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

API NUMBER: 051 24340 B

Approval Date: 05/02/2018
Expiration Date: 11/02/2018

Horizontal Hole Oil & Gas

Amend reason: ADD FORMATION

AMEND PERMIT TO DRILL

WELL LOCATION: Sec: 20 Twp: 5N Rge: 6W County: GRADY

SPOT LOCATION: NE SE SE SW FEET FROM QUARTER: FROM **SOUTH** FROM **WEST**
SECTION LINES: **340** **2435**

Lease Name: VENUS **Well No: 1-20H** **Well will be 340 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

J E DEVELOPMENT CORPORATION
PO BOX 865
CHICKASHA OK 73023

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

	Name	Depth		Name	Depth
1	MISSISSIPPIAN	12244	6		
2	WOODFORD	15210	7		
3			8		
4			9		
5			10		

Spacing Orders: 676418 Location Exception Orders: 675204 Increased Density Orders:

Pending CD Numbers: Special Orders:

Total Depth: 19850 Ground Elevation: 1171 **Surface Casing: 1500** Depth to base of Treatable Water-Bearing FM: 350

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: 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: DOG CREEK

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 18-34162
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 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: DOG CREEK

HORIZONTAL HOLE 1

Sec 20 Twp 5N Rge 6W County GRADY

Spot Location of End Point: NW NW NW NE

Feet From: NORTH 1/4 Section Line: 165

Feet From: EAST 1/4 Section Line: 2580

Depth of Deviation: 14687

Radius of Turn: 584

Direction: 3

Total Length: 4521

Measured Total Depth: 20125

True Vertical Depth: 15260

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

Notes:

Category	Description
COMPLETION INTERVAL	5/1/2018 - G60 - WILL BE LEGAL FOR THE WOODFORD AT 165' FNL/FSL AND NCT 330' FEL/FWL PER OPERATOR
DEEP SURFACE CASING	3/29/2018 - 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	3/29/2018 - 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
LOCATION EXCEPTION - 675204	9/20/2018 - G60 - (I.O.) 20-5N-6W X676418 MSSP COMPL. INT. NCT 165' FNL, NCT 165' FSL, NCT 1660' FWL ECHO E&P, LLC. 3/27/18

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Category	Description
MEMO	3/29/2018 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT
SPACING - 676418	4/19/2018 - G56 - (640) (HOR) 20-5N-6W EST MSSP, WDFD, OTHER POE TO BHL (MSSP) NLT 660' FB POE TO BHL (WDFD) NLT 165' FNL/FSL, NLT 330' FEL/FWL

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.