

VII (5)

NL TREATING CHEMICALS
NL INDUSTRIES, INC.

SCALING TENDENCIES OF WATERS

COMPANY: AMERADA-HESS

SAMPLE POINT: WELL #4

LOCATION: STATE PA UNIT L-1070 N SEC. 15, T-22S, R-37E

DATE: 6/18/85

(SAND ANDRES) PRODUCED WTR.

WATER ANALYSIS (MG/L):

SODIUM: 2042.4
CALCIUM: 440.0
MAGNESIUM: 585.6
CHLORIDE: 3700.0
SULFATE: 0.
BICARBONATE: 2061.8
IRON: 0.4
BARIUM: 0.

PH: 7.0

IONIC STRENGTH = 0.1837

INDEX VALUES GREATER THAN ZERO INDICATE SCALING CONDITIONS
INDEX VALUES OF ZERO OR LESS INDICATE A STABLE WATER

	CALCITE	GYP SUM	ANHYDRITE	BARITE
TEMP.	INDEX	INDEX	INDEX	INDEX
60	0.66	-46.65	-46.90	-41.27
80	0.77	-46.69	-46.83	-41.41
100	0.89	-46.71	-46.76	-41.53
120	1.04	-46.71	-46.68	-41.63
140	1.20	-46.71	-46.59	-41.72
160	1.38	-46.69	-46.49	-41.79
180	1.59	-46.68	-46.38	-41.84
200	1.81	-46.65	-46.26	-41.87
220	2.07	-46.63	-46.13	-41.88
240	2.34	-46.60	-45.99	-41.87
260	2.64	-46.58	-45.84	-41.80