HOLLAND&HART LLP

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April 17, 2015

VIA HAND DELIVERY

David R. Catanach, Director
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Dept.
1220 South St. Francis Drive
Santa Fe, NM 87504

Re: SWD-1444: Paladin Energy Corporation – South Vacuum Unit Well No. 274
Notice of intent to utilize well for commercial disposal operations

Dear Mr. Catanach:

SWD-144 (dated October 8, 2013) authorizes Paladin Energy Corporation to utilize its South Vacuum Unit Well No. 274 (API 30-025-37122), located 960 FSL and 693 FEL (Unit P) of Section 27, T-18-S, R-35-E in Lea County, for disposal of "oil field produced water (UIC Class II only) into the Mississippian formations (including the Chester formation) and Devonian formation through perforations from approximately 10858 feet to 12400 feet." This well is currently injecting produced water from the McKee, Devonian, and Silurian formations as a result of Paladin's offsetting development operations.

Paladin hereby notifies the Division that it intends to utilized this well for commercial disposal operations and anticipates disposal of water from the Bone Spring, Wolfcamp and Yeso formations. Accordingly, enclosed please find an analysis of the formation waters for the Devonian, Wolfcamp, Bone Spring and Yeso formations. A copy of this notice has been provided to the New Mexico State Land Office as the surface owner, as well as the Division's district office.

Thank you for your attention to this matter

Sincerely,

Michael H. Feldewert

cc: Will Jones, New Mexico Oil Conservation Division
Terry Warnell, New Mexico State Land Office
Maxey G. Brown, New Mexico Oil Conservation Division, Hobbs District Office

Catalyst Oilfield Services
11999 E Hwy 158
Gardendale, TX 79758
(432) 563-0727
Fax: (432) 224-1038

Water Analysis Report

Customer:	Paladin Energy	Sample #:	27313
Area:	Permian Basin	Analysis ID #:	25870
Lease:	South Vacuum		
Location:	26-1 (Wolfcamp) 0		
Sample Point:	Wellhead		

Sampling Date:	4/6/2015
Analysis Date:	4/10/2015
Analyst:	Catalyst
TDS (mg/l or g/m3):	154323.6
Density (g/cm3):	1.106
Hydrogen Sulfide:	17
Carbon Dioxide:	140
Comments:	

Anions	mg/l	meq/l
Chloride:	**93271.1**	**2630.84**
Bicarbonate:	**146.0**	**2.39**
Carbonate:		
Sulfate:	**700.0**	**14.57**
Borate*:	**189.0**	**1.19**

***Calculated based on measured elemental boron.**

pH at time of sampling:	6.87
pH at time of analysis:	
pH used in Calculation:	**6.87**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	**52410.0**	**2279.71**
Magnesium:	**988.5**	**81.32**
Calcium:	**4959.0**	**247.46**
Potassium:	**1475.0**	**37.72**
Strontium:	**185.0**	**4.22**
Barium:	**0.0**	**0.**
Iron:	**0.0**	**0.**
Manganese:	**0.000**	**0.**

Conductivity (micro-ohms/cm):	**182300**
Resistivity (ohm meter):	**.0549**

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4 * 2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.44	6.03	-0.49	0.00	-0.49	0.00	-0.20	0.00	0.00	0.00
100	0.50	7.54	-0.56	0.00	-0.49	0.00	-0.23	0.00	0.00	0.00
120	0.55	9.05	-0.61	0.00	-0.46	0.00	-0.24	0.00	0.00	0.00
140	0.60	10.86	-0.66	0.00	-0.42	0.00	-0.24	0.00	0.00	0.00
160	0.66	12.67	-0.69	0.00	-0.35	0.00	-0.24	0.00	0.00	0.00
180	0.71	14.78	-0.72	0.00	-0.27	0.00	-0.23	0.00	0.00	0.00
200	0.77	16.89	-0.75	0.00	-0.17	0.00	-0.21	0.00	0.00	0.00
220	0.83	19.00	-0.77	0.00	-0.06	0.00	-0.19	0.00	0.00	0.00

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Water Analysis Report

Customer:	Paladin Energy	Sample #:	27312
Area:	Permian Basin	Analysis ID #:	25890
Lease:	South Vacuum		
Location:	35-4 (Devonian) 0		
Sample Point:	Wellhead		

Sampling Date:	4/6/2015
Analysis Date:	4/10/2015
Analyst:	Catalyst
TDS (mg/l or g/m3):	44701.1
Density (g/cm3):	1.032
Hydrogen Sulfide:	306
Carbon Dioxide:	80
Comments:	

Anions	mg/l	meq/l
Chloride:	**26148.7**	**737.56**
Bicarbonate:	**366.0**	**6.**
Carbonate:		
Sulfate:	**1020.0**	**21.24**
Borate*:	**62.4**	**0.39**

***Calculated based on measured elemental boron.**

pH at time of sampling:	6.92
pH at time of analysis:	
pH used in Calculation:	**6.92**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	**13960.0**	**607.23**
Magnesium:	**365.4**	**30.06**
Calcium:	**2363.0**	**117.91**
Potassium:	**350.1**	**8.95**
Strontium:	**65.5**	**1.5**
Barium:	**0.0**	**0.**
Iron:	**0.0**	**0.**
Manganese:	**0.000**	**0.**

Conductivity (micro-ohms/cm):	**66700**
Resistivity (ohm meter):	**.1499**

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4*2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.58	27.83	-0.35	0.00	-0.40	0.00	-0.11	0.00	0.00	0.00
100	0.68	33.20	-0.38	0.00	-0.36	0.00	-0.11	0.00	0.00	0.00
120	0.78	39.23	-0.39	0.00	-0.30	0.00	-0.10	0.00	0.00	0.00
140	0.89	45.27	-0.40	0.00	-0.21	0.00	-0.08	0.00	0.00	0.00
160	0.99	51.30	-0.40	0.00	-0.11	0.00	-0.06	0.00	0.00	0.00
180	1.10	57.01	-0.40	0.00	0.01	5.70	-0.03	0.00	0.00	0.00
200	1.20	62.71	-0.39	0.00	0.14	121.05	0.00	0.34	0.00	0.00
220	1.31	68.07	-0.37	0.00	0.28	216.28	0.04	4.02	0.00	0.00

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Water Analysis Report

Customer:	Paladin Energy	Sample #:	27314
Area:	Permian Basin	Analysis ID #:	25891
Lease:	Dopplebock		
Location:	8 St Com 1H (Bone Springs) 0		
Sample Point:	Wellhead		

Sampling Date:	3/7/2015
Analysis Date:	4/10/2015
Analyst:	Catalyst
TDS (mg/l or g/m3):	230045.9
Density (g/cm3):	1.159
Hydrogen Sulfide:	17
Carbon Dioxide:	310
Comments:	

Anions	mg/l	meq/l
Chloride:	**141262.3**	**3984.49**
Bicarbonate:	**122.0**	**2.**
Carbonate:		
Sulfate:	**240.0**	**5.**
Borate*:	**283.1**	**1.79**

***Calculated based on measured elemental boron.**

pH at time of sampling:	6.13
pH at time of analysis:	
pH used in Calculation:	**6.13**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	**66600.0**	**2896.94**
Magnesium:	**3325.0**	**273.53**
Calcium:	**14840.0**	**740.52**
Potassium:	**2696.0**	**68.95**
Strontium:	**675.8**	**15.43**
Barium:	**0.0**	**0.**
Iron:	**1.6**	**0.06**
Manganese:	**0.147**	**0.01**

Conductivity (micro-ohms/cm):	**230000**
Resistivity (ohm meter):	**.0435**

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4*2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.12	2.25	-0.58	0.00	-0.55	0.00	-0.31	0.00	0.00	0.00
100	0.20	3.65	-0.66	0.00	-0.55	0.00	-0.34	0.00	0.00	0.00
120	0.28	5.34	-0.72	0.00	-0.54	0.00	-0.34	0.00	0.00	0.00
140	0.36	6.74	-0.77	0.00	-0.50	0.00	-0.34	0.00	0.00	0.00
160	0.45	8.43	-0.81	0.00	-0.44	0.00	-0.33	0.00	0.00	0.00
180	0.54	10.39	-0.85	0.00	-0.36	0.00	-0.32	0.00	0.00	0.00
200	0.64	12.36	-0.88	0.00	-0.27	0.00	-0.30	0.00	0.00	0.00
220	0.74	14.33	-0.90	0.00	-0.17	0.00	-0.27	0.00	0.00	0.00

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Water Analysis Report

Customer:	Paladin Energy	Sample #:	27315
Area:	Permian Basin	Analysis ID #:	25892
Lease:	Bae		
Location:	14 Fed Com 7H (Yeso) 0		
Sample Point:	Wellhead		

Sampling Date:	3/7/2015
Analysis Date:	4/10/2015
Analyst:	Catalyst
TDS (mg/l or g/m3):	318408.1
Density (g/cm3):	1.219
Hydrogen Sulfide:	17
Carbon Dioxide:	1100
Comments:	

Anions	mg/l	meq/l
Chloride:	**195252.1**	**5507.35**
Bicarbonate:	**195.0**	**3.2**
Carbonate:		
Sulfate:	**340.0**	**7.08**
Borate*:	**492.7**	**3.11**

***Calculated based on measured elemental boron.**

pH at time of sampling:	6.45
pH at time of analysis:	
pH used in Calculation:	**6.45**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	**96940.0**	**4216.65**
Magnesium:	**3267.0**	**268.76**
Calcium:	**19710.0**	**983.53**
Potassium:	**1792.0**	**45.83**
Strontium:	**419.3**	**9.57**
Barium:	**0.0**	**0.**
Iron:	**0.0**	**0.**
Manganese:	**0.000**	**0.**

Conductivity (micro-ohms/cm):	**242000**
Resistivity (ohm meter):	**.0413**

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4*2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.93	17.35	-0.28	0.00	-0.20	0.00	-0.51	0.00	0.00	0.00
100	0.98	18.90	-0.38	0.00	-0.23	0.00	-0.54	0.00	0.00	0.00
120	1.03	20.20	-0.46	0.00	-0.24	0.00	-0.55	0.00	0.00	0.00
140	1.08	22.01	-0.53	0.00	-0.22	0.00	-0.55	0.00	0.00	0.00
160	1.12	23.56	-0.60	0.00	-0.18	0.00	-0.54	0.00	0.00	0.00
180	1.17	25.64	-0.65	0.00	-0.12	0.00	-0.53	0.00	0.00	0.00
200	1.21	27.45	-0.70	0.00	-0.05	0.00	-0.51	0.00	0.00	0.00
220	1.26	29.52	-0.75	0.00	0.03	9.06	-0.48	0.00	0.00	0.00

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Water Analysis Report

Customer:	Paladin Energy	Sample #:	27316
Area:	Permian Basin	Analysis ID #:	25893
Lease:	Caswell		
Location:	23 Fed 3H (Yeso) 0		
Sample Point:	Wellhead		

Sampling Date:	3/7/2015
Analysis Date:	4/10/2015
Analyst:	Catalyst
TDS (mg/l or g/m3):	253462
Density (g/cm3):	1.174
Hydrogen Sulfide:	17
Carbon Dioxide:	270
Comments:	

Anions	mg/l	meq/l
Chloride:	**154128.9**	**4347.42**
Bicarbonate:	**317.0**	**5.2**
Carbonate:		
Sulfate:	**720.0**	**14.99**
Borate*:	**281.7**	**1.78**

***Calculated based on measured elemental boron.**

pH at time of sampling:	6.85
pH at time of analysis:	
pH used in Calculation:	**6.85**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	**85150.0**	**3703.82**
Magnesium:	**1856.0**	**152.68**
Calcium:	**9625.0**	**480.29**
Potassium:	**1156.0**	**29.56**
Strontium:	**227.4**	**5.19**
Barium:	**0.0**	**0.**
Iron:	**0.0**	**0.**
Manganese:	**0.000**	**0.**

Conductivity (micro-ohms/cm):	**227000**
Resistivity (ohm meter):	**.0441**

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4 \cdot 2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	1.18	33.53	-0.24	0.00	-0.19	0.00	-0.31	0.00	0.00	0.00
100	1.20	36.00	-0.33	0.00	-0.21	0.00	-0.34	0.00	0.00	0.00
120	1.22	38.48	-0.41	0.00	-0.21	0.00	-0.36	0.00	0.00	0.00
140	1.23	40.95	-0.48	0.00	-0.19	0.00	-0.36	0.00	0.00	0.00
160	1.24	43.97	-0.53	0.00	-0.14	0.00	-0.36	0.00	0.00	0.00
180	1.26	47.00	-0.58	0.00	-0.08	0.00	-0.35	0.00	0.00	0.00
200	1.29	50.02	-0.63	0.00	-0.01	0.00	-0.34	0.00	0.00	0.00
220	1.33	53.04	-0.67	0.00	0.08	49.47	-0.33	0.00	0.00	0.00