

DETAILED LOG

Hole Number: ES2006-53

Units: METRIC

Project Name: Norway - Espedalen	Primary Coordinates Grid: UTM84-32N	Destination Coordinates Grid: UTM:	Collar Dip: -70.00
Project Number: 201	North: 6801283.90	North: 61.34	Collar Az: 230.00
Location: Surface	East: 535501.10	East: 9.66	Length: 274.39 (m)
	Elev: 945.68	Elev: 945.68	Start Depth: 0.00 (m)
Date Started: Mar 15, 2006	Collar Survey: N	Plugged: N	Contractor: Arctic Drilling A/S
Date Completed: Mar 21, 2006	Multishot Survey: N	Hole Size: TT46	Core Storage: Strand Fjellstue
Logged By: larsw	Pulse EM Survey: N	Casing: Left in Hole, capped	Final Depth: 274.39 (m)

Comments: Purpose: to test the downdip potential of known mineralization in the Stormyra area at a depth below the UTEM detection limit.

Summary: This hole intersected a sequence of variably altered and sheared anorthosite that is cut by numerous mafic and a small number of ultramafic dikes.
No significant mineralization was intersected in this hole.

Sample Averages

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
0	11.00	C, Casing							

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Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
		<p>RQD</p> <p>56.00 - 59.00 : 91.00 % RQD 100.00 % Core</p> <p>59.00 - 62.00 : 88.00 % RQD 100.00 % Core</p> <p>62.00 - 65.00 : 84.00 % RQD 100.00 % Core</p> <p>65.00 - 68.00 : 77.00 % RQD 100.00 % Core</p> <p>68.00 - 71.00 : 93.00 % RQD 100.00 % Core</p> <p>71.00 - 74.00 : 81.00 % RQD 100.00 % Core</p> <p>MINOR INTERVALS:</p> <p>Minor Interval:</p> <p>17.38 - 19.23 MD, Mafic Dike</p> <p>Gray to greenish-gray, homogeneous, non-magnetic, moderately to well-foliated mafic rock. The rock is fine grained and contains abundant plagioclase as well as mafic and alteration minerals. The upper and lower contacts are sharp at 80 and 90 degrees tca, respectively.</p> <p>This unit is not mineralized.</p> <p>Minor Interval:</p> <p>26.89 - 30.44 MD, Mafic Dike</p> <p>Gray to greenish-gray, homogeneous, non-magnetic, moderately to well-foliated mafic rock. The rock is fine grained and contains abundant plagioclase as well as mafic and alteration minerals. The upper contact is sharp but irregular, the lower contact is sharp at 70 degrees tca.</p> <p>This unit is not mineralized.</p> <p>Minor Interval:</p> <p>38.97 - 44.11 MD, Mafic Dike</p> <p>Gray to greenish-gray, fine- to medium-grained, non-magnetic, moderately well-foliated mafic rock. Locally, the unit contains white feldspar "smears". The rock contains about 50% plagioclase, the remainder is composed of mafic and alteration minerals.</p> <p>The upper contact is sharp at 70 degrees tca, the lower contact is digested over about 10cm. Along both contacts the wallrock is somewhat banded.</p> <p>A 1mm (!) po vein occurs at 42.28m. The remainder of the unit is not mineralized.</p> <p>Minor Interval:</p> <p>45.25 - 46.47 MD, Mafic Dike</p> <p>Gray to greenish-gray, homogeneous, non-magnetic, moderately to well-foliated mafic rock. The rock is fine grained and contains abundant plagioclase as well as mafic and alteration minerals. The upper contact is sharp at 80- degrees tca, the lower contact is sharp but irregular.</p> <p>This unit is not mineralized.</p>							

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From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
		<p>MINOR INTERVALS:</p> <p>Minor Interval: 51.58 - 52.43 MD, Mafic Dike Gray to greenish-gray, homogeneous, non-magnetic, moderately to well-foliated mafic rock. The rock is fine grained and contains abundant plagioclase as well as mafic and alteration minerals. The upper contact is sharp at 60 degrees tca, the lower contact is sharp but irregular.</p> <p>This unit is not mineralized.</p> <p>Minor Interval: 63.07 - 63.45 MD, Mafic Dike Gray to greenish-gray, homogeneous, non-magnetic, moderately to well-foliated mafic rock. The rock is fine grained and contains abundant plagioclase as well as mafic and alteration minerals. The upper and lower contacts are sharp at 80 degrees tca.</p> <p>This unit is not mineralized.</p>							
71.21	90.88	<p>MD, Mafic Dike This unit consists of a dark gray to greenish-gray, very homogeneous, well-foliated, non-magnetic rock. It contains about 20% plagioclase as well as mafic and alteration minerals. A "raft" of 4s is located between 83.77 m and 84.32 m.</p> <p>The lower contact of this unit is sharp but irregular.</p> <p>Locally, the unit is hematized.</p> <p>Locally, the unit contains trace sulfide.</p> <p>Alteration 72.89 - 73.15 :HM Hematite, P Pervasive, M Moderate</p> <p>Structure 71.85 - 71.86 : S1 First Foliation, 80 Deg to CA 79.18 - 79.19 : S Schistose, 80 Deg to CA 87.90 - 87.91 : S1 First Foliation, 70 Deg to CA</p> <p>RQD 74.00 - 77.00 : 64.00 % RQD 100.00 % Core 77.00 - 80.00 : 96.00 % RQD 100.00 % Core 80.00 - 83.00 : 30.00 % RQD 100.00 % Core 83.00 - 86.00 : 45.00 % RQD 100.00 % Core 86.00 - 89.00 : 85.00 % RQD 100.00 % Core 89.00 - 92.00 : 97.00 % RQD 100.00 % Core</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%
90.88	99.48	<p>4s, Sausseritized/Tectonized Anorthosite</p> <p>Massive, homogeneous, non-magnetic, non-mineralized, non-foliated, recrystallized sausseritized anorthosite. The rock is pervasively quartz, epidote, and hematite altered. The lower contact is sharp at 70 degrees tca, but sheared.</p> <p>Alteration</p> <p>90.88 - 99.48 :HM Hematite, P Pervasive, W Weak</p> <p>90.88 - 99.48 :EP Epidote, P Pervasive, M Moderate</p> <p>90.88 - 99.48 :Q Quartz, P Pervasive, M Moderate</p> <p>RQD</p> <p>92.00 - 95.00 : 95.00 % RQD 100.00 % Core</p> <p>95.00 - 98.00 : 79.00 % RQD 100.00 % Core</p> <p>98.00 - 101.00 : 85.00 % RQD 100.00 % Core</p>							
99.48	117.72	<p>4s, Sausseritized/Tectonized Anorthosite</p> <p>This medium-grained, greenish-gray and white anorthosite unit is moderately to well-foliated and non-magnetic. It contains about 50% plagioclase and 50% mafic minerals. The unit is virtually unaltered and thus distinctly different from the hanging and footwall units.</p> <p>This unit is not mineralized.</p> <p>Structure</p> <p>100.90 - 100.91 : S1 First Foliation, 60 Deg to CA</p> <p>109.93 - 109.94 : S1 First Foliation, 80 Deg to CA</p> <p>116.29 - 116.30 : S1 First Foliation, 70 Deg to CA</p> <p>RQD</p> <p>101.00 - 104.00 : 88.00 % RQD 100.00 % Core</p> <p>104.00 - 107.00 : 82.00 % RQD 100.00 % Core</p> <p>107.00 - 110.00 : 94.00 % RQD 100.00 % Core</p> <p>110.00 - 113.00 : 98.00 % RQD 100.00 % Core</p> <p>113.00 - 116.00 : 96.00 % RQD 100.00 % Core</p> <p>116.00 - 119.00 : 80.00 % RQD 100.00 % Core</p>							

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Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
		<p>MINOR INTERVALS: Minor Interval: 164.9 - 165.64 MD, Mafic Dike Gray to greenish-gray, homogeneous, non-magnetic, well-foliated mafic rock. The rock is fine grained and contains abundant plagioclase as well as mafic and alteration minerals. Unlike similar units, this rock is garnet-bearing. The garnets are up to about 1mm in diameter. The upper contact is sharp at 70 degrees tca, the lower contact is digested.</p> <p>This unit is not mineralized.</p>							
171.85	177.56	<p>MD, Mafic Dike This unit consists of a fine-grained, gray-green, well-foliated, non-magnetic, epidote altered, homogeneous mafic rock. It contains about 30% plagioclase; mafic and alteration minerals compose the remainder.</p> <p>The upper and lower contacts are sharp at 85 and 75 degrees tca, respectively.</p> <p>This unit is not mineralized.</p> <p>Alteration 171.85 - 177.56 :EP Epidote, P Pervasive, M Moderate</p> <p>Structure 176.23 - 176.24 : S1 First Foliation, 70 Deg to CA</p> <p>RQD 173.00 - 176.00 : 97.00 % RQD 100.00 % Core 176.00 - 179.00 : 85.00 % RQD 100.00 % Core</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%
177.56	190.48	<p>4s, Sausseritized/Tectonized Anorthosite</p> <p>Massive, homogeneous, non-magnetic, non-mineralized, non-foliated, recrystallized anorthosite. The rock is pervasively quartz, epidote, and hematite altered.</p> <p>Alteration 177.56 - 190.48 :HM Hematite, P Pervasive, W Weak 177.56 - 190.48 :EP Epidote, P Pervasive, W Weak 177.56 - 190.48 :Q Quartz, P Pervasive, M Moderate</p> <p>RQD 179.00 - 182.00 : 59.00 % RQD 100.00 % Core 182.00 - 185.00 : 34.00 % RQD 100.00 % Core 185.00 - 188.00 : 92.00 % RQD 100.00 % Core 188.00 - 191.00 : 88.00 % RQD 100.00 % Core</p> <p>MINOR INTERVALS: Minor Interval: 182.78 - 185.35 PRDT, Peridotite</p> <p>This unit consists of a black, medium- to coarse-grained, non-foliated, moderately to strongly magnetic ultramafic rock. Pyroxenes are the predominant minerals (ca. 50%), magnetite is common and accounts for about 10%. The remainder consists of other unidentified mafic and alteration minerals.</p> <p>This unit is not mineralized.</p>							
190.48	202.16	<p>MD, Mafic Dike</p> <p>This unit consists of a fine-grained, gray-green, well-foliated, non-magnetic, homogeneous mafic rock. It contains about 30% plagioclase; mafic and alteration minerals compose the remainder.</p> <p>Locally, the unit is weakly epidote altered.</p> <p>A 4s "raft" is located at 197.7 - 198.20m</p> <p>This unit is not mineralized.</p> <p>Structure 191.64 - 191.65 : S1 First Foliation, 70 Deg to CA 199.24 - 199.25 : S1 First Foliation, 80 Deg to CA</p> <p>RQD 191.00 - 194.00 : 90.00 % RQD 100.00 % Core 194.00 - 197.00 : 94.00 % RQD 100.00 % Core 197.00 - 200.00 : 100.00 % RQD 100.00 % Core 200.00 - 203.00 : 95.00 % RQD 100.00 % Core</p>							

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Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
202.16	242.26	4s, Sausseritized/Tectonized Anorthosite	PG00493	206.25	207.59	1.34	0.0250	0.0250	0.0100
		This unit consists of a white to greenish gray, non-magnetic, fine- to medium-grained, on a meter scale homogeneous plagioclase-rich unit. The unit is moderately to well-foliated; the foliation increases towards the footwall contact where the rock is intensively tectonized. Below about 210m the unit is characterized by abundant fuchsite. The lower contact is sharp at 70 degrees tca. Apart from mm-scale remobilized sulfides (po) in the minor unit, this unit is not mineralized. Mineralization 207.60 - 207.88 : Po Pyrrhotite, VN Veins, 1% mm-scale remobilized Alteration 212.00 - 242.26 :ALT Alteration, P Pervasive, W Weak weak to moderate fuchsite Structure 213.78 - 213.79 : S1 First Foliation, 70 Deg to CA 223.83 - 223.84 : S1 First Foliation, 70 Deg to CA 236.87 - 236.88 : S1 First Foliation, 85 Deg to CA RQD 203.00 - 206.00 : 99.00 % RQD 100.00 % Core 206.00 - 209.00 : 92.00 % RQD 100.00 % Core 209.00 - 212.00 : 43.00 % RQD 100.00 % Core 212.00 - 215.00 : 73.00 % RQD 100.00 % Core 215.00 - 218.00 : 74.00 % RQD 100.00 % Core 218.00 - 221.00 : 84.00 % RQD 100.00 % Core 221.00 - 224.00 : 61.00 % RQD 100.00 % Core 224.00 - 227.00 : 92.00 % RQD 100.00 % Core 227.00 - 230.00 : 98.00 % RQD 100.00 % Core 230.00 - 233.00 : 79.00 % RQD 100.00 % Core 233.00 - 236.00 : 59.00 % RQD 100.00 % Core 236.00 - 239.00 : 100.00 % RQD 100.00 % Core 239.00 - 242.00 : 88.00 % RQD 100.00 % Core 242.00 - 245.00 : 100.00 % RQD 100.00 % Core	PG00494	207.59	207.89	0.30	0.0250	0.0250	0.0100
			PG00495	207.89	209.31	1.42	0.0250	0.0250	0.0100

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Detailed Lithology		Lithology	Assay Data						
From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
		<p>MINOR INTERVALS: Minor Interval: 207.6 - 207.88 MD, Mafic Dike Gray to greenish-gray, homogeneous, moderately magnetic (see mineralization below), moderately to well-foliated mafic rock. The rock is fine grained and contains abundant plagioclase as well as mafic and alteration minerals. The upper and lower contacts are sharp at 80 and 90 degrees tca, respectively.</p> <p>This unit contains mm-scale remobilized po veinlets, accounting for the high magnetic susceptibility of this rock.</p>							
242.26	248.91	<p>MD, Mafic Dike This unit consists of a medium-grained, gray-green, strongly-foliated, non-magnetic, homogeneous mafic rock. It contains about 30% plagioclase; mafic and alteration minerals compose the remainder. This unit appears recrystallized (coarser-grained compared to similar units) and is tectonized. The lower contact is fuzzy/digested.</p> <p>This unit is not mineralized.</p> <p>Structure 245.75 - 245.76 : S1 First Foliation, 70 Deg to CA RQD 245.00 - 248.00 : 85.00 % RQD 100.00 % Core 248.00 - 251.00 : 100.00 % RQD 100.00 % Core</p>							
248.91	257.80	<p>4s, Sausseritized/Tectonized Anorthosite RQD 251.00 - 254.00 : 100.00 % RQD 100.00 % Core 254.00 - 257.00 : 87.00 % RQD 100.00 % Core 257.00 - 260.00 : 95.00 % RQD 100.00 % Core</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%
257.80	268.61	<p>MD, Mafic Dike</p> <p>This unit consists of a medium-grained, gray-green, strongly-foliated, non-magnetic, homogeneous mafic rock. It contains about 30% plagioclase; mafic and alteration minerals compose the remainder. This unit contains about 3m of 4s (see minor unit for details). The lower contact is sharp at 90 degrees tca.</p> <p>This unit is not mineralized.</p> <p>Structure 259.85 - 259.86 : S1 First Foliation, 85 Deg to CA</p> <p>RQD 260.00 - 263.00 : 95.00 % RQD 100.00 % Core 263.00 - 266.00 : 85.00 % RQD 100.00 % Core 266.00 - 269.00 : 100.00 % RQD 100.00 % Core</p> <p>MINOR INTERVALS: Minor Interval: 261.79 - 264.9 4s, Sausseritized/Tectonized Anorthosite Plagioclase-rich, well-foliated, fine-grained, non-magnetic unit. Locally, minor brecciation occurs. Local qz-epidote alteration; here, the foliation has been destroyed. The upper and lower contacts are sharp at 80 degrees tca.</p>							
268.61	274.39	<p>4s, Sausseritized/Tectonized Anorthosite</p> <p>This unit consists of a strongly foliated and tectonized, white and black, plagioclase-rich, medium-grained, non-magnetic rock. It contains about 50% plagioclase and 50% mafic and alteration minerals. The lower contact of this unit is unknown as the hole was shut down.</p> <p>This unit is not mineralized.</p> <p>Structure 271.07 - 271.08 : S1 First Foliation, 75 Deg to CA</p> <p>RQD 269.00 - 272.00 : 98.00 % RQD 100.00 % Core 272.00 - 274.39 : 97.00 % RQD 100.00 % Core</p>							
274.39	274.39	EOH, End of Hole							

Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type	ASSAY				
PG00493	206.25	207.59	0.0250	0.0250	0.0100
PG00494	207.59	207.89	0.0250	0.0250	0.0100
PG00495	207.89	209.31	0.0250	0.0250	0.0100