

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

API NUMBER: 017 24991

Approval Date: 04/04/2017

Expiration Date: 10/04/2017

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 17 Twp: 14N Rge: 10W

County: CANADIAN

SPOT LOCATION: ☐ SE ☐ NE ☐ NE ☐ NE

FEET FROM QUARTER: FROM NORTH FROM EAST

SECTION LINES: 520 230

Lease Name: NADYNE ICE BURRESS

Well No: 2H-1720X

Well will be 230 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

WILEY T. HUBBARD
P.O. BOX 402
OKARCHE OK 73762

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

Name	Depth	Name	Depth
1 WOODFORD	12100	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 541682
548203
662225

Location Exception Orders: 661997

Increased Density Orders: 662071
662072

Pending CD Numbers:

Special Orders:

Total Depth: 22150

Ground Elevation: 1414

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 120

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 ALLUVIAL

Pit Location Formation: ALLUVIUM

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 17-32283
H. CLOSED SYSTEM=STEEL PITS (REQUIRED - NORTH CANADIAN RIVER)

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 20 Twp 14N Rge 10W County CANADIAN

Spot Location of End Point: S2 SE SE SE

Feet From: SOUTH 1/4 Section Line: 150

Feet From: EAST 1/4 Section Line: 330

Depth of Deviation: 11565

Radius of Turn: 750

Direction: 181

Total Length: 9407

Measured Total Depth: 22150

True Vertical Depth: 12122

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

Notes:

Category

Description

DEEP SURFACE CASING

3/30/2017 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY FOR ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON CONDUCTOR OR SURFACE CASING

HYDRAULIC FRACTURING

3/30/2017 - G71 - OCC 165:10-3-10 REQUIRES: 1) THE CHEMICAL DISCLOSURE OF HYDRAULIC FRACTURING INGREDIENTS FOR ALL WELLS BE REPORTED TO FRACFOCUS USING THE FOLLOWING LINK [HTTP://FRACFOCUS.ORG/](http://fracfocus.org/) WITH NOTICE GIVEN 48 HOURS IN ADVANCE OF FRACTURING TO THE LOCAL OCC DISTRICT OFFICE; AND, 2) PRIOR TO COMMENCEMENT OF FRACTURING OPERATIONS FOR HORIZONTAL WELLS, NOTICE ALSO GIVEN FIVE BUSINESS DAYS IN ADVANCE TO OFFSET OPERATORS WITH WELLS COMPLETED IN THE SAME COMMON SOURCE OF SUPPLY WITHIN 1/2 MILE

INCREASED DENSITY - 662071

3/31/2017 - G75 - (I.O.) 17-14N-10W
XOTHER
X541682 WDFD
1 WELL
CIMAREX ENERGY CO.
3-21-2017

INCREASED DENSITY - 662072

3/31/2017 - G75 - (I.O.) 20-14N-10W
XOTHER
X548203 WDFD
1 WELL
CIMAREX ENERGY CO.
3-21-2017

INTERMEDIATE CASING

3/30/2017 - 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

LOCATION EXCEPTION - 661997

3/31/2017 - G75 - (I.O.) 17 & 20-14N-10W
XOTHER
X541682 WDFD 17-14N-10W
X548203 WDFD 20-14N-10W
COMPL. INT. (17-14N-10W) NCT 150' FNL, NCT 0' FSL, NCT 250' FEL
COMPL. INT. (20-14N-10W) NCT 0' FNL, NCT 150' FSL, NCT 250' FEL
CIMAREX ENERGY CO.
3-16-2017

SPACING - 541682

3/31/2017 - G75 - (640) 17-14N-10W
EXT OTHERS
EST WDFD

SPACING - 548203

3/31/2017 - G75 - (640) 20-14N-10W
EXT 541682 WDFD

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017 24991 NADYNE ICE BURRESS 2H-1720X

Category	Description
SPACING - 662225	3/31/2017 - G75 - (I.O.) 17 & 20-14N-10W EST MULTIUNIT HORIZONTAL WELL XOTHER X541682 WDFD 17-14N-10W X548203 WDFD 20-14N-10W 50% 17-14N-10W 50% 20-14N-10W CIMAREX ENERGY CO. 3-28-2017

6709 NORTH CLASSEN BLVD., OKLA. CITY, OKLA. 73116 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219
Certificate of Authorization No. 1293 LS

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CANADIAN

County, Oklahoma

520'FNL - 230'FEL Section 17 Township 14N Range 10W I.M.



20 FNL - 250 FEL Section 17 Township 14N Range 10W T14N

X 1912239
Y 253580

X 1914878
Y 253575

X 1917518
Y 253570

520' 230'

2409'

2120'

LANDING POINT
1070'FNL-330'FEL
35°41'36.0" N
98°16'44.0" W
35.693337814" N
98.278894057" W
X: 1917182
Y: 252500

X 1912226
Y 250951

17

X 1917503
Y 250929

X 1912213
Y 248302

X 1914852
Y 248296

LOT 2

LOT 3

LOT 1

PROPOSED DRILL PATH

W/2-NW/4

LOT 11

LOT 4

LOT 10

LOT 12

LOT 13

LOT 9

LOT 8

LOT 7

LOT 6

LOT 5

ANCIENT NORTH BANK

CANADIAN RIVER

2491'

2293'

150'

330'

SE-SW

W/2-SW/4

X 1912225
Y 245662

X 1917487
Y 245648

2409'

2120'

2491'

2293'

150'

330'

SE-SW

W/2-SW/4

X 1912238
Y 243023

X 1914862
Y 243016

X 1917485
Y 243007

BOTTOM HOLE
150'FSL-330'FEL
35°40'03.8" N
98°16'44.0" W
35.667673320" N
98.278894248" W
X: 1917155
Y: 243158

ELEVATION:
1414' Gr. at level pad NGVD-29

Operator: CIMAREX ENERGY CO.
Lease Name: NADVNE ICE BURESS

Well No.: 2H-1720X

on herein is for

Operator: CIMAREX ENERGY CO.
 Lease Name: NADYNE ICE BURESS
 Well No.: 2H-1720X
 Topography & Vegetation Location fell on existing level pad.
 Good Drill Site? Yes Reference Stakes or Alternate Location
 Stakes Set None
 Best Accessibility to Location From county road north of well location.
 Distance & Direction From Calumet, OK., go ± 6.5 miles North, then ± 9.0 miles West
to the Northeast Corner of Section 17, T14N-R10W.

NOTE:

The information shown herein is for construction purposes ONLY.

DATUM: NAD-27
 LAT: 35°41'41.5" N
 LONG: 98°16'42.8" W
 LAT: 35.694848713° N
 LONG: 98.278552994° W
 STATE PLANE
 COORDINATES (US FEET):
 ZONE: OK NORTH
 X: 1917285
 Y: 253050

Invoice # 269528A

Date of Drawing: February 9, 2017

Date Staked: February 2, 2017

JGW

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. Navel
Oklahoma Lic. No. 1433

