

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

JAN 29 2009

Form C-101  
June 16, 2008

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit to appropriate District Office

☒ AMENDED REPORT  
Location \*

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

<sup>1</sup> Operator Name and Address LEGEND NATURAL GAS III LIMITED PARTNERSHIP 258894 410 W/ Grand Parkway South, Suite 400 Katy, Texas 77494		<sup>2</sup> OGRID Number 258894
<sup>3</sup> Property Code 37584		<sup>4</sup> API Number 30-015-36918
<sup>5</sup> Property Name Horseshoe Lake State		<sup>6</sup> Well No 1
<sup>7</sup> Proposed Pool 1 Salt Draw West Undesignated; Morrow (Gas) # 96819		<sup>8</sup> Proposed Pool 2

<sup>7</sup> Surface Location

UL or lot no	Section	Township	Range	Lot Idn	* Feet from the	North/South line	Feet from the	East/West line	County
I	32	24 S	28 E		1980	South	660	East	Eddy

<sup>8</sup> Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Additional Well Information

<sup>11</sup> Work Type Code N	<sup>12</sup> Well Type Code G	<sup>13</sup> Cable/Rotary Rotary	<sup>14</sup> Lease Type Code State	<sup>15</sup> Ground Level Elevation 3023'
<sup>16</sup> Multiple No	<sup>17</sup> Proposed Depth 13,000'	<sup>18</sup> Formation Morrow	<sup>19</sup> Contractor TBD	<sup>20</sup> Spud Date 1 <sup>st</sup> Qtr '09

<sup>21</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/2"	13-3/8"	48#/ft	650'	593 sxs	Surface
12-1/4"	9-5/8"	36#/ft	2600'	660 sxs	Surface
8-3/4"	7"	26#/ft	9350'	848 sxs	2300'
6-1/8"	4-1/2"	13.5#/ft	13,000'	419 sxs	9000'

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone Describe the blowout prevention program, if any Use additional sheets if necessary

Legend Natural Gas proposes to drill and test the Morrow & intermediate formations. Surface casing will be run to 650' and cement circulated. The first intermediate casing will be run to 2600' and cement circulated. The second intermediate casing will be run to approximately 9350' and cemented back to about 2300' If determined to be commercial, production casing will be ran, cemented back to about 9000' MD, perforated and treated to gain production

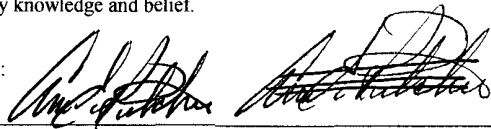
MUD PROGRAM:

Depth	Mud Wt.	Type System
0' - 650'	8.8 - 9.2	Fresh Water/Native Mud
650' - 2600'	10.0 - 10.1	Brine
2600' - 11,500'	8.4 - 10.0	Fresh Water/Brine
11,500' - 13,060'	10.0 - 13.5	Cut Brine/XD Polymer/Barite

BOPE PROGRAM: 3K or 5K system nipped up on 13-3/8" casing. 5K system nipped up on the 9-5/8" and 7" casing BOP Manufacturer will depend on Rig H2S is not anticipated.

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:



Printed name:

Ann E. Ritchie ✓

Title

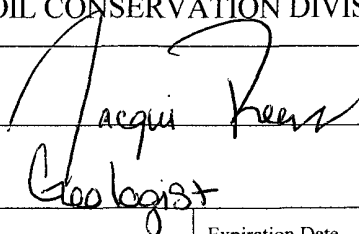
Regulatory Agent

E-mail Address:

ann.wtor@gmail.com

OIL CONSERVATION DIVISION

Approved by:

  
Geologist

Title:

Approval Date

2/6/09

Expiration Date.

2/6/2011

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State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 12, 2005

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-36918	Pool Code 96819	Pool Name Salt Draw West Undesignated; Morrow (Gas)
Property Code	Property Name HORSESHOE LAKE STATE	Well Number 1
OGRID No. 258894	Operator Name LEGEND NATURAL GAS III, L.P.	Elevation 3023'

Surface Location

UL or lot No. 1	Section 32	Township 24 S	Range 28 E	Lot Idn	Feet from the 1980'	North/South line SOUTH	Feet from the 660	East/West line EAST	County EDDY
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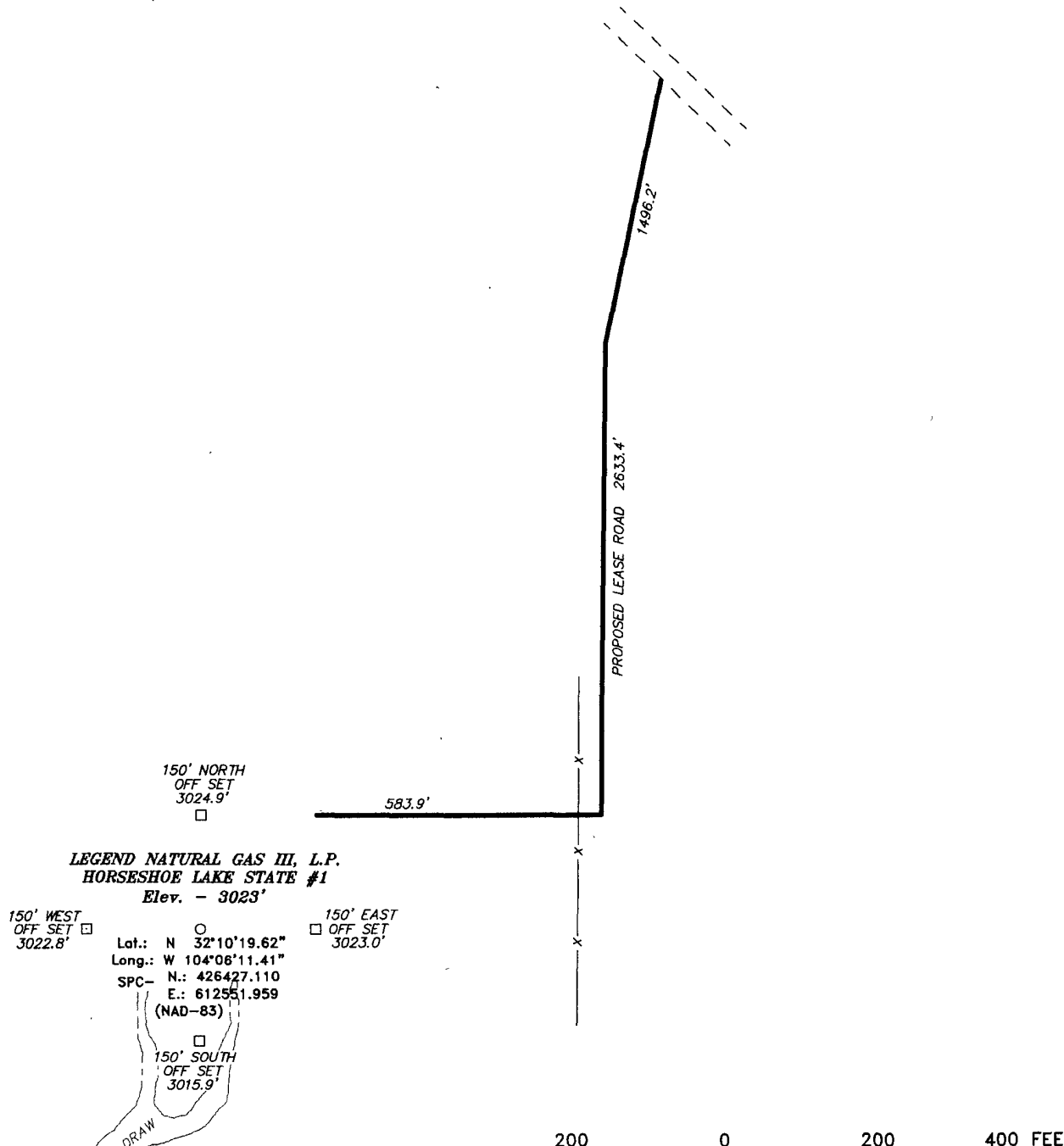
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Ann E. Ritchie</i> 1-26-08 Signature Date Ann E. Ritchie, Agent Printed Name</p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>OCTOBER 23, 2008 Date Surveyed Signature &amp; Seal of Professional Surveyor W.O. Jones 2008 Certificate No. Gary L. Jones 7977 BASIN SURVEYS</p>

SECTION 32, TOWNSHIP 24 SOUTH, RANGE 28 EAST, N.M.P.M.,  
EDDY COUNTY, NEW MEXICO.

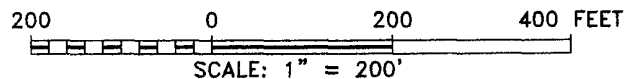


**LEGEND NATURAL GAS III, L.P.**  
**HORSESHOE LAKE STATE #1**  
Elev. - 3023'

150' WEST OFF SET 3022.8' □  
Lat.: N 32°10'19.62"  
Long.: W 104°06'11.41"  
SPC- N.: 426427.110  
E.: 612551.959  
(NAD-83)  
150' SOUTH OFF SET 3015.9' □  
150' EAST OFF SET 3023.0' □

Directions to Location:

FROM MALAGA GO SOUTH 1.5 MILES TO LEASE ROAD,  
ON LEASE ROAD GO NORTHWEST 0.4 MILES PAST  
MESQUITE SWD SITE, GO WEST 0.3 MILES THENCE  
SOUTHWEST 0.9 MILES THENCE 1.2 MILES TO  
PROPOSED LEASE ROAD.



**LEGEND NATURAL GAS III, L.P.**

REF: HORSESHOE LAKE STATE #1 / WELL PAD TOPO

THE HORSESHOE LAKE STATE #1 LOCATED 2030'  
FROM THE SOUTH LINE AND 660' FROM THE **EAST** LINE OF  
SECTION 32, TOWNSHIP 24 SOUTH, RANGE 28 EAST,  
N.M.P.M., EDDY COUNTY, NEW MEXICO.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 20632

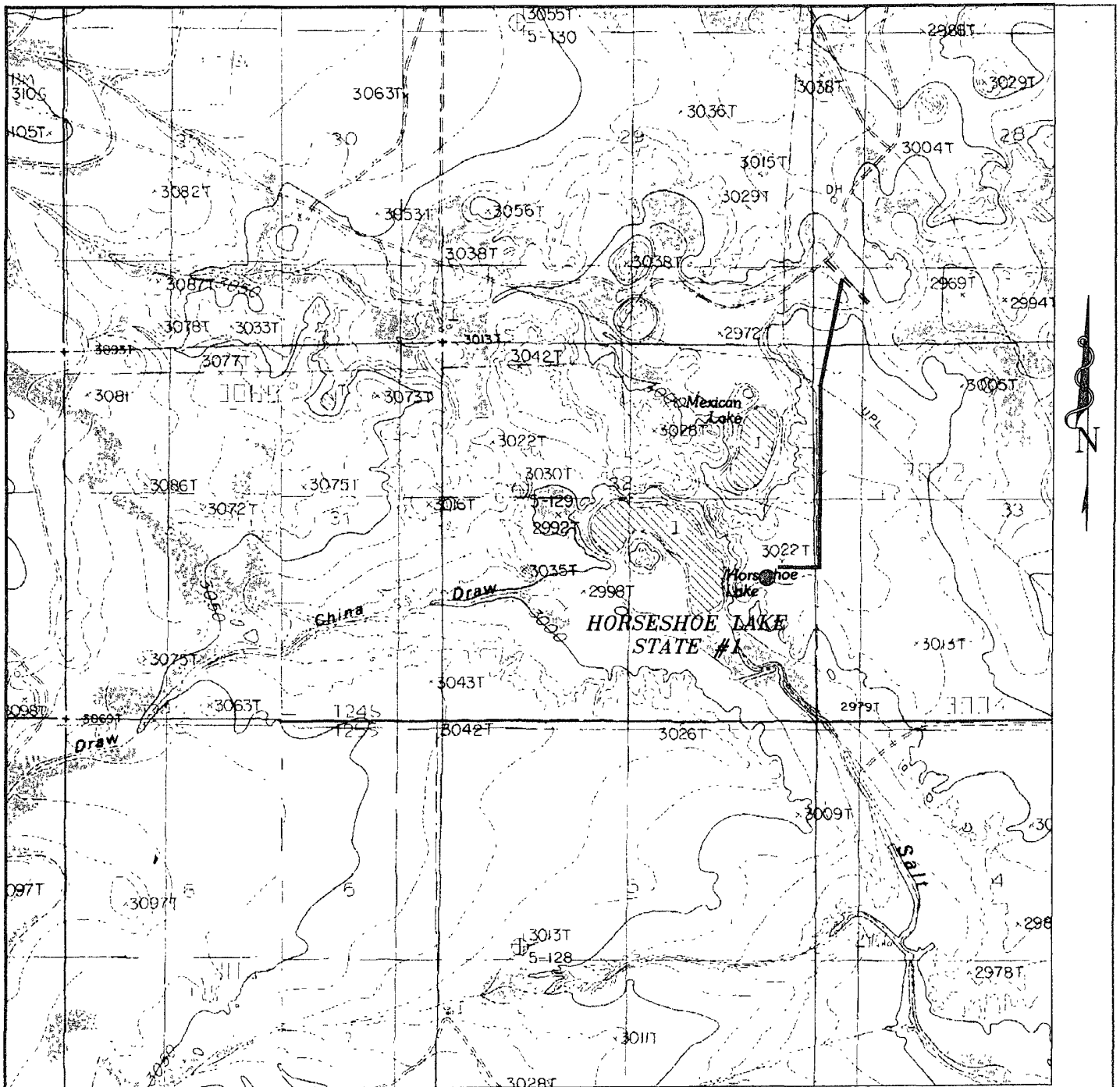
Drawn By: J. M. SMALL

Date: 10-27-2008

Disk: 20632 JMS

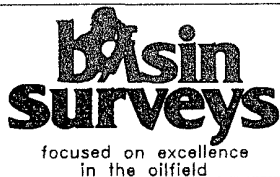
Survey Date: 10-23-2008

Sheet 1 of 1 Sheets



### HORSESHOE LAKE STATE #1

Located at 2030' FSL AND 660' FEL  
 Section 32, Township 24 South, Range 28 East,  
 N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
 basinsurveys.com

W.O Number 20632

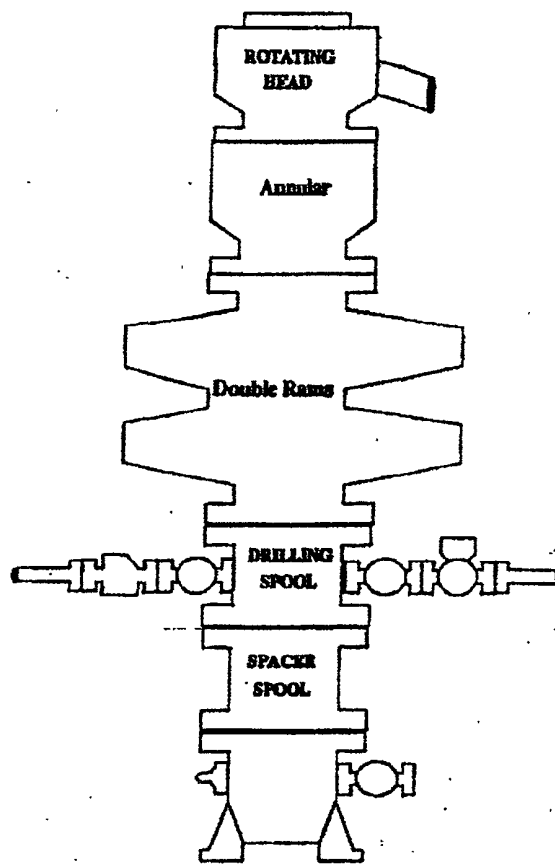
Survey Date. 10-23-2008

Scale 1" = 2000'

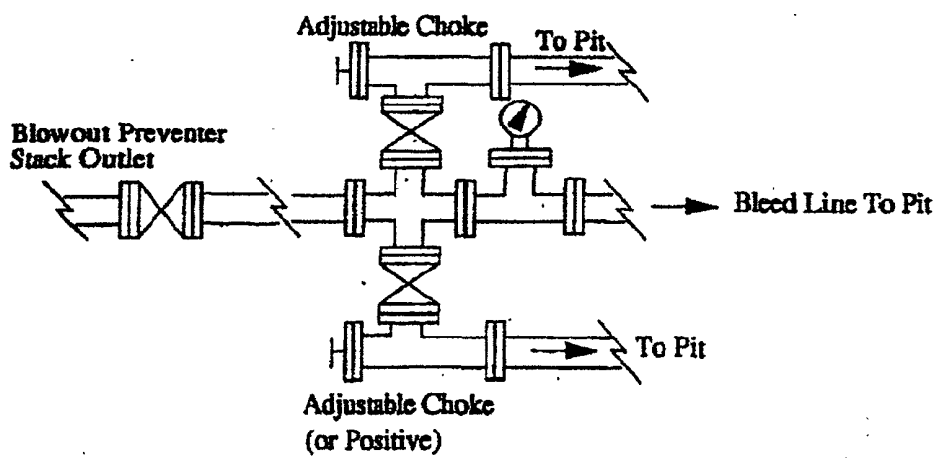
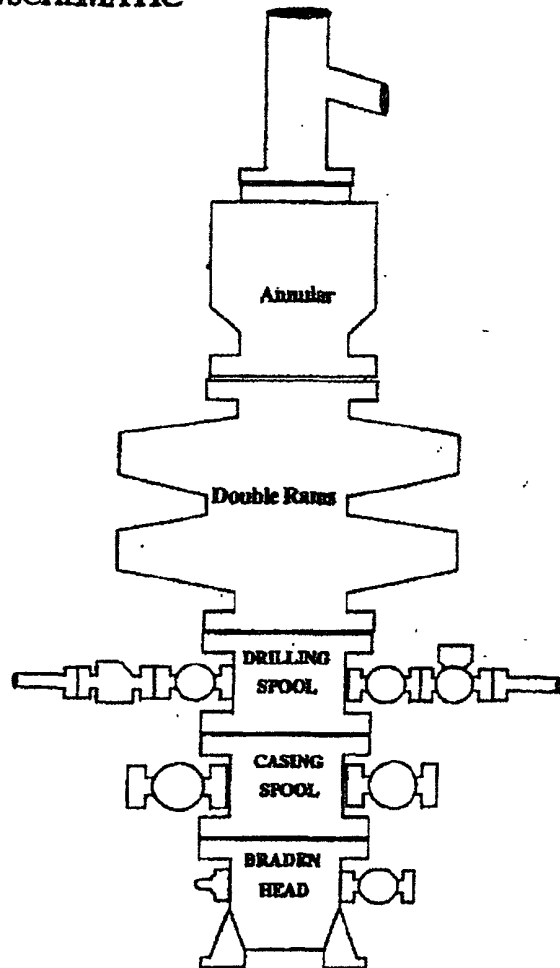
Date: 10-27-2008

LEGEND  
 NATURAL GAS  
 III, L.P.

# BOPE SCHEMATIC



**Choke Manifold**



## **Legend Natural Gas III, LP Closed Loop System**

*of 1980' 2038'* Horseshoe Lake State #1  
FSL & 660' FEL  
Section 32-T24S-R28E  
Eddy County, New Mexico

### **Equipment Design Plan**

Closed Loop System will consist of:

- 1 – (minimum) Double panel shaker with rig inventory
- 1 – (minimum) Centrifuge , certain wells and flow rates may require 2 centrifuges
- 1 – minimum centrifugal pump to transfer fluids
- 2 – (minimum) 500 bbl FW & BW Tanks
- 1 – 500 bbl watertank with rig inventory
- 1 – tank / bin – to catch cement / excess mud returns generated during a cement job
- 1 Set of rail cars / catch bins

### **Operation Plan**

All equipment will be inspected numerous times a day by each tour to make sure all equipment is operating correctly. Routine maintenance will be done to keep system running properly.

Any leak in system will be repaired and/or contained immediately and the OCD notified within 48 hours of the remediation process start.

### **Closure Plan**

While drilling all cuttings and fluids associated with drilling will be hauled off and disposed of via Control Recovery Incorporated facilities Permit R-9166.

# **Legend Natural Gas III, LP Closure Plan for Closed Loop Drilling System**

**Horseshoe Lake State #1**  
*1980' 2030'* FSL & 660' FEL  
*OK* Section 32-T24S-R28E  
Eddy County, New Mexico

## **Methods of Handling Waste Materials**

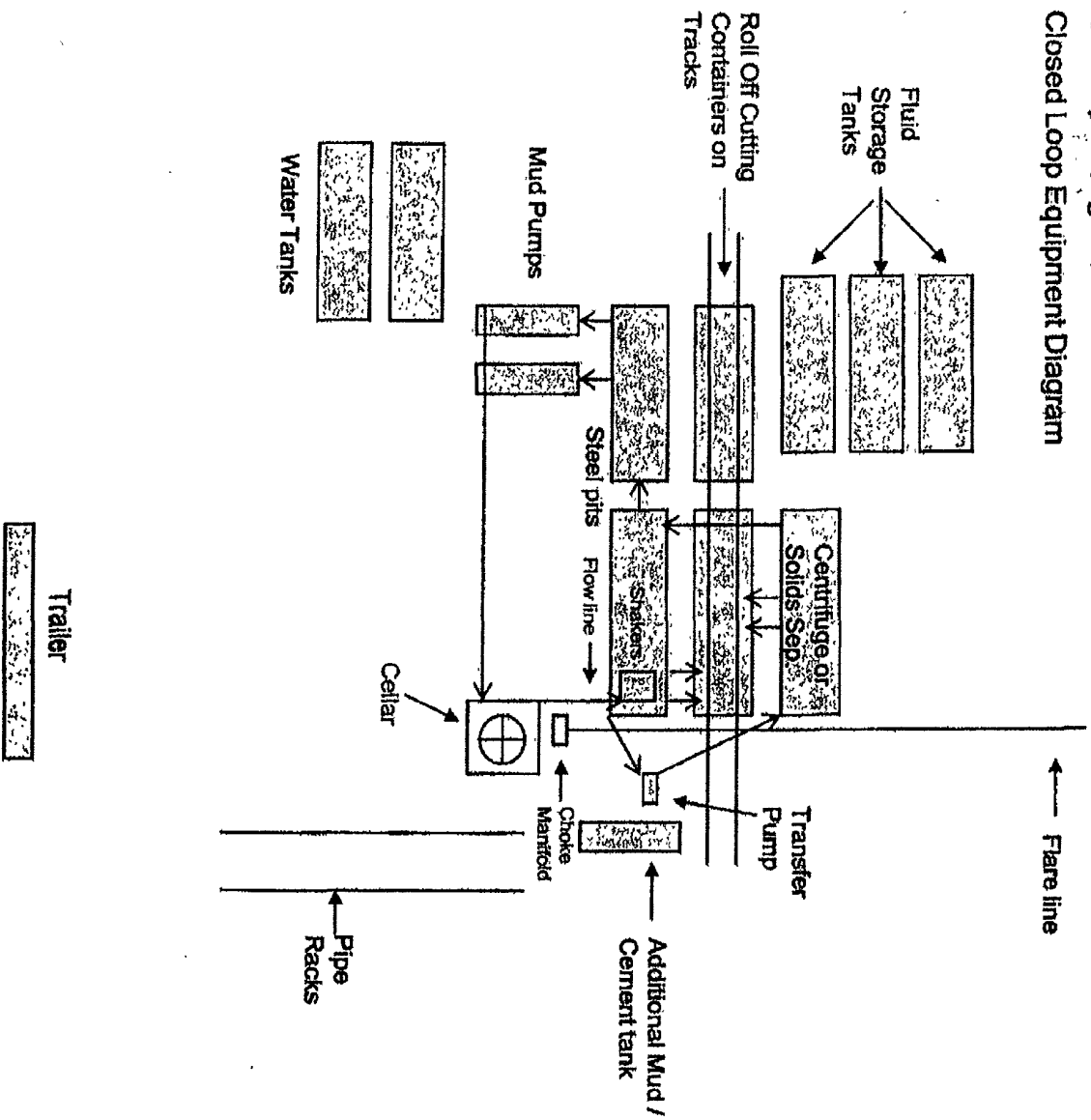
Drill cuttings shall be disposed of in steel cuttings bins (catch tanks) on the drilling pad (behind the steel mud tanks). The bins and cuttings shall be hauled to a division approved facility by an approved transporter. At the facility, the cuttings shall be removed from the bin and the bin shall be returned to the drilling site for reuse, moved to the next drilling site or returned to the provider.

Remaining drilling fluid shall be hauled off by approved transports to a division approved disposal facility. Water produced during completion shall be put in storage tanks and disposed of at a division approved facility. Oil and condensate produced shall be put in a storage tank and sold or put in a sales pipeline.

## **Reclamation**

Within 60 days after drilling and completion of the well, the location area shall be reduced as determined by Operator to the minimum area necessary to safely and effectively operate the well. The reclaimed location area shall be substantially restored to the condition that existed prior to oil and gas operations.

# Closed Loop Equipment Diagram





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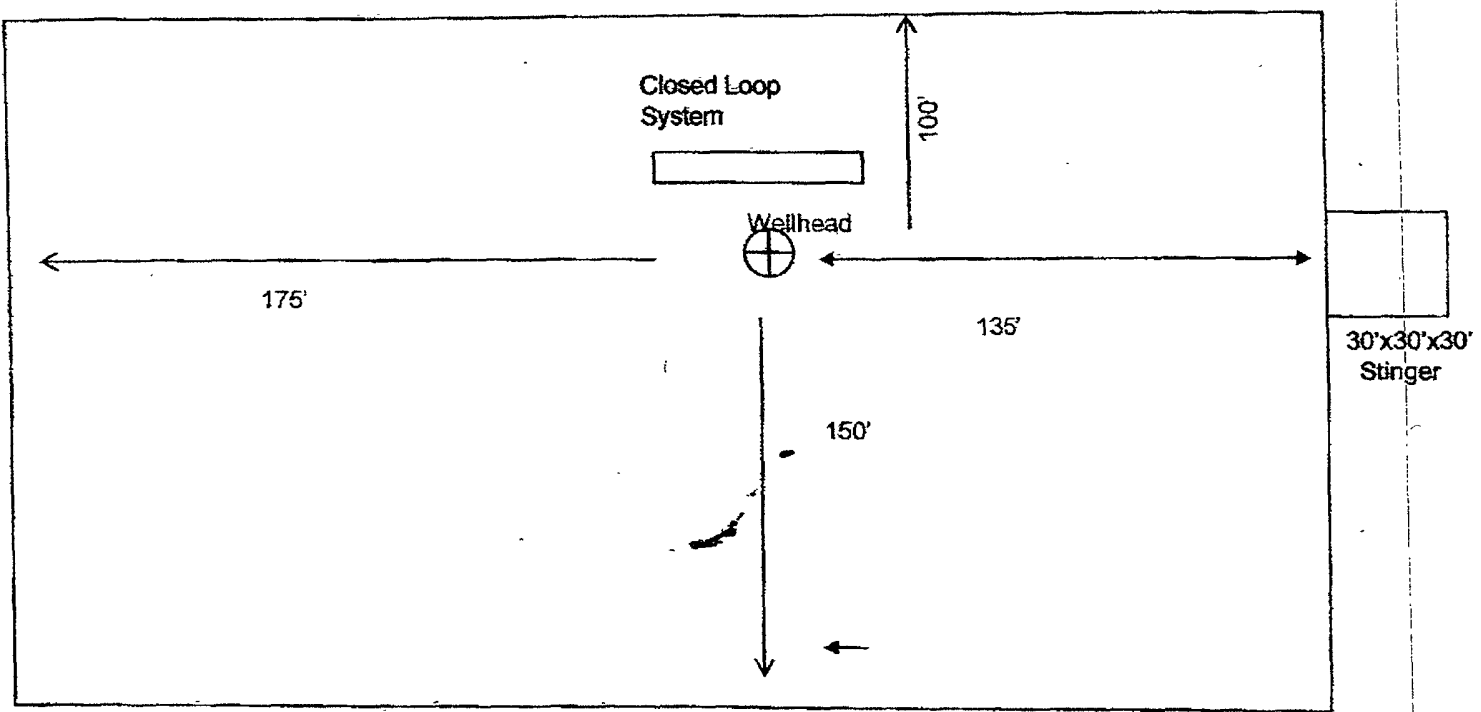


Exhibit 6

Not To Scale

Rig Layout- Closed Loop System