

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

API NUMBER: 011 24185

Approval Date: 02/27/2019

Expiration Date: 08/27/2020

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 04 Twp: 19N Rge: 12W

County: BLAINE

SPOT LOCATION: ☐ SW ☐ SE ☐ SW ☐ SW

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 235 675

Lease Name: SAWTOOTH 19-12-09

Well No: 1H

Well will be 235 feet from nearest unit or lease boundary.

Operator Name: STAGHORN PETROLEUM II LLC

Telephone: 9185842558

OTC/OCC Number: 24056 0

STAGHORN PETROLEUM II LLC
1 W 3RD ST STE 1000
TULSA, OK 74103-3500

JESSE HOSKINS
ROUTE 1 BOX 171 X
LONGDALE OK 73755

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

| Name | Depth | Name | Depth |
|-----------------|-------|------|-------|
| 1 MISSISSIPPIAN | 8519 | 6 | |
| 2 | | 7 | |
| 3 | | 8 | |
| 4 | | 9 | |
| 5 | | 10 | |

Spacing Orders: 688725

Location Exception Orders: 201809953

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 14000

Ground Elevation: 1467

Surface Casing: 700

Depth to base of Treatable Water-Bearing FM: 40

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: 8000 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: 19-36173

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: FLOWERPOT

HORIZONTAL HOLE 1

Sec 09 Twp 19N Rge 12W County BLAINE

Spot Location of End Point: SE SW SW SW

Feet From: SOUTH 1/4 Section Line: 135

Feet From: WEST 1/4 Section Line: 525

Depth of Deviation: 8355

Radius of Turn: 645

Direction: 185

Total Length: 4631

Measured Total Depth: 14000

True Vertical Depth: 8579

End Point Location from Lease,
Unit, or Property Line: 135

Notes:

Category

Description

DEEP SURFACE CASING

1/25/2019 - 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

1/25/2019 - 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

1/25/2019 - 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

MEMO

1/25/2019 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

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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.

011 24185 SAWTOOTH 19-12-09 1H

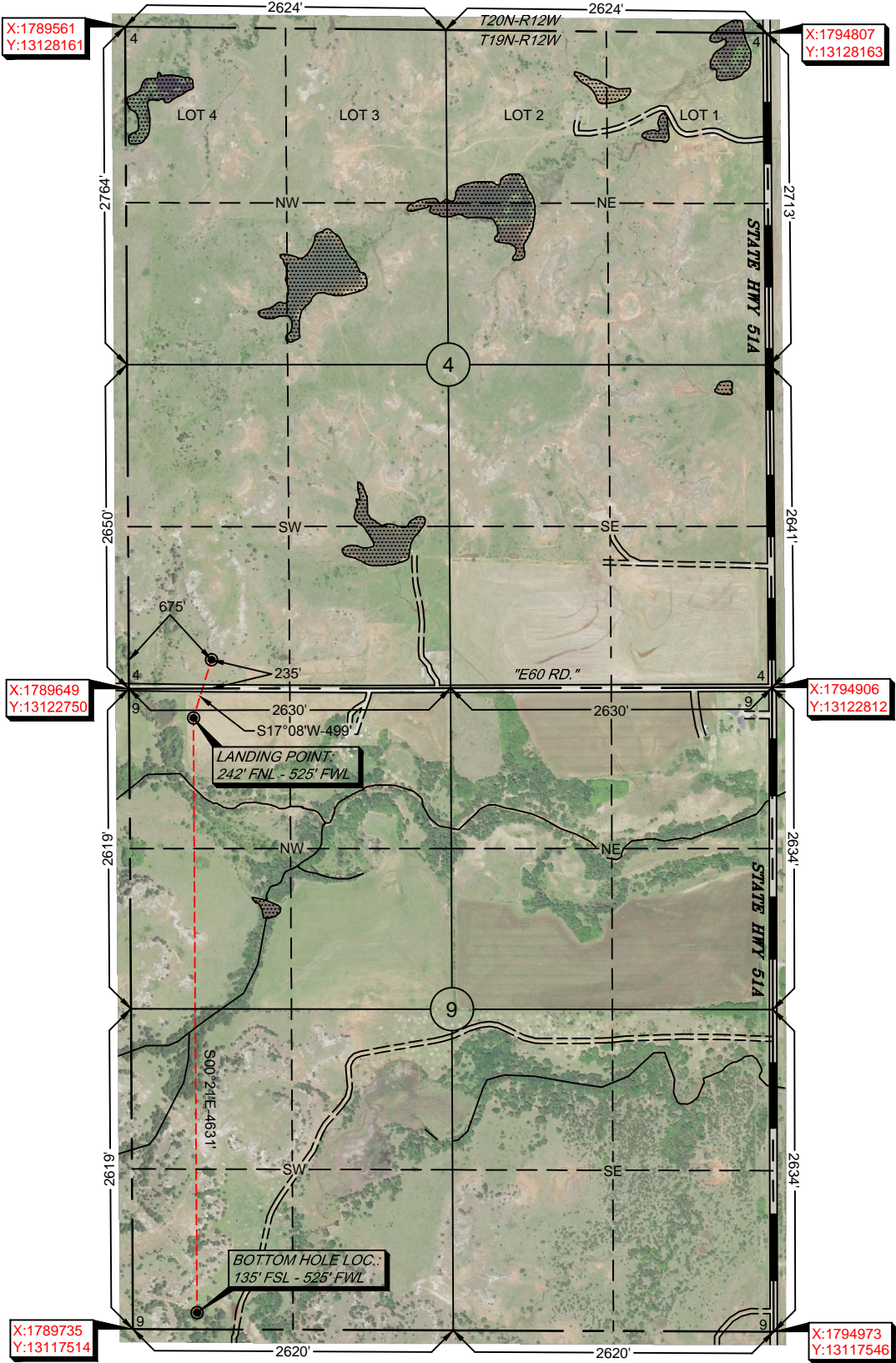
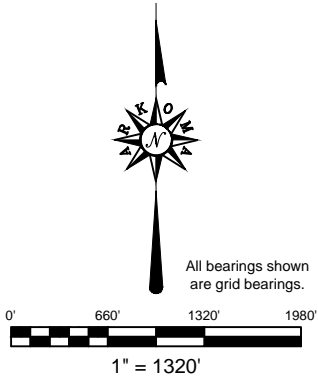
| Category | Description |
|------------------------|--|
| PENDING CD - 201809953 | 2/26/2019 - GA8 - (I.O.) 9-19N-12W X688725 MSSP COMPL. INT. NCT 165' FNL, NCT 165' FSL, NCT 330' FWL REC. 12/17/2018 (JOHNSON) |
| SPACING - 688725 | 2/26/2019 - GA8 - (640)(HOR) 9-19N-12W EST OTHER EXT 677400 MSSP, OTHERS POE TO BHL NLT 660' FB (COEXIST SP. ORDER #35526 CRUNC & ORDER #105372 MSSLM) |



Well Location Plat 35-011-24185

S.H.L. Sec. 4-19N-12W I.M.
B.H.L. Sec. 9-19N-12W I.M.

Operator: STAGHORN PETROLEUM, LLC
Lease Name and No.: SAWTOOTH 19-12-09 1H
Footage: 235' FSL - 675' FWL Gr. Elevation: 1467'
Section: 4 Township: 19N Range: 12W I.M.
County: Blaine State of Oklahoma
Terrain at Loc.: Location fell in a hilly pasture, North of an existing fence.



GPS DATUM
NAD 83
NAD 27
UTM - ZONE 14

Surface Hole Loc.:
Lat: 36°08'40.40"N
Lon: 98°29'32.96"W
Lat: 36.14451669
Lon: -98.49213206
X:1790320
Y:13122993

Landing Point:
Lat: 36°08'35.67"N
Lon: 98°29'34.72"W
Lat: 36.14320371
Lon: -98.49262200
X:1790178
Y:13122514

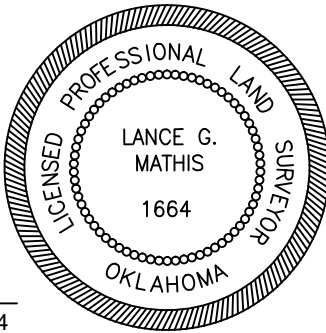
Bottom Hole Loc.:
Lat: 36°07'47.57"N
Lon: 98°29'34.06"W
Lat: 36.12984240
Lon: -98.49243599
X:1790258
Y:13117652

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

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, 2020

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 11/21/18
OK LPLS 1664



Invoice #7893-B
Date Staked: 11/16/18 By: J.W.
Date Drawn: 11/20/18 By: C.K.



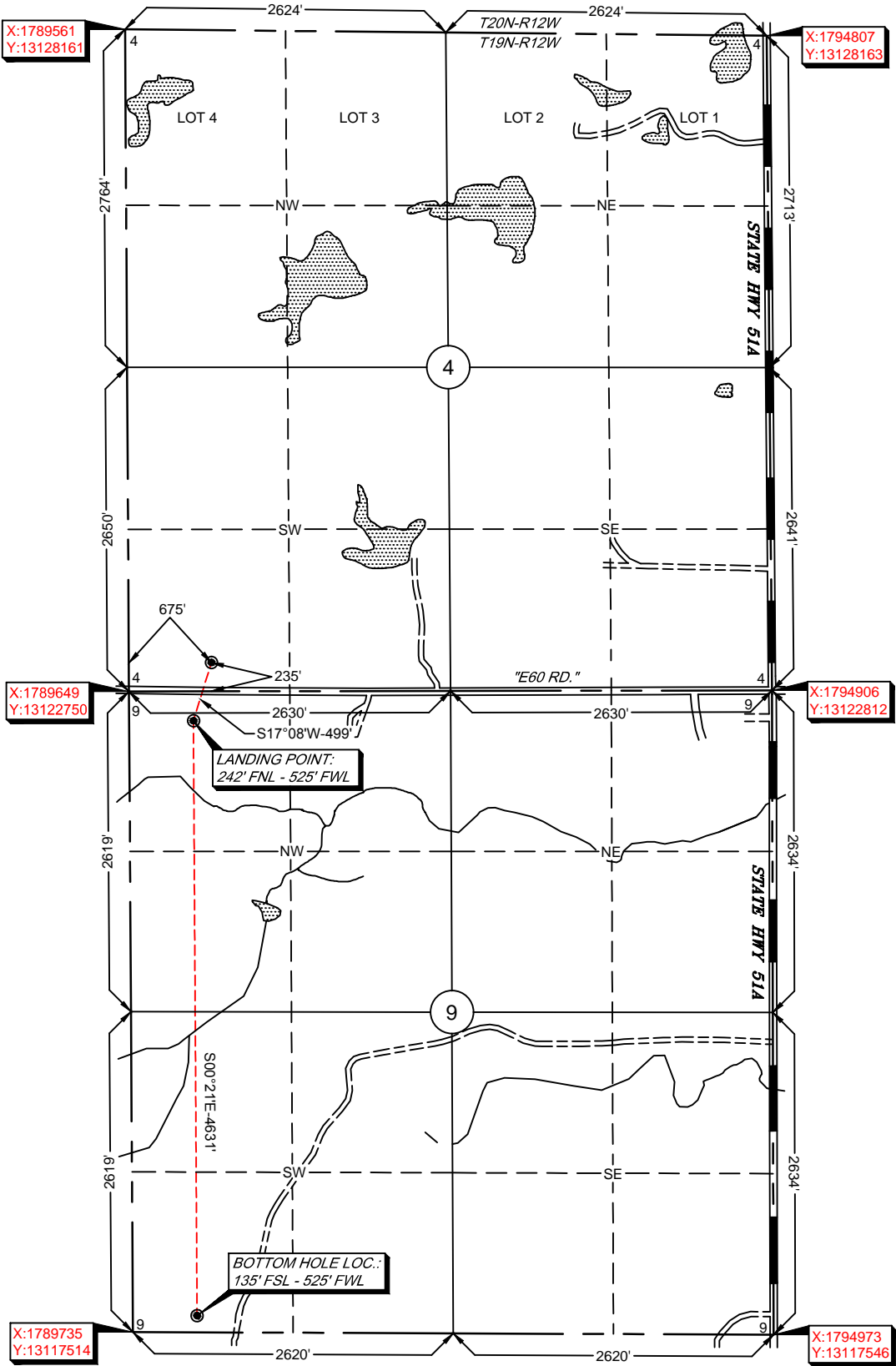
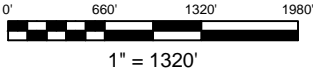
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All bearings shown
are grid bearings.



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NAD 83
NAD 27
UTM - ZONE 14

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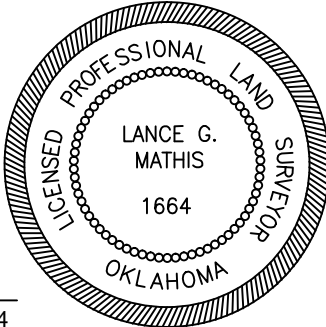
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Staghorn
PETROLEUM, LLC

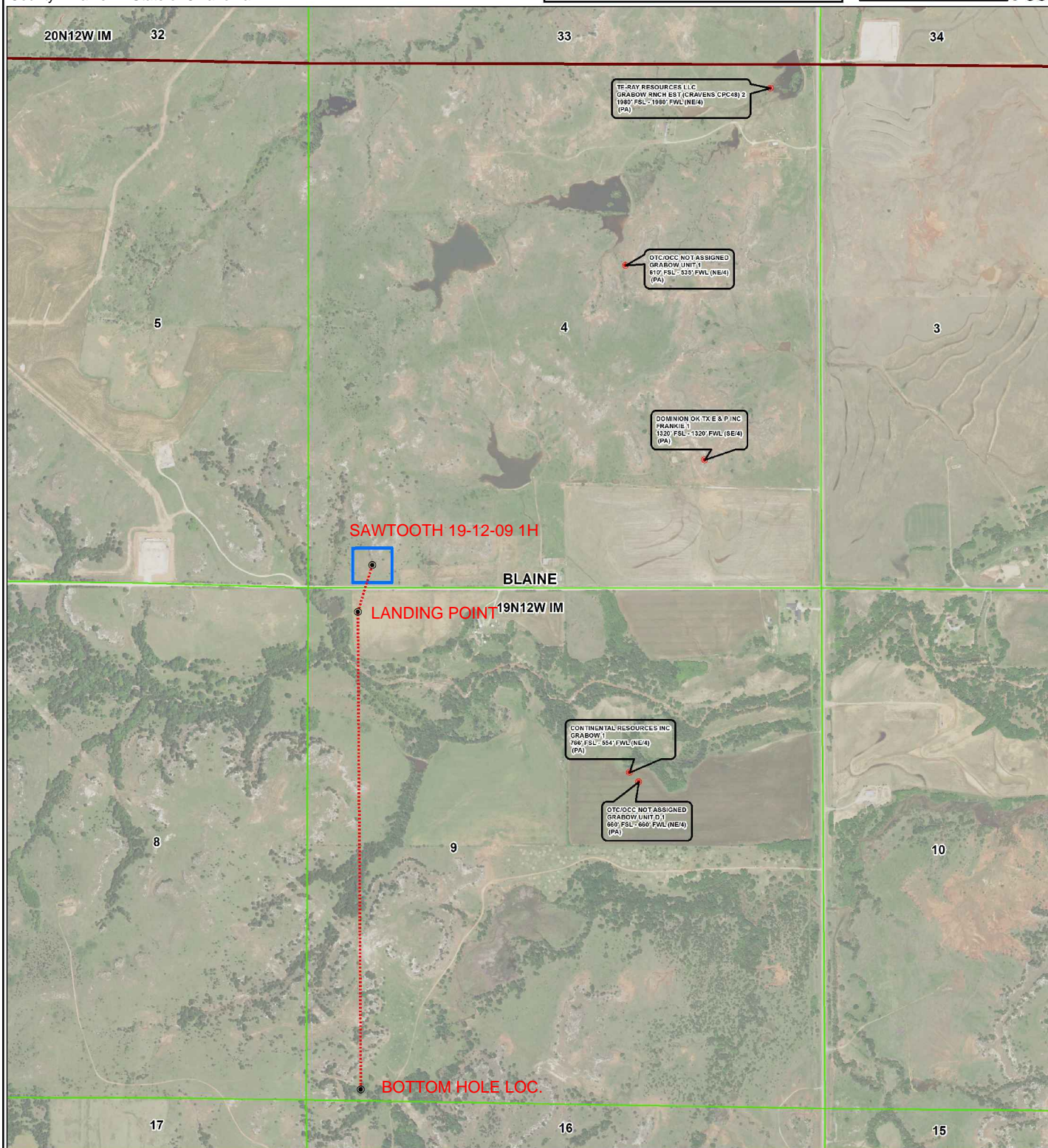
Anti-Collision

Sec. 4-19N-12W I.M.

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Landing Point: 242' FNL - 525' FWL
Bottom Hole Location: 135' FSL - 525' FWL
Sec. 9 Twp. 19N Rng. 12W I.M.
County: Blaine State of Oklahoma



0 750 1,500
Feet





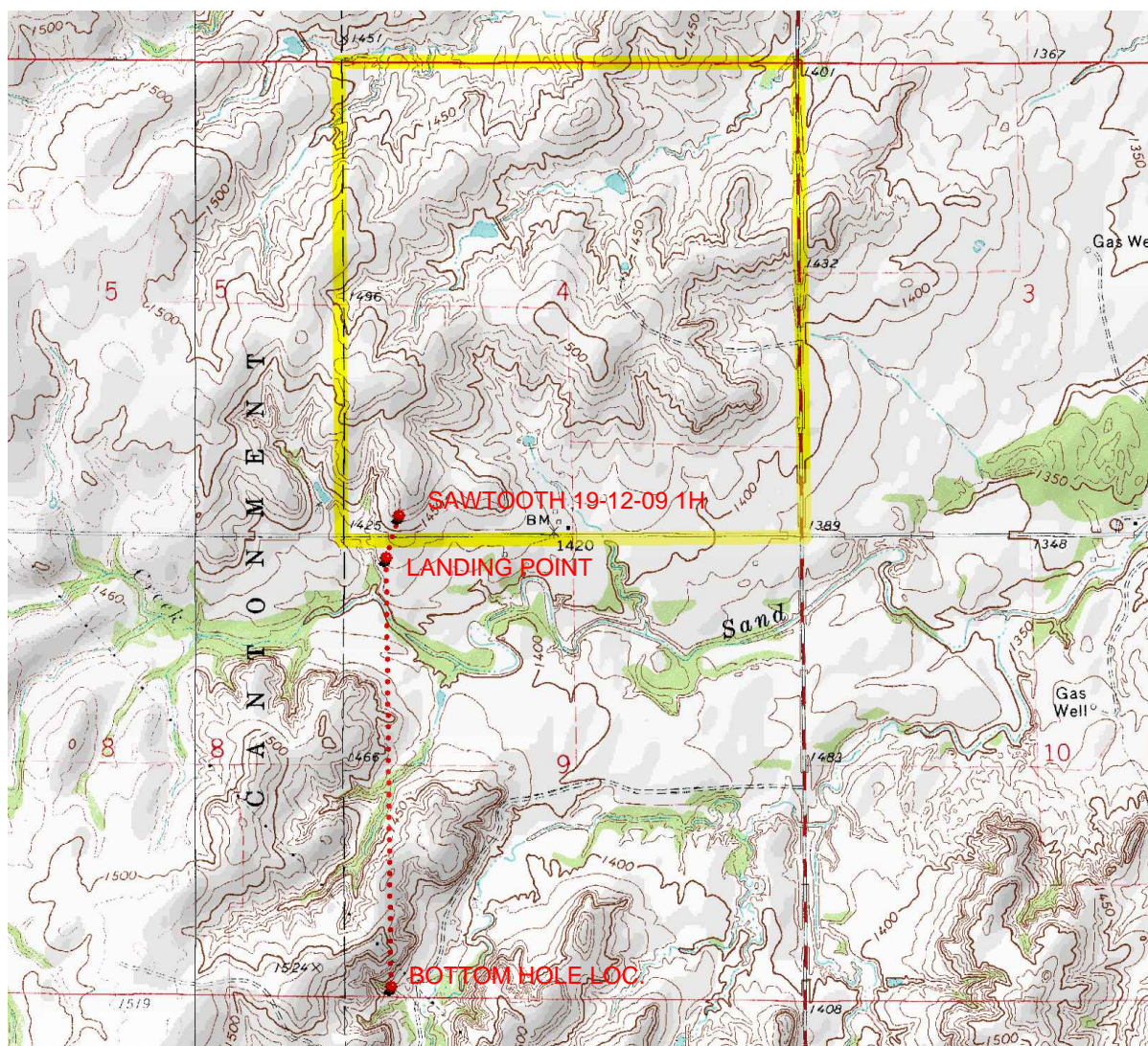
Topographic Vicinity Map

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Scale 1" = 2000'
Contour Interval: 10'

Ground Elevation at Surface Hole Location: 1467'



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Date Staked: 11/16/18

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.

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Staghorn
PETROLEUM, LLC

 $\rho = 0.7$

1 inch = 0.75 mile

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