

DETAILED LOG

Hole Number: ES08-142

Units: METRIC

Project Name: Norway - Espedalen	Primary Coordinates Grid: UTM84-32N	Destination Coordinates Grid: UTM:	Collar Dip: -80.00
Project Number: 201	North: 6804995.00	North: 61.38	Collar Az: 230.00
Location: Surface	East: 533949.00	East: 9.64	Length: 138.01 (m)
	Elev: 720.00	Elev: 720.00	Start Depth: 0.00 (m)
Date Started: Mar 31, 2008	Collar Survey: N	Plugged: N	Contractor: Arctic Drilling A/S
Date Completed: Apr 02, 2008	Multishot Survey: N	Hole Size: BQ	Core Storage: Tyrstrand
Logged By: vbno	Pulse EM Survey: N	Casing: Pulled	Final Depth: 138.01 (m)

Comments: This hole is a 100m step out hole ES08-135. It is 50m beyond edge of UTEM plate 013. Expect sulphides at 30m.

RESULTS:

20.80-30.0m: UM hosted 3% disseminated po/cp/pn
 30.0-35.2m: UM hosted 1% disseminated po/cp/pn

44.75-45.05m: ANOR hosted 80% po and 10%cp in several veins.
 45.8-45.9m: ANOR hosted po vein with cp.
 46.2-46.3m: ANOR hosted po vein with cp.

Sample Averages

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
0	14.00	CAS, Casing Casing was later extended to 19.1m							
14.00	20.80	ANOR, Anorthosite White-grey very broken anorthosite, olive green relatively soft mineral alteration in pervasive veins. Weathering on surfaces. No sulphides. Broken rock may be due to either a cavity, but more likely casing not taken deep enough and encountering rubble in overburden. Structure 14.00 - 20.80 Average core length 5cm	BL00210	20.00	20.80	0.80			

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From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
20.80	35.20	UM, Ultramafic Very talc altered ultra mafic rock. Some coarse grained biotite alteration. 20.8-35.2m: 3% disseminated sulphides. Lower contact is fault Mineralization 20.80 - 30.00 : POPNCP Pyrrhotite/Pentlandite/Chalcopyrite, DIS Disseminated, 3% po<cp<pn. Difficult to see through intense talc and biotite alteration. 30.00 - 35.20 : POPNCP Pyrrhotite/Pentlandite/Chalcopyrite, DIS Disseminated, 1% po<cp<pn. Difficult to see through intense talc alteration. Alteration 25.00 - 30.00 : BIO Biotite, MO Mottled, M Moderate Coarse biotite grains. 20.80 - 35.20 : TL Talc, P Pervasive, S Strong Pervasive dissemination and veins <5cm	BL00211	20.80	22.00	1.20			
			BL00212	22.00	23.50	1.50			
			BL00213	23.50	25.00	1.50			
			BL00214	25.00	26.50	1.50			
			BL00215	26.50	28.00	1.50			
			BL00216	28.00	29.50	1.50			
			BL00217	29.50	31.00	1.50			
			BL00218	31.00	32.50	1.50			
			BL00221	32.50	34.00	1.50			
			BL00222	34.00	35.20	1.20			
35.20	35.50	FLT, Fault Talc and chlorite (?) fault in Anorthosite. Very broken, almost entirely replaced with soft minerals. No sulphides. Upper and lower contacts are sharp. Alteration 35.20 - 35.50 : TL Talc, P Pervasive, S Strong INTENSE Structure 35.20 - 35.50							

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From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
35.50	54.25	ANOR, Anorthosite Fine to medium grained, well foliated at 80-90 degrees to LCA, grey-white and minor green Anorthosite. Non magnetic, sericite, epidote, talc and chlorite alteration seen in banding and disseminated. Several green mafic dykes throughout section. No sulphides, except for 1 small section shown below. Generally competent. 44.75-45.05m: Several po/cp veins 3-5cm wide with Anor inclusions. 45.8- 45.9m: po vein, with cp. 46.2-46.3m: po vein, with cp. Mineralization 44.75 - 45.05 : PO Pyrrhotite, VN Veins, 40% 44.75 - 45.05 : CP Chalcopyrite, VN Veins, 5% 45.80 - 45.90 : CP Chalcopyrite, VN Veins, 10% 45.80 - 45.90 : PO Pyrrhotite, VN Veins, 90% 46.20 - 46.30 : CP Chalcopyrite, VN Veins, 10% 46.20 - 46.30 : PO Pyrrhotite, VN Veins, 90% MINOR INTERVALS: Minor Interval: 38 - 40.5 MD, Mafic Dike Green, fine grained, non-magnetic, Mafic Dyke. No sulphides, competent. Fine banding at 80-90 degrees to LCA. Minor Interval: 40.5 - 41.3 UM, Ultramafic Very talc altered ultra mafic rock.. No sulphides. Moderately broken, with one very rubbly section from 41.2-41.3m Alteration 40.50 - 41.30 :TL Talc, P Pervasive, S Strong Minor Interval: 45.1 - 45.8 MD, Mafic Dike Green, fine grained, non-magnetic, Mafic Dyke. No sulphides, competent. Fine banding at 80-90 degrees to LCA. Upper and lower contact are competent with veins of po.	BL00223	41.70	42.70	1.00			
			BL00224	42.70	43.70	1.00			
			BL00225	43.70	44.70	1.00			
			BL00226	44.70	45.10	0.40			
			BL00227	45.10	45.70	0.60			
			BL00228	45.70	46.30	0.60			
			BL00229	46.30	46.90	0.60			
54.25	69.10	MD, Mafic Dike Green, fine grained, non-magnetic, Mafic Dyke. No sulphides, competent. Fine banding at 80-90 degrees to LCA. Upper and lower contact are sharp, with small 5-10cm veins of Anor/MD +/- 1m from contacts.							

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Detailed Lithology		Lithology	Assay Data						
From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
69.10	94.50	<p>ANOR, Anorthosite</p> <p>Fine to medium grained, well foliated at 80-90 degrees to LCA, grey-white and minor green Anorthosite. Non magnetic, sericite, epidote, talc and chlorite alteration seen in banding and disseminated. Several green mafic dykes throughout section.</p> <p>As above ANOR.</p> <p>MINOR INTERVALS:</p> <p>Minor Interval: 74.55 - 74.8 MD, Mafic Dike</p> <p>Green, fine grained, non-magnetic, Mafic Dyke. No sulphides, competent. Fine banding at 80-90 degrees to LCA. Upper and lower contact are sharp, with small 5-10cm veins of Anor/MD +/- 0.3m from contacts.</p> <p>Minor Interval: 82.15 - 84.15 MD, Mafic Dike</p> <p>Green, fine to medium grained, non-magnetic, Mafic Dyke. No sulphides, competent. Fine banding at 80-90 degrees to LCA. Upper and lower contact are sharp, with small 5-10cm veins of Anor/MD +/- 1m from contacts.</p> <p>Minor Interval: 87 - 88.5 MD, Mafic Dike</p> <p>Green, fine to medium grained, non-magnetic, Mafic Dyke. No sulphides, competent. Fine banding at 80-90 degrees to LCA. Upper and lower contact are sharp, with small 5-10cm veins of Anor/MD +/- 1m from contacts.</p> <p>Minor Interval: 89.7 - 90.3 MD, Mafic Dike</p> <p>Green, fine to medium grained, non-magnetic, Mafic Dyke. No sulphides, competent. Fine banding at 80-90 degrees to LCA. Upper and lower contact are sharp, with small 5-10cm veins of Anor/MD +/- 1m from contacts.</p>							
94.50	100.90	<p>MD, Mafic Dike</p> <p>Green, fine to medium grained, non-magnetic, Mafic Dyke. No sulphides, competent. Fine banding at 80-90 degrees to LCA. Upper and lower contact are sharp, with small 5-10cm veins of Anor/MD +/- 1m from contacts. Lower contact is also a fault.</p>							
100.90	104.75	<p>FLT, Fault</p> <p>Three faults, 0.4, 0.8 and 0.6m wide, separated by competent anorthosite with mafic dykes rock. Mostly broken, but some soft mineral infill. Rare gouge.</p>							

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Detailed Lithology		Lithology	Assay Data						
From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
104.75	129.65	MD, Mafic Dike Green, fine to medium grained, non-magnetic, Mafic Dyke. No sulphides, competent. Fine banding at 80-90 degrees to LCA. Upper and lower contact are sharp, with small 5-10cm veins of Anor/MD +/- 1m from contacts. MINOR INTERVALS: Minor Interval: 110.4 - 114 ANOR, Anorthosite Fine to medium grained, well foliated at 80-90 degrees to LCA, grey-white and minor green Anorthosite. Non magnetic, sericite, epidote, talc and chlorite alteration seen in banding and disseminated. Several green mafic dykes throughout section							
129.65	138.00	ANOR, Anorthosite Fine to medium grained, well foliated at 80-90 degrees to LCA, grey-white and minor green Anorthosite. Non magnetic, sericite, epidote, talc and chlorite alteration seen in banding and disseminated. Several green mafic dykes throughout section MINOR INTERVALS: Minor Interval: 136 - 137 MD, Mafic Dike Green, fine to medium grained, non-magnetic, Mafic Dyke. No sulphides, competent. Fine banding at 80-90 degrees to LCA. Upper and lower contact are sharp, with small 5-10cm veins of Anor/MD +/- 1m from contacts							
138.00	138.01	EOH, End of Hole							

Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type	ASSAY				
BL00210	20.00	20.80			
BL00211	20.80	22.00			
BL00212	22.00	23.50			
BL00213	23.50	25.00			
BL00214	25.00	26.50			
BL00215	26.50	28.00			
BL00216	28.00	29.50			
BL00217	29.50	31.00			
BL00218	31.00	32.50			
BL00221	32.50	34.00			
BL00222	34.00	35.20			
BL00223	41.70	42.70			
BL00224	42.70	43.70			
BL00225	43.70	44.70			

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Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type	ASSAY				
BL00226	44.70	45.10			
BL00227	45.10	45.70			
BL00228	45.70	46.30			
BL00229	46.30	46.90			