

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 051 - 01836 County Marshall District Clay
Quad Powhatan Point Pad Name MND 1 Field/Pool Name Marcellus
Farm name CNX Gas Company, LLC ET AL Well Number MND 1 DHS
Operator (as registered with the OOG) Noble Energy, Inc.
Address 1001 Noble Energy Way City Houston State Texas Zip 77070

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 39.849893 Easting -80.774340
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 1152.08 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)

Date permit issued 05/27/2015 Date drilling commenced 08/01/2015 Date drilling ceased 08/01/2015
Date completion activities began na Date completion activities ceased na
Verbal plugging (Y/N) n Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 521' Open mine(s) (Y/N) depths na
Salt water depth(s) ft na Void(s) encountered (Y/N) depths na
Coal depth(s) ft 687-697 Cavern(s) encountered (Y/N) depths na

Is coal being mined in area Yes

APPROVED
NAME: Jim Kuhlman
DATE: 8/14/2017

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Reviewed by AUG 01 2017
WV Department of
Environmental Protection

API 47-051 - 01836 Farm name CNX Gas Company, LLC ET AL Well number MND 1 DHS

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	36"	30"	40'	New	LS/117#		
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production							
Tubing							
Packer type and depth set							

Comment Details *set only the conductor.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production							
Tubing							

Drillers TD (ft) 40' Loggers TD (ft) 40'
 Deepest formation penetrated _____ Plug back to (ft) _____
 Plug back procedure _____

Kick off depth (ft) NA

Check all wireline logs run caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS AUG 01 2017

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____ WV Department of Environmental Protection

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

API 47- 051 - 01836

Farm name CNX Gas Company, LLC ET AL Well number MND 1 DHS

PRODUCING FORMATION(S)

DEPTH(S)

NA	TVD	MD
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd GAS MEASURED BY
 Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	

	0		0		

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Please insert additional pages as applicable.

Drilling Contractor _____
 Address _____ City _____ State _____ Zip _____

Logging Company _____
 Address _____ City _____ State _____ Zip _____

Cementing Company _____
 Address _____ City _____ State _____ Zip _____

Stimulating Company _____
 Address _____ City _____ State _____ Zip _____

Please insert additional pages as applicable.

Completed by Dee Swiger Telephone 724-820-3061
 Signature [Signature] Title Regulatory Analyst, III Date 06/19/2017

SURFACE HOLE LOCATION (SH)

UTM 17 - NAD83
 N: 4411121.376
 E: 518304.396
 NAD27 WY NORTH
 N: 494176.850
 E: 1642164.110
 LAT/LON DATUM-NAD83
 LAT: 39.849893
 LON: -80.774340

APPROX. LANDING POINT

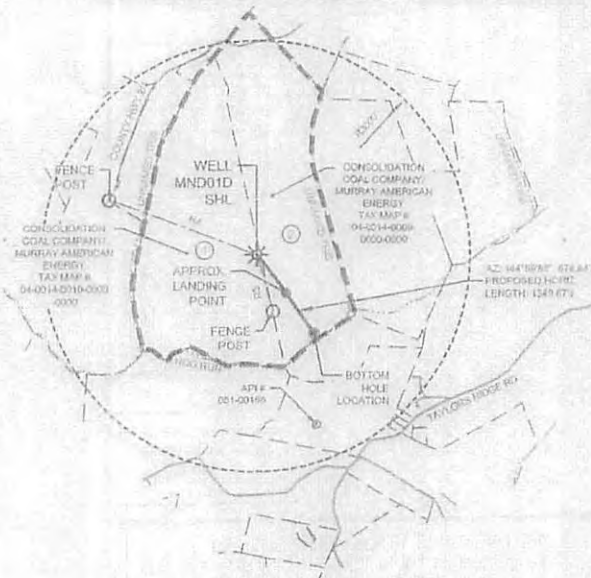
UTM 17 - NAD83
 N: 4410862.342
 E: 519432.121
 NAD27 WY NORTH
 N: 493646.950
 E: 1642574.510
 LAT/LON DATUM-NAD83
 LAT: 39.848457
 LON: -80.772852

BOTTOM HOLE LOCATION

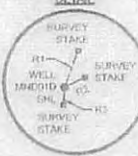
UTM 17 - NAD83
 N: 4410794.668
 E: 519553.754
 NAD27 WY NORTH
 N: 493090.0613
 E: 1642964.456
 LAT/LON DATUM-NAD83
 LAT: 39.846944
 LON: -80.771435

**WATER WELLS:
 NONE FOUND**

Well is located on topo map 9.147 feet south of Latitude: 39° 52' 30"



REFERENCE DETAIL



Well is located on topo map 9.147 feet west of Longitude: 80° 45' 00"

NOTES

- There are no water wells or developed areas within 250' of proposed well.
- There are no existing buildings within 675' of proposed well.
- Proposed well is greater than 100' from potential stream, wetland, pond, reservoir or lake.
- There are no active front streams within 300' of proposed well.
- Proposed well is greater than 1000' from surface ground water intake or public water supply.
- It is the purpose and intention of this plan to represent surveyed locations of the surface or proposed wells depicted herein. The location of the boundary lines, as shown, and based on recent deed descriptions. Field evidence should be the last step position, unless otherwise noted.

LINE	BEARING	DISTANCE
R1	S18°59'00"W	274.94'
R2	S04°32'00"W	156.72'
R3	N04°10'00"E	121.64'
R4	S69°12'00"E	2194.56'
R5	N10°28'00"W	903.09'

LEGEND

- TOPO MAP POINT
- PROPOSED WELL
- WATER SOURCE
- LEASED MEMBER EASEMENT (ATTACHED MOWMA)
- ALL ACRE POINTS (PALEO)
- OTHERWISE NOTED
- MINERAL TRACT BOUNDARY
- PARCEL LINE
- PROPOSED HORIZONTAL WELL
- WELL REFERENCE
- STREAM/WATERWAY
- ROAD
- EXISTING GAS WELL

PVE Sheffler
 Engineering • Surveying • Design
 Waterfront Corporate Park, III, Suite 101
 2000 Georgetown Drive
 Sewickley, PA 15143-8992
 Phone: 724-444-1100

FILE: MND 01 DHS
 DRAWING #: MND 01 DHS
 SCALE: 1"=2000'
 MINIMUM DEGREE OF ACCURACY: 1/2500'
 PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT H.136 636.56'

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

SIGNED: *[Signature]*
 R.P.E.: 18765 L.L.S.: P.S. NO. _____

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

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: SHORT CREEK-OHIO RIVER
 COUNTY/DISTRICT: MARSHALL / CLAY
 SURFACE OWNER: CONSOLIDATION COAL COMPANY / MURRAY ENERGY
 OIL & GAS ROYALTY OWNER: CNX GAS COMPANY, LLC, ET AL

DATE: FEBRUARY 12, 2015 - REV FEBRUARY 26, 2015
 OPERATOR'S WELL #: MND 01 DHS
 API WELL #: 47 051 01736
 STATE COUNTY PERMIT

ELEVATION: 1161.00'
 QUADRANGLE: POWHATAN POINT, W. VA. J010
 ACREAGE: 126.99

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY)

TARGET FORMATION: MARCELLUS
 WELL OPERATOR: NOBLE ENERGY, INC.
 Address: 1000 NOBLE ENERGY DRIVE
 City: CANNONSBURG State: PA Zip Code: 15317

ESTIMATED DEPTH: TVD: 6,380' + TMD: 7,643'
 DESIGNATED AGENT: JESSICA ALSOP
 Address: 301 GOLDEN EAGLE DRIVE
 City: MORGANTOWN State: WV Zip Code: _____

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