

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

API NUMBER: 063 24770

Approval Date: 02/13/2018

Expiration Date: 08/13/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 03 Twp: 6N Rge: 9E

County: HUGHES

SPOT LOCATION:

FEET FROM QUARTER: FROM NORTH FROM WEST

SECTION LINES: 518 390

Lease Name: BETH

Well No: 0310-1HXR

Well will be 390 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

JOSH BRANDON BLACK & BETH ANN BLACK
7425 EAST 137 ROAD
HOLDENVILLE OK 74648

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	4560	6	
2	WOODFORD	5040	7	
3	SYLVAN	5210	8	
4			9	
5			10	

Spacing Orders: No Spacing

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201703614
201708210
201708211

Special Orders:

Total Depth: 16000

Ground Elevation: 802

Surface Casing: 460

Depth to base of Treatable Water-Bearing FM: 410

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: 18-33836

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 AP/TE DEPOSIT

Pit Location Formation: TERRACE

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 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 10 Twp 6N 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: 510

Depth of Deviation: 4660

Radius of Turn: 706

Direction: 175

Total Length: 10231

Measured Total Depth: 16000

True Vertical Depth: 5210

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 24770 BETH 0310-1HXR

Category	Description
HYDRAULIC FRACTURING	<p>1/26/2018 - 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>1/26/2018 - G71 - PITS 2 & 3 - CLOSED SYSTEM=STEEL PITS (REQUIRED - HOLDENVILLE RESERVOIR & WATERSHED), PIT 3 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT</p>
PENDING CD - 201703614	<p>1/29/2018 - G58 - (E.O.)(640)(HOR) 3 & 10-6N-9E EST MSSP WDFD, SLVN COMPL. INT. (MSSP, SLVN) NCT 660' FB COMPL. INT. (WDFD) NCT 330' FEL & FWL, NCT 165' FNL & FSL HEARING 1/30/2018</p>
PENDING CD - 201708210	<p>1/29/2018 - G58 - (E.O.) 3 & 10-6N-9E EST MULTIUNIT HORIZONTAL WELL X201703614 WDFD, MSSP, SLVN (MSSP, SLVN ADJACENT COMMON SOURCE OF SUPPLY TO WDFD) 50% 3-6N-9E 50% 10-6N-9E NO OP. NAMED HEARING 1/30/2018</p>
PENDING CD - 201708211	<p>1/29/2018 - G58 - (E.O.) 3 & 10-6N-9E X201703614 MSSP, WDFD, SLVN SHL 525' FNL, 390' FWL OF 3-6N-9E COMPL. INT. (3-6N-9E) NCT 150' FNL, NCT 0' FSL, NCT 330' FWL COMPL. INT. (10-6N-9E) NCT 0' FNL, NCT 150' FSL, NCT 330' FWL NO OP. NAMED HEARING 1/30/2018</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.

WELL LOCATION

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

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.

Company Name: CORTERRA ENERGY OPERATING, LLC. 063-24770

Lease Name: BETH 0310 1HX

Section 3 Township 6 N Range 9 E , I.B.M., County of Hughes, State of Oklahoma

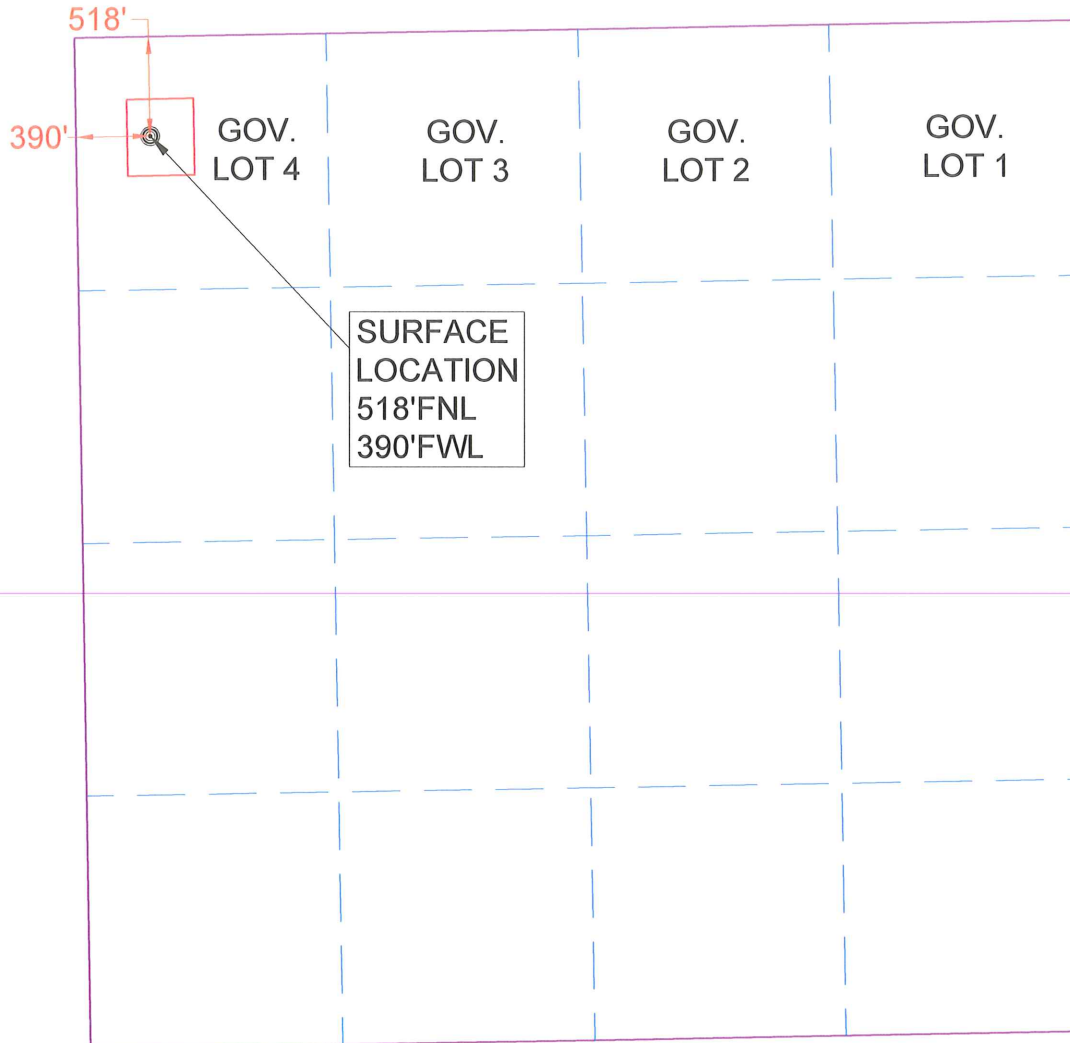
Elevation 802' Ground YES
Original Location: 518'FNL - 390'FWL

Topography: PASTURE - POND TO THE NORTHEAST AND SOUTH OF PAD - 13' SOUTH OF JOSH 0409 1HX

Best Accessibility to Location: From the North off of County Road E W 137.

Distance & Direction From Nearest Town: 4.6 miles Southeast of Holdenville.

From the town of Holdenville and the intersection of U.S. No. 270 Business (State Highway No. 48 and East Main Street) and North Hinckley Street; Go Southeasterly 4.7 miles on U.S. No. 270 Business (State Highway No. 48, East Main Street and Lakeside Drive); Then go Northeasterly 1.3 miles to Northwest section Corner in SECTION 3, T6N, R9E, I.B.M., Hughes County, Oklahoma.



PAD CORNER ELEVATIONS

NE/C = 808.77'

SE/C = 816.08'

SW/C = 801.18'

NW/C = 798.16'

NAD 27 OK SOUTH SURFACE LOCATION

LAT: 35.027214°N

LONG: 96.351555°W

N= 620461.88'

E= 2493520.45'

NAD 83 OK SOUTH SURFACE LOCATION

LAT: 35.027300°N

LONG 96.351841°W

N= 620509.36'

E= 2461922.76'

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.



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: 18073	SITE VISIT: (Explanation and Date)
SHEET: 1 OF 4	STAKING DATE: 02/12/2018
	DRAWING DATE: 02/12/2018

D. Harry McClintick 2/12/18
D. Harry McClintick
PLS. No.1367 CFEDS

LOCATION AND ELEVATION VERIFICATION MAP

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: **BETH 0310 1HX**

Section 3 Township 6 N Range 9 E , I.B.M., County of Hughes, State of Oklahoma

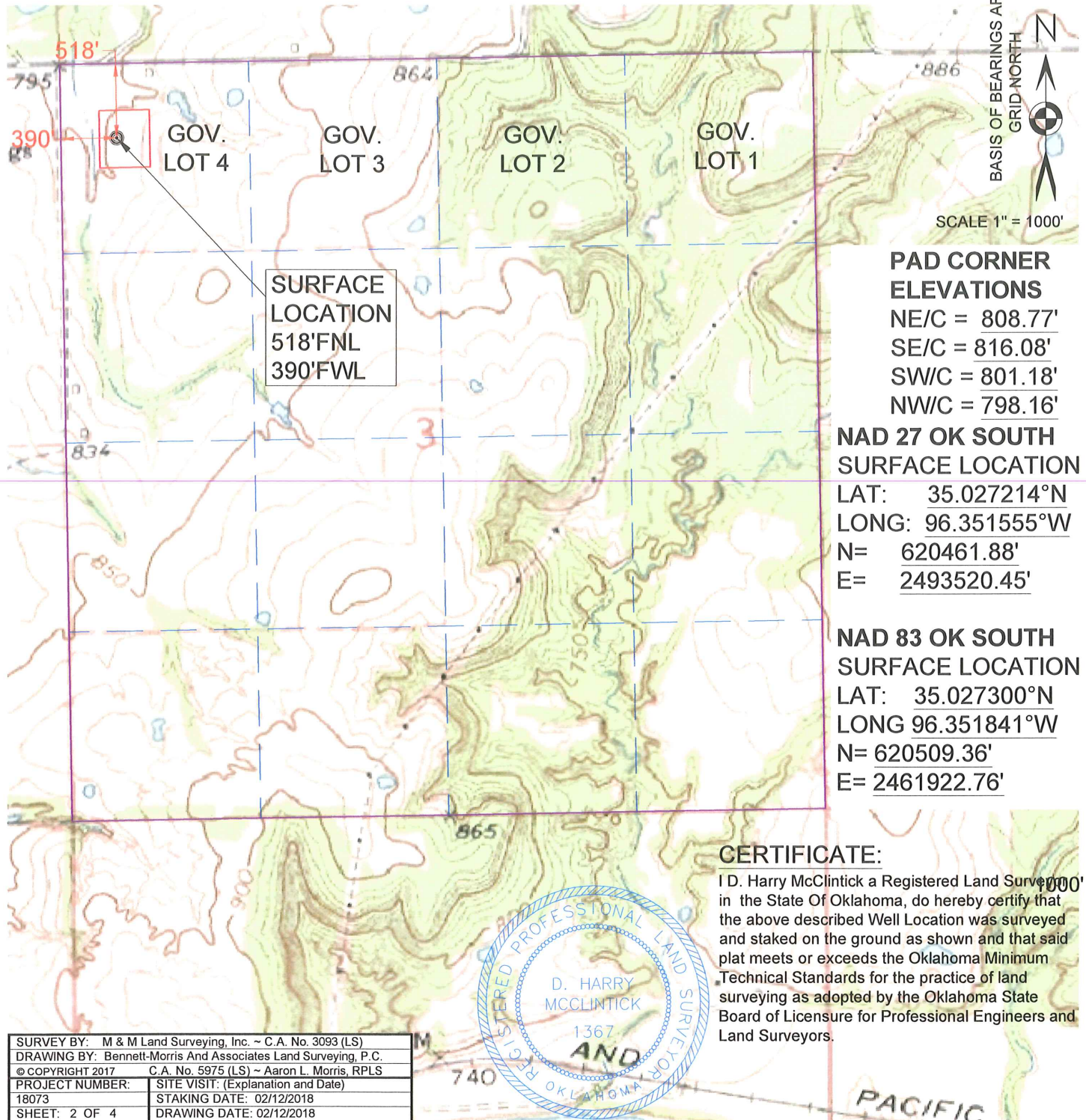
Original Location: 518'FNL - 390'FWL Elevation 802' GROUND Good Location? YES

Topography: PASTURE - POND TO THE NORTHEAST AND SOUTH OF PAD - 13' SOUTH OF JOSH 0409 1HX

Best Accessibility to Location: From the North off of County Road E W 137.

Distance & Direction From Nearest Town: 4.6 miles Southeast of Holdenville.

From the town of Holdenville and the intersection of U.S. No. 270 Business (State Highway No. 48 and East Main Street) and North Hinckley Street; Go Southeasterly 4.7 miles on U.S. No. 270 Business (State Highway No. 48, East Main Street and Lakeside Drive); Then go Northeasterly 1.3 miles to Northwest section Corner in SECTION 3, T6N, R9E, I.B.M., Hughes County, Oklahoma.



AERIAL PHOTO

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: **BETH 0310 1HX**

Section 3 Township 6 N Range 9 E , I.B.M., County of Hughes, State of Oklahoma

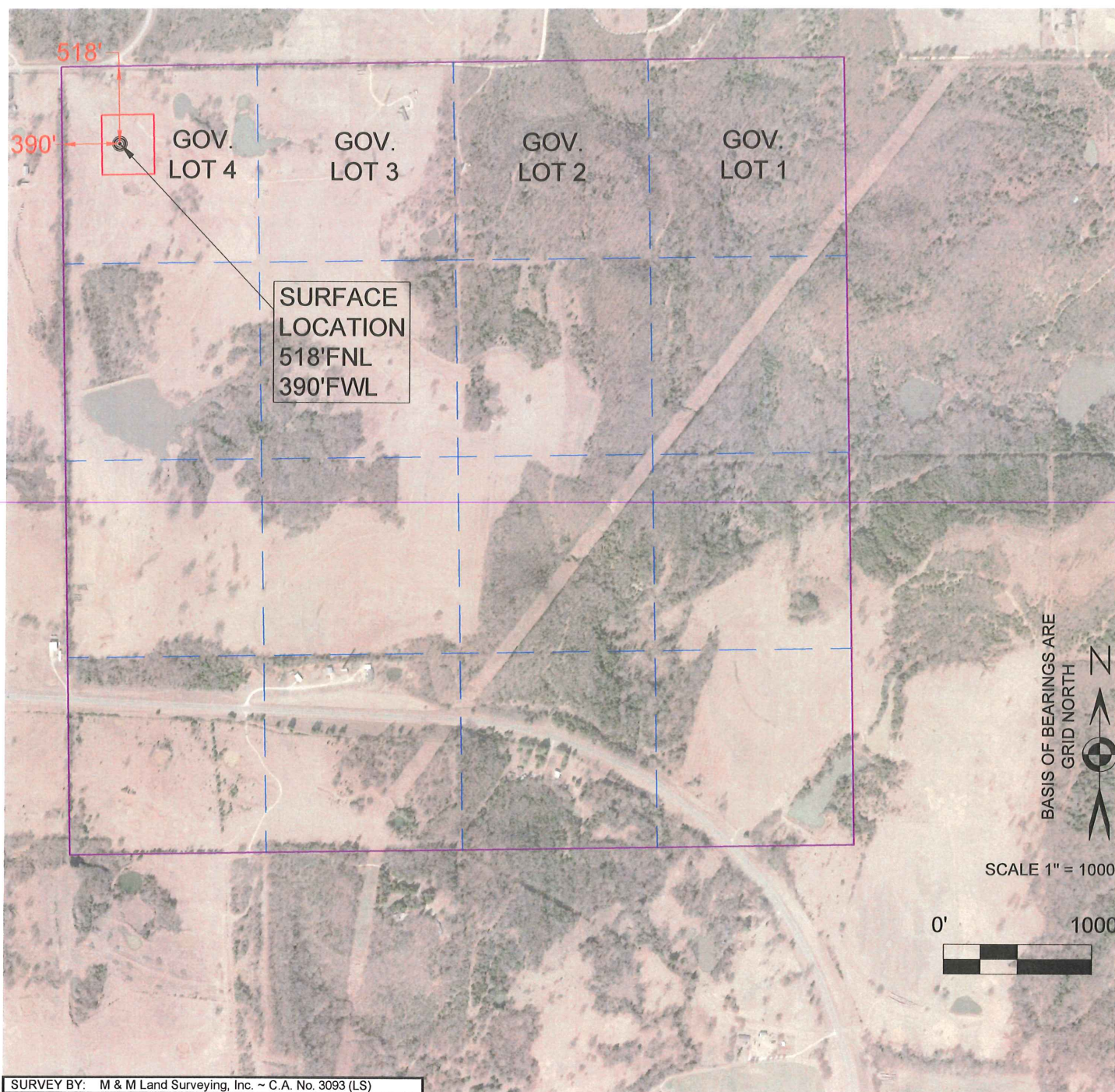
Original Location: 518'FNL - 390'FWL Elevation 802' Ground Good Location? YES

Topography: PASTURE - POND TO THE NORTHEAST AND SOUTH OF PAD - 13' SOUTH OF JOSH 0409 1HX

Best Accessibility to Location: From the North off of County Road E W 137.

Distance & Direction From Nearest Town: 4.6 miles Southeast of Holdenville.

From the town of Holdenville and the intersection of U.S. No. 270 Business (State Highway No. 48 and East Main Street) and North Hinckley Street; Go Southeasterly 4.7 miles on U.S. No. 270 Business (State Highway No. 48, East Main Street and Lakeside Drive); Then go Northeasterly 1.3 miles to Northwest section Corner in SECTION 3, T6N, R9E, I.B.M., Hughes County, Oklahoma.



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:	SITE VISIT: (Explanation and Date)
18073	STAKING DATE: 02/12/2018
SHEET: 3 OF 4	DRAWING DATE: 02/12/2018

PERMIT PLAT

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

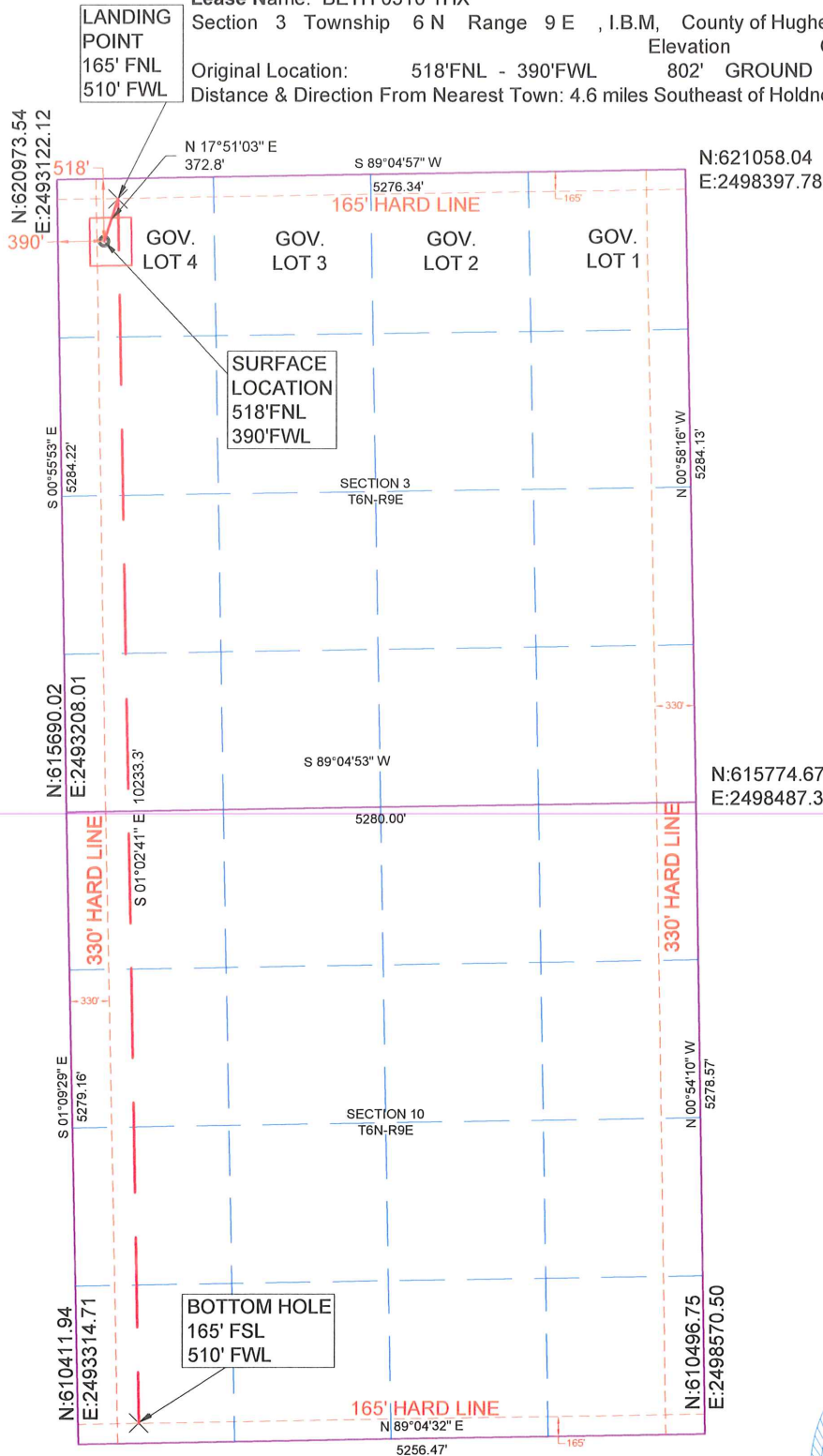
Company Name: **CORTERRA ENERGY OPERATING, LLC.**

Lease Name: **BETH 0310 1HX**

Section 3 Township 6 N Range 9 E , I.B.M., County of Hughes, State of Oklahoma
Elevation Good Location?

Original Location: 518'FNL - 390'FWL 802' GROUND YES

Distance & Direction From Nearest Town: 4.6 miles Southeast of Holdenville.



NAD 27 OK SOUTH SURFACE LOCATION

LAT: 35.027214°N

LONG: 96.351555°W

N= 620461.88'

E= 2493520.45'

LANDING POINT

N= 620816.71'

E= 2493634.73'

BOTTOM HOLE

N= 610585.26'

E= 2493821.31'

NAD 83 OK SOUTH SURFACE LOCATION

LAT: 35.027300°N

LONG: 96.351841°W

N= 620509.36'

E= 2461922.76'

LANDING POINT

N= 620864.2'

E= 2462037.04'

BOTTOM HOLE

N= 610632.6'

E= 2462223.61'

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
2/12/18

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: 18073	SITE VISIT: (Explanation and Date)
SHEET: 4 OF 4	STAKING DATE: 02/12/2018
	DRAWING DATE: 02/12/2018