



APPENDIX 8-2

HES BOREHOLE LOGS 2020



BOREHOLE LOG

LOG NUMBER: NT1

PROJECT NUMBER: P1500-0
 SITE: Seven Hills WF, Co. Roscommon
 CLIENT: Energia
 DRILLING CONTRACTOR: Petersen Drilling Ltd

DATE STARTED: 22/05/2020
 DATE FINISHED: 22/05/2020
 LOGGED BY: A. Keegan
 DRILLING TYPE: DTH

EASTING: 186362
 NORTHING: 248321
 ELEVATION: -96mOD

Well Completion Description	Comments	Water Strikes	Elevation	Meters Below Ground Surface	Lithology	Formation Description
G/L			96.00	0		Ground Surface
			94.30			Firm, sandy Topsoil
		dry, dust		93.60		Medium dense, light brown slightly gravelly, silty SAND with frequent cobbles and boulders
		dry, dust			5	Medium grey, weak weathered LIMESTONE
		dry, dust			10	Strong, grey LIMESTONE with occasional weathered zones
		dry, dust			15	
		dry, dust			20	
		dry, dust			25	
		dry, dust			30	
		dry, dust			35	
		minor water strike at 40mbgl	▼		40	
	water strike at 43.8mbgl	▼		45		
	minor weathering		47.50			
48.5mbgl				50		Total Depth of Borehole

REMARKS

Very minor water strike at 40mbgl. Water strike at 43.8mbgl of -0.25 m³/hr.
 Dipped 40mbTOC on 22/05/2020 13:00
 Dipped 33.5mbTOC on 22/05/2020 14:00

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SCALE as shown



BOREHOLE LOG

LOG NUMBER: NT3

PROJECT NUMBER: P1500-0

DATE STARTED: 20/05/2020

EASTING: 187141

SITE: Seven Hills WF, Co. Roscommon

DATE FINISHED: 22/05/2020

NORTHING: 247753

CLIENT: Energia

LOGGED BY: A. Keegan

ELEVATION: ~87.4mOD

DRILLING CONTRACTOR: Petersen Drilling Ltd

DRILLING TYPE: DTH

Well Completion Description	Comments	Water Strikes	Elevation	Meters Below Ground Surface	Lithology	Formation Description
			87.40	0		Ground Surface
	dry					Firm, brown sandy TOPSOIL
	dry		84.60			Firm to stiff, light brown sandy, gravelly, very silty CLAY with frequent cobbles and boulders
	dry		83.60			Limestone boulder
	dry		80.70		5	Firm to stiff, light brown, gravelly, very sandy, silty CLAY with frequent limestone cobbles
	dry					Limestone boulder
	dry				10	Medium-light brown silty SAND with occasional gravels and cobbles
	dry		74.20			
	dry		71.50		15	Medium dense, light brown, sandy very silty GRAVEL with limestone cobbles and boulders
	dry, dust					Soft to firm, moist, brown, slightly sandy, silty CLAY
	minor fracture/weathering, dry				20	Strong, dark grey Limestone with occasional very minor fracture sand weathering
	dry, dust				25	
minor fracture/weathering, dry				30		
dry, dust				35		
minor fracture/weathering, dry			54.00	40		
						Total Depth of Borehole

REMARKS

No water strikes.
Dipped DRY on 22/05/2020

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SCALE as shown



BOREHOLE LOG

LOG NUMBER: NT7

PROJECT NUMBER: P1500-0

DATE STARTED: 21/05/2020

EASTING: 186517

SITE: Seven Hills WF, Co. Roscommon

DATE FINISHED: 22/05/2020

NORTHING: 247332

CLIENT: Energia

LOGGED BY: A. Keegan

ELEVATION: ~75.1mOD

DRILLING CONTRACTOR: Petersen Drilling Ltd

DRILLING TYPE: DTH

Well Completion Description	Comments	Water Strikes	Elevation	Meters Below Ground Surface	Lithology	Formation Description	
			75.10	0		Ground Surface	
				71.90 71.40	0-4	Brown Sandy TOPSOIL	
		dry			4	Medium dense, brown, gravelly, silty SAND with frequent cobbles and boulders	
					5	Limestone boulder	
		dry		68.70	5-7	Soft to firm, orange-brown, very silty, sandy, gravelly CLAY with frequent limestone boulders	
		dry, dust			7	Strong, grey LIMESTONE with occasional minor weathering/fractures	
				64.20 63.60	10	Moderately strong to strong, medium grey slightly weathered LIMESTONE	
		dry, dust			15	Moderately strong, medium grey LIMESTONE with occasional minor fractures/weathering	
		minor weathering/fracture, dry		58.10	18	Fracture zone with clay infill	
		dry, dust			20	Weak to strong, grey, weathered LIMESTONE	
		minor weathering/fracture, dry		54.10	22	Fracture zone with clay infill	
		dry, dust			25	Moderately strong, medium grey LIMESTONE with occasional minor weathering/fractures	
	dry, dust		48.60	28	Weak to strong, medium grey, weathered LIMESTONE		
	dry, dust		46.10	30	Strong, light grey LIMESTONE		
	dry, dust		44.60	30		Total Depth of Borehole	

REMARKS

No water strikes.
Dipped DRY on 22/05/2020

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SCALE as shown



BOREHOLE LOG

LOG NUMBER: ST2

PROJECT NUMBER: P1500-0

DATE STARTED: 18/05/2020

EASTING: 188286

SITE: Seven Hills WF, Co. Roscommon

DATE FINISHED: 19/05/2020

NORTHING: 242877

CLIENT: Energia

LOGGED BY: A. Keegan

ELEVATION: ~80.05mOD

DRILLING CONTRACTOR: Petersen Drilling Ltd

DRILLING TYPE: DTH

Well Completion Description	Comments	Water Strikes	Elevation	Meters Below Ground Surface	Lithology	Formation Description
			80.05	0		Ground Surface
			79.15			Dense, dry brownish grey slightly gravelly SAND
		dry		78.05		Dense brownish grey gravelly SAND with frequent limestone cobbles and boulders
		dry, dust		73.55		Moderately strong, dry, competent, light grey LIMESTONE with occasional weathering/fractures
		dry, dust		71.05		Weak grey, dry, weathered LIMESTONE with dry clay infill
		dry, dust		67.05		Moderately strong, dry, grey LIMESTONE
		dry, dust			15	Weak to strong, light grey, LIMESTONE. Clay infill between 16.1 and 17.8mbgl slight fracture from 20.4 - 20.6m
		dry, dust			20	
		minor fracture, dry dry, dust		58.05		Strong, grey LIMESTONE
		dry, dust			25	
		dry, dust			30	
		dry, dust			35	
		dry, dust minor fracture, dry			40	
		dry, dust		40.00	40	

REMARKS

No water strikes.

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SCALE as shown



BOREHOLE LOG

LOG NUMBER: ST8

PROJECT NUMBER: P1500-0

DATE STARTED: 20/05/2020

EASTING: 188937

SITE: Seven Hills WF, Co. Roscommon

DATE FINISHED: 20/05/2020

NORTHING: 244075

CLIENT: Energia

LOGGED BY: A. Keegan

ELEVATION: ~73.5mOD

DRILLING CONTRACTOR: Petersen Drilling Ltd

DRILLING TYPE: DTH

Well Completion Description	Comments	Water Strikes	Elevation	Meters Below Ground Surface	Lithology	Formation Description	
			73.50	0		Ground Surface	
			72.55	0		Frim, sandy Topsoil	
		dry		71.70	0		Medium dense, brown, gravelly, silty SAND with frequent cobbles and boulders
		fracture/weathered zone from 3.2 to 3.7mbgl			3.2		Strong, light grey LIMESTONE dry fracture/weathered zone from 3.2 to 3.7mbgl
		dry, dust			3.7		
		dry, dust			6.5		
		dry, dust			10.0		
		dry, dust		62.40	11.1		Moderately weak, slightly fractured/weathered LIMESTONE
		dry, dust			15.0		Strong, light grey LIMESTONE, with occasional fractures and weathering
		dry, dust			20.0		
		dry, dust			25.0		
		dry, dust			30.0		
	dry, dust		38.30	35.0		Weak grey weathered/broken LIMESTONE	
	dry, dust		37.50	35.8		Strong, light grey LIMESTONE	
	dry, dust		36.70	36.8		Total Depth of Borehole	
				40.0			

REMARKS

No water strikes.

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SCALE as shown