

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

API NUMBER: 051 24222

Approval Date: 11/17/2017

Expiration Date: 05/17/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 31 Twp: 6N Rge: 6W

County: GRADY

SPOT LOCATION: ☐ SW ☐ SW ☐ SE ☐ SE

FEET FROM QUARTER: FROM SOUTH FROM EAST

SECTION LINES: 290 1210

Lease Name: BAR K 31-6-6

Well No: 1H

Well will be 290 feet from nearest unit or lease boundary.

Operator Name: APACHE CORPORATION

Telephone: 7132966000; 9184914

OTC/OCC Number: 6778 0

APACHE CORPORATION  
2000 POST OAK BLVD STE 100  
HOUSTON, TX 77056-4497

BAR-K INC. C/O STEVE & GINA CALHOUN  
1245 COUNTY ROAD 1420  
NINNEKAH OK 73067

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	15897	6	
2	WOODFORD	15999	7	
3	HUNTON	16215	8	
4			9	
5			10	

Spacing Orders: 665215

Location Exception Orders: 666042

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 21000

Ground Elevation: 1181

**Surface Casing: 1500**

Depth to base of Treatable Water-Bearing FM: 500

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: 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

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

PERMIT NO: 17-33447

H. SEE MEMO

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.

## PIT 2 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: OIL BASED

Chlorides Max: 300000 Average: 200000

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

## HORIZONTAL HOLE 1

Sec 31 Twp 6N Rge 6W County GRADY

Spot Location of End Point: NW NE NE NE

Feet From: NORTH 1/4 Section Line: 150

Feet From: EAST 1/4 Section Line: 350

Depth of Deviation: 15461

Radius of Turn: 333

Direction: 10

Total Length: 5016

Measured Total Depth: 21000

True Vertical Depth: 16215

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

### Notes:

#### Category

#### Description

#### DEEP SURFACE CASING

11/13/2017 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY OF ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON ANY CONDUCTOR OR SURFACE CASING

#### HYDRAULIC FRACTURING

11/13/2017 - 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](http://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](http://FRACFOCUS.ORG)

#### LOCATION EXCEPTION - 666042

11/16/2017 - G58 - (I.O) 31-6N-6W  
X665215 MSSP, WDFD, HNTN  
SHL NCT 150' FNL, NCT 430' FEL  
COMPL INT NCT 150' FNL, NCT 150' FSL, NCT330' FEL  
APACHE CORPORATION  
7/18/2017

#### MEMO

11/13/2017 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

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

051 24222 BAR K 31-6-6 1H

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.

Category	Description
SPACING - 665215	11/16/2017 - G58 - (640)(HOR) 31-6N-6W X665215 MSSP, WDFD, HNTN POE TO BHL (MSSP, HNTN) NLT 660' FB POE TO BHL (WDFD) NLT 165' FNL, & FSL, NLT 330' FEL & FWL



051-24222

Sec. 31-6N-6W I.M.



# Well Location Plat

Operator: APACHE CORPORATION

Lease Name and No. : BAR K 31-6-6 1H

Footage : 290' FSL - 1210' FEL GR. ELEVATION : 1181' (NAVD 88) Good Site? YES

Section: 31 Township: 6N Range: 6W I.M.

County : Grady State of Oklahoma

Terrain at Loc. : Location fell in open pasture, on top of a hill with sloping to the East and the West.

## PK NAIL

X: 2035469

Y: 590803

LAT: 34°57'24.26"N

LON: 97°52'53.88"W

LAT: 34.956738

LON: -97.881633

ANTI-COLLISION DATA SHOWN HEREON:

BLUE BOX: FOUND AND SHOT ON GROUND.

RED BOX: SEARCHED FOR BUT NO EVIDENCE FOUND  
ON GROUND, PLACED FROM FOOTAGES ON OCC WEBSITE.

## RR SPIKE

X: 2040733

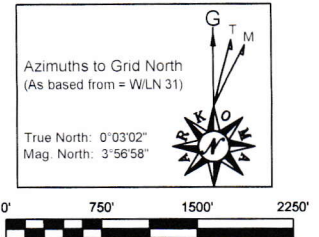
Y: 590821

LAT: 34°57'24.37"N

LON: 97°51'50.64"W

LAT: 34.956770

LON: -97.864067



GPS DATUM

NAD 27

OK SOUTH ZONE

## Surface Hole Loc.:

Lat: 34°56'34.67"N

Lon: 97°52'05.47"W

Lat: 34.942963

Lon: -97.868186

X: 2039505

Y: 585795

## Landing Point:

Lat: 34°56'33.27"N

Lon: 97°51'55.15"W

Lat: 34.942576

Lon: -97.865319

X: 2040364

Y: 585655

## Bottom Hole Loc.:

Lat: 34°57'22.88"N

Lon: 97°51'54.86"W

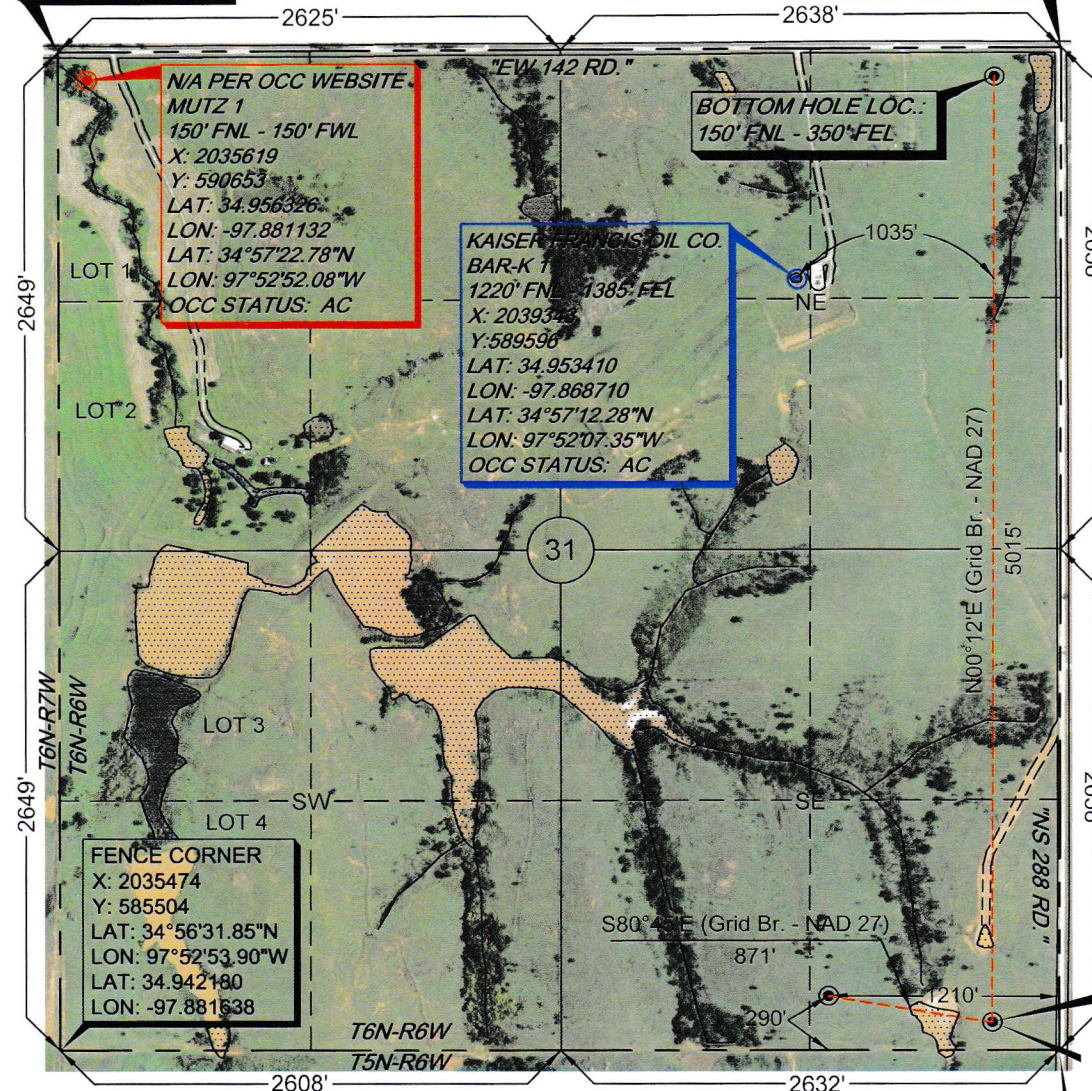
Lat: 34.956355

Lon: -97.865238

X: 2040382

Y: 590670

**LANDING POINT:**  
150' FSL - 350' FEL



Please note that this location was staked on the ground under the supervision of a Licensed Professional Land Surveyor, but the accuracy of this survey is not guaranteed. Please contact Arkoma Surveying and Mapping promptly if any inconsistency is determined. GPS data is observed from RTK - GPS.

Quarter Section distances may be assumed from a Government Survey Plat or assumed at a proportionate distance from opposing section corners, or occupation thereof, and may not have been measured on-the-ground, and further, does not represent a true boundary survey.

NOTE: X and Y data shown hereon for Section Corners may NOT have been surveyed on-the-ground, and further, does NOT represent a true Boundary Survey.

survey and plat by,

Arkoma Surveying and Mapping, PLLC

P.O. Box 238 Wilburton, OK 74578

Ph. 918-465-5711 Fax 918-465-5030

Certificate of Authorization No. 5348

Expires June 30, 2018

Invoice #7105

Date Staked : 04/25/17 By : C.K.

Date Drawn : 05/01/17 By : C.S.

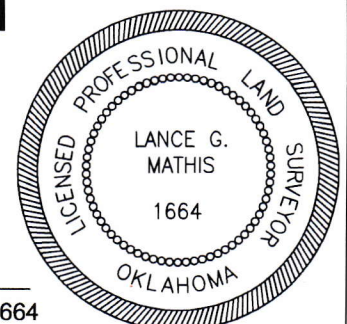
## Certification:

This is to certify that this Well Location Plat represents the results of a survey made on the ground performed under the supervision of the undersigned.

*Lance G. Mathis*  
LANCE G. MATHIS

05/02/17

OK LPLS 1664







# Well Location Plat

Sec. 31-6N-6W I.M.

Operator: APACHE CORPORATION

Lease Name and No. : BAR K 31-6-6 1H

Footage : 290' FSL - 1210' FEL GR. ELEVATION : 1181' (NAVD 88) Good Site? YES

Section: 31 Township: 6N Range: 6W I.M.

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RED BOX: SEARCHED FOR BUT NO EVIDENCE FOUND  
ON GROUND, PLACED FROM FOOTAGES ON OCC WEBSITE.

## RR SPIKE

X: 2040733

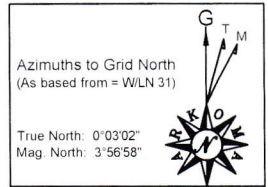
Y: 590821

LAT: 34°57'24.37"N

LON: 97°51'50.64"W

LAT: 34.956770

LON: -97.864067



0' 750' 1500' 2250'

1"=1500'

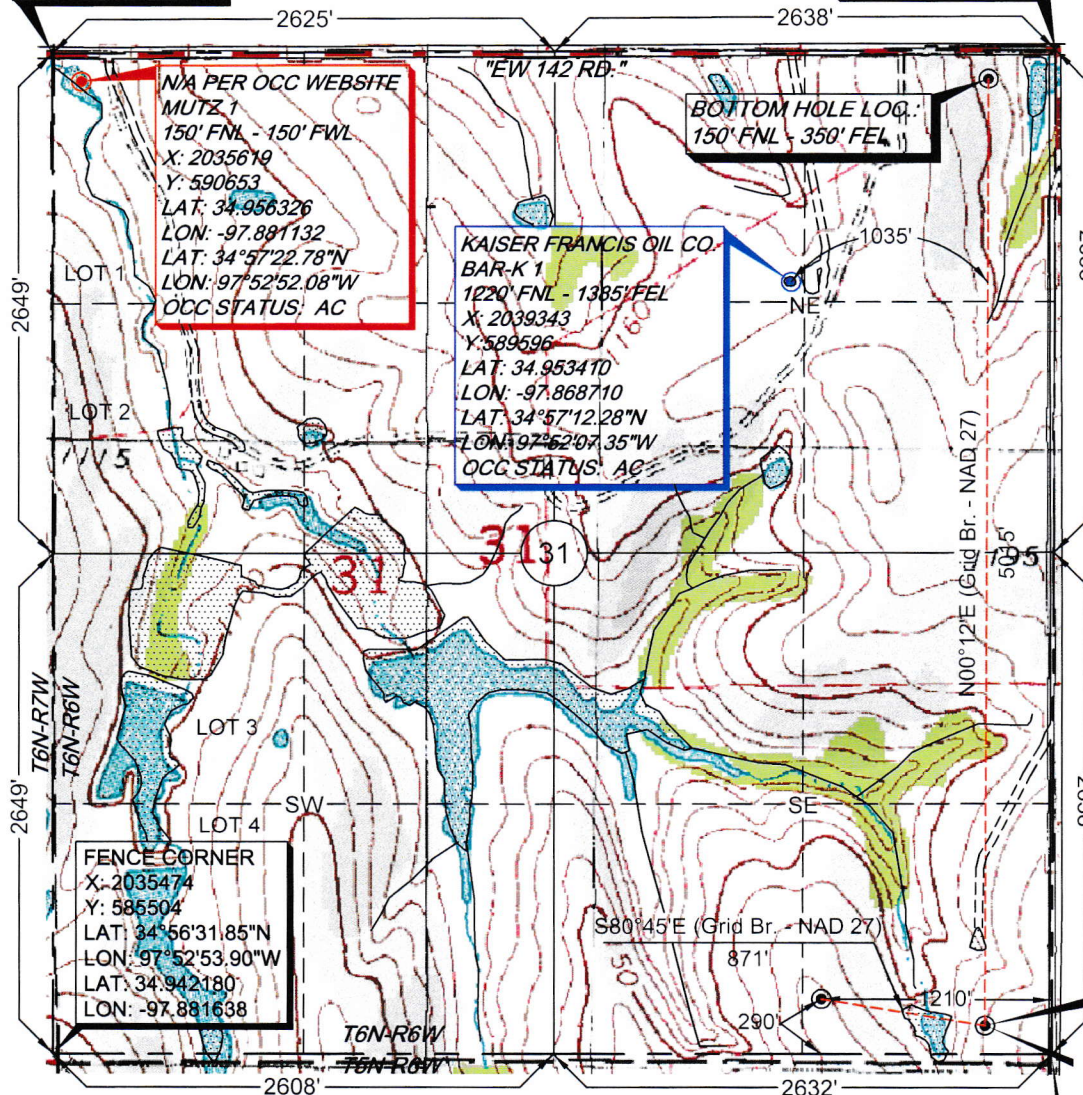
GPS DATUM  
NAD 27  
OK SOUTH ZONE

Surface Hole Loc.:  
Lat: 34°56'34.67"N  
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Lat: 34.942963  
Lon: -97.868186  
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Y: 585795

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Lat: 34.942576  
Lon: -97.865319  
X: 2040364  
Y: 585655

Bottom Hole Loc.:  
Lat: 34°57'22.88"N  
Lon: 97°51'54.86"W  
Lat: 34.956355  
Lon: -97.865238  
X: 2040382  
Y: 590670

LANDING POINT:  
150' FSL - 350' FEL



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Quarter Section distances may be assumed from a Government Survey Plat or assumed at a proportionate distance from opposing section corners, or occupation thereof, and may not have been measured on-the-ground, and further, does not represent a true boundary survey.

NOTE: X and Y data shown hereon for Section Corners may NOT have been surveyed on-the-ground, and further, does NOT represent a true Boundary Survey.

## 3/8" IRON ROD

X: 2040714

Y: 585505

LAT: 34°56'31.78"N

LON: 97°51'50.95"W

LAT: 34.942162

LON: -97.864154

survey and plat by,

**Arkoma Surveying and Mapping, PLLC**

P.O. Box 238 Wilburton, OK 74578

Ph. 918-465-5711 Fax 918-465-5030

Certificate of Authorization No. 5348

Expires June 30, 2018

Invoice #7105

Date Staked : 04/25/17

By : C.K.

Date Drawn : 05/01/17

By : C.S.

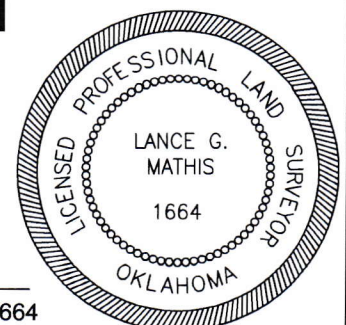
## Certification:

This is to certify that this Well Location Plat represents the results of a survey made on the ground performed under the supervision of the undersigned.

*Lance G. Mathis*  
LANCE G. MATHIS

05/02/17

OK LPLS 1664









# Apache County Highway Vicinity Map

Staked for: APACHE CORPORATION

Lease Name: BAR K 31-6-6 1H

Surface Hole Location: 290' FSL - 1210' FEL

Landing Point: 150' FSL - 350' FEL

Bottom Hole Location: 150' FNL - 350' FEL

Sec. 31 Twp. 6N Rng. 6W I.M.

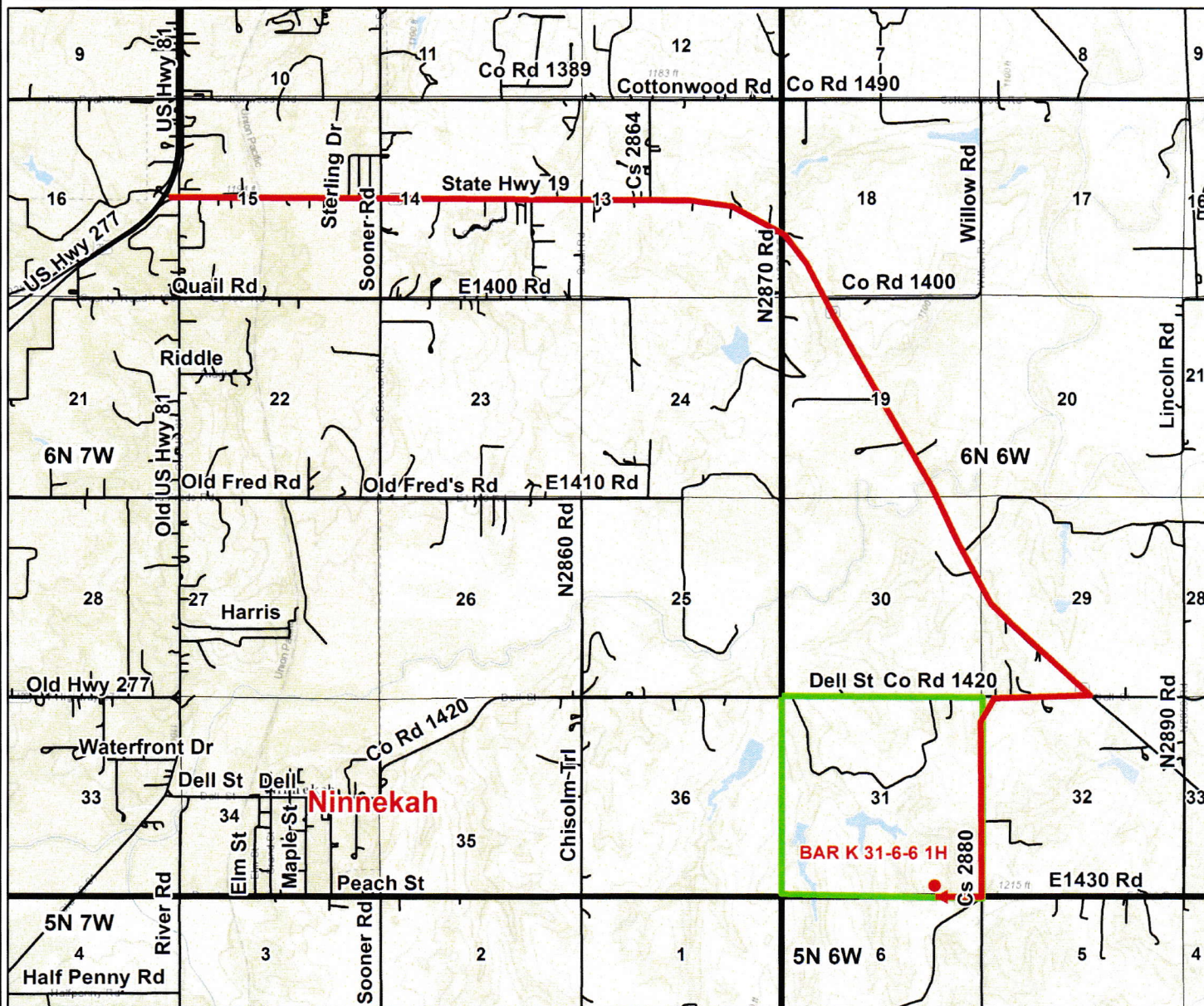
County: Grady State of Oklahoma

Ground Elevation at Surface Hole Location: 1181' (NAVD88)

Date Staked: 04/25/17



1 inch = 0.75 mile



Accessibility: From the North.

Directions: From the junction of US HWY 277 & State HWY 19 South of the town of Chickasha, OK, go 5.9 miles East/Southeast on State HWY 19, 0.5 miles West on "Dell St.", 1.0 mile South on "CS 288", then go 0.1 miles West on unnamed Lease Road to the Southeast Corner of Section 31-6N-6W.

provided by,  
Arkoma Surveying and Mapping, PLLC  
P.O. Box 238 Wilburton, OK 74578  
Ph. 918-465-5711 Fax 918-465-5030  
Certificate of Authorization No. 5348  
Expires June 30, 2018



# Apache Topographic Vicinity Map

Staked for: APACHE CORPORATION

Lease Name: BAR K 31-6-6 1H

Surface Hole Location: 290' FSL - 1210' FEL

Landing Point: 150' FSL - 350' FEL

Bottom Hole Location: 150' FNL - 350' FEL

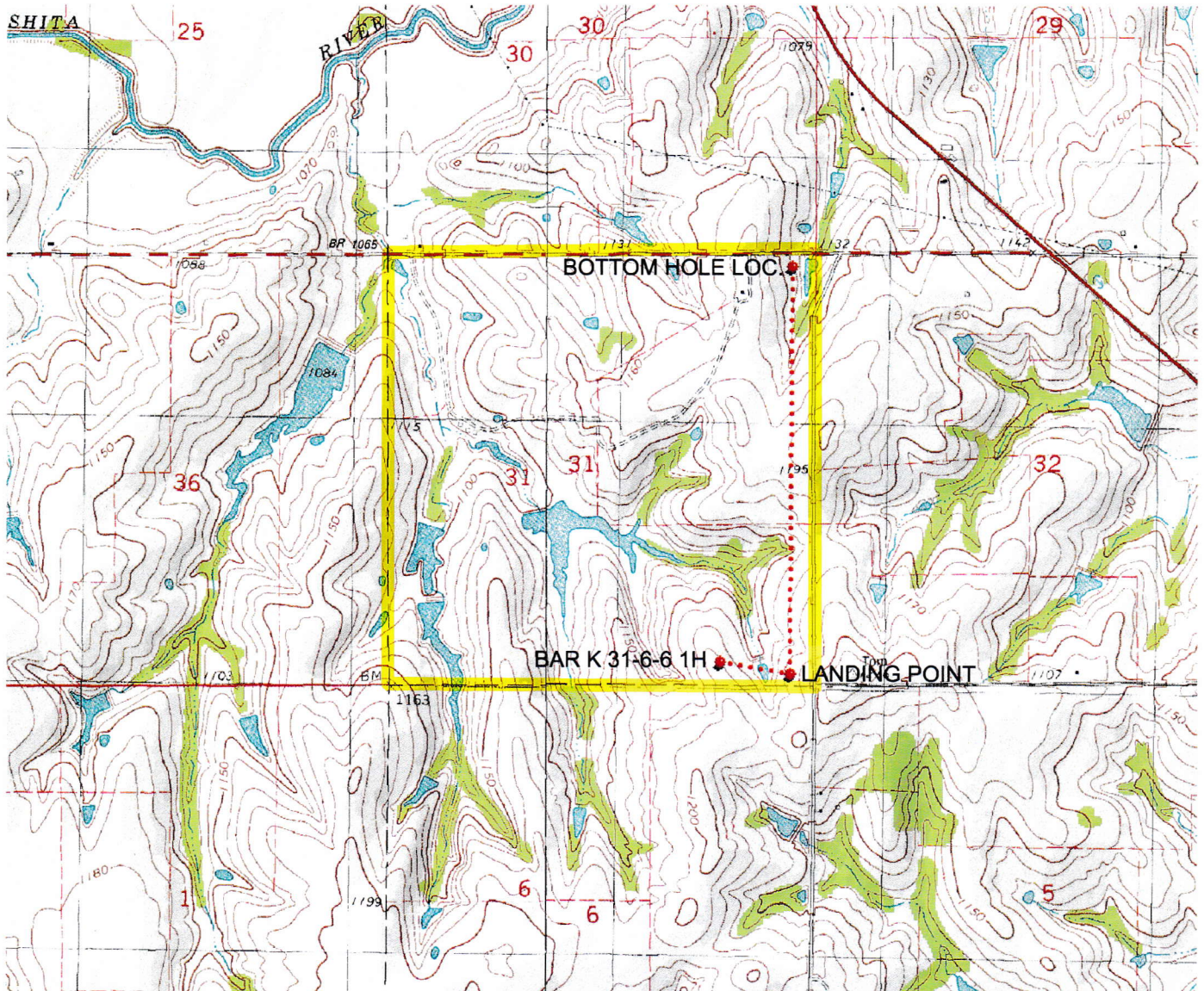
Sec. 31 Twp. 6N Rng. 6W I.M.

County: Grady State of Oklahoma

Ground Elevation at Surface Hole Location: 1181' (NAVD88)



Scale 1"= 2000'  
Contour Interval: 10'



provided by,  
**Arkoma Surveying and Mapping, PLLC**  
P.O. Box 238 Wilburton, OK 74578  
Ph. 918-465-5711 Fax 918-465-5030

Certificate of Authorization No. 5348  
Expires June 30, 2018

Date Staked: 04/25/17

The purpose of this map is to verify the location and elevation as staked on the ground and to show the surrounding Topographic features. The footage shown hereon is only as SCALED onto a U.S.G.S. Topographic Map.

Please note that this location was staked carefully on the ground under the supervision of a Licensed Professional Land Surveyor, but the accuracy of this survey is not guaranteed.

Please contact Arkoma Surveying and Mapping promptly if any inconsistency is determined.