

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

API NUMBER: 109 22405

Approval Date: 04/29/2013
Expiration Date: 10/29/2013

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 21 Twp: 14N Rge: 4W

County: OKLAHOMA

SPOT LOCATION: NW SW SE NW

FEET FROM QUARTER: FROM SOUTH FROM WEST

SECTION LINES: 411 1489

Lease Name: DEER DRAW

Well No: 21-1H

Well will be 1489 feet from nearest unit or lease boundary.

Operator Name: LIME ROCK RESOURCES II-A LP

Telephone: 7132929500

OTC/OCC Number: 22628 0

LIME ROCK RESOURCES II-A LP
1111 BAGBY ST STE 4600
HOUSTON, TX 77002-2559

TLW PROPERTIES LLC
PO BOX 54525
OKC OK 73154

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

Name	Depth	Name	Depth
1 HUNTON	6500	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: 11000

Ground Elevation: 1094

Surface Casing: 830

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: 13-23141

H. CLOSED SYSTEM=STEEL PITS PER OPERATOR OPTION

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 22 Twp 14N Rge 4W County OKLAHOMA

Spot Location of End Point: NE NW SW NW

Feet From: SOUTH 1/4 Section Line: 1298

Feet From: WEST 1/4 Section Line: 592

Depth of Deviation: 6100

Radius of Turn: 660

Direction: 87

Total Length: 4470

Measured Total Depth: 11000

True Vertical Depth: 6750

End Point Location from Lease,
Unit, or Property Line: 592

Notes:

Category

Description

SPACING - 20212

4/29/2013 - G30 - (UNIT) 21 & W2 22-14N-4W
EST WEST EDMOND HUNTON LIME UNIT FOR HNTN