

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

API NUMBER: 043 23574

Approval Date: 11/30/2017

Expiration Date: 05/30/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 13 Twp: 18N Rge: 14W

County: DEWEY

SPOT LOCATION: ☐ SE ☐ SW ☐ SW ☐ SW

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 235 450

Lease Name: SANDERSON

Well No: 13-1H

Well will be 235 feet from nearest unit or lease boundary.

Operator Name: COMANCHE EXPLORATION CO LLC

Telephone: 4057555900

OTC/OCC Number: 20631 0

COMANCHE EXPLORATION CO LLC
6520 N WESTERN AVE STE 300
OKLAHOMA CITY, OK 73116-7334

NORMA SANDERSON
67504 N. 2440 RD
CANTON OK 73724

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	9150	6	
2			7	
3			8	
4			9	
5			10	

Spacing Orders: No Spacing

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201706558
201706560

Special Orders:

Total Depth: 14596

Ground Elevation: 1695

Surface Casing: 850

Depth to base of Treatable Water-Bearing FM: 190

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: 8000 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: 17-33438
H. SEE MEMO

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 AP/TE DEPOSIT

Pit Location Formation: TERRACE

HORIZONTAL HOLE 1

Sec 13 Twp 18N Rge 14W County DEWEY

Spot Location of End Point: NE NW NW NW

Feet From: NORTH 1/4 Section Line: 135

Feet From: WEST 1/4 Section Line: 450

Depth of Deviation: 9150

Radius of Turn: 451

Direction: 360

Total Length: 4738

Measured Total Depth: 14596

True Vertical Depth: 9815

End Point Location from Lease,
Unit, or Property Line: 135

Notes:

Category

Description

COMPLETION INTERVAL

11/30/2017 - G58 - MUST BE NOT CLOSER THAN 165' FNL OR FSL; WILL BE LEGAL PER OPERATOR

DEEP SURFACE CASING

11/15/2017 - 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

HYDRAULIC FRACTURING

11/15/2017 - 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: OCCWEB.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

11/15/2017 - 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

MEMO

11/15/2017 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

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

043 23574 SANDERSON 13-1H

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
PENDING CD - 201706558	11/30/2017 - G58 - (E.O.) 13-18N-14W X201706560 MSSP COMPL. INT. NCT 165' FSL, NCT 165' FNL, NCT 330' FWL NO OP. NAMED REC 11/3/2017 (THOMAS)
PENDING CD - 201706560	11/30/2017 - G58 - (E.O.)(640)(HOR) 13-18N-14W EST MSSP, OTHERS POE TO BHL NLT 660' FB REC 11/3/2017 (THOMAS)