

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

API NUMBER: 083 24439

Approval Date: 10/17/2018

Expiration Date: 04/17/2020

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 23 Twp: 19N Rge: 4W

County: LOGAN

SPOT LOCATION: ☐ NE ☐ SE ☐ SE ☐ SW

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 348 2429

Lease Name: BEARTOOTH 23-19N-4W

Well No: 1MH

Well will be 348 feet from nearest unit or lease boundary.

Operator Name: WHITE STAR PETROLEUM LLC

Telephone: 4052525821; 8444024

OTC/OCC Number: 23358 0

WHITE STAR PETROLEUM LLC
PO BOX 13360
OKLAHOMA CITY, OK 73113-1360

M5 LAND, LLC
31535 CR 27
GREELEY CO 80631

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

Name	Depth	Name	Depth
1 MISSISSIPPIAN	5677	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 590649

Location Exception Orders: 681442

Increased Density Orders: 679302

Pending CD Numbers:

Special Orders:

Total Depth: 11000

Ground Elevation: 1030

Surface Casing: 590

Depth to base of Treatable Water-Bearing FM: 340

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: 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 located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is BED AQUIFER

Pit Location Formation: GARBER

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

PERMIT NO: 18-35393

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 23 Twp 19N Rge 4W County LOGAN

Spot Location of End Point: N2 N2 N2 N2

Feet From: NORTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 2640

Depth of Deviation: 5113

Radius of Turn: 587

Direction: 3

Total Length: 4965

Measured Total Depth: 11000

True Vertical Depth: 5863

End Point Location from Lease,
Unit, or Property Line: 165

Notes:

Category

Description

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

INCREASED DENSITY - 679302

10/16/2018 - G58 - 23-19N-4W
X590649 MSSP
1 WELL
WHITE STAR PETROLEUM
6/15/2018

LOCATION EXCEPTION - 681442

10/16/2018 - G58 - (I.O.) 23-19N-4W
X590649 MSSP
COMPL. INT. NCT 165' FNL, NCT 165' FSL, NCT 1980' FWL
WHITE STAR PETROLEUM, LLC
8/14/2018

SPACING - 590649

10/16/2018 - G58 - (640)(HOR) 23-19N-4W
EST MSSP, OTHERS
POE TO BHL NLT 660' FB,
(SUPERSEDE SP. 122035 MSSLM)

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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.

083 24439 BEARTOOTH 23-19N-4W 1MH

TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

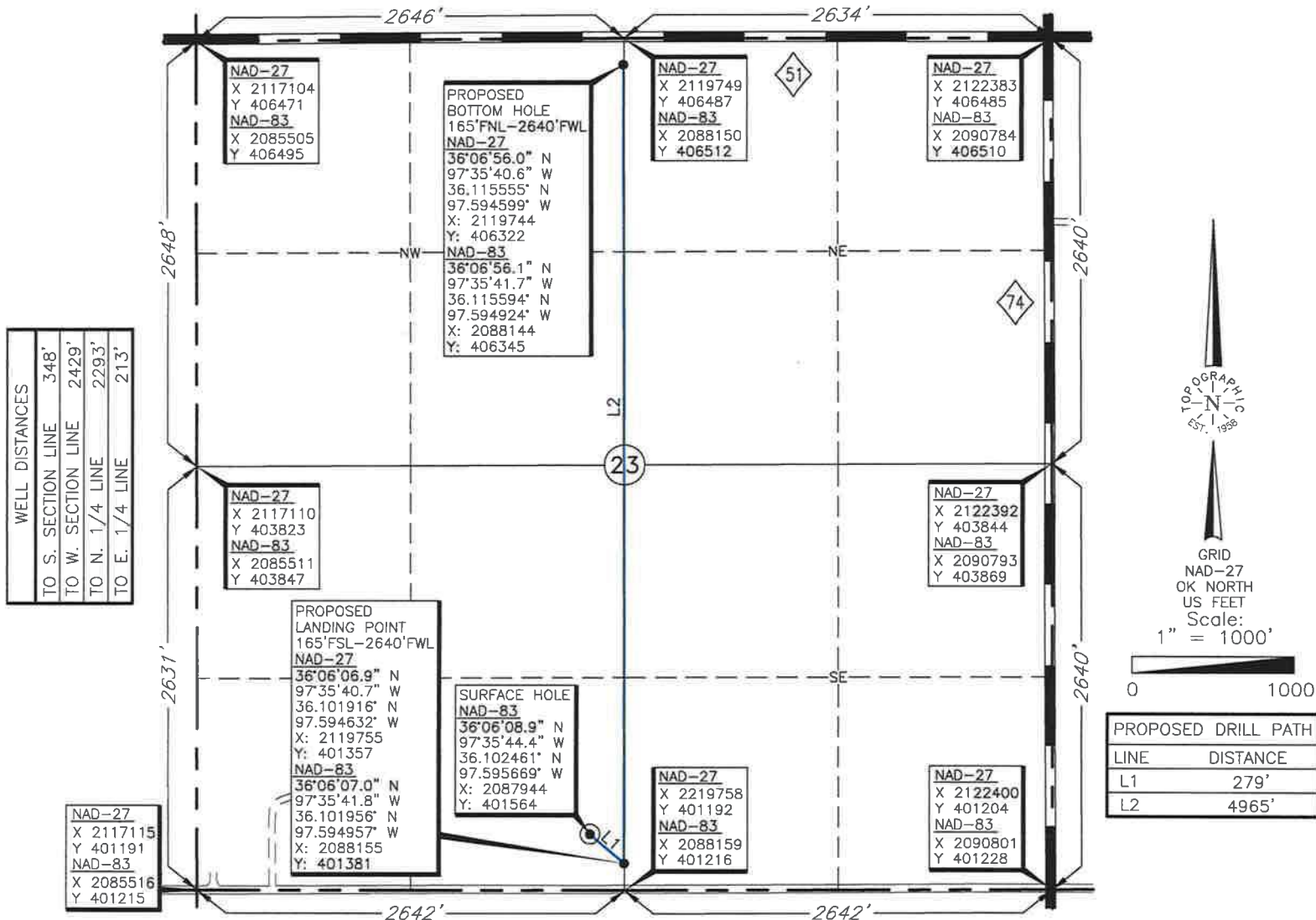
13800 WIRELESS WAY, OKLA. CITY, OKLA. 73134 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219
Certificate of Authorization No. 1293 LS

LOGAN

County, Oklahoma

083-24439

348'FSL-2429'FWL Section 23 Township 19N Range 4W I.M.



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

THE INFORMATION SHOWN HEREIN IS FOR CONSTRUCTION PURPOSES ONLY.

Operator: WHITE STAR PETROLEUM

Lease Name: BEARTOOTH 23-19N-4W

Well No.: 1MH

ELEVATION:

1030' Gr. at Stake

Topography & Vegetation Location fell in plowed field

Good Drill Site? Yes Reference Stakes or Alternate Location Stakes Set None

Best Accessibility to Location From South off county road

Distance & Direction from Hwy Jct or Town From the junction of St. Hwy 74 & St. Hwy 51, go ±1 mile South on St. Hwy 74, then ±0.5 mile West to the South Quarter Corner of Section 23, T19N-R4W.

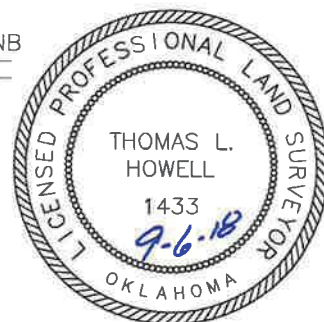
DATUM: NAD-27 Date of Drawing: Aug. 31, 2018
LAT: 36°06'08.7" N Invoice # 293415 Date Staked: Aug. 29, 2018 NB
LONG: 97°35'43.2" W
LAT: 36.102421° N
LONG: 97.595344° W

STATE PLANE COORDINATES (US FEET):
ZONE: OK NORTH
X: 2119544
Y: 401540

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 Reg. No. 1433



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