

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

API NUMBER: 063 24717

Approval Date: 10/18/2017

Expiration Date: 04/18/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 15 Twp: 6N Rge: 9E

County: HUGHES

SPOT LOCATION: ☐ SE ☐ NE ☐ SE ☐ SE

FEET FROM QUARTER: FROM SOUTH FROM EAST

SECTION LINES: 790 250

Lease Name: JESSICA

Well No: 1411-1HX

Well will be 250 feet from nearest unit or lease boundary.

Operator Name: CORTERRA ENERGY OPERATING LLC

Telephone: 9186150400

OTC/OCC Number: 23995 0

CORTERRA ENERGY OPERATING LLC
1717 S BOULDER AVE STE 900
TULSA, OK 74119-4844

WILLIAM D. CATES & JO ELLA CATES
P.O. BOX 155
ATWOOD OK 74827

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	4980	6	
2	WOODFORD	5330	7	
3	SYLVAN	5450	8	
4			9	
5			10	

Spacing Orders: No Spacing

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201702846
201704744
201706801
201706802

Special Orders:

Total Depth: 16000

Ground Elevation: 794

Surface Casing: 290

Depth to base of Treatable Water-Bearing FM: 240

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

PIT 1 INFORMATION

Type of Pit System: ON SITE

Type of Mud System: AIR

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: 4

Liner not required for Category: 4

Pit Location is AP/TE DEPOSIT

Pit Location Formation: TERRACE

Mud System Change to Water-Based or Oil-Based Mud Requires an Amended Intent (Form 1000).

Approved Method for disposal of Drilling Fluids:

A. Evaporation/dewater and backfilling of reserve pit.

D. One time land application -- (REQUIRES PERMIT)

PERMIT NO: 17-33318

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: 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

PIT 3 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 11 Twp 6N Rge 9E County HUGHES

Spot Location of End Point: NE NW NW NW

Feet From: NORTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 440

Depth of Deviation: 5023

Radius of Turn: 477

Direction: 5

Total Length: 10228

Measured Total Depth: 16000

True Vertical Depth: 5450

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

Notes:

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063 24717 JESSICA 1411-1HX

Category	Description
HYDRAULIC FRACTURING	<p>10/18/2017 - G57 - OCC 165:10-3-10 REQUIRES:</p> <p>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;</p> <p>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,</p> <p>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</p>
MEMO	<p>10/18/2017 - G57 - PIT 2 & 3 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST; PIT 3 - OBM TO VENDOR, OBM CUTTINGS PER DISTRICT</p>
PENDING CD - 201702846	<p>10/18/2017 - G75 - (E.O.)(640)(HOR) 11-6N-9E EST MSSP, WDFD, SLVN POE TO BHL (MSSP, SLVN) NCT 660' FB POE TO BHL (WDFD) NCT 165' FNL & FSL, NCT 330' FEL & FWL NO OP. NAMED REC 10-17-2017 (MCKEOWN)</p>
PENDING CD - 201704744	<p>10/18/2017 - G75 - (E.O.)(640)(HOR) 14-6N-9E EST MSSP, WDFD, SLVN POE TO BHL (MSSP, SLVN) NCT 660' FB POE TO BHL (WDFD) NCT 165' FNL & FSL, NCT 330' FEL & FWL NO OP. NAMED REC 10-17-2017 (MCKEOWN)</p>
PENDING CD - 201706801	<p>10/18/2017 - G75 - (E.O.) 14 & 11-6N-9E EST MULTIUNIT HORIZONTAL WELL X201704744 MSSP, WDFD, SLVN 14-6N-9E X201702846 MSSP, WDFD, SLVN 11-6N-9E (MSSP, SLVN ADJACENT COMMON SOURCES OF SUPPLY TO WDFD) 50% 14-6N-9E 50% 11-6N-9E NO OP. NAMED REC 10-17-2017 (MCKEOWN)</p>
PENDING CD - 201706802	<p>10/18/2017 - G75 - (E.O.) X201704744 MSSP, WDFD, SLVN 14-6N-9E X201702846 MSSP, WDFD, SLVN 11-6N-9E SHL (15-6N-9E) NCT 50' FSL, NCT 50' FEL COMPL. INT. (14-6N-9E) NCT 150' FSL, NCT 0' FNL, NCT 330' FWL COMPL. INT. (11-6N-9E) NCT 0' FSL, NCT 150' FNL, NCT 330' FWL NO OP. NAMED REC 10-17-2017 (MCKEOWN)</p>

This permit does not address the right of entry or settlement of surface damages.

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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.

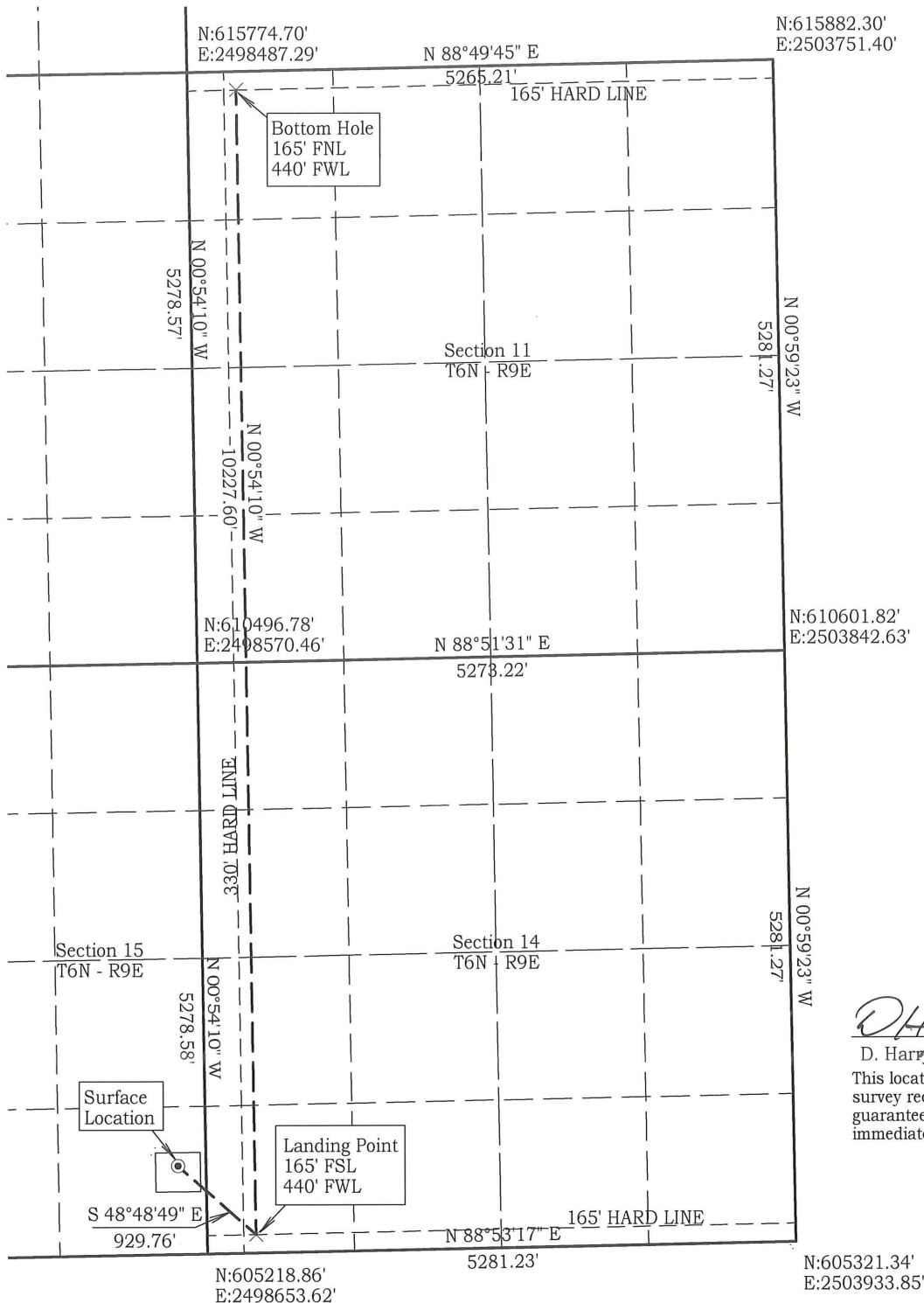
Permit Plat
M & M Land Surveying, Inc.

API 063-24717

520 "E" Street NW. Ardmore, OK. 73401
Office 580-226-0446 Mobile 580-221-4999

Company Name: Corterra Energy Operating, LLC. Lease Name: Jessica 1411-1HX
Section 15 Township 6 North Range 9 East County Hughes Oklahoma
Surface Location 790' FSL - 250' FEL Elevation 794'

ALL SECTION CORNER COORDINATES ARE NAD 27



SCALE 1" = 1500'
0' 1500'

Job # 17376
Date 9/18/17

NAD 27 OK SOUTH
Surface Location
Latitude: 34.987277°
Longitude: 96.336085°
Y = 606,005'
X = 2,498,391'
Landing Point
N = 605,392'
E = 2,499,091'
Bottom Hole
N = 615,619'
E = 2,498,930'

NAD 83 OK SOUTH
Surface Location
Latitude: 34.987364°
Longitude: 96.336370°
Y = 606,052'
X = 2,466,794'
Landing Point
N = 605,440'
E = 2,467,493'
Bottom Hole
N = 615,666'
E = 2,467,332'

D. Harry McClintick 9/28/17

D. Harry McClintick, R.P.L.S. # 1367, CA # 3093

This location has been staked according to the best official survey records available to us, but its accuracy is not guaranteed. Please review this plat and notify us immediately of any discrepancy.

