

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

API NUMBER: 017 25568

Approval Date: 12/03/2019

Expiration Date: 06/03/2021

Horizontal Hole  
Multi Unit  
Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 22 Twp: 12N Rge: 8W County: CANADIAN  
SPOT LOCATION: ☐ NE ☐ SW ☐ SW ☐ SE FEET FROM QUARTER: FROM SOUTH FROM EAST  
SECTION LINES: 335 2290

Lease Name: CROOKED PINE 22\_15-12N-8W Well No: 4MHX Well will be 335 feet from nearest unit or lease boundary.  
Operator Name: PALOMA OPERATING CO INC Telephone: 7136508509 OTC/OCC Number: 23932 0

PALOMA OPERATING CO INC  
1100 LOUISIANA ST STE 5100  
HOUSTON, TX 77002-5220

PATRICIA HARTWIG  
3305 WINDSOR BOULEVARD  
OKLAHOMA CITY OK 73122

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

	Name	Depth	Name	Depth
1	MISSISSIPPI	10553	6	
2	MISSISSIPPIAN	10670	7	
3			8	
4			9	
5			10	

Spacing Orders: 143998 Location Exception Orders: 705401 Increased Density Orders: 704470  
688916  
704467

Pending CD Numbers: 201904575

Special Orders:

Total Depth: 20959 Ground Elevation: 1437 Surface Casing: 1500 Depth to base of Treatable Water-Bearing FM: 340

Deep surface casing has been approved

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 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: DOG CREEK

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 19-37074  
F. Haul to Commercial soil farming facility: Sec. 27 Twn. 17N Rng. 9W Cnty. 73 Order No: 659856  
G. Haul to recycling/re-use facility: Sec. 22 Twn. 16N Rng. 9W Cnty. 73 Order No: 647741  
H. SEE MEMO

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.

## PIT 2 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: DOG CREEK

## HORIZONTAL HOLE 1

Sec 15 Twp 12N Rge 8W County CANADIAN

Spot Location of End Point: N2 NE NW NE

Feet From: NORTH 1/4 Section Line: 65

Feet From: EAST 1/4 Section Line: 1650

Depth of Deviation: 10192

Radius of Turn: 488

Direction: 5

Total Length: 10000

Measured Total Depth: 20959

True Vertical Depth: 10670

End Point Location from Lease,  
Unit, or Property Line: 65

### Notes:

#### Category

#### Description

DEEP SURFACE CASING

11/12/2019 - 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

HYDRAULIC FRACTURING

11/12/2019 - G71 - OCC 165:10-3-10 REQUIRES:

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;

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](http://OCCEWEB.COM/OG/OGFORMS.HTML); AND,

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](http://FRACFOCUS.ORG)

INCREASED DENSITY - 704470 (201904574)

12/3/2019 - GC2 - 15-12N-8W  
X143998 MISS  
4 WELLS  
PALOMA PARTNERS IV, LLC  
10-30-2019

LOCATION EXCEPTION - 705401  
(201904571)

12/3/2019 - GC2 - (I.O.) 15 & 22-12N-8W  
X143998 MISS 15-12N-8W  
X688916 MSSP 22-12N-8W  
COMPL. INT. (22-12N-8W) NCT 165' FSL, NCT 0' FNL, NCT 650' FEL COMPL. INT. (15-12N-8W)  
NCT 0' FSL, NCT 165' FNL, NCT 650' FEL PALOMA PARTNERS IV, LLC  
11-20-2019

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

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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.

017 25568 CROOKED PINE 22\_15-12N-8W  
4MHX

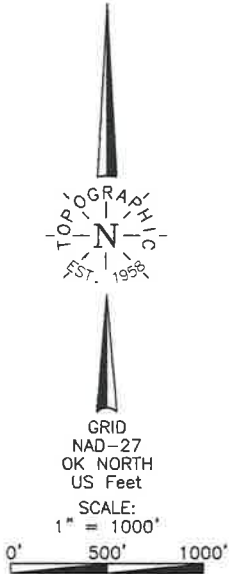
MEMO	11/12/2019 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT
PENDING CD - 201904575	12/3/2019 - GC2 - 22-12N-8W X688916 MSSP 4 WELLS NO OP. NAMED REC. 10-1-2019 (MOORE)
SPACING - 143998	12/3/2019 - GC2 - (640) 15-12N-8W EXT 122864/137298 MISS EXT OTHER
SPACING - 688916	12/3/2019 - GC2 - (640)(HOR) 22-12N-8W EST MSSP, OTHER COMPL. INT. (MSSP) NCT 660' FB
SPACING - 704467 (201904567)	12/3/2019 - GC2 - (I.O.) 15 & 22-12N-8W EST MULTIUNIT HORIZONTAL WELL X143998 MISS 15-12N-8W X688916 MSSP 22-12N-8W 50% 15-12N-8W 50% 22-12N-8W PALOMA PARTNERS IV, LLC 10-30-2019

API: 017-25568

CANADIAN

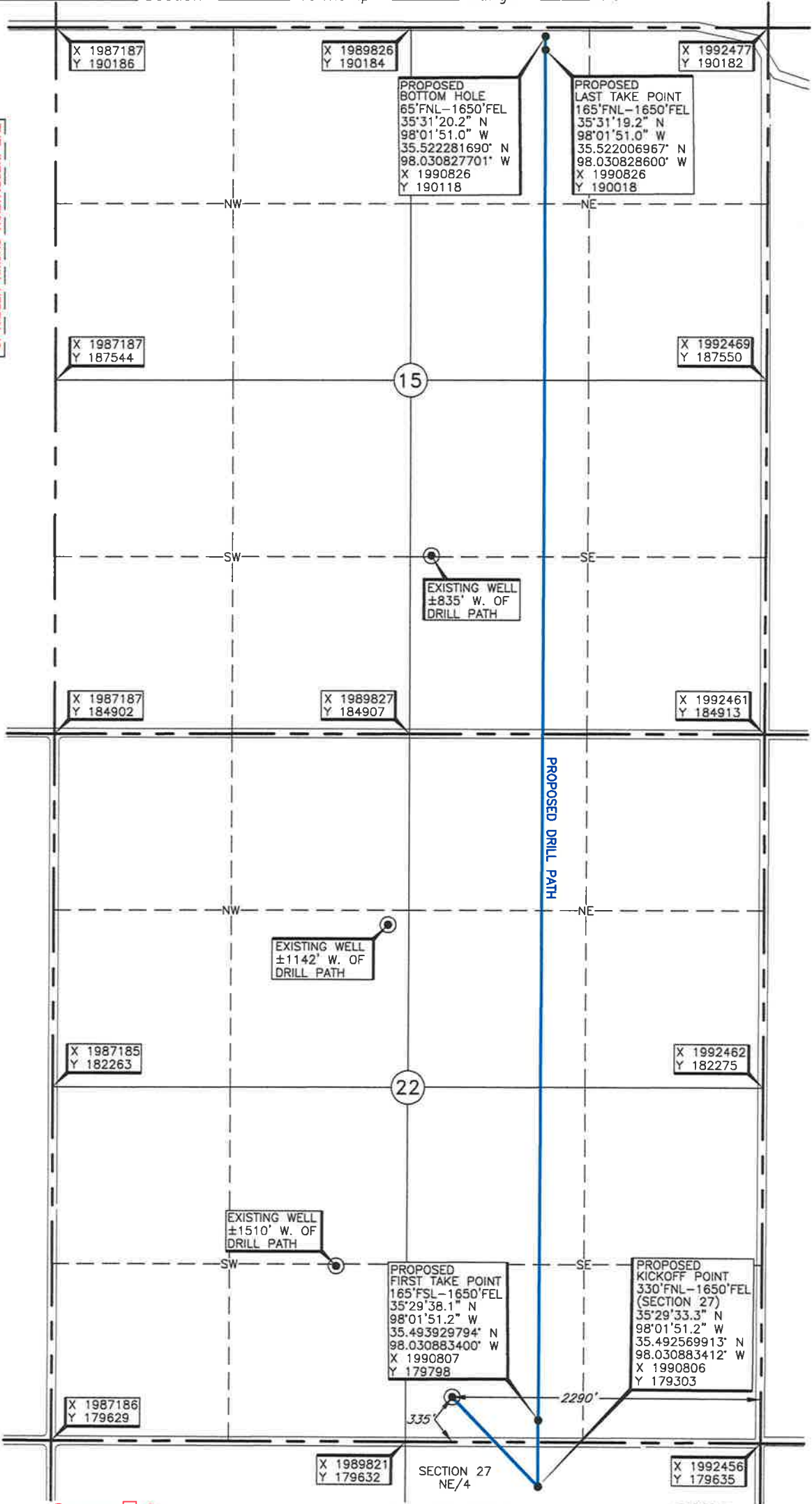
County, Oklahoma

335'FSL-2290'FEL Section 22 Township 12N Range 8W I.M.



KICKOFF POINT, FIRST TAKE POINT, LAST TAKE POINT, BOTTOM HOLE, AND DRILL PATH INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED.

THE INFORMATION SHOWN HEREIN IS FOR CONSULTATION PURPOSES ONLY



Revision ☒ 2

Date of Drawing: Oct. 22, 2019

Project # 128279

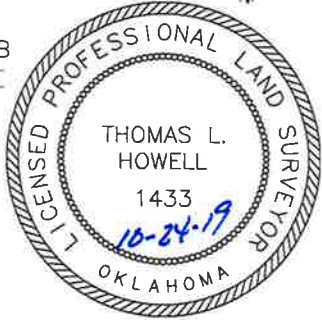
Date Staked: Oct. 21, 2019

NB

CERTIFICATE:

I, Thomas L. Howell an Oklahoma Licensed Land Surveyor and an authorized agent of Topographic Land Surveyors of Oklahoma, do hereby certify to the information shown herein.

Thomas L. Howell  
Oklahoma Lic. No. 1433



Operator: PALOMA OPERATING COMPANY, INC.  
Lease Name: CROOKED PINE 22-15-12N-8W  
Topography & Vegetation: Location fell on existing pad  
Good Drill Site? Yes  
Reference Stakes or Alternate Location: Stakes Set  
Best Accessibility to Location: From South off county road.  
Distance & Direction: From the junction of US Hwy 270/-40 and US Hwy 81 go ±0.5 miles South on US Hwy 81, Then ±5.0 miles West to the SE Corner of Section 22, T12N-R8W.

Well No.: 4MHX

ELEVATION:

1437' Gr. on Existing Pad

DATUM: NAD-27  
LAT: 35°29'39.8" N  
LONG: 98°01'58.9" W  
LAT: 35.494394516° N  
LONG: 98.033031654° W  
STATE PLANE COORDINATES: (US Feet)  
ZONE: OK NORTH  
X: 1990167  
Y: 179967



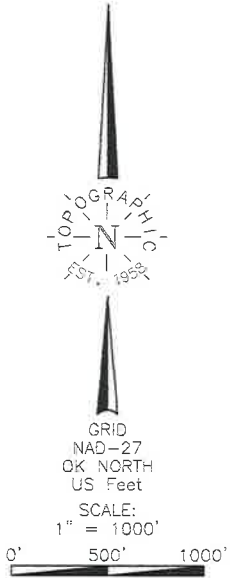
TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

13800 Wireless Way, Okla. City, OK. 73134 \* LOCAL (405) 843-4847 \* OUT OF STATE (800) 654-3219  
Certificate of Authorization No. 1293 LS

CANADIAN

County, Oklahoma

335'FSL-2290'FEL Section 22 Township 12N Range 8W I.M.



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Topography & Vegetation Location fell on existing pad

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ELEVATION: 1437' Gr. on Existing Pad

Good Drill Site? Yes  
Reference Stakes or Alternate Location Stakes Set None

Best Accessibility to Location From South off county road.  
Distance & Direction From the junction of US Hwy 270/I-40 and US Hwy 81 go ±0.5 miles South on US Hwy 81, then ±5.0 miles West to the SE Corner of Section 22, T12N-R8W.

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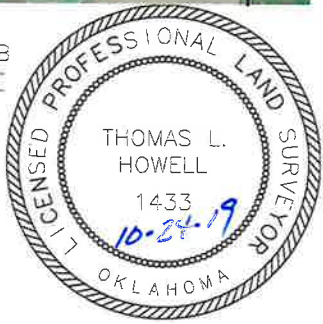
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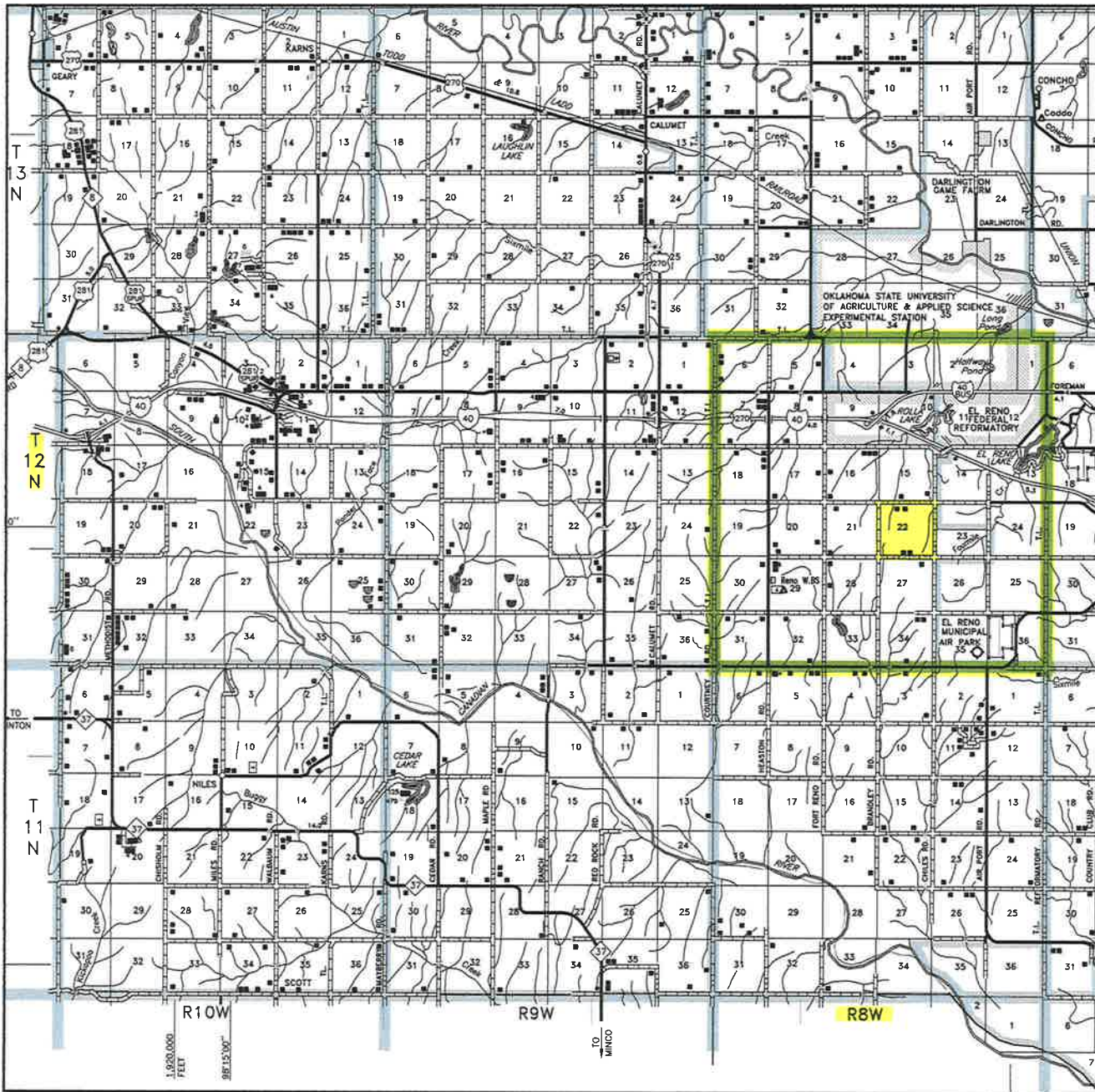
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# TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

Surveying and Mapping for the Energy Industry  
13800 Wireless Way, Oklahoma City, OK 73134 [www.topographic.com](http://www.topographic.com)  
Telephone Numbers: Local (405) 843-4847 Toll Free (800) 654-3219

## VICINITY MAP



Scale: 1" = 3 Miles

Sec. 22 Twp. 12N Rng. 8W I.M.

County CANADIAN State OK

Operator PALOMA OPERATING COMPANY, INC.

 **TOPOGRAPHIC**  
LOYALTY INNOVATION LEGACY  
**LAND SURVEYORS OF OKLAHOMA**



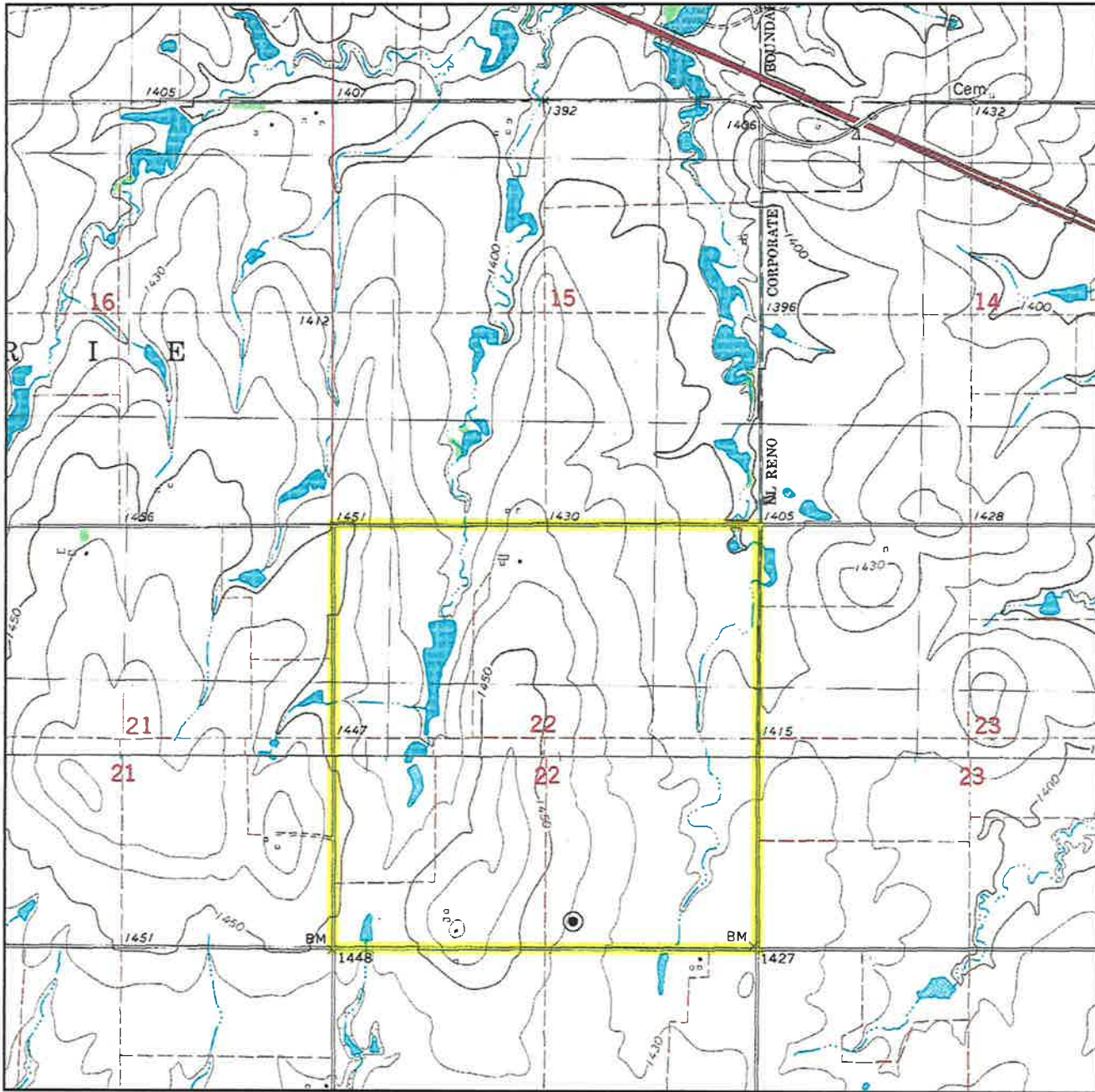
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## LOCATION & ELEVATION VERIFICATION MAP



Sec. 22 Twp. 12N Rng. 8W I.M.

County CANADIAN State OK

Operator PALOMA OPERATING COMPANY, INC.

Description 335' FSL-2290' FEL

Lease CROOKED PINE 22-15-12N-8W 4MHX

Elevation 1437' Gr. on Existing Pad

Above Background Data from  
U.S.G.S. Topographic Map  
Scale: 1"=2000'

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.



**TOPOGRAPHIC**  
LOYALTY INNOVATION LEGACY

**LAND SURVEYORS OF OKLAHOMA**

Oct. 21, 2019