

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

API 47 - 095 - 02312 County Tyler District Lincoln  
Quad Paden City Pad Name \_\_\_\_\_ Field/Pool Name \_\_\_\_\_  
Farm name Russell and Mary Myers Well Number Scruboak 1 V-1  
Operator (as registered with the OOG) Alliance Petroleum Corporation  
Address 4150 Belden Village Ave., NW Suite 410 City Canton State Ohio Zip 45750

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
Top hole Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Landing Point of Curve Northing \_\_\_\_\_ Easting \_\_\_\_\_  
Bottom Hole Northing \_\_\_\_\_ Easting \_\_\_\_\_

Elevation (ft) 814 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)  
Clay Stay -KCL - Soap

Date permit issued 10/9/15 Date drilling commenced 11/3/15 Date drilling ceased 11/10/15  
Date completion activities began 1-6-16 Date completion activities ceased 1-14-16  
Verbal plugging (Y/N) \_\_\_\_\_ 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 None Recorded Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 1154' - 1458' Void(s) encountered (Y/N) depths N  
Coal depth(s) ft Pittsburg 480' - 482' Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

**APPROVED**

NAME: Derek A. Hoyt  
DATE: 3-16-16

Reviewed by: DH  
AXX 03/18/2016

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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	15"	13-3/8"	30'	New	H-40 36#		Driven
Surface	13-3/4"	<del>9</del> 5/8"	379'	New	H-40 26#		Y
Coal							
Intermediate 1	8-3/4"	7"	1878'	New	J-55 17#		Y
Intermediate 2							
Intermediate 3							
Production	6-1/2"	4-1/2"	5361'	New	J-55 10.5#		N/A
Tubing		1-1/2"	5200	Used	J-55 2.75#		N/A
Packer type and depth set							

Comment Details 4-1/2 - 6 Total Centralizers - Every 100' off bottom

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Driven						
Surface	Class A	130				CTS	8
Coal							
Intermediate 1	Class A	252				CTS	8
Intermediate 2							
Intermediate 3							
Production	50/50 POZ	145				2490'	N/A
Tubing							

Drillers TD (ft) 5401' Loggers TD (ft) 5399'

Deepest formation penetrated Rhinestreet Plug back to (ft) \_\_\_\_\_

Plug back procedure \_\_\_\_\_

Kick off depth (ft) \_\_\_\_\_

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 \_\_\_\_\_

4-1/2 - 6 Centralizers every 100' off bottom

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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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	1-6-16	5212'	5143'	21	Rhinestreet Shale
		4970'			Big Bore Frac Plug
2	1-7-16	4900'	4891'	12	Stray Zone
2	1-7-16	4688'	4684'	10	Alexander

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	1/7/16	25	2345	3000	1536	200 Sks.	1113	500 Gal. Acid
2	1/7/16	28	2047	2400	1563	200 Sks.	895	500 Gal. Acid

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Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS			
Rhinestreet	5212'	TVD	5143'	MD
Alexander	4688'		4684'	

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 1205 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST 48 hrs

OPEN FLOW Gas 30 mcfpd Oil .5 bpd NGL \_\_\_\_\_ bpd Water .5 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		**SEE ATTACHED GEOLOGIST REPORT

Please insert additional pages as applicable.

Drilling Contractor Nexus Drilling  
Address P.O. Box 903 City Jane Lew State WV Zip 26378

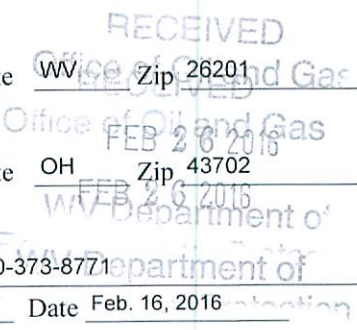
Logging Company Weatherford  
Address 6 Garton Plaza City Weston State WV Zip 26452

Cementing Company Universal Well Services  
Address P.O. Box 2437 City Buckhannon State WV Zip 26201

Stimulating Company Producers Service Corp.  
Address 109 S. Graham Street City Zanesville State OH Zip 43702

Please insert additional pages as applicable.

Completed by Martin L. Miller Telephone 740-373-8771  
Signature *Martin L. Miller* Title Sr. VP Of Operations Date Feb. 16, 2016



12956 Claylick Road  
Newark, Ohio 43056-9146  
Office 740-763-2758  
Home 740-763-2758  
Mobile 330-763-0479

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# National Minerals Corporation

**ALLIANCE PETROLEUM CORPORATION**

**SCRUB OAK 1V-1**

**LINCOLN DISTRICT**

**TYLER COUNTY, WEST VIRGINIA**



WELL: Alliance Petroleum Corporation #1V-1 Scrub Oak

LOCATION: Lincoln District, Tyler County, West Virginia.

PERMIT NUMBER: 47-095-02312.

ELEVATION: 814' Ground 822'KB.

STATUS: Preparing to complete as a gas producer.

CASING: 7" @ 1878'.

TOTAL DEPTH: 5401' Driller 5399' Logger.

CONTRACTOR: Nexus Drilling Co.

TOOLS: Rotary.

COMPLETED DRILLING: 11/10/2015.

FORMATION AT TOTAL DEPTH: Devonian shale.

ELECTRICAL SURVEYS: Gamma Ray- Compensated Density- Neutron- Caliper- Temperature- Induction- Gas Detector by Weatherford

SHOWS: A good show of oil and gas was encountered in the Big Injun at 1700'. Fair shows of gas were noted in the Rhinestreet, Alexander, Benson & Berea. Small shows of gas were noted in the Warren, 5<sup>th</sup> & Weir. Very small shows of gas were noted in the Riley and Speechley. No hydrocarbon fluorescence was noted in the samples below the 7" casing.

FORMATION TOPS:			
	1 <sup>st</sup> Salt Sand	1154'	- 340
	2 <sup>nd</sup> Salt Sand	1332'	- 518
	3 <sup>rd</sup> Salt Sand	1438'	- 624
	Maxon Sandstone	1536'	- 722
	Big Lime	1578'	- 764
	Keener Sandstone	1635'	- 821
	Big Injun Sandstone	1654'	- 840
	Weir Sandstone	2053'	-1239
	Berea Sandstone	2230'	-1416
	Gantz Sandstone	2268'	-1454
	Thirty-foot Sandstone	2370'	-1556
	Gordon Sandstone	2474'	-1660
	4 <sup>th</sup> Sand	2544'	-1730
	5 <sup>th</sup> Sand	2646'	-1832
	Bayard Sandstone	2710'	-1896

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Warren Sandstone	3195'	-2381
Speechley Sandstone	3540'	-2726
Balltown Sandstone	3758'	-2944
Bradford Sandstone	3918'	-3104
Riley Sandstone	4298'	-3484
Benson Sandstone	4638'	-3824
Alexander Sandstone	4884'	-4070
Rhinestreet Shale	5012'	-4198

**STRUCTURAL COMPARISON:**

	Alliance Petroleum Scrub Oak 1V-1	Alliance Petroleum Parr 1V North
Big Lime	- 764	- 854
Gordon Sandstone	-1660	-1726
Warren Sandstone	-2381	-2426
Benson Sandstone	-3824	-4058

**GEOLOGY:**

The best chances for commercial production in this well are in the 5<sup>th</sup> Sand & Berea Sandstone and will be discussed later.

Since this well is on the opposite side of lease block from the Parr 1V North, I believe it would be wise to test the potential of the lower zones (Rhinestreet Shale, Alexander Sandstone and Benson Sandstone). This would be a great help in knowing how deep to drill on future wells. I would recommend a two stage completion, the first being the Rhinestreet and the second being the Alexander and Benson together. The Rhinestreet Shale from 5114 to 5248' shows fair porosity development in numerous thin zones. Small to fair shows of gas (background of 70 to a maximum of 223 units) were recorded on the mud log in these same zones. The Alexander Sandstone is represented in this well by a porous shale interval 9' thick (4893 to 4902'). A fair show of gas (background of 70 to a maximum of 278 units) was recorded on the mud log at 4904'. The Benson is poorly developed in this well, but did have a fair show of gas (background of 75 to a maximum of 158 units) at 4684', in a very thin porous zone near the base.

Additional zones, that may be productive in this well, are the Warren, 5<sup>th</sup>, Berea, Weir and Big Injun. The Warren from 3195 to 3240' has a couple of thin zones with good porosity. However, the mud log indicated only very small shows of gas in these zones. Based upon what we have seen in other wells in the area, I would not complete the Warren.

As mentioned before, the best chances for commercial production in this well are the 5<sup>th</sup> and Berea Sandstones. The 5<sup>th</sup>, from 2646 to 2668' has 2 thin

zones of good to very good porosity. Water saturations are low and the mud log recorded a show of gas in this zone (background of 18 to a maximum of 80 units). A good temperature anomaly was also noted in the lower of the two zones. A note by the logging engineer indicated that this may be due to a change in logging speed, but I do not believe that is the case. The Berea from 2230 to 2234' is a single porous zone with very good to excellent porosities. Water saturations are low. A fair show of gas (background of 10 to a maximum of 128 units) was noted in this zone. The production potential of these two zones is indicated by the offset well shown on the attached map. The Earl Grimes #1 (47-095-00488) was completed in December, 1977. This well lies approximately 3780' northwest of the Scrub Oak 1V-1, and was completed in the 5<sup>th</sup> and Berea. I have attached copies of the induction log (the only log available) for both zones. Compared to the Scrub Oak 1V-1, they are identical in thickness. The production information reported to the state indicates that this well produced 139,160 MCF of gas and 4 BO from 1981 through 2013 (30 years reported). Note that this is missing the first 3 years of production.

The upper portion of the Weir is well developed in this well. From 2054 to 2074', it has good to very good porosities and low water saturations. A show of gas (background of 6 to a maximum of 58 units) was noted on the mud log at 2065'. A very good show of oil and gas was noted by the driller in the Big Injun at 1700'. Since this is behind the 7", we only have a gamma ray-neutron log for evaluation. It appears that a hydrocarbon bearing zone from 1696 to 1709' is lying on top of a water bearing zone (1710 to 1732'). Because of the chance for significant water production, completion of this zone should only be done after depletion of all lower zones. Perforations should also be limited to the upper 6' of the zone, and the only treatment should be a small amount of acid to clean up the perforation.

Respectfully submitted,



NATIONAL MINERALS CORPORATION

By: Douglas L. Core, President

November 11, 2015

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C. R. W. O'NEILL & CO.

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