

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

API NUMBER: 029 21376

Approval Date: 06/12/2018

Expiration Date: 12/12/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 30 Twp: 2N Rge: 10E County: COAL

SPOT LOCATION: ☐ SW ☐ NW ☐ SE ☐ NW FEET FROM QUARTER: FROM NORTH FROM WEST

SECTION LINES: 1850 1630

Lease Name: SANDERS Well No: 3-30/31/6H Well will be 1630 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

DAVID AND LYNDSEY GAYLOR  
37942 COUNTY ROAD 1675  
COALGATE OK 74538

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	7270	6	
2	WOODFORD	7518	7	
3	HUNTON	7678	8	
4			9	
5			10	

Spacing Orders: No Spacing

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201803314  
201803321  
201803322  
201803323  
201803324  
201803325

Special Orders:

Total Depth: 19444

Ground Elevation: 737

**Surface Casing: 1000**

Depth to base of Treatable Water-Bearing FM: 370

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.

H. SEE MEMO

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

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 06 Twp 1N Rge 10E County COAL

Spot Location of End Point: SW NE NE SW

Feet From: SOUTH 1/4 Section Line: 2080

Feet From: WEST 1/4 Section Line: 2200

Depth of Deviation: 7191

Radius of Turn: 477

Direction: 175

Total Length: 11504

Measured Total Depth: 19444

True Vertical Depth: 7678

End Point Location from Lease,  
Unit, or Property Line: 2080

Notes:

Category

Description

DEEP SURFACE CASING

5/29/2018 - 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

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 21376 SANDERS 3-30/31/6H

Category	Description
HYDRAULIC FRACTURING	<p>5/29/2018 - G71 - 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: <a href="http://OCCWEB.COM/OG/OGFORMS.HTML">OCCWEB.COM/OG/OGFORMS.HTML</a>; 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: <a href="http://FRACFOCUS.ORG">FRACFOCUS.ORG</a></p>
MEMO	<p>5/30/2018 - G71 - PIT 2 &amp; 3 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, WBM &amp; OBM CUTTINGS CAPTURED IN CONCRETE-LINED PIT, SOLIDIFIED AND HELD UNTIL DISPOSAL APPROVED BY OCC; PIT 3 - OBM TO VENDOR</p>
PENDING CD - 201803314	<p>5/31/2018 - G58 - (640)(HOR) 6-1N-10E, 30 &amp; 31-2N-10E  EXT 662358 MSSP, WDFD, HNTN  COMPL. INT. (MSSP, HNTN) NLT 660' FB  COMPL. INT. (WDFD) NLT 165' FNL &amp; FSL, NLT 330' FEL &amp; FWL  (COEXIST SP. ORDERS: 465585 HNTN; 463377 HNTN; 561632 HNTN; 494225 WDFD, CNEY; 503053 WDFD, CNEY; 528393 WDFD, CNEY)  REC 5/14/2018 (DUNN)</p>
PENDING CD - 201803321	<p>5/31/2018 - G58 - (I.O.) 6-1N-10E, 30 &amp; 31-2N-10E  EST MULTIUNIT HORIZONTAL WELL  X201803314 MSSP, WDFD, HNTN (6-1N-10E, 30 &amp; 31-2N-10E)  (MSSP &amp; HNTN ARE ADJACENT COMMON SOURCE OF SUPPLY TO WDFD)  39% 6-1N-10E  20% 30-2N-10E  41% 31-2N-10E  NO OP. NAMED  REC 5/14/2018 (DUNN)</p>
PENDING CD - 201803322	<p>5/31/2018 - G58 - (I.O.) 6-1N-10E, 30 &amp; 31-2N-10E  X201803314 MSSP, WDFD, HNTN (6-1N-10E, 30 &amp; 31-2N-10E)  COMPL. INT. (30-2N-10E) NCT 0' FSL, NCT 1320' FNL, NCT 1650' FWL  COMPL. INT. (31-2N-10E) NCT 0' FSL, NCT 0' FNL, NCT 1650' FWL  COMPL. INT. (6-1N-10E) NCT 0' FNL, NCT 165' FSL, NCT 1650' FWL  NO OP. NAMED  REC 5/14/2018 (DUNN)</p>
PENDING CD - 201803323	<p>5/31/2018 - G58 - 6-1N-10E  X201803314 MSSP, WDFD, HNTN  2 WELLS  NO OP. NAMED  REC 5/14/2018 (DUNN)</p>
PENDING CD - 201803324	<p>5/31/2018 - G58 - 30-2N-10E  X201803314 MSSP, WDFD, HNTN  2 WELLS  NO OP. NAMED  REC 5/14/2018 (DUNN)</p>
PENDING CD - 201803325	<p>5/31/2018 - G58 - 31-2N-10E  X201803314 MSSP, WDFD, HNTN  2 WELLS  NO OP. NAMED  REC 5/14/2018 (DUNN)</p>

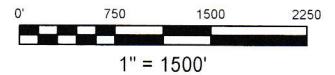
This permit does not address the right of entry or settlement of surface damages.

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.



All bearings shown  
are grid bearings.

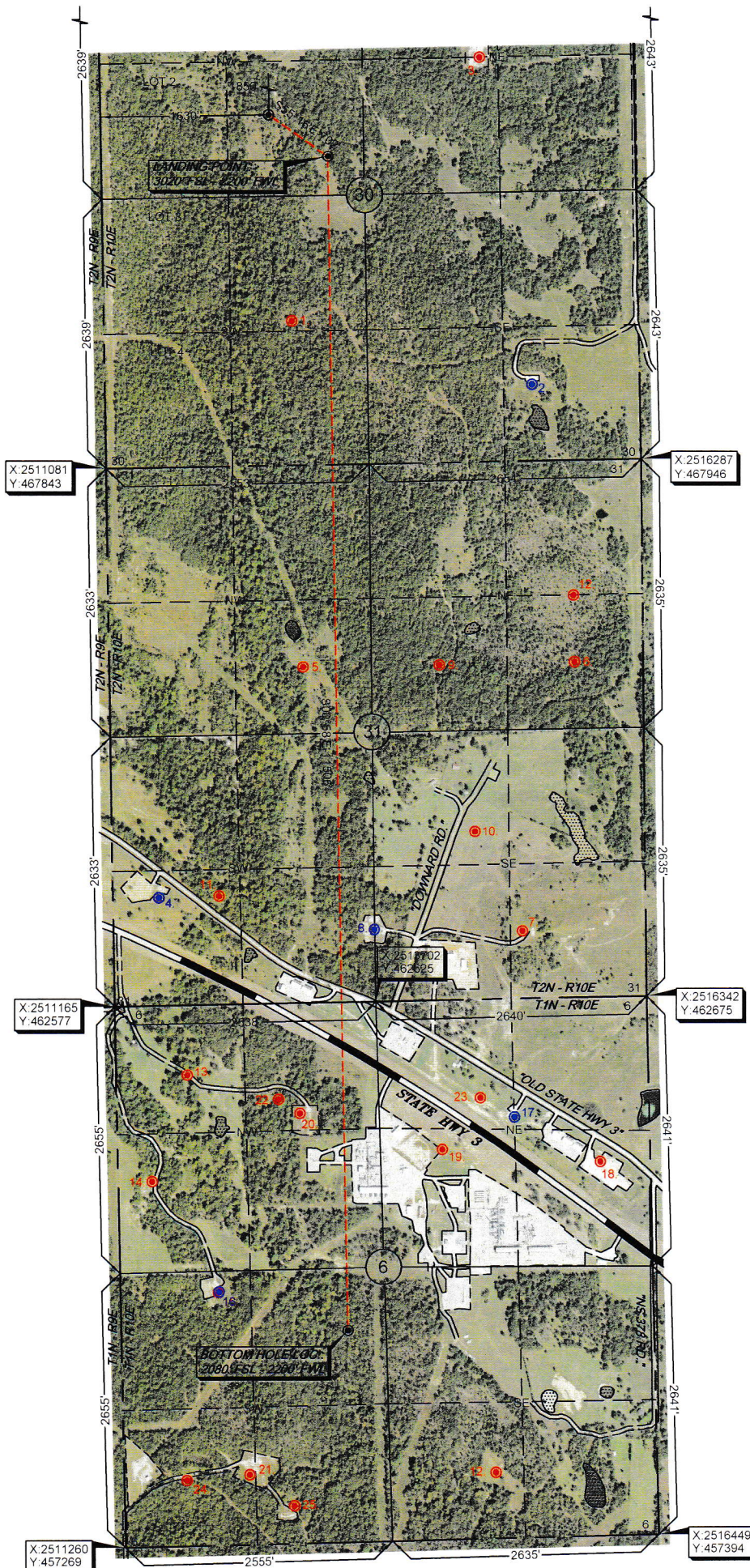


GPS DATUM  
NAD 27  
OK SOUTH ZONE

Surface Hole Loc.:  
Lat: 34°36'59.61"N  
Lon: 96°17'45.86"W  
X: 2512653  
Y: 471306

Landing Point:  
Lat: 34°36'55.56"N  
Lon: 96°17'39.04"W  
X: 2513229  
Y: 470906

Bottom Hole Loc.:  
Lat: 34°35'01.74"N  
Lon: 96°17'39.06"W  
X: 2513422  
Y: 459402




A second limitation of this location data source on the ground surface is the representation of a Licensed Professional Land Surveyor, that the accuracy of this survey is not guaranteed. Please contact Aconet 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 the true Boundary Quarter Section distances may be assumed from a Government Survey Plat or assumed at a proportional distance from opposing section corners, or occupation thereon, 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

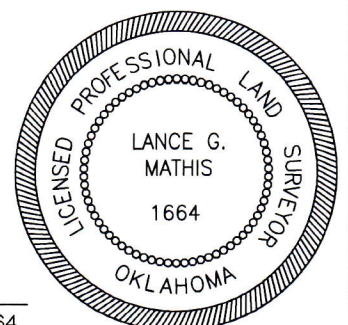
Invoice #7700-A-C  
Date Staked: 03/12/18 By: D.A.  
Date Drawn: 03/13/18 By: C.K.  
Add LP & BHL: 05/16/18 By: J.D.

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

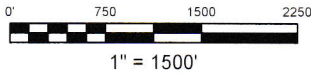
05/16/18  
OK LPLS 1664



Operator: BRAVO NATURAL RESOURCES, LLC  
Lease Name and No.: SANDERS 3-30/31/6H  
Footage: 1850' FNL - 1630' FWL Gr. Elevation: 737'  
Section: 30 Township: 2N Range: 10E I.M.  
County: Coal State of Oklahoma  
Terrain at Loc.: Location fell in timber.



All bearings shown  
are grid bearings.

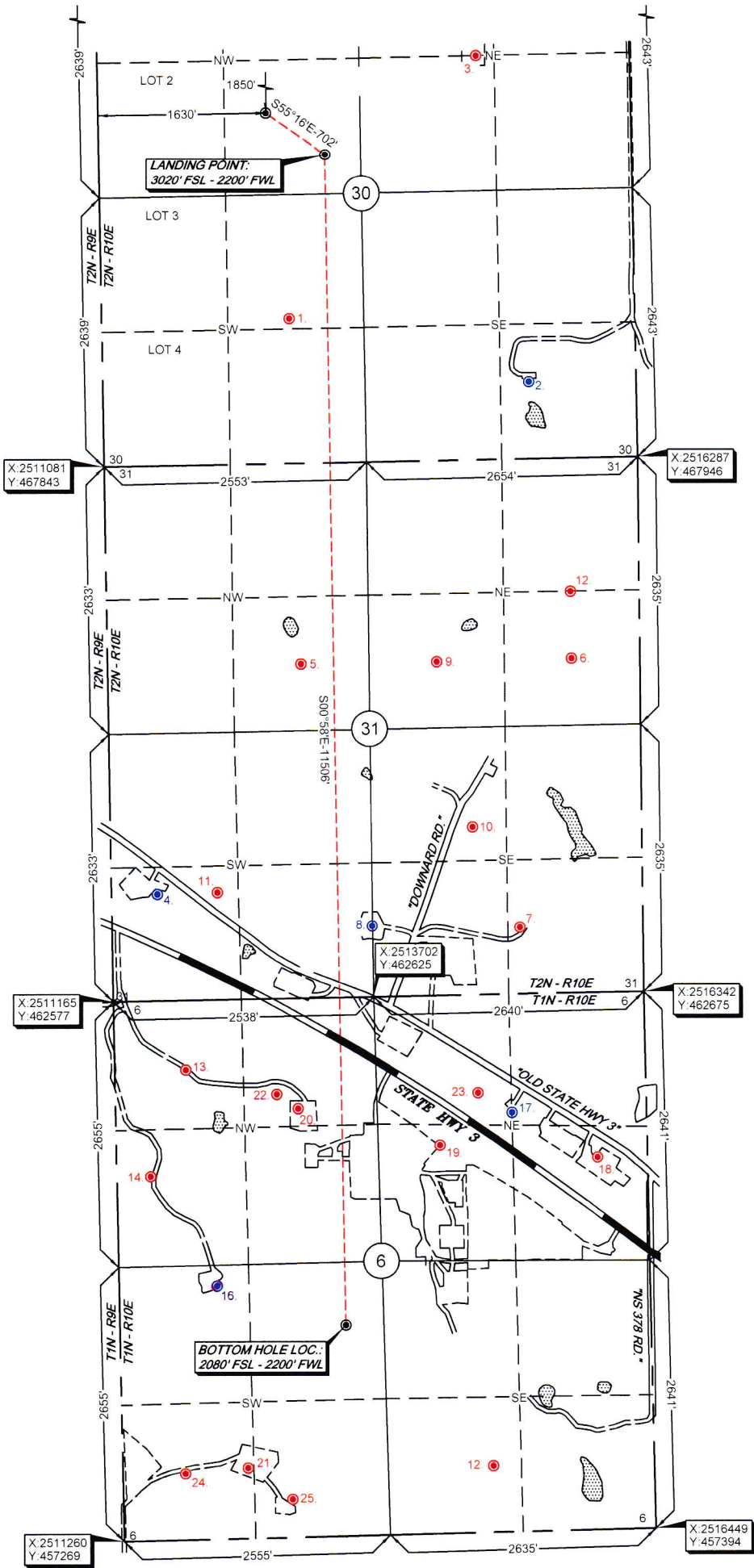


GPS DATUM  
NAD 27  
OK SOUTH ZONE

Surface Hole Loc.:  
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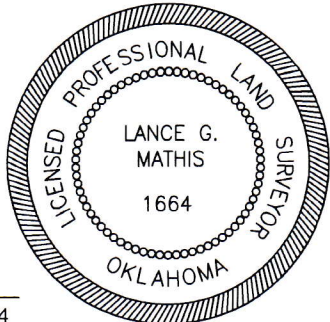
I, Lance G. Mathis, a Licensed Professional Land Surveyor, do hereby certify that the foregoing is a true and correct copy of the original survey made on the ground, and that the same is in accordance with the requirements of the Oklahoma Statutes.

Survey and plat by:  
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P.O. Box 238 Wilburton, OK 74578  
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Add LP & BHL: 05/16/18 By: J.D.

*Lance G. Mathis*  
**LANCE G. MATHIS** 05/16/18  
OK LPLS 1664





# Anti-Collision Info

S.H.L. Sec. 30-2N-10E I.M.  
B.H.L. Sec. 6-1N-10E I.M.

Operator: BRAVO NATURAL RESOURCES, LLC  
Lease Name and No.: SANDERS 3-30/31/6H  
Footage: 1850' FNL - 1630' FWL Gr. Elevation: 737'  
Landing Point: 3020' FSL - 2200' FWL  
Sec. 30 Twp. 2N Rng. 10E I.M.  
Bottom Hole Location: 2080' FSL - 2200' FWL  
Sec. 6 Twp. 1N Rng. 10E I.M.  
County: Coal State of Oklahoma

## SECTION 30-2N-10E

1. STONERIDGE OIL INC. <i>DOWNARD 1-30</i> 1421' FSL - 1827' FWL (SW/4) OCC STATUS: PA	2. SUNDOWN ENERGY LP <i>SYDNEY GAYLOR 1-30</i> 747' FSL - 1595' FWL (SE/4) OCC STATUS: AC	3. SUNDOWN ENERGY LP <i>NICK AND MACI GAYLOR 2-30</i> 1320' FNL - 1500' FEL (NE/4) OCC STATUS: AC
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## SECTION 31-2N-10E

4. BRAVO ARKOMA LLC <i>TERRANOVA HEIRS 1-31</i> 1050' FSL - 450' FWL (SW/4) OCC STATUS: AC	5. OTC/OCC NOT ASSIGNED <i>MADDRELL DOWNARD 1-31</i> CSE/4-NW/4 OCC STATUS: PA	6. DERRICK RESOURCES INC. <i>DOWNARD UNIT "J" 1</i> 660' FSL - 1980' FWL (NE/4) OCC STATUS: PA
7. BRAVO ARKOMA LLC <i>SHORES 1-31</i> 660' FSL - 1440' FWL (SE/4) OCC STATUS: AC	8. BRAVO ARKOMA LLC <i>SUMMER 3-31</i> 698' FSL - 2536' FWL (SW/4) OCC STATUS: AC	9. IDEAL CEMENT COMPANY <i>DOWNARD 4</i> 1980' FNL - 660' FWL (NE/4) OCC STATUS: PA
10. SM ENERGY COMPANY <i>W.R. DOWNARD, JR. UNIT 1</i> 1650' FSL - 990' FWL (SE/4) OCC STATUS: PA	11. SM ENERGY COMPANY <i>VAULATTO 1</i> 1061' FSL - 1031' FWL (SW/4) OCC STATUS: PA	12. TENNECO OIL COMPANY <i>MADDRELL DOWNWARD-A 1</i> W/2-NE/4 OCC STATUS: PA

## SECTION 6-1N-10E

13. BRAVO ARKOMA LLC <i>ERNEST HOFMANN 1</i> 660' FSL - 1030' FWL (SE/4) OCC STATUS: AC	14. JOSHUA ENERGY LLC <i>DEMPSEY 1</i> 1923' FSL - 692' FWL (NW/4) OCC STATUS: AC	15. JOSHUA ENERGY LLC <i>DEMPSEY 2</i> 890' FSL - 330' FWL (NW/4) OCC STATUS: AC
16. BRAVO ARKOMA LLC <i>WATSON 1-6</i> 2493' FSL - 957' FWL (SW/4) OCC STATUS: AC	17. BRAVO ARKOMA LLC <i>KASHWER 1-6</i> 1456' FSL - 1318' FWL (NE/4) OCC STATUS: AC	18. JOSHUA ENERGY LLC <i>DEMPSEY 1-A</i> 1650' FSL - 745' FWL (NW/4) OCC STATUS: AC
19. BRAVO ARKOMA LLC <i>JOSH K. 4-6</i> 1020' FSL - 2140' FWL (NE/4) OCC STATUS: AC	20. BRAVO ARKOMA LLC <i>JASON K. 3-6</i> 1143' FSL - 604' FWL (NE/4) OCC STATUS: AC	21. BRAVO ARKOMA LLC <i>MARY V. 2-6</i> 1520' FSL - 1780' FWL (NW/4) OCC STATUS: AC
22. BRAVO ARKOMA LLC <i>JOHNNY 3-6</i> 700' FSL - 1220' FWL (SW/4) OCC STATUS: AC	23. TENNECO OIL COMPANY <i>W E DOWNARD 1</i> CSW/4-NE/4-NW/4 OCC STATUS: PA	24. ST MARY OPERATING COMPANY <i>W. R. DOWNARD (#2) 2B-6</i> 1650' FSL - 990' FWL (NE/4) OCC STATUS: PA
25. TENNECO OIL COMPANY <i>C W JOHNSTON 1</i> 660' FSL - 610' FWL (SW/4) OCC STATUS: PA	26. BRAVO ARKOMA LLC <i>C. W. JOHNSTON 1-6</i> 380' FSL - 1650' FWL (SW/4) OCC STATUS: AC	

Survey and plat by:

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Certificate of Authorization No. 5348  
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Date Staked: 03/12/18 By: D.A.  
Date Drawn: 03/13/18 By: C.K.  
Add LP & BHL: 05/16/18 By: J.D.

### \*PLEASE NOTE\*

EXISTING WELL DATA SHOWN HEREON WAS  
FURNISHED FROM THE OCC WEBSITE AND WAS NOT  
SURVEYED OR VERIFIED ON THE GROUND  
EXISTING WELLS WERE LOCATED &  
SURVEYED ON THE GROUND



# X & Y Data Sheet

S.H.L. Sec. 30-2N-10E I.M.

B.H.L. Sec. 6-1N-10E I.M.

Operator: BRAVO NATURAL RESOURCES, LLC

Lease Name and No.: SANDERS 3-30/31/6H

Footage: 1850' FNL - 1630' FWL Gr. Elevation: 737'

Landing Point: 3020' FSL - 2200' FWL

Sec. 30 Twp. 2N Rng. 10E I.M.

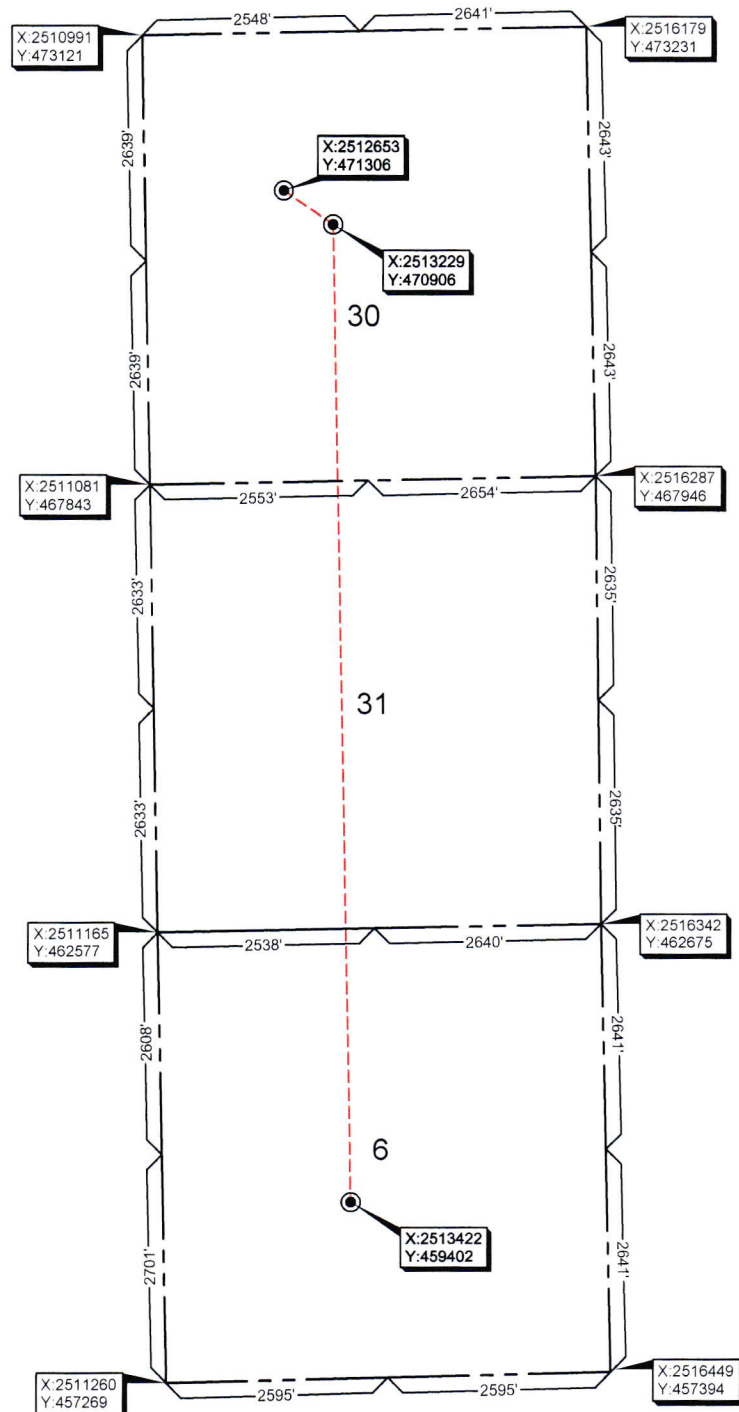
Bottom Hole Location: 2080' FSL - 2200' FWL

Sec. 6 Twp. 1N Rng. 10E I.M.

County: Coal State of Oklahoma



NO SCALE  
GPS DATUM  
NAD 27  
OK SOUTH ZONE



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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.



# Topographic Vicinity Map

Operator: BRAVO NATURAL RESOURCES, LLC

Lease Name and No.: SANDERS 3-30/31/6H

Surface Hole Location: 1850' FNL - 1630' FWL

Landing Point: 3020' FSL - 2200' FWL

Sec. 30 Twp. 2N Rng. 10E I.M.

Bottom Hole Location: 2080' FSL - 2200' FWL

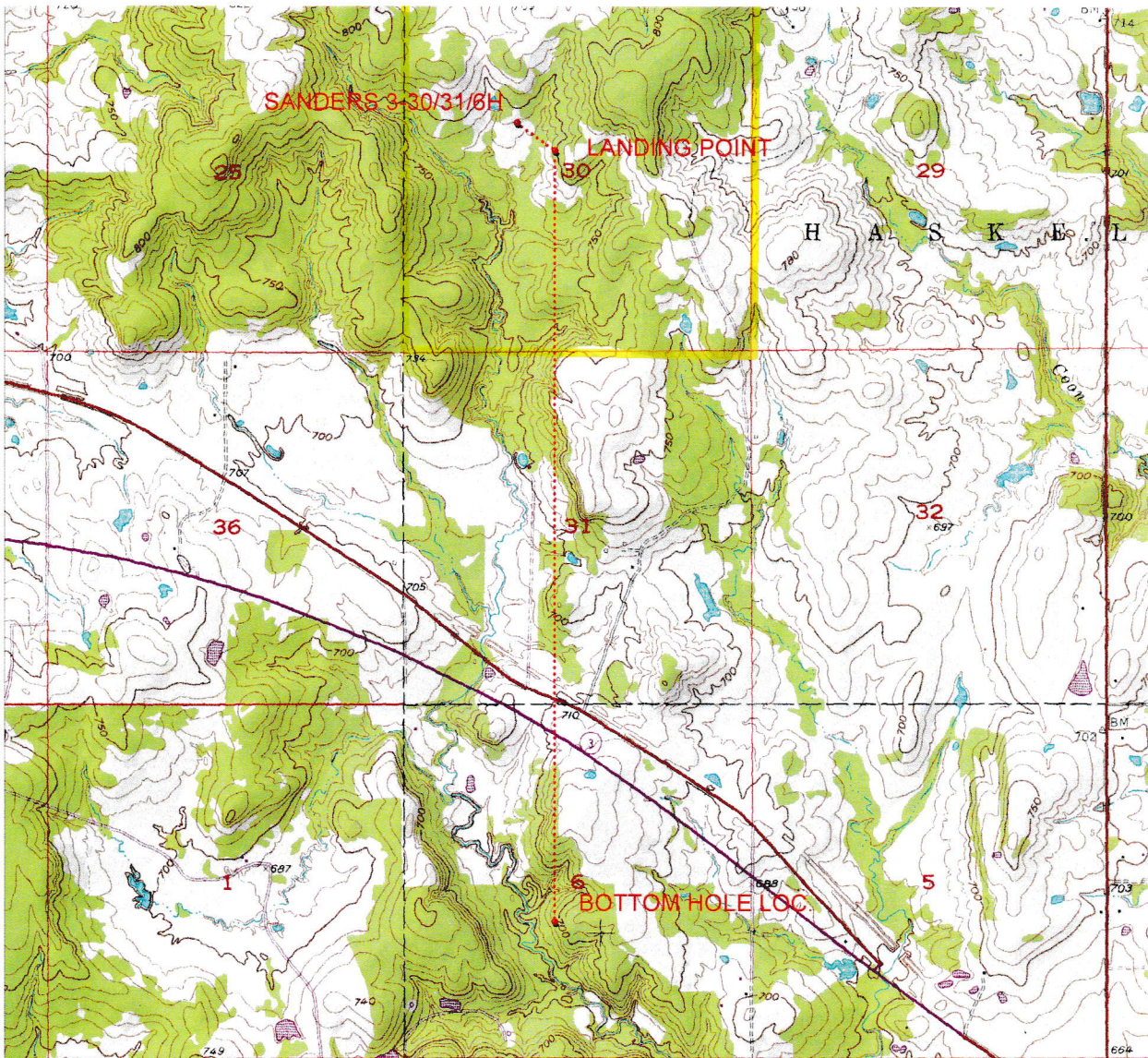
Sec. 6 Twp. 1N Rng. 10E I.M.

County: Coal State of Oklahoma

Ground Elevation at Surface Hole Location: 737'



-No Scale-  
Contour Interval: 10'



Provided 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

Date Staked: 03/12/18

The purpose of this map is to verify the location and elevation as staked on the ground and to show the surrounding Topographic features. The footage shown hereon is only as SCALED onto a U.S.G.S. Topographic Map.

Please note that this location was staked carefully 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.

# County Highway Vicinity Map

Job #: 7700-A-C

Operator: BRAVO NATURAL RESOURCES, LLC

Lease Name and No.: SANDERS 3-30/31/6H

**Accessibility: From the South.**

**Directions: From the junction of State HWY 3 & US HWY 75 South of the town of Centrahoma, OK go 3.2 miles North on US HWY 75, then go 1.0 mile West on "Sandridge S" to the Northwest Quarter of Section 30-2N-10E on the West side of the road.**



1 inch = 0.5 mile

provided by,  
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