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

API <u>47</u> - <u>049</u> <u>- 02127</u>	County Marion	District Lincoln								
Quad Mannington 7.5' Pad Name Haught Field/Pool Name										
Farm name Thomas J. & Linda Eminson Well Number 2028										
Operator (as registered with the OOG)	Vaco Oil & Gas Co., Inc.		25.00							
Address P.O. Box 397	City Glenville	State WV	Zip 26351							
Landing Point of Curve No	zontal	Easting 1779375 Easting Easting Xisting Type of Report Vertical Depth Type Redrilling Rework Easting Overy Solution Mining Store Gas NGL Oil	□Interim ■Final □ Deep ■ Shallow □ Stimulate □ rage □ Other ■ Other None							
Date permit issued	N/A Date complete permission granted	5 days of verbal permission to p	N/A Received NOFfice of Oil & Gas MAY 0 9 2016							

AX 05/25/14 ws APPR (v) VED

NAME: Jacqualen 05/27/2016

DATE: 5/12/14

Surface	nediate 1 nediate 2 nediate 3 netion g	Size 16 13 10	16 11 3/4	40 764'	Used N	wt/ft 42	D	epth(s)		de details below*
Conductor 16 16 40 N 42 Surface 13 11 3/4 764' N 32 738 Yes Coal Intermediate 1 10 8 5/8 2036 Intermediate 2 Intermediate 3 Intermediate 1 Intermediate 2 Intermediate 2 Intermediate 2 Intermediate 2 Intermediate 3 Intermediate 3 <td< td=""><td>nediate 1 nediate 2 nediate 3 netion g</td><td>16 13 10</td><td>16 11 3/4</td><td>40 764'</td><td>N</td><td>42</td><td></td><td></td><td></td><td></td></td<>	nediate 1 nediate 2 nediate 3 netion g	16 13 10	16 11 3/4	40 764'	N	42				
Surface	nediate 1 nediate 2 nediate 3 netion g r type and dep	10						738		Yes
Intermediate 1	nediate 2 nediate 3 netion g or type and dep		8 5/8	2036				•	-	
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Intermediate 3 Production	nediate 3 ction g r type and dep	pth set								
Production Tubing Packer type and depth set Comment Details CEMENT Class/Type Number of Sacks wt (ppg) (ft \(\frac{1}{1} \) Sks) (ft \(\frac{1}{2} \) Top (MD) (hrs \(\frac{1}{1} \) Surface Conductor A 30 5.2 1.18 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	g r type and dep	pth set								
Tubing	g or type and dep	pth set								
Packer type and depth set	r type and dep	pth set				-				
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Conductor A 30 5.2 1.18 8 Surface										WOC
Surface Coal Intermediate 1 A 380 5.2 1.18 8 Intermediate 2 Intermediate 3 Production Tubing Drillers TD (ft) 3116 Deepest formation penetrated 5th Sand Plug back procedure Kick off depth (ft) Check all wireline logs run a caliper a density deviated/directional induction			1				(11)	100 ((עוואו	(nrs) 8
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Check all wireline logs run ■ caliper ■ density □ deviated/directional ■ induction	est formation	ion penetrated 5								
	off depth ((ft)								
	k all wirelii	ine logs run		•					□sonic	;
Well cored □ Yes ■ No Conventional Sidewall Were cuttings collected □ Yes □ No	cored "	Yes ■ No	Conventiona	al Sidev	vall	Wer	e cuttings	collected	□ Yes □	No
DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING	CRIBE TH	IE CENTRALIZ	ZER PLACEMEN	NT USED FO	R EACH CA	ASING STR	UNG		-	
D.										
He										Recei
Office of					<u> </u>					Uffice of O
WAS WELL COMPLETED AS SHOT HOLE □ Yes ■ No DETAILS	S WELL CO	OMPLETED A	S SHOT HOLE	□ Yes 📱	No DI	ETAILS _				MAY 0 9
WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS		OMPLETED O	PEN HOLE?	⊐ Yes	o DET.	AILS			-·-	
WERE TRACERS USED Yes No TYPE OF TRACER(S) USED	S WELL CO									

PERFORATION RECORD

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

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

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)
							
						<u> </u>	
							<u> </u>
			-				
		 .					Received
							Received Output May 09 2016
							MAY 09 2016
						_	
							Date Rate (BPM) Pressure (PSI) Pressure (PSI) ISIP (PSI) Proppant (lbs) Water (bbls)

Please insert additional pages as applicable.

WR-35 Rev. 8/23/13

API 47- 049	_ 02127	Farm	name_Thomas	J. & Line	da Eminson	Well numb	_Well number_2028		
PRODUCING I	FORMATION(<u>S)</u>	DEPTHS						
5th Sand			3010	_TVD		MD			
				_	1				
Please insert ad	ditional pages a	as applicable.			.,				
			■ Open Flow		OIL TEST 🗆	Flow □ Pun	np		
SHUT-IN PRES	SSURE Surf	ace 40	psi Botto	m Hole	psi	DURATION	OF TEST	6 hrs	
OPEN FLOW	Gas 50 met	Oil fpd	NGL bpd	bpd		GAS MEAS		□ Pilot	
LITHOLOGY/ FORMATION	TOP DEPTH IN FT	BOTTOM DEPTH IN FT			FT DESCRIBE			UANTITYAND OIL, GAS, H₂S, ETC)	
Earth	NAME TVD 0	TVD 62	MD 0	MD	TIPEOFF	LOID (FRESHW)	TIER, DRINE,	OIL, GAS, 1125, ETC)	
Shale	62	106							
Coal	106	114							
Red Rock	114	120							
Shale	120	190							
Coal	190	199							
Sd & Shale	199	371							
Mapletown	371	379							
Shale	379	521							
Mapletown Coal	521	527							
Pittsburgh Coal	626	635							
Dunkard	1018	1128							
1 Salt Sand	1453	1501							
2 Salt Sand	1568	1616							
Please insert ad Drilling Contra Address P.O. Bo	ctor Waco Oil 8	(A) (A)	City	Glenville		State WV	Zip_26	351	
	5.9000 NV 1056	الد	City	y and the second					
Logging Compa Address	72-1948Y		City			State	Zip		
Cementing Con Address	100000000000000000000000000000000000000		City	24-	,	State	Zip		
Stimulating Co.	mpany N/A				_			Received	
Address		highti over	City			State	Zip	Office of Oil & (
Please insert ad	ditional pages	as applicable.						MAY 09 2016	
Completed by Stephen E. Holloway					_ Telephon	e 304-462-534	7		
Signature		0 1	Title L	and Manage	er	Date	02/24/2016		

API

47-049-02127

FARM NAME

Thomas J. & Linda Eminson

WELL NUMBER

2028

LITHOLOGY/	ТОР	воттом	ТОР	воттом	
FORMATION	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	DEPTH IN FT	DESCRIBE ROCK TYPE AND RECORD QUANTITIES AND
	NAME TVD	TVD	MD	MD	TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC.)
	0	Ι	0		
3 Salt Sand	1684	1701			
Red Rock	1701	1873			
Little Lime	1873	1890			
Pencil Cave	1890	1922			
Big Lime	1922	2002			
Big Injun	2002	2154			
Gantz	2534	2546		-	
50 ft. Sand	2616	2666			
30 ft. Sand	2676	2708	_		
Gordon Strey	2920	2936	<u>-</u>		
Gordon	2950	2970			
Fifth Sand	3010	3025			
				_	<u> </u>
		<u> </u>			

