

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

API NUMBER: 043 23624

Approval Date: 05/09/2018

Expiration Date: 11/09/2018

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 01 Twp: 18N Rge: 15W County: DEWEY

SPOT LOCATION:     FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 230 400

Lease Name: ARMSTRONG-HAMEL Well No: 2-1H Well will be 230 feet from nearest unit or lease boundary.

Operator Name: CRAWLEY PETROLEUM CORPORATION

Telephone: 4052329700

OTC/OCC Number: 7980 0

CRAWLEY PETROLEUM CORPORATION  
105 N HUDSON AVE STE 800  
OKLAHOMA CITY, OK 73102-4803

KAREN FLETCHER  
3135 ST. IVES COUNTRY CLUB PKWY.  
JOHN'S CREEK GA 30097

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

	Name	Depth	Name	Depth
1	MISS'AN LM	10200	6	
2			7	
3			8	
4			9	
5			10	

Spacing Orders: 644448

Location Exception Orders:

Increased Density Orders: 676670

Pending CD Numbers: 201801072

Special Orders:

Total Depth: 14850

Ground Elevation: 1911

**Surface Casing: 420**

Depth to base of Treatable Water-Bearing FM: 370

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

PIT 1 INFORMATION

Type of Pit System: ON SITE

Type of Mud System: WATER BASED

Chlorides Max: 20000 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: 1B

Liner required for Category: 1B

Pit Location is AP/TE DEPOSIT

Pit Location Formation: TERRACE

Approved Method for disposal of Drilling Fluids:

A. Evaporation/dewater and backfilling of reserve pit.

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

PERMIT NO: 18-34366

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? N

Wellhead Protection Area? N

Pit is located in a Hydrologically Sensitive Area.

Category of Pit: 3

Liner required for Category: 3

Pit Location is AP/TE DEPOSIT

Pit Location Formation: TERRACE

HORIZONTAL HOLE 1

Sec 01 Twp 18N Rge 15W County DEWEY

Spot Location of End Point: NE NW NW NW

Feet From: NORTH 1/4 Section Line: 200

Feet From: WEST 1/4 Section Line: 400

Depth of Deviation: 9758

Radius of Turn: 477

Direction: 360

Total Length: 4343

Measured Total Depth: 14850

True Vertical Depth: 10200

End Point Location from Lease,  
Unit, or Property Line: 200

Notes:

Category

Description

HYDRAULIC FRACTURING

4/23/2018 - 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 - 676670

5/7/2018 - G75 - 1-18N-15W  
X644448 MPLM  
1 WELL  
CRAWLEY PETRO. CORP.  
4-23-2018

INTERMEDIATE CASING

4/23/2018 - G71 - DUE TO THE KNOWN POTENTIAL RISK OF ENCOUNTERING AN OVER-PRESSURED ZONE IN THE MORROW SERIES IN THIS AREA, THE TECHNICAL MANAGER RECOMMENDS SETTING AN INTERMEDIATE STRING OF CASING IMMEDIATELY ABOVE THE MORROW SERIES

MEMO

4/23/2018 - G71 - PIT 1 & 2 - CONCRETE-LINED PIT PER OPERATOR REQUEST; PIT 2 - OBM TO VENDOR, OBM CUTTINGS PER DISTRICT

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.

043 23624 ARMSTRONG-HAMEL 2-1H

Category	Description
PENDING CD - 201801072	5/7/2018 - G75 - (I.O.) 1-18N-15W X644448 MPLM COMPL. INT. NCT 165' FSL, NCT 165' FNL, NCT 330' FWL NO OP. NAMED REC 2-27-2018 (MILLER)
SPACING - 644448	5/7/2018 - G75 - (640) 1-18N-15W VAC 347615 MSSSD EXT 633539 MPLM

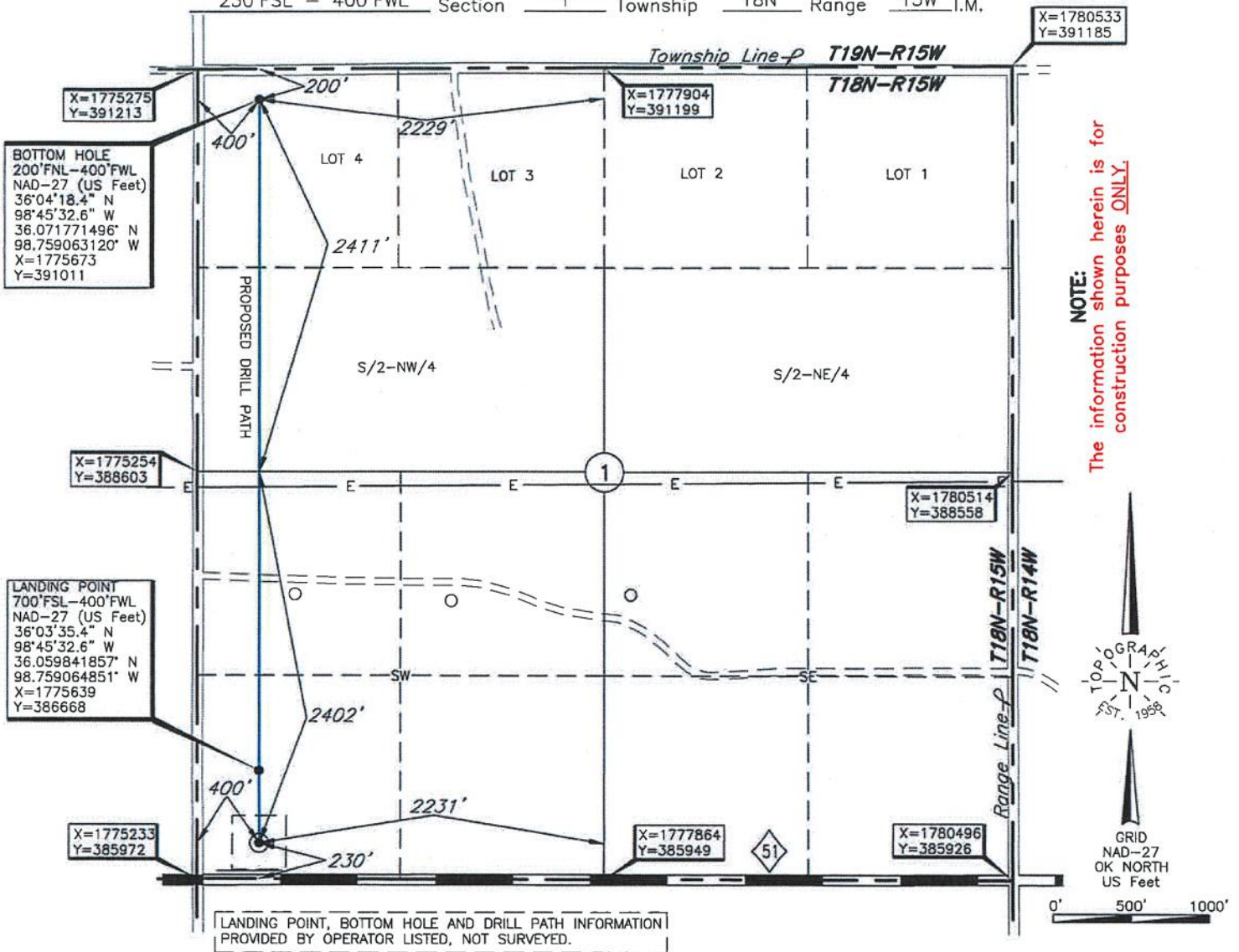
# TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

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

API 043-23624

DEWEY County, Oklahoma

230'FSL - 400'FWL Section 1 Township 18N Range 15W I.M.



Operator: CRAWLEY PETROLEUM CORP.

Lease Name: ARMSTRONG-HAMEL

Well No.: 2-1H

**ELEVATION:**

1911' Gr. at Stake

Topography & Vegetation Loc. fell in tall grass pasture, ±270' West to transmission power line,  
±180' South to overhead power line

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

Best Accessibility to Location From South off St. Hwy. 51

Distance & Direction  
from Hwy Jct or Town From Jct. US Hwy. 270 and St. Hwy. 51, NW of Oakwood, OK, go ±3.2 mi. East  
on St. Hwy. 51 to the SW Cor. of Sec. 1-T18N-R15W

**DATUM:** NAD-27  
**LAT:** 36°03'30.8"N  
**LONG:** 98°45'32.6"W  
**LAT:** 36.058550849' N  
**LONG:** 98.759064937' W  
**STATE PLANE**  
**COORDINATES:** (US Feet)  
**ZONE:** OK NORTH  
**X:** 1775635  
**Y:** 386198

Date of Drawing: Feb. 02, 2018  
Invoice # 287464 Date Staked: Jan. 29, 2018

## 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

