API NUMBER: 153 23642

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: 02/28/2019
Expiration Date: 08/28/2020

PERMIT TO DRILL

WELL LOCATION: Sec: 33 Twp: 20N Rge: 17W County: WOODWARD

SPOT LOCATION: NE NW NE NE FEET FROM QUARTER: FROM NORTH FROM EAST

SECTION LINES: 165 880

Lease Name: ROGERS TRUST 28-20-17 Well No: 1H Well will be 165 feet from nearest unit or lease boundary.

Operator TAPSTONE ENERGY LLC Telephone: 4057021600 OTC/OCC Number: 23467 0

TAPSTONE ENERGY LLC

100 E MAIN ST

OKLAHOMA CITY, OK 73104-2509

KAREN T. ROGERS, TRUSTEE

2028 ARTHUR DRIVE

MANHATTAN KS 66502

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

Depth Name Depth MISSISSIPPIAN (LESS CHESTER) 1 10500 6 2 7 3 8 4 9 10 667607 Spacing Orders: Location Exception Orders: Increased Density Orders:

Total Depth: 15500 Ground Elevation: 1806 Surface Casing: 1500 Depth to base of Treatable Water-Bearing FM: 80

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

201810256

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? $\quad \mbox{Y}$

Within 1 mile of municipal water well? N
Wellhead Protection Area? N

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: C

Pending CD Numbers:

Liner not required for Category: C
Pit Location is BED AQUIFER

Pit Location Formation: RUSH SPRINGS

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 19-36147

Special Orders:

H. SEE MEMO

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 located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C
Pit Location is BED AQUIFER

Pit Location Formation: RUSH SPRINGS

HORIZONTAL HOLE 1

Sec 28 Twp 20N Rge 17W County WOODWARD

Spot Location of End Point: NE NW NE NE Feet From: NORTH 1/4 Section Line: 165
Feet From: EAST 1/4 Section Line: 880

Depth of Deviation: 9986 Radius of Turn: 477 Direction: 360

Total Length: 4765

Measured Total Depth: 15500

True Vertical Depth: 10500

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

Notes:

Category Description

DEEP SURFACE CASING 1/28/2019 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY FOR ANY LOSS

OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON CONDUCTOR OR

SURFACE CASING

HYDRAULIC FRACTURING 1/28/2019 - 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 1/28/2019 - 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 1/28/2019 - G71 - PIT 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST; PIT 2 -

OBM TO VENDOR, OBM CUTTINGS PER DISTRICT

Category Description

2/28/2019 - G75 - (I.O.) 28-20N-17W PENDING CD - 201810256

X667607 MSNLC

X165:10-3-28(C)(2)(B) MAY BE CLOSER THAN 600' TO EXISTING/PROPOSED WELL COMPL. INT. NCT 150' FSL, NCT 150' FNL, NCT 330' FEL

NO OP. NAMED

REC 12-31-2018 (FOREMAN)

2/28/2019 - G75 - (640)(HOR) 28-20N-17W **SPACING - 667607**

VAC 129845 STGV, STLS, SPWR, OSGE

EST MSNLC

COMPL. INT. NLT 660' FB

TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

13800 Wireless Way, Okla. City, OK. 73134 (405) 843–4847 * OUT OF STATE (800) 654–3219

Certificate of Authorization No. 1293 LS API 153-23642 County, Oklahoma
20N Range WOODWARD 17W_I.M. - 880'FEL 33 _ Section Township X 1702244 Y 433863 X 1697007 Y 433961 information construction purposes 880 X 1699626 Y 433912 1739 shown herein is purposes ONLY. 2468 BOTTOM HOLE 165'FNL-880'FEL NAD-27 (US Feet) 36'11'14.0" N 99'00'43.2" W 36.187218268 N 99.011997763 W X=1701363 Y=433715 GRID PATH or OK NORTH US Feet ORILL 1000 X 1696984 Y 431316 (28 PROPOSED X 1702225 Y 431232 Best Accessibility to Loc Distance & Direction from Hwy Jct or Town __ US Hwy. 270, then ±1. Operator: TAPSTONE Good Copography Drill Site? 80 ROGERS then Vegetation LANDING POINT 335 FSL-879 FEL NAD-27 (US Feet) 36 10 26.9" N 99 00 43.0" W 36.174127079 N 99.011945699 W X=1701329 Y=428950 ENERGY Location ±1.0 mi. TRUST Yes From Loc. 28-20-17 South X 1696961 Y 428676 X 1699589 Y 428639 € X 1702206 Y 428602 Jct. ≥. >165 S ō terraced the Hwy. 880 Reference Stakes of Stakes Set None K off 183 South and wheat Cor. county of field road Sec. E-2470 q 33-T20N-R17W SN We∥ Alternate Location Hwy. No.: 270, 로 go X 1696948 Y 426034 X 1702199 Y 425969 ± 3.0 ELEVATION: 806' Gr. at Stake ∄. LOT 1 LOT 3 LOT 2 LOT 4 Z V g County WOODWARD CO. SOUTH BOUNDARY CHEROKEE OUTLET DEWEY CO. LOT 8 LOT 7 LOT 5 X 1699563 Y 423363 X 1696936 Y 423391 X 1702193 Y 423336 T20N - K. Township Line-P R17W LANDING POINT, BOTTOM HOLE AND DRILL PATH INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED. Date of Drawing: Nov. 26, 2018 Invoice # 306883 Date Staked: Nov. 15, 2018 AC ESS I ONAL NAD-27 DATUM:_ was receiver accuracy. LAT: 36'10'21.9"N LONG: 99'00'43.0"W **CERTIFICATE:** LAT: 36.172753533° ı, Thomas L. Howell __an Oklahoma Licensed Land Surveyor and an authorized agent of Topographic Land Surveyors of Oklahoma, do hereby certify to the Thomas L. Howell THOMAS L LONG: 99.011940237' W HOWELL STATE PLANE 1433 COORDINATES: (US Feet) information shown herein ZONE: OK NORTH X: 1701325 OKLAHOMA 428450 Oklahoma Lic. No. _