

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

API NUMBER: 109 22478

Approval Date: 09/13/2019

Expiration Date: 03/13/2021

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 20 Twp: 14N Rge: 4W

County: OKLAHOMA

SPOT LOCATION: ☐ SW ☐ SW ☐ SW ☐ NE

FEET FROM QUARTER: FROM NORTH FROM EAST

SECTION LINES: 2511 2375

Lease Name: ARROWHEAD 1404 20-17

Well No: 4BH

Well will be 2375 feet from nearest unit or lease boundary.

Operator Name: REVOLUTION RESOURCES LLC

Telephone: 4055345232

OTC/OCC Number: 24162 0

REVOLUTION RESOURCES LLC  
14301 CALIBER DR STE 110  
OKLAHOMA CITY, OK 73134-1016

TLW SDW LLC  
PO BOX 54525  
OKLAHOMA CITY OK 73154

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

Name	Depth	Name	Depth
1 HUNTON	6860	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 20212

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers:

Special Orders:

Total Depth: 15220

Ground Elevation: 1127

**Surface Casing: 710**

Depth to base of Treatable Water-Bearing FM: 660

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

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: SALT PLAINS

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

PERMIT NO: 19-36892

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 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.

# HORIZONTAL HOLE 1

Sec 17 Twp 14N Rge 4W County OKLAHOMA

Spot Location of End Point: N2 NE NW NE

Feet From: NORTH 1/4 Section Line: 10

Feet From: EAST 1/4 Section Line: 1650

Depth of Deviation: 6287

Radius of Turn: 573

Direction: 5

Total Length: 8033

Measured Total Depth: 15220

True Vertical Depth: 6860

End Point Location from Lease,

Unit, or Property Line: 10

## Notes:

### Category

### Description

HYDRAULIC FRACTURING

9/9/2019 - G71 - OCC 165:10-3-10 REQUIRES:

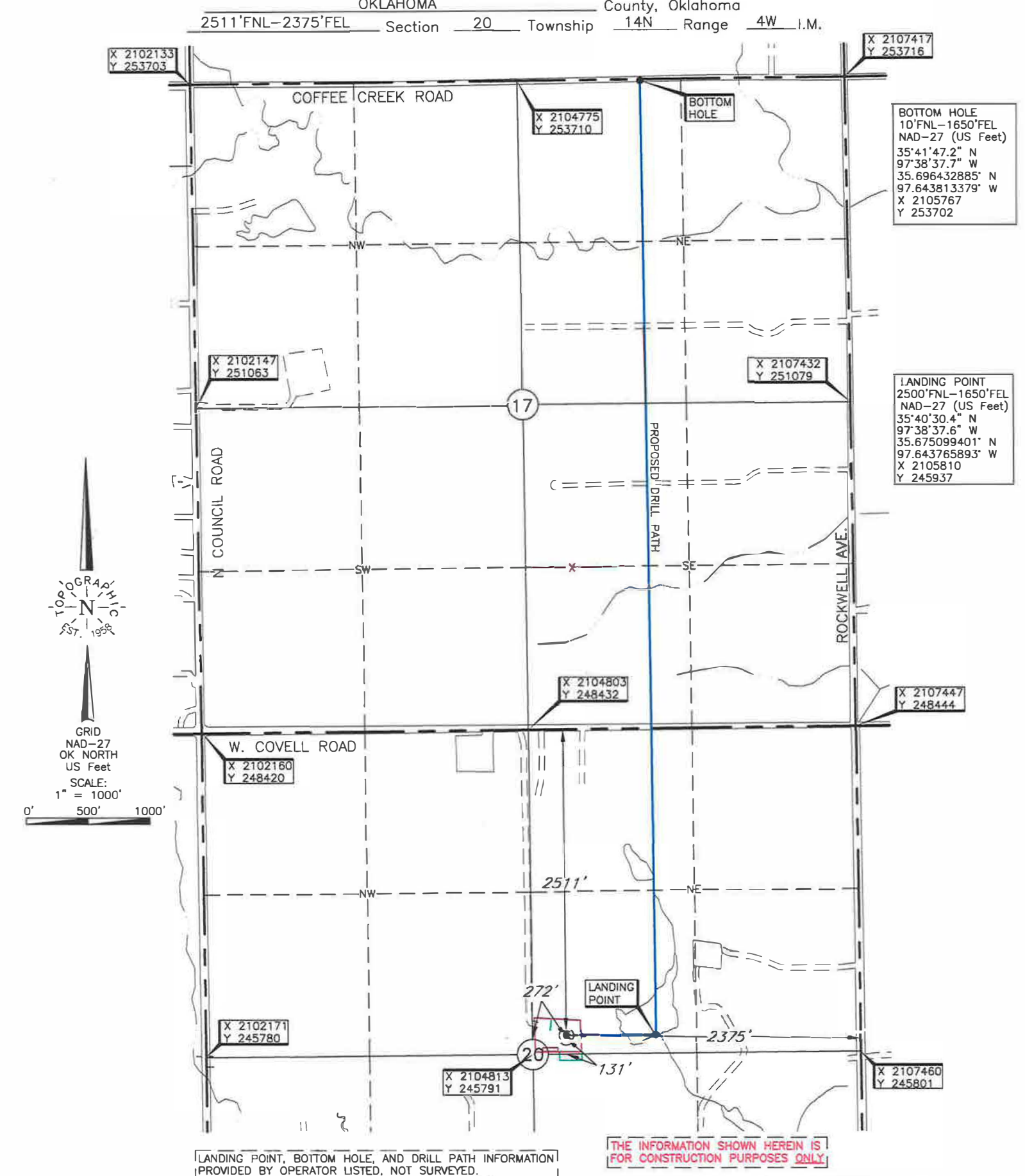
1) PRIOR TO COMMENCEMENT OF HYDRAULIC FRACTURING OPERATIONS FOR HORIZONTAL WELLS, NOTICE GIVEN FIVE BUSINESS DAYS IN ADVANCE TO OFFSET OPERATORS WITH WELLS COMPLETED IN THE SAME COMMON SOURCE OF SUPPLY WITHIN 1/2 MILE;

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)

SPACING - 20212

9/10/2019 - GC2 - (UNIT) 20 & 17-14N-4W  
EST WEST EDMOND HUNTON LIME UNIT FOR HNTN





# 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

OKLAHOMA

County, Oklahoma

2511'FNL-2375'FEL Section 20 Township 14N Range 4W I.M.

X 210213  
Y 253703

X 2107417  
Y 253716



BOTTOM HOLE  
10'FNL-1650'FEL  
NAD-27 (US Feet)  
35°41'47.2" N  
97°38'37.7" W  
35.696432885' N  
97.643813379' W  
X 2105767  
Y 253702

LANDING POINT  
2500'FNL-1650'FEL  
NAD-27 (US Feet)  
35°40'30.4" N  
97°38'37.6" W  
35.675099401' N  
97.643765893' W  
X 2105810  
Y 245937

X 2107447  
Y 248444

X 2107460  
Y 245801

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

THE INFORMATION SHOWN HEREIN IS  
FOR CONSTRUCTION PURPOSES ONLY

Operator: REVOLUTION RESOURCES

ELEVATION:

Lease Name: ARROWHEAD 1404 20-17

Well No.: 4BH

1127' Gr. at Level Pad

Topography & Vegetation Location fell on existing level pad; ±109' NE of existing well

Good Drill Site? Yes

Reference Stakes or Alternate Location  
Stakes Set None

Best Accessibility to Location From North off county road

Distance & Direction

from Hwy Jct or Town From the Jct. of county line road & Waterloo Rd, go ±3 miles South, then ±1.5 miles East  
to the N/4 Cor of Sec. 20-T14N-R4W, then ±0.5 mile South on lease road to the center of Sec. 20-T14N-R4W

Date of Drawing: Aug. 01, 2019

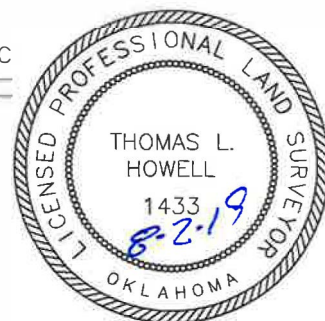
Project # 128626 Date Staked: July 31, 2019

LC

## 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.

Oklahoma Lic. No. 1433



This information was gathered with a GPS receiver with ±1 foot Horiz./Vert. accuracy

DATUM: NAD-27  
LAT: 35°40'30.2"N  
LONG: 97°38'46.3"W  
LAT: 35.675067102° N  
LONG: 97.646207352° W  
STATE PLANE  
COORDINATES: (US Feet)  
ZONE: OK NORTH  
X: 2105085  
Y: 245922



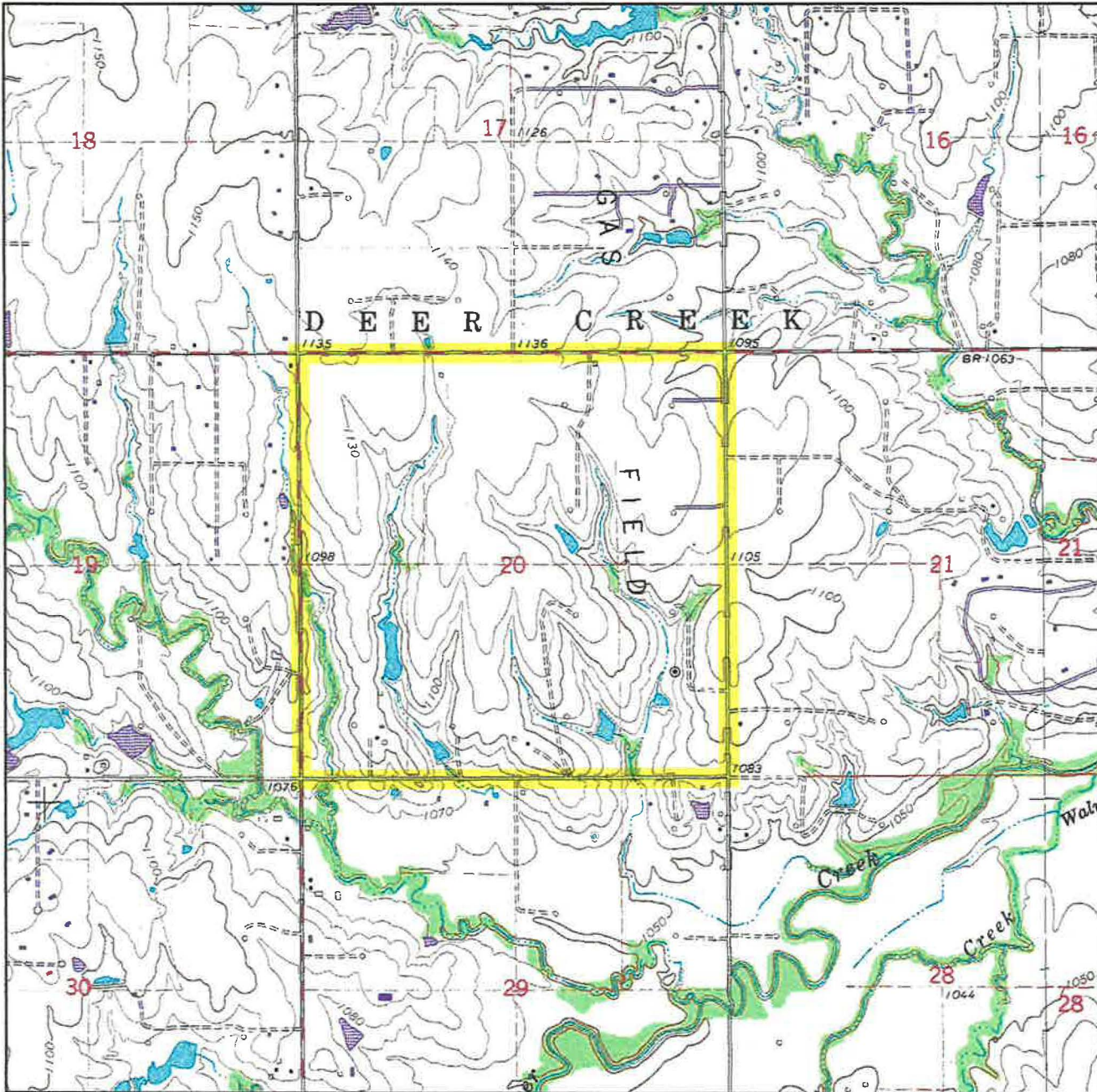
# TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

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

## LOCATION & ELEVATION VERIFICATION MAP



Sec. 20 Twp. 14N Rng. 4W I.M.

County OKLAHOMA State OK

Operator REVOLUTION RESOURCES

Description 2511'FNL-2375'FEL

Lease ARROWHEAD 1404 20-17 4BH

Elevation 1127' Gr. at Level 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**

July 31, 2019



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L O G A N



## LAND SURVEYORS OF OKLAHOMA

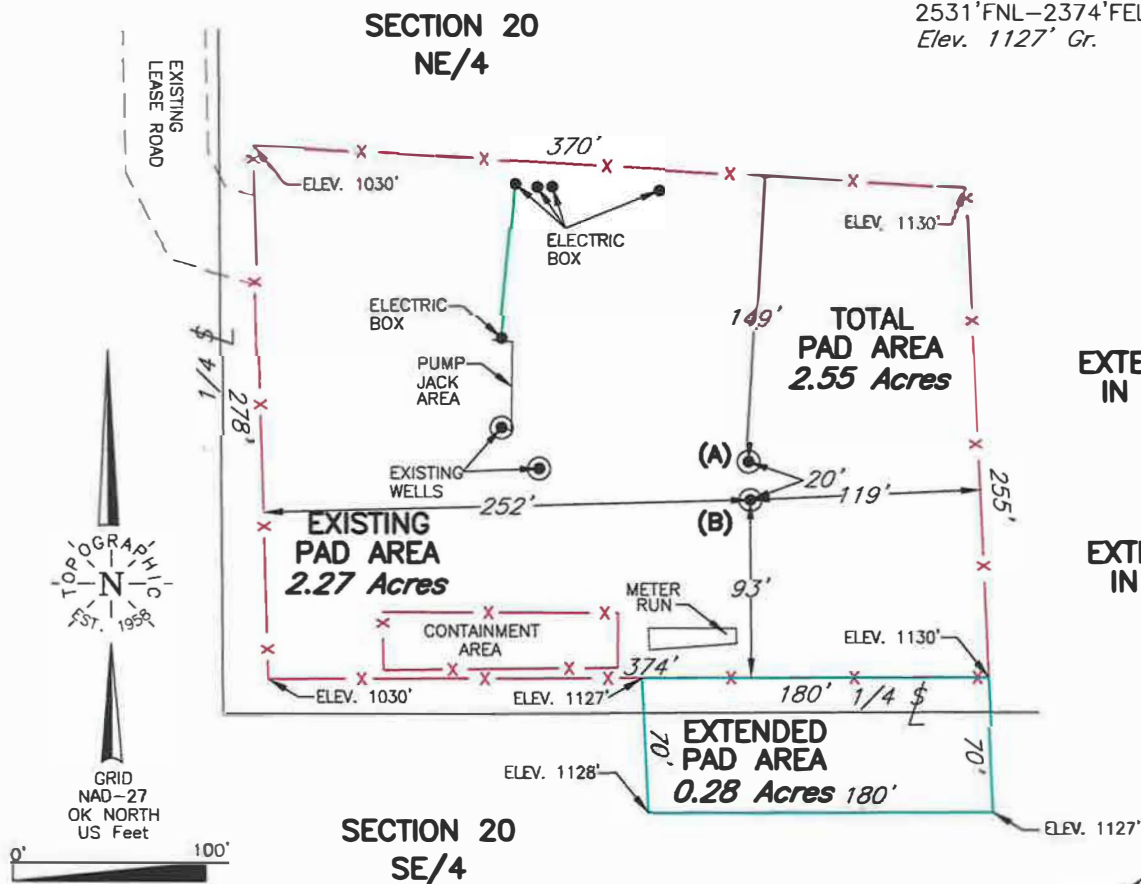


VICINITY MAP  
(Scale: 1" = 1000')

T 14 N - R 4 W  
(INDIAN MERIDIAN)

(A) REVOLUTION RESOURCES  
ARROWHEAD 1404 20-17 4BH  
2511'FNL-2375'FEL  
Elev. 1127' Gr.

(B) REVOLUTION RESOURCES  
ARROWHEAD 1404 20-17 3BH  
2531'FNL-2374'FEL  
Elev. 1127' Gr.



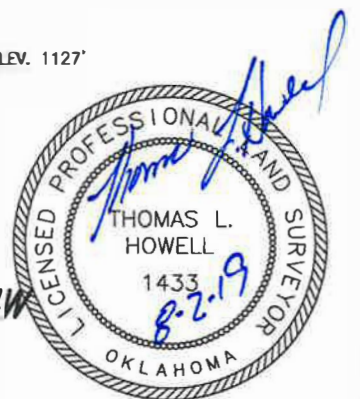
EXTENDED PAD AREA  
IN NE/4 SEC. 20  
0.07 Acres

EXTENDED PAD AREA  
IN SE/4 SEC. 20  
0.21 Acres

PLAT SHOWING  
EXISTING & EXTENDED PAD AREA IN THE  
SE/4 & NE/4 OF SECTION 20, T14N - R4W  
OKLAHOMA COUNTY, OKLAHOMA

NOTE:

The information shown herein is  
for construction purposes ONLY.



This plat was prepared exclusively for				SCALE: 1"=100'	
REVOLUTION RESOURCES				DATE: 8/01/19	
and may not be relied upon by any other entity without the written consent of Topographic Land Surveyors of Oklahoma				PROJECT NO.: 128626	
NO. REVISION DATE BY	SURVEYING AND MAPPING BY			FILE NAME: L2013A.DWG	
SUR. BY: ST 7-31-19	TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA			DWG NO.: 118067-L2-013-B	
DRAWN BY: LC	13800 Wireless Way, Okla. City, OK. 73134 (405) 843-4847			SHEET 1 OF 1	
APPROVED BY: TH	Certificate of Authorization No. 1293 LS				