DETAILED LOG

Hole Number: ES2005-33

Units: METRIC

Project Name:	Norway - Espedalen	Primary Coordinates	Grid: UTM84-32N		Destination Coordinates	Grid: UTM:	Collar Dip: -65.18
Project Number:	201	North:	6801254.17		North:	61.34	Collar Az: 226.58
Location:	Surface	East:	535233.39		East:	9.66	Length: 128.00 (m)
		Elev:	967.98		Elev:	967.98	Start Depth: 0.00 (m)
Date Started:	Apr 18, 2005	Collar Survey:	Y	Plugged: N	Contractor:	Arctic Drilling A/S	Final Depth: 128.00 (m)
Date Completed:	Apr 19, 2005	Multishot Survey:	Y	Hole Size: TT46	Core Storage:	Strand Fjellstue	
Logged By:	Trevor Blair	Pulse EM Survey:	Y	Casing: Left in Hole, capped			

Comments: Purpose: Test 17m down-dip toe on mineralization intersected in hole ES2005-20 (2.81%Ni, 1.11%Cu, 0.08%Co / 10.17m (65.43-75.06m)).

Result: Intersected several cm to dm scale remobilized massive sulphide (po-pn-cpy) veinlets within host anorthosite from 65.90-66.30m (0.40m) and 86.50-86.87m (0.37m). A massive sulphide (po-pn-cpy) veinlet was also intersected within anorthosite from 87.70-87.80m (0.10m).

Assays: 1.68%Ni, 0.32%Cu, 0.07%Co / 0.40m (65.90-66.30m)
0.91%Ni, 0.21%Cu, 0.04%Co / 1.55m (86.50-88.05m) including 1.81%Ni, 0.54%Cu, 0.05%Co / 0.50m (86.50-86.87m) and 1.98%Ni, 0.23%Cu, 0.08%Co / 0.35m (87.70-88.05m)

Borehole UTEM: Predominantly off-hole response @ 80m (5-10m away) with in-hole spikes @ 65m & 87m. In-hole spikes correlate with intersected mineralization.

Sample Averages

Average Type	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
WEIGHTED	86.20	86.87	0.67	1.0936	0.3654	0.0321

Survey Data

Depth (m)	Azimuth Decimal	Dip Decimal	Test Type	Flag	Comments	Depth (m)	Azimuth Decimal	Dip Decimal	Test Type	Flag	Comments
0.00	226.58	-65.18	MShot	OK		5.00	226.58	-65.18	MShot	OK	
10.00	227.38	-65.08	MShot	OK		15.00	227.83	-64.92	MShot	OK	
20.00	228.12	-64.80	MShot	OK		25.00	228.27	-64.80	MShot	OK	
30.00	228.58	-64.82	MShot	OK		35.00	228.72	-64.72	MShot	OK	
40.00	228.84	-64.70	MShot	OK		45.00	229.03	-64.65	MShot	OK	
50.00	228.93	-64.69	MShot	OK		55.00	229.16	-64.66	MShot	OK	
60.00	229.73	-64.71	MShot	OK		65.00	230.49	-64.58	MShot	OK	
70.00	230.67	-64.59	MShot	OK		75.00	230.65	-64.50	MShot	OK	
80.00	230.65	-64.51	MShot	OK		85.00	230.57	-64.60	MShot	OK	
90.00	230.30	-64.55	MShot	OK		95.00	230.17	-64.49	MShot	OK	
100.00	230.28	-64.41	MShot	OK		105.00	230.11	-64.35	MShot	OK	
110.00	230.06	-64.32	MShot	OK		115.00	229.82	-64.29	MShot	OK	
120.00	229.85	-64.31	MShot	OK		126.00	229.80	-64.30	MShot	OK	

Detailed Lithology

From (m)	To (m)	Lithology
0	2.60	C, Casing

Assay Data

Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%

Hole Number: ES2005-33

Units: METRIC

Detailed Lithology			Assay Data						
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
2.60	14.85	MD, Mafic Dike Fine grained, dark green, homogenous, well foliated, non-magnetic mafic dyke/sill composed of biotite, chlorite and pyroxenes (appear white on cut surfaces). This unit contains trace to 1% fine grained pyrrhotite. The lower contact of this unit is sharp at 75 degrees to the ca. Structure 8.50 - 8.51 : S1 First Foliation, 80 Deg to CA RQD 2.60 - 6.00 : 69.00 % RQD 100.00 % Core 6.00 - 9.00 : 92.00 % RQD 100.00 % Core 9.00 - 12.00 : 81.00 % RQD 100.00 % Core 12.00 - 15.00 : 93.00 % RQD 100.00 % Core MINOR INTERVALS: Minor Interval: 2.6 - 3.5 4s, Sausseritized/Tectonized Anorthosite Beginning of hole is within anorthosite. Granitic boulders cored in overburden.								

Hole Number: ES2005-33

Units: METRIC

Detailed Lithology			Assay Data						
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
14.85	52.95	4s, Sausseritized/Tectonized Anorthosite Medium grained, white-grey-green, non-magnetic, homogenous anorthosite composed of various amounts of plagioclase, chlorite and alteration minerals (resulting from sausseritization, epidotization). This unit contains local disseminated pyrrhotite-pyrite. The lower contact of this unit is sharp at 65 degrees to the ca. Structure 21.00 - 21.01 : S1 First Foliation, 80 Deg to CA 46.30 - 46.31 : S1 First Foliation, 65 Deg to CA RQD 15.00 - 18.00 : 77.00 % RQD 100.00 % Core 18.00 - 21.00 : 82.00 % RQD 100.00 % Core 21.00 - 24.00 : 96.00 % RQD 100.00 % Core 24.00 - 27.00 : 100.00 % RQD 100.00 % Core 27.00 - 30.00 : 89.00 % RQD 100.00 % Core 30.00 - 33.00 : 84.00 % RQD 100.00 % Core 33.00 - 36.00 : 97.00 % RQD 100.00 % Core 36.00 - 39.00 : 96.00 % RQD 100.00 % Core 39.00 - 42.00 : 95.00 % RQD 100.00 % Core 42.00 - 45.00 : 92.00 % RQD 100.00 % Core 45.00 - 48.00 : 61.00 % RQD 100.00 % Core 48.00 - 51.00 : 76.00 % RQD 100.00 % Core 51.00 - 54.00 : 85.00 % RQD 100.00 % Core MINOR INTERVALS: Minor Interval: 26.22 - 26.5 MD, Mafic Dike Fine grained, non-magnetic, homogenous, grey, unmineralized mafic dyke. Upper and lower contacts are both sharp at 40 and 70 degrees to the ca, respectively.								

Hole Number: ES2005-33

Units: METRIC

Detailed Lithology			Assay Data						
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
52.95	60.75	MD, Mafic Dike Fine grained, non-magnetic, homogenous, grey-green, massive to weakly foliated mafic dyke composed of chlorite, plagioclase and biotite. This unit is unmineralized. The lower contact of this unit is sharp at 65 degrees to the ca. RQD 54.00 - 57.00 : 89.00 % RQD 100.00 % Core 57.00 - 60.00 : 92.00 % RQD 100.00 % Core 60.00 - 63.00 : 100.00 % RQD 100.00 % Core							

Hole Number: ES2005-33

Units: METRIC

Detailed Lithology

From (m)	To (m)	Lithology
60.75	128.00	4s, Sausseritized/Tectonized Anorthosite Medium grained, highly tectonized, white-green, non-magnetic, heterogenous anorthosite. This unit contains patchy to pervasive (banded) sausseritization, epidotization , hematization and possibly sericitization. The unit contains 65-80% plagioclase (variably altered) and 20-35% alteration minerals (chlorite, hematite, sericite?, fuchsite?) This unit contains dm to m scale mafic dykes/sills which locally contain xenoliths of country rock (anorthosite). These mafic intervals are generally well foliated, fine grained, light to dark green, homogenous units that are unmineralized. See minor units for intervals as well as contact relationships. The anorthosite is crosscut by several mm to cm scale massive sulphide veinlets. These veinlets generally contain mm to cm scale altered haloes (chlorite), which appear as dark grey to black envelopes. These haloes give the appearance of mineralized mafic to ultramafic regions, whereas they are truly alteration derived. See mineralization tabs for intervals. The lower contact of this unit is unknown as the hole was completed. Mineralization 65.90 - 66.30 : Po Pyrrhotite, VN Veins, 5% Veinlets at 60-90 degrees tca. +-py,cpy?,pn? 86.50 - 86.87 : Po Pyrrhotite, VN Veins, 5% Veinlets at 5-85 degrees tca. +cpy+pn 87.70 - 87.80 : Cpy Chalcopyrite, VN Veins, 3% 87.70 - 87.80 : Pn Pentlandite, EY Eyes, 6% 87.70 - 87.80 : Po Pyrrhotite, M Massive, 90% 88.04 - 88.05 : Po Pyrrhotite, M Massive, 100% +pn-cpy 92.04 - 92.05 : Po Pyrrhotite, VN Veins, 50% +pn-cpy Structure 68.10 - 68.11 : S1 First Foliation, 75 Deg to CA 70.10 - 70.11 : S1 First Foliation, 70 Deg to CA 93.00 - 93.01 : S1 First Foliation, 75 Deg to CA 101.90 - 101.91 : S1 First Foliation, 65 Deg to CA 125.90 - 125.91 : S1 First Foliation, 65 Deg to CA RQD 63.00 - 66.00 : 100.00 % RQD 100.00 % Core 66.00 - 69.00 : 86.00 % RQD 100.00 % Core 69.00 - 72.00 : 76.00 % RQD 100.00 % Core 72.00 - 75.00 : 74.00 % RQD 100.00 % Core 75.00 - 78.00 : 74.00 % RQD 100.00 % Core 78.00 - 81.00 : 74.00 % RQD 100.00 % Core 81.00 - 84.00 : 94.00 % RQD 100.00 % Core

Assay Data

Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
PG03882	64.60	65.90	1.30	0.0250	0.0250	0.0100
PG03883	65.90	66.30	0.40	1.6800	0.3200	0.0700
PG03884	66.30	67.60	1.30	0.1200	0.0250	0.0100
PG03885	85.03	86.20	1.17	0.0250	0.0250	0.0100
PG03886	86.20	86.50	0.30	0.2100	0.1500	0.0100
PG03887	86.50	86.87	0.37	1.8100	0.5400	0.0500
PG03888	86.87	87.37	0.50	0.0250	0.0250	0.0100
PG03889	87.37	87.70	0.33	0.0700	0.0250	0.0100
PG03890	87.70	88.05	0.35	1.9800	0.2300	0.0800
PG03891	88.05	89.35	1.30	0.1100	0.1000	0.0100
PG03892	89.35	90.65	1.30	0.0250	0.0600	0.0100
PG03893	90.65	92.00	1.35	0.0250	0.0250	0.0100
PG03894	92.00	92.30	0.30	0.2300	0.2300	0.0100
PG03895	92.30	93.65	1.35	0.0250	0.0250	0.0100

Hole Number: ES2005-33 Units: METRIC

Detailed Lithology			Assay Data						
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%

RQD

84.00 - 87.00 : 84.00 % RQD 100.00 % Core
87.00 - 90.00 : 83.00 % RQD 100.00 % Core
90.00 - 93.00 : 85.00 % RQD 100.00 % Core
93.00 - 96.00 : 86.00 % RQD 100.00 % Core
96.00 - 99.00 : 98.00 % RQD 100.00 % Core
99.00 - 102.00 : 79.00 % RQD 100.00 % Core
102.00 - 105.00 : 82.00 % RQD 100.00 % Core
105.00 - 108.00 : 85.00 % RQD 100.00 % Core
108.00 - 111.00 : 83.00 % RQD 100.00 % Core
111.00 - 114.00 : 81.00 % RQD 100.00 % Core
114.00 - 117.00 : 89.00 % RQD 100.00 % Core
117.00 - 120.00 : 52.00 % RQD 100.00 % Core
120.00 - 123.00 : 71.00 % RQD 100.00 % Core
123.00 - 126.00 : 37.00 % RQD 100.00 % Core
126.00 - 128.00 : 66.00 % RQD 100.00 % Core

MINOR INTERVALS:

Minor Interval:

80.65 - 84.7 MD, Mafic Dike

The upper contact of this unit is unknown as it is within broken core, the lower contact is variable as digestion of anorthosite occurs parallel to foliation planes - 55 degrees to the ca.

Minor Interval:

85.03 - 86.2 6, Undivided Ultramafic Intrusive

Fine grained, dark grey to black, non-magnetic, well foliated unit composed primarily of chlorite and talc (+-biotite). Precursor rock unkonwn (mafic/ultramafic dyke completed altered?). Texturally, the rock appears identical to host anothosite (alternating cm scale bands of plagioclase and chlorite) although no remenant plagioclase. AFU!

Typical anorthosite occurs from 85.20-85.58m.

This altered unit contains trace fine grained pyrrhotite +- chalcopyrite.

The upper and lower contacts are sharp at 80 and 65 degrees to the ca, respectively.

Structure

85.35 - 85.36 : S1 First Foliation, 60 Deg to CA

Minor Interval:

86.87 - 87.37 MD, Mafic Dike

The upper and lower contacts of this unit are sharp at 45 and 90 degrees to the ca, respectively.

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Units: METRIC

Detailed Lithology			Assay Data						
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
		MINOR INTERVALS: Minor Interval: 107 - 107.6 MD, Mafic Dike The upper and lower contacts of this unit are both irregular (undulating).							

Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type ASSAY					
PG03882	64.60	65.90	0.0250	0.0250	0.0100
PG03883	65.90	66.30	1.6800	0.3200	0.0700
PG03884	66.30	67.60	0.1200	0.0250	0.0100
PG03885	85.03	86.20	0.0250	0.0250	0.0100
PG03886	86.20	86.50	0.2100	0.1500	0.0100
PG03887	86.50	86.87	1.8100	0.5400	0.0500
PG03888	86.87	87.37	0.0250	0.0250	0.0100
PG03889	87.37	87.70	0.0700	0.0250	0.0100
PG03890	87.70	88.05	1.9800	0.2300	0.0800
PG03891	88.05	89.35	0.1100	0.1000	0.0100
PG03892	89.35	90.65	0.0250	0.0600	0.0100
PG03893	90.65	92.00	0.0250	0.0250	0.0100
PG03894	92.00	92.30	0.2300	0.2300	0.0100
PG03895	92.30	93.65	0.0250	0.0250	0.0100