

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

API NUMBER: 029 21370 A

Approval Date: 02/14/2018
Expiration Date: 08/14/2018

Horizontal Hole Oil & Gas

Amend reason: CHANGE DRILLING OPERATION TO HORIZONTAL OIL/GAS WELL

AMEND PERMIT TO DRILL

WELL LOCATION: Sec: 27 Twp: 2N Rge: 10E County: COAL
SPOT LOCATION: SW NE SE SW FEET FROM QUARTER: FROM SOUTH FROM WEST
SECTION LINES: 850 2265

Lease Name: MCGRAW Well No: 2-34/3/10H Well will be 850 feet from nearest unit or lease boundary.

Operator Name: BRAVO ARKOMA LLC Telephone: 9188944440; 9188944 OCC Number: 23562 0

BRAVO ARKOMA LLC
1323 E 71ST ST STE 400
TULSA, OK 74136-5067

CHARLES FREDERICK LARECY
3000 S. HULEN STREET, STE. 124-229
FORT WORTH TX 76109

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

	Name	Depth	Name	Depth
1	CANEY	8239	6	
2	WOODFORD	8515	7	
3			8	
4			9	
5			10	

Spacing Orders: 535450
517456
530706

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201800496
201800497
201705640
201705638
201800500

Special Orders:

Total Depth: 24000 Ground Elevation: 640 **Surface Casing: 1000** Depth to base of Treatable Water-Bearing FM: 530

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 not located in a Hydrologically Sensitive Area.

Category of Pit: 4

Liner not required for Category: 4

Pit Location is NON HSA

Pit Location Formation: BOGGY

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.

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 not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: BOGGY

PIT 3 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: OIL BASED

Chlorides Max: 300000 Average: 200000

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 not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: BOGGY

HORIZONTAL HOLE 1

Sec 10 Twp 1N Rge 10E County COAL

Spot Location of End Point: SW SE SE SW

Feet From: SOUTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 2200

Depth of Deviation: 7898

Radius of Turn: 382

Direction: 181

Total Length: 15502

Measured Total Depth: 24000

True Vertical Depth: 8850

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

Notes:

Category

Description

DEEP SURFACE CASING

2/2/2018 - 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

Category	Description
HYDRAULIC FRACTURING	2/2/2018 - 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	2/2/2018 - G71 - PITS 2 & 3 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 3 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT
PENDING CD - 201705638	2/2/2018 - G57 - (I.O.) 3-1N-10E X517465 WDFD 3 WELLS NO OP. NAMED REC 2-13-2018 (DUNN)
PENDING CD - 201705640	2/2/2018 - G57 - (I.O.) 34-2N-10E X535450 WDFD 3 WELLS NO OP. NAMED REC 2-13-2018 (DUNN)
PENDING CD - 201800496	2/2/2018 - G57 - (I.O.) 34-2N-10E, 3 & 10-1N-10E EST MULTIUNIT HORIZONTAL WELL X535450 CNEY, WDFD 34-2N-10E X517465 CNEY, WDFD 3-1N-10E X530706 CNEY, WDFD 10-1N-10E (CNEY IS AN ADJACENT COMMON SOURCE OF SUPPLY TO WDFD) 33% 34-2N-10E 34% 3-1N-10E 33% 10-1N-10E BRAVO ARKOMA, LLC. REC 2-20-2018 (JOHNSON)
PENDING CD - 201800497	2/2/2018 - G57 - (I.O.) 34-2N-10E, 3 & 10-1N-10E X535450 CNEY, WDFD 34-2N-10E X517465 CNEY, WDFD 3-1N-10E X530706 CNEY, WDFD 10-1N-10E COMPL. INT. (34-2N-10E) NCT 165' FNL, NCT 0' FSL, NCT 1250' FWL COMPL. INT. (3-1N-10E) NCT 0' FNL, NCT 0' FSL, NCT 1250' FWL COMPL. INT. (10-1N-10E) NCT 0' FNL, NCT 165' FSL, NCT 1910' FWL NO OP. NAMED REC 2-20-2018 (JOHNSON)
PENDING CD - 201800500	2/2/2018 - G57 - (I.O.) 10-1N-10E X530706 WDFD 3 WELLS NO OP. NAMED REC 2-13-2018 (DUNN)
SPACING - 517456	2/2/2018 - G57 - (640) 3-1N-10E EST CNEY EXT 514721 WDFD
SPACING - 530706	2/2/2018 - G57 - (640) 10-1N-10E VAC OTHERS EXT OTHERS EXT 526275 CNEY, WDFD
SPACING - 535450	2/2/2018 - G57 - (640) 34-2N-10E EXT OTHERS EXT 519125 CNEY EXT 530163 WDFD

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