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

API <u>47</u> - 039 - 06	344 County Kana	wha	District Union	
Quad Pocatalico	Pad Name n/a		Field/Pool Name _n	la
Farm name Fisher, Howar	d		Well Number Fish	ner #1
Operator (as registered with	the OOG) Reserve Oil and	d Gas, Inc.		
Address 929 Charleston I	Road City	Spencer	State WV	Zip 25276
Top h Landing Point of Co Bottom H Elevation (ft) 851 Permit Type Deviated Type of Operation Converted Well Type Brine Disposa Type of Completion Sing Drilled with Cable	ole Northing Irve Northing Iole Northing GL Type of We Horizontal Hori THORET OF THE COMMENT OF THE COMMEN	Secondary Recovery Seconda	al Depth Type dedrilling	□ Interim ■Final □ Deep ■ Shallow ■ Stimulate
n/a	,			
				PEOF:
	E 10 4 10 0 4 0	Date completion n/a	activities ceased Granted by	5/24/2013 n/a NV Department of
	70			
reshwater depth(s) ft	4000	Open mine(s) (Y/		NO
alt water depth(s) ft	N1	_ Void(s) encounter	red (Y/N) depths RECE	EIVETINO
Coal depth(s) ft	110	_ Cavern(s) encound	tered (Y/N) depthsof	il and Con
s coal being mined in area ((/N)		0CT 1 E	2013 Reviewed by:
			WV Departi Environmental	40/00/0040

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API 47- 039	06344	Farr	n name_F	isher, H	oward		Well	number	ner #1	
CASING STRINGS	Hole Size	Casing Size	D	Depth	New or Used	Grade wt/ft		Basket Depth(s)		nent circulate (Y/N) de details below*
Conductor	17 1/2	13 3/8		18	New	,	48.0	none	cemen	t by hand to surface
Surface	12 1/4	9 5/8		6.60	New		26.0	84		es, 5 bbls to pit
Coal	12 174			0.00					-	
Intermediate 1	8 7/8	7	19	85.25	New	,	17.0	295	V	es, 5 bbls to pit
Intermediate 2	0770		- 	-						
Intermediate 3										
Production	640	4 1/2	+ 4	645	New	,	11.6	pints: 20, 30, 40, 50, 60	displa	ced plug w/ 63 bbls
Tubing	6 1/2	4 1/2	_	1040	1101		11.0		diopia	occ ping in to built
Packer type and de	enth cat		1	<u> </u>					<u> </u>	
racker type and the	cpm set									
CEMENT	Class/Type	•	mber	Slurry		Yield	Volume	Cemer		WOC
DATA Conductor	of Cement	of	Sacks	wt (pp	g)	(ft ³ /sks)	(ft.²)	Top (M	<u>יטו</u>	(hrs) 6
Surface	Portland		7				-	GL	-	12
	Type 1		25					GL	;	12
Coal						4 0 4 4 4 4 0	000 0/00	- 01		
Intermediate 1	Unifillight/Clas	SS A 16	5/75	12.7/15	5.6	1,84/1.18	303.6/88.5	5 GL		10
Intermediate 2				ļ			 			
Intermediate 3				100		0.04	400.0	4620		19
Production	Stronglite 25	50	85	12.3		2.34	432.9	402	•	19
Tubing										
Drillers TD (ft Deepest forma Plug back pro	tion penetrated	Devonian Shale				rs TD (ft) <u>46</u> ack to (ft) <u>4</u>				
Kick off depth Check all wire	(ft)line logs run	a calip	er 🖺 d	lensity esistivity		viated/direct		nduction emperature	≜ soni	c
			entional	□ Sidev	wall	V		collected		
DESCRIBE T	sed	IZER PLAC	EMENT U	JSED FO	R EACH		STRING			
7°: 3 centralizers wer										
4 1/2": 6 centralizers	used at joints 10, 20, 3	0, 40, 50, 60								
WAS WELL (COMPLETED	AS SHOT H	OLE 8	Yes 🗆	No	DETAILS				
WAS WELL O	COMPLETED	OPEN HOLE	? - Y	es 🖪 N	o D	ETAILS _				
WERE TRAC	ERS USED 1	⊐Yes ■ No	TY	PE OF T	RACER	(S) USED _				

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API	47- 039 -	06344	Farm name Fisher, Howard	Fisher #1Well number

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	5/24/2013	3850	4580	40	Lower Huron / Devonian Shale
2	5/24/2013	2840	3746	46	Shale

		<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)
		2500	2900	1500	0	17	1,000,390 scf
5/24/20		2200	1900	2000	0	24	1,000,479 scf
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		Date Rate (BPM) 5/24/204	Date Rate (BPM) Pressure (PSI) 5/24/204 2500	Date Rate (BPM) Pressure (PSI) Pressure (PSI) 5/24/204 2500 2900	Date Rate (BPM) Pressure (PSI) Pressure (PSI) ISIP (PSI) 5/24/204 2500 2900 1500	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 12/06/2013
Environmental Protection

Rev. 8/23/13								
API 47- <u>039</u>	_ 06344	Farm :	name Fisher, Ho	ward	<u> </u>	Well numbe	r Fisher #1	
PRODUCING	FORMATION(S		<u>DEPTHS</u> 3850-4580	_TVD _		MD		
Shale		:	2840-3746					
				<u> </u>				
Please insert ad	lditional pages a	s applicable.						
GAS TEST	□ Build up □	Drawdown	Open Flow	C	OIL TEST D	Flow 🗆 Pum	p	
SHUT-IN PRE	SSURE Surf	ace 0	_psi Botto	m Hole_80	psi	DURATION	OF TEST 12	hrs
OPEN FLOW	Gas 335 mcf	Oil pd1	NGL bpd	bpd	Water bpd	GAS MEAS	URED BY ■ Orifice □ Pil	ot
LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN F MD	T DESCRIBE) RECORD QUANTITY TER, BRINE, OIL, GAS,	
	0		0					
								
								
		<u> </u>	<u></u>			See Attachr	nent for Formations	
	lditional pages a							
Drilling Contra	ictor Kanawha V	alley Drilling					05070	
Address 929 Ch	narieston Road		City	Spencer		State WV	Zip 25276	
Logging Comp	any Nabors Con	npletion & Prod				State TX	Zip 77067	
Address 515 W	est Greens Road, S	suite 1100	City	Houston		State _IX_	Zip	
Cementing Con	mpany Universa	Well Services,	Inc.					
Address Rt 5 Ha	all Road		City	Buckhannon	n 	State WV	Zip 26201	
Stimulating Co	pairy	sal Well Service		Buckhannor	- n	State WV	Zip_26201	
Address Rt 5 H	lditional pages a	s applicable.	City		<u></u>	State		
Completed by	, Ryan Fields				Telephone	304-927-5033		
Signature	KIMIN	Filal	Title Cl	erk	2 Ozopiione	Date	10/11/2013	 }
	- year	1 - Car						•

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Formation	TOP (TVD)	BOTTOM (TVD)	TOP (MD)	BOTTOM (MD)	
KB to GL			0	7	70', 1/4" stream
Clay, Dirt	0	3	7	10	start soaping
Rock	3	18	10	25	
Sand/Rock	18	83	25	90	900', hole damp
Sand & Shale	83	1078	90	1085	start soaping
Salt Sand	1078	1353	1085	1360	
Lower Maxton	1353	1458	1360	1465	1320', 1 1/2"
Salt Sand	1458	1678	1465	1685	stream
Little Lime	1678	1701	1685	1708	
Big Lime	1701	1891	1708	1898	1416', 2 1/2"
Big Injun	1891	1923	1898	1930	stream
Squaw Sand	1923	2013	1930	2020	
Shale	2013	3923	2020	3930	3990, Gas
Lower Huron	3923	4008	3930	4015	check, smell
Devonian Shale	4008	4643	4015	4650	oil
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