

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 August 1, 2011

HOBBS OCD

OIL CONSERVATION DIVISION

JUN 06 2013

1220 South St. Francis Dr.  
Santa Fe, NM 87505

RECEIVED

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.)		WELL API NO. 30-025-10596 ✓
1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
2. Name of Operator LEGACY RESERVES OPERATING LP		6. State Oil & Gas Lease No.
3. Address of Operator P.O. BOX 10848 MIDLAND, TX 79702		7. Lease Name or Unit Agreement Name SKELLY PENROSE A UNIT ✓
4. Well Location Unit Letter <u>N</u> : <u>740</u> feet from the <u>SOUTH</u> line and <u>2000</u> feet from the <u>WEST</u> line Section <u>3</u> Township <u>23S</u> Range <u>37E</u> NMPM County <u>LEA</u>		8. Well Number <u>38</u> ✓
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3297' DF		9. OGRID Number 240974
		10. Pool name or Wildcat Langlie Mattix; 7 Rvrs-Queen-Grayburg

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐  
DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐

OTHER: DEEPEN, INSTALL LINER, FRAC & RTI ☒

OTHER: ☐

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.

---SEE ATTACHED PROCEDURE---

OCD Condition of Approval:  
After remedial work has been done. Forms required are:  
C-103 Subsequent Report with dates and the work that was done, and  
C-104 with transporter(s), per's producing from, tubing size and depth  
& 24 hour production test.

Spud Date:

Rig Release Date:

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

SIGNATURE Kent Williams TITLE SENIOR ENGINEER DATE 06/04/2013

Type or print name KENT WILLIAMS E-mail address:  PHONE: 432-689-5200

For State Use Only

APPROVED BY: Mark Whitman TITLE Compliance Officer DATE 06-07-2013

Conditions of Approval (if any):

# **DEEPEN, INSTALL 4 ½" x 3 1/2" TAPERED FULL LENGTH LINER, FRAC and CONVERT BACK TO WATER INJECTION PROCEDURE**

## **Skelly Penrose A Unit # 38**

Field: Landlie Mattix

Zone: Penrose Sand (Queen)

County: Lea Co, NM

Date: 4/26/13

Engineer: Kent Williams

Company: Legacy Reserves Operating, LP

**Purpose Of Procedure:** Convert from producer to water injection well. Deepen and frac stimulate Penrose Sand pay interval to penetrate 2 casing and cement strings and nitro-shot hole cement filled hole. Install 4 ½" x 3 ½" Flush Joint tapered liner from 0'-3670' if existing 5" or 7" casing found to be bad, as anticipated. 3 ½" liner is installed. Prior CIBP set in 2001 to TA the well was set high and may have allowed corrosion of casing in the lower portion of the hole.

## **Pre-Job:**

1. Run csg inspection log and pressure test 5" and 7" casing to verify condition of each.

## **Procedure:**

1. MIRU pulling unit. Install 3000# min WP BOP.
2. RIH w/ 6.250" shoe on 2 7/8" tbg workstring. RU reverse unit. Drillout CIBP at 3272' and push to liner top at 3277'. POH.
3. RIH w/ 4.250" bit, DC's and 2 7/8" tbg workstring. DO remainder of CIBP. Lower bit and drift casing 3277' to PBTD. Tag PBTD. Cleanout to 3630' KB and deepen well from 3630' to 3670' (40').  
(Note: Last reported PBTD at 3628')
4. ND BOP. Dig out wellhead. Remove 7" csg head. Install 4 ½ casing head and 4 ½"x2 1/16" tbg head .  
NU BOP.
5. RU wireline. Run 40-arm caliper from 3670'-3277' to evaluate deepen hole and 3 ½" liner before running 3 ½" casing. Will under-ream open hole if necessary for running casing.
6. RIH w/ 3670' of 4 ½" x 3 ½" tapered liner and 3 ½" guide shoe on bottom. Install 5, 4 ½ " casing centralizers. Land csg in csg head. Cutoff csg at surface as necessary.

## **Liner Talley**

- 0'-3167' (3167') - 4 ½", J-55, 11.6#, EUE, 8RD, LT&C Casing

- 3167'-3168' ( 1') - 4 ½" LT&C x 3 ½" FJ X-Over Sub

- 3168'-3668' (500') - 3 ½", J-55, 9.3#, FJ Casing

- 3668'-3670' (2') - 3 ½" Float Shoe

- 3670'- TD

Centralizers: Run 1 casing centralizer above X-Over sub, 1 at surface and 3 centralizers evenly spaced +/- 800' apart in casing string,

7. RU O-TEX cementers. Cement liner w/ 325 sxs (120 bbls) Super C Modified cement. SD overnight for cmt to set.  
Cement Slurry: 47# Class C + 20# Poz + 17# CSE2 + 0.1% C-16a + 5% Salt + 0.2% SMS + 0.004 gals C-41L  
Cement Data: 2.065 ft<sup>3</sup>/sx, 12.0 #/gal, 11.54 gals/sx water, TT: 3:30  
(Note: Design uses 10% excess inside 7" csg and 100% excess inside 5" csg liner.)
8. RU reverse unit. RIH w/ 2.750" bit, DC's and 2 1/16" FJ workstring tbg. Tag PBTD. DO cmt inadvertently left above shoe. Do not drillout shoe.

## Skelly Penrose A Unit # 38

9. RU wireline. Run GR/Compensated Neutron/CCL log from PBTD to 3000'
10. Perforate w/ 2 7/8" OD select fire casing gun, 0.36" hole, 2 SPF as selected by Midland Office following review of well logs.
11. RU Acidizers. Acidize Penrose Sand perms w/ 3500 gal 15% NEFE HCL at 8 BPM/5000# max pressure. Drop 50% excess of 5/8" (0.625") ball sealers to divert. Stage ball sealers throughout job and attempt to ball out. Shutin well for 15 minutes. Monitor ISIP, 5, 10 and 15 minute shut-in pressures. Test lines to 6000#.
12. RU wireline. RIH and knockoff ball sealers. Leave well shutin.
13. Install 3 1/2" full-opening 5000# frac valve on casing.
14. RU frac company. Frac down 3 1/2" csg to treat Penrose Sand perms w/ 23,250 gal (554 bbls) of 30# X-linked gel and 40,000 #'s (31,000# neat, 15,000# resin coated) 16/30 Brady Brown Sand at 30 BPM or 5500 # maximum pressure as follows. Test lines to 6000# before job.

### Frac Procedure:

3,360 gal ( 80 bbls) Water Pre-Pad  
8,000 gal ( 190 bbls) 30# X-Link Gel pad  
3,000 gal ( 71 bbls) 30# X-Link Gel at 1/4 PPG 16/30 Brown Sand  
2,500 gal ( 60 bbls) 30# X-Link Gel at 1 PPG 16/30 Brown Sand  
1,750 gal ( 42 bbls) 30# X-Link Gel at 2 PPG 16/30 Brown Sand  
2,500 gal ( 60 bbls) 30# X-Link Gel at 3 PPG 16/30 Brown Sand  
2,500 gal ( 60 bbls) 30# X-Link Gel at 4 PPG 16/30 Brown Sand  
1,500 gal ( 36 bbls) 30# X-Link Gel at 5 PPG 16/30 Brown Sand  
1,500 gal ( 36 bbls) 30# X-Link Gel at 5 PPG 16/30 Resin Coated Sand  
3,360 gal ( 80 bbls) 30# Linear Gel Flush

On frac job mark flush point at 3 #/gal on in-line wellhead densitometer. Flush to top perf. Do not overflush. Shutin well for 15 minutes. Monitor ISIP, 5, 10 and 15 minute shut-in pressures.

15. Shutin overnight.
16. Flowback to frac tank until dead.
17. RIH w/ 3 1/2" Nickel Plated, Internally Plastic Coated Injection Pkr, on/off tool, 1.500" profile nipple, and 2 1/16" IPC FJ tbg. Set pkr immediately above top perf.
18. Load annulus and pressure test annulus to 500# for 30 min.
19. Circulate annulus with packer fluid.
20. RD BOP. Flange up injection wellhead. RDMO pulling unit.
21. Notify NMOCD and schedule MIT test on casing. Return well to injection at 200 BWIPD max rate or 1400# max injection pressure.

## Skelly Penrose A Unit # 38

### Misc Information:

AFE Cost - \$ 285,000 AFE # - 213066

KB: 6' AGL

BWO – TA ( 2/5/01) AWO- 200 BWIPD/ 1500# (Forecast)

### Volumes & Strengths –

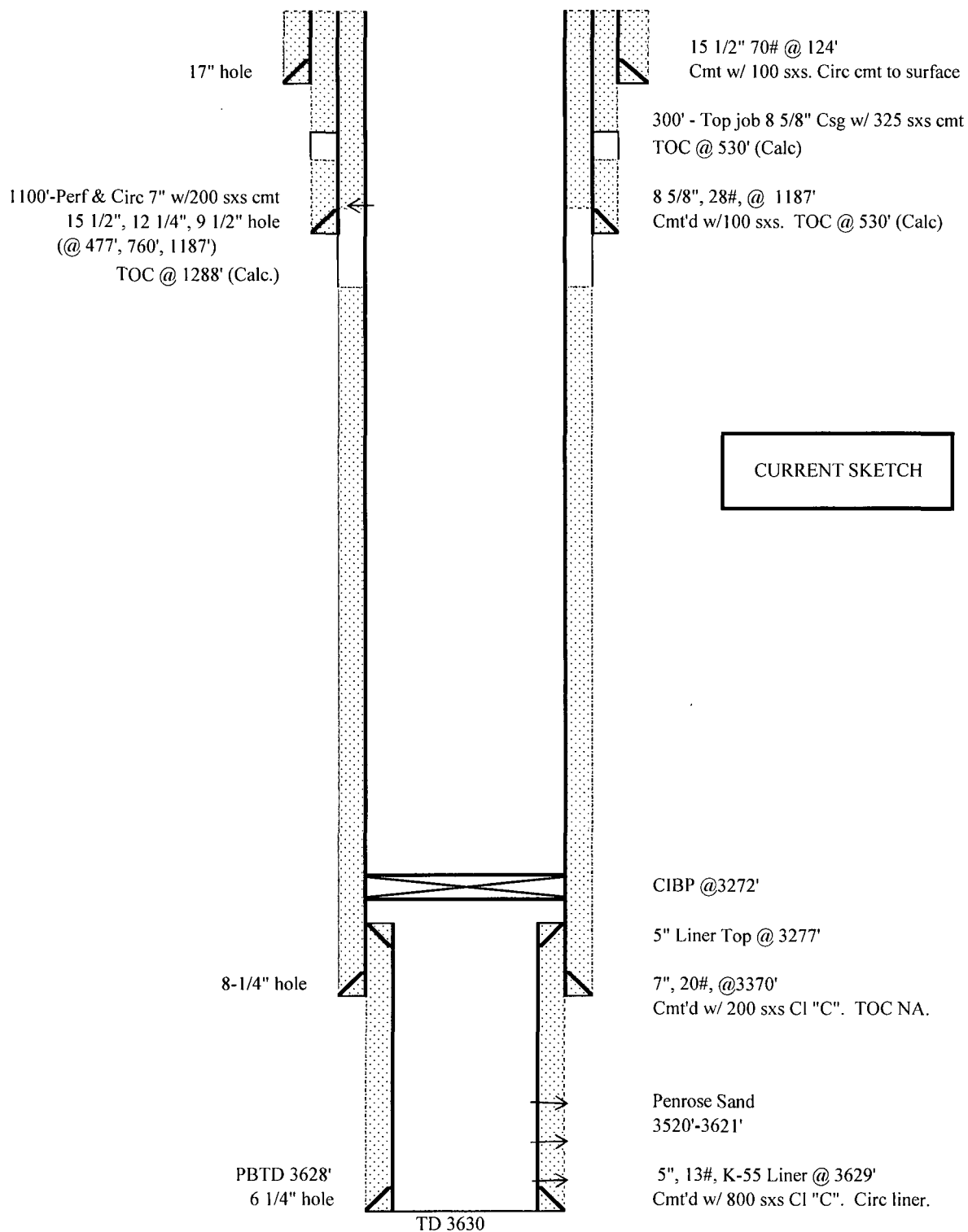
Tubing-	2 1/16" 3.25# IJ.,J-55 -	<u>0.0030 bbl/ft.</u>	1.751" ID, 1.657" Drift, Burst 7280#, Collapse 7690#, Cplg OD 2.325"
Tubing	2 3/8" 4.7# J-55 -	<u>0.0039 bbl/ft.</u>	1.995" ID, 1.901" Drift, Burst 7700#, Collapse 8100#, Cplg OD 2.594"
Tubing	2 7/8" 6.5# J-55-	<u>0.0058 bbl/ft.</u>	2.441" ID, 2.347" Drift, Burst 7260#, Collapse 7680#, Cplg OD 3.500"
Casing:	3 1/2" 9.3# J-55 FJ, J-55 -	<u>0.0087 bbl/ft</u>	2.992" ID, 2.867" Drift, Burst 6980# , Collapse 7400#, Cplg OD 4.125"*
Casing:	4 1/2" 11.60# J-55 -	<u>0.0155 bbl/ft</u>	4.000" ID, 3.875" Drift, Burst 5350# , Collapse 4960#, Cplg OD 5.000"
Casing:	5" 13# J-55 -	<u>0.0170 bbl/ft</u>	4.494" ID, 4.369" Drift,, Burst 4870# , Collapse 4140#

### Notes (Misc Equipment):

1. Need 3700'+ of 2 7/8" J-55 6.5# workstring tbg
2. Need 400'+ of 2 1/16" IJ bare workstring
3. Need 3500'+ of 2 1/16" IJ IPC coated injection tubing
4. Need 1, 3 1/2" Nickel Plated, IPC Internally Coated Injection Pkr w/ On-Off Tool and SN
5. Need 3167'+ of 4 1/2" J-55, 11.6# Casing and 500'+ of 3 1/2" J-55, 9.3#, FJ casing
6. Set 3 clean 500 bbl. frac tanks (2-frac, 1-flowback). Fill 2 tanks with 500 bbls 2% KCL water.  
Notify frac company for addition of bactericide prior to filling tanks.

## WELLBORE SCHEMATIC

Well Name & No.:	Skelly Penrose A Unit # 38		
Field:	Langlie Mattix (7Rivers/Queen/Grayburg)		
Location:	740' FSL x 2000' FWL, Sec. 3, Unit Letter N, T-22-S, R-37-E		
County:	Lea	State:	NM
		API #:	30-025-10596
GR Elev:	3297.0	Spud Date:	05/20/37
KB :	6.0	Original Operator:	Skelly Oil Co.
KB Elev:	3303.0	Original Lease Name:	Sims "C" #1-A



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