

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

API NUMBER: 073 25398

Approval Date: 10/17/2016
Expiration Date: 04/17/2017

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 29 Twp: 18N Rge: 8W

County: KINGFISHER

SPOT LOCATION: SW SW SW SE

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 149 250

Lease Name: KRAMER

Well No: 29-2H

Well will be 149 feet from nearest unit or lease boundary.

Operator Name: GASTAR EXPLORATION INC

Telephone: 7137391800

OTC/OCC Number: 23199 0

GASTAR EXPLORATION INC
1331 LAMAR STE 650
HOUSTON, TX 77010-3131

RODNEY KRAMER
7394 EAST 710 ROAD
LOYAL OK 73756

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

Name	Depth	Name	Depth
1 MISSISSIPPI LIME	7989	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 639392

Location Exception Orders: 656872

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 13008

Ground Elevation: 1144

Surface Casing: 520

Depth to base of Treatable Water-Bearing FM: 280

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: No

PIT 1 INFORMATION

Approved Method for disposal of Drilling Fluids:

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED

Chlorides Max: 5000 Average: 3000

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: CEDAR HILLS

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

PERMIT NO: 16-31640

H. CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST

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.

HORIZONTAL HOLE 1

Sec 29 Twp 18N Rge 8W County KINGFISHER

Spot Location of End Point: NE NW NE

Feet From: SOUTH 1/4 Section Line: 2475

Feet From: WEST 1/4 Section Line: 420

Depth of Deviation: 7506

Radius of Turn: 632

Direction: 5

Total Length: 4509

Measured Total Depth: 13008

True Vertical Depth: 8141

End Point Location from Lease,
Unit, or Property Line: 165

Notes:

Category	Description
HYDRAULIC FRACTURING	10/17/2016 - G71 - OCC 165:10-3-10 REQUIRES: 1) THE CHEMICAL DISCLOSURE OF HYDRAULIC FRACTURING INGREDIENTS FOR ALL WELLS BE REPORTED TO FRACFOCUS USING THE FOLLOWING LINK HTTP://FRACFOCUS.ORG/ WITH NOTICE GIVEN 48 HOURS IN ADVANCE OF FRACTURING TO THE LOCAL OCC DISTRICT OFFICE; AND, 2) PRIOR TO COMMENCEMENT OF FRACTURING OPERATIONS FOR HORIZONTAL WELLS, NOTICE ALSO GIVEN FIVE BUSINESS DAYS IN ADVANCE TO OFFSET OPERATORS WITH WELLS COMPLETED IN THE SAME COMMON SOURCE OF SUPPLY WITHIN 1/2 MILE.
LOCATION EXCEPTION - 656872	10/17/2016 - G60 - (I.O.) 29-18N-8W X639392 MSSLM SHL NCT 0' FSL, NCT 0' FEL POE TO BHL NCT 165' FSL, NCT 165' FNL, NCT 660' FEL GASTAR EXPLORATION INC. OR STAGHORN ENERGY, LLC 10-12-16
SPACING - 639392	10/17/2016 - G60 - (640)(HOR) 29-18N-8W EST MSSLM COMPL. INT. NCT 660' FB (COEXIST WITH SP. ORDER 77564 MSSD; SP. ORDER 222051 MSSSD)

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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.

PETRO LAND SERVICES SOUTH, LLC

10404 VINEYARD BLVD. SUITE D, OKLA. CITY, OKLA. 73120 * OFFICE (405) 212-3108
Certificate of Authorization No. 7318

KINGFISHER

County, Oklahoma

2396' FEL 149' FSL Section 29 Township 18N Range 8W I.M.

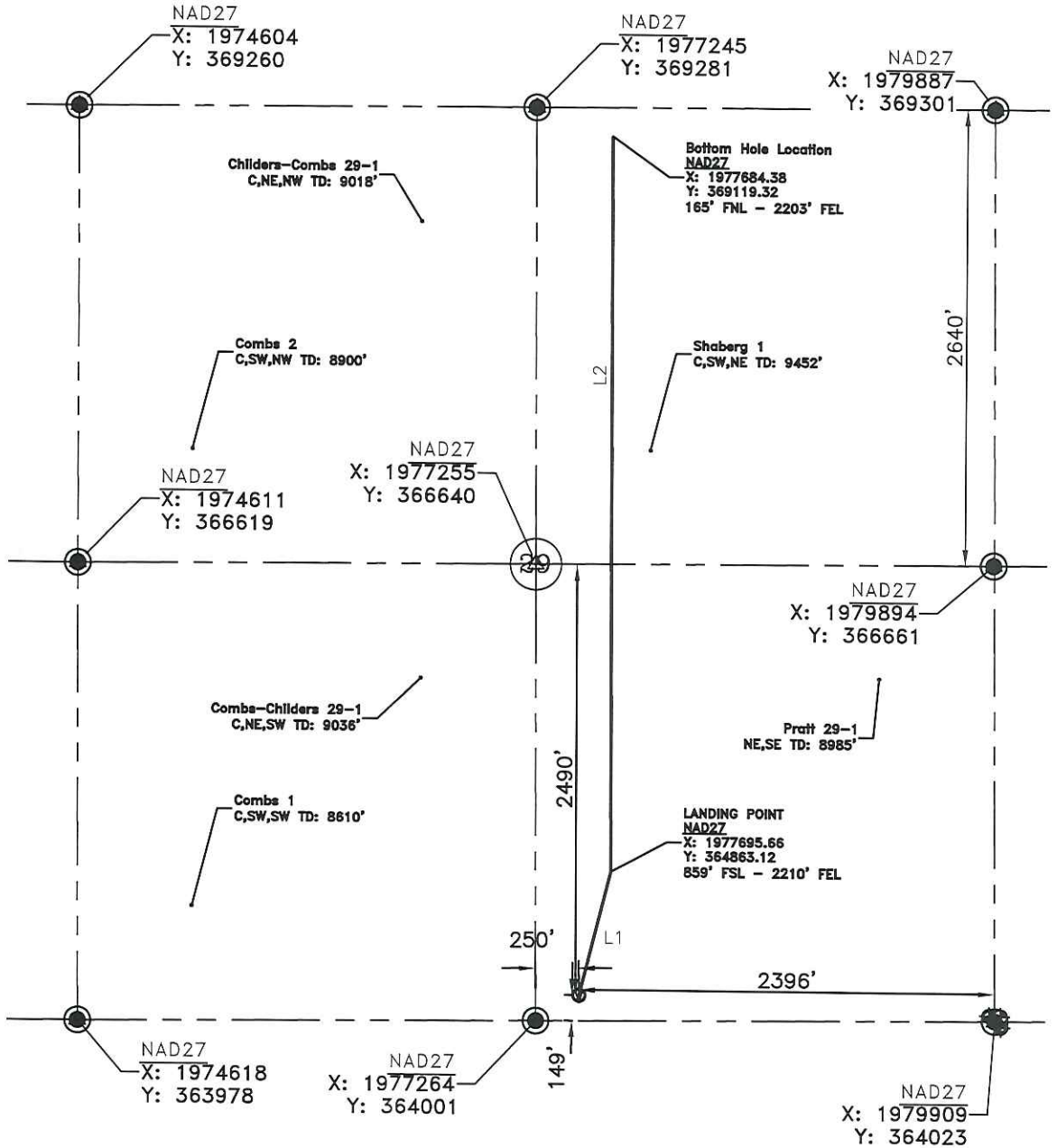
EXHIBIT

3507325398

GRID
NAD27
OK NORTH
1" = 1000'

THE INFORMATION SHOWN HEREIN IS FOR CONSTRUCTION PURPOSES ONLY

LANDING POINT, BOTTOM HOLE AND DRILL PATH INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED.



LEGEND:
PARENTHESIS = (CALCULATED)

NOTE:
This exhibit represents a proposed well location and does not represent a true boundary survey. The footages and ties shown are from lines of occupation, and/or ± 1' GPS Accuracy, not from actual property corners.



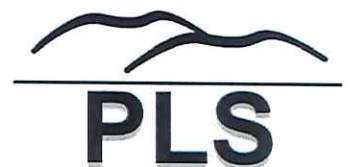
CERTIFICATE:

I, Beau Winfrey an Oklahoma Licensed Land Surveyor and an authorized agent of Petro Land Services South, LLC, do hereby certify to the information shown herein.

Oklahoma RPLS No.1766



SURVEY & MAPPING BY:



OPERATOR: GASTAR EXPLORATION, LLC
LEASE NAME: KRAMER 29
WELL No.: 1H
TOPOGRAPHY & VEGETATION: Location fell in flat open pasture
GOOD DRILL SITE? Yes
REFERENCE STAKES OR ALTERNATE LOCATION STAKES(S) SET: NONE

BEST ACCESSIBILITY TO LOCATION: From E 0700 Rd.
DIST & DIRECTION: From Hwy 101, OR TOWN: From Loyd, OK, head East on E 0720 Rd for 2 miles. Turn left on N 2760 Rd, and head North for 2 miles to SW Corner of Section 29.

The information shown herein was derived from occupation lines and/or ± 1' GPS Accuracy.

DATUM: NAD27
LAT: 36°00'01.34"N
LONG: 98°04'33.67"W
LAT: 36.000373°N
LONG: 98.076019°W

STATE PLANE COORDINATES (US SRV FEET):
ZONE: OK North
X: 1977513.2
Y: 364151.9

ELEVATION:
1144.6' GROUND AT STAKE

PROPOSED DRILL PATH	
LINE:	DISTANCE'
L1:	734'
L2:	4256'
WELL DISTANCES	
TO S. SECTION LINE:	149'
TO E. SECTION LINE:	2396'
TO W. 1/4 LINE:	250'
TO N. 1/4 LINE:	2490'

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KINGFISHER

County, Oklahoma

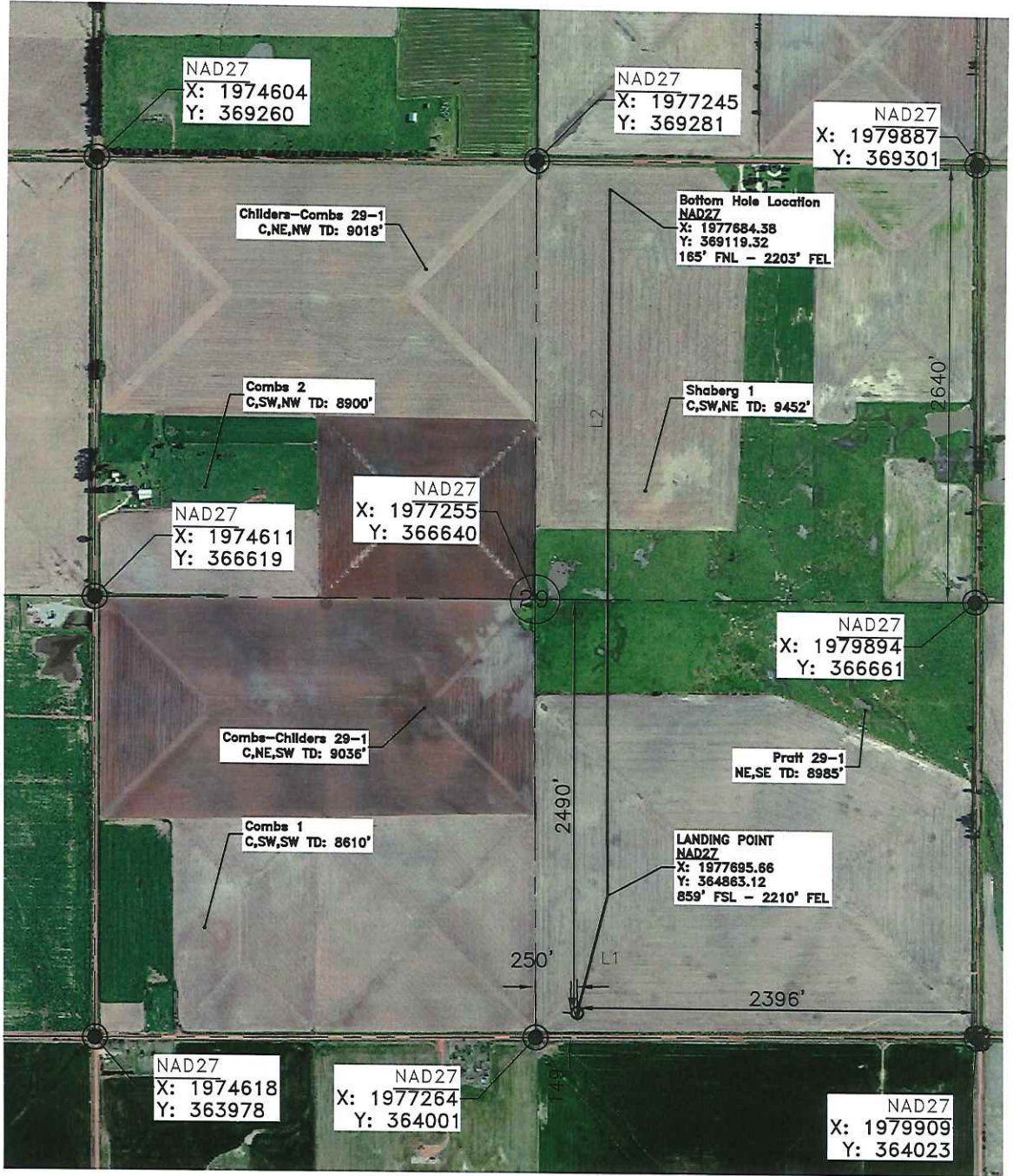
2396' FEL 149' FSL Section 29 Township 18N Range 8W I.M.

EXHIBIT

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NORTH
OKLAHOMA
Scale:
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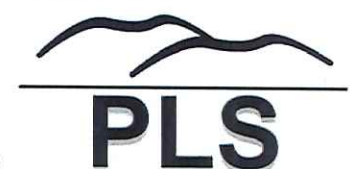


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LOCATION & ELEVATION VERIFICATION MAP

1" = 2,000'



Section 29 Township 18N Range 8W I.M.
 County KINGFISHER State OK
 Operator GASTAR EXPLORATION INC.
 Description 149' FSL-2396' FEL
 Well KRAMER 29-1H
 Elevation 1144.6'

Contour Interval 10'

When elevation is shown hereon it is the ground elevation of the location stake. Review this plat and inform us immediately of any possible discrepancy.



REVISIONS

NO.	DATE	REV BY	DESCRIPTION	CHK BY
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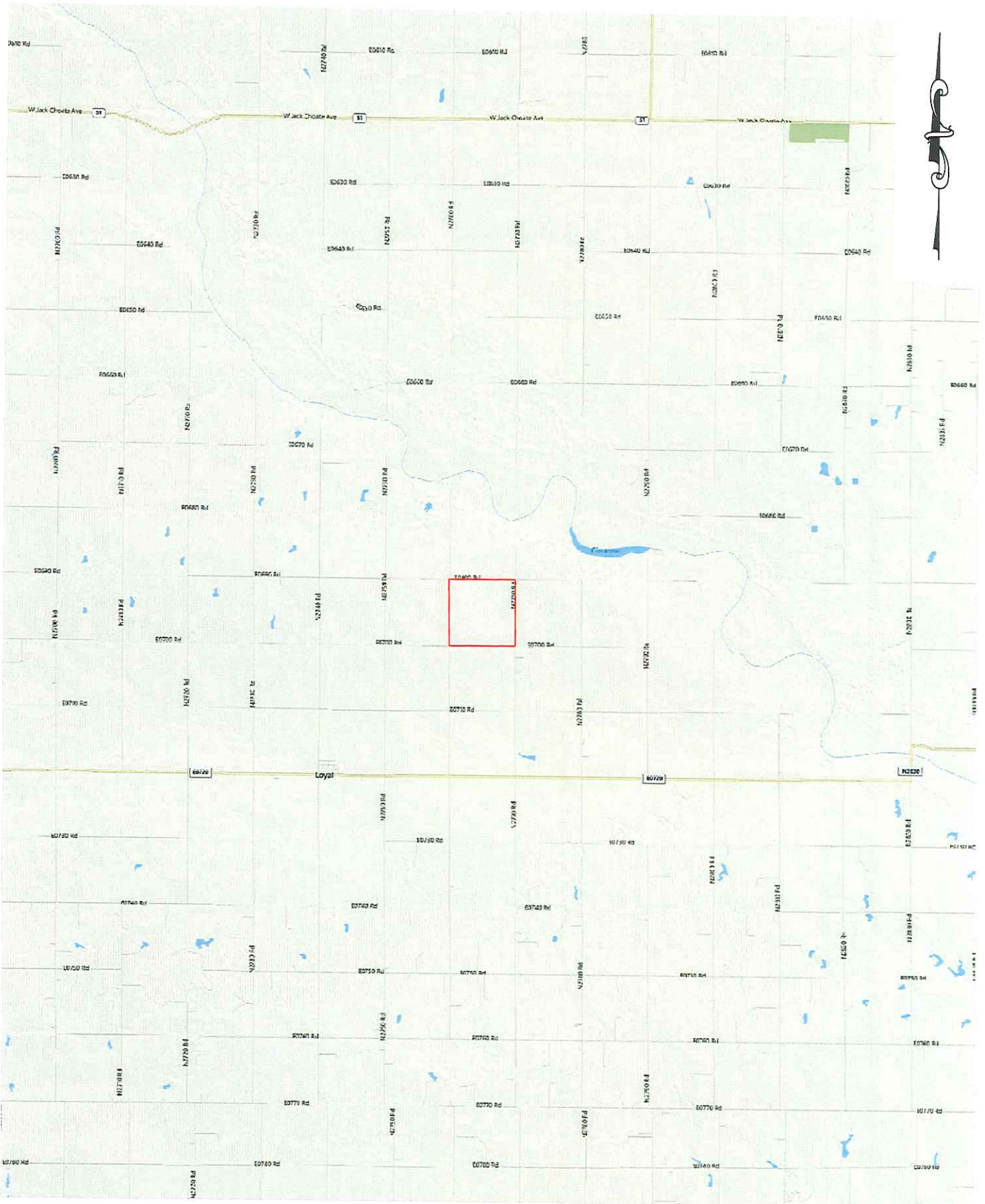
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VICINITY MAP

1" = 2.0 MILES



Section 29 Township 18N Range 8W I.M.

County KINGFISHER State OK

Operator GASTAR EXPLORATION INC.

Description 149' FSL-2396' FEL

Well KRAMER 29-1H

Elevation 1144.6'



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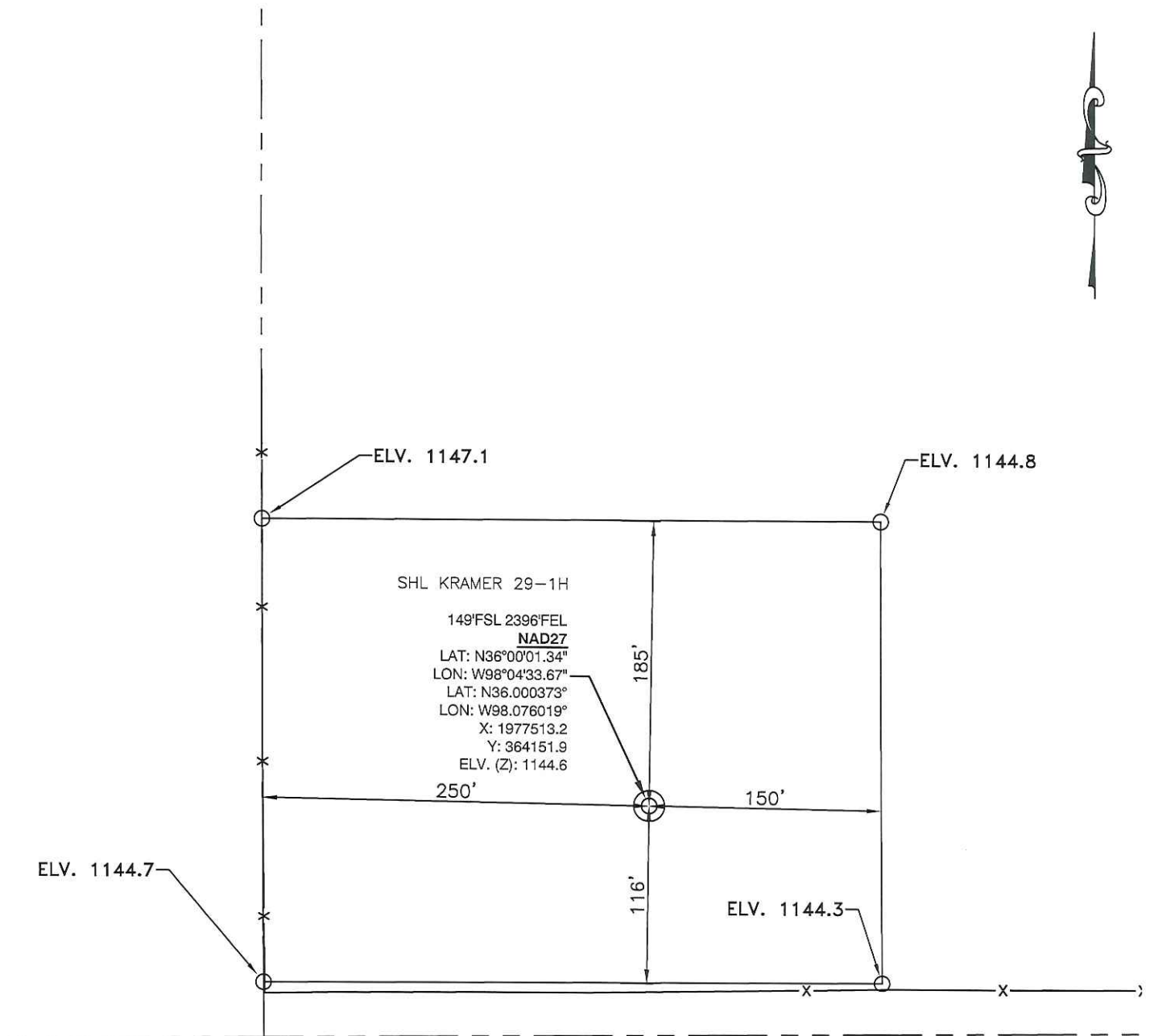
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PAD DETAILS

1" = 100'



Section 29 Township 18N Range 8W I.M.
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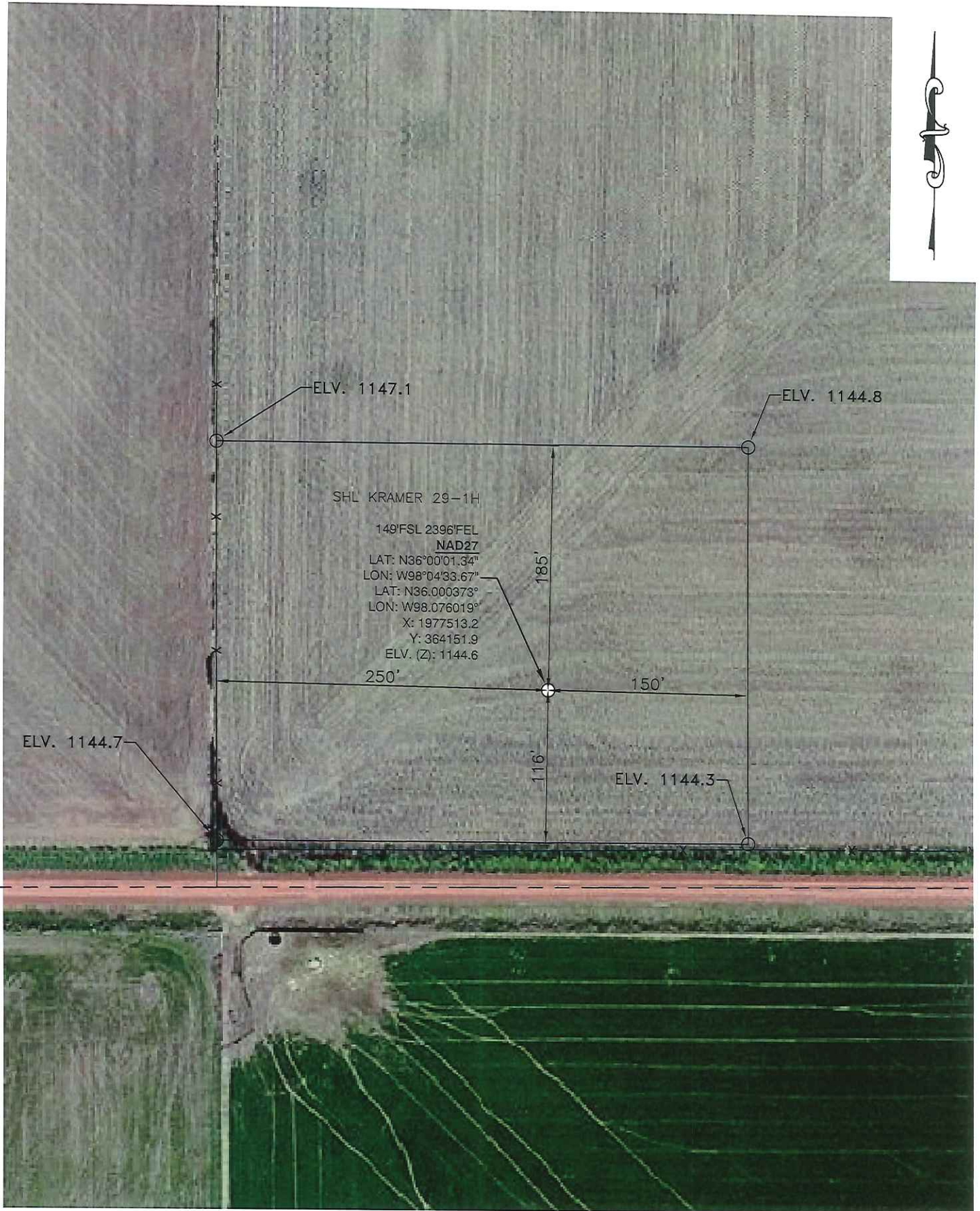
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