

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

API NUMBER: 017 25075

Approval Date: 09/20/2017
Expiration Date: 03/20/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 18 Twp: 14N Rge: 10W County: CANADIAN
SPOT LOCATION: NE NE NW NW FEET FROM QUARTER: FROM NORTH FROM WEST
SECTION LINES: 230 1125

Lease Name: GRESHAM COM Well No: 1H-1819X 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

MELDA FISHER
1601 HARVEY BROWN DR.
KINGFISHER OK 73750

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	10240	6	
2	WOODFORD	12100	7	
3			8	
4			9	
5			10	

Spacing Orders: 566198

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201705369
201705370
201705371

Special Orders:

Total Depth: 21581

Ground Elevation: 1423

Surface Casing: 280

Depth to base of Treatable Water-Bearing FM: 130

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? 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 ALLUVIAL

Pit Location Formation: ALLUVIUM

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 17-33071

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 19 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: 11074

Radius of Turn: 521

Direction: 183

Total Length: 9689

Measured Total Depth: 21581

True Vertical Depth: 12100

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

Notes:

Category

Description

HYDRAULIC FRACTURING

9/18/2017 - 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

9/18/2017 - 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

PENDING CD - 201705369

9/20/2017 - G60 - (640)(HOR) 18 & 19-14N-10W
EST MSSP, WDFD (18-14N-10W)
EST MSSP (19-14N-10W)
COMPL. INT. (MSSP) NLT 660' FB
COMPL. INT. (WDFD) NLT 165' FNL/FSL, NLT 330' FEL/FWL
REC. 9/8/17 (JOHNSON)

PENDING CD - 201705370

9/20/2017 - G60 - (I.O.) 18 & 19-14N-10W
EST MULTIUNIT HORIZONTAL WELL
X201705369 MSSP, WDFD (18-14N-10W)
X201705369 MSSP (19-14N-10W)
X566198 WDFD (19-14N-10W)
(WDFD IS AN ASSOCIATED COMMON SOURCE OF SUPPLY TO MSSP)
50% 19-14N-10W
50% 18-14N-10W
NO OP. NAMED
REC. 9/8/17 (JOHNSON)

PENDING CD - 201705371

9/20/2017 - G60 - (I.O.) 18 & 19-14N-10W
X201705369 MSSP, WDFD (18-14N-10W)
X201705369 MSSP (19-14N-10W)
X566198 WDFD (19-14N-10W)
COMPL. INT. (18-14N-10W) NCT 150' FNL, NCT 0' FSL, NCT 370' FWL
COMPL. INT. (19-14N-10W) NCT 0' FNL, NCT 150' FSL, NCT 370' FWL
NO OP. NAMED
REC. 9/18/17 (JOHNSON)

PUBLIC WATER SUPPLY WELL

9/18/2017 - G71 - GEARY - 1 PWS/WPA, SE/4 7-14N-10W

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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.

Category

Description

SPACING - 566198

9/20/2017 - G60 - (640) 19-14N-10W
EXT OTHER
EXT 561988 WDFD

This permit does not address the right of entry or settlement of surface damages.
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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

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

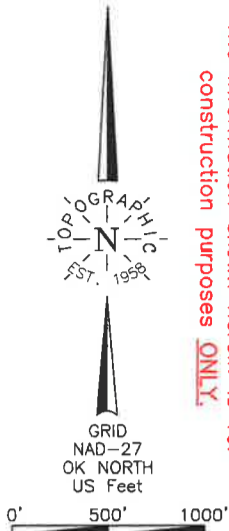
Certificate of Authorization No. 1293 LS

CANADIAN

County, Oklahoma

230'FNL-1125'FWL Section 18 Township 14N Range 10W I.M.

3501725075



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

LANDING POINT
776'FNL-450'FWL
NAD-27 (US Feet)
35°41'38.4"N
98°18'41.0"W
35.694013644"N
98.311385419"W
X = 1907534
Y = 252776

Operator: CIMAREX ENERGY CO.
Lease Name: GRESHAM COM
Topography & Vegetation Loc. fell in level wheat field

Good Drill Site? Yes

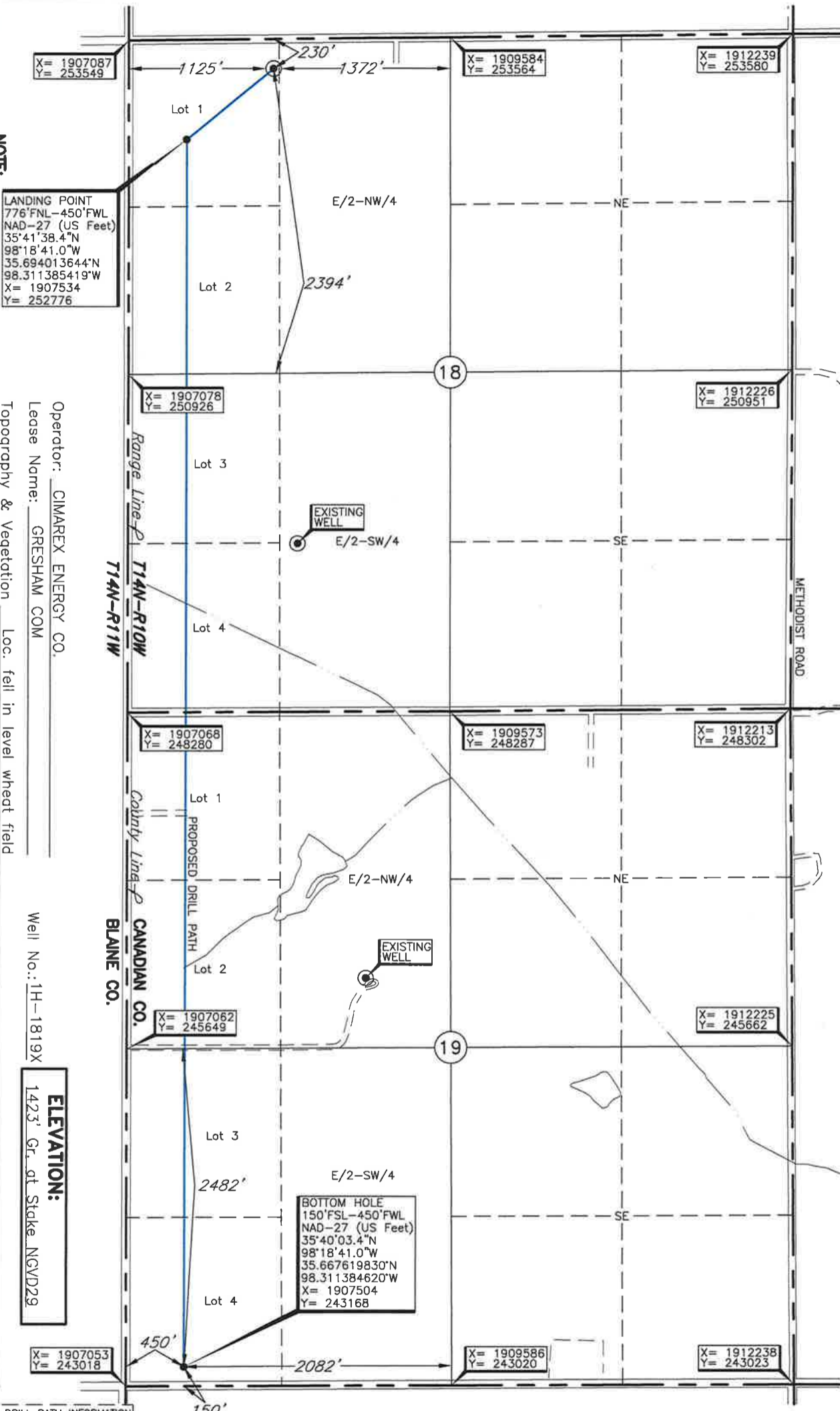
Reference Stakes or Alternate Location
Stakes Set None

Best Accessibility to Location From North off county road.

Distance & Direction From the junction of US Hwy. 281 and US Hwy. 270 in Geary, OK, go ±1.2 miles East on US Hwy. 270, then ±5 miles North on Methodist Road, then ±1 mile West to the NW Cor. of Sec. 18-T14N-R10W.

Well No.: 1H-1819X
ELEVATION:
1423' Gr. at Stake NGVD29

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



Date of Drawing: Aug. 15, 2017

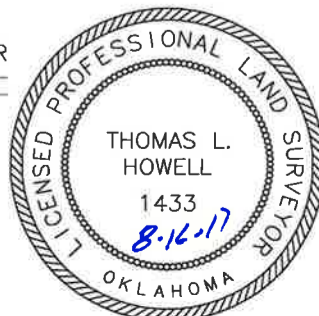
Invoice # 279964 Date Staked: Aug. 14, 2017

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



DATUM: NAD-27
LAT: 35°41'43.9"N
LONG: 98°18'32.8"W
LAT: 35.695530555"N
LONG: 98.309112597"W
STATE PLANE
COORDINATES: (US Feet)
ZONE: OK NORTH
X: 1908211
Y: 253326