


WATER ANALYSIS REPORT

**Champion
Chemicals, Inc.**

 BOX 4513
 ODESSA, TEXAS 79760

TECH SERVICE LABORATORY: Odessa, Texas Phone (915) 337-0055 & 563-0863

RESEARCH LABORATORY: Houston, Texas Phone (713) 431-2561

PLANT: Odessa, Texas Phone (915) 337-0055

| | | | |
|------------------|--------------|-----------------------|--------------|
| REPORT FOR | Bill Good | DATE SAMPLED | 10/22/86 |
| CC | Jim Spradley | DATE REPORTED | 10/23/86 |
| CC | J. Skidmore | FIELD, LEASE, OR WELL | as listed |
| CC | | COUNTY | STATE |
| COMPANY | Citation | FORMATION | |
| ADDRESS | | DEPTH | |
| SERVICE ENGINEER | Jim Spradley | SUBMITTED BY | Jim Spradley |

CHEMICAL ANALYSIS (AS PARTS PER MILLION)**Field, Lease, or Well**

| Chemical Component | State Com B #1 | State #2 | | | | |
|--------------------------------------|----------------|----------|--|--|--|--|
| Chloride (Cl) | 60000 | 9000 | | | | |
| Iron (Fe) | 221 | 5 | | | | |
| Total Hardness (Ca CO ₃) | 12500 | 5000 | | | | |
| Calcium (Ca) | 3649 | 922 | | | | |
| Magnesium (Mg) | 826 | 656 | | | | |
| Bicarbonate (HCO ₃) | 109 | 963 | | | | |
| Carbonate (CO ₃) | 0 | 0 | | | | |
| Sulfate (SO ₄) | 1890 | 1890 | | | | |
| Hydrogen Sulfide (H ₂ S) | 3 | 106 | | | | |
| Specific Gravity | 1.071 | 1.013 | | | | |
| Density, lb./gal. | 8.925 | 8.442 | | | | |
| pH - Beckman [] Strip [] | 7.300 | 7.500 | | | | |
| Carbon dioxide | | | | | | |
| Sodium (calc.) | 34161 | 4837 | | | | |
| TDS | 100636 | 18270 | | | | |
| CaSO ₄ Sol @ 82F | 4062 | 3852 | | | | |
| CaSO ₄ Present | 2679 | 2057 | | | | |

OTHER DESCRIPTION, REMARKS AND RECOMMENDATIONS

| | | |
|-----------------------------|-------|-------|
| CaCO ₃ SI @ 86 F | +0.26 | +1.05 |
| 104 F | +0.49 | +1.28 |
| 122 F | +0.75 | +1.54 |
| 140 F | +1.04 | +1.82 |
| 158 F | +1.36 | +2.12 |

CITATION OIL & GAS CORPORATION

Water Analysis Reports

State Com B #1 & State #2

REPORTED BY

Candolph Nantz

TITLE

Chemist