

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Geological & 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

Applicant: <u>Forty Acres Energy Well</u>	OGRID Number: <u>371416</u>
Name: <u>West Eumont Unit #527</u>	API: <u>30-025-45459</u>
Pool: <u>Eumont, Yates-7 Rivers-Queen</u>	Pool Code: <u>22800</u>

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) TYPE OF APPLICATION: Check those which apply for [A]

A. Location – Spacing Unit – Simultaneous Dedication

☐ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II]

[I] Commingling – Storage – Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☒ IPI ☐ EOR ☐ PPR

2) NOTIFICATION REQUIRED TO: Check those which apply.

- A. ☒ Offset operators or lease holders
 B. ☒ Royalty, overriding royalty owners, revenue owners
 C. ☒ Application requires published notice
 D. ☒ Notification and/or concurrent approval by SLO
 E. ☒ Notification and/or concurrent approval by BLM
 F. ☒ Surface owner
 G. ☒ For all of the above, proof of notification or publication is attached, and/or,
 H. ☒ No notice required

FOR OCD ONLY

- ☐ Notice Complete
☐ Application Content Complete

3) 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.

Garret Johnson

Print or Type Name

G. Joh

Signature

November 13, 2020

Date

918-697-8311

Phone Number

Garret@faenergyus.com

e-mail Address

forty acres energy

Novemeber 13, 2020

Energy Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis drive
Santa Fe, New Mexico 87505

Attention: Mr. Dean McClure
Petroleum Specialist

Re: Injection Pressure Increase Application
Forty Acres Energy, LLC
West Eumont Unit #525
Pool: Yates-& 7 Rivers
Lea County, New Mexico

Dear Mr. McClure,

Forty Acres Energy, LLC ("Forty Acres"; OGRID No. 371416), as current operator of the West Eumont Unit Waterflood Project, requests administrative approval to increase the surface injection pressure for the West Eumont Unit #525, API # 30-025-45482. (WEU #525)

On June 27th, 2020, Forty Acres conducted a step rate injection test on the WEU #525. On August 24, 2020, the IPI order was approved to inject at a pressure gradient of 0.49 psi/ft. Forty Acres Energy is requesting approval of the 0.49 psi/ft injection gradient to be extended to the adjacent injection wells within the same interval as the WEU 525. The adjacent wells are the WEU 522 (30-025-45479), WEU 523 (30-025-45480), WEU 524 (30-025-45481), WEU 526 (30-025-45483), and WEU 527 (30-025-45459). Geological cross sections and wellbore diagrams are provided for reference.

Please feel free to reach out with any questions of concerns.

Regards,



Garret Johnson
Operations Engineer

WEU #527

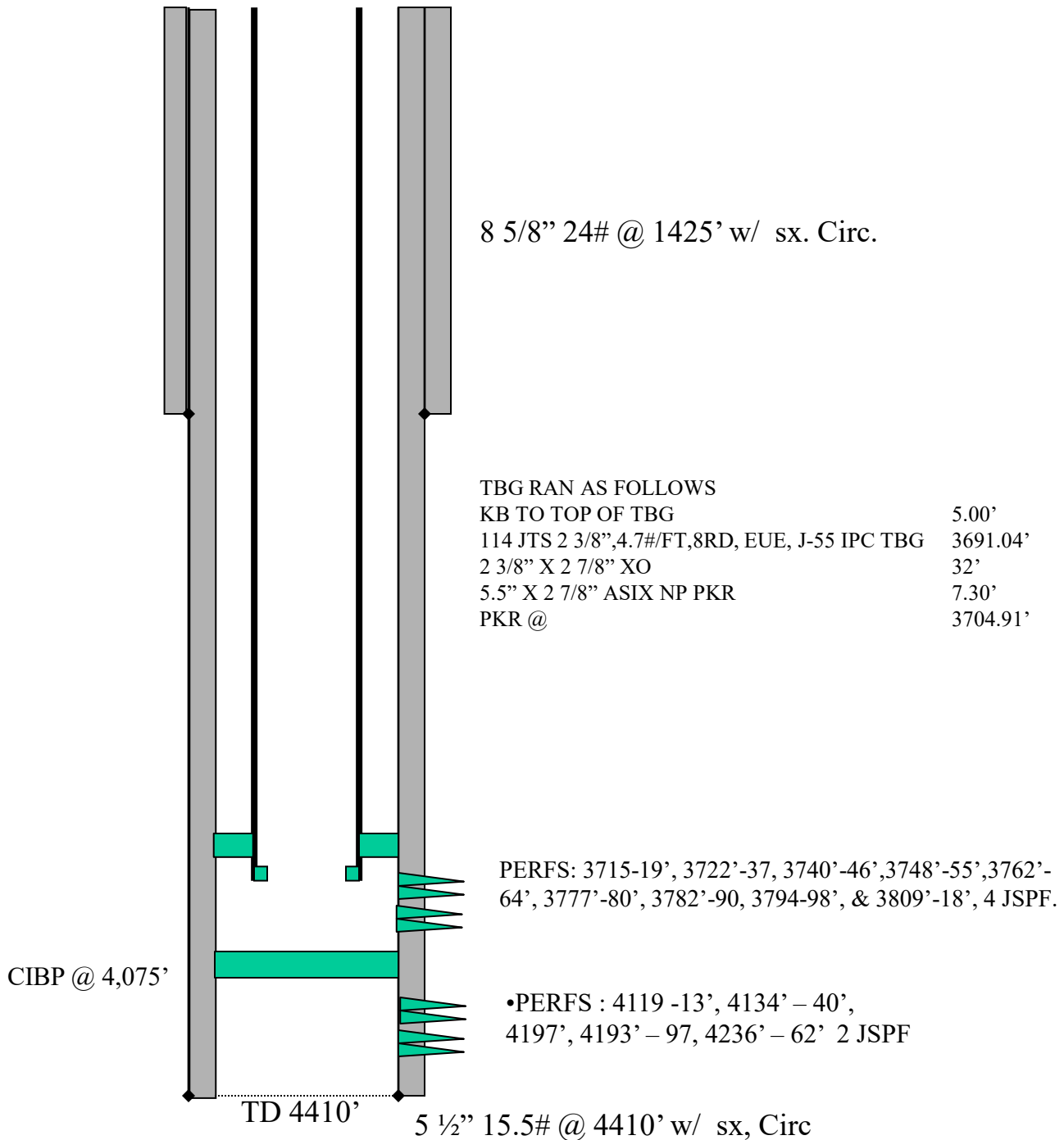
2365' FSL, 2460' FWL, Sec 35

T20S, R36E Lea Co., NM

Eumont Field completion Date: 03/29/2019

KB 12'

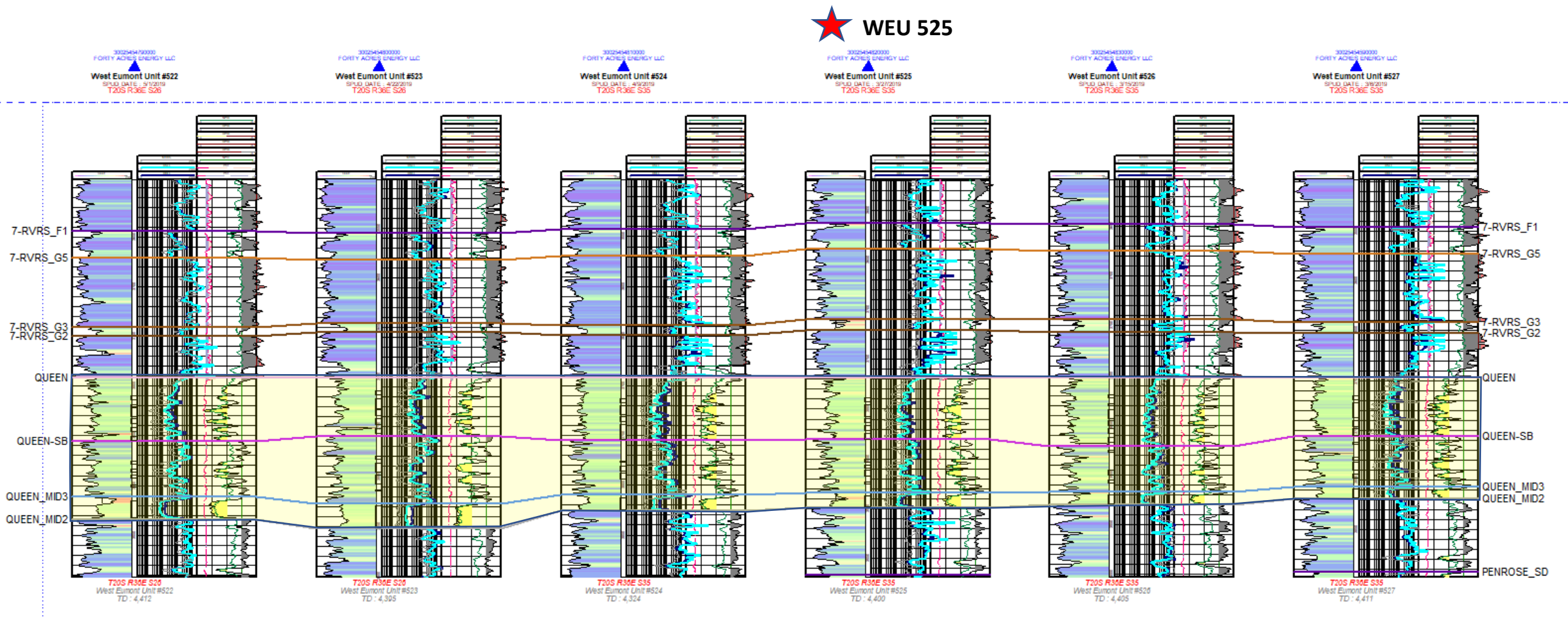
API # 30 025 45459



Current

06/24/2019

West Eumont Unit Pilot 2 Injection Interval for All 6 Injectors



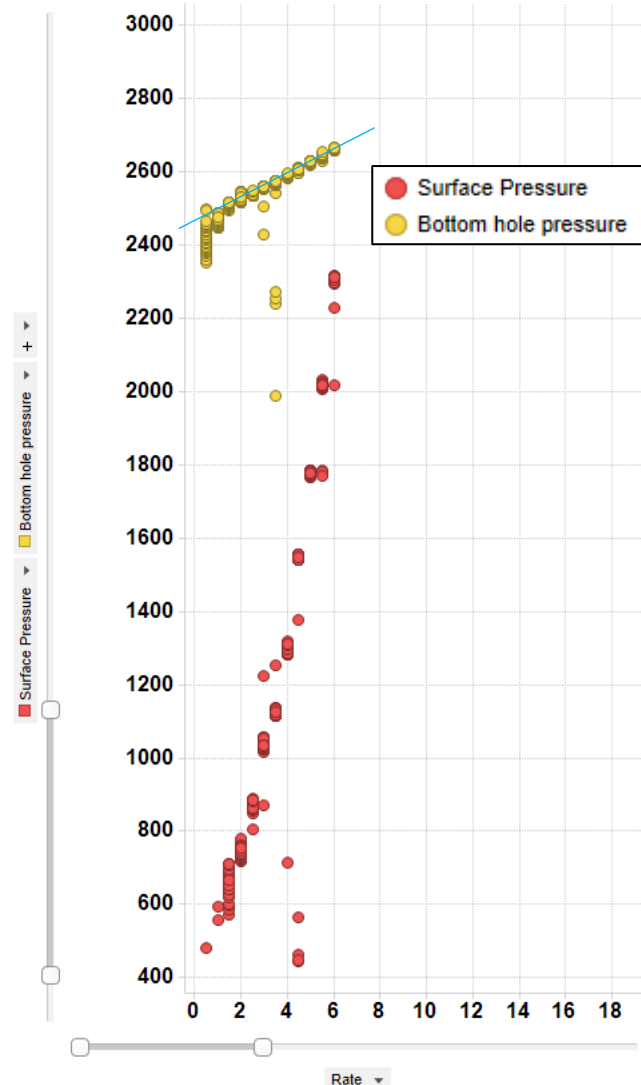
All 6 pilot 2 injectors inject into the exact same stratigraphic intervals

Well No.	Tubing OD (inch)	While Injecting	Injection Interval		Pressure Gradient (psi/ft)	Initial New MSIP Limit (psi)
			Top Perf	Bot Perf		
West Eumont Unit No. 522	2.375	Water	3812	3932	0.49	1861
West Eumont Unit No. 523	2.375	Water	3714	3851	0.49	1813
West Eumont Unit No. 524	2.375	Water	3713	3825	0.49	1813
West Eumont Unit No. 525	2.375	Water	3789	3898	0.49	1850
West Eumont Unit No. 526	2.375	Water	3819	3929	0.49	1865
West Eumont Unit No. 527	2.375	Water	3715	3818	0.49	1814

WEU 525 SRTs from March and June

March SRT

Surface Pressure, Bottom hole pressure vs. Rate

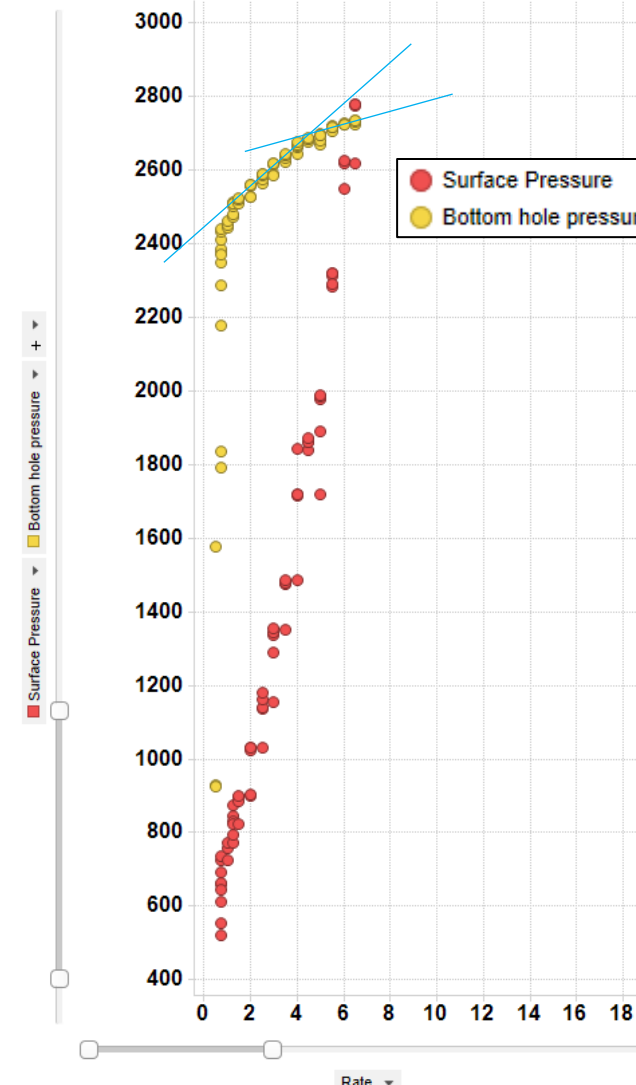


March SRT Comments

- Max bottomhole pressure reached in March was 2,666 psi
- Max surface pressure was 2,316 psi
- We did not see the bottomhole pressure break over on the March step rate test (perfectly straight line)

June SRT

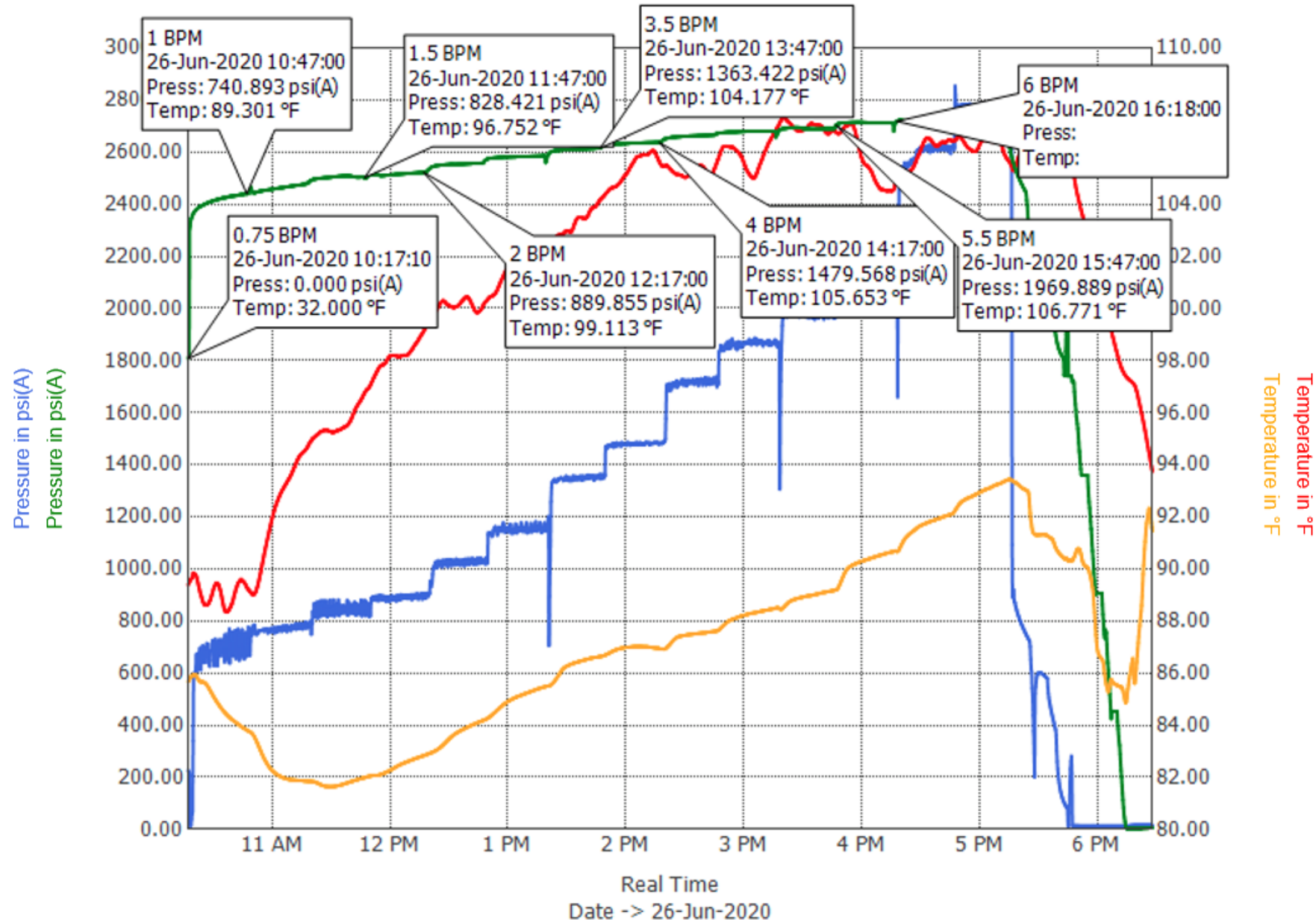
Surface Pressure, Bottom hole pressure vs. Rate



June SRT Comments

- Max bottomhole pressure reached in June was 2,734 psi
- Max surface pressure reached was 2,776 psi, ~460 psi greater than the March SRT
- We saw a breakover by pumping at the higher surface pressure
- The bottomhole breakover point is approximately 2,680 psi, which corresponds to a surface injection pressure of 1,850 psi

West Eumont Unit #525: June Step Rate Test



	Date:	Time:
Truck Called:	6/26/20	4:00 AM
Arrived at location:	6/26/20	5:30 AM
Start Job:	6/26/20	9:20 AM
Finish Job:	6/26/20	4:30 PM
Leave Location:	6/26/20	5:30 PM

Job Log

<i>Crain Hot Oil Service</i>		Customer Name: FORTY ACRES		Ticket Number: GS9678	
2239 S Main Street		Lease Name: WEU			
Lovington, NM 88260		Well #: 525		Supervisor: GERARDO SANCHEZ	
OFFICE # (575)396-9702		Type of Job: STEP RATE		County: LEA	
FAX # (575)396-9700		Date: 6/26/2020		CUSTOMER REPRESENTATIVE: JAMES MARTINEZ	
Tubing Size:		Casing size:		Tbg Capacity:	
Tubing weight:		Casing weight:		Top Perf:	
Tubing bbl/Inft		Casing bbl/Inft:		Bottom Perf:	
Packer depth:		Annulus:		Flush Top Perf:	
End of Tbg:		Total Depth:		Flush Bottom Perf:	
Top Perf:		Open Hole:		Annular Capacity:	
Bottom Perf:		Liner Size:		Maximum:	Psi
Holes in Csg:		Top of Liner			
Max psi:	2007	Min psi:	730	Avg psi:	1259
Max rate:	4.5	Avg rate:	2.4	ISIP	0-

Load to recover 5 min 10 min 15 min

Acid Systems

Acid System:		Gallons	
Diverter:		Balls	
		Coarse Rock Salt	

Injection Rate:			Job Pressures		Job Log Remarks:
Time	Rate:	Bbls in	Tbg psi	Csg psi	
9:20 AM	0.75		602		START PROCEDURE
9:35 AM	0.75	10	730	6	PSI CHECK
9:50 AM	1	22.5	786	6	BRING RATE UP
10:10 AM	1	40	790	6	PSI CHECK
10:20 AM	1.25	52.5	852	6	BRING RATE UP
10:39 AM	1.25	75	887	6	PSI CHECK
10:50 AM	1.5	90	909	6	BRING RATE UP
11:12 AM	1.5	122	920	6	PSI CHECK
11:20 AM	2	135	1053	6	BRING RATE UP
11:38 AM	2	170	1058	11	PSI CHECK
11:50 AM	2.5	195	1198	11	BRING RATE UP
12:09 PM	2.5	244	1202	11	PSI CHECK
12:20 PM	3	270	1369	11	CHANGE GEARS
12:38 PM	3	328	1418	11	PSI CHECK
12:50 PM	3.5	360	1559	11	BRING RATE UP
1:08 PM	3.5	430	1564	11	PSI CHECK
1:20 PM	4	465	1820	11	BRING RATE UP
1:35 PM	4	536	1833	11	PSI CHECK
1:50 PM	4.5	585	1984	11	BRING RATE UP
2:06 PM	4.5	672	2007	11	PSI CHECK

SERVICE REPRESENTATIVE: GERARDO SANCHEZ	Signature Please	CUSTOMER REPRESENTATIVE: X	Signature Please
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Ticket Number:

GS9678

Customer: FORTY ACRES

Date 6/26/2020

Lease: WEU

Well: 525

Job Type: STEP RATE

Max psi:	3055	Min psi:	2140	Avg psi:	2664	Max rate:	6.5	Avg rate:	5.7
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Injection Rate:			Job Pressures	
Time	Rate:	Bbls in	Tbg psi.	Csg psi
2:20 PM	5	720	2140	11
2:34 PM	5	800	2160	11
2:50 PM	5.5	870	2460	11
3:10 PM	5.5	994	2505	11
3:20 PM	6	1035	2770	11
3:34 PM	6	1135	2858	11
3:50 PM	6.5	1215	3055	11
4:10 PM	6.5	1366	3013	11
4:20 PM		1410	3023	11
4:20 PM			1040	
4:25 PM			808	
4:30 PM			753	

Job Log Remarks:

GET HIGHER GEAR

PSI CHECK

BRING RATE UP

PSI CHECK

GET HIGHER GEAR

PSI CHECK

BRING RATE UP

PSI CHECK

SHUT DOWN

ISIP

5 MIN

10 MIN

Thank you for your business, your patronage is greatly appreciated!!!

SERVICE REPRESENTATIVE: Signature Please

CUSTOMER REPRESENTATIVE: Signature Please

GERARDO SANCHEZ

X