

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

API NUMBER: 011 24002

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 1315

Lease Name: BLACKBIRD Well No: 3-14H 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: 201801745  
201801743

Special Orders:

Total Depth: 15260

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: 18-34208

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 SE SE SW

Feet From: SOUTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 2244

Depth of Deviation: 9764

Radius of Turn: 477

Direction: 170

Total Length: 4746

Measured Total Depth: 15260

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](http://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](http://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.

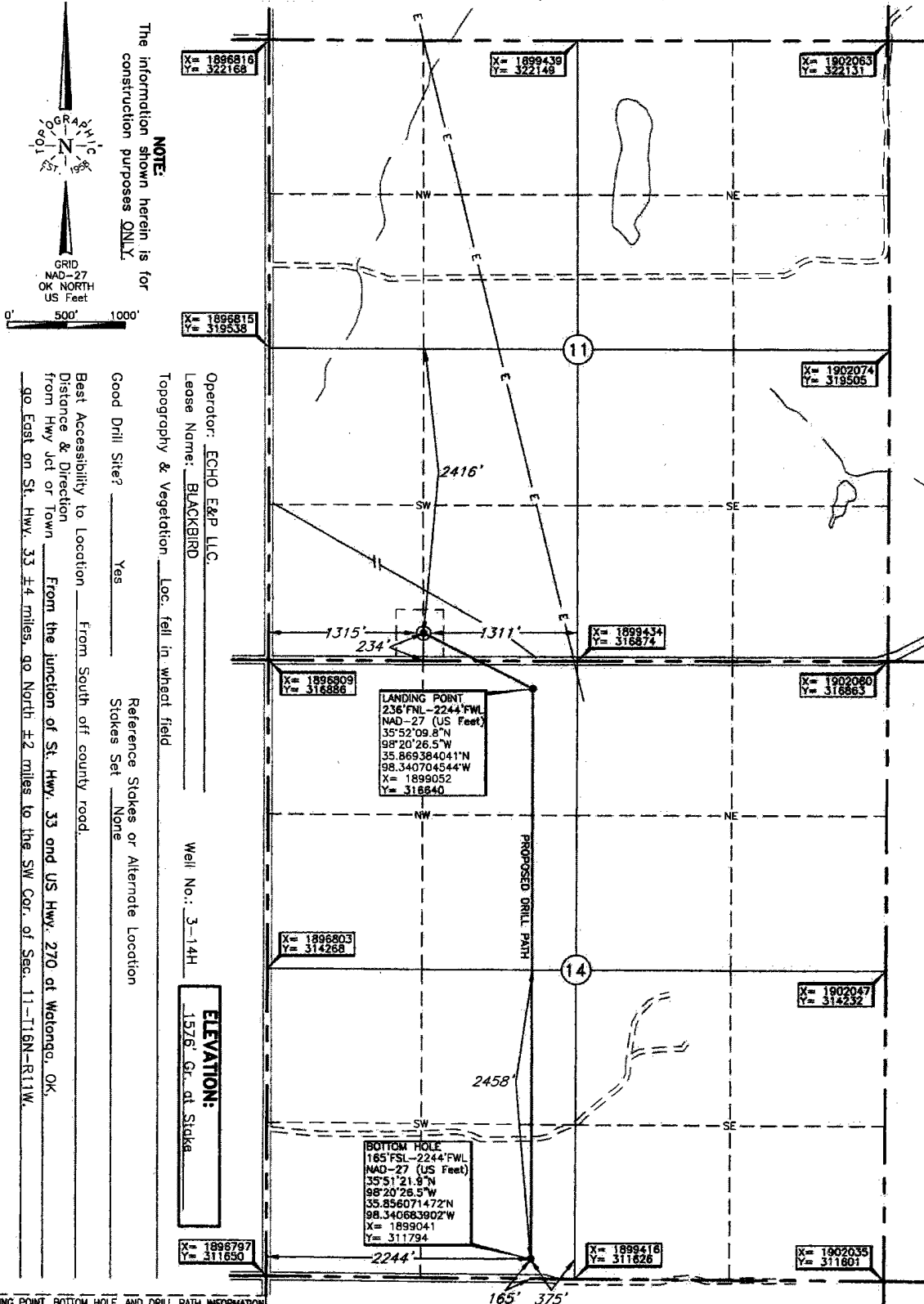
The duration of this permit is SIX MONTHS, except as otherwise provided by Rule 165: 10-3-1.

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 - 201801743 | 4/30/2018 - G57 - 14-16N-11W<br>X673566 MSSP<br>2 WELLS<br>NO OP. NAMED<br>REC 4-16-2018 (NORRIS)   |
| PENDING CD - 201801745 | 4/30/2018 - G57 - (I.O.) 14-16N-11W<br>X673566 MSSP<br>COMPL. INT. NCT 165' FNL, NCT 165' FSL, NCT 330' FWL<br>NO OP. NAMED<br>REC 4-16-2018 (NORRIS) |
| SPACING - 673566       | 4/30/2018 - G57 - (640)(HOR) 14-16N-11W<br>EXT 656049/657082 MSSP, OTHERS<br>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.

234'FSL-1315'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. fall in wheat field  
 Good Drill Site? Yes  
 Reference Stakes or Alternate Location: Stakes Set None  
 Well No.: 3-14H  
 ELEVATION: 1576' Gr. at Stake  
 Best Accessibility to Location: From South of county road.  
 Distance & Direction from Hwy Jet or Town: From the junction of St. Hwy. 33 and US Hwy. 270 at Waterloo, OK go East on St. Hwy. 33 ±4 miles, go North ±2 miles to the SW Cor. of Sec. 11-T16N-R11W.

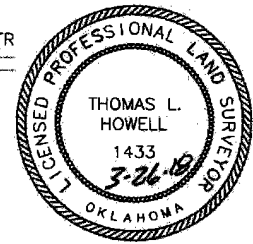
LANDING POINT, BOTTOM HOLE, AND DRILL PATH INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED.

Revision  A Date of Drawing: Mar. 26, 2018  
 Invoice # 290734B 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



DATUM: NAD-27  
 LAT: 35°52'14.4"N  
 LONG: 98°20'37.8"W  
 LAT: 35.870677181°N  
 LONG: 98.343842258°W  
 STATE PLANE COORDINATES: (US Feet)  
 ZONE: OK NORTH  
 X: 1898124  
 Y: 317114