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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

February 12, 2018  
PERMIT MODIFICATION APPROVAL  
Horizontal 6A / New Drill

JAY-BEE OIL & GAS, INC.  
1720 RT. 22 E

UNION, NJ 070830000

Re: Permit Modification Approval for CURLY 2  
47-095-02443-00-00

**Modified Site Plans with Cistern and Modified Permit Conditions**

JAY-BEE OIL & GAS, INC.

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: CURLY 2  
Farm Name: JAY-BEE OIL & GAS INC.  
U.S. WELL NUMBER: 47-095-02443-00-00  
Horizontal 6A / New Drill  
Date Issued: February 12, 2018

Promoting a healthy environment.

02/16/2018

## PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

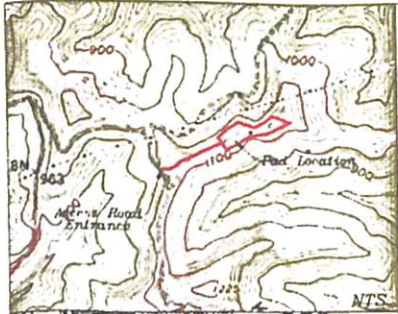
### CONDITIONS

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1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than one hundred (100) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. 24 hours prior to the initiation of the completion process the operator shall notify the Chief or his designee.
8. During the completion process the operator shall monitor annular pressures and report any anomaly noticed to the chief or his designee immediately.
9. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
10. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.

## PERMIT CONDITIONS

11. The operator shall provide to the Office of Oil and Gas the dates of each of the following within 30 days of their occurrence: completion of construction of the well pad, commencement of drilling, cessation of drilling, completion of any other permitted well work, and completion of the well. Such notice shall be provided by sending an email to [DEPOOGNotify@wv.gov](mailto:DEPOOGNotify@wv.gov).



West Virginia  
State Plane  
NAD 83  
North Zone  
RTK GPS

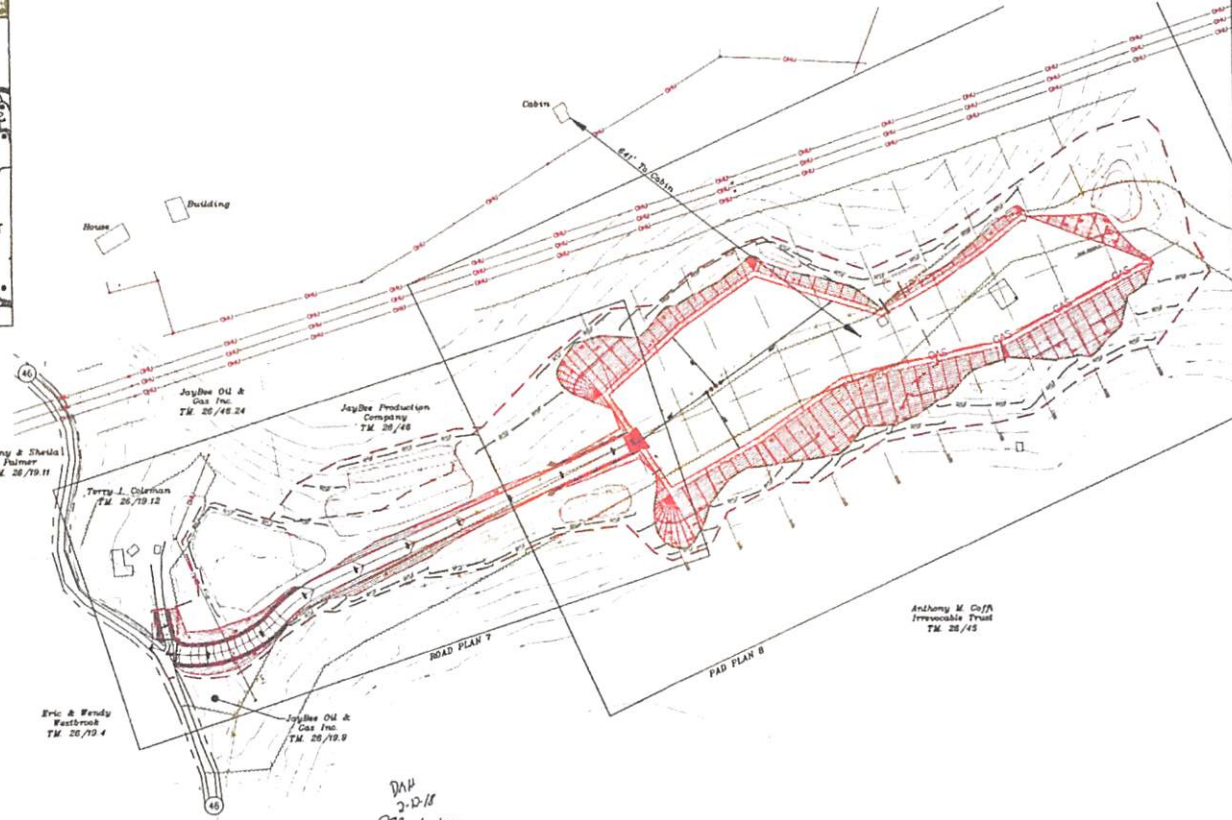
# Curly Well Pad Site Plan

Ellsworth District, Tyler County, WV  
Prepared for JAY BEE OIL & GAS

Date: February 27, 2017



Sheet	Description
1	Cover
2	Details & Notes
3	Details
4	Details
5	Details
6	Details
7	Road Plan & Profile
8	Pad Plan
9	Cut-Fill Diagram
10	Pad Profile & Sections
11	Pad Profile & Sections
12	Road Cross Sections
13	Reclamation Plan



Revisions:  
 02-27-2017: First Issue  
 05-02-2017: Changes Per DEP request  
 09-21-2017: Revised Pad  
 01-22-2018: Changes Per DEP request  
 02-09-2018: Added Cistern

**CENTER PAD**  
 Geographic NAD 83  
 Latitude: 39 464099  
 Longitude: 80 896233

**CENTER ROAD INT.**  
 Geographic NAD 83  
 Latitude: 39 462592  
 Longitude: 80 900638

TOTAL (Permit) LIMIT OF DISTURBANCE= 9.16 ± ACRES  
 TOTAL (Modified) LIMIT OF DISTURBANCE 14.28 ± ACRES

Notes:  
 No water wells were found within 250' of the well location. One drinking well was found 641' from the center of the well pad.

**WEST VIRGINIA 811**  
 CALL BEFORE YOU DIG! Dial 811 or 800.245.4848  
 www.WV811.com



**Design Certification**  
 The drawings, construction notes and reference diagrams attached hereto have been prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection, Office of Oil and Gas.  
 The information reflects a gas well drilling pad.  
 Dennis L. Fisher RPE 8884  
 02-09-2018 Date



DLF  
 Dennis L. Fisher, RPE  
 PO Box 288  
 Phillips, WV 26155  
 Cell: 204-677-4129  
 E-Mail: Fisher.Engineering@ymail.com

Jackson Surveying Inc.  
 COVER  
 SHEET 1  
 CURLY SITE PLAN

0015880-56

**CENTER PAD**  
 Geographic NAD 83  
 Latitude: 39.464099  
 Longitude: 80.896233

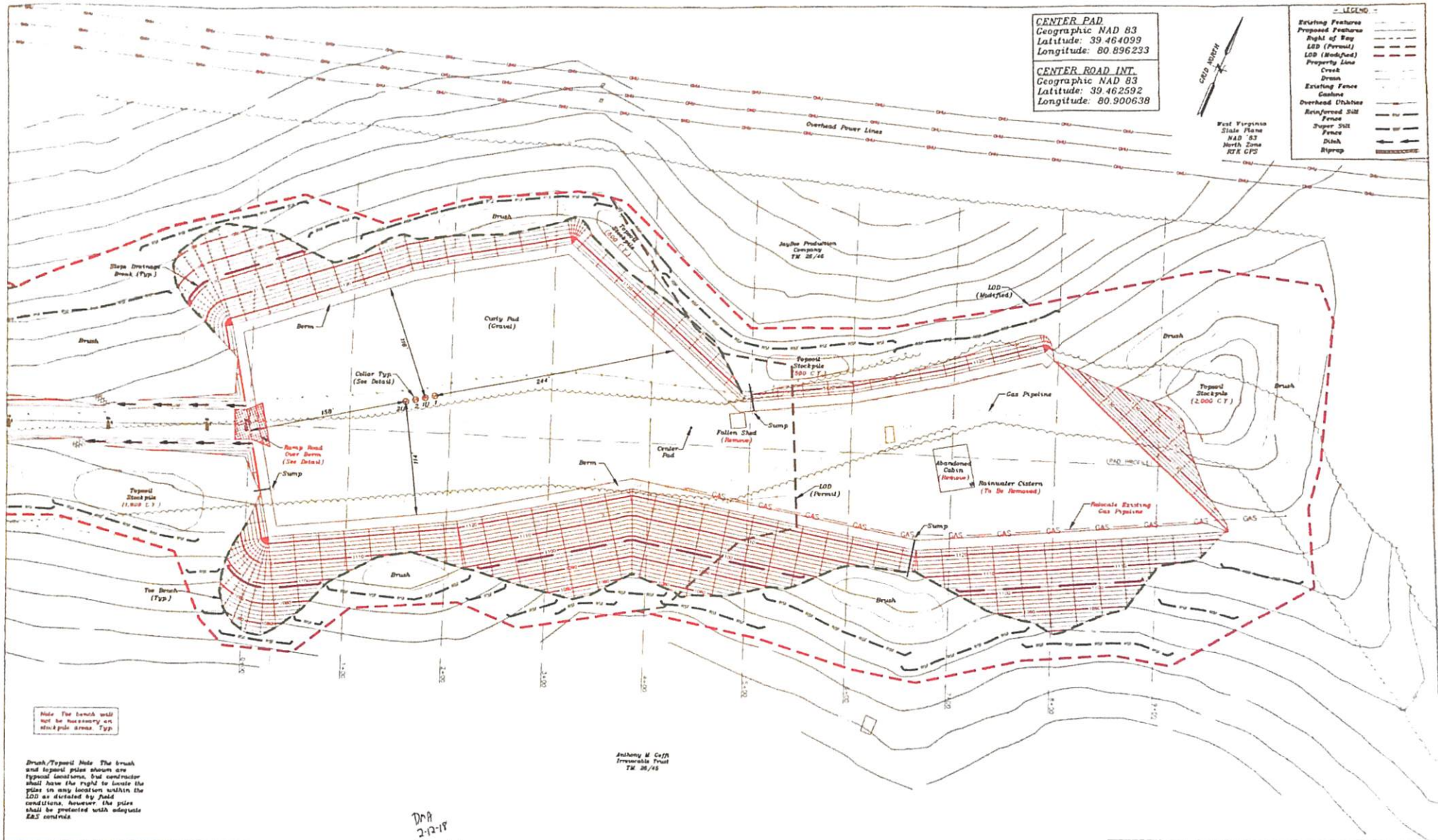
**CENTER ROAD INT.**  
 Geographic NAD 83  
 Latitude: 39.462592  
 Longitude: 80.900638



**LEGEND**

Existing Features	---
Proposed Features	---
Right of Way	---
LOD (Permit)	---
LOD (Stockpile)	---
Property Line	---
Creek	---
Drum	---
Existing Fence	---
Cashline	---
Overhead Utilities	---
Reinforced Silt Fence	---
Super Silt Fence	---
Ditch	---
Riprap	---

West Virginia  
 State Plane  
 NAD 83  
 North Zone  
 RTK GPS



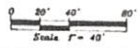
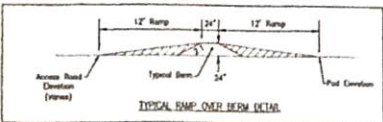
Note: The brush will not be necessary in stockpile areas Typ.

Brush/Typical Note: The brush and riprap piles shown are typical conditions. Bid contractor shall have the right to locate the piles in any location within the LOD as dictated by field conditions. However, the piles shall be protected with adequate E&S controls.

Anthony M. Criv  
 Irrevocable Trust  
 TM 28/46

DNA  
 2-12-18  
 SQR 4/11/2017

Notes:  
 No water wells were found within 250' of the well location. One dwelling was found 641' from the center of the well pad.



DLF  
 Dennis L. Fisher, RPE  
 PO Box 301  
 Phillips, WV 26001  
 Cell 304.677.4128  
 E-Mail: Fisher.Engineering@gnps.com

**Jackson Surveying Inc.**

PROPOSED PAD PLAN  
 SHEET 8  
 CURLY SITE PLAN

GTS-02443 MOD



**JAY-BEE OIL & GAS, INC.**

February 12, 2018

Permitting Office  
Office of Oil and Gas  
West Virginia Dept. of Environmental Protection  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

RE: Curly Pad Engineering Modifications

Permitting Office:

Included in this packet are the two updated pages from the modified construction plans for the Curly 1 API 47-095-02445, Curly 2 API 47-095-02443, Curly 1U API 47-095-02446, Curly 2U API 47-095-02447. The modification that occurred was adjusting the water well noted on the original pad plans to a water cistern noted on the newest set of pad plans.

If you would have any questions concerning this matter, please feel free to contact our office at the numbers listed below.

Sincerely,

Shane Dowell  
Office Manager