

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>059</u> - <u>02230</u>	County MIN	GO	District HARDEE	
Quad _	NAUGATUCK			Field/Pool Name	
Farm n	name KIRK, ZELLA D			_ Well Number2267	7
Operate	or (as registered with the OO	G) QUALITY NAT	TURAL GAS, LLC		
Addres	SS PO BOX 480	City Al	LLEN	State KY	_{Zip}
As Dri	lled location NAD 83/UTM Top hole Landing Point of Curve Bottom Hole	M Attach an as-dril Northing Northing	Ea:	nd deviation survey sting sting	
Elevati	ion (ft) <u>1049.9</u> GL	. Type of Well	■New □ Existing	Type of Report	ılnterim □Final
Permit	Type Deviated	Horizontal Horizontal	ontal 6A	Depth Type C	Deep Shallow
Туре о	of Operation Convert	Deepen Drill	□ Plug Back □ Red	rilling 🗆 Rework 🛭	□ Stimulate
Well T	Type □ Brine Disposal □ Cl	3M ■ Gas □ Oil □ S	Secondary Recovery 🗆 S	Solution Mining Store	age 🗆 Other
Drilling Produc	d with □ Cable ■ Rotary g Media Surface hole ■ A ction hole ■ Air □ Mud Type(s) and Additive(s)	Air □ Mud □Fresh W □ Fresh Water □ Bri		hole ■ Air □ Mud	□ Fresh Water □ Brine
Date co	ermit issued2/22/2012 ompletion activities began I plugging (Y/N)	0/00/0042			ased 6/07/2013 2/2013??
Please	note: Operator is required to	submit a plugging appl			
Freshw	vater depth(s) ftNon	e Encountered	Open mine(s) (Y/N)	depths <u>RECE</u> (Y/N) depths (Y/N) depths	IVED Gas
Salt wa	ater depth(s) ft	1,250	Void(s) encountered	(Y/N) depositice of C	N N
Coal d	lepth(s) ftNone E	Encountered	Cavern(s) encounter	ed (Y/N) depths	1 4 201M
Is coal	being mined in area (Y/N) _	NO	. <u></u>	WV De	partment of partition ental Projection 03/07/2014

API 47- 059 - 02230	Farm name_ KIRK, ZELLA D	Well number	

PERFORATION RECORD

Stage No.		Perforated from	Perforated to	Number of	
No.	Perforation date	MD ft.	MD ft.	Perforations	Formation(s)
1	9/8/2013	3808	2910	17	SHALE
2	9/9/2013	2832	2852	11	BEREA
		2390	2254	5	WEIR
-					
				 	
				<u></u>	

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)
9/9/2013		3865	4307	1193	NONE	NONE	901,764 (N2)
9/9/2013	101,103	3858	3929	2339	NONE	NONE	901,338 (N2)
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	-						
					- OFIL	ED	
					MECE	and Gas	
				e	HICE OF OT		
					1 . 1	2014	
					JAN I		{
	Date 9/9/2013	Date Rate (BPM) 9/9/2013 104,909	Date Rate (BPM) Pressure (PSI) 9/9/2013 104,909 3865	Date Rate (BPM) Pressure (PSI) Pressure (PSI) 9/9/2013 104,909 3865 4307	Date Rate (BPM) Pressure (PSI) Pressure (PSI) ISIP (PSI) 9/9/2013 104,909 3865 4307 1193 9/9/2013 101,103 3858 3929 2339	Date Rate (BPM) Pressure (PSI) Pressure (PSI) ISIP (PSI) Proppant (Ibs)	Date Rate (BPM) Pressure (PSI) Pressure (PSI) ISIP (PSI) Proppant (Ibs) Water (bbls)

Please insert additional pages as applicable.

WV Department of Environmental Protection

WELL #2267

API#47-5902230

WELL #2267			API#47-59022	.30	
		Î			DESCRIBE ROCK TYPE AND RECORD
	ТОР	воттом	ТОР	воттом	QUANTITY AND TYPE OF FLUID
	DEPTH IN FT		DEPTH IN FT	DEPTH IN FT	(FRESHWATER, BRINE, OIL, GAS, H2S,
LITHOLOGY/ FORMATION	NAME TVD	TVD	MD	MD	ETC)
	0	32			
SAND	32	90			
SAND/SHALE	90	150			
SAND	150	210			
SAND/SHALE	210	300			
SAND	300	330			
SAND/SHALE	330	450			
SAND	450	510	<u></u>		
SAND/SHALE	510	780			
SAND	780	830			
SAND/SHALE	830	870			
SAND	870	900			
SAND/SHALE	900	1110			
SAND	1110	1305			
SAND/SHALE	1305	1350			1-1 1/2" WATER @ 1,250'
SAND	1350	1500			
SAND/SHALE	1500	1530			
SAND	1530	1590			
SAND/SHALE	1590	1620			
SAND	1620	1770			
SAND/SHALE	1770	1822			
RED ROCK	1822	1830			
RR/SLATE/LIME	1830	1875			
SAND/SLATE/LIME	1875	1945			
LITTLE LIME	1945	1995			
BIG LIME	1995	2185			
NULNI	2185	2240			
WEIR	2240	2520			
GRAY SHALE	2520	2745			
COFFEE SHALE	2745	2795			
BEREA	2795	2865			
BROWN SHALE	2865	2950			
GRAY SHALE	2950	3575			
BROWN SHALE	3575	3705			
GRAY SHALE	3705	3713			
BROWN SHALE	3713	3820			
WHITE SHALE	3820	3930			RECEIVED
				Of	ice of Oil and Gas
					JAN 1 4 2014
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WV Department of Environmental Protection 03/07/2014