

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

API NUMBER: 129 23928

Approval Date: 03/19/2014
Expiration Date: 09/19/2014

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 28 Twp: 14N Rge: 24W County: ROGER MILLS
SPOT LOCATION: N2 N2 NE NE FEET FROM QUARTER: FROM NORTH FROM EAST
SECTION LINES: 250 660

Lease Name: RUSSELL 21-14-24 Well No: 1H Well will be 250 feet from nearest unit or lease boundary.

Operator Name: APACHE CORPORATION Telephone: 9184914900; 9184914 OTC/OCC Number: 6778 0

APACHE CORPORATION
6120 S YALE AVE STE 1500
TULSA, OK 74136-4224

RUSSELL D. CALVERT & DARLA S. CALVERT
18528 EAST 970 ROAD
CHEYENNE OK 73628

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

Name	Depth	Name	Depth
1 MARMATON	10550	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 128051

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201401391
201401392

Special Orders:

Total Depth: 16500

Ground Elevation: 2095

Surface Casing: 570

Depth to base of Treatable Water-Bearing FM: 520

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: No

PIT 1 INFORMATION

Type of Pit System: ON SITE

Type of Mud System: WATER BASED

Chlorides Max: 8000 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 BED AQUIFER

Pit Location Formation: CLOUD CHIEF

Approved Method for disposal of Drilling Fluids:

A. Evaporation/dewater and backfilling of reserve pit.

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

H. SEE MEMO

PERMIT NO: 14-26693

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 BED AQUIFER
Pit Location Formation: CLOUD CHIEF

HORIZONTAL HOLE 1

Sec 21 Twp 14N Rge 24W County ROGER MILLS
Spot Location of End Point: N2 N2 NE NE
Feet From: NORTH 1/4 Section Line: 250
Feet From: EAST 1/4 Section Line: 660
Depth of Deviation: 10672
Radius of Turn: 573
Direction: 360
Total Length: 4928
Measured Total Depth: 16500
True Vertical Depth: 11180
End Point Location from Lease,
Unit, or Property Line: 250

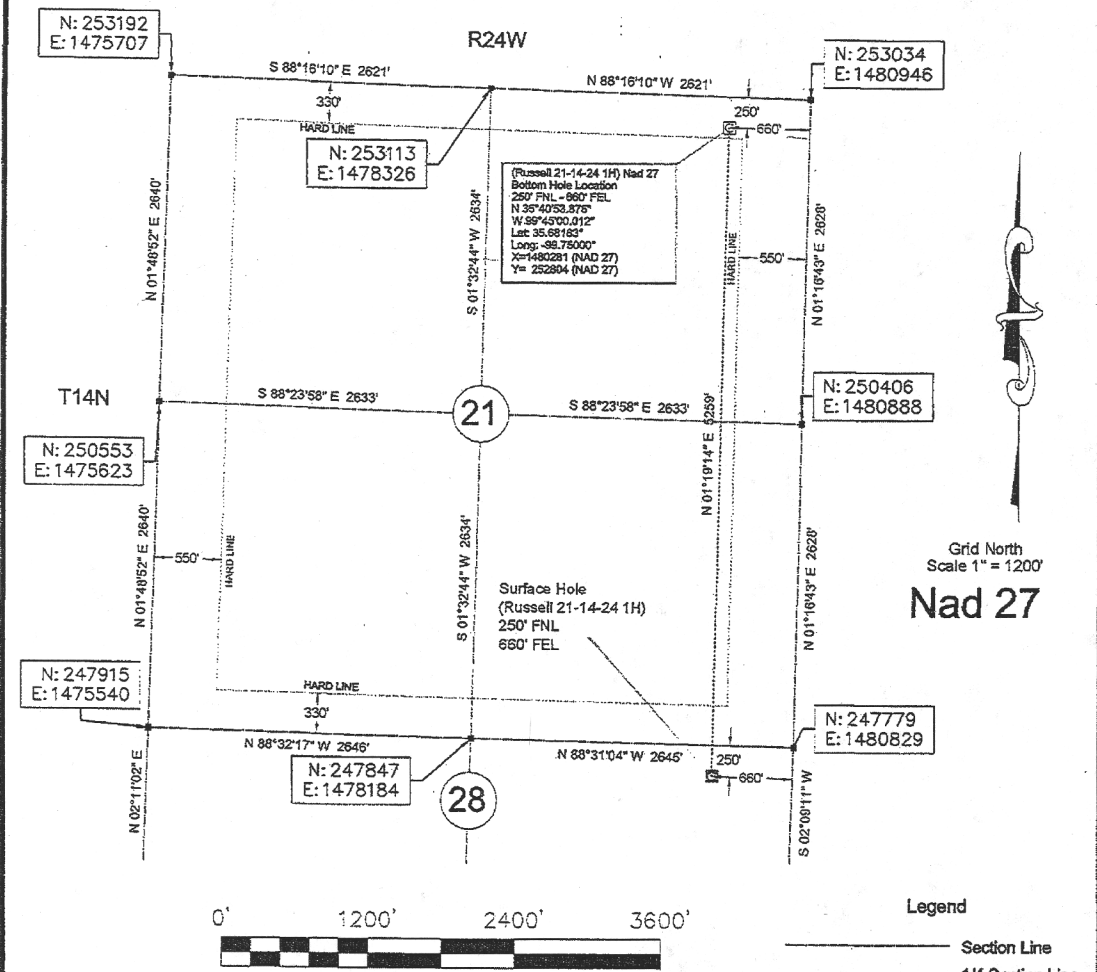
Notes:

Table with 2 columns: Category, Description. Contains notes for MEMO, PENDING CD, SPACING, and WATERSHED STRUCTURE.

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API 129-23928

Roger Mills County, Oklahoma.
 BHL 250' FNL - 660' FEL, Section 21, T 14 N, R 24 W.I.M.



Grid North
 Scale 1" = 1200'
 Nad 27



- Legend
- Section Line
 - 1/4 Section Line
 - Existing Pipeline

BOTTOM HOLE INFORMATION PROVIDED BY OPERATOR LISTED,
 NOT SURVEYED. CORNER COORDINATES ARE TAKEN FROM POINTS
 SURVEYED IN THE FIELD.

OPERATOR: Apache Corporation WELL NO.: 1H ELEVATION: 2095' Gr. at stake

LEASE NAME: Russell 21-14-24

TOPOGRAPHY & VEGETATION: Level to slope grass pasture.

GOOD DRILL SITE: Yes REFERENCE STAKES OR ALTERNATE LOCATION STAKES SET: None
 BEST ACCESSIBILITY TO LOCATION: From the North
 DISTANCE & DIRECTION
 FROM HWY JCT OR TOWN: From the intersection of Hwy 47 and CR N1820, then North on CR N1820 a distance of 3.9 miles, then Northeast 475 feet to location stake.

48 HOURS BEFORE YOU DIG...
 CALL ONE
 1-800-522-6543

OKLAHOMA ONECALL SYSTEM
 Buried utilities are not necessarily shown. It is the contractor's responsibility to locate and preserve all utility services.
 Contractor is responsible for contacting all utility companies prior to construction.

REVISION: _____ DATE OF DRAWING: December 2, 2013
 INVOICE #: 18411 DATE STAKED: November 30, 2013
 STAKED SURFACE
 HOLE
 DATUM: Nad 27
 N: 35°40'01.863"
 W: 99°45'00.332"
 LAT: 35.66718°
 LONG: -99.75009°
 STATE PLANE
 COORDINATES: (US FEET)
 ZONE: OK North
 X: 1480160
 Y: 247546

We do hereby certify that this survey was done in accordance to records, maps and other information as provided to us by the client herein named and that great care was taken in the actual staking of this well and the determination of any obstacles thereupon. However, the accuracy of this survey is not guaranteed and if there appears to be any discrepancy, please notify us immediately.

Survey is valid only if print has original seal and signature of surveyor present

JMIDENS LAND SURVEY CO., INC. 1210 19TH STREET / P.O. BOX 943 WOODWARD, OKLAHOMA 73802 Phone 580-258-7174 - Fax 580-258-3424 roger@jmidenslandsurvey.com mike@jmidenslandsurvey.com	Survey For: Apache Corporation 6120 South Yale Avenue, Ste. 1500 Tulsa, Oklahoma 74136	JOB 744-13	DATE OF PLAT 12-02-2013	SCALE 1"=1200'	SHEET 1 OF 4
	DRAWN BY D.W.K.	OKLA. CA #2084, EXP. 06/30/2015 KANSAS CA #143, EXP. 12/31/2014			