State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

John Bemis
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey
Division Director
Oil Conservation Division

October 1, 2012

Paul Marken
Completion Supervisor
Referred to Dollie Busse
ConocoPhillips Company
San Juan Business Unit
Phone: (505) 326-9837
Email: Dollie.L.Busse@conocophillips.com

Dear Ms. Busse,

The Oil Conservation Division ("Division") is in receipt of your request to beneficially use produced water to fracture treat the Davis A Federal #1P API # 30-045-35290, UL-M, Sec 25, Twn 30N, R11W. In granting this beneficial use the Division agrees and requires that:

1. The aquifer is an exempted aquifer because it does not currently serve as a source of drinking water, and that cannot now and will not in the foreseeable future serve as a source of drinking water because it is hydrocarbon producing. 19.15.2.7.E.5 NMAC
2. One of the water samples from the producing wells adjacent to Davis A Federal #1P has atypically low TDS for the San Juan Basin.
3. The produced water ConocoPhillips proposes to use for well stimulation averages less than 14,500 ppm TDS.
4. The produced water ConocoPhillips proposes to use in its pilot test is less than the TDS of the fluid used in a standard conventional well stimulation.
5. Notification is required to be given to the district office 24-72hrs prior to the commencement of hauling the produced water and shall include a schedule with beginning and ending dates.
6. All trucks hauling produced water to the location must have a copy of their approved C-133 and a copy of this letter in the truck.
7. This letter is to be in the trucks authorized to haul the produced water only for the time period supplied in the required notification.
8. Conoco is only authorized to haul water from downstream of the Vasely SWD #2 (API # 30-045-29936) second stage filtration system, which can be loaded into the trucks at the Vasely SWD #2 facility or the Mar Vista SWD #1 (API # 30-045-35126) facility.

9. Conoco is required to keep a log of the loads of produced water taken to the location and have it available upon request.

10. This approval will expire on October 30th , 2012

If you have any further questions, please feel free to contact Brandon Powell at BP Brandon.Powell@state.nm.us or 505-334-6178 xt 116.

Sincerely,

Charlie Perrin
Aztec District Manager
1000 Rio Brazos Road
Aztec, NM 87410

Powell, Brandon, EMNRD

Subject: FW: Produced Water Well Notification

From: Busse, Dollie L [mailto:Dollie.L.Busse@conocophillips.com]
Sent: Friday, September 28, 2012 6:19 AM
To: Powell, Brandon, EMNRD
Subject: Produced Water Well Notification

Going forward, to ensure that ConocoPhillips complies with the requirements to utilize produced water, ConocoPhillips will be the party notifying the OCD via email 24 hours prior to hauling water, rather than the trucking company. In addition, ConocoPhillips will provide mandatory training for all water hauling contractors on the produced water hauling process to make certain the proper notification is made and logs are available upon request.

Please let us know if you have any questions or need additional information.

Thank you,

Dollie L. Busse
ConocoPhillips Company-SJBU
Regulatory
Staff Regulatory Tech
505-324-6104
505-599-4062 (fax)
Dollie.L.Busse@conocophillips.com

"We can judge the heart of a man by his treatment of animals" ~ Immanual Kant

BP
In Response to failure to properly notify on the Calloway LS #2A

ConocoPhillips

San Juan

Request for Alternative Use of Produced Water

Davis A Federal #1 P

API # 3004535290
T30N R11W Sec 25 Unit M
36° 47' 6.641"N 107° 56' 44.966" W

September 4, 2012

Submitted by:

Paul Marken
Completion Supervisor

4 SEPTEMBER 2012

Please reply to: Dollie Busse at (505) 324-6104
Or: Dollie.L.Busse@conocophillips.com

Request for Alternative Use of Produced Water

1. COPC wishes to use 100% produced water as a base fluid for our stimulation of the Davis A Federal #1P. Plans are to use only this water to stimulate the Dakota and Mesa Verde zones. The stimulation job will be completed no later than October 30, 2012.

2. The source of the produced water for this alternative use pilot test will be the Vasaly SWD #2. The water will be taken downstream from the second stage filtration, just upstream from the injection wellhead. This treated and filtered water will be transferred by pipeline to two 500 Bbl holding tanks located on the Mar Vista SWD #1 site. Vacuum trucks will then haul this water to the Davis A Federal #1P. This will be a mixture of produced water from Dakota, Mesa Verde, Pictured Cliffs and Fruitland formations. Historic water sample from the Vasaly SWD #2 have averaged less than 14,500 ppm TDS. Our standard stimulation fluid, 2% KCl, averages over 21,000 ppm TDS. Analysis of water from Vasaly SWD #2 sampled on 21 August 2012 is attached as Appendix A. The Vasaly SWD #2 is 100% owned by ConocoPhillips.

3. We do not anticipate any compatibility issues using water from Vasaly SWD #2 to fracture stimulate Davis A Federal #1P. The bulk of the water transported to Vasaly SWD #2 originates from the same formations we will be stimulating. API analyses of water from Vasaly SWD #2 indicate negligible scaling tendencies. Water samples from the Bruington GC #1E, Bruington LS #4P, and Marx Fed #1M, which are near Davis A Federal #1P and are completed in some of the same target formations (Dk, MV) as Davis A Federal #1P, were analyzed for compatibility with the Vasaly SWD #2 water sample. The analysis was performed at three different mix ratios (25% / 75%, 50% / 50%, 75% / 25%). This analysis indicates negligible scaling tendencies at all mix ratios. These water sample analyses are available upon request.

4. A list of the wells disposing of water at the Vasaly SWD #2 is available upon request.

5. We anticipate that we will use approximately 4,400 bbls of water to stimulate this well.

6. We will be storing the produced water on location in eleven (11) 400 bbl frac tanks.

7. All fluids flowed back after the stimulation will be contained in a flowback tank then transported to an approved disposal facility.

APPENDIX A

Water Analysis Vasaly SWD #2

Baker Hughes

Production Water Analysis for

ConocoPhillips FARMINGTON, Vasaly SWD #2 ,Drilling

Representative: Sheperd, Dave

Sample Date: 08/21/2012	**Lab Test No: 2012125753**	
Specific Gravity:	1.013	
TDS:	17770	
pH:	6.26	
Cations	**mg/L**	**as:**
Calcium:	131	Ca
Magnesium:	28	Mg
Sodium:	6091	Na
Iron:	6.57	Fe
Barium:	9.21	Ba
Strontium:	20	Sr
Manganese:	0.74	Mn
Anions	**mg/L**	**as:**
Bicarbonate:	1342	HCO3
Carbonate:	0	CO3
Sulfate:	650	SO4
Chloride:	9400	Cl
Gases:	**mg/L**	**as:**
Carbon Dioxide:	50	CO2
Hydrogen Sulfide:	17	H2S
Lab Comments:		
Sales Comments:		

DownHole SAT Scale Prediction: 70

Mineral Scale	**Saturation Index**	**Momentary Excess (lbs/1000 bbls)**
Calcite (CaCO3)	0.19	-1.72
Strontianite (SrCO3)	0.12	-3.88
Anhydrite (CaSO4)	0.03	-2850.49
Gypsum (CaSO4*2H2O)	0.04	-2337.66
Barite (BaSO4)	165.99	15.56
Celestite (SrSO4)	0.18	-159.09
Siderite (FeCO3)	17.36	0.45
Halite (NaCl)	0	-494278.88
Iron sulfide (FeS)	6.8	2.18

APPENDIX B

Water Analysis from adjacent producing wells: Bruington GC #1E

Baker Hughes

Production Water Analysis for

ConocoPhillips FARMINGTON, Bruington Gas C #1E ,Drilling

Representative: Sheperd, Dave

Sample Date: 01/23/2012	**Lab Test No: 2012102313**	
Specific Gravity:	1.019	
TDS:	26896	
pH:	6.44	
Cations	**mg/L**	**as:**
Calcium:	216.14	Ca
Magnesium:	44.2	Mg
Sodium:	9168	Na
Iron:	86.12	Fe
Barium:	42.91	Ba
Strontium:	35.28	Sr
Manganese:	0	Mn
Anions	**mg/L**	**as:**
Bicarbonate:	488	HCO3
Carbonate:	0	CO3
Sulfate:	8	SO4
Chloride:	16700	Cl
Gases:	**mg/L**	**as:**
Carbon Dioxide:	100	CO2
Hydrogen Sulfide:	0	H2S
Lab Comments:		
Sales Comments:		

DownHole SAT Scale Prediction: 180

Mineral Scale	**Saturation Index**	**Momentary Excess (lbs/1000 bbls)**
Calcite (CaCO3)	0.65	-0.3
Strontianite (SrCO3)	0.08	-8.49
Anhydrite (CaSO4)	0	-1862.68
Gypsum (CaSO4*2H2O)	0	-2356.99
Barite (BaSO4)	0.69	-5.03
Celestite (SrSO4)	0	-548.56
Siderite (FeCO3)	861.8	0.65
Halite (NaCl)	0	-604999.69
Iron sulfide (FeS)	0	-0.09

APPENDIX B

Water Analysis from adjacent producing wells: Bruington LS #4P

Baker Hughes

Production Water Analysis for

ConocoPhillips FARMINGTON, Bruington LS #4 P ,Drilling

Representative: Sheperd, Dave		
Sample Date: 01/24/2012	**Lab Test No: 2012102316**	
Specific Gravity:	1.007	
TDS:	8590	
pH:	6.59	
Cations	**mg/L**	**as:**
Calcium:	133.23	Ca
Magnesium:	10.94	Mg
Sodium:	2825	Na
Iron:	39.52	Fe
Barium:	9.35	Ba
Strontium:	21.71	Sr
Manganese:	1.48	Mn
Anions	**mg/L**	**as:**
Bicarbonate:	244	HCO3
Carbonate:	0	CO3
Sulfate:	9	SO4
Chloride:	5210	Cl
Gases:	**mg/L**	**as:**
Carbon Dioxide:	250	CO2
Hydrogen Sulfide:	0	H2S
Lab Comments:		
Sales Comments:		

DownHole SAT Scale Prediction:	180	
Mineral Scale	**Saturation Index**	**Momentary Excess (lbs/1000 bbls)**
Calcite (CaCO3)	0.49	-0.34
Strontianite (SrCO3)	0.07	-5.96
Anhydrite (CaSO4)	0	-1276.07
Gypsum (CaSO4*2H2O)	0	-1593.14
Barite (BaSO4)	0.46	-7.94
Celestite (SrSO4)	0	-347.11
Siderite (FeCO3)	492.12	0.38
Halite (NaCl)	0	-563188.69
Iron sulfide (FeS)	0	-0.06

APPENDIX B

Water Analysis from adjacent producing wells: Marx Fed #1M

Baker Hughes

Production Water Analysis for

ConocoPhillips FARMINGTON, Marx Fed #1M ,Drilling

Representative: Sheperd, Dave		
Sample Date: 01/23/2012	**Lab Test No: 2012102314**	
Specific Gravity:	1.02	
TDS:	28826	
pH:	6.42	
Cations	**mg/L**	**as:**
Calcium:	299.4	Ca
Magnesium:	38.89	Mg
Sodium:	10018	Na
Iron:	106.64	Fe
Barium:	64.81	Ba
Strontium:	56.45	Sr
Manganese:	1.43	Mn
Anions	**mg/L**	**as:**
Bicarbonate:	366	HCO3
Carbonate:	0	CO3
Sulfate:	9	SO4
Chloride:	17700	Cl
Gases:	**mg/L**	**as:**
Carbon Dioxide:	350	CO2
Hydrogen Sulfide:	0	H2S
Lab Comments:		
Sales Comments:		

DownHole SAT Scale Prediction:	180

Mineral Scale	**Saturation Index**	**Momentary Excess (lbs/1000 bbls)**
Calcite (CaCO3)	0.64	-0.23
Strontianite (SrCO3)	0.08	-5.96
Anhydrite (CaSO4)	0	-1785.68
Gypsum (CaSO4*2H2O)	0	-2274.33
Barite (BaSO4)	1.09	1.19
Celestite (SrSO4)	0	-541.45
Siderite (FeCO3)	721.4	0.46
Halite (NaCl)	0	-606178.38
Iron sulfide (FeS)	0	-0.08