











PROJECT: <u>ATH-56-00.90</u>		DRILLING FIRM / OPERATOR: <u>ODOT / FAST</u>		DRILL RIG: <u>CME 850R TRACKED</u>		STATION / OFFSET: <u>52+74, 142' LT.</u>		EXPLORATION ID														
TYPE: <u>ROADWAY</u>		SAMPLING FIRM / LOGGER: <u>ODOT / LEWIS</u>		HAMMER: <u>CME AUTOMATIC</u>		ALIGNMENT: <u>CL CONST SR 56</u>		B-001-0-16														
PID: <u>119908</u> SFN: <u>N/A</u>		DRILLING METHOD: <u>4.25" HSA / NQ2</u>		CALIBRATION DATE: <u>5/27/15</u>		ELEVATION: <u>827.2 (ft)</u> EOB: <u>97.0 ft.</u>		PAGE														
START: <u>3/15/16</u> END: <u>3/17/16</u>		SAMPLING METHOD: <u>SPT / NQ2</u>		ENERGY RATIO (%): <u>87</u>		LAT / LONG: <u>39.370692, -82.274988</u>		1 OF 2														
MATERIAL DESCRIPTION AND NOTES			ELEV.	DEPTHS		SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED	
MEDIUM DENSE, DARK BROWN, <b>STONE FRAGMENTS WITH SAND</b> , LITTLE SILT, TRACE CLAY, DAMP			827.2	TR	1																	
			823.7		2	21 18 14	46	89	SS-1	-	-	-	-	-	-	-	-	9	A-1-b (V)			
			3																			
HARD, YELLOWISH BROWN, <b>SANDY SILT</b> , LITTLE STONE FRAGMENTS, LITTLE CLAY, DAMP			821.2		4	4 7 12	28	89	SS-2	4.50	-	-	-	-	-	-	-	-	12	A-4a (V)		
			819.7		5																	
SHALE, GRAY, HIGHLY WEATHERED, VERY WEAK TO WEAK, THINLY LAMINATED.			816.9		6	17 20 26	67	72	SS-3	-	-	-	-	-	-	-	-	-	12	Rock (V)		
LIMESTONE, BROWNISH GRAY, HIGHLY WEATHERED, MODERATELY STRONG, THICK BEDDED, JOINT, FRACTURED, OPEN, SLIGHTLY ROUGH; RQD 26%, REC 100%. @7.9' - 10.3'; HIGH ANGLE FRACTURE WITH RUST STAINING AND PARTIALLY HEALED @8.2' - 8.7'; S <sub>c</sub> = 6,430 psi			816.9		7																	
				8																		
			9																			
SHALE, BROWNISH GRAY WITH YELLOWISH ORANGE, SEVERELY WEATHERED, MODERATELY STRONG, MEDIUM BEDDED, CALCAREOUS, JOINT, FRACTURED TO MODERATELY FRACTURED, TIGHT, SLIGHTLY ROUGH; CONTAINS VERY THIN LIMESTONE LAYERS; RQD 26%, REC 71%.  @ 17.0' - 17.3'; γ = 156 pcf; Qu = 6,136 psi			808.3		10	28		80	NQ2-1												CORE	
				11																		
			12																			
SANDSTONE, GRAY AND BROWN, MODERATELY WEATHERED, SLIGHTLY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY CALCAREOUS, VERY BLOCKY, FAIR; JOINT, MODERATELY FRACTURED, NARROW, VERY ROUGH; RQD 69%, REC 100%.  SHALE, GRAY, MODERATELY WEATHERED, WEAK, LAMINATED TO VERY THIN BEDDED, SLIGHTLY CALCAREOUS, POORLY FISSILE, JOINT, FRACTURED, NARROW, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, POOR; RQD 13%, REC 44%. @24.1' - 24.7'; CARBONACEOUS			806.1		13																	
				14																		
			15																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		16																	
				17	38		84	NQ2-2														CORE
			18																			
SHALE, GRAY, MODERATELY WEATHERED, WEAK, LAMINATED TO VERY THIN BEDDED, SLIGHTLY CALCAREOUS, POORLY FISSILE, JOINT, FRACTURED, NARROW, SLIGHTLY ROUGH, BLOCKY/DISTURBED/SEAMY, POOR; RQD 13%, REC 44%. @24.1' - 24.7'; CARBONACEOUS			801.8		19																	
				20																		
			21																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		22																	
				23																		
			24																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		25																	
				26																		
			27	48		92	NQ2-3															CORE
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		28																	
				29																		
			30																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		31																	
				32																		
			33																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		34																	
				35																		
			36																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		37	87		97	NQ2-4												CORE	
				38																		
			39																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		40																	
				41																		
			42																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		43																	
				44																		
			45																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		46																	
				47	44		78	NQ2-5														CORE
			48																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		49																	
				50																		
			51																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		52																	
				53																		
			54																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		55																	
				56																		
			57	91		100	NQ2-6															CORE
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		58																	
				59																		
			60																			
SANDSTONE, BROWN AND GRAY, MODERATELY WEATHERED, SLIGHTLY TO MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY MICACEOUS, JOINT, SLIGHTLY FRACTURED, NARROW TO OPEN, VERY ROUGH, BLOCKY, FAIR; RQD 78%, REC 97%. @27.1' - 27.8'; HIGH ANGLE FRACTURE @29.2' - 30.7'; HIGH ANGLE FRACTURE  @30.7'; GRAY, SLIGHTLY WEATHERED, CONTAINS LITHIC FRAGMENTS. @ 30.7' - 31.0'; γ = 161 pcf; Qu = 7,141 psi			801.8		61																	
				62																		
			63																			

PID: 119908	SFN: N/A	PROJECT: ATH-56-00.90	STATION / OFFSET: 52+74, 142' LT.					START: 3/15/16	END: 3/17/16	PG 2 OF 2	B-001-0-16										
MATERIAL DESCRIPTION AND NOTES			ELEV. 767.2	DEPTHS		SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	ABAN- DONED
<b>SANDSTONE</b> , GRAY, MODERATELY WEATHERED, MODERATELY STRONG, VERY FINE GRAINED TO FINE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY ARGILLACEOUS, JOINT, MODERATELY FRACTURED, NARROW TO OPEN, VERY ROUGH; BLOCKY, GOOD; RQD 93%, REC 100%. <i>(continued)</i>				767.2	61																
					62																
					63																
@58.4'; ARGILLACEOUS				759.8	64																
@65.3' - 65.5'; SHALE BED					65																
@65.5'; MEDIUM COARSE GRAINED, CONTAINS COAL STRINGERS					66																
@ 65.5' - 65.8'; $\gamma$ = 148 pcf; Qu = 4,034 psi				756.2	67	74		99	NQ2-7											CORE	
@67.3'; 0.1' FERRIC LAYER					68																
<b>COAL</b> , BLACK, SLIGHTLY WEATHERED, CLEATED; RQD 40%, REC 98%.					69																
@70.5'; BECOMES IMPURE				754.4	70																
<b>SANDSTONE</b> , GRAY, SLIGHTLY WEATHERED, SLIGHTLY STRONG, VERY FINE GRAINED TO FINE GRAINED, MEDIUM BEDDED, ARGILLACEOUS, INTACT; RQD 100%, REC 100%.					71																
@ 71.0' - 71.3'; $\gamma$ = 161 pcf; Qu = 1,683 psi					72																
@ 72.3' - 73.0'; Id2 = 94.4%				730.2	73																
<b>SANDSTONE</b> , GRAY AND DARK GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE GRAINED TO FINE GRAINED, LAMINATED TO VERY THIN BEDDED, SLIGHTLY ARENACEOUS, MICACEOUS; RQD 95%, REC 100%.					74																
@ 73.4' - 73.7'; $\gamma$ = 161 pcf; Qu = 7,800 psi					75																
@77.4'; LOW ANGLE FRACTURE				730.2	76																
@ 78.0' - 78.3'; $\gamma$ = 154 pcf; Qu = 6,849 psi					77	100		100	NQ2-8											CORE	
					78																
				730.2	79																
@83.9' - 85.3'; SHALE LAYER, FRACTURED					80																
@ 83.9' - 84.9'; Id2 = 53.7%					81																
@85.3' - 87.6'; ARGILLACEOUS, SLIGHTLY FOSSILIFEROUS				730.2	82																
					83																
@ 86.8' - 87.7'; Id2 = 98.0%					84																
@ 86.9' - 87.2'; $\gamma$ = 164 pcf; Qu = 6,784 psi				730.2	85																
					86																
@89.9' - 90.1'; LOW ANGLE FRACTURES					87	88		99	NQ2-9											CORE	
				730.2	88																
					89																
					90																
				730.2	91																
					92																
@ 93.2' - 93.5'; $\gamma$ = 158 pcf; Qu = 8,664 psi					93																
				730.2	94																
					95	100		100	NQ2-10											CORE	
					96																
				730.2	97																
					98																
					99																

NOTES: S<sub>p</sub> = POINT LOAD STRENGTH VALUES AS PER ASTM D 5731. LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.

ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED



PROJECT: <u>ATH-56-0.90</u>		DRILLING FIRM / OPERATOR: <u>ODOT / LEWIS</u>		DRILL RIG: <u>CME 850R TRACKED</u>		STATION / OFFSET: <u>54+88, 337' LT.</u>		EXPLORATION ID													
TYPE: <u>ROADWAY</u>		SAMPLING FIRM / LOGGER: <u>ODOT / SPROUSE</u>		HAMMER: <u>CME AUTOMATIC</u>		ALIGNMENT: <u>CL CONST SR 56</u>		B-002-0-23													
PID: <u>119908</u> SFN: <u>N/A</u>		DRILLING METHOD: <u>3.75" HSA / NQ2</u>		CALIBRATION DATE: <u>4/25/23</u>		ELEVATION: <u>881.0 (ft)</u> EOB: <u>73.0 ft.</u>		PAGE													
START: <u>12/5/23</u> END: <u>12/7/23</u>		SAMPLING METHOD: <u>SPT / NQ2</u>		ENERGY RATIO (%): <u>89</u>		LAT / LONG: <u>39.371256, -82.274770</u>		1 OF 2													
MATERIAL DESCRIPTION AND NOTES		ELEV.	DEPTHS		SPT/ RQD	N <sub>60</sub>	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)					ATTERBERG			WC	ODOT CLASS (GI)	HOLE SEALED	
		881.0								GR	CS	FS	SI	CL	LL	PL	PI				
TOPSOIL (4")		880.7																			
MEDIUM DENSE, REDDISH BROWN, <b>COARSE AND FINE SAND</b> , SOME STONE FRAGMENTS, LITTLE CLAY, LITTLE SILT, MOIST			1																		
			2		3	4	21	61	SS-1	-	20	0	49	14	17	NP	NP	NP	14	A-3a (0)	
		877.5	3		10																
SANDSTONE, REDDISH BROWN, SEVERELY WEATHERED, VERY WEAK, VERY FINE GRAINED TO FINE GRAINED.			4		13	24	72	94	SS-2	-	-	-	-	-	-	-	-	9	Rock (V)		
			5		25																
@6.0'; LIGHT BROWN AND REDDISH BROWN, HIGHLY WEATHERED.			6																		
			7		16	24	89	100	SS-3	-	-	-	-	-	-	-	-	8	Rock (V)		
			8		36																
@8.5'; GRAYISH BROWN AND BROWN, VERY FINE GRAINED, SLIGHTLY ARGILLACEOUS.		871.0	9		26	47	148	83	SS-4	-	-	-	-	-	-	-	-	6	Rock (V)		
			10		53																
SANDSTONE, YELLOWISH BROWN, HIGHLY WEATHERED, SLIGHTLY STRONG, MEDIUM TO COARSE GRAINED, MEDIUM TO THICK BEDDED, MICACEOUS, JOINT, HIGHLY FRACTURED TO FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, FAIR; RQD 42%, REC 91%.			11					53	NQ2-1											CORE	
			12		0																
@13.4'-13.7'; CLAY SEAM			13																		
			14																		
@14.6'; MODERATELY WEATHERED, SLIGHTLY FRACTURED			15																		
@15.5' - 15.9'; $\gamma$ = 135 pcf; Qu = 3,252 psi			16		53		100		NQ2-2											CORE	
@15.8' - 16.7'; Id2 = 89.8%			17																		
@17.3' - 17.6'; $\gamma$ = 133 pcf; Qu = 2,650 psi			18																		
@18.2' - 18.6'; $\gamma$ = 137 pcf; Qu = 2,952 psi			19																		
			20																		
@20.3' - 22.8'; HIGH ANGLE FRACTURE, SEVERELY TO HIGHLY WEATHERED, HIGHLY FRACTURED, CONTAINS CLAY INFILLING AND LOSS			21		33		60		NQ2-3											CORE	
			22																		
@22.8'; YELLOWISH BROWN WITH OLIVE BLACK, HIGHLY WEATHERED, HIGHLY FRACTURED			23																		
@23.6' - 24.5'; Id2 = 76.8%			24																		
@23.8'; HIGHLY TO MODERATELY WEATHERED, MODERATELY FRACTURED			25																		
			26		48		98		NQ2-4											CORE	
@27.1' - 27.5'; $\gamma$ = 135 pcf; Qu = 3,016 psi			27																		
			28																		
			29																		
		849.5	30		45		82		NQ2-5											CORE	
			31																		
SANDSTONE, YELLOWISH BROWN AND REDDISH BROWN, SEVERELY WEATHERED, WEAK TO SLIGHTLY STRONG, COARSE GRAINED, THIN BEDDED, FRIABLE, FERRIFEROUS, JOINT, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, FAIR; RQD 14%, REC 69%.		846.5	32																		
@33.0' - 34.2'; Id2 = 67.5%			33																		
@33.7' - 34.1'; $\gamma$ = 135 pcf; Qu = 1,502 psi			34																		
SILTSTONE, BLUIISH GRAY, MODERATELY WEATHERED, SLIGHTLY STRONG, VERY THIN TO THIN BEDDED, ARGILLACEOUS, SLIGHTLY ARENACEOUS, MICACEOUS, JOINT, FRACTURED TO MODERATELY FRACTURED, OPEN TO MARROW, SLIGHTLY ROUGH; BLOCKY, POOR; RQD 25%, REC 97%.			35																		
@36.8' - 39.4'; Id2 = 90.0%			36		14		100		NQ2-6											CORE	
@37.6' - 38.4'; SEVERELY WEATHERED, HIGHLY FRACTURED			37																		
@39.1' - 42.5'; S <sub>c</sub> = 1,799 psi			38																		
@39.7' - 40.9'; HIGH ANGLE FRACTURE WITH RUST STAINING			39																		
			40																		
@43.6' - 44.2'; CLAY SEAM			41		58		94		NQ2-7											CORE	
			42																		
		836.8	43																		
			44																		
SANDSTONE, GRAY, MODERATELY TO SLIGHTLY WEATHERED, MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, ARGILLACEOUS, MICACEOUS, JOINT, MODERATELY TO SLIGHTLY FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, GOOD; RQD 88%, REC 96%.			45		58		93		NQ2-8											CORE	
@44.2' - 44.6'; $\gamma$ = 155 pcf; Qu = 3,652 psi			46																		
@45.8' - 46.2'; Id2 = 94.4%			47																		
			48																		
			49																		
			50		97		100		NQ2-9											CORE	
			51																		
		828.0	52																		
CLAYSTONE, DARK GRAY AND GRAY, HIGHLY TO MODERATELY WEATHERED, VERY WEAK, MEDIUM BEDDED, SLIGHTLY ARENACEOUS, JOINT, FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, POOR; RQD 0%, REC 75%.			53																		
@53.1' - 53.1'; CARRONACEOUS			54																		
@53.2' - 54.7'; Id2 = 2.4%		824.1	55		23		80		NQ2-10											CORE	
			56																		
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, FINE TO MEDIUM GRAINED, THIN BEDDED, ARGILLACEOUS, MICACEOUS, JOINT, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, GOOD; RQD 74%, REC 96%.			57																		
			58																		
			59																		



BR: NQ2-1  
7.5'

ER: NQ2-1  
12.0'

N DIV

Run #:	Depth		Recovery		RQD	
NQ2-1	7.5'	12.0'	43/54	80%	15/54	28%
ATH-56-0.90 PID 119908						



BR: NQ2-2  
12.0'

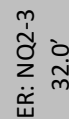


ER: NQ2-2  
22.0'

Run #:	Depth		Recovery		RQD	
NQ2-2	12.0'	22.0'	101/120	84%	46/120	38%
ATH-56-0.90 PID 119908						

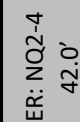


BR: NQ2-3  
22.0'



Run #:	Depth		Recovery		RQD	
NQ2-3	22.0'	32.0'	110/120	92%	58/120	48%
ATH-56-0.90 PID 119908						

BR: NQ2-4  
32.0'



Run #:	Depth		Recovery		RQD	
NQ2-4	32.0'	42.0'	116/120	97%	104/120	87%
ATH-56-0.90 PID 119908						



BR: NQ2-5  
42.0'

N DIV.

ER: NQ2-5  
52.0'

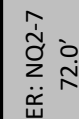
Run #:	Depth		Recovery		RQD	
NQ2-5	42.0'	52.0'	94/120	78%	53/120	44%
ATH-56-0.90 PID 119908						

BR: NQ2-6  
52.0'

ER: NQ2-6  
62.0'

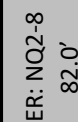
Run #:	Depth		Recovery		RQD	
NQ2-6	52.0'	62.0'	120/120	100%	109/120	91%
ATH-56-0.90 PID 119908						



BR: NQ2-7  
62.0'

Run #:	Depth		Recovery		RQD	
NQ2-7	62.0'	72.0'	119/120	99%	89/120	74%
ATH-56-0.90 PID 119908						

BR: NQ2-8  
72.0'



Run #:	Depth		Recovery		RQD	
NQ2-8	72.0'	82.0'	120/120	100%	120/120	100%
ATH-56-0.90 PID 119908						



BR: NQ2-9  
82.0'

ER: NQ2-9  
92.0'

Run #:	Depth		Recovery		RQD	
NQ2-9	82.0'	92.0'	119/120	99%	106/120	88%
ATH-56-0.90 PID 119908						

BR: NQ2-10  
92.0'

ER: NQ2-10  
97.0'

Run #:	Depth		Recovery		RQD	
NQ2-10	92.0'	97.0'	60/60	100%	60/60	100%
ATH-56-0.90 PID 119908						

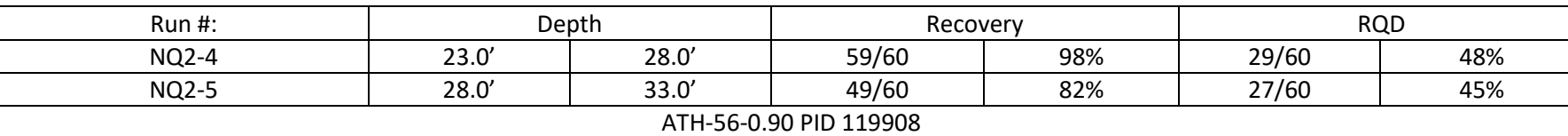


Run #:	Depth		Recovery		RQD	
NQ2-1	10.0'	13.0'	19/36	53%	0/36	0%
ATH-56-0.90 PID 119908						

Run #:	Depth		Recovery		RQD	
NQ2-2	13.0'	18.0'	60/60	100%	32/60	53%
NQ2-3	18.0'	23.0'	36/60	60%	20/60	33%
ATH-56-0.90 PID 119908						



B-002-0-23



ATH-56-0.90 PID 119908



Run #:	Depth		Recovery		RQD	
NQ2-6	33.0'	39.0'	72/72	100%	10/72	14%
NQ2-7	39.0'	43.0'	45/48	94%	28/48	58%
ATH-56-0.90 PID 119908						



BR 8 43.0

BR 9 48.0  
ER 8

ER 9 53.0

Run #:	Depth		Recovery		RQD	
NQ2-8	43.0'	48.0'	56/60	93%	35/60	58%
NQ2-9	48.0'	53.0'	60/60	100%	58/60	97%
ATH-56-0.90 PID 119908						

BR 10 53.0

ER 10 58.0  
BR 11

ER 11 63.0

Run #:	Depth		Recovery		RQD	
NQ2-10	53.0'	58.0'	48/60	80%	14/60	23%
NQ2-11	58.0'	63.0'	57/60	95%	24/60	40%
ATH-56-0.90 PID 119908						



Run #:	Depth		Recovery		RQD	
NQ2-12	63.0'	68.0'	53/60	88%	14/60	23%
NQ2-13	68.0'	73.0'	55/60	92%	28/60	47%
ATH-56-0.90 PID 119908						