UIC 0698

Region 8
9043

(2 OF 2)

CO00054

204-079 10788-
205a(1) UIC - CO[redacted]-00054 - PERMIT NON-
~~HOVENWEEP WD-1~~ Yellowjacket
Fldr #: 9043

PRIV

402

P. O. BOX 1468
MONAHANS, TEXAS 79756
PHONE 943-3234 OR 563-1040

ANALYSIS 2 (P.1 OF 2)

RESULT OF WATER ANALYSES

731 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

LABORATORY NO. 37920
SAMPLE RECEIVED 3-1-79
RESULTS REPORTED 3-7-79

TO: Mr. M. J. Pye
P.O. Box 1800, Hobbs, New Mexico

COMPANY Mobil Oil Corporation LEASE Yellow Jacket #2 - HWD-1
FIELD OR POOL FORMATION FLUID
SECTION ___ BLOCK ___ SURVEY ___ COUNTY ___ STATE ___

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Recovered water -sample #1 (1st rate in 4 point test: 8.4 MMCFD) @ 9:20 pm. 2-23-79
NO. 2 Recovered water-sample #2 (1st rate in 4 point test: 8.4 MMCFD) @9:20 pm. 2-23-79
NO. 3 Recovered water-sample #3 (2nd rate in 4 point test: 7.2 MMCFD) @ 2:00 am. 2-24-79
NO. 4 Recovered water-sample #4 (2nd rate in 4 point test: 7.2 MMCFE) @ 2:00 am. 2-24-79

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES

	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0666	1.0678	1.0577	1.0583
pH When Sampled				
pH When Received	6.5	6.5	6.5	6.6
Bicarbonate as HCO_3	2,623	2,440	2,501	2,989
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	34,400	25,250	29,500	28,500
Calcium as Ca	8,700	7,800	6,700	6,600
Magnesium as Mg	4,046	3,827	3,093	2,916
Sodium and/or Potassium	18,276	18,371	16,864	17,701
Sulfate as SO_4	723	674	600	539
Chloride as Cl	55,395	53,264	47,228	47,583
*Iron as Fe - Soluble	1,609	1,463	1,736	1,745
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	91,372	87,639	78,727	80,073
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0	0.0	0.0	0.0
Resistivity, ohms/m at 77° F.	0.100	0.103	0.112	0.111
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks

Form No. 3

By ___

SAMPLE 2 (192)

Martin Water Laboratories, Inc.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PHONE 943-3234 OR 563-1040

731 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

ANALYSIS 2 (P.2 OF 2)

RESULT OF WATER ANALYSES

LABORATORY NO. 37920 (Page 2)

SAMPLE RECEIVED 3-1-79

RESULTS REPORTED 3-7-79

TO: Mr. M. J. Pye
P.O.Box 1600, Hobbs, New Mexico

COMPANY Mobil Oil Corporation LEASE Yellow Jacket #2

FIELD OR POOL

SECTION ___ BLOCK ___ SURVEY ___ COUNTY ___ STATE ___

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Recovered water-sample #5(3rd rate in 4 point test: 5.5 MM(CFD) @ 9:15 am. 2-24-79

NO. 2 Recovered water-sample #6 (4th rate in 4 point test: 4.5 MM(CFD) @ 4:00 pm. 2-24-79

NO. 3

NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES

	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0456	1.0365		
pH When Sampled				
pH When Received	6.6	6.6		
Bicarbonate as HCO_3	2.867	2.227		
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	17,700	12,050		
Calcium as Ca	4,200	2,800		
Magnesium as Mg	2,795	1,227		
Sodium and/or Potassium	11,099	12,354		
Sulfate as SO_4	466	363		
Chloride as Cl	32,847	28,230		
*Iron as Fe – Soluble	1.687	1.736		
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	55,961	48,942		
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0	0.0		
Resistivity, ohms/m at 77° F.	0.146	0.163		
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks * This iron was solbule and was included in the calculations.

We are not familiar with the circumstances involved surrounding this well: but please contact us is we can be of any assistance in interpretation of these results.

Form No. 3

By

Waylan C. Martin, M. A.

APPENDIX 1

SHELL WESTERN E&P INC.

WATER ANALYSIS REPORT

MID-CONTINENT DIVISION

Sample Description

Company SWEPI
Field McELMO DOME
Lease
Well Number YWD-1
County & State MONTEZUMA
Producing Information
Where Sampled yellow Jacket S W D-1 (YWD-1) INJECTION FLUID
Remarks Caught 2" every 3 hours

Laboratory C.D.S.
Laboratory Number 1608
Date Sample Taken 11/29 - 11/30/84
Date Sample Received 11/30
Date Sample Reported

Chemical and Physical Properties

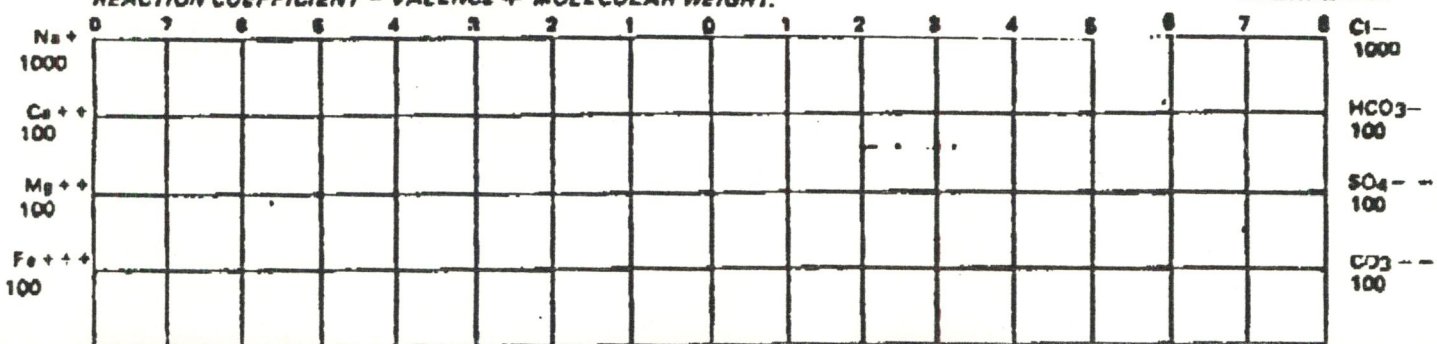
Total Hardness as $CaCO_3$ 2570 Mg/L Total Alkalinity as $CaCO_3$ 510 Mg/L

CONSTITUENT	Mg/Liter	REACT.COEF.	Meq/Liter
Sodium (incl. Potassium) as Na	Na 1072 + K 413	0.04350	Na 46.63 + K 10.54
Calcium - Ca++	908	0.04990	45.31
Magnesium-Mg++	378	0.08224	31.09
Iron Total-Fe++&Fe+++ Total	5.2	0.03581	0.186
Barium-Ba++	0.15	0.01460	<.01
Chromium	0.11		0.95
POSITIVE SUB-TOTAL	2776		134.71
Chloride-Cl-	3940	0.02820	111.11
Carbonate&Bicarbonate-CO_3&HCO_3-	0 + 683	0.01639*	0 + 11.19
Sulfate-SO_4=	214	0.02082	4.46
Hydroxyl-OH-	0	0.05880	0
Sulfide-S=	N/K	0.06238	
NEGATIVE SUB-TOTAL	4837		126.76
Total Dissolved Solids	7630		

*Bicarbonate

Specific Gravity 1.001 @ 73.4 °F pH 6.37 RES. 89 ohms @ 74.3 °F

Analyst Susan Kay Dickinson

Requested by

REACTION VALUE = (MILLIGRAMS/LITER) X (REACTION COEFFICIENT)
REACTION COEFFICIENT = VALENCE ÷ MOLECULAR WEIGHT.