

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

API NUMBER: 011 24173

Approval Date: 02/07/2019

Expiration Date: 08/07/2020

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 29 Twp: 15N Rge: 10W

County: BLAINE

SPOT LOCATION: ☐ SW ☐ NE ☐ NE ☐ NE

FEET FROM QUARTER: FROM NORTH FROM EAST

SECTION LINES: 360 345

Lease Name: HAMMERHEAD BIA 20-15N-10W

Well No: 5MH

Well will be 345 feet from nearest unit or lease boundary.

Operator Name: PALOMA OPERATING CO INC

Telephone: 7136508509

OTC/OCC Number: 23932 0

PALOMA OPERATING CO INC
1100 LOUISIANA ST STE 5100
HOUSTON, TX 77002-5220

JOHN D SCHULTE
PO BOX 246
OKARCHE OK 73762

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	10032	6	
2			7	
3			8	
4			9	
5			10	

Spacing Orders: 648300
660911

Location Exception Orders:

Increased Density Orders: 684007

Pending CD Numbers: 201810656

Special Orders:

Total Depth: 16555

Ground Elevation: 1517

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 90

Under Federal Jurisdiction: Yes

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: 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 located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is AP/TE DEPOSIT

Pit Location Formation: TERRACE

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 18-35172

G. Haul to recycling/re-use facility: Sec. 22 Twn. 16N Rng. 9W Cnty. 73 Order No: 647741

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 located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is AP/TE DEPOSIT

Pit Location Formation: TERRACE

HORIZONTAL HOLE 1

Sec 20 Twp 15N Rge 10W County BLAINE

Spot Location of End Point: NW NW NE NE

Feet From: NORTH 1/4 Section Line: 65

Feet From: EAST 1/4 Section Line: 1115

Depth of Deviation: 10749

Radius of Turn: 477

Direction: 355

Total Length: 5057

Measured Total Depth: 16555

True Vertical Depth: 11011

End Point Location from Lease,
Unit, or Property Line: 65

Notes:

Category

Description

DEEP SURFACE CASING

2/6/2019 - 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

2/6/2019 - 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

INCREASED DENSITY - 684007

2/7/2019 - G58 - 20-15N-10W
X648300 MSSP
6 WELLS
NO OP. NAMED
9/28/2018

INTERMEDIATE CASING

2/6/2019 - 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

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.

011 24173 HAMMERHEAD BIA 20-15N-10W
5MH

Category	Description
MEMO	2/6/2019 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT
PENDING CD - 201810656	2/7/2019 - G58 - (I.O.) 20-15N-10W X648300 MSSP X165:10-3-28(C)(2)(B) MAY BE CLOSER THAN 600' TO HAMMERHEAD BIA 20-15N-10W 10MH WELL COMPL. INT. NCT 165' FSL, NCT 165' FSL, NCT 750' FEL NO OP. NAMED REC 2/1/2019 (THOMAS)
SPACING - 648300	2/7/2019 - G58 - (640) 20-15N-10W EST MSSP EXT OTHERS
SPACING - 660911	2/7/2019 - G58 - (640) 20-15N-10W NPT 648300 TO CORRECT SCRIVNER'S ERROR IN PARAGRAPH F AND EXHIBIT A AS VERTICAL SPACING

BLAINE

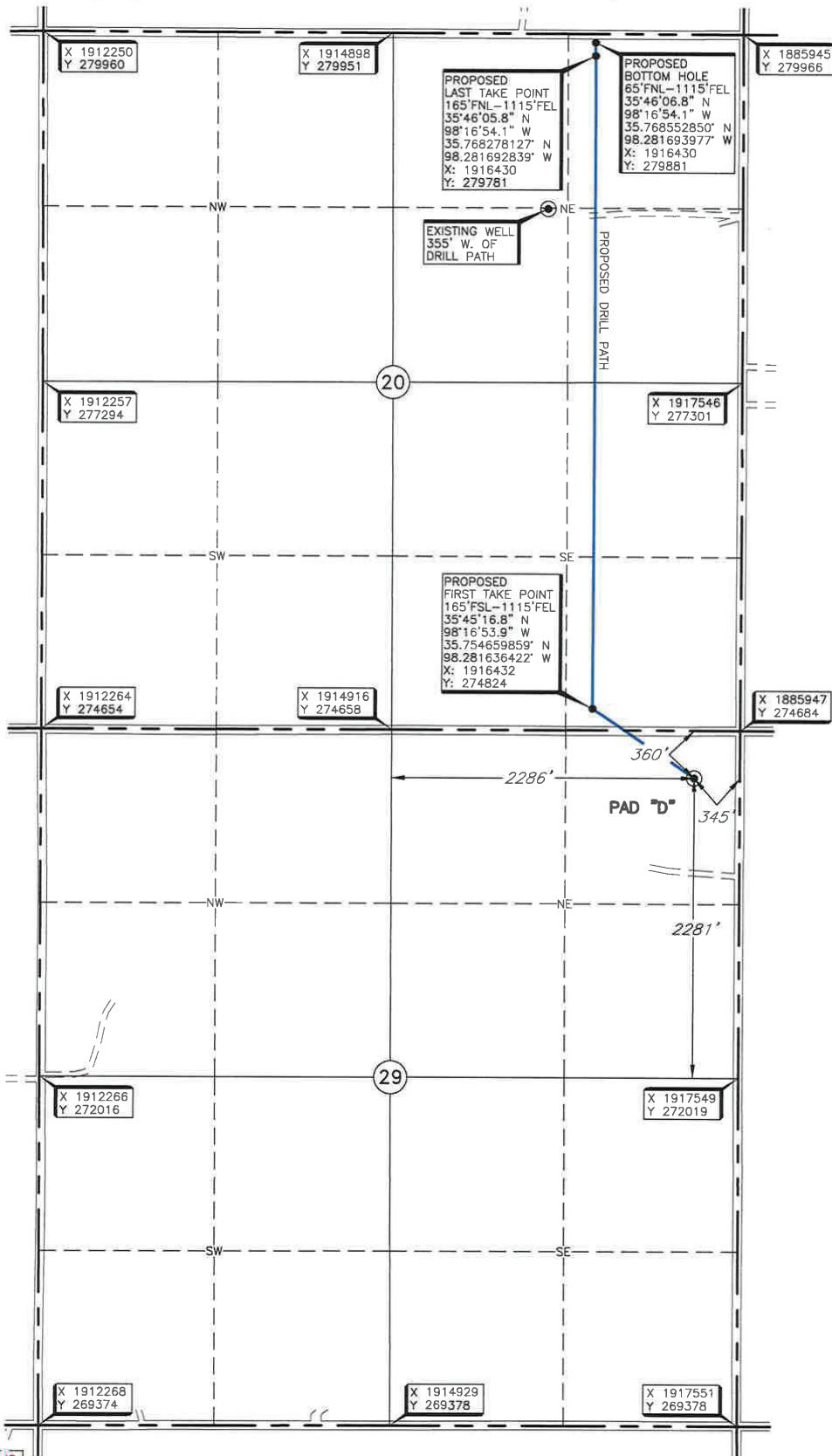
County, Oklahoma

011-24173

360' FNL-345' FEL Section 29 Township 15N Range 10W I.M.



FIRST TAKE POINT, LAST TAKE POINT, BOTTOM HOLE, AND DRILL PATH INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED.



Operator: PALOMA OPERATING COMPANY, INC.
Lease Name: HAMMERHEAD BIA 20-15N-10W
Topography & Vegetation Location fell in terraced cut field
Well No.: SMH
ELEVATION: 1517' Gr. at Stake
Good Drill Site? Yes
Best Accessibility to Location From North of county road
Distance & Direction from Hwy Jct or Town From US Hwy 281/St. Hwy 8 in Greenfield, Oklahoma, go \pm 6 miles East, then \pm 1 mile North to the Northeast Corner of Section 29, T15N-R10W.
Reference Stakes or Alternate Location Stakes Set None

THE INFORMATION SHOWN HEREIN IS FOR CONSTRUCTION PURPOSES ONLY

DATUM: NAD-27
LAT: 35°45'11.6" N
LONG: 98°16'44.5" W
LAT: 35.753225408° N
LONG: 98.279035168° W
STATE PLANE COORDINATES (US FEET):
ZONE: OK NORTH
X: 1917203
Y: 274300

Revision ☒ C

Date of Drawing: Jan. 8, 2018

Invoice # 2979411

Date Staked: July 9, 2018

NB

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 Lic. No. 1433

