

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 039 - 06367 County KANAWHA District ELK
Quad BLUE CREEK 7.5' Pad Name N/A Field/Pool Name BLUE CREEK
Farm name J.V.R. SKINNER Well Number 21
Operator (as registered with the OOG) PETRO HOLDINGS INC.
Address P.O. BOX 987 City SPENCER State WV Zip 25276

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,253,939 Easting 463,230
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 1018 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine
Mud Type(s) and Additive(s)

Date permit issued 07/28/14 Date drilling commenced 12/01/14 Date drilling ceased 12/04/14
Date completion activities began 12/15/14 Date completion activities ceased 01/19/15
Verbal plugging (Y/N) N/A Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft N/A Open mine(s) (Y/N) depths _____
Salt water depth(s) ft +/- 1750' Void(s) encountered (Y/N) depths NO
Coal depth(s) ft 454' - 460' Cavern(s) encountered (Y/N) depths NO
Is coal being mined in area (Y/N) NO

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JUN 02 2015
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Reviewed by:
AL 6/3/15 ✓
W.S. 6/05/2015

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CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor							
Surface	8 7/8"	7"	547'	USED	20	168'	YES
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6 1/4"	4 1/2"	2205	NEW/USED	10.5/11.6	N/A	YES
Tubing		2 3/8"	2135	USED	4.6		
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface	A	120	15.6	1.18	142	CTS	8
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	50/50 POZ	230	14.4	1.28	294	+/- 87	N/A
Tubing							

Drillers TD (ft) 2240

Loggers TD (ft) 2220

Deepest formation penetrated WEIR

Plug back to (ft) N/A

Plug back procedure _____

Kick off depth (ft) N/A

Check all wireline logs run
 caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING _____

PRODUCTION - 4 1/2" CASING CENTRALIZERS 2017, 2049, 2081, 2113

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WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

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06/05/2015

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PRODUCING FORMATION(S)	DEPTHS		
	2007-2080	TVD	2007-2080 MD
WEIR			

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 250 psi Bottom Hole _____ psi DURATION OF TEST 168 hrs

OPEN FLOW Gas 50 mcfpd Oil 3 bpd NGL _____ bpd Water TRACE bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
SHALE	0	70	0		
SAND	70	90			
RED ROCK	90	110			
SHALE	110	260			
SAND	260	280			
SHALE	280	454			
COAL	454	460			
SHALE	460	740			
SAND	740	760			
SHALE	760	798			
SAND	798	806			
SHALE	806	811			
SAND	811	844			
SHALE	844	906			

Please insert additional pages as applicable.

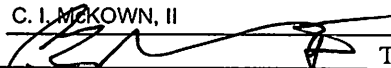
Drilling Contractor DECKER DRILLING INC.
Address 11565 STATE ROUTE 676 City VINCENT State OH Zip 45784

Logging Company PRECISION ENERGY SERVICES/WEATHERFORD (SEE ADDITIONAL PAGE)
Address 500 WINS COTT ROAD City FORT WORTH State TX Zip 78126

Cementing Company UNIVERSAL WELL SERVICES
Address PO BOX 2437 City BUCKHANNON State WV Zip 26201

Stimulating Company UNIVERSAL WELL SERVICES
Address PO BOX 2437 City BUCKHANNON State WV Zip 26201

Please insert additional pages as applicable.

Completed by C. I. MCKOWN, II Telephone (304) 565-7318
Signature  Title ENGINEER Date 05/27/2015

Submission of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

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