

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

API NUMBER: 029 21374

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 1600

Lease Name: SANDERS Well No: 1-30/31/6H Well will be 1600 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 & LYNDAY GAYLOR
37942 COUNTY ROAD 1675
COALGATE OK 74538

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	7244	6	
2	WOODFORD	7492	7	
3	HUNTON	7652	8	
4			9	
5			10	

Spacing Orders: No Spacing

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201803314
201803317
201803318

Special Orders:

Total Depth: 20265 Ground Elevation: 736 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: S2 NW SW SW

Feet From: SOUTH 1/4 Section Line: 880

Feet From: WEST 1/4 Section Line: 330

Depth of Deviation: 7304

Radius of Turn: 477

Direction: 185

Total Length: 12212

Measured Total Depth: 20265

True Vertical Depth: 7652

End Point Location from Lease,
Unit, or Property Line: 880

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

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: 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>
MEMO	<p>5/30/2018 - G71 - PIT 2 & 3 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, WBM & 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 & 31-2N-10E EXT 662358 MSSP, WDFD, HNTN COMPL. INT. (MSSP, HNTN) NLT 660' FB COMPL. INT. (WDFD) NLT 165' FNL & FSL, NLT 330' FEL & 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 - 201803317	<p>5/31/2018 - G58 - (I.O.) 6-1N-10E, 30 & 31-2N-10E EST MULTIUNIT HORIZONTAL WELL X201803314 MSSP, WDFD, HNTN (6-1N-10E, 30 & 31-2N-10E) (MSSP & 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 - 201803318	<p>5/31/2018 - G58 - (I.O.) 6-1N-10E, 30 & 31-2N-10E X201803314 MSSP, WDFD, HNTN (6-1N-10E, 30 & 31-2N-10E) COMPL. INT. (30-2N-10E) NCT 0' FSL, NCT 1320' FNL, NCT 330' FWL COMPL. INT. (31-2N-10E) NCT 0' FSL, NCT 0' FNL, NCT 330' FWL COMPL. INT. (6-1N-10E) NCT 0' FNL, NCT 165' FSL, NCT 330' FWL 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.

BNR Well Location Plat

Bravo Natural Resources, LLC

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 1-30/31/6H
Footage: 1850' FNL - 1600' FWL Gr. Elevation: 736'
Section: 30 Township: 2N Range: 10E I.M.
County: Coal State of Oklahoma
Terrain at Loc.: Location fell in timber.

029-21374



All bearings shown are grid bearings.



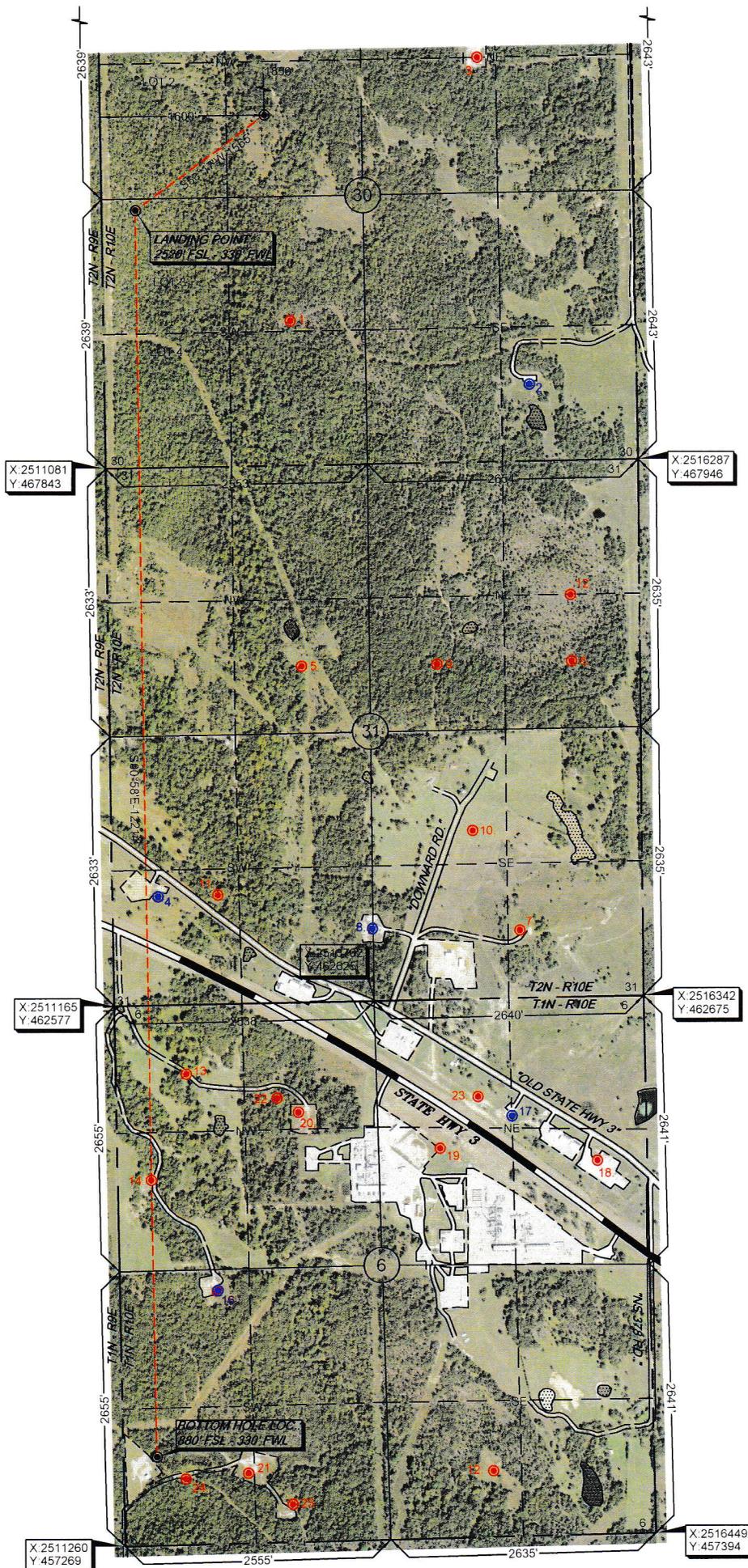
1" = 1500'

GPS DATUM
NAD 27
OK SOUTH ZONE

Surface Hole Loc.:
Lat: 34°36'59.61"N
Lon: 96°17'46.21"W
X: 2512623
Y: 471305

Landing Point:
Lat: 34°36'50.56"N
Lon: 96°18'01.41"W
X: 2511368
Y: 470369

Bottom Hole Loc.:
Lat: 34°34'49.73"N
Lon: 96°18'01.41"W
X: 2511574
Y: 458157



This plat was prepared by the undersigned, 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 proportional 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:

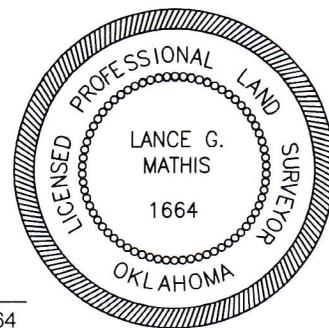
This is to certify that this Well Location Plat represents the results of a survey made on the ground performed under the supervision of the undersigned.

Invoice #7700-A-A
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.

Lance G. Mathis
LANCE G. MATHIS

05/16/18

OK LPLS 1664





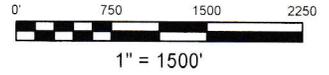
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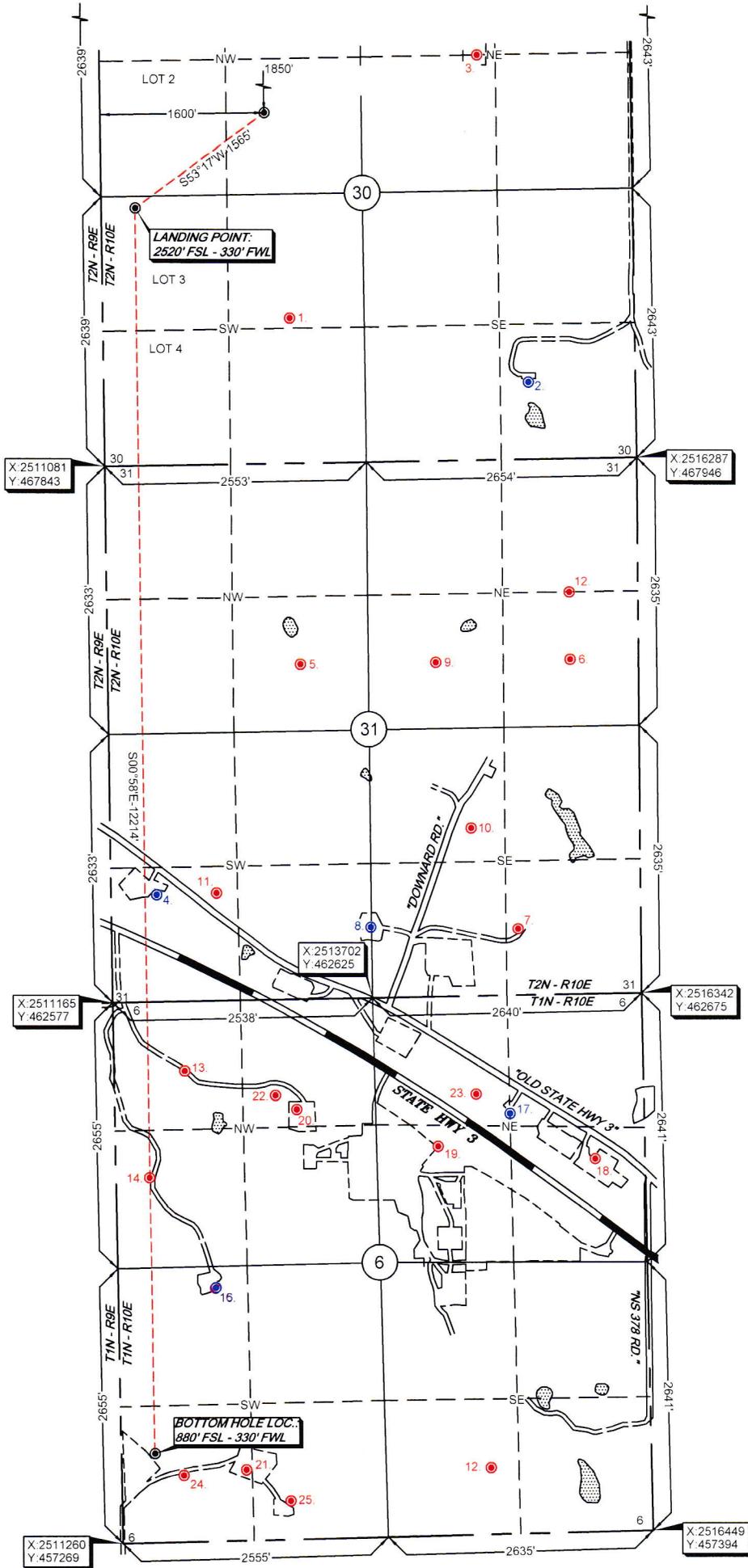


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X: 2511574
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1. BEARINGS SHOWN ARE GRID BEARINGS. ALL DISTANCES ARE IN FEET UNLESS OTHERWISE NOTED. THIS SURVEY WAS PERFORMED ON THE GROUND. THE ACCURACY OF THIS SURVEY IS NOT GUARANTEED. PLEASE CONTACT ARKOMA SURVEYING AND MAPPING PROMPTLY IF ANY INCONSISTENCY IS DETERMINED. GPS DATA IS OBTAINED FROM RTK - GPS. NOTE: X AND Y DATA SHOWN HEREON FOR SECTION CORNERS MAY NOT HAVE BEEN SURVEYED ON THE GROUND, AND THEREFORE DOES NOT REPRESENT A TRUE BOUNDARY SURVEY. QUARTER SECTION DISTANCES MAY BE ASSUMED FROM A CONVENTIONAL 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 THEREFORE DOES NOT REPRESENT A TRUE BOUNDARY SURVEY.

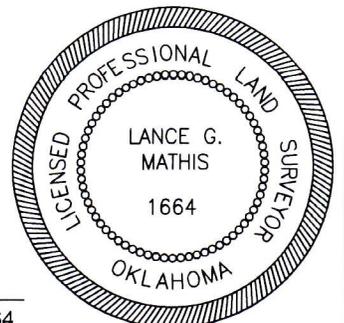
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Add LP & BHL: 05/16/18 By: J.D.


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 1-30/31/6H
Footage: 1850' FNL - 1600' FWL Gr. Elevation: 736'
Landing Point: 2520' FSL - 330' FWL
Sec. 30 Twp. 2N Rng. 10E I.M.
Bottom Hole Location: 880' FSL - 330' 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>WE 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	

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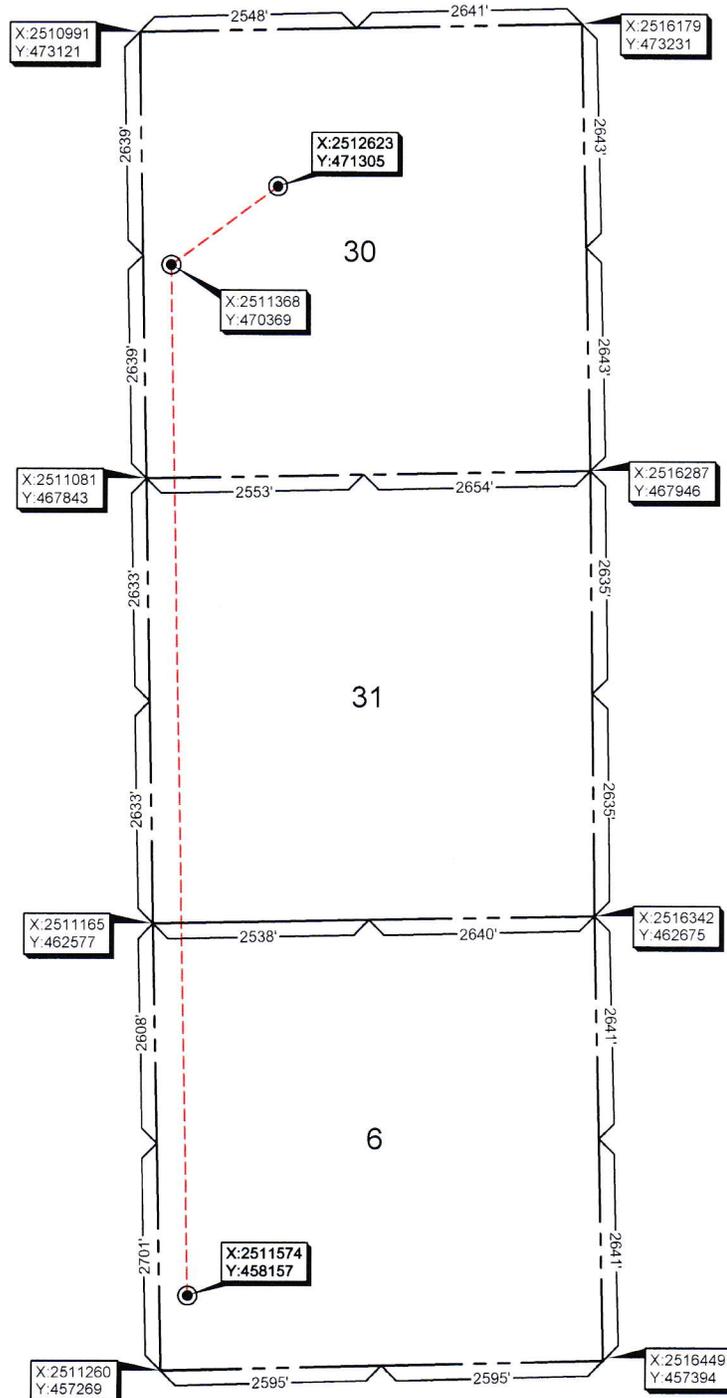
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PLEASE NOTE
EXISTING WELL DATA SHOWN HEREON WAS
FURNISHED FROM THE OCC WEBSITE AND WAS NOT
SURVEYED OR VERIFIED ON THE GROUND
EXISTING WELLS WERE LOCATED &
SURVEYED ON THE GROUND

Operator: BRAVO NATURAL RESOURCES, LLC
 Lease Name and No.: SANDERS 1-30/31/6H
 Footage: 1850' FNL - 1600' FWL Gr. Elevation: 736'
 Landing Point: 2520' FSL - 330' FWL
 Sec. 30 Twp. 2N Rng. 10E I.M.
 Bottom Hole Location: 880' FSL - 330' 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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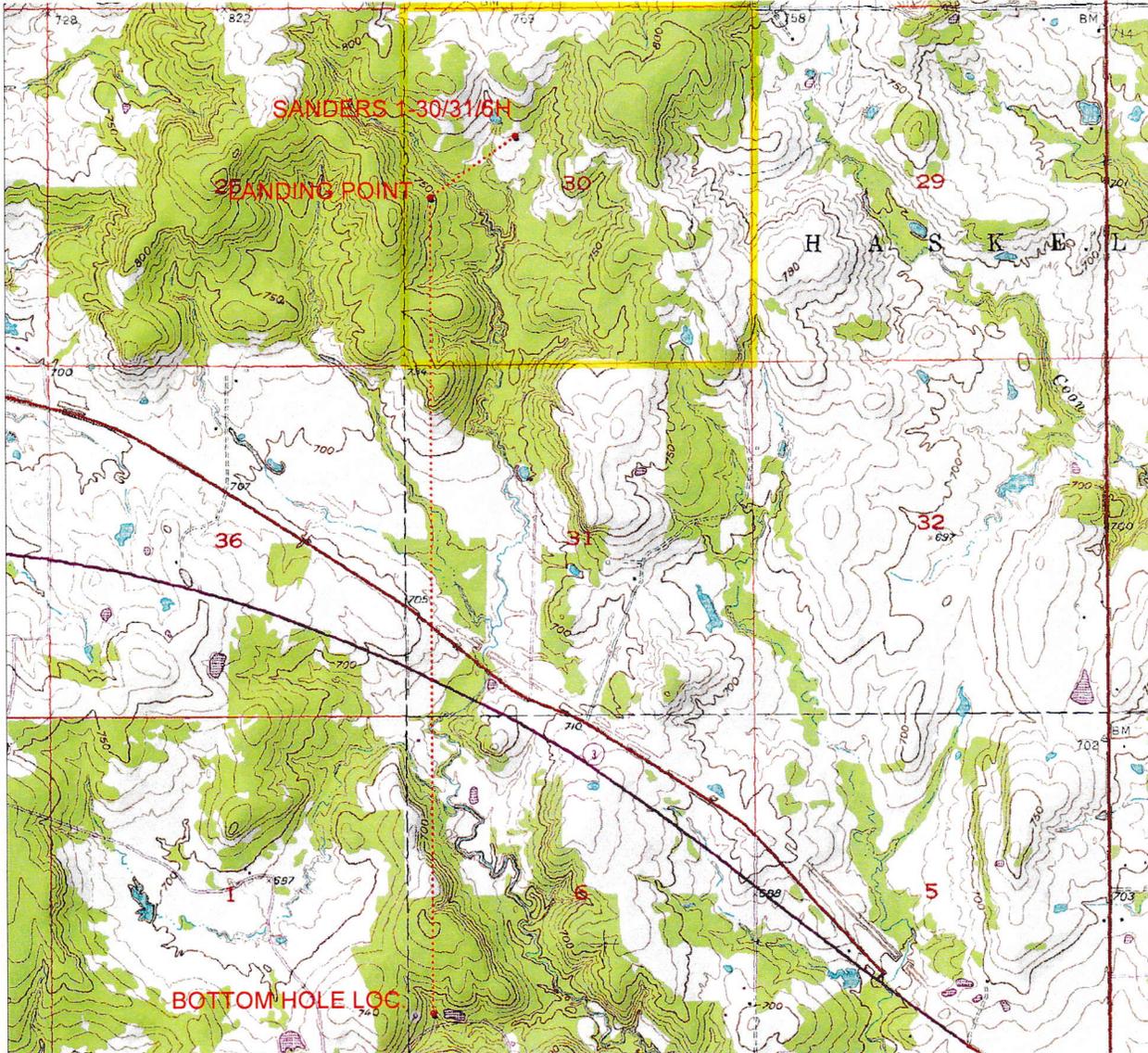


Topographic Vicinity Map

Operator: BRAVO NATURAL RESOURCES, LLC
 Lease Name and No.: SANDERS 1-30/31/6H
 Surface Hole Location: 1850' FNL - 1600' FWL
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 Sec. 30 Twp. 2N Rng. 10E I.M.
 Bottom Hole Location: 880' FSL - 330' FWL
 Sec. 6 Twp. 1N Rng. 10E I.M.
 County: Coal State of Oklahoma
 Ground Elevation at Surface Hole Location: 736'



-No Scale-
 Contour Interval: 10'



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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-A
Operator: BRAVO NATURAL RESOURCES, LLC
Lease Name and No.: SANDERS 1-30/31/6H

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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