

DATE 1/14/09	SUBMITTER W. Jones	ENGINEER W. Jones	LOGGED IN 1/14/09	TYPE SWD	APP NO. PKAA09014 50575
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RECEIVED

ABOVE THIS LINE FOR DIVISION USE ONLY

2009 JAN 14 PM 1 22

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505



Springs 2 Federal 1
30-015-312 36

Devon Energy Prod.
Co., L.P. 6137

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]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners
[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.

Ronnie Slack
Print or Type Name

Ronnie Slack
Signature

Engineering Tech
Title

1-12-09
Date

Ronnie.Slack@DVN.com
e-mail Address



Devon Energy Corporation
20 North Broadway
Oklahoma City, OK 73102-8260

405 235 3611 Phone
www.devonenergy.com

January 12, 2009

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RE: Form C-108, Application for Authorization to Inject
Springs 2 Federal #1; API#: 30-015-31236
Eddy County, NM
Section 2, T21S, R25E

Gentlemen:

Please find attached Devon Energy Production Company, LP's Form C-108, Application for Authorization to Inject.

Devon's application proposes to take produced waters from the Cisco Canyon formation and re-inject into the Delaware Brushy Canyon for salt water disposal purposes utilizing the Springs 2 Federal #1 wellbore.

A copy of this application has been filed with the OCD-District II office and appropriate surface and leasehold owners.

If you have any questions please contact Greg McGowen at (405)-228-8965 or myself at (405)-552-4615.

Sincerely,

A handwritten signature in cursive script that reads "Ronnie Slack".

Ronnie Slack
Engineering Technician

RS/rs

Enclosure

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance _____ ☒ Disposal _____ Storage
Application qualifies for administrative approval? _____ ☒ Yes _____ No
- II. OPERATOR: _____ Devon Energy Production Company, LP _____
ADDRESS: _____ 20 North Broadway, Suite 1500, Oklahoma City, Oklahoma 73102 _____
CONTACT PARTY: _____ Ronnie Slack _____ PHONE: _____ 405-552-4615
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? _____ Yes _____ ☒ No
If yes, give the Division order number authorizing the project: _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
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: _____ Ronnie Slack _____ TITLE: _____ Engineering Technician
- SIGNATURE: Ronnie Slack DATE: 1-12-09
- E-MAIL ADDRESS: _____ Ronnie.Slack@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: _____

III. WELL DATA

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

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

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

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

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

XIV. PROOF OF NOTICE

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

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

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

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

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

INJECTION WELL DATA SHEET

OPERATOR: Devon Energy Production Company, LPWELL NAME & NUMBER: Spring 2 Federal #1WELL LOCATION: 2375' FNL & 2300' FEL 60110 UNIT LETTER Sec 2 T21S R25E
FOOTAGE LOCATION SECTION TOWNSHIP RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATA
Surface CasingHole Size: 17-1/2" Casing Size: 13-3/8", 48#, @ 453'Cemented with: 500 sx. or ft³Top of Cement: Surface Method Determined: Circ. cementIntermediate CasingHole Size: 12-1/4" Casing Size: 8-5/8", 32# @ 2170'Cemented with: 910 sx. or ft³Top of Cement: Surface Method Determined: Circ. cementProduction CasingHole Size: 7-7/8" Casing Size: 5-1/2", 17#, @ 10850'Cemented with: 1200 sx. or ft³Top of Cement: 1190 Method Determined: CBL (9/6/00)Total Depth: 10850'Injection Interval (Perforated)2236' feet to 2275'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 2-7/8", 6.5# Lining Material: IPC Type of Packer: 5-1/2" IPC Packer Setting Depth: +/- 2205' Other Type of Tubing/Casing Seal (if applicable): Additional Data

1. Is this a new well drilled for injection? Yes X No
- If no, for what purpose was the well originally drilled? Producing Gas Well

2. Name of the Injection Formation: Delaware Brushy Canyon from 2236' to 2275'.

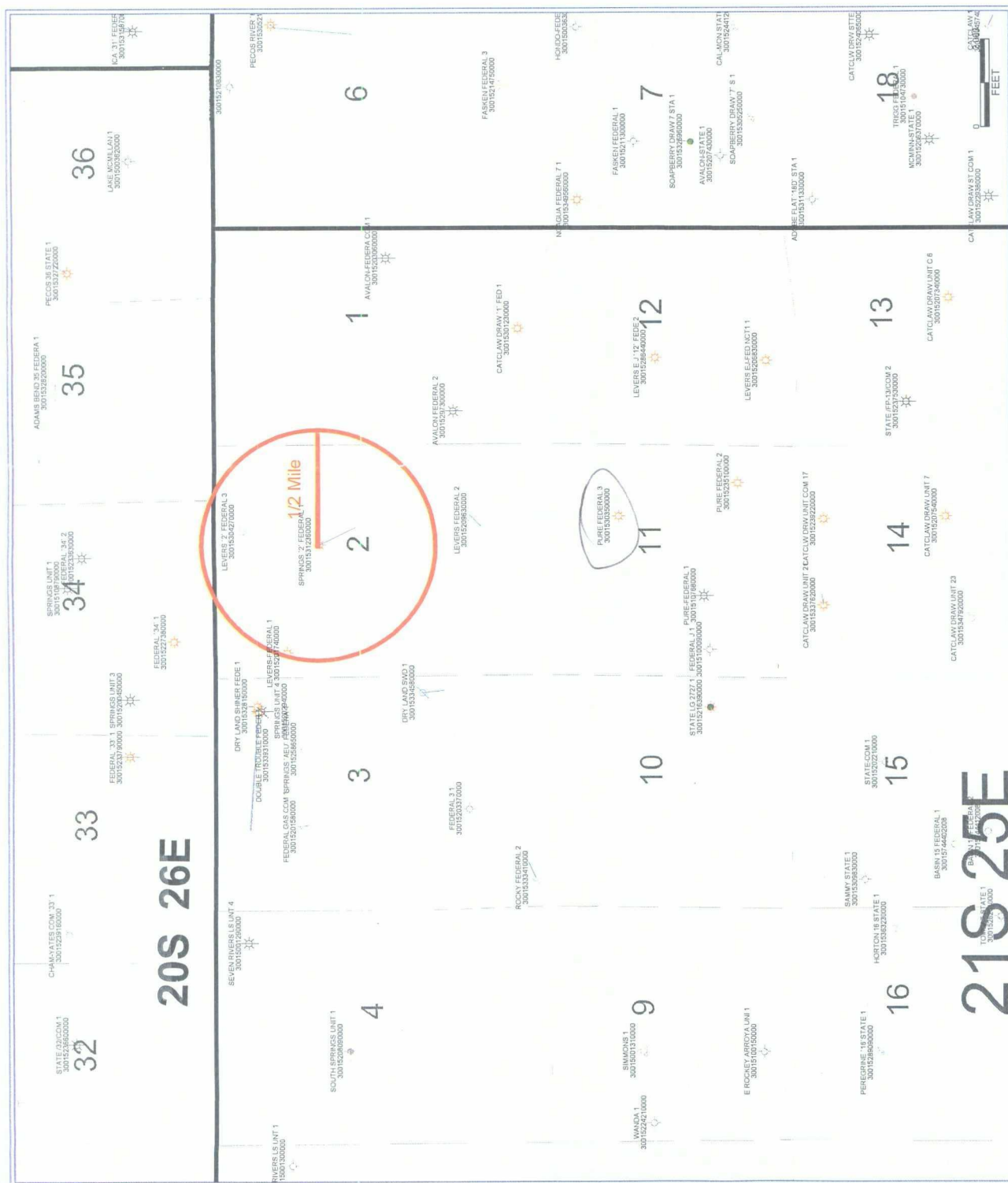
3. Name of Field or Pool (if applicable): Delaware

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.

Delaware Brushy Canyon: 2236' -2242'; Open perfs, tested wet.
 Cisco Canyon: 8108'-8126'; CIBP @ 8090', w/35' cement. PBD @ 8055'
 Cisco Canyon: 8266'-8282'; CIBP @ 8230', w/35' cement. PBD @ 8195'
 Morrow: 10347' - 10587'; CIBP @ 10325', w/35' cement. PBD @ 10290'

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

Reported formation tops are: Queen-858'; Delaware Cherry Canyon-1787'; Delaware Brushy Canyon-1996'; Bone Spring Limestone-3310'; Cisco-8050'; Atoka-9770'; Morrow-10090'.



C108-Item V
Map of Well Review Area
Proposed Injector; Springs 2 Federal #1
Eddy County; Sec 2-T21S-R25E

DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SPRINGS 2 FEDERAL #1		Field: CATCLAW DRAW	
Location: 2375' FNL & 2300' FEL; SEC 2-T21S-R25E		County: EDDY	State: NM
Elevation: 3225' GL		Spud Date: 6/21/00	Compl Date: 9/13/00
API#: 30-015-31236	Prepared by: Ronnie Slack	Date: 1/6/09	Rev:

Proposed for SWD

17-1/2" hole

13-3/8", 48#, H40, ST&C, @ 453'

Cmt'd w/500 Sx. Cement to surface.

TOC @ 1190' (CBL-9/6/00)

12-1/4" hole

8-5/8", 32#, K55, ST&C, @ 2,170'

Cmt'd w/910 Sx. Cement to surface.

Proposed Perfs for SWD

DELAWARE BRUSHY CANYON

2236' - 2242' (open-tested 8/6/08-wet)

2243' - 2255' (proposed new perfs)

2269' - 2275' (proposed new perfs)

DV Tool @ 7787'

CISCO CANYON (2/15/08)

8,108' - 8,126' (wet)

2/20/08: 2 stg acid job w/15%

CISCO CANYON (2/12/08)

8,266' - 8,282' 3 spf, 120° (wet)

2/13/08-acidized 8266-8282 w/2000 gals 15% HCl

MORROW 4 SPF (12/14/00)

10,347' - 10,353'

MORROW 4 SPF (11/21/00)

10,386' - 10,392'

MORROW 4 SPF (9/8/00)

10,534' - 10,544'

10,568' - 10,572'

10,575' - 10,581'

10,583' - 10,587'

10/3/00: Fraced 10534-10587 w/44K# 20/40

7-7/8" Hole

5-1/2", 17#, J55, LT&C, @ 10,850'

Cmt'd w/1200 Sx. TOC @ 1190' (CBL-9/6/00)

Formation	Top-MD
Queen	858
Cherry Canyon	1787
Brushy Canyon	1996
Bone Spring Limestone	3310
Cisco	8050
Atoka	9770
Morrow	10090

Proposed

2-7/8", IPC tubing

Proposed

5-1/2" IPC Injection Packer @ +/- 2205'

Proposed

Set CIBP @ 2510'. Cap w/35' cement. PBD @ 2475'

35' cement. PBD @ 8055'

CIBP @ 8,090' (8/6/08)

35' cement. PBD @ 8195'

CIBP @ 8,230' (2/15/08)

35' cement. PBD @ 10,290'

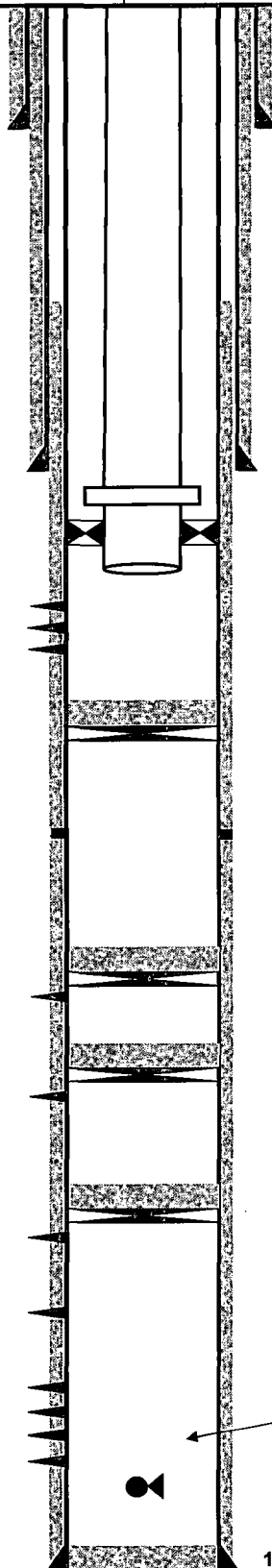
CIBP @ 10,325' (2/12/08)

6/14/07: Tubing cut at 10455', leaving a 4' piece w/profile & plug in place in hole.

10/01/00: Sundry report indicates TCP guns were released in hole.

10,750' PBD

10,850' TD



DEVON ENERGY PRODUCTION COMPANY LP

Well Name: SPRINGS 2 FEDERAL #1		Field: CATCLAW DRAW	
Location: 2375' FNL & 2300' FEL; SEC 2-T21S-R25E		County: EDDY	State: NM
Elevation: 3225' GL		Spud Date: 6/21/00	Compl Date: 9/13/00
API#: 30-015-31236	Prepared by: Ronnie Slack	Date: 11/20/08	Rev:

17-1/2" hole

13-3/8", 48#, H40, ST&C, @ 453'

Cmt'd w/500 Sx. Cement to surface.

TOC @ 1190' (CBL-9/6/00)

12-1/4" hole

8-5/8", 32#, K55, ST&C, @ 2,170'

Cmt'd w/910 Sx. Cement to surface.

DELAWARE (8/6/08)

2,236' - 2,242' (swab tested wet)

8/7/08: acidized 2236-2242 w/1000 gal 7.5% pentol

DV Tool @ 7787'

CISCO CANYON (2/15/08)

8,108' - 8,126' (wet)

2/20/08: 2 stg acid job w/15%

CISCO CANYON (2/12/08)

8,266' - 8,282' 3 spf, 120° (wet)

2/13/08-acidized 8266-8282 w/2000 gals 15% HCl

MORROW 4 SPF (12/14/00)

10,347' - 10,353'

MORROW 4 SPF (11/21/00)

10,386' - 10,392'

MORROW 4 SPF (9/8/00)

10,534' - 10,544'

10,568' - 10,572'

10,575' - 10,581'

10,583' - 10,587'

10/3/00: Fraced 10534-10587 w/44K# 20/40

7-7/8" Hole

5-1/2", 17#, J55, LT&C, @ 10,850'

Cmt'd w/1200 Sx. TOC @ 1190' (CBL-9/6/00)

2-7/8" Production Tubing (10/8/08)

EOT @ 2214' (10/8/08)

35' cement. PBD @ 8055'

CIBP @ 8,090' (8/6/08)

35' cement. PBD @ 8195'

CIBP @ 8,230' (2/15/08)

35' cement. PBD @ 10,290'

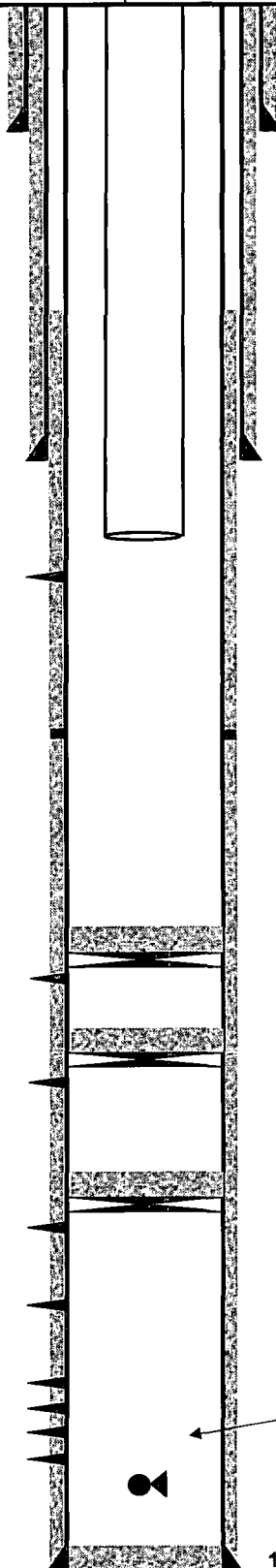
CIBP @ 10,325' (2/12/08)

6/14/07: Tubing cut at 10455', leaving a 4' piece w/profile & plug in place in hole.

10/01/00: Sundry report indicates TCP guns were released in hole.

10,850' TD

10,750' PBTD



SPRINGS 2 FEDERAL #1
APPLICATION FOR INJECTION
Form C-108 Section III

III. Well Data--On Injection Well

A. Injection Well Information

- (1) Lease Springs 2 Federal
Well No #1
Location 2375' FNL & 2300' FEL
Sec.Twn,Rnge Sec 2-T21S-R25E
Cnty, State Eddy County, New Mexico
- (2) Casing 13-3/8", 48#, @ 453' in 17-1/2" hole. Cmt'd w/ 500 sxs.
TOC @ surface. Cement circulated.

8-5/8", 32#, @ 2,170'. Cmt'd w/ 910 sxs.
TOC @ surface. Cement circulated.

5-1/2", 17#, @ 10,850'. Cmt'd w/ 1200 sxs.
TOC @ 1190'. Determined by CBL
- (3) Injection Tubing 2-7/8" , 6.5#, IPC tubing run to +/- 2,205'
- (4) Packer 5-1/2" IPC Packer @ +/- 2,205'

B. Other Well Information

- (1) Injection Formation: Delaware Brushy Canyon
Field Name: Catclaw Draw
- (2) Injection Interval: Perforations from 2236' to 2275'
- (3) Original Purpose of Wellbore:

The Springs 2 Federal #1 was spud June 21, 2000 and completed in the Morrow from 10,347' to 10,587'. It was recompleted to the Cisco Canyon from 8,108' to 8,282', but tested wet in February , 2008. It was recompleted to the Delaware Brushy Canyon from 2236' to 2242 in August 2008 and tested wet.

- (4) Other perforated intervals:

Springs 2 Federal #1 perforated intervals
Delaware Brushy Canyon: 2236'-2242'; Open perms, tested wet.
Cisco Canyon: 8108'-8126'; CIBP @ 8090', w/35' cement. PBD @ 8055'
Cisco Canyon: 8266'-8282'; CIBP @ 8230', w/35' cement. PBD @ 8195'
Morrow: 10347' - 10587'; CIBP @ 10325', w/35' cement. PBD @ 10290'

- (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.

Reported formation tops are: Queen-858'; Delaware Cherry Canyon-1787'; Delaware Brushy Canyon-1996'; Bone Spring Limestone-3310'; Cisco-8050'; Atoka-9770'; Morrow-10090'.

C-108 - Section VII to XII
Devon Energy Production Company, LP
Proposed Injector: Springs 2 Federal #1

VII Attach data on the proposed operation, including:

- (1) Proposed average injection rate: 5000 BWPD
Proposed maximum injection rate: 5500 BWPD
- (2) The system will be a closed system.
- (3) Proposed average injection pressure: 500 psi
Proposed max injection pressure: 500 psi
- (4) The proposed injection fluid is produced water from the Cisco formation that will be re-injected into the Delaware Brushy formation.
- (5) Water analysis' are submitted for the following
 1. Levers Federal #1; Item VII 4: Injection water from the Cisco formation.
 2. Springs 2 Federal #1; Item VII #5: Disposal zone formation water from the Delaware Brushy Canyon.No compatibility issues are expected.

VIII The proposed injection interval is located in the Delaware Brushy Canyon formation. The Delaware is a Permian age formation with a lithology of sandstone, siltstone, and shale. The top of the Delaware Brushy Canyon is found at 1996' MD and is approximately 1314' thick.
Per State Engineers Average Depth of Water Report, the average depth to fresh water is 44'. Surface casing has been set to 453' and cemented to surface. Intermediate casing is set to 2170' and cemented to surface to protect underground fresh water.

IX The proposed injection zone will be acidized with +/- 3000 gallons 15% HCl if necessary.

X Logging & test data have previously been submitted to the OCD.

XI There are no reported fresh water wells within one mile of the Springs 2 Federal #1.

XII 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.

C108-Item VII #4**Levers Fed #1****Injection Water Analysis****Cisco formation**

North Permian Basin Region

P.O. Box 740

Sundown, TX 79372-0740

(806) 229-8121

Lab Team Leader - Sheila Hernandez

(432) 495-7240

Water Analysis Report by Baker Petrolite

Company:	DEVON ENERGY CORPORATION	Sales RDT:	44221
Region:	PERMIAN BASIN	Account Manager:	SHAWNA MATTHEWS (505) 910-9393
Area:	CARLSBAD, NM	Sample #:	403701
Lease/Platform:	LEVERS FEDERAL	Analysis ID #:	72703
Entity (or well #):	1 CASING	Analysis Cost	\$80.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 403701 @ 75 °F							
Sampling Date:	6/15/07	Anions		mg/l	meq/l	Cations		mg/l	meq/l
Analysis Date:	6/26/07	Chloride:	3778.0		106.56	Sodium:	9217.3		400.93
Analyst:	STACEY SMITH	Bicarbonate:	976.0		16.	Magnesium:	114.0		9.38
		Carbonate:	0.0		0.	Calcium:	659.0		32.88
TDS (mg/l or g/m3):	30296.5	Sulfate:	15483.0		322.36	Strontium:	17.0		0.39
Density (g/cm3, tonne/m3):	1.009	Phosphate:				Barium:	0.1		0.
Anion/Cation Ratio:	1	Borate:				Iron:	0.1		0.
		Silicate:				Potassium:	52.0		1.33
Carbon Dioxide:		Hydrogen Sulfide:				Aluminum:			
Oxygen:		pH at time of sampling:			7.4	Chromium:			
Comments:		pH at time of analysis:				Copper:			
		pH used in Calculation:			7.4	Lead:			
						Manganese:	0.030		0.
						Nickel:			

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO ₃		Gypsum CaSO ₄ *2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		CO ₂ Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	0.74	62.56	0.23	404.58	0.17	250.57	0.28	5.78	1.25	0.00	0.39
100	0	0.83	76.16	0.21	379.42	0.22	304.96	0.27	5.78	1.08	0.00	0.55
120	0	0.93	91.12	0.21	371.26	0.29	378.74	0.28	5.78	0.94	0.00	0.74
140	0	1.02	108.11	0.21	377.38	0.39	457.62	0.30	6.12	0.83	0.00	0.99

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

C108-Item VII #5**Springs 2 Federal #1****Disposal zone water analysis****Delaware Brushy Canyon formation**

North Permian Basin Region

P.O. Box 740

Sundown, TX 79372-0740

(806) 229-8121

Lab Team Leader - Sheila Hernandez

(432) 495-7240

Water Analysis Report by Baker Petrolite

Company:	DEVON ENERGY CORPORATION	Sales RDT:	44221
Region:	PERMIAN BASIN	Account Manager:	SHAWNA MATTHEWS (505) 910-9393
Area:	ARTESIA, NM	Sample #:	403702
Lease/Platform:	SPRINGS FEDERAL 2	Analysis ID #:	72704
Entity (or well #):	1	Analysis Cost	\$80.00
Formation:	UNKNOWN		
Sample Point:	FRAC TANK		

Summary		Analysis of Sample 403702 @ 75 °F							
Sampling Date:	6/15/07	Anions		mg/l	meq/l	Cations		mg/l	meq/l
Analysis Date:	6/26/07	Chloride:	27775.0		783.43	Sodium:	16391.4		712.99
Analyst:	STACEY SMITH	Bicarbonate:	732.0		12.	Magnesium:	148.0		12.18
TDS (mg/l or g/m3):	46949.6	Carbonate:	0.0		0.	Calcium:	1353.0		67.51
Density (g/cm3, tonne/m3):	1.035	Sulfate:	230.0		4.79	Strontium:	246.0		5.62
Anion/Cation Ratio:	1	Phosphate:				Barium:	12.0		0.17
		Borate:				Iron:	15.0		0.54
		Silicate:				Potassium:	47.0		1.2
Carbon Dioxide:		Hydrogen Sulfide:				Aluminum:			
Oxygen:		pH at time of sampling:			6.5	Chromium:			
Comments:		pH at time of analysis:				Copper:			
		pH used in Calculation:			6.5	Lead:			
						Manganese:	0.200		0.01
						Nickel:			

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO ₃		Gypsum CaSO ₄ *2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		CO ₂ Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	0.25	31.79	-1.21	0.00	-1.26	0.00	-0.14	0.00	1.65	6.69	2.08
100	0	0.36	46.18	-1.24	0.00	-1.23	0.00	-0.15	0.00	1.48	6.69	2.67
120	0	0.48	60.56	-1.27	0.00	-1.17	0.00	-0.14	0.00	1.33	6.69	3.31
140	0	0.60	75.62	-1.28	0.00	-1.09	0.00	-0.13	0.00	1.21	6.36	3.97

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

Form C-108 Section XIV
Proof of Notice to Surface Land Owner

Application For Injection in Springs 2 Federal #1
Devon Energy Production Company, LP

Surface Land Owner

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

Certified receipt No.
7008-1140-0004-6107-7691

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 Springs 2 Federal #1.

Date Mailed: 1-12-09

Signature: Ronnie Slack

Date: 1-12-09

Ronnie Slack, Engineering Technician
Devon Energy Production Co., L.P.
20 N. Broadway, Suite 1500
Oklahoma City, OK 73102

Form C-108 Section XIV
Proof of Notice to Leasehold Operators

Application For Injection in Springs 2 Federal #1
Devon Energy Production Company, LP

Leasehold Operators within 1/2 mile of Springs 2 Federal #1

David H. Arrington Oil & Gas, Inc.
214 West Texas, Suite 400
Midland, TX 79702

Certified receipt No.
7008-1140-0004-6107-7653

Fasken Oil & Ranch, Ltd.
Attn: Linda Hicks
303 West Wall, Suite 1800
Midland, TX 79701

Certified receipt No.
7008-1140-0004-6107-7660

Chevron USA, Inc.
Attn: David Thompson
15 Smith Road
Midland, TX 79705

Certified receipt No.
7008-1140-0004-6107-7677

Mewbourne Oil Company
Attn: Larry Cunningham
500 West Texas, Suite 1020
Midland, TX 79701

Certified receipt No.
7008-1140-0004-6107-7684

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 Springs 2 Federal #1.

Date Mailed: 1-12-09

Signature: Ronnie Slack

Date: 1-12-09

Ronnie Slack, Engineering Technician
Devon Energy Production Co., L.P.
20 N. Broadway, Suite 1500
Oklahoma City, OK 73102

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Kathy McCarroll, being first duly sworn,
on oath says:

That she is the Classified Supervisor of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

December 4 2008

That the cost of publication is **\$45.78** that Payment Thereof has been made and will be assessed as court costs.

Kathy McCarroll

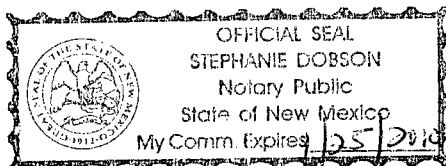
Subscribed and sworn to before me this

4th day of December, 2008

Stephanie Dobson

My commission Expires on 1/25/2010

Notary Public



December 4, 2008

Legal Notice

Devon Energy, Production Company, LP, 20 North Broadway, Oklahoma City, OK 73102-8260, has filed form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for an injection well. The proposed well, the Springs 2 Federal #1, located 2375' ENL & 2300' FEL, Section 2, Township 21 South, Range 25 East, in Eddy County, New Mexico, will be used for salt water disposal. Disposal waters from the Cisco Canyon formation will be injected into the Delaware formation at a depth from 2234' to 2285'. A maximum injection rate of 3500 BWPD and maximum injection pressure of 500 psi is expected.

All interested parties opposing the above mentioned must file objections or request for a hearing with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505-5472, within 15 days. Additional information can be obtained by contacting Greg McGowen at (405) 228-8965.

DISTRICT II

P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III

1000 Rio Erasos Rd., Artec, NM 87410

DISTRICT IV

P.O. Box 2088, Santa Fe, N.M. 87504-2088

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 74320	Pool Name CATCLAW DRAW - MORROW
Property Code	Property Name SPRINGS 2 FEDERAL	Well Number 1
OGRID No. 166111	Operator Name CONCHO RESOURCES INC.	Elevation 3225

Surface Location

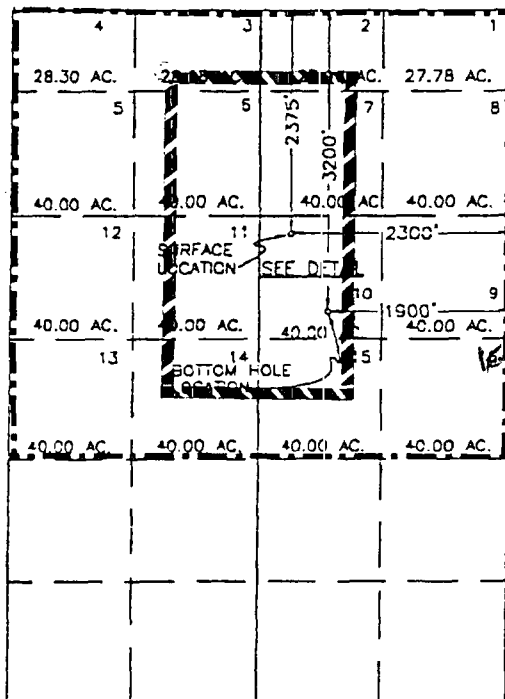
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 10	2	21 S	25 E		2375	NORTH	2300	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 10	2	21 S	25 E		3200	NORTH	1900	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
592			

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



3241.2' - 3237.2'

3235.7' - 3229.5'

DETAIL

6-29-00
Do not use a well

OPERATOR CERTIFICATION

I hereby certify the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Joe T. Janica

Printed Name

Agent

Title

03/16/00

Date

SURVEYOR CERTIFICATION

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

FEBRUARY 18, 2000

Date Surveyed

DC

Signature & Seal of Professional Surveyor

RONALD C. EDISON

60-11-02285

Certificate No. RONALD C. EDISON
GARY EIDSON
RONALD C. EDISON

3139
12641
12185

EXHIBIT "A"

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

01/30/09 08:24:20
OGOWVJ -TQ6S
PAGE NO: 1

Sec : 02 Twp : 21S Rng : 25E Section Type : NORMAL

1245	1136	1027	189
40.00 28.30 40.00	40.00 28.10 40.00	40.00 27.90 40.00	27.70 40.00 40.00
Federal owned	Federal owned	Federal owned	Federal owned
A		A C	
13	14	15	16
40.00	40.00	40.00	40.00
Federal owned	Federal owned	Federal owned	Federal owned

PF01 HELP
PF07 BKWD

PF02
PF08 FWD

PF03 EXIT
PF09 PRINT

PF04 GoTo
PF10 SDIV

PF05
PF11

PF06
PF12

592 acres

LOT 10

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
811 S. 1st Street
Artesia, NM 88210-2834

FORM APPROVED
Bureau No. 1004-0135
Expires March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT-" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

CONCHO RESOURCES INC.

3. Address and Telephone No.

110 W. LOUISIANA STE 410; MIDLAND, TX 79701 (915) 683-7443

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2375' FNL & 2300' FEL, SEC. 2, 21S, 25E

5. Lease Designation and Serial No.
NM 96822

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

SPRINGS '2' FEDERAL #1

9. API Well No.

30015 - 5/256

10. Field and Pool, or Exploratory Area

CATCLAW DRAW MORROW

11. County or Parish, State

EDDY, NM

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

TYPE OF SUBMISSION

- ☐ Notice of Intent
☒ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

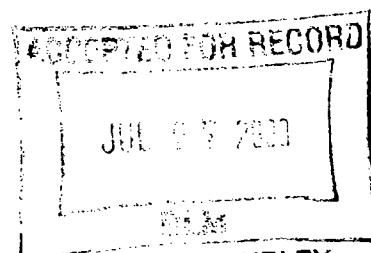
- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other SET SURFACE & INT CSG

- ☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations: (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations; and measured and true vertical depths for all markers and zones pertinent to this work.)

06/24/00 RIH W/ 13-3/8", H-40, 48# ST&C CSG & SET @ 453'. CMT W/ LEAD: 300 SX HALLIBURTON LITE + ADDITIVES;
TAILED W/ 200 SX PREMIUM PLUS + ADDITIVES. CIRC 88 SX TO PIT. WOC 12 HRS.
06/28/00 RIH W/ 8-5/8", K-55, 32# ST&C CSG & SET @ 2170'. CMT W/ LEAD: 50/50 POZ 'C' + ADDITIVES;
TAILED W/ 260 SX PREMIUM PLUS. CIRC 180 SX TO PIT. WOC 12 HRS.



(ORIG. SGD.) GARY GOURLEY

14. I hereby certify that the foregoing is true and correct

Signed

Title Production Analyst

Date 07/07/00

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
811 S. 1st Street
Artesia, NM 88210-2834
FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993
Lease License and Serial No.
NM 96822

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT-" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

CONCHO RESOURCES INC.

3. Address and Telephone No.

110 W. LOUISIANA STE 410; MIDLAND, TX 79701 (915) 683-7443

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2375' FNL & 2300' FEL, SEC. 2, 21S, 25E

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

SPRINGS '2' FEDERAL #1

9. API Well No. **30-015-31236**
30015

10. Field and Pool, or Exploratory Area

CATCLAW DRAW MORROW

11. County or Parish, State

EDDY, NM

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

TYPE OF SUBMISSION

- ☐ Notice of Intent
☒ Subsequent Report
☐ Final Abandonment Notice

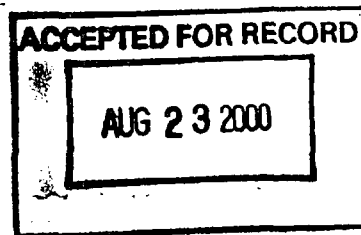
TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other SET PROD CSG/RELEASE RIG
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

08/16/00 RIH W/ 5-1/2" , J55, 17# LT&C CSG & SET @ 10850'. CMT W/ 1ST STAGE: 450 SX SUPER H + ADDITIVES; CIRC 10 SX.
2ND STAGE: 650 SX INTERFILL H & TAILED W/ 100 SX PREMIUM H. PLUG DOWN @ 5:15 PM.
08/17/00 RELEASE RIG @ 1:00 AM MDT.



(ORIG. SGD.) GARY GOURLEY

14. I hereby certify that the foregoing is true and correct

Signed

Title Production Analyst

Date 08/21/00

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT-" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

CONCHO RESOURCES INC.

3. Address and Telephone No.

110 W. LOUISIANA STE 410; MIDLAND, TX 79701 (915) 683-7443

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2375' FNL & 2300' FEL, SEC. 2, 21S, 25E

5. Lease Designation and Serial No.

NM 96822

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

SPRINGS '2' FEDERAL #1

9. API Well No.

30015

10. Field and Pool, or Exploratory Area

CATCLAW DRAW MORROW

11. County or Parish, State

EDDY, NM

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

TYPE OF SUBMISSION

- ☐ Notice of Intent
☒ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other COMPLETION
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

09/05/00 TAGGED DV TOOL & STARTED DRILLING IT @ 7787'.

09/06/00 DRILLED THRU DV. TAGGED PBTD @ 10750'. RAN GR CBL CCL LOG @ 10743-5000'. TOC @ 1190'.

09/07/00 PU TCP GUNS & BHA W/ 1 X PKR. TESTED TBG IN HOLE. SPOTTED @ 10583-587', 10575-581', 10568-572', 10534-544'.

09/08/00 LOADED TBG W/ NIT & SET OFF PRESS HEAD & GUNS TO PERF @ 10568-10572, 10575-10581', 10583-10587'. BLEW NITROGEN OUT OF TBG. WELL DEAD. RU & SWABBED. 1ST RUN FL @ 7800', 2ND RUN @ 6800', 3RD RUN - JUST SCATTERED FLUID. FLOWED WELL TO PIT FOR 1 HR TO CLEAN UP.

09/11/00 DROPPED BAR & FIRED UPPER GUNS @ 10534-44' W/ 4 SPF.

09/16/00 TEST: 0 BO, 28 BW, & 558 MCF.

10/01/00 TAG GUN RELEASE @ 10059'. LATCH GUN RELEASE & RELEASE.

10/03/00 FRAC MORROW PERFS W/ 44000# 20/40 INTERPROP USING 40# BINARY SYSTEM.

10/08/00 IP @ 0 BO, 180 BW, 2157 MCF.

14. I hereby certify that the foregoing is true and correct.

Signed

Title Production Analyst

Date 10/16/00

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes 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.

*See Instruction on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTOCT 06 2008
OCD-ARTESIAFORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

Serial No

NM-96822

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.

6 If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

1 Type of Well

☐ Oil Well ☒ Gas Well ☐ Other2 Name of Operator
Devon Energy Production Co., LP3a Address
20 North Broadway
OKC, OK 731023b Phone No. (include area code)
(405)-552-7802

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

8 Well Name and No.
Springs 2 Federal 19 API Well No
30-015-~~36205~~ 3123410 Field and Pool or Exploratory Area
Delaware4 Location of Well (Footage, Sec, T, R, M., or Survey Description)
2375' FNL & 2300' FEL
Sec 2-T21S-R25E11 Country or Parish, State
Eddy County, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<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 checked="" type="checkbox"/> Other Delaware plugback -
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	No economic reserves.
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	Rqst 6 month extension

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.)

08/06/2008 - 08/13/2008:

MIRU, NU BOP - TOOH - RU WL. Set CIBP @ 8,090' + 35' cmt; new PBTD @ 8,055'. RIH & perf @ 2,236' - 2,242'. RIH w/pkr to 2,184'; ld & test to 1000#. Swab. Acidize perms @ 2,236' - 2,242' w/1000 gals 7.5% pento acid + 36 bil slrs. Flush, swab. Frac Delaware w/4,000 gal 20# pad, 750 gal 1# 16/30 Brady, 750 gal 2#, 1,000 gal 3#, 1000 gal 4#, 750 gal 5# and 500 gal 6# Swab. TOH w/pkr - TIH w/SN & 251 jts 2 7/8" tbg - EOT @ 7,906' - NU/DN BOP - NU W/H. RD/MO/WSU. Zone tested wet, no economic reserves.

Devon respectfully requests the Springs 2 Federal 1 be left in "shut-in status" per conversation with Duncan Whitlock; to enable Devon to review other completion opportunities or time to start the SWD process and/or seek State approval with SWD application.

Devon respectfully requests an additional 6 months extension to produce, convert or plug the well. An NOI will be follow up within 6 month time period of our intentions to move forward.

ACCEPTED FOR RECORD

Will continue swabbing to see if we can make a well

OCT 7 2008

14 I hereby certify that the foregoing is true and correct
Name (Printed/Typed)
Stephanie A. YsasagaGerry Guye, Deputy Field Inspector
NMOCD-District II ARTESIA
Title Sr. Staff Engineering Technician

Signature

Date 09/05/2008

APPROVED

OCT 2 2008

JAMES A. AMOS
SUPERVISOR-EPS

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

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

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)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUBMIT IN TRIPLICATE - Other instructions on page 2

FORM APPROVED
OMB NO. 1004-0137
EXPIRES: March 31, 2007

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NM-96822
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY, LP		6. If Indian, Allottee or Tribe Name
3a. Address 20 North Broadway, Ste 1500, Oklahoma City, OK 73102	3b. Phone No. (include area code) 405-552-4615	7. Unit or CA Agreement Name and No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 2375 FNL 2300 FEL G 2 T21S R25E		8. Well Name and No. Springs 2 Federal #1
		9. API Well No. 30-015-31236
		10. Field and Pool, or Exploratory Area Catclaw Draw Delaware
		11. County or Parish, State Eddy NM

12. CHECK 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 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"/> Fracture Treat	<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 checked="" type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work and approximate duration thereof. If the proposal deepens directionally or recompletes horizontally, give subsurface location 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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirement, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection)

Devon Energy Production Company, LP is preparing Form C108, Application for Authorization to Inject that will be filed with the Oil Conservation Division, Santa Fe, New Mexico office. Devon is proposing to convert the Springs 2 Federal #1 to SWD in the Delaware Brushy Canyon formation perforated Interval from 2236' to 2275'. The BLM will be furnished a copy of C108 application when filed with the OCD.

Proposed:

1. MIRU. TOOH w/2-7/8" production tubing.
2. RIH & set CIBP @ 2510'. Dump 35' cement on top. (Calc. PBD @ 2475')
3. Add additional perfs in Delaware Brushy Canyon @ 2243' - 2255' & 2269'-2275'. (Note: existing perfs are from 2236' to 2242').
4. Acidize perforations from 2236' to 2275' w/ +/-3000 gals 15% HCl if necessary.
5. RIH w/2-7/8" IPC tubing & packer. Displace w/ packer fluid. Set packer @ +/- 2205'. Conduct MIT.
6. Turn to SWD.

Existing & proposed schemat attached

14. I hereby certify that the foregoing is true and correct Name: Ronnie Slack	Title Engineering Technician
Signature <i>Ronnie Slack</i>	Date 1/7/2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
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 or operations thereon.	Office	

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
				Delaware	1834'	1834'
				Bone Spring	3368'	3368'
				1st Bone Spring Sd	5216'	5216'
				3rd Bone Spring Sd	7298'	7298'
				Wolfcamp Shale	7570'	7570'
				Cisco Limestone	8122'	8122'
				Canyon Lime	8756'	8756'
				Strawn	9248'	9248'
				Atoka	9590'	9590'
				Morrow Lime	9794'	9794'
				Morrow Clastics	10146'	10146'
				Lower Morrow	10366'	10366'

RECEIVED
AUG 26 1908
U.S. GEOLOGICAL SURVEY

Time Mark Every 60 S

Integrated Cement Volume Major Dip Every 100 FS

Tension (TENS)
(LBF) 10000 0

Caliper (HCAL)
(IN) 6 16

Tool/ToL
Drag
From D3T
to ST1A

Gamma Ray (GR)
(GAPI) 0 100

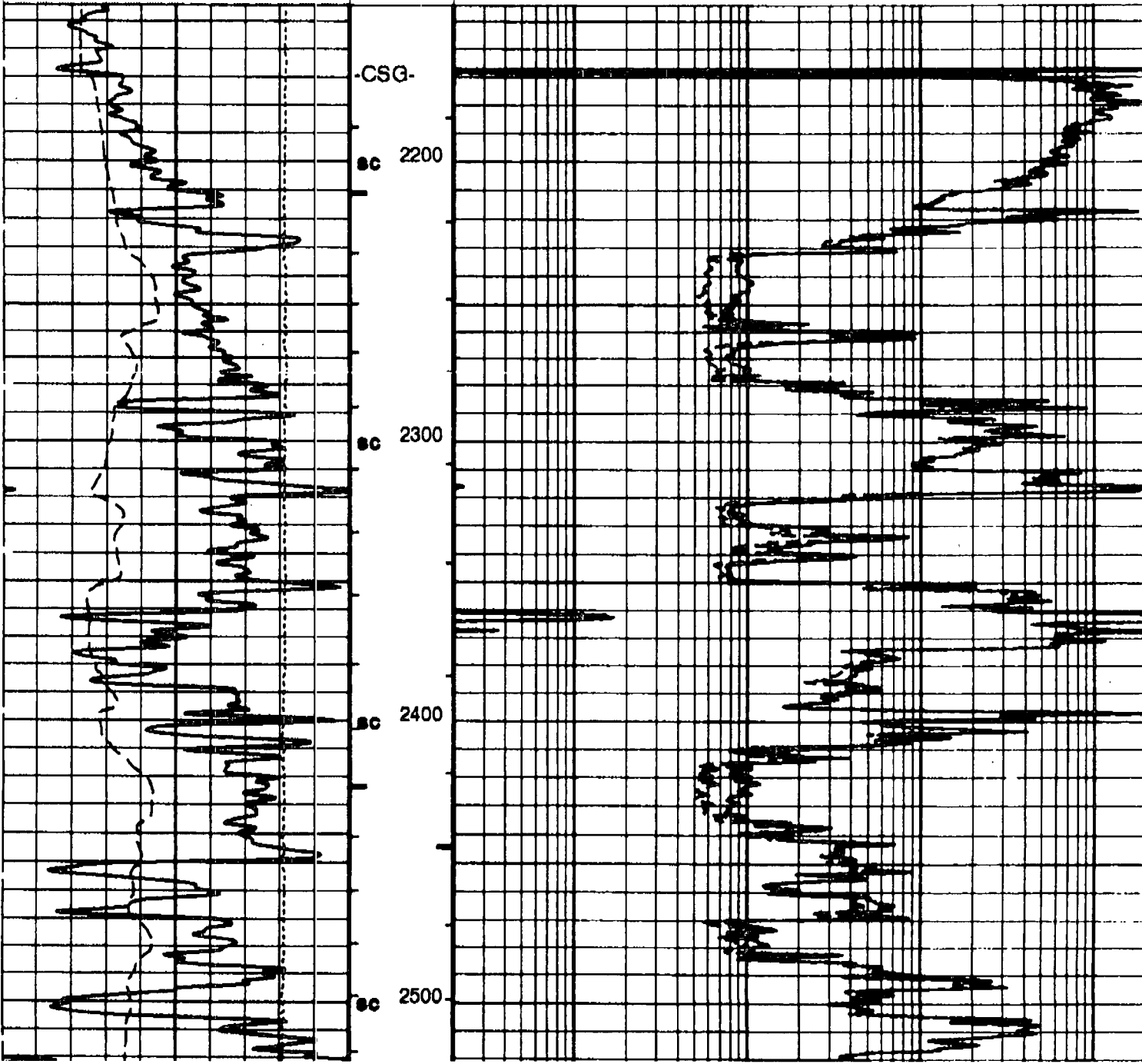
Cable
Drag
From ST1A
to ST1T

HRLT Resistivity 4 (RLA4)
(OHMM) 0.2 2000

Gamma Ray Backup

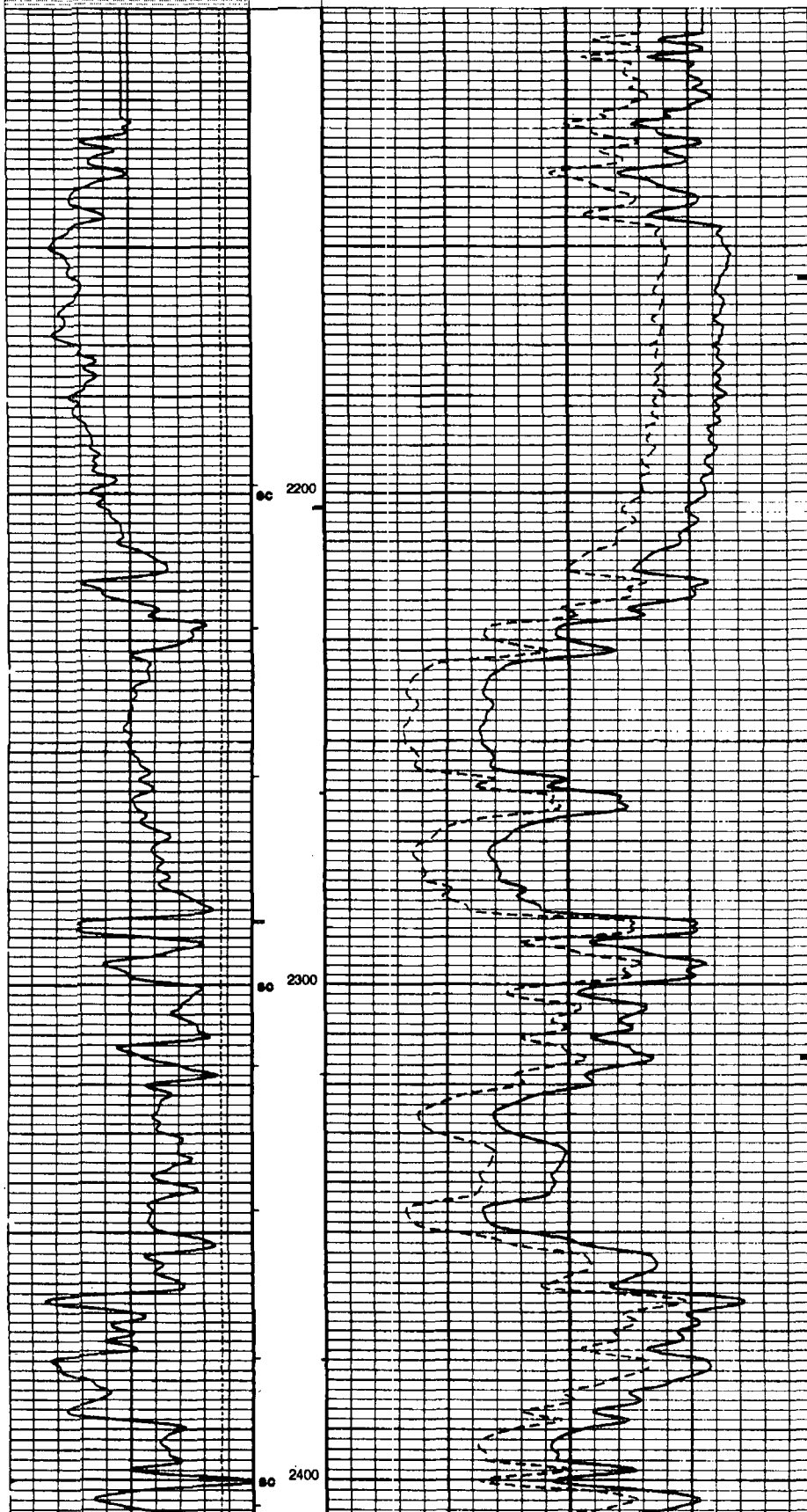
Stuck
Stretch
(ST1T)
0 (F) 50

HRLT Resistivity 5 (RLA5)
(OHMM) 0.2 2000



Time Mark Every 60 S

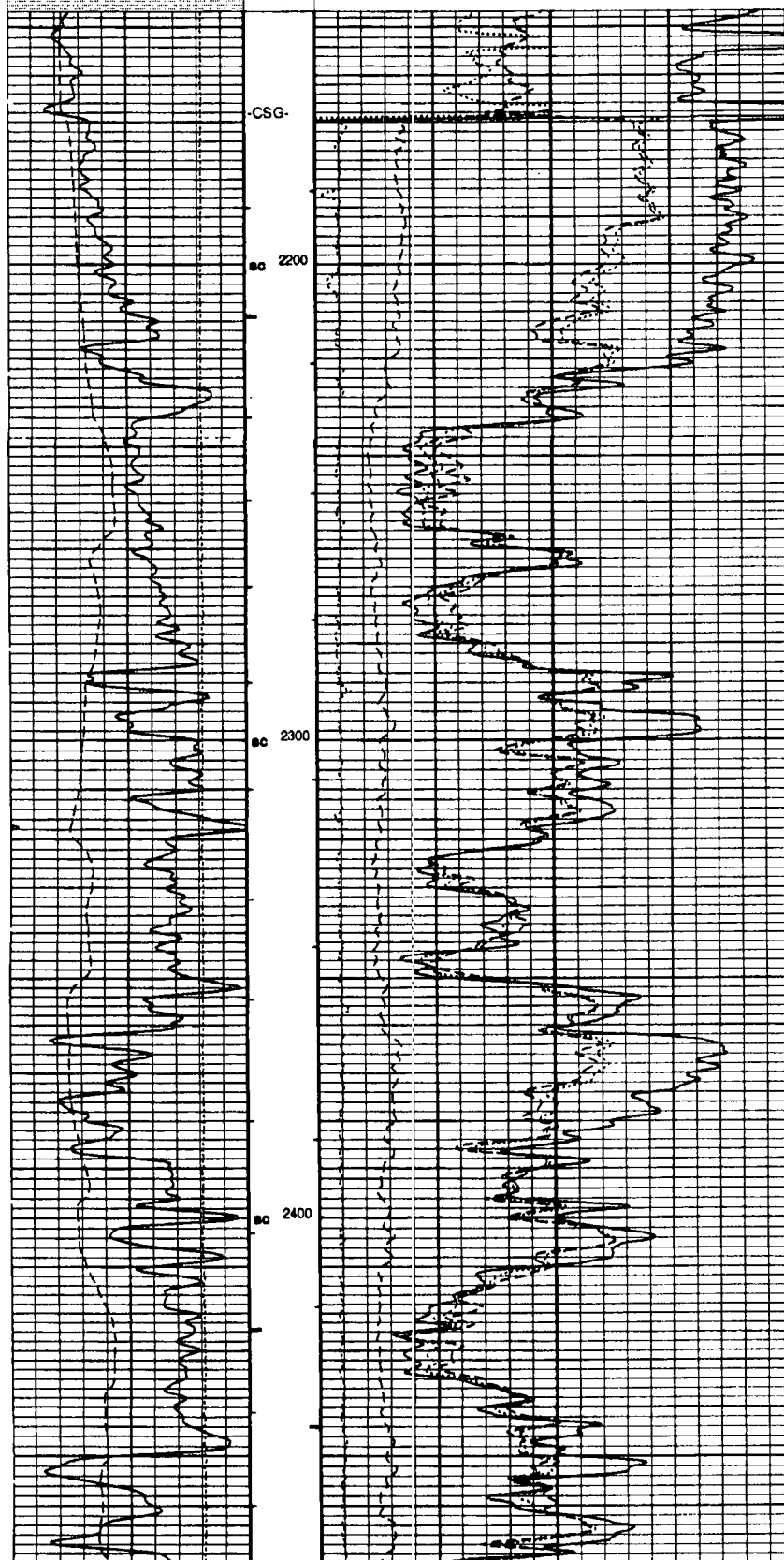
Tension (TENS) (LBP) 10000	Tool/Tol Drag From D3T to STIA	
Gamma Ray (GR) (GAPI) 0 100	Cable Drag From STIA to STIT	Bonic Porosity (BPHI) (V/V) 0.3 -0.1
Gamma Ray Backup	Stuck Stretch (STIT) 0 (F) 60	Delta-T (DT) (US/F) 100 40



Time Mark Every 80 S

Integrated Cement Volume Major Pip Every 100 F3

Tension (TENS) (LBF)		Env. Corr. Thermal Neutron Porosity (TNPH) (V/V)	
10000		0.3	
0		-0.1	
Caliper (HCAL) (IN)		Std. Res. Formation Ps (PEF2) (---)	
10		0	
0		10	
Gamma Ray (GR) (GAPI)		Hilt Porosity CrossPlot (FXND HILT) (V/V)	
100		0.3	
0		-0.1	
Gamma Ray Backup		Density Correction (HDRA) (G/G3)	
0		-0.05	
100		0.45	
Std. Res. Density Porosity (DPH2) (V/V)		0.3	
0		-0.1	
50			



Jones, William V., EMNRD

From: Wesley_Ingram@blm.gov
Sent: Monday, February 02, 2009 4:18 PM
To: Jones, William V., EMNRD
Cc: Sanchez, Daniel J., EMNRD; Brooks, David K., EMNRD; Reeves, Jacqueta, EMNRD; Ezeanyim, Richard, EMNRD; Warnell, Terry G, EMNRD
Subject: RE: Injection Application from Devon Energy Corporation - Springs 2 Federal 1

William V. Jones,

With the added stipulation, the BLM will not have any objections to the proposed injection.

Thanks for the other information.

Wesley W. Ingram

"Jones, William
V., EMNRD"
<William.V.Jones
@state.nm.us>

02/02/2009 11:43
AM

<Wesley_Ingram@blm.gov>

To

cc

"Warnell, Terry G, EMNRD"
<TerryG.Warnell@state.nm.us>,
"Brooks, David K., EMNRD"
<david.brooks@state.nm.us>,
"Ezeanyim, Richard, EMNRD"
<richard.ezeanyim@state.nm.us>,
"Reeves, Jacqueta, EMNRD"
<Jacqueta.Reeves@state.nm.us>,
"Sanchez, Daniel J., EMNRD"
<daniel.sanchez@state.nm.us>

Subject

RE: Injection Application from Devon
Energy Corporation - Springs 2
Federal 1

Wesley:
Thanks again.

Of the 5 states in EPA's Region 6, New Mexico is the only one that uses 1/2 mile as an Area of Review for the Underground Injection Control program (UIC is spawned from the Federal Safe Drinking Water Act). The OCD in New Mexico has obtained primacy from the EPA to administer the UIC program for oilfield related injection/disposal (UIC Class II). We report regularly

to the EPA in Dallas and they review our program to ensure we are protecting Potential Sources of Drinking Water from oilfield injection.

The other states in EPA Region 6 (Texas, Oklahoma, Arkansas, Louisiana) all use only 1/4 mile as an area of review or use a combination Zone of Endangering Influence "ZEI" calculation and a fixed 1/4 mile. Of course that is not the whole story, some of these states permit a volume to be injected, so when that volume is exceeded, the AOR increases. New Mexico does not look at volume, only wellhead injection pressure. The pressure-limit approach works well, except when injection is close to or in a Reef like rock (extremely high perm). The EPA is happy with New Mexico's 1/2 mile - but in fact we have seen disposal wells influencing problems MORE than 1/2 mile away. Usually the problems we have are with high rate, commercial "disposal" wells - and shallow wells are the worst.

The Pure Federal #3 is operated by Devon (so any notice issue is taken care of) and about 1 mile from the subject injection well, so it is outside the 1/2 mile AOR. However, we have seen where injected waters finish-off rotten (uncemented) casing in offsetting wells, even if more than 1/2 mile away) and then the injection waters invade that wellbore down into deeper producing intervals. Hopefully in this case, Devon would see problems at the surface (bradenhead) before the Morrow Gas production is invaded by salt water and ruined.

I will add a requirement in this permit for Devon to report yearly results of bradenhead testing of the Pure Federal #3. If any flow or pressure problems are seen on the bradenhead, then Devon will have to repair this well or cease injection into the subject well.

Please let me know (and copy Devon) if the BLM officially "objects" to allowing injection into the subject well, even with that bradenhead testing stipulation, and we will require Devon to come to an examiner hearing.

Regards,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

-----Original Message-----

From: Wesley_Ingram@blm.gov [mailto:Wesley_Ingram@blm.gov]
Sent: Monday, February 02, 2009 9:14 AM
To: Jones, William V., EMNRD
Cc: Brooks, David K., EMNRD; Reeves, Jacqueta, EMNRD; Ezeanyim, Richard, EMNRD; Warnell, Terry G, EMNRD
Subject: RE: Injection Application from Devon Energy Corporation - Springs
2 Federal 1

William V. Jones,

1. The confusing item on the Avalon Federal #2 is that the completion reports indicate that the TOC above the DV tool is 7200' not 720' as shown in later recompletion attempts. In addition, this one has been plugged so the 7200' must have been incorrect.

2. The data that I am seeing on the Pure Federal #3 is that they proposed a plugging procedure in 2004, but it was cancelled. They then perforated in the Upper Morrow the next

year and put it back on production. The concern here would be water coming from the Springs 2 Federal 1 and being able to travel up the annulus since it is not cemented.

Wesley W. Ingram

"Jones, William
V., EMNRD"
<William.V.Jones
@state.nm.us> To
<Wesley_Ingram@blm.gov>
cc
01/30/2009 10:27
AM "Reeves, Jacqueta, EMNRD"
<Jacqueta.Reeves@state.nm.us>,
"Ezeanyim, Richard, EMNRD"
<richard.ezeanyim@state.nm.us>,
"Warnell, Terry G, EMNRD"
<TerryG.Warnell@state.nm.us>,
"Brooks, David K., EMNRD"
<david.brooks@state.nm.us>
Subject
RE: Injection Application from Devon
Energy Corporation - Springs 2
Federal 1

Hello Wesley:

Thanks for the review of this application - keep these coming.

I reviewed these two wells you mentioned and here is what I found:

- 1) Avalon Federal #2 seems to be cemented across the Delaware, according to a temp survey run after the cement job above the Stage Tool.
- 2) The Pure Federal #3 does not have cement covering the Delaware. That well has plugs placed above and below the Delaware and no casing over that interval.

From looking at the nearby production and tests on the subject well, I assume the Delaware in this area is either wet or marginally oil productive, but not a gas producing interval. In my professional opinion, gas producing intervals should never be permitted for water injection even if they are depleted by years of production. Before allowing operators to inject into oil productive intervals (even if depleted), we ask the operator for a signed opinion from a reservoir engineer as to the effect this injection would have on that residual oil.

This well is located in the Northwest edge of the mapped Capitan Reef (Hiss map), but the Reef rocks are difficult to see on the logs and would be further uphole and covered by casing and cement. An offset well encountered lost circ problems at about 125 feet. Intermediate casing in this area would protect the reef.

Please let me know as soon as you can by email or by letter if you or your coworkers believe injection into the Springs 2 Federal #1 upper Delaware interval will harm BLM minerals.

If the BLM does formally object to this application for any reason, the NMOCD will refuse Devon's administrative application and give Devon the opportunity to argue its case at an examiner hearing. The BLM would be notified of this examiner hearing and would itself have opportunity to present evidence or make comments at the hearing.

Regards,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

-----Original Message-----

From: Wesley_Ingram@blm.gov [mailto:Wesley_Ingram@blm.gov]
Sent: Wednesday, January 21, 2009 4:52 PM
To: Jones, William V., EMNRD
Cc: Don_Peterson@nm.blm.gov; Shannon_Shaw@nm.blm.gov
Subject: Re: Injection Application from Devon Energy Corporation - Springs
2 Federal 1

William V. Jones,

Here are comments on the Springs 2 Federal #1 proposed conversion to injection by Devon Energy Corporation.

1. The plug back procedure will be modified as it does not meet BLM requirements. *it does*
2. The Avalon Federal 2 (API #30-015-29730) does not have cement across the Delaware formation. This well is approximately 1/4 mile from this well location. *OK*
3. The Pure Federal 3 (API #30-015-30350) does not have cement across the Delaware formation. This well is a little over one mile from the well of interest.

Thank you,

Wesley W. Ingram

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Jones, William V., EMNRD

From: Slack, Ronnie [Ronnie.Slack@dvn.com]
Sent: Wednesday, January 21, 2009 9:59 AM
To: Wesley Ingram
Cc: Jones, William V., EMNRD; McGowen, Gregory
Subject: Springs 2 Federal #1 C108_30-015-31236
Attachments: Springs 2 Federal #2 C108 review map_2 miles.pdf

Wesley,

Attached is a well review map going out to 2 miles for the Springs 2 Federal #1 C108 submittal that you requested from Greg McGowen.

On the map attached, the Levers 2 Fed #3 does not show up in the well review area, but it was an expired APD well only that has been cleared out of our database. I listed it on the well review data sheet that was originally submitted.

Let me know if you need any more info.

Springs 2 Federal #1

Sec 2-T21S-R25E

API: 30-015-31236

Thanks,

Ronnie Slack

Engineering Tech

Devon Energy Corporation

CT 3.033

(405) 552-4615 (office)

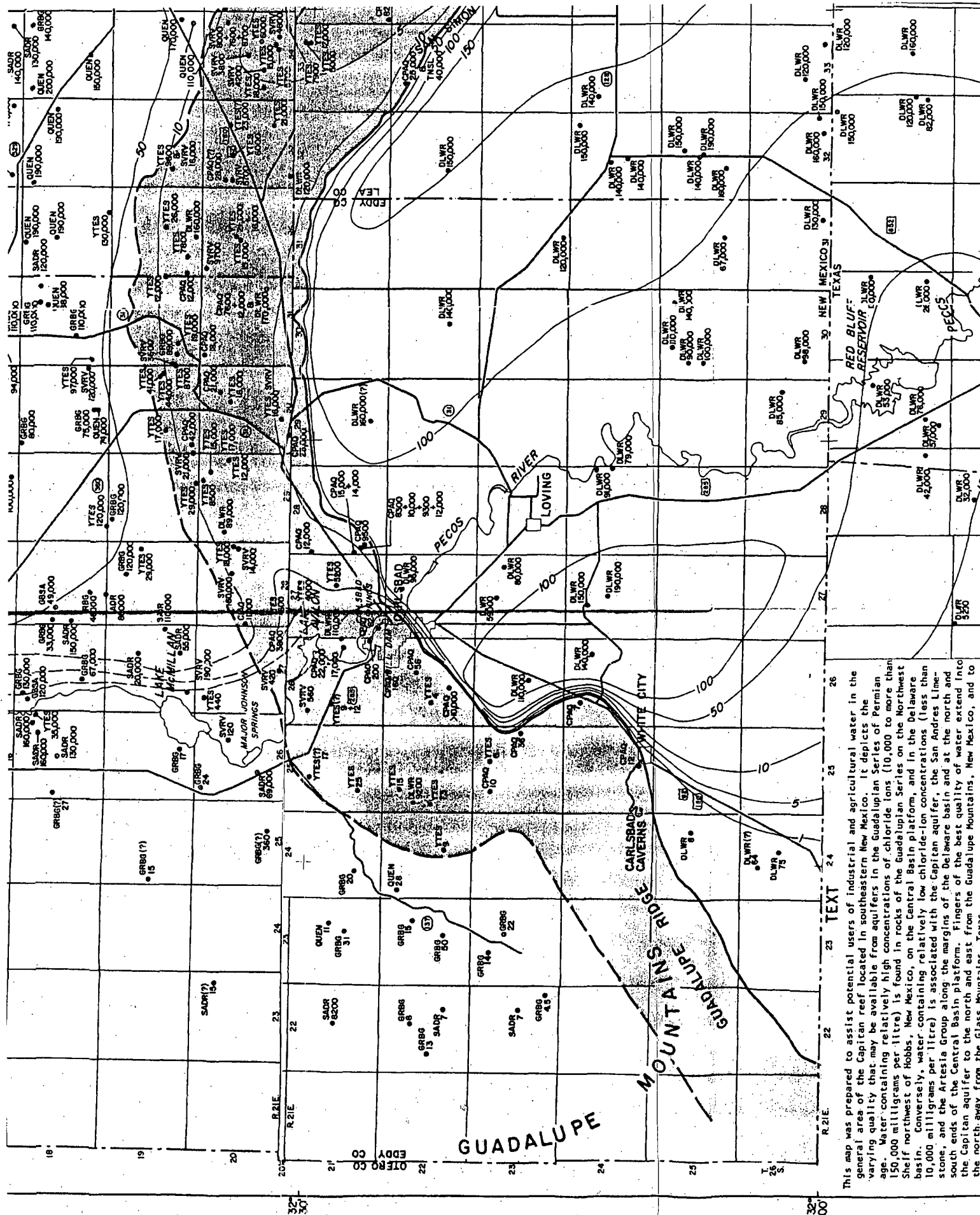
(405) 552-1415 (fax)

Email: Ronnie.Slack@dvn.com

<<Springs 2 Federal #2 C108 review map_2 miles.pdf>>

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This map was prepared to assist potential users of industrial and agricultural water in the general area of the Capitan reef located in southeastern New Mexico. It depicts the varying quality that may be available from aquifers in the Guadalupian Series of Permian age. Water containing relatively high concentrations of chloride ions (10,000 to more than 150,000 milligrams per litre) is found in rocks of the Guadalupian Series on the Northwest Shelf northwest of Hobbs, New Mexico, on the Central Basin platform, and in the Delaware basin. Conversely, water containing relatively low chloride-ion concentrations (less than 10,000 milligrams per litre) is associated with the Capitan aquifer, the San Andres Limestone, and the Artesia Group along the margins of the Delaware basin and at the north and south ends of the Central Basin platform. Fingers of the best quality of water extend into the Capitan aquifer to the north and east from the Guadalupe Mountains, New Mexico, and to the north away from the Glass Mountains, Texas.

Injection Permit Checklist (7/8/08)

Case _____ R- SWD 1160 WFX _____ PMX _____ IPI _____ Permit Date 2/4/09 UIC Qtr _____

Wells _____ Well Name: SPRING 2 F&L #1

API Num: (30-) 015-31236 Spud Date: 6/21/00 New/Old: N (UIC primacy March 7, 1982)

Footages 2315' FNL/2300' FEL Unit 2 Sec 2 Tsp 21S Rge 25E County Edg

Operator: DEVON Energy, Production Company, LP Contact Ronnie Slack

OGRID: _____ RULE 40 Compliance (Wells) _____ (Finan Assur) _____

Operator Address: 20 N. BRDWAY, SUITE 1500, OKC, OK 73102-8260

Current Status of Well: TAEP

Planned Work to Well:

Planned Tubing Size/Depth: 2 7/8 @ 2205'

	Sizes Hole.....Pipe	Setting Depths	Cement Sx or Cf	Cement Top and Determination Method
Existing <input checked="" type="checkbox"/> Surface	<u>17 1/2 13 3/8</u>	<u>453</u>	<u>500</u>	<u>CIRC</u>
Existing <input type="checkbox"/> Intermediate	<u>12 1/4 8 5/8</u>	<u>2170</u>	<u>910</u>	<u>CIRC</u>
Existing <input type="checkbox"/> Long String	<u>7 7/8 5 1/2</u>	<u>10850</u>	<u>1200</u>	<u>1190 CBL</u>

DV Tool 7787 ☒ Liner ☐ Open Hole _____ Total Depth 10850 PBDT _____

Well File Reviewed ☒

Diagrams: Before Conversion ☒ After Conversion ☒ Elogs in Imaging File: ☒

Intervals:	Depths	Formation	Producing (Yes/No)
Above (Name and Top)	<u>1789</u>	<u>Cherry C.</u>	
Above (Name and Top)	<u>1996</u>	<u>Bushy Top</u>	
Injection.....			
Interval TOP:	<u>2236</u>	<u>BRWHT C</u>	<u>(Tested Well)</u>
Injection.....			
Interval BOTTOM:	<u>2275</u>		
Below (Name and Top)	<u>3310</u>	<u>Bone SPRING</u>	

447 PSI Max. WHIP

Open Hole (Y/N) yes

Deviated Hole? yes

at deeper depths

Sensitive Areas: Capitan Reef Cliff House Salt Depths

.... Potash Area (R 111 P) Potash Lessee Noticed?

Fresh Water: Depths: 0-44 Wells (Y/N) No Analysis included (Y/N): — Affirmative Statement ☒

Salt Water: Injection Water Types: CISCO/COGAS Analysis? ☒

Injection Interval: Water Analysis: ☒ Hydrocarbon Potential well

Notice: Newspaper (Y/N) ☒ Surface Owner BLM Mineral Owner(s) _____

RULE 701B(2) Affected Parties: arrington/Fisher/Chavis/McEwen

Area of Review: Adequate Map (Y/N) ☒ and Well List (Y/N) ☒

Active Wells 1 Num Repairs 0 Producing in Injection Interval in AOR NO

..P&A Wells 0 Num Repairs 0 All Wellbore Diagrams Included? —

Questions to be Answered:

? Fresh?
NO

Required Work on This Well: _____ Request Sent _____ Reply: _____

AOR Repairs Needed: _____ Request Sent _____ Reply: _____

_____ Request Sent _____ Reply: _____