

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

API NUMBER: 011 24001

Approval Date: 05/01/2018
Expiration Date: 11/01/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 11 Twp: 16N Rge: 11W County: BLAINE
SPOT LOCATION: SE SE SW SW FEET FROM QUARTER: FROM SOUTH FROM WEST
SECTION LINES: 234 1285

Lease Name: BLACKBIRD Well No: 2-14H Well will be 234 feet from nearest unit or lease boundary.
Operator Name: ECHO E & P LLC Telephone: 4057534232 OTC/OCC Number: 23925 0

ECHO E & P LLC
3817 NW EXPRESSWAY STE 840
OKLAHOMA CITY, OK 73112-1400

WILLIAM K. & BRENDA J. ROSER
ROUTE 2, BOX 338A
WATONGA OK 73772

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

Name	Depth	Name	Depth
1	MISSISSIPPIAN	10050	6
2			7
3			8
4			9
5			10

Spacing Orders: 673566

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201801743
201702350

Special Orders:

Total Depth: 15200

Ground Elevation: 1576

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 40

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: No

PIT 1 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

Approved Method for disposal of Drilling Fluids:

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

PERMIT NO: 18-34207

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: 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 14 Twp 16N Rge 11W County BLAINE

Spot Location of End Point: SW SW SE SW

Feet From: SOUTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 1452

Depth of Deviation: 9762

Radius of Turn: 382

Direction: 178

Total Length: 4838

Measured Total Depth: 15200

True Vertical Depth: 10050

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

Notes:

Category

Description

DEEP SURFACE CASING

4/26/2018 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY OF ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON ANY CONDUCTOR OR SURFACE CASING

HYDRAULIC FRACTURING

4/26/2018 - 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

INTERMEDIATE CASING

4/26/2018 - G71 - DUE TO THE KNOWN POTENTIAL RISK OF ENCOUNTERING AN OVER-PRESSURED ZONE IN THE MORROW SERIES IN THIS AREA, THE TECHNICAL MANAGER RECOMMENDS SETTING AN INTERMEDIATE STRING OF CASING IMMEDIATELY ABOVE THE MORROW SERIES

MEMO

4/26/2018 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

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

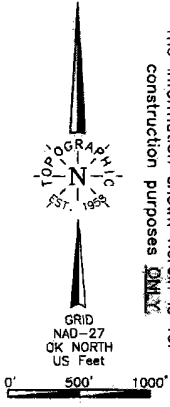
The duration of this permit is SIX MONTHS, except as otherwise provided by Rule 165: 10-3-1.

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.

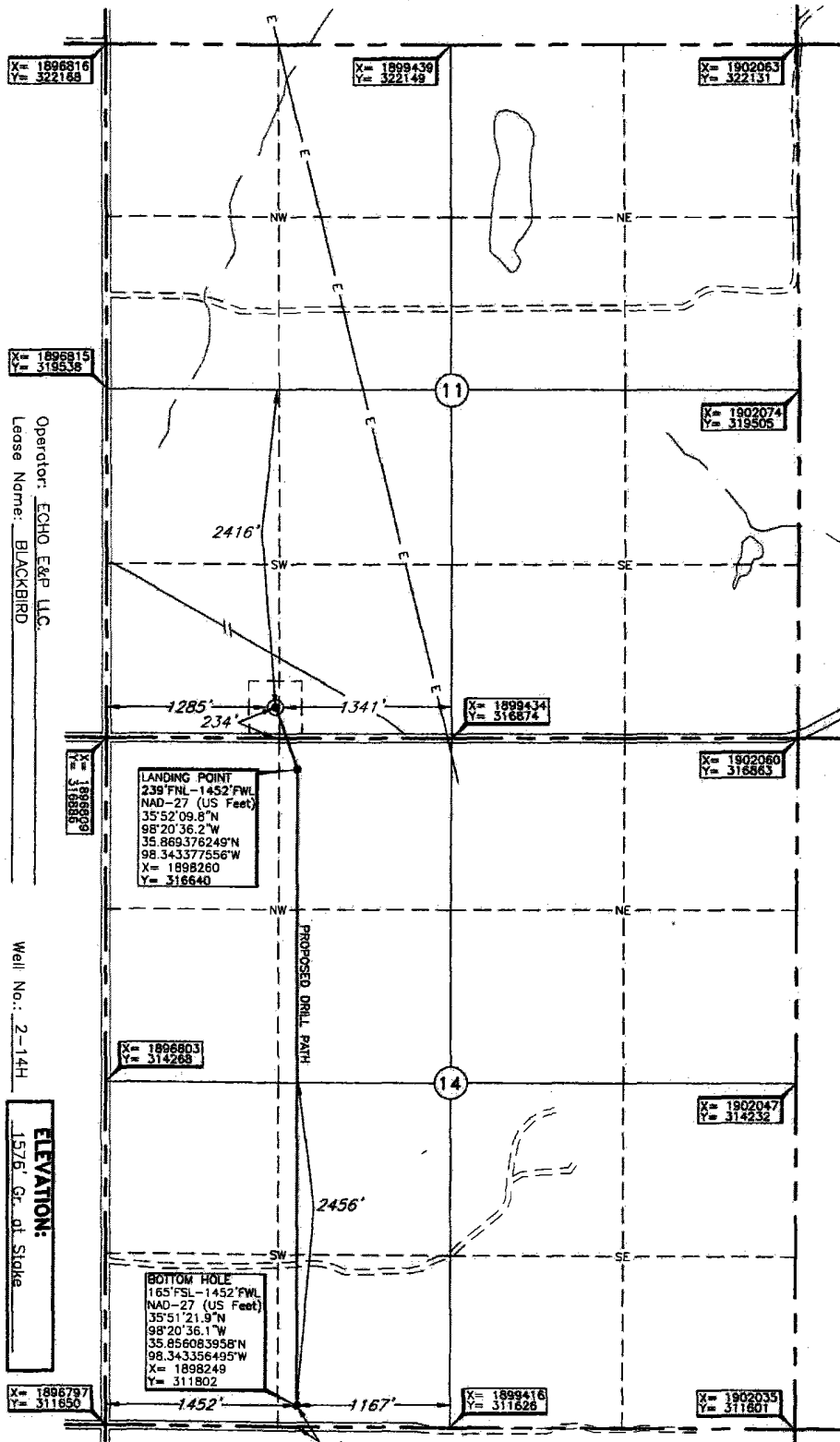
Category	Description
PENDING CD - 201702350	4/30/2018 - G57 - (I.O.) 14-16N-11W X673566 MSSP COMPL. INT. NCT 165' FNL, NCT 165' FSL, NCT 330' FWL NO OP. NAMED REC 1-18-2018 (THOMAS)
PENDING CD - 201801743	4/30/2018 - G57 - 14-16N-11W X673566 MSSP 2 WELLS NO OP. NAMED REC 4-16-2018 (NORRIS)
SPACING - 673566	4/30/2018 - G57 - (640)(HOR) 14-16N-11W EXT 656049/657082 MSSP, OTHERS NLT 660' FB

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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.

BLAINE County, Oklahoma
 234' FSL-1285' FWL Section 11 Township 16N Range 11W I.M.



NOTE:
 The information shown herein is for construction purposes ONLY.



Operator: ECHO E&P LLC.
 Lease Name: BLACKBIRD
 Topography & Vegetation: Loc. fell in wheat field
 Good Drill Site? Yes
 Reference Stakes or Alternate Location: Stakes Set
 Well No.: 2-14H
 ELEVATION: 1576' Gr. at Stake
 Best Accessibility to Location: From South off county road.
 Distance & Direction from Hwy Jct or Town: From the junction of St. Hwy. 33 and US Hwy. 270 at Watonga, OK, go East on St. Hwy. 33 ±4 miles, go North ±2 miles to the SW Cor. of Sec. 11-16N-R11W.

LANDING POINT, BOTTOM HOLE, AND DRILL PATH INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED.

Revision A Date of Drawing: Mar. 26, 2018
 Invoice # 290734A Date Staked: Mar. 23, 2018 TR

CERTIFICATE:

I, Thomas L. Howell an Oklahoma Licensed Land Surveyor and an authorized agent of Topographic Land Surveyors of Oklahoma, do hereby certify to the information shown herein

Thomas L. Howell
 Oklahoma Lic. No. 1433

This information was gathered with a GPS receiver with a Zephyr datalogger.
 DATUM: NAD-27
 LAT: 35°52'14.4"N
 LONG: 98°20'38.2"W
 LAT: 35.870677056°N
 LONG: 98.343943599°W
 STATE PLANE COORDINATES: (US Feet)
 ZONE: OK NORTH
 X: 1898094
 Y: 317114

