

DATE IN 07/15/13	SUSPENSE	PG ENGINEER	LOGGED IN 07/16/2013	TYPE IPI	APP NO. AK1319732286
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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 IPI-423
- 30-015-21748*
Greenhorn SWD LLC
Green A Fed 10

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

James B Campanella		Member/Manager	7-11-2013
Print or Type Name	Signature	Title	Date
		jbc@judahoil.com	
		e-mail Address	

Geronimo SWD, LLC

Date: 7-11-2013

To: William V. Jones
OCD

Reference: Step-Rate-Test on Green "A" Fed No 10 (F-29-T17S-R28E)
API # 30-015-21748, Date June 19, 2012

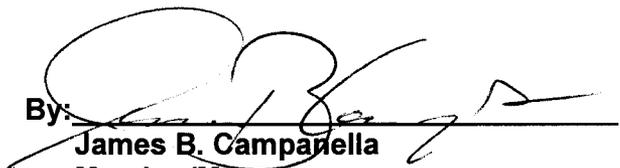
Dear Sir,

Please find the certified report on the subject Step-Rate-Test report and prepared by Van S. Welch II, PE State of Texas # 66291. As presented in this report, the subject well did not fracture up to a surface pressure of 2850 psi and 5483 psi bottom-hole pressure (@ 9450' KB – mid perms). Based on these results, Geronimo SWD, LLC, as operator of this well, respectfully requests the limiting surface pressure be increased from 1844 psi to 2800 psi (50 psi below the highest pressure recorded at the surface).

For information, a previous SRT was run on this well August 14, 2012 when it had 2-7/8 inch coated tubing. From that SRT the BLM/OCD granted increasing the limiting pressure from 1844 psi to 2500 psi. Ultimately it was decided to keep the 1844 psi limit and run 3-1/2" Du-O-Line tubing and the well has been running at approximately 1700 psi since changing out the tubing. However, due to increased public demand in the is area for SWD, it was decide to run this new SRT to see if a higher injection pressure limit could be achieved without fracturing the formation.

The BLM is being advised simultaneously of this pressure increase request.

Geronimo SWD, LLC

By: 

James B. Campanella
Member/Manager

$$\frac{2800 \text{ psi}}{9220 \text{ ft}} = 0.303 \text{ psi/ft}$$

RECEIVED OCD
JUL 15 P 2:25

GERONIMO SWD, LLC

Review of Step-Rate Test Dated June 19, 2013

Green "A" Federal No. 10

API # 30-015-21748

F-29-T17S-R28E

Date : June 2013

DISCLAIMER - THIS REVIEW IS BASED ON THE INFORMATION COLLECTED ON LOCATION BY VAN WELCH, PE, OF VSW2 E&P, LLC (VSW2), DURING A STEP-RATE-TEST ON THE GREEN "A" FED NO. 10. THE INFORMATION COLLECTED WAS FROM PACESETTER SERVICES (SURFACE RATES AND PRESSURES) AND PRO WELL TESTING & WIRELINE, INC (BHP DATA). ALL DATA WAS ACCEPTED AS TRUE AND VALID. VSW2 DOES NOT GUARANTEE THE RESULTS OF ANY ACTIONS TAKEN BASED ON THIS REVIEW NOR DOES VSW2 ACCEPT ANY RESPONSIBILITY FOR ANY DECISIONS OR ACTIONS TAKEN BY GERONIMO SWD, LLC. ANY PARTNERS TO GERONIMO SWD, LLC, ANY ASSOCIATES OF GERONIMO SWD, LLC AND/OR OTHER THIRD PARTIES OR AGENCIES (PRIVATE OR GOVERNMENTAL) WITH WHOM GERONIMO SWD, LLC MAY SHARE THIS REVIEW.

Prepared by:

Van S. Welch II, PE # 66291 State of Texas

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Technical Review

Preface

This is a review prepared by **VSW2 E&P, LLC.** (VSW2) of Duncan, Oklahoma. Mr. Van Welch, **Professional Engineer (No. 66291 State of Texas)** has performed the "Technical Review" of the Step-Rate-Test (SRT) conducted on the Green "A" Fed No. 10, Eddy Co. New Mexico on June 19, 2013. Mr. Welch was physically present to collect all necessary data and assure that the Step-Rate-Test was properly performed in accordance with industry standards. The SRT program and pressure data collection met industry standards.

Disclaimer – VSW2 does not accept any responsibility for any decisions or actions taken by Geronimo SWD, LLC (its Partners, any associates of Geronimo SWD, LLC, third-parties or governmental agencies) relative to this "Technical Review". Due to the many uncertainties relative to individual wells and reservoirs, VSW2 cannot make any guarantees as to the best practices for future reservoir performance on the Green "A" 10 as presented in this document.

Summary Result

As discussed in the review, the surface and bottom-hole pressure (BHP) data establish that the well has not fractured up to a surface pressure of 2850 psi or 5483 psi bottom-hole @9450' KB (9431' GL). During the test, the well-head started vibrating more than usual during the 4 BPM injection period and for safety reasons, that injection period was reduced from 30 minutes to 20 minutes. As a result, the ending pressure for this injection rate period is low as pointed out on the step-rate =-pressure graphs. The reduced injection period did not effect the interpretation showing that the formation did not fracture during the test.

Discussion

Mr., Welch collected surface and BHP data from a SRT conducted on June 19, 2013. The surface data set on the SRT are included as **Appendix I** which is a copy of Rising Star Services surface pressure and rates. **Appendix II** is a copy of Pro Well Testing & Wireline, Inc BHP report which is only presented in graphic form. VSW2 included an extraction of the critical ending BHP for each rate increase from Pro Well's extended file which records pressure every 6 seconds. If the BLM or OCD desire this extended pressure file, please advice.

The procedures used in the SRT were as follows:

1. Run Bottom-Hole Gauge to 9431 ft GL; 9450 ft KB (Perfs 9220-9600 ft KB)
2. Start Rate 2.0 BPM constant for approximately 30 Minutes and Record Pressures
3. Increase Rate to 4.0 BPM for approximately 30 Minutes and Record Pressures
4. Increase Rate to 6.0 BPM for approximately 30 Minutes and Record Pressures
5. Increase Rate to 8.0 BPM for approximately 30 Minutes and Record Pressures
6. Increase Rate to 9.0 BPM for approximately 30 Minutes and Record Pressures
7. SI Record Surface ISIP and 5 Minute SIP's

Figure 1 illustrates the wellbore at the time of the SRT.

2207 Fairway Dr, Duncan OK, 73533 Cell 281.635.1718 Fax 509.562.9684			
June 2013	Confidential	Page	5/13

GERONIMO SWD, LLC
 GREEN "A" FED NO 10
 API # 30-015-21748
 1980' FSL - 1980 FWL
 F-29-T17S-R28E NMPM, EDDY CO, NM

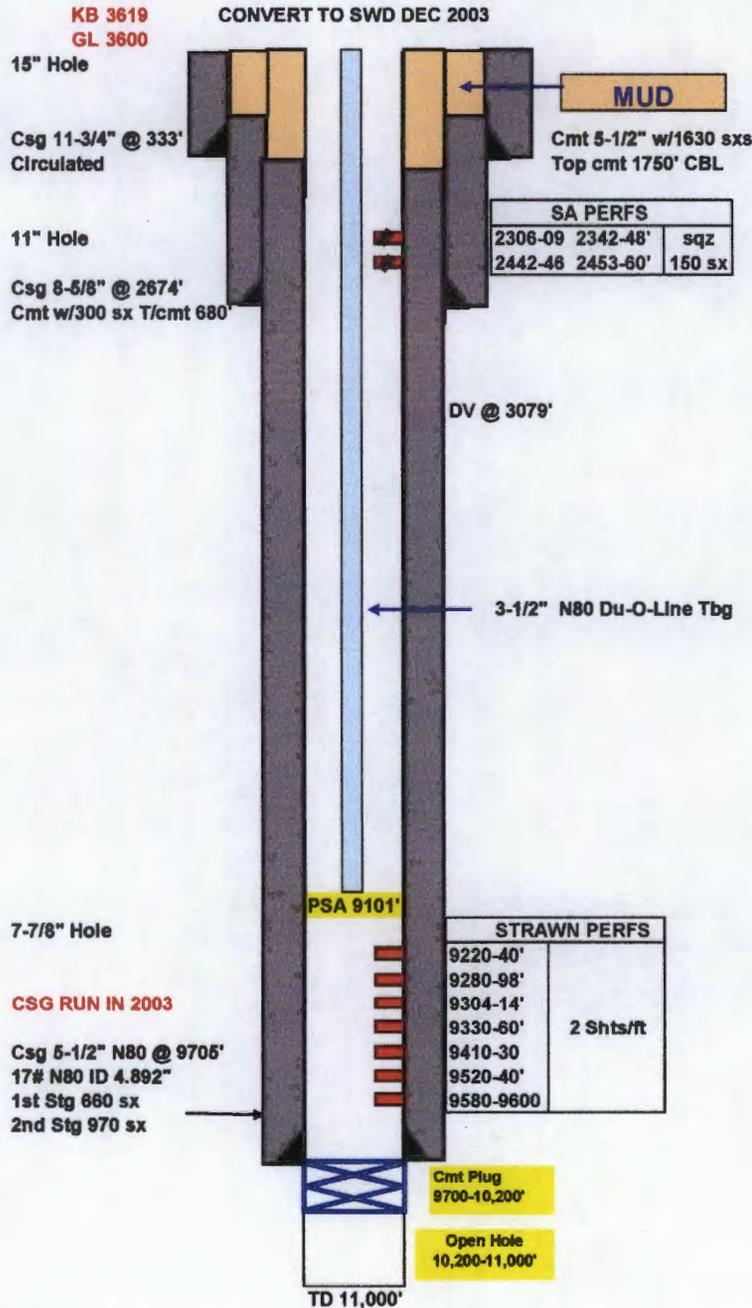


Figure 1 Wellbore Diagram

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This review included graphing the data collected by Mr. Welch in a standard SRT format of plotting the surface and BHP at the end of each 30 minute (approx) injection period as a function of injection rate. Data used for these plots are shown in Table 1. Note that there was a slight discrepancy between the surface and down-hole pressure gauge times, the times shown are from the BHP gauge.

Table 1: SRT Pressure Data

GREEN "A" FED No 10			
Ending Time	Rate BPM	Surface Final PSI	BHP Final PSI
9:19	0	355	4848
9:47	2	506	4895
10:07	4.4	950	4981
10:36	6.2	1575	5144
11:05	8.3	2275	5326
11:34	9.3	2850	5483

The surface and bottom-hole graphs of this data are shown in Figure 2, surface pressure, and Figure 3, bottom-hole pressure.

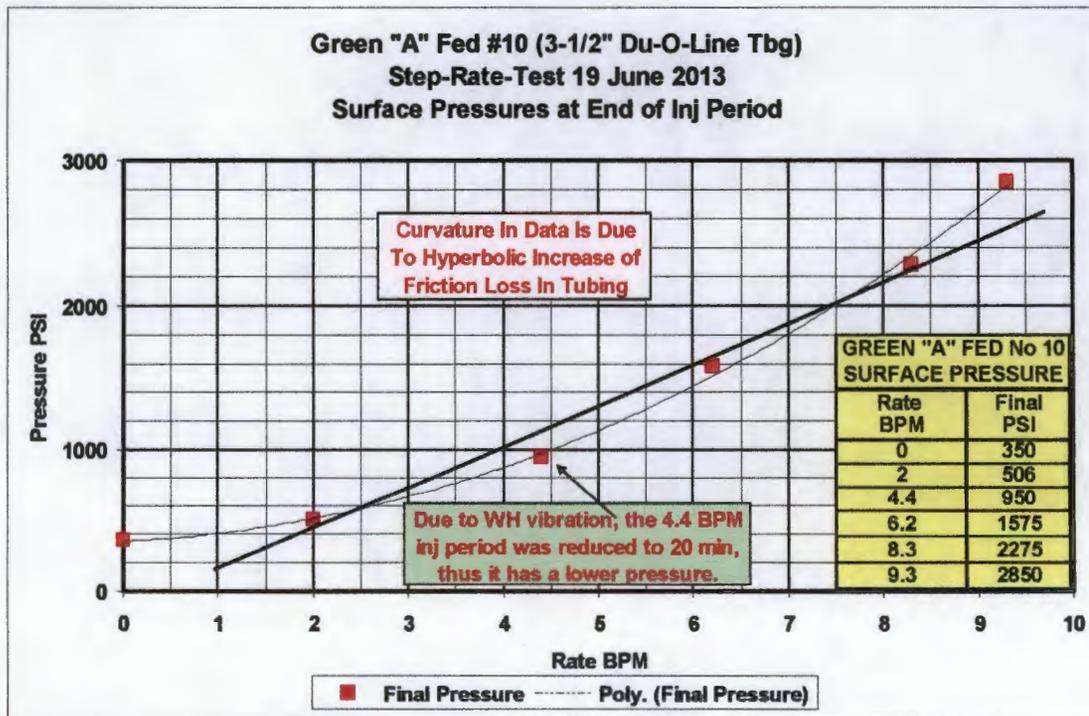


Figure 2: Surface Pressure SRT

Mr. Welch received the complete BHP data file from Pro Well which had pressures on 6 second readings. The report attached from Pro Well only has graphical data. Mr. Welch extracted the starting and end pressures for each strep rate and included it in Appendix II.

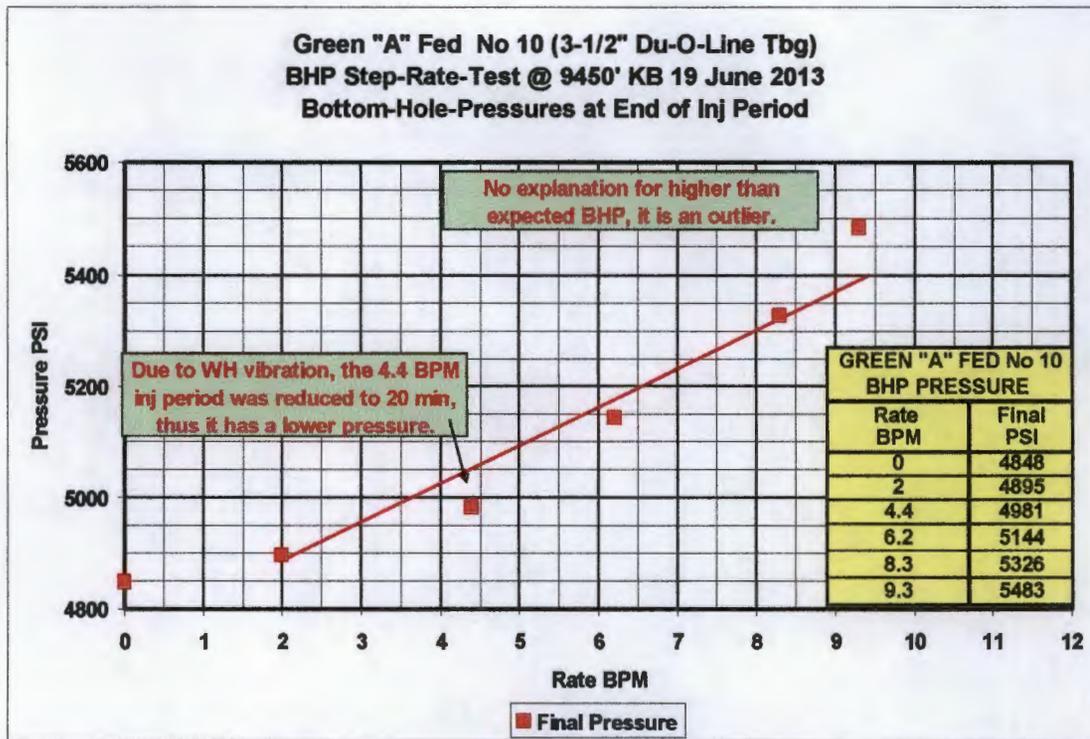


Figure 3: Bottom-Hole Pressure SRT

Both pressure graphs are representative of a typical SRT illustrating a continued straight-line increase in pressure with each rate increase. Neither graph illustrates the characteristic break associated with fracturing the reservoir in which the pressure increase is significantly reduced with each incremental increase in rate.

For information, a previous SRT was run on this well August 14, 2012 when it had 2-7/8 inch coated tubing. From that SRT the BLM/OCD granted increasing the limiting pressure from 1844 psi to 2500 psi. Ultimately it was decided to keep the 1844 psi limit and run 3-1/2" Du-O-Line tubing and the well has been running at approximately 1700 psi since changing out the tubing. However, due to public demand in the area, it was decided to run this new SRT to see if a higher injection pressure limit could be achieved without fracturing the formation.

Van S. Welch II
 Van S. Welch II, PE
 V&C Properties, LLC.
 President
 Professional Engineer State of Texas (PE No. 66291)

Seal

Appendix :1 Pacesetter Surface Rate and Pressure Report



Field Receipt

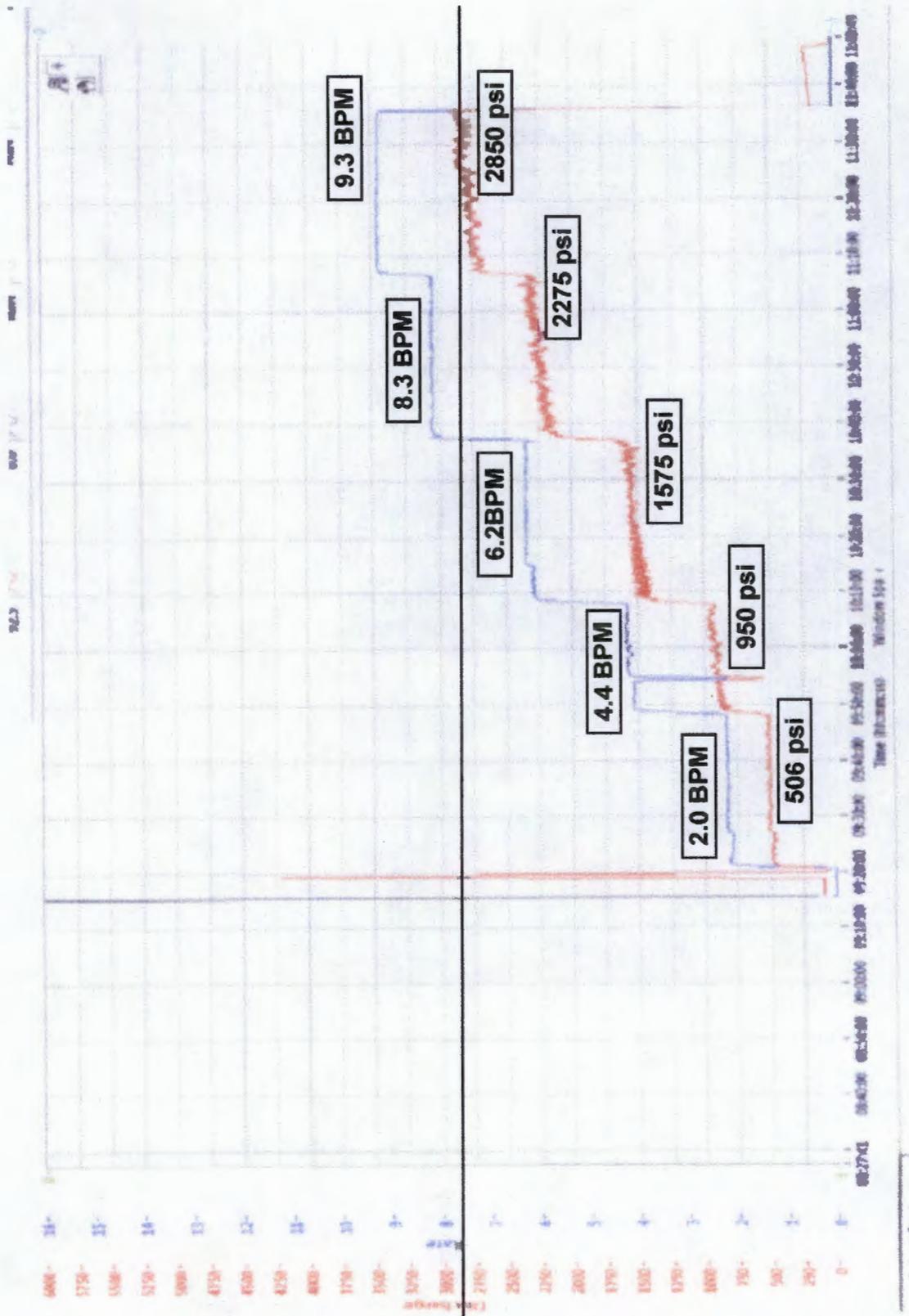
C20130658

Customer: Judah Oil
Date: 6/19/2013

Lease: GREEN "A" FED
Well: 10
Job Type: STEP RATE TEST

Time	Injection Rate:		Job Pressures		Job Log
	Rate:	Bbls in	Tbg psi	Csg psi	
09:00AM					SAFETY MEETING
09:18AM				4309	TEST LINE
09:19AM					OPEN WELLHEAD
09:20AM	2	60		506	START TEST
09:50AM	4.4	80	60	850	INCREASE RATE
10:08AM	6.2	180	140	1510	INCREASE RATE
10:37AM	8.3	240	380	2213	INCREASE RATE
11:01AM	9.3	270	530	2638	INCREASE RATE
11:36AM			530	568	SHUTDOWN ISIP=968
11:40AM				800	5 MINUTE
11:45AM				710	10MINUTE
11:46AM				700	SHUT IN WELL RIG DOWN
					ALL RATES ARE THE AVERAGE FOR THAT STAGE
					GOOD JOB BY CREW

NOTE: These are actually Strat of Inj Period Tubing Pressures



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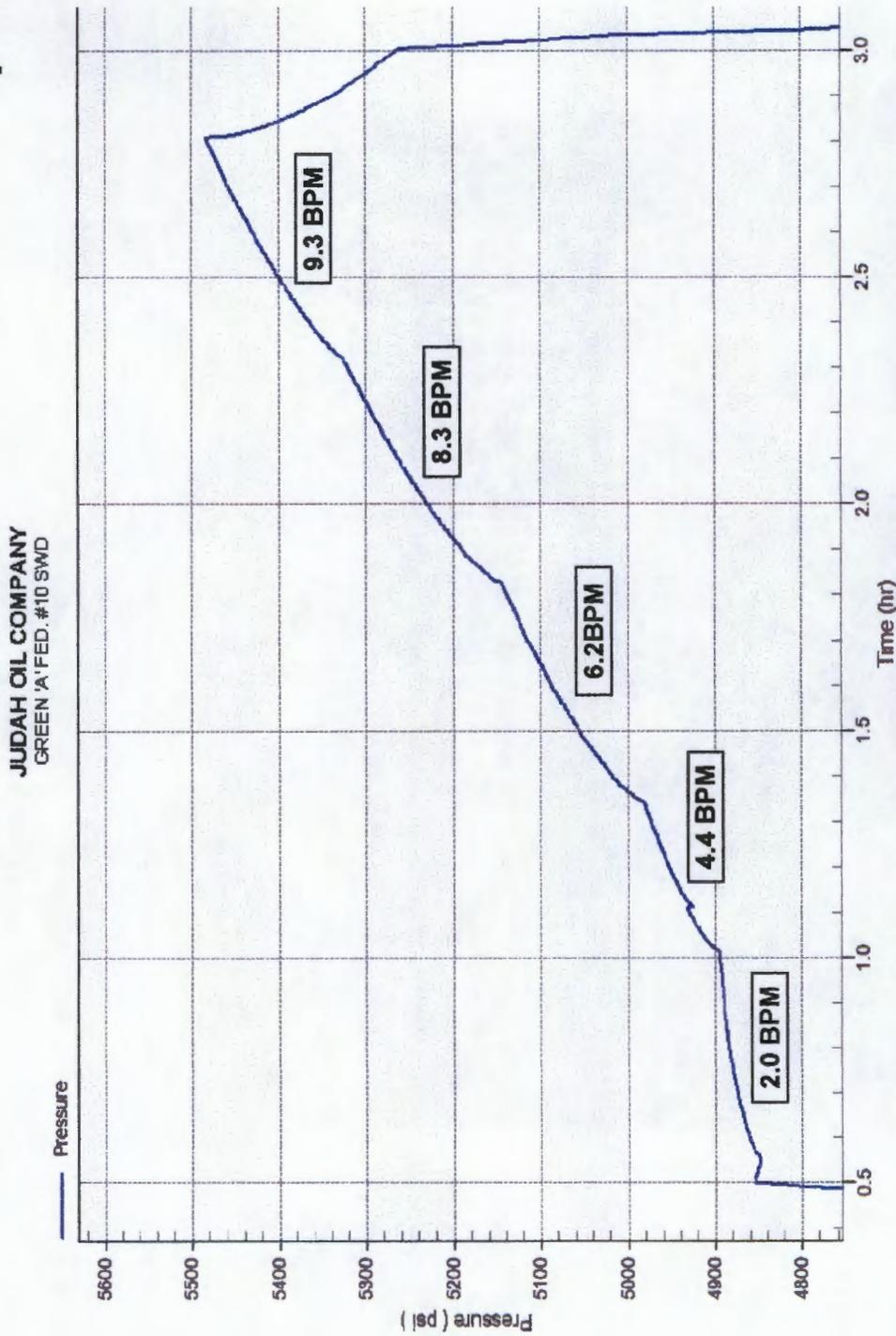
Appendix :2 Pro Well Testing Bottom-Hole Pressure Report



BUILDUP JOB INFORMATION SHEET

Company Information		
Company Name:	JUDAH OIL COMPANY	
Address:		
Well Information		
Well Name:	GREEN 'A' FED. #10 SMD	
Location:		
Field - Pool:		
Status:	SHUT IN	
Test Information		
Type of Test:	STEP RATE TEST	
Gauge Depth:	9431 ft	
Production Interval:	NOT AVAILABLE	
Production Through:	3.5" TUBING	
Tubing Pressure:		
Casing Pressure:		
Shut in Time:		
Status:	SHUT IN	
Temperature @ Run Depth:	109.02 degF	
Surface Temperature:	75.87 degF	
Gauge Information		
	Top Recorder	Bottom Recorder
Serial Number:	75871	76173
Calibration Date:	10/29/12	10/29/12
Pressure Range:	6009 psi	6009 psi
Comments		

Pro Well Testing & Wireline, Inc.
 P.O. Box 791 Hobbs, NM 88241
 (505) 397-3590



Pro Well Testing & Wireline, Inc.
P.O. Box 791 Hobbs, NM 88241
(505) 397-3690

**GREEN "A" FED NO 10 SRT JUNE 19, 2013
ENDING INJECTION BHP's @9450' KB
DATA FROM PRO WELL TESTING & WIRELINE
(Complete 6 sec reading data file available on request)**

Line No.	Date M/d/yyyy	T h:mm:ss	Time hr	Rate BPM	Pressure psi	Temp degF
113	6/19/2013	8:57:06	0.183611	0	354.59	87.68
332	6/19/2013	9:19:00	0.548611	0	4847.25	102.47
333	6/19/2013	9:19:06	0.550278	0	4846.97	102.46
334	6/19/2013	9:19:12	0.551944	0	4846.64	102.46
335	6/19/2013	9:19:18	0.553611	0	4847.44	102.47
336	6/19/2013	9:19:24	0.555278	0	4848.14	102.47
607	6/19/2013	9:46:30	1.006944	2	4894.55	102.82
608	6/19/2013	9:46:36	1.008611	2	4894.35	102.81
609	6/19/2013	9:46:42	1.010278	2	4894.44	102.81
610	6/19/2013	9:46:48	1.011944	2	4894.47	102.81
611	6/19/2013	9:46:54	1.013611	2	4894.68	102.81
804	6/19/2013	10:06:12	1.335278	4.4	4979.65	103.46
805	6/19/2013	10:06:18	1.336944	4.4	4979.97	103.46
806	6/19/2013	10:06:24	1.338611	4.4	4980.16	103.46
807	6/19/2013	10:06:30	1.340278	4.4	4980.52	103.45
808	6/19/2013	10:06:36	1.341944	4.4	4981.09	103.45
1093	6/19/2013	10:35:06	1.816944	6.2	5142.08	104.85
1094	6/19/2013	10:35:12	1.818611	6.2	5142.36	104.85
1095	6/19/2013	10:35:18	1.820278	6.2	5142.70	104.85
1096	6/19/2013	10:35:24	1.821944	6.2	5143.12	104.86
1097	6/19/2013	10:35:30	1.823611	6.2	5143.51	104.86
1390	6/19/2013	11:04:48	2.311944	8.3	5323.78	107.32
1391	6/19/2013	11:04:54	2.313611	8.3	5324.18	107.33
1392	6/19/2013	11:05:00	2.315278	8.3	5324.69	107.33
1393	6/19/2013	11:05:06	2.316944	8.3	5325.12	107.33
1394	6/19/2013	11:05:12	2.318611	8.3	5325.52	107.32
1682	6/19/2013	11:34:00	2.798611	9.3	5482.00	109.00
1683	6/19/2013	11:34:06	2.800278	9.3	5482.49	109.00
1684	6/19/2013	11:34:12	2.801944	9.3	5482.77	108.99
1685	6/19/2013	11:34:18	2.803611	9.3	5483.17	108.99
1686	6/19/2013	11:34:24	2.805278	9.3	5483.60	108.98