

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

API NUMBER: 011 24245

Approval Date: 10/16/2019
Expiration Date: 04/16/2021

Horizontal Hole Oil & Gas
Multi Unit

PERMIT TO DRILL

WELL LOCATION: Sec: 21 Twp: 18N Rge: 13W County: BLAINE
SPOT LOCATION: SW SE SW SW FEET FROM QUARTER: FROM SOUTH FROM WEST
SECTION LINES: 250 760

Lease Name: POPE Well No: 16-21-1XH Well will be 250 feet from nearest unit or lease boundary.
Operator Name: DERBY EXPLORATION LLC Telephone: 4056393786 OTC/OCC Number: 24143 0

DERBY EXPLORATION LLC
PO BOX 779
OKLAHOMA CITY, OK 73101-0779

RONALD A POPE
PO BOX 835
CANTON OK 73724

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

Name	Depth	Name	Depth
1 MISSISSIPPIAN	8645	6	
2 WOODFORD	10520	7	
3		8	
4		9	
5		10	

Spacing Orders: 701624 Location Exception Orders: 703506 Increased Density Orders:
701625
703505

Pending CD Numbers: Special Orders:

Total Depth: 18210 Ground Elevation: 1669 **Surface Casing: 400** Depth to base of Treatable Water-Bearing FM: 150

Under Federal Jurisdiction: No Fresh Water Supply Well Drilled: No Surface Water used to Drill: Yes

PIT 1 INFORMATION

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 BED AQUIFER

Pit Location Formation: MARLOW

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 19-36988
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 18 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 16 Twp 18N Rge 13W County BLAINE

Spot Location of End Point: C W2 W2

Feet From: SOUTH 1/4 Section Line: 2640

Feet From: WEST 1/4 Section Line: 660

Depth of Deviation: 9923

Radius of Turn: 480

Direction: 359

Total Length: 7533

Measured Total Depth: 18210

True Vertical Depth: 10520

End Point Location from Lease,
Unit, or Property Line: 660

Notes:

Category

Description

HYDRAULIC FRACTURING

10/1/2019 - 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,

INTERMEDIATE CASING

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

LOCATION EXCEPTION - 703506

10/1/2019 - 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

SPACING - 701624

10/16/2019 - GB1 - (I.O.) 16 & 21-18N-13W
X701624 MSSP, WDFD 16-18N-13W
X701625 MSSP, WDFD 21-18N-13W
SHL 250' FSL, 760' FWL 21-18N-13W
COMPL. INT. (16-18N-13W) NCT 2640' FNL, NCT 0' FSL, NCT 330' FWL
COMPL. INT. (21-18N-13W) NCT 0' FNL, NCT 165' FSL, NCT 330' FWL
NO OP. NAMED
10/10/2019

SPACING - 701625

10/16/2019 - GB1 - (640)(HOR) 16-18N-13W
VAC 262134 CRUNC, MSSLM NE4
EXT 697488 MSSP, WDFD, OTHER
COMPL. INT. (MSSP) NCT 660' FB
COMPL. INT. (WDFD) NCT 165' FNL/FSL, NCT 330' FEL/FWL

SPACING - 703505

10/16/2019 - GB1 - (I.O.) 16 & 21-18N-13W
EST MULTIUNIT HORIZONTAL WELL
X701624 MSSP, WDFD 16-18N-13W
X701625 MSSP, WDFD 21-18N-13W
(WDFD ASSOCIATED COMMON SOURCE OF SUPPLY TO MSSP)
33.33% 16-18N-13W
66.67% 21-18N-13W
NO OP. NAMED
10/10/2019

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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.

DERBY Well Location Plat

S.H.L. Sec. 21-18N-13W I.M.
B.H.L. Sec. 16-18N-13W I.M.

Operator: DERBY EXPLORATION, LLC
Lease Name and No.: POPE 16-21-1XH
Footage: 250' FSL - 760' FWL Gr. Elevation: 1669'
Section: 21 Township: 18N Range: 13W I.M.
County: Blaine State of Oklahoma
Terrain at Loc.: Location fell in a terraced pasture.

API 011-24245



All bearings shown are grid bearings.



1" = 1320'

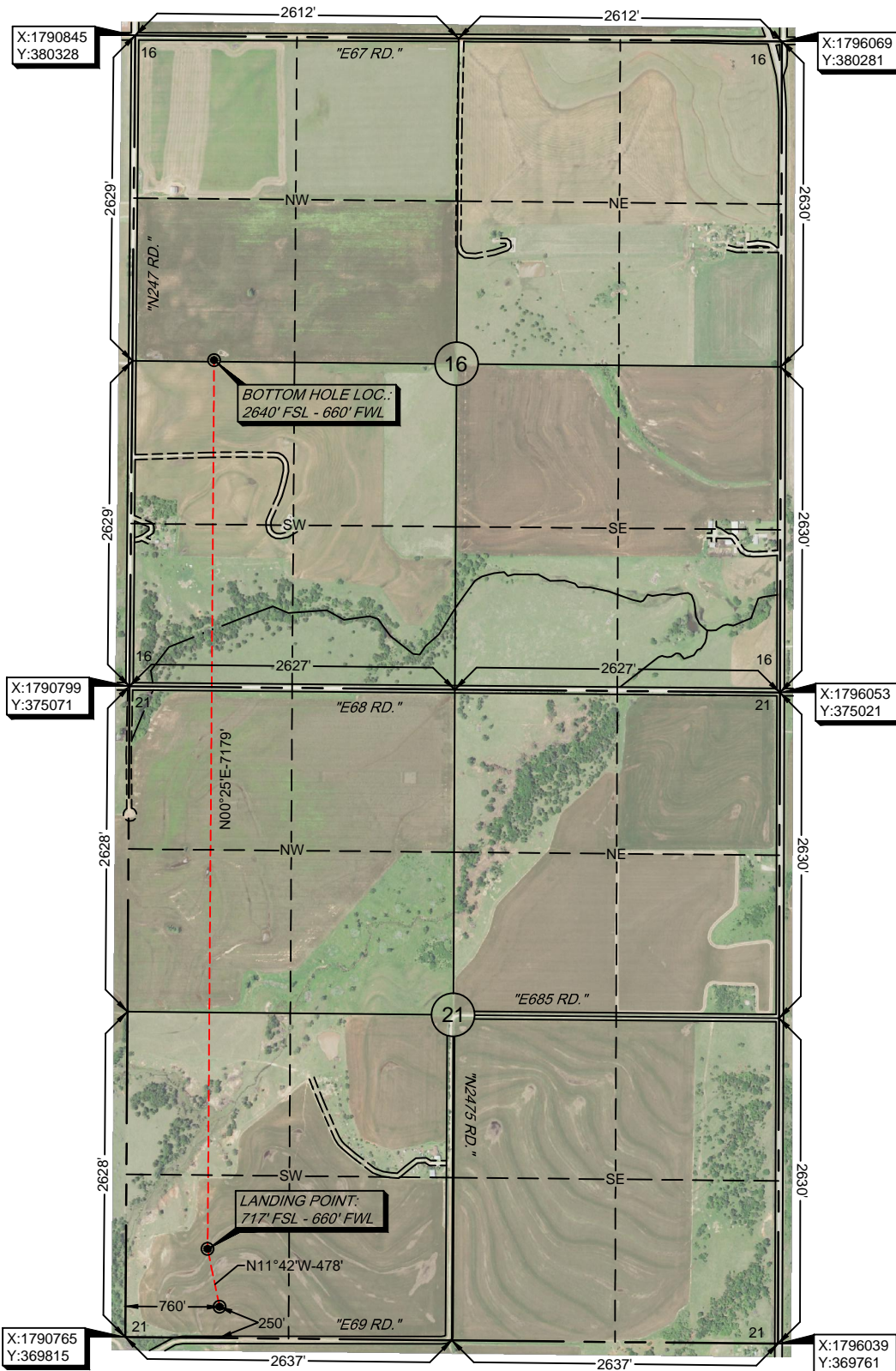
GPS DATUM
NAD 83
OK NORTH ZONE

Surface Hole Loc.:
Lat: 36°00'54.35"N
Lon: 98°35'54.28"W
Lat: 36.01509623
Lon: -98.59841159
X: 1791527
Y: 370058

Landing Point:
Lat: 36°00'58.97"N
Lon: 98°35'55.50"W
Lat: 36.01638027
Lon: -98.59874931
X: 1791430
Y: 370526

Bottom Hole Loc.:
Lat: 36°02'09.97"N
Lon: 98°35'55.40"W
Lat: 36.03610143
Lon: -98.59872197
X: 1791482
Y: 377704

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

Invoice #8674
Date Staked: 05/30/19 By: D.K.
Date Drawn: 06/04/19 By: C.K.

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

06/05/19

OK LPLS 1664

