

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

**District II**

811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**District III**

1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

**District IV**

1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Form C-101  
Revised July 18, 2013

Energy Minerals and Natural Resources

Oil Conservation Division

AMENDED REPORT

1220 South St. Francis Dr.

Santa Fe, NM 87505

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

<sup>1</sup> Operator Name and Address <b>Ray Westall Operating, Inc.</b> P.O. Box 4, Loco Hills, NM 88255		<sup>2</sup> OGRID Number <b>119305</b>
		<sup>3</sup> API Number <b>30-015-32682</b>
<sup>4</sup> Property Code <b>313960</b>	<sup>5</sup> Property Name <b>Porterhouse State Com</b>	<sup>6</sup> Well No. <b>1</b>

**7. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
A	32	18 S	31 E		660'	North	660'	East	Eddy

**8. Proposed Bottom Hole Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

**9. Pool Information**

Pool Name <b>SWD; Grayburg - San Andres</b>	Pool Code <b>96110</b>
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**Additional Well Information**

<sup>11</sup> Work Type <b>E</b>	<sup>12</sup> Well Type <b>S</b>	<sup>13</sup> Cable/Rotary <b>R</b>	<sup>14</sup> Lease Type <b>S</b>	<sup>15</sup> Ground Level Elevation <b>3597'</b>
<sup>16</sup> Multiple <b>N</b>	<sup>17</sup> Proposed Depth <b>4280' PBDT</b>	<sup>18</sup> Formation <b>San Andres</b>	<sup>19</sup> Contractor <b>TBD</b>	<sup>20</sup> Spud Date <b>12/15/2014</b>
Depth to Ground water <b>~200'</b>	Distance from nearest fresh water well <b>&gt;1 mile</b>		Distance to nearest surface water <b>n/a</b>	

We will be using a closed-loop system in lieu of lined pits

**21. Proposed Casing and Cement Program**

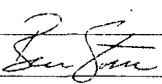
Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	17.5"	13.375"	48.0#	660'	650 'C'	Circ. to Surf.
Intermediate	11.0"	8.625"	32.0#	3614'	1175 'C'	Circ. to Surf.
Production *	7.875"	5.5"	17, 20#	12210' / PBDT 4280'	1075 'C' + 600*	Circ. to Surf.

**Casing/Cement Program: Additional Comments**

\*Drill out plugs to approx. 4280' (This will leave approximately 230 feet of existing cmt plug. A CIBP may be set if required.)

**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Hydraulic or Man./ Dbl. Blind Ram	3000 psi	5000 psi	Shaffer/ Hydril or equivalent

<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that I have complied with 19.15.14.9 (A) NMAC <input type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input type="checkbox"/> , if applicable. Signature:  Printed name: <b>Ben Stone</b> Title: <b>Agent for Ray Westall Operating, Inc.</b> E-mail Address: <b>ben@sosconsulting.us</b> Date: <b>12/04/2014</b> Phone: <b>903-488-9850</b>	OIL CONSERVATION DIVISION	
	Approved By: 	
	Title: <b>SR Supervisor</b>	
	Approved Date: <b>12/9/2014</b>	Expiration Date: <b>12/9/2016</b>
	Conditions of Approval Attached	

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

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number 30-015-32682		<sup>2</sup> Pool Code 96110		<sup>3</sup> Pool Name SWD; Grayburg - San Andres	
<sup>4</sup> Property Code 313960		<sup>5</sup> Property Name Porterhouse State Com			<sup>6</sup> Well Number 1
<sup>7</sup> OGRID No. 119305		<sup>8</sup> Operator Name Ray Westall Operating, Inc.			<sup>9</sup> Elevation 3597 feet

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from line	North/South line	Feet from the	East/West line	County
A	32	18-S	31-E		660	North	660	East	Eddy

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres n/a	<sup>13</sup> Joint or Infill n/a	<sup>14</sup> Consolidation Code n/a	<sup>15</sup> Order No. SWD-1479
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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.

16		<b><sup>17</sup> OPERATOR CERTIFICATION</b>	
		<i>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 or has a right to drill this well at this 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.</i>	
		Signature	Date
		Benjamin E. Stone SOS Consulting, LLC; agent for: Ray Westall Operating, Inc.	
16		<b><sup>18</sup> SURVEYOR CERTIFICATION</b>	
		<i>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.</i>	
		March 10, 1983 Date of Survey	
		Signature and Seal of Professional Surveyor: Dan Reddy  NM Cert. No.5412 Certificate Number	

**Ray Westall Operating, Inc.  
Porterhouse State Com Well No.1 SWD  
Section 32, Twp 18-S, Rng 31-E  
Eddy County, New Mexico**

**Well Re-entry Program**

**Objective: Re-enter the existing wellbore by drilling out plugs, clean out to new PBTD of 4280', perforate, acidize and run new tubulars to configure for salt water disposal.**

**1. Geologic Information** - (Roy E. Johnson, Consulting Geologist) - Lower Grayburg and San Andres arkosic sands in this well bore. These sands are non productive for hydrocarbons in this area and are extensive enough to insure that a considerable volume of water can be disposed of. The following depths represent the best porosity;

3914'-3932'  
3940'-3964'  
4150'-4160'  
4186'-4202'  
4220'-4230'  
4236'-4250'

The sands of the Delaware Mountain Group below the San Andres formation indicate porosity on the density log but experience has shown that these sands have a low permeability and will not accept a lot of water without a great deal of pressure.

**Formation Tops**

Rustler	632
Yates	2236
Seven River	2686
Queen	3356
Graybury	3600
San Andres	4040
Delaware	5045

**2. Completion Procedure**

- a) MIRU WSU, reverse unit and associated equipment. Install B.O.P. RIH with bit and collars to drill out plugs.
- b) D/O & C/O plugs to apprx. 4280'. (Optional: set CIBP @ 4280'.)
- c) Perf and Sqz 5.5" - Attempt to Circ. to surface.
- d) D/O & C/O cement; RU Wireline & run Temp for TOC; ReSqz if necessary. Run CBL Good bond minimum 3400'.
- e) Perforate selected intervals - max top: 3914'; max bottom: 4250'.
- f) Acidize w/ 750-2500 gals HCl. Swab and/or circulate hole clean.
- g) RIH with nickel plated 5.5" or equiv. VFE retrievable packer or equivalent on 2.875" IPC or equiv. tubing w/ PKR @3820', pump clean fresh water containing corrosion inhibitor, biocide and oxygen scavenger down annulus, set packer. Prepare to run MIT test and notify OCD to witness 24 hours in advance.
- h) Build injection facility and start water disposal. Per SWD-1479: limit injection pressure to 783 psi. Run injection profile within two years of start date.

**Well Re-entry Program (cont.)**

3. **Tubular program** - The well casing is set as described above. (See attached Proposed Well Schematic) 2-7/8" internally coated tubing will be run and set in a packer located at approximately 3820' (within 100' of the uppermost injection perforation at 3914').

4. **Cementing Program** - Existing Surface and Intermediate casing strings were all circulated to surface during the original well drilling and completion operations as follows:

Surface	13.375"	48.0#	17.5" hole	660'	650 sx	Circ to Surf
Intermediate	8.625"	32.0#	11.0" hole	3614'	1175 sx	Circ to Surf
Production	5.5"	17/20.0#	7.875	12210' 4280' PBTD	600 sx	Sqz for >3400' TOC
<b>Existing 5.5" casing to be Squeezed - Attempt to Circulate; Run CBL w/ good bond &gt;3400'</b>						

5. **Pressure Control** - BOP diagram is attached to this application. All BOP and related equipment shall comply with well control requirements as described NIM OCD rules and regulations. Minimum working pressure of the BOP and related equipment required for the drillout shall be 3000 psi. OCD will be notified a minimum of 4 hours prior to BOP pressure tests. The test shall be performed by an independent service company utilizing a test plug (no cup or J-packer). The results of the test shall be recorded on a calibrated test chart submitted to the OCD Artesia district office. The BOP test(s) will be conducted at:

- a) Installation;
- b) after equipment or configuration changes;
- c) at 30 days from any previous test, and;
- d) anytime operations warrant, such as well conditions

6. **Mud Circulation System** - the plugs will be drilled with 8.4 lb/gal fresh water looped through the reverse unit with all cutting recovered for disposal. Visual inspection will be made by personnel while reverse unit is in operation so cement plug cuttings and potential losses are witnessed and acted upon.

7. **Auxiliary Well Control and Monitoring** - Not Applicable

8. **H<sub>2</sub>S Safety** - There is a low risk of H<sub>2</sub>S in this area. The operator will comply with the provisions of company H<sub>2</sub>S contingency plan as applicable. All personnel will wear monitoring devices and a wind direction sock will be placed on location.

9. **Logging, Coring and Testing** - Ray Westall Operating is not anticipating running additional logs. No corings or drill tests will be conducted. (The well may potentially be step rate tested in the future if additional injection pressures are required.)

10. **Potential Hazards** - No abnormal pressures or temperatures are expected. No loss of circulation is expected to occur. All personnel will be familiar with the safe operation of the equipment being used to drillout and reenter this well. The maximum anticipated bottom hole pressure is 4200 psi and the maximum anticipated bottom hole temperature is 130 F.

11. **Waste Management** - All drill cuttings and other wastes associated with the re-entry and drill out operations will be transported to a commercial surface waste disposal facility permitted by the Environmental Bureau of the New Mexico Oil Conservation Division.

12. **Anticipated Start Date** - Upon approval of all permits for SWD, operations would begin within 30 days. Completion of the well operations will take two to three weeks. Installation of the tank battery, berms, plumbing and other and associated equipment would be occurring during the same interval. In any

**Well Re-entry Program (cont.)**

event, it is not expected for the construction phase of the project to last more than 60 days, depending on availability of contractors and equipment. At the time of this submittal, the anticipated start date is:

**December 15, 2014.**

**13. Configure for Salt Water Disposal** – SWD Permit No. SWD-1479. Prior to commencing any work, an NOI sundry(ies) will be submitted to configure the well for SWD and will detail the following tasks: drillout and workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per OCD test procedures. (Notify NMOCD 24 hours prior.) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity. Anticipated daily volume is ~5,000 bpd at a maximum surface injection pressure of 783 psi.

Submit 1 Copy To Appropriate District Office  
 District I - (575) 393-6161  
 1625 N. French Dr., Hobbs, NM 88240  
 District II - (575) 748-1283  
 811 S. First St., Artesia, NM 88210  
 District III - (505) 334-6178  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV - (505) 476-3460  
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
 Energy, Minerals and Natural Resources

Form C-103  
 Revised July 18, 2013

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

WELL API NO.	30-015-32682
5. Indicate Type of Lease	STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name	Porterhouse State Com
8. Well Number	1
9. OGRID Number	119305
10. Pool name or Wildcat	SWD; Grayburg-San Andres (96110)
11. Elevation (Show whether DR, RKB, RT, GR, etc.)	3597' GL

**SUNDRY NOTICES AND REPORTS ON WELLS**  
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well  Gas Well  Other

2. Name of Operator  
 Ray Westall Operating, Inc.

3. Address of Operator  
 P.O. Box 4, Loco Hills, NM 88255

4. Well Location  
 Unit Letter A : 660 feet from the North line and 660 feet from the East line  
 Section 32 Township 13-S Range 31-E NMPM County Eddy

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

<b>NOTICE OF INTENTION TO:</b>		<b>SUBSEQUENT REPORT OF:</b>	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>	Perf, Test & Configure for SWD <input type="checkbox"/>		
OTHER: <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

**Conduct Safety Meeting Prior to Start of All Operations SWD per OCD Permit SWD-1479**

- MIRU WSU, reverse unit and associated equipment. Install B.O.P. RIH with bit and collars to drill out plugs.
- D/O & C/O plugs to approx. 4280'.
- Perf and Sqz 5.5" - Attempt to Circ. to surface.
- D/O & C/O cement; RU Wireline & run Temp for TOC; ReSqz if necessary. Run CBL Good bond minimum 3400'.
- Perforate selected intervals - max top: 3914'; max bottom: 4250'.
- Acidize w/ 750-2500 gals HCl. Swab and/or circulate hole clear.
- RIH with nickel plated 5.5" or equiv. VFE retrievable packer or equivalent on 2.875" IPC or equiv. tubing w/ PKR @3820', pump clean fresh water containing corrosion inhibitor, biocide and oxygen scavenger down annulus, set packer. Prepare to run MIT test and notify OCD to witness 24 hours in advance.
- Build injection facility and start water disposal. Limit injection pressure to 783 psi. Run injection profile within two years of start date.

Spud Date: 12/10/2014 (Dpnding on Rig avblty) Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE  TITLE Agent for Ray Westall Operating, Inc. DATE 12/04/2014

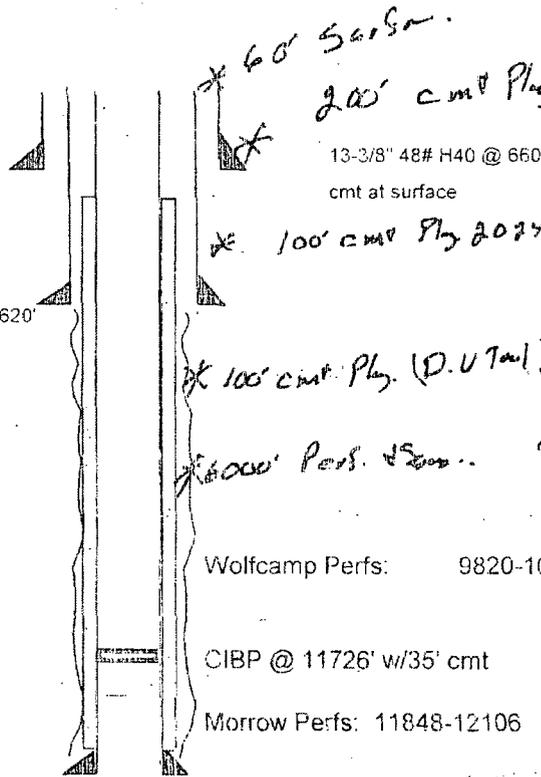
Type or print name Ben Stone E-mail address: ben@sosconsulting.us PHONE: 903-488-9850

**For State Use Only**

APPROVED BY:  TITLE Dist. P. Supervisor DATE 12/9/2014

Conditions of Approval (if any):

**Porterhouse State Com. #1**  
**API# 30-015-32682**  
**Eddy County, New Mexico**



8-5/8" 32# K55 @ 3620'  
cmt at surface

13-3/8" 48# H40 @ 660'  
cmt at surface

\* 60' Surface  
\* 200' cmt Plug 800'-600' (T. Salt w/ 13 3/8") TAG

\* 100' cmt Plug 2024'-1924' (B. Salt) TAG

\* 100' cmt Plug (D.V. Tool) 4511'-4411' TAG

\* 6000' Perf. & Spaz. TAG

Wolfcamp Perfs: 9820-10142'

CIBP @ 11726' w/35' cmt

Morrow Perfs: 11848-12106

5-1/2" 17# N80 & P110 @ 12228'  
DV tool @ 4461'

**Plug and Abandon Procedure**

POOH W/ production string  
Set CIBP @ 9800' to abandon Wolfcamp Perfs

Dump 35' cmt on top of CIBP

Set CIBP @ 3600' w/35' cmt on top

\* Pump 10 sx surface plug *min 60'*  
Install dry hole marker

\* Perf. & Spaz. @ 6000' (100' cmt plug.) WOC TAG

\* Spot 100' cmt Plug 4511'-4411' (D.V. Tool) WOC TAG

\* 100' cmt Plug 2024'-1924' B. Salt. WOC TAG

\* 200' cmt Plug 800'-600' (T. Salt & 13 3/8" cas.) WOC TAG



**WELL SCHEMATIC - PROPOSED**  
**Porterhouse State Com Well No.1 SWD**

API 30-015-32682

660' FNL & 660' FEL, SEC. 32-T18S-R31E  
 EDDY COUNTY, NEW MEXICO

Spud Date: 3/29/2003

P&A Date: 1/28/2011

Re-Entry Date: ~3/01/2014

Annulus Annulled  
or open to atmosphere

Injection Pressure Regulated  
and Volumes Reported

**RAY WESTALL OPERATING INC.**

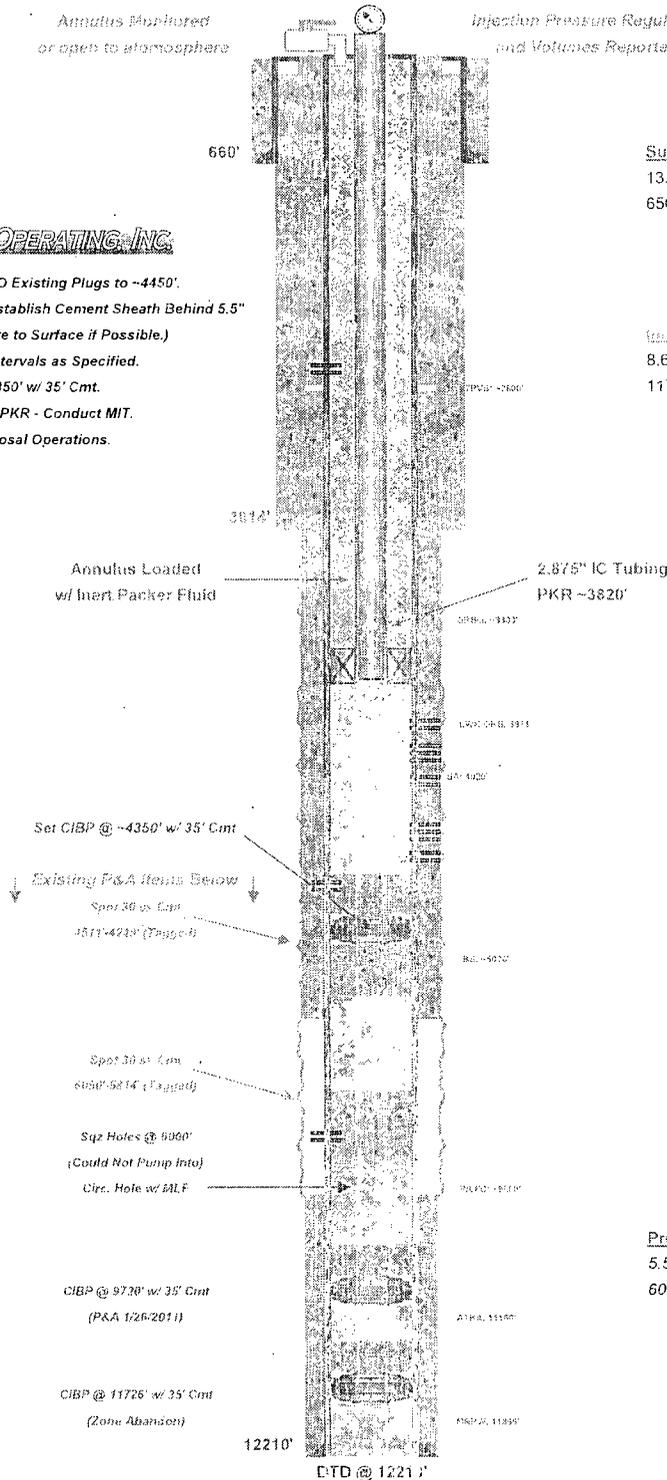
Convert to SWD: D/O & C/O Existing Plugs to ~4450'.  
 Perf & Sqz as Necessary to Establish Cement Sheath Behind 5.5"  
 (Minimum 3400' - Circulate to Surface if Possible.)  
 Perforate Disposal Intervals as Specified.  
 Set CIBP @ ~4350' w/ 35' Cmt.  
 Run PC Tubing and PKR - Conduct MIT.  
 Commence Disposal Operations.

Surface Casing

13.375", 54.5# Csg. (17.5" Hole) @ 660'  
 650 sx CIs 'C' - 100 sx - Circulated to Surface

Intermediate Casing

8.625", 26.0# csg. (11.0" Hole) @ 3614'  
 1175 sx Calc. to Circ - Not Rpt'd



Production Casing

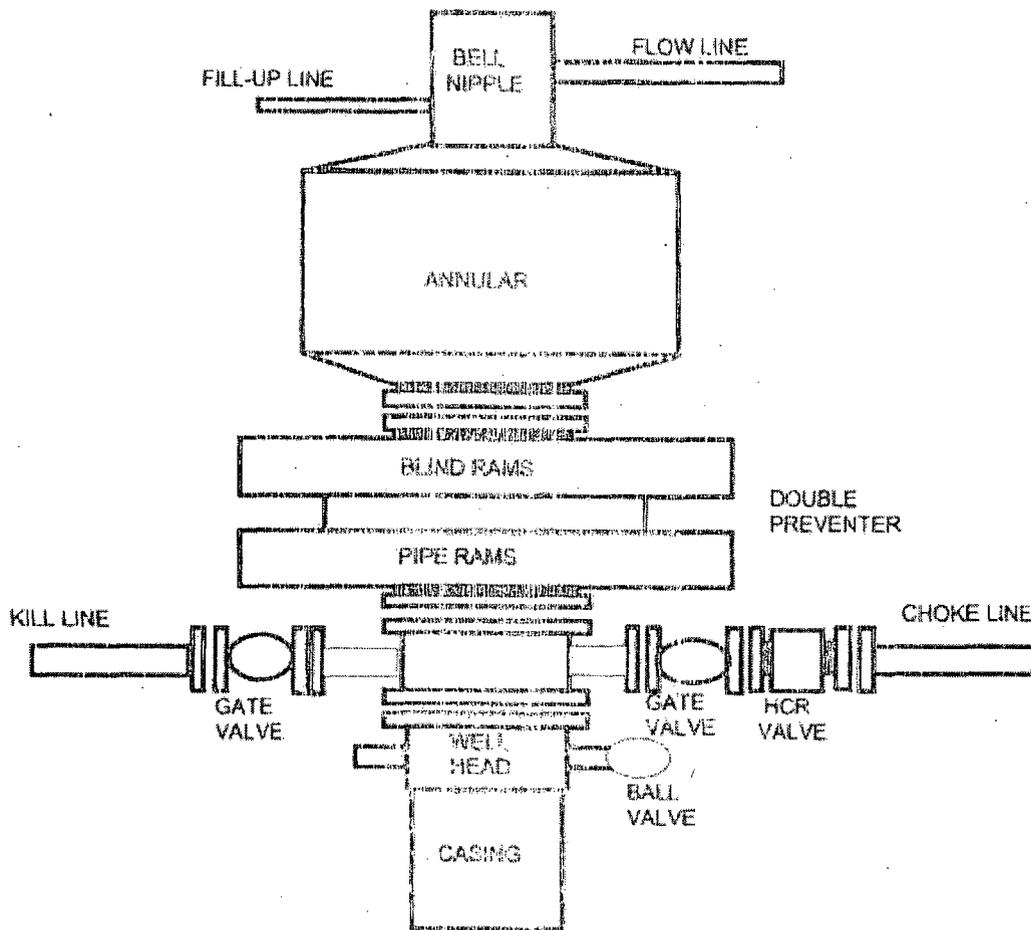
5.5", 20 & 17.0# Csg (7.785" hole) @ 12210'  
 600 sx - TOC @ 9034' by Calc.



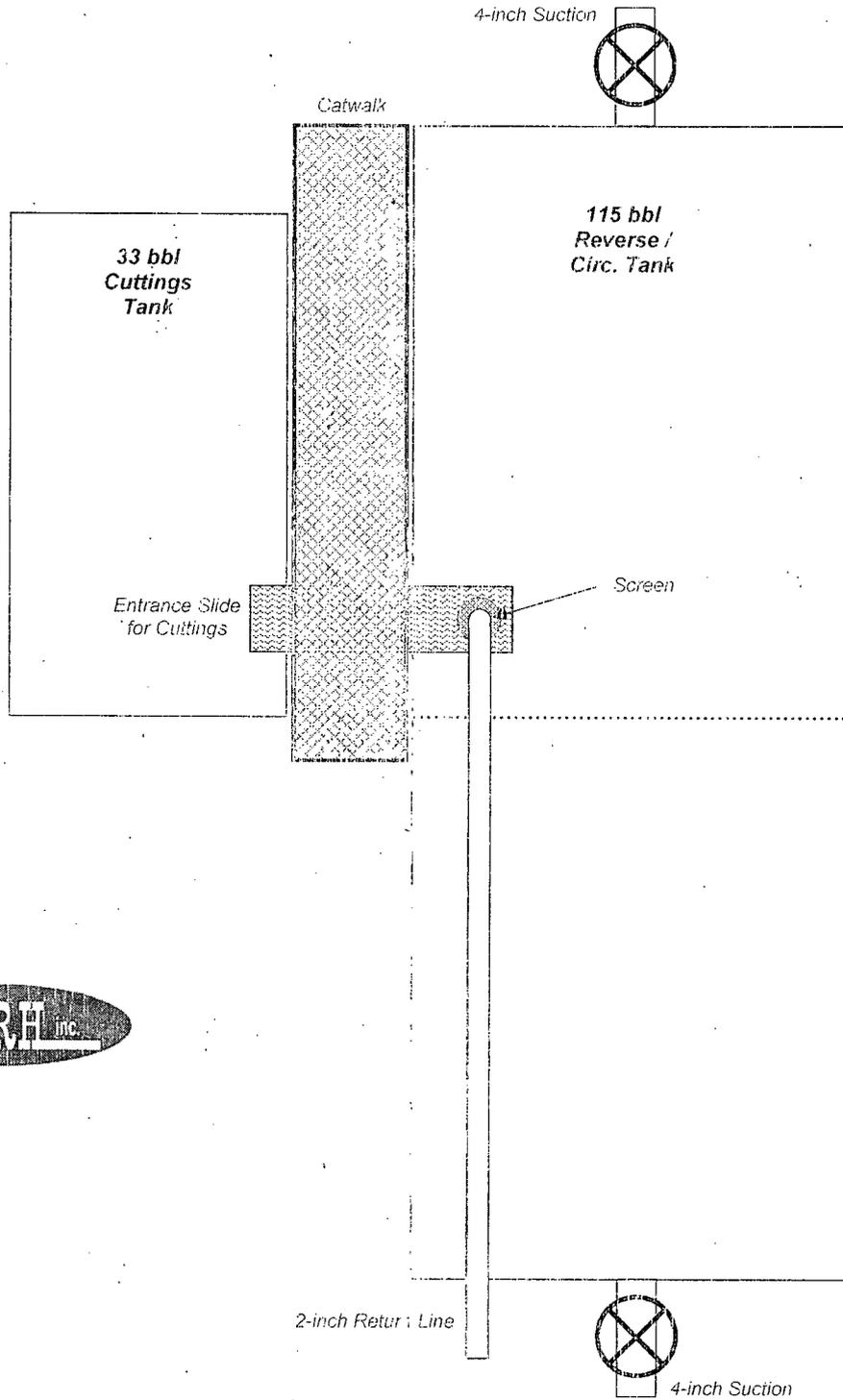
Drawn by: Ben Stone, 12/29/2013

# BLOWOUT PREVENTER DIAGRAM

3000 PSI WORKING PRESSURE

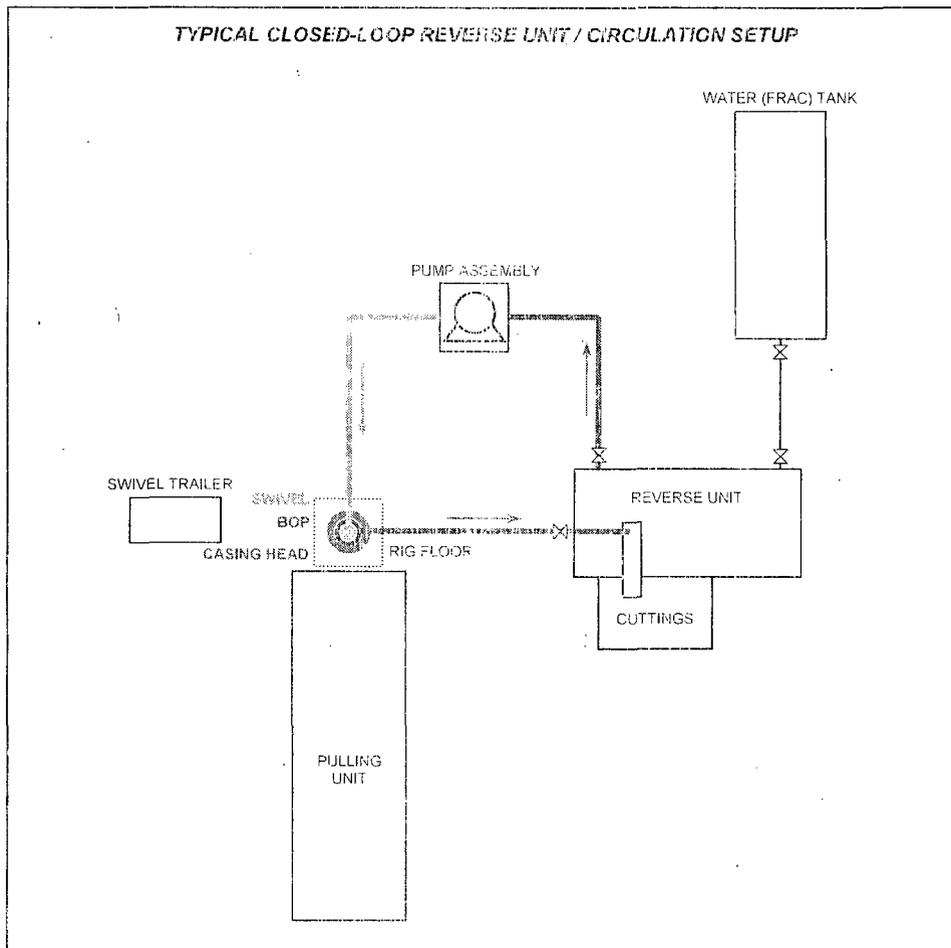


# Reverse / Circulation Tank for Workovers & Drillouts



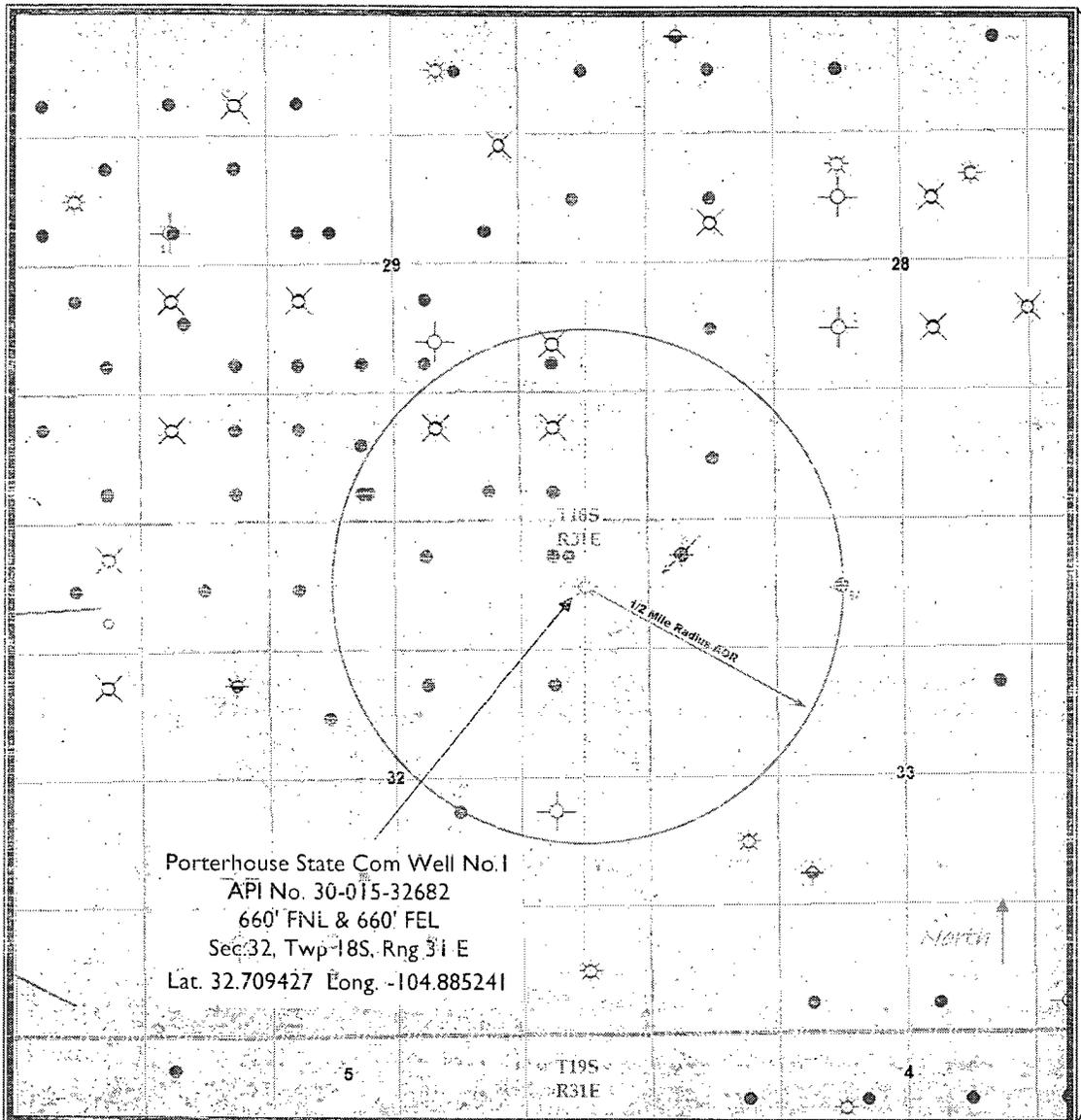
## Standard Operating Procedure - Re-entry Closed-Loop Reverse Unit Diagram

1. Blow Out Preventer tested prior to any operations. Notify OCD at least 4 hours prior.
2. Visual monitoring maintained on returns. Proceed with drillout operations accordingly.
3. Cuttings / waste hauled to specified facility. ORI - LEA COUNTY
4. Spills contained & cleaned up immediately. Repair or otherwise correct the situation within 48 hours before resuming operations. Notify OCD within 24 hours. Remediation started ASAP if required. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate.
5. Subsequent sundry / forms filed as needed - well returned to service.

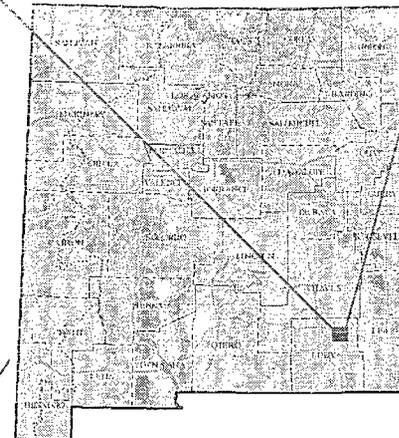
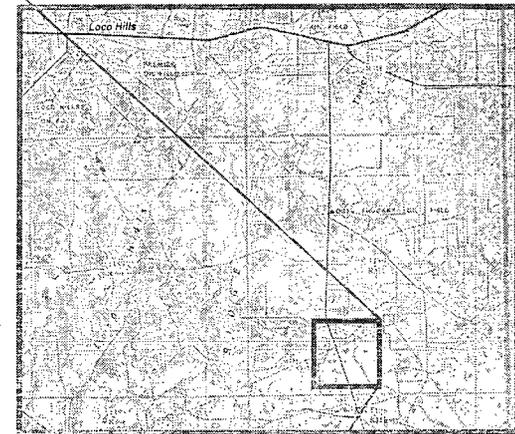


# Porterhouse St. Com Well No.1 - Area of Review / Overview Map

(Attachment to NMOCD Form C-108 - Item V)



~8.0 miles Southeast  
of Loco Hills, NM



Eddy County, New Mexico

## Permit Conditions of Approval

API: 30-015-32682

OCD Reviewer	Condition
CSHAPARD	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string

Must have approved C-108, MIT, and all regulatory requirements in place prior to injecting

