API NUMBER: 091 21821 **OKLAHOMA CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION** P.O. BOX 52000 **OKLAHOMA CITY, OK 73152-2000** (Rule 165:10-3-1)

Approval Date: 03/19/2019 09/19/2020 Expiration Date:

23515 0

Horizontal Hole Multi Unit

Name:

Oil & Gas

PERMIT TO DRILL

WELL LOCATION:	Sec: 14 Twp: 9N	Rge: 13E	County: MCI	NTOSH	
SPOT LOCATION:	SW NW SW	NW	FEET FROM QUARTER: FROM	NORTH FROM	WEST
			SECTION LINES:	1795	234
Lease Name: MIFFLIN			Well No:	1-15-27CH	
Operator	CALYX ENERGY III LLC			Telephone:	9189494224

OTC/OCC Number:

Well will be 234 feet from nearest unit or lease boundary.

CALYX ENERGY III LLC 6120 S YALE AVE STE 1480

TULSA. OK 74136-4226 JACK CAMPBELL RANCH, LLC

399356 HIGHWAY 9

HANNA OK 74845

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	3675	6	
2	WOODFORD	4200	7	
3			8	
4			9	
5			10	
Spacing Orders:	541781	Location Exception Orders: 69	10	Increased Density Orders:
. 0	689526	·		•
	552292			
	689527			
	692609			

Pending CD Numbers: Special Orders:

Total Depth: 17125 Ground Elevation: 760 Depth to base of Treatable Water-Bearing FM: 160 Surface Casing: 1500

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?

is located in a Hydrologically Sensitive Area.

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

Approved Method for disposal of Drilling Fluids:

B. Solidification of pit contents.

A. Evaporation/dewater and backfilling of reserve pit.

H. SEE MEMO

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).

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 27 Twp 9N Rge 13E County MCINTOSH

Spot Location of End Point: SW SE SE SE Feet From: SOUTH 1/4 Section Line: 165
Feet From: EAST 1/4 Section Line: 600

Depth of Deviation: 2899 Radius of Turn: 573

Direction: 185

Total Length: 13326

Measured Total Depth: 17125

True Vertical Depth: 4200

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

Notes:

Category Description

DEEP SURFACE CASING 2/20/2019 - 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 2/20/2019 - 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

LOCATION EXCEPTION - 692610 3/18/2019 - GA8 - (I.O.) 15, 22 & 27-9N-13E

X54178 MSSP 15-9N-13E X689526 WDFD 15-9N-13E X552292 MSSP, WDFD 22-9N-13E X689527 MSSP, WDFD 27-9N-13E

COMPL. INT. (15-9N-13E) NCT 660' FNL, NCT 0' FSL, NCT 330' FEL COMPL. INT. (22-9N-13E) NCT 0' FNL, NCT 0' FSL, NCT 330' FEL COMPL. INT. (27-9N-13E) NCT 0' FNL, NCT 165' FSL, NCT 300' FEL

CALYX ENERGY III, LLC

3/8/2019

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.

091 21821 MIFFLIN 1-15-27CH

Category Description

MEMO 2/20/2019 - G71 - PIT 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST.

WBM/CUTTINGS CAPTURED IN CONCRETE-LINED PIT, SOLIDFIED AND HELD UNTIL DISPOSAL

APPROVED BY OCC

SPACING - 541781 3/18/2019 - GA8 - (640) 15-9N-13E

EXT 535651 MSSP, OTHERS

SPACING - 552292 3/18/2019 - GA8 - (640) 22-9N-13E

EXT 541781 MSSP, OTHERS EXT 500360 WDFD, OTHERS

SPACING - 689526 3/18/2019 - GA8 - (640)(HOR) 15-9N-13E

EST WDFD, OTHER

POE TO BHL 165' FNL & FSL, NLT 330' FEL & FWL

SPACING - 689527 3/18/2019 - GA8 - (640)(HOR) 27-9N-13E

EST MSSP, WDFD, OTHER POE TO BHL (MSSP) NLT 660' FB

POE OT BHL (WDFD) NLT 165' FNL & FSL, NLT 330' FEL & FWL

SPACING - 692609 3/18/2019 - GA8 - (I.O.) 15, 22, 27-9N-13E EST MULITUNIT HORIZONTAL WELL

X54178 MSSP 15-9N-13E X689526 WDFD 15-9N-13E X552292 MSSP, WDFD 22-9N-13E X689527 MSSP, WDFD 27-9N-13E

(WDFD ADJACENT COMMON SOURCE OF SUPPLY TO MSSP)

19% 15-9N-13E 41% 22-9N-13E 40% 27-9N-13E

CALYX ENERGY III, LLC

3/8/2019