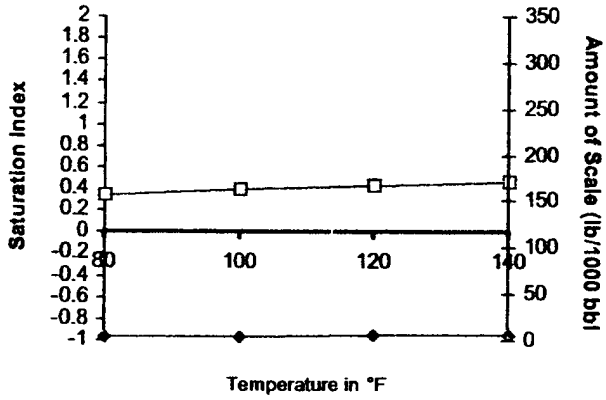


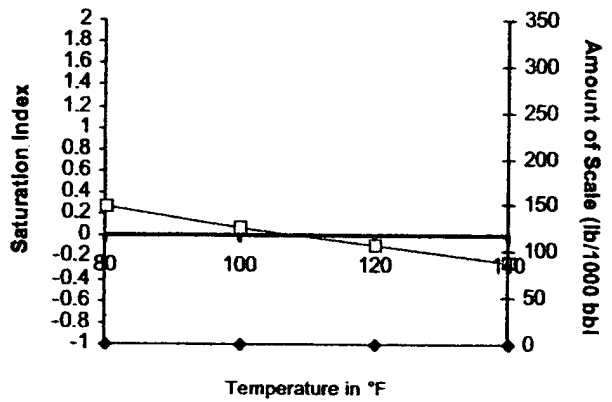
Scale Predictions from Baker Petrolite

Analysis of Sample 326977 @ 75 °F for MACK ENERGY INCORPORATED, 12/7/04

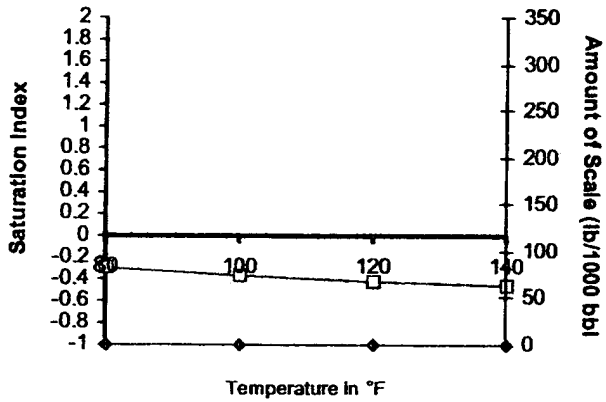
Calcite - CaCO₃



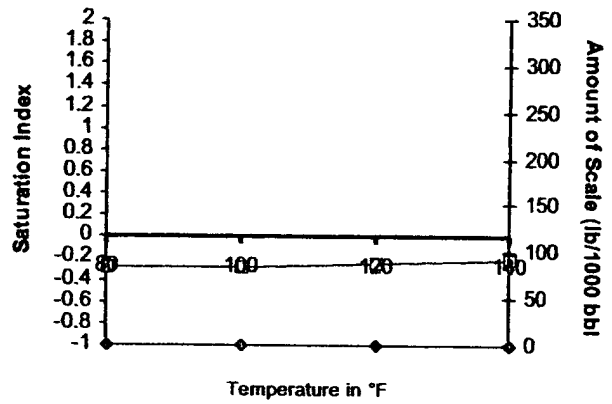
Barite - BaSO₄



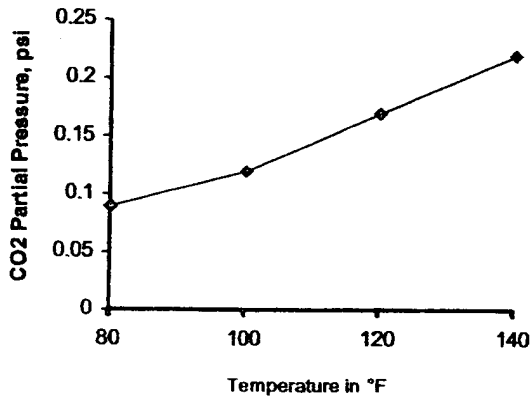
Gypsum - CaSO₄*2H₂O



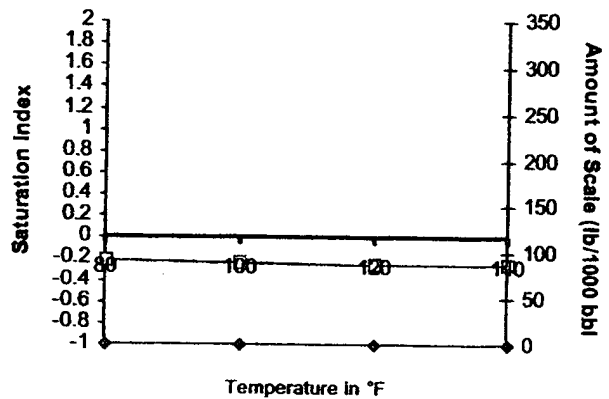
Anhydrite - CaSO₄



Carbon Dioxide Partial Pressure



Celestite - SrSO₄



North Permian Basin Region

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Lab Team Leader - Sheila Hernandez

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Water Analysis Report by Baker Petrolite

Company:	MACK ENERGY INCORPORATED	Sales RDT:	33512
Region:	PERMIAN BASIN	Account Manager:	WAYNE PETERSON (505) 910-9389
Area:	ARTESIA, NM	Sample #:	326977
Lease/Platform:	BASSETT BIRNEY	Analysis ID #:	47102
Entity (or well #):	1	Analysis Cost:	\$40.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary		Analysis of Sample 326977 @ 75 °F			
		Anions		Cations	
		mg/l	meq/l	mg/l	meq/l
Sampling Date:	11/24/04	Chloride:	103532.0	Sodium:	53384.8
Analysis Date:	12/7/04	Bicarbonate:	124.4	Magnesium:	4719.0
Analyst:	SALLY MOORE	Carbonate:	0.0	Calcium:	3555.0
TDS (mg/l or g/m3):	169524.4	Sulfate:	1575.0	Strontium:	84.0
Density (g/cm3, tonne/m3):	1.121	Phosphate:		Barium:	0.2
Anion/Cation Ratio:	1	Borate:		Iron:	24.0
Carbon Dioxide:	75 PPM	Silicate:		Potassium:	2526.0
Oxygen:	0 PPM	Hydrogen Sulfide:	1 PPM	Aluminum:	
Comments:		pH at time of sampling:	7	Chromium:	
RESISTIVITY: 19.92 OHM-CM @ 77°F		pH at time of analysis:		Copper:	
		pH used in Calculation:	7	Lead:	
				Manganese:	
				Nickel:	

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		CO ₂ Press
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	0	0.34	3.27	-0.29	0.00	-0.28	0.00	-0.21	0.00	0.27	0.00	0.09
100	0	0.40	4.46	-0.36	0.00	-0.28	0.00	-0.23	0.00	0.08	0.00	0.12
120	0	0.44	5.65	-0.41	0.00	-0.25	0.00	-0.25	0.00	-0.09	0.00	0.17
140	0	0.48	6.84	-0.45	0.00	-0.21	0.00	-0.25	0.00	-0.24	0.00	0.22

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.