15364

CASE (~~Number~~): ***Application of Chevron Midcontinent, LP for approval of a salt water disposal well, Lea County, New Mexico.*** Applicant seeks an order approving disposal of produced water into the Delaware Mountain group at depths of 5215 feet to 7760 feet subsurface in the **Bell Lake 2 State Well No. 1**, located 1980 feet from the north line and 660 feet from the east line of Section 2, Township 25 South, Range 33 East, NMPM. The well is located approximately 20 miles west of Jal, New Mexico.

5/12/2015 DATE IN	SUSPENSE	PRG ENGINEER	5/12/2015 LOGGED IN	SWD TYPE	pMAM1513254473 APP NO.

ABOVE THIS LINE FOR DIVISION USE ONLY

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

Case 15364

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
-Chevron Midcontinent
[illegible] 241333
Well
-Bell Lake 2 State #1
30-025-27178
POW
-SWD; Delaware 96100

[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.

Paul T. Brown	Paul T. Brown	Petroleum Engineer	4/22/15
Print or Type Name	Signature	Title	Date

paulbrown@chevron.com
e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance ____X____Disposal _____Storage
Application qualifies for administrative approval? _____Yes _____No

II. OPERATOR: _Chevron Midcontinent, L.P._____

ADDRESS: __15 Smith Road Midland, TX 79705_____

CONTACT PARTY: Paul T. Brown_____PHONE: 432-687-7351___

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 ____X_____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: _Paul T. Brown_____TITLE: _Petroleum Engineer_____

SIGNATURE: Paul T Brown _____DATE: 4-22-15

E-MAIL ADDRESS: _paulbrown@chevron.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.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Chevron Midcontinent, L.P.

WELL NAME & NUMBER: Bell Lake 2 State No. 1

WELL LOCATION: 1980' FNL & 660' FEL | H | 2 | 25S | 33E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

THE CURRENT AND PROPOSED WELLBORE DIAGRAMS ARE ON THE FOLLOWING PAGES.

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8"

Cemented with: 550 sx. ***or*** _____ ft^3

Top of Cement: Surface Method Determined: Circulated

Intermediate Casing

Hole Size: 12-1/4" Casing Size: 9-5/8"

Cemented with: 3,400 sx. ***or*** _____ ft^3

Top of Cement: Surface Method Determined: Circulated

Production Casing

Hole Size: 8-1/2" Casing Size: 7"

Cemented with: 1,050 sx. ***or*** _____ ft^3

Top of Cement: 6,722' Method Determined: Calculated

Total Depth: 13,280

Perforated Injection Interval

5215 feet to 7760

CURRENT
WELLBORE DIAGRAM

Created: 2/6/2015 **By:** PTB
Updated: **By:**
Lease: Bell Lake 2 State **Well No.:** 1 **Field:** Vaca Draw (Morrow)
Surface Location: 1980' FNL & 660' FEL **Unit Ltr:** H **Sec:** 2 **TSHP/Range:** 25S/33E
County: Lea **St:** NM **St Lease:** **API:** 30-025-27178 **Cost Center:** BCUS50100
Current Status: SI Producer **CHEVNO:** AH2272

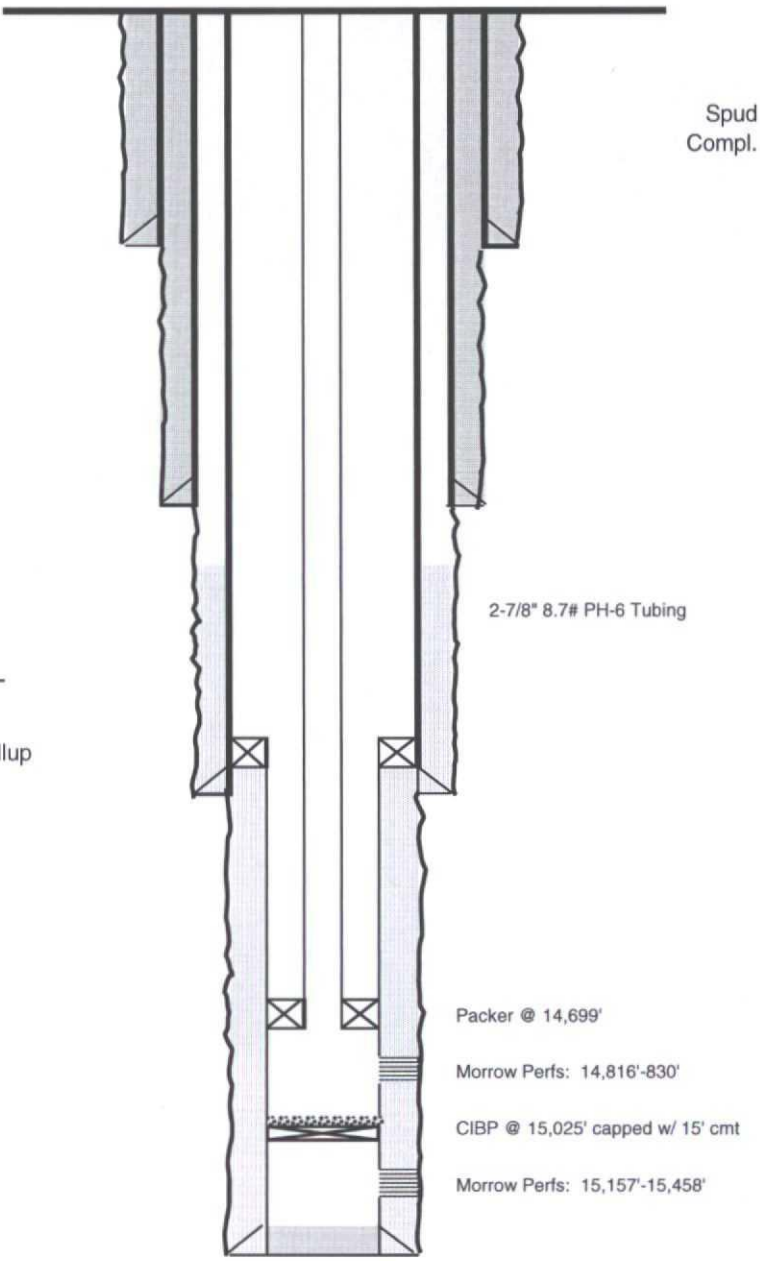
Surface Csg.
Size: 13 3/8"
Wt.: 48# H-40
Set @: 576'
Sxs cmt: 550
Circ: yes
TOC: surface
Hole Size: 17 1/2"

Intermediate Csg.
Size: 9 5/8"
Wt.: 36# K-55, S-80
Set @: 5061'
Sxs Cmt: 3400
Circ: yes; 500 sx
TOC: surface
Hole Size: 12 1/4"

Production Csg.
Size: 7"
Wt.: 26# P-110
Set @: 13,280'
Sxs Cmt: 1,050
TOC: 6,722' calc @ 60% fillup
Hole Size: 8 1/2"

Production Liner
Size: 4-1/2"
Wt.: 15#, P-110
TOL 13,017'
BOL 15,809'
Sxs Cmt: 575

KB:
DF:
GL: 3465
Spud Date: 12/14/1980
Compl. Date: 4/14/1981



PBTD: 15,010'

PROPOSED
WELLBORE DIAGRAM

Created: 2/6/2015 **By:** PTB
Updated: **By:**
Lease: Bell Lake 2 State **Well No.:** 1 **Field:** Vaca Draw (Morrow)
Surface Location: 1980' FNL & 660' FEL **Unit Ltr:** H **Sec:** 2 **TSHP/Range:** 25S/33E
County: Lea **St:** NM **St Lease:** **API:** 30-025-27178 **Cost Center:** BCUS50100
Current Status: SI Producer **CHEVNO:** AH2272

Surface Csg.
Size: 13 3/8"
Wt.: 48# H-40
Set @: 576'
Sxs cmt: 550
Circ: yes
TOC: surface
Hole Size: 17 1/2"

Intermediate Csg.
Size: 9 5/8"
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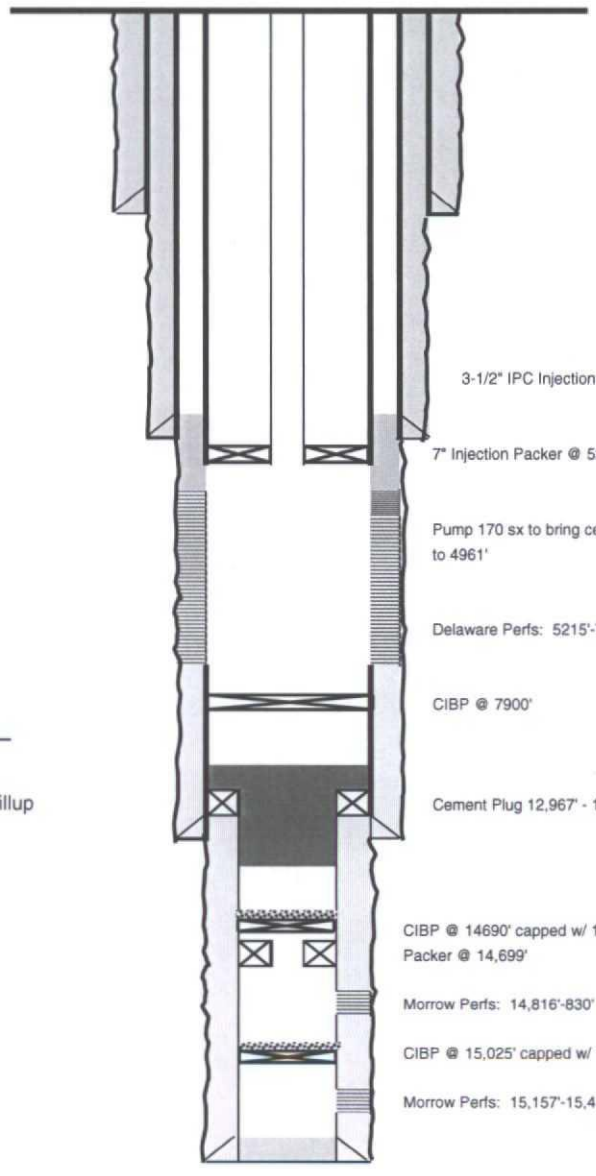
Circ: yes; 500 sx
TOC: surface
Hole Size: 12 1/4"

Production Csg.
Size: 7"
Wt.: 26# P-110
Set @: 13,280'
Sxs Cmt: 1,050
TOC: 6,722' calc @ 60% fillup
Hole Size: 8 1/2"

Production Liner
Size: 4-1/2"
Wt.: 15#, P-110
TOL 13,017'
BOL 15,809'
Sxs Cmt: 575

KB:
DF:
GL: 3465
Spud Date: 12/14/1980
Compl. Date: 4/14/1981



PBTD: 7900'

INJECTION WELL DATA SHEET

Tubing Size: _____3-1/2"_____Lining Material: ____Tuboscope TK-99_(or equal)__

Type of Packer: ___Arrowset Retrievable__with On-off tool_____

Packer Setting Depth: __5,200'_____

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? ___ Well was drilled as a Morrow Producer_____

   _____

2. Name of the Injection Formation: __Delaware_____

3. Name of Field or Pool (if applicable): ___SWD; 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. _Morrow 15,157-15,458: plugged with_____

   CIBP @ 15,025' w/ 15' cmt on top / Morrow 14,716-830: plugged with CIBP @ 14,690' w/ 15' cmt on top_____

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

   Bone Spring_9,250'_____

   Wolfcamp 12,123' _____

   Morrow 14,597'_____

Chevron Midcontinent, L.P.

Application for Authorization to Inject

Bell Lake 2 State No. 1

VI. Tabulated well data for wells in area of review is attached. The schematic of the Federal Muse No. 1 (P&A) is attached.

VII. Proposed Operation

1. Average Daily Rate = 5,200 BWPD. Maximum Daily Rate = 10,000 BWPD.
2. The system will be closed.
3. Average injection pressure = 300 psig. Maximum injection pressure = 2,600 psig.
4. Water would be from Chevron's Red Hills 2 State No. 1H, Red Hills 2 State No. 3H and Red Hills 11 Federal No. 1H. All three wells are producing from the Upper Avalon Shale. The water analyses from Red Hills 2 State No. 3H and Red Hills 11 Federal No. 1H are attached.
5. Nearby Delaware Sands formation water analysis is not available.

VIII. Geologic Data on Injection Zone

Injection Zone: Delaware Sandstone. Perfs: 5215'-7760'

Lithological Detail: Fine grained sandstone

Geological Name: Delaware Mountain Group (Guadalupian)

Thickness: Delaware – 4046'

Depth: Top of Delaware at 5195'

Underground Sources of Drinking Water:

Fresh water sources in the immediate area have been encountered in aquifers above 250'. These aquifers are found in Pliocene age Ogallala and Pleistocene age alluvial sediments and consist of for the most part of alternating calcareous silt, fine sand and clay. There are no other sources of fresh water underlying the injection interval.

IX. Proposed Stimulation

If necessary the perforations will be acidized with 15% NEFL HCl.

X. Logging and Testing on well

Logs have been previously submitted for this well.

Chevron Midcontinent, L.P.

Application for Authorization to Inject

Bell Lake 2 State No. 1

XI. Chemical Analysis of Water from Fresh Water Wells within one mile of the subject well

The following sections were queried on the New Mexico Office of the State Engineer Website: 34, 35, 36 of T24S/R33E and 1, 2, 3,10, 11, 12 of T25S/R33E. There are 6 points of diversion in Section 35 with POD4, POD5 and POD6 within one mile of the proposed disposal well. It is not known if any of these wells are active or not.

XII. Available geologic and engineering data has been examined and no evidence has been found of open faults or any other hydrologic connection between the injection zone and the any underground source of drinking water.

XIII. See attached proofs of notice

Surface owner:

State of New Mexico Land Office

310 Old Santa Fe Trail

Santa Fe, NM 87504

Operators within ½ mile radius of the proposed injector:

EOG Resources, Inc.

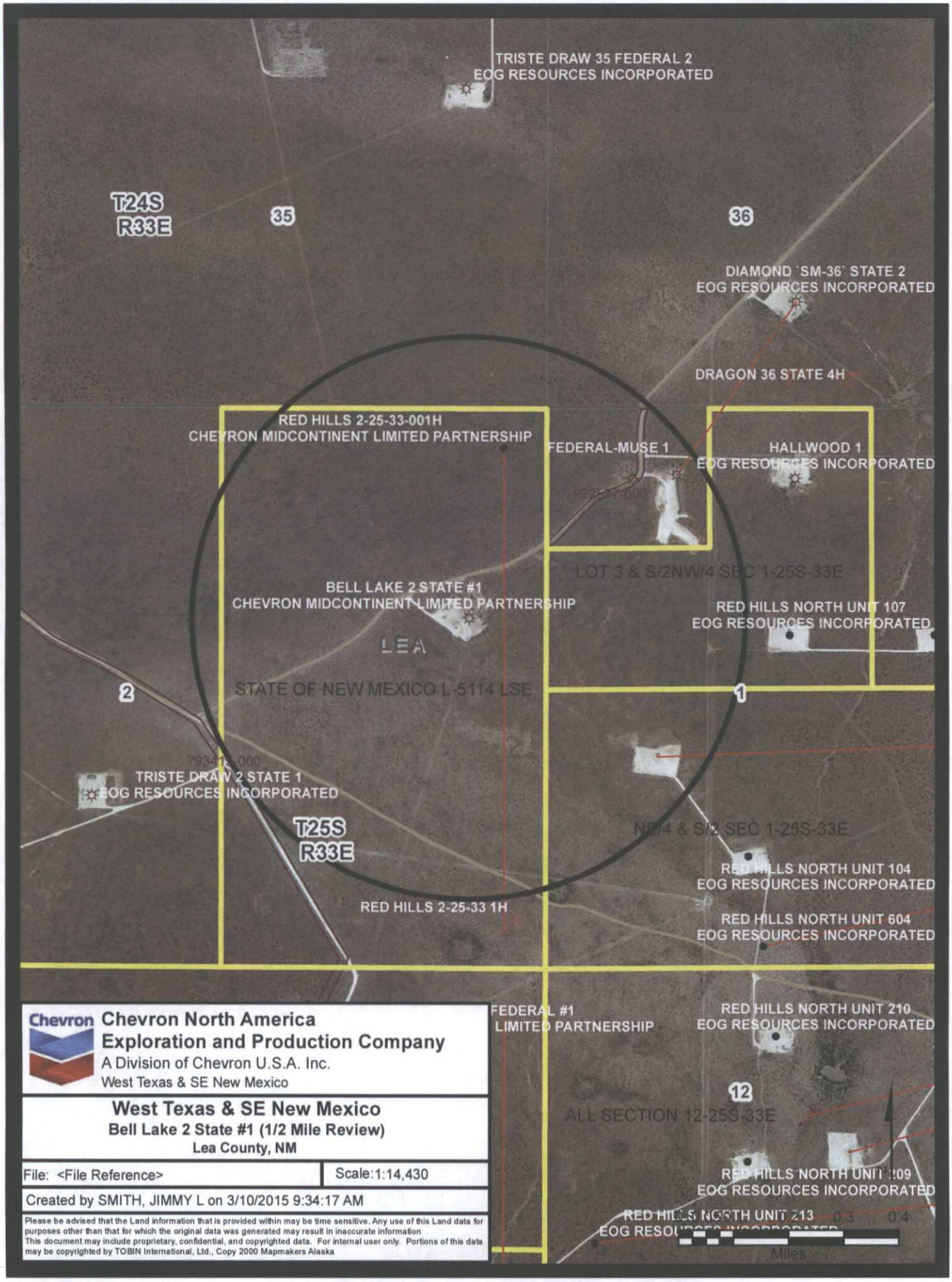
P. O. Box 2267

Midland, TX 79702

Chevron Midcontinent, L.P.

15 Smith Rd.

Midland, TX 79705



Chevron North America
Exploration and Production Company
A Division of Chevron U.S.A. Inc.
West Texas & SE New Mexico

West Texas & SE New Mexico
Bell Lake 2 State #1 (1/2 Mile Review)
Lea County, NM

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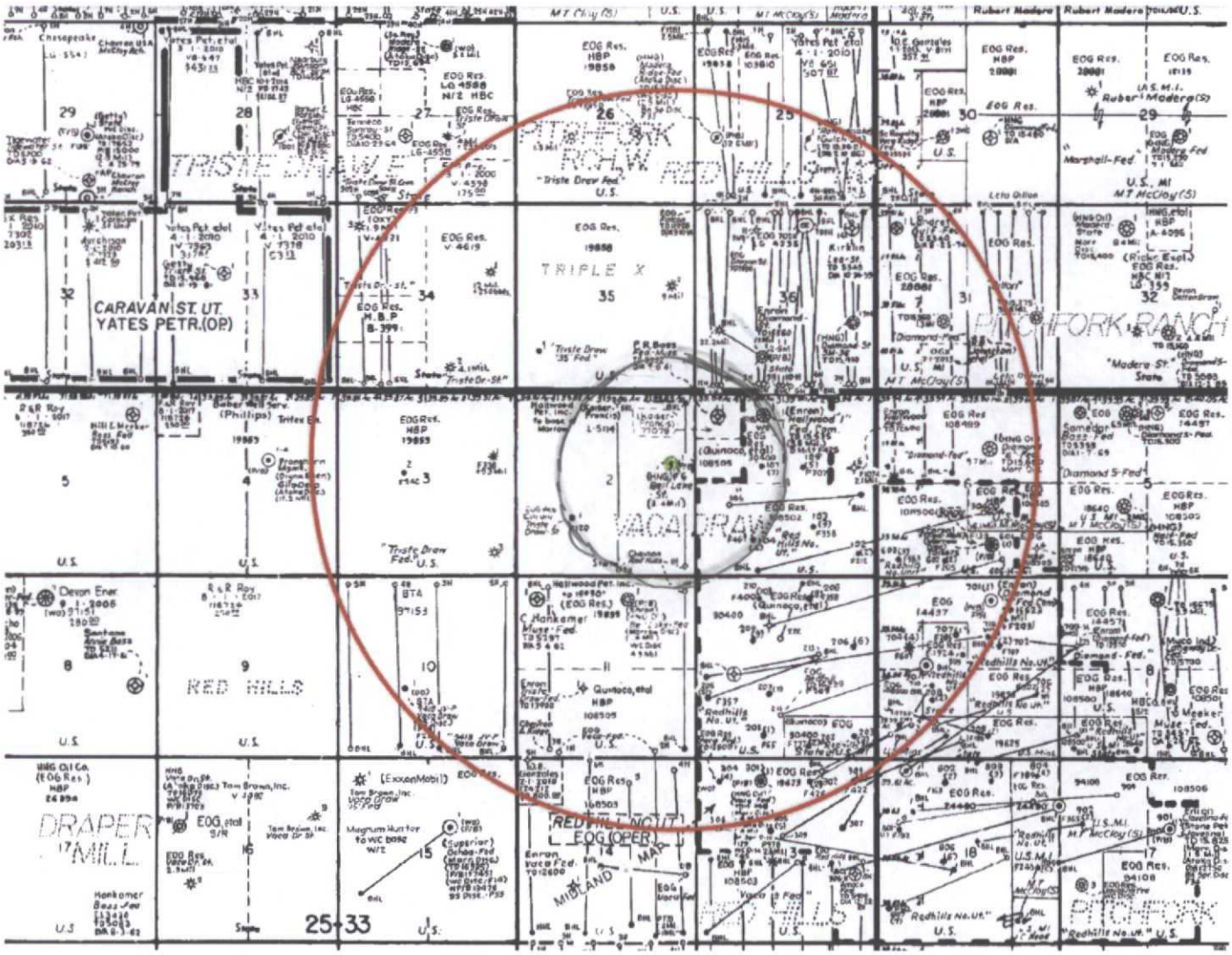


CHEVRON MIDCONTINENT, LP

BELL LAKE 2 STATE No.1 SWD APPLICATION

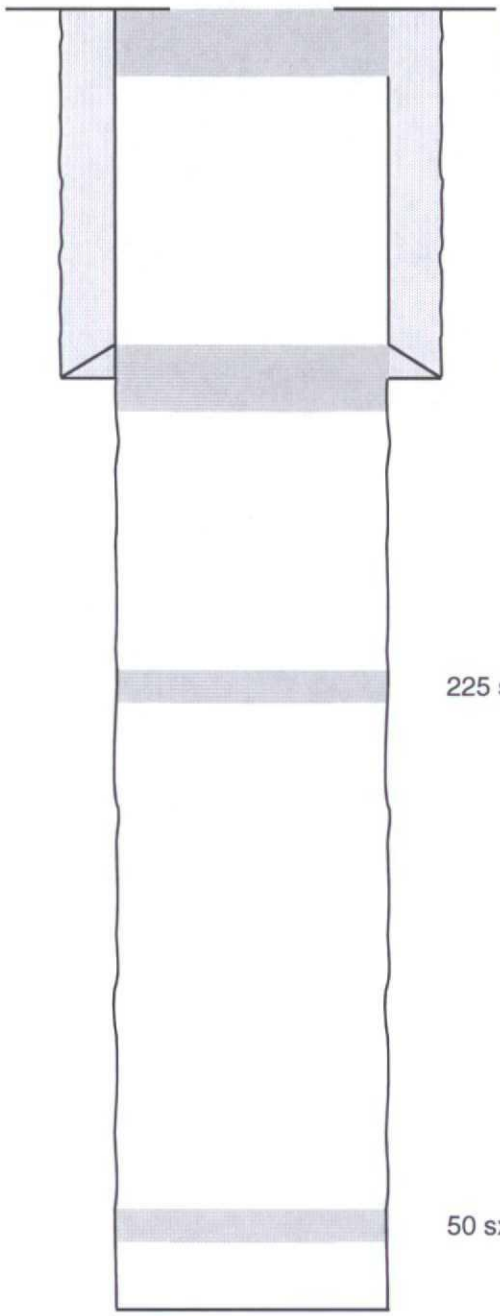
V. MAP W/ 2 MILE RADIUS AND ½ MILE RADIUS AROUND SUBJECT WELL

Chevron Midcontinent, LP
1/2 Mile Radius Area of Review
Application for Authorization to Inject Bell Lake 2 State No. 1

							Surface Casing			Production Casing			
Operator	Lease/Well	API No.	Status	Location	Spud Date	TMD	Size	Depth	Cement	Size	Depth	Cement	Producing Perfs
Chevron Midcontinent, L.P.	Red Hills 2-25-33 No. 1H	3002541546	Producing	P-2-25S-33E	4/19/2014	13,941	13-3/8"	1197	1399	5-1/2"	13,941	1550	9540-13692
Chevron Midcontinent, L.P.	Red Hills 2-25-33 No. 3H	3002541907	Producing	O-2-25S-33E	7/18/2014	14,105	13-3/8"	1259	1070	5-1/2"	14,083	1940	9825-13771
EOG Resources, Inc.	Red Hills North Unit No. 106	3002536310	SWD Inj	L-1-25S-33E	8/25/2003	16,925	13-3/8"	665	575	4-1/2"	16,902	625	12695-16730
EOG Resources, Inc.	Red Hills North Unit No. 107	3002533214	Producing	F-1-25S-33E	1/21/1996	12,550	11-3/4"	659	250	5-1/2"	12,497	1540	12278-12301
EOG Resources, Inc.	Hallwood 1 Fed Com No. 1	3002531649	Producing	C-1-s5S-33E	8/9/1992	15,535	16"	657	625	5-1/2"	14,704	200	13660-13680
Perry Bass	Federal-Muse No. 1	3002508379	D&A	D-1-25S-33E	1961	5328	7-5/8"	397	350	None			

Federal Muse No. 1 Wellbore Diagram

Created:	03/20/15	By:	PTB	Well #:	1	St. Lse:	-
Updated:		By:		API		30-015-08379	
Updated:		By:					
Lease:	Federal Muse			Unit Ltr.:	D	Section:	1
Field:				TSHP/Rng:		25S / 33E	
Surf. Loc.:	660' FNL & 660' FWL			Unit Ltr.:		Section:	
Bot. Loc.:				TSHP/Rng:			
County:	Lea	St.:	NM	COST CTR			
Status:	P&A			CHEVNO:			



KB: 3,490
DF:
GL: 3,480
Ini. Spud:
Ini. Comp.:

Surface Casing

Size:	7-5/8"
Wt., Grd.:	
Depth:	397
Sxs Cmt:	350
Circulate:	
TOC:	Surface
Hole Size:	12-1/4"

Production Casing

Size:	
Wt., Grd.:	
Depth:	5,332
Sxs Cmt:	
Circulate:	
TOC:	
Hole Size:	6-3/4"

BAKER HUGHES

Permian Basin Area Laboratory
2101 S Market St / Building B
Midland, TX. 79703

Report Date: 2/19/2015

Complete Water Analysis Report SSP v.8

Customer:	CHEVRON	Sample Point Name	RED HILLS 3H
District:	New Mexico	Sample ID:	201501001572
Sales Rep:	Donal M Ruth	Sample Date:	1/15/2015
Lease:	RED HILLS	Log Out Date:	1/21/2015
Site Type:	Well Sites	Analyst:	Samuel Newman
Sample Point Description:	NOT PROVIDED		

CHEVRON, RED HILLS, RED HILLS 3H

2-3

Field Data

Initial Temperature (°F):	250
Final Temperature (°F):	54
Initial Pressure (psi):	100
Final Pressure (psi):	15

pH:

pH at time of sampling:	7.0

Alkalinity by Titration:

	mg/L	meq/L
Bicarbonate (HCO_3^-):	4758.0	78.0
Carbonate (CO_3^{2-}):	ND	
Hydroxide (OH^-):	ND	

aqueous CO_2 (ppm):	810.0
aqueous H_2S (ppm):	17.1
aqueous O_2 (ppb):	ND
Calculated TDS (mg/L):	138878
Density/Specific Gravity (g/cm³):	1.0871
Measured Density/Specific Gravity	1.0995
Conductivity (mmhos):	ND
Resistivity:	ND
MCF/D:	No Data
BOPD:	No Data
BWPD:	No Data

Analysis of Sample

Anions:	mg/L	meq/L
Chloride (Cl^-):	76271.1	2151.5
Sulfate (SO_4^{2-}):	5141.1	107.0
Borate (H_3BO_3):	311.2	5.0
Fluoride (F^-):	ND	
Bromide (Br^-):	ND	
Nitrite (NO_2^-):	ND	
Nitrate (NO_3^-):	ND	
Phosphate (PO_4^{3-}):	ND	
Silica (SiO_2):	ND	

Organic Acids:	mg/L	meq/L
Formic Acid:	ND	
Acetic Acid:	ND	
Proplonic Acid:	ND	
Butyric Acid:	ND	
Valeric Acid:	ND	

Anion/Cation Ratio:	1.03

Cations:	mg/L	meq/L
Sodium (Na^+):	51444.8	2238.7
Potassium (K^+):	645.2	16.5
Magnesium (Mg^{2+}):	52.0	4.3
Calcium (Ca^{2+}):	236.1	11.8
Strontium (Sr^{2+}):	18.1	0.4
Barium (Ba^{2+}):	0.0	0.0
Iron (Fe^{2+}):	0.0	0.0
Manganese (Mn^{2+}):	0.0	0.0
Lead (Pb^{2+}):	ND	
Zinc (Zn^{2+}):	0.0	0.0
Aluminum (Al^{3+}):	ND	
Chromium (Cr^{3+}):	ND	
Cobalt (Co^{2+}):	ND	
Copper (Cu^{2+}):	ND	
Molybdenum (Mo^{2+}):	ND	
Nickel (Ni^{2+}):	ND	
Tin (Sn^{2+}):	ND	
Titanium (Ti^{2+}):	ND	
Vanadium (V^{2+}):	ND	
Zirconium (Zr^{2+}):	ND	
Total Hardness:	825	N/A

ND = Not Determined

Conditions		Barite ($BaSO_4$)		Calcite ($CaCO_3$)		Gypsum ($CaSO_4 \cdot 2H_2O$)		Anhydrite ($CaSO_4$)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
54°F	15 psi		0.000	0.96	170.649	-0.91	0.000	-1.19	0.000
76°F	24 psi		0.000	1.10	179.383	-0.88	0.000	-1.07	0.000
98°F	34 psi		0.000	1.23	186.179	-0.87	0.000	-0.97	0.000
119°F	43 psi		0.000	1.36	191.176	-0.86	0.000	-0.87	0.000
141°F	53 psi		0.000	1.48	194.818	-0.86	0.000	-0.76	0.000
163°F	62 psi		0.000	1.59	197.490	-0.86	0.000	-0.65	0.000
185°F	72 psi		0.000	1.70	199.519	-0.86	0.000	-0.54	0.000
206°F	81 psi		0.000	1.82	201.122	-0.86	0.000	-0.42	0.000
228°F	91 psi		0.000	1.92	202.320	-0.86	0.000	-0.30	0.000
250°F	100 psi		0.000	2.03	203.229	-0.86	0.000	-0.18	0.000

Conditions		Celestite ($SrSO_4$)		Halite (NaCl)		Iron Sulfide (FeS)		Iron Carbonate ($FeCO_3$)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
54°F	15 psi	-0.35	0.000	-1.18	0.000	0	0.000		0.000
76°F	24 psi	-0.34	0.000	-1.20	0.000	0	0.000		0.000
98°F	34 psi	-0.33	0.000	-1.21	0.000	0	0.000		0.000
119°F	43 psi	-0.33	0.000	-1.22	0.000	0	0.000		0.000
141°F	53 psi	-0.32	0.000	-1.22	0.000	0	0.000		0.000
163°F	62 psi	-0.32	0.000	-1.23	0.000	0	0.000		0.000
185°F	72 psi	-0.30	0.000	-1.23	0.000	0	0.000		0.000
206°F	81 psi	-0.29	0.000	-1.23	0.000	0	0.000		0.000
228°F	91 psi	-0.26	0.000	-1.23	0.000	0	0.000		0.000
250°F	100 psi	-0.24	0.000	-1.23	0.000	0	0.000		0.000

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 eight (8) scales

Note 3: Saturation Index predictions on this sheet use pH and alkalinity. $\%CO_2$ is not included in the calculations

ScaleSoftPitzer™ SSP2010

Comments:

VII. 4. PROPOSED INJECTION FLUID (CHEVRON/RED HILLS 2 STATE No. 3H)
30-025-41907

BAKER HUGHES

Permian Basin Area Laboratory
2101 S Market St / Building B
Midland, TX 79703

Report Date: 2/19/2015

Complete Water Analysis Report SSP v.8

Customer:	CHEVRON	Sample Point Name	RED HILLS 11 1H
District:	New Mexico	Sample ID:	201501001573
Sales Rep:	Donal M Ruth	Sample Date:	1/15/2015
Lease:	RED HILLS	Log Out Date:	1/21/2015
Site Type:	Well Sites	Analyst:	Samuel Newman
Sample Point Description:	NOT PROVIDED		

CHEVRON, RED HILLS, RED HILLS 11 1H

Field Data

Initial Temperature (°F):	250
Final Temperature (°F):	54
Initial Pressure (psi):	100
Final Pressure (psi):	15
pH:	
pH at time of sampling:	6.6

Alkalinity by Titration:	mg/L	meq/L
Bicarbonate (HCO_3^-):	1708.0	28.0
Carbonate (CO_3^{2-}):	ND	
Hydroxide (OH^-):	ND	

aqueous CO_2 (ppm):	980.0
aqueous H_2S (ppm):	34.2
aqueous O_2 (ppb):	ND
Calculated TDS (mg/L):	183926
Density/Specific Gravity (g/cm³):	1.1162
Measured Density/Specific Gravity	1.1277
Conductivity (mmhos):	ND
Resistivity:	ND
MCF/D:	No Data
BOPD:	No Data
BWPD:	No Data

Analysis of Sample

Anions:	mg/L	meq/L
Chloride (Cl^-):	110313.4	3111.8
Sulfate (SO_4^{2-}):	2493.8	51.9
Borate (H_3BO_3):	304.9	4.9
Fluoride (F^-):	ND	
Bromide (Br^-):	ND	
Nitrite (NO_2^-):	ND	
Nitrate (NO_3^-):	ND	
Phosphate (PO_4^{3-}):	ND	
Silica (SiO_2):	ND	

Organic Acids:	mg/L	meq/L
Formic Acid:	ND	
Acetic Acid:	ND	
Propionic Acid:	ND	
Butyric Acid:	ND	
Valeric Acid:	ND	
Anion/Cation Ratio:		1.04

Cations:	mg/L	meq/L
Sodium (Na^+):	59451.3	2587.1
Potassium (K^+):	930.6	23.8
Magnesium (Mg^{2+}):	1300.4	107.0
Calcium (Ca^{2+}):	7138.7	356.2
Strontium (Sr^{2+}):	242.4	5.5
Barium (Ba^{2+}):	0.0	0.0
Iron (Fe^{2+}):	40.8	1.5
Manganese (Mn^{2+}):	1.4	0.1
Lead (Pb^{2+}):	ND	
Zinc (Zn^{2+}):	0.0	0.0
Aluminum (Al^{3+}):	ND	
Chromium (Cr^{3+}):	ND	
Cobalt (Co^{2+}):	ND	
Copper (Cu^{2+}):	ND	
Molybdenum (Mo^{2+}):	ND	
Nickel (Ni^{2+}):	ND	
Tin (Sn^{2+}):	ND	
Titanium (Ti^{2+}):	ND	
Vanadium (V^{2+}):	ND	
Zirconium (Zr^{2+}):	ND	
Total Hardness:	23481	N/A

ND = Not Determined

Conditions		Barite ($BaSO_4$)		Calcite ($CaCO_3$)		Gypsum ($CaSO_4 \cdot 2H_2O$)		Anhydrite ($CaSO_4$)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
54°F	15 psi		0.000	1.84	415.728	0.16	441.461	-0.08	0.000
76°F	24 psi		0.000	1.96	425.406	0.21	546.202	0.05	125.930
98°F	34 psi		0.000	2.08	433.436	0.23	580.426	0.16	343.971
119°F	43 psi		0.000	2.19	439.998	0.23	592.269	0.26	517.359
141°F	53 psi		0.000	2.29	445.378	0.23	595.801	0.37	661.635
163°F	62 psi		0.000	2.39	449.847	0.23	596.125	0.48	781.850
185°F	72 psi		0.000	2.48	453.633	0.23	594.657	0.59	880.510
206°F	81 psi		0.000	2.57	457.208	0.23	590.788	0.70	959.818
228°F	91 psi		0.000	2.66	460.410	0.23	582.563	0.82	1022.218
250°F	100 psi		0.000	2.74	463.275	0.22	566.950	0.93	1070.339

Conditions		Celestite ($SrSO_4$)		Halite (NaCl)		Iron Sulfide (FeS)		Iron Carbonate ($FeCO_3$)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
54°F	15 psi	0.45	110.851	-0.85	0.000	3.18	22.445	1.16	27.279
76°F	24 psi	0.48	114.391	-0.86	0.000	3.09	22.439	1.34	28.091
98°F	34 psi	0.49	115.999	-0.88	0.000	3.06	22.437	1.52	28.609
119°F	43 psi	0.50	116.719	-0.89	0.000	3.04	22.436	1.68	28.917
141°F	53 psi	0.50	117.221	-0.90	0.000	3.03	22.435	1.82	29.103
163°F	62 psi	0.50	117.935	-0.90	0.000	3.02	22.435	1.92	29.218
185°F	72 psi	0.51	119.094	-0.91	0.000	3.03	22.437	2.02	29.295
206°F	81 psi	0.53	120.769	-0.92	0.000	3.06	22.439	2.09	29.346
228°F	91 psi	0.54	122.896	-0.92	0.000	3.08	22.441	2.14	29.377
250°F	100 psi	0.56	125.316	-0.93	0.000	3.11	22.443	2.17	29.396

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 eight (8) scales

Note 3: Saturation Index predictions on this sheet use pH and alkalinity. $\%CO_2$ is not included in the calculations

ScaleSoftPitzer™ SSP2010

Comments:

VII 4. PROPOSED INJECTION FLUID (CHEVRON RED HILLS 11 FED No. 1H.)
30-025-41848

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher 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
March 20, 2015
and ending with the issue dated
March 20, 2015.

Daniel Russell
Publisher

Sworn and subscribed to before me this
20th day of March 2015.

Gussie Black
Business Manager

My commission expires
January 29, 2019
(Seal).

OFFICIAL SEAL
GUSSIE BLACK
Notary Public
State of New Mexico
My Commission Expires 1-29-19

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

LEGALS

LEGAL NOTICE
March 20, 2015

Notice is hereby given of the application of Chevron Midcontinent, L.P., 15 Smith road, Midland, Texas 79705 to the New Mexico Oil conservation Division and the Commissioner of Public Lands, State of New Mexico for approval of Bell Lake 2 State #1 to a Salt Water Disposal. The Chevron Bell Lake 2 State #1 is located 1980' FNL & 660' FEL, Unit Letter H, Section 2, Township 25 South, Range 33 East, Lea County, New Mexico. The injection water is in the Delaware formation from 5215' to 7760 through perforations. The maximum injection rate will be 10,000 BWPD, with a maximum allowable amount of 2,600 psi. All interested parties should file objections or requests for hearing with the State of New Mexico Oil Conservation Division, 1220 South St. Francis Dr, Santa Fe, New Mexico 87505 within 15 days. Inquiries regarding this application should be directed to Chevron Midcontinent LP Attn: Paul T. Brown at 15 Smith Road, Midland, Texas 79705.
#29871

01102480 00153686

CHEVRON USA INC.
15 SMITH ROAD
MIDLAND, TX 79705

Paul T. Brown
Petroleum Engineer

Chevron North America Exploration and Production Company
15 Smith Road
Midland, TX 79705
Tel 432-687-7351
PaulBrown@chevron.com

March 24, 2015

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

EOG Resources, Inc.
P. O. Box 2267
Midland, TX 79702

RE: Application of Chevron Midcontinent, L.P. for administrative approval of Bell Lake 2 State No. 1 – Lea County, NM.
Application for a Salt Water Disposal Injection Well

Ladies and Gentlemen:
Enclosed please find a copy of the application of Chevron Midcontinent, L.P. (Oil Conservation Division Form C-108) in the above-referenced matter for approval of a Water Disposal Injection Well: Bell Lake 2 State No. 1 located 1980' FNL & 660' FEL of Section 2, Township 25S, Range 33E, NMPM, Lea County, New Mexico. Chevron proposes to re-inject produced water from the Bone Spring formation into the Delaware Sand formation at a measured depth of 5215 feet to 7760 feet. The injection will occur with a maximum injection pressure of 2,600 psi and a maximum rate of 10,000 barrels of water per day as fully described in the application.

This application is provided to you as an offset operator with well located within ½ mile of the where the subject well is located. If you object to this application your objection must be filed in writing with the Santa Fe Office of the Oil Conservation Division located at 1220 South Francis Drive, Santa Fe, New Mexico 87505 within 15 days of this letter. If there is no objection, the Division Director may approve this application.

Sincerely,

Chevron Midcontinent, L. P.

Paul T. Brown
Petroleum Engineer

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

EOG Resources, Inc.
P. O. Box 2267
Midland, TX 79702

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Robert Force ☑ Agent ☐ Addressee

B. Received by (Printed Name) R. FORCE
C. Date of Delivery 3-27-15

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail® ☐ Priority Mail Express™
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ Collect on Delivery

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7013 2630 0001 9931 7851

PS Form 3811, July 2013 Domestic Return Receipt

Paul T. Brown
Petroleum Engineer

Chevron North America Exploration and Production Company
15 Smith Road
Midland, TX 79705
Tel 432-687-7351
PaulBrown@chevron.com

March 24, 2015

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

State of New Mexico
310 Old Santa Fe Trail
Santa Fe, NM 87504

RE: Application of Chevron Midcontinent, L.P. for administrative approval of Bell Lake 2 State No. 1 – Lea County, NM.
Application for a Salt Water Disposal Injection Well

Ladies and Gentlemen:

Enclosed please find a copy of the application of Chevron Midcontinent, L.P. (Oil Conservation Division Form C-108) in the above-referenced matter for approval of a Water Disposal Injection Well: Bell Lake 2 State No. 1 located 1980' FNL & 660' FEL of Section 2, Township 25S, Range 33E, NMPM, Lea County, New Mexico. Chevron proposes to re-inject produced water from the Bone Spring formation into the Delaware Sand formation at a measured depth of 5215 feet to 7760 feet. The injection will occur with a maximum injection pressure of 2,600 psi and a maximum rate of 10,000 barrels of water per day as fully described in the application.

This application is provided to you as owner of the surface of the land upon where the subject well is located. If you object to this application your objection must be filed in writing with the Santa Fe Office of the Oil Conservation Division located at 1220 South Francis Drive, Santa Fe, New Mexico 87505 within 15 days of this letter. If there is no objection, the Division Director may approve this application.

Sincerely,

Chevron Midcontinent, L. P.

Paul T. Brown
Petroleum Engineer

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

State of New Mexico
310 Old Santa Fe Trail
Santa Fe, NM 87504

COMPLETE THIS SECTION ON DELIVERY

A. Signature
x Michael C Lucero ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* | C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail® ☐ Priority Mail Express™
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ Collect on Delivery

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service label)* 7013 1730 0001 9931 7844

PS Form 3811, July 2013 Domestic Return Receipt

Paul T. Brown
Petroleum Engineer

Chevron North America Exploration and Production Company
15 Smith Road
Midland, TX 79705
Tel 432-687-7351
PaulBrown@chevron.com

May 6, 2015

New Mexico Oil Conservation Commission
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Attn: Mr. Phillip Goetze, P. G.

RE: Application of Chevron Midcontinent, L.P. for Administrative Approval of Bell Lake 2 State No. 1 – Lea County, NM.
Application for a Salt Water Disposal Injection Well

Dear Mr. Goetze,

Chevron Midcontinent, L.P. is seeking administrative approval for authorization to inject produced water into our Bell Lake 2 State No. 1. The subject well is currently completed in the Morrow formation, but will be plugged back to the Delaware Sands.

Attached is Form C-108 with all the necessary attachments. Should further information be required to approve this application, please advise.

Sincerely,

Chevron Midcontinent, L. P.

Paul T. Brown
Petroleum Engineer

Goetze, Phillip, EMNRD

From: Goetze, Phillip, EMNRD
Sent: Monday, April 20, 2015 1:28 PM
To: Brown, Paul T (PaulBrown)
Subject: RE: Objection to Chevron SWD application

Case 15364

Mr. Brown:

That is a business decision on your part. As I explained, the application can be submitted and the clock started, but the application will not be reviewed since the protest stalls the approval under the administrative process. If it is your intent to get the process started, then submittal would be favorable and could possibly provide the opportunity to see if any additional parties have concerns. PRG

Phillip R. Goetze, P.G.
Engineering and Geological Services Bureau, Oil Conservation Division
1220 South St. Francis Drive, Santa Fe, NM 87505
O: 505.476.3466 F: 505.476.3462
phillip.goetze@state.nm.us

From: Brown, Paul T (PaulBrown) [mailto:PaulBrown@chevron.com]
Sent: Monday, April 20, 2015 12:33 PM
To: Goetze, Phillip, EMNRD
Subject: RE: Objection to Chevron SWD application

I have made contact with EOG via email, but have not heard back yet.

Should I go ahead and submit the application to the OCD now and continue to talk with EOG or should I wait?

From: Goetze, Phillip, EMNRD [mailto:Phillip.Goetze@state.nm.us]
Sent: Tuesday, April 14, 2015 4:43 PM
To: Brown, Paul T (PaulBrown)
Cc: jamesbruc@aol.com; Jones, William V, EMNRD; McMillan, Michael, EMNRD; Dawson, Scott, EMNRD; Catanach, David, EMNRD
Subject: RE: Objection to Chevron SWD application

Mr. Brown:

Since EOG has protested, the application would not be approved through the administrative process and would have to go to hearing. Director Catanach has specified a period of no greater than 30 days for resolution for any application which OCD has formally received and was protested. If no resolution is completed within the period, OCD will proceed to place the application on the docket for hearing. Call/e-mail with any questions on the process or the impact on the application. PRG

Phillip R. Goetze, P.G.
Engineering and Geological Services Bureau, Oil Conservation Division
1220 South St. Francis Drive, Santa Fe, NM 87505
O: 505.476.3466 F: 505.476.3462
phillip.goetze@state.nm.us

From: Brown, Paul T (PaulBrown) [mailto:PaulBrown@chevron.com]
Sent: Tuesday, April 14, 2015 3:33 PM
To: Goetze, Phillip, EMNRD
Subject: FW: Objection to Chevron SWD application

I was not expecting this from EOG since they have similar SWD wells in the area. I have a few questions:

If I were to submit the application to you right now, would that necessitate a hearing?

How much time do I have to contact EOG and try to resolve their objection?

Thanks,

Paul T. Brown, Petroleum Engineer
Delaware Basin Operations

Chevron North America Exploration and Production Company
MidContinent Business Unit
15 Smith Road, Midland, TX 79705
Tel (432) 687-7351 Fax (432) 687-7871 Cell (432) 238-8755

mailto:paulbrown@chevron.com

from: jamesbruc@aol.com [mailto:jamesbruc@aol.com]
Sent: Friday, April 10, 2015 2:21 PM
To: phillip.goetze@state.nm.us
Cc: Brown, Paul T (PaulBrown); matthew_phillips@eogresources.com
Subject: Objection to Chevron SWD application

Attached.

Jim Bruce

Goetze, Phillip, EMNRD

From: Goetze, Phillip, EMNRD
Sent: Tuesday, April 14, 2015 3:43 PM
To: Brown, Paul T (PaulBrown)
Cc: jamesbruc@aol.com; Jones, William V, EMNRD; McMillan, Michael, EMNRD; Dawson, Scott, EMNRD; Catanach, David, EMNRD
Subject: RE: Objection to Chevron SWD application

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Phillip R. Goetze, P.G.
Engineering and Geological Services Bureau, Oil Conservation Division
1220 South St. Francis Drive, Santa Fe, NM 87505
O: 505.476.3466 F: 505.476.3462
phillip.goetze@state.nm.us

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Subject: FW: Objection to Chevron SWD application

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Thanks,

Paul T. Brown, Petroleum Engineer
Delaware Basin Operations

Chevron North America Exploration and Production Company
MidContinent Business Unit
15 Smith Road, Midland, TX 79705
Tel (432) 687-7351 Fax (432) 687-7871 Cell (432) 238-8755

mailto:paulbrown@chevron.com

from: jamesbruc@aol.com [mailto:jamesbruc@aol.com]
Sent: Friday, April 10, 2015 2:21 PM
To: phillip.goetze@state.nm.us
Cc: Brown, Paul T (PaulBrown); matthew_phillips@eogresources.com
Subject: Objection to Chevron SWD application

Attached.

Jim Bruce

Goetze, Phillip, EMNRD

From: Brown, Paul T (PaulBrown) <PaulBrown@chevron.com>
Sent: Friday, July 10, 2015 7:27 AM
To: Goetze, Phillip, EMNRD
Subject: Chevron Midcontinent LP Bell Lake 2 State No. 1 SWD Application - Public Hearing Request

Mr. Goetze,

This is to advise that we still do not have an agreement in place between Chevron and EOG Resources which will cause EOG to withdraw their opposition to this application. Both sides are in agreement in principle on getting this accomplished, but obtaining approval from EOG has not occurred. We submitted our proposal to them on June 8th . Despite our numerous efforts of making contact by phone or email we have not received the approval or even a counter-proposal from EOG.

Chevron is currently trucking 1,500 BWPD from wells that benefit from this proposed disposal.

Chevron intends to pursue this application even if it requires a public hearing for approval.

Please schedule this application on the OCD hearing docket. We will continue to attempt to work with EOG to get this matter resolved up to the date of the hearing if necessary.

Thanks,

Paul T. Brown, Petroleum Engineer
Delaware Basin Operations

Chevron North America Exploration and Production Company
MidContinent Business Unit
15 Smith Road, Midland, TX 79705
Tel (432) 687-7351 Fax (432) 687-7871 Cell (432) 238-8755

mailto:paulbrown@chevron.com