

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

API NUMBER: 093 25165

Approval Date: 09/25/2018

Expiration Date: 03/25/2020

Horizontal Hole

Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 23 Twp: 20N Rge: 13W

County: MAJOR

SPOT LOCATION:

FEET FROM QUARTER: FROM SOUTH FROM EAST

SECTION LINES: 210 225

Lease Name: JACK

Well No: 20-13-23 1H

Well will be 210 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

KECK FAMILY REVOCABLE TRUST

1202 WINCHESTER AVENUE

ENID OK 73703

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	8441	6	
2	WOODFORD	9098	7	
3			8	
4			9	
5			10	

Spacing Orders: 670976

Location Exception Orders: 673286

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 13400

Ground Elevation: 1518

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 220

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: 5000

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: DOG CREEK

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

PERMIT NO: 18-35323

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: DOG CREEK

HORIZONTAL HOLE 1

Sec 23 Twp 20N Rge 13W County MAJOR

Spot Location of End Point: NW NE NE NE

Feet From: NORTH 1/4 Section Line: 135

Feet From: EAST 1/4 Section Line: 525

Depth of Deviation: 8055

Radius of Turn: 483

Direction: 359

Total Length: 4585

Measured Total Depth: 13400

True Vertical Depth: 9098

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

Notes:

Category

Description

DEEP SURFACE CASING

9/6/2018 - 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

9/6/2018 - 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

9/6/2018 - 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

LOCATION EXCEPTION - 673286

9/25/2018 - G57 - (I.O.) 23-20N-13W
X670976 MSSP, WDFD
COMPL. INT. NCT 165' FSL, NCT 165' FNL, NCT 330' FEL
STAGHORN PETROLEUM II, LLC.
2-7-2018

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

093 25165 JACK 20-13-23 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
MEMO	9/6/2018 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT
SPACING - 670976	9/25/2018 - G57 - (640)(HOR) 23-20N-13W EXT 667175 MSSP, WDFD EST OTHER POE TO BHL(MSSP) NLT 660' FB POE TO BHL(WDFD) NLT 165' FNL & FSL, NLT 330' FEL & FWL (COEXIST W/ SP. ORDER 148245 UNCCR)



Well Location Plat

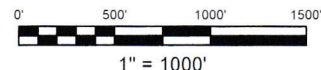
Sec. 23-20N-13W I.M.

Operator: STAGHORN PETROLEUM, LLC
 Lease Name and No.: JACK 20-13-23 1H
 Footage: 210' FSL - 225' FEL Gr. Elevation: 1518'
 Section: 23 Township: 20N Range: 13W I.M.
 County: Major State of Oklahoma
 Terrain at Loc.: Location fell in flat pasture at the top of a ridge.

API:093 25165



All bearings shown
are grid bearings.



GPS DATUM

NAD 83

NAD 27

UTM - ZONE 14

Surface Hole Loc.:

Lat: 36°11'18.10"N

Lon: 98°32'54.73"W

Lat: 36.18832316

Lon: -98.54817786

X: 1773703

Y: 13138852

Landing Point:

Lat: 36°11'20.86"N

Lon: 98°32'58.40"W

Lat: 36.18908923

Lon: -98.54919535

X: 1773401

Y: 13139130

Bottom Hole Loc.:

Lat: 36°12'06.49"N

Lon: 98°32'58.45"W

Lat: 36.20176623

Lon: -98.54920893

X: 1773376

Y: 13143743



-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.
 -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

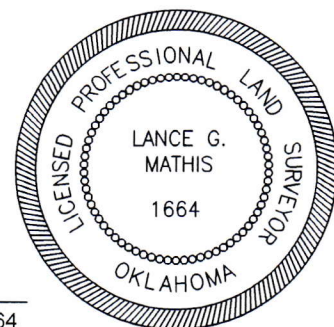
Certification:

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
 LANCE G. MATHIS

09/11/18

OK LPLS 1664



Invoice #7056-B

Date Staked: 09/04/18 By: R.L.

Date Drawn: 09/06/18 By: J.H.



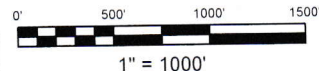
Well Location Plat

Sec. 23-20N-13W I.M.

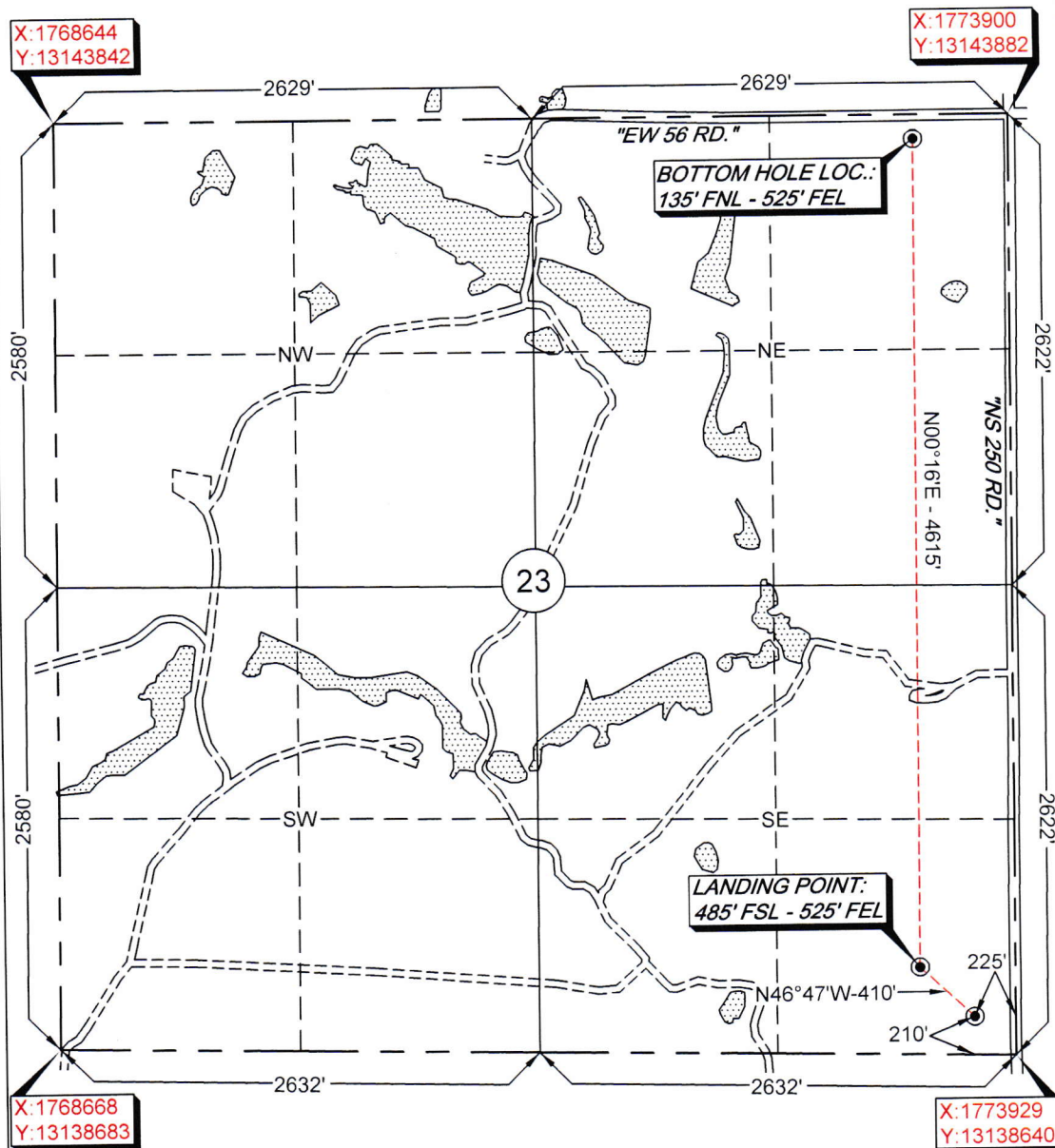
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 UTM - ZONE 14



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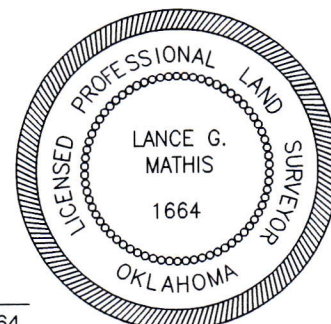
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Lance G. Mathis
 LANCE G. MATHIS

09/11/18

OK LPLS 1664



Invoice #7056-B

Date Staked: 09/04/18 By: R.L.
 Date Drawn: 09/06/18 By: J.H.

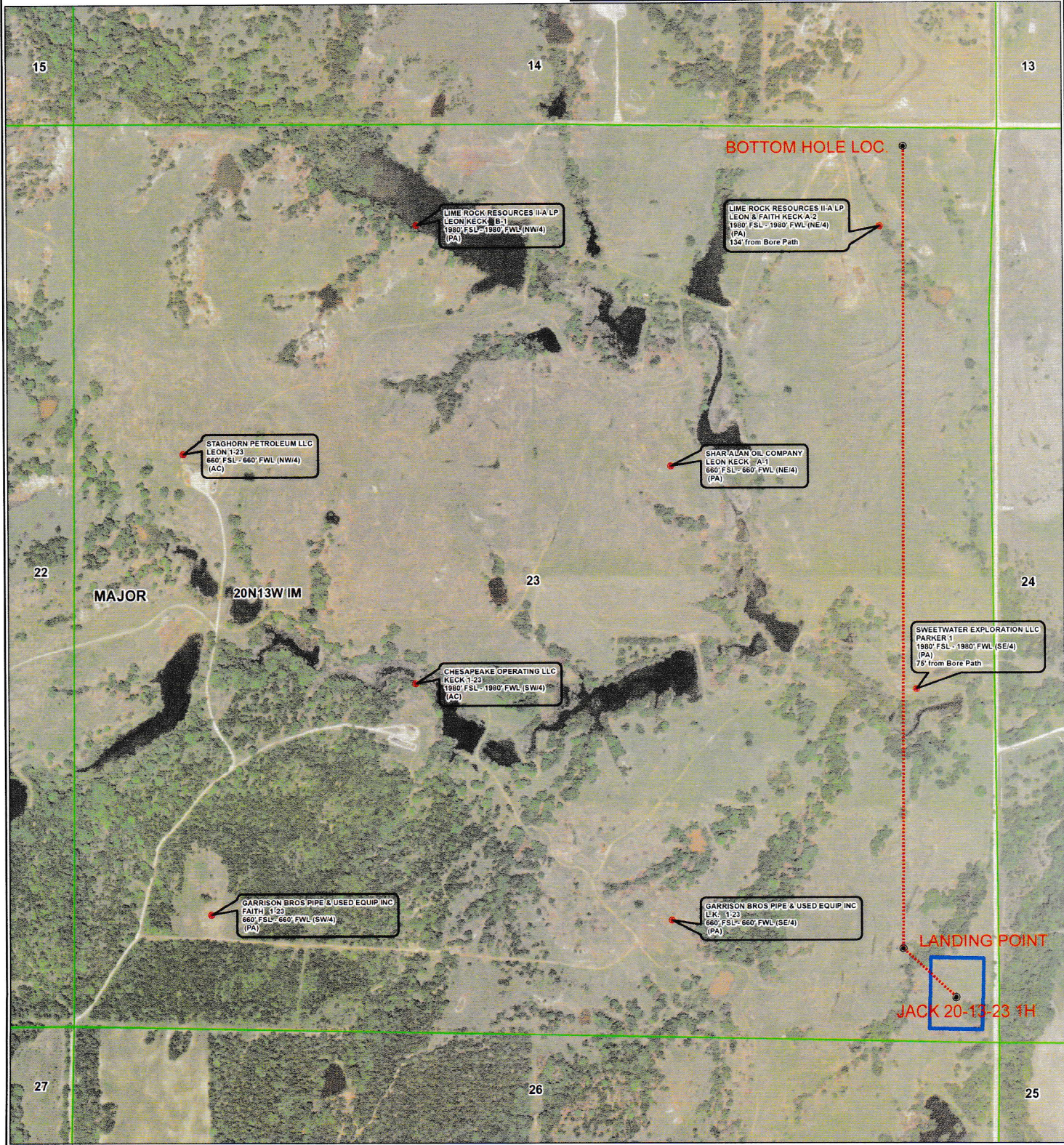
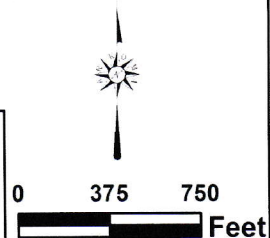


Anti-Collision

Sec. 23-20N-13W I.M.

Operator: STAGHORN PETROLEUM, LLC
Lease Name and No.: JACK 20-13-23 1H
Surface Hole Location: 210' FSL - 225' FEL
Landing Point: 485' FSL - 525' FEL
Bottom Hole Location: 135' FNL - 525' FEL
Sec. 23 Twp. 20N Rng. 13W I.M.
County: Major State of Oklahoma

● SHL, LP, & BHL	Counties
..... Bore Path	Township-Range
■ Pad	Sections
● OCC Wells	



County Highway Vicinity Map

Job #: 7056-B

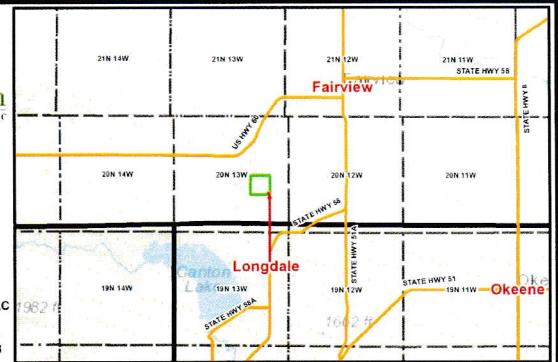
Operator: STAGHORN PETROLEUM, LLC

Lease Name and No.: JACK 20-13-23 1H



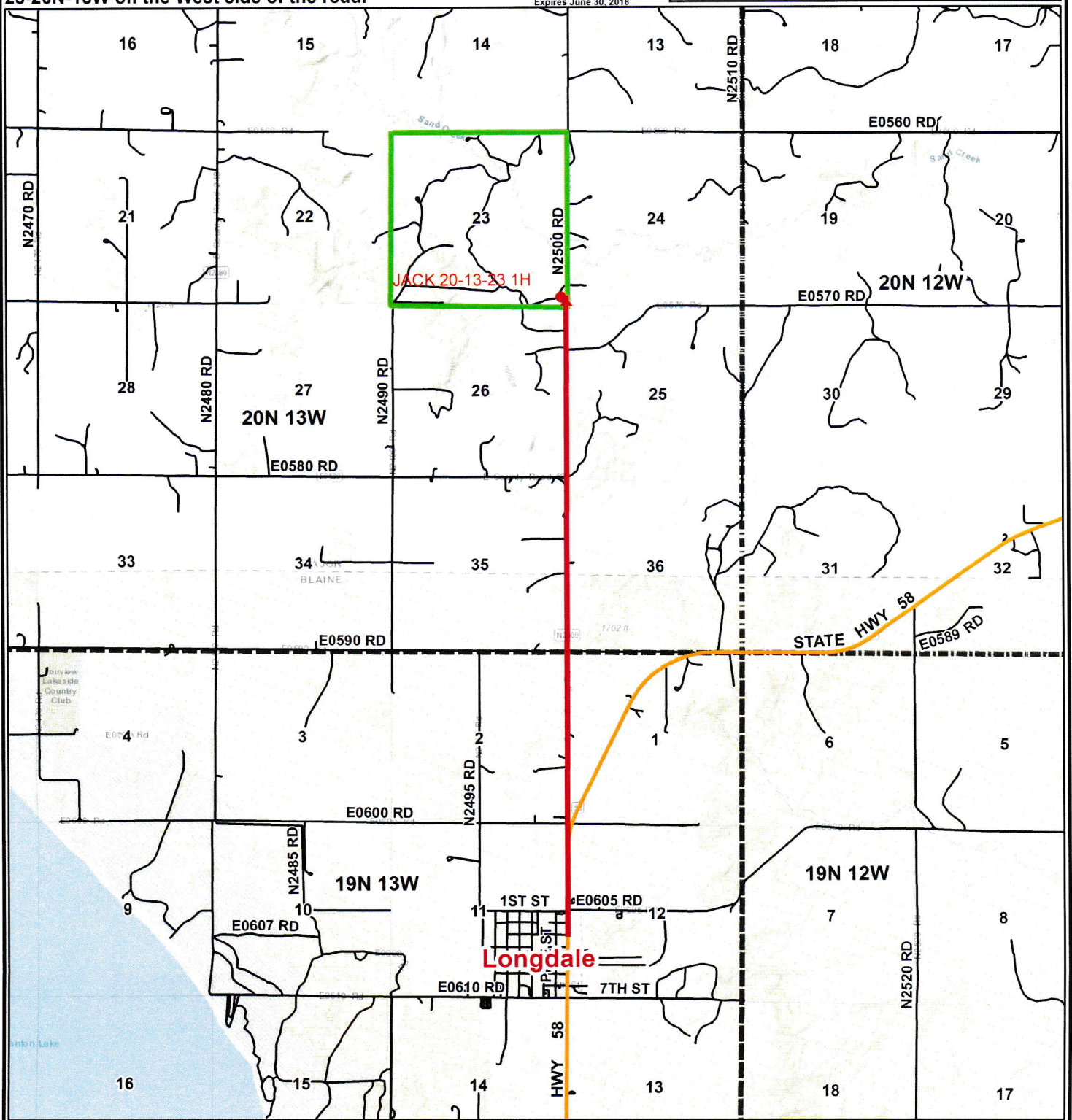
1 inch = 0.75 mile

provided by:
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Accessibility: From the South.

Directions: From the junction of "Main St" & State HWY 58 in the town of Longdale, OK, go 0.5 miles North on State HWY 58, then continue 3.1 miles North on "NS 250 RD." to the Southeast Quarter of Section 23-20N-13W on the West side of the road.





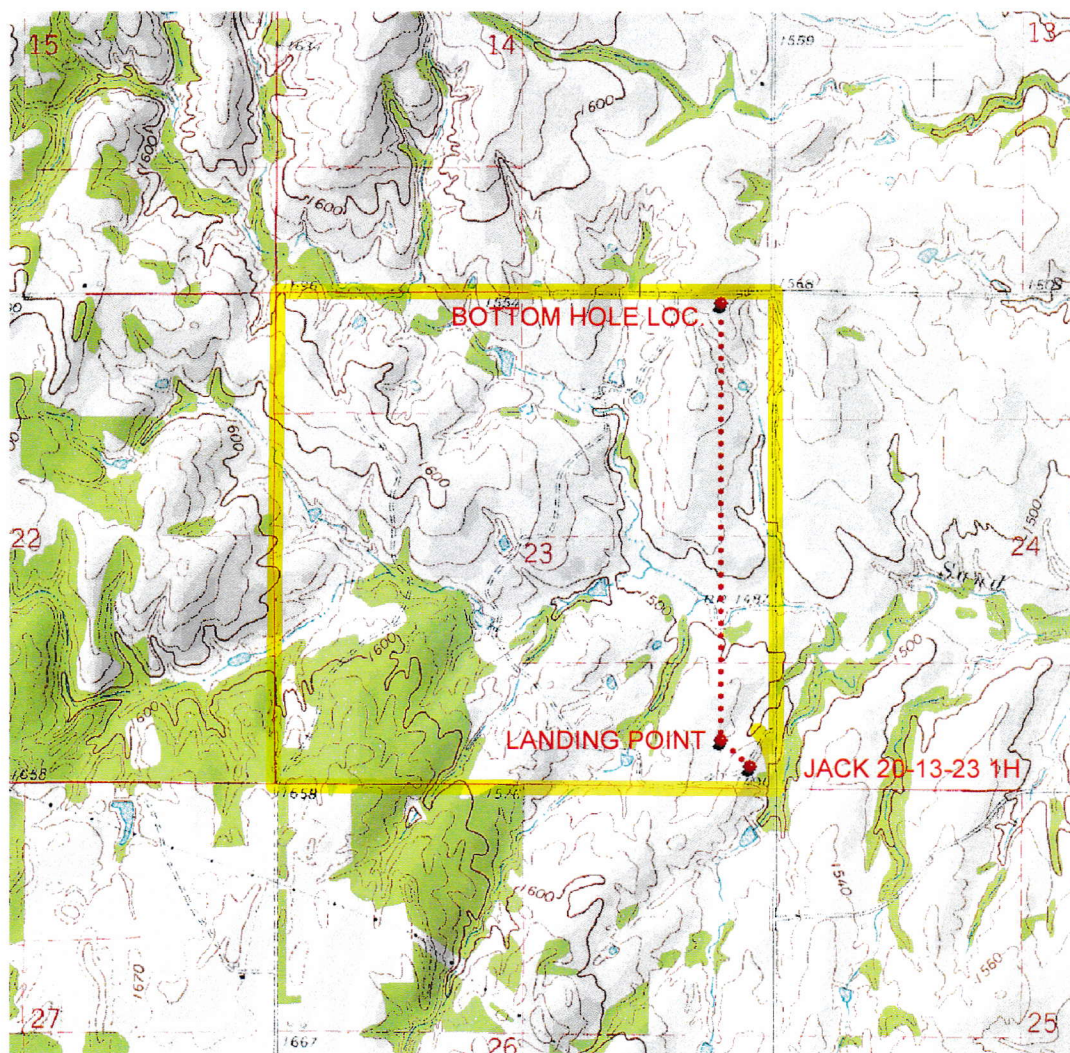
Topographic Vicinity Map

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Sec. 23 Twp. 20N Rng. 13W I.M.
County: Major State of Oklahoma



Ground Elevation at Surface Hole Location: 1518'

Scale 1" = 2000'
Contour Interval: 10'



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Date Staked: 09/04/18

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.

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