

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

API NUMBER: 063 24814

Approval Date: 06/22/2018

Expiration Date: 12/22/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 18 Twp: 9N Rge: 10E County: HUGHES

SPOT LOCATION: ☐ SW ☐ SW ☐ NW ☐ NW FEET FROM QUARTER: FROM NORTH FROM WEST

SECTION LINES: 1323 182

Lease Name: THUNDER Well No: 1-13-25CH Well will be 182 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

EDWARD V. & LORI M. WILLIAMS
2151 N. 377 RD.
WETUMKA OK 74883

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	3600	6	
2	WOODFORD	3875	7	
3			8	
4			9	
5			10	

Spacing Orders: 678866

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201802868
201802876
201802875

Special Orders:

Total Depth: 16500

Ground Elevation: 856

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 140

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: WEWOKA

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.

H. SEE MEMO

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

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: WEWOKA

HORIZONTAL HOLE 1

Sec 25 Twp 9N Rge 9E County HUGHES

Spot Location of End Point: C E2 NE SE

Feet From: SOUTH 1/4 Section Line: 1980

Feet From: EAST 1/4 Section Line: 330

Depth of Deviation: 3362

Radius of Turn: 382

Direction: 185

Total Length: 12538

Measured Total Depth: 16500

True Vertical Depth: 3900

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

Notes:

Category

Description

DEEP SURFACE CASING

5/31/2018 - 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

5/31/2018 - 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

MEMO

5/31/2018 - 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

PENDING CD - 201802868

5/31/2018 - G57 - (640)(HOR) 25-9N-9E
EST MSSP, WDFD, OTHER
POE TO BHL (MSSP) NLT 660' FB
POE TO BHL (WDFD) NLT 165' FNL & FSL, NLT 330' FEL & FWL
REC 5-7-2018 (DUNN)

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.

063 24814 THUNDER 1-13-25CH

Category	Description
PENDING CD - 201802875	6/8/2018 - G57 - (I.O.) 13, 24 & 25-9N-9E EST MULTIUNIT HORIZONTAL WELL X201802868 MSSP, WDFD 25-9N-9E X678866 MSSP, WDFD 13 & 24-9N-9E (WDFD IS AN ADJACENT COMMON SOURCE OF SUPPLY TO THE MSSP) 75% 13 & 24-9N-9E 25% 25-9N-9E CALYX ENERGY III, LLC. REC 5-7-2018 (DUNN)
PENDING CD - 201802876	6/8/2018 - G57 - (I.O.) 13, 24 & 25-9N-9E X201802868 MSSP, WDFD 25-9N-9E X678866 MSSP, WDFD 13 & 24-9N-9E COMPL. INT. (13 & 24-9N-9E) NCT 1320' FNL, NCT 0' FSL, NCT 330' FEL COMPL. INT. (25-9N-9E) NCT 0' FNL, NCT 1980' FSL, NCT 330' FEL NO OP. NAMED REC 5-7-2018 (DUNN)
SPACING - 678866	5/31/2018 - G57 - (1280)(HOR) 13 & 24-9N-9E 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.

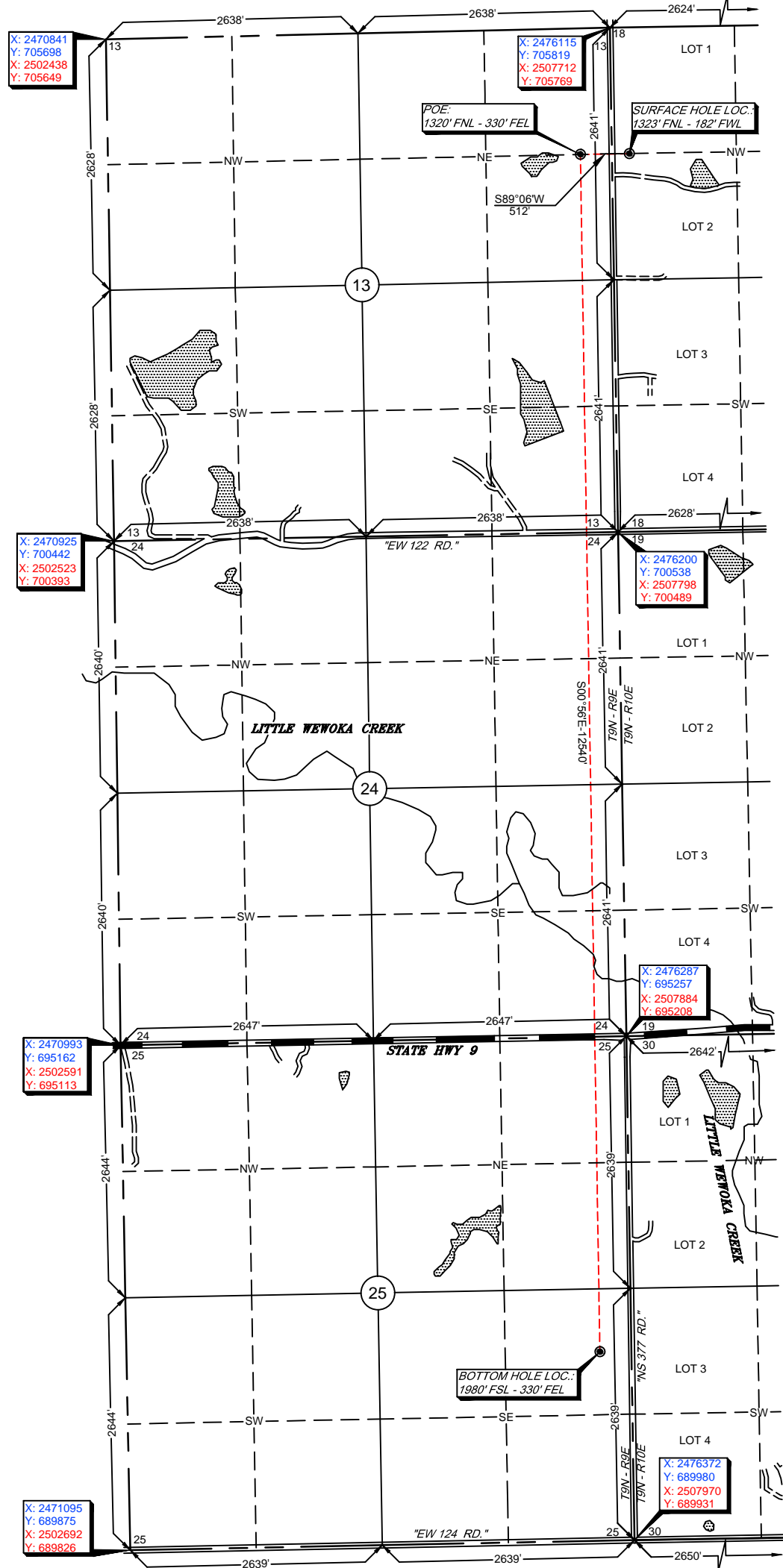


Well Location Plat

S.H.L. Sec. 18-9N-10E I.M.
B.H.L. Sec. 25-9N-9E I.M.

Operator: CALYX ENERGY III, LLC
Lease Name and No.: THUNDER 1-13-25CH
Footage: 1323' FNL - 182' FWL Gr. Elevation: 856'
Section: 18 Township: 9N Range: 10E I.M. County: Hughes State of Oklahoma
Terrain at Loc.: Location fell in open pasture, slopes down to NW & SE pad corners, E-W fence runs through location.

API: 063 24814



X: 2471095
Y: 689875
X: 2502692
Y: 689826

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
Invoice #7753-A-A
Date Staked: 03/28/18 By: H.S.
Date Drawn: 04/13/18 By: J.D
Revise LP & BHL: 06/19/18 By: C.K.

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.

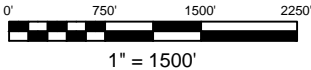
Lance G. Mathis
LANCE G. MATHIS

06/19/18

OK LPLS 1664



All bearings shown are grid bearings.



GPS DATUM
NAD 83
NAD 27
OK SOUTH ZONE

Surface Hole Loc.:
Lat: 35°15'26.52"N
Lon: 96°17'56.54"W
X: 2476317.95
Y: 704499.56

Surface Hole Loc.:
Lat: 35°15'26.21"N
Lon: 96°17'55.51"W
X: 2507915.58
Y: 704449.97

POE:
Lat: 35°15'26.53"N
Lon: 96°18'02.72"W
X: 2475806.09
Y: 704491.47

POE:
Lat: 35°15'26.22"N
Lon: 96°18'01.69"W
X: 2507403.72
Y: 704441.90

Bottom Hole Loc.:
Lat: 35°13'22.50"N
Lon: 96°18'02.80"W
X: 2476010.03
Y: 691953.20

Bottom Hole Loc.:
Lat: 35°13'22.19"N
Lon: 96°18'01.77"W
X: 2507607.70
Y: 691903.89

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.

