

## Jones, William V., EMNRD

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**From:** Slack, Ronnie [Ronnie.Slack@dvn.com]  
**Sent:** Friday, October 22, 2010 1:44 PM  
**To:** Jones, William V., EMNRD  
**Subject:** Cotton Draw Unit 81\_SWD 1248\_30-015-29345 Fresh Water Analysis on offset  
**Attachments:** Fresh Water Analysis\_2-25S-31E\_SWD-1248.pdf

Will,

Attached is a fresh water analysis pertaining to Devon's Cotton Draw Unit 81\_SWD 1248. Let me know if you need anything else.

Thanks,  
Ronnie

*Ronnie Slack*  
Operations Technician  
Devon Energy Corporation  
CT 3.033  
(405) 552-4615 (office)  
(405) 552-1415 (fax)  
Email: [Ronnie.Slack@dvn.com](mailto:Ronnie.Slack@dvn.com)

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**From:** Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]  
**Sent:** Wednesday, October 20, 2010 2:03 PM  
**To:** Slack, Ronnie  
**Subject:** RE: Approved disposal application from Devon: Cotton Draw Unit #81 30-015-29345 Bell Canyon and Cherry Canyon disposal from 4541 to 5734 feet

Thanks for this and this info.

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**From:** Slack, Ronnie [mailto:Ronnie.Slack@dvn.com]  
**Sent:** Wednesday, October 20, 2010 12:49 PM  
**To:** Jones, William V., EMNRD  
**Subject:** RE: Approved disposal application from Devon: Cotton Draw Unit #81 30-015-29345 Bell Canyon and Cherry Canyon disposal from 4541 to 5734 feet

Thanks Will. I am waiting for a fresh water analysis from a well in Sec 2-T25S-31 and will forward that when I get it from the field. You had requested this in your email dated 9/30/10.

FYI...In our original submittal, I had looked for fresh water wells in the categories of domestic, livestock, and municipal water supplies. None were listed on the State Engineers Web Site. However there were some listed under the Com (commercial) category. They were reportedly used as water supply for drilling operations and water for cattle.

Thanks again,

*Ronnie Slack*  
Operations Technician  
Devon Energy Corporation  
CT 3.033  
(405) 552-4615 (office)

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**From:** Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]  
**Sent:** Wednesday, October 20, 2010 11:32 AM  
**To:** Slack, Ronnie  
**Cc:** Brooks, David K., EMNRD; Dade, Randy, EMNRD; Gray, Darold, EMNRD; Jay\_Spielman@blm.gov; Albers, Jeff J.; llrwb@austin.rr.com  
**Subject:** Approved disposal application from Devon: Cotton Draw Unit #81 30-015-29345 Bell Canyon and Cherry Canyon disposal from 4541 to 5734 feet

SWD-1248 has been signed approved by the Director and will soon be scanned and available for you to download from the Division's imaging site.

Regards,

William V Jones, P.E.  
Engineering, Oil Conservation Division  
1220 South St. Francis Drive, Santa Fe, NM 87505  
Tel 505.476.3448 ~ Fax 505.476.3462



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**Fresh Water Analysis Report**  
**Paddock Delaware Water Field Well #9**  
**SE/NE SEC 2-T25S-R31E**  
**Lat 32° 03.723' Long -103° 44.852'**  
**(Pertaining to Devon-Cotton Draw Unit 81\_SWD-1248)**  
**30-015-29345**

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:	33521 1
Region:	PERMIAN BASIN	Account Manager:	GENE ROGERS (575) 910-1022
Area:	ARTESIA, NM	Sample #:	496517
Lease/Platform:	SIERRA FRESH WATER	Analysis ID #:	103888
Entity (or well #):	DEVON	Analysis Cost:	\$90.00
Formation:	UNKNOWN		
Sample Point:	PRESSURE PUMP		

Summary		Analysis of Sample 496517 @ 75 F											
		Anions		mg/l		meq/l		Cations		mg/l		meq/l	
Sampling Date:	10/14/10	Chloride:	1060.0		29.9	Sodium:	682.8		29.7				
Analysis Date:	10/21/10	Bicarbonate:	109.8		1.8	Magnesium:	163.0		13.41				
Analyst:	LEAH DURAN	Carbonate:	0.0		0.	Calcium:	669.0		33.38				
TDS (mg/l or g/m3):	4879.5	Sulfate:	2175.0		45.28	Strontium:	10.0		0.23				
Density (g/cm3, tonne/m3):	1.004	Phosphate:				Barium:	0.1		0.				
Anion/Cation Ratio:	1.0000001	Borate:				Iron:	0.8		0.03				
		Silicate:				Potassium:	9.0		0.23				
Carbon Dioxide:	50 PPM	Hydrogen Sulfide:				Aluminum:							
Oxygen:		pH at time of sampling:			7	Chromium:							
Comments:		pH at time of analysis:				Copper:							
		pH used in Calculation:			7	Lead:							
						Manganese:	0.025		0.				
						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
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0	-0.10	0.00	0.00	0.00	-0.07	0.00	-0.16	0.00	0.99	0.00	0.13
100	0	0.02	0.35	-0.01	0.00	-0.01	0.00	-0.16	0.00	0.84	0.00	0.17
120	0	0.15	2.44	0.00	0.00	0.07	98.71	-0.14	0.00	0.71	0.00	0.22
140	0	0.29	4.53	0.01	21.28	0.18	225.68	-0.11	0.00	0.61	0.00	0.26

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.