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District IV

New Mexico  
Energy Minerals and Natural Resources Department  
Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505  
(505) 827-7131

Form C-140  
Originated 11/1/95

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H-0257

APPLICATION FOR  
QUALIFICATION OF WELL WORKOVER PROJECT  
AND CERTIFICATION OF APPROVAL

THREE COPIES OF THIS APPLICATION AND ALL ATTACHMENTS MUST BE FILED WITH THE APPROPRIATE DISTRICT OFFICE OF THE OIL CONSERVATION DIVISION.

- I. Operator: SHELL WESTERN E&P INC. OGRID #: \_\_\_\_\_  
Address: P.O. Box 1950, Hobbs NM, 88240  
Contact Party: DAVID NELSON Phone: 505-392-3561
- II. Name of Well: N. HOBBS (G/SA) UNIT 32-211 API #: 30-025-07525  
Location of Well: Unit Letter C, 990 Feet from the NORTH line and 2310 feet from the WEST line.  
Section 32, Township 18-2, Range 38-E, NMPM, LEA County
- III. Date Workover Procedures Commenced: 1-25-96  
Date Workover Procedures were Completed: 1-26-96
- IV. Attach a description of the Workover Procedures undertaken to increase the production from the Well.
- V. Attach an estimate of the production rate of the Well (a production decline curve or other acceptable method, and table showing monthly oil and/or gas Project Production) based on at least twelve (12) months of established production which shows the future rate of production based on well performance prior to performing Workover.
- VI. Pool(s) on which Production Projection is based: HOBBS (G/SA)

VII. AFFIDAVIT:

State of New Mexico  
County of Lea ) ss.

\_\_\_\_\_, being first duly sworn, upon oath states:

1. I am the Operator or authorized representative of the Operator of the above referenced Well.
2. I have made, or caused to be made, a diligent search of the production records which are reasonably available and contain information relevant to the production history of this Well.
3. To the best of my knowledge, the data used to prepare the Production Projection for this Well is complete and accurate and this projection was prepared using sound petroleum engineering principles.

Mark J. Mann  
(Name)

Sr. Field Supervisor  
(Title)

JAN 23 1997

SUBSCRIBED AND SWORN TO before me this 20<sup>th</sup> day of Jan, 1997

JoAnn King  
Notary Public

My Commission expires: 2/17/2000

FOR OIL CONSERVATION DIVISION USE ONLY:

VIII. CERTIFICATION OF APPROVAL:

This Application for Qualification of Well Workover Project is hereby approved and the above referenced Well is designated as a Well Workover Project pursuant to the "Natural Gas and Crude Oil Production Incentive Act" (Laws 1995, Chapter 15, Sections 1 through 8). The Oil Conservation Division hereby verifies the Production Projection for the Well Workover Project attached to this application. By copy of this Application and Certification of Approval, the Division notifies the Secretary of the Taxation and Revenue Department of this Approval and certifies that this Well Workover Project has been completed as of 1-26-96 1996.

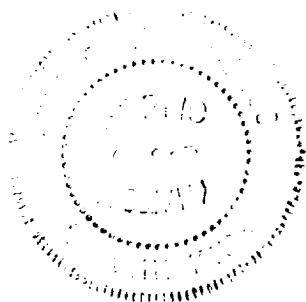
[Signature]  
District Supervisor, District 1  
Oil Conservation Division

**Geologist**

Date: 2/17/97

IX. DATE OF NOTIFICATION TO THE SECRETARY OF THE TAXATION AND REVENUE DEPARTMENT.

DATE: \_\_\_\_\_



7537 68 64

OPERATOR: SHELL WESTERN E&P INC.  
FIELD NAME: NORTH HOBBS (G/SA) UNIT  
POOL NAME: HOBBS (G/SA)  
WELL NO.: 32-211  
COUNTY: LEA

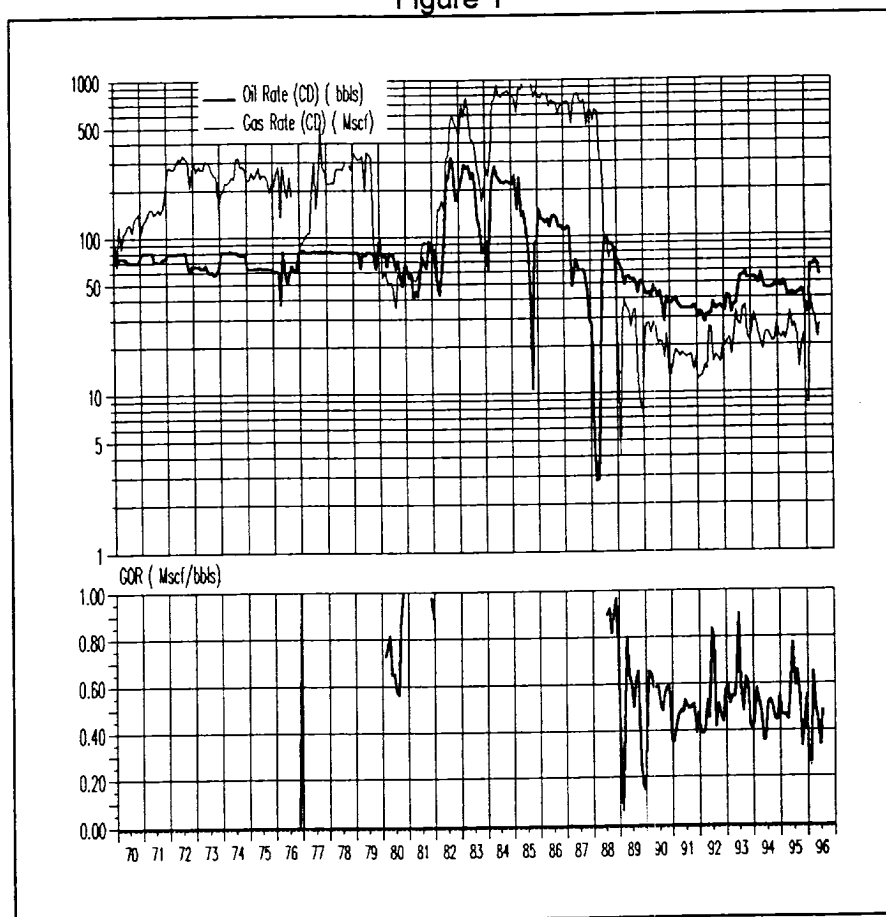
As part of our surveillance of this project we monitor casing fluid levels above pump intakes with periodic sonic fluid level measurements. This well was identified in late 1995 as a candidate for increased lift by having a fluid level at approximately 728 feet above pump intake and lift equipment running 24 hours per day. The existing submersible pump failed in early January 1996 and on January 26, 1996 we pulled the failed equipment and elected to invest in larger lift equipment to reduce back pressure on the reservoir and increase production by reducing the casing fluid level.

**Baseline production forecast  
North Hobbs Unit Well# 32-211  
Lea County, New Mexico**

**Objective:** Establish a baseline production forecast for NHU 32-211, so that incremental production from well work can be calculated. This incremental production will qualify for reduced production taxes.

**Production history:** Figure 1 illustrates the well's oil gas production history since 1970. This data is tabulated in appendix A and is from the PI database. The benefits of the lift upgrade done January 26, 1996 can also be seen in figure 1.

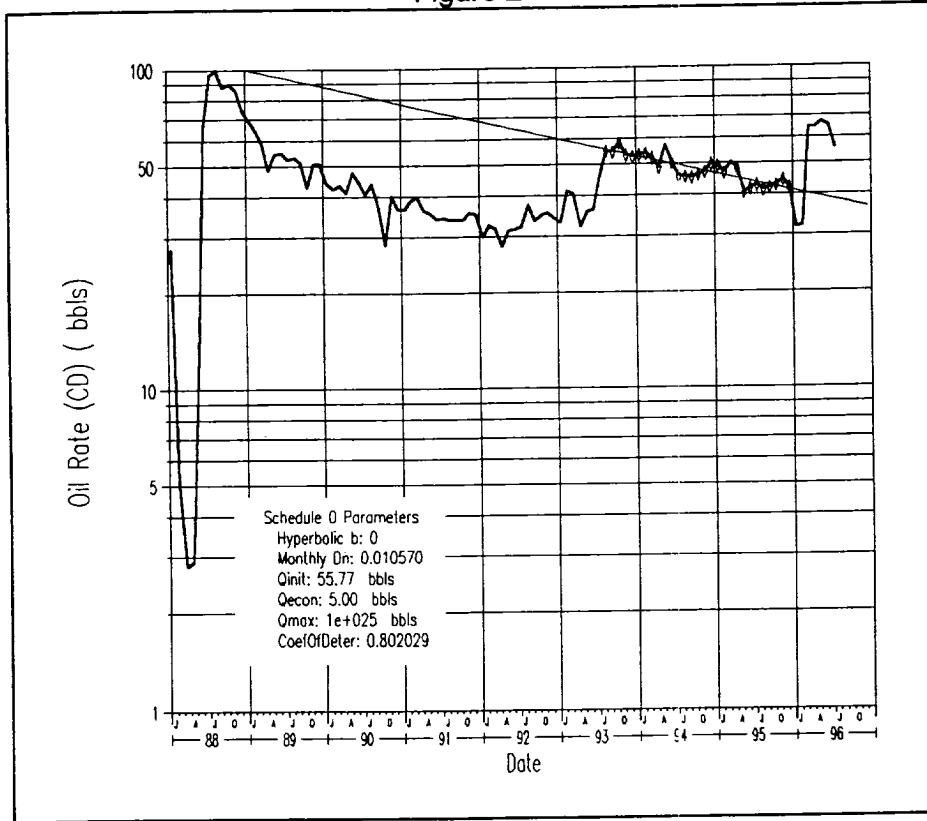
Figure 1



**Production forecast:** Figure 2 illustrates the oil production decline curve used to estimate the baseline oil production forecast. An exponential (straight line log-lin) decline of 1.057%/mo. was used to predict the future rate of oil decline. This decline was established using production data from August 1993 through December 1995. Two anomalous months, May 1994 and March 1995 were excluded when calculating the decline. The data points used in the decline forecast are highlighted with diamond symbols in figure 2.

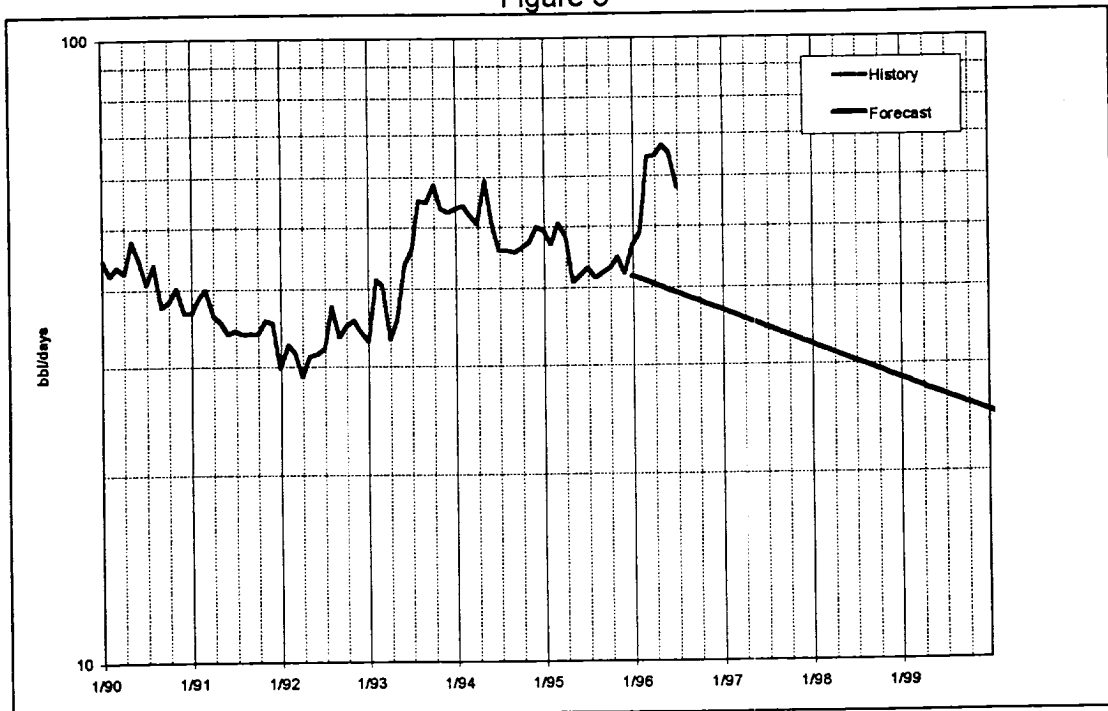
Gas was forecast using a constant gas-oil ratio (GOR) of .503 MCF/bbl. This is the average producing GOR from August 1993 through December 1995.

Figure 2



**Forecast schedule:** Appendix B is the tabulated production forecast based on the December 1995 actual production of 1,307 bbls (42.16 bbl/day), the 1.057%/month oil decline and a constant GOR of 0.503 MCF/bbl. Figure 3 illustrates the production history and the baseline forecast.

Figure 3



# Appendix A - Production History

Jan-08-1997  
11:22  
1 of 1

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Petroleum Information's Production Data on CD-ROM  
Southeast New Mexico - July 1996  
Entity Monthly Production Report - GITI

27541

|                                                     |                 |
|-----------------------------------------------------|-----------------|
| Entity : NORTH HOBBS G/SA UNIT (010091)             | Product: CRUDE  |
| Field : HOBBS (27000)                               | Start : 197001  |
| Reservoir: GRAYBURG SAN ANDRES (432)                | Stop : 199607   |
| Operator : SHELL WESTERN E & P INCORPORATED (30528) | Status : ACTIVE |
| Location : S32 T18S R38E C LEA                      | Dist : HOBBS    |
| Basin : PERMIAN (430)                               | Well# : 211     |
| Zone : GRAYBURG-SAN ANDRES (453GBSA)                | Lat : 32.70825  |
| API : 30025075250000                                | Lng : 103.17122 |

## Monthly Production

| Year     | Gas<br>(MCF) | Liq<br>(BBLS) | Wtr<br>(BBLS) | Gas<br>Trans | Liq<br>Trans | Active<br>Wells | Days<br>On |
|----------|--------------|---------------|---------------|--------------|--------------|-----------------|------------|
| 1970 CUM | 171157       | 814792        | 45            |              |              |                 |            |
| 1970 JAN | 2928         | 2216          | 20            |              |              | 1               |            |
| 1970 FEB | 1849         | 2007          | 20            |              |              | 1               |            |
| 1970 MAR | 3669         | 2317          | 20            |              |              | 1               |            |
| 1970 APR | 2549         | 2245          | 20            |              |              | 1               |            |
| 1970 MAY | 3285         | 2319          | 20            |              |              | 1               |            |
| 1970 JUN | 3256         | 2220          |               |              |              | 1               |            |
| 1970 JUL | 3768         | 2172          | 20            |              |              | 1               |            |
| 1970 AUG | 3782         | 2174          | 20            |              |              | 1               |            |
| 1970 SEP | 3248         | 2102          | 20            |              |              | 1               |            |
| 1970 OCT | 4061         | 2173          | 21            |              |              | 1               |            |
| 1970 NOV | 4131         | 2099          | 20            |              |              | 1               |            |
| 1970 DEC | 4453         | 2167          | 22            |              |              | 1               |            |
| 1971 JAN | 3203         | 2454          | 15            |              |              | 1               |            |
| 1971 FEB | 3487         | 2257          |               |              |              | 1               |            |
| 1971 MAR | 4027         | 2500          | 30            |              |              | 1               |            |
| 1971 APR | 4180         | 2420          | 29            |              |              | 1               |            |
| 1971 MAY | 4694         | 2504          | 30            |              |              | 1               |            |
| 1971 JUN | 4549         | 2413          | 25            |              |              | 1               |            |
| 1971 JUL | 4363         | 2175          | 60            |              |              | 1               |            |
| 1971 AUG | 4534         | 2197          | 60            |              |              | 1               |            |
| 1971 SEP | 4551         | 2112          | 90            |              |              | 1               |            |
| 1971 OCT | 4475         | 2176          | 93            |              |              | 1               |            |
| 1971 NOV | 4690         | 2227          | 98            |              |              | 1               |            |
| 1971 DEC | 5971         | 2290          | 98            |              |              | 1               |            |
| 1972 JAN | 8311         | 2445          | 98            |              |              | 1               |            |
| 1972 FEB | 8211         | 2319          | 87            |              |              | 1               |            |
| 1972 MAR | 8427         | 2461          | 90            |              |              | 1               |            |
| 1972 APR | 8311         | 2378          | 60            |              |              | 1               |            |
| 1972 MAY | 8964         | 2471          | 62            |              |              | 1               |            |
| 1972 JUN | 9696         | 2419          | 60            |              |              | 1               |            |
| 1972 JUL | 9516         | 2480          | 496           |              |              | 1               |            |
| 1972 AUG | 10465        | 2502          | 496           |              |              | 1               |            |
| 1972 SEP | 9680         | 2425          | 490           |              |              | 1               |            |
| 1972 OCT | 9504         | 2048          | 400           |              |              | 1               |            |
| 1972 NOV | 6248         | 1800          | 1280          |              |              | 1               |            |
| 1972 DEC | 8018         | 2043          | 1320          |              |              | 1               |            |
| 1973 JAN | 9458         | 2040          | 840           |              |              | 1               |            |
| 1973 FEB | 7296         | 1833          | 860           |              |              | 1               |            |
| 1973 MAR | 8802         | 2046          | 1300          |              |              | 1               |            |
| 1973 APR | 8176         | 1914          | 1260          |              |              | 1               |            |
| 1973 MAY | 8433         | 1970          | 720           |              |              | 1               |            |
| 1973 JUN | 9237         | 1991          | 700           |              |              | 1               |            |
| 1973 JUL | 9247         | 1897          | 837           |              |              | 1               |            |
| 1973 AUG | 9022         | 1848          | 830           |              |              | 1               |            |
| 1973 SEP | 7819         | 1817          | 830           |              |              | 1               |            |
| 1973 OCT | 7616         | 1795          | 830           |              |              | 1               |            |
| 1973 NOV | 7359         | 1803          | 970           |              |              | 1               |            |
| 1973 DEC | 4738         | 1943          | 870           |              |              | 1               |            |
| 1974 JAN | 5821         | 2484          | 900           |              |              | 1               |            |
| 1974 FEB | 5627         | 2243          | 800           |              |              | 1               |            |
| 1974 MAR | 6915         | 2501          | 800           |              |              | 1               |            |
| 1974 APR | 6607         | 2414          | 780           |              |              | 1               |            |
| 1974 MAY | 7120         | 2538          | 1600          |              |              | 1               |            |
| 1974 JUN | 7250         | 2420          | 1700          |              |              | 1               |            |
| 1974 JUL | 7332         | 2499          | 1850          |              |              | 1               |            |
| 1974 AUG | 9814         | 2502          | 1860          |              |              | 1               |            |
| 1974 SEP | 9673         | 2347          | 1800          |              |              | 1               |            |
| 1974 OCT | 8682         | 2396          | 1860          |              |              | 1               |            |

|          |       |      |      |     |     |      |
|----------|-------|------|------|-----|-----|------|
| 1974 NOV | 8450  | 2290 | 1800 |     |     | 1    |
| 1974 DEC | 8144  | 2434 | 1870 |     |     | 1    |
| 1975 JAN | 7070  | 1950 | 1870 |     |     | 1    |
| 1975 FEB | 6504  | 1761 | 1680 |     |     | 1    |
| 1975 MAR | 8014  | 1952 | 1860 |     |     | 1    |
| 1975 APR | 7162  | 1905 | 1800 |     |     | 1    |
| 1975 MAY | 7829  | 1953 | 1850 |     |     | 1    |
| 1975 JUN | 8348  | 1912 | 1850 |     |     | 1    |
| 1975 JUL | 7395  | 1970 | 1400 |     |     | 1    |
| 1975 AUG | 7740  | 1962 | 1900 |     |     | 1    |
| 1975 SEP | 7403  | 1892 | 1840 |     |     | 1    |
| 1975 OCT | 7395  | 1959 | 1900 |     |     | 1    |
| 1975 NOV | 5786  | 1888 | 1900 |     |     | 1    |
| 1975 DEC | 6795  | 1950 | 1900 |     |     | 1    |
| 1976 JAN | 6593  | 1860 | 1900 |     |     | 1    |
| 1976 FEB | 7403  | 1762 | 1800 |     |     | 1    |
| 1976 MAR | 8778  | 1860 | 1900 |     |     | 1    |
| 1976 APR | 4083  | 1114 | 2000 |     |     | 1    |
| 1976 MAY | 8845  | 2513 | 2000 |     |     | 1    |
| 1976 JUN | 6307  | 1805 | 2000 |     |     | 1    |
| 1976 JUL | 5615  | 1564 | 1800 |     |     | 1    |
| 1976 AUG | 7480  | 1865 | 1800 |     |     | 1    |
| 1976 SEP | 5459  | 1987 | 1720 |     |     | 1    |
| 1976 OCT |       | 1897 | 1860 |     |     | 1    |
| 1976 NOV |       | 1822 | 1800 |     |     | 1    |
| 1976 DEC | 2476  | 2491 | 1860 |     |     | 1    |
| 1977 JAN | 2845  | 2495 | 1840 |     |     | 1    |
| 1977 FEB | 2609  | 2348 | 560  |     |     | 1    |
| 1977 MAR | 3136  | 2489 | 1600 |     |     | 1    |
| 1977 APR | 3165  | 2421 | 1560 |     |     | 1    |
| 1977 MAY | 3317  | 2503 | 1500 |     |     | 1    |
| 1977 JUN | 5808  | 2428 | 1500 |     |     | 1    |
| 1977 JUL | 9305  | 2538 | 1500 |     |     | 1    |
| 1977 AUG | 4772  | 2507 | 1320 |     |     | 1    |
| 1977 SEP | 7245  | 2404 | 1200 |     |     | 1    |
| 1977 OCT | 15729 | 2529 | 1300 |     |     | 1    |
| 1977 NOV | 8573  | 2399 | 1190 |     |     | 1    |
| 1977 DEC | 8056  | 2544 | 1200 |     |     | 1    |
| 1978 JAN | 6831  | 2484 | 1190 |     |     | 1    |
| 1978 FEB | 6141  | 2292 | 820  |     |     | 1    |
| 1978 MAR | 6957  | 2497 | 2100 |     |     | 1    |
| 1978 APR | 6652  | 2416 | 2100 |     |     | 1    |
| 1978 MAY | 8442  | 2490 | 2050 |     |     | 1    |
| 1978 JUN | 8236  | 2418 | 2000 |     |     | 1    |
| 1978 JUL | 8482  | 2491 | 900  |     |     | 1    |
| 1978 AUG | 8364  | 2488 | 930  |     |     | 1    |
| 1978 SEP | 8989  | 2409 | 900  |     |     | 1    |
| 1978 OCT | 6     | 2486 | 930  |     |     | 1    |
| 1978 NOV | 8667  | 2406 | 2040 |     |     | 1    |
| 1978 DEC | 8333  | 2482 | 1860 |     |     | 1    |
| 1979 JAN | 10759 | 2485 | 2000 |     |     | 1    |
| 1979 FEB | 9175  | 2247 | 1904 |     |     | 1    |
| 1979 MAR | 9667  | 2482 | 2000 |     |     | 1    |
| 1979 APR | 9518  | 1900 | 1670 |     |     | 1    |
| 1979 MAY | 10320 | 2470 | 2000 |     |     | 1    |
| 1979 JUN | 5874  | 2308 | 2000 |     |     | 1    |
| 1979 JUL | 10880 | 2495 | 2000 |     |     | 1    |
| 1979 AUG | 10431 | 2494 | 2000 |     |     | 1    |
| 1979 SEP | 9591  | 2390 | 1800 |     |     | 1    |
| 1979 OCT | 2947  | 2415 | 1800 |     |     | 1    |
| 1979 NOV | 2055  | 1893 | 1350 |     |     | 1    |
| 1979 DEC | 2894  | 2369 | 1800 |     |     | 1    |
| 1980 JAN | 3047  | 2517 | 1800 | P P | SHL | 1 31 |
| 1980 FEB | 1584  | 2175 | 932  | P P | SHL | 1 29 |
| 1980 MAR | 1873  | 2426 | 1039 | P P | SHL | 1 31 |
| 1980 APR | 1599  | 1964 | 841  | P P | SHL | 1 29 |
| 1980 MAY | 1567  | 2419 | 1036 | P P | SHL | 1 31 |
| 1980 JUN | 1534  | 2354 | 1008 | P P | SHL | 1 30 |
| 1980 JUL | 1369  | 2362 | 1012 | P P | SHL | 1 31 |
| 1980 AUG | 1088  | 1932 | 828  | P P | SHL | 1 29 |
| 1980 SEP | 1796  | 2110 | 1048 | P P | SHL | 1 30 |
| 1980 OCT | 1689  | 1695 | 816  | P P | SHL | 1 31 |
| 1980 NOV | 1727  | 1465 | 695  | P P | SHL | 1 30 |
| 1980 DEC | 2112  | 2074 | 1058 | P P | SHL | 1 31 |
| 1981 JAN | 1947  | 1969 | 1181 | P P | SHL | 1 31 |
| 1981 FEB | 1628  | 1549 | 921  | P P | SHL | 1 28 |
| 1981 MAR | 1836  | 1779 | 1132 | P P | SHL | 1 31 |
| 1981 APR | 1618  | 1229 | 882  | P P | SHL | 1 29 |

|          |       |      |       |     |     |   |    |
|----------|-------|------|-------|-----|-----|---|----|
| 1981 MAY | 1615  | 1403 | 974   | P P | SHL | 1 | 31 |
| 1981 JUN | 1706  | 1254 | 860   | P P | SHL | 1 | 27 |
| 1981 JUL | 2064  | 1778 | 1220  | P P | SHL | 1 | 30 |
| 1981 AUG | 2798  | 2317 | 1531  | P P | SHL | 1 | 31 |
| 1981 SEP | 2806  | 2056 | 1320  | P P | SHL | 1 | 26 |
| 1981 OCT | 2812  | 1958 | 1241  | P P | SHL | 1 | 27 |
| 1981 NOV | 2735  | 2809 | 926   | P P | SHL | 1 | 30 |
| 1981 DEC | 2415  | 2714 | 1071  | P P | SHL | 1 | 31 |
| 1982 JAN | 2769  | 2262 | 1094  | P P | SHL | 1 | 25 |
| 1982 FEB | 1475  | 2337 | 1130  | P P | SHL | 1 | 28 |
| 1982 MAR | 4659  | 1491 | 1249  | P P | SHL | 1 | 31 |
| 1982 APR | 4471  | 1281 | 1173  | P P | SHL | 1 | 30 |
| 1982 MAY | 5306  | 1945 | 1475  | P P | SHL | 1 | 31 |
| 1982 JUN | 4531  | 2797 | 2911  | P P | SHL | 1 | 22 |
| 1982 JUL | 9849  | 7161 | 15789 | P P | SHL | 1 | 31 |
| 1982 AUG | 10399 | 7410 | 16340 | P P | SHL | 1 | 31 |
| 1982 SEP | 17003 | 9538 | 21032 | P P | SHL | 1 | 30 |
| 1982 OCT | 18346 | 9163 | 23101 | P P | SHL | 1 | 31 |
| 1982 NOV | 15655 | 5170 | 21610 | P P | SHL | 1 | 30 |
| 1982 DEC | 15221 | 5580 | 23331 | P P | SHL | 1 | 31 |
| 1983 JAN | 13295 | 6464 | 29052 | P P | SHL | 1 | 31 |
| 1983 FEB | 19611 | 6627 | 26842 | P P | SHL | 1 | 28 |
| 1983 MAR | 18159 | 8877 | 20811 | P P | SHL | 1 | 31 |
| 1983 APR | 23041 | 8232 | 22370 | P P | SHL | 1 | 29 |
| 1983 MAY | 20116 | 8709 | 26407 | P P | SHL | 1 | 31 |
| 1983 JUN | 12745 | 7073 | 19123 | P P | SHL | 1 | 30 |
| 1983 JUL | 12565 | 7936 | 20106 | P P | SHL | 1 | 30 |
| 1983 AUG | 11719 | 6748 | 18812 | P P | SHL | 1 | 28 |
| 1983 SEP | 8165  | 3930 | 21589 | P P | SHL | 1 | 30 |
| 1983 OCT | 7536  | 3634 | 19963 | P P | SHL | 1 | 31 |
| 1983 NOV | 5061  | 2381 | 15794 | P P | SHL | 1 | 25 |
| 1983 DEC | 6204  | 2587 | 17161 | P P | SHL | 1 | 27 |
| 1984 JAN | 8602  | 2917 | 20051 | P P | SHL | 1 | 31 |
| 1984 FEB | 7062  | 1804 | 13484 | P P | SHL | 1 | 19 |
| 1984 MAR | 11338 | 5985 | 38348 | P P | SHL | 1 | 30 |
| 1984 APR | 21831 | 7602 | 35591 | P P | SHL | 1 | 30 |
| 1984 MAY | 22892 | 8691 | 37293 | P P | SHL | 1 | 31 |
| 1984 JUN | 27981 | 7265 | 37859 | P P | SHL | 1 | 30 |
| 1984 JUL | 24719 | 7207 | 45263 | P P | SHL | 1 | 30 |
| 1984 AUG | 23855 | 6871 | 48136 | P P | SHL | 1 | 28 |
| 1984 SEP | 24816 | 6640 | 52097 | P P | SHL | 1 | 30 |
| 1984 OCT | 25710 | 7010 | 56696 | P P | SHL | 1 | 31 |
| 1984 NOV | 25720 | 6759 | 56428 | P P | SHL | 1 | 30 |
| 1984 DEC | 25098 | 6810 | 58466 | P P | SHL | 1 | 31 |
| 1985 JAN | 24694 | 6722 | 58309 | P P | SHL | 1 | 31 |
| 1985 FEB | 21345 | 6925 | 51786 | P P | SHL | 1 | 28 |
| 1985 MAR | 19315 | 4687 | 52605 | P P | SHL | 1 | 29 |
| 1985 APR | 26134 | 7120 | 54691 | P P | SHL | 1 | 30 |
| 1985 MAY | 26804 | 4214 | 54621 | P P | SHL | 1 | 31 |
| 1985 JUN | 28572 | 4357 | 57100 | P P | SHL | 1 | 30 |
| 1985 JUL | 31660 | 3679 | 60543 | P P | SHL | 1 | 31 |
| 1985 AUG | 31829 | 2704 | 62951 | P P | SHL | 1 | 31 |
| 1985 SEP | 30591 | 1543 | 60994 | P P | SHL | 1 | 30 |
| 1985 OCT | 28888 | 334  | 64452 | P P | SHL | 1 | 31 |
| 1985 NOV | 23055 | 2699 | 60383 | P P | SHL | 1 | 30 |
| 1985 DEC | 26751 | 2943 | 68181 | P P | SHL | 1 | 31 |
| 1986 JAN | 24239 | 4674 | 63934 | P P | SHL | 1 | 31 |
| 1986 FEB | 21150 | 3630 | 59035 | P P | SHL | 1 | 28 |
| 1986 MAR | 25667 | 4019 | 65317 | P P | SHL | 1 | 31 |
| 1986 APR | 24112 | 3700 | 62832 | P P | SHL | 1 | 30 |
| 1986 MAY | 25100 | 3994 | 64105 | P P | SHL | 1 | 31 |
| 1986 JUN | 20362 | 3504 | 61510 | P P | SHL | 1 | 30 |
| 1986 JUL | 23137 | 4205 | 65184 | P P | SHL | 1 | 31 |
| 1986 AUG | 22231 | 4231 | 65745 | P P | SHL | 1 | 31 |
| 1986 SEP | 21316 | 3975 | 64882 | P P | SHL | 1 | 30 |
| 1986 OCT | 18540 | 3567 | 74989 | P P | SHL | 1 | 31 |
| 1986 NOV | 20295 | 3540 | 72126 | P P | SHL | 1 | 30 |
| 1986 DEC | 21385 | 3460 | 76649 | P P | SHL | 1 | 31 |
| 1987 JAN | 22048 | 3411 | 76973 | P P | SHL | 1 | 31 |
| 1987 FEB | 20405 | 3275 | 69265 | P P | SHL | 1 | 28 |
| 1987 MAR | 22009 | 3482 | 77092 | P P | SHL | 1 | 31 |
| 1987 APR | 15849 | 1443 | 74822 | P P | SHL | 1 | 28 |
| 1987 MAY | 22346 | 1772 | 83227 | P P | SHL | 1 | 31 |
| 1987 JUN | 24117 | 2125 | 78370 | P P | SHL | 1 | 30 |
| 1987 JUL | 25462 | 1933 | 76771 | P P | SHL | 1 | 31 |
| 1987 AUG | 22919 | 1880 | 78783 | P P | SHL | 1 | 31 |
| 1987 SEP | 21355 | 1835 | 76678 | P P | SHL | 1 | 30 |
| 1987 OCT | 23125 | 1825 | 79143 | P P | SHL | 1 | 31 |

|          |       |      |       |     |     |   |    |
|----------|-------|------|-------|-----|-----|---|----|
| 1987 NOV | 15455 | 1334 | 58400 | P P | SHL | 1 | 23 |
| 1987 DEC | 19857 | 896  | 78219 | P P | SHL | 1 | 31 |
| 1988 JAN | 19675 | 852  | 78228 | P P | SHL | 1 | 31 |
| 1988 FEB | 15857 | 146  | 35533 | P P | SHL | 1 | 15 |
| 1988 MAR | 20070 | 87   | 70721 | P P | SHL | 1 | 30 |
| 1988 APR | 18638 | 87   | 67947 | P P | SHL | 1 | 30 |
| 1988 MAY | 9574  | 337  | 42148 | P P | SHL | 1 | 18 |
| 1988 JUN | 8966  | 1980 | 53623 | P P | SHL | 1 | 28 |
| 1988 JUL | 2682  | 2984 | 16762 | P P | SHL | 1 | 31 |
| 1988 AUG | 2849  | 3092 | 16248 | P P | SHL | 1 | 31 |
| 1988 SEP | 2168  | 2645 | 14640 | P P | SHL | 1 | 30 |
| 1988 OCT | 2483  | 2787 | 15128 | P P | SHL | 1 | 31 |
| 1988 NOV | 2494  | 2579 | 14610 | P P | SHL | 1 | 30 |
| 1988 DEC | 1776  | 2310 | 15541 | P P | SHL | 1 | 31 |
| 1989 JAN | 558   | 2148 | 15233 | P P | SHL | 1 | 31 |
| 1989 FEB | 113   | 1812 | 13580 | P P | SHL | 1 | 28 |
| 1989 MAR | 969   | 1839 | 13851 | P P | SHL | 1 | 31 |
| 1989 APR | 1172  | 1463 | 11809 | P P | SHL | 1 | 29 |
| 1989 MAY | 1078  | 1686 | 13299 | P P | SHL | 1 | 31 |
| 1989 JUN | 990   | 1650 | 13092 | P P | SHL | 1 | 30 |
| 1989 JUL | 813   | 1623 | 14766 | P P | SHL | 1 | 31 |
| 1989 AUG | 1033  | 1646 | 15438 | P P | SHL | 1 | 31 |
| 1989 SEP | 1004  | 1534 | 14630 | P P | SHL | 1 | 30 |
| 1989 OCT | 362   | 1333 | 13273 | P P | SHL | 1 | 31 |
| 1989 NOV | 258   | 1521 | 14880 | P P | SHL | 1 | 30 |
| 1989 DEC | 228   | 1574 | 15810 | P P | SHL | 1 | 31 |
| 1990 JAN | 661   | 1377 | 16371 | P P | SHL | 1 | 31 |
| 1990 FEB | 773   | 1182 | 15204 | P P | SHL | 1 | 28 |
| 1990 MAR | 862   | 1349 | 15897 | P P | SHL | 1 | 31 |
| 1990 APR | 722   | 1232 | 15272 | P P | SHL | 1 | 29 |
| 1990 MAY | 867   | 1481 | 15841 | P P | SHL | 1 | 31 |
| 1990 JUN | 791   | 1339 | 15236 | P P | SHL | 1 | 30 |
| 1990 JUL | 635   | 1263 | 16754 | P P | SHL | 1 | 31 |
| 1990 AUG | 659   | 1358 | 17944 | P P | SHL | 1 | 31 |
| 1990 SEP | 630   | 1124 | 16517 | P P | SHL | 1 | 30 |
| 1990 OCT | 517   | 878  | 12812 | P P | SHL | 1 | 23 |
| 1990 NOV | 711   | 1205 | 17340 | P P | SHL | 1 | 30 |
| 1990 DEC | 404   | 1140 | 18058 | P P | SHL | 1 | 31 |
| 1991 JAN | 401   | 1137 | 17768 | P P | SHL | 1 | 31 |
| 1991 FEB | 460   | 1088 | 16537 | P P | SHL | 1 | 28 |
| 1991 MAR | 579   | 1238 | 18538 | P P | SHL | 1 | 31 |
| 1991 APR | 532   | 1090 | 17761 | P P | SHL | 1 | 30 |
| 1991 MAY | 527   | 1096 | 19291 | P P | SHL | 1 | 31 |
| 1991 JUN | 541   | 1019 | 18936 | P P | SHL | 1 | 30 |
| 1991 JUL | 537   | 1065 | 19496 | P P | SHL | 1 | 31 |
| 1991 AUG | 518   | 1049 | 19279 | P P | SHL | 1 | 31 |
| 1991 SEP | 519   | 1021 | 18771 | P P | SHL | 1 | 30 |
| 1991 OCT | 540   | 1051 | 18601 | P P | SHL | 1 | 31 |
| 1991 NOV | 420   | 1069 | 17196 | P P | SHL | 1 | 30 |
| 1991 DEC | 517   | 1092 | 18138 | P P | SHL | 1 | 31 |
| 1992 JAN | 378   | 927  | 18054 | P P | SHL | 1 | 31 |
| 1992 FEB | 365   | 943  | 17145 | P P | SHL | 1 | 29 |
| 1992 MAR | 398   | 983  | 18901 | P P | SHL | 1 | 31 |
| 1992 APR | 444   | 839  | 17426 | P P | SHL | 1 | 29 |
| 1992 MAY | 439   | 967  | 17838 | P P | SHL | 1 | 31 |
| 1992 JUN | 789   | 946  | 18780 | P P | SHL | 1 | 30 |
| 1992 JUL | 796   | 997  | 19367 | P P | SHL | 1 | 31 |
| 1992 AUG | 485   | 1161 | 19704 | P P | SHL | 1 | 31 |
| 1992 SEP | 516   | 1006 | 17838 | P P | SHL | 1 | 30 |
| 1992 OCT | 514   | 1082 | 19137 | P P | SHL | 1 | 31 |
| 1992 NOV | 468   | 1070 | 19496 | P P | SHL | 1 | 30 |
| 1992 DEC | 598   | 1059 | 20672 | P P | SHL | 1 | 31 |
| 1993 JAN | 611   | 1022 | 18820 | P P | SHL | 1 | 31 |
| 1993 FEB | 597   | 1158 | 22678 | P P | SHL | 1 | 28 |
| 1993 MAR | 689   | 1256 | 23299 | P P | SHL | 1 | 31 |
| 1993 APR | 523   | 963  | 17853 | P P | SHL | 1 | 29 |
| 1993 MAY | 677   | 1109 | 18383 | P P | SHL | 1 | 31 |
| 1993 JUN | 984   | 1095 | 19081 | P P | SHL | 1 | 25 |
| 1993 JUL | 844   | 1430 | 27222 | P P | SHL | 1 | 31 |
| 1993 AUG | 833   | 1714 | 24901 | P P | SHL | 1 | 31 |
| 1993 SEP | 1031  | 1645 | 23951 | P P | SHL | 1 | 30 |
| 1993 OCT | 1099  | 1814 | 25372 | P P | SHL | 1 | 31 |
| 1993 NOV | 687   | 1609 | 25276 | P P | SHL | 1 | 30 |
| 1993 DEC | 660   | 1641 | 26049 | P P | SHL | 1 | 31 |
| 1994 JAN | 753   | 1663 | 25180 | P P | SHL | 1 | 31 |
| 1994 FEB | 878   | 1515 | 20029 | P P | SHL | 1 | 28 |
| 1994 MAR | 856   | 1624 | 23269 | P P | SHL | 1 | 31 |
| 1994 APR | 705   | 1470 | 23903 | P P | SHL | 1 | 29 |

|          |      |      |       |     |     |   |    |
|----------|------|------|-------|-----|-----|---|----|
| 1994 MAY | 635  | 1780 | 25772 | P P | SHL | 1 | 30 |
| 1994 JUN | 560  | 1519 | 27462 | P P | SHL | 1 | 30 |
| 1994 JUL | 735  | 1426 | 28309 | P P | SHL | 1 | 31 |
| 1994 AUG | 756  | 1424 | 27915 | P P | SHL | 1 | 31 |
| 1994 SEP | 696  | 1368 | 26298 | P P | SHL | 1 | 30 |
| 1994 OCT | 650  | 1441 | 25248 | P P | SHL | 1 | 31 |
| 1994 NOV | 633  | 1423 | 24090 | P P | SHL | 1 | 30 |
| 1994 DEC | 858  | 1552 | 26147 | P P | SHL | 1 | 31 |
| 1995 JAN | 721  | 1533 | 25296 | P P | SHL | 1 | 31 |
| 1995 FEB | 611  | 1316 | 20048 | P P | SHL | 1 | 28 |
| 1995 MAR | 732  | 1569 | 22368 | P P | SHL | 1 | 31 |
| 1995 APR | 648  | 1453 | 21100 | P P | SHL | 1 | 30 |
| 1995 MAY | 780  | 1265 | 22172 | P P | SHL | 1 | 31 |
| 1995 JUN | 971  | 1256 | 21723 | P P | SHL | 1 | 30 |
| 1995 JUL | 788  | 1335 | 21946 | P P | SHL | 1 | 31 |
| 1995 AUG | 841  | 1284 | 21498 | P P | SHL | 1 | 31 |
| 1995 SEP | 685  | 1267 | 21258 | P P | SHL | 1 | 30 |
| 1995 OCT | 445  | 1334 | 22417 | P P | SHL | 1 | 31 |
| 1995 NOV | 612  | 1342 | 22050 | P P | SHL | 1 | 30 |
| 1995 DEC | 716  | 1307 | 21993 | P P | SHL | 1 | 31 |
| 1996 JAN | 266  | 981  | 16630 | P P | SHL | 1 | 21 |
| 1996 FEB | 246  | 932  | 16630 | P P | SHL | 1 | 19 |
| 1996 MAR | 1294 | 1990 | 30483 | P P | SHL | 1 | 31 |
| 1996 APR | 959  | 1941 | 28190 | P P | SHL | 1 | 30 |
| 1996 MAY | 938  | 2080 | 29743 | P P | SHL | 1 | 31 |
| 1996 JUN | 662  | 1959 | 28054 | P P | SHL | 1 | 30 |
| 1996 JUL | 837  | 1729 | 27668 | P P | SHL | 1 | 30 |

## Appendix B - Production Forecast

|           | <u>Month-Year</u> | <u>Oil</u><br><u>bbls</u> | <u>Oil</u><br><u>bbl/cay</u> | <u>Gas</u><br><u>MSCF</u> | <u>Days</u> |
|-----------|-------------------|---------------------------|------------------------------|---------------------------|-------------|
| Actual    | Dec-1995          | 1,307                     | 42.16                        | 716                       | 31          |
| Forecast: | Jan-1996          | 1,293                     | 41.71                        | 650                       | 31          |
|           | Feb-1996          | 1,197                     | 41.27                        | 602                       | 29          |
|           | Mar-1996          | 1,266                     | 40.83                        | 637                       | 31          |
|           | Apr-1996          | 1,212                     | 40.40                        | 610                       | 30          |
|           | May-1996          | 1,239                     | 39.97                        | 623                       | 31          |
|           | Jun-1996          | 1,187                     | 39.55                        | 597                       | 30          |
|           | Jul-1996          | 1,213                     | 39.13                        | 610                       | 31          |
|           | Aug-1996          | 1,200                     | 38.72                        | 604                       | 31          |
|           | Sep-1996          | 1,149                     | 38.31                        | 578                       | 30          |
|           | Oct-1996          | 1,175                     | 37.91                        | 591                       | 31          |
|           | Nov-1996          | 1,125                     | 37.51                        | 566                       | 30          |
|           | Dec-1996          | 1,150                     | 37.11                        | 578                       | 31          |
|           | Jan-1997          | 1,138                     | 36.72                        | 572                       | 31          |
|           | Feb-1997          | 1,017                     | 36.33                        | 512                       | 28          |
|           | Mar-1997          | 1,114                     | 35.95                        | 560                       | 31          |
|           | Apr-1997          | 1,067                     | 35.57                        | 537                       | 30          |
|           | May-1997          | 1,091                     | 35.19                        | 549                       | 31          |
|           | Jun-1997          | 1,045                     | 34.82                        | 526                       | 30          |
|           | Jul-1997          | 1,068                     | 34.45                        | 537                       | 31          |
|           | Aug-1997          | 1,057                     | 34.09                        | 532                       | 31          |
|           | Sep-1997          | 1,012                     | 33.73                        | 509                       | 30          |
|           | Oct-1997          | 1,034                     | 33.37                        | 520                       | 31          |
|           | Nov-1997          | 991                       | 33.02                        | 498                       | 30          |
|           | Dec-1997          | 1,013                     | 32.67                        | 510                       | 31          |
|           | Jan-1998          | 1,002                     | 32.32                        | 504                       | 31          |
|           | Feb-1998          | 895                       | 31.98                        | 450                       | 28          |
|           | Mar-1998          | 981                       | 31.64                        | 493                       | 31          |
|           | Apr-1998          | 939                       | 31.31                        | 472                       | 30          |
|           | May-1998          | 960                       | 30.98                        | 483                       | 31          |
|           | Jun-1998          | 920                       | 30.65                        | 463                       | 30          |
|           | Jul-1998          | 940                       | 30.33                        | 473                       | 31          |
|           | Aug-1998          | 930                       | 30.01                        | 468                       | 31          |
|           | Sep-1998          | 891                       | 29.69                        | 448                       | 30          |
|           | Oct-1998          | 911                       | 29.38                        | 458                       | 31          |
|           | Nov-1998          | 872                       | 29.07                        | 439                       | 30          |
|           | Dec-1998          | 892                       | 28.76                        | 449                       | 31          |
|           | Jan-1999          | 882                       | 28.46                        | 444                       | 31          |
|           | Feb-1999          | 788                       | 28.16                        | 396                       | 28          |
|           | Mar-1999          | 864                       | 27.86                        | 435                       | 31          |
|           | Apr-1999          | 827                       | 27.57                        | 416                       | 30          |
|           | May-1999          | 846                       | 27.28                        | 426                       | 31          |
|           | Jun-1999          | 810                       | 26.99                        | 407                       | 30          |
|           | Jul-1999          | 828                       | 26.70                        | 416                       | 31          |
|           | Aug-1999          | 819                       | 26.42                        | 412                       | 31          |
|           | Sep-1999          | 784                       | 26.14                        | 394                       | 30          |

|          |     |       |     |    |
|----------|-----|-------|-----|----|
| Oct-1999 | 802 | 25 86 | 403 | 31 |
| Nov-1999 | 768 | 25 59 | 386 | 30 |
| Dec-1999 | 785 | 25 32 | 395 | 31 |
| Jan-2000 | 777 | 25 05 | 391 | 31 |
| Feb-2000 | 719 | 24 79 | 362 | 29 |
| Mar-2000 | 760 | 24 53 | 382 | 31 |
| Apr-2000 | 728 | 24 27 | 366 | 30 |
| May-2000 | 744 | 24 01 | 374 | 31 |
| Jun-2000 | 713 | 23 76 | 359 | 30 |
| Jul-2000 | 729 | 23 51 | 367 | 31 |
| Aug-2000 | 721 | 23 26 | 363 | 31 |
| Sep-2000 | 690 | 23 01 | 347 | 30 |
| Oct-2000 | 706 | 22 77 | 355 | 31 |
| Nov-2000 | 676 | 22 53 | 340 | 30 |
| Dec-2000 | 691 | 22 29 | 348 | 31 |
| Jan-2001 | 684 | 22 05 | 344 | 31 |
| Feb-2001 | 611 | 21 82 | 307 | 28 |
| Mar-2001 | 669 | 21 59 | 337 | 31 |
| Apr-2001 | 641 | 21 36 | 322 | 30 |
| May-2001 | 655 | 21 13 | 329 | 31 |
| Jun-2001 | 627 | 20 91 | 315 | 30 |
| Jul-2001 | 641 | 20 69 | 322 | 31 |
| Aug-2001 | 635 | 20 47 | 319 | 31 |
| Sep-2001 | 608 | 20 25 | 306 | 30 |
| Oct-2001 | 621 | 20 04 | 312 | 31 |
| Nov-2001 | 595 | 19 83 | 299 | 30 |
| Dec-2001 | 608 | 19 62 | 306 | 31 |
| Jan-2002 | 602 | 19 41 | 303 | 31 |
| Feb-2002 | 538 | 19 20 | 271 | 28 |
| Mar-2002 | 589 | 19 00 | 296 | 31 |
| Apr-2002 | 564 | 18 80 | 284 | 30 |
| May-2002 | 577 | 18 60 | 290 | 31 |
| Jun-2002 | 552 | 18 40 | 278 | 30 |
| Jul-2002 | 565 | 18 21 | 284 | 31 |
| Aug-2002 | 559 | 18 02 | 281 | 31 |
| Sep-2002 | 535 | 17 83 | 269 | 30 |
| Oct-2002 | 547 | 17 64 | 275 | 31 |
| Nov-2002 | 524 | 17 45 | 264 | 30 |
| Dec-2002 | 535 | 17 27 | 269 | 31 |
| Jan-2003 | 530 | 17 09 | 267 | 31 |
| Feb-2003 | 473 | 16 91 | 238 | 28 |
| Mar-2003 | 519 | 16 73 | 261 | 31 |
| Apr-2003 | 497 | 16 55 | 250 | 30 |
| May-2003 | 508 | 16 38 | 256 | 31 |
| Jun-2003 | 486 | 16 21 | 244 | 30 |
| Jul-2003 | 497 | 16 04 | 250 | 31 |
| Aug-2003 | 492 | 15 87 | 247 | 31 |
| Sep-2003 | 471 | 15 70 | 237 | 30 |
| Oct-2003 | 481 | 15 53 | 242 | 31 |
| Nov-2003 | 461 | 15 37 | 232 | 30 |
| Dec-2003 | 472 | 15 21 | 237 | 31 |

|          |     |       |     |    |
|----------|-----|-------|-----|----|
| Jan-2004 | 467 | 15 05 | 235 | 31 |
| Feb-2004 | 432 | 14 89 | 217 | 29 |
| Mar-2004 | 457 | 14 73 | 230 | 31 |
| Apr-2004 | 437 | 14 57 | 220 | 30 |
| May-2004 | 447 | 14 42 | 225 | 31 |
| Jun-2004 | 428 | 14 27 | 215 | 30 |
| Jul-2004 | 438 | 14 12 | 220 | 31 |
| Aug-2004 | 433 | 13 97 | 218 | 31 |
| Sep-2004 | 415 | 13 82 | 209 | 30 |
| Oct-2004 | 424 | 13 67 | 213 | 31 |
| Nov-2004 | 406 | 13 53 | 204 | 30 |
| Dec-2004 | 415 | 13 39 | 209 | 31 |
| Jan-2005 | 411 | 13 25 | 207 | 31 |
| Feb-2005 | 367 | 13 11 | 185 | 28 |
| Mar-2005 | 402 | 12 97 | 202 | 31 |
| Apr-2005 | 385 | 12 83 | 194 | 30 |
| May-2005 | 393 | 12 69 | 198 | 31 |
| Jun-2005 | 377 | 12 56 | 190 | 30 |
| Jul-2005 | 385 | 12 43 | 194 | 31 |
| Aug-2005 | 381 | 12 30 | 192 | 31 |
| Sep-2005 | 365 | 12 17 | 184 | 30 |
| Oct-2005 | 373 | 12 04 | 188 | 31 |
| Nov-2005 | 357 | 11 91 | 180 | 30 |
| Dec-2005 | 365 | 11 76 | 184 | 31 |
| Jan-2006 | 361 | 11 66 | 182 | 31 |
| Feb-2006 | 323 | 11 54 | 162 | 28 |
| Mar-2006 | 354 | 11 42 | 178 | 31 |
| Apr-2006 | 339 | 11 30 | 171 | 30 |
| May-2006 | 347 | 11 18 | 175 | 31 |
| Jun-2006 | 332 | 11 06 | 167 | 30 |
| Jul-2006 | 339 | 10 94 | 171 | 31 |
| Aug-2006 | 335 | 10 82 | 169 | 31 |
| Sep-2006 | 321 | 10 71 | 161 | 30 |
| Oct-2006 | 329 | 10 60 | 165 | 31 |
| Nov-2006 | 315 | 10 49 | 158 | 30 |
| Dec-2006 | 322 | 10 38 | 162 | 31 |
| Jan-2007 | 318 | 10 27 | 160 | 31 |
| Feb-2007 | 284 | 10 16 | 143 | 28 |
| Mar-2007 | 312 | 10 05 | 157 | 31 |
| Apr-2007 | 298 | 9 94  | 150 | 30 |
| May-2007 | 305 | 9 83  | 153 | 31 |
| Jun-2007 | 292 | 9 73  | 147 | 30 |
| Jul-2007 | 299 | 9 63  | 150 | 31 |
| Aug-2007 | 295 | 9 53  | 148 | 31 |
| Sep-2007 | 283 | 9 43  | 142 | 30 |
| Oct-2007 | 289 | 9 33  | 145 | 31 |
| Nov-2007 | 277 | 9 23  | 139 | 30 |
| Dec-2007 | 283 | 9 13  | 142 | 31 |
| Jan-2008 | 280 | 9 03  | 141 | 31 |
| Feb-2008 | 259 | 8 93  | 130 | 29 |
| Mar-2008 | 274 | 8 84  | 138 | 31 |

|          |     |      |     |    |
|----------|-----|------|-----|----|
| Apr-2006 | 263 | 8.75 | 132 | 30 |
| May-2006 | 268 | 8.66 | 135 | 31 |
| Jun-2006 | 257 | 8.57 | 129 | 30 |
| Jul-2006 | 263 | 8.48 | 132 | 31 |
| Aug-2006 | 260 | 8.39 | 131 | 31 |
| Sep-2006 | 249 | 8.30 | 125 | 30 |
| Oct-2006 | 255 | 8.21 | 128 | 31 |
| Nov-2006 | 244 | 8.12 | 123 | 30 |
| Dec-2006 | 249 | 8.03 | 125 | 31 |
| Jan-2007 | 246 | 7.95 | 124 | 31 |
| Feb-2007 | 220 | 7.87 | 111 | 28 |
| Mar-2007 | 241 | 7.79 | 121 | 31 |
| Apr-2007 | 231 | 7.71 | 116 | 30 |
| May-2007 | 237 | 7.63 | 119 | 31 |
| Jun-2007 | 227 | 7.55 | 114 | 30 |
| Jul-2007 | 232 | 7.47 | 117 | 31 |
| Aug-2007 | 229 | 7.39 | 115 | 31 |
| Sep-2007 | 219 | 7.31 | 110 | 30 |
| Oct-2007 | 224 | 7.23 | 113 | 31 |
| Nov-2007 | 215 | 7.15 | 108 | 30 |
| Dec-2007 | 219 | 7.07 | 110 | 31 |
| Jan-2008 | 217 | 7.00 | 109 | 31 |
| Feb-2008 | 194 | 6.93 | 98  | 28 |
| Mar-2008 | 213 | 6.86 | 107 | 31 |
| Apr-2008 | 204 | 6.79 | 103 | 30 |
| May-2008 | 208 | 6.72 | 105 | 31 |
| Jun-2008 | 200 | 6.65 | 101 | 30 |
| Jul-2008 | 204 | 6.58 | 103 | 31 |
| Aug-2008 | 202 | 6.51 | 102 | 31 |
| Sep-2008 | 193 | 6.44 | 97  | 30 |
| Oct-2008 | 197 | 6.37 | 99  | 31 |
| Nov-2008 | 189 | 6.30 | 95  | 30 |
| Dec-2008 | 193 | 6.23 | 97  | 31 |