API NUMBER: 073 26320

Horizontal Hole Oil & Gas

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

Approval Date: 10/16/2018
Expiration Date: 04/16/2020

PERMIT TO DRILL

WELL LOCATION: Sec: 20 Twp: 15N Rge: 9W County: KINGFISHER

SPOT LOCATION: N2 N2 NW NE FEET FROM QUARTER: FROM **NORTH** FROM **EAST**
SECTION LINES: **250** **1980**

Lease Name: BILLY **Well No: 3-20H** **Well will be 250 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

MERLE BERNHARDT
15051 EAST 202ND STREET
BIXBY OK 74008

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

	Name	Depth		Name	Depth
1	MISSISSIPPI SOLID	9500	6		
2			7		
3			8		
4			9		
5			10		

Spacing Orders: 139333 Location Exception Orders: Increased Density Orders:

Pending CD Numbers: 201806989
201806985

Special Orders:

Total Depth: 14951 Ground Elevation: 1264 **Surface Casing: 1500** Depth to base of Treatable Water-Bearing FM: 440

Under Federal Jurisdiction: No Fresh Water Supply Well Drilled: No Surface Water used to Drill: Yes

PIT 1 INFORMATION

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: CHICKASHA

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 18-35468
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 20 Twp 15N Rge 9W County KINGFISHER

Spot Location of End Point: S2 S2 S2 S2

Feet From: SOUTH 1/4 Section Line: 150

Feet From: EAST 1/4 Section Line: 2640

Depth of Deviation: 9224

Radius of Turn: 477

Direction: 185

Total Length: 4978

Measured Total Depth: 14951

True Vertical Depth: 10156

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 - 201806985	10/16/2018 - G58 - 20-15-9W X139333 MSSSD 4 WELLS NO OP. NAMED REC 9/17/2018 (THOMAS)
PENDING CD - 201806989	10/16/2018 - G58 - (I.O.) 20-15N-9W X139333 MSSSD COMPL. INT. NCT 150' FNL, NCT 150' FSL, NCT 330' FEL, NCT 330' FWL NO OP. NAMED REC 9/17/2018 (THOMAS)
SPACING - 139333	10/16/2018 - G58 - (640) 20-15N-9W EXT OTHERS EXT 125914/137756 MSSSD, OTHERS

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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

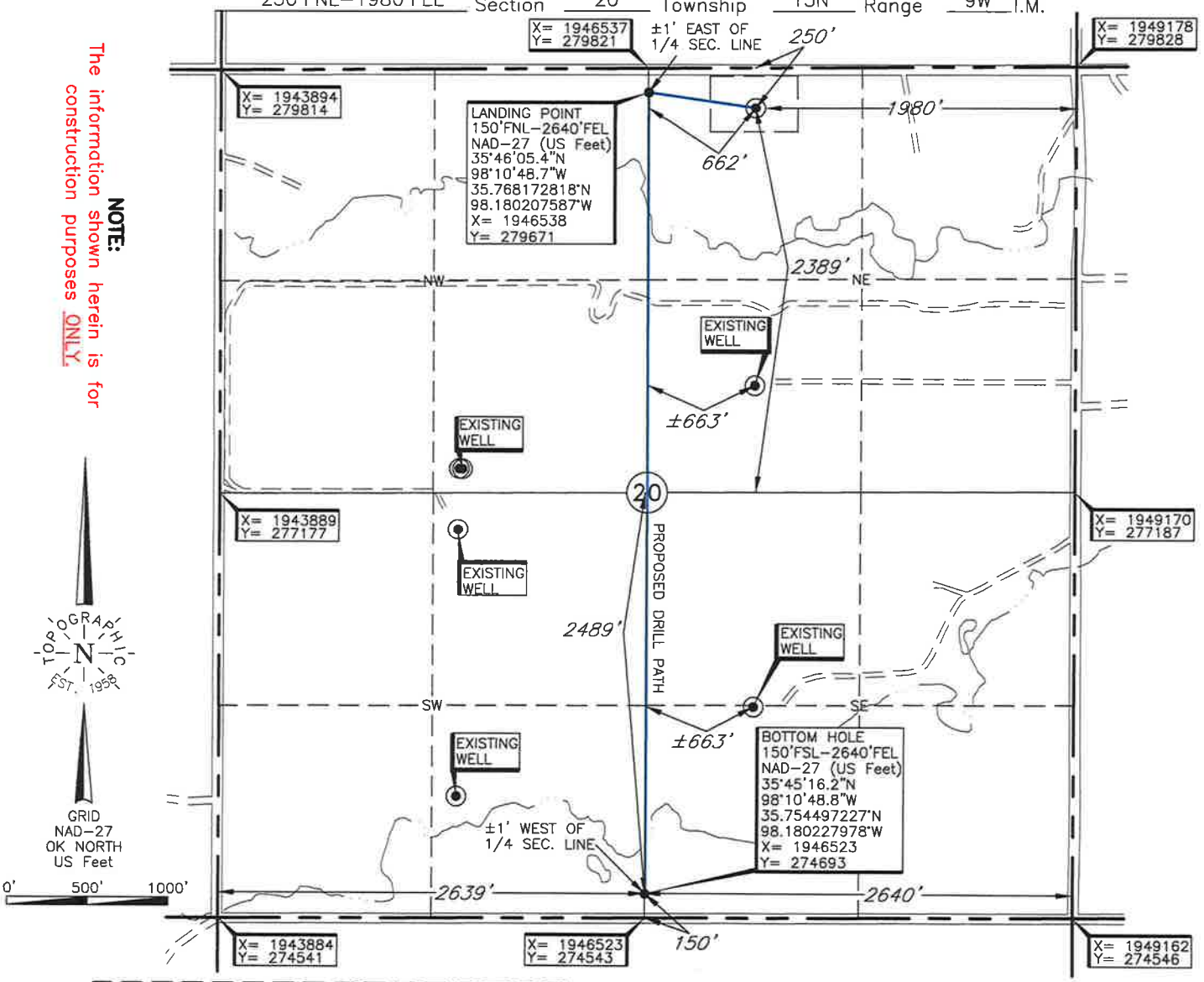
13800 WIRELESS WAY, OKLA. CITY, OKLA. 73134 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219
Certificate of Authorization No. 1293 LS

073-26320

KINGFISHER County, Oklahoma

250'FNL-1980'FEL Section 20 Township 15N Range 9W I.M.

NOTE: The information shown herein is for construction purposes ONLY



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

Operator: CIMAREX ENERGY CO.

Lease Name: BILLY Well No.: 3-20H

ELEVATION: 1264' Gr. at Stake (NGVD29)

Topography & Vegetation Loc. fell in sloped field.

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 junction of St. Hwy. 33 E-W and Calumet Rd., go South ±6 miles on Calumet Rd., then West ± 3 miles to the NE Cor. of Sec. 20-T15N-R9W.

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

DATUM: NAD-27
LAT: 35°46'04.5"N
LONG: 98°10'40.7"W
LAT: 35.767906191°N
LONG: 98.177982721°W
STATE PLANE COORDINATES: (US Feet)
ZONE: OK NORTH
X: 1947198
Y: 279573

Revision X A

Invoice # 303977 Date of Drawing: Oct. 12, 2018

Date Staked: Sept. 14, 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

LICENSED PROFESSIONAL LAND SURVEYOR
THOMAS L. HOWELL
1433
10-15-18
OKLAHOMA