

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

API NUMBER: 047 24700

Approval Date: 05/30/2013
Expiration Date: 11/30/2013

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 02 Twp: 24N Rge: 5W

County: GARFIELD

SPOT LOCATION: NE NW NE NW

FEET FROM QUARTER: FROM NORTH FROM WEST

SECTION LINES: 165 1680

Lease Name: SEMRAD

Well No: 1-2H

Well will be 165 feet from nearest unit or lease boundary.

Operator Name: PLYMOUTH EXPLORATION LLC

Telephone: 9185991850; 9185991

OTC/OCC Number: 22491 0

PLYMOUTH EXPLORATION LLC
110 W 7TH ST STE 2600
TULSA, OK 74119-1031

TODD SEMRAD
11429 E. UNION ROAD
HUNTER OK 74640

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

Name	Depth	Name	Depth
1 MISSISSIPPI	5084	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 611737

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201302387

Special Orders:

Total Depth: 10200

Ground Elevation: 1091

Surface Casing: 300

Depth to base of Treatable Water-Bearing FM: 250

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: Yes

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: 50000 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: GARBER

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

PERMIT NO: 13-23008

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 02 Twp 24N Rge 5W County GARFIELD

Spot Location of End Point: E2 SW SE SW

Feet From: SOUTH 1/4 Section Line: 330

Feet From: WEST 1/4 Section Line: 1680

Depth of Deviation: 5084

Radius of Turn: 716

Direction: 180

Total Length: 4000

Measured Total Depth: 10200

True Vertical Depth: 5800

End Point Location from Lease,
Unit, or Property Line: 330

Notes:

Category	Description
PENDING CD - 201302387	5/30/2013 - G30 - 2-24N-5W X611737 MISS SHL NCT 165 FNL, NCT 1650 FWL 1ST PERF NCT 330 FNL, NCT 1650 FWL LAST PERF NCT 330 FSL, NCT 1650 FWL BHL NCT 330 FSL, NCT 1650 FWL NO OP. NAMED REC 4/33/13 (JOHNSON)
SPACING - 611737	5/30/2013 - G30 - (640 HOR) 2-24N-5W EST MISS, OTHER POE TO BHL: NCT 660' FB (COEXIST WITH SP. 114523 MISS W2 SE4; SUPERSEDE NON-DEVELOPED, NON-HORIZONTAL SPACING UNITS)