

Via Federal Express

January 21, 2016

Ms. Laura Cooper  
Office of Oil & Gas  
601 57<sup>th</sup> Street  
Charleston WV 25304

**RE:** Form WR-35 and WR-36 Filing      Well: Alice Edge OHI 301H  
API: 47-069-00183

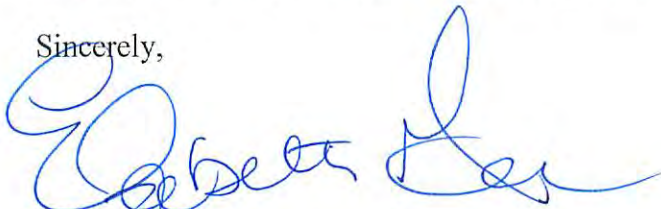
Dear Ms. Cooper:

Please find enclosed form WR-35 Well Operator's Report of Well Work and WR-36 Well Operator's Report of Initial Gas-Oil Ratio, with supporting documentation for the subject well referenced above.

One item that was not ready at mailing is the as-drilled plat. This will be sent as soon as available under separate cover.

If you have any questions or require additional information, please contact me via email at [liz\\_gee@swn.com](mailto:liz_gee@swn.com) or telephone at (832) 796-7632.

Sincerely,



Elizabeth Gee  
Sr. Regulatory Analyst  
West Virginia Division

/lg  
Encl.

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JAN 27 2016

WV Department of  
Environmental Protection

WS AX 02/29/16

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*E. 780*  
2-22-16

03/04/2016

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

API 47 - 069 - 00183 County OHIO District LIBERTY  
Quad VALLEY GROVE Pad Name ALICE EDGE-OHI-PAD1 Field/Pool Name PANHANDLE  
Farm name ALICE MAE EDGE Well Number ALICE EDGE OHI 301H  
Operator (as registered with the OOG) SWN PRODUCTION COMPANY LLC  
Address PO BOX 12359 City SPRING State TX Zip 77397-2359

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4438926.190 Easting 537473.681  
Landing Point of Curve Northing 4438576.609 Easting 536625.615  
Bottom Hole Northing 4441280.489 Easting 535695.172

Elevation (ft) 1199' 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) SOBM

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WV Department of Environmental Protection  
Date permit issued 10/08/2014 Date drilling commenced 10/28/2014 Date drilling ceased 12/03/2014  
Date completion activities began 08/30/2015 Date completion activities ceased 10/26/2015  
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 393' Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 730' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 588' Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed by:

03/04/2016

API 47-069 - 00183 Farm name ALICE MAE EDGE Well number ALICE EDGE OHI 301H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade w/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	26	20	120'	N	J-55/ 94#		Y
Surface	17.5	13.375	624'	N	J-55/ 54.50#		Y, 35 BBLS TO SURFACE
Coal	SEE SURFACE						
Intermediate 1	12.25	9.625	2107'	N	J-55/ 40#		Y, 35 BBLS TO SURFACE
Intermediate 2							
Intermediate 3							
Production	8.75 TO 8.50	5.5	17243'	N	P-110/20#		Y
Tubing		2.375	7726'	N	L-80/4.70#		N
Packer type and depth set		N/A					

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	A	GROUT	19.3	1.20		SURFACE	24
Surface	A	610	15.6	1.20	732	SURFACE	8
Coal	SEE SURFACE						
Intermediate 1	A	802	15.7	1.19	954.38	SURFACE	8
Intermediate 2							
Intermediate 3							
Production	A	985/2516	15.3/15.6	1.30/1.19	1280.5/2994.04	SURFACE	24
Tubing							

Drillers TD (ft) 17,243 Loggers TD (ft) 17,243  
 Deepest formation penetrated MARCELLUS Plug back to (ft) NA  
 Plug back procedure NA

Kick off depth (ft) 6269'

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 \_\_\_\_\_

ALL CASING STRINGS RAN WITH A CENTRALIZER AT A MINIMUM OF 1 PER EVERY 3RD JOINT OF CASING

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

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

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





ALICE EDGE OHI 301H - STIMULATION INFORMATION

STAGE	NUM	Stim Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of water bbis	Amount of nitrogen/other
	1	8/31/2015	2	8,471	9,084	4,216	496,320	7,471	
	2	8/31/2015	2	8,602	9,176	4,479	500,680	7,641	
	3	9/1/2015	2	8,587	8,966	4,505	503,040	8,102	
	4	9/2/2015	2	8,572	9,074	4,479	496,080	7,618	
	5	9/3/2015	2	8,458	9,036	4,709	499,760	7,404	
	6	9/4/2015	2	8,526	9,207	4,452	497,620	7,501	
	7	9/4/2015	2	8,514	9,208	4,559	509,660	7,563	
	8	9/5/2015	1	8,653	9,285	4,685	55,800	6,768	
	9	9/6/2015	2	8,419	9,173	4,351	505,760	7,547	
	10	9/6/2015	2	8,439	8,874	4,308	499,720	7,410	
	11	9/6/2015	2	8,302	9,127	4,408	505,480	9,429	
	12	9/7/2015	2	8,257	9,058	4,477	501,680	7,334	
	13	9/7/2015	2	8,150	8,767	4,455	504,280	7,150	
	14	9/7/2015	2	8,376	9,192	4,439	501,880	7,350	
	15	9/8/2015	2	7,979	9,073	4,514	500,400	7,270	
	16	9/8/2015	2	7,887	8,549	4,333	499,540	7,236	
	17	9/8/2015	2	7,993	9,038	4,628	494,760	7,166	
	18	9/9/2015	2	8,072	9,202	4,629	499,940	7,141	
	19	9/9/2015	2	8,253	9,137	4,515	500,980	7,265	
	20	9/9/2015	2	7,812	9,061	4,394	505,020	7,626	
	21	9/10/2015	2	8,393	9,501	5,529	259,200	5,402	
	22	9/10/2015	2	7,370	8,099	4,615	493,220	7,728	
	23	9/11/2015	2	8,189	9,123	4,705	503,600	10,135	
	24	9/11/2015	2	7,585	9,054	4,591	499,000	7,470	
	25	9/12/2015	2	7,496	8,228	4,611	466,300	7,427	
	26	9/12/2015	2	7,986	9,062	4,366	499,320	7,072	
	27	9/13/2015	2	7,752	8,969	4,416	500,600	8,509	
	28	9/13/2015	2	7,845	8,985	4,816	499,220	7,004	
	29	9/13/2015	2	7,654	9,029	4,702	402,980	7,319	
	30	9/14/2015	2	7,552	9,008	4,479	502,420	6,959	
	31	9/14/2015	2	7,391	8,736	4,389	501,200	8,998	
	32	9/15/2015	2	7,323	9,020	4,552	500,860	6,964	
	33	9/16/2015	2	7,154	8,565	4,748	500,740	9,123	
	34	9/16/2015	2	7,351	8,781	4,441	500,660	7,066	
	35	9/16/2015	2	7,193	8,666	4,494	500,780	7,285	
Grand total			2	8,016	9,501	4,543	16,708,500	264,453	

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**ALICE EDGE OHI 301H**

LITHOLOGY/FORMATION	TOP DEPTH, TVD (FT)	BOTTOM DEPTH, TVD (FT)	TOP DEPTH, MD (FT)	BOTTOM DEPTH, MD (FT)	QUANTITY AND TYPE OF FLUID
Base of Fresh Water	N.A.	393.00	N.A.	393.00	
Top of Salt Water	730.00	N.A.	730.00	N.A.	
Pittsburgh Coal	582.00	588.00	582.00	588.00	
Big Injun (ss)	1802.84	2270.80	1828.00	2288.00	
Berea (siltstone)	2270.80	5815.51	2288.00	6186.00	
Rhinestreet (shale)	5815.51	6045.20	6186.00	6479.31	
Cashaqua (shale)	6045.20	6118.13	6479.31	6593.59	
Middlesex (shale)	6118.13	6193.48	6593.59	6737.83	
Burket (shale)	6193.48	6213.95	6737.83	6789.15	
Tully (ls)	6213.95	6246.61	6789.15	6907.79	
Mahantango (shale)	6246.61	6372.07	6907.79	7530.45	
Marcellus (shale)	6372.07	N.A.	7530.45	N.A.	GAS

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/31/2015
Job End Date:	9/16/2015
State:	West Virginia
County:	Ohio
API Number:	47-069-00183-00-00
Operator Name:	Southwestern Energy
Well Name and Number:	Alice Edge Ohi 301H
Longitude:	-80.56034869
Latitude:	40.09979595
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	6,269
Total Base Water Volume (gal):	11,391,282
Total Base Non Water Volume:	0



## 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)**	Comments
Ingredients shown above are subject to 29 CFR 1910.1200(f) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
Proppant Transport	Schlumberger	Corrosion Inhibitor, Acid, Breaker, Gelling Agent, Friction Reducer, Fluid Loss Additive, Propping Agent					
			Water (Including Mix Water Supplied by Client)*	NA		84.59167	
			Quartz, Crystalline silica	14808-60-7	98.58766	15.19072	
			Hydrochloric acid	7647-01-0	1.36594	0.21047	
			Ammonium sulfate	7783-20-2	0.31498	0.04853	
			Urea	57-13-6	0.05250	0.00809	
			Methanol	67-56-1	0.00396	0.00061	
			Thiourea formaldehyde polymer	Proprietary	0.00198	0.00030	
			Aliphatic acids	Proprietary	0.00198	0.00030	
			Propargyl alcohol	107-19-7	0.00066	0.00010	
			Aliphatic alcohols, ethoxylated #2	Proprietary	0.00066	0.00010	
			Hexadec-1-ene	629-73-2	0.00033	0.00005	
			Olefin Hydrocarbon	Proprietary	0.00033	0.00005	
			Formaldehyde	50-00-0	0.00001		

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\* 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.  
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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03/04/2016

**State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas**

Well Operator's Report of  
Initial Gas-Oil Ratio

Well Operator SWN PRODUCTION COMPANY LLC Designated Agent \_\_\_\_\_  
Address PO BOX 12359 Address \_\_\_\_\_  
SPRING, TX 77391-2359 \_\_\_\_\_  
\_\_\_\_\_

Geological Target Formation: MARCELLUS Depth 17243' MD/6269' TVD feet  
Perforation Interval 8077' - 17089' MD feet

Guidelines for testing:

1. A minimum of gas vented or flared.
2. A 24 hour pre-flow into pipelines or tanks.
3. Uniform producing rate during the 24 hour test per test period.
4. Measurement standards as for Form WR-39, "Report of Annual Production" (see 35CSR4-15)
5. Separate Form WR-36 for each producing formation in a multiple completion.

**TEST DATA**

Start of Test Date	Time	End of Test Date	Time	Duration of Test
Tubing Pressure	Casing Pressure	Separator Pressure	Separator Temperature	
Oil Production During Test	Gas Production During Test	Water Production During Test		
BBLS	MCF	BBls	-Salinity	
Oil Gravity	Producing Method (flowing, pumping, gas lift etc.)			
API				

**GAS PRODUCTION**

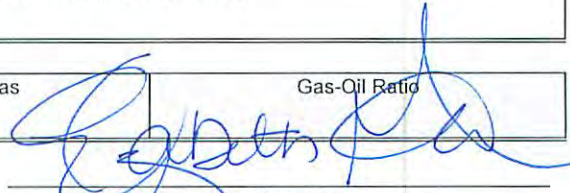
Measurement Method Flange Tap <input type="checkbox"/> Pipe Tap <input type="checkbox"/> L-10 <input type="checkbox"/>		Positive Choke <input checked="" type="checkbox"/>
		Positive flow prover <input type="checkbox"/>
Orifice diameter 19	Pipe Diameter (inside)	Nominal Choke Size inches
Differential Pressure range	Max. Static pressure range	Prover and Orifice diameter - inches
Differential		Static
Gas Gravity (Air = 1.0)	Flowing Temperature	Gas Temperature
Measured	Estimated	
24 Hour Coefficient	24 Hour coefficient pressure PSIA	

**TEST RESULTS**

Daily Oil 463 BBL	Daily Water 286 BBL	Daily Gas 4228 MCFD	Gas-Oil Ratio
----------------------	------------------------	------------------------	---------------

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JAN 27 2016

  
BY ELIZABETH GEE Well Operator  
ITS: DESIGNATED REPRESENTATIVE

Via Federal Express

January 25, 2016

Ms. Laura Cooper  
Office of Oil & Gas  
601 57<sup>th</sup> Street  
Charleston WV 25304

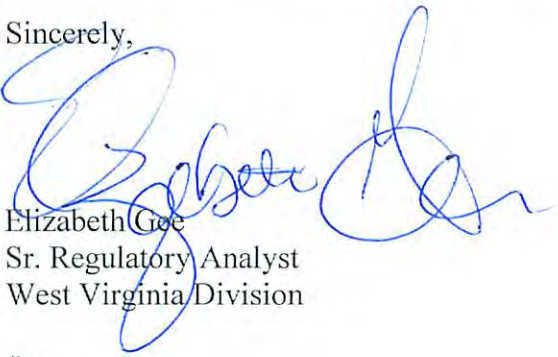
**RE:** Final As-Drilled Plat Well: Alice Edge OHI 301H  
API: 47-069-00183

Dear Ms. Cooper:

Please find enclosed final as-drilled plat for the subject referenced well. The completion package was sent on Thursday, January 2<sup>1st</sup>, without this enclosure.

If you have any questions or require additional information, please contact me via email at [liz\\_gee@swn.com](mailto:liz_gee@swn.com) or telephone at (832) 796-7632.

Sincerely,

  
Elizabeth Gee  
Sr. Regulatory Analyst  
West Virginia Division

/lg  
Encl.

Received  
Office of Oil & Gas  
JAN 27 2016

*E. H. O*  
2-22-16

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03/04/2016

# THRASHER AS-DRILLED

THE THRASHER GROUP, INC.  
600 WHITE OAKS BLVD. B.H.I.  
BRIDGEPORT, WV 26330  
PHONE 304-624-4108



TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES	LEASE NO.
1	ALICE MAE EDGE	3-L11-23	103.0	1-292590-000
2	LYNN & YVONNE REUSSER	3-L11-21	70.90	47-000579-000
3	LYNN & YVONNE REUSSER	3-L11-20	103.84	47-000579-000
4	MICHAEL & MELISSA JEAN VARGO	3-L11-10	134.94	1-324194-000
5	ASSEMBLY OF GOD TRUSTEES	3-L11-10.2	0.154	
6	ASSEMBLY OF GOD TRUSTEES	3-L11-12	0.089	
7	RICHARD J & KRISTEN L LUCAS	3-L11-11	32.14	1-384440-000
8	DAVID J MILLER	3-L11-8	28.89	1-205403-000
9	HOWARD G & DORA E TAYLOR	3-L11E-21	39.15	47-000079-000
10	LINNILLE R TAGGART, FAYE J TAGGART LIFE	3-L10-41	93.86	47-0000193-000
11	FAYE J TAGGART LIFE & CHRISTINE J KIM	3-L11-3	55.00	47-0000193-000
12	JOSEPH A & DIANNA C DOUGLAS	3-L7-48.1	12.02	47-0000014-000
13	JOHN L & JOAN MARIE SMITH	3-L7-48	120.58	1-385509-000

**NOTES ON SURVEY**

- COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
- SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED OF CENTER OF PAD.
- NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
- NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.

GRID NORTH  
UTM, NAD83 DATUM, ZONE 17, US FT

<b>AS-DRILLED</b>
<b>SURFACE HOLE LOCATION (SHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,438,926.190 EASTING: 537,473.681
<b>AS-DRILLED</b>
<b>LANDING POINT LOCATION (LPL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,438,576.609 EASTING: 536,625.615
<b>AS-DRILLED</b>
<b>BOTTOM HOLE LOCATION (BHL):</b>
UTM (NAD83, ZONE 17, METERS): NORTHING: 4,441,280.489 EASTING: 535,695.172

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 2270 *M.S.W.* 1/21/16



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
WVDEP  
OFFICE OF OIL & GAS  
601 57TH STREET  
CHARLESTON, WV 25034

MINIMUM DEGREE OF ACCURACY: 1/200  
PROVEN SURVEY SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)

COMPANY: **SWN** Production Company, LLC

ALICE EDGE	
OPERATOR'S WELL #:	OHI 301H
API WELL #:	47 069 00183
STATE	COUNTY PERMIT

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

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1199.4

DISTRICT: LIBERTY COUNTY: OHIO QUADRANGLE: VALLEY GROVE

SURFACE OWNER: ALICE MAE EDGE ACREAGE: 103±

OIL & GAS ROYALTY OWNER: ALICE MAE EDGE ACREAGE: 804.197

DRILL  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION

CONVERT  PLUG & ABANDON  CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,410 TVD 17,153 TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: DEE SOUTHALL

ADDRESS: P.O. BOX 1300 ADDRESS: P.O. BOX 1300

CITY: JANE LEW STATE: WV ZIP CODE: 26378 CITY: JANE LEW STATE: WV ZIP CODE: 26378

<b>LEGEND:</b>	<b>REVISIONS:</b>	<b>DATE:</b> 01-21-2016
○ PROPOSED SURFACE HOLE / BOTTOM HOLE		
⊗ EXISTING / PRODUCING WELLHEAD	--- LEASE BOUNDARY	
⊗ ABANDONED WELL	--- DESIGN DHP	
⊗ PLUGGED & ABANDONED WELL	--- AS-DRILLED DHP	
△ CUT CONDUCTOR	--- ABANDONED PATH	
		<b>DRAWN BY:</b> E.LYTLÉ
		<b>SCALE:</b> 1" = 2000'
		<b>DRAWING NO:</b> 030-2725
		<b>WELL LOCATION PLAT</b>

# THRASHER AS-DRILLED

THE THRASHER GROUP, INC.  
600 WHITE OAKS BLVD. BHI  
BRIDGEPORT, WV 26330  
PHONE 304-624-4108

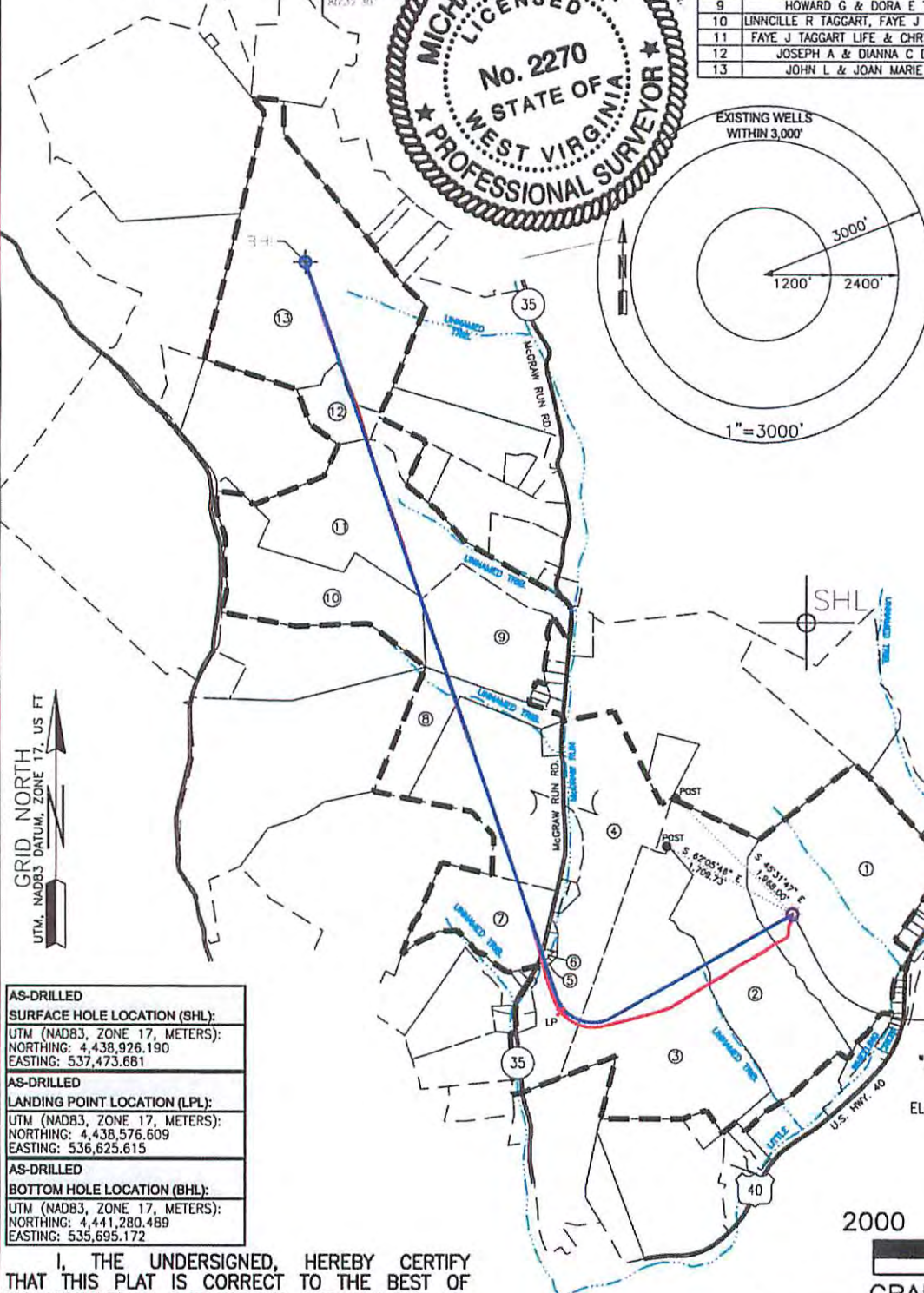
1.444' SOUTH OF LATITUDE 40°07'30"  
11.080' WEST OF LONGITUDE 80°32'30"



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**NOTES ON SURVEY**

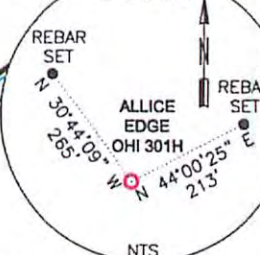
- COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
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- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCELS SHOWN HEREON.
- NO DWELLINGS AND BUILDINGS WITHIN 625 FEET OF PROPOSED CENTER OF PAD.
- NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF PROPOSED WELL.
- NO PERENNIAL STREAMS, LAKES, PONDS, RESERVOIRS OR WETLANDS WITHIN 100 FEET OF THE LIMITS OF DISTURBANCE.
- NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.



**REFERENCES TO PROPOSED HORIZONTAL WELLS SURFACE LOCATIONS**



**REFERENCES**



<b>AS-DRILLED</b>
<b>SURFACE HOLE LOCATION (SHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4,438,926.190 EASTING: 537,473.681
<b>AS-DRILLED</b>
<b>LANDING POINT LOCATION (LPL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4,438,576.609 EASTING: 536,625.615
<b>AS-DRILLED</b>
<b>BOTTOM HOLE LOCATION (BHL):</b> UTM (NAD83, ZONE 17, METERS): NORTHING: 4,441,280.489 EASTING: 535,695.172

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 REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 2270 *M.S.W.* 11/21/16



COMPANY: **SWN** Production Company, LLC

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	MINIMUM DEGREE OF ACCURACY: 1/200 PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)	COMPANY: <b>SWN</b> Production Company, LLC OPERATOR'S WELL #: ALICE EDGE OHI 301H API WELL #: 47 069 00183 STATE COUNTY PERMIT
---	--	--

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

WATERSHED: UPPER OHIO SOUTH  
 DISTRICT: LIBERTY COUNTY: OHIO ELEVATION: 1199.4  
 SURFACE OWNER: ALICE MAE EDGE QUADRANGLE: VALLEY GROVE  
 OIL & GAS ROYALTY OWNER: ALICE MAE EDGE ACREAGE: 103±  
 ACREAGE: 804.197

DRILL  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION   
 CONVERT  PLUG & ABANDON  CLEAN OUT & REPLUG  OTHER CHANGE  (SPECIFY)  
 TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,410 TVD 17,153 TMD

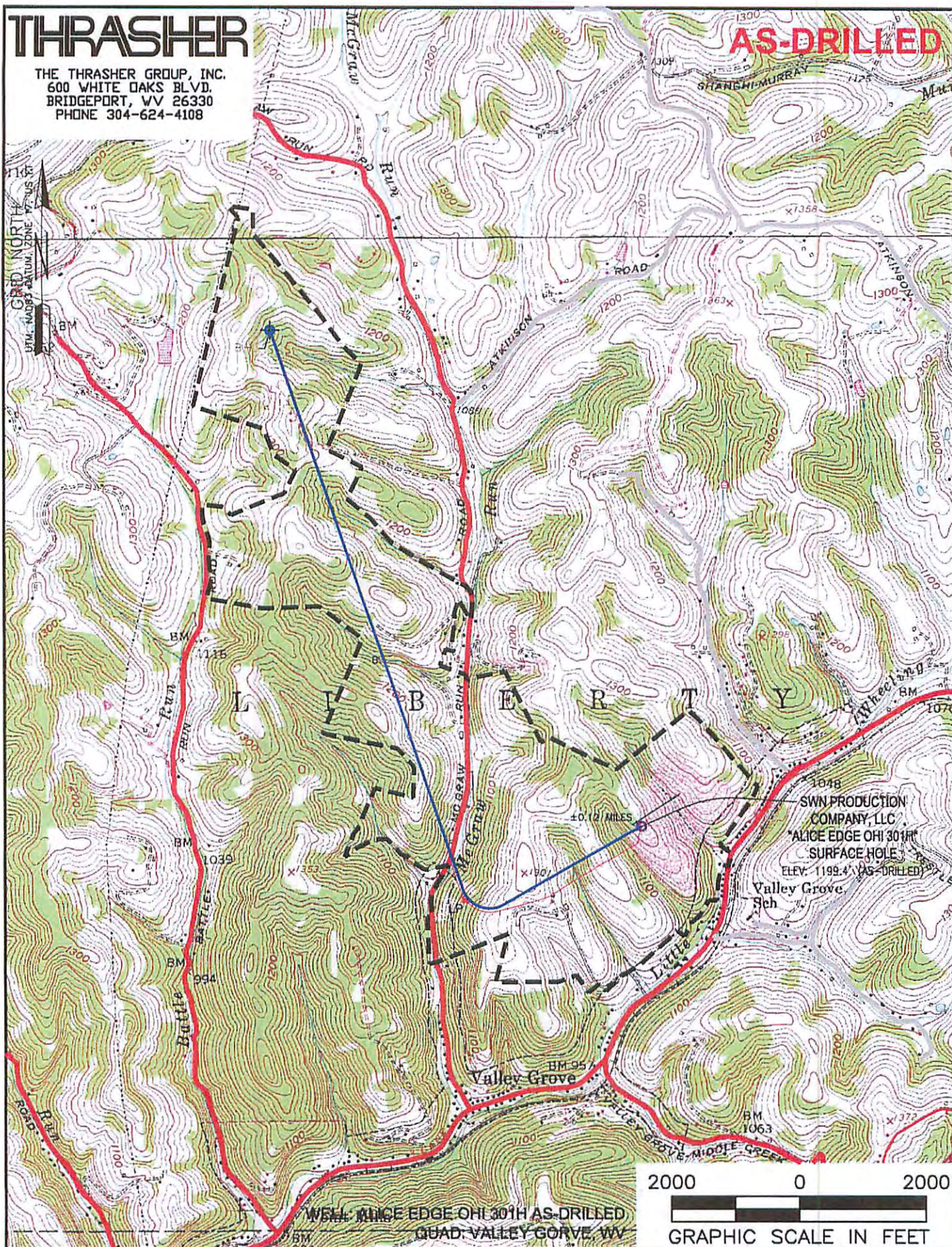
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378  
 DESIGNATED AGENT: DEE SOUTHALL ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378

<b>LEGEND:</b>	<b>REVISIONS:</b>	<b>DATE:</b> 01-21-2016
○ PROPOSED SURFACE HOLE / BOTTOM HOLE ✱ EXISTING / PRODUCING WELLHEAD ✕ ABANDONED WELL ✕ PLUGGED & ABANDONED WELL △ CUT CONDUCTOR	- - - LEASE BOUNDARY - - - DESIGN DHP - - - AS-DRILLED DHP - - - ABANDONED PATH	DRAWN BY: E.LYTLÉ SCALE: 1" = 2000' DRAWING NO: 030-2725 WELL LOCATION PLAT

# THRASHER

THE THRASHER GROUP, INC.  
600 WHITE OAKS BLVD.  
BRIDGEPORT, WV 26330  
PHONE 304-624-4108

## AS-DRILLED



**NAME AND DISTANCE TO THE NEAREST STREAM:** AN UNNAMED TRIBUTARY TO LITTLE WHEELING CREEK IS LOCATED ±0.12 MILES (NE) OF THE CENTER OF THE DRILL PAD.

**STREAM CROSSING COORDINATES (NAD 83):**  
A. LAT: 40.098205° / LONG: -80.571089°  
B. LAT: 40.106962° / LONG: -80.574869°

**WELL RESTRICTIONS:**  
WELL PAD, LOD, & E & S CONTROL FEATURES TO PERENNIAL STREAM, LAKE, POND, RESERVOIR OR WETLAND: >100 FEET  
WELL PAD, LOD, & E & S CONTROL FEATURES TO NATURALLY PRODUCING TROUT STREAM: >300 FEET  
WELL PAD, LOD, & E & S CONTROL FEATURES TO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY: >1000 FEET  
WELL SHL TO EXISTING WATER WELL OR DEVELOPED SPRING: >250 FEET  
CENTER OF PAD TO OCCUPIED DWELLING STRUCTURE: >625 FEET  
CENTER OF PAD TO AGRICULTURAL BUILDINGS LARGER THAN 2500 SQ FT: >625 FEET

**FEMA FLOOD INFORMATION:**  
NO FLOOD ZONES.

**LEGEND:**

- PROPOSED SURFACE HOLE / BOTTOM HOLE
- ⊗ EXISTING / PRODUCING WELLHEAD
- ⊗ ABANDONED WELL
- ⊗ PLUGGED & ABANDONED WELL
- △ CUT CONDUCTOR
- EXISTING SPRING
- EXISTING WATER WELL
- ACCESS ROAD
- ACCESS ROAD TO PREV. SITE
- HIGHWAY/INTERSTATE
- COUNTY ROAD

**COMPANY:** SWN Production Company, LLC

**OPERATOR'S WELL #:** ALICE EDGE OHI 301H

**LOCATION:** LIBERTY DISTRICT, OHIO, WEST VIRGINIA

**AS-DRILLED SURFACE HOLE LOCATION:**  
GEOGRAPHIC (NAD83):  
LATITUDE: 40.099987°  
LONGITUDE: -80.560419°

**AS-DRILLED BOTTOM HOLE LOCATION:**  
GEOGRAPHIC (NAD83):  
LATITUDE: 40.125345°  
LONGITUDE: -80.575292°

**REVISIONS:**

**DATE:** 01-21-2016

**DRAWN BY:** E.LYTL

**SCALE:** 1" = 2000'

**DRAWING NO:** 030-2725

**TOPOGRAPHIC MAP**

Received  
Office of Oil & Gas  
JAN 27 2016

03/04/2016

# THRASHER AS-DRILLED

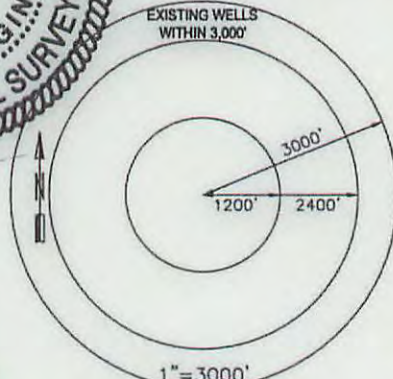
THE THRASHER GROUP, INC.  
600 WHITE OAKS BLVD. BHI  
BRIDGEPORT, WV 26330  
PHONE 304-624-4108

1.244' SOUTH  
OF LATITUDE  
40°07'30"  
11.040' WEST  
OF LONGITUDE  
80°32'30"

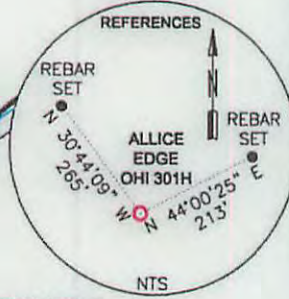


TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES	LEASE NO.
1	ALICE MAE EDGE	3-L11-23	103.0	1-292590-000
2	LYNN & YVONNE REUSSER	3-L11-21	70.90	47-000579-000
3	LYNN & YVONNE REUSSER	3-L11-20	103.84	47-000579-000
4	MICHAEL & MELISSA JEAN VARGO	3-L11-10	134.94	1-324194-000
5	ASSEMBLY OF GOD TRUSTEES	3-L11-10.2	0.154	
6	ASSEMBLY OF GOD TRUSTEES	3-L11-12	0.099	
7	RICHARD J & KRISTEN L. LUCAS	3-L11-11	32.14	1-384440-000
8	DAVID J. MILLER	3-L11-8	28.89	1-203403-000
9	HOWARD G & DORA E. TAYLOR	3-L11E-21	39.15	47-000079-000
10	LINNCLLE R. TAGGART, FAYE J. TAGGART LIFE	3-L10-41	93.86	47-0000193-000
11	FAYE J. TAGGART LIFE & CHRISTINE J. KIM	3-L11-3	55.00	47-0000193-000
12	JOSEPH A & DIANNA C. DOUGLAS	3-L7-48.1	12.02	47-0000014-000
13	JOHN L. & JOAN MARIE SMITH	3-L7-48	120.58	1-385509-000

- NOTES ON SURVEY**
- COORDINATES SYSTEM IS UTM, NAD 83 DATUM, ZONE 17, U.S. FOOT AND WELL COORDINATES ESTABLISHED USING SURVEY GRADE GPS.
  - SURFACE AND ROYALTY OWNER INFORMATION AND THEIR BOUNDARIES SHOWN HEREON WERE PLOTTED FROM DEEDS AND/OR TAX PARCEL MAPS PROVIDED BY CLIENT AND FIELD LOCATIONS.
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  - NO NATURALLY PRODUCING TROUT STREAM WITHIN 300 FEET OF LIMITS OF DISTURBANCE.



**REFERENCES TO PROPOSED HORIZONTAL WELLS SURFACE LOCATIONS**

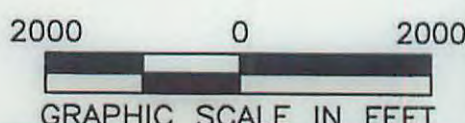


GRID NORTH  
UTM, NAD83 DATUM, ZONE 17, US FT

<b>AS-DRILLED</b>
<b>SURFACE HOLE LOCATION (SHL):</b>
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,438,926.190
EASTING: 537,473.681
<b>AS-DRILLED</b>
<b>LANDING POINT LOCATION (LPL):</b>
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,438,576.609
EASTING: 536,625.615
<b>AS-DRILLED</b>
<b>BOTTOM HOLE LOCATION (BHL):</b>
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,441,280.489
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P.S. 2270 *MASON* 1/21/16



<p>(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS</p> <p>WVDEP OFFICE OF OIL &amp; GAS 601 57TH STREET CHARLESTON, WV 25034</p>	MINIMUM DEGREE OF ACCURACY: 1/200  PROVEN SURVEY GRADE GPS ELEVATION: (NAVD 88, US FT)	COMPANY: <b>SWN</b> Production Company, LLC <b>swn</b> <sup>REG. A-V+*</sup> Production Company™ OPERATOR'S WELL #: ALICE EDGE OHI 301H API WELL #: 47 069 00183 STATE COUNTY PERMIT
---	--	--

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

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1199.4

DISTRICT: LIBERTY COUNTY: OHIO QUADRANGLE: VALLEY GROVE

SURFACE OWNER: ALICE MAE EDGE ACREAGE: 103±

OIL & GAS ROYALTY OWNER: ALICE MAE EDGE ACREAGE: 804.197

DRILL  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION

CONVERT  PLUG & ABANDON  CLEAN OUT & REPLUG  OTHER CHANGE  (S<sup>c</sup>\_CIF)

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,410 TVD 17,153 TMD

03/04/2016

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: DEE SOUTHALL  
 ADDRESS: P.O. BOX 1300 ADDRESS: P.O. BOX 1300  
 CITY: JANE LEW STATE: WV ZIP CODE: 26378 CITY: JANE LEW STATE: WV ZIP CODE: 26378

<b>LEGEND:</b>	<b>REVISIONS:</b>	<b>DATE:</b> 01-21-2016
○ PROPOSED SURFACE HOLE / BOTTOM HOLE		
⊗ EXISTING / PRODUCING WELLHEAD		
⊗ ABANDONED WELL	--- LEASE BOUNDARY	<b>DRAWN BY:</b> E.LYTL
⊗ PLUGGED & ABANDONED WELL	--- DESIGN DHP	<b>SCALE:</b> 1" = 2000'
△ CUT CONDUCTOR	--- AS-DRILLED DHP	<b>DRAWING NO:</b> 030-2725
	--- ABANDONED PATH	<b>WELL LOCATION PLAT</b>

# THRASHER AS-DRILLED

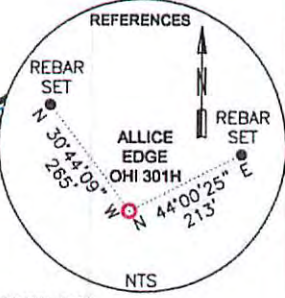
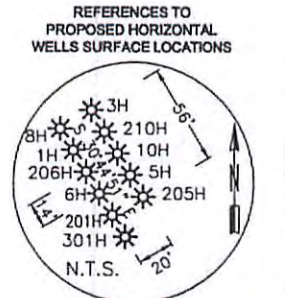
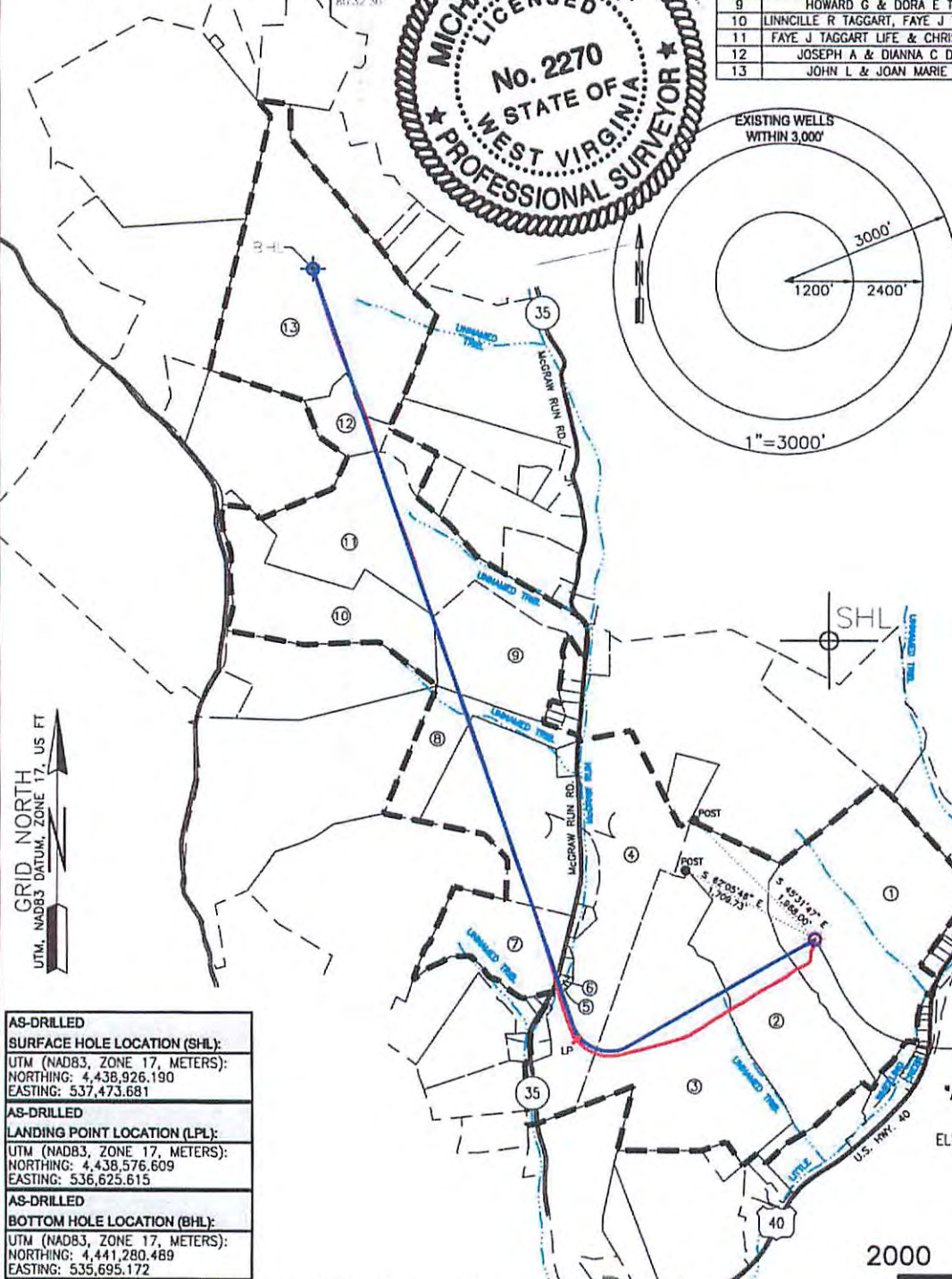
THE THRASHER GROUP, INC.  
600 WHITE OAKS BLVD.  
BRIDGEPORT, WV 26330  
PHONE 304-624-4108

1.245' SOUTH OF LATITUDE 40°07'30"  
11.060' WEST OF LONGITUDE 80°32'30"



TRACT	SURFACE OWNER (S) / ROYALTY OWNER (R)	TAX PARCEL	ACRES	LEASE NO.
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4	MICHAEL & MELISSA JEAN VARGO	3-L11-10	134.84	1-324194-000
5	ASSEMBLY OF GOD TRUSTEES	3-L11-10.2	0.154	
6	ASSEMBLY OF GOD TRUSTEES	3-L11-12	0.099	
7	RICHARD J & KRISTEN L LUCAS	3-L11-11	32.14	1-384440-000
8	DAVID J MILLER	3-L11-8	28.89	1-205403-000
9	HOWARD G & DORA E TAYLOR	3-L11E-21	39.15	47-000079-000
10	LINNILLE R TAGGART, FAYE J TAGGART LIFE	3-L10-41	93.86	47-0000193-000
11	FAYE J TAGGART LIFE & CHRISTINE J KIM	3-L11-3	55.00	47-0000193-000
12	JOSEPH A & DIANNA C DOUGLAS	3-L7-48.1	12.02	47-0000014-000
13	JOHN L & JOAN MARIE SMITH	3-L7-48	120.58	1-385509-000

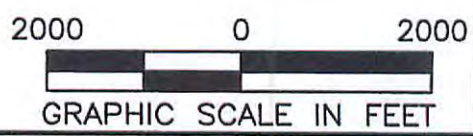
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<b>AS-DRILLED</b>
<b>SURFACE HOLE LOCATION (SHL):</b>
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,438,926.190
EASTING: 537,473.681
<b>AS-DRILLED</b>
<b>LANDING POINT LOCATION (LPL):</b>
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,438,576.609
EASTING: 536,625.615
<b>AS-DRILLED</b>
<b>BOTTOM HOLE LOCATION (BHL):</b>
UTM (NAD83, ZONE 17, METERS):
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Office of Oil & Gas  
JAN 27 2016



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
WVDEP  
OFFICE OF OIL & GAS  
601 57TH STREET  
CHARLESTON, WV 25034

MINIMUM DEGREE OF ACCURACY: 1/200  
PROVEN SURVEY GRADE GPS ELEVATION: (NAVD 88, US FT)

COMPANY: **SWN** Production Company, LLC

ALICE EDGE  
OPERATOR'S WELL #: OHI 301H  
API WELL #: 47 069 00183  
STATE COUNTY PERMIT

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

WATERSHED: UPPER OHIO SOUTH ELEVATION: 1199.4  
DISTRICT: LIBERTY COUNTY: OHIO QUADRANGLE: VALLEY GROVE  
SURFACE OWNER: ALICE MAE EDGE ACREAGE: 103±  
OIL & GAS ROYALTY OWNER: ALICE MAE EDGE ACREAGE: 804.197

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

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 6,410 TVD 17,153 TMD

WELL OPERATOR: SWN PRODUCTION COMPANY, LLC DESIGNATED AGENT: DEE SOUTHALL  
ADDRESS: P.O. BOX 1300 ADDRESS: P.O. BOX 1300  
CITY: JANE LEW STATE: WV ZIP CODE: 26378 CITY: JANE LEW STATE: WV ZIP CODE: 26378

**LEGEND:**

○ PROPOSED SURFACE HOLE / BOTTOM HOLE	--- LEASE BOUNDARY
⊗ EXISTING / PRODUCING WELLHEAD	--- DESIGN DHP
⊗ ABANDONED WELL	--- AS-DRILLED DHP
⊗ PLUGGED & ABANDONED WELL	--- ABANDONED PATH
△ CUT CONDUCTOR	

**REVISIONS:**

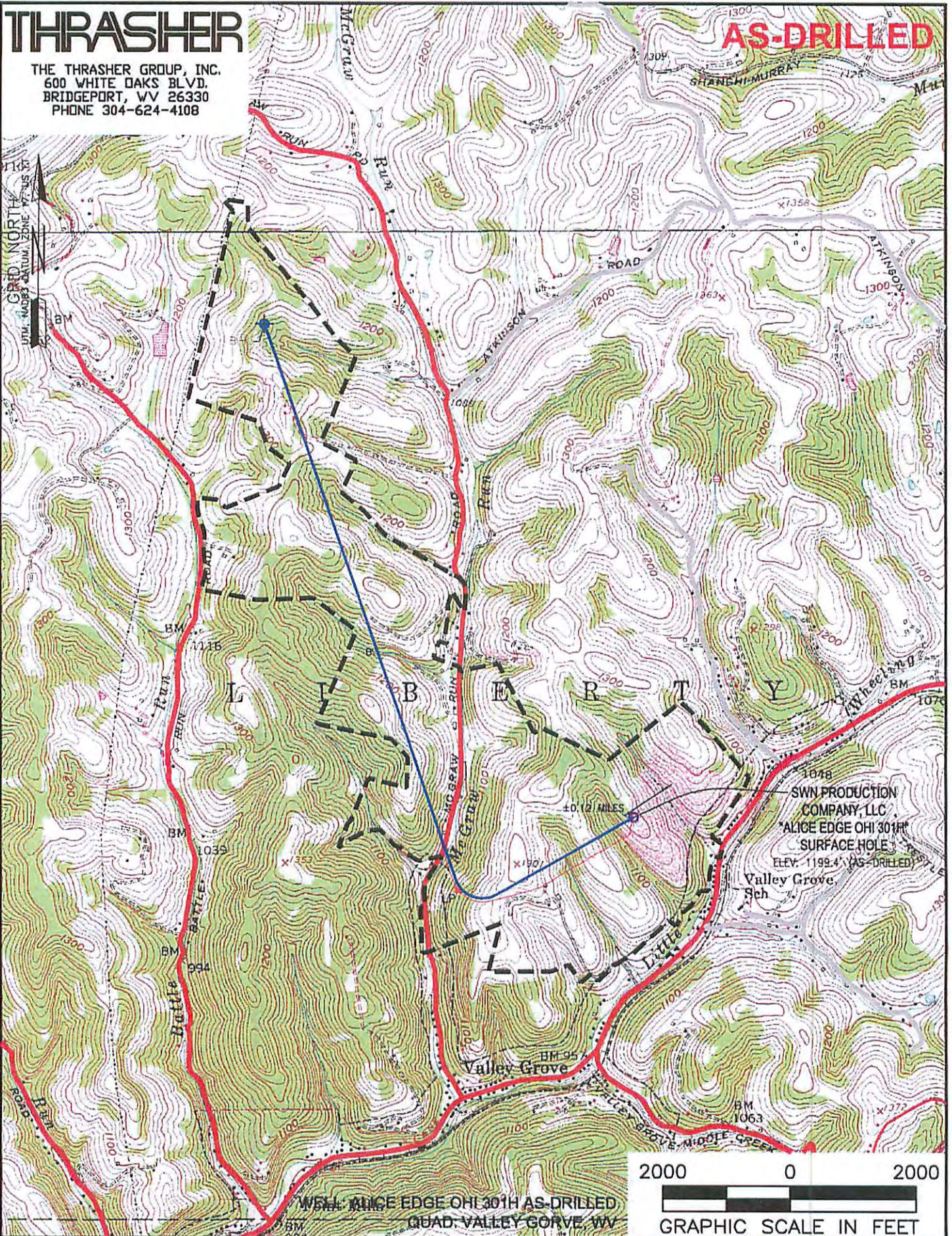
NO.	DATE	DESCRIPTION
1	01-21-2016	DRAWN BY: E.LYTL
2		SCALE: 1" = 2000'
3		DRAWING NO: 030-2725
4		WELL LOCATION PLAT



# THRASHER

THE THRASHER GROUP, INC.  
600 WHITE OAKS BLVD.  
BRIDGEPORT, WV 26330  
PHONE 304-624-4108

## AS-DRILLED



WELL: ALICE EDGE OHI 301H AS-DRILLED  
QUAD: VALLEY GROVE WV



<b>NAME AND DISTANCE TO THE NEAREST STREAM:</b> AN UNNAMED TRIBUTARY TO LITTLE WHEELING CREEK IS LOCATED ±0.12 MILES (NE) OF THE CENTER OF THE DRILL PAD.		<b>STREAM CROSSING COORDINATES (NAD 83):</b> A. LAT: 40.098205° / LONG: -80.571089° B. LAT: 40.106962° / LONG: -80.574869°		<b>COMPANY:</b> 	
<b>WELL RESTRICTIONS:</b> WELL PAD, LOD, & E & S CONTROL FEATURES TO PERENNIAL STREAM, LAKE, POND, RESERVOIR OR WETLAND: >100 FEET WELL PAD, LOD, & E & S CONTROL FEATURES TO NATURALLY PRODUCING TROUT STREAM: >300 FEET WELL PAD, LOD, & E & S CONTROL FEATURES TO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY: >1000 FEET WELL SHL TO EXISTING WATER WELL OR DEVELOPED SPRING: >250 FEET CENTER OF PAD TO OCCUPIED DWELLING STRUCTURE: >625 FEET CENTER OF PAD TO AGRICULTURAL BUILDINGS LARGER THAN 2500 SQ FT: >625 FEET		<b>OPERATOR'S:</b> ALICE EDGE <b>WELL #:</b> OHI 301H		<b>LOCATION:</b> LIBERTY DISTRICT, OHIO, WEST VIRGINIA Received Office of Oil & Gas	
<b>FEMA FLOOD INFORMATION:</b> NO FLOOD ZONES.		<b>AS-DRILLED SURFACE HOLE LOCATION:</b> GEOGRAPHIC (NAD83): LATITUDE: 40.099987° LONGITUDE: -80.560419°		J 03/04/2016	
<b>LEGEND:</b> ○ PROPOSED SURFACE HOLE / BOTTOM HOLE ✱ EXISTING / PRODUCING WELLHEAD ✕ ABANDONED WELL ✕ PLUGGED & ABANDONED WELL △ CUT CONDUCTOR		○ EXISTING SPRING ○ EXISTING WATER WELL — ACCESS ROAD — ACCESS ROAD TO PREV. SITE — HIGHWAY/INTERSTATE — COUNTY ROAD		<b>AS-DRILLED BOTTOM HOLE LOCATION:</b> GEOGRAPHIC (NAD83): LATITUDE: 40.125345° LONGITUDE: -80.575292°	
<b>REVISIONS:</b>		DATE: 01-21-2016		DRAWN BY: E.LYTLÉ SCALE: 1" = 2000' DRAWING NO: 030-2725 TOPOGRAPHIC MAP	