

Hole Number: ES07-89

Units: METRIC

Project Name: Norway - Espedalen	Primary Coordinates Grid: UTM84-32N	Destination Coordinates Grid: UTM:	Collar Dip: -90.00
Project Number: 201	North: 6808349.00	North: 61.41	Collar Az: 360.00
Location: Storgruva	East: 532180.00	East: 9.60	Length: 131.41 (m)
	Elev: 1227.00	Elev: 1227.00	Start Depth: 0.00 (m)
Date Started: Aug 30, 2007	Collar Survey: Y	Plugged: N	Contractor: Geo Drilling A/S
Date Completed: Sep 04, 2007	Multishot Survey: N	Hole Size: TT46	Core Storage: Tyrstrand
Logged By: klnor	Pulse EM Survey: N	Casing: Left in Hole	Final Depth: 131.41 (m)

Comments: This hole was drilled as a 30m step-out from Hole ES07-88. The Storgruva structure does NOT project to surface on this section. The collar position has moved slightly to the north of the main surface workings.

Sample Averages

Average Type	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
WEIGHTED	98.00	107.50	9.50	0.5171	0.3359	0.0268
WEIGHTED	98.00	113.25	15.25	0.4618	0.2902	0.0251
WEIGHTED	110.50	113.25	2.75	0.5465	0.2504	0.0306

Detailed Lithology		Assay Data							
From (m)	To (m)	Lithology	Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
0	1.40	CAS, Casing							
1.40	44.33	UM, Ultramafic dark grey in colour, fine to-medium grained, foliated and locally fractured, strongly magnetic, phenocrystic - orthopyroxene anhedral with amphibole and plagioclase (M=65-70)). The same unit intersected in previous drill holes ES07-85 to 88 inclusive. Texture 1.40 - 44.33 : HYPD Hypidiomorphic Mineralization 4.10 - 4.15 : PO Pyrrhotite, DIS Disseminated, 2% occasional specks 15.12 - 16.71 : PO Pyrrhotite, DIS Disseminated, 1% rare specks 41.78 - 42.90 : PO Pyrrhotite, DIS Disseminated, 1% Structure 4.80 - 4.85 9.80 - 9.87 10.15 - 10.50 14.05 - 14.80 19.25 - 19.50 20.83 - 21.04 29.60 - 29.95 42.78 - 42.90 42.78 - 42.90 42.78 - 42.90							

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Detailed Lithology		Lithology	Assay Data						
From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
44.33	49.85	GAB, Gabbro altered gabbro and/or lamprophyre, green in colour, medium grained, intrusive contacts with units above and below, evenly distributed cm-sized brownish biotite phenocrysts, abundant qtz-carb. hairline stringers infilling fractures. irregular upper contact from 0 to 10 deg to the LCA. sharp lower contact at 80 deg to the LCA Structure 45.30 - 45.40 46.50 - 46.90 48.19 - 48.37 48.60 - 48.75							
49.85	76.55	ANOR, Anorthosite light grey in colour modified by finely laminated mafic inclusions and patchy smokey quartz material, fine to-medium grained amorphous plagioclase, quartz, (An=65) chlorite, epidote, sericite (M=35), layered, protoclastic texture trends 50 deg to the LCA below 71.25m the core becomes blue-grey in colour, very siliceous and tectonized fabric, local sulphides Structure 50.70 - 50.96 : SHR Shear, 80 Deg to CA 63.35 - 63.40 63.70 - 64.00 10-15% laminated Po 65.20 - 65.50 5-7% laminated Po 66.70 - 68.70	PG07892	63.40	63.70	0.30	0.0025	0.0025	0.0020
			PG07893	63.70	64.00	0.30	0.0350	0.0120	0.0100
			PG07894	64.00	64.40	0.40	0.0060	0.0025	0.0010
			PG07895	64.40	64.90	0.50	0.0120	0.0025	0.0030
			PG07896	64.90	65.20	0.30	0.0130	0.0025	0.0010
			PG07897	65.20	65.50	0.30	0.0230	0.0120	0.0070
			PG07898	65.50	66.00	0.50	0.0025	0.0025	0.0010
76.55	78.82	MD, Mafic Dike green in colour, fine grained, homogenous texture, occasional qtz.-carb. gashes, broken/fractured lower contact, generally competent core, nil sulphides. Structure 78.30 - 78.82 moderate chlorite 78.30 - 78.82							
78.82	88.13	UM, Ultramafic same as unit observed above from 1.80 to 44.33m., sharp contact with ANOR below at 90 deg to the LCA., nil sulphides. Structure 78.82 - 80.30 81.00 - 82.60 moderately chloritized 81.16 - 81.25 81.16 - 81.25 84.66 - 86.00							

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Detailed Lithology		Lithology	Assay Data						
From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
88.13	90.90	ANOR, Anorthosite very light grey, predominantly (An=80) plag-rich, spotty quartz and sheared / banded and patchy mafic incursions (M=15), competent core, nil sulphides.							
90.90	97.00	UM, Ultramafic similar to units observed above from 1.80 - 44.33m and 78.82 to 88.13m., very minor qtz-carb. stringers, locally fractured, nil sulphides. Structure 90.90 - 91.03 93.80 - 94.05 95.78 - 96.11							
97.00	99.48	GAB, Gabbro green in colour, medium grained, chlorite altered, pervasively sheared, abundant qtz.-carb gashed, well mineralized, generally competent core. MINOR INTERVALS: Minor Interval: 98.5 - 99.48 SULF, Sulfide remobilized, fracture-infilled and disseminated Po and Cpy mineralization, up to 7% Mineralization 98.50 - 99.48 : Cpy Chalcopyrite, FF Fracture Filling, 2% 98.50 - 99.48 : PO Pyrrhotite, DIS Disseminated, 7% Structure 98.50 - 99.48 : SHR Shear, 42 Deg to CA	PG07899	98.00	98.50	0.50	0.2010	0.0700	0.0120
			PG07901	98.50	99.00	0.50	0.3960	0.2850	0.0210
			PG07902	99.00	99.50	0.50	0.1960	0.0750	0.0110

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Detailed Lithology		Lithology	Assay Data						
From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
99.48	114.05	UM, Ultramafic similar to units encountered above however, this section is strongly mineralized throughout., locally fractured core, pervasively magnetite. MINOR INTERVALS: Minor Interval: 99.48 - 113.25 SULF, Sulfide pervasively well mineralized, remobilized, fracture controlled and very fine grained masses of Po and Cpy mineralization ranging from 7 to 25%,, net-textured sulphides up to 30% from 112 to 113.25m . Mineralization 99.48 - 107.30 : Cpy Chalcopyrite, FF Fracture Filling, 3% 99.48 - 107.30 : PO Pyrrhotite, DIS Disseminated, 20% 99.48 - 107.30 : PO Pyrrhotite, P Pervasive, 20% 107.30 - 109.00 : PO Pyrrhotite, DIS Disseminated, 3% 109.00 - 111.03 : Cpy Chalcopyrite, FF Fracture Filling, 4% 109.00 - 111.03 : PO Pyrrhotite, FF Fracture Filling, 10% 111.03 - 112.00 : PO Pyrrhotite, DIS Disseminated, 1% 112.00 - 113.25 : PO Pyrrhotite, Net Net Textured, 30% Structure 108.21 - 108.50 108.21 - 108.50 109.35 - 109.90 : F Fractured, 40 Deg to CA	PG07903	99.50	100.00	0.50	0.6470	0.3650	0.0340
			PG07904	100.00	100.50	0.50	0.6160	0.8810	0.0350
			PG07905	100.50	101.00	0.50	0.5330	0.1620	0.0290
			PG07906	101.00	101.50	0.50	0.3370	0.2660	0.0180
			PG07908	101.50	102.00	0.50	0.4710	0.1720	0.0260
			PG07909	102.00	102.50	0.50	0.6420	0.3650	0.0340
			PG07910	102.50	103.00	0.50	0.3490	0.3630	0.0180
			PG07911	103.00	103.50	0.50	0.4160	0.4900	0.0210
			PG07912	103.50	104.00	0.50	0.3190	0.2870	0.0160
			PG07913	104.00	104.50	0.50	0.7440	0.2290	0.0360
			PG07915	104.50	105.00	0.50	0.8110	0.2960	0.0390
			PG07916	105.00	105.50	0.50	0.8440	0.3160	0.0400
			PG07917	105.50	106.00	0.50	0.8630	0.2100	0.0420
			PG07918	106.00	106.50	0.50	0.5800	0.4200	0.0310
			PG07919	106.50	107.00	0.50	0.5800	0.3270	0.0300
			PG07921	107.00	107.50	0.50	0.2800	0.8030	0.0170
			PG07922	107.50	108.00	0.50	0.0980	0.0420	0.0120
			PG07923	108.00	108.50	0.50	0.1080	0.0520	0.0120
			PG07924	108.50	109.00	0.50	0.1140	0.0670	0.0110
			PG07925	109.00	109.50	0.50	0.2680	0.5880	0.0160
			PG07926	109.50	110.00	0.50	0.2900	0.2310	0.0160
			PG07927	110.00	110.50	0.50	0.3770	0.1110	0.0200
			PG07928	110.50	111.00	0.50	0.6220	0.2330	0.0340
			PG07929	111.00	111.50	0.50	0.1560	0.1470	0.0150
			PG07930	111.50	112.00	0.50	0.0980	0.1160	0.0100
			PG07931	112.00	112.70	0.70	1.1950	0.4190	0.0600
			PG07932	112.70	113.25	0.55	0.4150	0.2680	0.0230
			PG07934	113.25	114.04	0.79	0.0870	0.0480	0.0100
			PG07935	114.04	114.50	0.46	0.0370	0.0650	0.0040
114.05	116.82	ANOR, Anorthosite off-white coloured, (An=85) and (M=15), foliated at 40 deg to the LCA., sharp, irregular lower contact, nil sulphides, competent core.							
116.82	118.30	GAB, Gabbro altered, grey-green in colour, extremely fractured, locally "poker-chip" style fracturing, sheared, qtz-carb stringers, broken lower contact, nil sulphides. Structure 116.82 - 118.30 : SHR Shear, 36 Deg to CA 116.82 - 118.30							

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From (m)	To (m)		Sample Number	From (m)	To (m)	Length (m)	Ni%	Cu%	Co%
118.30	131.40	ANOR, Anorthosite off-white in colour, well laminated / banded mafic inclusions (M=25), generally competent core, nil sulphides. Structure 118.30 - 123.52 : FOL Foliated, 30 Deg to CA 123.52 - 123.56 123.52 - 123.56 clay gouge 125.00 - 125.40 : FOL Foliated, 45 Deg to CA 126.60 - 126.72 : FOL Foliated, 41 Deg to CA 128.35 - 128.40 : FOL Foliated, 50 Deg to CA 128.80 - 128.90 : FOL Foliated, 65 Deg to CA 130.10 - 130.15 : FOL Foliated, 46 Deg to CA 131.10 - 131.20 : FOL Foliated, 50 Deg to CA							
131.40	131.41	EOH, End of Hole							

Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type	ASSAY				
PG07892	63.40	63.70	0.0025	0.0025	0.0020
PG07893	63.70	64.00	0.0350	0.0120	0.0100
PG07894	64.00	64.40	0.0060	0.0025	0.0010
PG07895	64.40	64.90	0.0120	0.0025	0.0030
PG07896	64.90	65.20	0.0130	0.0025	0.0010
PG07897	65.20	65.50	0.0230	0.0120	0.0070
PG07898	65.50	66.00	0.0025	0.0025	0.0010
PG07899	98.00	98.50	0.2010	0.0700	0.0120
PG07901	98.50	99.00	0.3960	0.2850	0.0210
PG07902	99.00	99.50	0.1960	0.0750	0.0110
PG07903	99.50	100.00	0.6470	0.3650	0.0340
PG07904	100.00	100.50	0.6160	0.8810	0.0350
PG07905	100.50	101.00	0.5330	0.1620	0.0290
PG07906	101.00	101.50	0.3370	0.2660	0.0180
PG07908	101.50	102.00	0.4710	0.1720	0.0260
PG07909	102.00	102.50	0.6420	0.3650	0.0340
PG07910	102.50	103.00	0.3490	0.3630	0.0180
PG07911	103.00	103.50	0.4160	0.4900	0.0210
PG07912	103.50	104.00	0.3190	0.2870	0.0160
PG07913	104.00	104.50	0.7440	0.2290	0.0360
PG07915	104.50	105.00	0.8110	0.2960	0.0390

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Samples

Sample Number	From (m)	To (m)	Ni%	Cu%	Co%
Sample Type	ASSAY				
PG07916	105.00	105.50	0.8440	0.3160	0.0400
PG07917	105.50	106.00	0.8630	0.2100	0.0420
PG07918	106.00	106.50	0.5800	0.4200	0.0310
PG07919	106.50	107.00	0.5800	0.3270	0.0300
PG07921	107.00	107.50	0.2800	0.8030	0.0170
PG07922	107.50	108.00	0.0980	0.0420	0.0120
PG07923	108.00	108.50	0.1080	0.0520	0.0120
PG07924	108.50	109.00	0.1140	0.0670	0.0110
PG07925	109.00	109.50	0.2680	0.5880	0.0160
PG07926	109.50	110.00	0.2900	0.2310	0.0160
PG07927	110.00	110.50	0.3770	0.1110	0.0200
PG07928	110.50	111.00	0.6220	0.2330	0.0340
PG07929	111.00	111.50	0.1560	0.1470	0.0150
PG07930	111.50	112.00	0.0980	0.1160	0.0100
PG07931	112.00	112.70	1.1950	0.4190	0.0600
PG07932	112.70	113.25	0.4150	0.2680	0.0230
PG07934	113.25	114.04	0.0870	0.0480	0.0100
PG07935	114.04	114.50	0.0370	0.0650	0.0040