

DATE IN <u>12-22-09</u>	SUSPENSE	ENGINEER <u>Jones</u>	LOGGED IN <u>12-22</u>	TYPE <u>SWD</u>	PTGW APP NO. <u>0935656296</u>
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ABOVE THIS LINE FOR DIVISION USE ONLY

## NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505

Yates Pet. Corp.  
255-75**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 Acronym:**

[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

Kivi ARX STATE #5  
30-025-31644

Check: One Only for [B] or [C]

- [B] Commingling - Storage - Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
Kivi ARX State #10  
30-025-36006

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

☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR
Lotus SWD #12  
30-025-37799

- [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.

Margrethe Hotter

Area Engineer

12/22/09

Print or Type Name

Signature

Title

Date

mhotter@yatespetroleumcom  
 e-mail Address

MARTIN YATES, III  
1912-1985

FRANK W. YATES  
1936-1986

S.P. YATES  
1914-2008



JOHN A. YATES  
CHAIRMAN OF THE BOARD  
PRESIDENT

JOHN A. YATES JR.  
ASSISTANT TO THE PRESIDENT

JAMES S. BROWN  
CHIEF OPERATING OFFICER

JOHN D. PERINI  
CHIEF FINANCIAL OFFICER

105 SOUTH FOURTH STREET  
ARTESIA, NEW MEXICO 88210-2118  
TELEPHONE (575) 748-1471

2009 DEC 18 PM 2 33

December 17, 2009

Will Jones  
State of New Mexico  
Oil Conservation Division  
1220 S. Saint Francis Drive  
Santa Fe, NM 87505

Re Lotus SWD #12  
Kiwi SWD #5  
Kiwi SWD #10

Dear Sirs:

Enclosed please find copies of form C-108 (Application for Authority to Inject) on said wells located in Lea County, New Mexico.

If you have any questions or need additional information, please call me at (575) 748-4361.

Sincerely,

Debbie Chavez  
Engineering Technician

Enclosure

**C-108 Application for Authorization to Inject  
Yates Petroleum Corporation  
Lotus SWD #12  
Unit B, 330' FNL & 2310' FEL, Sec. 32, T22S, R32E  
Lea County, New Mexico**

- I. The purpose of completing this well is to make a disposal well for produced Delaware Sand water into the Delaware Sand formation.**

**Yates Petroleum Corporation plans to convert this well to a water disposal well into the Delaware Sand.**

- II. Operator: Yates Petroleum Corporation  
105 South Fourth Street  
Artesia, NM 88210  
Margrethe Hotter (505) 748-4165**
- III. Well Data: See Attachment A**
- IV. This is not an expansion of an existing project.**
- V. See attached map, Attachment B.**
- VI. There are 4 wells within the area of review that penetrate the proposed injection zone (See Attachment C).**
- VII. 1. Proposed average daily injection volume approximately 2500 BWPD. Maximum daily injection volume approximately 5000 BWPD.**
- 2. This will be a closed system.**
- 3. Proposed average injection pressure –unknown.  
Proposed maximum injection pressure – 1150 psi.**
- 4. Sources of injected water would be produced water from the Delaware Sand. (Attachment D)**
- VIII. 1. The proposed injection interval is the portion of the Delaware Sand formation consisting of porous Sandstone from 5750'-6500'.**

**Application for Authorization to Inject  
Lotus SWD #12**

**-2-**

- 2. Possible Fresh water zones overlie the proposed injection formations at depths to approximately 850' or less. There are no fresh water zones underlying the formation.**
- IX. The proposed disposal interval may be acidized with 7-1/2% HCL acid, or proppant fractured.**
- X. Logs were filed at your office when the well was drilled.**
- XI. There are no windmills within a one-mile radius of the subject location.**
- XII. Yates Petroleum Corporation has examined geologic and engineering data and has found that there is no evidence of faulting in the proposed interval. (Attachment G)**
- XIII. Proof of notice.**
  - A. Certified letters sent to the surface owner and offset operators attached (Attachment E)**
  - B. Copy of legal advertisement attached. (Attachment F)**
- XIV. Certification is signed.**

**Yates Petroleum Corporation  
Lotus SWD #12  
B-32-T22S-R32E  
Lea County, New Mexico**

**Attachment A**

III. Well Data

- A.
1. Lease Name/Location  
Lotus SWD #12  
(Prev. Lotus ALT St #12)  
B-32-T22S-R32E  
330' FNL & 2310' FEL
  2. Casing Strings:
    - a. Present well condition  
13 3/8", 48# H-40 @ 865' w/865 sx (circ)  
8 5/8", 24# & 32# J-55 @ 4,527' w/1310 sx (circ).  
5 1/2", 15.5# & 17# @ 8,600' w/DV tool @ 6,207'.  
Stage 1: 800sx (circ)  
Stage 2: 450sx (TOC @ 2760 est)
    - b. Present Status:  
Non-commercial completion in Delaware at 6772'-6786', 6948'-  
6952', 6986'-6990', 7102'-7112', 7190'-7194', 7408'-7484', 7818'-  
7824', 8334'-8386'
  3. Proposed well condition:  
Casing same as above.  
CIBP @ 6722' and cap with 35' cement.  
3 1/2" 9.3 J55 or 2-7/8" 6.5 J55 plastic-coated injection tubing @ 5650'
  4. Propose to use Guiberson or Baker plastic-coated or nickel-plated packer set at 5650'.
- B.
1. Injection Formation: Delaware Sands
  2. Injection Interval will be through perforations from approximately 5750'-6500' gross interval.
  3. Well was originally drilled as a Delaware oil well. Well will be a Delaware water disposal well when work is completed.
  4. Perforations: High porosity sands between 5750'-6500'.
  5. Next higher (shallower) oil or gas zone within 2 miles-None.  
Next lower (deeper) oil or gas zone within 2 miles- Brushy Canyon

WELL NAME: Lotus SWD #12 FIELD: \_\_\_\_\_  
 LOCATION: 330' FNL & 2,310' FEL of Section 32-22S-32E Lea Co., NM  
 GL: 3,553' ZERO: \_\_\_\_\_ KB: \_\_\_\_\_  
 SPUD DATE: 6/30/06 COMPLETION DATE: \_\_\_\_\_  
 COMMENTS: API No.: 30-025-37799

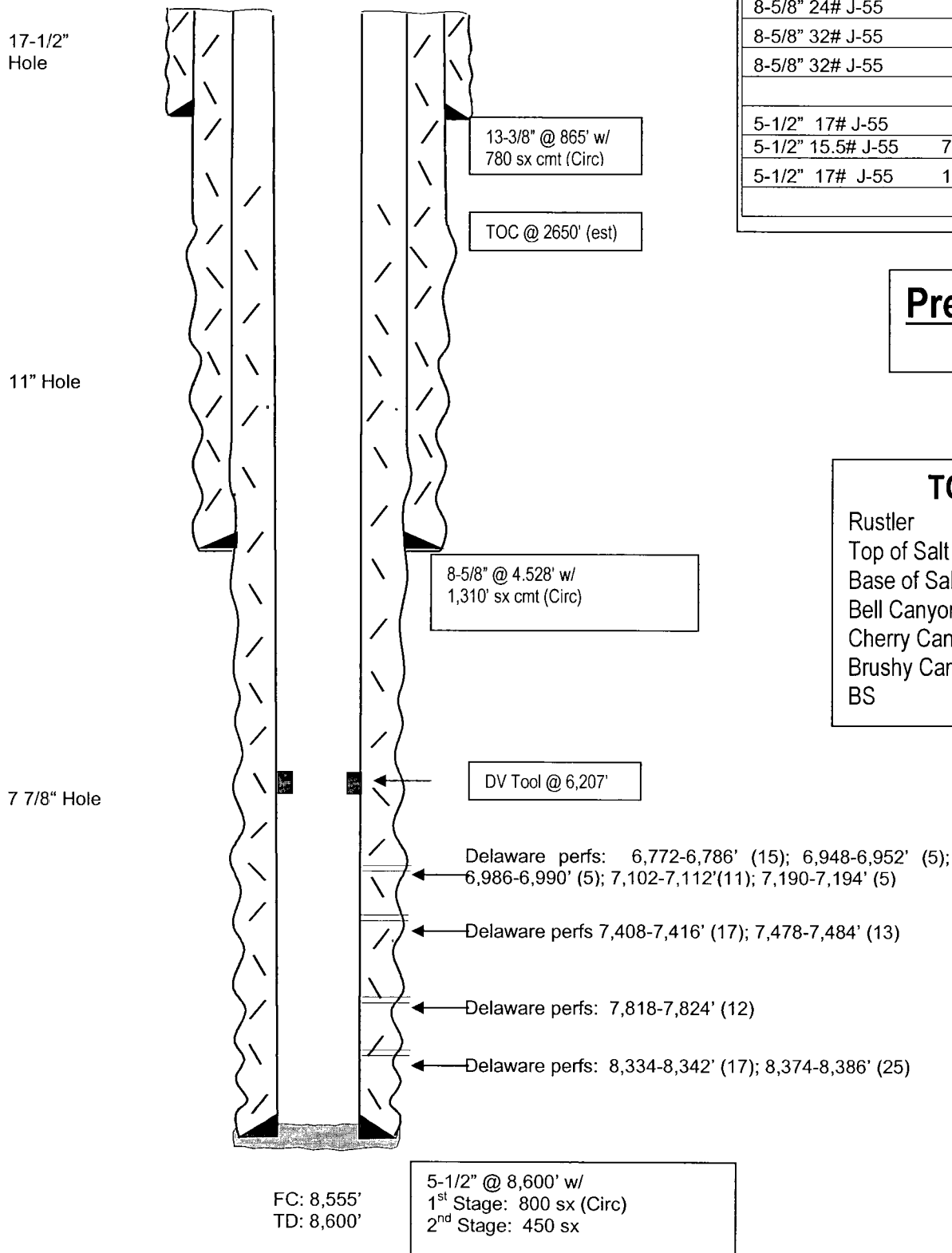
### CASING PROGRAM

13-3/8" 48# H-40		<b>865'</b>
8-5/8" 32# HCK-55	257'	
8-5/8" 24# J-55	2,016'	
8-5/8" 32# J-55	2,245'	
8-5/8" 32# J-55	43'	<b>4,527'</b>
5-1/2" 17# J-55	257'	
5-1/2" 15.5# J-55	7,076'	
5-1/2" 17# J-55	1,274'	<b>8,600'</b>

**Present**

### TOPS

Rustler	824'
Top of Salt	925'
Base of Salt	4,350'
Bell Canyon	4,683'
Cherry Canyon	5,514'
Brushy Canyon	6,708'
BS	8,517'



**Not to Scale**  
 7/27/06  
 DC/Shannon

WELL NAME: Lotus SWD #12 FIELD: \_\_\_\_\_  
 LOCATION: 330' FNL & 2,310' FEL of Section 32-22S-32E Lea Co., NM  
 GL: 3,553' ZERO: \_\_\_\_\_ KB: \_\_\_\_\_  
 SPUD DATE: 6/30/06 COMPLETION DATE: \_\_\_\_\_  
 COMMENTS: API No.: 30-025-37799

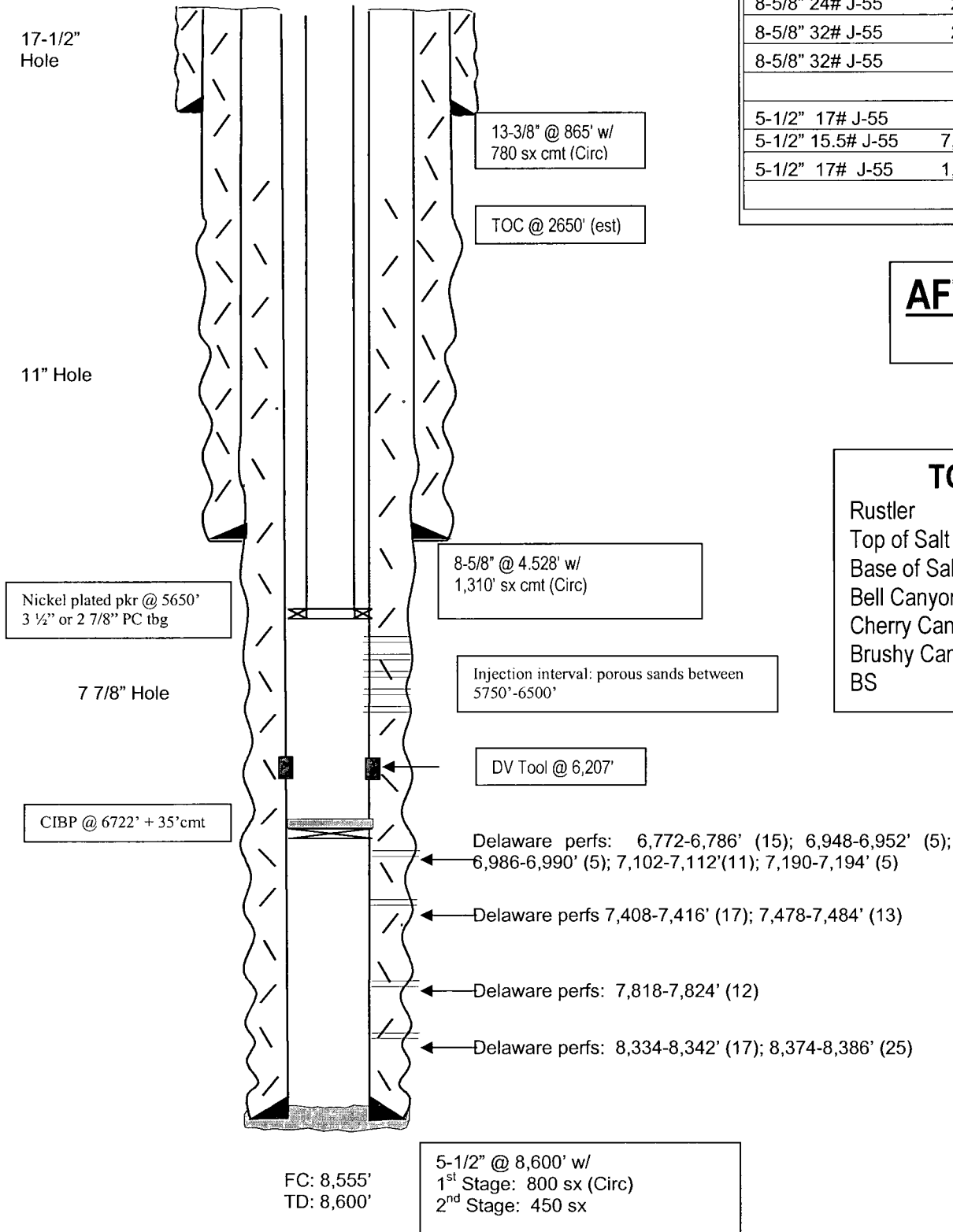
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5-1/2" 15.5# J-55	7,076'	
5-1/2" 17# J-55	1,274'	<b>8,600'</b>

**AFTER**

### TOPS

Rustler	824'
Top of Salt	925'
Base of Salt	4,350'
Bell Canyon	4,683'
Cherry Canyon	5,514'
Brushy Canyon	6,708'
BS	8,517'



**Not to Scale**  
 9/3/09  
 MMFH



Attachment "C"

Lotus SWD #12  
Form C-108

Tabulation of data on wells within area of review

Well Name	Operator	Type	Spud	Total Depth Zone	Producing Perforations	Completion Information
Lotus ALT ST #1 660FNL & 660FEL Sec 32 22S 32E	Yates Petroleum Corp	Oil	1/30/2003	8620' Delaware	6744-8518	13 3/8" @ 846' Cmtd w/700 sx (circ) 8 5/8" @ 4,510' Cmtd w/1250 sx (circ) 5 1/2" @ 8,780' Cmtd w/ Stage 1: 575 sx (TOC 5556') ✓ Stage 2: 550 sx (circ)
Lotus ALT St #2 1980FNL & 1980FEL Sec 32 22S 32E	Yates Petroleum Corp	Oil	9/19/1992	9250' Delaware	6716-8430'	13 3/8" @ 858' Cmtd w/825 sx (circ) 8 5/8" @ 4,418' Cmtd w/1250 sx (TOC 800') 5 1/2" @ 9,250" Cmtd w/ Stage 1: 100 sx (circ) ✓ Stage 2: 550 sx (circ) Stage 3: 800 sx (TOC 3826')
Lotus ALT St #3 660FNL & 1980FWL Sec 32 22S 32E	Yates Petroleum Corp	Oil	11/3/2002	8600' Delaware	6706'-8398'	13 3/8" @ 842' Cmtd w/700 sx (circ) 8 5/8" @ 4,489' Cmtd w/1250 sx (circ) ✓ 5 1/2" @ 8,600' Cmtd w/ Stage 1: 555 sx (TOC 5608') Stage 2: 550 sx (circ)
Lotus ALT St #4 990FNL & 330FWL Sec 32 22S 32E	Yates Petroleum Corp	Oil	3/24/2003	8600' Delaware	7062'-8392'	13 3/8" @ 853' Cmtd w/670 sx (circ) 8 5/8" @ 4,475' Cmtd w/1220 sx (circ) 5 1/2" @ 8,600' Cmtd w/ Stage 1: 870 sx (circ) ✓ Stage 2: 450 sx (circ)

North Permian Basin Region  
P.O. Box 740  
Sundown, TX 79372-074C  
(806) 229-8121  
Lab Team Leader - Sheila Hernandez  
(432) 495-7240

## Water Analysis Report by Baker Petrolite

Company:	YATES PETROLEUM INC	Sales RDT:	33514
Region:	PERMIAN BASIN	Account Manager:	REGGIE GUY (575) 910-9391
Area:	ARTESIA, NM	Sample #:	354147
Lease/Platform:	LOTUS 'ALT' STATE UNIT	Analysis ID #:	94689
Entity (or well #):	4	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 354147 @ 75 °F					
Sampling Date:	9/15/09	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	9/23/09	Chloride:	142320.0	4014.33	Sodium:	69489.4	3022.62
Analyst:	LEAH DURAN	Bicarbonate:	36.6	0.6	Magnesium:	2815.0	231.57
		Carbonate:	0.0	0.	Calcium:	14251.0	711.13
TDS (mg/l or g/m3):	231647.5	Sulfate:	350.0	7.29	Strontium:	1225.0	27.96
Density (g/cm3, tonne/m3):	1.15	Phosphate:			Barium:	87.0	1.27
Anion/Cation Ratio:	1	Borate:			Iron:	15.0	0.54
		Silicate:			Potassium:	1053.0	26.93
					Aluminum:		
Carbon Dioxide:	280 PPM	Hydrogen Sulfide:		0 PPM	Chromium:		
Oxygen:		pH at time of sampling:		5.7	Copper:		
Comments:		pH at time of analysis:			Lead:		
		pH used in Calculation:		5.7	Manganese:	5.500	0.2
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	-0.83	0.00	-0.43	0.00	-0.39	0.00	0.11	37.23	2.06	44.50	0.43
100	0	-0.74	0.00	-0.50	0.00	-0.40	0.00	0.08	29.67	1.86	44.22	0.51
120	0	-0.66	0.00	-0.57	0.00	-0.38	0.00	0.07	26.31	1.69	43.94	0.59
140	0	-0.57	0.00	-0.62	0.00	-0.35	0.00	0.08	26.59	1.54	43.39	0.67

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.

Attachment D  
Example of water to be disposed into  
SWD well

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:	YATES PETROLEUM INC	Sales RDT:	33514
Region:	PERMIAN BASIN	Account Manager:	REGGIE GUY (575) 910-9391
Area:	ARTESIA, NM	Sample #:	354157
Lease/Platform:	KIWI 'AKX' STATE LEASE	Analysis ID #:	94687
Entity (or well #):	3	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 354157 @ 75 °F					
Sampling Date:	9/15/09	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	9/23/09	Chloride:	177816.0	5015.54	Sodium:	81444.2	3542.62
Analyst:	LEAH DURAN	Bicarbonate:	73.2	1.2	Magnesium:	3828.0	314.91
TDS (mg/l or g/m3):	289080.9	Carbonate:	0.0	0.	Calcium:	22006.0	1098.1
Density (g/cm3, tonne/m3):	1.192	Sulfate:	774.0	16.11	Strontium:	1226.0	27.98
Anion/Cation Ratio:	1	Phosphate:			Barium:	2.5	0.04
		Borate:			Iron:	28.0	1.01
		Silicate:			Potassium:	1879.0	48.05
Carbon Dioxide:	430 PPM	Hydrogen Sulfide:		0 PPM	Aluminum:		
Oxygen:		pH at time of sampling:		5.5	Chromium:		
Comments:		pH at time of analysis:			Copper:		
		pH used in Calculation:		5.5	Lead:		
					Manganese:	4.000	0.15
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	-0.49	0.00	0.09	74.08	0.15	94.78	0.34	175.23	0.74	1.06	1.14
100	0	-0.41	0.00	0.00	2.12	0.13	84.16	0.31	165.14	0.54	0.80	1.33
120	0	-0.33	0.00	-0.07	0.00	0.14	87.62	0.30	161.43	0.37	0.80	1.51
140	0	-0.24	0.00	-0.13	0.00	0.17	103.02	0.31	163.02	0.22	0.53	1.66

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 CO<sub>2</sub> pressure is actually the calculated CO<sub>2</sub> fugacity. It is usually nearly the same as the CO<sub>2</sub> partial pressure.

Attachment D  
Example of water to be disposed  
into SWD well.

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:	YATES PETROLEUM INC	Sales RDT:	33514
Region:	PERMIAN BASIN	Account Manager:	REGGIE GUY (575) 910-9391
Area:	ARTESIA, NM	Sample #:	354152
Lease/Platform:	LOTUS 'ALT' STATE UNIT	Analysis ID #:	94688
Entity (or well #):	3	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 354152 @ 75 °F					
Sampling Date:	9/15/09	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	9/23/09	Chloride:	181989.0	5133.25	Sodium:	77172.6	3356.82
Analyst:	LEAH DURAN	Bicarbonate:	48.8	0.8	Magnesium:	4720.0	388.29
TDS (mg/l or g/m3):	294549.4	Carbonate:	0.0	0.	Calcium:	26148.0	1304.79
Density (g/cm3, tonne/m3):	1.197	Sulfate:	541.0	11.26	Strontium:	1946.0	44.42
Anion/Cation Ratio:	1	Phosphate:			Barium:	3.5	0.05
Carbon Dioxide:	400 PPM	Borate:			Iron:	24.0	0.87
Oxygen:		Silicate:			Potassium:	1952.0	49.92
Comments:		Hydrogen Sulfide:		0 PPM	Aluminum:		
		pH at time of sampling:		5.2	Chromium:		
		pH at time of analysis:			Copper:		
		pH used in Calculation:		5.2	Lead:		
					Manganese:	4.500	0.16
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	-0.93	0.00	-0.01	0.00	0.05	24.84	0.36	151.42	0.70	1.32	1.41
100	0	-0.84	0.00	-0.10	0.00	0.03	16.38	0.34	144.28	0.51	1.32	1.65
120	0	-0.76	0.00	-0.17	0.00	0.04	20.61	0.33	142.17	0.34	1.06	1.86
140	0	-0.67	0.00	-0.23	0.00	0.07	35.15	0.33	144.02	0.19	0.53	2.05

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 CO<sub>2</sub> pressure is actually the calculated CO<sub>2</sub> fugacity. It is usually nearly the same as the CO<sub>2</sub> partial pressure.

Attachment D  
Example of water to be  
disposed into SWD well

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:	YATES PETROLEUM INC	Sales RDT:	33514
Region:	PERMIAN BASIN	Account Manager:	REGGIE GUY (575) 910-9391
Area:	ARTESIA, NM	Sample #:	354158
Lease/Platform:	KIWI 'AKX' STATE LEASE	Analysis ID #:	94686
Entity (or well #):	1	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 354158 @ 75 °F					
Sampling Date:	9/15/09	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	9/23/09	Chloride:	139881.0	3945.53	Sodium:	61614.9	2680.1
Analyst:	LEAH DURAN	Bicarbonate:	85.4	1.4	Magnesium:	3256.0	267.85
TDS (mg/l or g/m3):	227088.3	Carbonate:	0.0	0.	Calcium:	18604.0	928.34
Density (g/cm3, tonne/m3):	1.152	Sulfate:	404.0	8.41	Strontium:	1504.0	34.33
Anion/Cation Ratio:	1	Phosphate:			Barium:	3.0	0.04
		Borate:			Iron:	23.0	0.83
		Silicate:			Potassium:	1709.0	43.71
					Aluminum:		
Carbon Dioxide:	480 PPM	Hydrogen Sulfide:		0 PPM	Chromium:		
Oxygen:		pH at time of sampling:		5.1	Copper:		
Comments:		pH at time of analysis:			Lead:		
		pH used in Calculation:		5.1	Manganese:	4.000	0.15
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	-1.01	0.00	-0.29	0.00	-0.25	0.00	0.24	85.83	0.63	1.13	3.69
100	0	-0.92	0.00	-0.36	0.00	-0.26	0.00	0.22	80.20	0.44	0.84	4.43
120	0	-0.84	0.00	-0.42	0.00	-0.24	0.00	0.21	78.23	0.27	0.84	5.15
140	0	-0.75	0.00	-0.46	0.00	-0.19	0.00	0.22	79.64	0.13	0.28	5.8

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.

Attachment D  
Example of water to  
be disposed into SWD well

# Affidavit of Publication

NO. 20949

STATE OF NEW MEXICO

County of Eddy:

**GARY D. SCOTT**

being duly

sworn,says: That he is the **PUBLISHER** of The

Artesia Daily Press, a daily newspaper of general circulation, published in English at Artesia, said county and county and state, and that the here to attached

## Legal Notice

was published in a regular and entire issue of the said Artesia Daily Press,a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for

1 Consecutive week/days on the same day as follows:

First Publication December 11, 2009

Second Publication \_\_\_\_\_

Third Publication \_\_\_\_\_

Fourth Publication \_\_\_\_\_

Fifth Publication \_\_\_\_\_

Subscribed and sworn to before me this

11 Day December 2009



**OFFICIAL SEAL**  
**Jo Morgan**  
**NOTARY PUBLIC-STATE OF NEW MEXICO**

My commission expires: 6/26/2012

*Jo Morgan*  
Notary Public, Eddy County, New Mexico

# Copy of Publication:

Lotus SWD #12

Legal Notice

Yates Petroleum Corporation, 105 south Fourth Street, Artesia, NM 88210, 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 Lotus SWD #12 located 330' FNL & 2310' FEL, Unit B, Section 32, Township 22 South, Range 32 East of Lea County, New Mexico, will be used for saltwater disposal. Produced waters from the Delaware Sand will be re-injected into the Delaware Sand at a depth of 5750'-6500' with a maximum pressure of 1150 psi and a maximum rate of 5000 BWP.

All interested parties opposing the aforementioned must file objections or requests 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 Margrethe Hotter at (575) 748-4165.

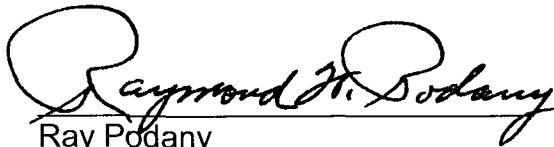
Published in the Artesia Daily Press, Artesia, NM December 11, 2009.

Legal No. 20949

**Attachment G**

C-108 Application for Authorization to Inject  
Yates Petroleum Corporation  
Lotus SWD #12  
Unit B, Section 32-T22S-R32E  
Lea County New Mexico.

Available engineering and geological data have been examined and no evidence of open faults of hydrologic connection between the disposal zone and any underground sources of drinking water has been found.

A handwritten signature in black ink, reading "Raymond H. Podany". The signature is written in a cursive style with a large, looping "R" at the beginning.

Ray Podany  
Geologist  
Yates Petroleum Corporation

12-08-09  
Date

Send notification letters to:

**1. Surface owner:**

State of New Mexico  
Commissioner of Public Lands  
P.O. Box 1148  
Santa Fe, New Mexico 87504-1148

**2. Operators:**

OXY USA Inc  
P.O. Box 27570  
Houston, TX 77227-7570

BP America Production CO.  
P.O. Box 3092  
Houston, TX 77253-3092

Chevron USA Inc  
11111 S Wilcrest Dr  
Houston, TX 77099-4310

MARTIN Y  
1912-  
FRANK V  
1936-  
S.P.  
1914

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December 10, 2009

JOHN A. YATES  
CHAIRMAN OF THE BOARD  
PRESIDENT

JOHN A. YATES JR.  
ASSISTANT TO THE PRESIDENT

JAMES S. BROWN  
CHIEF OPERATING OFFICER

JOHN D. PERINI  
CHIEF FINANCIAL OFFICER

Oxy USA, Inc.  
P.O. Box 27570  
Houston, TX 77227-7570

Re: Lotus SWD #12  
Kiwi SWD #5  
Kiwi SWD #10

Dear Sirs:

Enclosed please find copies of form C-108 (Application for Authority to Inject) on said wells located in Lea County, New Mexico.

If you have any questions or need additional information, please call me at (575) 748-4361.

Sincerely,

*Debbie Chavez*

Debbie Chavez  
Engineering Technician

Enclosures

KATHY H. PORTER  
SECRETARY

DENNIS G. KINSEY  
TREASURER

MARTIN YATES  
1912-1998  
FRANK W. YATES  
1936-1998  
S.P. YATES  
1914-2000

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December 8, 2009

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10-2118

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PRESIDENT

JOHN A. YATES JR.  
ASSISTANT TO THE PRESIDENT

JAMES S. BROWN  
CHIEF OPERATING OFFICER

JOHN D. PERINI  
CHIEF FINANCIAL OFFICER

State of New Mexico  
Commissioner of Public Lands  
P.O. Box 1148  
Santa Fe, NM 87504-1148

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Kiwi SWD #5  
Kiwi SWD #10

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Sincerely,

Debbie Chavez  
Engineering Technician

Enclosures

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Total Postage: *7.34* **Chevron USA, Inc.**  
Sent To: 11111 S. Wilcrest Drive  
Houston, TX 77099-4310  
City, State, ZIP+4®  
*Debbie C.*

Postmark Here  
ARTESIA, N.M.  
DEC 10 2009  
USPS 88210

Form 3800, August 2008 See Reverse for Instructions

**ROLEUM CORPORATION**  
8TH STREET  
PO 88210-2118  
748-1471

JOHN A. YATES  
CHAIRMAN OF THE BOARD  
PRESIDENT

JOHN A. YATES JR.  
ASSISTANT TO THE PRESIDENT

JAMES S. BROWN  
CHIEF OPERATING OFFICER

JOHN D. PERINI  
CHIEF FINANCIAL OFFICER

Chevron USA, Inc.  
11111 S. Wilcrest Drive  
Houston, TX 77099-4310

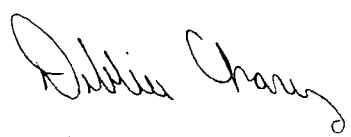
Re: Lotus SWD #12  
Kiwi SWD #5  
Kiwi SWD #10

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Sincerely,



Debbie Chavez  
Engineering Technician

Enclosures

MARTIN YATES, I  
1912-1995  
FRANK W. YATES  
1935-1986  
S.P. YATES  
1914-2008

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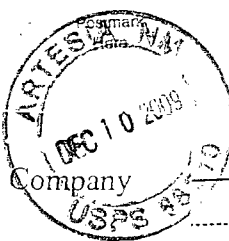
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P.O. Box 3092  
Houston, TX 77253-3092

Street, Apt. or PO Box  
City, State.

PS Form 3800, August 2005. See Reverse for Instructions.



JOHN A. YATES  
CHAIRMAN OF THE BOARD  
PRESIDENT

JOHN A. YATES JR.  
ASSISTANT TO THE PRESIDENT

JAMES S. BROWN  
CHIEF OPERATING OFFICER

JOHN D. PERINI  
CHIEF FINANCIAL OFFICER

Decer. 10, 2009

BP America Production Company  
P.O. Box 3092  
Houston, TX 77253-3092

Re: Lotus SWD #12  
Kiwi SWD #5  
Kiwi SWD #10

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Sincerely,

*Debbie Chavez*

Debbie Chavez  
Engineering Technician

Enclosures

MARTIN  
1912 9413  
FRANK  
1936 5028  
S. P.  
1914 0000  
7007 2680 0000

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Houston, TX 77210-4610

City, State, ZIP+4

ARTEZIA NM  
DEC 10 2009  
USPS 83210

See Reverse for Instructions

**EUM  
INATION**

REET  
8210-2118  
1471

JOHN A. YATES  
CHAIRMAN OF THE BOARD  
PRESIDENT

JOHN A. YATES JR.  
ASSISTANT TO THE PRESIDENT

JAMES S. BROWN  
CHIEF OPERATING OFFICER

JOHN D. PERINI  
CHIEF FINANCIAL OFFICER

Exxon Mobil Production Company  
P.O. Box 4610  
Houston, TX 77210-4610

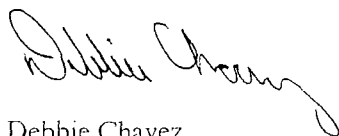
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Kiwi SWD #5  
Kiwi SWD #10

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Sincerely,



Debbie Chavez  
Engineering Technician

Enclosures

MARTIN YATES  
1912-1985  
FRANK W. YATES  
1926-1986  
S.P. YATES  
1914-2008

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P.O. Box 1030  
Roswell, NM 88202

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PS Form 3800, August 2006 See Reverse for Instructions

**JM  
TION**

0-2118

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PRESIDENT

JOHN A. YATES JR.  
ASSISTANT TO THE PRESIDENT

JAMES S. BROWN  
CHIEF OPERATING OFFICER

JOHN D. PERINI  
CHIEF FINANCIAL OFFICER

Strata Production Company  
P.O. Box 1030  
Roswell, NM 88202

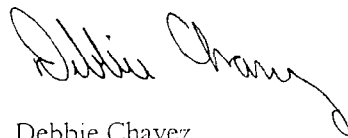
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Kiwi SWD #5  
Kiwi SWD #10

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Sincerely,



Debbie Chavez  
Engineering Technician

Enclosure

# Injection Permit Checklist (11/30/09)

Case \_\_\_\_\_ R- \_\_\_\_\_ SWD 1198 WFX \_\_\_\_\_ PMX \_\_\_\_\_ IPI \_\_\_\_\_ Permit Date \_\_\_\_\_ UIC Qtr (J/F/M)  
 # Wells 1 Well Name: LOTUS SWD #12 (was LOTUS ALT SWD #12)  
 API Num: (30-) 025-37799 Spud Date: 2006 New/Old: N (UIC primacy March 7, 1982)  
 Footages 330 FNL/2310 FEL Unit B Sec 32 Tsp 225 Rge 32E County Lea  
 Operator: Yota Petroleum Corp Contact Margaret Foster  
 OGRID: 25575 RULE 5.9 Compliance (Wells) 5/2428 (Finan Assur) OK OK  
 Operator Address: 105 S. 4th St, ARIZONA NM 8820  
 Location and Current Status: NON-commercial Del (6,772-8386)

Planned Work to Well:

Planned Tubing Size/Depth: 2 1/2" @ 5650

	Sizes Hole.....Pipe	Setting Depths	Cement Sx or Cf	Cement Top and Determination Method
Existing <input checked="" type="checkbox"/> Surface	<u>12 1/8" 21 3/8"</u>	<u>865</u>	<u>865</u>	<u>CIRC</u>
Existing <input checked="" type="checkbox"/> Intermediate	<u>11" 8 5/8"</u>	<u>4527</u>	<u>1310</u>	<u>CIRC</u>
Existing <input checked="" type="checkbox"/> Long String	<u>7 7/8" 5 1/2"</u>	<u>8600</u>	<u>800/450</u>	<u>CIRC/276 EST.</u>

DV Tool 6207 Liner \_\_\_\_\_ Open Hole \_\_\_\_\_ Total Depth 8600

Well File Reviewed \_\_\_\_\_

Diagrams: Before Conversion ☒ After Conversion ☒ Elogs in Imaging File: CBL/XL/LOT/DL

Intervals:	Depths	Formation	Producing (Yes/No)
Above (Name and Top)	<u>4683</u>	<u>Bell C. T.P</u>	
Above (Name and Top)	<u>5514</u>	<u>Cherry C. T.P</u>	
Injection.....	<u>5750</u>	<u>Cherry Del</u>	<u>NO</u>
Interval TOP:	<u>6500</u>	<u>Cherry Del</u>	<u>NO</u>
Interval BOTTOM:	<u>6708</u>	<u>Bruce C. T.P</u>	
Below (Name and Top)			

SOUTH of Reef

150 PSI Max. WHIP  
 \_\_\_\_\_ Open Hole (Y/N)  
 \_\_\_\_\_ Deviated Hole?

Sensitive Areas: Capitan Reef Cliff House Salt Depths 925-4350

..... Potash Area (R-111-P) \_\_\_\_\_ Potash Lessee \_\_\_\_\_ Noticed? \_\_\_\_\_

Fresh Water: Depths: 0-950 Wells Nine Analysis? \_\_\_\_\_ Affirmative Statement ☒

Disposal Fluid Sources: \_\_\_\_\_ Analysis? \_\_\_\_\_

Disposal Interval Production Potential/Testing/Analysis Analysis: Log analysis, never Tested

Notice: Newspaper(Y/N) ☒ Surface Owner SLC Mineral Owner(s) \_\_\_\_\_

RULE 26.7(A) Affected Parties: OTY/BP/Chevron

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

Active Wells 4 Num Repairs 0 Producing in Injection Interval in AOR NO

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

Questions to be Answered:

Required Work on This Well: \_\_\_\_\_ Request Sent \_\_\_\_\_ Reply: \_\_\_\_\_

AOR Repairs Needed: \_\_\_\_\_ Request Sent \_\_\_\_\_ Reply: \_\_\_\_\_

Request Sent \_\_\_\_\_ Reply: \_\_\_\_\_