

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

Well Operator's Report of Well Work

Farm name: HOVATTER, BEATRICE Operator Well No.: 20

LOCATION: Elevation: 1440' Quadrangle: THORNTON

District: KNOTTSVILLE County: TAYLOR  
Latitude: 4,190 Feet South of 39 Deg. 20 Min. 0 Sec.  
Longitude: 7,400 Feet West of 79 Deg. 52 Min. 30 Sec.

Company: Texas Keystone, Inc.

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
560 Epsilon Drive Pittsburgh, PA 15238				
Agent: Jon Farmer	13 3/8"	40	40	Sanded In
Inspector: Bryan Harris				
Date Permit Issued: 12/12/11	9 5/8"	463	463	120
Date Well Work Commenced: 05/29/12				
Date Well Work Completed: 06/06/12	7"	1733	1733	250
Verbal Plugging:				
Date Permission granted on:	4 1/2"	0	5218	205
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft.): 5760				
Total Measured Depth(ft.): 5760				
Fresh Water Depth (ft.): 270				
Salt Water Depth (ft.): 535, 580				
Is coal being mined in the area (N/Y)? N				
Coal Depths (ft.): 320				
Void(s) encountered (N/Y) Depth(s): N				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation: 3RD ELK Pay zone Depth (ft) 5042 - 5030  
Gas: Initial open flow: G/S TSTM MCF/D Oil: Initial open flow: 0 Bbl/d  
Final open flow 368 MCF/D Oil: Final open flow: 0 Bbl/d  
Time of open flow between initial and final tests: N/A Hours  
Static rock Pressure: 860 psig(surface pressure) after 48 Hours

Second Producing formation: 1ST ELK Pay zone Depth (ft) 4771 - 4779  
Gas: Initial open flow: Co-mingled MCF/D Oil: Initial open flow: 0 Bbl/d  
Final open flow Co-mingled MCF/D Oil: Final open flow: 0 Bbl/d  
Time of open flow between initial and final tests:      Hours  
Static rock Pressure: Co-mingled psig(surface pressure) after - Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Steph [Signature]  
Signature

7/20/12  
Date

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Were core samples taken? Yes \_\_\_ No X Were cuttings caught during drilling? Yes \_\_\_ No X

Were N Electrical, N Mechanical, Y or Geophysical logs recorded on this well?  
 Y/N Y/N Y/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 3rd Elk 5042' - 5060' (30 shots). BD 4081 #. 250 sks 40/70 & 109 sks 20/40. 757 bbl. Gel Frac.

Perfed 1st Elk 4771' - 4779' (18 shots). BD 2800 #. 100 sks 40/70 & 84 sks 20/40. 515 bbl. Gel Frac.

Perfed Alexander 4336' - 4341' (20 shots). BD 3667 #. 100 sks 40/70 & 88 sks 20/40. 485 bbl. Gel Frac.

Perfed Balltown B 2950' - 2959' (21 shots). BD 3475 #. 100 sks 40/70 & 110 sks 20/40. 460 bbl. Gel Frac.

Perfed Speechley A 2353' - 2368' (22 shots). BD 3667 #. 100 sks 40/70 & 110 sks 20/40. 478 bbl. Gel Frac.

Formations Encountered:	Top Depth	Bottom Depth	Notes:
FILL	0	10	
SHALE	10	30	
SANDY SHALE	30	45	
SHALE	45	70	
SAND	70	110	
SHALE	110	160	
SANDY SHALE	160	320	1/2" FW @ 270'
COAL	320	330	
SANDY SHALE	330	365	
SAND	365	500	
SANDY SHALE	500	785	3" SW @ 535', 1" SW @ 580'
RED ROCK	785	835	
SANDY SHALE	835	985	
SAND	985	1058	
LITTLE LIME	1058	1074	
PENCIL CAVE SHALE	1074	1098	
BIG LIME	1098	1384	
WEIR SANDSTONE	1384	1432	
SHALE	1432	1534	
BEREA SANDSTONE	1534	1550	
UPPER GANTZ SANDSTONE	1550	1580	
GANTZ SANDSTONE.	1580	1621	
LOWER GANTZ SANDSTONE	1621	1647	
SANDY SHALE	1647	2287	
BAYARD SANDSTONE	2287	2349	
SPEECHLEY A SANDSTONE	2349	2373	
SANDY SHALE	2373	2420	
SPEECHLEY B SANDSTONE	2420	2838	
BALLTOWN A SANDSTONE	2838	2949	
BALLTOWN B SANDSTONE	2949	3106	
BALLTOWN C SANDSTONE	3106	3111	
SANDY SHALE	3111	4112	
BENSON SILTSTONE	4112	4144	
SANDY SHALE	4144	4319	
ALEXANDER	4319	4375	
SHALE	4375	4506	
1ST ELK SILTSTONE	4506	4572	
SANDY SHALE	4572	4731	
2ND ELK SILTSTONE	4731	4800	
SANDY SHALE	4800	5019	
3RD ELK SILTSTONE	5019	5091	
SANDY SHALE	5091	5365	
5TH ELK SILTSTONE	5365	5400	
SHALE	5400	5760	TD

Third Producing formation:	<u>ALEXANDER</u>	Pay zone Depth (ft)	<u>4336 - 4341</u>
Gas: Initial open flow:	<u>Co-mingled</u>	MCF/D	Oil: Initial open flow: <u>0</u> Bbl/d
Final open flow	<u>Co-mingled</u>	MCF/D	Oil: Final open flow: <u>0</u> Bbl/d
Time of open flow between initial and final tests:	<u>      </u>	Hours	
Static rock Pressure:	<u>Co-mingled</u>	psig(surface pressure) after	<u>-</u> Hours
Fourth Producing formation:	<u>BALLTOWN B</u>	Pay zone Depth (ft)	<u>2950 - 5959</u>
Gas: Initial open flow:	<u>Co-mingled</u>	MCF/D	Oil: Initial open flow: <u>0</u> Bbl/d
Final open flow	<u>Co-mingled</u>	MCF/D	Oil: Final open flow: <u>0</u> Bbl/d
Time of open flow between initial and final tests:	<u>      </u>	Hours	
Static rock Pressure:	<u>Co-mingled</u>	psig(surface pressure) after	<u>-</u> Hours
Fifth Producing formation:	<u>SPEECHLEY A</u>	Pay zone Depth (ft)	<u>2353 - 2368</u>
Gas: Initial open flow:	<u>Co-mingled</u>	MCF/D	Oil: Initial open flow: <u>0</u> Bbl/d
Final open flow	<u>Co-mingled</u>	MCF/D	Oil: Final open flow: <u>0</u> Bbl/d
Time of open flow between initial and final tests:	<u>      </u>	Hours	
Static rock Pressure:	<u>Co-mingled</u>	psig(surface pressure) after	<u>-</u> Hours

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