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

DATE: 1/13/12 API#: 4700103240

Well Operator's Report of Well Work

Farm name:	Farm name: BIGELOW LODGE		Operator Well No.:				18			
LOCATION	CATION: Elevation: 1517' District: COVE		Quadrangle:		NESTORVILLE					
			DV E	County:		BARBOUR				
	Latitude:	300		_	Deg.	15	Min.			
	Longitude:				Deg.		Min.			
Company	Tevas Kevstone	Inc					-			
Company.	Texas Keystone	, IIIC.		Casing &		Used in	-	Left in well	Cement	fill un
Address:	560 Epsilon Dri	ve		Tubing		drilling		Zeit in wen	Cu. Ft.	mi up
	Pittsburgh, PA					, <u>.</u>				
Agent:	Jon Farmer			13 3/3	8"	42		42	Sande	ed In
	Bryan Harris			20 07		 		12	Bande	u m
Date Permi		05/24	/10	9 5/8	"	462).	462	20	0
Date Well	Work Commend							102	20	
	Work Complete			7"		169	4	1694	23	-
Verbal Plu										<u> </u>
	ssion granted o	n:		4 1/2'	,	0		5454	20	5
		Rig							 	
	cal Depth (ft.):			1 1/2'	,	0		5303	0	
	ured Depth(ft.)							2202	† – ř	
	er Depth (ft.):		75, 610						 	
	Depth (ft.):	none report							 	
	g mined in the									
Coal Depth		95								
	countered (N/Y)	Depth(s):	N							
OPEN FLO			o producing form	ations plea	ase in					
	Producing form	ation:	5TH ELK			Pay zone			5319 - 53	
	Gas: Initial oper							Initial open flow		_Bbl/d
	Final open flow		13		77/1		Oil: 1	Final open flow:	:0_	_Bbl/d
			initial and final te	sts:	N/A	Hours	^	` ^		
•	Static rock Pres	sure: 1	000			_psig(sur	face pr	essure) after	48	_Hours
	Second Produci	ng formation	: 3RD ELK			Pay zone	e Dept	h (ft)	4966 - 50	01
	Gas: Initial oper	n flow: C	o-mingled	•		MCF/D		Initial open flow		Bbl/d
	Final open flow		o-mingled			MCF/D		Final open flow:		Bbl/d
	Time of open fl		initial and final te	sts:		Hours		•		_
	Static rock Pres	sure: C	o-mingled			psig(sur	face pr	essure) after	-	Hours
			re personally example that, based on a							
obtaining th	e information I l	elieve that th	ne information is	ווויס פריווי	ate a	nd compl	ete			-

Signature | 1/6/10

RECEIVED

JAN 23 2017

WV GEOLOGICAL SURVEY MORGANTOWN, WY

Were co	ore samp	oles taken?	Yes	No <u>X</u>	Were	cuttings caught during drilling?	Yes	No_	X
Were	N	_Electrical,	N	Mechanical,	Y	or Geophysical logs recorded on	this well?		

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	
SANDY SHALE	32	54	
SAND	54	95	
COAL	95	100	1/01/77/ 🔾 100
SANDY SHALE	100		1/2" FW @ 100'
SAND	142	142	DAMP @ 130'
SANDY SHALE	200	200	
RED ROCK	240	240	
SANDY SHALE	265	265	1/4// 7777 (2.040)
SAND	350	350	1/4" FW @ 340'
SANDY SHALE	442	442	
SAND	540	540	DATE O 575 4/4 TV O 515
RED ROCK		650	DAMP @ 575', 1/4" FW @ 610'
SAND	650	770	
RED ROCK	770	860	
SANDY SHALE	860	925	
SAND	925	1000	
LITTLE LIME	1000	1210	
PENCIL CAVE SHALE	1210	1228	
BIG LIME	1228	1257	
WEIR SANDSTONE	1257	1504	
SHALE	1504	1546	
BEREA SANDSTONE	1546	1645	
UPPER GANTZ SANDSTONE	1645	1665	
GANTZ SANDSTONE GANTZ SANDSTONE	1665	1680	
LOWER GANTZ SANDSTONE	1680	1703	
SANDY SHALE	1703	1751	
BAYARD SANDSTONE	1751	2358	
SPEECHLEY A SANDSTONE	2358	2400	
SANDY SHALE	2400	2450	
SPEECHLEY B SANDSTONE	2450	2506	
BALLTOWN A SANDSTONE	2506	2954	•
BALLTOWN B SANDSTONE	2954	3033	
BALLTOWN C SANDSTONE	3033	3150	
SANDY SHALE	3150	3203	•
BENSON SILTSTONE	3203	4070	
SANDY SHALE	4070	4080	
ALEXANDER	4080	4264	
SHALE	4264	4300	
1ST ELK SILTSTONE	4300	4473	
SANDY SHALE	4473	4595	
2ND ELK SILTSTONE	4595	4721	
SANDY SHALE	4721	4751	
3RD ELK SILTSTONE	4751	4959	
SANDY SHALE	4959	5023	
5TH ELK SILTSTONE	5023	5291	
SHALE	5291	5340	
	5340	5568	TD

Third Producing formation	n: BENSON	Pay zone Depth (f	t) 407	3 - 407	79		
Gas: Initial open flow:	Co-mingled	MCF/D Oil: Initi	ial open flow:	0	Bbl/d		
Final open flow	Co-mingled	MCF/D Oil: Fina			Bbl/d		
Time of open flow betwee	n initial and final tests:	Hours					
Static rock Pressure:	Co-mingled	psig(surface pressure) after Hours					
Fourth Producing formation	on: BALLTOWN C	Pay zone Depth (ft) 3187 - 3193					
Gas: Initial open flow:	Co-mingled	MCF/D Oil: Initi			Bbl/d		
Final open flow	Co-mingled	MCF/D Oil: Fina		0	Bbl/d		
Time of open flow betwee		Hours					
Static rock Pressure:	Co-mingled	psig(surface pressure) after Hours					
Fifth Producing formation	: BALLTOWN B	Pay zone Depth (f	t) 303	4 - 304	16		
Gas: Initial open flow:	Co-mingled	MCF/D Oil: Initi			Bbl/d		
Final open flow	Co-mingled	MCF/D Oil: Fina		0	Bbl/d		
Time of open flow between	n initial and final tests:	Hours	_				
Static rock Pressure:	Co-mingled	_psig(surface press	ure) after	-	Hours		
Sixth Producing formation	n: BALLTOWN A	_Pay zone Depth (f	t) 298		93		
Gas: Initial open flow:	Co-mingled	MCF/D Oil: Init			Bbl/d		
Final open flow	Co-mingled	MCF/D Oil: Fina			Bbl/d		
Time of open flow between		Hours	_				
Static rock Pressure:	Co-mingled	psig(surface press	ure) after	_	Hours		