

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

API NUMBER: 011 23801

Approval Date: 05/10/2017

Expiration Date: 11/10/2017

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 22 Twp: 16N Rge: 13W

County: BLAINE

SPOT LOCATION: ☐ NW ☐ NW ☐ NE

FEET FROM QUARTER: FROM NORTH FROM EAST

SECTION LINES: 325 2370

Lease Name: DUNN

Well No: 1-15H

Well will be 325 feet from nearest unit or lease boundary.

Operator Name: HIGHMARK ENERGY OPERATING LLC

Telephone: 9725562950

OTC/OCC Number: 23831 0

HIGHMARK ENERGY OPERATING LLC
909 LAKE CAROLYN PKWY STE 1500
IRVING, TX 75039-3912

THOMAS F. MCCABE
702 WILLOW CREEK CIRCLE
SAN MARCOS TX 78666

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	11170	6	
2	WOODFORD	11780	7	
3	HUNTON	11875	8	
4			9	
5			10	

Spacing Orders: 660363

Location Exception Orders: 660779

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 16547

Ground Elevation: 1783

Surface Casing: 280

Depth to base of Treatable Water-Bearing FM: 230

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: 75000 Average: 8000

H. SEE MEMO

Is depth to top of ground water greater than 10ft below base of pit? Y

G. Haul to recycling/re-use facility: Sec. 34 Twn. 16N Rng. 10W Cnty. 11 Order No: 641866

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

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 15 Twp 16N Rge 13W County BLAINE

Spot Location of End Point: NW NW NW NE

Feet From: NORTH 1/4 Section Line: 50

Feet From: EAST 1/4 Section Line: 2383

Depth of Deviation: 10755

Radius of Turn: 561

Direction: 359

Total Length: 4911

Measured Total Depth: 16547

True Vertical Depth: 11875

End Point Location from Lease,
Unit, or Property Line: 50

Additional Surface Owner	Address	City, State, Zip
JOYE LAVERNE ALLEN GADDIS	702 MONETTE DRIVE	CORPUS CHRISTI, TX 74812

Notes:

Category

Description

HYDRAULIC FRACTURING

5/10/2017 - G71 - OCC 165:10-3-10 REQUIRES: 1) THE CHEMICAL DISCLOSURE OF HYDRAULIC FRACTURING INGREDIENTS FOR ALL WELLS BE REPORTED TO FRACFOCUS USING THE FOLLOWING LINK [HTTP://FRACFOCUS.ORG/](http://fracfocus.org/) WITH NOTICE GIVEN 48 HOURS IN ADVANCE OF FRACTURING TO THE LOCAL OCC DISTRICT OFFICE; AND, 2) PRIOR TO COMMENCEMENT OF FRACTURING OPERATIONS FOR HORIZONTAL WELLS, NOTICE ALSO GIVEN FIVE BUSINESS DAYS IN ADVANCE TO OFFSET OPERATORS WITH WELLS COMPLETED IN THE SAME COMMON SOURCE OF SUPPLY WITHIN 1/2 MILE

INTERMEDIATE CASING

5/10/2017 - 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

LOCATION EXCEPTION - 660779

5/10/2017 - G60 - (I.O.) 15-16N-13W
X660363 MSSP, WDFFD, HNTN
COMPL. INT. NCT 165' FSL, NCT 165' FNL, NCT 330' FEL
HIGHMARK RESOURCES, LLC.
2/7/17

MEMO

5/10/2017 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

SPACING - 660363

5/10/2017 - G60 - (640) 15-16N-13W
VAC 87122 MISS, HNTN
EST MSSP, WDFFD, HNTN
COMPL. INT. (MSSP, HNTN) NLT 660'FB
COMPL. INT. (WDFFD) NLT 165' FNL/FSL, NLT 330' FEL/FWL

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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.

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