



west virginia department of environmental protection

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

Jim Justice , Governor
Austin Caperton , Cabinet Secretary
www.dep.wv.gov

Monday, December 18, 2017
WELL WORK PERMIT
Not Available / Plugging

ARSENAL RESOURCES LLC
6031 WALLACE ROAD EXTENSION SUITE 603

WEXFORD, PA 15090

Re: Permit approval for JACK RUN 1
47-033-04262-00-00

This well work permit 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 any additional specific 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 permitted well work, 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 35 CSR 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- 0450.

James A. Martin
Chief

Operator's Well Number: JACK RUN 1
Farm Name: JOHN R. NABORS AND PENNY ANN VICTORIA MANGOLD
U.S. WELL NUMBER: 47-033-04262-00-00
Not Available / Plugging
Date Issued: 12/18/2017

Promoting a healthy environment.

12/22/2017

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.
4. This well is under a consent order and must be plugged under the terms of that agreement.

WW-4B
Rev. 2/01

1) Date August 28, 2017
2) Operator AS
Well No. Jack Run #1
3) API Well No. 47-033-04262

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil / Gas / Liquid injection / Waste disposal
(If "Gas, Production or Underground storage) Deep / Shallow

5) Location: Elevation 920' Watershed Branch of West Fork River
District Coal County Harrison Quadrangle Clarksburg

6) Well Operator Arsenal Resources 7) Designated Agent Bill Veigel
Address 6031 Wallace Road Ext. Suite 300 Address 65 Professional Place Suite 200
Wexford, PA 15090 Bridgeport, WV 26330

8) Oil and Gas Inspector to be notified Name Sam Ward
Address P.O Box 2327
Buckhannon, WV 26201
9) Plugging Contractor Name Patchwork Oil & Gas, LLC
Address PO Box 168
Davisville, WV 26142

10) Work Order: The work order for the manner of plugging this well is as follows:

Plugging procedures attached. - no well records.

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Environmental Protection

Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector [Signature] Date 11/7/2017

WW-4B Work Order Attachment

47-033-04262 Jack Run #1

OPEN HOLE

1. MIRU Service rig, pull rods and tubing out of hole (if any), clean hole to TD
2. Run 2 3/8 8rd tubing to a minimum of 50' below each producing pay zone, pump and set cement plug using Class A cement to a minimum of 50' above the producing pay zone, pump 6% gel ahead of cement. (Minimum 100' bottom plug)
3. Tag cement top to ensure plug meets minimum, add cement if necessary. Find free point on casing, cut and remove casing and pull out of hole.
4. Run 2 3/8 8rd tubing to a minimum of 50' below the cut casing. Pump and set cement plug using Class A Cement to a minimum of 50' above cut casing, pump 6% gel ahead of cement. (Minimum of 100' casing cut plug)
5. Tag cement top to ensure plug meets minimum, add cement if necessary.
6. Pull and set 2 3/8 8rd tubing a minimum of 50' below elevation depth. Pump and set cement plug with Class A Cement to a minimum of 50' above elevation depth, pump 6% gel ahead of cement. (Minimum 100' elevation plug) *ELN. 920'*
7. Tag cement top to ensure plug meets minimum, add cement if necessary.
8. Pull and set 2 3/8 8rd tubing to a minimum of ~~100'~~ below surface, pump Class A cement to surface. (Minimum ~~100'~~ surface and fresh water strata plug) *No records, Set 300' surface plug SDW 11/7/2017*
9. Erect 3' x 6" with identification and fill with cement.
10. RDMO service rig, all surface equipment and disposals.
11. Reclaim location and lease road.
12. Prepare release forms.

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Note: 100' cement plug across any perforations or pay zones.

- MUST COVER ALL 20" OR GREATER COAL SEAMS WITH CLASS A CEMENT WITH NO MORE THAN 3% CaCl₂ AND NO OTHER ADDITIVES.
- 6% GEL SPACERS BETWEEN ALL CEMENT PLUGS.
- CEMENT PLUGS MUST BE A MINIMUM OF 100 FEET. *Jrm*

12/22/2017



Select County: (033) Harrison

Enter Permit #: 72971

Get Data [Reset]

Select datatypes: (Check All)

- Location
- Production
- Owner/Completion
- Stratigraphy
- Logs
- Pay/ShowWater
- Plugging
- Sample
- Bm Hole Loc

- [Table Descriptions](#)
- [County Code Translations](#)
- [Permit Numbering Series](#)
- [License Notes](#)
- [Contact Information](#)
- [Disclaimer](#)
- [WVGES Main](#)
- [Pipeline-Blue New](#)

WV Geological & Economic Survey

Well: County = 33 Permit = 72971

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Report Time: Monday, August 28, 2017 11:55:53 AM

12/22/2017

Location Information: [View Map](#)

API	COUNTY	PERMIT	TAX	DISTRICT	QUAD	75	QUAD	15	LAT	DD	LOX	DD	UTIME	UTMN
4703372971	Harrison	72971	Coal	Clarksburg	Clarksburg	39.314554	-80.334078	557407.4	4.351895.3					

There is no Bottom Hole Location data for this well

Owner Information:

API	CMP_DT	SUFFIX	STATUS	SURFACE_OWNER	WELL_NUM	CO_NUM	LEASE	LEASE_NUM	MINERAL_OWN	OPERATOR	AT	COMPLETION	PROP_VD	PROP_TRGT_FM	TFM_EST_PR
4703372971	-/-	-/-	Unknown	Prty Map	Mordcael Smith	1			Unknown						

Completion Information:

API	CMP_DT	CMP_DT	SPUD_DT	ELEV	DATUM	FIELD	DEEPEST_FM	DEEPEST_FMT	INITIAL_CLASS	FINAL_CLASS	TYPE	RIG	CMP_MTHD	TVD	TMD	NEW_FTG	G_BEF	Q_AFT	O_BEF	O_AFT	NGL_BEF	NGL_AFT	P_BEF	TI_BEF	P_AFT	TI_AFT	BH_P_BEF	BH
4703372971	-/-	-/-							Unclassified	Unclassified		not available	Unknown															

There is no Pay data for this well

There is no Production Gas data for this well

There is no Production Oil data for this well ** some operators may have reported NGL under Oil

There is no Production NGL data for this well ** some operators may have reported NGL under Oil

There is no Production Water data for this well

There is no Stratigraphy data for this well

There is no Wireline (E-Log) data for this well

There is no Plugging data for this well

There is no Sample data for this well



Select County: **(033) Harrison** ▼

Enter Permit #: **4262**

Select datatypes: (Check All)

<input checked="" type="checkbox"/> Location	<input checked="" type="checkbox"/> Production	<input checked="" type="checkbox"/> Plugging
<input checked="" type="checkbox"/> Owner/Completion	<input checked="" type="checkbox"/> Stratigraphy	<input checked="" type="checkbox"/> Sample
<input checked="" type="checkbox"/> Pay/Show/Water	<input checked="" type="checkbox"/> Logs	<input checked="" type="checkbox"/> Btm Hole Loc

- [Table Descriptions](#)
- [County Code Translations](#)
- [Permit-Numbering Schemes](#)
- [Usage Notes](#)
- [Contact Information](#)
- [Disclaimer](#)
- [WVGES Main](#)
- ["Pipeline-Plus" New](#)

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12/22/2017

WV Geological & Economic Survey:

Well: County = 33 Permit = 4262

Report Time: Monday, August 28, 2017 11:56:56 AM

No records found for Well: County = 33 Permit = 4262

WW-4A
Revised 6-07

1) Date: August 28th, 2017
2) Operator's Well Number Jack Run #1

3) API Well No.: 47 - 033 - 04262N

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

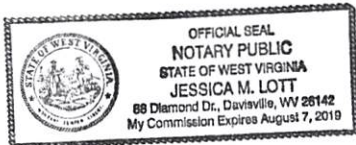
4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>John R. Nabors and Penny Ann Victoria Mangold</u>	Name _____
Address <u>310 Penny Lane</u>	Address _____
<u>Clarksburg, WV 26301</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Sam Ward</u>	(c) Coal Lessee with Declaration
Address <u>PO Box 2327</u>	Name _____
<u>Buckhannon, WV 26201</u>	Address _____
Telephone <u>304-389-7583</u>	_____

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.



Well Operator Arsenal Resources
 By: William Veigel
 Its: Designated Agent
 Address 65 Professional Place Suite 200
Bridgeport, WV 26330
 Telephone 724-940-1117

Handwritten signature of William Veigel

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Subscribed and sworn before me this 6th day of November

My Commission Expires Aug. 7, 2019 _____ Notary Public

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.

WW-9
(5/16)

API Number 47 - 033 - 04282
Operator's Well No. Jack Run #1

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Arsenal Resources OP Code 494519412
Watershed (HUC 10) West Fork River Quadrangle Clarksburg

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No
Will a pit be used? Yes No

If so, please describe anticipated pit waste: _____

Will a synthetic liner be used in the pit? Yes No If so, what ml.? _____

- Proposed Disposal Method For Treated Pit Wastes:
- Land Application (if selected provide a completed form WW-9-GPP)
 - Underground Injection (UIC Permit Number _____)
 - Reuse (at API Number _____)
 - Off Site Disposal (Supply form WW-9 for disposal location)
 - Other (Explain Vac truck is used for all fluids needed during plugging operations)

Will closed loop system be used? If so, describe: n/a

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. n/a

-If oil based, what type? Synthetic, petroleum, etc. n/a

Additives to be used in drilling medium? n/a

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. n/a

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) n/a

-Landfill or offsite name/permit number? n/a

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto 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. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature [Signature]

Company Official (Typed Name) Bill Veigel

Company Official Title Designated Agent, Sr. Director of Production

Subscribed and sworn before me this 6th day of November, 2017

[Signature] Notary Public

My commission expires Aug. 7, 2019

SDEW
11/7/2017

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Form WW-9

Operator's Well No. Jack Run #1

Proposed Revegetation Treatment: Acres Disturbed One +/- Prevegetation pH 5.5

Lime One-Two Tons/acre or to correct to pH 6.5

Fertilizer type Aglard 5-10-10

Fertilizer amount 500 lbs/acre

Mulch 75-100 bales of hay/straw Tons/acre

Seed Mixtures

Temporary

Permanent

Seed Type lbs/acre

Seed Type lbs/acre

Pasture Mix 200

(Contains: Orchard Grass, Rye, Timothy, and Clover)

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: S. P. D. Ward III

Comments: _____

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Title: OOG Inspector Date: 11/7/2017

Field Reviewed? () Yes (X) No

WW-9- GPP
Rev. 5/16

Page 1 of 1
API Number 47 - 033 - 04262
Operator's Well No. Jack Run #1

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
GROUNDWATER PROTECTION PLAN

Operator Name: Arsenal Resources
Watershed (HUC 10): West Fork River Quad: Clarksburg
Farm Name: Jack Run #1

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

N/A no pit being used

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

N/A no pit being used

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

N/A no pit being used

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4. Summarize all activities at your facility that are already regulated for groundwater protection.

N/A no pit being used

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

N/A no pit being used

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

N/A no pit being used

7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

N/A no pit being used

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

N/A no pit being used

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Signature: 

Date: 11/6/17

3304262 P

input coordinates

inter comma delimited coordinates examples
16 15 30.1 -81 25 15.2 (lat, lon as degrees minutes seconds)
16.123456 -81.123456 (lat, lon as decimal degrees)
16 15 30.1 100 100 (UTM as existing northing, easting)
1607694 32 364 123 49 (11V state plane as easting, northing)
557363 83 435 1880 69

UTM NAD83 Zone 17N

Convert zoom to point

output coordinates

39 314337 -80 334774

Lat/Lon NAD27

Google Maps

history (for copy, paste edit)

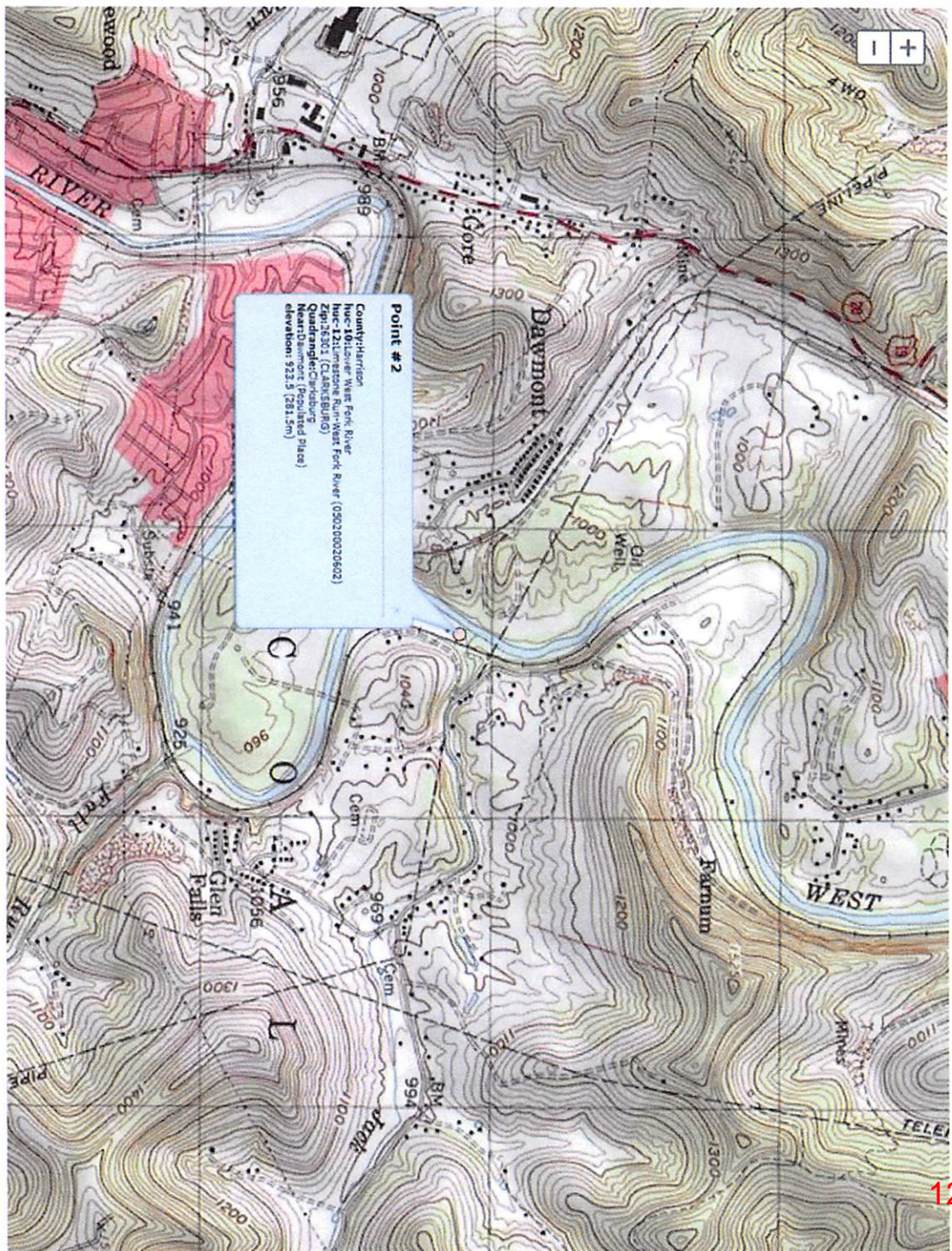
1 559598 3 434499 8 UTM17N NAD83 1680 10 258580 -80 377826 LL NAD27
2 557363 8 4351880 7 UTM17N NAD83 1680 10 314337 -80 334774 LL NAD27

notes about datum conversions

Datum conversions between all realizations of NAD27, NAD83, and WGS84 are not practical, or sometimes not strictly possible. Many of the issues are associated with the inability to convert between the original realization of NAD83 and more recent realizations. While error could be reduced by introducing an intermediate HARN conversion, separate transformations would have to be implemented for each state, which significantly increases the complexity of the application. Therefore datum conversions include a few built-in assumptions:

1 Conversion between NAD27 and NAD83: This converts between NAD27 and NAD83(1986) using the NADCON transformation. Newer realizations of NAD83, such as NAD83(GCR96) and NAD83(CM11) can differ from NAD83(1986) by a meter or so. This conversion uses the Eni transformation NAD_1983_To_NAD_1983_NADCON.

link to arcswgs version



Jack Run #1 47-033-04262

12/22/2017

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-033-04262N WELL NO.: #1

FARM NAME: Jack Run

RESPONSIBLE PARTY NAME: Arsenal Resources

COUNTY: Harrison DISTRICT: Coal

QUADRANGLE: Clarksburg

SURFACE OWNER: John R. Nabors and Penny Ann Victoria Mangold

ROYALTY OWNER: John R. Nabors and Penny Ann Victoria Mangold

UTM GPS NORTHING: ~~557363.83~~ 4351880.69N

UTM GPS EASTING: ~~4351880.69~~ 557363.83 E GPS ELEVATION: 920'

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS : Post Processed Differential
Real-Time Differential

Mapping Grade GPS : Post Processed Differential
Real-Time Differential

4. Letter size copy of the topography map showing the well location.

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

[Signature] Designated Agent, Sr. Director of Production
Signature Title Date 11/16/17

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