

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

Well Operator's Report of Well Work

Farm name: HARKER, ARTHUR Operator Well No.: 4
 LOCATION: Elevation: 1682' Quadrangle: THORNTON
 District: COVE County: BARBOUR
 Latitude: 6,130 Feet South of 39 Deg. 17 Min. 30 Sec.
 Longitude: 4,630 Feet West of 79 Deg. 52 Min. 30 Sec.

Company: Texas Keystone, Inc.

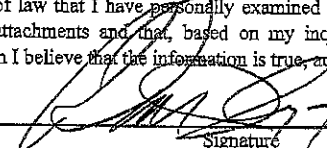
Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
560 Epsilon Drive Pittsburgh, PA 15238				
Agent: Jon Farmer	13 3/8"	42	42	Sanded in
Inspector: Bryan Harris				
Date Permit Issued: 02/03/11	9 5/8"	465	465	170
Date Well Work Commenced: 08/04/11				
Date Well Work Completed: 08/11/11	7"	1857	1857	250
Verbal Plugging:				
Date Permission granted on:	4 1/2"	0	5673	253
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft.): 5790				
Total Measured Depth (ft.): 5790				
Fresh Water Depth (ft.): 110, 740				
Salt Water Depth (ft.): none reported				
Is coal being mined in the area (N/Y)? N				
Coal Depths (ft.): 750				
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: 5TH ELK Pay zone Depth (ft) 5533 - 5565
 Gas: Initial open flow: G/S TSTM MCF/D Oil: Initial open flow: 0 Bbl/d
 Final open flow 304 MCF/D Oil: Final open flow: 0 Bbl/d
 Time of open flow between initial and final tests: N/A Hours
 Static rock Pressure: 810 psig(surface pressure) after 48 Hours

Second Producing formation: 3RD ELK Pay zone Depth (ft) 5205 - 5233
 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.


Signature
9-30-11
Date

RECEIVED
Office of Oil & Gas

MAR 16 2012

WV Department of
Environmental Protection

Were core samples taken? 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 5th Elk 5533' - 5565' (21 shots). BD 3147 #. 155 sks 40/70 & 100 sks 20/40. 501 bbl. Gel Frac.
 Perfed 3rd Elk 5205' - 5233' (28 shots). BD 4180 #. 250 sks 40/70 & 112 sks 20/40. 875 bbl. Gel Frac.
 Perfed 1st Elk 4763' - 4767' (12 shots). BD 4520 #. 105 sks 40/70 & 100 sks 20/40. 437 bbl. Gel Frac.
 Perfed Balltown B 3258' - 3268' (20 shots). BD 3800 #. 200 sks 40/70 & 115 sks 20/40. 539 bbl. Gel Frac.

Formations Encountered:	Top Depth	Bottom Depth	Notes:
FILL	0	15	
SANDY SHALE	15	30	
SANDSTONE	30	42	
SANDY SHALE	42	210	1/2" FW @ 110'
SANDSTONE	210	340	1/4" FW @ 240'
SANDY SHALE	340	375	
SANDSTONE	375	400	
SANDY SHALE	400	550	
SANDSTONE	550	640	
SANDY SHALE	640	750	
COAL	750	755	
SHALE	755	800	
SANDSTONE	800	980	
SANDY SHALE	980	1215	
SANDSTONE	1215	1280	
SANDY SHALE	1280	1396	
LITTLE LIME	1396	1401	
PENCIL CAVE SHALE	1401	1437	
BIG LIME	1437	1663	
SQUAW SANDSTONE	1663	1689	
SHALE	1689	1715	
WEIR SANDSTONE	1715	1764	
SHALE	1764	1849	
BEREA SANDSTONE	1849	1858	
SHALE	1858	1904	
GANTZ SANDSTONE	1904	1944	
LOWER GANTZ SANDSTONE	1944	1983	
SANDY SHALE	1983	2579	
BAYARD SANDSTONE	2579	2615	
SANDY SHALE	2615	2631	
SPEECHLEY A SANDSTONE	2631	2676	
SANDY SHALE	2676	3247	
BALLTOWN B SANDSTONE	3247	3272	
SHALE	3272	4317	
BENSON SILTSTONE	4317	4323	
SANDY SHALE	4323	4507	
ALEXANDER	4507	4545	
SHALE	4545	4707	
1ST ELK SILTSTONE	4707	4771	
SANDY SHALE	4771	4948	
2ND ELK SILTSTONE	4948	5002	
SANDY SHALE	5002	5200	
3RD ELK SILTSTONE	5200	5264	
SANDY SHALE	5264	5525	
5TH ELK SILTSTONE	5525	5578	
SHALE	5578	5790	TD

Third Producing formation:	<u>1ST ELK</u>	Pay zone Depth (ft)	<u>4763 - 4767</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:		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>3258 - 3268</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:		Hours	
Static rock Pressure:	<u>Co-mingled</u>	psig(surface pressure) after	<u>-</u> Hours