

DATE IN 08/16/13	SUSPENSE	ENGINEER PRG	LOGGED IN 08/19/13	TYPE IPI	PP NO. PRG1323159765
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☒ IPI ☐ EOR ☐ PPR

[D] Other: Specify R-13388 / Case 14593

Chevron
Skelly Unit #902

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply 30-015-29322

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
- [B] ☐ Offset Operators, Leaseholders or Surface Owner
- [C] ☐ Application is One Which Requires Published Legal Notice
- [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Carolyn Haynie *Carolyn Haynie* NM Petro Eng Tech Assistant
 Print or Type Name Signature Title

8-14-13
 Date

chay@chevron.com
 e-mail Address



Paul Brown
Petroleum Engineering

MidContinent Business Unit
Chevron North America
Exploration and Production
Company
15 Smith Road
Midland, TX 79705
Tel 432-687-7351
Fax 432-687-7871
PaulBrown@chevron.com

August 14, 2013

New Mexico Oil Conservation Division
Attn: Richard Ezeanyim
1200 South St. Francis Drive
Santa Fe, NM 87505

Injection Pressure Increase Request
Disposal Permit: Injection Order R-13388
Maximum Wellhead Injection Pressure: 1,684 psi
Skelly Unit No. 902
API No. 30-015-29322
UL E, Sec 15-17S-31E, 1,650' FSL & 990' FWL
Eddy County, NM

Dear Mr. Ezeanyim:

Chevron respectfully requests that the maximum allowable injection pressure for Skelly Unit 902 be increased to 2,200 psi.

Skelly Unit 902 has been a salt water disposal well since 2011 and has an open hole horizontal completion at 8418' and is also perforated from 8552' to 9766'. No initial step rate test was performed and the subject well was permitted to inject at a maximum pressure of 1684 psi (0.2 psi/ft gradient).

On July 22, 2013 a step rate test was performed on the subject well. The test identified a possible "soft frac" at a surface pressure of 2225 psi. The test was not continued past 2,225 psi due to surface pressure equipment limitations. The step rate test is attached for your review.

Chevron is requesting that the maximum pressure be increased from its present 1684 psi to 2200 psi. Doing so will allow Chevron to utilize the full pressure capability of its injection facility.

Please contact me at 432-687-7351 if you have further questions.

Yours very truly,

Paul T. Brown
Petroleum Engineer
New Mexico Area
Midland, TX

Horizontal
Open Hole

$$\left[\begin{array}{l} \frac{2125}{8418} = 0.25 \\ \frac{2225}{8418} = 0.26 \end{array} \right]$$

$$\begin{array}{r} 2200 \\ - 30 \\ \hline 2170 \end{array} \quad \begin{array}{r} 2225 \text{ psi} \\ - 50 \text{ psi} \\ \hline 2175 \end{array}$$

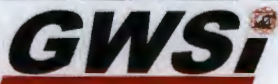
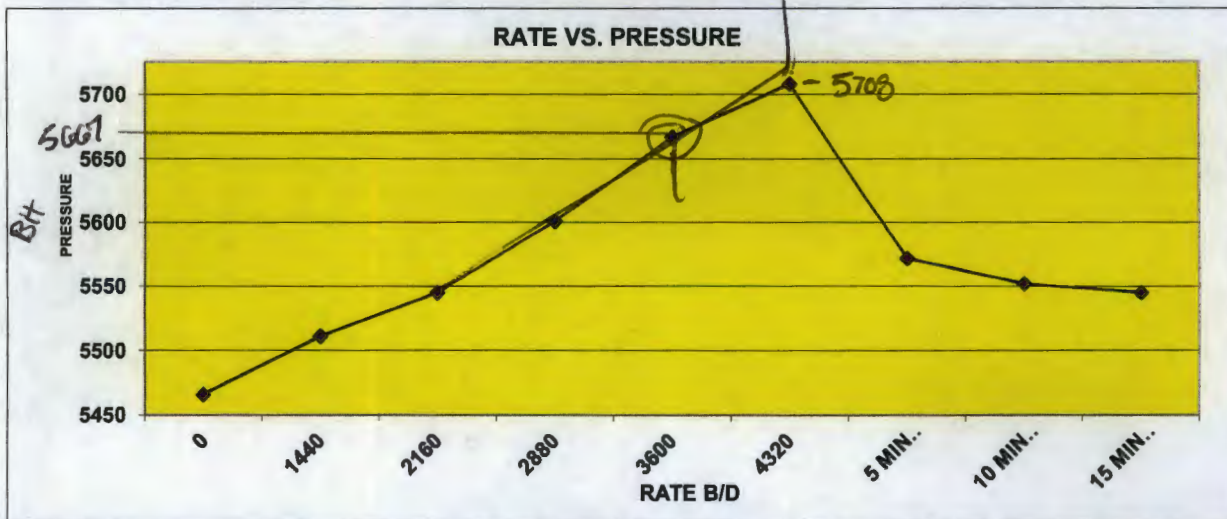


STEP RATE TEST

graywsi2@aol.com

RATE B/D	Date	Time	BH PRESS	SURF. PRESS	Comments
0	7/22/2013	3:07 PM	5466	1275	
1 BWPM 1.5 1440	7/22/2013	3:22 PM	5511	1450	
2.5 2160	7/22/2013	3:36 PM	5545	1700	
3 2880	7/22/2013	4:05 PM	5601	2025	
1.5 3600	7/22/2013	4:21 PM	5667	2125	3 soft "frac"
3 4320	7/22/2013	4:37 PM	5708	2225	
5 MIN FALL OFF	7/22/2013	4:42 PM	5572	1950	
10 MIN FALL OFF	7/22/2013	4:47 PM	5552	1900	
15 MIN FALLOFF	7/22/2013	4:52 PM	5545	1875	

Company:	CHEVRON	Recorded By:	T. STANCZAK
Well:	SKELLY UNIT # 902	Witnessed By:	
Field:	FREN	Truck Number:	104
County:	EDDY	District:	LEVELLAND
State:	NEW MEXICO	Tool Number:	
Disposal:	WATER	Test Type:	STEP RATE TESTS
Shut In Time:	4:37:00 PM	POSSIBLE SOFT FRAC @ 4320 B/D 2225 SURFACE PRESSURE 5708 BOTTOM HOLE PRESSURE	
Total Shut In Time:	15 MIN.		
Tubing Size:	3 1/2		
Open Hole:	8418'-10,534'		
Perforations:	8552'-70, 8718'-9766'		
Plug Back Depth	N/A		



CHEVRON

SKELLY UNIT # 902

July 22, 2013

JOB INFORMATION SHEET

Company Information	
Company Name:	CHEVRON
Address:	1500 LOUISIANA STREET HOUSTON, TX 77002
Well Information	
Well Name:	SKELLY UNIT # 902
Field – Pool:	FREN
Status:	DISPOSAL
Test Information	
Type of Test:	STEP RATE TEST
Gauge Depth:	8360'
Production Interval:	OH 8418'-10,513' PERFORATIONS: 8552'-70', 8718'-9766'
Production Through:	TUBING
Tubing Pressure:	2225 psi
Casing Pressure:	0 psi
Shut In Time	4:37 PM
Status:	DISPOSAL
Temperature @ Run Depth	98.22 degF
Surface Temperature:	86.06 degF
Comments	
POSSIBLE SOFT FRAC @ 4320 B/D 2225 PSI SURFACE 5708 BOTTOM HOLE PRESSURE	

GRAY WIRELINE

CHEVRON

WELL INFORMATION SHEET

Well:	SKELLY UNIT # 902		
Well License:		Unique Well Identifier:	30-015-29322
Company:	CHEVRON		
Field	FREN		

Location:		County:	EDDY
Formation:	WOLFCAMP	State:	NEW MEXICO
Purpose:	PRESSURE LOG	Country:	USA

Permanent Datum	KB	Elevation:	3870'
Vertical Zero Entity		Distance above PD:	17'

Open Hole Completion?	Y	(Y)es or (N)o
Casing Liner Present?	N	(Y)es or (N)o
Flow Regime	T	(T)ubing, (A)nnular, or (C)asing

Total Depth:	12,300'	ID Borehole:	7.875"
Packer Depth:	8360'	ID Production Casing:	5"
Depth of window:	8414'	OD Production Tubing:	3.5"
Depth at which casing is landed:	12,300' ft	ID Production Tubing:	2.9"
Depth at which tubing is landed:	8360' ft	ID Drill Pipe:	N/A

Gradient Data Report

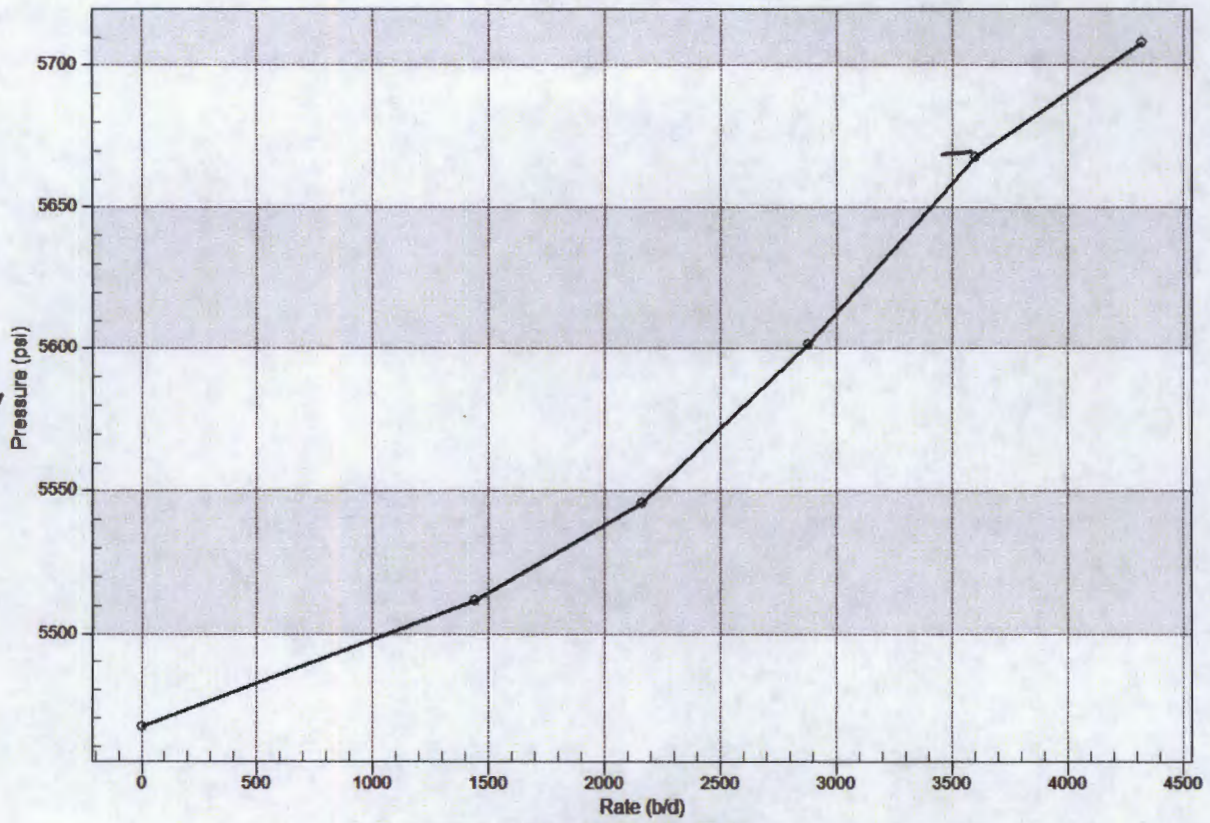
CHEVRON
SKELLY UNIT # 902

Gradient Data Table

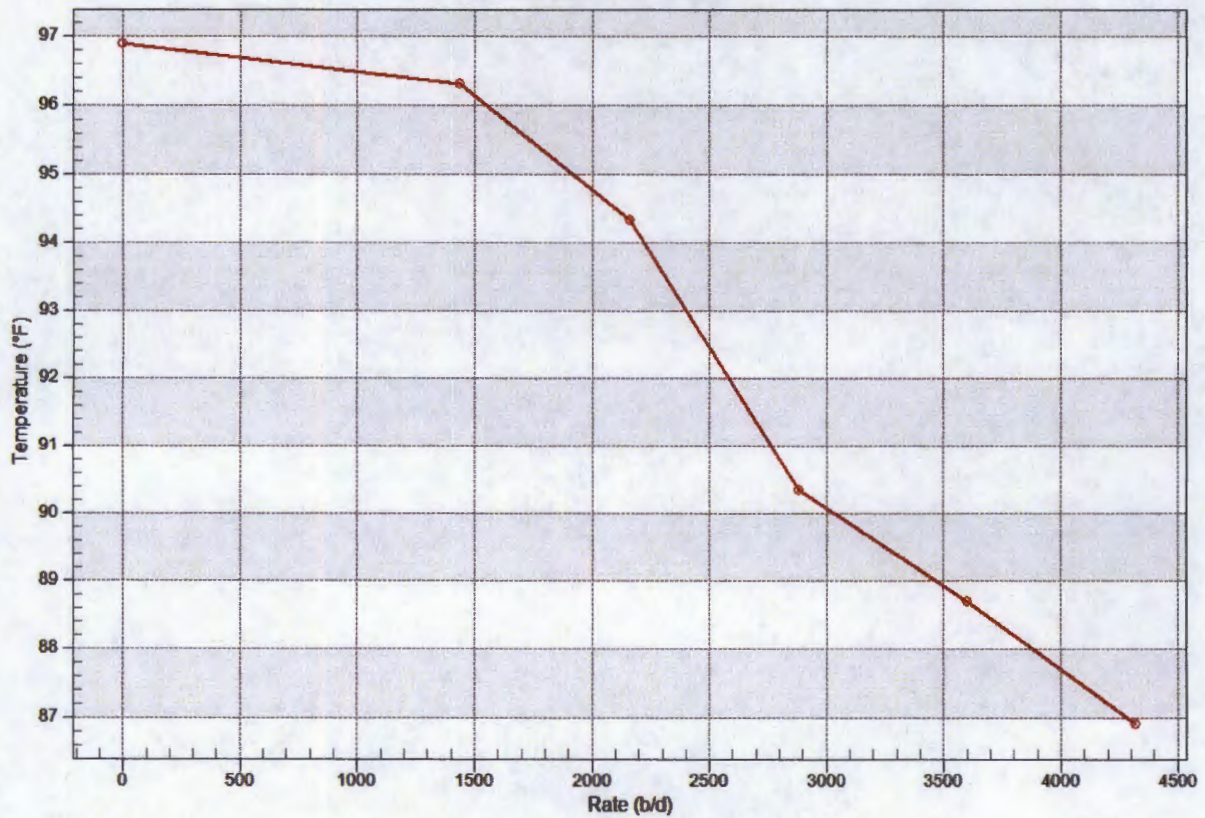
Rate b/d	Pressure psi	Temperature degF	Gradient psi/rate
0.00	5466.92	96.90	0.0000
1440.00	5511.59	96.32	0.0310
2160.00	5545.96	94.32	0.0477
2880.00	5601.54	90.33	0.0772
3600.00	5667.75	88.68	0.0920
4320.00	5708.05	86.90	0.0560

GRAY WIRELINE

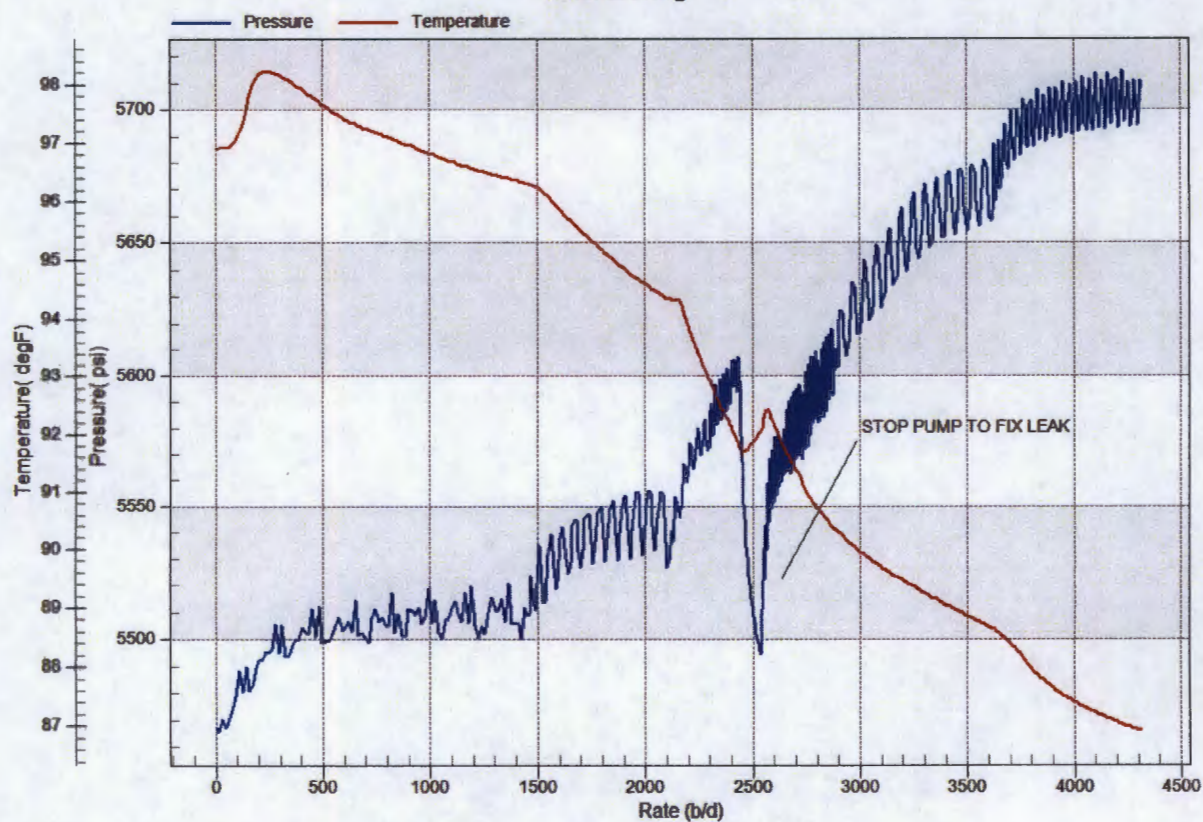
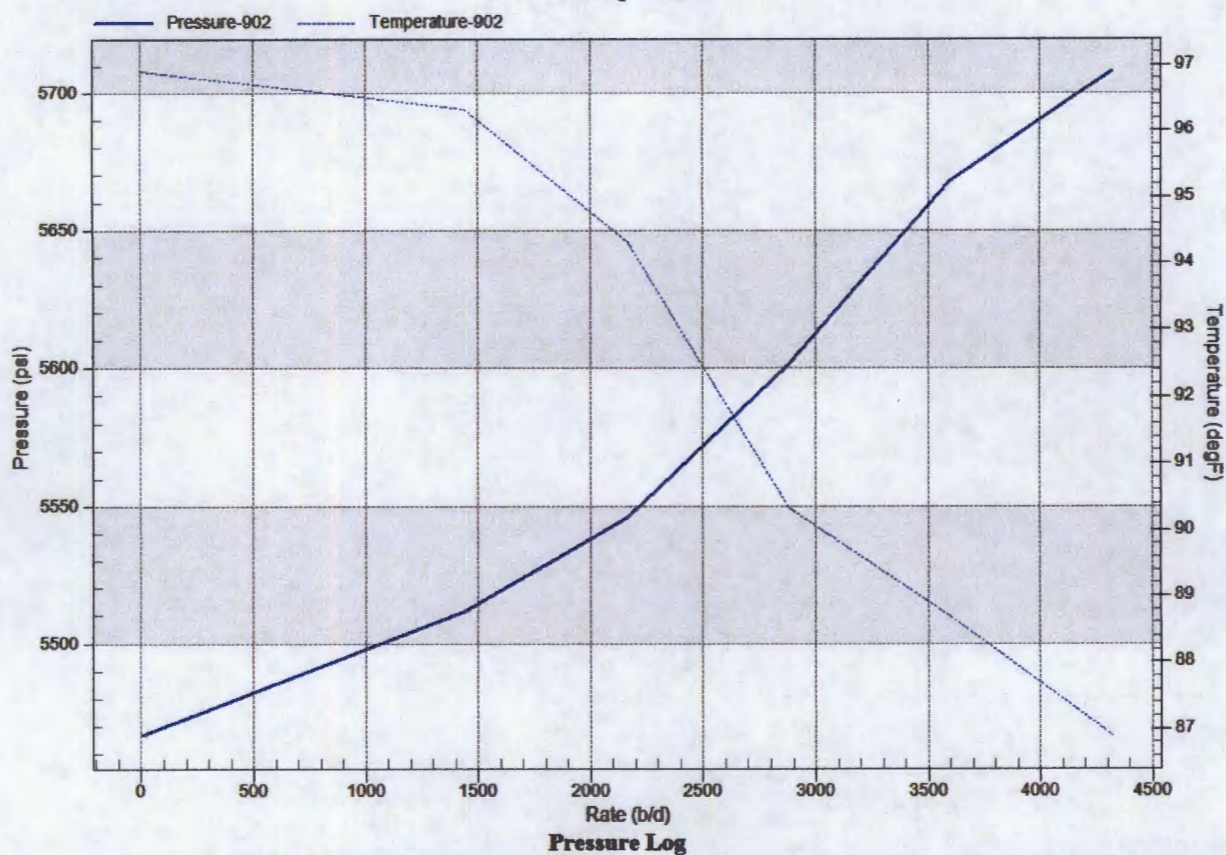
Pressure vs. Rate



Temperature vs. Rate



Pres/Temp vs Rate



Well: Skelly Unit #902

Field: Fren

Reservoir: Wolfcamp

Location:

1650' FNL & 990' FWL
 Section: 15 (SW/4 NW/4)
 Township: 17S
 Range: 31E Unit: E
 County: Eddy State: NM

Elevations:

GL: 3870
 KB: 3887
 DF: 3886

Log Formation Tops

Tansill	1658
Yates	1814
Seven Rivers	2115
Queen	2752
Grayburg	3140
San Andres	3494
Glorieta	5012
Tubb	6456
Abo	7160
Wolfcamp	8550
Strawn	11048
Atoka	11305
Morrow	11553
Chester	12130

Current
Wellbore Diagram

Well ID Info: BLM Well

Chevno: BO3157
 API No: 30-015-29322
 L5/L6: PH6 / 1000
 Spud Date: 1/26/97
 Rig Released: 3/22/97
 Compl. Date: 4/16/97

Surface Csg: 11 3/4" 42# WC-50

Set: @ 600 w/ 450 sx cmt
 Hole Size: 14 3/4" TO 600
 Circ: Yes TOC: Surface
 TOC By: Circulation (75 sx)

Intermediate Csg: 8 5/8" 32# K-55

Set: @ 5100 w/ 2000 sx cmt
 Hole Size: 11" to 5100
 Circ: Yes TOC: Surface
 TOC By: Circulation

Initial Completion:

4/97 (Morrow) perf 11980-90 (4 jsf) ; A/1000 gal 7 1/2% HCL

Subsequent Work

1/2000 CIBP @ 11930 w/35' cmt on top ; (Wolfcamp) perf 8552-70 (4jsf)
 A/1890 gal 20% NEFE HCL
 11/2000 CIBP @ 8430 ; KO Horizontal ; TOW 8418 ; BOW 8424
 Drilled to MD 10534 ; TVD 8550 ; A/60000 gal 20% HCL & 40000 gal WF-130
 POH w/whipstock & push CIBP to 11870

6/2011 Convert to SWD

3-1/2" IPC Tubing

Packer w/ on-of tool @ 8360'

Window @ 8418 to 8424**MD: 10534 ; TVD: 8530**

OH 8418-10534

Wolfcamp - open

8552-70

Wolfcamp - open

8718-9766

CIBP @ 9960' capped w/ 35' cmt

TAC @ 6591.17

Prod. Csg: 5 1/2" 17# WC-70
 Set: @ 12300 w/2500 sx cmt
 Hole Size: 7 7/8" to 12300
 Circ: Yes TOC: Surface
 TOC By: Circulation

CIBP @ 11870 pushed down not set**CIBP set @ 11930 w/35' cmt on top**

{ 11980-90

Morrow - closed

TD: 12300 COTD: 12085 PBD: 11870

Updated: 10-14-04 by WAYN

By: W.P. Johnson