

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

API 47-069-00178 County OHIO District LIBERTY  
Quad VALLEY GROVE Pad Name ALICE EDGE OHI Field/Pool Name PANHANDLE FIELD  
Farm name EDGE, ALICE MAE Well Number 5H  
Operator (as registered with the OOG) SWN PRODUCTION CO., LLC  
Address P.O. BOX 12359 City SPRING State TX Zip 77391-2359

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing 4438936.564 Easting 537474.593  
Landing Point of Curve Northing 4439279.653 Easting 537706.239  
Bottom Hole Northing 4441229.161 Easting 536778.413

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

Date permit issued 08/28/2014 Date drilling commenced 09/26/2014 Date drilling ceased 10/27/2014  
Date completion activities began 07/19/2015 Date completion activities ceased 10/17/2015  
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 394 Open mine(s) (Y/N) depths \_\_\_\_\_  
Salt water depth(s) ft 732 Void(s) encountered (Y/N) depths \_\_\_\_\_  
Coal depth(s) ft 582 Cavern(s) encountered (Y/N) depths \_\_\_\_\_

Is coal being mined in area (Y/N) Y

**APPROVED**

NAME: Jackie Shonta  
DATE: 9/22/16

Reviewed by:  
\_\_\_\_\_  
WV Department of  
Environmental Protection  
**10/28/2016**

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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	24	20	120	N	94/J-55		Y
Surface	17.5	13.375	630	N	54.5/J-55		Y
Coal	SEE SURFACE						
Intermediate 1	12.250	9.625	2098	N	40/J-55		Y
Intermediate 2							
Intermediate 3							
Production	8.75/8.5	5.5	14562	N	20/P-110		N
Tubing		2.375	7107	N	4.7/P-110		NA
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	A		15.6			GTS	GTS
Surface	A	623	15.6	1.2	748	7.4	8
Coal	SEE SURFACE						
Intermediate 1	A	818	15.7	1.19	973	6.8	8
Intermediate 2							
Intermediate 3							
Production	A		15.3/15.6	1.30/1.19		670	24
Tubing							

Drillers TD (ft) 14562 Loggers TD (ft) 14562

Deepest formation penetrated MARCELLUS Plug back to (ft) NA

Plug back procedure NA

Kick off depth (ft) 5685

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 will be ran with a centralizer at a minimum of 1 per every 3 joints of casing.

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 \_\_\_\_\_

Office of Oil and Gas  
SEP 16 2016  
WV Department of Environmental Protection

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**PERFORATION RECORD**

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

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)
			SEE ATTACHED					

WV DEPARTMENT OF  
Office of Oil and Gas

SEP 16 2016

Please insert additional pages as applicable.

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
<u>MARCELLUS</u>	<u>5566</u>	<u>TVD</u>	<u>14543</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 1600 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas 4117 mcfpd Oil 337 bpd NGL \_\_\_\_\_ bpd Water 405 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 <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<u>0</u>		<u>0</u>		
			<u>SEE</u>	<u>ATTACHED</u>	

Please insert additional pages as applicable.

Drilling Contractor NOMAC DRILLING  
Address 3400 South Radio Road El Reno, OK 73036 City EL RENO State OK Zip 73036

Logging Company NINE ENERGY SERVICES  
Address 8885 State Hwy 21 E, Bryan, TX 77808 City BRYAN State TX Zip 77808

Cementing Company SCHLUMBERGER OILFIELD SERVICES  
Address 1121 Buschong St, Houston, TX 77039 City HOUSTON State TX Zip 77039

Stimulating Company SCHLUMBERGER OILFIELD SERVICES  
Address 1121 Buschong St, Houston, TX 77039 City HOUSTON State TX Zip 77039

Please insert additional pages as applicable.

Completed by SHELLY BOWEN Telephone 832-796-6287  
Signature *Shelly Bowen* Title SR. STAFF REGULATORY Date 9/15/16

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry **10/28/2016**