

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

API 47 - 051 - 01809 County Marshall District Sandhill
Quad Valley Grove Pad Name SHL 22 Field/Pool Name NA
Farm name Consol Mining Co. (CONSOL) Well Number SHL 22 DHS
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 4429054.795 Easting 536128.914
Landing Point of Curve Northing 4428775.307 Easting 535455.548
Bottom Hole Northing 4426726.453 Easting 5369942.346

Elevation (ft) 1322 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 02/25/2015 Date drilling commenced 04/06/2015 Date drilling ceased 07/26/2015
Date completion activities began 11/18/2016 Date completion activities ceased 12/26/2016
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.

Freshwater depth(s) ft 210 Open mine(s) (Y/N) depths APR 07 2017
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 area (Y/N) N

RECEIVED
Office of Oil and Gas

APR 07 2017
WV Department of
Environmental Protection

APPROVED

NAME: Jim Underbe

DATE: 5/2/17

Reviewed by:

[Signature]

05/26/2017

API 47-051 - 01809 Farm name Consol Mining Co. (CONSOL) Well number SHL 22 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				
Surface	17 1/2	13 3/8	1225.0	N	J-55 54.5#		Y
Coal							
Intermediate 1	12 3/8	9 5/8	3162.0	N	HCK-55 36#		Y
Intermediate 2							
Intermediate 3							
Production	8 3/4	5 1/2	16,410.0	N	P-110 20#		Y
Tubing							
Packer type and depth set							

Comment Details Water String -Casing Size 20, Depth, 399.0 New Grade wt/ft J-55 94#

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	Class A	Water String 527 Surface 1084	Water String 15.6 Surface 15.6	Water String 1.20 Surface 1.20	Water String 112.0 Surf 232.0	0	8/8
Coal							
Intermediate 1	Class A	1207	15.6	1.18	241.0	0	8
Intermediate 2							
Intermediate 3							
Production	Class A	3160	14.5	1.32	742.0	27.0	8
Tubing							

Drillers TD (ft) 15,849 Loggers TD (ft) 15,824
 Deepest formation penetrated Marcellus Plug back to (ft) Not a Pilot Hole
 Plug back procedure Not a Pilot Hole

Kick off depth (ft) 5,043

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. Water String 4 Bow Spring Centralizers used. Fresh Water:
 Surface - 10 bow spring centralizers used, one every third joint Intermediate - 39 bow spring centralizers on every third joint from KOP to 100' from surface.
 Production - 260 8 3/4 Bow 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 _____

API 47- 051 - 01809 Farm name Consol Mining Co. (CONSOL) Well number SHL 22 DHS

PERFORATION RECORD

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

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 (bbbls)	Amount of Nitrogen/other (units)
SEE ATTACHED STIMULATION INFORMATION PER STAGE RECORD								

Please insert additional pages as applicable.

SHL 22 DHS
Perforations

API	Well Name	Date	Top (ftKB)	Btm (ftKB)	Com	Entered Shot Total	Est Hole Dia (in)
47-051-01809	SHL-22D-HS	12/18/2016	7,827.00	7,972.00	STG #44	44	0.43
47-051-01809	SHL-22D-HS	12/17/2016	8,008.00	8,010.00	STG #43	44	0.43
47-051-01809	SHL-22D-HS	12/10/2016	10,623.00	10,772.00	STG #29	44	0.43
47-051-01809	SHL-22D-HS	12/10/2016	10,809.00	10,959.00	STG #28	44	0.43
47-051-01809	SHL-22D-HS	12/9/2016	10,996.00	11,145.00	STG #27	44	0.43
47-051-01809	SHL-22D-HS	12/9/2016	11,182.00	11,255.00	STG 26 REPERF	36	0.43
47-051-01809	SHL-22D-HS	12/8/2016	11,269.50	11,415.00		44	0.43
47-051-01809	SHL-22D-HS	12/7/2016	11,463.00	11,615.00	STG #25	44	0.43
47-051-01809	SHL-22D-HS	12/7/2016	11,655.00	11,806.00	STG #24	37	0.43
47-051-01809	SHL-22D-HS	12/7/2016	11,846.00	11,997.00	STG #23	44	0.43
47-051-01809	SHL-22D-HS	12/6/2016	12,037.00	12,380.00	STG #22	44	0.43
47-051-01809	SHL-22D-HS	12/5/2016	12,331.00	12,380.00	STG #21	44	0.43
47-051-01809	SHL-22D-HS	12/4/2016	12,420.00	12,574.00	STG #20	44	0.43
47-051-01809	SHL-22D-HS	12/4/2016	12,611.00	12,765.00	STG #19	44	0.43
47-051-01809	SHL-22D-HS	12/3/2016	12,803.00	12,953.00	STG #18	44	0.43
47-051-01809	SHL-22D-HS	12/3/2016	12,994.00	13,146.00	STG #17	44	0.43
47-051-01809	SHL-22D-HS	12/2/2016	13,186.00	13,334.00	STG #16	44	0.43
47-051-01809	SHL-22D-HS	12/2/2016	13,376.00	13,528.00	STG #15	44	0.43
47-051-01809	SHL-22D-HS	12/2/2016	13,568.00	13,717.00	STG #14	44	0.43
47-051-01809	SHL-22D-HS	12/2/2016	13,760.00	13,905.00	STG #13	44	0.43
47-051-01809	SHL-22D-HS	12/1/2016	13,957.00	14,120.00	STG #12	44	0.43
47-051-01809	SHL-22D-HS	12/1/2016	14,142.00	14,315.00	STG #11	44	0.43
47-051-01809	SHL-22D-HS	12/1/2016	14,334.00	14,511.00	STG #10	44	0.43
47-051-01809	SHL-22D-HS	11/30/2016	14,525.00	14,672.00	STG #9	44	0.43
47-051-01809	SHL-22D-HS	11/30/2016	14,716.00	14,868.00	STG #8	44	0.43
47-051-01809	SHL-22D-HS	11/30/2016	14,908.00	15,054.00	STG #7	44	0.43
47-051-01809	SHL-22D-HS	11/29/2016	15,097.00	15,251.00	STG #6	44	0.43
47-051-01809	SHL-22D-HS	11/28/2016	15,291.00	15,437.00	STG #5	44	0.43
47-051-01809	SHL-22D-HS	11/27/2016	15,480.00	15,633.00	STG #4	44	0.43
47-051-01809	SHL-22D-HS	11/27/2016	15,673.00	15,827.00	STG #3	44	0.43
47-051-01809	SHL-22D-HS	11/20/2016	15,865.00	16,014.00	STG #2	44	0.43
47-051-01809	SHL-22D-HS	11/19/2016	16,056.00	16,056.00	STG #1 REPERF	22	0.43
47-051-01809	SHL-22D-HS	11/19/2016	16,106.00	16,251.00	STG #1	32	0.43

SHL 22 DHS

API: 47-051-01809

WR-35 - Stimulation

Int Des	Start Date	Slurry Rate Avg (bbl/min)	P Treat Avg (psi)	P Breakdown (psi)	ISIP (psi)	Propanant Deliver (lb)	Vol Slurry Total (gal)
INJ TEST #1	11/18/2016	12.6	6,772.00		5,952.00		31,802.40
STG #1	11/19/2016	77.1	7,309.00	5,735.00	3,419.00	597,892.00	750,073.80
STG #1A	11/19/2016	43.2	7,698.00	5,937.00	5,174.00	4,900.00	221,151.00
STG #2	11/20/2016	89.5	8,155.00	5,906.00	3,274.00	602,838.00	634,015.20
STG #3	11/27/2016	81.7	7,933.00	5,996.00	4,598.00	571,804.00	853,511.40
STG #4	11/28/2016	78.8	8,214.00	6,277.00	4,132.00	546,158.00	676,132.80
STG #5	11/29/2016	76.3	8,122.00	5,955.00	4,118.00	603,124.00	764,085.00
STG #6	11/30/2016	80.2	8,064.00	5,430.00	4,110.00	597,202.00	695,751.00
STG #7	11/30/2016	81.7	7,999.00	5,818.00	4,332.00	554,627.00	962,997.00
STG #8	11/30/2016	93.9	8,127.00	5,815.00	3,998.00	602,715.00	639,634.80
STG #9	11/30/2016	88	7,932.00	5,595.00	4,079.00	603,027.00	649,929.00
STG #10	12/1/2016	96.1	8,100.00	5,686.00	4,098.00	599,182.00	627,639.60
STG #11	12/1/2016	91.1	82,014.00	6,533.00	3,636.00	599,689.00	628,882.80
STG #12	12/1/2016	94.9	8,078.00	6,319.00	3,815.00	599,780.00	635,216.40
STG #13	12/2/2016	87.4	7,808.00	3,854.00	3,854.00	602,707.00	631,730.40
STG #14	12/2/2016	94.4	8,503.00	4,129.00	4,129.00	600,559.00	627,076.80
STG #15	12/2/2016	91.5	8,319.00	3,826.00	3,826.00	605,354.00	603,078.00
STG #16	12/3/2016	92.9	8,105.00	5,340.00	3,750.00	603,904.00	599,785.20
STG #17	12/3/2016	90.9	8,325.00	5,394.00	3,648.00	600,246.00	606,076.80
STG#18	12/4/2016	88.2	7,631.00	5,596.00	3,526.00	600,903.00	482,034.00
STG #19	12/4/2016	79.9	7,113.00	5,496.00	3,785.00	599,717.00	546,117.60
STG #20	12/4/2016	96.4	8,032.00	5,012.00	4,175.00	495,763.00	530,854.80
STG #21	12/5/2016	90.5	7,950.00	5,447.00	3,694.00	661,437.00	560,002.80
STG #22	12/7/2016	95.6	7,525.00	5,526.00	3,762.00	592,789.00	467,846.40
STG #23	12/7/2016	83.9	8,316.00	6,077.00	4,409.00	579,803.00	544,177.20
STG #24	12/7/2016	85.5	7,640.00	6,094.00	4,284.00	602,439.00	543,480.00
STG #25	12/8/2016	91.4	7,413.00	5,707.00	3,986.00	606,282.00	475,881.00
STG #26 A	12/8/2016	66.3	8,402.00	4,470.00	0	4,529.00	2,159,766.00
STG #26 B INJ TEST	12/9/2016	21.1	6,430.00		5,695.00		56,162.40
STG #26 C	12/9/2016	89.7	7,025.00	5,465.00	2,859.00	600,000.00	506,217.60
STG #27 INJ TEST	12/8/2016	6			7,921.00		821,478.00
STG #27	12/9/2016	87	7,105.00	5,785.00	3,416.00	607,035.00	475,540.80

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STG #28	12/10/2016	80.9	6,553.00	6,197.00	3,523.00	598,776.00	614,010.60
STG #29	12/10/2016	96.4	7,525.00	5,660.00	3,709.00	603,450.00	477,304.80
STG #30	12/11/2016	96.6	7,360.00	6,115.00	3,403.00	603,641.00	479,425.80
STG #31	12/11/2016	88.7	8,029.00	5,619.00	3,825.00	55,349.00	173,283.60
STG # 31 B	12/11/2016	97.9	6,778.00	4,955.00	3,874.00	604,559.00	428,610.00
STG #32	12/12/2016	100.8	7,448.00	5,616.00	5,616.00	598,591.00	475,393.80
STG #33	12/12/2016	80.8	6,586.00	5,598.00	3,815.00	597,782.00	498,300.60
STG #34	12/12/2016	92.3	7,541.00	5,839.00	4,760.00	533,693.00	468,111.00
STG #35	12/13/2016	99.1	7,569.00	6,264.00	4,838.00	611,434.00	467,817.00
STG #36	12/13/2016	92	7,465.00	5,876.00	4,421.00	599,937.00	561,430.80
STG #37	12/14/2016	97.7	7,652.00	5,975.00	4,789.00	603,939.00	470,038.80
STG #38	12/14/2016	95.3	7,581.00	6,649.00	4,430.00	601,559.00	477,905.40
STG #39	12/15/2016	97.7	7,859.00	4,652.00	4,396.00	599,255.00	475,083.00
STG #40	12/17/2016	96.5	7,755.00	6,209.00	4,498.00	598,555.00	571,943.40
STG #41	12/17/2016	90.6	7,387.00	5,981.00	5,981.00	600,804.00	475,902.00
STG #42	12/17/2016	95.3	7,588.00	5,438.00	4,494.00	601,030.00	471,487.80
STG #43	12/18/2016	91.2	7,189.00	4,734.00	4,347.00	597,454.00	474,398.40
STG #44	12/18/2016	99.6	7,460.00	6,181.00	4,688.00	607,290.00	456,393.00

API 47- 051 - 01809 Farm name Consol Mining Co. (CONSOL) Well number SHL 22 DHS

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>Marcellus</u>	<u>6,857</u>	<u>TVD</u>	<u>16,154</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 Oil NGL Water GAS MEASURED BY
4180 mcfpd 69 bpd 233 bpd 522 bpd Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	0		0		
	SEE ATTACHED FORMATION SHEET				See attached sheet

Please insert additional pages as applicable.

Drilling Contractor Precision Drilling Company
 Address 5400 D Big Tyler Road City Charleston State WV Zip 25313

Logging Company _____
 Address _____ City _____ State _____ Zip _____

Cementing Company Schlumberger
 Address 4600 J Barry Court, Suite 200 City Canonsburg State PA Zip 15317

Stimulating Company Halliburton Energy Services
 Address 121 Champion Way, Suite 110 City Canonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by Regina A Logue Telephone 724-820-3559
 Signature Regina A Logue Title Regulatory Analyst Date 3/29/17

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

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SHL 22 DHS

Formations	Top	Base
Shale	0	782
Pittsburgh Coal	782	792
Shale and Sandstone	792	1253
Gas Sand	1253	1282
Shale	1282	1383
1st Salt Sand	1383	1464
Shale	1464	1570
2nd Salt Sand	1570	1584
Shale	1584	1616
3rd Salt Sand	1616	1634
Shale	1634	1663
Maxton Sand	1663	1794
Shale	1794	1850
Big Lime	1850	1968
Big Injun	1968	2095
Price	2095	2449
Murrysville	2449	2457
Shale	2457	2731
Gordon	2731	2738
Shale	2738	2839
Fifth Sand	2839	2866
Shale	2866	3266
Speechley Sand	3266	3290
Shale	3290	4174
Warren Sand	4174	4188
Shale	4188	5095
Java Shale	5095	5165
Pipe Creek Shale	5165	5209
Angola Shale	5209	5835
Rhinestreet	5835	6249
Cashaqua	6249	6341
Middlesex	6341	6378
West River	6378	6419
Burkett	6419	6452
Tully Limestone	6452	6480
Hamilton	6480	6594
Marcellus	6594	6645
Onondaga	6645	

Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date:	2016-12-26
State:	West Virginia
County:	Marshall
API Number:	47-051-01809
Operator Name:	NOBLE ENERGY
Well Name and Number:	SHL22 D
Longitude:	0
Latitude:	0
Long/Lat Projection:	
Indian/Federal:	none
Production Type:	
True Vertical Depth (TVD):	6,857
Total Water Volume (gal)*:	17,895,846.52

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Volume of Additive Pumped (gal)	Mass of additive pumped (lbs)	Density (lbs/gal)	Company	First Name	Last Name	Email	Phone
SC-30	Xchem	Scale Inhibitor	Water Neutralized polycarboxylic acid Sodium hydroxide	7732-18-5 903-04-7 1310-73-2	100% 20% 1.5%	0.00200% 0.00400% 0.000300%	328.00	2981.72	9.0906					
SC-82	Xchem	Scale Inhibitor	Water Bis(hexamethylene)amine pentamethylene phosphonic acid Sodium hydroxide	7732-18-5 34690-00-1 1310-73-2	100% 30% 5%	0.01224% 0.00367% 0.00001%	2029.00	18275.61	9.0072					
B-84	Xchem	Biocide	Sodium chloride	7647-14-5	1%	0.00012%	7906.00	71870.28	9.0906					
			Water Glutaldehyde n-Alkyl (C12-C16) dimethyl benzyl ammonium chloride Dibecyl dimethyl ammonium chloride Ethanol	7732-18-5 111-30-8 68424-85-1 7175-51-5 64-17-5	45% 30% 10% 10% 5%	0.02167% 0.01445% 0.00462% 0.00241% 0.06240%	10263.00	93127.61						
Total														

* Total Water Volume sources may include fresh water, produced water, and/or recycled water.

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(d) and Appendix D.

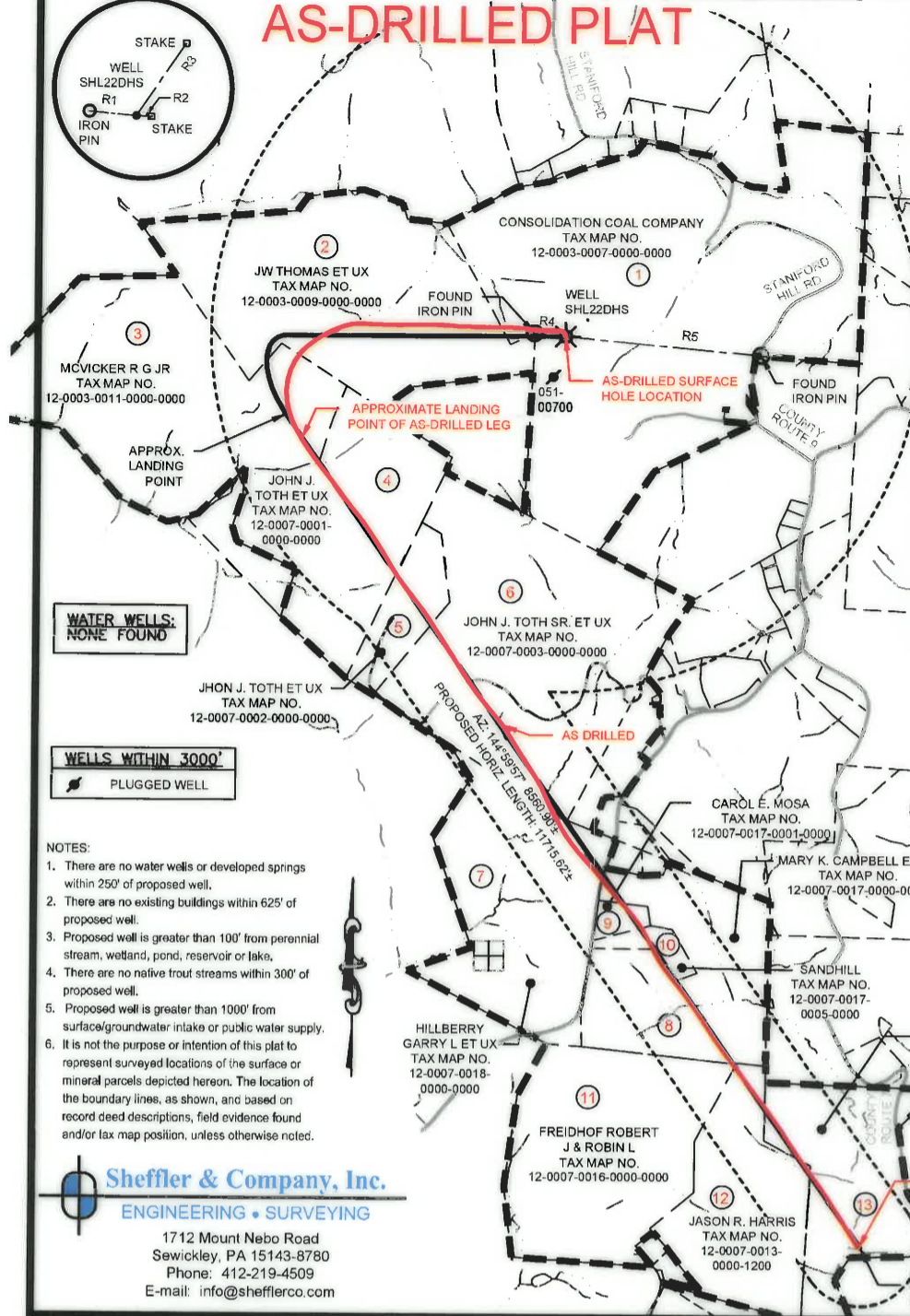
REFERENCE DETAIL

Well is located on topo map 11,202 feet south of Latitude: 40° 02' 30"

AS-DRILLED PLAT



SURFACE HOLE LOCATION (SHL)		SURFACE HOLE LOCATION (SHL)	
UTM 17 - NAD83			
N: 4429054.795	N: 4429054.451		
E: 536128.914	E: 536129.264		
NAD27, WV NORTH			
N: 552100.630	N: 552099.479		
E: 1698355.470	E: 1698356.601		
LAT/LON DATUM-NAD83			
LAT: 40.010918	LAT: 40.010915		
LON: -80.576678	LON: -80.576674		
APPROX. LANDING POINT		APPROX. LANDING POINT	
UTM 17 - NAD83			
N: 4428775.307	N: 4428839.163		
E: 535455.548	E: 535412.767		
NAD27, WV NORTH			
N: 551220.490	N: 551432.385		
E: 1696130.530	E: 1695993.656		
LAT/LON DATUM-NAD83			
LAT: 40.008428	LAT: 40.009005		
LON: -80.584583	LON: -80.585081		
BOTTOM HOLE LOCATION		BOTTOM HOLE LOCATION	
UTM 17 - NAD83			
N: 4426726.453	N: 4426727.792		
E: 536942.346	E: 536944.500		
NAD27, WV NORTH			
N: 544415.430	N: 544419.704		
E: 1700896.880	E: 1700904.021		
LAT/LON DATUM-NAD83			
LAT: 39.989905	LAT: 39.989917		
LON: -80.567280	LON: -80.567255		



LINE TABLE

LINE	BEARING	DISTANCE
R1	S84°26'24"E	266.24'
R2	N87°46'34"W	84.20'
R3	S34°19'11"W	494.00'
R4	S84°26'24"E	266.24'
R5	N84°38'15"W	1657.62'

LEGEND

- TOPO MAP POINT
- WELL
- WATER SOURCE
- LEASED NUMBER BASED ON ATTACHED WV6A1
- ALL ARE POINTS UNLESS OTHERWISE NOTED
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- PROPOSED HORIZONTAL WELL
- WELL REFERENCE
- STREAM CENTERLINE
- ROAD
- AS-DRILLED HORIZONTAL WELL

WATER WELLS: NONE FOUND

WELLS WITHIN 3000' PLUGGED WELL

- NOTES:
- There are no water wells or developed springs within 250' of proposed well.
 - There are no existing buildings within 625' of proposed well.
 - Proposed well is greater than 100' from perennial stream, wetland, pond, reservoir or lake.
 - There are no native trout streams within 300' of proposed well.
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ENGINEERING • SURVEYING
1712 Mount Nebo Road
Sewickley, PA 15143-8780
Phone: 412-219-4509
E-mail: info@shefflerco.com

FILE #: SHL 22 DHS
DRAWING #: SHL 22 DHS
SCALE: 1"=1500'
MINIMUM DEGREE OF ACCURACY: 1/2500
PROVEN SOURCE OF ELEVATION: U.S.G.S. MONUMENT WILSON KNOB 1462.02

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: *Gary A. Sheffler, Jr.*
R.P.E.: 21452 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: WHEELING CREEK ELEVATION: 1322'
COUNTY/DISTRICT: MARSHALL / SAND HILL QUADRANGLE: VALLEY GROVE, W. VA.
SURFACE OWNER: CONSOL MINING CO. (CONSOL ENERGY) ACREAGE: 170.55
OIL & GAS ROYALTY OWNER: CNX GAS COMPANY, LLC, ET AL. ACREAGE: 170.55

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: 3307 HOBENBERG DRIVE SUITE 100 CANNONSBURG, PA 15317
City CANNONSBURG State PA Zip Code 15317



DATE: MARCH 13, 2017
OPERATOR'S WELL #: SHL 22 DHS - AS DRILLED
API WELL # 47 051 01809
STATE COUNTY PERMIT

ESTIMATED DEPTH: TVD: 6,680' ± TMD: 16,413' ±
DESIGNATED AGENT: STEVEN M. GREEN
Address: 500 VIRGINIA STREET EAST, UNITED CENTER SUITE 590
City CHARLESTON State WV Zip Code 25301

05/26/2017

Well is located on topo map 9,810 feet west of Longitude: 80° 32' 30"

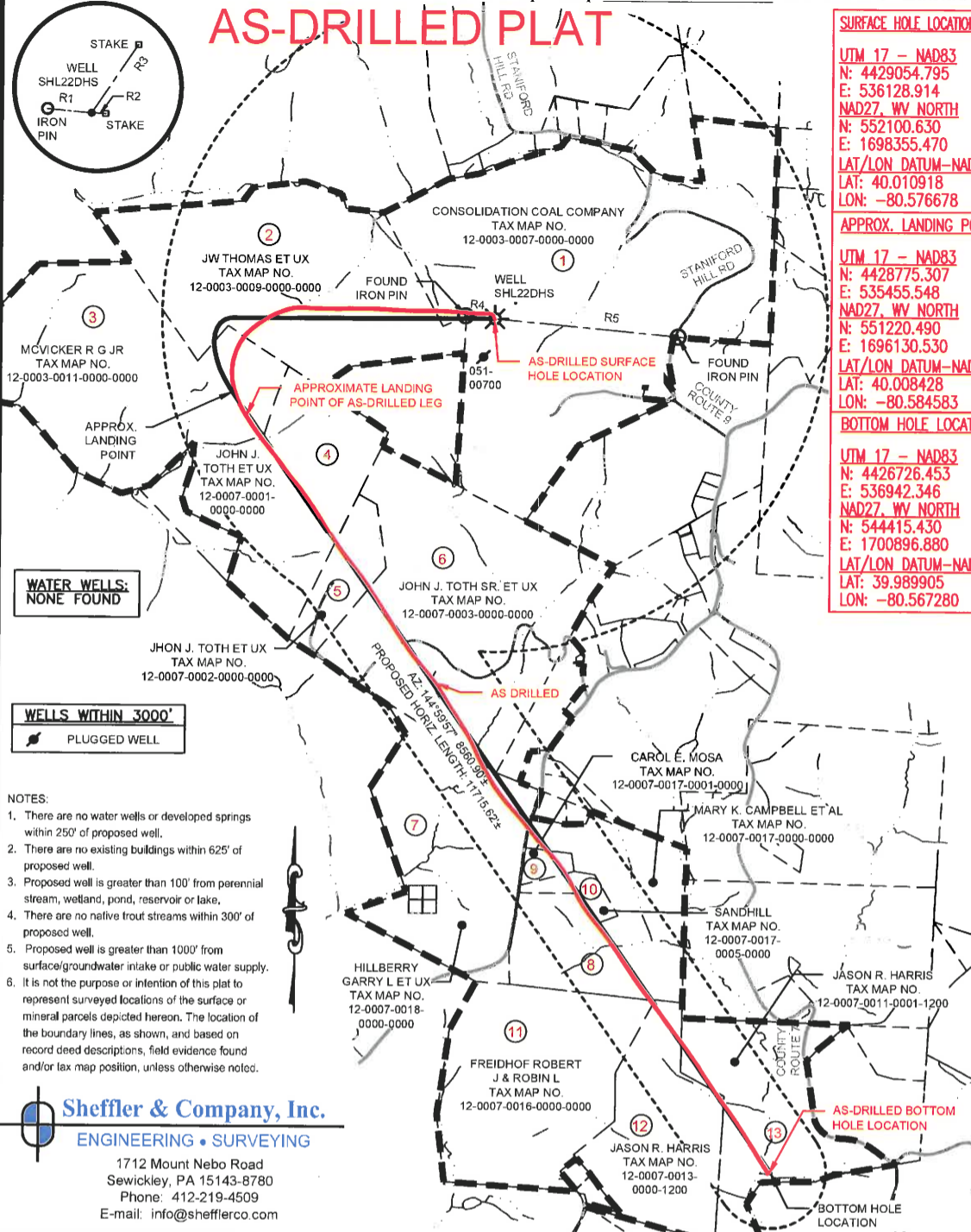
REFERENCE
DETAIL

Well is located on topo map 11,202 feet south of Latitude: 40° 02' 30"

AS-DRILLED PLAT

SURFACE HOLE LOCATION (SHL)	SURFACE HOLE LOCATION (SHL)
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WATER WELLS:
NONE FOUND

WELLS WITHIN 3000'
PLUGGED WELL

- NOTES:
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LINE TABLE		
LINE	BEARING	DISTANCE
R1	S84°26'24"E	266.24'
R2	N87°46'34"W	84.20'
R3	S34°19'11"W	494.00'
R4	S84°26'24"E	266.24'
R5	N84°38'15"W	1657.62'

LEGEND

- TOPO MAP POINT
- WELL
- WATER SOURCE
- LEASED NUMBER BASED ON ATTACHED WW6A1
- ALL ARE POINTS UNLESS OTHERWISE NOTED
- MINERAL TRACT BOUNDARY
- PARCEL LINES
- PROPOSED HORIZONTAL WELL
- WELL REFERENCE
- STREAM
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- ROAD
- AS-DRILLED
- HORIZONTAL WELL

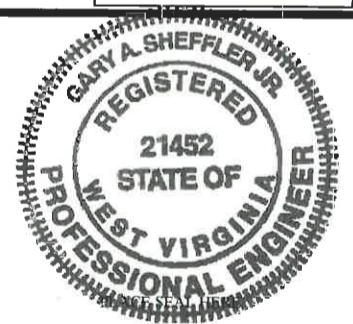
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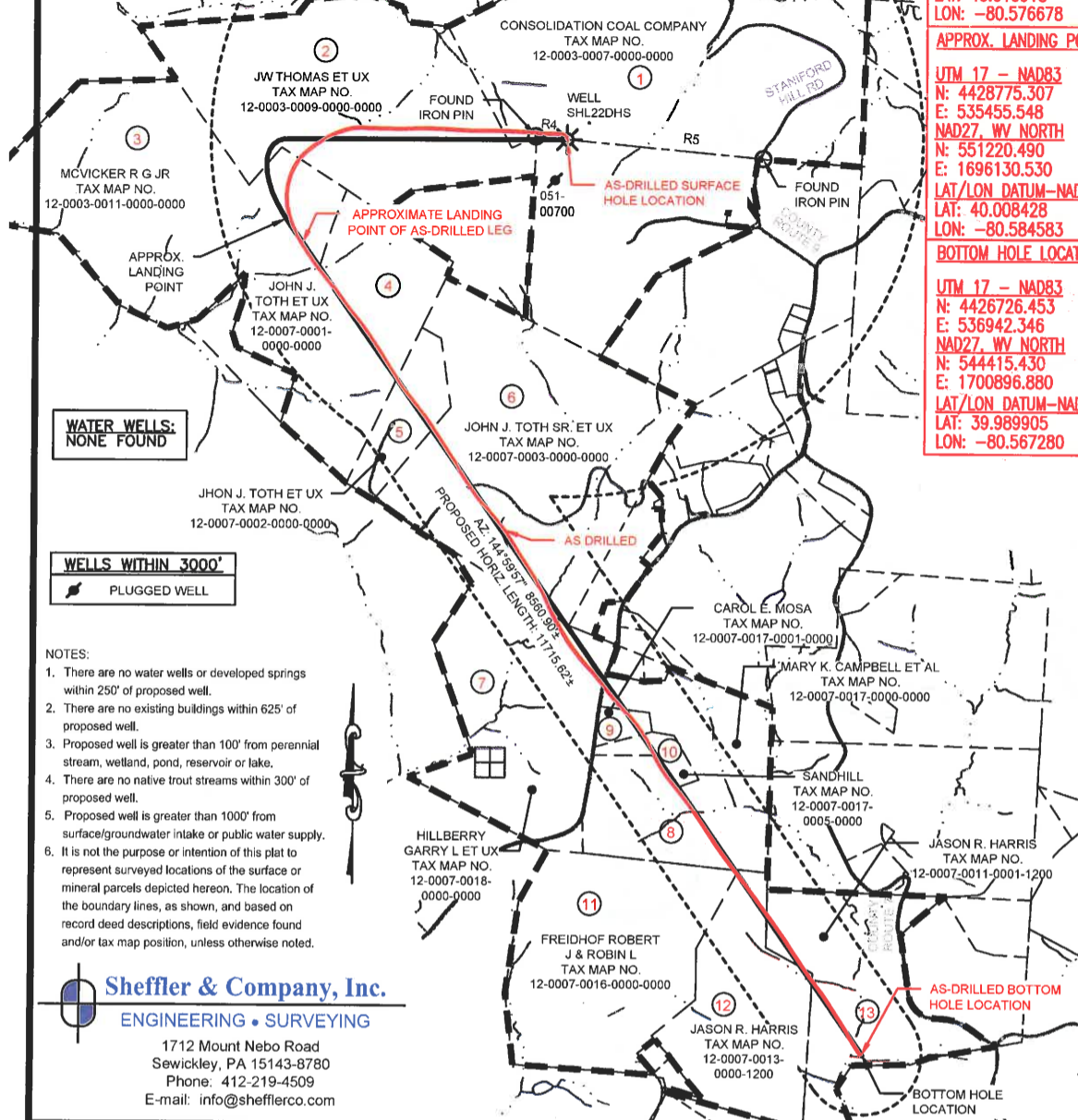
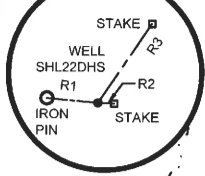
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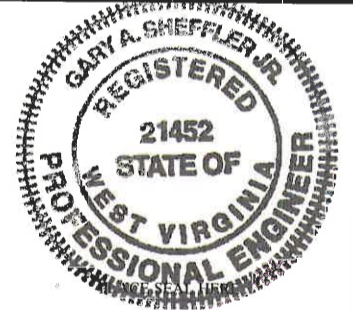
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