

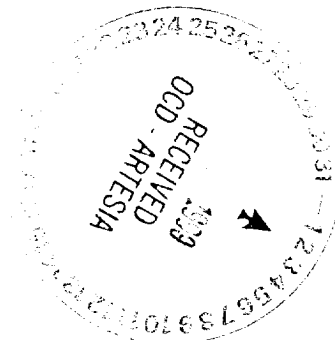
c/sf

October 14, 1997

N.M. Oil Cons. Division
811 S. 1st Street
Artesia, NM 88210-2834

Anadarko

Bureau of Land Management
Carlsbad Area Resource Headquarters
620 E Greene Street
Carlsbad, NM 88220



Re: NTL-2B
Ballard GB-SA Unit Tract #21, Well #3
NW/4 SW/4, Sec. 8, T18S, R29E,
Eddy County, NM

Gentlemen:

The checklist of information which is needed for approval of disposing water at the BGSAU Tract #21, Well #3, NW/4 SW/4, Sec. 8, T18S, R29E, Eddy County, NM, is as follows:

- (a) Well produces from the San Andres & Grayburg formations.
- (b) Amount of water produced = 110 bbls/day.
- (c) Water Analysis (attached).
- (d) Water is stored on the lease in a tank or tanks.
- (e) Water is piped to or injected into approved facilities.
- (f) For approved water disposal facility, see attached sheet.

Sincerely,

Howard D. Hackett
Field Foreman

HDH/md

Enclosures

APPROVED

JUN 01 1999
(ORIG. SGD.) DAVID R. GLASS

AUTHORIZED OFFICER, MINERALS
BUREAU OF LAND MANAGEMENT

BUREAU OF LAND MGMT.
CARLSBAD RESOURCE AREA

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SEE ATTACHED FOR
CONDITIONS OF APPROVAL

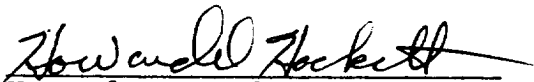
ANADARKO PETROLEUM CORPORATION

DISPOSAL FACILITIES

The facility listed below is where the water is sent for disposal from the Ballard #21-3.

Ballard Water Plant R-4493
SW/4 NW/4, Sec. 8, T18S, R29E, Eddy County, NM (LC-028772)

This disposal facility is an approved Water Injection Plant belonging to Anadarko located in the SW/4 NW/4, Sec. 8, T18S, R29E, Eddy County, NM. This water injection facility was approved by NMOCD order #R-4493, dated March 16, 1973.


Howard D. Hackett
Field Foreman

md

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Water Analysis Report

Analysis Number : 000005053

Company.....:	Anadarko	Date of Sampling.....:	03/31/97
Location.....:	Midland, Texas	Date of Analysis.....:	03/31/97
Field.....:		Baker Representative..:	Steven Stroud
Lease.....:	Ballard	Well#.....:	21-3
Sample Source....:	Well Head	Analysis by.....:	Green

DISSOLVED SOLIDS

CATIONS:

	mg/l	me/l
Ca++	3920.00	196.00
Mg++	927.20	76.00
Fe+++	5.00	0.27
Ba++	0.00	0.00
Na+	29572.25	1285.75
Mn++	0.00	0.00

ANIONS:

	mg/l	me/l
Cl-	53000.00	1492.96
SO4--	2400.00	50.00
HCO3-	860.10	14.10
CO3--	0.00	0.00
OH-	0.00	0.00
S-	15.36	0.96

TOTAL HARDNESS.....: 272.00
 TOTAL SOLIDS (quantitative).....: 90699.90
 RESIDUAL HYDROCARBONS(ppm).....: 0.00

g = not determined

DISSOLVED GASES

Hydrogen Sulfide, H2S.....:	350.0
Carbon Dioxide, CO2.....:	154.4
Oxygen, O2.....:	0.0

PHYSICAL PROPERTIES

pH.....:	6.5
Specific Gravity.....:	1.045
TDS (calculated) ppm.....:	90699.9
TIS (calculated):	1.7

SCALE STABILITIES

Temp.	°C	°F	CaCO3	CaSO4	BaSO4
	25	77	0.26	3957	0
	35	95	0.47	4191	0
	45	113	0.71	4755	0
Max entity, (calculated):			3494		0

WATER ANALYSIS PATTERN

Number below the symbol indicates mg/l of the solid



NOTES:

@25°C CALCIUM SULFATE SCALING IS UNLIKELY

@25°C SLIGHTLY CORROISVE, AND SLIGHT CARBONATE SCALING

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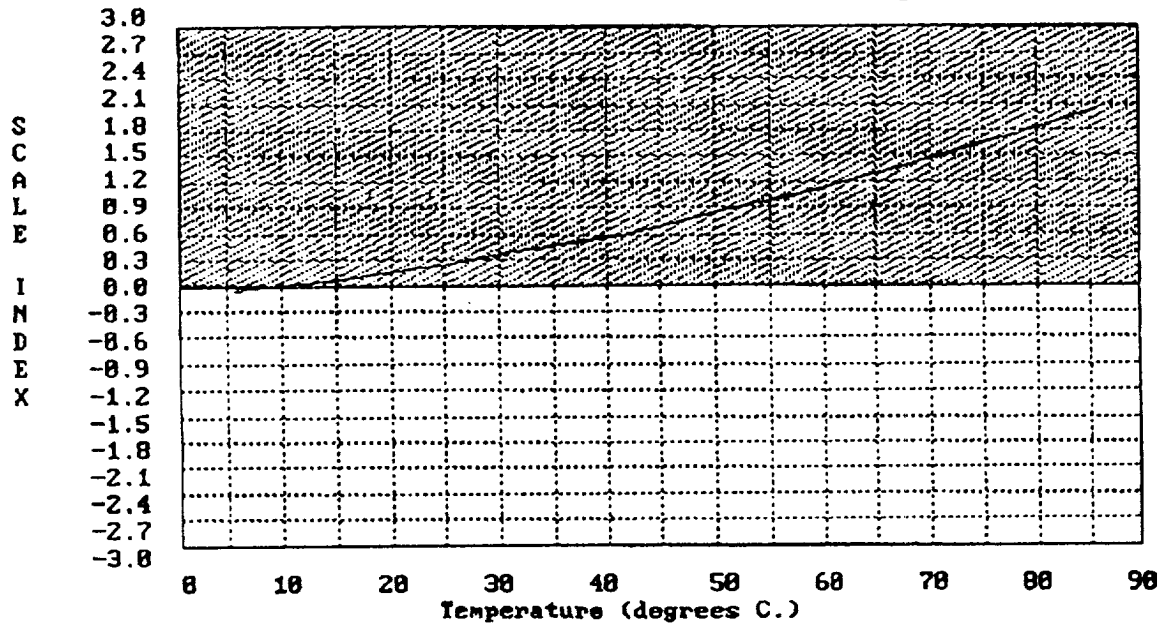


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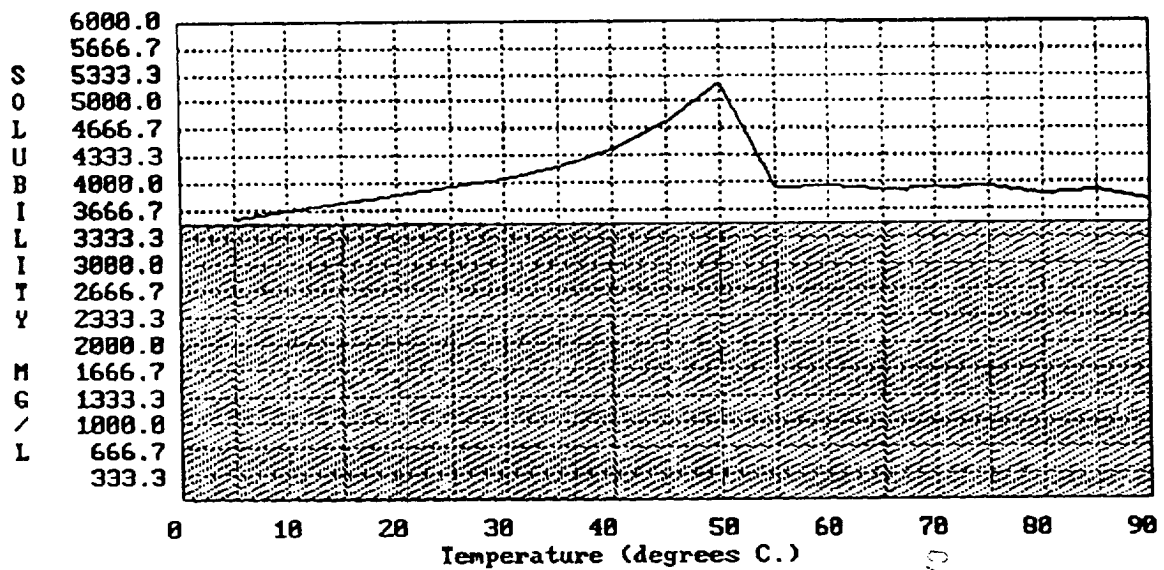
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Calcium Carbonate Scaling Tendency



Calcium Sulfate Solubility --



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