

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

API NUMBER: 017 24675

Approval Date: 01/30/2014
Expiration Date: 07/30/2014

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 19 Twp: 13N Rge: 8W

County: CANADIAN

SPOT LOCATION: SE SW SW SW

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 170 340

Lease Name: LEOTA

Well No: 1-19H

Well will be 170 feet from nearest unit or lease boundary.

Operator Name: CIMAREX ENERGY CO

Telephone: 9185851100

OTC/OCC Number: 21194 0

CIMAREX ENERGY CO
202 S CHEYENNE AVE STE 1000
TULSA, OK 74103-3001

LEOTA MAY HARMAN, TRUSTEE
PO BOX 348
CALUMET OK 73014

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	10063	6	
2	WOODFORD	11583	7	
3	HUNTON	11875	8	
4			9	
5			10	

Spacing Orders: 149719
188458
621052

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201308484

Special Orders:

Total Depth: 16440

Ground Elevation: 1387

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 280

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 not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: DOG CREEK

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

PERMIT NO: 13-26107

H. CLOSED SYSTEM=STEEL PITS PER OPERATOR OPTION

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.

HORIZONTAL HOLE 1

Sec 19 Twp 13N Rge 8W County CANADIAN

Spot Location of End Point: NW NW NW NW

Feet From: NORTH 1/4 Section Line: 150

Feet From: WEST 1/4 Section Line: 250

Depth of Deviation: 11241

Radius of Turn: 478

Direction: 360

Total Length: 4452

Measured Total Depth: 16440

True Vertical Depth: 11875

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

Notes:

Category	Description
DEEP SURFACE CASING	1/30/2014 - G71 - APPROVED CONTINGENT ON NOTIFYING OCC FIELD STAFF IMMEDIATELY OF ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON ANY CONDUCTOR OR SURFACE CASING
PENDING CD - 201308484	1/30/2014 - G30 - 19-13N-8W X149719 HNTN X188458 WDFD X201308507 MSSP, SHL NCT 170 FSL, NCT 340 FWL 1ST PERF NCT 150 FSL, NCT 250 FWL LAST PERF NCT 150 FNL, NCT 250 FWL NO OP. NAMED REC 1/13/14 (JOHNSON)
SPACING - 149719	1/30/2014 - G30 - (640) 19-13N-8W EXT 141747 MSCST, MSSLM, HNTN (VAC MSCST, MSSLM PER 621052)
SPACING - 188458	1/30/2014 - G30 - (640) 19-13N-8W EXT 183538 WDFD, OTHER EXT OTHERS EST OTHER
SPACING - 621052	1/30/2014 - G30 - (640) 19-13N-8W VAC 149719 MSCST, MSSLM EST MSSP

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