

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

API NUMBER: 073 26323

Approval Date: 10/17/2018

Expiration Date: 04/17/2020

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 21 Twp: 15N Rge: 9W

County: KINGFISHER

SPOT LOCATION:

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 265 440

Lease Name: WORT

Well No: 2-21H

Well will be 265 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 HUBBARD
PO BOX 402
OKARCHE OK 73762

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

Name	Depth	Name	Depth
1 MISSISSIPPI SOLID	9200	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 212580

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201806926
201806930

Special Orders:

Total Depth: 14691

Ground Elevation: 1220

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 420

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

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: 5000 Average: 3000

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: FLOWERPOT

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

PERMIT NO: 18-35577

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 21 Twp 15N Rge 9W County KINGFISHER

Spot Location of End Point: NE NW NW NW

Feet From: NORTH 1/4 Section Line: 150

Feet From: WEST 1/4 Section Line: 380

Depth of Deviation: 8960

Radius of Turn: 477

Direction: 359

Total Length: 4982

Measured Total Depth: 14691

True Vertical Depth: 10016

End Point Location from Lease,

Unit, or Property Line: 150

Notes:

Category

Description

DEEP SURFACE CASING

10/15/2018 - GA8 - 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

10/15/2018 - GA8 - 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

10/15/2018 - GA8 - 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 - 201806926

10/17/2018 - G58 - (I.O.) 21-15N-9W
X212580 MSSSD
COMPL. INT. NCT 150' FNL, NCT 150' FSL, NCT 330' FWL
NO OP. NAMED
REC 9/17/2018 (THOMAS)

PENDING CD - 201806930

10/17/2018 - G58 - 21-15N-9W
X212580 MSSSD
4 WELLS
NO OP. NAMED
REC 9/17/2018 (THOMAS)

SPACING - 212580

10/17/2018 - G58 - (640) 21-15N-9W
EST MSSSD, OTHERS

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.

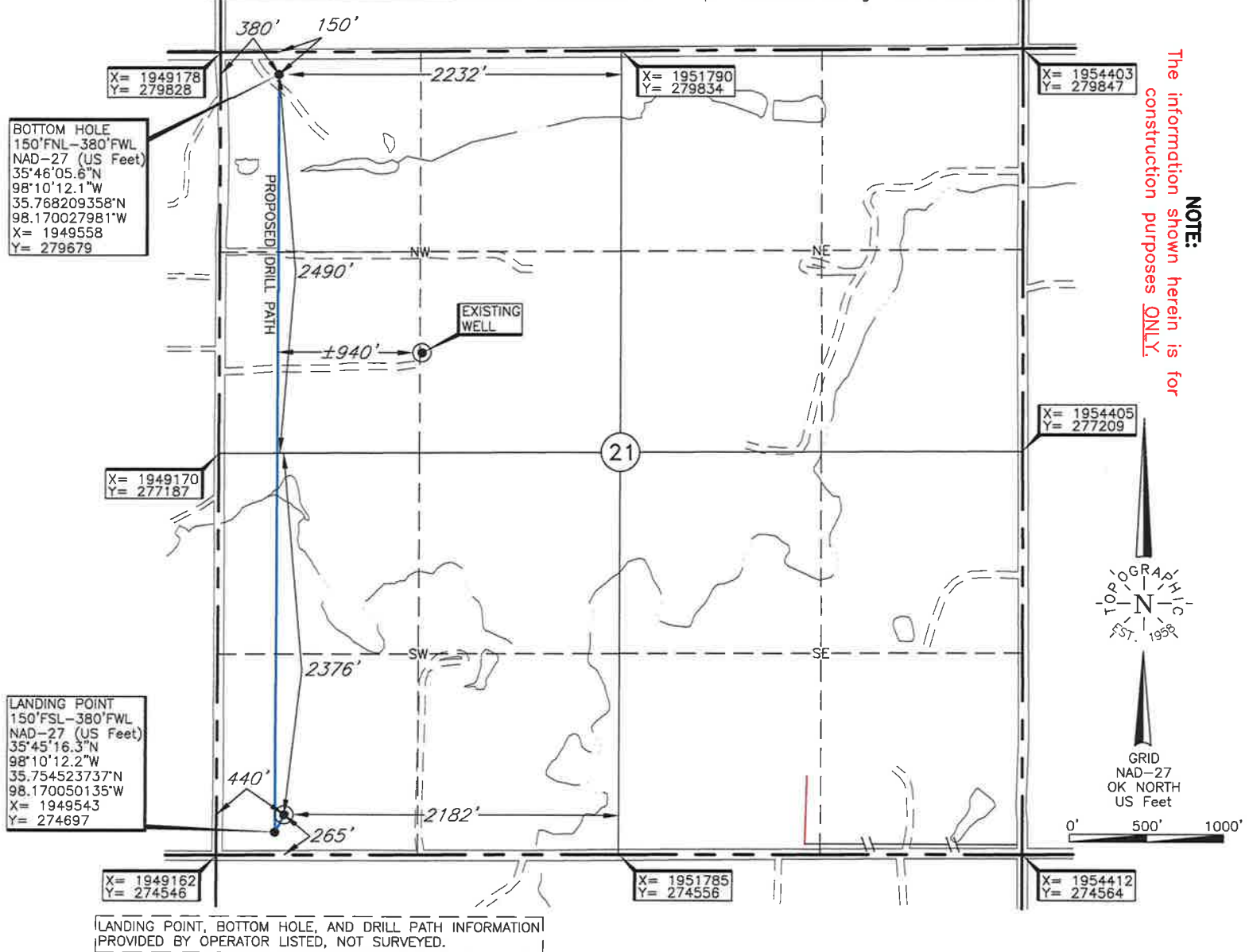
073 26323 WORT 2-21H

KINGFISHER

County, Oklahoma

073-26323

265'FSL-440'FWL Section 21 Township 15N Range 9W I.M.



Operator: CIMAREX ENERGY CO.

Lease Name: WORT

Well No.: 2-21H

ELEVATION:

1220' Gr. at Pad (NGVD29)

Topography & Vegetation Loc. fell on pad under construction.

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 the junction of St. Hwy. 33 E-W and Calumet Rd., go South

±7 miles on Calumet Rd., then West ±3 miles to the SW Cor. of Sec. 21-T15N-R9W.

(This information was gathered with a GPS receiver with ±1 foot Horiz./Vert. accuracy)

DATUM: NAD-27

LAT: 35°45'17.4"N

LONG: 98°10'11.5"W

LAT: 35.754840559°N

LONG: 98.169847225°W

STATE PLANE COORDINATES: (US Feet)

ZONE: OK NORTH

X: 1949603

Y: 274813

Date of Drawing: Oct. 5, 2018

Invoice # 303652 Date Staked: Oct. 2, 2018

TR

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

