

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

API NUMBER: 043 23622

Approval Date: 05/03/2018

Expiration Date: 11/03/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 04 Twp: 17N Rge: 17W County: DEWEY  
SPOT LOCATION: ☐ SE ☐ SW ☐ SE ☐ SE FEET FROM QUARTER: FROM SOUTH FROM EAST  
SECTION LINES: 260 720

Lease Name: IRWIN Well No: 2-4H Well will be 260 feet from nearest unit or lease boundary.  
Operator Name: UNIT PETROLEUM COMPANY Telephone: 9184937700; 9184937 OTC/OCC Number: 16711 0

UNIT PETROLEUM COMPANY  
PO BOX 702500  
TULSA, OK 74170-2500

BRENDA L AND H. GRANT IRWIN  
3101 CASTLE ROCK ROAD #19  
OKLAHOMA CITY OK 73120

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

|   | Name          | Depth | Name | Depth |
|---|---------------|-------|------|-------|
| 1 | MISSISSIPPIAN | 11750 | 6    |       |
| 2 |               |       | 7    |       |
| 3 |               |       | 8    |       |
| 4 |               |       | 9    |       |
| 5 |               |       | 10   |       |

Spacing Orders: 547504

Location Exception Orders: 674631  
674947

Increased Density Orders:

Pending CD Numbers: 201708476

Special Orders:

Total Depth: 16800 Ground Elevation: 1779 Surface Casing: 1500 Depth to base of Treatable Water-Bearing FM: 115

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

PIT 1 INFORMATION

Approved Method for disposal of Drilling Fluids:

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED

Chlorides Max: 50000 Average: 5000

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: C

Liner not required for Category: C

Pit Location is BED AQUIFER

Pit Location Formation: RUSH SPRINGS

D. One time land application -- (REQUIRES PERMIT)  
H. SEE MEMO

PERMIT NO: 18-34104

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.

PIT 2 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: OIL BASED

Chlorides Max: 300000 Average: 200000

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: C

Liner not required for Category: C

Pit Location is BED AQUIFER

Pit Location Formation: RUSH SPRINGS

HORIZONTAL HOLE 1

Sec 04 Twp 17N Rge 17W County DEWEY

Spot Location of End Point: NE NW NE NE

Feet From: NORTH 1/4 Section Line: 165

Feet From: EAST 1/4 Section Line: 860

Depth of Deviation: 11498

Radius of Turn: 488

Direction: 359

Total Length: 4536

Measured Total Depth: 16800

True Vertical Depth: 11970

End Point Location from Lease,  
Unit, or Property Line: 165

Notes:

Category

Description

DEEP SURFACE CASING

4/26/2018 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY OF ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON ANY CONDUCTOR OR SURFACE CASING

EXCEPTION TO RULE - 674947

5/2/2018 - G60 - 4-17N-17W  
X165:10-3-28(C)(2)(B) MSSP  
MAY BE CLOSER THAN 600' TO THE IRWIN #1-4H  
UNIT PETROLEUM CO.  
3/21/18

HYDRAULIC FRACTURING

4/26/2018 - G71 - OCC 165:10-3-10 REQUIRES:

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;

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: [OCCEWEB.COM/OG/OGFORMS.HTML](http://OCCEWEB.COM/OG/OGFORMS.HTML); AND,

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: [FRACFOCUS.ORG](http://FRACFOCUS.ORG)

INTERMEDIATE CASING

4/26/2018 - G71 - DUE TO THE KNOWN POTENTIAL RISK OF ENCOUNTERING AN OVER-PRESSURED ZONE IN THE MORROW SERIES IN THIS AREA, THE TECHNICAL MANAGER RECOMMENDS SETTING AN INTERMEDIATE STRING OF CASING IMMEDIATELY ABOVE THE MORROW SERIES

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.

043 23622 IRWIN 2-4H

| Category                    | Description  |
|-----------------------------|--|
| LOCATION EXCEPTION - 674631 | 5/2/2018 - G60 - (I.O.) 4-17N-17W<br>X547504 MSSP<br>COMPL. INT. NCT 165' FSL, NCT 165' FNL, NCT 665' FEL<br>UNIT PETROLEUM CO.<br>3/13/18       |
| MEMO                        | 4/26/2018 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 -<br>OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT |
| PENDING CD - 201708476      | 5/2/2018 - G60 - 4-17N-17W<br>X547504 MSSP<br>1 WELL<br>NO OP. NAMED<br>REC. 2/26/18 (JOHNSON)   |
| SPACING - 547504            | 5/2/2018 - G60 - (640) 4-17N-7W<br>EXT OTHERS<br>EST MSSP, OTHERS  |

**Section 4, T 17 N, R 17 W.I.M.,  
Dewey County, Oklahoma.**

