

Gulf Pittsburg - Midway

HOLE NO.

DEPARTMENT OF THE ARMY		1. PROJECT	SHEET	OF
DIVISION _____		2. LOCATION (Coordinates or Station) 13-33-12 E		
INSTALLATION _____		3. DRILLING AGENCY		
DRILLING LOG		5. NAME OF DRILLER Gulf Minerals (P.M.)		
4. HOLE NO. (As shown on drawing title and file No.) P+M # 1		7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK	9. TOTAL DEPTH OF HOLE
6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> 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		14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER
17. ELEV. TOP OF HOLE 815		18. TOTAL CORE RECOVERY FOR BORING (%)		16. DATE HOLE STARTED _____ COMPLETED _____
19. SIGNATURE OF INSPECTOR				

13-33-21e

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	XXX	Clayshale - dk gy(N3), hard, brittle, hackly fracture, micaceous, thin horizontal laminae, no apparent fossils, abundant calcareous cement near base, clay ironstone nodules near top, sharp lower contact w/coal.		40'	Top of core (logged by John Harris)	
		XXX					
		XXX					
		T					
		T					
		T					
		T					
		T					
		T					
		T					
	45	XXX	Coal - blk(N1), banded, mod. bright, sharp contacts.		1.5'	Mineral coal	
		XXX					
		-	Mudstone - lt gy(N7) soft, blocky frags, silty, micaceous, massive, plant fossils, Fe-oxide stains, gradational lower contact.		2.0		
		-					
		-					
		-					
	50	..	Siltstone - same unit as below.		3.2'	50'	

DEPARTMENT OF THE ARMY		1. PROJECT		SHEET OF	
DIVISION _____		2. LOCATION (Coordinates or Station)			
INSTALLATION _____		3. DRILLING AGENCY			
DRILLING LOG		5. NAME OF DRILLER			
4. HOLE NO. (As shown on drawing title and file No.)		7. THICKNESS OF OVER-BURDEN		8. DEPTH DRILLED INTO ROCK	
6. DIRECTION OF HOLE		9. TOTAL DEPTH OF HOLE		12. MANUFACTURER'S DESIGNATION OF DRILL	
<input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES WITH VERTICAL		10. SIZE AND TYPE OF BIT		11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES		15. ELEV. GROUND WATER	
DISTURBED		UNDISTURBED		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		---	Siltstone - 1t94(N7), hard, massive, qtz, micaceous comp, no fossils found, abundant Fe-oxide stains, gradational lower contact.	3.2	50'	
		---	Mudshale - dk 94(N3) at base to 1t94(N7) at top, hard, parallel fractures, silty, micaceous, silt content increases upwards, thin horizontal laminae, few silty lenses near top, few brachs, crinoids & other marine fossil frags near base, localized calcareous cement, clay ironstone nodules to 0.2' dia, sharp lower contact w/ limestone.	20.8'	#2	
60		---				

HOLE NO. _____

DEPARTMENT OF THE ARMY DIVISION _____ INSTALLATION _____ <p style="text-align: center;">DRILLING LOG</p>	1. PROJECT _____ SHEET _____ OF _____ 2. LOCATION (Coordinates or Station) _____ 3. DRILLING AGENCY _____
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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
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10. SIZE AND TYPE OF BIT	11. DATUM FOR ELEVATION SHOWN (TBM or MSL)	12. MANUFACTURER'S DESIGNATION OF DRILL
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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
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17. ELEV. TOP OF HOLE.	18. TOTAL CORE RECOVERY FOR BORING (%)	19. SIGNATURE OF INSPECTOR
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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)
60			Mudshale - same unit as above,		#2 61'	
		XXX			#3	
		XXX				
65				20.8		
		XXX				
70						

DEPARTMENT OF THE ARMY DIVISION _____ INSTALLATION _____		1. PROJECT _____		SHEET _____ OF _____
		2. LOCATION (Coordinates or Station) _____		
DRILLING LOG 4. HOLE NO. (As shown on drawing title and file No.) _____		3. DRILLING AGENCY _____		
		5. NAME OF DRILLER _____		
6. DIRECTION OF HOLE		7. THICKNESS OF OVER-BURDEN	8. DEPTH DRILLED INTO ROCK	9. TOTAL DEPTH OF HOLE
<input type="checkbox"/> VERTICAL <input type="checkbox"/> 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)
70		—	<u>Mudshale</u> — same unit as above		# 3 71	
		—		20.8'	# 4	
		—	<u>Limestone</u> — Hgy (N7) brachs, crinoids 24c. massive, argillaceous at base, sharp lower cont	0.8'		
		—	<u>Coal</u> — blk (N1) banded mod bright, sharp contacts.	0.6'		Scammon Coal
75		—	<u>Mudstone</u> — med gy (N5), soft, crumbled, blocky fracture, massive, plant fossils, clay ironst, veins & nodules, grad. lower contact.	1.7'		
		—	<u>Siltstone</u> — med Hgy (N6), hard, blocky frags, qtz, micaceous comp, wavy bedded at base to massive at top, brown Fe-oxide stain, gradational lower contact.	3.5'		
80		—				

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

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			Sandstone - It 94(N7), v fine gr, qtz, micaceous, rippled to flaser bedded, authigenic siderite, abruptly gradational lower contact.	20	#4	Chelsea Sandstone
			Siltstone - It 94 (N7), hard, blocky frags, qtz, micaceous, wavy bedded rippled, convolute bedding, authigenic siderite, gradational intercalating lower contact.	26'	#5	
85			Mudshale - dk 94(N3) (at base to med It 94(N6) at top, hard, parallel frags, silty, micaceous, thin horizontal laminae at base to lenticular bedded at top, sand lenses to 0.3' thick at top w/ convolute bedding, few white, marine fossil frags near base, plant frags scattered throughout, localized calcareous cement, clay ironstone nodules →	28.8'		
90						

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5. NAME OF DRILLER _____	

6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> 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)
	100		mudshale - same unit as above.		# 6	
					102'	
					# 7	
	105			28.8		
	110					

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DRILLING LOG			5. NAME OF DRILLER _____		
4. HOLE NO. (As shown on drawing title and file No.) _____			7. THICKNESS OF OVER-BURDEN _____		
6. DIRECTION OF HOLE		8. DEPTH DRILLED INTO ROCK _____		9. TOTAL DEPTH OF HOLE _____	
<input type="checkbox"/> VERTICAL	<input type="checkbox"/> 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 _____	
DISTURBED _____		UNDISTURBED _____		16. DATE HOLE	
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			Mudshale - same unit as above.		# 7	
		T		288'	112'	
		T			# 8	
			Coal - blk (N1), banded, mod. bright, sharp contacts.	0.6'		Tebo coal
			Mudstone - med lt gy (N6), mod. hard, blocky frags, silty, micaceous, massive, plant frags, irregular clay ironstone bands, gradational lower contact.	25'		
			Siltstone - med lt gy (N6), hard, blocky frags, massive, qtz, micaceous, few plant fossils, authigenic siderite crystals & veins, sharp lower contact w/ coal.	4.5'		
120						

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4. HOLE NO. (As shown on drawing title and file no.)		7. THICKNESS OF OVER-BURDEN	
6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES WITH VERTICAL		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	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	

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	120	...	Siltstone - same unit as above.	4.5	# 8	Tebo "B" coal
		...	Coal - smut	0.1'		
		- - -	mudstone - med H gy(N6), soft, crumbled, blocky fracture, massive, silty, micaceous, plant fossils, gradational lower contact.	2.4'	# 9	
		- - -	Mudshale - med H gy(N6), mod. hard, parallel frags, silty, micaceous, thin horizontal laminae, no fossils found, few sand sized authigenic siderite crystals, gradational lower contact.	5.5'		
		§ § §	Siltstone - med H gy(N6) hard, qtz, micaceous, wavy bedded, abundant burrows, authigenic siderite, gradational lower contact.	1.5'		
	130	...	Sandstone - same unit as below	1.5'		

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6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> 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)
	150		Mudstone - lt qz (N7), soft, blocky frags, crumbled, silty, micaceous, massive, abundant plant fossils, some authigenic siderite, Fe-oxide stains, gradational lower contact.	5.2'	# 11	
			Siltstone - med lt qz (N6) at base to lt qz (N7) at top, hard, blocky frags, qtz, micaceous Comp, sequence coarsens upwards, wavy bedded at base to flaser bedded at top, few ripples, mud content decreases upwards, few plant fossils, abundant sand sized authigenic siderite crystals, gradational lower contact.	6.4'	# 12	
	160		Mudshale - same unit as below.	6.0		

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6. DIRECTION OF HOLE		11. DATUM FOR ELEVATION SHOWN (TBM or MSL)			
<input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES WITH VERTICAL		12. MANUFACTURER'S DESIGNATION OF DRILL			
10. SIZE AND TYPE OF BIT		13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES	15. ELEV. GROUND WATER
DISTURBED		UNDISTURBED		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)
160			Mudshale - med dk gy (N4) at base to med. lt gy (N6) at top, hard, sub-parallel frags, silty, micaceous, lenticular bedded w/ thin lenses, few small plant fossils, clay ironstone nodules to 0.2' dia, gradational lower contact.	60'	# 12 161	
165			Siltstone - V H gy (N8) w/ med. gy (N5) laminae, hard, blocky frags, 60-40 silt-mud ratio, wavy bedded, abundant plant fragments, few burrows, brown Fe-oxide stains, gradational lower contact.	2.6'	# 13	
170			Mudshale - med dk gy (N4) at base, to med gy (N5) ↑, hard, parallel frags, silty, qtz, micaceous, lenticular bedded w/ thin lenses - >	3.5'		

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6. DIRECTION OF HOLE			7. THICKNESS OF OVER-BURDEN		9. TOTAL DEPTH OF HOLE
<input type="checkbox"/> VERTICAL	<input type="checkbox"/> INCLINED	DEGREES WITH VERTICAL		8. DEPTH DRILLED INTO ROCK	
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	

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	170		Mudshale - (cont), silt content increasing upwards, few small plant frags, sparsely burrowed, gradational lower contact.	3.5'	13 # 171'	
			Clayshale - dk gray (N3), hard, brittle, hackly fracture, micaceous, thin horizontal laminae, no fossils found, abundant clay ironstone bands to 0.1' thk, localized calcareous cement, sharp lower contact w/ coal.		# 14	
	175					
				8.7'		
	180					

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DRILLING LOG		5. NAME OF DRILLER			
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6. DIRECTION OF HOLE		DEGREES WITH VERTICAL			
<input type="checkbox"/> VERTICAL	<input type="checkbox"/> INCLINED				
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
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	190	---	<u>Mudstone - med</u> lt. gy (N6), mod. hard, blocky frags, silty, micaceous, massive, abundant plant fossils, may contain fresh water lime just below coal. gradational lower contact.	3.3'	190'	
		---	<u>mudshale - med lt</u> gy (N6), hard, sub- parallel frags, silty, micaceous, occasional silty lense, few burrows small plant frags, gradational lower contact	25	# 16	
	195	---	<u>Siltstone - lt gy (N7)</u> , hard, blocky frags, qtz, micaceous comp, original bedding destroyed by bioturb- ation, auth. siderite, gradational lower contact,	2.0		
		---	<u>Interbedded sandstone</u> & siltstone, v lt gy (N8) and med lt gy (N6) interbeds, hard, blocky frags, qtz, micaceous comp, sand layers to 0.8' thick, no apparent structures, abundant soft sediment folding, sand sized	4.0		
	200	---			200'	

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13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN		14. TOTAL NO. CORE BOXES _____		15. ELEV. GROUND WATER _____	
DISTURBED _____		UNDISTURBED _____		16. DATE HOLE	
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200			Interbedded sandstone and siltstone, (cont) authigenic siderite crystals, gradational lower contact.	4.0'	200'	
			Siltstone - alt. vlt qz (N8) & med. lt qz (N6) laminae, hard, sub-parallel frags, qtz, micaceous comp, 40-60 silt-mud ratio, wavy bedded, small plant frags, gradational, intercalating lower contact.	2.5'		
205			Sandstone - vlt qz (N8), hard, blocky frags, very fine-fine gr, qtz, micaceous comp, rippled at base, lg scale x-strat. in middle, rippled w/ flaser bedding at top, few small plant frags, sand sized authigenic siderite crystals, sharp, non-scoured lower contact, slightly intercalating.	3.7'	# 17	Upper Bluejacket S.S.
			Siltstone - alternating vlt qz (N8) & mlt qz (N6) laminae, hard, parallel frags, qtz, micaceous comp, 50-50 silt/mud ratio, wavy bedded, few small plant fossils, sharp, non-scoured lower contact.	2.8'		
210					210'	

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6. DIRECTION OF HOLE		8. DEPTH DRILLED INTO ROCK		9. TOTAL DEPTH OF HOLE	
<input type="checkbox"/> VERTICAL	<input type="checkbox"/> 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	
DISTURBED		UNDISTURBED		16. DATE HOLE	
				STARTED	
				COMPLETED	
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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	...	Siltstone - same unit as above	2.8'		
		—	Clay shale - dk gy(N3), hard, brittle, hackly fracture, micaceous, thin horizontal laminae, no fossils found, clay ironstone nodules to 0.1' dia, gradational lower contact.	3.6'	#18	
		—	Argillaceous Limestone - lt gy(N7) to med gy(N5), hard, brachs, crinoid stems + other marine fossil frags, sharp lower contact w/ coal.	1.0'		
	215	—	Coal, blk(N1), banded, mod bright, sharp contacts.	0.2'		Bluejacket "C" coal
		—	Mudstone - lt. gy(N7), mod. hard, blocky, frags, silty, massive, plant frags, abundant irregular clay ironstone nodules, gradational lower contact.	1.9'		
		—	Mudshale - same unit as below.	13.4'		
		—			219'	
		—			#19	
	220	—				

DEPARTMENT OF THE ARMY		1. PROJECT		SHEET OF	
DIVISION _____		2. LOCATION (Coordinates or Station)			
INSTALLATION _____		3. DRILLING AGENCY			
DRILLING LOG			5. NAME OF DRILLER		
4. HOLE NO. (As shown on drawing title and file no.)			9. TOTAL DEPTH OF HOLE		
6. DIRECTION OF HOLE		7. THICKNESS OF OVER-BURDEN		8. DEPTH DRILLED INTO ROCK	
<input type="checkbox"/> VERTICAL	<input type="checkbox"/> 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	
DISTURBED		UNDISTURBED		16. DATE HOLE	
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			Mudshale - med dk gy(N4) - med gy(N5), hard, parallel frags, silty, qtz, micaceous, thin horizontal laminae at base to lenticular bedded at top, few small brachi & crinoid stems, burrowed in upper 5', localized calcareous cement, thin clay ironstone nodules, brown Fe-oxide stains, sharp lower contact w/ coal.			
					# 19	
				13.4		
		T				
					229	
		T			#	
					20	
230						

DEPARTMENT OF THE ARMY DIVISION _____ INSTALLATION _____ <p style="text-align: center;">DRILLING LOG</p> 4. HOLE NO. (As shown on drawing title and file No.)	1. PROJECT _____ SHEET _____ OF _____ 2. LOCATION (Coordinates or Station) _____ 3. DRILLING AGENCY _____ 5. NAME OF DRILLER _____
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6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> 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)
	230		Shale - same as above Coal, blk(N1) sharp contacts	0.25		Bluejacket "D" coal
			Mudstone - Hgy(N7), mod. hard, blocky fracture, slightly silty, micaceous, massive, abundant plant fossils, few v. small clay ironstone nodules, gradational lower contact	2.1		
			Silt-shale - alt. Hgy(N7) & med gy(N5) laminae, hard, parallel-blocky fracs, lent. - wavy bedded, abundant bioturbation, abruptly gradational lower contact.	1.5'	# 20	
	235		Mud shale - med gy(N5) to med Hgy(N6), hard, parallel fracs, silty, qtz, micaceous, thin horizontal laminae w/ occasional thin silty laminae, few small plant fossils clay ironstone nodules to 0.1' thick, sharp lower contact w/ Coal,	20.6		
					239'	
					# 21	
	240					

DEPARTMENT OF THE ARMY DIVISION _____ INSTALLATION _____	1. PROJECT _____ SHEET _____ OF _____ 2. LOCATION (Coordinates or Station) _____ 3. DRILLING AGENCY _____
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DRILLING LOG

4. HOLE NO. (As shown on drawing title and file No.) _____	5. NAME OF DRILLER _____	
6. DIRECTION OF HOLE		7. THICKNESS OF OVER-BURDEN _____
<input type="checkbox"/> VERTICAL	<input type="checkbox"/> INCLINED	8. DEPTH DRILLED INTO ROCK _____
DEGREES WITH VERTICAL _____		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		14. TOTAL NO. CORE BOXES _____
DISTURBED _____	UNDISTURBED _____	15. ELEV. GROUND WATER _____
17. ELEV. TOP OF HOLE _____		16. DATE HOLE STARTED _____ COMPLETED _____
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		mudshale - same unit as above.		# 21	
	245			20.6'	248	
					H	
					22	
	250					

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

6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> 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 _____		14. TOTAL NO. CORE BOXES _____		15. ELEV. GROUND WATER _____	
17. ELEV. TOP OF HOLE _____		18. TOTAL CORE RECOVERY FOR BORING (%) _____		16. DATE HOLE STARTED _____ COMPLETED _____	
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		Mudshale - same unit as above.			
				20.6'	# 22	
	255		Coal - blk (N1), banded, mod. bright, sharp contacts	0.35		Dry wood coal
		33	Mudstone - H. gy (N7) mod. hard, blocky fracture, silty, massive, abundant plant fossils, irregular clay ironstone nodules less than 0.1' dia, gradational lower contact.	2.2'		
			Mudshale - med. H. gy. (N6), hard, parallel frags, silty, micaceous, thin bedded w/ occasional silty lens, non fossiliferous, gradational lower contact.	1.8'	258 # 23	
			Clayshale - some unit as below.	8.8'		
	260					

DEPARTMENT OF THE ARMY DIVISION _____ INSTALLATION _____ DRILLING LOG		1. PROJECT _____		SHEET _____ OF _____
		2. LOCATION (Coordinates or Station) _____		
4. HOLE NO. (As shown on drawing title and file No.) _____		3. DRILLING AGENCY _____		
5. NAME OF DRILLER _____		9. TOTAL DEPTH OF HOLE _____		
6. DIRECTION OF HOLE		7. THICKNESS OF OVER-BURDEN _____	8. DEPTH DRILLED INTO ROCK _____	9. TOTAL DEPTH OF HOLE _____
<input type="checkbox"/> VERTICAL <input type="checkbox"/> 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 _____		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			Mudshale - dk. gy (N3), hard, brittle, hackly fracture, slightly silty at base with silt content increasing upwards, qtz, micaceous, thin horizontal laminae at base to lenticular bedded at top with very thin lenses, non-fossiliferous, clay ironstone bands to 0.2' dia, irregularly shaped near top, silty zones near top show few small horizontal burrows gradational lower contact.	25.0	# 24	
275					# 25	
280					# 27	

DEPARTMENT OF THE ARMY		1. PROJECT _____		SHEET _____ OF _____	
DIVISION _____		2. LOCATION (Coordinates or Station) _____			
INSTALLATION _____		3. DRILLING AGENCY _____			
DRILLING LOG		4. HOLE NO. (As shown on drawing title and file No.) _____			
5. NAME OF DRILLER _____		7. THICKNESS OF OVER-BURDEN _____		8. DEPTH DRILLED INTO ROCK _____	
6. DIRECTION OF MOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES WITH VERTICAL _____		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 MOLE STARTED _____ COMPLETED _____		17. ELEV. TOP OF MOLE _____			
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			Mudshale - same unit as above.			
					# 25	
				25.0'		
					267'	
					# 26	
290						

DEPARTMENT OF THE ARMY		1. PROJECT _____		SHEET _____ OF _____	
DIVISION _____		2. LOCATION (Coordinates or Station) _____			
INSTALLATION _____		3. DRILLING AGENCY _____			
DRILLING LOG			4. HOLE NO. (As shown on drawing title and file no.) _____		
5. NAME OF DRILLER _____			6. DIRECTION OF HOLE		
<input type="checkbox"/> VERTICAL <input type="checkbox"/> 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		14. TOTAL NO. CORE BOXES _____	
DISTURBED _____		UNDISTURBED _____		15. ELEV. GROUND WATER _____	
16. DATE HOLE		17. ELEV. TOP OF HOLE _____		18. TOTAL CORE RECOVERY FOR BORING (%) _____	
STARTED _____		COMPLETED _____		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		Mud shale - same unit as above.			
				25.0'	# 26	
	295		Silt shale - med dk gy(N4) & Hgy(N7) laminae, hard, parallel fracture, silty, micaceous, silt content decreasing upwards, wavy bedded at base to lenticular bedded at top, abundant woody plant fragments, clay ironstone bands to 1/4" thick few small burrows, gradational, intercalating lower contact.	60'	# 27	
	300					

DEPARTMENT OF THE ARMY		1. PROJECT		SHEET OF	
DIVISION _____		2. LOCATION (Coordinates or Station)			
INSTALLATION _____		3. DRILLING AGENCY			
DRILLING LOG			5. NAME OF DRILLER		
4. HOLE NO. (As shown on drawing title and file No.)			7. THICKNESS OF OVER-BURDEN		
6. DIRECTION OF HOLE		DEGREES WITH VERTICAL	8. DEPTH DRILLED INTO ROCK	9. TOTAL DEPTH OF HOLE	
<input type="checkbox"/> VERTICAL	<input type="checkbox"/> INCLINED				
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)
300		S	Siltshale - same unit as above	6.0'		
		S	Sandstone - med Hgy (N6), hard, blocky frags, very fine gr., abund. mud matrix & laminae, qtz, micaceous comp, flaser bedded, rippled, few small plant frags, clay ironstone bands to 0.1' thick, gradational, intercalating lower contact.	3.5'	# 27	Upper Warner Sandstone
305		S	Siltshale - alternating Hgy (N7) & med dkgy (N4) laminae, hard, parallel frags, approx. 50-50 silt - mud ratio, qtz, micaceous, wavy bedded, few plant frags, grad. intercalating lower contact.	2.4'		few small burrows at 306'
		S	Mud shale - med dk gy (N4), hard, parallel frags, silty, micaceous, lent. bedded, silty lenses increasing up wards, finely divided plant material, sharp irregular lower contact.	2.1'	# 28	
		S	Mudstone - med Hgy (N6) clay ironst.	0.6'		
		S	Clay shale - dk gy (N3) clay ironstone	1.2'		annular horizon resembles underclay
310						

Sharp Contact

DEPARTMENT OF THE ARMY DIVISION _____ INSTALLATION _____	1. PROJECT _____ SHEET _____ OF _____ 2. LOCATION (Coordinates or Station) _____ 3. DRILLING AGENCY _____
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DRILLING LOG

4. HOLE NO. (As shown on drawing title and file no.) _____	5. NAME OF DRILLER _____	
6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES WITH VERTICAL _____		7. THICKNESS OF OVERBURDEN _____
10. SIZE AND TYPE OF BIT _____		8. DEPTH DRILLED INTO ROCK _____
11. DATUM FOR ELEVATION SHOWN (TBM or MSL) _____		9. TOTAL DEPTH OF HOLE _____
13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED _____ UNDISTURBED _____		12. MANUFACTURER'S DESIGNATION OF DRILL _____
14. TOTAL NO. CORE BOXES _____		15. ELEV. GROUND WATER _____
17. ELEV. TOP OF HOLE _____		16. DATE HOLE STARTED _____ COMPLETED _____
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 weather ind., etc., if significant)
	310	XX	Clay shale - some white as above.			
		T	Calcareous mudshale - med dk gy, hard, blocky fracture, silty, micaceous, thinly laminated, abundant brachs, crinoid stems + other fossil frags, clay ironst. in upper 6", gradational lower contact.	12'		
		T				
		T				
		++				
		T				
		T				
			Mudshale dk gy N3, hard, brittle, parallel frags, silty, micaceous, few small plant frags, occasional small brachiopods near base, upper 1' appears burrowed, clay ironstone nodules to 0.1' dia, sharp lower contact w/coal.	2.5'	# 28	
	315					
				6.4'	317'	
					# 29	
	320		Coal, blk (N1), bony, same as below	1.3		"A" coal

DEPARTMENT OF THE ARMY		1. PROJECT		SHEET OF	
DIVISION _____		2. LOCATION (Coordinates or Station)			
INSTALLATION _____		3. DRILLING AGENCY			
DRILLING LOG			5. NAME OF DRILLER		
4. HOLE NO. (As shown on drawing title and file No.)			7. THICKNESS OF OVER-BURDEN		
6. DIRECTION OF HOLE			8. DEPTH DRILLED INTO ROCK	9. TOTAL DEPTH OF HOLE	
<input type="checkbox"/> VERTICAL	<input type="checkbox"/> 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)
320			Coal-blk(N1), hard, banded, mod. bright, sulfate bloom, upper 0.3' bony, sharp contacts,	1.3'		"A" coal
			Mudstone - med dk gy(N4), med. hard, blocky fracture, silty, micaceous, abundant plant frags, no apparent bedding, gradational lower contact.	3.0'	# 29	
325+			Mudstone - dk gy(N3), hard, brittle, parallel fracture, slightly silty, micaceous, thin horizontal laminae, occasional very thin silty laminae, few small plant frags, upper portion may be burrowed, clay ironstone nodules to 0.1' dia, sharp lower contact.	5.9'	# 30	
330			Coal - same as below	0.7'		"B" coal

DEPARTMENT OF THE ARMY DIVISION _____ INSTALLATION _____ DRILLING LOG	1. PROJECT _____ SHEET _____ OF _____ 2. LOCATION (Coordinates or Station) _____ 3. DRILLING AGENCY _____
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4. HOLE NO. (As shown on drawing title and file No.) _____	5. NAME OF DRILLER _____
--	--------------------------

6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED	DEGREES WITH VERTICAL _____	7. THICKNESS OF OVER-BURDEN _____	8. DEPTH DRILLED INTO ROCK _____	9. TOTAL DEPTH OF HOLE _____
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10. SIZE AND TYPE OF BIT _____	11. DATUM FOR ELEVATION SHOWN (TBM or MSL) _____	12. MANUFACTURER'S DESIGNATION OF DRILL _____
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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 _____
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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)
330			Coal, blk (N1), banded, mod. bright, suff. bloom, sharp contacts	0.7'		"B" coal
335			Mudstone - med gy (N5) at base to med H gy (N6) ↑ mod. hard, blocky frags, massive, silty micaceous, plant frags, authgenic siderite crystals, several irregular ironstone nodules near base, gradational lower contact.	3.2'	# 30	
335+			Mudshale - same unit as below,			
340				17.0'	# 31	

DEPARTMENT OF THE ARMY		1. PROJECT _____	SHEET _____ OF _____
DIVISION _____		2. LOCATION (Coordinates or Station) _____	
INSTALLATION _____		3. DRILLING AGENCY _____	
DRILLING LOG		5. NAME OF DRILLER _____	
4. HOLE NO. (As shown on drawing title and file no.) _____		7. THICKNESS OF OVER-BURDEN _____	8. DEPTH DRILLED INTO ROCK _____
6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES WITH VERTICAL _____		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 _____
17. ELEV. TOP OF HOLE _____		16. DATE HOLE STARTED _____ COMPLETED _____	
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)
	340		<u>Mudshale</u> - dk gy (N3), hard, brittle, hackly fracture, slightly silty, occasional very thin silty laminae, thin, horizontal laminae, some finely divided plant debris, clay ironstone nodules to 0.4' thick, small amt. localized calcareous cement, sharp lower contact w/coal.		# 31	
	345			17.0'		
					346'	
					# 32	
	350					

DEPARTMENT OF THE ARMY		1. PROJECT _____		SHEET _____ OF _____	
DIVISION _____		2. LOCATION (Coordinates or Station) _____			
INSTALLATION _____		3. DRILLING AGENCY _____			
DRILLING LOG		5. NAME OF DRILLER _____			
4. HOLE NO. (As shown on drawing title and file No.) _____		7. THICKNESS OF OVERBURDEN _____		8. DEPTH DRILLED INTO ROCK _____	9. TOTAL DEPTH OF HOLE _____
6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> 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)
	370		Mudshale - same unit as above.			
				16.7'	# 37	
			Limestone, med H gy(N6) to H.gy(N7), hard, wackestone, massive, few small brachs, other fossil frags, calcareous cement in some fractures, may contain sphalerite, thin shale parting 1.7' above base, sharp upper & lower contact.			
	375			3.9'	# 38	
						possibly diagenetic concretion?
			Mudshale - dk gy(N3), hard, brittle, parallel fracture, slightly silty, qtz, micaceous, thin, horizontal laminae, few small plant fragments, brown Fe oxide stains, sharp lower contact.			
				2.7'		
	380					

DEPARTMENT OF THE ARMY		1. PROJECT _____	SHEET _____ OF _____
DIVISION _____		2. LOCATION (Coordinates or Station) _____	
INSTALLATION _____		3. DRILLING AGENCY _____	
DRILLING LOG		5. NAME OF DRILLER _____	
4. HOLE NO. (As shown on drawing title and file no.) _____		7. THICKNESS OF OVER-BURDEN _____	8. DEPTH DRILLED INTO ROCK _____
6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES WITH VERTICAL _____		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 _____	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)
340			mudshale - same as above.	2.7'		D coal coal
			Coal blk (N1), hard, banded, med. bright, abundant sulfate bloom in upper portion, sharp contacts, some zones bony, (contain some mud)	3.2'	# 38	
			Siltstone -		# 39	
385						
				6.3		
390			Coal - same as below	0.6		

DEPARTMENT OF THE ARMY		1. PROJECT _____	SHEET _____ OF _____
DIVISION _____		2. LOCATION (Coordinates or Station) _____	
INSTALLATION _____		3. DRILLING AGENCY _____	
DRILLING LOG		5. NAME OF DRILLER _____	
4. HOLE NO. (As shown on drawing title and file No.) _____		7. THICKNESS OF OVER-BURDEN _____	
6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED DEGREES WITH VERTICAL _____		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 _____	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)
400	—	—	Clay shale - vdkgy N2 - dkgy (N3), hard, brittle, hackly fracture, no silt, thin, horizontal laminae, few small woody plant frags, no apparent bioturbation abundant pyrite nodules to 0.05' dia., finely disseminated pyrite, lower contact sharp & disconformable w/ chert clasts & shale veins in limestone,		# 40 403' 7.4' # 41	
405	—	—				
410	—	—	Limestone - v.H.gy. (N8), hard, massive, mudstone, extensive fractures, lt. oil stn. in some zones, abundant pyrite nodules, lower contact not showed, upper contact disconformable w/ shale.			major unconformity Mississippian Limestone

DEPARTMENT OF THE ARMY DIVISION _____ INSTALLATION _____ <p style="text-align: center;">DRILLING LOG</p>	1. PROJECT _____ SHEET _____ OF _____ 2. LOCATION (Coordinates or Station) _____ 3. DRILLING AGENCY _____
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4. HOLE NO. (As shown on drawing title and file No.) _____	5. NAME OF DRILLER _____
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6. DIRECTION OF HOLE <input type="checkbox"/> VERTICAL <input type="checkbox"/> INCLINED	DEGREES WITH VERTICAL _____	7. THICKNESS OF OVER-BURDEN _____	8. DEPTH DRILLED INTO ROCK _____	9. TOTAL DEPTH OF HOLE _____
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10. SIZE AND TYPE OF BIT _____	11. DATUM FOR ELEVATION SHOWN (TBM or MSL) _____	12. MANUFACTURER'S DESIGNATION OF DRILL _____
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13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN	14. TOTAL NO. CORE BOXES _____	15. ELEV. GROUND WATER _____	16. DATE HOLE	
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13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN DISTURBED _____	13. TOTAL NO. OF OVERBURDEN SAMPLES TAKEN UNDISTURBED _____	16. DATE HOLE STARTED _____	16. DATE HOLE COMPLETED _____	19. SIGNATURE OF INSPECTOR _____
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17. ELEV. TOP OF HOLE _____	18. TOTAL CORE RECOVERY FOR BORING (%) _____	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)		
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ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOVERY	BOX OR SAMPLE NO.	REMARKS
410			Limestone - same unit as above.			