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, August 8, 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-40 201
47-091-01367-00-00

Lateral Extension. Lateral Leg Length 13715' to 17846'. Total Measured Depth 22343.2' to 26475'. Updated Lease Chain

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-40 201
Farm Name: RENEE JOHNSON
U.S. WELL NUMBER: 47-091-01367-00-00
Horizontal 6A New Drill
Date Modification Issued: 08/08/2022

08/12/2022

WW-6B
(04/15)

API NO. 47- 091 - 01367
OPERATOR WELL NO. Johnson TFP 40 201
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: Johnson TFP 40 201 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 No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus Shale, Top- 7,824.5ft, Bottom- 7,916.5ft, Anticipated Thickness- 92ft, 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: 26,475 ft

11) Proposed Horizontal Leg Length: 17,846 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: _____

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Environmental Protection

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API NO. 47- 091 - 01367
OPERATOR WELL NO. Johnson TFP 40 201
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	Used		94	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	26,475	26,475	TOC @ 1,950
Tubing							
Liners							

Kenneth Greynolds Digitally signed by: Kenneth Greynolds DN: CN = Kenneth Greynolds email = Kenneth.L.Greynolds@wv.gov C = AD O = WVDEP OU = Oil and Gas Date: 2022.07.15 09:05:13 -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	15,920	11,500	Class A/50:50 Poz	1.29/1.34
Tubing					5,000		
Liners					N/A		

PACKERS

Kind:				
Sizes:				
Depths Set:				

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API NO. 47- 091 - 01367
OPERATOR WELL NO. Johnson TFP 40 201
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 pilot hole depth, then trip out of hole to run wireline logs. A cement kick-off plug will then be set from bottom of the pilot hole to the designed KOP. We will then drill off the cement plug and 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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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 1950' (+/- 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.

08/12/2022

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.

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.

Area of Review Report - __Johnson TFP 40 _____ Pad, ____201___ 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
Walter B Goodwin #2	091-00116	Union Drilling Inc.	Existing	39.25858	-80.169849	4560	Benson	NA
Goodwin 4	091-00118	Diversified Production LLC	Existing	39.256779	-80.173388	2480	Big Injun(Grnbr), Fifth	NA
Goff-Arnold #1	091-00181	Greylock Conventional LLC	Existing	39.249118	-80.171944	4600	Benson	NA
Charles Compton #3	001-02134	Alliance Petroleum Corp	Existing	39.239652	-80.168152	4829	Keener, Big Injun, Fourth, Benson	NA
John F Steward #1	001-02158	Diversified Production LLC	Existing	39.235591	-80.166388	5083	Benson, Bluestone Crk	NA
J/M Mosesso 32	001-00969	Diversified Production LLC	Existing	39.230265	-80.164906	4722	Big Injun, Riley, Benson	NA
Polino Enterprises Inc Coalquest 13	001-02876	Summit Appalachia Operating Company LLC	Existing	39.226745	-80.161163	1186	Lower Kittanning Coal	NA
Polino Enterprises Inc Coalquest 11A	001-02879	Summit Appalachia Operating Company LLC	Existing	39.225878	-80.160416	1014	Lower Kittanning Coal	NA
Polino Enterprises Inc Coalquest 12	001-02875	Summit Appalachia Operating Company LLC	Existing	39.22486	-80.160975	960	Lower Kittanning Coal	NA
O & A Goodwin 1	001-00553	Diversified Production LLC	Existing	39.215094	-80.156066	4718	Riley, Benson	NA

91-01367 MOD

ARSENAL RESOURCES

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Office of Oil and Gas
JUL 25 2022
WV Department of
Environmental Protection

SITE SAFETY PLAN

JOHNSON TFP 40 WELL PAD #201

911 Address:

4006 Green Valley Rd

Bridgeport, WV 26330

Kenneth Greynolds

Digitally signed by: Kenneth Greynolds
DN: CN = Kenneth Greynolds email = Kenneth.L.Greynolds@wv.gov C = AD O = WVDEP OU = Oil and Gas
Date: 2022.07.15 09:05:58 -04'00'

08/12/2022

SURFACE HOLE SURVEYED 39° 17' 30" (NAD27)
BOTTOM HOLE SURVEYED 39° 15' 00" (NAD27)

822'

8,459'

12,108'

14,781'

Latitude: (NAD27)

Longitude: (NAD27)

N
W E
S

(NAD83-WVN) US SURVEY FT.

TOP HOLE
N) 276971.722
E) 1779051.662

LANDING POINT
N) 275876.633
E) 1777228.570

BOTTOM HOLE
N) 259005.183
E) 1783046.610

(NAD83-LAT/LONG) DECIMAL

TOP HOLE
N) 39.258499
E) -80.169059

LANDING POINT
N) 39.255455
E) -80.175469

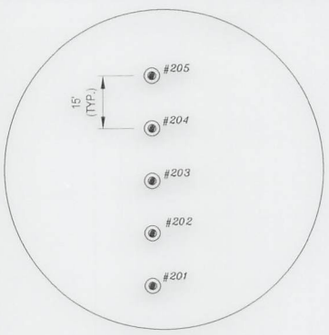
BOTTOM HOLE
N) 39.209253
E) -80.154489

(UTM, NAD83) METER

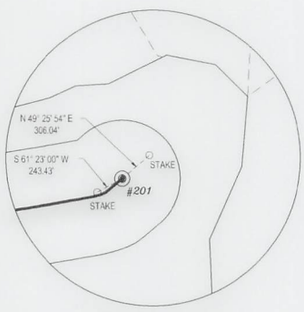
TOP HOLE
N) 4345792.144
E) 571690.548

LANDING POINT
N) 4345449.270
E) 571140.659

BOTTOM HOLE
N) 4340338.559
E) 572998.661



REFERENCES TO
PROPOSED HORIZONTAL
WELL SURFACE LOCATIONS
NTS



REFERENCES TIES (NTS)

SURFACE HOLE NAD27
LAT. 39.258407°
LON. -80.169253°

#201

BOTTOM HOLE NAD27
LAT. 39.209159°
LON. -80.154683°

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" = 4000'
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: 7/18/2022
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: JULY 18, 2022
JOHNSON TFP-40
OPERATOR'S WELL #: # 201

API WELL #: 47 (STATE) 091 (COUNTY) 01367 (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 ±

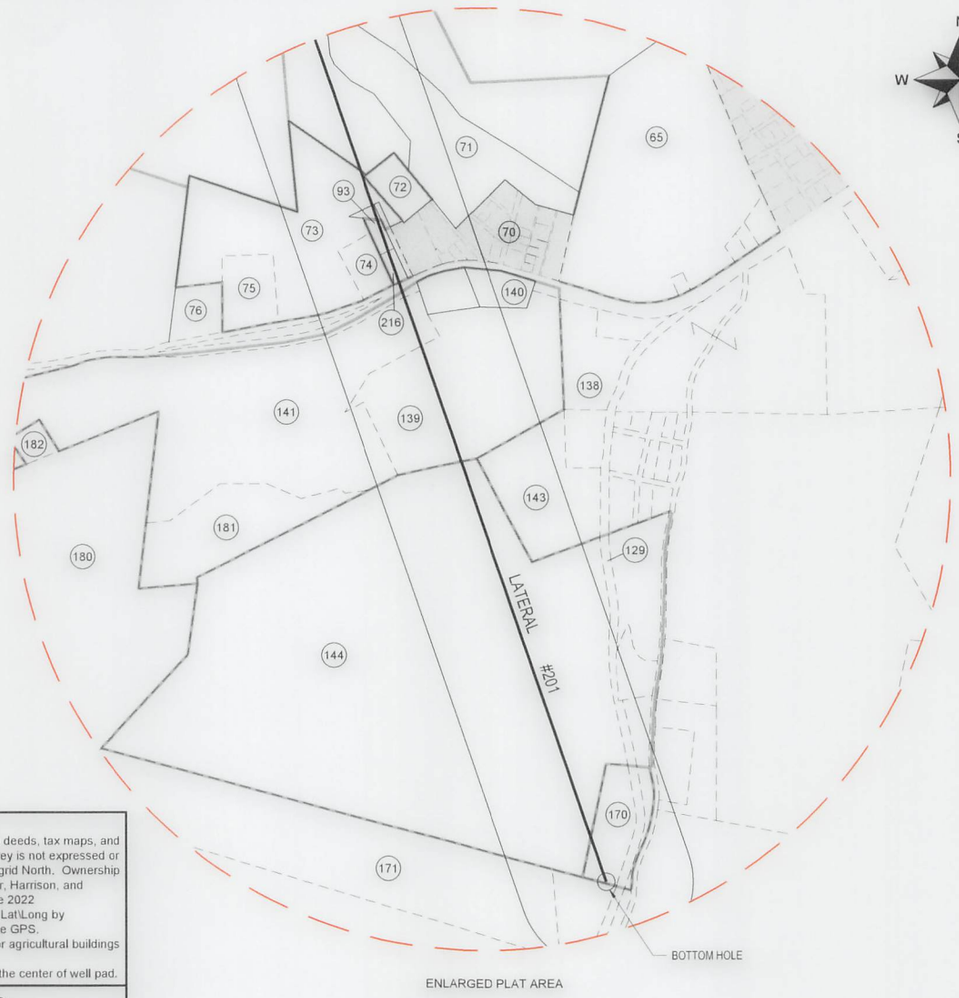
08/12/2022

☒ 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: 26,475.0'

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



ENLARGED PLAT AREA

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
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- EXISTING WELL HEAD (Never Drilled)
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- LANDING POINT\BOTTOM HOLE
- (#) SURFACE OWNER

FILE#: 22078-001
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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: JULY 18, 2022
JOHNSON TFP-40
OPERATOR'S WELL #: # 201

API WELL #: 47 (STATE) 091 (COUNTY) 01367 (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 ±

08/12/2022

☒ 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: 26,475.0'

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	17-15-0331-0027-0000	JOHNSON RENEE
88	033	17-15-0351-0010-0000	JOHNSON RENEE
4	033	17-15-0351-0012-0000	GCSTREAM LLC
3	033	17-15-0351-0013-0000	GCSTREAM LLC
86	033	17-15-0351-0023-0000	GCSTREAM LLC
39	001	01-09-0009-0001-0000	STEWART FARM LLC
81	001	01-09-0009-0019-0000	STEWART FARM LLC
40	001	01-09-0009-0020-0000	SEESE ROBERT & BRENDA HWS
80	001	01-09-0010-0002-0000	SMITH JO ANN V & GARY M BROWN JR (WS)
42	001	01-09-0011-0001-0000	POLINO ENTERPRISES INC
73	001	01-09-0012-0042-0000	FOSTER ERIC M & TRACI D WS
93	001	01-09-012C-0003-0000	ARBAUGH RITA
216	001	01-09-012C-0001-0000	LEHMAN DIANA LYNN
141	001	01-09-0012-0040-0000	ZBOSNIK DENNIS ALBIN
139	001	01-09-0012-0039-0000	ZBOSNIK DENNIS ALBIN
144	001	01-09-0012-0045-0001	MCCORD LLOYD JR & SANDRA
170	001	01-09-0012-0048-0000	HURST DELORES

ADJOINER PARCEL OWNER INFORMATION

ID#	DEP#	PARCEL NUMBER	OWNER NAME
2	001	01-09-0009-0002-0000	STEWART FARM LLC
5	091	46-04-0011-0001-0000	CFS FARMS LIMITED LIABILITY CO
6	091	46-04-0008-0022-0000	GRIPPIN JAMES S & ELAINE M & SURV
92		RIGHT-OF-WAY	COUNTY ROUTE 77/8 BARBOUR CORNER
35	001	01-09-0009-0020-0001	SMALLWOOD RUSSELL & ANGELA WRS
38	001	01-09-0009-0003-0000	STEWART FARM LLC
41	001	01-09-0009-0012-0001	POLINO ENTERPRISES INC
43	001	01-09-0009-0022-0000	WOLFE LARRY, ROBERT WOLFE & STANLEY WOLFE ET UXES, HWS
60		RIGHT-OF-WAY	COUNTY ROUTE 1/6 BEAR MOUNTAIN ROAD
65	001	01-09-0012-0027-0000	WOLFE LARRY MICHAEL
70	001	PLAN OF LOTS	BROWNTON PLAN OF LOTS
71	001	01-09-0012-0061-0000	CHARLTON-FRYER AMANDA S & TIMOTHY R CHARLTON L/E
72	001	01-09-0012-0060-0000	SCHIMANSKY STEVEN & DEBRA HWS
74	001	01-09-012C-0002-0000	FOSTER ERIC M & TRACI D WS
75	001	01-09-0012-0043-0000	TRADER PAUL L
76	001	01-09-0012-0041-0000	TRADER PAUL & LORETTA WRS
77	001	01-09-0011-0001-0002	BECKWITH LUMBER CO INC
79	033	17-15-0351-0031-0000	GCSTREAM LLC
82	001	01-09-0010-0001-0000	SMITH JO ANN V & GARY M BROWN JR (WS)
83	033	17-15-0351-0021-0000	GCSTREAM LLC
84	033	17-15-0351-0022-0000	GCSTREAM LLC
85	033	17-15-0351-0024-0000	GCSTREAM LLC
87	033	17-15-0351-0011-0000	GCSTREAM LLC
89	033	17-15-0351-0007-0000	WARDER ORAN LEE & JANICE L
96	091	46-04-0008-0021-0000	MILLARD CARLYLE G
97	091	46-04-0007-0027-0000	CEQUEL III COMMUNICATIONS
98	091	46-04-0007-0009-0000	CEQUEL III COMMUNICATIONS
99	091	46-04-0007-0008-0000	FRUM CLINTON A (HEIRS)
100	033	17-15-0351-0009-0000	JOHNSON RENEE
129	001	01-09-0022-0004-0000	MARPLE JAMES D & GENA F DOWELL WS
138	001	01-09-0012-0035-0000	TR PENTECOSTAL CHURCH OF GOD C/O EDWARD L BARKLEY SR
140	001	01-09-0012-0040-0001	ZBOSNIK DENNIS KEITH
143	001	01-09-0012-0037-0000	LIPSCOMB ANNA G MCCORD
171	001	01-09-0012-0046-0000	SHAHAN OKEY C
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180	001	01-09-0011-0006-0000	BEAR MOUNTAIN COAL CO KEYBANK N.A.-TRUST REAL ESTATE
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217	033	17-15-0351-0008-0000	WARDER ORAN LEE & JANICE L

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- LANDING POINT\BOTTOM HOLE
- (#) SURFACE OWNER

FILE#: 22078-001
SHEET#: 3 of 3
SCALE: 1" = 4000'
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: [signature] 7/18/2022
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: JULY 18, 2022
JOHNSON TFP-40
OPERATOR'S WELL #: # 201

API WELL #: 47 (STATE) 091 (COUNTY) (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 ± 08/12/2022
OIL & GAS ROYALTY OWNER: SEE WW-6A1
ACREAGE: 284 ±

☒ 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: 26,475.0'

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

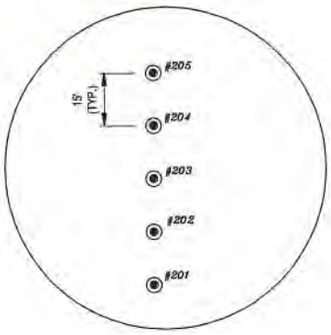
DESIGNATED AGENT: NATHAN SKEEN
ADDRESS: 633 MAIN STREET
CITY: BRIDGEPORT STATE: WV ZIP: 26330

SURFACE HOLE SURVEYED 39° 17' 30" (NAD27)
BOTTOM HOLE SURVEYED 39° 15' 00" (NAD27)

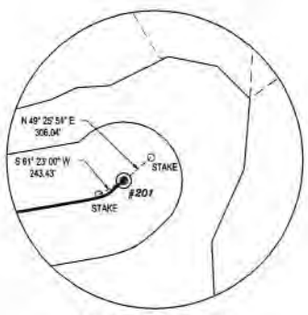
822'

8,459'

Latitude: (NAD27)



REFERENCES TO PROPOSED HORIZONTAL WELL SURFACE LOCATIONS NTS



REFERENCES TIES (NTS)

(NAD83-WVN) US SURVEY FT.	
TOP HOLE	
N) 276971.722	
E) 1779051.662	
LANDING POINT	
N) 275876.633	
E) 1777228.570	
BOTTOM HOLE	
N) 259005.183	
E) 1783046.610	

(NAD83-LAT/LONG) DECIMAL	
TOP HOLE	
N) 39.258499	
E) -80.169059	
LANDING POINT	
N) 39.255455	
E) -80.175469	
BOTTOM HOLE	
N) 39.209253	
E) -80.154489	

(UTM, NAD83) METER	
TOP HOLE	
N) 4345792.144	
E) 571690.548	
LANDING POINT	
N) 4345449.270	
E) 571140.659	
BOTTOM HOLE	
N) 4340338.559	
E) 572998.661	

12,108'

14,781'

Longitude: (NAD27)

SURFACE HOLE NAD27
LAT, 39.258407°
LON, -80.169253°

#201

BOTTOM HOLE NAD27
LAT, 39.209159°
LON, -80.154683°

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- EXISTING WELL HEAD (Future Drill)
- LANDING POINT\BOTTOM HOLE
- (#) SURFACE OWNER

FILE#: 22078-001
SHEET#: 1 of 3
SCALE: 1" = 4000'
TICK SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SOURCE OF ELEVATION: WV-RTN CORS STATION

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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

STATE OF WEST VIRGINIA MONTANI SEMPER LIBERI

DATE: JULY 18, 2022
OPERATOR'S WELL #: JOHNSON TFP-40 # 201
API WELL #: 47 (STATE) 091 (COUNTY) 01367 (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 ± 08/12/2022
ACREAGE: 284 ±

☒ 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: 26,475.0'

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

DESIGNATED AGENT: NATHAN SKEEN
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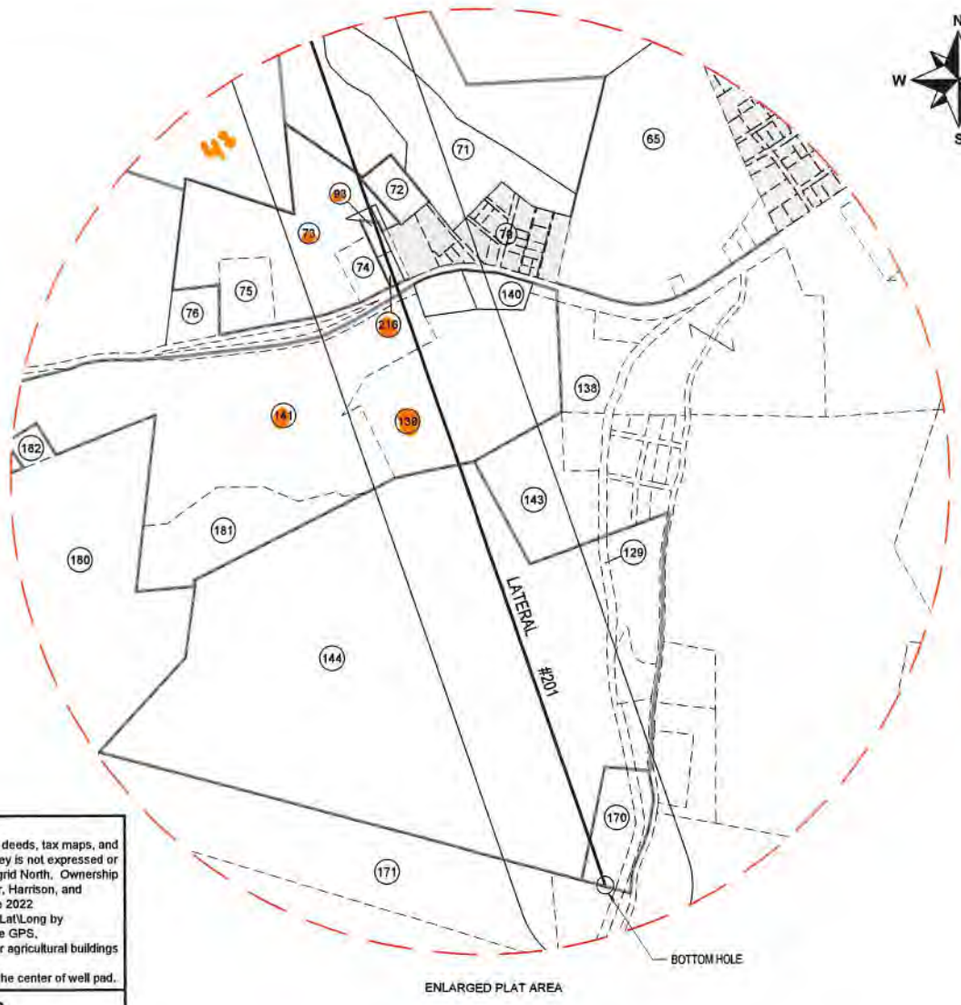

ENLARGED PLAT AREA

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FILE#: 22078-001
SHEET#: 2 of 3
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SURFACE OWNER: RENEE JOHNSON
OIL & GAS ROYALTY OWNER: SEE WW-6A1

ELEVATION: 1,332.5
QUADRANGLE: ROSEMONT, WV
ACREAGE: 284 ± 08/12/2022
ACREAGE: 284 ±

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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	17-15-0331-0027-0000	JOHNSON RENEE
88	033	17-15-0351-0010-0000	JOHNSON RENEE
4	033	17-15-0351-0012-0000	GCSTREAM LLC
3	033	17-15-0351-0013-0000	GCSTREAM LLC
86	033	17-15-0351-0023-0000	GCSTREAM LLC
39	001	01-09-0009-0001-0000	STEWART FARM LLC
81	001	01-09-0009-0019-0000	STEWART FARM LLC
40	001	01-09-0009-0020-0000	SEESE ROBERT & BRENDA HWS
80	001	01-09-0010-0002-0000	SMITH JO ANN V & GARY M BROWN JR (WS)
42	001	01-09-0011-0001-0000	POLINO ENTERPRISES INC
73	001	01-09-0012-0042-0000	FOSTER ERIC M & TRACI D WS
93	001	01-09-012C-0003-0000	ARBAUGH RITA
216	001	01-09-012C-0001-0000	LEHMAN DIANA LYNN
141	001	01-09-0012-0040-0000	ZBOSNIK DENNIS ALBIN
139	001	01-09-0012-0039-0000	ZBOSNIK DENNIS ALBIN
144	001	01-09-0012-0045-0001	MCCORD LLOYD JR & SANDRA
170	001	01-09-0012-0048-0000	HURST DELORES

ADJOINER PARCEL OWNER INFORMATION

ID#	DEP#	PARCEL NUMBER	OWNER NAME
2	001	01-09-0009-0002-0000	STEWART FARM LLC
5	091	46-04-0011-0001-0000	CFS FARMS LIMITED LIABILITY CO
6	091	46-04-0008-0022-0000	GRIPPIN JAMES S & ELAINE M & SURV
92		RIGHT-OF-WAY	COUNTY ROUTE 77/8 BARBOUR CORNER
35	001	01-09-0009-0020-0001	SMALLWOOD RUSSELL & ANGELA WRS
38	001	01-09-0009-0003-0000	STEWART FARM LLC
41	001	01-09-0009-0012-0001	POLINO ENTERPRISES INC
43	001	01-09-0009-0022-0000	WOLFE LARRY, ROBERT WOLFE & STANLEY WOLFE ET UXES, HWS
60		RIGHT-OF-WAY	COUNTY ROUTE 1/6 BEAR MOUNTAIN ROAD
65	001	01-09-0012-0027-0000	WOLFE LARRY MICHAEL
70	001	PLAN OF LOTS	BROWNTON PLAN OF LOTS
71	001	01-09-0012-0061-0000	CHARLTON-FRYER AMANDA S & TIMOTHY R CHARLTON L/E
72	001	01-09-0012-0060-0000	SCHIMANSKY STEVEN & DEBRA HWS
74	001	01-09-012C-0002-0000	FOSTER ERIC M & TRACI D WS
75	001	01-09-0012-0043-0000	TRADER PAUL L
76	001	01-09-0012-0041-0000	TRADER PAUL & LORETTA WRS
77	001	01-09-0011-0001-0002	BECKWITH LUMBER CO INC
79	033	17-15-0351-0031-0000	GCSTREAM LLC
82	001	01-09-0010-0001-0000	SMITH JO ANN V & GARY M BROWN JR (WS)
83	033	17-15-0351-0021-0000	GCSTREAM LLC
84	033	17-15-0351-0022-0000	GCSTREAM LLC
85	033	17-15-0351-0024-0000	GCSTREAM LLC
87	033	17-15-0351-0011-0000	GCSTREAM LLC
89	033	17-15-0351-0007-0000	WARDER ORAN LEE & JANICE L
96	091	46-04-0008-0021-0000	MILLARD CARLYLE G
97	091	46-04-0007-0027-0000	CEQUEL III COMMUNICATIONS
98	091	46-04-0007-0009-0000	CEQUEL III COMMUNICATIONS
99	091	46-04-0007-0008-0000	FRUM CLINTON A (HEIRS)
100	033	17-15-0351-0009-0000	JOHNSON RENEE
129	001	01-09-0022-0004-0000	MARPLE JAMES D & GENA F DOWELL WS
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Attachment to WW-6A1, Johnson 201

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	Union Drilling Inc	12.50%	32/220 and 1030/412	284
	Union Drilling Inc	Equitable Resources Exploration		1189/1209	
	Equitable Resources Energy Co	Equitable Resources Exploration		1199/642	
	Equitable Resources Exploration	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		16/637 also 447/129	
88 (00006674)	Debra A Mulneix	Mar Key LLC	15.00%	1561/464	85
88 (00006675)	Phyllis G Steele	Mar Key LLC	15.00%	1561/454	85
88 (00006676)	Alice L Donley	Mar Key LLC	15.00%	1561/451	85
88 (00006677)	James R Collins Jr by REBECCA COLLINS BISER, ACTING IN HER CAPACITY AS ATTORNEY IN FACT	Mar Key LLC	15.00%	1561/490	85
88 (00006697)	Gale M Steele	Mar Key LLC	15.00%	1568/76	85
88 (00007736)	MARLENE B STEELE, WIDOW, BY DAVID E BOWEN AND CHERYL L BOWEN AS ATTORNEYS-IN-FACT	Mar Key LLC	15.00%	1585/239	85
88 (00007761)	George F Jack Jr	Mar Key LLC	15.00%	1598/842	85
4 00008217	LAURA GOFF DAVIS HAROLD DOTSON CATHER AND DIANE GOFF CATHER HIS WIFE	NRM Petroleum Corporation	12.50%	1076/550 34/220	225

Attachment to WW-6A1, Johnson 201

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	NRM Petroleum Corporation	Eastern American Energy Corporation		1248/378	
	Eastern American Energy Corporation	Energy Corporation of America		1441/1003	
	Energy Corporation of America	Greylock Production, LLC		36/618	
	Greylock Production, LLC	Mar Key, LLC		1607/855	
4 00008218	H DOTSON CATHER AND DIANA CATHER HIS WIFE	NRM Petroleum Corporation	12.50%	1076/548 34/218	225
	NRM Petroleum Corporation	Eastern American Energy Corporation		1248/378	
	Eastern American Energy Corporation	Energy Corporation of America		1441/1003	
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	Eastern American Energy Corporation	Energy Corporation of America		1441/1003	
	Energy Corporation of America	Greylock Production, LLC		36/618	
	Greylock Production, LLC	Mar Key, LLC		1607/855	
86 (00003555)	Lyda Drainer	Union Carbide Corporation	12.50%	853/91	380
	Cresslenn Oil Company	Union Carbide Corporation		897/286	
	Delta Producing Corporation	Creslenn Oil Company		925/629	
	Petroleum Corporation of America	Delta Producing Corporation		977/168	
	Petroleum Development Corporation	Petroleum Corporation of America		977/153	

Attachment to WW-6A1, Johnson 201

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
	PDC Mountaineer, LLC	Petroleum Development Corporation		1440/364	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
~~39~~ (00003422)	John E Lough and Elda D Lough	Petroleum Development Corporation	12.50%	111/114	75
	PDC Mountaineer, LLC	Petroleum Development Corporation		150/444	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
39 (00003421)	L L MOSS AND MARY MARGARET MOSS	Petroleum Development Corporation	12.50%	111/88	75
	PDC Mountaineer, LLC	Petroleum Development Corporation		150/444	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
~~81~~ (00003868)	HOLLIE STEWART AND BLANCHE M STEWART HIS WIFE FRANKLIN D STEWART AND SHIRLEY P STEWART HIS WIFE	Petroleum Development Corporation	12.50%	99/252	37.58
	PDC Mountaineer, LLC	Petroleum Development Corporation		150/444	
	PDC Mountaineer, LLC	River Ridge Energy, LLC		59/1263	
~~40~~ (00005898)	John A Mosesso and Mary K Mosesso	Union Drilling Inc	12.50%	79/55	98
	Union Drilling Inc	Equitable Resources Exploration		325/219	
	Equitable Resources Exploration	Equitable Resources Energy Co		328/171	
	Equitable Resources Energy Co	Enervest East LMTD Partnership		129/524	
	Enervest East LMTD Partnership	The Houston Exploration Co		138/1	
	The Houston Exploration Co	Seneca Upshur Petroleum Inc		404/381	
	Seneca-Upshur Petroleum, Inc.	Seneca-Upshur Petroleum LLC		16/637 also 447/129	
~~80~~ (00008219)	Hal S Raper Jr and Cathy C Raper	Mar Key, LLC	12.50%	181/173	227.563
~~42~~ (00005891)	John A Mosesso, Raymond and Kathryn Chess	Allerton Miller	12.50%	49/227	250
	Allerton Miller	Union Drilling Inc		98/11	
	Union Drilling Inc	Equitable Resources Exploration		325/219	
	Equitable Resources Exploration	Equitable Resources Energy Co		328/171	

Attachment to WW-6A1, Johnson 201

Letter Designation/Number Designation on Plat	Grantor, Lessor, Assignor, etc.	Grantee, Lessee, Assignee, etc.	Royalty	Book/Page	Acreage
	Equitable Resources Energy Co	Enervest East LMTD Partnership		129/524	
	Enervest East LMTD Partnership	The Houston Exploration Co		138/1	
	The Houston Exploration Co	Seneca Upshur Petroleum Inc		404/381	
	Seneca-Upshur Petroleum, Inc.	Seneca-Upshur Petroleum LLC		16/637 also 447/129	
73 (00008815)	LINDA KAMINSKI	Mar Key, LLC	12.50%	182/338	16
93 (00008911)	THOMAS HUNT JR, A SINGLE MAN	Mar Key LLC	12.5	184/432	17.221
216 (00008808)	JAMES L LEE	MAR KEY LLC	15.00%	182/335	57.67
141 and 139 (00008905)	DENNIS ALBIN ZBOSNIK	MAR KEY	12.5	184/428	51.89
144 (00005943)	O B GOODWIN AND ADA GOODWIN HIS WIFE	CUMBERLAND AND ALLEGHENY GAS	12.5	46/417	119
	CUMBERLAND AND ALLEGHENY GAS	UNION DRILLING INC & 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 COMPANY		328/171	
	EQUITABLE RESOURCES ENERGY COMPANY	FUEL RESOURCES PRODUCTION & DEVELOPMENT		116/81	
	FUEL RESOURCES PRODUCTION & DEVELOPMENT	THE HOUSTON EXPLORATION COMPANY		136/162	
	EQUITABLE RESOURCES ENERGY COMPANY	ENERVEST EAST LIMITED PARTNERSHIP		129/524	
	ENERVEST EAST LIMITED PARTNERSHIP	THE HOUSTON EXPLORATION COMPANY		138/1	
	HOUSTON EXPLORATION COMPANY	SENECA-UPSHUR PETROLEUM INC		139/48	
	SENECA-UPSHUR PETROLEUM INC	SENECA-UPSHUR PETROLEUM LLC		447/129	
170 (00008903)	DELORES FOSTER	MAR KEY LLC	12.5	184/434	3.09

Agreement to Drill, Complete and Operate Oil & Gas Wells

This Agreement to Drill, Complete and Operate Oil & Gas Wells (this "**Agreement**"), by and among Arsenal Resources LLC, a West Virginia limited liability company ("**Arsenal**"), River Ridge Energy, LLC, a Delaware limited liability company ("**River Ridge**"), and River Ridge Energy, Holdings, LLC, a Delaware limited liability company ("**River Ridge Holdings**"), is effective as of **March 1, 2017.** (the "**Effective Date**") and sets forth the terms pursuant to which Arsenal will drill, complete and operate the Wells (as defined below) on behalf of River Ridge and River Ridge Holdings. Arsenal, River Ridge, and River Ridge Holdings are each a "**Party**" and are collectively the "**Parties**". In consideration of the foregoing and the respective agreements hereinafter set forth and the mutual benefits to be derived therefrom, the Parties, intending to be legally bound, hereby agree as follows:

1. **Term:** This Agreement is effective from the Effective Date until terminated by Arsenal on the one hand or River Ridge and River Ridge Holdings on the other hand with 30 days' written notice to the other Party or Parties, as applicable (the "**Term**").

2. **Authorization to Operate:** River Ridge and River Holdings authorize Arsenal to undertake and perform, on River Ridge and River Ridge Holdings behalf, all operations, including without limitation permit applications, well pad preparation, drilling and completing wells, and marketing gas, oil and other hydrocarbons therefrom with respect to all oil and gas wells to be drilled on oil and gas leasehold acreage held by River Ridge or River Ridge Holdings. River Ridge, River Ridge Holdings and Arsenal are affiliates with a common parent. Arsenal was formed to operate oil and gas leasehold acreage held by River Ridge, River Ridge Holdings and certain other affiliates. Arsenal agrees that it shall, in a good and workmanlike manner and in accordance with industry standards as they prevail in the area, drill, complete and operate oil and gas wells on leasehold acreage owned by River Ridge or River Ridge Holdings from time to time as directed by River Ridge or River Ridge Holdings (collectively, the "**Wells**").

3. **No Third Party Beneficiary:** This Agreement is for the benefit of the Parties and is not for the benefit of any third party.

4. **Counterparts:** This Agreement may be simultaneously executed in several counterparts and via facsimile or similar electronic transmittal, each of which shall be deemed to be an original and taken together shall constitute one and the same instrument.

[Signature Page Follows]

IN WITNESS WHEREOF, Arsenal, River Ridge, and River Ridge Holdings have caused their duly authorized representatives to execute this Agreement as of the Effective Date.

ARSENAL RESOURCES LLC

By: _____
Name: Joel E. Symonds
Title: Vice President - Land

RIVER RIDGE ENERGY, LLC

By: _____
Name: Joel E. Symonds
Title: Vice President - Land

RIVER RIDGE HOLDINGS, LLC

By: _____
Name: Joel E. Symonds
Title: Vice President - Land

08/12/2022

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MAR KEY LLC

Organization Information							
Org Type	**Effective Date**	**Established Date**	**Filing Date**	**Charter**	**Class**	**Sec Type**	**Termination Date**	**Termination Reason**
LLC | Limited Liability Company	7/11/2011		7/11/2011	Domestic	Profit			

Organization Information			
Business Purpose	2111 - Mining, Quarrying, Oil & Gas Extraction - Oil and Gas Extraction - Crude Oil and Natural Gas Extraction	**Capital Stock**	
Charter County		**Control Number**	99Q1F
Charter State	WV	**Excess Acres**	
At Will Term	A	**Member Managed**	MBR
At Will Term Years		**Par Value**	
Authorized Shares		**Young Entrepreneur**	Not Specified

08/12/2022

Addresses

Type	Address
Designated Office Address	633 W. MAIN STREET BRIDGEPORT, WV, 26330
Mailing Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA
Notice of Process Address	CORPORATION SERVICE COMPANY 209 WEST WASHINGTON STREET CHARLESTON, WV, 25302
Principal Office Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA
Type	**Address**

Officers

Type	Name/Address
Member	ARSENAL RESOURCES DEVELOPMENT LLC 6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090
Organizer	PAUL M HERZING 560 EPSILON DR. PITTSBURGH, PA, 15238 USA
Type	**Name/Address**

Annual Reports

Filed For
2020
2019
2018

2017
2016
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2014
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2012
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Monday, March 1, 2021 — 9:37 AM

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SENECA-UPSHUR PETROLEUM, LLC

Organization Information							
Org Type	**Effective Date**	**Established Date**	**Filing Date**	**Charter**	**Class**	**Sec Type**	**Termination Date**	**Termination Reason**
LLC | Limited Liability Company	2/12/1973		2/12/1973	Domestic	Profit			

Organization Information			
Business Purpose	2111 - Mining, Quarrying, Oil & Gas Extraction - Oil and Gas Extraction - Crude Oil and Natural Gas Extraction	**Capital Stock**	
Charter County		**Control Number**	0
Charter State	WV	**Excess Acres**	0
At Will Term	A	**Member Managed**	MBR
At Will Term Years		**Par Value**	
Authorized Shares		**Young Entrepreneur**	Not Specified

08/12/2022

Addresses

Type	Address
Designated Office Address	633 W. MAIN STREET BRIDGEPORT, WV, 26330
Mailing Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA
Notice of Process Address	CORPORATION SERVICE COMPANY 209 WEST WASHINGTON STREET CHARLESTON, WV, 25302
Principal Office Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA
Type	**Address**

Officers

Type	Name/Address
Member	RIVER RIDGE ENERGY, LLC 6031 WALLACE ROAD EXTENSION, SUITE 300 WEXFORD, PA, 15090
Organizer	TAMMY J OWEN 300 SUMMERS STREET, STE 1500 PO BOX 2107 CHARLESTON, WV, 25328 USA
Type	**Name/Address**

DBA

DBA Name	Description	Effective Date	Termination Date
KEYSPAN PRODUCTION & DEVELOPMENT COMPANY	TRADENAME	6/11/2004	
NATIONAL GRID	TRADENAME	8/17/2007	

NATIONAL GRID PRODUCTION AND DEVELOPMENT	TRADENAME	12/5/2008	5/9/2012

DBA Name	Description	Effective Date	Termination Date

Name Changes

Date	Old Name
3/28/2011	SENECA-UPSHUR PETROLEUM, INC.

Date	Old Name

Date	Amendment
6/15/2016	AMENDMENT FILED CHANGING FROM A MANAGER-MANAGED CO. TO A MEMBER-MANAGED CO. >> REMOVED ROBERT KOZEL & STEPHEN A. BISHOP AS MANAGERS & ADDED SOLE MEMBER (C IMAGE).
3/28/2011	CONVERSION: FROM SENECA-UPSHUR PETROLEUM, INC. TO SENECA-UPSHUR PETROLEUM, LLC
7/25/1997	MERGER; MERGING LITTLE SWISS DRILLING COMPANY, A QUAL WV CORP AND PALACE VALLEY PETROLEUM COMPANY, A QUAL WV CORP WITH AND INTO SENECA-UPSHUR PETROLEUM, INC., A QUAL WV CORP, THE SURVIVOR.

Date	Amendment

Annual Reports

Filed For
2020
2019
2018
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Monday, March 1, 2021 — 9:40 AM

91-01367 MOD

ARSENAL RESOURCES

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Office of Oil and Gas
JUL 25 2022
WV Department of
Environmental Protection

SITE SAFETY PLAN

JOHNSON TFP 40 WELL PAD #201

911 Address:

4006 Green Valley Rd

Bridgeport, WV 26330

Kenneth Greynolds

Digitally signed by: Kenneth Greynolds
DN: CN = Kenneth Greynolds email = Kenneth.L.Greynolds@wv.gov C = AD O = WVDEP OU = Oil and Gas
Date: 2022.07.15 09:05:58 -04'00'

08/12/2022

JOHNSON TFP40 Well Pad #201
Site Safety Plan Table of Contents

08/12/2022

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

08/12/2022

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

08/12/2022

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.

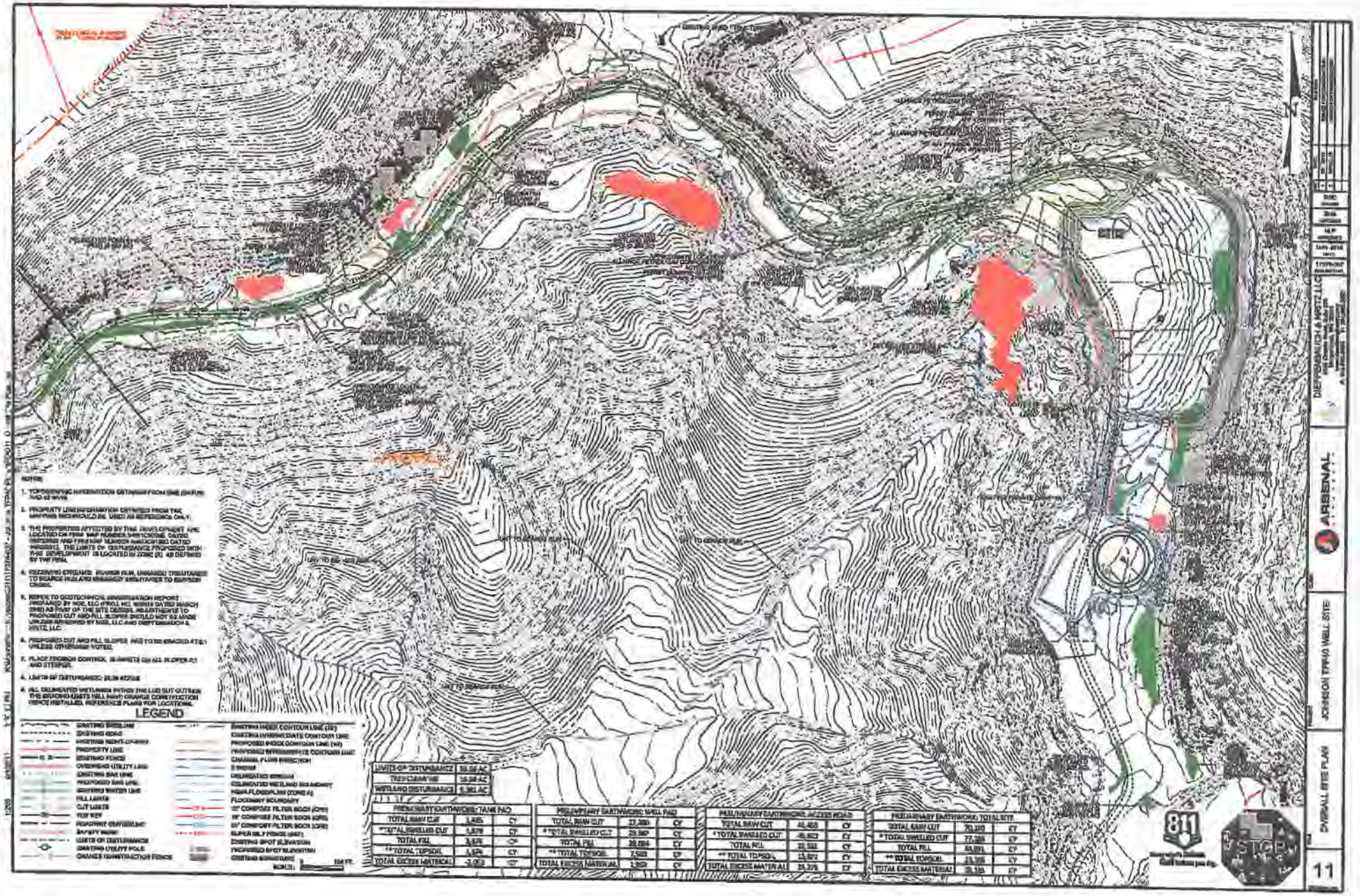
The local WV DEP inspector, Bryan Harris, or another Office of Oil and Gas representative and emergency responders from the area will be notified of and invited to the pre-drill and subsequent meeting.

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



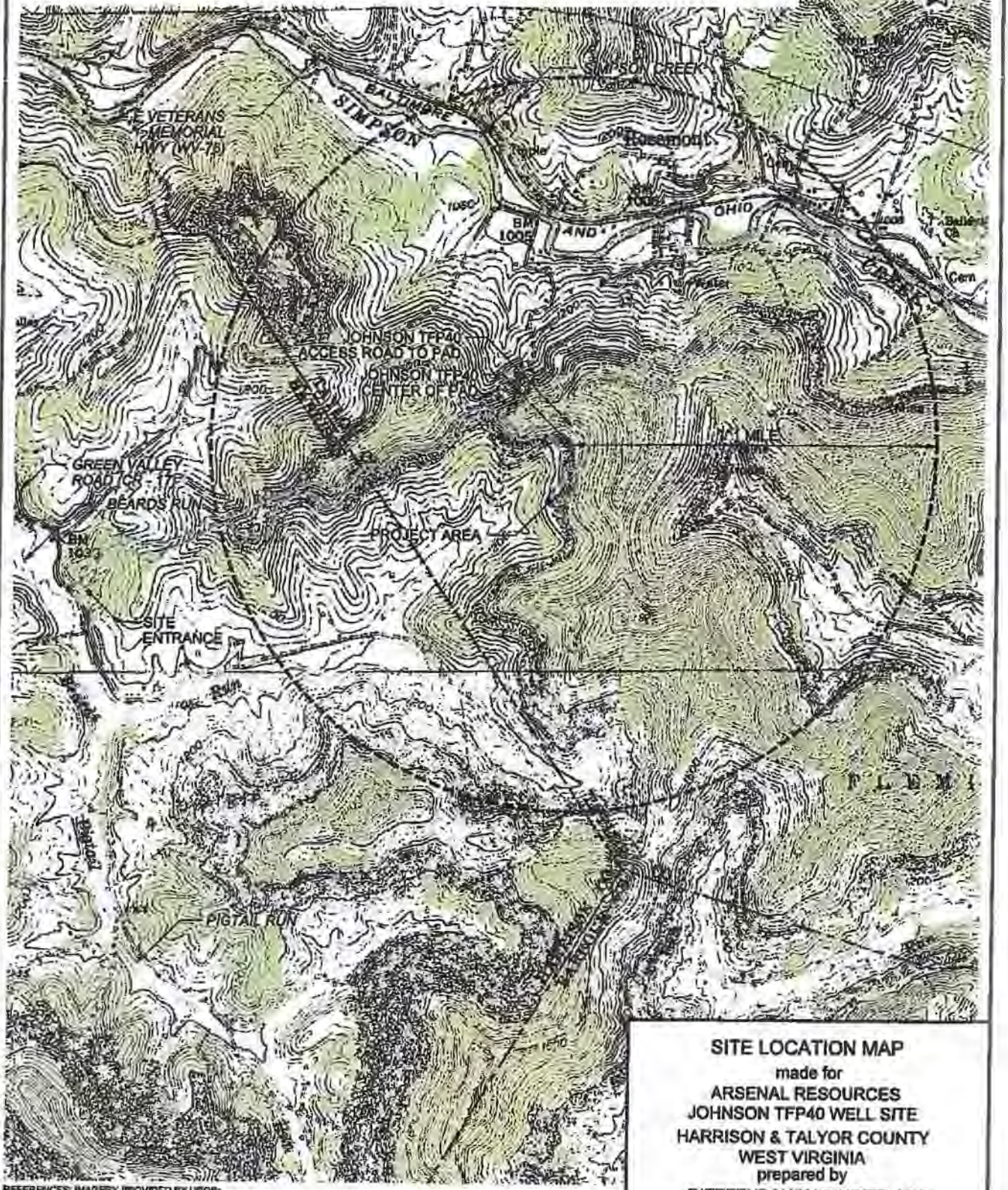
B. Topographic Map

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.

SITE ACCESS ROAD ENTRANCE (NAD83)
UTM (METER)
N: 4345150.895
E: 569526.425
GEOGRAPHIC (DMS)
LAT: 39° 15' 10.43"
LONG: -80° 11' 3.15"

ACCESS ROAD TO PAD (NAD83)
UTM (METER)
N: 4345904.476
E: 571674.923
GEOGRAFIC (DMS)
LAT: 39° 15' 34.25"
LONG: -80° 10' 9.22"

CENTER OF PAD (NAD83)
UTM (METER)
N: 4345803.620
E: 571680.367
GEOGRAFIC (DMS)
LAT: 39° 15' 30.97"
LONG: -80° 10' 8.62"



REFERENCES: IMAGERY PROVIDED BY USGS; ROSEMONT & BROWNTOWN QUADRANGLES; WEST VIRGINIA 7.5 MINUTE SERIES

SCALE: 0 2000 ft.

SITE LOCATION MAP
made for
ARSENAL RESOURCES
JOHNSON TFP40 WELL SITE
HARRISON & TALYOR COUNTY
WEST VIRGINIA
prepared by
DIEFFENBAUCH & HRITZ, LLC
1095 Chaplin Rd Suite 200, Morgantown, WV 26501
Phone: 304-985-5555 Fax: 304-985-5547

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 120' 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 #201 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:

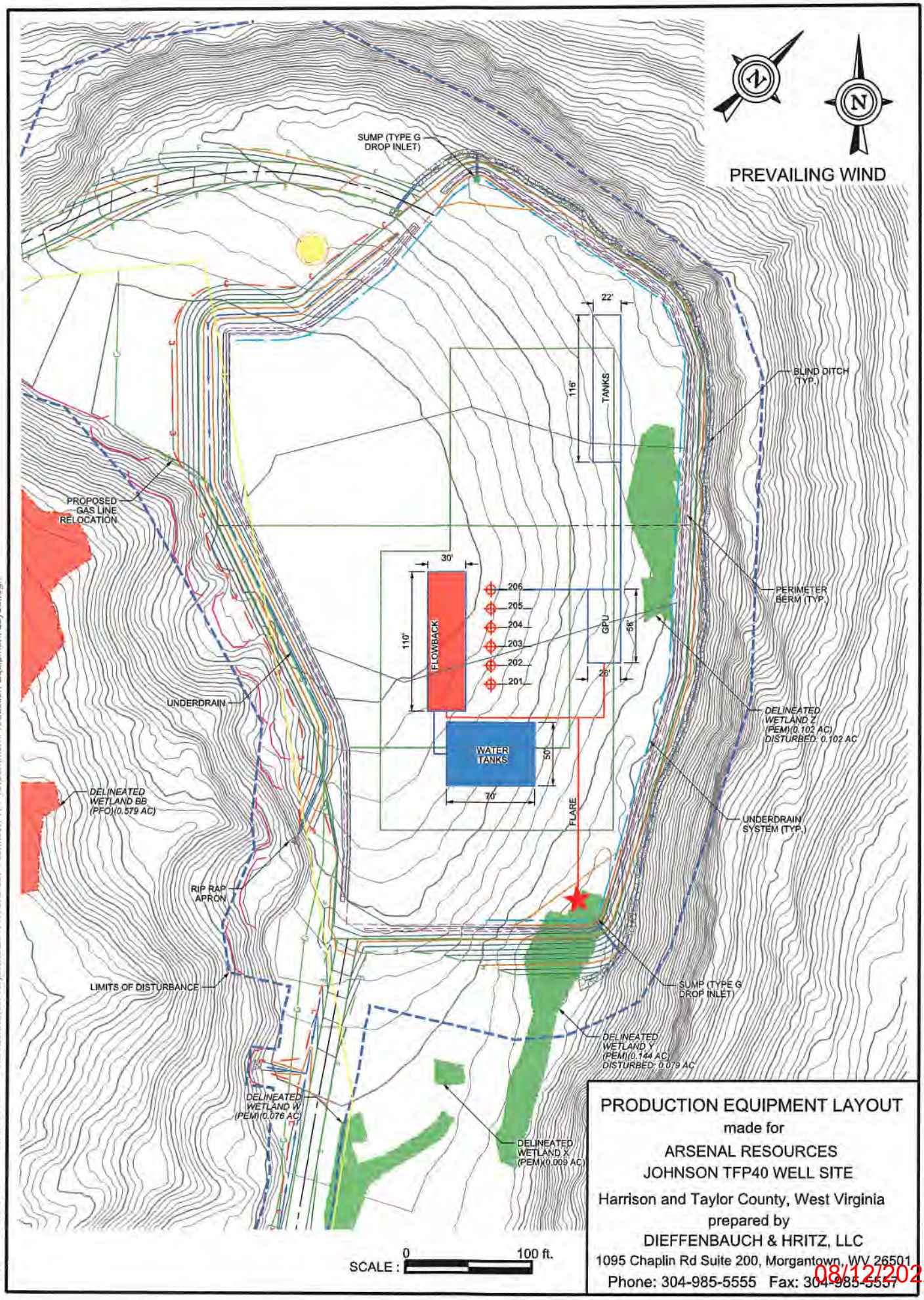
Geologic Information	
Approximate freshwater strata depths	38', 40', 49', 362', 670'
Approximate saltwater depths	1980'
Approximate coal seam depths	322.5', 398.5', 477.5', 577.5', 630.5', 692.5', 760.5', 825.5', 845.5, 876.5'
Approximate void depths (coal, karst, other)	None

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#	27,650'	31,650'	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.

08/12/2022



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: 304-985-5557

08/12/2022

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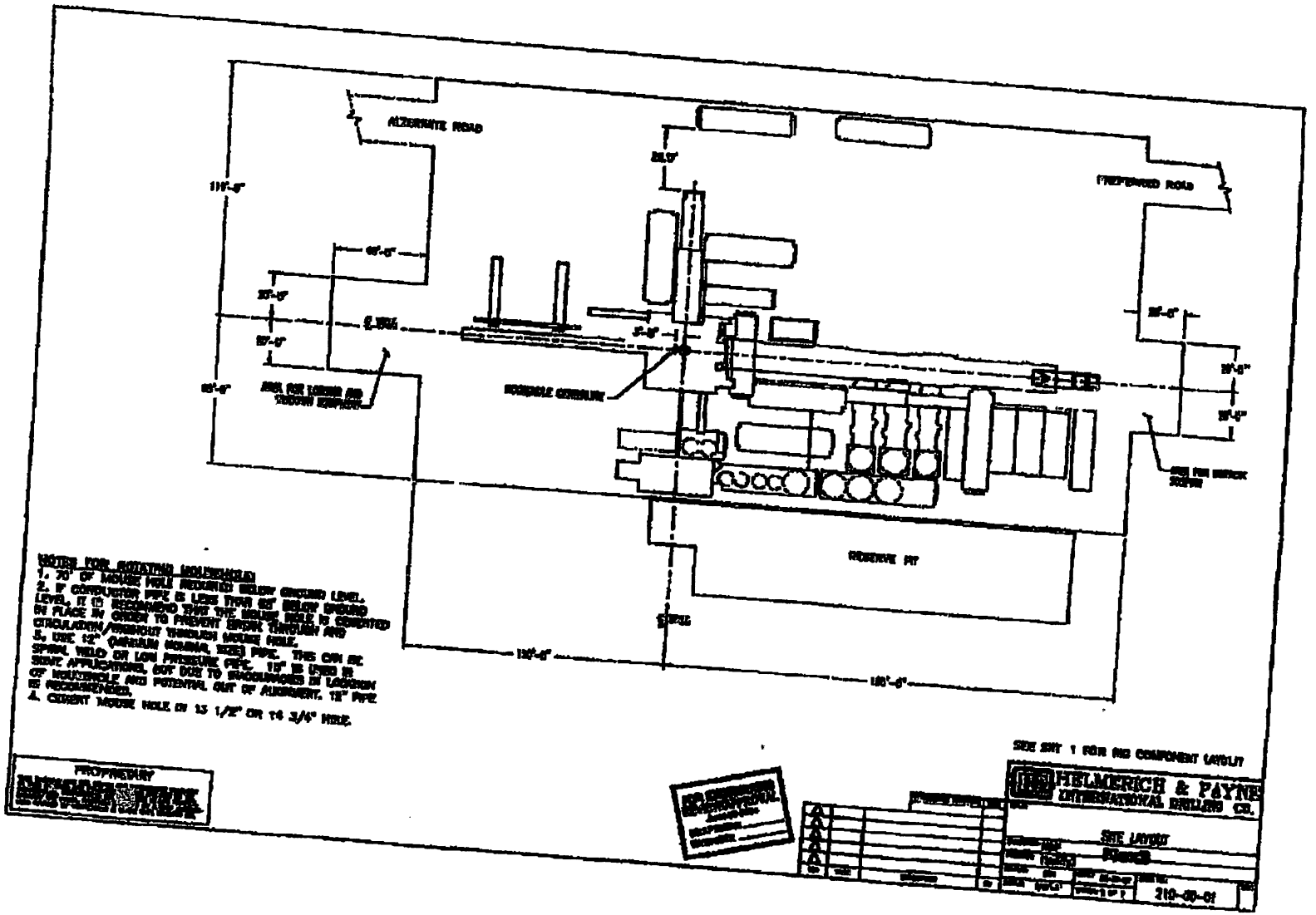

ALTERNATE ROAD
PREFERRED ROAD
RESERVE PIT
SEE SHT 1 FOR RIG COMPONENT LAYOUT
HELMERICH & PAYNE
SITE LAYOUT
210-00-01

08/12/2022

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 1-800-428-0881

08/12/2022

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.

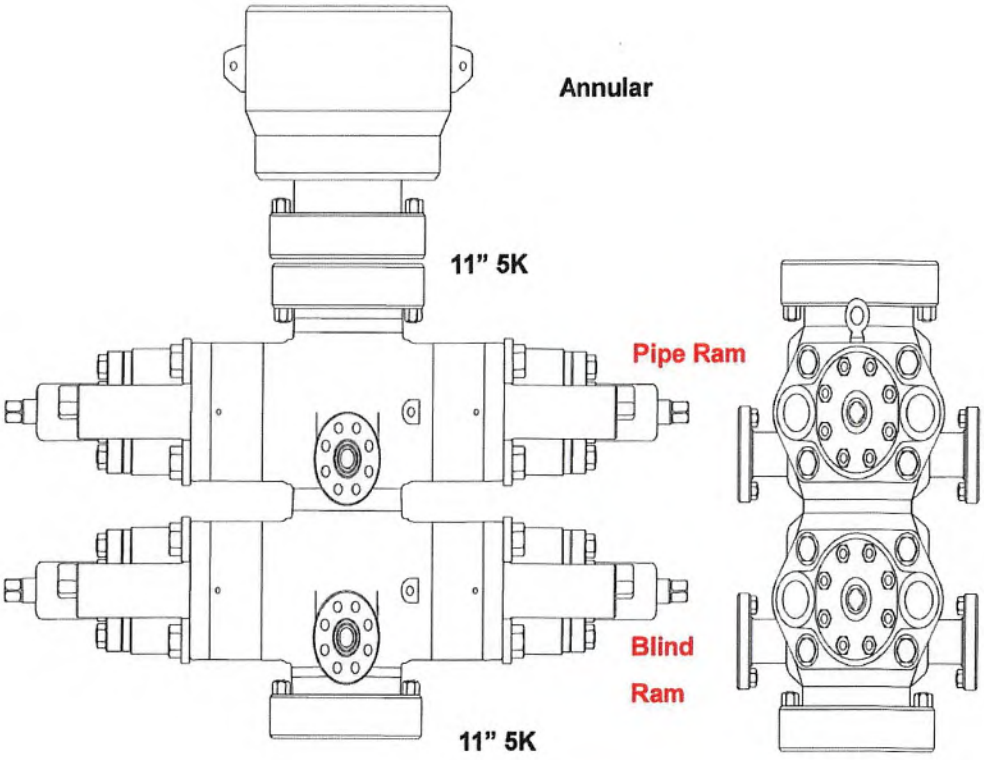
Section 5 -BOP and Well Control

A. BOP Equipment

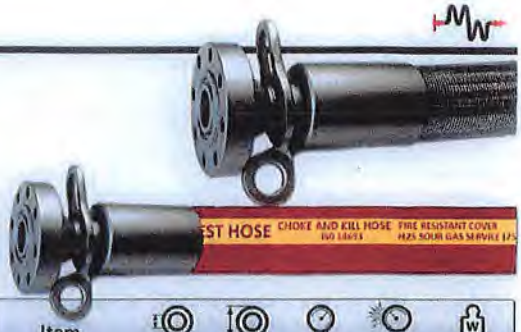
The following pages include schematics and information on the BOP equipment.

08/12/2022

11" 5K Double Ram BOP



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

08/12/2022

Section 5, continued

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

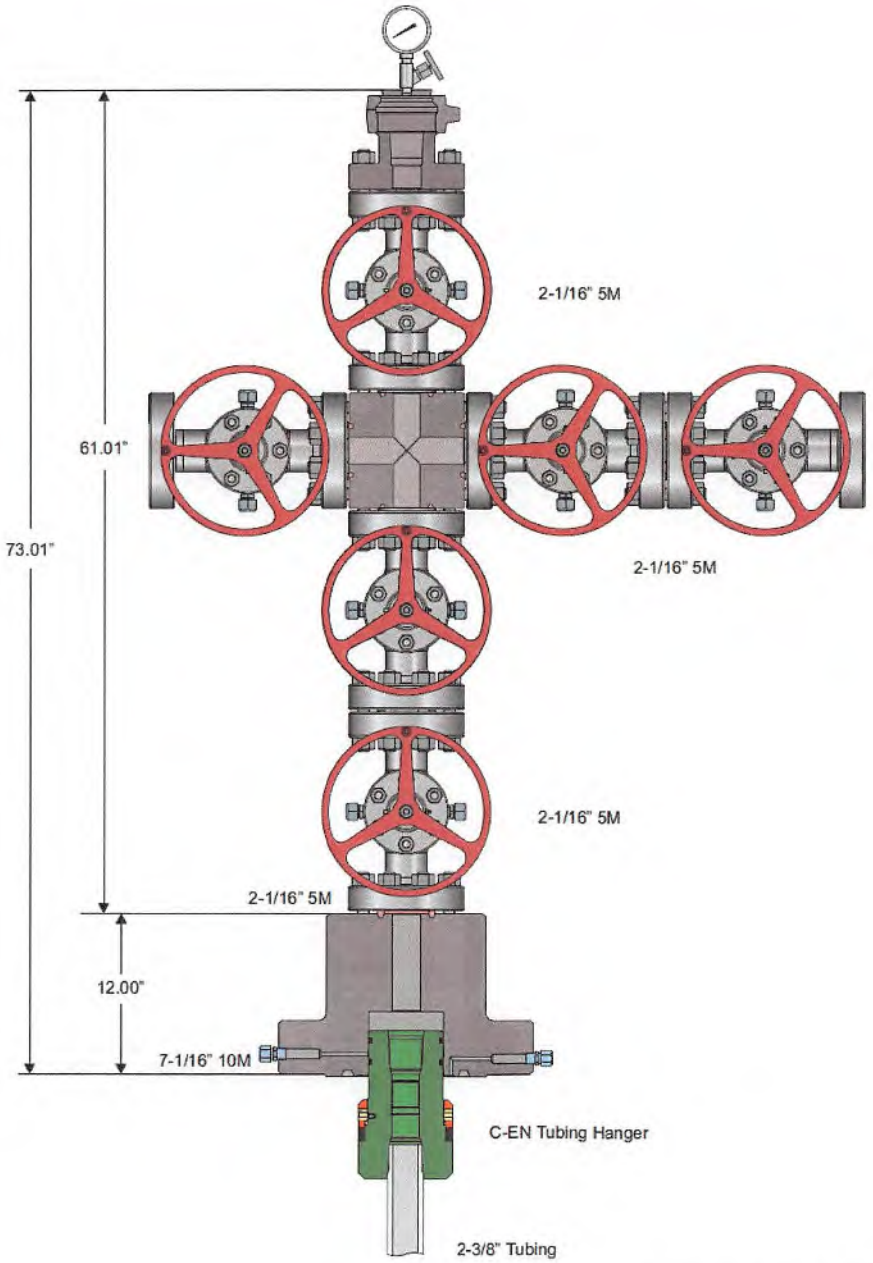
A detailed record of significant drilling events will be recorded in Arsenal Resources well log book. The state inspector will be notified upon any significant drilling events including the encounter of Hydrogen Sulfide Gas, lost circulation, fluid entry, abnormal pressures, etc.

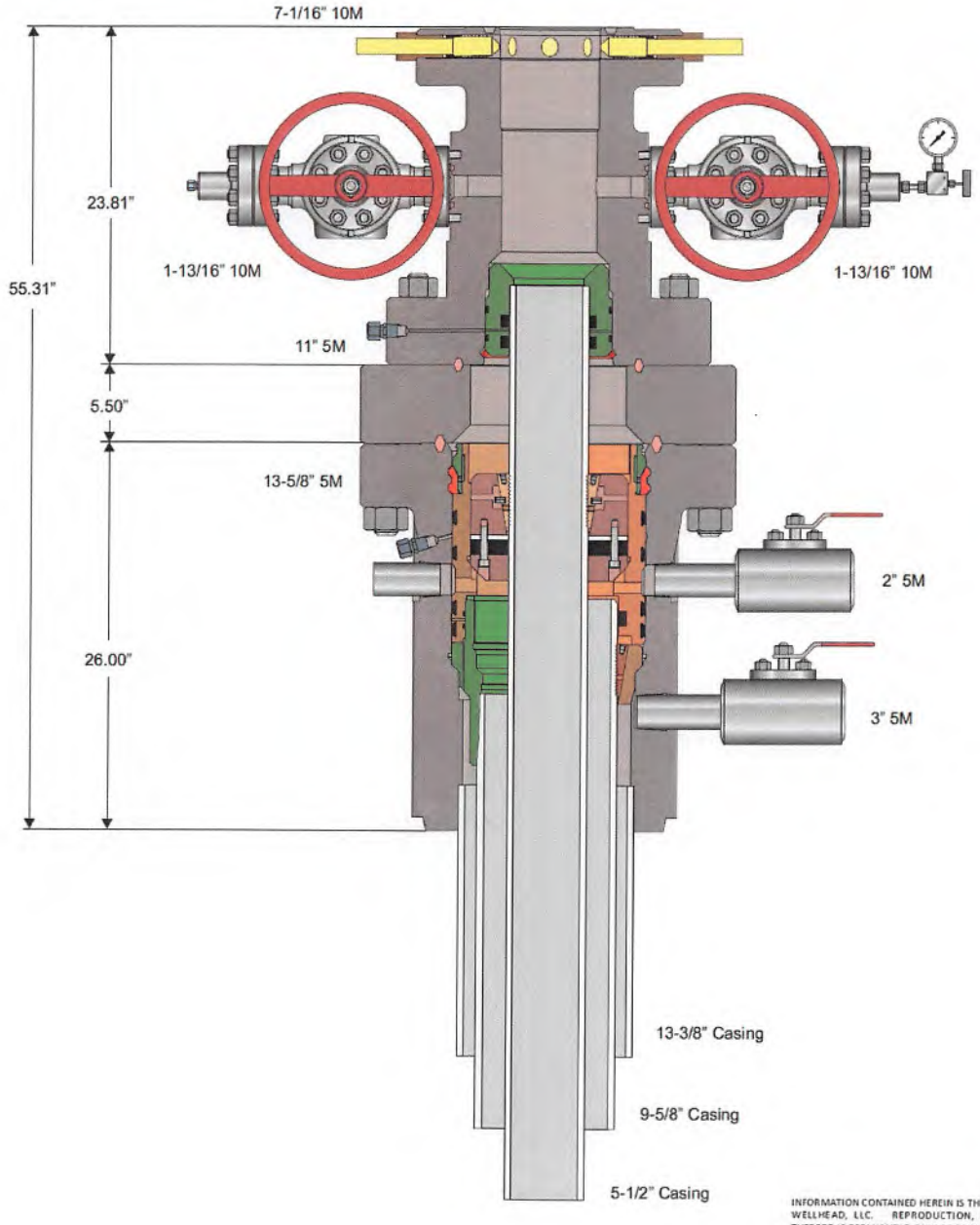
G. Wellhead Assembly

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

Cactus Wellhead

2-1/16" 5M Production Tree
DUE123





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:

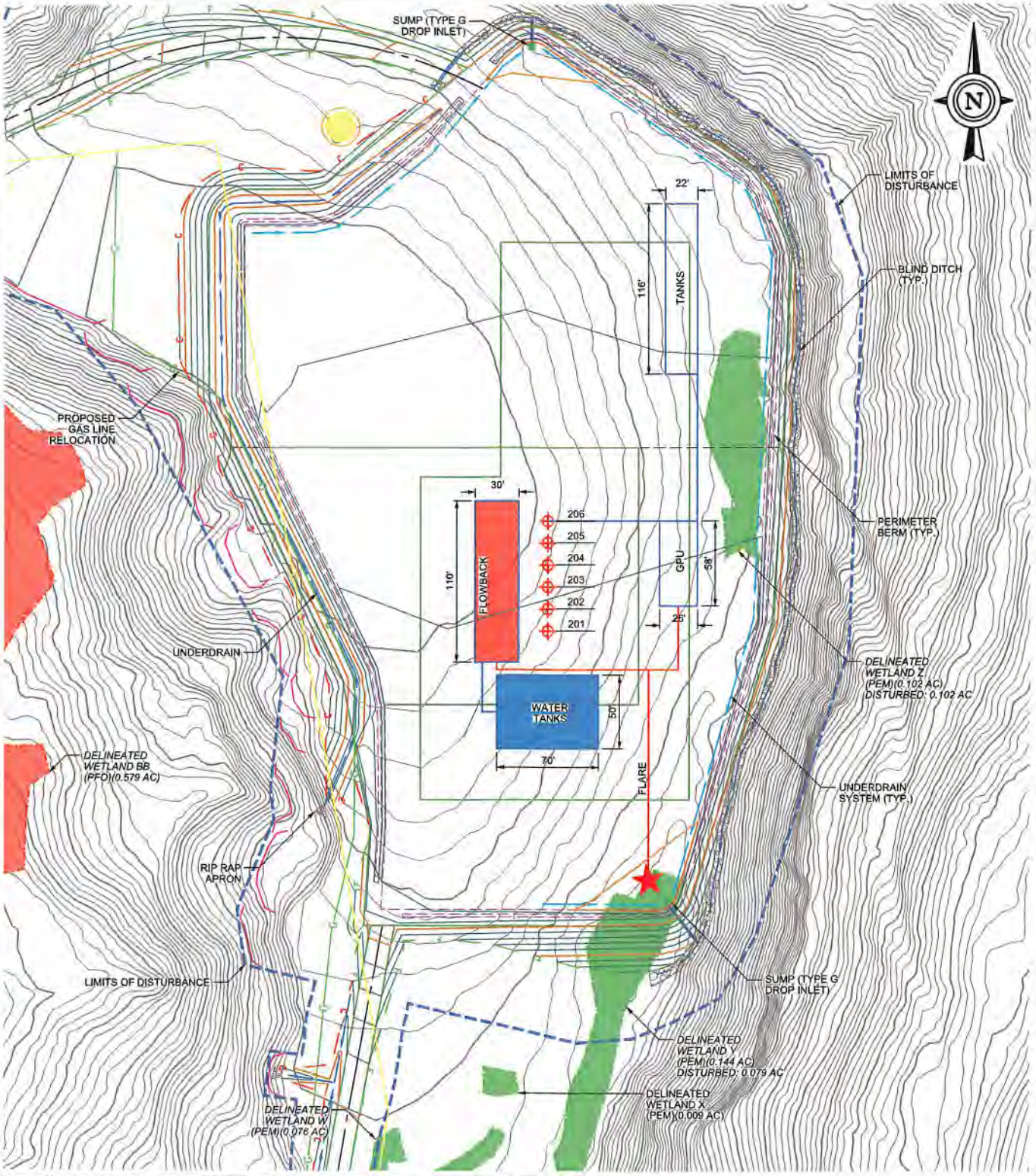
1. Flare Line will be constructed using three inch flare line tubing and anchored with cement anchor blocks. The line will have a dual choke assembly manifold with adjustable manual chokes. A detailed Pad Flaring Diagram is located in Section 7.

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	NORTHINNG	276971.7221	LAT:	39.258499°	LAT:	39°15'30.60"	NORTHINNG	4345792.144	1335.08'	1333.5'
	EASTING	1779051.6624	LONG:	-80.169060°	LONG:	-80°10'08.61"	EASTING	571690.548		
WELL 202	NORTHINNG	276986.7221	LAT:	39.258540°	LAT:	39°15'30.75"	NORTHINNG	4345796.714	1335.90'	1333.5'
	EASTING	1779051.6624	LONG:	-80.169060°	LONG:	-80°10'08.62"	EASTING	571690.472		
WELL 203	NORTHINNG	277001.7221	LAT:	39.258582°	LAT:	39°15'30.89"	NORTHINNG	4345801.284	1337.01'	1333.5'
	EASTING	1779051.6624	LONG:	-80.169060°	LONG:	-80°10'08.62"	EASTING	571690.397		
WELL 204	NORTHINNG	277016.7221	LAT:	39.258623°	LAT:	39°15'31.04"	NORTHINNG	4345805.854	1337.79'	1333.5'
	EASTING	1779051.6624	LONG:	-80.169061°	LONG:	-80°10'08.62"	EASTING	571690.321		
WELL 205	NORTHINNG	277031.7221	LAT:	39.258664°	LAT:	39°15'31.19"	NORTHINNG	4345810.424	1338.26'	1333.5'
	EASTING	1779051.6624	LONG:	-80.169061°	LONG:	-80.10'08.62"	EASTING	571690.245		
WELL 206	NORTHINNG	277046.7221	LAT:	39.258705°	LAT:	39°15'31.34"	NORTHINNG	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: 304-985-5557

08/12/2022

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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

Taylor County, WV
Johnson TFP40
201

Orig.

Plan: DEP Plan 6

Standard Planning Report

11 July, 2022

Scientific Drilling

www.scientificdrilling.com

08/12/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 201
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:	201	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 6		

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	201					
Well Position	**+N/-S**	0.1 usft	**Northing:**	276,971.72 usft	**Latitude:**	39.2584993
	+E/-W	-0.2 usft	**Easting:**	1,779,051.66 usft	**Longitude:**	-80.1690595
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	6/14/2022	-9.53	65.73	51,574.60000000

Design	DEP Plan 6			
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	230.00	1,099.5	-10.1	-12.0	2.00	2.00	0.00	230.00	
2,608.8	6.00	230.00	2,600.0	-111.5	-132.8	0.00	0.00	0.00	0.00	
3,426.6	21.26	260.41	3,393.2	-164.0	-313.0	2.00	1.87	3.72	40.67	
7,590.7	21.26	260.41	7,273.8	-415.5	-1,801.8	0.00	0.00	0.00	0.00	
8,628.6	90.00	160.97	7,903.5	-1,095.1	-1,823.1	9.00	6.62	-9.58	-98.81	Joh_TPF40_201_LP
26,475.0	90.00	160.97	7,903.5	-17,966.5	3,994.9	0.00	0.00	0.00	0.00	Joh_TPF40_201_PBH

08/12/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 201
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:	201	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 6		

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	230.00	900.0	-1.1	-1.3	0.6	2.00	2.00	0.00
1,000.0	4.00	230.00	999.8	-4.5	-5.3	2.5	2.00	2.00	0.00
1,100.0	6.00	230.00	1,099.5	-10.1	-12.0	5.6	2.00	2.00	0.00
Hold 6° Inc									
1,200.0	6.00	230.00	1,198.9	-16.8	-20.0	9.4	0.00	0.00	0.00
1,300.0	6.00	230.00	1,298.4	-23.5	-28.0	13.1	0.00	0.00	0.00
1,400.0	6.00	230.00	1,397.8	-30.2	-36.0	16.8	0.00	0.00	0.00
1,500.0	6.00	230.00	1,497.3	-37.0	-44.1	20.6	0.00	0.00	0.00
1,600.0	6.00	230.00	1,596.7	-43.7	-52.1	24.3	0.00	0.00	0.00
1,700.0	6.00	230.00	1,696.2	-50.4	-60.1	28.1	0.00	0.00	0.00
1,800.0	6.00	230.00	1,795.6	-57.1	-68.1	31.8	0.00	0.00	0.00
1,900.0	6.00	230.00	1,895.1	-63.8	-76.1	35.5	0.00	0.00	0.00
2,000.0	6.00	230.00	1,994.5	-70.6	-84.1	39.3	0.00	0.00	0.00
2,100.0	6.00	230.00	2,094.0	-77.3	-92.1	43.0	0.00	0.00	0.00
2,200.0	6.00	230.00	2,193.4	-84.0	-100.1	46.8	0.00	0.00	0.00
2,300.0	6.00	230.00	2,292.9	-90.7	-108.1	50.5	0.00	0.00	0.00
2,400.0	6.00	230.00	2,392.3	-97.4	-116.1	54.2	0.00	0.00	0.00
2,500.0	6.00	230.00	2,491.8	-104.2	-124.1	58.0	0.00	0.00	0.00
2,600.0	6.00	230.00	2,591.2	-110.9	-132.1	61.7	0.00	0.00	0.00
2,608.8	6.00	230.00	2,600.0	-111.5	-132.8	62.1	0.00	0.00	0.00
KO Tangent 2°/100									
2,700.0	7.48	239.17	2,690.6	-117.6	-141.6	65.0	2.00	1.62	10.06
2,800.0	9.24	245.70	2,789.5	-124.2	-154.5	67.0	2.00	1.76	6.53
2,900.0	11.08	250.12	2,887.9	-130.8	-170.9	67.9	2.00	1.84	4.42
3,000.0	12.97	253.28	2,985.7	-137.3	-190.6	67.6	2.00	1.89	3.16
3,100.0	14.89	255.64	3,082.8	-143.7	-213.8	66.1	2.00	1.92	2.36
3,200.0	16.83	257.47	3,179.0	-150.0	-240.4	63.4	2.00	1.94	1.83
3,300.0	18.78	258.93	3,274.2	-156.3	-270.4	59.6	2.00	1.95	1.46
3,400.0	20.74	260.13	3,368.3	-162.4	-303.6	54.5	2.00	1.96	1.20
3,426.6	21.26	260.41	3,393.1	-164.0	-313.0	53.0	2.00	1.96	1.06
Hold 21.3° Inc									
3,500.0	21.26	260.41	3,461.5	-168.4	-339.2	48.6	0.00	0.00	0.00
3,600.0	21.26	260.41	3,554.7	-174.5	-375.0	42.7	0.00	0.00	0.00
3,700.0	21.26	260.41	3,647.9	-180.5	-410.7	36.7	0.00	0.00	0.00
3,800.0	21.26	260.41	3,741.1	-186.5	-446.5	30.8	0.00	0.00	0.00
3,900.0	21.26	260.41	3,834.3	-192.6	-482.2	24.8	0.00	0.00	0.00
4,000.0	21.26	260.41	3,927.5	-198.6	-518.0	18.9	0.00	0.00	0.00
4,100.0	21.26	260.41	4,020.7	-204.7	-553.8	12.9	0.00	0.00	0.00
4,200.0	21.26	260.41	4,113.9	-210.7	-589.5	7.0	0.00	0.00	0.00
4,300.0	21.26	260.41	4,207.1	-216.8	-625.3	1.0	0.00	0.00	0.00
4,400.0	21.26	260.41	4,300.3	-222.8	-661.0	-4.9	0.00	0.00	0.00
4,500.0	21.26	260.41	4,393.5	-228.8	-696.8	-10.9	0.00	0.00	0.00

08/12/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 201
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:	201	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 6		

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)
4,600.0	21.26	260.41	4,486.7	-234.9	-732.5	-16.8	0.00	0.00	0.00
4,700.0	21.26	260.41	4,579.8	-240.9	-768.3	-22.8	0.00	0.00	0.00
4,800.0	21.26	260.41	4,673.0	-247.0	-804.0	-28.7	0.00	0.00	0.00
4,900.0	21.26	260.41	4,766.2	-253.0	-839.8	-34.7	0.00	0.00	0.00
5,000.0	21.26	260.41	4,859.4	-259.0	-875.5	-40.6	0.00	0.00	0.00
5,100.0	21.26	260.41	4,952.6	-265.1	-911.3	-46.5	0.00	0.00	0.00
5,200.0	21.26	260.41	5,045.8	-271.1	-947.0	-52.5	0.00	0.00	0.00
5,300.0	21.26	260.41	5,139.0	-277.2	-982.8	-58.4	0.00	0.00	0.00
5,400.0	21.26	260.41	5,232.2	-283.2	-1,018.5	-64.4	0.00	0.00	0.00
5,500.0	21.26	260.41	5,325.4	-289.2	-1,054.3	-70.3	0.00	0.00	0.00
5,600.0	21.26	260.41	5,418.6	-295.3	-1,090.0	-76.3	0.00	0.00	0.00
5,700.0	21.26	260.41	5,511.8	-301.3	-1,125.8	-82.2	0.00	0.00	0.00
5,800.0	21.26	260.41	5,605.0	-307.4	-1,161.6	-88.2	0.00	0.00	0.00
5,900.0	21.26	260.41	5,698.2	-313.4	-1,197.3	-94.1	0.00	0.00	0.00
6,000.0	21.26	260.41	5,791.4	-319.4	-1,233.1	-100.1	0.00	0.00	0.00
6,100.0	21.26	260.41	5,884.6	-325.5	-1,268.8	-106.0	0.00	0.00	0.00
6,200.0	21.26	260.41	5,977.8	-331.5	-1,304.6	-112.0	0.00	0.00	0.00
6,300.0	21.26	260.41	6,071.0	-337.6	-1,340.3	-117.9	0.00	0.00	0.00
6,400.0	21.26	260.41	6,164.1	-343.6	-1,376.1	-123.9	0.00	0.00	0.00
6,500.0	21.26	260.41	6,257.3	-349.6	-1,411.8	-129.8	0.00	0.00	0.00
6,600.0	21.26	260.41	6,350.5	-355.7	-1,447.6	-135.8	0.00	0.00	0.00
6,700.0	21.26	260.41	6,443.7	-361.7	-1,483.3	-141.7	0.00	0.00	0.00
6,800.0	21.26	260.41	6,536.9	-367.8	-1,519.1	-147.7	0.00	0.00	0.00
6,900.0	21.26	260.41	6,630.1	-373.8	-1,554.8	-153.6	0.00	0.00	0.00
7,000.0	21.26	260.41	6,723.3	-379.8	-1,590.6	-159.5	0.00	0.00	0.00
7,100.0	21.26	260.41	6,816.5	-385.9	-1,626.3	-165.5	0.00	0.00	0.00
7,200.0	21.26	260.41	6,909.7	-391.9	-1,662.1	-171.4	0.00	0.00	0.00
7,300.0	21.26	260.41	7,002.9	-398.0	-1,697.9	-177.4	0.00	0.00	0.00
7,400.0	21.26	260.41	7,096.1	-404.0	-1,733.6	-183.3	0.00	0.00	0.00
7,500.0	21.26	260.41	7,189.3	-410.0	-1,769.4	-189.3	0.00	0.00	0.00
7,590.7	21.26	260.41	7,273.8	-415.5	-1,801.8	-194.7	0.00	0.00	0.00
KO Curve 9°/100									
7,600.0	21.15	258.12	7,282.5	-416.2	-1,805.1	-195.2	9.01	-1.21	-24.68
7,700.0	21.92	233.52	7,375.7	-431.0	-1,837.8	-191.8	9.00	0.77	-24.60
7,800.0	25.85	213.37	7,467.3	-460.4	-1,864.9	-172.9	9.00	3.93	-20.15
7,900.0	31.79	199.24	7,554.9	-503.5	-1,885.6	-138.8	9.00	5.94	-14.13
8,000.0	38.82	189.47	7,636.6	-559.4	-1,899.4	-90.5	9.00	7.03	-9.77
8,100.0	46.44	182.38	7,710.1	-626.7	-1,906.1	-29.1	9.00	7.62	-7.09
8,200.0	54.40	176.92	7,773.8	-703.6	-1,905.4	43.9	9.00	7.96	-5.46
8,300.0	62.56	172.47	7,826.1	-788.4	-1,897.4	126.6	9.00	8.16	-4.45
8,400.0	70.85	168.63	7,865.6	-878.9	-1,882.3	217.1	9.00	8.28	-3.83
8,500.0	79.21	165.17	7,891.4	-972.8	-1,860.3	313.1	9.00	8.36	-3.46
8,600.0	87.60	161.90	7,902.9	-1,068.0	-1,832.2	412.2	9.00	8.39	-3.27
8,628.6	90.00	160.97	7,903.5	-1,095.1	-1,823.1	440.8	8.99	8.39	-3.22
LP @ 90° Inc/ 160.9° Az/ 8628.6' MD/ TVD 7903.5'									
8,700.0	90.00	160.97	7,903.5	-1,162.6	-1,799.8	512.2	0.00	0.00	0.00
8,800.0	90.00	160.97	7,903.5	-1,257.1	-1,767.2	612.2	0.00	0.00	0.00
8,900.0	90.00	160.97	7,903.5	-1,351.7	-1,734.6	712.2	0.00	0.00	0.00
9,000.0	90.00	160.97	7,903.5	-1,446.2	-1,702.0	812.2	0.00	0.00	0.00
9,100.0	90.00	160.97	7,903.5	-1,540.8	-1,669.4	912.2	0.00	0.00	0.00
9,200.0	90.00	160.97	7,903.5	-1,635.3	-1,636.8	1,012.2	0.00	0.00	0.00
9,300.0	90.00	160.97	7,903.5	-1,729.8	-1,604.2	1,112.2	0.00	0.00	0.00

08/12/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 201
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:	201	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 6		

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)
9,400.0	90.00	160.97	7,903.5	-1,824.4	-1,571.6	1,212.2	0.00	0.00	0.00
9,500.0	90.00	160.97	7,903.5	-1,918.9	-1,539.0	1,312.2	0.00	0.00	0.00
9,600.0	90.00	160.97	7,903.5	-2,013.4	-1,506.4	1,412.2	0.00	0.00	0.00
9,700.0	90.00	160.97	7,903.5	-2,108.0	-1,473.8	1,512.2	0.00	0.00	0.00
9,800.0	90.00	160.97	7,903.5	-2,202.5	-1,441.2	1,612.2	0.00	0.00	0.00
9,900.0	90.00	160.97	7,903.5	-2,297.0	-1,408.6	1,712.2	0.00	0.00	0.00
10,000.0	90.00	160.97	7,903.5	-2,391.6	-1,376.0	1,812.2	0.00	0.00	0.00
10,100.0	90.00	160.97	7,903.5	-2,486.1	-1,343.4	1,912.2	0.00	0.00	0.00
10,200.0	90.00	160.97	7,903.5	-2,580.7	-1,310.8	2,012.2	0.00	0.00	0.00
10,300.0	90.00	160.97	7,903.5	-2,675.2	-1,278.2	2,112.2	0.00	0.00	0.00
10,400.0	90.00	160.97	7,903.5	-2,769.7	-1,245.6	2,212.2	0.00	0.00	0.00
10,500.0	90.00	160.97	7,903.5	-2,864.3	-1,213.0	2,312.2	0.00	0.00	0.00
10,600.0	90.00	160.97	7,903.5	-2,958.8	-1,180.4	2,412.2	0.00	0.00	0.00
10,700.0	90.00	160.97	7,903.5	-3,053.3	-1,147.8	2,512.2	0.00	0.00	0.00
10,800.0	90.00	160.97	7,903.5	-3,147.9	-1,115.2	2,612.2	0.00	0.00	0.00
10,900.0	90.00	160.97	7,903.5	-3,242.4	-1,082.6	2,712.2	0.00	0.00	0.00
11,000.0	90.00	160.97	7,903.5	-3,337.0	-1,050.0	2,812.2	0.00	0.00	0.00
11,100.0	90.00	160.97	7,903.5	-3,431.5	-1,017.4	2,912.2	0.00	0.00	0.00
11,200.0	90.00	160.97	7,903.5	-3,526.0	-984.8	3,012.2	0.00	0.00	0.00
11,300.0	90.00	160.97	7,903.5	-3,620.6	-952.2	3,112.2	0.00	0.00	0.00
11,400.0	90.00	160.97	7,903.5	-3,715.1	-919.6	3,212.2	0.00	0.00	0.00
11,500.0	90.00	160.97	7,903.5	-3,809.6	-887.0	3,312.2	0.00	0.00	0.00
11,600.0	90.00	160.97	7,903.5	-3,904.2	-854.4	3,412.2	0.00	0.00	0.00
11,700.0	90.00	160.97	7,903.5	-3,998.7	-821.8	3,512.2	0.00	0.00	0.00
11,800.0	90.00	160.97	7,903.5	-4,093.2	-789.2	3,612.2	0.00	0.00	0.00
11,900.0	90.00	160.97	7,903.5	-4,187.8	-756.6	3,712.2	0.00	0.00	0.00
12,000.0	90.00	160.97	7,903.5	-4,282.3	-724.0	3,812.2	0.00	0.00	0.00
12,100.0	90.00	160.97	7,903.5	-4,376.9	-691.4	3,912.2	0.00	0.00	0.00
12,200.0	90.00	160.97	7,903.5	-4,471.4	-658.8	4,012.2	0.00	0.00	0.00
12,300.0	90.00	160.97	7,903.5	-4,565.9	-626.2	4,112.2	0.00	0.00	0.00
12,400.0	90.00	160.97	7,903.5	-4,660.5	-593.6	4,212.2	0.00	0.00	0.00
12,500.0	90.00	160.97	7,903.5	-4,755.0	-561.0	4,312.2	0.00	0.00	0.00
12,600.0	90.00	160.97	7,903.5	-4,849.5	-528.4	4,412.2	0.00	0.00	0.00
12,700.0	90.00	160.97	7,903.5	-4,944.1	-495.8	4,512.2	0.00	0.00	0.00
12,800.0	90.00	160.97	7,903.5	-5,038.6	-463.2	4,612.2	0.00	0.00	0.00
12,900.0	90.00	160.97	7,903.5	-5,133.1	-430.6	4,712.2	0.00	0.00	0.00
13,000.0	90.00	160.97	7,903.5	-5,227.7	-398.0	4,812.2	0.00	0.00	0.00
13,100.0	90.00	160.97	7,903.5	-5,322.2	-365.4	4,912.2	0.00	0.00	0.00
13,200.0	90.00	160.97	7,903.5	-5,416.8	-332.8	5,012.2	0.00	0.00	0.00
13,300.0	90.00	160.97	7,903.5	-5,511.3	-300.2	5,112.2	0.00	0.00	0.00
13,400.0	90.00	160.97	7,903.5	-5,605.8	-267.6	5,212.2	0.00	0.00	0.00
13,500.0	90.00	160.97	7,903.5	-5,700.4	-235.0	5,312.2	0.00	0.00	0.00
13,600.0	90.00	160.97	7,903.5	-5,794.9	-202.4	5,412.2	0.00	0.00	0.00
13,700.0	90.00	160.97	7,903.5	-5,889.4	-169.8	5,512.2	0.00	0.00	0.00
13,800.0	90.00	160.97	7,903.5	-5,984.0	-137.2	5,612.2	0.00	0.00	0.00
13,900.0	90.00	160.97	7,903.5	-6,078.5	-104.6	5,712.2	0.00	0.00	0.00
14,000.0	90.00	160.97	7,903.5	-6,173.0	-72.0	5,812.2	0.00	0.00	0.00
14,100.0	90.00	160.97	7,903.5	-6,267.6	-39.4	5,912.2	0.00	0.00	0.00
14,200.0	90.00	160.97	7,903.5	-6,362.1	-6.8	6,012.2	0.00	0.00	0.00
14,300.0	90.00	160.97	7,903.5	-6,456.7	25.8	6,112.2	0.00	0.00	0.00
14,400.0	90.00	160.97	7,903.5	-6,551.2	58.4	6,212.2	0.00	0.00	0.00
14,500.0	90.00	160.97	7,903.5	-6,645.7	91.0	6,312.2	0.00	0.00	0.00

08/12/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 201
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:	201	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 6		

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)
14,600.0	90.00	160.97	7,903.5	-6,740.3	123.6	6,412.2	0.00	0.00	0.00
14,700.0	90.00	160.97	7,903.5	-6,834.8	156.2	6,512.2	0.00	0.00	0.00
14,800.0	90.00	160.97	7,903.5	-6,929.3	188.8	6,612.2	0.00	0.00	0.00
14,900.0	90.00	160.97	7,903.5	-7,023.9	221.4	6,712.2	0.00	0.00	0.00
15,000.0	90.00	160.97	7,903.5	-7,118.4	254.0	6,812.2	0.00	0.00	0.00
15,100.0	90.00	160.97	7,903.5	-7,213.0	286.6	6,912.2	0.00	0.00	0.00
15,200.0	90.00	160.97	7,903.5	-7,307.5	319.2	7,012.2	0.00	0.00	0.00
15,300.0	90.00	160.97	7,903.5	-7,402.0	351.8	7,112.2	0.00	0.00	0.00
15,400.0	90.00	160.97	7,903.5	-7,496.6	384.4	7,212.2	0.00	0.00	0.00
15,500.0	90.00	160.97	7,903.5	-7,591.1	417.0	7,312.2	0.00	0.00	0.00
15,600.0	90.00	160.97	7,903.5	-7,685.6	449.6	7,412.2	0.00	0.00	0.00
15,700.0	90.00	160.97	7,903.5	-7,780.2	482.2	7,512.2	0.00	0.00	0.00
15,800.0	90.00	160.97	7,903.5	-7,874.7	514.8	7,612.2	0.00	0.00	0.00
15,900.0	90.00	160.97	7,903.5	-7,969.2	547.4	7,712.2	0.00	0.00	0.00
16,000.0	90.00	160.97	7,903.5	-8,063.8	580.0	7,812.2	0.00	0.00	0.00
16,100.0	90.00	160.97	7,903.5	-8,158.3	612.6	7,912.2	0.00	0.00	0.00
16,200.0	90.00	160.97	7,903.5	-8,252.9	645.2	8,012.2	0.00	0.00	0.00
16,300.0	90.00	160.97	7,903.5	-8,347.4	677.8	8,112.2	0.00	0.00	0.00
16,400.0	90.00	160.97	7,903.5	-8,441.9	710.4	8,212.2	0.00	0.00	0.00
16,500.0	90.00	160.97	7,903.5	-8,536.5	743.0	8,312.2	0.00	0.00	0.00
16,600.0	90.00	160.97	7,903.5	-8,631.0	775.6	8,412.2	0.00	0.00	0.00
16,700.0	90.00	160.97	7,903.5	-8,725.5	808.2	8,512.2	0.00	0.00	0.00
16,800.0	90.00	160.97	7,903.5	-8,820.1	840.8	8,612.2	0.00	0.00	0.00
16,900.0	90.00	160.97	7,903.5	-8,914.6	873.4	8,712.2	0.00	0.00	0.00
17,000.0	90.00	160.97	7,903.5	-9,009.1	906.0	8,812.2	0.00	0.00	0.00
17,100.0	90.00	160.97	7,903.5	-9,103.7	938.6	8,912.2	0.00	0.00	0.00
17,200.0	90.00	160.97	7,903.5	-9,198.2	971.2	9,012.2	0.00	0.00	0.00
17,300.0	90.00	160.97	7,903.5	-9,292.8	1,003.8	9,112.2	0.00	0.00	0.00
17,400.0	90.00	160.97	7,903.5	-9,387.3	1,036.4	9,212.2	0.00	0.00	0.00
17,500.0	90.00	160.97	7,903.5	-9,481.8	1,069.0	9,312.2	0.00	0.00	0.00
17,600.0	90.00	160.97	7,903.5	-9,576.4	1,101.6	9,412.2	0.00	0.00	0.00
17,700.0	90.00	160.97	7,903.5	-9,670.9	1,134.2	9,512.2	0.00	0.00	0.00
17,800.0	90.00	160.97	7,903.5	-9,765.4	1,166.8	9,612.2	0.00	0.00	0.00
17,900.0	90.00	160.97	7,903.5	-9,860.0	1,199.4	9,712.2	0.00	0.00	0.00
18,000.0	90.00	160.97	7,903.5	-9,954.5	1,232.0	9,812.2	0.00	0.00	0.00
18,100.0	90.00	160.97	7,903.5	-10,049.0	1,264.6	9,912.2	0.00	0.00	0.00
18,200.0	90.00	160.97	7,903.5	-10,143.6	1,297.2	10,012.2	0.00	0.00	0.00
18,300.0	90.00	160.97	7,903.5	-10,238.1	1,329.8	10,112.2	0.00	0.00	0.00
18,400.0	90.00	160.97	7,903.5	-10,332.7	1,362.4	10,212.2	0.00	0.00	0.00
18,500.0	90.00	160.97	7,903.5	-10,427.2	1,395.0	10,312.2	0.00	0.00	0.00
18,600.0	90.00	160.97	7,903.5	-10,521.7	1,427.6	10,412.2	0.00	0.00	0.00
18,700.0	90.00	160.97	7,903.5	-10,616.3	1,460.2	10,512.2	0.00	0.00	0.00
18,800.0	90.00	160.97	7,903.5	-10,710.8	1,492.8	10,612.2	0.00	0.00	0.00
18,900.0	90.00	160.97	7,903.5	-10,805.3	1,525.4	10,712.2	0.00	0.00	0.00
19,000.0	90.00	160.97	7,903.5	-10,899.9	1,558.0	10,812.2	0.00	0.00	0.00
19,100.0	90.00	160.97	7,903.5	-10,994.4	1,590.6	10,912.2	0.00	0.00	0.00
19,200.0	90.00	160.97	7,903.5	-11,089.0	1,623.2	11,012.2	0.00	0.00	0.00
19,300.0	90.00	160.97	7,903.5	-11,183.5	1,655.8	11,112.2	0.00	0.00	0.00
19,400.0	90.00	160.97	7,903.5	-11,278.0	1,688.4	11,212.2	0.00	0.00	0.00
19,500.0	90.00	160.97	7,903.5	-11,372.6	1,721.0	11,312.2	0.00	0.00	0.00
19,600.0	90.00	160.97	7,903.5	-11,467.1	1,753.6	11,412.2	0.00	0.00	0.00
19,700.0	90.00	160.97	7,903.5	-11,561.6	1,786.2	11,512.2	0.00	0.00	0.00

08/12/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 201
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:	201	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 6		

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)
19,800.0	90.00	160.97	7,903.5	-11,656.2	1,818.8	11,612.2	0.00	0.00	0.00
19,900.0	90.00	160.97	7,903.5	-11,750.7	1,851.4	11,712.2	0.00	0.00	0.00
20,000.0	90.00	160.97	7,903.5	-11,845.2	1,884.0	11,812.2	0.00	0.00	0.00
20,100.0	90.00	160.97	7,903.5	-11,939.8	1,916.6	11,912.2	0.00	0.00	0.00
20,200.0	90.00	160.97	7,903.5	-12,034.3	1,949.2	12,012.2	0.00	0.00	0.00
20,300.0	90.00	160.97	7,903.5	-12,128.9	1,981.8	12,112.2	0.00	0.00	0.00
20,400.0	90.00	160.97	7,903.5	-12,223.4	2,014.4	12,212.2	0.00	0.00	0.00
20,500.0	90.00	160.97	7,903.5	-12,317.9	2,047.0	12,312.2	0.00	0.00	0.00
20,600.0	90.00	160.97	7,903.5	-12,412.5	2,079.7	12,412.2	0.00	0.00	0.00
20,700.0	90.00	160.97	7,903.5	-12,507.0	2,112.3	12,512.2	0.00	0.00	0.00
20,800.0	90.00	160.97	7,903.5	-12,601.5	2,144.9	12,612.2	0.00	0.00	0.00
20,900.0	90.00	160.97	7,903.5	-12,696.1	2,177.5	12,712.2	0.00	0.00	0.00
21,000.0	90.00	160.97	7,903.5	-12,790.6	2,210.1	12,812.2	0.00	0.00	0.00
21,100.0	90.00	160.97	7,903.5	-12,885.1	2,242.7	12,912.2	0.00	0.00	0.00
21,200.0	90.00	160.97	7,903.5	-12,979.7	2,275.3	13,012.2	0.00	0.00	0.00
21,300.0	90.00	160.97	7,903.5	-13,074.2	2,307.9	13,112.2	0.00	0.00	0.00
21,400.0	90.00	160.97	7,903.5	-13,168.8	2,340.5	13,212.2	0.00	0.00	0.00
21,500.0	90.00	160.97	7,903.5	-13,263.3	2,373.1	13,312.2	0.00	0.00	0.00
21,600.0	90.00	160.97	7,903.5	-13,357.8	2,405.7	13,412.2	0.00	0.00	0.00
21,700.0	90.00	160.97	7,903.5	-13,452.4	2,438.3	13,512.2	0.00	0.00	0.00
21,800.0	90.00	160.97	7,903.5	-13,546.9	2,470.9	13,612.2	0.00	0.00	0.00
21,900.0	90.00	160.97	7,903.5	-13,641.4	2,503.5	13,712.2	0.00	0.00	0.00
22,000.0	90.00	160.97	7,903.5	-13,736.0	2,536.1	13,812.2	0.00	0.00	0.00
22,100.0	90.00	160.97	7,903.5	-13,830.5	2,568.7	13,912.2	0.00	0.00	0.00
22,200.0	90.00	160.97	7,903.5	-13,925.0	2,601.3	14,012.2	0.00	0.00	0.00
22,300.0	90.00	160.97	7,903.5	-14,019.6	2,633.9	14,112.2	0.00	0.00	0.00
22,400.0	90.00	160.97	7,903.5	-14,114.1	2,666.5	14,212.2	0.00	0.00	0.00
22,500.0	90.00	160.97	7,903.5	-14,208.7	2,699.1	14,312.2	0.00	0.00	0.00
22,600.0	90.00	160.97	7,903.5	-14,303.2	2,731.7	14,412.2	0.00	0.00	0.00
22,700.0	90.00	160.97	7,903.5	-14,397.7	2,764.3	14,512.2	0.00	0.00	0.00
22,800.0	90.00	160.97	7,903.5	-14,492.3	2,796.9	14,612.2	0.00	0.00	0.00
22,900.0	90.00	160.97	7,903.5	-14,586.8	2,829.5	14,712.2	0.00	0.00	0.00
23,000.0	90.00	160.97	7,903.5	-14,681.3	2,862.1	14,812.2	0.00	0.00	0.00
23,100.0	90.00	160.97	7,903.5	-14,775.9	2,894.7	14,912.2	0.00	0.00	0.00
23,200.0	90.00	160.97	7,903.5	-14,870.4	2,927.3	15,012.2	0.00	0.00	0.00
23,300.0	90.00	160.97	7,903.5	-14,965.0	2,959.9	15,112.2	0.00	0.00	0.00
23,400.0	90.00	160.97	7,903.5	-15,059.5	2,992.5	15,212.2	0.00	0.00	0.00
23,500.0	90.00	160.97	7,903.5	-15,154.0	3,025.1	15,312.2	0.00	0.00	0.00
23,600.0	90.00	160.97	7,903.5	-15,248.6	3,057.7	15,412.2	0.00	0.00	0.00
23,700.0	90.00	160.97	7,903.5	-15,343.1	3,090.3	15,512.2	0.00	0.00	0.00
23,800.0	90.00	160.97	7,903.5	-15,437.6	3,122.9	15,612.2	0.00	0.00	0.00
23,900.0	90.00	160.97	7,903.5	-15,532.2	3,155.5	15,712.2	0.00	0.00	0.00
24,000.0	90.00	160.97	7,903.5	-15,626.7	3,188.1	15,812.2	0.00	0.00	0.00
24,100.0	90.00	160.97	7,903.5	-15,721.2	3,220.7	15,912.2	0.00	0.00	0.00
24,200.0	90.00	160.97	7,903.5	-15,815.8	3,253.3	16,012.2	0.00	0.00	0.00
24,300.0	90.00	160.97	7,903.5	-15,910.3	3,285.9	16,112.2	0.00	0.00	0.00
24,400.0	90.00	160.97	7,903.5	-16,004.9	3,318.5	16,212.2	0.00	0.00	0.00
24,500.0	90.00	160.97	7,903.5	-16,099.4	3,351.1	16,312.2	0.00	0.00	0.00
24,600.0	90.00	160.97	7,903.5	-16,193.9	3,383.7	16,412.2	0.00	0.00	0.00
24,700.0	90.00	160.97	7,903.5	-16,288.5	3,416.3	16,512.2	0.00	0.00	0.00
24,800.0	90.00	160.97	7,903.5	-16,383.0	3,448.9	16,612.2	0.00	0.00	0.00
24,899.9	90.00	160.97	7,903.5	-16,477.5	3,481.5	16,712.2	0.00	0.00	0.00

08/12/2022

Database:	Northeast	**Local Co-ordinate Reference:**	Well 201
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:	201	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Orig.		
Design:	DEP Plan 6		

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)
24,999.9	90.00	160.97	7,903.5	-16,572.1	3,514.1	16,812.2	0.00	0.00	0.00
25,099.9	90.00	160.97	7,903.5	-16,666.6	3,546.7	16,912.2	0.00	0.00	0.00
25,199.9	90.00	160.97	7,903.5	-16,761.1	3,579.3	17,012.2	0.00	0.00	0.00
25,299.9	90.00	160.97	7,903.5	-16,855.7	3,611.9	17,112.2	0.00	0.00	0.00
25,399.9	90.00	160.97	7,903.5	-16,950.2	3,644.5	17,212.2	0.00	0.00	0.00
25,499.9	90.00	160.97	7,903.5	-17,044.8	3,677.1	17,312.2	0.00	0.00	0.00
25,599.9	90.00	160.97	7,903.5	-17,139.3	3,709.7	17,412.2	0.00	0.00	0.00
25,699.9	90.00	160.97	7,903.5	-17,233.8	3,742.3	17,512.2	0.00	0.00	0.00
25,799.9	90.00	160.97	7,903.5	-17,328.4	3,774.9	17,612.2	0.00	0.00	0.00
25,899.9	90.00	160.97	7,903.5	-17,422.9	3,807.5	17,712.2	0.00	0.00	0.00
25,999.9	90.00	160.97	7,903.5	-17,517.4	3,840.1	17,812.2	0.00	0.00	0.00
26,099.9	90.00	160.97	7,903.5	-17,612.0	3,872.7	17,912.2	0.00	0.00	0.00
26,199.9	90.00	160.97	7,903.5	-17,706.5	3,905.3	18,012.2	0.00	0.00	0.00
26,299.9	90.00	160.97	7,903.5	-17,801.0	3,937.9	18,112.2	0.00	0.00	0.00
26,399.9	90.00	160.97	7,903.5	-17,895.6	3,970.5	18,212.2	0.00	0.00	0.00
26,474.0	90.00	160.97	7,903.5	-17,965.6	3,994.6	18,286.2	0.00	0.00	0.00
TD @ 90° Inc/ 160.9° Az/ 26475.00' MD/ TVD 7903.5'									
26,475.0	90.00	160.97	7,903.5	-17,966.5	3,994.9	18,287.2	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_201_ SHL - plan hits target center - Point	0.00	0.00	0.0	0.0	0.0	276,971.72	1,779,051.66	39.2584993	-80.1690595
Joh_TPF40_201_KOP - plan hits target center - Point	0.00	0.00	800.0	0.0	0.0	276,971.72	1,779,051.66	39.2584993	-80.1690595
Joh_TPF40_201_LP - plan hits target center - Point	0.00	360.00	7,903.5	-1,095.1	-1,823.1	275,876.63	1,777,228.57	39.2554553	-80.1754687
Joh_TPF40_201_PBHL - plan hits target center - Point	0.00	360.00	7,903.5	-17,966.5	3,994.9	259,005.18	1,783,046.61	39.2092532	-80.1544892

08/12/2022

Well Location Plat
Page 4 Cross Section

Seneca Resources Company, LLC Applicant / Well Operator Name	DEP ID#	Johnson TFP40 Taylor County, WV GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)	Well # 201

ARSENAL RESOURCES

WELL PLAN
Operator Name: **Arsenal Resources**

Well/Farm Name: **Johnson TFP40**

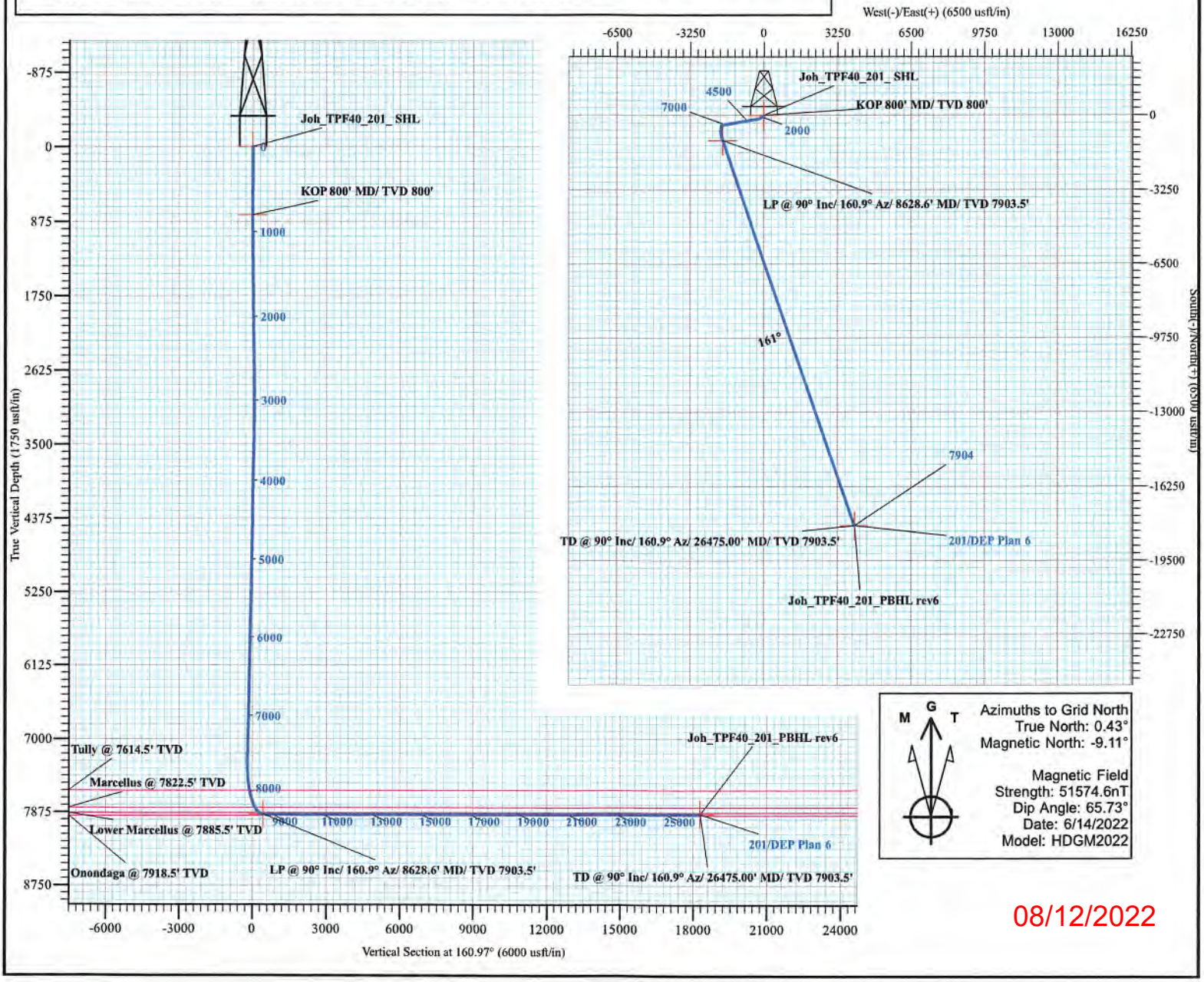
DEP Use Only	Permit #

NOTES:

Name	TVD	Latitude	Longitude	TMD
Joh_TPF40_201_ SHL	0.0	39.2584992	-80.1690596	0.00
Joh_TPF40_201_KOP	800.0	39.2584992	-80.1690596	800
Joh_TPF40_201_LP	7903.5	39.2554552	-80.1754687	8628.6
Joh_TPF40_201_PBHL rev6	7903.5	39.2092532	-80.1544892	26475.0

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	230.00	1099.5	-10.1	-12.0	2.00	230.00	5.6	Hold 6° Inc
2608.8	6.00	230.00	2600.0	-111.5	-132.8	0.00	0.00	62.1	KO Tangent 2°/100
3426.6	21.26	260.41	3393.2	-164.0	-313.0	2.00	40.67	53.0	Hold 21.3° Inc
7590.7	21.26	260.41	7273.8	-415.5	-1801.8	0.00	0.00	-194.7	KO Curve 9°/100
8628.6	90.00	160.97	7903.5	-1095.1	-1823.1	9.00	-98.81	440.8	LP @ 90° Inc/ 160.9° Az
26475.0	90.00	160.97	7903.5	-17966.5	3994.9	0.00	0.00	18287.2	



08/12/2022

Arsenal Resources

Taylor County, WV
Johnson TFP40
201

Orig.
DEP Plan 6

Anticollision Report

11 July, 2022

Scientific Drilling

www.scientificdrilling.com

08/12/2022

Anticollision Report

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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

Reference	DEP Plan 6		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	**Error Model:**	ISCWSA
Depth Range:	0.0 to 26,475.0usft	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 1,000.0 usft	**Error Surface:**	Ellipsoid Separation
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 7/11/2022

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	800.0	DEP Plan 6 (Orig.)	MWD+HRGM+Int	MWD with High Resolution Geomagnetic model and E>
800.0	2,600.0	DEP Plan 6 (Orig.)	MWD+AfterInt	OWSG MWD with High resolution geomagnetic model
2,600.0	26,475.0	DEP Plan 6 (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
Johnson TFP40						
202 - Orig. - DEP Plan 4	800.0	800.0	15.0	9.5	2.707	CC, ES
202 - Orig. - DEP Plan 4	26,400.0	26,116.8	1,000.2	307.8	1.445	Level 3, SF
203 - Orig. - DEP Plan 4	800.0	800.0	30.0	24.5	5.414	CC, ES
203 - Orig. - DEP Plan 4	26,400.0	26,012.7	2,000.1	1,304.1	2.874	SF
204 - Orig. - DEP Plan 5	800.0	800.0	45.0	39.5	8.120	CC, ES
204 - Orig. - DEP Plan 5	900.0	899.5	46.6	40.4	7.473	SF
205 - Orig. - DEP Plan 4	800.0	800.0	60.0	54.5	10.827	CC, ES
205 - Orig. - DEP Plan 4	900.0	898.0	62.7	56.5	10.055	SF
Pritt South Pad						
Pritt South #207 - OH - SDI Plan 1	11,635.9	8,901.9	1,207.4	1,108.5	12.213	CC
Pritt South #207 - OH - SDI Plan 1	22,300.0	19,532.0	1,209.7	723.7	2.489	ES, SF

Offset Design Johnson TFP40 - 202 - Orig. - DEP Plan 4 — 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	0.00	15.0	0.0	15.0				
100.0	100.0	100.0	100.0	0.3	0.3	0.00	15.0	0.0	15.0	14.5	0.52	28.664	
200.0	200.0	200.0	200.0	0.6	0.6	0.00	15.0	0.0	15.0	13.8	1.24	12.095	
300.0	300.0	300.0	300.0	1.0	1.0	0.00	15.0	0.0	15.0	13.0	1.96	7.665	
400.0	400.0	400.0	400.0	1.3	1.3	0.00	15.0	0.0	15.0	12.3	2.67	5.610	
500.0	500.0	500.0	500.0	1.7	1.7	0.00	15.0	0.0	15.0	11.6	3.39	4.424	
600.0	600.0	600.0	600.0	2.1	2.1	0.00	15.0	0.0	15.0	10.9	4.11	3.652	
700.0	700.0	700.0	700.0	2.4	2.4	0.00	15.0	0.0	15.0	10.2	4.83	3.109	
800.0	800.0	800.0	800.0	2.8	2.8	0.00	15.0	0.0	15.0	9.5	5.54	2.707	CC, ES
900.0	900.0	900.0	900.0	3.1	3.1	128.53	15.0	-1.7	16.1	9.9	6.24	2.586	
1,000.0	999.8	999.9	999.7	3.5	3.5	125.15	15.0	-7.0	19.6	12.6	6.92	2.826	
1,100.0	1,099.5	1,099.7	1,099.3	3.8	3.8	125.47	15.0	-13.9	25.2	17.5	7.61	3.304	

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

08/12/2022

Anticollision Report

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 202 - Orig. - DEP Plan 4 — Offset Site Error: 0.0 usft

Survey Program: 0-MWD+HRGM+Ini, 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
1,200.0	1,198.9	1,199.5	1,198.8	4.1	4.2	128.28	15.0	-20.9	31.8	23.5	8.32	3.825	
1,300.0	1,298.4	1,299.3	1,298.4	4.5	4.5	130.12	15.0	-27.9	38.5	29.5	9.03	4.267	
1,400.0	1,397.8	1,399.0	1,397.9	4.9	4.9	131.41	15.0	-34.8	45.3	35.5	9.74	4.646	
1,500.0	1,497.3	1,498.8	1,497.4	5.2	5.2	132.37	15.0	-41.8	52.0	41.6	10.46	4.972	
1,600.0	1,596.7	1,598.6	1,596.9	5.6	5.6	133.10	15.0	-48.7	58.8	47.6	11.18	5.255	
1,700.0	1,696.2	1,698.3	1,696.5	6.0	6.0	133.69	15.0	-55.7	65.6	53.6	11.91	5.504	
1,800.0	1,795.6	1,798.1	1,796.0	6.4	6.3	134.16	15.0	-62.7	72.3	59.7	12.64	5.723	
1,900.0	1,895.1	1,897.9	1,895.5	6.7	6.7	134.56	15.0	-69.6	79.1	65.7	13.37	5.918	
2,000.0	1,994.5	1,997.6	1,995.0	7.1	7.1	134.89	15.0	-76.6	85.9	71.8	14.10	6.092	
2,100.0	2,094.0	2,097.4	2,094.6	7.5	7.4	135.17	15.0	-83.5	92.7	77.8	14.83	6.249	
2,200.0	2,193.4	2,197.2	2,194.1	7.9	7.8	135.42	15.0	-90.5	99.5	83.9	15.56	6.391	
2,300.0	2,292.9	2,296.9	2,293.6	8.3	8.2	135.63	15.0	-97.4	106.3	90.0	16.30	6.519	
2,400.0	2,392.3	2,396.7	2,393.1	8.6	8.5	135.82	15.0	-104.4	113.0	96.0	17.03	6.637	
2,500.0	2,491.8	2,496.5	2,492.7	9.0	8.9	135.98	15.0	-111.4	119.8	102.1	17.77	6.744	
2,600.0	2,591.2	2,596.2	2,592.2	9.2	9.1	136.13	15.0	-118.3	126.6	108.5	18.15	6.979	
2,700.0	2,690.6	2,697.7	2,693.3	9.2	9.1	127.07	14.6	-125.9	133.0	114.8	18.20	7.308	
2,800.0	2,789.5	2,799.5	2,794.4	9.3	9.1	120.75	13.1	-138.9	138.2	120.0	18.23	7.582	
2,900.0	2,887.9	2,901.4	2,895.1	9.3	9.2	116.63	10.5	-154.3	142.4	124.1	18.30	7.783	
3,000.0	2,985.7	3,002.3	2,994.2	9.4	9.2	114.07	7.1	-172.4	145.6	127.4	18.41	7.919	
3,100.0	3,082.8	3,102.1	3,092.3	9.5	9.3	113.48	3.6	-190.6	149.4	130.9	18.56	8.053	
3,200.0	3,179.0	3,201.7	3,190.2	9.6	9.4	114.59	0.2	-208.8	153.9	135.1	18.75	8.208	
3,300.0	3,274.2	3,300.9	3,287.7	9.8	9.5	117.07	-3.3	-227.0	159.6	140.6	18.97	8.411	
3,400.0	3,368.3	3,399.7	3,384.7	10.0	9.6	120.60	-6.7	-245.0	167.1	147.9	19.22	8.696	
3,500.0	3,461.5	3,498.0	3,481.3	10.3	9.8	125.38	-10.1	-263.0	176.8	157.3	19.48	9.077	
3,600.0	3,554.7	3,596.3	3,577.9	10.7	9.9	129.96	-13.5	-280.9	187.8	168.1	19.74	9.514	
3,700.0	3,647.9	3,694.6	3,674.5	11.1	10.1	134.01	-17.0	-298.9	199.9	179.9	20.00	9.994	
3,800.0	3,741.1	3,792.9	3,771.1	11.5	10.3	137.60	-20.4	-316.9	212.9	192.6	20.27	10.505	
3,900.0	3,834.3	3,891.2	3,867.7	12.0	10.5	140.77	-23.8	-334.8	226.6	206.1	20.53	11.038	
4,000.0	3,927.5	3,989.6	3,964.3	12.5	10.7	143.58	-27.2	-352.8	240.9	220.1	20.79	11.586	
4,100.0	4,020.7	4,087.9	4,060.9	13.0	10.9	146.07	-30.6	-370.7	255.7	234.7	21.06	12.142	
4,200.0	4,113.9	4,186.2	4,157.5	13.6	11.2	148.28	-34.0	-388.7	271.0	249.7	21.34	12.701	
4,300.0	4,207.1	4,284.5	4,254.1	14.1	11.4	150.26	-37.4	-406.7	286.6	265.0	21.62	13.258	
4,400.0	4,300.3	4,382.8	4,350.7	14.7	11.6	152.04	-40.9	-424.6	302.5	280.6	21.91	13.809	
4,500.0	4,393.5	4,481.1	4,447.3	15.3	11.9	153.64	-44.3	-442.6	318.7	296.5	22.20	14.353	
4,600.0	4,486.7	4,579.4	4,543.8	15.9	12.2	155.08	-47.7	-460.6	335.1	312.6	22.51	14.887	
4,700.0	4,579.9	4,677.7	4,640.4	16.6	12.5	156.39	-51.1	-478.5	351.7	328.8	22.82	15.408	
4,800.0	4,673.0	4,776.0	4,737.0	17.2	12.7	157.58	-54.5	-496.5	368.4	345.2	23.15	15.916	
4,900.0	4,766.2	4,874.4	4,833.6	17.8	13.0	158.67	-57.9	-514.4	385.3	361.8	23.48	16.410	
5,000.0	4,859.4	4,972.7	4,930.2	18.5	13.3	159.66	-61.4	-532.4	402.3	378.5	23.82	16.889	
5,100.0	4,952.6	5,071.0	5,026.8	19.2	13.6	160.58	-64.8	-550.4	419.4	395.2	24.17	17.353	
5,200.0	5,045.8	5,169.3	5,123.4	19.8	13.9	161.42	-68.2	-568.3	436.6	412.1	24.53	17.802	
5,300.0	5,139.0	5,267.6	5,220.0	20.5	14.3	162.20	-71.6	-586.3	453.9	429.0	24.89	18.234	
5,400.0	5,232.2	5,365.9	5,316.6	21.2	14.6	162.93	-75.0	-604.2	471.3	446.0	25.27	18.652	
5,500.0	5,325.4	5,464.2	5,413.2	21.9	14.9	163.60	-78.4	-622.2	488.7	463.1	25.65	19.054	
5,600.0	5,418.6	5,562.5	5,509.8	22.6	15.2	164.22	-81.8	-640.2	506.2	480.2	26.04	19.440	
5,700.0	5,511.8	5,660.8	5,606.4	23.3	15.6	164.81	-85.3	-658.1	523.8	497.3	26.44	19.813	
5,800.0	5,605.0	5,759.1	5,703.0	23.9	15.9	165.35	-88.7	-676.1	541.4	514.5	26.84	20.170	
5,900.0	5,698.2	5,857.5	5,799.6	24.7	16.2	165.86	-92.1	-694.1	559.0	531.8	27.25	20.514	
6,000.0	5,791.4	5,955.8	5,896.2	25.4	16.6	166.34	-95.5	-712.0	576.7	549.1	27.67	20.844	
6,100.0	5,884.6	6,054.1	5,992.8	26.1	16.9	166.80	-98.9	-730.0	594.5	566.4	28.09	21.160	
6,200.0	5,977.8	6,152.4	6,089.4	26.8	17.3	167.22	-102.3	-747.9	612.2	583.7	28.52	21.464	

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

08/12/2022

Anticollision Report

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 202 - Orig. - DEP Plan 4 — 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
6,300.0	6,071.0	6,250.7	6,186.0	27.5	17.6	167.62	-105.7	-765.9	630.0	601.1	28.96	21.756	
6,400.0	6,164.2	6,349.0	6,282.6	28.2	18.0	168.00	-109.2	-783.9	647.8	618.4	29.40	22.035	
6,500.0	6,257.4	6,447.3	6,379.2	28.9	18.3	168.36	-112.6	-801.8	665.7	635.8	29.85	22.304	
6,600.0	6,350.5	6,545.6	6,475.8	29.7	18.7	168.70	-116.0	-819.8	683.6	653.3	30.30	22.561	
6,700.0	6,443.7	6,643.9	6,572.4	30.4	19.1	169.02	-119.4	-837.8	701.5	670.7	30.75	22.809	
6,800.0	6,536.9	6,742.3	6,669.0	31.1	19.4	169.33	-122.8	-855.7	719.4	688.2	31.21	23.046	
6,900.0	6,630.1	6,840.6	6,765.5	31.8	19.8	169.62	-126.2	-873.7	737.3	705.6	31.68	23.273	
7,000.0	6,723.3	6,938.9	6,862.1	32.6	20.2	169.90	-129.6	-891.6	755.3	723.1	32.15	23.491	
7,100.0	6,816.5	7,037.2	6,958.7	33.3	20.5	170.17	-133.1	-909.6	773.2	740.6	32.62	23.701	
7,200.0	6,909.7	7,135.5	7,055.3	34.0	20.9	170.42	-136.5	-927.6	791.2	758.1	33.10	23.902	
7,300.0	7,002.9	7,233.8	7,151.9	34.7	21.3	170.66	-139.9	-945.5	809.2	775.6	33.58	24.096	
7,400.0	7,096.1	7,332.1	7,248.5	35.5	21.6	170.89	-143.3	-963.5	827.2	793.1	34.07	24.281	
7,500.0	7,189.3	7,428.9	7,343.5	36.2	22.0	171.49	-151.9	-979.3	845.3	810.8	34.46	24.527	
7,600.0	7,282.5	7,520.9	7,432.5	36.9	22.2	175.24	-172.7	-989.8	864.0	829.3	34.72	24.887	
7,700.0	7,375.7	7,608.4	7,514.0	37.6	22.5	-158.45	-203.5	-995.3	883.6	848.6	34.92	25.300	
7,800.0	7,467.3	7,693.2	7,588.9	38.1	22.7	-136.84	-243.2	-996.5	903.4	868.2	35.16	25.692	
7,900.0	7,555.0	7,775.9	7,656.7	38.6	22.9	-121.57	-290.6	-993.6	922.7	887.3	35.44	26.035	
8,000.0	7,636.6	7,857.1	7,716.9	39.1	23.1	-111.03	-344.4	-986.9	940.9	905.2	35.77	26.303	
8,100.0	7,710.1	7,936.9	7,769.2	39.4	23.3	-103.62	-403.8	-976.8	957.5	921.3	36.18	26.466	
8,200.0	7,773.8	8,015.8	7,813.3	39.8	23.5	-98.34	-467.8	-963.5	971.8	935.1	36.71	26.473	
8,300.0	7,826.1	8,094.1	7,849.0	40.1	23.8	-94.60	-535.5	-947.2	983.6	946.2	37.33	26.345	
8,400.0	7,865.6	8,171.9	7,875.8	40.3	24.1	-92.07	-606.0	-928.2	992.3	954.3	38.08	26.060	
8,500.0	7,891.4	8,250.0	7,893.9	40.6	24.5	-90.57	-678.8	-906.7	997.9	959.0	38.97	25.609	
8,600.0	7,902.9	8,326.9	7,902.6	40.8	25.0	-89.99	-751.5	-883.3	1,000.2	960.2	40.05	24.973	
8,700.0	7,903.5	8,416.8	7,903.5	41.0	25.6	-90.00	-836.5	-854.2	1,000.2	958.7	41.57	24.063	
8,800.0	7,903.5	8,516.8	7,903.5	41.3	26.4	-90.00	-931.1	-821.6	1,000.2	956.8	43.48	23.002	
8,900.0	7,903.5	8,616.8	7,903.5	41.7	27.3	-90.00	-1,025.6	-789.0	1,000.2	954.6	45.63	21.921	
9,000.0	7,903.5	8,716.8	7,903.5	42.1	28.3	-90.00	-1,120.2	-756.4	1,000.2	952.3	47.97	20.850	
9,100.0	7,903.5	8,816.8	7,903.5	42.7	29.4	-90.00	-1,214.7	-723.8	1,000.2	949.7	50.49	19.810	
9,200.0	7,903.5	8,916.8	7,903.5	43.3	30.6	-90.00	-1,309.2	-691.2	1,000.2	947.1	53.16	18.815	
9,300.0	7,903.5	9,016.8	7,903.5	43.9	31.9	-90.00	-1,403.8	-658.6	1,000.2	944.3	55.96	17.875	
9,400.0	7,903.5	9,116.8	7,903.5	44.7	33.3	-90.00	-1,498.3	-626.0	1,000.2	941.4	58.87	16.992	
9,500.0	7,903.5	9,216.8	7,903.5	45.5	34.7	-90.00	-1,592.8	-593.4	1,000.2	938.4	61.87	16.167	
9,600.0	7,903.5	9,316.8	7,903.5	46.4	36.1	-90.00	-1,687.4	-560.8	1,000.2	935.3	64.96	15.398	
9,700.0	7,903.5	9,416.8	7,903.5	47.3	37.6	-90.00	-1,781.9	-528.2	1,000.2	932.1	68.12	14.683	
9,800.0	7,903.5	9,516.8	7,903.5	48.3	39.1	-90.00	-1,876.5	-495.6	1,000.2	928.9	71.34	14.020	
9,900.0	7,903.5	9,616.8	7,903.5	49.4	40.7	-90.00	-1,971.0	-463.0	1,000.2	925.6	74.62	13.404	
10,000.0	7,903.5	9,716.8	7,903.5	50.6	42.3	-90.00	-2,065.5	-430.4	1,000.2	922.3	77.95	12.832	
10,100.0	7,903.5	9,816.8	7,903.5	51.8	43.9	-90.00	-2,160.1	-397.8	1,000.2	918.9	81.31	12.301	
10,200.0	7,903.5	9,916.8	7,903.5	53.0	45.5	-90.00	-2,254.6	-365.2	1,000.2	915.5	84.72	11.807	
10,300.0	7,903.5	10,016.8	7,903.5	54.3	47.2	-90.00	-2,349.1	-332.6	1,000.2	912.1	88.16	11.346	
10,400.0	7,903.5	10,116.8	7,903.5	55.6	48.9	-90.00	-2,443.7	-300.0	1,000.2	908.6	91.63	10.916	
10,500.0	7,903.5	10,216.8	7,903.5	57.0	50.6	-90.00	-2,538.2	-267.4	1,000.2	905.1	95.15	10.512	
10,600.0	7,903.5	10,316.8	7,903.5	58.4	52.3	-90.00	-2,632.7	-234.8	1,000.2	901.6	98.62	10.142	
10,700.0	7,903.5	10,416.8	7,903.5	59.8	54.0	-90.00	-2,727.3	-202.2	1,000.2	898.1	102.16	9.791	
10,800.0	7,903.5	10,516.8	7,903.5	61.3	55.7	-90.00	-2,821.8	-169.6	1,000.2	894.5	105.72	9.461	
10,900.0	7,903.5	10,616.8	7,903.5	62.8	57.5	-90.00	-2,916.4	-137.0	1,000.2	890.9	109.29	9.152	
11,000.0	7,903.5	10,716.8	7,903.5	64.3	59.2	-90.00	-3,010.9	-104.4	1,000.2	887.4	112.88	8.861	
11,100.0	7,903.5	10,816.8	7,903.5	65.9	61.0	-90.00	-3,105.4	-71.8	1,000.2	883.7	116.48	8.587	
11,200.0	7,903.5	10,916.8	7,903.5	67.4	62.8	-90.00	-3,200.0	-39.2	1,000.2	880.1	120.10	8.329	

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 202 - Orig. - DEP Plan 4 — 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
11,300.0	7,903.5	11,016.8	7,903.5	69.0	64.6	-90.00	-3,294.5	-6.6	1,000.2	876.5	123.72	8.085	
11,400.0	7,903.5	11,116.8	7,903.5	70.6	66.3	-90.00	-3,389.0	26.0	1,000.2	872.9	127.36	7.854	
11,500.0	7,903.5	11,216.8	7,903.5	72.2	68.1	-90.00	-3,483.6	58.6	1,000.2	869.2	131.00	7.635	
11,600.0	7,903.5	11,316.8	7,903.5	73.9	69.9	-90.00	-3,578.1	91.2	1,000.2	865.6	134.66	7.428	
11,700.0	7,903.5	11,416.8	7,903.5	75.5	71.7	-90.00	-3,672.7	123.8	1,000.2	861.9	138.32	7.231	
11,800.0	7,903.5	11,516.8	7,903.5	77.2	73.6	-90.00	-3,767.2	156.4	1,000.2	858.2	141.99	7.044	
11,900.0	7,903.5	11,616.8	7,903.5	78.8	75.4	-90.00	-3,861.7	189.0	1,000.2	854.6	145.67	6.867	
12,000.0	7,903.5	11,716.8	7,903.5	80.5	77.2	-90.00	-3,956.3	221.6	1,000.2	850.9	149.35	6.697	
12,100.0	7,903.5	11,816.8	7,903.5	82.2	79.0	-90.00	-4,050.8	254.2	1,000.2	847.2	153.04	6.536	
12,200.0	7,903.5	11,916.8	7,903.5	83.9	80.8	-90.00	-4,145.3	286.8	1,000.2	843.5	156.73	6.382	
12,300.0	7,903.5	12,016.8	7,903.5	85.6	82.7	-90.00	-4,239.9	319.4	1,000.2	839.8	160.43	6.234	
12,400.0	7,903.5	12,116.8	7,903.5	87.4	84.5	-90.00	-4,334.4	352.0	1,000.2	836.1	164.14	6.094	
12,500.0	7,903.5	12,216.8	7,903.5	89.1	86.3	-90.00	-4,428.9	384.6	1,000.2	832.4	167.85	5.959	
12,600.0	7,903.5	12,316.8	7,903.5	90.8	88.2	-90.00	-4,523.5	417.2	1,000.2	828.7	171.56	5.830	
12,700.0	7,903.5	12,416.8	7,903.5	92.6	90.0	-90.00	-4,618.0	449.8	1,000.2	824.9	175.28	5.706	
12,800.0	7,903.5	12,516.8	7,903.5	94.3	91.9	-90.00	-4,712.6	482.4	1,000.2	821.2	179.00	5.588	
12,900.0	7,903.5	12,616.8	7,903.5	96.1	93.7	-90.00	-4,807.1	515.0	1,000.2	817.5	182.72	5.474	
13,000.0	7,903.5	12,716.8	7,903.5	97.9	95.6	-90.00	-4,901.6	547.6	1,000.2	813.8	186.45	5.365	
13,100.0	7,903.5	12,816.8	7,903.5	99.6	97.4	-90.00	-4,996.2	580.2	1,000.2	810.0	190.18	5.259	
13,200.0	7,903.5	12,916.8	7,903.5	101.4	99.3	-90.00	-5,090.7	612.8	1,000.2	806.3	193.92	5.158	
13,300.0	7,903.5	13,016.8	7,903.5	103.2	101.1	-90.00	-5,185.2	645.4	1,000.2	802.6	197.65	5.061	
13,400.0	7,903.5	13,116.8	7,903.5	105.0	103.0	-90.00	-5,279.8	678.0	1,000.2	798.8	201.39	4.967	
13,500.0	7,903.5	13,216.8	7,903.5	106.7	104.8	-90.00	-5,374.3	710.6	1,000.2	795.1	205.13	4.876	
13,600.0	7,903.5	13,316.8	7,903.5	108.5	106.7	-90.00	-5,468.9	743.2	1,000.2	791.3	208.87	4.789	
13,700.0	7,903.5	13,416.8	7,903.5	110.3	108.6	-90.00	-5,563.4	775.8	1,000.2	787.6	212.62	4.704	
13,800.0	7,903.5	13,516.8	7,903.5	112.1	110.4	-90.00	-5,657.9	808.4	1,000.2	783.9	216.37	4.623	
13,900.0	7,903.5	13,616.8	7,903.5	113.9	112.3	-90.00	-5,752.5	841.0	1,000.2	780.1	220.12	4.544	
14,000.0	7,903.5	13,716.8	7,903.5	115.7	114.2	-90.00	-5,847.0	873.6	1,000.2	776.4	223.87	4.468	
14,100.0	7,903.5	13,816.8	7,903.5	117.6	116.0	-90.00	-5,941.5	906.2	1,000.2	772.6	227.62	4.394	
14,200.0	7,903.5	13,916.8	7,903.5	119.4	117.9	-90.00	-6,036.1	938.8	1,000.2	768.8	231.37	4.323	
14,300.0	7,903.5	14,016.8	7,903.5	121.2	119.8	-90.00	-6,130.6	971.4	1,000.2	765.1	235.13	4.254	
14,400.0	7,903.5	14,116.8	7,903.5	123.0	121.6	-90.00	-6,225.1	1,004.0	1,000.2	761.3	238.89	4.187	
14,500.0	7,903.5	14,216.8	7,903.5	124.8	123.5	-90.00	-6,319.7	1,036.6	1,000.2	757.6	242.65	4.122	
14,600.0	7,903.5	14,316.8	7,903.5	126.7	125.4	-90.00	-6,414.2	1,069.2	1,000.2	753.8	246.41	4.059	
14,700.0	7,903.5	14,416.8	7,903.5	128.5	127.3	-90.00	-6,508.8	1,101.8	1,000.2	750.1	250.17	3.998	
14,800.0	7,903.5	14,516.8	7,903.5	130.3	129.1	-90.00	-6,603.3	1,134.4	1,000.2	746.3	253.93	3.939	
14,900.0	7,903.5	14,616.8	7,903.5	132.1	131.0	-90.00	-6,697.8	1,167.0	1,000.2	742.5	257.69	3.881	
15,000.0	7,903.5	14,716.8	7,903.5	134.0	132.9	-90.00	-6,792.4	1,199.6	1,000.2	738.8	261.46	3.826	
15,100.0	7,903.5	14,816.8	7,903.5	135.8	134.8	-90.00	-6,886.9	1,232.2	1,000.2	735.0	265.22	3.771	
15,200.0	7,903.5	14,916.8	7,903.5	137.6	136.6	-90.00	-6,981.4	1,264.8	1,000.2	731.2	268.99	3.718	
15,300.0	7,903.5	15,016.8	7,903.5	139.5	138.5	-90.00	-7,076.0	1,297.4	1,000.2	727.5	272.76	3.667	
15,400.0	7,903.5	15,116.8	7,903.5	141.3	140.4	-90.00	-7,170.5	1,330.0	1,000.2	723.7	276.53	3.617	
15,500.0	7,903.5	15,216.8	7,903.5	143.2	142.3	-90.00	-7,265.1	1,362.6	1,000.2	719.9	280.30	3.568	
15,600.0	7,903.5	15,316.8	7,903.5	145.0	144.2	-90.00	-7,359.6	1,395.2	1,000.2	716.2	284.07	3.521	
15,700.0	7,903.5	15,416.8	7,903.5	146.9	146.0	-90.00	-7,454.1	1,427.8	1,000.2	712.4	287.84	3.475	
15,800.0	7,903.5	15,516.8	7,903.5	148.7	147.9	-90.00	-7,548.7	1,460.4	1,000.2	708.6	291.61	3.430	
15,900.0	7,903.5	15,616.8	7,903.5	150.6	149.8	-90.00	-7,643.2	1,493.0	1,000.2	704.8	295.38	3.386	
16,000.0	7,903.5	15,716.8	7,903.5	152.4	151.7	-90.00	-7,737.7	1,525.6	1,000.2	701.1	299.16	3.343	
16,100.0	7,903.5	15,816.8	7,903.5	154.3	153.6	-90.00	-7,832.3	1,558.2	1,000.2	697.3	302.93	3.302	
16,200.0	7,903.5	15,916.8	7,903.5	156.1	155.5	-90.00	-7,926.8	1,590.8	1,000.2	693.5	306.71	3.261	
16,300.0	7,903.5	16,016.8	7,903.5	158.0	157.3	-90.00	-8,021.3	1,623.4	1,000.2	689.7	310.48	3.222	

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

08/12/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 202 - Orig. - DEP Plan 4 — Offset Site Error: 0.0 usft

Survey Program: 0-MWD+HRGM+Ini, 600-MWD+AfterIni, 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
16,400.0	7,903.5	16,116.8	7,903.5	159.8	159.2	-90.00	-8,115.9	1,656.0	1,000.2	686.0	314.26	3.183	
16,500.0	7,903.5	16,216.8	7,903.5	161.7	161.1	-90.00	-8,210.4	1,688.6	1,000.2	682.2	318.03	3.145	
16,600.0	7,903.5	16,316.8	7,903.5	163.5	163.0	-90.00	-8,305.0	1,721.2	1,000.2	678.4	321.81	3.108	
16,700.0	7,903.5	16,416.8	7,903.5	165.4	164.9	-90.00	-8,399.5	1,753.8	1,000.2	674.6	325.59	3.072	
16,800.0	7,903.5	16,516.8	7,903.5	167.3	166.8	-90.00	-8,494.0	1,786.4	1,000.2	670.9	329.36	3.037	
16,900.0	7,903.5	16,616.8	7,903.5	169.1	168.7	-90.00	-8,588.6	1,819.0	1,000.2	667.1	333.14	3.002	
17,000.0	7,903.5	16,716.8	7,903.5	171.0	170.5	-90.00	-8,683.1	1,851.6	1,000.2	663.3	336.92	2.969	
17,100.0	7,903.5	16,816.8	7,903.5	172.8	172.4	-90.00	-8,777.6	1,884.2	1,000.2	659.5	340.70	2.936	
17,200.0	7,903.5	16,916.8	7,903.5	174.7	174.3	-90.00	-8,872.2	1,916.8	1,000.2	655.7	344.48	2.904	
17,300.0	7,903.5	17,016.8	7,903.5	176.6	176.2	-90.00	-8,966.7	1,949.4	1,000.2	652.0	348.26	2.872	
17,400.0	7,903.5	17,116.8	7,903.5	178.4	178.1	-90.00	-9,061.3	1,982.0	1,000.2	648.2	352.04	2.841	
17,500.0	7,903.5	17,216.8	7,903.5	180.3	180.0	-90.00	-9,155.8	2,014.6	1,000.2	644.4	355.82	2.811	
17,600.0	7,903.5	17,316.8	7,903.5	182.2	181.9	-90.00	-9,250.3	2,047.2	1,000.2	640.6	359.60	2.781	
17,700.0	7,903.5	17,416.8	7,903.5	184.0	183.8	-90.00	-9,344.9	2,079.8	1,000.2	636.8	363.38	2.752	
17,800.0	7,903.5	17,516.8	7,903.5	185.9	185.7	-90.00	-9,439.4	2,112.4	1,000.2	633.0	367.17	2.724	
17,900.0	7,903.5	17,616.8	7,903.5	187.8	187.6	-90.00	-9,533.9	2,145.0	1,000.2	629.3	370.95	2.696	
18,000.0	7,903.5	17,716.8	7,903.5	189.6	189.4	-90.00	-9,628.5	2,177.6	1,000.2	625.5	374.73	2.669	
18,100.0	7,903.5	17,816.8	7,903.5	191.5	191.3	-90.00	-9,723.0	2,210.2	1,000.2	621.7	378.51	2.642	
18,200.0	7,903.5	17,916.8	7,903.5	193.4	193.2	-90.00	-9,817.5	2,242.8	1,000.2	617.9	382.30	2.616	
18,300.0	7,903.5	18,016.8	7,903.5	195.3	195.1	-90.00	-9,912.1	2,275.4	1,000.2	614.1	386.08	2.591	
18,400.0	7,903.5	18,116.8	7,903.5	197.1	197.0	-90.00	-10,006.6	2,308.0	1,000.2	610.4	389.86	2.566	
18,500.0	7,903.5	18,216.8	7,903.5	199.0	198.9	-90.00	-10,101.2	2,340.6	1,000.2	606.6	393.65	2.541	
18,600.0	7,903.5	18,316.8	7,903.5	200.9	200.8	-90.00	-10,195.7	2,373.2	1,000.2	602.8	397.43	2.517	
18,700.0	7,903.5	18,416.8	7,903.5	202.8	202.7	-90.00	-10,290.2	2,405.8	1,000.2	599.0	401.21	2.493	
18,800.0	7,903.5	18,516.8	7,903.5	204.6	204.6	-90.00	-10,384.8	2,438.4	1,000.2	595.2	405.00	2.470	
18,900.0	7,903.5	18,616.8	7,903.5	206.5	206.5	-90.00	-10,479.3	2,471.0	1,000.2	591.4	408.78	2.447	
19,000.0	7,903.5	18,716.8	7,903.5	208.4	208.4	-90.00	-10,573.8	2,503.6	1,000.2	587.6	412.57	2.424	
19,100.0	7,903.5	18,816.8	7,903.5	210.3	210.3	-90.00	-10,668.4	2,536.2	1,000.2	583.9	416.35	2.402	
19,200.0	7,903.5	18,916.8	7,903.5	212.1	212.2	-90.00	-10,762.9	2,568.8	1,000.2	580.1	420.14	2.381	
19,300.0	7,903.5	19,016.8	7,903.5	214.0	214.1	-90.00	-10,857.5	2,601.4	1,000.2	576.3	423.92	2.359	
19,400.0	7,903.5	19,116.8	7,903.5	215.9	215.9	-90.00	-10,952.0	2,634.0	1,000.2	572.5	427.70	2.339	
19,500.0	7,903.5	19,216.8	7,903.5	217.8	217.8	-90.00	-11,046.5	2,666.6	1,000.2	568.7	431.49	2.318	
19,600.0	7,903.5	19,316.8	7,903.5	219.6	219.7	-90.00	-11,141.1	2,699.2	1,000.2	564.9	435.28	2.298	
19,700.0	7,903.5	19,416.8	7,903.5	221.5	221.6	-90.00	-11,235.6	2,731.8	1,000.2	561.2	439.06	2.278	
19,800.0	7,903.5	19,516.8	7,903.5	223.4	223.5	-90.00	-11,330.1	2,764.4	1,000.2	557.4	442.85	2.259	
19,900.0	7,903.5	19,616.8	7,903.5	225.3	225.4	-90.00	-11,424.7	2,797.0	1,000.2	553.6	446.63	2.239	
20,000.0	7,903.5	19,716.8	7,903.5	227.2	227.3	-90.00	-11,519.2	2,829.6	1,000.2	549.8	450.42	2.221	
20,100.0	7,903.5	19,816.8	7,903.5	229.1	229.2	-90.00	-11,613.7	2,862.2	1,000.2	546.0	454.20	2.202	
20,200.0	7,903.5	19,916.8	7,903.5	230.9	231.1	-90.00	-11,708.3	2,894.8	1,000.2	542.2	457.99	2.184	
20,300.0	7,903.5	20,016.8	7,903.5	232.8	233.0	-90.00	-11,802.8	2,927.4	1,000.2	538.4	461.77	2.166	
20,400.0	7,903.5	20,116.8	7,903.5	234.7	234.9	-90.00	-11,897.4	2,960.0	1,000.2	534.7	465.56	2.148	
20,500.0	7,903.5	20,216.8	7,903.5	236.6	236.8	-90.00	-11,991.9	2,992.6	1,000.2	530.9	469.35	2.131	
20,600.0	7,903.5	20,316.8	7,903.5	238.5	238.7	-90.00	-12,086.4	3,025.2	1,000.2	527.1	473.13	2.114	
20,700.0	7,903.5	20,416.8	7,903.5	240.3	240.6	-90.00	-12,181.0	3,057.8	1,000.2	523.3	476.92	2.097	
20,800.0	7,903.5	20,516.8	7,903.5	242.2	242.5	-90.00	-12,275.5	3,090.4	1,000.2	519.5	480.70	2.081	
20,900.0	7,903.5	20,616.8	7,903.5	244.1	244.4	-90.00	-12,370.0	3,123.0	1,000.2	515.7	484.49	2.064	
21,000.0	7,903.5	20,716.8	7,903.5	246.0	246.3	-90.00	-12,464.6	3,155.6	1,000.2	511.9	488.27	2.048	
21,100.0	7,903.5	20,816.8	7,903.5	247.9	248.2	-90.00	-12,559.1	3,188.2	1,000.2	508.1	492.06	2.033	
21,200.0	7,903.5	20,916.8	7,903.5	249.8	250.1	-90.00	-12,653.7	3,220.8	1,000.2	504.4	495.85	2.017	
21,300.0	7,903.5	21,016.8	7,903.5	251.7	252.0	-90.00	-12,748.2	3,253.4	1,000.2	500.6	499.63	2.002	

Anticollision Report

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 202 - Orig. - DEP Plan 4 — 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
21,400.0	7,903.5	21,116.8	7,903.5	253.5	253.9	-90.00	-12,842.7	3,286.0	1,000.2	496.8	503.42	1.987	
21,500.0	7,903.5	21,216.8	7,903.5	255.4	255.8	-90.00	-12,937.3	3,318.6	1,000.2	493.0	507.20	1.972	
21,600.0	7,903.5	21,316.8	7,903.5	257.3	257.7	-90.00	-13,031.8	3,351.2	1,000.2	489.2	510.99	1.957	
21,700.0	7,903.5	21,416.8	7,903.5	259.2	259.6	-90.00	-13,126.3	3,383.8	1,000.2	485.4	514.77	1.943	
21,800.0	7,903.5	21,516.8	7,903.5	261.1	261.5	-90.00	-13,220.9	3,416.4	1,000.2	481.6	518.56	1.929	
21,900.0	7,903.5	21,616.8	7,903.5	263.0	263.4	-90.00	-13,315.4	3,449.0	1,000.2	477.9	522.34	1.915	
22,000.0	7,903.5	21,716.8	7,903.5	264.9	265.3	-90.00	-13,409.9	3,481.6	1,000.2	474.1	526.13	1.901	
22,100.0	7,903.5	21,816.8	7,903.5	266.7	267.2	-90.00	-13,504.5	3,514.2	1,000.2	470.3	529.91	1.887	
22,200.0	7,903.5	21,916.8	7,903.5	268.6	269.1	-90.00	-13,599.0	3,546.8	1,000.2	466.5	533.70	1.874	
22,300.0	7,903.5	22,016.8	7,903.5	270.5	271.0	-90.00	-13,693.6	3,579.4	1,000.2	462.7	537.48	1.861	
22,400.0	7,903.5	22,116.8	7,903.5	272.4	272.9	-90.00	-13,788.1	3,612.0	1,000.2	458.9	541.27	1.848	
22,500.0	7,903.5	22,216.8	7,903.5	274.3	274.8	-90.00	-13,882.6	3,644.6	1,000.2	455.2	545.05	1.835	
22,600.0	7,903.5	22,316.8	7,903.5	276.2	276.6	-90.00	-13,977.2	3,677.2	1,000.2	451.4	548.84	1.822	
22,700.0	7,903.5	22,416.8	7,903.5	278.1	278.5	-90.00	-14,071.7	3,709.8	1,000.2	447.6	552.62	1.810	
22,800.0	7,903.5	22,516.8	7,903.5	280.0	280.4	-90.00	-14,166.2	3,742.4	1,000.2	443.8	556.40	1.798	
22,900.0	7,903.5	22,616.8	7,903.5	281.9	282.3	-90.00	-14,260.8	3,775.0	1,000.2	440.0	560.19	1.785	
23,000.0	7,903.5	22,716.8	7,903.5	283.7	284.2	-90.00	-14,355.3	3,807.6	1,000.2	436.2	563.97	1.774	
23,100.0	7,903.5	22,816.8	7,903.5	285.6	286.1	-90.00	-14,449.9	3,840.2	1,000.2	432.4	567.76	1.762	
23,200.0	7,903.5	22,916.8	7,903.5	287.5	288.0	-90.00	-14,544.4	3,872.8	1,000.2	428.7	571.54	1.750	
23,300.0	7,903.5	23,016.8	7,903.5	289.4	289.9	-90.00	-14,638.9	3,905.4	1,000.2	424.9	575.32	1.739	
23,400.0	7,903.5	23,116.8	7,903.5	291.3	291.8	-90.00	-14,733.5	3,938.0	1,000.2	421.1	579.10	1.727	
23,500.0	7,903.5	23,216.8	7,903.5	293.2	293.7	-90.00	-14,828.0	3,970.6	1,000.2	417.3	582.89	1.716	
23,600.0	7,903.5	23,316.8	7,903.5	295.1	295.6	-90.00	-14,922.5	4,003.2	1,000.2	413.5	586.67	1.705	
23,700.0	7,903.5	23,416.8	7,903.5	297.0	297.5	-90.00	-15,017.1	4,035.8	1,000.2	409.8	590.45	1.694	
23,800.0	7,903.5	23,516.8	7,903.5	298.9	299.4	-90.00	-15,111.6	4,068.4	1,000.2	406.0	594.23	1.683	
23,900.0	7,903.5	23,616.8	7,903.5	300.8	301.3	-90.00	-15,206.1	4,101.0	1,000.2	402.2	598.01	1.673	
24,000.0	7,903.5	23,716.8	7,903.5	302.6	303.2	-90.00	-15,300.7	4,133.6	1,000.2	398.4	601.80	1.662	
24,100.0	7,903.5	23,816.8	7,903.5	304.5	305.1	-90.00	-15,395.2	4,166.2	1,000.2	394.6	605.58	1.652	
24,200.0	7,903.5	23,916.8	7,903.5	306.4	307.0	-90.00	-15,489.8	4,198.8	1,000.2	390.8	609.36	1.641	
24,300.0	7,903.5	24,016.8	7,903.5	308.3	308.9	-90.00	-15,584.3	4,231.4	1,000.2	387.1	613.14	1.631	
24,400.0	7,903.5	24,116.8	7,903.5	310.2	310.8	-90.00	-15,678.8	4,264.0	1,000.2	383.3	616.92	1.621	
24,500.0	7,903.5	24,216.8	7,903.5	312.1	312.7	-90.00	-15,773.4	4,296.6	1,000.2	379.5	620.70	1.611	
24,600.0	7,903.5	24,316.8	7,903.5	314.0	314.6	-90.00	-15,867.9	4,329.2	1,000.2	375.7	624.48	1.602	
24,700.0	7,903.5	24,416.8	7,903.5	315.9	316.5	-90.00	-15,962.4	4,361.8	1,000.2	371.9	628.25	1.592	
24,800.0	7,903.5	24,516.8	7,903.5	317.8	318.4	-90.00	-16,057.0	4,394.4	1,000.2	368.2	632.03	1.583	
24,900.0	7,903.5	24,616.8	7,903.5	319.7	320.3	-90.00	-16,151.5	4,427.0	1,000.2	364.4	635.81	1.573	
25,000.0	7,903.5	24,716.8	7,903.5	321.6	322.2	-90.00	-16,246.1	4,459.6	1,000.2	360.6	639.59	1.564	
25,100.0	7,903.5	24,816.8	7,903.5	323.5	324.1	-90.00	-16,340.6	4,492.2	1,000.2	356.8	643.36	1.555	
25,200.0	7,903.5	24,916.8	7,903.5	325.4	326.0	-90.00	-16,435.1	4,524.8	1,000.2	353.1	647.14	1.546	
25,300.0	7,903.5	25,016.8	7,903.5	327.2	327.9	-90.00	-16,529.7	4,557.4	1,000.2	349.3	650.92	1.537	
25,400.0	7,903.5	25,116.8	7,903.5	329.1	329.8	-90.00	-16,624.2	4,590.0	1,000.2	345.5	654.69	1.528	
25,500.0	7,903.5	25,216.8	7,903.5	331.0	331.7	-90.00	-16,718.7	4,622.6	1,000.2	341.7	658.47	1.519	
25,600.0	7,903.5	25,316.8	7,903.5	332.9	333.6	-90.00	-16,813.3	4,655.2	1,000.2	338.0	662.24	1.510	
25,700.0	7,903.5	25,416.8	7,903.5	334.8	335.5	-90.00	-16,907.8	4,687.8	1,000.2	334.2	666.01	1.502	
25,800.0	7,903.5	25,516.8	7,903.5	336.7	337.4	-90.00	-17,002.3	4,720.4	1,000.2	330.4	669.79	1.493	Level 3
25,900.0	7,903.5	25,616.8	7,903.5	338.6	339.3	-90.00	-17,096.9	4,753.0	1,000.2	326.6	673.56	1.485	Level 3
26,000.0	7,903.5	25,716.8	7,903.5	340.5	341.2	-90.00	-17,191.4	4,785.6	1,000.2	322.9	677.33	1.477	Level 3
26,100.0	7,903.5	25,816.8	7,903.5	342.4	343.1	-90.00	-17,286.0	4,818.3	1,000.2	319.1	681.10	1.468	Level 3
26,200.0	7,903.5	25,916.8	7,903.5	344.3	345.0	-90.00	-17,380.5	4,850.9	1,000.2	315.3	684.87	1.460	Level 3
26,300.0	7,903.5	26,016.8	7,903.5	346.2	346.9	-90.00	-17,475.0	4,883.5	1,000.2	311.6	688.64	1.452	Level 3
26,400.0	7,903.5	26,116.8	7,903.5	348.1	348.8	-90.00	-17,569.6	4,916.1	1,000.2	307.8	692.41	1.445	Level 3, SF

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

08/12/2022

Anticollision Report

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 202 - Orig. - DEP Plan 4 — **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

08/12/2022

Anticollision Report

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 203 - Orig. - DEP Plan 4 — 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	0.00	30.0	0.0	30.0				
100.0	100.0	100.0	100.0	0.3	0.3	0.00	30.0	0.0	30.0	29.5	0.52	57.325	
200.0	200.0	200.0	200.0	0.6	0.6	0.00	30.0	0.0	30.0	28.8	1.24	24.189	
300.0	300.0	300.0	300.0	1.0	1.0	0.00	30.0	0.0	30.0	28.0	1.96	15.329	
400.0	400.0	400.0	400.0	1.3	1.3	0.00	30.0	0.0	30.0	27.3	2.67	11.219	
500.0	500.0	500.0	500.0	1.7	1.7	0.00	30.0	0.0	30.0	26.6	3.39	8.847	
600.0	600.0	600.0	600.0	2.1	2.1	0.00	30.0	0.0	30.0	25.9	4.11	7.303	
700.0	700.0	700.0	700.0	2.4	2.4	0.00	30.0	0.0	30.0	25.2	4.83	6.218	
800.0	800.0	800.0	800.0	2.8	2.8	0.00	30.0	0.0	30.0	24.5	5.54	5.414	CC, ES
900.0	900.0	899.6	899.6	3.1	3.1	131.18	30.6	-0.7	31.7	25.4	6.24	5.077	
1,000.0	999.8	999.1	999.1	3.5	3.5	134.05	32.2	-2.7	36.8	29.9	6.93	5.311	
1,100.0	1,099.5	1,098.3	1,098.2	3.8	3.8	137.37	35.0	-6.0	45.5	37.8	7.63	5.962	
1,200.0	1,198.9	1,197.3	1,196.9	4.1	4.2	139.33	38.8	-10.6	56.4	48.1	8.32	6.776	
1,300.0	1,298.4	1,296.6	1,296.0	4.5	4.5	139.99	43.2	-15.9	67.8	58.8	9.03	7.513	
1,400.0	1,397.8	1,395.9	1,395.1	4.9	4.9	140.45	47.6	-21.3	79.3	69.5	9.74	8.139	
1,500.0	1,497.3	1,495.3	1,494.2	5.2	5.3	140.80	52.0	-26.6	90.7	80.3	10.46	8.677	
1,600.0	1,596.7	1,594.6	1,593.3	5.6	5.6	141.07	56.4	-32.0	102.2	91.0	11.17	9.145	
1,700.0	1,696.2	1,694.0	1,692.4	6.0	6.0	141.29	60.9	-37.3	113.6	101.7	11.89	9.554	
1,800.0	1,795.6	1,793.3	1,791.5	6.4	6.3	141.47	65.3	-42.6	125.1	112.5	12.62	9.914	
1,900.0	1,895.1	1,892.6	1,890.6	6.7	6.7	141.61	69.7	-48.0	136.5	123.2	13.34	10.235	
2,000.0	1,994.5	1,992.0	1,989.7	7.1	7.1	141.74	74.1	-53.3	148.0	133.9	14.07	10.521	
2,100.0	2,094.0	2,091.3	2,088.8	7.5	7.4	141.84	78.5	-58.6	159.4	144.7	14.79	10.779	
2,200.0	2,193.4	2,190.7	2,187.9	7.9	7.8	141.94	83.0	-64.0	170.9	155.4	15.52	11.011	
2,300.0	2,292.9	2,290.0	2,287.0	8.3	8.2	142.02	87.4	-69.3	182.4	166.1	16.25	11.222	
2,400.0	2,392.3	2,389.4	2,386.1	8.6	8.5	142.09	91.8	-74.7	193.8	176.8	16.98	11.415	
2,500.0	2,491.8	2,488.7	2,485.2	9.0	8.9	142.15	96.2	-80.0	205.3	187.6	17.71	11.591	
2,600.0	2,591.2	2,588.0	2,584.3	9.2	9.1	142.21	100.6	-85.3	216.7	198.6	18.09	11.978	
2,700.0	2,690.6	2,687.3	2,683.4	9.2	9.1	133.30	105.0	-90.7	228.5	210.3	18.15	12.591	
2,800.0	2,789.5	2,786.4	2,782.2	9.3	9.1	127.77	109.4	-96.0	241.0	222.8	18.18	13.255	
2,900.0	2,887.9	2,885.2	2,880.8	9.3	9.2	124.99	113.8	-101.3	254.4	236.2	18.24	13.950	
3,000.0	2,985.7	2,983.5	2,978.9	9.4	9.2	123.97	118.2	-106.6	269.0	250.7	18.32	14.684	
3,100.0	3,082.8	3,081.3	3,076.4	9.5	9.2	124.13	122.6	-111.8	285.2	266.8	18.44	15.466	
3,200.0	3,179.0	3,178.4	3,173.3	9.6	9.3	125.09	126.9	-117.1	303.2	284.6	18.59	16.306	
3,300.0	3,274.2	3,274.7	3,269.3	9.8	9.3	126.59	131.2	-122.2	323.4	304.6	18.78	17.217	
3,400.0	3,368.3	3,371.0	3,365.4	10.0	9.3	128.58	135.0	-126.9	345.9	326.9	19.00	18.209	
3,500.0	3,461.5	3,465.9	3,460.2	10.3	9.4	131.84	137.8	-130.2	370.7	351.5	19.23	19.277	
3,600.0	3,554.7	3,560.1	3,554.4	10.7	9.4	135.26	139.5	-132.3	396.8	377.4	19.46	20.386	
3,700.0	3,647.9	3,653.7	3,648.0	11.1	9.5	138.46	140.3	-133.3	424.1	404.5	19.69	21.537	
3,800.0	3,741.1	3,746.8	3,741.1	11.5	9.5	141.41	140.3	-133.3	452.7	432.8	19.92	22.725	
3,900.0	3,834.3	3,840.0	3,834.3	12.0	9.6	144.04	140.3	-133.3	482.3	462.1	20.15	23.934	
4,000.0	3,927.5	3,933.2	3,927.5	12.5	9.6	146.37	140.3	-133.3	512.7	492.3	20.38	25.153	
4,100.0	4,020.7	4,026.4	4,020.7	13.0	9.7	148.45	140.3	-133.3	543.9	523.2	20.62	26.373	
4,200.0	4,113.9	4,119.6	4,113.9	13.6	9.8	150.31	140.3	-133.3	575.6	554.8	20.87	27.587	
4,300.0	4,207.1	4,212.8	4,207.1	14.1	9.8	151.97	140.3	-133.3	607.9	586.8	21.11	28.789	
4,400.0	4,300.3	4,306.0	4,300.3	14.7	9.9	153.48	140.3	-133.3	640.6	619.2	21.37	29.974	
4,500.0	4,393.5	4,399.2	4,393.5	15.3	10.0	154.84	140.3	-133.3	673.6	652.0	21.63	31.138	
4,600.0	4,486.7	4,492.4	4,486.7	15.9	10.1	156.08	140.3	-133.3	707.0	685.1	21.90	32.278	
4,700.0	4,579.9	4,585.6	4,579.9	16.6	10.2	157.20	140.3	-133.3	740.6	718.4	22.18	33.392	
4,800.0	4,673.0	4,678.8	4,673.0	17.2	10.3	158.23	140.3	-133.3	774.5	752.0	22.46	34.477	
4,900.0	4,766.2	4,772.0	4,766.2	17.8	10.4	159.18	140.3	-133.3	808.6	785.8	22.76	35.534	
5,000.0	4,859.4	4,865.2	4,859.4	18.5	10.5	160.05	140.3	-133.3	842.8	819.8	23.05	36.560	

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

08/12/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 203 - Orig. - DEP Plan 4 — 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	4,952.6	4,958.3	4,952.6	19.2	10.6	160.85	140.3	-133.3	877.3	853.9	23.36	37.556	
5,200.0	5,045.8	5,051.5	5,045.8	19.8	10.7	161.59	140.3	-133.3	911.8	888.2	23.67	38.520	
5,300.0	5,139.0	5,144.7	5,139.0	20.5	10.8	162.28	140.3	-133.3	946.5	922.5	23.99	39.454	
5,400.0	5,232.2	5,237.9	5,232.2	21.2	10.9	162.92	140.3	-133.3	981.3	957.0	24.32	40.356	
5,500.0	5,325.4	5,331.1	5,325.4	21.9	11.0	163.52	140.3	-133.3	1,016.2	991.6	24.65	41.228	
5,600.0	5,418.6	5,424.3	5,418.6	22.6	11.1	164.08	140.3	-133.3	1,051.2	1,026.2	24.99	42.069	
5,700.0	5,511.8	5,517.5	5,511.8	23.3	11.2	164.60	140.3	-133.3	1,086.3	1,061.0	25.33	42.881	
5,800.0	5,605.0	5,610.7	5,605.0	23.9	11.3	165.09	140.3	-133.3	1,121.5	1,095.8	25.68	43.663	
5,900.0	5,698.2	5,703.9	5,698.2	24.7	11.5	165.55	140.3	-133.3	1,156.7	1,130.7	26.04	44.417	
6,000.0	5,791.4	5,797.1	5,791.4	25.4	11.6	165.98	140.3	-133.3	1,192.0	1,165.6	26.40	45.144	
6,100.0	5,884.6	5,890.3	5,884.6	26.1	11.7	166.39	140.3	-133.3	1,227.3	1,200.6	26.77	45.843	
6,200.0	5,977.8	5,983.5	5,977.8	26.8	11.8	166.78	140.3	-133.3	1,262.7	1,235.6	27.15	46.516	
6,300.0	6,071.0	6,076.7	6,071.0	27.5	12.0	167.14	140.3	-133.3	1,298.2	1,270.6	27.52	47.164	
6,400.0	6,164.2	6,169.9	6,164.2	28.2	12.1	167.49	140.3	-133.3	1,333.7	1,305.8	27.91	47.787	
6,500.0	6,257.4	6,263.1	6,257.4	28.9	12.3	167.81	140.3	-133.3	1,369.2	1,340.9	28.30	48.387	
6,600.0	6,350.5	6,356.3	6,350.5	29.7	12.4	168.13	140.3	-133.3	1,404.8	1,376.1	28.69	48.964	
6,700.0	6,443.7	6,449.5	6,443.7	30.4	12.5	168.42	140.3	-133.3	1,440.4	1,411.3	29.09	49.519	
6,800.0	6,536.9	6,542.7	6,536.9	31.1	12.7	168.70	140.3	-133.3	1,476.0	1,446.5	29.49	50.053	
6,900.0	6,630.1	6,635.8	6,630.1	31.8	12.8	168.97	140.3	-133.3	1,511.6	1,481.8	29.89	50.567	
7,000.0	6,723.3	6,729.0	6,723.3	32.6	13.0	169.23	140.3	-133.3	1,547.3	1,517.0	30.30	51.061	
7,100.0	6,816.5	6,822.2	6,816.5	33.3	13.1	169.47	140.3	-133.3	1,583.1	1,552.3	30.72	51.536	
7,200.0	6,909.7	6,915.4	6,909.7	34.0	13.3	169.71	140.3	-133.3	1,618.8	1,587.7	31.13	51.993	
7,300.0	7,002.9	7,008.6	7,002.9	34.7	13.4	169.93	140.3	-133.3	1,654.6	1,623.0	31.56	52.433	
7,400.0	7,096.1	7,101.8	7,096.1	35.5	13.6	170.15	140.3	-133.3	1,690.3	1,658.4	31.98	52.857	
7,500.0	7,189.3	7,195.0	7,189.3	36.2	13.7	170.35	140.3	-133.3	1,726.1	1,693.7	32.41	53.264	
7,600.0	7,282.5	7,285.7	7,279.8	36.9	13.8	173.16	136.0	-131.8	1,762.0	1,729.3	32.76	53.782	
7,700.0	7,375.7	7,375.1	7,368.1	37.6	13.9	-160.09	122.9	-127.3	1,798.0	1,765.0	33.03	54.439	
7,800.0	7,467.3	7,464.3	7,454.3	38.1	14.0	-138.10	101.2	-119.8	1,833.3	1,800.0	33.24	55.156	
7,900.0	7,555.0	7,553.3	7,537.1	38.6	14.2	-122.53	70.7	-109.2	1,867.0	1,833.5	33.42	55.865	
8,000.0	7,636.6	7,642.7	7,615.2	39.1	14.3	-111.72	29.6	-95.0	1,898.3	1,864.7	33.61	56.479	
8,100.0	7,710.1	7,733.5	7,687.4	39.4	14.5	-104.08	-22.3	-77.1	1,926.5	1,892.6	33.87	56.871	
8,200.0	7,773.8	7,825.9	7,752.1	39.8	14.8	-98.60	-84.5	-55.6	1,950.8	1,916.5	34.29	56.890	
8,300.0	7,826.1	7,920.0	7,807.5	40.1	15.3	-94.71	-156.3	-30.8	1,970.8	1,935.9	34.94	56.405	
8,400.0	7,865.6	8,016.0	7,851.9	40.3	15.9	-92.10	-236.7	-3.1	1,986.0	1,950.0	35.92	55.292	
8,500.0	7,891.4	8,113.7	7,883.4	40.6	16.8	-90.55	-324.0	27.1	1,995.8	1,958.6	37.25	53.586	
8,600.0	7,902.9	8,212.7	7,900.5	40.8	17.8	-89.97	-416.1	58.8	2,000.2	1,961.3	38.90	51.426	
8,700.0	7,903.5	8,312.7	7,903.5	41.0	18.9	-90.00	-510.5	91.4	2,000.5	1,959.7	40.81	49.022	
8,800.0	7,903.5	8,412.7	7,903.5	41.3	20.2	-90.00	-605.0	124.0	2,000.5	1,957.5	42.92	46.614	
8,900.0	7,903.5	8,512.7	7,903.5	41.7	21.5	-90.00	-699.6	156.6	2,000.5	1,955.2	45.24	44.220	
9,000.0	7,903.5	8,612.7	7,903.5	42.1	23.0	-90.00	-794.1	189.2	2,000.5	1,952.7	47.75	41.896	
9,100.0	7,903.5	8,712.7	7,903.5	42.7	24.5	-90.00	-888.6	221.8	2,000.5	1,950.0	50.42	39.677	
9,200.0	7,903.5	8,812.7	7,903.5	43.3	26.0	-90.00	-983.2	254.4	2,000.5	1,947.2	53.22	37.586	
9,300.0	7,903.5	8,912.7	7,903.5	43.9	27.6	-90.00	-1,077.7	287.0	2,000.5	1,944.3	56.14	35.630	
9,400.0	7,903.5	9,012.7	7,903.5	44.7	29.2	-90.00	-1,172.3	319.6	2,000.4	1,941.3	59.16	33.812	
9,500.0	7,903.5	9,112.7	7,903.5	45.5	30.9	-90.00	-1,266.8	352.2	2,000.4	1,938.2	62.27	32.126	
9,600.0	7,903.5	9,212.7	7,903.5	46.4	32.6	-90.00	-1,361.3	384.8	2,000.4	1,935.0	65.45	30.566	
9,700.0	7,903.5	9,312.7	7,903.5	47.3	34.3	-90.00	-1,455.9	417.4	2,000.4	1,931.8	68.69	29.123	
9,800.0	7,903.5	9,412.7	7,903.5	48.3	36.0	-90.00	-1,550.4	450.0	2,000.4	1,928.5	71.99	27.789	
9,900.0	7,903.5	9,512.7	7,903.5	49.4	37.8	-90.00	-1,644.9	482.6	2,000.4	1,925.1	75.33	26.554	
10,000.0	7,903.5	9,612.7	7,903.5	50.6	39.6	-90.00	-1,739.5	515.2	2,000.4	1,921.7	78.72	25.411	

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 203 - Orig. - DEP Plan 4 — 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	9,712.7	7,903.5	51.8	41.3	-90.00	-1,834.0	547.8	2,000.4	1,918.3	82.15	24.352	
10,200.0	7,903.5	9,812.7	7,903.5	53.0	43.1	-90.00	-1,928.6	580.4	2,000.4	1,914.8	85.60	23.369	
10,300.0	7,903.5	9,912.7	7,903.5	54.3	44.9	-90.00	-2,023.1	613.0	2,000.4	1,911.3	89.09	22.454	
10,400.0	7,903.5	10,012.7	7,903.5	55.6	46.7	-90.00	-2,117.6	645.6	2,000.4	1,907.8	92.60	21.603	
10,500.0	7,903.5	10,112.7	7,903.5	57.0	48.5	-90.00	-2,212.2	678.2	2,000.4	1,904.3	96.13	20.809	
10,600.0	7,903.5	10,212.7	7,903.5	58.4	50.4	-90.00	-2,306.7	710.8	2,000.4	1,900.7	99.69	20.067	
10,700.0	7,903.5	10,312.7	7,903.5	59.8	52.2	-90.00	-2,401.2	743.4	2,000.4	1,897.2	103.26	19.373	
10,800.0	7,903.5	10,412.7	7,903.5	61.3	54.0	-90.00	-2,495.8	776.0	2,000.4	1,893.6	106.85	18.722	
10,900.0	7,903.5	10,512.7	7,903.5	62.8	55.8	-90.00	-2,590.3	808.6	2,000.4	1,890.0	110.45	18.112	
11,000.0	7,903.5	10,612.7	7,903.5	64.3	57.7	-90.00	-2,684.9	841.2	2,000.4	1,886.4	114.07	17.537	
11,100.0	7,903.5	10,712.7	7,903.5	65.9	59.5	-90.00	-2,779.4	873.8	2,000.4	1,882.7	117.70	16.997	
11,200.0	7,903.5	10,812.7	7,903.5	67.4	61.4	-90.00	-2,873.9	906.4	2,000.4	1,879.1	121.34	16.487	
11,300.0	7,903.5	10,912.7	7,903.5	69.0	63.2	-90.00	-2,968.5	939.0	2,000.4	1,875.4	124.99	16.005	
11,400.0	7,903.5	11,012.7	7,903.5	70.6	65.1	-90.00	-3,063.0	971.5	2,000.4	1,871.8	128.64	15.550	
11,500.0	7,903.5	11,112.7	7,903.5	72.2	66.9	-90.00	-3,157.5	1,004.1	2,000.4	1,868.1	132.31	15.119	
11,600.0	7,903.5	11,212.7	7,903.5	73.9	68.8	-90.00	-3,252.1	1,036.7	2,000.4	1,864.4	135.99	14.710	
11,700.0	7,903.5	11,312.7	7,903.5	75.5	70.7	-90.00	-3,346.6	1,069.3	2,000.4	1,860.7	139.67	14.322	
11,800.0	7,903.5	11,412.7	7,903.5	77.2	72.5	-90.00	-3,441.2	1,101.9	2,000.4	1,857.0	143.36	13.954	
11,900.0	7,903.5	11,512.7	7,903.5	78.8	74.4	-90.00	-3,535.7	1,134.5	2,000.4	1,853.3	147.06	13.603	
12,000.0	7,903.5	11,612.7	7,903.5	80.5	76.3	-90.00	-3,630.2	1,167.1	2,000.4	1,849.6	150.76	13.269	
12,100.0	7,903.5	11,712.7	7,903.5	82.2	78.1	-90.00	-3,724.8	1,199.7	2,000.4	1,845.9	154.47	12.950	
12,200.0	7,903.5	11,812.7	7,903.5	83.9	80.0	-90.00	-3,819.3	1,232.3	2,000.4	1,842.2	158.18	12.647	
12,300.0	7,903.5	11,912.7	7,903.5	85.6	81.9	-90.00	-3,913.8	1,264.9	2,000.4	1,838.5	161.89	12.356	
12,400.0	7,903.5	12,012.7	7,903.5	87.4	83.8	-90.00	-4,008.4	1,297.5	2,000.4	1,834.8	165.61	12.079	
12,500.0	7,903.5	12,112.7	7,903.5	89.1	85.6	-90.00	-4,102.9	1,330.1	2,000.4	1,831.1	169.34	11.813	
12,600.0	7,903.5	12,212.7	7,903.5	90.8	87.5	-90.00	-4,197.5	1,362.7	2,000.4	1,827.3	173.07	11.559	
12,700.0	7,903.5	12,312.7	7,903.5	92.6	89.4	-90.00	-4,292.0	1,395.3	2,000.4	1,823.6	176.80	11.315	
12,800.0	7,903.5	12,412.7	7,903.5	94.3	91.3	-90.00	-4,386.5	1,427.9	2,000.4	1,819.9	180.53	11.080	
12,900.0	7,903.5	12,512.7	7,903.5	96.1	93.1	-90.00	-4,481.1	1,460.5	2,000.4	1,816.1	184.27	10.856	
13,000.0	7,903.5	12,612.7	7,903.5	97.9	95.0	-90.00	-4,575.6	1,493.1	2,000.4	1,812.4	188.01	10.640	
13,100.0	7,903.5	12,712.7	7,903.5	99.6	96.9	-90.00	-4,670.1	1,525.7	2,000.4	1,808.6	191.75	10.432	
13,200.0	7,903.5	12,812.7	7,903.5	101.4	98.8	-90.00	-4,764.7	1,558.3	2,000.4	1,804.9	195.50	10.232	
13,300.0	7,903.5	12,912.7	7,903.5	103.2	100.7	-90.00	-4,859.2	1,590.9	2,000.4	1,801.1	199.25	10.040	
13,400.0	7,903.5	13,012.7	7,903.5	105.0	102.6	-90.00	-4,953.8	1,623.5	2,000.4	1,797.4	203.00	9.854	
13,500.0	7,903.5	13,112.7	7,903.5	106.7	104.5	-90.00	-5,048.3	1,656.1	2,000.4	1,793.6	206.75	9.675	
13,600.0	7,903.5	13,212.7	7,903.5	108.5	106.3	-90.00	-5,142.8	1,688.7	2,000.4	1,789.9	210.51	9.503	
13,700.0	7,903.5	13,312.7	7,903.5	110.3	108.2	-90.00	-5,237.4	1,721.3	2,000.4	1,786.1	214.26	9.336	
13,800.0	7,903.5	13,412.7	7,903.5	112.1	110.1	-90.00	-5,331.9	1,753.9	2,000.4	1,782.3	218.02	9.175	
13,900.0	7,903.5	13,512.7	7,903.5	113.9	112.0	-90.00	-5,426.4	1,786.5	2,000.4	1,778.6	221.78	9.019	
14,000.0	7,903.5	13,612.7	7,903.5	115.7	113.9	-90.00	-5,521.0	1,819.1	2,000.4	1,774.8	225.55	8.869	
14,100.0	7,903.5	13,712.7	7,903.5	117.6	115.8	-90.00	-5,615.5	1,851.7	2,000.4	1,771.1	229.31	8.723	
14,200.0	7,903.5	13,812.7	7,903.5	119.4	117.7	-90.00	-5,710.1	1,884.3	2,000.4	1,767.3	233.07	8.582	
14,300.0	7,903.5	13,912.7	7,903.5	121.2	119.6	-90.00	-5,804.6	1,916.9	2,000.4	1,763.5	236.84	8.446	
14,400.0	7,903.5	14,012.7	7,903.5	123.0	121.5	-90.00	-5,899.1	1,949.5	2,000.4	1,759.7	240.61	8.314	
14,500.0	7,903.5	14,112.7	7,903.5	124.8	123.3	-90.00	-5,993.7	1,982.1	2,000.4	1,756.0	244.38	8.185	
14,600.0	7,903.5	14,212.7	7,903.5	126.7	125.2	-90.00	-6,088.2	2,014.7	2,000.4	1,752.2	248.15	8.061	
14,700.0	7,903.5	14,312.7	7,903.5	128.5	127.1	-90.00	-6,182.7	2,047.3	2,000.4	1,748.4	251.92	7.940	
14,800.0	7,903.5	14,412.7	7,903.5	130.3	129.0	-90.00	-6,277.3	2,079.9	2,000.3	1,744.7	255.69	7.823	
14,900.0	7,903.5	14,512.7	7,903.5	132.1	130.9	-90.00	-6,371.8	2,112.5	2,000.3	1,740.9	259.47	7.709	
15,000.0	7,903.5	14,612.7	7,903.5	134.0	132.8	-90.00	-6,466.4	2,145.1	2,000.3	1,737.1	263.24	7.599	
15,100.0	7,903.5	14,712.7	7,903.5	135.8	134.7	-90.00	-6,560.9	2,177.7	2,000.3	1,733.3	267.02	7.491	

08/12/2022

Anticollision Report

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 203 - Orig. - DEP Plan 4 — 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	14,812.7	7,903.5	137.6	136.6	-90.00	-6,655.4	2,210.3	2,000.3	1,729.5	270.80	7.387	
15,300.0	7,903.5	14,912.7	7,903.5	139.5	138.5	-90.00	-6,750.0	2,242.9	2,000.3	1,725.8	274.57	7.285	
15,400.0	7,903.5	15,012.7	7,903.5	141.3	140.4	-90.00	-6,844.5	2,275.5	2,000.3	1,722.0	278.35	7.186	
15,500.0	7,903.5	15,112.7	7,903.5	143.2	142.3	-90.00	-6,939.0	2,308.1	2,000.3	1,718.2	282.13	7.090	
15,600.0	7,903.5	15,212.7	7,903.5	145.0	144.2	-90.00	-7,033.6	2,340.7	2,000.3	1,714.4	285.91	6.996	
15,700.0	7,903.5	15,312.7	7,903.5	146.9	146.1	-90.00	-7,128.1	2,373.3	2,000.3	1,710.6	289.69	6.905	
15,800.0	7,903.5	15,412.7	7,903.5	148.7	148.0	-90.00	-7,222.7	2,405.9	2,000.3	1,706.9	293.47	6.816	
15,900.0	7,903.5	15,512.7	7,903.5	150.6	149.9	-90.00	-7,317.2	2,438.5	2,000.3	1,703.1	297.26	6.729	
16,000.0	7,903.5	15,612.7	7,903.5	152.4	151.8	-90.00	-7,411.7	2,471.1	2,000.3	1,699.3	301.04	6.645	
16,100.0	7,903.5	15,712.7	7,903.5	154.3	153.7	-90.00	-7,506.3	2,503.7	2,000.3	1,695.5	304.82	6.562	
16,200.0	7,903.5	15,812.7	7,903.5	156.1	155.5	-90.00	-7,600.8	2,536.3	2,000.3	1,691.7	308.61	6.482	
16,300.0	7,903.5	15,912.7	7,903.5	158.0	157.4	-90.00	-7,695.3	2,568.9	2,000.3	1,687.9	312.39	6.403	
16,400.0	7,903.5	16,012.7	7,903.5	159.8	159.3	-90.00	-7,789.9	2,601.5	2,000.3	1,684.1	316.18	6.327	
16,500.0	7,903.5	16,112.7	7,903.5	161.7	161.2	-90.00	-7,884.4	2,634.1	2,000.3	1,680.4	319.96	6.252	
16,600.0	7,903.5	16,212.7	7,903.5	163.5	163.1	-90.00	-7,979.0	2,666.7	2,000.3	1,676.6	323.75	6.179	
16,700.0	7,903.5	16,312.7	7,903.5	165.4	165.0	-90.00	-8,073.5	2,699.3	2,000.3	1,672.8	327.54	6.107	
16,800.0	7,903.5	16,412.7	7,903.5	167.3	166.9	-90.00	-8,168.0	2,731.9	2,000.3	1,669.0	331.32	6.037	
16,900.0	7,903.5	16,512.7	7,903.5	169.1	168.8	-90.00	-8,262.6	2,764.5	2,000.3	1,665.2	335.11	5.969	
17,000.0	7,903.5	16,612.7	7,903.5	171.0	170.7	-90.00	-8,357.1	2,797.1	2,000.3	1,661.4	338.90	5.902	
17,100.0	7,903.5	16,712.7	7,903.5	172.8	172.6	-90.00	-8,451.6	2,829.7	2,000.3	1,657.6	342.69	5.837	
17,200.0	7,903.5	16,812.7	7,903.5	174.7	174.5	-90.00	-8,546.2	2,862.3	2,000.3	1,653.8	346.48	5.773	
17,300.0	7,903.5	16,912.7	7,903.5	176.6	176.4	-90.00	-8,640.7	2,894.9	2,000.3	1,650.0	350.27	5.711	
17,400.0	7,903.5	17,012.7	7,903.5	178.4	178.3	-90.00	-8,735.3	2,927.5	2,000.3	1,646.2	354.06	5.650	
17,500.0	7,903.5	17,112.7	7,903.5	180.3	180.2	-90.00	-8,829.8	2,960.1	2,000.3	1,642.4	357.85	5.590	
17,600.0	7,903.5	17,212.7	7,903.5	182.2	182.1	-90.00	-8,924.3	2,992.7	2,000.3	1,638.7	361.64	5.531	
17,700.0	7,903.5	17,312.7	7,903.5	184.0	184.0	-90.00	-9,018.9	3,025.3	2,000.3	1,634.9	365.43	5.474	
17,800.0	7,903.5	17,412.7	7,903.5	185.9	185.9	-90.00	-9,113.4	3,057.9	2,000.3	1,631.1	369.22	5.418	
17,900.0	7,903.5	17,512.7	7,903.5	187.8	187.8	-90.00	-9,207.9	3,090.5	2,000.3	1,627.3	373.02	5.362	
18,000.0	7,903.5	17,612.7	7,903.5	189.6	189.7	-90.00	-9,302.5	3,123.1	2,000.3	1,623.5	376.81	5.309	
18,100.0	7,903.5	17,712.7	7,903.5	191.5	191.6	-90.00	-9,397.0	3,155.7	2,000.3	1,619.7	380.60	5.256	
18,200.0	7,903.5	17,812.7	7,903.5	193.4	193.5	-90.00	-9,491.6	3,188.3	2,000.3	1,615.9	384.39	5.204	
18,300.0	7,903.5	17,912.7	7,903.5	195.3	195.4	-90.00	-9,586.1	3,220.9	2,000.3	1,612.1	388.19	5.153	
18,400.0	7,903.5	18,012.7	7,903.5	197.1	197.3	-90.00	-9,680.6	3,253.5	2,000.3	1,608.3	391.98	5.103	
18,500.0	7,903.5	18,112.7	7,903.5	199.0	199.2	-90.00	-9,775.2	3,286.1	2,000.3	1,604.5	395.78	5.054	
18,600.0	7,903.5	18,212.7	7,903.5	200.9	201.1	-90.00	-9,869.7	3,318.7	2,000.3	1,600.7	399.57	5.006	
18,700.0	7,903.5	18,312.7	7,903.5	202.8	203.0	-90.00	-9,964.2	3,351.3	2,000.3	1,596.9	403.36	4.959	
18,800.0	7,903.5	18,412.7	7,903.5	204.6	204.9	-90.00	-10,058.8	3,383.9	2,000.3	1,593.1	407.16	4.913	
18,900.0	7,903.5	18,512.7	7,903.5	206.5	206.8	-90.00	-10,153.3	3,416.5	2,000.3	1,589.3	410.95	4.867	
19,000.0	7,903.5	18,612.7	7,903.5	208.4	208.7	-90.00	-10,247.9	3,449.1	2,000.3	1,585.5	414.75	4.823	
19,100.0	7,903.5	18,712.7	7,903.5	210.3	210.6	-90.00	-10,342.4	3,481.7	2,000.3	1,581.7	418.55	4.779	
19,200.0	7,903.5	18,812.7	7,903.5	212.1	212.5	-90.00	-10,436.9	3,514.3	2,000.3	1,577.9	422.34	4.736	
19,300.0	7,903.5	18,912.7	7,903.5	214.0	214.4	-90.00	-10,531.5	3,546.9	2,000.3	1,574.1	426.14	4.694	
19,400.0	7,903.5	19,012.7	7,903.5	215.9	216.3	-90.00	-10,626.0	3,579.5	2,000.3	1,570.3	429.93	4.652	
19,500.0	7,903.5	19,112.7	7,903.5	217.8	218.2	-90.00	-10,720.5	3,612.1	2,000.3	1,566.5	433.73	4.612	
19,600.0	7,903.5	19,212.7	7,903.5	219.6	220.1	-90.00	-10,815.1	3,644.7	2,000.3	1,562.7	437.53	4.572	
19,700.0	7,903.5	19,312.7	7,903.5	221.5	222.0	-90.00	-10,909.6	3,677.2	2,000.3	1,558.9	441.33	4.532	
19,800.0	7,903.5	19,412.7	7,903.5	223.4	223.9	-90.00	-11,004.1	3,709.8	2,000.3	1,555.1	445.12	4.494	
19,900.0	7,903.5	19,512.7	7,903.5	225.3	225.8	-90.00	-11,098.7	3,742.4	2,000.3	1,551.3	448.92	4.456	
20,000.0	7,903.5	19,612.7	7,903.5	227.2	227.7	-90.00	-11,193.2	3,775.0	2,000.3	1,547.5	452.72	4.418	
20,100.0	7,903.5	19,712.7	7,903.5	229.1	229.6	-90.00	-11,287.8	3,807.6	2,000.2	1,543.7	456.52	4.382	

Anticollision Report

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 203 - Orig. - DEP Plan 4 — 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
20,200.0	7,903.5	19,612.7	7,903.5	230.9	231.5	-90.00	-11,382.3	3,840.2	2,000.2	1,539.9	460.31	4.345	
20,300.0	7,903.5	19,912.7	7,903.5	232.8	233.4	-90.00	-11,476.8	3,872.8	2,000.2	1,536.1	464.11	4.310	
20,400.0	7,903.5	20,012.7	7,903.5	234.7	235.3	-90.00	-11,571.4	3,905.4	2,000.2	1,532.3	467.91	4.275	
20,500.0	7,903.5	20,112.7	7,903.5	236.6	237.2	-90.00	-11,665.9	3,938.0	2,000.2	1,528.5	471.71	4.240	
20,600.0	7,903.5	20,212.7	7,903.5	238.5	239.1	-90.00	-11,760.4	3,970.6	2,000.2	1,524.7	475.51	4.207	
20,700.0	7,903.5	20,312.7	7,903.5	240.3	241.0	-90.00	-11,855.0	4,003.2	2,000.2	1,520.9	479.31	4.173	
20,800.0	7,903.5	20,412.7	7,903.5	242.2	242.9	-90.00	-11,949.5	4,035.8	2,000.2	1,517.1	483.11	4.140	
20,900.0	7,903.5	20,512.7	7,903.5	244.1	244.8	-90.00	-12,044.1	4,068.4	2,000.2	1,513.3	486.90	4.108	
21,000.0	7,903.5	20,612.7	7,903.5	246.0	246.7	-90.00	-12,138.6	4,101.0	2,000.2	1,509.5	490.70	4.076	
21,100.0	7,903.5	20,712.7	7,903.5	247.9	248.6	-90.00	-12,233.1	4,133.6	2,000.2	1,505.7	494.50	4.045	
21,200.0	7,903.5	20,812.7	7,903.5	249.8	250.5	-90.00	-12,327.7	4,166.2	2,000.2	1,501.9	498.30	4.014	
21,300.0	7,903.5	20,912.7	7,903.5	251.7	252.4	-90.00	-12,422.2	4,198.8	2,000.2	1,498.1	502.10	3.984	
21,400.0	7,903.5	21,012.7	7,903.5	253.5	254.3	-90.00	-12,516.7	4,231.4	2,000.2	1,494.3	505.90	3.954	
21,500.0	7,903.5	21,112.7	7,903.5	255.4	256.2	-90.00	-12,611.3	4,264.0	2,000.2	1,490.5	509.70	3.924	
21,600.0	7,903.5	21,212.7	7,903.5	257.3	258.1	-90.00	-12,705.8	4,296.6	2,000.2	1,486.7	513.50	3.895	
21,700.0	7,903.5	21,312.7	7,903.5	259.2	260.1	-90.00	-12,800.4	4,329.2	2,000.2	1,482.9	517.30	3.867	
21,800.0	7,903.5	21,412.7	7,903.5	261.1	262.0	-90.00	-12,894.9	4,361.8	2,000.2	1,479.1	521.10	3.838	
21,900.0	7,903.5	21,512.7	7,903.5	263.0	263.9	-90.00	-12,989.4	4,394.4	2,000.2	1,475.3	524.91	3.811	
22,000.0	7,903.5	21,612.7	7,903.5	264.9	265.8	-90.00	-13,084.0	4,427.0	2,000.2	1,471.5	528.71	3.783	
22,100.0	7,903.5	21,712.7	7,903.5	266.7	267.7	-90.00	-13,178.5	4,459.6	2,000.2	1,467.7	532.51	3.756	
22,200.0	7,903.5	21,812.7	7,903.5	268.6	269.6	-90.00	-13,273.0	4,492.2	2,000.2	1,463.9	536.31	3.730	
22,300.0	7,903.5	21,912.7	7,903.5	270.5	271.5	-90.00	-13,367.6	4,524.8	2,000.2	1,460.1	540.11	3.703	
22,400.0	7,903.5	22,012.7	7,903.5	272.4	273.4	-90.00	-13,462.1	4,557.4	2,000.2	1,456.3	543.91	3.677	
22,500.0	7,903.5	22,112.7	7,903.5	274.3	275.3	-90.00	-13,556.7	4,590.0	2,000.2	1,452.5	547.71	3.652	
22,600.0	7,903.5	22,212.7	7,903.5	276.2	277.2	-90.00	-13,651.2	4,622.6	2,000.2	1,448.7	551.51	3.627	
22,700.0	7,903.5	22,312.7	7,903.5	278.1	279.1	-90.00	-13,745.7	4,655.2	2,000.2	1,444.9	555.32	3.602	
22,800.0	7,903.5	22,412.7	7,903.5	280.0	281.0	-90.00	-13,840.3	4,687.8	2,000.2	1,441.1	559.12	3.577	
22,900.0	7,903.5	22,512.7	7,903.5	281.9	282.9	-90.00	-13,934.8	4,720.4	2,000.2	1,437.3	562.92	3.553	
23,000.0	7,903.5	22,612.7	7,903.5	283.7	284.8	-90.00	-14,029.3	4,753.0	2,000.2	1,433.5	566.72	3.529	
23,100.0	7,903.5	22,712.7	7,903.5	285.6	286.7	-90.00	-14,123.9	4,785.6	2,000.2	1,429.7	570.52	3.506	
23,200.0	7,903.5	22,812.7	7,903.5	287.5	288.6	-90.00	-14,218.4	4,818.2	2,000.2	1,425.9	574.32	3.483	
23,300.0	7,903.5	22,912.7	7,903.5	289.4	290.5	-90.00	-14,313.0	4,850.8	2,000.2	1,422.1	578.13	3.460	
23,400.0	7,903.5	23,012.7	7,903.5	291.3	292.4	-90.00	-14,407.5	4,883.4	2,000.2	1,418.3	581.93	3.437	
23,500.0	7,903.5	23,112.7	7,903.5	293.2	294.3	-90.00	-14,502.0	4,916.0	2,000.2	1,414.5	585.73	3.415	
23,600.0	7,903.5	23,212.7	7,903.5	295.1	296.2	-90.00	-14,596.6	4,948.6	2,000.2	1,410.6	589.53	3.393	
23,700.0	7,903.5	23,312.7	7,903.5	297.0	298.1	-90.00	-14,691.1	4,981.2	2,000.2	1,406.8	593.34	3.371	
23,800.0	7,903.5	23,412.7	7,903.5	298.9	300.0	-90.00	-14,785.6	5,013.8	2,000.2	1,403.0	597.14	3.350	
23,900.0	7,903.5	23,512.7	7,903.5	300.8	301.9	-90.00	-14,880.2	5,046.4	2,000.2	1,399.2	600.94	3.328	
24,000.0	7,903.5	23,612.7	7,903.5	302.6	303.8	-90.00	-14,974.7	5,079.0	2,000.2	1,395.4	604.74	3.307	
24,100.0	7,903.5	23,712.7	7,903.5	304.5	305.7	-90.00	-15,069.3	5,111.6	2,000.2	1,391.6	608.55	3.287	
24,200.0	7,903.5	23,812.7	7,903.5	306.4	307.6	-90.00	-15,163.8	5,144.2	2,000.2	1,387.8	612.35	3.266	
24,300.0	7,903.5	23,912.7	7,903.5	308.3	309.5	-90.00	-15,258.3	5,176.8	2,000.2	1,384.0	616.15	3.246	
24,400.0	7,903.5	24,012.7	7,903.5	310.2	311.4	-90.00	-15,352.9	5,209.4	2,000.2	1,380.2	619.96	3.226	
24,500.0	7,903.5	24,112.7	7,903.5	312.1	313.3	-90.00	-15,447.4	5,242.0	2,000.2	1,376.4	623.76	3.207	
24,600.0	7,903.5	24,212.7	7,903.5	314.0	315.2	-90.00	-15,541.9	5,274.6	2,000.2	1,372.6	627.56	3.187	
24,700.0	7,903.5	24,312.7	7,903.5	315.9	317.1	-90.00	-15,636.5	5,307.2	2,000.2	1,368.8	631.37	3.168	
24,800.0	7,903.5	24,412.7	7,903.5	317.8	319.0	-90.00	-15,731.0	5,339.8	2,000.2	1,365.0	635.17	3.149	
24,900.0	7,903.5	24,512.7	7,903.5	319.7	320.9	-90.00	-15,825.6	5,372.4	2,000.2	1,361.2	638.97	3.130	
25,000.0	7,903.5	24,612.7	7,903.5	321.6	322.8	-90.00	-15,920.1	5,405.0	2,000.2	1,357.4	642.78	3.112	
25,100.0	7,903.5	24,712.7	7,903.5	323.5	324.7	-90.00	-16,014.6	5,437.6	2,000.2	1,353.6	646.58	3.093	
25,200.0	7,903.5	24,812.7	7,903.5	325.4	326.6	-90.00	-16,109.2	5,470.2	2,000.2	1,349.8	650.38	3.075	

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

08/12/2022

Anticollision Report

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 203 - Orig. - DEP Plan 4 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+HRGM+Int, 600-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
25,300.0	7,903.5	24,912.7	7,903.5	327.2	328.5	-90.00	-16,203.7	5,502.8	2,000.2	1,346.0	654.19	3.057	
25,400.0	7,903.5	25,012.7	7,903.5	329.1	330.5	-90.00	-16,298.2	5,535.4	2,000.1	1,342.2	657.99	3.040	
25,500.0	7,903.5	25,112.7	7,903.5	331.0	332.4	-90.00	-16,392.8	5,568.0	2,000.1	1,338.4	661.79	3.022	
25,600.0	7,903.5	25,212.7	7,903.5	332.9	334.3	-90.00	-16,487.3	5,600.6	2,000.1	1,334.5	665.60	3.005	
25,700.0	7,903.5	25,312.7	7,903.5	334.8	336.2	-90.00	-16,581.9	5,633.2	2,000.1	1,330.7	669.40	2.988	
25,800.0	7,903.5	25,412.7	7,903.5	336.7	338.1	-90.00	-16,676.4	5,665.8	2,000.1	1,326.9	673.20	2.971	
25,900.0	7,903.5	25,512.7	7,903.5	338.6	340.0	-90.00	-16,770.9	5,698.4	2,000.1	1,323.1	677.01	2.954	
26,000.0	7,903.5	25,612.7	7,903.5	340.5	341.9	-90.00	-16,865.5	5,731.0	2,000.1	1,319.3	680.81	2.938	
26,100.0	7,903.5	25,712.7	7,903.5	342.4	343.8	-90.00	-16,960.0	5,763.6	2,000.1	1,315.5	684.62	2.922	
26,200.0	7,903.5	25,812.7	7,903.5	344.3	345.7	-90.00	-17,054.5	5,796.2	2,000.1	1,311.7	688.42	2.905	
26,300.0	7,903.5	25,912.7	7,903.5	346.2	347.6	-90.00	-17,149.1	5,828.8	2,000.1	1,307.9	692.22	2.889	
26,400.0	7,903.5	26,012.7	7,903.5	348.1	349.5	-90.00	-17,243.6	5,861.4	2,000.1	1,304.1	696.03	2.874 SF	

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Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 5 — 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	0.00	45.0	0.0	45.0				
100.0	100.0	100.0	100.0	0.3	0.3	0.00	45.0	0.0	45.0	44.5	0.52	85.985	
200.0	200.0	200.0	200.0	0.6	0.6	0.00	45.0	0.0	45.0	43.8	1.24	36.283	
300.0	300.0	300.0	300.0	1.0	1.0	0.00	45.0	0.0	45.0	43.0	1.96	22.992	
400.0	400.0	400.0	400.0	1.3	1.3	0.00	45.0	0.0	45.0	42.3	2.67	16.828	
500.0	500.0	500.0	500.0	1.7	1.7	0.00	45.0	0.0	45.0	41.6	3.39	13.270	
600.0	600.0	600.0	600.0	2.1	2.1	0.00	45.0	0.0	45.0	40.9	4.11	10.954	
700.0	700.0	700.0	700.0	2.4	2.4	0.00	45.0	0.0	45.0	40.2	4.83	9.327	
800.0	800.0	800.0	800.0	2.8	2.8	0.00	45.0	0.0	45.0	39.5	5.54	8.120	CC, ES
900.0	900.0	899.5	899.5	3.1	3.1	133.68	45.4	1.7	46.6	40.4	6.24	7.473	SF
1,000.0	999.8	998.4	998.2	3.5	3.5	143.13	46.5	6.7	52.5	45.5	6.92	7.581	
1,100.0	1,099.5	1,097.2	1,096.8	3.8	3.8	153.37	48.1	13.4	63.6	55.9	7.61	8.352	
1,200.0	1,198.9	1,195.8	1,195.1	4.1	4.2	160.94	49.6	20.1	77.7	69.4	8.30	9.364	
1,300.0	1,298.4	1,294.3	1,293.4	4.5	4.5	166.13	51.2	26.8	92.8	83.8	8.99	10.323	
1,400.0	1,397.8	1,392.9	1,391.8	4.9	4.9	169.85	52.7	33.5	108.4	98.8	9.69	11.197	
1,500.0	1,497.3	1,491.4	1,490.1	5.2	5.2	172.63	54.3	40.2	124.4	114.0	10.38	11.982	
1,600.0	1,596.7	1,590.0	1,588.4	5.6	5.6	174.78	55.8	46.9	140.6	129.5	11.08	12.686	
1,700.0	1,696.2	1,688.6	1,686.7	6.0	6.0	176.48	57.4	53.6	156.9	145.1	11.78	13.316	
1,800.0	1,795.6	1,787.1	1,785.0	6.4	6.3	177.86	58.9	60.3	173.4	160.9	12.49	13.882	
1,900.0	1,895.1	1,885.7	1,883.4	6.7	6.7	179.00	60.5	67.0	189.9	176.7	13.19	14.392	
2,000.0	1,994.5	1,984.2	1,981.7	7.1	7.0	179.96	62.0	73.7	206.5	192.6	13.90	14.853	
2,100.0	2,094.0	2,082.8	2,080.0	7.5	7.4	-179.22	63.6	80.4	223.1	208.5	14.61	15.271	
2,200.0	2,193.4	2,181.4	2,178.3	7.9	7.8	-178.52	65.1	87.1	239.8	224.5	15.32	15.651	
2,300.0	2,292.9	2,279.9	2,276.6	8.3	8.1	-177.91	66.7	93.8	256.5	240.5	16.03	15.999	
2,400.0	2,392.3	2,378.5	2,375.0	8.6	8.5	-177.37	68.2	100.5	273.2	256.5	16.74	16.318	
2,500.0	2,491.8	2,477.0	2,473.3	9.0	8.9	-176.90	69.7	107.2	290.0	272.5	17.46	16.612	
2,600.0	2,591.2	2,575.6	2,571.6	9.2	9.1	-176.48	71.3	113.9	306.8	288.9	17.84	17.190	
2,700.0	2,690.6	2,667.3	2,663.0	9.2	9.1	174.75	72.9	120.8	325.4	307.5	17.89	18.189	
2,800.0	2,789.5	2,754.7	2,749.9	9.3	9.2	168.95	75.0	129.9	349.5	331.6	17.86	19.572	
2,900.0	2,887.9	2,839.7	2,834.1	9.3	9.2	165.49	77.6	141.2	379.1	361.3	17.82	21.275	
3,000.0	2,985.7	2,922.0	2,915.3	9.4	9.2	163.42	80.7	154.5	414.3	396.5	17.78	23.294	
3,100.0	3,082.8	3,012.1	3,003.9	9.5	9.3	162.33	84.4	170.5	453.8	436.0	17.84	25.437	
3,200.0	3,179.0	3,101.7	3,092.0	9.6	9.3	161.72	88.0	186.4	496.4	478.5	17.93	27.692	
3,300.0	3,274.2	3,189.7	3,178.5	9.8	9.4	161.39	91.6	202.1	542.0	524.0	18.03	30.059	
3,400.0	3,368.3	3,276.1	3,263.5	10.0	9.5	161.24	95.2	217.4	590.6	572.4	18.15	32.529	
3,500.0	3,461.5	3,361.2	3,347.1	10.3	9.6	162.25	98.7	232.5	641.3	623.0	18.30	35.055	
3,600.0	3,554.7	3,446.2	3,430.7	10.7	9.7	163.48	102.2	247.6	692.5	674.0	18.45	37.538	
3,700.0	3,647.9	3,531.3	3,514.4	11.1	9.8	164.55	105.7	262.7	743.8	725.2	18.61	39.966	
3,800.0	3,741.1	3,616.3	3,598.0	11.5	10.0	165.47	109.1	277.8	795.3	776.5	18.79	42.334	
3,900.0	3,834.3	3,701.4	3,681.6	12.0	10.1	166.29	112.6	292.9	847.0	828.0	18.97	44.638	
4,000.0	3,927.5	3,786.4	3,765.2	12.5	10.3	167.01	116.1	308.0	898.7	879.5	19.17	46.872	
4,100.0	4,020.7	3,871.4	3,848.8	13.0	10.4	167.66	119.6	323.1	950.6	931.2	19.38	49.037	
4,200.0	4,113.9	3,956.5	3,932.4	13.6	10.6	168.24	123.1	338.2	1,002.5	982.9	19.61	51.131	
4,300.0	4,207.1	4,040.8	4,015.3	14.1	10.8	168.75	126.6	353.2	1,054.5	1,034.7	19.83	53.167	
4,400.0	4,300.3	4,121.9	4,095.1	14.7	11.0	169.11	131.5	367.2	1,106.8	1,086.7	20.06	55.183	
4,500.0	4,393.5	4,203.0	4,174.7	15.3	11.1	169.31	136.6	380.8	1,159.3	1,139.0	20.29	57.140	
4,600.0	4,486.7	4,285.5	4,255.6	15.9	11.3	169.37	147.9	394.2	1,212.2	1,191.6	20.55	58.993	
4,700.0	4,579.9	4,370.4	4,338.7	16.6	11.5	169.41	157.9	407.9	1,265.1	1,244.3	20.83	60.723	
4,800.0	4,673.0	4,455.2	4,421.9	17.2	11.7	169.45	167.9	421.5	1,318.0	1,296.9	21.13	62.373	
4,900.0	4,766.2	4,540.1	4,505.1	17.8	12.0	169.48	177.9	435.2	1,370.9	1,349.5	21.44	63.946	
5,000.0	4,859.4	4,625.0	4,588.2	18.5	12.2	169.51	187.8	448.9	1,423.8	1,402.1	21.76	65.445	

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

08/12/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 5 — 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	4,952.6	4,709.8	4,671.4	19.2	12.4	169.54	197.8	462.5	1,476.7	1,454.6	22.08	66.872	
5,200.0	5,045.8	4,794.7	4,754.5	19.8	12.7	169.56	207.8	476.2	1,529.6	1,507.2	22.42	68.227	
5,300.0	5,139.0	4,879.5	4,837.7	20.5	12.9	169.59	217.7	489.8	1,582.5	1,559.8	22.77	69.513	
5,400.0	5,232.2	4,964.4	4,920.8	21.2	13.2	169.61	227.7	503.5	1,635.4	1,612.3	23.12	70.735	
5,500.0	5,325.4	5,049.2	5,004.0	21.9	13.5	169.63	237.7	517.2	1,688.3	1,664.9	23.48	71.896	
5,600.0	5,418.6	5,134.1	5,087.1	22.6	13.7	169.65	247.7	530.8	1,741.3	1,717.4	23.85	72.998	
5,700.0	5,511.8	5,219.0	5,170.3	23.3	14.0	169.67	257.6	544.5	1,794.2	1,769.9	24.23	74.043	
5,800.0	5,605.0	5,303.8	5,253.4	23.9	14.3	169.69	267.6	558.2	1,847.1	1,822.4	24.62	75.034	
5,900.0	5,698.2	5,388.7	5,336.6	24.7	14.6	169.71	277.6	571.8	1,900.0	1,875.0	25.01	75.971	
6,000.0	5,791.4	5,473.5	5,419.7	25.4	14.8	169.73	287.6	585.5	1,952.9	1,927.5	25.41	76.860	
6,100.0	5,884.6	5,558.4	5,502.9	26.1	15.1	169.74	297.5	599.2	2,005.8	1,980.0	25.81	77.701	
6,200.0	5,977.8	5,643.2	5,586.0	26.8	15.4	169.76	307.5	612.8	2,058.7	2,032.5	26.23	78.499	
6,300.0	6,071.0	5,728.1	5,669.2	27.5	15.7	169.77	317.5	626.5	2,111.6	2,085.0	26.64	79.254	
6,400.0	6,164.2	5,812.9	5,752.3	28.2	16.0	169.78	327.5	640.1	2,164.5	2,137.4	27.07	79.969	
6,500.0	6,257.4	5,897.8	5,835.5	28.9	16.3	169.79	337.4	653.8	2,217.4	2,189.9	27.50	80.646	
6,600.0	6,350.5	5,982.7	5,918.7	29.7	16.6	169.81	347.4	667.5	2,270.3	2,242.4	27.93	81.286	
6,700.0	6,443.7	6,067.5	6,001.8	30.4	16.9	169.82	357.4	681.1	2,323.2	2,294.9	28.37	81.893	
6,800.0	6,536.9	6,152.4	6,085.0	31.1	17.2	169.83	367.4	694.8	2,376.1	2,347.3	28.81	82.467	
6,900.0	6,630.1	6,237.2	6,168.1	31.8	17.6	169.84	377.3	708.5	2,429.0	2,399.8	29.26	83.011	
7,000.0	6,723.3	6,322.1	6,251.3	32.6	17.9	169.85	387.3	722.1	2,482.0	2,452.2	29.71	83.526	

08/12/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 205 - Orig. - DEP Plan 4 — 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	0.00	60.0	0.0	60.0				
100.0	100.0	100.0	100.0	0.3	0.3	0.00	60.0	0.0	60.0	59.5	0.52	114.646	
200.0	200.0	200.0	200.0	0.6	0.6	0.00	60.0	0.0	60.0	58.8	1.24	48.377	
300.0	300.0	300.0	300.0	1.0	1.0	0.00	60.0	0.0	60.0	58.0	1.96	30.656	
400.0	400.0	400.0	400.0	1.3	1.3	0.00	60.0	0.0	60.0	57.3	2.67	22.437	
500.0	500.0	500.0	500.0	1.7	1.7	0.00	60.0	0.0	60.0	56.6	3.39	17.694	
600.0	600.0	600.0	600.0	2.1	2.1	0.00	60.0	0.0	60.0	55.9	4.11	14.606	
700.0	700.0	700.0	700.0	2.4	2.4	0.00	60.0	0.0	60.0	55.2	4.83	12.436	
800.0	800.0	800.0	800.0	2.8	2.8	0.00	60.0	0.0	60.0	54.5	5.54	10.827	CC, ES
900.0	900.0	898.0	898.0	3.1	3.1	131.81	61.5	0.7	62.7	56.5	6.24	10.055	SF
1,000.0	999.8	995.4	995.2	3.5	3.5	136.35	66.0	2.8	71.1	64.2	6.92	10.286	
1,100.0	1,099.5	1,091.4	1,090.9	3.8	3.8	141.83	73.4	6.3	85.9	78.3	7.59	11.316	
1,200.0	1,198.9	1,189.1	1,188.1	4.1	4.2	146.61	82.7	10.6	104.6	96.4	8.28	12.633	
1,300.0	1,298.4	1,287.0	1,285.5	4.5	4.5	149.94	91.9	14.9	123.9	114.9	8.98	13.800	
1,400.0	1,397.8	1,384.9	1,382.8	4.9	4.9	152.38	101.2	19.2	143.4	133.7	9.67	14.828	
1,500.0	1,497.3	1,482.9	1,480.2	5.2	5.3	154.23	110.5	23.5	163.1	152.7	10.37	15.730	
1,600.0	1,596.7	1,580.8	1,577.6	5.6	5.6	155.68	119.8	27.9	183.0	171.9	11.07	16.527	
1,700.0	1,696.2	1,678.7	1,675.0	6.0	6.0	156.85	129.0	32.2	202.9	191.1	11.77	17.234	
1,800.0	1,795.6	1,776.6	1,772.4	6.4	6.4	157.81	138.3	36.5	222.9	210.4	12.48	17.864	
1,900.0	1,895.1	1,874.5	1,869.7	6.7	6.7	158.61	147.6	40.8	242.9	229.8	13.18	18.428	
2,000.0	1,994.5	1,972.4	1,967.1	7.1	7.1	159.29	156.9	45.2	263.0	249.1	13.89	18.937	
2,100.0	2,094.0	2,070.4	2,064.5	7.5	7.5	159.87	166.2	49.5	283.2	268.6	14.60	19.396	
2,200.0	2,193.4	2,168.3	2,161.9	7.9	7.8	160.37	175.4	53.8	303.3	288.0	15.31	19.814	
2,300.0	2,292.9	2,266.2	2,259.3	8.3	8.2	160.81	184.7	58.1	323.5	307.4	16.02	20.195	
2,400.0	2,392.3	2,364.1	2,356.6	8.6	8.6	161.20	194.0	62.5	343.6	326.9	16.73	20.543	
2,500.0	2,491.8	2,462.0	2,454.0	9.0	9.0	161.55	203.3	66.8	363.8	346.4	17.44	20.863	
2,600.0	2,591.2	2,559.9	2,551.4	9.2	9.2	161.86	212.5	71.1	384.0	366.2	17.85	21.518	
2,700.0	2,690.6	2,653.6	2,644.6	9.2	9.3	152.89	221.5	75.6	405.2	387.3	17.94	22.584	
2,800.0	2,789.5	2,741.9	2,732.2	9.3	9.3	147.03	230.1	82.2	430.0	412.1	17.93	23.986	
2,900.0	2,887.9	2,828.1	2,817.4	9.3	9.4	143.68	238.9	91.3	458.6	440.7	17.92	25.600	
3,000.0	2,985.7	2,911.6	2,899.7	9.4	9.4	141.87	247.7	102.5	491.4	473.5	17.91	27.433	
3,100.0	3,082.8	2,992.2	2,978.7	9.5	9.4	140.99	256.4	115.6	528.6	510.7	17.92	29.490	
3,200.0	3,179.0	3,069.3	3,054.0	9.6	9.5	140.67	264.9	130.2	570.2	552.3	17.95	31.770	
3,300.0	3,274.2	3,142.9	3,125.4	9.8	9.6	140.67	273.3	146.0	616.4	598.4	17.99	34.271	
3,400.0	3,368.3	3,212.6	3,192.6	10.0	9.7	140.83	281.4	162.6	667.2	649.2	18.04	36.987	
3,500.0	3,461.5	3,278.8	3,256.0	10.3	9.8	142.40	289.2	179.9	722.0	703.9	18.10	39.878	
3,600.0	3,554.7	3,342.7	3,316.7	10.7	9.9	144.27	296.9	196.0	779.2	761.0	18.17	42.884	
3,700.0	3,647.9	3,400.0	3,370.9	11.1	10.0	145.84	303.9	215.4	838.7	820.5	18.20	46.084	
3,800.0	3,741.1	3,463.7	3,430.6	11.5	10.2	147.46	311.8	236.0	900.3	882.0	18.30	49.196	
3,900.0	3,834.3	3,521.0	3,484.0	12.0	10.4	148.82	319.0	255.7	963.9	945.5	18.37	52.481	
4,000.0	3,927.5	3,576.3	3,535.0	12.5	10.6	150.05	326.1	275.7	1,029.2	1,010.8	18.43	55.837	
4,100.0	4,020.7	3,629.5	3,583.9	13.0	10.8	151.17	332.9	295.8	1,096.2	1,077.7	18.50	59.257	
4,200.0	4,113.9	3,680.9	3,630.6	13.6	11.0	152.18	339.6	316.2	1,164.8	1,146.2	18.57	62.738	
4,300.0	4,207.1	3,743.6	3,687.2	14.1	11.3	153.33	347.9	341.7	1,234.6	1,215.8	18.74	65.891	
4,400.0	4,300.3	3,812.3	3,749.3	14.7	11.6	154.48	356.9	369.8	1,304.7	1,285.8	18.96	68.800	
4,500.0	4,393.5	3,881.1	3,811.4	15.3	12.0	155.51	365.9	397.9	1,375.1	1,355.9	19.21	71.599	
4,600.0	4,486.7	3,949.8	3,873.5	15.9	12.4	156.45	375.0	426.0	1,445.8	1,426.3	19.46	74.294	
4,700.0	4,579.9	4,018.6	3,935.6	16.6	12.8	157.31	384.0	454.2	1,516.6	1,496.8	19.72	76.894	
4,800.0	4,673.0	4,087.4	3,997.6	17.2	13.3	158.09	393.1	482.3	1,587.5	1,567.6	20.00	79.388	
4,900.0	4,766.2	4,156.1	4,059.7	17.8	13.7	158.81	402.1	510.4	1,658.7	1,638.4	20.28	81.776	
5,000.0	4,859.4	4,224.9	4,121.8	18.5	14.2	159.48	411.1	538.5	1,729.9	1,709.3	20.58	84.072	

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

08/12/2022

Anticollision Report

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 - 205 - Orig. - DEP Plan 4

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	4,952.6	4,293.6	4,183.9	19.2	14.6	160.09	420.2	566.6	1,801.3	1,780.4	20.88	86.273	
5,200.0	5,045.8	4,362.4	4,246.0	19.8	15.1	160.66	429.2	594.7	1,872.7	1,851.5	21.19	88.369	
5,300.0	5,139.0	4,431.1	4,308.1	20.5	15.6	161.18	438.3	622.8	1,944.3	1,922.7	21.51	90.379	
5,400.0	5,232.2	4,499.9	4,370.2	21.2	16.1	161.67	447.3	650.9	2,015.9	1,994.0	21.84	92.302	
5,500.0	5,325.4	4,568.6	4,432.3	21.9	16.6	162.13	456.3	679.0	2,087.5	2,065.4	22.18	94.127	
5,600.0	5,418.6	4,637.4	4,494.4	22.6	17.1	162.56	465.4	707.1	2,159.3	2,136.8	22.52	95.871	
5,700.0	5,511.8	4,706.2	4,556.5	23.3	17.7	162.96	474.4	735.2	2,231.1	2,208.2	22.87	97.536	
5,800.0	5,605.0	4,774.9	4,618.6	23.9	18.2	163.34	483.5	763.3	2,302.9	2,279.7	23.23	99.116	
5,900.0	5,698.2	4,843.7	4,680.7	24.7	18.7	163.69	492.5	791.4	2,374.8	2,351.2	23.60	100.623	
6,000.0	5,791.4	4,912.4	4,742.8	25.4	19.3	164.03	501.5	819.5	2,446.8	2,422.8	23.97	102.060	

Anticollision Report

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 Pritt South Pad - Pritt South #207 - OH - SDI Plan 1 — Offset Site Error: 0.0 usft

Survey Program: 0-MWD+HRGM+Int, 1100-MWD+AfterInt, 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
9,100.0	7,903.5	8,200.0	7,479.8	42.7	64.6	72.97	-3,849.3	-2,327.8	2,437.2	2,350.4	86.84	28.065	
9,200.0	7,903.5	8,221.1	7,496.1	43.3	64.8	73.49	-3,855.6	-2,315.8	2,356.8	2,271.2	85.62	27.526	
9,300.0	7,903.5	8,250.0	7,517.8	43.9	65.0	74.19	-3,865.2	-2,299.3	2,278.1	2,193.5	84.62	26.921	
9,400.0	7,903.5	8,250.0	7,517.8	44.7	65.0	74.19	-3,865.2	-2,299.3	2,200.3	2,117.6	82.71	26.604	
9,500.0	7,903.5	8,250.0	7,517.8	45.5	65.0	74.19	-3,865.2	-2,299.3	2,124.4	2,043.6	80.79	26.296	
9,600.0	7,903.5	8,271.5	7,533.5	46.4	65.1	74.71	-3,873.1	-2,287.1	2,050.1	1,970.5	79.61	25.752	
9,700.0	7,903.5	8,300.0	7,553.9	47.3	65.3	75.41	-3,884.6	-2,270.8	1,977.9	1,899.1	78.74	25.120	
9,800.0	7,903.5	8,300.0	7,553.9	48.3	65.3	75.41	-3,884.6	-2,270.8	1,907.3	1,830.3	77.05	24.756	
9,900.0	7,903.5	8,319.3	7,567.4	49.4	65.5	75.87	-3,893.0	-2,259.7	1,839.2	1,763.1	76.15	24.151	
10,000.0	7,903.5	8,350.0	7,588.1	50.6	65.7	76.60	-3,907.4	-2,242.3	1,773.7	1,697.9	75.80	23.399	
10,100.0	7,903.5	8,350.0	7,588.1	51.8	65.7	76.60	-3,907.4	-2,242.3	1,710.5	1,635.8	74.72	22.891	
10,200.0	7,903.5	8,378.8	7,606.7	53.0	65.9	77.27	-3,922.0	-2,225.9	1,650.2	1,575.4	74.78	22.068	
10,300.0	7,903.5	8,400.0	7,620.0	54.3	66.0	77.76	-3,933.4	-2,214.0	1,593.0	1,518.1	74.85	21.283	
10,400.0	7,903.5	8,426.5	7,636.0	55.6	66.2	78.36	-3,948.4	-2,199.1	1,539.1	1,463.7	75.32	20.433	
10,500.0	7,903.5	8,450.0	7,649.6	57.0	66.3	78.87	-3,962.5	-2,186.1	1,488.7	1,412.7	75.95	19.601	
10,600.0	7,903.5	8,481.9	7,667.0	58.4	66.5	79.55	-3,982.6	-2,168.6	1,441.9	1,364.9	77.02	18.723	
10,700.0	7,903.5	8,500.0	7,676.5	59.8	66.6	79.92	-3,994.5	-2,158.7	1,399.3	1,321.4	77.94	17.954	
10,800.0	7,903.5	8,550.0	7,700.7	61.3	66.9	80.89	-4,029.2	-2,132.1	1,360.5	1,280.6	79.82	17.045	
10,900.0	7,903.5	8,581.2	7,714.4	62.8	67.0	81.45	-4,052.1	-2,115.9	1,326.0	1,244.6	81.40	16.289	
11,000.0	7,903.5	8,618.9	7,729.3	64.3	67.2	82.07	-4,081.1	-2,096.9	1,295.8	1,212.6	83.27	15.562	
11,100.0	7,903.5	8,650.0	7,740.3	65.9	67.3	82.54	-4,105.8	-2,081.7	1,270.2	1,185.0	85.12	14.923	
11,200.0	7,903.5	8,700.0	7,755.5	67.4	67.5	83.19	-4,147.3	-2,058.3	1,248.8	1,161.2	87.60	14.256	
11,300.0	7,903.5	8,750.0	7,767.4	69.0	67.7	83.70	-4,190.5	-2,036.2	1,231.9	1,141.8	90.15	13.666	
11,400.0	7,903.5	8,800.0	7,775.9	70.6	67.9	84.08	-4,235.3	-2,015.6	1,219.6	1,126.8	92.74	13.150	
11,498.7	7,903.5	8,836.6	7,780.1	72.2	68.0	84.27	-4,268.8	-2,001.5	1,211.5	1,116.2	95.24	12.721	
11,500.0	7,903.5	8,850.0	7,781.2	72.2	68.0	84.31	-4,281.2	-1,996.6	1,211.5	1,116.2	95.36	12.705	
11,584.5	7,903.5	8,877.3	7,782.6	73.6	68.1	84.38	-4,306.7	-1,986.9	1,208.0	1,110.5	97.51	12.389	
11,600.0	7,903.5	8,884.7	7,782.8	73.9	68.1	84.39	-4,313.6	-1,984.4	1,207.7	1,109.8	97.91	12.334	
11,635.9	7,903.5	8,901.9	7,783.0	74.4	68.1	84.40	-4,329.8	-1,978.7	1,207.4	1,108.5	98.86	12.213 CC	
11,700.0	7,903.5	8,965.8	7,783.0	75.5	68.3	84.40	-4,390.3	-1,957.9	1,207.4	1,106.7	100.73	11.987	
11,723.3	7,903.5	8,989.1	7,783.0	75.9	68.3	84.40	-4,412.3	-1,950.3	1,207.4	1,106.0	101.40	11.906	
11,800.0	7,903.5	9,065.8	7,783.0	77.2	68.5	84.40	-4,484.8	-1,925.3	1,207.4	1,103.8	103.67	11.646	
11,823.3	7,903.5	9,089.1	7,783.0	77.6	68.6	84.40	-4,506.8	-1,917.7	1,207.4	1,103.1	104.36	11.570	
11,900.0	7,903.5	9,165.8	7,783.0	78.8	68.9	84.40	-4,579.4	-1,892.7	1,207.5	1,100.8	106.69	11.317	
11,923.3	7,903.5	9,189.1	7,783.0	79.2	68.9	84.40	-4,601.4	-1,885.1	1,207.5	1,100.1	107.39	11.244	
12,000.0	7,903.5	9,265.8	7,783.0	80.5	69.2	84.40	-4,673.9	-1,860.1	1,207.5	1,097.7	109.77	11.000	
12,023.3	7,903.5	9,289.1	7,783.0	80.9	69.3	84.40	-4,695.9	-1,852.5	1,207.5	1,097.0	110.48	10.929	
12,100.0	7,903.5	9,365.8	7,783.0	82.2	69.6	84.40	-4,768.4	-1,827.5	1,207.5	1,094.6	112.92	10.693	
12,123.3	7,903.5	9,389.1	7,783.0	82.6	69.7	84.40	-4,790.4	-1,819.9	1,207.5	1,093.9	113.64	10.626	
12,200.0	7,903.5	9,465.8	7,783.0	83.9	70.1	84.40	-4,863.0	-1,794.9	1,207.5	1,091.4	116.15	10.396	
12,223.3	7,903.5	9,489.1	7,783.0	84.3	70.2	84.40	-4,885.0	-1,787.4	1,207.5	1,090.7	116.86	10.333	
12,300.0	7,903.5	9,565.8	7,783.0	85.6	70.6	84.40	-4,957.5	-1,762.3	1,207.5	1,088.4	119.11	10.138	
12,323.3	7,903.5	9,589.1	7,783.0	86.0	70.7	84.40	-4,979.5	-1,754.8	1,207.5	1,087.6	119.96	10.066	
12,400.0	7,903.5	9,665.8	7,783.0	87.4	71.1	84.40	-5,052.1	-1,729.8	1,207.5	1,085.0	122.55	9.853	
12,423.3	7,903.5	9,689.1	7,783.0	87.8	71.2	84.40	-5,074.1	-1,722.2	1,207.5	1,084.2	123.34	9.790	
12,500.0	7,903.5	9,765.8	7,783.0	89.1	71.7	84.40	-5,146.6	-1,697.2	1,207.6	1,081.7	125.89	9.592	
12,523.3	7,903.5	9,789.1	7,783.0	89.5	71.8	84.40	-5,168.6	-1,689.6	1,207.6	1,080.9	126.67	9.533	
12,600.0	7,903.5	9,865.8	7,783.0	90.8	72.3	84.40	-5,241.2	-1,664.6	1,207.6	1,078.3	129.25	9.343	
12,623.3	7,903.5	9,889.1	7,783.0	91.2	72.5	84.40	-5,263.2	-1,657.0	1,207.6	1,077.5	130.04	9.286	
12,700.0	7,903.5	9,965.8	7,783.0	92.6	73.0	84.40	-5,335.7	-1,632.0	1,207.6	1,075.0	132.63	9.105	
12,723.3	7,903.5	9,989.1	7,783.0	93.0	73.2	84.40	-5,357.7	-1,624.4	1,207.6	1,074.2	133.43	9.050	

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

08/12/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 Pritt South Pad - Pritt South #207 - OH - SDI Plan 1 — Offset Site Error: 0.0 usft

Survey Program: 0-MWD+HRGM+Int, 1100-MWD+AfterInt, 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
12,800.0	7,903.5	10,065.8	7,783.0	94.3	73.7	84.40	-5,430.2	-1,599.4	1,207.6	1,071.6	136.04	8.877	
12,823.3	7,903.5	10,089.1	7,783.0	94.7	73.9	84.40	-5,452.2	-1,591.8	1,207.6	1,070.7	136.89	8.822	
12,900.0	7,903.5	10,165.8	7,783.0	96.1	74.5	84.40	-5,524.8	-1,566.8	1,207.6	1,068.1	139.48	8.658	
12,923.3	7,903.5	10,189.1	7,783.0	96.5	74.7	84.40	-5,546.8	-1,559.3	1,207.6	1,067.4	140.26	8.610	
13,000.0	7,903.5	10,265.8	7,783.0	97.9	75.3	84.40	-5,619.3	-1,534.3	1,207.6	1,064.7	142.94	8.449	
13,023.3	7,903.5	10,289.1	7,783.0	98.3	75.5	84.40	-5,641.3	-1,526.7	1,207.6	1,063.9	143.74	8.401	
13,100.0	7,903.5	10,365.8	7,783.0	99.6	76.2	84.40	-5,713.9	-1,501.7	1,207.7	1,061.2	146.42	8.248	
13,123.3	7,903.5	10,389.1	7,783.0	100.0	76.4	84.40	-5,735.9	-1,494.1	1,207.7	1,060.4	147.23	8.203	
13,200.0	7,903.5	10,465.8	7,783.0	101.4	77.1	84.40	-5,808.4	-1,469.1	1,207.7	1,057.8	149.92	8.055	
13,223.3	7,903.5	10,489.1	7,783.0	101.8	77.4	84.40	-5,830.4	-1,461.5	1,207.7	1,056.9	150.74	8.012	
13,300.0	7,903.5	10,565.8	7,783.0	103.2	78.1	84.40	-5,903.0	-1,436.5	1,207.7	1,054.3	153.44	7.871	
13,323.3	7,903.5	10,589.1	7,783.0	103.6	78.3	84.40	-5,925.0	-1,428.9	1,207.7	1,053.4	154.26	7.829	
13,400.0	7,903.5	10,665.8	7,783.0	105.0	79.1	84.40	-5,997.5	-1,403.9	1,207.7	1,050.7	156.97	7.694	
13,423.3	7,903.5	10,689.1	7,783.0	105.4	79.3	84.40	-6,019.5	-1,396.3	1,207.7	1,049.9	157.80	7.654	
13,500.0	7,903.5	10,765.8	7,783.0	106.7	80.2	84.40	-6,092.0	-1,371.3	1,207.7	1,047.2	160.52	7.524	
13,523.3	7,903.5	10,789.1	7,783.0	107.2	80.4	84.40	-6,114.0	-1,363.8	1,207.7	1,046.4	161.35	7.485	
13,600.0	7,903.5	10,865.8	7,783.0	108.5	81.2	84.40	-6,186.6	-1,338.8	1,207.7	1,043.7	164.08	7.361	
13,623.3	7,903.5	10,889.1	7,783.0	109.0	81.5	84.40	-6,208.6	-1,331.2	1,207.7	1,042.8	164.91	7.324	
13,700.0	7,903.5	10,965.8	7,783.0	110.3	82.4	84.40	-6,281.1	-1,306.2	1,207.8	1,040.1	167.66	7.204	
13,723.3	7,903.5	10,989.1	7,783.0	110.8	82.6	84.40	-6,303.1	-1,298.6	1,207.8	1,039.3	168.49	7.168	
13,800.0	7,903.5	11,065.8	7,783.0	112.1	83.5	84.40	-6,375.7	-1,273.6	1,207.8	1,036.5	171.24	7.053	
13,823.3	7,903.5	11,089.1	7,783.0	112.6	83.8	84.40	-6,397.7	-1,266.0	1,207.8	1,035.7	172.08	7.019	
13,900.0	7,903.5	11,165.8	7,783.0	113.9	84.7	84.40	-6,470.2	-1,241.0	1,207.8	1,033.0	174.84	6.908	
13,923.3	7,903.5	11,189.1	7,783.0	114.4	85.0	84.40	-6,492.2	-1,233.4	1,207.8	1,032.1	175.68	6.875	
14,000.0	7,903.5	11,265.8	7,783.0	115.7	86.0	84.40	-6,564.8	-1,208.4	1,207.8	1,029.4	178.45	6.768	
14,023.3	7,903.5	11,289.1	7,783.0	116.2	86.3	84.40	-6,586.8	-1,200.8	1,207.8	1,028.5	179.29	6.737	
14,100.0	7,903.5	11,365.8	7,783.0	117.6	87.2	84.40	-6,659.3	-1,175.8	1,207.8	1,025.8	182.07	6.634	
14,123.3	7,903.5	11,389.1	7,783.0	118.0	87.5	84.40	-6,681.3	-1,168.2	1,207.8	1,024.9	182.91	6.604	
14,200.0	7,903.5	11,465.8	7,783.0	119.4	88.5	84.40	-6,753.8	-1,143.2	1,207.8	1,022.2	185.69	6.505	
14,223.3	7,903.5	11,489.1	7,783.0	119.8	88.8	84.40	-6,775.8	-1,135.7	1,207.8	1,021.3	186.53	6.475	
14,300.0	7,903.5	11,565.8	7,783.0	121.2	89.9	84.40	-6,848.4	-1,110.7	1,207.9	1,018.5	189.32	6.380	
14,323.3	7,903.5	11,589.1	7,783.0	121.6	90.2	84.40	-6,870.4	-1,103.1	1,207.9	1,017.7	190.17	6.352	
14,400.0	7,903.5	11,665.8	7,783.0	123.0	91.2	84.40	-6,942.9	-1,078.1	1,207.9	1,014.9	192.96	6.260	
14,423.3	7,903.5	11,689.1	7,783.0	123.4	91.5	84.40	-6,964.9	-1,070.5	1,207.9	1,014.1	193.81	6.232	
14,500.0	7,903.5	11,765.8	7,783.0	124.8	92.6	84.40	-7,037.5	-1,045.5	1,207.9	1,011.3	196.61	6.144	
14,523.3	7,903.5	11,789.1	7,783.0	125.3	92.9	84.40	-7,059.5	-1,037.9	1,207.9	1,010.4	197.46	6.117	
14,600.0	7,903.5	11,865.8	7,783.0	126.7	94.0	84.40	-7,132.0	-1,012.9	1,207.9	1,007.7	200.26	6.032	
14,623.3	7,903.5	11,889.1	7,783.0	127.1	94.3	84.40	-7,154.0	-1,005.3	1,207.9	1,006.8	201.11	6.006	
14,700.0	7,903.5	11,965.8	7,783.0	128.5	95.4	84.40	-7,226.5	-980.3	1,207.9	1,004.0	203.92	5.924	
14,723.3	7,903.5	11,989.1	7,783.0	128.9	95.7	84.40	-7,248.5	-972.7	1,207.9	1,003.2	204.77	5.899	
14,800.0	7,903.5	12,065.8	7,783.0	130.3	96.9	84.40	-7,321.1	-947.7	1,207.9	1,000.4	207.58	5.819	
14,823.3	7,903.5	12,089.1	7,783.0	130.7	97.2	84.40	-7,343.1	-940.2	1,208.0	999.5	208.44	5.795	
14,900.0	7,903.5	12,165.8	7,783.0	132.1	98.3	84.40	-7,415.6	-915.2	1,208.0	996.7	211.25	5.718	
14,923.3	7,903.5	12,189.1	7,783.0	132.6	98.7	84.40	-7,437.6	-907.6	1,208.0	995.9	212.11	5.695	
15,000.0	7,903.5	12,265.8	7,783.0	134.0	99.8	84.40	-7,510.2	-882.6	1,208.0	993.1	214.92	5.620	
15,023.3	7,903.5	12,289.1	7,783.0	134.4	100.2	84.40	-7,532.2	-875.0	1,208.0	992.2	215.78	5.598	
15,100.0	7,903.5	12,365.8	7,783.0	135.8	101.3	84.40	-7,604.7	-850.0	1,208.0	989.4	218.60	5.526	
15,123.3	7,903.5	12,389.1	7,783.0	136.2	101.7	84.40	-7,626.7	-842.4	1,208.0	988.5	219.46	5.504	
15,200.0	7,903.5	12,465.8	7,783.0	137.6	102.8	84.40	-7,699.3	-817.4	1,208.0	985.7	222.29	5.434	
15,223.3	7,903.5	12,489.1	7,783.0	138.1	103.2	84.40	-7,721.3	-809.8	1,208.0	984.9	223.14	5.414	

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

08/12/2022

Anticollision Report

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 Pritt South Pad - Pritt South #207 - OH - SDI Plan 1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+HRGM+Int, 1100-MWD+AfterInt, 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
15,300.0	7,903.5	12,565.8	7,783.0	139.5	104.4	84.40	-7,793.8	-784.8	1,208.0	982.1	225.97	5.346	
15,323.3	7,903.5	12,589.1	7,783.0	139.9	104.7	84.40	-7,815.8	-777.2	1,208.0	981.2	226.83	5.326	
15,400.0	7,903.5	12,665.8	7,783.0	141.3	105.9	84.40	-7,888.3	-752.2	1,208.0	978.4	229.66	5.260	
15,423.3	7,903.5	12,689.1	7,783.0	141.8	106.3	84.40	-7,910.3	-744.6	1,208.1	977.5	230.52	5.240	
15,500.0	7,903.5	12,765.8	7,783.0	143.2	107.5	84.40	-7,982.9	-719.6	1,208.1	974.7	233.36	5.177	
15,523.3	7,903.5	12,789.1	7,783.0	143.6	107.9	84.40	-8,004.9	-712.1	1,208.1	973.9	234.22	5.158	
15,600.0	7,903.5	12,865.8	7,783.0	145.0	109.1	84.40	-8,077.4	-687.1	1,208.1	971.0	237.06	5.096	
15,623.3	7,903.5	12,889.1	7,783.0	145.4	109.5	84.40	-8,099.4	-679.5	1,208.1	970.2	237.92	5.078	
15,700.0	7,903.5	12,965.8	7,783.0	146.9	110.7	84.40	-8,172.0	-654.5	1,208.1	967.3	240.76	5.018	
15,723.3	7,903.5	12,989.1	7,783.0	147.3	111.1	84.40	-8,194.0	-646.9	1,208.1	966.5	241.62	5.000	
15,800.0	7,903.5	13,065.8	7,783.0	148.7	112.3	84.40	-8,266.5	-621.9	1,208.1	963.7	244.46	4.942	
15,823.3	7,903.5	13,089.1	7,783.0	149.1	112.7	84.40	-8,288.5	-614.3	1,208.1	962.8	245.32	4.925	
15,900.0	7,903.5	13,165.8	7,783.0	150.6	113.9	84.40	-8,361.1	-589.3	1,208.1	960.0	248.17	4.868	
15,923.3	7,903.5	13,189.1	7,783.0	151.0	114.3	84.40	-8,383.1	-581.7	1,208.1	959.1	249.03	4.851	
16,000.0	7,903.5	13,265.8	7,783.0	152.4	115.5	84.40	-8,455.6	-556.7	1,208.2	956.3	251.88	4.797	
16,023.3	7,903.5	13,289.1	7,783.0	152.8	115.9	84.40	-8,477.6	-549.1	1,208.2	955.4	252.74	4.780	
16,100.0	7,903.5	13,365.8	7,783.0	154.3	117.2	84.40	-8,550.1	-524.1	1,208.2	952.6	255.59	4.727	
16,123.3	7,903.5	13,389.1	7,783.0	154.7	117.6	84.40	-8,572.1	-516.6	1,208.2	951.7	256.45	4.711	
16,200.0	7,903.5	13,465.8	7,783.0	156.1	118.8	84.40	-8,644.7	-491.6	1,208.2	948.9	259.30	4.659	
16,223.3	7,903.5	13,489.1	7,783.0	156.5	119.2	84.40	-8,666.7	-484.0	1,208.2	948.0	260.17	4.644	
16,300.0	7,903.5	13,565.8	7,783.0	158.0	120.5	84.40	-8,739.2	-459.0	1,208.2	945.2	263.02	4.594	
16,323.3	7,903.5	13,589.1	7,783.0	158.4	120.9	84.40	-8,761.2	-451.4	1,208.2	944.3	263.88	4.579	
16,400.0	7,903.5	13,665.8	7,783.0	159.8	122.1	84.40	-8,833.8	-426.4	1,208.2	941.5	266.74	4.530	
16,423.3	7,903.5	13,689.1	7,783.0	160.3	122.5	84.40	-8,855.8	-418.8	1,208.2	940.6	267.60	4.515	
16,500.0	7,903.5	13,765.8	7,783.0	161.7	123.8	84.40	-8,928.3	-393.8	1,208.2	937.8	270.46	4.467	
16,523.3	7,903.5	13,789.1	7,783.0	162.1	124.2	84.40	-8,950.3	-386.2	1,208.2	936.9	271.32	4.453	
16,600.0	7,903.5	13,865.8	7,783.0	163.5	125.5	84.40	-9,022.9	-361.2	1,208.3	934.1	274.18	4.407	
16,623.3	7,903.5	13,889.1	7,783.0	164.0	125.9	84.40	-9,044.9	-353.6	1,208.3	933.2	275.05	4.393	
16,700.0	7,903.5	13,965.8	7,783.0	165.4	127.2	84.40	-9,117.4	-328.6	1,208.3	930.4	277.90	4.348	
16,723.3	7,903.5	13,989.1	7,783.0	165.8	127.6	84.40	-9,139.4	-321.1	1,208.3	929.5	278.77	4.334	
16,800.0	7,903.5	14,065.8	7,783.0	167.3	128.9	84.40	-9,211.9	-296.0	1,208.3	926.7	281.63	4.290	
16,823.3	7,903.5	14,089.1	7,783.0	167.7	129.3	84.40	-9,233.9	-288.5	1,208.3	925.8	282.50	4.277	
16,900.0	7,903.5	14,165.8	7,783.0	169.1	130.6	84.40	-9,306.5	-263.5	1,208.3	922.9	285.36	4.234	
16,923.3	7,903.5	14,189.1	7,783.0	169.6	131.0	84.40	-9,328.5	-255.9	1,208.3	922.1	286.23	4.222	
17,000.0	7,903.5	14,265.8	7,783.0	171.0	132.3	84.40	-9,401.0	-230.9	1,208.3	919.2	289.09	4.180	
17,023.3	7,903.5	14,289.1	7,783.0	171.4	132.7	84.40	-9,423.0	-223.3	1,208.3	918.4	289.95	4.167	
17,100.0	7,903.5	14,365.8	7,783.0	172.8	134.0	84.40	-9,495.6	-198.3	1,208.3	915.5	292.82	4.127	
17,123.3	7,903.5	14,389.1	7,783.0	173.3	134.4	84.40	-9,517.6	-190.7	1,208.3	914.7	293.69	4.114	
17,200.0	7,903.5	14,465.8	7,783.0	174.7	135.7	84.40	-9,590.1	-165.7	1,208.4	911.8	296.55	4.075	
17,223.3	7,903.5	14,489.1	7,783.0	175.1	136.2	84.40	-9,612.1	-158.1	1,208.4	910.9	297.42	4.063	
17,300.0	7,903.5	14,565.8	7,783.0	176.6	137.5	84.40	-9,684.7	-133.1	1,208.4	908.1	300.28	4.024	
17,323.3	7,903.5	14,589.1	7,783.0	177.0	137.9	84.40	-9,706.6	-125.5	1,208.4	907.2	301.15	4.013	
17,400.0	7,903.5	14,665.8	7,783.0	178.4	139.2	84.40	-9,779.2	-100.5	1,208.4	904.4	304.02	3.975	
17,423.3	7,903.5	14,689.1	7,783.0	178.9	139.6	84.40	-9,801.2	-93.0	1,208.4	903.5	304.89	3.963	
17,500.0	7,903.5	14,765.8	7,783.0	180.3	141.0	84.40	-9,873.7	-68.0	1,208.4	900.7	307.75	3.927	
17,523.3	7,903.5	14,789.1	7,783.0	180.7	141.4	84.40	-9,895.7	-60.4	1,208.4	899.8	308.62	3.915	
17,600.0	7,903.5	14,865.8	7,783.0	182.2	142.7	84.40	-9,968.3	-35.4	1,208.4	896.9	311.49	3.879	
17,623.3	7,903.5	14,889.1	7,783.0	182.6	143.1	84.40	-9,990.3	-27.8	1,208.4	896.1	312.36	3.869	
17,700.0	7,903.5	14,965.8	7,783.0	184.0	144.4	84.40	-10,062.8	-2.8	1,208.4	893.2	315.23	3.834	
17,723.3	7,903.5	14,989.1	7,783.0	184.5	144.9	84.40	-10,084.8	4.8	1,208.4	892.3	316.10	3.823	
17,800.0	7,903.5	15,065.8	7,783.0	185.9	146.2	84.40	-10,157.4	29.8	1,208.5	889.5	318.97	3.789	

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

08/12/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 Pritt South Pad - Pritt South #207 - OH - SDI Plan 1 — Offset Site Error: 0.0 usft

Survey Program: 0-MWD+HRGM+Int, 1100-MWD+AfterInt, 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
17,823.3	7,903.5	15,089.1	7,783.0	186.3	146.6	84.40	-10,179.4	37.4	1,208.5	888.6	319.84	3.778	
17,900.0	7,903.5	15,165.8	7,783.0	187.8	148.0	84.40	-10,251.9	62.4	1,208.5	885.8	322.71	3.745	
17,923.3	7,903.5	15,189.1	7,783.0	188.2	148.4	84.40	-10,273.9	70.0	1,208.5	884.9	323.58	3.735	
18,000.0	7,903.5	15,265.8	7,783.0	189.6	149.7	84.40	-10,346.4	95.0	1,208.5	882.0	326.45	3.702	
18,023.3	7,903.5	15,289.1	7,783.0	190.1	150.1	84.40	-10,368.4	102.5	1,208.5	881.2	327.32	3.692	
18,100.0	7,903.5	15,365.8	7,783.0	191.5	151.5	84.40	-10,441.0	127.5	1,208.5	878.3	330.19	3.660	
18,123.3	7,903.5	15,389.1	7,783.0	192.0	151.9	84.40	-10,463.0	135.1	1,208.5	877.4	331.07	3.650	
18,200.0	7,903.5	15,465.8	7,783.0	193.4	153.3	84.40	-10,535.5	160.1	1,208.5	874.6	333.94	3.619	
18,223.3	7,903.5	15,489.1	7,783.0	193.8	153.7	84.40	-10,557.5	167.7	1,208.5	873.7	334.81	3.610	
18,300.0	7,903.5	15,565.8	7,783.0	195.3	155.0	84.40	-10,630.1	192.7	1,208.5	870.9	337.68	3.579	
18,323.3	7,903.5	15,589.1	7,783.0	195.7	155.4	84.40	-10,652.1	200.3	1,208.5	870.0	338.55	3.570	
18,400.0	7,903.5	15,665.8	7,783.0	197.1	156.8	84.40	-10,724.6	225.3	1,208.6	867.1	341.43	3.540	
18,423.3	7,903.5	15,689.1	7,783.0	197.6	157.2	84.40	-10,746.6	232.9	1,208.6	866.3	342.30	3.531	
18,500.0	7,903.5	15,765.8	7,783.0	199.0	158.6	84.40	-10,819.2	257.9	1,208.6	863.4	345.17	3.501	
18,523.3	7,903.5	15,789.1	7,783.0	199.4	159.0	84.40	-10,841.2	265.5	1,208.6	862.5	346.04	3.493	
18,600.0	7,903.5	15,865.8	7,783.0	200.9	160.4	84.40	-10,913.7	290.5	1,208.6	859.7	348.92	3.464	
18,623.3	7,903.5	15,889.1	7,783.0	201.3	160.8	84.40	-10,935.7	298.1	1,208.6	858.8	349.79	3.455	
18,700.0	7,903.5	15,965.8	7,783.0	202.8	162.2	84.40	-11,008.2	323.1	1,208.6	855.9	352.66	3.427	
18,723.3	7,903.5	15,989.1	7,783.0	203.2	162.6	84.40	-11,030.2	330.6	1,208.6	855.1	353.54	3.419	
18,800.0	7,903.5	16,065.8	7,783.0	204.6	163.9	84.40	-11,102.8	355.6	1,208.6	852.2	356.41	3.391	
18,823.3	7,903.5	16,089.1	7,783.0	205.1	164.4	84.40	-11,124.8	363.2	1,208.6	851.3	357.28	3.383	
18,900.0	7,903.5	16,165.8	7,783.0	206.5	165.7	84.40	-11,197.3	388.2	1,208.6	848.5	360.16	3.356	
18,923.3	7,903.5	16,189.1	7,783.0	206.9	166.2	84.40	-11,219.3	395.8	1,208.6	847.6	361.03	3.348	
19,000.0	7,903.5	16,265.8	7,783.0	208.4	167.5	84.40	-11,291.9	420.8	1,208.7	844.8	363.91	3.321	
19,023.3	7,903.5	16,289.1	7,783.0	208.8	167.9	84.40	-11,313.9	428.4	1,208.7	843.9	364.78	3.313	
19,100.0	7,903.5	16,365.8	7,783.0	210.3	169.3	84.40	-11,386.4	453.4	1,208.7	841.0	367.66	3.287	
19,123.3	7,903.5	16,389.1	7,783.0	210.7	169.7	84.40	-11,408.4	461.0	1,208.7	840.1	368.53	3.280	
19,200.0	7,903.5	16,465.8	7,783.0	212.1	171.1	84.40	-11,481.0	486.0	1,208.7	837.3	371.41	3.254	
19,223.3	7,903.5	16,489.1	7,783.0	212.6	171.5	84.40	-11,503.0	493.6	1,208.7	836.4	372.28	3.247	
19,300.0	7,903.5	16,565.8	7,783.0	214.0	172.9	84.40	-11,575.5	518.6	1,208.7	833.6	375.16	3.222	
19,323.3	7,903.5	16,589.1	7,783.0	214.5	173.3	84.40	-11,597.5	526.1	1,208.7	832.7	376.03	3.214	
19,400.0	7,903.5	16,665.8	7,783.0	215.9	174.7	84.40	-11,670.0	551.1	1,208.7	829.8	378.91	3.190	
19,423.3	7,903.5	16,689.1	7,783.0	216.3	175.2	84.40	-11,692.0	558.7	1,208.7	828.9	379.78	3.183	
19,500.0	7,903.5	16,765.8	7,783.0	217.8	176.5	84.40	-11,764.6	583.7	1,208.7	826.1	382.66	3.159	
19,523.3	7,903.5	16,789.1	7,783.0	218.2	177.0	84.40	-11,786.6	591.3	1,208.7	825.2	383.54	3.152	
19,600.0	7,903.5	16,865.8	7,783.0	219.6	178.4	84.40	-11,859.1	616.3	1,208.8	822.3	386.41	3.128	
19,623.3	7,903.5	16,889.1	7,783.0	220.1	178.8	84.40	-11,881.1	623.9	1,208.8	821.5	387.29	3.121	
19,700.0	7,903.5	16,965.8	7,783.0	221.5	180.2	84.40	-11,953.7	648.9	1,208.8	818.6	390.17	3.098	
19,723.3	7,903.5	16,989.1	7,783.0	222.0	180.6	84.40	-11,975.7	656.5	1,208.8	817.7	391.04	3.091	
19,800.0	7,903.5	17,065.8	7,783.0	223.4	182.0	84.40	-12,048.2	681.5	1,208.8	814.9	393.92	3.069	
19,823.3	7,903.5	17,089.1	7,783.0	223.8	182.4	84.40	-12,070.2	689.1	1,208.8	814.0	394.79	3.062	
19,900.0	7,903.5	17,165.8	7,783.0	225.3	183.8	84.40	-12,142.8	714.1	1,208.8	811.1	397.67	3.040	
19,923.3	7,903.5	17,189.1	7,783.0	225.7	184.2	84.40	-12,164.7	721.7	1,208.8	810.3	398.55	3.033	
20,000.0	7,903.5	17,265.8	7,783.0	227.2	185.6	84.40	-12,237.3	746.7	1,208.8	807.4	401.43	3.011	
20,023.3	7,903.5	17,289.1	7,783.0	227.6	186.0	84.40	-12,259.3	754.2	1,208.8	806.5	402.30	3.005	
20,100.0	7,903.5	17,365.8	7,783.0	229.1	187.4	84.40	-12,331.8	779.2	1,208.8	803.7	405.18	2.983	
20,123.3	7,903.5	17,389.1	7,783.0	229.5	187.9	84.40	-12,353.8	786.8	1,208.8	802.8	406.05	2.977	
20,200.0	7,903.5	17,465.8	7,783.0	230.9	189.3	84.40	-12,426.4	811.8	1,208.9	799.9	408.93	2.956	
20,223.3	7,903.5	17,489.1	7,783.0	231.4	189.7	84.40	-12,448.4	819.4	1,208.9	799.1	409.81	2.950	
20,300.0	7,903.5	17,565.8	7,783.0	232.8	191.1	84.40	-12,520.9	844.4	1,208.9	796.2	412.69	2.929	

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

08/12/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 Pritt South Pad - Pritt South #207 - OH - SDI Plan 1 — Offset Site Error: 0.0 usft

Survey Program: 0-MWD+HRGM+Int, 1100-MWD+AfterInt, 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
20,323.3	7,903.5	17,589.1	7,783.0	233.3	191.5	84.40	-12,542.9	852.0	1,208.9	795.3	413.56	2.923	
20,400.0	7,903.5	17,665.8	7,783.0	234.7	192.9	84.40	-12,615.5	877.0	1,208.9	792.5	416.44	2.903	
20,423.3	7,903.5	17,689.1	7,783.0	235.1	193.3	84.40	-12,637.5	884.6	1,208.9	791.6	417.32	2.897	
20,500.0	7,903.5	17,765.8	7,783.0	236.6	194.7	84.40	-12,710.0	909.6	1,208.9	788.7	420.20	2.877	
20,523.3	7,903.5	17,789.1	7,783.0	237.0	195.2	84.40	-12,732.0	917.2	1,208.9	787.8	421.07	2.871	
20,600.0	7,903.5	17,865.8	7,783.0	238.5	196.6	84.40	-12,804.5	942.2	1,208.9	785.0	423.95	2.852	
20,623.3	7,903.5	17,889.1	7,783.0	238.9	197.0	84.40	-12,826.5	949.7	1,208.9	784.1	424.83	2.846	
20,700.0	7,903.5	17,965.8	7,783.0	240.3	198.4	84.40	-12,899.1	974.7	1,208.9	781.2	427.71	2.827	
20,723.3	7,903.5	17,989.1	7,783.0	240.8	198.8	84.40	-12,921.1	982.3	1,209.0	780.4	428.58	2.821	
20,800.0	7,903.5	18,065.8	7,783.0	242.2	200.2	84.40	-12,993.6	1,007.3	1,209.0	777.5	431.46	2.802	
20,823.3	7,903.5	18,089.1	7,783.0	242.7	200.7	84.40	-13,015.6	1,014.9	1,209.0	776.6	432.34	2.796	
20,900.0	7,903.5	18,165.8	7,783.0	244.1	202.1	84.40	-13,088.2	1,039.9	1,209.0	773.8	435.22	2.778	
20,923.3	7,903.5	18,189.1	7,783.0	244.6	202.5	84.40	-13,110.2	1,047.5	1,209.0	772.9	436.09	2.772	
21,000.0	7,903.5	18,265.8	7,783.0	246.0	203.9	84.40	-13,182.7	1,072.5	1,209.0	770.0	438.97	2.754	
21,023.3	7,903.5	18,289.1	7,783.0	246.4	204.3	84.40	-13,204.7	1,080.1	1,209.0	769.2	439.85	2.749	
21,100.0	7,903.5	18,365.8	7,783.0	247.9	205.7	84.40	-13,277.3	1,105.1	1,209.0	766.3	442.73	2.731	
21,123.3	7,903.5	18,389.1	7,783.0	248.3	206.2	84.40	-13,299.3	1,112.7	1,209.0	765.4	443.60	2.725	
21,200.0	7,903.5	18,465.8	7,783.0	249.8	207.6	84.40	-13,371.8	1,137.7	1,209.0	762.5	446.49	2.708	
21,223.3	7,903.5	18,489.1	7,783.0	250.2	208.0	84.40	-13,393.8	1,145.2	1,209.0	761.7	447.36	2.703	
21,300.0	7,903.5	18,565.8	7,783.0	251.7	209.4	84.40	-13,466.3	1,170.3	1,209.0	758.8	450.24	2.685	
21,323.3	7,903.5	18,589.1	7,783.0	252.1	209.8	84.40	-13,488.3	1,177.8	1,209.1	757.9	451.12	2.680	
21,400.0	7,903.5	18,665.8	7,783.0	253.5	211.2	84.40	-13,560.9	1,202.8	1,209.1	755.1	454.00	2.663	
21,423.3	7,903.5	18,689.1	7,783.0	254.0	211.7	84.40	-13,582.9	1,210.4	1,209.1	754.2	454.87	2.658	
21,500.0	7,903.5	18,765.8	7,783.0	255.4	213.1	84.40	-13,655.4	1,235.4	1,209.1	751.3	457.76	2.641	
21,523.3	7,903.5	18,789.1	7,783.0	255.9	213.5	84.40	-13,677.4	1,243.0	1,209.1	750.5	458.63	2.636	
21,600.0	7,903.5	18,865.8	7,783.0	257.3	214.9	84.40	-13,750.0	1,268.0	1,209.1	747.6	461.51	2.620	
21,623.3	7,903.5	18,889.1	7,783.0	257.7	215.4	84.40	-13,772.0	1,275.6	1,209.1	746.7	462.39	2.615	
21,700.0	7,903.5	18,965.8	7,783.0	259.2	216.8	84.40	-13,844.5	1,300.6	1,209.1	743.8	465.27	2.599	
21,723.3	7,903.5	18,989.1	7,783.0	259.6	217.2	84.40	-13,866.5	1,308.2	1,209.1	743.0	466.14	2.594	
21,800.0	7,903.5	19,065.8	7,783.0	261.1	218.6	84.40	-13,939.1	1,333.2	1,209.1	740.1	469.02	2.578	
21,823.3	7,903.5	19,089.1	7,783.0	261.5	219.1	84.40	-13,961.1	1,340.8	1,209.1	739.2	469.90	2.573	
21,900.0	7,903.5	19,165.8	7,783.0	263.0	220.5	84.40	-14,033.6	1,365.8	1,209.2	736.4	472.78	2.558	
21,923.3	7,903.5	19,189.1	7,783.0	263.4	220.9	84.40	-14,055.6	1,373.3	1,209.2	735.5	473.66	2.553	
22,000.0	7,903.5	19,265.8	7,783.0	264.9	222.3	84.40	-14,128.1	1,398.3	1,209.2	732.6	476.54	2.537	
22,023.3	7,903.5	19,289.1	7,783.0	265.3	222.7	84.40	-14,150.1	1,405.9	1,209.2	731.8	477.41	2.533	
22,100.0	7,903.5	19,365.8	7,783.0	266.7	224.2	84.40	-14,222.7	1,430.9	1,209.2	728.9	480.30	2.518	
22,123.3	7,903.5	19,389.1	7,783.0	267.2	224.6	84.40	-14,244.7	1,438.5	1,209.2	728.0	481.17	2.513	
22,200.0	7,903.5	19,465.8	7,783.0	268.6	226.0	84.40	-14,317.2	1,463.5	1,209.2	725.1	484.05	2.498	
22,219.9	7,903.5	19,485.7	7,783.0	269.0	226.4	84.40	-14,336.0	1,470.0	1,209.2	724.4	484.80	2.494	
22,300.0	7,903.5	19,532.0	7,783.0	270.5	227.2	84.40	-14,379.8	1,485.1	1,209.7	723.7	485.95	2.489	ES, SF
22,400.0	7,903.5	19,532.0	7,783.0	272.4	227.2	84.40	-14,379.8	1,485.1	1,216.6	735.6	480.78	2.531	
22,500.0	7,903.5	19,532.0	7,783.0	274.3	227.2	84.40	-14,379.8	1,485.1	1,231.7	760.7	470.98	2.615	
22,600.0	7,903.5	19,532.0	7,783.0	276.2	227.2	84.40	-14,379.8	1,485.1	1,254.5	797.0	457.47	2.742	
22,700.0	7,903.5	19,532.0	7,783.0	278.1	227.2	84.40	-14,379.8	1,485.1	1,284.7	843.4	441.34	2.911	
22,800.0	7,903.5	19,532.0	7,783.0	280.0	227.2	84.40	-14,379.8	1,485.1	1,321.9	898.2	423.65	3.120	
22,900.0	7,903.5	19,532.0	7,783.0	281.9	227.2	84.40	-14,379.8	1,485.1	1,365.3	960.0	405.30	3.369	
23,000.0	7,903.5	19,532.0	7,783.0	283.7	227.2	84.40	-14,379.8	1,485.1	1,414.6	1,027.6	386.98	3.655	
23,100.0	7,903.5	19,532.0	7,783.0	285.6	227.2	84.40	-14,379.8	1,485.1	1,468.9	1,099.8	369.18	3.979	
23,200.0	7,903.5	19,532.0	7,783.0	287.5	227.2	84.40	-14,379.8	1,485.1	1,527.9	1,175.7	352.21	4.338	
23,300.0	7,903.5	19,532.0	7,783.0	289.4	227.2	84.40	-14,379.8	1,485.1	1,591.0	1,254.8	336.25	4.732	
23,400.0	7,903.5	19,532.0	7,783.0	291.3	227.2	84.40	-14,379.8	1,485.1	1,657.8	1,336.4	321.38	5.158	

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

08/12/2022

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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:	201	**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 Pritt South Pad - Pritt South #207 - OH - SDI Plan 1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD+HRGM+Int, 1100-MWD+AfterInt, 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
23,500.0	7,903.5	19,532.0	7,783.0	293.2	227.2	84.40	-14,379.8	1,485.1	1,727.7	1,420.1	307.64	5.616	
23,600.0	7,903.5	19,532.0	7,783.0	295.1	227.2	84.40	-14,379.8	1,485.1	1,800.5	1,505.5	294.99	6.104	
23,700.0	7,903.5	19,532.0	7,783.0	297.0	227.2	84.40	-14,379.8	1,485.1	1,875.8	1,592.4	283.39	6.619	
23,800.0	7,903.5	19,532.0	7,783.0	298.9	227.2	84.40	-14,379.8	1,485.1	1,953.3	1,680.5	272.76	7.161	
23,900.0	7,903.5	19,532.0	7,783.0	300.8	227.2	84.40	-14,379.8	1,485.1	2,032.8	1,769.7	263.06	7.728	
24,000.0	7,903.5	19,532.0	7,783.0	302.6	227.2	84.40	-14,379.8	1,485.1	2,114.0	1,859.8	254.19	8.317	
24,100.0	7,903.5	19,532.0	7,783.0	304.5	227.2	84.40	-14,379.8	1,485.1	2,196.8	1,950.7	246.09	8.927	
24,200.0	7,903.5	19,532.0	7,783.0	306.4	227.2	84.40	-14,379.8	1,485.1	2,280.9	2,042.2	238.69	9.556	
24,300.0	7,903.5	19,532.0	7,783.0	308.3	227.2	84.40	-14,379.8	1,485.1	2,366.3	2,134.4	231.92	10.203	
24,400.0	7,903.5	19,532.0	7,783.0	310.2	227.2	84.40	-14,379.8	1,485.1	2,452.8	2,227.1	225.73	10.866	

Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
Project:	Taylor County, WV	**TVD Reference:**	GL 1332.5' & 27' KB @ 1359.5usft (Original Well Elev)
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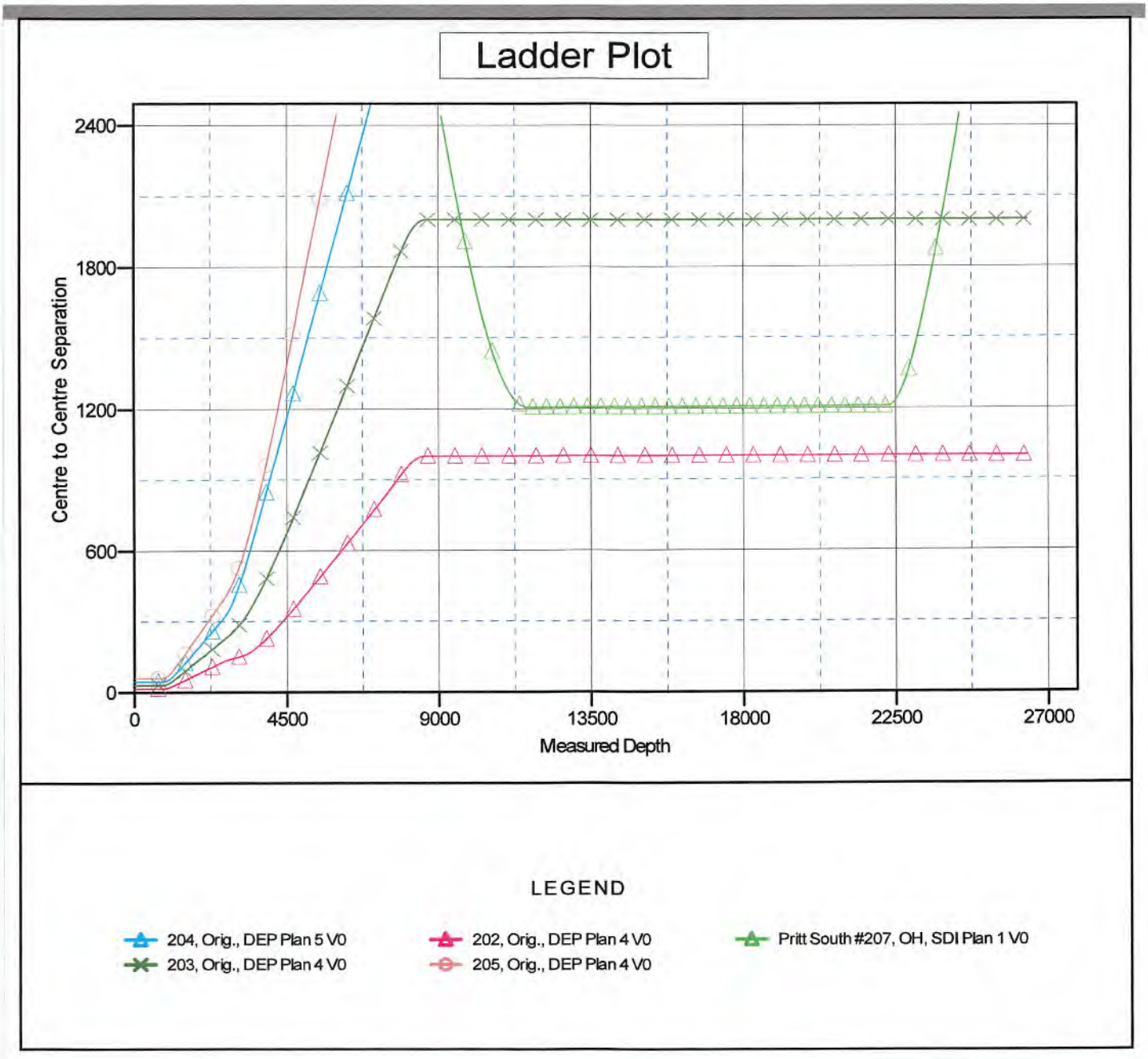
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	201	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Orig.	**Database:**	Northeast
Reference Design:	DEP Plan 6	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to GL 1332.5' & 27' KB @ 1359.5usft (O	Coordinates are relative to: 201
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, West Virginia Northern Zone
Central Meridian is -79.5000000	Grid Convergence at Surface is: -0.43°



Company:	Arsenal Resources	**Local Co-ordinate Reference:**	Well 201
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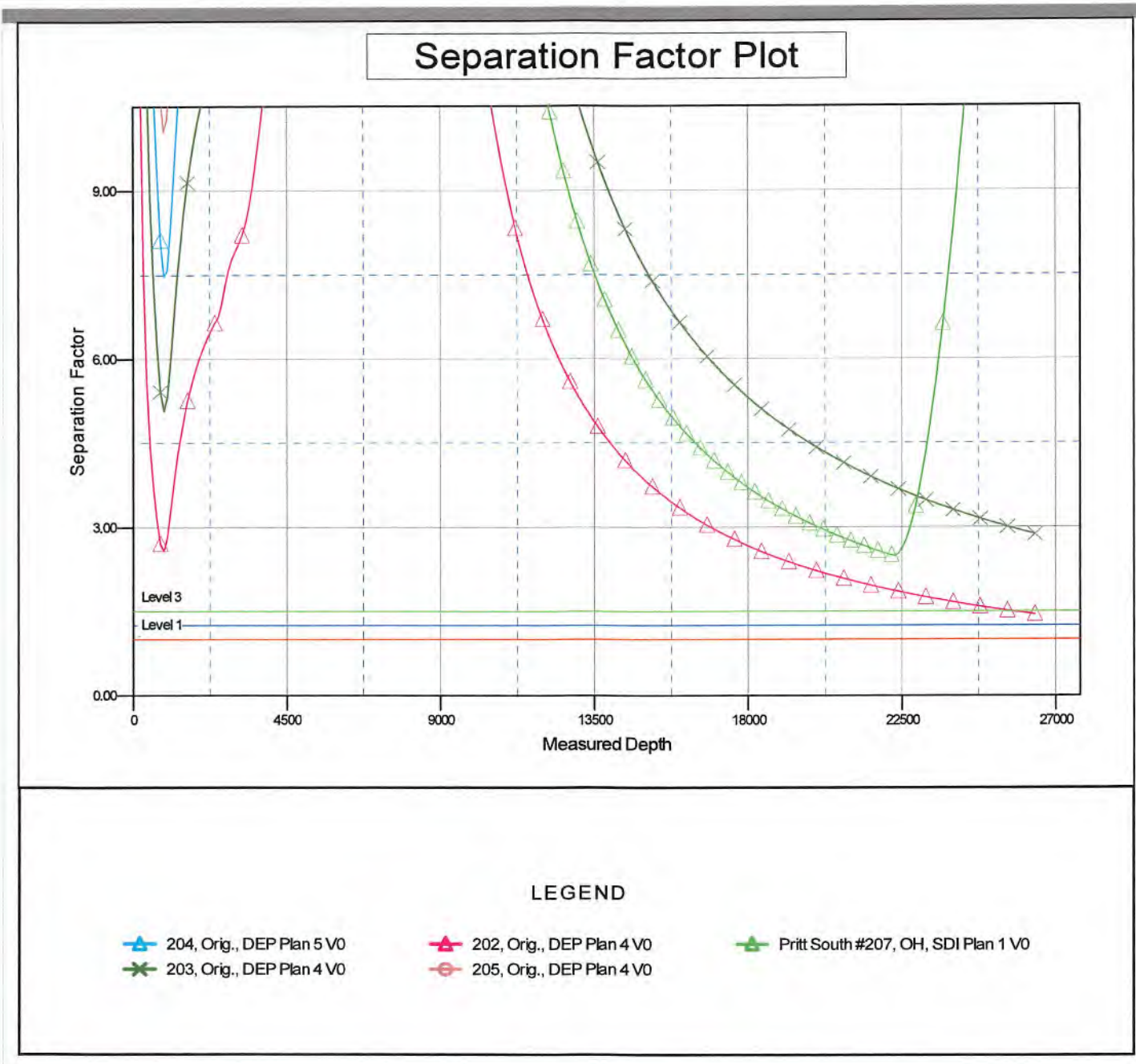


08/12/2022

ARSENAL RESOURCES

People Powered. Asset Strong.

$5150.00
CK# 0000118972
6/23/22

July 21, 2022

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

RECEIVED
Office of Oil and Gas
JUL 25 2022
WV Department of
Environmental Protection

RE: Johnson TFP 40 201, API# 47-091-01367 – Expedited Modification due to well extension

Dear Taylor,

Enclosed please find the modification for the Johnson TFP 40 201, (API# 47-091-01367). This permit is being modified due to adjusting the wellbore lateral length. The wellhead locations remain the same as the current permit. This well was originally permitted to 22,343 feet. The modification request is to increase the total measured depth to 26,475 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

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

08/12/2022

SURFACE HOLE SURVEYED 39° 17' 30" (NAD27)
BOTTOM HOLE SURVEYED 39° 15' 00" (NAD27)

8,459'

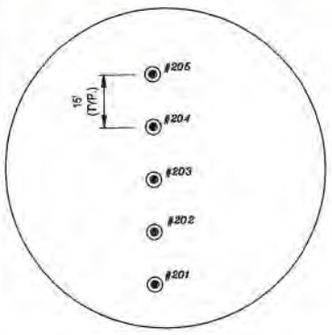
822'

12,108'

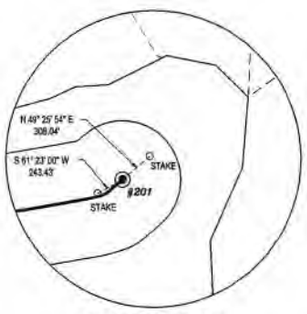
14,781'

Latitude: (NAD27)

Longitude: (NAD27)



REFERENCES TO PROPOSED HORIZONTAL WELL SURFACE LOCATIONS NTS



REFERENCES TIES (NTS)

(NAD83-WVN) US SURVEY FT.	
TOP HOLE	
N) 276971.722	
E) 1779051.662	
LANDING POINT	
N) 275876.633	
E) 1777228.570	
BOTTOM HOLE	
N) 259005.183	
E) 1783046.610	

(NAD83-LAT/LONG) DECIMAL	
TOP HOLE	
N) 39.258499	
E) -80.169059	
LANDING POINT	
N) 39.255455	
E) -80.175469	
BOTTOM HOLE	
N) 39.209253	
E) -80.154489	

(UTM, NAD83) METER	
TOP HOLE	
N) 4345792.144	
E) 571690.548	
LANDING POINT	
N) 4345449.270	
E) 571140.659	
BOTTOM HOLE	
N) 4340338.559	
E) 572998.661	

SURFACE HOLE NAD27
LAT. 39.258407°
LON. -80.169253°

#201

BOTTOM HOLE NAD27
LAT. 39.209159°
LON. -80.154663°

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" = 4000'
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 7-18-2022
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: JULY 18, 2022
JOHNSON TFP-40
OPERATOR'S WELL #: # 201

API WELL #: 47 (STATE) 091 (COUNTY) 01367 (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

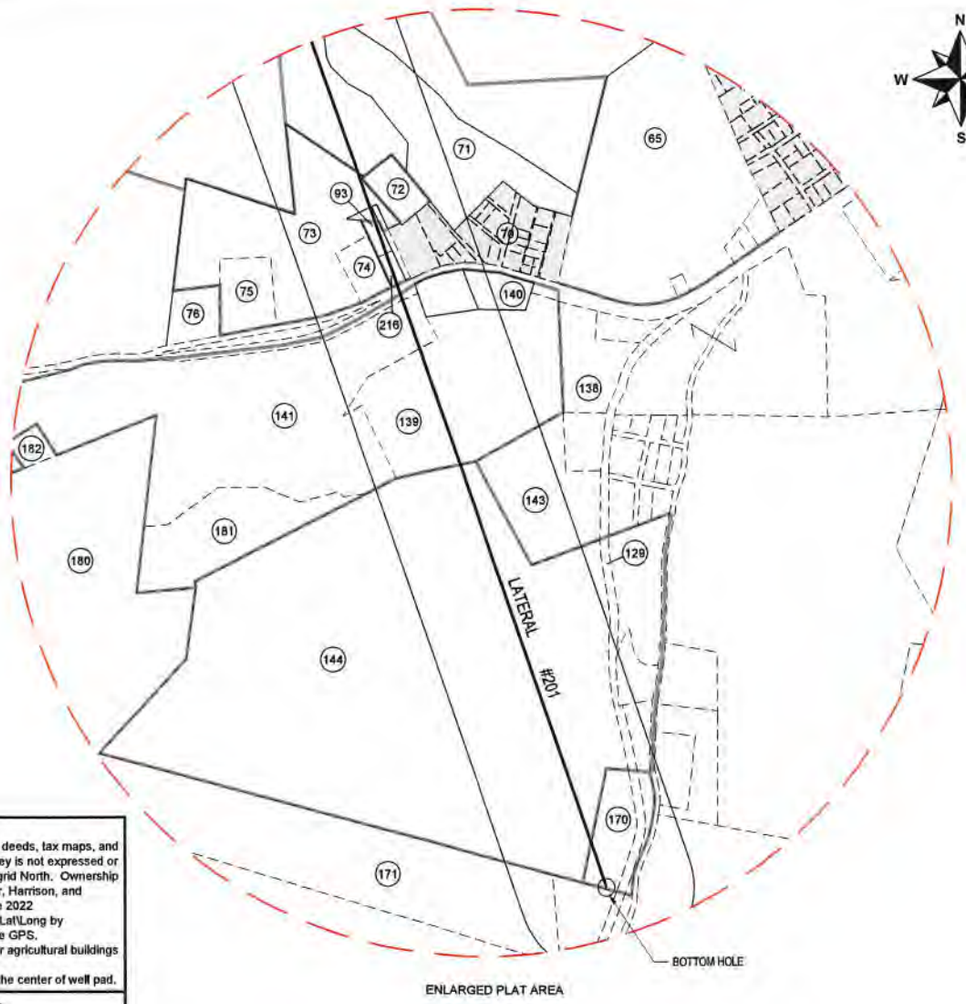
ELEVATION: 1,332.5
QUADRANGLE: ROSEMONT, WV
ACREAGE: 284 ± 08/12/2022
ACREAGE: 284 ±

☒ 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: 26,475.0'

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



ENLARGED PLAT AREA

REFERENCE NOTES
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- EXISTING WELL HEAD (Future Drill)
- LANDING POINT\BOTTOM HOLE
- (#) SURFACE OWNER

FILE#: 22078-001
SHEET#: 2 of 3
SCALE: 1" = 1000'
TICK SCALE: 1" = 2000'
MINIMUM DEGREE OF ACCURACY: 1/200
PROVEN SOURCE OF ELEVATION: WV-RTN CORS STATION

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OIL & GAS ROYALTY OWNER: SEE WW-6A1

ELEVATION: 1,332.5
QUADRANGLE: ROSEMONT, WV
ACREAGE: 284 ± 08/12/2022
ACREAGE: 284 ±

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

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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	17-15-0331-0027-0000	JOHNSON RENEE
88	033	17-15-0351-0010-0000	JOHNSON RENEE
4	033	17-15-0351-0012-0000	GCSTREAM LLC
3	033	17-15-0351-0013-0000	GCSTREAM LLC
86	033	17-15-0351-0023-0000	GCSTREAM LLC
39	001	01-09-0009-0001-0000	STEWART FARM LLC
81	001	01-09-0009-0019-0000	STEWART FARM LLC
40	001	01-09-0009-0020-0000	SEESE ROBERT & BRENDA HWS
80	001	01-09-0010-0002-0000	SMITH JO ANN V & GARY M BROWN JR (WS)
42	001	01-09-0011-0001-0000	POLINO ENTERPRISES INC
73	001	01-09-0012-0042-0000	FOSTER ERIC M & TRACI D WS
93	001	01-09-012C-0003-0000	ARBAUGH RITA
216	001	01-09-012C-0001-0000	LEHMAN DIANA LYNN
141	001	01-09-0012-0040-0000	ZBOSNIK DENNIS ALBIN
139	001	01-09-0012-0039-0000	ZBOSNIK DENNIS ALBIN
144	001	01-09-0012-0045-0001	MCCORD LLOYD JR & SANDRA
170	001	01-09-0012-0048-0000	HURST DELORES

ADJOINER PARCEL OWNER INFORMATION

ID#	DEP#	PARCEL NUMBER	OWNER NAME
2	001	01-09-0009-0002-0000	STEWART FARM LLC
5	091	46-04-0011-0001-0000	CFS FARMS LIMITED LIABILITY CO
6	091	46-04-0008-0022-0000	GRIPPIN JAMES S & ELAINE M & SURV
92		RIGHT-OF-WAY	COUNTY ROUTE 77/6 BARBOUR CORNER
35	001	01-09-0009-0020-0001	SMALLWOOD RUSSELL & ANGELA WRS
38	001	01-09-0009-0003-0000	STEWART FARM LLC
41	001	01-09-0009-0012-0001	POLINO ENTERPRISES INC
43	001	01-09-0009-0022-0000	WOLFE LARRY, ROBERT WOLFE & STANLEY WOLFE ET UXES, HWS
60		RIGHT-OF-WAY	COUNTY ROUTE 1/6 BEAR MOUNTAIN ROAD
65	001	01-09-0012-0027-0000	WOLFE LARRY MICHAEL
70	001	PLAN OF LOTS	BROWNTON PLAN OF LOTS
71	001	01-09-0012-0061-0000	CHARLTON-FRYER AMANDA S & TIMOTHY R CHARLTON L/E
72	001	01-09-0012-0060-0000	SCHIMANSKY STEVEN & DEBRA HWS
74	001	01-09-012C-0002-0000	FOSTER ERIC M & TRACI D WS
75	001	01-09-0012-0043-0000	TRADER PAUL L
76	001	01-09-0012-0041-0000	TRADER PAUL & LORETTA WRS
77	001	01-09-0011-0001-0002	BECKWITH LUMBER CO INC
79	033	17-15-0351-0031-0000	GCSTREAM LLC
82	001	01-09-0010-0001-0000	SMITH JO ANN V & GARY M BROWN JR (WS)
83	033	17-15-0351-0021-0000	GCSTREAM LLC
84	033	17-15-0351-0022-0000	GCSTREAM LLC
85	033	17-15-0351-0024-0000	GCSTREAM LLC
87	033	17-15-0351-0011-0000	GCSTREAM LLC
89	033	17-15-0351-0007-0000	WARDER ORAN LEE & JANICE L
96	091	46-04-0008-0021-0000	MILLARD CARLYLE G
97	091	46-04-0007-0027-0000	CEQUEL III COMMUNICATIONS
98	091	46-04-0007-0009-0000	CEQUEL III COMMUNICATIONS
99	091	46-04-0007-0008-0000	FRUM CLINTON A (HEIRS)
100	033	17-15-0351-0009-0000	JOHNSON RENEE
129	001	01-09-0022-0004-0000	MARPLE JAMES D & GENA F DOWELL WS
138	001	01-09-0012-0035-0000	TR PENTECOSTAL CHURCH OF GOD C/O EDWARD L BARKLEY SR
140	001	01-09-0012-0040-0001	ZBOSNIK DENNIS KEITH
143	001	01-09-0012-0037-0000	LIPSCOMB ANNA G MCCORD
171	001	01-09-0012-0046-0000	SHAHAN OKEY C
172	001	01-09-0022-0001-0000	MARPLE JAMES D & GENA F DOWELL WS
180	001	01-09-0011-0006-0000	BEAR MOUNTAIN COAL CO KEYBANK N.A.-TRUST REAL ESTATE
181	001	01-09-0012-0045-0000	LYONS MORGAN H&HILDA S REV DECLARATION TRST 6-30-98 ET AL
182	001	01-09-0012-0044-0000	ZBOSNIK DENNIS ALBIN
183	001	01-09-012D-0031-0000	KENNEDY DEBBIE J
217	033	17-15-0351-0008-0000	WARDER ORAN LEE & JANICE L

REFERENCE NOTES
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- STREAM
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- SURFACE OWNER

FILE#: 22078-001
SHEET#: 3 of 3
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TICK SCALE: 1" = 2000'
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
WVDEP
OFFICE OF OIL & GAS
601 57TH STREET
CHARLESTON, WV 25304

DATE: JULY 18, 2022
JOHNSON TFP-40
OPERATOR'S WELL #: # 201
API WELL #: 47 091 _____
STATE COUNTY PERMIT

Well Type: ☐ Oil ☐ Waste Disposal ☒ Production ☐ Deep
☒ Gas ☐ Liquid Injection ☐ Storage ☒ Shallow
WATERSHED: SIMPSON CREEK
COUNTY / DISTRICT: TAYLOR CO. FLEMINGTON DISTRICT
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OIL & GAS ROYALTY OWNER: SEE WW-6A1

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ACREAGE: 284 ±

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ESTIMATED DEPTH: TVD: 7,903.5' TMD: 26,475.0'

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ADDRESS: 6031 WALLACE ROAD EXTENSION # 300
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DESIGNATED AGENT: NATHAN SKEEN
ADDRESS: 633 MAIN STREET
CITY: BRIDGEPORT STATE: WV ZIP: 26330

Arsenal Resources
Johnson TFP 40 201
WW-6A – Notice of Application, Attachment (page 1 of 1)

Water Purveyors:

Renee Johnson
511 Beards Run Road
Bridgeport, WV 26330

Cequel III Communications II LLC
520 Maryville Centre Dr Suite
Saint Louis, MO 63141

Carlyle G. Millard
413 High St
Bridgeport, WV 26330

James and Elaine Grippin
137 Ocello St.
Clarksburg, WV 26301

CFS Farms Limited Liability Co.
P.O. Box 297
Flemington, WV 26347

08/12/2022

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City, S Bridgeport, WV 26330

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Cit St Louis, MO 63141

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137 Ocello Street
City, Clarksburg, WV 26301

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Total Postage and Fees
$ 11.75

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Stree Carlyle G. Millard
513 High Street
City, Bridgeport, WV 26330

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

08/12/2022

Agreement to Drill, Complete and Operate Oil & Gas Wells

This Agreement to Drill, Complete and Operate Oil & Gas Wells (this "**Agreement**"), by and among Arsenal Resources LLC, a West Virginia limited liability company ("**Arsenal**"), River Ridge Energy, LLC, a Delaware limited liability company ("**River Ridge**"), and River Ridge Energy, Holdings, LLC, a Delaware limited liability company ("**River Ridge Holdings**"), is effective as of **March 1, 2017.** (the "**Effective Date**") and sets forth the terms pursuant to which Arsenal will drill, complete and operate the Wells (as defined below) on behalf of River Ridge and River Ridge Holdings. Arsenal, River Ridge, and River Ridge Holdings are each a "**Party**" and are collectively the "**Parties**". In consideration of the foregoing and the respective agreements hereinafter set forth and the mutual benefits to be derived therefrom, the Parties, intending to be legally bound, hereby agree as follows:

1. **Term:** This Agreement is effective from the Effective Date until terminated by Arsenal on the one hand or River Ridge and River Ridge Holdings on the other hand with 30 days' written notice to the other Party or Parties, as applicable (the "**Term**").

2. **Authorization to Operate:** River Ridge and River Holdings authorize Arsenal to undertake and perform, on River Ridge and River Ridge Holdings behalf, all operations, including without limitation permit applications, well pad preparation, drilling and completing wells, and marketing gas, oil and other hydrocarbons therefrom with respect to all oil and gas wells to be drilled on oil and gas leasehold acreage held by River Ridge or River Ridge Holdings. River Ridge, River Ridge Holdings and Arsenal are affiliates with a common parent. Arsenal was formed to operate oil and gas leasehold acreage held by River Ridge, River Ridge Holdings and certain other affiliates. Arsenal agrees that it shall, in a good and workmanlike manner and in accordance with industry standards as they prevail in the area, drill, complete and operate oil and gas wells on leasehold acreage owned by River Ridge or River Ridge Holdings from time to time as directed by River Ridge or River Ridge Holdings (collectively, the "**Wells**").

3. **No Third Party Beneficiary:** This Agreement is for the benefit of the Parties and is not for the benefit of any third party.

4. **Counterparts:** This Agreement may be simultaneously executed in several counterparts and via facsimile or similar electronic transmittal, each of which shall be deemed to be an original and taken together shall constitute one and the same instrument.

[Signature Page Follows]

IN WITNESS WHEREOF, Arsenal, River Ridge, and River Ridge Holdings have caused their duly authorized representatives to execute this Agreement as of the Effective Date.

ARSENAL RESOURCES LLC

By: _____
Name: Joel E. Symonds
Title: Vice President - Land

RIVER RIDGE ENERGY, LLC

By: _____
Name: Joel E. Symonds
Title: Vice President - Land

RIVER RIDGE HOLDINGS, LLC

By: _____
Name: Joel E. Symonds
Title: Vice President - Land

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MAR KEY LLC

Organization Information							
Org Type	**Effective Date**	**Established Date**	**Filing Date**	**Charter**	**Class**	**Sec Type**	**Termination Date**	**Termination Reason**
LLC | Limited Liability Company	7/11/2011		7/11/2011	Domestic	Profit			

Organization Information			
Business Purpose	2111 - Mining, Quarrying, Oil & Gas Extraction - Oil and Gas Extraction - Crude Oil and Natural Gas Extraction	**Capital Stock**	
Charter County		**Control Number**	99Q1F
Charter State	WV	**Excess Acres**	
At Will Term	A	**Member Managed**	MBR
At Will Term Years		**Par Value**	
Authorized Shares		**Young Entrepreneur**	Not Specified

08/12/2022

Addresses

Type	Address
Designated Office Address	633 W. MAIN STREET BRIDGEPORT, WV, 26330
Mailing Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA
Notice of Process Address	CORPORATION SERVICE COMPANY 209 WEST WASHINGTON STREET CHARLESTON, WV, 25302
Principal Office Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA
Type	**Address**

Officers

Type	Name/Address
Member	ARSENAL RESOURCES DEVELOPMENT LLC 6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090
Organizer	PAUL M HERZING 560 EPSILON DR. PITTSBURGH, PA, 15238 USA
Type	**Name/Address**

Annual Reports

Filed For
2020
2019
2018

2017
2016
2015
2014
2013
2012
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Monday, March 1, 2021 — 9:37 AM

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SENECA-UPSHUR PETROLEUM, LLC

Organization Information

Org Type	Effective Date	Established Date	Filing Date	Charter	Class	Sec Type	Termination Date	Termination Reason
LLC | Limited Liability Company	2/12/1973		2/12/1973	Domestic	Profit			

Organization Information

Business Purpose	2111 - Mining, Quarrying, Oil & Gas Extraction - Oil and Gas Extraction - Crude Oil and Natural Gas Extraction	**Capital Stock**	
Charter County		**Control Number**	0
Charter State	WV	**Excess Acres**	0
At Will Term	A	**Member Managed**	MBR
At Will Term Years		**Par Value**	
Authorized Shares		**Young Entrepreneur**	Not Specified

08/12/2022

Addresses

Type	Address
Designated Office Address	633 W. MAIN STREET BRIDGEPORT, WV, 26330
Mailing Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA
Notice of Process Address	CORPORATION SERVICE COMPANY 209 WEST WASHINGTON STREET CHARLESTON, WV, 25302
Principal Office Address	6031 WALLACE ROAD EXTENSION SUITE 300 WEXFORD, PA, 15090 USA
Type	**Address**

Officers

Type	Name/Address
Member	RIVER RIDGE ENERGY, LLC 6031 WALLACE ROAD EXTENSION, SUITE 300 WEXFORD, PA, 15090
Organizer	TAMMY J OWEN 300 SUMMERS STREET, STE 1500 PO BOX 2107 CHARLESTON, WV, 25328 USA
Type	**Name/Address**

DBA

DBA Name	Description	Effective Date	Termination Date
KEYSPAN PRODUCTION & DEVELOPMENT COMPANY	TRADENAME	6/11/2004	
NATIONAL GRID	TRADENAME	8/17/2007	

NATIONAL GRID PRODUCTION AND DEVELOPMENT	TRADENAME	12/5/2008	5/9/2012

DBA Name	Description	Effective Date	Termination Date

Name Changes

Date	Old Name
3/28/2011	SENECA-UPSHUR PETROLEUM, INC.

Date	Old Name

Date	Amendment
6/15/2016	AMENDMENT FILED CHANGING FROM A MANAGER-MANAGED CO. TO A MEMBER-MANAGED CO. >> REMOVED ROBERT KOZEL & STEPHEN A. BISHOP AS MANAGERS & ADDED SOLE MEMBER (C IMAGE).
3/28/2011	CONVERSION: FROM SENECA-UPSHUR PETROLEUM, INC. TO SENECA-UPSHUR PETROLEUM, LLC
7/25/1997	MERGER; MERGING LITTLE SWISS DRILLING COMPANY, A QUAL WV CORP AND PALACE VALLEY PETROLEUM COMPANY, A QUAL WV CORP WITH AND INTO SENECA-UPSHUR PETROLEUM, INC., A QUAL WV CORP, THE SURVIVOR.

Date	Amendment

Annual Reports

Filed For
2020
2019
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For more information, please contact the Secretary of State's Office at 304-558-8000.

Monday, March 1, 2021 — 9:40 AM

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

RE: [External Sender] Johnson TFP 40 Modifications

1 message

Ross Schweitzer <rschweitzer@arsenalresources.com> Fri, Aug 5, 2022 at 2:44 PM
To: Dave Boyer <dboyer@arsenalresources.com>, "Stansberry, Wade A" <wade.a.stansberry@wv.gov>

Wade,

Here is some additional documentation that we normally include in the permit the show the agreement between Seneca Upshur/River Ridge and Arsenal. Additionally ,MarKey is a part of Arsenal all of which are just different entities for us.

Ross Schweitzer

Sr. Director of Drilling, Construction and Permitting

Arsenal Resources

6031 Wallace Road Ext. Suite 101

Wexford, PA 15090

P: 724.940.1137

C: 724.584.1192

From: Dave Boyer <dboyer@arsenalresources.com>
Sent: Friday, August 05, 2022 2:31 PM
To: Stansberry, Wade A <wade.a.stansberry@wv.gov>
Cc: Ross Schweitzer <rschweitzer@arsenalresources.com>
Subject: RE: [External Sender] Johnson TFP 40 Modifications

Yes, those entities (Mar Key, Seneca-Upshur, & River Ridge) are all held by Arsenal Resources.

Thanks,

Dave

Dave Boyer

Director of Geology & Development Planning

Arsenal Resources

6031 Wallace Road Suite 101

Wexford, PA 15090

C: 724.759.0088

08/12/2022

From: Stansberry, Wade A <wade.a.stansberry@wv.gov>
Sent: Friday, August 5, 2022 2:29 PM
To: Dave Boyer <dboyer@arsenalresources.com>
Cc: Ross Schweitzer <rschweitzer@arsenalresources.com>
Subject: Re: [External Sender] Johnson TFP 40 Modifications

In the leases that end in Mar Key, Seneca-Upshur, Arsenal/River Ridge Energy LLC has the agreement to drill through them?

I am wanting to verify and I will proceed with the review and hope to get it to you next week.

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

On Fri, Aug 5, 2022 at 1:32 PM Dave Boyer <dboyer@arsenalresources.com> wrote:

> Wade,
>
> Our Lease Records Supervisor reviewed the 6A1 documents. She found a typo on Johnson #201 and a revised 6A1 is attached.
>
> All of the other chains appear to be complete ending in either Mar Key, Seneca-Upshur, or River Ridge. I attached the Agreement to Drill, Complete, and Operate Oil & Gas Wells included in the original permit package.
>
> Please let me know if you have any questions or need additional information.
>
> Thanks,
>
> Dave
>
> **Dave Boyer**
>
> *Director of Geology & Development Planning*
>
> Arsenal Resources
>
> 6031 Wallace Road Suite 101
>
> Wexford, PA 15090

08/12/2022

C: 724.759.0088

ARSENAL RESOURCES

From: Stansberry, Wade A <wade.a.stansberry@wv.gov>
Sent: Friday, August 5, 2022 11:33 AM
To: Dave Boyer <dboyer@arsenalresources.com>; Ross Schweitzer <rschweitzer@arsenalresources.com>
Subject: [External Sender] Johnson TFP 40 Modifications

Dave/Ross,

The Lease Chains need to be clear to show that River Ridge Energy LLC has the lease and/or agreement to drill through these parcels for:

91-01363

91-01367

91-01368

The corrections/updates can be emailed to me.

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

4 attachments

- **WV SOS - Business and Licensing - Corporations - Mar Key.pdf** 88K
- **WV SOS Seneca Upshur.pdf** 272K
- **River Ridge Arsenal Part 2.pdf** 19K
- **River Ridge Arsenal Part 1.pdf** 39K

08/12/2022

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

Expedited Modification Horizontal H6A Well Work Permits API: (47-091-01363, 47-091-01367, & 47-091-01368)

1 message

Stansberry, Wade A <wade.a.stansberry@wv.gov> Mon, Aug 8, 2022 at 3:58 PM
To: Dave Boyer <Dboyer@arsenalresources.com>, Ross Schweitzer <rschweitzer@arsenalresources.com>, "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>, C Kinsey <ckinsey@wvassessor.com>

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

47-091-01363 - JOHNSON TFP 40 202
47-091-01367 - JOHNSON TFP 40 201
47-091-01368 - JOHNSON TFP 40 203

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

3 attachments

- **47-091-01363 - mod.pdf** 6028K
- **47-091-01367 - mod.pdf** 3689K
- **47-091-01368 - mod.pdf** 3967K

08/12/2022

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

Re: Expedited Modification Horizontal H6A Well Work Permits API: (47-091-01363, 47-091-01367, & 47-091-01368)

1 message

Stansberry, Wade A <wade.a.stansberry@wv.gov> Mon, Aug 8, 2022 at 4:00 PM
To: Dave Boyer <Dboyer@arsenalresources.com>, Ross Schweitzer <rschweitzer@arsenalresources.com>, "Greynolds, Kenneth L" <kenneth.l.greynolds@wv.gov>, C Kinsey <ckinsey@wvassessor.com>

Sorry,

Attached are the official 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

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> **47-091-01367 - JOHNSON TFP 40 201**
> **47-091-01368 - JOHNSON TFP 40 203**
>
> 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**

3 attachments

47-091-01363 - mod.pdf
6028K

47-091-01368 - mod.pdf
5345K

47-091-01367 - mod.pdf

08/12/2022

5066K

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