

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

API NUMBER: 063 24796

Approval Date: 05/02/2018

Expiration Date: 11/02/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 34 Twp: 4N Rge: 9E County: HUGHES
SPOT LOCATION: SE SW SW SW FEET FROM QUARTER: FROM SOUTH FROM WEST
SECTION LINES: 315 345

Lease Name: HAMILTON Well No: 0310-1HX Well will be 315 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

GARY HAMILTON & SUE HAMILTON
16965 COUNTY RD. 3534
ADA OK 74820

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

	Name	Depth	Name	Depth
1	WOODFORD	5222	6	
2	HUNTON	5381	7	
3	SYLVAN	5483	8	
4			9	
5			10	

Spacing Orders: 119154
327459

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201801827
201803174
201803173

Special Orders:

Total Depth: 15669 Ground Elevation: 740 **Surface Casing: 240** Depth to base of Treatable Water-Bearing FM: 40

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 not located in a Hydrologically Sensitive Area.

Category of Pit: 4

Liner not required for Category: 4

Pit Location is NON HSA

Pit Location Formation: STUART

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

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 18-34388
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 not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: STUART

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 not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: STUART

HORIZONTAL HOLE 1

Sec 10 Twp 3N Rge 9E County COAL

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: 4819

Radius of Turn: 382

Direction: 179

Total Length: 10250

Measured Total Depth: 15669

True Vertical Depth: 5483

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.

Category	Description
HYDRAULIC FRACTURING	<p>4/27/2018 - 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>
MEMO	<p>4/27/2018 - G71 - PIT 2 & 3 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST; PIT 3 - OBM TO VENDOR, OBM CUTTINGS PER DISTRICT</p>
PENDING CD - 201801827	<p>5/1/2018 - G75 - (640)(HOR) 3 & 10-3N-9E VAC 562942 WDFD 10-3N-9E EST WDFD, SLVN, OTHER POE TO BHL (SLVN) NCT 330' FB POE TO BHL (WDFD) NCT 165' FNL & FSL, NCT 330' FEL & FWL REC 4-17-2018 (DUNN)</p>
PENDING CD - 201803173	<p>5/1/2018 - G75 - (E.O.) X119154 HNTN 3-3N-9E X327459 HNTN 10-3N-9E X201801827 WDFD, SLVN, OTHER 3 & 10-3N-9E SHL (34-4N-9E) 315' FSL, 345' FWL COMPL. INT. (3-3N-9E) NCT 150' FNL, NCT 0' FSL, NCT 330' FWL COMPL. INT. (10-3N-9E) NCT 0' FNL, NCT 150' FSL, NCT 330' FWL NO OP. NAMED REC 4-27-2018 (JOHNSON)</p>
PENDING CD - 201803174	<p>5/1/2018 - G75 - (E.O.) 3 & 10-3N-9E EST MULTIUNIT HORIZONTAL WELL X119154 HNTN 3-3N-9E X327459 HNTN 10-3N-9E X201801827 WDFD, SLVN, OTHER 3 & 10-3N-9E (HNTN, SLVN ADJACENT COMMON SOURCES OF SUPPLY TO WDFD) 66% 3-3N-9E ** 34% 10-3N-9E ** NO OP. NAMED REC 4-27-2018 (JOHNSON)</p> <p>** S/B 50% 3-3N-9E & 50% 10-3N-9E PER STAKING PLAT; TO BE CORRECTED AT MERIT HEARING ON 5-15-2018 PER OPERATOR</p>
SPACING - 119154	<p>5/1/2018 - G75 - (640) 3-3N-9E EST HNTN, OTHERS</p>
SPACING - 327459	<p>5/1/2018 - G75 - (640) 10-3N-9E VAC OTHER EST OTHERS EXT 119154 HNTN</p>

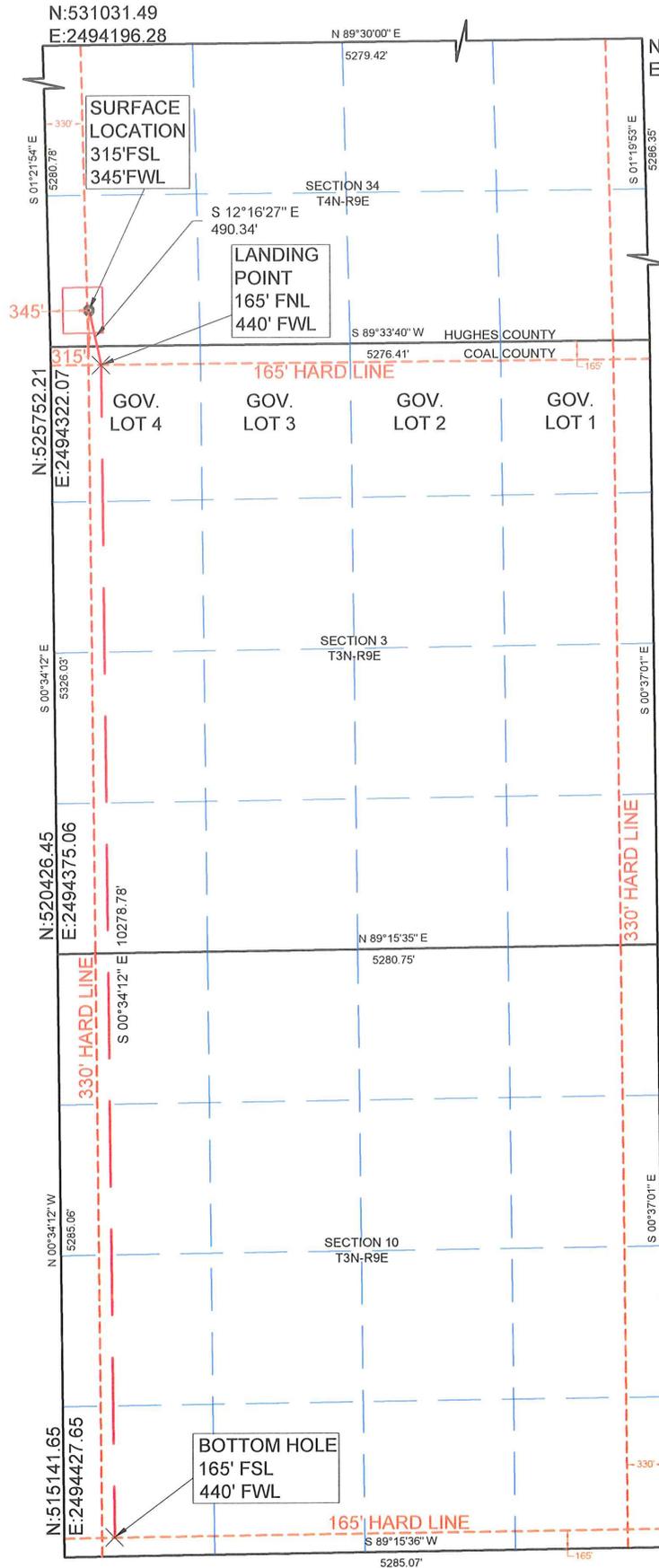
This permit does not address the right of entry or settlement of surface damages.
The duration of this permit is SIX MONTHS, except as otherwise provided by Rule 165: 10-3-1.
Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.

PERMIT PLAT

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

Company Name: **CORTERRA ENERGY OPERATING, LLC.**
 Lease Name: HAMILTON 0310 1HX
 Section 34 Township 4 N Range 9 E ,I.B.M,
 County of Hughes, State of Oklahoma
 Good Location? YES

Original Location: 315'FSL - 345'FWL Elevation 740' GROUND
 Distance & Direction From Nearest Town: 8.5 miles Southeast of Allen



N:531077.57
 E:2499475.50

N:525792.64
 E:2499598.33

N:520494.67
 E:2499655.37

N:515209.91
 E:2499712.27

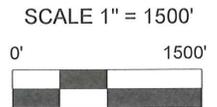
NAD 27 OK SOUTH SURFACE LOCATION
 LAT: 34.767838°N
 LONG: 96.352895°W
 N= 526069.78'
 E= 2494659.43'

LANDING POINT
 N= 525590.65'
 E= 2494763.67'
BOTTOM HOLE
 N= 515312.53'
 E= 2494865.81'

NAD 83 OK SOUTH SURFACE LOCATION
 LAT: 34.767930°N
 LONG: 96.353178°W
 N= 526116.54'
 E= 2463062.71'

LANDING POINT
 N= 525637.41'
 E= 2463166.95'
BOTTOM HOLE
 N= 515359.14'
 E= 2463269.22'

PAD CORNER ELEVATIONS
 NE/C = 731.40'
 SE/C = 729.56'
 SW/C = 730.81'
 NW/C = 734.82'

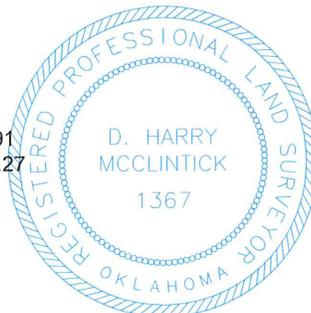


DATA DERIVED FROM G.P.S. WITH O.P.U.S. DATA.

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 4/5/18
 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: 18030	SITE VISIT: (Explanation and Date)
	STAKING DATE: 01/18/2018
SHEET: 4 OF 4	DRAWING DATE: 02/01/2018