

## DETAILED LOG

Hole Number: ES07-80

Units: METRIC

Project Name: Norway - Espedalen	Primary Coordinates Grid: UTM84-32N	Destination Coordinates Grid: UTM:	Collar Dip: -50.00
Project Number: 201	North: 6805893.82	North: 61.39	Collar Az: 232.20
Location: Andreasburg	East: 535347.99	East: 9.66	Length: 312.01 (m)
	Elev: 987.13	Elev: 987.13	Start Depth: 0.00 (m)
Date Started: Jul 30, 2007	Collar Survey: Y	Plugged: N	Contractor: Geo Drilling A/S
Date Completed: Aug 05, 2007	Multishot Survey: N	Hole Size: TT46	Core Storage: tyristrand core farm
Logged By: ccnor	Pulse EM Survey: N	Casing: Left in Hole, capped	Final Depth: 312.01 (m)

Comments: Target: Hole testing 150 to 180m down dip extension of Andreasburg mineralization. Secondary target is both UTEM and airborne conductors.

Result: Hole intersected var. mineralized mafic dikes within anorthosite (54.8 to 131.15m). Dikes contained 5-35% Po and trace CPY. Dikes are highly conductive where mineralized.

## Sample Averages

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
0	2.90	O/B, Overburden casing to 2.9m							

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From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
2.90	54.80	GAB, Gabbro (leucogabbro)	PG07718	49.50	50.50	1.00	0.0100	0.0120	0.0020
			PG07719	50.50	51.00	0.50	0.0090	0.0110	0.0020
			PG07721	51.00	52.30	1.30	0.0360	0.0300	0.0070
			PG07722	52.30	52.90	0.60	0.0070	0.0130	0.0010
			PG07723	52.90	53.80	0.90	0.0440	0.0560	0.0070
			PG07724	53.80	54.30	0.50	0.0200	0.0480	0.0050
			PG07725	54.30	54.80	0.50	0.0110	0.0090	0.0010
		<p>Unit is dark to light grey, medium to fine grained, non mineralized (except for mafic dikes near lower contact) and weakly to moderately magnetic. Variable color and grain size throughout. Unit is light grey to white (anorthosite sweats) and non magnetic to 5.9m then becomes distinctly darker, finer grained and more magnetic (avg 15 on mag sus) from 5.9m to 25.35m. From 25.35 to lower contact magnetism decreases and unit returns to a lighter grey.</p> <p>Overall unit consists of 70-80% light grey to white feldspars 10-20% dark grey to reddish pyroxenes, 0-5% pinkish red garnets, minor biotite and serpentinite alteration.</p> <p>massive to weakly foliated. Foliation best developed near lower contact 45-60 DTCA.</p> <p>From 39.5m to lower contact unit becomes fine grained and contains metric wide mafic dikes that contain 10-20% Po stringers. These dikes are conductive. Lower contact is somewhat arbitrary.</p> <p>Mineralization  53.80 - 54.80 : PO Pyrrhotite, TR Trace, 0.5%  52.90 - 53.80 : PO Pyrrhotite, STR Stringers, 15%  52.30 - 52.90 : PO Pyrrhotite, DIS Disseminated, 1%  51.00 - 52.30 : PO Pyrrhotite, STR Stringers, 20%  49.50 - 51.00 : PO Pyrrhotite, TR Trace, 0.5%</p> <p>Structure  4.55 - 4.55 : FLT Fault, 40 Deg to CA  19.20 - 19.20 : FLT Fault, 20 Deg to CA  broken core, carbonate infill  35.00 - 35.00 : FLT Fault, 60 Deg to CA  37.00 - 37.00 : FOL Foliated, 60 Deg to CA</p> <p>MINOR INTERVALS:  Minor Interval:  51 - 52.3 MD, Mafic Dike  Mafic Dike  dark grey, fine grained, mineralized with 15-20% Po stringers/veinlets.  Upper/lower contact 50 and 55 DTCA. Strongly conductive.  Minor Interval:  52.9 - 53.8 MD, Mafic Dike  Mafic Dike  Dark grey, fine grained, mineralized with 10-15% Po stringers/veinlets.  Strongly conductive</p>							

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From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
54.80	131.15	ANOR, Anorthosite	PG07726	82.50	83.50	1.00	0.0050	0.0080	0.0010
		Anorthosite	PG07727	83.50	84.00	0.50	0.0280	0.0025	0.0040
		Light grey to white, with shades of pink. well foliated/banded 45-60 DTCA with dark grey more mafic intervals, non magnetic, mineralized with stinger Po 1-30% and trace Cpy. Mineralization concentrated in mafic dikes (see minor units and mineralization tabs) conductive where mineralized. Overall unit consists of a 75-85% white to light grey feldspar, 10-15% fine grained mafic minerals that form cm to dcm wide bands throughout, 0-5% pinkish red altered garnets.	PG07728	84.00	84.50	0.50	0.0220	0.0240	0.0020
		Mafic dikes are fine grained dark grey and have sharp contacts. Dikes are mineralized with 10-35% Po and trace CPY (see minor units and mineralization tab for descriptions).	PG07729	84.50	84.80	0.30	0.0320	0.0370	0.0050
		Lower contact sharp 70 DTCA.	PG07730	84.80	85.10	0.30	0.0190	0.0200	0.0030
		Mineralization	PG07731	85.10	85.55	0.45	0.0280	0.0240	0.0050
		108.00 - 108.80 : PO Pyrrhotite, STR Stringers, 10%	PG07732	85.55	86.10	0.55	0.0320	0.0370	0.0040
		107.00 - 107.40 : PO Pyrrhotite, STR Stringers, 2%	PG07733	86.10	86.60	0.50	0.0240	0.0210	0.0040
		98.00 - 98.30 : PO Pyrrhotite, STR Stringers, 30% stringer to diss	PG07734	86.60	87.20	0.60	0.0270	0.0290	0.0070
		96.70 - 97.20 : PO Pyrrhotite, VN Veins, 10% 1% CPY	PG07735	87.20	88.00	0.80	0.0025	0.0050	0.0020
		89.80 - 90.30 : PO Pyrrhotite, STR Stringers, 10% fault zone	PG07737	88.00	89.20	1.20	0.0060	0.0050	0.0020
		89.20 - 89.50 : PO Pyrrhotite, STR Stringers, 15% 1% CPY, TR PN?	PG07738	89.20	89.50	0.30	0.0290	0.0220	0.0050
		86.60 - 87.20 : PO Pyrrhotite, STR Stringers, 20% TR CPY	PG07739	89.50	89.80	0.30	0.0100	0.0100	0.0010
		85.55 - 86.10 : PO Pyrrhotite, STR Stringers, 30%	PG07741	89.80	90.30	0.50	0.0240	0.0110	0.0020
		84.80 - 85.10	PG07742	90.30	91.00	0.70	0.0050	0.0025	0.0010
		118.10 - 120.00 : PO Pyrrhotite, TR Trace, 1%	PG07743	91.00	92.00	1.00	0.0060	0.0025	0.0010
		113.00 - 114.50 : PO Pyrrhotite, DIS Disseminated, 3%	PG07744	92.00	93.50	1.50	0.0070	0.0025	0.0020
		114.50 - 115.15 : PO Pyrrhotite, STR Stringers, 20% Tr CPY	PG07745	93.50	95.00	1.50	0.0080	0.0025	0.0020
		112.40 - 113.00 : PO Pyrrhotite, STR Stringers, 5%	PG07746	95.00	96.00	1.00	0.0080	0.0025	0.0010
		111.10 - 111.75 : PO Pyrrhotite, STR Stringers, 7%	PG07747	96.00	96.70	0.70	0.0230	0.0140	0.0030
		109.50 - 110.60 : PO Pyrrhotite, STR Stringers, 10%	PG07748	96.70	97.20	0.50	0.0670	0.0380	0.0180
		110.60 - 111.10 : PO Pyrrhotite, STR Stringers, 15%	PG07749	97.20	98.00	0.80	0.0260	0.0180	0.0070
		108.80 - 109.50 : PO Pyrrhotite, STR Stringers, 25%	PG07750	98.00	98.30	0.30	0.0880	0.0590	0.0180
		107.40 - 108.00 : PO Pyrrhotite, STR Stringers, 25% 60 DTCA	PG07751	98.30	99.55	1.25	0.0310	0.0180	0.0060
		98.30 - 99.55 : PO Pyrrhotite, TR Trace, 1%	PG07752	99.55	101.00	1.45	0.0090	0.0025	0.0030
		97.20 - 98.00 : PO Pyrrhotite, TR Trace, 1%	PG07753	101.00	102.50	1.50	0.0140	0.0050	0.0030
		96.00 - 96.70 : PO Pyrrhotite, TR Trace, 1%	PG07754	102.50	104.00	1.50	0.0130	0.0070	0.0030
		89.50 - 89.80 : PO Pyrrhotite, TR Trace, 1%	PG07755	104.00	105.50	1.50	0.0100	0.0050	0.0040
		87.20 - 89.20	PG07756	105.50	107.00	1.50	0.0110	0.0025	0.0040
			PG07757	107.00	107.40	0.40	0.0130	0.0150	0.0020
			PG07758	107.40	108.00	0.60	0.0270	0.0290	0.0060
			PG07759	108.00	108.80	0.80	0.0220	0.0180	0.0050
			PG07761	108.80	109.50	0.70	0.0390	0.0390	0.0080
			PG07762	109.50	110.60	1.10	0.0270	0.0250	0.0070
			PG07763	110.60	111.10	0.50	0.0320	0.0410	0.0090
			PG07764	111.10	111.75	0.65	0.0230	0.0190	0.0050
			PG07765	111.75	112.40	0.65	0.0360	0.0350	0.0100
			PG07766	112.40	113.00	0.60	0.0110	0.0080	0.0030
			PG07767	113.00	114.50	1.50	0.0100	0.0070	0.0020
			PG07768	114.50	115.15	0.65	0.0230	0.0200	0.0050
			PG07769	115.15	116.50	1.35	0.0080	0.0025	0.0040
			PG07770	116.50	117.50	1.00	0.0070	0.0025	0.0030
			PG07772	117.50	118.10	0.60	0.0280	0.0280	0.0070

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From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
		Mineralization	PG07773	118.10	118.75	0.65	0.0110	0.0050	0.0050
		86.10 - 86.60 : PO Pyrrhotite, STR Stringers, 15%	PG07774	118.75	119.40	0.65	0.0110	0.0110	0.0040
		35 DTCA	PG07775	119.40	120.00	0.60	0.0150	0.0025	0.0040
		85.10 - 85.55 : PO Pyrrhotite, DIS Disseminated, 15%	PG07776	120.00	121.00	1.00	0.0240	0.0025	0.0050
		84.50 - 84.80 : PO Pyrrhotite, STR Stringers, 35%							
		TR CPY							
		84.00 - 84.50 : PO Pyrrhotite, STR Stringers, 10%							
		TR CPY							
		82.50 - 84.00 : PO Pyrrhotite, TR Trace, 0%							
		117.50 - 118.10 : PO Pyrrhotite, STR Stringers, 15%							
		111.75 - 112.40 : PO Pyrrhotite, STR Stringers, 30%							
		50 DTCA, Tr CPY							
		Structure							
		56.50 - 56.50 : FOL Foliated, 55 Deg to CA							
		61.00 - 61.00 : FOL Foliated, 40 Deg to CA							
		65.00 - 65.00 : FOL Foliated, 60 Deg to CA							
		72.50 - 72.50 : SHR Shear, 60 Deg to CA							
		minor shear							
		76.50 - 76.50 : FOL Foliated, 45 Deg to CA							
		77.70 - 77.70 : FLT Fault, 75 Deg to CA							
		minor fault							
		83.00 - 83.00 : FOL Foliated, 50 Deg to CA							
		89.50 - 89.50 : FLT Fault, 55 Deg to CA							
		93.00 - 93.00 : FOL Foliated, 50 Deg to CA							
		96.00 - 96.70 : BX Brecciation, 40 Deg to CA							
		1-2cm wide mafic clasts							
		100.50 - 100.50 : FOL Foliated, 70 Deg to CA							
		114.20 - 114.20 : FOL Foliated, 40 Deg to CA							
		MINOR INTERVALS:							
		Minor Interval:							
		84.5 - 84.8 MD, Mafic Dike							
		Mafic Dike							
		Mineralized with 30-35% Po and TR Cpy. Upper and lower contact 45 and 80							
		DTCA							
		Minor Interval:							
		85.1 - 87.2 MD, Mafic Dike							
		Mafic Dike							
		Mineralized with 10-30% Po, Tr Cpy. Lower contact 40 DTCA.							
		Minor Interval:							
		89.2 - 89.5 MD, Mafic Dike							
		Mafic Dike							
		Sheared 40 DTCA. Mineralized with 10-15% Po, 1% CPY, and Tr Pn?.							

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		MINOR INTERVALS: Minor Interval: 89.8 - 90.3 MD, Mafic Dike Mafic Dike Faulted 50 DTCA at 89.95m. Mineralized with 5-10% Po, Upper and lower contact 50 DTCA. Minor Interval: 96.7 - 97.2 MD, Mafic Dike Mafic dike 7-10% Po, 1% Cpy, upper and lower contact 15 and 40 DTCA Minor Interval: 107.4 - 108 MD, Mafic Dike Mafic Dike 20-25% Po, upper and lower contact 60 and 40 DTCA. Minor Interval: 111.75 - 112.4 MD, Mafic Dike Mafic Dike 25-30% Po, Trace Cpy. Upper contact 50 DTCA. Minor Interval: 114.5 - 115.15 MD, Mafic Dike Mafic Dike 15-20% Po, Tr Cpy. Upper and lower contact 65 and 50 DTCA. Minor Interval: 117.5 - 118.1 MD, Mafic Dike Mafic Dike 10-15% Po stingers, Lower contact 75 DTCA							



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From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
258.00	276.40	GAB, Gabbro from 258.00 to 276.40 the rock becomes increasingly more sheraed, feldspar phenocrysts are locally indistinct, f.g chloritized sections with garnet crystals up to 2mm in size., locally magnetic, sparse mineralization . Texture 259.80 - 265.77 : FG Fine Grained 258.50 - 258.90 : FLT Fault Gouge crushed, fissile core Mineralization 260.21 - 260.80 : MAG Magnetite, DIS Disseminated, 0.5% Alteration 260.24 - 262.00 :Carb Carbonate, FF Fracture Filling, W Weak 263.43 - 264.60 :Carb Carbonate, FF Fracture Filling, W Weak Structure 264.60 - 268.70 : SHR Shear, 60 Deg to CA 267.80 - 268.63							
276.40	312.00	GAB, Gabbro same as unit observed above from 131.15-276.40. massive to weakly foliated, dark grey in colour, conspicuous cream coloured feldspar anhedral throughout - interstitial / salt and pepper appearance							
312.00	312.01	EOH, End of Hole							

## Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type	ASSAY				
PG07718	49.50	50.50	0.0100	0.0120	0.0020
PG07719	50.50	51.00	0.0090	0.0110	0.0020
PG07721	51.00	52.30	0.0360	0.0300	0.0070
PG07722	52.30	52.90	0.0070	0.0130	0.0010
PG07723	52.90	53.80	0.0440	0.0560	0.0070
PG07724	53.80	54.30	0.0200	0.0480	0.0050
PG07725	54.30	54.80	0.0110	0.0090	0.0010
PG07726	82.50	83.50	0.0050	0.0080	0.0010
PG07727	83.50	84.00	0.0280	0.0025	0.0040
PG07728	84.00	84.50	0.0220	0.0240	0.0020
PG07729	84.50	84.80	0.0320	0.0370	0.0050
PG07730	84.80	85.10	0.0190	0.0200	0.0030
PG07731	85.10	85.55	0.0280	0.0240	0.0050
PG07732	85.55	86.10	0.0320	0.0370	0.0040
PG07733	86.10	86.60	0.0240	0.0210	0.0040

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## Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type	ASSAY				
PG07734	86.60	87.20	0.0270	0.0290	0.0070
PG07735	87.20	88.00	0.0025	0.0050	0.0020
PG07737	88.00	89.20	0.0060	0.0050	0.0020
PG07738	89.20	89.50	0.0290	0.0220	0.0050
PG07739	89.50	89.80	0.0100	0.0100	0.0010
PG07741	89.80	90.30	0.0240	0.0110	0.0020
PG07742	90.30	91.00	0.0050	0.0025	0.0010
PG07743	91.00	92.00	0.0060	0.0025	0.0010
PG07744	92.00	93.50	0.0070	0.0025	0.0020
PG07745	93.50	95.00	0.0080	0.0025	0.0020
PG07746	95.00	96.00	0.0080	0.0025	0.0010
PG07747	96.00	96.70	0.0230	0.0140	0.0030
PG07748	96.70	97.20	0.0670	0.0380	0.0180
PG07749	97.20	98.00	0.0260	0.0180	0.0070
PG07750	98.00	98.30	0.0880	0.0590	0.0180
PG07751	98.30	99.55	0.0310	0.0180	0.0060
PG07752	99.55	101.00	0.0090	0.0025	0.0030
PG07753	101.00	102.50	0.0140	0.0050	0.0030
PG07754	102.50	104.00	0.0130	0.0070	0.0030
PG07755	104.00	105.50	0.0100	0.0050	0.0040
PG07756	105.50	107.00	0.0110	0.0025	0.0040
PG07757	107.00	107.40	0.0130	0.0150	0.0020
PG07758	107.40	108.00	0.0270	0.0290	0.0060
PG07759	108.00	108.80	0.0220	0.0180	0.0050
PG07761	108.80	109.50	0.0390	0.0390	0.0080
PG07762	109.50	110.60	0.0270	0.0250	0.0070
PG07763	110.60	111.10	0.0320	0.0410	0.0090
PG07764	111.10	111.75	0.0230	0.0190	0.0050
PG07765	111.75	112.40	0.0360	0.0350	0.0100
PG07766	112.40	113.00	0.0110	0.0080	0.0030
PG07767	113.00	114.50	0.0100	0.0070	0.0020
PG07768	114.50	115.15	0.0230	0.0200	0.0050
PG07769	115.15	116.50	0.0080	0.0025	0.0040
PG07770	116.50	117.50	0.0070	0.0025	0.0030
PG07772	117.50	118.10	0.0280	0.0280	0.0070
PG07773	118.10	118.75	0.0110	0.0050	0.0050
PG07774	118.75	119.40	0.0110	0.0110	0.0040



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Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type ASSAY					
PG07775	119.40	120.00	0.0150	0.0025	0.0040
PG07776	120.00	121.00	0.0240	0.0025	0.0050