

API NUMBER: 125 23957

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

Approval Date: 02/10/2021
Expiration Date: 08/10/2022

Straight Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Section: 16 Township: 8N Range: 3E County: POTTAWATOMIE

SPOT LOCATION: C S2 SE SW FEET FROM QUARTER: FROM SOUTH FROM WEST
SECTION LINES: 330 1980

Lease Name: STATE Well No: 2-16 Well will be 330 feet from nearest unit or lease boundary.
Operator Name: ARROWHEAD ENERGY INC Telephone: 4058485777 OTC/OCC Number: 10239 0

ARROWHEAD ENERGY INC
2934 NW 156TH ST
EDMOND, OK 73013-2102

COMMISSIONERS OF THE LAND OFFICE
204 N ROBINSON AVE
STE 900
OKLAHOMA CITY OK 73102

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

Name	Code	Depth
1 HUNTON	269HNTN	4700

Spacing Orders: No Spacing

Location Exception Orders: No Exceptions

Increased Density Orders: No Density Orders

Pending CD Numbers: No Pending

Working interest owners' notified: ***

Special Orders: No Special Orders

Total Depth: 5200 Ground Elevation: 925

Surface Casing: 250

Depth to base of Treatable Water-Bearing FM: 90

Under Federal Jurisdiction: No
Fresh Water Supply Well Drilled: No
Surface Water used to Drill: Yes

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT)

PERMIT NO: 21-37520

H. (Other)

CLOSED SYSTEM=STEEL PITS (REQUIRED - LITTLE RIVER)

PIT 1 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: ALLUVIAL

Pit Location Formation: ALLUVIUM

NOTES:

This permit does not address the right of entry or settlement of surface damages. The duration of this permit is 18 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.

Category	Description
HYDRAULIC FRACTURING	<p>[2/2/2021 - GC2] - OCC 165:10-3-10 REQUIRES:</p> <p>1) NOTICE SHALL BE GIVEN AT LEAST 5 BUSINESS DAYS PRIOR TO COMMENCEMENT OF HYDRAULIC FRACTURING OPERATIONS ON A HORIZONTAL WELL TO OPERATORS PRODUCING WELLS WITHIN 1 MILE OF THE COMPLETION INTERVAL OF THE SUBJECT WELL. THE NOTICE TO SUCH OPERATORS SHALL CONTAIN THE INFORMATION IN FORM 6000NOO. IF THE HYDRAULIC FRACTURING OPERATIONS SCHEDULE CHANGES AFTER NOTICE HAS BEEN PROVIDED, RESULTING IN A DELAY OF OPERATIONS OF MORE THAN 5 DAYS FROM THE INITIAL NOTICE, NEW NOTICE IS REQUIRED TO BE GIVEN;</p> <p>2) NOTICE WILL BE GIVEN TO THE OCC CENTRAL OFFICE AND LOCAL DISTRICT OFFICES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF HYDRAULIC FRACTURING OPERATIONS. FORM 6000NHF SHALL BE USED AND IS FOUND AT THIS LINK: OCCEWEB.COM/OG/OGFORMS.HTML; AND,</p> <p>3) THE CHEMICAL DISCLOSURE OF HYDRAULIC FRACTURING INGREDIENTS FOR ALL WELLS IS TO BE REPORTED TO FRACFOCUS WITHIN 60 DAYS AFTER THE CONCLUSION OF HYDRAULIC FRACTURING OPERATIONS, FOUND AT FRACFOCUS.ORG</p>
SPACING	[2/8/2021 - G56] - FORMATION UNSPACED; 80-ACRE LEASE (E2 SW4)



Well Location Plat

Sec. 16-8N-3E I.M.

Operator: ARROWHEAD ENERGY, INC.

Lease Name and No.: STATE 2-16

Surface Hole Location: 330' FSL - 1980' FWL Gr. Elevation: 925'

NW/4-SE/4-SE/4-SW/4 Section: 16 Township: 8N Range: 3E I.M.

County: Pottawatomie State of Oklahoma

Terrain at Loc.: Location fell in level open field, +/- 130' Southwest of a NW-SE drain.



All bearings shown are grid bearings.



1" = 1000'

GPS DATUM

NAD 83

NAD 27

OK SOUTH ZONE

Surface Hole Loc.:

Lat: 35°09'38.27"N

Lon: 96°59'43.60"W

Lat: 35.16062999

Lon: -96.99544372

X: 2268768

Y: 666504

Surface Hole Loc.:

Lat: 35°09'38.00"N

Lon: 96°59'42.52"W

Lat: 35.16055632

Lon: -96.99514334

X: 2300365

Y: 666459

5/8" IR

X:2272003

Y:668832

X:2303600

Y:668787

3/8" IR

X:2271989

Y:671462

X:2303586

Y:671417

IR/660 CAP

X:2269360

Y:671437

X:2300957

Y:671393

CCR CALC

X:2266731

Y:671413

X:2298328

Y:671368

ODOT IR/CAP

X:2269404

Y:666179

X:2301001

Y:666134

ODOT IR/CAP

X:2266792

Y:666157

X:2298389

Y:666112

SURFACE HOLE LOC.:
330' FSL - 1980' FWL

-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. 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, 2022

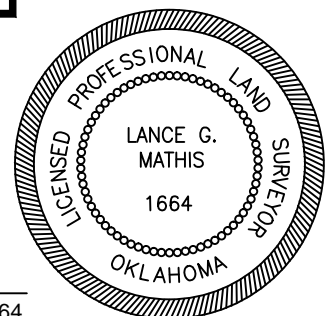
Certification:

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

11/23/2020

OK LPLS 1664



Invoice #9180

Date Staked: 11/17/2020

By: L.M.

Date Drawn: 11/19/2020

By: S.S.



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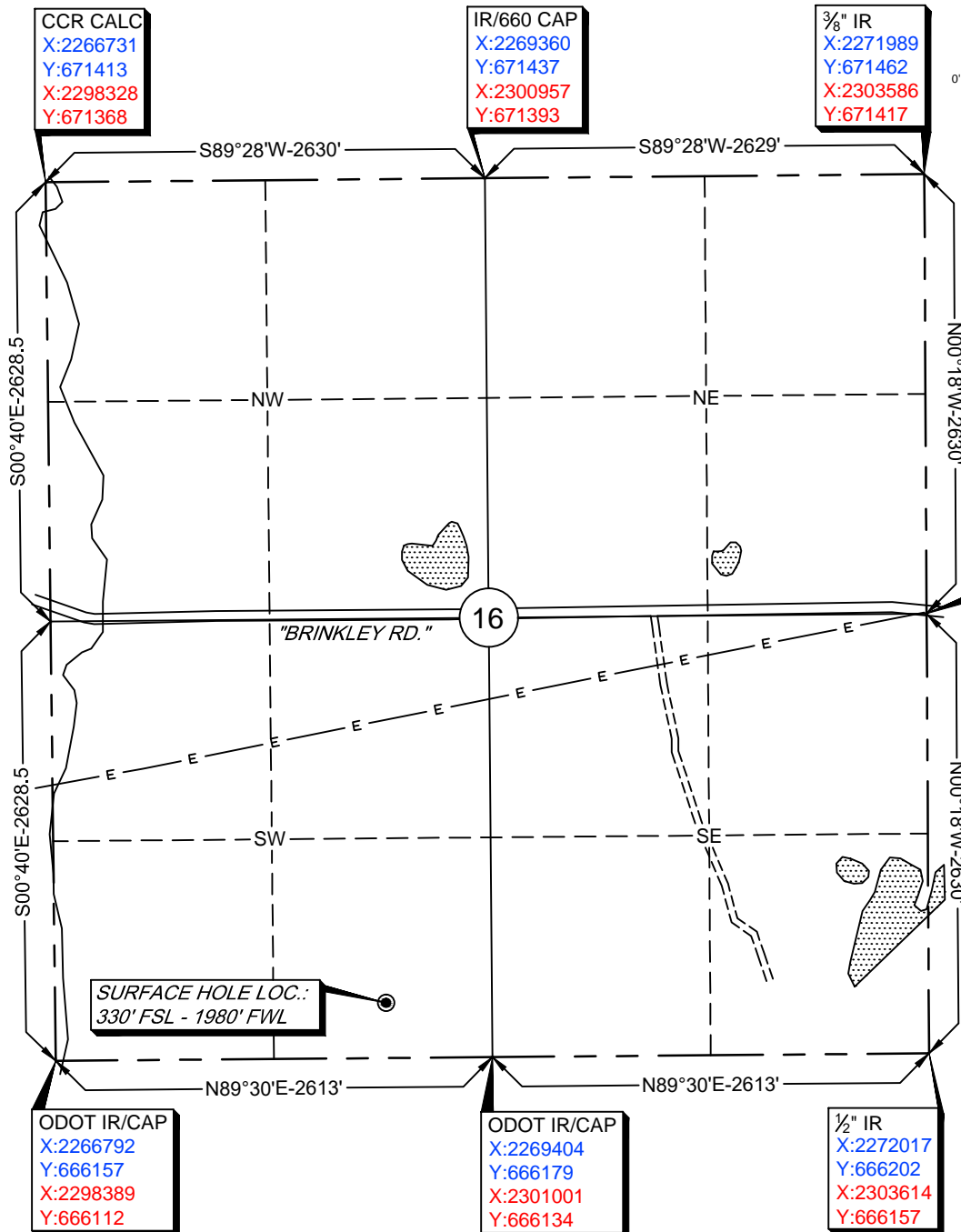
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X:2303600
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3/8" IR
X:2271989
Y:671462
X:2303586
Y:671417

IR/660 CAP
X:2269360
Y:671437
X:2300957
Y:671393

CCR CALC
X:2266731
Y:671413
X:2298328
Y:671368



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330' FSL - 1980' FWL

ODOT IR/CAP
X:2266792
Y:666157
X:2298389
Y:666112

ODOT IR/CAP
X:2269404
Y:666179
X:2301001
Y:666134

1/2" IR
X:2272017
Y:666202
X:2303614
Y:666157

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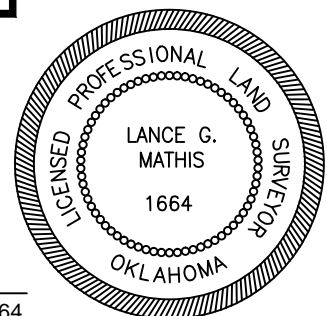
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LANCE G. MATHIS

11/23/2020

OK LPLS 1664



Invoice #9180

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Date Drawn: 11/19/2020 By: S.S.

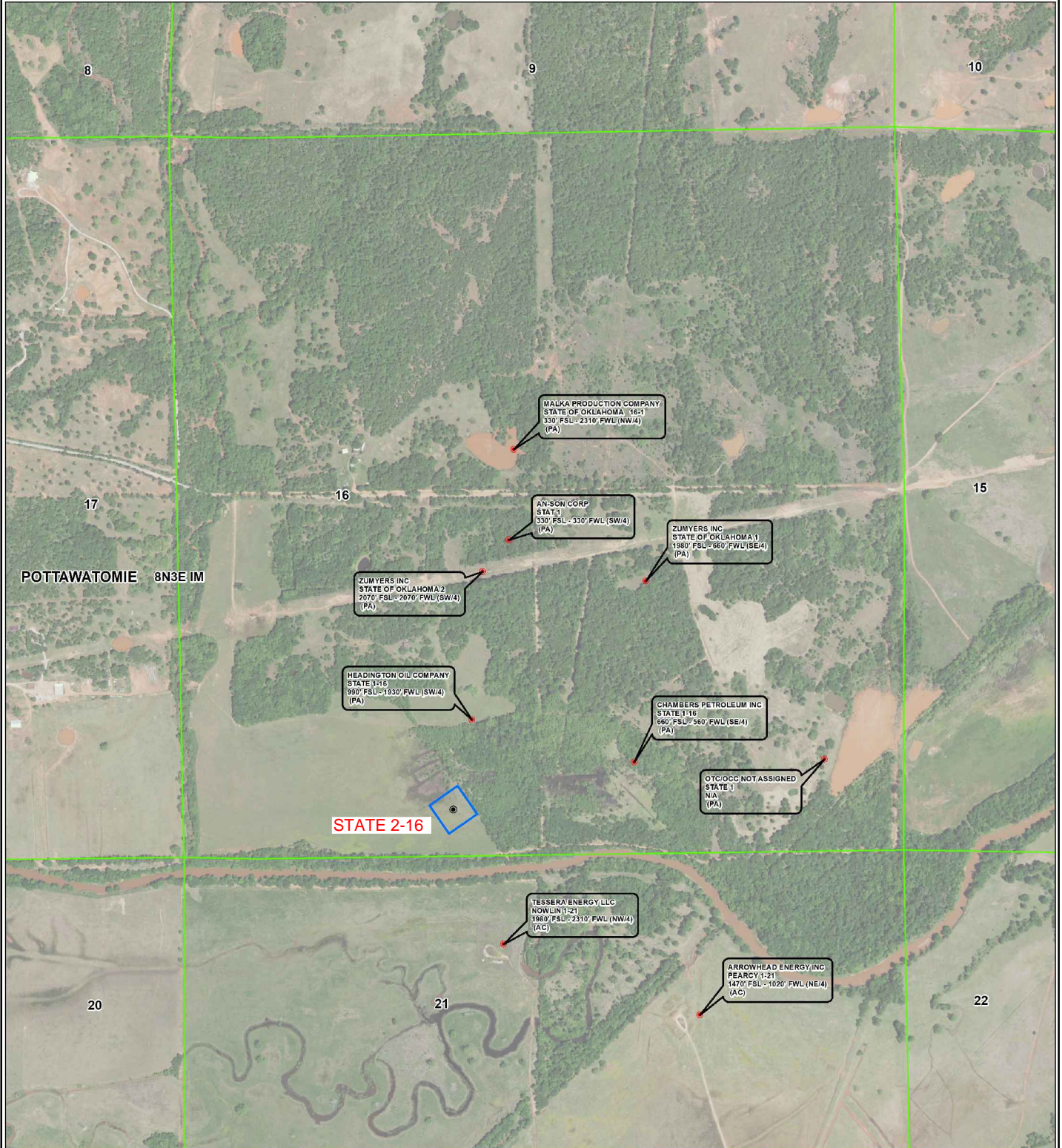
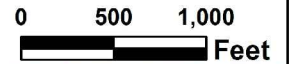
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Section: 16 Township: 8N Range: 3E I.M.

County: Pottawatomie State of Oklahoma





Topographic Vicinity Map



Operator: ARROWHEAD ENERGY, INC.

Lease Name and No.: STATE 2-16

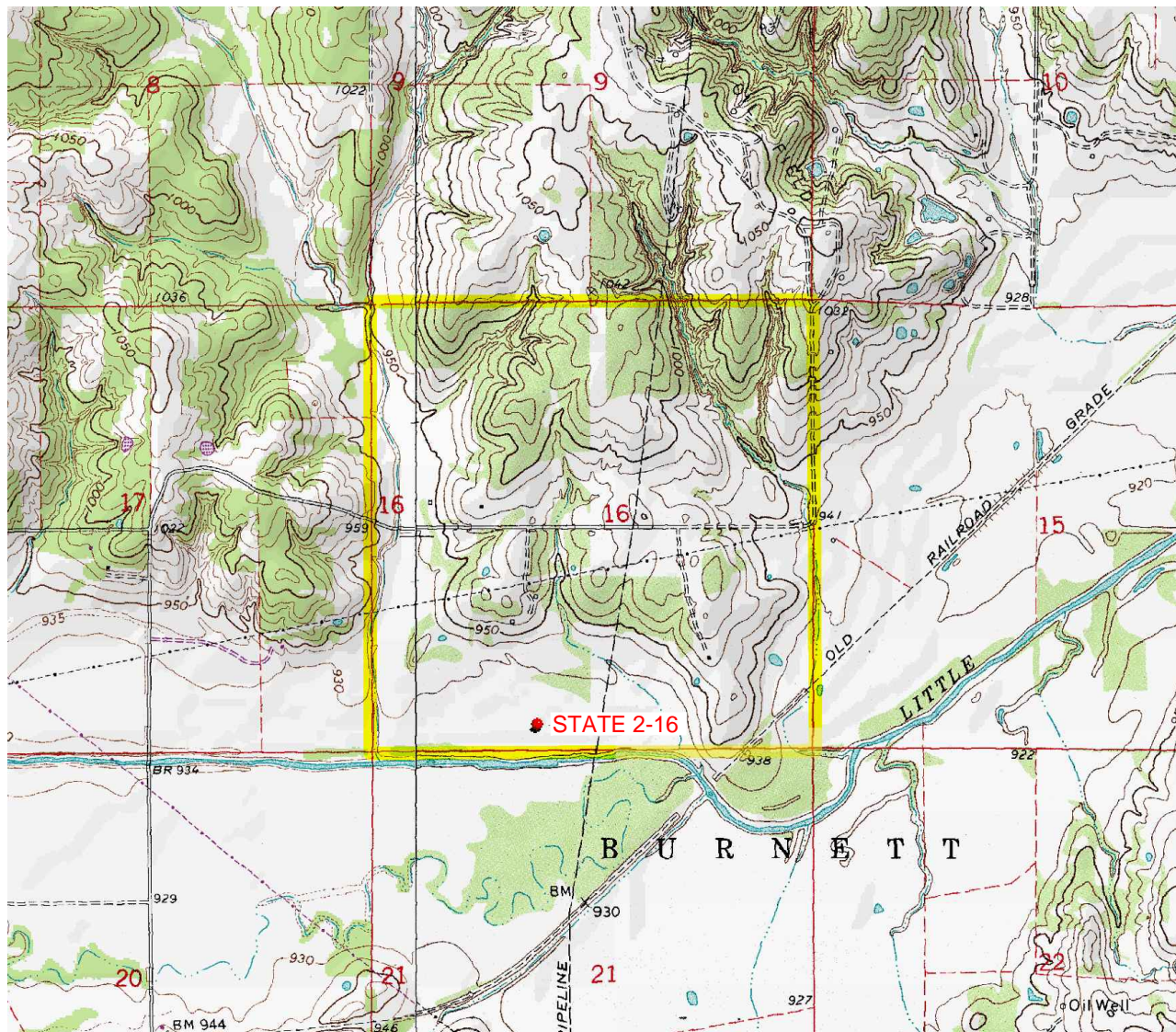
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Section: 16 Township: 8N Range: 3E I.M.

County: Pottawatomie State of Oklahoma

Ground Elevation at Surface Hole Location: 925'

Scale 1" = 2000'
Contour Interval: 10'



Provided by:

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Date Staked: 11/17/2020

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

ARROWHEAD ENERGY, INC.

Job #: 9180

Operator: ARROWHEAD ENERGY, INC.

Lease Name and No.: STATE 2-16

Accessibility: From the West

Directions: From the junction of State Highway 59B & "Kimes Ave." in the town of Macomb, OK. Go 1.5 miles North on "Kime Ave." to a locked gate. Continue through locked gate & travel N-NE-E-SE along County Road 0.7 mile to an aluminum gate South of road & just east of a concrete bridge. Go South through gate across a pasture 0.3 mile then 0.3 mile SE to the Southwest Quarter of Section 16-8N-3E and being at the Wellstack.

1 inch = 0.5 mile

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3	2	1	6	5	4	3	2	1	6
10	11	12	7	8	9	10	11	12	7
15	14	13	18	17	16	15	14	13	18
22	23	24	19	20	21	22	23	24	19
27	26	25	30	29	28	27	26	25	30
34	35	36	31	32	33	34	35	36	31
4	3	2	1	6	5	4	3	2	1

