

OKLAHOMA CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION  
P.O. BOX 52000  
OKLAHOMA CITY, OK 73152-2000  
(Rule 165:10-3-1)

API NUMBER: 027 21496

Approval Date: 12/01/2017  
Expiration Date: 06/01/2018

Straight Hole Disposal

PERMIT TO DRILL

WELL LOCATION: Sec: 16 Twp: 9N Rge: 1E County: CLEVELAND  
SPOT LOCATION:  SW  SE  SW  SE FEET FROM QUARTER: FROM SOUTH FROM EAST  
SECTION LINES: 234 1765

Lease Name: BOWLING SWD Well No: 1 Well will be 234 feet from nearest unit or lease boundary.  
Operator Name: ARROWHEAD ENERGY INC Telephone: 4058485777 OTC/OCC Number: 10239 0

ARROWHEAD ENERGY INC  
2934 NW 156TH ST  
EDMOND, OK 73013-2102

TIMOTHY B. & BECKY G. BOWLING  
16303 EAST ROCK CREEK ROAD  
NORMAN OK 73026

Formation(s) (Permit Valid for Listed Formations Only):

	Name	Depth	Name	Depth
1	VIRGILIAN	3400	6	
2	MISSOURIAN	3900	7	
3	SIMPSON	6200	8	
4			9	
5			10	

Spacing Orders: No Spacing

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 6700 Ground Elevation: 1095 **Surface Casing: 1300** Depth to base of Treatable Water-Bearing FM: 760

Under Federal Jurisdiction: No Fresh Water Supply Well Drilled: No Surface Water used to Drill: No

PIT 1 INFORMATION

Type of Pit System: ON SITE  
Type of Mud System: WATER BASED  
Chlorides Max: 5000 Average: 3000

Is depth to top of ground water greater than 10ft below base of pit? Y  
Within 1 mile of municipal water well? N  
Wellhead Protection Area? N

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: 2

Liner not required for Category: 2

Pit Location is BED AQUIFER  
Pit Location Formation: GARBER

Approved Method for disposal of Drilling Fluids:

A. Evaporation/dewater and backfilling of reserve pit.

D. One time land application -- (REQUIRES PERMIT)

PERMIT NO: 17-33277

Notes:

This permit does not address the right of entry or settlement of surface damages.  
The duration of this permit is SIX MONTHS, except as otherwise provided by Rule 165: 10-3-1.  
Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.

Category	Description
HYDRAULIC FRACTURING	<p>11/21/2017 - G71 - OCC 165:10-3-10 REQUIRES:</p> <p>1) PRIOR TO COMMENCEMENT OF HYDRAULIC FRACTURING OPERATIONS FOR HORIZONTAL WELLS, NOTICE GIVEN FIVE BUSINESS DAYS IN ADVANCE TO OFFSET OPERATORS WITH WELLS COMPLETED IN THE SAME COMMON SOURCE OF SUPPLY WITHIN 1/2 MILE;</p> <p>2) WITH NOTICE ALSO GIVEN 48 HOURS IN ADVANCE OF HYDRAULIC FRACTURING ALL WELLS TO BOTH THE OCC CENTRAL OFFICE AND LOCAL DISTRICT OFFICES, USING THE "FRAC NOTICE FORM" FOUND AT THE FOLLOWING LINK: <a href="http://OCCEWEB.COM/OG/OGFORMS.HTML">OCCEWEB.COM/OG/OGFORMS.HTML</a>; AND,</p> <p>3) THE CHEMICAL DISCLOSURE OF HYDRAULIC FRACTURING INGREDIENTS FOR ALL WELLS TO BE REPORTED TO FRACFOCUS WITHIN 60 DAYS AFTER THE CONCLUSION THE HYDRAULIC FRACTURING OPERATIONS, USING THE FOLLOWING LINK: <a href="http://FRACFOCUS.ORG">FRACFOCUS.ORG</a></p>
SPACING	11/21/2017 - G71 - N/A - DISPOSAL WELL

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Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.