

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

API NUMBER: 051 24239

Approval Date: 01/02/2018

Expiration Date: 07/02/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 34 Twp: 10N Rge: 5W

County: GRADY

SPOT LOCATION: ☐ NW ☐ NE ☐ NW ☐ NW

FEET FROM QUARTER: FROM NORTH FROM WEST

SECTION LINES: 250 800

Lease Name: THUNDER GULCH 27-10-5

Well No: 2H

Well will be 250 feet from nearest unit or lease boundary.

Operator Name: LINN OPERATING LLC

Telephone: 4052412237; 4052412

OTC/OCC Number: 22182 0

LINN OPERATING LLC
14701 HERTZ QUAIL SPRINGS PKWY
OKLAHOMA CITY, OK 73134-2641

J. BOND ET AL
2201 NW 27
OKLAHOMA CITY OK 73107

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

Name	Depth	Name	Depth
1 WOODFORD	9300	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 419868

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201708061

Special Orders:

Total Depth: 14535

Ground Elevation: 1289

Surface Casing: 170

Depth to base of Treatable Water-Bearing FM: 120

Under Federal Jurisdiction: Yes

Fresh Water Supply Well Drilled: Yes

Surface Water used to Drill: No

PIT 1 INFORMATION

Type of Pit System: ON SITE

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? Y

Wellhead Protection Area? Y

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: 1A

Liner required for Category: 1A

Pit Location is BED AQUIFER

Pit Location Formation: DUNCAN

Approved Method for disposal of Drilling Fluids:

A. Evaporation/dewater and backfilling of reserve pit.

B. Solidification of pit contents.

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

PERMIT NO: 17-33502

H. SEE MEMO

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: ON SITE

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? Y

Wellhead Protection Area? Y

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: 3

Liner required for Category: 3

Pit Location is BED AQUIFER

Pit Location Formation: DUNCAN

HORIZONTAL HOLE 1

Sec 27 Twp 10N Rge 5W County GRADY

Spot Location of End Point: NE NW NW NW

Feet From: NORTH 1/4 Section Line: 65

Feet From: WEST 1/4 Section Line: 380

Depth of Deviation: 9000

Radius of Turn: 575

Direction: 357

Total Length: 4632

Measured Total Depth: 14535

True Vertical Depth: 9300

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

Notes:

Category

Description

HYDRAULIC FRACTURING

11/30/2017 - 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; 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

MEMO

11/30/2017 - G71 - PITS 1 & 2 - CONCRETE LINED PIT PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT

PENDING CD - 201708061

12/15/2017 - G60 - (I.O.) 27-10N-5W
X419868 WDFD
COMPL. INT. NCT 165' FNL, NCT 165' FSL, NCT 330' FWL
NO OP. NAMED
REC. 12/19/17 (MILLER)

PUBLIC WATER SUPPLY WELL

11/30/2017 - G71 - TRI CITY DENTAL - 1 PWS/WPA, NW/4 3-9N-5W

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.

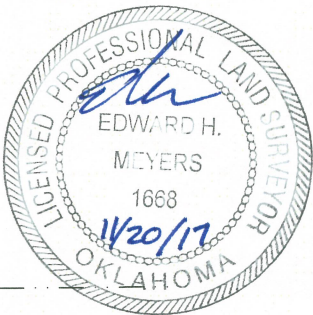
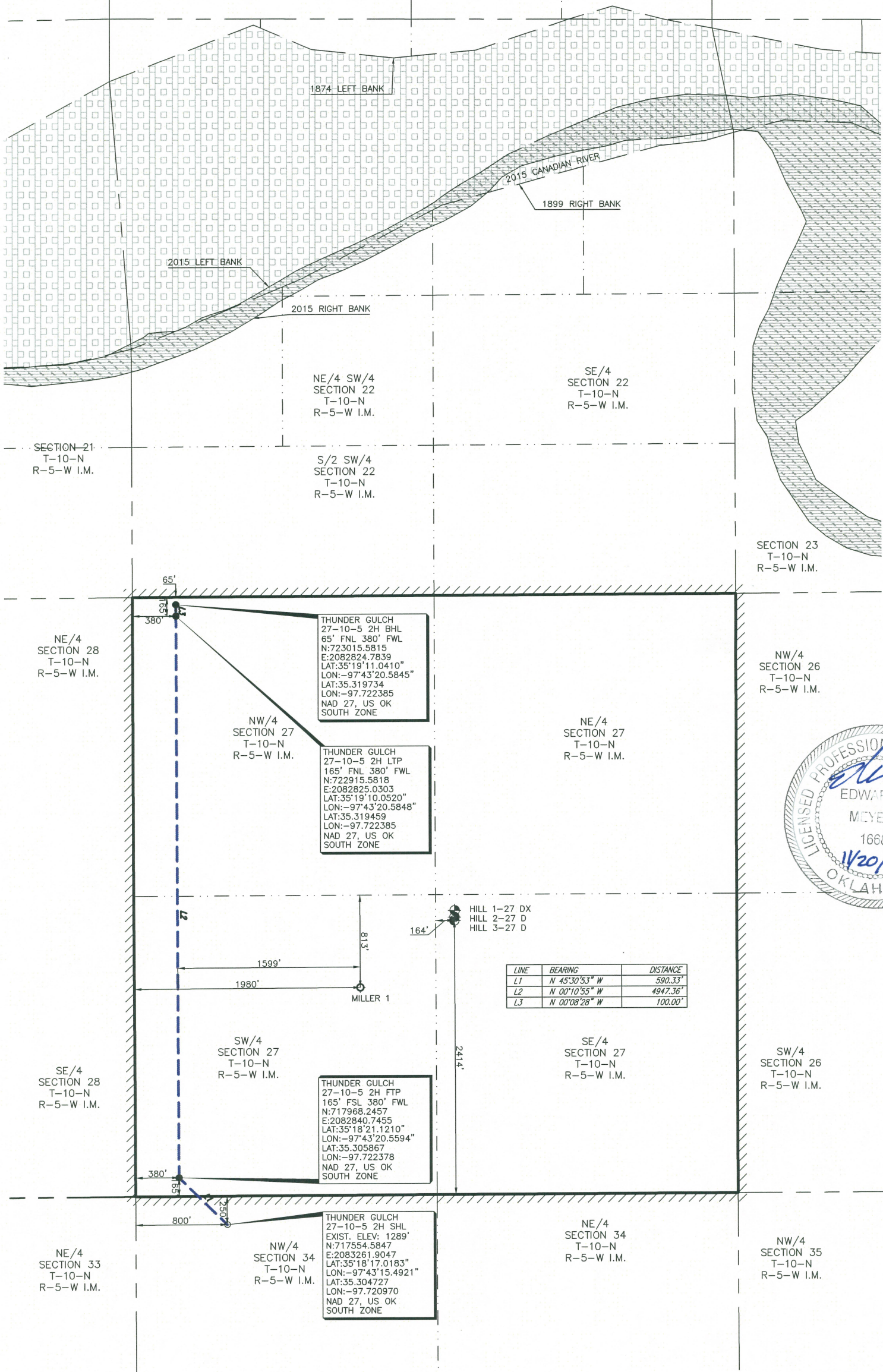
Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.

051 24239 THUNDER GULCH 27-10-5 2H

Category	Description
SPACING - 419868	12/15/2017 - G60 - (640) 27-10N-5W VAC OTHER EXT 415281 WDFD, OTHER

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.

3505124239



SCALE 1" = 1000'



PERMIT PLAT OF
LINN OPERATING, INC
THUNDER GULCH 27-10-5 2H
250' FNL 800' FWL OF SECTION 34
MINCO FIELD
SECTION 27, TOWNSHIP 10 NORTH, RANGE 5 WEST I.M. &
LEASE LINES
SHL: 250' FSL & 800' FWL
GRADY COUNTY, OKLAHOMA

- NOTE:
1. COMBINED SCALE FACTOR: 0.999947069
 2. SHL IS APPROXIMATELY 5.23 MILES N 79°13'15" E OF TUTTLE, OKLAHOMA.

FILE: S:\OK\GRADY\PROJECTS\T10N-R05W\DWG\

LEGEND

SHL SURFACE HOLE LOCATION
PP PENETRATION POINT
FTP FIRST TAKE POINT
LTP LAST TAKE POINT
BHL BOTTOM HOLE LOCATION
OCC OKLAHOMA CORPORATION COMMISSION

POINT
EXISTING WELLHEAD
PROPOSED WELL LOCATION SET
SURFACE LOCATION OBTAINED FROM OCC

AS-DRILLED LATERAL
SUBJECT PROPOSED LATERAL
PROPOSED LATERAL
LEASE LINE
SURVEY LINE

ORIGINAL STAKE DATE: 10/23/17
ADDED LATERAL: 11/17/17

REV: - AFE NO.: - JOB NO.: 17-0203
FIELD BOOK: SERVER VER: 1 DRAWN BY: EHM

NOTE:

1. BEARINGS, DISTANCES & ACREAGE ARE GRID, NAD 27 US OK SOUTH ZONE AND ARE OBTAINED BY NORMAL GPS TECHNIQUES.
2. ELEVATIONS ARE BASED ON NAVD 89 COMPUTED USING GEOID 12B.
3. THIS SURVEY IS FOR AN OIL & GAS SUB-SURFACE LEASE AND IS NOT A BOUNDARY SURVEY.
4. LOCATION OF ADJOINING WELLS OUTSIDE LEASE BOUNDARY ARE APPROXIMATED FROM OKLAHOMA CORPORATION COMMISSION DATA.
5. DOWNHOLE INFORMATION PROVIDED BY THE CLIENT.
6. THIS SURVEY COMPLIES WITH THE US PUBLIC LAND SURVEY SYSTEM AND MEETS THE OKLAHOMA MINIMUM STANDARDS FOR THE PRACTICE OF LAND SURVEYING AS ADOPTED BY THE OKLAHOMA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS, EFFECTIVE JULY 25, 2013.
7. THIS IS NOT A BOUNDARY SURVEY.
8. THIS PERMIT PLAT HAS BEEN PREPARED FROM A SURVEY PLAT ON FILE IN THE OFFICE OF JOHN F. WATSON & COMPANY, MIDLAND TEXAS.

I, THE UNDERSIGNED, DO HEREBY CERTIFY THAT THE SURVEY INFORMATION FOUND ON THIS PLAT WAS DERIVED FROM ACTUAL FIELD NOTES OF ON-THE-GROUND SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

John F. Watson
PROFESSIONAL LAND SURVEYOR

11/20/17

SHEET 1 OF 1

John F. Watson & Company
LAND & DEVELOPMENT SERVICES
PROFESSIONAL LAND SURVEYORS
200 N. Loraine, Ste. 220
Midland, Texas 79701
jwatson@wfindearthwater.com

off: (432) 520-2400
fax: (432) 520-2404
mob: (432) 528-0074

CA#5957 EXPIRATION 6-30-2019
200 N LORAIN #220
MIDLAND, TX 79701
(432) 520-2400