

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

API NUMBER: 047 24999

Approval Date: 01/29/2015
Expiration Date: 07/29/2015

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 19 Twp: 24N Rge: 7W County: GARFIELD
SPOT LOCATION: NE NE NE NE FEET FROM QUARTER: FROM NORTH FROM EAST
SECTION LINES: 245 275

Lease Name: **SONYA 2407** Well No: **1-19H** Well will be **245** feet from nearest unit or lease boundary.
Operator Name: **SANDRIDGE EXPLORATION & PRODUCTION LLC** Telephone: 4054296169 OTC/OCC Number: 22281 0

SANDRIDGE EXPLORATION & PRODUCTION LLC
123 ROBERT S KERR AVE STE 1702
OKLAHOMA CITY, OK 73102-6406

JOSEPH LYNN & SONYA RENA BOWEN
7629 KEOWEE RD.
KREMLIN OK 73753

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

Name	Depth	Name	Depth
1 MISSISSIPPIAN	5977	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 621346 Location Exception Orders: 633638 Increased Density Orders:
634130

Pending CD Numbers: Special Orders:

Total Depth: 12903 Ground Elevation: 1218 **Surface Casing: 1500** Depth to base of Treatable Water-Bearing FM: 70

Under Federal Jurisdiction: No Fresh Water Supply Well Drilled: No Surface Water used to Drill: Yes

PIT 1 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED

Chlorides Max: 10000 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: 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: 15-29514
- E. Haul to Commercial pit facility: Sec. 15 Twn. 24N Rng. 7W Cnty. 47 Order No: 623842
- 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 19 Twp 24N Rge 7W County GARFIELD

Spot Location of End Point: SW SE SW SW

Feet From: SOUTH 1/4 Section Line: 150

Feet From: WEST 1/4 Section Line: 880

Depth of Deviation: 5517

Radius of Turn: 906

Direction: 225

Total Length: 5963

Measured Total Depth: 12903

True Vertical Depth: 6094

End Point Location from Lease,
Unit, or Property Line: 150

HORIZONTAL HOLE 2

Sec 19 Twp 24N Rge 7W County GARFIELD

Spot Location of End Point: SE NW SW NW

Feet From: NORTH 1/4 Section Line: 1960

Feet From: WEST 1/4 Section Line: 560

Depth of Deviation: 5509

Radius of Turn: 906

Direction: 248

Total Length: 4953

Measured Total Depth: 11885

True Vertical Depth: 6086

End Point Location from Lease,
Unit, or Property Line: 560

HORIZONTAL HOLE 3

Sec 19 Twp 24N Rge 7W County GARFIELD

Spot Location of End Point: S2 S2 S2 S2

Feet From: SOUTH 1/4 Section Line: 150

Feet From: EAST 1/4 Section Line: 2640

Depth of Deviation: 5511

Radius of Turn: 906

Direction: 210

Total Length: 5130

Measured Total Depth: 12064

True Vertical Depth: 6088

End Point Location from Lease,
Unit, or Property Line: 150

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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.

HORIZONTAL HOLE 4

Sec 19 Twp 24N Rge 7W County GARFIELD

Spot Location of End Point: SE SW SE SE

Feet From: SOUTH 1/4 Section Line: 150

Feet From: EAST 1/4 Section Line: 880

Depth of Deviation: 5507

Radius of Turn: 906

Direction: 185

Total Length: 4655

Measured Total Depth: 11585

True Vertical Depth: 6084

End Point Location from Lease,
Unit, or Property Line: 150

Notes:

Category	Description
DEEP SURFACE CASING	1/29/2015 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY FOR ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON CONDUCTOR OR SURFACE CASING
LOCATION EXCEPTION - 633638	1/29/2015 - G75 - (I.O.) 19-24N-7W X621346 MSSP COMPL. INT. (LAT 1) NCT 150 FNL, NCT 150 FSL, NCT 680 FWL COMPL. INT. (LAT 2) NCT 150 FNL, NCT 1400 FSL, NCT 460 FWL COMPL. INT. (LAT 3) NCT 150 FNL & NCT 2440 FEL, NCT 150 FSL & NCT 2440 FWL SANDRIDGE EXPLOR. & PROD., L.L.C. 12-1-2014
LOCATION EXCEPTION - 634130	1/29/2015 - G75 - NPT 633638 TO ADD COMPL. INT. (LAT 4) NCT 150 FNL, NCT 150 FSL, NCT 680 FEL
SPACING - 621346	1/29/2015 - G75 - (640)(HOR) 19-24N-7W VAC 67722 MSSLM EXT 618213 MSSP, OTHER POE TO BHL NCT 660' FB

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API 047-24999

SHL
NE NE NE NE

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.

GARFIELD

County, Oklahoma

245' FNL - 275' FEL Section 19 Township 24N Range 7W 1.M.

X 2001029
Y 564420

X 2008112
Y 564351

SW SE SW SW

Bottom Hole #1
150' FSL - 880' FWL
NAD-27 (US Feet)
36°32'11.0"N
97°59'36.7"W
36.536391708"N
97.993516922"W
X= 2001805
Y= 559269

SE NWSW NW

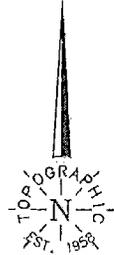
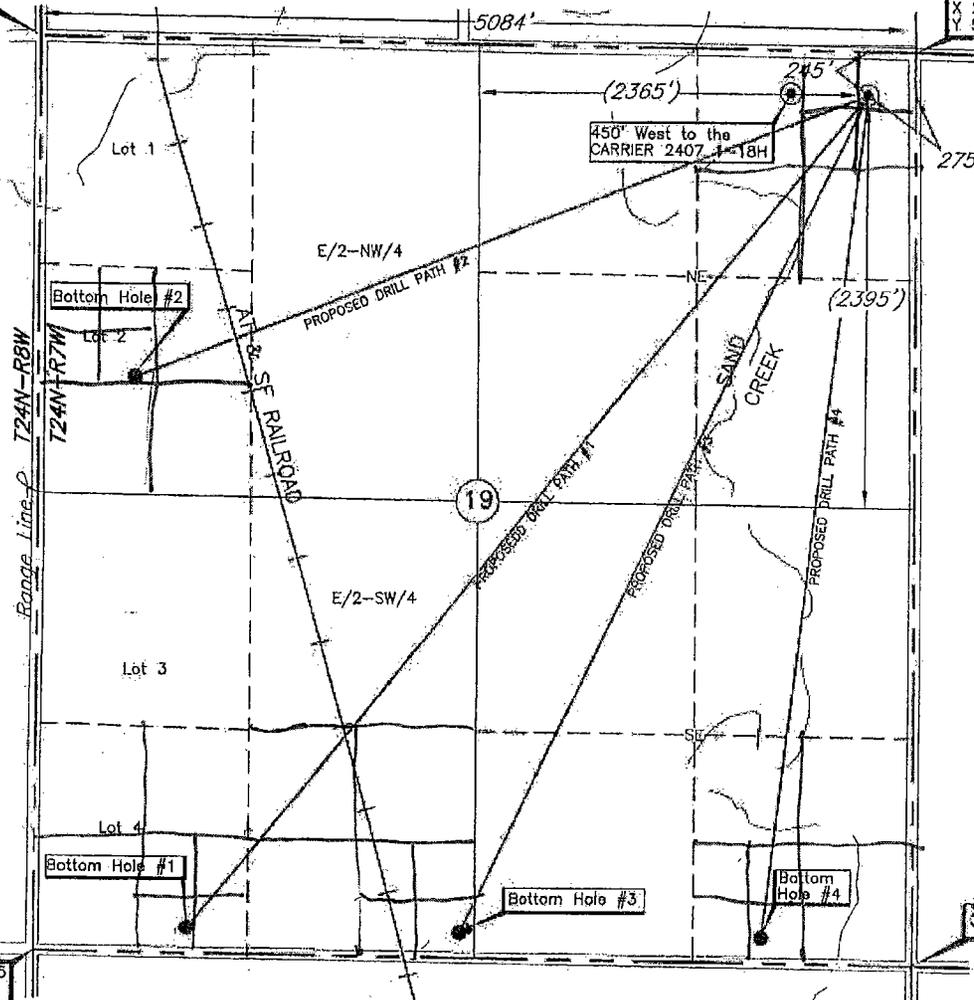
Bottom Hole #2
1960' FNL - 560' FWL
NAD-27 (US Feet)
36°32'42.5"N
97°59'40.6"W
36.545133560"N
97.994598288"W
X= 2001587
Y= 562452

SE SW SE SW

Bottom Hole #3
150' FSL - 2640' FEL
NAD-27 (US Feet)
36°32'10.8"N
97°59'17.3"W
36.536334530"N
97.988127056"W
X= 2003489
Y= 559249

SE SW SE SE

Bottom Hole #4
150' FSL - 880' FEL
NAD-27 (US Feet)
36°32'10.8"N
97°58'55.7"W
36.536270693"N
97.982136173"W
X= 2005249
Y= 559226



GRID
NAD-27
Okla. North
US Feet
Scale:
1" = 1000'

Distances shown in (parenthesis) are calculated based upon the Quarter Section being 2640 feet, those shown in [brackets] are based on GLO (General Land Office) distances and have NOT been measured on the ground.

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

Bottom Hole and Drill Path Information provided by operator listed, NOT Surveyed.

Operator: SANDRIDGE EXPLORATION & PRODUCTION, LLC

Lease Name: SONYA 2407

Well No.: 1-19H

ELEVATION: 1218' Gr. at Stake

Topography & Vegetation Loc. fell in sloped plowed field

Good Drill Site? Yes

Reference Stakes or Alternate Location Stakes Set None

Best Accessibility to Location From North off county road

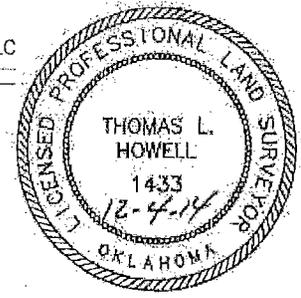
Distance & Direction from Hwy Jct or Town From the Jct. of St. Hwy. 132 N-S & Kremlin-Hilldale blacktop (Keowee Rd) go ±2 miles East on Keowee Rd to the NE Cor. of Sec. 19-T24N-R7W

DATUM: NAD-27
LAT: 36°32'58.9"N
LONG: 97°58'48.5"W
LAT: 36.549684532° N
LONG: 97.980128776° W
STATE PLANE
COORDINATES: (US Feet)
ZONE: OK NORTH
X: 2005838
Y: 564109

Revision A Date of Drawing: Dec. 4, 2014
Invoice # 232570 Date Staked: Oct. 14, 2014

LC

CERTIFICATE:
I, Thomas L. Howell a 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



This information was gathered with a GPS receiver with ±1 foot horiz./vert. accuracy