

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

API 47-051-01834 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 KHS  
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 39.849872 Easting -80.774263  
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 \_\_\_\_\_  
Coal depth(s) ft 687-697 Cavern(s) encountered (Y/N) depths \_\_\_\_\_  
Is coal being mined in area (Y/N) Yes

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**APPROVED**  
NAME: Jim Underwood  
DATE: 8/16/2017

Reviewed by: \_\_\_\_\_

API 47- 051 - 01834 Farm name CNX Gas Company, LLC ET AL Well number MND 1 KHS

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 <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor							
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production							
Tubing							

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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 \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

WAS WELL COMPLETED AS SHOT HOLE    Yes    No      DETAILS \_\_\_\_\_

WAS WELL COMPLETED OPEN HOLE?    Yes    No      DETAILS \_\_\_\_\_

WERE TRACERS USED    Yes    No      TYPE OF TRACER(S) USED \_\_\_\_\_

API 47- 051 - 01834

Farm name CNX Gas Company, LLC ET AL

Well number MND 1 KHS

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
NA					

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
NA								

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>NA</u>	<u>TVD</u>	<u>MD</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

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

<u>LITHOLOGY/ FORMATION</u>	<u>TOP DEPTH IN FT NAME TVD</u>	<u>BOTTOM DEPTH IN FT TVD</u>	<u>TOP DEPTH IN FT MD</u>	<u>BOTTOM DEPTH IN FT MD</u>	<u>DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H<sub>2</sub>S, ETC)</u>
_____	0	_____	0	_____	_____
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Please insert additional pages as applicable.

Drilling Contractor \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

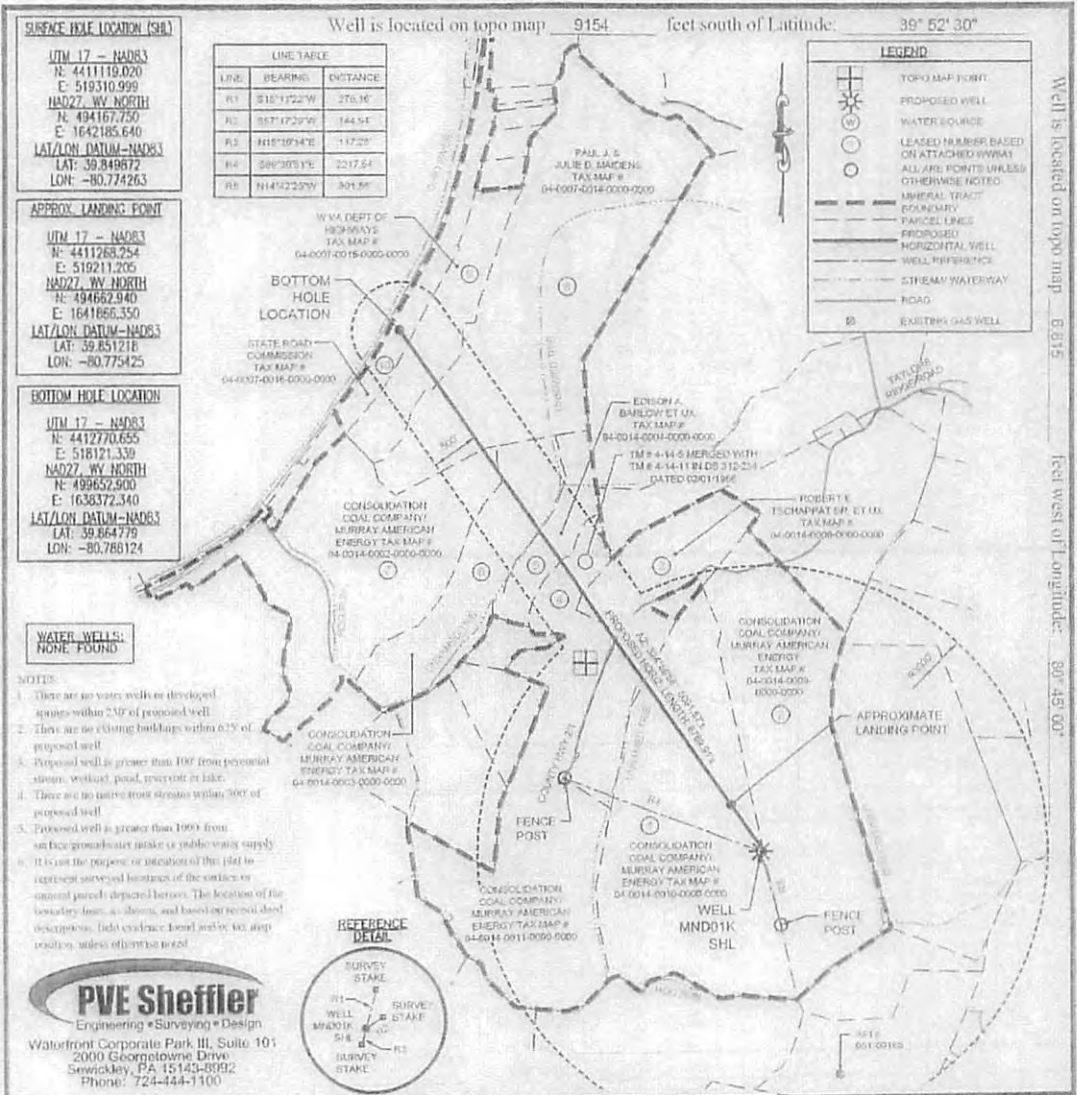
Logging Company \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

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 Dee Swiger Title Regulatory Analyst, III Date 06/19/2017



FILE: MND 01 KHS

DRAWING #: MND 01 KHS

SCALE: 1"=1500'

MINIMUM DEGREE OF ACCURACY: 1/2500

PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT H 135-636.56'

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: *James G. ...*

R.P.E.: 18766 L.L.S.: P.S. NO. \_\_\_\_\_

PLACE STAMP HERE

DATE: FEBRUARY 12, 2016 - REV FEBRUARY 24, 2015

OPERATOR'S WELL #: MND 01 KHS

API WELL #: 47 051 01834

STATE COUNTY PERMIT

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 AMERICAN ENERGY

OIL & GAS ROYALTY OWNER: CNX GAS COMPANY, LLC, ET AL

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: 6,360' ± TMD: 10,252'

DESIGNATED AGENT: JESSICA ALSOP

Address: 301 GOLDEN EAGLE DRIVE

City: MORGANTOWN State: WV Zip Code: 26508

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