

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

API NUMBER: 017 25234

Approval Date: 06/18/2018

Expiration Date: 12/18/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 10 Twp: 14N Rge: 10W

County: CANADIAN

SPOT LOCATION:

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 300 550

Lease Name: THATCHER

Well No: 1H-1522X

Well will be 300 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

JAMESON SISTERS, LLC
602 W. MATTHEWS
EL RENO OK 73036

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN (EX CHESTER)	11160	6	
2			7	
3			8	
4			9	
5			10	

Spacing Orders: No Spacing

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201804020
201804022
201804021

Special Orders:

Total Depth: 21608

Ground Elevation: 1413

Surface Casing: 350

Depth to base of Treatable Water-Bearing FM: 140

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: 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? Y

Wellhead Protection Area? Y

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: 18-34593
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.

HORIZONTAL HOLE 1

Sec 22 Twp 14N Rge 10W County CANADIAN

Spot Location of End Point: SE SW SW SW

Feet From: SOUTH 1/4 Section Line: 150

Feet From: WEST 1/4 Section Line: 450

Depth of Deviation: 10845

Radius of Turn: 382

Direction: 178

Total Length: 10163

Measured Total Depth: 21608

True Vertical Depth: 11642

End Point Location from Lease,

Unit, or Property Line: 150

Notes:

Category

Description

HYDRAULIC FRACTURING

6/7/2018 - 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; 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

6/7/2018 - 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

PENDING CD - 201804020

6/18/2018 - G57 - (640)(HOR) 15 & 22-14N-10W
EST MSNLC
POE TO BHL NLT 660' FB
REC 6-4-2018 (DUNN)

PENDING CD - 201804021

6/18/2018 - G57 - (I.O.) 15 & 22-14N-10W
EST MULTIUNIT HORIZONTAL WELL
X20180420 MSNLC
50% 15-14N-10W
50% 22-14N-10W
CIMAREX ENERGY CO.
REC 6-4-2018 (DUNN)

PENDING CD - 201804022

6/18/2018 - G57 - (I.O.) 15 & 22-14N-10W
X20180420 MSNLC
COMPL. INT. (15-14N-10W) NCT 150' FNL, NCT 0' FSL, NCT 370' FWL
COMPL. INT. (22-14N-10W) NCT 0' FNL, NCT 150' FSL, NCT 370' FWL
CIMAREX ENERGY CO.
REC 6-4-2018 (DUNN)

PUBLIC WATER SUPPLY WELL

6/7/2018 - G71 - GEARY - 1 PWS/WPA, NW/4 10-14N-10W

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017 25234 THATCHER 1H-1522X

CANADIAN County, Oklahoma

300'FSL - 550'FWL Section 10 Township 14N Range 10W I.M.

-NOTE-
The information shown herein is for construction purposes ONLY.

BOTTOM HOLE, LANDING POINT AND DRILL PATH INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED

Operator: CIMAREX ENERGY CO.
Lease Name: THATCHER
Topography & Vegetation: Location fell in wheat field, existing pipelines ±190' South, ±234' South and ±246' South.
Good Drill Site? Yes Reference Stakes or Alternate Location Stakes Set None
Best Accessibility to Location: From South off county road.
Distance & Direction from Hwy Jct or Town: From Colunet, OK, go North on Colunet Rd ±6.5 miles, then go West ±7 miles to the SE Corner of Section 10, T14N - R10W.

Well No.: 1H-1522X

ELEVATION:

1413' Gr. at Stake (NGVD29)

BOTTOM HOLE
150'FSL - 450'FWL
35°40'03.7"N
98°15'30.7"W
35.667680799°N
98.258517273°W
X 1923208
Y 243144

BOTTOM HOLE
X 1922757
Y 242995

LANDING POINT
250'FSL - 450'FWL
35°41'44.2"N
98°15'30.5"W
35.695599078°N
98.258469258°W
X 1923249
Y 253307

X 1922817
Y 258841

X 1925490
Y 258838

X 1928099
Y 258833

X 1922808
Y 256199

X 1928085
Y 256201

X 1922800
Y 253557

X 1925447
Y 253556

X 1928071
Y 253555

X 1922794
Y 250916

X 1928053
Y 250919

X 1922791
Y 248276

X 1925414
Y 248279

X 1928037
Y 248282

X 1922775
Y 245635

X 1928037
Y 245637

X 1928038
Y 242993

X 1925397
Y 242994

Revision ☒ A

Date of Drawing: February 26, 2018

Invoice # 288949

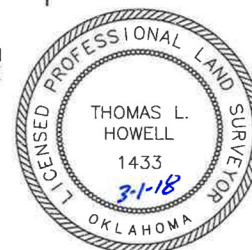
Date Staked: February 20, 2018

RKM

CERTIFICATE:

I, Thomas L. Howell an Oklahoma Licensed Land Surveyor and an authorized agent of Topographic Land Surveyors of Oklahoma, do hereby certify to the information shown herein

Thomas L. Howell
Oklahoma Lic. No. 1433



As shown on the map, the location of the well is within the boundaries of the lease.

DATUM: NAD-27
LAT: 35°41'49.6"N
LONG: 98°15'29.3"W
LAT: 35.697110793°N
LONG: 98.258132588°W
STATE PLANE
COORDINATES: (US Feet)
ZONE: OK NORTH
X: 1923351
Y: 253857