

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

API 47-085-10016 County Ritchie District Murphy
Quad Harrisville Pad Name N/A Field/Pool Name N/A
Farm name Marion Roby Well Number W-1642H
Operator (as registered with the OOG) Haight Energy Corporation
Address 12864 Staunton TPKE City Smithville State WV Zip 26178

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 39.170667 Easting 81.068739
Landing Point of Curve Northing See Deviation Survey Easting See Deviation Survey
Bottom Hole Northing See Deviation Survey Easting See Deviation Survey

Elevation (ft) 832' 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)
N/A

Date permit issued 12/11/2012 Date drilling commenced 06/28/2014 Date drilling ceased 07/16/2014
Date completion activities began 07/23/2014 Date completion activities ceased 07/23/2014
Verbal plugging (Y/N) No Date permission granted N/A Granted by _____

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

Freshwater depth(s) ft 40' Open mine(s) (Y/N) depths No
Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths No
Coal depth(s) ft N/A Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

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Reviewed by:
A.L. 5/19/15
W.S.C. 06/12/2015

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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	22"	20"	20'	New	94#	N/A	Yes
Surface	17"	13 3/8"	190'	New	54.5#	N/A	Yes
Coal							
Intermediate 1	15"	9 5/8"	885	New	36#	N/A	Yes
Intermediate 2	12 1/4"	7"	1977	New	20#	800'	Yes
Intermediate 3							
Production	6 1/4"	4 1/2"	2911.8	New	11.6#	N/A	Yes
Tubing							
Packer type and depth set		Run 2911.8' of 4 1/2" casing. Iso packer @ 1951'. 2380' pkr, 2475' slv, 2569' pkr, 2620' slv, 2715' pkr, 2766' slv, 2860' pkr.					

Comment Details _____

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	Type 1	20	Grouted	Grouted	Grouted	Surface	8
Surface	Class A/Type 1	120	15.6	1.18	82.6	To Surface	10
Coal							
Intermediate 1	Class A/Type 1	250	14.8	1.40	350	To Surface	12
Intermediate 2	Class A/Type 1	275	14.8	1.40	385	To Surface	13
Intermediate 3							
Production	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tubing							

Drillers TD (ft) 3010' Loggers TD (ft) N/A

Deepest formation penetrated Squaw Plug back to (ft) 850'

Plug back procedure Set bottom plug: 550' fill up. 165 sks 50/50 poz. :Set top plug: 800' fill up. 245 sks Type 1 cement. Total fill up 1150'. Plug up to 850'. : Let cure for 24 hours

Kick off depth (ft) 1100'

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 None

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 _____

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
N/A	N/A	N/A	N/A	N/A	No perforations

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)
1/2	07/23/14	12.1	2870	3033	2000	70000	227	1083584
2	07/23/14	13.1	2808	2967	2000	40000	275	509190
3	07/23/14	15	2878	2977	1900	50000	306	529368

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PRODUCING FORMATION(S)	DEPTHS		
Big Injun	1892'	TVD	3011' MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 800 psi Bottom Hole 1450 psi DURATION OF TEST 12 hrs

OPEN FLOW Gas 250 mcfpd Oil 5 bpd NGL 0 bpd Water 10 bpd GAS MEASURED BY 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)
See Attached	0		0		

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Please insert additional pages as applicable.

Drilling Contractor Top Drilling Corporation
Address 107 Lancaster Street City Marietta State OH Zip 45750

Logging Company Nabors Completion & Production Services Co.
Address P.O. Box 975682 City Dallas State TX Zip 75397

Cementing Company Universal Well Services
Address P.O. Box 200969 City Dallas State TX Zip 75320

Stimulating Company Universal Well Services, Inc.
Address P.O. Box 200969 City Dallas State TX Zip 75320

Please insert additional pages as applicable.

Completed by WARREN R. HAUGHT Telephone 304-477-3333
Signature Warren R. Haught Title AGENT Date 2/12/15

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

Roby W-1642H
 API # 47-085-10018

Formation	Top TVD	Bottom TVD	Top TMD	Bottom TMD	Remarks
Red Rock & Shale	0	434	0	434	
Sand	434	579	434	579	
Slate & Shells	579	767	579	767	
Red Rock	767	904	767	904	
Dunkard Sand	904	923	904	923	
Slate & Shells	923	961	923	961	
Gas Sand	961	980	961	980	
Slate & Shells	980	1055	980	1055	
Gas Sand #2	1055	1063	1055	1063	
Shale	1063	1207	1063	1208	
Long Streak	1207	1289	1208	1291	
Shale	1289	1430	1291	1435	
1st and 2nd Salt Sands	1430	1551	1435	1566	
Shale	1551	1579	1566	1595	
3rd Salt Sand	1579	1587	1595	1605	
Slate & Shells	1587	1643	1605	1670	
Maxton	1643	1708	1670	1758	
Shale	1708	1718	1758	1776	
Big Lime	1718	1783	1776	1877	
Big Injun Sand	1783	1892	1877	2143	
TD	1892				

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