

PROPERTY MANAGEMENT & CONSULTING, INC.

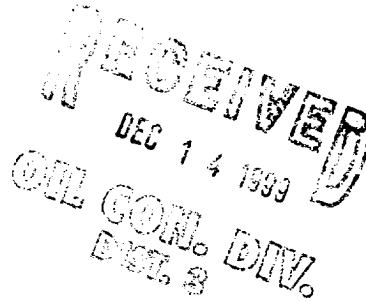
P. O. BOX 2596

FARMINGTON, NEW MEXICO 87499-2596

(505) 325-5220
December 9, 1999

New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, NM 87410
ATTN: Mr. Frank Chavez

Re: Beneficial use of produced water
Cougar Com 33 No. 1
Section 33, T26N, R2W



Dear Frank:

McElvain Oil & Gas Properties Inc. proposes to use produced water from their existing Mesa Verde wells as mix water for the mud system on this well and future wells drilled in the Lindrith area. The fresh water supply is from run off fed ponds and is diminishing to the point that the local ranchers do not want to sell water so they have an adequate supply for their livestock. The water will be transferred from the Elk Com 34 # 1, Fee lease, and the Elk Com # 1, NM98693. The water will be mixed in an approximate 50 /50 ratio with fresh water. The Elk Com 34 # 1 will be the primary source because of it's proximity to access roads and the Elk Com # 1 will be the secondary source. The water will be hauled from the produced water tanks and the reserve pits in an effort to dry up the existing pits. A copy of the latest analysis on each well as well as test data from the mud engineer's sample of the reserve pit fluid is attached for reference. The water has been found to be compatible for mixing the fresh water mud system used for this well and is a beneficial use to this lease. The water transferred has or will be reported as production on McElvain's C -115 reports each month. The water truck tickets on location identify the source and amount of water transferred.

If you have questions, please call at (505) 325 - 5220.

Sincerely;

A handwritten signature in cursive script that reads "R. E. Fielder".

R. E. Fielder

Agent for McElvain Oil & Gas Properties

Barry

Well file: Elk Com 34 #1

OFF: (505) 325-5667



LAB: (505) 325-1556

ANALYTICAL REPORT

Date: 18-Aug-99

Client: American Energy

Work Order: 9908032

Lab ID: 9908032-01A Matrix: AQUEOUS

Project: TH McElvain, Elk Com 34 #11

Client Sample Info: TH McElvain (MV Formation)

Client Sample ID: Elk Com 34 #11

Collection Date: 08/12/1999 11:00:00 AM - Separator

COC Record: 10244

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
CALCIUM, DISSOLVED	E215.1					
Calcium	30	5		mg/L	20	Analyst: HR 08/17/1999
IRON, DISSOLVED	E236.1					
Iron	0.71	0.1		mg/L	1	Analyst: HR 08/17/1999
POTASSIUM, DISSOLVED	E258.1					
Potassium	210	25		mg/L	100	Analyst: HR 08/17/1999
MAGNESIUM, DISSOLVED	E242.1					
Magnesium	9	1.2		mg/L	5	Analyst: HR 08/17/1999
SODIUM, DISSOLVED	E273.1					
Sodium	3470	250		mg/L	1000	Analyst: HR 08/17/1999
ALKALINITY, TOTAL	M2320 B					
Alkalinity, Bicarbonate (As CaCO ₃)	1780	5		mg/L CaCO ₃	1	Analyst: HR 08/13/1999
Alkalinity, Carbonate (As CaCO ₃)	ND	5		mg/L CaCO ₃	1	08/13/1999
Alkalinity, Hydroxide	ND	5		mg/L CaCO ₃	1	08/13/1999
Alkalinity, Total (As CaCO ₃)	1780	5		mg/L CaCO ₃	1	08/13/1999
CHLORIDE	E325.3					
Chloride	4400	1		mg/L	1	Analyst: HR 08/13/1999
HARDNESS, TOTAL	M2340 B					
Hardness (As CaCO ₃)	112	1		mg/L	1	Analyst: HR 08/17/1999
PH	E150.1					
pH	7.35	2		pH units	1	Analyst: HR 08/13/1999
RESISTIVITY (@ 25 DEG. C)	M2510 C					
Resistivity	0.6207	0.001		ohm-m	1	Analyst: HR 08/13/1999
SPECIFIC GRAVITY	M2710 F					
Specific Gravity	1.0096	1			1	Analyst: HR 08/16/1999
SULFATE	M4500-SO4 D					
Sulfate	48	8		mg/L	1	Analyst: HR 08/13/1999
TOTAL DISSOLVED SOLIDS	CALC					
Total Dissolved Solids (Calculated)	9950	40		mg/L	1	Analyst: HR 08/17/1999

Qualifiers: PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr - Surrogate

1 of 1

P.O. BOX 2606 • FARMINGTON, NM 87499

- TECHNOLOGY BLENDING INDUSTRY WITH THE ENVIRONMENT



Water Analysis Report

To: Medvate Oil & Gas CO.
Submitted by: Halliburton Energy Services
Attention: JOE ELLEDGE
Well Name: ELK COM. #1

Date: 6/3/99
Date Rec: 6/3/99
Report #: WT-990-0135
Formation: Separator

Specific Gravity	1.020	
pH	7.94	
Resistivity	0.66	@ 70° F
Iron (Fe)	3	Mg / L
Potassium (K)	0	Mg / L
Sodium (Na)	5064	Mg / L
Calcium (Ca)	52	Mg / L
Magnesium (Mg)	39	Mg / L
Chlorides (Cl)	6814	Mg / L
Sulfates (SO ₄)	200	Mg / L
Carbonates (CO ₃)	79.9733422	Mg / L
Bicarbonates (HCO ₃)	1749	Mg / L
Total Dissolved Solids	14000	Mg / L

Respectfully: A.J. JAHANGIRI

Title: QA/QC

Location: Farmington, NM

NOTICE:

This report is limited to the described sample tested. Any person using or relying on this report agrees that Halliburton shall not be liable for any loss or damage whether due to act or omission resulting from such report or its use.



WesVan Mud & Chemical Co.

P.O. BOX 163 • FARMINGTON, NEW MEXICO 87401 • PHONE: (505) 327-2009

December 11, 1999

MCCLVAIN OIL & GAS PROPERTIES, INC.

Elk Com 34 #11

(Water Sample) from produced water tank, November, 1999

Chlorides 4200 ppm

Calcium 600 ppm

ARNOLD VAN NOY