

BACHMAN PRODUCTION SPECIALTIES, Inc.

307 C Street, Airport Addition
Great Bend, Kansas 67530

Phone 620-792-2540
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WATER ANALYSIS REPORT

Company: Lebsack Oil Production
Source: Foster D #2

Date Sampled: 12-26-01
Date Analyzed: 12-27-01

pH: 6.70 Total Dissolved Solids (mg/L): 153,478
Dissolved H₂S: 1
Dissolved CO₂:
Specific Gravity: 1.1 Total Ionic Strength: 2.840742
Density (lbs/gal): 9.174

	mg/L	Meq/L
Anions		
Bicarbonate:	104	2
Chloride:	92,546	2,607
Sulfate:	1,664	35
Cations		
Calcium:	5,443	272
Magnesium:	921	76
Sodium:	52,799	2,296
Barium:	0	
Strontium:	0	
Total Hardness:	17,400	
Total Iron:	5.9	
Ferrous Iron:	0.0	

PROBABLE MINERAL COMPOSITION

		Meq/L	mg/L
272 Ca	2 HCO ₃		
76 Mg	35 SO ₄		
2,296 Na	2,607 Cl		
	Calcium Bicarbonate:	2	162
	Calcium Sulfate:	35	2,382
	Calcium Chloride:	235	13,043
	Magnesium Bicarbonate:	0	0
	Magnesium Sulfate:	0	0
	Magnesium Chloride:	76	3,619
	Sodium Bicarbonate:	0	0
	Sodium Sulfate:	0	0
	Sodium Chloride:	2,296	134,224

Saturation Values
In Distilled Water @ 20 C

CaCO₃ 13 mg/L
CaSO₄ * 2H₂O 2,090 mg/L
MgCO₃ 103 mg/L

Remarks:

SCALE CALCULATIONS

FIELD NAME : Lebsack Oil Production

SOURCE : Foster D #2

SAMPLE NO: 12/26/01

ION	mg/L
Na	52799
Ca	5443
Mg	921
Ba	0
Sr	0
Cl	92546
SO4	1664
CO3	0
HCO3	104
TDS	153477
pH	6.7
SG	1.1
I (Molar)	2.84

TWO PHASE PRODUCTION SYSTEM (WATER + GAS)

CALCIUM CARBONATE SCALING CALCULATIONS

%A	TF	Psia	XCO2	pHc	SI	PTB	SIC	PTSc	Is
.00	100	200	0	****	.24	24.8	*****	*****	*****

SULFATE SCALE CALCULATIONS

%A	TF	Psia	SR	PTB	SR	PTB	SR	PTB
.00	100	200	.7	-236.9	0	-.1	0	-78.3

NOTE: Values of SI & PTB for CaCO3, and SR & PTB for CaSO4 and BaSO4 are calculated at 14.7 psia.

BACHMAN PRODUCTION SPECIALTIES, INC.
307 'C' AVE. AIRPORT ADDITION
GREAT BEND, KS. 67530

LABORATORY REPORT

DATE: January 10, 2002

TO: Lebsack Oil Production

BELOW ARE THE RESULT OF OUR EXAMINATION OF WATER
SAMPLE TAKEN ON 12-27-01:

LEASE

SULFATE REDUCING BACTERIA

Foster D #2

10-99 BACTERIA/ML

LABORATORY ANALYST

FEIST

SALES REPRESENTATIVE

Doug Keiswetter