

Initial Application Part I

Received: 06/26/2019

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

ABOVE THIS LINE FOR DIVISION USE ONLY

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



ADMINISTRATIVE APPLICATION CHECKLIST

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

Application Acronyms:

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]**
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A] SWD-2171
- [A] Location - Spacing Unit - Simultaneous Dedication Devon Energy Production
- NSL NSP SD
- Check One Only for [B] or [C] 6137
- [B] Commingling - Storage - Measurement Rio Blanco 33 Fed Well #2
- DHC CTB PLC PC OLS OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery 30-025-36360
- WFX PMX SWD IPI EOR PPR
- [D] Other: Specify _____
- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply SWD; Devonian-Silurian
- [A] Working, Royalty or Overriding Royalty Interest Owners 97869
- [B] Offset Operators, Leaseholders or Surface Owner
- [C] Application is One Which Requires Published Legal Notice
- [D] Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

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

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

Rebecca Deal Print or Type Name	<u>Rebecca Deal</u> Signature	Regulatory Analyst Title	6/3/2019 Date
		Rebecca.deal@dvn.com e-mail Address	

McMillan, Michael, EMNRD

From: Deal, Rebecca <Rebecca.Deal@dvn.com>
Sent: Wednesday, June 26, 2019 3:20 PM
To: McMillan, Michael, EMNRD
Cc: Goetze, Phillip, EMNRD; Jones, William V, EMNRD
Subject: [EXT] Rio Blanco 33 Fed 2 C-108 Owner Revision
Attachments: Rio Blanco 33 Fed 2_Submitted C-108 OCD Santa Fe P. Goetze Rev Own Not.pdf

Hello All,

The Rio Blanco 33 Fed 2 SWD C-108, submitted 6/4, will have the same ownership notification issue as the Rio Blanco 4 Fed Com 3. Attached is a revised C-108 with the addition of a one mile radius map and the updated list of the owners that have been notified via certified mailing.

If you would like a hard copy overnighted of this or both revised C-108s, please let me know and I'll send them out ASAP.

Thank you,

Rebecca Deal
Regulatory Analyst

Devon Energy Corporation
333 West Sheridan Avenue
Oklahoma City, OK 73102-5015
405 228 8429 Direct
405 552 1364 Fax



Devon - Internal

From: Deal, Rebecca
Sent: Wednesday, June 26, 2019 3:59 PM
To: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>
Cc: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Jones, William V, EMNRD <WilliamV.Jones@state.nm.us>
Subject: RE: [EXTERNAL] Rio Blanco 4 Fed Com Well No. 3

Hello Michael,

Attached is the revised C-108, listing notification of surface and leasehold operators within 1 mile of the well and the addition of a one mile radius map.

Thank you,

Rebecca Deal



Devon Energy Corporation
333 West Sheridan Avenue
Oklahoma City, OK 73102-5010

405 235 3611 Phone
www.devonenergy.com

June 3rd, 2019

Oil Conservation Division
Attn: Phillip Goetze
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RE: Form C-108, Application for Authorization to Inject
Rio Blanco 33 Fed #2; API 30-025-36360
Lea County, NM
Section 33, T22S, R34E

Dear Santa Fe Oil Conservation Division:

Please find attached Devon Energy Production Company, LP's Form C-108, amendment to the Application for Authorization to Inject. Devon's application proposes to deepen the Rio Blanco 33 Fed #2 SWD to dispose in the Devonian, Silurian, Fusselman formations.

A notice of intent sundry for the deepening procedure has been approved by the BLM (Carlsbad Office).

The surface land owner and operators with leasehold ownership have been notified with Devon's application to inject via certified mail. A copy of this application has been filed with the OCD-Artesia office.

If you have any questions, please contact Rebecca Deal at (405)-228-8429.

Sincerely,

A handwritten signature in blue ink that reads "Rebecca Deal". The signature is written in a cursive, flowing style.

Rebecca Deal
Regulatory Analyst

RD/rd
Enclosure

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery ___ Pressure Maintenance X Disposal _____ Storage
Application qualifies for administrative approval? X Yes _____ No
- II. OPERATOR: Devon Energy Production Company, LP
ADDRESS: 333 West Sheridan Avenue, Oklahoma City, Oklahoma 73102-5010
CONTACT PARTY: Rebecca Deal PHONE: 405-228-8429
- 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 - Deepening Wellbore
If yes, give the Division order number authorizing the project: Order No. R-13685
- 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:
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. 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: Rebecca Deal TITLE: Regulatory Analyst
SIGNATURE: Rebecca Deal DATE: _____
- E-MAIL ADDRESS: Rebecca.deal@dvn.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: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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

Tubing Size: 4-1/2”& 2-7/8” Lining Material: IPC

Type of Packer: 5” Nickel Coated Arrowset Packer

Packer Setting Depth: 14499’

Other Type of Tubing/Casing Seal (if applicable): N/A

Additional Data

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

If no, for what purpose was the well originally drilled? Oil & Gas Producer

2. Name of the Injection Formation: Devonian, Silurian, Fusselman

3. Name of Field or Pool (if applicable): SWD; Devonian-Silurian

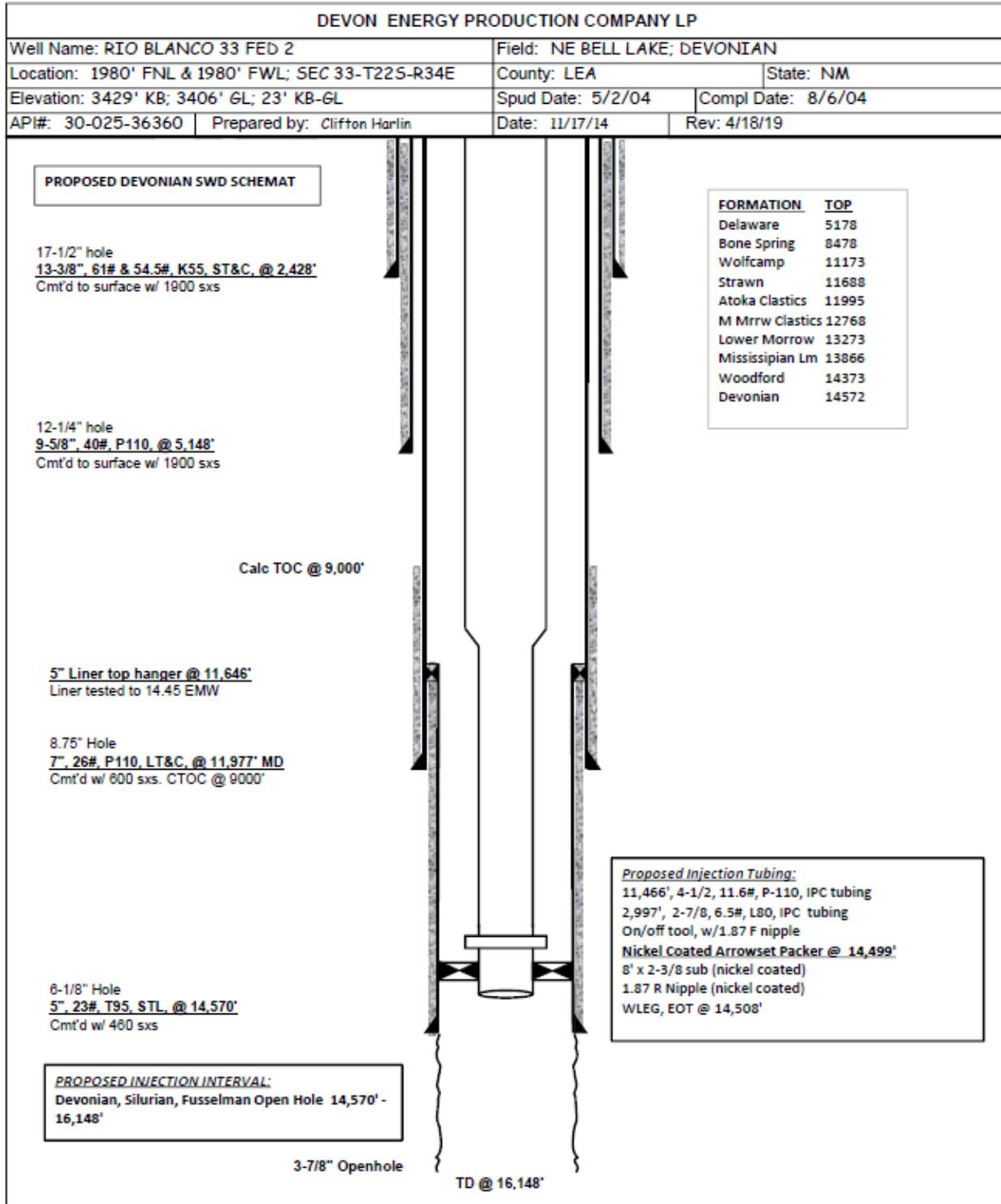
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used.

Bell Lake Devonian 14570-14660. (Open hole). Proposed nickel coated arrow set packer @ 14499’

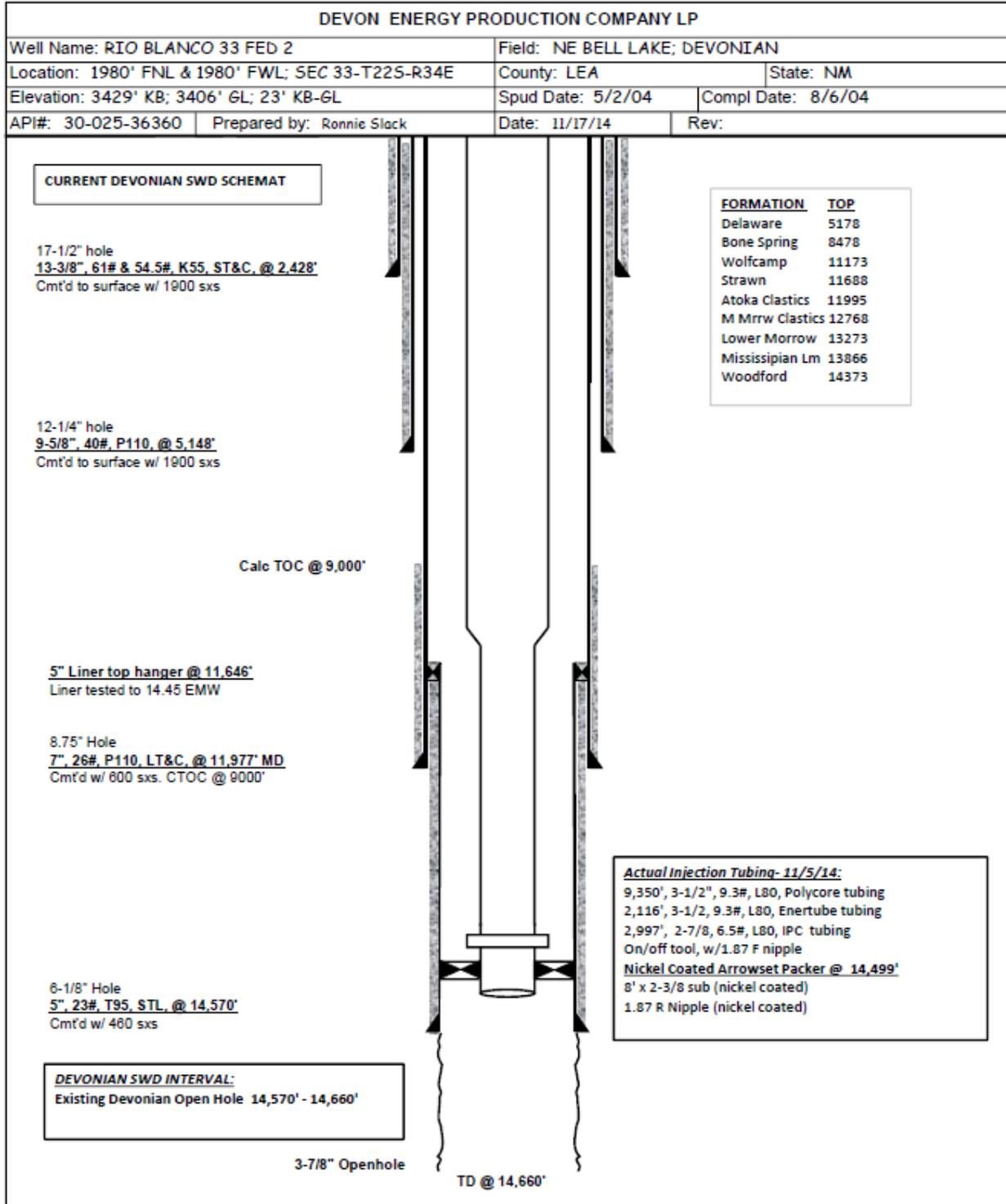
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

Delaware 5178; Bone Spring 8478; Wolfcamp 11173; Strawn 11688; Atoka Clastics 11995; Middle Morrow Clastics 12768; Lower Morrow 13273; Mississippian Lime 13866; Woodford 14373; Devonian 14570, Montoya 16148

PROPOSED WELLBORE SCHEMATIC



CURRENT WELLBORE SCHEMATIC



Proposed Injection Well: Rio Blanco 33 Fed #2

API: 30-025-36360

APPLICATION FOR INJECTION

Form C-108 Section III

III. Well Data--On Injection Well

A. Injection Well Information

- (1) **Lease** Rio Blanco 33 Fed
- Well No** #2
- Location** 1980' FNL & 1980' FWL
- Sec.Twn,Rnge** Sec 33-T22S-R34E
- Cnty. State** Lea County, NM

- (2) **Casing** 13-3/8", 61 & 54.5#, K55, STC, @ 2,428'
Cmt'd w/1900 sx, circ cmt to surf

- 9-5/8", 40#, P110, LTC, @ 5,148'
Cmt'd w/1900, circ cmt to surf

- 7", 26#, P110, LTC @ 11,977'
Cmt'd w/600 sx. CTOC @ 9000'

- 5", 23#, T95, STL liner from 11646' to 14570'
Cmt'd w/460 sx

- (3) **Injection Tubing** 4-1/2", 11.6#, P-110, IPC to +/- 11000'
2-7/8", 6.5#, L80, IPC to +/- 11000' - 14450'
- (4) **Packer** 5" Nickel Coated Arrowset Packer @ 14499'

B. Other Well Information

- (1) **Injection Formation:** Devonian, Silurian, Fusselman
- Field Name:** SWD; Devonian-Silurian

- (2) **Injection Interval:** 14570' - 16,148' (open hole)

(3) **Original Purpose of Wellbore:**

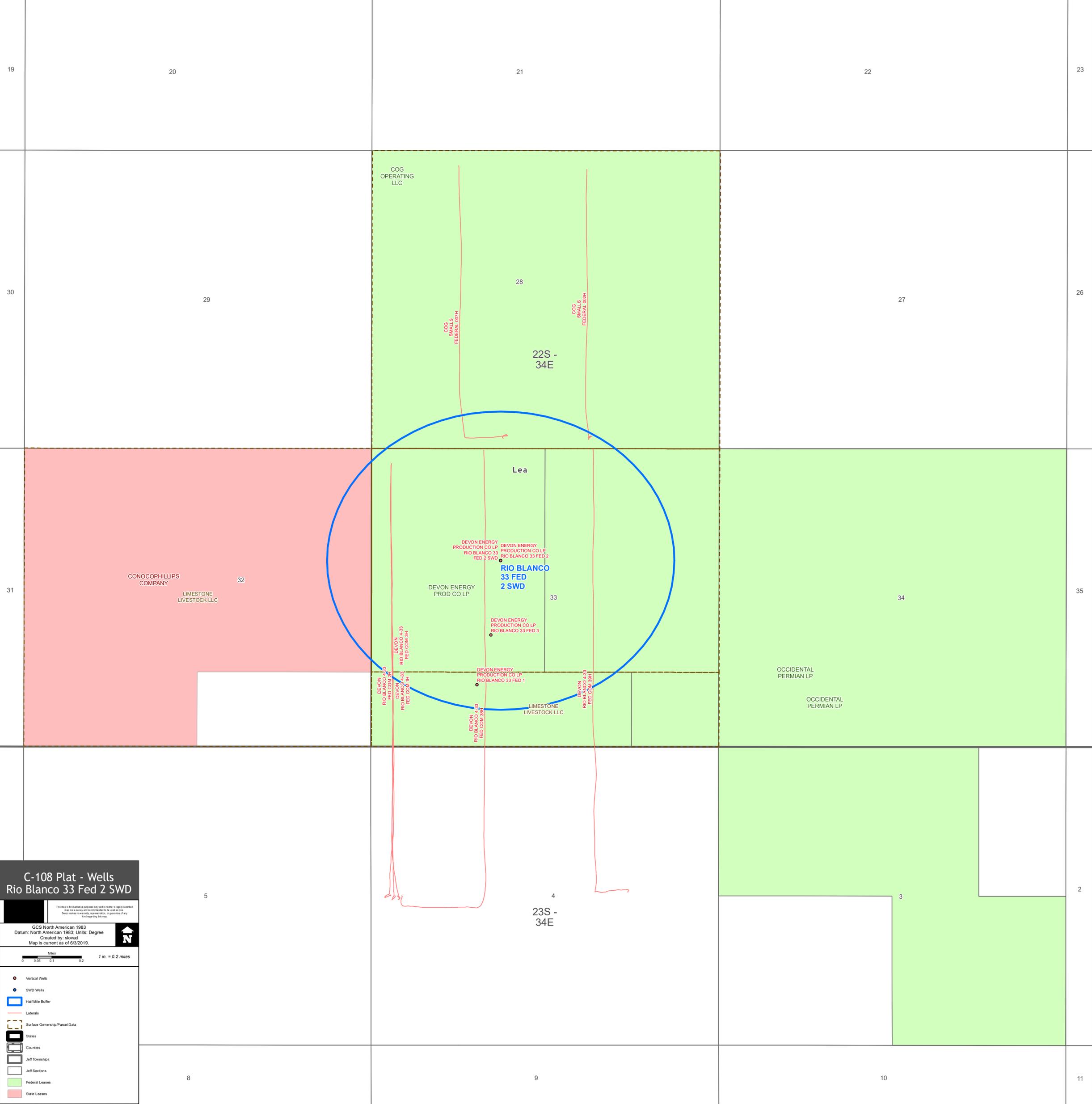
Devonian producer

(4) **Other perforated intervals:**

Bell Lake Devonian 14570-14660. (Open hole). Proposed nickel coated arrow set packer @ 11400'

(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.**

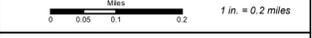
Delaware 5178; Bone Spring 8478; Wolfcamp 11173; Strawn 11688; Atoka Clastics 11995; Middle Morrow Clastics 12768; Lower Morrow 13273; Mississippian Lime 13866; Woodford 14373; Devonian 14570, Montoys 16,148



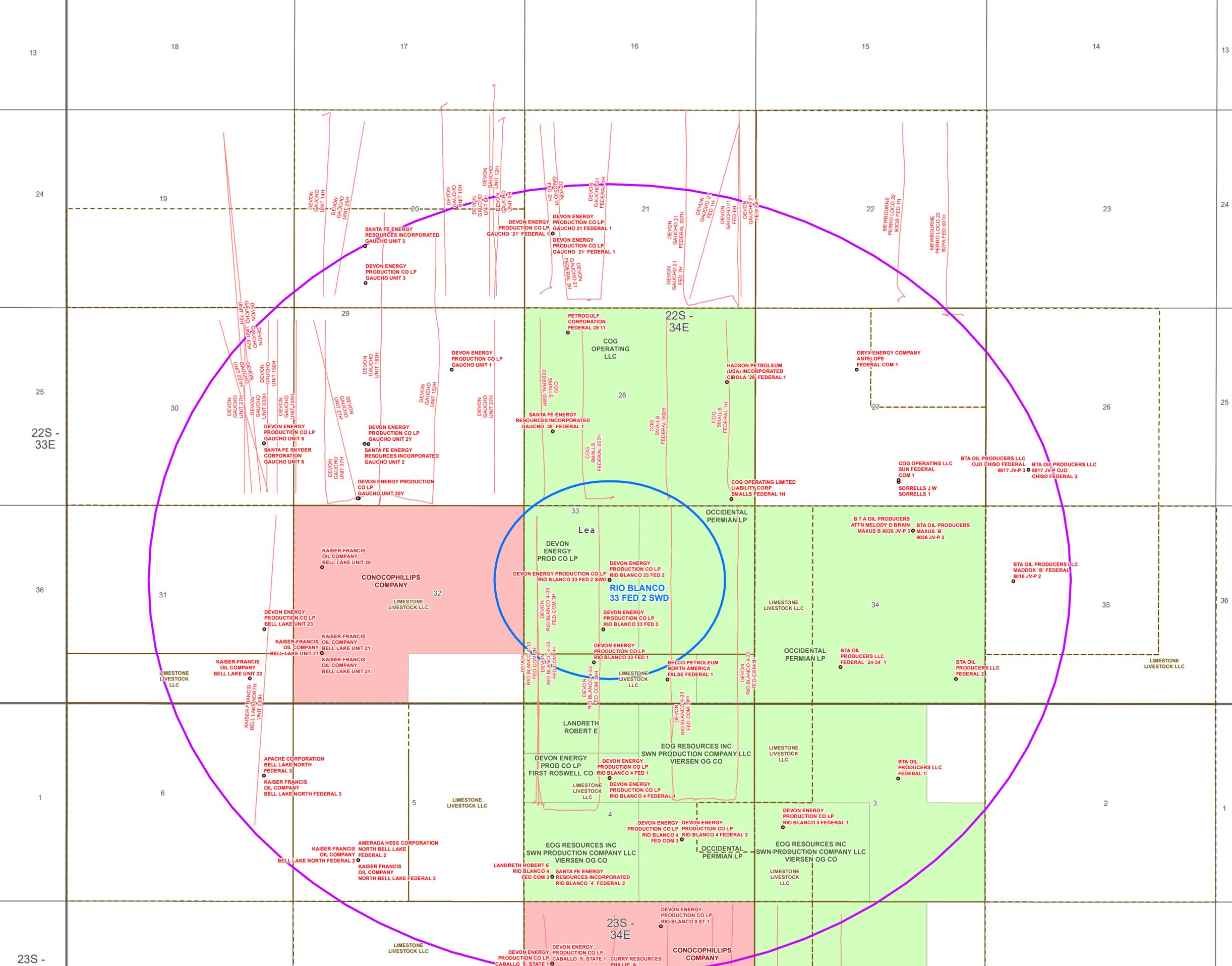
**C-108 Plat - Wells
Rio Blanco 33 Fed 2 SWD**

This map is for illustrative purposes only and is neither a legally recorded map nor a survey and is not intended to be used as one. Owner retains no warranty, representation, or guarantee of any kind regarding this map.

GCS North American 1983
Datum: North American 1983; Units: Degree
Created by: sloyd
Map is current as of 6/3/2019.



- Vertical Wells
- SWD Wells
- Half Mile Buffer
- Laterals
- - - Surface Ownership/Parcel Data
- ▭ States
- ▭ Counties
- ▭ Jeff Townships
- ▭ Jeff Sections
- ▭ Federal Leases
- ▭ State Leases



**C-108 Plat - Wells
Rio Blanco 33 Fed 2 SWD**

This map is for illustrative purposes only and is neither a legally recorded map nor a survey and is not intended to be used as one. Owner names are not verified, represented, or guaranteed in any way regarding this map.

GCS North American 1983
Datum: North American 1983; Units: Degree
Created by: sloyd
Map is current as of 6/3/2019.



- Vertical Wells
- SWD Wells
- 2 Mile Buffer
- Half Mile Buffer
- Laterals
- Surface Ownership/Parcel Data
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- Counties
- Jeff Townships
- Jeff Sections
- Federal Leases
- State Leases

Proposed Injection Well: Rio Blanco 33 Fed #2

API: 30-025-36360

APPLICATION FOR INJECTION

Form C-108 Section VII to XIII

VII Attach data on the proposed operation, including:

- (1) Proposed average injection rate: 15000 BWPD
Proposed maximum injection rate: 20000 BWPD
- (2) The system will be a closed system.
- (3) Proposed average injection pressure: 2914 psi
Proposed max injection pressure: 2914 psi
- (4) The proposed injection fluid is produced water from formations ranging from the Delaware to Wolfcamp that will be re-injected into the Devonian, Silurian, Fusselman.
- (5) Disposal zone formation water analysis: commingled produced water from various formations ranging from the Delaware to Wolfcamp

VIII Geologic Injection Zone Data

The proposed injection interval is located in the Devonian, Silurian, and Fusselman. This formation is approximately 1578' feet thick in this area. The injection interval is from 14,570' to 16,148'. The average depth to fresh water is 125' in this area.

IX Proposed Stimulation

Interval will be treated at pressure below current permitted max with 15% Hydrochloric acid following deepening.

X Log Data

Logs have previously been submitted to the OCD.

XI Fresh Water Analysis

Attached is a fresh water analysis for a fresh water well drilled in Section 33-T22S-R34E on Bill Angel's property within 1 mile of the proposed SWD location. CP-01705-POD1 is 700 ft deep & 0.45 miles from the Rio Blanco 33-2.

XII Geologic / Engineering Statement

An examination of this area has determined there are no open faults or other hydrologic connection between the disposal zone and any underground drinking water.

XIII Proof of Notice

Proof of notice to surface owner, and public legal notification are attached.

Section XIV--Proof of Notice to Surface Land Owner Devon Energy Prod Co LP
C108 Application For Injection
Proposed Well: RIO BLANCO 33 FED 2

Proof of Notice to Surface Land Owner within one mile of well location site.

New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

Certified receipt No. Mailed 6/4/2019
9414 8149 0152 7181 7061 18

Bureau of Land Management
Carlsbad Field Office
620 East Greene Street
Carlsbad, New Mexico 88220

Certified receipt No. Mailed 6/4/2019
9414 8149 0152 7181 7061 25

A copy of this application has been mailed to the above surface land owner by certified mail, pertaining to Devon Energy's application for salt water disposal in the Rio Blanco 33 Fed #2.

Date Mailed: 6/4/2019

Signature: 

Date: 6/4/2019

Rebecca Deal, Regulatory Analyst
Devon Energy Production Co., L.P.
333 West Sheridan Avenue
Oklahoma City, OK 73102

Section XIV--Proof of Notice to Leasehold Operators
Devon Energy Prod Co LP
C108 Application For Injection
Proposed Well: RIO BLANCO 33 FED 2

Proof of Notice to Leasehold Operators within 1 mile of Rio Blanco 33 Fed #2

Kaiser-Francis Oil Company P.O. Box 21468 Tulsa, OK 74121-1468	Certified receipt No. 9414 8149 0152 7181 7061 01	Mailed 6/4/2019
COG Operating 600 W. Illinois Ave Midland, TX 79701	Certified receipt No. 9414 8149 0152 7181 7060 95	Mailed 6/4/2019
Conoco Phillips P.O. Box 7500 Bartlesville, OK 74005-7500	Certified receipt No. 9414 8149 0152 7181 7061 25	Mailed 6/4/2019
Bureau of Land Management* Carlsbad Field Office 620 East Greene Street Carlsbad, New Mexico 88220	Certified receipt No. 9414 8149 0152 7181 7061 25	Mailed 6/4/2019
Occidental Permian LP 5 Greenway Plaza, Suite 110 Houston, Texas 77046-0521	Certified receipt No. 9414 8149 0152 7181 7132 77	
Axis Energy Corp PO Box 2107 Roswell, NM 88202	Certified receipt No. 9414 8149 0152 7181 7132 84	
EOG Resources, Inc. 5509 Champions Drive Midland, Texas 79706	Certified receipt No. 9414 8149 0152 7181 7132 91	
Vierson Oil and Gas Co. 7130 S. Lewis Ave. Suite 200 Tulsa, OK 74136	Certified receipt No. 9414 8149 0152 7181 7133 07	
SWN Production Company 2350 N. Sam Houston Pkwy E. Houston, TX 77032	Certified receipt No. 9414 8149 0152 7181 7133 14	
BTA Oil Producers 104 S. Pecos Midland TX 79701	Certified receipt No. 9414 8149 0152 7181 7133 21	
Robert E. Landereth 110 W. Louisiana, Suite 404 Midland TX 79701	Certified receipt No. 9414 8149 0152 7181 7133 38	
Hunt Oil Company 1900 N. Akard Street Dallas, TX 75201	Certified receipt No. 9414 8149 0152 7181 7133 45	
Enline Resources Ltd Partners 2001 Kirby Drive Houston, TX 77019	Certified receipt No. 9414 8149 0152 7181 7133 52	
Fred L. Engle PO Box 26245 Milwaukee, WI 53226	Certified receipt No. 9414 8149 0152 7181 7133 69	

A copy of this application has been mailed to the above leasehold* operators by certified mail, pertaining to Devon Energy's application for salt water disposal in the Rio Blanco 33 Fed #2.

* Includes Mineral (BLM)

Date Mailed: 6/4/2019 & 6/26/2019

Signature: Rebecca Deal

Date: 6/26/2019

Rebecca Deal, Regulatory Analyst
Devon Energy Production Co., L.P.
333 West Sheridan Avenue
Oklahoma City, OK 73102

C108 ITEM VI--Well Tabulation in 1/2 Mile Review Area																	
Devon Energy Production Company, LP																	
Proposed Inj Well:		RIO BLANCO 33 FED 2															
Proposed Formation:		DEVONIAN															
Proposed Interval:		14570' - 14660'															
Operator	Well Name	API NO	County	Surf Location	Sec	Twn	Rnge	Type	Status	Spud Date	Comp Date	TD	PBTD	Comp Zone	Comp Interval-Ft	Casing Program	Cement / TOC
Devon Energy Prod Co LP	Rio Blanco 33 Fed 2	30-025-36360	Lea	1980' FNL 1980' FWL	33	22S	34E	Oil	Act	5/2/04	8/6/04	14660	14660	Devonian	14570-14660 (open hole)	13-3/8", 61 & 54.5# @ 2428' 9-5/8", 40# @ 5148' 7", 26# @ 11977' 5", 23.2# liner 11646-14570	1900 sx / surface 1900 sx / surface 600 sx / 9000-etoc 460 sx / liner top
Devon Energy Prod Co LP	Rio Blanco 33 Fed 1	30-025-36359	Lea	1000' FSL 1620' FWL	33	22S	34E	Oil	Act	9/20/03	3/8/04	14682	14682	Devonian	14486-14682 (open hole)	20", 106#, @ 1764' 13-3/8", 68#, @ 5135' 9-5/8", 53.5#, @ 11980 7 5/8", 38#, @ 14497	3405 sx / surface 2700 sx / surface 1320 sx / 7500-etoc 360 sx / liner top
Devon Energy Prod Co LP	Rio Blanco 33 Fed 3	30-025-37860	Lea	1980' FSL 1830' FWL	33	22S	34E	Oil	Act	2/1/07	4/25/07	8600	8497	Delaware	6872-8456 (open)	13-3/8", 61#, @ 2200' 8-5/8", 32#, @ 5155 7 7/8", 15.5/17#, @ 8600	1450 sx / surface 2015 sx / surface 620 sx / 4040-cbl



Dissolved Mineral Water Analysis

Friday, May 24, 2019

Laboratory Sample #: AC88592

Login Batch: 190524039-CWA-ASAP

Production Company:	DEVON ENERGY	Date Sampled:	May 16, 2019
Field:	PERMIAN BASIN	Date Received:	May 24, 2019
Pad:	NORTH THISTLE	Submitted By:	JEROMIE PICKERING
Well/Vessel:	CP-01073	Collection Point:	POD 1

Gases and Physical Parameters			Analysis of Sample			
Analyte	Result	Unit	Cations	mg/L (ppm)	Anions	mg/L (ppm)
Total Dissolved Solids	472.39		Calcium	54.5	Bicarbonate	219.5
Specific Gravity	1.000		Magnesium	23.52	Chloride	80.088
pH	7.5		Barium	0.08	Sulfate	36
Sample Temperature	70	° F	Strontium	1.05		
Downhole Temperature	300	° F	Potassium	0.01		
Sample Pressure	14.7	psia	Iron	0.07		
Downhole Pressure	1470	psia	Manganese	0.01		
Carbon Dioxide (Dissolved)	20	ppm	Zinc	0.2		
Hydrogen Sulfide (Dissolved)	<1.71	ppm	Lead	0.04		
			Sodium	44.06		
			Lithium	0.01		
			Total Hardness	197.86		

SCALING POTENTIAL PREDICTED USING SCALESOFTPIZZER FROM BRINE CHEMISTRY CONSORTIUM (RICE UNIVERSITY)

SCALE PREDICTIONS BASED ON FIELD PROVIDED DATA; FUTHER MODELING MAY BE REQUIRED FOR VALIDATION OF SCALE PREDICTION RESULTS

T ^a	P	Calcite (CaCO ₃)		Barite (BaSO ₄)		Gypsum (CaSO ₄ 2H ₂ O)		Anhydrite (CaSO ₄)	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB
300	1470	1.74	28.21	-0.65	0.00	-1.67	0.00	-0.80	0.00
274	1308	1.52	25.82	-0.69	0.00	-1.75	0.00	-1.01	0.00
249	1147	1.31	23.07	-0.71	0.00	-1.81	0.00	-1.20	0.00
223	985	1.09	20.00	-0.72	0.00	-1.86	0.00	-1.40	0.00
198	823	0.88	16.62	-0.70	0.00	-1.91	0.00	-1.59	0.00
172	662	0.67	13.01	-0.65	0.00	-1.96	0.00	-1.78	0.00
147	500	0.47	9.23	-0.57	0.00	-2.01	0.00	-1.97	0.00
121	338	0.27	5.39	-0.44	0.00	-2.06	0.00	-2.16	0.00
96	176	0.08	1.63	-0.27	0.00	-2.10	0.00	-2.36	0.00
70	15	0.06	1.20	-0.05	0.00	-2.12	0.00	-2.56	0.00

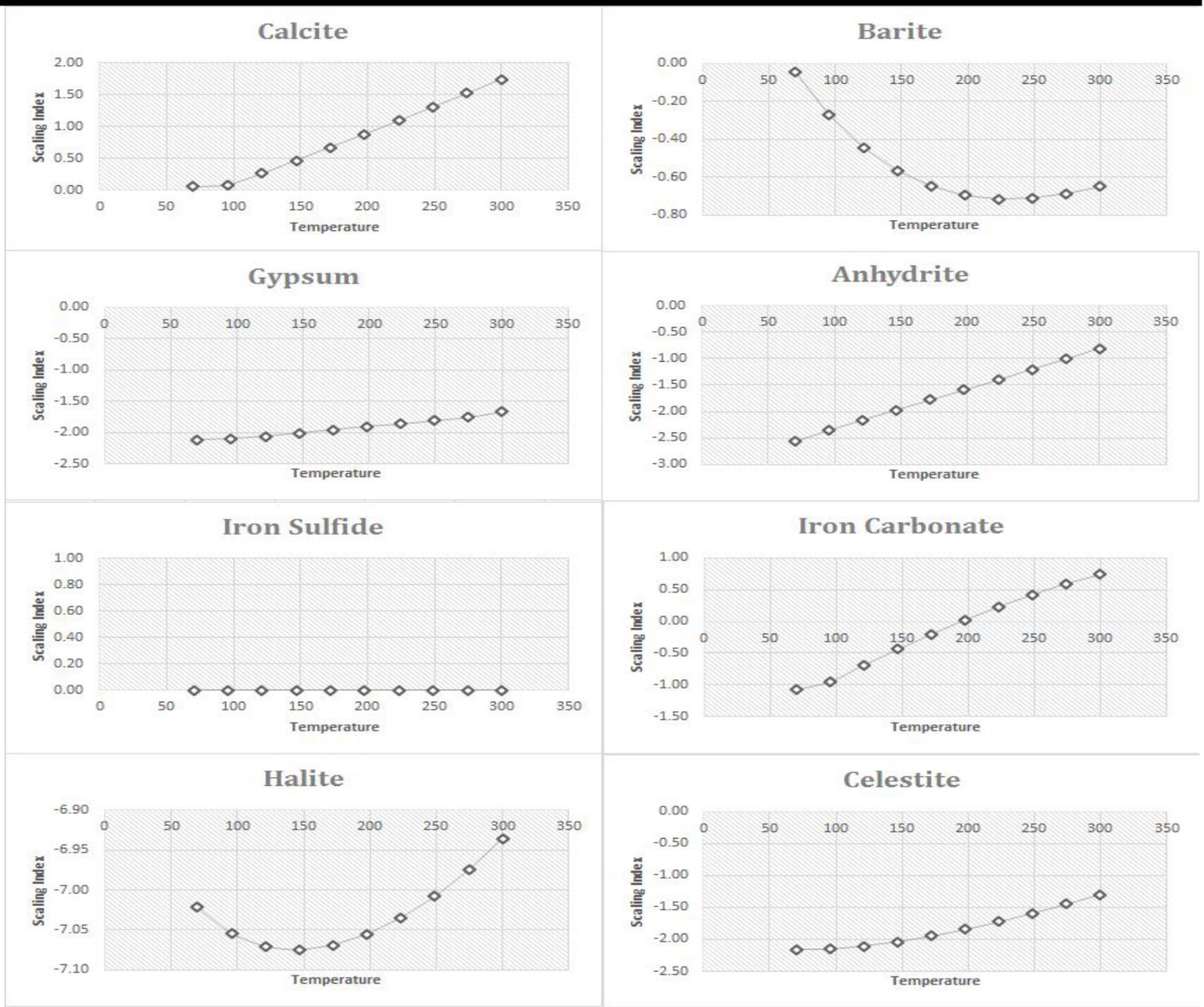
T	P	Iron Sulfide (FeS)		Iron Carbonate (FeCO ₃)		Halite (NaCl)		Celestite (SrSO ₄)	
		SI	PTB	SI	PTB	SI	PTB	SI	PTB
300	1470	0.00	0.00	0.74	0.03	-6.94	0.00	-1.30	0.00
274	1308	0.00	0.00	0.59	0.03	-6.97	0.00	-1.45	0.00
249	1147	0.00	0.00	0.42	0.02	-7.01	0.00	-1.59	0.00
223	985	0.00	0.00	0.23	0.02	-7.03	0.00	-1.72	0.00
198	823	0.00	0.00	0.02	0.00	-7.06	0.00	-1.84	0.00
172	662	0.00	0.00	-0.20	0.00	-7.07	0.00	-1.95	0.00
147	500	0.00	0.00	-0.44	0.00	-7.08	0.00	-2.04	0.00
121	338	0.00	0.00	-0.69	0.00	-7.07	0.00	-2.11	0.00
96	176	0.00	0.00	-0.95	0.00	-7.05	0.00	-2.15	0.00
70	15	0.00	0.00	-1.07	0.00	-7.02	0.00	-2.16	0.00

Midland Lab
 3408 East State Hwy 158
 Midland, TX 79706

Friday, May 24, 2019

Laboratory Sample #: AC88592

Login Batch: 190524039-CWA-ASAP



Remarks
None

Curtis Hendricks
Analyst

May 24, 2019

Validation Date

Midland Lab
3408 East State Hwy 158
Midland, TX 79706

Well Name	Rio Blanco 33 Federal 002 SWD	Rio Blanco 4 Fed 3 SWD
Sample Date	10/24/2018	10/24/2018
Test Date	10/26/2018	10/26/2018
Calcium (mg/L)	10590	11879
Magnesium (mg/L)	1625	1880
Barium (mg/L)	2	1
Strontium (mg/L)	549	658
Sodium (calculated) (mg/L)	59998.54555	63371.51338
Iron (mg/L)	2127	255
Manganese (mg/L)	4	2.6
Chlorides (mg/L)	115404	123634
Sulfates (mg/L)	994	1029
Bicarbonates (mg/L)	512	610
CO2 in Brine	770	792
H2S in Brine	0	0
Total Hardness (as CaCO3)	33162.2428	37434.12551
Total Dissolved Solids (mg/L)	191805.5456	203320.1134
Resistivity (ohms/m)	0.033367127	0.031477456
pH	5.780881177	5.844706594
Specific Gravity (mg/L)	1.128	1.134
Temperature (°F)	80	80
Pressure (psi)	120	120
Ionic Strength	3.632196248	3.910942389
CalciteSI	-0.520645267	-0.284776516
BariteSI	0.73162155	0.464127667
GypsumSI	-0.149006899	-0.10358548
HemihydrateSI	-0.185969189	-0.137446016
AnhydriteSI	-0.113206645	-0.036142026
CelestiteSI	0.564987035	0.668824788
PTBCalcite	0	0
PTBBarite	0.962231115	0.369713201
PTBGypsum	0	0
PTBHemiHydrate	0	0
PTBAnhydrite	0	0
PTBCelestite	225.560319	270.0692629

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

I, Todd Bailey, Editor of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
June 07, 2019
and ending with the issue dated
June 07, 2019.



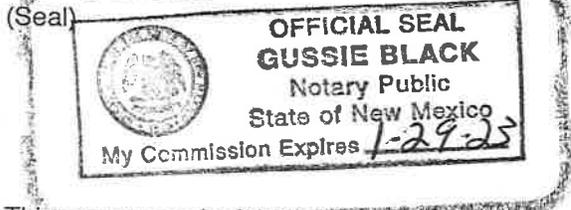
Editor

Sworn and subscribed to before me this
7th day of June 2019.



Business Manager

My commission expires
January 29, 2023



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

LEGAL NOTICE
June 7, 2019

Devon Energy Production Company, LP, 333 West Sheridan Avenue, Oklahoma City, OK 73102-8260 has filed an amended form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking approval to amend the depth for this injection well. The injection well, Rio Blanco 33 Fed 2, is located SENW 1980' FNL & 1980' FWL, Section 33, Township 22 South, Range 34 East, in Lea County, New Mexico. Disposal water will be sourced from area wells producing from formations ranging from the Delaware to Wolfcamp that will be re-injected into the Devonian, Silurian, Fusselman, at a depth from 14,570' to 16,148', at a maximum injection pressure of 2914 psi, and a maximum rate of 20,000 BWP. Any interested party who has an objection to this must give notice in writing to the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505, within (15) days of this notice. Any interested party with questions or comments may contact Josh Bruening at Devon Energy Corporation, 333 West Sheridan Avenue, Oklahoma City, OK 73102 at 405-552-7882.
#34253

67106744

00229317

ACCOUNTS PAYABLE
DEVON ENERGY
PO BOX 3198
OKLAHOMA CITY, OK 73102-3198

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NMNM100864

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other: INJECTION		8. Well Name and No. RIO BLANCO 33 FED 2
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY Contact: REBECCA DEAL E-Mail: Rebecca.Deal@dvn.com		9. API Well No. 30-025-36360-00-S1
3a. Address P O BOX 250 ARTESIA, NM 88201	3b. Phone No. (include area code) Ph: 405-228-8429	10. Field and Pool or Exploratory Area BELL LAKE SWD
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 33 T22S R34E SENW 1980FNL 1980FWL		11. County or Parish, State LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input checked="" type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Devon Energy Production Co. respectfully requests approval of procedure to deepen the Rio Blanco 33 Fed SWD 2. Proposed procedure as follows:

- MIRU WSU & TOH INJECTION STRING
- 1) Hold PJSM; Record SITP & SICP; MIRU WSU & support equipment.
 - 2) ND tree; NU 7-1/16? 10K BOPE with annular, tbg rams, blind rams; PTEST BOPE according to Devon protocol.
 - 3) Release PCKR & TOH laying down lined injection tbg, On/Off tool, & PCKR.
 - 4) RIH kill string; RDMO WSU & equipment for deepening rig.

- MIRU DEEPENING RIG, D/O OPEN HOLE, & ACID TREAT FORMATION
- 1) Prep pad & existing facility equipment according to deepening rig

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #464177 verified by the BLM Well Information System For DEVON ENERGY PRODUCTION COM LP, sent to the Hobbs Committed to AFSS for processing by PRISCILLA PEREZ on 05/06/2019 (19PP1773SE)	
Name (Printed/Typed) REBECCA DEAL	Title REGULATORY COMPLIANCE PROFESSI
Signature (Electronic Submission)	Date 05/06/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>LONG VO</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>05/09/2019</u>
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office <u>Hobbs</u>

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #464177 that would not fit on the form

32. Additional remarks, continued

footprint.

- 2) Hold PJSM; Record SITP & SICP; MIRU deepening rig & support equipment.
- 3) NU 7-1/16? 10K BOPE with annular, pipe rams, blind rams; PTEST BOPE according to Devon protocol.
- 4) MU 3-7/8? D/O BHA; TIH to 5? CSG Shoe.
- 5) C/O existing OH interval; proceed deepening OH to top of Montoya @ 16,148 ftKB.
- 6) CIRC hole clean; TOH laying down D/O string & BHA.
- 7) RIH kill string; RDMO deepening rig & equipment for WSU.

MIRU WSU & TIH INJECTION STRING

- 1) Hold PJSM; Record SITP & SICP; MIRU WSU & support equipment.
- 2) NU 7-1/16? 10K BOPE with annular, tbg rams, blind rams; PTEST BOPE according to Devon protocol.
- 3) MU injection BHA:
 - 2-7/8? tail pipe w/ XN Nipple
 - 5? x 2-7/8? Arrowset AS1-X 10K Injection Packer (internal Ni coated), On/Off Tool, Stinger.
 - RIH w/ ~2,950? 2-7/8? 6.5# L-80 lined injection string.
 - RIH with ~11,556? 4-1/2? 12.6# P-110 line injection string & set PCKR @ ~14,499?. *Per NMOCD, packer must be set within 100? of injection zone (Csg Shoe @ 14,570?). Move packer set depth deeper or shallower to avoid previous packer slip set points while staying below 14,470?.
- 4) MIRU pumping services; acid treat well with 20,000 gal 15% HCl; RDMO pumping services.
- 5) Release On/Off tool, CIRC backside with PCKR fluid, latch On/Off tool.
- 6) Space out, land injection string, & NU WH.
- 7) RDMO WSU & related equipment.

Please see attached proposed procedure and current and proposed wellbore schematic.

Revisions to Operator-Submitted EC Data for Sundry Notice #464177

	Operator Submitted	BLM Revised (AFMSS)
Sundry Type:	DEEP NOI	DEEP NOI
Lease:	NMNM100864	NMNM100864
Agreement:		
Operator:	DEVON ENERGY PRODUCTION COMPAN 333 WEST SHERIDAN AVE OKLAHOMA CITY, OK 73102 Ph: 405-228-8429	DEVON ENERGY PRODUCTION COM LP P O BOX 250 ARTESIA, NM 88201 Ph: 575-748-1854
Admin Contact:	REBECCA DEAL REGULATORY COMPLIANCE PROFESSI E-Mail: Rebecca.Deal@dvn.com Ph: 405-228-8429	REBECCA DEAL REGULATORY COMPLIANCE PROFESSI E-Mail: Rebecca.Deal@dvn.com Ph: 405-228-8429
Tech Contact:	REBECCA DEAL REGULATORY COMPLIANCE PROFESSI E-Mail: Rebecca.Deal@dvn.com Ph: 405-228-8429	REBECCA DEAL REGULATORY COMPLIANCE PROFESSI E-Mail: Rebecca.Deal@dvn.com Ph: 405-228-8429
Location:		
State:	NM	NM
County:	LEA	LEA
Field/Pool:	SWD; DEVONIAN	BELL LAKE SWD
Well/Facility:	RIO BLANCO 33 FEDERAL 2 Sec 33 T22S R34E Mer NMP SENW 1980FNL 1980FWL	RIO BLANCO 33 FED 2 Sec 33 T22S R34E SENW 1980FNL 1980FWL

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company LP
LEASE NO.:	NMNM100864
WELL NAME & NO.:	Rio Blanco 33 Federal 2
SURFACE HOLE FOOTAGE:	1980'/S & 1980'/E
BOTTOM HOLE FOOTAGE:	1980'/S & 1980'/E
LOCATION:	Section 33, T.22 S., R.34 E., NMPM
COUNTY:	Lea County, New Mexico

COA

H2S	<input type="radio"/> Yes	<input checked="" type="radio"/> No	
Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input type="radio"/> Conventional	<input type="radio"/> Multibowl	<input checked="" type="radio"/> Both
Other	<input type="checkbox"/> 4 String Area	<input checked="" type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input type="checkbox"/> Fluid Filled	<input type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input checked="" type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit

All Previous COAs Still Apply.

A. PRESSURE CONTROL

1.
 - a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the liner casing shoe shall be **10,000 (10M) psi.**

B. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

C. SPECIAL REQUIREMENT (S)

WELL COMPLETION

The operator shall supply the BLM with a copy of a mudlog over the permitted disposal interval and estimated insitu water salinity based on open-hole logs. If hydrocarbon shows occur while drilling, the operator shall notify the BLM.

The operator shall provide to the BLM a summary of formation depth picks based on mudlog and geophysical logs along with a copy of the mudlog and open hole logs from TD to top of Devonian

A NOI sundry with the completion procedure for this well shall be submitted and approved prior to commencing completion work. The procedure will be reviewed to verify that the completion proposal will allow the operator to:

1. Properly evaluate the injection zone utilizing open hole logs, swab testing and/or any other method to confirm that hydrocarbons cannot be produced in paying quantities. This evaluation shall be reviewed by the BLM prior to injection commencing.
2. Restrict the injection fluid to the approved formation.
3. If a step rate test will be run an NOI sundry shall be submitted to the BLM for approval

If off-lease water will be disposed in this well, the operator shall provide proof of right-of-way approval.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Chaves and Roosevelt Counties
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After office hours call (575)

Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

- a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test

does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

B. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

C. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

WELL NAME: Rio Blanco 33 Fed 2 SWD

API: 30-025-36360

WBS:

Lea County, NM

Contact: Clifton Harlin

405-549-6574

WELLBORE DATA

**Tubing & packer data available in “Current Wellbore Schematic” at bottom of procedure – “Proposed Wellbore Schematic” included as well.*

Rio Blanco 33-2 - KBEL: 3,429’; GL: 3,406’; KB: 23’

Size	Weight	Grade	Interval	Collapse	Burst	Drift	Capacity
9-5/8”	40	P-110	0-3,121’	-	-	-	-
7”	26	P-110	0-11,977’	6,210	9,960	6.151”	0.0383
5”	23.2	T-95	11,646-14,570’	16,430	12,840	3.919”	0.0159
3-7/8”	OH	OH	14,570’-14,660’	N/A	N/A	N/A	0.0146

IMPORTANT NOTES

- 1) The existing 3-7/8” Open Hole interval will be deepened to the top of the Montoya formation at 16,148 ftKB.
- 2) The existing injection string has been run with lined injection string, On/Off tool, & retrievable packer.
- 3) This well currently injects into 90’ open hole into Devonian formation.
- 4) The existing injection string is made up of 3-1/2”, 2-7/8”, & 2-3/8” pipe. The proposed injection string will be made up of 4-1/2” & 2-7/8” pipe – ensure appropriate elevators and BOP rams are readily available prior to TOH.

RELEVANT CONCERNS

- 1) NMOCD tubing pressure limit is **2,914 psi** at surface. If this pressure is exceeded during workover operations, take measures to ensure injection pressure will remain below permitted value before resuming disposal (10 ppg brine may be necessary to stay below pressure limitations).
- 2) Following well work, tank water levels will need to be high enough to resume injection post-job – we will need to resume injection after completing the state witnessed MIT.
- 3) NMOCD regulation states that the packer may be set no shallower than 14,470’.

PROCEDURE

SAFETY: All personnel will wear hard hats, safety glasses with side shields, steel toed boots, H₂S monitor and fire-retardant clothing while on location. Any personnel arriving on location after the pre-job safety meeting will check in with the Devon PIC and review hazards before proceeding. All personnel have the obligation and full authority to stop the job if any action may be perceived as harmful to people or the environment.

MIRU WSU & TOH INJECTION STRING

- 1) Hold PJSM; Record SITP & SICP; MIRU WSU & support equipment.
- 2) ND tree; NU 7-1/16" 10K BOPE with annular, tbg rams, blind rams; PTEST BOPE according to Devon protocol.
- 3) Release PCKR & TOH laying down lined injection tbg, On/Off tool, & PCKR.
- 4) RIH kill string; RDMO WSU & equipment for deepening rig.

MIRU DEEPENING RIG, D/O OPEN HOLE, & ACID TREAT FORMATION

- 1) Prep pad & existing facility equipment according to deepening rig footprint.
- 2) Hold PJSM; Record SITP & SICP; MIRU deepening rig & support equipment.
- 3) NU 7-1/16" 10K BOPE with annular, pipe rams, blind rams; PTEST BOPE according to Devon protocol.
- 4) MU 3-7/8" D/O BHA; TIH to 5" CSG Shoe.
- 5) C/O existing OH interval; proceed deepening OH to top of Montoya @ 16,148 ftKB.
- 6) CIRC hole clean; TOH laying down D/O string & BHA.
- 7) RIH kill string; RDMO deepening rig & equipment for WSU.

MIRU WSU & TIH INJECTION STRING

- 1) Hold PJSM; Record SITP & SICP; MIRU WSU & support equipment.
- 2) NU 7-1/16" 10K BOPE with annular, tbg rams, blind rams; PTEST BOPE according to Devon protocol.
- 3) MU injection BHA:
 - 2-7/8" tail pipe w/ XN Nipple
 - 5" x 2-7/8" Arrowset AS1-X 10K Injection Packer (internal Ni coated), On/Off Tool, Stinger.
 - RIH w/ ~2,950' 2-7/8" 6.5# L-80 lined injection string.
 - RIH with ~11,556' 4-1/2" 12.6# P-110 line injection string & set PCKR @ ~14,499'.

Per NMOCD, packer must be set within 100' of injection zone (Csg Shoe @ 14,570'). Move packer set depth deeper or shallower to avoid previous packer slip set points **while staying below 14,470'.*

- 4) MIRU pumping services; acid treat well with 20,000 gal 15% HCl; RDMO pumping services.
- 5) Release On/Off tool, CIRC backside with PCKR fluid, latch On/Off tool.
- 6) Space out, land injection string, & NU WH.
- 7) RDMO WSU & related equipment.

PERFORM MIT W/ REGULATORY REPRESENTATIVES

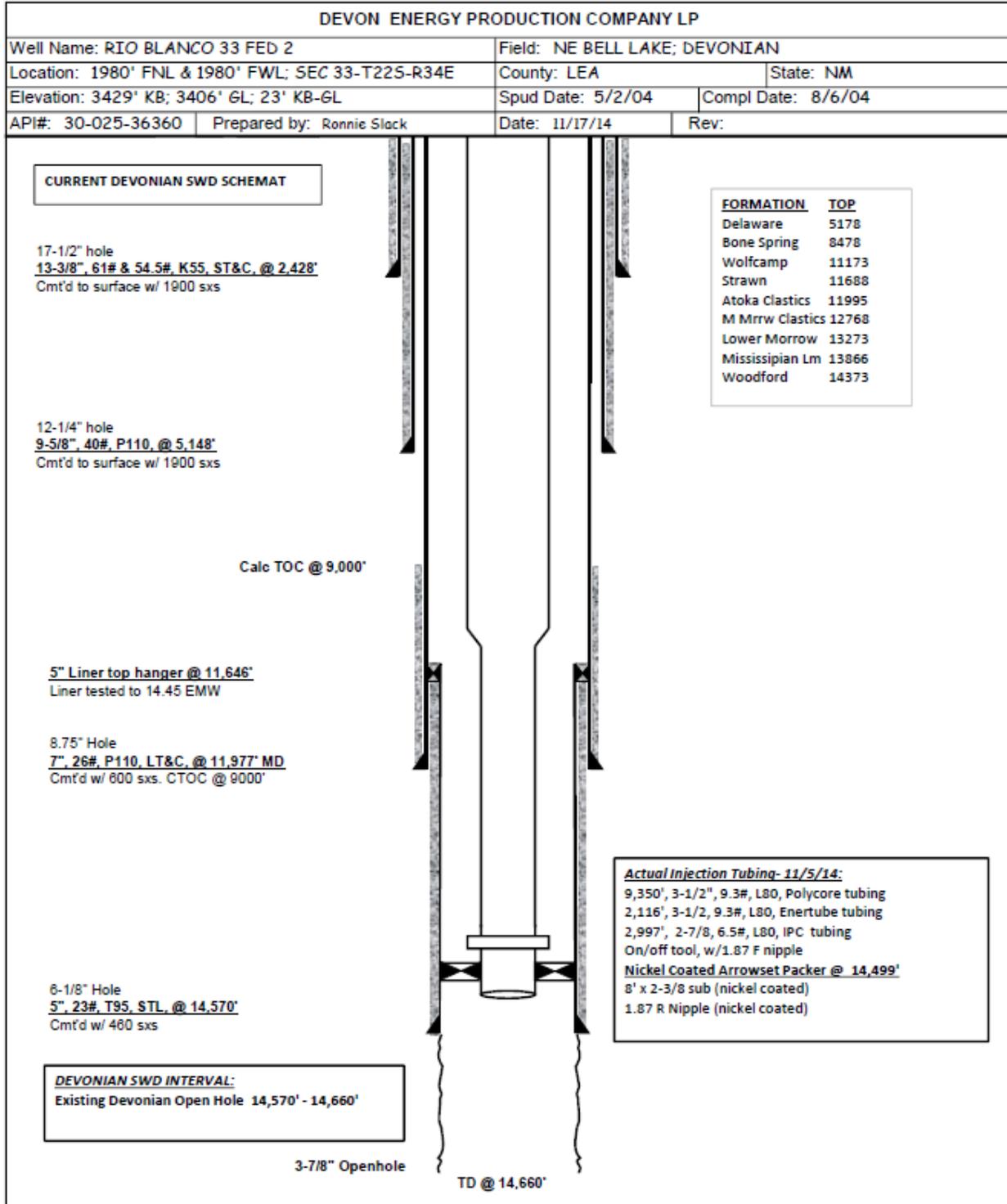
- 1) Notify & set up NMOCD & BLM for official MIT with chart recorder. Once MIT is approved & NMOCD OK's injection, initiate disposal into Devonian. **Do not exceed max pressure of 2,914 psi per NMOCD.**

**Any future slickline tools will require a smooth surface to prevent tbg coating damage.*

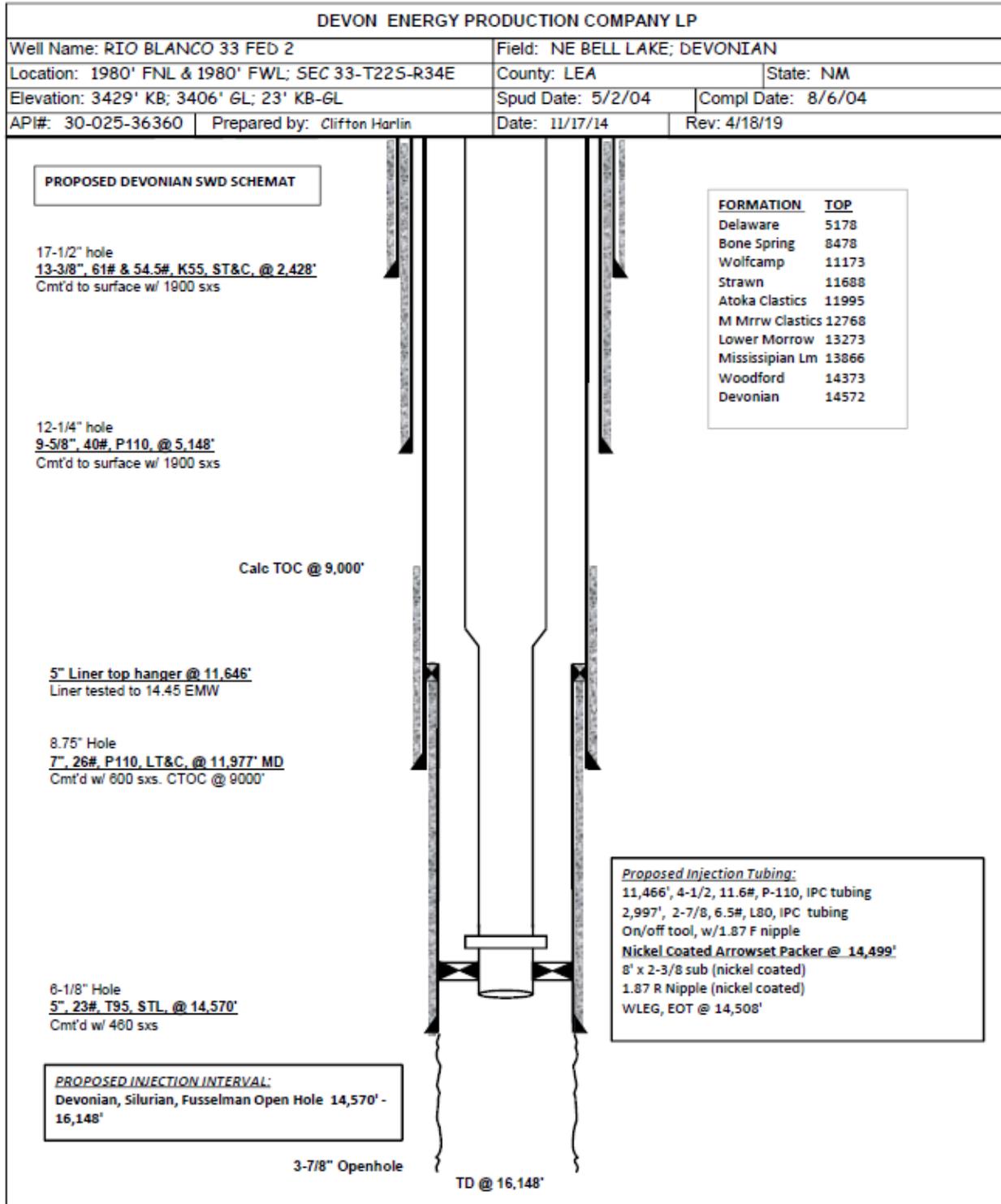
***Per NMOCD, any unseating of injection packer will require an additional witnessed MIT prior to commencing injection.*

- 2) TOTP - Resume Injection.

CURRENT WELLBORE SCHEMATIC



PROPOSED WELLBORE SCHEMATIC



**STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:**

**CASE NO. 14943
ORDER NO. R-13685**

**APPLICATION OF DEVON ENERGY PRODUCTION COMPANY, L.P. FOR
APPROVAL OF A SALT WATER DISPOSAL WELL, LEA COUNTY, NEW
MEXICO**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on January 24, 2013, at Santa Fe, New Mexico, before Examiner William V. Jones.

NOW, on this 6th day of March, 2013, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) The applicant, Devon Energy Production Company, L.P. ("Devon" or "applicant"), seeks authority to utilize its Rio Blanco 33 Federal Well No. 2 (**API No. 30-025-36360**), (the "subject well"), located 1980 feet from the North line and 1980 feet from the West line, Unit letter F of Section 33, Township 22 South, Range 34 East, NMPM, Lea County, New Mexico, for oil field water disposal into the Devonian formation from 14,570 feet to 14,660 feet.

(3) This application was set to hearing by the applicant due to the presence of the following Devonian gas well located within the ½ mile Area of Review. The Rio Blanco 33 Federal Well No. 1 (API No. 30-025-36359) operated by Devon is a vertical well producing from the Northeast Bell Lake-Devonian Gas Pool (Pool Code 97328).

(4) Devon presented exhibits and testimony at the hearing from a geologist and an engineer. An affidavit of notice was also presented for the record. The testimony and exhibits indicate the following:

- a. The subject well was completed in 2004 in the Northeast Bell Lake-Devonian Gas Pool (Pool Code 97328). The Devonian gas production has declined rapidly and the well has produced only sporadically since early 2009 when the well was making approximately 2000 barrels of water per day. Lately, the well has been produced only a few days per month.
- b. The offset producing Devonian gas well, the Rio Blanco 33 Federal Well No. 1, is located 2328 feet from the subject well so it is very close to the ½ mile limit of the Area of Review. This well is also only being produced sporadically – a few days per month. Division records indicate production averages between 150 and 700 Mcf of Gas per Day and between 325 and 1400 barrels of water per day. Devon expects no adverse effect on this well from offsetting disposal.
- c. The Devonian is highly fractured in this area and the water seems to have come from below rather than laterally.
- d. In June of 2011, the Division issued Order No. R-13410 in Case No. 14600 allowing Devon to utilize the Rio Blanco 4 Federal Com. Well No. 3 (API No. 30-025-36425) for disposal into the Devonian formation through an open hole interval. That well was, at the time, an inactive Devonian gas well within the Northeast Bell Lake-Devonian Gas Pool and is located just over 1 mile South of the subject well.
- e. Devon does not intend to attempt any further production from the Devonian formation within the subject well and intends to convert this uneconomic producer to disposal into the existing open hole interval.
- f. The source waters going into this well would originate primarily from Devon's local wells producing from the Delaware and Bone Spring formations.
- g. Devon does not expect any waste of oil or gas to occur as a result of disposal into the Devonian formation.
- h. The State of New Mexico is the surface owner and the United States of America is the mineral owner. In addition to all other "affected persons", both the N.M. State Land Office and the U.S. Bureau of Land Management have been notified.

- i. The well is adequately equipped and cemented to isolate any fresh water intervals.

(5) The half-mile Area of Review around this well contains no plugged wells and only one active well which penetrated the disposal interval. The Area of Review well is adequately cased and cemented in order to isolate the disposal interval.

(6) It appears this Devonian gas pool was at first prolific, but has been rapidly depleted, and the remaining wells have watered out and are uneconomic. Water disposal into this pool was granted already in Case No. 14600 without causing waste of surrounding production. The subject well is itself watered out with water coming from below the completed interval.

(7) This application has been duly filed under the provisions of 19.15.26.8 NMAC. Devon provided proper notice of the administrative application in September of 2012 and again provided notice to all the same parties of the hearing application. There were no other appearances at the hearing or objections to this application.

(8) The applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met and the operator (OGRID 6137) is in compliance with 19.15.5.9 NMAC.

- (9) This application as presented by Devon should be approved.

IT IS THEREFORE ORDERED THAT:

(1) Devon Energy Production Company, L.P. ("Devon" or "operator") [OGRID 6137], is hereby authorized to utilize its Rio Blanco 33 Federal Well No. 2 (API No. 30-025-36360) located 1980 feet from the North line and 1980 feet from the West line, Unit letter F of Section 33, Township 22 South, Range 34 East, NMPM, Lea County, New Mexico, for oil field water disposal (limited only to UIC Class II fluids) into the Devonian formation open hole interval from 14,570 feet to 14,660 feet through lined tubing and a packer set within 100 feet above the permitted disposal interval.

(2) The operator shall take all steps necessary to ensure that the disposed water enters only the permitted disposal interval depths and is not permitted to escape to other formations or onto the surface.

(3) After installation of tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

(4) The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal

packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

(5) The wellhead injection pressure on the well shall be limited to **no more than 2914 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

(6) The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate-Test.

(7) The operator shall notify the supervisor of the Division's district office of the date and time of the installation of disposal equipment and of any mechanical integrity test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with rules 19.15.26.13 NMAC and 19.15.7.24 NMAC.

(8) Without limitation on the duties of the operator as provided in 19.15.29 NMAC and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from or around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

(9) The injection authority granted under this order is not transferable except upon Division approval. The Division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

(10) The Division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

(11) The Division director shall be authorized to amend this permit administratively after proper notice and opportunity for hearing.

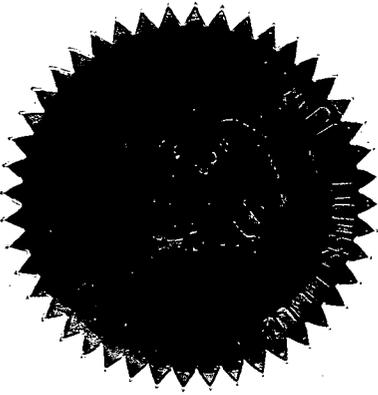
(12) The disposal authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request, mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

(13) One year after disposal into the well has ceased, the authority to dispose will terminate *ipso facto*.

(14) Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

(15) Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing or prior to notice and hearing in event of an emergency, terminate the disposal authority granted herein.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



SEAL

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JAMI BAILEY
Director