

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

API NUMBER: 091 21803

Approval Date: 06/13/2018

Expiration Date: 12/13/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 17 Twp: 8N Rge: 13E County: MCINTOSH  
SPOT LOCATION:  NW  NW  NW  NW FEET FROM QUARTER: FROM NORTH FROM WEST  
SECTION LINES: 275 324

Lease Name: OSCAR LU Well No: 1-8-5WMH Well will be 275 feet from nearest unit or lease boundary.  
Operator Name: CALYX ENERGY III LLC Telephone: 9189494224 OTC/OCC Number: 23515 0

CALYX ENERGY III LLC  
6120 S YALE AVE STE 1480  
TULSA, OK 74136-4226

MIDDLE CREEK, LLC.  
2798 N. 394  
DUSTIN OK 74839

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

	Name	Depth	Name	Depth
1	CANEY	4500	6	
2	MAYES	4750	7	
3	WOODFORD	4850	8	
4	HUNTON	4900	9	
5	SYLVAN	4900	10	

Spacing Orders: 672567  
677022  
676054  
524669

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201802975  
201802974

Special Orders:

Total Depth: 15145 Ground Elevation: 755 **Surface Casing: 1500** Depth to base of Treatable Water-Bearing FM: 220

Under Federal Jurisdiction: No Fresh Water Supply Well Drilled: No Surface Water used to Drill: Yes

PIT 1 INFORMATION

Type of Pit System: ON SITE  
Type of Mud System: AIR

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 BED AQUIFER  
Pit Location Formation: SENORA

Mud System Change to Water-Based or Oil-Based Mud Requires an Amended Intent (Form 1000).

Approved Method for disposal of Drilling Fluids:

- A. Evaporation/dewater and backfilling of reserve pit.
- B. Solidification of pit contents.

F. Haul to Commercial soil farming facility: Sec. 14 Twn. 7N Rng. 9E Cnty. 63 Order No: 551649

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: 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 BED AQUIFER

Pit Location Formation: SENORA

HORIZONTAL HOLE 1

Sec 05 Twp 8N Rge 13E County MCINTOSH

Spot Location of End Point: N2 NW NW NW

Feet From: NORTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 330

Depth of Deviation: 4318

Radius of Turn: 382

Direction: 1

Total Length: 10226

Measured Total Depth: 15145

True Vertical Depth: 5236

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

Notes:

Category

Description

DEEP SURFACE CASING

6/6/2018 - 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

6/6/2018 - 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)

MEMO

6/6/2018 - G71 - PIT 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, WBM/CUTTINGS CAPTURED IN CONCRETE-LINED PIT, SOLIDIFIED AND HELD UNTIL DISPOSAL APPROVED BY OCC

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.

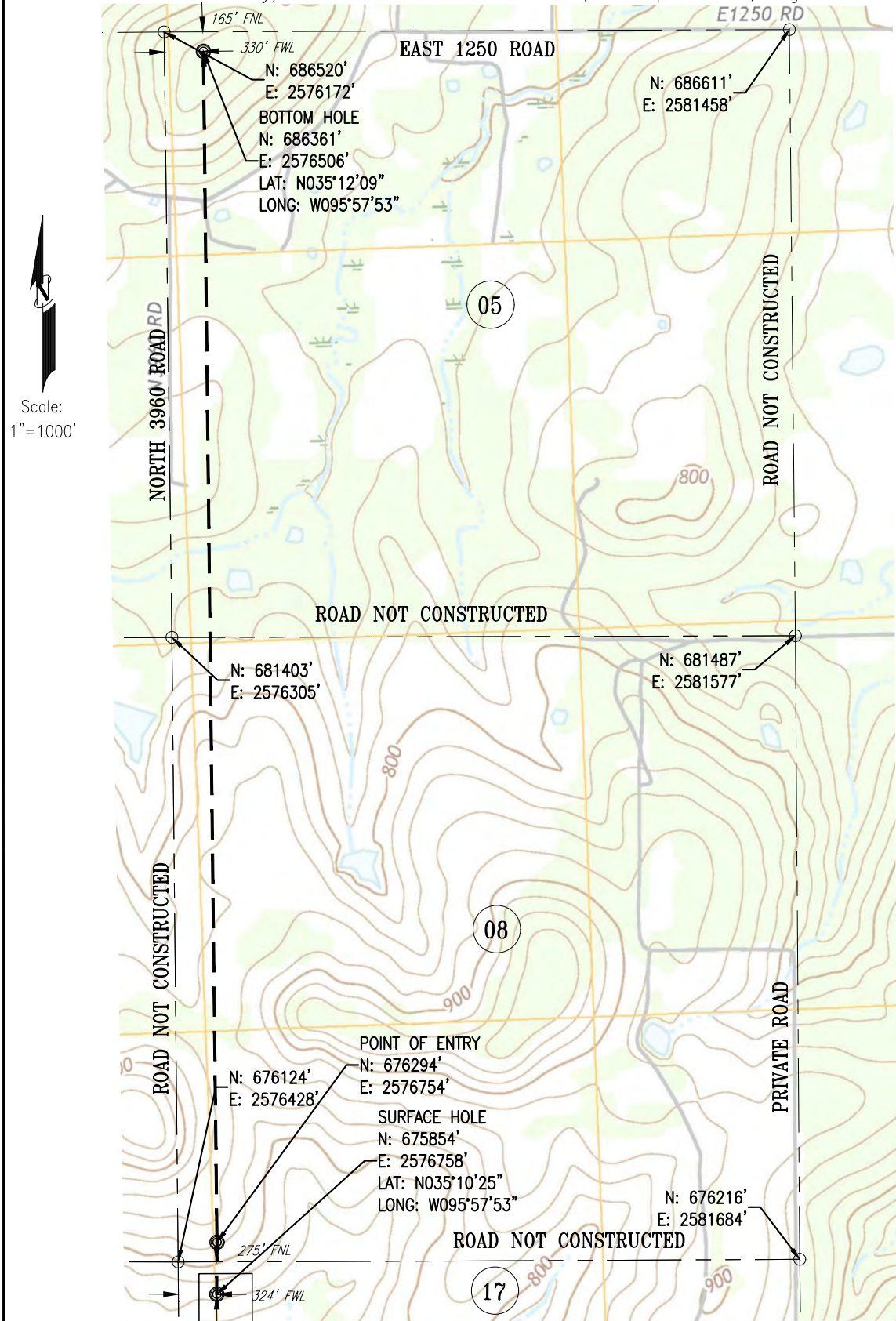
Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.

Category	Description
PENDING CD - 201802974	6/7/2018 - G57 - (I.O.) 5 & 8-8N-13E EST MULTIUNIT HORIZONTAL WELL X524669 CNEY, WDFD 5-8N-13E X676054 MYES 5-8N-13E X672567 CNEY, MYES, WDFD, HNTN 8-8N-13E X677022 SLVN 8-8N-13E (CNEY, WDFD ARE ADJACENT COMMON SOURCES OF SUPPLY TO THE MYES 5-8N-13E) (CNEY, HNTN, SLVN ARE ADJACENT COMMON SOURCES OF SUPPLY TO THE MYES, WDFD 8-8N-13E) 50% 8-8N-13E 50% 5-8N-13E NO OP. NAMED REC 5-18-2018 (DUNN)
PENDING CD - 201802975	6/7/2018 - G57 - (I.O.) 5 & 8-8N-13E X524669 CNEY, WDFD 5-8N-13E X676054 MYES 5-8N-13E X672567 CNEY, MYES, WDFD, HNTN 8-8N-13E X677022 SLVN 8-8N-13E WDFD COMPL. INT. (8-8N-13E) NCT 165' FNL, NCT 165' FSL, NCT 330' FWL MYES COMPL. INT. (8-8N-13E) NCT 165' FSL, NCT 0' FNL, NCT 330' FWL MYES COMPL. INT (5-8N-13E) NCT 0' FSL, NCT 165' FNL, NCT 330' FWL NO OP. NAMED REC 6-11-2018 (DUNN)
SPACING - 524669	6/7/2018 - G57 - (640) 5-8N-13E VAC OTHER EXT OTHERS EXT 490484 CNEY, WDFD EST OTHERS
SPACING - 672567	6/7/2018 - G57 - (640)(HOR) 8-18N-13E EST CNEY, MYES, WDFD, HNTN POE TO BHL (MYES, HNTN) NLT 660' FB POE TO BHL (CNEY) NLT 330' FB POE TO BHL (WDFD) NLT 165' FNL & FSL, NLT 330' FEL & FWL
SPACING - 676054	6/7/2018 - G57 - (640)(HOR) 5-8N-13E EXT 672567 MYES EXT 671566 OTHER POE TO BHL (MYES) NLT 660' FB
SPACING - 677022	6/7/2018 - G57 - (640)(HOR) 8-8N-13E EXT 671803 SLVN POE TO BHL NLT 330' FB

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# BOTTOM HOLE EXHIBIT

MCINTOSH County, Oklahoma Sections 5, 8, & 17, Township 8N, Range 13E I.M.



Above Background data from  
 U.S.G.S. Topographic Map  
 Contour Interval 10'

SURFACE HOLE: 324' FWL & 275' FNL Sec. 17-T8N-R13E  
 POINT OF ENTRY: 330' FWL & 165' FSL Sec. 8-T8N-R13E  
 BOTTOM HOLE: 330' FWL & 165' FNL Sec. 5-T8N-R13E



Operator: CALYX ENERGY III, LLC  
 Well Name: OSCAR LU 1-8-5WMH

Keystone Engineering  
 and Land Surveying, Inc.

W18-003