Date Permission granted on:

Fresh Water Depth (ft.):

Salt Water Depth (ft.):

Coal Depths (ft.):

X Cable Total Vertical Depth (ft.): 5900 Total Measured Depth(ft.): 5900

Is coal being mined in the area (N/Y)?

Void(s) encountered (N/Y) Depth(s):

310', 620'

252', 610'

none reported

N

Rotary

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

Well Operator's Report of Well Work

			II		-11 11 0	***	120	. WY	•	8 8 20 V
Farm name	JEN	NINGS, G. L	YNN	Operato	r Well	No.:		VVZ Room	E E	* 2012
LOCATIO	N: Elevation:	1	583	_Quadrai	ngle:			THOR		
	District:	RE	NO	County:				PRESTO	N	
	Latitude:	13,200	_Feet South of	_ 39	Deg.	22	Min.	30	Sec.	
	Longitude:	3,210	Feet West of	79	Deg.	52	Min.	30	Sec.	
Company:	Texas Keystone	ve		Casing Tubing		Used in drilling		Left in	well	Cement fill up
	Pittsburgh, PA 1	5238								
Agent:	Jon Farmer			13 3	/8"	42		42	2	Sanded In
Inspector:	Bryan Harris									
Date Perm	it Issued:	05/12/	11	9 5/	8"	432	?	43	2	180
Date Well	Work Commenc	ed: 11/30/	11							
Date Well	Work Completed	d: 12/07/	11	7	,	173	4	173	34	240
Verbal Plu	gging:		•					i		

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

Producing formation:	3RD ELK		Pay zone I	Depth (ft)	54	53 - 540	58
Gas: Initial open flow:	G/S TSTM		MCF/D (Oil: Initial open	flow:	0	Bbl/d
Final open flow	1278		MCF/D (Oil: Final open fl	low:	0 -	Bbl/d
Time of open flow between	en initial and final tests:	N/A	Hours	-			_
Static rock Pressure:	690		psig(surfac	ce pressure) after	r	48	Hours
				-			-
Second Producing format	ion: LOWER RILEY		Pay zone I	Depth (ft)	41	75 - 418	31
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 fl	low:	0	Bbl/d
Time of open flow between	en initial and final tests:		Hours	_			•
Static rock Pressure:	Co-mingled		_ _psig(surfac	ce pressure) after	:	-	Hours

4 1/2"

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

DATE:

5594

246

Were co	ore samples tal	ken? Yes	No <u>X</u>	. Were	cuttings caught during drilling?	Yes	No_	X
Were	N Elect	rical, 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 5453' - 5468' (12 shots). BD 3584 #. 0 SKS 40/70 & 0 sks 20/40. 70 bbl. Gel Frac. Perfed Lower Riley 4175' - 4181' (24 shots). BD 2440 #. 200 sks 40/70 & 109 sks 20/40. 667 bbl. Gel Frac. Perfed Balltown B 3221' - 3236' (45 shots). BD 2500 #. 250 sks 40/70 & 109 sks 20/40. 723 bbl. Gel Frac. Perfed Bayard 2566' - 2571' (20 shots). BD 3389 #. 150 sks 40/70 & 121 sks 20/40. 557 bbl. Gel Frac.

Formations Encountered:	Top Depth	Bottom Depth	Notes:
FILL	0	15	
SHALE	15	20	
SANDY SHALE	20	30	
SANDIGIALE	30		
SANDSTONE SANDY SHALE		58	
SANDSTONE	58	87	
SHALE	87	102	
	102	125	
SANDY SHALE	125	172	
SANDSTONE	172	232	
SHALE	232	252	
COAL	252	260	
SHALE	260	282	
SANDSTONE	282	322	DAMP FW @ 225'
SANDY SHALE	322	382	
SANDSTONE	382	550	,
SANDY SHALE	550	610	
COAL	610	620	DAMP FW @ 620'
SANDY SHALE	620	875	
SHALE	875	1010	
RED ROCK	1010	1150	
SANDSTONE	1150	1230	
RED ROCK	1230	1300	
LITTLE LIME	1300	1313	
PENCIL CAVE SHALE	1313	1350	
BIG LIME	1350	1551	
SHALE	1551	1580	
SQUAW SANDSTONE	1580	1603	
SANDY SHALE	1603	1640	
WEIR SANDSTONE	1640	1678	
SANDY SHALE	1678	1780	
BEREA SANDSTONE	1780	1800	
UPPER GANTZ SANDSTONE	1800	1816	
SHALE	1816	1840	
GANTZ SANDSTONE	1840	1851	
SANDY SHALE	1851	2549	
BAYARD SANDSTONE	2 549	2578	
SANDY SHALE	2578	3221	
BALLTOWN B SANDSTONE	3221	3245	
SANDY SHALE	3245	3750	
SHALE	3750	4175	•
LOWER RILEY SILTSTONE	4175	4800	
IST ELK SILTSTONE	4800	4858	
SANDY SHALE	4858	5016	
2ND ELK SILTSTONE	5016	5084	
SHALE	5084	5152	
2ND ELK A SILTSTONE	5152	5193	
SANDY SHALE	5193	5428	
3RD ELK SILTSTONE	5428	5503	
SANDY SHALE	5503	5900	TD
Canada A Diddidd	5505	3700	110

Third Producing formation	n: BALLTOWN B	Pay zone Depth (ft) 3	221 - 3236
Gas: Initial open flow:	Co-mingled	MCF/D Oil: Initial open flow:	0 Bb1/d
Final open flow	Co-mingled	MCF/D Oil: Final open flow:	0 Bbl/d
Time of open flow between	n initial and final tests:	Hours	
Static rock Pressure:	Co-mingled	psig(surface pressure) after	Hours
			•
Fourth Producing formation	on: BAYARD	Pay zone Depth (ft) 2	566 - 2571
Gas: Initial open flow:	Co-mingled	MCF/D Oil: Initial open flow	
Final open flow	Co-mingled	MCF/D Oil: Final open flow:	0Bbl/d
Time of open flow between	n initial and final tests:	Hours	
Static rock Pressure:	Co-mingled	psig(surface pressure) after	 Hours