

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

API NUMBER: 029 21372

Approval Date: 02/14/2018

Expiration Date: 08/14/2018

Horizontal Hole Oil & Gas

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 2280

Lease Name: MCGRAW Well No: 1-34/3/10H Well will be 850 feet from nearest unit or lease boundary.

Operator Name: BRAVO ARKOMA LLC

Telephone: 9188944440; 9188944

OTC/OCC Number: 23562 0

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

CHARLES FREDERICK LARECY
FORT WORTH, TX 76109
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	8125	6	
2	WOODFORD	8401	7	
3			8	
4			9	
5			10	

Spacing Orders: 535450
517456
530706

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201800494
201800495
201705640
201705638
201800500
201801225

Special Orders:

Total Depth: 20232 Ground Elevation: 641

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

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 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).

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

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HORIZONTAL HOLE 1

Sec 10 Twp 1N Rge 10E County COAL

Spot Location of End Point: NE SW NW NE

Feet From: NORTH 1/4 Section Line: 800

Feet From: EAST 1/4 Section Line: 2200

Depth of Deviation: 8157

Radius of Turn: 572

Direction: 178

Total Length: 11176

Measured Total Depth: 20232

True Vertical Depth: 8571

End Point Location from Lease,
Unit, or Property Line: 800

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
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 - 201800494	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) 45% 34-2N-10E 47% 3-1N-10E 8% 10-1N-10E BRAVO ARKOMA, LLC. REC 2-13-2018 (DUNN)

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

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029 21372 MCGRAW 1-34/3/10H

Category	Description
PENDING CD - 201800495	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 1710' FEL COMPL. INT. (3-1N-10E) NCT 0' FNL, NCT 0' FSL, NCT 1710' FEL COMPL. INT. (10-1N-10E) NCT 0' FNL, NCT 800' FNL, NCT 1710' FEL NO OP. NAMED REC 2-13-2018 (DUNN)
PENDING CD - 201800500	2/2/2018 - G57 - (I.O.) 10-1N-10E X530706 WDFD 3 WELLS NO OP. NAMED REC 2-13-2018 (DUNN)
PENDING CD - 201801225	2/14/2018 - G57 - (I.O.) 10-1N-10E X530706 WDFD X165:10-3-28(C)(2)(B) WDFD (MCGRAW 1-34/3/10H) MAY BE CLOSER THAN 600' TO THE WANDA 1-10 HEARING 3-5-2018 (OK'D PER HULLINGER)
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



Well Location Plat

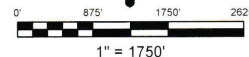
S.H.L. Sec. 27-2N-10E I.M.
B.H.L. Sec. 10-1N-10E I.M.

Operator: BRAVO NATURAL RESOURCES, LLC
Lease Name and No.: McGRAW 1-34/3/10H
Footage: 850' FSL - 2280' FWL Gr. Elevation: 641'
Section: 27 Township: 2N Range: 10E I.M.
County: Coal State of Oklahoma
Terrain at Loc.: Location fell in timber.

API: 029 21372



All bearings shown
are grid bearings.



GPS DATUM
NAD 27
OK SOUTH ZONE

Surface Hole Loc.:
Lat: 34°36'34.81"N
Lon: 96°14'29.80"W
X: 2529080
Y: 469081

Landing Point:
Lat: 34°36'24.77"N
Lon: 96°14'20.42"W
X: 2529881
Y: 468079

Bottom Hole Loc.:
Lat: 34°34'34.19"N
Lon: 96°14'20.11"W
X: 2530102
Y: 456903



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 inaccuracy is determined. GPS data is obtained from GPS stations located on the ground and is not guaranteed to be accurate. The survey was conducted 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, 2018

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 01/25/18
LANCE G. MATHIS OK LPLS 1664

Invoice #7531-A-C
Date Staked: 01/10/18 By: D.A.
Date Drawn: 01/15/18 By: K.B.
Rev. Lse Name & LP & BH: 01/23/18 By: C.K.

