Vermejo Fed #1 SWD

API #	30-015-40644	County, ST	Eddy County, NM
Operator	Spur Energy Partners	Sec-Twn-Rng	15-17S-28E
Field	SWD; Cisco	Footage	900' FSL & 2530' FEL
Spud Date	10/23/2012	Survey	32.8296547,-104.1635208

Formation (MD)	
San Andres	
Glorieta	
Yeso	
Bone Spring	
Wolfcamp	
Canyon	
Strawn	
Atoka	
Morrow	

RKB	3577'
GL	3559'

Hole Size	17-1/2"
TOC	surf
Method	circ returns

Csg Depth	362'
Size	13-3/8"
Weight	48#
Grade	J-55
Connections	
Cement	370sx

Hole Size	12-1/4"
TOC	surf
Method	circ return

Csg Depth	2105'
Size	9-5/8"
Weight	36#
Grade	L-80
Connections	
Cement	770sx

Tubing Detail				
Jts	Size	Depth	Length	Detail
		14	13.95	KB and Compression Corrections
1	3-1/2"	46	31.6	FG lined tubing
2	3-1/2"	60	14.25	IPC Tubing
247	3-1/2"	7,858	7798.1	FG lined tubing
1	XO	7,859	1	3-1/2" x 2-3/8" Nickel Plated XO
6	2-3/8"	8,048	188.94	IPC Tubing
1	O/O	8,050	1.84	T2 On/Off Tool
1	4-1/2"	8,056	6.51	ASX PC Packer
1	2-3/8"	8,066	10.01	Nickel Plated Pup Joint
1	2-3/8"	8,067	0.85	Profile Nipple w/ 1.43R
1	2-3/8"	8,068	0.41	Pump out Plug

Hole Size	8"
TOC	160'
Method	CBL

Csg Depth	8130'
Size	7"
Weight	26#
Grade	N-80
Connections	
Cement	830sx

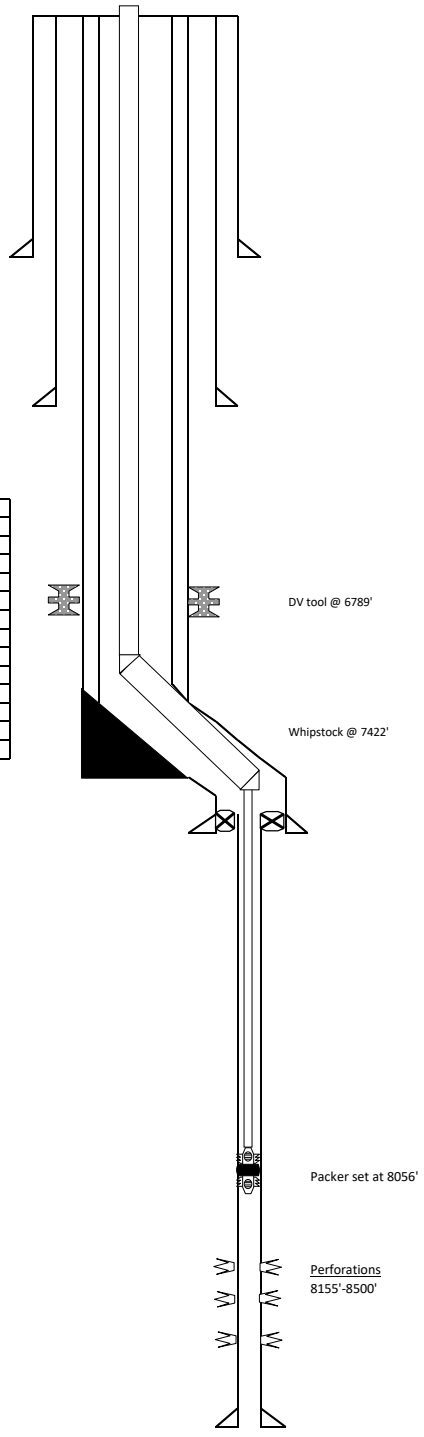
Hole Size	6-1/8"
TOC	8009'
Method	Circ

LINER

Csg Depth	8009'-8691'
Size	4-1/2"
Weight	11.6#
Grade	L-80
Connections	
Cement	830sx

PBTD	8640'
TD MD	8700'
TD TVD	8699'

Last Update	3/25/2022
By	RCB



Santa Fe Main Office
Phone: (505) 476-3441
General Information
Phone: (505) 629-6116

Online Phone Directory Visit:
https://www.emnrd.nm.gov/ocd/contact-us/

State of New Mexico
Energy, Minerals and Natural Resources

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

Form C-103
Revised July 18, 2013

WELL API NO. 30-015-40644

5. Indicate Type of Lease STATE ☐ FEE ☐

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: VERMEJO SWD

1. Type of Well: Oil Well ☐ Gas Well ☐ Other SWD

8. Well Number 1

2. Name of Operator: SPUR ENERGY PARTNERS LLC

9. OGRID Number: 328947

3. Address of Operator: 9655 KATY FREEWAY, SUITE 500, HOUSTON, TX 77024

10. Pool name or Wildcat: SWD; CISCO

4. Well Location
Unit Letter O : 900 feet from the SOUTH line and 2530 feet from the EAST line
Section 15 Township 17S Range 28E NMPM EDDY County

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*: 3559' GR

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

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☒	COMMENCE DRILLING OPNS.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
DOWNHOLE COMMINGLE	☐						
CLOSED-LOOP SYSTEM	☐						
OTHER:	☐			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.

Spur Energy Partners LLC requests to perform a step rate test to determine if injection pressure can be raised without fractuing the formation.

Please find proposed procedure and other documentation attached for your review.

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 Sarah Chapman TITLE REGULATORY DIRECTOR DATE 01/07/2025

Type or print name SARAH CHAPMAN E-mail address: PHONE: 832-930-8613

For State Use Only

APPROVED BY: TITLE DATE

Conditions of Approval (if any):

Vermejo SWD #1

Step Rate Test
Hunter Spragg – 817.914.0987
AFE – TBD

NW Shelf
Eddy County, NM

OBJECTIVES

Perform a step rate test on the Vermejo SWD to determine if injection pressure can be raised without fracturing the formation. 45-minute steps chosen due to lower permeability but a perforated interval of only 350' and also the stabilization seen within 30 minutes in the SRT that was performed by the previous operator.

- Estimated BHP Bomb set date – 5/3/2024
- Estimated Well SI date - 5/5/2024
- Estimated SRT and Pressure Bomb retrieval date - 5/7/2024 (minimum of 48 hours after well is shut in)

Well Information	
Surface Location (NAD83)	Latitude: 32.8300247° / Longitude: -104.1427078°
Ground Elevation / KB	3,637' / 19'
API Number	30-015-29569
AFE Number	**TBD**

Wellbore Details	
TVD / PBTD	TVD: 10,540' / PBTD: 8,830'
Perforations MD'	***OH from 8,304' - 8,831'***

Casing & Tubing Details - Current/Planned

Size	Depth *(MD)*	Weight *lb/ft*	Grade	ID *In*	Drift *In*	Thread	Burst *psi*	Collapse *psi*	Yield *Mlbs*	Cap *bbl/ft*
5.500" *csg*	0' – 8,304'	17.0	J-55	4.892	4.767	STC	5,320	4,910	234	0.023
2.875" IPC *tbg*	0' – 8,213'	6.5	L-80	2.411	2.317	EUE 8RD	10,570	11,160	144	0.00579

PROCEDURE

Spur Energy Partners LLC is committed to providing a safe working environment for all personnel. A safety meeting will be held prior to commencing each operation in order to define/clarify objectives, roles and responsibilities, identify all potential risk/hazards and establish a work procedure that is safe and environmentally sound. Meetings are to be documented on the reports returned to Spur Energy Partners LLC.

PERFORM SAFETY CHECKS AND SAFETY MEETING

1. Perform a safety meeting prior to rigging up **ANY** equipment on location. Discuss the job procedure and objective with all personnel on location. Document the safety meeting on the daily report sent to Spur. Make note of all potential risks/hazards, and clearly identify an emergency route and emergency vehicle. Also make note of any new or inexperienced personnel on location. Ensure proper Personal Protective Equipment (PPE) is used during the job. Minimums are hard hats, steel toes, safety glasses, H_2S monitors, and FR certified clothing as required. Designate a smoking area off location and 100' from any potential hydrocarbons.

Preparation

1. Set 3 - 500 bbl Frac tanks on location and begin filling with produced water from the facility. Do not use fresh water or produced water from any of the other surrounding facilities. Fill completely. Leave hoses attached to water tanks at the facility so water in water tanks can be utilized at the end of the test if needed.

2. Replace all wellhead valves with 3k rated valves.

72 hours before SRT

3. Notify OCD and BLM representative that SRT is planned to occur in 72 hours.

4. Notify OCD that a MIT will be ran with the pump truck and recorded in the data van on the date of the SRT. Ask if a chart recorder is required, if so, ensure one is on location for the day of the SRT.

5. MIRU Precision Pressure Data Slickline truck and crane, utilize a lubricator for well control.

6. Run in hole with BHP Bomb and set at 8,056' from surface on top of the 1.5F profile nipple.

    a) Ensure bomb is rated to 10k psi or greater and can collect 1 million data points and is set to collect data 1 time every second. This will give us 11.5 days of data collection in case we occur any delays.

48 hours before SRT

7. Shut in well and isolate injection line. Ensure 0 injection is able to occur.

Step Rate Test Procedure

8. RU pump and manifold all 3 frac tanks together. Run 1 - 2" injection lines.

    a) RU an injection line and pressure transmitter to the production casing-tubing annulus and pressure up to 500 psi and preform an MIT.

        i. Have the service company save and export this data, call this file "Vermejo SWD MIT prior to SRT" and clear the data and prepare for SRT data collection.

    b) Ensure pumps can pump can output 10 bpm at 3000 psi.

    c) Max pressure limit for this job is 3000 psi.

    d) Install pressure transmitters on the tubing, not the discharge of the pump, and another transmitter on the production casing.

    e) A turbine meter is to be used to measure injection rate.

    f) Rig injection line up to the tubing.

9. Close bottom master valve and open all other valves and test Iron and wellhead to 3000 psi.

10. Open lower master valve and begin step rate test. Follow the below schedule exactly. Do not stop injection. Do not alter schedule. Steps need to be exactly at prescribed rates and for exactly 45 minutes unless:

    a) Breakdown is observed and 2 more steps passed that are not in the schedule.

        i. If this is the case and there is pressure headroom, we will divide the remaining pressure rating of the wellhead by number of remaining steps needed to get to 3 and add 1 and target a starting pressure for those remaining step instead of rate.

            1. I.e. Stage 6 break is observed at 2500 psi and wellhead is rated to 3000 psi. 3000-2500 = 500 psi. 2 more stages needed, add one. 500/3= 166 psi. Stage 7 should be started at 2666 psi and stage 8 started at the end of stage 7 pressure plus 166 psi. Rate is to be held steady through the remainder of the stage. Stage length is to be the same as the previous stages.

        ii. If there is no more pressure headroom available, hold the rate steady for the amount of time equivalent to running the needed number of extra stages add notes in stage notes.

            1. I.e. if breakdown is observed on stage 6, and the ending pressure of stage 6 is 2950 psi and wellhead is rated to 3000 psi, keep the same rate of stage 6 for stage 7 and 8.

Step Rate Test - Proposed					
Step	**Time Start (mins)**	**Time End (mins)**	**Rate (BPM)**	**Stage Volume (Bbl)**	**Cumulative Volume (Bbl)**
1	**0**	**45**	**0.40**	**18**	**18**
2	**45**	**90**	**0.70**	**32**	**50**
3	**90**	**135**	**1.40**	**63**	**113**
4	**135**	**180**	**2.80**	**126**	**239**
5	**180**	**225**	**4.20**	**189**	**428**
6	**225**	**270**	**5.60**	**252**	**680**
7	**270**	**315**	**7.00**	**315**	**995**

11. RD pump and iron.

12. MIRU Slickline unit and crane if required.

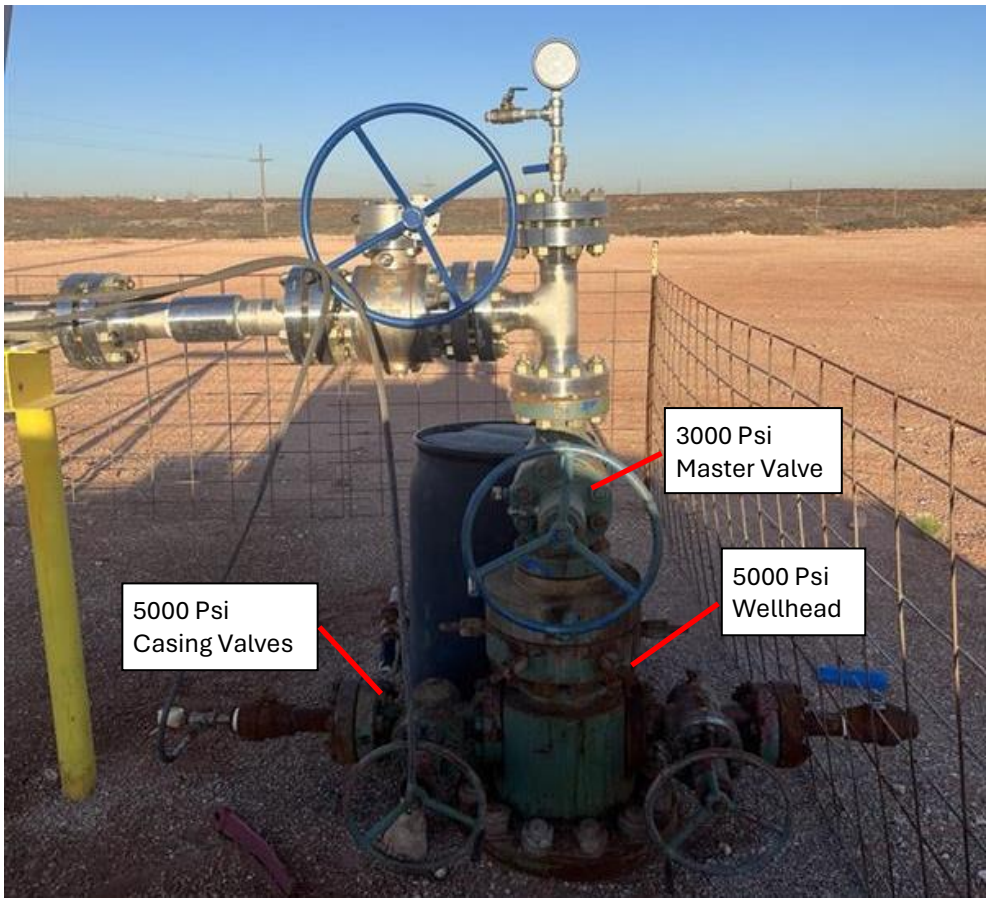
13. RIH to 8,056’ to retrieve the BHP Bomb. Send all data to Engineer.

Appendix

Current Tubing Detail

Current Tubing String									
Tubing Description: Tubing - Production					Set Depth (ftKB): 8,067.7		Run Date: 3/23/2022		
Item Des	Grade	Wt (lb/ft)	OD (in)	ID (in)	Len (ft)	Jts	Cum Len (ft)	Top (ftKB)	Btm (ftKB)
ADJUSTED KB FOR FLOOR HEIGHT					16.00		8,073.80	-6.1	9.9
TUBING HANGAR			4 1/2	3.50	1.00	1	8,057.80	9.9	10.9
3 1/2 FG LINED TBG	L-80	9.30	3 1/2	2.65	31.60	1	8,056.80	10.9	42.5
3 1/2 IPC PONY SUBS	L-80	9.30	3 1/2	2.65	14.25	2	8,025.20	42.5	56.7
3 1/2 FG LINED TBG	L-80	9.30	3 1/2	2.65	7,801.39	247	8,010.95	56.7	7,858.1
3 1/2 X 2 3/8 X-OVER	L-80		3 1/2		1.00	1	209.56	7,858.1	7,859.1
2 3/8 IPC TBG	L-80	4.70	2 3/8	1.98	188.94	6	208.56	7,859.1	8,048.1
T2 ON/OFF TOOL W/1.50F SS PROFILE NIPPLE			2 3/8	1.50	1.84	1	19.62	8,048.1	8,049.9
4 1/2 X 2 3/8 ASX PACKER			4 1/2	1.94	6.51	1	17.78	8,049.9	8,056.4
2 3/8 NICKEL PLATED PUP JT	L-80	4.70	2 3/8	2.00	10.01	1	11.27	8,056.4	8,066.4
LANDING NIPPLE W/1.43R PROFILE			2 3/8	1.43	0.85	1	1.26	8,066.4	8,067.3
2 3/8 POP W/4 PINS 565 PSI EACH			2 3/8	1.99	0.41	1	0.41	8,067.3	8,067.7

Wellhead



Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 417908

CONDITIONS

Operator: Spur Energy Partners LLC 9655 Katy Freeway Houston, TX 77024	OGRID: 328947
	Action Number: 417908
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
mgebremichael	Since the wellhead rating is 3000 Psi, the maximum testing pressure shall not exceed 2700 psi.	2/3/2025