

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

API NUMBER: 091 21813

Approval Date: 03/01/2019

Expiration Date: 09/01/2020

Horizontal Hole
Multi Unit

Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 18 Twp: 9N Rge: 13E County: MCINTOSH
SPOT LOCATION: ☐ SW ☐ NE ☐ SE ☐ NW FEET FROM QUARTER: FROM NORTH FROM WEST
SECTION LINES: 1882 1999

Lease Name: DUNDER Well No: 1-18-6CH Well will be 1882 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

JACK CAMPBELL RANCH, LLC
399356 HIGHWAY 9
HANNA OK 74845

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	3850	6	
2	WOODFORD	4100	7	
3			8	
4			9	
5			10	

Spacing Orders: 516040
687018
687017

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201810504
201810508
201810511

Special Orders:

Total Depth: 15658 Ground Elevation: 890 Surface Casing: 1500 Depth to base of Treatable Water-Bearing FM: 120

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 06 Twp 9N Rge 13E County MCINTOSH

Spot Location of End Point: NE NW NE NW

Feet From: NORTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 1800

Depth of Deviation: 3377

Radius of Turn: 573

Direction: 359

Total Length: 11381

Measured Total Depth: 15658

True Vertical Depth: 4100

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

Notes:

Category

Description

DEEP SURFACE CASING

2/14/2019 - 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

2/14/2019 - 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

MEMO

2/14/2019 - 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.

091 21813 DUNDER 1-18-6CH

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 - 201810504	2/20/2019 - GA8 - (E.O.) 18, 7 & 6-9N-13E X516040 MSSP, WDFD 18-9N-13E X687018 MSSP, WDFD 7-9N-13E X687017 MSSP, WDFD 6-9N-13E COMPL. INT. (18-9N-13E) NCT 2640' FSL, NCT 0' FNL, NCT 1320' FWL COMPL. INT. (7-9N-13E) NCT 0' FSL, NCT 0' FNL, NCT 1320' FWL COMPL. INT. (6-9N-13E) NCT 0' FSL, NCT 165' FNL, NCT 1320' FWL NO OP. NAMED REC 3/1/2019 (JOHNSON)
PENDING CD - 201810508	2/21/2019 - GA8 - 18-9N-13E X516040 1 WELL CALYX ENERGY III, LLC REC 1/8/2019 (JOHNSON)
PENDING CD - 201810511	2/20/2019 - GA8 - (E.O.) 18, 7 & 6-9N-13E EST MULTIUNIT HORIZONTAL WELL X516040 MSSP, WDFD 18-9N-13E X687018 MSSP, WDFD 7-9N-13E X687017 MSSP, WDFD 6-9N-13E (WDFD ADJACENT COMMON SOURCE OF SUPPLY TO MSSP) 18.61% 18-9N-13E 45.91% 7-9N-13E 35.48% 6-9N-13E NO OP. NAMED REC 3/1/2019 (JOHNSON)
SPACING - 516040	2/20/2019 - GA8 - (640) 18-9N-13E VAC OTHERS EXT OTHERS EST MSSP, WDFD, OTHERS
SPACING - 687017	2/20/2019 - GA8 - (640)(HOR) 6-9N-13E EST MSSP, WDFD, OTHERS POE TO BHL (MSSP) NCT 660' FB POE TO BHL (WDFD) NCT 165' FNL & FSL, NCT 330' FEL & FWL
SPACING - 687018	2/20/2019 - GA8 - (640)(HOR) 7-9N-13E EST MSSP, WDFD, OTHERS POE TO BHL (MSSP) NCT 660' FB POE TO BHL (WDFD) NCT 165' FNL & FSL, NCT 330' FEL & FWL (COEXIST SP. ORDER #463698)

This permit does not address the right of entry or settlement of surface damages.

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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.

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SPOT LOCATION: ☐ SW ☐ NE ☐ SE ☐ NW FEET FROM QUARTER: FROM NORTH FROM WEST
SECTION LINES: 1682 995

Lease Name: DUNDER

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Well will be 1882 feet from nearest unit or lease boundary.

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Telephone: 9189494224

OTC/OCC Number: 23515 0

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Location Exception Orders:

Increased Density Orders:

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(E.O.) Hearing 3-1-2019

Special Orders:

Total Depth: 15658

Ground Elevation: 890

Surface Casing: 1500

Depth to base of Treatable Water-Bearing FM: 120

DEEP SURFACE CASING HAS BEEN APPROVED

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

PIT 1: AIR

PIT 2: WATER-BASED, CLOSED
8K - 5K ppm CHLORIDES

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

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

TEMPORARY AUTHORIZATION TO DRILL

Expiration Date: 3-1-2019

Signature: *Virginia Hallinger*
OAC 165: 10-3-1 (L)

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HORIZONTAL HOLE 1

Sec 06 Twp 9N Rge 13E County MCINTOSH

Spot Location of End Point: NE NW NE NW

Feet From: NORTH 1/4 Section Line: 165

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Depth of Deviation: 3377

Radius of Turn: 573

Direction: 359

Total Length: 11381

Measured Total Depth: 15658

True Vertical Depth: 4100

End Point Location from Lease,

Unit, or Property Line: 165

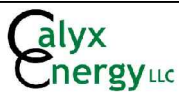
Application for Intent to Drill

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000 00000 DUNDER 1-18-6CH



Well Location Plat

31-091-21813

S.H.L. Sec. 18-9N-13E I.M.

B.H.L. Sec. 6-9N-13E I.M.

Operator: CALYX ENERGY III, LLC

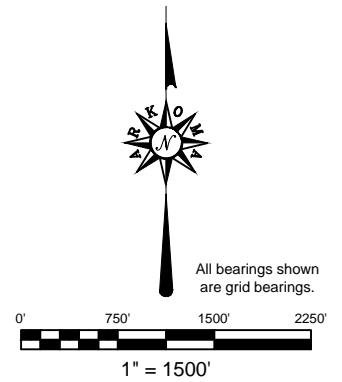
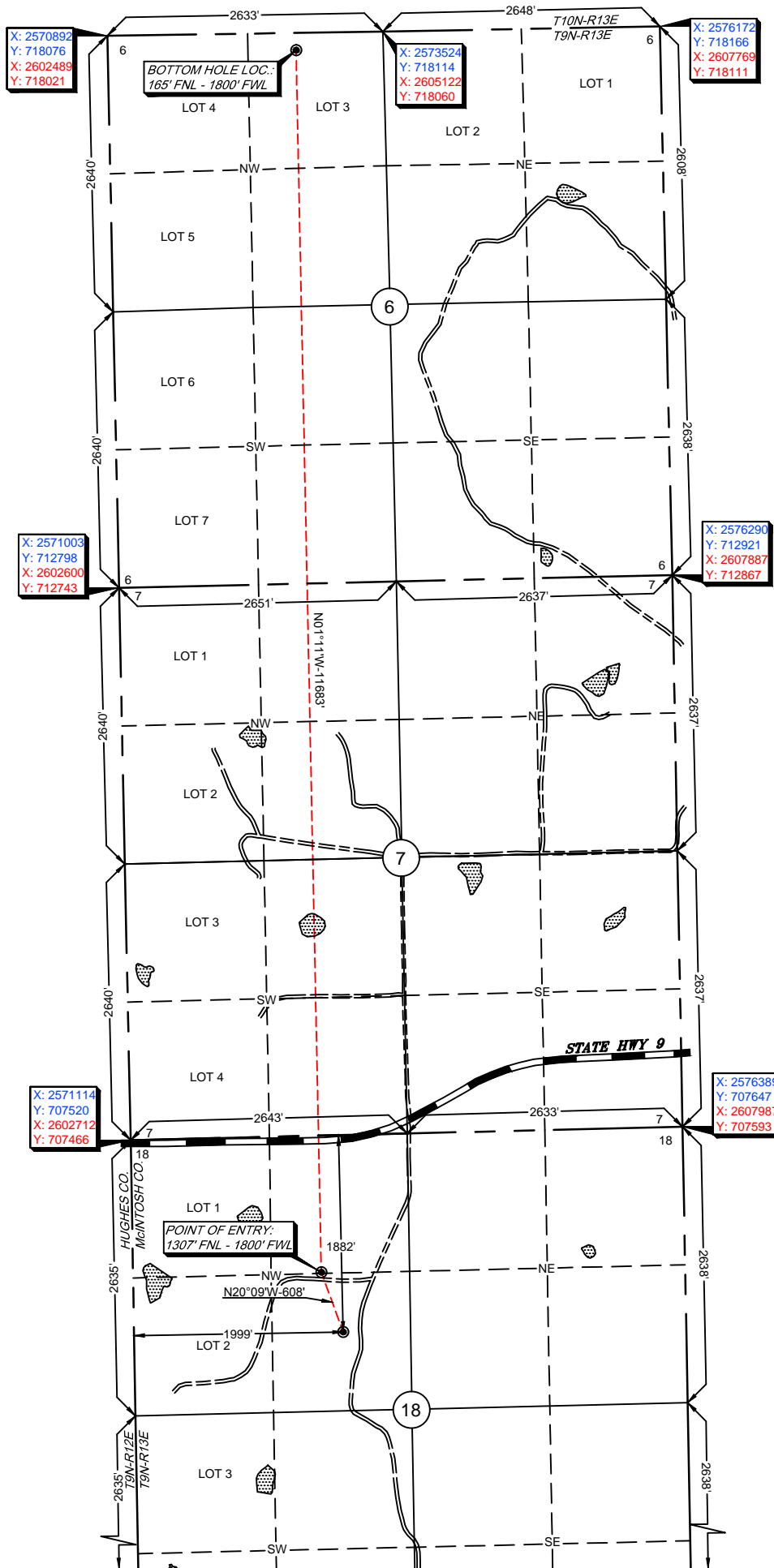
Lease Name and No.: DUNDER 1-18-6CH

Footage: 1882' FNL - 1999' FWL Gr. Elevation: 890'

Section: 18 Township: 9N Range: 13E I.M.

County: McIntosh State of Oklahoma

Terrain at Loc.: Location fell in fairly flat, open pasture.



GPS DATUM

NAD 83

NAD 27

OK SOUTH ZONE

Surface Hole Loc.:
Lat: 35°15'20.57"N
Lon: 95°58'28.96"W
Lat: 35.25571575
Lon: -95.97471066
X: 2573145.76
Y: 705685.83

Surface Hole Loc.:
Lat: 35°15'20.22"N
Lon: 95°58'27.96"W
Lat: 35.25561750
Lon: -95.97443286
X: 2604743.49
Y: 705631.97

Point Of Entry:
Lat: 35°15'26.26"N
Lon: 95°58'31.34"W
Lat: 35.25729383
Lon: -95.97537332
X: 2572936.43
Y: 706256.16

Point Of Entry:
Lat: 35°15'25.90"N
Lon: 95°58'30.34"W
Lat: 35.25719555
Lon: -95.97509553
X: 2604534.15
Y: 706202.26

Bottom Hole Loc.:
Lat: 35°17'21.81"N
Lon: 95°58'31.43"W
Lat: 35.28939159
Lon: 95.97539717
X: 2572694.99
Y: 717937.15

Bottom Hole Loc.:
Lat: 35°17'21.45"N
Lon: 95°58'30.43"W
Lat: 35.28929233
Lon: -95.97511968
X: 2604292.60
Y: 717882.59

-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

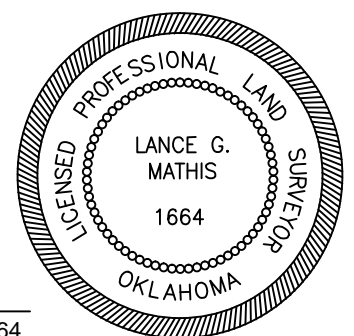
Certification:

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

02/13/19

OK LPLS 1664



Invoice #8479-A

Date Staked: 02/07/19 By: H.S.

Date Drawn: 02/11/19 By: E.W.