



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, February 7, 2022
PERMIT MODIFICATION APPROVAL
Horizontal 6A / New Drill

SWN PRODUCTION COMPANY, LLC
POST OFFICE BOX 12359
SPRING, TX 773914954

Re: Permit Modification Approval for CHARLES JAMISON MSH 410H
47-051-02425-00-00

Updated Coal Seem Depth

SWN PRODUCTION COMPANY, 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: CHARLES JAMISON MSH 410H
Farm Name: CHARLES AND JEAN JAMISON
U.S. WELL NUMBER: 47-051-02425-00-00
Horizontal 6A New Drill
Date Modification Issued: 02/07/2022

Promoting a healthy environment.

02/11/2022

4705102425

WW-6B
(04/15)

API NO. 47-051 -
OPERATOR WELL NO. Jamison MSH 410H
Well Pad Name: Charles Jamison MSH

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

1) Well Operator: SWN Production Co., LLC Operator ID: 494512924 County: 051-Marshall District: 7-Liberty Quadrangle: 278-Cameron

2) Operator's Well Number: Jamison MSH 410H Well Pad Name: Charles Jamison MSH

3) Farm Name/Surface Owner: Charles & Jean Jamison Public Road Access: Grapevine Ridge Road

4) Elevation, current ground: 1335' Elevation, proposed post-construction: 1335'

5) Well Type (a) Gas Oil Underground Storage

Other

(b) If Gas Shallow Deep

Horizontal

Gayne
Knitowski

Digitally signed by Gayne
Knitowski
Date: 2022.01.21 08:19:55
-05'00'

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Target Formation- Marcellus, Down-Dip well to the South, Target Top TVD- 7383', Target Base TVD- 7431', Anticipated Thickness- 47', Associated Pressure- 4841'

8) Proposed Total Vertical Depth: 7415'

9) Formation at Total Vertical Depth: Marcellus

10) Proposed Total Measured Depth: 27386'

11) Proposed Horizontal Leg Length: 18928.49'

12) Approximate Fresh Water Strata Depths: 322'

13) Method to Determine Fresh Water Depths: Salinity Calculations from Charles Jamison MSH 206H logs (API 47-051-02295)

14) Approximate Saltwater Depths: 1121' Salinity Profile

15) Approximate Coal Seam Depths: 1087'

16) Approximate Depth to Possible Void (coal mine, karst, other): None that we are aware of.

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No

(a) If Yes, provide Mine Info: Name: McElroy Mine/Marshall County Mine

Depth: 1060'

Seam: Pittsburgh

Owner: Murray Energy Corporation

RECEIVED
Office of Oil and Gas

FEB 3 2022

WV Department of
Environmental Protection

4705102425

Southwestern Energy Company

Proposed Drilling Program

Well: CHARLES JAMISON MSH 410
 Field: NORTH VICTORY FIELD WET
 County: MARSHALL
 SHL: 39.7919 Latitude -80.6075 Longitude
 BHL: 39.7552 Latitude -80.5667 Longitude
 KB Elev: 1,361 ft MSL

Re-entry Rig: SDC 41
 Prospect: Marcellus Shale
 State: WV



GL Elev: 1,335 ft MSL

No COAL VOID Anticipated

Gas Storage Interval: 2034'-2483' (Maxton, Base of Big Injun)

PROD TOC Lead @ 2,970' MD

PROD TOC Tail @ 6,820' MD

TUBULAR DETAIL

Casing String	Casing Size (in)	Weight (Min)	Grade (Min)	Planned Interval	
				From	To
Conductor	20	94.0 #	J-55	0'	126'
Surface	13.375	48.0 #	H-40	0'	390'
Intm/Coal	9.625	36.0 #	J-55	0'	2,600'
Intermediate	9.625	40.0 #	J/K-55	2,600'	2,770'
Production	6	24.5 #	P-110	0'	4,900'
Production	5.5	20.0 #	P-110 HP	4,900'	27,386'

CEMENT DETAIL

	Sacks	Class	Density
Conductor:	151	A	19.3
Surface:	426	A	15.6
Intermediate:	1472	A	15.6-16
Production:	5192	A	15.0-15.6

126' to 410'
Air/Mist

410' to 2,790'
Air/Mist

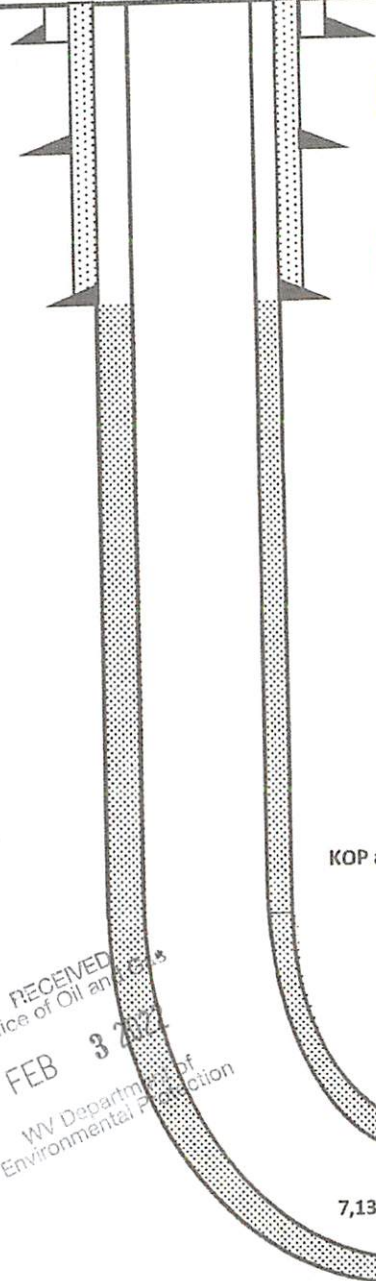
10.5# Brine Mud

2,790' to 6,920'
Air/Mist

Air
TD at 6,920'

6,920' to 8,452'
12.0-12.5 ppg

8,452' to 27,386'
12.5-13.2 ppg



KOP at 6,920' MD

Freshwater Depth - 322' TVD

Coal Depth - 1,087' TVD

Saltwater Depth - 1,121' TVD

TVD - 7,415'

TMD - 27,386'

TD at 27,386' MD
7,415' TVD

7,133' Target Center

Onondaga 7,431' TVD

EOB at 8,452' MD

SHL Onondaga 7,149' TVD

Gayne Knitowski

Digitally signed by
Gayne Knitowski
Date: 2022.01.21
08:20:18 -05'00'

Created by: C R Hall on 01/20/2022

RECEIVED
Office of Oil and Gas
FEB 3 2022
WV Department of
Environmental Protection

02/11/2022

February 2, 2022

PAID ONLINE
\$15000

Mr. Charles Brewer
Office of Oil & Gas
601 57th Street
Charleston, WV 25304

RE: Proposed Expedited Modification:

Charles Jamison MSH 410H - 51-02425
Charles Jamison MSH 610H - 51-02426
Charles Jamison MSH 810H - 51-02427

Dear Mr. Brewer:

Enclosed please find the required documents to modify this well. There was a typo on the coal depth. This well is situated on the Jamison's property, in Liberty District, Marshall County, West Virginia.

Enclosed you will find:

- 6B
- Updated WBD

If you have any questions or desire additional information, please me at 304-884-1613

Thank you.

Sincerely,



Brittany Woody
Senior Regulatory Analyst
Southwestern Energy Production Company, LLC

RECEIVED
Office of Oil and Gas
FEB 3 2022
WV Department of
Environmental Protection

$\frac{R^2}{A} \rightarrow V^+$



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

Expedited Modification Horizontal H6A Well Work Permit API: 47-051-02425, 02426, 02427)

1 message

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

Tue, Feb 8, 2022 at 7:57 AM

To: Brittany Woody <Brittany_Woody@swn.com>, liz_gee@swn.com, "Gayne J. Knitowski" <gayne.j.knitowski@wv.gov>, Eric Buzzard <ebuzzard@marshallcountywv.org>

I have attached a copy of the newly issued well [permit](#) number. This will serve as your copy.

- 47-051-02425 - CHARLES JAMISON MSH 410H**
- 47-051-02426 - CHARLES JAMISON MSH 610H**
- 47-051-02427 - CHARLES JAMISON MSH 810H**




If you have any questions, then [please](#) contact us here at the Office of Oil and Gas.

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

<47-085-10414 - Copy.pdf><47-085-10415 - Copy.pdf><47-085-10417 - Copy.pdf>

3 attachments

-  **47-051-02425 - mod.pdf**
1007K
-  **47-051-02427 - mod.pdf**
1009K
-  **47-051-02426 - mod.pdf**
1002K

02/11/2022