



Dowell

Hobbs District Laboratory

Company: EGL Resources

Lease & Well: NM Fed B #1

County State: Lea, NM

Formation: Morrow

BHT (F):

Report No.: HSY2K243-4

Service Point: HNM LAB

Prepared by: Greg Daniel

Prepared for: Darren Printz

Date: 12/15/2000

Specific gravity: 1.034 @ 75 degrees F ph 6.50

Anions

							Ionic Strength		
	Factor	ml	Sample	mg/l	Factor	me/l	(mg/l)	(me/l)	(ppm)
Chlorides	3545	7.30	1	25879	0.0282	729.77	0.3623	0.3649	25028
Sulfates	20	0.0	1	0	0.0208	0.00	0.0000	0.0000	0
Carbonates	492			0	0.0333	0.00	0.0000	0.0000	0
Bicarbonates	1000			0	0.0164	0.00	0.0000	0.0000	0

Cations

							Ionic Strength		
	Factor	ml	Sample	mg/l	Factor	me/l	(mg/l)	(me/l)	(ppm)
Calcium	401	3.8	1	1523.8	0.0499	76.04	0.0762	0.0760	1474
Magnesium	243	1.20	1	291.6	0.0823	24.00	0.0239	0.0240	282
Iron				200	0.0358	7.16	0.0016	0.0036	193
Sodium	0	0	0	14312	0.0435	622.58	0.3149	0.3113	13842

Total Dissolved Solids: 42206.02 1459.55

Total Ionic Strength: 0.7789 0.7798

Calcium Carbonate Deposition

Stiff-Davis Equation: Stability Index(SI) = pH - pCa - pAlk - K

pH= 6.50

pCa= 1.41

pAlk= #NUM!

K= 1.31

Total Ion Equivalent NaCl Concentration= 40833.11 ppm

SI= #NUM!

The Stiff-Davis equation predicts this water #NUM!
have a tendency toward calcium carbonate deposition.

Calcium Sulfate Deposition

CaSO4 Solubility: $S = 1000 (\text{SQRT}(X^{**2} + 4*K) - X)$

Total Ionic Strength= 0.7789

Solubility Constant, K= 0.00290

X= 0.0381

S= 76.15 me/l

Laboratory analysis shows that this water contains
0.00 me/l. therefore the tendency towards calcium
sulfate deposition does not exist.