

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

API 47 - 073 - 02566 County Pleasants District Union
Quad Ben's Run 7.5' Pad Name P2 Field/Pool Name _____
Farm name Morgan Valley Farms Well Number P2S6
Operator (as registered with the OOG) Jay-Bee Oil & Gas, Inc.
Address 3570 Shields Hill Rd. City Cairo State WV Zip 26337

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,365,094.11 Easting 496,337.13
Landing Point of Curve Northing 4,364,907.18 Easting 496,115.01
Bottom Hole Northing 4,363,011.92 Easting 497,109.71

Elevation (ft) 712.4' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

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

RECEIVED
Office of Oil and Gas
JUN 15 2018
WV Department of
Environmental Protection

Date permit issued 4/3/2017 Date drilling commenced 4/23/2017 Date drilling ceased 7/15/2017
Date completion activities began 10/28/2017 Date completion activities ceased 11/18/2017
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 150' Open mine(s) (Y/N) depths N
Salt water depth(s) ft N/A Void(s) encountered (Y/N) depths N
Coal depth(s) ft N/A Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Revised
Alvin Blum
8/21/2018

Reviewed by:
JOB

API 47- 073 - 02566 Farm name Morgan Valley Farms Well number P2S6

| CASING STRINGS | Hole Size | Casing Size | Depth | New or Used | Grade wt/ft | Basket Depth(s) | Did cement circulate (Y/ N) * Provide details below* |
|---------------------------|-----------|-------------|---------|-------------|-------------|-----------------|---|
| Conductor | 24" | 18 5/8" | 30' | New | J55 - 96# | | Y |
| Surface | 17.5" | 13 3/8" | 422' | New | J55 - 48# | 50' | Y |
| Coal | | | | | | | |
| Intermediate 1 | 11" | 8 5/8" | 1,915' | New | J55 - 24# | 500'/1500' | Y |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 7 7/8" | 5 1/2" | 13,418' | New | P110 - 20# | | Y |
| Tubing | | | | | | | |
| Packer type and depth set | | | | | | | |

Comment Details _____

| CEMENT DATA | Class/Type of Cement | Number of Sacks | Slurry wt (ppg) | Yield (ft ³ /sks) | Volume (ft ³) | Cement Top (MD) | WOC (hrs) |
|----------------|----------------------|-----------------|-----------------|------------------------------|---------------------------|-----------------|-----------|
| Conductor | | | | | | | |
| Surface | Class A | 354 | 15.6 | 1.2 | 425 | CTS | 8 |
| Coal | | | | | | | |
| Intermediate 1 | Class A | 585 | 15.6 | 1.19 | 696 | CTS | 8 |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | Class A | 2046 | 14.5 | 1.19 | 2435 | 2370' | 8 |
| Tubing | | | | | | | |

Drillers TD (ft) 13,418' Loggers TD (ft) 13,418'
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 2,267'

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

Well cored Yes No Conventional Sidewall Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING Spiral centralizer every joint from TD back to start of 90 degree.
90 - 70 degree every second joint.
70 degree - KOP every third joint.
KOP - Surface centralizer placed every 500'.

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

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

RECEIVED
Office of Oil and Gas
JUN 15 2018
WV Department of
Environmental Protection

API 47- 073 - 02566

Farm name Morgan Valley Farms

Well number P2S6

PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|-----------|------------------|------------------------|----------------------|------------------------|--------------|
| 1 | 10/28/17 | 13224 | 13552 | 32 | Marcellus |
| 2 | 10/31/17 | 12990 | 13179 | 40 | Marcellus |
| 3 | 11/1/17 | 12794 | 12948 | 40 | Marcellus |
| 4 | 11/2/17 | 12612 | 12758 | 40 | Marcellus |
| 5 | 11/2/17 | 12406 | 12550 | 40 | Marcellus |
| 6 | 11/2/17 | 12216 | 12364 | 40 | Marcellus |
| 7 | 11/2/17 | 12032 | 12166 | 40 | Marcellus |
| 8 | 11/3/17 | 11825 | 11970 | 40 | Marcellus |
| 9 | 11/3/17 | 11608 | 11782 | 40 | Marcellus |
| 10 | 11/4/17 | 11432 | 11556 | 40 | Marcellus |
| 11 | 11/5/17 | 11242 | 11387 | 40 | Marcellus |
| 12 | Skipped | | | 40 | Marcellus |
| 13 | 11/7/17 | 10828 | 10921 | 40 | Marcellus |
| 14 | 11/8/17 | 10634 | 10802 | 40 | Marcellus |
| 15 | 11/8/17 | 10476 | 10603 | 40 | Marcellus |
| 16 | 11/9/17 | 10259 | 10435 | 40 | Marcellus |

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

| Stage No. | Stimulations Date | Ave Pump Rate (BPM) | Ave Treatment Pressure (PSI) | Max Breakdown Pressure (PSI) | ISIP (PSI) | Amount of Proppant (lbs) | Amount of Water (bbbls) | Nitrogen/other (units) |
|-----------|-------------------|---------------------|------------------------------|------------------------------|------------|--------------------------|-------------------------|------------------------|
| 1 | 10/28/17 | 81 | 7221 | | 6796 | 150400 | 5744 | N/A |
| 2 | 10/31/17 | 67 | 7170 | 6306 | 6639 | 186000 | 9237 | N/A |
| 3 | 11/1/17 | 80 | 7253 | | 3362 | 174140 | 7529 | N/A |
| 4 | 11/2/17 | 75 | 6664 | 5229 | 3762 | 196980 | 7155 | N/A |
| 5 | 11/2/17 | 75 | 6773 | 5862 | 3729 | 194400 | 6496 | N/A |
| 6 | 11/2/17 | 75 | 7426 | 7140 | 2833 | 196540 | 7080 | N/A |
| 7 | 11/2/17 | 75 | 7106 | 6102 | 3379 | 183980 | 6544 | N/A |
| 8 | 11/3/17 | 75 | 7352 | 6375 | 2762 | 184740 | 5405 | N/A |
| 9 | 11/3/17 | 75 | 7074 | 6514 | 2607 | 181670 | 6886 | N/A |
| 10 | 11/4/17 | 75 | 7082 | 5692 | 7839 | 164970 | 7180 | N/A |
| 11 | 11/5/17 | 65 | 8264 | 8686 | 7015 | 185720 | 7932 | N/A |
| 12 | Skipped | | | | | | | N/A |
| 13 | 11/7/17 | 59 | 8364 | 9130 | 2832 | 183700 | 9672 | N/A |
| 14 | 11/8/17 | 70 | 6444 | 6092 | 3430 | 188200 | 7148 | N/A |
| 15 | 11/8/17 | 68 | 6126 | 5624 | 4040 | 181300 | 7197 | N/A |
| 16 | 11/9/17 | 68 | 6107 | 5492 | 4204 | 185300 | 6945 | N/A |

Please insert additional pages as applicable.

RECEIVED
Office of Oil and Gas

JUN 15 2018

WV Department of
Environmental Protection

API 47- 073 - 02566 Farm name Morgan Valley Farms Well number P2S6

PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|-----------|------------------|------------------------|----------------------|------------------------|--------------|
| 17 | 11/10/17 | 10076 | 10222 | 40 | Marcellus |
| 18 | 11/10/17 | 9853 | 10040 | 40 | Marcellus |
| 19 | 11/11/17 | 9678 | 9810 | 40 | Marcellus |
| 20 | 11/11/17 | 9471 | 9639 | 40 | Marcellus |
| 21 | 11/12/17 | 9284 | 9416 | 40 | Marcellus |
| 22 | 11/12/17 | 9066 | 9236 | 40 | Marcellus |
| 23 | 11/14/17 | 8851 | 9030 | 40 | Marcellus |
| 24 | 11/15/17 | 8691 | 8791 | 40 | Marcellus |
| 25 | 11/15/17 | 8474 | 8645 | 40 | Marcellus |
| 26 | 11/16/17 | 8290 | 8420 | 40 | Marcellus |
| 27 | 11/16/17 | 8088 | 8241 | 40 | Marcellus |
| 28 | 11/17/17 | 7902 | 8045 | 40 | Marcellus |
| 29 | 11/17/17 | 7696 | 7856 | 40 | Marcellus |
| 30 | 11/18/17 | 7506 | 7660 | 40 | Marcellus |
| 31 | 11/18/17 | 7298 | 7470 | 40 | Marcellus |
| 32 | 11/18/17 | 7116 | 7263 | 40 | Marcellus |

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

| Stage No. | Stimulations Date | Ave Pump Rate (BPM) | Ave Treatment Pressure (PSI) | Max Breakdown Pressure (PSI) | ISIP (PSI) | Amount of Proppant (lbs) | Amount of Water (bbls) | Amount of Nitrogen/other (units) |
|-----------|-------------------|---------------------|------------------------------|------------------------------|------------|--------------------------|------------------------|----------------------------------|
| 17 | 11/10/17 | 65 | 5957 | 5762 | 3971 | 191130 | 7329 | N/A |
| 18 | 11/10/17 | 68 | 6342 | 5662 | 3587 | 183100 | 6641 | N/A |
| 19 | 11/11/17 | 69 | 6187 | 5618 | 3608 | 182360 | 6988 | N/A |
| 20 | 11/11/17 | 70 | 6200 | 5682 | 4140 | 188480 | 6982 | N/A |
| 21 | 11/12/17 | 70 | 6019 | 5701 | 3930 | 182800 | 6686 | N/A |
| 22 | 11/12/17 | 69 | 6036 | 5992 | 4292 | 186140 | 6577 | N/A |
| 23 | 11/14/17 | 70 | 6166 | 5961 | 4025 | 191470 | 6389 | N/A |
| 24 | 11/15/17 | 70 | 5929 | 5693 | 3319 | 190386 | 6263 | N/A |
| 25 | 11/15/17 | 70 | 6101 | 5971 | 4232 | 188620 | 6362 | N/A |
| 26 | 11/16/17 | 70 | 6448 | 7649 | 3650 | 187450 | 6299 | N/A |
| 27 | 11/16/17 | 71 | 5765 | 6575 | 4088 | 188600 | 6333 | N/A |
| 28 | 11/17/17 | 70 | 6331 | 6539 | 4393 | 187180 | 5689 | N/A |
| 29 | 11/17/17 | 69 | 6251 | 6941 | 4282 | 192640 | 5741 | N/A |
| 30 | 11/18/17 | 70 | 6301 | 6591 | 2909 | 184780 | 5838 | N/A |
| 31 | 11/18/17 | 69 | 6281 | 5835 | 4243 | 190340 | 6480 | N/A |
| 32 | 11/18/17 | 70 | 6032 | 7674 | 4752 | 185800 | 5829 | N/A |

Please insert additional pages as applicable.

RECEIVED
Office of Oil and Gas
JUN 15 2018
WV Department of
Environmental Protection

API 47- 073 - 02566 Farm name Morgan Valley Farms Well number P2S6

| <u>PRODUCING FORMATION(S)</u> | <u>DEPTHS</u> | | |
|-------------------------------|---------------|------------|--------------------------|
| <u>Marcellus</u> | <u>5,748'</u> | <u>TVD</u> | <u>13,418'</u> <u>MD</u> |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 1710 psi Bottom Hole N/A psi DURATION OF TEST 24 hrs

OPEN FLOW Gas 7121 mcfpd Oil _____ bpd NGL 25 bpd Water 100 bpd GAS MEASURED BY Estimated Orifice Pilot

| LITHOLOGY/ FORMATION | TOP | BOTTOM | TOP | BOTTOM | DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC) |
|-------------------------|-------------------------|--------------------|-------------------|-------------------|--|
| | DEPTH IN FT NAME TVD | DEPTH IN FT TVD | DEPTH IN FT MD | DEPTH IN FT MD | |
| See Attached. | 0 | | 0 | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

RECEIVED
Office of Oil and Gas
JUN 15 2018
WV Department of
Environmental Protection

Please insert additional pages as applicable.

Drilling Contractor Patterson-UTI Energy Inc
Address 10713 West Sam Houston Parkway North Suite 800 City Houston State TX Zip 77064

Logging Company StrataGraph NE Inc.
Address 116 Ellsworth Ave City Marietta State OH Zip 45750

Cementing Company BJ Services
Address 1036 E Main St City Bridgeport State WV Zip 26330

Stimulating Company US Well Services
Address 533 Industrial Park Rd City Jane Lew State CO Zip 26378

Please insert additional pages as applicable.

Completed by Shane Dowell Telephone 304-628-3111
Signature [Signature] Title Office Manager Date 6-5-2018

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

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Discharge Monitoring Report
Oil and Gas General Permit

Company Name: Jay-Bee Oil & Gas, Inc.
API No: 47-073-02566 County: Pleasants
District: Union Well No: P2S6
Farm Name: Morgan Valley Farms
Discharge Date/s From: (MMDDYY) _____ To: (MMDDYY) _____
Discharge Times. From: _____ To: _____
Total Volume to be Disposed from this facility (gallons): NO DISCHARGE
Disposal Option(s) Utilized (write volumes in gallons):

- (1) Land Application: _____ (Include a topographical map of the Area.)
(2) UIC: _____ Permit No. _____
(3) Offsite Disposal: _____ Site Location: _____
(4) Reuse: _____ Alternate Permit Number: _____
(5) Centralized Facility: _____ Permit No. _____
(6) Other method: _____ (Include an explanation)

RECEIVED
Office of Oil and Gas
JUN 15 2018
WV Department of
Environmental Protection

Follow Instructions below to determine your treatment category:

Optional Pretreatment test: n/a Cl- mg/l n/a DO mg/l

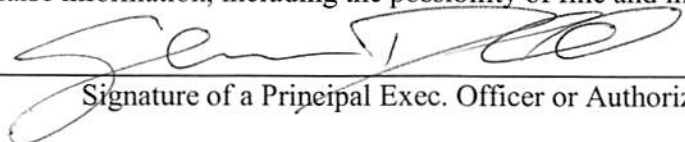
1. Do you have permission to use expedited treatment from the Director or his representative?
(Y/N) N If yes, who? n/a and place a four (4) on line 7.
If not go to line 2
2. Was Frac Fluid or flowback put into the pit? (Y/N) N If yes, go to line 5. If not, go to line 3.
3. Do you have a chloride value pretreatment (see above)? (Y/N) n/a If yes, go to line 4
If not, go to line 5.
4. Is the Chloride level less than 5000 mg/l? (Y/N) n/a If yes, then enter a one (1) on line 7.
5. Do you have a pretreatment value for DO? (See above) (Y/N) n/a If yes, go to line 6
If not, enter a three (3) in line 7.
6. Is the DO level greater than 2.5 mg/l? (Y/N) n/a If yes, enter a two (2) on line 7. If not, enter a three (3) on line 7.
7. n/a is the category of your pit. Use the Appropriate section.
8. Comments on Pit condition: n/a

Name of Principal Exec. Officer: Shane Dowell

Title of Officer: Office Manager

Date Completed: 6-5-2018

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



Signature of a Principle Exec. Officer or Authorized agent.

Lithology

P2S6

47-073-02566

| FORMATION | TOP | BOTTOM |
|-------------------------|------------|---------------|
| MISC. RED ROCK & SHALES | 0 | 1765 |
| LIME | 1765 | 1865 |
| INJUN | 1865 | 1982 |
| SHALE | 1982 | 2329 |
| GORDON STRAY | 2329 | 2349 |
| SHALE | 2349 | 2545 |
| GORDON | 2545 | 2575 |
| SHALE | 2575 | 2854 |
| BAYARD | 2854 | 2863 |
| SHALE | 2863 | 3192 |
| WARREN | 3192 | 3290 |
| SHALE | 3290 | 3526 |
| BALLTOWN | 3526 | 3689 |
| SHALE | 3689 | 4127 |
| 2ND RILEY | 4127 | 4235 |
| SHALE | 4235 | 4386 |
| 3RD RILEY | 4386 | 4427 |
| SHALE | 4427 | 4484 |
| BENSON | 4484 | 4487 |
| SHALE | 4487 | 4729 |
| ALEXANDER | 4729 | 4900 |
| SHALE | 4900 | 5145 |
| ELK | 5145 | 5193 |
| SHALE | 5193 | 5349 |
| HAMILTON | 5349 | 5523 |
| SHALE | 5523 | 5621 |
| UPPER MARCELLUS | 5621 | 5634 |
| PARCELL LIME | 5634 | 5669 |
| SHALE | 5669 | 5724 |
| LOWER MARCELLUS | 5724 | |

RECEIVED
Office of Oil and Gas
JUN 15 2018
WV Department of
Environmental Protection



Jay-Bee Oil & Gas

Pleasants County

P2 Pad

P2S6

Wellbore #1

Design: Wellbore #1

QES Survey Certification Report

14 July, 2017

RECEIVED
Office of Oil and Gas
JUN 15 2018
WV Department of
Environmental Protection



Quintana Energy Services

11390 FM 830
Willis, TX 77318
Phone: (936) 856-4332
Fax: (936) 856-8678



Survey Certification Sheet

| Company | Job Number | Date |
|-------------------------|------------|----------|
| Jay-Bee Oil & Gas, Inc. | AM-170723 | 9/1/2017 |

| Lease | Well Name | County & State |
|-------|-----------|----------------------|
| N/A | P2S6 | Pleasants County, WV |

| API No. | Survey Depth Range | Survey Type |
|--------------|----------------------------|-------------|
| 47-073-02566 | 1773 feet to 13418 feet MD | MWD |

| Sidetrack Information | Directional Supervisor/Surveyor |
|-----------------------|---------------------------------|
| N/A | Adam Ball |

Certification Statement

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by Quintana Energy Services (QES). This report represents a true and correct directional survey of this well based on the original data obtained at the well site. Wellbore coordinates are calculated using minimum curvature.

RECEIVED
Office of Oil and Gas
JUN 15 2018
WV Department of
Environmental Protection

Christopher Hughes

Digitally signed by Christopher Hughes
DN: cn=Christopher Hughes, o=QES,
ou=compliance,
email=chris@qeslp.com, c=US
Date: 2017.09.01 11:38:24 -05'00'

Christopher Hughes
MWD Compliance Manager
Quintana Energy Services



QES Survey Certification Report



| | | | |
|------------------|-------------------|-------------------------------------|------------------------------|
| Company: | Jay-Bee Oil & Gas | Local Co-ordinate Reference: | Well P2S6 |
| Project: | Pleasants County | TVD Reference: | well @ 732.8usft (Nomac #81) |
| Site: | P2 Pad | MD Reference: | well @ 732.8usft (Nomac #81) |
| Well: | P2S6 | North Reference: | Grid |
| Wellbore: | Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Wellbore #1 | Database: | EDM5002 |

| | | | |
|--------------------|-----------------------------|----------------------|----------------|
| Project | Pleasants County | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | West Virginia Northern Zone | | |

| | | | | | |
|------------------------------|----------|---------------------|-------------------|--------------------------|-----------------|
| Site | P2 Pad | | | | |
| Site Position: | | Northing: | 344,470.06 usft | Latitude: | 39° 26' 7.746 N |
| From: | Lat/Long | Easting: | 1,532,823.36 usft | Longitude: | 81° 2' 33.414 W |
| Position Uncertainty: | 0.0 usft | Slot Radius: | 13-3/16" | Grid Convergence: | -0.98 ° |

| | | | | | | |
|-----------------------------|--------------|----------|----------------------------|-------------------|----------------------|-----------------|
| Well | P2S6 | | | | | |
| Well Position | +N/-S | 0.0 usft | Northing: | 344,432.63 usft | Latitude: | 39° 26' 7.378 N |
| | +E/-W | 0.0 usft | Easting: | 1,532,837.26 usft | Longitude: | 81° 2' 33.229 W |
| Position Uncertainty | | 0.0 usft | Wellhead Elevation: | 0.0 usft | Ground Level: | 712.2 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2015 | 6/29/2017 | -8.39 | 66.72 | |

| | | | | | |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|-----|
| Design | Wellbore #1 | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) | |
| | 0.0 | 0.0 | 0.0 | 160.74 | |

| | | | | | |
|-----------------------|------------------|---|------------------|-----------------------|--|
| Survey Program | Date | 7/14/2017 | | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description | |
| 100.0 | 1,773.0 | VES Gyro Surveys (Wellbore #1) | GYRO-NS | OWSG Gyrocompass Gyro | |
| 1,850.0 | 13,418.0 | MWD Surveys (Gyro Tie-in) (Wellbore #1) | MWD default | MWD - Standard | |

| | | | | | | | | | |
|---|----------------|--------------------------|-------------------|-------------------|-------------------|--------------------------------|----------------------------|--|--|
| Survey | | | | | | | | | |
| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | Closure Distance (usft) | Closure Azimuth (°) | | |
| 1,773.0 | 0.81 | 228.35 | 1,771.9 | -15.7 | -31.0 | 34.8 | 243.10 | | |
| VES Gyro Tie In @ 1773.0 'MD / 1771.9 'TVD | | | | | | | | | |
| 1,850.0 | 0.30 | 252.40 | 1,848.9 | -16.2 | -31.6 | 35.5 | 242.93 | | |
| 1,935.0 | 0.50 | 281.41 | 1,933.8 | -16.2 | -32.2 | 36.0 | 243.35 | | |
| 2,030.0 | 0.31 | 196.77 | 2,028.8 | -16.3 | -32.7 | 36.5 | 243.46 | | |
| 2,125.0 | 0.26 | 216.26 | 2,123.8 | -16.7 | -32.9 | 36.9 | 243.02 | | |
| 2,220.0 | 0.37 | 114.80 | 2,218.8 | -17.0 | -32.7 | 36.9 | 242.49 | | |
| 2,267.0 | 2.39 | 302.64 | 2,265.8 | -16.6 | -33.4 | 37.3 | 243.61 | | |
| 2,315.0 | 5.17 | 298.11 | 2,313.7 | -15.0 | -36.2 | 39.2 | 247.45 | | |
| 2,362.0 | 6.81 | 295.17 | 2,360.5 | -12.8 | -40.6 | 42.6 | 252.44 | | |
| 2,410.0 | 8.07 | 288.00 | 2,408.1 | -10.6 | -46.3 | 47.5 | 257.13 | | |

RECEIVED
Office of Oil and Gas
JUN 15 2018
WV Department of Environmental Protection



QES Survey Certification Report



| | | | | |
|------------------|-------------------|-------------------------------------|------------------------------|--|
| Company: | Jay-Bee Oil & Gas | Local Co-ordinate Reference: | Well P2S6 | RECEIVED Office of Oil and Gas JUN 15 2018 WV Department of Environmental Protection |
| Project: | Pleasants County | TVD Reference: | well @ 732.8usft (Nomac #81) | |
| Site: | P2 Pad | MD Reference: | well @ 732.8usft (Nomac #81) | |
| Well: | P2S6 | North Reference: | Grid | |
| Wellbore: | Wellbore #1 | Survey Calculation Method: | Minimum Curvature | |
| Design: | Wellbore #1 | Database: | EDM5002 | |

| Survey | | | | | | | | |
|-----------|---------|-------------------|------------|------------|------------|-------------------------|---------------------|--|
| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | Closure Distance (usft) | Closure Azimuth (°) | |
| 2,457.0 | 9.07 | 287.79 | 2,454.5 | -8.4 | -53.0 | 53.7 | 260.96 | |
| 2,505.0 | 9.83 | 286.38 | 2,501.9 | -6.1 | -60.5 | 60.9 | 264.22 | |
| 2,552.0 | 11.43 | 286.47 | 2,548.1 | -3.7 | -68.9 | 69.0 | 266.95 | |
| 2,600.0 | 13.98 | 290.77 | 2,594.9 | -0.3 | -78.8 | 78.8 | 269.80 | |
| 2,647.0 | 15.21 | 291.55 | 2,640.4 | 4.0 | -89.9 | 90.0 | 272.55 | |
| 2,694.0 | 16.98 | 293.81 | 2,685.5 | 9.0 | -101.9 | 102.3 | 275.07 | |
| 2,741.0 | 19.14 | 290.27 | 2,730.2 | 14.5 | -115.4 | 116.3 | 277.15 | |
| 2,789.0 | 18.19 | 286.63 | 2,775.7 | 19.4 | -130.0 | 131.4 | 278.47 | |
| 2,836.0 | 17.76 | 279.04 | 2,820.4 | 22.6 | -144.1 | 145.8 | 278.91 | |
| 2,884.0 | 19.04 | 277.52 | 2,866.0 | 24.8 | -159.1 | 161.0 | 278.85 | |
| 2,979.0 | 18.74 | 278.40 | 2,955.8 | 29.0 | -189.5 | 191.7 | 278.70 | |
| 3,074.0 | 18.61 | 277.55 | 3,045.8 | 33.2 | -219.7 | 222.2 | 278.60 | |
| 3,168.0 | 16.98 | 277.18 | 3,135.3 | 36.9 | -248.1 | 250.9 | 278.46 | |
| 3,215.0 | 15.86 | 275.88 | 3,180.4 | 38.4 | -261.3 | 264.2 | 278.37 | |
| 3,263.0 | 16.32 | 281.96 | 3,226.5 | 40.5 | -274.5 | 277.4 | 278.40 | |
| 3,310.0 | 17.34 | 286.78 | 3,271.5 | 43.9 | -287.6 | 291.0 | 278.68 | |
| 3,358.0 | 19.00 | 290.22 | 3,317.1 | 48.7 | -301.8 | 305.7 | 279.16 | |
| 3,453.0 | 22.21 | 288.55 | 3,406.0 | 59.7 | -333.4 | 338.7 | 280.16 | |
| 3,548.0 | 22.37 | 284.47 | 3,494.0 | 70.0 | -367.9 | 374.5 | 280.77 | |
| 3,642.0 | 21.14 | 280.19 | 3,581.3 | 77.4 | -401.9 | 409.3 | 280.90 | |
| 3,737.0 | 20.73 | 281.66 | 3,670.0 | 83.9 | -435.2 | 443.2 | 280.91 | |
| 3,832.0 | 21.13 | 287.27 | 3,758.7 | 92.3 | -468.0 | 477.1 | 281.16 | |
| 3,927.0 | 21.22 | 279.79 | 3,847.3 | 100.3 | -501.3 | 511.3 | 281.32 | |
| 4,022.0 | 19.24 | 270.18 | 3,936.5 | 103.3 | -534.0 | 543.9 | 280.95 | |
| 4,117.0 | 19.55 | 270.38 | 4,026.1 | 103.5 | -565.5 | 574.9 | 280.37 | |
| 4,212.0 | 18.26 | 276.17 | 4,116.0 | 105.2 | -596.2 | 605.4 | 280.00 | |
| 4,306.0 | 17.91 | 281.27 | 4,205.3 | 109.6 | -625.0 | 634.5 | 279.94 | |
| 4,404.0 | 19.46 | 286.04 | 4,298.2 | 117.0 | -655.5 | 665.8 | 280.12 | |
| 4,499.0 | 22.20 | 285.13 | 4,387.0 | 126.1 | -688.0 | 699.5 | 280.39 | |
| 4,594.0 | 20.46 | 280.82 | 4,475.5 | 133.9 | -721.7 | 734.0 | 280.51 | |
| 4,688.0 | 20.45 | 282.85 | 4,563.5 | 140.6 | -753.8 | 766.8 | 280.57 | |
| 4,783.0 | 20.01 | 290.71 | 4,652.7 | 150.1 | -785.2 | 799.4 | 280.82 | |
| 4,878.0 | 21.34 | 294.13 | 4,741.6 | 162.9 | -816.2 | 832.3 | 281.29 | |
| 4,973.0 | 20.45 | 289.06 | 4,830.3 | 175.4 | -847.6 | 865.6 | 281.69 | |
| 5,068.0 | 18.63 | 275.02 | 4,919.9 | 182.1 | -878.5 | 897.1 | 281.71 | |
| 5,162.0 | 16.89 | 249.78 | 5,009.6 | 178.7 | -906.3 | 923.7 | 281.16 | |
| 5,257.0 | 18.68 | 223.29 | 5,100.2 | 162.9 | -929.7 | 943.9 | 279.94 | |
| 5,347.0 | 22.80 | 207.30 | 5,184.4 | 136.8 | -947.6 | 957.4 | 278.22 | |
| 5,394.0 | 23.80 | 200.10 | 5,227.6 | 119.8 | -955.0 | 962.5 | 277.15 | |
| 5,442.0 | 23.40 | 187.10 | 5,271.6 | 101.3 | -959.6 | 964.9 | 276.02 | |
| 5,489.0 | 24.70 | 178.70 | 5,314.5 | 82.2 | -960.5 | 964.0 | 274.89 | |
| 5,537.0 | 26.30 | 174.10 | 5,357.8 | 61.6 | -959.2 | 961.1 | 273.67 | |
| 5,584.0 | 29.10 | 169.00 | 5,399.4 | 40.0 | -955.9 | 956.7 | 272.40 | |
| 5,631.0 | 33.00 | 165.40 | 5,439.7 | 16.4 | -950.5 | 950.6 | 270.99 | |



QES Survey Certification Report



| | | |
|-----------------------------------|---|---|
| Company: Jay-Bee Oil & Gas | Local Co-ordinate Reference: Well P2S6 | RECEIVED Office of Oil and Gas JUN 15 2018 WV Department of Environmental Protection |
| Project: Pleasants County | TVD Reference: well @ 732.8usft (Nomac #81) | |
| Site: P2 Pad | MD Reference: well @ 732.8usft (Nomac #81) | |
| Well: P2S6 | North Reference: Grid | |
| Wellbore: Wellbore #1 | Survey Calculation Method: Minimum Curvature | |
| Design: Wellbore #1 | Database: EDM5002 | |

Survey

| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | Closure Distance (usft) | Closure Azimuth (°) |
|-----------|---------|-------------------|------------|------------|------------|-------------------------|---------------------|
| 5,678.0 | 37.00 | 163.70 | 5,478.2 | -9.6 | -943.3 | 943.3 | 269.42 |
| 5,726.0 | 40.70 | 162.40 | 5,515.6 | -38.4 | -934.5 | 935.3 | 267.65 |
| 5,773.0 | 44.90 | 163.40 | 5,550.1 | -68.9 | -925.1 | 927.7 | 265.74 |
| 5,821.0 | 49.50 | 164.20 | 5,582.7 | -102.7 | -915.3 | 921.1 | 263.60 |
| 5,868.0 | 53.70 | 164.50 | 5,611.8 | -138.2 | -905.4 | 915.9 | 261.32 |
| 5,916.0 | 58.20 | 164.70 | 5,638.7 | -176.5 | -894.8 | 912.1 | 258.84 |
| 5,963.0 | 63.10 | 165.20 | 5,661.7 | -216.1 | -884.2 | 910.2 | 256.27 |
| 6,009.0 | 66.80 | 163.10 | 5,681.2 | -256.1 | -872.8 | 909.6 | 253.64 |
| 6,056.0 | 70.60 | 161.80 | 5,698.3 | -297.9 | -859.6 | 909.8 | 250.89 |
| 6,103.0 | 74.50 | 161.40 | 5,712.4 | -340.4 | -845.5 | 911.4 | 248.07 |
| 6,150.0 | 77.50 | 161.40 | 5,723.8 | -383.6 | -830.9 | 915.2 | 245.22 |
| 6,198.0 | 81.30 | 159.60 | 5,732.6 | -428.1 | -815.2 | 920.7 | 242.29 |
| 6,293.0 | 85.80 | 156.30 | 5,743.3 | -515.6 | -779.7 | 934.8 | 236.53 |
| 6,388.0 | 87.30 | 153.00 | 5,749.0 | -601.2 | -739.1 | 952.8 | 230.87 |
| 6,482.0 | 89.30 | 152.50 | 5,751.8 | -684.8 | -696.1 | 976.5 | 225.47 |
| 6,578.0 | 91.00 | 151.10 | 5,751.5 | -769.4 | -650.7 | 1,007.7 | 220.23 |
| 6,673.0 | 91.30 | 151.20 | 5,749.6 | -852.6 | -604.9 | 1,045.4 | 215.36 |
| 6,768.0 | 90.10 | 149.00 | 5,748.4 | -934.9 | -557.6 | 1,088.5 | 210.81 |
| 6,862.0 | 88.50 | 146.10 | 5,749.6 | -1,014.2 | -507.1 | 1,133.9 | 206.57 |
| 6,957.0 | 90.20 | 149.00 | 5,750.7 | -1,094.4 | -456.2 | 1,185.6 | 202.63 |
| 7,052.0 | 89.10 | 148.40 | 5,751.2 | -1,175.5 | -406.8 | 1,243.9 | 199.09 |
| 7,147.0 | 89.40 | 148.00 | 5,752.5 | -1,256.3 | -356.8 | 1,305.9 | 195.85 |
| 7,242.0 | 92.20 | 151.20 | 5,751.2 | -1,338.2 | -308.7 | 1,373.3 | 192.99 |
| 7,336.0 | 90.50 | 153.60 | 5,748.9 | -1,421.4 | -265.2 | 1,446.0 | 190.57 |
| 7,431.0 | 90.20 | 157.40 | 5,748.4 | -1,507.9 | -225.8 | 1,524.7 | 188.52 |
| 7,526.0 | 90.90 | 156.60 | 5,747.5 | -1,595.3 | -188.7 | 1,606.4 | 186.74 |
| 7,621.0 | 90.10 | 156.90 | 5,746.6 | -1,682.6 | -151.2 | 1,689.4 | 185.13 |
| 7,715.0 | 89.80 | 156.70 | 5,746.7 | -1,769.0 | -114.1 | 1,772.7 | 183.69 |
| 7,810.0 | 89.40 | 153.50 | 5,747.4 | -1,855.1 | -74.2 | 1,856.6 | 182.29 |
| 7,905.0 | 89.70 | 157.50 | 5,748.1 | -1,941.6 | -34.8 | 1,941.9 | 181.03 |
| 8,000.0 | 89.40 | 155.50 | 5,748.9 | -2,028.7 | 3.1 | 2,028.7 | 179.91 |
| 8,094.0 | 89.80 | 152.70 | 5,749.5 | -2,113.2 | 44.2 | 2,113.7 | 178.80 |
| 8,189.0 | 89.60 | 156.30 | 5,750.0 | -2,199.0 | 85.1 | 2,200.6 | 177.78 |
| 8,284.0 | 89.50 | 154.10 | 5,750.8 | -2,285.2 | 124.9 | 2,288.6 | 176.87 |
| 8,379.0 | 88.60 | 153.50 | 5,752.3 | -2,370.4 | 166.8 | 2,376.3 | 175.97 |
| 8,473.0 | 89.50 | 154.40 | 5,753.9 | -2,454.9 | 208.1 | 2,463.7 | 175.15 |
| 8,568.0 | 89.50 | 154.10 | 5,754.7 | -2,540.4 | 249.4 | 2,552.6 | 174.39 |
| 8,663.0 | 89.70 | 153.90 | 5,755.4 | -2,625.8 | 291.0 | 2,641.9 | 173.68 |
| 8,758.0 | 90.10 | 154.70 | 5,755.6 | -2,711.4 | 332.2 | 2,731.7 | 173.01 |
| 8,853.0 | 90.20 | 154.30 | 5,755.3 | -2,797.1 | 373.1 | 2,821.9 | 172.40 |
| 8,948.0 | 90.00 | 153.70 | 5,755.1 | -2,882.5 | 414.8 | 2,912.2 | 171.81 |
| 9,042.0 | 90.20 | 153.60 | 5,755.0 | -2,966.8 | 456.5 | 3,001.7 | 171.25 |
| 9,137.0 | 89.50 | 152.90 | 5,755.2 | -3,051.6 | 499.2 | 3,092.2 | 170.71 |
| 9,232.0 | 89.70 | 151.90 | 5,755.9 | -3,135.8 | 543.3 | 3,182.5 | 170.17 |



QES Survey Certification Report



| | | | |
|------------------|-------------------|-------------------------------------|------------------------------|
| Company: | Jay-Bee Oil & Gas | Local Co-ordinate Reference: | Well P2S6 |
| Project: | Pleasants County | TVD Reference: | well @ 732.8usft (Nomac #81) |
| Site: | P2 Pad | MD Reference: | well @ 732.8usft (Nomac #81) |
| Well: | P2S6 | North Reference: | Grid |
| Wellbore: | Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Wellbore #1 | Database: | EDM5002 |

RECEIVED
Office of Oil and Gas
JUN 15 2018
WV Department of
Environmental Protection

| Survey | | | | | | | | | |
|-----------|---------|-------------------|--------|------------|------------|------------|-------------------------|---------------------|--------|
| MD (usft) | Inc (°) | Azi (azimuth) (°) | | TVD (usft) | N/S (usft) | E/W (usft) | Closure Distance (usft) | Closure Azimuth (°) | |
| 9,326.0 | 89.20 | 150.20 | 150.20 | 5,756.8 | -3,218.0 | 588.8 | 3,271.4 | 169.63 | 169.63 |
| 9,421.0 | 89.60 | 153.30 | 153.30 | 5,757.8 | -3,301.7 | 633.7 | 3,362.0 | 169.14 | 169.14 |
| 9,516.0 | 90.20 | 154.60 | 154.60 | 5,758.0 | -3,387.0 | 675.4 | 3,453.7 | 168.72 | 168.72 |
| 9,611.0 | 89.40 | 154.80 | 154.80 | 5,758.3 | -3,472.9 | 716.0 | 3,546.0 | 168.35 | 168.35 |
| 9,706.0 | 89.80 | 154.10 | 154.10 | 5,758.9 | -3,558.6 | 757.0 | 3,638.3 | 167.99 | 167.99 |
| 9,801.0 | 89.50 | 152.20 | 152.20 | 5,759.5 | -3,643.4 | 799.9 | 3,730.2 | 167.62 | 167.62 |
| 9,895.0 | 89.40 | 155.30 | 155.30 | 5,760.4 | -3,727.7 | 841.5 | 3,821.5 | 167.28 | 167.28 |
| 9,990.0 | 89.90 | 156.80 | 156.80 | 5,761.0 | -3,814.5 | 880.0 | 3,914.7 | 167.01 | 167.01 |
| 10,085.0 | 89.80 | 158.10 | 158.10 | 5,761.3 | -3,902.2 | 916.5 | 4,008.4 | 166.78 | 166.78 |
| 10,180.0 | 89.50 | 154.50 | 154.50 | 5,761.8 | -3,989.2 | 954.6 | 4,101.8 | 166.54 | 166.54 |
| 10,274.0 | 89.60 | 153.40 | 153.40 | 5,762.6 | -4,073.7 | 995.9 | 4,193.6 | 166.26 | 166.26 |
| 10,369.0 | 90.30 | 154.00 | 154.00 | 5,762.7 | -4,158.8 | 1,038.0 | 4,286.4 | 165.99 | 165.99 |
| 10,464.0 | 89.40 | 152.70 | 152.70 | 5,762.9 | -4,243.7 | 1,080.6 | 4,379.2 | 165.71 | 165.71 |
| 10,558.0 | 89.50 | 153.00 | 153.00 | 5,763.8 | -4,327.4 | 1,123.5 | 4,470.8 | 165.45 | 165.45 |
| 10,653.0 | 89.10 | 152.20 | 152.20 | 5,765.0 | -4,411.7 | 1,167.2 | 4,563.5 | 165.18 | 165.18 |
| 10,747.0 | 89.30 | 151.90 | 151.90 | 5,766.3 | -4,494.7 | 1,211.3 | 4,655.1 | 164.92 | 164.92 |
| 10,842.0 | 89.60 | 152.30 | 152.30 | 5,767.2 | -4,578.7 | 1,255.7 | 4,747.8 | 164.66 | 164.66 |
| 10,937.0 | 89.60 | 150.70 | 150.70 | 5,767.9 | -4,662.2 | 1,301.1 | 4,840.3 | 164.41 | 164.41 |
| 11,031.0 | 90.10 | 153.10 | 153.10 | 5,768.1 | -4,745.1 | 1,345.3 | 4,932.1 | 164.17 | 164.17 |
| 11,126.0 | 90.40 | 152.60 | 152.60 | 5,767.7 | -4,829.6 | 1,388.7 | 5,025.3 | 163.96 | 163.96 |
| 11,221.0 | 90.50 | 152.40 | 152.40 | 5,766.9 | -4,913.9 | 1,432.6 | 5,118.4 | 163.75 | 163.75 |
| 11,315.0 | 90.30 | 151.20 | 151.20 | 5,766.3 | -4,996.7 | 1,477.0 | 5,210.4 | 163.53 | 163.53 |
| 11,410.0 | 89.90 | 154.10 | 154.10 | 5,766.1 | -5,081.1 | 1,520.6 | 5,303.7 | 163.34 | 163.34 |
| 11,505.0 | 89.80 | 153.40 | 153.40 | 5,766.4 | -5,166.3 | 1,562.6 | 5,397.4 | 163.17 | 163.17 |
| 11,600.0 | 89.70 | 153.30 | 153.30 | 5,766.8 | -5,251.2 | 1,605.2 | 5,491.1 | 163.00 | 163.00 |
| 11,695.0 | 89.20 | 155.50 | 155.50 | 5,767.7 | -5,336.9 | 1,646.3 | 5,585.0 | 162.86 | 162.86 |
| 11,789.0 | 89.30 | 155.70 | 155.70 | 5,768.9 | -5,422.5 | 1,685.1 | 5,678.3 | 162.74 | 162.74 |
| 11,884.0 | 89.60 | 156.30 | 156.30 | 5,769.8 | -5,509.2 | 1,723.7 | 5,772.6 | 162.63 | 162.63 |
| 11,978.0 | 90.10 | 153.80 | 153.80 | 5,770.1 | -5,594.5 | 1,763.4 | 5,865.8 | 162.50 | 162.50 |
| 12,073.0 | 89.80 | 154.20 | 154.20 | 5,770.2 | -5,679.8 | 1,805.0 | 5,959.8 | 162.37 | 162.37 |
| 12,168.0 | 89.50 | 153.20 | 153.20 | 5,770.8 | -5,765.0 | 1,847.1 | 6,053.7 | 162.23 | 162.23 |
| 12,263.0 | 89.10 | 153.40 | 153.40 | 5,771.9 | -5,849.9 | 1,889.8 | 6,147.5 | 162.10 | 162.10 |
| 12,358.0 | 88.90 | 153.30 | 153.30 | 5,773.6 | -5,934.8 | 1,932.4 | 6,241.4 | 161.96 | 161.96 |
| 12,452.0 | 89.10 | 153.10 | 153.10 | 5,775.2 | -6,018.7 | 1,974.8 | 6,334.3 | 161.83 | 161.83 |
| 12,547.0 | 90.30 | 153.60 | 153.60 | 5,775.7 | -6,103.6 | 2,017.4 | 6,428.3 | 161.71 | 161.71 |
| 12,642.0 | 90.30 | 153.10 | 153.10 | 5,775.2 | -6,188.5 | 2,060.0 | 6,522.3 | 161.59 | 161.59 |
| 12,737.0 | 90.10 | 151.80 | 151.80 | 5,774.9 | -6,272.7 | 2,104.0 | 6,616.1 | 161.46 | 161.46 |
| 12,832.0 | 89.50 | 154.10 | 154.10 | 5,775.2 | -6,357.3 | 2,147.2 | 6,710.1 | 161.34 | 161.34 |
| 12,926.0 | 89.70 | 153.20 | 153.20 | 5,775.9 | -6,441.5 | 2,188.9 | 6,803.3 | 161.23 | 161.23 |
| 13,021.0 | 90.30 | 153.30 | 153.30 | 5,775.9 | -6,526.4 | 2,231.6 | 6,897.4 | 161.12 | 161.12 |
| 13,116.0 | 90.40 | 153.10 | 153.10 | 5,775.3 | -6,611.1 | 2,274.5 | 6,991.5 | 161.02 | 161.02 |
| 13,211.0 | 90.30 | 151.30 | 151.30 | 5,774.7 | -6,695.2 | 2,318.8 | 7,085.3 | 160.90 | 160.90 |
| 13,306.0 | 89.00 | 150.50 | 150.50 | 5,775.3 | -6,778.2 | 2,365.0 | 7,178.9 | 160.77 | 160.77 |
| 13,363.0 | 89.50 | 149.70 | 149.70 | 5,776.0 | -6,827.6 | 2,393.4 | 7,234.9 | 160.68 | 160.68 |



QES Survey Certification Report



| | | | |
|------------------|-------------------|-------------------------------------|------------------------------|
| Company: | Jay-Bee Oil & Gas | Local Co-ordinate Reference: | Well P2S6 |
| Project: | Pleasants County | TVD Reference: | well @ 732.8usft (Nomac #81) |
| Site: | P2 Pad | MD Reference: | well @ 732.8usft (Nomac #81) |
| Well: | P2S6 | North Reference: | Grid |
| Wellbore: | Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Wellbore #1 | Database: | EDM5002 |

| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | Closure Distance (usft) | Closure Azimuth (°) |
|--------------------------------|---------|-------------------|------------|------------|------------|-------------------------|---------------------|
| 13,418.0 | 89.50 | 149.70 | 5,776.5 | -6,875.1 | 2,421.1 | 7,288.9 | 160.60 |
| TD @ 13418.0' MD / 5776.5' TVD | | | | | | | |

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
|-----------------------|-----------------------|-------------------|--------------|--|
| | | +N/-S (usft) | +E/-W (usft) | |
| 1,773.0 | 1,771.9 | -15.7 | -31.0 | VES Gyro Tie In @ 1773.0 'MD / 1771.9 'TVD |
| 13,418.0 | 5,776.5 | -6,875.1 | 2,421.1 | TD @ 13418.0' MD / 5776.5' TVD |

RECEIVED
Office of Oil and Gas
JUN 15 2018
WV Department of
Environmental Protection

Hydraulic Fracturing Fluid Product Component Information Disclosure

| | |
|--------------------------------|-------------------------|
| Job Start Date: | 10/28/2017 |
| Job End Date: | 11/18/2017 |
| State: | West Virginia |
| County: | Pleasants |
| API Number: | 47-073-02566-00-00 |
| Operator Name: | Jay-Bee Oil & Gas, Inc. |
| Well Name and Number: | P2S6 |
| Latitude: | 39.43538200 |
| Longitude: | -81.04256250 |
| Datum: | NAD83 |
| Federal Well: | NO |
| Indian Well: | NO |
| True Vertical Depth: | 5,748 |
| Total Base Water Volume (gal): | 10,287,272 |
| Total Base Non Water Volume: | 0 |



Hydraulic Fracturing Fluid Composition:

| Trade Name | Supplier | Purpose | Ingredients | Chemical Abstract Service Number (CAS #) | Maximum Ingredient Concentration in Additive (% by mass)** | Maximum Ingredient Concentration in HF Fluid (% by mass)** | Comments |
|------------------------|-------------------------|--------------------|----------------------------|--|--|--|----------|
| Water | JayBee Oil & Gas | Carrier/Base Fluid | Water | 7732-18-5 | 100.00000 | 92.01957 | |
| Sand | U.S. Well Services, LLC | Proppant | Crystalline Silica, quartz | 14808-60-7 | 100.00000 | 6.97919 | |
| HCL Acid (3% to 7.5%) | U.S. Well Services, LLC | Bulk Acid | Water | 7732-18-5 | 97.00000 | 0.67914 | |
| | | | Hydrogen Chloride | 7647-01-0 | 7.50000 | 0.06097 | |
| HCL Acid (12.6%-17.5%) | U.S. Well Services, LLC | Bulk Acid | Water | 7732-18-5 | 87.40000 | 0.09763 | |
| | | | Hydrogen Chloride | 7647-01-0 | 17.50000 | 0.02270 | |
| LGC-15 | U.S. Well Services, LLC | Gelling Agents | Guar Gum | 9000-30-0 | 50.00000 | 0.02494 | |
| | | | Petroleum Distillates | 64742-47-8 | 60.00000 | 0.02362 | |
| | | | Suspending agent (solid) | 14808-60-7 | 3.00000 | 0.00381 | |
| | | | Surfactant | 68439-51-0 | 3.00000 | 0.00150 | |

RECEIVED
 Office of Oil and Gas
 JUN 15 2018
 WV Department of Environmental Protection

| | | | | | | | |
|----------------------|-------------------------|---------------------------|--|-------------|-----------|---------|--|
| WFRA-405 | J.S. Well Services, LLC | Friction Reducer | | | | | |
| | | | 2-Propenoic acid, polymer with 2-propenamide | 29003-06-9 | 30.00000 | 0.01190 | |
| | | | Hydrated light distillate (petroleum) | 64742-47-8 | 30.00000 | 0.00958 | |
| HCL Acid (22.6%-28%) | J.S. Well Services, LLC | Bulk Acid | | | | | |
| | | | Water | 7732-18-5 | 77.40000 | 0.01383 | |
| | | | Hydrogen Chloride | 7647-01-0 | 28.00000 | 0.00581 | |
| WFRA-1000 | J.S. Well Services, LLC | Friction Reducer | | | | | |
| | | | 2-Propenoic acid, polymer with 2-propenamide | 29003-06-9 | 30.00000 | 0.01076 | |
| | | | Hydrated light distillate (petroleum) | 64742-47-8 | 30.00000 | 0.00882 | |
| SI-1200 | J.S. Well Services, LLC | Scale Inhibitor | | | | | |
| | | | Ethylene Glycol | 107-21-1 | 40.00000 | 0.01207 | |
| | | | Proprietary Scale Inhibitor | Proprietary | 10.00000 | 0.00323 | |
| Bioclear 5000 | J.S. Well Services, LLC | Anti-Bacterial Agent | | | | | |
| | | | 2,2-Dibromo-3-nitrilopropionamide | 10222-01-2 | 10.00000 | 0.00536 | |
| NWA-200s | J.S. Well Services, LLC | Surfactants & Foamers | | | | | |
| | | | Proprietary Activating Agent | Proprietary | 50.00000 | 0.00415 | |
| AP One | J.S. Well Services, LLC | Gel Breakers | | | | | |
| | | | Ammonium Persulfate | 7727-54-0 | 100.00000 | 0.00110 | |
| AI-303 | J.S. Well Services, LLC | Acid Corrosion Inhibitors | | | | | |
| | | | Ethylene glycol | 107-21-1 | 40.00000 | 0.00014 | |
| | | | Cinnamaldehyde | 104-55-2 | 20.00000 | 0.00005 | |
| | | | Formic acid | 64-18-6 | 20.00000 | 0.00005 | |
| | | | Butyl cellosolve | 111-76-2 | 20.00000 | 0.00005 | |
| | | | Polyether | 60828-78-6 | 10.00000 | 0.00003 | |
| | | | Acetophenone, thiourea, formaldehyde polymer | 68527-49-1 | 5.00000 | 0.00001 | |

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

RECEIVED
 Office of Oil and Gas
 JUN 15 2018
 WV Department of
 Environmental Protection

STATE OF WEST VIRGINIA
 Division of Environmental Protection
 OFFICE OF OIL AND GAS

DATE February 27, 2018
 OPERATOR'S WELL NO. P256
 API WELL NO.

WELL TYPE: OIL GAS & LIQUID INJECTION WASTE DISPOSAL

(IF GAS) PRODUCTION & STORAGE DEEP SHALLOW

LOCATION: ELEVATION 712.4' WATER SHED Middle Island Creek

DISTRICT Union COUNTY Pleasants

QUADRANGLE Bens Run 7 1/2'

SURFACE OWNER Morgan Valley Farms, Inc.

OIL & GAS ROYALTY OWNER Morgan Valley Farms, Inc.

LEASE NO. P7220

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR

STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW

FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) **AS DRILLED**

PLUG AND ABANDON CLEAN OUT AND REFLUG

TARGET FORMATION **Marcellus** ESTIMATED DEPTH TVD = 5,748'; TMD = 13,418'

WELL OPERATOR **Jay-Bee Oil & Gas, Inc.**

DESIGNATED AGENT **Randy Broda**

ADDRESS **1720 Route 22 E, Union, NJ 07083**

ADDRESS **3570 Shields Hill Rd, Cairo, WV 26337**

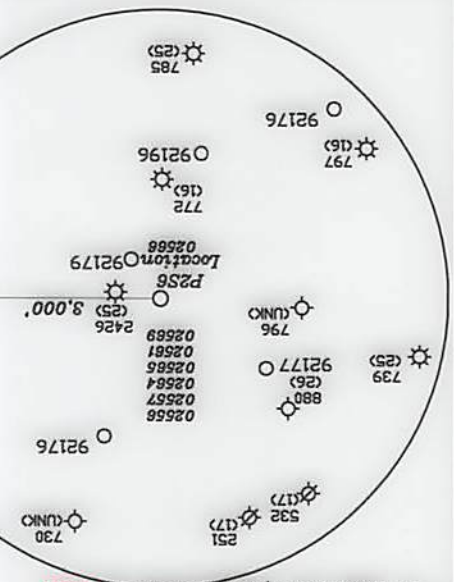
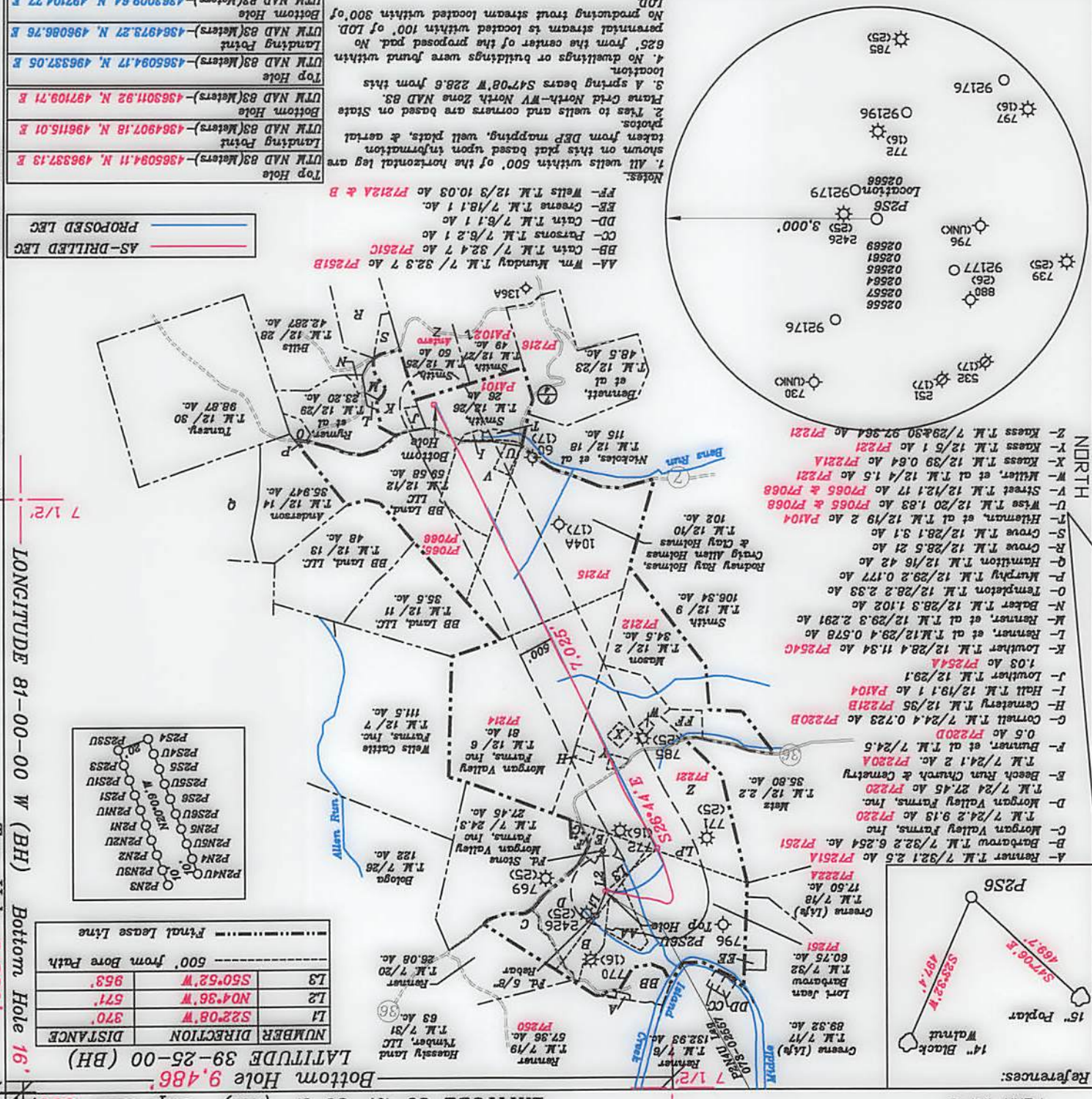
I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAN IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES OF ENVIRONMENTAL PROTECTION.

(SIGNED) *David S. Jackson*
 R.P.E. P.S. 708



| | |
|----------------------------|------------|
| FILE NO. | 1 |
| DRAWING NO. | 1 |
| SCALE | 1" = 2000' |
| MINIMUM DEGREE OF ACCURACY | 1 in 200 |
| PROVEN SOURCE OF ELEVATION | GPS |
| submeter unit | |

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS



| | |
|----------------|-------------|
| AS-DRILLED LEG | (Red line) |
| PROPOSED LEG | (Blue line) |

Notes:
 1. All wells within 500' of the horizontal leg are shown on this plat based upon information taken from DEP mapping, well plats, & aerial photos.
 2. Ties to wells and corners are based on State Plane Grid North-WV North Zone NAD 83.
 3. A spring bears S47°08' W 228.6' from this location.
 4. No dwellings or buildings were found within 625' from the center of the proposed pad. No potential stream is located within 100' of LOD. No producing trout stream located within 300' of LOD.

Top Hole UTM NAD 83 (Meters) -4365094.11 N, 496337.13 E
 Landing Point UTM NAD 83 (Meters) -4364907.18 N, 49615.01 E
 Bottom Hole UTM NAD 83 (Meters) -4363011.92 N, 497109.71 E

Top Hole UTM NAD 83 (Meters) -4365094.17 N, 496337.05 E
 Landing Point UTM NAD 83 (Meters) -4364973.27 N, 496086.76 E
 Bottom Hole UTM NAD 83 (Meters) -4363009.64 N, 497104.77 E

Bottom Hole 16' Bottom Hole 16'

Top Hole 8,360' Bottom Hole 16'

LATITUDE 39-27-30 N (TH) Top Hole 253'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

LATITUDE 39-25-00 (BH) Bottom Hole 9,486'

