



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

PERMIT MODIFICATION APPROVAL

November 17, 2014

NOBLE ENERGY, INC.
333 TECHNOLOGY DRIVE, SUITE 116
CANONSBURG, PA 15317

Re: Permit Modification Approval for API Number 5101732 , Well #: MND 6 HHS

Deep Well Approved

Oil and Gas Operator:

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before permitted well work is commenced.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

for Gene Smith
Assistant Chief of Permitting
Office of Oil and Gas



west virginia department of environmental protection

Oil and Gas Conservation Commission
601 57th Street, SE Charleston, WV 25304
(304)926-0499, Ext 1656

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.org

Department of Environmental Protection
Office of Oil and Gas
Charleston, WV 25304

RE: Application for Deep Well Permit – API #47-051-01732

COMPANY: Noble Energy, Inc.

FARM: Consolidation Coal Company #MND 06 HHS

COUNTY: Marshall

DISTRICT: Franklin

QUAD: Powhatan Point

The deep well review of the application for the above company is **APPROVED FOR UTICA/POINT PLEASANT.** If operator wishes to drill deeper than the Trenton, additional approval must be obtained from the OGCC.

The applicant has complied with the provision of Chapter 22C-9, of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

1. Comments to Notice of Deviation filed? No
2. Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners; Yes
3. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of all deep wells, well name, and the name and address of the operator; none
4. Provided a plat showing that the proposed location is a distance of 400 feet from the nearest lease line or unit boundary and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location.

Sincerely,

Cindy Raines
Executive Assistant

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Noble Energy, Inc. 494501907 Marshall Franklin Powhatan Point
Operator ID County District Quadrangle

2) Operator's Well Number: MND 6 HHS Well Pad Name: MND 6

3) Farm Name/Surface Owner: Consolidated Coal Company Public Road Access: CR 7/4-Fish Creek Rd

4) Elevation, current ground: 722' Elevation, proposed post-construction: 721'

5) Well Type (a) Gas Oil Underground Storage
Other
(b) If Gas Shallow Deep
Horizontal

Ju 8/12/14

6) Existing Pad: Yes or No yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Utica at 9809' - 10358' 549' in thickness. Anticipated pressure at 9075. Point Pleasant at 10358' - 10467' 109' in thickness - Anticipated pressure 9371

8) Proposed Total Vertical Depth: 10,667'

9) Formation at Total Vertical Depth: Trenton ✓

10) Proposed Total Measured Depth: 20,115'

11) Proposed Horizontal Leg Length: 9,094'

12) Approximate Fresh Water Strata Depths: 128' and 265'

13) Method to Determine Fresh Water Depths: Offset well data

14) Approximate Saltwater Depths: None noted in offsets

15) Approximate Coal Seam Depths: 284' to 294'

16) Approximate Depth to Possible Void (coal mine, karst, other): None anticipated, drilling in pillar-mine maps attached

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No

(a) If Yes, provide Mine Info: Name: 1082' to nearest active mining
Depth: Base at 294' at deepest point
Seam: Pittsburgh
Owner: Murray American Energy (Previously Consol)

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18)

CASING AND TUBING PROGRAM

<u>TYPE</u>	<u>Size</u>	<u>New or Used</u>	<u>Grade</u>	<u>Weight per ft. (lb/ft)</u>	<u>FOOTAGE: For Drilling</u>	<u>INTERVALS: Left in Well</u>	<u>CEMENT: Fill-up (Cu. Ft.)</u>
Conductor	30"	New	LS	94#	120'	120'	GTS
Fresh Water	20"	New	LS	94#	694'	694'	CTS
Coal	13 3/8"	NEW	J-55	54.5#	2017'	2017'	CTS
Intermediate	9 5/8"	New	J-55	53#	8869'	8869'	CTS
Production	5 1/2"	New	P110	23#	20,115'	20,115'	TDC 1000' above 9 825 casing shoe
Tubing							
Liners							

JIN 8/13/14

<u>TYPE</u>	<u>Size</u>	<u>Wellbore Diameter</u>	<u>Wall Thickness</u>	<u>Burst Pressure</u>	<u>Cement Type</u>	<u>Cement Yield (cu. ft./k)</u>
Conductor	30"	36"	.375		GTS	GTS
Fresh Water	20"	26"	.438	2730	Type 1	1.18
Coal	13 3/8"	17 1/2"	.380	2730	Type 1	1.18
Intermediate	9 5/8"	12 1/4"	.545	10,900	Class A	2.47 lead and 1.57 tail
Production	5 1/2"	8 1/2"	.415	16,510	Class A	1.3
Tubing	See attached WBS					
Liners						

PACKERS

Kind:				
Sizes:				
Depths Set:				

WW-6B
(9/13)

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill the vertical pilot depth to the Trenton at an estimated total vertical depth of approximately 10,667 feet, plug back with solid cement to 200' above KOP at 9445'. Drill Horizontal leg - stimulate and produce the Point Pleasant /Utica Formations. If we should encounter an unanticipated void we will install casing at a minimum of 20' below the void but not more than 100' below the void, set a basket and grout to surface.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

The stimulation will be multiple stages divided over the lateral length of the well. Stage spacing is dependent upon engineering design. Slickwater fracturing technique will be utilized on each stage using sand, water, and chemicals. See attached list. Maximum pressure not to exceed 14,000 lb.

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 9.6

22) Area to be disturbed for well pad only, less access road (acres): 7.3

23) Describe centralizer placement for each casing string:

No centralizers will be used with conductor casing. Surface casing Centralized every 3 joints to surface. 1st intermediate string- Bow spring on first 2 joints then every third joint to 100' from surface. 2nd intermediate string- Bow string every third joint to 100' from surface. Production casing - Curve -Rigid Bow Spring every third joint from KOP to TOC. lateral Rigid Bow Spring every joint to KOP.

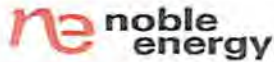
24) Describe all cement additives associated with each cement type:

Conductor-GTS. Surface & 1st Intermediate- 15.6 ppg Type 1 +2% CaCl, 0.25# Lost Circ 30%excess Yield=1.18. 2nd Intermediate 12.0 Class A lead + 5% dispercent, 10% light weight additive, .75% fluid loss additive, Yield=2.47/13.5 ppg class A tail + .5% light weight additive, Yield =1.57,0.125#sk Lost Circ 20% Excess Yield 1.19 to surface. Production - 15.0 ppg Class A+.35% retarder, 14% dispercent, .8% fluid loss & .2% freewater additive. 10% excess Yield =1.3 TOC>=1000' above 9.625" shoe. Pilot Hole- 16.8 ppg Class G (HAL) +0.55 friction reducer, .4% defoamer & .15% retarder from TD to 200' above KOP (2) 800' balanced plugs w/2.375" tubing. Yield =1.02
*Surface and Coal string WVDEP approved variance attached.

25) Proposed borehole conditioning procedures:

Conductor-The hole is drilled w/air and casing is run on air. Apart from insuring the hole is clean via air circulation at TD, there are no other conditioning procedures. Surface/Coal-The hole is drilled w/air and casing is run on air. Fill with KCl water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement 1st and 2nd Intermediate -The hole is drilled and cased w/air or on SOBMs. Once casing is at TD, the hole is filled w/KCl water and a minimum of one hole volume is circulated prior to pumping cement. Production-The hole is drilled with SOBMs and once to TD, circulated at maximum allowable pump rate for at least 6x bottoms up. Once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement. Pilot - Once at TD, Circulate at drilling pump rate for at least 3 hours. TOOH and run OH logs.

*Note: Attach additional sheets as needed.



DRILLING WELL PLAN
MND-6H-UHS (Utica HZ)
 Utica Shale Horizontal
 Marshall County, WV

Ground Elevation		720'		MND-6H SHL (Lat/Long)		(482508.3N, 1637163.3E) (NAD27)			
Azm		325°		MND-6H LP (Lat/Long)		(483456.18N, 1637234.16E) (NAD27)			
WELLDRE DIAGRAM		MND-6H BHL (Lat/Long)		(490904.53N, 1632018.77E) (NAD27)					
HOLE	CASING	GEOLOGY	MD	TVD	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
36"	30" 94# LS	Conductor	120	120	AIR	To Surface	N/A	Ensure the hole is clean at TD	Stabilize surface /burst Conductor casing = 0.375" wall thickness
26"	30" 94#	Pittsburgh Coal	264	204	AIR or 8.5 WBM	15.8 ppg Type 1 + 2% CaCl ₂ 0.25# Lost Circ 30% Excess Yield = 1.18	Centralized every 3 joints to surface	Fill with KCl water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Water protection & coal isolation string, casing set 400' below Pit coal. Surface casing = 0.438" wall thickness Burst=2730 psi
		Water Protection Casing	604	604					
17.5"	15-3/8" 54.5# J-55 BTC	Big Injun	1488	1488	AIR or 8.5 WBM	15.8 ppg Type 1 + 2% CaCl ₂ 0.25# Lost Circ 30% Excess Yield = 1.18	Bow Spring on first 2 joints then every third joint to 100' from surface	Fill with KCl water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Isolate red beds & Big Injun, intermediate casing = 0.360" wall thickness Burst=2730 psi
		Surface casing	2017	2017					
12.25"	9-5/8" 53# J-55 BTC	5th Sand top	2482	2482	AIR	12.0 ppg Class A mud + 5% dispersant, 10% light weight additive, 75% fluid loss additive and 1.15% fluid loss additive. Yield = 2.4713 0 ppg class A mud + 5% fluid loss additive, 25% freshwater additive, 5% light weight additive, Yield = 1.57, 0.125#/gal Lost Circ 32% Excess To Surface	Bow spring centralizers every third joint to 100' feet from surface	Fill with KCl water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Casing to be run 250' below the 5th Sand. Intermediate casing = 0.545" wall thickness Burst=10,000 psi
		5th Sand Base	2481	2481					
		Warren Sand	3633	3633					
		Java	4570	4570					
		Rosenstreet	5334	5334					
		Cashoga	5655	5655					
		Middlesex	5727	5727					
		West River	5750	5750					
		Burkett	5811	5811					
		Tully Limestone	5838	5838					
		Hamilton	5860	5860					
		Marcus	5895	5895					
		Onondaga	5950	5950					
		Drinkany	6162	6162					
		Bass Island Dol	6514	6514					
		Sakna G	6818	6818					
		Sakna F	6817	6817					
Lockport	7700	7700							
Rochester Shale	7871	7871							
Peckel Shell	8278	8278							
Clinton	8327	8327							
Medina	8410	8410							
Quakeren	8489	8489							
Intermediate Casing	8890	8890							
8.5" Curve	5-1/2" 23# HCP-110 Wedge 583	Reedsville	9284	9284	12.5ppg-13.5ppg SOBM	15.0 ppg Class A + 35% retarder, 14% dispersant, 8% fluid loss & 2% freshwater additive	Rigid flow string every third joint from KDP to TOC	Once at TD, circulate at max allowable pump rate for at least 1hr bottoms up. Once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.415" wall thickness Burst=16510 psi Note Actual centralizer schedules may be changed due to hole conditions
		Utica	9826	9809					
8.5" - 8.5" Lateral	5-1/2" 23# HCP-110 TXP BTC	Pond Pleasant	10726	10358	12.5ppg-13.5ppg SOBM	10% Excess Yield=1.3 TOC = 1000' above 8 625' shoe	Rigid Bow Spring every joint to KDP		
		TD	20115	19412					
LP @ 10412 TVD / 11021' MD		8.5" / 8.5" Hole - Cemented Long String 5-1/2" 23# HCP-110 TXP BTC/ Wedge 583				TD @ 110412 TVD / 120115 MD			
8.5" Pilot	Isolation / Sidetrack Cement	Trenton	10407	10407	12.3ppg-13.5ppg SOBM	15.8ppg Class G (HAL) +0.55% friction reducer, 4% defoamer & .15% retarder from TD to 200' above KDP (2) 800' balanced plugs w/ 2.375" fishing. Yield = 1.02	N/A	Once at TD, circulate at drilling pump rate for at least three hours. TOOH and run OH logs.	OH logs, kippers on location to call TD. Dr. Surveys show to TD
		Pilot Hole TD	10667	10667					

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DRILLING WELL PLAN
MND-6H-UHS (Utica HZ)
Utica Shale Horizontal
Marshall County, WV

		MND-6H SHL (Lat/Long)			(482508.3N, 1637163.3E) (NAD27)		
Ground Elevation	720'	MND-6H LP (Lat/Long)			(483456.18N, 1637234.16E) (NAD27)		
Azm	325°	MND-6H BHL (Lat/Long)			(490904.53N, 1632018.77E) (NAD27)		

WELLBORE DIAGRAM	HOLE	CASING	GEOLOGY	MD	TVD	MUD	CEMENT	CENTRALIZERS	CONDITIONING	COMMENTS
	36"	30" 94# LS	Conductor	120	120	AIR	To Surface	N/A	Ensure the hole is clean at TD.	Stabilize surface fill/soil. Conductor casing = 0.375" wall thickness
	26"	20" 94#	Pittsburgh Coal	284	294	AIR or 8.5 WBM	15.6 ppg Type 1 + 2% CaCl, 0.25# Lost Circ 30% Excess Yield = 1.18	Centralized every 3 joints to surface	Fill with KCl water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Water protection & coal isolation string, casing set 400' below Pit coal, Surface casing = 0.438" wall thickness Burst=2730 psi
			Water Protection Casing	694	694					
	17.5"	13-3/8" 54.5# J-55 BTC	Big Lime	1488	1488	AIR or 8.5 WBM	15.6 ppg Type 1 + 2% CaCl, 0.25# Lost Circ 30% Excess Yield = 1.18	Bow Spring on first 2 joints then every third joint to 100' from surface	Fill with KCl water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Isolate red beds & Big Injun, casing set 300' below Big Injun, Intermediate casing = 0.380" wall thickness Burst=2730 psi
			Big Injun	1604	1604					
			Surface casing	2017	2017					
	12.25"	9-5/8" 53# J-55 BTC	5th Sand top	2462	2462	AIR	12.0 ppg Class A lead + 5% dispersant, 10% light weight additive, .75% fluid loss additive and 1.15% fluid loss additive, Yield = 2.47/13.5 ppg class A tail + .5% fluid loss additive, .25% freewater additive, & 5% light weight additive, Yield = 1.57, 0.125#/sk Lost Circ 20% Excess To Surface	Bow spring centralizers every third joint to 100' feet from surface.	Fill with KCl water once drilled to TD. Once casing is at setting depth, circulate a minimum of one hole volume prior to pumping cement.	Casing to be ran 250' below the 5th Sand. Intermediate casing = 0.545" wall thickness Burst=10,900 psi
			5th Sand Base	2491	2491					
			Warren Sand	3633	3633					
			Java	4570	4570					
			Rheinstreet	5334	5334					
			Cashaqua	5655	5655					
			Middlesex	5727	5727					
			West River	5750	5750					
			Burkett	5811	5811					
Tully Limestone			5836	5836						
Hamilton			5860	5860						
Marcellus			5895	5895						
Onondaga			5950	5950						
Oriskany			6162	6162						
Bass Island Dol.			6514	6514						
Salina G	6619	6619								
Salina F	6817	6817								
Lockport	7700	7700								
Rochester Shale	7871	7871								
Packer Shell	8278	8278								
Clinton	8327	8327								
Medina	8410	8410								
Queenston	8469	8469								
Intermediate Casing	8869	8869								
8.5" Curve	5-1/2" 23# HCP-110 Wedge 563	Reedsville	9284	9284	12.5ppg-13.5ppg SOBM	15.0 ppg Class A + 35% retarder, 14% dispersant, .8% fluid loss & 2% freewater additive	Rigid Bow Spring every third joint from KOP to TOC	Once at TD, circulate at max allowable pump rate for at least 6x bottoms up. Once on bottom with casing, circulate a minimum of one hole volume prior to pumping cement.	Production casing = 0.415" wall thickness Burst=16510 psi Note Actual centralizer schedules may be changed due to hole conditions	
		Utica	9826	9809						
		Point Pleasant	10726	10358						
8.5" - 8.5" Lateral	5-1/2" 23# HCP-110 TXP BTC	TD	20115	10412		TOC >= 1000' above 9.625" shoe	Rigid Bow Spring every joint to KOP			

LP @ 10412' TVD / 11021' MD

8.5 / 8.5 Hole - Cemented Long String
 5-1/2" 23# HCP-110 TXP BTC/ Wedge 563

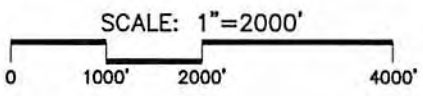
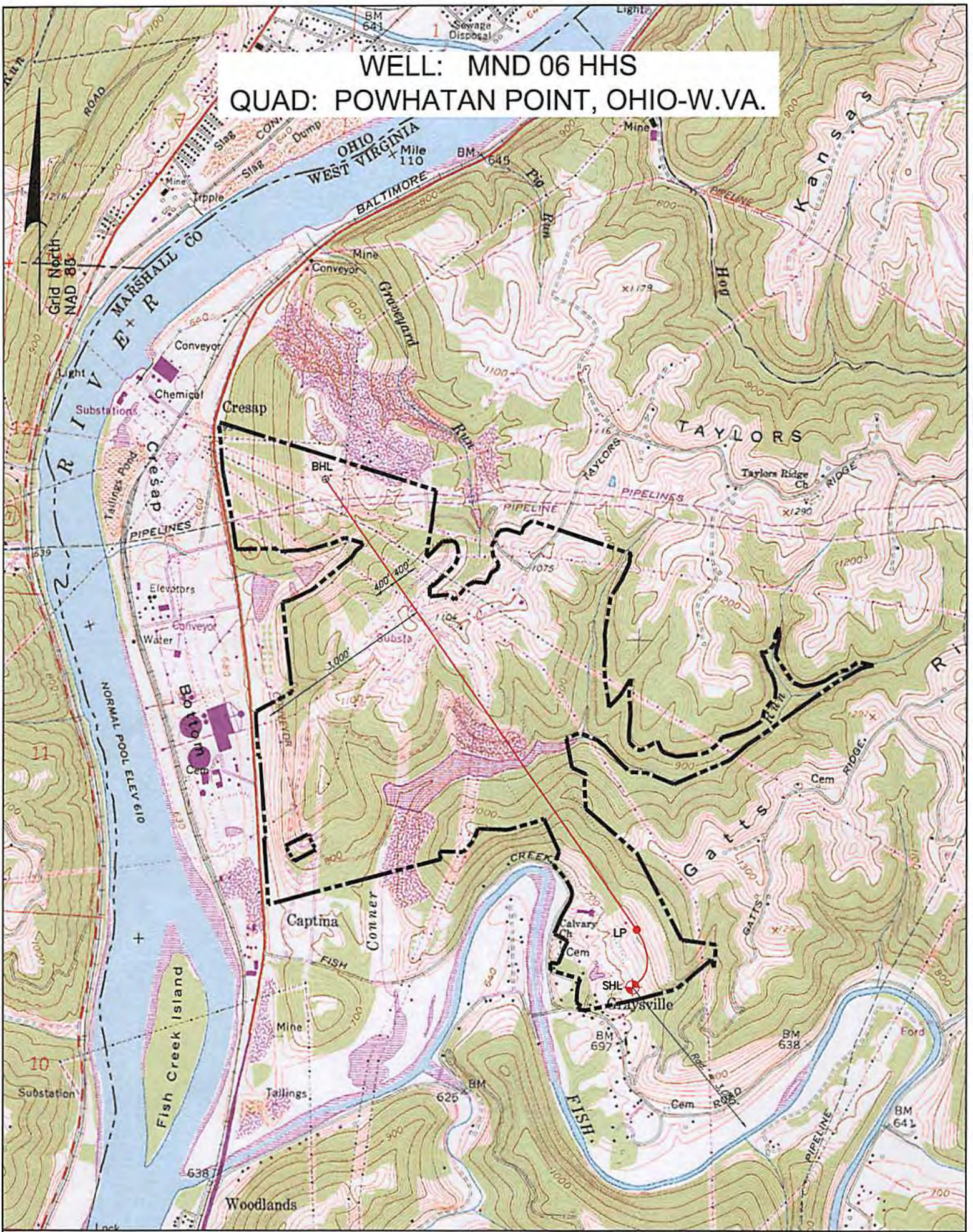
+/-9094' ft Lateral

TD @ +/-10412' TVD +/-20115' MD

8.5" Pilot	Isolation / Sidetrack Cement	Trenton	10467	10467	12.3ppg-13.5ppg SOBM	16.8ppg Class G (HAL) +0.55% friction reducer, 4% defoamer & 15% retarder from TD to 200' above KOP (2) 800' balanced plugs w/ 2.375" tubing. Yield = 1.02	N/A	Once at TD, circulate at drilling pump rate for at least three hours. 100H and run DH logs	DH logs, loggers on location to call TD. Dir. Surveys shoe to TD
		Pilot Hole TD	10667	10667					

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 Office of Oil and Gas
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WELL: MND 06 HHS
QUAD: POWHATAN POINT, OHIO-W.VA.



GENERAL NOTE:
 THE PURPOSE OF THIS PLAT IS FOR THE LOCATION OF PROPOSED GAS WELLS AND DOES NOT REPRESENT A CLOSED BOUNDARY SURVEY. PROPERTY LINES AND OWNERS WERE OBTAINED FROM VARIOUS FIELD EVIDENCE, TAX RECORDS AND AERIAL MAPPING.

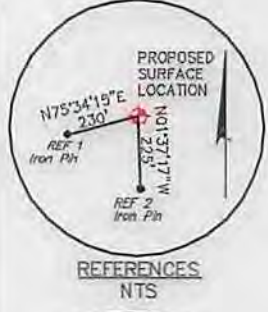
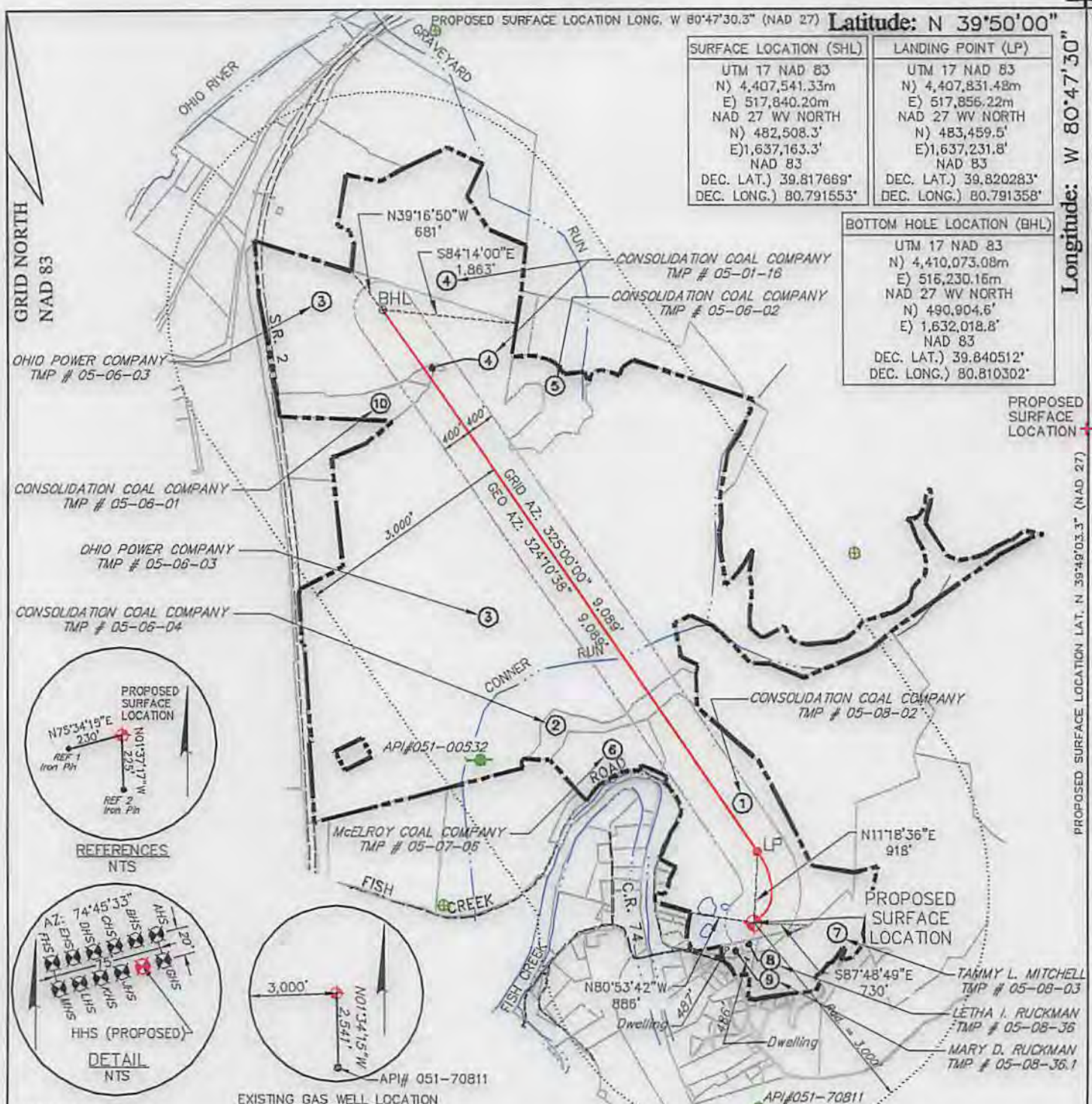
LEGEND

- PROPOSED GAS WELL
- PROPOSED BOTTOM HOLE
- PROPOSED BORE
- EXTERNAL LEASE LINE

SURFACE LOCATION (SHL)	LANDING POINT (LP)	BOTTOM HOLE LOCATION (BHL)
(NAD 83) N) 482,544.4' E) 1,605,726.0' LAT.) 39°49'03.6" LONG.) 80°47'29.6" DEC. LAT.) 39.817669° DEC. LONG.) 80.791553°	(NAD 83) N) 483,495.7' E) 1,605,794.4' LAT.) 39°49'13.0" LONG.) 80°47'28.9" DEC. LAT.) 39.820283° DEC. LONG.) 80.791358°	(NAD 83) N) 490,940.6' E) 1,600,581.4' LAT.) 39°50'25.8" LONG.) 80°48'37.1" DEC. LAT.) 39.840512° DEC. LONG.) 80.810302°
(NAD 27) N) 482,508.3' E) 1,637,163.3' LAT.) 39°49'03.3" LONG.) 80°47'30.3" DEC. LAT.) 39.817593° DEC. LONG.) 80.791741°	(NAD 27) N) 483,445.96' E) 1,637,231.8' LAT.) 39°49'12.7" LONG.) 80°47'29.6" DEC. LAT.) 39.820207° DEC. LONG.) 80.791546°	(NAD 27) N) 490,904.6' E) 1,600,581.4' LAT.) 39°50'25.6" LONG.) 80°48'37.8" DEC. LAT.) 39.840437° DEC. LONG.) 80.810490°
(UTM NAD 83) N) 4,407,541.33m E) 517,840.20m	(UTM NAD 83) N) 4,407,831.48m E) 517,856.22m	(UTM NAD 83) N) 4,410,073.08m E) 516,230.16m

11/21/2014

Applicant / Well Operator Name NOBLE ENERGY, INC.	Well(Farm) Name MND06	Well # HHS	Serial #
Address 333 TECHNOLOGY DRIVE, SUITE 116, CANONSBURG, PA 15317	County - Code MARSHALL - 051	District FRANKLIN	
Surface Landowner / Lessor CONSOLIDATION COAL COMPANY	USGS 71/2 Quadrangle Map Name POWHATAN POINT, OHIO-W.VA	Scale: 1" = 2,000'	



GENERAL NOTES:

1. THE LOCATION OF BOUNDARY LINES SHOWN HEREON ARE BASED ON RECORD DEED, PLATS, AND TAX MAPS BEST FIT TO FOUND FIELD EVIDENCE AND AERIAL PHOTOS, UNLESS OTHERWISE NOTED.
2. THIS PLAT DOES NOT REPRESENT AN ACTUAL BOUNDARY SURVEY OF THE INDIVIDUAL PARCELS.
3. THERE ARE NO EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' OF PROPOSED WELL.
4. PROPOSED WELL IS GREATER THAN 100' FROM PERENNIAL STREAM, WETLAND, POND, RESERVOIR OR LAKE.
5. THERE ARE NO NATIVE TROUT STREAMS WITHIN 300' OF PROPOSED WELL.
6. THERE ARE TWO DWELLINGS LOCATED WITHIN 650' OF PROPOSED WELLBORE, DISTANCE AS SHOWN ABOVE.
7. THE SURROUNDING LANDS ARE BEING SERVED BY PUBLIC WATER BY THE GRAND VIEW DOOLIN WATER SYSTEM PROVIDED BY MARSHALL COUNTY PUBLIC HEALTH AND SANITATION DIVISION.
8. NO PRODUCING DEEP WELLS WITHIN 3,000 FT. OF WELL BORE

LEGEND

- PROPOSED GAS WELL
- PROPOSED BORE
- TIE LINE
- OIL & GAS LEASE BOUNDARY
- PROPERTY LINE
- STREAM LINE
- BUFFER LINE
- UNIT BOUNDARY
- GAS WELL
- PLUGGED GAS WELL

FILE #: 093842010

DRAWING #: 093842010_SV-Plat

SCALE: PLAT & TICK: 1" = 2,000'

MINIMUM DEGREE OF ACCURACY: 1/2,500

PROVEN SOURCE OF ELEVATION: NGS (CORS)

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

SIGNED: [Signature]

R.P.R.: _____ L.L.S.: 2241



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304



DATE: NOVEMBER 05, 2014

OPERATOR'S WELL #: MND 06 HHS

API WELL #: 47 051 01732

STATE COUNTY PERMIT

WELL TYPE: OIL GAS WASTE DISPOSAL LIQUID INJECTION PRODUCTION STORAGE DEEP SHALLOW

WATERSHED: FISH CREEK ELEVATION: 719.9'-DESIGN (NAVD 88)

COUNTY/DISTRICT: MARSHALL / FRANKLIN QUADRANGLE: POWHATAN POINT, OHIO-W.VA

SURFACE OWNER: CONSOLIDATION COAL COMPANY ACREAGE: 136.587±

OIL & GAS ROYALTY OWNER: CNX GAS COMPANY LLC and NOBLE ENERGY, INC. ACREAGE: 136.587±

CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PERFORATE NEW FORMATION PLUG & ABANDON

DRILL PLUG OFF OLD FORMATION CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: UTICA and POINT PLEASANT ESTIMATED DEPTH: TVD: 10,412±ft. TMD: 20,115±ft.

WELL OPERATOR: NOBLE ENERGY, INC. DESIGNATED AGENT: STEVE M. GREEN

ADDRESS: 333 TECHNOLOGY DRIVE, SUITE 116 ADDRESS: 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 590

CITY: CANONSBURG STATE: PA ZIP CODE: 15317 CITY: CHARLESTON STATE: WV ZIP CODE: 25301

11/21/2014

H6A MOD2