

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

API NUMBER: 029 21364 A

Approval Date: 08/09/2017
Expiration Date: 02/09/2018

Horizontal Hole Oil & Gas

Amend reason: CHANGE TO HORIZONTAL OIL/GAS WELL

AMEND PERMIT TO DRILL

WELL LOCATION: Sec: 15 Twp: 1N Rge: 10E

County: COAL

SPOT LOCATION: ☐ SW ☐ NW ☐ SE ☐ SW

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 812 1570

Lease Name: STELLA TUCKER

Well No: 4-22/27H

Well will be 812 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

CALEB WARD
RURAL ROUTE 5, BOX 220
COALGATE OK 74538

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

	Name	Depth	Name	Depth
1	WOODFORD	8125	6	
2			7	
3			8	
4			9	
5			10	

Spacing Orders: 668730
551463
554103
554588

Location Exception Orders: 669579

Increased Density Orders: 669730

Pending CD Numbers: 201705223

Special Orders:

Total Depth: 19534

Ground Elevation: 641

Surface Casing: 1999

Depth to base of Treatable Water-Bearing FM: 170

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

PIT 1 INFORMATION

Approved Method for disposal of Drilling Fluids:

Type of Pit System: ON SITE

A. Evaporation/dewater and backfilling of reserve pit.

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: SAVANNA

Mud System Change to Water-Based or Oil-Based Mud Requires an Amended Intent (Form 1000).

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: SAVANNA

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 located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is BED AQUIFER

Pit Location Formation: SAVANNA

HORIZONTAL HOLE 1

Sec 27 Twp 1N Rge 10E County COAL

Spot Location of End Point: S2 S2 S2 SE

Feet From: SOUTH 1/4 Section Line: 164

Feet From: EAST 1/4 Section Line: 1320

Depth of Deviation: 7617

Radius of Turn: 1070

Direction: 160

Total Length: 10236

Measured Total Depth: 19534

True Vertical Depth: 8125

End Point Location from Lease,

Unit, or Property Line: 165

Notes:

Category

Description

DEEP SURFACE CASING

8/2/2017 - G58 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY FOR ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON CONDUCTOR OR SURFACE CASING

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.

029 21364 STELLA TUCKER 4-22/27H

Category	Description
HYDRAULIC FRACTURING	<p>11/9/2017 - G58 - OCC 165:10-3-10 REQUIRES:</p> <p>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;</p> <p>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,</p> <p>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</p>
INCREASED DENSITY - 669730	<p>11/9/2017 - G75 - 27-1N-10E X554103/554588 WDFD 1 WELL BRAVO ARKOMA, LLC 11-3-2017</p>
LOCATION EXCEPTION - 669579	<p>11/9/2017 - G75 - (I.O.) 22 & 27-1N-10E X551463 WDFD 22-1N-10E X554103/554588 WDFD 27-1N-10E COMPL. INT. (22-1N-10E) NCT 165' FNL, NCT 0' FSL, NCT 990' FEL COMPL. INT. (27-1N-10E) NCT 0' FNL, NCT 165' FSL, NCT 990' FEL BRAVO ARKOMA, LLC 10-31-2017</p>
MEMO	<p>8/2/2017 - G58 - PIT 2 & 3 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST; PIT 3 - OBM TO VENDOR, OBM CUTTINGS PER DISTRICT</p>
PENDING CD - 201705223	<p>11/9/2017 - G75 - 22-1N-10E X551463 WDFD 1 WELL NO OP. NAMED REC 8-28-2017 (MCKEOWN)</p>
SPACING - 551463	<p>11/9/2017 - G75 - (640) 22-1N-10E VAC OTHERS EXT 521377 WDFD EST OTHERS</p>
SPACING - 554103	<p>11/9/2017 - G75 - (640) 27-1N-10E EXT OTHERS EXT 551463 WDFD, OTHERS</p>
SPACING - 554588	<p>11/9/2017 - G75 - NPT 554103 CHANGING PARAGRAPH 1 OF ORDER SECTION FROM HUGHES CO. TO COAL CO.</p>
SPACING - 668730	<p>11/9/2017 - G75 - (I.O.) 22 & 27-1N-10E EST MULTIUNIT HORIZONTAL WELL X551463 WDFD 22-1N-10E X554103/554588 WDFD 27-1N-10E 50% 22-1N-10E 50% 27-1N-10E BRAVO ARKOMA, LLC 10-2-2017</p>

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.

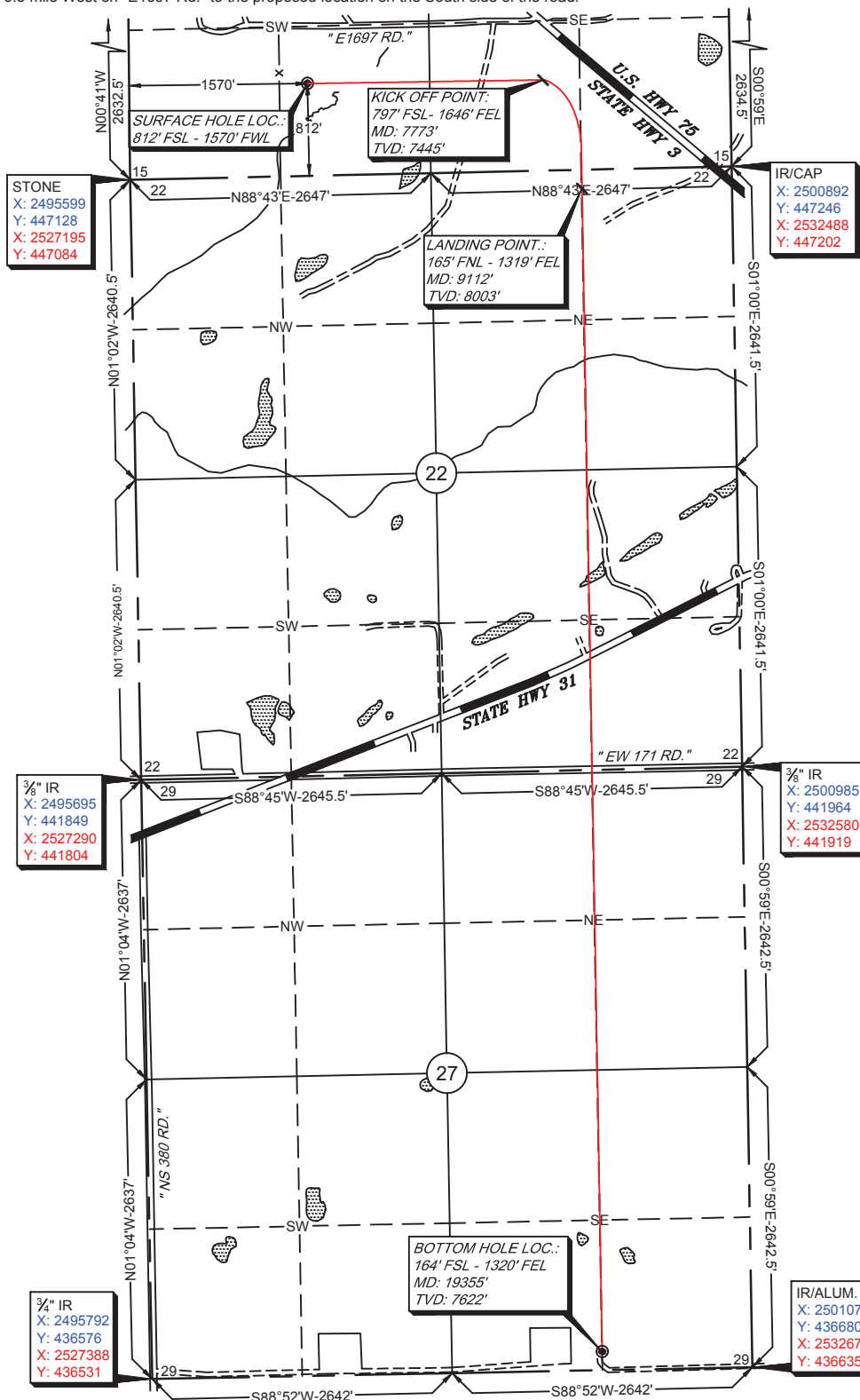
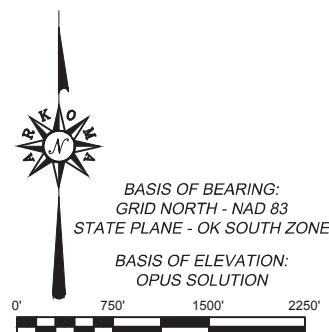
BNR Well Location Plat

Operator : BRAVO NATURAL RESOURCES
Lease Name and No. : STELLA-TUCKER 4-22/27H
Footage : 812' FSL - 1570' FWL GR. ELEVATION : 641' Good Site? YES
Section : 15 Township : 1N Range : 10E I.M.
County : Coal State of Oklahoma

API 029-21364

S.H.L. Sec. 15-1N-10E I.M.
B.H.L. Sec. 27-1N-10E I.M.

Terrain at Loc. : Location fell in open pasture, ±258' E. of an existing N-S fence.
Accessibility : From the East.
Directions : From the junction of U.S. Hwy 75/State Hwy 3 & State Hwy 31, in the town of Coalgate, OK, go 1.5 miles Northwest on Hwy 75/3, go 0.3 mile West on "E1697 Rd." to the proposed location on the South side of the road.



1"=1500'
GPS DATUM
NAD 83
OK SOUTH ZONE
NAD 27
OK SOUTH ZONE

Surface Hole Loc.:
Lat: 34.55166841
Lon: -96.24419060
X: 2497159
Y: 447975

Surface Hole Loc.:
Lat: 34.55157705
Lon: -96.24391474
X: 2528755
Y: 447930

Kick Off Point:
Lat: 34.55156425
Lon: -96.23702550
X: 2499233
Y: 448007

Kick Off Point:
Lat: 34.55156313
Lon: -96.23702604
X: 2530829
Y: 447962

Landing Point:
Lat: 34.54901551
Lon: -96.23621722
X: 2499576
Y: 447052

Landing Point:
Lat: 34.54892309
Lon: -96.23594057
X: 2531172
Y: 447007

Bottom Hole Loc.:
Lat: 34.52088947
Lon: -96.23622255
X: 2499753
Y: 436818

Bottom Hole Loc.:
Lat: 34.52079712
Lon: -96.23594645
X: 2531349
Y: 436773

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. 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.

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
Invoice #6131-C
Date Staked : 02/04/16 By: H.S.
Date Drawn : 02/08/16 By: K.M.
Add KOP, LP & BHL : 08/04/17 By: S.S.

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
08/08/17
OK LPLS 1664

