

Hole Number: ES2004-01

Units: METRIC

Project Name:	Norway - Espedalen	Primary Coordinates	Grid: UTM84-32N	Destination Coordinates	Grid: UTM:	Collar Dip:	-73.50
Project Number:	201	North:	6805861.69	North:	61.39	Collar Az:	50.00
Location:	Andreasburg	East:	535275.52	East:	9.66	Length:	112.65 (m)
		Elev:	998.32	Elev:	998.32	Start Depth:	0.00 (m)
Date Started:	Jul 23, 2004	Collar Survey:	Y	Plugged:	N	Contractor:	Geobor-Salag A/S
Date Completed:	Aug 05, 2004	Multishot Survey:	N	Hole Size:	T246	Core Storage:	Strand Fjellstue
Logged By:	Trevor Blair	Pulse EM Survey:	N	Casing:	Left in Hole, capped		
						Final Depth:	112.65 (m)

Comments: Purpose: Test UTEM conductor ESP\_05\_03. Conductivity = 500 Siemens

Result: Intersected gabbro-norites and siliceous metasediments as well as one unit of sulphidic norite (65.45-80.45m). Sulphidic norite contains 3-5% disseminated sulphides and locally up to 10% sulphides where cm scale remobilized veinlets are present. Hand conductivity measurements (taken on whole core) were 300 Siemens.

All nickel values less than detection limit (ie. <0.05%).

## Sample Averages

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
0	2.85	C, Casing							

Hole Number: ES2004-01

Units: METRIC

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
2.85	41.12	<p>GAB, Gabbro</p> <p>Medium grained, homogenous, equigranular, dark green and white, weakly to moderately magnetic gabbronorite.</p> <p>This unit contains 45% feldspar and 55% equigranular, dark green pyroxenes. Locally, the gabbronorite displays a weak foliation (mineral alignments) at 30-40 tca.</p> <p>The lower 3.32m (37.80m to 41.12m) contains 5-15% mm scale, dark brown to purple garnets (almandine).</p> <p>This unit contains no visible sulphides.</p> <p>The lower contact of this unit is diffuse and was based on the appearance of quartz-rich banding.</p> <p>Interpretation: Consistent with Heim's Rock Suite 3 (Gabbronortite-Noritegabbro).</p> <p>RQD</p> <p>2.85 - 6.00 : 37.00 % RQD 69.00 % Core Missing core not marked in box</p> <p>6.00 - 9.00 : 26.00 % RQD 79.00 % Core Missing core not marked in box</p> <p>9.00 - 12.00 : 18.00 % RQD 83.00 % Core 37cm of ground core at 11.63cm</p> <p>12.00 - 15.00 : 25.00 % RQD 93.00 % Core</p> <p>15.00 - 18.00 : 39.00 % RQD 100.00 % Core</p> <p>18.00 - 21.00 : 57.00 % RQD 97.00 % Core</p> <p>21.00 - 24.00 : 64.00 % RQD 100.00 % Core</p> <p>24.00 - 27.00 : 76.00 % RQD 100.00 % Core</p> <p>27.00 - 30.00 : 76.00 % RQD 100.00 % Core</p> <p>30.00 - 33.00 : 50.00 % RQD 100.00 % Core</p> <p>33.00 - 36.00 : 55.00 % RQD 100.00 % Core</p> <p>36.00 - 39.00 : 41.00 % RQD 100.00 % Core</p> <p>39.00 - 42.00 : 52.00 % RQD 100.00 % Core</p> <p>Mag Sus</p> <p>4.50 - 4.51 : 1.43 NT</p> <p>5.50 - 5.51 : 1.59 NT</p> <p>6.50 - 6.51 : 2.85 NT</p> <p>7.50 - 7.51 : 1.74 NT</p> <p>8.50 - 8.51 : 2.81 NT</p> <p>9.50 - 9.51 : 2.42 NT</p> <p>10.50 - 10.51 : 2.13 NT</p>							

Hole Number: ES2004-01

Units: METRIC

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
		Mag Sus							
	11.50 - 11.51	2.06 NT							
	12.50 - 12.51	0.43 NT							
	13.50 - 13.51	2.24 NT							
	14.50 - 14.51	1.75 NT							
	15.50 - 15.51	2.26 NT							
	16.50 - 16.51	0.73 NT							
	17.50 - 17.51	3.00 NT							
	18.50 - 18.51	3.27 NT							
	19.50 - 19.51	3.60 NT							
	20.50 - 20.51	2.82 NT							
	21.50 - 21.51	2.44 NT							
	22.50 - 22.51	3.53 NT							
	23.50 - 23.51	4.80 NT							
	24.50 - 24.51	3.09 NT							
	25.50 - 25.51	3.04 NT							
	26.50 - 26.51	3.45 NT							
	27.50 - 27.51	3.88 NT							
	28.50 - 28.51	3.92 NT							
	29.50 - 29.51	3.51 NT							
	MINOR INTERVALS:								
	Minor Interval:								
	18.2 - 18.41 PYXT, Pyroxenite								
	Fine grained, non-magnetic, dark green to black, homogenous pyroxenite dyke.								
	The upper contact is sharp at 35 tca with the lower contact lost in broken core.								

# DETAILED LOG

Hole Number: ES2004-01

Units: METRIC

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
41.12	65.45	<p>FGN, Felsic Gneiss</p> <p>Fine grained, strongly silicified, grey, unhomogenous, non-magnetic metasediments. The sediments are moderately foliated (45-60 degrees tca, remenant bedding) and locally appear remelted, resulting in a gneissic texture. This unit contains 10-15% mm scale pink garnets and 10% mafic minerals (biotite, pyroxenes) within a quartzofeldspathic matrix. Intercalated with siliceous sediments are more mafic horizons (dm scale - Heim's series 2 norites?) which generally contain 3-5% finely disseminated sulphides.</p> <p>This unit is crosscut by 15-20% dm to m scale fine grained, homogenous, non-magnetic, pale to dark green, mafic dykes (pyroxenite?). These dykes are weakly silicified, crosscut by mm scale chlorite infilled fractures and contain locally contain trace sulphides. See minor units for intervals.</p> <p>These metasediments contain trace to 3% fine grained disseminated non-magnetic pyrrhotite. Sulphides are locally concentrated in cm to dm scale horizons, concordant with foliations.</p> <p>The lower contact of this unit is gradational over 2.0m and was based on the increased percentage of mafic horizons versus siliceous horizons.</p> <p>Interpretation: Likely consistent with Heim's Rock Suite 1 (Hybrid rocks).</p> <p>Mineralization</p> <p>45.30 - 45.42 : Po Pyrrhotite, D Disseminated, 12% 10-15%</p> <p>57.50 - 57.58 : Po Pyrrhotite, VN Veins, 50% Remobilized veinlets</p> <p>Structure</p> <p>43.80 - 43.81 : Sm General Foliation, 60 Deg to CA 44.05 - 44.06 : Sm General Foliation, 45 Deg to CA 45.37 - 45.38 : Sm General Foliation, 70 Deg to CA 63.65 - 63.66 : Sm General Foliation, 50 Deg to CA</p> <p>RQD</p> <p>42.00 - 45.00 : 27.00 % RQD 100.00 % Core 45.00 - 48.00 : 29.00 % RQD 100.00 % Core 48.00 - 51.00 : 29.00 % RQD 50.00 % Core 1.5m of lost core 51.00 - 54.00 : 35.00 % RQD 93.00 % Core 54.00 - 57.00 : 41.00 % RQD 100.00 % Core 57.00 - 60.00 : 23.00 % RQD 100.00 % Core 60.00 - 63.00 : 54.00 % RQD 100.00 % Core 63.00 - 66.00 : 51.00 % RQD 100.00 % Core</p>	PG00051	41.12	41.85	0.73	0.0250	0.0250	0.0100
			PG00052	41.85	42.72	0.87	0.0250	0.0250	0.0100
			PG00053	44.78	45.18	0.40	0.0250	0.0250	0.0100
			PG00054	45.18	45.58	0.40	0.0250	0.0250	0.0100
			PG00055	45.58	45.98	0.40	0.0250	0.0250	0.0100
			PG00056	51.44	52.12	0.68	0.0250	0.0250	0.0100
			PG00057	52.12	52.75	0.63	0.0250	0.0250	0.0100
			PG00058	52.75	54.02	1.27	0.0250	0.0250	0.0100
			PG00059	56.75	57.30	0.55	0.0250	0.0250	0.0100
			PG00060	57.30	57.80	0.50	0.0250	0.0250	0.0100
			PG00061	57.80	58.39	0.59	0.0250	0.0250	0.0100
			PG00062	58.39	59.31	0.92	0.0250	0.0250	0.0100
			PG00063	59.31	60.27	0.96	0.0250	0.0250	0.0100
			PG00064	64.08	65.45	1.37	0.0250	0.0250	0.0100

# DETAILED LOG

Hole Number: ES2004-01

Units: METRIC

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
		<p>MINOR INTERVALS:</p> <p>Minor Interval: 52.75 - 54.02 PYXT, Pyroxenite See major unit for description.</p> <p>Upper contact is sharp but irregular (approximately 15 degrees tca), lower contact is sharp at 55 degrees tca.</p> <p>Minor Interval: 58.39 - 60.06 PYXT, Pyroxenite See major unit for description (medium grained).</p> <p>Upper contact is lost within broken core, lower contact occurs along quartzofeldspathic veinlet, sub-parallel to core axis (5 degrees tca).</p>							

Hole Number: ES2004-01

Units: METRIC

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
65.45	80.45	6f, Norite	PG00065	65.45	66.35	0.90	0.0250	0.0250	0.0100
		<p>Fine to medium grained, dark grey, weakly to moderately magnetic norite composed of 65% pyroxenes and 35% plagioclase. This unit contains 5% cm to dm scale horizons of anorthosite as well as 5% cm to dm scale horizons of metasediments. Contact relationships are generally sharp but irregular (see minor units for larger horizons). Locally, plagioclase appears as mm to cm scale clots (remelt) which results in a vague brecciated texture.</p> <p>This norite contains 3-5% disseminated sulphides throughout, although sulphides have been remobilized resulting in mm scale veinlets (defining foliation planes) and blebs. Locally, sulphide content (cm to dm scale) approaches 10%.</p> <p>The lower contact of this unit is sharp along a siliceous sedimentary unit.</p> <p>Interpretation: Likely consistent with Heim's Rock Suite 2b (Sulphide bearing norites containing rafts of Hybrid rocks and intermixed with Anorthosites).</p> <p>Mineralization 65.45 - 80.45 : Po Pyrrhotite, D Disseminated, 5% Locally remobilized in veinlets (up to 10%)</p> <p>Structure 70.40 - 70.41 : Sm General Foliation, 60 Deg to CA Within sedimentary raft 79.45 - 79.46 : Sm General Foliation, 65 Deg to CA Within norite, sulphides define foliation</p> <p>RQD 66.00 - 69.00 : 58.00 % RQD 100.00 % Core 69.00 - 72.00 : 46.00 % RQD 100.00 % Core 72.00 - 75.00 : 30.00 % RQD 100.00 % Core 75.00 - 78.00 : 59.00 % RQD 100.00 % Core 78.00 - 81.00 : 62.00 % RQD 100.00 % Core</p> <p>MINOR INTERVALS: Minor Interval: 67.24 - 67.62 4, Anorthosite / Anorthosite Gabbro Medium grained, white, non-magnetic, massive anorthosite composed of 90% plagioclase and 10% pyroxenes. The upper and lower contacts of this unit are sharp but irregular. The anorthosite appears to be younger than the norite as two amoeboid fingers intrude the noritic groundmass.</p> <p>This unit contains trace disseminated sulphides.</p>	PG00066	66.35	67.24	0.89	0.0250	0.0600	0.0100
			PG00067	67.24	67.62	0.38	0.0250	0.0250	0.0100
			PG00068	67.62	68.50	0.88	0.0250	0.0250	0.0100
			PG00069	68.50	69.50	1.00	0.0250	0.0250	0.0100
			PG00070	69.50	70.50	1.00	0.0250	0.0250	0.0100
			PG00071	70.50	71.50	1.00	0.0250	0.0250	0.0100
			PG00072	71.50	72.50	1.00	0.0250	0.0250	0.0100
			PG00073	72.50	73.50	1.00	0.0250	0.0250	0.0100
			PG00074	73.50	74.50	1.00	0.0250	0.0250	0.0100
			PG00076	74.50	75.50	1.00	0.0250	0.0250	0.0100
			PG00077	75.50	76.50	1.00	0.0250	0.0250	0.0100
			PG00078	76.50	77.06	0.56	0.0250	0.0250	0.0100
			PG00079	77.06	78.10	1.04	0.0250	0.0250	0.0100
			PG00080	78.10	78.70	0.60	0.0250	0.0250	0.0100
		PG00081	78.70	79.50	0.80	0.0250	0.0250	0.0100	
		PG00082	79.50	80.45	0.95	0.0250	0.0250	0.0100	

Hole Number: ES2004-01

Units: METRIC

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
		<p>MINOR INTERVALS:                      Minor Interval:                      77.06 - 78.1 FGN, Felsic Gneiss                      Fine grained, non-magnetic, grey and white, weakly to moderately foliated metasediments composed of plagioclase, pyroxenes, garnet and quartz. The lower contact of this unit is highly broken, although garnet content increases toward the lower contact.</p>							
80.45	97.78	<p>FGN, Felsic Gneiss                      Fine grained, light to dark grey, weakly to moderately foliated (60 tca), non-magnetic siliceous metasediment composed of 25% mm scale, light purple garnets, 5-10% pyroxenes and &lt;5% biotite within a quartzofeldspathic groundmass.                       This unit is highly broken and blocky.                       Trace disseminated pyrrhotite occurs locally.                       The lower contact of this unit is sharp at 60 degrees tca with underlying unit.                       Interpretation: Likely consistent with Heim's Rock Suite 1 (Hybrid rocks).                      Structure                      87.30 - 87.31 : Sm General Foliation, 60 Deg to CA                      95.60 - 95.61 : Sm General Foliation, 60 Deg to CA                      96.23 - 96.24 : Sm General Foliation, 60 Deg to CA                      RQD                      81.00 - 84.00 : 4.00 % RQD 100.00 % Core                      84.00 - 87.00 : 0.00 % RQD 100.00 % Core                      Broken, blocky core, pieces reground                      87.00 - 90.00 : 19.00 % RQD 100.00 % Core                      90.00 - 93.00 : 20.00 % RQD 100.00 % Core                      93.00 - 96.00 : 0.00 % RQD 100.00 % Core                      96.00 - 99.00 : 38.00 % RQD 100.00 % Core</p>	PG00083	80.45	81.00	0.55	0.0250	0.0250	0.0100

Hole Number: ES2004-01

Units: METRIC

Detailed Lithology		Lithology	Assay Data						
From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
97.78	112.65	GAB, Gabbro Medium grained (equigranular), black and white, homogenous, massive, weakly magnetic gabbronorite composed of 55-65% pyroxenes and 35-45% plagioclase.  The upper 1.50m of this unit is fine grained, light green and non-magnetic (late intrusive).  This unit contains local trace disseminated sulphides.  The lower contact of this unit is unknown as drillhole was completed at 112.65m.  Interpretation: Consistent with Heim's Rock Suite 3 (Gabbronortite-Noritegabbro). RQD 99.00 - 102.00 : 53.00 % RQD 100.00 % Core 102.00 - 105.00 : 74.00 % RQD 100.00 % Core 105.00 - 108.00 : 55.00 % RQD 100.00 % Core 108.00 - 111.00 : 32.00 % RQD 100.00 % Core 111.00 - 112.65 : 24.00 % RQD 100.00 % Core							

## Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type	ASSAY				
PG00051	41.12	41.85	0.0250	0.0250	0.0100
PG00052	41.85	42.72	0.0250	0.0250	0.0100
PG00053	44.78	45.18	0.0250	0.0250	0.0100
PG00054	45.18	45.58	0.0250	0.0250	0.0100
PG00055	45.58	45.98	0.0250	0.0250	0.0100
PG00056	51.44	52.12	0.0250	0.0250	0.0100
PG00057	52.12	52.75	0.0250	0.0250	0.0100
PG00058	52.75	54.02	0.0250	0.0250	0.0100
PG00059	56.75	57.30	0.0250	0.0250	0.0100
PG00060	57.30	57.80	0.0250	0.0250	0.0100
PG00061	57.80	58.39	0.0250	0.0250	0.0100
PG00062	58.39	59.31	0.0250	0.0250	0.0100
PG00063	59.31	60.27	0.0250	0.0250	0.0100
PG00064	64.08	65.45	0.0250	0.0250	0.0100
PG00065	65.45	66.35	0.0250	0.0250	0.0100
PG00066	66.35	67.24	0.0250	0.0600	0.0100
PG00067	67.24	67.62	0.0250	0.0250	0.0100



Hole Number: ES2004-01

Units: METRIC

## Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type	ASSAY				
PG00068	67.62	68.50	0.0250	0.0250	0.0100
PG00069	68.50	69.50	0.0250	0.0250	0.0100
PG00070	69.50	70.50	0.0250	0.0250	0.0100
PG00071	70.50	71.50	0.0250	0.0250	0.0100
PG00072	71.50	72.50	0.0250	0.0250	0.0100
PG00073	72.50	73.50	0.0250	0.0250	0.0100
PG00074	73.50	74.50	0.0250	0.0250	0.0100
PG00076	74.50	75.50	0.0250	0.0250	0.0100
PG00077	75.50	76.50	0.0250	0.0250	0.0100
PG00078	76.50	77.06	0.0250	0.0250	0.0100
PG00079	77.06	78.10	0.0250	0.0250	0.0100
PG00080	78.10	78.70	0.0250	0.0250	0.0100
PG00081	78.70	79.50	0.0250	0.0250	0.0100
PG00082	79.50	80.45	0.0250	0.0250	0.0100
PG00083	80.45	81.00	0.0250	0.0250	0.0100