

# Initial Application Part I

Received: 08/15/2019

*This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete*

RECEIVED: 08/15/2019	REVIEWER:	TYPE: SWD	APP NO: pMAM1922750410
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
 - Geological & Engineering Bureau -  
 1220 South St. Francis Drive, Santa Fe, NM 87505

**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND  
 REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

<b>Applicant:</b> V-F Petroleum Inc.	<b>OGRID Number:</b> 24010
<b>Well Name:</b> Guerrero 34 State 1	<b>API:</b> 30-015-30366
<b>Pool:</b> SWD; Devonian	<b>Pool Code:</b> 96101

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

1) **TYPE OF APPLICATION:** Check those which apply for [A]**SWD-2246**

A. Location - Spacing Unit - Simultaneous Dedication

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

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

[ I ] Commingling - Storage - Measurement

☐ DHC☐ CTB☐ PLC☐ PC☐ OLS☐ OLM

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

☐ WFX☐ PMX☒ SWD☐ IPI☐ EOR☐ PPR2) **NOTIFICATION REQUIRED TO:** Check those which apply.A. ☒ Offset operators or lease holdersB. ☒ Royalty, overriding royalty owners, revenue ownersC. ☒ Application requires published noticeD. ☒ Notification and/or concurrent approval by SLOE. ☐ Notification and/or concurrent approval by BLMF. ☒ Surface ownerG. ☒ For all of the above, proof of notification or publication is attached, and/or,H. ☐ No notice required**FOR OCD ONLY**☐ Notice Complete
☐ Application  
 Content  
 Complete

3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

**Note: Statement must be completed by an individual with managerial and/or supervisory capacity.**

Brian Wood

Print or Type Name

Signature

8-15-19

Date

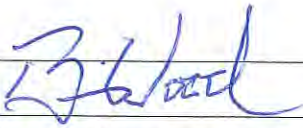
505 466-8120

Phone Number

brian@permitswest.com

e-mail Address

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance XXX Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? XXX Yes \_\_\_\_\_ No
- II. OPERATOR: V-F PETROLEUM INC.  
ADDRESS: PO BOX 1889, MIDLAND TX 79702  
CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: 505 466-8120
- 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 XXX 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: Guerrero 34 State 1  
30-015-30366  
SWD; Devonian
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. 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: BRIAN WOOD  TITLE: CONSULTANT  
SIGNATURE: \_\_\_\_\_ DATE: AUG. 13, 2019  
E-MAIL ADDRESS: brian@permitswest.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.

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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: V-F PETROLEUM INC.WELL NAME & NUMBER: GUERRERO 34 STATE 1

SHL: 990 FSL &amp; 330 FWL

WELL LOCATION: BHL: 990 FSL & 480 FWL

FOOTAGE LOCATION

M

UNIT LETTER

34

SECTION

18 S

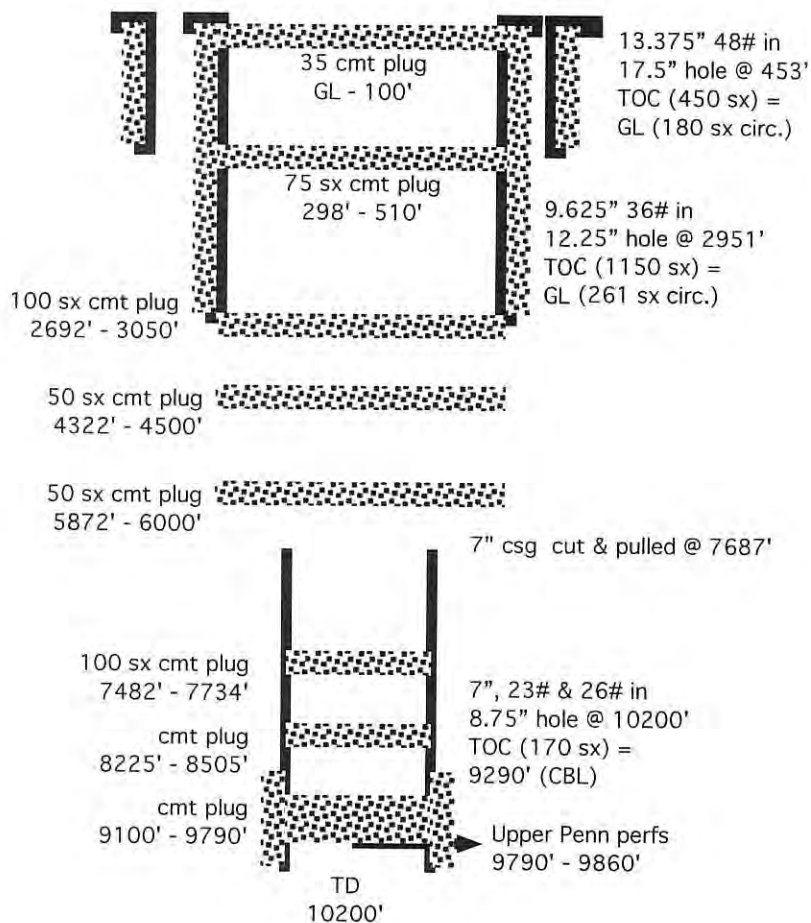
TOWNSHIP

28 E

RANGE

WELLBORE SCHEMATIC

"As Is"



(not to scale)

WELL CONSTRUCTION DATASurface CasingHole Size: 17.5" Casing Size: 13.375"Cemented with: 450 sx. or                      ft<sup>3</sup>Top of Cement: SURFACE Method Determined: CIRC. 180 SXIntermediate CasingHole Size: 12.25" Casing Size: 9.625"Cemented with: 1150 sx. or                      ft<sup>3</sup>Top of Cement: SURFACE Method Determined: CIRC. 261 SXProduction CasingHole Size: 8.75" Casing Size: 7"Cemented with: 170 sx. or                      ft<sup>3</sup>Top of Cement: 9290' Method Determined: CBLTotal Depth: 10,200' (now) & 14,000' (proposed TVD)Injection Interval6.125" 12,100 feet to 14,000'~~(Perforated)~~ or Open Hole; indicate which)

## INJECTION WELL DATA SHEET

OPERATOR: V-F PETROLEUM INC.WELL NAME & NUMBER: GUERRERO 34 STATE 1

SHL: 990 FSL &amp; 330 FWL

WELL LOCATION: BHL: 990 FSL & 480 FWL

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M

UNIT LETTER

34

SECTION

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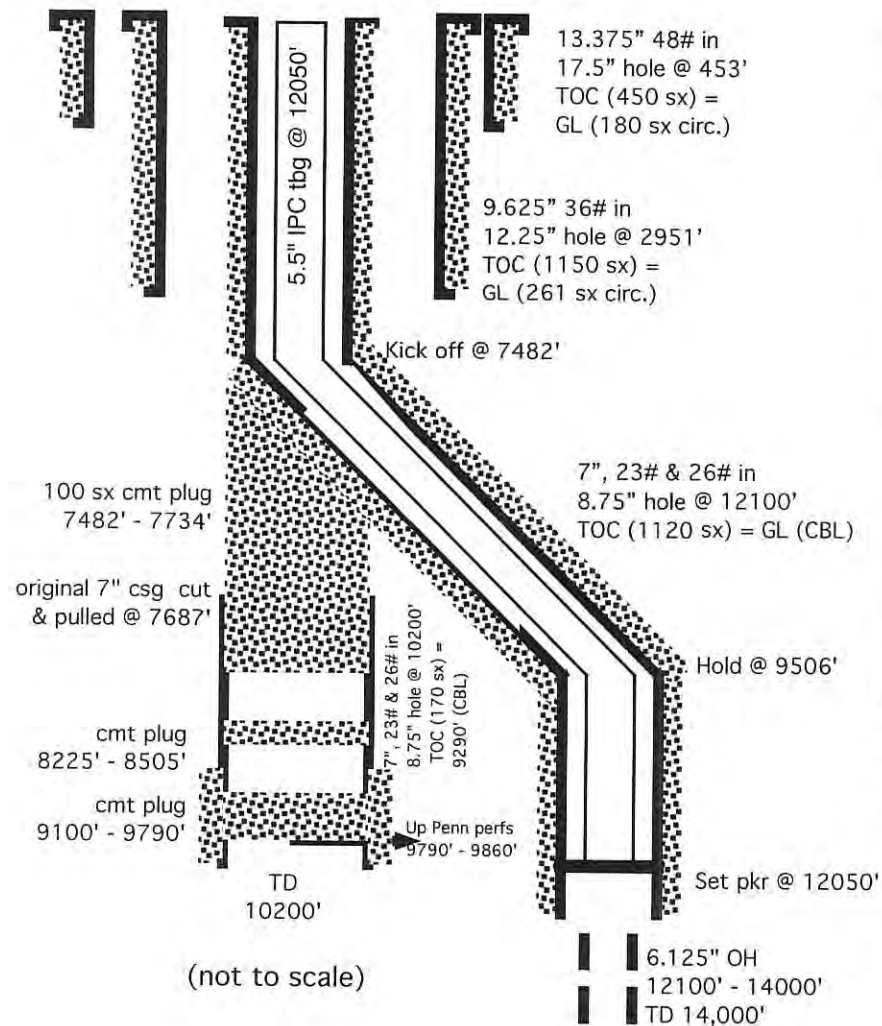
TOWNSHIP

28 E

RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface Casing

"Proposed"

Hole Size: 17.5" Casing Size: 13.375"Cemented with: 450 sx. or                      ft<sup>3</sup>Top of Cement: SURFACE Method Determined: CIRC. 180 SXIntermediate CasingHole Size: 12.25" Casing Size: 9.625"Cemented with: 1150 sx. or                      ft<sup>3</sup>Top of Cement: SURFACE Method Determined: CIRC. 261 SXProduction CasingHole Size: 8.75" Casing Size: 7"Cemented with: 170 sx. or                      ft<sup>3</sup>Top of Cement: 9290' Method Determined: CBLTotal Depth: 10,200' (now) & 14,000' (proposed TVD)Injection Interval6.125" 12,100 feet to 14,000'~~(Perforated~~ or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 5.5" Lining Material: IPCType of Packer: ARROW NICKEL PLATED 10,000# WPPacker Setting Depth: ≈12,000'

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

Additional Data

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

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

2. Name of the Injection Formation: DEVONIAN

3. Name of Field or Pool (if applicable): SWD;DEVONIAN (96101)

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. YES

UPPER PENN 9790' - 9860' (PLUG FROM 9100' TO 9790')

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

OVER: YATES (740'), SEVEN RIVERS (1000'), QUEEN (1677'), GRAYBURG (2000'),  
SAN ANDRES (2160'), BONE SPRING (3646'), WOLFCAMP (8511'), UP PENN (9762'),  
MORROW (10500')

UNDER: NONE



V-F PETROLEUM INC.  
GUERRERO 34 STATE 1  
SHL: 990' FSL & 330' FWL  
BHL: 990' FSL & 480' FWL  
SEC. 34, T. 18 S., R. 28 E., EDDY COUNTY, NM

PAGE 1

30-015-30366

I. Plan is to re-enter a 10,200' P&A well, drill out 5 plugs, kick-off at 7482', and directionally drill a 14,000' TVD (14,006' MD) SWD; Devonian (96101) commercial saltwater disposal well. Disposal will be from 12,100' to 14,000' in the Devonian. Well is on NMSLO surface and minerals. See Exhibit A for a USGS map and C-102 form.

II. Operator: V-F Petroleum Inc. (OGRID 24010)  
Operator phone number: (432) 683-3344  
Operator address: PO Box 1889, Midland TX 79702  
Contact for Application: Brian Wood (Permits West, Inc.)  
Phone: (505) 466-8120

III. A. (1) Lease: NMSLO lease X0-0647-0417  
Lease Size: 5,173.42 acres  
Closest Lease Line: 990'  
Lease: W2, SWSE, & E2SE4 Section 34, T. 18 S., R. 28 E. et al

A. (2) Surface casing (13.375", 48#) is set at 453' in a 17.5" hole and cemented to GL with 450 sacks. Circulated 180 sacks.

Intermediate casing (9.625", 36#) is set at 2,951' in a 12.25" hole and cemented to GL with 1,150 sacks. Circulated 261 sacks.

Production casing (7", 26# & 23#, L-80) is set at 10,200' in an 8.75" hole and cemented to 9,290' (CBL) with 170 sacks in 1998. Casing was cut at 7,687' and pulled in 2004. Well was P&A in 2014.

V-F will drill out 5 plugs, kick-off at 7482', and drill an 8.75" hole to 12,100'. Casing (7", 23# & 26#) will be set there and cemented to GL with 1120 sacks.



A 6.125" hole will be drilled to 14,000' TVD (14,006' MD) and completed open hole in the Devonian from 12,100' to 14,000' TVD.

- A. (3) Tubing (5.5", IPC) will be set @  $\approx 12,050'$ . (Disposal interval will be 12,100' - 14,000' TVD.)
- A. (4) An Arrow 10,000# WP nickel-plated packer will be set @  $\approx 12,050'$  (or in any event,  $\leq 100'$  above the top (12,100') of the open-hole.
- B. (1) Disposal zone will be carbonates in the SWD; Devonian (NMOCD pool 96101). Estimated fracture gradient is  $\approx 0.7$  psi per foot.
- B. (2) Disposal interval (12,100' to 14,000' TVD) will be open hole.
- B. (3) Well was originally drilled and completed as an Upper Penn oil well.
- B. (4) Perforated interval is 9790' - 9860' (Upper Penn). Those perforations are isolated behind a cement plug from 9,290' to 9,860'. Seven plugs are above that plug.
- B. (5) Next higher oil or gas zone in the area of review is the Morrow. Deepest Morrow (or other) well in a 1-mile radius is 11,275'. Top of open hole will be 12,100'. There is no lower producing oil or gas zone in the area of review. Closest Devonian producer is >6 miles distant. Closest SWD; Devonian APD (30-015-32422) is >3.71 miles northwest.

IV. This is not an expansion of an existing injection project. It is disposal only.

V. Exhibit B shows and tabulates 55 wells (31 producers + 22 P&A + 1 WIW + 1 water) within a 1-mile radius. Exhibit C shows 256 existing wells (112 oil or gas + 130 P&A + 12 water injectors + 2 water) within a 2-mile radius.

V-F PETROLEUM INC.  
GUERRERO 34 STATE 1  
SHL: 990' FSL & 330' FWL  
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SEC. 34, T. 18 S., R. 28 E., EDDY COUNTY, NM

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Exhibit D maps and tabulates all operators (regardless of depth), leases, and lessors (only NMSLO) within a 1-mile radius. Exhibit E shows all leases (only NMSLO) within a 2-mile radius.

VI. None of the 55 wells within 1-mile penetrated the Devonian ( $\approx 12,060'$ ). Deepest well (30-015-30395) within 1-mile went to 11,275' in the Morrow. It is 4,757' northeast in B-34-18s-28e.

- VII.
1. Average injection rate will be  $\approx 15,000$  bwpd.  
Maximum injection rate will be 25,000 bwpd.
  2. System will be closed and open.
  3. Average injection pressure will be  $\approx 2000$  psi. Maximum injection pressure will be 2420 psi ( $= 0.2$  psi/foot  $\times 12,100'$  (top of open hole)).
  4. Water source will be produced water from Permian Basin wells. Exhibit F tabulates T. 18 S., R. 28 E. and T. 19 S., R. 28 & 29 E. analyses from New Mexico Produced Water Quality Database v.2. Sample from a Devonian P&A wildcat oil well (30-015-03537) well 8 miles ESE in M-1-19s-29e showed TDS at 29,011 mg/l. No compatibility problems have been reported from the closest ( $\approx 3.71$  miles northwest) SWD; Devonian well (30-015-32422). A minimum 5,013,393 barrels have been disposed to date in 5 years of operation.
  5. Closest Devonian producer (30-015-05614) is  $>6$  miles northeast. Devonian water samples from Lea Unit 8 (30-025-02431) and Lea Unit 9 (30-025-02432) show:

Lea Unit Well	TDS (mg/L)	Chlorides (mg/L)	Sulfate (mg/L)
8	33,414	18,570	1,961
9	45,778	26,440	729

VIII. The Devonian is comprised of carbonates and is an estimated 1940' thick in this well. Closest possible underground source of drinking water above the



V-F PETROLEUM INC.  
GUERRERO 34 STATE 1  
SHL: 990' FSL & 330' FWL  
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SEC. 34, T. 18 S., R. 28 E., EDDY COUNTY, NM

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30-015-30366

proposed disposal interval are the red beds from GL to  $\approx 450'$ . Salt and anhydrite are below the red beds and  $>2$  miles of separation between the bottom of the red beds and the top of the Devonian.

State Engineer records (Exhibit G) show 1 water well has been approved within a mile radius. Its approval expired in 1999 and the well was never drilled. No water well was found during a June 4, 2019 field inspection. Guerrero 34 State 1 is 6-1/4 miles northwest of the Capitan.

No underground source of drinking water is below the proposed disposal interval. Produced water is currently being injected in 44 wells (Grayburg, Queen, San Andres) and disposed in 12 wells (Abo, Canyon, Cisco, Devonian, Penn, Mississippian, San Andres, Wolfcamp) within 18s-28e.

Formation tops are:

Quaternary = 0'  
Salado = 350'  
Base salt = 600'  
Yates = 740'  
Seven Rivers = 1000'  
Queen = 1677'  
Grayburg = 2000'  
San Andres = 2160'  
Bone Spring = 3646'  
Wolfcamp = 8511'  
Cisco = 9302'  
Canyon = 9531'  
Strawn = 9762'  
Atoka = 10,250'  
Morrow = 10,450'  
Devonian = 12,060'  
*Proposed Disposal Zone = 12100' - 14,000'*  
TD: 14,000'

IX. The well will be stimulated with acid to clean out scale or fill.

V-F PETROLEUM INC.  
GUERRERO 34 STATE 1  
SHL: 990' FSL & 330' FWL  
BHL: 990' FSL & 480' FWL  
SEC. 34, T. 18 S., R. 28 E., EDDY COUNTY, NM

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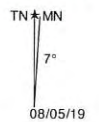
X. Seven logs are on file with NMOCD. CBL will be run if cement does not circulate to surface on the 7" in the directional portion of the well.

XI. One approved water well is within a mile. However, there is no State record that it was ever drilled. Nor was it found during a June 4, 2019 field inspection.

XII. V-F Petroleum Inc. is not aware of any geologic or engineering data that may indicate the Devonian is in hydrologic connection with any underground source of water. One-hundred fifty-five Devonian saltwater disposal wells are active in New Mexico. Closest Quaternary fault (Guadalupe) is  $\approx$ 58 miles west (Exhibit H).

XIII. Legal ads (Exhibit I) were published in the Artesia and Carlsbad newspapers on June 26, 2019. Notice (this application) is being sent to the surface owner (NMSLO), only lessor (NMSLO), all oil and gas lessees (Apache, COG Operating, Hanagan & Hanagan, Marathon Oil, Marathon Oil Permian, Occidetal Permian, Alvrone Sater, Van P. Welch Estate, WPX Energy Permian), and all well operators regardless of depth (Apache, Devon, Finney, Forrest, Marathon Oil Permian, OXY USA WTP, Parrish, Vanguard, Welch), and other owners (Mewbourne, Permian Resource Holdings, ZPZ) within 1-mile (Exhibit J).







DISTRICT I  
1625 N French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
DISTRICT II  
811 S First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
DISTRICT III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
DISTRICT IV  
1220 S St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

AMENDED REPORT

EXHIBIT A

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-30366	Pool Code 96101	Pool Name SWD; Devonian
Property Code	Property Name GUERRERO 34 STATE	Well Number 1
OGRID No. 24010	Operator Name V-F PETROLEUM INC.	Elevation 3566'

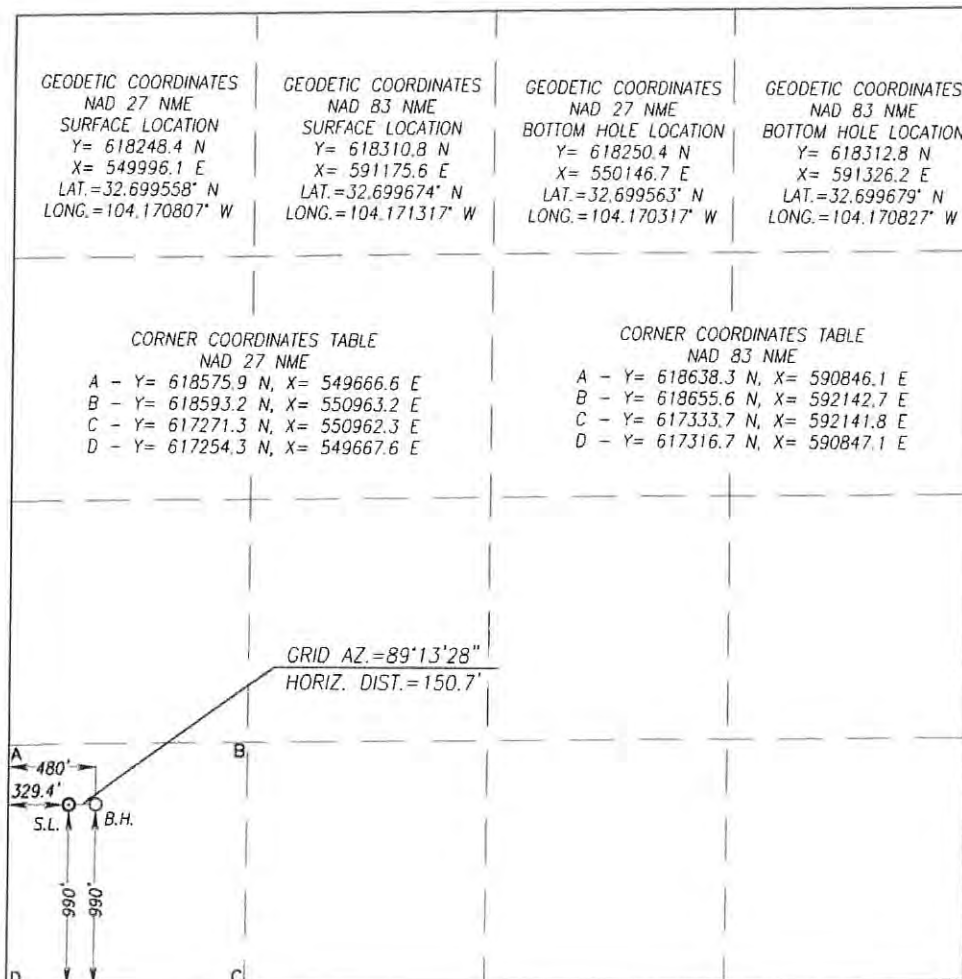
Surface Location

UL or lot No. M	Section 34	Township 18-S	Range 28-E	Lot Idn	Feet from the 990	North/South line SOUTH	Feet from the 329.4	East/West line WEST	County EDDY
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Bottom Hole Location If Different From Surface

UL or lot No. M	Section 34	Township 18-S	Range 28-E	Lot Idn	Feet from the 990	North/South line SOUTH	Feet from the 480	East/West line WEST	County EDDY
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division

Signature: Eric Sprinkle Date: 4/26/2019  
Printed Name  
eric@vfpetroleum.com  
E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from notes of surveys made by me or under my supervision, and that the same is true and correct to the best of my belief

Date of Survey  
Signature & Seal of Professional Surveyor

Signature: Ronald J. Eldson Date: 04/25/2019  
Certificate Number  
Gary G. Eldson 12641  
Ronald J. Eldson 3239  
LSL JWSC W.O. 19 11 0538



EXHIBIT B

1 mile radius

Guerrero 34 State 1

**LEGEND**

- New
- ✦ Active
- ✦ HRZ
- ⊙ BHL
- ⊕ P&A
- ⊙ INJ
- ⊙ SWD
- ⊙ Brine
- ⊙ Water

Quad: ILLINOIS CAMP  
Scale: 1 inch = 2,000 ft.



(C) Copyright 2016, Trimble Navigation



SORTED BY DISTANCE FROM GUERRERO 34 STATE 1

API	OPERATOR	WELL	STATUS	UNIT-SECTION	TVD	ZONE @ TD	FEET FROM GUERRERO 34 STATE 1
30-015-45815	Apache	Palmillo 3 State Com 356H	O	4-3	plan 7500	Bone Spring	1320
30-015-45802	Apache	Palmillo 3 State Com 244H	O	4-3	plan 7500	Bone Spring	1370
3001529890	Oxy USA WTP	James Buchanan 33 State 001	G	I-33	11130	Morrow	1411
3001510782	Finney Oil	State 647 AC 721 207	I	I-33	2824	San Andres	1647
3001510907	D.W. Berry	Lowe B. State 003	P&A	A-4	2520	San Andres	1878
30-015-45814	Apache	Palmillo 3 State Com 355H	O	4-3	plan 7500	Bone Spring	2230
3001530315	V-F Petroleum	Samuel Burns 34 State 002	O	E-34	9970	Upper Penn	2428
3001510084	Finney Oil	State 647 AC 721 199	O	J-33	2777	San Andres	2512
3001510891	SDX	State 647 AC 721 217	P&A	E-34	2861	San Andres	2646
3001510314	Breitbart	State 647 AC 721 201	P&A	O-33	2787	San Andres	2673
30-015-45801	Apache	Palmillo 3 State Com 243H	O	H-3	plan 7418	Bone Spring	2784
3001528993	Finney Oil	State 647 AC 711 131	O	G-33	2950	San Andres	2787
3001520532	Parrish, H Dwane & Rhonda K	Lowe B State 004	P&A	2-4	11052	Morrow	2817
3001502160	Quantum	State 647 AC 711 083	P&A	H-33	2905	San Andres	2940
3001510893	Parrish, H Dwane & Rhonda K	Lowe B State 001	O	2-4	2785	San Andres	2974
30-015-45813	Apache	Palmillo 3 State Com 354H	O	H-3	plan 7500	Bone Spring	3140
3001529375	V-F Petroleum	Scanlon Draw 34 State 001	G	O-34	11180	Morrow	3201
3001525914	Fred Pool	Avalon State 001	P&A	F-3	2148	Grayburg	3245
3001510898	Parrish, H Dwane & Rhonda K	Lowe A State 001	O	N-33	2778	San Andres	3259
3001521435	David C Collier	Kersey 001	P&A	K-33	1250	Seven Rivers	3334
3001529076	Finney Oil	State 647 AC 731 206	O	A-33	3000	San Andres	3362
3001502181	Flynn-Welch-Yates	State 080	P&A	H-4	2915	San Andres	3372
3001521484	Robert H Forrest Jr Oil LLC	Kersey 001Y	O	K-33	2822	San Andres	3411



SORTED BY DISTANCE FROM GUERRERO 34 STATE 1

API	OPERATOR	WELL	STATUS	UNIT-SECTION	TVD	ZONE @ TD	FEET FROM GUERRERO 34 STATE 1
30-015-45815	Apache	Palmillo 3 State Com 356H	O	4-3	plan 7500	Bone Spring	1320
30-015-45802	Apache	Palmillo 3 State Com 244H	O	4-3	plan 7500	Bone Spring	1370
3001529890	Oxy USA WTP	James Buchanan 33 State 001	G	I-33	11130	Morrow	1411
3001510782	Finney Oil	State 647 AC 721 207	I	I-33	2824	San Andres	1647
3001510907	D.W. Berry	Lowe B. State 003	P&A	A-4	2520	San Andres	1878
30-015-45814	Apache	Palmillo 3 State Com 355H	O	4-3	plan 7500	Bone Spring	2230
3001530315	V-F Petroleum	Samuel Burns 34 State 002	O	E-34	9970	Upper Penn	2428
3001510084	Finney Oil	State 647 AC 721 199	O	J-33	2777	San Andres	2512
3001510891	SDX	State 647 AC 721 217	P&A	E-34	2861	San Andres	2646
3001510314	Breitburn	State 647 AC 721 201	P&A	O-33	2787	San Andres	2673
30-015-45801	Apache	Palmillo 3 State Com 243H	O	H-3	plan 7418	Bone Spring	2784
3001528993	Finney Oil	State 647 AC 711 131	O	G-33	2950	San Andres	2787
3001520532	Parrish, H Dwane & Rhonda K	Lowe B State 004	P&A	2-4	11052	Morrow	2817
3001502160	Quantum	State 647 AC 711 083	P&A	H-33	2905	San Andres	2940
3001510893	Parrish, H Dwane & Rhonda K	Lowe B State 001	O	2-4	2785	San Andres	2974
30-015-45813	Apache	Palmillo 3 State Com 354H	O	H-3	plan 7500	Bone Spring	3140
3001529375	V-F Petroleum	Scanlon Draw 34 State 001	G	O-34	11180	Morrow	3201
3001525914	Fred Pool	Avalon State 001	P&A	F-3	2148	Grayburg	3245
3001510898	Parrish, H Dwane & Rhonda K	Lowe A State 001	O	N-33	2778	San Andres	3259
3001521435	David C Collier	Kersey 001	P&A	K-33	1250	Seven Rivers	3334
3001529076	Finney Oil	State 647 AC 731 206	O	A-33	3000	San Andres	3362
3001502181	Flynn-Welch-Yates	State 080	P&A	H-4	2915	San Andres	3372

SORTED BY DISTANCE FROM GUERRERO 34 STATE 1

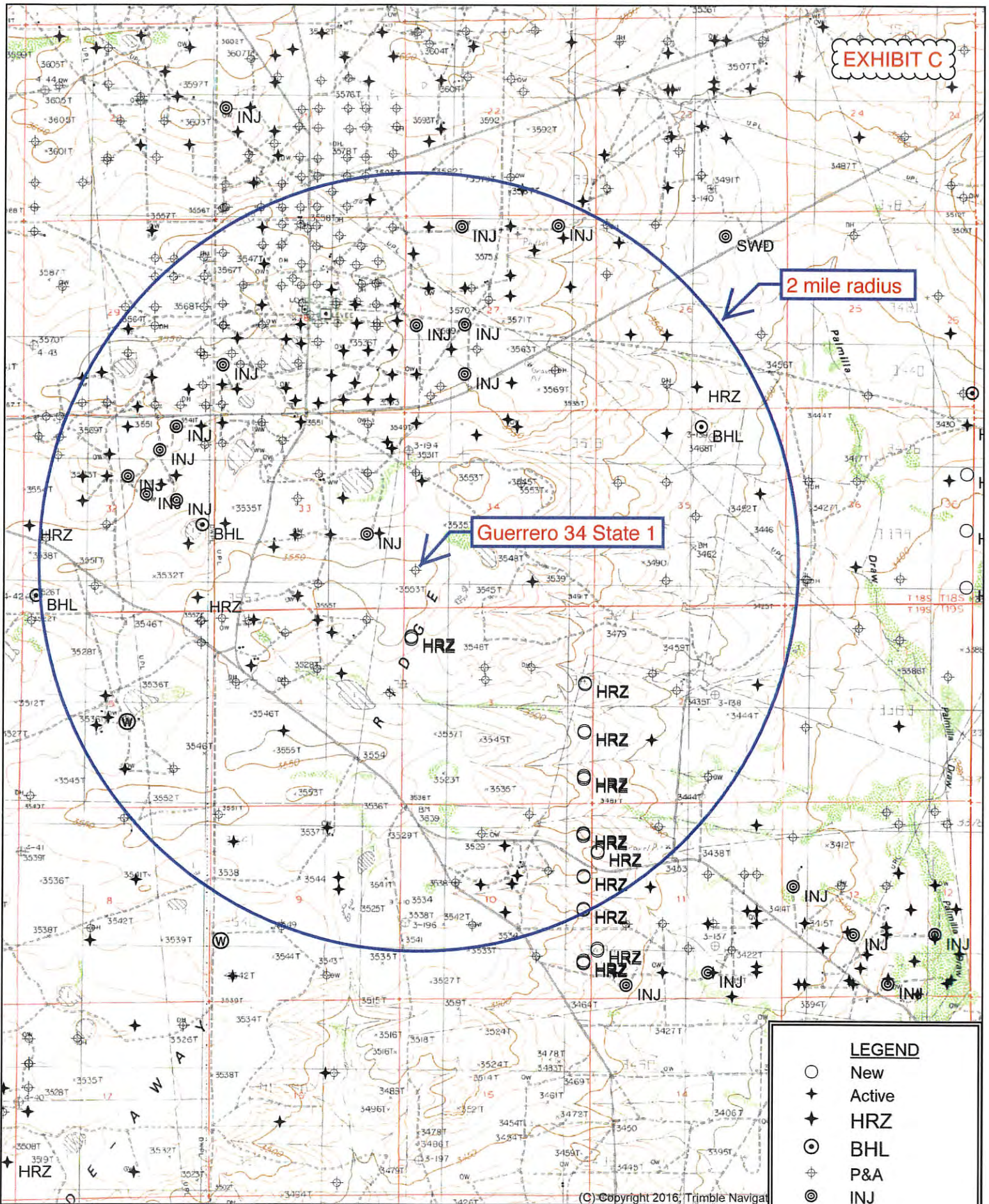
API	OPERATOR	WELL	STATUS	UNIT-SECTION	TVD	ZONE @ TD	FEET FROM GUERRERO 34 STATE 1
3001521484	Robert H Forrest Jr Oil LLC	Kersey 001Y	O	K-33	2822	San Andres	3411
3001530060	V-F Petroleum	Henry Courtman 4 State Com 001	G	G-4	11115	Morrow	3432
3001528528	Maralo	Millman 3 State 001	P&A	F-3	11148	Morrow	3526
3001530322	Oxy USA WTP	James Buchanan 33 State 002	O	A-33	9753	Upper Penn	3541
3001522976	Hanagan	Shamrock 001	P&A	G-34	11205	Morrow	3707
3001502162	Depco	State 647 AC 711 085	P&A	G-33	2645	San Andres	3716
3001502161	Kersey & Co	Yates 006	P&A	F-33	2750	San Andres	3739
3001510905	D.W. Berry	Lowe B. State 002	P&A	G-4	2774	San Andres	3769
3001530566	V-F Petroleum	Walker State 001	G	K-33	11050	Morrow	3904
3001502178	EOG Y	MRY State 001	P&A	3-4	2690	San Andres	3905
3001502168	Finney Oil	State 647 AC 711 090	O	D-34	2901	San Andres	3966
3001530159	V-F Petroleum	Samuel Burns 34 State 001	G	C-34	11114	Morrow	4019
30-015-45812	Apache	Palmillo 3 State Com 353H	O	I-3	plan 7500	Bone Spring	4050
3001502175	Stanolind	State AI 001	P&A	G-3	11150	Morrow	4099
3001510540	Melrose	State 647 AC 731 205	P&A	A-33	2810	San Andres	4162
30-015-45800	Apache	Palmillo 3 State 242H	O	I-3	plan 7451	Bone Spring	4197
3001510538	Finney Oil	State 647 AC 731 204	O	B-33	2792	San Andres	4282
3001502177	Vanguard	Mesa State 002	P&A	4-4	730	Yates	4582
3001510803	Depco	State 648 209	P&A	F-4	2835	San Andres	4641
3001524483	Robert H Forrest Jr Oil LLC	Toomey Allen 011	O	P-28	2850	San Andres	4670
3001502179	Yates	Mesa ST 002	P&A	D-4	2788	San Andres	4717
3001530279	Oxy USA WTP	David Crockett 27 State 003	P&A	M-27	9870	Upper Penn	4734
3001530395	V-F Petroleum	Samuel Burns 34 State 003	O	B-34	11275	Morrow	4757

SORTED BY DISTANCE FROM GUERRERO 34 STATE 1

API	OPERATOR	WELL	STATUS	UNIT-SECTION	TVD	ZONE @ TD	FEET FROM GUERRERO 34 STATE 1
3001502167	Elmira T Welch	Cheesman 002	O	B-34	2340	Grayburg	4780
3001524260	Robert H Forrest Jr Oil LLC	Toomey Allen 010	O	P-28	2900	San Andres	4793
30-015-45811	Apache	Palmillo 3 State Com 352H	O	P-3	plan 7500	Bone Spring	4960
3001524448	Finney Oil	Toomey Allen 017	O	O-28	2850	San Andres	5007
3001529078	Breitburn	State 647 AC 711 132	P&A	M-27	3050	San Andres	5010
3001502159	Smith & Marrs	Yates 005	P&A	C-33	2759	San Andres	5035
3001502166	Finney Oil	Yates 004	O	C-33	2110	Queen	5077
3001534745	V-F Petroleum	Oxy Senita State 001	G	E-4	11220	Morrow	5152
3001502100	Finney	Toomey Allen 007	O	O-28	2750	San Andres	5241



EXHIBIT C



Quad: ARTESIA  
Scale: 1 inch = 3,333 ft.

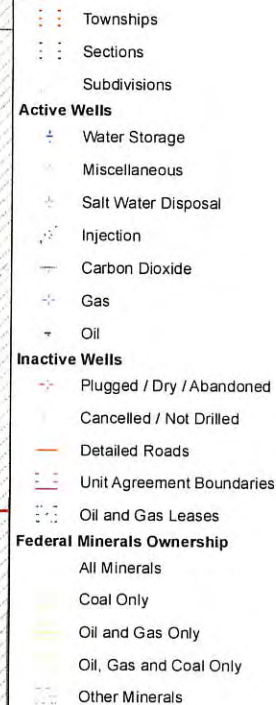
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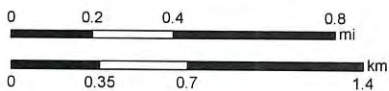
## Oil, Gas, and Minerals Leases and Wells

**Legend**



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**EXHIBIT D**

Map Created: 8/6/2019



GUERRERO 34 STATE 1 AREA OF REVIEW LEASES

Aliquot Parts in Area of Review	Lease (all NMSLO)	Lessee(s) of Record	Operators (all shallower than Devonian)
T. 18 S., R 28 E.			
S2SW4 & SWSE Sec. 27	X0-0647-0414	WPX Energy Permian	Devon & Finney
S2SE4 Sec. 28	X0-0647-0141	Marathon Oil	Finney & Forrest
NW4, N2SW4, SWSW Sec. 33	X0-0694-0020	Alvrone Sater	Finney, Forrest, Parrish, & V-F
SESW Sec. 33	L0-5382-0000	Hanagan & Hanagan	Parrish & V-F
E2 Sec. 33	X0-0647-0417	WPX Energy Permian	Finney & OXY USA WTP
N2NE4 & SENE Sec. 34	X0-0647-0305	Van P Welch Estate	V-F & Welch
W2, SWSE, & E2SE4 Sec. 34	X0-0647-0417	WPX Energy Permian	Finney & V-F
SWNE Sec. 34	VB-0489-0001	Marathon Oil	N/A
NWSE Sec. 34	E0-6945-0002	Occidental Permian	V-F
W2SW4 Sec. 35	V0-6201-0002	Marathon Oil Permian	Marathon Oil Permian
T. 19 S., R. 28 E.			
NWNW Sec. 2	X0-0648-0153	WPX Energy Permian	N/A
NE4, N2S2, S2SW4 Sec. 3	X0-0648-0155	Apache	Apache
NW4 Sec. 3	OG-0605-0003	COG Operating	Apache
NE4 & NESE Sec. 4	OG-0605-0003	COG Operating	Parrish & V-F
E2NW4, NESW, NWSE, & SESE Sec. 4	X0-0648-0153	WPX Energy Permian	OXY USA WTP & V-F
W2NW4 Sec. 4	X0-0645-0151	COG Operating	Vanguard & V-F