API NUMBER: 083 24419

Oil & Gas

Horizontal Hole

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

Approval Date: 02/05/2018
Expiration Date: 08/05/2018

PERMIT TO DRILL

WELL LOCATION: Sec: 22 Twp: 19N Rge: 4W County: LOGAN

SPOT LOCATION: SE SE SE SW FEET FROM QUARTER: FROM SOUTH FROM WEST SECTION LINES: 267 2455

Lease Name: DENALI 22-19N-4W Well No: 1MH Well will be 267 feet from nearest unit or lease boundary.

Operator WHITE STAR PETROLEUM LLC Telephone: 4052525821; 8444024 OTC/OCC Number: 23358 0

WHITE STAR PETROLEUM LLC

PO BOX 13360

OKLAHOMA CITY, OK 73113-1360

MATHESON FARMS 1430 S. LYNN LANE RD

TULSA OK 74108

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

Name Depth Name Depth MISSISSIPPIAN 1 5676 6 2 7 3 8 4 9 5 10 607771 Spacing Orders: Location Exception Orders: Increased Density Orders:

Pending CD Numbers: 201800121 Special Orders:

201800120

Total Depth: 11000 Ground Elevation: 1004 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: 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?  $\quad Y$ 

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: 18-33715

H. CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST

## **HORIZONTAL HOLE 1**

LOGAN Sec 22 Twp 19N Rge 4W County Spot Location of End Point: NW NW NE NΙ\Λ Feet From: NORTH 1/4 Section Line: 165 Feet From: WEST 1/4 Section Line: 1360

Depth of Deviation: 5143
Radius of Turn: 573
Direction: 350
Total Length: 4957

Measured Total Depth: 11000

True Vertical Depth: 5848

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

Notes:

Category Description

HYDRAULIC FRACTURING 1/26/2018 - 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

PENDING CD - 201800120 1/30/2018 - G57 - (I.O.) 22-19N-4W

X607771 MSSP 2 WELLS NO OP. NAMED

REC 1-30-2018 (MINMIER)

PENDING CD - 201800121 1/30/2018 - G57 - (I.O.) 22-19N-4W

X607771 MSSP

COMPL. INT. NCT 165' FSL, NCT 165' FNL, NCT 660' FWL

NO OP. NAMED

**REC 1-30-2018 (MINMIER)** 

SPACING - 607771 1/30/2018 - G57 - (640)(HOR) 22-19N-4W

EXT 591961 MSSP, OTHERS POE TO BHL NCT 660' FB

(SUPERSEDE NON-PRODUCING NON-HORIZONTAL SPACING UNITS; COEXIST WITH

PRODUCING NON-HORIZONTAL SPACING UNITS)

