



42A06SW2009 2.19891 DELORO

010

PENTLAND FIRTH VENTURES LTD.

Page: 1 of 3

Property: Royal Oak - Deloro Magnesite Deposit  
 EASTING: 700.000  
 NORTHING: -160.000  
 Elevation: .000  
 Grid: Royal Oak - 1998 Field Grid  
 Collar Azm.: 180  
 Collar Dip: -45  
 Local Ref: \Ref1  
 Hole Length: 77.0 metres  
 Print Date: 21 Nov, 1999

## DRILL HOLE RECORD

\*\*\* Dip Tests \*\*\*

Depth Azm Dip

77 180 -46

Drill Hole: KDE99-01  
 Township: DELORO  
 Claim #: P-850094  
 Date Started: November 16, 1999  
 Completed: November 17, 1999  
 Logged by: Gord Yule  
 Date(s) Logged: November 17, 1999  
 Drilled by: NOREX DRILLING LTD.  
 Core Size: BQ  
 Company: PFVL

Purpose: Drill on Section 80 m to the west of previous drilling on West Magnesite Zone  
 Hole Condition: 3.0 m BW Casing left downhole  
 Comments: Collar is located 148 m West, and 167 m south of #1 post - P850094

2.19891

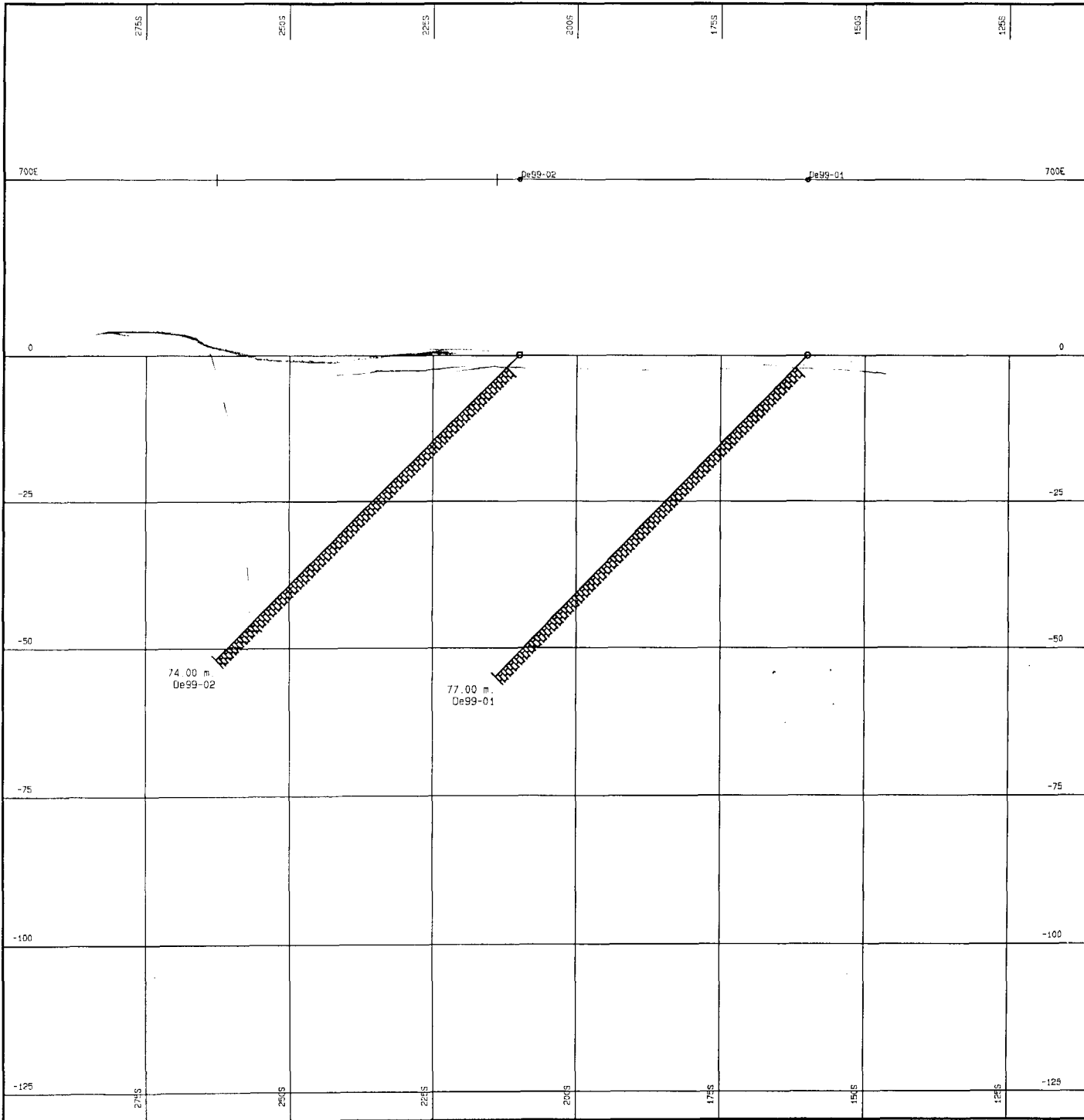
\*yfe

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	Qtz (%)	FeOx (%)	Mafic (%)	Talc (%)	MgCO3 (%)
.0	3.0		OVERBURDEN									
3.0	77.0		MAGNESITE ALTERED ULTRAMAFIC (6ze).									
			Unit is a massive, soft to moderately hard, light grey-green to weakly buff-brown coloured, with a very pale purple hue, coarse grained re-crystallized, non-foliated, Magnesite Altered Ultramafic.	00001	3.0	5.0	2.0	20.0	2.0	.00	30.00	55.00
			Unit is weakly marbled with minor, mm thin bands of black stylonites of specular hematite, IRON OXIDES at 30-70 degrees to the core axis. Fine grained disseminated shiny black specular hematite crystals throughout.	00002	5.0	8.0	3.0	20.0	2.0	.00	30.00	50.00
			Minor creamy-yellow to orangy magnesite - quartz veins at up to 1 cm, crosscutting core at 75 degrees to the core axis.	00003	8.0	11.0	3.0	20.0	3.0	.00	30.00	50.00
			Locally limonitic brown weathered jointing.	00004	11.0	14.0	3.0	20.0	5.0	.00	30.00	50.00
			Locally fine grained, light green, magnesite.	00005	14.0	17.0	3.0	20.0	3.0	.00	35.00	50.00
			Fine grained, bladed, pearly white talc is interstitial to magnesite.	00006	17.0	20.0	3.0	20.0	2.0	.00	35.00	50.00
			Weak magnesite with black iron oxide appears as a fabric at 40-50 degrees to the core axis.	00007	20.0	23.0	3.0	20.0	5.0	.00	30.00	50.00
			Minor fine grained, disseminated, silicate crystals of black tourmaline throughout. These crystals are usually observed as a stubby habit end on, but also occur as minor acicular rosettes.	00008	23.0	26.0	3.0	20.0	4.0	.00	30.00	50.00
				00009	26.0	29.0	3.0	20.0	4.0	.00	30.00	50.00
				00010	29.0	32.0	3.0	20.0	4.0	.00	30.00	50.00
				00011	32.0	35.0	3.0	20.0	4.0	.00	30.00	50.00
				00012	35.0	38.0	3.0	20.0	3.0	.00	30.00	50.00
				00013	38.0	41.0	3.0	20.0	3.0	.00	30.00	50.00
				00014	41.0	44.0	3.0	20.0	3.0	.00	30.00	50.00
				00015	44.0	47.0	3.0	20.0	4.0	.00	30.00	50.00
				00016	47.0	50.0	3.0	20.0	4.0	.00	30.00	50.00
				00017	50.0	53.0	3.0	20.0	4.0	.00	30.00	50.00
				00018	53.0	56.0	3.0	10.0	9.0	.00	35.00	45.00
				00019	56.0	59.0	3.0	20.0	5.0	.00	30.00	50.00
				00020	59.0	62.0	3.0	20.0	4.0	.00	30.00	50.00
				00021	62.0	65.0	3.0	20.0	4.0	.00	35.00	45.00
				00022	65.0	68.0	3.0	20.0	4.0	.00	30.00	50.00
				00023	68.0	71.0	3.0	20.0	4.0	.00	30.00	50.00
				00024	71.0	74.0	3.0	20.0	4.0	.00	30.00	50.00
				00025	74.0	77.0	3.0	20.0	4.0	.00	30.00	50.00












RECEIVED  
 NOV 24 1999  
 GEOSCIENCE ASSESSMENT  
 OFFICE

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngr (m)	Qtz (%)	FeOx (%)	Mafic (%)	Talc (%)	MgCO3 (%)
			<p>axis.            At 17.0-20.0 meters, weak fabric at 40-50 degrees to the core axis.            At 21.2-21.26 meters, sharp, milky-white quartz vein at 80 degrees to the core axis.            At 23.5-23.55 meters, sharp, milky-white quartz vein at 80 degrees to the core axis.            At 24.2-24.25 meters, sharp, milky-white quartz vein at 40 degrees to the core axis. No sulphide.            At 24.72-24.79 meters, sharp yellow cream magnesite vein at 65 degrees to the core axis.            At 31.7-32.0 meters, folded or contorted magnesite - quartz vein at 60 degrees to the core axis.            At 32.37-32.39 meters, creamy yellow magnesite vein at 60 degrees to the core axis.            At 32.42-32.46 meters, creamy yellow magnesite vein at 60 degrees to the core axis.            At 36.05-36.08 meters, creamy yellow magnesite vein at 50 degrees to the core axis.            At 36.57-37.66 meters, creamy yellow magnesite vein at 60 degrees to the core axis.            At 40.38-40.45 meters, creamy yellow magnesite vein at 45-70 degrees to the core axis.            At 41.2-41.27 meters, creamy yellow magnesite vein at 80 degrees to the core axis.            At 48.09-48.18 meters, creamy yellow magnesite vein at 80 degrees to the core axis.            At 61.9-62.0 meters, milky white quartz vein at 30 degrees to the core axis.            At 64.01-64.07 meters, creamy yellow vein at 50 degrees to the core axis, perpendicular to and crosscuttings specular hematite stylolites.            At 64.58-64.85 meters, creamy yellow veins at 70 to core axis.            At 65.85 meters, Jointed fracture at 30 degrees to the core axis, perpendicular to specular hematite fabric.            At 72.2-72.28 meters, creamy yellow magnesite veins at 70 degrees to the core axis.</p> <p>Sample intervals reflect a visual mineralogical estimate.            3.0 5.0 Magnesite veins 5 cm apart, fine grained talc, fine disseminated peppery specular hematite.            5.0 8.0 Trace disseminated specular hematite.            8.0 11.0 Very fine grained limonitic specular hematite stringers at 60-70 degrees to the core axis.            11.0 14.0 Dark disseminated and stringers of specular hematite, 25 cm quartz vein.            14.0 17.0 Medium grey magnesite.            17.0 20.0 Orangy limonitic stained magnesite.</p>									

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngr (m)	Qtz (%)	FeOx (%)	Mafic (%)	Talc (%)	MgCO3 (%)
			<p>20.0 23.0 Fine grained disseminated, and fine grained stringers of specular hematite - fe oxides.</p> <p>23.0 26.0 Minor hematite red specular hematite stringers - 50-70 degrees to the core axis.</p> <p>26.0 29.0 Pale pink hue of magnesite.</p> <p>29.0 32.0 Metre grey, recrystallized magnesite.</p> <p>32.0 35.0 Metre grey, recrystallized magnesite.</p> <p>35.0 38.0 Minor fine grained, disseminated black tourmaline crystals in creamy yellow to pale reddish hematitic magnesite.</p> <p>38.0 41.0 Fine grained, grey magnesite.</p> <p>41.0 44.0 Same as above.</p> <p>44.0 47.0 Same as above.</p> <p>47.0 50.0 Same as above.</p> <p>50.0 53.0 Same as above.</p> <p>53.0 56.0 Massive, fine grained, light green magnesite with fine grained, black specular hematite at 80 degrees to the core axis.</p> <p>56.0 59.0 Specular hematite banding at 50-60 appears to replace a primary fabric within the original rock type.</p> <p>59.0 62.0 Massive, magnesite.</p> <p>62.0 65.0 Light green fine grained, magnesite with 5% cream yellow magnesite vein at 40-80 degrees to the core axis.</p> <p>65.0 68.0 Massive, light grey, recrystallized magnesite.</p> <p>68.0 71.0 Massive, light grey, recrystallized magnesite.</p> <p>71.0 74.0 Massive, light grey, recrystallized magnesite.</p> <p>74.0 77.0 Massive, light grey, recrystallized magnesite.</p> <p>At 77.0 meters, END OF HOLE.</p> <p>No Samples analysed. Visual Mineralogical estimates.</p> <p>DRILLING BY NOREX DIAMOND DRILLING LTD., PORCUPINE. Core is racked at Pentland's field office in Porcupine, Ontario and will be eventually be cross-piled at Pentland's core storage facility at Marlhill.</p>									



Geological Legend:

- 10 - MAFIC INTRUSIVES:
  -  Diabase Dyke
- 9 - FELSIC INTRUSIVES:
  -  Weakly Altered Felsic Intrusive
  -  Feldspar Porphyry Intrusive
- ULTRAMAFIC INTRUSIVES:
  -  6ze Magnesite Altered U/M
  -  6ye Magnesite -Serpentine Altered U/M
  -  Peridotite - U/M
- 5 - SEDIMENTS:
  -  Sediments
- 2 - MAFIC VOLCANICS:
  -  Moderate-Strongly Altered Mafic Volcanics
  -  Weakly-Moderately Altered Mafic Volcanics
  -  Mafic Volcanic Flows
- 1 - ULTRAMAFIC VOLCANICS:
  -  Variably Altered Ultramafic Volcanics

Pentland Firth Ventures Ltd.

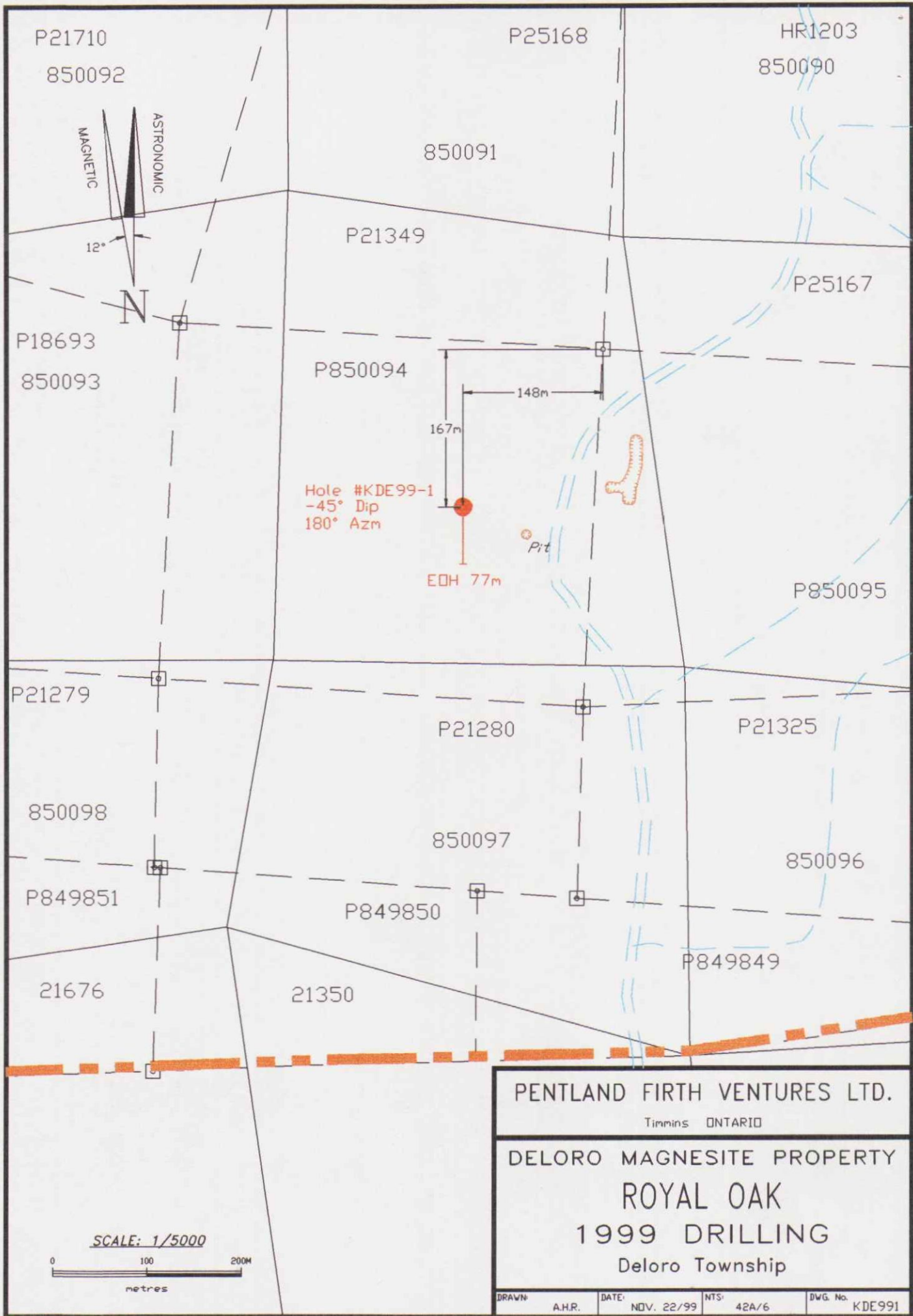
DELORO MAGNESITE PROPERTY

SECTION 700E

(Royal Oak Property)

DATE: 99/11/22

SCALE: 1/1000



P21710  
850092

P25168

HR1203

850090



12°

850091

P21349

P25167

P18693

850093

P850094

148m

167m

Hole #KDE99-1  
-45° Dip  
180° Azm

EDH 77m

Prt

P850095

P21279

P21280

P21325

850098

850097

850096

P849851

P849850

P849849

21676

21350

PENTLAND FIRTH VENTURES LTD.

Timmins ONTARIO

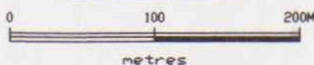
DELORO MAGNESITE PROPERTY

ROYAL OAK

1999 DRILLING

Deloro Township

SCALE: 1/5000



DRAWN:	A.H.R.	DATE:	NOV. 22/99	NTS:	42A/6	DWG. No.	KDE991
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ASTRONOMIC



ROYAL OAK

KDE99-1

KDE99-2

**Legend**

- Pentland 1999 Drill Hole (Filed for Assessment)
- Previous Drilling

**PENTLAND FIRTH VENTURES LTD.**  
Timmins, ONTARIO

**Drill Hole Location:**  
**KDE99-1**  
Deloro Magnesite Property - Deloro Twp.  
Porcupine Mining Division

DATE	A.H.R.	DATE	REV.	NO.	PROJECT
NOV. 23/99				42A/6	
0 100 200 300 400M					
SHEET NO. KDE991B					



42A06SW2009 2.19891 DELORO

020

PENTLAND FIRTH VENTURES LTD.

Page: 1 of 4

Property: Royal Oak - Deloro Magnesite Deposit  
 EASTING: 700.000  
 NORTHING: -210.000  
 Elevation: .000  
 Grid: Royal Oak - 1998 Field Grid  
 Collar Azm.: 180  
 Collar Dip: -45  
 Local Ref: \Ref1  
 Hole Length: 74.0 metres  
 Print Date: 21 Nov, 1999

## DRILL HOLE RECORD

\*\*\* Dip Tests \*\*\*  
 Depth Azm Dip

74 180 -44

Drill Hole: KDE99-02  
 Township: DELORO  
 Claim #: P-850094  
 Date Started: November 17, 1999  
 Completed: November 17, 1999  
 Logged by: Gord Yule  
 Date(s) Logged: November 18, 1999  
 Drilled by: NOREX DRILLING LTD.  
 Core Size: BQ  
 Company: PFVL

2.19891

Purpose: Drill on Section 80 m to the west of previous drilling on West Magnesite Zone, and 50 m south of KDE99-01  
 Hole Condition: 3.0 m BW Casing left downhole  
 Comments: Collar is located 148 m West, and 217 m south of #1 post - P850094


From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	Qtz (%)	FeOx (%)	Mafic (%)	Talc (%)	MgCO3 (%)
.0	3.2		OVERBURDEN									
3.2	65.0		MAGNESITE ALTERED ULTRAMAFIC (6ze).  Unit is a massive, soft to moderately hard, light grey-green to weakly buff-brown coloured, with a very pale purply hue, coarse grained re-crystallized, non-foliated, Magnesite Altered Ultramafic. Unit is weakly marbled with minor, thin bands of black stylolites of specular hematite, iron oxides at 30 and 70 degrees to the core axis. Fine grained disseminated shiny black specular hematite crystals throughout. Minor creamy-yellow to orangy magnesite - quartz veins at up to 1 cm, crosscutting core at 75 degrees to the core axis. Locally limonitic brown weathered jointing. Locally fine grained, light green, magnesite. Locally, the core exhibits light green, soft, serpentine. Fine grained, bladed, pearly-white talc is interstitial to magnesite. Weak magnesite with black iron oxide appears as a fabric at 40-50 degrees to the core axis. Minor fine grained, disseminated, silicate crystals of black tourmaline throughout. These crystals are usually observed as a stubby habit end on, but also occur as minor acicular rosettes.  At 3.2-5.0 meters, RQD 40%. The RQD for the rest of hole is 90-95%. At 3.2-3.5 meters, Milky white quartz vein at 5-10 degrees to the core axis. At 13.0-14.0 meters, contorted specular hematite stylolites. At 13.6-14.5 meters, weak limonitic stained massive Magnesite Altered									
				00026	3.2	5.0	1.8	20.0	4.0	.00	30.00	55.00
				00027	5.0	8.0	3.0	20.0	3.0	.00	30.00	50.00
				00028	8.0	11.0	3.0	20.0	3.0	.00	30.00	50.00
				00029	11.0	14.0	3.0	20.0	5.0	.00	30.00	50.00
				00030	14.0	17.0	3.0	20.0	3.0	.00	35.00	50.00
				00031	17.0	20.0	3.0	20.0	2.0	.00	35.00	50.00
				00032	20.0	23.0	3.0	20.0	5.0	.00	30.00	50.00
				00033	23.0	26.0	3.0	20.0	6.0	.00	30.00	50.00
				00034	26.0	29.0	3.0	20.0	5.0	.00	30.00	50.00
				00035	29.0	32.0	3.0	20.0	5.0	.00	30.00	50.00
				00036	32.0	35.0	3.0	20.0	6.0	.00	30.00	50.00
				00037	35.0	38.0	3.0	20.0	6.0	.00	30.00	50.00
				00038	38.0	41.0	3.0	20.0	3.0	.00	25.00	45.00
				00039	41.0	44.0	3.0	20.0	3.0	.00	25.00	45.00
				00040	44.0	47.0	3.0	20.0	4.0	.00	25.00	45.00
				00041	47.0	50.0	3.0	20.0	4.0	.00	25.00	45.00
				00042	50.0	53.0	3.0	20.0	4.0	.00	30.00	50.00
				00043	53.0	56.0	3.0	20.0	3.0	.00	35.00	45.00
				00044	56.0	59.0	3.0	20.0	5.0	.00	30.00	50.00
				00045	59.0	62.0	3.0	15.0	4.0	.00	15.00	35.00
				00046	62.0	65.0	3.0	15.0	4.0	.00	15.00	35.00

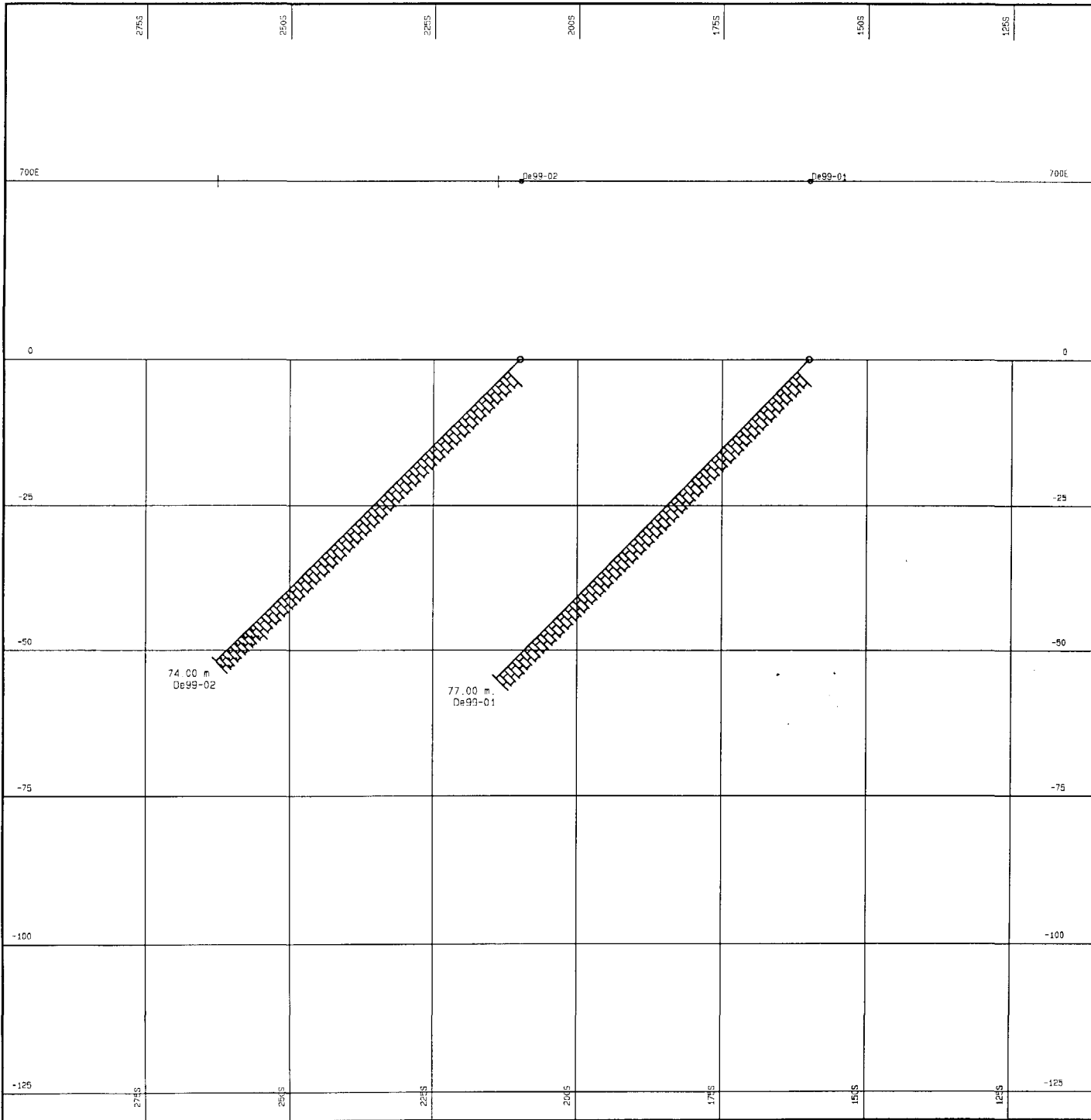
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 NOV 24 1999  
 GEOSCIENCE ASSESSMENT  
 OFFICE

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngr (m)	Qtz (%)	FeOx (%)	Mafic (%)	Talc (%)	MgCO <sub>3</sub> (%)	
			<p>Ultramafic, enveloping the vein documented below.</p> <p>At 13.8-14.2 meters, sharp, milky-white quartz vein with no sulphide at 60 degrees to the core axis. A second, 2 mm wide, veinlet at 5 degrees to the core axis.</p> <p>At 14.5-18.0 meters, lineation oriented specular hematite stylolites.</p> <p>At 20.5-20.62 meters, sharp, milky-white quartz vein with locally 5% fine grained crystals of black tourmaline at contacts, at 30 degrees to the core axis</p> <p>At 21.0-21.1 meters, Creamy yellow magnesite vein at 25 degrees to the core axis</p> <p>At 23.5-23.55 meters, sharp, milky-white quartz vein at 80 degrees to the core axis.</p> <p>At 22.7-22.75 meters, sharp, milky-white quartz vein at 40 degrees to the core axis. No sulphide.</p> <p>At 25.3 meters, sharp light emerald green, fine grained, soft, serpentine vein at 20 degrees to the core axis.</p> <p>At 27.8 meters, sharp vein of light emerald green coloured, soft, serpentine at 20 degrees to the core axis.</p> <p>At 29.5-58.5 meters, fine grained, light grey, magnesite with rare serpentine.</p> <p>At 32.3-32.32 meters, white magnesite with light green to pearly, soft talc vein at 80 degrees to the core axis.</p> <p>At 38.26-38.35 meters, white to light emerald green magnesite vein at 75 degrees to the core axis.</p> <p>At 39.92-40.0 meters, Creamy yellow magnesite vein at 50 degrees to the core axis.</p> <p>At 41.0-41.03 meters, Creamy yellow magnesite vein at 70 degrees to the core axis.</p> <p>At 44.1-44.15 meters, pale to light emerald green serpentine vein at 55 degrees to the core axis.</p> <p>At 45.0-45.3 meters, specular hematite banding at 70 degrees to the core axis.</p> <p>At 50.3-54.7 meters, weak orangy - limonite yellow stained magnesite section.</p> <p>At 50.4-51.3 meters, specular hematite banding at 70 degrees to the core axis.</p> <p>At 52.0 meters, serpentine vein at 20 degrees to the core axis.</p> <p>At 52.6-53.3 meters, serpentine vein, 1 cm wide, at 10 degrees to the core axis.</p> <p>At 56.3-57.0 meters, Orangy limonite stained magnesite.</p> <p>At 58.5-65.0 meters, gradational increase in serpentinized core, very minor light emerald green serpentine disseminated throughout.</p> <p>At 59.84-59.88 meters, white magnesite, minor serpentine vein at 40 degrees to the core axis.</p> <p>At 60.08-60.2 meters, Vuggy white talc, serpentine vein at 30 degrees to the core axis.</p> <p>Sample intervals reflect a visual mineralogical estimate.</p> <p>3.2 5.0 Massive light grey magnesite, fine grained talc, peppered with fine disseminated specular hematite.</p> <p>5.0 8.0 Hard, fine grained, light pink crystals (feldspars ?), trace disseminated specular hematite.</p>										














From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	Qtz (%)	FeOx (%)	Mafic (%)	Talc (%)	MgCO3 (%)
			8.0 11.0 Locally 3% light green serpentine, disseminated specular hematite crystals and stringers. 11.0 14.0 Dark disseminated and stringers of specular hematite. 14.0 17.0 Medium grey magnesite. 17.0 20.0 Same as above. 20.0 23.0 Magnesite veins, fine grained disseminated, and fine grained stringers of specular hematite fe oxides. 23.0 26.0 Minor specular hematite stringers at 50-70 degrees to the core axis, 1 cm serpentine vein. 26.0 29.0 Pale green fine grained serpentine - talc vein, magnesite. 29.0 32.0 Metre grey, recrystallized magnesite. 32.0 35.0 Minor fine grained serpentine, metre grey, recrystallized magnesite. 35.0 38.0 Minor indistinct, serpentine, with magnesite, and minor disseminated, fine grained specular hematite. 38.0 41.0 Fine grained, light grey magnesite, minor serpentine vein. 41.0 44.0 Same as above. 44.0 47.0 Same as above. 47.0 50.0 Same as above. 50.0 53.0 Same as above, minor serpentine intermixed. 53.0 56.0 Massive, fine grained, light grey to pale mauve coloured magnesite with fine grained, black specular hematite at 80 degrees to the core axis. 56.0 59.0 Massive, light grey to pale mauve coloured magnesite. 59.0 62.0 Massive, light grey to pale mauve coloured magnesite. 62.0 65.0 Light grey to pale mauve coloured, fine grained, magnesite with 5% cream yellow magnesite vein at 40-80 degrees to the core axis.									
65.0	74.0		MAGNESITE - SERPENTINE ALTERED ULTRAMAFIC (6ye).	00047	65.0	68.0	3.0	20.0	4.0	.00	15.00	20.00
				00048	68.0	71.0	3.0	15.0	4.0	10.00	15.00	20.00
				00049	71.0	74.0	3.0	15.0	4.0	.00	15.00	20.00
			Unit is a massive, soft to moderately hard, light emerald green and light grey coloured zone of magnesite and serpentine. Unit is coarse grained re-crystallized, non-foliated, Magnesite Altered Ultramafic gradual to Magnesite - Serpentine Altered Ultramafic. Unit is increasingly serpentinized from unit up hole, with an attractive light emerald green coloured, mottled appearance. The moderately hard, light grey magnesite has a very pale purple hue, due to trace amounts of specular hematite. Unit is weakly marbled with very minor, thin bands of black styolites of specular hematite, iron oxides at 30 and 70 degrees to the core axis. Very fine grained disseminated shiny black specular hematite crystals throughout. Weak magnesite with black iron oxide appears as a fabric at 40-50 degrees to the core axis.									

From (m)	To (m)	Rock Type	Geology	Sample	From (m)	To (m)	Lngt (m)	Qtz (%)	FeOx (%)	Mafic (%)	Talc (%)	MgCO3 (%)
			<p>Minor creamy white magnesite - quartz veins at up to 1 cm, crosscutting core at 75 degrees to the core axis. Locally, the core exhibits light green, soft, serpentine. Fine grained, bladed, pearly-white talc is interstitial to magnesite. Weak magnesite with black iron oxide appears as a fabric at 40-50 degrees to the core axis. Very minor, fine grained, disseminated, silicate crystals of brown and black tourmaline throughout. These crystals are usually observed as a stubby habit end on, but also occur as minor acicular rosettes.</p> <p>At 67.12 meters, 1 cm, white magnesite vein at 50 degrees to the core axis. At 67.56 meters, 2 cm, white magnesite vein at 65 degrees to the core axis. At 67.90 meters, 5 cm, white magnesite and light emerald green serpentine vein at 60 degrees to the core axis. At 68.76-69.1 meters, massive, fine grained, soft, talcose chloritic green coloured, mafic dyke at 85 degrees to the core axis. Sharp contacts. At 72.0-74.0 meters, light emerald green serpentine with white magnesite intermixed.</p> <p>65.0 68.0 Massive, intermixed serpentine and light grey recrystallized magnesite at 30:70. 68.0 71.0 Massive, intermixed serpentine and light grey recrystallized magnesite at 60:40. 71.0 74.0 Massive, intermixed serpentine and white recrystallized magnesite at 50:50.</p> <p>At 74.0 meters, END OF HOLE.</p> <p>No Samples analysed. Visual Mineralogical estimates.</p> <p>DRILLING BY NOREX DIAMOND DRILLING LTD., PORCUPINE. Core is racked at Pentland's field office in Porcupine, Ontario and eventually cross-piled at Pentland's core storage facility at Marlhill.</p>									



Geological Legend:

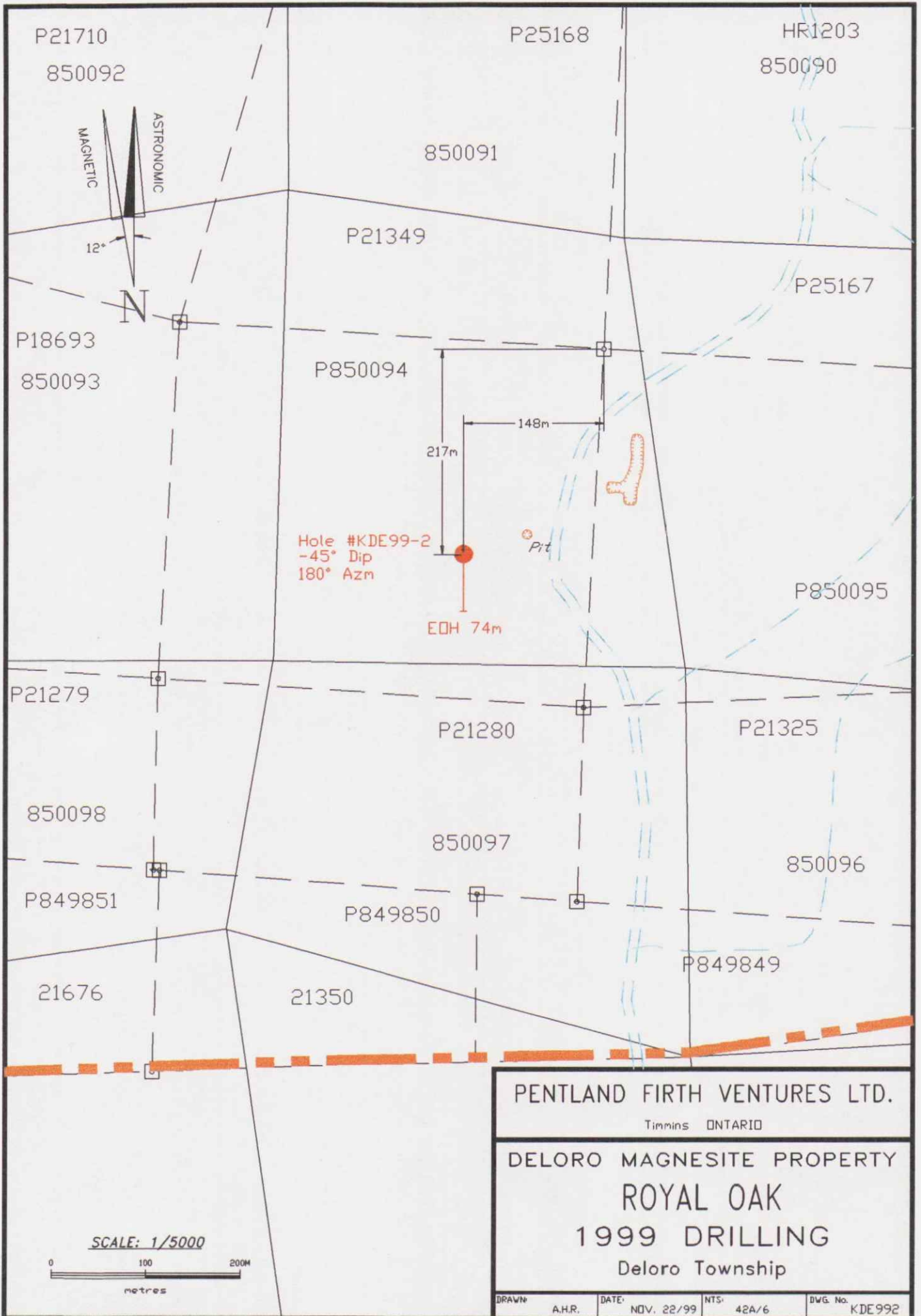
- 10 - MAFIC INTRUSIVES:
  -  Diabase Dyke
- 9 - FELSIC INTRUSIVES:
  -  Weakly Altered Felsic Intrusive
  -  Feldspar Porphyry Intrusive
- ULTRAMAFIC INTRUSIVES:
  -  6ze Magnesite Altered U/M
  -  6ye Magnesite -Serpentine Altered U/M
  -  Peridotite - U/M
- 5 - SEDIMENTS:
  -  Sediments
- 2 - MAFIC VOLCANICS:
  -  Moderate-Strongly Altered Mafic Volcanics
  -  Weakly-Moderately Altered Mafic Volcanics
  -  Mafic Volcanic Flows
- 1 - ULTRAMAFIC VOLCANICS:
  -  Variably Altered Ultramafic Volcanics

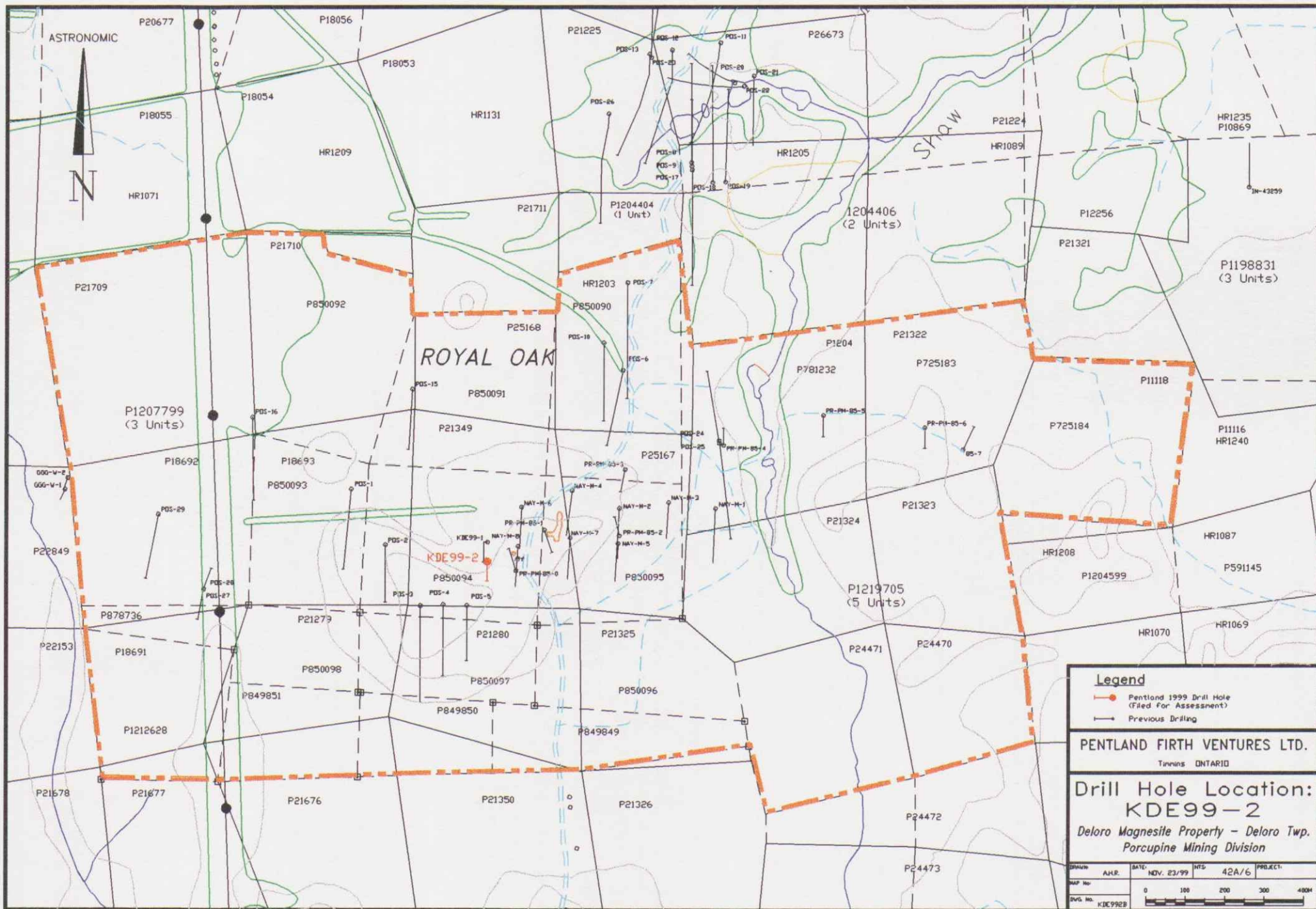
Pentland Firth Ventures Ltd.

DELORO MAGNESITE PROPERTY  
SECTION 700E  
(Royal Oak Property)

DATE: 99/11/22

SCALE: 1/1000





**Declaration of Assessment Work Performed on Mining Land**

Transaction Number (office use) <i>W9960.00449</i>
Assessment Files Research Imaging

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



42A06SW2009 2.19891 DELORO 900

the authority of subsections 65(2) and 66(3) of the Mining Act. Under this information will be used to review the assessment work and section should be directed to a Provincial Mining Recorder, Ministry of Northern Development and Mines, Sudbury, Ontario, P3E 6B5.

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

**2.19891**

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

Name Royal Oak Mines Inc.	Client Number 136226
Address P.O. Bag 2010 Timmins, Ontario	Telephone Number (705)360-1141
	Fax Number (705)360-1532
Name	Client Number
Address	Telephone Number
	Fax Number

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

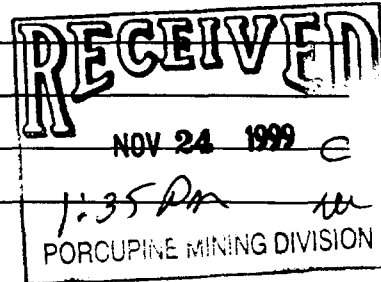
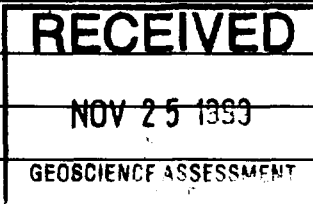
- Geotechnical: prospecting, surveys, assays and work under section 18 (regs)       Physical: drilling stripping, trenching and associated assays       Rehabilitation

Work Type Diamond Drilling	Office Use	
	Commodity	
	Total \$ Value of Work Claimed	<i>\$10,117</i>
Dates Work Performed From 15 Day 11 Month 99 Year To 18 Day 11 Month 99 Year	NTS Reference	
Global Positioning System Data (if available)	Township/Area Deloro	Mining Division <i>Porcupine</i>
	M or G-Plan Number G-3993	Resident Geologist District <i>Timmins</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 Gord Yule - Pentland Firth Ventures Ltd.	Telephone Number (705)235-2311
Address Box 1690 South Porcupine, Ontario P0N 1H0	Fax Number (705)235-2433
Name	Telephone Number
Address	Fax Number
Name	Telephone Number
Address	Fax Number



4. Certification by Recorded Holder or Agent

I, Kathryn Andrews-Smith, do hereby certify that I have personal knowledge of the facts set forth in 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 <i>[Signature]</i>	Date Nov 24 1999
Agents Address P.O. Box 1690, South Porcupine, Ontario P0N 1H0	Telephone Number (705)235-2311
	Fax Number (705)235-2433

*deemed Feb 22 / 2000*

5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

W970-00449

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date	
			<b>2.19891</b>			
1	850094	1	\$10,117	\$0	\$10,000	\$117
2	850091	1	\$0	\$1,200	\$0	\$0
3	850098	1	\$0	\$1,200	\$0	\$0
4	850097	1	\$0	\$1,200	\$0	\$0
5	850096	1	\$0	\$1,200	\$0	\$0
6	849850	1	\$0	\$800	\$0	\$0
7	849851	1	\$0	\$800	\$0	\$0
8	849849	1	\$0	\$800	\$0	\$0
9	878736	1	\$0	\$400	\$0	\$0
10	1212628	1	\$0	\$400	\$0	\$0
11	725183	1	\$0	\$400	\$0	\$0
12	725184	1	\$0	\$400	\$0	\$0
13	781232	1	\$0	\$400	\$0	\$0
14	850090	1	\$0	\$400	\$0	\$0
15	850095	1	\$0	\$400	\$0	\$0
Column Totals			\$10,117	\$10,000	\$10,000	\$117

I, Kathryn Andrews-Smith, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing

*Kathryn Andrews-Smith*

Date

Nov. 24, 1999

6. Instructions for cutting back credits that are not approved.

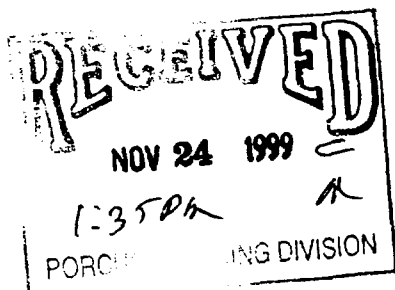
Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp



Deemed Approved Date	Date Notification Sent
Date Approved	Total Value of Credit Approved
Approved for Recording by Mining Recorder (Signature)	



Ministry of Northern Development and Mines

Statement of Costs for Assessment Credit

Transaction Number (office use)

W9960.00449

2.19801

Personal information collected on this form is obtained under the authority of subsection 6 (1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, this information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to a Provincial Mining Recorder, Ministry of Northern Development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

Table with 4 columns: Work Type, Units of work, Cost Per Unit of work, Total Cost. Rows include Diamond Drilling, Supervision/Core Logging, Field Assistance, Data Preparation, Drafting, Associated Costs, Core Shack Rental, Transportation Costs (Truck Lease, Fuel), and Food and Lodging Costs. Total Value of Assessment Work is \$10,100.

Calculations of Filing Discounts:

- 1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work.

TOTAL VALUE OF ASSESSMENT WORK x 0.50 = Total \$ value of worked claimed.

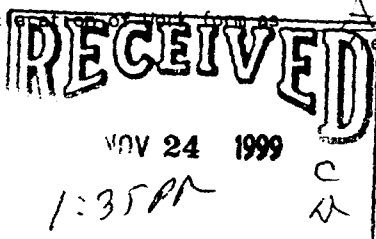
Note:

- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification.

Certification verifying costs:

I, Kathryn Andrews-Smith do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying

I am authorized to make this certification. (Recorded holder, agent, or state company position with signing authority)



Signature: [Handwritten Signature] Date: Nov 24 1999



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

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

December 15, 1999

Kathryn Andrews Smith  
ROYAL OAK MINES INC.  
P.O. BOX 2010  
TIMMINS, ONTARIO  
P0N 1H0

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:** 2.19891

**Status**

**Subject: Transaction Number(s):** W9960.00449 Approval

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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 **STEVE BENETEAU** by e-mail at [steve.beneteau@ndm.gov.on.ca](mailto:steve.beneteau@ndm.gov.on.ca) or by telephone at (705) 670-5855.

Yours sincerely,



ORIGINAL SIGNED BY  
Blair Kite  
Supervisor, Geoscience Assessment Office  
Mining Lands Section

# Work Report Assessment Results

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Submission Number: 2.19891

Date Correspondence Sent: December 15, 1999

Assessor: STEVE BENETEAU

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Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9960.00449	850094	DELORO	Approval	December 14, 1999

**Section:**

16 Drilling PDRILL

**Correspondence to:**

Resident Geologist  
South Porcupine, ON

Assessment Files Library  
Sudbury, ON

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

Kathryn Andrews Smith  
ROYAL OAK MINES INC.  
TIMMINS, ONTARIO

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**MAP SYMBOLOLOGY**

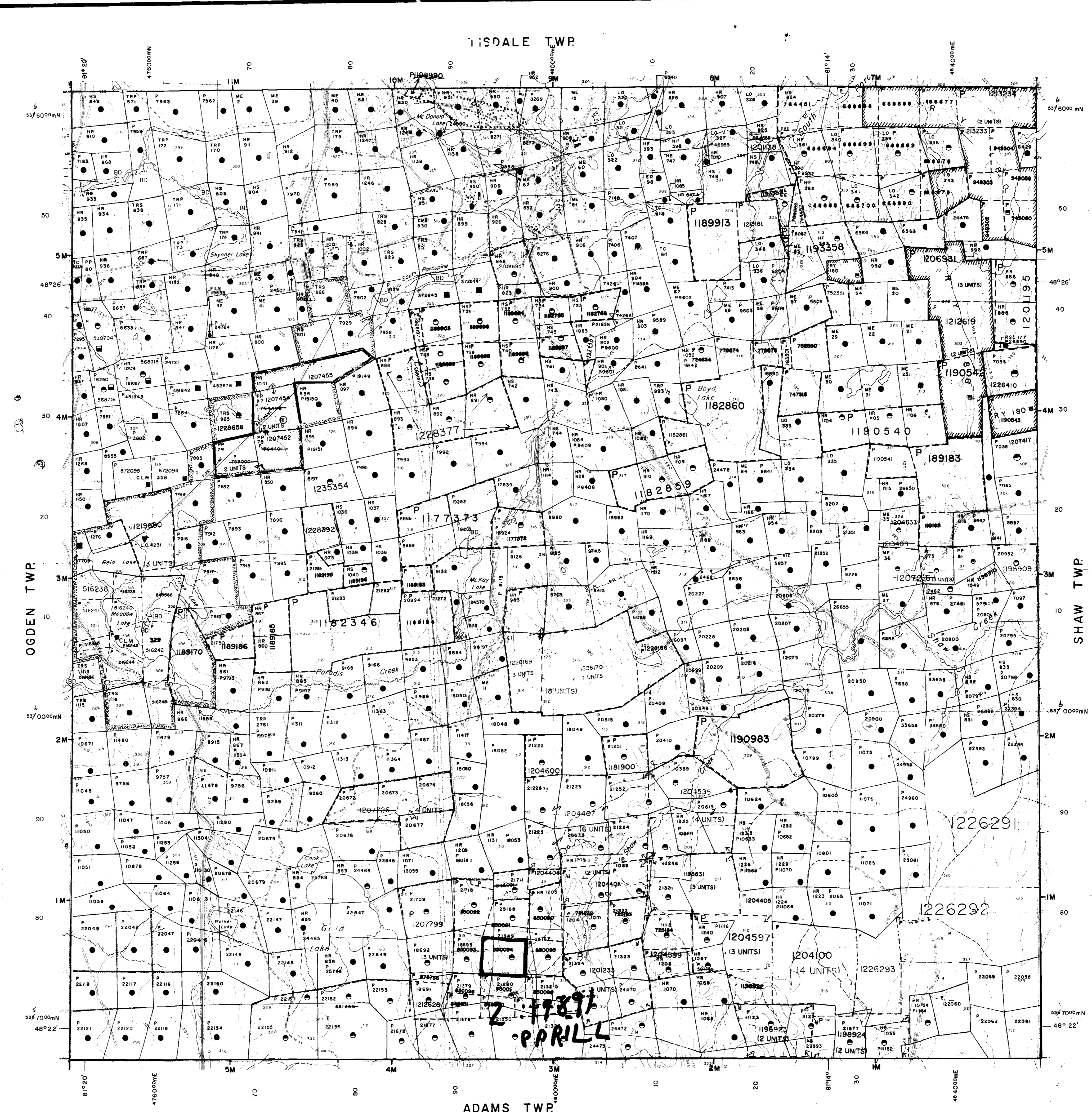
Aerial Cableway	Pipeline (above ground)
Boundary (International)	Railroad (Single Track)
Boundary (Domestic Township or Precinct)	Railroad (Double Track)
Approximate	Road (Abandoned)
Lot, Concession	Road (Turbidite)
Approximate	Road (Highway, County)
Pack Boundary	Road (Township)
Bridge	Access (road of doubtful maintenance or significant driveway)
Road, Railroad	Trail, Bush Road (outdoor trail)
Building	Rapids
Chimney	Double line river with multiple rapids
Cliff, Pit, Pile	Double line river with multiple rapids
Contours	Reservoir
Interpreted	River, Stream, Canal
Approximate	Approximate (measured)
Depression	Transect of flow
Control Points	Horizontal (607760)
Vertical (630002)	Rock (outcrop)
Culvert	Spot Elevation (class elevations)
Falls	Spot Elevation (class elevations)
Double line river	Transmission Line
Fence, Hedge, Wall	Power Poles
Feature Outline (Construction Features, etc.)	Wharf, Dock, Pier
Flooded Land	Wooded Area
Lock	
Marsh or Swamp	
Mast	
Mine Head Frame	
Outcrop	

**AREAS WITHDRAWN FROM DISPOSITION**

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

Description	Order No.	Date	Disposition	File
W.P. 12/92 NR. 92-FEB-24 S.R.O. APPLICATION UNDER THE PUBLIC LANDS ACT FOR A WASTE DISPOSAL SITE				
THE SURFACE AND MINING RIGHTS ARE WITHDRAWN FROM PROSPECTING, STAKING OUT, SALE OR LEASE UNDER SECTION 35 OF THE MINING ACT - R.S.O. 1990, DATED FEB 27, 1996 AT 4:01 P.M. - ORDER NO. W.P. 11/29/96 NR. 11-29-96				
CLAIMS RELIEVED FROM FORFEITURE ORDER OF THE MINISTER OCT. 9, 1996				
THE SURFACE AND MINING RIGHTS ARE RE-OPENED TO PROSPECTING, STAKING OUT, SALE OR LEASE UNDER SECTION 35 OF THE MINING ACT, R.S.O. 1990 ORDER NO. O.P. 4/97 NR. DATED JAN. 21/97				

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**

HIGHWAY AND ROUTE No.	
OTHER ROADS	
TRAILS	
SURVEYED LINES (TOWNSHIPS, BASE LINES, ETC.)	
UNSURVEYED LINES (LOT LINES, MINING CLAIMS, PARCELS, ETC.)	
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON-PERENNIAL STREAM	
FLOODING OR FLOODING RIGHTS	
SUBDIVISION OR COMPOSITE PLAN	
RESERVATIONS	
ORIGINAL SHORELINE	
MARSH OR MUSKEG	
MINES	
TRAVERSE MONUMENT	

**DISPOSITION OF CROWN LANDS**

TYPE OF DOCUMENT	SYMBOL
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	OC
RESERVATION	○
CANCELLED	○
SAND & GRAVEL	○

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEES BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1.

SCALE 1:20 000  
 GRID ZONE: 17  
 NOTES

REGISTERED PLAN OF SUBDIVISION

MINING CLAIMS SHOWN WITHIN THIS AREA ARE SUBJECT TO THE RIGHTS AND PRIVILEGES GRANTED TO DELNITE MINES LTD. UNDER AN EASEMENT ORDER DATED MAY 19, 1937.

DOMESTIC MINES LIMITED SURFACE RIGHTS LEASE #103926

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES AND ACCURACY IS NOT GUARANTEED.

MAY 12 1998

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.

TOWNSHIP  
**DELORO**

M.N.R. ADMINISTRATIVE DISTRICT  
**TIMMINS**  
 MINING DIVISION  
**PORCUPINE**  
 LAND TITLES / REGISTRY DIVISION  
**COCHRANE**

Ministry of Natural Resources  
 Land Management Branch

Ontario ACTIVATED NOV 24/93 BY: D.L.

ORIGINAL COMPILATION JULY 1984  
 REVISED CHECKED BY: A.R.W. 10/23/93

Number  
**G-3993**