



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

PERMIT MODIFICATION APPROVAL

May 15, 2015

CHEVRON APPALACHIA, LLC
POST OFFICE BOX 611
MOON TOWN, PA 15108

Re: Permit Modification Approval for API Number 5101784, Well #: CURRY 8H

Casing change

Oil and Gas Operator:

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.

Please call James Martin at 304-926-0499, extension 1654 if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Gene Smith".

Gene Smith
Assistant Chief of Permitting
Office of Oil and Gas

Promoting a healthy environment.

05/15/2015

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

1) Well Operator: Chevron Appalachia, LLC 49449935 Marshall Washington Moundsville, WV
Operator ID County District Quadrangle

2) Operator's Well Number: 8H Well Pad Name: Curry

3) Farm Name/Surface Owner: Curry Public Road Access: Wayman's Ridge Rd/County Rt 38

4) Elevation, current ground: 1317' Elevation, proposed post-construction: 1317'

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

6) Existing Pad: Yes or No Yes

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Expected Pressure(s):
Point Pleasant, 11381, Thickness 140' - Pressure 0.89 psi/ft

8) Proposed Total Vertical Depth: 11,898'

9) Formation at Total Vertical Depth: Point Pleasant

10) Proposed Total Measured Depth: 17,900'

11) Proposed Horizontal Leg Length: 6,002'

12) Approximate Fresh Water Strata Depths: 355' GL

13) Method to Determine Fresh Water Depths: Curry 2H

14) Approximate Saltwater Depths: 1,890'-3,080'

15) Approximate Coal Seam Depths: 825' GL

16) Approximate Depth to Possible Void (coal mine, karst, other): 825' GL

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: Alexander Mine (abandoned)
Depth: 825'-833' GL
Seam: Pittsburgh No. 8 Coal Seam
Owner: Reserve Coal Properties Company

Handwritten signature and date: 5/14/15

Received

MAY 14 2015

Office of Oil and Gas
WV Dept. of Environmental Protection

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	30"	New			40'	40'	CTS
Surface/Coal	20"	New	J-55	94#	925'	925'	CTS
Intermediate1	13-3/8"	New	NT-80LHE	68#	2,296'	2,296'	CTS
Intermediate 2	9-5/8"	New	P-110	40#	8,852'	8,852'	CTS
Production	5.5"	New	P-110	23#	17,868'	17,868'	CTS
Liners							

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	30"	36"					
Surface/Coal	20"	26"	0.438"	2,110 psi	600 psi	Class A	1.21
Intermediate1	13-3/8"	17-1/2"	0.514"	4,930 psi	2,500 psi	Class A	1.29
Intermediate 2	9-5/8"	12-1/4"	0.3952"	7,880 psi	6,500 psi	Class G	1.27/1.45
Production	5.5"	8.5"	0.415"	14,515 psi	11,500 psi	Class G	1.28/1.65
Liners							

AS 5/14/15

PACKERS

Kind:				Received MAY 14 2015
Sizes:				
Depths Set:				

Office of Oil and Gas
 WV Dept. of Environmental Protection