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

Harold D. Ward, Cabinet Secretary
www.dep.wv.gov

Monday, October 17, 2022
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

ARSENAL RESOURCES LLC
6031 WALLACE RD EXT., SUITE 101

WEXFORD, PA 15090

Re: Permit Modification Approval for JOHNSON TFP-40 205
47-091-01370-00-00

Lateral Extension/ Wellbore Spacing

ARSENAL RESOURCES LLC

The Office of Oil and Gas has reviewed the attached permit modification for the above referenced permit. The attached modification has been approved and well work may begin. Please be reminded that the oil and gas inspector is to be notified twenty-four (24) hours before 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: JOHNSON TFP-40 205
Farm Name: RENEE JOHNSON
U.S. WELL NUMBER: 47-091-01370-00-00
Horizontal 6A New Drill
Date Modification Issued: 10/17/2022

10/21/2022

WW-6B
(04/15)

CK# 0000200049 $5150.00 9/29/22

API NO. 47- 091 - 01370
OPERATOR WELL NO. 205
Well Pad Name: Johnson TFP 40

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Arsenal Resources	494519412	Taylor	Fleming	Rosemont
	Operator ID	County	District	Quadrangle

2) Operator's Well Number: 205 Well Pad Name: Johnson TFP 40

3) Farm Name/Surface Owner: Renee Johnson Public Road Access: CR 17, Oral Lake Road

4) Elevation, current ground: 1338.79 Elevation, proposed post-construction: 1332.5

5) Well Type (a) Gas X Oil _____ Underground Storage _____
Other _____
(b)If Gas Shallow X Deep _____
Horizontal X

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation - Marcellus Shale, Top - 7824.5 ft, Bottom - 7916.5 ft, Anticipated Thickness - 92 ft, Associated Pressure - 0.5 psi/ft

8) Proposed Total Vertical Depth: 7,903.5 ft

9) Formation at Total Vertical Depth: Marcellus Shale

10) Proposed Total Measured Depth: 30,034 ft

11) Proposed Horizontal Leg Length: 21,300 ft

12) Approximate Fresh Water Strata Depths: 38', 40', 49', 362', 670'

13) Method to Determine Fresh Water Depths: Offsetting wells reported water depths (091-00116, 091-00118, 091-00108, 091-00120)

14) Approximate Saltwater Depths: 1980'

15) Approximate Coal Seam Depths: Elk Lick-322.5', Harlem-398.5',Bakerstown-477.5',Brush Creek-577.5', Upper Freeport-630.5', Lower Freeport-692.5', Upper Kittanning-760.5', Middle Kittanning-825.5', Lower Kittanning-845.5', Clarion-876.5'

16) Approximate Depth to Possible Void (coal mine, karst, other): None Known

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes _____ No None Known

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

10/21/2022

WW-6B
(04/15)

API NO. 47- 091 - 01370
OPERATOR WELL NO. 205
Well Pad Name: Johnson TFP 40

18) **CASING AND TUBING PROGRAM**

TYPE	Size (in)	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling (ft)	INTERVALS: Left in Well (ft)	CEMENT: Fill-up (Cu. Ft.)/CTS
Conductor	24	New	H-40	102.7	120	120	CTS
Fresh Water	13.375	New	J-55	54.5	725	725	CTS
Coal							
Intermediate	9.625	New	J-55	40	2100	2100	CTS
Production	5.5	New	P-110	20	30,034	30,034	TOC @ 1,950
Tubing							
Liners							

Kenneth Greynolds

Digitally signed by Kenneth Greynolds
DN: CN = Kenneth Greynolds email = Kenneth.L.Greynolds@ws.gov C = AD O = WVDEP OU = Oil and Gas
Date: 2022.10.12 13:37:48 -04'00'

TYPE	Size (in)	Wellbore Diameter (in)	Wall Thickness (in)	Burst Pressure (psi)	Anticipated Max. Internal Pressure (psi)	Cement Type	Cement Yield (cu. ft./k)
Conductor	24	36			0	Class A, 3% CaCl2	1.2
Fresh Water	13.375	17.5	0.38	2,730	900	Class A, 3% CaCl2	1.2
Coal							
Intermediate	9.625	12.25	0.395	3,950	1,500	Class A, 3% CaCl2	1.29
Production	5.5	8.5-8.75	0.361	14,360	11,500	Class A/50:50 Poz	1.29/1.34
Tubing					5,000		
Liners					N/A		

PACKERS

Kind:				
Sizes:			RECEIVED Office of Oil and Gas	
Depths Set:			OCT 14 2022	

WV Department of Environmental Protection

10/21/2022

API NO. 47- 091 - 01370
OPERATOR WELL NO. 205
Well Pad Name: Johnson TFP 40

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

The well will be started with a conductor rig drilling a 36" hole to Conductor programmed depth then running 24" casing and circulate cement back to surface. The conductor rig will move out and the drilling rig will move in and rig up. The drilling rig will then spud a 17 ½" hole and drill to fresh water casing (Surface) to the programmed depth, Run 13- 3/8" casing and cement to surface. The rig will continue drilling a 12- ¼" intermediate hole to the programmed depth, run 9- 5/8" casing and cement to surface. The rig with then continue to drill an 8- ¾" hole to a designed KOP. We will then start drilling the curve and lateral section to the programmed total measured depth, run 5 ½" casing and cement according to the program.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

The well will be completed using a plug and perforation method and stimulated with a slickwater and sand slurry. The anticipated maximum rate will be 90 bpm and the maximum pressure will be 11,500 psi.

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Environmental Protection

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 33.56

22) Area to be disturbed for well pad only, less access road (acres): 6.20

23) Describe centralizer placement for each casing string:

24"- No centralizers 13 3/8" – one bow spring centralizer on every other joint 9 5/8" – one bow spring centralizer every third joint from TD to surface 5 ½" – one semi rigid centralizer on every joint from TD of casing to end of curve. Then every other joint to KOP. Every third joint from KOP to 2,300'; there will be no centralizers from 2,300' to surface.

24) Describe all cement additives associated with each cement type:

24" will be circulated to surface. The 13 3/8" casing will be cemented to surface with Class A cement and no greater than 3% CaCl (calcium chloride). The 9 5/8" casing will be cemented to surface with Class A cement, & no greater than 3% calcium chloride. The 5 1/2" production string will be cemented back to 1,950' (+/- 150' above the casing shoe for the 9 5/8") with Class A and 50/50 Poz cement retarded (to extend pumpability) cellophane flaked for fluid loss, Bentonite gel as an extender (increased pumpability and fluid loss), a defoaming agent to decrease cement foaming during mixing to insure the cement is of proper weight to placement and possibly gypsum gas blocking additive to aid in blocking/gas migration (in combination with other additive mentioned here, helps cement achieve a "right angle" set) during the plastic phase of the cement set-up.

25) Proposed borehole conditioning procedures:

Top holes will be drilled with fresh water KOP. At KOP, the wellbore will be loaded with synthetic oil based mud, barite-weighted mud system with such properties as to build a filter-cake on the face of the bore-hole. This will provide lubricity as well as stabilizing the well bore. We will begin rotating the drill string and mud will be circulated upon reaching TD until no further cuttings are observed coming across the shaker screens. Once clean mud is circulated back to surface, we will pull three stands of drill pipe, load the hole, pull three strands and load the hole. The weight indicator on the rig will be monitored for any occurrences of drag and if any are noticed, we will re-run the previous stand of pipe pulled across and circulate 2x bottoms up while watching shakers for signs of cuttings. Once at the base curve, the string will be continuously rotated while pumping 2x bottoms up. We will pull three stands and fill the hole until we reach the vertical section of the well.

*Note: Attach additional sheets as needed.

10/21/2022

ARSENAL RESOURCES

Click or tap to enter a date

Alliance Petroleum Corp
4150 Belden Village Ave. NW Ste 410
Canton, OH 44718-2553

RE: Johnson TFP 40 Pad

Dear Sir/Madam,

Arsenal Resources has developed a Marcellus pad, Johnson TFP40, well #204, located in Taylor County, WV. As an owner or operator of conventional natural gas wells in this area, we are requesting your assistance in this matter.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 7,910 TVD) and existing conventional natural gas wells included in the attached well list for which you are believed to be the operator.

Arsenal Resources anticipates conducting hydraulic fracturing at the Johnson TFP40 pad, well #201, during the 4th Quarter of 2022. We have identified conventional natural gas wells operated by your company within 500' (lateral distance) of our newly planned wells. Plats for each well on this pad are attached.

We recommend that conventional well operators conduct the following activities before, during and after fracturing operations:

1. Inspect surface equipment, prior to fracturing, to establish integrity and establish well conditions.
2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas, or pressure.
3. Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity.
4. Notify the OOG and Arsenal Resources if any changes in water, gas production, pressure or other anomalies are identified.

Please feel free to contact me at 724-940-1218 with any questions or comments. You may also contact the WV Office of Oil and Gas at 304-926-0499.

Sincerely,

R. Schweitzer

Ross Schweitzer
Sr. Director of Drilling, Construction & Permitting

AOR - Attachment "B"

10/21/2022

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City, State, ZIP+4®: Clarksburg WV 26301

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Sent To: Renee Johnson
Street and Apt. No., or PO Box No.: 511 Reeds Run Rd
City, State, ZIP+4®: Bridgeport WV 26330

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Sent To: Carlyle G. Millard
Street and Apt. No., or PO Box No.: 413 High St
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Street and Apt. No., or PO Box No.: 1000 Consol Energy Drive
City, State, ZIP+4®: Canonsburg PA 15317

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Sent To: Cogent III Communications II
Street and Apt. No., or PO Box No.: 520 Maryville Centre Dr Suite
City, State, ZIP+4®: Saint Louis MO 63141

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

ARSENAL RESOURCES

Purpose

The purpose of this pad-specific Hydraulic Fracturing Monitoring Plan is to identify and notify conventional well operators near Arsenal Resources hydraulic fracturing in Taylor County, WV prior to hydraulic fracturing at Johnson TFP40 and Well Number 201.

Due to the apparent presence of unique geological conditions, the potential for communication between deep geologic zones exists in this area. This potential communication, via natural gas, water, or both, may occur between hydraulically fractured wells in the Marcellus formation (approximately 7,910' TVD) and existing conventional natural gas wells in the partially-depleted, relatively high permeability Benson formations (approximately 4,900' TVD).

The plan is being implemented as an additional safety measure to be utilized in conjunction with best management practices and emergency action plans for this site. These additional measures include pre-notification of conventional well operators of the timing and location of the hydraulic fracturing, establishment of measures conventional well operators should implement, and assurance that the Division of Oil and Gas is notified of the timeline, as well as any issues that may arise during fracturing.

1. Communications with Conventional Operators.

Arsenal Resources, using available data (WV Geological Survey, WVDEP Website, and IHS data service), has identified all known conventional wells and well operators within 500 feet of this pad and the lateral sections. A map showing these wells along with a list of the wells and operators is included in Attachment A.

Upon approval of this plan, Arsenal Resources will notify these operators, via letter, of the hydraulic fracturing schedule for these wells. A copy of this letter is included in Attachment B.

The letter provides recommendations to these conventional operators to 1) increase their monitoring of their wells during that time period, 2) ensure that their well head equipment is sound, and 3) provide immediate notification to Arsenal Resources and the OOG in the event of any changes in their well conditions.

Specifically, the letter recommends that conventional well operators conduct the following activities during and after fracturing operations:

1. Inspect their surface equipment prior to fracturing to establish integrity and establish pre-frac well conditions.
2. Observe wells closely during and after fracturing and monitor for abnormal increases in water, gas or pressure.
3. Inspect or install master valves rated to 3,000 psi or other necessary equipment for wellhead integrity.
4. Notify the OOG and ARSENAL RESOURCES if any changes in water, gas production, pressure or other anomalies are identified.

10/21/2022

ARSENAL RESOURCES

2. Reporting

Arsenal Resources will provide information relating to the hydraulic fracturing schedule, communication with conventional operators, and ongoing monitoring of the work upon request of OOG or immediately after any event of any noted abnormalities.

6031 Wallace Road Extension, Suite 300, Wexford, PA 15090 Phone (724) 940-1100 eFax 1-800-428-0981

Area of Review Report - __Johnson TFP40_____ Pad, ____205___ Lateral, _____Taylor, Barbour_____County, WV

Well Name	API Number	Operator Name / Address	Well Type	Latitude	Longitude	Total Depth	Perforated Formation(s)	Producing Zones not Perforated
Goodwin 2	091-00116	Diversified Production LLC	Existing	39.25858	-80.169849	4560	Benson	NA
Sinsel 2 / 361-UF	091-00120	Diversified Production LLC	Existing	39.260762	-80.163512	4767	Big Injun (Grnbr), Godon, Riley, Benson	NA
Sinsel 3 / 363-UF	091-00212	Diversified Production LLC	Existing	39.258398	-80.158194	4790	Fifth, Riley, Benson	
Sinsel 2 / 1645	091-00214	Diversified Production LLC	Existing	39.249223	-80.155206	4765	Big Injun (Grnbr), Riley, Riley, Benson	NA
CFS Farms LLC/Coalquest 14A	091-01091	CDX Gas, LLC	Cancelled	39.249368	-80.15446	NA	NA	NA
CFS Farms LLC/Coalquest 14	091-01090	CDX Gas, LLC	Cancelled	39.248498	-80.1539	NA	NA	NA
Tomblyn 1	091-00177	Braxton Oil & Gas Corp	Existing	39.240961	-80.151564	4529	Big Injun (Grnbr, Riley, Riley, Benson, Benson	NA
Post 6 / 411-CH	001-00893	Diversified Production LLC	Existing	39.23714	-80.150006	4950	Riley, Benson	NA
McDonald 1 / 172-CH	001-00389	Diversified Production LLC	Existing	39.230358	-80.14153	4788	Riley, Benson	NA
Rosaltha Law 2	001-00563	Diversified Production LLC	Existing	39.218516	-80.141191	4521	Riley, Benson	NA
Coalquest 8	001-02829	Wolf Run Mining LLC	Existing	39.214275	-80.1386	854	Lower Kittanning Coal	NA
Coalquest 10	001-02830	Wolf Run Mining LLC	Existing	39.213405	-80.140277	826	Lower Kittanning Coal	NA
Coalquest 8A	001-02827	Wolf Run Mining LLC	Existing	39.21355	-80.139345	808	Lower Kittanning Coal	NA
Coalquest 9	001-02828	Wolf Run Mining LLC	Existing	39.212825	-80.1386	938	Lower Kittanning Coal	NA
Charles Banish 1	001-00301	Diversified Production LLC	Existing	39.211292	-80.137767	4740	Riley, Benson	NA
Richard G Smith 1	001-00241	EQT Production Company	Existing	39.209901	-80.139753	4791	Big Injun (Grnbr), Riley, Benson	NA
Claribel Corder 1	001-00838	Diversified Production LLC	Existing	39.205892	-80.137613	4806	Riley, Benson	NA

ARSENAL RESOURCES

SITE SAFETY PLAN

JOHNSON TFP 40 WELL PAD #205

911 Address:

4006 Green Valley Rd

Bridgeport, WV 26330

Kenneth Greynolds

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DN: CN = Kenneth Greynolds email = Kenneth.L.Greynolds@wv.gov C = AD O = WVDEP OU = Oil and Gas
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ARSENAL RESOURCES

SITE SAFETY PLAN

JOHNSON TFP 40 WELL PAD #205

911 Address:

4006 Green Valley Rd

Bridgeport, WV 26330

JOHNSON TFP40 Well Pad #205
Site Safety Plan Table of Contents

Section 1 – Contacts, Schedules, and Meetings

A. Emergency Contact Information

This section details the method of notification to the public if an H2S Gas, blowout, or flaring emergency would be encountered. This section also lists the H2S Safety Services and Equipment that will be brought on site in case of an H2S Emergency.

Emergency Contact Information

The 24-hour Emergency Contact Information including the name and phone numbers of persons to be notified shall be posted in the production trailer in a common area and in plain sight for reference. The Emergency Contact Information is identified in the following table:

Arsenal Resources – Emergency Contact Information		
Name	**Position**	**24-Hour Phone #**
Jon Sheldon	Chief Operating Officer	304-376-0719
Ross Schweitzer	Sr. Director of Drilling, Cons &Permitting	724-584-1192
Brandon Wedde	Sr Director of Completions & Production	724-719-1240
West Virginia DEP Office of Oil & Gas – Emergency Contact Information		
Name	**Position**	**24-Hour Phone #**
Ken Greynolds	Local WVDEP Inspector, Taylor County	304-206-6613
	Office of Oil & Gas	304-926-0499
	WVDEP Emergency Spill Hotline	1-800-642-3074
Emergency Response Units		
National Response Center for Reporting Chemical or Oil Spills		800-424-8802
WVDEP Emergency Spill Center		800-642-3074
Ambulance, Fire, and Law Enforcement		911
Taylor County EMS		304-265-0904
Taylor County Emergency Service Center		304-265-2524
Taylor County Sheriff Department		304-265-3428

B. Public Facility Contact Information

According to information provided to Arsenal Resources by D&H, there are six public facilities located within the one-mile radius of the site. These facilities are listed in the table below:

Bailey Memorial UMC	63 Bailey Church Rd	Rosemont	WV	26424	304-842-1141
Flemington Assembly Church of God	1001 West Veterans Memorial HWY	Flemington	WV	26347	304-506-3448
Victory Valley Church	Route 76	Rosemont	WV	26424	304-739-4787
USPS	1791 W Veterans Memorial Hwy	Rosemont	WV	26424	800-275-8777
D&K Custom Cutting	1686 E Veterans Memorial Hwy	Flemington	WV	26347	304-739-2686
Mustangs & Bullets	4041 Green Valley Rd	Bridgeport	WV	26330	304-842-4363

All landowners within a 1 Mile Radius are listed as part of the Well Safety Plan Map.
* - *ESRI Aerial Imaging was used to determine the location of Schools/Public Facilities/Houses within one mile of the project site.*

C. H2S Gas, Blow Out, and Flaring Emergency Notification and Evacuation Procedures

This section details the method of notification to the public if an H2S Gas, blowout, or flaring emergency would be encountered. This section also lists the H2S Safety Services and Equipment that will be brought on-site in case of an H2S Emergency.

Evacuation Plan
In the event of an emergency that requires evacuation, personnel are to vacate the well pad area in a calm and orderly fashion by exiting the pad via the access road onto CR 17.

The procedure to be used in alerting nearby persons in the event of any occurrence that could pose a threat to life or property will be arranged and completed with public officials in detail, prior to drilling into the hydrogen sulfide formations.

In the event of an actual emergency, the following steps will be immediately taken:

1. Arsenal Resources will immediately notify the appropriate parties from the Emergency Contacts Section of this plan and any other appropriate parties to conduct necessary evacuation notifications. The emergency officials will immediately warn each resident and transient's down-wind within the radius of exposure from the well site, and then warn all residents in the radius of exposure. Additional evacuation zones may be necessary as the situation warrants. Arsenal Resources will provide assistance to emergency authorities.

2. Arsenal Resources will dispatch sufficient personnel to assist with traffic control in the vicinity away from the potentially dangerous area as requested and directed by the emergency authorities in charge of the evacuation procedures. A guard will be stationed at the entrance of the well site to monitor essential and non-essential traffic.

3. General:
   A. The area included within the radius of exposure is considered to be the zone of maximum potential hazard from a hydrogen sulfide gas escape. Immediate evacuation of public areas, in accordance with the provisions of this contingency plan, is imperative. When it is determined that conditions exist which create an additional area (beyond the initial zone of maximum potential hazard) vulnerable to possible hazard, public areas in the additional hazardous area will be evacuated in accordance

with the contingency plan.

B. In the event of a disaster, after the public areas have been evacuated and traffic stopped, it is expected that local civil authorities will have arrived and within a few hours will have assumed direction of and control of the public, including all public areas. Arsenal Resources will cooperate with these authorities to the fullest extent and will exert every effort by careful advice to such authorities to prevent panic or rumors.

C. Arsenal Resources will dispatch appropriate management personnel at the disaster site as soon as possible. The company's personnel will cooperate with and provide such information to civil authorities as they might require.

D. One of the products of the combustion of hydrogen sulfide is sulfur dioxide (SO_2). Under certain conditions this gas may be equally as dangerous as H_2S. A pump type detector device, which determines the percent of SO_2 in air through concentrations in ppm, will be available. Although normal air movement is sufficient to dissipate this material to safe levels, the SO_2 detector should be utilized to check concentrations in the proximity of the well once every hour, or as necessary and the situation warrants. Also, if any low areas are suspected of having high concentrations, personnel should be made aware of these areas, and steps should be taken to determine whether or not these low areas are hazardous.

This evacuation plan will also be posted in the production trailer in a common area and in plain sight for personnel to reference if there is an emergency that requires evacuation. The evacuation plan will be reviewed in the pre-drill or weekly safety meetings with all personnel.

D. Pre-Spud Meeting.

The Pre-Spud Meeting Form included on the next page will be used during the pre-spud meeting to account for all parties that are present. The invited parties shall include Representatives from Arsenal Resources Drilling and HSE Departments, the regional WVDEP Inspector, and representatives from all contractor companies being utilized during the drilling process.

Meeting Date:_____ Pre-Spud Meeting

JOHNSON TFP40 Well Pad #____

NAME	TITLE
	Arsenal Resources DRILLING REPRESENTATIVE
	Arsenal Resources SITE SUPERVISOR/REPRESENTATIVE
	STATE INSPECTOR
	DRILLING CONTRACTOR REPRESENTATIVE

10/21/2022

E. Daily Visitor Sign-In Sheets

Arsenal Resources utilizes a third-party security contractor to monitor the main entry to our sites from the start of the drilling process through the conclusion of flowback. The contractors will be utilizing their forms to document all individuals that access Arsenal Resources' well pad.

F. Safety Meetings

Safety Meetings: Arsenal Resources and selected contractors shall hold a "pre- drill" safety meeting to discuss Well Site Safety during operations at the project location.

Safety Meetings will be held on a daily basis, prior to starting different phases of the operation (e.g., completion or work over operations), or when safety issues arise or need to be addressed.

Attendance logs will be kept for all site safety meetings and maintained on site.

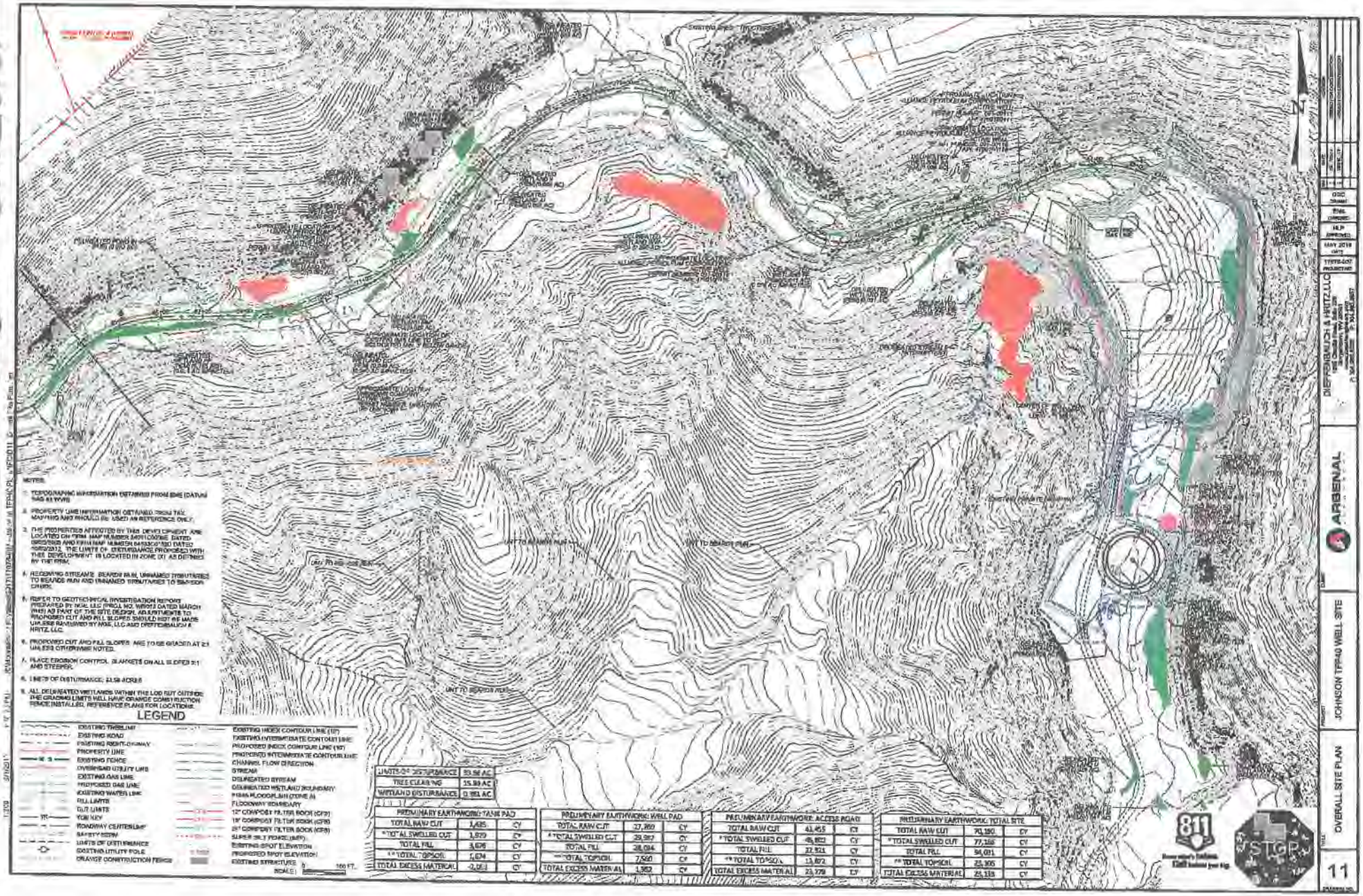
The local WV DEP inspector, Bryan Harris, or another Office of Oil and Gas representative and emergency responders from the area will be notified of and invited to the pre-drill and subsequent meeting.

Section 2 – Maps and Diagrams

A. Plan View Map

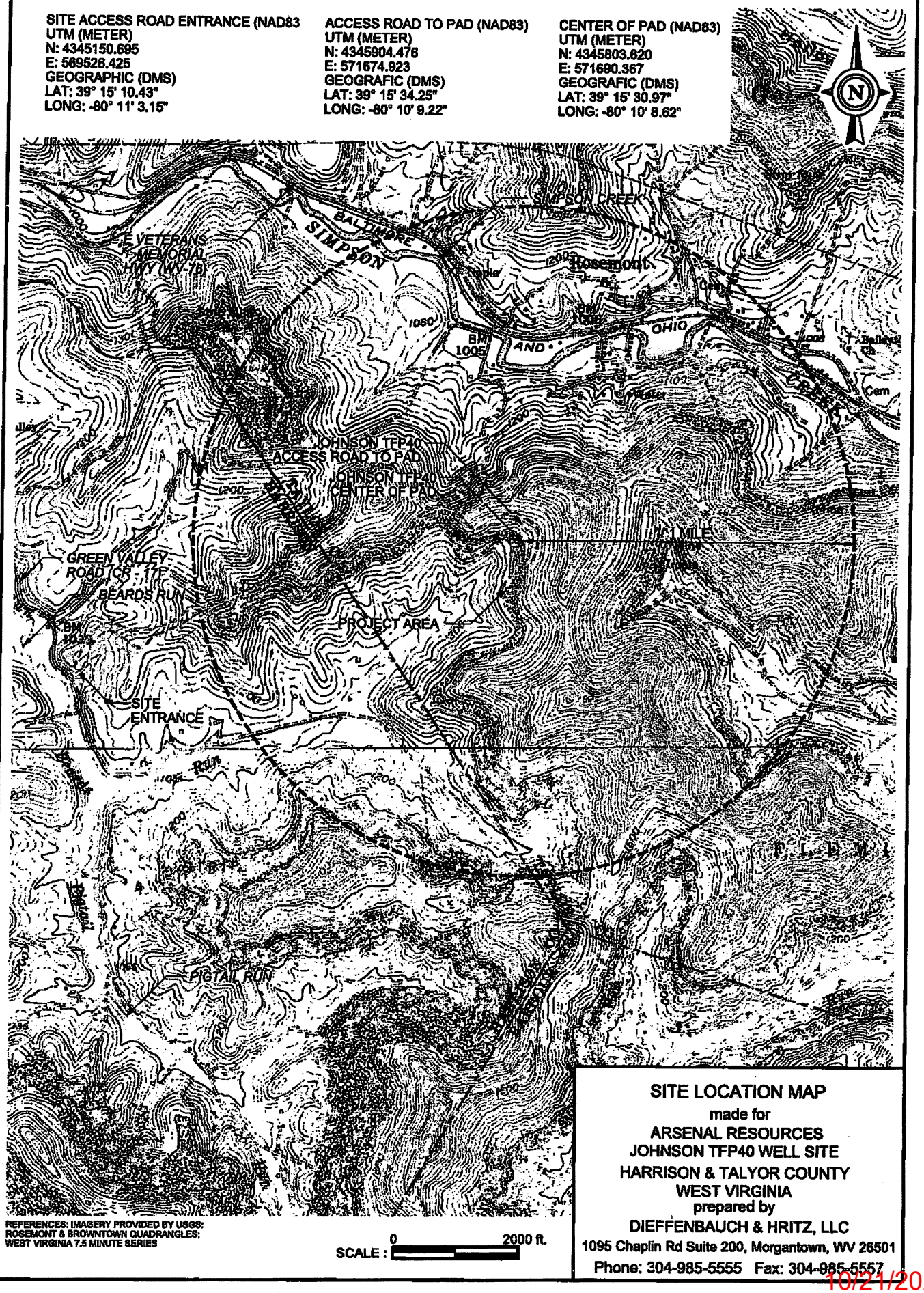
The following pages include a Plan view map of the location, access road, pit(s), flare lines, nearby dwellings, notation of the north direction and the prevailing wind direction.

ISSUED FOR CONSTRUCTION



B. Topographic Map

This section includes a Topographic map of the well location, including a 1 mile radius of well location, and UTM NAD 83 coordinates of well site entrance, UTM NAD 83 coordinates of the point the access road intersects the public route, and public route numbers and/or route names.



1:2000 8/27/2018 3:05:29 PM K:\Mountaineer Keystone\2017\117078-007 - Johnson TFP40\Common\Site Location Map_(1 MILE)_SSM.dgn

10/21/2022

C. Evacuation Plan Procedures

In the event of an H2S emergency, the following steps will be immediately taken:

1. Arsenal Resources will immediately notify the appropriate parties from the Emergency Contacts Section of this plan and any other appropriate parties to conduct necessary evacuation notifications. The emergency officials will immediately warn each resident and transient's down-wind within the radius of exposure from the well site, and then warn all residents in the radius of exposure. Additional evacuation zones may be necessary as the situation warrants. Arsenal Resources will provide assistance to emergency authorities.
2. Arsenal Resources will dispatch sufficient personnel to assist with traffic control in the vicinity away from the potentially dangerous area as requested and directed by the emergency authorities in charge of the evacuation procedures. A guard will be stationed at the entrance of the well site to monitor essential and non-essential traffic.

General:

A. The area included within the radius of exposure is considered to be the zone of maximum potential hazard from a hydrogen sulfide gas escape. Immediate evacuation of public areas, in accordance with the provisions of this contingency plan, is imperative. When it is determined that conditions exist which create an additional area (beyond the initial zone of maximum potential hazard) vulnerable to possible hazard, public areas in the additional hazardous area will be evacuated in accordance with the contingency plan.

B. In the event of a disaster, after the public areas have been evacuated and traffic stopped, it is expected that local civil authorities will have arrived and within a few hours will have assumed direction of and control of the public, including all public areas. Arsenal Resources will cooperate with these authorities to the fullest extent and will exert every effort by careful advice to such authorities to prevent panic or rumors.

C. Arsenal Resources will dispatch appropriate management personnel at the disaster site as soon as possible. The company's personnel will cooperate with and provide such information to civil authorities as they might require.

D. One of the products of the combustion of hydrogen sulfide is sulfur dioxide (SO_2). Under certain conditions this gas may be equally as dangerous as H_2S. A pump type detector device, which determines the percent of SO_2 in air through concentrations in ppm, will be available. Although normal air movement is sufficient to dissipate this material to safe levels, the SO_2 detector should be utilized to check concentrations in the proximity of the well once every hour, or as necessary and the situation warrants. Also, if any low areas are suspected of having high concentrations, personnel should be made aware of these areas, and steps should be taken to determine whether or not these low areas are hazardous.

Section 3 - Well Work

This section includes written descriptions of well work and procedure to be used during the drilling, completion, and production phases, including schematic plan views of each, as well as casing sheets.

Project Description

This project includes the construction of several temporary and permanent features including a 8,383 foot long, 16 foot wide gravel access road to a 182,660 square foot gravel well pad with associated erosion and sediment control BMP's. An additional 238 foot long access road is to be constructed from the gravel well pad to a 40,280 square foot gravel AST and Manifold pad. Once the well pad is constructed, the well is to be drilled as a horizontal well for natural gas extraction purposes.

General Drilling Program

1. Move in and rig up rat hole rig and drill 36" conductor hole and run 24" conductor casing to approximately 80' depth. Cement to surface via pump truck thru swedge and up the backside and drill 16" mouse hole per rig specifications. Rig down move off rat hole rig.
2. Move in and rig up a double or triple drilling rig, rig up flow lines and steel pits, and drill 17 ½" hole to a depth of 300' – 1000' depending on local fresh water depth. Drilling medium will be on fresh water. Run new, J-55, 54.5#, 13 3/8" casing and hardware to near bottom and cement to surface with Class A, 3% CaCl2 cement. Wait at least 8 hrs. on cement prior to drilling. If no cement circulation, call the inspector, run a CBL to determine cement top, then grout from the top back to surface. Wait on top grout 8hrs if grout is needed prior to drilling. Nipple up casing with annular BOP and test.
3. *Open Mine Contingency Plan:* when an open mine is encountered, Arsenal Resources will run 20" (H-40, 94#) and hardware as a mine string. The mine string will be set between 30 to 50 feet below the base of the open mine encountered. The mine string will have a cement balance job on the bottom (below the open mine), and the top will be surface-grouted to ground level. Then drill down to the proposed surface depth and set 13 -3/8" casing as originally planned.
4. Rig up directional drillers (if they are scheduled to nudge the surface) and trip in hole with 12 ¼" bit and drill on fresh water to the depth of 50 feet below the base of the 5th Sand, at approximately 1,500-2,800 feet. Any change from permitted depth will result in immediate notification to the OOG inspector for approval and subsequent modification to other well casing plans on the same pad will be made immediately to the OOG inspector. Run new, J-55 40#, 9 5/8" casing and hardware to near bottom and cement to surface with Class A cement. Wait at least 8 hrs. on cement prior to drilling.
5. Trip in hole with directional tools and 8 ¾" bit, continue drilling on fresh water to KOP. Then switch to a synthetic base mud system, and drill and build angle at 9 degree doglegs and land well at approximately 90 degrees horizontal in the lower Marcellus. Trip for directional issues or bit as needed, and drill 8 ¾" or 8 ½" hole.
6. Drill 8 3/4" or 8 ½" hole to planned total depth. Condition and prep the hole for casing run, and trip out of the hole. Lay down drilling assembly, and rig up casing crew and handling equipment. Run 5.5" 20# P-110, production casing the entire

measured depth of the well. Rig down casing crew and equipment, and rig up cementing crew. Cement production casing in 2 stages, with the lead and tail consisting of various densities of Class A cement slurry. The top of the production cement will be brought to approximately 150' within the intermediate casing shoe.

Once drilling operations have finished, the Johnson TFP40 #205 will be handed over to completions. Arsenal Resources will complete the well, using wireline perforating, and slickwater fracing. The number of stages will be determined once the lateral has been drilled. Each stage will consist of 400,000 lbs. of sand and approximately 350,000 gallons of water.

Well Equipment Set Up Procedure

1. Well set up starts by meeting with completions, flow back, set up contractor, and production supervisor.
2. A discussion is made on where to set surface equipment, GPU's Tanks and lines.
3. Procedure for equipment setup is to level off and gravel GPU and Tank area. Build concrete pad for GPU's and construct tank containment, and then set GPU's and Tanks. Install header pipe and dump lines to tanks. Install Sand traps, Lock-out casing valve and install prefabbed well head fittings, and dig up and install 3" lines to well heads. X-Ray all welds on gas lines; install skillets and block of lines for Hydrostatic test, test pipe. Drain pipe, remove plugs and skillets, bolt piping back up. Finish hooking up ESD Controls.
4. Welding is done in one corner of locations, utilizing flow backs LEL and our Personal LEL Monitors

Wellbore Casing and Cement Information

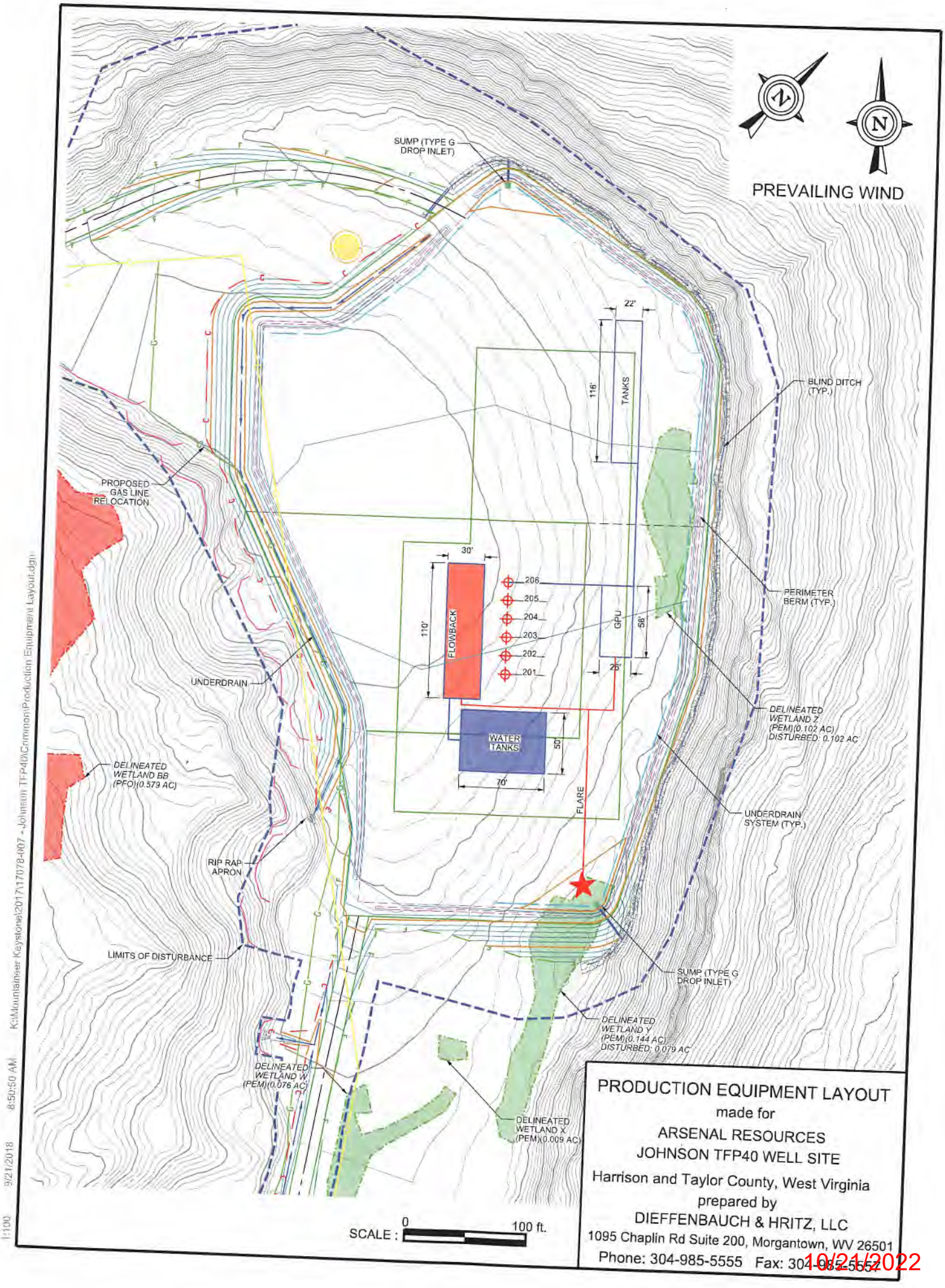
Geology information pertaining to the depths of freshwater, saltwater, coal, voids, etc., as listed on the Well Permit Application have been identified in the table below:

Geologic Information	
Approximate freshwater strata depths	38', 40', 49', 362', 670'
Approximate saltwater depths	1980'
Approximate coal seam depths	322.5', 398.5', 477.5', 577.5', 630.5', 692.5', 760.5', 825.5', 845.5, 876.5'
Approximate void depths (coal, karst, other)	None

1. Casing and Cementing Standards listed on the Well Work Permit Application Casing and Tubing Program Table have been identified in the table below:

Casing & Tubing Program						
Casing Type	Size	Grade	Weight /FT	For Drilling	Left in Well	Fill Up
Conductor	24"		94#	120'	120'	CTS
Fr. Water	13.375"	J-55	54.5#	725'	725'	CTS
Intermediate	9.625"	J-55	40#	2,100'	2,100'	CTS
Production	5.5"	P-110	20#	28,840'	28,840'	TOC @ 1.950
Tubing						

All casing and cement will meet current API standards any special conditions required of the permit that were set forth upon approval.


PREVAILING WIND
SUMP (TYPE G DROP INLET)
PROPOSED GAS LINE RELOCATION
UNDERDRAIN
DELINEATED WETLAND BB (PFO)(0.579 AC)
RIP RAP APRON
LIMITS OF DISTURBANCE
DELINEATED WETLAND W (PEM)(0.076 AC)
DELINEATED WETLAND X (PEM)(0.009 AC)
DELINEATED WETLAND Y (PEM)(0.144 AC) DISTURBED: 0.079 AC
SUMP (TYPE G DROP INLET)
UNDERDRAIN SYSTEM (TYP.)
DELINEATED WETLAND Z (PEM)(0.102 AC) DISTURBED: 0.102 AC
PERIMETER BERM (TYP.)
BLIND DITCH (TYP.)
22'
116'
TANKS
30'
110'
FLOWBACK
206
205
204
203
202
201
GPU
58'
25'
WATER TANKS
50'
70'
FLARE
SCALE : 0 100 ft.
PRODUCTION EQUIPMENT LAYOUT
made for
ARSENAL RESOURCES
JOHNSON TFP40 WELL SITE
Harrison and Taylor County, West Virginia
prepared by
DIEFFENBAUCH & HRITZ, LLC
1095 Chaplin Rd Suite 200, Morgantown, WV 26501
Phone: 304-985-5555 Fax: 304-985-5552
10/21/2022
K:\Mountaineer Keystone\2017\17078-007 - Johnson TFP40\Common\Production Equipment Layout.dgn
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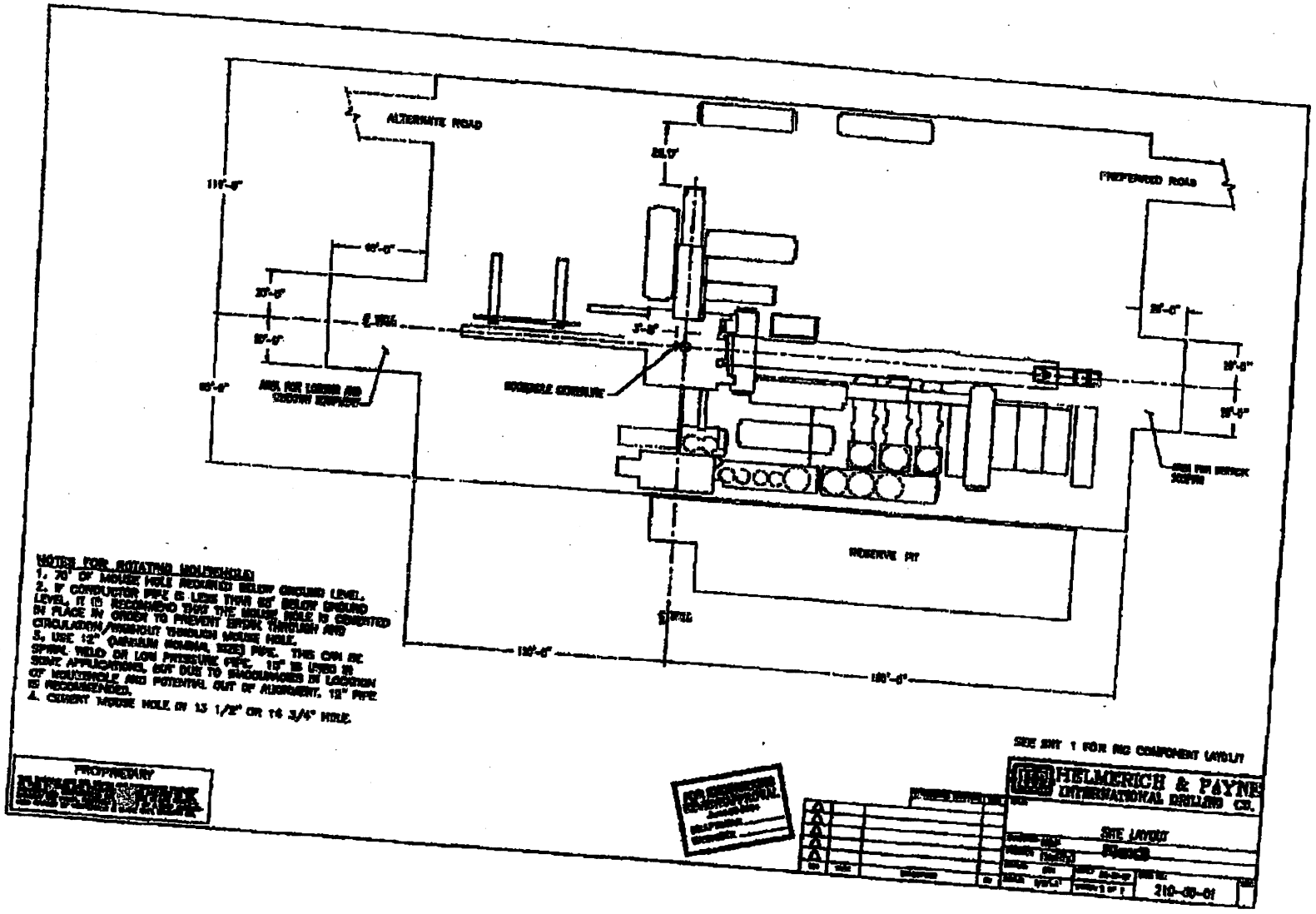

ALTERNATE ROAD
PREPENNED ROAD
RESERVE PIT
SEE SHT 1 FOR RIG COMPONENT LAYOUT
HELMERICH & PAYNE
INTERNATIONAL DRILLING CO.
SITE LAYOUT
210-09-01

10/21/2022

B. LEPC Submission

The following page contains a Statement detailing that the plan will be provided to the local emergency planning committee or county emergency services office within at least 7 days from land disturbance or well work.

ARSENAL
RESOURCES

Arsenal Resources acknowledges that a copy of this Site Safety Plan will be submitted to the Local Emergency Planning Committee or county emergency services office as listed in the contacts section of this plan, within at least 7 days from land disturbance or well work.

RSchweitzer

Ross Schweitzer
Sr. Director of Drilling, Construction and Permitting

6031 Wallace Road Extension, Suite 300, Wexford, PA 15090 Phone (724) 940-1100 eFax 1-800-428-0981

10/21/2022

Section 4 – Chemical Inventory and Safety Data Sheets (SDS)

A. SDS Availability / Location

The SDS sheets will be provided and maintained by the selected contractor(s) and for personnel to reference.

The location of the SDS sheets, how they are referenced, and maintained shall be detailed in each of the operations meetings and the pre-drill or weekly safety meetings with all personnel.

B. Inventory of Mud Materials

1. Inventory: At least 70,965 pounds of barite will be kept on location plus additional weight at the warehouse. At least 2,075 bbls of drilling fluid will be onsite and additional fluid will be stored both on location and at the warehouse.

2. The number and type of mixing units for mixing the mud on site shall be provided by the selected contractor and kept in the production trailer in a designated archive area for reference.

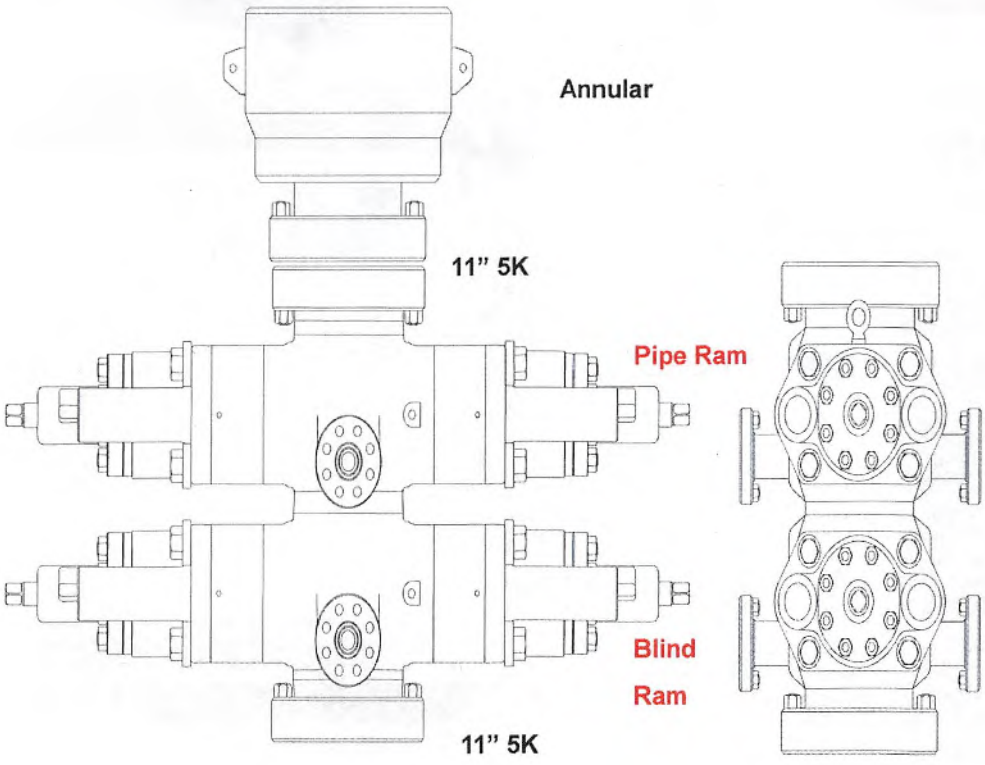
3. The selected driller shall use IADC well control methods. These shall include the Driller's Method, Wait and Weight, Dynamic Volumetric, Migration/Bleed, and Lubrication/Bleed. The primary methods are Driller's Method and Wait and Weight.

Section 5 -BOP and Well Control

A. BOP Equipment

The following pages include schematics and information on the BOP equipment.

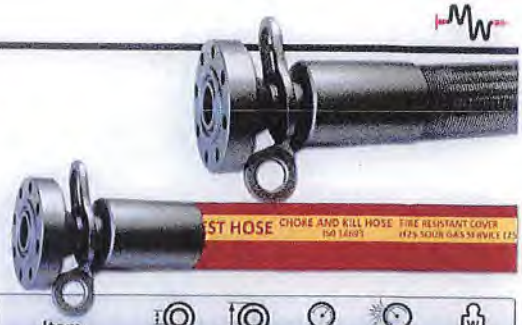
11" 5K Double Ram BOP



10/21/2022

- Choke & Kill, BOP
- Rotary hose
- Hydraulic hose
- Hammer Unions
- Industrial hose
- Fire hose
- Metal hose, Expansion Joints
- Ducting hose
- Automotive hose
- Crimp Fittings & Machines
- Frac Fittings, Notched KCs
- Cam & Groove, Universal, Shank Fittings
- Valves
- Black Pipe
- Quick Couplings
- Gauges
- Belts, Sheaves, & Bushings
- Steel Adapters
- Brass Adapters

Choke & Kill



Designed as a flexible connection to the choke manifold.
Tube: petroleum resistant for oil based drilling fluids
Cover: ozone, petroleum, and abrasion resistant
Reinforcement: high tensile steel wire spiral layers
Thermal Blanket: 1500° continuous ratings, non-flammable, non-conductive
Armor Wall: .144"
Max Length: 150 feet

-20° F / +212° F
-29° C / +100° C

Item	ID inch	OD inch	WP psi	Test psi	Weight lbs./ft
CK-48 Red	3	4.94	5,000	10,000	14.9
CK-56 Red	3½	5.44			17.7
CK-64 Red	4	6.31			26.4
CK-48 Armor	3	6.5			20.8
CK-56 Armor	3½	7			23.1
CK-64 Armor	4	8			26.3
CK-4810K Red	3	5.31	10,000	15,000	22.3
CK-5610K Red	3½	5.81			25.0
CK-6410K Red	4	4.75			36.1
CK-4810K Armor	3	6.5			26.0
CK-5610K Armor	3½	7			29.0
CK-6410K Armor	4	8			32.8

BOP Control Line

For blowout preventer lines.
Tube: for hydraulic BOP actuation
Thermal Blanket: 1500° continuous rating, non-flammable, non-conductive
Armor Wall: .08"
Popular with a larger hex and longer threads for easier installation of hammer unions.

-20° F / +212° F
-29° C / +100° C

Item	ID inch	OD inch	WP psi	Test psi	Weight lbs./ft
BOP-16 Armor	1	2.06	5,000	10,000	3.9
BOP-32 Armor	2	3.75			11.7
BOP-16	1	1.77			2.1
BOP-32	2	3.09			10.2

Carbon or stainless steel nipples are available and 1/2", 3/4", 1-1/4", and 1-1/2" sizes are available too.


Weld-on Flanges or Hammer Unions


Integral 1002/1502 Hammer Union Fittings


Safety Clamps


Fire Proof Quick Connects


Ring Gaskets

B. BOP Testing

Procedure and Schedule for Testing the BOP Stack: For the bottom and horizontal wellbore drilling phase, the BOP equipment shall be function tested upon initial installation, weekly, and after each bit trip. The BOP equipment shall be pressure tested upon initial installation and every twenty-one (21) days thereafter. All pressure tests shall be performed for thirty (30) minutes. Annular preventers should be tested to seventy percent (70%) of the rated capacity and ram preventers should be tested to eighty percent (80%) of the rated capacity.

BOP Schedule: A schedule of BOP equipment installation and operation shall be kept for each applicable string in the Detailed Daily Reports that are kept in the production trailer in a designated archive location for reference.

Adjustments and variances are only permitted with consent of the area drilling/completion manager and WVDEP Inspector.

The Testing will follow the requirements of 35-8 5.7.c.2.

C. BOP Equipment and Assembly Installation Schedule

1. The 13 3/8" Rotating Head will be installed when nippling up on the 13 3/8" casing. It will divert returns to the pit while air drilling this section.

2. The 9 5/8" BOP stack will be installed when nippling up on the 13 3/8" casing. The BOP will be pressure tested using a test plug. The BOP will be tested to a pressure of 250 psi low and 5,000 psi high and the annular to 250 psi low and 2,500 psi high prior to drilling out 8 5/8" casing.

3. When the 10,000 psi BOP stack is in use, a 10,000 psi upper and lower Kelly cock will be employed. They will be tested when the BOP stack is tested.

D. Personnel with Well Control Training

A list of all personnel with approved well control training and current certification recognized by the International Association of Drilling Contractors (IADC) shall be provided to the Office prior to the pre-spud meeting. Current Arsenal Resources employee with Wild Well Control training is Ross Schweitzer and Jarrett Toms.

E. Well Event Record Keeping

Detailed Log: A detailed daily record of events shall be kept during the drilling operation noting any significant event (e.g., lost circulation, presence of hydrogen sulfide, fluid entry, kicks and abnormal pressures). The daily reports will be kept in the production trailer in a designated archive location for reference.

F. Inspector Notification

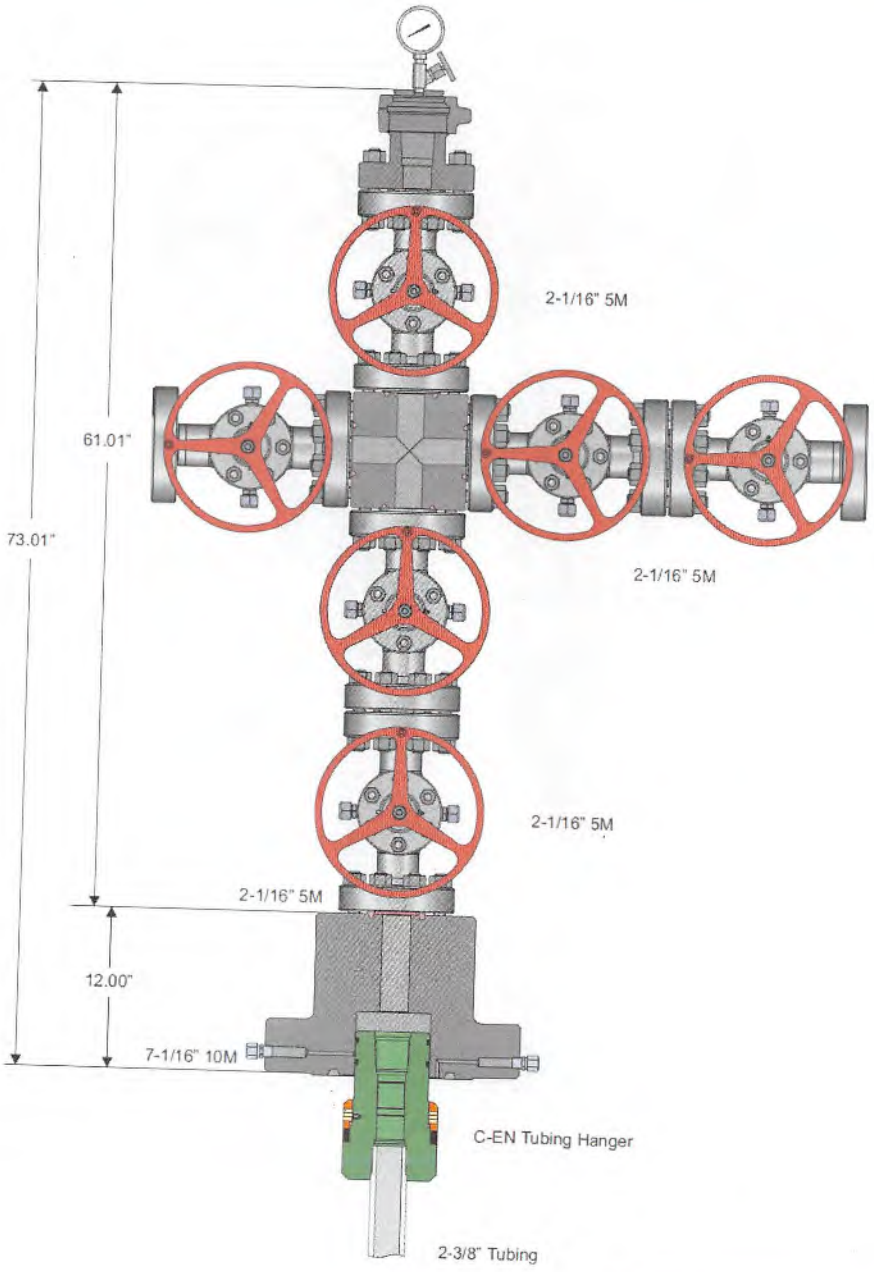
A detailed record of significant drilling events will be recorded in Arsenal Resources well log book. The state inspector will be notified upon any significant drilling events including the encounter of Hydrogen Sulfide Gas, lost circulation, fluid entry, abnormal pressures, etc.

G. Wellhead Assembly

The following pages contain sketches of the anticipated wellhead assemblies that will be used.

Cactus Wellhead

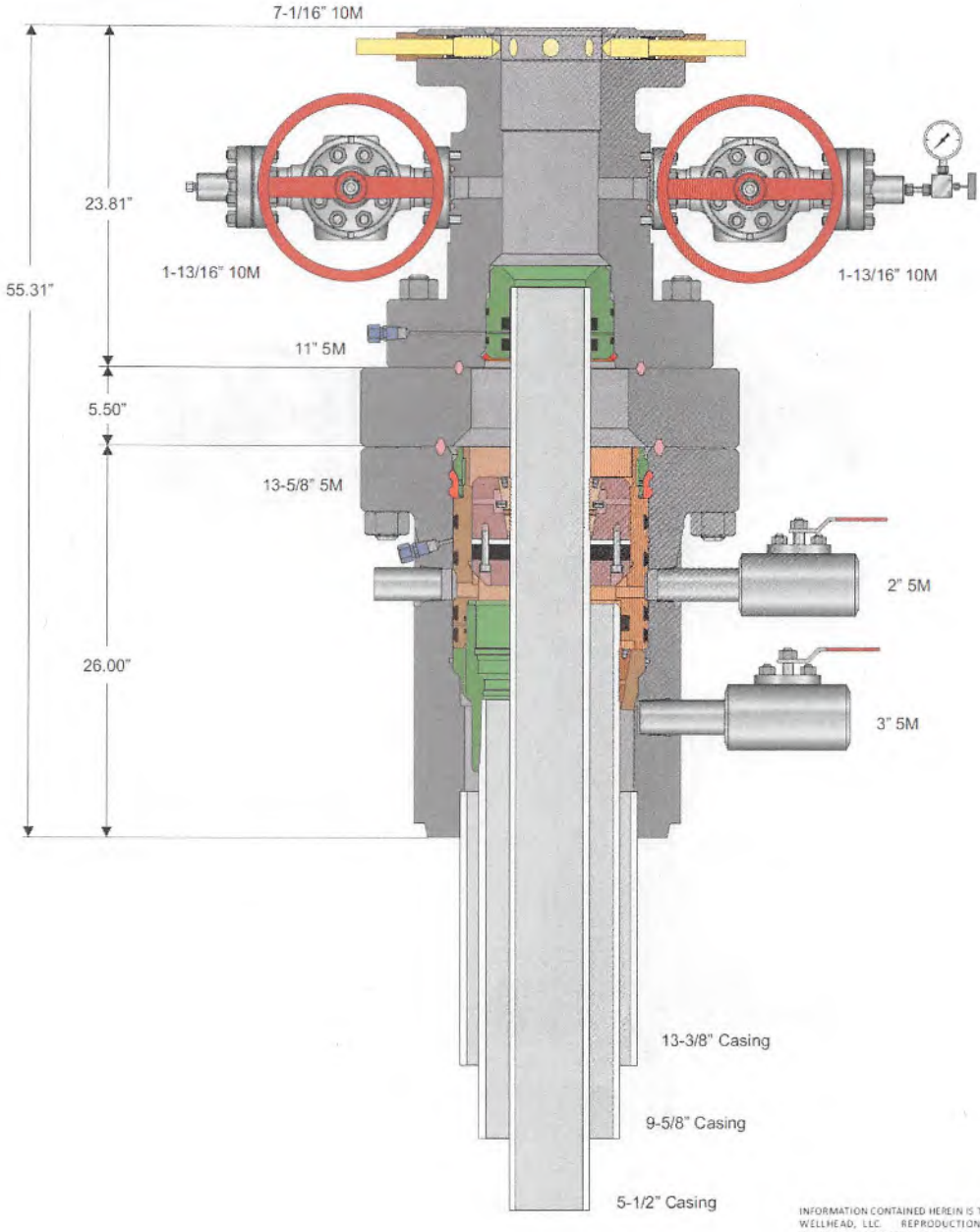
2-1/16" 5M Production Tree
DUE123



10/21/2022

Cactus Wellhead

13-3/8" x 9-5/8" x 5-1/2"
DUE125



10/21/2022

H. Well Kill Procedures

1. Inventory: At least 70,965 pounds of barite will be kept on location plus additional weight at the warehouse. At least 2,075 bbls of drilling fluid will be onsite and additional fluid will be stored both on location and at the warehouse.

2. The number and type of mixing units for mixing the mud on site shall be provided by the selected contractor and kept in the production trailer in a designated archive area for reference.

3. The selected driller shall use IADC well control methods. These shall include the Driller's Method, Wait and Weight, Dynamic Volumetric, Migration/Bleed, and Lubrication/Bleed. The primary methods are Driller's Method and Wait and Weight.

Section 6 – Hydrogen Sulfide (H2S)

A. Hydrogen Sulfide (H2S) Detection and Warning Equipment

Arsenal Resources has a MeshGuard LEL and H2S Monitoring system installed on the rig. The system triggers audio and visual alarms if it detects LEL or H2S at action levels.

The system consists of the following:

1 H_2S Fixed Monitor w/2 relays (relays location in doghouse & company man trailer)

4 H_2S Sensors (sensors located on rig floor, cellar, shakers, and mud tank)

2 Explosion Proof Alarms (Light and Siren)

Arsenal Resources employees will utilize MGC multi-gas detectors. The selected contractor foreman shall immediately notify the WV DEP Office of Oil and Gas Inspector and the Office when Hydrogen Sulfide is encountered.

B. H2S Personnel Training

Personnel involved with the monitoring, detection or warning of the presence of Hydrogen Sulfide shall be provided training in a special training session detailing how to use the equipment and issue the necessary warning prior to the operations commencing. This is special Hydrogen Sulfide detection training that will be conducted by the selected contractor.

C. Inspector Notification of H2S Presence

The selected contractor shall immediately contact the WV DEP Office of Oil and Gas Inspector by phone when Hydrogen Sulfide is detected and alert the guard station that no entry to the site shall be granted to unauthorized personnel during that time until the presence of Hydrogen Sulfide is no longer detected and the site is deemed safe by the WV DEP Office of Oil and Gas Inspector or Office Representative.

D. Establishment of Protective Zones

Evacuation and Notification of General Public if an H2S Emergency Occurs:

In the event of an accident that requires notification to the residents within 2,500 feet of the well site, local emergency responders and the Taylor County Emergency Services shall be notified by phone and coordinate alerting the residents by phone or in person and advise them of the appropriate action.

The selected contractor shall maintain the 2,500 foot protection zone during all applicable events such as hydrogen sulfide, blow-outs and flaring by alerting the local emergency responders and the Taylor County Emergency Services and having them coordinate notifications and evacuation of the protection zone.

E. H2S PPE

Personal Protective Equipment (PPE):
During operations, all personnel shall have on hard hats, safety goggles, fire retardant clothing, steel toe boots and earplugs at all times. Additional PPE may be required for specialized tasks.

Each individual's required PPE will be detailed in the Job Safety Analysis report that is kept in the production trailer in a designated archive area for reference, and shall be reviewed by each individual prior to the start of their shift.

Personnel without the required PPE will not be granted access to the site.

H_2S Safety Services Equipment List:

In the event of an H2S Emergency, Total Safety or TekSolv will be contacted to provide the following:

Hydrogen Sulfide Safety Package

Respiratory Safety Systems

QTY	DESCRIPTION
8	30-minute pressure demand SCBA with Pigtail.
4	4 supplied Air Respirators with 5 minute escape bottles.

Detection and Alarm Safety System

1	Personal H_2S monitors
1	Portable Tri-Gas Hand Held Meter (O_2, LEL, H_2S)
1	Gastech Manual Impingement Pump Type Detector
2	Boxes H_2S Tubes Various Ranges
2	Boxes SO_2 Tubes Various Ranges
1	Calibration Gas
1	Set Paper Work for Records: Training, Cal, Inspection, other

Additional Safety Related Equipment

QTY	Description
2	Windsocks with Pole and Bracket
1	Set Well Condition Sign w/Green, Yellow, Red Flags
1	Primary Safe Briefing Area Sign
1	Secondary Safe Briefing Area Sign
1	Oxygen Resuscitator

Section 7 – Flaring

A. Description and Plan including schematic of installation for duration of flaring activities:

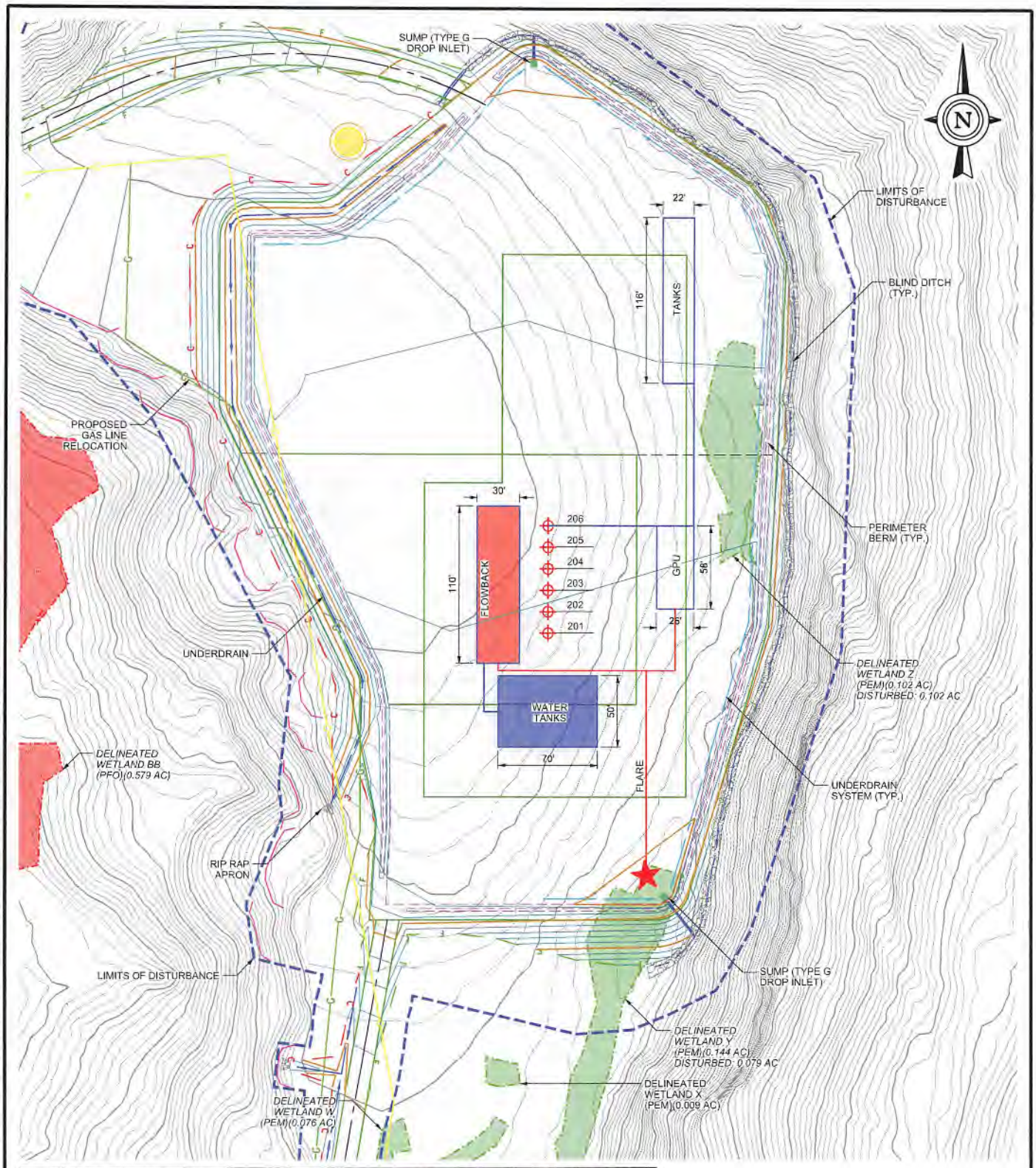
1. Flare Line will be constructed using three inch flare line tubing and anchored with cement anchor blocks. The line will have a dual choke assembly manifold with adjustable manual chokes. A detailed Pad Flaring Diagram is located in Section 7.

2. The selected contractor will designate the system to light the flare and the dedication of the back-up igniters.

3. The Taylor County Emergency Services and local Volunteer Fire Department shall be notified by the selected contractor foreman prior to lighting the flare when possible, and as soon after lighting the flare as reasonably possible.

4. A minimum distance of 100 feet will be maintained to the nearest flammable material beyond the end of the flare line. The flare line has been placed in order to avoid any distance less than 100 feet to the nearest wooded area. The flare line minimum distances to the nearest flammable material shall be detailed in each of the operations meetings and the pre-drill or weekly safety meetings with all personnel.

5. The estimated flaring operations for this site are anticipated to last no longer than two weeks.



WELL NO.	STATE PLAN COORDINATE (WVN NAD 83)		LAT/LONG COORDINATE		LAT/LONG COORDINATE (NAD 83) (DMS)		UTM COORDINATE (NAD83-ZONE 17-METER)		EXISTING ELEV (NAVD88) (FT)	PROPOSED ELEV. NAVD88) (FT)
WELL 201	NORTHING	276971.7221	LAT:	39.258499°	LAT:	39°15'30.60"	NORTHING	4345792.144	1335.08'	1333.5'
	EASTING	1779051.6624	LONG:	-80.169060°	LONG:	-80°10'08.61"	EASTING	571690.548		
WELL 202	NORTHING	276986.7221	LAT:	39.258540°	LAT:	39°15'30.75"	NORTHING	4345796.714	1335.90'	1333.5'
	EASTING	1779051.6624	LONG:	-80.169060°	LONG:	-80°10'08.62"	EASTING	571690.472		
WELL 203	NORTHING	277001.7221	LAT:	39.258582°	LAT:	39°15'30.89"	NORTHING	4345801.284	1337.01'	1333.5'
	EASTING	1779051.6624	LONG	-80.169060°	LONG	-80°10'08.62"	EASTING	571690.397		
WELL 204	NORTHING	277016.7221	LAT:	39.258623°	LAT:	39°15'31.04"	NORTHING	4345805.854	1337.79'	1333.5'
	EASTING	1779051.6624	LONG:	-80.169061°	LONG:	-80°10'08.62"	EASTING	571690.321		
WELL 205	NORTHING	277031.7221	LAT:	39.258664°	LAT:	39°15'31.19"	NORTHING	4345810.424	1338.26'	1333.5'
	EASTING	1779051.6624	LONG:	-80.169061°	LONG:	-80.10'08.62"	EASTING	571690.245		
WELL 206	NORTHING	277046.7221	LAT:	39.258705°	LAT:	39°15'31.34"	NORTHING	4345814.994	1338.79'	1333.5'
	EASTING	1779051.6624	LONG	-80.169062°	LONG:	-80°10'08.62"	EASTING	571690.169		

SCALE : 0 100 ft.

FLOWBACK SCHEMATIC LAYOUT

made for

ARSENAL RESOURCES

JOHNSON TFP40 WELL SITE

Harrison and Taylor County, West Virginia

prepared by

DIEFFENBAUCH & HRITZ, LLC
1095 Chaplin Rd Suite 200, Morgantown, WV 26501
Phone: 304-985-5555 Fax: 304-982-5527

10/2/2022

K:\Mountaineer Keystone\2017\17078-007 - Johnson TFP40\Common\Flowback Schematic Layout.dgn 9/21/2018 8:51:13 AM 1:100

Section 8 – Collision Avoidance

A. Established Definitions

Protocol and established safeguard designed to prevent underground collisions during any drilling on multi-well pads.

B. Description of Risk

Arsenal Resources uses an anti-collision protocol on all wells as a safeguard designed to prevent underground collision during any drilling on multi-well pads.

C. Plan Components

1. All surveys will be MWD/EM survey tools in all hole sections, and surveys will be taken every stand (Around 90'). If the SF < 1 surveys will be taken on a more frequent basis, most likely every 30'. We will discuss with the WVDEP Oil and Gas Inspector.

2. All directional and MWD tools will be visually inspected by directional MWD personnel and Arsenal Resources site representatives at a minimum.

3. Surface nudges will be planned by the directional company as needed to maintain a safe SF.

4. The same survey tools that we use in the vertical section will be used.

5. The directional company uses a AC software to maintain a safe SF. Compass is the current company's software.

6. Arsenal Resources will maintain the state minimum SF factors in all whole sections.

    a. Minimum SF standards (thresholds) required – SF > 1.5 shall be obtained early as practical and maintained. Survey every stand (90').
    b. SF > 2 applies when in proximity to any fractured or any producing well that exists on the well pad. Survey every stand (90'). **Additional risk management might be needed as well and will be addressed as needed.

7. Lateral Section
    a. Arsenal Resources will work with the directional companies to maintain delineation, grid connections, and ensure magnetic interference correction is being followed. The onsite Arsenal Resources representative and the directional company's MWD personnel will be responsible for QC/QA.

8. For any existing horizontal or vertical well found adjacent to the lateral section Arsenal Resources will maintain over a 2 SF and will review each well on a case by case basis with a pre-drilled AC program along with continually updating the plan while drilling.

9. Arsenal Resources will attach the wall map showing all wells on the pad spaced at 10' - 15' apart. If there is a fractured well, (live) well, Arsenal Resources will note it in the drawing.

10. When there is an existing wellbore on the pad, Arsenal Resources will attach notes and or surveys for the well.

11. If a collision should occur, the wellbores would be shut in immediately and the well would need to be killed with kill mud. If a survey shows imminent risk for a collision, Arsenal Resources will stop drilling and confirm with a gyro, then evaluate the situation on a case by case basis. If Arsenal Resources can steer away with MWD or a gyro we will, or we will plug back if needed.

12. Arsenal Resources will notify the WVDEP Oil and Gas inspector immediately of any underground collision or if the SF level 1 is determined.

13. Arsenal Resources will provide other supportive resources as needed.

ARSENAL™
RESOURCES

Arsenal Resources

Taylor County, WV
Johnson TFP40
205 - Slot 205

Orig.

Plan: DEP Plan 5

Standard Planning Report

17 September, 2022

Scientific Drilling

www.scientificdrilling.com

10/21/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Company:	Arsenal Resources	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Project:	Taylor County, WV	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site:	Johnson TFP40	**North Reference:**	Grid
Well:	205	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 5		

Project	Taylor County, WV		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	West Virginia Northern Zone		

Site	Johnson TFP40				
Site Position:		**Northing:**	276,971.63 usft	**Latitude:**	39.2584990
From:	Map	**Easting:**	1,779,051.83 usft	**Longitude:**	-80.1690590
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	-0.43 °

Well	205 - Slot 205					
Well Position	**+N/-S**	60.1 usft	**Northing:**	277,031.72 usft	**Latitude:**	39.2586640
	+E/-W	-0.2 usft	**Easting:**	1,779,051.66 usft	**Longitude:**	-80.1690611
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	1,332.5 usft

Wellbore	Orig.				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	HDGM2022	2/1/2022	-9.52	65.77	51,612.60000000

Design	DEP Plan 5				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	160.97	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,100.0	6.00	25.00	1,099.5	14.2	6.6	2.00	2.00	0.00	25.00	
2,608.8	6.00	25.00	2,600.0	157.2	73.3	0.00	0.00	0.00	0.00	
3,643.8	24.33	72.16	3,597.0	272.8	301.6	2.00	1.77	4.56	58.75	
7,739.0	24.33	72.16	7,328.4	789.6	1,908.0	0.00	0.00	0.00	0.00	
8,733.5	90.00	160.97	7,903.5	272.6	2,361.4	9.00	6.60	8.93	88.91	Joh_TPF40_205_LP
30,033.7	90.00	160.97	7,903.5	-19,863.5	9,306.6	0.00	0.00	0.00	0.00	Joh_TPF40_205_PBH

10/21/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Company:	Arsenal Resources	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Project:	Taylor County, WV	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site:	Johnson TFP40	**North Reference:**	Grid
Well:	205	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 5		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP 800' MD/ TVD 800'									
900.0	2.00	25.00	900.0	1.6	0.7	-1.3	2.00	2.00	0.00
1,000.0	4.00	25.00	999.8	6.3	2.9	-5.0	2.00	2.00	0.00
1,100.0	6.00	25.00	1,099.5	14.2	6.6	-11.3	2.00	2.00	0.00
Hold 6° Inc									
1,200.0	6.00	25.00	1,198.9	23.7	11.0	-18.8	0.00	0.00	0.00
1,300.0	6.00	25.00	1,298.4	33.2	15.5	-26.3	0.00	0.00	0.00
1,400.0	6.00	25.00	1,397.8	42.6	19.9	-33.8	0.00	0.00	0.00
1,500.0	6.00	25.00	1,497.3	52.1	24.3	-41.3	0.00	0.00	0.00
1,600.0	6.00	25.00	1,596.7	61.6	28.7	-48.9	0.00	0.00	0.00
1,700.0	6.00	25.00	1,696.2	71.1	33.1	-56.4	0.00	0.00	0.00
1,800.0	6.00	25.00	1,795.6	80.5	37.6	-63.9	0.00	0.00	0.00
1,900.0	6.00	25.00	1,895.1	90.0	42.0	-71.4	0.00	0.00	0.00
2,000.0	6.00	25.00	1,994.5	99.5	46.4	-78.9	0.00	0.00	0.00
2,100.0	6.00	25.00	2,094.0	109.0	50.8	-86.4	0.00	0.00	0.00
2,200.0	6.00	25.00	2,193.4	118.4	55.2	-94.0	0.00	0.00	0.00
2,300.0	6.00	25.00	2,292.9	127.9	59.6	-101.5	0.00	0.00	0.00
2,400.0	6.00	25.00	2,392.3	137.4	64.1	-109.0	0.00	0.00	0.00
2,500.0	6.00	25.00	2,491.8	146.9	68.5	-116.5	0.00	0.00	0.00
2,608.8	6.00	25.00	2,600.0	157.2	73.3	-124.7	0.00	0.00	0.00
KO Tangent 2°/100									
2,700.0	7.12	37.68	2,690.6	166.0	78.8	-131.2	2.00	1.23	13.91
2,800.0	8.62	47.34	2,789.7	175.9	88.1	-137.6	2.00	1.51	9.66
2,900.0	10.30	54.02	2,888.3	186.3	100.8	-143.2	2.00	1.67	6.68
3,000.0	12.07	58.81	2,986.4	196.9	117.0	-148.0	2.00	1.77	4.78
3,100.0	13.91	62.35	3,083.8	207.9	136.6	-152.0	2.00	1.83	3.56
3,200.0	15.78	65.10	3,180.5	219.2	159.6	-155.2	2.00	1.87	2.73
3,300.0	17.68	67.26	3,276.3	230.8	185.9	-157.6	2.00	1.90	2.16
3,400.0	19.60	69.01	3,371.0	242.7	215.6	-159.2	2.00	1.92	1.75
3,500.0	21.54	70.47	3,464.6	254.9	248.5	-159.9	2.00	1.93	1.45
3,600.0	23.48	71.69	3,557.0	267.3	284.8	-159.8	2.00	1.94	1.22
3,643.8	24.33	72.16	3,597.0	272.8	301.6	-159.5	2.00	1.95	1.09
Hold 24.3° Inc									
3,700.0	24.33	72.16	3,648.2	279.9	323.7	-159.0	0.00	0.00	0.00
3,800.0	24.33	72.16	3,739.4	292.5	362.9	-158.2	0.00	0.00	0.00
3,900.0	24.33	72.16	3,830.5	305.1	402.1	-157.3	0.00	0.00	0.00
4,000.0	24.33	72.16	3,921.6	317.7	441.4	-156.4	0.00	0.00	0.00
4,100.0	24.33	72.16	4,012.7	330.3	480.6	-155.6	0.00	0.00	0.00
4,200.0	24.33	72.16	4,103.8	343.0	519.8	-154.7	0.00	0.00	0.00
4,300.0	24.33	72.16	4,194.9	355.6	559.0	-153.9	0.00	0.00	0.00
4,400.0	24.33	72.16	4,286.1	368.2	598.3	-153.0	0.00	0.00	0.00
4,500.0	24.33	72.16	4,377.2	380.8	637.5	-152.2	0.00	0.00	0.00
4,600.0	24.33	72.16	4,468.3	393.4	676.7	-151.3	0.00	0.00	0.00

10/21/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Company:	Arsenal Resources	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Project:	Taylor County, WV	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site:	Johnson TFP40	**North Reference:**	Grid
Well:	205	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 5		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.0	24.33	72.16	4,559.4	406.1	715.9	-150.4	0.00	0.00	0.00
4,800.0	24.33	72.16	4,650.5	418.7	755.2	-149.6	0.00	0.00	0.00
4,900.0	24.33	72.16	4,741.6	431.3	794.4	-148.7	0.00	0.00	0.00
5,000.0	24.33	72.16	4,832.8	443.9	833.6	-147.9	0.00	0.00	0.00
5,100.0	24.33	72.16	4,923.9	456.6	872.8	-147.0	0.00	0.00	0.00
5,200.0	24.33	72.16	5,015.0	469.2	912.1	-146.1	0.00	0.00	0.00
5,300.0	24.33	72.16	5,106.1	481.8	951.3	-145.3	0.00	0.00	0.00
5,400.0	24.33	72.16	5,197.2	494.4	990.5	-144.4	0.00	0.00	0.00
5,500.0	24.33	72.16	5,288.3	507.0	1,029.7	-143.6	0.00	0.00	0.00
5,600.0	24.33	72.16	5,379.4	519.7	1,069.0	-142.7	0.00	0.00	0.00
5,700.0	24.33	72.16	5,470.6	532.3	1,108.2	-141.9	0.00	0.00	0.00
5,800.0	24.33	72.16	5,561.7	544.9	1,147.4	-141.0	0.00	0.00	0.00
5,900.0	24.33	72.16	5,652.8	557.5	1,186.6	-140.1	0.00	0.00	0.00
6,000.0	24.33	72.16	5,743.9	570.1	1,225.9	-139.3	0.00	0.00	0.00
6,100.0	24.33	72.16	5,835.0	582.8	1,265.1	-138.4	0.00	0.00	0.00
6,200.0	24.33	72.16	5,926.1	595.4	1,304.3	-137.6	0.00	0.00	0.00
6,300.0	24.33	72.16	6,017.3	608.0	1,343.5	-136.7	0.00	0.00	0.00
6,400.0	24.33	72.16	6,108.4	620.6	1,382.8	-135.8	0.00	0.00	0.00
6,500.0	24.33	72.16	6,199.5	633.2	1,422.0	-135.0	0.00	0.00	0.00
6,600.0	24.33	72.16	6,290.6	645.9	1,461.2	-134.1	0.00	0.00	0.00
6,700.0	24.33	72.16	6,381.7	658.5	1,500.4	-133.3	0.00	0.00	0.00
6,800.0	24.33	72.16	6,472.8	671.1	1,539.7	-132.4	0.00	0.00	0.00
6,900.0	24.33	72.16	6,563.9	683.7	1,578.9	-131.5	0.00	0.00	0.00
7,000.0	24.33	72.16	6,655.1	696.4	1,618.1	-130.7	0.00	0.00	0.00
7,100.0	24.33	72.16	6,746.2	709.0	1,657.3	-129.8	0.00	0.00	0.00
7,200.0	24.33	72.16	6,837.3	721.6	1,696.6	-129.0	0.00	0.00	0.00
7,300.0	24.33	72.16	6,928.4	734.2	1,735.8	-128.1	0.00	0.00	0.00
7,400.0	24.33	72.16	7,019.5	746.8	1,775.0	-127.3	0.00	0.00	0.00
7,500.0	24.33	72.16	7,110.6	759.5	1,814.2	-126.4	0.00	0.00	0.00
7,600.0	24.33	72.16	7,201.8	772.1	1,853.5	-125.5	0.00	0.00	0.00
7,700.0	24.33	72.16	7,292.9	784.7	1,892.7	-124.7	0.00	0.00	0.00
7,739.0	24.33	72.16	7,328.4	789.6	1,908.0	-124.3	0.00	0.00	0.00
KO Curve 9°/100									
7,750.0	24.37	74.57	7,338.4	790.9	1,912.3	-124.2	9.01	0.34	21.83
7,800.0	25.01	85.24	7,383.9	794.6	1,932.8	-120.9	9.00	1.28	21.35
7,850.0	26.37	95.16	7,429.0	794.4	1,954.4	-113.7	9.00	2.71	19.83
7,900.0	28.33	103.98	7,473.4	790.6	1,977.0	-102.7	9.00	3.93	17.64
7,950.0	30.79	111.62	7,516.9	783.0	2,000.4	-87.9	9.00	4.92	15.29
8,000.0	33.64	118.17	7,559.2	771.7	2,024.6	-69.4	9.00	5.69	13.09
8,050.0	36.78	123.76	7,600.1	756.9	2,049.2	-47.3	9.00	6.29	11.18
8,100.0	40.15	128.56	7,639.2	738.5	2,074.3	-21.8	9.00	6.74	9.60
8,150.0	43.69	132.72	7,676.4	716.7	2,099.6	7.1	9.00	7.08	8.32
8,200.0	47.36	136.37	7,711.4	691.7	2,125.0	39.0	9.00	7.35	7.29
8,250.0	51.14	139.60	7,744.1	663.5	2,150.3	73.9	9.00	7.55	6.47
8,300.0	55.00	142.51	7,774.1	632.4	2,175.4	111.5	9.00	7.71	5.81
8,350.0	58.91	145.15	7,801.4	598.6	2,200.1	151.5	9.00	7.84	5.28
8,400.0	62.88	147.58	7,825.7	562.2	2,224.3	193.8	9.00	7.94	4.86
8,450.0	66.89	149.84	7,846.9	523.5	2,247.8	238.0	9.00	8.01	4.53
8,500.0	70.93	151.98	7,864.9	482.8	2,270.4	283.9	9.00	8.07	4.26
8,550.0	74.99	154.00	7,879.6	440.2	2,292.1	331.3	9.00	8.12	4.06
8,600.0	79.06	155.96	7,890.8	396.0	2,312.7	379.7	9.00	8.16	3.91
8,650.0	83.15	157.86	7,898.5	350.6	2,332.1	429.0	9.00	8.18	3.80

Database:	Northeast	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Company:	Arsenal Resources	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Project:	Taylor County, WV	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site:	Johnson TFP40	**North Reference:**	Grid
Well:	205	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 5		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,700.0	87.25	159.73	7,902.7	304.2	2,350.1	478.7	9.00	8.19	3.74
8,733.5	90.00	160.97	7,903.5	272.6	2,361.4	512.2	9.00	8.20	3.71
LP @ 90° Inc/ 160.9° Az/ 8733.5' MD/ TVD 7903.5'									
8,800.0	90.00	160.97	7,903.5	209.8	2,383.1	578.7	0.00	0.00	0.00
8,900.0	90.00	160.97	7,903.5	115.2	2,415.7	678.7	0.00	0.00	0.00
9,000.0	90.00	160.97	7,903.5	20.7	2,448.3	778.7	0.00	0.00	0.00
9,100.0	90.00	160.97	7,903.5	-73.8	2,480.9	878.7	0.00	0.00	0.00
9,200.0	90.00	160.97	7,903.5	-168.4	2,513.5	978.7	0.00	0.00	0.00
9,300.0	90.00	160.97	7,903.5	-262.9	2,546.1	1,078.7	0.00	0.00	0.00
9,400.0	90.00	160.97	7,903.5	-357.4	2,578.7	1,178.7	0.00	0.00	0.00
9,500.0	90.00	160.97	7,903.5	-452.0	2,611.3	1,278.7	0.00	0.00	0.00
9,600.0	90.00	160.97	7,903.5	-546.5	2,643.9	1,378.7	0.00	0.00	0.00
9,700.0	90.00	160.97	7,903.5	-641.1	2,676.5	1,478.7	0.00	0.00	0.00
9,800.0	90.00	160.97	7,903.5	-735.6	2,709.1	1,578.7	0.00	0.00	0.00
9,900.0	90.00	160.97	7,903.5	-830.1	2,741.7	1,678.7	0.00	0.00	0.00
10,000.0	90.00	160.97	7,903.5	-924.7	2,774.3	1,778.7	0.00	0.00	0.00
10,100.0	90.00	160.97	7,903.5	-1,019.2	2,806.9	1,878.7	0.00	0.00	0.00
10,200.0	90.00	160.97	7,903.5	-1,113.7	2,839.5	1,978.7	0.00	0.00	0.00
10,300.0	90.00	160.97	7,903.5	-1,208.3	2,872.1	2,078.7	0.00	0.00	0.00
10,400.0	90.00	160.97	7,903.5	-1,302.8	2,904.8	2,178.7	0.00	0.00	0.00
10,500.0	90.00	160.97	7,903.5	-1,397.3	2,937.4	2,278.7	0.00	0.00	0.00
10,600.0	90.00	160.97	7,903.5	-1,491.9	2,970.0	2,378.7	0.00	0.00	0.00
10,700.0	90.00	160.97	7,903.5	-1,586.4	3,002.6	2,478.7	0.00	0.00	0.00
10,800.0	90.00	160.97	7,903.5	-1,680.9	3,035.2	2,578.7	0.00	0.00	0.00
10,900.0	90.00	160.97	7,903.5	-1,775.5	3,067.8	2,678.7	0.00	0.00	0.00
11,000.0	90.00	160.97	7,903.5	-1,870.0	3,100.4	2,778.7	0.00	0.00	0.00
11,100.0	90.00	160.97	7,903.5	-1,964.5	3,133.0	2,878.7	0.00	0.00	0.00
11,200.0	90.00	160.97	7,903.5	-2,059.1	3,165.6	2,978.7	0.00	0.00	0.00
11,300.0	90.00	160.97	7,903.5	-2,153.6	3,198.2	3,078.7	0.00	0.00	0.00
11,400.0	90.00	160.97	7,903.5	-2,248.1	3,230.8	3,178.7	0.00	0.00	0.00
11,500.0	90.00	160.97	7,903.5	-2,342.7	3,263.4	3,278.7	0.00	0.00	0.00
11,600.0	90.00	160.97	7,903.5	-2,437.2	3,296.0	3,378.7	0.00	0.00	0.00
11,700.0	90.00	160.97	7,903.5	-2,531.7	3,328.6	3,478.7	0.00	0.00	0.00
11,800.0	90.00	160.97	7,903.5	-2,626.3	3,361.2	3,578.7	0.00	0.00	0.00
11,900.0	90.00	160.97	7,903.5	-2,720.8	3,393.8	3,678.7	0.00	0.00	0.00
12,000.0	90.00	160.97	7,903.5	-2,815.4	3,426.5	3,778.7	0.00	0.00	0.00
12,100.0	90.00	160.97	7,903.5	-2,909.9	3,459.1	3,878.7	0.00	0.00	0.00
12,200.0	90.00	160.97	7,903.5	-3,004.4	3,491.7	3,978.7	0.00	0.00	0.00
12,300.0	90.00	160.97	7,903.5	-3,099.0	3,524.3	4,078.7	0.00	0.00	0.00
12,400.0	90.00	160.97	7,903.5	-3,193.5	3,556.9	4,178.7	0.00	0.00	0.00
12,500.0	90.00	160.97	7,903.5	-3,288.0	3,589.5	4,278.7	0.00	0.00	0.00
12,600.0	90.00	160.97	7,903.5	-3,382.6	3,622.1	4,378.7	0.00	0.00	0.00
12,700.0	90.00	160.97	7,903.5	-3,477.1	3,654.7	4,478.7	0.00	0.00	0.00
12,800.0	90.00	160.97	7,903.5	-3,571.6	3,687.3	4,578.7	0.00	0.00	0.00
12,900.0	90.00	160.97	7,903.5	-3,666.2	3,719.9	4,678.7	0.00	0.00	0.00
13,000.0	90.00	160.97	7,903.5	-3,760.7	3,752.5	4,778.7	0.00	0.00	0.00
13,100.0	90.00	160.97	7,903.5	-3,855.2	3,785.1	4,878.7	0.00	0.00	0.00
13,200.0	90.00	160.97	7,903.5	-3,949.8	3,817.7	4,978.7	0.00	0.00	0.00
13,300.0	90.00	160.97	7,903.5	-4,044.3	3,850.3	5,078.7	0.00	0.00	0.00
13,400.0	90.00	160.97	7,903.5	-4,138.8	3,882.9	5,178.7	0.00	0.00	0.00
13,500.0	90.00	160.97	7,903.5	-4,233.4	3,915.5	5,278.7	0.00	0.00	0.00
13,600.0	90.00	160.97	7,903.5	-4,327.9	3,948.1	5,378.7	0.00	0.00	0.00

10/21/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Company:	Arsenal Resources	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Project:	Taylor County, WV	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site:	Johnson TFP40	**North Reference:**	Grid
Well:	205	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 5		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,700.0	90.00	160.97	7,903.5	-4,422.4	3,980.8	5,478.7	0.00	0.00	0.00
13,800.0	90.00	160.97	7,903.5	-4,517.0	4,013.4	5,578.7	0.00	0.00	0.00
13,900.0	90.00	160.97	7,903.5	-4,611.5	4,046.0	5,678.7	0.00	0.00	0.00
14,000.0	90.00	160.97	7,903.5	-4,706.0	4,078.6	5,778.7	0.00	0.00	0.00
14,100.0	90.00	160.97	7,903.5	-4,800.6	4,111.2	5,878.7	0.00	0.00	0.00
14,200.0	90.00	160.97	7,903.5	-4,895.1	4,143.8	5,978.7	0.00	0.00	0.00
14,300.0	90.00	160.97	7,903.5	-4,989.7	4,176.4	6,078.7	0.00	0.00	0.00
14,400.0	90.00	160.97	7,903.5	-5,084.2	4,209.0	6,178.7	0.00	0.00	0.00
14,500.0	90.00	160.97	7,903.5	-5,178.7	4,241.6	6,278.7	0.00	0.00	0.00
14,600.0	90.00	160.97	7,903.5	-5,273.3	4,274.2	6,378.7	0.00	0.00	0.00
14,700.0	90.00	160.97	7,903.5	-5,367.8	4,306.8	6,478.7	0.00	0.00	0.00
14,800.0	90.00	160.97	7,903.5	-5,462.3	4,339.4	6,578.7	0.00	0.00	0.00
14,900.0	90.00	160.97	7,903.5	-5,556.9	4,372.0	6,678.7	0.00	0.00	0.00
15,000.0	90.00	160.97	7,903.5	-5,651.4	4,404.6	6,778.7	0.00	0.00	0.00
15,100.0	90.00	160.97	7,903.5	-5,745.9	4,437.2	6,878.7	0.00	0.00	0.00
15,200.0	90.00	160.97	7,903.5	-5,840.5	4,469.8	6,978.7	0.00	0.00	0.00
15,300.0	90.00	160.97	7,903.5	-5,935.0	4,502.5	7,078.7	0.00	0.00	0.00
15,400.0	90.00	160.97	7,903.5	-6,029.5	4,535.1	7,178.7	0.00	0.00	0.00
15,500.0	90.00	160.97	7,903.5	-6,124.1	4,567.7	7,278.7	0.00	0.00	0.00
15,600.0	90.00	160.97	7,903.5	-6,218.6	4,600.3	7,378.7	0.00	0.00	0.00
15,700.0	90.00	160.97	7,903.5	-6,313.1	4,632.9	7,478.7	0.00	0.00	0.00
15,800.0	90.00	160.97	7,903.5	-6,407.7	4,665.5	7,578.7	0.00	0.00	0.00
15,900.0	90.00	160.97	7,903.5	-6,502.2	4,698.1	7,678.7	0.00	0.00	0.00
16,000.0	90.00	160.97	7,903.5	-6,596.7	4,730.7	7,778.7	0.00	0.00	0.00
16,100.0	90.00	160.97	7,903.5	-6,691.3	4,763.3	7,878.7	0.00	0.00	0.00
16,200.0	90.00	160.97	7,903.5	-6,785.8	4,795.9	7,978.7	0.00	0.00	0.00
16,300.0	90.00	160.97	7,903.5	-6,880.4	4,828.5	8,078.7	0.00	0.00	0.00
16,400.0	90.00	160.97	7,903.5	-6,974.9	4,861.1	8,178.7	0.00	0.00	0.00
16,500.0	90.00	160.97	7,903.5	-7,069.4	4,893.7	8,278.7	0.00	0.00	0.00
16,600.0	90.00	160.97	7,903.5	-7,164.0	4,926.3	8,378.7	0.00	0.00	0.00
16,700.0	90.00	160.97	7,903.5	-7,258.5	4,958.9	8,478.7	0.00	0.00	0.00
16,800.0	90.00	160.97	7,903.5	-7,353.0	4,991.5	8,578.7	0.00	0.00	0.00
16,900.0	90.00	160.97	7,903.5	-7,447.6	5,024.2	8,678.7	0.00	0.00	0.00
17,000.0	90.00	160.97	7,903.5	-7,542.1	5,056.8	8,778.7	0.00	0.00	0.00
17,100.0	90.00	160.97	7,903.5	-7,636.6	5,089.4	8,878.7	0.00	0.00	0.00
17,200.0	90.00	160.97	7,903.5	-7,731.2	5,122.0	8,978.7	0.00	0.00	0.00
17,300.0	90.00	160.97	7,903.5	-7,825.7	5,154.6	9,078.7	0.00	0.00	0.00
17,400.0	90.00	160.97	7,903.5	-7,920.2	5,187.2	9,178.7	0.00	0.00	0.00
17,500.0	90.00	160.97	7,903.5	-8,014.8	5,219.8	9,278.7	0.00	0.00	0.00
17,600.0	90.00	160.97	7,903.5	-8,109.3	5,252.4	9,378.7	0.00	0.00	0.00
17,700.0	90.00	160.97	7,903.5	-8,203.8	5,285.0	9,478.7	0.00	0.00	0.00
17,800.0	90.00	160.97	7,903.5	-8,298.4	5,317.6	9,578.7	0.00	0.00	0.00
17,900.0	90.00	160.97	7,903.5	-8,392.9	5,350.2	9,678.7	0.00	0.00	0.00
18,000.0	90.00	160.97	7,903.5	-8,487.4	5,382.8	9,778.7	0.00	0.00	0.00
18,100.0	90.00	160.97	7,903.5	-8,582.0	5,415.4	9,878.7	0.00	0.00	0.00
18,200.0	90.00	160.97	7,903.5	-8,676.5	5,448.0	9,978.7	0.00	0.00	0.00
18,300.0	90.00	160.97	7,903.5	-8,771.0	5,480.6	10,078.7	0.00	0.00	0.00
18,400.0	90.00	160.97	7,903.5	-8,865.6	5,513.2	10,178.7	0.00	0.00	0.00
18,500.0	90.00	160.97	7,903.5	-8,960.1	5,545.9	10,278.7	0.00	0.00	0.00
18,600.0	90.00	160.97	7,903.5	-9,054.7	5,578.5	10,378.7	0.00	0.00	0.00
18,700.0	90.00	160.97	7,903.5	-9,149.2	5,611.1	10,478.7	0.00	0.00	0.00
18,800.0	90.00	160.97	7,903.5	-9,243.7	5,643.7	10,578.7	0.00	0.00	0.00

10/21/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Company:	Arsenal Resources	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Project:	Taylor County, WV	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site:	Johnson TFP40	**North Reference:**	Grid
Well:	205	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig		
Design:	DEP Plan 5		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,900.0	90.00	160.97	7,903.5	-9,338.3	5,676.3	10,678.7	0.00	0.00	0.00
19,000.0	90.00	160.97	7,903.5	-9,432.8	5,708.9	10,778.7	0.00	0.00	0.00
19,100.0	90.00	160.97	7,903.5	-9,527.3	5,741.5	10,878.7	0.00	0.00	0.00
19,200.0	90.00	160.97	7,903.5	-9,621.9	5,774.1	10,978.7	0.00	0.00	0.00
19,300.0	90.00	160.97	7,903.5	-9,716.4	5,806.7	11,078.7	0.00	0.00	0.00
19,400.0	90.00	160.97	7,903.5	-9,810.9	5,839.3	11,178.7	0.00	0.00	0.00
19,500.0	90.00	160.97	7,903.5	-9,905.5	5,871.9	11,278.7	0.00	0.00	0.00
19,600.0	90.00	160.97	7,903.5	-10,000.0	5,904.5	11,378.7	0.00	0.00	0.00
19,700.0	90.00	160.97	7,903.5	-10,094.5	5,937.1	11,478.7	0.00	0.00	0.00
19,800.0	90.00	160.97	7,903.5	-10,189.1	5,969.7	11,578.7	0.00	0.00	0.00
19,900.0	90.00	160.97	7,903.5	-10,283.6	6,002.3	11,678.7	0.00	0.00	0.00
20,000.0	90.00	160.97	7,903.5	-10,378.1	6,034.9	11,778.7	0.00	0.00	0.00
20,100.0	90.00	160.97	7,903.5	-10,472.7	6,067.6	11,878.7	0.00	0.00	0.00
20,200.0	90.00	160.97	7,903.5	-10,567.2	6,100.2	11,978.7	0.00	0.00	0.00
20,300.0	90.00	160.97	7,903.5	-10,661.7	6,132.8	12,078.7	0.00	0.00	0.00
20,400.0	90.00	160.97	7,903.5	-10,756.3	6,165.4	12,178.7	0.00	0.00	0.00
20,500.0	90.00	160.97	7,903.5	-10,850.8	6,198.0	12,278.7	0.00	0.00	0.00
20,600.0	90.00	160.97	7,903.5	-10,945.3	6,230.6	12,378.7	0.00	0.00	0.00
20,700.0	90.00	160.97	7,903.5	-11,039.9	6,263.2	12,478.7	0.00	0.00	0.00
20,800.0	90.00	160.97	7,903.5	-11,134.4	6,295.8	12,578.7	0.00	0.00	0.00
20,900.0	90.00	160.97	7,903.5	-11,229.0	6,328.4	12,678.7	0.00	0.00	0.00
21,000.0	90.00	160.97	7,903.5	-11,323.5	6,361.0	12,778.7	0.00	0.00	0.00
21,100.0	90.00	160.97	7,903.5	-11,418.0	6,393.6	12,878.7	0.00	0.00	0.00
21,200.0	90.00	160.97	7,903.5	-11,512.6	6,426.2	12,978.7	0.00	0.00	0.00
21,300.0	90.00	160.97	7,903.5	-11,607.1	6,458.8	13,078.7	0.00	0.00	0.00
21,400.0	90.00	160.97	7,903.5	-11,701.6	6,491.4	13,178.7	0.00	0.00	0.00
21,500.0	90.00	160.97	7,903.5	-11,796.2	6,524.0	13,278.7	0.00	0.00	0.00
21,600.0	90.00	160.97	7,903.5	-11,890.7	6,556.6	13,378.7	0.00	0.00	0.00
21,700.0	90.00	160.97	7,903.5	-11,985.2	6,589.3	13,478.7	0.00	0.00	0.00
21,800.0	90.00	160.97	7,903.5	-12,079.8	6,621.9	13,578.7	0.00	0.00	0.00
21,900.0	90.00	160.97	7,903.5	-12,174.3	6,654.5	13,678.7	0.00	0.00	0.00
22,000.0	90.00	160.97	7,903.5	-12,268.8	6,687.1	13,778.7	0.00	0.00	0.00
22,100.0	90.00	160.97	7,903.5	-12,363.4	6,719.7	13,878.7	0.00	0.00	0.00
22,200.0	90.00	160.97	7,903.5	-12,457.9	6,752.3	13,978.7	0.00	0.00	0.00
22,300.0	90.00	160.97	7,903.5	-12,552.4	6,784.9	14,078.7	0.00	0.00	0.00
22,400.0	90.00	160.97	7,903.5	-12,647.0	6,817.5	14,178.7	0.00	0.00	0.00
22,500.0	90.00	160.97	7,903.5	-12,741.5	6,850.1	14,278.7	0.00	0.00	0.00
22,600.0	90.00	160.97	7,903.5	-12,836.0	6,882.7	14,378.7	0.00	0.00	0.00
22,700.0	90.00	160.97	7,903.5	-12,930.6	6,915.3	14,478.7	0.00	0.00	0.00
22,800.0	90.00	160.97	7,903.5	-13,025.1	6,947.9	14,578.7	0.00	0.00	0.00
22,900.0	90.00	160.97	7,903.5	-13,119.7	6,980.5	14,678.7	0.00	0.00	0.00
23,000.0	90.00	160.97	7,903.5	-13,214.2	7,013.1	14,778.7	0.00	0.00	0.00
23,100.0	90.00	160.97	7,903.5	-13,308.7	7,045.7	14,878.7	0.00	0.00	0.00
23,200.0	90.00	160.97	7,903.5	-13,403.3	7,078.3	14,978.7	0.00	0.00	0.00
23,300.0	90.00	160.97	7,903.5	-13,497.8	7,111.0	15,078.7	0.00	0.00	0.00
23,400.0	90.00	160.97	7,903.5	-13,592.3	7,143.6	15,178.7	0.00	0.00	0.00
23,500.0	90.00	160.97	7,903.5	-13,686.9	7,176.2	15,278.7	0.00	0.00	0.00
23,600.0	90.00	160.97	7,903.5	-13,781.4	7,208.8	15,378.7	0.00	0.00	0.00
23,700.0	90.00	160.97	7,903.5	-13,875.9	7,241.4	15,478.7	0.00	0.00	0.00
23,800.0	90.00	160.97	7,903.5	-13,970.5	7,274.0	15,578.7	0.00	0.00	0.00
23,900.0	90.00	160.97	7,903.5	-14,065.0	7,306.6	15,678.7	0.00	0.00	0.00
24,000.0	90.00	160.97	7,903.5	-14,159.5	7,339.2	15,778.7	0.00	0.00	0.00

10/21/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Company:	Arsenal Resources	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Project:	Taylor County, WV	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site:	Johnson TFP40	**North Reference:**	Grid
Well:	205	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 5		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
24,100.0	90.00	160.97	7,903.5	-14,254.1	7,371.8	15,878.7	0.00	0.00	0.00
24,200.0	90.00	160.97	7,903.5	-14,348.6	7,404.4	15,978.7	0.00	0.00	0.00
24,300.0	90.00	160.97	7,903.5	-14,443.1	7,437.0	16,078.7	0.00	0.00	0.00
24,400.0	90.00	160.97	7,903.5	-14,537.7	7,469.6	16,178.7	0.00	0.00	0.00
24,500.0	90.00	160.97	7,903.5	-14,632.2	7,502.2	16,278.7	0.00	0.00	0.00
24,600.0	90.00	160.97	7,903.5	-14,726.7	7,534.8	16,378.7	0.00	0.00	0.00
24,700.0	90.00	160.97	7,903.5	-14,821.3	7,567.4	16,478.7	0.00	0.00	0.00
24,800.0	90.00	160.97	7,903.5	-14,915.8	7,600.0	16,578.7	0.00	0.00	0.00
24,900.0	90.00	160.97	7,903.5	-15,010.3	7,632.6	16,678.7	0.00	0.00	0.00
25,000.0	90.00	160.97	7,903.5	-15,104.9	7,665.3	16,778.7	0.00	0.00	0.00
25,100.0	90.00	160.97	7,903.5	-15,199.4	7,697.9	16,878.7	0.00	0.00	0.00
25,200.0	90.00	160.97	7,903.5	-15,294.0	7,730.5	16,978.7	0.00	0.00	0.00
25,300.0	90.00	160.97	7,903.5	-15,388.5	7,763.1	17,078.7	0.00	0.00	0.00
25,400.0	90.00	160.97	7,903.5	-15,483.0	7,795.7	17,178.7	0.00	0.00	0.00
25,500.0	90.00	160.97	7,903.5	-15,577.6	7,828.3	17,278.7	0.00	0.00	0.00
25,600.0	90.00	160.97	7,903.5	-15,672.1	7,860.9	17,378.7	0.00	0.00	0.00
25,700.0	90.00	160.97	7,903.5	-15,766.6	7,893.5	17,478.7	0.00	0.00	0.00
25,800.0	90.00	160.97	7,903.5	-15,861.2	7,926.1	17,578.7	0.00	0.00	0.00
25,900.0	90.00	160.97	7,903.5	-15,955.7	7,958.7	17,678.7	0.00	0.00	0.00
26,000.0	90.00	160.97	7,903.5	-16,050.2	7,991.3	17,778.7	0.00	0.00	0.00
26,100.0	90.00	160.97	7,903.5	-16,144.8	8,023.9	17,878.7	0.00	0.00	0.00
26,200.0	90.00	160.97	7,903.5	-16,239.3	8,056.5	17,978.7	0.00	0.00	0.00
26,300.0	90.00	160.97	7,903.5	-16,333.8	8,089.1	18,078.7	0.00	0.00	0.00
26,400.0	90.00	160.97	7,903.5	-16,428.4	8,121.7	18,178.7	0.00	0.00	0.00
26,500.0	90.00	160.97	7,903.5	-16,522.9	8,154.3	18,278.7	0.00	0.00	0.00
26,600.0	90.00	160.97	7,903.5	-16,617.4	8,187.0	18,378.7	0.00	0.00	0.00
26,700.0	90.00	160.97	7,903.5	-16,712.0	8,219.6	18,478.7	0.00	0.00	0.00
26,800.0	90.00	160.97	7,903.5	-16,806.5	8,252.2	18,578.7	0.00	0.00	0.00
26,900.0	90.00	160.97	7,903.5	-16,901.0	8,284.8	18,678.7	0.00	0.00	0.00
27,000.0	90.00	160.97	7,903.5	-16,995.6	8,317.4	18,778.7	0.00	0.00	0.00
27,100.0	90.00	160.97	7,903.5	-17,090.1	8,350.0	18,878.7	0.00	0.00	0.00
27,200.0	90.00	160.97	7,903.5	-17,184.6	8,382.6	18,978.7	0.00	0.00	0.00
27,300.0	90.00	160.97	7,903.5	-17,279.2	8,415.2	19,078.7	0.00	0.00	0.00
27,400.0	90.00	160.97	7,903.5	-17,373.7	8,447.8	19,178.7	0.00	0.00	0.00
27,500.0	90.00	160.97	7,903.5	-17,468.3	8,480.4	19,278.7	0.00	0.00	0.00
27,600.0	90.00	160.97	7,903.5	-17,562.8	8,513.0	19,378.7	0.00	0.00	0.00
27,700.0	90.00	160.97	7,903.5	-17,657.3	8,545.6	19,478.7	0.00	0.00	0.00
27,800.0	90.00	160.97	7,903.5	-17,751.9	8,578.2	19,578.7	0.00	0.00	0.00
27,900.0	90.00	160.97	7,903.5	-17,846.4	8,610.8	19,678.7	0.00	0.00	0.00
28,000.0	90.00	160.97	7,903.5	-17,940.9	8,643.4	19,778.7	0.00	0.00	0.00
28,100.0	90.00	160.97	7,903.5	-18,035.5	8,676.0	19,878.7	0.00	0.00	0.00
28,200.0	90.00	160.97	7,903.5	-18,130.0	8,708.7	19,978.7	0.00	0.00	0.00
28,300.0	90.00	160.97	7,903.5	-18,224.5	8,741.3	20,078.7	0.00	0.00	0.00
28,400.0	90.00	160.97	7,903.5	-18,319.1	8,773.9	20,178.7	0.00	0.00	0.00
28,500.0	90.00	160.97	7,903.5	-18,413.6	8,806.5	20,278.7	0.00	0.00	0.00
28,600.0	90.00	160.97	7,903.5	-18,508.1	8,839.1	20,378.7	0.00	0.00	0.00
28,700.0	90.00	160.97	7,903.5	-18,602.7	8,871.7	20,478.7	0.00	0.00	0.00
28,800.0	90.00	160.97	7,903.5	-18,697.2	8,904.3	20,578.7	0.00	0.00	0.00
28,900.0	90.00	160.97	7,903.5	-18,791.7	8,936.9	20,678.7	0.00	0.00	0.00
29,000.0	90.00	160.97	7,903.5	-18,886.3	8,969.5	20,778.7	0.00	0.00	0.00
29,100.0	90.00	160.97	7,903.5	-18,980.8	9,002.1	20,878.7	0.00	0.00	0.00
29,200.0	90.00	160.97	7,903.5	-19,075.3	9,034.7	20,978.7	0.00	0.00	0.00

10/21/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Company:	Arsenal Resources	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Project:	Taylor County, WV	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site:	Johnson TFP40	**North Reference:**	Grid
Well:	205	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 5		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
29,300.0	90.00	160.97	7,903.5	-19,169.9	9,067.3	21,078.7	0.00	0.00	0.00
29,400.0	90.00	160.97	7,903.5	-19,264.4	9,099.9	21,178.7	0.00	0.00	0.00
29,500.0	90.00	160.97	7,903.5	-19,358.9	9,132.5	21,278.7	0.00	0.00	0.00
29,600.0	90.00	160.97	7,903.5	-19,453.5	9,165.1	21,378.7	0.00	0.00	0.00
29,700.0	90.00	160.97	7,903.5	-19,548.0	9,197.7	21,478.7	0.00	0.00	0.00
29,800.0	90.00	160.97	7,903.5	-19,642.6	9,230.4	21,578.7	0.00	0.00	0.00
29,900.0	90.00	160.97	7,903.5	-19,737.1	9,263.0	21,678.7	0.00	0.00	0.00
30,000.0	90.00	160.97	7,903.5	-19,831.6	9,295.6	21,778.7	0.00	0.00	0.00
30,033.5	90.00	160.97	7,903.5	-19,863.3	9,306.5	21,812.2	0.00	0.00	0.00
TD @ 90° Inc/ 160.9° Az/ 30033.7' MD/ TVD 7903.5'									
30,033.7	90.00	160.97	7,903.5	-19,863.5	9,306.6	21,812.5	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Joh_TPF40_205_ SHL - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	277,031.72	1,779,051.66	39.2586640	-80.1690611
Joh_TPF40_205_KOP - plan hits target center - Point	0.00	0.00	800.0	0.0	0.0	277,031.72	1,779,051.66	39.2586640	-80.1690611
Joh_TPF40_205_LP rev - plan hits target center - Point	0.00	360.00	7,903.5	272.6	2,361.4	277,304.32	1,781,413.04	39.2594604	-80.1607290
Joh_TPF40_205_PBHL - plan hits target center - Point	0.00	360.00	7,903.5	-19,863.5	9,306.6	257,168.21	1,788,358.23	39.2043146	-80.1356985

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
8,068.2	7,614.5	Tully @ 7614.5' TVD		0.00	
8,393.1	7,822.5	Marcellus @ 7822.5' TVD		0.00	
8,574.5	7,885.5	Lower Marcellus @ 7885.5' TVD		0.00	

10/21/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Company:	Arsenal Resources	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Project:	Taylor County, WV	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site:	Johnson TFP40	**North Reference:**	Grid
Well:	205	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 5		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
800.0	800.0	0.0	0.0	KOP 800' MD/ TVD 800'
1,100.0	1,099.5	14.2	6.6	Hold 6° Inc
2,608.8	2,600.0	157.2	73.3	KO Tangent 2°/100
3,643.8	3,597.0	272.8	301.6	Hold 24.3° Inc
7,739.0	7,328.4	789.6	1,908.0	KO Curve 9°/100
8,733.5	7,903.5	272.6	2,361.4	LP @ 90° Inc/ 160.9° Az/ 8733.5' MD/ TVD 7903.5'
30,033.5	7,903.5	-19,863.3	9,306.5	TD @ 90° Inc/ 160.9° Az/ 30033.7' MD/ TVD 7903.5'

10/21/2022

Well Location Plat
Page 4 Cross Section

Arsenal Resources, LLC Applicant / Well Operator Name	DEP ID#	Johnson TFP40 Taylor County, WV GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)	Well # 205

ARSENAL RESOURCES

WELL PLAN

Operator Name: **Arsenal Resources**

Well/Farm Name: **Johnson TFP40**

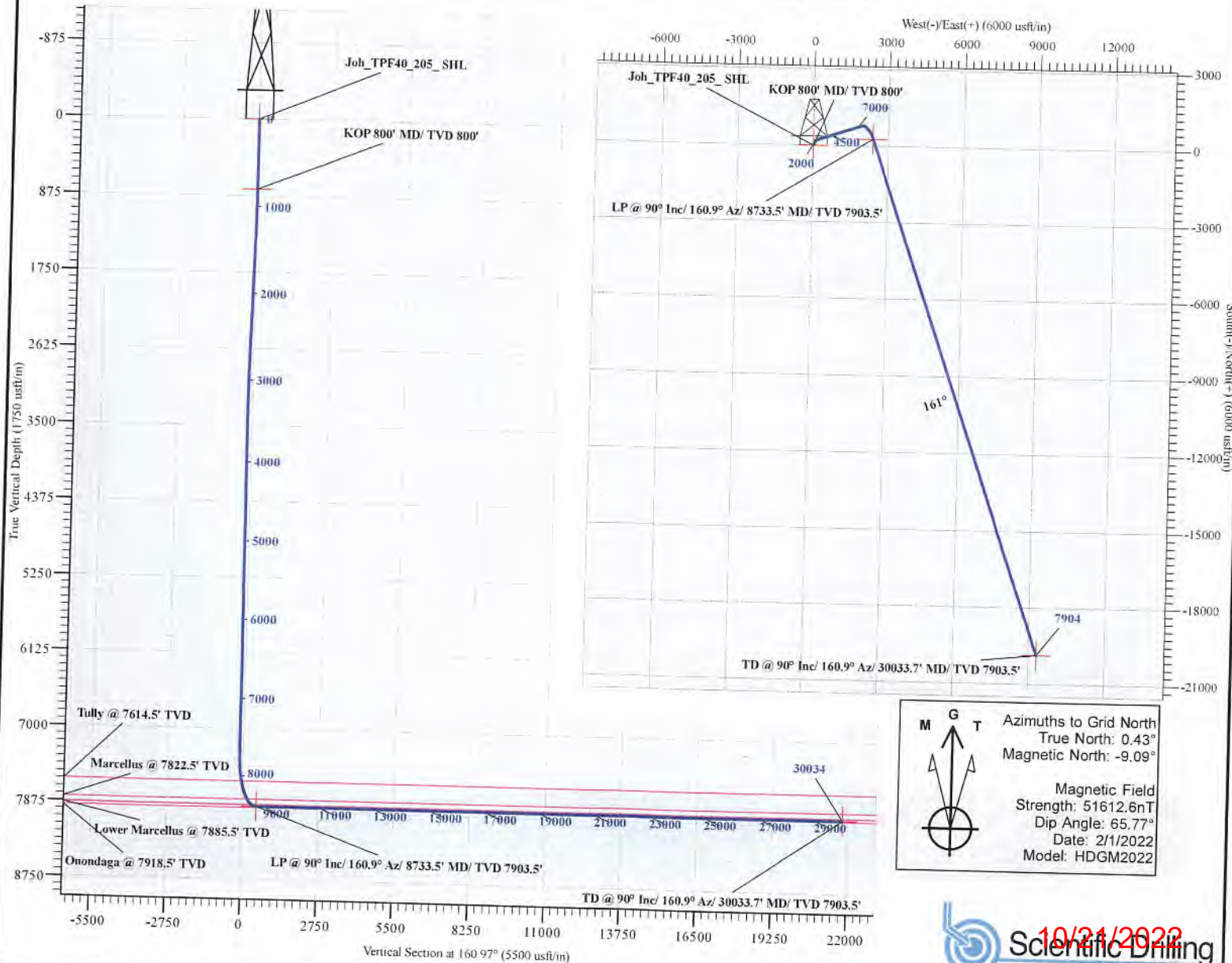
DEP Use Only	Permit #

NOTES:

Name	TVD	Latitude	Longitude	TMD
Joh_TPF40_205_ SHL	0.0	39.2586639	-80.1690612	0
Joh_TPF40_205_KOP	800.0	39.2586639	-80.1690612	800
Joh_TPF40_205_LP rev4	7903.5	39.2594604	-80.1607290	8733.5
Joh_TPF40_205_PBHL rev4	7903.5	39.2043145	-80.1356986	30033.7

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	KOP 800' MD/ TVD 800'
1100.0	6.00	25.00	1099.5	14.2	6.6	2.00	25.00	-11.3	Hold 6° Inc
2608.8	6.00	25.00	2600.0	157.2	73.3	0.00	0.00	-124.7	KO Tangent 2°/100
3643.8	24.33	72.16	3597.0	272.8	301.6	2.00	58.75	-159.5	Hold 24.3° Inc
7739.0	24.33	72.16	7328.4	789.6	1908.0	0.00	0.00	-124.3	KO Curve 9°/100
8733.5	90.00	160.97	7903.5	272.6	2361.4	9.00	88.91	512.3	LP @ 90° Inc/ 160.9° Az
30033.7	90.00	160.97	7903.5	-19863.5	9306.6	0.00	0.00	21812.5	TD @ 90° Inc/ 160.9° Az



Scientific Drilling

10/21/2022

ARSENAL™
RESOURCES

Arsenal Resources

Taylor County, WV
Johnson TFP40
205

Orig.
DEP Plan 5

Anticollision Report

28 September, 2022

Scientific Drilling

www.scientificdrilling.com

10/21/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Reference DEP Plan 5

Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.0usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 2,500.0 usft	**Error Surface:**	Ellipsoid Separation
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 9/28/2022

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	800.0	DEP Plan 5 (Orig.)	MWD+HRGM+Int	MWD with High Resolution Geomagnetic model and E>
800.0	2,600.0	DEP Plan 5 (Orig.)	MWD+AfterInt	OWSG MWD with High resolution geomagnetic model
2,600.0	30,033.7	DEP Plan 5 (Orig.)	SDI MWD	SDI MWD - Standard ver 1.0.1

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Fiber TFP22						
201 - Orig. - DEP Plan 4	12,535.4	8,318.8	1,301.9	1,189.4	11.576	CC
201 - Orig. - DEP Plan 4	30,033.7	25,817.2	1,302.0	539.5	1.708	ES, SF
202 - Orig. - DEP Plan 7						Out of range
Johnson TFP40						
201 - Orig. - 201 As Drilled	364.7	364.7	55.8	54.0	31.122	CC
201 - Orig. - 201 As Drilled	400.0	399.5	56.0	54.0	28.087	ES
201 - Orig. - 201 As Drilled	700.0	691.8	75.9	72.2	20.690	SF
202 - Orig. - SDI Plan 2	800.0	800.0	45.0	39.5	8.120	CC, ES
202 - Orig. - SDI Plan 2	900.0	899.9	46.6	40.4	7.463	SF
203 - Orig. - SDI Plan 1 Prelim	800.0	800.0	30.0	24.5	5.413	CC, ES
203 - Orig. - SDI Plan 1 Prelim	29,600.0	29,171.4	2,422.5	1,602.9	2.956	SF
204 - Orig. - DEP Plan 6	800.0	800.0	15.0	9.5	2.707	CC, ES
204 - Orig. - DEP Plan 6	29,900.0	29,546.8	1,211.7	385.5	1.467	Level 3, SF

Offset Design Fiber TFP22 - 201 - Orig. - DEP Plan 4

Survey Program: 0-SDI MWD

Offset Site Error: 0.0 usft
Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,000.0	7,903.5	7,550.0	7,360.5	58.1	32.0	-72.25	-2,299.5	4,739.0	2,440.0	2,387.3	52.68	46.313	
10,100.0	7,903.5	7,574.2	7,382.2	59.2	32.1	-72.99	-2,309.9	4,736.4	2,360.7	2,308.8	51.92	45.465	
10,200.0	7,903.5	7,600.0	7,404.9	60.4	32.2	-73.77	-2,321.9	4,733.9	2,283.4	2,232.1	51.30	44.507	
10,300.0	7,903.5	7,600.0	7,404.9	61.7	32.2	-73.77	-2,321.9	4,733.9	2,207.2	2,156.6	50.60	43.623	
10,400.0	7,903.5	7,600.0	7,404.9	62.9	32.2	-73.77	-2,321.9	4,733.9	2,133.0	2,082.9	50.15	42.530	
10,500.0	7,903.5	7,600.0	7,404.9	64.2	32.2	-73.77	-2,321.9	4,733.9	2,061.0	2,011.0	50.03	41.193	
10,600.0	7,903.5	7,630.9	7,431.6	65.6	32.2	-74.71	-2,337.4	4,731.6	1,990.6	1,940.2	50.44	39.468	
10,700.0	7,903.5	7,650.0	7,447.7	66.9	32.3	-75.28	-2,347.6	4,730.4	1,922.8	1,871.6	51.20	37.555	
10,800.0	7,903.5	7,650.0	7,447.7	68.3	32.3	-75.28	-2,347.6	4,730.4	1,857.6	1,805.1	52.48	35.399	
10,900.0	7,903.5	7,677.5	7,470.4	69.7	32.4	-76.11	-2,363.0	4,729.2	1,794.9	1,740.8	54.18	33.128	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

10/21/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Fiber TFP22 - 201 - Orig. - DEP Plan 4 — Offset Site Error: 0.0 usft

Survey Program: 0-SDI MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,000.0	7,903.5	7,700.0	7,488.5	71.2	32.4	-76.77	-2,376.3	4,728.5	1,735.3	1,679.1	56.29	30.830	
11,100.0	7,903.5	7,700.0	7,488.5	72.7	32.4	-76.77	-2,376.3	4,728.5	1,679.1	1,620.2	58.93	28.493	
11,200.0	7,903.5	7,750.0	7,527.3	74.1	32.5	-78.22	-2,407.9	4,728.2	1,626.1	1,564.5	61.64	26.382	
11,300.0	7,903.5	7,750.0	7,527.3	75.6	32.5	-78.22	-2,407.9	4,728.2	1,576.8	1,511.7	65.11	24.217	
11,400.0	7,903.5	7,800.0	7,563.6	77.2	32.6	-79.62	-2,442.2	4,729.5	1,531.4	1,463.0	68.39	22.393	
11,500.0	7,903.5	7,818.1	7,576.1	78.7	32.7	-80.11	-2,455.2	4,730.4	1,490.0	1,417.6	72.33	20.600	
11,600.0	7,903.5	7,850.0	7,597.4	80.3	32.7	-80.95	-2,478.9	4,732.4	1,452.8	1,376.5	76.32	19.037	
11,700.0	7,903.5	7,885.9	7,619.9	81.9	32.8	-81.85	-2,506.7	4,735.5	1,420.0	1,339.6	80.42	17.658	
11,800.0	7,903.5	7,925.0	7,642.7	83.4	32.9	-82.78	-2,538.2	4,739.7	1,391.6	1,307.0	84.58	16.452	
11,900.0	7,903.5	7,967.8	7,665.5	85.0	32.9	-83.71	-2,573.9	4,745.5	1,367.4	1,278.7	88.74	15.410	
12,000.0	7,903.5	8,014.4	7,687.6	86.7	33.0	-84.64	-2,614.3	4,753.0	1,347.4	1,254.6	92.82	14.517	
12,100.0	7,903.5	8,064.9	7,708.3	88.3	33.1	-85.51	-2,659.3	4,762.5	1,331.3	1,234.6	96.78	13.757	
12,200.0	7,903.5	8,119.0	7,726.5	89.9	33.2	-86.28	-2,708.8	4,774.3	1,319.0	1,218.4	100.59	13.113	
12,300.0	7,903.5	8,176.2	7,741.2	91.6	33.3	-86.91	-2,762.3	4,788.5	1,310.2	1,205.9	104.26	12.567	
12,398.2	7,903.5	8,234.8	7,751.2	93.2	33.4	-87.35	-2,817.6	4,804.7	1,304.7	1,197.0	107.73	12.111	
12,400.0	7,903.5	8,235.9	7,751.3	93.3	33.4	-87.35	-2,818.7	4,805.0	1,304.6	1,196.8	107.79	12.103	
12,488.2	7,903.5	8,289.8	7,755.9	94.7	33.5	-87.55	-2,869.8	4,821.4	1,302.2	1,191.4	110.82	11.750	
12,500.0	7,903.5	8,300.0	7,756.2	94.9	33.5	-87.57	-2,879.5	4,824.6	1,302.1	1,190.9	111.14	11.715	
12,535.4	7,903.5	8,318.8	7,756.5	95.5	33.6	-87.58	-2,897.4	4,830.7	1,301.9	1,189.4	112.47	11.576	CC
12,600.0	7,903.5	8,383.4	7,756.5	96.6	33.7	-87.58	-2,958.4	4,851.7	1,301.9	1,187.8	114.06	11.415	
12,623.3	7,903.5	8,406.8	7,756.5	97.0	33.8	-87.58	-2,980.5	4,859.3	1,301.9	1,187.2	114.74	11.347	
12,700.0	7,903.5	8,483.4	7,756.5	98.3	34.1	-87.58	-3,053.0	4,884.3	1,301.9	1,185.2	116.71	11.155	
12,723.3	7,903.5	8,506.8	7,756.5	98.7	34.2	-87.58	-3,075.0	4,891.9	1,301.9	1,184.5	117.41	11.088	
12,800.0	7,903.5	8,583.4	7,756.5	100.0	34.5	-87.58	-3,147.5	4,916.9	1,301.9	1,182.4	119.48	10.896	
12,823.3	7,903.5	8,606.8	7,756.5	100.4	34.6	-87.58	-3,169.5	4,924.5	1,301.9	1,181.7	120.22	10.829	
12,900.0	7,903.5	8,683.4	7,756.5	101.7	35.0	-87.58	-3,242.0	4,949.6	1,301.9	1,179.5	122.37	10.639	
12,923.3	7,903.5	8,706.8	7,756.5	102.1	35.2	-87.58	-3,264.1	4,957.2	1,301.9	1,178.8	123.13	10.573	
13,000.0	7,903.5	8,783.4	7,756.5	103.4	35.7	-87.58	-3,336.6	4,982.2	1,301.9	1,176.5	125.36	10.385	
13,023.3	7,903.5	8,806.8	7,756.5	103.8	35.8	-87.58	-3,358.6	4,989.8	1,301.9	1,175.7	126.15	10.320	
13,100.0	7,903.5	8,883.4	7,756.5	105.1	36.4	-87.58	-3,431.1	5,014.8	1,301.9	1,173.5	128.45	10.136	
13,123.3	7,903.5	8,906.8	7,756.5	105.5	36.6	-87.58	-3,453.2	5,022.4	1,301.9	1,172.6	129.25	10.073	
13,200.0	7,903.5	8,983.4	7,756.5	106.9	37.2	-87.58	-3,525.6	5,047.4	1,301.9	1,170.3	131.60	9.893	
13,223.3	7,903.5	9,006.8	7,756.5	107.3	37.4	-87.58	-3,547.7	5,055.0	1,301.9	1,169.5	132.42	9.831	
13,300.0	7,903.5	9,083.4	7,756.5	108.6	38.1	-87.58	-3,620.2	5,080.0	1,301.9	1,167.1	134.83	9.656	
13,323.3	7,903.5	9,106.8	7,756.5	109.0	38.4	-87.58	-3,642.2	5,087.6	1,301.9	1,166.2	135.67	9.596	
13,400.0	7,903.5	9,183.4	7,756.5	110.3	39.1	-87.58	-3,714.7	5,112.6	1,301.9	1,163.8	138.12	9.426	
13,423.3	7,903.5	9,206.8	7,756.5	110.7	39.4	-87.58	-3,736.8	5,120.2	1,301.9	1,162.9	138.97	9.369	
13,500.0	7,903.5	9,283.4	7,756.5	112.1	40.2	-87.58	-3,809.2	5,145.2	1,301.9	1,160.4	141.45	9.204	
13,523.3	7,903.5	9,306.8	7,756.5	112.5	40.5	-87.58	-3,831.3	5,152.8	1,301.9	1,159.6	142.31	9.148	
13,600.0	7,903.5	9,383.4	7,756.5	113.8	41.3	-87.58	-3,903.8	5,177.8	1,301.9	1,157.1	144.84	8.989	
13,623.3	7,903.5	9,406.8	7,756.5	114.2	41.6	-87.58	-3,925.8	5,185.4	1,301.9	1,156.2	145.70	8.935	
13,700.0	7,903.5	9,483.4	7,756.5	115.6	42.5	-87.58	-3,998.3	5,210.4	1,301.9	1,153.6	148.25	8.782	
13,723.3	7,903.5	9,506.8	7,756.5	116.0	42.8	-87.58	-4,020.4	5,218.0	1,301.9	1,152.8	149.13	8.730	
13,800.0	7,903.5	9,583.4	7,756.5	117.3	43.8	-87.58	-4,092.9	5,243.0	1,301.9	1,150.2	151.71	8.582	
13,823.3	7,903.5	9,606.8	7,756.5	117.8	44.1	-87.58	-4,114.9	5,250.6	1,301.9	1,149.3	152.59	8.532	
13,900.0	7,903.5	9,683.4	7,756.5	119.1	45.1	-87.58	-4,187.4	5,275.6	1,301.9	1,146.7	155.19	8.389	
13,923.3	7,903.5	9,706.8	7,756.5	119.5	45.4	-87.58	-4,209.4	5,283.2	1,301.9	1,145.8	156.08	8.341	
14,000.0	7,903.5	9,783.4	7,756.5	120.9	46.5	-87.58	-4,281.9	5,308.2	1,301.9	1,143.2	158.70	8.203	
14,023.3	7,903.5	9,806.8	7,756.5	121.3	46.8	-87.58	-4,304.0	5,315.8	1,301.9	1,142.3	159.60	8.157	
14,100.0	7,903.5	9,883.4	7,756.5	122.7	47.9	-87.58	-4,376.5	5,340.8	1,301.9	1,139.7	162.24	8.025	
14,123.3	7,903.5	9,906.8	7,756.5	123.1	48.2	-87.58	-4,398.5	5,348.4	1,301.9	1,138.8	163.14	7.980	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Fiber TFP22 - 201 - Orig. - DEP Plan 4 — **Offset Site Error:** 0.0 usft

Survey Program: 0-SDI MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,200.0	7,903.5	9,983.4	7,756.5	124.4	49.3	-87.58	-4,471.0	5,373.4	1,301.9	1,136.1	165.79	7.853	
14,223.3	7,903.5	10,006.8	7,756.5	124.8	49.6	-87.58	-4,493.0	5,381.0	1,301.9	1,135.2	166.70	7.810	
14,300.0	7,903.5	10,083.4	7,756.5	126.2	50.8	-87.58	-4,565.5	5,406.0	1,301.9	1,132.5	169.36	7.687	
14,323.3	7,903.5	10,106.8	7,756.5	126.6	51.1	-87.58	-4,587.6	5,413.6	1,301.9	1,131.6	170.27	7.646	
14,400.0	7,903.5	10,183.4	7,756.5	128.0	52.3	-87.58	-4,660.1	5,438.7	1,301.9	1,128.9	172.95	7.527	
14,423.3	7,903.5	10,206.8	7,756.5	128.4	52.6	-87.58	-4,682.1	5,446.3	1,301.9	1,128.0	173.87	7.486	
14,500.0	7,903.5	10,283.4	7,756.5	129.8	53.8	-87.58	-4,754.6	5,471.3	1,301.9	1,125.3	176.56	7.374	
14,523.3	7,903.5	10,306.8	7,756.5	130.2	54.2	-87.58	-4,776.6	5,478.9	1,301.9	1,124.4	177.48	7.336	
14,600.0	7,903.5	10,383.4	7,756.5	131.6	55.3	-87.58	-4,849.1	5,503.9	1,301.9	1,121.7	180.18	7.226	
14,623.3	7,903.5	10,406.8	7,756.5	132.0	55.7	-87.58	-4,871.2	5,511.5	1,301.9	1,120.8	181.10	7.189	
14,700.0	7,903.5	10,483.4	7,756.5	133.4	56.9	-87.58	-4,943.7	5,536.5	1,301.9	1,118.1	183.81	7.083	
14,723.3	7,903.5	10,506.8	7,756.5	133.8	57.3	-87.58	-4,965.7	5,544.1	1,301.9	1,117.2	184.73	7.048	
14,800.0	7,903.5	10,583.4	7,756.5	135.2	58.5	-87.58	-5,038.2	5,569.1	1,301.9	1,114.5	187.45	6.945	
14,823.3	7,903.5	10,606.8	7,756.5	135.6	58.9	-87.58	-5,060.2	5,576.7	1,301.9	1,113.5	188.37	6.911	
14,900.0	7,903.5	10,683.4	7,756.5	137.0	60.1	-87.58	-5,132.7	5,601.7	1,301.9	1,110.8	191.10	6.813	
14,923.3	7,903.5	10,706.8	7,756.5	137.4	60.5	-87.58	-5,154.8	5,609.3	1,301.9	1,109.9	192.03	6.780	
15,000.0	7,903.5	10,783.4	7,756.5	138.8	61.8	-87.58	-5,227.3	5,634.3	1,301.9	1,107.1	194.76	6.685	
15,023.3	7,903.5	10,806.8	7,756.5	139.2	62.2	-87.58	-5,249.3	5,641.9	1,301.9	1,106.2	195.69	6.653	
15,100.0	7,903.5	10,883.4	7,756.5	140.6	63.4	-87.58	-5,321.8	5,666.9	1,301.9	1,103.5	198.43	6.561	
15,123.3	7,903.5	10,906.8	7,756.5	141.0	63.8	-87.58	-5,343.8	5,674.5	1,301.9	1,102.5	199.36	6.530	
15,200.0	7,903.5	10,983.4	7,756.5	142.4	65.1	-87.58	-5,416.3	5,699.5	1,301.9	1,099.8	202.10	6.442	
15,223.3	7,903.5	11,006.8	7,756.5	142.8	65.5	-87.58	-5,438.4	5,707.1	1,301.9	1,098.9	203.04	6.412	
15,300.0	7,903.5	11,083.4	7,756.5	144.2	66.8	-87.58	-5,510.9	5,732.1	1,301.9	1,096.1	205.79	6.327	
15,323.3	7,903.5	11,106.8	7,756.5	144.6	67.2	-87.58	-5,532.9	5,739.7	1,301.9	1,095.2	206.72	6.298	
15,400.0	7,903.5	11,183.4	7,756.5	146.0	68.5	-87.58	-5,605.4	5,764.7	1,301.9	1,092.4	209.48	6.215	
15,423.3	7,903.5	11,206.8	7,756.5	146.4	68.9	-87.58	-5,627.5	5,772.3	1,301.9	1,091.5	210.41	6.187	
15,500.0	7,903.5	11,283.4	7,756.5	147.8	70.2	-87.58	-5,699.9	5,797.3	1,301.9	1,088.7	213.17	6.107	
15,523.3	7,903.5	11,306.8	7,756.5	148.3	70.6	-87.58	-5,722.0	5,804.9	1,301.9	1,087.8	214.11	6.081	
15,600.0	7,903.5	11,383.4	7,756.5	149.7	71.9	-87.58	-5,794.5	5,829.9	1,301.9	1,085.0	216.87	6.003	
15,623.3	7,903.5	11,406.8	7,756.5	150.1	72.3	-87.58	-5,816.5	5,837.5	1,301.9	1,084.1	217.81	5.977	
15,700.0	7,903.5	11,483.4	7,756.5	151.5	73.6	-87.58	-5,889.0	5,862.5	1,301.9	1,081.3	220.58	5.902	
15,723.3	7,903.5	11,506.8	7,756.5	151.9	74.0	-87.58	-5,911.1	5,870.1	1,301.9	1,080.4	221.52	5.877	
15,800.0	7,903.5	11,583.4	7,756.5	153.3	75.3	-87.58	-5,983.5	5,895.1	1,301.9	1,077.6	224.30	5.804	
15,823.3	7,903.5	11,606.8	7,756.5	153.7	75.7	-87.58	-6,005.6	5,902.7	1,301.9	1,076.7	225.23	5.780	
15,900.0	7,903.5	11,683.4	7,756.5	155.1	77.1	-87.58	-6,078.1	5,927.7	1,301.9	1,073.9	227.97	5.711	
15,923.3	7,903.5	11,706.8	7,756.5	155.6	77.5	-87.58	-6,100.1	5,935.4	1,301.9	1,073.0	228.94	5.687	
16,000.0	7,903.5	11,783.4	7,756.5	157.0	78.8	-87.58	-6,172.6	5,960.4	1,301.9	1,070.2	231.71	5.619	
16,023.3	7,903.5	11,806.8	7,756.5	157.4	79.2	-87.58	-6,194.7	5,968.0	1,301.9	1,069.2	232.66	5.596	
16,100.0	7,903.5	11,883.4	7,756.5	158.8	80.6	-87.58	-6,267.2	5,993.0	1,301.9	1,066.5	235.44	5.530	
16,123.3	7,903.5	11,906.8	7,756.5	159.2	81.0	-87.58	-6,289.2	6,000.6	1,301.9	1,065.5	236.39	5.508	
16,200.0	7,903.5	11,983.4	7,756.5	160.6	82.3	-87.58	-6,361.7	6,025.6	1,301.9	1,062.7	239.17	5.444	
16,223.3	7,903.5	12,006.8	7,756.5	161.0	82.7	-87.58	-6,383.7	6,033.2	1,301.9	1,061.8	240.11	5.422	
16,300.0	7,903.5	12,083.4	7,756.5	162.4	84.1	-87.58	-6,456.2	6,058.2	1,301.9	1,059.0	242.90	5.360	
16,323.3	7,903.5	12,106.8	7,756.5	162.9	84.5	-87.58	-6,478.3	6,065.8	1,301.9	1,058.1	243.84	5.339	
16,400.0	7,903.5	12,183.4	7,756.5	164.3	85.9	-87.58	-6,550.8	6,090.8	1,301.9	1,055.3	246.63	5.279	
16,423.3	7,903.5	12,206.8	7,756.5	164.7	86.3	-87.58	-6,572.8	6,098.4	1,301.9	1,054.3	247.58	5.259	
16,500.0	7,903.5	12,283.4	7,756.5	166.1	87.7	-87.58	-6,645.3	6,123.4	1,301.9	1,051.5	250.36	5.200	
16,523.3	7,903.5	12,306.8	7,756.5	166.5	88.1	-87.58	-6,667.3	6,131.0	1,301.9	1,050.6	251.31	5.180	
16,600.0	7,903.5	12,383.4	7,756.5	168.0	89.4	-87.58	-6,739.8	6,156.0	1,301.9	1,047.8	254.10	5.124	
16,623.3	7,903.5	12,406.8	7,756.5	168.4	89.9	-87.58	-6,761.9	6,163.6	1,301.9	1,046.9	255.05	5.105	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

10/21/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Fiber TFP22 - 201 - Orig. - DEP Plan 4 — Offset Site Error: 0.0 usft

Survey Program: 0-SDI MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
16,700.0	7,903.5	12,483.4	7,756.5	169.8	91.2	-87.58	-6,834.4	6,188.6	1,301.9	1,044.1	257.84	5.049	
16,723.3	7,903.5	12,506.8	7,756.5	170.2	91.6	-87.58	-6,856.4	6,196.2	1,301.9	1,043.1	258.79	5.031	
16,800.0	7,903.5	12,583.4	7,756.5	171.6	93.0	-87.58	-6,928.9	6,221.2	1,301.9	1,040.3	261.59	4.977	
16,823.3	7,903.5	12,606.8	7,756.5	172.1	93.4	-87.58	-6,950.9	6,228.8	1,301.9	1,039.4	262.54	4.959	
16,900.0	7,903.5	12,683.4	7,756.5	173.5	94.8	-87.58	-7,023.4	6,253.8	1,301.9	1,036.6	265.33	4.907	
16,923.3	7,903.5	12,706.8	7,756.5	173.9	95.2	-87.58	-7,045.5	6,261.4	1,301.9	1,035.6	266.28	4.889	
17,000.0	7,903.5	12,783.4	7,756.5	175.3	96.6	-87.58	-7,118.0	6,286.4	1,301.9	1,032.8	269.08	4.838	
17,023.3	7,903.5	12,806.8	7,756.5	175.7	97.0	-87.58	-7,140.0	6,294.0	1,301.9	1,031.9	270.03	4.821	
17,100.0	7,903.5	12,883.4	7,756.5	177.2	98.4	-87.58	-7,212.5	6,319.0	1,301.9	1,029.1	272.83	4.772	
17,123.3	7,903.5	12,906.8	7,756.5	177.6	98.9	-87.58	-7,234.5	6,326.6	1,301.9	1,028.1	273.78	4.755	
17,200.0	7,903.5	12,983.4	7,756.5	179.0	100.2	-87.58	-7,307.0	6,351.6	1,301.9	1,025.3	276.58	4.707	
17,223.3	7,903.5	13,006.8	7,756.5	179.4	100.7	-87.58	-7,329.1	6,359.2	1,301.9	1,024.4	277.53	4.691	
17,300.0	7,903.5	13,083.4	7,756.5	180.9	102.1	-87.58	-7,401.6	6,384.2	1,301.9	1,021.6	280.33	4.644	
17,323.3	7,903.5	13,106.8	7,756.5	181.3	102.5	-87.58	-7,423.6	6,391.8	1,301.9	1,020.6	281.28	4.628	
17,400.0	7,903.5	13,183.4	7,756.5	182.7	103.9	-87.58	-7,496.1	6,416.8	1,301.9	1,017.8	284.09	4.583	
17,423.3	7,903.5	13,206.8	7,756.5	183.1	104.3	-87.58	-7,518.1	6,424.4	1,301.9	1,016.9	285.04	4.568	
17,500.0	7,903.5	13,283.4	7,756.5	184.6	105.7	-87.58	-7,590.6	6,449.5	1,301.9	1,014.1	287.84	4.523	
17,523.3	7,903.5	13,306.8	7,756.5	185.0	106.1	-87.58	-7,612.7	6,457.1	1,301.9	1,013.1	288.79	4.508	
17,600.0	7,903.5	13,383.4	7,756.5	186.4	107.5	-87.58	-7,685.2	6,482.1	1,301.9	1,010.3	291.60	4.465	
17,623.3	7,903.5	13,406.8	7,756.5	186.8	107.9	-87.58	-7,707.2	6,489.7	1,301.9	1,009.4	292.55	4.450	
17,700.0	7,903.5	13,483.4	7,756.5	188.3	109.3	-87.58	-7,779.7	6,514.7	1,301.9	1,006.6	295.36	4.408	
17,723.3	7,903.5	13,506.8	7,756.5	188.7	109.8	-87.58	-7,801.7	6,522.3	1,301.9	1,005.6	296.31	4.394	
17,800.0	7,903.5	13,583.4	7,756.5	190.1	111.2	-87.58	-7,874.2	6,547.3	1,301.9	1,002.8	299.12	4.352	
17,823.3	7,903.5	13,606.8	7,756.5	190.5	111.6	-87.58	-7,896.3	6,554.9	1,301.9	1,001.8	300.07	4.339	
17,900.0	7,903.5	13,683.4	7,756.5	192.0	113.0	-87.58	-7,968.8	6,579.9	1,301.9	999.0	302.88	4.298	
17,923.3	7,903.5	13,706.8	7,756.5	192.4	113.4	-87.58	-7,990.8	6,587.5	1,301.9	998.1	303.84	4.285	
18,000.0	7,903.5	13,783.4	7,756.5	193.8	114.8	-87.58	-8,063.3	6,612.5	1,301.9	995.3	306.65	4.246	
18,023.3	7,903.5	13,806.8	7,756.5	194.3	115.3	-87.58	-8,085.4	6,620.1	1,301.9	994.3	307.60	4.233	
18,100.0	7,903.5	13,883.4	7,756.5	195.7	116.7	-87.58	-8,157.8	6,645.1	1,301.9	991.5	310.41	4.194	
18,123.3	7,903.5	13,906.8	7,756.5	196.1	117.1	-87.58	-8,179.9	6,652.7	1,301.9	990.6	311.36	4.181	
18,200.0	7,903.5	13,983.4	7,756.5	197.5	118.5	-87.58	-8,252.4	6,677.7	1,301.9	987.7	314.18	4.144	
18,223.3	7,903.5	14,006.8	7,756.5	198.0	118.9	-87.58	-8,274.4	6,685.3	1,301.9	986.8	315.13	4.131	
18,300.0	7,903.5	14,083.4	7,756.5	199.4	120.3	-87.58	-8,346.9	6,710.3	1,301.9	984.0	317.94	4.095	
18,323.3	7,903.5	14,106.8	7,756.5	199.8	120.8	-87.58	-8,369.0	6,717.9	1,301.9	983.0	318.90	4.083	
18,400.0	7,903.5	14,183.4	7,756.5	201.2	122.2	-87.58	-8,441.5	6,742.9	1,301.9	980.2	321.71	4.047	
18,423.3	7,903.5	14,206.8	7,756.5	201.7	122.6	-87.58	-8,463.5	6,750.5	1,301.9	979.3	322.67	4.035	
18,500.0	7,903.5	14,283.4	7,756.5	203.1	124.0	-87.58	-8,536.0	6,775.5	1,301.9	976.4	325.48	4.000	
18,523.3	7,903.5	14,306.8	7,756.5	203.5	124.5	-87.58	-8,558.0	6,783.1	1,301.9	975.5	326.44	3.988	
18,600.0	7,903.5	14,383.4	7,756.5	205.0	125.9	-87.58	-8,630.5	6,808.1	1,301.9	972.7	329.25	3.954	
18,623.3	7,903.5	14,406.8	7,756.5	205.4	126.3	-87.58	-8,652.6	6,815.7	1,301.9	971.7	330.21	3.943	
18,700.0	7,903.5	14,483.4	7,756.5	206.8	127.7	-87.58	-8,725.1	6,840.7	1,301.9	968.9	333.02	3.909	
18,723.3	7,903.5	14,506.8	7,756.5	207.3	128.2	-87.58	-8,747.1	6,848.3	1,301.9	967.9	333.98	3.898	
18,800.0	7,903.5	14,583.4	7,756.5	208.7	129.6	-87.58	-8,819.6	6,873.3	1,301.9	965.1	336.79	3.866	
18,823.3	7,903.5	14,606.8	7,756.5	209.1	130.0	-87.58	-8,841.6	6,880.9	1,301.9	964.2	337.75	3.855	
18,900.0	7,903.5	14,683.4	7,756.5	210.6	131.4	-87.58	-8,914.1	6,905.9	1,301.9	961.4	340.57	3.823	
18,923.3	7,903.5	14,706.8	7,756.5	211.0	131.9	-87.58	-8,936.2	6,913.5	1,301.9	960.4	341.52	3.812	
19,000.0	7,903.5	14,783.4	7,756.5	212.4	133.3	-87.58	-9,008.7	6,938.6	1,301.9	957.6	344.34	3.781	
19,023.3	7,903.5	14,806.8	7,756.5	212.9	133.7	-87.58	-9,030.7	6,946.2	1,301.9	956.6	345.30	3.770	
19,100.0	7,903.5	14,883.4	7,756.5	214.3	135.1	-87.58	-9,103.2	6,971.2	1,301.9	953.8	348.11	3.740	
19,123.3	7,903.5	14,906.8	7,756.5	214.7	135.6	-87.58	-9,125.2	6,978.8	1,301.9	952.8	349.07	3.730	
19,200.0	7,903.5	14,983.4	7,756.5	216.1	137.0	-87.58	-9,197.7	7,003.8	1,301.9	950.0	351.89	3.700	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

10/21/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Fiber TFP22 - 201 - Orig. - DEP Plan 4

Survey Program: 0-SDI MWD

Offset Site Error: 0.0 usft
Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,223.3	7,903.5	15,006.8	7,756.5	216.6	137.4	-87.58	-9,219.8	7,011.4	1,301.9	949.1	352.84	3.690	
19,300.0	7,903.5	15,083.4	7,756.5	218.0	138.8	-87.58	-9,292.3	7,036.4	1,301.9	946.3	355.66	3.661	
19,323.3	7,903.5	15,106.8	7,756.5	218.5	139.3	-87.58	-9,314.3	7,044.0	1,301.9	945.3	356.62	3.651	
19,400.0	7,903.5	15,183.4	7,756.5	219.9	140.7	-87.58	-9,386.8	7,069.0	1,301.9	942.5	359.44	3.622	
19,423.3	7,903.5	15,206.8	7,756.5	220.3	141.1	-87.58	-9,408.8	7,076.6	1,301.9	941.5	360.40	3.612	
19,500.0	7,903.5	15,283.4	7,756.5	221.7	142.6	-87.58	-9,481.3	7,101.6	1,301.9	938.7	363.22	3.584	
19,523.3	7,903.5	15,306.8	7,756.5	222.2	143.0	-87.58	-9,503.4	7,109.2	1,301.9	937.7	364.17	3.575	
19,600.0	7,903.5	15,383.4	7,756.5	223.6	144.4	-87.58	-9,575.9	7,134.2	1,301.9	934.9	366.99	3.548	
19,623.3	7,903.5	15,406.8	7,756.5	224.1	144.9	-87.58	-9,597.9	7,141.8	1,301.9	934.0	367.95	3.538	
19,700.0	7,903.5	15,483.4	7,756.5	225.5	146.3	-87.58	-9,670.4	7,166.8	1,301.9	931.1	370.77	3.511	
19,723.3	7,903.5	15,506.8	7,756.5	225.9	146.7	-87.58	-9,692.4	7,174.4	1,301.9	930.2	371.73	3.502	
19,800.0	7,903.5	15,583.4	7,756.5	227.4	148.1	-87.58	-9,764.9	7,199.4	1,301.9	927.4	374.55	3.476	
19,823.3	7,903.5	15,606.8	7,756.5	227.8	148.6	-87.58	-9,787.0	7,207.0	1,301.9	926.4	375.51	3.467	
19,900.0	7,903.5	15,683.4	7,756.5	229.2	150.0	-87.58	-9,859.5	7,232.0	1,301.9	923.6	378.33	3.441	
19,923.3	7,903.5	15,706.8	7,756.5	229.7	150.4	-87.58	-9,881.5	7,239.6	1,301.9	922.6	379.29	3.433	
20,000.0	7,903.5	15,783.4	7,756.5	231.1	151.9	-87.58	-9,954.0	7,264.6	1,301.9	919.8	382.11	3.407	
20,023.3	7,903.5	15,806.8	7,756.5	231.5	152.3	-87.58	-9,976.0	7,272.2	1,301.9	918.9	383.07	3.399	
20,100.0	7,903.5	15,883.4	7,756.5	233.0	153.7	-87.58	-10,048.5	7,297.2	1,301.9	916.0	385.89	3.374	
20,123.3	7,903.5	15,906.8	7,756.5	233.4	154.2	-87.58	-10,070.6	7,304.8	1,301.9	915.1	386.85	3.365	
20,200.0	7,903.5	15,983.4	7,756.5	234.8	155.6	-87.58	-10,143.1	7,329.8	1,301.9	912.3	389.67	3.341	
20,223.3	7,903.5	16,006.8	7,756.5	235.3	156.0	-87.58	-10,165.1	7,337.4	1,301.9	911.3	390.63	3.333	
20,300.0	7,903.5	16,083.4	7,756.5	236.7	157.5	-87.58	-10,237.6	7,362.4	1,301.9	908.5	393.45	3.309	
20,323.3	7,903.5	16,106.8	7,756.5	237.1	157.9	-87.58	-10,259.7	7,370.0	1,301.9	907.5	394.41	3.301	
20,400.0	7,903.5	16,183.4	7,756.5	238.6	159.3	-87.58	-10,332.1	7,395.0	1,301.9	904.7	397.24	3.277	
20,423.3	7,903.5	16,206.8	7,756.5	239.0	159.8	-87.58	-10,354.2	7,402.6	1,301.9	903.7	398.19	3.270	
20,500.0	7,903.5	16,283.4	7,756.5	240.5	161.2	-87.58	-10,426.7	7,427.6	1,301.9	900.9	401.02	3.247	
20,523.3	7,903.5	16,306.8	7,756.5	240.9	161.6	-87.58	-10,448.7	7,435.3	1,301.9	899.9	401.98	3.239	
20,600.0	7,903.5	16,383.4	7,756.5	242.3	163.1	-87.58	-10,521.2	7,460.3	1,301.9	897.1	404.80	3.216	
20,623.3	7,903.5	16,406.8	7,756.5	242.8	163.5	-87.58	-10,543.3	7,467.9	1,301.9	896.2	405.76	3.209	
20,700.0	7,903.5	16,483.4	7,756.5	244.2	165.0	-87.58	-10,615.7	7,492.9	1,301.9	893.3	408.58	3.186	
20,723.3	7,903.5	16,506.8	7,756.5	244.6	165.4	-87.58	-10,637.8	7,500.5	1,301.9	892.4	409.54	3.179	
20,800.0	7,903.5	16,583.4	7,756.5	246.1	166.8	-87.58	-10,710.3	7,525.5	1,301.9	889.6	412.37	3.157	
20,823.3	7,903.5	16,606.8	7,756.5	246.5	167.3	-87.58	-10,732.3	7,533.1	1,301.9	888.6	413.32	3.150	
20,900.0	7,903.5	16,683.4	7,756.5	248.0	168.7	-87.58	-10,804.8	7,558.1	1,301.9	885.8	416.15	3.129	
20,923.3	7,903.5	16,706.8	7,756.5	248.4	169.1	-87.58	-10,826.9	7,565.7	1,301.9	884.8	417.11	3.121	
21,000.0	7,903.5	16,783.4	7,756.5	249.8	170.6	-87.58	-10,899.4	7,590.7	1,301.9	882.0	419.93	3.100	
21,023.3	7,903.5	16,806.8	7,756.5	250.3	171.0	-87.58	-10,921.4	7,598.3	1,301.9	881.0	420.89	3.093	
21,100.0	7,903.5	16,883.4	7,756.5	251.7	172.4	-87.58	-10,993.9	7,623.3	1,301.9	878.2	423.72	3.073	
21,123.3	7,903.5	16,906.8	7,756.5	252.1	172.9	-87.58	-11,015.9	7,630.9	1,301.9	877.2	424.68	3.066	
21,200.0	7,903.5	16,983.4	7,756.5	253.6	174.3	-87.58	-11,088.4	7,655.9	1,301.9	874.4	427.50	3.045	
21,223.3	7,903.5	17,006.8	7,756.5	254.0	174.8	-87.58	-11,110.5	7,663.5	1,301.9	873.5	428.46	3.039	
21,300.0	7,903.5	17,083.4	7,756.5	255.5	176.2	-87.58	-11,183.0	7,688.5	1,301.9	870.6	431.29	3.019	
21,323.3	7,903.5	17,106.8	7,756.5	255.9	176.6	-87.58	-11,205.0	7,696.1	1,301.9	869.7	432.25	3.012	
21,400.0	7,903.5	17,183.4	7,756.5	257.3	178.1	-87.58	-11,277.5	7,721.1	1,301.9	866.9	435.08	2.992	
21,423.3	7,903.5	17,206.8	7,756.5	257.8	178.5	-87.58	-11,299.5	7,728.7	1,301.9	865.9	436.03	2.986	
21,500.0	7,903.5	17,283.4	7,756.5	259.2	179.9	-87.58	-11,372.0	7,753.7	1,301.9	863.1	438.86	2.967	
21,523.3	7,903.5	17,306.8	7,756.5	259.6	180.4	-87.58	-11,394.1	7,761.3	1,301.9	862.1	439.82	2.960	
21,600.0	7,903.5	17,383.4	7,756.5	261.1	181.8	-87.58	-11,466.6	7,786.3	1,301.9	859.3	442.65	2.941	
21,623.3	7,903.5	17,406.8	7,756.5	261.5	182.3	-87.58	-11,488.6	7,793.9	1,301.9	858.3	443.61	2.935	
21,700.0	7,903.5	17,483.4	7,756.5	263.0	183.7	-87.58	-11,561.1	7,818.9	1,301.9	855.5	446.43	2.916	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

10/21/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Fiber TFP22 - 201 - Orig. - DEP Plan 4

Survey Program: 0-SDI MWD

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
21,723.3	7,903.5	17,506.8	7,756.5	263.4	184.1	-87.58	-11,583.1	7,826.5	1,301.9	854.5	447.39	2.910	
21,800.0	7,903.5	17,583.4	7,756.5	264.8	185.6	-87.58	-11,655.6	7,851.5	1,301.9	851.7	450.22	2.892	
21,823.3	7,903.5	17,606.8	7,756.5	265.3	186.0	-87.58	-11,677.7	7,859.1	1,301.9	850.8	451.18	2.886	
21,900.0	7,903.5	17,683.4	7,756.5	266.7	187.5	-87.58	-11,750.2	7,884.1	1,301.9	847.9	454.01	2.868	
21,923.3	7,903.5	17,706.8	7,756.5	267.2	187.9	-87.58	-11,772.2	7,891.7	1,301.9	847.0	454.97	2.862	
22,000.0	7,903.5	17,783.4	7,756.5	268.6	189.3	-87.58	-11,844.7	7,916.7	1,301.9	844.1	457.79	2.844	
22,023.3	7,903.5	17,806.8	7,756.5	269.0	189.8	-87.58	-11,866.7	7,924.3	1,301.9	843.2	458.75	2.838	
22,100.0	7,903.5	17,883.4	7,756.5	270.5	191.2	-87.58	-11,939.2	7,949.4	1,301.9	840.3	461.58	2.821	
22,123.3	7,903.5	17,906.8	7,756.5	270.9	191.6	-87.58	-11,961.3	7,957.0	1,301.9	839.4	462.54	2.815	
22,200.0	7,903.5	17,983.4	7,756.5	272.4	193.1	-87.58	-12,033.8	7,982.0	1,301.9	836.6	465.37	2.798	
22,223.3	7,903.5	18,006.8	7,756.5	272.8	193.5	-87.58	-12,055.8	7,989.6	1,301.9	835.6	466.33	2.792	
22,300.0	7,903.5	18,083.4	7,756.5	274.2	195.0	-87.58	-12,128.3	8,014.6	1,301.9	832.8	469.16	2.775	
22,323.3	7,903.5	18,106.8	7,756.5	274.7	195.4	-87.58	-12,150.3	8,022.2	1,301.9	831.8	470.12	2.769	
22,400.0	7,903.5	18,183.4	7,756.5	276.1	196.8	-87.58	-12,222.8	8,047.2	1,301.9	829.0	472.95	2.753	
22,423.3	7,903.5	18,206.8	7,756.5	276.6	197.3	-87.58	-12,244.9	8,054.8	1,301.9	828.0	473.91	2.747	
22,500.0	7,903.5	18,283.4	7,756.5	278.0	198.7	-87.58	-12,317.4	8,079.8	1,301.9	825.2	476.74	2.731	
22,523.3	7,903.5	18,306.8	7,756.5	278.4	199.2	-87.58	-12,339.4	8,087.4	1,301.9	824.2	477.70	2.725	
22,600.0	7,903.5	18,383.4	7,756.5	279.9	200.6	-87.58	-12,411.9	8,112.4	1,301.9	821.4	480.53	2.709	
22,623.3	7,903.5	18,406.8	7,756.5	280.3	201.1	-87.58	-12,433.9	8,120.0	1,301.9	820.4	481.48	2.704	
22,700.0	7,903.5	18,483.4	7,756.5	281.8	202.5	-87.58	-12,506.4	8,145.0	1,301.9	817.6	484.31	2.688	
22,723.3	7,903.5	18,506.8	7,756.5	282.2	202.9	-87.58	-12,528.5	8,152.6	1,301.9	816.7	485.27	2.683	
22,800.0	7,903.5	18,583.4	7,756.5	283.7	204.4	-87.58	-12,601.0	8,177.6	1,301.9	813.8	488.10	2.667	
22,823.3	7,903.5	18,606.8	7,756.5	284.1	204.8	-87.58	-12,623.0	8,185.2	1,301.9	812.9	489.06	2.662	
22,900.0	7,903.5	18,683.4	7,756.5	285.5	206.3	-87.58	-12,695.5	8,210.2	1,301.9	810.0	491.89	2.647	
22,923.3	7,903.5	18,706.8	7,756.5	286.0	206.7	-87.58	-12,717.6	8,217.8	1,301.9	809.1	492.85	2.642	
23,000.0	7,903.5	18,783.4	7,756.5	287.4	208.1	-87.58	-12,790.0	8,242.8	1,301.9	806.3	495.68	2.627	
23,023.3	7,903.5	18,806.8	7,756.5	287.9	208.6	-87.58	-12,812.1	8,250.4	1,301.9	805.3	496.64	2.621	
23,100.0	7,903.5	18,883.4	7,756.5	289.3	210.0	-87.58	-12,884.6	8,275.4	1,301.9	802.5	499.47	2.607	
23,123.3	7,903.5	18,906.8	7,756.5	289.7	210.5	-87.58	-12,906.6	8,283.0	1,301.9	801.5	500.43	2.602	
23,200.0	7,903.5	18,983.4	7,756.5	291.2	211.9	-87.58	-12,979.1	8,308.0	1,301.9	798.7	503.26	2.587	
23,223.3	7,903.5	19,006.8	7,756.5	291.6	212.4	-87.58	-13,001.2	8,315.6	1,301.9	797.7	504.22	2.582	
23,300.0	7,903.5	19,083.4	7,756.5	293.1	213.8	-87.58	-13,073.7	8,340.6	1,301.9	794.9	507.05	2.568	
23,323.3	7,903.5	19,106.8	7,756.5	293.5	214.2	-87.58	-13,095.7	8,348.2	1,301.9	793.9	508.01	2.563	
23,400.0	7,903.5	19,183.4	7,756.5	295.0	215.7	-87.58	-13,168.2	8,373.2	1,301.9	791.1	510.84	2.549	
23,423.3	7,903.5	19,206.8	7,756.5	295.4	216.1	-87.58	-13,190.2	8,380.8	1,301.9	790.1	511.80	2.544	
23,500.0	7,903.5	19,283.4	7,756.5	296.8	217.6	-87.58	-13,262.7	8,405.8	1,301.9	787.3	514.63	2.530	
23,523.3	7,903.5	19,306.8	7,756.5	297.3	218.0	-87.58	-13,284.8	8,413.4	1,301.9	786.3	515.59	2.525	
23,600.0	7,903.5	19,383.4	7,756.5	298.7	219.5	-87.58	-13,357.3	8,438.5	1,301.9	783.5	518.42	2.511	
23,623.3	7,903.5	19,406.8	7,756.5	299.2	219.9	-87.58	-13,379.3	8,446.1	1,301.9	782.6	519.38	2.507	
23,700.0	7,903.5	19,483.4	7,756.5	300.6	221.3	-87.58	-13,451.8	8,471.1	1,301.9	779.7	522.21	2.493	
23,723.3	7,903.5	19,506.8	7,756.5	301.0	221.8	-87.58	-13,473.8	8,478.7	1,301.9	778.8	523.17	2.489	
23,800.0	7,903.5	19,583.4	7,756.5	302.5	223.2	-87.58	-13,546.3	8,503.7	1,301.9	775.9	526.01	2.475	
23,823.3	7,903.5	19,606.8	7,756.5	302.9	223.7	-87.58	-13,568.4	8,511.3	1,301.9	775.0	526.97	2.471	
23,900.0	7,903.5	19,683.4	7,756.5	304.4	225.1	-87.58	-13,640.9	8,536.3	1,301.9	772.1	529.80	2.457	
23,923.3	7,903.5	19,706.8	7,756.5	304.8	225.5	-87.58	-13,662.9	8,543.9	1,301.9	771.2	530.76	2.453	
24,000.0	7,903.5	19,783.4	7,756.5	306.3	227.0	-87.58	-13,735.4	8,568.9	1,301.9	768.4	533.59	2.440	
24,023.3	7,903.5	19,806.8	7,756.5	306.7	227.4	-87.58	-13,757.4	8,576.5	1,301.9	767.4	534.55	2.436	
24,100.0	7,903.5	19,883.4	7,756.5	308.1	228.9	-87.58	-13,829.9	8,601.5	1,301.9	764.6	537.38	2.423	
24,123.3	7,903.5	19,906.8	7,756.5	308.6	229.3	-87.58	-13,852.0	8,609.1	1,301.9	763.6	538.34	2.418	
24,200.0	7,903.5	19,983.4	7,756.5	310.0	230.8	-87.58	-13,924.5	8,634.1	1,301.9	760.8	541.17	2.406	
24,223.3	7,903.5	20,006.8	7,756.5	310.5	231.2	-87.58	-13,946.5	8,641.7	1,301.9	759.8	542.13	2.402	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Fiber TFP22 - 201 - Orig. - DEP Plan 4 — **Offset Site Error:** 0.0 usft

Survey Program: 0-SDI MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
24,300.0	7,903.5	20,083.4	7,756.5	311.9	232.7	-87.58	-14,019.0	8,666.7	1,301.9	757.0	544.96	2.389	
24,323.3	7,903.5	20,106.8	7,756.5	312.4	233.1	-87.58	-14,041.0	8,674.3	1,301.9	756.0	545.92	2.385	
24,400.0	7,903.5	20,183.4	7,756.5	313.8	234.5	-87.58	-14,113.5	8,699.3	1,301.9	753.2	548.75	2.373	
24,423.3	7,903.5	20,206.8	7,756.5	314.2	235.0	-87.58	-14,135.6	8,706.9	1,301.9	752.2	549.71	2.368	
24,500.0	7,903.5	20,283.4	7,756.5	315.7	236.4	-87.58	-14,208.1	8,731.9	1,301.9	749.4	552.55	2.356	
24,523.3	7,903.5	20,306.8	7,756.5	316.1	236.9	-87.58	-14,230.1	8,739.5	1,301.9	748.4	553.51	2.352	
24,600.0	7,903.5	20,383.4	7,756.5	317.6	238.3	-87.58	-14,302.6	8,764.5	1,301.9	745.6	556.34	2.340	
24,623.3	7,903.5	20,406.8	7,756.5	318.0	238.8	-87.58	-14,324.6	8,772.1	1,301.9	744.6	557.30	2.336	
24,700.0	7,903.5	20,483.4	7,756.5	319.5	240.2	-87.58	-14,397.1	8,797.1	1,301.9	741.8	560.13	2.324	
24,723.3	7,903.5	20,506.8	7,756.5	319.9	240.7	-87.58	-14,419.2	8,804.7	1,301.9	740.9	561.09	2.320	
24,800.0	7,903.5	20,583.4	7,756.5	321.4	242.1	-87.58	-14,491.7	8,829.7	1,301.9	738.0	563.92	2.309	
24,823.3	7,903.5	20,606.8	7,756.5	321.8	242.5	-87.58	-14,513.7	8,837.3	1,301.9	737.1	564.88	2.305	
24,900.0	7,903.5	20,683.4	7,756.5	323.2	244.0	-87.58	-14,586.2	8,862.3	1,301.9	734.2	567.71	2.293	
24,923.3	7,903.5	20,706.8	7,756.5	323.7	244.4	-87.58	-14,608.2	8,869.9	1,301.9	733.3	568.67	2.289	
25,000.0	7,903.5	20,783.4	7,756.5	325.1	245.9	-87.58	-14,680.7	8,894.9	1,301.9	730.4	571.51	2.278	
25,023.3	7,903.5	20,806.8	7,756.5	325.6	246.3	-87.58	-14,702.8	8,902.5	1,301.9	729.5	572.47	2.274	
25,100.0	7,903.5	20,883.4	7,756.5	327.0	247.8	-87.58	-14,775.3	8,927.6	1,301.9	726.6	575.30	2.263	
25,123.3	7,903.5	20,906.8	7,756.5	327.5	248.2	-87.58	-14,797.3	8,935.2	1,301.9	725.7	576.26	2.259	
25,200.0	7,903.5	20,983.4	7,756.5	328.9	249.7	-87.58	-14,869.8	8,960.2	1,301.9	722.9	579.09	2.248	
25,223.3	7,903.5	21,006.8	7,756.5	329.3	250.1	-87.58	-14,891.9	8,967.8	1,301.9	721.9	580.05	2.245	
25,300.0	7,903.5	21,083.4	7,756.5	330.8	251.5	-87.58	-14,964.3	8,992.8	1,301.9	719.1	582.88	2.234	
25,323.3	7,903.5	21,106.8	7,756.5	331.2	252.0	-87.58	-14,986.4	9,000.4	1,301.9	718.1	583.84	2.230	
25,400.0	7,903.5	21,183.4	7,756.5	332.7	253.4	-87.58	-15,058.9	9,025.4	1,301.9	715.3	586.68	2.219	
25,423.3	7,903.5	21,206.8	7,756.5	333.1	253.9	-87.58	-15,080.9	9,033.0	1,301.9	714.3	587.64	2.216	
25,500.0	7,903.5	21,283.4	7,756.5	334.6	255.3	-87.58	-15,153.4	9,058.0	1,301.9	711.5	590.47	2.205	
25,523.3	7,903.5	21,306.8	7,756.5	335.0	255.8	-87.58	-15,175.5	9,065.6	1,301.9	710.5	591.43	2.201	
25,600.0	7,903.5	21,383.4	7,756.5	336.5	257.2	-87.58	-15,248.0	9,090.6	1,301.9	707.7	594.26	2.191	
25,623.3	7,903.5	21,406.8	7,756.5	336.9	257.7	-87.58	-15,270.0	9,098.2	1,301.9	706.7	595.22	2.187	
25,700.0	7,903.5	21,483.4	7,756.5	338.3	259.1	-87.58	-15,342.5	9,123.2	1,301.9	703.9	598.05	2.177	
25,723.3	7,903.5	21,506.8	7,756.5	338.8	259.5	-87.58	-15,364.5	9,130.8	1,301.9	702.9	599.01	2.173	
25,800.0	7,903.5	21,583.4	7,756.5	340.2	261.0	-87.58	-15,437.0	9,155.8	1,301.9	700.1	601.85	2.163	
25,823.3	7,903.5	21,606.8	7,756.5	340.7	261.4	-87.58	-15,459.1	9,163.4	1,301.9	699.1	602.81	2.160	
25,900.0	7,903.5	21,683.4	7,756.5	342.1	262.9	-87.58	-15,531.6	9,188.4	1,301.9	696.3	605.64	2.150	
25,923.3	7,903.5	21,706.8	7,756.5	342.6	263.3	-87.58	-15,553.6	9,196.0	1,301.9	695.3	606.60	2.146	
26,000.0	7,903.5	21,783.4	7,756.5	344.0	264.8	-87.58	-15,626.1	9,221.0	1,301.9	692.5	609.43	2.136	
26,023.3	7,903.5	21,806.8	7,756.5	344.5	265.2	-87.58	-15,648.1	9,228.6	1,301.9	691.6	610.39	2.133	
26,100.0	7,903.5	21,883.4	7,756.5	345.9	266.7	-87.58	-15,720.6	9,253.6	1,301.9	688.7	613.22	2.123	
26,123.3	7,903.5	21,906.8	7,756.5	346.3	267.1	-87.58	-15,742.7	9,261.2	1,301.9	687.8	614.18	2.120	
26,200.0	7,903.5	21,983.4	7,756.5	347.8	268.6	-87.58	-15,815.2	9,286.2	1,301.9	684.9	617.02	2.110	
26,223.3	7,903.5	22,006.8	7,756.5	348.2	269.0	-87.58	-15,837.2	9,293.8	1,301.9	684.0	617.98	2.107	
26,300.0	7,903.5	22,083.4	7,756.5	349.7	270.5	-87.58	-15,909.7	9,318.8	1,301.9	681.1	620.81	2.097	
26,323.3	7,903.5	22,106.8	7,756.5	350.1	270.9	-87.58	-15,931.7	9,326.4	1,301.9	680.2	621.77	2.094	
26,400.0	7,903.5	22,183.4	7,756.5	351.6	272.4	-87.58	-16,004.2	9,351.4	1,301.9	677.3	624.60	2.084	
26,423.3	7,903.5	22,206.8	7,756.5	352.0	272.8	-87.58	-16,026.3	9,359.0	1,301.9	676.4	625.56	2.081	
26,500.0	7,903.5	22,283.4	7,756.5	353.5	274.2	-87.58	-16,098.8	9,384.0	1,301.9	673.6	628.40	2.072	
26,523.3	7,903.5	22,306.8	7,756.5	353.9	274.7	-87.58	-16,120.8	9,391.6	1,301.9	672.6	629.36	2.069	
26,600.0	7,903.5	22,383.4	7,756.5	355.4	276.1	-87.58	-16,193.3	9,416.6	1,301.9	669.8	632.19	2.059	
26,623.3	7,903.5	22,406.8	7,756.5	355.8	276.6	-87.58	-16,215.3	9,424.3	1,301.9	668.8	633.15	2.056	
26,700.0	7,903.5	22,483.4	7,756.5	357.2	278.0	-87.58	-16,287.8	9,449.3	1,301.9	666.0	635.98	2.047	
26,723.3	7,903.5	22,506.8	7,756.5	357.7	278.5	-87.58	-16,309.9	9,456.9	1,301.9	665.0	636.94	2.044	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

10/21/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Fiber TFP22 - 201 - Orig. - DEP Plan 4

Survey Program: 0-SDI MWD

Offset Site Error: 0.0 usft
Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
26,800.0	7,903.5	22,583.4	7,756.5	359.1	279.9	-87.58	-16,382.4	9,481.9	1,301.9	662.2	639.78	2.035	
26,823.3	7,903.5	22,606.8	7,756.5	359.6	280.4	-87.58	-16,404.4	9,489.5	1,301.9	661.2	640.74	2.032	
26,900.0	7,903.5	22,683.4	7,756.5	361.0	281.8	-87.58	-16,476.9	9,514.5	1,301.9	658.4	643.57	2.023	
26,923.3	7,903.5	22,706.8	7,756.5	361.5	282.3	-87.58	-16,498.9	9,522.1	1,301.9	657.4	644.53	2.020	
27,000.0	7,903.5	22,783.4	7,756.5	362.9	283.7	-87.58	-16,571.4	9,547.1	1,301.9	654.6	647.36	2.011	
27,023.3	7,903.5	22,806.8	7,756.5	363.4	284.1	-87.58	-16,593.5	9,554.7	1,301.9	653.6	648.32	2.008	
27,100.0	7,903.5	22,883.4	7,756.5	364.8	285.6	-87.58	-16,666.0	9,579.7	1,302.0	650.8	651.16	1.999	
27,123.3	7,903.5	22,906.8	7,756.5	365.3	286.0	-87.58	-16,688.0	9,587.3	1,302.0	649.8	652.12	1.996	
27,200.0	7,903.5	22,983.4	7,756.5	366.7	287.5	-87.58	-16,760.5	9,612.3	1,302.0	647.0	654.95	1.988	
27,223.3	7,903.5	23,006.8	7,756.5	367.1	287.9	-87.58	-16,782.5	9,619.9	1,302.0	646.0	655.91	1.985	
27,300.0	7,903.5	23,083.4	7,756.5	368.6	289.4	-87.58	-16,855.0	9,644.9	1,302.0	643.2	658.74	1.976	
27,323.3	7,903.5	23,106.8	7,756.5	369.0	289.8	-87.58	-16,877.1	9,652.5	1,302.0	642.2	659.70	1.974	
27,400.0	7,903.5	23,183.4	7,756.5	370.5	291.3	-87.58	-16,949.6	9,677.5	1,302.0	639.4	662.54	1.965	
27,423.3	7,903.5	23,206.8	7,756.5	370.9	291.7	-87.58	-16,971.6	9,685.1	1,302.0	638.5	663.50	1.962	
27,500.0	7,903.5	23,283.4	7,756.5	372.4	293.2	-87.58	-17,044.1	9,710.1	1,302.0	635.6	666.33	1.954	
27,523.3	7,903.5	23,306.8	7,756.5	372.8	293.6	-87.58	-17,066.2	9,717.7	1,302.0	634.7	667.29	1.951	
27,600.0	7,903.5	23,383.4	7,756.5	374.3	295.1	-87.58	-17,138.6	9,742.7	1,302.0	631.8	670.12	1.943	
27,623.3	7,903.5	23,406.8	7,756.5	374.7	295.5	-87.58	-17,160.7	9,750.3	1,302.0	630.9	671.08	1.940	
27,700.0	7,903.5	23,483.4	7,756.5	376.2	297.0	-87.58	-17,233.2	9,775.3	1,302.0	628.0	673.92	1.932	
27,723.3	7,903.5	23,506.8	7,756.5	376.6	297.4	-87.58	-17,255.2	9,782.9	1,302.0	627.1	674.88	1.929	
27,800.0	7,903.5	23,583.4	7,756.5	378.1	298.9	-87.58	-17,327.7	9,807.9	1,302.0	624.2	677.71	1.921	
27,823.3	7,903.5	23,606.8	7,756.5	378.5	299.3	-87.58	-17,349.8	9,815.5	1,302.0	623.3	678.67	1.918	
27,900.0	7,903.5	23,683.4	7,756.5	379.9	300.8	-87.58	-17,422.2	9,840.5	1,302.0	620.5	681.50	1.910	
27,923.3	7,903.5	23,706.8	7,756.5	380.4	301.2	-87.58	-17,444.3	9,848.1	1,302.0	619.5	682.46	1.908	
28,000.0	7,903.5	23,783.4	7,756.5	381.8	302.6	-87.58	-17,516.8	9,873.1	1,302.0	616.7	685.30	1.900	
28,023.3	7,903.5	23,806.8	7,756.5	382.3	303.1	-87.58	-17,538.8	9,880.7	1,302.0	615.7	686.26	1.897	
28,100.0	7,903.5	23,883.4	7,756.5	383.7	304.5	-87.58	-17,611.3	9,905.7	1,302.0	612.9	689.09	1.889	
28,123.3	7,903.5	23,906.8	7,756.5	384.2	305.0	-87.58	-17,633.4	9,913.3	1,302.0	611.9	690.05	1.887	
28,200.0	7,903.5	23,983.4	7,756.5	385.6	306.4	-87.58	-17,705.9	9,938.4	1,302.0	609.1	692.88	1.879	
28,223.3	7,903.5	24,006.8	7,756.5	386.1	306.9	-87.58	-17,727.9	9,946.0	1,302.0	608.1	693.84	1.876	
28,300.0	7,903.5	24,083.4	7,756.5	387.5	308.3	-87.58	-17,800.4	9,971.0	1,302.0	605.3	696.68	1.869	
28,323.3	7,903.5	24,106.8	7,756.5	388.0	308.8	-87.58	-17,822.4	9,978.6	1,302.0	604.3	697.64	1.866	
28,400.0	7,903.5	24,183.4	7,756.5	389.4	310.2	-87.58	-17,894.9	10,003.6	1,302.0	601.5	700.47	1.859	
28,423.3	7,903.5	24,206.8	7,756.5	389.9	310.7	-87.58	-17,917.0	10,011.2	1,302.0	600.5	701.43	1.856	
28,500.0	7,903.5	24,283.4	7,756.5	391.3	312.1	-87.58	-17,989.5	10,036.2	1,302.0	597.7	704.26	1.849	
28,523.3	7,903.5	24,306.8	7,756.5	391.7	312.6	-87.58	-18,011.5	10,043.8	1,302.0	596.7	705.22	1.846	
28,600.0	7,903.5	24,383.4	7,756.5	393.2	314.0	-87.58	-18,084.0	10,068.8	1,302.0	593.9	708.05	1.839	
28,623.3	7,903.5	24,406.8	7,756.5	393.6	314.5	-87.58	-18,106.0	10,076.4	1,302.0	592.9	709.01	1.836	
28,700.0	7,903.5	24,483.4	7,756.5	395.1	315.9	-87.58	-18,178.5	10,101.4	1,302.0	590.1	711.85	1.829	
28,723.3	7,903.5	24,506.8	7,756.5	395.5	316.4	-87.58	-18,200.6	10,109.0	1,302.0	589.1	712.81	1.827	
28,800.0	7,903.5	24,583.4	7,756.5	397.0	317.8	-87.58	-18,273.1	10,134.0	1,302.0	586.3	715.64	1.819	
28,823.3	7,903.5	24,606.8	7,756.5	397.4	318.2	-87.58	-18,295.1	10,141.6	1,302.0	585.4	716.60	1.817	
28,900.0	7,903.5	24,683.4	7,756.5	398.9	319.7	-87.58	-18,367.6	10,166.6	1,302.0	582.5	719.43	1.810	
28,923.3	7,903.5	24,706.8	7,756.5	399.3	320.1	-87.58	-18,389.6	10,174.2	1,302.0	581.6	720.39	1.807	
29,000.0	7,903.5	24,783.4	7,756.5	400.8	321.6	-87.58	-18,462.1	10,199.2	1,302.0	578.7	723.23	1.800	
29,023.3	7,903.5	24,806.8	7,756.5	401.2	322.0	-87.58	-18,484.2	10,206.8	1,302.0	577.8	724.19	1.798	
29,100.0	7,903.5	24,883.4	7,756.5	402.7	323.5	-87.58	-18,556.7	10,231.8	1,302.0	574.9	727.02	1.791	
29,123.3	7,903.5	24,906.8	7,756.5	403.1	323.9	-87.58	-18,578.7	10,239.4	1,302.0	574.0	727.98	1.788	
29,200.0	7,903.5	24,983.4	7,756.5	404.6	325.4	-87.58	-18,651.2	10,264.4	1,302.0	571.1	730.81	1.782	
29,223.3	7,903.5	25,006.8	7,756.5	405.0	325.8	-87.58	-18,673.2	10,272.0	1,302.0	570.2	731.77	1.779	
29,300.0	7,903.5	25,083.4	7,756.5	406.5	327.3	-87.58	-18,745.7	10,297.0	1,302.0	567.4	734.61	1.772	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Fiber TFP22 - 201 - Orig - DEP Plan 4

Offset Site Error: 0.0 usft

Survey Program: 0-SDI MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
29,323.3	7,903.5	25,106.8	7,756.5	406.9	327.7	-87.58	-18,767.8	10,304.6	1,302.0	566.4	735.57	1.770	
29,400.0	7,903.5	25,183.4	7,756.5	408.4	329.2	-87.58	-18,840.3	10,329.6	1,302.0	563.6	738.40	1.763	
29,423.3	7,903.5	25,206.8	7,756.5	408.6	329.6	-87.58	-18,862.3	10,337.2	1,302.0	562.6	739.36	1.761	
29,500.0	7,903.5	25,283.4	7,756.5	410.2	331.1	-87.58	-18,934.8	10,362.2	1,302.0	559.8	742.19	1.754	
29,523.3	7,903.5	25,306.8	7,756.5	410.7	331.5	-87.58	-18,956.8	10,369.8	1,302.0	558.8	743.15	1.752	
29,600.0	7,903.5	25,383.4	7,756.5	412.1	333.0	-87.58	-19,029.3	10,394.8	1,302.0	556.0	745.98	1.745	
29,623.3	7,903.5	25,406.8	7,756.5	412.6	333.4	-87.58	-19,051.4	10,402.4	1,302.0	555.0	746.95	1.743	
29,700.0	7,903.5	25,483.4	7,756.5	414.0	334.9	-87.58	-19,123.9	10,427.5	1,302.0	552.2	749.78	1.736	
29,723.3	7,903.5	25,506.8	7,756.5	414.5	335.3	-87.58	-19,145.9	10,435.1	1,302.0	551.2	750.74	1.734	
29,800.0	7,903.5	25,583.4	7,756.5	415.9	336.8	-87.58	-19,218.4	10,460.1	1,302.0	548.4	753.57	1.728	
29,823.3	7,903.5	25,606.8	7,756.5	416.4	337.2	-87.58	-19,240.4	10,467.7	1,302.0	547.4	754.53	1.726	
29,900.0	7,903.5	25,683.4	7,756.5	417.8	338.7	-87.58	-19,312.9	10,492.7	1,302.0	544.6	757.36	1.719	
29,923.3	7,903.5	25,706.8	7,756.5	418.3	339.1	-87.58	-19,335.0	10,500.3	1,302.0	543.6	758.32	1.717	
30,000.0	7,903.5	25,783.4	7,756.5	419.7	340.6	-87.58	-19,407.5	10,525.3	1,302.0	540.8	761.15	1.711	
30,026.7	7,903.5	25,810.1	7,756.5	420.2	341.1	-87.58	-19,432.7	10,534.0	1,302.0	539.8	762.17	1.708	
30,033.7	7,903.5	25,817.2	7,756.5	420.4	341.2	-87.58	-19,439.4	10,536.3	1,302.0	539.5	762.43	1.708	ES, SF

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 201 - Orig. - 201 As Drilled

Survey Program: 175-SDI MWD, 873-SDI MWD, 2205-SDI MWD, 3440-MWD

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-60.0	0.0	60.0				
100.0	100.0	100.6	100.6	0.3	0.1	-179.81	-59.5	-0.2	59.5	59.2	0.36	166.078	
200.0	200.0	201.0	201.0	0.6	0.2	-179.24	-58.1	-0.8	58.2	57.3	0.85	68.747	
300.0	300.0	301.1	301.0	1.0	0.4	-178.12	-56.4	-1.8	56.4	55.0	1.43	39.538	
364.7	364.7	364.7	364.7	1.2	0.6	-176.88	-55.7	-3.0	55.8	54.0	1.79	31.122 CC	
400.0	400.0	399.5	399.4	1.3	0.7	-175.92	-55.8	-4.0	56.0	54.0	1.99	28.087 ES	
500.0	500.0	497.5	497.4	1.7	0.9	-173.16	-58.3	-7.0	58.7	56.2	2.56	22.983	
600.0	600.0	594.6	594.2	2.1	1.1	-172.27	-64.6	-8.8	65.5	62.4	3.11	21.041	
700.0	700.0	691.8	690.9	2.4	1.3	-173.33	-74.8	-8.7	75.9	72.2	3.67	20.690 SF	
800.0	800.0	790.2	788.5	2.8	1.5	-175.26	-87.7	-7.3	88.7	84.6	4.16	21.351	
900.0	900.0	889.6	886.9	3.1	1.7	158.50	-100.7	-5.7	103.3	98.7	4.62	22.383	
1,000.0	999.8	990.9	987.6	3.5	1.8	158.34	-112.4	-4.4	119.5	114.5	5.04	23.742	
1,100.0	1,099.5	1,091.7	1,088.0	3.8	1.9	159.62	-121.7	-5.0	136.9	131.4	5.48	24.968	
1,200.0	1,198.9	1,192.2	1,188.1	4.2	2.1	161.99	-129.1	-8.3	154.4	148.4	5.95	25.940	
1,300.0	1,298.4	1,293.1	1,288.7	4.6	2.3	164.74	-134.6	-13.8	170.6	164.2	6.44	26.489	
1,400.0	1,397.8	1,392.2	1,387.4	4.9	2.4	167.61	-138.6	-21.1	186.1	179.2	6.94	26.823	
1,500.0	1,497.3	1,491.4	1,486.3	5.3	2.6	170.13	-142.6	-28.7	202.1	194.7	7.44	27.146	
1,600.0	1,596.7	1,591.5	1,586.0	5.7	2.8	172.49	-145.4	-36.8	217.4	209.4	7.97	27.276	
1,700.0	1,696.2	1,688.7	1,682.8	6.1	3.0	174.80	-147.6	-45.9	232.9	224.4	8.50	27.394	
1,800.0	1,795.6	1,786.9	1,780.4	6.4	3.2	176.88	-150.4	-55.4	249.4	240.4	9.04	27.600	
1,900.0	1,895.1	1,885.6	1,878.7	6.8	3.4	178.36	-153.6	-63.3	265.8	256.3	9.57	27.784	
2,000.0	1,994.5	1,982.3	1,975.1	7.2	3.6	179.51	-157.1	-70.6	282.7	272.6	10.10	27.994	
2,100.0	2,094.0	2,079.0	2,071.5	7.6	3.8	-179.55	-161.4	-77.8	300.3	289.6	10.64	28.235	
2,200.0	2,193.4	2,173.5	2,165.6	8.0	3.9	-178.82	-166.5	-84.8	318.7	307.6	11.09	28.738	
2,300.0	2,292.9	2,267.6	2,259.2	8.3	4.0	-178.28	-172.9	-91.6	338.4	326.9	11.48	29.480	
2,400.0	2,392.3	2,359.2	2,350.2	8.7	4.1	-177.86	-180.4	-98.6	359.5	347.6	11.84	30.353	
2,500.0	2,491.8	2,448.8	2,439.0	9.1	4.3	-177.20	-188.4	-107.9	382.5	370.3	12.21	31.327	
2,600.0	2,591.2	2,543.0	2,532.0	9.3	4.5	-176.30	-197.4	-120.1	407.3	394.9	12.42	32.805	
2,700.0	2,690.6	2,642.7	2,630.3	9.3	4.7	171.99	-205.5	-134.6	432.6	420.1	12.54	34.511	
2,800.0	2,789.7	2,743.1	2,729.3	9.3	4.9	163.70	-212.1	-150.1	459.3	446.6	12.67	36.255	
2,900.0	2,888.3	2,840.6	2,825.4	9.4	5.1	158.65	-217.0	-165.8	487.5	474.7	12.81	38.068	
3,000.0	2,986.4	2,933.3	2,916.6	9.4	5.4	155.53	-221.1	-181.1	516.1	505.2	12.94	40.044	
3,100.0	3,083.8	3,027.5	3,009.4	9.5	5.6	153.78	-224.9	-197.3	551.7	538.6	13.10	42.104	
3,200.0	3,180.5	3,111.4	3,091.8	9.6	5.9	152.73	-227.4	-212.7	588.2	574.9	13.24	44.428	
3,300.0	3,276.3	3,186.3	3,165.1	9.8	6.1	152.07	-230.1	-228.2	629.5	616.1	13.35	47.147	
3,400.0	3,371.0	3,250.0	3,227.0	10.0	6.3	151.52	-232.6	-243.0	675.9	662.5	13.42	50.369	
3,500.0	3,464.6	3,320.4	3,294.9	10.3	6.6	151.50	-235.5	-261.3	727.5	713.9	13.57	53.611	
3,600.0	3,557.0	3,379.6	3,351.5	10.6	6.9	151.35	-238.2	-278.6	784.2	770.6	13.63	57.528	
3,700.0	3,648.2	3,440.0	3,408.5	11.1	7.2	152.48	-240.8	-298.1	845.6	831.9	13.73	61.596	
3,800.0	3,739.4	3,491.2	3,456.5	11.5	7.4	154.10	-243.0	-315.8	909.6	895.9	13.74	66.212	
3,900.0	3,830.5	3,548.0	3,509.4	12.1	7.6	155.78	-245.5	-336.5	975.6	961.8	13.79	70.759	
4,000.0	3,921.6	3,609.6	3,566.4	12.6	7.9	157.45	-248.2	-359.6	1,043.0	1,029.1	13.89	75.093	
4,100.0	4,012.7	3,673.6	3,625.5	13.2	8.2	159.03	-250.9	-384.1	1,111.5	1,097.5	14.03	79.244	
4,200.0	4,103.8	3,737.4	3,684.2	13.8	8.6	160.49	-253.3	-408.9	1,180.7	1,166.5	14.18	83.277	
4,300.0	4,194.9	3,795.8	3,737.8	14.5	8.9	161.73	-255.2	-432.1	1,250.8	1,236.5	14.32	87.319	
4,400.0	4,286.1	3,855.8	3,801.7	15.1	9.3	163.13	-257.1	-460.5	1,321.6	1,307.0	14.55	90.829	
4,500.0	4,377.2	3,943.2	3,872.6	15.8	9.8	164.52	-258.8	-491.5	1,392.3	1,377.4	14.83	93.876	
4,600.0	4,468.3	4,017.0	3,940.4	16.5	10.2	165.69	-260.6	-520.6	1,462.9	1,447.8	15.10	96.864	
4,700.0	4,559.4	4,089.4	4,007.0	17.3	10.7	166.72	-262.7	-548.7	1,533.6	1,518.2	15.38	99.690	
4,800.0	4,650.5	4,162.5	4,074.5	18.0	11.2	167.65	-265.0	-576.9	1,604.2	1,588.5	15.69	102.255	
4,900.0	4,741.6	4,231.8	4,138.5	18.7	11.6	168.47	-266.8	-603.5	1,674.9	1,658.9	15.97	104.859	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 201 - Orig - 201 As Drilled — **Offset Site Error:** 0.0 usft

Survey Program: 175-SDI MWD, 873-SDI MWD, 2205-SDI MWD, 3440-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,832.8	4,296.4	4,198.0	19.5	12.0	169.18	-268.5	-628.5	1,745.9	1,729.6	16.25	107.422	
5,100.0	4,923.9	4,393.7	4,288.0	20.3	12.7	170.17	-270.6	-665.6	1,816.5	1,799.8	16.73	108.579	
5,200.0	5,015.0	4,455.7	4,345.4	21.0	13.1	170.74	-272.0	-688.8	1,886.9	1,869.9	17.01	110.912	
5,300.0	5,106.1	4,514.2	4,399.6	21.8	13.5	171.23	-273.6	-710.9	1,957.7	1,940.4	17.28	113.278	
5,400.0	5,197.2	4,568.4	4,449.7	22.6	13.9	171.62	-276.3	-731.2	2,029.1	2,011.5	17.54	115.711	
5,500.0	5,288.3	4,620.3	4,497.7	23.4	14.2	171.95	-279.6	-750.8	2,101.0	2,083.2	17.79	118.131	
5,600.0	5,379.4	4,676.0	4,549.0	24.2	14.6	172.28	-283.4	-772.2	2,173.5	2,155.5	18.06	120.334	
5,700.0	5,470.6	4,718.4	4,587.8	25.0	15.0	172.54	-285.8	-789.0	2,246.8	2,228.5	18.28	122.908	
5,800.0	5,561.7	4,771.0	4,635.6	25.8	15.4	172.91	-287.6	-810.8	2,320.6	2,302.1	18.56	125.034	
5,900.0	5,652.8	4,805.8	4,667.0	26.6	15.7	173.17	-288.1	-825.8	2,395.1	2,376.4	18.75	127.750	
6,000.0	5,743.9	4,845.5	4,702.8	27.4	16.0	173.48	-288.5	-843.3	2,470.4	2,451.5	18.97	130.215	

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 202 - Orig. - SDI Plan 2

Survey Program: 0-MWD+HRGM+Int, 800-MWD+AfterInt, 2600-SDI MWD

Offset Site Error: 0.0 usft
Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-45.0	0.0	45.0				
100.0	100.0	100.0	100.0	0.3	0.3	180.00	-45.0	0.0	45.0	44.5	0.52	85.981	
200.0	200.0	200.0	200.0	0.6	0.6	180.00	-45.0	0.0	45.0	43.8	1.24	36.281	
300.0	300.0	300.0	300.0	1.0	1.0	180.00	-45.0	0.0	45.0	43.0	1.96	22.991	
400.0	400.0	400.0	400.0	1.3	1.3	180.00	-45.0	0.0	45.0	42.3	2.67	16.827	
500.0	500.0	500.0	500.0	1.7	1.7	180.00	-45.0	0.0	45.0	41.6	3.39	13.270	
600.0	600.0	600.0	600.0	2.1	2.1	180.00	-45.0	0.0	45.0	40.9	4.11	10.954	
700.0	700.0	700.0	700.0	2.4	2.4	180.00	-45.0	0.0	45.0	40.2	4.83	9.326	
800.0	800.0	800.0	800.0	2.8	2.8	180.00	-45.0	0.0	45.0	39.5	5.54	8.120 CC, ES	
900.0	900.0	899.9	899.9	3.1	3.1	158.03	-45.0	-1.7	46.6	40.4	6.25	7.463 SF	
1,000.0	999.8	999.3	999.1	3.5	3.5	165.85	-45.0	-6.9	52.3	45.3	6.95	7.517	
1,100.0	1,099.5	1,098.4	1,098.0	3.8	3.8	174.03	-45.0	-13.8	62.7	55.0	7.66	8.181	
1,200.0	1,198.9	1,197.3	1,196.7	4.2	4.2	179.83	-45.0	-20.7	75.7	67.4	8.37	9.051	
1,300.0	1,298.4	1,296.2	1,295.3	4.6	4.5	-176.09	-45.0	-27.6	89.3	80.2	9.07	9.846	
1,400.0	1,397.8	1,395.1	1,394.0	4.9	4.9	-173.10	-45.0	-34.5	103.2	93.5	9.78	10.557	
1,500.0	1,497.3	1,494.0	1,492.7	5.3	5.2	-170.82	-45.0	-41.4	117.4	106.9	10.49	11.191	
1,600.0	1,596.7	1,592.9	1,591.3	5.7	5.6	-169.03	-45.0	-48.3	131.6	120.4	11.20	11.755	
1,700.0	1,696.2	1,691.8	1,690.0	6.1	6.0	-167.59	-45.0	-55.2	146.0	134.1	11.91	12.258	
1,800.0	1,795.6	1,790.7	1,788.6	6.4	6.3	-166.41	-45.0	-62.1	160.5	147.8	12.63	12.709	
1,900.0	1,895.1	1,889.6	1,887.3	6.8	6.7	-165.43	-45.0	-69.0	175.0	161.6	13.34	13.115	
2,000.0	1,994.5	1,988.5	1,986.0	7.2	7.0	-164.60	-45.0	-75.9	189.5	175.4	14.06	13.481	
2,100.0	2,094.0	2,087.4	2,084.6	7.6	7.4	-163.88	-45.0	-82.8	204.1	189.3	14.77	13.813	
2,200.0	2,193.4	2,186.3	2,183.3	8.0	7.8	-163.26	-45.0	-89.7	218.7	203.2	15.49	14.116	
2,300.0	2,292.9	2,285.2	2,282.0	8.3	8.1	-162.72	-45.0	-96.6	233.3	217.1	16.21	14.393	
2,400.0	2,392.3	2,384.1	2,380.6	8.7	8.5	-162.24	-45.0	-103.5	248.0	231.0	16.93	14.646	
2,500.0	2,491.8	2,483.0	2,479.3	9.1	8.9	-161.82	-45.0	-110.4	262.6	245.0	17.65	14.880	
2,600.0	2,591.2	2,581.9	2,577.9	9.3	9.1	-161.44	-45.0	-117.3	277.3	259.3	18.04	15.375	
2,700.0	2,690.6	2,674.8	2,670.5	9.3	9.1	-173.64	-45.1	-124.7	293.8	275.8	18.08	16.254	
2,800.0	2,789.7	2,764.5	2,759.7	9.3	9.1	177.71	-45.7	-134.5	315.5	297.5	18.06	17.471	
2,900.0	2,888.3	2,852.0	2,846.3	9.4	9.2	172.42	-46.7	-146.7	342.5	324.5	18.04	18.984	
3,000.0	2,986.4	2,936.8	2,929.9	9.4	9.2	169.23	-48.1	-161.0	374.9	356.9	18.02	20.799	
3,100.0	3,083.8	3,024.6	3,015.9	9.5	9.2	167.44	-49.9	-177.9	412.3	394.2	18.06	22.829	
3,200.0	3,180.5	3,114.6	3,104.3	9.6	9.3	166.43	-51.7	-195.5	453.1	434.9	18.14	24.973	
3,300.0	3,276.3	3,203.2	3,191.1	9.8	9.4	165.85	-53.5	-212.7	497.0	478.8	18.24	27.251	
3,400.0	3,371.0	3,290.1	3,276.3	10.0	9.5	165.53	-55.3	-229.7	544.1	525.7	18.35	29.654	
3,500.0	3,464.6	3,375.2	3,359.8	10.3	9.6	165.37	-57.1	-246.3	594.2	575.8	18.47	32.174	
3,600.0	3,557.0	3,458.5	3,441.4	10.6	9.7	165.30	-58.8	-262.5	647.4	628.8	18.60	34.800	
3,700.0	3,648.2	3,540.1	3,521.5	11.1	9.9	166.12	-60.5	-278.4	703.1	684.4	18.75	37.500	
3,800.0	3,739.4	3,621.6	3,601.4	11.5	10.0	167.45	-62.1	-294.2	759.4	740.5	18.91	40.159	
3,900.0	3,830.5	3,703.0	3,681.2	12.1	10.2	168.59	-63.8	-310.1	815.9	796.8	19.08	42.752	
4,000.0	3,921.6	3,784.5	3,761.1	12.6	10.3	169.59	-65.5	-326.0	872.6	853.3	19.27	45.273	
4,100.0	4,012.7	3,865.9	3,841.0	13.2	10.5	170.47	-67.2	-341.9	929.5	910.0	19.48	47.720	
4,200.0	4,103.8	3,947.4	3,920.9	13.8	10.7	171.25	-68.8	-357.7	986.5	966.8	19.69	50.091	
4,300.0	4,194.9	4,028.8	4,000.7	14.5	10.9	171.95	-70.5	-373.6	1,043.6	1,023.7	19.92	52.383	
4,400.0	4,286.1	4,110.3	4,080.6	15.1	11.1	172.57	-72.2	-389.5	1,100.8	1,080.6	20.16	54.597	
4,500.0	4,377.2	4,191.7	4,160.5	15.8	11.3	173.14	-73.9	-405.3	1,158.1	1,137.7	20.41	56.731	
4,600.0	4,468.3	4,273.1	4,240.3	16.5	11.5	173.65	-75.5	-421.2	1,215.4	1,194.8	20.68	58.782	
4,700.0	4,559.4	4,354.6	4,320.2	17.3	11.7	174.11	-77.2	-437.1	1,272.9	1,251.9	20.95	60.756	
4,800.0	4,650.5	4,436.0	4,400.1	18.0	11.9	174.54	-78.9	-452.9	1,330.3	1,309.1	21.23	62.651	
4,900.0	4,741.6	4,517.5	4,479.9	18.7	12.2	174.93	-80.5	-468.8	1,387.8	1,366.3	21.53	64.471	
5,000.0	4,832.8	4,598.9	4,559.8	19.5	12.4	175.29	-82.2	-484.7	1,445.4	1,423.6	21.83	66.214	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 202 - Orig. - SDI Plan 2 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+HRGM+Int, 800-MWD+Afterint, 2600-SDI MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	4,923.9	4,680.4	4,639.7	20.3	12.7	175.62	-83.9	-500.5	1,503.0	1,480.9	22.14	67.882	
5,200.0	5,015.0	4,761.8	4,719.6	21.0	12.9	175.93	-85.6	-516.4	1,560.6	1,538.2	22.46	69.479	
5,300.0	5,106.1	4,843.3	4,799.4	21.8	13.2	176.22	-87.2	-532.3	1,618.3	1,595.5	22.79	71.007	
5,400.0	5,197.2	4,924.7	4,879.3	22.6	13.4	176.48	-88.9	-548.1	1,675.9	1,652.8	23.13	72.469	
5,500.0	5,288.3	5,006.2	4,959.2	23.4	13.7	176.73	-90.6	-564.0	1,733.6	1,710.2	23.47	73.865	
5,600.0	5,379.4	5,087.6	5,039.0	24.2	13.9	176.96	-92.3	-579.9	1,791.4	1,767.5	23.82	75.198	
5,700.0	5,470.6	5,169.1	5,118.9	25.0	14.2	177.18	-93.9	-595.7	1,849.1	1,824.9	24.18	76.471	
5,800.0	5,561.7	5,250.5	5,198.8	25.8	14.5	177.39	-95.6	-611.6	1,906.9	1,882.3	24.55	77.685	
5,900.0	5,652.8	5,332.0	5,278.7	26.6	14.8	177.58	-97.3	-627.5	1,964.6	1,939.7	24.92	78.845	
6,000.0	5,743.9	5,413.4	5,358.5	27.4	15.0	177.76	-99.0	-643.4	2,022.4	1,997.1	25.30	79.952	
6,100.0	5,835.0	5,494.9	5,438.4	28.2	15.3	177.94	-100.6	-659.2	2,080.2	2,054.5	25.68	81.008	
6,200.0	5,926.1	5,576.3	5,518.3	29.0	15.6	178.10	-102.3	-675.1	2,138.0	2,112.0	26.07	82.014	
6,300.0	6,017.3	5,657.8	5,598.1	29.9	15.9	178.25	-104.0	-691.0	2,195.8	2,169.4	26.46	82.974	
6,400.0	6,108.4	5,739.2	5,678.0	30.7	16.2	178.40	-105.6	-706.8	2,253.7	2,226.8	26.86	83.890	
6,500.0	6,199.5	5,820.7	5,757.9	31.5	16.5	178.54	-107.3	-722.7	2,311.5	2,284.3	27.27	84.764	
6,600.0	6,290.6	5,902.1	5,837.7	32.3	16.8	178.67	-109.0	-738.6	2,369.4	2,341.7	27.68	85.598	
6,700.0	6,381.7	5,983.6	5,917.6	33.2	17.1	178.80	-110.7	-754.4	2,427.2	2,399.1	28.10	86.392	
6,800.0	6,472.8	6,065.0	5,997.5	34.0	17.4	178.92	-112.3	-770.3	2,485.1	2,456.6	28.52	87.149	

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 203 - Orig. - SDI Plan 1 Prelim — Offset Site Error: 0.0 usft

Survey Program: 0-MWD+HRGM+Int, 800-MWD+AfterInt, 2600-SDI MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-30.0	0.0	30.0				
100.0	100.0	100.0	100.0	0.3	0.3	180.00	-30.0	0.0	30.0	29.5	0.52	57.321	
200.0	200.0	200.0	200.0	0.6	0.6	180.00	-30.0	0.0	30.0	28.8	1.24	24.187	
300.0	300.0	300.0	300.0	1.0	1.0	180.00	-30.0	0.0	30.0	28.0	1.96	15.328	
400.0	400.0	400.0	400.0	1.3	1.3	180.00	-30.0	0.0	30.0	27.3	2.67	11.218	
500.0	500.0	500.0	500.0	1.7	1.7	180.00	-30.0	0.0	30.0	26.6	3.39	8.847	
600.0	600.0	600.0	600.0	2.1	2.1	180.00	-30.0	0.0	30.0	25.9	4.11	7.303	
700.0	700.0	700.0	700.0	2.4	2.4	180.00	-30.0	0.0	30.0	25.2	4.83	6.218	
800.0	800.0	800.0	800.0	2.8	2.8	-180.00	-30.0	0.0	30.0	24.5	5.54	5.413 CC, ES	
900.0	900.0	900.4	900.4	3.1	3.1	157.45	-29.3	-0.6	31.0	24.7	6.26	4.947	
1,000.0	999.8	1,000.6	1,000.6	3.5	3.5	163.90	-27.4	-2.3	34.1	27.2	6.97	4.895	
1,100.0	1,099.5	1,100.7	1,100.5	3.8	3.8	172.20	-24.1	-5.2	40.1	32.5	7.69	5.224	
1,200.0	1,198.9	1,200.5	1,200.2	4.2	4.2	-179.79	-19.6	-9.3	47.8	39.4	8.40	5.692	
1,300.0	1,298.4	1,300.3	1,299.7	4.6	4.6	-172.37	-13.7	-14.5	55.7	46.5	9.12	6.104	
1,400.0	1,397.8	1,399.9	1,398.8	4.9	4.9	-165.32	-6.6	-20.9	63.9	54.1	9.84	6.495	
1,500.0	1,497.3	1,499.3	1,497.6	5.3	5.3	-159.27	1.2	-27.8	72.9	62.3	10.56	6.897	
1,600.0	1,596.7	1,598.6	1,596.4	5.7	5.7	-154.59	8.9	-34.7	82.4	71.1	11.29	7.300	
1,700.0	1,696.2	1,697.9	1,695.2	6.1	6.0	-150.89	16.7	-41.6	92.4	80.4	12.02	7.689	
1,800.0	1,795.6	1,797.3	1,794.0	6.4	6.4	-147.93	24.4	-48.5	102.7	90.0	12.75	8.055	
1,900.0	1,895.1	1,896.6	1,892.8	6.8	6.8	-145.50	32.2	-55.4	113.3	99.8	13.49	8.397	
2,000.0	1,994.5	1,996.0	1,991.6	7.2	7.1	-143.50	39.9	-62.3	124.0	109.7	14.23	8.714	
2,100.0	2,094.0	2,095.3	2,090.4	7.6	7.5	-141.81	47.7	-69.2	134.8	119.8	14.97	9.008	
2,200.0	2,193.4	2,194.6	2,189.2	8.0	7.9	-140.38	55.4	-76.1	145.7	130.0	15.71	9.279	
2,300.0	2,292.9	2,294.0	2,288.0	8.3	8.3	-139.14	63.1	-83.0	156.7	140.3	16.45	9.530	
2,400.0	2,392.3	2,393.3	2,386.8	8.7	8.6	-138.07	70.9	-89.9	167.8	150.6	17.19	9.762	
2,500.0	2,491.8	2,492.7	2,485.6	9.1	9.0	-137.13	78.6	-96.8	178.9	161.0	17.93	9.978	
2,600.0	2,591.2	2,592.0	2,584.4	9.3	9.2	-136.30	86.4	-103.7	190.1	171.8	18.32	10.377	
2,700.0	2,690.6	2,691.2	2,683.0	9.3	9.2	-148.12	94.1	-110.6	202.7	184.3	18.37	11.033	
2,800.0	2,789.7	2,789.8	2,781.1	9.3	9.3	-156.81	101.8	-117.5	218.6	200.2	18.41	11.877	
2,900.0	2,888.3	2,887.8	2,878.6	9.4	9.3	-162.48	109.5	-124.3	238.0	219.6	18.46	12.890	
3,000.0	2,986.4	2,985.1	2,975.3	9.4	9.3	-166.25	117.0	-131.0	260.8	242.3	18.54	14.069	
3,100.0	3,083.8	3,082.6	3,072.3	9.5	9.4	-168.87	124.5	-137.6	286.9	268.2	18.63	15.400	
3,200.0	3,180.5	3,180.5	3,169.9	9.6	9.4	-170.96	130.8	-143.3	315.7	296.9	18.73	16.853	
3,300.0	3,276.3	3,277.9	3,267.0	9.8	9.4	-172.75	135.9	-147.8	347.1	328.2	18.84	18.418	
3,400.0	3,371.0	3,374.6	3,363.6	10.0	9.5	-174.34	139.7	-151.2	381.0	362.1	18.97	20.088	
3,500.0	3,464.6	3,470.6	3,459.5	10.3	9.5	-175.80	142.3	-153.5	417.5	398.4	19.10	21.859	
3,600.0	3,557.0	3,565.9	3,554.8	10.6	9.6	-177.16	143.6	-154.7	456.5	437.3	19.24	23.723	
3,700.0	3,648.2	3,659.4	3,648.2	11.1	9.6	-177.83	143.9	-155.0	497.6	478.2	19.40	25.654	
3,800.0	3,739.4	3,750.5	3,739.4	11.5	9.7	-177.99	143.9	-155.0	538.8	519.2	19.55	27.552	
3,900.0	3,830.5	3,841.6	3,830.5	12.1	9.7	-178.14	143.9	-155.0	579.9	560.2	19.73	29.398	
4,000.0	3,921.6	3,932.7	3,921.6	12.6	9.8	-178.26	143.9	-155.0	621.1	601.2	19.91	31.192	
4,100.0	4,012.7	4,023.8	4,012.7	13.2	9.8	-178.37	143.9	-155.0	662.3	642.2	20.11	32.931	
4,200.0	4,103.8	4,114.9	4,103.8	13.8	9.9	-178.46	143.9	-155.0	703.5	683.2	20.33	34.613	
4,300.0	4,194.9	4,206.0	4,194.9	14.5	10.0	-178.55	143.9	-155.0	744.7	724.2	20.55	36.239	
4,400.0	4,286.1	4,297.2	4,286.1	15.1	10.0	-178.62	143.9	-155.0	785.9	765.1	20.79	37.807	
4,500.0	4,377.2	4,388.3	4,377.2	15.8	10.1	-178.69	143.9	-155.0	827.1	806.1	21.04	39.318	
4,600.0	4,468.3	4,479.4	4,468.3	16.5	10.2	-178.76	143.9	-155.0	868.3	847.0	21.30	40.772	
4,700.0	4,559.4	4,570.5	4,559.4	17.3	10.3	-178.81	143.9	-155.0	909.5	887.9	21.57	42.170	
4,800.0	4,650.5	4,661.6	4,650.5	18.0	10.4	-178.86	143.9	-155.0	950.7	928.8	21.85	43.512	
4,900.0	4,741.6	4,752.7	4,741.6	18.7	10.4	-178.91	143.9	-155.0	991.9	969.8	22.14	44.800	
5,000.0	4,832.8	4,843.9	4,832.8	19.5	10.5	-178.95	143.9	-155.0	1,033.1	1,010.7	22.44	46.036	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

10/21/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 203 - Orig - SDI Plan 1 Prelim — Offset Site Error: 0.0 usft

Survey Program: 0-MWD+HRGM Hnt 600-MWD+ARerInt 2600-SDI MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	4,923.9	4,935.0	4,923.9	20.3	10.6	-178.99	143.9	-155.0	1,074.3	1,051.5	22.75	47.219	
5,200.0	5,015.0	5,026.1	5,015.0	21.0	10.7	-179.03	143.9	-155.0	1,115.5	1,092.4	23.07	48.352	
5,300.0	5,106.1	5,117.2	5,106.1	21.8	10.8	-179.07	143.9	-155.0	1,156.7	1,133.3	23.40	49.427	
5,400.0	5,197.2	5,208.3	5,197.2	22.6	10.9	-179.10	143.9	-155.0	1,197.9	1,174.2	23.73	50.474	
5,500.0	5,288.3	5,299.4	5,288.3	23.4	11.0	-179.13	143.9	-155.0	1,239.1	1,215.0	24.08	51.467	
5,600.0	5,379.4	5,390.5	5,379.4	24.2	11.2	-179.16	143.9	-155.0	1,280.3	1,255.9	24.43	52.415	
5,700.0	5,470.6	5,481.7	5,470.6	25.0	11.3	-179.18	143.9	-155.0	1,321.5	1,296.7	24.78	53.321	
5,800.0	5,561.7	5,572.8	5,561.7	25.8	11.4	-179.21	143.9	-155.0	1,362.7	1,337.6	25.19	54.186	
5,900.0	5,652.8	5,663.9	5,652.8	26.6	11.5	-179.23	143.9	-155.0	1,403.9	1,378.4	25.52	55.013	
6,000.0	5,743.9	5,755.0	5,743.9	27.4	11.6	-179.25	143.9	-155.0	1,445.1	1,419.2	25.90	55.803	
6,100.0	5,835.0	5,846.1	5,835.0	28.2	11.7	-179.27	143.9	-155.0	1,486.3	1,460.0	26.28	56.556	
6,200.0	5,926.1	5,937.2	5,926.1	29.0	11.9	-179.29	143.9	-155.0	1,527.5	1,500.9	26.67	57.278	
6,300.0	6,017.3	6,028.4	6,017.3	29.9	12.0	-179.31	143.9	-155.0	1,568.7	1,541.7	27.06	57.966	
6,400.0	6,108.4	6,119.5	6,108.4	30.7	12.1	-179.33	143.9	-155.0	1,609.9	1,582.5	27.46	58.623	
6,500.0	6,199.5	6,210.6	6,199.5	31.5	12.2	-179.35	143.9	-155.0	1,651.1	1,623.3	27.87	59.251	
6,600.0	6,290.6	6,301.7	6,290.6	32.3	12.4	-179.36	143.9	-155.0	1,692.3	1,664.1	28.28	59.851	
6,700.0	6,381.7	6,392.8	6,381.7	33.2	12.5	-179.38	143.9	-155.0	1,733.5	1,704.9	28.69	60.423	
6,800.0	6,472.8	6,483.9	6,472.8	34.0	12.6	-179.39	143.9	-155.0	1,774.7	1,745.6	29.11	60.970	
6,900.0	6,563.9	6,575.1	6,563.9	34.8	12.8	-179.40	143.9	-155.0	1,815.9	1,786.4	29.53	61.492	
7,000.0	6,655.1	6,666.2	6,655.1	35.7	12.9	-179.42	143.9	-155.0	1,857.2	1,827.2	29.98	61.991	
7,100.0	6,746.2	6,757.3	6,746.2	36.5	13.1	-179.43	143.9	-155.0	1,898.4	1,868.0	30.39	62.468	
7,200.0	6,837.3	6,848.4	6,837.3	37.3	13.2	-179.44	143.9	-155.0	1,939.6	1,908.7	30.82	62.924	
7,300.0	6,928.4	6,939.5	6,928.4	38.2	13.4	-179.45	143.9	-155.0	1,980.8	1,949.5	31.26	63.360	
7,400.0	7,019.5	7,030.6	7,019.5	39.0	13.5	-179.47	143.9	-155.0	2,022.0	1,990.3	31.70	63.777	
7,500.0	7,110.6	7,121.7	7,110.6	39.9	13.7	-179.48	143.9	-155.0	2,063.2	2,031.0	32.15	64.176	
7,600.0	7,201.8	7,215.0	7,203.9	40.7	13.8	-179.50	143.5	-154.8	2,104.4	2,071.8	32.60	64.559	
7,700.0	7,292.9	7,312.9	7,301.3	41.6	13.9	-179.79	134.4	-151.7	2,145.3	2,112.3	33.00	65.002	
7,800.0	7,383.9	7,408.3	7,394.2	42.3	14.0	165.33	114.2	-144.7	2,186.1	2,152.8	33.36	65.534	
7,900.0	7,473.4	7,502.3	7,482.1	43.1	14.1	144.16	83.0	-134.0	2,226.4	2,192.7	33.70	66.060	
8,000.0	7,559.2	7,595.8	7,564.5	43.8	14.2	127.91	41.5	-119.6	2,265.1	2,231.0	34.12	66.378	
8,100.0	7,639.2	7,689.5	7,640.7	44.5	14.4	115.95	-10.0	-101.9	2,301.3	2,266.7	34.64	66.433	
8,200.0	7,711.4	7,783.8	7,709.6	45.2	14.7	107.17	-70.8	-80.9	2,334.0	2,298.7	35.30	66.115	
8,300.0	7,774.1	7,879.1	7,770.0	45.8	15.1	100.72	-140.4	-56.9	2,362.3	2,326.1	36.17	65.305	
8,400.0	7,825.7	7,975.6	7,820.7	46.4	15.7	96.05	-218.0	-30.2	2,385.6	2,348.3	37.31	63.948	
8,500.0	7,864.9	8,073.3	7,860.2	46.9	16.5	92.84	-302.3	-1.1	2,403.4	2,364.6	38.73	62.052	
8,600.0	7,890.8	8,172.0	7,887.5	47.4	17.4	90.87	-391.9	29.8	2,415.1	2,374.6	40.44	59.713	
8,700.0	7,902.7	8,271.5	7,901.6	47.8	18.5	90.03	-485.0	61.9	2,420.5	2,378.0	42.43	57.043	
8,800.0	7,903.5	8,371.4	7,903.5	48.2	19.7	90.00	-579.4	94.5	2,420.8	2,376.2	44.63	54.241	
8,900.0	7,903.5	8,471.4	7,903.5	48.7	21.0	90.00	-673.9	127.1	2,420.8	2,373.8	47.02	51.484	
9,000.0	7,903.5	8,571.4	7,903.5	49.3	22.4	90.00	-768.5	159.6	2,420.9	2,371.3	49.56	48.826	
9,100.0	7,903.5	8,671.4	7,903.5	49.9	23.9	90.00	-863.0	192.2	2,420.9	2,368.6	52.29	46.297	
9,200.0	7,903.5	8,771.4	7,903.5	50.6	25.4	90.00	-957.6	224.8	2,420.9	2,365.7	55.13	43.915	
9,300.0	7,903.5	8,871.4	7,903.5	51.4	27.0	90.00	-1,052.1	257.4	2,420.9	2,362.8	58.07	41.686	
9,400.0	7,903.5	8,971.4	7,903.5	52.2	28.6	90.00	-1,146.5	290.0	2,420.9	2,359.8	61.12	39.612	
9,500.0	7,903.5	9,071.4	7,903.5	53.0	30.3	90.00	-1,241.2	322.6	2,420.9	2,356.7	64.24	37.688	
9,600.0	7,903.5	9,171.4	7,903.5	53.9	32.0	90.00	-1,335.7	355.2	2,420.9	2,353.5	67.43	35.902	
9,700.0	7,903.5	9,271.4	7,903.5	54.9	33.7	90.00	-1,430.2	387.8	2,420.9	2,350.2	70.68	34.250	
9,800.0	7,903.5	9,371.4	7,903.5	55.9	35.4	90.00	-1,524.8	420.4	2,420.9	2,346.9	73.99	32.721	
9,900.0	7,903.5	9,471.4	7,903.5	57.0	37.1	90.00	-1,619.3	453.0	2,420.9	2,343.6	77.34	31.304	
10,000.0	7,903.5	9,571.4	7,903.5	58.1	38.9	90.00	-1,713.9	485.6	2,420.9	2,340.2	80.73	29.990	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 203 - Orig. - SDI Plan 1 Prelim

Survey Program: 0-MWD+HRGM+Int, 800-MWD+AfterInt, 2600-SDI MWD

Offset Site Error: 0.0 usft
Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.0	7,903.5	9,671.4	7,903.5	59.2	40.6	90.00	-1,808.4	518.2	2,420.9	2,336.8	84.15	28.769	
10,200.0	7,903.5	9,771.4	7,903.5	60.4	42.4	90.00	-1,902.9	550.8	2,421.0	2,333.3	87.61	27.634	
10,300.0	7,903.5	9,871.4	7,903.5	61.7	44.2	90.00	-1,997.5	583.4	2,421.0	2,329.9	91.09	26.577	
10,400.0	7,903.5	9,971.4	7,903.5	62.9	46.0	90.00	-2,092.0	616.0	2,421.0	2,326.4	94.60	25.591	
10,500.0	7,903.5	10,071.4	7,903.5	64.2	47.8	90.00	-2,186.5	648.6	2,421.0	2,322.8	98.13	24.670	
10,600.0	7,903.5	10,171.4	7,903.5	65.6	49.6	90.00	-2,281.1	681.2	2,421.0	2,319.3	101.68	23.809	
10,700.0	7,903.5	10,271.4	7,903.5	66.9	51.5	90.00	-2,375.6	713.8	2,421.0	2,315.7	105.25	23.001	
10,800.0	7,903.5	10,371.4	7,903.5	68.3	53.3	90.00	-2,470.2	746.4	2,421.0	2,312.2	108.84	22.244	
10,900.0	7,903.5	10,471.4	7,903.5	69.7	55.1	90.00	-2,564.7	779.0	2,421.0	2,308.6	112.44	21.532	
11,000.0	7,903.5	10,571.4	7,903.5	71.2	57.0	90.00	-2,659.2	811.6	2,421.0	2,305.0	116.05	20.861	
11,100.0	7,903.5	10,671.4	7,903.5	72.7	58.8	90.00	-2,753.8	844.2	2,421.0	2,301.3	119.68	20.229	
11,200.0	7,903.5	10,771.4	7,903.5	74.1	60.6	90.00	-2,848.3	876.8	2,421.0	2,297.7	123.32	19.633	
11,300.0	7,903.5	10,871.4	7,903.5	75.6	62.5	90.00	-2,942.8	909.4	2,421.0	2,294.1	126.96	19.069	
11,400.0	7,903.5	10,971.4	7,903.5	77.2	64.4	90.00	-3,037.4	942.0	2,421.0	2,290.4	130.62	18.535	
11,500.0	7,903.5	11,071.4	7,903.5	78.7	66.2	90.00	-3,131.9	974.6	2,421.1	2,286.8	134.28	18.029	
11,600.0	7,903.5	11,171.4	7,903.5	80.3	68.1	90.00	-3,226.4	1,007.2	2,421.1	2,283.1	137.96	17.550	
11,700.0	7,903.5	11,271.4	7,903.5	81.9	69.9	90.00	-3,321.0	1,039.8	2,421.1	2,279.4	141.64	17.094	
11,800.0	7,903.5	11,371.4	7,903.5	83.4	71.8	90.00	-3,415.5	1,072.4	2,421.1	2,275.8	145.32	16.660	
11,900.0	7,903.5	11,471.4	7,903.5	85.0	73.7	90.00	-3,510.1	1,105.0	2,421.1	2,272.1	149.01	16.247	
12,000.0	7,903.5	11,571.4	7,903.5	86.7	75.5	90.00	-3,604.6	1,137.6	2,421.1	2,268.4	152.71	15.854	
12,100.0	7,903.5	11,671.4	7,903.5	88.3	77.4	90.00	-3,699.1	1,170.2	2,421.1	2,264.7	156.42	15.479	
12,200.0	7,903.5	11,771.4	7,903.5	89.9	79.3	90.00	-3,793.7	1,202.8	2,421.1	2,261.0	160.12	15.120	
12,300.0	7,903.5	11,871.4	7,903.5	91.6	81.1	90.00	-3,888.2	1,235.4	2,421.1	2,257.3	163.84	14.778	
12,400.0	7,903.5	11,971.4	7,903.5	93.3	83.0	90.00	-3,982.7	1,268.0	2,421.1	2,253.6	167.55	14.450	
12,500.0	7,903.5	12,071.4	7,903.5	94.9	84.9	90.00	-4,077.3	1,300.6	2,421.1	2,249.9	171.26	14.136	
12,600.0	7,903.5	12,171.4	7,903.5	96.6	86.8	90.00	-4,171.8	1,333.2	2,421.1	2,246.1	175.00	13.835	
12,700.0	7,903.5	12,271.4	7,903.5	98.3	88.6	90.00	-4,266.4	1,365.8	2,421.1	2,242.4	178.73	13.546	
12,800.0	7,903.5	12,371.4	7,903.5	100.0	90.5	90.00	-4,360.9	1,398.4	2,421.2	2,238.7	182.46	13.269	
12,900.0	7,903.5	12,471.4	7,903.5	101.7	92.4	90.00	-4,455.4	1,431.0	2,421.2	2,235.0	186.20	13.003	
13,000.0	7,903.5	12,571.4	7,903.5	103.4	94.3	90.00	-4,550.0	1,463.6	2,421.2	2,231.2	189.94	12.747	
13,100.0	7,903.5	12,671.4	7,903.5	105.1	96.2	90.00	-4,644.5	1,496.2	2,421.2	2,227.5	193.68	12.501	
13,200.0	7,903.5	12,771.4	7,903.5	106.9	98.0	90.00	-4,739.0	1,528.8	2,421.2	2,223.8	197.42	12.264	
13,300.0	7,903.5	12,871.4	7,903.5	108.6	99.9	90.00	-4,833.6	1,561.4	2,421.2	2,220.0	201.17	12.036	
13,400.0	7,903.5	12,971.4	7,903.5	110.3	101.8	90.00	-4,928.1	1,594.0	2,421.2	2,216.3	204.91	11.816	
13,500.0	7,903.5	13,071.4	7,903.5	112.1	103.7	90.00	-5,022.7	1,626.6	2,421.2	2,212.5	208.66	11.603	
13,600.0	7,903.5	13,171.4	7,903.5	113.8	105.6	90.00	-5,117.2	1,659.2	2,421.2	2,208.8	212.42	11.398	
13,700.0	7,903.5	13,271.4	7,903.5	115.6	107.5	90.00	-5,211.7	1,691.8	2,421.2	2,205.1	216.17	11.200	
13,800.0	7,903.5	13,371.4	7,903.5	117.3	109.4	90.00	-5,306.3	1,724.4	2,421.2	2,201.3	219.93	11.009	
13,900.0	7,903.5	13,471.4	7,903.5	119.1	111.2	90.00	-5,400.8	1,757.0	2,421.2	2,197.6	223.69	10.824	
14,000.0	7,903.5	13,571.4	7,903.5	120.9	113.1	90.00	-5,495.3	1,789.6	2,421.2	2,193.8	227.45	10.645	
14,100.0	7,903.5	13,671.4	7,903.5	122.7	115.0	90.00	-5,589.9	1,822.2	2,421.3	2,190.0	231.21	10.472	
14,200.0	7,903.5	13,771.4	7,903.5	124.4	116.9	90.00	-5,684.4	1,854.8	2,421.3	2,186.3	234.97	10.305	
14,300.0	7,903.5	13,871.4	7,903.5	126.2	118.8	90.00	-5,779.0	1,887.4	2,421.3	2,182.5	238.74	10.142	
14,400.0	7,903.5	13,971.4	7,903.5	128.0	120.7	90.00	-5,873.5	1,920.0	2,421.3	2,178.8	242.50	9.985	
14,500.0	7,903.5	14,071.4	7,903.5	129.8	122.6	90.00	-5,968.0	1,952.6	2,421.3	2,175.0	246.27	9.832	
14,600.0	7,903.5	14,171.4	7,903.5	131.6	124.5	90.00	-6,062.6	1,985.2	2,421.3	2,171.3	250.04	9.684	
14,700.0	7,903.5	14,271.4	7,903.5	133.4	126.4	90.00	-6,157.1	2,017.8	2,421.3	2,167.5	253.81	9.540	
14,800.0	7,903.5	14,371.4	7,903.5	135.2	128.3	90.00	-6,251.6	2,050.4	2,421.3	2,163.7	257.58	9.400	
14,900.0	7,903.5	14,471.4	7,903.5	137.0	130.1	90.00	-6,346.2	2,083.0	2,421.3	2,160.0	261.35	9.265	
15,000.0	7,903.5	14,571.4	7,903.5	138.8	132.0	90.00	-6,440.7	2,115.6	2,421.3	2,156.2	265.12	9.133	
15,100.0	7,903.5	14,671.4	7,903.5	140.6	133.9	90.00	-6,535.3	2,148.2	2,421.3	2,152.4	268.90	9.005	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 203 - Orig. - SDI Plan 1 Prelim — Offset Site Error: 0.0 usft

Survey Program: 0-MWD+HRGM+Int, 600-MWD+Alterint, 2600-SDI MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,200.0	7,903.5	14,771.4	7,903.5	142.4	135.8	90.00	-6,629.8	2,180.8	2,421.3	2,148.7	272.67	8.880	
15,300.0	7,903.5	14,871.4	7,903.5	144.2	137.7	90.00	-6,724.3	2,213.4	2,421.4	2,144.9	276.45	8.759	
15,400.0	7,903.5	14,971.4	7,903.5	146.0	139.6	90.00	-6,818.9	2,246.0	2,421.4	2,141.1	280.23	8.641	
15,500.0	7,903.5	15,071.4	7,903.5	147.8	141.5	90.00	-6,913.4	2,278.6	2,421.4	2,137.4	284.00	8.526	
15,600.0	7,903.5	15,171.4	7,903.5	149.7	143.4	90.00	-7,007.9	2,311.2	2,421.4	2,133.6	287.78	8.414	
15,700.0	7,903.5	15,271.4	7,903.5	151.5	145.3	90.00	-7,102.5	2,343.8	2,421.4	2,129.8	291.56	8.305	
15,800.0	7,903.5	15,371.4	7,903.5	153.3	147.2	90.00	-7,197.0	2,376.4	2,421.4	2,126.0	295.34	8.199	
15,900.0	7,903.5	15,471.4	7,903.5	155.1	149.1	90.00	-7,291.6	2,409.0	2,421.4	2,122.3	299.12	8.095	
16,000.0	7,903.5	15,571.4	7,903.5	157.0	151.0	90.00	-7,386.1	2,441.6	2,421.4	2,118.5	302.90	7.994	
16,100.0	7,903.5	15,671.4	7,903.5	158.8	152.9	90.00	-7,480.6	2,474.2	2,421.4	2,114.7	306.69	7.895	
16,200.0	7,903.5	15,771.4	7,903.5	160.6	154.8	90.00	-7,575.2	2,506.8	2,421.4	2,111.0	310.47	7.799	
16,300.0	7,903.5	15,871.4	7,903.5	162.4	156.7	90.00	-7,669.7	2,539.4	2,421.4	2,107.2	314.25	7.705	
16,400.0	7,903.5	15,971.4	7,903.5	164.3	158.6	90.00	-7,764.2	2,572.0	2,421.4	2,103.4	318.04	7.614	
16,500.0	7,903.5	16,071.4	7,903.5	166.1	160.5	90.00	-7,858.8	2,604.6	2,421.4	2,099.6	321.82	7.524	
16,600.0	7,903.5	16,171.4	7,903.5	168.0	162.4	90.00	-7,953.3	2,637.2	2,421.5	2,095.8	325.61	7.437	
16,700.0	7,903.5	16,271.4	7,903.5	169.8	164.3	90.00	-8,047.9	2,669.8	2,421.5	2,092.1	329.39	7.351	
16,800.0	7,903.5	16,371.4	7,903.5	171.6	166.2	90.00	-8,142.4	2,702.4	2,421.5	2,088.3	333.18	7.266	
16,900.0	7,903.5	16,471.4	7,903.5	173.5	168.0	90.00	-8,236.9	2,735.0	2,421.5	2,084.5	336.96	7.186	
17,000.0	7,903.5	16,571.4	7,903.5	175.3	169.9	90.00	-8,331.5	2,767.6	2,421.5	2,080.7	340.75	7.106	
17,100.0	7,903.5	16,671.4	7,903.5	177.2	171.8	90.00	-8,426.0	2,800.2	2,421.5	2,077.0	344.54	7.028	
17,200.0	7,903.5	16,771.4	7,903.5	179.0	173.7	90.00	-8,520.5	2,832.8	2,421.5	2,073.2	348.33	6.952	
17,300.0	7,903.5	16,871.4	7,903.5	180.9	175.6	90.00	-8,615.1	2,865.3	2,421.5	2,069.4	352.12	6.877	
17,400.0	7,903.5	16,971.4	7,903.5	182.7	177.5	90.00	-8,709.6	2,897.9	2,421.5	2,065.6	355.91	6.804	
17,500.0	7,903.5	17,071.4	7,903.5	184.6	179.4	90.00	-8,804.2	2,930.5	2,421.5	2,061.9	359.70	6.732	
17,600.0	7,903.5	17,171.4	7,903.5	186.4	181.3	90.00	-8,898.7	2,963.1	2,421.5	2,058.0	363.49	6.662	
17,700.0	7,903.5	17,271.4	7,903.5	188.3	183.2	90.00	-8,993.2	2,995.7	2,421.5	2,054.3	367.28	6.593	
17,800.0	7,903.5	17,371.4	7,903.5	190.1	185.1	90.00	-9,087.8	3,028.3	2,421.5	2,050.5	371.07	6.526	
17,900.0	7,903.5	17,471.4	7,903.5	192.0	187.0	90.00	-9,182.3	3,060.9	2,421.6	2,046.7	374.86	6.460	
18,000.0	7,903.5	17,571.4	7,903.5	193.8	188.9	90.00	-9,276.8	3,093.5	2,421.6	2,042.9	378.65	6.395	
18,100.0	7,903.5	17,671.4	7,903.5	195.7	190.8	90.00	-9,371.4	3,126.1	2,421.6	2,039.1	382.44	6.332	
18,200.0	7,903.5	17,771.4	7,903.5	197.5	192.7	90.00	-9,465.9	3,158.7	2,421.6	2,035.3	386.23	6.270	
18,300.0	7,903.5	17,871.4	7,903.5	199.4	194.6	90.00	-9,560.5	3,191.3	2,421.6	2,031.6	390.03	6.209	
18,400.0	7,903.5	17,971.4	7,903.5	201.2	196.5	90.00	-9,655.0	3,223.9	2,421.6	2,027.8	393.82	6.149	
18,500.0	7,903.5	18,071.4	7,903.5	203.1	198.4	90.00	-9,749.5	3,256.5	2,421.6	2,024.0	397.61	6.090	
18,600.0	7,903.5	18,171.4	7,903.5	205.0	200.3	90.00	-9,844.1	3,289.1	2,421.6	2,020.2	401.41	6.033	
18,700.0	7,903.5	18,271.4	7,903.5	206.8	202.2	90.00	-9,938.6	3,321.7	2,421.6	2,016.4	405.20	5.976	
18,800.0	7,903.5	18,371.4	7,903.5	208.7	204.1	90.00	-10,033.1	3,354.3	2,421.6	2,012.6	408.99	5.921	
18,900.0	7,903.5	18,471.4	7,903.5	210.6	206.0	90.00	-10,127.7	3,386.9	2,421.6	2,008.8	412.79	5.867	
19,000.0	7,903.5	18,571.4	7,903.5	212.4	207.9	90.00	-10,222.2	3,419.5	2,421.6	2,005.1	416.58	5.813	
19,100.0	7,903.5	18,671.4	7,903.5	214.3	209.8	90.00	-10,316.8	3,452.1	2,421.6	2,001.3	420.38	5.761	
19,200.0	7,903.5	18,771.4	7,903.5	216.1	211.7	90.00	-10,411.3	3,484.7	2,421.7	1,997.5	424.17	5.709	
19,300.0	7,903.5	18,871.4	7,903.5	218.0	213.6	90.00	-10,505.8	3,517.3	2,421.7	1,993.7	427.97	5.658	
19,400.0	7,903.5	18,971.4	7,903.5	219.9	215.5	90.00	-10,600.4	3,549.9	2,421.7	1,989.9	431.77	5.609	
19,500.0	7,903.5	19,071.4	7,903.5	221.7	217.4	90.00	-10,694.9	3,582.5	2,421.7	1,986.1	435.56	5.560	
19,600.0	7,903.5	19,171.4	7,903.5	223.6	219.3	90.00	-10,789.4	3,615.1	2,421.7	1,982.3	439.36	5.512	
19,700.0	7,903.5	19,271.4	7,903.5	225.5	221.2	90.00	-10,884.0	3,647.7	2,421.7	1,978.5	443.15	5.465	
19,800.0	7,903.5	19,371.4	7,903.5	227.4	223.1	90.00	-10,978.5	3,680.3	2,421.7	1,974.8	446.95	5.418	
19,900.0	7,903.5	19,471.4	7,903.5	229.2	225.0	90.00	-11,073.1	3,712.9	2,421.7	1,971.0	450.75	5.373	
20,000.0	7,903.5	19,571.4	7,903.5	231.1	226.9	90.00	-11,167.6	3,745.5	2,421.7	1,967.2	454.54	5.328	
20,100.0	7,903.5	19,671.4	7,903.5	233.0	228.8	90.00	-11,262.1	3,778.1	2,421.7	1,963.4	458.34	5.284	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 203 - Orig. - SDI Plan 1 Prelim

Survey Program: 0-MWD+HRGM+Int, 800-MWD+AfterInt, 2600-SDI MWD

Offset Site Error: 0.0 usft
Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
20,200.0	7,903.5	19,771.4	7,903.5	234.8	230.7	90.00	-11,356.7	3,810.7	2,421.7	1,959.6	462.14	5.240	
20,300.0	7,903.5	19,871.4	7,903.5	236.7	232.6	90.00	-11,451.2	3,843.3	2,421.7	1,955.8	465.94	5.198	
20,400.0	7,903.5	19,971.4	7,903.5	238.6	234.5	90.00	-11,545.7	3,875.9	2,421.8	1,952.0	469.73	5.156	
20,500.0	7,903.5	20,071.4	7,903.5	240.5	236.4	90.00	-11,640.3	3,908.5	2,421.8	1,948.2	473.53	5.114	
20,600.0	7,903.5	20,171.4	7,903.5	242.3	238.3	90.00	-11,734.8	3,941.1	2,421.8	1,944.4	477.33	5.074	
20,700.0	7,903.5	20,271.4	7,903.5	244.2	240.2	90.00	-11,829.4	3,973.7	2,421.8	1,940.6	481.13	5.034	
20,800.0	7,903.5	20,371.4	7,903.5	246.1	242.1	90.00	-11,923.9	4,006.3	2,421.8	1,936.9	484.93	4.994	
20,900.0	7,903.5	20,471.4	7,903.5	248.0	244.0	90.00	-12,018.4	4,038.9	2,421.8	1,933.1	488.73	4.955	
21,000.0	7,903.5	20,571.4	7,903.5	249.8	245.9	90.00	-12,113.0	4,071.5	2,421.8	1,929.3	492.52	4.917	
21,100.0	7,903.5	20,671.4	7,903.5	251.7	247.8	90.00	-12,207.5	4,104.1	2,421.8	1,925.5	496.32	4.879	
21,200.0	7,903.5	20,771.4	7,903.5	253.6	249.7	90.00	-12,302.0	4,136.7	2,421.8	1,921.7	500.12	4.842	
21,300.0	7,903.5	20,871.4	7,903.5	255.5	251.6	90.00	-12,396.6	4,169.3	2,421.8	1,917.9	503.92	4.806	
21,400.0	7,903.5	20,971.4	7,903.5	257.3	253.5	90.00	-12,491.1	4,201.9	2,421.8	1,914.1	507.72	4.770	
21,500.0	7,903.5	21,071.4	7,903.5	259.2	255.4	90.00	-12,585.7	4,234.5	2,421.8	1,910.3	511.52	4.735	
21,600.0	7,903.5	21,171.4	7,903.5	261.1	257.3	90.00	-12,680.2	4,267.1	2,421.8	1,906.5	515.32	4.700	
21,700.0	7,903.5	21,271.4	7,903.5	263.0	259.2	90.00	-12,774.7	4,299.7	2,421.9	1,902.7	519.12	4.665	
21,800.0	7,903.5	21,371.4	7,903.5	264.8	261.1	90.00	-12,869.3	4,332.3	2,421.9	1,898.9	522.92	4.631	
21,900.0	7,903.5	21,471.4	7,903.5	266.7	263.0	90.00	-12,963.8	4,364.9	2,421.9	1,895.1	526.72	4.598	
22,000.0	7,903.5	21,571.4	7,903.5	268.6	265.0	90.00	-13,058.3	4,397.5	2,421.9	1,891.4	530.52	4.565	
22,100.0	7,903.5	21,671.4	7,903.5	270.5	266.9	90.00	-13,152.9	4,430.1	2,421.9	1,887.6	534.32	4.533	
22,200.0	7,903.5	21,771.4	7,903.5	272.4	268.8	90.00	-13,247.4	4,462.7	2,421.9	1,883.8	538.12	4.501	
22,300.0	7,903.5	21,871.4	7,903.5	274.2	270.7	90.00	-13,342.0	4,495.3	2,421.9	1,880.0	541.92	4.469	
22,400.0	7,903.5	21,971.4	7,903.5	276.1	272.6	90.00	-13,436.5	4,527.9	2,421.9	1,876.2	545.72	4.438	
22,500.0	7,903.5	22,071.4	7,903.5	278.0	274.5	90.00	-13,531.0	4,560.5	2,421.9	1,872.4	549.52	4.407	
22,600.0	7,903.5	22,171.4	7,903.5	279.9	276.4	90.00	-13,625.6	4,593.1	2,421.9	1,868.6	553.33	4.377	
22,700.0	7,903.5	22,271.4	7,903.5	281.8	278.3	90.00	-13,720.1	4,625.7	2,421.9	1,864.8	557.13	4.347	
22,800.0	7,903.5	22,371.4	7,903.5	283.7	280.2	90.00	-13,814.6	4,658.3	2,421.9	1,861.0	560.93	4.318	
22,900.0	7,903.5	22,471.4	7,903.5	285.5	282.1	90.00	-13,909.2	4,690.9	2,421.9	1,857.2	564.73	4.289	
23,000.0	7,903.5	22,571.4	7,903.5	287.4	284.0	90.00	-14,003.7	4,723.5	2,422.0	1,853.4	568.53	4.260	
23,100.0	7,903.5	22,671.4	7,903.5	289.3	285.9	90.00	-14,098.2	4,756.1	2,422.0	1,849.6	572.33	4.232	
23,200.0	7,903.5	22,771.4	7,903.5	291.2	287.8	90.00	-14,192.8	4,788.7	2,422.0	1,845.8	576.13	4.204	
23,300.0	7,903.5	22,871.4	7,903.5	293.1	289.7	90.00	-14,287.3	4,821.3	2,422.0	1,842.0	579.94	4.176	
23,400.0	7,903.5	22,971.4	7,903.5	295.0	291.6	90.00	-14,381.9	4,853.9	2,422.0	1,838.2	583.74	4.149	
23,500.0	7,903.5	23,071.4	7,903.5	296.8	293.5	90.00	-14,476.4	4,886.5	2,422.0	1,834.5	587.54	4.122	
23,600.0	7,903.5	23,171.4	7,903.5	298.7	295.4	90.00	-14,570.9	4,919.1	2,422.0	1,830.7	591.34	4.096	
23,700.0	7,903.5	23,271.4	7,903.5	300.6	297.3	90.00	-14,665.5	4,951.7	2,422.0	1,826.9	595.14	4.070	
23,800.0	7,903.5	23,371.4	7,903.5	302.5	299.2	90.00	-14,760.0	4,984.3	2,422.0	1,823.1	598.95	4.044	
23,900.0	7,903.5	23,471.4	7,903.5	304.4	301.1	90.00	-14,854.5	5,016.9	2,422.0	1,819.3	602.75	4.018	
24,000.0	7,903.5	23,571.4	7,903.5	306.3	303.0	90.00	-14,949.1	5,049.5	2,422.0	1,815.5	606.55	3.993	
24,100.0	7,903.5	23,671.4	7,903.5	308.1	304.9	90.00	-15,043.6	5,082.1	2,422.0	1,811.7	610.35	3.968	
24,200.0	7,903.5	23,771.4	7,903.5	310.0	306.8	90.00	-15,138.2	5,114.7	2,422.0	1,807.9	614.16	3.944	
24,300.0	7,903.5	23,871.4	7,903.5	311.9	308.7	90.00	-15,232.7	5,147.3	2,422.1	1,804.1	617.96	3.919	
24,400.0	7,903.5	23,971.4	7,903.5	313.8	310.6	90.00	-15,327.2	5,179.9	2,422.1	1,800.3	621.76	3.895	
24,500.0	7,903.5	24,071.4	7,903.5	315.7	312.5	90.00	-15,421.8	5,212.5	2,422.1	1,796.5	625.56	3.872	
24,600.0	7,903.5	24,171.4	7,903.5	317.6	314.4	90.00	-15,516.3	5,245.1	2,422.1	1,792.7	629.37	3.848	
24,700.0	7,903.5	24,271.4	7,903.5	319.5	316.3	90.00	-15,610.8	5,277.7	2,422.1	1,788.9	633.17	3.825	
24,800.0	7,903.5	24,371.4	7,903.5	321.4	318.2	90.00	-15,705.4	5,310.3	2,422.1	1,785.1	636.97	3.803	
24,900.0	7,903.5	24,471.4	7,903.5	323.2	320.1	90.00	-15,799.9	5,342.9	2,422.1	1,781.3	640.78	3.780	
25,000.0	7,903.5	24,571.4	7,903.5	325.1	322.0	90.00	-15,894.5	5,375.5	2,422.1	1,777.5	644.58	3.758	
25,100.0	7,903.5	24,671.4	7,903.5	327.0	323.9	90.00	-15,989.0	5,408.1	2,422.1	1,773.7	648.38	3.736	
25,200.0	7,903.5	24,771.4	7,903.5	328.9	325.8	90.00	-16,083.5	5,440.7	2,422.1	1,769.9	652.19	3.714	

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 203 - Orig. - SDI Plan 1 Prelim — Offset Site Error: 0.0 usft

Survey Program: 0-MWD+HRGM+Ini, 800-MWD+Gyro+Ini, 2800-SDI MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
25,300.0	7,903.5	24,871.4	7,903.6	330.8	327.7	90.00	-16,178.1	5,473.3	2,422.1	1,786.1	855.99	3.692	
25,400.0	7,903.5	24,971.4	7,903.5	332.7	329.6	90.00	-16,272.6	5,505.9	2,422.1	1,782.3	859.79	3.671	
25,500.0	7,903.5	25,071.4	7,903.6	334.6	331.5	90.00	-16,367.1	5,538.4	2,422.1	1,778.6	863.60	3.650	
25,600.0	7,903.5	25,171.4	7,903.5	336.5	333.4	90.00	-16,461.7	5,571.0	2,422.2	1,774.8	867.40	3.629	
25,700.0	7,903.5	25,271.4	7,903.6	338.3	335.3	90.00	-16,556.2	5,603.6	2,422.2	1,771.0	871.20	3.609	
25,800.0	7,903.5	25,371.4	7,903.6	340.2	337.2	90.00	-16,650.8	5,636.2	2,422.2	1,767.2	875.01	3.588	
25,900.0	7,903.5	25,471.4	7,903.5	342.1	339.1	90.00	-16,745.3	5,668.8	2,422.2	1,763.4	878.81	3.568	
26,000.0	7,903.5	25,571.4	7,903.5	344.0	341.0	90.00	-16,839.8	5,701.4	2,422.2	1,759.6	882.61	3.548	
26,100.0	7,903.5	25,671.4	7,903.5	345.9	342.9	90.00	-16,934.4	5,734.0	2,422.2	1,755.8	886.42	3.529	
26,200.0	7,903.5	25,771.4	7,903.5	347.8	344.9	90.00	-17,028.9	5,766.6	2,422.2	1,752.0	890.22	3.509	
26,300.0	7,903.5	25,871.4	7,903.5	349.7	346.8	90.00	-17,123.4	5,799.2	2,422.2	1,748.2	894.03	3.490	
26,400.0	7,903.5	25,971.4	7,903.5	351.6	348.7	90.00	-17,218.0	5,831.8	2,422.2	1,744.4	897.83	3.471	
26,500.0	7,903.5	26,071.4	7,903.5	353.5	350.6	90.00	-17,312.5	5,864.4	2,422.2	1,740.6	701.63	3.452	
26,600.0	7,903.5	26,171.4	7,903.5	355.4	352.5	90.00	-17,407.1	5,897.0	2,422.2	1,736.8	705.44	3.434	
26,700.0	7,903.5	26,271.4	7,903.5	357.2	354.4	90.00	-17,501.6	5,929.6	2,422.2	1,733.0	709.24	3.415	
26,800.0	7,903.5	26,371.4	7,903.5	359.1	356.3	90.00	-17,596.1	5,962.2	2,422.3	1,729.2	713.05	3.397	
26,900.0	7,903.5	26,471.4	7,903.5	361.0	358.2	90.00	-17,690.7	5,994.8	2,422.3	1,725.4	716.85	3.379	
27,000.0	7,903.5	26,571.4	7,903.5	362.9	360.1	90.00	-17,785.2	6,027.4	2,422.3	1,721.6	720.65	3.361	
27,100.0	7,903.5	26,671.4	7,903.5	364.8	362.0	90.00	-17,879.7	6,060.0	2,422.3	1,697.8	724.46	3.344	
27,200.0	7,903.5	26,771.4	7,903.5	366.7	363.9	90.00	-17,974.3	6,092.6	2,422.3	1,694.0	728.26	3.326	
27,300.0	7,903.5	26,871.4	7,903.5	368.6	365.8	90.00	-18,068.8	6,125.2	2,422.3	1,690.2	732.07	3.309	
27,400.0	7,903.5	26,971.4	7,903.5	370.5	367.7	90.00	-18,163.4	6,157.8	2,422.3	1,686.4	735.87	3.292	
27,500.0	7,903.5	27,071.4	7,903.5	372.4	369.6	90.00	-18,257.9	6,190.4	2,422.3	1,682.6	739.68	3.275	
27,600.0	7,903.5	27,171.4	7,903.5	374.3	371.5	90.00	-18,352.4	6,223.0	2,422.3	1,678.8	743.48	3.258	
27,700.0	7,903.5	27,271.4	7,903.5	376.2	373.4	90.00	-18,447.0	6,255.6	2,422.3	1,675.0	747.28	3.241	
27,800.0	7,903.5	27,371.4	7,903.5	378.1	375.3	90.00	-18,541.5	6,288.2	2,422.3	1,671.2	751.09	3.225	
27,900.0	7,903.5	27,471.4	7,903.5	379.9	377.2	90.00	-18,636.0	6,320.8	2,422.3	1,667.4	754.89	3.209	
28,000.0	7,903.5	27,571.4	7,903.5	381.8	379.1	90.00	-18,730.6	6,353.4	2,422.3	1,663.6	758.70	3.193	
28,100.0	7,903.5	27,671.4	7,903.5	383.7	381.0	90.00	-18,825.1	6,386.0	2,422.4	1,659.9	762.50	3.177	
28,200.0	7,903.5	27,771.4	7,903.5	385.6	382.9	90.00	-18,919.7	6,418.6	2,422.4	1,656.1	766.31	3.161	
28,300.0	7,903.5	27,871.4	7,903.5	387.5	384.8	90.00	-19,014.2	6,451.2	2,422.4	1,652.3	770.11	3.145	
28,400.0	7,903.5	27,971.4	7,903.5	389.4	386.7	90.00	-19,108.7	6,483.8	2,422.4	1,648.5	773.92	3.130	
28,500.0	7,903.5	28,071.4	7,903.5	391.3	388.6	90.00	-19,203.3	6,516.4	2,422.4	1,644.7	777.72	3.115	
28,600.0	7,903.5	28,171.4	7,903.5	393.2	390.5	90.00	-19,297.8	6,549.0	2,422.4	1,640.9	781.53	3.100	
28,700.0	7,903.5	28,271.4	7,903.5	395.1	392.4	90.00	-19,392.3	6,581.6	2,422.4	1,637.1	785.33	3.085	
28,800.0	7,903.5	28,371.4	7,903.5	397.0	394.3	90.00	-19,486.9	6,614.2	2,422.4	1,633.3	789.14	3.070	
28,900.0	7,903.5	28,471.4	7,903.5	398.9	396.2	90.00	-19,581.4	6,646.8	2,422.4	1,629.5	792.94	3.055	
29,000.0	7,903.5	28,571.4	7,903.5	400.8	398.1	90.00	-19,676.0	6,679.4	2,422.4	1,625.7	796.75	3.040	
29,100.0	7,903.5	28,671.4	7,903.5	402.7	400.0	90.00	-19,770.5	6,712.0	2,422.4	1,621.9	800.55	3.026	
29,200.0	7,903.5	28,771.4	7,903.5	404.6	401.9	90.00	-19,865.0	6,744.6	2,422.4	1,618.1	804.36	3.012	
29,300.0	7,903.5	28,871.4	7,903.5	406.5	403.9	90.00	-19,959.6	6,777.2	2,422.4	1,614.3	808.16	2.997	
29,400.0	7,903.5	28,971.4	7,903.5	408.4	405.8	90.00	-20,054.1	6,809.8	2,422.5	1,610.5	811.97	2.983	
29,500.0	7,903.5	29,071.4	7,903.5	410.2	407.7	90.00	-20,148.6	6,842.4	2,422.5	1,606.7	815.77	2.970	
29,600.0	7,903.5	29,171.4	7,903.5	412.1	409.6	90.00	-20,243.2	6,875.0	2,422.5	1,602.9	819.58	2.956 SF	
29,700.0	7,903.5	29,199.3	7,903.5	414.0	410.1	90.00	-20,269.6	6,884.1	2,423.6	1,603.7	819.85	2.956	
29,800.0	7,903.5	29,199.3	7,903.5	415.9	410.1	90.00	-20,269.6	6,884.1	2,428.6	1,611.6	816.98	2.973	
29,900.0	7,903.5	29,199.3	7,903.5	417.8	410.1	90.00	-20,269.6	6,884.1	2,437.7	1,625.6	812.09	3.002	
30,000.0	7,903.5	29,199.3	7,903.5	419.7	410.1	90.00	-20,269.6	6,884.1	2,450.9	1,645.6	805.31	3.043	
30,033.7	7,903.6	29,199.3	7,903.6	420.4	410.1	90.00	-20,269.6	6,884.1	2,456.3	1,653.6	802.62	3.060	

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 204 - Orig. - DEP Plan 6

Survey Program: 0-MWD+HRGM+Int, 800-MWD+AfterInt, 2600-SDI MWD

Offset Site Error: 0.0 usft
Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-15.0	0.0	15.0				
100.0	100.0	100.0	100.0	0.3	0.3	180.00	-15.0	0.0	15.0	14.5	0.52	28.660	
200.0	200.0	200.0	200.0	0.6	0.6	180.00	-15.0	0.0	15.0	13.8	1.24	12.094	
300.0	300.0	300.0	300.0	1.0	1.0	180.00	-15.0	0.0	15.0	13.0	1.96	7.664	
400.0	400.0	400.0	400.0	1.3	1.3	180.00	-15.0	0.0	15.0	12.3	2.67	5.609	
500.0	500.0	500.0	500.0	1.7	1.7	180.00	-15.0	0.0	15.0	11.6	3.39	4.423	
600.0	600.0	600.0	600.0	2.1	2.1	180.00	-15.0	0.0	15.0	10.9	4.11	3.651	
700.0	700.0	700.0	700.0	2.4	2.4	180.00	-15.0	0.0	15.0	10.2	4.83	3.109	
800.0	800.0	800.0	800.0	2.8	2.8	180.00	-15.0	0.0	15.0	9.5	5.54	2.707 CC, ES	
900.0	900.0	900.1	900.1	3.1	3.1	151.58	-14.6	1.7	16.2	10.0	6.25	2.594	
1,000.0	999.8	1,000.0	999.9	3.5	3.5	143.90	-13.4	6.8	20.1	13.2	6.96	2.891	
1,100.0	1,099.5	1,099.8	1,099.4	3.8	3.8	139.92	-11.9	13.6	27.0	19.3	7.68	3.517	
1,200.0	1,198.9	1,199.5	1,198.8	4.2	4.2	139.52	-10.3	20.4	35.2	26.9	8.39	4.199	
1,300.0	1,298.4	1,299.1	1,298.2	4.6	4.5	139.28	-8.7	27.1	43.5	34.4	9.12	4.772	
1,400.0	1,397.8	1,398.8	1,397.6	4.9	4.9	139.11	-7.2	33.9	51.8	41.9	9.84	5.259	
1,500.0	1,497.3	1,498.4	1,497.1	5.3	5.3	138.99	-5.6	40.7	60.0	49.4	10.57	5.678	
1,600.0	1,596.7	1,598.1	1,596.5	5.7	5.6	138.90	-4.0	47.5	68.3	57.0	11.30	6.041	
1,700.0	1,696.2	1,697.7	1,695.9	6.1	6.0	138.83	-2.5	54.2	76.5	64.5	12.03	6.360	
1,800.0	1,795.6	1,797.4	1,795.3	6.4	6.4	138.77	-0.9	61.0	84.8	72.0	12.76	6.641	
1,900.0	1,895.1	1,897.1	1,894.7	6.8	6.7	138.73	0.6	67.8	93.0	79.5	13.50	6.891	
2,000.0	1,994.5	1,996.7	1,994.1	7.2	7.1	138.69	2.2	74.5	101.3	87.0	14.23	7.114	
2,100.0	2,094.0	2,096.4	2,093.5	7.6	7.5	138.65	3.8	81.3	109.5	94.5	14.97	7.315	
2,200.0	2,193.4	2,196.0	2,193.0	8.0	7.8	138.62	5.3	88.1	117.8	102.1	15.71	7.497	
2,300.0	2,292.9	2,295.7	2,292.4	8.3	8.2	138.60	6.9	94.9	126.0	109.6	16.45	7.662	
2,400.0	2,392.3	2,395.4	2,391.8	8.7	8.6	138.58	8.5	101.6	134.3	117.1	17.19	7.813	
2,500.0	2,491.8	2,495.0	2,491.2	9.1	8.9	138.56	10.0	108.4	142.5	124.6	17.93	7.951	
2,600.0	2,591.2	2,594.7	2,590.6	9.3	9.1	138.54	11.6	115.2	150.8	132.5	18.30	8.238	
2,700.0	2,690.6	2,694.1	2,689.7	9.3	9.1	125.78	13.5	123.3	158.9	140.5	18.35	8.656	
2,800.0	2,789.7	2,793.4	2,788.3	9.3	9.2	116.04	16.1	134.8	166.5	148.1	18.39	9.055	
2,900.0	2,888.3	2,892.8	2,886.6	9.4	9.2	109.29	19.5	149.6	173.7	155.3	18.46	9.413	
3,000.0	2,986.4	2,992.5	2,984.6	9.4	9.2	104.66	23.6	167.0	180.5	161.9	18.56	9.721	
3,100.0	3,083.8	3,092.2	3,082.6	9.5	9.3	102.24	27.7	184.7	186.6	167.9	18.72	9.970	
3,200.0	3,180.5	3,191.8	3,180.6	9.6	9.4	101.59	31.7	202.4	192.3	173.4	18.92	10.167	
3,300.0	3,276.3	3,291.1	3,278.2	9.8	9.5	102.39	35.8	220.1	198.0	178.8	19.17	10.329	
3,400.0	3,371.0	3,390.0	3,375.5	10.0	9.6	104.37	39.9	237.6	204.1	184.6	19.47	10.480	
3,500.0	3,464.6	3,488.4	3,472.2	10.3	9.8	107.32	43.9	255.1	211.2	191.4	19.82	10.655	
3,600.0	3,557.0	3,586.2	3,568.4	10.6	9.9	111.00	47.9	272.5	220.0	199.8	20.20	10.890	
3,700.0	3,648.2	3,683.4	3,663.9	11.1	10.1	115.72	51.9	289.7	231.0	210.4	20.59	11.219	
3,800.0	3,739.4	3,780.4	3,759.3	11.5	10.3	120.55	55.9	306.9	244.0	223.0	20.98	11.630	
3,900.0	3,830.5	3,877.5	3,854.8	12.1	10.5	124.87	59.8	324.2	258.5	237.1	21.35	12.105	
4,000.0	3,921.6	3,974.6	3,950.2	12.6	10.7	128.74	63.8	341.4	274.4	252.6	21.72	12.630	
4,100.0	4,012.7	4,075.8	4,049.7	13.2	10.9	132.37	68.4	359.3	291.0	268.9	22.07	13.187	
4,200.0	4,103.8	4,181.5	4,153.6	13.8	11.1	136.13	76.5	377.3	306.3	283.9	22.33	13.714	
4,300.0	4,194.9	4,284.1	4,254.2	14.5	11.3	139.85	87.8	394.0	320.1	297.6	22.54	14.203	
4,400.0	4,286.1	4,381.2	4,349.3	15.1	11.5	143.17	99.2	409.6	334.6	311.9	22.76	14.702	
4,500.0	4,377.2	4,478.3	4,444.5	15.8	11.8	146.21	110.6	425.2	350.2	327.2	22.97	15.242	
4,600.0	4,468.3	4,575.4	4,539.6	16.5	12.1	148.99	122.0	440.9	366.6	343.4	23.18	15.813	
4,700.0	4,559.4	4,672.4	4,634.7	17.3	12.3	151.53	133.4	456.5	383.8	360.4	23.40	16.406	
4,800.0	4,650.5	4,769.5	4,729.9	18.0	12.6	153.86	144.8	472.1	401.8	378.1	23.61	17.013	
4,900.0	4,741.6	4,866.6	4,825.0	18.7	12.9	155.99	156.2	487.8	420.3	396.4	23.84	17.626	
5,000.0	4,832.8	4,963.7	4,920.2	19.5	13.2	157.95	167.6	503.4	439.3	415.2	24.09	18.240	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 204 - Orig. - DEP Plan 6 — Offset Site Error: 0.0 usft

Survey Program: 0-MWD+HRGM+Int, 800-MWD+AfterInt, 2600-SDI MWD — Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	4,923.9	5,060.8	5,015.3	20.3	13.5	159.74	179.1	519.0	458.8	434.5	24.34	18.849	
5,200.0	5,015.0	5,157.9	5,110.4	21.0	13.8	161.38	190.5	534.7	478.8	454.1	24.62	19.449	
5,300.0	5,106.1	5,255.0	5,205.6	21.8	14.1	162.90	201.9	550.3	499.0	474.1	24.91	20.037	
5,400.0	5,197.2	5,352.1	5,300.7	22.6	14.4	164.30	213.3	565.9	519.6	494.4	25.21	20.612	
5,500.0	5,288.3	5,449.1	5,395.8	23.4	14.8	165.59	224.7	581.6	540.5	515.0	25.53	21.170	
5,600.0	5,379.4	5,546.2	5,491.0	24.2	15.1	166.79	236.1	597.2	561.6	535.7	25.87	21.710	
5,700.0	5,470.6	5,643.3	5,586.1	25.0	15.4	167.90	247.5	612.8	582.9	556.7	26.22	22.231	
5,800.0	5,561.7	5,740.4	5,681.3	25.8	15.8	168.94	258.9	628.5	604.5	577.9	26.59	22.731	
5,900.0	5,652.8	5,837.5	5,776.4	26.6	16.1	169.90	270.4	644.1	626.2	599.2	26.98	23.213	
6,000.0	5,743.9	5,934.6	5,871.5	27.4	16.4	170.80	281.8	659.7	648.0	620.7	27.37	23.675	
6,100.0	5,835.0	6,031.7	5,966.7	28.2	16.8	171.64	293.2	675.4	670.0	642.3	27.78	24.116	
6,200.0	5,926.1	6,128.7	6,061.8	29.0	17.2	172.43	304.6	691.0	692.2	664.0	28.21	24.537	
6,300.0	6,017.3	6,225.8	6,156.9	29.9	17.5	173.16	316.0	706.6	714.4	685.8	28.65	24.939	
6,400.0	6,108.4	6,322.9	6,252.1	30.7	17.9	173.86	327.4	722.3	736.8	707.7	29.10	25.323	
6,500.0	6,199.5	6,420.0	6,347.2	31.5	18.2	174.51	338.8	737.9	759.3	729.7	29.56	25.688	
6,600.0	6,290.6	6,517.1	6,442.4	32.3	18.6	175.13	350.2	753.5	781.8	751.8	30.03	26.036	
6,700.0	6,381.7	6,614.2	6,537.5	33.2	19.0	175.71	361.7	769.2	804.5	773.9	30.51	26.366	
6,800.0	6,472.8	6,711.3	6,632.6	34.0	19.3	176.26	373.1	784.8	827.2	796.2	31.00	26.681	
6,900.0	6,563.9	6,808.3	6,727.8	34.8	19.7	176.78	384.5	800.4	849.9	818.4	31.50	26.980	
7,000.0	6,655.1	6,905.4	6,822.9	35.7	20.1	177.28	395.9	816.1	872.8	840.8	32.01	27.265	
7,100.0	6,746.2	7,002.5	6,918.0	36.5	20.5	177.75	407.3	831.7	895.7	863.1	32.53	27.535	
7,200.0	6,837.3	7,099.6	7,013.2	37.3	20.8	178.19	418.7	847.3	918.6	885.6	33.05	27.791	
7,300.0	6,928.4	7,196.7	7,108.3	38.2	21.2	178.62	430.1	863.0	941.6	908.0	33.59	28.034	
7,400.0	7,019.5	7,293.8	7,203.5	39.0	21.6	179.02	441.5	878.6	964.7	930.6	34.13	28.265	
7,500.0	7,110.6	7,391.6	7,299.4	39.9	22.0	179.25	450.5	895.2	987.8	953.1	34.65	28.503	
7,600.0	7,201.8	7,488.9	7,394.3	40.7	22.3	178.67	446.4	916.2	1,010.8	975.7	35.11	28.787	
7,700.0	7,292.9	7,581.2	7,481.8	41.6	22.5	177.37	429.7	939.9	1,034.2	998.6	35.55	29.092	
7,800.0	7,383.9	7,666.5	7,558.9	42.3	22.7	162.43	403.4	964.9	1,058.6	1,022.6	36.02	29.389	
7,900.0	7,473.4	7,750.0	7,629.5	43.1	22.9	141.88	367.9	991.6	1,083.5	1,046.9	36.57	29.630	
8,000.0	7,559.2	7,827.8	7,690.0	43.8	23.1	126.26	326.8	1,018.2	1,108.0	1,070.9	37.16	29.819	
8,100.0	7,639.2	7,905.6	7,744.2	44.5	23.3	114.84	278.6	1,046.0	1,131.3	1,093.5	37.81	29.921	
8,200.0	7,711.4	7,981.9	7,790.7	45.2	23.5	106.50	225.0	1,074.0	1,152.6	1,114.1	38.51	29.928	
8,300.0	7,774.1	8,057.3	7,829.4	45.8	23.8	100.39	166.8	1,102.1	1,171.2	1,132.0	39.25	29.838	
8,400.0	7,825.7	8,131.9	7,860.1	46.4	24.1	95.96	104.8	1,129.8	1,186.7	1,146.7	40.06	29.627	
8,500.0	7,864.9	8,200.0	7,881.2	46.9	24.4	92.91	45.1	1,154.7	1,198.6	1,157.9	40.74	29.424	
8,600.0	7,890.8	8,279.6	7,897.2	47.4	24.8	90.96	-27.6	1,183.1	1,206.5	1,164.7	41.80	28.864	
8,700.0	7,902.7	8,353.1	7,903.3	47.8	25.2	90.07	-96.3	1,208.0	1,210.3	1,167.5	42.80	28.275	
8,800.0	7,903.5	8,446.8	7,903.5	48.2	25.9	90.00	-184.9	1,238.6	1,210.6	1,166.0	44.55	27.175	
8,900.0	7,903.5	8,546.8	7,903.5	48.7	26.7	90.00	-279.4	1,271.2	1,210.6	1,163.9	46.70	25.924	
9,000.0	7,903.5	8,646.8	7,903.5	49.3	27.6	90.00	-374.0	1,303.8	1,210.6	1,161.5	49.04	24.685	
9,100.0	7,903.5	8,746.8	7,903.5	49.9	28.7	90.00	-468.5	1,336.4	1,210.6	1,159.0	51.56	23.480	
9,200.0	7,903.5	8,846.8	7,903.5	50.6	29.8	90.00	-563.0	1,369.0	1,210.6	1,156.4	54.22	22.327	
9,300.0	7,903.5	8,946.8	7,903.5	51.4	31.0	90.00	-657.6	1,401.6	1,210.6	1,153.6	57.02	21.233	
9,400.0	7,903.5	9,046.8	7,903.5	52.2	32.3	90.00	-752.1	1,434.2	1,210.6	1,150.7	59.92	20.204	
9,500.0	7,903.5	9,146.8	7,903.5	53.0	33.7	90.00	-846.7	1,466.8	1,210.6	1,147.7	62.92	19.242	
9,600.0	7,903.5	9,246.8	7,903.5	53.9	35.1	90.00	-941.2	1,499.4	1,210.6	1,144.6	66.00	18.344	
9,700.0	7,903.5	9,346.8	7,903.5	54.9	36.5	90.00	-1,035.7	1,532.0	1,210.6	1,141.5	69.15	17.508	
9,800.0	7,903.5	9,446.8	7,903.5	55.9	38.0	90.00	-1,130.3	1,564.6	1,210.6	1,138.3	72.37	16.730	
9,900.0	7,903.5	9,546.8	7,903.5	57.0	39.5	90.00	-1,224.8	1,597.2	1,210.6	1,135.0	75.64	16.006	
10,000.0	7,903.5	9,646.8	7,903.5	58.1	41.1	90.00	-1,319.3	1,629.8	1,210.6	1,131.7	78.95	15.334	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

10/21/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 204 - Orig. - DEP Plan 6 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+HRGM+Int, 800-MWD+AfterInt, 2600-SDI MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.0	7,903.5	9,746.8	7,903.5	59.2	42.7	90.00	-1,413.9	1,662.4	1,210.6	1,128.3	82.31	14.708	
10,200.0	7,903.5	9,846.8	7,903.5	60.4	44.3	90.00	-1,508.4	1,695.0	1,210.7	1,124.9	85.71	14.125	
10,300.0	7,903.5	9,946.8	7,903.5	61.7	45.9	90.00	-1,602.9	1,727.6	1,210.7	1,121.5	89.14	13.581	
10,400.0	7,903.5	10,046.8	7,903.5	62.9	47.6	90.00	-1,697.5	1,760.2	1,210.7	1,118.1	92.60	13.074	
10,500.0	7,903.5	10,146.8	7,903.5	64.2	49.3	90.00	-1,792.0	1,792.8	1,210.7	1,114.6	96.09	12.600	
10,600.0	7,903.5	10,246.8	7,903.5	65.6	51.0	90.00	-1,886.6	1,825.4	1,210.7	1,111.1	99.60	12.156	
10,700.0	7,903.5	10,346.8	7,903.5	66.9	52.7	90.00	-1,981.1	1,858.0	1,210.7	1,107.6	103.13	11.740	
10,800.0	7,903.5	10,446.8	7,903.5	68.3	54.4	90.00	-2,075.6	1,890.6	1,210.7	1,104.0	106.67	11.349	
10,900.0	7,903.5	10,546.8	7,903.5	69.7	56.1	90.00	-2,170.2	1,923.2	1,210.7	1,100.5	110.24	10.982	
11,000.0	7,903.5	10,646.8	7,903.5	71.2	57.9	90.00	-2,264.7	1,955.8	1,210.7	1,096.9	113.82	10.637	
11,100.0	7,903.5	10,746.8	7,903.5	72.7	59.6	90.00	-2,359.2	1,988.4	1,210.7	1,093.3	117.42	10.311	
11,200.0	7,903.5	10,846.8	7,903.5	74.1	61.4	90.00	-2,453.8	2,021.0	1,210.7	1,089.7	121.03	10.004	
11,300.0	7,903.5	10,946.8	7,903.5	75.6	63.2	90.00	-2,548.3	2,053.6	1,210.7	1,086.1	124.65	9.713	
11,400.0	7,903.5	11,046.8	7,903.5	77.2	64.9	90.00	-2,642.9	2,086.2	1,210.7	1,082.4	128.28	9.438	
11,500.0	7,903.5	11,146.8	7,903.5	78.7	66.7	90.00	-2,737.4	2,118.8	1,210.7	1,078.8	131.92	9.178	
11,600.0	7,903.5	11,246.8	7,903.5	80.3	68.5	90.00	-2,831.9	2,151.4	1,210.7	1,075.2	135.57	8.930	
11,700.0	7,903.5	11,346.8	7,903.5	81.9	70.3	90.00	-2,926.5	2,184.0	1,210.7	1,071.5	139.23	8.696	
11,800.0	7,903.5	11,446.8	7,903.5	83.4	72.1	90.00	-3,021.0	2,216.6	1,210.7	1,067.8	142.90	8.473	
11,900.0	7,903.5	11,546.8	7,903.5	85.0	73.9	90.00	-3,115.5	2,249.2	1,210.7	1,064.2	146.57	8.261	
12,000.0	7,903.5	11,646.8	7,903.5	86.7	75.7	90.00	-3,210.1	2,281.8	1,210.8	1,060.5	150.25	8.058	
12,100.0	7,903.5	11,746.8	7,903.5	88.3	77.6	90.00	-3,304.6	2,314.4	1,210.8	1,056.8	153.94	7.865	
12,200.0	7,903.5	11,846.8	7,903.5	89.9	79.4	90.00	-3,399.1	2,347.0	1,210.8	1,053.1	157.63	7.681	
12,300.0	7,903.5	11,946.8	7,903.5	91.6	81.2	90.00	-3,493.7	2,379.7	1,210.8	1,049.4	161.32	7.505	
12,400.0	7,903.5	12,046.8	7,903.5	93.3	83.0	90.00	-3,588.2	2,412.3	1,210.8	1,045.7	165.03	7.337	
12,500.0	7,903.5	12,146.8	7,903.5	94.9	84.9	90.00	-3,682.8	2,444.9	1,210.8	1,042.0	168.73	7.176	
12,600.0	7,903.5	12,246.8	7,903.5	96.6	86.7	90.00	-3,777.3	2,477.5	1,210.8	1,038.3	172.44	7.021	
12,700.0	7,903.5	12,346.8	7,903.5	98.3	88.5	90.00	-3,871.8	2,510.1	1,210.8	1,034.6	176.16	6.873	
12,800.0	7,903.5	12,446.8	7,903.5	100.0	90.4	90.00	-3,966.4	2,542.7	1,210.8	1,030.9	179.88	6.731	
12,900.0	7,903.5	12,546.8	7,903.5	101.7	92.2	90.00	-4,060.9	2,575.3	1,210.8	1,027.2	183.60	6.595	
13,000.0	7,903.5	12,646.8	7,903.5	103.4	94.1	90.00	-4,155.4	2,607.9	1,210.8	1,023.5	187.33	6.464	
13,100.0	7,903.5	12,746.8	7,903.5	105.1	95.9	90.00	-4,250.0	2,640.5	1,210.8	1,019.8	191.05	6.338	
13,200.0	7,903.5	12,846.8	7,903.5	106.9	97.8	90.00	-4,344.5	2,673.1	1,210.8	1,016.0	194.79	6.216	
13,300.0	7,903.5	12,946.8	7,903.5	108.6	99.6	90.00	-4,439.0	2,705.7	1,210.8	1,012.3	198.52	6.099	
13,400.0	7,903.5	13,046.8	7,903.5	110.3	101.5	90.00	-4,533.6	2,738.3	1,210.8	1,008.6	202.26	5.987	
13,500.0	7,903.5	13,146.8	7,903.5	112.1	103.3	90.00	-4,628.1	2,770.9	1,210.8	1,004.8	206.00	5.878	
13,600.0	7,903.5	13,246.8	7,903.5	113.8	105.2	90.00	-4,722.7	2,803.5	1,210.8	1,001.1	209.74	5.773	
13,700.0	7,903.5	13,346.8	7,903.5	115.6	107.0	90.00	-4,817.2	2,836.1	1,210.8	997.4	213.48	5.672	
13,800.0	7,903.5	13,446.8	7,903.5	117.3	108.9	90.00	-4,911.7	2,868.7	1,210.8	993.6	217.23	5.574	
13,900.0	7,903.5	13,546.8	7,903.5	119.1	110.8	90.00	-5,006.3	2,901.3	1,210.9	989.9	220.97	5.480	
14,000.0	7,903.5	13,646.8	7,903.5	120.9	112.6	90.00	-5,100.8	2,933.9	1,210.9	986.1	224.72	5.388	
14,100.0	7,903.5	13,746.8	7,903.5	122.7	114.5	90.00	-5,195.3	2,966.5	1,210.9	982.4	228.48	5.300	
14,200.0	7,903.5	13,846.8	7,903.5	124.4	116.4	90.00	-5,289.9	2,999.1	1,210.9	978.6	232.23	5.214	
14,300.0	7,903.5	13,946.8	7,903.5	126.2	118.2	90.00	-5,384.4	3,031.7	1,210.9	974.9	235.99	5.131	
14,400.0	7,903.5	14,046.8	7,903.5	128.0	120.1	90.00	-5,478.9	3,064.3	1,210.9	971.1	239.74	5.051	
14,500.0	7,903.5	14,146.8	7,903.5	129.8	122.0	90.00	-5,573.5	3,096.9	1,210.9	967.4	243.50	4.973	
14,600.0	7,903.5	14,246.8	7,903.5	131.6	123.8	90.00	-5,668.0	3,129.5	1,210.9	963.6	247.26	4.897	
14,700.0	7,903.5	14,346.8	7,903.5	133.4	125.7	90.00	-5,762.6	3,162.1	1,210.9	959.9	251.02	4.824	
14,800.0	7,903.5	14,446.8	7,903.5	135.2	127.6	90.00	-5,857.1	3,194.7	1,210.9	956.1	254.78	4.753	
14,900.0	7,903.5	14,546.8	7,903.5	137.0	129.5	90.00	-5,951.6	3,227.3	1,210.9	952.4	258.55	4.684	
15,000.0	7,903.5	14,646.8	7,903.5	138.8	131.3	90.00	-6,046.2	3,259.9	1,210.9	948.6	262.31	4.616	
15,100.0	7,903.5	14,746.8	7,903.5	140.6	133.2	90.00	-6,140.7	3,292.5	1,210.9	944.8	266.08	4.551	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 204 - Orig. - DEP Plan 6 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+HRGM+Int. 800-MWD+AfterInt, 2600-SDI MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,200.0	7,903.5	14,846.8	7,903.5	142.4	135.1	90.00	-6,235.2	3,325.1	1,210.9	941.1	269.84	4.488	
15,300.0	7,903.5	14,946.8	7,903.5	144.2	137.0	90.00	-6,329.8	3,357.7	1,210.9	937.3	273.61	4.426	
15,400.0	7,903.5	15,046.8	7,903.5	146.0	138.8	90.00	-6,424.3	3,390.3	1,210.9	933.6	277.38	4.366	
15,500.0	7,903.5	15,146.8	7,903.5	147.8	140.7	90.00	-6,518.9	3,422.9	1,210.9	929.8	281.15	4.307	
15,600.0	7,903.5	15,246.8	7,903.5	149.7	142.6	90.00	-6,613.4	3,455.5	1,210.9	926.0	284.92	4.250	
15,700.0	7,903.5	15,346.8	7,903.5	151.5	144.5	90.00	-6,707.9	3,488.1	1,211.0	922.3	288.69	4.195	
15,800.0	7,903.5	15,446.8	7,903.5	153.3	146.4	90.00	-6,802.5	3,520.7	1,211.0	918.5	292.46	4.141	
15,900.0	7,903.5	15,546.8	7,903.5	155.1	148.2	90.00	-6,897.0	3,553.3	1,211.0	914.7	296.24	4.088	
16,000.0	7,903.5	15,646.8	7,903.5	157.0	150.1	90.00	-6,991.5	3,585.9	1,211.0	911.0	300.01	4.036	
16,100.0	7,903.5	15,746.8	7,903.5	158.8	152.0	90.00	-7,086.1	3,618.5	1,211.0	907.2	303.78	3.986	
16,200.0	7,903.5	15,846.8	7,903.5	160.6	153.9	90.00	-7,180.6	3,651.1	1,211.0	903.4	307.56	3.937	
16,300.0	7,903.5	15,946.8	7,903.5	162.4	155.8	90.00	-7,275.1	3,683.7	1,211.0	899.7	311.34	3.890	
16,400.0	7,903.5	16,046.8	7,903.5	164.3	157.7	90.00	-7,369.7	3,716.3	1,211.0	895.9	315.11	3.843	
16,500.0	7,903.5	16,146.8	7,903.5	166.1	159.5	90.00	-7,464.2	3,748.9	1,211.0	892.1	318.89	3.798	
16,600.0	7,903.5	16,246.8	7,903.5	168.0	161.4	90.00	-7,558.8	3,781.5	1,211.0	888.3	322.67	3.753	
16,700.0	7,903.5	16,346.8	7,903.5	169.8	163.3	90.00	-7,653.3	3,814.1	1,211.0	884.6	326.44	3.710	
16,800.0	7,903.5	16,446.8	7,903.5	171.6	165.2	90.00	-7,747.8	3,846.7	1,211.0	880.8	330.22	3.667	
16,900.0	7,903.5	16,546.8	7,903.5	173.5	167.1	90.00	-7,842.4	3,879.3	1,211.0	877.0	334.00	3.626	
17,000.0	7,903.5	16,646.8	7,903.5	175.3	169.0	90.00	-7,936.9	3,911.9	1,211.0	873.2	337.78	3.585	
17,100.0	7,903.5	16,746.8	7,903.5	177.2	170.9	90.00	-8,031.4	3,944.5	1,211.0	869.5	341.56	3.546	
17,200.0	7,903.5	16,846.8	7,903.5	179.0	172.8	90.00	-8,126.0	3,977.1	1,211.0	865.7	345.34	3.507	
17,300.0	7,903.5	16,946.8	7,903.5	180.9	174.6	90.00	-8,220.5	4,009.7	1,211.0	861.9	349.12	3.469	
17,400.0	7,903.5	17,046.8	7,903.5	182.7	176.5	90.00	-8,315.0	4,042.3	1,211.0	858.1	352.90	3.432	
17,500.0	7,903.5	17,146.8	7,903.5	184.6	178.4	90.00	-8,409.6	4,074.9	1,211.1	854.4	356.69	3.395	
17,600.0	7,903.5	17,246.8	7,903.5	186.4	180.3	90.00	-8,504.1	4,107.5	1,211.1	850.6	360.47	3.360	
17,700.0	7,903.5	17,346.8	7,903.5	188.3	182.2	90.00	-8,598.7	4,140.1	1,211.1	846.8	364.25	3.325	
17,800.0	7,903.5	17,446.8	7,903.5	190.1	184.1	90.00	-8,693.2	4,172.7	1,211.1	843.0	368.04	3.291	
17,900.0	7,903.5	17,546.8	7,903.5	192.0	186.0	90.00	-8,787.7	4,205.3	1,211.1	839.3	371.82	3.257	
18,000.0	7,903.5	17,646.8	7,903.5	193.8	187.9	90.00	-8,882.3	4,237.9	1,211.1	835.5	375.60	3.224	
18,100.0	7,903.5	17,746.8	7,903.5	195.7	189.8	90.00	-8,976.8	4,270.5	1,211.1	831.7	379.39	3.192	
18,200.0	7,903.5	17,846.8	7,903.5	197.5	191.6	90.00	-9,071.3	4,303.1	1,211.1	827.9	383.17	3.161	
18,300.0	7,903.5	17,946.8	7,903.5	199.4	193.5	90.00	-9,165.9	4,335.7	1,211.1	824.1	386.95	3.130	
18,400.0	7,903.5	18,046.8	7,903.5	201.2	195.4	90.00	-9,260.4	4,368.3	1,211.1	820.4	390.74	3.100	
18,500.0	7,903.5	18,146.8	7,903.5	203.1	197.3	90.00	-9,355.0	4,400.9	1,211.1	816.6	394.52	3.070	
18,600.0	7,903.5	18,246.8	7,903.5	205.0	199.2	90.00	-9,449.5	4,433.5	1,211.1	812.8	398.31	3.041	
18,700.0	7,903.5	18,346.8	7,903.5	206.8	201.1	90.00	-9,544.0	4,466.1	1,211.1	809.0	402.10	3.012	
18,800.0	7,903.5	18,446.8	7,903.5	208.7	203.0	90.00	-9,638.6	4,498.7	1,211.1	805.2	405.88	2.984	
18,900.0	7,903.5	18,546.8	7,903.5	210.6	204.9	90.00	-9,733.1	4,531.3	1,211.1	801.5	409.67	2.956	
19,000.0	7,903.5	18,646.8	7,903.5	212.4	206.8	90.00	-9,827.6	4,563.9	1,211.1	797.7	413.46	2.929	
19,100.0	7,903.5	18,746.8	7,903.5	214.3	208.7	90.00	-9,922.2	4,596.5	1,211.1	793.9	417.24	2.903	
19,200.0	7,903.5	18,846.8	7,903.5	216.1	210.6	90.00	-10,016.7	4,629.1	1,211.1	790.1	421.03	2.877	
19,300.0	7,903.5	18,946.8	7,903.5	218.0	212.5	90.00	-10,111.2	4,661.7	1,211.2	786.3	424.82	2.851	
19,400.0	7,903.5	19,046.8	7,903.5	219.9	214.4	90.00	-10,205.8	4,694.3	1,211.2	782.6	428.60	2.826	
19,500.0	7,903.5	19,146.8	7,903.5	221.7	216.3	90.00	-10,300.3	4,726.9	1,211.2	778.8	432.39	2.801	
19,600.0	7,903.5	19,246.8	7,903.5	223.6	218.1	90.00	-10,394.9	4,759.5	1,211.2	775.0	436.18	2.777	
19,700.0	7,903.5	19,346.8	7,903.5	225.5	220.0	90.00	-10,489.4	4,792.1	1,211.2	771.2	439.97	2.753	
19,800.0	7,903.5	19,446.8	7,903.5	227.4	221.9	90.00	-10,583.9	4,824.7	1,211.2	767.4	443.76	2.729	
19,900.0	7,903.5	19,546.8	7,903.5	229.2	223.8	90.00	-10,678.5	4,857.3	1,211.2	763.6	447.54	2.706	
20,000.0	7,903.5	19,646.8	7,903.5	231.1	225.7	90.00	-10,773.0	4,889.9	1,211.2	759.9	451.33	2.684	
20,100.0	7,903.5	19,746.8	7,903.5	233.0	227.6	90.00	-10,867.5	4,922.5	1,211.2	756.1	455.12	2.661	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

10/21/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 204 - Orig. - DEP Plan 6

Survey Program: 0-MWD+HRGM+Int, 800-MWD+AfterInt, 2600-SDI MWD

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
20,200.0	7,903.5	19,846.8	7,903.5	234.8	229.5	90.00	-10,962.1	4,955.1	1,211.2	752.3	458.91	2.639	
20,300.0	7,903.5	19,946.8	7,903.5	236.7	231.4	90.00	-11,056.6	4,987.7	1,211.2	748.5	462.70	2.618	
20,400.0	7,903.5	20,046.8	7,903.5	238.6	233.3	90.00	-11,151.1	5,020.3	1,211.2	744.7	466.49	2.596	
20,500.0	7,903.5	20,146.8	7,903.5	240.5	235.2	90.00	-11,245.7	5,052.9	1,211.2	740.9	470.27	2.576	
20,600.0	7,903.5	20,246.8	7,903.5	242.3	237.1	90.00	-11,340.2	5,085.5	1,211.2	737.2	474.06	2.555	
20,700.0	7,903.5	20,346.8	7,903.5	244.2	239.0	90.00	-11,434.8	5,118.1	1,211.2	733.4	477.85	2.535	
20,800.0	7,903.5	20,446.8	7,903.5	246.1	240.9	90.00	-11,529.3	5,150.7	1,211.2	729.6	481.64	2.515	
20,900.0	7,903.5	20,546.8	7,903.5	248.0	242.8	90.00	-11,623.8	5,183.3	1,211.2	725.8	485.43	2.495	
21,000.0	7,903.5	20,646.8	7,903.5	249.8	244.7	90.00	-11,718.4	5,215.9	1,211.2	722.0	489.22	2.476	
21,100.0	7,903.5	20,746.8	7,903.5	251.7	246.6	90.00	-11,812.9	5,248.5	1,211.2	718.2	493.01	2.457	
21,200.0	7,903.5	20,846.8	7,903.5	253.6	248.5	90.00	-11,907.4	5,281.1	1,211.3	714.5	496.80	2.438	
21,300.0	7,903.5	20,946.8	7,903.5	255.5	250.4	90.00	-12,002.0	5,313.7	1,211.3	710.7	500.59	2.420	
21,400.0	7,903.5	21,046.8	7,903.5	257.3	252.3	90.00	-12,096.5	5,346.3	1,211.3	706.9	504.38	2.401	
21,500.0	7,903.5	21,146.8	7,903.5	259.2	254.2	90.00	-12,191.0	5,378.9	1,211.3	703.1	508.17	2.384	
21,600.0	7,903.5	21,246.8	7,903.5	261.1	256.1	90.00	-12,285.6	5,411.5	1,211.3	699.3	511.96	2.366	
21,700.0	7,903.5	21,346.8	7,903.5	263.0	258.0	90.00	-12,380.1	5,444.1	1,211.3	695.5	515.75	2.349	
21,800.0	7,903.5	21,446.8	7,903.5	264.8	259.9	90.00	-12,474.7	5,476.7	1,211.3	691.7	519.54	2.331	
21,900.0	7,903.5	21,546.8	7,903.5	266.7	261.8	90.00	-12,569.2	5,509.3	1,211.3	688.0	523.33	2.315	
22,000.0	7,903.5	21,646.8	7,903.5	268.6	263.7	90.00	-12,663.7	5,541.9	1,211.3	684.2	527.12	2.298	
22,100.0	7,903.5	21,746.8	7,903.5	270.5	265.6	90.00	-12,758.3	5,574.6	1,211.3	680.4	530.91	2.282	
22,200.0	7,903.5	21,846.8	7,903.5	272.4	267.5	90.00	-12,852.8	5,607.2	1,211.3	676.6	534.70	2.265	
22,300.0	7,903.5	21,946.8	7,903.5	274.2	269.4	90.00	-12,947.3	5,639.8	1,211.3	672.8	538.49	2.249	
22,400.0	7,903.5	22,046.8	7,903.5	276.1	271.3	90.00	-13,041.9	5,672.4	1,211.3	669.0	542.28	2.234	
22,500.0	7,903.5	22,146.8	7,903.5	278.0	273.1	90.00	-13,136.4	5,705.0	1,211.3	665.3	546.07	2.218	
22,600.0	7,903.5	22,246.8	7,903.5	279.9	275.0	90.00	-13,231.0	5,737.6	1,211.3	661.5	549.86	2.203	
22,700.0	7,903.5	22,346.8	7,903.5	281.8	276.9	90.00	-13,325.5	5,770.2	1,211.3	657.7	553.65	2.188	
22,800.0	7,903.5	22,446.8	7,903.5	283.7	278.8	90.00	-13,420.0	5,802.8	1,211.3	653.9	557.44	2.173	
22,900.0	7,903.5	22,546.8	7,903.5	285.5	280.7	90.00	-13,514.6	5,835.4	1,211.3	650.1	561.23	2.158	
23,000.0	7,903.5	22,646.8	7,903.5	287.4	282.6	90.00	-13,609.1	5,868.0	1,211.4	646.3	565.02	2.144	
23,100.0	7,903.5	22,746.8	7,903.5	289.3	284.5	90.00	-13,703.6	5,900.6	1,211.4	642.5	568.81	2.130	
23,200.0	7,903.5	22,846.8	7,903.5	291.2	286.4	90.00	-13,798.2	5,933.2	1,211.4	638.8	572.60	2.116	
23,300.0	7,903.5	22,946.8	7,903.5	293.1	288.3	90.00	-13,892.7	5,965.8	1,211.4	635.0	576.39	2.102	
23,400.0	7,903.5	23,046.8	7,903.5	295.0	290.2	90.00	-13,987.2	5,998.4	1,211.4	631.2	580.18	2.088	
23,500.0	7,903.5	23,146.8	7,903.5	296.8	292.1	90.00	-14,081.8	6,031.0	1,211.4	627.4	583.97	2.074	
23,600.0	7,903.5	23,246.8	7,903.5	298.7	294.0	90.00	-14,176.3	6,063.6	1,211.4	623.6	587.76	2.061	
23,700.0	7,903.5	23,346.8	7,903.5	300.6	295.9	90.00	-14,270.9	6,096.2	1,211.4	619.8	591.55	2.048	
23,800.0	7,903.5	23,446.8	7,903.5	302.5	297.8	90.00	-14,365.4	6,128.8	1,211.4	616.1	595.34	2.035	
23,900.0	7,903.5	23,546.8	7,903.5	304.4	299.7	90.00	-14,459.9	6,161.4	1,211.4	612.3	599.13	2.022	
24,000.0	7,903.5	23,646.8	7,903.5	306.3	301.6	90.00	-14,554.5	6,194.0	1,211.4	608.5	602.92	2.009	
24,100.0	7,903.5	23,746.8	7,903.5	308.1	303.5	90.00	-14,649.0	6,226.6	1,211.4	604.7	606.71	1.997	
24,200.0	7,903.5	23,846.8	7,903.5	310.0	305.4	90.00	-14,743.5	6,259.2	1,211.4	600.9	610.50	1.984	
24,300.0	7,903.5	23,946.8	7,903.5	311.9	307.3	90.00	-14,838.1	6,291.8	1,211.4	597.1	614.29	1.972	
24,400.0	7,903.5	24,046.8	7,903.5	313.8	309.2	90.00	-14,932.6	6,324.4	1,211.4	593.4	618.08	1.960	
24,500.0	7,903.5	24,146.8	7,903.5	315.7	311.1	90.00	-15,027.1	6,357.0	1,211.4	589.6	621.87	1.948	
24,600.0	7,903.5	24,246.8	7,903.5	317.6	313.0	90.00	-15,121.7	6,389.6	1,211.4	585.8	625.66	1.936	
24,700.0	7,903.5	24,346.8	7,903.5	319.5	314.9	90.00	-15,216.2	6,422.2	1,211.4	582.0	629.45	1.925	
24,800.0	7,903.5	24,446.8	7,903.5	321.4	316.8	90.00	-15,310.8	6,454.8	1,211.5	578.2	633.23	1.913	
24,900.0	7,903.5	24,546.8	7,903.5	323.2	318.7	90.00	-15,405.3	6,487.4	1,211.5	574.4	637.02	1.902	
25,000.0	7,903.5	24,646.8	7,903.5	325.1	320.6	90.00	-15,499.8	6,520.0	1,211.5	570.7	640.81	1.891	
25,100.0	7,903.5	24,746.8	7,903.5	327.0	322.5	90.00	-15,594.4	6,552.6	1,211.5	566.9	644.60	1.879	
25,200.0	7,903.5	24,846.8	7,903.5	328.9	324.4	90.00	-15,688.9	6,585.2	1,211.5	563.1	648.39	1.868	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig	**Database:**	Northeast
Reference Design:	DEP Plan 6	**Offset TVD Reference:**	Offset Datum

Offset Design Johnson TFP40 - 204 - Orig. - DEP Plan 6 — Offset Site Error: 0.0 usft

Survey Program: 0-MWD+HRGM+Int 300-MWD+AtteInt 2500-SDI MWD — Offset Well Error: 0.0 usft

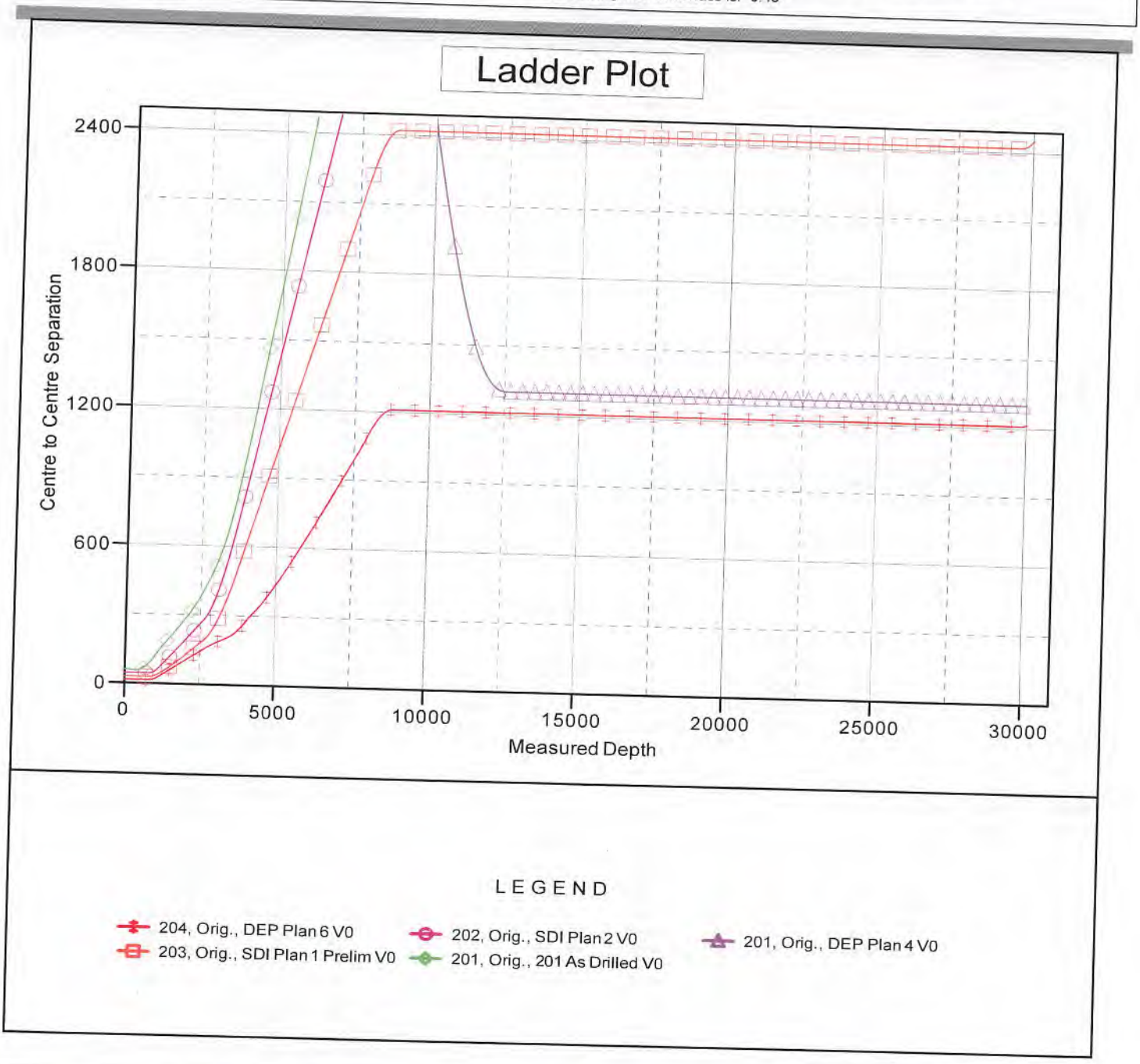
Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
25,300.0	7,903.5	24,946.8	7,903.5	330.8	326.3	90.00	-15,783.4	6,617.8	1,211.5	559.3	652.18	1.858	
25,400.0	7,903.5	25,046.8	7,903.5	332.7	328.2	90.00	-15,878.0	6,650.4	1,211.5	555.5	655.97	1.847	
25,500.0	7,903.5	25,146.8	7,903.5	334.6	330.1	90.00	-15,972.5	6,683.0	1,211.5	551.7	659.75	1.836	
25,600.0	7,903.5	25,246.8	7,903.5	336.5	332.0	90.00	-16,067.1	6,715.6	1,211.5	548.0	663.54	1.826	
25,700.0	7,903.5	25,346.8	7,903.5	338.3	333.9	90.00	-16,161.6	6,748.2	1,211.5	544.2	667.33	1.815	
25,800.0	7,903.5	25,446.8	7,903.5	340.2	335.8	90.00	-16,256.1	6,780.8	1,211.5	540.4	671.12	1.805	
25,900.0	7,903.5	25,546.8	7,903.5	342.1	337.7	90.00	-16,350.7	6,813.4	1,211.5	536.6	674.91	1.795	
26,000.0	7,903.5	25,646.8	7,903.5	344.0	339.6	90.00	-16,445.2	6,846.0	1,211.5	532.8	678.69	1.785	
26,100.0	7,903.5	25,746.8	7,903.5	345.9	341.5	90.00	-16,539.7	6,878.6	1,211.5	529.0	682.48	1.775	
26,200.0	7,903.5	25,846.8	7,903.5	347.8	343.4	90.00	-16,634.3	6,911.2	1,211.5	525.3	686.27	1.765	
26,300.0	7,903.5	25,946.8	7,903.5	349.7	345.3	90.00	-16,728.8	6,943.8	1,211.6	521.5	690.05	1.756	
26,400.0	7,903.5	26,046.8	7,903.5	351.6	347.2	90.00	-16,823.3	6,976.4	1,211.5	517.7	693.84	1.746	
26,500.0	7,903.5	26,146.8	7,903.5	353.5	349.1	90.00	-16,917.9	7,009.0	1,211.5	513.9	697.63	1.737	
26,600.0	7,903.5	26,246.8	7,903.5	355.4	351.0	90.00	-17,012.4	7,041.6	1,211.6	510.1	701.41	1.727	
26,700.0	7,903.5	26,346.8	7,903.5	357.2	352.9	90.00	-17,107.0	7,074.2	1,211.6	506.4	705.20	1.718	
26,800.0	7,903.5	26,446.8	7,903.5	359.1	354.8	90.00	-17,201.5	7,106.8	1,211.6	502.6	708.98	1.709	
26,900.0	7,903.5	26,546.8	7,903.5	361.0	356.7	90.00	-17,296.0	7,139.4	1,211.6	498.8	712.77	1.700	
27,000.0	7,903.5	26,646.8	7,903.5	362.9	358.6	90.00	-17,390.6	7,172.0	1,211.6	495.0	716.56	1.691	
27,100.0	7,903.5	26,746.8	7,903.5	364.8	360.5	90.00	-17,485.1	7,204.6	1,211.6	491.2	720.34	1.682	
27,200.0	7,903.5	26,846.8	7,903.5	366.7	362.4	90.00	-17,579.6	7,237.2	1,211.6	487.5	724.13	1.673	
27,300.0	7,903.5	26,946.8	7,903.5	368.6	364.3	90.00	-17,674.2	7,269.8	1,211.6	483.7	727.91	1.664	
27,400.0	7,903.5	27,046.8	7,903.5	370.5	366.2	90.00	-17,768.7	7,302.4	1,211.6	479.9	731.69	1.656	
27,500.0	7,903.5	27,146.8	7,903.5	372.4	368.2	90.00	-17,863.2	7,335.0	1,211.6	476.1	735.48	1.647	
27,600.0	7,903.5	27,246.8	7,903.5	374.3	370.1	90.00	-17,957.8	7,367.6	1,211.6	472.3	739.26	1.639	
27,700.0	7,903.5	27,346.8	7,903.5	376.2	372.0	90.00	-18,052.3	7,400.2	1,211.6	468.6	743.05	1.631	
27,800.0	7,903.5	27,446.8	7,903.5	378.1	373.9	90.00	-18,146.9	7,432.8	1,211.6	464.8	746.83	1.622	
27,900.0	7,903.5	27,546.8	7,903.5	379.9	375.8	90.00	-18,241.4	7,465.4	1,211.6	461.0	750.61	1.614	
28,000.0	7,903.5	27,646.8	7,903.5	381.8	377.7	90.00	-18,335.9	7,498.0	1,211.6	457.2	754.39	1.606	
28,100.0	7,903.5	27,746.8	7,903.5	383.7	379.6	90.00	-18,430.5	7,530.6	1,211.6	453.5	758.18	1.598	
28,200.0	7,903.5	27,846.8	7,903.5	385.6	381.5	90.00	-18,525.0	7,563.2	1,211.6	449.7	761.96	1.590	
28,300.0	7,903.5	27,946.8	7,903.5	387.5	383.4	90.00	-18,619.5	7,595.8	1,211.6	445.9	765.74	1.582	
28,400.0	7,903.5	28,046.8	7,903.5	389.4	385.3	90.00	-18,714.1	7,628.4	1,211.6	442.1	769.52	1.575	
28,500.0	7,903.5	28,146.8	7,903.5	391.3	387.2	90.00	-18,808.6	7,661.0	1,211.7	438.4	773.30	1.567	
28,600.0	7,903.5	28,246.8	7,903.5	393.2	389.1	90.00	-18,903.1	7,693.6	1,211.7	434.6	777.08	1.559	
28,700.0	7,903.5	28,346.8	7,903.5	395.1	391.0	90.00	-18,997.7	7,726.2	1,211.7	430.8	780.86	1.552	
28,800.0	7,903.5	28,446.8	7,903.5	397.0	392.9	90.00	-19,092.2	7,758.8	1,211.7	427.0	784.64	1.544	
28,900.0	7,903.5	28,546.8	7,903.5	398.9	394.8	90.00	-19,186.8	7,791.4	1,211.7	423.3	788.42	1.537	
29,000.0	7,903.5	28,646.8	7,903.5	400.8	396.7	90.00	-19,281.3	7,824.0	1,211.7	419.5	792.20	1.530	
29,100.0	7,903.5	28,746.8	7,903.5	402.7	398.6	90.00	-19,375.8	7,856.6	1,211.7	415.7	795.98	1.522	
29,200.0	7,903.5	28,846.8	7,903.5	404.6	400.5	90.00	-19,470.4	7,889.2	1,211.7	411.9	799.76	1.515	
29,300.0	7,903.5	28,946.8	7,903.5	406.5	402.4	90.00	-19,564.9	7,921.8	1,211.7	408.2	803.53	1.508	
29,400.0	7,903.5	29,046.8	7,903.5	408.4	404.3	90.00	-19,659.4	7,954.4	1,211.7	404.4	807.31	1.501	
29,500.0	7,903.5	29,146.8	7,903.5	410.2	406.2	90.00	-19,754.0	7,987.0	1,211.7	400.6	811.09	1.494	Level 2
29,600.0	7,903.5	29,246.8	7,903.5	412.1	408.1	90.00	-19,848.5	8,019.6	1,211.7	396.9	814.86	1.487	Level 3
29,700.0	7,903.5	29,346.8	7,903.5	414.0	410.0	90.00	-19,943.1	8,052.2	1,211.7	393.1	818.64	1.480	Level 2
29,800.0	7,903.5	29,446.8	7,903.5	415.9	411.9	90.00	-20,037.6	8,084.8	1,211.7	389.3	822.41	1.473	Level 3
29,900.0	7,903.5	29,546.8	7,903.5	417.8	413.8	90.00	-20,132.1	8,117.4	1,211.7	385.5	826.19	1.467	Level 3, SF
30,000.0	7,903.5	29,553.7	7,903.5	419.7	413.9	90.00	-20,138.7	8,119.7	1,215.3	406.3	808.95	1.502	
30,033.7	7,903.5	29,553.7	7,903.5	420.4	413.9	90.00	-20,138.7	8,119.7	1,218.4	418.8	799.60	1.524	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL 1332.5' & 27' KB @ 1359.5usft (O
Offset Depths are relative to Offset Datum
Central Meridian is -79.5000000

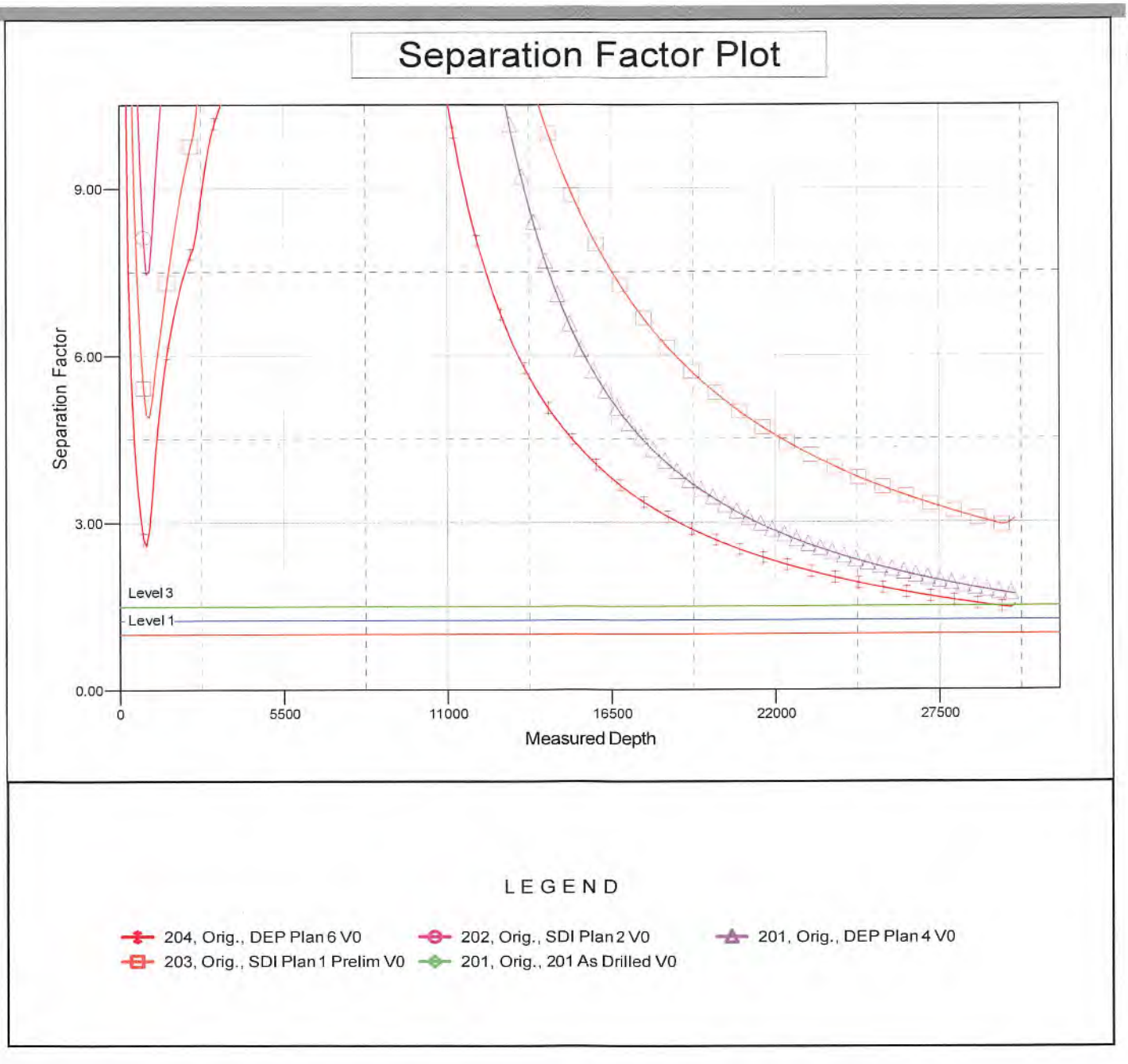
Coordinates are relative to: 205 - Slot 205
Coordinate System is US State Plane 1983, West Virginia Northern Zone
Grid Convergence at Surface is: -0.43°



Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 205 - Slot 205
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Reference Site:	Johnson TFP40	**MD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	205	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 5	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL 1332.5' & 27' KB @ 1359.5usft (O
Offset Depths are relative to Offset Datum
Central Meridian is -79.5000000

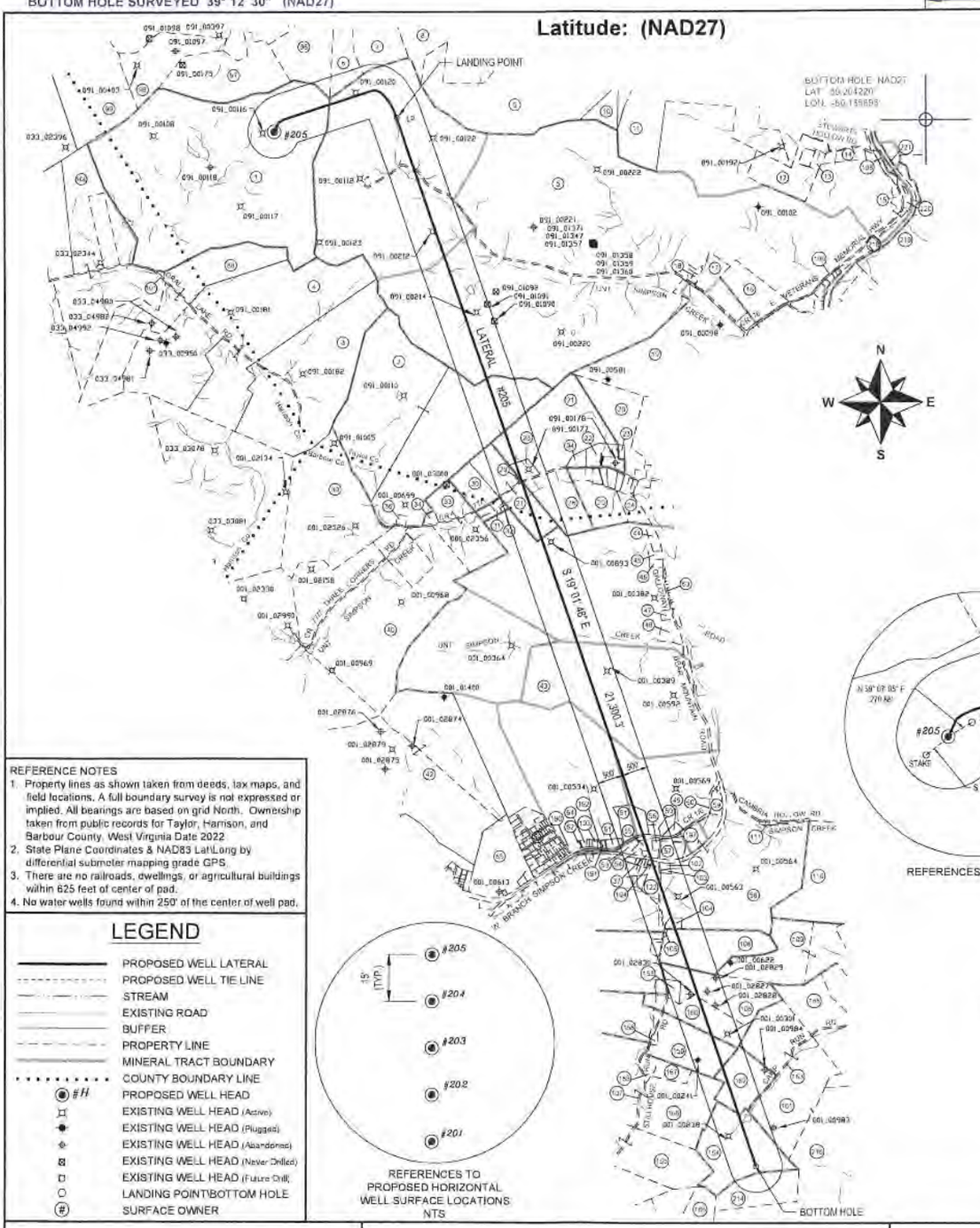
Coordinates are relative to: 205 - Slot 205
Coordinate System is US State Plane 1983, West Virginia Northern Zone
Grid Convergence at Surface is: -0.43°



SURFACE HOLE SURVEYED 39° 17' 30" (NAD27)
BOTTOM HOLE SURVEYED 39° 12' 30" (NAD27)

822'
3,164'

Latitude: (NAD27)



(NAD83-WVN) US SURVEY FT.	
TOP HOLE	
N) 277031.722	
E) 1779051.662	
LANDING POINT	
N) 277304.350	
E) 1781413.030	
BOTTOM HOLE	
N) 257168.210	
E) 1788358.230	

(NAD83-LAT/LONG) DECIMAL	
TOP HOLE	
N) 39.258553	
E) -80.159061	
LANDING POINT	
N) 39.259460	
E) -80.160729	
BOTTOM HOLE	
N) 39.204315	
E) -80.135698	

(UTM, NAD83) METER	
TOP HOLE	
N) 4345810.424	
E) 571090.244	
LANDING POINT	
N) 4345905.447	
E) 572408.296	
BOTTOM HOLE	
N) 4339805.781	
E) 574626.235	

1,399'

12,048'

Longitude: (NAD27)

REFERENCE NOTES
1. Property lines as shown taken from deeds, tax maps, and field locations. A full boundary survey is not expressed or implied. All bearings are based on grid North. Ownership taken from public records for Taylor, Harrison, and Barbour County, West Virginia Date 2022
2. State Plane Coordinates & NAD83 Lat\Long by differential submeter mapping grade GPS.
3. There are no railroads, dwellings, or agricultural buildings within 625 feet of center of pad.
4. No water wells found within 250' of the center of well pad.

LEGEND

- PROPOSED WELL LATERAL
- PROPOSED WELL TIE LINE
- STREAM
- EXISTING ROAD
- BUFFER
- PROPERTY LINE
- MINERAL TRACT BOUNDARY
- COUNTY BOUNDARY LINE
- #H PROPOSED WELL HEAD
- EXISTING WELL HEAD (Active)
- EXISTING WELL HEAD (Plugged)
- EXISTING WELL HEAD (Abandoned)
- EXISTING WELL HEAD (Never Drilled)
- EXISTING WELL HEAD (Future Drill)
- LANDING POINT\BOTTOM HOLE
- (#) SURFACE OWNER

FILE#: 22078-001
SHEET#: 1 of 3
SCALE: 1" = 3000'
TICK SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SOURCE OF ELEVATION: WV-RTN CORS STATION

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT 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 DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: 9/29/22
P.S. #2361: Herbert L. Parsons, III P.S.

HERBERT L PARSONS III
REGISTERED
No. 2361
STATE OF
WEST VIRGINIA
PROFESSIONAL SURVEYOR

BOTTOM HOLE SURVEYED 80° 07' 30" (NAD27)
SURFACE HOLE SURVEYED 80° 10' 00" (NAD27)

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: SEPTEMBER 29, 2022
OPERATOR'S WELL #: JOHNSON TFP-40 # 205 MOD
API WELL #: 47 (STATE) 091 (COUNTY) 01370 (PERMIT)

Well Type: ☐ Oil ☐ Waste Disposal ☒ Production ☐ Deep
☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: SIMPSON CREEK
COUNTY / DISTRICT: TAYLOR CO. FLEMINGTON DISTRICT
SURFACE OWNER: RENEE JOHNSON
OIL & GAS ROYALTY OWNER: SEE WW-6A1

ELEVATION: 1,332.5'
QUADRANGLE: ROSEMONT, WV
ACREAGE: 284 ±
ACREAGE: 284 ±

10/21/2022

☒ DRILL ☐ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☒ FRACTURE OR STIMULATE
☐ PLUG OFF FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON
☐ CLEAN OUT & REPLUG ☐ OTHER CHANGE SPECIFY:

TARGET FORMATION: MARCELLUS
ESTIMATED DEPTH: TVD: 7,903.5' TMD: 30,033.7'

WELL OPERATOR: ARSENAL RESOURCES
ADDRESS: 6031 WALLACE ROAD EXTENSION # 300
CITY: WEXFORD STATE: PA ZIP: 15090

DESIGNATED AGENT: NATHAN SKEEN
ADDRESS: 633 MAIN STREET
CITY: BRIDGEPORT STATE: WV ZIP: 26330

SURFACE PARCEL OWNER INFORMATION

ID#	DEP#	PARCEL NUMBER	OWNER NAME
1	033	17-15-0351-0027-0000	JOHNSON RENEE
5	091	46-04-0011-0001-0000	CFS FARMS LIMITED LIABILITY CO
2	001	01-09-0009-0002-0000	STEWART FARM LLC
21	091	46-04-0011-0005-0005	BECKWITH LUMBER COMPANY
26	091	46-04-0011-0005-0003	SEESE BRENDA KAY & JOANN V SMITH & SURV
27	091	46-04-0011-0003-0000	PROPST PAUL
43	001	01-09-0009-0023-0000	WOLFE LARRY ROBERT WOLFE & STANLEY WOLFE ET UXES: HWS
51	001	01-09-0009-0022-0003	KRIZNER FRANK A & RENEE B HWS
197	001	01-09-0012-0013-0002	FARRIS VERNIE L/E THEN RAYMOND E FARRIS
55	001	01-09-0012-0015-0000	TR MT VERNON BAP CHURCH
37	001	01-09-0012-0013-0000	FARRIS VERNIE L/E
194	001	01-09-012B-0046-0001	SYLVESTER ANTHONY
122	001	01-09-012B-0046-0000	CROSTON ELSWORTH J
58	001	01-09-0012-0010-0000	VUKOVICH ROBERT K & SHELIA MARIE VUKOVICH & CAROL A SPEAR
104	001	01-09-0012-0052-0000	MONTGOMERY BRADFORD EUGENE & GEORGIA, HWS
106	001	01-09-0012-0051-0002	BECKWITH LUMBER CO
108	001	01-09-0012-0052-0001	TRIPLE L LAND & MINERALS
160	001	01-09-0012-0054-0000	MARTIN ROBERT E
159	001	01-09-0012-0050-0001	STREETS BRENDA K ET ALS
162	001	01-09-0012-0055-0000	CORDER WAYNE D & JEANETTE S, HWS
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214	001	01-04-0003-0021-0000	BURNER GARNET HRS C/O BEVERLY J POE
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98	091	46-04-0007-0009-0000	CEQUEL III COMMUNICATIONS
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6	091	46-04-0008-0022-0000	GRIPPIN JAMES S & ELAINE M
7	091	46-04-0008-0023-0000	GRAY RANDALL & RITA
8	091	46-04-0008-0035-0000	MARKS BETTY P
9	091	46-04-0008-0029-0000	COALQUEST DEVELOPMENT LLC
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12	091	46-04-0008-0083-0000	PRATT JANICE & CHARLENE MOORE & CURTIS & DAVID STEWART
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219	091	46-04-0009-0039-0000	BRAKE WILLIAM CLARK & CRYSTAL RANEAU & SURV
220	091	46-04-0009-0035-0000	PRITT HOY LYNN & PATRICIA LYNN & SURV
221	091	46-04-0009-0032-0000	MARTIN ROBERT E
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61	001	01-09-0012-0004-0000	SWIGER ARGYLE C
191	001	01-09-0012-0004-0004	TINGLER RUSSEL J
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193	001	01-09-012A-0096-0000	BARTLETT MICHAEL ALLEN SR
64	001	01-09-012A-0091 thru 94 & 107	CRISS DAVID A
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166	001	01-09-0012-0060-0000	MARTIN ROBERT E
167	001	01-09-0022-0009-0000	STREETS FRANKLIN D & BRENDA (WROS)
168	001	01-09-0012-0060-0004	MCGUNE CLAYTON & CHARLOTTE WS
107		RIGHT-OF-WAY	COUNTY ROUTE 7/2 STILLHOUSE RUN ROAD
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4. No water wells found within 250' of the center of well pad.

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- PROPOSED WELL LATERAL
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- STREAM
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- BUFFER
- PROPERTY LINE
- MINERAL TRACT BOUNDARY
- COUNTY BOUNDARY LINE
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- EXISTING WELL HEAD (Active)
- EXISTING WELL HEAD (Plugged)
- EXISTING WELL HEAD (Abandoned)
- EXISTING WELL HEAD (Never Drilled)
- EXISTING WELL HEAD (Future Drill)
- LANDING POINT\BOTTOM HOLE
- SURFACE OWNER

FILE#: 22078-001
SHEET#: 2 of 3
SCALE: 1" = 3000'
TICK SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SOURCE OF ELEVATION: WV-RTN CORS STATION

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT 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 DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: Herbert L. Parsons III 9/29/22
P.S. #2361: Herbert L. Parsons, III P.S.

HERBERT L PARSONS III REGISTERED No. 2361 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: SEPTEMBER 29, 2022
OPERATOR'S WELL #: JOHNSON TFP-40 # 205 MOD
API WELL #: 47 (STATE) 091 (COUNTY) 01370 (PERMIT)

Well Type: ☐ Oil ☐ Waste Disposal ☒ Production ☐ Deep ☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: SIMPSON CREEK
COUNTY / DISTRICT: TAYLOR CO. FLEMINGTON DISTRICT
SURFACE OWNER: RENEE JOHNSON
OIL & GAS ROYALTY OWNER: SEE WW-6A1

ELEVATION: 1,332.5'
QUADRANGLE: ROSEMONT, WV
ACREAGE: 284 ±
ACREAGE: 284 ±

10/21/2022

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CHARLESTON, WV 25304

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JOHNSON TFP-40
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API WELL #: 47 (STATE) 091 (COUNTY) 01370 (PERMIT)

Well Type: ☐ Oil ☐ Waste Disposal ☒ Production ☐ Deep
☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: SIMPSON CREEK
ELEVATION: 1,332.5'
COUNTY / DISTRICT: TAYLOR CO. FLEMINGTON DISTRICT
QUADRANGLE: ROSEMONT, WV
SURFACE OWNER: RENEE JOHNSON
ACREAGE: 284 ± 10/21/2022
OIL & GAS ROYALTY OWNER: SEE WW-6A1
ACREAGE: 284 ±

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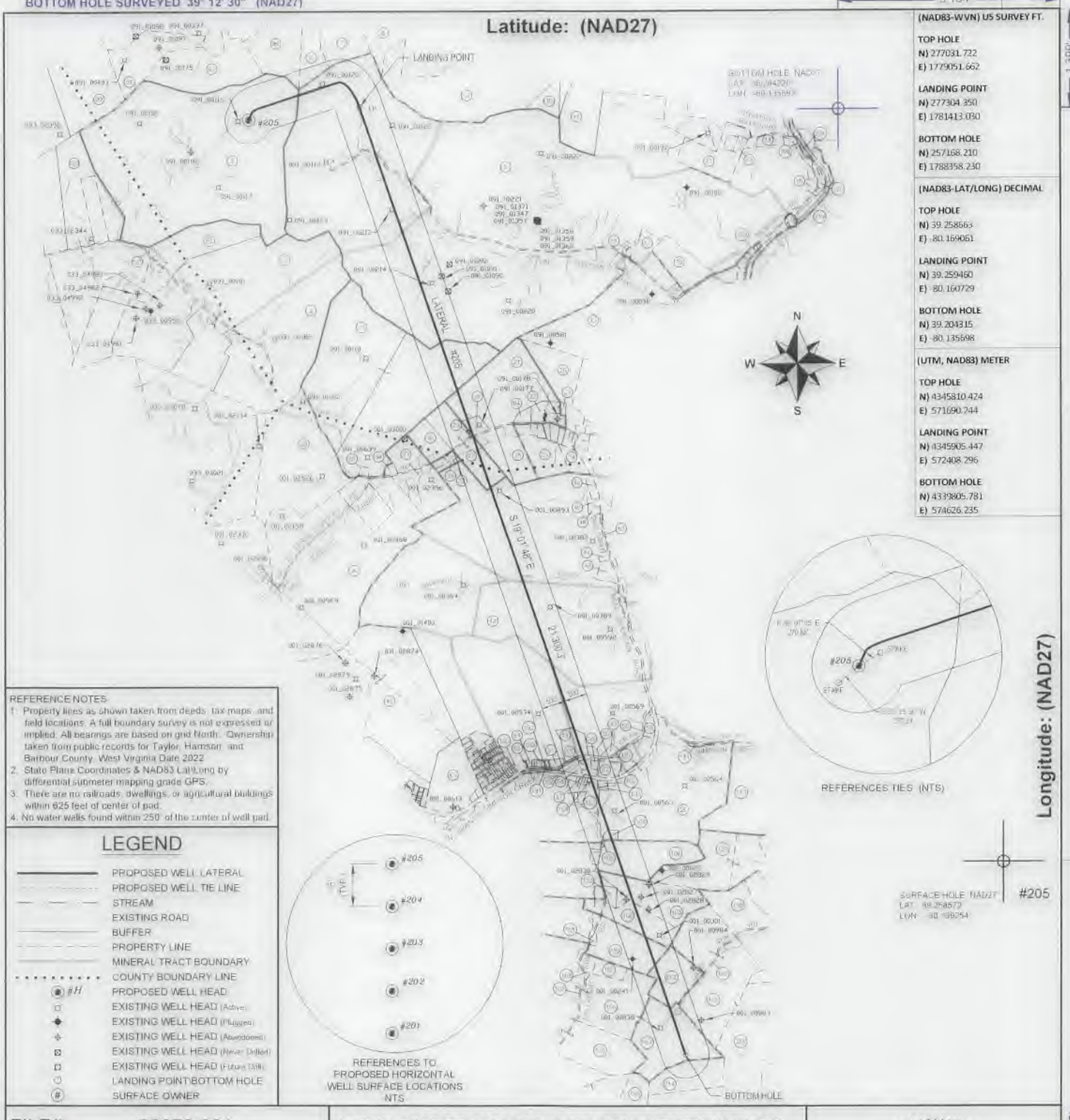
ADDRESS: 6031 WALLACE ROAD EXTENSION # 300
CITY: WEXFORD STATE: PA ZIP: 15090

DESIGNATED AGENT: NATHAN SKEEN
ADDRESS: 633 MAIN STREET
CITY: BRIDGEPORT STATE: WV ZIP: 26330

SURFACE HOLE SURVEYED 39° 17' 30" (NAD27)
BOTTOM HOLE SURVEYED 39° 12' 30" (NAD27)

822'
3,164'



(NAD83-WVN) US SURVEY FT.

TOP HOLE
N) 277031.722
E) 1779051.662

LANDING POINT
N) 277304.350
E) 1781413.030

BOTTOM HOLE
N) 257168.210
E) 1788358.230

(NAD83-LAT/LONG) DECIMAL

TOP HOLE
N) 39.258863
E) -80.169061

LANDING POINT
N) 39.259460
E) -80.160729

BOTTOM HOLE
N) 39.204315
E) -80.135598

(UTM, NAD83) METER

TOP HOLE
N) 4345810.424
E) 571690.244

LANDING POINT
N) 4345905.447
E) 572408.296

BOTTOM HOLE
N) 4339805.781
E) 574626.235

REFERENCE NOTES:
1. Property lines as shown taken from deeds, tax maps, and field locations. A full boundary survey is not expressed or implied. All bearings are based on grid North. Ownership taken from public records for Taylor, Harrison, and Barbour County, West Virginia Date 2022.
2. State Plane Coordinates & NAD83 Lat/Long by differential submeter mapping grade GPS.
3. There are no railroads, dwellings, or agricultural buildings within 625 feet of center of pad.
4. No water wells found within 250' of the center of well pad.

LEGEND

- PROPOSED WELL LATERAL
- PROPOSED WELL TIE LINE
- STREAM
- EXISTING ROAD
- BUFFER
- PROPERTY LINE
- MINERAL TRACT BOUNDARY
- COUNTY BOUNDARY LINE
- #H PROPOSED WELL HEAD
- EXISTING WELL HEAD (Active)
- EXISTING WELL HEAD (Plugged)
- EXISTING WELL HEAD (Abandoned)
- EXISTING WELL HEAD (Never Drilled)
- EXISTING WELL HEAD (Future Use)
- LANDING POINT/BOTTOM HOLE
- (#) SURFACE OWNER

FILE#: 22078-001
SHEET#: 1 of 3
SCALE: 1" = 3000'
TICK SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SOURCE OF ELEVATION: WV-RTN CORS STATION

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT 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 DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: 9/29/22
P.S. #2361: Herbert L. Parsons, III P.S.

HERBERT L PARSONS III
REGISTERED
No. 2361
STATE OF
WEST VIRGINIA
PROFESSIONAL SURVEYOR

BOTTOM HOLE SURVEYED 80° 07' 30" (NAD27)
SURFACE HOLE SURVEYED 80° 10' 00" (NAD27)

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: SEPTEMBER 29, 2022
JOHNSON TFP-40
OPERATOR'S WELL #: # 205 MOD

API WELL #: 47 (STATE) 091 (COUNTY) 01370 (PERMIT)

Well Type: ☐ Oil ☐ Waste Disposal ☒ Production ☐ Deep
☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow

WATERSHED: SIMPSON CREEK
ELEVATION: 1,332.5'
COUNTY / DISTRICT: TAYLOR CO. FLEMINGTON DISTRICT
QUADRANGLE: ROSEMONT, WV
SURFACE OWNER: RENEE JOHNSON
ACREAGE: 284 ±
OIL & GAS ROYALTY OWNER: SEE WW-6A1
ACREAGE: 284 ±

10/21/2022

☒ DRILL ☐ CONVERT ☐ DRILL DEEPER ☐ REDRILL ☒ FRACTURE OR STIMULATE
☐ PLUG OFF FORMATION ☐ PERFORATE NEW FORMATION ☐ PLUG & ABANDON
☐ CLEAN OUT & REPLUG ☐ OTHER CHANGE SPECIFY:

TARGET FORMATION: MARCELLUS
ESTIMATED DEPTH: TVD: 7,903.5' TMD: 30,033.7'

WELL OPERATOR: ARSENAL RESOURCES
ADDRESS: 6031 WALLACE ROAD EXTENSION # 300
CITY: WEXFORD STATE: PA ZIP: 15090

DESIGNATED AGENT: NATHAN SKEEN
ADDRESS: 633 MAIN STREET
CITY: BRIDGEPORT STATE: WV ZIP: 26330

4709101370

Attachment to WW-6A1, Johnson 205

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
1 (00006031)	BLANCH WATSON(WIDOW) DEZZIE BUTTS & TERRY H BUTTS(HER HUSBAND) DULCIE STARKEY(WIDOW) MARTHA ROBERTS(WIDOW) GAIL WILSON(WIDOW) MARY BARTLETT(WIDOW) JAMES BARTLETT & ELSA BARTLETT(HIS WIFE) ERNESTINE WHITE & JOHN WHITE(HER HUSBAND) LEONA CHANDLER(WIDOW) AND ELLENOR WHITMAN & PAUL WHITMAN (HER HUSBAND)	Union Drilling Inc	12.50%	32/220 and 1030/412	284
	Union Drilling Inc	Equitable Resources Exploration		1189/1209	
	Equitable Resources Exploration	Equitable Resources Energy Co		1199/642	
	Equitable Resources Energy Co	Enervest East LMTD Partnership		22/181	
	Enervest East LMTD Partnership	The Houston Exploration Co		1359/820	
	The Houston Exploration Co	Seneca Upshur Petroleum Inc		1367/1084	
	Seneca-Upshur Petroleum, Inc.	Seneca-Upshur Petroleum LLC		447/129	
5 P/O (00005213)	Chester Sinsel and Frances Sinsel his wife	Union Drilling Inc AND Allerton Miller	12.50%	35/488	1,080
	Allerton Miller	Union Drilling Inc		98/11	
	Union Drilling Inc	Equitable Resources Exploration		9/427	
	Equitable Resources Exploration	Equitable Resources Energy		10/079	
	Equitable Resources Energy Co	Enervest East LP		250/359	
	Enervest East LP	The Houston Exploration Co		27/99	
	The Houston Exploration Co	Seneca Upshur Petroleum Inc		27/426	
	Seneca-Upshur Petroleum, Inc.	Seneca-Upshur Petroleum LLC		16/637 also 447/129	
5 P/O (00006028)	A Brooks Fleming and Winnie Fleming his wife and Georgia L Fleming, widow	Union Drilling Inc AND Allerton Miller	12.50%	33/79	890
	Allerton Miller	Union Drilling Inc		98/11	
	Union Drilling Inc	Equitable Resources Exploration		9/427	
	Equitable Resources Exploration	Equitable Resources Energy		10/079	
	Equitable Resources Energy Co	Enervest East LP		250/359	

Attachment to WW-6A1, Johnson 205

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
	Enervest East LP	The Houston Exploration Co		27/99	
	The Houston Exploration Co	Seneca Upshur Petroleum Inc		27/426	
	Seneca-Upshur Petroleum, Inc.	Seneca-Upshur Petroleum LLC		447/129	
2 (00008235)	John F Stewart	Petro-Lewis Corporation	12.50%	33/250 and 75/154	200
	Petro-Lewis Corporation	Partnership Properties Co		77/226	
	Partnership Properties Co	Eastern American Energy Corporation		95/112	
	Eastern American Energy Corporation	Energy Corporation of America		438/429	
	Energy Corporation of America	Greylock Production LLC		178/401	
	Greylock Production, LLC	Mar Key, LLC		179/96	
21, 28, 26 (00008265)	Ethel A Tomblin single and Bessie T Knight widow	Petro-Lewis Corporation	12.50%	33/254	94
	Petro-Lewis Corporation	Partnership Properties Co		3/176	
	Partnership Properties Co	Eastern American Energy Corporation		4/381	
	Eastern American Energy Corporation	Energy Corporation of America		16/488	
	Energy Corporation of America	Greylock Production LLC		36/618	
	Greylock Production LLC	Mar Key, LLC		37/8	
27 (00008900)	Paul Propst	Mar Key, LLC	13.00%	70/280	34.71
43 P/O (00005950)	Lillian Wilson Post	Cumberland and Allegheny Gas Company	12.50%	40/242	400
	Cumberland and Allegheny Gas Company	Union Drilling Inc AND Allerton Miller		46/347	
	Allerton Miller	Union Drilling Inc		98/11	
	Union Drilling Inc	Equitable Resources Exploration		325/219	
	Equitable Resources Exploration	Equitable Resources Energy		328/127	
	Equitable Resources Energy Co	Fuel Resources Production & Development		116/81	
	Fuel Resources Production & Development	The Houston Exploration Co		383/187	
	The Houston Exploration Co	Seneca Upshur Petroleum Inc		404/381	

Attachment to WW-6A1, Johnson 205

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
	Seneca-Upshur Petroleum, Inc.	Seneca-Upshur Petroleum LLC		447/129	
43 P/O (00005894)	Virginia C McDonald	Union Drilling Inc AND Allerton Miller	12.50%	47/434	177
	Allerton Miller	Union Drilling Inc		98/11	
	Union Drilling Inc	Equitable Resources Exploration		325/219	
	Equitable Resources Exploration	Equitable Resources Energy		328/171	
	Equitable Resources Energy Co	Fuel Resources Production & Development		116/81	
	Equitable Resources Energy Co	Enervest East Limited Partnership		129/524	
	Enervest East Limited Partnership	The Houston Exploration Co		138/1	
	Fuel Resources Production & Development	The Houston Exploration Co		383/187	
	The Houston Exploration Co	Seneca Upshur Petroleum Inc		404/381	
	Seneca-Upshur Petroleum, Inc.	Seneca-Upshur Petroleum LLC		447/129	
51, 197, 55, 56, 37, 194, 122, 58, 104 (00005895)	George C Law; Guy W and Lara M Law; Edison O and Betsy Law; Zella and BR Bond; Thomas A Helmick; Oris and Wanda Helmick	Cumberland and Allegheny Gas Company	12.50%	40/240	313
	Cumberland and Allegheny Gas Company	Union Drilling Inc		46/347	
	Union Drilling Inc	Equitable Resources Exploration		325/219	
	Equitable Resources Exploration	Equitable Resources Energy Comp		328/171	
	Equitable Resources Energy Co	Fuel Resources Production & Development		116/81	
	Equitable Resources Energy Co	Enervest East Limited Partnership		129/524	

Attachment to WW-6A1, Johnson 205

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
	Enervest East Limited Partnership	The Houston Exploration Co		138/1	
	Fuel Resources Production & Development	The Houston Exploration Co		383/187	
	The Houston Exploration Co	Seneca Upshur Petroleum Inc		404/381	
	Seneca-Upshur Petroleum, Inc.	Seneca-Upshur Petroleum LLC		447/129	
106 (00005696)	MABEL CLEAVENGER	Cumberland and Allegheny Gas Company	12.5	46/405	100
	Cumberland and Allegheny Gas Company	Union Drilling Inc AND Allerton Miller		46/347	
	Allerton Miller	Union Drilling Inc		98/11	
	Union Drilling Inc	Equitable Resources Exploration		325/219	
	Equitable Resources Exploration	Equitable Resources Energy		328/171	
	Equitable Resources Energy Co	Fuel Resources Production & Development		116/81	
	Equitable Resources Energy Co	Enervest East Limited Partnership		129/524	
	Enervest East Limited Partnership	The Houston Exploration Company		138/1	
	Fuel Resources Production & Development	The Houston Exploration Company		136/162	
	The Houston Exploration Company	Seneca-Upshur Petroleum LLC		447/523	
	Seneca-Upshur Petroleum, Inc.	Seneca-Upshur Petroleum LLC		447/129	
108, 160 00008912	TRIPLE L Land and Minerals	Mar Key, LLC	12.5	184/591	90.75
159 158 00005909	Charles Banish & Bonnie Banish his wife	Cumberland and Allegheny Gas Company	12.5	46/401	55
	Cumberland and Allegheny Gas Company	Union Drilling Inc AND Allerton Miller		46/347	
	Allerton Miller	Union Drilling Inc		98/11	
	Union Drilling Inc	Equitable Resources Exploration		325/219	
	Equitable Resources Exploration	Equitable Resources Energy		328/171	

Attachment to WW-6A1, Johnson 205

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
	Equitable Resources Energy Co	Fuel Resources Production & Development		116/81	
	Equitable Resources Energy Co	Enervest East Limited Partnership		129/524	
	Enervest East Limited Partnership	The Houston Exploration Company		138/1	
	Fuel Resources Production & Development	The Houston Exploration Company		136/162	
	The Houston Exploration Company	Seneca-Upshur Petroleum LLC		139/48	
	Seneca-Upshur Petroleum, Inc.	Seneca-Upshur Petroleum LLC		447/129	
162 (00007998)	Wayne Dale Corder	Mar Key, LLC	15	178/315	26
164 (00005951)	James B Corder and Claribell Corder, his wife	Union Drilling Inc and Allerton Miller	12.5	70/25	64
	Allerton Miller	Union Drilling Inc		98/11	
	Union Drilling Inc	Equitable Resources Exploration		325/219	
	Equitable Resources Exploration	Equitable Resources Energy		328/171	
	Equitable Resources Energy Co	Fuel Resources Production & Development		116/81	
	Equitable Resources Energy Co	Enervest East Limited Partnership		129/524	
	Enervest East Limited Partnership	The Houston Exploration Co		138/1	
	Fuel Resources Production & Development	The Houston Exploration Co		383/187	
	The Houston Exploration Co	Seneca Upshur Petroleum Inc		404/381	
	Seneca-Upshur Petroleum, Inc.	Seneca-Upshur Petroleum LLC		447/129	

4709101370 MOD

ARSENAL RESOURCES

People Powered. Asset Strong.

October 12, 2022

West Virginia Department of Environmental Protection
Office of Oil and Gas
ATTN: Taylor Brewer
601 57th Street SE
Charleston, WV 25304

RE: Johnson TFP 40 205, API# 47-091-01370 – Expedited Modification due to well extension and spacing changes

Dear Mr. Brewer,

Enclosed please find the modification for the Johnson TFP 40 205, (API# 47-091-01370). This permit is being modified due to adjusting the wellbore spacing and moving it approximately 100 feet to the west. The wellhead locations remain the same as the current permit. The well is also being extended in lateral length. This well was permitted to 28,841 feet. The modification request is to increase the total measured depth to 30,034 feet. Additional leases under the additional section are shown on the revised WW-6A1.

Included are the following updated forms:

- Plat
- WW-6B
- Wellbore Schematic
- WW-6A1, Lease Information
- Area of Review Report
- Site Safety Plan
- Notification of Application

RECEIVED
Office of Oil and Gas
OCT 14 2022
WV Department of
Environmental Protection

Should you have any questions or need any additional information, please feel free to contact me by phone or email.

Sincerely,

Dave Boyer
Director of Geology & Development Planning
(c) 724-759-0088
(e) dboyer@arsenalresources.com

6031 Wallace Road Ext. Suite 101
Wexford, PA 15090
P: 724-940-1100
F: 800-428-0981
www.arsenalresources.com

10/21/2022

Stansberry, Wade A <wade.a.stansberry@wv.gov>

Expedited Modification Horizontal H6A Well Work Permits API: (47-091-01369 & 47-091-01370)

1 message

Stansberry, Wade A <wade.a.stansberry@wv.gov> Tue, Oct 18, 2022 at 7:48 AM
To: Ross Schweitzer <rschweitzer@arsenalresources.com>, Dave Boyer <Dboyer@arsenalresources.com>, C Kinsey <ckinsey@wvassessor.com>, "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>, "Blevins, Cragin" <cragin.blevins@wv.gov>

I have attached a copy of the newly issued well permit numbers:

47-091-01369 - JOHNSON TFP 40 204
47-091-01370 - JOHNSON TFP 40 205

These will serve as your copy.

Thank you,

Wade A. Stansberry

Environmental Resource Specialist 3

West Virginia Department of Environmental Protection

Office of Oil & Gas

601 57th St. SE

Charleston, WV 25304

(304) 926-0499 ext. 41115

(304) 926-0452 fax

Wade.A.Stansberry@wv.gov

2 attachments

47-091-01369 - mod.pdf
9079K

47-091-01370 - mod.pdf
8293K

10/21/2022