

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

API NUMBER: 083 24377

Approval Date: 02/20/2015
Expiration Date: 08/20/2015

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 31 Twp: 15N Rge: 4W

County: LOGAN

SPOT LOCATION: NW NE NW SW

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 2496 937

Lease Name: BLAIR FARMS

Well No: 31-1H

Well will be 937 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

BLAIR FARMS LTD PARTNERSHIP
24451 N MACARTHUR
EDMOND OK 73025

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

Name	Depth	Name	Depth
1 HUNTON	6933	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: 14750

Ground Elevation: 1117

Surface Casing: 820

Depth to base of Treatable Water-Bearing FM: 770

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: No

PIT 1 INFORMATION

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: SALT PLAINS

Approved Method for disposal of Drilling Fluids:

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

PERMIT NO: 15-29591

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 30 Twp 15N Rge 4W County LOGAN

Spot Location of End Point: NE NE NW NE

Feet From: SOUTH 1/4 Section Line: 2390

Feet From: WEST 1/4 Section Line: 1000

Depth of Deviation: 6000

Radius of Turn: 700

Direction: 18

Total Length: 7650

Measured Total Depth: 14750

True Vertical Depth: 6933

End Point Location from Lease,
Unit, or Property Line: 250

Notes:

Category

Description

SPACING - 20212

2/20/2015 - G76 - (UNIT) 30-15N-4W LESS NE4 NE4
EST WEST EDMOND HUNTON LIME UNIT FOR HNTN

UNDERGROUND NATURAL GAS STORAGE
FACILITY

2/20/2015 - G76 - 30-15N-4W UNDERGROUND NATURAL GAS STORAGE IN BRVL PER ORDER #
46736; OPERATOR MUST COMPLY WITH OCC 165:10-3-5

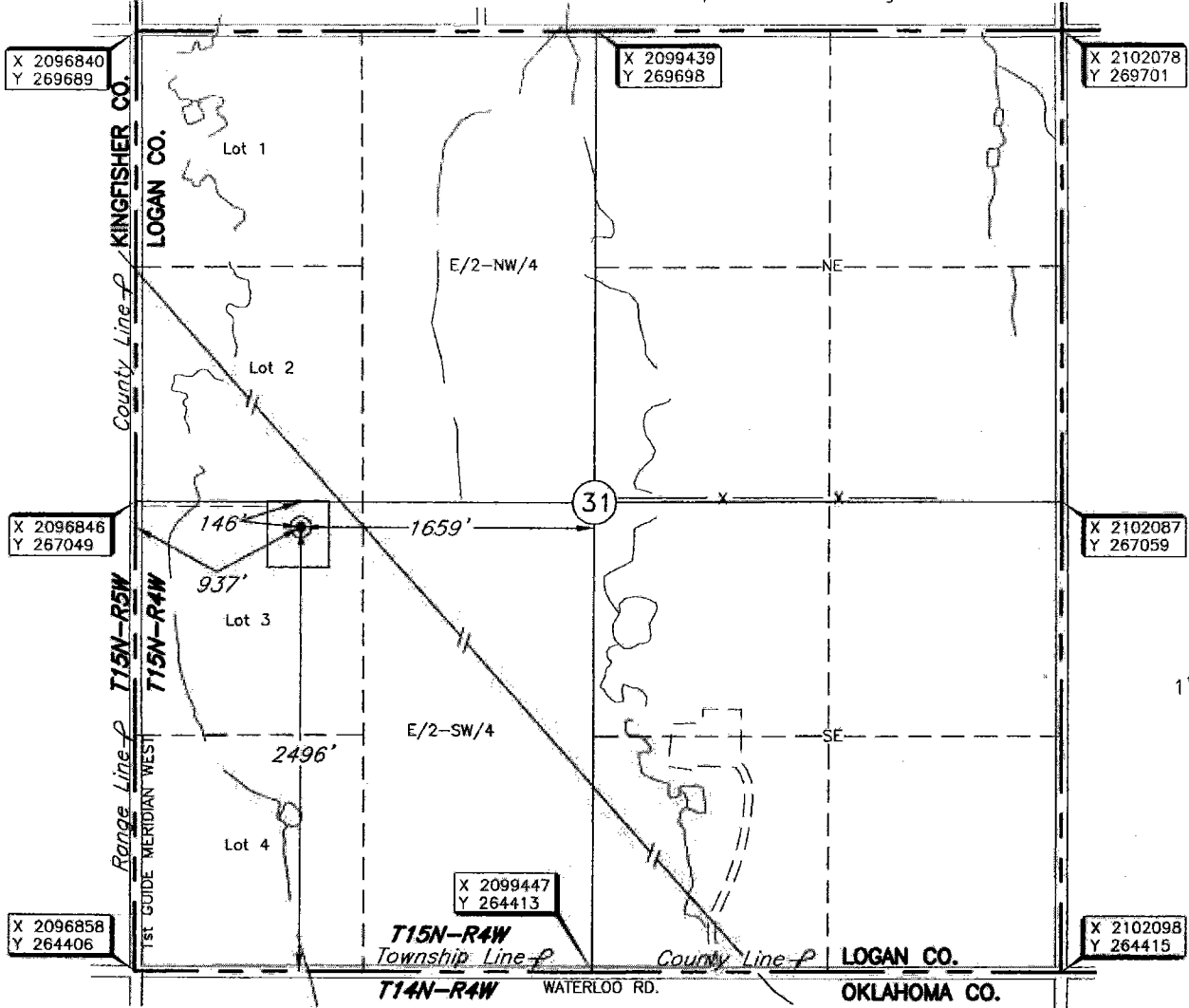
APL-083-24377

TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

6709 NORTH CLASSEN BLVD., OKLA. CITY, OKLA. 73116 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219
Certificate of Authorization No. 1293.

LOGAN County, Oklahoma

2496'FSL-937'FWL Section 31 Township 15N Range 4W I.M.



TOPOGRAPHIC
EST. 1968

GRID
NAD-27
OK NORTH
US FEET
Scale:
1" = 1000'

NOTE:
The information shown herein is for construction purposes ONLY.

Operator: GASTAR EXPLORATION USA, INC.

Lease Name: BLAIR FARMS

Well No.: 31-1H

ELEVATION:
1117' Gr. at Stake

Topography & Vegetation Location fell in a wheat field.

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

Best Accessibility to Location From county road South of well location.

Distance & Direction from Hwy Jct or Town From Jct. St. Hwy 74 & Waterloo Road, at Logan/Oklahoma

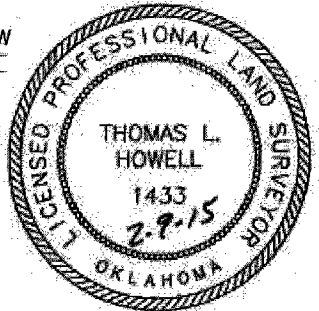
County line, go ±5 miles West on Waterloo Road to the Southwest Corner of Section 31, T15N-R4W.

DATUM: NAD-27
 LAT: 35°43'58.0"N
 LONG: 97°40'14.0"W
 LAT: 35.732780284°N
 LONG: 97.670547715°W
 STATE PLANE
 COORDINATES (US FEET):
 ZONE: OK NORTH
 X: 2097784
 Y: 266904

Date of Drawing: Feb. 9, 2015
 Invoice # 240169 Date Staked: Feb. 6, 2015 JGW

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 Reg. No. 1433



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