

WATER ANALYSIS REPORT



NL Treating Chemicals/NL Industries Inc.
P. O. Box 4305 Houston, Texas 77210

COMPANY AMERADA-HESS CORP						SHEET NUMBER	
FIELD EUNICE AREA						DATE 6-18-85	
LEASE OR UNIT STATE PA				WELL(S) NAME OR NO. #4		COUNTY OR PARISH LEA	
STATE PA				WATER SOURCE (FORMATION) SAN ANDRES		STATE NM	
DEPTH, FT.	BHT, F	SAMPLE SOURCE Wellhead	TEMP, F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY	
DATE SAMPLED 6-18-85		TYPE OF WATER ☒ PRODUCED ☐ SUPPLY ☐ WATERFLOOD ☐ SALT WATER DISPOSED					

WATER ANALYSIS PATTERN

(NUMBER BESIDE ION SYMBOL INDICATES me/l* SCALE UNIT)

Na ⁺ 20	15	10	5	0	5	10	15	20 Cl ⁻
Ca ⁺⁺								HCO ₃ ⁻
Mg ⁺⁺								SO ₄ ⁼
Fe ⁺⁺⁺								CO ₃ ⁼

DISSOLVED SOLIDS

CATIONS
Total Hardness
Calcium, Ca⁺⁺
Magnesium, Mg⁺⁺
Iron (Total) Fe⁺⁺⁺
Barium, Ba⁺⁺
Sodium, Na⁺(calc.)

me/l*	mg/l*
<u>70</u>	<u>440</u>
<u>22</u>	<u>585.6</u>
<u>48</u>	<u>0.4</u>
<u>88.8</u>	<u>2042.4</u>

ANIONS

Chloride, Cl⁻
Sulfate, SO₄⁼
Carbonate, CO₃⁼
Bicarbonate, HCO₃⁻
Hydroxyl, OH⁻
Sulfide, S⁼

me/l*	mg/l*
<u>104.2</u>	<u>3700</u>
<u>0</u>	<u>0</u>
<u>33.8</u>	<u>2061.8</u>
<u>20.8</u>	<u>333.3</u>

PO₄

DISSOLVED GASES

Hydrogen Sulfide, H₂S _____ mg/l*
Carbon Dioxide, CO₂ _____ mg/l*
Oxygen, O₂ _____ mg/l*

PHYSICAL PROPERTIES

pH 7.0
Eh (Redox Potential) _____ MV
Specific Gravity _____
Turbidity, JTU Units _____
Total Dissolved Solids (calc.) 9163.5 mg/l*
Stability Index @ _____ F _____
CaSO₄ Solubility @ _____ F _____ mg/l*
Max. CaSO₄ Possible (calc.) _____ mg/l*
Max. BaSO₄ Possible (calc.) _____ mg/l*
Residual Hydrocarbons _____ ppm(Vol.)

SUSPENDED SOLIDS (QUALITATIVE)

Iron Sulfide ☐ Iron Oxide ☐ Calcium Carbonate ☐ Acid Insoluble ☐

REMARKS AND RECOMMENDATIONS:

Complete Analysis plus PO₄ (As P₂O₅) + Fe

*NOTE: me/l and mg/l are commonly used interchangeably for epm and ppm respectively. Where epm and ppm are used, corrections should be made for specific gravity.

BTC ENGINEER WONER	DIST. NO. 821	ADDRESS	OFFICE PHONE	HOME PHONE
ANALYZED Hanson / Cresson	DATE 6/19/85	DISTRIBUTION ☐ CUSTOMER ☐ AREA OR ☐ DISTRICT OFFICE ☐ BTC ENGINEER OR ☐ BTC LAB ☐ BTC SALES SUPERVISOR		

RECEIVED

JUL 18 1985

U.S. DEPARTMENT OF JUSTICE