

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

API NUMBER: 073 26224

Approval Date: 08/16/2018

Expiration Date: 02/16/2019

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 15 Twp: 16N Rge: 6W

County: KINGFISHER

SPOT LOCATION: ☐ SE ☐ SE ☐ SE ☐ SW

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 315 2465

Lease Name: RUTH 15-16-6

Well No: 2HC

Well will be 315 feet from nearest unit or lease boundary.

Operator Name: CHESAPEAKE OPERATING LLC

Telephone: 4059353425; 4059358

OTC/OCC Number: 17441 0

CHESAPEAKE OPERATING LLC
PO BOX 18496
OKLAHOMA CITY, OK 73154-0496

JOHN F. EMMERICH
21023 STATE HWY. 33
KINGFISHER OK 73750

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

Name	Depth	Name	Depth
1 OSWEGO	6604	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 654841
672942

Location Exception Orders: 680419
680418

Increased Density Orders: 680417
680416

Pending CD Numbers: 201804725

Special Orders:

Total Depth: 17500

Ground Elevation: 1106

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 270

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: No

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: 5000 Average: 3000

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: SALT PLAINS

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 18-34961
H. CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST

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.

HORIZONTAL HOLE 1

Sec 10 Twp 16N Rge 6W County KINGFISHER

Spot Location of End Point: W2 NE NE NW

Feet From: NORTH 1/4 Section Line: 330

Feet From: WEST 1/4 Section Line: 2300

Depth of Deviation: 6150

Radius of Turn: 900

Direction: 358

Total Length: 9936

Measured Total Depth: 17500

True Vertical Depth: 6741

End Point Location from Lease,

Unit, or Property Line: 330

Notes:

Category

Description

DEEP SURFACE CASING

7/12/2018 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY FOR ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON CONDUCTOR OR SURFACE CASING

HYDRAULIC FRACTURING

7/12/2018 - G71 - OCC 165:10-3-10 REQUIRES:

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;

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,

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

INCREASED DENSITY - 680416

8/16/2018 - G75 - 10-16N-6W
X654841 OSWG
2 WELLS
CHESAPEAKE OP., L.L.C.
7-19-2018

INCREASED DENSITY - 680417

8/16/2018 - G75 - 15-16N-6W
X672942 OSWG
2 WELLS
CHESAPEAKE OP., L.L.C.
7-19-2018

LOCATION EXCEPTION - 680418

8/16/2018 - G75 - (I.O.) 10-16N-6W
X654841 OSWG
COMPL. INT. NCT 0' FSL, NCT 330' FNL, NCT 660' FWL
CHESAPEAKE OP., L.L.C.
7-19-2018

LOCATION EXCEPTION - 680419

8/16/2018 - G75 - (I.O.) 15-16N-6W
X672942 OSWG
COMPL. INT. NCT 330' FSL, NCT 0' FNL, NCT 660' FWL
CHESAPEAKE OP., L.L.C.
7-19-2018

PENDING CD - 201804725

8/16/2018 - G75 - (I.O.) 15 & 10-16N-6W
EST MULTIUNIT HORIZONTAL WELL
X672942 OSWG 15-16N-6W
X654841 OSWG 10-16N-6W
50% 15-16N-6W
50% 10-16N-6W
NO OP. NAMED
REC 7-9-2018 (MILLER)

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

073 26224 RUTH 15-16-6 2HC

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
SPACING - 654841	8/16/2018 - G75 - (640)(HOR) 10-16N-6W EST OSWG, OTHER POE TO BHL NCT 660' FB (COEXIST SP. ORDER # 62116 OSWG)
SPACING - 672942	8/16/2018 - G75 - (640)(HOR) 15-16N-6W EXT 654841 OSWG, OTHER POE TO BHL NCT 660' FB (COEXIST SP. ORDER # 62116 OSWG N2 & ORDER # 62116//124683 OSWG S2)

CHESAPEAKE ENERGY

OPERATOR: CHESAPEAKE OPERATING, LLC
LEASE NAME: RUTH 15-16-6
WELL NO. 2HC
STAKED DATE: 4/23/18
GROUND ELEVATION: 1106.50 GR. AT STAKE
SURFACE HOLE FOOTAGE: 315' FSL - 2465' FWL
SECTION: 15 TOWNSHIP: T16N RANGE: R6W
KINGFISHER COUNTY, STATE: OK

BOTTOM HOLE: 10-T16N-R6W-1M.
BOTTOM HOLE FOOTAGE: 330' FNL - 2300' FWL
LANDING POINT FOOTAGE: 500' FSL - 2300' FWL

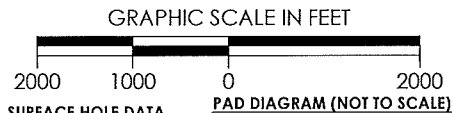
ACCESSIBILITY TO LOCATION: FROM SOUTH LINE
TOPOGRAPHY & VEGETATION: LOCATION FELL ON THE SOUTH EDGE OF A FIELD.

DISTANCE & DIRECTION FROM HWY JCT OR TOWN:
FROM THE TOWN OF KINGFISHER HEAD EAST ON
OK-33 FOR ±.5MI TO N2900RD, CONTINUE EAST
±0.4MI, PAD SITE IS NORTH OF THE ROAD.

BASS OF BEARING:
GRID NORTH (NAD 83)
OKLAHOMA - NORTH ZONE



API 073-26224



SURFACE HOLE DATA

STATE PLANE COORDINATES:

ZONE: OK-NORTH NAD27

X: 2051735.6

Y: 312133.6

GPS DATUM: NAD27

LAT: 35.85736498

LONG: -97.82541746

STATE PLANE COORDINATES:

ZONE: OK-NORTH NAD83

X: 2020136.9

Y: 312157.7

GPS DATUM: NAD83

LAT: 35.85740893

LONG: -97.82574613

BOTTOM HOLE DATA

STATE PLANE COORDINATES:

ZONE: OK-NORTH NAD27

X: 2051524.9

Y: 322067.2

GPS DATUM: NAD27

LAT: 35.88465563

LONG: -97.82606842

STATE PLANE COORDINATES:

ZONE: OK-NORTH NAD83

X: 2019926.1

Y: 322091.3

GPS DATUM: NAD83

LAT: 35.88469886

LONG: -97.82639760

LANDING POINT DATA

STATE PLANE COORDINATES:

ZONE: OK-NORTH NAD27

X: 2051570.2

Y: 312319.2

GPS DATUM: NAD27

LAT: 35.85787569

LONG: -97.82597455

STATE PLANE COORDINATES:

ZONE: OK-NORTH NAD83

X: 2019971.5

Y: 312343.3

GPS DATUM: NAD83

LAT: 35.85791962

LONG: -97.82630325

PLEASE NOTE THAT THIS LOCATION WAS STAKED ON THE GROUND UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL LAND SURVEYOR, BUT ACCURACY OF THIS EXHIBIT IS NOT GUARANTEED. PLEASE CONTACT CRAFTON TULL PROMPTLY IF ANY INCONSISTENCY IS DETERMINED, GPS DATA IS OBSERVED FROM RTK-GPS. NOTE: X AND Y DATA SHOWN HEREON FOR SECTION CORNERS MAY NOT HAVE BEEN SURVEYED ON THE GROUND, AND FURTHER, DOES NOT REPRESENT A TRUE BOUNDARY SURVEY. LANDING POINT, BOTTOM HOLE, AND DRILL PATH INFORMATION PROVIDED BY OPERATOR LISTED.

CERTIFICATION:

THIS IS TO CERTIFY THAT THIS WELL LOCATION EXHIBIT WAS COMPILED AND PREPARED UNDER MY SUPERVISION.

2018.05.11 09:14:27-05'00'

[Signature]
DENVER WINCHESTER PLS 1952



RUTH 15-16-6 2HC

REVISION DATE:

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PART OF THE SW/4 OF
SECTION 15, T16N, R6W
WELL LOCATION EXHIBIT
KINGFISHER COUNTY, OKLAHOMA

SCALE: 1" = 2000'

PLOT DATE: 04-26-2018

DRAWING: 17601117-WELL-P

DRAWN BY: SQ

SHEET NO.: 2 OF 3

300 Pointe Parkway Blvd
Yukon, OK 73099
405.787.6270 f 405.787.6276 f
www.craftontull.com



Crafton Tull
SURVEYING
CERTIFICATE OF AUTHORIZATION:
CA 973 (PE/LS) EXPIRES 6/30/2018