

hinklelawfirm.com

**HINKLE, HENSLEY, SHANOR & MARTIN, L.L.P.**

ATTORNEYS AT LAW

218 MONTEZUMA

SANTA FE, NEW MEXICO 87501

505-982-4554 (FAX) 505-982-8623

WRITER:

Gary W. Larson,  
Partner  
glarson@hinklelawfirm.com

May 13, 2010

**VIA HAND DELIVERY**

Florene Davidson  
Oil Conservation Division  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

Re: VPR Operating Application

Dear Florene:

As you requested, I am enclosing a copy of the application for approval of a waterflood pilot project that I filed on behalf of VPR Operating on February 16, 2010.

Thank you for your attention to this matter.

Sincerely,

Gary W. Larson

GWL:js  
Encl.

RECEIVED OCD  
200 MAY 13 P 450  
*Case 14494*

PO BOX 10  
ROSWELL, NEW MEXICO 88202  
(575) 622-6510  
FAX (575) 623-9332

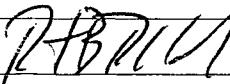
PO BOX 3580  
MIDLAND, TEXAS 79702  
(432) 683-4691  
FAX (432) 683-6518

PO BOX 2068  
SANTA FE, NEW MEXICO 87504  
(505) 982-4554  
FAX (505) 982-8623

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE:  Secondary Recovery      Pressure Maintenance      Disposal      Storage  
Application qualifies for administrative approval?      Yes       No
- II. OPERATOR: VPR OPERATING, LLC  
ADDRESS: 1406 CAMP CRAFT RD, SUITE 106, AUSTIN, TX 78746  
CONTACT PARTY: ROBERT PULLEN      PHONE: (512) 327-8776
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? Yes  No  
If yes, give the Division order number authorizing the project:
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
- Proposed average and maximum daily rate and volume of fluids to be injected;
  - Whether the system is open or closed;
  - Proposed average and maximum injection pressure;
  - Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  - If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Robert B. Pullen, Sr.      TITLE: Sr. Vice-President

SIGNATURE:  DATE: February 3, 2010

E-MAIL ADDRESS: bob@vproperating.com

\* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal:

### III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

---

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

**INJECTION WELL DATA SHEET**

OPERATOR: \_\_\_\_\_

WELL NAME &amp; NUMBER: \_\_\_\_\_

WELL LOCATION: \_\_\_\_\_ FOOTAGE LOCATION \_\_\_\_\_ UNIT LETTER \_\_\_\_\_ SECTION \_\_\_\_\_ TOWNSHIP \_\_\_\_\_ RANGE \_\_\_\_\_

**WELLBORE SCHEMATIC****WELL CONSTRUCTION DATA**  
Surface Casing

Hole Size: \_\_\_\_\_ Casing Size: \_\_\_\_\_

Cemented with: \_\_\_\_\_ cu. or \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: \_\_\_\_\_ Method Determined: \_\_\_\_\_

Intermediate Casing

Hole Size: \_\_\_\_\_ Casing Size: \_\_\_\_\_

Cemented with: \_\_\_\_\_ cu. or \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: \_\_\_\_\_ Method Determined: \_\_\_\_\_

Production Casing

Hole Size: \_\_\_\_\_ Casing Size: \_\_\_\_\_

Cemented with: \_\_\_\_\_ cu. or \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: \_\_\_\_\_ Method Determined: \_\_\_\_\_

Total Depth: \_\_\_\_\_

Injection Interval

feet to \_\_\_\_\_

(Perforated or Open Hole; indicate which)

**INJECTION WELL DATA SHEET**

Tubing Size: \_\_\_\_\_ Lining Material: \_\_\_\_\_

Type of Packer: \_\_\_\_\_

Packer Setting Depth: \_\_\_\_\_

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

**Additional Data**

1. Is this a new well drilled for injection? \_\_\_\_\_ Yes \_\_\_\_\_ No

If no, for what purpose was the well originally drilled? \_\_\_\_\_

2. Name of the Injection Formation: \_\_\_\_\_

3. Name of Field or Pool (if applicable): \_\_\_\_\_

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. \_\_\_\_\_

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: \_\_\_\_\_

**EXHIBIT III. A. (1)**

**C-108 FILING**

VPR OPERATING, LLC  
1406 CAMP CRAFT RD., SUITE 106  
AUSTIN, TX 78746

LEASE NAME	WELL NO.	SEC.	TWN	RGE	FT	F/	FT	F/	COUNTY	STATE
SFPRR	18	28	9S	37E	1980	SL	660	EL	LEA	NEW MEXICO
SFPRR	12	27	9S	37E	1980	SL	660	EL	LEA	NEW MEXICO
SFPRR	17	27	9S	37E	1980	SL	1980	WL	LEA	NEW MEXICO
SFPRR	3	28	9S	37E	660	SL	660	EL	LEA	NEW MEXICO
SFPRR	19	27	9S	37E	660	SL	660	EL	LEA	NEW MEXICO
SFPRR	13	27	9S	37E	660	SL	1780	WL	LEA	NEW MEXICO

Wells Name  
1

L & C Shw

Pantos

20

21

22

23

29

28

27

26

32

33

34

35

5

4

3

2

9

10

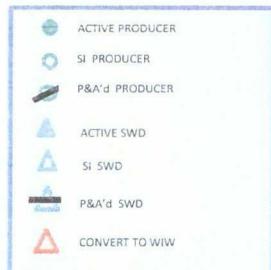
11

#### Victory Park Resources

Wellsite Locations - County Map

Legend

Zones  
• 1  
• 2  
• 3  
• 4  
• 5  
• 6  
• 7  
• 8  
• 9  
• 10  
• 11  
• 12  
• 13  
• 14  
• 15  
• 16  
• 17  
• 18  
• 19  
• 20  
• 21  
• 22  
• 23  
• 24  
• 25  
• 26  
• 27  
• 28  
• 29  
• 30  
• 31  
• 32  
• 33  
• 34  
• 35



## ESTABLISH PILOT WATERFLOOD

**EXHIBIT III. A. (2)**

**C-108 FILING**

VPR OPERATING, LLC  
1406 CAMP CRAFT RD., SUITE 106  
AUSTIN, TX 78746

LEASE NAME	WELL NO.	SEC.	TWN	RGE	FT	F/	FT	F/	COUNTY	STATE
SFPRR	18	28	9S	37E	1980	SL	660	EL	LEA	NEW MEXICO
SURFACE CASING:	8-5/8", 24#, J-55 @ 431'				PRODUCTION CASING:	4-1/2", 10.5#, K-55 @ 5,020'				
SURFACE HOLE:	12-1/4" hole to 431'				PRODUCTION HOLE:	7-7/8" Hole to 5,020'				
SURFACE CEMENT:	300 sx				CEMENT:	250 SX TO DV TOOL & 760 SX F/ DV TOOL T/ SURFACE				
SURFACE TOC:	SURFACE				TOC:	SURFACE	PBTD:	5013'		
					PERFS:	4934 - 5004'		TD:	5022'	
					STIMULATION:	9000 GAL 20% HCL				
SFPRR	12	27	9S	37E	1980	SL	660	EL	LEA	NEW MEXICO
SURFACE CASING:	8-5/8", 24#, J-55 @ 425'				PRODUCTION CASING:	4-1/2", 10.5#, K-55 @ 5,030'				
SURFACE HOLE:	12-1/4" hole to 425'				PRODUCTION HOLE:	7-7/8" Hole to 5,030'				
SURFACE CEMENT:	325 sx				CEMENT:	250 SX				
SURFACE TOC:	SURFACE				TOC:	SURFACE	✓	PBTD:	5013'	
					PERFS:	4954 - 5005'		TD:	5030'	
					STIMULATION:	8250 GAL 20% HCL				
SFPRR	17	27	9S	37E	1980	SL	1980	WL	LEA	NEW MEXICO
SURFACE CASING:	8-5/8", 24#, J-55 @ 423'				PRODUCTION CASING:	4-1/2", 10.5#, K-55 @ 5,033'				
SURFACE HOLE:	12-1/4" hole to 423'				PRODUCTION HOLE:	7-7/8" Hole to 5,033'				
SURFACE CEMENT:	300 sx				CEMENT:	250 SX TO DV TOOL & 750 SX F/ DV TOOL T/ SURFACE				
SURFACE TOC:	SURFACE				TOC:	SURFACE	PBTD:	5028'		
					PERFS:	4963 - 5023'		TD:	5033'	
					STIMULATION:	9000 GAL 20% HCL				
SFPRR	3	28	9S	37E	660	SL	660	EL	LEA	NEW MEXICO
SURFACE CASING:	8-5/8", 24#, J-55 @ 411'				PRODUCTION CASING:	4-1/2", 10.5#, K-55 @ 5,039'				
SURFACE HOLE:	12-1/4" hole to 411'				PRODUCTION HOLE:	7-7/8" Hole to 5,039'				
SURFACE CEMENT:	325 sx				CEMENT:	250 SX				
SURFACE TOC:	SURFACE				TOC:	4090' EST.	✓	PBTD:	5025'	
					PERFS:	4933 - 4992'		TD:	5039'	
					STIMULATION:	8250 GAL 20% HCL				
SFPRR	19	27	9S	37E	660	SL	660	EL	LEA	NEW MEXICO
SURFACE CASING:	8-5/8", 24#, J-55 @ 423'				PRODUCTION CASING:	4-1/2", 10.5#, K-55 @ 5,026'				
SURFACE HOLE:	12-1/4" hole to 423'				PRODUCTION HOLE:	7-7/8" Hole to 5,026'				
SURFACE CEMENT:	250 sx				CEMENT:	250 SX to DV Tool @ 2421'; 700 SX to Surface				
SURFACE TOC:	SURFACE				TOC:	SURFACE	PBTD:	5024'		
					PERFS:	4958 - 5016'		TD:	5024'	
					STIMULATION:	9000 GAL 20% HCL				
SFPRR	13	27	9S	37E	660	SL	1780	WL	LEA	NEW MEXICO
SURFACE CASING:	8-5/8", 24#, J-55 @ 400'				PRODUCTION CASING:	4-1/2", 10.5#, K-55 @ 5,050'				
SURFACE HOLE:	12-1/4" hole to 400'				PRODUCTION HOLE:	7-7/8" Hole to 5,050'				
SURFACE CEMENT:	300 sx				CEMENT:	250 SX				
SURFACE TOC:	SURFACE				TOC:	4100' Calculated	✓	PBTD:	5032'	
					PERFS:	4974 - 5000'		TD:	5050'	
					STIMULATION:	800 GAL 28% + 2400 GAL 15% + 3200 GAL 3%				

**EXHIBIT III. A. (3) & (4)**

**C-108 FILING**

VPR OPERATING, LLC  
1406 CAMP CRAFT RD., SUITE 106  
AUSTIN, TX 78746

LEASE NAME	WELL NO.	SEC.	TWN	RGE	FT	F/	FT	F/	COUNTY	STATE
SFPRR	18	28	95	37E	1980	SL	660	EL	LEA	NEW MEXICO
SURFACE CASING:	8-5/8", 24#, J-55 @ 431'				PRODUCTION CASING:	4-1/2", 10.5#, K-55 @ 5,020'				
SURFACE HOLE:	12-1/4" hole to 431'				PRODUCTION HOLE:	7-7/8" Hole to 5,020'				
SURFACE CEMENT:	300 sx				CEMENT:	250 SX TO DV TOOL & 760 SX F/ DV TOOL T/ SURFACE				
SURFACE TOC:	SURFACE				TOC:	SURFACE	PBTD:	5013'		
					PERFS:	4934 - 5004'	TD:	5022'		
					PROPOSED:	RUN 2-3/8", 4.7#, J-55, EUE-8RD IPC TBG W/ COATED/IPC AD-1 PACKER @ +/- 4900'				
SFPRR	12	27	95	37E	1980	SL	660	EL	LEA	NEW MEXICO
SURFACE CASING:	8-5/8", 24#, J-55 @ 425'				PRODUCTION CASING:	4-1/2", 10.5#, K-55 @ 5,030'				
SURFACE HOLE:	12-1/4" hole to 425'				PRODUCTION HOLE:	7-7/8" Hole to 5,030'				
SURFACE CEMENT:	325 sx				CEMENT:	250 SX				
SURFACE TOC:	SURFACE				TOC:	4000' EST	PBTD:	5013'		
					PERFS:	4954 - 5005'	TD:	5030'		
					PROPOSED:	RUN 2-3/8", 4.7#, J-55, EUE-8RD IPC TBG W/ COATED/IPC AD-1 PACKER @ +/- 4905'				
SFPRR	17	27	95	37E	1980	SL	1980	WL	LEA	NEW MEXICO
SURFACE CASING:	8-5/8", 24#, J-55 @ 423'				PRODUCTION CASING:	4-1/2", 10.5#, K-55 @ 5,033'				
SURFACE HOLE:	12-1/4" hole to 423'				PRODUCTION HOLE:	7-7/8" Hole to 5,033'				
SURFACE CEMENT:	300 sx				CEMENT:	250 SX TO DV TOOL & 750 SX F/ DV TOOL T/ SURFACE				
SURFACE TOC:	SURFACE				TOC:	SURFACE	PBTD:	5028'		
					PERFS:	4963 - 5023'	TD:	5033'		
					PROPOSED:	RUN 2-3/8", 4.7#, J-55, EUE-8RD IPC TBG W/ COATED/IPC AD-1 PACKER @ +/- 4910'				
SFPRR	3	28	95	37E	660	SL	660	EL	LEA	NEW MEXICO
SURFACE CASING:	8-5/8", 24#, J-55 @ 411'				PRODUCTION CASING:	4-1/2", 10.5#, K-55 @ 5,039'				
SURFACE HOLE:	12-1/4" hole to 411'				PRODUCTION HOLE:	7-7/8" Hole to 5,039'				
SURFACE CEMENT:	325 sx				CEMENT:	250 SX				
SURFACE TOC:	SURFACE				TOC:	4090' EST.	PBTD:	5025'		
					PERFS:	4933 - 4992'	TD:	5039'		
					PROPOSED:	RUN 2-3/8", 4.7#, J-55, EUE-8RD IPC TBG W/ COATED/IPC AD-1 PACKER @ +/- 4890'				
SFPRR	19	27	95	37E	660	SL	660	EL	LEA	NEW MEXICO
SURFACE CASING:	8-5/8", 24#, J-55 @ 423'				PRODUCTION CASING:	4-1/2", 10.5#, K-55 @ 5,026'				
SURFACE HOLE:	12-1/4" hole to 423'				PRODUCTION HOLE:	7-7/8" Hole to 5,026'				
SURFACE CEMENT:	250 sx				CEMENT:	250 SX TO DV Tool @ 2421'; 700 SX to Surface				
SURFACE TOC:	SURFACE				TOC:	SURFACE	PBTD:	5024'		
					PERFS:	4958 - 5016'	TD:	5024'		
					PROPOSED:	RUN 2-3/8", 4.7#, J-55, EUE-8RD IPC TBG W/ COATED/IPC AD-1 PACKER @ +/- 4910'				
SFPRR	13	27	95	37E	660	SL	1780	WL	LEA	NEW MEXICO
SURFACE CASING:	8-5/8", 24#, J-55 @ 400'				PRODUCTION CASING:	4-1/2", 10.5#, K-55 @ 5,050'				
SURFACE HOLE:	12-1/4" hole to 400'				PRODUCTION HOLE:	7-7/8" Hole to 5,050'				
SURFACE CEMENT:	300 sx				CEMENT:	250 SX				
SURFACE TOC:	SURFACE				TOC:	4100' Calculated	PBTD:	5032'		
					PERFS:	4974 - 5000'	TD:	5050'		
					PROPOSED:	RUN 2-3/8", 4.7#, J-55, EUE-8RD IPC TBG W/ COATED/IPC AD-1 PACKER @ +/- 4930'				

# VPR OPERATING

EXISTING

WELL: SFPRR #3		FIELD: SAWYER		DATE: 30 JAN 2010		
LOCATION: 660' FEL & 660' FSL		SECTION 28, T09S-R37E				
COUNTY: LEA		STATE: NEW MEXICO			BY: J R HULING	
API # 30-025-25518		SIZE, IN	WGT, # /FT	GRADE	THREAD	DEPTH
GL: 3,965'	CASING:	8-5/8	24	H-40	ST&C	411'
KB: 3,976'	CASING:	4-1/2	10.5	J-55	ST&C	5,039'
SPUD: 6/05/70	CASING:					
TD: 5,039'	PBTD: 5,025'	TUBING:	2-3/8	4.7	J-55	EUE-8RD +/- 5,000'
		<p>12-1/4" SURFACE HOLE DRILLED TO 411'</p> <p>8-5/8" SURFACE CSG @ 411' CMT'd T/ Surf. W/ 325 SX CMT</p> <p>TOC 4090' EST</p> <p>BHA: 2-3/8", 4.7#, J-55, EUE-8RD TBG, TAC, 4 JTS 2-3/8" TBG, SN, 4' PS, BULL PLUG; EOT @ +/- 5000'</p> <p>SAN ANDRES PERFS: 4933' - 4992'</p> <p>SAN ANDRES PERFS: ORIG-8250 GAL 20% HCL ACID</p> <p>4-1/2" CSG @ 5,039' CMT'd W/ 200 SX CMT; 7-7/8" HOLE DRILLED TO 5039'; PBTD@ 5,025'</p>				
BHT = 110F						

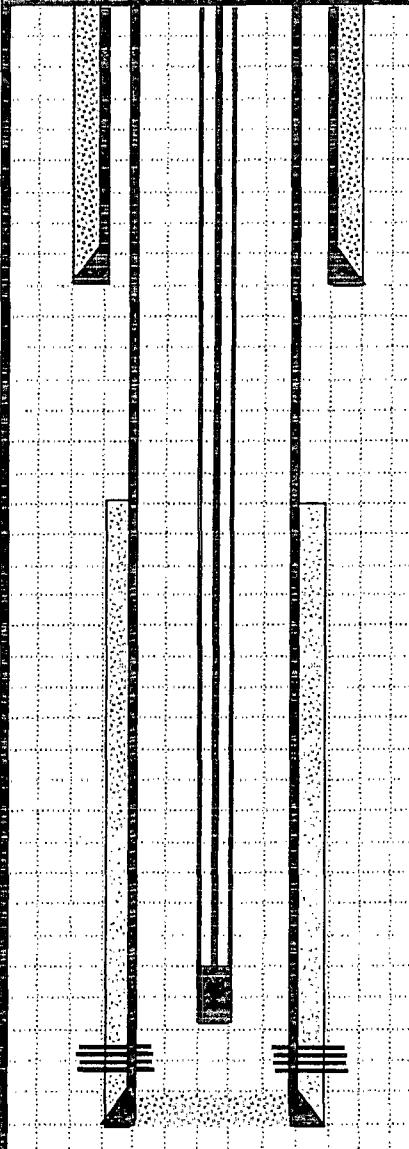
# VPR OPERATING

## PROPOSED

WELL: SFPRR #3		FIELD: SAWYER		DATE: 30 JAN 2010		
LOCATION: 660' FEL & 660' FSL		SECTION 28, T09S-R37E				
COUNTY: LEA		STATE: NEW MEXICO			BY: J R HULING	
API # 30-025-25518		SIZE, IN	WTG, #/FT	GRADE	THREAD	DEPTH
GL: 3,965'	CASING:	8-5/8	24	H-40	ST&C	411'
KB: 3,976'	CASING:	4-1/2	10.5	J-55	ST&C	5,039'
SPUD: 6/05/70	CASING:					
TD: 5,039'	PBTD: 5,025'	TUBING:	2-3/8	4.7	J-55	EUE-8RD +/- 4,890'
		<p>12-1/4" SURFACE HOLE DRILLED TO 411'</p> <p>8-5/8" SURFACE CSG @ 411' CMT'd T/Surf. W/ 325 SX CMT</p> <p>TOC 4090' EST</p> <p>PROPOSED: 2-3/8", 4.7#, J-55, EUE-8RD IPC TBG W/ COATED AD-1 PACKER @ +/- 4,890'</p> <p><i>[Large oval highlighting the San Andres perforation section]</i></p> <p>SAN ANDRES PERFS: ORIG-8250 GAL 20% HCL ACID</p> <p>4-1/2" CSG @ 5,039' CMT'd W/ 200 SX CMT; 7-7/8" HOLE DRILLED TO 5039'; PBTD@ 5,025'</p>				

# VPR OPERATING

EXISTING

WELL: SFPRR #12		FIELD: SAWYER		DATE: 30 JAN 2010		
LOCATION: 1980' FSL & 660' FWL		SECTION 27, T09S-R37E				
COUNTY: LEA		STATE: NEW MEXICO			BY: JR HULING	
API # 30-025-23894		SIZE, IN	WGT, # /FT	GRADE	THREAD	DEPTH
GL: 3,964'	CASING:	8-5/8	24	H-40	ST&C	425'
KB: 3,975'	CASING:	4-1/2	10.5	J-55	ST&C	5,030'
SPUD: 10/15/71	CASING:					
TD: 5,030'	PBTD: 5,025'	TUBING:	2-3/8	4.7	J-55	EUE-8RD
+/- 4,990'						
						
12-1/4" SURFACE HOLE DRILLED TO 425'						
8-5/8" SURFACE CSG @ 425' CMT'd T/ Surf. W/ 325 SX CMT						
TOC 4000' EST						
BHA: 2-3/8", 4.7#, J-55, EUE-8RD TBG, TAC, 4 JTS 2-3/8" TBG, SN, 4' PS, BULL PLUG; EOT @ +/- 4990'						
SAN ANDRES PERFS: 4954' - 5005'						
SAN ANDRES PERFS: ORIG-8250 GAL 20% HCL ACID						
4-1/2" CSG @ 5,039' CMT'd W/ 250 SX CMT; 7-7/8" HOLE DRILLED TO 5039'; PBTD@ 5,030'						
BHT = 110F						

# VPR OPERATING

## PROPOSED

WELL: SFPRR #12		FIELD: SAWYER			DATE: 30 JAN 2010	
LOCATION: 1980' FSL & 660' FWL		SECTION 27, T09S-R37E				
COUNTY: LEA		STATE: NEW MEXICO			BY: J R HULING	
API # 30-025-23894		SIZE, IN	WGT, # /FT	GRADE	THREAD	DEPTH
GL: 3,964'	CASING:	8-5/8	24	H-40	ST&C	425'
KB: 3,975'	CASING:	4-1/2	10.5	J-55	ST&C	5,030'
SPUD: 10/15/71	CASING:					
TD: 5,030'	PBTD: 5,025'	TUBING:	2-3/8	4.7	J-55	EUE-8RD
						+/- 4,905'
		<p>12-1/4" SURFACE HOLE DRILLED TO 425'</p> <p>8-5/8" SURFACE CSG @ 425' CMT'd T/ Surf. W/ 325 SX CMT</p> <p>TOC 4000' EST</p> <p>PROPOSED: 2-3/8", 4.7#, J-55, EUE-8RD IPC TBG W/ COATED AD-1 PACKER @ +/- 4,905'</p> <p>SAN ANDRES PERFS: 4954' - 5065'</p> <p>SAN ANDRES PERFS: ORIG-8250 GAL 20% HCL ACID</p> <p>4-1/2" CSG @ 5,039' CMT'd W/ 250 SX CMT; 7-7/8" HOLE DRILLED TO 5039'; PBTD@ 5,030'</p>				

# VPR OPERATING

## EXISTING

WELL: SFPRR #13		FIELD: SAWYER		DATE: 30 JAN 2010		
LOCATION: 1980' FSL & 660' FWL		SECTION 27, T09S-R37E				
COUNTY: LEA		STATE: NEW MEXICO			BY: J R HULING	
API # 30-025-23951		SIZE, IN	WGT, #/FT	GRADE	THREAD	DEPTH
GL: 3,964'	CASING:	8-5/8	24	H-40	ST&C	420'
KB: 3,976'	CASING:	4-1/2	10.5	J-55	ST&C	5,050'
SPUD: 11/25/71	CASING:					
TD: 5,060'	PBTD: 5,032'	TUBING:	2-3/8	4.7	J-55	EUE-8RD
+/- 4,990'						
		<p>12-1/4" SURFACE HOLE DRILLED TO 420'</p> <p>8-5/8" SURFACE CSG @ 420' CMT'd T/ Surf. W/ 325 SX CMT</p> <p>TOC 4000' EST</p> <p>BHA: 2-3/8", 4.7#, J-55, EUE-8RD TBG, TAG, 4 JTS 2-3/8" TBG, SN, 4' PS, BULL PLUG; EOT @ +/- 4990'</p> <p>SAN ANDRES PERFS: 4974' - 5000'</p> <p>SAN ANDRES PERFS: ORIG-6400 GAL 20% HCL ACID</p> <p>4-1/2" CSG @ 5,050' CMT'd W/ 250 SX CMT; 7-7/8" HOLE DRILLED TO 5050'; PBTD@ 5,032'</p>				

# VPR OPERATING

## PROPOSED

WELL: SFPRR #13		FIELD: SAWYER		DATE: 30 JAN 2010		
LOCATION: 1980' FSL & 660' FWL		SECTION 27, T09S-R37E				
COUNTY: LEA		STATE: NEW MEXICO			BY: J R HULING	
API # 30-025-23951		SIZE, IN	WGT, # /FT	GRADE	THREAD	DEPTH
GL: 3,964'	CASING:	8-5/8	24	H-40	ST&C	420'
KB: 3,976'	CASING:	4-1/2	10.5	J-55	ST&C	5,050'
SPUD: 11/25/71	CASING:					
TD: 5,060'	PBTD: 5,032'	TUBING:	2-3/8	4.7	J-55	EUE-8RD
						+/- 4,930'
		<p>12-1/4" SURFACE HOLE DRILLED TO 420'</p> <p>8-5/8" SURFACE CSG @ 420' CMT'd T/ Surf. W/ 325 SX CMT</p> <p>TOC 4000' EST</p> <p>PROPOSED: 2-3/8", 4.7#, J-55, EUE-8RD IPC TBG W/ COATED AD-1 PACKER @ +/- 4,930'</p> <p>SAN ANDRES PERFS: 4974' - 5000'</p> <p>SAN ANDRES PERFS: ORIG-6400 GAL 20% HCL ACID</p> <p>4-1/2" CSG @ 5,050' CMT'd W/ 250 SX CMT; 7-7/8" HOLE DRILLED TO 5050'; PBTD@ 5,032'</p>				

# VPR OPERATING

## EXISTING

WELL: SFP RR #17		FIELD: SAWYER		DATE: 30 JAN 2010		
LOCATION: 1980' FSL & 1980' FWL		SECTION 27, T09S-R37E				
COUNTY: LEA		STATE: NEW MEXICO			BY: J R HULING	
API # 30-025-25340		SIZE, IN	WGT, # /FT	GRADE	THREAD	DEPTH
GL: 3,967'	CASING:	8-5/8	24	H-40	ST&C	423'
KB: 3,978'	CASING:	4-1/2	10.5	J-55	ST&C	5,033'
SPUD: 9/23/76	CASING:					
TD: 5,033'	PBTD: 5,028'	TUBING:	2-3/8	4.7	J-55	EUE-8RD
						+/- 5,018'
		<p>12-1/4" SURFACE HOLE DRILLED TO 423'</p> <p>8-5/8" SURFACE CSG @ 306' CMT'd T/Surf. W/ 300 SX CMT</p> <p>DV Tool @ 2,304'; 750 SX Cemented to Surface Thru DV Tool</p> <p>CORES PULLED F/ 4958' - 5034'</p> <p>TOPS: ANHY-2288'; YATES - 2949'; SAN ANDRES - 4217'.</p> <p>TOC @ 4000' (EST)</p> <p>BHA: 153 JTS 2-3/8", 4.7#, J-55, EUE-8RD TBG, TAC, 4 JTS 2-3/8" TBG, SN, 4' PS, BULL PLUG; EOT @ +/- 5018'; 137 3/4" RODS, 59 7/8" RODS 16'X 1-1/2" PUMP</p> <p>SAN ANDRES PERFS: 4963 - 5023'</p> <p>SAN ANDRES PERFS: ORIG-9000 GAL 20% HCL ACID @ 10 BPM &amp; 500 PSIG, ISIP- 0 PSIG</p> <p>4-1/2" CSG @ 5,033' CMT'd W/ 1010 SX CMT; 7-7/8" HOLE DRILLED TO 5033'; PBTD@ 5,028'</p>				

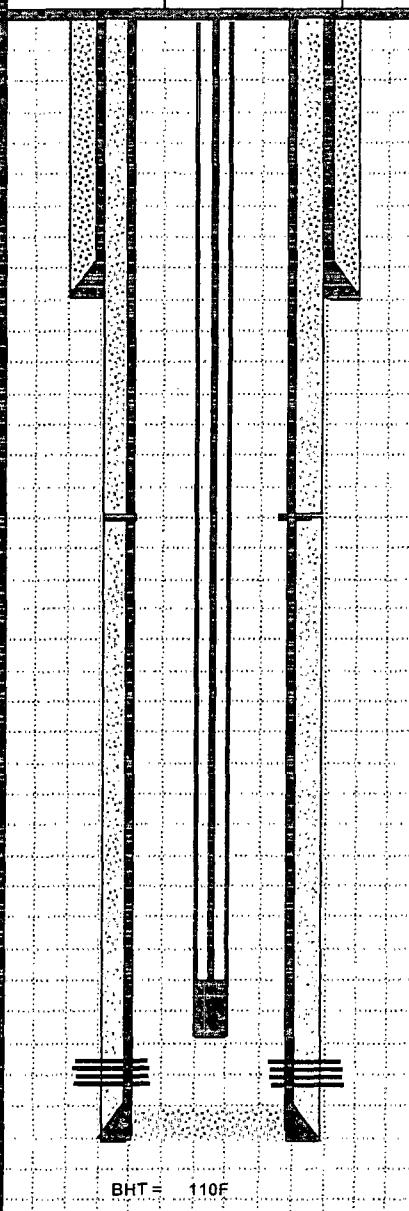
# VPR OPERATING

## PROPOSED

WELL: SFPRR #17		FIELD: SAWYER		DATE: 30 JAN 2010		
LOCATION: 1980' FSL & 1980' FWL		SECTION 27, T09S-R37E				
COUNTY: LEA		STATE: NEW MEXICO			BY: J R HULING	
API # 30-025-25340		SIZE, IN	WGT, # /FT	GRADE	THREAD	DEPTH
GL: 3,967'	CASING:	8-5/8	24	H-40	ST&C	423'
KB: 3,978'	CASING:	4-1/2	10.5	J-55	ST&C	5,033'
SPUD: 9/23/76	CASING:					
TD: 5,033'	PBTD: 5,028'	TUBING:	2-3/8	4.7	J-55	EUE-8RD
						+/- 4,910'
		<p>12-1/4" SURFACE HOLE DRILLED TO 423'</p> <p>8-5/8" SURFACE CSG @ 306' CMT'd T/ Surf. W/ 300 SX CMT</p> <p>DV Tool @ 2,304'; 750 SX Cemented to Surface Thru DV Tool</p> <p>CORES PULLED F/ 4958' – 5034'</p> <p>TOPS: ANHY-2288'; YATES – 2949'; SAN ANDRES – 4217'.</p> <p>TOC @ 4000' (EST)</p> <p>PROPOSED: 2-3/8", 4.7#, J-55, EUE-8RD IPC TBG W/ COATED AD-1 PACKER @ +/- 4,910'</p> <p>SAN ANDRES PERFS: 4963 - 5023'</p> <p>SAN ANDRES PERFS: ORIG-9000 GAL 20% HCL ACID @ 10 BPM &amp; 500 PSIG, ISIP- 0 PSIG</p> <p>4-1/2" CSG @ 5,033' CMT'd W/ 1010 SX CMT; 7-7/8" HOLE DRILLED TO 5033'; PBTD@ 5,028'</p>				
BHT = 110F						

# VPR OPERATING

## EXISTING

WELL: SFPRR #18		FIELD: SAWYER		DATE: 30 JAN 2010		
LOCATION: 660' FEL & 1980' FSL		SECTION 28, T09S-R37E				
COUNTY: LEA		STATE: NEW MEXICO			BY: J R HULING	
API # 30-025-25341		SIZE, IN	WGT, # /FT	GRADE	THREAD	DEPTH
GL: 3,971'	CASING:	8-5/8	24	H-40	ST&C	430'
KB: 3,982'	CASING:	4-1/2	10.5	J-55	ST&C	5,020'
SPUD: 9/23/76	CASING:					
TD: 5,022'	PBTD: 5,028'	TUBING:	2-3/8	4.7	J-55	EUE-8RD
						+/- 5,018'
		<p>12-1/4" SURFACE HOLE DRILLED TO 430'</p> <p>8-5/8" SURFACE CSG @ 430' CMT'd T/ Surf. W/ 300 SX CMT</p> <p>DV Tool ; 760 SX Cemented to Surface Thru DV Tool</p> <p>TOC SURFACE</p> <p>BHA: 2-3/8", 4.7#, J-55, EUE-8RD TBG, TAC, 4 JTS 2-3/8" TBG, SN, 4' PS, BULL PLUG; EOT @ +/- 5000'</p> <p>SAN ANDRES PERFS: 4934' - 5004'</p> <p>SAN ANDRES PERFS: ORIG-9000 GAL 20% HCL ACID</p> <p>4-1/2" CSG @ 5,020' CMT'd W/ 1010 SX CMT; 7-7/8" HOLE DRILLED TO 5020'; PBTD@ 5,013'</p>				

# VPR OPERATING

**PROPOSED**

WELL: SFPRR #18		FIELD: SAWYER		DATE: 30 JAN 2010		
LOCATION: 660' FEL & 1980' FSL		SECTION 28, T09S-R37E				
COUNTY: LEA		STATE: NEW MEXICO			BY: J R HULING	
API # 30-025-25341		SIZE, IN	WGT, # /FT	GRADE	THREAD	DEPTH
GL: 3,971'	CASING:	8-5/8	24	H-40	ST&C	430'
KB: 3,982'	CASING:	4-1/2	10.5	J-55	ST&C	5,020'
SPUD: 9/23/76	CASING:					
TD: 5,022'	PBTD: 5,028'	TUBING:	2-3/8	4.7	J-55	EUE-8RD      +/- 4,900'
		<p>12-1/4" SURFACE HOLE DRILLED TO 430'</p> <p>8-5/8" SURFACE CSG @ 430' CMT'd T/ Surf. W/ 300 SX CMT</p> <p>DV Tool ; 760 SX Cemented to Surface Thru DV Tool</p> <p>TOC SURFACE</p> <p>PROPOSED: 2-3/8", 4.7#, J-55, EUE-8RD IPC TBG W/ COATED AD-1 PACKER @ +/- 4,900'</p> <p>SAN ANDRES PERFS: 4934' – 5004'</p> <p>SAN ANDRES PERFS: ORIG-9000 GAL 20% HCL ACID</p> <p>4-1/2" CSG @ 5,020' CMT'd W/ 1010 SX CMT; 7-7/8" HOLE DRILLED TO 5020'; PBTD@ 5,013'</p>				

**VPR OPERATING, LLC**

**EXISTING**

WELL: SFPRR #19		FIELD: SAWYER		DATE: 24 JAN 2010		
LOCATION: 660' FSL & 660' FWL		SECTION 27, T09S-R37E				
COUNTY: LEA		STATE: NEW MEXICO			BY: J R HULING	
API # 30-025-25342		SIZE, IN	WGT, # /FT	GRADE	THREAD	DEPTH
GL: 3,968'	CASING:	8-5/8	24	H-40	ST&C	423'
KB: 3,979'	CASING:	4-1/2	10.5	J-55	ST&C	5,026'
SPUD: 10/18/76	CASING:					
TD: 5,028'	PBTD: 5,024'	TUBING:	2-3/8	4.7	J-55	EUE-8RD
						+/- 4,955'
		<p>12-1/4" SURFACE HOLE DRILLED TO 423'</p> <p>8-5/8" SURFACE CSG @ 483' CMT'd T/ Surf. W/ 250 SX CMT</p> <p>DV Tool @ 2,421'; 700 SX Cemented to Surface Thru DV Tool</p> <p>TOPS: ANHY-2265'; YATES - 2939'; SAN ANDRES - 4201'.</p> <p>TOC @ 4000' (EST)</p> <p>BHA: 159 JTS 2-3/8", 4.7#, J-55, EUE-8RD TBG, TAC (?), ? JTS 2-3/8" TBG, SN, ? PS, BULL PLUG; EOT @ +/- 4955'; 138 1/4" RODS; 60 7/8" RODS 16"X 1-1/2" PUMP</p> <p>SAN ANDRES PERFS: (IP: 62 BOPD + 7 MCFD + 160 BWPD) 4558 - 62'; 4970 - 93'; 5000- 5016' (43 Shots 0.41" EHD)</p> <p>SAN ANDRES PERFS: ORIG-9000 GAL 20% HCL ACID</p> <p>4-1/2" CSG @ 5,026' CMT'd W/ 250 SX CMT; 7-7/8" HOLE DRILLED TO 5026'; PBTD@ 5,024'</p>				
BHT = 110F						

# VPR OPERATING, LLC

## PROPOSED

WELL: SFPRR #19		FIELD: SAWYER		DATE: 24 JAN 2010		
LOCATION: 660' FSL & 660' FWL		SECTION 27, T09S-R37E				
COUNTY: LEA		STATE: NEW MEXICO			BY: JR HULING	
API # 30-025-25342		SIZE, IN	WGT, # /FT	GRADE	THREAD	DEPTH
GL: 3,968'	CASING:	8-5/8	24	H-40	ST&C	423'
KB: 3,979'	CASING:	4-1/2	10.5	J-55	ST&C	5,026'
SPUD: 10/18/76	CASING:					
TD: 5,028'	PBTD: 5,024'	TUBING:	2-3/8	4.7	J-55	EUE-8RD
						+/- 4,920'
		<p>12-1/4" SURFACE HOLE DRILLED TO 423'</p> <p>8-5/8" SURFACE CSG @ 483' CMT'd T/ Surf. W/ 250 SX CMT</p> <p>DV Tool @ 2,421'; 700 SX Cemented to Surface Thru DV Tool</p> <p>TOPS: ANHY-2265'; YATES - 2939'; SAN ANDRES - 4201'.</p> <p>TOC @ 4000' (EST)</p> <p>PROPOSED: 2-3/8", 4.7#, J-55, EUE-8RD IPC TBG W/ COATED AD-1 PACKER @ +/- 4,920'</p> <p>SAN ANDRES PERFS: (IP: 62 BOPD + 7 MCFD + 160 BWP) 4958 - 62'; 4970 - 93'; 5000-5016' (43 Shots 0.41" EHD)</p> <p>SAN ANDRES PERFS: ORIG-9000 GAL 20% HCL ACID</p> <p>4-1/2" CSG @ 5,026' CMT'd W/ 250 SX CMT; 7-7/8" HOLE DRILLED TO 5026'; PBTD@ 5,024'</p>				
BHT = 110F						

**EXHIBIT III. B. (1), (2), (3), (4) & (5)**

C-108 FILING

VPR OPERATING, LLC  
1406 CAMP CRAFT RD., SUITE 106  
AUSTIN, TX 78746

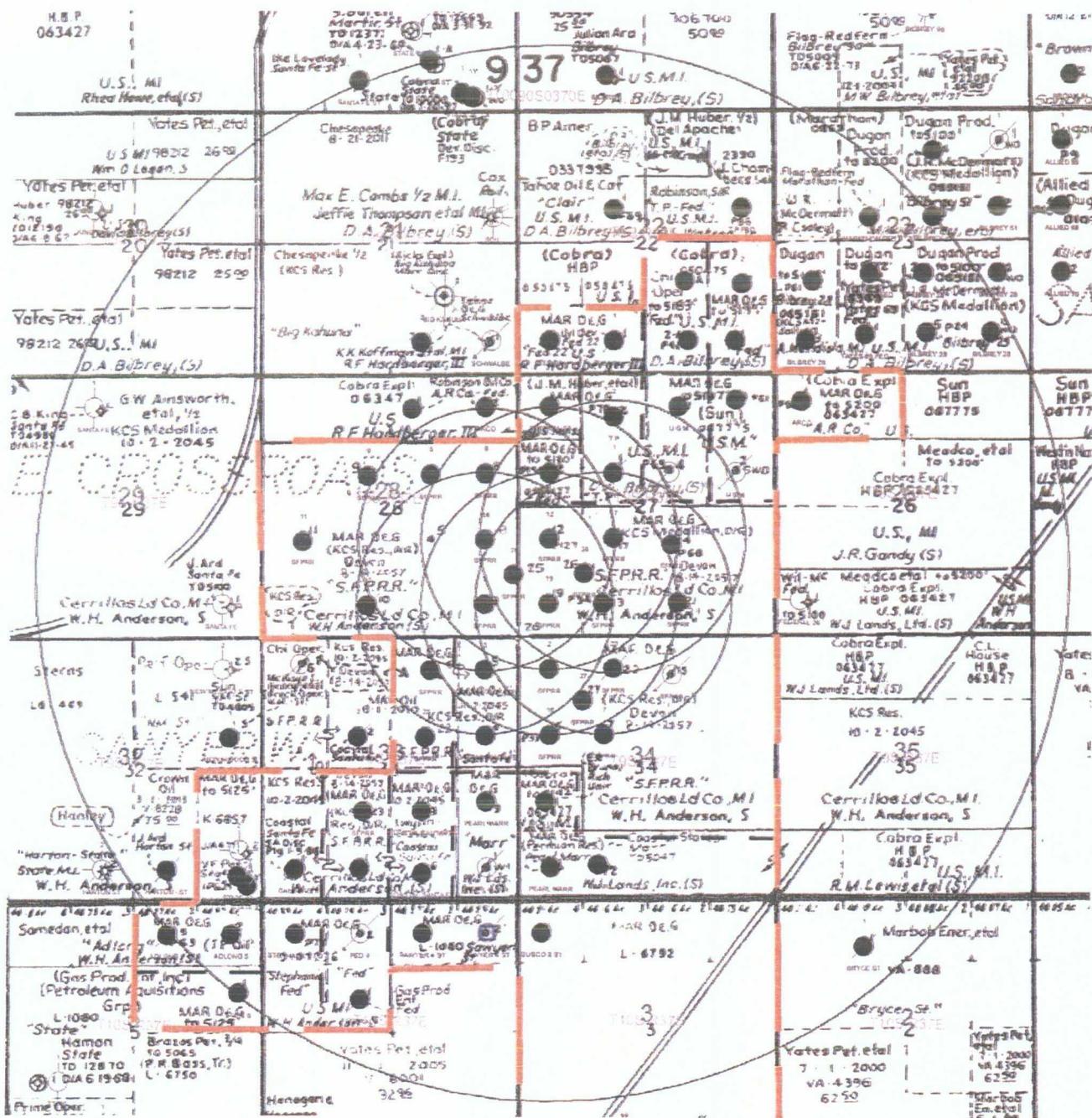
LEASE NAME	WELL NO.	SEC.	TWN	RGE	FT	F/	FT	F/	COUNTY	STATE
SFPRR	18	28	9S	37E	1980	SL	660	EL	LEA	NEW MEXICO
(1) INJECTION FORMATION/ FIELD-POOL:					SAN ANDRES / WEST SAWYER FIELD					
(2) INJECTION INTERVAL:					4934 - 5004' - PERFORATIONS					
(3) WELL HISTORY:					DRILLED AS PRODUCER, PROPSED FOR CONVERSION TO INJECTION					
(4) OTHER PERFORATED INTERVALS:					NONE					
(5) ZONES ABOVE/BELOW:					NONE IN THE AREA OF INTEREST/IMPACT	✓				
SFPRR	12	27	9S	37E	1980	SL	660	EL	LEA	NEW MEXICO
(1) INJECTION FORMATION:					SAN ANDRES / WEST SAWYER FIELD					
(2) FIELD / POOL NAME:					4954 - 5005' - PERFORATIONS					
(3) WELL HISTORY:					DRILLED AS PRODUCER, PROPSED FOR CONVERSION TO INJECTION					
(4) OTHER PERFORATED INTERVALS:					NONE					
(5) ZONES ABOVE/BELOW:					NONE IN THE AREA OF INTEREST/IMPACT	✓				
SFPRR	17	27	9S	37E	1980	SL	1980	WL	LEA	NEW MEXICO
(1) INJECTION FORMATION:					SAN ANDRES / WEST SAWYER FIELD					
(2) FIELD / POOL NAME:					4963 - 5023' - PERFORATIONS					
(3) WELL HISTORY:					DRILLED AS PRODUCER, PROPSED FOR CONVERSION TO INJECTION					
(4) OTHER PERFORATED INTERVALS:					NONE					
(5) ZONES ABOVE/BELOW:					NONE IN THE AREA OF INTEREST/IMPACT	✓				
SFPRR	3	28	9S	37E	660	SL	660	EL	LEA	NEW MEXICO
(1) INJECTION FORMATION:					SAN ANDRES / WEST SAWYER FIELD					
(2) FIELD / POOL NAME:					4933 - 4992' - PERFORATIONS					
(3) WELL HISTORY:					DRILLED AS PRODUCER, PROPSED FOR CONVERSION TO INJECTION					
(4) OTHER PERFORATED INTERVALS:					NONE					
(5) ZONES ABOVE/BELOW:					NONE IN THE AREA OF INTEREST/IMPACT	✓				
SFPRR	19	27	9S	37E	660	SL	660	EL	LEA	NEW MEXICO
(1) INJECTION FORMATION:					SAN ANDRES / WEST SAWYER FIELD					
(2) FIELD / POOL NAME:					4958 - 5016' - PERFORATIONS					
(3) WELL HISTORY:					DRILLED AS PRODUCER, PROPSED FOR CONVERSION TO INJECTION					
(4) OTHER PERFORATED INTERVALS:					NONE					
(5) ZONES ABOVE/BELOW:					NONE IN THE AREA OF INTEREST/IMPACT	✓				
SFPRR	13	27	9S	37E	660	SL	1780	WL	LEA	NEW MEXICO
(1) INJECTION FORMATION:					SAN ANDRES / WEST SAWYER FIELD					
(2) FIELD / POOL NAME:					4974 - 5000' - PERFORATIONS					
(3) WELL HISTORY:					DRILLED AS PRODUCER, PROPSED FOR CONVERSION TO INJECTION					
(4) OTHER PERFORATED INTERVALS:					NONE					
(5) ZONES ABOVE/BELOW:					NONE IN THE AREA OF INTEREST/IMPACT	✓				

**EXHIBIT IV**

**C-108 FILING**

**VPR OPERATING, LLC**  
**1406 CAMP CRAFT RD., SUITE 106**  
**AUSTIN, TX 78746**

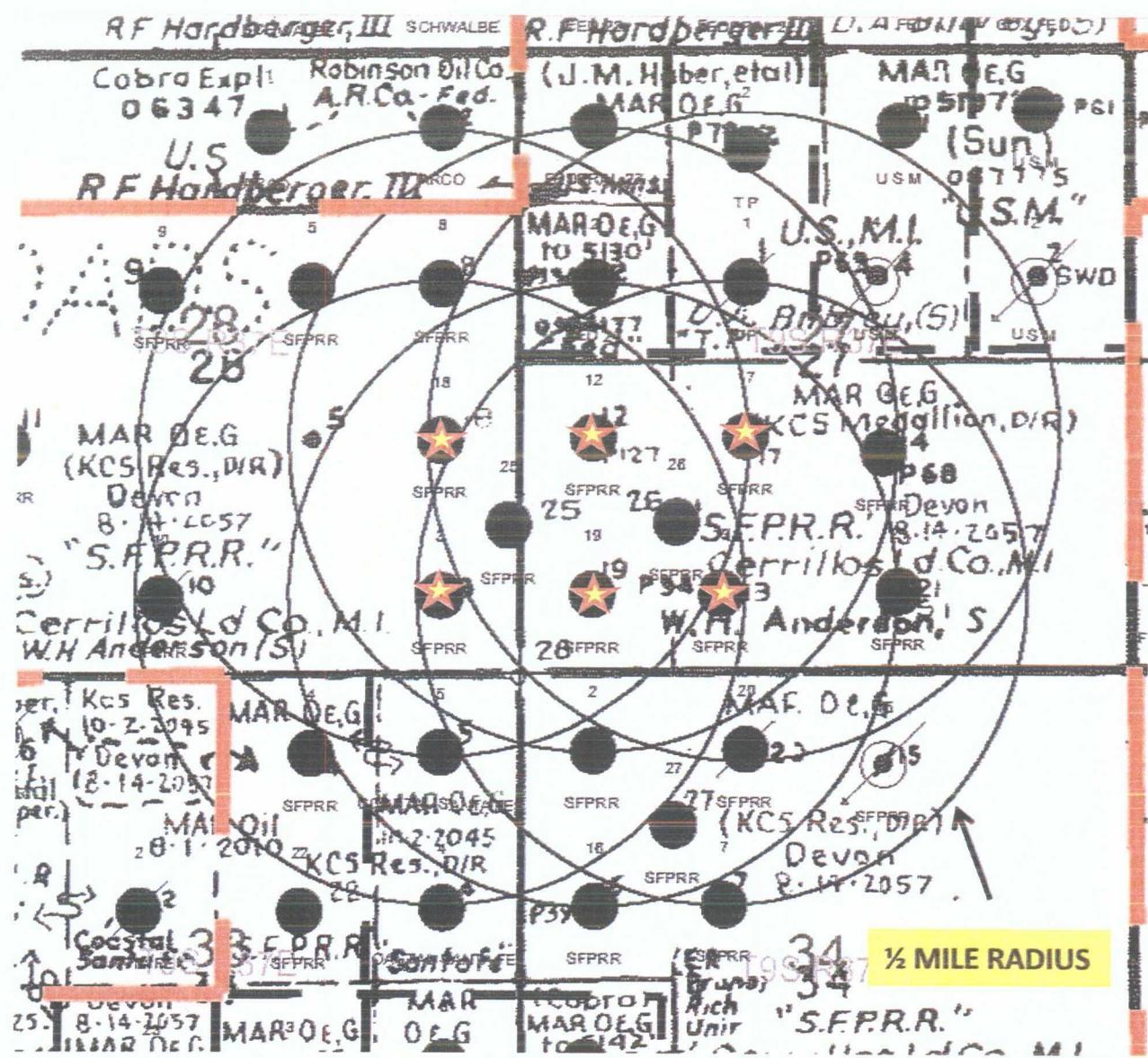
**THIS IS A NEW PROJECT, NOT AN EXPANSION OF AN EXISTING PROJECT.**



## 2 MILE RADIUS AROUND PROPOSED INJECTION WELLS ½ MILE RADII AROUND PROPOSED INJECTION WELLS

VPR OPERATING, LLC  
SAWYER WEST FIELD  
LEA COUNTY, NM

**EXHIBIT V - MAP1**



1/2 MILE RADII AROUND PROPOSED INJECTION WELLS

VPR OPERATING, LLC  
SAWYER WEST FIELD  
LEA COUNTY, NM



PROPOSED CONVERSION TO INJECTION

EXHIBIT V - MAP2

API Number	Lease Name	Name	Field Name	FEET FL	FEET FL	Sec	TWN	RSG	STATE	County	Depth	Elevation	Ref	Date Spud	Date Completion	Surface Dr.	Csg	CMT [S]	Prod Depth	Prod Csg	CMT [S]	Tr Perf	Bl Perf	Treatment Vol [gal]	IP [BOPD]	
3002526872000	SANTA FE	6	SAWYER WEST	360 FSL	1980 FEL	33 95	37E	NM	LEA	5202	5 1/2 IN	250	4326	4992	ACID	10250	95	1100	465	8,540 IN	200	5019	4996	ACID	27000	
30025238540001	A-10 FEDERAL	1	ANTICLINE RIDGE	660 FHL	1780 FEL	33 95	37E	NM	LEA	7563	8/29/1995	398	8,548 IN	300	5025	4 1/2 IN	250	4936	4992	ACID	9000	52	122	5022		
30025251410000	SPRR	18	SAWYER WEST	180 FSL	460 FEL	28 95	37E	NM	LEA	5022	3982 KB	10/4/1976	1771 917	431	8,548 IN	300	5025	4 1/2 IN	250	4936	4992	ACID	9000	52	122	5022
30025251420000	SPRR	19	SAWYER WEST	660 FSL	2780 FEL	27 95	37E	NM	LEA	5028	3979 KB	10/18/1976	1801 917	423	8,548 IN	300	5026	5 1/2 IN	250	4936	4992	ACID	9000	52	122	5026
30025251440000	SPRR	20	SAWYER WEST	660 FSL	1980 FEL	34 95	37E	NM	LEA	5023	3978 KB	11/5/1976	11/13/1977	421	8,548 IN	300	5023	4 1/2 IN	250	4978	5006	ACID	9000	52	122	5023
30025251440000	SPRR	21	SAWYER WEST	660 FSL	1980 FEL	27 95	37E	NM	LEA	5013	3976 KB	11/6/1976	11/31/1977	426	8,548 IN	250	5042	4 1/2 IN	250	4978	5006	ACID	9000	52	122	5042
30025251450000	SPRR	22	SAWYER WEST	660 FSL	2680 FEL	26 95	37E	NM	LEA	5037	3974 KB	12/22/1976	12/24/1977	460	8,548 IN	375	5037	4 1/2 IN	250	5036	5006	FRAC	8000	96	8000	5022
30025251450000	SPRR	23	SAWYER WEST	660 FSL	1980 FEL	27 95	37E	NM	LEA	5024	3973 KB	11/29/1976	12/29/1976	425	8,548 IN	350	5024	4 1/2 IN	250	4995	5013	ACID	9000	84	8000	5024
30025251460000	SPRR	24	SAWYER WEST	660 FSL	33 95	37E	NM	LEA	5061	3974 DF	8/17/1997	8/17/1997	406	8,548 IN	350	5065	4 1/2 IN	250	4985	4986	ACID	9000	84	8000	5065	
30025251460000	SPRR	25	SAWYER WEST	660 FSL	2180 FEL	28 95	37E	NM	LEA	5015	3973 DF	1/23/1970	12/8/1970	417	8,548 IN	325	5015	4 1/2 IN	250	4976	4984	ACID	8000	41	8000	5015
30025251460000	SPRR	26	SAWYER WEST	660 FHL	1330 FEL	34 95	37E	NM	LEA	5010	3978 KB	1/21/1970	1/21/1975	460	8,548 IN	300	5010	4 1/2 IN	250	4982	4992	ACID	8000	39	8000	5010
30025251460000	SPRR	27	SAWYER WEST	660 FEL	33 95	37E	NM	LEA	5025	3974 KB	10/15/1991	10/15/1991	484	8,548 IN	350	5025	5 1/2 IN	1400	4943	5007	ACID	1500	32	1500	5025	
30025251470000	MARR PEARL	2	SAWYER WEST	660 FHL	1980 FEL	27 95	37E	NM	LEA	5100	3974 KB	9/15/1974	9/15/1974	411	8,548 IN	325	5100	4 1/2 IN	250	4957	5022	ACID	7000	78	7000	5022
30025251480000	SPRR	28	SAWYER WEST	1798 FSL	2002 FEL	34 95	37E	NM	LEA	4992	3967 KB	9/18/1971	9/18/1971	472	8,548 IN	275	5104	4 1/2 IN	1375	4986	5046	ACID	8000	0	8000	5046
30025251480000	SPRR	29	SAWYER WEST	1798 FSL	1853 FEL	33 95	37E	NM	LEA	5022	3965 KB	9/19/1977	10/2/1977	431	8,548 IN	250	5091	4 1/2 IN	1000	4984	4974	ACID	8000	205	8000	5091
30025251490000	SPRR	30	SAWYER WEST	1798 FSL	1330 FEL	34 95	37E	NM	LEA	5100	3969 GL	10/20/2009	10/20/2009	460	8,548 IN	300	5100	4 1/2 IN	1070	5030	5046	ACID	2300	35	5046	5030
30025251490000	SPRR	31	SAWYER WEST	1798 FSL	50 FEL	28 95	37E	NM	LEA	5100	3971 GL	11/12/2009	11/12/2009	472	8,548 IN	275	5104	5 1/2 IN	1375	5030	5046	ACID	2300	35	5046	5030
30025251490000	SPRR	32	SAWYER WEST	1798 FSL	1780 FEL	34 95	37E	NM	LEA	5020	3964 KB	11/18/1970	12/21/1970	411	8,548 IN	325	5060	4 1/2 IN	250	4970	4994	ACID	6000	N/A	N/A	5060
30025251490000	SPRR	33	SAWYER WEST	1798 FSL	1980 FEL	27 95	37E	NM	LEA	5025	3973 DF	1/22/1973	1/22/1973	430	8,548 IN	325	5095	4 1/2 IN	250	4976	5022	ACID	7000	139	7000	5022
30025251490000	SPRR	34	SAWYER WEST	1798 FSL	1980 FEL	27 95	37E	NM	LEA	5020	3974 KB	3/19/1973	3/24/1973	428	8,548 IN	325	5080	4 1/2 IN	250	4989	5017	ACID	7000	26	7000	5017
30025251490000	SPRR	35	SAWYER WEST	1798 FSL	2121 FEL	27 95	37E	NM	LEA	5125	3971 KB	3/17/1972	3/18/1972	447	8,548 IN	325	5125	4 1/2 IN	275	4976	5033	ACID	7000	4	7000	5033
30025251490000	SPRR	36	SAWYER WEST	1798 FSL	1750 FEL	33 95	37E	NM	LEA	5025	3982 DF	8/11/1970	8/12/1970	479	8,548 IN	300	5025	4 1/2 IN	250	4936	4982	ACID	10250	N/A	N/A	5025
30025251490000	SPRR	37	SAWYER WEST	1798 FSL	1780 FEL	28 95	37E	NM	LEA	5025	3982 DF	10/19/1970	11/21/1970	417	8,548 IN	325	5025	4 1/2 IN	250	4936	4984	ACID	10250	N/A	N/A	5025
30025251490000	SPRR	38	SAWYER WEST	1798 FSL	1800 FEL	33 95	37E	NM	LEA	5025	3982 DF	10/19/1970	11/21/1970	417	8,548 IN	325	5025	4 1/2 IN	250	4936	4984	ACID	10250	N/A	N/A	5025
30025251490000	SPRR	39	SAWYER WEST	1798 FSL	1820 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	416	8,548 IN	325	5025	4 1/2 IN	250	4978	4984	ACID	8000	N/A	N/A	5025
30025251490000	SPRR	40	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4982	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	41	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4983	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	42	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4982	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	43	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4983	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	44	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4982	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	45	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4983	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	46	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4982	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	47	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4983	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	48	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4982	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	49	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4983	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	50	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4982	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	51	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4983	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	52	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4982	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	53	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4983	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	54	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN	250	4984	4982	ACID	8000	N/A	N/A	5030
30025251490000	SPRR	55	SAWYER WEST	1798 FSL	1880 FEL	28 95	37E	NM	LEA	5025	3986 DF	11/19/1970	11/20/1970	428	8,548 IN	325	5030	4 1/2 IN</								

*EXHIBIT VI CONT.*

C-108 FILING

VPR OPERATING, LLC  
1406 CAMP CRAFT RD., SUITE 106  
AUSTIN, TX 78746

NO WELLS PLUGGED WITHIN 1/2 MILE OF PROPOSED INJECTION WELLS.

✓

**EXHIBIT VII. (1), (2), (3)**

**C-108 FILING**

VPR OPERATING, LLC  
1406 CAMP CRAFT RD., SUITE 100  
AUSTIN, TX 78746

LEASE NAME	WELL NO.	PROPOSED AVG INJ BWPD	PROPOSED MAX INJ BWPD	PROPOSED AVG PRESS PSIG	PROPOSED MAX PRESS BWPD
SFPRR	18	500	2000	200	1500
SFPRR	12	500	2000	200	1500
SFPRR	17	500	2000	200	1500
SFPRR	3	500	2000	200	1500
SFPRR	19	500	2000	200	1500
SFPRR	13	500	2000	200	1500

PRODUCED AND MAKE-UP WATER WILL BE PIPED AND TRUCKED FOR DISPOSAL INTO THE 6 WELLS PROPOSED FOR CONVERSION TO INJECTION.

**EXHIBIT VII. (4)**

**C-108 FILING**

VPR OPERATING, LLC  
1406 CAMP CRAFT RD, SUITE 106  
AUSTIN, TX 78746

PRODUCED WATER FROM ALL VPR OPERATED LEASES IN AREA WILL BE COLLECTED AND PUMPED INTO THE PROPOSED PILOT AREA WHICH INCLUDES THE CONVERSION OF INJECTION OF THE SFPRR 18, 12, 17, 3, 19 AND 13. VPR OPERATING HAS TWO POSSIBLE MAKE-UP WATER SOURCES, DOWN-DIP SAN ANDRES WATER FROM THE FIELD AND EXISTING FRESH WATER FROM THE AREA. ACTUAL WATER ANALYSIS ARE ATTACHED/FOLLOW.

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co.: VPR Operating, LLC  
 Lease: Costal Santa Fe  
 Well No.: # 3  
 Location:  
 Attention:

Date Sampled: 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 1  
 Salesperson:  
 File Name: May2609.001

### ANALYSIS

1. Ph	6.040
2. Specific Gravity 60/60 F.	1.158
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
@ 140F

1.078  
2.688

Moderate  
Severe

#### Dissolved Gasses

4. Hydrogen Sulfide	MG/L.	EQ. WT.	*MEQ/L
5. Carbon Dioxide	Present		
6. Dissolved Oxygen	Not Determined		
	Not Determined		

#### Cations

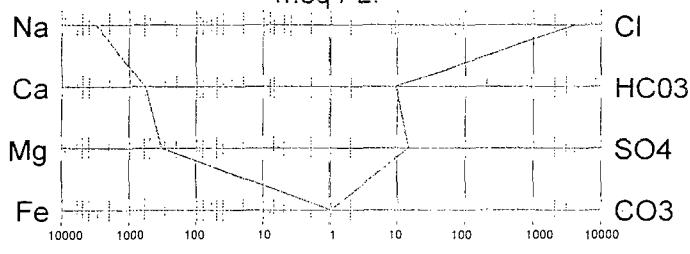
7. Calcium	(Ca <sup>++</sup> )	11,363	/ 20.1 =	565.32
8. Magnesium	(Mg <sup>++</sup> )	3,829	/ 12.2 =	313.85
9. Sodium	(Na <sup>+</sup> )	(Calculated)	69,716	/ 23.0 =
10. Barium	(Ba <sup>++</sup> )		Not Determined	3,031.13

#### Anions

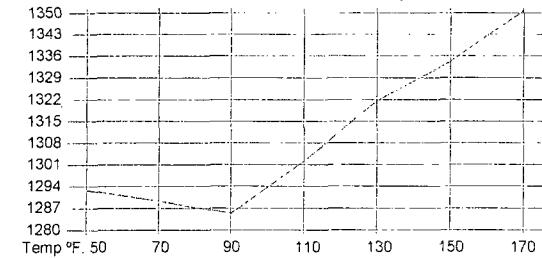
11. Hydroxyl	(OH <sup>-</sup> )	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> <sup>-</sup> )	539	/ 61.1 =	8.82
14. Sulfate	(SO <sub>4</sub> =)	675	/ 48.8 =	13.83
15. Chloride	(Cl <sup>-</sup> )	137,969	/ 35.5 =	3,886.45
16. Total Dissolved Solids		224,091		
17. Total Iron	(Fe)	1.00	/ 18.2 =	0.05
18. Manganese	(Mn <sup>++</sup> )	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		44,139		
20. Resistivity @ 75 F.	(Calculated)	0.001	Ohm · meters	

#### LOGARITHMIC WATER PATTERN

\*meq / L.



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	8.82		81.04		715
CaSO <sub>4</sub>	13.83		68.07		942
CaCl <sub>2</sub>	542.67		55.50		30,118
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	313.85		47.62		14,946
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	3,029.93		58.46		177,130

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : VPR Operating, LLC  
 Lease : SPPRR  
 Well No.: # 8  
 Location:  
 Attention:

Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 2  
 Salesperson :  
 File Name : May2609.001

### ANALYSIS

1. Ph	6.760
2. Specific Gravity 60/60 F.	1.073
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
 @ 140F

6.760

1.073

0.565      Mild  
 1.485      Severe

#### Dissolved Gasses

4. Hydrogen Sulfide  
 5. Carbon Dioxide  
 6. Dissolved Oxygen

MG/L.      EQ. WT.      \*MEQ/L

Not Present  
 Not Determined  
 Not Determined

#### Cations

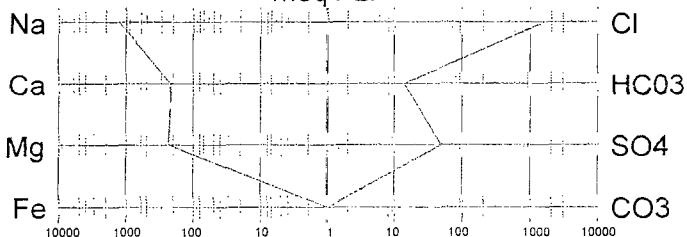
7. Calcium	(Ca++)	4,148	/ 20.1 =	206.37
8. Magnesium	(Mg++)	2,735	/ 12.2 =	224.18
9. Sodium	(Na+)	(Calculated)	27,755	/ 23.0 =
10. Barium	(Ba++)		Not Determined	1,206.74

#### Anions

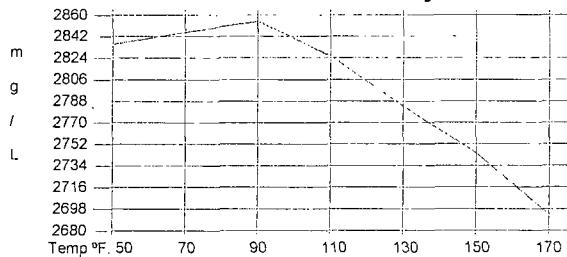
11. Hydroxyl	(OH-)	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> -)	806	/ 61.1 =	13.19
14. Sulfate	(SO <sub>4</sub> =)	2,250	/ 48.8 =	46.11
15. Chloride	(Cl-)	55,987	/ 35.5 =	1,577.10
16. Total Dissolved Solids		93,681		
17. Total Iron	(Fe)	8.00	/ 18.2 =	0.44
18. Manganese	(Mn++)	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		21,619		
20. Resistivity @ 75 F. (Calculated)		0.099	Ohm · meters	

#### LOGARITHMIC WATER PATTERN

\*meq / L.



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	13.19		81.04		1,069
CaSO <sub>4</sub>	46.11		68.07		3,138
CaCl <sub>2</sub>	147.07		55.50		8,162
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	224.18		47.62		10,675
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	1,205.85		58.46		70,494

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : VPR Operating, LLC  
 Lease : Fed 27  
 Well No.: # 1  
 Location:  
 Attention:

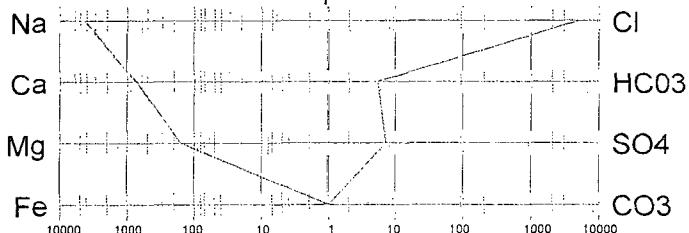
Date Sampled : 20-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 3  
 Salesperson :  
 File Name : May2609.001

### ANALYSIS

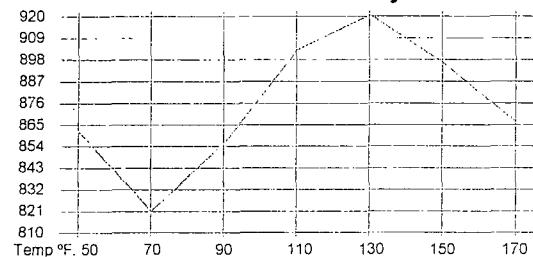
1. Ph	5.800			
2. Specific Gravity 60/60 F.	1.201			
3. CACO <sub>3</sub> Saturation Index	@ 80F @ 140F	1.721 3.101	Severe Severe	
<b>Dissolved Gasses</b>		MG/L.	EQ. WT.	*MEQ/L
4. Hydrogen Sulfide		Present		
5. Carbon Dioxide		Not Determined		
6. Dissolved Oxygen		Not Determined		
<b>Cations</b>				
7. Calcium	(Ca <sup>++</sup> )	14,068	/ 20.1 =	699.90
8. Magnesium	(Mg <sup>++</sup> )	1,860	/ 12.2 =	152.46
9. Sodium	(Na <sup>+</sup> )	(Calculated)	94,721	/ 23.0 = 4,118.30
10. Barium	(Ba <sup>++</sup> )		Not Determined	
<b>Anions</b>				
11. Hydroxyl	(OH <sup>-</sup> )	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> <sup>-</sup> )	310	/ 61.1 =	5.07
14. Sulfate	(SO <sub>4</sub> =)	330	/ 48.8 =	6.76
15. Chloride	(Cl <sup>-</sup> )	175,960	/ 35.5 =	4,956.62
16. Total Dissolved Solids		287,249		
17. Total Iron	(Fe)	2.00	/ 18.2 =	0.11
18. Manganese	(Mn <sup>++</sup> )		Not Determined	
19. Total Hardness as CaCO <sub>3</sub>		42,788		
20. Resistivity @ 75 F. (Calculated)		0.001 Ohm · meters		

### LOGARITHMIC WATER PATTERN

\*meq / L.



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	5.07		81.04		411
CaSO <sub>4</sub>	6.76		68.07		460
CaCl <sub>2</sub>	688.06		55.50		38,188
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	152.46		47.62		7,260
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	4,116.10		58.46		240,627

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co.: VPR Operating, LLC  
 Lease : St. 32  
 Well No.: # 002Y  
 Location:  
 Attention:

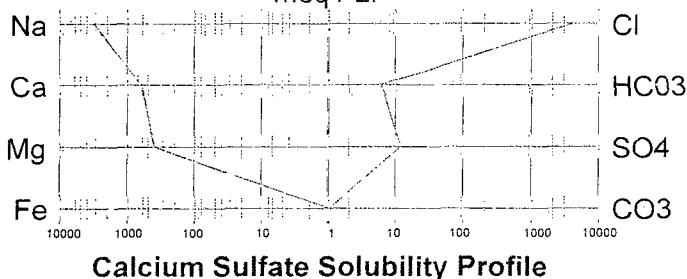
Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 4  
 Salesperson :  
 File Name : May2609.001

### ANALYSIS

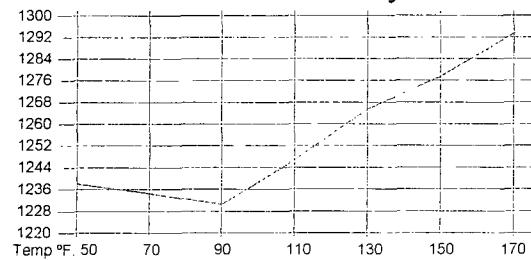
1. Ph		6.020		
2. Specific Gravity 60/60 F.		1.158		
3. CACO <sub>3</sub> Saturation Index	@ 80F @140F	0.966 2.726	Moderate Severe	
<b>Dissolved Gasses</b>		<b>MG/L.</b>	<b>EQ. WT.</b>	<b>*MEQ/L</b>
4. Hydrogen Sulfide		Present		
5. Carbon Dioxide		Not Determined		
6. Dissolved Oxygen		Not Determined		
<b>Cations</b>				
7. Calcium	(Ca <sup>++</sup> )	11,904	/ 20.1 =	592.24
8. Magnesium	(Mg <sup>++</sup> )	4,704	/ 12.2 =	385.57
9. Sodium	(Na <sup>+</sup> )	(Calculated)	68,608	/ 23.0 = 2,982.96
10. Barium	(Ba <sup>++</sup> )		Not Determined	
<b>Anions</b>				
11. Hydroxyl	(OH <sup>-</sup> )	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> <sup>=</sup> )	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> <sup>-</sup> )	354	/ 61.1 =	5.79
14. Sulfate	(SO <sub>4</sub> <sup>=</sup> )	550	/ 48.8 =	11.27
15. Chloride	(Cl <sup>-</sup> )	139,968	/ 35.5 =	3,942.76
16. Total Dissolved Solids		226,088		
17. Total Iron	(Fe)	0.50	/ 18.2 =	0.03
18. Manganese	(Mn <sup>++</sup> )		Not Determined	
19. Total Hardness as CaCO <sub>3</sub>		49,094		
20. Resistivity @ 75 F. (Calculated)		0.001	Ohm · meters	

### LOGARITHMIC WATER PATTERN

\*meq / L.



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	5.79		81.04		470
CaSO <sub>4</sub>	11.27		68.07		767
CaCl <sub>2</sub>	575.17		55.50		31,922
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	385.57		47.62		18,361
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	2,982.01		58.46		174,328

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co.: VPR Operating, LLC  
 Lease : SPPR  
 Well No.: # 20  
 Location:  
 Attention:

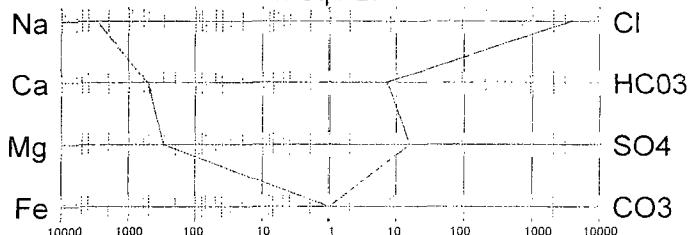
Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 5  
 Salesperson :  
 File Name : May2609.001

### ANALYSIS

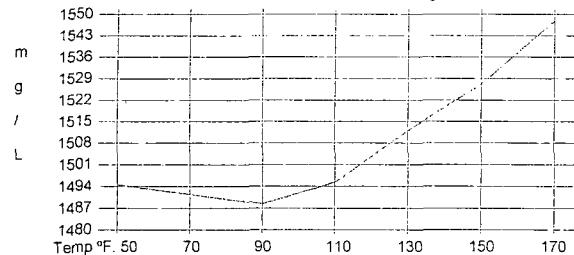
1. Ph		6.020		
2. Specific Gravity 60/60 F.		1.152		
3. CACO <sub>3</sub> Saturation Index	@ 80F @140F	0.728 2.088	Moderate Severe	
<b>Dissolved Gasses</b>		<u>MG/L.</u>	<u>EQ. WT.</u>	<u>*MEQ/L</u>
4. Hydrogen Sulfide		Present		
5. Carbon Dioxide		Not Determined		
6. Dissolved Oxygen		Not Determined		
<b>Cations</b>				
7. Calcium	(Ca <sup>++</sup> )	10,100	/ 20.1 =	502.49
8. Magnesium	(Mg <sup>++</sup> )	3,501	/ 12.2 =	286.97
9. Sodium	(Na <sup>+</sup> )	(Calculated)	66,578	/ 23.0 = 2,894.70
10. Barium	(Ba <sup>++</sup> )		Not Determined	
<b>Anions</b>				
11. Hydroxyl	(OH <sup>-</sup> )	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> <sup>-</sup> )	419	/ 61.1 =	6.86
14. Sulfate	(SO <sub>4</sub> =)	725	/ 48.8 =	14.86
15. Chloride	(Cl <sup>-</sup> )	129,971	/ 35.5 =	3,661.15
16. Total Dissolved Solids		211,294		
17. Total Iron	(Fe)	3.50	/ 18.2 =	0.19
18. Manganese	(Mn <sup>++</sup> )		Not Determined	
19. Total Hardness as CaCO <sub>3</sub>		39,635		
20. Resistivity @ 75 F. (Calculated)		0.001	Ohm · meters	

### LOGARITHMIC WATER PATTERN

\*meq / L.



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	= mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	6.86		81.04	556
CaSO <sub>4</sub>	14.86		68.07	1,011
CaCl <sub>2</sub>	480.77		55.50	26,683
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17	0
MgSO <sub>4</sub>	0.00		60.19	0
MgCl <sub>2</sub>	286.97		47.62	13,665
NaHCO <sub>3</sub>	0.00		84.00	0
NaSO <sub>4</sub>	0.00		71.03	0
NaCl	2,893.41		58.46	169,149

\* milliequivalents per Liter

---

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co.: VPR Operating, LLC  
 Lease : Cox Fed  
 Well No.: # 1  
 Location:  
 Attention:

Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 6  
 Salesperson :  
 File Name : May2609.001

### ANALYSIS

1. Ph	5.570
2. Specific Gravity 60/60 F.	1.209
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
 @ 140F

1.660 Severe  
 2.760 Severe

#### Dissolved Gasses

4. Hydrogen Sulfide	MG/L.	EQ. WT.	*MEQ/L
5. Carbon Dioxide	Present		
6. Dissolved Oxygen	Not Determined		
	Not Determined		

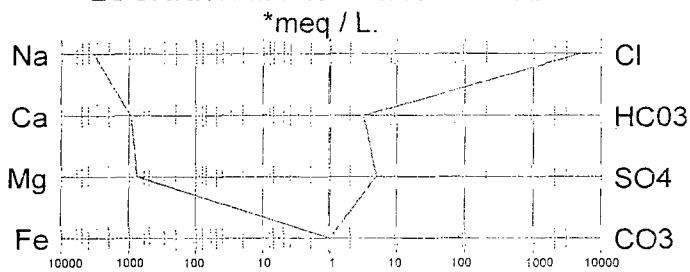
#### Cations

7. Calcium	(Ca++)	18,216	/ 20.1 =	906.27
8. Magnesium	(Mg++)	8,752	/ 12.2 =	717.38
9. Sodium	(Na+)	74,240	/ 23.0 =	3,227.83
10. Barium	(Ba++)	Below 10		

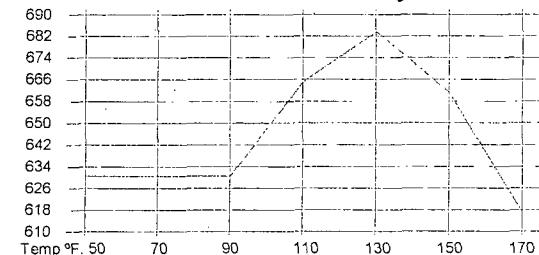
#### Anions

11. Hydroxyl	(OH-)	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> -)	185	/ 61.1 =	3.03
14. Sulfate	(SO <sub>4</sub> =)	230	/ 48.8 =	4.71
15. Chloride	(Cl-)	171,961	/ 35.5 =	4,843.97
16. Total Dissolved Solids		273,584		
17. Total Iron	(Fe)	0.00	/ 18.2 =	0.00
18. Manganese	(Mn++)	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		81,523		
20. Resistivity @ 75 F. (Calculated)		0.001 Ohm · meters		

#### LOGARITHMIC WATER PATTERN



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	3.03		81.04		245
CaSO <sub>4</sub>	4.71		68.07		321
CaCl <sub>2</sub>	898.53		55.50		49,868
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	717.38		47.62		34,161
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	3,228.07		58.46		188,713

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

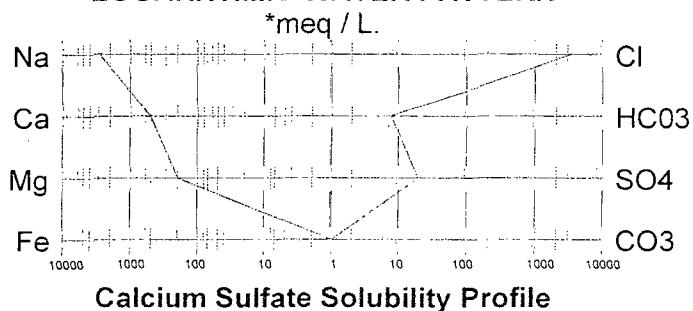
Oil Co. : VPR Operating, LLC  
 Lease : Costal Santa Fe  
 Well No.: # 6  
 Location:  
 Attention:

Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 7  
 Salesperson :  
 File Name : May2609.001

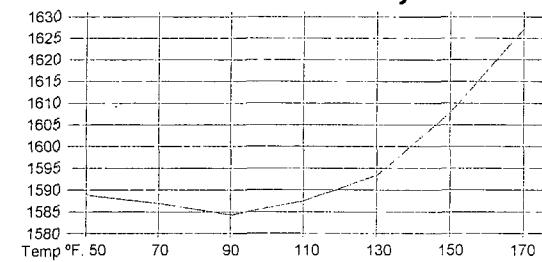
### ANALYSIS

1.	Ph		6.070			
2.	Specific Gravity 60/60 F.		1.135			
3.	CACO <sub>3</sub> Saturation Index	@ 80F @140F	0.639 1.809	Moderate Severe		
	<b>Dissolved Gasses</b>			<u>MG/L.</u>	<u>EQ. WT.</u>	<u>*MEQ/L</u>
4.	Hydrogen Sulfide			Present		
5.	Carbon Dioxide			Not Determined		
6.	Dissolved Oxygen			Not Determined		
	<b>Cations</b>					
7.	Calcium	(Ca++)	9,739	/ 20.1 =	484.53	
8.	Magnesium	(Mg++)	2,297	/ 12.2 =	188.28	
9.	Sodium	(Na+)	62,880	/ 23.0 =	2,733.91	
10.	Barium	(Ba++)	Not Determined			
	<b>Anions</b>					
11.	Hydroxyl	(OH-)	0	/ 17.0 =	0.00	
12.	Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00	
13.	Bicarbonate	(HCO <sub>3</sub> -)	446	/ 61.1 =	7.30	
14.	Sulfate	(SO <sub>4</sub> =)	900	/ 48.8 =	18.44	
15.	Chloride	(Cl-)	119,973	/ 35.5 =	3,379.52	
16.	Total Dissolved Solids		196,235			
17.	Total Iron	(Fe)	1.00	/ 18.2 =	0.05	
18.	Manganese	(Mn++)	Not Determined			
19.	Total Hardness as CaCO <sub>3</sub>		33,780			
20.	Resistivity @ 75 F. (Calculated)		0.002	Ohm · meters		

### LOGARITHMIC WATER PATTERN



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	7.30		81.04		592
CaSO <sub>4</sub>	18.44		68.07		1,255
CaCl <sub>2</sub>	458.79		55.50		25,463
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	188.28		47.62		8,966
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	2,732.46		58.46		159,739

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

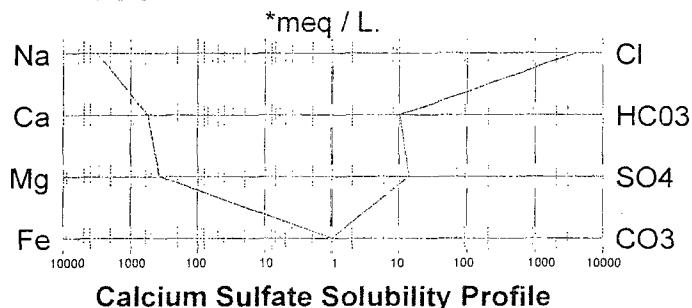
Oil Co.: VPR Operating, LLC  
 Lease : Stephanie Fed  
 Well No.: # 1  
 Location:  
 Attention:

Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 8  
 Salesperson :  
 File Name : May2609.001

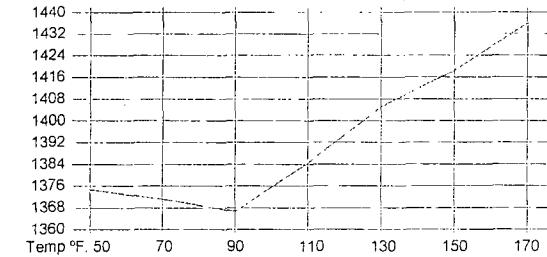
### ANALYSIS

1. Ph		6.170		
2. Specific Gravity 60/60 F.		1.153		
3. CACO <sub>3</sub> Saturation Index	@ 80F @ 140F	1.291 3.051	Severe Severe	
Dissolved Gasses		MG/L.	EQ. WT.	*MEQ/L
4. Hydrogen Sulfide		Present		
5. Carbon Dioxide		Not Determined		
6. Dissolved Oxygen		Not Determined		
Cations				
7. Calcium	(Ca++)	10,641	/ 20.1 =	529.40
8. Magnesium	(Mg++)	4,376	/ 12.2 =	358.69
9. Sodium	(Na+)	(Calculated)	/ 23.0 =	3,078.91
10. Barium	(Ba++)	Not Determined		
Anions				
11. Hydroxyl	(OH-)	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> -)	593	/ 61.1 =	9.71
14. Sulfate	(SO <sub>4</sub> =)	650	/ 48.8 =	13.32
15. Chloride	(Cl-)	139,968	/ 35.5 =	3,942.76
16. Total Dissolved Solids		227,043		
17. Total Iron	(Fe)	1.50	/ 18.2 =	0.08
18. Manganese	(Mn++)	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		44,590		
20. Resistivity @ 75 F. (Calculated)		0.001	Ohm · meters	

### LOGARITHMIC WATER PATTERN



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	9.71		81.04		787
CaSO <sub>4</sub>	13.32		68.07		907
CaCl <sub>2</sub>	506.38		55.50		28,104
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	358.69		47.62		17,081
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	3,077.69		58.46		179,922

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co.: VPR Operating, LLC  
 Lease : Adlong '5'  
 Well No.: # 1  
 Location:  
 Attention:

Date Sampled : 20-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 9  
 Salesperson :  
 File Name : May2609.001

### ANALYSIS

1. Ph	6.110
2. Specific Gravity 60/60 F.	1.156
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
 @140F

1.246 Severe  
 3.156 Severe

#### Dissolved Gasses

4. Hydrogen Sulfide	MG/L.	EQ. WT.	*MEQ/L
5. Carbon Dioxide	Present		
6. Dissolved Oxygen	Not Determined		
	Not Determined		

#### Cations

7. Calcium	(Ca++)	9,920	/ 20.1 =	493.53
8. Magnesium	(Mg++)	4,267	/ 12.2 =	349.75
9. Sodium	(Na+)	(Calculated)	74,394	/ 23.0 =
10. Barium	(Ba++)		Not Determined	3,234.52

#### Anions

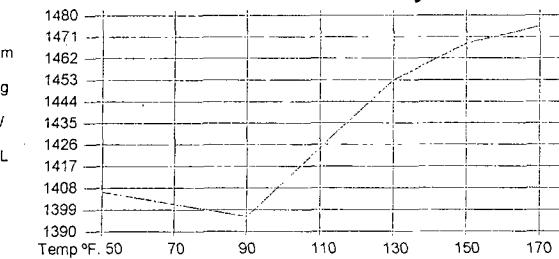
11. Hydroxyl	(OH-)	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> -)	561	/ 61.1 =	9.18
14. Sulfate	(SO <sub>4</sub> =)	575	/ 48.8 =	11.78
15. Chloride	(Cl-)	143,968	/ 35.5 =	4,055.44
16. Total Dissolved Solids		233,685		
17. Total Iron	(Fe)	3.00	/ 18.2 =	0.16
18. Manganese	(Mn++)	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		42,338		
20. Resistivity @ 75 F. (Calculated)		0.001	Ohm · meters	

#### LOGARITHMIC WATER PATTERN

\*meq / L.



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	9.18	81.04	744		
CaSO <sub>4</sub>	11.78	68.07	802		
CaCl <sub>2</sub>	472.57	55.50	26,228		
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00	73.17	0		
MgSO <sub>4</sub>	0.00	60.19	0		
MgCl <sub>2</sub>	349.75	47.62	16,655		
NaHCO <sub>3</sub>	0.00	84.00	0		
NaSO <sub>4</sub>	0.00	71.03	0		
NaCl	3,233.11	58.46	189,008		

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : VPR Operating, LLC  
 Lease : SFPRR  
 Well No.: # 12  
 Location:  
 Attention:

Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 10  
 Salesperson :  
 File Name : May2609.001

### ANALYSIS

1. Ph	5.800
2. Specific Gravity 60/60 F.	1.154
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
 @140F

0.816      Moderate  
 2.316      Severe

#### Dissolved Gasses

4. Hydrogen Sulfide	MG/L.	EQ. WT.	*MEQ/L
5. Carbon Dioxide	Present		
6. Dissolved Oxygen	Not Determined		
	Not Determined		

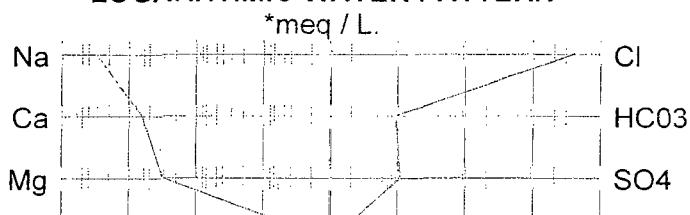
#### Cations

7. Calcium	(Ca <sup>++</sup> )	12,264	/ 20.1 =	610.15
8. Magnesium	(Mg <sup>++</sup> )	3,610	/ 12.2 =	295.90
9. Sodium	(Na <sup>+</sup> )	66,418	/ 23.0 =	2,887.74
10. Barium	(Ba <sup>++</sup> )	Not Determined		

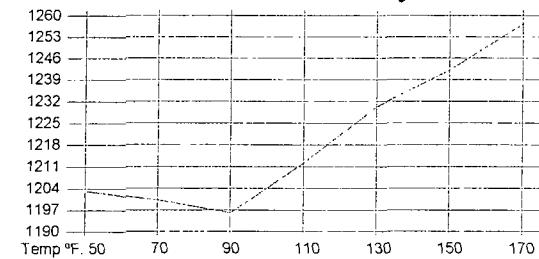
#### Anions

11. Hydroxyl	(OH <sup>-</sup> )	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> <sup>-</sup> )	533	/ 61.1 =	8.72
14. Sulfate	(SO <sub>4</sub> =)	500	/ 48.8 =	10.25
15. Chloride	(Cl <sup>-</sup> )	133,970	/ 35.5 =	3,773.80
16. Total Dissolved Solids		217,295		
17. Total Iron	(Fe)	2.00	/ 18.2 =	0.11
18. Manganese	(Mn <sup>++</sup> )	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		45,491		
20. Resistivity @ 75 F. (Calculated)		0.001	Ohm · meters	

#### LOGARITHMIC WATER PATTERN



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	= mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	8.72		81.04	707
CaSO <sub>4</sub>	10.25		68.07	697
CaCl <sub>2</sub>	591.18		55.50	32,810
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17	0
MgSO <sub>4</sub>	0.00		60.19	0
MgCl <sub>2</sub>	295.90		47.62	14,091
NaHCO <sub>3</sub>	0.00		84.00	0
NaSO <sub>4</sub>	0.00		71.03	0
NaCl	2,886.72		58.46	168,758

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co.: VPR Operating, LLC  
 Lease : Fed A  
 Well No.: # 1  
 Location:  
 Attention:

Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 11  
 Salesperson :  
 File Name : May2609.001

### ANALYSIS

1. Ph	5.340
2. Specific Gravity 60/60 F.	1.209
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
 @ 140F

2.487  
 2.487

Severe  
 Severe

#### Dissolved Gasses

4. Hydrogen Sulfide  
 5. Carbon Dioxide  
 6. Dissolved Oxygen

MG/L.      EQ. WT.      \*MEQ/L

Not Present  
 Not Determined  
 Not Determined

#### Cations

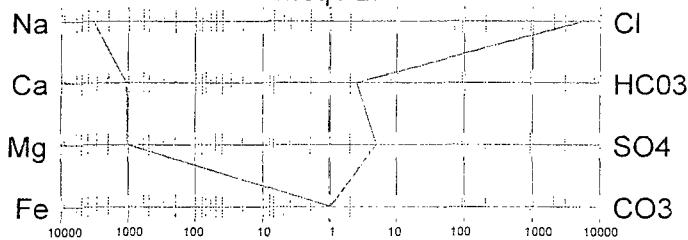
7. Calcium	(Ca++)	20,741	/ 20.1 =	1,031.89
8. Magnesium	(Mg++)	12,253	/ 12.2 =	1,004.34
9. Sodium	(Na+)	75,084	/ 23.0 =	3,264.52
10. Barium	(Ba++)	Below 10		

#### Anions

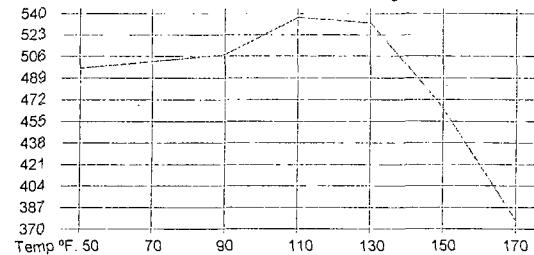
11. Hydroxyl	(OH-)	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> -)	147	/ 61.1 =	2.41
14. Sulfate	(SO <sub>4</sub> =)	235	/ 48.8 =	4.82
15. Chloride	(Cl-)	187,958	/ 35.5 =	5,294.59
16. Total Dissolved Solids		296,418		
17. Total Iron	(Fe)	2.50	/ 18.2 =	0.14
18. Manganese	(Mn++)	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		102,241		
20. Resistivity @ 75 F. (Calculated)		0.001 Ohm · meters		

#### LOGARITHMIC WATER PATTERN

\*meq / L.



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	2.41		81.04		195
CaSO <sub>4</sub>	4.82		68.07		328
CaCl <sub>2</sub>	1,024.67		55.50		56,869
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	1,004.34		47.62		47,827
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	3,265.58		58.46		190,906

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : VPR Operating, LLC  
 Lease : SPPRR  
 Well No.: # 18  
 Location:  
 Attention:

Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 12  
 Salesperson :  
 File Name : May2609.001

### ANALYSIS

1. Ph	5.970
2. Specific Gravity 60/60 F.	1.152
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
@ 140F

0.757  
2.117

Moderate  
Severe

#### Dissolved Gasses

4. Hydrogen Sulfide	MG/L.	EQ. WT.	*MEQ/L
Present			
5. Carbon Dioxide	Not Determined		
6. Dissolved Oxygen	Not Determined		

#### Cations

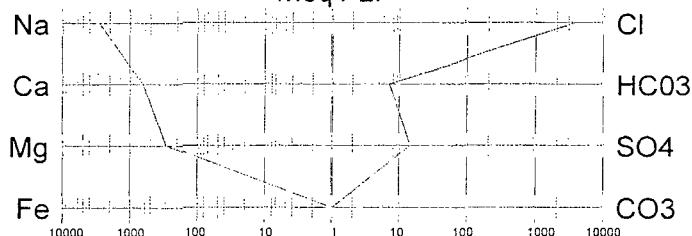
7. Calcium	(Ca++)	12,264	/ 20.1 =	610.15
8. Magnesium	(Mg++)	3,392	/ 12.2 =	278.03
9. Sodium	(Na+)	62,979	/ 23.0 =	2,738.22
10. Barium	(Ba++)	Not Determined		

#### Anions

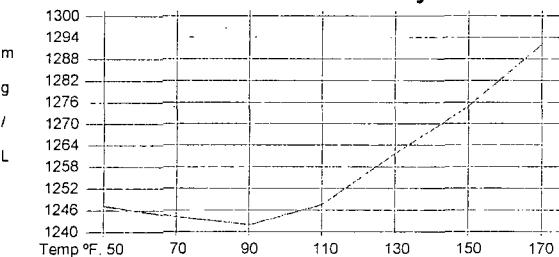
11. Hydroxyl	(OH-)	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> -)	414	/ 61.1 =	6.78
14. Sulfate	(SO <sub>4</sub> =)	675	/ 48.8 =	13.83
15. Chloride	(Cl-)	127,971	/ 35.5 =	3,604.82
16. Total Dissolved Solids		207,695		
17. Total Iron	(Fe)	2.50	/ 18.2 =	0.14
18. Manganese	(Mn++)	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		44,590		
20. Resistivity @ 75 F. (Calculated)		0.001	Ohm · meters	

#### LOGARITHMIC WATER PATTERN

\*meq / L.



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO <sub>3</sub> ) <sub>2</sub>	6.78		81.04		549
CaSO <sub>4</sub>	13.83		68.07		942
CaCl <sub>2</sub>	589.54		55.50		32,720
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	278.03		47.62		13,240
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	2,737.24		58.46		160,019

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co.: VPR Operating, LLC  
 Lease : MARR  
 Well No.: # 3  
 Location:  
 Attention:

Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 13  
 Salesperson :  
 File Name : May2609.001

### ANALYSIS

1. Ph	6.210
2. Specific Gravity 60/60 F.	1.134
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
 @ 140F

0.635  
 1.735

Moderate  
 Severe

#### Dissolved Gasses

4. Hydrogen Sulfide	Present
5. Carbon Dioxide	Not Determined
6. Dissolved Oxygen	Not Determined

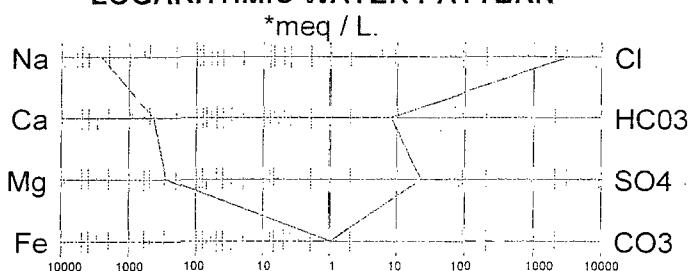
#### Cations

7. Calcium	(Ca <sup>++</sup> )	8,297	/ 20.1 =	412.79
8. Magnesium	(Mg <sup>++</sup> )	3,282	/ 12.2 =	269.02
9. Sodium	(Na <sup>+</sup> )	57,563	/ 23.0 =	2,502.74
10. Barium	(Ba <sup>++</sup> )	Not Determined		

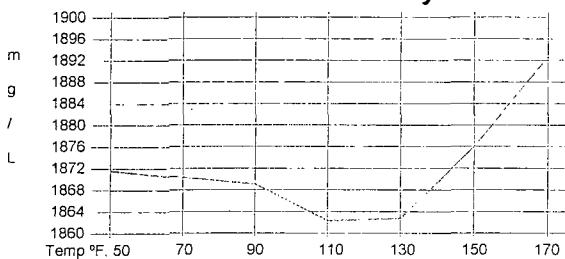
#### Anions

11. Hydroxyl	(OH <sup>-</sup> )	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> <sup>-</sup> )	463	/ 61.1 =	7.58
14. Sulfate	(SO <sub>4</sub> =)	1,050	/ 48.8 =	21.52
15. Chloride	(Cl <sup>-</sup> )	111,975	/ 35.5 =	3,154.23
16. Total Dissolved Solids		182,630		
17. Total Iron	(Fe)	1.00	/ 18.2 =	0.05
18. Manganese	(Mn <sup>++</sup> )	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		34,231		
20. Resistivity @ 75 F. (Calculated)		0.010	Ohm · meters	

#### LOGARITHMIC WATER PATTERN



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	7.58		81.04		614
CaSO <sub>4</sub>	21.52		68.07		1,465
CaCl <sub>2</sub>	383.69		55.50		21,295
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	269.02		47.62		12,811
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	2,501.52		58.46		146,239

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

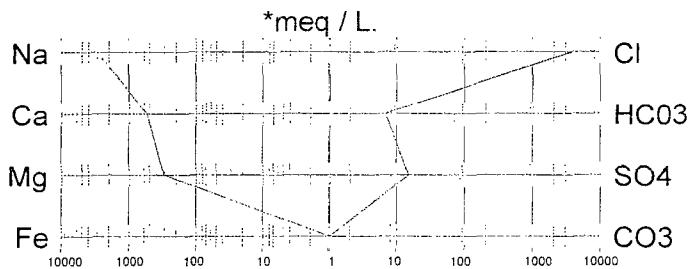
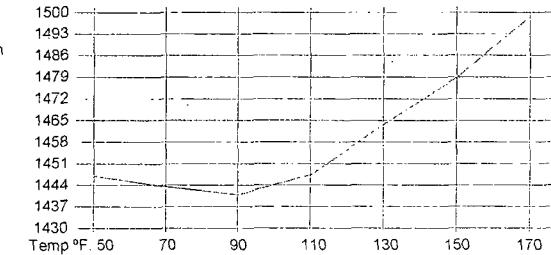
**SAMPLE**

Oil Co. : VPR Operating, LLC  
 Lease : Fed 4  
 Well No.: # 002  
 Location:  
 Attention:

Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 14  
 Salesperson :  
 File Name : May2609.001

**ANALYSIS**

1. Ph		5.990			
2. Specific Gravity 60/60 F.		1.154			
3. CACO <sub>3</sub> Saturation Index	@ 80F @140F	0.744 2.164	Moderate Severe		
<b>Dissolved Gasses</b>			<u>MG/L.</u>	<u>*MEQ/L</u>	
4. Hydrogen Sulfide			Present		
5. Carbon Dioxide			Not Determined		
6. Dissolved Oxygen			Not Determined		
<b>Cations</b>					
7. Calcium	(Ca++)	10,461	/ 20.1 =	520.45	
8. Magnesium	(Mg++)	3,501	/ 12.2 =	286.97	
9. Sodium	(Na+)	(Calculated)	66,142	/ 23.0 =	2,875.74
10. Barium	(Ba++)		Not Determined		
<b>Anions</b>					
11. Hydroxyl	(OH-)	0	/ 17.0 =	0.00	
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00	
13. Bicarbonate	(HCO <sub>3</sub> -)	392	/ 61.1 =	6.42	
14. Sulfate	(SO <sub>4</sub> =)	700	/ 48.8 =	14.34	
15. Chloride	(Cl-)	129,971	/ 35.5 =	3,661.15	
16. Total Dissolved Solids		211,167			
17. Total Iron	(Fe)	2.50	/ 18.2 =	0.14	
18. Manganese	(Mn++)	Not Determined			
19. Total Hardness as CaCO <sub>3</sub>		40,536			
20. Resistivity @ 75 F. (Calculated)		0.001	Ohm · meters		

**LOGARITHMIC WATER PATTERN**

**Calcium Sulfate Solubility Profile**

**PROBABLE MINERAL COMPOSITION**

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	6.42		81.04		520
CaSO <sub>4</sub>	14.34		68.07		976
CaCl <sub>2</sub>	499.69		55.50		27,733
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	286.97		47.62		13,665
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	2,874.50		58.46		168,043

\* milliequivalents per Liter

---

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : VPR Operating, LLC

Lease : Costal Santa Fe

Well No.: # 5

Location:

Attention:

Date Sampled : 19-May-2009

Date Analyzed: 26-May-2009

Lab ID Number: May2609.001- 15

Salesperson :

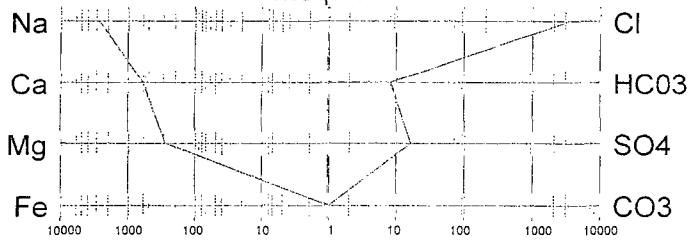
File Name : May2609.001

### ANALYSIS

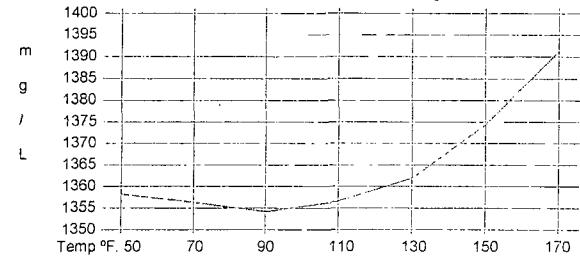
1.	Ph		5.930			
2.	Specific Gravity 60/60 F.		1.151			
3.	CACO <sub>3</sub> Saturation Index	@ 80F @ 140F	0.649 1.869	Moderate Severe		
	<b>Dissolved Gasses</b>			<u>MG/L.</u>	<u>EQ. WT.</u>	<u>*MEQ/L</u>
4.	Hydrogen Sulfide			Present		
5.	Carbon Dioxide			Not Determined		
6.	Dissolved Oxygen			Not Determined		
	<b>Cations</b>					
7.	Calcium	(Ca++)	11,543	/ 20.1 =	574.28	
8.	Magnesium	(Mg++)	3,282	/ 12.2 =	269.02	
9.	Sodium	(Na+)	(Calculated)	60,183	/ 23.0 =	2,616.65
10.	Barium	(Ba++)		Not Determined		
	<b>Anions</b>					
11.	Hydroxyl	(OH-)	0	/ 17.0 =	0.00	
12.	Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00	
13.	Bicarbonate	(HCO <sub>3</sub> -)	474	/ 61.1 =	7.76	
14.	Sulfate	(SO <sub>4</sub> =)	750	/ 48.8 =	15.37	
15.	Chloride	(Cl-)	121,973	/ 35.5 =	3,435.86	
16.	Total Dissolved Solids		198,205			
17.	Total Iron	(Fe)	2.50	/ 18.2 =	0.14	
18.	Manganese	(Mn++)	Not Determined			
19.	Total Hardness as CaCO <sub>3</sub>		42,338			
20.	Resistivity @ 75 F. (Calculated)			0.001 Ohm · meters		

### LOGARITHMIC WATER PATTERN

\*meq / L.



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	7.76		81.04		629
CaSO <sub>4</sub>	15.37		68.07		1,046
CaCl <sub>2</sub>	551.15		55.50		30,589
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	269.02		47.62		12,811
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	2,615.69		58.46		152,913

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co.: VPR Operating, LLC  
 Lease: Fed 22  
 Well No.: # 2  
 Location:  
 Attention:

Date Sampled: 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 16  
 Salesperson:  
 File Name: May2609.001

### ANALYSIS

1. Ph	5.570
2. Specific Gravity 60/60 F.	1.203
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
 @140F

2.140 Severe  
 2.580 Severe

#### Dissolved Gasses

4. Hydrogen Sulfide	MG/L.	EQ. WT.	*MEQ/L
Present			
5. Carbon Dioxide			
6. Dissolved Oxygen			

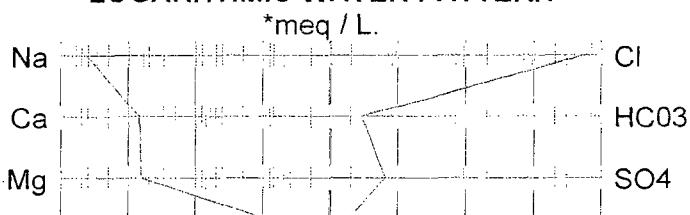
#### Cations

7. Calcium	(Ca <sup>++</sup> )	13,166	/ 20.1 =	655.02
8. Magnesium	(Mg <sup>++</sup> )	7,549	/ 12.2 =	618.77
9. Sodium	(Na <sup>+</sup> )	92,709	/ 23.0 =	4,030.83
10. Barium	(Ba <sup>++</sup> )	Not Determined		

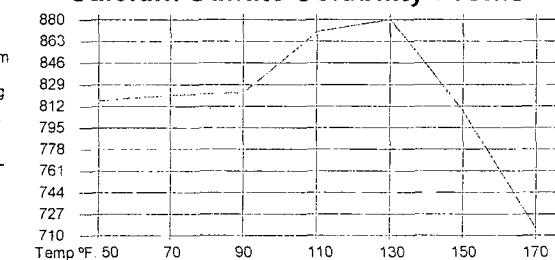
#### Anions

11. Hydroxyl	(OH <sup>-</sup> )	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> <sup>-</sup> )	169	/ 61.1 =	2.77
14. Sulfate	(SO <sub>4</sub> =)	300	/ 48.8 =	6.15
15. Chloride	(Cl <sup>-</sup> )	187,958	/ 35.5 =	5,294.59
16. Total Dissolved Solids		301,851		
17. Total Iron	(Fe)	1.50	/ 18.2 =	0.08
18. Manganese	(Mn <sup>++</sup> )	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		63,957		
20. Resistivity @ 75 F. (Calculated)		0.001 Ohm · meters		

#### LOGARITHMIC WATER PATTERN



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	2.77		81.04		224
CaSO <sub>4</sub>	6.15		68.07		418
CaCl <sub>2</sub>	646.11		55.50		35,859
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	618.77		47.62		29,466
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	4,029.71		58.46		235,577

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co.: VPR Operating, LLC  
 Lease: Coastal Santa Fe  
 Well No.: # 4  
 Location:  
 Attention:

Date Sampled: 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 17  
 Salesperson:  
 File Name: May2609.001

### ANALYSIS

1. Ph	6.240
2. Specific Gravity 60/60 F.	1.145
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
 @140F

0.863      Moderate  
 1.963      Severe

#### Dissolved Gases

4. Hydrogen Sulfide	MG/L.	EQ. WT.	*MEQ/L
5. Carbon Dioxide	Present		
6. Dissolved Oxygen	Not Determined		
	Not Determined		

#### Cations

7. Calcium	(Ca <sup>++</sup> )	10,100	/ 20.1 =	502.49
8. Magnesium	(Mg <sup>++</sup> )	3,173	/ 12.2 =	260.08
9. Sodium	(Na <sup>+</sup> )	(Calculated)	55,632	/ 23.0 =
10. Barium	(Ba <sup>++</sup> )		Not Determined	2,418.78

#### Anions

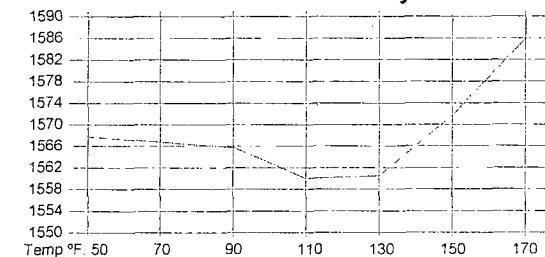
11. Hydroxyl	(OH <sup>-</sup> )	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> <sup>-</sup> )	599	/ 61.1 =	9.80
14. Sulfate	(SO <sub>4</sub> =)	800	/ 48.8 =	16.39
15. Chloride	(Cl <sup>-</sup> )	111,975	/ 35.5 =	3,154.23
16. Total Dissolved Solids		182,279		
17. Total Iron	(Fe)	4.00	/ 18.2 =	0.22
18. Manganese	(Mn <sup>++</sup> )	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		38,284		
20. Resistivity @ 75 F. (Calculated)		0.011	Ohm · meters	

#### LOGARITHMIC WATER PATTERN

\*meq / L.



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	9.80		81.04		794
CaSO <sub>4</sub>	16.39		68.07		1,116
CaCl <sub>2</sub>	476.29		55.50		26,434
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	260.08		47.62		12,385
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	2,417.85		58.46		141,348

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co.: VPR Operating, LLC  
 Lease : Sawyer St. 4  
 Well No.: # 1  
 Location:  
 Attention:

Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 18  
 Salesperson :  
 File Name : May2609.001

### ANALYSIS

1. Ph	6.220
2. Specific Gravity 60/60 F.	1.123
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
 @140F

0.372      Mild  
 1.312      Severe

#### Dissolved Gasses

4. Hydrogen Sulfide	MG/L.	EQ. WT.	*MEQ/L
5. Carbon Dioxide	Present		
6. Dissolved Oxygen	Not Determined		
	Not Determined		

#### Cations

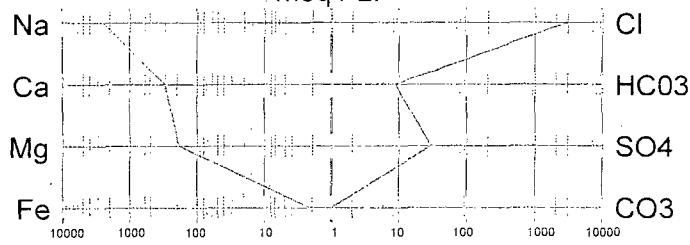
7. Calcium	(Ca++)	5,772	/ 20.1 =	287.16
8. Magnesium	(Mg++)	2,188	/ 12.2 =	179.34
9. Sodium	(Na+)	(Calculated)	56,219	/ 23.0 =
10. Barium	(Ba++)		Not Determined	2,444.30

#### Anions

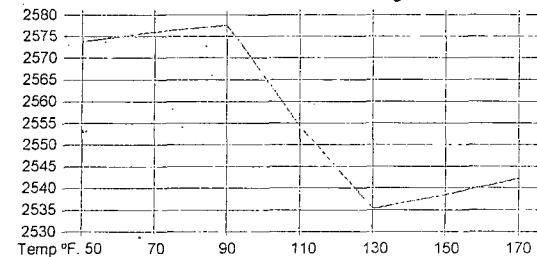
11. Hydroxyl	(OH-)	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> -)	512	/ 61.1 =	8.38
14. Sulfate	(SO <sub>4</sub> =)	1,375	/ 48.8 =	28.18
15. Chloride	(Cl-)	101,977	/ 35.5 =	2,872.59
16. Total Dissolved Solids		168,043		
17. Total Iron	(Fe)	36.50	/ 18.2 =	2.01
18. Manganese	(Mn++)	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		23,421		
20. Resistivity @ 75 F. (Calculated)		0.022	Ohm · meters	

#### LOGARITHMIC WATER PATTERN

\*meq / L.



#### Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	8.38		81.04		679
CaSO <sub>4</sub>	28.18		68.07		1,918
CaCl <sub>2</sub>	250.61		55.50		13,909
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	179.34		47.62		8,540
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	2,442.64		58.46		142,797

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : VPR Operating, LLC  
 Lease : SPPR  
 Well No.: # 3  
 Location:  
 Attention:

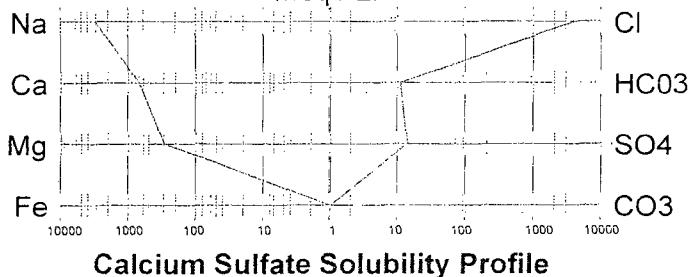
Date Sampled : 20-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 19  
 Salesperson :  
 File Name : May2609.001

### ANALYSIS

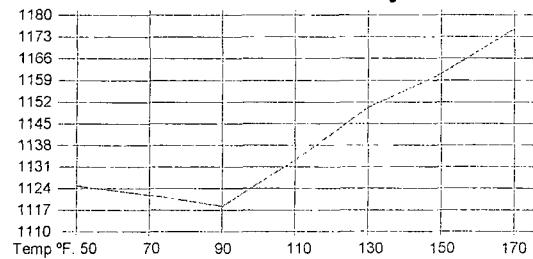
1.	Ph	5.970			
2.	Specific Gravity 60/60 F.	1.161			
3.	CACO <sub>3</sub> Saturation Index	@ 80F @140F	1.148 2.758	Moderate Severe	
	<b>Dissolved Gasses</b>		<u>MG/L.</u>	<u>EQ. WT.</u>	<u>*MEQ/L</u>
4.	Hydrogen Sulfide		Present		
5.	Carbon Dioxide		Not Determined		
6.	Dissolved Oxygen		Not Determined		
	<b>Cations</b>				
7.	Calcium	(Ca <sup>++</sup> )	13,166	/ 20.1 =	655.02
8.	Magnesium	(Mg <sup>++</sup> )	3,392	/ 12.2 =	278.03
9.	Sodium	(Na <sup>+</sup> )	(Calculated)	68,501	/ 23.0 = 2,978.30
10.	Barium	(Ba <sup>++</sup> )		Not Determined	
	<b>Anions</b>				
11.	Hydroxyl	(OH <sup>-</sup> )	0	/ 17.0 =	0.00
12.	Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO <sub>3</sub> <sup>-</sup> )	642	/ 61.1 =	10.51
14.	Sulfate	(SO <sub>4</sub> =)	650	/ 48.8 =	13.32
15.	Chloride	(Cl <sup>-</sup> )	137,969	/ 35.5 =	3,886.45
16.	Total Dissolved Solids		224,320		
17.	Total Iron	(Fe)	0.50	/ 18.2 =	0.03
18.	Manganese	(Mn <sup>++</sup> )		Not Determined	
19.	Total Hardness as CaCO <sub>3</sub>		46,842		
20.	Resistivity @ 75 F. (Calculated)		0.001	Ohm · meters	

### LOGARITHMIC WATER PATTERN

\*meq / L.



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO <sub>3</sub> ) <sub>2</sub>	10.51		81.04		852
CaSO <sub>4</sub>	13.32		68.07		907
CaCl <sub>2</sub>	631.20		55.50		35,031
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	278.03		47.62		13,240
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	2,977.22		58.46		174,048

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co.: VPR Operating, LLC

Lease : SFRP

Well No.: # 13

Location:

Attention:

Date Sampled : 20-May-2009

Date Analyzed: 26-May-2009

Lab ID Number: May2609.001- 20

Salesperson :

File Name : May2609.001

### ANALYSIS

1. Ph	5.780
2. Specific Gravity 60/60 F.	1.152
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
@ 140F

0.709  
2.069

Moderate  
Severe

\*MEQ/L

<u>Dissolved Gasses</u>	
4. Hydrogen Sulfide	Present
5. Carbon Dioxide	Not Determined
6. Dissolved Oxygen	Not Determined

<u>Cations</u>	
7. Calcium	(Ca++)
8. Magnesium	(Mg++)
9. Sodium	(Na+)
10. Barium	(Ba++)

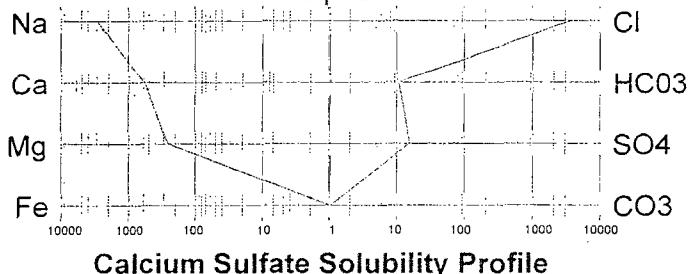
11,363	/ 20.1 =	565.32
3,063	/ 12.2 =	251.07
64,736	/ 23.0 =	2,814.61
Not Determined		

<u>Anions</u>	
11. Hydroxyl	(OH-)
12. Carbonate	(CO <sub>3</sub> =)
13. Bicarbonate	(HCO <sub>3</sub> -)
14. Sulfate	(SO <sub>4</sub> =)
15. Chloride	(Cl-)
16. Total Dissolved Solids	
17. Total Iron	(Fe)
18. Manganese	(Mn++)
19. Total Hardness as CaCO <sub>3</sub>	
20. Resistivity @ 75 F.	(Calculated)

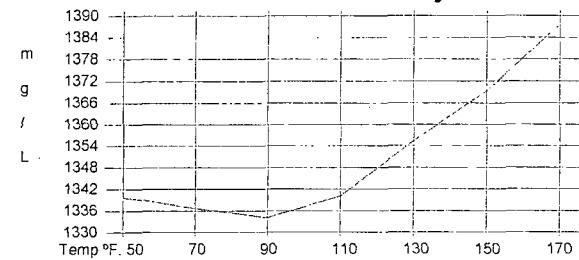
0	/ 17.0 =	0.00
0	/ 30.0 =	0.00
620	/ 61.1 =	10.15
725	/ 48.8 =	14.86
127,971	/ 35.5 =	3,604.82
208,478		
1.50	/ 18.2 =	0.08
Not Determined		
40,987		
0.001	Ohm · meters	

### LOGARITHMIC WATER PATTERN

\*meq / L.



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	10.15		81.04		822
CaSO <sub>4</sub>	14.86		68.07		1,011
CaCl <sub>2</sub>	540.32		55.50		29,988
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	251.07		47.62		11,956
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	2,813.43		58.46		164,473

\* milliequivalents per Liter

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

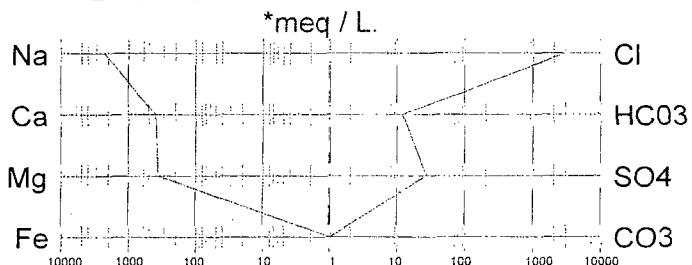
Oil Co. : VPR Operating, LLC  
 Lease : TP Fed  
 Well No.: # 2  
 Location:  
 Attention:

Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 21  
 Salesperson :  
 File Name : May2609.001

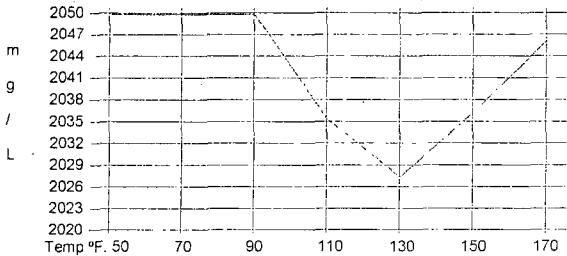
### ANALYSIS

1. Ph		6.150		
2. Specific Gravity 60/60 F.		1.127		
3. CACO <sub>3</sub> Saturation Index	@ 80F @140F	0.593 1.553	Mild Severe	
<b>Dissolved Gasses</b>			<u>MG/L.</u>	<u>EQ. WT.</u>
4. Hydrogen Sulfide			Present	*MEQ/L
5. Carbon Dioxide			Not Determined	
6. Dissolved Oxygen			Not Determined	
<b>Cations</b>				
7. Calcium	(Ca <sup>++</sup> )	7,575	/ 20.1 =	376.87
8. Magnesium	(Mg <sup>++</sup> )	4,267	/ 12.2 =	349.75
9. Sodium	(Na <sup>+</sup> )	(Calculated)	50,241	/ 23.0 = 2,184.39
10. Barium	(Ba <sup>++</sup> )		Not Determined	
<b>Anions</b>				
11. Hydroxyl	(OH <sup>-</sup> )	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> <sup>=</sup> )	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> <sup>-</sup> )	697	/ 61.1 =	11.41
14. Sulfate	(SO <sub>4</sub> <sup>=</sup> )	1,275	/ 48.8 =	26.13
15. Chloride	(Cl <sup>-</sup> )	101,977	/ 35.5 =	2,872.59
16. Total Dissolved Solids		166,032		
17. Total Iron	(Fe)	2.50	/ 18.2 =	0.14
18. Manganese	(Mn <sup>++</sup> )		Not Determined	
19. Total Hardness as CaCO <sub>3</sub>		36,483		
20. Resistivity @ 75 F. (Calculated)		0.022	Ohm · meters	

### LOGARITHMIC WATER PATTERN



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	= mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	11.41		81.04	924
CaSO <sub>4</sub>	26.13		68.07	1,778
CaCl <sub>2</sub>	339.33		55.50	18,833
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17	0
MgSO <sub>4</sub>	0.00		60.19	0
MgCl <sub>2</sub>	349.75		47.62	16,655
NaHCO <sub>3</sub>	0.00		84.00	0
NaSO <sub>4</sub>	0.00		71.03	0
NaCl	2,183.51		58.46	127,648

\* milliequivalents per Liter

Kevin Byrne, Analyst

# **Permian Treating**

## **WATER ANALYSIS REPORT**

**SAMPLE**

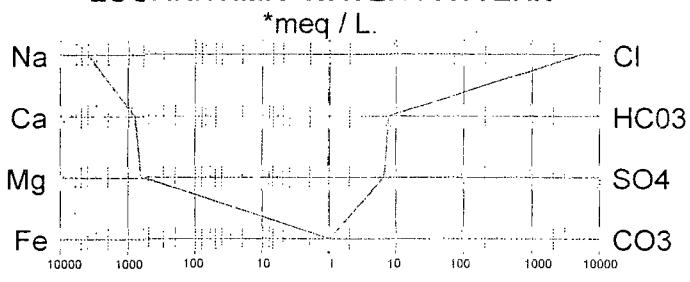
Oil Co. : VPR Operating, LLC  
Lease : U.S.M  
Well No. : # 3  
Location:  
Attention:

Date Sampled : **19-May-2009**  
Date Analyzed: **26-May-2009**  
Lab ID Number: **May2609.001- 22**  
Salesperson :  
File Name : **May2609.001**

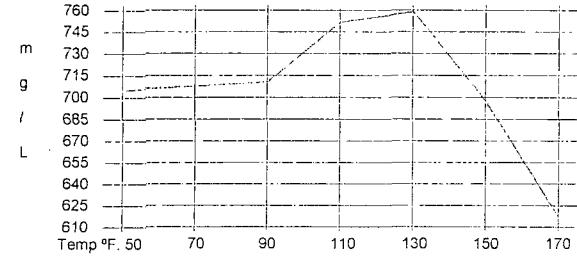
## ANALYSIS

1.	Ph		5.750		
2.	Specific Gravity 60/60 F.		1.208		
3.	CACO <sub>3</sub> Saturation Index	@ 80F @140F	2.546 3.246	Severe Severe	
	<b>Dissolved Gasses</b>			<u>MG/L.</u>	<u>EQ. WT.</u>
4.	Hydrogen Sulfide			Present	*MEQ/L
5.	Carbon Dioxide			Not Determined	
6.	Dissolved Oxygen			Not Determined	
	<b>Cations</b>				
7.	Calcium	(Ca++)		15,331	/ 20.1 =
8.	Magnesium	(Mg++)		7,439	/ 12.2 =
9.	Sodium	(Na+)	(Calculated)	87,950	/ 23.0 =
10.	Barium	(Ba++)		Not Determined	762.74
	<b>Anions</b>				609.75
11.	Hydroxyl	(OH-)		0	3,823.91
12.	Carbonate	(CO <sub>3</sub> =)		0	0.00
13.	Bicarbonate	(HCO <sub>3</sub> -)		446	0.00
14.	Sulfate	(SO <sub>4</sub> =)		310	7.30
15.	Chloride	(Cl-)		183,959	6.35
16.	Total Dissolved Solids			295,435	5,181.94
17.	Total Iron	(Fe)		2.00	0.11
18.	Manganese	(Mn++)		Not Determined	
19.	Total Hardness as CaCO <sub>3</sub>			68,911	
20.	Resistivity @ 75 F.	(Calculated)		0.001	Ohm · meters

## LOGARITHMIC WATER PATTERN



## Calcium Sulfate Solubility Profile



#### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	7.30		81.04		592
CaSO <sub>4</sub>	6.35		68.07		432
CaCl <sub>2</sub>	749.08		55.50		41,574
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	609.75		47.62		29,036
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	3,823.11		58.46		223,499

\* milliequivalents per Liter

---

Kevin Byrne, Analyst

# Permian Treating

## WATER ANALYSIS REPORT

### SAMPLE

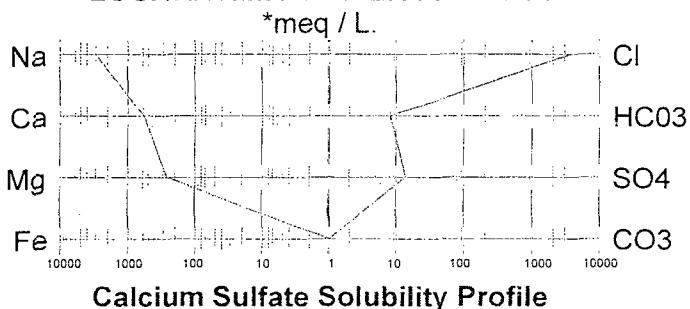
Oil Co. : VPR Operating, LLC  
 Lease : SFPRR  
 Well No.: # 22  
 Location:  
 Attention:

Date Sampled : 19-May-2009  
 Date Analyzed: 26-May-2009  
 Lab ID Number: May2609.001- 23  
 Salesperson :  
 File Name : May2609.001

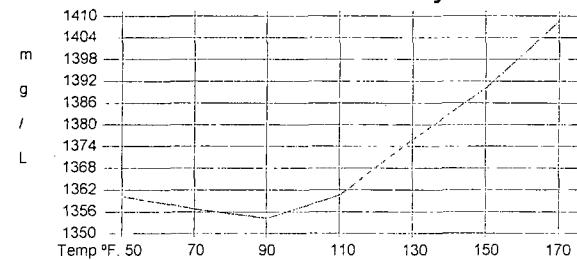
### ANALYSIS

1.	Ph	6.150		
2.	Specific Gravity 60/60 F.	1.159		
3.	CACO <sub>3</sub> Saturation Index	@ 80F @140F	1.015 2.435	Moderate Severe
	<b>Dissolved Gasses</b>		<u>MG/L.</u>	<u>EQ. WT.</u>
4.	Hydrogen Sulfide		Present	
5.	Carbon Dioxide		Not Determined	
6.	Dissolved Oxygen		Not Determined	
	<b>Cations</b>			
7.	Calcium	(Ca <sup>++</sup> )	11,182	/ 20.1 =
8.	Magnesium	(Mg <sup>++</sup> )	3,063	/ 12.2 =
9.	Sodium	(Na <sup>+</sup> )	66,150	/ 23.0 =
10.	Barium	(Ba <sup>++</sup> )	Not Determined	2,876.09
	<b>Anions</b>			
11.	Hydroxyl	(OH <sup>-</sup> )	0	/ 17.0 =
12.	Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =
13.	Bicarbonate	(HCO <sub>3</sub> <sup>-</sup> )	474	/ 61.1 =
14.	Sulfate	(SO <sub>4</sub> =)	650	/ 48.8 =
15.	Chloride	(Cl <sup>-</sup> )	129,971	/ 35.5 =
16.	Total Dissolved Solids		211,490	3,661.15
17.	Total Iron	(Fe)	3.00	/ 18.2 =
18.	Manganese	(Mn <sup>++</sup> )	Not Determined	0.16
19.	Total Hardness as CaCO <sub>3</sub>		40,536	
20.	Resistivity @ 75 F. (Calculated)		0.001	Ohm · meters

### LOGARITHMIC WATER PATTERN



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO <sub>3</sub> ) <sub>2</sub>	7.76		81.04		629
CaSO <sub>4</sub>	13.32		68.07		907
CaCl <sub>2</sub>	535.24		55.50		29,706
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	251.07		47.62		11,956
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	2,874.85		58.46		168,064

\* milliequivalents per Liter

---

Kevin Byrne, Analyst

# Permian Treating WATER ANALYSIS REPORT

## SAMPLE

Oil Co.: VPR  
 Lease: SFPRR  
 Well No.: 25  
 Location:  
 Attention:

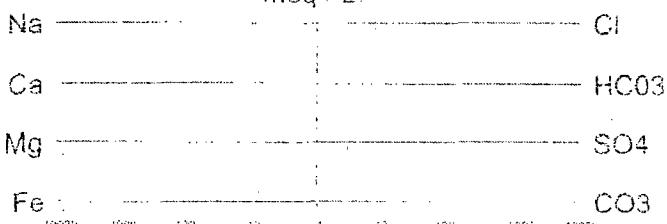
Date Sampled: 12-12-09  
 Date Analyzed: 08-January-2010  
 Lab ID Number: Jan0810.004-1  
 Salesperson:  
 File Name: Jan0810.004

## ANALYSIS

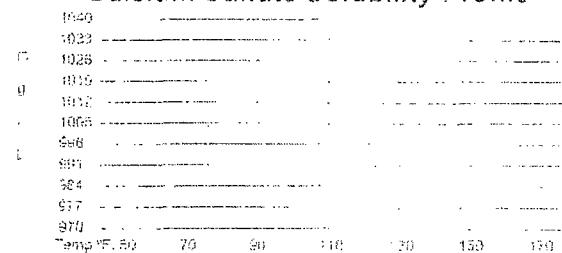
1.	Pn		5.320			
2.	Specific Gravity 60/60 F		1.158			
3.	CACO <sub>3</sub> Saturation Index	@ 80F @ 140F	0.693 2.793	Moderate Severe		
	<b>Dissolved Gasses</b>			MG/L.	EQ. WT.	*MEQ/L
4.	Hydrogen Sulfide			Present		
5.	Carbon Dioxide			Not Determined		
6.	Dissolved Oxygen			Not Determined		
	<b>Cations</b>					
7.	Calcium	(Ca++)	14,438	/ 20.1 =	718.31	
8.	Magnesium	(Mg++)	3,918	/ 12.2 =	321.15	
9.	Sodium	(Na+)	(Calculated)	71,229	/ 23.0 =	3,096.91
10.	Barium	(Ba++)		Not Determined		
	<b>Anions</b>					
11.	Hydroxyl	(OH-)	0	/ 17.0 =	0.00	
12.	Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00	
13.	Bicarbonate	(HCO <sub>3</sub> -)	566	/ 61.1 =	9.26	
14.	Sulfate	(SO <sub>4</sub> =)	700	/ 48.8 =	14.34	
15.	Chloride	(Cl-)	145,967	/ 35.5 =	4,111.75	
16.	Total Dissolved Solids		236,818			
17.	Total Iron	(Fe)	4.00	/ 18.2 =	0.22	
18.	Manganese	(Mn++)		Not Determined		
19.	Total Hardness as CaCO <sub>3</sub>		52,187			
20.	Resistivity @ 75 F. (Calculated)			0.001 Ohm · meters		

## LOGARITHMIC WATER PATTERN

\*meq / L.



## Calcium Sulfate Solubility Profile



## PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	9.26		81.04		751
CaSO <sub>4</sub>	14.34		68.07		976
CaCl <sub>2</sub>	694.70		55.50		38,556
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	321.15		47.62		15,293
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	3,095.90		58.46		180,986

\* milliequivalents per Liter

David Chavez, Analyst

# Permian Treating WATER ANALYSIS REPORT

## SAMPLE

Oil Co.: VPR Operating  
 Lease: SPPRR  
 Well No.: 27  
 Location:  
 Attention:

Date Sampled: 12/28/2009  
 Date Analyzed: 29-December-2009  
 Lab ID Number: Dec2909.002-3  
 Salesperson:  
 File Name: Dec2909.002

## ANALYSIS

1.	Ph	6.260
2.	Specific Gravity 60/60 F.	1.263
3.	CACO <sub>3</sub> Saturation Index	

@ 80F  
 @ 145F

1.432  
 3.192

Severe  
 Severe

### Dissolved Gasses

			MG/L.	EQ. WT.	*MEQ/L
4.	Hydrogen Sulfide		Present		
5.	Carbon Dioxide		Not Determined		
6.	Dissolved Oxygen		Not Determined		

### Cations

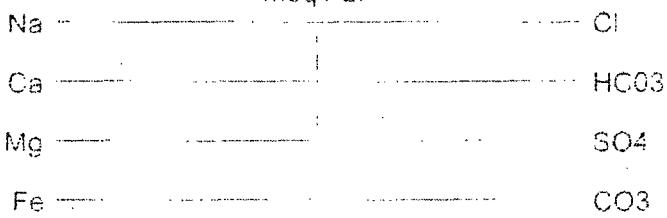
7.	Calcium	(Ca++)	12,919	/ 20.1 =	642.74
8.	Magnesium	(Mg++)	5,186	/ 12.2 =	425.08
9.	Sodium	(Na+)	(Calculated)	65,714	/ 23.0 =
10.	Barium	(Ba++)		Not Determined	2,857.13

### Anions

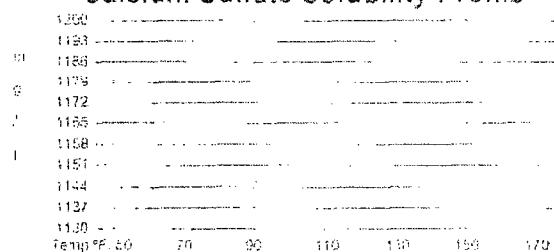
11.	Hydroxyl	(OH-)	0	/ 17.0 =	0.00
12.	Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO <sub>3</sub> -)	550	/ 61.1 =	9.00
14.	Sulfate	(SO <sub>4</sub> =)	41	/ 48.8 =	0.84
15.	Chloride	(Cl-)	138,969	/ 35.5 =	3,914.62
16.	Total Dissolved Solids		223,379		
17.	Total Iron	(Fe)	5.00	/ 18.2 =	0.27
18.	Manganese	(Mn++)	Not Determined		
19.	Total Hardness as CaCO <sub>3</sub>		53,610		
20.	Resistivity @ 75 F.	(Calculated)		0.001 Ohm · meters	

### LOGARITHMIC WATER PATTERN

\*meq / L.



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	9.00		81.04		729
CaSO <sub>4</sub>	0.84		68.07		57
CaCl <sub>2</sub>	632.89		55.50		35,126
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	0.00		60.19		0
MgCl <sub>2</sub>	425.08		47.62		20,242
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.00		71.03		0
NaCl	2,856.64		58.46		166,999

\* milliequivalents per Liter

Elisabeth Andrews, Analyst

# Permian Treating WATER ANALYSIS REPORT

## SAMPLE

Oil Co.: VPR Operating  
 Lease : Sawyer Corral  
 Well No.: *Mixer - up water sample*  
 Location:  
 Attention:

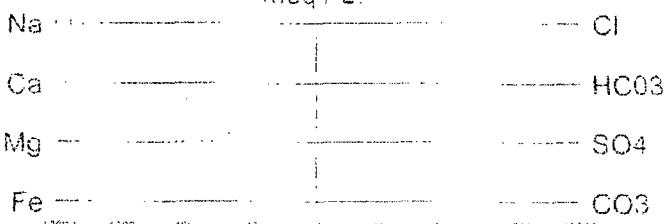
Date Sampled : 1-5-2010  
 Date Analyzed: 06-January-2010  
 Lab ID Number: Jan0610.001- 2  
 Salesperson :  
 File Name : Jan0610.001

## ANALYSIS

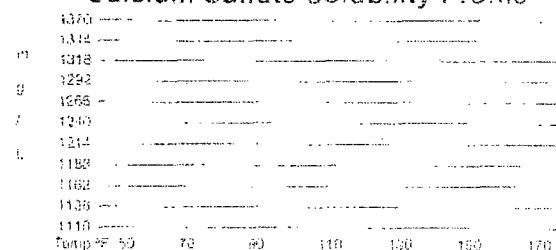
1. Ph		7.590			
2. Specific Gravity 60/60 F.		1.009			
3. CACO <sub>3</sub> Saturation Index	@ 80F @ 140F	0.876 1.476	Moderate Severe		
<b>Dissolved Gasses</b>			MG/L	EQ. WT.	MEQ/L
4. Hydrogen Sulfide			Not Present		
5. Carbon Dioxide			Not Determined		
6. Dissolved Oxygen			Not Determined		
<b>Cations</b>					
7. Calcium	(Ca++)	104	/ 20.1 =	5.17	
8. Magnesium	(Mg++)	58	/ 12.2 =	4.75	
9. Sodium	(Na+)	(Calculated)	114	/ 23.0 =	4.96
10. Barium	(Ba++)		Not Determined		
<b>Anions</b>					
11. Hydroxyl	(OH-)	0	/ 17.0 =	0.00	
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00	
13. Bicarbonate	(HCO <sub>3</sub> -)	207	/ 61.1 =	3.39	
14. Sulfate	(SO <sub>4</sub> =)	350	/ 48.8 =	7.17	
15. Chloride	(Cl-)	150	/ 35.5 =	4.23	
16. Total Dissolved Solids		983			
17. Total Iron	(Fe)	0.75	/ 18.2 =	0.04	
18. Manganese	(Mn++)		Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		498			
20. Resistivity @ 75 F. (Calculated)			2.851 Ohm · meters		

## LOGARITHMIC WATER PATTERN

\*meq / L.



## Calcium Sulfate Solubility Profile



## PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	3.39		81.04		275
CaSO <sub>4</sub>	1.79		68.07		122
CaCl <sub>2</sub>	0.00		55.50		0
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	4.75		60.19		286
MgCl <sub>2</sub>	0.00		47.62		0
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.63		71.03		45
NaCl	4.23		58.46		247

\* milliequivalents per Liter

Elisabeth Andrews, Analyst

# Permian Treating WATER ANALYSIS REPORT

## SAMPLE

Oil Co.: VPR Operating  
 Lease : Sawyer Corral  
 Well No.: South  
 Location: **MAKED - up** WATER SOURCE  
 Attention:

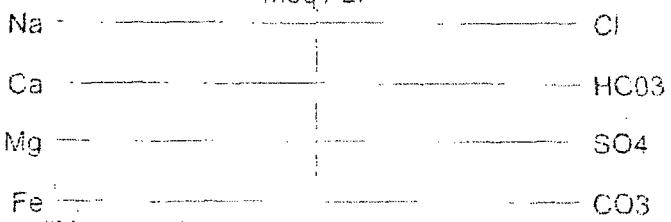
Date Sampled: 1-5-2010  
 Date Analyzed: 06-January-2010  
 Lab ID Number: Jan0610.001-3  
 Salesperson :  
 File Name: Jan0610.001

## ANALYSIS

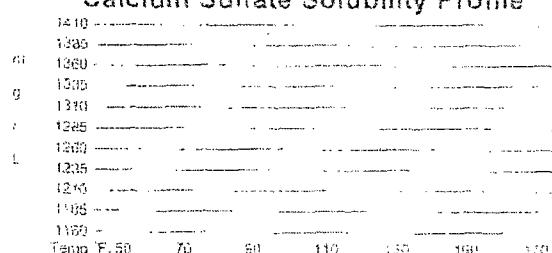
1. Ph		7.670			
2. Specific Gravity 60/60 F		1.007			
3. CaCO <sub>3</sub> Saturation Index	@ 80F @ 140F	0.862 1.462	Moderate Severe		
Dissolved Gasses		MG/L.	EQ. WT.	*MEQ/L	
4. Hydrogen Sulfide		Not Present			
5. Carbon Dioxide		Not Determined			
6. Dissolved Oxygen		Not Determined			
Cations					
7. Calcium	(Ca++)	76	/ 20.1 =	3.78	
8. Magnesium	(Mg++)	40	/ 12.2 =	3.28	
9. Sodium	(Na+)	(Calculated)	120	/ 23.0 =	5.22
10. Barium	(Ba++)		Less than 10		
Anions					
11. Hydroxyl	(OH-)	0	/ 17.0 =	0.00	
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00	
13. Bicarbonate	(HCO <sub>3</sub> -)	229	/ 61.1 =	3.75	
14. Sulfate	(SO <sub>4</sub> =)	275	/ 48.8 =	5.64	
15. Chloride	(Cl-)	100	/ 35.5 =	2.82	
16. Total Dissolved Solids		840			
17. Total Iron	(Fe)	0.75	/ 18.2 =	0.04	
18. Manganese	(Mn++)		Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		356			
20. Resistivity @ 75 F. (Calculated)			2.757 Ohm · meters		

## LOGARITHMIC WATER PATTERN

\*meq / L.



## Calcium Sulfate Solubility Profile



## PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	3.75		81.04		304
CaSO <sub>4</sub>	0.03		68.07		2
CaCl <sub>2</sub>	0.00		55.50		0
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	3.28		60.19		197
MgCl <sub>2</sub>	0.00		47.62		0
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	2.32		71.03		165
NaCl	2.82		58.46		165

\* milliequivalents per Liter

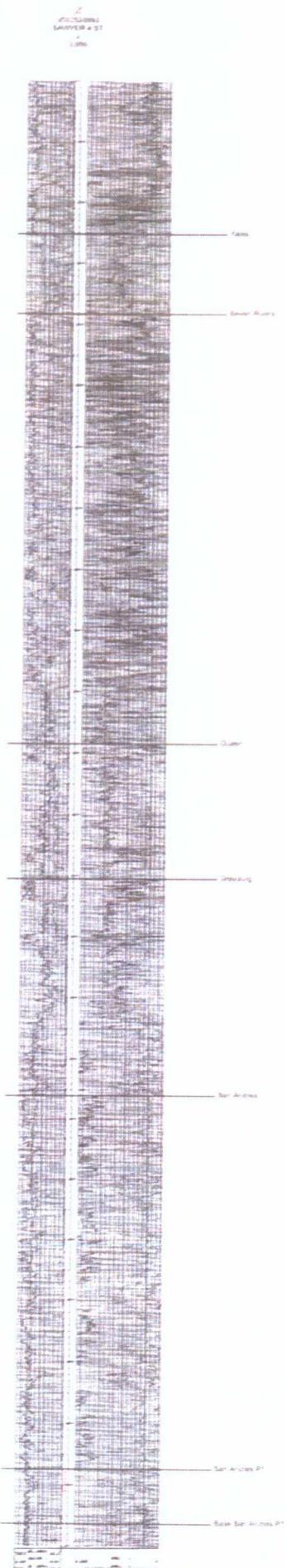
Elisabeth Andrews, Analyst

*EXHIBIT VII. (5)*

*C-108 FILING*

VPR OPERATING, LLC  
1406 CAMP CRAFT RD., SUITE 106  
AUSTIN, TX 78746

N/A - Injection is for the purpose of a pilot waterflood.



**EXHIBIT VIII**

**C-108 FILING**

**VPR OPERATING, LLC  
1406 CAMP CRAFT RD., SUITE 106  
AUSTIN, TX 78746**

**LITHOLOGIC DETAIL:**

The Sawyer West Field is part of the larger east-west Slaughter trend of the San Andres formation. The Slaughter trend consists of three porosity zones conveniently termed Upper, Middle, and Lower also known as porosity zones P-1, P-2, and P-3 respectively. Traps are typically stratigraphic and formed by diagenetic plugging of porosity with evaporates in an up dip direction. In the Sawyer West Field the Slaughter zone occurs approximately 600 feet below the top of the San Andres.

The Sawyer West Field is produces from the P-1 and P-2 zones. The top of the Slaughter zone P-1 is at approximately 4970 feet deep. The productive thickness of the P-1 and P-2 is approximately 120 feet. The lithology consists of inter-bedded anhydrite and gray to brown medium to coarsely crystalline dolomite. Styolites and vuggy porosity are present related to secondary porosity development from dolomitization. The dolomite contains scattered inclusions of gray to white anhydrite. Intervals of thin argillaceous sediments are present throughout the section.

C

370255502  
FED 22  
3.903  
3.973

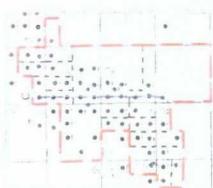
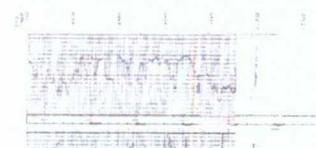
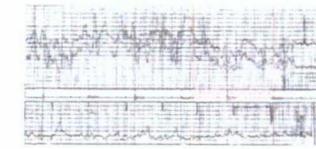
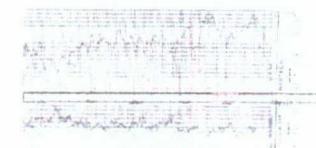
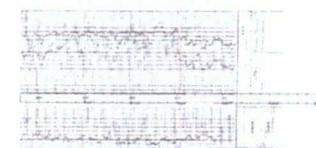
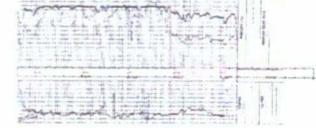
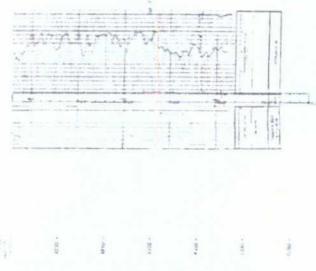
370255041  
FED 27  
3.903  
3.973

370255094  
SFPR  
12  
3.974  
3.979

370255494  
SFPR  
2  
3.977

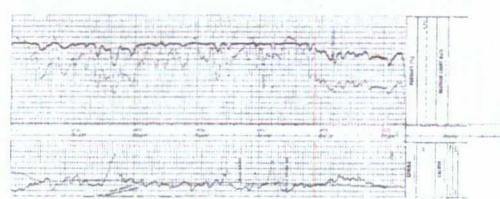
370255295  
SFPR  
16  
3.978

370255175  
SFPR  
3.51  
3.901



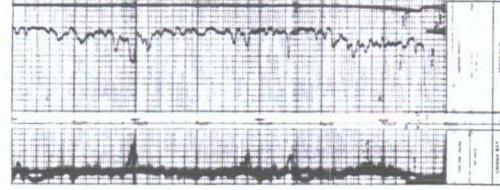
**B**

● 23894  
SFPRR  
12



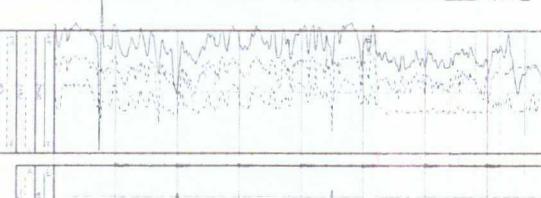
120 bpm  
P wave  
ST elevation  
T waves

● 25342  
SFPRR  
19



190 bpm  
P wave  
ST elevation  
T waves

● 39534  
SFPRR  
26



260 bpm  
P wave  
ST elevation  
T waves

● 25340  
SFPRR  
17

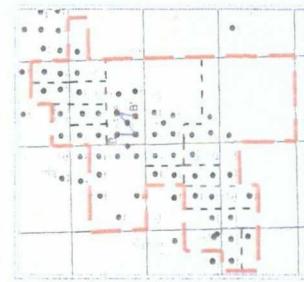


170 bpm  
P wave  
ST elevation  
T waves

● 25351  
SFPRR  
13



130 bpm  
P wave  
ST elevation  
T waves



120 bpm  
P wave  
ST elevation  
T waves

**A**

● 300252518  
SFPRR  
3  
3.976

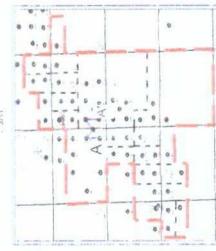
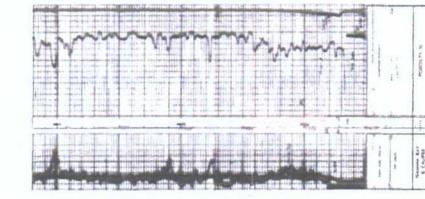
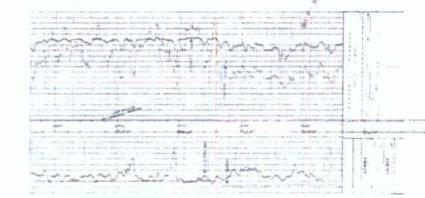
● 300252541  
SFPRR  
18  
3.982

● 300253953  
SFPRR  
25  
3.984

● 3002523894  
SFPRR  
12  
3.979

**A'**

● 300252532  
SFPRR  
19  
3.979

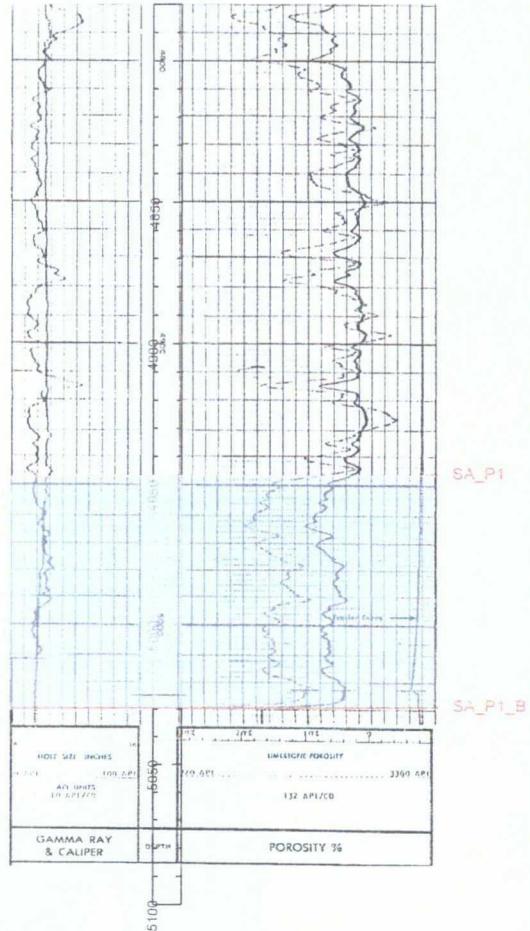


3002525403

FED 27

2

3,983



HS=1

**EXHIBIT VIII**

**C-108 FILING**

**VPR OPERATING, LLC  
1406 CAMP CRAFT RD., SUITE 106  
AUSTIN, TX 78746**

**UNDERGROUND SOURCES OF DRINKING WATER:**

The Quaternary sediments consist of unconsolidated gravel, sand, silt, and clay deposited by streams or sand and silt deposited by wind (figure 67). These deposits form part of the High Plains aquifer where they are saturated and are in contact with underlying aquifer units of Tertiary age. In eastern Colorado and New Mexico, the saturated Quaternary sediments generally are thin and discontinuous. Undifferentiated Quaternary sediments are hydraulically connected with the underlying aquifer in Tertiary units and are shown separately in (figure 68) only in areas where they do not overlie Tertiary aquifer units. The extent of the saturated Tertiary units defines the western boundary of the aquifer.

The Ogallala Formation is the principal geologic unit in the High Plains aquifer in eastern Colorado and New Mexico. The Ogallala generally consists of an unconsolidated and poorly sorted sequence of gravel, sand, silt, and clay.

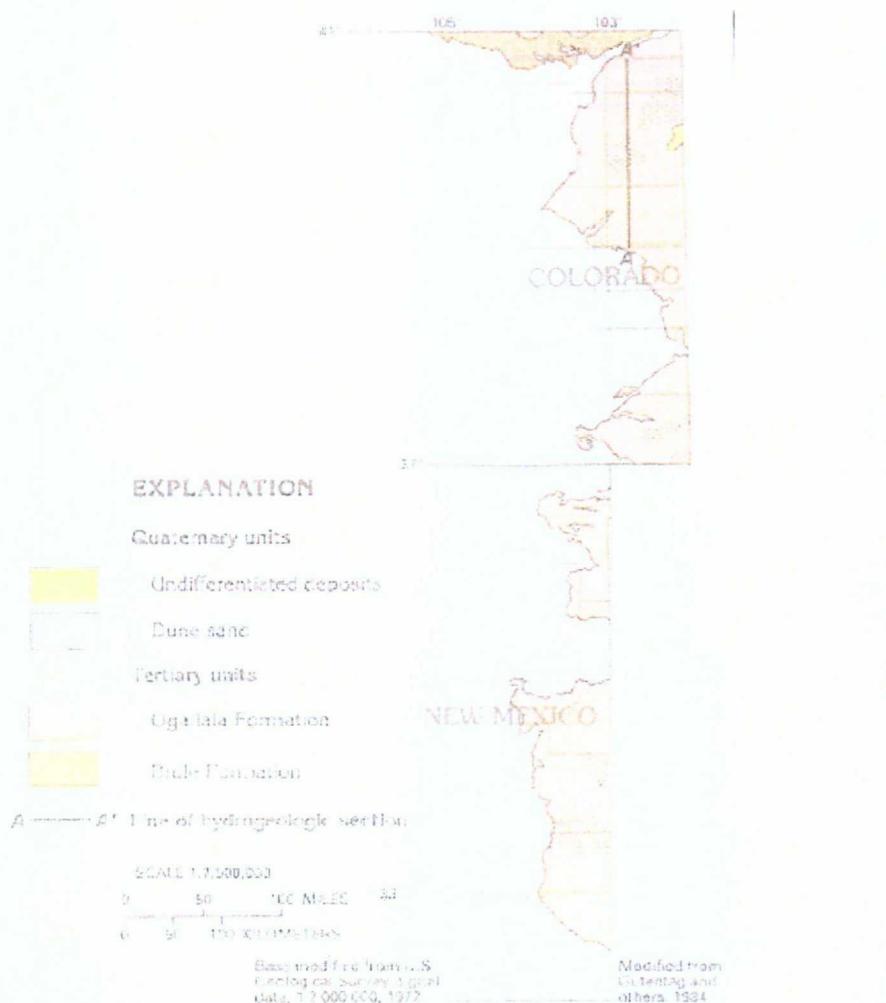
In southeastern Colorado and eastern New Mexico, the High Plains aquifer is underlain by shale and interlayered sandstone, claystone, limestone, and dolomite of relatively low permeability. Permeable zones within some of these rocks may yield usable volumes of water to wells in some local areas.

The thickness of the Ogallala Formation that underlies the High Plains of eastern Colorado and New Mexico is highly irregular. The Ogallala was deposited by ancient streams that flowed eastward from the Rocky Mountains. The aggrading streams deposited gravel, sand, silt, and clay in the stream valleys that had been eroded into the pre-Ogallala land surface. Eventually, the valleys were filled and buried, and thick deposits of Ogallala sediments extended over a vast area. Subsequent changes in geologic and climatic conditions caused streams to begin degrading, and new stream valleys were eroded into the surface of the Ogallala sediments. Present stream valleys of eastern Colorado and New Mexico do not necessarily correspond to the location of the ancient stream valleys. The resulting thickness of the Ogallala sediments is irregular and ranges from 0 to about 500 feet in a few buried valleys. Ogallala sediments are thinner near the margins of the aquifer and near high areas of the bedrock surface.

Era	System	Series	Stratigraphic unit	Hydrogeologic unit	Physical characteristics
Cenozoic	Quaternary	Holocene and Pleistocene	Alluvial deposits, valley fill deposits and dune sand	High Plains aquifer	Gravel, sand, silt, and clay
			Ogallala Formation		Unconsolidated, poorly sorted gravel, sand, silt, and clay
	Upper Tertiary	Miocene	Ankaree Formation		Sandstone, fine to very fine. Local beds of volcanic ash, siltstone, claystone, and marl
	Lower Oligocene	Bruce Formation	White River Group		Siltstone with sandstone as beds and channel deposits
		Chadron Formation		Confining unit	Clay and silt

Modified from Gutentag and others, 1984.

**Figure 67.** Geologic units ranging in age from Oligocene to Quaternary compose the High Plains aquifer. The permeable units consist of sand, sandstone, and gravel.



**Figure 68.** The principal geologic unit in the High Plains aquifer of eastern Colorado and New Mexico is the Ogallala Formation.

Reference:

Robson, S. G. and Banta, E. R., GROUND WATER ATLAS of the UNITED STATES  
Arizona, Colorado, New Mexico, Utah, U.S. Geological Survey; Contents of HA 730-C,  
1995

*EXHIBIT IX*

*C-108 FILING*

VPR OPERATING, LLC  
1406 CAMP CRAFT RD., SUITE 106  
AUSTIN, TX 78746

WELLS MAY BE STIMULATED AS NEEDED WITH +/- 1000 GAL 15% NEFE ACID.

*EXHIBIT X*

*C-108 FILING*

VPR OPERATING, LLC  
1406 CAMP CRAFT RD., SUITE 106  
AUSTIN, TX 78746

ALL LOGS AND ORIGINAL TEST DATA ON FILE WITH OIL CONSERVATION DIVISION.

*EXHIBIT XI*

*C-108 FILING*

VPR OPERATING, LLC  
1406 CAMP CRAFT RD., SUITE 106  
AUSTIN, TX 78746

WATER ANALYSIS FROM AREA FRESH WATER WELLS - SEE FOLLOWING/ATTACHED

# Permian Treating WATER ANALYSIS REPORT

## SAMPLE

Oil Co.: VPR Operating  
 Lease: Sawyer Corral  
 Well No.: *MALE - up water source*  
 Location:  
 Attention:

Date Sampled: 1-5-2010  
 Date Analyzed: 06-January-2010  
 Lab ID Number: Jan0610.001-2  
 Salesperson:  
 File Name: Jan0610.001

## ANALYSIS

1. Ph	7.590
2. Specific Gravity 60/60 F	1.009
3. CACO <sub>3</sub> Saturation Index	

@ 80F  
 @ 140F

0.876  
 1.476

Moderate  
 Severe

### Dissolved Gasses

4. Hydrogen Sulfide  
 5. Carbon Dioxide  
 6. Dissolved Oxygen

MG/L.      EQ. WT.      \*MEQ/L

Not Present  
 Not Determined  
 Not Determined

### Cations

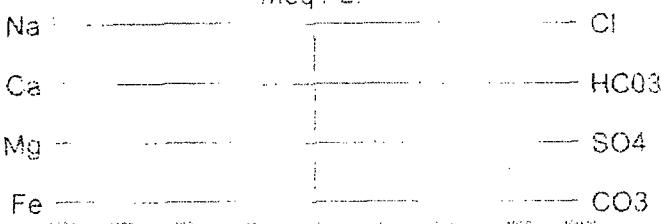
7. Calcium	(Ca++)	104	/ 20.1 =	5.17
8. Magnesium	(Mg++)	58	/ 12.2 =	4.75
9. Sodium	(Na+)	(Calculated)	/ 23.0 =	4.96
10. Barium	(Ba++)	Not Determined		

### Anions

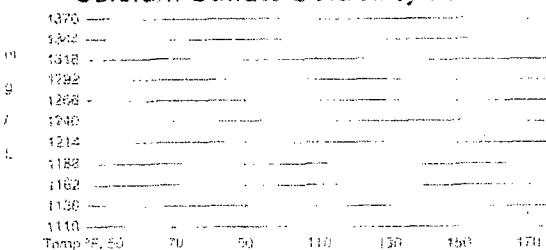
11. Hydroxyl	(OH-)	0	/ 17.0 =	0.00
12. Carbonate	(CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate	(HCO <sub>3</sub> -)	207	/ 61.1 =	3.39
14. Sulfate	(SO <sub>4</sub> =)	350	/ 48.8 =	7.17
15. Chloride	(Cl-)	150	/ 35.5 =	4.23
16. Total Dissolved Solids		983		
17. Total Iron	(Fe)	0.75	/ 18.2 =	0.04
18. Manganese	(Mn++)	Not Determined		
19. Total Hardness as CaCO <sub>3</sub>		498		
20. Resistivity @ 75 F.	(Calculated)	2.851	Ohm · meters	

### LOGARITHMIC WATER PATTERN

\*meq / L.



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	3.39		81.04		275
CaSO <sub>4</sub>	1.79		68.07		122
CaCl <sub>2</sub>	0.00		56.50		0
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	4.75		60.19		286
MgCl <sub>2</sub>	0.00		47.62		0
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	0.63		71.03		45
NaCl	4.23		58.46		247

\* milliequivalents per Liter

Elisabeth Andrews, Analyst

# Permian Treating WATER ANALYSIS REPORT

## SAMPLE

Oil Co.: VPR Operating  
 Lease: Sawyer Corral  
 Well No.: South  
 Location: MAKES UP WATER SOURCE  
 Attention:

Date Sampled: 1-5-2010  
 Date Analyzed: 06-January-2010  
 Lab ID Number: Jan0610.001-3  
 Salesperson:  
 File Name: Jan0610.001

## ANALYSIS

1. Ph 7.670  
 2. Specific Gravity 60/60 F. 1.007  
 3. CACO<sub>3</sub> Saturation Index

@ 80F  
 @ 140F

0.862  
 1.462

Moderate  
 Severe

### Dissolved Gasses

4. Hydrogen Sulfide Not Present  
 5. Carbon Dioxide Not Determined  
 6. Dissolved Oxygen Not Determined

### Cations

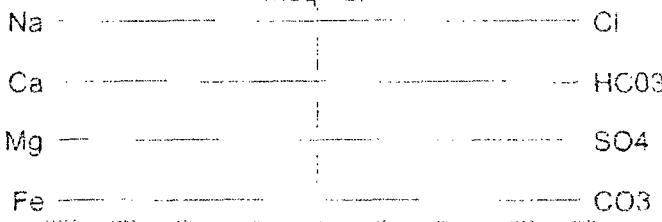
7. Calcium (Ca++)	76	/ 20.1 =	3.78	
8. Magnesium (Mg++)	40	/ 12.2 =	3.28	
9. Sodium (Na+)	(Calculated)	120	/ 23.0 =	5.22
10. Barium (Ba++)		Less than 10		

### Anions

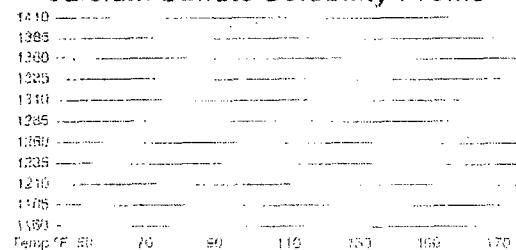
11. Hydroxyl (OH-)	0	/ 17.0 =	0.00
12. Carbonate (CO <sub>3</sub> =)	0	/ 30.0 =	0.00
13. Bicarbonate (HCO <sub>3</sub> -)	229	/ 61.1 =	3.75
14. Sulfate (SO <sub>4</sub> =)	275	/ 48.8 =	5.64
15. Chloride (Cl-)	100	/ 35.5 =	2.82
16. Total Dissolved Solids	840		
17. Total Iron (Fe)	0.75	/ 18.2 =	0.04
18. Manganese (Mn++)		Not Determined	
19. Total Hardness as CaCO <sub>3</sub>	356		
20. Resistivity @ 75 F. (Calculated)	2.757	Ohm · meters	

### LOGARITHMIC WATER PATTERN

\*meq / L.



### Calcium Sulfate Solubility Profile



### PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L
Ca(HCO <sub>3</sub> ) <sub>2</sub>	3.75		81.04		304
CaSO <sub>4</sub>	0.03		68.07		2
CaCl <sub>2</sub>	0.00		55.50		0
Mg(HCO <sub>3</sub> ) <sub>2</sub>	0.00		73.17		0
MgSO <sub>4</sub>	3.28		60.19		197
MgCl <sub>2</sub>	0.00		47.62		0
NaHCO <sub>3</sub>	0.00		84.00		0
NaSO <sub>4</sub>	2.32		71.03		165
NaCl	2.82		58.46		165

\* milliequivalents per Liter

Elisabeth Andrews, Analyst

*EXHIBIT XII*

*C-108 FILING*

VPR OPERATING, LLC  
1406 CAMP CRAFT RD. SUITE 106  
AUSTIN, TX 78746

ENGINEERING AND GEOLOGICAL CONSULTANTS IN ADDITION TO VPR OPERATING PERSONNEL HAVE REVIEWED ALL AVAILABLE DATA AND SEE NO EVIDENCE OF OPEN FAULTS, HYDROLOGIC CONNECTION, OR OTHER MEANS OF THE PROPOSED INJECTION INTERVAL TO UNDERGROUND SOURCES OF DRINKING WATER.

*EXHIBIT XIII*

*C-108 FILING*

VPR OPERATING, LLC  
1406 CAMP CRAFT RD, SUITE 106  
AUSTIN, TX 78746

PLEASE FIND ATTACHED/FOLLOWING "PROOF OF NOTICE" OF THIS APPLICATION