

JAN 27 2017

WR-35  
Rev. 8/23/13

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

API 47-095-02205 County Tyler District Centerville  
Quad Shirley Pad Name SHR 40 Field/Pool Name NA  
Farm name Noble Energy, Inc. Well Number SHR 40 CHS  
Operator (as registered with the OOG) Noble Energy, Inc.  
Address 1000 Noble Energy Drive City Canonsburg State PA Zip 15317

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4362836.66 Easting 514239.48  
Landing Point of Curve Northing 4362741.37 Easting 514608.54  
Bottom Hole Northing 4360088.19 Easting 515624.68

Elevation (ft) 771 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)  
Synthetic Oil Based

Date permit issued 12/16/2014 Date drilling commenced 03/30/2015 Date drilling ceased 05/31/2015  
Date completion activities began NA Date completion activities ceased \_\_\_\_\_  
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 357 Open mine(s) (Y/N) depths none  
Salt water depth(s) ft None noted for Offsets Void(s) encountered (Y/N) depths none  
Coal depth(s) ft no coal Cavern(s) encountered (Y/N) depths none

Is coal being mined in \_\_\_\_\_

**APPROVED**  
NAME: [Signature] JUSTIN SWYDEN  
DATE: 2/3/17

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

API 47-095 - 02205 Farm name Noble Energy, Inc. Well number SHR 40 CHS

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	20	40				
Surface	17 1/2	13 3/8	495.6	N	J-55 54.5#		Y
Coal							
Intermediate 1	13 3/8	9 5/8	2235.6	N	HCK-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4	5 1/2	16,404.8	N	P-110 20#		Y
Tubing							
Packer type and depth set							

Comment Details \_\_\_\_\_

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	Class A	420	15.6	1.18	70.0	0	8
Coal							
Intermediate 1	Class A	840	15.6	1.18	170.0	0	8
Intermediate 2							
Intermediate 3							
Production	Class A	Lead 845 Tail 2710	Lead 13.5 Tail 14.5	Lead 1.58 Tail 1.25	Lead 238.0 Tail 362.0	3000.9	8
Tubing							

Drillers TD (ft) 16,414 Loggers TD (ft) 16,390

Deepest formation penetrated Marcellus Plug back to (ft) Not a Pilot Hole

Plug back procedure Not a Pilot Hole

Kick off depth (ft) 5,937

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 Conductor - No centralizers used. Fresh Water/Surface-  
Surface - 5 centralizers used, one every third joint Intermediate - 26 centralizers - bow spring centralizers on every joint to KOP, on every third joint from KOP to 100' from surface.  
Production - 320 centralizers - rigid bow spring every third joint from KOP to TOC, rigid bow spring every joint to KOP.

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 \_\_\_\_\_





## SHR 40 CHS

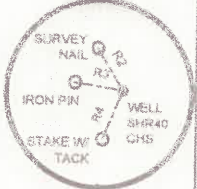
Formations	Top	Base
Shale	0	1020
Shale and Sandstone	1020	1743
Big Lime	1743	1871
Big Injun	1871	1978
Price	1978	2129
Weir	2129	2233
Shale	2233	2320
Berea	2320	2328
Shale	2328	2509
Sandstone	2509	2611
Shale	2611	2747
Sandstone	2747	2765
Shale	2765	3239
Warren	3239	3285
Shale and Sandstone	3285	3637
Lower Huron	3637	4395
Sandstone	4395	4433
Shale	4433	4627
Sandstone	4627	4683
Shale	4683	4807
Benson	4807	4851
Shale	4851	5051
Alexander	5051	5109
Shale	5109	6050
Cashaqua	6050	6161
Middlesex	6161	6195
West River	6195	6263
Burkett	6263	6297
Tully	6297	6300
Hamilton	6300	6317
Marcellus	6317	6381
Onondaga	6381	

Well is located on topo map 635 feet south of Latitude: 39° 25' 00"

Well is located on topo map 353

feet west of Longitude: 80° 50' 00"

REFERENCE DETAIL



**SURFACE HOLE LOCATION (SH1)**

UTM 17 - NAD83  
 N: 4362836.658  
 E: 514239.677  
 NAD27, WV NORTH  
 N: 336008.760  
 E: 1622901.774  
 LAT/LON DATUM-NAD83  
 LAT: 39.414931  
 LON: -80.834586

**APPROX. LANDING POINT**

UTM 17 - NAD83  
 N: 4362741.365  
 E: 514608.542  
 NAD27, WV NORTH  
 N: 335675.810  
 E: 1624107.650  
 LAT/LON DATUM-NAD83  
 LAT: 39.414067  
 LON: -80.830301

**BOTTOM HOLE LOCATION**

UTM 17 - NAD83  
 N: 4360088.186  
 E: 515624.675  
 NAD27, WV NORTH  
 N: 326913.660  
 E: 1622296.810  
 LAT/LON DATUM-NAD83  
 LAT: 39.390142  
 LON: -80.818559

**LINE TABLE**

LINE	BEARING	DISTANCE
R2	S31°29'14"E	260.63'
R3	S81°17'42"E	205.13'
R4	N22°17'22"E	284.80'
R5	N44°22'46"E	514.34'
R6	N55°47'45"W	859.36'



- NOTES**
1. There are no water wells or developed springs within 250' of proposed well.
  2. There are no existing buildings within 625' of proposed well.
  3. Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
  4. There are no native trout streams within 300' of proposed well.
  5. Proposed well is greater than 1000' from surface/groundwater intake or public water supply.
  6. It is not the purpose or intention of this plat to represent surveyed locations of the surface or mineral parcels depicted herein. The location of the boundary lines, as shown, and based on record deed descriptions, field evidence found and/or tax map position, unless otherwise noted.

**PVE Sheffler**  
 Waterfront Corporate Park III, Suite 101  
 2000 Georgetowne Drive  
 Sewickley, PA 15143-8992  
 Phone: 724-444-1100

**LEGEND**

- TOPO MAP POINT
- PROPOSED WELL
- WATER SOURCE
- LEASED NUMBER BASED ON ATTACHED WMA#
- ALL ARE POINTS UNLESS OTHERWISE NOTED
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- PROPOSED
- HORIZONTAL WELL
- WELL REFERENCE
- STREAM/WATERWAY
- ROAD

**WELLS WITHIN 3000'**

- EXISTING GAS WELL
- RECORD GAS WELL

FILE #: SHR 40 CHS

DRAWING #: SHR 40 CHS

SCALE: 1"=2500'

MINIMUM DEGREE OF ACCURACY: 1/2500

PROVEN SOURCE OF ELEVATION: USGS MONUMENT A 142, 724.81'

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: *Charles Douglas Davidson*

R.P.E.: \_\_\_\_\_ L.L.S.: P.S. NO. 819

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

Watershed: MIDDLE ISLAND CREEK

County/District: CENTERVILLE / TYLER

Surface Owner: NOBLE ENERGY, INC.

Oil & Gas Royalty Owner: DAVID L. MAPLE, ET AL.

Target Formation: BURKETT

Well Operator: NOBLE ENERGY, INC.

Address: 333 TECHNOLOGY DRIVE, SUITE 116

City: CANONSBURG State: PA Zip Code: 15317



DATE: SEPTEMBER 4, 2014

OPERATOR'S WELL #: SHR 40 CHS

API WELL # 47 095 02205

STATE: \_\_\_\_\_ COUNTY: \_\_\_\_\_ PERMIT: \_\_\_\_\_

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

ELEVATION: 771'

QUADRANGLE: SHIRLEY, W. VA

ACREAGE: 572.64

ACREAGE: 357.43

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

ESTIMATED DEPTH: TVD: 6,285' ± TMD: 16,287' ±

DESIGNATED AGENT: STEVEN M. GREEN

Address: 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 590

City: CHARLESTON State: WV Zip Code: 25301