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

DATE: 9/14/2011 API #: 4700103165

## Well Operator's Report of Well Work

L L	District:		1220	0 1 1		\ Tomononi III \		
L L		ion:1701'		_Quadrangle:	NESTORVILLE			
L L		(	COVE	County:		BARBOUR		
L	Latitude:	7,920	Feet South of		15 Mir			
	Longitude:		Feet West of	79 Deg.	52 Mir			
ompany, T	Longitude	7,470	reet west of		NIII	n. 30 Sec.		
Joinpany: 1	Texas Keystone,	Inc.						
	60 Epsilon Driv			Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.	
	Pittsburgh, PA 1	5238						
	on Farmer			13 3/8"	42	42	SANDED IN	
nspector: B								
Date Permit			16/10	9 5/8"	462	462	160	
	ork Commenc		04/11					
	ork Completed	1: 06/1	13/11	7"	1857	1857	230	
erbal Plugg								
	sion granted or	1:		4 1/2"	0	5250	185	
Rotary	X Cable	Rig				Witer, Street, all Street	THE ST PRODUCES	
Total Vertica	al Depth (ft.):	5730				PLC	12 1 - 1-1	
otal Mass	red Depth(ft.):	5730				Office of	Jil & Gas	
otal Wleasul		100						
	Depth (ft.):	400						
resh Water		1430				SEP 2	9 2011	
resh Water alt Water D	Depth (ft.):	1430	? N			SEP 2	9 2011	
resh Water Salt Water D s coal being	Depth (ft.): mined in the a	1430 rea (N/Y)	? N					
Fresh Water Salt Water D s coal being Coal Depths Toid(s) encou	Depth (ft.): mined in the a (ft.): untered (N/Y)	1430 area (N/Y) 110, 855 Depth(s):	N	ations places in		WV Dapa	the set of all Frotecti	
resh Water alt Water D s coal being coal Depths oid(s) encou PEN FLOW P G F T	Depth (ft.): mined in the a (ft.): untered (N/Y)  DATA (If n Producing forma Gas: Initial open Final open flow Fime of open flow Static rock Press	1430 area (N/Y) 110, 855 Depth(s): nore than to ation: a flow: bow between sure:	N wo producing form <u>5TH ELK</u> G/S TSTM  298 In initial and final te	sts: N/A	Pay zone Dep MCF/D Oil: MCF/D Oil: Hours psig(surface p	al data on separate th (ft) Initial open flow Final open flow oressure) after	te sheet)  5129 - 5137  v: 0 Bbl/d	
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Fresh Water Calt Water D s coal being Coal Depths Froid(s) encor OPEN FLOW F G F T S G F	Depth (ft.): mined in the a (ft.): untered (N/Y)  V DATA (If n Producing forma Gas: Initial open Final open flow Final open flow Finatic rock Press Gecond Producin Gas: Initial open Final open flow	nrea (N/Y) 110, 855 Depth(s): nore than to the street of t	N  Swo producing form  5TH ELK  G/S TSTM  298 In initial and final te 920  DOI: ALEXANDER  Co-mingled  Co-mingled	sts: <u>N/A</u>	Pay zone Dep MCF/D Oil: MCF/D Oil: Hours psig(surface pay zone Dep MCF/D Oil: MCF/D Oil:	al data on separate th (ft) Initial open flow pressure) after oth (ft)	te sheet)  5129 - 5137  v: 0 Bbl/c  48 Hour  4451 - 4458  v: 0 Bbl/c	
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Were core san	ples taken?	Yes	No_X	Were	cuttings caught during drilling?	Yes	No_	<u>X</u> '
Were N	_Electrical,	N Y/N	Mechanical,	Y Y/N	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 5129' - 5137' (18 shots). BD 4294 #. 307 sks 20/40. 538 bbl. Gel Frac.

Perfed Alexander 4451' - 4458" (21 shots). BD 4087 #. 252 sks 20/40. 529 bbl. Gel Frac.

Perfed Benson 4220' - 4226' (18 shots). BD 4367 #. 200 sks 20/40. 470 bbl. Gel Frac.

Perfed Balltown A 3140' - 3156' (32 shots). BD 1880 #. 350 sks 20/40. 668 bbl. Gel Frac.

Formations Encountered:	Top Depth	Bottom Depth	Notes:	
EII I	0	15		
FILL SANDY SHALE	15	35		
SANDY SHALE	35			
SANDYSHALE		42		
SANDY SHALE	42	52		
SANDSTONE	52	110		
COAL	110	115		
SANDY SHALE	115	175		
REDROCK SHALE	175	200		
SANDY SHALE	200	262		
SANDSTONE	262	322		
SANDY SHALE	322	385		
SANDSTONE	385	490	DAMP @ 400'	
SANDY SHALE	490	530		
SANDSTONE	530	590		
SANDY SHALE	590	740		
SANDSTONE ·	740	855		
COAL	855	900		
SANDY SHALE	900	1040		
REDROCK SHALE	1040	1285		
SANDY SHALE	1285	1391		
LITTLE LIME	1391	1411		
PENCIL CAVE SHALE	1411	1443	DAMP @ 1430'	
BIG LIME	1443	1660		
SANDY SHALE	1660	1692		
WEIR SANDSTONE	1692	1720		
SHALE	1720	1834		
UPPER GANTZ SANDSTONE	1834	1847		
SHALE	1847	1899		
GANTZ SANDSTONE	1899	1919		
SANDY SHALE	1919	3138		
BALLTOWN A SANDSTONE	3138	3170		
SHALE	3170	3990		
SANDY SHALE	3990	4220		
BENSON SILTSTONE	4220	4226		
SANDY SHALE	4226	4425		
ALEXANDER SILTSTONE	4425	4458		
SANDY SHALE	4458	4626		
IST ELK SILTSTONE	4626	4670		
SANDY SHALE	4670	4882		
2ND ELK SILTSTONE	4882	4898		
SHALE	4898	5001		
2ND ELK A SILTSTONE	5001	5008		
SANDY SHALE	5008	5129		
3RD ELK SILTSTONE	5129	5150		
SANDY SHALE	5150	5267		40/44/004:
4TH ELK SILTSTONE	5267	5270		10/14/2011
SANDY SHALE	5270	5459		
5TH ELK SILSTONE	5459	5730		
SHALE	5730	5730	TD	

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  Fourth Producing formation: BALLTOWN A Pay zone Depth (ft) 3140 - 3156  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  Fifth Producing formation: Pay zone Depth (ft)  Gas: Initial open flow: MCF/D Oil: Initial open flow: 0 Bbl/d Final open flow: MCF/D Oil: Final open flow: 0 Bbl/d Final open flow MCF/D Oil: Final open flow: 0 Bbl/d Final open flow between initial and final tests: Hours  Static rock Pressure: psig(surface pressure) after - Hours  Static rock Pressure: psig(surface pressure) after - Hours	Third Producing formation	n: BENSON	Pay zone Depth (ft)	4220 - 4226
Time of open flow between initial and final tests:  Static rock Pressure:  Co-mingled  Pay zone Depth (ft)  Gas: Initial open flow:  Co-mingled  MCF/D Oil: Initial open flow:  O-mingled  MCF/D Oil: Final open flow:  O-mingled  MCF/D Oil: Final open flow:  O-mingled  MCF/D Oil: Final open flow:  O-mingled  Time of open flow between initial and final tests:  Static rock Pressure:  Co-mingled  Pay zone Depth (ft)  Gas: Initial open flow:  Pay zone Depth (ft)  MCF/D Oil: Initial open flow:  O-mingled  MCF/D Oil: Initial open flow:  O-mingled  MCF/D Oil: Initial open flow:  O-mingled  MCF/D Oil: Final open flow:  O-mingled  Hours  Fifth Producing formation:  Pay zone Depth (ft)  MCF/D Oil: Initial open flow:  O-mingled  HOURS	Gas: Initial open flow:	Co-mingled	MCF/D Oil: Initial open flo	ow: 0 Bbl/d
Static rock Pressure: Co-mingled psig(surface pressure) after - Hours  Fourth Producing formation: BALLTOWN A Pay zone Depth (ft) 3140 - 3156  Gas: Initial open flow: Co-mingled MCF/D Oil: Initial open flow: 0 Bbl/d  Final open flow Detween initial and final tests: Hours  Static rock Pressure: Co-mingled psig(surface pressure) after - Hours  Fifth Producing formation: Pay zone Depth (ft)  Gas: Initial open flow: MCF/D Oil: Initial open flow: 0 Bbl/d  Final open flow MCF/D Oil: Initial open flow: 0 Bbl/d  Final open flow MCF/D Oil: Final open flow: 0 Bbl/d  Time of open flow between initial and final tests: Hours	Final open flow	Co-mingled	MCF/D Oil: Final open flo	w: 0 Bbl/d
Fourth Producing formation: BALLTOWN A  Pay zone Depth (ft)  3140 - 3156  Gas: Initial open flow: Co-mingled  MCF/D Oil: Initial open flow: 0 Bbl/d  Final open flow between initial and final tests:  Static rock Pressure: Co-mingled  Fifth Producing formation:  Pay zone Depth (ft)  Gas: Initial open flow: 0 Bbl/d  Final open flow: MCF/D Oil: Initial open flow: 0 Bbl/d  First Producing formation:  Pay zone Depth (ft)  Gas: Initial open flow: 0 Bbl/d  Final open flow  MCF/D Oil: Initial open flow: 0 Bbl/d  Final open flow between initial and final tests: Hours	Time of open flow between	en initial and final tests:	Hours	<del></del>
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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  Fifth Producing formation: Pay zone Depth (ft)  Gas: Initial open flow: MCF/D Oil: Initial open flow: 0 Bbl/d Final open flow MCF/D Oil: Final open flow: 0 Bbl/d Time of open flow between initial and final tests: Hours	Fourth Producing formation	on: BALLTOWN A	Pay zone Depth (ft)	3140 - 3156
Time of open flow between initial and final tests:  Static rock Pressure:  Co-mingled  Pay zone Depth (ft)  Gas: Initial open flow:  Final open flow  MCF/D Oil: Initial open flow:  O Bbl/d  Time of open flow between initial and final tests:  Hours	Gas: Initial open flow:	Co-mingled	MCF/D Oil: Initial open flo	ow: 0 Bbl/d
Static rock Pressure: Co-mingled psig(surface pressure) after - Hours  Fifth Producing formation: Pay zone Depth (ft)  Gas: Initial open flow: MCF/D Oil: Initial open flow: 0 Bbl/d  Final open flow MCF/D Oil: Final open flow: 0 Bbl/d  Time of open flow between initial and final tests: Hours	Final open flow	Co-mingled	MCF/D Oil: Final open flo	w: 0 Bbl/d
Fifth Producing formation:  Gas: Initial open flow:  Final open flow  MCF/D  MCF/D  Oil: Final open flow:  MCF/D  Oil: Final open flow:  Time of open flow between initial and final tests:  Hours	Time of open flow between	en initial and final tests:	Hours	<del></del>
Gas: Initial open flow:  MCF/D Oil: Initial open flow:  O Bbl/d  Final open flow  MCF/D Oil: Final open flow:  Hours  MCF/D Oil: Final open flow:  Bbl/d	Static rock Pressure:	Co-mingled	psig(surface pressure) after	- Hours
Gas: Initial open flow:  MCF/D Oil: Initial open flow:  O Bbl/d  Final open flow  MCF/D Oil: Final open flow:  O Bbl/d  Time of open flow between initial and final tests:  Hours				,——
Final open flow MCF/D Oil: Final open flow: 0 Bbl/d Time of open flow between initial and final tests: Hours	Fifth Producing formation	:	Pay zone Depth (ft)	
Time of open flow between initial and final tests:  Hours	Gas: Initial open flow:		MCF/D Oil: Initial open flo	ow: 0 Bbl/d
•	Final open flow		MCF/D Oil: Final open flo	w: 0 Bbl/d
Static rock Pressure: psig(surface pressure) after - Hours	Time of open flow between	en initial and final tests:	Hours	<del></del>
	Static rock Pressure:		psig(surface pressure) after	Hours
	Static rock Pressure:	_	psig(surface pressure) after	- Hours