DATE: 1/13/2012 API #: 4700103240

State of West Virginia
Department of Environmental Protection
Office of Oil and Gas

## Office of Oil and Gas

Well Operator's Report of Well Work

BIG	JELOW LO	DDGE .	Operator Well	No.:	18	
N: Elevation:_		1517'	_Quadrangle:		NESTORVILL	Æ
District:	C	OVF	County		T A D D C I T D	
	7,200	rect west of	Deg	·	. <u>30</u> Sec.	
Texas Keystone	, Inc.					
			Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
	15238					
	···		13 3/8"	42	42	Sanded In
			9 5/8"	462	462	200
	<b>d:</b> 11/1	0/11	7"	1694	1694	230
			4 1 (2)			
			4 1/2"	0	5454	205
		·				
			1 ½"	0	5303	0
		0 NT				
		? N	<u> </u>	<del></del>		
		NT	<del> </del>			-
Producing form Gas: Initial ope	ation: n flow:	5TH ELK G/S TSTM	nations please in	_Pay zone Der _MCF/D Oil	oth (ft) : Initial open flo	5319 - 5328 w: <u>0</u> Bbl/d
					: Final open flov	v: 0 Bbl/d
			ests: <u>N/A</u>		oressure) after	48Hours
Coopered Duradores	C	2DD ELV		D	4.70	1066 5001
	-		4) * - *	_	` '	4966 - 5001
			<u> </u>	_	•	
•			etc.		. Filiai open nov	v. <u> </u>
_					oressure) after	- Hour
				_		
and all the attac	chments an	d that, based on	my inquiry of	those individu		
		Signatur	re 7		t <sub>Date</sub> /	•
	District: Latitude: Longitude:  Texas Keystone  560 Epsilon Dri Pittsburgh, PA Jon Farmer Bryan Harris it Issued: Work Complete gging: ission granted o  X Cable ical Depth (ft.): ber Depth (ft.): g mined in the sis (ft.): countered (N/Y)  DW DATA (If it is the sis (ft.): countered (N/Y)  DW DATA (If it is the sis (ft.): Countered (N/Y)  DW DATA (If it is the sis (ft.): Countered (N/Y)  DW DATA (If it is the sis (ft.): Countered (N/Y)  DW DATA (If it is the sis (ft.): Countered (N/Y)  DW DATA (If it is the sis (ft.): Countered (N/Y)  DW DATA (If it is the sis (ft.): Countered (N/Y)  DW DATA (If it is the sis (ft.): Countered (N/Y)  DW DATA (If it is the sis (ft.): Countered (N/Y)  DW DATA (If it is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)  DW DATA (If is the sis (ft.): Countered (N/Y)	District:	District: COVE Latitude: 300 Feet South of Longitude: 9,280 Feet West of Texas Keystone, Inc.  560 Epsilon Drive Pittsburgh, PA 15238 Jon Farmer Bryan Harris it Issued: 05/24/10 Work Commenced: 11/03/11 Work Completed: 11/10/11 gging: ission granted on:  X Cable Rig ical Depth (ft.): 5568 sured Depth (ft.): 5568 sured Depth (ft.): 575, 610 ng mined in the area (N/Y)? N ns (ft.): 95 countered (N/Y) Depth(s): N  DW DATA (If more than two producing form Froducing formation: 5TH ELK Gas: Initial open flow: G/S TSTM Final open flow between initial and final to Static rock Pressure: 1000  Second Producing formation: 3RD ELK Gas: Initial open flow: Co-mingled Time of open flow between initial and final to Static rock Pressure: Co-mingled Time of open flow between initial and final to Static rock Pressure: Co-mingled	N: Elevation: 1517' Quadrangle:  District: COVE County: Latitude: 300 Feet South of 39 Deg Longitude: 9,280 Feet West of 79 Deg  Texas Keystone, Inc.  Casing & Tubing  Pittsburgh, PA 15238  Jon Farmer 13 3/8"  Bryan Harris  it Issued: 05/24/10 9 5/8"  Work Commenced: 11/03/11  Work Completed: 11/10/11 7"  gging: 4 ½"  Ix Cable Rig Geal Depth (ft.): 5568 1½"  Ix Cable Rig Geal Depth (ft.): 575, 610 12 12 12 12 12 12 12 12 12 12 12 12 12	District:   COVE	Second Producing formation:   SECOND PROSECULAR SECO

Were co	ore samp	oles taken?	Yes	No _X_	Were	cuttings caught during drilling?	Yes	No X
Were	N	_Electrical,	_ N	_Mechanical,	Y	or Geophysical logs recorded or	this well?	
	V/N		V/N		V/N			

NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL

Perforated Intervals, Fracturing, or Stimulating:

Perfed 5th Elk 5319' - 5328' (24 shots). BD 3787 #. 150 sks 40/70 & 100 sks 20/40. 508 bbl. Gel Frac.

Perfed 3rd Elk 4966' - 5001' (30 shots). BD 2600 #. 200 sks 40/70 & 113 sks 20/40. 811 bbl. Gel Frac.

Perfed Benson 4073' - 4079' (18 shots). BD 3125 #. 100 sks 40/70 & 82 sks 20/40. 464 bbl. Gel Frac.

Perfed Balltown C 3187' - 3193' (18 shots). BD 3633 #. 100 sks 40/70 & 110 sks 20/40. 462 bbl. Gel Frac.

Perfed Balltown B 3034' - 3046' (24 shots). BD 3569 #. 250 sks 40/70 & 117 sks 20/40. 642 bbl. Gel Frac.

Perfed Balltown A 2987' - 2993' (18 shots). BD 3818 #. 150 sks 40/70 & 116 sks 20/40. 502 bbl. Gel Frac.

Formations Encountered:	Top Depth	Bottom Depth	Notes:
FILL	0 .	16	
SAND	16	32	yr.
SANDY SHALE	32	54	
SAND	54	95	
COAL	95	100	1/2" FW @ 100'
SANDY SHALE	100	142	DAMP @ 130'
SAND	142	200	DAM @ 150
SANDY SHALE	200	240	
RED ROCK	240	265	
SANDY SHALE	265	350	1/4" FW @ 340'
SAND	350	442	1/4 1 W @ 540
SANDY SHALE	442	540	
SAND	540	650	DAMP SW @ 575', 1/4" SW @ 610'
RED ROCK	650	770	Didia 64 @ 575, 174 54 @ 610
SAND	770	860	
RED ROCK	860	925	
SANDY SHALE	925	1000	
SAND	1000	1210	
LITTLE LIME	1210	1228	
PENCIL CAVE SHALE	1228	1257	
BIĠ LIME	1257	1504	
WEIR SANDSTONE	1504	1546	
SHÂLE	1546	1645	
BEREA SANDSTONE	1645	1665	
UPPER GANTZ SANDSTONE	1665	1680	
GANTZ SANDSTONE	1680	1703	
LOWER GANTZ SANDSTONE	1703	1751	
SANDY SHALE	1751	2358	
BAYARD SANDSTONE	2358	2400	
SPEECHLEY A SANDSTONE	2400	2450	
SANDY SHALE	2450	2506	
SPEECHLEY B SANDSTONE	2506	2954	
BALLTOWN A SANDSTONE	2954	3033	
BALLTOWN B SANDSTONE	3033	3150	
BALLTOWN C SANDSTONE	3150	3203	•
SANDY SHALE	3203	4070	
BENSON SILTSTONE	4070	4080	
SANDY SHALE	4080	4264	
ALEXANDER	4264	4300	
SHALE	4300	4473	
1ST ELK SILTSTONE	4473	4595	
SANDY SHALE	4595	4721	
2ND ELK SILTSTONE	<b>472</b> 1	4751	
SANDY SHALE	4751	4959	
3RD ELK SILTSTONE	4959	5023	
SANDY SHALE	5023	5291	
5TH ELK SILTSTONE	5291	5340	
SHALE	5340	5568	TD

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Third Producing formation	n: <u>BENSON</u>	Pay zone Depth (ft)	4073 - 4079
Gas: Initial open flow:		MCF/D Oil: Initial open flow	
Final open flow		MCF/D Oil: Final open flow	
Time of open flow between	en initial and final tests:	Hours	. <u> </u>
Static rock Pressure:	Co-mingled	psig(surface pressure) after	Hours
Fourth Producing formation	on: BALLTOWN C	Pay zona Donth (A)	2197 2102
Gas: Initial open flow:	Co-mingled	Pay zone Depth (ft)	
Final open flow		MCF/D Oil: Initial open flow	
		MCF/D Oil: Final open flow	/:0 Bbl/d
Time of open flow between	_	Hours	
Static rock Pressure:	Co-mingled	psig(surface pressure) after	- Hours
Fifth Producing formation		Pay zone Depth (ft)	3034 - 3046
Gas: Initial open flow:	Co-mingled	MCF/D Oil: Initial open flow	
Final open flow	Co-mingled	MCF/D Oil: Final open flow	
Time of open flow between		Hours	
Static rock Pressure:	Co-mingled	psig(surface pressure) after	TT
		psig(surface pressure) after	Hours
Sixth Producing formation		Pay zone Depth (ft)	2987 - 2993
Gas: Initial open flow:	Co-mingled	MCF/D Oil: Initial open flow	
Final open flow	Co-mingled	MCF/D Oil: Final open flow	
Time of open flow between		Hours	
Static rock Pressure:	Co-mingled	psig(surface pressure) after	TT
	oo mmalou	pargrautace pressure) after	<ul> <li>Hours</li> </ul>