

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

API NUMBER: 017 24959

Approval Date: 12/08/2016
Expiration Date: 06/08/2017

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 33 Twp: 13N Rge: 9W County: CANADIAN
SPOT LOCATION: NE NW NE NE FEET FROM QUARTER: FROM NORTH FROM EAST
SECTION LINES: 255 875

Lease Name: COPELAND Well No: 8-33H Well will be 255 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

BONNIE RHEA
4750 SOUTH HIGHWAY 74-F
CASHION OK 73016

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

Name	Depth	Name	Depth
1 WOODFORD	12600	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 566702

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201605341
201605349
201605345

Special Orders:

Total Depth: 17407 Ground Elevation: 1473 **Surface Casing: 1500** Depth to base of Treatable Water-Bearing FM: 250

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: No

PIT 1 INFORMATION

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 BED AQUIFER

Pit Location Formation: MARLOW

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 16-31906

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 33 Twp 13N Rge 9W County CANADIAN

Spot Location of End Point: SW SE SE SE

Feet From: SOUTH 1/4 Section Line: 150

Feet From: EAST 1/4 Section Line: 396

Depth of Deviation: 11880

Radius of Turn: 477

Direction: 175

Total Length: 4778

Measured Total Depth: 17407

True Vertical Depth: 12800

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

Notes:

Category	Description
DEEP SURFACE CASING	12/7/2016 - 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	12/7/2016 - 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/ 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.
PENDING CD - 201605341	12/8/2016 - G75 - (I.O.) 33-13N-9W X566702 WDFD, OTHER XOTHER COMPL. INT. NCT 500' FNL, NCT 150' FSL, NCT 316' FEL NO OP. NAMED REC 12-5-2016 (MCKEOWN)
PENDING CD - 201605345	12/8/2016 - G75 - 33-13N-9W X566702 WDFD 6 WELLS NO OP. NAMED REC 12-5-2016 (MCKEOWN)
PENDING CD - 201605349	12/8/2016 - G75 - (I.O.) 33-13N-9W X165:10-3-28(C)(2)(B) WDFD (COPELAND 8-33H) MAY BE CLOSER THAN 600' TO EXISTING/PROPOSED WELL CIMAREX ENERGY CO. REC 12-5-2016 (MCKEOWN)
SPACING - 566702	12/8/2016 - G75 - (640) 33-13N-9W EXT 560156 WDFD, OTHER

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.

TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

6709 NORTH CLASSEN BLVD., OKLA. CITY, OKLA. 73116 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219

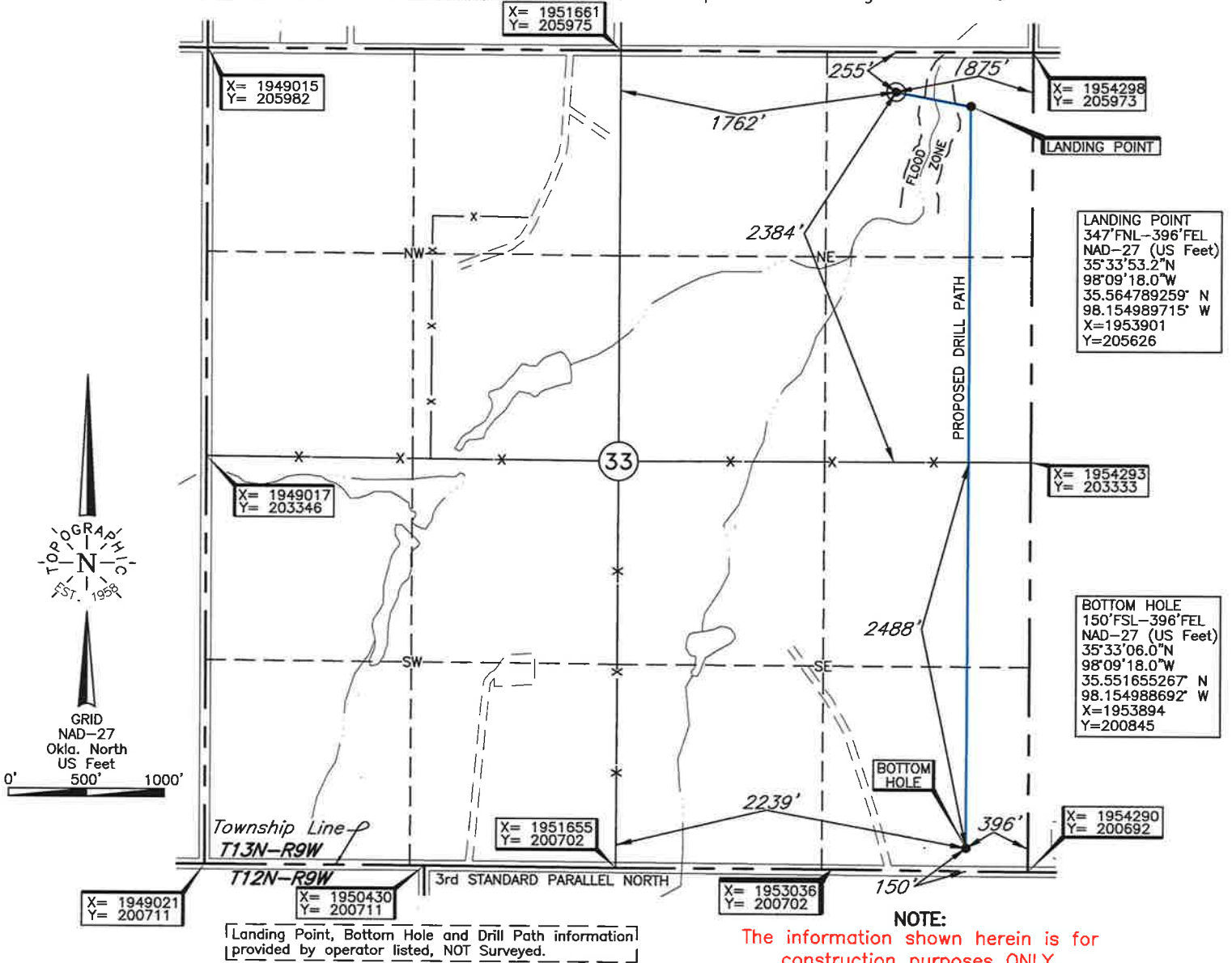
Certificate of Authorization No. 1293 LS

CANADIAN

County, Oklahoma

API 017-24959

255'FNL - 875'FEL Section 33 Township 13N Range 9W I.M.



Operator: CIMAREX ENERGY CO.

Lease Name: COPELAND

Well No.: 8-33H **ELEVATION:** 1473' Gr. at level pad NGVD29

Topography & Vegetation Loc. fell on level pad under construction

Good Drill Site? Yes Reference Stakes or Alternate Location Stakes Set None

Best Accessibility to Location From North off county road

Distance & Direction from Hwy Jct or Town From Calumet, OK, go ±2.5 mi. South on US Hwy. 270, then ±2.25 mi. West on Britton Road West to the NE Cor. of Sec. 33-T13N-R9W

(This information was gathered with a GPS receiver with ±1 foot Horiz./Vert. accuracy)
 DATUM: NAD-27
 LAT: 35°33'54.1"N
 LONG: 98°09'23.8"W
 LAT: 35.565040656° N
 LONG: 98.156600079° W
 STATE PLANE
 COORDINATES: (US Feet)
 ZONE: OK NORTH
 X: 1953422
 Y: 205719

Date of Drawing: Dec. 01, 2016
 Invoice # 268193D Date Staked: Nov. 29, 2016 AC

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

