

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

API NUMBER: 091 21817

Approval Date: 03/14/2019
Expiration Date: 09/14/2020

Horizontal Hole Oil & Gas
Multi Unit

PERMIT TO DRILL

WELL LOCATION: Sec: 31 Twp: 9N Rge: 13E County: MCINTOSH
SPOT LOCATION: SE NE SE SE FEET FROM QUARTER: FROM SOUTH FROM EAST
SECTION LINES: 749 255

Lease Name: MOSE Well No: 1-32-8WH Well will be 255 feet from nearest unit or lease boundary.
Operator CALYX ENERGY III LLC Telephone: 9189494224 OTC/OCC Number: 23515 0
Name:

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

JAMES B SACKETT
401686 E 1250 RD F12
HANNA OK 74845

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

Name	Depth	Name	Depth
1 MISSISSIPPIAN	3700	6	
2 MAYES	4750	7	
3 WOODFORD	4850	8	
4 HUNTON	4900	9	
5 SYLVAN	4950	10	

Spacing Orders: 690614 Location Exception Orders: Increased Density Orders: 690414
676054
524669
672567
677022

Pending CD Numbers: 201810539
201810538

Special Orders:

Total Depth: 15589 Ground Elevation: 724 **Surface Casing: 1500** Depth to base of Treatable Water-Bearing FM: 190

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 AP/TE DEPOSIT

Pit Location Formation: TERRACE

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. PIT 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, WBM/CUTTINGS CAPTURED IN CONCRETE-LINED PIT,

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 AP/TE DEPOSIT

Pit Location Formation: TERRACE

HORIZONTAL HOLE 1

Sec 08 Twp 8N Rge 13E County MCINTOSH

Spot Location of End Point: SE SE SW SW

Feet From: SOUTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 1000

Depth of Deviation: 4568

Radius of Turn: 382

Direction: 177

Total Length: 10421

Measured Total Depth: 15589

True Vertical Depth: 4950

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

Notes:

Category

Description

DEEP SURFACE CASING

1/9/2019 - 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

1/9/2019 - 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 - 690414

2/12/2019 - G56 - 5-8N-13E
X524669 WDFD
1 WELL
CALYX ENERGY III, LLC
1/25/2019

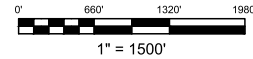
Category	Description
PENDING CD - 201810538	<p>2/12/2019 - G56 - (I.O.) S2 32-9N-13E, 5 & 8-8N-13E ESTABLISH MULTIUNIT HORIZONTAL WELL X201809852 MSSP, WDFD, HNTN, SLVN S2 32-9N-13E X676054 MYES, SLVN 5-8N-13E X524669 WDFD, HNTN 5-8N-13E X672567 MYES, WDFD, HNTN 8-8N-13E X677022 SLVN 8-8N-13E (WDFD IS AN ADJACENT COMMON SOURCE OF SUPPLY TO MSSP IN S2 32-9N-13E AND MYES IN 5 & 8-8N-13E; HNTN, SLVN ARE ADJACENT COMMON SOURCES OF SUPPLY TO WDFD 5 & 8 -8N-13E) 14% S2 32-8N-13E*** 44% 5-8N-13E*** 42% 8-8N-13E*** NO OP NAMED REC 1/7/2019 (DUNN)</p> <p>*** WILL BE REVISED AT HEARING PER OPERATOR 2% S2-31-9N-13E 50% 6-8N-13E 48% 7-8N-13E</p>
PENDING CD - 201810539	<p>2/12/2019 - G56 - (I.O.) S2 32-9N-13E, 5 & 8-8N-13E X201809852 MSSP, WDFD, HNTN, SLVN S2 32-9N-13E X676054 MYES, SLVN 5-8N-13E X524669 WDFD, HNTN 5-8N-13E X672567 MYES, WDFD, HNTN 8-8N-13E X677022 SLVN 8-8N-13E COMPL INT (S2 32-9N-13E) NCT 165' FNL, NCT 0' FSL, NCT 330' FWL COMPL INT (5-8N-13E) NCT 0' FNL, NCT 0' FSL, NCT 33' FWL COMPL INT (8-8N-13E) NCT 0' FNL, 165' FSL, NCT 330' FWL NO OP NAMED REC 1/7/2019 (DUNN)</p>
SPACING - 524669	<p>2/12/2019 - G56 - (640) 5-8N-13E EST OTHERS EXT OTHER EXT 490484 WDFD, HNTN, OTHERS</p>
SPACING - 672567	<p>2/12/2019 - G56 - (640)(HOR) 8-8N-13E EST MYES, WDFD, HNTN, OTHER COMPL INT (MYES, HNTN) NLT 660' FB COMPL INT (WDFD) NLT 165' FNL/FSL, NLT 330' FEL/FWL</p>
SPACING - 676054	<p>2/12/2019 - G56 - (640)(HOR) 5-8N-13E EXT 672567 MYES EXT 671566 SLVN COMPL INT (MYES) NLT 660' FB COMPL INT (SLVN) NLT 330' FB</p>
SPACING - 677022	<p>2/12/2019 - G56 - (640)(HOR) 6 & 7-8N-13E EXT 671803 SLVN COMPL INT NLT 330' FB</p>
SPACING - 690614	<p>2/12/2019 - G56 - (320)(HOR) S2 32-9N-13E EST MSSP, WDFD, HNTN, SLVN POE TO BHL (MSSP, HNTN) NLT 660' FB POE TO BHL (WDFD) NLT 165' FNL/FSL, NLT 330' FEL/FWL POE TO BHL (SLVN) NLT 330' FB</p>

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.

Calyx Energy LLC Well Location Plat

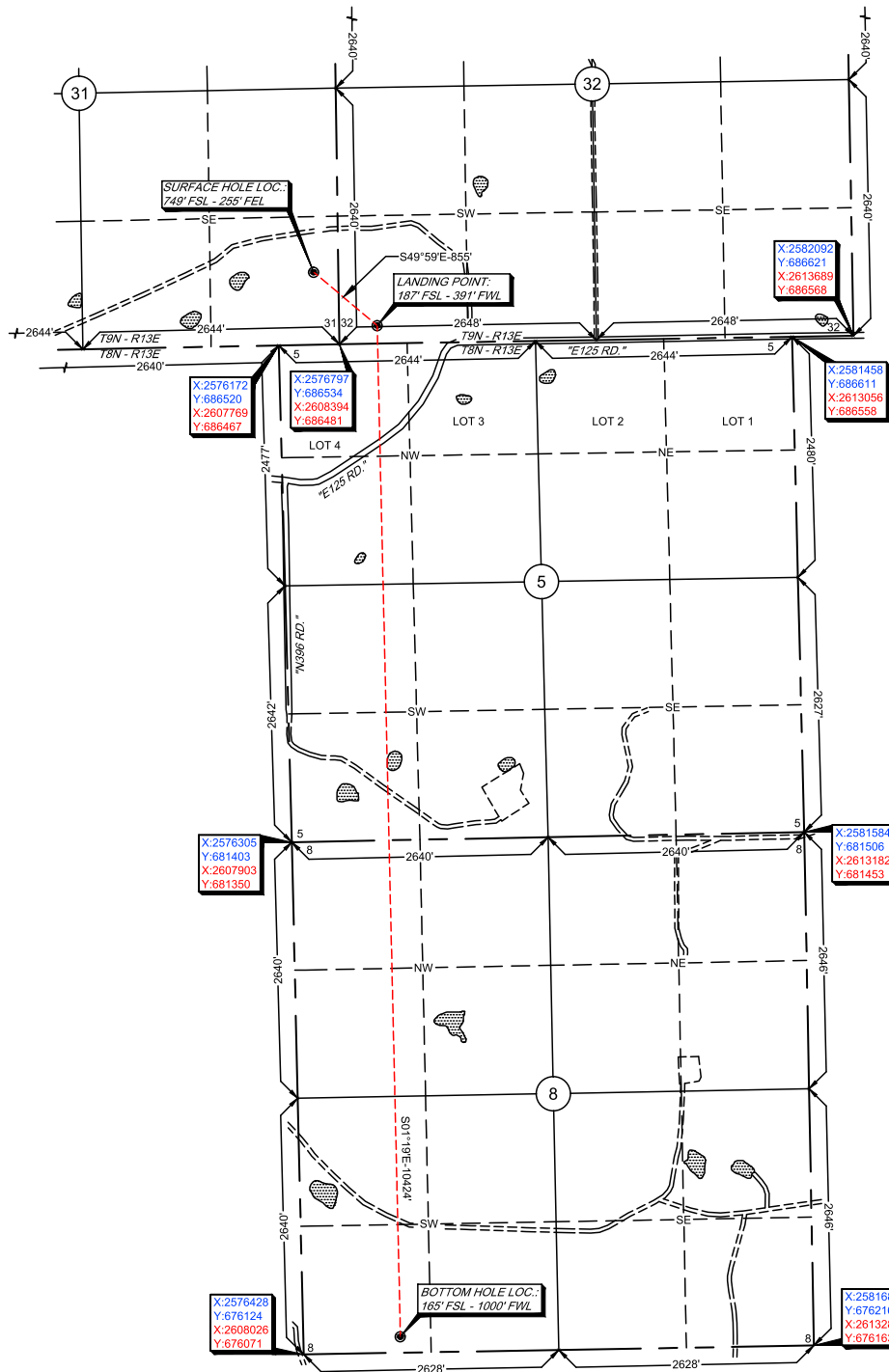
S.H.L. Sec. 31-9N-13E I.M.
B.H.L. Sec. 8-8N-13E I.M.

Operator: CALYX ENERGY III, LLC
Lease Name and No.: MOSE 1-32-8WH
Footage: 749' FSL - 255' FEL Gr. Elevation: 724'
Section: 31 Township: 9N Range: 13E I.M.
County: McIntosh State of Oklahoma
Terrain at Loc.: Location fell on the bottom of a brushy hillside.



All bearings shown are grid bearings.

GPS DATUM
NAD 83
NAD 27
OK SOUTH ZONE



Surface Hole Loc.:
Lat: 35°12'17.87"N
Lon: 95°57'52.64"W
Lat: 35.20496502
Lon: -95.96462113
X: 2576530.02
Y: 687277.35

Surface Hole Loc.:
Lat: 35°12'17.52"N
Lon: 95°57'51.64"W
Lat: 35.20486782
Lon: -95.96434376
X: 2608127.73
Y: 687224.37

Landing Point:
Lat: 35°12'12.30"N
Lon: 95°57'44.88"W
Lat: 35.20341798
Lon: -95.96246628
X: 2577185.02
Y: 686727.35

Landing Point:
Lat: 35°12'11.95"N
Lon: 95°57'43.88"W
Lat: 35.20332080
Lon: -95.96218897
X: 2608782.72
Y: 686674.40

Bottom Hole Loc.:
Lat: 35°10'29.21"N
Lon: 95°57'44.53"W
Lat: 35.17477993
Lon: -95.96236963
X: 2577424.30
Y: 676306.22

Bottom Hole Loc.:
Lat: 35°10'28.86"N
Lon: 95°57'43.53"W
Lat: 35.17468333
Lon: -95.96209243
X: 2609021.98
Y: 676253.75

-Please note that this location was staked on the ground under the supervision of a Licensed Professional Land Surveyor, but the accuracy of this survey is not guaranteed. Please contact Arkoma Surveying and Mapping 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. -Quarter Section distances may be assumed from a Government Survey Plat or assumed at a proportionate distance from opposing section corners, or occupation thereof, and may not have been measured on-the-ground, and further, does not represent a true boundary survey.

Survey and plat by:
Arkoma Surveying and Mapping, PLLC
P.O. Box 238 Wilburton, OK 74578
Ph. 918-465-5711 Fax 918-465-5030
Certificate of Authorization No. 5348
Expires June 30, 2020

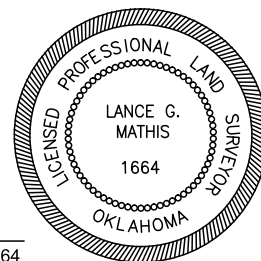
Certification:

This is to certify that this Well Location Plat represents the results of a survey made on the ground performed under the supervision of the undersigned.

Lance G. Mathis
LANCE G. MATHIS

12/27/18

OK LPLS 1664



Invoice #8393-B

Date Staked: 12/18/18 By: Z.D.
Date Drawn: 12/19/18 By: C.K.