Strat Well PM-6

Gulf Pittsburg - Midway

HOLE NO. _____

DEPARTMENT OF THE ARMY

DIVISION _____

INSTALLATION _____

DRILLING LOG

1. PROJECT | SHEET OF

2. LOCATION (Coordinates or Station) SE SW SE 8-325-22E

3. DRILLING AGENCY P+M (Gulf Minerals)

4. HOLE NO. (As shown on drawing title and file No.) P+M #6

5. NAME OF DRILLER

6. DIRECTION OF HOLE: ☐ VERTICAL ☐ INCLINED; DEGREES WITH VERTICAL

7. THICKNESS OF OVERBURDEN

8. DEPTH DRILLED INTO ROCK

9. TOTAL DEPTH OF HOLE

10. SIZE AND TYPE OF BIT

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

12. MANUFACTURER'S DESIGNATION OF DRILL

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED; UNDISTURBED

14. TOTAL NO. CORE BOXES

15. ELEV. GROUND WATER

16. DATE HOLE: STARTED; COMPLETED

17. ELEV. TOP OF HOLE 835

18. TOTAL CORE RECOVERY FOR BORING (%)

19. SIGNATURE OF INSPECTOR

8-32-22e

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (drilling time, water loss, depth of weathering, etc., if significant)
	40					(Logged by John Harris)
			Top of Core		43'	
		T T I	Limestone, lt gy (N7), brachs.	0.5'	1	Joe Hatch # 6-0 Verdigris L.S.
			Shale, gy blk (N2) - blk (N1), claystone, carbonaceous, hard, thin horizontal laminae, fossiliferous zones contain brachs + other marine fossil debris, abundant calcareous cement, sharp lower contact with underlying shale.			← Dale Schlingog sampled here.
	45	T				
		T		6.5'		Joe Hatch Sample # 6-1 Verd. Shale
		T				
					1	
	50					

ENG FORM 1 JUN 57 1836 (TRANSLUCENT) PREVIOUS EDITIONS ARE OBSOLETE (EN 1110-3-1001)

PROJECT _____ HOLE NO. _____

HOLE NO. _____

DEPARTMENT OF THE ARMY
DIVISION _____
INSTALLATION _____

DRILLING LOG

1. PROJECT | SHEET OF

2. LOCATION (Coordinates or Station)

3. DRILLING AGENCY

4. HOLE NO. (As shown on drawing title and file No.)

5. NAME OF DRILLER

6. DIRECTION OF HOLE: ☐ VERTICAL ☐ INCLINED | DEGREES WITH VERTICAL

7. THICKNESS OF OVERBURDEN

8. DEPTH DRILLED INTO ROCK

9. TOTAL DEPTH OF HOLE

10. SIZE AND TYPE OF BIT

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

12. MANUFACTURER'S DESIGNATION OF DRILL

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED | UNDISTURBED

14. TOTAL NO. CORE BOXES

15. ELEV. GROUND WATER

16. DATE HOLE: STARTED | COMPLETED

17. ELEV. TOP OF HOLE

18. TOTAL CORE RECOVERY FOR BORING (%)

19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (drilling time, water loss, depth of weathering, etc., if significant)
	50		Shale, med lt gy (N6), claystone, micaceous, soft, thin horizontal laminae, nonfossiliferous, sulfate bloom, sharp lower contact w/coal,	2'	1	
			Coal, blk(N1), banded mod. bright, sulfate bloom, sharp contacts.	0.7'	1	Joe Hatch sample # 6-2 Croweburg coal 52.0' - 52.7'
			Mudstone, med gy(N5), slightly silty, soft, blocky fracture, massive, plant fragments, irregular clay ironstone concretions, sharp lower contact with coal.	3.1'	53	
	55				2	
			Coal, blk(N1), crumbled sulfate bloom	0.4'		Fleming Coal
			Mudstone, med dk gy (N4)	0.3'		
			10.5' core loss 56.5' - 67' mud stone & shale	10.5'		
					2	
	60					

ENG FORM 1 JUN 57 1836 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE

PROJECT _____ HOLE NO. _____

HOLE NO. _____

DEPARTMENT OF THE ARMY

DIVISION _____

INSTALLATION _____

DRILLING LOG

1. PROJECT | SHEET OF

2. LOCATION (Coordinates or Station)

3. DRILLING AGENCY

4. HOLE NO. (As shown on drawing title and file No.)

5. NAME OF DRILLER

6. DIRECTION OF HOLE: ☐ VERTICAL ☐ INCLINED | DEGREES WITH VERTICAL

7. THICKNESS OF OVER-BURDEN

8. DEPTH DRILLED INTO ROCK

9. TOTAL DEPTH OF HOLE

10. SIZE AND TYPE OF BIT

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

12. MANUFACTURER'S DESIGNATION OF DRILL

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED | UNDISTURBED

14. TOTAL NO. CORE BOXES

15. ELEV. GROUND WATER

16. DATE HOLE: STARTED | COMPLETED

17. ELEV. TOP OF HOLE

18. TOTAL CORE RECOVERY FOR BORING (%)

19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	60		core loss 10,5' 56,5'-67' probably shale & mudstone	10,5'	2	
	65					
			Shale, same unit as below.	9,8'		
	70				2	

ENG FORM 1836 1 JUN 57 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE

PROJECT _____ HOLE NO. _____

HOLE NO. _____

DEPARTMENT OF THE ARMY
DIVISION _____
INSTALLATION _____

DRILLING LOG

1. PROJECT | SHEET OF
2. LOCATION (Coordinates or Station)
3. DRILLING AGENCY
4. HOLE NO. (As shown on drawing title and file No.)
5. NAME OF DRILLER
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7. THICKNESS OF OVERBURDEN
8. DEPTH DRILLED INTO ROCK
9. TOTAL DEPTH OF HOLE
10. SIZE AND TYPE OF BIT
11. DATUM FOR ELEVATION SHOWN (TBM or MSL)
12. MANUFACTURER'S DESIGNATION OF DRILL
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED | UNDISTURBED
14. TOTAL NO. CORE BOXES
15. ELEV. GROUND WATER
16. DATE HOLE: STARTED | COMPLETED
17. ELEV. TOP OF HOLE
18. TOTAL CORE RECOVERY FOR BORING (%)
19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	70		Shale, dkgy (N3) at base to med gy (N5) at top, mudstone, slightly silty, micaceous, mod. hard, thin horizontal laminae, zones of brachs, crinoid stems & other fossil debris, calcareous cement, clay ironstone bands to 0.2' dia. some thin zones contain intraformational mud clasts and may represent stormdeposits, sharp lower contact with coal,	9.8'	2	
					2, 74'	
					3	
	75		Coal, blk (N1), banded, mod. bright, sharp contacts.	0.25'		Joe Hatch #6-3 76.8'-77.05' coal Unnamed coal
			Mudstone, med ltgy (N6), soft, blocky fracture, crumbled, massive, plant fragments, clay ironstone nodules, gradational lower contact.	1.7'		
			Shale, same unit as below.	3.3'	3	
	80					

ENG FORM 1836 1 JUN 87 (TRANSLUCENT) PREVIOUS EDITIONS ARE OBSOLETE (EM 1110-2-1803)

PROJECT _____ HOLE NO. _____

HOLE NO. _____

DEPARTMENT OF THE ARMY
DIVISION _____
INSTALLATION _____

DRILLING LOG

1. PROJECT	SHEET OF
2. LOCATION (Coordinates or Station)	
3. DRILLING AGENCY	
4. HOLE NO. (As shown on drawing title and file No.)	5. NAME OF DRILLER

6. DIRECTION OF HOLE			7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK	9. TOTAL DEPTH OF HOLE
☐ VERTICAL	☐ INCLINED	DEGREES WITH VERTICAL			
10. SIZE AND TYPE OF BIT	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	12. MANUFACTURER'S DESIGNATION OF DRILL			
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED / UNDISTURBED	14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER	16. DATE HOLE: STARTED	COMPLETED	
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	80		Shale, dk gy (N3), claystone, micaceous, mod. hard, thin horizontal laminae, nonfossiliferous, pyrite concretions to 0.1' long x .05' dia, localized calcareous cement, gradational lower contact	3.3'	3	
			Clayshale, gy blk (N2) – dk gy (N3), nonfossiliferous, clay ironstone bands, sulfate bloom, pyrite concretions,	1.8'	3	Joe Hatch sample #6-4 Clayshale 82.0' – 83.8'
					84	
			Shale, gy blk (N2), claystone, fossil debris, calcareous cement, sharp lower contact.	1.7'	4	Joe Hatch sample #6-5 83.85' – 85.5' fossiliferous shale
	85		Coal, blk (N1), banded, mod. bright, sulfate bloom, sharp contacts.	2.0'		Joe Hatch sample # 6-6 Coal 85.5' – 87.5' Mineral coal
			Mudstone, same unit as below, "underclay"	5.5'		
					4	
	90					

HOLE NO. _____

DEPARTMENT OF THE ARMY
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DRILLING LOG

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2· LOCATION (Coordinates or Station)		
3· DRILLING AGENCY		
4· HOLE NO. (As shown on drawing title and file No.)	5· NAME OF DRILLER	

6· DIRECTION OF HOLE			7· THICKNESS OF OVER-BURDEN	8· DEPTH DRILLED INTO ROCK	9· TOTAL DEPTH OF HOLE
☐ VERTICAL	☐ INCLINED	DEGREES WITH VERTICAL			
10· SIZE AND TYPE OF BIT	11· DATUM FOR ELEVATION SHOWN (TBM or MSL)	12· MANUFACTURER'S DESIGNATION OF DRILL			

13· TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14· TOTAL NO. CORE BOXES	15· ELEV. GROUND WATER	16· DATE HOLE	
DISTURBED	UNDISTURBED			STARTED	COMPLETED
17· ELEV. TOP OF HOLE	18· TOTAL CORE RECOVERY FOR BORING (%)	19· SIGNATURE OF INSPECTOR			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	90		mudstone, med lt gy(N6) with brown mottling, silty, soft, blocky fracture, massive, plant fragments in upper portion, irregular clay ironstone or siderite crystals, sulfate bloom, gradational lower contact,	5.5'	4 4 93'	
	95		Shale, med dk gy(N4) at base to med lt gy(N6) at top, claystone, micaceous, mod. hard, thin horizontal laminae, finely divided plant fragments along bedding planes, clay ironstone bands up to 0.2' thick, gradational lower contact.	7'	5	
	100				5	

HOLE NO. _____

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4. HOLE NO. (As shown on drawing title and file No.)
5. NAME OF DRILLER
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9. TOTAL DEPTH OF HOLE
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14. TOTAL NO. CORE BOXES
15. ELEV. GROUND WATER
16. DATE HOLE: STARTED | COMPLETED
17. ELEV. TOP OF HOLE
18. TOTAL CORE RECOVERY FOR BORING (%)
19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (drilling time, water loss, depth of weathering, etc., if significant)
	100		Clay shale, dk gy (N3) - gy blk (N2), unfossiliferous	4'	5	Joe Hatch #6-7 clay shale.
					5	
					104	
		XXX				
			Clayshale, gy blk (N2) - dk gy (N3), fissile,	2'	6	Joe Hatch #6-8 Clayshale
	105					
			Clayshale, (N2), phosphatic	.7'		Joe Hatch #6-9 phosphatic shale
		T T T	shale, calcareous, fossil hash, sharp lower contact	0.65		Joe Hatch sample #6-10 Lime stone, fossil hash
			Coal, blk (N1), banded mod. bright, crumbled, sharp contacts.	0.4'		Scammon coal
		-.-	Mudstone - as below.	0.1'		
			4.0' core loss 108'-112' probably mudstone	4'		
	110				6	

ENG FORM 1836 1 JUN 57 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE

PROJECT _____ HOLE NO. _____

HOLE NO. _____

DEPARTMENT OF THE ARMY
DIVISION _____
INSTALLATION _____

DRILLING LOG

1. PROJECT		SHEET OF
2. LOCATION (Coordinates or Station)		
3. DRILLING AGENCY		
4. HOLE NO. (As shown on drawing title and file No.)	5. NAME OF DRILLER	
6. DIRECTION OF HOLE: ☐ VERTICAL ☐ INCLINED; DEGREES WITH VERTICAL	7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK / 9. TOTAL DEPTH OF HOLE
10. SIZE AND TYPE OF BIT	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	12. MANUFACTURER'S DESIGNATION OF DRILL
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED / UNDISTURBED	14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER / 16. DATE HOLE: STARTED / COMPLETED
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	110		4.0' core loss 108'-112' probably mudstone	4'	6	
			Mudstone, med lt gy(N6), silty, mod. hard, blocky-parallel fracture, massive, few small plant fragments, sand sized authigenic siderite crystals, gradational lower contact.	4'		
	115		Shale, med gy(N5), mudstone, silty, micaceous, hard, thin horizontal laminae, few plant fragments near base, sand sized authigenic siderite crystals, sharp lower contact.	6.2'	6 118 7 7	
	120					

HOLE NO. _____

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DRILLING LOG

1. PROJECT		SHEET OF
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3. DRILLING AGENCY		
4. HOLE NO. (As shown on drawing title and file No.)	5. NAME OF DRILLER	
6. DIRECTION OF HOLE: ☐ VERTICAL ☐ INCLINED; DEGREES WITH VERTICAL	7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK / 9. TOTAL DEPTH OF HOLE
10. SIZE AND TYPE OF BIT	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	12. MANUFACTURER'S DESIGNATION OF DRILL
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED / UNDISTURBED	14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER / 16. DATE HOLE: STARTED / COMPLETED
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	120		Shale, same unit as above.	6.2'	7	
		T	Shale, same unit as below.			
	125	T		20'	7	
		T			128	
		T			8	
	130				8	

HOLE NO. _____

DEPARTMENT OF THE ARMY

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INSTALLATION _____

DRILLING LOG

1. PROJECT | SHEET OF

2. LOCATION (Coordinates or Station)

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4. HOLE NO. (As shown on drawing title and file No.)

5. NAME OF DRILLER

6. DIRECTION OF HOLE			7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK	9. TOTAL DEPTH OF HOLE
☐ VERTICAL	☐ INCLINED	DEGREES WITH VERTICAL			

10. SIZE AND TYPE OF BIT	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	12. MANUFACTURER'S DESIGNATION OF DRILL

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER	16. DATE HOLE	
DISTURBED	UNDISTURBED			STARTED	COMPLETED

17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (drilling time, water loss, depth of weathering, etc., if significant)
	130		Shale, med gy (N5) with brown mottling, mudstone, silty, micaceous, hard, thin horizontal laminae, abundant plant fragments show little abraision, abundant clay ironstone bands to .05' thick, localized calcareous cement, sharp lower contact, few silty laminae in upper 5'	20'	8	
	135				8	
					138	
					9	
	140				9	

ENG FORM 1 JUN 57 1836 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE

PROJECT _____ HOLE NO. _____

HOLE NO. _____

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DRILLING LOG

1. PROJECT | SHEET OF

2. LOCATION (Coordinates or Station)

3. DRILLING AGENCY

4. HOLE NO. (As shown on drawing title and file No.)

5. NAME OF DRILLER

6. DIRECTION OF HOLE			7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK	9. TOTAL DEPTH OF HOLE
☐ VERTICAL	☐ INCLINED	DEGREES WITH VERTICAL			

10. SIZE AND TYPE OF BIT	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	12. MANUFACTURER'S DESIGNATION OF DRILL

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER	16. DATE HOLE	
DISTURBED	UNDISTURBED			STARTED	COMPLETED

17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (drilling time, water loss, depth of weathering, etc., if significant)
	140		Shale, same unit as above.	20'	9	
	145	T XXX T T XXX T XXX T	Shale, dkgy(N3), claystone, micaceous, hard, brittle, thin horizontal laminae, marine fossil debris, calcareous cement, clay ironstone bands to 0.3' thick, sharp lower contact with coal,	10.3'	9 148 10	
	150				10	

ENG FORM 1836 1 JUN 57 (TRANSLUCENT) PREVIOUS EDITIONS ARE OBSOLETE (EM 1110-2-1801)

PROJECT _____ HOLE NO. _____

HOLE NO. _____

DEPARTMENT OF THE ARMY
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DRILLING LOG

1· PROJECT		SHEET OF
2· LOCATION (Coordinates or Station)		
3· DRILLING AGENCY		
4· HOLE NO. (As shown on drawing title and file No.)	5· NAME OF DRILLER	
6· DIRECTION OF HOLE: ☐ VERTICAL ☐ INCLINED; DEGREES WITH VERTICAL	7· THICKNESS OF OVER-BURDEN	8· DEPTH DRILLED INTO ROCK / 9· TOTAL DEPTH OF HOLE
10· SIZE AND TYPE OF BIT	11· DATUM FOR ELEVATION SHOWN (TBM or MSL)	12· MANUFACTURER'S DESIGNATION OF DRILL
13· TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED / UNDISTURBED	14· TOTAL NO. CORE BOXES	15· ELEV. GROUND WATER / 16· DATE HOLE: STARTED / COMPLETED
17· ELEV. TOP OF HOLE	18· TOTAL CORE RECOVERY FOR BORING (%)	19· SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	150		Shale, same unit as above		10	Joe Hatch sample # 6-12 150.65 - 152.3 Shale
		T / I	fossil debris	10.3'		
			Coal, blk (N1), sampled. sharp contacts.	0.7'		Joe Hatch sample #6-13 152.3' - 153.0' Coal Tebo coal
			Mudstone, ltgy (N7) with brown mottling, silty, micaceous, soft, blocky fracture, massive, abundant plant fragments, irregular clay ironstone bands near base, finely disseminated pyrite crystals, gradational lower contact.	4.5'	10	
	155				157	
					11	
			Siltstone, same unit as below.	7.5'		
					11	
	160					

HOLE NO. _____

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3. DRILLING AGENCY
4. HOLE NO. (As shown on drawing title and file No.)
5. NAME OF DRILLER
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17. ELEV. TOP OF HOLE
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ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (drilling time, water loss, depth of weathering, etc., if significant)
	160		SiHstone, med Hgy (N6), micaceous, hard, thinly laminated, finely divided plant remains in upper part., abundant sand sized authigenic siderite crystals, intercalating lower contact	7.5'	11	Unnamed S.S.
	165		Shale, med dk gy (N4), mudstone, slightly silty, micaceous, mod. hard, thin horizontal laminae, nonfossiliferous, may be burrowed, few sand sized authigenic siderite crystals in upper 1 foot, gradational lower contact.	5'	11 166 12 12	
	170					

ENG FORM 1 JUN 57 1836 (TRANSLUCENT) PREVIOUS EDITIONS ARE OBSOLETE (EM 1110-2-1803)

PROJECT _____ HOLE NO. _____

HOLE NO. _____

DEPARTMENT OF THE ARMY
DIVISION _____
INSTALLATION _____

DRILLING LOG

1. PROJECT | SHEET OF

2. LOCATION (Coordinates or Station)

3. DRILLING AGENCY

4. HOLE NO. (As shown on drawing title and file No.)

5. NAME OF DRILLER

6. DIRECTION OF HOLE			7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK	9. TOTAL DEPTH OF HOLE
☐ VERTICAL	☐ INCLINED	DEGREES WITH VERTICAL			

10. SIZE AND TYPE OF BIT	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	12. MANUFACTURER'S DESIGNATION OF DRILL

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER	16. DATE HOLE	
DISTURBED	UNDISTURBED			STARTED	COMPLETED

17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	170		Shale, gy blk (N2) to dk gy (N3), claystone, hard, brittle, thin horizontal laminae, non-fossiliferous, clay ironstone bands to 0.1' thick, sharp lower contact w/ coal.	5.5'	12	Joe Hatch Sample # 6-14 170.9 – 175.5' clay shale.
	175		Coal, blk (N1), smct sharp contacts	0.1'	12	Weir-Pittsburg coal
			Mudstone, med H gy (N6), slightly silty, soft, blocky fracture, crumbled, massive, plant frags, no apparent diagenetic features, gradational lower contact.	3.4'	176 13	
	180		2.0' core loss 179' – 181' mudstone	2.0'	13	

ENG FORM 1836 1 JUN 57 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE

PROJECT _____ HOLE NO. _____

HOLE NO. _____

DEPARTMENT OF THE ARMY
DIVISION _____
INSTALLATION _____

DRILLING LOG

1. PROJECT | SHEET OF

2. LOCATION (Coordinates or Station)

3. DRILLING AGENCY

4. HOLE NO. (As shown on drawing title and file No.)

5. NAME OF DRILLER

6. DIRECTION OF HOLE: ☐ VERTICAL ☐ INCLINED; DEGREES WITH VERTICAL

7. THICKNESS OF OVERBURDEN

8. DEPTH DRILLED INTO ROCK

9. TOTAL DEPTH OF HOLE

10. SIZE AND TYPE OF BIT

11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

12. MANUFACTURER'S DESIGNATION OF DRILL

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED | UNDISTURBED

14. TOTAL NO. CORE BOXES

15. ELEV. GROUND WATER

16. DATE HOLE: STARTED | COMPLETED

17. ELEV. TOP OF HOLE

18. TOTAL CORE RECOVERY FOR BORING (%)

19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	180		2.0' core loss 279'-281' mudstone	2.0'	13	
			Siltstone, lt gy(N7) at base to med lt gy(N6) at top, micaceous, hard, high angle ripple cross laminae, nonfossiliferous, sand sized authigenic siderite crystals, sharp lower contact.	4.6'		
	185		Shale, med lt gy (N6), mudstone, slightly silty micaceous, mod. hard, thin horizontal laminae, unfossiliferous, sand sized authigenic siderite crystals, gradational lower contact.	2.5'	13	
					188'	
			Shale, same unit as below,	17		
	190				14	

ENG FORM 1 JUN 57 1836 (TRANSLUCENT) (EM 1110-2-1803) PREVIOUS EDITIONS ARE OBSOLETE

PROJECT _____ HOLE NO. _____

HOLE NO. _____

DEPARTMENT OF THE ARMY

DIVISION _____

INSTALLATION _____

DRILLING LOG

1. PROJECT		SHEET OF
2. LOCATION (Coordinates or Station)		
3. DRILLING AGENCY		
4. HOLE NO. (As shown on drawing title and file No.)	5. NAME OF DRILLER	

6. DIRECTION OF HOLE			7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK	9. TOTAL DEPTH OF HOLE
☐ VERTICAL	☐ INCLINED	DEGREES WITH VERTICAL			
10. SIZE AND TYPE OF BIT	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	12. MANUFACTURER'S DESIGNATION OF DRILL			

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER	16. DATE HOLE	
DISTURBED	UNDISTURBED			STARTED	COMPLETED
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	190		Shale, dk gy (N3) at base to med gy (N5) at top, mudstone, few very thin silty laminae, micaceous, hard, thin horizontal laminae, nonfossiliferous, clay ironstone bands to 2cm thick, sharp lower contact. localized calcareous cement	17'	14	
	195				14	
					198	
	200				15	

ENG FORM 1 JUN 57 1836 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE

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HOLE NO. _____

DEPARTMENT OF THE ARMY
DIVISION _____
INSTALLATION _____

DRILLING LOG

1. PROJECT | SHEET OF
2. LOCATION (Coordinates or Station)
3. DRILLING AGENCY
4. HOLE NO. (As shown on drawing title and file No.)
5. NAME OF DRILLER
6. DIRECTION OF HOLE: ☐ VERTICAL ☐ INCLINED | DEGREES WITH VERTICAL
7. THICKNESS OF OVERBURDEN
8. DEPTH DRILLED INTO ROCK
9. TOTAL DEPTH OF HOLE
10. SIZE AND TYPE OF BIT
11. DATUM FOR ELEVATION SHOWN (TBM or MSL)
12. MANUFACTURER'S DESIGNATION OF DRILL
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED | UNDISTURBED
14. TOTAL NO. CORE BOXES
15. ELEV. GROUND WATER
16. DATE HOLE: STARTED | COMPLETED
17. ELEV. TOP OF HOLE
18. TOTAL CORE RECOVERY FOR BORING (%)
19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	200		Shale, same unit as above.		15	
				17'		
	205		Siltstone, lt gy(N7) qtz, micaceous comp, hard, wavy bedded, bioturbated, abundant sand sized authigenic siderite crystals, lower contact not observed.	3.0'	15	
					208'	
			Mudstone, med lt gy(N6), soft, blocky fracture, massive, plant frags, lower contact not observed.	2.0'	16	"Underclay" but no coal. "A" Bluejacket Horizon
	210					

ENG FORM 1 JUN 57 1836 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE

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DIVISION _____
INSTALLATION _____

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17. ELEV. TOP OF HOLE
18. TOTAL CORE RECOVERY FOR BORING (%)
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ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	210		Shale - gy, blk (N2) phosphatic.	0.6'		"A" Blue Jacket coal
			Coal - smut			Joe Hatch sample # 6-15 210.5 - 210.7' phosphatic shale, Blue Jacket coal
			Shale, dk gy (N3) - gy blk (N2), claystone, nonfossiliferous, sharp lower contact w/ coal.		16	Joe Hatch sample # 6-16 210.7' - 214.7'
				5.8'		
	215					
			Coal blk, (N1), sharp contact	0.25'	16	Joe Hatch sample # 6-17 216.55' - 216.8' "B" Blue Jacket coal.
			Mudstone - underclay	0.3'		
			Clayshale, gy bk (N2) - dk gy (N3), thinly laminated, clay ironstone bands to 0.2' thick, lower contact not observed		218'	Joe Hatch sample # 6-18 216.8' - 221.15' shale
				3.1'		
					17	
	220					

HOLE NO. _____

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3. DRILLING AGENCY		
4. HOLE NO. (As shown on drawing title and file No.)	5. NAME OF DRILLER	
6. DIRECTION OF HOLE: ☐ VERTICAL ☐ INCLINED; DEGREES WITH VERTICAL	7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK / 9. TOTAL DEPTH OF HOLE
10. SIZE AND TYPE OF BIT	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	12. MANUFACTURER'S DESIGNATION OF DRILL
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED / UNDISTURBED	14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER / 16. DATE HOLE: STARTED / COMPLETED
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (drilling time, water loss, depth of weathering, etc., if significant)
	220		Shale - same as above			
			Siltstone, ltgy(N7) micaceous, hard, wavy bedded, grad. lower contact.	0.8'	17	
			Sandstone, ltgy (N7) w/ brown mottling, very fine - fine grained, silty at base, oil stained, abundant authigenic siderite crystals, sharp lower contact.	14'	17	Joe Hatch sample # 6-19 Sandstone 221.1' - 228.0' Upper Bluejacket S.S.
	225				228	
					18	
	230					

EDG FORM 1 JUN 57 1836 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE

PROJECT _____ HOLE NO. _____

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DEPARTMENT OF THE ARMY
DIVISION _____
INSTALLATION _____

DRILLING LOG

1. PROJECT		SHEET OF
2. LOCATION (Coordinates or Station)		
3. DRILLING AGENCY		
4. HOLE NO. (As shown on drawing title and file No.)	5. NAME OF DRILLER	
6. DIRECTION OF HOLE: ☐ VERTICAL ☐ INCLINED; DEGREES WITH VERTICAL	7. THICKNESS OF OVERBURDEN	8. DEPTH DRILLED INTO ROCK / 9. TOTAL DEPTH OF HOLE
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13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED / UNDISTURBED	14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER / 16. DATE HOLE: STARTED / COMPLETED
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (drilling time, water loss, depth of weathering, etc., if significant)
	230		Sandstone, same unit as above.		18	
				14'		Upper Bluejacket S.S.
	235		Shale, dkgy(N3), clayst, hard, micaceous, thin horizontal laminae, non-fossiliferous, gradational lower contact;	1.5'	18	
			Shaly Limestone, calc, fossil fragments sharp lower contac	0.9'	237	Joe Hatch sample # 6-21 L.S. 236.5'-237.4'
			Coal, blk(N1), banded mod. bright, sharp contacts,	0.3'	19	Joe Hatch sample # 6-22 coal 237.4'-237.7'.
			Mudstone, lt gy(N7), massive plant frags, gradational	0.3'		"C" Bluejacket coal
			Shale, same unit as below.	13.8'		
	240				19	

ENG FORM 1 JUN 57 1836 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE PROJECT _____ HOLE NO. _____

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4. HOLE NO. (As shown on drawing title and file No.)	5. NAME OF DRILLER	

6. DIRECTION OF HOLE			7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK	9. TOTAL DEPTH OF HOLE
☐ VERTICAL	☐ INCLINED	DEGREES WITH VERTICAL			
10. SIZE AND TYPE OF BIT	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	12. MANUFACTURER'S DESIGNATION OF DRILL			

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER	16. DATE HOLE	
DISTURBED	UNDISTURBED			STARTED	COMPLETED
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	240		Shale, med dk gy (N4), mudstone, few thin lt gy silty lenses, micaceous, hard, thin horizontal laminae, small plant fragments along bedding planes, bioturbated, clay ironstone bands to 1 cm thick and sand sized authigenic siderite crystals, sharp lower contact with coal.	13.8'	19	
	245				19	
					246	
					20	
	250				20	

ENG FORM 1836 1 JUN 57 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE

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13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED / UNDISTURBED	14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER / 16. DATE HOLE: STARTED / COMPLETED
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	250		Shale, same unit as above.	13.8'	20	
			Coal, blk (N1), bony, sharp contacts.	0.15'		"D" Bluejacket coal
			Mudstone, med ltgy (N6), mod. hard, blocky frac, slightly silty, micaceous, massive, plant fragments, gradational lower contact	1.3'		"Underclay"
	255		Interbedded siltstone & shale, alternating med ltgy (N6) and ltgy (N7) laminae, silty laminae up to 2cm thick, show ripple crosslamination. wavy bedded, small plant fragments along bedding surfaces, abundant sand sized authigenic siderite crystals, gradational lower contact.	6.8'	20 256 21	
	260				21	

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1. PROJECT			SHEET OF
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17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR	

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	260		Shale, same unit as below.		21	
				19'		
	265				21	
					266	
					22	
	270				22	

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13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED / UNDISTURBED	14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER / 16. DATE HOLE: STARTED / COMPLETED
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	270		Shale medgy (N5) at base to med Hgy (N6) at top, mudstone, slightly silty, micaceous, mod. hard, thin horizontal laminae, few very small plant frags along bedding planes, sand sized authigenic siderite crystals in upper portion, sharp lower contact with coal.	19'	22	
	275				22	
					276	
					23	
			Coal, blk (N1), bony, banded, mod. bright, sulfate bloom, sharp contacts,	0.15'		Drywood
			Mudstone, same unit as below.	4.3'	23	"Underclay"
	280					

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17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	280		mudstone, med H gy (N6), mod. hard, massive, blocky fracture, plant frags in upper portion, abundant sand sized authigenic siderite crystals, brown Fe oxide stains, gradational lower contact.	4.3'	23	
	285	T	Shale, dkgy (N3) - gy blk (N2), claystone, micaceous, hard, brittle, thin horizontal laminae, nonfossiliferous few very small clay ironstone nodules less than 1 cm dia, localized calcareous cement, sharp lower contact with coal.	6.3'	23 285 24	Joe Hatch #6-23 284.5'-285.5' Shale
		T				
		T			24	#6-23 Shale 288.8'-289.8'
		T	Rowe coal			Joe Hatch Sample #6-24
	290		Coal, blk (N1), banded, mod. bright, sharp contacts.	0.2'		Coal 289.8'-290'

ENG FORM 1 JUN 57 1836 (TRANSLUCENT) (EM 1110-2-1801) PREVIOUS EDITIONS ARE OBSOLETE PROJECT _____ HOLE NO. _____

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1. PROJECT		SHEET OF
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13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED / UNDISTURBED	14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER / 16. DATE HOLE: STARTED / COMPLETED
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	290		Mudstone, med lt gy (N6) at base to med gy (N5) at top, slightly silty, soft, blocky fracture, massive, plant fragments in upper portion, some brown staining, gradational lower contact.	3.7'	24	"Underclay"
	295		Shale, med dk gy (N4) at base to med lt gy (N6) at top, mudstone, silty, micaceous, hard, thin horizontal laminae, few small plant frags along bedding planes, few sand sized authigenic siderite crystals, gradational lower contact.	5.3'	24 295 25	
	300		Shale, same unit as below.	11.4'	25	Joe Hatch #6-25 299.5 - 300.5

HOLE NO. _____

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7. THICKNESS OF OVERBURDEN

8. DEPTH DRILLED INTO ROCK

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11. DATUM FOR ELEVATION SHOWN (TBM or MSL)

12. MANUFACTURER'S DESIGNATION OF DRILL

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14. TOTAL NO. CORE BOXES

15. ELEV. GROUND WATER

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17. ELEV. TOP OF HOLE

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ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (drilling time, water loss, depth of weathering, etc., if significant)
	300	T	Shale, claystone, gyblk(N2) at base to dkgy(N3) at top., micaceous, hard, brittle, thin horizontal laminae, abundant calcareous cement, clay ironstone bands to 0.1' dia., sharp lower contact with underclay,		25	Joe Hatch #6-25 299.5'-300.5'
		T		11.4'		
		T			25	Joe Hatch #6-25 303.5'-304.5'
		T			305	
	305	T			26	Joe Hatch #6-25 305.5'-306.5'
		T				
		T				
		T				
		T				
	310				26	Joe Hatch #6-25 308.5'-309.5'

HOLE NO. _____

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4. HOLE NO. (As shown on drawing title and file No.)	5. NAME OF DRILLER	

6. DIRECTION OF HOLE			7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK	9. TOTAL DEPTH OF HOLE
☐ VERTICAL	☐ INCLINED	DEGREES WITH VERTICAL			
10. SIZE AND TYPE OF BIT	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)		12. MANUFACTURER'S DESIGNATION OF DRILL		

13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER	16. DATE HOLE	
DISTURBED	UNDISTURBED			STARTED	COMPLETED
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)		19. SIGNATURE OF INSPECTOR		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	310		Shale, same unit as above	11.4'	26	Neutral coal horizon "Underclay" with no coal.
			Mudstone, med lt gy(N6), soft, blocky fracture, massive, abundant plant fragments, irregular clay ironstone nodules up to 0.1' long, sand sized authigenic siderite crystals, gradational lower contact.	3.3'		
			Shale, mudstone, med. dk gy (N4), hard, micaceous, thin horizontal laminae, nonfossiliferous, abundant sand sized authigenic siderite crystals, irregular clay ironstone concretions, gradational lower contact.	5.3'	26	
	315				315	
					27	
			Interbedded siltstone & shale, same unit as below.	9.3'		
	320				27	

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4. HOLE NO. (As shown on drawing title and file No.)	5. NAME OF DRILLER	
6. DIRECTION OF HOLE: ☐ VERTICAL ☐ INCLINED; DEGREES WITH VERTICAL	7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK / 9. TOTAL DEPTH OF HOLE
10. SIZE AND TYPE OF BIT	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	12. MANUFACTURER'S DESIGNATION OF DRILL
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN: DISTURBED / UNDISTURBED	14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER / 16. DATE HOLE: STARTED / COMPLETED
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	320		Interbedded siltstone & shale, alternating lt gy(N7) silty laminae and dk gy(N3) shaly laminae, hard, qtz, micaceous comp, wavy-lenticular bedded, silty laminae generally less than 0.5 cm thick, shale predominant, abundant plant fragments on bedding surfaces, few thin clay ironstone bands to 2 cm thick, gradational lower contact	9.3'	27	
					27	
	325				325'	
					28	
		T T T XXXX	Shale, med dk gy(N4), mudstone, lt gy(N7) silty laminae, lenticular bedded, abundant brachs and crinoid stems to 1 cm dia, calcareous cement, clay ironstone bands to 0.1' thick, authigenic siderite xtals, gradational lower contact.	2.7'		
	330	T			28	

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13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER	16. DATE HOLE	
DISTURBED	UNDISTURBED			STARTED	COMPLETED
17. ELEV. TOP OF HOLE	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR			

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	330		Shale, same unit as above.	2.7'	28	
			Shale, med dk gy (N4), mudstone, micaceous, hard, thin horizontal laminae, slightly silty, upper portion bioturbated, small amount of localized calcareous cement, clay ironstone bands up to 0.3' thick, sharp lower contact w/coal.	10.2'	28	
	335				335	
					29	
	340				29	

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ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	340		Shale, same unit as above.	10.2'	29	
			Coal, blk(N1), banded, mod. bright, hard, sulfate bloom, sharp contacts,	0.9'		Joe Hatch sample # 6-26 341.2'-342.1' "A" coal
			Mudstone, med ltgy(N6), slightly silty, micaceous, soft, blocky-conchoidal fracture, massive, abundant plant fragments, few sand sized authigenic siderite crystals near base, sharp lower contact	3.1'	29 344' 30	
	345		Interbedded sandstone + shale, alternating v ltgy(N8) and dk gy(N3), wavy bedded, 0.4' sand layer at top, non-fossiliferous, gradational lower contact,	1.5'		
			Shale, dk gy(N3), claystone, thin horizontal laminae, clay ironstone bands to 0.1' thick not included in sample, sharp lower contact with coal.	1.8'		Joe Hatch sample # 6-27 346.7'-348.5'
			Coal, blk(N1), banded, mod. bright, sulfate bloom, 0.1' pyrite concretion not sampled, sharp contacts,	0.8'		Joe Hatch sample # 6-28 348.5'-349.3' "B" coal
			Mudstone, same unit as below.	4.3'		Underclay
	350				30	

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ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (drilling time, water loss, depth of weathering, etc., if significant)
	350		Mudstone, med lt gy (N6), slightly silty, soft, blocky - conchoidal fracture, massive, abundant plant fragments, abundant fine sand sized authigenic siderite crystals, small clay ironstone nodules, 1cm dia, abruptly gradational lower contact,	4.3'	30	"Underclay"
					30	
			Shale, dk gy (N3), claystone, micaceous, hard, brittle, thin horizontal laminae, non-fossiliferous, abundant fine sand and silt sized authgenic siderite crystals, sharp lower contact with mudstone, uniform color and comp. throughout, Several intervals sampled by Dr. Joe Hatch.		354	
					31	Joe Hatch sample# 6-29 354.5'-355.5'
	355			15.1'		
						Joe Hatch sample # 6-29 358'-359'
	360				31	

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ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	360		Shale, same unit as above		31	
						Joe Hatch # 6-29 361'-362'
					31	
					363'	
					32	
				15.1'		Joe Hatch # 6-29 364'-365'
	365					
					32	
						Joe Hatch # 6-29 367'-368'
			Mudstone, med lt gy (N6), slightly silty, soft, blocky fracture, massive, plant fragments, sand sized authigenic siderite, gradational lower contact.	2.7'		resembles underclay but no coal developed. "C" horizon
	370				32	

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	370		Mudstone, same unit as above.	2.7'	32	
		T	Shale, med dk gy (N4) - dk gy (N3), mudstone, silty, micaceous, mod. hard, thin horizontal laminae, nonfossiliferous, calcareous cement, gradational lower contact.	3.5'	32	
		T			373'	
		T			33	
		T				
	375		Interbedded siltstone & shale, alternating dk gy (N3) and lt gy (N7) silty laminae, wavy bedded, few small crinoid stems and fossil debris, calcareous cement, few sand sized authigenic siderite crystals, sharp lower contact.	3.3'		"D" coal horizon "Underclay" but no coal.
		T				
		T				
		T				
			Mudstone, same unit as below.	3.7'		
	380				33	

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	380		Mudstone, ltgy(N7), slightly silty, soft, blocky fracture, massive, plant fragments, brown stains, gradational lower contact	3.7'	33	resembles "Underclay" but no coal
			Shale, med ltgy(N6), claystone, mod. hard, thin horizontal laminae, non-fossiliferous no apparent diagenetic features, abruptly gradational lower contact.	3'	33 383 34	
	385		Shale, same unit as below.	20'		
	390				34	

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	390		Shale, dk gy (N3) with lt gy (N7) silty laminae, mudstone, hard, thin lenticular - wavy bedding, bioturbated, mixing of silty laminae, abundant sand sized authigenic siderite crystals and clay ironstone bands to 0.1' thick, gradational lower contact,		34	
					34	
					393'	
					35	
				20'		
	395					
	400				35	

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	400		Shale, same unit as above.	20'	35	
					35	
					403'	
					36	
	405		Shale, gyblk(N2) - dk gy(N3), claystone, thin horizontal laminae, nonfossiliferous, clay ironstone concretions, sharp lower contact/coal,	1.6'		Joe Hatch shale sample # 6-30 404.5 - 407.25
			Coal, blk (N1), banded, mod. bright, hard, sulfate bloom, 0.1' shale parting at 407.6', sharp upper & lower contact.	1.7'		Riverton coal; sample # 6-31 coal Dr. Joe Hatch 407.35 - 408.85
			Claystone, dkgy(N3)↓ to med gy(N5)↑, mod. hard, massive, blocky fracture, plant frags, gradational lower contact.	1.1'		
			Shale, same unit as below.	10.5'		
	410				36	

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	410		Shale, dk gy (N3) with a few lt gy (N7) silty laminae near top, claystone, hard, brittle, thin horizontal laminae, non fossiliferous, abundant pyrite concretions near base, up to 0.1' dia, sharp, unconformable lower contact marked by brecciated zone,		36	
					36	
					413'	
					37	
				10.5'		
	415					
	420		Limestone, same unit as below.	10'	37	

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	420		Limestone, ltgy(N7) – vltgy(N8), mudstone, massive, no fossils observed, extensively fractured, abundant pyrite concretions, oil staining, lower contact not observed, upper contact unconformable, marked by mixing of shale & limestone clasts.		37	Mississippian L.S.
					37	
					422'	
					38	
				10'		
	425					
					38	
	430		Bottom of Hole		430'	

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