

RECEIVED  
Office of Oil & Gas  
R-35  
AUG 2 10 08  
WV Department of  
Environmental Protection

DATE: 08/06/08  
API #: 47-001-02959

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

MS

Well Operator's Report of Well Work

Farm name: Robert Smith Operator Well No.: 1

LOCATION: Elevation: 1629' Quadrangle: Thornton

District: Cove County: Barbour  
Latitude: 3220 Feet South of 39 Deg. 17 Min. 30 Sec.  
Longitude: 6,200 Feet West of 79 Deg. 52 Min. 30 Sec.

Company: Texas Keystone, Inc.

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
Address: 560 Epsilon Drive Pittsburgh PA, 15238				
Agent: Jon Farmer	13 3/8"	42'	42'	Sanded In
Inspector: Bill Hatfield				
Date Permit Issued: 04/25/2008	9 5/8"	464'	464'	135 SKS
Date Well Work Commenced: 06/09/08				
Date Well Work Completed: 06/16/08	7"	1394'	1394'	265 SKS
Verbal Plugging:				
Date Permission granted on: N/A	4 1/2"	5601'	5601'	111 SKS
Rotary X Cable Rig				
Total Depth (feet): 6512'				
Fresh Water Depth (ft.): 765'				
Salt Water Depth (ft.):				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.):				

OPEN FLOW DATA

Producing formation 5<sup>th</sup> Elk Pay zone depth (ft) 5502' - 5514'  
Gas: Initial open flow G/S TSTM MCF/d Oil: Initial open flow 0 Bbl/d  
Final open flow 531 MCF/d Oil: Final open flow 0 Bbl/d  
Time of open flow between initial and final tests NA Hours  
Static rock Pressure 1300 psig (surface pressure) after 50 Hours

Second Producing formation 3<sup>rd</sup> Elk Pay zone depth (ft) 5142' - 5173'  
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 NA Hours  
Static rock Pressure Co-mingled psig (surface pressure) after \_\_\_\_\_ Hours

Third Producing formation 1<sup>st</sup> Elk Pay zone depth (ft) 4688' - 4692'  
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 NA Hours  
Static rock Pressure Co-mingled psig (surface pressure) after \_\_\_\_\_ Hours

Fourth Producing formation Alexander Pay zone depth (ft) 4456' - 4476'  
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 NA Hours  
Static rock Pressure Co-mingled psig (surface pressure) after \_\_\_\_\_ Hours

Fifth Producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Final open flow Co-mingled MCF/d Oil: Final open flow 0 Bbl/d  
Time of open flow between initial and final tests NA Hours  
Static rock Pressure Co-mingled psig (surface pressure) after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM 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 ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed: \_\_\_\_\_  
By: PAUL M. HERZOG  
Date: 8-18-08

08/06/08

Well fractured 06/19/08

Perfed 5<sup>th</sup> Elk 5502' - 5504' (4 shots) & 5510' - 5514' (12 shots). BD 3196#. 350 sks 20/40. 721 bbl - Gel Frac.

Perfed 3<sup>rd</sup> Elk 5142' - 5144' (4 shots), 5158' - 5162' (8 shots) & 5171' - 5173' (4 shots).

BD 2732#. 250 sks 20/40. 690 bbl - Gel Frac.

Perfed 1<sup>st</sup> Elk 4688' - 4692' (12 shots). BD 4045#. 200 sks 20/40. 563 bbl - Gel Frac.

Perfed Alexander 4456' - 4458' (4 shots) & 4470' - 4476' (12 shots). BD 3196#. 200 sks 20/40. 556 bbl - Gel Frac.

ROCK DESCRIPTION	TOP DEPTH	BOTTOM DEPTH	NOTES
FILL	0	8	
SHALE	8	41	
REDROCK SHALE	41	82	
SANDY SHALE	82	172	
SANDSTONE	172	292	
SANDY SHALE	292	382	
SANDSTONE	382	492	
SANDY SHALE	492	700	
SANDSTONE	700	790	¼" FW @ 765'
SANDY SHALE	790	960	
REDROCK SHALE	960	1080	
SANDSTONE	1080	1170	
REDROCK SHALE	1170	1280	
LITTLE LIME	1280	1295	
PENCIL CAVE SHALE	1295	1314	
BIG LIME	1314	1538	
SHALE	1538	1551	
SANDSTONE	1551	1575	
SHALE	1575	1617	
WEIR SANDSTONE	1617	1656	
SHALE	1656	1750	
BEREA SANDSTONE	1750	1777	
SHALE	1777	1795	
GANTZ SANDSTONE	1795	1874	
50 FOOT SANDSTONE	1874	1915	
SANDY SHALE	1915	2541	
SPEECHLEY A SANDSTONE	2541	2585	
SANDY SHALE	2585	2789	
SHALE	2789	3050	
BALLTOWN A SANDSTONE	3050	3138	
SHALE	3138	3167	
BALLTOWN B SANDSTONE	3167	3254	
SHALE	3254	3300	
SANDY SHALE	3300	3469	
SHALE	3469	4065	
LOWER RILEY SILTSTONE	4065	4118	
SHALE	4118	4230	
BENSON SILTSTONE	4230	4242	
SANDY SHALE	4242	4451	
ALEXANDER SILTSTONE	4451	4478	
SHALE	4478	4633	
1 <sup>ST</sup> ELK SILTSTONE	4633	4700	
SANDY SHALE	4700	4876	
2 <sup>ND</sup> ELK SILTSTONE	4876	4916	
SHALE	4916	4982	
2 <sup>ND</sup> ELK A SILTSTONE	4982	4990	
SANDY SHALE	4990	5043	
SHALE	5043	5140	
3 <sup>RD</sup> ELK SILTSTONE	5140	5186	
SHALE	5186	5463	
5 <sup>TH</sup> ELK SILTSTONE	5463	5515	GAS SHOW @ 5510' TSTM
SHALE	5515	6512	TD



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**west virginia** department of environmental protection

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Office of Oil and Gas  
601 57th Street SE  
Charleston, WV 25304  
(304) 926-0450  
(304) 926-0452 fax

Joe Manchin III, Governor  
Stephanic R. Timmermeyer, Cabinet Secretary  
[www.wvdep.org](http://www.wvdep.org)

April 25, 2008

**WELL WORK PERMIT**

**New Well**

This permit, API Well Number: 47-102959, issued to TEXAS KEYSTONE INC, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, well operators report of well work, is to be submitted to this office within 90 days of completion of drilling, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

A handwritten signature in black ink, appearing to read 'James Martin'.

James Martin  
Chief

Operator's Well No: R SMITH 1  
Farm Name: SMITH, ROBERT L.  
**API Well Number: 47-102959**  
**Permit Type: New Well**  
Date Issued: 04/25/2008

**Promoting a healthy environment.**

1-02959

2/25

**STATE OF WEST VIRGINIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
WELL WORK PERMIT APPLICATION**

1) Well Operator Texas Keystone, Inc.

	Barbour	Cove	Thornton 7.5'
Operator ID	County	District	Quadrangle

2) Operators Well Number: R. Smith #1      3) Elevation: 1629'

4) Well Type: (a) Oil \_\_\_\_\_ or Gas X  
 (b) If Gas: Production X / Underground Storage \_\_\_\_\_  
 Deep \_\_\_\_\_ / Shallow X

5) Proposed Target Formation(s): Elk  
 6) Proposed Total Depth: 5930 Feet  
 7) Approximate fresh water strata depths: 300'  
 8) Approximate salt water depths: 1700'  
 9) Approximate coal seam depths: 85' 149' 200' 345' 400'  
 10) Does land contain coal seams tributary to active mine? No

11) Describe proposed well work To Drill and Stimulate a New Well

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12) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	

Conductor	13 3/8"			30'	30'	
Fresh Water	9 5/8"			450'	450'	CTS
Coal						
Intermediate	7"			1129'	1129'	CTS
Production	4 1/2"			5930'	5930'	By Rule 35 CSR 4-11.1
Tubing						CID 4-14-08
Liners						

Packers: Kind \_\_\_\_\_  
 Sizes \_\_\_\_\_  
 Depths Set CK410

\$650

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 APR 23 2008  
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