

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

Received

AUG 14 2015

Office of Oil and Gas
WV Dept. of Environmental Protection

API 47-085-10112 County Ritchie District Union
Quad Harrisville Pad Name NA Field/Pool Name NA
Farm name Ira M. Haught Well Number W-1649
Operator (as registered with the OOG) Haught Energy Corporation
Address 12864 Staunton Turnpike 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 4338847 Easting 495209
Landing Point of Curve Northing NA Easting NA
Bottom Hole Northing NA Easting NA

Elevation (ft) 954 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)
TD 200 Drilling Soap

Date permit issued 7/23/2014 Date drilling commenced 10/24/2014 Date drilling ceased 11/04/2014
Date completion activities began 11/12/2014 Date completion activities ceased 11/12/2014
Verbal plugging (Y/N) NA Date permission granted NA Granted by _____

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

Freshwater depth(s) ft 105' Open mine(s) (Y/N) depths No
Salt water depth(s) ft NA Void(s) encountered (Y/N) depths NA
Coal depth(s) ft NA Cavern(s) encountered (Y/N) depths NA
Is coal being mined in area (Y/N) No

Reviewed by:
JR 8/28
10/30/2015

API 47-085 - 10112

Farm name Ira M. Haugt

Well number W-1649

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	15"	13" 3/8	40'	New	48#	NA	Yes
Surface	12" 1/4	9" 5/8	337'	New	26#	NA	Yes
Coal							
Intermediate 1	8" 7/8	7"	2110'	New	17#	NA	Yes
Intermediate 2							
Intermediate 3							
Production	6" 3/8	4" 1/2	6109.15	New	10.5#	5775,5557,5224	NA
Tubing						4679, 4512, 4262	
Packer type and depth set	NA						

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	Class A	10	15.6	1.18	12	To Surface	12 Hours
Surface	Class A, Type 1	125	15.6	1.18	141.6	To Surface	12 Hours
Coal							
Intermediate 1	Class A, Type 1	300	14.8	1.40	420	To Surface	8 Hours
Intermediate 2							
Intermediate 3							
Production	Strong Light 150	160	13.1	1.94	310.4	3700'	24 Hours
Tubing							

Drillers TD (ft) 6150

Loggers TD (ft) 6154

Deepest formation penetrated Onandaga Lime

Plug back to (ft) NA

Plug back procedure NA

Kick off depth (ft) NA

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 _____

4 1/2" Production String Centralizers only-6025, 5859,5734, 5609, 5266, 4932, 4345, 4210, 4044, 3535.

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

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WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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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)
	11/12/2014	4232	4237	5	Riley
	11/12/2014	4426	4434	12	Benson Sand
	11/12/2014	4744	4748	6	Devonian Shale
	11/12/2014	5546	5564	10	Hamilton Shale
	11/12/2014	5588	5600	10	Hamilton Shale
	11/12/2014	5670	5674	4	Eik
	11/12/2014	5694	5702	10	Eik
	11/12/2014	5840	5848	8	Lower Devonian Shale

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	11/12/15	50184scf	3691	3742	3100	NA	0	701591 scf
2	11/12/15	50600scf	3697	3732	3104	NA	0	751149 scf
3	11/12/15	50445scf	2990	3095	2229	NA	0	501456 scf

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Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS
See Attached	TVD MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2200 psi Bottom Hole 2200 psi DURATION OF TEST 12 hrs

OPEN FLOW Gas 800 mcfpd Oil 10 bpd NGL NA bpd Water NA 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		

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, Inc
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 8/12/15

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

Prunty W-1649
API # 47-085-10112

Producing Formation	Top	Bottom	Remarks
Riley	4232	4237	
Benson Sand	4426	4440	
Devonian Shale	4744	4748	
Hamilton Shale	5546	5600	
Elk	5670	5702	
Lower Devonian Shale	5840	5848	

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Formation	Top	Bottom	Remarks
Red Rock & Shale	0	533	
Sand	533	568	
Red Rock	568	648	
Sand	648	668	
Red Rock	668	733	
Slate	733	848	
Dunkard Sand	848	968	
Slate & Shells	968	1193	
Gas Sand	1193	1308	
Slate	1308	1368	
1st Salt Sand	1368	1429	
Shale	1429	1469	
2nd Salt Sand	1469	1487	
Shale	1487	1513	
3rd Salt Sand	1513	1628	
Slate	1628	1713	
Maxon Sand	1713	1748	
Shale	1748	1823	
Little lime	1823	1845	
Pencil Cave	1845	1857	
Big Lime	1857	1955	
Big Injun Sand	1955	2003	
Slate Break	2003	2008	
Squaw Sand	2008	2016	
Slate & Shells	2016	2765	
Gordon	2765	2773	
Slate & Shells	2773	4232	
Riley	4232	4237	
Slate & Shells	4237	4426	
Benson Sand	4426	4440	
Slate & Shells	4440	4990	
Alexander Sand	4990	5002	
Slate & Shells	5002	5546	
Hamilton Shale	5546	5600	
Slate & Shells	5600	5670	
Elk	5670	5702	Received
Slate & Shells	5702	5840	
Lower Devonian Shale	5840	5848	AUG 14 2015
Slate & Shells	5848	6020	
Marcellus	6020	6101	
Onandoga lime	6101	6154	Office of Oil and Gas WV Dept. of Environmental Protection
TD	6154		