Bergvesenet

Postboks 3021, N-7441 Trondheim

Rapportarkivet

Bergvesenet rapport nr	Intern Journal nr	Internt arkiv nr	Rapport lokalisering	Gradering
4813	0908/05			**Fortrolig**
Kommer fra ..arkiv	Ekstern rapport nr	Oversendt fra Sulfidmalm a.s.	Fortrolig pga Muting	Fortrolig fra dato:

Tittel

2004 Summer Drilling, Espedalen Project, Drill Logs ES2004-01 through ES2004-17
Volum 1

Forfatter	Dato År	Bedrift (Oppdragsgiver og/eller oppdragstaker)
Tirschmann	24.05 2004	Sulfidmalm A/S

Kommune	Fylke	Bergdistrikt	1: 50 000 kartblad	1: 250 000 kartblad
Sør-Fron Gausdal	Oppland		17171 17172	Lillehammer

Fagområde	Dokument type	Forekomster (forekomst, gruvefelt, undersøkelsesfelt)
Boring		Stormyra Vesle Andreasberg Jørstad Storgruva Evans Statsråd Stang Nicoline Melgårdseter Stylskampen Søndre Gråhø Grimstjønna Dalen
Råstoffgruppe: Malm/metall	Råstofftype: Cu Ni	

Sammendrag, innholdsfortegnelse eller innholdsbeskrivelse

Borlogger og analyser samt oversiktskart borhullspplassering og 2003-UTEM nett

0908/05

Summer 2004 ~~Winter~~ Drilling

Espedalen,
Oppland county, Norway

Falconbridge Limited
On behalf of
Sulfidmalm A/S

May 24, 2004

May 24, 2005

2004 Drilling Program - Espedalen, Norway

The Espedalen Project is an option and joint venture between Sulfidmalm A/S (Norway), wholly-owned subsidiary of Falconbridge Limited, and Blackstone Ventures Inc. (Canada).

During the period July 12th to October 9th, 2004, a drilling campaign was carried out in the area of Espedalen, Norway by Falconbridge Limited on behalf of Sulfidmalm A/S. The program consisted of seventeen drillholes totaling 1844m. The first four holes (ES2004-01, ES2004-02 & 2A, ES2004-03 and ES2004-04 were drilled by Geobor-Salg A/S (Otta, Norway) and the remaining thirteen holes (ES2004-05 through ES2004-17) by Geo Drilling A/S (Namsos, Norway).

All drillholes were targeted on UTEM conductors obtained from the 2003 and 2004 winter UTEM programs. Of the seventeen holes drilled, fifteen reached target depth and tested the intended geophysical anomaly. (Two holes, ES2004-03 and ES2004-04, were not completed). All fifteen holes intersected variably mineralized mafic and/or ultramafic rocks and/or remobilized sulphide veinlets and stringers associated with ultramafic rocks. The mineralized intercepts adequately explained the UTEM target in all but one of the holes (ES2004-13).

The best results from the 2004 drilling campaign were obtained in the area referred to as "Stormyra" located approximately 2.5km south of the southern end of Espedalen Lake. Drillhole ES2004-08 intersected a narrow mineralized ultramafic body within an anorthositic country rocks between 56.30m and 59.00m. This interval averaged 2.07% Ni, 1.20% Cu and 0.07% Co over 2.70m. A second hole (ES2004-09), drilled 200m along strike to the southwest, intersected 1.73% Ni, 0.77% Cu and 0.06% Co over 14.60m (80.40-95.00m) including up to 6.91% Ni, 2.05% Cu and 0.21% Co over 1.90m (93.10-95.00m). The mineralization is situated at vertical depths of 45-100m and represents a new, previously unknown subsurface zone of nickel mineralization.

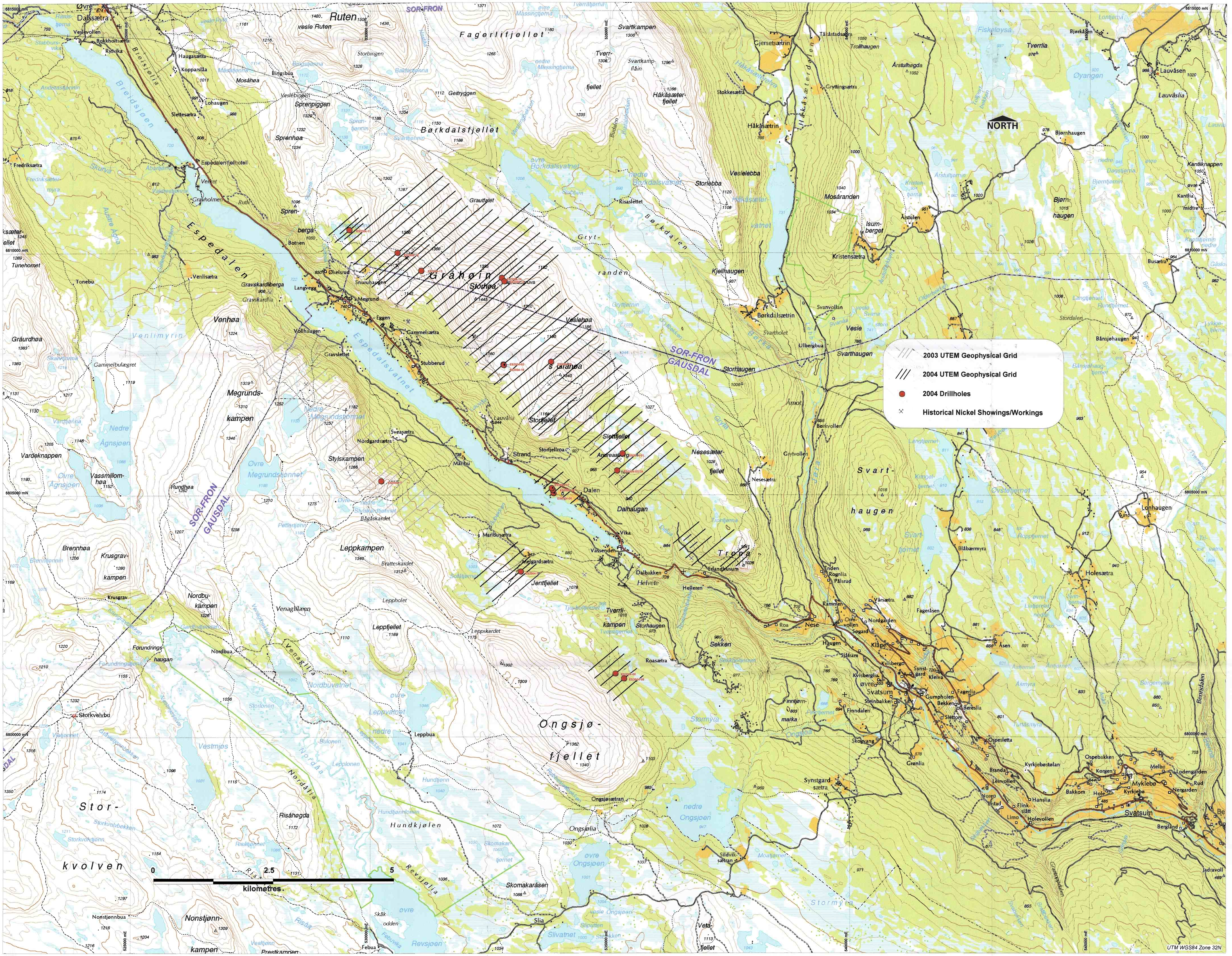
A complete set of drill log for holes ES2004-01 through ES2004-17 (including analytical results) are appended and hole locations can be seen on the included plan map. All drill core samples were analyzed for Ni, Cu, Co, S, Pt, Pd, Au and Ag. Analyses were carried out by SGS Lakefield Research of Lakefield, Canada.

P. Tirschmann
Falconbridge Limited

P. Tirschmann

On behalf of
Sulfidmalm A/S
Serviceboks 604
4606 Kristiansand S

ESPEDALEN PROJECT
Location of 2004 Drilling



Sulfidmalm

1:25,000

Espedalen Project

Drill Logs
ES2004-01 through ES2004-17

NOTE:
Results for samples which returned values below the laboratory detection limit are listed in the drill logs as *one half the detection limit* for the given element as follows:

Ni	0.025% (detection = 0.05%)	Pt	0.01 g/t (detection = 0.02 g/t)
Cu	0.025% (detection = 0.05%)	Pd	0.01 g/t (detection = 0.02 g/t)
Co	0.01% (detection = 0.02%)	Au	0.01 g/t (detection = 0.02 g/t)
S	0.005% (detection = 0.01%)	Ag	0.25 g/t (detection = 0.50 g/t)

Detailed Log

Hole Number: **ES2004-01** Units: METRIC

Project Name:	Espedalen	Collar Survey:	Y	Plugged	N	Core Storage:	Strand Fjellstue
Project Number:	300	Multishot Survey:	N	Hole Size:	T246	Contractor:	Geobor-Salag A/S
Date Started:	7/23/2004	Pulse EM Survey:	N				
Date Completed:	8/5/2004	Casing:	Left in Hole, capped				
		Location:	Surface				

UTM WGS 84 Coord		Local Coord	
UTM Northing:	6,805,861.69	Local Northing:	6049.73
UTM Easting:	535,275.52	Local Easting:	7998.23
	Elevation: 998.32		

Collar Dip: -73.50
Collar Azimuth: 50.00
Length: 112.65
Logged by: Trevor Blair

Comments

Purpose: Test UTEM conductor ESP_05_03. Conductivity = 500 Siemens

Result: Intersected gabbronorites 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%).

Detailed Lithology

From	To		Lithology
0.00	2.85	C	**Casing**

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t

Detailed Lithology			Assay Data										
From	To	Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
2.85	41.12	**7a Gabbronorite** Medium grained, homogenous, equigranular, dark green and white, weakly to moderately magnetic gabbronorite. This unit contains 45% feldspar and 55% equigranular, dark green pyroxenes. Locally, the gabbronorite displays a weak foliation (mineral alignments) at 30-40 tca. The lower 3.32m (37.80m to 41.12m) contains 5-15% mm scale, dark brown to purple garnets (almandine). This unit contains no visible sulphides. The lower contact of this unit is diffuse and was based on the appearance of quartz-rich banding. Interpretation: Consistent with Heim's Rock Suite 3 (Gabbronortite-Noritegabbro). **Minor Interval** 18.20 18.41 **8e 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 Lithology

From	To	Lithology
41.12	65.45	**5a Siliceous Metasediments** Fine grained, strongly silicified, grey, unhomogenous, non-magnetic metasediments. The sediments are moderately foliated (45-60 degress tca, remenent 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. 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. 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. The lower contact of this unit is gradational over 2.0m and was based on the increased percentage of mafic horizons versus siliceous horizons. Interpretation: Likely consistent with Heim's Rock Suite 1 (Hybrid rocks). **Minor Interval** 52.75 54.02 **8e Pyroxenite** See major unit for description. Upper contact is sharp but irregular (approximately 15 degrees tca), lower contact is sharp at 55 degrees tca. **Minor Interval** 58.39 60.06 **8e Pyroxenite** See major unit for description (medium grained). Upper contact is lost within broken core, lower contact occurs along quartzofeldspathic veinlet, sub-parallel to core axis (5 degrees tca). **Mineralization** 45.30 45.42 12.0 % Po Pyrrhotite D Disseminated 10-15% **Mineralization** 57.50 57.58 50.0 % Po Pyrrhotite VN Veined Remobilized veinlets **Structure** 43.80 43.81 Sm General Foliation **Structure** 44.05 44.06 Sm General Foliation **Structure** 45.37 45.38 Sm General Foliation

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00051	41.12	41.85	0.73	0.03	0.03	0.01	3.64	0.01	0.01	0.01	0.25
PG00052	41.85	42.72	0.87	0.03	0.03	0.01	3.39	0.01	0.01	0.01	0.25
PG00053	44.78	45.18	0.40	0.03	0.03	0.01	0.69	0.01	0.01	0.01	0.25
PG00054	45.18	45.58	0.40	0.03	0.03	0.01	3.05	0.01	0.01	0.03	0.25
PG00055	45.58	45.98	0.40	0.03	0.03	0.01	0.17	0.01	0.01	0.01	0.25
PG00056	51.44	52.12	0.68	0.03	0.03	0.01	3.82	0.01	0.01	0.02	0.25
PG00057	52.12	52.75	0.63	0.03	0.03	0.01	1.67	0.01	0.01	0.01	0.25
PG00058	52.75	54.02	1.27	0.03	0.03	0.01	0.67	0.01	0.01	0.01	0.25
PG00059	56.75	57.30	0.55	0.03	0.03	0.01	2.70	0.01	0.01	0.01	0.25
PG00060	57.30	57.80	0.50	0.03	0.03	0.01	6.39	0.01	0.01	0.02	0.25
PG00061	57.80	58.39	0.59	0.03	0.03	0.01	3.51	0.01	0.01	0.01	0.25
PG00062	58.39	59.31	0.92	0.03	0.03	0.01	2.79	0.01	0.01	0.03	0.25
PG00063	59.31	60.27	0.96	0.03	0.03	0.01	2.25	0.02	0.01	0.01	0.25
PG00064	64.08	65.45	1.37	0.03	0.03	0.01	3.18	0.01	0.01	0.01	0.25

Detailed Lithology

From	To	Lithology
		Structure 63.65 63.66 Sm General Foliation
65.45	80.45	**6f Norite** 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. 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%. The lower contact of this unit is sharp along a siliceous sedimentary unit. Interpretation: Likely consistent with Heim's Rock Suite 2b (Sulphide bearing norites containing rafts of Hybrid rocks and intermixed with Anorthosites). **Minor Interval** 67.24 67.62 **4 Anorthosite / Anorthositic 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. This unit contains trace disseminated sulphides. **Minor Interval** 77.06 78.10 **5a Siliceous Metasediments** 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. **Mineralization** 65.45 80.45 5.0 % Po Pyrrhotite D Disseminated Locally remobilized in veinlets (up to 10%) **Structure** 70.40 70.41 Sm General Foliation Within sedimentary raft **Structure** 79.45 79.46 Sm General Foliation Within norite, sulphides define foliation

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00065	65.45	66.35	0.90	0.03	0.03	0.01	5.40	0.01	0.01	0.01	0.25
PG00066	66.35	67.24	0.89	0.03	0.06	0.01	5.05	0.01	0.01	0.01	0.60
PG00068	67.62	68.50	0.88	0.03	0.03	0.01	5.29	0.01	0.01	0.01	0.50
PG00069	68.50	69.50	1.00	0.03	0.03	0.01	4.79	0.01	0.01	0.01	0.25
PG00070	69.50	70.50	1.00	0.03	0.03	0.01	4.01	0.01	0.01	0.01	0.25
PG00071	70.50	71.50	1.00	0.03	0.03	0.01	2.18	0.01	0.01	0.02	0.25
PG00072	71.50	72.50	1.00	0.03	0.03	0.01	5.50	0.01	0.01	0.02	0.25
PG00073	72.50	73.50	1.00	0.03	0.03	0.01	5.90	0.01	0.01	0.04	0.25
PG00074	73.50	74.50	1.00	0.03	0.03	0.01	6.23	0.01	0.01	0.05	0.25
PG00076	74.50	75.50	1.00	0.03	0.03	0.01	5.17	0.01	0.01	0.01	0.25
PG00077	75.50	76.50	1.00	0.03	0.03	0.01	7.85	0.01	0.01	0.15	0.25
PG00078	76.50	77.06	0.56	0.03	0.03	0.01	9.10	0.01	0.01	0.02	0.25
PG00080	78.10	78.70	0.60	0.03	0.03	0.01	4.54	0.01	0.01	0.01	0.25
PG00081	78.70	79.50	0.80	0.03	0.03	0.01	7.86	0.01	0.01	0.01	0.60
PG00082	79.50	80.45	0.95	0.03	0.03	0.01	7.07	0.01	0.02	0.01	0.25

Detailed Lithology			Assay Data										
From	To	Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
80.45	97.78	**5a Siliceous Metasediments** 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 <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 **Structure** 95.60 95.61 Sm General Foliation **Structure** 96.23 96.24 Sm General Foliation	PG00083	80.45	81.00	0.55	0.03	0.03	0.01	1.37	0.01	0.01	0.01	0.25
97.78	112.65	**7a Gabbronorite** 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).												

Espedalen - Analysis

Hole Number: ES2004-01

Sample Number	From	To	Sample Length	Ni%	Cu%	Co%	S%	Au g/t	Pt g/t	Pd g/t	Ag g/t	Pb%	Zn%	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI%	SUM %
PG00051	41.12	41.85	0.73	0.03	0.03	0.01	3.64	0.01	0.01	0.01	0.25																
PG00052	41.85	42.72	0.87	0.03	0.03	0.01	3.39	0.01	0.01	0.01	0.25																
PG00053	44.78	45.18	0.40	0.03	0.03	0.01	0.69	0.01	0.01	0.01	0.25																
PG00054	45.18	45.58	0.40	0.03	0.03	0.01	3.05	0.03	0.01	0.01	0.25																
PG00055	45.58	45.98	0.40	0.03	0.03	0.01	0.17	0.01	0.01	0.01	0.25																
PG00056	51.44	52.12	0.68	0.03	0.03	0.01	3.82	0.02	0.01	0.01	0.25																
PG00057	52.12	52.75	0.63	0.03	0.03	0.01	1.67	0.01	0.01	0.01	0.25																
PG00058	52.75	54.02	1.27	0.03	0.03	0.01	0.67	0.01	0.01	0.01	0.25																
PG00059	56.75	57.30	0.55	0.03	0.03	0.01	2.70	0.01	0.01	0.01	0.25																
PG00060	57.30	57.80	0.50	0.03	0.03	0.01	6.39	0.02	0.01	0.01	0.25																
PG00061	57.80	58.39	0.59	0.03	0.03	0.01	3.51	0.01	0.01	0.01	0.25																
PG00062	58.39	59.31	0.92	0.03	0.03	0.01	2.79	0.03	0.01	0.01	0.25																
PG00063	59.31	60.27	0.96	0.03	0.03	0.01	2.25	0.01	0.02	0.01	0.25																
PG00064	64.08	65.45	1.37	0.03	0.03	0.01	3.18	0.01	0.01	0.01	0.25																
PG00065	65.45	66.35	0.90	0.03	0.03	0.01	5.40	0.01	0.01	0.01	0.25																
PG00066	66.35	67.24	0.89	0.03	0.06	0.01	5.05	0.01	0.01	0.01	0.60																
PG00067	67.24	67.62	0.38	0.03	0.03	0.01	0.57	0.01	0.01	0.01	0.25																
PG00068	67.62	68.50	0.88	0.03	0.03	0.01	5.29	0.01	0.01	0.01	0.50																
PG00069	68.50	69.50	1.00	0.03	0.03	0.01	4.79	0.01	0.01	0.01	0.25																
PG00070	69.50	70.50	1.00	0.03	0.03	0.01	4.01	0.01	0.01	0.01	0.25																
PG00071	70.50	71.50	1.00	0.03	0.03	0.01	2.18	0.02	0.01	0.01	0.25																
PG00072	71.50	72.50	1.00	0.03	0.03	0.01	5.50	0.02	0.01	0.01	0.25																
PG00073	72.50	73.50	1.00	0.03	0.03	0.01	5.90	0.04	0.01	0.01	0.25																
PG00074	73.50	74.50	1.00	0.03	0.03	0.01	6.23	0.05	0.01	0.01	0.25																
PG00076	74.50	75.50	1.00	0.03	0.03	0.01	5.17	0.01	0.01	0.01	0.25																
PG00077	75.50	76.50	1.00	0.03	0.03	0.01	7.85	0.15	0.01	0.01	0.25																
PG00078	76.50	77.06	0.56	0.03	0.03	0.01	9.10	0.02	0.01	0.01	0.25																
PG00079	77.06	78.10	1.04	0.03	0.03	0.01	1.55	0.01	0.01	0.01	0.25																

Espedalen - Analysis

Hole Number: ES2004-01

Sample Number	From	To	Sample Length	Ni%	Cu%	Co%	S%	Au g/t	Pt g/t	Pd g/t	Ag g/t	Pb%	Zn%	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI%	SUM %
PG00080	78.10	78.70	0.60	0.03	0.03	0.01	4.54	0.01	0.01	0.01	0.25																
PG00081	78.70	79.50	0.80	0.03	0.03	0.01	7.86	0.01	0.01	0.01	0.60																
PG00082	79.50	80.45	0.95	0.03	0.03	0.01	7.07	0.01	0.01	0.02	0.25																
PG00083	80.45	81.00	0.55	0.03	0.03	0.01	1.37	0.01	0.01	0.01	0.25																

Espedalen - Conductivity	Hole Number: ES2004-01

Depth	Conductivity (Siemens)	COMMENTS
45.38	875.00	
57.55	300.00	
69.50	300.00	
72.25	250.00	
76.75	350.00	
79.85	200.00	

Espedalen - Magnetic Susceptibility	Hole Number: ES2004-01

DEPTH	MAGNETIC SUSCEPTIBILITY (X 10^{-3} SI)	COMMENTS
3.50	1.90	
4.50	1.43	
5.50	1.59	
6.50	2.85	
7.50	1.74	
8.50	2.81	
9.50	2.42	
10.50	2.13	
11.50	2.06	
12.50	0.43	
13.50	2.24	
14.50	1.75	
15.50	2.26	
16.50	0.73	
17.50	3.00	
18.50	3.27	
19.50	3.60	
20.50	2.82	
21.50	2.44	
22.50	3.53	
23.50	4.80	
24.50	3.09	
25.50	3.04	
26.50	3.45	
27.50	3.88	
28.50	3.92	
29.50	3.51	
30.50	5.18	
31.50	4.44	
32.50	15.80	
33.50	10.20	
34.50	9.95	
35.50	7.10	
36.50	8.49	
37.50	30.50	
38.50	7.68	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-01
39.50	7.23	
40.50	3.31	
41.50	0.27	
42.50	1.03	
43.50	0.12	
44.50	0.31	
45.50	0.06	
46.50	0.17	
47.50	0.45	
48.50	0.11	
49.50	0.00	LOST CORE
50.50	0.31	
51.50	0.37	
52.50	0.47	
53.50	0.37	
54.50	0.55	
55.50	0.29	
56.50	0.74	
57.50	0.52	
58.50	0.21	
59.50	0.73	
60.50	0.41	
61.50	0.36	
62.50	0.32	
63.50	0.20	
64.50	0.29	
65.50	0.62	
66.50	0.78	
67.50	0.05	
68.50	0.27	
69.50	0.65	
70.50	0.21	
71.50	0.15	
72.50	0.34	
73.50	0.65	
74.50	0.19	
75.50	5.03	
76.50	0.32	
77.50	0.09	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-01
78.50	0.18	
79.50	0.39	
80.50	0.12	
81.50	0.15	
82.50	0.96	
83.50	0.62	
84.50	0.11	
85.50	0.25	
86.50	1.25	
87.50	0.27	
88.50	0.53	
89.50	0.24	
90.50	0.19	
91.50	0.13	
92.50	0.16	
93.50	0.50	
94.50	0.15	
95.50	0.09	
96.50	0.18	
97.50	0.06	
98.50	0.23	
99.50	4.65	
100.50	1.51	
101.50	2.70	
102.50	4.88	
103.50	4.44	
104.50	2.97	
105.50	2.16	
106.50	1.70	
107.50	5.62	
108.50	3.14	
109.50	3.21	
110.50	3.93	
111.50	0.94	
112.50	2.75	EOH at 112.65m

Espedalen - Rock Quality (RQD)

Hole Number: ES2004-01

FROM	TO	PERCENT QUALITY	PERCENT CORE	DISKING	COMMENTS
2.85	6.00	37.00	69.00	N	Missing core not marked in box
6.00	9.00	26.00	79.00	N	Missing core not marked in box
9.00	12.00	18.00	83.00	N	37cm of ground core at 11.63cm
12.00	15.00	25.00	93.00	N	
15.00	18.00	39.00	100.00	N	
18.00	21.00	57.00	97.00	N	
21.00	24.00	64.00	100.00	N	
24.00	27.00	76.00	100.00	N	
27.00	30.00	76.00	100.00	N	
30.00	33.00	50.00	100.00	N	
33.00	36.00	55.00	100.00	N	
36.00	39.00	41.00	100.00	N	
39.00	42.00	52.00	100.00	N	
42.00	45.00	27.00	100.00	N	
45.00	48.00	29.00	100.00	N	
48.00	51.00	29.00	50.00	N	1.5m of lost core
51.00	54.00	35.00	93.00	N	
54.00	57.00	41.00	100.00	N	
57.00	60.00	23.00	100.00	N	
60.00	63.00	54.00	100.00	N	
63.00	66.00	51.00	100.00	N	
66.00	69.00	58.00	100.00	N	
69.00	72.00	46.00	100.00	N	
72.00	75.00	30.00	100.00	N	
75.00	78.00	59.00	100.00	N	
78.00	81.00	62.00	100.00	N	
81.00	84.00	4.00	100.00	N	
84.00	87.00	0.00	100.00	N	Broken, blocky core, pieces reground
87.00	90.00	19.00	100.00	N	
90.00	93.00	20.00	100.00	N	
93.00	96.00	0.00	100.00	N	
96.00	99.00	38.00	100.00	N	
99.00	102.00	53.00	100.00	N	
102.00	105.00	74.00	100.00	N	
105.00	108.00	55.00	100.00	N	
108.00	111.00	32.00	100.00	N	
111.00	112.65	24.00	100.00	N	

Detailed Log

Hole Number: **ES2004-02** Units: METRIC

Project Name:	Espedalen	Collar Survey:	N	Plugged	N	Core Storage:	Strand Fjellstue
Project Number:	300	Mulitshot Survey:	N	Hole Size:	T246	Contractor:	Geobor-Salag A/S
Date Started:	7/21/2004	Pulse EM Survey:	N				
Date Completed:	8/2/2004	Casing:	Left in Hole, capped			Logged by:	Trevor Blair
		Location:	Surface				

	UTM WGS 84 Coord		Local Coord		Collar Dip:	-45.00
UTM Northing:	6,805,506.83	Local Northing:	5735.23		Collar Azimuth:	50.00
UTM Easting:	535,162.74	Local Easting:	8197.58		Length:	29.80
	Elevation: 1001.62					

Comments

Purpose: Test UTEM conductor ESP_05_04. Conductivity = 500 Siemens

Result: Hole was abandoned after 2 unsuccessful cementing attempts. Recollared as ES2004-02A. No samples taken.

Lithological interpretation: Intersected anorthosite/anorthositic gabbro with minor gabbronorite.

Detailed Lithology

From	To		Lithology
0.00	1.20	C	**Casing**

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t

Detailed Lithology			Assay Data										
From	To	Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t

1.20 29.80 **4 Anorthosite / Anorthositic Gabbro**

Medium grained, white and dark green, non-magnetic, anorthosite / anorthositic gabbro composed of 70-75% plagioclase, 20-25% pyroxene, 5% biotite and trace to 3% garnets. This unit contains 10-15% mm scale, dark green to black, amorphous veinlets which are at irregular angles to the ca, resulting in a brecciated texture. Proximal to these veinlets the plagioclase has a light green hue (sausseritized). Mafic components increase downhole resulting in a more gabbroic composition.

This unit is crosscut by dm to m scale, fine grained, non-magnetic, black and white, homogenous gabbronorite dykes. Contact relationships are sharp but irregular (see minor units). These dykes contain 50-60% pyroxenes (light green to black) and 40-50% plagioclase. The lower 10.45m (19.35-20.80m) is injected with approximately 50% dyklets which do not display sharp contacts but rather irregular, remelted contacts?

This unit locally contains fine grained disseminated pyrrhotite.

The lower contact of this unit is undetermined as hole was lost at 29.8m.

Interpretation: Consistent with Heim's Rock Suite 2a (Anorthosite - Anorthositic Gabbro), crosscut by late gabbronorite bodies (Rock Suite 3).

Minor Interval

8.06 8.96 **7a Gabbronorite**

See major unit for rock description.

The upper and lower contacts of this unit are sharp but undulating at approx 37 and 10 degrees tca, respectively.

Minor Interval

16.96 17.34 **7a Gabbronorite**

See major unit for rock description.

The upper and lower contacts of this unit are sharp but undulating at approx 35 and 55 degrees tca, respectively.

Alteration	1.20	19.35	ALT	ALTERATION
			P	Pervasive
			M	Moderate
			Sausseritized	
Alteration	1.20	6.00	WEA	Weathering
			F	Fracture-Controlled
			S	Strong
			Ground water infiltration	

Espedalen - Magnetic Susceptibility

Hole Number: ES2004-02

DEPTH	MAGNETIC SUSCEPTIBILITY (X 10^{-3} SI)	COMMENTS
1.50	0.35	
2.50	0.34	
3.50	0.36	
4.50	0.18	
5.50	0.40	
6.50	0.52	
7.50	0.05	
8.50	0.50	
9.50	0.16	
10.50	0.18	
11.50	0.08	
12.50	0.35	
13.50	0.18	
14.50	1.93	
15.50	1.47	
16.50	0.15	
17.50	0.17	
18.50	0.14	
19.50	0.57	
20.50	0.46	
21.50	0.32	
22.50	0.21	
23.50	0.38	
24.50	0.50	
25.50	0.62	
26.50	0.72	
27.50	0.98	
28.50	0.73	
29.50	0.51	

Espedalen - Rock Quality (RQD)

Hole Number: ES2004-02

FROM	TO	PERCENT QUALITY	PERCENT CORE	DISKING	COMMENTS
1.20	3.00	22.00	89.00	N	
3.00	6.00	11.00	100.00	N	
6.00	9.00	51.00	100.00	N	
9.00	12.00	58.00	88.00	N	
12.00	15.00	45.00	100.00	N	
15.00	18.00	45.00	97.00	N	
18.00	21.00	47.00	100.00	N	
21.00	24.00	30.00	100.00	N	
24.00	27.00	34.00	100.00	N	
27.00	29.80	34.00	100.00	N	EOH at 29.80m

Detailed Log

Hole Number: **ES2004-02A** Units: METRIC

Project Name:	Espedalen	Collar Survey:	Y	Plugged	N		
Project Number:	300	Mulitshot Survey:	N	Hole Size:	T246		
Date Started:	8/2/2004	Pulse EM Survey:	N				
Date Completed:	8/12/2004	Casing:	Left in Hole, capped				
		Location:	Surface				

UTM WGS 84 Coord		Local Coord	
UTM Northing:	6,805,506.83	Local Northing:	5735.23
UTM Easting:	535,162.74	Local Easting:	8197.58
		Elevation:	1001.62

Core Storage:	Strand Fjellstue	Collar Dip:	-45.00
Contractor:	Geobor-Salag A/S	Collar Azimuth:	50.00
		Length:	93.40
Logged by:	Trevor Blair		

Comments

Purpose: Test UTEM conductor ESP_05_04. Conductivity = 500 Siemens

Result: Hole intersected oikocrystic pyroxenite and weakly mineralized norite bounded uphole and downhole by anorthosite/anorthositic gabbro. Two zones of weak mineralization were intersected:

1) 31.50-36.66m (gabbro): 5-15% sulphides (disseminations & cm scale remobilized veinlets); best nickel value was 0.17% Ni / 1.08m (35.19-36.27m)
2) 61.30-68.03m (norite): 10-15% sulphides (mm to cm scale remobilized veinlets, disseminations and patches); all nickel values <0.10%.

Lithological nterpretation: Intersected mineralized and unmineralized noritic and ultramafic rocks (coincident with M. Heim's rock suite 2b) bounded by anorthosites / anorthositic gabbros (Heim's rock suite 2a).

Detailed Lithology

From	To	Lithology
0.00	3.00	**C Casing** 0.00-1.50m of OVB 1.50-3.00m cement from lost hole ES2004-02. Redrill of hole ES2004-02 deviated from cement and rock was cored from 3.00m and beyond.

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t

Detailed Lithology

From	To	Lithology
3.00	37.65	**4 Anorthosite / Anorthositic Gabbro** Medium grained, white and dark green, non-magnetic, anorthosite / anorthositic gabbro composed of 70-75% plagioclase, 20-25% pyroxene, 5% biotite and trace to 3% garnets. This unit contains 5-10% mm scale, dark green to black, amorphous veinlets which are at irregular angles to the ca, resulting in a brecciated texture. Proximal to these veinlets the plagioclase has a light green hue (saussentized). Pyroxene content within the rock unit increases downhole towards the lower contact resulting in a gabbroic composition. Melanocratic and leucocratic constituents appear to be segregated in dm to m scale horizons with gradational contacts between the two (compositional banding?). This unit is crosscut by dm to m scale, fine grained, non-magnetic, black and white, homogenous gabbronorite dykes. Contact relationships are sharp but irregular (see minor units). These dykes contain 50-60% pyroxenes (light green to black) and 40-50% plagioclase. The upper portion of this unit locally contains fine grained disseminated pyrrhotite (non-magnetic) with sulphide content increasing below 30.50m to 3-5%. These sulphides appear as fine grained disseminations as well as cm scale remobilized veinlets (with chalcopyrite). The lower contact of this unit is lost within broken core but is obvious as plagioclase within the groundmass is absent, as well as an increased magnetic susceptibility. Interpretation: Consistent with Heim's Rock Suite 2a (Anorthosite - Anorthositic Gabbro), crosscut by late gabbronorite bodies (Rock Suite 3). **Minor Interval** 3.00 5.60 **4 Anorthosite / Anorthositic Gabbro** Drill core is incomplete as cement from ES2004-02 acted as a wedge. The drill core is virtually a semi-barrel with the final scallop appearing at 5.60m. At this point, ES2004-02A has deviated 46mm from hole ES2004-02. **Minor Interval** 5.60 7.00 **7a Gabbronorite** See major unit for rock description. The upper contact of this unit is sharp at approximately 65 degrees tca with the lower contact at 50 degrees tca. **Minor Interval** 12.00 12.67 **7a Gabbronorite** See major unit for rock description. The upper contact is sharp but lost within broken core with the lower contact sharp but irregular. **Mineralization** 31.50 32.65 7.0 % Po Pyrrhotite VN Veined 5 individual cm scale remobilized veinlets

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00084	30.50	31.50	1.00	0.03	0.03	0.01	0.80	0.01	0.01	0.03	0.25
PG00085	31.50	32.65	1.15	0.03	0.03	0.01	2.32	0.01	0.01	0.01	0.25
PG00086	32.65	34.09	1.44	0.03	0.03	0.02	0.72	0.01	0.01	0.02	0.25
PG00087	34.09	35.19	1.10	0.03	0.03	0.01	0.39	0.01	0.01	0.01	0.25
PG00088	35.19	36.27	1.08	0.17	0.05	0.04	15.80	0.02	0.09	0.04	0.60
PG00089	36.27	36.66	0.39	0.12	0.17	0.02	11.20	0.01	0.03	0.01	0.25
PG00090	36.66	37.65	0.99	0.03	0.06	0.01	1.33	0.01	0.01	0.02	0.25

Detailed Lithology							Assay Data											
From	To	Lithology					Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
		Mineralization	36.27	36.66	1.0 %	Cpy Chalcopyrite D Disseminated												
		Mineralization	36.27	36.66	15.0 %	Po Pyrrhotite D Disseminated remobilized												
		Structure	28.20	28.21		Sm General Foliation												
		Structure	29.50	29.51		Sm General Foliation												
37.65	56.55	**6c Oikocrystic Pyroxenite** Fine grained, weakly foliated, strongly magnetic, dark grey, moderately serpentinized oikocrystic pyroxenite. This unit contains 10-20% mm scale dark green to black serpentine veinlets at ~60 degrees to the core axis. Pyroxenes occur as mm scale, light to dark grey oikocrysts which are partially replaced by serpentine and magnetite. Unit is likely a transitional unit between a 'good' oikocrystic pyroxenite and a 'good' peridotite. This unit contains trace disseminated sulphides The lower contact of this unit was based on the percentage of plagioclase within the matrix but is lost within broken core. Interpretation: Consistent with Heim's Rock Suite 2b (Peridotite - Pyroxenite).					PG00091	42.48	43.48	1.00	0.10	0.03	0.03	0.08	0.01	0.01	0.01	0.25
		Minor Interval																
		51.82	56.06	**6f Norite** Fine grained, moderately magnetic, massive, homogenous norite containing 10% mm scale, subhedral, white plagioclase crystals within a dark green pyroxenitic groundmass (differentiated horizon to ultramafic body intersected uphole). This unit is unmineralized. The unit contains gradational contacts and were based on the percentage of plagioclase.														
		Alteration	37.65	51.82		SERP Serpentine P Pervasive M Moderate												
		Structure	42.85	42.86		Sm General Foliation												
		Structure	44.73	44.74		Sm General Foliation												

Detailed Lithology

From	To	Lithology
56.55	68.03	**6f Norite** Fine to locally medium grained, dark to light blue-grey, weakly magnetic, weakly foliated norite composed of 55-70% pyroxenes and 30-45% plagioclase (within groundmass as well as mm to cm scale remelt bands). From 64.95-68.03m, mafic mineral content increases and unit is a melano-norite grading downhole to an ultramafic. This unit contains dm to m scale horizons of anorthosite / anorthositic gabbro (rafts?) which are fine to medium grained, white-dark brown, non-magnetic, weakly foliated and composed of ~50% plagioclase and ~50% pyroxenes (see minor units for contact relationships and lengths). Sulphides (10-15% pyrrhotite, pyrite +-chalcopyrite) occur as fine grained disseminations and mm scale amoeboid patches which appear to have been locally remobilized resulting in mm to cm scale massive and semi-massive veinlets. Mm scale semi-angular to semi-rounded clasts of mafic (norite) to felsic (anorthosite) composition occur within larger sulphide veinlets. Non-magnetic pyrrhotite is the prominent sulphide, although local concentrations of brassy-yellow pyrite are generally located within thicker sulphide veinlets, and mm scale local veinlets of chalcopyrite. The lower contact of this unit is sharp at 35 degrees tca along an anorthosite unit. **Minor Interval** 58.41 59.70 **4 Anorthosite / Anorthositic Gabbro** See major units for rock description. The upper and lower contacts of this unit are sharp at 65 and 45 degrees tca, respectively. **Mineralization** 61.30 68.03 0.5 % Cpy Chalcopyrite F Fracture-Controlled **Mineralization** 61.30 68.03 2.0 % Py Pyrite MG Medium Grained **Mineralization** 61.30 68.03 12.5 % Po Pyrrhotite STR Stringers 10-15% disseminated, patchy, semi-massive veinlets, massive veinlets

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00092	56.55	57.03	0.48	0.03	0.03	0.02	0.62	0.01	0.01	0.01	0.25
PG00093	57.03	57.67	0.64	0.05	0.03	0.01	7.49	0.01	0.02	0.02	0.60
PG00094	57.67	58.41	0.74	0.03	0.03	0.01	0.36	0.01	0.01	0.01	0.25
PG00095	60.80	61.30	0.50	0.03	0.03	0.03	1.22	0.12	0.01	0.01	0.25
PG00096	61.30	62.30	1.00	0.08	0.08	0.02	13.00	0.01	0.01	0.02	0.60
PG00097	62.30	63.30	1.00	0.06	0.11	0.03	11.40	0.01	0.01	0.01	0.60
PG00098	63.30	64.30	1.00	0.07	0.08	0.01	12.80	0.01	0.02	0.02	0.25
PG00099	64.30	65.30	1.00	0.06	0.08	0.02	10.70	0.01	0.01	0.01	0.25
PG00101	65.30	66.30	1.00	0.07	0.08	0.02	11.70	0.01	0.02	0.02	0.25
PG00102	66.30	67.30	1.00	0.05	0.07	0.01	10.40	0.01	0.01	0.03	0.60
PG00103	67.30	68.03	0.73	0.03	0.03	0.01	6.01	0.01	0.01	0.01	0.25

Detailed Lithology

From	To	Lithology
68.03	93.40	**4 Anorthosite / Anorthositic Gabbro** Fine to medium grained, green to grey to white, non-magnetic, weakly to moderately foliated anorthositic gabbro composed of 30-45% plagioclase (greenish hue - sausseritized) and 55-70% pyroxenes. This unit contains dm scale compositional segregation between mafic and felsic horizons. The unit contains local trace disseminated pyrrhotite. The lower contact of this unit is unknown as the hole was completed. Early completion due to broken casing in the hole. **Structure** 91.40 91.41 Sm General Foliation

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00104	68.03	68.73	0.70	0.03	0.03	0.02	6.69	0.01	0.01	0.02	0.25
PG00105	68.73	69.33	0.60	0.03	0.03	0.01	1.68	0.01	0.01	0.01	0.25

Espedalen - Analysis

Hole Number: ES2004-02A

Sample Number	From	To	Sample Length	Ni%	Cu%	Co%	S%	Au g/t	Pt g/t	Pd g/t	Ag g/t	Pb%	Zn%	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI%	SUM %
PG00084	30.50	31.50	1.00	0.03	0.03	0.01	0.80	0.03	0.01	0.01	0.25																
PG00085	31.50	32.65	1.15	0.03	0.03	0.01	2.32	0.01	0.01	0.01	0.25																
PG00086	32.65	34.09	1.44	0.03	0.03	0.02	0.72	0.02	0.01	0.01	0.25																
PG00087	34.09	35.19	1.10	0.03	0.03	0.01	0.39	0.01	0.01	0.01	0.25																
PG00088	35.19	36.27	1.08	0.17	0.05	0.04	15.80	0.04	0.02	0.09	0.60																
PG00089	36.27	36.66	0.39	0.12	0.17	0.02	11.20	0.01	0.01	0.03	0.25																
PG00090	36.66	37.65	0.99	0.03	0.06	0.01	1.33	0.02	0.01	0.01	0.25																
PG00091	42.48	43.48	1.00	0.10	0.03	0.03	0.08	0.01	0.01	0.01	0.25																
PG00092	56.55	57.03	0.48	0.03	0.03	0.02	0.62	0.01	0.01	0.01	0.25																
PG00093	57.03	57.67	0.64	0.05	0.03	0.01	7.49	0.02	0.01	0.02	0.60																
PG00094	57.67	58.41	0.74	0.03	0.03	0.01	0.36	0.01	0.01	0.01	0.25																
PG00095	60.80	61.30	0.50	0.03	0.03	0.03	1.22	0.01	0.12	0.01	0.25																
PG00096	61.30	62.30	1.00	0.08	0.08	0.02	13.00	0.02	0.01	0.01	0.60																
PG00097	62.30	63.30	1.00	0.06	0.11	0.03	11.40	0.01	0.01	0.01	0.60																
PG00098	63.30	64.30	1.00	0.07	0.08	0.01	12.80	0.02	0.01	0.02	0.25																
PG00099	64.30	65.30	1.00	0.06	0.08	0.02	10.70	0.01	0.01	0.01	0.25																
PG00101	65.30	66.30	1.00	0.07	0.08	0.02	11.70	0.02	0.01	0.02	0.25																
PG00102	66.30	67.30	1.00	0.05	0.07	0.01	10.40	0.03	0.01	0.01	0.60																
PG00103	67.30	68.03	0.73	0.03	0.03	0.01	6.01	0.01	0.01	0.01	0.25																
PG00104	68.03	68.73	0.70	0.03	0.03	0.02	6.69	0.02	0.01	0.01	0.25																
PG00105	68.73	69.33	0.60	0.03	0.03	0.01	1.68	0.01	0.01	0.01	0.25																

Espedalen - Conductivity

Hole Number: ES2004-02A

Depth	Conductivity (Siemens)	COMMENTS
36.60	750.00	Range of 600-950 Siemens
57.05	999.00	1050 siemens - 1750 siemens (cut core) -7cm wide ms veinlet
62.25	750.00	1750 siemens (cut core)
63.10	650.00	1025 siemens (cut core)
64.10	250.00	500 siemens (cut core)
65.70	750.00	1300 siemens (cut core)
66.70	650.00	1500 siemens (cut core)

Espedalen - Magnetic Susceptibility

Hole Number: ES2004-02A

DEPTH	MAGNETIC SUSCEPTIBILITY (X 10^{-3} SI)	COMMENTS
3.50	0.14	
4.50	0.11	
5.50	0.56	
6.50	0.60	
7.50	0.07	
8.50	0.51	
9.50	0.18	
10.50	0.34	
11.50	0.16	
12.50	0.52	
13.50	0.16	
14.50	0.30	
15.50	0.34	
16.50	0.19	
17.50	2.03	
18.50	0.30	
19.50	0.22	
20.50	0.23	
21.50	0.54	
22.50	0.42	
23.50	0.52	
24.50	0.33	
25.50	0.49	
26.50	0.32	
27.50	1.42	
28.50	0.45	
29.50	1.50	
30.50	0.98	
31.50	0.87	
32.50	1.04	
33.50	0.45	
34.50	0.41	
35.50	0.52	
36.50	1.35	
37.50	0.28	
38.50	13.60	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-02A
39.50	26.60	
40.50	22.80	
41.50	29.70	
42.50	38.50	
43.50	38.60	
44.50	26.90	
45.50	30.70	
46.50	32.00	
47.50	15.10	
48.50	22.20	
49.50	32.00	
50.50	29.40	
51.50	32.80	
52.50	0.87	
53.50	0.41	
54.50	15.90	
55.50	9.19	
56.50	0.33	
57.50	0.78	
58.50	0.49	
59.50	0.17	
60.50	0.27	
61.50	0.67	
62.50	0.46	
63.50	0.67	
64.50	1.34	
65.50	1.71	
66.50	0.65	
67.50	0.75	
68.50	1.05	
69.50	1.00	
70.50	0.36	
71.50	0.68	
72.50	0.37	
73.50	0.27	
74.50	0.28	
75.50	0.34	
76.50	0.61	
77.50	1.26	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-02A
78.50	0.28	
79.50	0.37	
80.50	0.34	
81.50	0.24	
82.50	0.27	
83.50	0.24	
84.50	0.31	
85.50	0.27	
86.50	0.19	
87.50	0.60	
88.50	0.31	
89.50	0.34	
90.50	0.73	
91.50	4.17	
92.50	4.53	
93.40	0.63	

Espedalen - Rock Quality (RQD)

Hole Number: ES2004-02A

FROM	TO	PERCENT QUALITY	PERCENT CORE	DISKING	COMMENTS
3.00	6.00	11.00	72.00	N	
6.00	9.00	45.00	93.00	N	
9.00	12.00	61.00	78.00	N	
12.00	15.00	54.00	100.00	N	
15.00	18.00	62.00	100.00	N	
18.00	21.00	69.00	95.00	N	
21.00	24.00	33.00	100.00	N	
24.00	27.00	29.00	93.00	N	
27.00	30.00	55.00	100.00	N	
30.00	33.00	70.00	100.00	N	
33.00	36.00	33.00	100.00	N	
36.00	39.00	30.00	100.00	N	
39.00	42.00	70.00	100.00	N	
42.00	45.00	84.00	100.00	N	
45.00	48.00	49.00	100.00	N	
48.00	51.00	53.00	100.00	N	
51.00	54.00	38.00	100.00	N	
54.00	57.00	82.00	100.00	N	
57.00	60.00	62.00	100.00	N	
60.00	63.00	72.00	100.00	N	
63.00	66.00	83.00	100.00	N	
66.00	69.00	73.00	100.00	N	
69.00	72.00	63.00	100.00	N	
72.00	75.00	89.00	100.00	N	
75.00	78.00	80.00	100.00	N	
78.00	81.00	88.00	100.00	N	
81.00	84.00	86.00	100.00	N	
84.00	87.00	67.00	100.00	N	
87.00	90.00	55.00	100.00	N	
90.00	93.40	74.00	100.00	N	EOH at 93.40m

Detailed Log

Hole Number: **ES2004-03** Units: METRIC

Project Name:	Espedalen	Collar Survey:	Y	Plugged	N		
Project Number:	300	Mulitshot Survey:	N	Hole Size:	T246		
Date Started:	8/10/2004	Pulse EM Survey:	N				
Date Completed:	9/1/2004	Casing:	Left in Hole, capped				
		Location:	Surface				

UTM WGS 84 Coord		Local Coord	
UTM Northing:	6,807,692.78	Local Northing:	5324.60
UTM Easting:	532,792.47	Local Easting:	4999.46
Elevation:	1129.08		

Core Storage:	Strand Fjellstue	Collar Dip:	-59.00
Contractor:	Geobor-Salag A/S	Collar Azimuth:	230.00
		Length:	117.30
Logged by:	Trevor Blair		

Comments

Purpose: Test UTEM conductor ESP_09_07. Conductivity = 600, 900 Siemens (2 plates)

Result: Hole intersected a thick package of anorthosite/anorthositic gabbro but did not reach target depth and was abandoned. Second hole was collared and re-drilled nearby as ES2004-16 by second drilling contractor. No samples taken.

Detailed Lithology

From	To	Lithology
0.00	2.90	C Casing CASING

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t

Detailed Lithology			Assay Data									
From	To	Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t

2.90 117.30 **4 Anorthosite / Anorthositic Gabbro**

Medium grained, white-dark green, non-magnetic, moderately to strongly foliated anorthosite to anorthositic gabbro composed of 60% plagioclase and 40% pyroxenes. Segregational banding is present on a cm scale resulting in melanocratic and leucocratic horizons. This unit is unmineralized. Anorthositic rocks are cross-cut by cm to dm scale ultramafic (eg. 63.85-64.1m, 71.9-72.1m, 86.3-86.55m, 87.2-87.7m) and mafic dykes (eg. 49.5-49.9m, 98.1-99.7m (sheared). Ultramafic dykes locally contain po stringers (see minor intervals).

48.9m: 10cm wide white quartz vein; apparently lost water at this depth.
55.6-56.6m: Lost core due to broken drill rod.

NOTE: Overall condition of core in this hole is bad with abundant broken, mis-matched and ground core. Condition largley attributed to improper drilling and core barrel emptying techniques. Disking of core likely due to high drilling pressure which also attributes to core blockages.

Magnetic suscpetibility: < 1

Interpretation: Consistent with Heim's Rock Suite 2a (Anorthosite - Anorthositic Gabbro).

Minor Interval

76.60 77.20 **6e Ultramafic Schist**

Dark green, chloritized ultramafic schist containing 3-5% po stringers. Core is badly broken and ground.

Minor Interval

78.80 80.35 **6e Ultramafic Schist**

green chloritized ultramafic schist containing 1-2% po stringers.

Minor Interval

91.75 92.10 **6 Undivided Ultramafic Intrusive**

Dark grey, serpentinized ultramafic containing 2-3% fracture-controlled po.

Structure	7.35	7.36	Sm	General Foliation
Structure	29.30	29.31	Sm	General Foliation
Structure	38.40	38.41	Sm	General Foliation
Structure	55.30	55.31	Sm	General Foliation
Structure	58.40	58.41	Sm	General Foliation
Structure	71.80	71.81	Sm	General Foliation
Structure	75.20	75.21	Sm	General Foliation
Structure	85.10	85.11	Sm	General Foliation
Structure	89.80	89.81	Sm	General Foliation
Structure	94.00	94.01	Sm	General Foliation

Detailed Lithology					Assay Data										
From	To	Lithology			Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
	Structure	100.30	100.31	Sm General Foliation												
	Structure	106.50	106.51	Sm General Foliation												
	Structure	113.30	113.31	Sm General Foliation												

Espedalen - Magnetic Susceptibility

Hole Number: ES2004-03

DEPTH	MAGNETIC SUSCEPTIBILITY (X 10^{-3} SI)	COMMENTS
3.50	0.16	0 - 2.9 Casing
4.50	0.22	
5.50	0.22	
6.50	0.40	
7.50	0.20	
8.50	0.27	
9.50	0.18	
10.50	0.22	
11.50	0.27	
12.50	0.22	
13.50	0.25	
14.50	0.20	
15.50	0.20	
16.50	0.22	
17.50	0.16	
18.50	0.20	
19.50	0.20	
20.50	0.19	
21.50	0.24	
22.50	0.34	
23.50	0.29	
24.50	0.21	
25.50	0.22	
26.50	0.21	
27.50	0.22	
28.50	0.11	
29.50	0.19	
30.50	0.20	
31.50	0.67	
32.50	0.21	
33.50	0.66	
34.50	0.26	
35.50	0.32	
36.50	0.15	
37.50	0.26	
38.50	0.37	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-03
39.50	0.22	
40.50	0.15	
41.50	0.20	
42.50	0.21	
43.50	0.21	
44.50	0.15	
45.50	0.13	
46.50	0.29	
47.50	0.13	
48.50	0.12	
49.50	0.37	
50.50	0.19	
51.50	0.10	
52.50	0.12	
53.50	0.21	
54.50	0.06	
55.50		no reading
56.50	0.16	
57.50	0.40	
58.50	0.25	
59.50	0.08	
60.50	0.15	
61.50	0.35	
62.50		No Reading?
63.50	0.21	
64.50	0.43	
65.50	0.20	
66.50	0.02	
67.50	0.34	
68.50	0.10	
69.50	0.09	
70.50	0.03	
71.50	0.06	
72.50	0.11	
73.50	0.06	
74.50	0.05	
75.50	0.05	
76.50	0.16	
77.50	0.59	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-03
78.50	0.33	
79.50	0.58	
80.50	0.11	
81.50	0.18	
82.50	0.06	
83.50	0.08	
84.50	0.09	
85.50	0.36	
86.50	0.12	
87.50	0.28	
88.50	0.41	
89.50	0.17	
90.50	0.06	
91.50	0.18	
92.50	0.43	
93.50	0.02	
94.50	0.08	
95.50	0.08	
96.50	0.13	
97.50	0.05	
98.50	0.43	
99.50	0.16	
100.50	0.12	
101.50	0.04	
102.50	0.05	
103.50	0.42	
104.50	0.12	
105.50	0.03	
106.50	0.03	
107.50	0.16	
108.50	0.06	
109.50	0.13	
110.50	0.06	
111.50	0.05	
112.50	0.04	
113.50	0.10	
114.50	0.02	
115.50	0.02	
116.50	0.02	117.3 End of Hole

Espedalen - Magnetic Susceptibility	Hole Number: ES2004-03

117.50		

Espedalen - Rock Quality (RQD)

Hole Number: ES2004-03

FROM	TO	PERCENT QUALITY	PERCENT CORE	DISKING	COMMENTS
0.00	2.90	0.00	0.00	N	
2.90	6.00	16.00	100.00	N	
6.00	9.00	23.00	100.00	N	
9.00	12.00	60.00	100.00	N	
12.00	15.00	53.00	100.00	N	
15.00	18.00	54.00	100.00	N	
18.00	21.00	43.00	100.00	N	
21.00	24.00	68.00	100.00	N	
24.00	27.00	68.00	100.00	N	
27.00	30.00	67.00	100.00	N	
30.00	33.00	63.00	100.00	N	
33.00	36.00	56.00	100.00	N	
36.00	39.00	73.00	100.00	N	
39.00	42.00	62.00	100.00	N	
42.00	45.00	58.00	100.00	N	
45.00	48.00	57.00	100.00	N	
48.00	51.00	37.00	95.00	N	
51.00	54.00	35.00	90.00	N	
54.00	57.00	19.00	70.00	N	
57.00	60.00	36.00	100.00	N	
60.00	63.00	44.00	100.00	N	
63.00	66.00	50.00	100.00	N	
66.00	69.00	32.00	100.00	N	
69.00	72.00	56.00	100.00	N	
72.00	75.00	26.00	95.00	N	
75.00	78.00	58.00	100.00	N	
78.00	81.00	24.00	100.00	N	
81.00	84.00	29.00	100.00	N	
84.00	87.00	34.00	100.00	N	
87.00	90.00	16.00	100.00	N	
90.00	93.00	13.00	100.00	N	
93.00	96.00	9.00	100.00	N	
96.00	99.00	32.00	100.00	N	
99.00	102.00	49.00	100.00	N	
102.00	105.00	54.00	100.00	N	
105.00	108.00	67.00	100.00	N	
108.00	111.00	64.00	100.00	N	

Espedalen - Rock Quality (RQD)					Hole Number: ES2004-03
111.00	114.00	45.00	100.00	N	
114.00	117.27	37.00	100.00	N	

Detailed Log

Hole Number: **ES2004-04** Units: METRIC

Project Name:	Espedalen	Collar Survey:	Y	Plugged	N	Core Storage:	Strand Fjellstue
Project Number:	300	Mulitshot Survey:	N	Hole Size:	T246	Contractor:	Geobor-Salag A/S
Date Started:	8/18/2204	Pulse EM Survey:	N				
Date Completed:	9/1/2004	Casing:	Left in Hole, capped			Logged by:	Trevor Blair
		Location:	Surface				

UTM WGS 84 Coord		Local Coord	
UTM Northing:	6,807,750.47	Local Northing:	6124.91
UTM Easting:	533,788.79	Local Easting:	5595.68
		Elevation:	1255.41

Collar Dip:	-75.00
Collar Azimuth:	220.00
Length:	32.00

Comments

Purpose: Test UTEM conductor ESP_08_05. Conductivity = 300 Siemens

Result: Hole collared in ultramafic rocks but was not completed to target depth and was abandoned. Efforts to pull the rods out of the hole were unsuccessful. Target not tested.

Assays: No samples taken

Detailed Lithology

From	To	Lithology
0.00	4.50	**C Casing** CASING
4.50	32.00	**6 Undivided Ultramafic Intrusive** Medium grained oikocrystic peridotite consisting of 80-85% dark grey to black olivine, 10-20% light grey pyroxene in groundmass and as oikocrysts up to 1.5cm in size, 3% fine grained magnetite and rare trace fine grained sulphide. Reddish brown fine grained (ortho?) pyroxene observed locally. Magnetic susceptibility: 15-65, averages 25-30.

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t

Espedalen - Rock Quality (RQD)

Hole Number: ES2004-04

FROM	TO	PERCENT QUALITY	PERCENT CORE	DISKING	COMMENTS
4.50	6.00	25.00	100.00	N	Broken, locally ground
6.00	9.00	49.00	100.00	N	Broken intervals; poor recovery
9.00	12.00	23.00	100.00	N	Badly broken
12.00	15.00	53.00	100.00	N	Broken 13-14.5m
15.00	18.00	72.00	100.00	N	Good run
18.00	21.00	26.00	100.00	N	Broken 18-20
21.00	24.00	70.00	100.00	N	Good run
24.00	27.00	71.00	100.00	N	Good run
27.00	30.00	61.00	100.00	N	Broken 28.7-29
30.00	32.00	42.00	100.00	N	Ground @31.8m; End of Hole @ 32m

Detailed Log

Hole Number: **ES2004-05** Units: METRIC

Project Name:	Espedalen	Collar Survey:	Y	Plugged	N	Core Storage:	Strand Fjellstue
Project Number:	300	Mulitshot Survey:	N	Hole Size:	TT46	Contractor:	Geo Drilling A/S
Date Started:	8/16/2004	Pulse EM Survey:	Y				
Date Completed:	8/18/2004	Casing:	Left in Hole, capped			Logged by:	Yannick Beaudoin
		Location:	Surface				

UTM WGS 84 Coord		Local Coord	
UTM Northing:	6,805,039.72	Local Northing:	4421.91
UTM Easting:	533,840.27	Local Easting:	7705.33
Elevation:	726.65		

Collar Dip: -79.00
Collar Azimuth: 230.00
Length: 119.40

Comments

Purpose: Test UTEM conductor ESP_15_15. Conductivity = 800 Siemens

Result: Hole collared in mineralized peridotite bounded downhole by a fine grained mafic unit in turn followed by anorthosite/anorthositic gabbro. Mineralization in the UM consisted of 5-20% net-textured to disseminated sulphides and minor remobilized veinlets. A narrow zone with increased sulphide content (20-25%) was intersected adjacent to the downhole contact of the ultramafic body.

Assays: 0.45% Ni, 0.20% Cu, 0.03% Co / 34.40m (9.60-40.00m)
0.90% Ni, 0.27% Cu, 0.06% Co / 0.75m (53.40-54.15m)

Borehole UTEM: In-hole response centered between 20m and 30m.

Lithological interpretation: Sheared anorthositic and fine grained mafic country rocks intruded by mineralized ultramafic.

Detailed Lithology

From	To		Lithology
0.00	9.40	C	**Casing** 0.8 meters of casing core recovered; cased in mineralized peridotite (see Major Units 6b for full description). 10-15% sulphides; visually ressembles net textured mineralization; pyrrhotite with trace chalcopyrite; bright flecks in pyrrhotite may be pentlandite

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00106	8.80	9.60	0.80	0.41	0.09	0.03	4.03	0.02	0.01	0.02	0.60

Detailed Lithology

From	To	Lithology
9.40	54.16	**6b Peridotite** Medium to coarse grained, weakly foliated, strongly magnetic, dark grey, moderately serpentinized peridotite with large cm scale sub-hedral to sub-rounded pyroxene oikocrysts. Oikocrysts are light to dark grey and are partially replaced by serpentine and magnetite. Unit is transitional between a 'good' oikocrystic pyroxenite and a 'good' peridotite. Visually, the unit looks brecciated due to the distribution of the oikocrysts. Unit is cut by cm to dm scale talc/serpentinite veins. Between 40m and 45.5m, a more sheared and serpentinized zone is observed. Serpentine/talc veins permeate this zone with some veins containing good concentrations of remobilized chalcopyrite. The general sulphide content of this zone is <5%. This zone marks a notable decrease in sulphide content between the previous portion of the unit and the section beyond the zone. The lower contact is at 82 degrees relative to the core axis (nearly perpendicular). Sulphide mineralization throughout the unit averages between 15 and 20%. Visually mineralization appears as net-textured. Pyrrhotite is the dominant sulphide with trace to minor chalcopyrite and what appears to be flecks of pentlandite within the pyrrhotite. Variability in sulphide content is broken down under the 'Mineralization' header. From 53.3m to 54.16 (end of unit), grain size diminishes and sulphide content increases to between 35-40%. Interpretation: Consistent with Heim's Rock Suite 2b (Peridotite - Pyroxenite).
		Mineralization 9.40 30.00 17.0 % Po Pyrrhotite NT Net-Textured 15-20%; trace cpy
		Mineralization 30.00 39.40 8.0 % Po Pyrrhotite D Disseminated looks like net-textured; trace cpy
		Mineralization 39.40 53.30 3.0 % Po Pyrrhotite D Disseminated
		Mineralization 53.30 54.16 38.0 % Po Pyrrhotite NT Net-Textured 35-40%; minor cpy
		Alteration 9.60 54.16 TL Talc V Vein M Moderate
		Structure 39.40 45.50 S Shear

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00107	9.60	10.00	0.40	0.30	0.15	0.02	2.37	0.01	0.01	0.01	0.25
PG00108	10.00	11.00	1.00	0.32	0.11	0.04	2.46	0.01	0.01	0.01	0.25
PG00109	11.00	12.00	1.00	0.51	0.16	0.04	3.97	0.01	0.01	0.01	0.25
PG00110	12.00	13.00	1.00	0.77	0.36	0.06	5.39	0.02	0.02	0.03	0.60
PG00111	13.00	14.00	1.00	0.56	0.17	0.04	4.20	0.02	0.01	0.01	0.25
PG00112	14.00	15.00	1.00	0.62	0.25	0.05	4.86	0.01	0.02	0.02	0.60
PG00113	15.00	16.00	1.00	0.33	0.14	0.01	2.50	0.01	0.01	0.02	0.25
PG00114	16.00	17.00	1.00	0.37	0.28	0.01	3.24	0.02	0.01	0.03	0.60
PG00115	17.00	18.00	1.00	0.40	0.19	0.02	2.77	0.03	0.01	0.01	0.80
PG00116	18.00	19.00	1.00	0.35	0.16	0.01	2.95	0.02	0.01	0.01	0.25
PG00117	19.00	20.00	1.00	0.52	0.17	0.03	4.11	0.02	0.01	0.01	0.25
PG00118	20.00	21.00	1.00	0.58	0.14	0.05	4.25	0.01	0.02	0.01	0.25
PG00119	21.00	22.00	1.00	0.51	0.28	0.04	4.37	0.02	0.01	0.02	0.25
PG00120	22.00	23.00	1.00	0.45	0.18	0.04	3.52	0.02	0.02	0.02	0.25
PG00121	23.00	24.00	1.00	0.64	0.21	0.03	3.45	0.01	0.02	0.05	0.25
PG00122	24.00	25.00	1.00	0.44	0.13	0.03	4.39	0.02	0.02	0.02	0.25
PG00123	25.00	26.00	1.00	0.50	0.15	0.03	3.82	0.01	0.01	0.02	8.50
PG00124	26.00	27.00	1.00	0.53	0.14	0.04	4.18	0.04	0.04	0.01	0.60
PG00126	27.00	28.00	1.00	0.58	0.23	0.03	4.49	0.01	0.04	0.02	0.25
PG00127	28.00	29.00	1.00	0.58	0.29	0.04	4.34	0.04	0.05	0.02	0.25
PG00128	29.00	30.00	1.00	0.49	0.23	0.03	3.84	0.03	0.01	0.01	0.25
PG00129	30.00	31.00	1.00	0.44	0.20	0.04	3.42	0.01	0.01	0.01	0.60
PG00130	31.00	32.00	1.00	0.42	0.19	0.03	2.89	0.01	0.01	0.02	0.25
PG00131	32.00	33.00	1.00	0.33	0.16	0.02	2.47	0.01	0.01	0.01	0.25
PG00132	33.00	34.00	1.00	0.34	0.17	0.02	2.57	0.02	0.02	0.02	0.25
PG00133	34.00	35.00	1.00	0.33	0.24	0.03	2.28	0.01	0.01	0.02	0.60
PG00134	35.00	36.00	1.00	0.31	0.12	0.02	2.25	0.01	0.01	0.01	0.25
PG00135	36.00	37.00	1.00	0.33	0.12	0.01	2.29	0.01	0.01	0.01	0.25
PG00136	37.00	38.00	1.00	0.30	0.14	0.04	2.04	0.01	0.01	0.01	0.25
PG00137	38.00	39.00	1.00	0.36	0.14	0.03	2.53	0.01	0.01	0.01	0.25
PG00138	39.00	39.40	0.40	0.32	0.12	0.03	2.33	0.02	0.01	0.02	0.25
PG00139	39.40	40.00	0.60	0.34	0.24	0.03	2.86	0.01	0.01	0.01	0.60
PG00140	40.00	41.00	1.00	0.22	0.10	0.01	1.43	0.01	0.01	0.01	0.60
PG00141	41.00	42.00	1.00	0.19	0.10	0.02	1.32	0.01	0.01	0.01	0.25
PG00142	42.00	43.00	1.00	0.21	0.07	0.01	1.59	0.01	0.01	0.01	0.25
PG00143	43.00	44.00	1.00	0.18	0.16	0.02	1.44	0.01	0.01	0.02	0.50
PG00144	44.00	45.00	1.00	0.15	0.06	0.01	0.81	0.01	0.01	0.01	0.25
PG00145	45.00	46.00	1.00	0.24	0.12	0.02	1.79	0.01	0.01	0.01	0.25
PG00146	46.00	47.00	1.00	0.27	0.10	0.02	1.65	0.01	0.01	0.02	0.25
PG00147	47.00	48.00	1.00	0.20	0.08	0.01	1.17	0.01	0.01	0.01	0.25

Detailed Lithology					Assay Data										
From	To			Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
	Structure	54.15	54.16	LC Lower Contact	PG00148	48.00	49.00	1.00	0.17	0.08	0.01	1.08	0.01	0.01	0.01	0.25
					PG00149	49.00	50.00	1.00	0.13	0.03	0.01	0.75	0.01	0.01	0.01	0.25
					PG00151	50.00	51.00	1.00	0.10	0.03	0.02	0.41	0.01	0.01	0.01	0.25
					PG00152	51.00	52.00	1.00	0.23	0.09	0.03	1.46	0.01	0.01	0.02	0.60
					PG00153	52.00	53.40	1.40	0.22	0.12	0.01	1.85	0.01	0.01	0.01	0.25
					PG00154	53.40	54.15	0.75	0.90	0.27	0.06	8.39	0.03	0.01	0.01	0.60
					PG00155	54.15	55.00	0.85	0.23	0.11	0.02	1.22	0.02	0.02	0.01	0.25

Detailed Lithology

From	To	Lithology
54.16	77.58	**10a Massive flows** Mafic volcanic sequence Unit dominated by fine to medium grained, altered (chloritic?) mafic volcanic flows (or sills??). The upper contact (with the peridotite) is defined by a highly sheared unit that may represent a sheared version of the volcanic, or a volcaniclastic (tuff?) sediment. Core axis to foliation angle is 84 degrees. 1-3% pyrite mineralization is observed as veinlets, disseminated and along fracture planes. The lower contact is characterized by a unit of thinly layered, deformed (soft sediment deformation??) volcanic sediments. Pyrite occurs along fracture plains, in disseminated form and in veinlets. Lower contact occurs at 55 degrees with respect to core axis. Two separate ultramafic units intruded the volcanic package (see Minor Units). Interpretation: This unit is not consistent with units mapped by Heim. Since this hole was drilled low in the topography of the complex, these units may represent previously unmapped (unexposed elsewhere) units of the Espedalen complex. Alternatively, the rocks of this unit may be part of the country rock outside the Espedalen complex. **Minor Interval** 66.17 68.90 **6e Ultramafic Schist** Highly sheared, fine grained pyroxenitic unit; variable foliation from near 90 degree to core axis to 60-65 degrees to core axis. Minor mineralization ~5% Moderately magnetic Fault cuts through at 67.5m **Minor Interval** 73.20 74.62 **6e Ultramafic Schist** Sheared pyroxenitic unit; moderately magnetic. Locally 5-10% mineralization; disseminated and stringer style that give the unit an almost brecciated appearance (locally). Upper contact at ~12 degrees from core axis; lower contact at ~60 degrees to core axis. **Structure** 77.57 77.58 LC Lower Contact

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00156	65.70	66.20	0.50	0.03	0.03	0.01	0.02	0.01	0.01	0.01	0.25
PG00157	66.20	67.00	0.80	0.14	0.08	0.01	2.09	0.01	0.01	0.01	0.25
PG00158	67.00	68.00	1.00	0.11	0.03	0.01	1.17	0.01	0.01	0.01	0.25
PG00159	68.00	68.90	0.90	0.10	0.03	0.01	1.29	0.01	0.01	0.01	0.25
PG00160	68.90	69.90	1.00	0.26	0.11	0.03	0.49	0.01	0.01	0.01	0.25
PG00161	72.80	73.30	0.50	0.09	0.03	0.01	0.71	0.01	0.01	0.01	0.25
PG00162	73.30	74.00	0.70	0.22	0.07	0.03	3.14	0.01	0.01	0.01	0.25
PG00163	74.00	74.60	0.60	0.36	0.12	0.02	4.50	0.01	0.01	0.01	0.25
PG00164	74.60	75.10	0.50	0.11	0.08	0.01	0.47	0.01	0.01	0.01	0.25

Detailed Lithology			Assay Data										
From	To	Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
77.58	119.40	**4 Anorthosite / Anorthositic Gabbro** Anorthosite to anorthositic gabbro (mainly anorthositic gabbro). Medium-coarse to medium grained, mottled texture. Locally sheared/tectonized and saussentized. Core axis to foliation angle consistently lies between 65 and 75 degrees. Locally, pyrite occurs as veinlets and also fills fracture planes. Some disseminated pyrite is also observed. Interpretation: Unit classification based on observation and correlation with similar units from other drill holes (e.g. ES2004-08, 09). **Minor Interval** 83.81 86.52 **10f Mafic dykes** Mafic volcanic/sill Medium grained, non magnetic. Chloritic alteration. Upper and lower contact at 70 degrees to core axis and parallel to foliation in anorthosite. **Minor Interval** 102.52 107.60 **10f Mafic dykes** Mafic volcanic/sill Medium grained, non magnetic. Chloritic alteration. Upper and lower contact at 70 degrees to core axis and parallel to foliation in anorthosite. Contacts characterized by 0.5m long zones of altered anorthosite (Major Unit). **Minor Interval** 113.90 119.40 **10f Mafic dykes** Mafic volcanic/sill Medium grained, non magnetic. Chloritic alteration. Upper and lower contact at 70 degrees to core axis and parallel to foliation in anorthosite. Contacts characterized by 0.5m long zones of altered anorthosite (Major Unit). The unit is cut off by the end of the hole.												

Detailed Lithology			Assay Data									
From	To	Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t

Espedalen - Analysis

Hole Number: ES2004-05

Sample Number	From	To	Sample Length	Ni%	Cu%	Co%	S%	Au g/t	Pt g/t	Pd g/t	Ag g/t	Pb%	Zn%	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI%	SUM %
PG00106	8.80	9.60	0.80	0.41	0.09	0.03	4.03	0.02	0.02	0.01	0.60																
PG00107	9.60	10.00	0.40	0.30	0.15	0.02	2.37	0.01	0.01	0.01	0.25																
PG00108	10.00	11.00	1.00	0.32	0.11	0.04	2.46	0.01	0.01	0.01	0.25																
PG00109	11.00	12.00	1.00	0.51	0.16	0.04	3.97	0.01	0.01	0.01	0.25																
PG00110	12.00	13.00	1.00	0.77	0.36	0.06	5.39	0.03	0.02	0.02	0.60																
PG00111	13.00	14.00	1.00	0.56	0.17	0.04	4.20	0.01	0.02	0.01	0.25																
PG00112	14.00	15.00	1.00	0.62	0.25	0.05	4.86	0.02	0.01	0.02	0.60																
PG00113	15.00	16.00	1.00	0.33	0.14	0.01	2.50	0.02	0.01	0.01	0.25																
PG00114	16.00	17.00	1.00	0.37	0.28	0.01	3.24	0.03	0.02	0.01	0.60																
PG00115	17.00	18.00	1.00	0.40	0.19	0.02	2.77	0.01	0.03	0.01	0.80																
PG00116	18.00	19.00	1.00	0.35	0.16	0.01	2.95	0.01	0.02	0.01	0.25																
PG00117	19.00	20.00	1.00	0.52	0.17	0.03	4.11	0.01	0.02	0.01	0.25																
PG00118	20.00	21.00	1.00	0.58	0.14	0.05	4.25	0.01	0.01	0.02	0.25																
PG00119	21.00	22.00	1.00	0.51	0.28	0.04	4.37	0.02	0.02	0.01	0.25																
PG00120	22.00	23.00	1.00	0.45	0.18	0.04	3.52	0.02	0.02	0.02	0.25																
PG00121	23.00	24.00	1.00	0.64	0.21	0.03	3.45	0.05	0.01	0.02	0.25																
PG00122	24.00	25.00	1.00	0.44	0.13	0.03	4.39	0.02	0.02	0.02	0.25																
PG00123	25.00	26.00	1.00	0.50	0.15	0.03	3.82	0.02	0.01	0.01	8.50																
PG00124	26.00	27.00	1.00	0.53	0.14	0.04	4.18	0.01	0.04	0.04	0.60																
PG00126	27.00	28.00	1.00	0.58	0.23	0.03	4.49	0.02	0.01	0.04	0.25																
PG00127	28.00	29.00	1.00	0.58	0.29	0.04	4.34	0.02	0.04	0.05	0.25																
PG00128	29.00	30.00	1.00	0.49	0.23	0.03	3.84	0.01	0.03	0.01	0.25																
PG00129	30.00	31.00	1.00	0.44	0.20	0.04	3.42	0.01	0.01	0.01	0.60																
PG00130	31.00	32.00	1.00	0.42	0.19	0.03	2.89	0.02	0.01	0.01	0.25																
PG00131	32.00	33.00	1.00	0.33	0.16	0.02	2.47	0.01	0.01	0.01	0.25																
PG00132	33.00	34.00	1.00	0.34	0.17	0.02	2.57	0.02	0.02	0.02	0.25																
PG00133	34.00	35.00	1.00	0.33	0.24	0.03	2.28	0.02	0.01	0.01	0.60																
PG00134	35.00	36.00	1.00	0.31	0.12	0.02	2.25	0.01	0.01	0.01	0.25																

Espedalen - Analysis

Hole Number: ES2004-05

Sample Number	From	To	Sample Length	Ni%	Cu%	Co%	S%	Au g/t	Pt g/t	Pd g/t	Ag g/t	Pb%	Zn%	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI%	SUM %
PG00135	36.00	37.00	1.00	0.33	0.12	0.01	2.29	0.01	0.01	0.01	0.25																
PG00136	37.00	38.00	1.00	0.30	0.14	0.04	2.04	0.01	0.01	0.01	0.25																
PG00137	38.00	39.00	1.00	0.36	0.14	0.03	2.53	0.01	0.01	0.01	0.25																
PG00138	39.00	39.40	0.40	0.32	0.12	0.03	2.33	0.02	0.02	0.01	0.25																
PG00139	39.40	40.00	0.60	0.34	0.24	0.03	2.86	0.01	0.01	0.01	0.60																
PG00140	40.00	41.00	1.00	0.22	0.10	0.01	1.43	0.01	0.01	0.01	0.60																
PG00141	41.00	42.00	1.00	0.19	0.10	0.02	1.32	0.01	0.01	0.01	0.25																
PG00142	42.00	43.00	1.00	0.21	0.07	0.01	1.59	0.01	0.01	0.01	0.25																
PG00143	43.00	44.00	1.00	0.18	0.16	0.02	1.44	0.02	0.01	0.01	0.50																
PG00144	44.00	45.00	1.00	0.15	0.06	0.01	0.81	0.01	0.01	0.01	0.25																
PG00145	45.00	46.00	1.00	0.24	0.12	0.02	1.79	0.01	0.01	0.01	0.25																
PG00146	46.00	47.00	1.00	0.27	0.10	0.02	1.65	0.02	0.01	0.01	0.25																
PG00147	47.00	48.00	1.00	0.20	0.08	0.01	1.17	0.01	0.01	0.01	0.25																
PG00148	48.00	49.00	1.00	0.17	0.08	0.01	1.08	0.01	0.01	0.01	0.25																
PG00149	49.00	50.00	1.00	0.13	0.03	0.01	0.75	0.01	0.01	0.01	0.25																
PG00151	50.00	51.00	1.00	0.10	0.03	0.02	0.41	0.01	0.01	0.01	0.25																
PG00152	51.00	52.00	1.00	0.23	0.09	0.03	1.46	0.02	0.01	0.01	0.60																
PG00153	52.00	53.40	1.40	0.22	0.12	0.01	1.85	0.01	0.01	0.01	0.25																
PG00154	53.40	54.15	0.75	0.90	0.27	0.06	8.39	0.01	0.03	0.01	0.60																
PG00155	54.15	55.00	0.85	0.23	0.11	0.02	1.22	0.01	0.02	0.02	0.25																
PG00156	65.70	66.20	0.50	0.03	0.03	0.01	0.02	0.01	0.01	0.01	0.25																
PG00157	66.20	67.00	0.80	0.14	0.08	0.01	2.09	0.01	0.01	0.01	0.25																
PG00158	67.00	68.00	1.00	0.11	0.03	0.01	1.17	0.01	0.01	0.01	0.25																
PG00159	68.00	68.90	0.90	0.10	0.03	0.01	1.29	0.01	0.01	0.01	0.25																
PG00160	68.90	69.90	1.00	0.26	0.11	0.03	0.49	0.01	0.01	0.01	0.25																
PG00161	72.80	73.30	0.50	0.09	0.03	0.01	0.71	0.01	0.01	0.01	0.25																
PG00162	73.30	74.00	0.70	0.22	0.07	0.03	3.14	0.01	0.01	0.01	0.25																
PG00163	74.00	74.60	0.60	0.36	0.12	0.02	4.50	0.01	0.01	0.01	0.25																

Espedalen - Analysis

Hole Number: ES2004-05

Sample Number	From	To	Sample Length	Ni%	Cu%	Co%	S%	Au g/t	Pt g/t	Pd g/t	Ag g/t	Pb%	Zn%	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI%	SUM %
PG00164	74.60	75.10	0.50	0.11	0.08	0.01	0.47	0.01	0.01	0.01	0.25																

Espedalen - Conductivity	Hole Number: ES2004-05

Depth	Conductivity (Siemens)	COMMENTS
4.20	372.50	cut surface 417.5
6.20	59.90	cut surface 84.36
9.40	22.20	cut surface 24.42
20.30	108.70	cut surface 148.27
23.60	157.60	cut surface 168.7
25.40	88.80	cut surface 119.8
28.50	210.90	cut surface 321.9
29.50	77.70	cut surface 104.3
53.50	195.10	
53.70	108.70	

Espedalen - Magnetic Susceptibility

Hole Number: ES2004-05

DEPTH	MAGNETIC SUSCEPTIBILITY (X 10^{-3} SI)	COMMENTS
9.50	14.90	
9.50		0-9.5m casing
10.50	24.80	
11.50	13.90	
12.50	20.90	
13.50	35.60	
14.50	8.43	
15.50	26.20	
16.50	4.52	
17.50	7.02	
18.50	35.40	
19.50	23.80	
20.50	5.24	
21.50	4.50	
22.50	79.70	
23.50	101.00	
24.50	194.00	
25.50	56.50	
26.50	78.20	
27.50	87.10	
28.50	93.40	
29.50	119.00	
30.50	110.00	
31.50	92.80	
32.50	122.00	
33.50	92.90	
34.50	81.90	
35.50	105.00	
36.50	105.00	
37.50	60.10	
38.50	99.60	
39.50	39.30	
40.50	26.80	
41.50	57.40	
42.50	35.20	
43.50	4.94	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-05
44.50	84.70	
45.50	34.60	
46.50	61.70	
47.50	23.50	
48.50	65.30	
49.50	26.00	
50.50	56.90	
51.50	51.80	
52.50	21.60	
53.50	12.00	
54.50	0.32	
55.50	1.08	
56.50	5.49	
57.50	0.78	
58.50	0.37	
59.50	0.34	
60.50	0.62	
61.50	0.38	
62.50	0.40	
63.50	0.39	
64.50	0.52	
65.50	0.11	
66.50	3.87	
67.50	42.50	
68.50	9.40	
69.50	1.00	
70.50	0.30	
71.50	0.38	
72.50	0.41	
73.50	10.40	
74.50	4.39	
75.50	0.92	
76.50	0.64	
77.50	1.59	
78.50	0.30	
79.50	0.17	
80.50	0.37	
81.50	0.26	
82.50	0.18	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-05
83.50	0.15	
84.50	0.33	
85.50	0.52	
86.50	0.73	
87.50	0.32	
88.50	0.28	
89.50	0.99	
90.50	0.23	
91.50	0.20	
92.50	0.16	
93.50	0.80	
94.50	0.34	
95.50	0.22	
96.50	0.11	
97.50	0.09	
98.50	0.11	
99.50	0.07	
100.50	0.11	
101.50	0.07	
102.50	0.14	
103.50	0.49	
104.50	0.47	
105.50	0.62	
106.50	0.56	
107.50	0.43	
108.50	0.08	
109.50	0.04	
110.50	0.11	
111.50	0.10	
112.50	0.02	
113.50	0.04	
114.50	0.15	
115.50	0.12	
116.50	0.61	
117.50	0.52	
118.50	0.33	119.4m End of Hole

Espedalen - Rock Quality (RQD)

Hole Number: ES2004-05

FROM	TO	PERCENT QUALITY	PERCENT CORE	DISKING	COMMENTS
9.40	13.00	72.00	95.00	N	
13.00	16.00	70.00	98.00	N	
16.00	19.00	63.00	98.00	N	
19.00	22.00	68.00	100.00	N	
22.00	25.00	67.00	100.00	N	
25.00	28.00	68.00	100.00	N	
28.00	31.00	78.00	100.00	N	
31.00	34.00	81.00	100.00	N	
34.00	37.00	85.00	100.00	N	
37.00	40.00	86.00	98.00	N	
40.00	43.00	44.00	100.00	N	
43.00	46.00	42.00	100.00	N	
46.00	49.00	76.00	100.00	N	
49.00	52.00	91.00	100.00	N	
52.00	55.00	68.00	100.00	N	
55.00	58.00	69.00	100.00	N	
58.00	61.00	64.00	100.00	N	
61.00	64.00	87.00	100.00	N	
64.00	67.00	58.00	100.00	N	
67.00	70.00	34.00	100.00	N	
70.00	73.00	44.00	100.00	N	
73.00	76.00	39.00	100.00	N	
76.00	79.00	63.00	100.00	N	
79.00	82.00	39.00	98.00	N	
82.00	85.00	28.00	100.00	N	
85.00	88.00	65.00	100.00	N	
88.00	91.00	59.00	100.00	N	
91.00	94.00	72.00	100.00	N	
94.00	97.00	61.00	100.00	N	
97.00	100.00	59.00	100.00	N	
100.00	103.00	47.00	100.00	N	
103.00	106.00	64.00	100.00	N	
106.00	109.00	60.00	100.00	N	
109.00	112.00	48.00	100.00	N	
112.00	115.00	48.00	100.00	N	
115.00	118.00	88.00	100.00	N	
118.00	119.40	40.00	100.00	N	

Detailed Log

Hole Number: **ES2004-06** Units: METRIC

Project Name:	Espedalen	Collar Survey:	Y	Plugged	N	Core Storage:	Strand Fjellstue
Project Number:	300	Mulitshot Survey:	N	Hole Size:	TT46	Contractor:	Geo Drilling A/S
Date Started:	8/18/2004	Pulse EM Survey:	N				
Date Completed:	8/19/2004	Casing:	Left in Hole, capped			Logged by:	Yannick Beaudoin
		Location:	Surface				

	UTM WGS 84 Coord		Local Coord		
UTM Northing:	6,805,105.25	Local Northing:	4454.24	Collar Dip:	-75.00
UTM Easting:	533,827.49	Local Easting:	7646.92	Collar Azimuth:	229.00
Elevation:	727.79			Length:	62.40

Comments

Purpose: Follow up mineralization intersected in ES2004-05 and further test UTEM conductor ESP_15_15

Result: Intersected mineralized (5-15% sulphides) ultramafic body from 15.57-46.35m bounded by mafic dykes. Also intersected anorthositic rocks and a dolerite dyke downhole of the ultramafic.

Assays: 0.40% Ni, 0.14% Cu, 0.03% Co / 1.0m (40.00-41.00m) (best).

Lithological interpretation: Anorthositic rocks extensively intruded by mafic to ultramafic dykes and intrusions.

Detailed Lithology

From	To		Lithology
0.00	14.70	C	**Casing**
14.70	15.57	10f	**Mafic dykes**

Fine grained, chloritized mafic volcanic.
Cross cut by late, mm scale quartz veins. <1% sulphides.

Lower contact, with peridotite unit, is at 60 degrees from the core axis.

Alteration	14.70	15.57	CH	Chlorite
			P	Pervasive
			M	Moderate
Structure	15.56	15.57	LC	Lower Contact

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t

Detailed Lithology

From	To	Lithology
15.57	46.35	**6b Peridotite** Medium to coarse grained, weakly foliated, strongly magnetic, dark grey, moderately serpentinized peridotite with large cm scale sub-hedral to sub-rounded pyroxene oikocrysts. Oikocrysts are light to dark grey and are partially replaced by serpentine and magnetite. Unit is transitional between a 'good' oikocrystic pyroxenite and a 'good' peridotite. Unit is cut by cm to dm scale talc/serpentinite veins. The lower contact is at 85 degrees relative to the core axis. From 23.58m to 45.38m, grain size is reduced and a well developped fabric appears. From this point the unit is defined as an ultramafic schist. (See minor unit for description). Unit is strongly magnetic until 23.58m. Sulphide mineralization averages 10-15% from 14.70m to 23.58m (beginning of schist minor unit...see minor description for mineralization in ultramafic schist). Mineralization type is mostly disseminated to somewhat blebby with minor stringers and veinlets. Pyrrhotite is the dominant sulphide with trace to minor chalcopyrite and what appears to be flecks of pentlandite within the pyrrhotite. Interpretation: Consistent with Heim's Rock Suite 2b (Peridotite - Pyroxenite). **Minor Interval** 23.58 33.70 **6e Ultramafic Schist** From this point, the oikocrystic peridotite is defined as a schist due to an increase in overall fabric intensity. Grain size is also notably reduced to medium. Within the ultramafic schist portion of the peridotite, a small <4m long mafic volcanic wrath is present. At the contact between the ultramafic schist and the mafic volcanic, brecciation can be seen with angular fragments of the volcanic lying within the ultramafic. Mineraliation within this minor unit averages 5-8% with local pyrrhotite stringers. Trace to minor chalcopyrite can also be seen. Some pentlandite eyes (<1 mm) can be seen within the

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00165	15.60	17.00	1.40	0.23	0.08	0.01	2.04	0.01	0.01	0.01	0.25
PG00166	17.00	18.00	1.00	0.23	0.09	0.03	1.56	0.01	0.01	0.01	0.25
PG00167	18.00	19.00	1.00	0.24	0.06	0.02	1.72	0.01	0.01	0.01	0.25
PG00168	19.00	20.00	1.00	0.27	0.15	0.02	1.75	0.01	0.01	0.01	0.60
PG00169	20.00	21.00	1.00	0.27	0.09	0.04	1.75	0.01	0.01	0.01	0.25
PG00170	21.00	22.00	1.00	0.26	0.09	0.03	1.84	0.01	0.01	0.02	0.25
PG00171	22.00	23.00	1.00	0.28	0.10	0.02	1.79	0.01	0.01	0.02	0.25
PG00172	23.00	23.60	0.60	0.23	0.10	0.03	1.72	0.01	0.01	0.01	0.25
PG00173	23.60	25.00	1.40	0.23	0.12	0.02	1.44	0.01	0.01	0.02	0.60
PG00174	25.00	26.00	1.00	0.22	0.17	0.01	1.84	0.01	0.01	0.02	0.70
PG00176	26.00	27.00	1.00	0.23	0.12	0.01	1.80	0.01	0.01	0.02	0.60
PG00177	27.00	28.00	1.00	0.26	0.19	0.02	1.95	0.01	0.01	0.04	0.90
PG00178	28.00	29.00	1.00	0.28	0.08	0.01	2.07	0.01	0.01	0.01	0.50
PG00179	29.00	30.00	1.00	0.24	0.08	0.03	1.48	0.01	0.01	0.01	0.25
PG00180	30.00	31.00	1.00	0.22	0.07	0.01	1.91	0.01	0.01	0.01	0.25
PG00181	31.00	32.00	1.00	0.15	0.07	0.01	0.54	0.01	0.01	0.04	0.25
PG00182	32.00	33.00	1.00	0.25	0.18	0.01	1.50	0.01	0.01	0.01	0.70
PG00183	33.00	33.70	0.70	0.20	0.08	0.03	0.84	0.01	0.01	0.01	0.25
PG00184	33.70	35.00	1.30	0.03	0.03	0.01	0.24	0.01	0.01	0.01	0.25
PG00185	35.00	36.00	1.00	0.03	0.03	0.01	0.34	0.01	0.01	0.02	0.25
PG00186	36.00	36.50	0.50	0.03	0.03	0.01	0.06	0.01	0.01	0.01	0.25
PG00187	36.50	38.00	1.50	0.23	0.12	0.02	1.69	0.01	0.01	0.02	0.25
PG00188	38.00	39.00	1.00	0.25	0.11	0.03	1.88	0.01	0.01	0.01	0.60
PG00189	39.00	40.00	1.00	0.36	0.19	0.03	2.89	0.01	0.01	0.02	1.00
PG00190	40.00	41.00	1.00	0.40	0.14	0.03	3.44	0.02	0.01	0.02	0.80
PG00191	41.00	42.00	1.00	0.25	0.24	0.01	2.14	0.02	0.01	0.05	1.00
PG00192	42.00	43.00	1.00	0.33	0.12	0.03	2.78	0.01	0.01	0.06	0.80
PG00193	43.00	44.00	1.00	0.24	0.14	0.02	1.89	0.01	0.01	0.03	0.70
PG00194	44.00	45.00	1.00	0.18	0.16	0.02	1.21	0.02	0.01	0.02	1.00
PG00195	45.00	46.30	1.30	0.14	0.10	0.01	0.46	0.01	0.01	0.01	0.80
PG00196	46.30	47.00	0.70	0.08	0.20	0.01	0.27	0.01	0.01	0.05	1.70

Detailed Lithology			Assay Data										
From	To	Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
46.35	49.74	**10f Mafic dykes** Fine grained, chloritized mafic volcanic. Cross cut by late, mm scale quartz veins, <1% sulphides. Lower contact, with anorthosite is at 45 degrees with respect to core axis. **Alteration** 46.35 49.74 CH Chlorite P Pervasive M Moderate **Structure** 49.73 49.74 LC Lower Contact												
49.74	61.40	**4 Anorthosite / Anorthositic Gabbro** Anorthosite to anorthositic gabbro (mainly anorthositic gabbro). Medium-coarse to medium grained, mottled texture. Locally sheared/tectonized and sausseritized. Unit is cross cut by epidote-chlorite veins. Minor chlorite and epidote can be seen locally in the matrix. No mineralization is present. Unit is not magnetic. Interpretation: Unit classification based on observation and correlation with similar units from other drill holes (e.g. ES2004-08, 09).												
61.40	62.40	**8a Dolerite** Fine to medium grained, moderately magnetic mafic intrusive with diabasic (doloritic) texture. Upper contact with anorthosite is at 28 degrees with respect to core axis. Unmineralized.												

Espedalen - Analysis

Hole Number: ES2004-06

Sample Number	From	To	Sample Length	Ni%	Cu%	Co%	S%	Au g/t	Pt g/t	Pd g/t	Ag g/t	Pb%	Zn%	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI%	SUM %
PG00165	15.60	17.00	1.40	0.23	0.08	0.01	2.04	0.01	0.01	0.01	0.25																
PG00166	17.00	18.00	1.00	0.23	0.09	0.03	1.56	0.01	0.01	0.01	0.25																
PG00167	18.00	19.00	1.00	0.24	0.06	0.02	1.72	0.01	0.01	0.01	0.25																
PG00168	19.00	20.00	1.00	0.27	0.15	0.02	1.75	0.01	0.01	0.01	0.60																
PG00169	20.00	21.00	1.00	0.27	0.09	0.04	1.75	0.01	0.01	0.01	0.25																
PG00170	21.00	22.00	1.00	0.26	0.09	0.03	1.84	0.02	0.01	0.01	0.25																
PG00171	22.00	23.00	1.00	0.28	0.10	0.02	1.79	0.02	0.01	0.01	0.25																
PG00172	23.00	23.60	0.60	0.23	0.10	0.03	1.72	0.01	0.01	0.01	0.25																
PG00173	23.60	25.00	1.40	0.23	0.12	0.02	1.44	0.02	0.01	0.01	0.60																
PG00174	25.00	26.00	1.00	0.22	0.17	0.01	1.84	0.02	0.01	0.01	0.70																
PG00176	26.00	27.00	1.00	0.23	0.12	0.01	1.80	0.02	0.01	0.01	0.60																
PG00177	27.00	28.00	1.00	0.26	0.19	0.02	1.95	0.04	0.01	0.01	0.90																
PG00178	28.00	29.00	1.00	0.28	0.08	0.01	2.07	0.01	0.01	0.01	0.50																
PG00179	29.00	30.00	1.00	0.24	0.08	0.03	1.48	0.01	0.01	0.01	0.25																
PG00180	30.00	31.00	1.00	0.22	0.07	0.01	1.91	0.01	0.01	0.01	0.25																
PG00181	31.00	32.00	1.00	0.15	0.07	0.01	0.54	0.04	0.01	0.01	0.25																
PG00182	32.00	33.00	1.00	0.25	0.18	0.01	1.50	0.01	0.01	0.01	0.70																
PG00183	33.00	33.70	0.70	0.20	0.08	0.03	0.84	0.01	0.01	0.01	0.25																
PG00184	33.70	35.00	1.30	0.03	0.03	0.01	0.24	0.01	0.01	0.01	0.25																
PG00185	35.00	36.00	1.00	0.03	0.03	0.01	0.34	0.02	0.01	0.01	0.25																
PG00186	36.00	36.50	0.50	0.03	0.03	0.01	0.06	0.01	0.01	0.01	0.25																
PG00187	36.50	38.00	1.50	0.23	0.12	0.02	1.69	0.02	0.01	0.01	0.25																
PG00188	38.00	39.00	1.00	0.25	0.11	0.03	1.88	0.01	0.01	0.01	0.60																
PG00189	39.00	40.00	1.00	0.36	0.19	0.03	2.89	0.02	0.01	0.01	1.00																
PG00190	40.00	41.00	1.00	0.40	0.14	0.03	3.44	0.02	0.02	0.01	0.80																
PG00191	41.00	42.00	1.00	0.25	0.24	0.01	2.14	0.05	0.02	0.01	1.00																
PG00192	42.00	43.00	1.00	0.33	0.12	0.03	2.78	0.06	0.01	0.01	0.80																
PG00193	43.00	44.00	1.00	0.24	0.14	0.02	1.89	0.03	0.01	0.01	0.70																

Espedalen - Analysis

Hole Number: ES2004-06

Sample Number	From	To	Sample Length	Ni%	Cu%	Co%	S%	Au g/t	Pt g/t	Pd g/t	Ag g/t	Pb%	Zn%	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI%	SUM %
PG00194	44.00	45.00	1.00	0.18	0.16	0.02	1.21	0.02	0.02	0.01	1.00																
PG00195	45.00	46.30	1.30	0.14	0.10	0.01	0.46	0.01	0.01	0.01	0.80																
PG00196	46.30	47.00	0.70	0.08	0.20	0.01	0.27	0.05	0.01	0.01	1.70																

Espedalen - Conductivity

Hole Number: ES2004-06

Depth	Conductivity (Siemens)	COMMENTS
16.40	42.20	
17.60	40.00	
18.45	51.10	
18.80	44.40	
19.50	57.70	
19.80	53.10	

Espedalen - Magnetic Susceptibility	Hole Number: ES2004-06

DEPTH	MAGNETIC SUSCEPTIBILITY (X 10^{-3} SI)	COMMENTS
15.50	0.45	
16.50	77.70	
17.50	91.50	
18.50	89.10	
19.50	100.00	
20.50	58.60	
21.50	70.70	
22.50	72.70	
23.50	48.40	
24.50	1.18	
25.50	8.37	
26.50	6.08	
27.50	4.23	
28.50	0.97	
29.50	0.88	
30.50	2.16	
31.50	0.42	
32.50	1.51	
33.50	0.46	
34.50	0.47	
35.50	0.40	
36.50	0.35	
37.50	10.30	
38.50	9.04	
39.50	22.00	
40.50	17.70	
41.50	8.96	
42.50	6.34	
43.50	4.19	
44.50	1.00	
45.50	0.88	
46.50	0.49	
47.50	0.43	
48.50	0.79	
49.50	1.23	
50.50	0.03	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-06
51.50	0.10	
52.50	0.12	
53.50	0.10	
54.50	0.04	
55.50	0.09	
56.50	0.11	
57.50	0.13	
58.50	0.21	
59.50	0.14	
60.50	0.14	
61.50	2.65	

Espedalen - Rock Quality (RQD)

Hole Number: ES2004-06

FROM	TO	PERCENT QUALITY	PERCENT CORE	DISKING	COMMENTS
14.70	18.00	59.00	100.00	N	
18.00	21.00	67.00	100.00	N	
21.00	24.00	46.00	100.00	N	
24.00	27.00	54.00	100.00	N	
27.00	30.00	65.00	100.00	N	
30.00	33.00	78.00	100.00	N	
33.00	36.00	81.00	100.00	N	
36.00	39.00	56.00	100.00	N	
39.00	42.00	38.00	100.00	N	
42.00	45.00	61.00	100.00	N	
45.00	48.00	32.00	100.00	N	
48.00	51.00	61.00	100.00	N	
51.00	54.00	78.00	100.00	N	
54.00	57.00	63.00	100.00	N	
57.00	60.00	73.00	100.00	N	
60.00	62.40	70.00	100.00	N	62.4m End of Hole

Detailed Log

Hole Number: **ES2004-07** Units: METRIC

Project Name:	Espedalen	Collar Survey:	Y	Plugged	N	Core Storage:	Strand Fjellstue
Project Number:	300	Mulitshot Survey:	N	Hole Size:	TT46	Contractor:	Geo Drilling A/S
Date Started:	8/20/2004	Pulse EM Survey:	Y			Logged by:	Yannick Beaudoin
Date Completed:	8/22/2004	Casing:	Left in Hole, capped				
		Location:	Surface				

UTM WGS 84 Coord		Local Coord	
UTM Northing:	6,805,141.94	Local Northing:	4460.12
UTM Easting:	533,804.38	Local Easting:	7603.96
Elevation:	731.74		

Collar Dip: -75.00
Collar Azimuth: 231.00
Length: 72.40

Comments

Purpose: Follow up on mineralization intersected in ES2004-05 and further test UTEM conductor ESP_15_15.

Result: Intersected mineralized pyroxenite between 18.30-39.40m containing 5-15% sulphides as disseminations, blebs and stringers. Ultramafic is bounded uphole and downhole by anorthosite/anorthositic gabbro.

Assays: 0.19% Ni, 0.16% Cu, 0.01% Co / 1.0m (20.00-21.00m) (best)

Borehole UTEM: off-hole response centered @ 40m, situated approximately 20m away from hole.

Lithological interpretation: Anorthositic rocks intruded by a mineralized pyroxenite.

Detailed Lithology

From	To		Lithology	Assay Data: Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
0.00	16.20	C	**Casing**												
16.20	18.30	4	**Anorthosite / Anorthositic Gabbro** Anorthosite to anorthositic gabbro (mainly anorthositic gabbro). Medium-coarse to medium grained, mottled texture. Locally sheared/tectonized and sausseritized. Unit is cross cut by epidote-chlorite veins. Minor chlorite and epidote can be seen locally in the matrix. No mineralization is present. Unit is not magnetic. Interpretation: Unit classification based on observation and correlation with similar units from other drill holes (e.g. ES2004-08, 09).	PG00197	17.80	18.30	0.50	0.03	0.03	0.01	0.02	0.01	0.01	0.01	0.25

Detailed Lithology

From	To	Lithology
18.30	39.40	**6d Pyroxenite** Medium to locally fine grained pyroxenite. Moderately magnetic to locally highly magnetic patches. Pervasive talc/serpentinite alteration gives bands of the unit a melano-noritic appearance. No visible oikocrysts (in reference to decription for ES2004-05 and ES2004-06). Mineralization is variable with 5-10% sulphides from 18.2m to 34.30m and 10-15% from 34.30m to 39.00m. Mineralization is generally disseminated with blebs and stringers. Pyrrhotite is the main sulphide with bright flecks of pentlandite visible. Minor chalcopyrite is also visible in association with the pyrrhotite. Cm scale talc/serpentinite veins cross cut the entire unit. Fragments of anorthosite are observed in the ultramafic in proximity to the upper contact. Upper contact is at 65 degrees to the core axis. Lower contact is near 90 degrees to core axis angle. Interpretation: Consistent with Heim's Rock Suite 2b (Peridotite - Pyroxenite). **Mineralization** 18.30 34.30 8.0 % Po Pyrrhotite D Disseminated local stringers and blebs; minor cpy and

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00198	18.30	20.00	1.70	0.17	0.12	0.01	1.42	0.01	0.01	0.01	0.25
PG00199	20.00	21.00	1.00	0.19	0.16	0.01	1.85	0.02	0.01	0.02	0.25
PG00201	21.00	22.00	1.00	0.11	0.07	0.01	1.09	0.01	0.01	0.01	0.25
PG00202	22.00	23.00	1.00	0.11	0.09	0.01	1.00	0.01	0.01	0.01	0.25
PG00203	23.00	24.00	1.00	0.09	0.08	0.01	0.68	0.02	0.01	0.01	0.25
PG00204	24.00	25.00	1.00	0.08	0.03	0.01	0.66	0.01	0.01	0.01	0.25
PG00206	25.00	26.00	1.00	0.08	0.07	0.01	0.77	0.01	0.01	0.02	0.60
PG00207	26.00	27.00	1.00	0.06	0.03	0.01	0.44	0.01	0.01	0.01	0.25
PG00208	27.00	28.00	1.00	0.06	0.03	0.01	0.47	0.02	0.01	0.01	0.25
PG00209	28.00	29.00	1.00	0.07	0.03	0.01	0.62	0.01	0.01	0.01	0.25
PG00210	29.00	30.00	1.00	0.07	0.05	0.01	0.59	0.01	0.01	0.01	0.25
PG00211	30.00	31.00	1.00	0.14	0.05	0.01	1.22	0.01	0.01	0.01	0.25
PG00212	31.00	32.00	1.00	0.16	0.07	0.03	1.47	0.01	0.01	0.01	0.25
PG00213	32.00	33.00	1.00	0.11	0.06	0.02	1.10	0.01	0.01	0.01	0.25
PG00214	33.00	34.00	1.00	0.15	0.03	0.01	1.38	0.01	0.01	0.01	0.25
PG00215	34.00	35.00	1.00	0.19	0.06	0.01	1.69	0.01	0.01	0.01	0.25
PG00216	35.00	36.00	1.00	0.16	0.09	0.01	1.21	0.01	0.01	0.01	0.50
PG00217	36.00	37.00	1.00	0.17	0.11	0.01	1.45	0.01	0.01	0.01	0.25
PG00218	37.00	38.00	1.00	0.16	0.11	0.02	1.46	0.01	0.01	0.01	0.25
PG00219	38.00	39.40	1.40	0.18	0.07	0.01	1.54	0.01	0.01	0.01	0.25

Detailed Lithology

From	To	Lithology
39.40	72.40	**4 Anorthosite / Anorthositic Gabbro** Anorthosite to anorthositic gabbro (mainly anorthositic gabbro). Medium-coarse to medium grained, mottled texture. Locally sheared/tectonized and saussentized. Intruded by mineralized ultramafic (pyroxenite) dykes as well as mafic dykes (see Minor Unit for descriptions). 56.6-56.85m: narrow peridotitic UM with 2% sulphides (not sampled). Upper contact at near 90 degrees to core axis angle. Interpretation: Unit classification based on observation and correlation with similar units from other drill holes (e.g. ES2004-08, 09). **Minor Interval** 43.10 43.90 **6d Pyroxenite** Medium grained, non oikocrystic pyroxenite. Relatively unaltered (with respect to talc/serpentinite alteration in major unit 6d from 18.30m to 39.40m). Moderately developed fabric at ~65 degrees to core axis angle. Mineralization consists of 10-15% disseminated to locally stringer sulphides. Pyrrhotite is the main sulphide with visible bright flecks of pentlandite. Minor chalcopyrite is seen in association with the pyrrhotite. Upper contact is 85 degrees to core axis angle. Lower contact is at 75 degrees to core axis angle, marked by a cm scale talc/serpentinite vein. Interpretation: Consistent with Heim's Rock Suite 2b (Peridotite - Pyroxenite). **Minor Interval** 63.20 64.35 **10f Mafic dykes** Fine grained mafic volcanic/dyke. Chloritized. Non magnetic and non mineralized. Upper contact at ~10 degrees from core axis angle. Intruded anorthosites are altered for about 0.5m ahead of contact. Lower contact at ~45 degrees tro core axis angle. Intruded anorthosites are altered for about 0.20m below contact

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00220	39.40	40.00	0.60	0.03	0.03	0.01	0.04	0.02	0.01	0.01	0.25
PG00221	42.60	43.10	0.50	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.25
PG00223	43.90	44.40	0.50	0.03	0.03	0.01	0.06	0.01	0.01	0.01	0.25

Detailed Lithology			Assay Data									
From	To	Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
		Minor Interval												
64.70	65.70	**10f Mafic dykes** Fine grained mafic volcanic/dyke. Chloritized. Non magnetic and non mineralized. Upper contact at ~45 degrees from core axis angle. Intruded anorthosites are altered for about 0.2m ahead of contact. Lower contact at ~70 degrees tro core axis angle. Intruded anorthosites are altered for about 1.6m below contact											
		Minor Interval												
67.30	68.50	**10f Mafic dykes** Fine grained mafic volcanic/dyke. Chloritized. Non magnetic and non mineralized. Upper contact at ~45 degrees from core axis angle. Intruded anorthosites are altered for about 1.6m ahead of contact. Lower contact near parallel to core axis angle. Intruded anorthosites are altered for about 1.5m below contact											

Espedalen - Analysis

Hole Number: ES2004-07

Sample Number	From	To	Sample Length	Ni%	Cu%	Co%	S%	Au g/t	Pt g/t	Pd g/t	Ag g/t	Pb%	Zn%	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI%	SUM %
PG00197	17.80	18.30	0.50	0.03	0.03	0.01	0.02	0.01	0.01	0.01	0.25																
PG00198	18.30	20.00	1.70	0.17	0.12	0.01	1.42	0.01	0.01	0.01	0.25																
PG00199	20.00	21.00	1.00	0.19	0.16	0.01	1.85	0.02	0.02	0.01	0.25																
PG00201	21.00	22.00	1.00	0.11	0.07	0.01	1.09	0.01	0.01	0.01	0.25																
PG00202	22.00	23.00	1.00	0.11	0.09	0.01	1.00	0.01	0.01	0.01	0.25																
PG00203	23.00	24.00	1.00	0.09	0.08	0.01	0.68	0.01	0.02	0.01	0.25																
PG00204	24.00	25.00	1.00	0.08	0.03	0.01	0.66	0.01	0.01	0.01	0.25																
PG00206	25.00	26.00	1.00	0.08	0.07	0.01	0.77	0.02	0.01	0.01	0.60																
PG00207	26.00	27.00	1.00	0.06	0.03	0.01	0.44	0.01	0.01	0.01	0.25																
PG00208	27.00	28.00	1.00	0.06	0.03	0.01	0.47	0.01	0.02	0.01	0.25																
PG00209	28.00	29.00	1.00	0.07	0.03	0.01	0.62	0.01	0.01	0.01	0.25																
PG00210	29.00	30.00	1.00	0.07	0.05	0.01	0.59	0.01	0.01	0.01	0.25																
PG00211	30.00	31.00	1.00	0.14	0.05	0.01	1.22	0.01	0.01	0.01	0.25																
PG00212	31.00	32.00	1.00	0.16	0.07	0.03	1.47	0.01	0.01	0.01	0.25																
PG00213	32.00	33.00	1.00	0.11	0.06	0.02	1.10	0.01	0.01	0.01	0.25																
PG00214	33.00	34.00	1.00	0.15	0.03	0.01	1.38	0.01	0.01	0.01	0.25																
PG00215	34.00	35.00	1.00	0.19	0.06	0.01	1.69	0.01	0.01	0.01	0.25																
PG00216	35.00	36.00	1.00	0.16	0.09	0.01	1.21	0.01	0.01	0.01	0.50																
PG00217	36.00	37.00	1.00	0.17	0.11	0.01	1.45	0.01	0.01	0.01	0.25																
PG00218	37.00	38.00	1.00	0.16	0.11	0.02	1.46	0.01	0.01	0.01	0.25																
PG00219	38.00	39.40	1.40	0.18	0.07	0.01	1.54	0.01	0.01	0.01	0.25																
PG00220	39.40	40.00	0.60	0.03	0.03	0.01	0.04	0.01	0.02	0.01	0.25																
PG00221	42.60	43.10	0.50	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.25																
PG00222	43.10	43.90	0.80	0.18	0.08	0.01	1.45	0.01	0.01	0.01	0.25																
PG00223	43.90	44.40	0.50	0.03	0.03	0.01	0.06	0.01	0.01	0.01	0.25																

Espedalen - Conductivity	Hole Number: ES2004-07

Depth	Conductivity (Siemens)	COMMENTS
43.20	24.40	small mineralized ultramafic dyke 43.10m-43.90m
43.45	24.00	
43.70	31.10	
44.15	22.20	

Espedalen - Magnetic Susceptibility

Hole Number: ES2004-07

DEPTH	MAGNETIC SUSCEPTIBILITY (X 10^{-3} SI)	COMMENTS
16.50	0.42	
17.50	0.05	
18.50	3.30	
19.50	4.92	
20.50	2.72	
21.50	6.26	
22.50	20.20	
23.50	2.00	
24.50	7.99	
25.50	16.40	
26.50	3.10	
27.50	7.88	
28.50	4.90	
29.50	3.13	
30.50	0.39	
31.50	3.37	
32.50	6.60	
33.50	3.86	
34.50	17.20	
35.50	16.00	
36.50	15.30	
37.50	25.60	
38.50	30.10	
39.50	0.25	
40.50	0.15	
41.50	0.08	
42.50	0.11	
43.50	1.88	
44.50	0.25	
45.50	0.28	
46.50	0.19	
47.50	0.06	
48.50	0.10	
49.50	0.21	
50.50	0.09	
51.50	0.17	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-07
52.50	0.36	
53.50	0.18	
54.50	0.07	
55.50	0.20	
56.50	0.13	
57.50	0.11	
58.50	0.11	
59.50	0.08	
60.50	0.16	
61.50	0.10	
62.50	0.16	
63.50	0.26	
64.50	0.09	
65.50	0.74	
66.50	0.17	
67.50	0.29	
68.50	0.11	
69.50	0.08	
70.50	0.44	
71.50	0.13	

Espedalen - Rock Quality (RQD)

Hole Number: ES2004-07

FROM	TO	PERCENT QUALITY	PERCENT CORE	DISKING	COMMENTS
16.20	19.00	20.00	98.00	N	
19.00	22.00	30.00	100.00	N	
22.00	25.00	48.00	100.00	N	
25.00	28.00	50.00	100.00	N	
28.00	31.00	58.00	100.00	N	
31.00	34.00	68.00	100.00	N	
34.00	37.00	47.00	100.00	N	
37.00	40.00	66.00	100.00	N	
40.00	43.00	61.00	100.00	N	
43.00	46.00	50.00	100.00	N	
46.00	49.00	44.00	100.00	N	
49.00	52.00	70.00	100.00	N	
52.00	55.00	75.00	100.00	N	
55.00	58.00	43.00	100.00	N	
58.00	61.00	77.00	100.00	N	
61.00	64.00	65.00	98.00	N	
64.00	67.00	56.00	100.00	N	
67.00	70.00	45.00	100.00	N	
70.00	72.40	46.00	100.00	N	72.4m End of Hole

Detailed Log

Hole Number: **ES2004-08** Units: METRIC

Project Name:	Espedalen	Collar Survey:	Y	Plugged	N		
Project Number:	300	Mulitshot Survey:	Y	Hole Size:	TT46		
Date Started:	8/24/2004	Pulse EM Survey:	Y				
Date Completed:	8/26/2004	Casing:	Left in Hole, capped				
		Location:	Surface				

UTM WGS 84 Coord		Local Coord	
UTM Northing:	6,801,300.03	Local Northing:	3005.43
UTM Easting:	535,129.16	Local Easting:	1398.59
Elevation:	970.74		

Core Storage:	Strand Fjellstue	Collar Dip:	-43.95
Contractor:	Geo Drilling A/S	Collar Azimuth:	234.75
		Length:	85.30
Logged by:	Yannick Beaudoin/P. Tirschmann		

Comments

Purpose: Test UTEM conductor ESP_17_17. Conductivity = 500 Siemens

Result: Intersected sausseritized and tecontonized anorthosite intruded by a narrow, schistose, mineralized ultramafic body from 56.25-59.00m. mineralization consists of 10-45% sulphide (po-pn-cp-py) stringers, veinlets and disseminations.

Assays: 2.07% Ni, 1.20% Cu, 0.07% Co / 2.70m (56.30-59.00m)

Borehole UTEM: Symmetric in-hole response centered on 60m, correlates with intersected mineralization.

Lithological interpretation: Mineralized ultramafic dyke (?) intruding anorthositic rocks; all units subsequently tectonized.

Detailed Lithology

From	To		Lithology
0.00	3.55	C	**Casing**

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t

Detailed Lithology

From	To	Lithology
3.55	56.25	**4s Sausseritized/Tectonized Anorthosite** Medium grained, well foliated, banded sausseritized and tectonized anorthosite. Unit is cross cut by mm to cm scale foliation parallel quartz veins. Dm to m scale mafic dykes intrude the unit (see Minor Units). Mineralization: Minor disseminated pyrite can be seen throughout. From 53.8m to 56.25m, patchy stringers of po, py mineralization (<3%) can be seen (related to the mineralized mafic unit below). Trace amounts of very bright green mineral (mica, fuchsite or chloritoid?) observed (eg. 48.8m). Foliation is between 65-85 degrees to core axis. **Minor Interval** 36.00 39.50 **10f Mafic dykes** Unmineralized, fine-medium grained mafic dyke/flow. Upper contact near perpendicular to core axis. Lower contact ~75 degrees to core axis. Fragments of anorthosite observed especially in the vicinity of the contacts. **Minor Interval** 51.50 53.00 **6 Undivided Ultramafic Intrusive** Ultramafic schist containing po stringers up to 1.5cm in width. Upper and lower contacts near perpendicular to core axis. **Mineralization** 52.85 54.00 4.0 % Po Pyrrhotite STR Stringers 3-5% po stringers **Structure** 14.40 14.41 Sm General Foliation **Structure** 41.50 41.51 Sm General Foliation **Structure** 54.50 54.51 Sm General Foliation

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG03109	52.00	52.85	0.85	0.03	0.03	0.01	0.50	0.01	0.01	0.01	0.25
PG03110	52.85	54.00	1.15	0.51	0.30	0.03	2.64	0.01	0.01	0.01	0.25
PG03111	54.00	55.00	1.00	0.03	0.03	0.01	0.02	0.02	0.01	0.01	0.25
PG03112	55.00	55.80	0.80	0.03	0.03	0.01	0.02	0.01	0.01	0.01	0.25
PG00224	55.80	56.30	0.50	0.22	0.08	0.01	0.91	0.02	0.01	0.01	0.25

Detailed Lithology

From	To	Lithology
56.25	59.00	**6e Ultramafic Schist**

Fine to medium grained, dark green, schistose and highly altered (chlorite or talc/serpentinite), ultramafic or mafic intrusive unit. No quartz and visible feldspar although the latter may be completely altered and no longer recognizable. Secondary biotite (alteration of amphiboles?) is pervasive. Unit is very soft and can easily be scratched with a finger nail. Fragments of anorthosite are observed especially in the vicinity of the upper and lower contacts. Angular quartz fragment observed near upper contact.

Mineralization: 20-25% sulphides over the length, 35-40% betwen 57m and 58m. Sulphides are 70% pyrrhotite, 5% pyrite and 25% chalcopyrite. Bright flecks within pyrrhotite may represent presence of pentlandite. Mineralization occurs as stringers and veinlets, and also as disseminated sulphide. From 58m to 59m, the presence of unmineralized anorthosite fragments reduces the overall sulphide content.

Unit is moderately to strongly magnetic throughout; unmineralized portions are non magnetic.

Foliation within unit is perpendicular to core axis.

Lower contact is ~ 70-75 degrees to core axis. Upper contact angle cannot be determined due to missing core piece.

Interpretation: Though well mineralized, this unit does not bare a strong resemblance to the ultramafic units seen in previous holes (maybe simply because of the strong alteration). The mineralization most likely consists of remobilized sulphides.

Mineralization	56.25	57.00	23.0 %	Po	Pyrrhotite
				STR	Stringers
				with 25% cp and 5% py and 70% po	
Mineralization	57.00	58.00	38.0 %	Po	Pyrrhotite
				STR	Stringers
				with 25% cp and 5% py and 70% po	
Mineralization	58.00	59.00	10.0 %	Po	Pyrrhotite
				STR	Stringers
				less due to anorthosite fragments	
Alteration	56.25	59.00	BI	Biotite	
			PT	Patchy	
			M	Moderate	
Alteration	56.25	59.00	CH	Chlorite	
			P	Pervasive	
			S	Strong	
Structure	56.25	59.00	Sm	General Foliation	
Structure	58.99	59.00	LC	Lower Contact	

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00226	56.30	57.00	0.70	0.79	0.72	0.03	3.51	0.02	0.03	0.01	0.70
PG00227	57.00	58.00	1.00	3.32	2.01	0.12	15.00	0.05	0.06	0.01	1.60
PG00228	58.00	58.50	0.50	1.80	0.76	0.05	10.20	0.04	0.05	0.04	0.60
PG00229	58.50	59.00	0.50	1.65	0.69	0.07	9.31	0.04	0.04	0.01	0.60

Detailed Lithology

From	To	Lithology
59.00	85.30	**4s Sausseritized/Tectonized Anorthosite** Medium grained, well foliated, banded, altered and tectonized anorthosite. Trace amounts of bright green mineral present (mice, fuchsite or chloritoid?). Trace cp-po-py in fractures at 60.35m. Hematization observed from 60.45m to 63.4. **Minor Interval** 70.10 70.50 **4s Sausseritized/Tectonized Anorthosite** Fine grained, chloritized, banded (layers?) anorthosite. Minor pyrite mineralization. Upper contact is at 45 degrees to core axis. Lower contact is at 80 degrees to core axis. **Minor Interval** 79.00 84.00 **10f Mafic dykes** Unmineralized, fine-medium grained mafic dyke/flow. Upper contact near perpendicular to core axis. **Alteration** 60.45 63.40 HM Hematite P Pervasive M Moderate also another type of unrecognized alteration. Yello green alteration (epidote?). **Structure** 65.00 65.01 Sm General Foliation **Structure** 84.10 84.11 Sm General Foliation

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00230	59.00	59.50	0.50	0.41	0.22	0.03	1.26	0.01	0.03	0.01	0.25
PG03113	59.50	60.40	0.90	0.13	0.06	0.01	0.37	0.02	0.01	0.01	0.25

Espedalen - Analysis

Hole Number: ES2004-08

Sample Number	From	To	Sample Length	Ni%	Cu%	Co%	S%	Au g/t	Pt g/t	Pd g/t	Ag g/t	Pb%	Zn%	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI%	SUM %
PG03109	52.00	52.85	0.85	0.03	0.03	0.01	0.50	0.01	0.01	0.01	0.25																
PG03110	52.85	54.00	1.15	0.51	0.30	0.03	2.64	0.01	0.01	0.01	0.25																
PG03111	54.00	55.00	1.00	0.03	0.03	0.01	0.02	0.01	0.02	0.01	0.25																
PG03112	55.00	55.80	0.80	0.03	0.03	0.01	0.02	0.01	0.01	0.01	0.25																
PG00224	55.80	56.30	0.50	0.22	0.08	0.01	0.91	0.01	0.02	0.01	0.25																
PG00226	56.30	57.00	0.70	0.79	0.72	0.03	3.51	0.01	0.02	0.03	0.70																
PG00227	57.00	58.00	1.00	3.32	2.01	0.12	15.00	0.01	0.05	0.06	1.60																
PG00228	58.00	58.50	0.50	1.80	0.76	0.05	10.20	0.04	0.04	0.05	0.60																
PG00229	58.50	59.00	0.50	1.65	0.69	0.07	9.31	0.01	0.04	0.04	0.60																
PG00230	59.00	59.50	0.50	0.41	0.22	0.03	1.26	0.01	0.01	0.03	0.25																
PG03113	59.50	60.40	0.90	0.13	0.06	0.01	0.37	0.01	0.02	0.01	0.25																

Espedalen - Conductivity	Hole Number: ES2004-08

Depth	Conductivity (Siemens)	COMMENTS
56.90	64.40	
57.10	68.80	
57.40	253.80	
57.60	415.40	
57.90	999.00	1078.2
58.30	950.10	
58.50	146.10	
58.90	999.00	1878.3

Espedalen - Magnetic Susceptibility

Hole Number: ES2004-08

DEPTH	MAGNETIC SUSCEPTIBILITY (X 10^{-3} SI)	COMMENTS
3.50	0.15	
4.50	0.12	
5.50	0.11	
6.50	0.10	
7.50	0.20	
8.50	0.19	
9.50	0.13	
10.50	0.15	
11.50	0.23	
12.50	0.15	
13.50	0.19	
14.50	0.18	
15.50	0.15	
16.50	0.19	
17.50	0.19	
18.50	0.13	
19.50	0.16	
20.50	0.11	
21.50	0.14	
22.50	0.21	
23.50	0.53	
24.50	0.20	
25.50	0.18	
26.50	0.11	
27.50	0.11	
28.50	0.17	
29.50	0.08	
30.50	0.05	
31.50	0.03	
32.50	0.03	
33.50	0.02	
34.50	0.03	
35.50	0.06	
36.50	0.30	
37.50	0.32	
38.50	0.54	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-08
39.50	0.09	
40.50	0.03	
41.50	0.12	
42.50	0.08	
43.50	0.13	
44.50	0.12	
45.50	0.08	
46.50	0.12	
47.50	0.05	
48.50	0.08	
49.50	0.11	
50.50	0.05	
51.50	0.50	
52.50	0.91	
53.50	0.26	
54.50	0.10	
55.50	0.21	
56.50	0.43	
57.50	10.80	
58.50	8.71	
59.50	0.16	
60.50	0.15	
61.50	0.07	
62.50	0.08	
63.50	0.25	
64.50	0.14	
65.50	0.24	
66.50	0.14	
67.50	0.35	
68.50	0.17	
69.50	0.07	
70.50	0.36	
71.50	0.18	
72.50	0.14	
73.50	0.07	
74.50	0.07	
75.50	0.16	
76.50	0.27	
77.50	0.13	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-08
78.50	0.14	
79.50	0.45	
80.50	0.62	
81.50	0.61	
82.50	0.33	
83.50	0.51	
84.50	0.20	

Espedalen - Rock Quality (RQD)

Hole Number: ES2004-08

FROM	TO	PERCENT QUALITY	PERCENT CORE	DISKING	COMMENTS
3.55	6.00	71.00	100.00	N	
6.00	9.00	70.00	100.00	N	
9.00	12.00	61.00	100.00	N	
12.00	15.00	53.00	100.00	N	
15.00	18.00	48.00	100.00	N	
18.00	21.00	51.00	98.00	N	
21.00	24.00	52.00	100.00	N	
24.00	27.00	40.00	100.00	N	
27.00	30.00	35.00	100.00	N	
30.00	33.00	62.00	100.00	N	
33.00	36.00	29.00	98.00	N	
36.00	39.00	40.00	100.00	N	
39.00	42.00	37.00	100.00	N	
42.00	45.00	34.00	100.00	N	
45.00	48.00	20.00	100.00	N	
48.00	51.00	29.00	100.00	N	
51.00	54.00	36.00	100.00	N	
54.00	57.00	16.00	100.00	N	
57.00	60.00	62.00	100.00	N	
60.00	63.00	55.00	100.00	N	
63.00	66.00	60.00	100.00	N	
66.00	69.00	70.00	100.00	N	
69.00	72.00	52.00	100.00	N	
72.00	75.00	62.00	100.00	N	
75.00	78.00	33.00	100.00	N	
78.00	81.00	85.00	100.00	N	
81.00	84.00	29.00	97.00	N	
84.00	85.30	69.00	100.00	N	85.3m End of Hole

Detailed Log

Hole Number: **ES2004-09** Units: METRIC

Project Name:	Espedalen	Collar Survey:	Y	Plugged	N	Core Storage:	Strand Fjellstue
Project Number:	300	Mulitshot Survey:	Y	Hole Size:	TT46	Contractor:	Geo Drilling A/S
Date Started:	8/27/2004	Pulse EM Survey:	Y				
Date Completed:	8/31/2004	Casing:	Left in Hole, capped				
		Location:	Surface				

UTM WGS 84 Coord		Local Coord	
UTM Northing:	6,801,193.37	Local Northing:	3074.43
UTM Easting:	535,308.73	Local Easting:	1595.72
Elevation:	979.13		

Collar Dip: -78.68
Collar Azimuth: 208.95
Length: 139.20
Logged by: Yannick Beaudoin

Comments

Purpose: To follow-up on mineralization intersected in ES2004-08 and further test UTEM conductor ESP_17_17. Conductivity = 700, 1000 Siemens (2 plates)

Result: Intersected two units of mineralized ultramafic schist and two units of massive sulphide (MS) between 80.4m and 95.0m (po-pn-cp-py). Pentlandite "eyes" visible in MS intervals. Mineralized units are bounded by anorthosite and mafic dykes.

Assays: 1.73% Ni, 0.77% Cu, 0.06% Co / 14.60m (80.40-95.00m)
incl. 3.39% Ni, 2.03% Cu, 0.12% Co / 1.00m
3.03% Ni, 1.15% Cu, 0.14% Co / 1.80m
5.55% Ni, 5.42% Cu, 0.16% Co / 0.50m
6.91% Ni, 2.05% Cu, 0.21% Co / 1.90m

Borehole UTEM: Multi-peaked in-hole responses @ 68m, 85m & 95m. Latter two can be correlated with intersected mineralization listed above. Response at 68m can be correlated with cm scale sulphide stringers intersected within the following intervals: 63.50-63.55m, 64.80-64.80m & 73.50-74.85m.

Lithological interpretation: Anorthositic terrain intruded by mafic dykes and narrow mineralized ultramafic intrusions. Subsequent tectonization of all lithologies and partial remobilization of massive sulphides.

NOTE: Collar re-surveyed by Rob McKeown with base station DGPS in winter of 2005. Results as follows:
UTM North - 6,801,301.504 UTM East - 535,129.069 Grid North: 3006.306 Grid East: 11397.396

Detailed Lithology

From	To		Lithology
0.00	8.80	C	**Casing**
8.80	9.80	10f	**Mafic dykes** Unmineralized, fine-medium grained mafic dyke/flow. Lower contact near perpendicular to core axis.

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t

Detailed Lithology

From	To	Lithology
9.80	80.43	**4s Sausseritized/Tectonized Anorthosite** Inhomogeneous, foliated, mottled to banded, white and green, tectonized and altered anorthosite. Alteration consists of patchy to pervasive sausseritization and sericitization (?). Consists of 60-75% variably sausseritized plagioclase, 10-30% foliated, fine grained, pale green amorphous alteration mineral (sericite?) and 5-10% dark green chloritized mafic minerals. Locally contains cm to dm scale intervals of fine grained , green ultramafic schist (eg. 69.6-70m, 73.5-73.85m, 74.85-74.95m). Unit is cross cut by mm to cm scale foliation parallel quartz veins. Dm to m scale mafic dykes/flows intrude the unit (see Minor Units). Banded hematization occurs between 50.00m and 56.40m. **Minor Interval** 13.48 17.80 **10f Mafic dykes** Unmineralized, fine-medium grained mafic dyke/flow. Upper contact near perpendicular to core axis. Lower contact at 85 degrees to core axis. **Minor Interval** 19.70 23.58 **10f Mafic dykes** Unmineralized, fine-medium grained mafic dyke/flow. Upper contact at 75 degrees to core axis. Lower contact near perpendicular to core axis. **Minor Interval** 26.30 31.18 **10f Mafic dykes** Unmineralized, fine-medium grained mafic dyke/flow. Upper contact near perpendicular to core axis. Lower contact at 75 degrees to core axis. **Minor Interval** 56.40 58.00 **10f Mafic dykes** Unmineralized, fine-medium grained mafic dyke/flow. Upper contact near perpendicular to core axis. Lower contact at 45 degrees to core axis. **Minor Interval** 60.60 68.28 **10f Mafic dykes** Unmineralized, fine-medium grained mafic dyke/flow. Upper contact at 50 degrees to core axis. Lower contact near perpendicular to core axis. **Mineralization** 63.50 63.55 80.0 % Py Pyrite

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG03106	72.50	73.50	1.00	0.03	0.03	0.01	0.07	0.02	0.01	0.01	0.25
PG03107	73.50	74.85	1.35	0.46	0.12	0.01	2.11	0.01	0.01	0.01	0.25
PG03108	74.85	75.60	0.75	0.03	0.03	0.01	0.01	0.03	0.01	0.01	0.25
PG00231	79.40	80.40	1.00	0.03	0.03	0.01	0.10	0.01	0.01	0.01	0.25
PG00232	80.40	81.40	1.00	3.39	2.03	0.12	19.50	0.04	0.08	0.02	1.70

Detailed Lithology						Assay Data											
From	To	Lithology				Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
					STR Stringers py, po stringer; isolated												
		Mineralization	64.80	64.84	55.0 %	Po Pyrrhotite STR Stringers po, minor ccp; isolated											
		Mineralization	73.50	74.85	5.0 %	Po Pyrrhotite STR Stringers 5% po (1pn, tr cp) concentrated in t three 3 20mm wide massive stringers (73.5m: 33° to CA; 74.8m: 60° to CA).											
		Alteration	50.00	56.40	HM BN M	Hematite Banded Moderate											
		Structure	45.50	45.51	Sm	General Foliation											
		Structure	55.50	55.51	Sm	General Foliation											
		Structure	73.00	73.01	Sm	General Foliation											
		Structure	73.50	73.51	Sm	General Foliation											
		Structure	74.50	74.51	Sm	General Foliation											
80.43	81.40	**6e Ultramafic Schist** Fine grained, highly altered (chloritized) ultramafic schist. Mineralization consists of 30-35% sulphides over length. Net textured on dm scale. Semi massive stringers. 80-85% po with 10% py, 5% ccp and trace exsolution of pentlandite. Cm scale angular fragment of anorthositic gabbro. Upper contact appears near perpendicular to core axis although some missing pieces make observation inconclusive. Lower contact is at 75 degrees to core axis. Interpretation: May be consistent with Heim's rock suite **2b**.																
		Mineralization	80.43	81.40	33.0 %	Po Pyrrhotite STR Stringers locally net textured and semi massive stringers; po-pn-cpy											
		Alteration	80.43	81.40	CH P S	Chlorite Pervasive Strong											

Detailed Lithology			Assay Data										
From	To	Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
81.40	82.50	**4s Sausseritized/Tectonized Anorthosite** Medium grained, mottled, white and grey anorthosite. Unit is cross cut by mm to cm scale foliation parallel quartz veins. Dm to m scale mafic dykes/flows intrude the unit.	PG00233	81.40	82.50	1.10	0.03	0.03	0.01	0.12	0.01	0.01	0.01	0.25
82.50	84.28	**6e Ultramafic Schist** Fine grained, highly altered (chloritized) ultramafic schist. Mineralization consists of 45-50% sulphides over length. Net textured on dm scale. Locally semi massive stringers. 75% po with 10% py, 10% ccp and ~5% exsolution of pentlandite ("eyes"). Cm scale unmineralized patches. In the vicinity of 83.20m, cm scale dark patches are observed within an unmineralized portion of the unit. Relict pyroxenes? Upper and lower contacts are near perpendicular to core axis. Interpretation: May be consistent with Heim's rock suite 2b. **Mineralization** 82.51 84.28 50.0 % Po Pyrrhotite NT Net-Textured po-pn-cpy-py; visible pentlandite "eyes" **Alteration** 82.51 84.28 CH Chlorite P Pervasive S Strong	PG00234	82.50	83.00	0.50	3.29	1.38	0.17	23.40	0.04	0.03	0.03	1.40
			PG00235	83.00	83.50	0.50	2.92	0.68	0.13	18.20	0.05	0.03	0.01	0.80
			PG00236	83.50	84.30	0.80	2.94	1.30	0.12	18.10	0.10	0.05	0.02	1.00
84.28	87.00	**10f Mafic dykes** Fine-medium grained mafic dyke/flow. **Minor Interval** 86.60 87.00 **6e Ultramafic Schist** Ultramafic schist with 10% po and 5% cp in several 2-15mm wide veinlets. **Mineralization** 86.66 87.00 5.0 % Po Pyrrhotite STR Stringers with minor ccp	PG00237	84.30	85.00	0.70	0.03	0.03	0.01	0.20	0.01	0.01	0.01	0.25
			PG00238	85.00	86.00	1.00	0.03	0.03	0.01	0.38	0.01	0.01	0.01	0.25
			PG00239	86.00	87.00	1.00	0.34	0.49	0.01	2.52	0.03	0.01	0.01	0.25

Detailed Lithology			Assay Data										
From	To	Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
87.00	87.50	**MS MASSIVE SULPHIDE (>75%)** 20% fine grained, highly altered (chloritized) ultramafic schist and 80% massive sulphides (70% po with 15% ccp, 10% py and ~5% exsolution of pentlandite ("eyes")). Upper contact slightly diffuse and at about 75 degrees to core axis. Lower contact at about 80 degrees to core axis. Interpretation: May be consistent with Heim's rock suite 2b. **Mineralization** 87.00 87.50 93.0 % Po Pyrrhotite; M Massive; po-cpy-pn-py; visible pentlandite "eyes" **Alteration** 87.00 87.50 CH Chlorite; P Pervasive; S Strong	PG00240	87.00	87.50	0.50	5.55	5.42	0.16	31.10	0.05	0.07	0.08	3.60
87.50	92.00	**10f Mafic dykes** Fine grained, well foliated, unmineralized, green mafic dyke as 84.28-87m. Uphole contact approximately perpendicular to CA; downhole contact at 80° to CA.	PG00241	87.50	88.50	1.00	0.11	0.07	0.01	0.47	0.01	0.01	0.01	0.25
			PG03094	88.50	89.50	1.00	0.03	0.03	0.01	0.14	0.02	0.01	0.01	0.25
			PG03095	89.50	90.50	1.00	0.03	0.03	0.01	0.05	0.08	0.02	0.02	0.25
			PG03096	90.50	92.00	1.50	0.03	0.06	0.01	0.26	0.01	0.01	0.01	0.25
92.00	93.10	**4s Sausseritized/Tectonized Anorthosite** Fine to medium grained, sheared, white and green anorthosite as previously.	PG00242	92.00	93.10	1.10	0.03	0.03	0.01	0.16	0.01	0.01	0.01	0.25

Detailed Lithology

From	To	Lithology
93.10	95.00	**MS MASSIVE SULPHIDE (>75%)** Fine grained, highly altered (chloritized) ultramafic schist. Mineralization consists of 75-80% sulphides over length. 70% po with 10% py, 10% ccp and ~10% exsolution of pentlandite ("eyes"). From 93.10m to 93.22m, only ~trace sulphides. From 93.22m to 95m, 90-95% (massive) sulphides. Minor cm to dm scale unmineralized fragments. Upper contact at 45 degrees to core axis. Lower contact appears to be near perpendicular to core axis (missing piece). Interpretation: May be consistent with Heim's rock suite 2b. **Mineralization** 93.10 93.22 0.5 % Po Pyrrhotite TR Trace **Mineralization** 93.22 95.00 95.0 % Po Pyrrhotite M Massive po-pn-cpy; visible pentlandite "eyes" **Alteration** 93.10 95.00 CH Chlorite P Pervasive S Strong

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00243	93.10	94.00	0.90	6.56	1.87	0.20	30.60	0.03	0.06	0.05	1.00
PG00244	94.00	95.00	1.00	7.22	2.21	0.21	33.40	0.21	0.59	0.06	1.20

Detailed Lithology			Assay Data										
From	To	Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
95.00	139.20	**4s Sausseritized/Tectonized Anorthosite** Inhomogenous, medium grained, well foliated to banded altered and tectonized anorthosite. Consists of 70-80% white plagioclase, 15-20% pale green sericite (?) and 5-10% dark green, chloritized mafic minerals. Locally cross-cut by cm to dm scale schistose ultramafic dykes. Progressively more leucocratic with increasing depth. **Minor Interval** 128.05 131.00 **10f Mafic dykes** Unmineralized, fine-medium grained mafic dyke/flow. Upper contact at 40 degrees to core axis. Lower contact perpendicular to axis. **Minor Interval** 131.50 132.40 **10f Mafic dykes** Unmineralized, fine-medium grained mafic dyke/flow. Upper and lower contacts at 75 degrees to core axis. **Alteration** 137.00 139.19 HM Hematite ST Staining M Moderate **Structure** 114.50 114.51 Sm General Foliation	PG00245	95.00	96.00	1.00	0.06	0.12	0.01	0.24	0.01	0.01	0.01	0.25

Espedalen - Analysis

Hole Number: ES2004-09

Sample Number	From	To	Sample Length	Ni%	Cu%	Co%	S%	Au g/t	Pt g/t	Pd g/t	Ag g/t	Pb%	Zn%	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	V2O5 %	LOI%	SUM %
PG03106	72.50	73.50	1.00	0.03	0.03	0.01	0.07	0.01	0.02	0.01	0.25																
PG03107	73.50	74.85	1.35	0.46	0.12	0.01	2.11	0.01	0.01	0.01	0.25																
PG03108	74.85	75.60	0.75	0.03	0.03	0.01	0.01	0.01	0.03	0.01	0.25																
PG00231	79.40	80.40	1.00	0.03	0.03	0.01	0.10	0.01	0.01	0.01	0.25																
PG00232	80.40	81.40	1.00	3.39	2.03	0.12	19.50	0.02	0.04	0.08	1.70																
PG00233	81.40	82.50	1.10	0.03	0.03	0.01	0.12	0.01	0.01	0.01	0.25																
PG00234	82.50	83.00	0.50	3.29	1.38	0.17	23.40	0.03	0.04	0.03	1.40																
PG00235	83.00	83.50	0.50	2.92	0.68	0.13	18.20	0.01	0.05	0.03	0.80																
PG00236	83.50	84.30	0.80	2.94	1.30	0.12	18.10	0.02	0.10	0.05	1.00																
PG00237	84.30	85.00	0.70	0.03	0.03	0.01	0.20	0.01	0.01	0.01	0.25																
PG00238	85.00	86.00	1.00	0.03	0.03	0.01	0.38	0.01	0.01	0.01	0.25																
PG00239	86.00	87.00	1.00	0.34	0.49	0.01	2.52	0.01	0.03	0.01	0.25																
PG00240	87.00	87.50	0.50	5.55	5.42	0.16	31.10	0.08	0.05	0.07	3.60																
PG00241	87.50	88.50	1.00	0.11	0.07	0.01	0.47	0.01	0.01	0.01	0.25																
PG03094	88.50	89.50	1.00	0.03	0.03	0.01	0.14	0.01	0.02	0.01	0.25																
PG03095	89.50	90.50	1.00	0.03	0.03	0.01	0.05	0.02	0.08	0.02	0.25																
PG03096	90.50	92.00	1.50	0.03	0.06	0.01	0.26	0.01	0.01	0.01	0.25																
PG00242	92.00	93.10	1.10	0.03	0.03	0.01	0.16	0.01	0.01	0.01	0.25																
PG00243	93.10	94.00	0.90	6.56	1.87	0.20	30.60	0.05	0.03	0.06	1.00																
PG00244	94.00	95.00	1.00	7.22	2.21	0.21	33.40	0.06	0.21	0.59	1.20																
PG00245	95.00	96.00	1.00	0.06	0.12	0.01	0.24	0.01	0.01	0.01	0.25																

Espedalen - Conductivity	Hole Number: ES2004-09

Depth	Conductivity (Siemens)	COMMENTS
80.90	999.00	1136
81.30	974.20	
83.10	999.00	1399
87.25	999.00	1343
93.30	999.00	1871
93.80	999.00	2140
94.40	999.00	1387
94.70	999.00	1685

Espedalen - Magnetic Susceptibility

Hole Number: ES2004-09

DEPTH	MAGNETIC SUSCEPTIBILITY (X 10^{-3} SI)	COMMENTS
9.50	0.64	
10.50	0.17	
11.50	0.16	
12.50	0.20	
13.50	0.26	
14.50	0.39	
15.50	0.55	
16.50	0.53	
17.50	0.47	
18.50	0.20	
19.50	0.24	
20.50	0.55	
21.50	0.54	
22.50	0.59	
23.50	0.20	
24.50	0.13	
25.50	0.17	
26.50	0.47	
27.50	0.45	
28.50	0.39	
29.50	0.40	
30.50	0.43	
31.50	0.22	
32.50	0.02	
33.50	0.21	
34.50	0.16	
35.50	0.16	
36.50	0.18	
37.50	0.20	
38.50	0.20	
39.50	0.23	
40.50	0.21	
41.50	0.16	
42.50	0.08	
43.50	0.10	
44.50	0.12	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-09
45.50	0.15	
46.50	0.23	
47.50	0.19	
48.50	0.10	
49.50	0.11	
50.50	0.14	
51.50	0.18	
52.50	0.21	
53.50	0.13	
54.50	0.18	
55.50	0.39	
56.50	0.56	
57.50	0.20	
58.50	0.16	
59.50	0.16	
60.50	0.23	
61.50	0.46	
62.50	0.44	
63.50	0.42	
64.50	0.82	
65.50	0.25	
66.50	0.14	
67.50	0.25	
68.50	0.24	
69.50	0.57	
70.50	0.18	
71.50	0.21	
72.50	0.44	
73.50	21.00	
74.50	1.50	
75.50	0.18	
76.50	0.22	
77.50	0.11	
78.50	0.15	
79.50	0.09	
80.50	23.60	
81.50	8.18	
82.50	18.00	
83.50	19.60	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-09
84.50	0.03	
85.50	0.46	
86.50	0.45	
87.50	5.70	
88.50	0.41	
89.50	0.32	
90.50	0.45	
91.50	0.44	
92.50	0.15	
93.50	29.80	
94.50	90.20	
95.50	0.46	
96.50	0.86	
97.50	0.03	
98.50	0.06	
99.50	0.13	
100.50	0.14	
101.50	0.12	
102.50	0.10	
103.50	0.13	
104.50	0.05	
105.50	0.06	
106.50	0.14	
107.50	0.08	
108.50	0.07	
109.50	0.23	
110.50	0.10	
111.50	0.05	
112.50	0.07	
113.50	0.30	
114.50	0.10	
115.50	0.06	
116.50	0.12	
117.50	0.12	
118.50	0.10	
119.50	0.06	
120.50	0.17	
121.50	0.25	
122.50	0.32	

Espedalen - Magnetic Susceptibility		Hole Number: ES2004-09
123.50	0.14	
124.50	0.07	
125.50	0.76	
126.50	0.06	
127.50	0.10	
128.50	0.51	
129.50	0.46	
130.50	0.48	
131.50	0.48	
132.50	0.07	
133.50	0.03	
134.50	0.03	
135.50	0.05	
136.50	0.07	
137.50	0.06	
138.50	0.03	

Espedalen - Rock Quality (RQD)

Hole Number: ES2004-09

FROM	TO	PERCENT QUALITY	PERCENT CORE	DISKING	COMMENTS
8.80	11.00	15.00	95.00	N	
11.00	14.00	32.00	100.00	N	
14.00	17.00	68.00	100.00	N	
17.00	20.00	70.00	100.00	N	
20.00	23.00	69.00	100.00	N	
23.00	26.00	66.00	100.00	N	
26.00	29.00	63.00	100.00	N	
29.00	32.00	82.00	100.00	N	
32.00	35.00	88.00	100.00	N	
35.00	38.00	82.00	98.00	N	
38.00	41.00	68.00	100.00	N	
41.00	44.00	70.00	100.00	N	
44.00	47.00	64.00	100.00	N	
47.00	50.00	69.00	100.00	N	
50.00	53.00	31.00	100.00	N	
53.00	56.00	42.00	100.00	N	
56.00	59.00	49.00	95.00	N	
59.00	62.00	71.00	98.00	N	
62.00	65.00	74.00	98.00	N	
65.00	68.00	38.00	100.00	N	
68.00	71.00	43.00	100.00	N	
71.00	74.00	65.00	100.00	N	
74.00	77.00	66.00	100.00	N	
77.00	80.00	55.00	98.00	N	
80.00	83.00	37.00	95.00	N	
83.00	86.00	63.00	100.00	N	
86.00	89.00	59.00	100.00	N	
89.00	92.00	41.00	100.00	N	
92.00	95.00	76.00	100.00	N	
95.00	98.00	77.00	100.00	N	
98.00	101.00	80.00	100.00	N	
101.00	104.00	75.00	100.00	N	
104.00	107.00	66.00	100.00	N	
107.00	110.00	62.00	100.00	N	
110.00	113.00	60.00	100.00	N	
113.00	116.00	57.00	100.00	N	
116.00	119.00	70.00	100.00	N	

Espedalen - Rock Quality (RQD)					Hole Number: ES2004-09
119.00	122.00	85.00	100.00	N	
122.00	125.00	65.00	100.00	N	
125.00	128.00	68.00	100.00	N	
128.00	131.00	84.00	100.00	N	
131.00	134.00	70.00	100.00	N	
134.00	137.00	62.00	95.00	N	
137.00	139.20	35.00	100.00	N	

Detailed Log

Hole Number: **ES2004-10** Units: METRIC

Project Name:	Espedalen	Collar Survey:	Y	Plugged	N	Core Storage:	Strand Fjellstue
Project Number:	300	Mulitshot Survey:	N	Hole Size:	TT46	Contractor:	Geo Drilling A/S
Date Started:	9/1/2004	Pulse EM Survey:	Y				
Date Completed:	9/5/2004	Casing:	Left in Hole, capped			Logged by:	P. Tirschmann
		Location:	Surface				

UTM WGS 84 Coord		Local Coord	
UTM Northing:	6,803,420.18	Local Northing:	2858.74
UTM Easting:	533,158.66	Local Easting:	8507.84
		Elevation:	1007.65

Collar Dip: -50.00
Collar Azimuth: 230.00
Length: 129.65

Comments

Purpose: To test UTEM conductor ESP_16_16. Conductivity =600 siemens

Result: Intersected variably mineralized, zoned UM body between 50.8m and 83.15m. Conductor can be correlated with the following zones of mineralized ultramafic:
65-73m (8m): 3-15% po disseminations, blebs and stringers in dunite/peridotite
76-79m (3m): 5-10% po blebs, stringers and veinlets in peridotite

Assays: 0.52% Ni, 0.12% Cu, 0.02% Co / 1.00m (65.00-66.00m) (Best)

Borehole UTEM: In-hole response centered @68m.

Lithological interpretation: Anorthositic terrain intruded by mafic dykes and a mineralized ultramafic body.

Detailed Lithology

From	To	Lithology
0.00	1.79	C **Casing**
1.79	12.60	**10f Mafic dykes** Fine to medium grained, greyish-green mafic dyke. Crosscut by several percent 1-15mm wide white carbonate veinlets. Downhole contact is gradational chilled over approx. 5cm; 60-75 degrees to CA. Magnetic Susceptibility: <1 Conductivity: Non-conductive Interpretation: Unit could be either a gabbroic dyke or a coarse grained mafic metavolcanic flow. (More likely a gabbroic dyke if bounded by anorthosite). Similar units logged as mafic dykes in drillholes ES-2004-05, 06 & 07 (P4 area) and ES-2004-08 & 09 (P2 area).

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t

Detailed Lithology			Assay Data										
From	To	Lithology	Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
12.60	31.60	**4 Anorthosite / Anorthositic Gabbro** White to grey medium grained anorthosite consisting of 80-90% feldspar and 10-20% interstitial soft, green, altered mafic (?) minerals. Local grain size reduction due to shearing. Unit becomes progressively more altered and tectonized downhole. Downhole contact gradational. Cross-cut by 2 narrow ultramafic dykes (see minor intervals). Magnetic Susceptibility: <0.5 Conductivity: Non-conductive **Minor Interval** 23.42 24.10 **8e Pyroxenite** Fine grained, dark green melano-gabbro to pyroxenite dyke. Contacts sharp; uphole contact at 60 degrees to CA; downhole contact at 50 degrees to CA. Related to uphole gabbroic unit? **Minor Interval** 24.90 25.45 **8e Pyroxenite** Fine grained, dark green melano-gabbro to pyroxenite dyke. Contacts sharp; uphole contact at 50-55 degrees to CA; downhole contact at approx. 75 degrees to CA. Related to uphole gabbroic unit? **Structure** 30.40 30.41 Sm General Foliation Shearing												
31.60	50.80	**4s Sausseritized/Tectonized Anorthosite** Inhomogenous, banded white, grey and pale green sausseritized and sheared anorthosite. Consists of fine grained, sheared sericite and feldspar-rich rock surrounding lozenges of what appears to be coarser grained, equigranular, white anorthosite as uphole. Grain size reduction with shearing evident; locally mylonitized. Magnetic Susceptibility: <0.5 Conductivity: non-conductive Interpretation: Altered, tectonized anorthosite based on gradation to more recognizable anorthosite uphole. **Minor Interval** 42.65 43.03 **10f Mafic dykes** Pale green, aphanitic mafic dyke. Contacts sharp; uphole contact at 40 degrees to CA; downhole contact at 65 degrees to CA. **Structure** 34.50 34.51 Sm General Foliation **Structure** 39.70 39.71 Sm General Foliation **Structure** 43.40 43.41 Sm General Foliation **Structure** 49.90 49.91 Sm General Foliation	PG00246	49.00	50.00	1.00	0.03	0.03	0.01	0.04	0.01	0.01	0.01	0.25
			PG00247	50.00	50.80	0.80	0.03	0.03	0.01	0.10	0.01	0.01	0.01	0.25

Detailed Lithology

From	To	Lithology
50.80	83.15	**6 Undivided Ultramafic Intrusive** Fine to medium grained, dark green to black zoned (?) ultramafic body containing trace to, locally, 15% sulphides (po, minor cp) occurring as blebs, disseminations and stringers. Shows less evidence of tectonization compared to surrounding anorthosites. Massive to locally foliated . Several cm to dm scale inclusions (?) of altered, brownish green, fine grained, equigranular gabbroic rock adjacent to downhole contact between 81m and 83.15m. 50.8-65m: Fairly soft, pyroxenitic (?) ultramafic largely altered to chlorite, serpentine and talc +- phlogopite. Locally contains mm to cm scale, rounded grains altered to phlogopite (formerly pyroxenes?). Trace disseminated sulphides. Mag sus ranges from <1 to 2.5; non-conductive. 65-73: Medium grained, dark green to black, cumulate textured, well-mineralized dunite/peridotite containing 3-15% sulphide blebs , disseminations & minor fracture fillings (esp. cp). Sulphides locally strung out parallel to foliation. Mag Sus ranges from 2-20; conductivity = 10-30, locally 200 (eg. 65.7m). 73-83.15m: Medium grained, dark green, variably altered peridotitic to pyroxenitic ultramafic containing 1-5% sulphide blebs, disseminations and stringers. Two intervals of fine grained equigranular, melanonorite (?) from 81-81.90m and 82.75-83.15m. Mag sus highly variable (1-50) but averages 15-20; conductivity = 10-60; locally 100-300. Uphole contact sharp at 55 degrees to CA; Downhole contact at approx. 50 degrees to CA. Interpretation: Zoned ultramafic body consisting of a mineralized dunitic to peridotitic core surrounded by peridotitic to pyroxenitic phases. Body interpreted to intrude surrounding anorthosites. **Minor Interval** 62.90 64.35 **4s Sausseritized/Tectonized Anorthosite** **Mineralization** 50.80 53.00 0.5 % Po Pyrrhotite STR Stringers Trace po veinlets locally.

Assay Data

Sample #	From	To	Length	Ni %	Cu %	Co %	S %	Pt g/t	Pd g/t	Au g/t	Ag g/t
PG00248	50.80	52.00	1.20	0.11	0.07	0.01	0.85	0.01	0.01	0.01	0.25
PG00249	52.00	53.00	1.00	0.12	0.06	0.01	0.69	0.01	0.01	0.01	0.25
PG03001	53.00	54.00	1.00	0.06	0.03	0.01	0.16	0.06	0.01	0.02	0.25
PG03002	54.00	55.00	1.00	0.08	0.03	0.02	0.26	0.01	0.01	0.01	0.25
PG03003	55.00	56.00	1.00	0.09	0.03	0.01	0.44	0.01	0.01	0.01	0.25
PG03004	56.00	57.00	1.00	0.07	0.05	0.01	0.10	0.02	0.01	0.01	0.25
PG03005	57.00	58.00	1.00	0.23	0.07	0.01	0.36	0.02	0.01	0.01	0.25
PG03006	58.00	59.00	1.00	0.14	0.03	0.02	0.27	0.01	0.01	0.01	0.25
PG03007	59.00	60.00	1.00	0.03	0.03	0.01	0.18	0.01	0.01	0.01	0.25
PG03008	60.00	61.00	1.00	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.25
PG03009	61.00	62.00	1.00	0.03	0.05	0.01	0.01	0.01	0.01	0.01	0.25
PG03010	62.00	62.90	0.90	0.03	0.03	0.01	0.01	0.01	0.01	0.01	0.25
PG03012	64.35	65.00	0.65	0.08	0.03	0.01	0.19	0.02	0.01	0.01	0.25
PG03013	65.00	66.00	1.00	0.52	0.12	0.02	4.24	0.02	0.02	0.01	0.50
PG03014	66.00	67.00	1.00	0.33	0.31	0.03	3.13	0.01	0.01	0.03	1.10
PG03015	67.00	68.00	1.00	0.26	0.17	0.01	1.82	0.02	0.01	0.02	0.60
PG03016	68.00	69.00	1.00	0.30	0.28	0.03	2.50	0.03	0.01	0.13	1.20
PG03017	69.00	70.00	1.00	0.37	0.33	0.01	2.81	0.02	0.02	0.03	1.10
PG03018	70.00	71.00	1.00	0.42	0.37	0.02	3.14	0.01	0.01	0.01	0.80
PG03019	71.00	72.00	1.00	0.29	0.10	0.01	1.93	0.02	0.01	0.01	0.25
PG03020	72.00	73.00	1.00	0.20	0.09	0.01	1.13	0.01	0.01	0.01	0.25
PG03021	73.00	74.00	1.00	0.16	0.09	0.03	0.95	0.02	0.01	0.01	0.25
PG03022	74.00	75.00	1.00	0.21	0.09	0.02	1.42	0.01	0.02	0.02	0.25
PG03023	75.00	76.00	1.00	0.26	0.17	0.01	2.00	0.01	0.02	0.01	0.25
PG03024	76.00	77.00	1.00	0.47	0.31	0.03	3.88	0.03	0.03	0.01	0.90
PG03026	77.00	78.00	1.00	0.46	0.11	0.01	3.72	0.01	0.03	0.01	0.25
PG03027	78.00	79.00	1.00	0.28	0.11	0.02	2.32	0.01	0.02	0.01	0.25
PG03028	79.00	80.00	1.00	0.23	0.19	0.02	1.36	0.01	0.02	0.06	0.60
PG03029	80.00	81.00	1.00	0.30	0.17	0.02	2.33	0.03	0.03	0.02	0.60
PG03030	81.00	81.90	0.90	0.09	0.11	0.01	0.11	0.04	0.04	0.01	0.25
PG03031	81.90	82.75	0.85	0.08	0.08	0.01	0.67	0.01	0.01	0.01	0.25
PG03032	82.75	83.15	0.40	0.06	0.03	0.04	0.03	0.02	0.02	0.01	0.25