Archean rocks include metavolcanics and metasediments, which are intruded by granitic batholiths and mafic intrusions of gabbroic composition. Proterozoic metasedimentary rocks of the Huronian Supergroup unconformably overlie the Archean rocks. Nipissing-type gabbroic intrusives and late diabase dikes intrude the Archean and Proterozoic sequences (Long, 1984).

Mineral exploration in the area has revealed the presence of barite, cobalt, copper, gold, nickel, silver and zinc mineralization, of which only barite is currently being mined. Most of the mineralization is associated with the Nipissing Diabase intrusions.

### **5.2 Property Geology**

Archean volcanics and granitic intrusions which outcrop in the northeastern portion of the mapped area, on the eastern most portions of claims 1234964 and 1234965 underlay most of North Williams Township. A thick sequence of Huronian sediments comprising of quartzite, arkose, conglomerates and argillites/siltstone/slates unconformably overlay the Archean rocks. Gabbroic/dioritic sills and dikes as well as diabase dikes intrude the younger Huronian sedimentary rocks.

Two barite veins outcrop on the adjacent Extender Minerals Property, see sketch of veins on Figure 1. Vein A, the vein currently mined at Extender Minerals, trends roughly 50 degrees and dips steeply to the southeast. The vein is white to light pink in colour and coarse to fine grained. The exposed outcrop of vein A consist of nearly pure barite without sulphide minerals but the vein tends to be pody over a short strike length. Vein B is located ~300m northwest of vein A, it trends roughly 30 degrees and dips steeply to the southeast. Vein B is ~2.5' in true width and contains trace amounts of chalcopyrite.

## **6.0 WORK PERFORMED BY HIGHWOOD RESOURCES LTD., May 2000 thru August 2000**

Highwood Resources performed line cutting, geophysical surveys, geological mapping, trenching and diamond drilling on the property during the period from May through August 2000.

### **6.1 Line cutting**

A grid was established to provide control points for the geological and geophysical work to be carried out. Georgex Exploration of Timmins, Ontario was contracted to carry out the line cutting. A total of 11.3 line km was cut and picketed between May 15<sup>th</sup> and June 1<sup>st</sup>, 2000. The baseline is 1.1 km long with pickets at 25m intervals and is oriented at Azimuth 050° to true north. Grid lines spaced 100m apart were turned at 90° to the baseline and were chained and picketed at 25 m intervals along lines east and west of the baseline. All pickets were spray-painted orange and labeled with aluminum tags.

### **6.2 Geologic Mapping**

Geologic mapping was conducted by employees of Highwood, namely Heather Miree – Exploration Manager and Ann Larocque – Project Geologist, between May 26<sup>th</sup> and June 13<sup>th</sup>, 2000. The purpose of the mapping was to determine the general stratigraphy and structure of the map area and provide a better understanding of the controlling factors affecting the barite vein found at Extender Minerals. The map area has very limited bedrock exposures and thick vegetation cover.

## Description of Rock Units

**Arkose:** This unit has a characteristic red, brownish-red to orangy colour and appears to host most the barite veining and breccia. On surface, arkose is only observed at trench 2, (Figure 2), and at the outcrop exposing Extender Minerals' barite vein by the road at the power line. In drill core, arkose is the most abundant rock type observed. This unit tends to be very incompetent and broken into small fragments with local vugs measuring more than 5cm in diameter. This incompetent characteristic results in a unit, which easily weather down, and therefore is rarely observed in outcrops. The unit consists of moderately sorted and subrounded quartz grains. Clay, possibly representing altered feldspar, is common in varying amounts in the unit.

**Argillites/mudstone/chert:** These units are only observed in drill core. They are characteristically thin bedded and individual beds are easily depicted by colour variation. Bedding is generally less than 15cm thick. The argillite beds are beige to light greenish in colour, the mudstone beds are dark brown in colour, generally very soft, and the chert beds are medium green or bright red in colour.

**Diabase:** This unit is fine grained, moderately to strongly magnetic. It is composed of ~45-50% feldspar, ~45% mafic minerals, mostly amphiboles and minor biotite, ~5-8% quartz, ~2% magnetite, trace pyrite. This unit appears to have the same mineralogical composition as the diorite unit; visually, grains size is the only differentiating feature between these rock types. For simplicity reasons, the term diabase was used through out the mapping, rather than differentiating between the two units.

In drill logs, diabase is called "diabase or chill zone", as this unit always occurs between the diorite and the arkose. It is therefore possible that the diabase represents a chill zone between the sedimentary and intrusive contact. To note, a sharp contact between the diorite and the diabase is observed in some of the drill core, implying that the diabase maybe a separate intrusion.

### Diorite:

This unit is medium grained, massive and varies from strongly magnetic to very weakly magnetic. It is composed of ~50% feldspar, commonly a light greenish colour, ~40-45% mafic minerals, mostly amphibols, ~5% quartz, trace to 5% magnetite. The feldspars are locally red in colour giving the rock a mottled orangy-red and dark green to black colour.

**Quartzite:** Colour varies from light grey to white in outcrop and in drill core colour is more commonly a light pink to light grey. The unit consists of well-rounded and well-sorted quartz grains and is generally competent. On surface as well as in drill core, the unit locally grades into a pebbly quartzite or a conglomeratic quartzite, where grains tend to be matrix supported.

## 6.3 Trenching

Gogama Forest Products Inc. was contracted to perform trenching at the property using a John-Deere Crawler 450, operated by Brent Guse. Trenching was carried out on June 14<sup>th</sup>, at the end of the mapping program along the small road in the gully to the southwest of Extender Minerals barite vein, (Figure 2). Two trenches were completed in the area of Vein A.

Trench 1, centered at 4+58E and 3+87N straddles the southeastern edge of the diabase ridge at the end of the small road. On surface barite veinlets, 1-4" true width, and barite breccia with ~10% barite over 1m, outcrops on the southern most edge of the diabase ridge. The trench

measured 20m long by up to 6m wide and reached a depth of 4.5m without reaching outcrop at the base of the trench. Overburden consisted of a thin layer of organic material overlying a thick layer of clay to sandy material.

Trench 2, centered at 5+25E and 4+04N was dug along the eastern edge of the outcrop ridge found on the western side of the small road. The trench measured 27m long by 6.7m wide and reached a maximum depth of 5m at the northeast end of the trench and a maximum depth of 4m at the southwest end of the trench. Outcrop was only uncovered along the edge of the outcrop ridge but not at the base of the trench. A barite vein with a true width of ~4m was uncovered along the ridge face which is interpreted to be the southwest extension of vein A. The total width of the vein is unknown as the vein was still in thick overburden to the southeast. The barite is light grey to white, locally light pink in colour, with a fine-grained, sugary texture. Local minor vugs coated with an unidentified black mineral (MnO?) were observed. (note: the light pink sandstone observed in drill core locally contained abundant vugs coated with the black unknown mineral). The barite vein has a sharp contact to the northwest with a red arkose.

#### **6.4 Geophysical Surveys**

Due to the lack of outcrop exposure on the property, geophysical surveys were conducted to provide a tool, which would assist in the interpretation of the regional structure of the mapped area. Georgex Exploration of Timmins, Ontario were contracted and carried out both Total Field magnetometer and VLF-EM surveys, see 1:2500 scale maps in Appendix B. The survey was completed by Steve Anderson of Vision Exploration of Timmins, Ontario, between June 7th and June 10th, 2000.

The VLF instrument used was a Geonics EM-16 and magnetometer instrument a GEM GSM-19. A total of 11.3 km of grid lines, with lines spaces 100m apart and stations spaced 12.5 m apart was surveyed.

#### **VLF-EM Results**

Electromagnetic surveying, using the VLF-EM (very low frequency-electromagnetic) method was performed in order to identify and trace structural trends, especially shears or faults which might host barite veins. The surveying was performed using a Geonics EM-16 VLF-EM receiver. The Cutler, Maine (station id. NAA, transmitting at 24.0 kHz) VLF transmitter station was used as this station was the only reliable transmitter during the duration of the survey which had appropriate strength and coupling with the anticipated structural trends. Additional instrument and survey parameters are available in Appendix F.

Magnetometer results are shown on Figures 3 and 4, located in Appendix B. Interpretation of structural trends has been performed by analysis of In-phase and Quadrature conductor axes, as 'cross-overs'. Survey data were also Fraser Filtered in order to assist in the interpretation (Figure 3). The survey results were affected by a major hydroelectric transmission line, which traverses the survey grid from north to south. Several linear conductor axes, which likely represent structural breaks or trends such as shears or faults, are present over the survey grid, as shown on Figures 3 and 4, and compiled on Figure 2. These anomaly axes are generally weak to moderate in strength, relatively short being 200 - 300m in length, and are roughly parallel to the survey baseline and the general trend of the nearby barite veins, Vein A and Vein B, being ~050° Azimuth. In particular, a strong conductor axis from 6+00E 1+60N to 8+00E 1+90N which corresponds to a topographic low and linear creek is interpreted to represent fault or shear which may potentially host barite veining. The anomaly is of a similar orientation and spacing of that between Vein A and Vein B and thus may represent the position of a repeated structure. This

anomaly was recommended for evaluation by drilling and was later drilled with ddh 00-NW-01 experiencing negative results.

### **Magnetometer Results**

Magnetometer surveying was performed in order to assist in geological interpretation, particularly in areas of thick overburden cover, where outcrop is sparse to absent. The surveying was performed using a GEM GSM-19 magnetometer and base station readings were also acquired in order to correct for diurnal fluctuations in the earth's magnetic field. A total of 10.8km of grid lines were surveyed upon lines spaced 100m apart with stations spaced 12.5m apart. Further instrument information and operational parameters are available in Appendix F.

Survey results are presented on Figure 5, located in Appendix A. In general, the magnetic results show two main trends; magnetic lows tend to be underlain by quartzite and other metasedimentary rocks; magnetic highs tend to be underlain with the diorite and diabase. A broad mag low is present in the southeast portion of the survey grid, which was later found to correlate with scattered quartzite outcrops. A broad mag high is present in the northcentral portion of the survey grid, which was found to correlate with a diabase ridge. Structural trends evident from VLF survey results are also reflected in the magnetic trends.

### **6.5 Diamond Drilling**

Diamond drilling was performed on the property in between July and August of 2000. The drilling was contracted to Norex Drilling Ltd. of Timmins, Ontario. Five drill holes were drilled with a total depth of 774m. Two drill holes were drilled to test the extension of Vein A, which is currently being mined at Extender Minerals. Two drill holes were drilled to test the extension of Vein B, which is located subparallel and ~300m west of vein A on Extender Minerals' property and 1 drill hole was drill to test a low area to the southeast and trending parallel Vein A and Vein B.

Overall, geology of the drilled core consisted of a competent, magnetic, mafic intrusive for the first 30-75m followed by a blocky pink to orangy brown arkose and by a more competent, thinly interbedded argillite/mudstone/chert/arkose at the base of the hole. The incompetence of the arkosic unit caused drilling problems in two of the drill holes. Reduction of core size, from NQ to BQ, was necessary in drill hole 00-NW-02 and 00-NW-03, as the broken nature of the core caused the drill rods to jam and created water loss problem.

The drill core is neatly stacked on three palettes at the side of the road, which leads to the area of trenching on vein A, see Figure 2 for location. All drill logs and cross sections are in Appendix C.

#### **DDH 00-NW-01;**

*Target:* low area (swamp; between 1+40N and 2+10N on line 7+00E, 8+00E and 9+00E on geology map) trending parallel Vein A and B.

*Summary:* A total of 250.5m was drilled which projects to 179m on surface. No barite was intersected in the drill hole. The geology is summarized as follows;

0m to 17m; sandy overburden

17m to 73.3m; mafic intrusive with faults defined by the presence of clay and a silvery grey serpentine mineral

73.3m to 185.5m; brownish-red arkose interbedded with minor chert, local various gouges/faults. This unit is blocky, with local intervals of very blocky core.



185.5m to 250.5m; thinly bedded sandstone, arkose, argillites and mudstones. Unit has a banded appearance.

**DDH 00-NW-02;**

*Target:* test extension of Vein A near trenched area where the vein was partly exposed

*Summary:* A total of 152.0m was drilled which projects to 116.4m on surface. 7 light pink to pink barite veinlets were intersected between 35.4m and 40.3m all of which were in a blocky, brownish-red, arkose. The thickness of the veinlets varies from 1cm to 8cm thick. Minor barite breccia occurs between 41.3m and 43.5m, with ~5% interstitial barite. The geology is summarized as follows;

0m to 3m; sandy overburden

3m to 28.8m; mafic intrusive

28.8m to 43.5m; brownish-red arkose with various thin pink barite veins and minor barite breccia

43.5m to 89.8m; brownish-red arkose interbedded with a light pink quartzite

89.8m to 152.0m; thinly bedded sandstone, arkose, argillites and mudstones. Unit has a banded appearance.

**DDH 00-NW-03;**

*Target:* test extension of Vein B

*Summary:* A total of 152.0m was drilled which projects to 114.1m on surface. No barite was intersected in the drill hole. The geology is summarized as follows;

0m to 5m; sandy overburden

5m to 67.5m; mafic intrusive with faults defined by the presence of clay and a silvery grey serpentine mineral

67.5m to 107.2m; brownish-red arkose interbedded with a light pink quartzite

107.2m to 152.0m; thinly bedded sandstone, arkose, argillites and mudstones. Unit has a banded appearance.

**DDH 00-NW-04;**

*Target:* test extension of Vein B further to the southwest

*Summary:* A total of 110m was drilled which projects to 80.8m on surface. No barite was intersected in the drill hole. The geology is summarized as follows;

0m to 2.3m; sandy overburden

2.3m to 75.6m; mafic intrusive with faults defined by the presence of clay and a silvery grey serpentine mineral

75.6m to 110m; brownish-red arkose interbedded with a light pink quartzite and minor mudstone and chert

**00-NW-05;**

*Target:* test extension of Vein A 100m southwest of drill hole 00-NW-02

*Summary:* A total of 110m was drilled which projects to 82.4m on surface. No barite was intersected in the drill hole. The geology is summarized as follows;

0m to 5.5m; sandy overburden

5.5m to 75.8m; brownish-red arkose interbedded with a light pink quartzite and minor mudstone and chert. Various intervals are very block to crumbly (fragments less than a few cm)

75.8m to 110m; thinly bedded sandstone, arkose, argillites, mudstones and chert. Unit has a banded appearance.

## **7.0 CONCLUSIONS AND RECOMMENDATIONS**

A control grid has been established along the projected strike extension of Vein A.

Geological mapping and geophysical surveys assisted in providing a better understanding of the geology and structure of the property, but geological mapping is hindered by lack of outcrop.

Trenching confirmed on the adjacent property, currently being mined, the continuity of the Vein A near surface for a strike length of 170m from the vein outcrop.

A total of 5 drill holes were drilled on the property. Diamond drilling failed to show extension of Vein A or B at depth greater than 30m. Still remaining untested is the extension of the Vein A and B to the northeast onto claim 1234964. Further exploration activities should focus on locating any possible northeastern extension of Vein A and B.

Respectfully,  
HIGHWOOD RESOURCES LTD.

Ann Larocque  
Project Geologist

December 08, 2000

## 8.0 REFERENCES:

Carter M.W., 1987;

Geology of the Shining Tree Area, District of Sudbury and Timiskaming, Ontario. Geological Survey, Mines and Minerals Division, Report 240.

Long D.G.F. and Colvine A.C., 1984;

Geology and Placer Related Gold Potential of the Huronian Supergroup in Part of the Northwest Cobalt Plain. Miscellaneous Paper 126, p 242-246.

## STATEMENT OF QUALIFICATIONS

I, Ann Larocque, do hereby certify:

1. That I am employed by Highwood Resources Ltd with office at Suite 715, 734-7<sup>th</sup> Ave SW, Calgary, AB, T2P 3P8.
2. That I graduated from the University of Ottawa with a Bachelor of Science with Honors in *Geology* in 1993.
3. That I have practiced my profession as a geologist from 1993 to present.
4. That the geological information contained in this report is based on my personal observations on the property with the exception of the geophysical work, which was performed by Georgex Exploration of Timmins, Ontario.
5. That I hold no interest in the property.

Dated in Calgary, Alberta this day of December 8, 2000

  
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Ann Larocque

## APPENDIX A

North Willams Township; Figure 1: Claim Map, scale to fit,  
Figure 2: Geological Mapping and Diamond Drilling, 1:2500 scale

## **APPENDIX B**

Figure 3: Fraser Filtered VLF-EM Survey, 1:2500 scale,  
Figure 4: Posted and Profiled VLF-EM survey, 1:2500 scale,  
Figure 5: Posted and Contoured Total Field Magnetometer Survey, 1:2500 scale,

## **APPENDIX C**

**Drill Logs and Cross Section (Figure 7 thru 11) for Diamond Drill Holes;  
00-NW-01 to 00-NW-05; 1:250 scale**





# HIGHWOOD RESOURCES LTD.

## DIAMOND DRILL LOG

Property North Williams  
 Hole No. 00NW01  
 Grid \_\_\_\_\_  
 Claim \_\_\_\_\_  
 Comments \_\_\_\_\_

Northing 1400N EoH 250.5m Start Date July 25/00  
 Easting 7400E Az/plunge 320/45 End Date July 28/00  
 Elevation \_\_\_\_\_ Horiz. Length \_\_\_\_\_ Drilled by Norex  
 Section \_\_\_\_\_ Core Size NQ Logged by AL

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INTE RVAL feet / metres		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS	
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %
73.5m	76.8m	ARKOSIC SANDSTONE	- f.g., siliceous, local bedding planes observed, light pink to orange pink colour 73.6-73.85 Sugary tx, light orange colour, massive gtrite 77.2-77.8 f.g. massive mafic rock volcanic? upper contact @ 45° to CA lower contact @ 40° to CA 77.2-77.3 Unit contains rounded amygdules? 1mm Ø are rounded, filled with calcite light yellowish, light green (Calc+epidote) - 10% minor epidote-calcite stringers @ 70-45° to CA 75.5 bedding @ 65° to CA. Lower contact is sharp @ 30° to CA.						
79.8m	86.7m	MAFIC volcanic	f.g. massive mid-dk gray-green colour, magnetic with 7% amygdules filled with calcite ↳ 4mm - 0.5cm Ø (white) Some are filled with fine grained magnetite (only observed in 2 location; near calcite stringers) Unit contains ~ 1-2% stringers; calcite + epidote < 1cm thick @ 35-60° to CA						
86.7m	99.7m	ARKOSIC SANDSTONE (with minor calcite stringers throughout) as 73.2-78.8	86.7-87.8m; unit contains ~ 10% rounded 0.2-0.5cm Ø limonite blebs 87.8-88.0m; orange colour, sugary tx bed with discontinuous irregular band of dk brownish mineral? 88.0-90.0; same as 86.7-87.8 but blebs are a dk brownish colour? + core is very blocky! 91.3m cherty (red colour) bed @ 50° to CA } found in minor amount throughout unit						

# HIGHWOOD RESOURCES LTD.

## DIAMOND DRILL LOG

Property North Williams  
 Hole No. 00NW01  
 Grid \_\_\_\_\_  
 Claim \_\_\_\_\_  
 Comments \_\_\_\_\_

Northing \_\_\_\_\_ EoH \_\_\_\_\_ Start Date \_\_\_\_\_  
 Easting \_\_\_\_\_ Az/plunge \_\_\_\_\_ End Date \_\_\_\_\_  
 Elevation \_\_\_\_\_ Horiz. Length \_\_\_\_\_ Drilled by \_\_\_\_\_  
 Section \_\_\_\_\_ Core Size \_\_\_\_\_ Logged by \_\_\_\_\_

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INTE RVAL feet / metres		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS	
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %
99.9m	100.1m	Cherty Sediments	Unit is very fine grained, dark red colour with irregularly discontinuous bands of olive green chert						
100.1m	111.6m	ARKOSE	Orange-red colour fine grained (granules to siliceous) with minor (2-3%) chert (olive green or red) beds. 100.6 - 100.9 = Qtz vein white w/ chert clast @ 50° to C.A. 100m: laminations @ 50° to C.A. 109.7m - 113.8 (mostly) (mostly) interbedded reddish orange arkose + a brownish granulate minor chert beds + locally med grained orange sandstone beds. (sh) (sh) * core is very blocky broken up into fragments (< 20cm long) microfracturing is apparent within beds. local beds (mostly the cherty beds) show a lx + z 107.1 bedding @ 60° to C.A. (defined by a sandstone bed) note: the sandstone beds often have a pitted appearance and pits are locally filled with "limonite"? @ 111.2 lam @ 45° to C.A.						
111.6m	121.7m	Same as previous but brecciated Arkose	112.6' - 115.2' rock is blocky but not as blocky as previous and next interval 118.6m - 129.6m - very blocky core 123.0 - 123.1m - broken up clay rich zone - Fault zone? orientation?						
124.7m	148.1m	Red Arkosic SEDIMENTS	- F.g. weakly laminated, with minor cherty clasts/beds (3-5%) - With ~1-2% calcite - qtz stringers randomly oriented						

HIGHWOOD RESOURCES LTD.

DIAMOND DRILL LOG

Property North Williams  
 Hole No. 00NW01  
 Grid \_\_\_\_\_  
 Claim \_\_\_\_\_  
 Comments \_\_\_\_\_

Northing \_\_\_\_\_ EoH \_\_\_\_\_ Start Date \_\_\_\_\_  
 Easting \_\_\_\_\_ Az/plunge \_\_\_\_\_ End Date \_\_\_\_\_  
 Elevation \_\_\_\_\_ Horiz. Length \_\_\_\_\_ Drilled by \_\_\_\_\_  
 Section \_\_\_\_\_ Core Size \_\_\_\_\_ Logged by \_\_\_\_\_

INTE RVAL feet / metres		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS	
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %
		131.1 - 131.14	Fault zone? rock is bx 4cm thick w/ clay in between fragments @ ~70° to C.A.						
		133.6m	graded bedding - tops facing up hole						
		143m	core is fairly broken up.						
		136.4 - 136.6m	interval is very porous. Some of the cavities are up to 4cm long x 1.5cm. cavities were previously filled w/ a black cherty? material						
			round to elongated clast (sids) are locally noted						
		137.6	bedding @ ~70° to C.A.						
		142m	bedding @ ~70° to C.A. defined by a coarse 2cm thick limonite red bed.						
		145.6	Core is very blocky - increasing amount of cherty clast/beds + chert. younger beds w/ a limonite & H. oxidation						
		147.3m	bedding @ 60-65° to C.A. laminations						
		147.4m - 147.7m	1cm thick gouge @ ~70° to C.A. consist of red clay / very blocky						
148.1m	154.3m		Well banded brownish-red + light-med green chert cherty to Arkose sediments						
			banding/bedding is on average ~1-3cm thick @ 60° to C.A.						
154.3m	155.7m		brecciated chert (green) + Arkose (brownish red) fragments are up to 3cm long and angular						
155.7m	180.7m		Same as 148.1m - 154.3m banded brownish red + green chert > Arkose						
			@ 158m banding is @ 65° to C.A.						
			few beds w/ rounded chert or arkose fragments up to 2.5cm long elongated parallel bedding						
		159.2m	bedding @ 60° to C.A.						

# HIGHWOOD RESOURCES LTD.

## DIAMOND DRILL LOG

Property North Williams  
 Hole No. 00NW01  
 Grid \_\_\_\_\_  
 Claim \_\_\_\_\_  
 Comments \_\_\_\_\_

Northing \_\_\_\_\_ EoH \_\_\_\_\_ Start Date \_\_\_\_\_  
 Easting \_\_\_\_\_ Az/plunge \_\_\_\_\_ End Date \_\_\_\_\_  
 Elevation \_\_\_\_\_ Horiz. Length \_\_\_\_\_ Drilled by \_\_\_\_\_  
 Section \_\_\_\_\_ Core Size \_\_\_\_\_ Logged by \_\_\_\_\_

INTE RVAL feet / metres		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS		
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %	
			local coarse grain beds altered to limonite? orange colour spotted black							
			@ 162.5m bedding @ 60° to C.A.							
			@ 172.0m bedding @ 60° to C.A.							
			@ 179.0m bedding @ 65° to C.A.							
180.7m	185.5m	Arkasic Sandstone	180.7-182.1m: brownish red arkose grading into a coarser granular arkasic sandstone med grained, sugary tx, light orange-brown colour							
			185.3 - 184.2m abundant elongated, subangular darker red arkose clast generally elongated @ ~ 70° to C.A.							
185.5m	187.8m	Well bedded/laminated arkose + cherty arkose beds	brownish-red + light green to dark green cherty beds bedding is on average ~ 0.5 to 6cm thick + @ 65° to C.A. Upper and lower contacts are gradational.							
189.8m	201.9m	Well laminated light brown + light green quartzite - mudstone	med to fine grained laminations are generally < 0.5cm thick + @ 75° to C.A.							
201.9m	202.0m	qtz + calcite vein @ 60° to C.A.								
202.0m	200.5m	Well laminated light brown-brise + light green quartzite to arkasic sediments	med to fine grained lam are < 0.5cm thick + @ 70° to C.A. @ 203m 202.0 - 203.2m: interval is fairly open in colour - 90% green laminae + 10% light brown 203.2 - 203.6 - soft sed def showing dextral movement.							

tr py



# HIGHWOOD RESOURCES LTD.

DIAMOND DRILL LOG ACID TEST  
 @ 62m Dip = 40°  
 @ 258m Dip = 37°

Property North Williams  
 Hole No. 00NW02  
 Grid \_\_\_\_\_  
 Claim \_\_\_\_\_  
 Comments A Vein near trench

Northing 3150N EoH 152.0m Start Date July 28, 2000  
 Easting 5100E Az/plunge 32/45° End Date July 30, 2000  
 Elevation \_\_\_\_\_ Horiz. Length \_\_\_\_\_ Drilled by Norex  
 Section \_\_\_\_\_ Core Size 10/100 Logged by A.L.

Page 1 of 4

INTE RVAL feet (metres)		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS	
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %
0m	3m	CASING							
3m	15.3m	Diorite	- medium grained, massive, weakly to moderately magnetic - medium grey-green colour - trace quartz and epidote stringers - 10% mafics (mostly amphibole), 55% alkali feldspar (plag? light greenish colour), 25% Qtz, 2% magnetite, tr py, dss + clots (up to 1.5cm long)						
15.3m	28.8m	DIABASE	- F.g. massive, med grey-green look the same as previous unit but fine-grained * - sounds glassy when struck - weakly magnetic - 1% calcite stringers (locally calcite + epidote) < 1cm thick @ 40-60° to C.A.						
28.8m	35.1m	brownish-red arkosic sediments	fine-grained with minor beds of sandstone; light grey colour 2-10cm thick @ 30-35° to C.A. 33.3m - 2cm thick pink barite vn @ 50° to C.A. 33.85 - 34.65; 8cm thick, s.g. pink barite vn @ 60° to C.A. upper contact @ 55° to C.A. lower contact 35.35m - calcite/Ba vn 1.5cm thick @ 60° to C.A. 35.86; 4cm thick Ba + calcite vn, pink @ 70° to C.A. 35.97; 4cm thick barite vn, pink @ 70° to C.A.						
35.1m	38.0m	Diabase	F.g. massive, med grey-green, moderately magnetic w 2% calcite + epidote stringers (various orientations)						
38.0m	41.3m	Brownish-red arkosic sediments	interbedded w light grey sandstone (10%) 4-30cm thick Bedding is @ - 45-50° to C.A. @ 39.6m core starts to get fairly blocky @ 40.5m 1cm thick barite vn, pink @ 50° to C.A.						

# HIGHWOOD RESOURCES LTD.

## DIAMOND DRILL LOG

Property \_\_\_\_\_  
 Hole No. DONW02  
 Grid \_\_\_\_\_  
 Claim \_\_\_\_\_  
 Comments \_\_\_\_\_

Northing \_\_\_\_\_ EoH \_\_\_\_\_ Start Date \_\_\_\_\_  
 Easting \_\_\_\_\_ Az/plunge \_\_\_\_\_ End Date \_\_\_\_\_  
 Elevation \_\_\_\_\_ Horiz. Length \_\_\_\_\_ Drilled by \_\_\_\_\_  
 Section \_\_\_\_\_ Core Size \_\_\_\_\_ Logged by \_\_\_\_\_

INTERVAL feet / metres		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS		
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %	
41.3m	43.5m	Breccia in Arkosic Sediments.	discontinuous bx ~ 80% bx rest are Arkosic to Sandstone beds contain ~ 5% barite minor qtz + calcite. @ 41.1m core gets very blocky							
43.5m	52.8m	Brownish-red Arkosic SEDIMENTS w/ minor sandstone beds.	43.5m-43.9m - core is in small bits rest is very blocky. @ 44.5m bedding is @ 60° to C.A. 45.8m-48.1m rock is slightly brecciated w/ ~1% barite as matrix 47.9m - pink barite vn - 1cm thick, orientation? 48.3m-49.1m - rock is broken into very small fragments 50m CHANGE CORE SIZE TO BQ 52.2m - 2mm thick stringer of massive galena @ ~50° to C.A. 52.5m-52.6m - few mm thick stringers of galena @ various angle to core							
52.8m	60.2m	Sandstone	light pink to light grey w/ minor Arkosic beds w/ with minor calcite stringers + blocks ~1% core is blocky 8.5cm thick light pink fanite vn @ ~70-75° to C.A. 58.5m-60.2m: beds are speckled with black coating around qtz grains? (look organic??)							
60.2m	62.2m	INTERBEDDED ARKOSIC + CHERT (light green) (brownish-red)	F.g. looks banded w/ beds ~ 0.5cm-10cm thick @ ~50° to C.A. With minor sandstone interbeds.							

# HIGHWOOD RESOURCES LTD.

## DIAMOND DRILL LOG

Property \_\_\_\_\_  
 Hole No. 00NW02  
 Grid \_\_\_\_\_  
 Claim \_\_\_\_\_  
 Comments \_\_\_\_\_

Northing \_\_\_\_\_ EoH \_\_\_\_\_ Start Date \_\_\_\_\_  
 Easting \_\_\_\_\_ Az/plunge \_\_\_\_\_ End Date \_\_\_\_\_  
 Elevation \_\_\_\_\_ Horiz. Length \_\_\_\_\_ Drilled by \_\_\_\_\_  
 Section \_\_\_\_\_ Core Size \_\_\_\_\_ Logged by \_\_\_\_\_

Page 3 of 4

INTERVAL feet / metres		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS	
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %
62.2m	68.4m	Arkose (brownish-red)	interbedded w/ cherty sediments + minor sandstone (greywacke) - unit looks well bedded - 30% of bands have a limonite staining (looks like black material previously observed is altered to limonite) - bedding is thin 1-10cm thick @ ~60° to CA. @ 62.2m micro fault with synistral movement of 2cm @ 35° to CA. core is very broken up						
68.4m	69.8m	LIGHT PINK QUARTZITE	BECCIATED core is not as broken up as previous interval but still blocky - clast supported breccia. Fragments are angular to subangular + up to 3cm long						
69.8m	73.8m	LIGHT PINK QUARTZITE	(Core is fairly solid) w/ minor local becciated zones + minor inclusions / layers of material 169.8-171.0m contains ~10% of black speckled material making the rock porous as small cavities form @ the black material (< than a few mm of cavities) 70.5m - 72.5m CA						
73.8m	84.5m	Brownish-red Arkose	w/ minor green chert beds / clast (2%) + minor quartzite beds / greywacke (3%) + limonite stained beds (1%) @ 76.5m bedding @ 45° to CA. 78.3m - core is broken into very small fragments 80.0m - 2cm bed to limonite staining bedding @ 40° to CA. 84.4-84.5m - bed to abundant chert and mudstone clasts, clasts one rounded to subrounded + up to 3cm long						



# HIGHWOOD RESOURCES LTD.

## DIAMOND DRILL LOG

Property \_\_\_\_\_  
 Hole No. CDNW02  
 Grid \_\_\_\_\_  
 Claim \_\_\_\_\_  
 Comments \_\_\_\_\_

Northing \_\_\_\_\_ EoH \_\_\_\_\_ Start Date \_\_\_\_\_  
 Easting \_\_\_\_\_ Az/plunge \_\_\_\_\_ End Date \_\_\_\_\_  
 Elevation \_\_\_\_\_ Horiz. Length \_\_\_\_\_ Drilled by \_\_\_\_\_  
 Section \_\_\_\_\_ Core Size \_\_\_\_\_ Logged by \_\_\_\_\_

INTE RVAL feet / metres		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS	
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %
89.8m	152.0m	INTERBEDDED	MUDSTONE / ARKOSE / CHESTY SEDIMENTS / SANDSTONE / (brown) (brownish red) (Green, minor red) (lt grey) (grey to grey) (red grey)						
			mirrored beds altered to limonite (lt grey)						
			Chert + mudstone beds are often broken up + brecciated OR conglomeratic						
			- ON ave beds are 0.5cm to 10cm thick:						
			92.0m bedding @ 55° to C.A.						
			- green cherty bed. often contain cavities up to 4cm long filled in w qtz/calcite						
			100m bedding is @ 35° to C.A. stratigraphic tops is uphole						
			103.9m bedding @ 45° to C.A.						
			107m bedding @ 45° to C.A.						
			112.2m - 3cm thick concave - mud looks @ same angle as bedding = 45° to C.A.						
			115.0m - bedding @ 40° to C.A.						
			119.2m - bedding @ 40° to C.A.						
			125.5m - large bright red chert clast in a porous sandstone clast are site rounded + up to 7cm long						
			128.4m - bedding @ 35° to C.A.						
			130.0m - bedding @ 40° to C.A.						
			131.2m - 2.5cm thick qtz vn @ 60° to C.A. calcite						
			133.9m - bedding @ 45° to C.A.						
			139.0m - core is solid						
			139.9m - 141.7m - light pink quartzite bed w local vugs filled w calcite crystals						
			143.3m - bedding @ 40° to C.A.						
			146.6m - minor fault (hairline fracture) @ 50° to C.A.						
			149.0m - bedding @ 35° to C.A.						
152.0		EOH							

# HIGHWOOD RESOURCES LTD.

DIAMOND DRILL LOG ACID TEST at 95m = 41.5°  
at 138m = 36.0°

Property North Williams  
Hole No. CONW03  
Grid \_\_\_\_\_  
Claim \_\_\_\_\_  
Comments B VEIN

Northing 5+30N EoH 152m Start Date July 30, 2000  
Easting 3+00E Az/plunge 140°/45° End Date Aug 3, 2000  
Elevation \_\_\_\_\_ Horiz. Length \_\_\_\_\_ Drilled by NOREX  
Section \_\_\_\_\_ Core Size NQ/BQ Logged by AL  
D-131, 3m = NQ  
131.3-152m = BQ

Page 1 of 3

INTERVAL feet / metres		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS	
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %
0 m	3m	CASING							
3m	45.7m	Diorite	- medium grained, massive, med green-grey - weakly to <del>weakly</del> magnetic - 15% Qtz, - 100% light green coloured feld (Plag) ~ 35% mafics (mostly amph)						
			16.2m - 1m wide gouge @ ~ 50° to C.A (gouge consist of a silty siliceous to clay material)						
			29.5-45.7m Core is starting to get slightly block to few thin line fractures parallel to at very low take angle often filled with a light grey-green clay material						
			34.5m - epidote/serpentine rich 2cm thick fracture @ 30° to C.A.						
			40.2m - hornblende/epidote/serpentine rich 1cm thick fracture @ 15° to C.A.						
			45.2m - 1cm thick fracture filled with epidote/serpentine + 3% py bits + chert (red) fragments @ 20° C.A.						
45.7m	67.5m	Diorite	fine grained looks same composition as previous unit but f.g. (no amph clots up to 48.8m) weakly magnetic, massive minor (1%) epidote rich stringer locally						
			56.8m - 59.0m - with amph clots						
			59.2m - 61.5m - with small calcite blebs throughout - looks like amygdules filled with white calcite						
67.5m	70.0m	INTERBEDDED ARKOSE/GREENSLAKE/SANDSTONE / (MUDSTONE)	- core is fairly blocky with local crumbly intervals - upper contact is sharp @ 30° to C.A.  - Sandstone beds are generally light pink in colour + very granular with frags up to 5cm long, 2cm wide partially filled in with calcite/dolomite (saddle shaped etc) - frags locally make the unit very crumbly						
			71.0m - bedding @ 35° to C.A.						
70.0m	93.1m	Silicified Quartzite	Light orange to light pink in colour colour gradually changes to light pink towards the down hole contact core is solid						

# HIGHWOOD RESOURCES LTD.

## DIAMOND DRILL LOG

Property \_\_\_\_\_  
 Hole No. 00NW03  
 Grid \_\_\_\_\_  
 Claim \_\_\_\_\_  
 Comments \_\_\_\_\_

Northing \_\_\_\_\_ EoH \_\_\_\_\_ Start Date \_\_\_\_\_  
 Easting \_\_\_\_\_ Az/plunge \_\_\_\_\_ End Date \_\_\_\_\_  
 Elevation \_\_\_\_\_ Horiz. Length \_\_\_\_\_ Drilled by \_\_\_\_\_  
 Section \_\_\_\_\_ Core Size \_\_\_\_\_ Logged by \_\_\_\_\_

Page 2 of 3

INTE RVAL feet / metres		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS		
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %	
			80.9m- bedding @ 40° to C.A.							
			85.0m- large vug coated with calcite x'tols (vug is larger than core size) → unit is granular between 84.0m-85.1m; as above interval							
			87.6m- bedding @ 30° to C.A.							
			91.0m- 91.4m- Dark brown Arkosic mudstone, granular w/ pink calcic clasts / bedding @ 50° to C.A.							
			91.4m- 92.1m- green mudstone bed grading into a grey waxy dolomite							
93.1m	107.2m	ARKOSE	to Arkosic Sandstone. previous unit gradually grades into this interval after 92.1m							
			- Orange-brown color, locally granular, locally partly silicified							
			- core is fairly competent (as previous unit)							
			97.0m- bedding @ 45° to C.A.							
			100.4m- 101.6m- stock work of fractures creating discoloration in core							
			102.4m- bedding @ 50° to C.A.							
			104.1m- bedding @ 45° to C.A.							
			106m- 107.2m- Stock work of fractures + the more sandy beds are conglomeratic							
107.2m	152.0m	INTERBEDDED	ARKOSE / SANDSTONE / MUDSTONE / Green cherty beds locally well laminated							
			108.2m laminations @ 50° to C.A.							
			108.4m microfault in 4cm displacement - synclinal @ 35° to C.A.							
			109.5m- 112.2m- w/ stock work of calcite veinlets (mm scale) fractures - sinistral movement on few fractures (displacement of < 2cm)							
			110.3-112.4m core is very blocky							
			* 112.7m - ~1cm thick calcite / possibly barite (tr) as a small discontinuous veinlet ? white stuff doesn't seem to penetrate to full							
			* 112.4m- EoH: core is extremely blocky							

# HIGHWOOD RESOURCES LTD.

## DIAMOND DRILL LOG

Property \_\_\_\_\_  
 Hole No. 00 NW 03  
 Grid \_\_\_\_\_  
 Claim \_\_\_\_\_  
 Comments \_\_\_\_\_

Northing \_\_\_\_\_ EoH \_\_\_\_\_ Start Date \_\_\_\_\_  
 Easting \_\_\_\_\_ Az/plunge \_\_\_\_\_ End Date \_\_\_\_\_  
 Elevation \_\_\_\_\_ Horiz. Length \_\_\_\_\_ Drilled by \_\_\_\_\_  
 Section \_\_\_\_\_ Core Size \_\_\_\_\_ Logged by \_\_\_\_\_

INTE RVAL feet / metres		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS	
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %
			116.4m - bedding @ 40° to C.A.						
			119.6m - bedding @ 60° to C.A.						
			- local conglomeratic interbeds (matrix supported)						
			125.4m - bedding @ 50° to C.A.						
			129.3m - bedding @ 45° to C.A.						
			127.3m - 4cm of very ground up rock in brownish-red clay. may be fault but may also be a very incompetent bed.						
			* 131.3m CHANGED TO BS CORE - NO RATE TO BIT ROCK TOO ROBUST!						
			135.2m - bedding @ 37° to C.A.						
			140.0m - bedding @ 45° to C.A.						
			148.0m - bedding @ 35° to C.A.						
			152.7m ground up core clay + rock fragments - gauge? angle?						
152.0m		EOH							

# HIGHWOOD RESOURCES LTD.

DIAMOND DRILL LOG ACID TEST  
 AT 62m = 42°  
 AT 110m = 41.5°

Property NORTH WILLIAMS  
 Hole No. 00NWO4  
 Grid \_\_\_\_\_  
 Claim \_\_\_\_\_  
 Comments B VEIN

Northing 5130N EoH 110m Start Date Aug 2, 2000  
 Easting 2100E Az/plunge 40/45 End Date Aug 3, 2000  
 Elevation ? Horiz. Length \_\_\_\_\_ Drilled by NOREX  
 Section \_\_\_\_\_ Core Size N/A Logged by A.L.

Page 1 of 2

INTE RVAL feet / metres		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS	
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %
0	2.3	CASING							
2.3	68.9m	Diorite	- medium grained, massive, moderately magnetic - medium grey-green colour - 2% plae (light green colour), - % Matrix (mostly amf), - 25% qtz 1-2% magnetite minor calcite veins						
			@ 18.1m + 18.8m : 0.7cm thick white calcite stringer @ 65° to C.A.						
			23.0 - 24.6m → fracture roughly parallel to core axis (undulating) → 23.6m - 24.6m core is disturbed we → FAULT gouge??						
			27.1m - 27.9m → 0.8 to 1cm wide calcite veinlet roughly parallel to C.A. (undulating)						
			*42.4 - 42.5m - fault epidote / serpentine rich w fragment of red Arkosic rock @ 35° to C.A.						
			62.24m - 0.5cm thick calcite stringer @ 65° to C.A.						
68.9m	75.6m	Diatase OR "chill zone"	Same rock as previous interval but fine-grained - massive, weakly to none magnetic - upper contact is gradational over 2cm 73.3 - 74.1m - core is blocky - lower contact is sharp @ 60° to C.A.						
75.6m	85.1m	INTERBEDDED ARKOSE (brownish-red) / Quartzite (generally w/ lignite) Mudstone (brown) / minor green chert	- vugs are common in the quartzite units making the core blocky 75.1 - 79.4m - with abundant vugs and very soft sed. making rock crumbly ↑ some of the beds are very fine sand - almost like a white soft clay 78.4m - bedding at 45-50° to C.A. 81.7m - 85.1m - same as 81.7 - 84.8 - crumbly core / blocky 85.0m - bedding @ 45° to C.A.						



# HIGHWOOD RESOURCES LTD.

## DIAMOND DRILL LOG

ACUTEST @ 56m = 40.5°  
110-m = 39.5°

Property NORTH WILLIAMS  
Hole No. 00NW05  
Grid \_\_\_\_\_  
Claim \_\_\_\_\_  
Comments AVEIN 2<sup>nd</sup> HOLE

Northing 3+SON EoH 110m Start Date Aug 3/2000  
Easting 4+00E Az/plunge 190/45° End Date \_\_\_\_\_  
Elevation ? Horiz. Length \_\_\_\_\_ Drilled by NOKEX  
Section \_\_\_\_\_ Core Size NQ Logged by AL

Page 1 of 2

INTE RVAL feet / metres		ROCK NAME	DESCRIPTION	SAMPLE RECORD				ANALYTICAL RESULTS	
From	To			Sample No.	From	To	Width (ft/m)	S.G.	BaSO4 %
0	5.5m	CASING							
5.5m	36.6m	Arkose (brownish red)	inter layered with a light pink quartzite tr chert beds + mudstone beds 6.4m - bedding @ 60° to C.A. 9.7m - 10.7m - Breccia with quartz rich arkosic sed + inetic dyre, fragment ore subangular + up to 4cm Ø local vugs - generally lined to calcite, + local calcite stringers 13.6m - bedding (wavy) @ 45° to C.A. local tr dy, limonite 17.7m - bedding @ 35° to C.A. core is fairly blocky up to 19.1m *19.1m - 34.6m - core is crumbed up! most is coarser grained, more sandy unit - light pink quartzite 22.4m - bedding @ ~ 60° to C.A. 23.0m - @ 4cm thick clay (soft) bed 31.0m - bedding @ 55° to C.A. 34.6m - 38.0m - core is blocky but not crumbed up.						
36.6m	41.6m	Light pink quartzite	to Arkosic quartzite w/ stockwork of thin calcite veinlets, looks slightly brecciated						
41.6m	75.8m	Orange - pink Arkosic - quartzite	to Arkose. w/ minor chert beds (green) 44.4 - 45.4m - core is very blocky, fracture filled with clay runs ~ parallel C.A. over this interval / tr light green chert beds. 46.4m - bedding @ 35° to C.A. 48.7 - 50.7m - core is extremely blocky 57.2m - bedding @ 40° to C.A. locally w/ black mineral (Manganese Oxide?) often along laminations 67.0m - bedding @ 35° to C.A.						





## **APPENDIX D**

### **Sample Descriptions and Assay Results**

Sample	Property	Prov.	Type	Date	Location	Sample type	Rock type	Colour	Description	% refl	SG	Note
33153	North Williams	ON	HWD Project	6/14/2000	east claims	grab	metasediment	med grey	- fine grained, poss metasediment ?	N/A	N/A	iPL; ICP, WR
33152	North Williams	ON	HWD Project	6/14/2000	TR NW-00-2	grab- bldrs	barite	lt grey to white, lt pink	- grab from 4 boulders in trench, minor black-filled vugs, no sulphides	93.6	4.44	iPL; ICP ICP fine
33151	North Williams	ON	HWD Project	6/14/2000	TR NW-00-2	grab	barite	lt pink	- at footwall contact of vein with host rock, small black-filled vugs, tr sulphides	57.8	3.64	iPL; ICP ICP fine, Cu = 118ppm
33150	North Williams	ON	HWD Project	6/14/2000	TR NW-00-2	approx channel	barite	lt grey to white	- sugary texture, no sulphides, ~4ft tw	90.0	4.45	iPL; ICP ICP fine





INTERNATIONAL PLASMA LABORATORY LTD.

**CERTIFICATE OF ANALYSIS**  
 007  
**iPL 00G0681**

2036 Columbia Street  
 Vancouver, B.C.  
 Canada V5Y 3E1  
 Phone (604) 879-7878  
 Fax (604) 879-7898

Client : Highwood Resources Ltd.  
 Project: 104

**5 Samples**  
 5-Pulp

[068117:02:55:00071200]

Out: Jul 12, 2000  
 In : Jul 04, 2000

Page 1 of 1  
 Section 1 of 1

Sample Name	Type	Al2O3 %	BaO %	CaO %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	Total %
33153	Pulp	12.87	0.77	2.05	4.78	2.84	6.85	0.04	3.99	0.21	59.12	0.42	5.14	99.08
<del>33154</del>	<del>Pulp</del>	<del>0.51</del>	<del>0.55</del>	<del>0.08</del>	<del>0.70</del>	<del>0.08</del>	<del>0.09</del>	<del>0.01</del>	<del>0.25</del>	<del>0.03</del>	<del>96.29</del>	<del>0.01</del>	<del>0.20</del>	<del>98.78</del>
33155	Pulp	1.10	0.07	52.06	0.30	0.11	0.95	0.01	0.25	0.02	1.00	0.01	43.26	99.94
<del>33156</del>	<del>Pulp</del>	<del>1.22</del>	<del>0.06</del>	<del>51.91</del>	<del>0.31</del>	<del>0.04</del>	<del>0.89</del>	<del>0.01</del>	<del>0.25</del>	<del>0.05</del>	<del>2.99</del>	<del>0.01</del>	<del>42.29</del>	<del>99.93</del>
33157	Pulp	2.01	0.02	50.01	0.40	0.22	0.65	0.01	0.43	0.01	5.74	0.02	40.44	99.95

Minimum Detection  
 Maximum Detection  
 Method

0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	105.00
WRock	WRock	WRock	WRock	WRock	WRock	WRock	WRock	WRock	WRock	WRock	WRock	WRock	Ash/Wt	WRock

## **APPENDIX E**

**Geophysical Instruments Used;  
Geonics EM-16 and GEM GSM-19**

## MAGNETOMETER THEORY

A GEM GSM-19 Proton Precession magnetometer was used to carry out the magnetometer survey. The instrument is synchronised with an GEM GSM-19 recording base station to help eliminate magnetic diurnal variation. This should ensure an accuracy of less than 10 Nt.

The Proton Precession method involves energising a wire coil immersed in a hydrocarbon fluid. This causes the protons in the proton rich fluid to spin or precess simulating spinning magnetic dipoles. When the current is removed the protons precess about the direction of the earth's magnetic field, generating a signal in the same coil which is proportional to the total magnetic field intensity. In this way, the horizontal gradient of the earth's magnetic field can be measured and plotted in plan form with values of equal intensity joined to form a contour map.

This presentation is useful in correlating with other data sets to aid in structural interpretation.  
Individual magnetic

Responses can be interpreted for dip, depth and width estimates after profiling the data.

The following parameters were employed for the survey:

Instrument - GEM GSM-19 Proton Precession Magnetometer

Station Interval - 12.5m

Line Interval - 100m

Diurnal Correction Method - GEM GSM-19 Recording Base Station

Data Presentation - Magnetic Contours Map

- 1:5000 scale

- Contour interval = 20 nano-teslas

### VLF - EM Survey

A Geonics EM-16 VLF EM instrument was used to survey the entire property. Both the In-phase (dip angle) and Quadrature values were recorded at 12.5m intervals.

While VLF stands for Very Low Frequency, it is for mineral exploration purposes a very high frequency compared to other commonly used Electromagnetic Surveys. The commonly used frequencies are in the order of 18-20 kilohertz. The VLF-EM technique employs fixed transmitter stations located at various places around the world to facilitate navigation. Because of this, one has a limited choice as to what transmitter station that can be used, depending on distance from and azimuth to the transmitter station.

For this survey, Cuttler, Maine (NAA) was used. It has an operating frequency of 24.0 kHz and an azimuth of approximately of 110 degrees TN from the property. Very briefly, the transmitting station emits a concentric, circular wave pattern, expanding about the transmitter dipole. Being thousands of miles away from the transmitter, we deal with the tangent of this wave pattern, which in this case would have a direction normal to the azimuth of 110 degrees. Thus any conductors having a general EW strike direction would be intersected by this signal which induces a signal in the conductor which in turn opposes the primary signal from the transmitter station. This elliptically polarizes the resultant field enabling detection of the conductor using a receiver coil to determine the attitude of the resultant field at various points along the grid lines.

The resultant field dips away from the conductor axis on both sides of the conductor producing a crossover on the conductor axis. For an EW conductor, a true crossover would occur where the field dips south and changes to a north dip as you progress from south to north. For this survey, a +/- system is used where a (+) dip angle means the field is dipping to the south (indicating anomaly is to north) and a (-) dip angle means the field is dipping to the north (indicating anomaly is to South). This is the case only if all readings were taken facing north as per this survey.

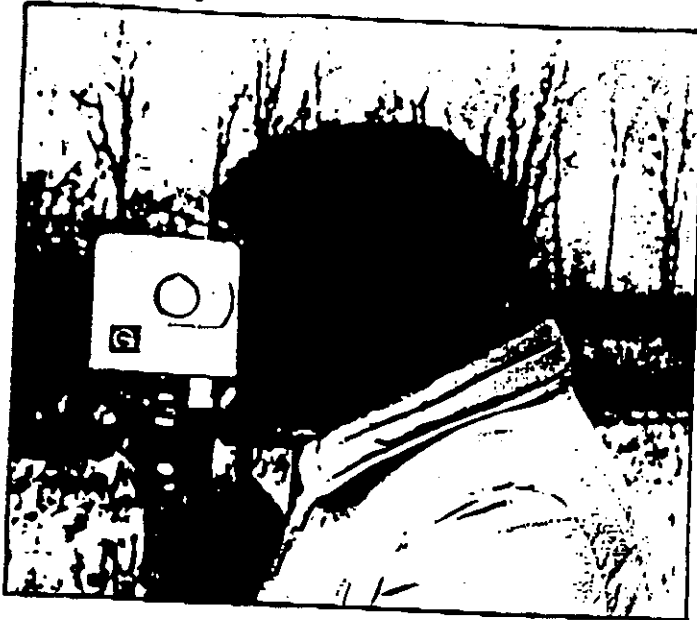
The quadrature values, while not useful alone, can help distinguish between bedrock conductors, which generally have a smaller out-of-phase response than overburden or short wavelength conductors can. Also, the polarity of the quadrature is diagnostic, i.e.; if the polarity follows or is the same sense as the In-phase it gives more credibility to the conductor. Reverse quadrature often indicates overburden responses.

The following parameters were employed for the survey:

Instrument - Geonics EM-16 VLF EM  
Transmitter Station - Cuttler Maine (USA)  
- Call symbol NAA  
Frequency - 24.0 kHz  
Azimuth to station - approx. 130 degrees TN  
Reading Direction - All reading taken facing north  
Station Interval - 12.5m  
Line Interval - 100m  
Data Presentation - Plan, profiled map  
- Plan, Fraser Filtered map  
- Scale - 1:5000  
- Profile scale 1 cm = 10%

## VLF (PLANE WAVE) EM INSTRUMENTS

### VLF EM



### EM16

One of the most popular and widely used electromagnetic instruments, the EM16 VLF receiver makes the ideal reconnaissance EM. This can be attributed to its field reliability, operational simplicity, compactness and mutual compatibility with other reconnaissance instruments such as portable magnetometers and radiometric detectors.

The VLF method of EM surveying, pioneered by Geonics, has proven to be a simple economical means of mapping geological structure and fault tracing. The applications are many and varied, ranging from direct detection of massive sulphide conductors to the indirect detection of precious metals and radioactive deposits.

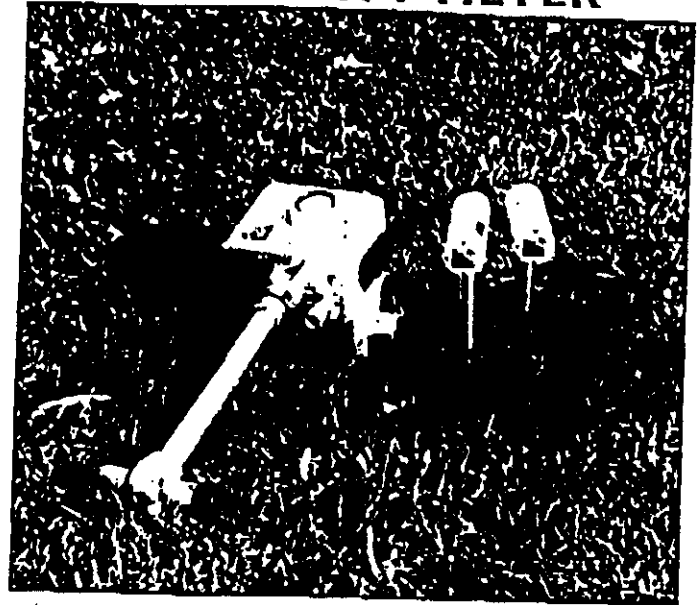
#### FEATURES

- The EM16 is the only VLF instrument that measures the quad-phase as well as the in-phase secondary field. This has the advantage of providing an additional piece of data for a more comprehensive interpretation and also allows a more accurate determination of the tilt angle.
- The secondary fields are measured as a ratio to the primary field making the measurement independent of absolute field strength.
- The EM16 is the only VLF receiver that can be adapted to measure VLF resistivity.

### Specifications

<b>MEASURED QUANTITY</b>	In-phase and quad-phase components of vertical magnetic field as a percentage of horizontal primary field. (i.e. tangent of the tilt angle and ellipticity)
<b>SENSITIVITY</b>	In-phase : $\pm 150\%$ Quad-phase : $\pm 40\%$
<b>RESOLUTION</b>	$\pm 1\%$
<b>OUTPUT</b>	Nulling by audio tone. In-phase indication has mechanical inclinometer and quad-phase from a graduated dial.
<b>OPERATING FREQUENCY</b>	15-25 kHz VLF Radio Band. Station selection done by means of plug-in units.
<b>OPERATOR CONTROLS</b>	On/Off switch, battery test push button, station selector switch, audio volume control, quadrature dial, inclinometer.
<b>POWER SUPPLY</b>	6 disposable 'AA' cells
<b>DIMENSIONS</b>	42 x 14 x 9 cm
<b>WEIGHT</b>	Instrument : 1.8 kg Shipping : 3.5 kg

### VLF RESISTIVITY METER



### EM16/I6R

The EM16R is a simple, button on attachment to the EM16 converting it to a direct reading terrain resistivity meter. The EM16R interfaces a pair of potential electrodes to the EM16 enabling the measurement of the ratio of, and the phase angle between, the horizontal electric and magnetic fields of the plane wave propagated by distant VLF radio transmitters.

The EM16R is direct reading in ohm-meters of apparent ground resistivity. If the phase angle is  $45^\circ$ , the resistivity reading is the true value and the earth is uniform to the depth of exploration (i.e. a skin depth). Any departure from  $45^\circ$  of phase indicates a layered earth. Two layer interpretation curves are supplied with each instrument to permit an interpretation based on a two layer earth model.

This highly portable resistivity meter makes an ideal tool for quick geological mapping and has been used successfully for a variety of applications.

- Detection of massive and disseminated sulphide deposits
- Overburden conductivity and thickness measurements
- Permafrost mapping
- Detection and delineation of industrial mineral deposits
- Aquifer mapping

### Specifications EM16R ATTACHMENT

<b>MEASURED QUANTITY</b>	• Apparent Resistivity of the ground in ohm-meters • Phase angle between $E_x$ and $H_y$ in degrees
<b>RESISTIVITY RANGES</b>	• 10 - 300 ohm-meters • 100 - 3000 ohm-meters • 1000 - 30000 ohm-meters
<b>PHASE RANGE</b>	0-90 degrees
<b>RESOLUTION</b>	• Resistivity : $\pm 2\%$ full scale • Phase : $\pm 0.5^\circ$
<b>OUTPUT</b>	Null by audio tone. Resistivity and phase angle read from graduated dials.
<b>OPERATING FREQUENCY</b>	15-25 kHz VLF Radio Band. Station selection by means of rotary switch.
<b>INTERPROBE SPACING</b>	10 meters
<b>PROBE INPUT IMPEDANCE</b>	100 M $\Omega$ in parallel with 0.3 picofarads
<b>DIMENSIONS</b>	19 x 11.5 x 10 cm. (attached to side of EM16)
<b>WEIGHT</b>	1.5 kg (including probes and cable)



## GEM GSM-19

### INSTRUMENT SPECIFICATIONS

#### MAGNETOMETER / GRADIOMETER

Resolution:	0.01 nT (gamma), magnetic field and gradient.
Accuracy:	0.2 nT over operating range.
Range:	20,000 to 120,000 nT.
Gradient Tolerance:	Over 10,000 nT/m
Operating interval:	3 seconds minimum, faster optional. Readings initiated from keyboard, external trigger, or carriage return via RS-232-C.
Input/Output:	6 pin weatherproof connector, RS-232C, and (optional) analog output.
Power Requirements:	12 V, 200 mA peak (during polarization), 30 mA standby. 300mA peak in gradiometer mode.
Power Source:	Internal 12 V, 2.6 Ah sealed lead-acid battery standard, others optional. An External 12V power source can also be used.
Battery Charger:	Input: 110 VAC, 60 Hz. Optional 110/220 VAC, 50/60 Hz. Output: dual level charging.
Operating Ranges:	Temperature: -40 °C to +60 °C. Battery Voltage: 10.0 V minimum to 15V maximum. Humidity: up to 90% relative, non condensing.
Storage Temperature:	-50°C to +65°C
Display:	LCD: 240 x 64 pixels, or 8 x 30 characters. Built in heater for operation below -20°C
Dimensions:	Console: 223 x 69 x 240mm. Sensor staff: 4 x 450mm sections. Sensor: 170 x 71mm dia. Weight: Console 2.1kg, Staff 0.9kg, Sensors 1.1 kg each.

#### VLF

Frequency Range:	15 - 30.0 kHz.
Parameters Measured:	Vertical In-phase and Out-of-phase components as percentage of total field. 2 components of horizontal field. Absolute amplitude of total field.
Resolution:	0.1%.
Number of Stations:	Up to 3 at a time.
Storage:	Automatic with: time, coordinates, magnetic field/gradient, slope, EM field, frequency, in- and out-of-phase vertical, and both horizontal components for each selected station.
Terrain Slope Range:	0° - 90° (entered manually).
Sensor Dimensions:	14 x 15 x 9 cm. (5.5 x 6 x 3 inches).
Sensor Weight:	1.0 kg (2.2 lbs).

## **APPENDIX F**

### **Statement of Expenditures**

**HIGHWOOD RESOURCES LTD.**  
**North Willimas Property - Exploration cost**  
For the perior ending 11/31/2000

	<b>Account Description</b>	<b>YTD</b>
407502EX N WILLIAMS	ACCOMM/CAMP COST	963.00 ✓
407507EX N WILLIMAS	DIAMOND DRILLING	40,012.17 ✓
407509EX N WILLIMAS	PLOTTING, PRINTING	456.69 ✓
407512EX N WILLIAMS	FRT, SHIPPING	196.05 ✓
407513EX N WILLIMAS	FILED OP SUPPLIES	911.52 ✓
407514EX N WILLIMAS	GEOL SUPERVISION	11,100.00 ✓
407517EX N WILLIMAS	LINECUTTING/GEOPHYSICAL	5,672.07 ✓
407519EX N WILLIMAS	MEALS	436.91 ✓
407522EX N WILLIMAS	OFFICE	2,200.00 ✓
407528EX N WILLIMAS	TRANSPORT	1,469.99
407529EX N WILLIMAS	TRENCHING, STRIPPING	<u>2,430.18 -</u>
	<b>Exploration N Williams Total:</b>	<b>\$ 65,848.58</b>



**NOREX DRILLING LIMITED**  
 P.O. Box 88  
 PORCUPINE, ONTARIO PON 1C0

**INVOICE**

Tel: (705) 235-2222 Fax: (705) 235-2806

366

NO:

8/8/00

DATE:

1 of 2

PAGE:

SOLD TO:

Highwood Resources Ltd.  
 734 7th Ave, SW Suite 715  
 Calgary, Alberta  
 T2P 3P8

SHIP TO:

Highwood Resources Ltd.  
 Att: Ann Larocque  
 Re: North Williams Township Ontario  
 July 25-Aug 3/00

Business No.: 10390 4504

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	GST	PST	UNIT PRICE	AMOUNT
	15	m	HOLE #NW-01, Casing 17m	3		45.95	689.25
	2	m		3		54.15	108.30
	133	m	17 to 150	3		45.95	6,111.35
	100	m	150 to 250	3		47.60	4,760.00
	3	each	Tests	3		50.00	150.00
			Pull casing out - NO CHARGE				
			HOLE #NW-02, Casing 3m				
	150	m		3		45.95	6,892.50
	2	m		3		47.60	95.20
	2	each	Tests	3		50.00	100.00
			Pull casing out - NO CHARGE				
			Lost complete core barrel in hole cave in 3m Rod, Bit & Reaming Shell \$1,500.00 x 50%	3		750.00	750.00
			HOLE #NW-03, Casing 5m				
	150	m		3		45.95	6,892.50
	2	m		3		47.60	95.20
	2	each	Tests	3		50.00	100.00
	1		NW 9F Bit \$525. x 50%	3		262.50	262.50
			HOLE #NW-04, Casing 3m				
	110	m		3		45.95	5,054.50
	2	each	Tests	3		50.00	100.00
			HOLE #NW-05, Casing 6m				
	110	m		3		45.95	5,054.50
	2	each	Tests	3		50.00	100.00
			Pull casing out - NO CHARGE				
	15	each	NQ Core Trays	3		5.25	78.75

COMMENTS:

Thank You !

**DUPLICATE**

**TOTAL** ▾

Continued...



**NOREX DRILLING LIMITED**  
 P.O. Box 88  
 PORCUPINE, ONTARIO P0N 1C0

**INVOICE**

Tel: (705) 235-2222 Fax: (705) 235-2806

NO: 366  
 DATE: 8/8/00  
 PAGE: 2 of 2

SOLD TO: Highwood Resources Ltd.  
 734 7th Ave, SW Suite 715  
 Calgary, Alberta  
 T2P 3P8

SHIP TO: Highwood Resources Ltd.  
 At: Ann Larocque  
 Re: North Williams Township Ontario  
 July 25-Aug 3/00

Business No.: 10390 4504

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	GST	PST	UNIT PRICE	AMOUNT
			3 - GST @ 7.0%				2,617.62
			Terms: Net 15. Due 8/23/00.				

COMMENTS:  
 Thank You!

**DUPLICATE**

**TOTAL**

40,012.17

**GOGAMA FOREST PRODUCTS LTD.**

HEAD OFFICE: 2500 ELM ST., BOX 700, COPPER CLIFF, ON P0M 1N0  
 PHONE (705) 682-1555 FAX (705) 682-2739

DATE ▶

NUMBER ▶

SOLD TO:

Highwood Resources Inc  
 Suite 715  
 734 7th Ave Southwest  
 Calgary, Alberta T2P 3P8

SHIP TO:

Inv No. J000469  
 Inv Date Jun 29/00

ALESPERSON

ACCOUNT NUMBER

Sls Cat / SlsM MISC/HSE

Job Number 13010  
 Bush outside sales

TAX EXEMPT NO. 1

TAX EXEMPT NO. 2

TERMS

SHIP DATE

Our GST/BN No. 102131463RT001

Attn: Heather Miree

Description

Amount

ITEM NUMBER	JOB NO.	DESCRIPTION	QUANTITY	PRICE	EXTENDED AMOUNT
		Prospecting Work in North Williams Twp:			
		Transportation : \$1081.20			
		Permit : \$150.00			
		345 B Excavator: 6.5hrs @ 160.00 = 1040.00			
		Total Invoice			2,271.20

**RECEIVED**  
 JUL 19 2000

407-529 *Heather Miree*

DAYBILL NO. ▶

Subtotal 2,271.20  
 GST 158.98  
 -----  
 Total 2,430.18  
 =====

**GEORGEX** EXPLORATION CONTRACTORS

353 Railway St.  
Timmins, Ontario  
P4N 2P4

Tel. (705) 267-4576 Fax (705) 267-2545

Payment due upon receipt of invoice.  
No statements issued.

641

HIGHWOOD RESOURCES LIMITED

TO ~~\_\_\_\_\_~~  
Suite 715, 734/ 7th Avenue S.W.  
Calgary Alberta

TERMS: Net 30 days from date of billing on pre-approved credit.  
2% interest per month charged on overdue accounts

G.S.T. #R111643607

DATE	JOB. NO.	COMMENCEMENT DATE	COMPLETION DATE
June 13/2000	381	May 09/00	June 06/00

RE: North Williams Twp. Linecutting  
Magnetometer & VLF - EM Surveys.

At a Rate of:

Total lines cut 11.55 @ 300./Km.....	3,465.00
Magnetometer, 10.8 km. @ 85./Km.....	918.00
VLF-EM 10.8 @ 85./Km.....	918.00
<b>SUB total</b>	<b>5,301.00</b>
GST @ 7 %	371.07
<b>TOTAL CONTRACT COST</b>	<b>5,672.07</b>
- SUBTRACT ADVANCE RECEIVED INV.# 639	- 3,000.00
<b>TOTAL AMOUNT DUE</b>	<b>+ 2,672.07</b>

P.A.P. 38614

Regards, Georges

Code: 407 - 502

PREMIER EXPLORATIONS INC.

491 Finn Road  
Connaught, Ontario  
PON 1A0  
Ph 705 363-2108  
Fx 705 363.2410  
Field Office Ph 705 263-2208

July 06, 2000

Highwood Resources Limited

SENT VIA FAX

INVOICE: 200706

House rental in ShiningTree For 3 weeks in June	\$600.00
GST (7%)	\$ 42.00

407-502 *Rat Finer*



PREMIER EXPLORATIONS INC.  
491 Finn Road  
Connaught, Ontario  
PON 1AO  
Ph 705 363-2108  
Fx 705 363.2410  
Field Office Ph 705 263-2208

August 08, 2000

Highwood Resources Limited

SENT VIA FAX

INVOICE: 200808

House rental in ShiningTree Re- Ann during drill program	\$300.00
GST (7%)	\$ 21.00
Balance Duc	\$321.00

Thank you

J G Salo

Premier Explorations Inc.

407-502

*RA Salo*



Ministry of  
Northern Development  
and Mines

# Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990

Transaction Number (office use)

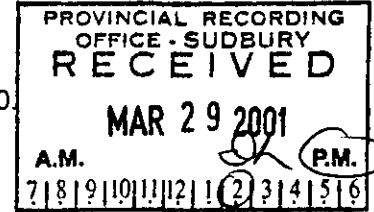
W0180.00155

Assessment Files Research Imaging



41P06NE2013 2.21009 NORTH WILLIAMS 900

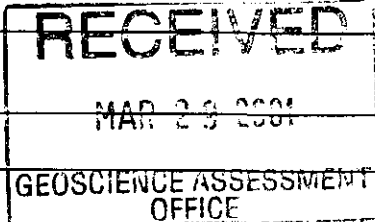
of subsection 65(2) and 66(3) of the Mining Act. Under section 8 of the Mining Act, the assessment work and correspond with the mining land holder. Questions about this Northern Development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury,



Instructions: - For work performed on Crown Lands before recording a claim, use form 0240.  
- Please type or print in ink.

### 1. Recorded holder(s) (Attach a list if necessary)

Name Joe-Anne Salo	Client Number
Address 491 Finn Road, Connaught, Ontario PON 1A0	Telephone Number 705-363-2108
	Fax Number 705-363-2410
Name Roy Annett	Client Number
Address General Delivery, Shining Tree, Ontario	Telephone Number 705-263-2054
	Fax Number N/a



### 2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.

- Geotechnical: prospecting, surveys, assays and work under section 18 (regs)       Physical: drilling stripping, trenching and associated assays       Rehabilitation

Work Type <i>Linecutting, geophysics</i>	Office Use
	Commodity
	Total \$ Value of Work Claimed <i>14,539</i>
Dates Work Performed From <i>10</i> <i>05</i> <i>2000</i> To <i>30</i> <i>06</i> <i>2000</i>	NTS Reference
Global Positioning System Data (if available)	Mining Division <i>Rarder Lake</i>
Township/Area <i>North Williams</i>	Resident Geologist District <i>Kirkland Lake</i>
M or G-Plan Number <i>G-3694</i>	

- Please remember to:
- obtain a work permit from the Ministry of Natural Resources as required;
  - provide proper notice to surface rights holders before starting work;
  - complete and attach a Statement of Costs, form 0212;
  - provide a map showing contiguous mining lands that are linked for assigning work;
  - include two copies of your technical report.

### 3. Person or companies who prepared the technical report (Attach a list if necessary)

Name Highwood Resources	Telephone Number 403-261-3999
Address Suite 715, 734 7 <sup>th</sup> Ave S.W., Calgary, Alberta T2P 3P8	Fax Number 403-264-2959
Name	Telephone Number
Address	Fax Number
Name	Telephone Number
Address	Fax Number

3577

**4. Certification by Recorded Holder or Agent**

I, Joe-Anne Salo, do hereby certify that I have personal knowledge of the facts set forth in

(Print Name)

this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent

*J. Salo*

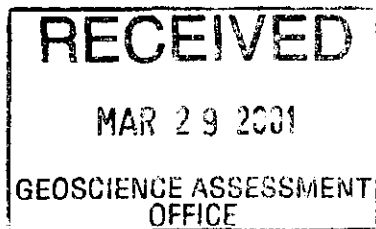
Date March 27<sup>th</sup> 2001

Agent's Address

Telephone Number

Fax Number

0241 (03/97)



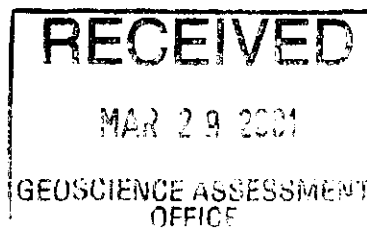
W0180.00155

Other Recorded Holders

Highwood Resources Ltd.  
Suite 715, 734-7<sup>th</sup> Ave. S.W.  
Calgary, Alberta  
T2P 3P8

Phone 403-261-3999  
Fax 403-264-2959

Erich Knies  
Lakeview Motel and Restaurant  
Gowganda, Ontario  
P0J 1Y0



Geoscience Assessment Office  
933 Ramsey Lake Road  
6th Floor  
Sudbury, Ontario  
P3E 6B5

Telephone: (888) 415-9845  
Fax: (877) 670-1555

April 26, 2001

JOE-ANNE G. SALO  
GENERAL DELIVERY  
CONNAUGHT, Ontario  
P0N-1A0

Visit our website at:  
[www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm](http://www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm)

Dear Sir or Madam:

**Submission Number:** 2.21009

**Status**

**Subject: Transaction Number(s):** W0180.00155 Approval

---

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. **WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.**

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact JIM MCAULEY by e-mail at [james.mcauley@ndm.gov.on.ca](mailto:james.mcauley@ndm.gov.on.ca) or by telephone at (705) 670-5858.

Yours sincerely,



ORIGINAL SIGNED BY  
Lucille Jerome  
Acting Supervisor, Geoscience Assessment Office  
Mining Lands Section

# Work Report Assessment Results

**Submission Number:** 2.21009

**Date Correspondence Sent:** April 26, 2001

**Assessor:** JIM MCAULEY

<b>Transaction Number</b>	<b>First Claim Number</b>	<b>Township(s) / Area(s)</b>	<b>Status</b>	<b>Approval Date</b>
W0180.00155	1224513	NORTH WILLIAMS	Approval	April 25, 2001

**Section:**

16 Drilling PDRILL  
14 Geophysical VLF  
12 Geological GEOL  
14 Geophysical MAG  
10 Physical PSTRIP

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

**Correspondence to:**

Resident Geologist  
Kirkland Lake, ON

Assessment Files Library  
Sudbury, ON

**Recorded Holder(s) and/or Agent(s):**

JOE-ANNE G. SALO  
CONNAUGHT, Ontario

ROY ANNETT  
SHININGTREE, ONTARIO

HIGHWOOD RESOURCES LTD.  
CALGARY, ALBERTA

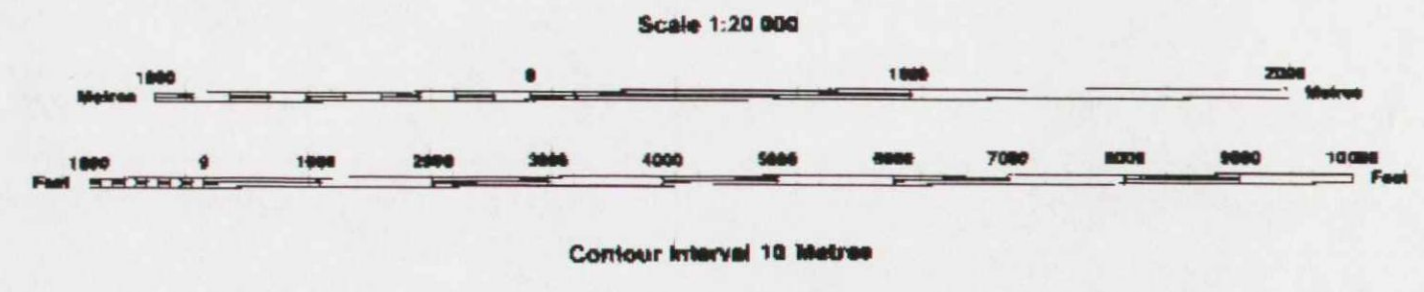
ERICH JOSEF KNIES  
GOWGANDA, ONTARIO



**INDEX TO LAND DISPOSITION**

PLAN  
**G-3694**  
 TOWNSHIP  
**NORTH WILLIAMS**

M.N.R. ADMINISTRATIVE DISTRICT  
**KIRKLAND LAKE**  
 MINING DIVISION  
**LARDER LAKE**  
 LAND TITLES/REGISTRY DIVISION  
**TIMISKAMING**



**AREAS WITHDRAWN FROM DISPOSITION**

- MRO - Mining Rights Only
- SRO - Surface Rights Only
- M+S - Mining and Surface Rights

Description Order No. Date Disposition File  
 (R) SEC. 35 W - LL - C1696/89 ONT MAY 15/89 M+S

**SYMBOLS**

- Boundary
- Township, Meridian, Baseline
- Flood allowance; surveyed
- shoreline
- Lot/Concession; surveyed
- unsurveyed
- Parcel; surveyed
- unsurveyed
- Right-of-way; road
- railway
- utility
- Reservation
- Cliff, Pit, Pile
- Contour
- Interpolated
- Approximate
- Depression
- Control point (horizontal)
- Flooded land
- Mine head frame
- Pipeline (above ground)
- Railway; single track
- double track
- abandoned
- Road; highway, county, township
- access
- trail, bush
- Shoreline (original)
- Transmission line
- Wooded area

**DISPOSITION OF CROWN LANDS**

- Patent
- Surface & Mining Rights
- Surface Rights Only
- Mining Rights Only
- Lease
- Surface & Mining Rights
- Surface Rights Only
- Mining Rights Only
- Licence of Occupation
- Order-in-Council
- Cancelled
- Reservation
- Sand & Gravel

- Salvage Option
- Other Highwood Properties
- Sketch of Extender Minerals A and B Vein

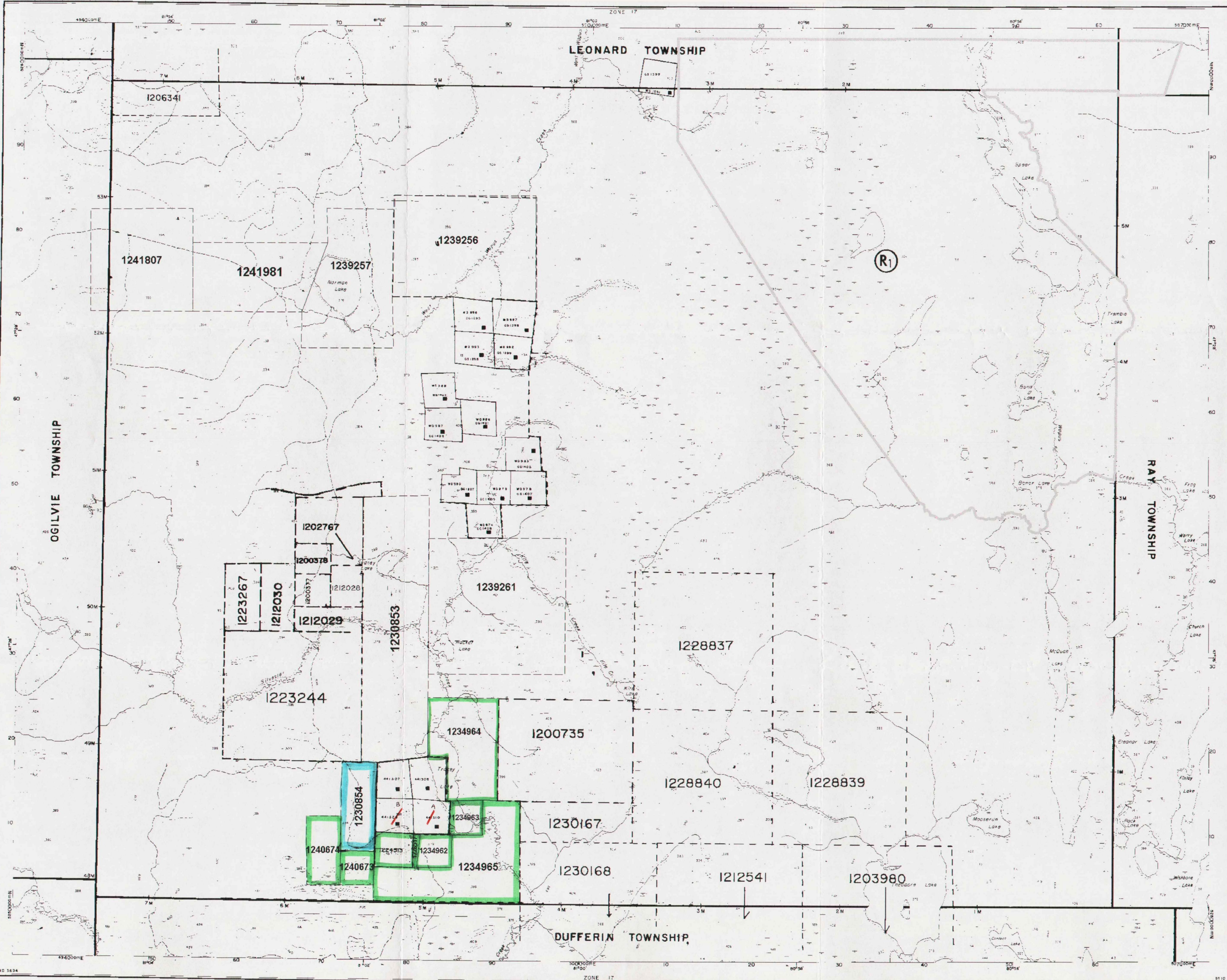
Figure 1. North Williams Township Claim Map



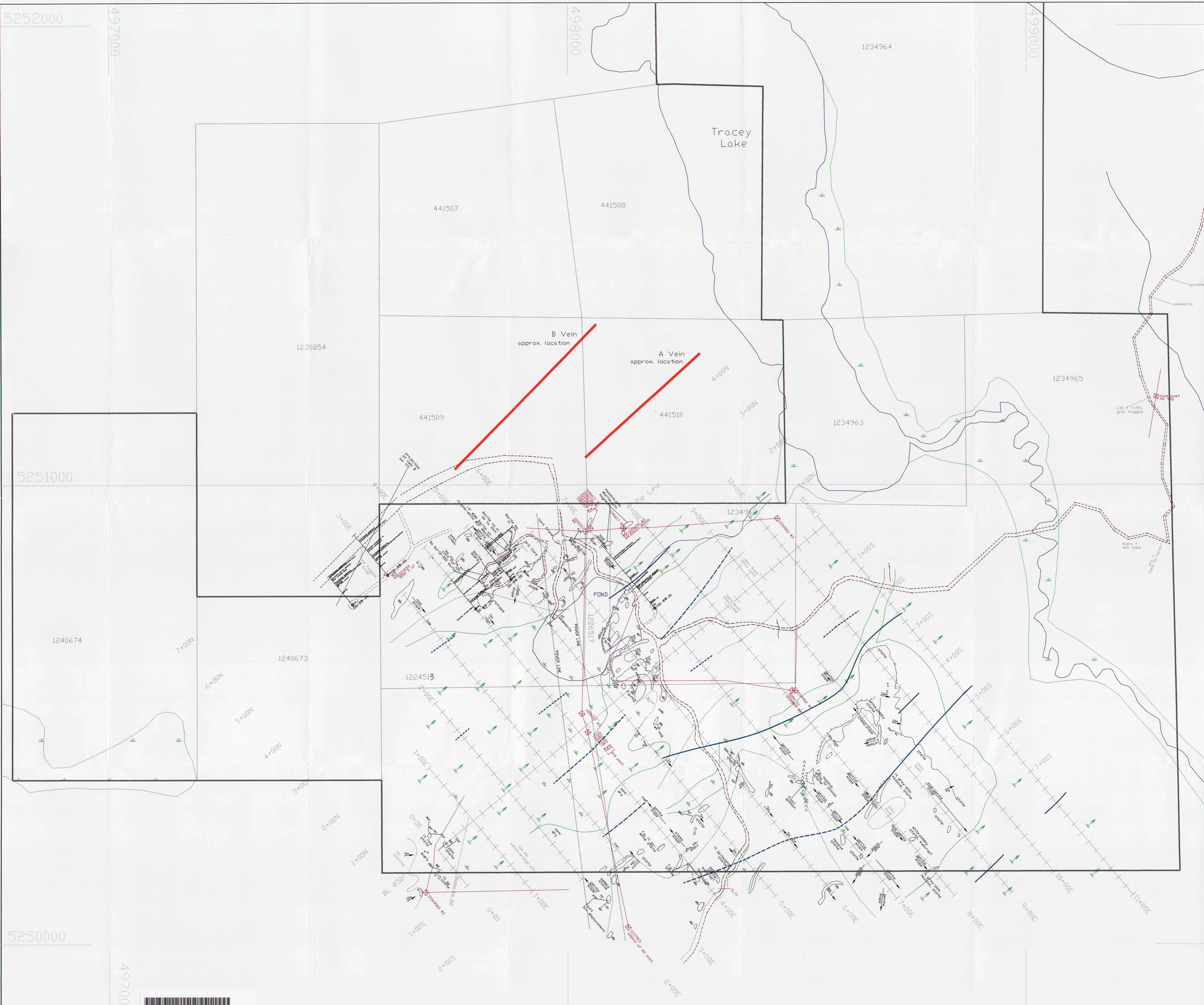
THIS MAP SHOWS THE APPROXIMATE LOCATION OF THE BOUNDARIES OF THE AREA WHICH IS THE SUBJECT OF CURRENT LITIGATION. THE EXACT LOCATION WILL BE SHOWN FOLLOWING CONFIRMATION BY THE PARTIES TO THE ACTION.

RECEIVED SEPT. 19, 1996  
 RECEIVED FEB. 22/95  
 CIRCULATED AUG. 19, 1992 B.R.B.

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.







**LEGEND**

- Bedding
- Joint
- Outcrop
- Outcrop on hill side (ticks pointing down hill)
- Geological contact, known, inferred
- Swamp, swamp with trees
- Beaver pond, creek
- Diamond drill hole (number unknown)
- Claim post location and number
- Claim line, from field mapping
- Idealized claim line (From topographic map)
- Property boundary
- Power line

**Abbreviations:**

- ba barite
- blor boulder
- bx breccia
- db diabase
- f.g. fine grained
- gy grey
- qtzite quartzite
- magn magnetic
- vn vein
- lt light

**VLF Conductor Axis**

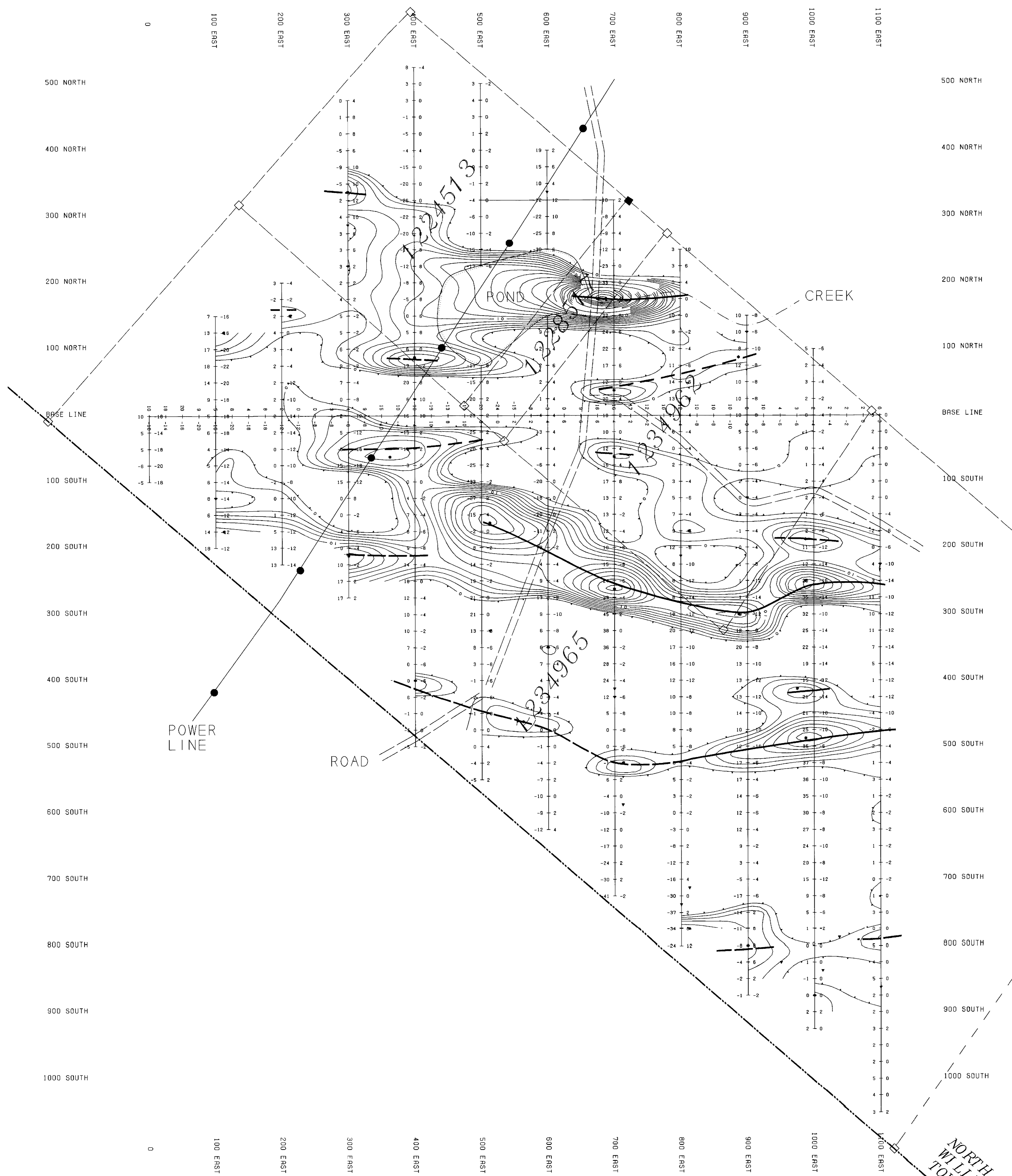
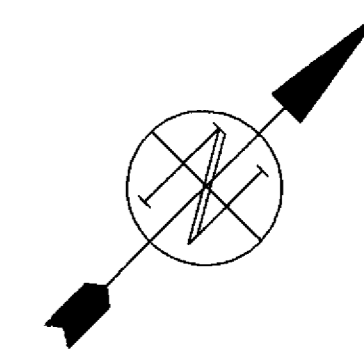
- STRONG
- MODERATE

Diamond drill hole (geology projected to surface)

2.21009



PROJECT: North Williams Barite Project		
North Williams Township, Ontario		
TITLE: Figure 2. Geological Mapping and Diamond Drilling		
SCALE: 1 : 2500	MAP SCALE:	
DATE: June 21, 2000	DRAWN BY: A.L.	PROJECT #:
LAST UPDATED: Aug 17, 2000	REVISED BY: A.L.	DRAWING NAME: N_W_mapping.dwg

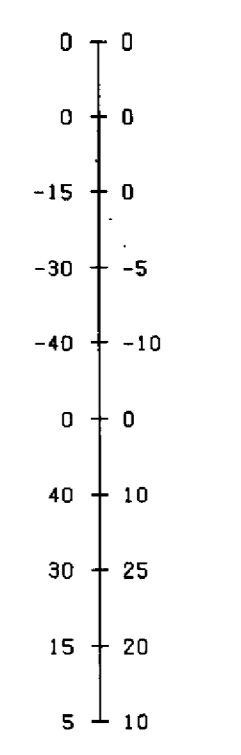


**TOPO LEGEND**

- SHORE LINE
- ROAD
- HYDRO LINE
- CLAIM POST ASSUMED
- CLAIM POST LOCATED
- CLAIM LINE
- LOT AND CONCESSION LINE

**LEGEND**

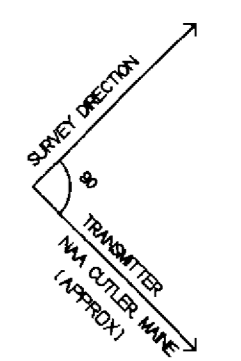
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 PARAMETERS MEASURED: IN-PHASE AND QUADRATURE  
 READING INTERVAL: 25M  
 ALL READINGS TAKEN FACING APPROX. NORTH  
 STATION: CUTLER MAINE NAA-24.0 KHZ.  
 CONTOUR INTERVAL- 2 UNITS



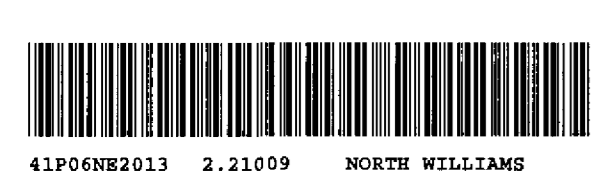
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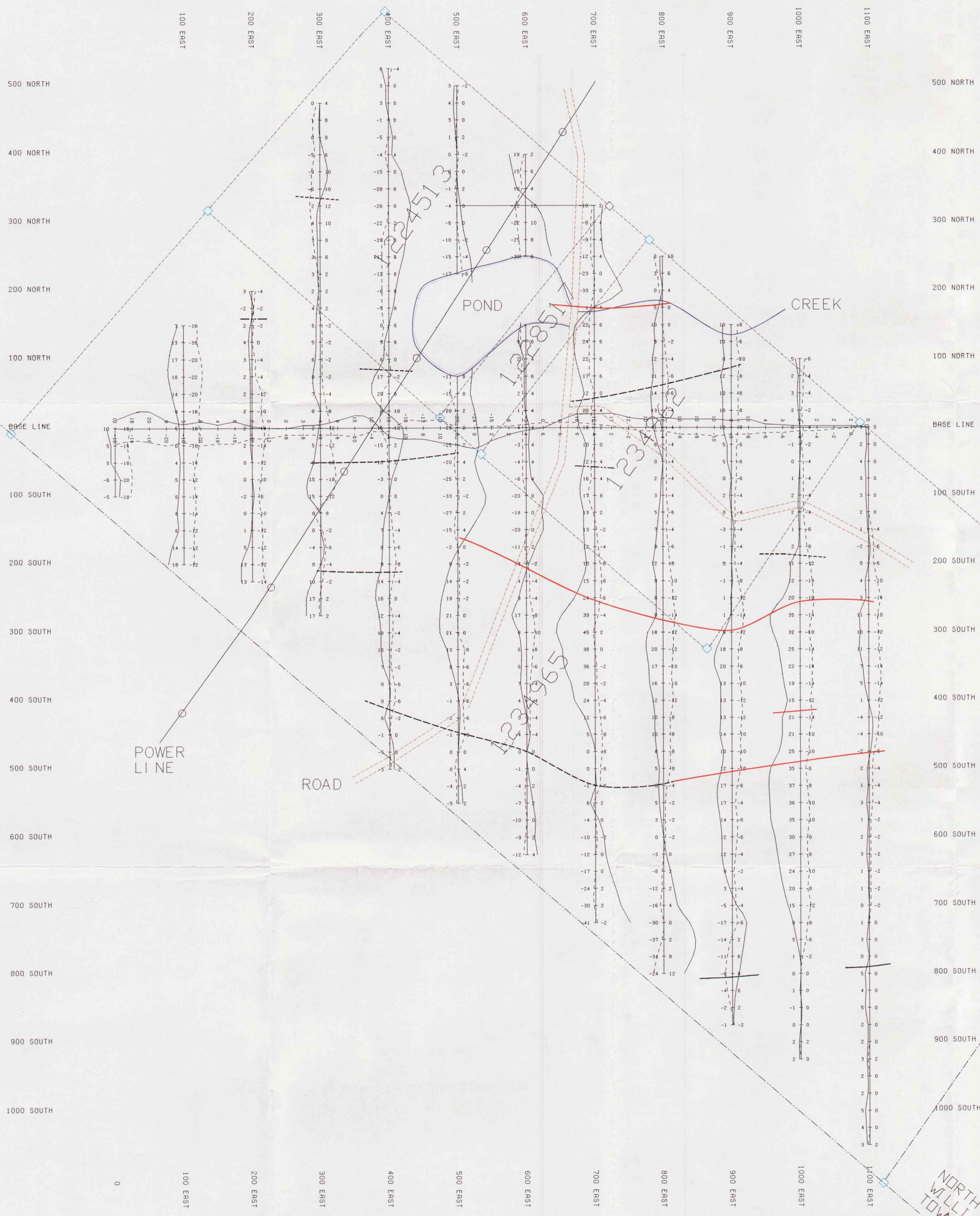
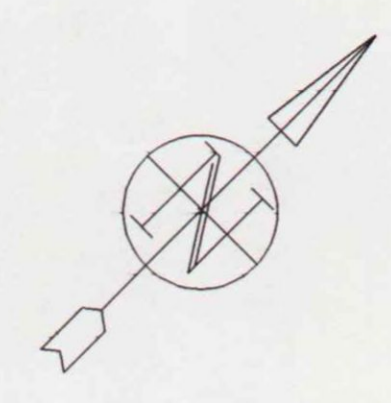
**CONDUCTOX AXIS**

- STRONG
- MODERATE



Client: HIGHWOOD RESOURCES LIMITED			
Property: NORTH WILLIAMS TOWNSHIP			
Title: Figure 5 FRASER FILTERED VLF-EM SURVEY CUTLER MAINE NAA 24.0Khz			
Processed: SDA	Checked: SDA		
Date: JUNE/00	Township: NORTH WILLIAMS		
Province: ONT	N.T.S.:		
Scale: 1:2500	Drawing: V89FF		





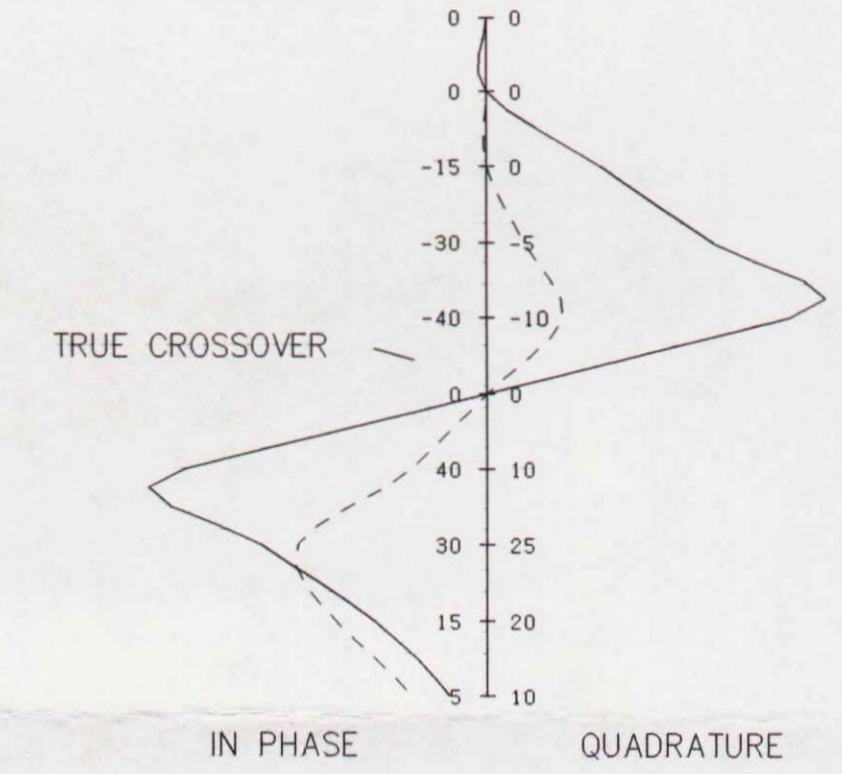
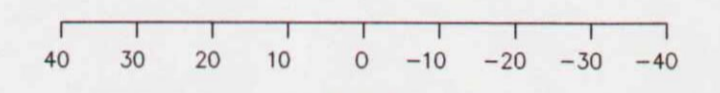
**TOPO LEGEND**

- SHORE LINE
- ROAD
- HYDRO LINE
- CLAIM POST ASSUMED
- CLAIM POST LOCATED
- CLAIM LINE
- LOT AND CONCESSION LINE

**LEGEND**

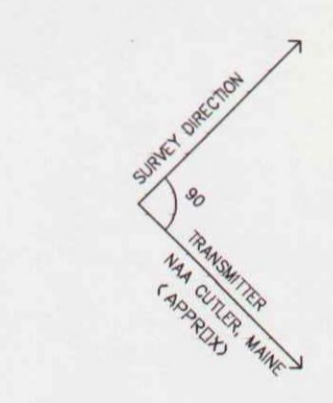
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 PARAMETERS MEASURED: IN-PHASE AND QUADRATURE  
 READING INTERVAL: 25M  
 ALL READINGS TAKEN FACING APPROX. NORTH  
 STATION: CUTLER MAINE NAA-24.0 KHZ.  
 PROFILE SCALE: 1cm = 20%

PROFILE SCALE: 1cm = 20%

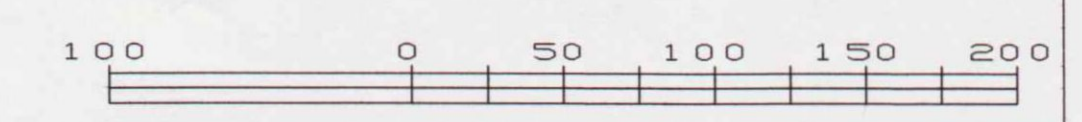


**CONDUCTOX AXIS**

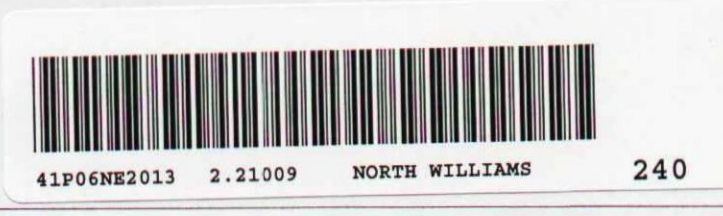
- STRONG
- MODERATE

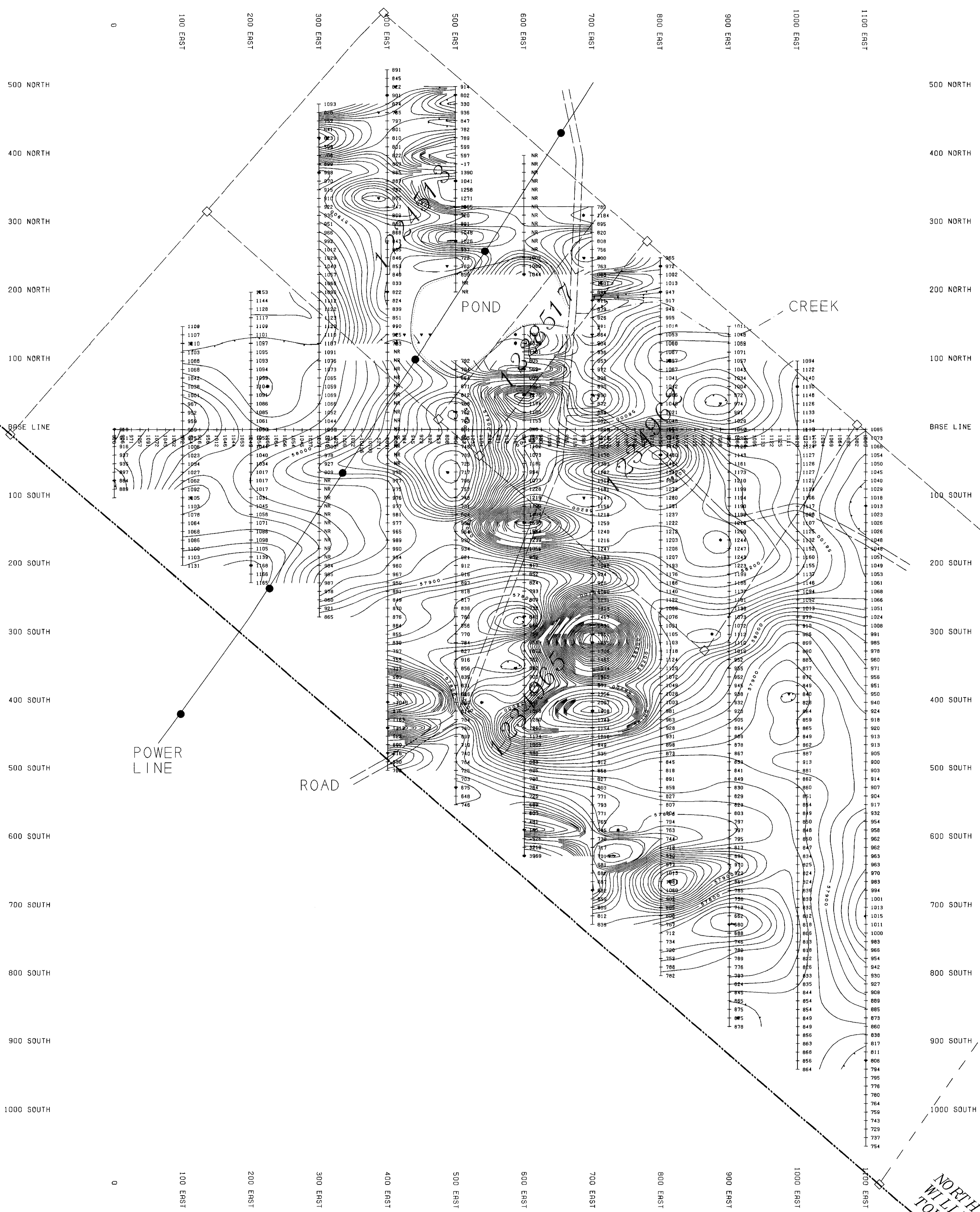
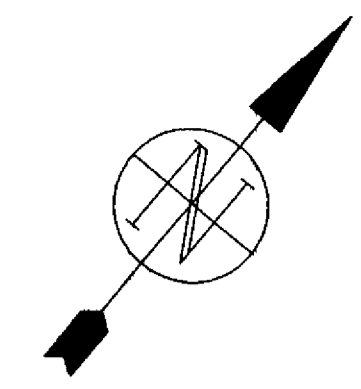


2.21009



Client: HIGHWOOD RESOURCES LIMITED	
Property: NORTH WILLIAMS TOWNSHIP	
Title: FIGURE 4 POSTED AND PROFILED VLF-EM SURVEY CUTLER MAINE NAA 24.0Khz	
Processed: SDA	Checked: SDA
Date: JUNE/00	Township: NORTH WILLIAMS
Province: ONT	N.T.S.
Scale: 1:2500	Drawing: V89PRO





TOPO LEGEND

- SHORE LINE
- ROAD
- HYDRO LINE
- CLAIM POST ASSUMED
- CLAIM POST LOCATED
- CLAIM LINE
- LOT AND CONCESSION LINE

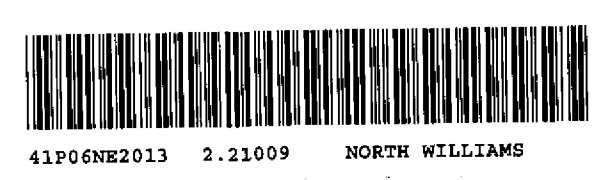
LEGEND

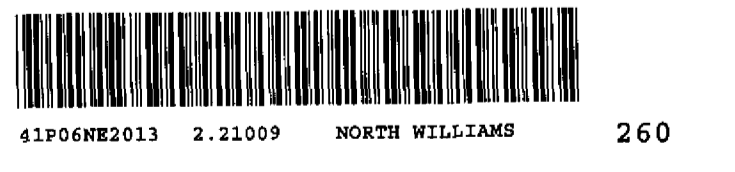
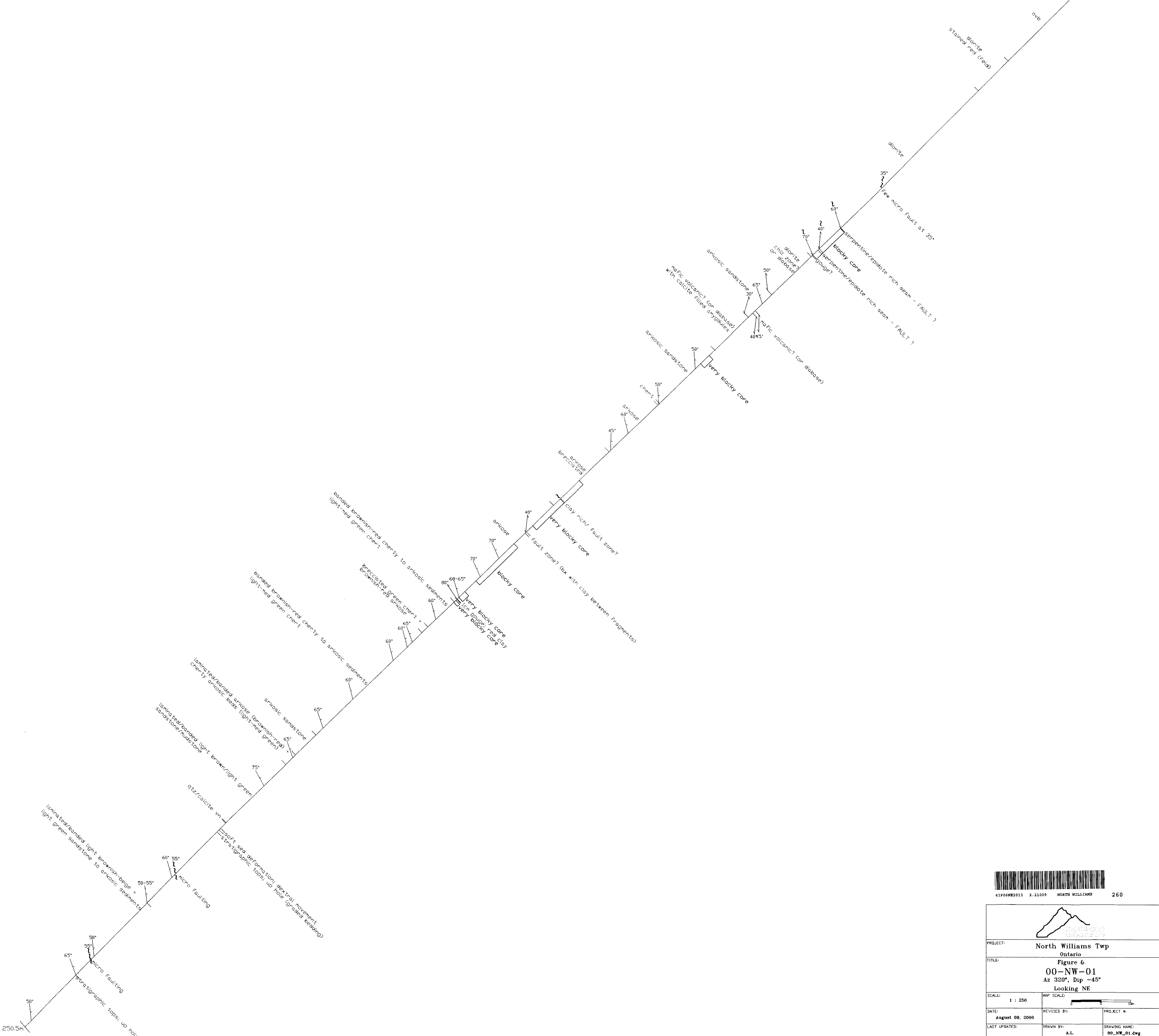
PARAMETERS MEASURED: Earth's Total Magnetic Field  
 INSTRUMENT: GEM GSM-9 Magnetometer  
 READING INTERVAL: 12.5 metres  
 DIURNAL CORRECTIONS: Base Station Corrected  
 DATUM SUBTRACTED: 57,000 nT  
 BASE STATION LOCATION: BASELINE/6+50E  
 CONTOUR INTERVAL: 20 nT  
 NO READING DUE TO POWER LINE: NR

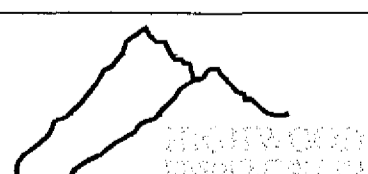
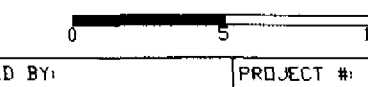


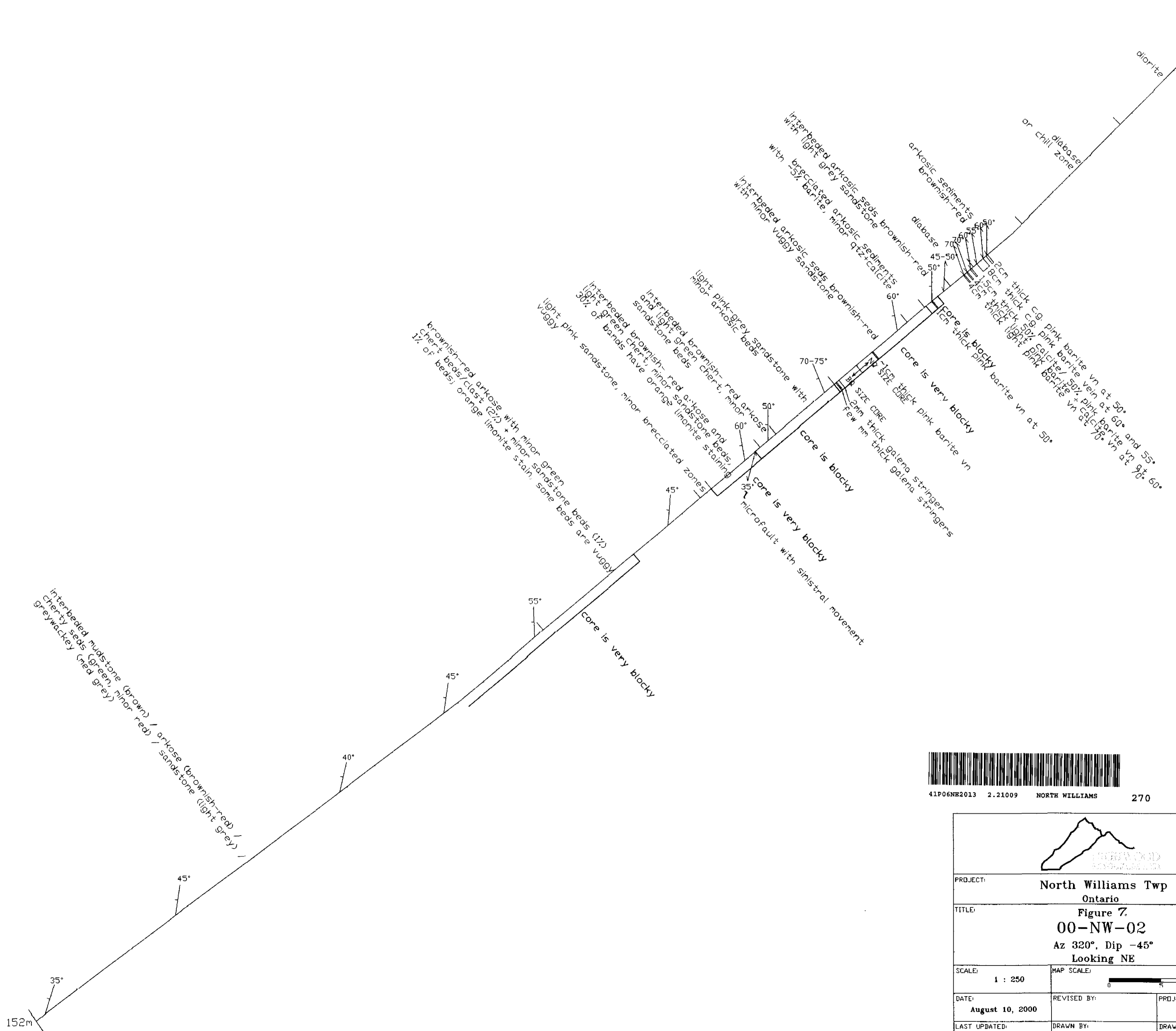
Client: HIGHWOOD RESOURCES LIMITED	
Property: NORTH WILLIAMS TOWNSHIP	
Title: Figure 5 POSTED AND CONTOURED TOTAL FIELD MAGNETOMETER SURVEY	
Processed: SDA	Checked: SDA
Date: JUNE/00	Township: NORTH WILLIAMS
Province: ONT	N.T.S.:
Scale: 1:2500	Drawing: V89MAG

NORTH WILLIAMS TOWNSHIP P  
 DUFFERIN TOWNSHIP P





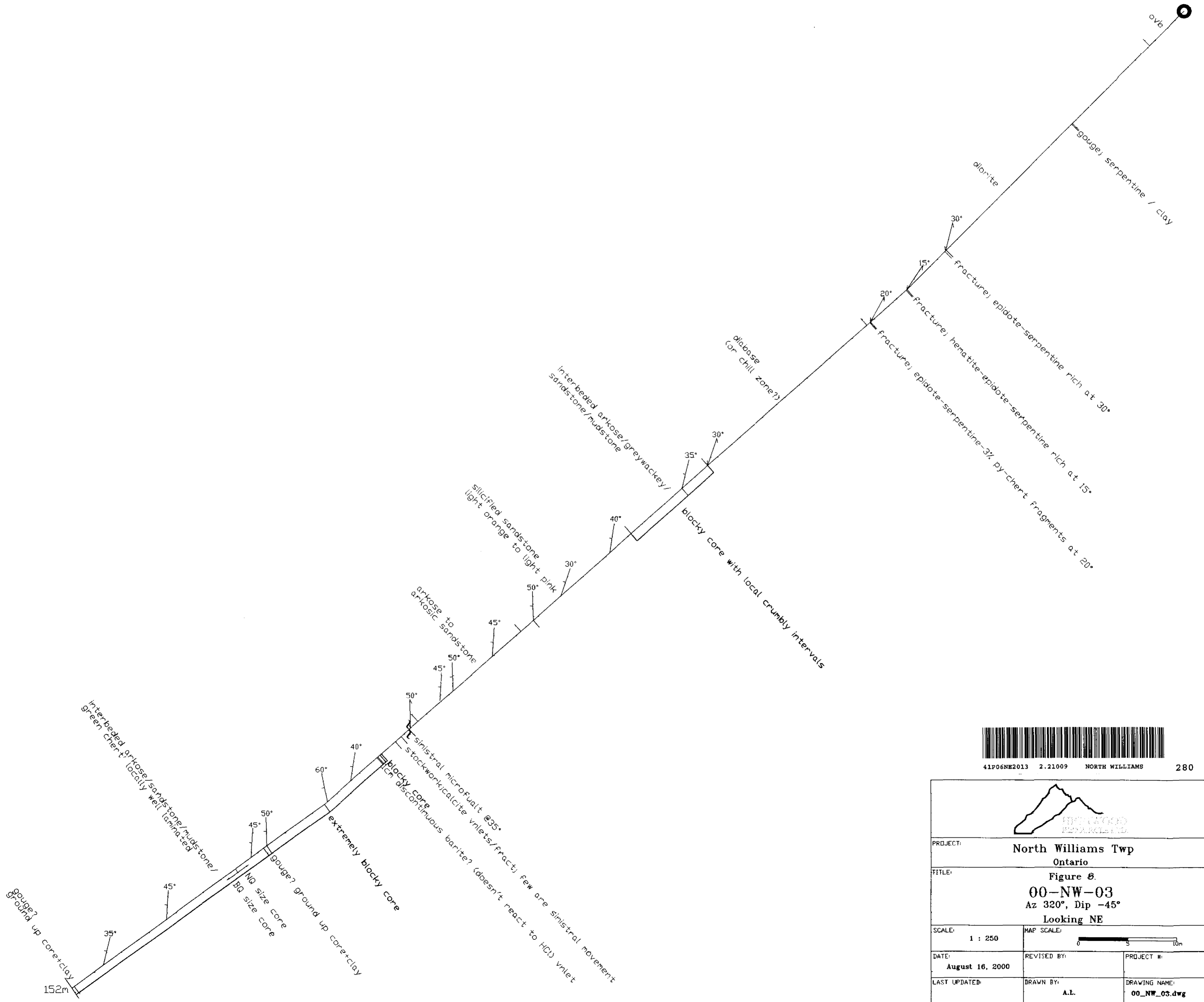
		
PROJECT: North Williams Twp Ontario		
TITLE: Figure 6 00-NW-01 Az 320°, Dip -45° Looking NE		
SCALE: 1 : 250	MAP SCALE: 	
DATE: August 09, 2000	REVISED BY:	PROJECT #:
LAST UPDATED:	DRAWN BY: A.L.	DRAWING NAME: 00_NW_01.dwg



41P06NE2013 2.21009 NORTH WILLIAMS 270



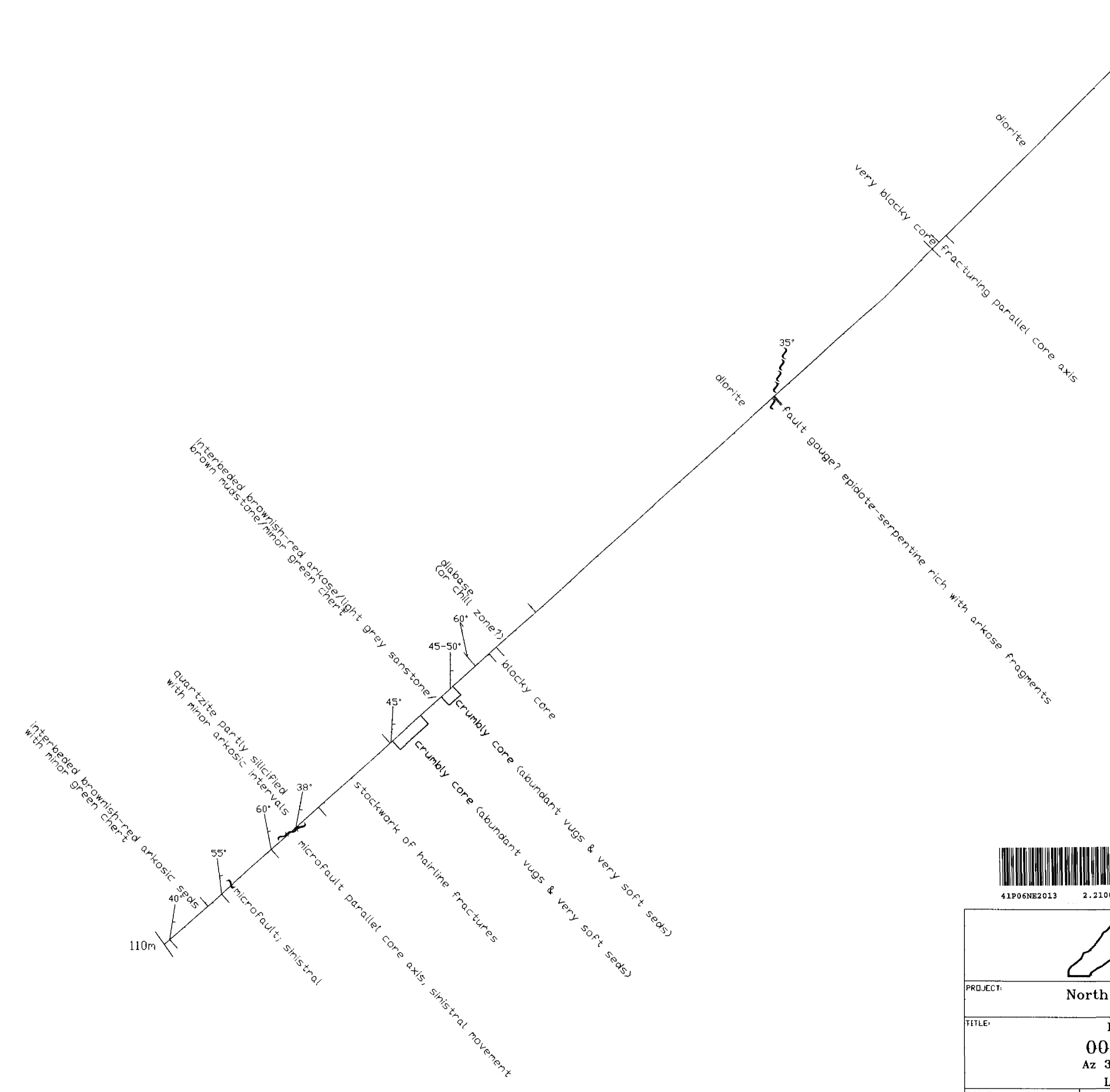
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TITLE: Figure 7 00-NW-02 Az 320°, Dip -45° Looking NE		
SCALE: 1 : 250	MAP SCALE:	
DATE: August 10, 2000	REVISED BY:	PROJECT #:
LAST UPDATED:	DRAWN BY: A.L.	DRAWING NAME: 00_NW_02.dwg

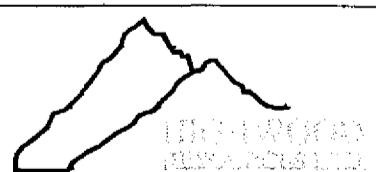
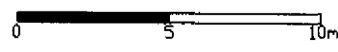


41F06NE2013 2.21009 NORTH WILLIAMS 280

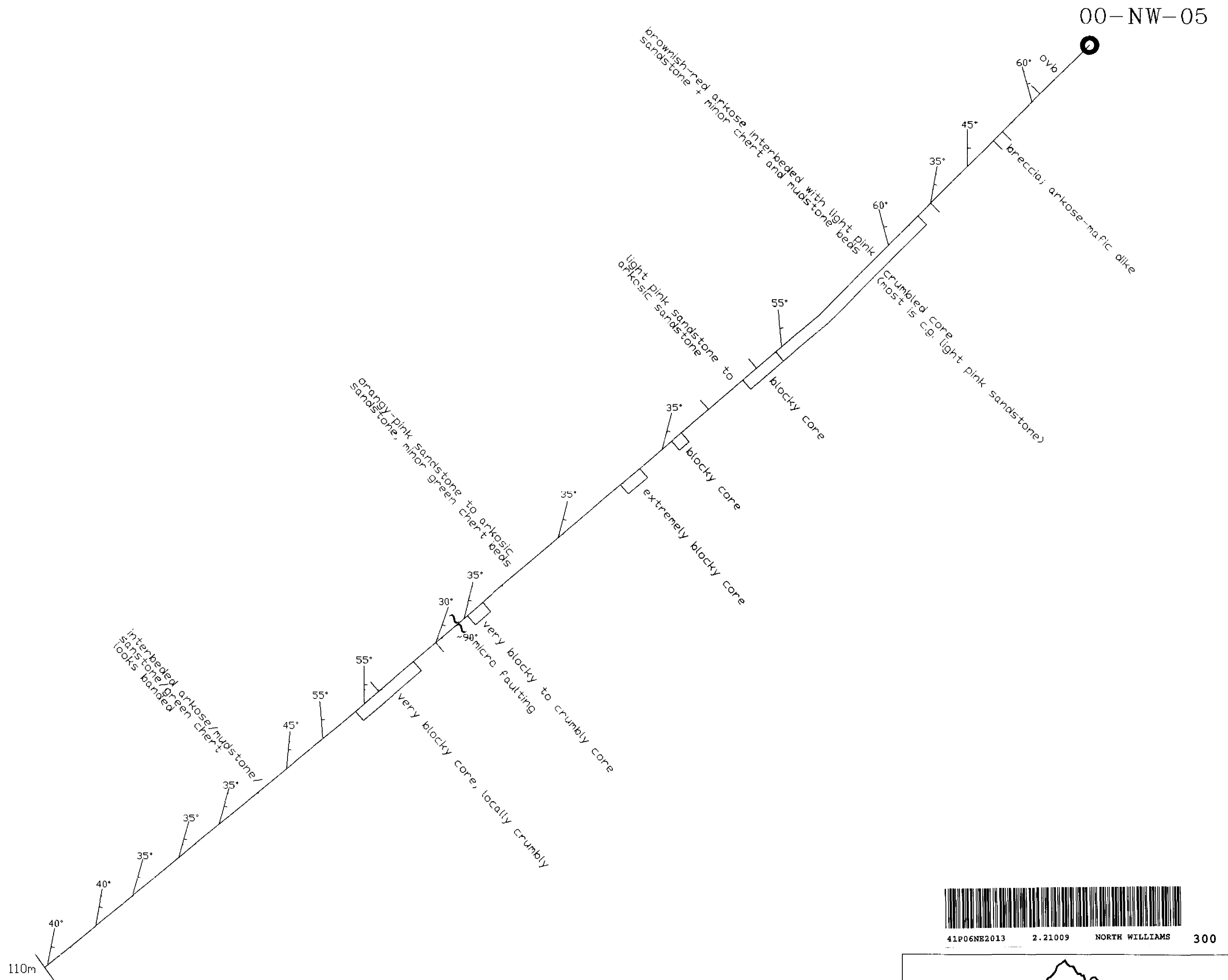
PROJECT: North Williams Twp Ontario		
TITLE: Figure 8 00-NW-03 Az 320°, Dip -45° Looking NE		
SCALE: 1 : 250	MAP SCALE:	
DATE: August 16, 2000	REVISED BY:	PROJECT #:
LAST UPDATED:	DRAWN BY: A.L.	DRAWING NAME: 00_NW_03.dwg

00-NW-04


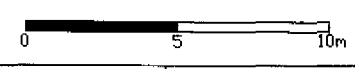


 NORTH WILLIAMS TWP ONTARIO		
PROJECT: North Williams Twp Ontario		
TITLE: Figure 9. 00-NW-04 Az 320°, Dip -45° Looking NE		
SCALE: 1 : 250	MAP SCALE: 	
DATE: August 16, 2000	REVISED BY:	PROJECT #:
LAST UPDATED:	DRAWN BY: A.L.	DRAWING NAME: 00_NW_04.dwg





41P06NE2013 2.21009 NORTH WILLIAMS 300

		
PROJECT: North Williams Twp Ontario		
TITLE: Figure 10 00-NW-05 Az 320°, Dip -45° Looking NE		
SCALE: 1 : 250	MAP SCALE: 	
DATE: August 16, 2000	REVISED BY:	PROJECT #:
LAST UPDATED:	DRAWN BY: A.L.	DRAWING NAME: 00_NW_05.dwg