

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

API NUMBER: 093 25128 A

Approval Date: 01/17/2019

Expiration Date: 07/17/2020

Horizontal Hole Oil & Gas

Amend reason: REPERMIT OF EXPIRED PERMIT, CHANGE TD & BHL

AMEND PERMIT TO DRILL

WELL LOCATION: Sec: 34 Twp: 20N Rge: 15W

County: MAJOR

SPOT LOCATION: ☐ NW ☐ NW ☐ NE ☐ NW

FEET FROM QUARTER: FROM NORTH FROM WEST

SECTION LINES: 275 1400

Lease Name: BROMLOW 2015

Well No: 1-34H

Well will be 275 feet from nearest unit or lease boundary.

Operator Name: SANDRIDGE EXPLORATION & PRODUCTION LLC

Telephone: 4054295610

OTC/OCC Number: 22281 0

SANDRIDGE EXPLORATION & PRODUCTION LLC
123 ROBERT S KERR AVE STE 1702
OKLAHOMA CITY, OK 73102-6406

QUINCY AND STARLA BROMLOW
PO BOX 781
SEILING OK 73663

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

| Name | Depth | Name | Depth |
|-----------------|-------|------|-------|
| 1 MISSISSIPPIAN | 9275 | 6 | |
| 2 | | 7 | |
| 3 | | 8 | |
| 4 | | 9 | |
| 5 | | 10 | |

Spacing Orders: 634339

Location Exception Orders: 676132

Increased Density Orders:

677077

Pending CD Numbers:

Special Orders:

Total Depth: 13740

Ground Elevation: 1701

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 360

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

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: 10000 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 AP/TE DEPOSIT

Pit Location Formation: TERRACE

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

PERMIT NO: 19-36146

H. CLOSED SYSTEM-STEEL PITS PER OPERATOR REQUEST

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: 500000 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 AP/TE DEPOSIT

Pit Location Formation: TERRACE

HORIZONTAL HOLE 1

Sec 34 Twp 20N Rge 15W County DEWEY

Spot Location of End Point: SE SE SW SW

Feet From: SOUTH 1/4 Section Line: 150

Feet From: WEST 1/4 Section Line: 1170

Depth of Deviation: 8590

Radius of Turn: 344

Direction: 180

Total Length: 4609

Measured Total Depth: 13740

True Vertical Depth: 9330

End Point Location from Lease,
Unit, or Property Line: 150

Notes:

Category

Description

DEEP SURFACE CASING

1/17/2019 - G58 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY OF ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON ANY CONDUCTOR OR SURFACE CASING

HYDRAULIC FRACTURING

1/17/2019 - G58 - 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; 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

INTERMEDIATE CASING

1/17/2019 - G58 - 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

LOCATION EXCEPTION - 676132

1/17/2019 - G58 - (I.O.) 34-20N-15W
X634339 MSSP
COMPL. INT. NCT 150' FNL, NCT 150' FSL, NCT 560' FWL
SANDRIDGE EXPLORATION AND PRODUCTION, LLC
4/11/2018

This permit does not address the right of entry or settlement of surface damages.

093 25128 BROMLOW 2015 1-34H

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 |
|-----------------------------|--|
| LOCATION EXCEPTION - 677077 | 1/17/2019 - G58 - (I.O.) 34-20N-15W X165:10-3-28(C)(2)(B) MSSP (BROMLOW 2016 1-34H) MAY BE CLOSER THAN 600' TO THE JERRY NO. 1-34 NO OP. NAMED 5/1/2018 |
| MEMO | 1/17/2019 - G58 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT |
| SPACING - 634339 | 1/17/2019 - G58 - (640)(HOR) 34-20N-15W VAC OTHERS VAC 574435/578073 MSSLM, OTHER S2 NW4 & NE4 & SE4 & SW4 VAC 132900 CSTR S2 NW4 & NE4 & SE4 & SW4 EST (REG) OTHER EXT (REG) OTHERS EST (HOR) MSSP, OTHERS POE TO BHL (MSSP) NCT 660' FB (COEXIST WITH SP. ORDER 574435/578073 MSSLM N2 NW4 & COEXIST WITH SP. ORDER 132900 CSTR N2 NW4) |