

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

API NUMBER: 063 24785 A

Approval Date: 04/18/2018
Expiration Date: 10/18/2018

Horizontal Hole Oil & Gas

Amend reason: CHANGE STRAT TEST TO HORIZONTAL, UPDATE
WELL NAME

AMEND PERMIT TO DRILL

WELL LOCATION: Sec: 15 Twp: 4N Rge: 9E County: HUGHES
SPOT LOCATION: ☐ NE ☐ SW ☐ NW ☐ NW FEET FROM QUARTER: FROM NORTH FROM WEST
SECTION LINES: 682 364

Lease Name: JEWEL Well No: 15-2H Well will be 364 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

JOHN MATTHEW EEVETT
605 MANOR DRIVE NORTH EAST
VIENNA VA 22180

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	5476	6	
2	WOODFORD	5828	7	
3	HUNTON	6008	8	
4			9	
5			10	

Spacing Orders: 511194

Location Exception Orders:

Increased Density Orders: 678153

Pending CD Numbers: 201802935
201803614

Special Orders:

Total Depth: 10964 Ground Elevation: 714 Surface Casing: 300 Depth to base of Treatable Water-Bearing FM: 250

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: ON SITE

Type of Mud System: AIR

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 18-34309
H. SEE MEMO

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 BED AQUIFER

Pit Location Formation: SENORA

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

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 BED AQUIFER

Pit Location Formation: SENORA

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 BED AQUIFER

Pit Location Formation: SENORA

HORIZONTAL HOLE 1

Sec 15 Twp 4N Rge 9E County HUGHES

Spot Location of End Point: SE SW SW SW

Feet From: SOUTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 440

Depth of Deviation: 5108

Radius of Turn: 573

Direction: 179

Total Length: 4956

Measured Total Depth: 10964

True Vertical Depth: 6300

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

Notes:

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.

063 24785 JEWEL 15-2H

Category	Description
HYDRAULIC FRACTURING	<p>5/22/2018 - G71 - 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>
INCREASED DENSITY - 678153	<p>6/1/2018 - G57 - 15-4N-9E X511194 WDFD 2 WELLS CORTERRA ENERGY OPERATING, LLC. 5-22-2018</p>
MEMO	<p>4/18/2018 - G71 - PITS 2 & 3 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 3 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT</p>
PENDING CD - 201802935	<p>6/1/2018 - G57 - (640)(HOR) 15-4N-9E VAC 511194 CNEY EST MSSP POE TO BHL NCT 660' FB REC 5-1-2018 (DUNN)</p>
PENDING CD - 201803614	<p>6/1/2018 - G57 - (I.O.) 15-4N-9E X201802935 MSSP X511194 WDFD, HNTN X165:10-3-28(C)(2)(B) WDFD (JEWEL 15-2H) MAY NOT BE CLOSER THAN 400' TO HOUK 1-15H SHL 682' FNL, 364' FWL COMPL. INT. NCT 150' FNL, NCT 150' FSL, NCT 330' FWL CORTERRA ENERGY, LLC. REC 5-29-2018</p>
SPACING - 511194	<p>6/1/2018 - G57 - (640) 15-4N-9E EXT 506361 CNEY (VAC BY 201802935) EXT 506361 WDFD, HNTN</p>

PERMIT PLAT

M & M Land Surveying, Inc.
Phone (580) 226-0446
520 E Street N.W.
Ardmore, OK 73401

API: 063 24785A

Company Name: **CORTERRA ENERGY OPERATING, LLC.**

Lease Name: JEWEL 15 2H

Section 15 Township 4 N Range 9 E , I.B.M., County of Hughes, State of Oklahoma

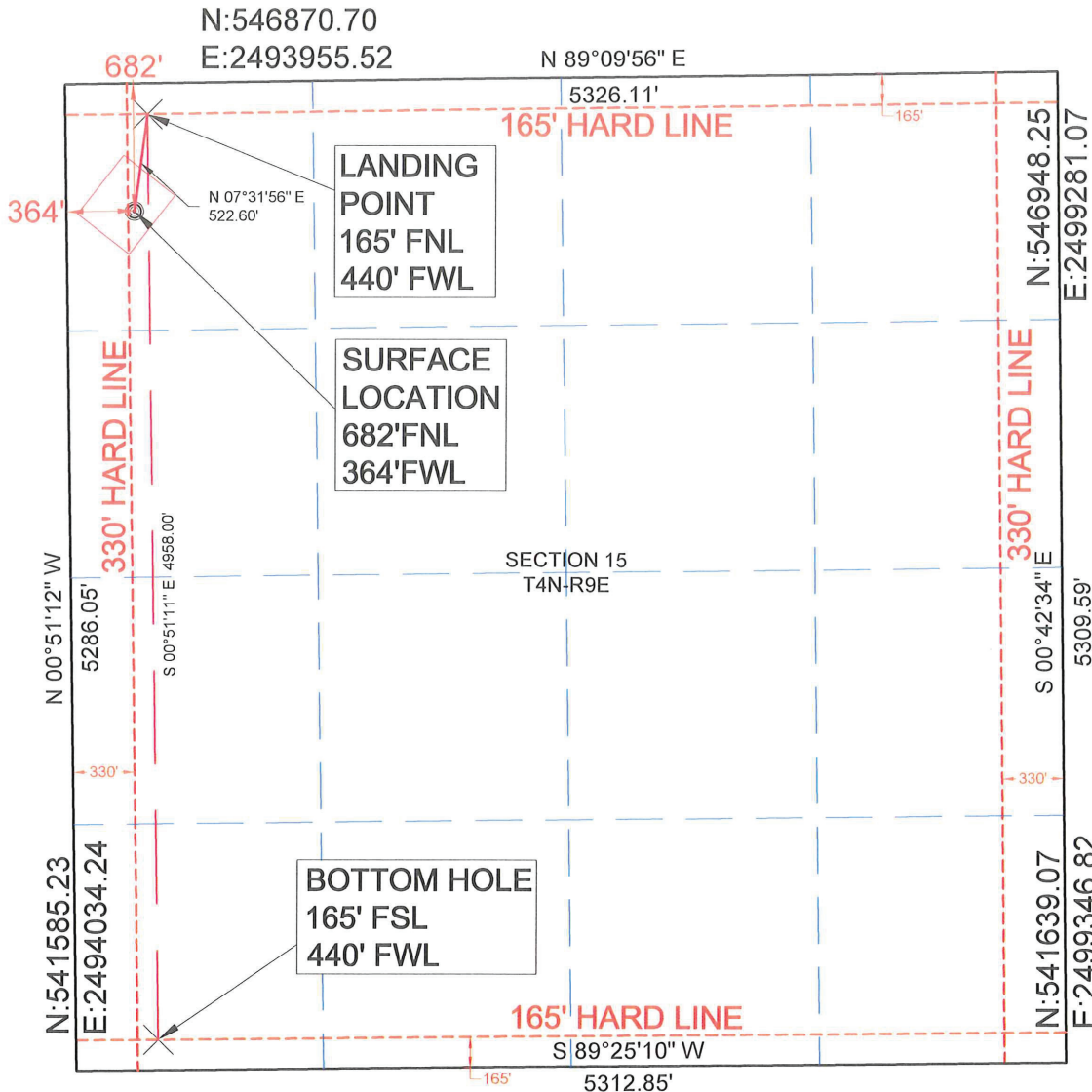
Elevation Good Location?

Original Location: 682'FNL - 364'FWL 714' GROUND YES

Distance & Direction From Nearest Town: 5.4 miles Southeast of Allen.



SCALE 1" = 1000'



NAD 27 OK SOUTH

SURFACE LOCATION

LAT: 34.823142°N

LONG: 96.352901°W

N= 546194.11'

E= 2494329.36'

LANDING POINT

N= 546712.21'

E= 2494397.81'

BOTTOM HOLE

N= 541754.79'

E= 2494471.58'

NAD 83 OK SOUTH

SURFACE LOCATION

LAT: 34.823232°N

LONG: 96.353184°W

N= 546241.01'

E= 2462732.41'

LANDING POINT

N= 546759.11'

E= 2462800.85'

BOTTOM HOLE

N= 541801.66'

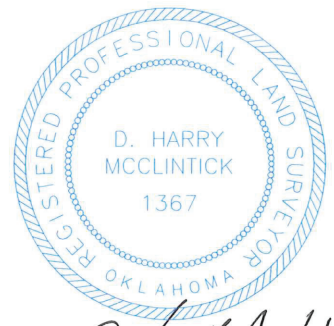
E= 2462874.68'

DATA DERIVED FROM G.P.S. WITH
O.P.U.S. DATA.

This location has been
staked according to the
best official survey records
available to us. The metrical
data shown hereon is for
permitting the well location
and the section location
may or may not be field
verified. Please review this
plat and notify us
immediately of any
discrepancy.

CERTIFICATE:

I D. Harry McClintick a Registered Land Surveyor
in the State Of Oklahoma, do hereby certify that
the above described Well Location was surveyed
and staked on the ground as shown and that said
plat meets or exceeds the Oklahoma Minimum
Technical Standards for the practice of land
surveying as adopted by the Oklahoma State
Board of Licensure for Professional Engineers and
Land Surveyors.



D. Harry McClintick 4/6/18

D. Harry McClintick
PLS. No.1367 CFEDS

SURVEY BY: M & M Land Surveying, Inc. ~ C.A. No. 3093 (LS)	
DRAWING BY: Bennett-Morris And Associates Land Surveying, P.C.	
© COPYRIGHT 2017 C.A. No. 5975 (LS) ~ Aaron L. Morris, RPLS	
PROJECT NUMBER: 18102	SITE VISIT: (Explanation and Date)
SHEET: 4 OF 4	STAKING DATE: 03/19/2018
	DRAWING DATE: 04/02/2018