

Ray Westall Operating, Inc.

Independent Oil Producer Post Office Box 4 Loco Hills, New Mexico 88255 PH. 505-677-2370 • FAX 505-677-2361

March 1, 2005

Oil Conservation Division 1220 S. St. Francis Drive Santa Fe, NM 87505

Re: SWD -964 State G #1 Ray Westall-Operator

Gentlemen:

Swab test of the Canyon formation through perforations 8730-9220' shows constant fluid level at 7300' from surface, water analysis attached.

Reservoir Pressure:

 $\frac{1.051SG = 0.458 \#/ft}{0.458 \times 7300' = 655\# \text{ hydrostatic pressure}} = 75^{p} PERF$

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Randall Harris Geologist

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Water Analysis

Date: 2/24/2005

2401 Sivley, Artesia NM 88210 Phone (505) 746-3140 Fax (505) 746-2293

Analyzed For

Temperature (°F) 65 Reducing Agents Not Tester Cations Sodlum (Calc) In Mg/L 9,518 In PPM 9,056 Calcium in Mg/L 5,600 in PPM 5,328 Magnesium in Mg/L 240 in PPM 228 Soluable Iron (FE2) in Mg/L 300.0 in PPM 285 Anions In Mg/L 24,000 In PPM 22,835 Sulfates in Mg/L 2,000 in PPM 1,903 Bicarbonates in Mg/L 185 in PPM 1,903 Total Hardness (as CaCO3) in Mg/L 15,000 in PPM 14,272 Total Dissolved Solids (Calc) in Mg/L 15,000 in PPM 39,813 Equivalent NaCl Concentration in Mg/L 38,410 in PPM 39,813 Equivalent NaCl Concentration in Mg/L 38,410 in PPM 36,546 Scaling Tendencies Inota Solo,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable 1,038,464	Company Westall	and the second second as a state of the	II Name ite G#1	where the state of the second state of the second state.	oumty Iddy	State New Mexico	
Specific Gravity 1.050 SG @ 60 °F 1.051 pH 6.30 Sulfides Not Teste Temperature (°F) 65 Reducing Agents Not Teste Cations Sodium (Calc) In Mg/L 9,518 In PPM 9,056 Calcium in Mg/L 5,600 in PPM 5,328 Magnesium in Mg/L 240 in PPM 228 Soluable Iron (FE2) in Mg/L 300.0 in PPM 285 Anions Sulfates in Mg/L 24,000 In PPM 22,835 Sulfates in Mg/L 2000 in PPM 1,903 Bicarbonates in Mg/L 185 in PPM 1,903 Bicarbonates in Mg/L 15,000 in PPM 14,272 Total Hardness (as CaCO3) in Mg/L 15,000 in PPM 39,813 Equivalent NaCl Concentration in Mg/L 38,410 in PPM 39,813 Equivalent NaCl Concentration in Mg/L 38,410 in PPM 3	Sample Source			Sample #		1	
pH 6.30 Sulfides Not Tester Temperature (°F) 65 Reducing Agents Not Tester Cations Sodium (Calc) In Mg/L 9,518 In PPM 9,056 Calcium in Mg/L 5,600 in PPM 5,328 Magnesium in Mg/L 240 in PPM 228 Soluable Iron (FE2) in Mg/L 300.0 in PPM 285 Anions In Mg/L 2,000 in PPM 1,903 Bicarbonates in Mg/L 185 in PPM 1,903 Bicarbonates in Mg/L 15,000 in PPM 14,272 Total Hardness (as CaCO3) in Mg/L 15,000 in PPM 14,272 Total Dissolved Solids (Calc) in Mg/L 38,410 in PPM 39,813 Equivalent NaCl Concentration in Mg/L 38,410 in PPM 36,546 Scaling Tendencies 1,038,464 Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable 11,200,000	Formation	Canyon		Depth			
Temperature (°F) 65 Reducing Agents Not Tester Cations Sodium (Calc) In Mg/L 9,518 In PPM 9,056 Calcium in Mg/L 5,600 in PPM 5,328 Magnesium in Mg/L 240 in PPM 228 Soluable Iron (FE2) in Mg/L 300.0 in PPM 285 Anions Chiorides In Mg/L 24,000 In PPM 22,835 Sulfates in Mg/L 2,000 in PPM 1,903 Bicarbonates in Mg/L 185 in PPM 1,903 Total Hardness (as CaCO3) in Mg/L 15,000 in PPM 14,272 Total Dissolved Solids (Calc) in Mg/L 38,410 in PPM 39,813 Equivalent NaCl Concentration in Mg/L 38,410 in PPM 36,546 Scaling Tendencies 1,038,464 Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable 11,200,000	Specific Gravity	1.050		SG @	60 °F	1.051	
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Sodium (Calc) In Mg/L 9,518 In PPM 9,056 Calcium in Mg/L 5,600 in PPM 5,328 Magnesium in Mg/L 240 in PPM 228 Soluable Iron (FE2) in Mg/L 300.0 in PPM 285 Anions	Temperature (°F)	65		Reducing A	gents	Not Tested	
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Magnesium in Mg/L 240 in PPM 228 Soluable Iron (FE2) in Mg/L 300.0 in PPM 285 Anions Chiorides In Mg/L 24,000 In PPM 22,835 Sulfates in Mg/L 24,000 In PPM 22,835 Sulfates in Mg/L 2,000 in PPM 1,903 Bicarbonates in Mg/L 185 in PPM 1,903 Bicarbonates in Mg/L 185 in PPM 14,272 Total Hardness (as CaCO3) in Mg/L 15,000 in PPM 39,813 Equivalent NaCl Concentration in Mg/L 38,410 in PPM 39,813 Equivalent NaCl Concentration in Mg/L 38,410 in PPM 36,546 Scaling Tendencies 1,038,464 Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable 11,200,000 Calcium Sulfate (Gyp) Index 11,200,000 11,200,000 11,200,000	Sodium (Calc)		In Mg/L	9,518	In PPM	9,056	
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Anions Chlorides In Mg/L 24,000 In PPM 22,835 Sulfates in Mg/L 2,000 in PPM 1,903 Bicarbonates in Mg/L 185 in PPM 1,903 Total Hardness (as CaCO3) in Mg/L 185 in PPM 176 Total Hardness (as CaCO3) in Mg/L 15,000 in PPM 14,272 Total Dissolved Solids (Calc) in Mg/L 41,844 in PPM 39,813 Equivalent NaCl Concentration in Mg/L 38,410 in PPM 36,546 Scaling Tendencies 1,038,464 Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable 11,200,000 Calcium Sulfate (Gyp) Index 11,200,000 11,200,000 11,200,000	Magnesium		in Mg/L	240	in PPM	228	
Chlorides In Mg/L 24,000 In PPM 22,835 Sulfates in Mg/L 2,000 in PPM 1,903 Bicarbonates in Mg/L 185 in PPM 1,903 Bicarbonates in Mg/L 185 in PPM 176 Total Hardness (as CaCO3) in Mg/L 15,000 in PPM 14,272 Total Dissolved Solids (Calc) in Mg/L 41,844 in PPM 39,813 Equivalent NaCl Concentration in Mg/L 38,410 in PPM 36,546 Scaling Tendencies 1,038,464 Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable 11,200,000 Calcium Sulfate (Gyp) Index 11,200,000 11,200,000 11,200,000	Soluable Iron (FE2)		in Mg/L	300.0	in PPM	285	
Sulfates in Mg/L 2,000 in PPM 1,903 Bicarbonates in Mg/L 185 in PPM 176 Total Hardness (as CaCO3) in Mg/L 15,000 in PPM 14,272 Total Hardness (as CaCO3) in Mg/L 15,000 in PPM 14,272 Total Dissolved Solids (Calc) in Mg/L 41,844 in PPM 39,813 Equivalent NaCl Concentration in Mg/L 38,410 in PPM 36,546 Scaling Tendencies 1,038,464 1,038,464 1,038,464 1,038,464 Below 500,000 Remote / 500,000 - 1,000,000 Possible / Above 1,000,000 Probable 11,200,000 11,200,000	Anions						
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Remarks FAX 677-2361

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