

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

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

WELL API NO.	30-045-27935
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>	
6. State Oil & Gas Lease No.	

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.)		7. Lease Name or Unit Agreement Name SAN JUAN 32-8 UNIT
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other SWD <input type="checkbox"/>		8. Well Number 301
2. Name of Operator CONOCOPHILLIPS CO.		9. OGRID Number 217817
3. Address of Operator P.O. BOX 2197 WL3 6108 HOUSTON, TX 77252		10. Pool name or Wildcat SWD; MORRISON BLUFF ENTRADA
4. Well Location Unit Letter L : 1643 feet from the SOUTH line and 1006 feet from the WEST line Section 16 Township 31N Range 8W NMPM County SAN JUAN		
11. Elevation (Show whether DR, RKB, RT, GR, etc.)		
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>		
Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____		
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____		

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 ☐

SUBSEQUENT REPORT OF:

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

OTHER: Step rate test ☒

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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

ConocoPhillips requests approval to conduct a step-rate test on this well as per the attached procedure.

NOTIFY AZTEC OCD 48 hours
IN TIME TO WITNESS

NOTIFY AZTEC OCD
IN TIME TO WITNESS

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Deborah Marberry TITLE REGULATORY ANALYST DATE 08/01/2005

Type or print name DEBORAH MARBERRY
For State Use Only

E-mail address: deborah.marberry@conocophillips.com Telephone No. (832)486-2326

APPROVED BY: Charles Herrin

SUPERVISOR DISTRICT # 3 DATE AUG - 5 2005

Conditions of Approval (if any):



San Juan 32-8 #301 SWD Well

SWD Volumes & Pressures

<u>Prod Date</u>	<u>Volume (BBLs)</u>	<u>Ini Pressure (psig)</u>
May-03	7175	1960
June-03	9526	1950
July-03	6349	1950
August-03	14890	2050
September-03	16155	2040
October-03	14795	2050
November-03	11260	2050
December-03	17319	2100
January-04	11509	2010
February-04	12319	2050
March-04	14530	2050
April-04	7279	2040
May-04	6911	2040
June-04	2355	1950
July-04	6643	2040
August-04	7216	1950
September-04	15851	2010
October-04	16778	2040
November-04	18116	2040
December-04	18798	2130
January-05	18051	2100
February-05	13673	2100
March-05	16416	2100
April-05	15967	2100
May-05	11605	2100
June-05	9723	2100



**SAN JUAN 32-8 #301 SWD WELL
STEP RATE INJECTION TEST**

Prepared By: Ben Landry

25 July 2005

Objective : Perform a step-rate test to determine current formation parting pressure to establish a new maximum surface injection pressure.

Scope of Work: Run down hole pressure recorder, inject produced water at increasing rates to determine formation parting pressure.

Justification: A higher maximum injection pressure is needed in order to inject the volume of water currently being produced.

WELL DATA

API: 30-045-27935

TWN: 31 N **RNG:** 8 W **Section:** 16

Lat: 36.89467 N **Long:** 107.68642 W **1643' FSL, 1006' FWL**

KB Elev: 6634' **GL Elev:** 6621' **TD:** 9401'

Injection Zones: Morrison, Bluff, & Entrada

Perforation Depths: 8444' – 9200' KB

CURRENT WELLBORE INFORMATION

	OD (in)	Depth (ft)	Drift (inches)	Weight (#/ft)	Grade	Burst (psi)	Collapse (psi)	Cmt top
Surface	20	464	19.124	94.0	H-40	1530	520	Surface
Production Casing	13-3/8	3097	12.415	68.0	K-55	3450	1950	Surface
Production Casing	13-3/8	3097-3815	12.191	72.0	N-80	5380	2670	Surface
Production Liner	9-5/8	4852	8.835	40	L-80	5750	3090	3700'
Production Liner	9-5/8	4852-6998	8.835	40	S-95	6820	3330	3700'
Production Casing	7	178	6.184	29	L-80	9060	8600	5000'
Production Casing	7	178-390	6.151	26.0	N-80	7240	5410	5000'
Production Casing	7	390-9398	6.276	26.0	S-95	8600	5870	5000'
Packer - Baker SC-1L	N/A	8344	N/A	N/A	N/A	N/A	N/A	N/A
'F' Nipple	N/A	8617	2.810	N/A	N/A	N/A	N/A	N/A
Tubing	3-1/2	8694	2.992	9.3	N-80	10,160	10,530	N/A

2005 INJECTION VOLUMES AND PRESSURES

Month - 2005	Water Volume Injected, BBLs	Injection Pressure, PSI
January	18051	2100
February	13673	2100
March	16416	2100
April	15967	2100
May	11605	2100
June	9723	2100

Well History					
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> SAN JUAN 32 8 UNIT #301 SWD </div> </div>					
API/Bottom Hole UWI	Surface Legal Location	Field Name	BU/IV	Latitude (DMS)	Longitude
300452793500	NMPM-31N-08W-16-L	SAND: MORRISON-BLUFF-ENTRA	Lower 48 - MA	0° 0' 0" N	0° 0' 0" E
Well Type	Well Configuration Type	Original KB Elevation (ft)	KB: Ground Distance (ft)	KB: CF (ft)	ConocoP
Disposal	Vertical	6,634.00	13.00		
Date	Bolt				
9/14/1990	Casing Strings: Casing Description: Surface Casing; Set Depth: 464.0 ftKB; Comment:				
9/14/1990	Cement: Description: SURFACE CASING CEMENT; Eval Res: ; Comment:				
9/14/1990	Wellbore Sections: Section: ; Size: 26 in; Act Top: 13.0 ftKB; Act Btm: 464.0 ftKB				
9/14/1990	Wellbore Sections: Section: ; Size: 17 1/2 in; Act Top: 464.0 ftKB; Act Btm: 3,815.0 ftKB				
9/19/1990	Casing Strings: Casing Description: Intermediate Casing; Set Depth: 3,815.0 ftKB; Comment:				
9/19/1990	Cement: Description: INTERMEDIATE CASING CEMENT; Eval Res: ; Comment:				
9/19/1990	Wellbore Sections: Section: ; Size: 12 1/4 in; Act Top: 3,815.0 ftKB; Act Btm: 6,998.0 ftKB				
10/15/1990	Casing Strings: Casing Description: Liner; Set Depth: 6,998.0 ftKB; Comment:				
10/15/1990	Cement: Description: LINER CEMENT; Eval Res: ; Comment:				
10/15/1990	Wellbore Sections: Section: ; Size: 8 3/4 in; Act Top: 6,998.0 ftKB; Act Btm: 9,398.0 ftKB				
10/30/1990	Casing Strings: Casing Description: Production Casing; Set Depth: 9,398.0 ftKB; Comment:				
10/30/1990	Cement: Description: PRODUCTION CASING CEMENT; Eval Res: ; Comment:				
10/31/1990	Cement: Description: PLUGBACK; Eval Res: ; Comment:				
12/17/1990	Stimulations & Treatments: Zone: Entrada, Main Hole (0 - 2852); Type: Hydraulic Frac-Other; Comment:				
12/17/1990	Perforations: Zone: ; Top: 8,751.0 ftKB; Btm: 8,920.0 ftKB; Shot Dens: shots/ft				
12/17/1990	Perforations: Zone: ; Top: 8,790.0 ftKB; Btm: 8,920.0 ftKB; Shot Dens: shots/ft				
12/17/1990	Perforations: Zone: ; Top: 9,030.0 ftKB; Btm: 9,148.0 ftKB; Shot Dens: shots/ft				
12/17/1990	Perforations: Zone: ; Top: 9,130.0 ftKB; Btm: 9,150.0 ftKB; Shot Dens: shots/ft				
12/17/1990	Perforations: Zone: ; Top: 9,150.0 ftKB; Btm: 9,200.0 ftKB; Shot Dens: shots/ft				
12/27/1990	Stimulations & Treatments: Zone: Entrada, Main Hole (0 - 2852); Type: Hydraulic Frac-Other; Comment:				
1/7/1991	Tubing Strings: Tubing Description: Production Tubing; Set Depth: 8,660.1 ftKB; Comment:				
1/7/1991	Other In Hole: Description: PACKER; Top: 8,358.0 ftKB; Btm: 8,363.0 ftKB; OD: 4 1/2 in				
1/7/1991	Other Strings: String Description: Tail Pipe; Set Depth: 8,694.0 ftKB				
2/13/1992	Perforations: Zone: ; Top: 8,444.0 ftKB; Btm: 8,638.0 ftKB; Shot Dens: shots/ft				
2/14/1992	Stimulations & Treatments: Zone: Entrada, Main Hole (0 - 2852); Type: Hydraulic Frac-Other; Comment:				

Well History Continued

2.13.92: Perforated Morrison formation from 8444' – 8636' KB with 1 spf. Broke down perms with 7-1/2% HCl. Frac'ed Morrison with 3565 bbls gelled water and 305,000 lbs of 20/40 sand, max pressure 3890 psi, ISIP 3760 psi, average treating pressure 3400 psi at average rate of 75 bpm. Set packer at 8358' KB and reran 3-1/2" IPC tubing. Tested tubing-casing annulus to 3000 psi for 15 minutes.

1.14.94: RU Western and pumped step rate test using produced water as follows:

Established injection:

3 bpm @ 1900 psi, 15 bbls

2 bpm @ 1850 psi, 20 bbls

Step rate test:

1.5 bpm @ 1850 psi, 30 bbls

2.5 bpm @ 1900 psi, 30 bbls

3.5 bpm @ 1925 psi, 30 bbls

2.0 bpm @ 1925 psi, 5 bbls

Pumped 1 drum Tretolite WAW 100 surfactant with 4 bbls of produced water, displaced surfactant with 100 bbls at 2 bpm, restarted step rate test.

1.5 bpm @ 1950 psi, 30 bbls (had 50 psi increase half way through stage)

2.5 bpm @ 2050 psi, 30 bbls

3.5 bpm @ 2100 psi, 30 bbls

ISIP = 1950 psi, 5 minute pressure 1950 psi

Returned well to injection, pressured up to 2100 psi in less than 15 minutes.

Shut well in, SITP = 1825 psi. Flowed back 400 bbls of water in 33 minutes, initial FTP = 200 psi through a 2" ball valve. Initial SICP = 160 psi, increased to 172 psi due to warm flow back water. Flow back water was clear, no change of color. Shut well in, SITP = 1500 psi and increased to 1725 psi in 27 minutes.

1.17.94: MI & RU wire line, RIH with 1.425" drift to 9274' WLM, records show bottom of perms at 9200' KB and TD of 9398' KB. RIH with 3.000" drift to profile nipple at 8358' WLM.

- 6.22.94: MI & RU equipment; established injection rate of 2 bpm @ 2100 psi with produced water. Pumped 200 gals 50/50 xylene/alcohol mixture @ 2 bpm and 2100 psi, increased rate to 7 bpm @ 2950 psi and pumped 100 bbls of produced water, then shut down. ISIP = 2100 psi. After one hour, SITP = 2061 psi. Flowed back 150 bbls of water. Pumped 200 gals of 50/50 xylene/alcohol mix at 2 bpm @ 2100 psi, increased rate and pumped 150 bbls of produced water at 7.1 bpm @ 2950 psi to over displace mixture into formation. ISIP = 2100 psi. Shut in well, after 1 hour, SITP = 2030 psi. Flowed back 375 bbls. Pumped 100 gals of 50/50 xylene/alcohol mixture at 2.4 bpm @ 2100 psi, increased rate to 7.7 bpm @ 2950 psi and pumped 100 bbls of produced water. ISIP = 2100 psi. SITP = 1990 psi in 30 minutes. Put well back on injection.
- 3.30.01: Tested tubing-casing annulus to 500 psi, O.K. Pumped 5000 gals of 7-1/2% HCl and displaced to 8400' KB with produced water. ISIP of 2100 psi.

Safety

Safe operations are of utmost importance at all ConocoPhillips properties and facilities. To further this goal, the Project Lead at the location shall conduct tailgate safety meetings prior to initiation of work, following each change in tour (to review all operations projected during the tour), and also prior to any critical operations. These tailgate safety meetings shall be attended by all Company, contract and service personnel then present at the location. All parties shall review proposed upcoming steps, procedures and potentially hazardous situations. Occurrence of these meetings shall be recorded in the Daily Report.

All personnel arriving on location shall check in with the Project Lead. Safety glasses, hard hats and hard-soled shoes will be worn on location.

No Smoking is allowed on location. The Project Lead will set up a designated smoking area. No individual should have matches, lighters, pipes, cigarettes, or cigars on his person within 75 feet of the well.

Emergency/helicopter response information is attached, including driving directions.

Prior to each wellsite operation, a pre-job safety meeting should be held with all personnel on location. ConocoPhillips safety requirements, contingency plans, procedures, equipment layout and hook-up, and all other safety concerns should be discussed thoroughly before the job begins in JSA. Additionally, ensure any and all equipment has proper certification, pressure ratings and compliant inspections. Occurrence of PJSA shall be recorded.

All personnel arriving on location shall check-in with Project Leader. No additional personnel will be allowed on location post-safety meeting after or during operation discussed in safety meeting has commenced.

When spotting equipment on location, only one piece of equipment may move at a time with two ground men as spotters required.

MAXIMUM ANTICIPATED STIMULATION SURFACE TREATING PRESSURE: 3000 psi



SJ 32-8 #301 STEP-RATE TEST

PROCEDURE:

1. Shut the well in for at least 24 hours or until the shut-in pressure stabilizes prior to the test.
2. Hold a pre-job safety meeting and document in WellView.
3. MI & RU filter unit, injection pump and pressure recorder, pump discharge/flow back manifold, and flow back tank.
4. MI & RU slick line equipment. RIH with dual 10,000 psi pressure recorders to 8660' WLM. Make sure pack off is in good working order and can hold at least 3000 psi surface pressure, close wire line valve. Have slick line personnel stand by with gauges in the hole.
5. Test all lines and equipment exposed to pressure to 3000 psi, including the wire line lubricator.
6. The pumping service personnel shall provide a continuous graph of injection rate vs. pressure to determine the break-over point, which is a clear a change of slope on the graph.
7. Note the initial shut in tubing pressure, production casing and bradenhead pressures at the beginning of the test and record the production casing and bradenhead pressures at every step change. The test shall stop if the production casing pressure increases substantially or if any pressure is seen on the bradenhead above starting pressure.
8. Establish injection at approximately ¼ bpm with filtered produced water.
9. Begin pumping filtered produced water at a ¼ bpm. The first two step rates shall be

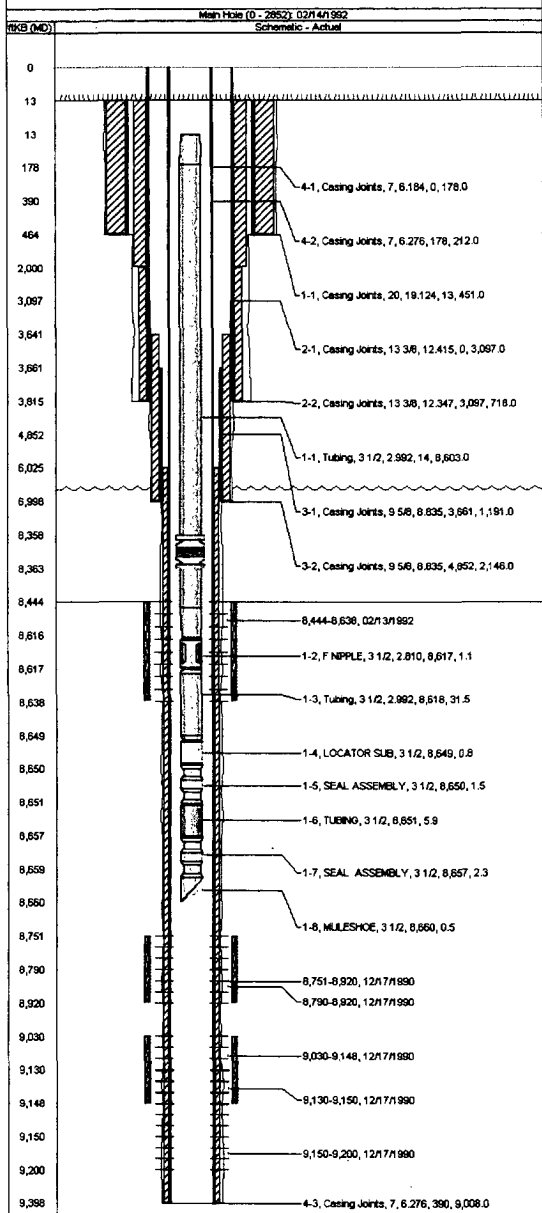
at an injection pressure at or below 1689 psi. If $\frac{1}{4}$ bpm is too high to maintain a pressure below 1689 psi, decrease the pump rate. Continue injection for the following incremental rates in barrels per minute until break-over occurs, then continue for three steps after break over: $\frac{1}{2}$, $\frac{3}{4}$, 1, 1- $\frac{1}{4}$, 1- $\frac{1}{2}$, 1- $\frac{3}{4}$, 2, 2- $\frac{1}{4}$, 2- $\frac{1}{2}$, 2- $\frac{3}{4}$, 3, etc. Each step shall be maintained for fifteen minutes. Step duration cannot change during the test.

10. Shut down pump and record the ISIP. Start flow back immediately after the step-rate test and record pressure for at least fifteen minutes after injection shutdown.
11. Pull pressure gauge from well bore, RD wire line.
12. RD & MO pumping equipment. Fill out the job report in WellView.

Attachments:

Emergency Response Sheet
Phone Contact list
Wellbore schematic
Equipment Layout Diagram

Complete Well Summary **SAN JUAN 32 & UNIT #301 SWD**



data last updated on 07/27/2005 5:54 PM gmt
 printed on Thursday, July 28, 2005
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www.peloton.com

API/Bottom Hole UWI 300452783500		Operator CONOCOPHILLIPS CO		Edit	
Original KB Elevation (ft) 6,634.00		KB Ground Distance (ft) 13.00		Spud Date 08/14/1990	
Surface Legal Location NMPM-31 N-08W-16-L		Latitude (DMS) 0° 0' 0" N		Longitude (DMS) 0° 0' 0" E	
Main Hole (0 - 2852)		Wellbore AP/UMI		Btm. Loc.	
Proposed Deviation Survey		Deviation Survey		Profile Type	
Size (in)		Act Top (ftKB)		Act Btm (ftKB)	
28		13.0		481.0	
17 1/2		464.0		3,815.0	
12 1/4		3,815.0		6,998.0	
8 3/4		6,998.0		9,398.0	
PBDTs					
Date		Depth (ftKB)		Method	
Date		Depth (ftKB)		Method	
Formations					
Formation Name		Geologic Age		Element Type	
Gallup				H2S (ppm)	
Fruitland				Final Top MD (ftKB)	
Dakota				Final Top TVD (ftKB)	
Entrada					
Point Lookout					
Cliff House					
Manatee					
Kortland					
Morrison					
Green Horn					
Ojo Alamo					
Kimmeron, Jb...				8,444.0	
Mancos					
Deviation Surveys					
Date		Description		Prop?	
Date		Description		Definite?	
Reservoirs					
Reservoir Name		Depth Top (ftKB)		Depth Btm (ftKB)	
Reservoir Name		Depth Top (ftKB)		Depth Res Datum (ft KB)	
Surface Casing 464.0 Planned=No					
Run Date		Centralizers		Scratchers	
08/14/1990					
OD (in)		Item Description		Btm (ftKB)	
20		Casing Joints		464.0	
ID (in)		Wt (kips)		Grade	
19.124		42.4		H-40	
Intermediate Casing 3,815.0 Planned=No					
Run Date		Centralizers		Scratchers	
08/19/1990					
OD (in)		Item Description		Btm (ftKB)	
13 3/8		Casing Joints		3,087.0	
13 3/8		Casing Joints		3,815.0	
ID (in)		Wt (kips)		Grade	
12.415		210.6		N-80	
12.347		511.7		N-80	
Liner 6,998.0 Planned=No					
Run Date		Centralizers		Scratchers	
10/15/1990					
OD (in)		Item Description		Btm (ftKB)	
9 5/8		Casing Joints		4,852.0	
9 5/8		Casing Joints		6,998.0	
ID (in)		Wt (kips)		Grade	
8.835		147.8		L-80	
8.835		65.9		S-95	
Production Casing 9,398.0 Planned=No					
Run Date		Centralizers		Scratchers	
10/30/1990					
OD (in)		Item Description		Btm (ftKB)	
7		Casing Joints		178.0	
7		Casing Joints		390.0	
7		Casing Joints		6,398.0	
ID (in)		Wt (kips)		Grade	
6.184		5.2		L-80	
6.276		5.5		N-80	
6.276		234.2		S-95	
SURFACE CASING CEMENT, casing, 08/14/1990 00:30					
Cementing Company		Evaluation Method		Cement Evaluation Results	
Stg No. 1		Description		Top (ftKB)	
1		SURFACE CASING CEMENT		13.0	
Fluid		Class		Amount (sacks)	
				Yield (ft/sack)	
				Mix H2O Ratio (gal/sack)	
				V (bbt)	
				Fluid Des	
INTERMEDIATE CASING CEMENT, casing, 08/19/1990 00:30					
Cementing Company		Evaluation Method		Cement Evaluation Results	
Stg No. 1		Description		Top (ftKB)	
1		INTERMEDIATE CASING CEMENT		2,000.0	
Fluid		Class		Amount (sacks)	
				Yield (ft/sack)	
				Mix H2O Ratio (gal/sack)	
				V (bbt)	
				Fluid Des	
Stg No. 2					
2		Description		Top (ftKB)	
				13.0	
Fluid		Class		Amount (sacks)	
				Yield (ft/sack)	
				Mix H2O Ratio (gal/sack)	
				V (bbt)	
				Fluid Des	

32-8 #301 SWD TEST EQUIPMENT LAYOUT DIAGRAM

