

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

API NUMBER: 017 24711

Approval Date: 10/24/2014  
Expiration Date: 04/24/2015

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 33 Twp: 14N Rge: 10W County: CANADIAN  
SPOT LOCATION:  SW  SE  SW  SW FEET FROM QUARTER: FROM SOUTH FROM WEST  
SECTION LINES: 200 740

Lease Name: ARMACOST Well No: 2-33H Well will be 200 feet from nearest unit or lease boundary.  
Operator Name: CIMAREX ENERGY CO Telephone: 9185851100 OTC/OCC Number: 21194 0

CIMAREX ENERGY CO  
202 S CHEYENNE AVE STE 1000  
TULSA, OK 74103-3001

BIA CONCHO AGENCY  
PO BOX 68  
EL RENO OK 73036

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

	Name	Depth	Name	Depth
1	MERAMEC	10800	6	
2	WOODFORD	12380	7	
3	HUNTON	12650	8	
4			9	
5			10	

Spacing Orders: 437583

Location Exception Orders:

Increased Density Orders: 631981

Pending CD Numbers: 201406905  
201406904

Special Orders:

Total Depth: 17702

Ground Elevation: 1480

**Surface Casing: 1500**

Depth to base of Treatable Water-Bearing FM: 140

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: No

PIT 1 INFORMATION

Approved Method for disposal of Drilling Fluids:

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED

Chlorides Max: 100000 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 not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: DOG CREEK

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 14-28723  
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 33 Twp 14N Rge 10W County CANADIAN

Spot Location of End Point: N2 NW NW NW

Feet From: NORTH 1/4 Section Line: 1

Feet From: WEST 1/4 Section Line: 330

Depth of Deviation: 12347

Radius of Turn: 575

Direction: 358

Total Length: 4452

Measured Total Depth: 17702

True Vertical Depth: 12736

End Point Location from Lease,  
Unit, or Property Line: 1

Notes:

Category	Description
DEEP SURFACE CASING	10/24/2014 - G71 - APPROVED CONTINGENT ON NOTIFYING OCC FIELD STAFF IMMEDIATELY OF ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON ANY CONDUCTOR OR SURFACE CASING
INCREASED DENSITY - 631981	10/24/2014 - G91 - 33-14N-10W X 437583 WDFD 9 WELLS CIMAREX ENERGY CO. 10-17-2014
PENDING CD - 201406904	10/24/2014 - G91 -(I.O.) 33-14N-10W X 165:10-3-28(C)(2)(B) (ARMACOST 2-33H) LESS THAN 600' FROM EXISTING/PROPOSED WELLS CIMAREX ENERGY CO. REC. 10-6-2014 (MCKEOWN)
PENDING CD - 201406905	10/24/2014 - G91 - 33-14N-10W X 437583 MRMC, WDFD, HNTN, OTHER SHL 200 FSL, 740 FWL COMPL. INT. NCT 150 FSL, NCT 150 FNL, NCT 250 FWL NO OP. NAMED REC. 10-6-2014 (MCKEOWN)
SPACING - 437583	10/24/2014 - G91 - (640) 33-14N-10W EST MRMC, WDFD, OTHERS EXT 202425 HNTN, OTHERS EXT OTHERS



# Well Location Plat

Sec. 33-14N-10W I.M.

Operator: CIMAREX ENERGY COMPANY  
 Lease Name and No. : ARMACOST #2-33H  
 Footage : 200' FSL - 740' FWL GR. ELEVATION : 1480' Good Site? YES  
 Section: 33 Township: 14N Range: 10W I.M.  
 County : Canadian State of Oklahoma  
 Alternate Loc. : N/A  
 Terrain at Loc. : Location fell in open plowed wheat field.

017-24711



BASIS OF BEARINGS:  
 GRID NORTH - NAD 83  
 STATE PLANE - OK NORTH ZONE

Accessibility : From the West

Directions : From the junction of State Highway 281 and State Highway 270 in Geary, OK, go 2.2 miles East on HWY 270 then 1 mile North on County Road to the Southwest Corner Section 33-14N-10W.



1"=1000'  
 GPS DATUM  
 NAD 83  
 OK NORTH ZONE  
 NAD 27  
 OK NORTH ZONE

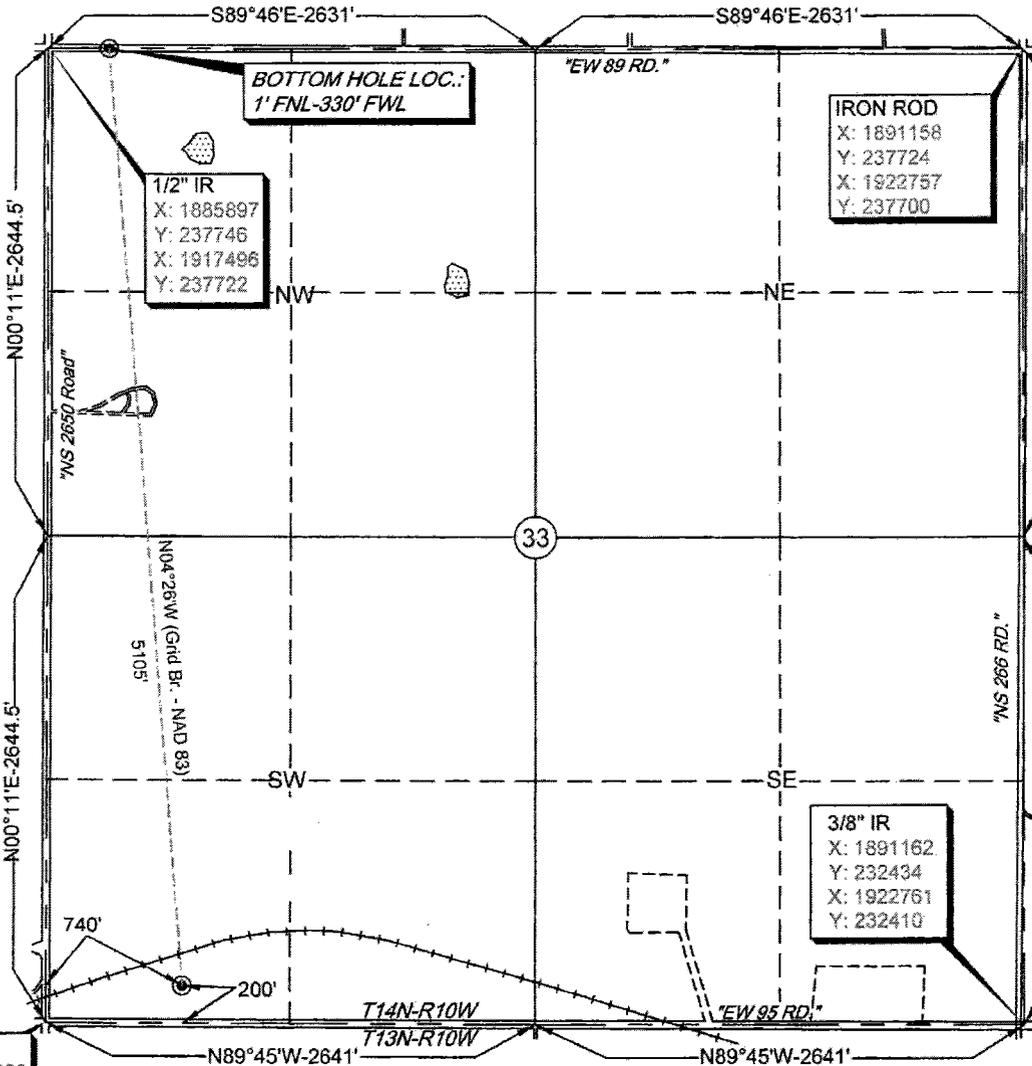
Surface Hole Loc.:  
 Lat: 35.63880646  
 Lon: -98.27554744  
 X: 1886621  
 Y: 232653

Surface Hole Loc.:  
 Lat: 35.63875859  
 Lon: -98.27520785  
 X: 1918220  
 Y: 232630

Bottom Hole Loc.:  
 Lat: 35.65278658  
 Lon: -98.27692246  
 X: 1886227  
 Y: 237744

Bottom Hole Loc.:  
 Lat: 35.65273909  
 Lon: -98.27658249  
 X: 1917826  
 Y: 237720

Quarter Section distances may be assumed from a Government Survey Plat or assumed at a proportionate distance from opposing section corners, or occupation thereof, and may not have been measured on-the-ground, and further, does not represent a true boundary survey.



1/2" IR  
 X: 1885880  
 Y: 232457  
 X: 1917479  
 Y: 232433

NOTE: X and Y data shown hereon for Section Corners may NOT have been surveyed on-the-ground, and further, does NOT represent a true Boundary Survey.

Please note that this location was staked on the ground under the supervision of a Licensed Professional Land Surveyor, but the accuracy of this survey is not guaranteed. Please contact Arkoma Surveying and Mapping promptly if any inconsistency is determined. GPS data is observed from RTK - GPS.

BASIS OF ELEVATION:  
 Topo Elev.=1442' @  
 NE Cor. Section 33, T14N-R10W  
 Tied with  
 Topo Elev.=1456' @  
 SE Cor. Section 33, T14N-R10W

survey and plat by.

**Arkoma Surveying and Mapping, PLLC**

P.O. Box 238 Wilburton, OK 74578

Ph. 918-465-5711 Fax 918-465-5030

Certificate of Authorization No. 5348

Expires June 30, 2016

Invoice #2986-A-A

Date Staked : 04/02/12 By : C.K.

Date Drawn : 04/05/12 By : S.S.

Rev. BHL : 08/01/14 By : J.H.

### Certification:

This is to certify that this Well Location Plat represents the results of a survey made on the ground performed under the supervision of the undersigned.

*Stan Drannon* 8/5/14  
 STAN DRANNON OK LPLS 1672

