



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

September 19, 1997

PDEV00209000617

Hanson Operating Company
P.O. Box 1515
Roswell, New Mexico 88202-1515

Attn: Ms. Betsy Speer

**RE: Injection Pressure Increase,
Presler Lake SWD Well No.4,
Chaves County, New Mexico**

Dear Ms. Speer:

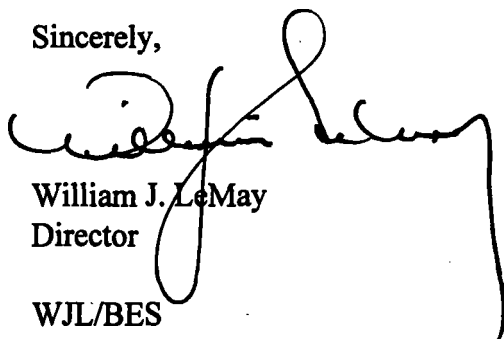
Reference is made to your request dated September 17, 1997 to increase the surface injection pressure on the above referenced well. This request is based on data obtained from a step rate test conducted on July 17, 1997. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on this well is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following well:

| <i>Well and Location</i> | <i>Maximum Surface Injection Pressure</i> |
|---|---|
| Presler Lake SWD Well No.4 | 1815 PSIG |
| Located in Section 12, Township 9 South, Range 29 East, Chaves County, New Mexico. | |

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

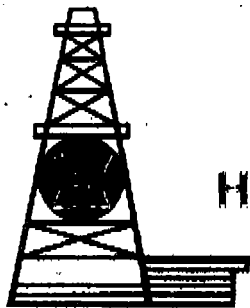
Sincerely,



William J. LeMay
Director

WJL/BES

cc: Oil Conservation Division - Artesia
Files: SWD-617; PSI-X 1stQTR98



HANSON OPERATING COMPANY, INC.

P.O. BOX 1515

ROSWELL, NEW MEXICO 88202-1515

PHONE AC 505-622-7330



FROM FAX NUMBER (505) 622-7330

DATE: 9-17-97

TIME: _____ A.M. P.M.

TOTAL NUMBER OF PAGES INCLUDING THIS TRANSMITTAL PAGE: 4TO: Ben StoweDEPARTMENT: OCID

COMMENTS: _____

Att'n: Ben StoweSIGNED: Betsy Speer

PLEASE NOTE

IF YOU DO NOT RECEIVE THE TOTAL NUMBER OF PAGES INDICATED ABOVE OR DO NOT RECEIVE A CLEAR IMAGE, PLEASE NOTIFY THE ABOVE REPRESENTATIVE AT (505) 622-7330.

WEST-TEST, INC.

A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY

Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: HANSON OPERATING COMPANY

DATE: JULY 19, 1997

WELL NAME: PRESLER LAKE NO.4 SWD
CHAVES COUNTY, NEW MEXICO

WO#: 97-14-1201

PERFS = 3168-3264

PACKER DEPTH = 3087

BHP GAUGE DEPTH = SURFACE ONLY

| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|--------------------------|------|-----------------------------------|--|---------------------------------|--------------------------------|--|--|--------------------------|
| STEP NO. & REMARKS | TIME | SURFACE TUBING PRESS (psig) | CUMMULATIVE VOL. INJECTED (bbls) | INJECTION RATE (bbls/day) | FRICTION HEAD LOSS (psi) | CORRECTED TUBING PRESS (psi) (1) (4) | INJECTION RATE (gpm) (3)/(24.2657) | MEASURED BHP (psi) |
| 1 | 7:30 | 444.2 | | | | 444.2 | | |
| | 7:35 | 573.2 | 2.6 | 748.8 | 6.067 | 567.1 | 21.84 | |
| | 7:40 | 622.9 | 5.3 | 777.6 | 6.527 | 616.4 | 22.68 | |
| | 7:45 | 661.1 | 7.9 | 748.8 | 6.087 | 655.0 | 21.84 | |
| | | | | 758.4 | | | | |
| 2 | 7:50 | 721.1 | 11.4 | 1008.0 | 10.549 | 710.6 | 29.40 | |
| | 7:55 | 759.3 | 14.8 | 979.2 | 9.998 | 749.3 | 28.56 | |
| | 8:00 | 800.1 | 18.2 | 979.2 | 9.998 | 790.1 | 28.56 | |
| 3 | | | | 988.8 | | | | |
| | 8:05 | 869.0 | 23.1 | 1411.2 | 19.659 | 849.3 | 41.16 | |
| | 8:10 | 955.8 | 28.0 | 1411.2 | 19.659 | 936.1 | 41.16 | |
| | 8:15 | 990.2 | 32.9 | 1411.2 | 19.659 | 970.5 | 41.16 | |
| | | | | 1411.2 | | | | |
| 4 | 8:20 | 1138.6 | 40.1 | 2073.6 | 40.065 | 1098.5 | 60.48 | |
| | 8:25 | 1187.1 | 47.2 | 2044.8 | 39.041 | 1148.1 | 59.64 | |
| | 8:30 | 1285.6 | 54.3 | 2044.8 | 39.041 | 1246.6 | 59.64 | |
| | | | | 2054.4 | | | | |
| 5 | 8:35 | 1349.6 | 63.9 | 2764.8 | 66.218 | 1281.4 | 80.64 | |
| | 8:40 | 1422.5 | 73.4 | 2736.0 | 66.909 | 1355.6 | 79.80 | |
| | 8:45 | 1484.0 | 82.9 | 2736.0 | 66.909 | 1417.1 | 79.80 | |
| | | | | 2745.6 | | | | |
| 6 | 8:50 | 1598.0 | 95.1 | 3513.6 | 106.283 | 1491.7 | 102.48 | |
| | 8:55 | 1651.7 | 107.2 | 3484.8 | 104.677 | 1547.0 | 101.64 | |
| | 9:00 | 1686.3 | 119.3 | 3484.8 | 104.677 | 1581.6 | 101.64 | |
| | | | | 3494.4 | | | | |
| 7 | 9:05 | 1809.2 | 134.9 | 4492.8 | 167.486 | 1641.7 | 131.04 | |
| | 9:10 | 1843.6 | 148.9 | 4032.0 | 137.099 | 1706.5 | 117.60 | |
| | 9:15 | 1853.8 | 163.6 | 4233.6 | 150.050 | 1703.8 | 123.48 | |
| | | | | 4252.8 | | | | |

| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|----------|--------------|---------------|---------------|------------|-----------|---------------|-------------|----------|
| STEP NO. | | SURFACE | CUMMULATIVE | INJECTION | FRICTION | CORRECTED | INJECTION | MEASURED |
| & | | TUBING PRESS. | VOL. INJECTED | RATE | HEAD LOSS | TUBING PRESS. | RATE (gpm) | BHP |
| REMARKS | TIME | (psig) | (bbls) | (bbls/day) | (psi) | (psi) (1)-(4) | (3)/34.2857 | (psi) |
| 8 | 9:20 | 1981.7 | 181.6 | 5184.0 | 218.249 | 1763.5 | 151.20 | |
| | 9:25 | 1991.7 | 199.6 | 5184.0 | 218.249 | 1773.5 | 151.20 | |
| | 9:30 | 1983.9 | 217.6 | 5184.0 | 218.249 | 1765.7 | 151.20 | |
| 9 | | | | 5184.0 | | | | |
| | 9:35 | 2045.2 | 237.9 | 5846.4 | 272.625 | 1772.6 | 170.52 | |
| | 9:40 | 2029.6 | 258.0 | 5788.8 | 267.677 | 1761.9 | 168.84 | |
| | 9:45 | 2026.9 | 278.2 | 5817.6 | 270.146 | 1756.8 | 169.68 | |
| 10 | | | | 5817.6 | | | | |
| | 9:50 | 2113.7 | 300.8 | 6508.8 | 332.505 | 1781.2 | 189.84 | |
| | 9:55 | 2107.1 | 323.7 | 6595.2 | 340.717 | 1766.4 | 192.36 | |
| | 10:00 | 2112.1 | 346.2 | 6480.0 | 329.789 | 1782.3 | 189.00 | |
| 11 | | | | 6528.0 | | | | |
| | 10:05 | 2188.6 | 371.2 | 7200.0 | 400.763 | 1787.8 | 210.00 | |
| | 10:10 | 2183.3 | 396.2 | 7200.0 | 400.763 | 1782.5 | 210.00 | |
| | OUT OF WATER | | 407.5 | | | | | |
| FALLOFF | 10:13 | 1710.9 | | | | 1710.9 | | |
| | 10:14 | 1685.2 | | | | 1685.2 | | |
| | 10:15 | 1664.7 | | | | 1664.7 | | |
| | 10:16 | 1649.3 | | | | 1649.3 | | |
| | 10:17 | 1635.2 | | | | 1635.2 | | |
| | 10:18 | 1622.3 | | | | 1622.3 | | |
| | 10:19 | 1609.5 | | | | 1609.5 | | |
| | 10:20 | 1598.0 | | | | 1598.0 | | |
| | 10:25 | 1541.5 | | | | 1541.5 | | |

STEP RATE INJECTION TEST

HANSON OPERATING COMPANY

Well Name:
Presler Lake No. 4 SWD
Chaves County, New Mexico

Wellhead Pressure = 1,870 psig
Injection Rate = 4,150 bbls/day

