pKRV0208731013 SWD 4/11/02

MAR 27 2002

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

**Oil Conservation Division 1220 South St. Francis Dr.**

**Santa Fe, New Mexico 87505** FORM C-108 Revised 4-1-98

## APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance
_X_ Disposal _____ Storage
Application qualifies for administrative approval? _X_ Yes _____ No

II. OPERATOR:
DKD, L L C.

ADDRESS:
P O Box 682 Tatum, NM 88267

CONTACT PARTY:
Danny R. Watson PHONE: (505)398-3490

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____ Yes _X_ No
If yes, give the Division order number authorizing the project:

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the

Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Eddie W Seay Agent TITLE: _____

SIGNATURE: Eddie W Seay 2/28/02 DATE: _____

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: when drilled

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30-025-02706 | STATE C #003 | 993S | 2131E | O | 1 | 16S | 35E | CHARLES B GILLESPIE JR | 4136 | 4687 | 0 | PLUGGED & ABANDONED | | 1994-06-01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-03728 | SNYDER B #001 | 3656N | 660E | A | 6 | 16S | 36E | ENERGEN RESOURCES CORPORATION | 162928 | 27807 | 59847 | WOLFCAMP | TOWNSEND,PERMO UPPER PENN | 9999-12-31 | 0 | 0 | 0 | 2224 | 395 | 1023 |
| 30-025-03730 | SNYDER C #001 | 2336N | 660E | A | 6 | 16S | 36E | ENERGEN RESOURCES CORPORATION | 162928 | 27808 | 59847 | WOLFCAMP | TOWNSEND,PERMO UPPER PENN | 9999-12-31 | 12033 | 2287 | 4170 | 14380 | 2977 | 2514 |
| 30-025-34282 | WEST LOVINGTON STRAWN UNIT #016 | 510N | 990E | A | 6 | 16S | 36E | ENERGEN RESOURCES CORPORATION | 162928 | 27820 | 40875 | ATOKA | LOVINGTON;STRAWN, WEST | 9999-12-31 | 105504 | 10616 | 0 | 3703 | 533 | 33 |
| 30-025-03729 | SNYDER B #002 | 3656N | 2310E | B | 6 | 16S | 36E | ENERGEN RESOURCES CORPORATION | 162928 | 27807 | 59847 | WOFCAMP | TOWNSEND;PERMO UPPER PENN | 9999-12-31 | 14989 | 2898 | 4728 | 16536 | 3226 | 7952 |
| 30-025-03732 | SNYDER E #001 | 1016N | 1980E | B | 6 | 16S | 36E | ENERGEN RESOURCES CORPORATION | 162928 | 27809 | 59847 | WOLFCAMP | TOWNSEND;PERMO UPPER PENN | 9999-12-31 | 6644 | 359 | 56 | 5312 | 234 | 0 |
| 30-025-33219 | WEST LOVINGTON STRAWN UNIT #015 | 1346N | 1980E | B | 6 | 16S | 36E | ENERGEN RESOURCES CORPORATION | 162928 | 27820 | 40875 | STRAWN | LOVINGTON;STRAWN, WEST | 9999-12-31 | 19117 | 12625 | 0 | 27617 | 10640 | 0 |
| 30-025-03731 | SNYDER D #001 | 2336N | 1916W | C | 6 | 16S | 36E | CHARLES B GILLESPIE JR | 4136 | 4682 | 0 | WOLFCAMP | | 1993-09-22 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-03737 | STATE T #004 | 4620S | 1885W | C | 6 | 16S | 36E | PRONGHORN MANAGEMENT CORP | 122811 | 14991 | 0 | WOLFCAMP | | 9999-12-31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-03735 | STATE T #002 | 4290S | 500W | D | 6 | 16S | 36E | PRONGHORN MANAGEMENT CORP | 122811 | 14991 | 0 | WOLFCAMP | | 9999-12-31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-03736 | STATE T #003 | 3300S | 1551W | F | 6 | 16S | 36E | PRONGHORN MANAGEMENT CORP | 122811 | 14991 | 0 | WOLFCAMP | | 9999-12-31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-27702 | SNYDER C #002 | 2236N | 1980E | G | 6 | 16S | 36E | CHARLES B GILLESPIE JR | 4136 | 4681 | 0 | PLUGGED & ABANDONED | | 1993-09-16 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-33934 | LITTLE 6 #001 | 2065S | 2038W | K | 6 | 16S | 36E | CHESAPEAKE OPERATING, INC. | 147179 | 20764 | 96649 | STRAWN | SHOE BAR,STRAWN, NORTHEAST | 9999-12-31 | 29939 | 19059 | 35301 | 31707 | 20958 | 30828 |
| 30-025-03727 | SNYDER A #001 | 2319S | 330W | L | 6 | 16S | 36E | ENERGEN RESOURCES CORPORATION | 162928 | 27805 | 0 | WOLFCAMP | | 9999-12-31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-03734 | STATE T #001 | 2970S | 330W | M | 6 | 16S | 36E | PRONGHORN MANAGEMENT CORP | 122811 | 14991 | 0 | WOLFCAMP | | 9999-12-31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-34[illegible] | WATSON 6 #001 | 2857S | 1417W | N | 6 | 16S | 36E | CHESAPEAKE OPERATING, INC | 147179 | 21706 | 0 | STRAWN | | 9999-12-31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-34073 | SNYDER A COM #001 | 990S | 874W | U | 6 | 16S | 36E | ENERGEN RESOURCES CORPORATION | 162928 | 27806 | 96649 | ATOKA | SHOE BAR,STRAWN, NORTHEAST | 9999-12-31 | 12972 | 7175 | 18421 | 11803 | 7003 | 13549 |

| API | Well Name | NS Ftg | EW Ftg | UL | Sec | Tsp | Rge | Operator | OGRID Cde | Prop Nbr | Pool IDN | Formation/ Notes | Active Zone 2001 | Plug Date | Gas2000 | Oil2000 | Water2000 | Gas2001 | Oil2001 | Water2001 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30-025-02708 | STATE B #003 | 4290S | 160E | A | 1 | 16S | 35E | CHARLES B GILLESPIE JR | 4136 | 4686 | 0 | WOLFCAMP | 10,554 - 10,629' | 1993-08-27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-31831 | WEST LOVINGTON STRAWN UNIT #006 | 990N | 660E | A | 1 | 16S | 35E | ENERGEN RESOURCES CORPORATION | 162928 | 27820 | 0 | STRAWN | | 9999-12-31 | 7509 | 632 | 0 | 0 | 0 | 0 |
| 30-025-02709 | STATE B #004 | 4610S | 2301E | B | 1 | 16S | 35E | ENERGEN RESOURCES CORPORATION | 162928 | 27821 | 59847 | WOLFCAMP | TOWNSEND;PERMO UPPER PENN | 9999-12-31 | 1065 | 173 | 38 | 165 | 65 | 0 |
| 30-025-31830 | WEST LOVINGTON STRAWN UNIT #005 | 990N | 1980E | B | 1 | 16S | 35E | ENERGEN RESOURCES CORPORATION | 162928 | 27820 | 40875 | STRAWN | LOVINGTON;STRAWN, WEST | 9999-12-31 | 5108 | 225 | 0 | 0 | 25 | 0 |
| 30-025-02716 | STATE D #007 | 4290S | 2310W | C | 1 | 16S | 35E | CHARLES B GILLESPIE JR | 4136 | 4688 | 0 | WOLFCAMP | | 1993-09-13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-31646 | WEST LOVINGTON STRAWN UNIT #007 | 660N | 2310W | C | 1 | 16S | 35E | ENERGEN RESOURCES CORPORATION | 162928 | 27820 | 40875 | STRAWN / CONVERTED TO WIW | LOVINGTON;STRAWN, WEST | 9999-12-31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-02715 | STATE D #006 | 2970S | 2300W | F | 1 | 16S | 35E | ENERGEN RESOURCES CORPORATION | 162928 | 27811 | 59847 | WOLFCAMP | TOWNSEND;PERMO UPPER PENN | 9999-12-31 | 2504 | 1216 | 858 | 1658 | 1888 | 1469 |
| 30-025-08508 | STATE B #002 | 3690S | 2200E | G | 1 | 16S | 35E | ENERGEN RESOURCES CORPORATION | 162928 | 27821 | 59847 | WOLFCAMP | TOWNSEND;PERMO UPPER PENN | 9999-12-31 | 0 | 0 | 0 | 0 | 269 | 0 |
| 30-025-02707 | STATE B #001 | 3300S | 985E | H | 1 | 16S | 35E | CHARLES B GILLESPIE JR | 4136 | 4686 | 0 | WOLFCAMP | 10,568 - 10,614' | 1993-08-31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-02705 | STATE C #002 | 2340S | 910E | I | 1 | 16S | 35E | CHARLES B GILLESPIE JR | 4136 | 4687 | 0 | WOLFCAMP | 10,600' - 10,643' | 1993-09-07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-02704 | STATE C #001 | 2310S | 2140E | J | 1 | 16S | 35E | CHARLES B GILLESPIE JR | 4136 | 4687 | 0 | PLUGGED & ABANDONED | | 1994-10-10 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-02714 | STATE D #005 | 1980S | 2301W | K | 1 | 16S | 35E | ENERGEN RESOURCES CORPORATION | 162928 | 27811 | 59847 | WOLFCAMP | TOWNSEND;PERMO UPPER PENN | 9999-12-31 | 4203 | 2209 | 5484 | 5362 | 4024 | 7455 |
| 30-025-02711 | STATE D #002 | 1980S | 330W | L | 1 | 16S | 35E | ENERGEN RESOURCES CORPORATION | 162928 | 27811 | 59847 | WOLFCAMP | TOWNSEND;PERMO UPPER PENN | 9999-12-31 | 2032 | 961 | 456 | 1351 | 924 | 806 |
| 30-025-33606 | STATE D #008 | 3990N | 330W | L | 1 | 16S | 35E | ENERGEN RESOURCES CORPORATION | 162928 | 27811 | 96690 | STRAWN | BIG DOG;STRAWN, SOUTH | 9999-12-31 | 30881 | 3505 | 0 | 15937 | 2183 | 145 |
| 30-025-02710 | STATE D #001 | 990S | 330W | M | 1 | 16S | 35E | ENERGEN RESOURCES CORPORATION | 162928 | 27811 | 59847 | WOLFCAMP | TOWNSEND;PERMO UPPER PENN | 9999-12-31 | 3160 | 1558 | 1023 | 1644 | 1691 | 956 |
| 30-025-02712 | STATE D #003 | 3000S | 330W | M | 1 | 16S | 35E | ENERGEN RESOURCES CORPORATION | 162928 | 27811 | 96113 | | SWD;PENN | 9999-12-31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-34683 | STATE D #009 | 330S | 330W | M | 1 | 16S | 35E | CHARLES B GILLESPIE JR | 4136 | 4688 | 0 | PLUGGED & ABANDONED 11/01/99 | | 1999-11-01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-025-02713 | STATE D #004 | 990S | 1650W | N | 1 | 16S | 35E | CHARLES B GILLESPIE JR | 4136 | 4688 | 0 | WOLFCAMP | | 1993-09-30 | 0 | 0 | 0 | 0 | 0 | 0 |

*New Mexico Office of the State Engineer*
**Water Right Summary**

Back

DB File Nbr: L 03104
Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
Primary Status: PMT Permit
Total Acres:
Total Diversion: 3
Owner: WARREN & BRADSHAW EXPLORATION

Documents on File

| Doc | File/Act | Status 1 2 3 | Trans_Desc | From/To | Acres | Diversion | Consumptive |
|---|---|---|---|---|---|---|---|
| 72121 | 03/07/1956 | PMT LOG ABS | L 03104 | T | | 3 | |

(qtr are 1=NW 2=NE 3=SW 4=SE)

| Point of Diversion POD | Number | Source | (qtr are biggest to smallest Tws | Rng | Sec | q | q | q | X Y are in Feet Zone | X | Y | UTM are in Meters) UTM_Zone | Easting | Northing | Latitude | Lo |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 03104 | Shallow | 16S | 36E | 06 | 1 | | | | | | 13 | 649763 | 3647199 | 32 57 3.62 | 103 2 |
| L | 03104 APPRO | Shallow | 16S | 36E | 06 | 1 | | | | | | 13 | 649763 | 3647199 | 32 57 3.62 | 103 2 |

***New Mexico Office of the State Engineer***

**Well Reports and Downloads**

Township: 16S Range: 36E Sections: 6

NAD27 X: Y: Zone: Search Radius:

County: LE Basin: Number: Suffix:

Owner Name: (First) (Last) ○ Non-Domestic ○ Domestic ◉ All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | WATERS Menu | Help

**WELL / SURFACE DATA REPORT 04/10/2002**

(acre ft per annum) (quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are biggest to smallest X Y are in

| DB | File Nbr | Use | Diversion | Owner | Well Number | Source | Tws | Rng | Sec | q q q | Zone | X |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 03104 | PRO | 3 | WARREN & BRADSHAW EXPLORATION | L 03104 | | 16S | 36E | 06 | 1 | | |
| | | | | | L 03104 APPRO | Shallow | 16S | 36E | 06 | 1 | | |
| L | 03697 | PRO | 3 | CACTUS DRILLING CORP. | L 03697 | | 16S | 36E | 06 | | | |
| | | | | | L 03697 APPRO | Shallow | 16S | 36E | 06 | | | |
| L | 03773 | PRO | 3 | CACTUS DRILLING CORP. | L 03773 | | 16S | 36E | 06 | | | |
| | | | | | L 03773 APPRO | Shallow | 16S | 36E | 06 | | | |
| L | 03797 | DOM | 3 | W.M. SNYDER | L 03797 | | 16S | 36E | 06 | | | |
| | | | | | L 03797 APPRO EXP | | 16S | 36E | 06 | | | |
| L | 03862 | PRO | 3 | FIRST BLACK STOCK | L 03862 | Shallow | 16S | 36E | 06 | | | |
| | | | | | L 03862 APPRO | Shallow | 16S | 36E | 06 | | | |
| L | 06206 | DOM | 3 | CLARENCE EUGENE LUCE | L 06206 | Shallow | 16S | 36E | 06 | 3 | | |
| L | 07110 | DOM | 3 | MELVIN J. DICKERSON | L 07110 | Shallow | 16S | 36E | 06 | 3 4 | | |
| L | 07187 | DOM | 3 | LARRY WHITE | L 07187 | Shallow | 16S | 36E | 06 | 3 3 | | |
| L | 07313 | DOM | 3 | LARRY L. WHITE | L 07313 | Shallow | 16S | 36E | 06 | 3 4 | | |
| L | 07430 | DOM | 3 | GILBERT ARREOLA | L 07430 | Shallow | 16S | 36E | 06 | 3 1 | | |
| L | 08466 | DOM | 3 | EMPIRE DIRLLING COMPANY | L 08466 | Shallow | 16S | 36E | 06 | 3 4 1 | | |
| L | 09962 | DOM | 3 | JOSE M. MORENO | L 09962 | Shallow | 16S | 36E | 06 | | | |
| L | 10024 | DOM | 3 | LUPE F. MORENO | L 10024 | Shallow | 16S | 36E | 06 | | | |
| L | 10577 | DOM | 3 | ORBIT ENTERPRISES INC | L 10577 | Shallow | 16S | 36E | 06 | 3 3 1 | | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | 10628 | DOM | 3 | LITTLE BILLY E AND MARSHA R | L | 10628 | | Shallow | 16S | 36E | 06 | 3 4 4 |
| L | 10657 | PRO | 0 | CHESAPEAKE OPERATING | L | 10657 | | Shallow | 16S | 36E | 06 | 3 2 2 |
| L | 10705 | PRO | 0 | CHARLES B JR GILLESPIE | L | 10705 | | | 16S | 36E | 06 | 3 1 |
| L | 10733 | PRO | 0 | PATTERSON DRILLING COMPANY | L | 10657 | | Shallow | 16S | 36E | 06 | 3 2 2 |
| L | 10752 | PRO | 0 | GILLESPIE OIL COMPANY | L | 10752 | | | 16S | 36E | 06 | 3 1 1 |
| L | 11149 | DOM | 3 | CARROLL W. BELLAH | L | 11149 | | Shallow | 16S | 36E | 06 | 1 3 |

Record Count: 25

# Casing and Cementing Records

| | Surface | Production |
|---|---|---|
| Hole Size, in | 12-1/4 | 7-7/8 |
| Total Depth, ft | 241 | 10704 |
| Casing Size, in | 8-5/8 | 5-1/2 |
| Weight, ppf | 24 | 17 |
| Grade | K-55 | K-55 |
| Collar Type | ST&C | LT&C |
| Setting Depth, ft (kb) | 233 | 10704 |
| PBTD, ft (kb) | | 10640 |
| CIBP? 1=yes, 0=No | | 0 |
| Circ Cement, Sx | 12 | 0 |
| Calced Cmt Top, Ft (kb) | 0 | 9,506 |
| **Lead Cement** | | |
| Sacks | 120 | 200 |
| Type or Class | Type III | Class C |
| Gel, pct | | 2 |
| Weight, ppg | 14.8 | 14.1 |
| Yield, cf/sk | 1.32 | 1.35 |
| CaCl2, pct | 2 | |
| Celloflake, lb/sk | 1/4 | |
| Gilsonite, lb/sk | | 6-1/4 |
| FL-52, pct | | 0.3 |
| Other additive | | 0.02% CD32 |
| **Tail Cement** | | |
| Sacks | | |
| Type or Class | | |
| Gel, pct | | |
| Weight, ppg | | |
| Yield, cf/sk | | |
| CaCl2, pct | | |
| Celloflake, lb/sk | | |
| Gilsonite, lb/sk | | |
| FL-52, pct | | |
| Other additive | | |

Cement Fillup Calculation

| Efficiency, pct | 80 | 80 |
|---|---|---|
| Annulus Volume, ft3 | 91 | 1,852 |
| Lead ready? | 1 | 1 |
| Bottom ready? | 0 | 0 |
| Proceed? | 1 | 1 |
| Lead Cement, ft3 | 158 | 270 |
| Tail Cement, ft3 | Missing Data | Missing Data |
| Annulus Cement, ft3 | 148 | 259 |
| Calced Cmt Top, Ft (kb) | 0 | 9,506 |
| Format for Cmt Top | 3 | 3.0 |
| Integers in Cmt Top | 1 | 4 |

[redacted]

Click to calc. Erase it

**Surface**

8-5/8", 24#, K-55, ST&C, set @ 233' KB.
12-1/4" Hole.
Cmt w/ 120 sx, Type III 14.8 ppg, 1.32 cu.ft/sx,
2% CaCl2, 1/4 lb/sx CF.
Circ. 12 sx cmt to pit.

CMT TOP CALC.

**Production**

5-1/2", 17#, K-55, LT&C, set @ 10,704' KB.
7-7/8" Hole.
Cmt w/ 200 sx, Class C, 2% gel, 14.1 ppg, 1.35 cu.ft/sx
, 6-1/4 lb/sx gilsonite, 0.3% FL-52 0.02% CD32 .
Cement top calced (80% fillup) @ 9,506' KB.

DKD, L L C.

## Application for Disposal
## Watson 1-6

| Well | Type | Date Drilled | Location | Depth | Record of Completion | Zone | Status |
|---|---|---|---|---|---|---|---|
| State 1T | Oil | Aug-57 | 2970 FSL/330 FWL 6-16S-36E | 10,746 | perf 10,650'-10,710' | Wolf | In-active |
| State 2T | Oil | Nov-57 | 4290 FSL/550 FWL 6-16S-36E | 10,692 | perf 10,583'-10,647' | Wolf | In-active |
| State 3T | Oil | Apr-58 | 3300 FSL/1551 FWL 6-16S-36E | 10,737 | perf 10,650'-10,700' | Wolf | In-active |
| State 4T | Oil | Aug-58 | 4620 FSL/1885 FWL 6-16S-36E | 10,728 | perf 10,607'-10,664' | Wolf | In-active |
| State B3 | Oil | Apr-57 | 4290 FSL/160 FEL 1-16S-35E | 10,706 | perf 10,554'-10,629' | Wolf | In-active |
| Snyder 2B | Oil | May-58 | 3656 FNL/2310 FEL 6-16S-36E | 10,703 | perf 10,653'-10,671' | Wolf | Active |
| State B1 | Oil | Sep-56 | 3300 FSL/975 FEL 1-16S-35E | 10,700 | perf 10,568'-10,614' | Wolf | In-active |
| State C2 | Oil | Nov-56 | 2340 FSL/910 FEL 1-16S-35E | 10,695 | perf 10,600'-10,643' | Wolf | In-active |
| Snyder 1A | Oil | May-57 | 2319 FSL.330 FWL 6-16S-36E | 10,714 | perf 10,652'-10,692' | Wolf | In-active |
| Snyder A Comm | Oil | Mar-98 | 990 FSL/874 FWL 6-16S-36E | 11,745 | perf 11,452'-11,477' | Strawn | Active |
| Little 1-6 | Oil | Jul-97 | 2065 FSL/2038 FWL 6-16S-36E | 11,860 | perf 11,456'-11,523' | Strawn | Active |

## WELL DATA

**Energen Resources Corp., Snyder A Comm #1 U, Sect. 6**
Drilled 1998 as an oil well in the Strawn, active producer

| HOLE | CSG | DEPTH | CEMENT | |
|---|---|---|---|---|
| 17 1/2" | 13 3/8" | 398' | 440 sx | circ. |
| 11" | 8 5/8" | 4762' | 1110 sx | circ. |
| 7 7/8" | 5 1/2" | 11,745' | 650 sx | calc. TOC 2100' |

**Energen Resources Corp., Snyder B #2 J, Sect. 6**
Drilled 1958 as an oil well in the Wolfcamp, active producer

| HOLE | CSG | DEPTH | CEMENT | |
|---|---|---|---|---|
| 17 1/2" | 13 3/8" | 363' | 275 sx | circ. |
| 11" | 8 5/8" | 4724' | 2050 sx | circ. |
| 7 7/8" | 5 1/2" liner | 4551'/10,703' | 300 sx | calc. TOC 6200' |

**Energen Resources Corp., Snyder A #1-T, Sect. 6**
Drilled 1957 as an oil well in the Wolfcamp, well inactive.

| HOLE | CSG | DEPTH | CEMENT | |
|---|---|---|---|---|
| 17 1/2" | 13 3/8" | 369' | 275 sx | circ. |
| 12 1/4" | 8 5/8" | 4715' | 2050 sx | circ. |
| 7 7/8" | 5 1/2" liner | 4536'/10,719' | 300 sx | calc. TOC 6200' |

**Chesapeake Operating, Inc., Little 6 #1 K, Sect. 6**
Drilled 1997 as an oil well in the Strawn, active producer.

| HOLE | CSG | DEPTH | CEMENT | |
|---|---|---|---|---|
| 17 1/2" | 13 3/8" | 489' | 495 sx | circ. |
| 11" | 8 5/8" | 4100' | 2227 sx | circ. |
| 7 7/8" | 5 1/2" | 11,853' | 2055 sx | circ. |

**Charles B. Gillespie, Jr., State B #1-P, Sect. 1**
Drilled 1956 as an oil well in the Wolfcamp, well P & A 1995.

| HOLE | CSG | DEPTH | CEMENT |
|---|---|---|---|
| 17 1/4" | 13 3/8" | 365' | 350 sx |
| 11" | 8 5/8" | 4701' | 1850 sx |
| 7 7/8" | 5 1/2" liner | 4527'/10,677' | 200 sx |

Well bore schematic of P & A attached.

**Charles B. Gillespie, Jr., State C #2 Q, Sect. 1**
Drilled 1956 as an oil well in the Wolfcamp, well P & A 1995.

| HOLE | CSG | DEPTH | CEMENT |
|---|---|---|---|
| 17 1/2" | 13 3/8" | 366' | 250 sx |
| 11" | 8 5/8" | 4697' | 2050 sx |
| 7 3/4" | 5 1/2" liner | 4520'/10,694' | 200 sx |

Well bore schematic of P & A attached.

**Charles B. Gillespie, Jr., State B #3 I, Sect. 1**
Drilled 1957 as an oil well in the Wolfcamp, well P & A 1995.

| HOLE | CSG | DEPTH | CEMENT | |
|---|---|---|---|---|
| 17 1/2" | 13 3/8" | 375' | 275 sx | circ. |
| 11" | 8 5/8" | 4714' | 2050 sx | circ. |
| 7 7/8" | 5 1/2" liner | 4548'/10,704' | 200 sx | calc. TOC 7000' |

Well bore schematic of P & A attached.

**Pronghorn Management Corp., State T #1-M, Sect. 6**
Drilled 1957 as an oil producer in the Wolfcamp, well inactive.

| HOLE | CSG | DEPTH | CEMENT | |
|---|---|---|---|---|
| 17 1/4" | 13 3/8" | 361' | 375 sx | TOC 25' filled w/cement |
| 12 1/4" | 8 5/8" | 4748' | 1240 sx | circ. |
| 7 7/8" | 5 1/2" | 10,745' | 300 sx | TOC 9445' |

P & A filed on this well, approval attached.

**Pronghorn Management Corp., State T #2-L, Sect. 6**
Drilled 1957 as a producer in the Wolfcamp, well inactive.

| HOLE | CSG | DEPTH | CEMENT | |
|---|---|---|---|---|
| 17 1/4" | 13 3/8" | 371' | 400 sx | circ. |
| 12 1/4" | 8 5/8" | 4749' | 1352 sx | TOC 625' |
| 7 7/8" | 5 1/2" | 10,679' | 300 sx | TOC 9762' |

P & A filed on this well, approval attached.

**Pronghorn Management Corp., State T #3-N, Sect. 6**
Drilled 1958 as an oil producer in the Wolfcamp, well inactive.

| HOLE | CSG | DEPTH | CEMENT | |
|---|---|---|---|---|
| 17 1/4" | 13 3/8" | 376' | 400 sx | circ. |
| 12 1/4" | 8 5/8" | 4704' | 1682 sx | circ. |
| 7 7/8" | 5 1/2" | 10,736' | 300 sx | TOC 9535' |

P & A filed on this well.

**Pronghorn Management Corp., State T #4-K, Sect. 6**
Drilled 1958 as an oil well in the Wolfcamp, well is inactive.

| HOLE | CSG | DEPTH | CEMENT | |
|---|---|---|---|---|
| 17 1/4" | 13 3/8" | 376' | 425 sx | circ. |
| 12 1/4" | 8 5/8" | 4749' | 1051 sx | TOC 605' |
| 7 7/8" | 5 1/2" | 10,727' | 300 sx | TOC 9620' |

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

# OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO. 30-025-02705

5. Indicate Type of Lease STATE [XX] FEE [ ]

6. State Oil & Gas Lease No. E-9117

## SUNDRY NOTICES AND REPORTS ON WELLS

( DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: State C

1. Type of Well: OIL WELL [XX] GAS WELL [ ] OTHER

2. Name of Operator: Charles B Gillespie, Jr.

8. Well No. 2

3. Address of Operator: P.O. Box 8 Midland, Tx. 79702

9. Pool name or Wildcat: Townsend Perm & Upper Penn

4. Well Location
Unit Letter O : 2340 Feet From The South Line and 910 Feet From The East Line
Section 1 Township 16-S Range 35-E NMPM Lea N.M. County

10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3968 GR

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

| NOTICE OF INTENTION TO: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| PERFORM REMEDIAL WORK | [ ] | PLUG AND ABANDON | [ ] | REMEDIAL WORK | [ ] | ALTERING CASING | [ ] |
| TEMPORARILY ABANDON | [ ] | CHANGE PLANS | [ ] | COMMENCE DRILLING OPNS. | [ ] | PLUG AND ABANDONMENT | [XX] |
| PULL OR ALTER CASING | [ ] | | | CASING TEST AND CEMENT JOB | [ ] | | |
| OTHER: | [ ] | | | OTHER: | [ ] | | |

12. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

(1) Set 5½ CIBP @ 10,500 cap w/4 sacks cement
(2) Load hole w/mud
(3) Spot 25 sack cement plug @ 7500'
(4) Spot 50 sack cement plug @ 4747 8 5/8 shoe to cover 8 5/8 shoe & 5½ liner top W.O.C. tag plug @ 4468'
(5) Cut & pull 8 5/8 casing @ 610
(6) Spot 55 sack cement plug @ 8 5/8 stub W.O.C. tag plug @ 558'
(7) Spot 80 sack cement plug @ 13 3/8 shoe 386' W.O.C. tag plug @ 285'
(8) Spot 15 sacks cement plug @ surf, set P&A marker 9/7/1993

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

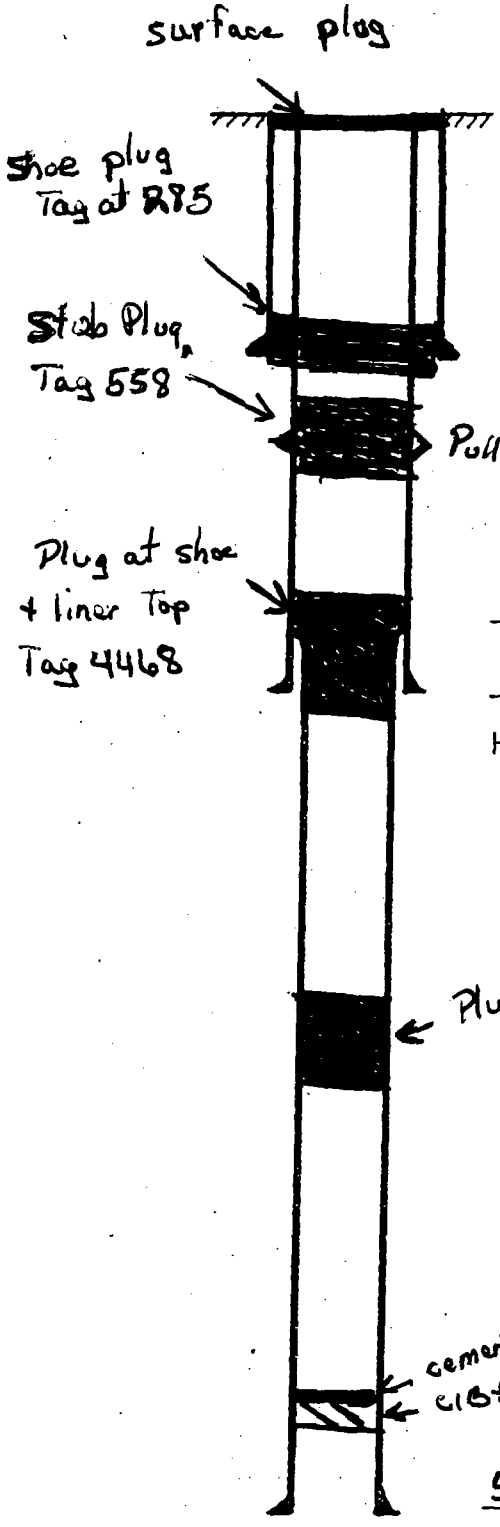
SIGNATURE Raymond Maldonado TITLE Supervisor DATE

TYPE OR PRINT NAME TELEPHONE NO.

(This space for State Use)

APPROVED BY Paul W. Sid TITLE OIL & GAS INSPECTOR DATE JAN 06 1995

| OPERATOR | | | DATE |
|---|---|---|---|
| Charles B Gillespie Jr. | | | P+A 1995 |
| LEASE | WELL No. | LOCATION | |
| State C | 1 | Q-1-16-35 | |




$13\frac{3}{8}$ casing set at 366 with 250 sx of C cement

Hole size $17\frac{1}{2}$ " Circ

4520 ' Liner top

$8\frac{5}{8}$ " casing set at 4697 ' with 2050 sx of C cement

Hole size 11 "

Hole loaded with mud

$5\frac{1}{2}$ " liner set at 10694 ' with 200 sx of

C cement. Total depth 10694 ' Hole size $7\frac{3}{4}$

Submit 3 Copies to Appropriate District Office

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

# OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-103
Revised 1-1-89

WELL API NO. 30-025-02708

5. Indicate Type of Lease STATE [XX] FEE [ ]

6. State Oil & Gas Lease No. E-9116

## SUNDRY NOTICES AND REPORTS ON WELLS

( DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: State B

1. Type of Well: OIL WELL [XX] GAS WELL [ ] OTHER

2. Name of Operator: Charles B Gillespie, Jr.

8. Well No. 3

3. Address of Operator: P.O. Box 8 Midland, Texas 79702

9. Pool name or Wildcat: Townsend Perm & Upper Penn

4. Well Location
Unit Letter I : 4290 Feet From The South Line and 160 Feet From The East Line

Section 1 Township 16-S Range 35-E NMPM Lea County

10. Elevation (*Show whether DF, RKB, RT, GR, etc.*) 3964 GR

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

| NOTICE OF INTENTION TO: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| PERFORM REMEDIAL WORK | [ ] | PLUG AND ABANDON | [ ] | REMEDIAL WORK | [ ] | ALTERING CASING | [ ] |
| TEMPORARILY ABANDON | [ ] | CHANGE PLANS | [ ] | COMMENCE DRILLING OPNS. | [ ] | PLUG AND ABANDONMENT | [XX] |
| PULL OR ALTER CASING | [ ] | | | CASING TEST AND CEMENT JOB | [ ] | | |
| OTHER: | [ ] | | | OTHER: | [ ] | | |

12. Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

(1) Set 5½ CIBP @ 10,200' cap w/4 sacks cement
(2) Load hole w/mud
(3) Spot 25 sacks cement plug @ 7500'
(4) Spot 50 sacks cement @ 4764 to cover the 8 5/8 shoe & 5½ liner top W.O.C. tag plug @ 4490
(5) Spot 35 sakcs cement plug @ 426'
(6) Spot 15 sacks cement @ surf. Set P&A marker 8-27-1993

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

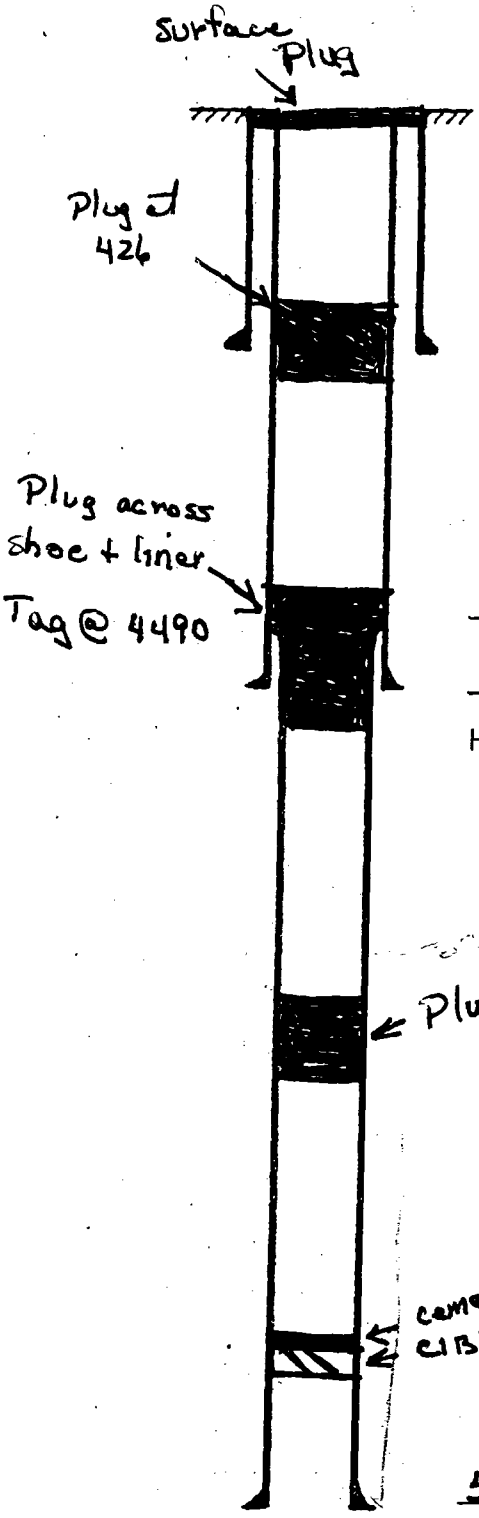
SIGNATURE Raymond Maldonado TITLE Supervisor DATE

TYPE OR PRINT NAME TELEPHONE NO.

(This space for State Use)

APPROVED BY Larry W. Hill TITLE OIL & GAS INSPECTOR DATE JAN 06 1995

| OPERATOR | | | DATE |
|---|---|---|---|
| Charles B. Gillespie Jr. | | | P+A 1995 |
| LEASE | WELL No. | LOCATION | |
| State B | 3 | I - 1 - 16 - 35 | |




13 3/8 casing set at 375 with 275 sx of C cement
Hole size 17 1/2 "
Circ

4548 ' Liner top

8 5/8 " casing set at 4714 ' with 2050 sx of C cement

Hole size 11 "
Circ

Hole loaded w/mud

5 1/2 " liner set at 10704' with 200 sx of

C cement. Total depth 10704 ' Hole size 7 7/8

Submit 3 Copies to Appropriate District Office

DISTRICT I
Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

# OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

NOV 2 1993

Form C-103
Revised 1-1-89

WELL API NO. 30-025-02707

5. Indicate Type of Lease STATE [XX] FEE [ ]

6. State Oil & Gas Lease No. E-9116

## SUNDRY NOTICES AND REPORTS ON WELLS

( DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: State B

1. Type of Well: OIL WELL [XX] GAS WELL [ ] OTHER

2. Name of Operator: Charles B Gillespie, Jr.

8. Well No. 1

3. Address of Operator: P.O. Box 8 Midland, Tx. 79702

9. Pool name or Wildcat: Townsend Perm & Upper Penn

4. Well Location

Unit Letter P : 3300 Feet From The south Line and 985 Feet From The east Line

Section 1 Township 16-S Range 35-E NMPM Lea N.M. County

10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3967 GR

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

| NOTICE OF INTENTION TO: | | SUBSEQUENT REPORT OF: | |
|---|---|---|---|
| PERFORM REMEDIAL WORK [ ] | PLUG AND ABANDON [ ] | REMEDIAL WORK [ ] | ALTERING CASING [ ] |
| TEMPORARILY ABANDON [ ] | CHANGE PLANS [ ] | COMMENCE DRILLING OPNS. [ ] | PLUG AND ABANDONMENT [XX] |
| PULL OR ALTER CASING [ ] | | CASING TEST AND CEMENT JOB [ ] | |
| OTHER: [ ] | | OTHER: [ ] | |

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

(1) Set 5½ CIBP @ 10,350' cap w/4 sacks cement
(2) Load hole w/mud
(3) Spot 25 sacks cement plug @ 7500'
(4) spot 50 sack cement plug @ 8 3/8 shoe 4751' to cover 8 5/8 & 5½ liner top W.O.C. tag plug @ 4476'
(5) Spot 35 sack cement plut @ 414'
(6) Spot 15 sack cement at surf., set P&A marker 8/31/1993

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

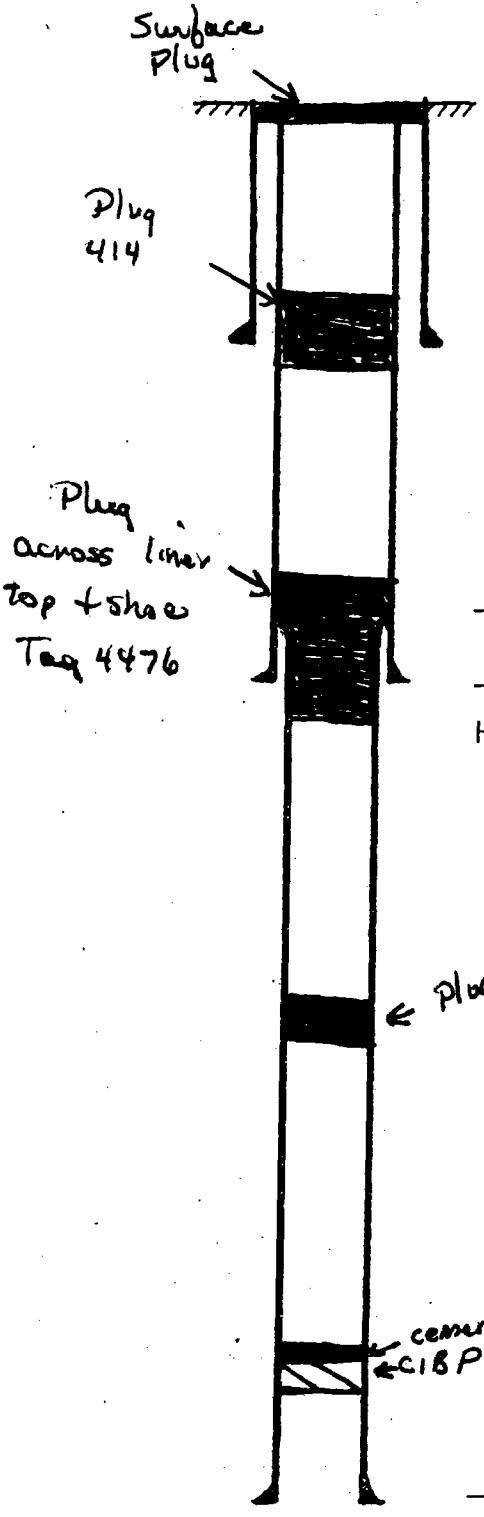
SIGNATURE Raymond Maldonado TITLE Supervisor DATE

TYPE OR PRINT NAME TELEPHONE NO.

(This space for State Use)

APPROVED BY Gary W. Hill TITLE OIL & GAS INSPECTOR DATE JAN 06 1995

| OPERATOR | | | DATE |
|---|---|---|---|
| Charles B. Gillespie Jr. | | | P&A 1995 |
| LEASE | WELL No. | LOCATION | |
| State B | 1 | P 1-16-35 | |




13 3/8 casing set at 365 with 350 sx of C cement
Circ
Hole size 17 1/4 "

4527 ' Liner top

8 5/8 " casing set at 4701 ' with 1850 sx of C cement
Circ
Hole size 11 "

Hole loaded w/ mud

5 1/2 " liner set at 10677 ' with 200 sx of
C cement. Total depth 10677 ' Hole size 7 7/8

Submit 3 Copies to Appropriate District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

# OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.
30-025-03736

5. Indicate Type of Lease STATE [X] FEE [ ]

6. State Oil & Gas Lease No.
E 9335-S

## SUNDRY NOTICES AND REPORTS ON WELLS
( DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
STATE " T "

1. Type of Well:
OIL WELL [ ] GAS WELL [ ] OTHER TA

2. Name of Operator
BABER WELL SERVICING CO.

8. Well No.
3

3. Address of Operator
P.O. BOX 1772 Hobbs NM 88240

9. Pool name or Wildcat
TOWNSEND PERMO UPPER PENN

4. Well Location
Unit Letter N : 3300 Feet From The SOUTH Line and 1551 Feet From The WEST Line

Section 6 Township 16-S Range 36-E NMPM LEA County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

| NOTICE OF INTENTION TO: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| PERFORM REMEDIAL WORK | [ ] | PLUG AND ABANDON | [ ] | REMEDIAL WORK | [ ] | ALTERING CASING | [ ] |
| TEMPORARILY ABANDON | [ ] | CHANGE PLANS | [ ] | COMMENCE DRILLING OPNS. | [ ] | PLUG AND ABANDONMENT | [X] |
| PULL OR ALTER CASING | [ ] | | | CASING TEST AND CEMENT JOB | [ ] | | |
| OTHER: | [ ] | | | OTHER: | [ ] | | |

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

1. RUN TUBING TO 9518' AND SPOT W/25 SKS AND WOC.
2. TAGGED PLUG AT 9400'
3. LOAD HOLE W/MUD
4. CUT AND LAID DOWN 4992' OF 5½ CASING
5. SPOT 25 SKS CEMENT PLUG AT 6500'
6. SPOT 140 SKS CEMENT PLUG AT 5½ STUB 5050'AND WOC
7. TAGGED PLUG AT 4927' SPOT W/60SKS CEMENT AND WOC
8. TAGGED PLUG AT 4670' SPOT W/45 SKS CEMENT AND WOC
9. TAGGED PLUG AT 4618'
10. SPOT 30 SKS CEMENT PLUG AT 2039'
11. SPOT 15 SKS CEMENT AT SURF AND SET UP P&A MARKER.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Raymond Maldonado TITLE P&A SUPERVISOR DATE 8-14-91

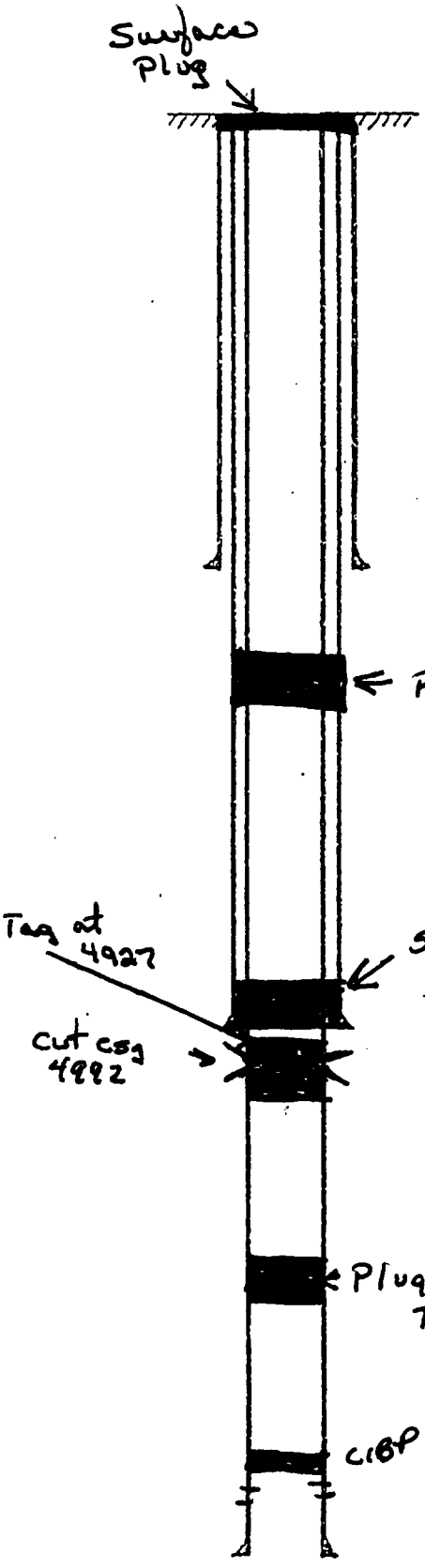
TYPE OR PRINT NAME RAYMOND MALDONADO TELEPHONE NO. (505)397-3502

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

| OPERATOR | | DATE |
|---|---|---|
| Baber Well Service | | P+A 1991 |
| LEASE | WELL No. / LOCATION | |
| State T | 3 / N-6-16-36 | |




13 3/8 " casing set at 376 ' with 400 sx of C cement
Hole size 17 1/4 " Circ.

8 5/8 " casing set at 4704 ' with 1682 sx of C cement
Hole size 12 1/4 " Circ

Hole loaded with Mud

5 1/2 " casing set at 10736 ' with 300 sx of C cement
Total depth 10736 ' Hole size 7 7/8 " TOC 9535

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 87240
District II
11 South First, Artesia, NM 87210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-103
Revised March 25, 1999

WELL API NO. 30-025-03734
5. Indicate Type of Lease STATE [XX] FEE [ ]
6. State Oil & Gas Lease No. E9335-S

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: STATE "T"

1. Type of Well: Oil Well [XX] Gas Well [ ] Other

2. Name of Operator: Pronghorn Management Corporation

8. Well No. 1

3. Address of Operator: P. O. Box 1772 Hobbs, NM 88241

9. Pool name or Wildcat: Townsend Permo Upper Penn

4. Well Location
Unit Letter M : 2970 feet from the South line and 330 feet from the West line
Section 6 Township 16-S Range 36-E NMPM Lea County

10. Elevation (Show whether DR, RKB, RT, GR, etc.) 3965' RKB

11. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

| NOTICE OF INTENTION TO: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| PERFORM REMEDIAL WORK | [ ] | PLUG AND ABANDON | [XX] | REMEDIAL WORK | [ ] | ALTERING CASING | [ ] |
| TEMPORARILY ABANDON | [ ] | CHANGE PLANS | [ ] | COMMENCE DRILLING OPNS. | [ ] | PLUG AND ABANDONMENT | [ ] |
| PULL OR ALTER CASING | [ ] | MULTIPLE COMPLETION | [ ] | CASING TEST AND CEMENT JOB | [ ] | | |
| OTHER: | | | [ ] | OTHER: | | | [ ] |

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompilation.

1. Set CIBP @ ± 10,100', Cap with 35' cement
2. Circulate hole with mud laden fluid.
3. Nipple up to 5½" casing. Stretch, cut and pull ± 7000' csg.
4. Spot cement plug 50' in and out of stub. WOC and tag.
5. Spot 100' cement plug 4680' - 4780'. (Int. csg. shoe) WOC and Tag.
6. Spot 100' cement plug 1939' - 2039'. (Top of salt) WOC and Tag.
7. Spot 10 sx. surface plug.
8. Erect dry hole marker. Clean location.

25 SX OR 100' WHICHEVER IS GREATER F/ 350' TO 250' - TAG (13 3/8 SHOE)

THE COMMISSION MUST BE NOTIFIED 24 HOURS PRIOR TO THE BEGINNING OF PLUGGING OPERATIONS FOR THE C-103 TO BE APPROVED

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE G. A. Baber TITLE Partner DATE 4/7/00

Type or print name G. A. BABER Telephone No 505-393-9176

(This space for State use)

APPPROVED BY ORIGINAL SIGNED BY TITLE DATE

Conditions of approval, if any:

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 87240
District II
South First, Artesia, NM 87210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-103
Revised March 25, 1999

WELL API NO. 30-025-03735
5. Indicate Type of Lease STATE [XX] FEE [ ]
6. State Oil & Gas Lease No. E9335-S

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: STATE "T"

1. Type of Well: Oil Well [XX] Gas Well [ ] Other

2. Name of Operator: Pronghorn Management Corporation

8. Well No. 2

3. Address of Operator: P. O. Box 1772 Hobbs, NM 88241

9. Pool name or Wildcat: Townsend Perms Upper Penn

4. Well Location
Unit Letter L : 4290 feet from the SSouth line and 500 feet from the West line
Section 6 Township 16-S Range 36-E NMPM Lea County

10. Elevation (Show whether DR, RKB, RT, GR, etc.)

11. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

| NOTICE OF INTENTION TO: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| PERFORM REMEDIAL WORK | [ ] | PLUG AND ABANDON | [XX] | REMEDIAL WORK | [ ] | ALTERING CASING | [ ] |
| TEMPORARILY ABANDON | [ ] | CHANGE PLANS | [ ] | COMMENCE DRILLING OPNS. | [ ] | PLUG AND ABANDONMENT | [ ] |
| PULL OR ALTER CASING | [ ] | MULTIPLE COMPLETION | [ ] | CASING TEST AND CEMENT JOB | [ ] | | |
| OTHER: | | | [ ] | OTHER: | | | [ ] |

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompilation.

1. Set C.I.B.P. @ 10,100'. Cap with 35' cement.
2. Circulate hole with mud laden fluid.
3. Nipple up to 5½" casing. Stretch, cut and pull ± 7000' casing.
4. Spot cement plug 50' in and out of stub. WOC - Tag.
5. Spot 100' cement plug 4799'-4699'. (Int. csg. shoe) WOC - Tag.
6. Spot 100' cement plug 2074'-1974'. (Top of salt) WOC - Tag.
7. Spot 10 sx. surface plug.
8. Erect dry hole marker. Clean location.

25 SK PLUG OR 100' WHICHEVER IS GREATER
F 421' to 321' - TAG

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE [signature] TITLE Partner DATE 4/7/00

Type or print name G. A. BABER Telephone No. 505-393-9176

(This space for State use)

APPPROVED BY [signature] TITLE ORIGINAL SIGNED BY GARY WINK FIELD REP. II DATE [illegible]

Conditions of approval, if any:
THE COMMISSION MUST BE NOTIFIED 24 HOURS PRIOR TO THE BEGINNING OF PLUGGING OPERATIONS FOR THE C-103 TO BE APPROVED

Submit 3 Copies to Appropriate District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

# OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO. 30-025-03737

5. Indicate Type of Lease STATE [XX] FEE [ ]

6. State Oil & Gas Lease No. E 9335-5

## SUNDRY NOTICES AND REPORTS ON WELLS

( DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: STATE "T"

1. Type of Well: OIL WELL [XX] GAS WELL [ ] OTHER

2. Name of Operator: BABER WELL SERVICING COMPANY

8. Well No. 4

3. Address of Operator: P.O. BOX 1772 HOBBS, NM 88241

9. Pool name or Wildcat Permo Upper TOWNSEND-~~WOLFCAMP~~ Penn

4. Well Location

Unit Letter K : 4620 Feet From The South Line and 1885 Feet From The West Line

Section 6 Township 16-S Range 36-E NMPM LEA County

10. Elevation (Show whether DF, RKB, RT, GR, etc.) 3958'

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

| NOTICE OF INTENTION TO: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| PERFORM REMEDIAL WORK | [ ] | PLUG AND ABANDON | [ ] | REMEDIAL WORK | [ ] | ALTERING CASING | [ ] |
| TEMPORARILY ABANDON | [XX] | CHANGE PLANS | [ ] | COMMENCE DRILLING OPNS. | [ ] | PLUG AND ABANDONMENT | [ ] |
| PULL OR ALTER CASING | [ ] | | | CASING TEST AND CEMENT JOB | [ ] | | |
| OTHER: | [ ] | | | OTHER: | | | [ ] |

12. Describe Proposed or Completed Operations *(Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work)* SEE RULE 1103.

1) M.I.R.U.
2) Install 6" - 900 B.O.P.
3) Unable to unseat anchor at 10,400'.
4) Received permission from NMOCC to cut tbg.
5) Cut tbg @ 10,400'.
6) Tag plug @ 10,000'.
7) Set 35 sks plug @ 7,500'.
8) Tag plug @ 7,500'.
9) File application to make disposal well
10) Shut in well
11) Temporarily abandon well

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE G. A. Baber TITLE CHRMN OF BOARD DATE 10/18/93

TYPE OR PRINT NAME G.A. BABER, JR. TELEPHONE NO. 392-5516

(This space for State Use)

APPROVED BY Orig. Signed by Paul Kautz Geologist TITLE DATE OCT 21 1993

CONDITIONS OF APPROVAL, IF ANY:

Submit 5 Copies
Appropriate District Office
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

# OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-104
Revised 1-1-89
See Instructions
at Bottom of Page

## REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I.

| Operator | Well API No. |
|---|---|
| PRONGHORN MANAGEMENT CORPORATION (12281) | 30-025-03737 |
| Address: P.O. BOX 1772 HOBBS, NM 88241 | |

Reason(s) for Filing (Check proper box)
New Well ☐ Recompletion ☐ Change in Operator ☐
Change in Transporter of: Oil ☐ Dry Gas ☐ Casinghead Gas ☐ Condensate ☐
XX Other (Please explain): OPERATOR NAME CHANGE ONLY
MAY 01 1994

If change of operator give name and address of previous operator: BABER WELL SERVICING COMPANY P.O. BOX 1772 HOBBS, NM 88241

## II. DESCRIPTION OF WELL AND LEASE

| Lease Name | Well No. | Pool Name, Including Formation | Kind of Lease | Lease No. |
|---|---|---|---|---|
| STATE T (14991) | 4 | TOWNSEND PERMO UPPER PRNN (59814) | State / Federal or Fee | E-9335 |

Location
Unit Letter K : 4620 Feet From The FSL Line and 1885 Feet From The FWL Line
Section 06 Township 16S Range 36E, NMPM, LEA County

## III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

| Name of Authorized Transporter of Oil or Condensate | Address (Give address to which approved copy of this form is to be sent) |
|---|---|
| Texas NM Pipeline (022628) | T/A |
| Name of Authorized Transporter of Casinghead Gas ☐ or Dry Gas ☑ | Address (Give address to which approved copy of this form is to be sent) |
| Warren Petroleum (022465D) | |

| If well produces oil or liquids, give location of tanks. | Unit | Sec. | Twp. | Rge. | Is gas actually connected? | When ? |
|---|---|---|---|---|---|---|
| | | | | | | |

If this [illegible] with that from any other lease or pool, give commingling order number:

## IV.

| D | Oil Well | Gas Well | New Well | Workover | Deepen | Plug Back | Same Res'v | Diff Res'v |
|---|---|---|---|---|---|---|---|---|
| Date | Date Compl. Ready to Prod. | | Total Depth | | | P.B.T.D. | | |
| Elevi | Name of Producing Formation | | Top Oil/Gas Pay | | | Tubing Depth | | |
| Perfi | | | | | | Depth Casing Shoe | | |

OIL POD NO. 50/510 50/520
GAS POD NO.
O-TRNSP. OGRID NO. 022628
G.-TRNSP. OGRID NO. 024650

TUBING, CASING AND CEMENTING RECORD

| CASING & TUBING SIZE | DEPTH SET | SACKS CEMENT |
|---|---|---|
| | | |

## V. TEST FOR ALLOWABLE

Oi (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours.)

| Da | Date of Test | Producing Method (Flow, pump, gas lift, etc.) | |
|---|---|---|---|
| Le | Tubing Pressure | Casing Pressure | Choke Size |
| Ac | Oil - Bbls. | Water - Bbls. | Gas- MCF |

50/550 UT

| C | Length of Test | Bbls. Condensate/MMCF | Gravity of Condensate |
|---|---|---|---|
| Te | Tubing Pressure (Shut-in) | Casing Pressure (Shut-in) | Choke Size |

## VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: Sherry Wade
Printed Name: SHERRY WADE
Title: PRODUCTION CLERK
Date: 3-5-94
Telephone No.: (505) 392-5516

## OIL CONSERVATION DIVISION

Date Approved: MAY 20 1994

By: Orig. Signed by: Paul Kautz Geologist

Title

INSTRUCTIONS: This form is to be filed in compliance with Rule 1104

1) Request for allowable for newly drilled or deepened well must be accompanied by tabulation of deviation tests taken in accordance with Rule 111.
2) All sections of this form must be filled out for allowable on new and recompleted wells.
3) Fill out only Sections I, II, III, and VI for changes of operator, well name or number, transporter, or other such changes.

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
EDDIE SEAY CONSULTING
ATTN: EDDIE SEAY
601 W. ILLINOIS
HOBBS, NM 88242
FAX TO:

Receiving Date: 02/27/02
Reporting Date: 03/01/02
Project Number: NOT GIVEN
Project Name: WATSON 6
Project Location: LOVINGTON, NM

Sampling Date: 02/27/02
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: HM

| LAB NUMBER | SAMPLE ID | P-Alkalinity (mg/L) | T-Alkalinity (mg/L) | Hardness (mg/L) | Chloride (mg/L) | Sulfates (mg/L) | pH (s.u.) |
|---|---|---|---|---|---|---|---|
| ANALYSIS DATE | | 02/28/02 | 02/28/02 | 02/28/02 | 02/28/02 | 02/28/02 | 02/28/02 |
| H6551-1 | SECT 6 MILL | 0 | 173 | 240 | 48 | 80 | 7.51 |
| Quality Control | | NR | NR | 48 | 1040 | 52.66 | 7.08 |
| True Value QC | | NR | NR | 50 | 1000 | 50.00 | 7.00 |
| % Accuracy | | NR | NR | 96.0 | 104 | 105 | 101 |
| Relative Percent Difference | | NR | NR | 1.2 | 2.0 | 0.6 | 0.1 |
| METHODS: | EPA 600/4-79-02 | - | - | 130.2 | 325.3 | 375.4 | 150.1 |
| | Standard Method | 2320 B | 2320 B | - | - | - | - |

| LAB NUMBER | SAMPLE ID | Hydroxides (mg/L) | Carbonates (mg/L) | Bicarbonates (mg/L) | Conductivity (umhos/cm) | TDS (mg/L) |
|---|---|---|---|---|---|---|
| ANALYSIS DATE | | 02/28/02 | 02/28/02 | 02/28/02 | 02/28/02 | 02/28/02 |
| H6551-1 | SECT 6 MILL | 0 | 0 | 211 | 621 | 427 |
| Quality Control | | NR | NR | 975 | 1489 | NR |
| True Value QC | | NR | NR | 1000 | 1413 | NR |
| % Accuracy | | NR | NR | 97.5 | 105 | NR |
| Relative Percent Difference | | NR | NR | 2.7 | 0.3 | 5.1 |
| METHODS: | EPA 600/4-79-02 | - | - | - | 120.1 | 160.1 |
| | Standard Method | 2320 B | 2320 B | 2320 B | - | - |

Amy Hill
Chemist

3-1-02
Date

*New Mexico Office of the State Engineer*
**Well Reports and Downloads**

Township: 16S Range: 36E Sections: 6

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | WATERS Menu | Help

**AVERAGE DEPTH OF WATER REPORT 02/27/2002**

| | | | | | | | (Depth Water in Feet) | | |
|---|---|---|---|---|---|---|---|---|---|
| **Bsn** | **Tws** | **Rng** | **Sec** | **Zone** | **X** | **Y** | **Wells** | **Min** | **Max** | **Avg** |
| L | 16S | 36E | 06 | | | | 20 | 40 | 65 | 56 |

Record Count: 20

*New Mexico Office of the State Engineer*

**Well Reports and Downloads**

Township: 16S Range: 36E Sections: 6

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

Well / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | WATERS Menu | Help

**WELL / SURFACE DATA REPORT 02/27/2002**

| DB File Nbr | Use | (acre ft per annum) Diversion | Owner | Well Number | Source | Tws | Rng | Sec | (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest) q q q | X Y are in Feet Zone | X | Y | UTM are in M UTM_Zone | Ea |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L 03104 | PRO | 3 | WARREN & BRADSHAW EXPLORATION | L 03104 | Shallow | 16S | 36E | 06 | 1 | | | | 13 | 6 |
| | | | | L 03104 APPRO | Shallow | 16S | 36E | 06 | 1 | | | | 13 | 6 |
| L 03697 | PRO | 3 | CACTUS DRILLING CORP. | L 03697 | Shallow | 16S | 36E | 06 | | | | | 13 | 6 |
| | | | | L 03697 APPRO | Shallow | 16S | 36E | 06 | | | | | 13 | 6 |
| L 03773 | PRO | 3 | CACTUS DRILLING CORP. | L 03773 | Shallow | 16S | 36E | 06 | | | | | 13 | 6 |
| | | | | L 03773 APPRO | Shallow | 16S | 36E | 06 | | | | | 13 | 6 |
| L 03797 | DOM | 3 | W.M. SNYDER | L 03797 | | 16S | 36E | 06 | | | | | 13 | 6 |
| | | | | L 03797 APPRO EXP | | 16S | 36E | 06 | | | | | 13 | 6 |
| L 03862 | PRO | 3 | FIRST BLACK STOCK | L 03862 | Shallow | 16S | 36E | 06 | | | | | 13 | 6 |
| | | | | L 03862 APPRO | Shallow | 16S | 36E | 06 | | | | | 13 | 6 |
| L 06206 | DOM | 3 | CLARENCE EUGENE LUCE | L 06206 | Shallow | 16S | 36E | 06 | 3 | | | | 13 | 6 |
| L 07110 | DOM | 3 | MELVIN J. DICKERSON | L 07110 | Shallow | 16S | 36E | 06 | 3 4 | | | | 13 | 6 |
| L 07187 | DOM | 3 | LARRY WHITE | L 07187 | Shallow | 16S | 36E | 06 | 3 3 | | | | 13 | 6 |
| L 07313 | DOM | 3 | LARRY L. WHITE | L 07313 | Shallow | 16S | 36E | 06 | 3 4 | | | | 13 | 6 |
| L 07430 | DOM | 3 | GILBERT ARREOLA | L 07430 | Shallow | 16S | 36E | 06 | 3 1 | | | | 13 | 6 |
| L 08466 | DOM | 3 | EMPIRE DIRLLING COMPANY | L 08466 | Shallow | 16S | 36E | 06 | 3 4 1 | | | | 13 | 6 |
| L 09962 | DOM | 3 | JOSE M. MORENO | L 09962 | Shallow | 16S | 36E | 06 | | | | | 13 | 6 |
| L 10024 | DOM | 3 | LUPE F. MORENO | L 10024 | Shallow | 16S | 36E | 06 | | | | | 13 | 6 |
| L 10577 | DOM | 3 | ORRIT ENTERPRISES INC | L 10577 | Shallow | 16S | 36E | 06 | 3 3 1 | | | | 13 | 6 |
| L 10628 | DOM | 3 | LITTLE BILLY E AND MARSHA R | L 10628 | Shallow | 16S | 36E | 06 | 3 4 4 | | | | 13 | 6 |
| L 10657 | PRO | 0 | CHESAPEAKE OPERATING | L 10657 | Shallow | 16S | 36E | 06 | 3 2 2 | | | | 13 | 6 |
| L 10705 | PRO | 0 | CHARLES B JR GILLESPIE | L 10705 | | 16S | 36E | 06 | 3 1 | | | | 13 | 6 |
| L 10733 | PRO | 0 | PATTERSON DRILLING COMPANY | L 10657 | Shallow | 16S | 36E | 06 | 3 2 2 | | | | 13 | 6 |
| L 10752 | PRO | 0 | GILLESPIE OIL COMPANY | L 10752 | | 16S | 36E | 06 | 3 1 1 | | | | 13 | 6 |
| L 11149 | DOM | 3 | CARROLL W. BELLAH | L 11149 | Shallow | 16S | 36E | 06 | 1 3 | | | | 13 | 6 |

Record Count: 25

| POOL | LOCATION | CHLORIDES |
|---|---|---|
| Dean Permo Pennsylvanian | 5-16-37 | 44,730 |
| Dean Devonian | 35-15-36 | 19,525 |
| Denton Wolfcamp | 2-15-37 | 37,275 |
| Denton Devonian | 26-14-37 | 37,062 |
| South Denton Wolfcamp | 26-15-37 | 54,315 |
| South Denton Devonian | 36-15-37 | 34,080 |
| Medicine Rock Devonian | 15-15-38 | 39,760 |
| Little Lucky Lake Devonian | 29-15-30 | 23,288 |
| Wantz Abo | 26-21-37 | 132,770 |
| Crosby Devonian | 18-25-37 | 58,220 |
| Scarborough Yates Seven Rivers | 7-26-37 | 3,443 (Reef) |
| Teague Simpson | 34-23-37 | 114,665 |
| Teague Ellenburger | 34-23-37 | 120,345 |
| Rhodes Yates Seven Rivers | 27-26-37 | 144,485 |
| House San Andres | 11-20-38 | 93,365 |
| House Drinkard | 12-20-38 | 49,700 |
| South Leonard Queen | 24-26-37 | 115,375 |
| Elliott Abo | 8-21-38 | 55,380 |
| Scharb Bone Springs | 5-19-35 | 30,601 |
| EK Queen | 13-18-34 | 41,890 |
| East EK Queen | 22-18-34 | 179,630 |
| Maljamar Grayburg San Andres | 22-17-32 | 46,079 |
| Maljamar Paddock | 27-17-32 | 115,375 |
| Maljamar Devonian | 22-17-32 | 25,418 |
| Salt Lake Yates | 7-20-33 | 6,781 (Reef) |
| Teas Yates Seven Rivers | 11-20-33 | 22,152 (Reef?) |

| POOL | LOCATION | CHLORIDES |
|---|---|---|
| North Justis Montoya | 2-25-37 | 45,440 |
| North Justis McKee | 2-25-37 | 58,220 |
| North Justis Fusselman | 2-25-37 | 68,533 |
| North Justis Ellenburger | 2-25-37 | 34,151 |
| Fowler Blinebry | 22-24-37 | 116,085 |
| Skaggs Grayburg | 18-20-38 | 84,845 |
| Warren McKee | 18-20-38 | 85,910 |
| Warren Abo | 19-20-39 | 91,600 |
| DK Drinkard | 30-20-39 | 106,855 |
| Littman San Andres | 8-21-38 | 38,695 |
| East Hobbs Grayburg | 29-18-39 | 6,461 |
| Halfway Yates | 16-20-32 | 14,768 |
| Arkansas Junction San Andres | 12-18-36 | 7,171 |
| Pearl Queen | 28-19-35 | 114,310 |
| Midway Abo | 17-17-37 | 36,494 |
| Lovington Abo | 31-16-37 | 22,933 |
| Lovington San Andres | 3-16-37 | 4,899 |
| Lovington Paddock | 31-16-37 | 93,720 |
| West Lovington San Andres | -- | 65,320 |
| Mesa Queen | 17-16-32 | 172,530 |
| Kemnitz Wolfcamp | 27-16-34 | 49,345 |
| Hume Queen | 9-16-34 | 124,960 |
| Anderson Ranch Wolfcamp | 2-16-32 | 11,040 |
| Anderson Ranch Devonian | 11-16-32 | 25,702 |
| Anderson Ranch Unit | 11-16-32 | 23,785 |
| Caudill Devonian | 9-15-36 | 20,874 |
| Townsend Wolfcamp | 6-16-36 | 38,695 |

# Pro-Kem, Inc.
# WATER ANALYSIS REPORT

## SAMPLE

Oil Co. : **Chesapeake**
Lease : **Little**
Well No.: **# 6-1**
Location:
Attention:

Date Sampled : **21-January-2002**
Date Analyzed: **08-February-2002**
Lab ID Number: **Feb0802.003- 4**
Salesperson :

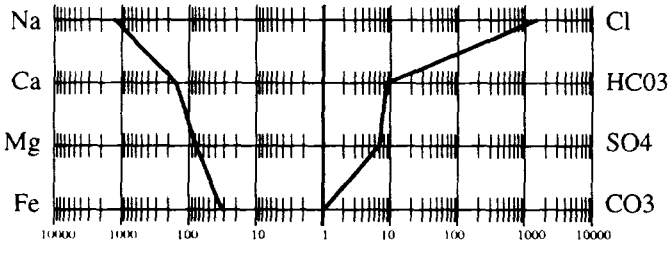
File Name : **F:\WATERS\Feb0802.003**

## ANALYSIS

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. | Ph | | | **6.600** | | |
| 2. | Specific Gravity 60/60 F. | | | **1.063** | | |
| 3. | CACO3 Saturation Index | @ 80F | | **0.014** | | |
| | | @140F | | **0.939** | | |
| | **Dissolved Gasses** | | | **MG/L.** | **EQ. WT.** | ***MEQ/L** |
| 4. | Hydrogen Sulfide | | | **0** | | |
| 5. | Carbon Dioxide | | | **160** | | |
| 6. | Dissolved Oxygen | | | **Not Determined** | | |
| | **Cations** | | | | | |
| 7. | Calcium | (Ca++) | | **3,006** | / 20.1 = | **149.55** |
| 8. | Magnesium | (Mg++) | | **912** | / 12.2 = | **74.75** |
| 9. | Sodium | (Na+) | (Calculated) | **27,591** | / 23.0 = | **1,199.61** |
| 10. | Barium | (Ba++) | | **Not Determined** | | |
| | **Anions** | | | | | |
| 11. | Hydroxyl | (OH+) | | **0** | / 17.0 = | **0.00** |
| 12. | Carbonate | (CO3=) | | **0** | / 30.0 = | **0.00** |
| 13. | Bicarbonate | (HCO3-) | | **513** | / 61.1 = | **8.40** |
| 14. | Sulfate | (SO4=) | | **325** | / 48.8 = | **6.66** |
| 15. | Chloride | (Cl-) | | **49,989** | / 35.5 = | **1,408.14** |
| 16. | Total Dissolved Solids | | | **82,336** | | |
| 17. | Total Iron | (Fe) | | **563** | / 18.2 = | **30.91** |
| 18. | Total Hardness as CaCO3 | | | **11,260** | | |
| 19. | Resistivity @ 75 F. (Calculated) | | | **0.117** /cm. | | |

**LOGARITHMIC WATER PATTERN**

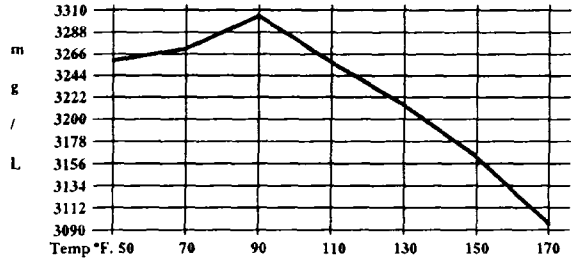
***meq / L.**




**PROBABLE MINERAL COMPOSITION**

| COMPOUND | EQ. WT. | X | *meq/L | = | mg/L. |
|---|---|---|---|---|---|
| Ca(HCO3)2 | **81.04** | | 8.40 | | 680 |
| CaSO4 | **68.07** | | 6.66 | | 453 |
| CaCl2 | **55.50** | | 134.50 | | 7,465 |
| Mg(HCO3)2 | **73.17** | | 0.00 | | 0 |
| MgSO4 | **60.19** | | 0.00 | | 0 |
| MgCl2 | **47.62** | | 74.75 | | 3,560 |
| NaHCO3 | **84.00** | | 0.00 | | 0 |
| NaSO4 | **71.03** | | 0.00 | | 0 |
| NaCl | **58.46** | | 1,198.89 | | 70,087 |

**Calcium Sulfate Solubility Profile**



# Pro-Kem, Inc.
## WATER ANALYSIS REPORT

## SAMPLE

Oil Co. : **Chesapeake**
Lease : **Chambers**
Well No.: **# 7-1**
Location:
Attention:

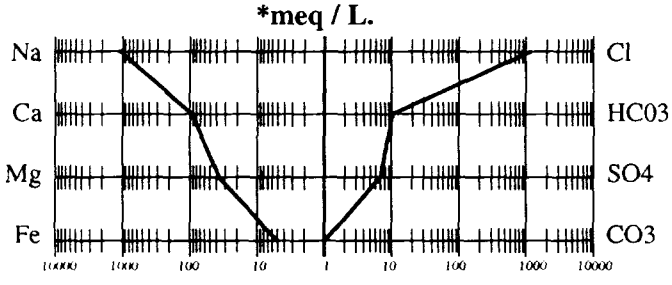
Date Sampled : **21-January-2002**
Date Analyzed: **08-February-2002**
Lab ID Number: **Feb0802.003- 6**
Salesperson :

File Name : **F:\WATERS\Feb0802.003**

## ANALYSIS

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. | Ph | | | **6.900** | | |
| 2. | Specific Gravity 60/60 F. | | | **1.048** | | |
| 3. | CACO3 Saturation Index | | @ 80F | **0.163** | | |
| | | | @140F | **1.073** | | |
| | **Dissolved Gasses** | | | **MG/L.** | **EQ. WT.** | ***MEQ/L** |
| 4. | Hydrogen Sulfide | | | **0** | | |
| 5. | Carbon Dioxide | | | **60** | | |
| 6. | Dissolved Oxygen | | | **Not Determined** | | |
| | **Cations** | | | | | |
| 7. | Calcium | (Ca++) | | **1,804** | / 20.1 = | **89.75** |
| 8. | Magnesium | (Mg++) | | **425** | / 12.2 = | **34.84** |
| 9. | Sodium | (Na+) | (Calculated) | **23,445** | / 23.0 = | **1,019.35** |
| 10. | Barium | (Ba++) | | **Not Determined** | | |
| | **Anions** | | | | | |
| 11. | Hydroxyl | (OH+) | | **0** | / 17.0 = | **0.00** |
| 12. | Carbonate | (CO3=) | | **0** | / 30.0 = | **0.00** |
| 13. | Bicarbonate | (HCO3-) | | **610** | / 61.1 = | **9.98** |
| 14. | Sulfate | (SO4=) | | **325** | / 48.8 = | **6.66** |
| 15. | Chloride | (Cl-) | | **39,991** | / 35.5 = | **1,126.51** |
| 16. | Total Dissolved Solids | | | **66,600** | | |
| 17. | Total Iron | (Fe) | | **88** | / 18.2 = | **4.81** |
| 18. | Total Hardness as CaCO3 | | | **6,256** | | |
| 19. | Resistivity @ 75 F. (Calculated) | | | **0.146** /cm. | | |

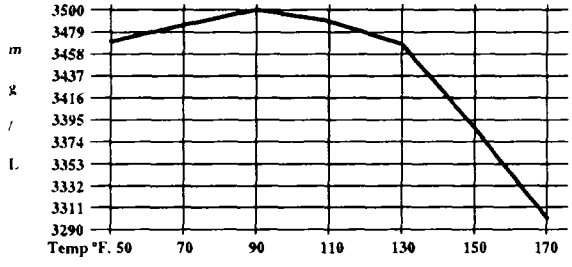
**LOGARITHMIC WATER PATTERN**




**PROBABLE MINERAL COMPOSITION**

| COMPOUND | EQ. WT. | X | *meq/L | = | mg/L. |
|---|---|---|---|---|---|
| Ca(HCO3)2 | **81.04** | | 9.98 | | 809 |
| CaSO4 | **68.07** | | 6.66 | | 453 |
| CaCl2 | **55.50** | | 73.11 | | 4,057 |
| Mg(HCO3)2 | **73.17** | | 0.00 | | 0 |
| MgSO4 | **60.19** | | 0.00 | | 0 |
| MgCl2 | **47.62** | | 34.84 | | 1,659 |
| NaHCO3 | **84.00** | | 0.00 | | 0 |
| NaSO4 | **71.03** | | 0.00 | | 0 |
| NaCl | **58.46** | | 1,018.56 | | 59,545 |

**Calcium Sulfate Solubility Profile**



# Pro-Kem, Inc.

## WATER ANALYSIS REPORT

## SAMPLE

Oil Co. : **Chesapeake**
Lease : **Bus Barn**
Well No.: **# 4-14**
Location:
Attention:

Date Sampled : **21-January-2002**
Date Analyzed: **08-February-2002**
Lab ID Number: **Feb0802.003- 5**
Salesperson :

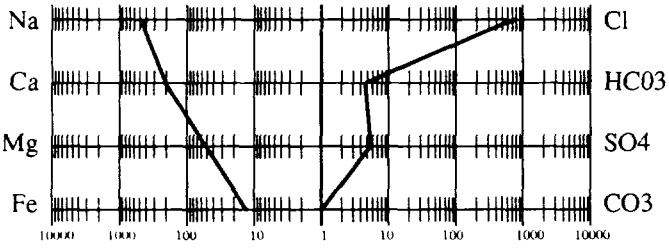
File Name : **F:\WATERS\Feb0802.003**

## ANALYSIS

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. | Ph | | | **6.500** | | |
| 2. | Specific Gravity 60/60 F. | | | **1.038** | | |
| 3. | CACO3 Saturation Index | | @ 80F | **-0.217** | | |
| | | | @140F | **0.723** | | |
| | **Dissolved Gasses** | | | **MG/L.** | **EQ. WT.** | ***MEQ/L** |
| 4. | Hydrogen Sulfide | | | **0** | | |
| 5. | Carbon Dioxide | | | **80** | | |
| 6. | Dissolved Oxygen | | | **Not Determined** | | |
| | **Cations** | | | | | |
| 7. | Calcium | (Ca++) | | **4,008** | / 20.1 = | **199.40** |
| 8. | Magnesium | (Mg++) | | **608** | / 12.2 = | **49.84** |
| 9. | Sodium | (Na+) | (Calculated) | **10,683** | / 23.0 = | **464.48** |
| 10. | Barium | (Ba++) | | **Below 10** | | |
| | **Anions** | | | | | |
| 11. | Hydroxyl | (OH+) | | **0** | / 17.0 = | **0.00** |
| 12. | Carbonate | (CO3=) | | **0** | / 30.0 = | **0.00** |
| 13. | Bicarbonate | (HCO3-) | | **268** | / 61.1 = | **4.39** |
| 14. | Sulfate | (SO4=) | | **255** | / 48.8 = | **5.23** |
| 15. | Chloride | (Cl-) | | **24,994** | / 35.5 = | **704.06** |
| 16. | Total Dissolved Solids | | | **40,816** | | |
| 17. | Total Iron | (Fe) | | **233** | / 18.2 = | **12.77** |
| 18. | Total Hardness as CaCO3 | | | **12,511** | | |
| 19. | Resistivity @ 75 F. (Calculated) | | | **0.210** /cm. | | |

**LOGARITHMIC WATER PATTERN**

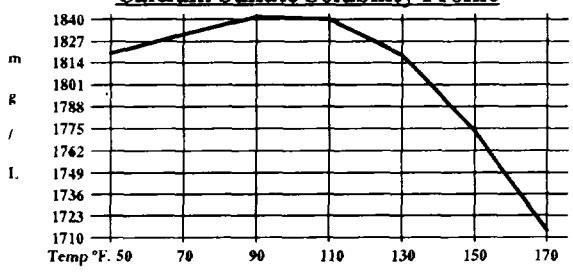
***meq / L.**




**PROBABLE MINERAL COMPOSITION**

| COMPOUND | EQ. WT. | X | *meq/L | = | mg/L. |
|---|---|---|---|---|---|
| Ca(HCO3)2 | **81.04** | | 4.39 | | 355 |
| CaSO4 | **68.07** | | 5.23 | | 356 |
| CaCl2 | **55.50** | | 189.79 | | 10,533 |
| Mg(HCO3)2 | **73.17** | | 0.00 | | 0 |
| MgSO4 | **60.19** | | 0.00 | | 0 |
| MgCl2 | **47.62** | | 49.84 | | 2,373 |
| NaHCO3 | **84.00** | | 0.00 | | 0 |
| NaSO4 | **71.03** | | 0.00 | | 0 |
| NaCl | **58.46** | | 464.43 | | 27,151 |

**Calcium Sulfate Solubility Profile**



# Pro-Kem, Inc.

# WATER ANALYSIS REPORT

## SAMPLE

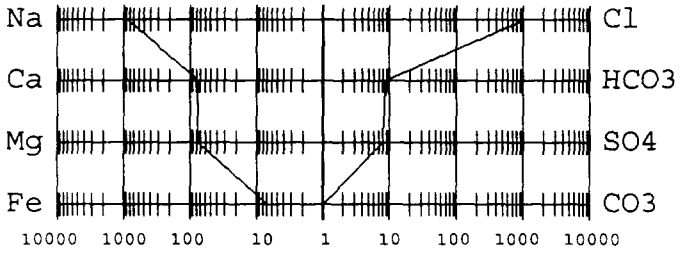
Oil Co. : **Chesapeake Operating**
Lease : **Ruth**
Well No.: **# 20-1**
Lab No. : **F:\ANALYSES\Nov1399.001**

Sample Loc. :
Date Analyzed: **13-November-1999**
Date Sampled : **21-October-1999**

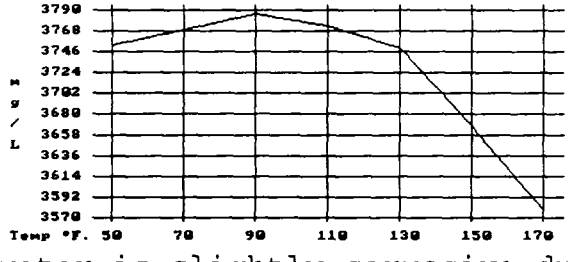
## ANALYSIS

| | | | | | |
|---|---|---|---|---|---|
| 1. | pH | | 6.220 | | |
| 2. | Specific Gravity 60/60 F. | | 1.048 | | |
| 3. | $CaCO_3$ Saturation Index | @ 80 F. | -0.653 | | |
| | | @ 140 F. | +0.272 | | |
| | **Dissolved Gasses** | | **MG/L** | **EQ. WT.** | ***MEQ/L** |
| 4. | Hydrogen Sulfide | | 0 | | |
| 5. | Carbon Dioxide | | 70 | | |
| 6. | Dissolved Oxygen | | Not Determined | | |
| | **Cations** | | | | |
| 7. | Calcium | ($Ca^{++}$) | 1,503 | / 20.1 = | 74.78 |
| 8. | Magnesium | ($Mg^{++}$) | 912 | / 12.2 = | 74.75 |
| 9. | Sodium | ($Na^{+}$) (Calculated) | 19,616 | / 23.0 = | 852.87 |
| 10. | Barium | ($Ba^{++}$) | Not Determined | | |
| | **Anions** | | | | |
| 11. | Hydroxyl | ($OH^{-}$) | 0 | / 17.0 = | 0.00 |
| 12. | Carbonate | ($CO_3^{=}$) | 0 | / 30.0 = | 0.00 |
| 13. | Bicarbonate | ($HCO_3^{-}$) | 517 | / 61.1 = | 8.46 |
| 14. | Sulfate | ($SO_4^{=}$) | 375 | / 48.8 = | 7.68 |
| 15. | Chloride | ($Cl^{-}$) | 34,992 | / 35.5 = | 985.69 |
| 16. | Total Dissolved Solids | | 57,915 | | |
| 17. | Total Iron (Fe) | | 120 | / 18.2 = | 6.59 |
| 18. | Total Hardness As $CaCO_3$ | | 7,507 | | |
| 19. | Resistivity @ 75 F. (Calculated) | | 0.164 /cm. | | |

**LOGARITHMIC WATER PATTERN**
***meq/L.**




**Calcium Sulfate Solubility Profile**




**PROBABLE MINERAL COMPOSITION**

| COMPOUND | EQ. WT. X | *meq/L = | mg/L. |
|---|---|---|---|
| $Ca(HCO_3)_2$ | 81.04 | 8.46 | 686 |
| $CaSO_4$ | 68.07 | 7.68 | 523 |
| $CaCl_2$ | 55.50 | 58.63 | 3,254 |
| $Mg(HCO_3)_2$ | 73.17 | 0.00 | 0 |
| $MgSO_4$ | 60.19 | 0.00 | 0 |
| $MgCL_2$ | 47.62 | 74.75 | 3,560 |
| $NaHCO_3$ | 84.00 | 0.00 | 0 |
| $NaSO_4$ | 71.03 | 0.00 | 0 |
| NaCl | 58.46 | 852.31 | 49,826 |

***Milli Equivalents per Liter**

This water is slightly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of, CO2 in solution.

# Pro-Kem, Inc.

# WATER ANALYSIS REPORT

## SAMPLE

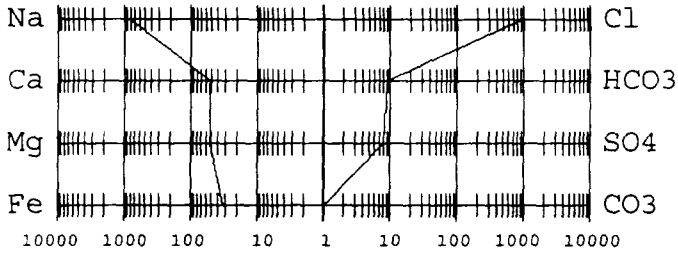
Oil Co. : **Chesapeake Operating**
Lease : **Runnels**
Well No.: **# 8-1**
Lab No. : **F:\ANALYSES\Nov1399.001**

Sample Loc. :
Date Analyzed: **13-November-1999**
Date Sampled : **21-October-1999**

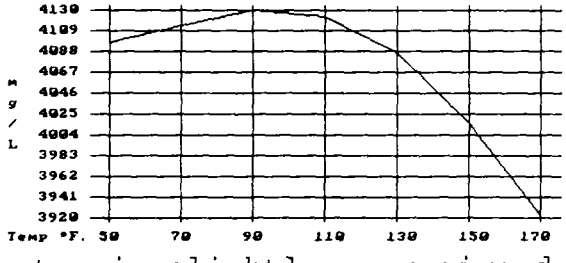
## ANALYSIS

| | | | | | |
|---|---|---|---|---|---|
| 1. | pH | | 6.590 | | |
| 2. | Specific Gravity 60/60 F. | | 1.045 | | |
| 3. | $CaCO_3$ Saturation Index | @ 80 F. | -0.438 | | |
| | | @ 140 F. | +0.492 | | |
| | **Dissolved Gasses** | | **MG/L** | **EQ. WT.** | ***MEQ/L** |
| 4. | Hydrogen Sulfide | | 0 | | |
| 5. | Carbon Dioxide | | 90 | | |
| 6. | Dissolved Oxygen | | **Not Determined** | | |
| | **Cations** | | | | |
| 7. | Calcium ($Ca^{++}$) | | 1,002 | / 20.1 = | 49.85 |
| 8. | Magnesium ($Mg^{++}$) | | 608 | / 12.2 = | 49.84 |
| 9. | Sodium ($Na^{+}$) | (Calculated) | 18,829 | / 23.0 = | 818.65 |
| 10. | Barium ($Ba^{++}$) | | **Not Determined** | | |
| | **Anions** | | | | |
| 11. | Hydroxyl ($OH^{-}$) | | 0 | / 17.0 = | 0.00 |
| 12. | Carbonate ($CO_3^{=}$) | | 0 | / 30.0 = | 0.00 |
| 13. | Bicarbonate ($HCO_3^{-}$) | | 537 | / 61.1 = | 8.79 |
| 14. | Sulfate ($SO_4^{=}$) | | 375 | / 48.8 = | 7.68 |
| 15. | Chloride ($Cl^{-}$) | | 31,993 | / 35.5 = | 901.21 |
| 16. | Total Dissolved Solids | | 53,344 | | |
| 17. | Total Iron (Fe) | | 590 | / 18.2 = | 32.42 |
| 18. | Total Hardness As $CaCO_3$ | | 5,004 | | |
| 19. | Resistivity @ 75 F. (Calculated) | | 0.175 /cm. | | |

**LOGARITHMIC WATER PATTERN**
***meq/L.**




**Calcium Sulfate Solubility Profile**




**PROBABLE MINERAL COMPOSITION**

| COMPOUND | EQ. WT. | X *meq/L | = mg/L. |
|---|---|---|---|
| $Ca(HCO_3)_2$ | 81.04 | 8.79 | 712 |
| $CaSO_4$ | 68.07 | 7.68 | 523 |
| $CaCl_2$ | 55.50 | 33.38 | 1,852 |
| $Mg(HCO_3)_2$ | 73.17 | 0.00 | 0 |
| $MgSO_4$ | 60.19 | 0.00 | 0 |
| $MgCL_2$ | 47.62 | 49.84 | 2,373 |
| $NaHCO_3$ | 84.00 | 0.00 | 0 |
| $NaSO_4$ | 71.03 | 0.00 | 0 |
| NaCl | 58.46 | 818.00 | 47,820 |

***Milli Equivalents per Liter**

This water is slightly corrosive due to the pH observed on analysis. The corrosivity is increased by the content of mineral salts, and the presence of, CO2 in solution.

# Pro-Kem, Inc.

## WATER ANALYSIS REPORT

## SAMPLE

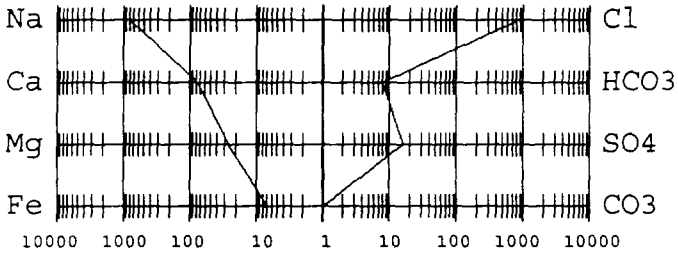
Oil Co. : **Chesapeake Operating**
Lease : **Lorena**
Well No.: **# 1-1**
Lab No. : **F:\ANALYSES\Nov1399.001**

Sample Loc. :
Date Analyzed: **13-November-1999**
Date Sampled : **22-October-1999**

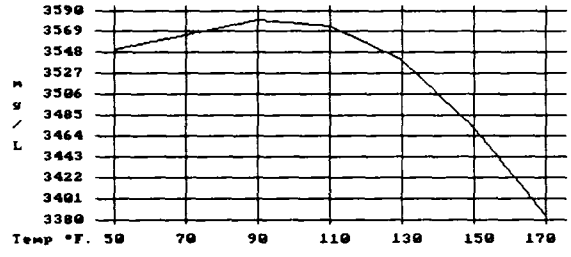
## ANALYSIS

| | | | | | |
|---|---|---|---|---|---|
| 1. | pH | | 6.570 | | |
| 2. | Specific Gravity 60/60 F. | | 1.043 | | |
| 3. | $CaCO_3$ Saturation Index | @ 80 F. | -0.345 | | |
| | | @ 140 F. | +0.585 | | |
| | **Dissolved Gasses** | | **MG/L** | **EQ. WT.** | ***MEQ/L** |
| 4. | Hydrogen Sulfide | | 0 | | |
| 5. | Carbon Dioxide | | 100 | | |
| 6. | Dissolved Oxygen | | Not Determined | | |
| | **Cations** | | | | |
| 7. | Calcium | ($Ca^{++}$) | 1,503 | / 20.1 = | 74.78 |
| 8. | Magnesium | ($Mg^{++}$) | 304 | / 12.2 = | 24.92 |
| 9. | Sodium | ($Na^{+}$) (Calculated) | 17,684 | / 23.0 = | 768.87 |
| 10. | Barium | ($Ba^{++}$) | Not Determined | | |
| | **Anions** | | | | |
| 11. | Hydroxyl | ($OH^{-}$) | 0 | / 17.0 = | 0.00 |
| 12. | Carbonate | ($CO_3^{=}$) | 0 | / 30.0 = | 0.00 |
| 13. | Bicarbonate | ($HCO_3^{-}$) | 464 | / 61.1 = | 7.59 |
| 14. | Sulfate | ($SO_4^{=}$) | 750 | / 48.8 = | 15.37 |
| 15. | Chloride | ($Cl^{-}$) | 29,993 | / 35.5 = | 844.87 |
| 16. | Total Dissolved Solids | | 50,698 | | |
| 17. | Total Iron (Fe) | | 120 | / 18.2 = | 6.59 |
| 18. | Total Hardness As $CaCO_3$ | | 5,004 | | |
| 19. | Resistivity @ 75 F. (Calculated) | | 0.183 /cm. | | |

**LOGARITHMIC WATER PATTERN**
***meq/L.**




**Calcium Sulfate Solubility Profile**




**PROBABLE MINERAL COMPOSITION**

| COMPOUND | EQ. WT. | X *meq/L = | mg/L. |
|---|---|---|---|
| $Ca(HCO_3)_2$ | 81.04 | 7.59 | 615 |
| $CaSO_4$ | 68.07 | 15.37 | 1,046 |
| $CaCl_2$ | 55.50 | 51.81 | 2,876 |
| $Mg(HCO_3)_2$ | 73.17 | 0.00 | 0 |
| $MgSO_4$ | 60.19 | 0.00 | 0 |
| $MgCL_2$ | 47.62 | 24.92 | 1,187 |
| $NaHCO_3$ | 84.00 | 0.00 | 0 |
| $NaSO_4$ | 71.03 | 0.00 | 0 |
| NaCl | 58.46 | 768.14 | 44,906 |

***Milli Equivalents per Liter**

This water is slightly corrosive due to the pH observed on analysis. The corrosivity is increased by the content of mineral salts, and the presence of, CO2 in solution.

# Pro-Kem, Inc.

## WATER ANALYSIS REPORT

## AMPLE

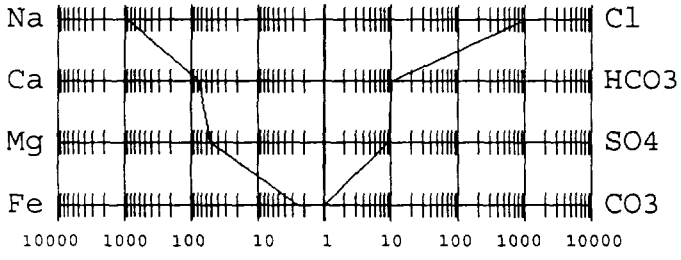
Oil Co. : **Chesapeake Operating**
Lease : **Chambers ''7''**
Well No.: **# 1**
Lab No. : **F:\ANALYSES\Nov0199.001**

Sample Loc. :
Date Analyzed: **01-November-1999**
Date Sampled : **20-October-1999**

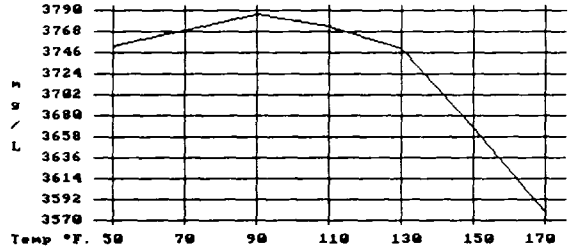
## ANALYSIS

| | | | | | |
|---|---|---|---|---|---|
| 1. | pH | | 6.610 | | |
| 2. | Specific Gravity 60/60 F. | | 1.043 | | |
| 3. | $CaCO_3$ Saturation Index | @ 80 F. | -0.199 | | |
| | | @ 140 F. | +0.726 | | |
| | **Dissolved Gasses** | | **MG/L** | **EQ. WT.** | ***MEQ/L** |
| 4. | Hydrogen Sulfide | | 0 | | |
| 5. | Carbon Dioxide | | 40 | | |
| 6. | Dissolved Oxygen | | **Not Determined** | | |
| | **Cations** | | | | |
| 7. | Calcium | ($Ca^{++}$) | 1,503 | / 20.1 = | 74.78 |
| 8. | Magnesium | ($Mg^{++}$) | 608 | / 12.2 = | 49.84 |
| 9. | Sodium | ($Na^{+}$) (Calculated) | 20,246 | / 23.0 = | 880.26 |
| 10. | Barium | ($Ba^{++}$) | **Not Determined** | | |
| | **Anions** | | | | |
| 11. | Hydroxyl | ($OH^{-}$) | 0 | / 17.0 = | 0.00 |
| 12. | Carbonate | ($CO_3^{=}$) | 0 | / 30.0 = | 0.00 |
| 13. | Bicarbonate | ($HCO_3^{-}$) | 600 | / 61.1 = | 9.82 |
| 14. | Sulfate | ($SO_4^{=}$) | 425 | / 48.8 = | 8.71 |
| 15. | Chloride | ($Cl^{-}$) | 34,992 | / 35.5 = | 985.69 |
| 16. | Total Dissolved Solids | | 58,374 | | |
| 17. | Total Iron (Fe) | | 44 | / 18.2 = | 2.42 |
| 18. | Total Hardness As $CaCO_3$ | | 6,256 | | |
| 19. | Resistivity @ 75 F. (Calculated) | | 0.164 /cm. | | |

**LOGARITHMIC WATER PATTERN**
***meq/L.**




**Calcium Sulfate Solubility Profile**




**PROBABLE MINERAL COMPOSITION**

| COMPOUND | EQ. WT. | X *meq/L = | mg/L. |
|---|---|---|---|
| $Ca(HCO_3)_2$ | 81.04 | 9.82 | 796 |
| $CaSO_4$ | 68.07 | 8.71 | 593 |
| $CaCl_2$ | 55.50 | 56.25 | 3,122 |
| $Mg(HCO_3)_2$ | 73.17 | 0.00 | 0 |
| $MgSO_4$ | 60.19 | 0.00 | 0 |
| $MgCL_2$ | 47.62 | 49.84 | 2,373 |
| $NaHCO_3$ | 84.00 | 0.00 | 0 |
| $NaSO_4$ | 71.03 | 0.00 | 0 |
| NaCl | 58.46 | 879.61 | 51,422 |

***Milli Equivalents per Liter**

This water is slightly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of, CO2 in solution.

# Pro-Kem, Inc.

## WATER ANALYSIS REPORT

### SAMPLE

Oil Co. : Chesapeake
Lease : Watson
Well No.: # 6-1
Salesman:

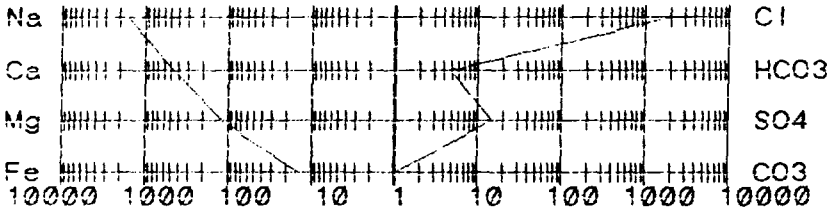
Sample Loc. :
Date Analyzed: 16-March-1998
Date Sampled : 25-February-1998

### ANALYSIS

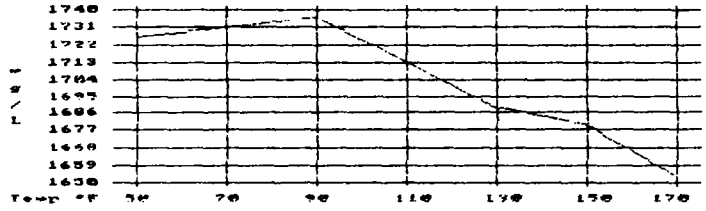
| | | | | |
|---|---|---|---|---|
| 1. | pH | | 6.350 | |
| 2. | Specific Gravity 60/60 F. | | 1.088 | |
| 3. | $CaCO_3$ Saturation Index | @ 80 F. | +0.135 | |
| | | @ 140 F. | +1.015 | |

| | Dissolved Gasses | | MG/L | EQ. WT. | *MEQ/L |
|---|---|---|---|---|---|
| 4. | Hydrogen Sulfide | | 0 | | |
| 5. | Carbon Dioxide | | 80 | | |
| 6. | Dissolved Oxygen | | Not Determined | | |
| | **Cations** | | | | |
| 7. | Calcium | ($Ca^{++}$) | 8,649 | / 20.1 = | 430.30 |
| 8. | Magnesium | ($Mg^{++}$) | 1,391 | / 12.2 = | 114.02 |
| 9. | Sodium | ($Na^{+}$) (Calculated) | 35,212 | / 23.0 = | 1,530.96 |
| 10. | Barium | ($Ba^{++}$) | Not Determined | | |
| | **Anions** | | | | |
| 11. | Hydroxyl | ($OH^{-}$) | 0 | / 17.0 = | 0.00 |
| 12. | Carbonate | ($CO_3^{=}$) | 0 | / 30.0 = | 0.00 |
| 13. | Bicarbonate | ($HCO_3^{-}$) | 273 | / 61.1 = | 4.47 |
| 14. | Sulfate | ($SO_4^{=}$) | 700 | / 48.8 = | 14.34 |
| 15. | Chloride | ($Cl^{-}$) | 72,984 | / 35.5 = | 2,055.89 |
| 16. | Total Dissolved Solids | | 119,209 | | |
| 17. | Total Iron (Fe) | | 252 | / 18.2 = | 13.85 |
| 18. | Total Hardness As $CaCO_3$ | | 27,324 | | |
| 19. | Resistivity @ 75 F. (Calculated) | | 0.068 /cm. | | |

LOGARITHMIC WATER PATTERN
*meq/L.




Calcium Sulfate Solubility Profile




PROBABLE MINERAL COMPOSITION

| COMPOUND | EQ. WT. X | *meq/L = | mg/L. |
|---|---|---|---|
| $Ca(HCO_3)_2$ | 81.04 | 4.47 | 362 |
| $CaSO_4$ | 68.07 | 14.34 | 976 |
| $CaCl_2$ | 55.50 | 411.49 | 22.837 |
| $Mg(HCO_3)_2$ | 73.17 | 0.00 | 0 |
| $MgSO_4$ | 60.19 | 0.00 | 0 |
| $MgCL_2$ | 47.62 | 114.02 | 5.429 |
| $NaHCO_3$ | 84.00 | 0.00 | 0 |
| $NaSO_4$ | 71.03 | 0.00 | 0 |
| NaCl | 58.46 | 1,530.38 | 89,466 |

*Milli Equivalents per Liter

This water is slightly corrosive due to the pH observed on analysis.
The corrosivity is increased by the content of mineral salts, and the presence of, CO2 in solution.

VIII

# INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all specific tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

| Southeastern New Mexico | | | | Northwestern New Mexico | | | |
|---|---|---|---|---|---|---|---|
| T. Anhy | 1914.0 | T. Canyon | | T. Ojo Alamo | | T. Penn. "B" | |
| T. Salt | 2038.0 | T. Strawn | 11436.0 | T. Kirtland-Fruitland | | T. Penn. "C" | |
| B. Salt | | T. Atoka | 11642.0 | T. Pictured Cliffs | | T. Penn. "D" | |
| T. Yates | 3117.0 | T. Miss | | T. Cliff House | | T. Leadville | |
| T. 7 Rivers | | T. Devonian | | T. Menefee | | T. Madison | |
| T. Queen | | T. Silurian | | T. Point Lookout | | T. Elbert | |
| T. Grayburg | | T. Montoya | | T. Mancos | | T. McCracken | |
| T. San Andres | 4668.0 | T. Simpson | | T. Gallup | | T. Ignacio Otzte | |
| T. Glorieta | 6224.0 | T. McKee | | Base Greenhorn | | T. Granite | |
| T. Paddock | | T. Ellenburger | | T. Dakota | | T. | |
| T. Blinebry | | T. Gr. Wash | | T. Morrison | | T. | |
| T. Tubb | 7488.0 | T. Delaware Sand | | T. Todilto | | T. | |
| T. Drinkard | | T. Bone Springs | | T. Entrada | | T. | |
| T. Abo | 8218.0 | T. | | T. Wingate | | T. | |
| T. Wolfcamp | 9689.0 | T. | | T. Chinle | | T. | |
| T. Penn | | T. | | T. Permain | | T. | |
| T. Cisco (Bough C) | | T. | | T. Penn. "A" | | T. | |

## OIL OR GAS SANDS OR ZONES

No. 1, from 11452 to 11477 — No. 3, from ... to ...

No. 2, from ... to ... — No. 4, from ... to ...

## IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from ... to ... feet

No. 2, from ... to ... feet

No. 3, from ... to ... feet

## LITHOLOGY RECORD (Attach additional sheet if necessary)

| From | To | Thickness in Feet | Lithology | From | To | Thickness in Feet | Lithology |
|---|---|---|---|---|---|---|---|
| 0.0 | 398.0 | 398.0 | Sand gravel/caliche | | | | |
| 398.0 | 1914.0 | 1516.0 | Red beds | | | | |
| 1914.0 | 3117.0 | 1203.0 | Anhydrite & salt | | | | |
| 3117.0 | 4668.0 | 1551.0 | Sand, Dolomite & Anhydrite | | | | |
| 4668.0 | 6224.0 | 1556.0 | Dolomite | | | | |
| 6224.0 | 8218.0 | 1994.0 | Sand & Dolomite | | | | |
| 8218.0 | 9689.0 | 1471.0 | Dolomite & Shale | | | | |
| 9689.0 | 11800.0 | 2111.0 | Limestone, Shale, Chert and san | | | | |

XIII

**DKD, L.L.C.**
**P.O. BOX 682**
**TATUM, NM 88267**

February 28, 2002

RE: Watson 6 #1
Unit N, Sect. 6, Tws. 16 S., Rng. 36 E.

Dear Sirs:

In accordance with the rules and regulations of the Oil Conservation Division of the State of New Mexico, you are being provided a copy of the C-108, Application for Authorization to Inject, in the above captioned well.

Any questions about the permit can be directed to Eddie W. Seay, (505)392-2236. Any objections or request for hearing must be filed with the Oil Conservation Division within fifteen (15) days from the date received. The OCD address is P.O. Box 6429, 1220 S. Saint Francis Drive, Santa Fe, NM 87504, (505)476-3440.

Thank you,

Eddie W. Seay

Eddie W. Seay, Agent
601 W. Illinois
Hobbs, NM 88242
(505)392-2236

## LIST OF LANDOWNERS & OFFSET OPERATORS

LANDOWNER

DKD LLC.
P.O. Box 682
Tatum, NM 88267

OFFSET OPERATORS

Chesapeake Operating, Inc.
P.O. Box 18496
Oklahoma City, OK 73154-0496

Charles B. Gillespie, Jr.
Box 8, 500 W. Texas, Ste. 890
Midland, TX 79701

Pronghorn Management Corporation
Box 1772
Hobbs, NM 88241

Energen Resources Corporation
2198 Bloomfield Hwy.
Farmington, NM 87402

## U.S. Postal Service
## CERTIFIED MAIL RECEIPT
*(Domestic Mail Only; No Insurance Coverage Provided)*

FARMINGTON, NM 87402

| | |
|---|---|
| Postage | $ 1.95 |
| Certified Fee | 2.10 |
| Return Receipt Fee (Endorsement Required) | 1.50 |
| Restricted Delivery Fee (Endorsement Required) | |
| **Total Postage & Fees** | $ 5.55 |

Postmark Here — HOBBS NM — 03/04/02 — Clerk: KHGZHK

7001 2510 0007 4767 0973

Sent To: Energen Resources Corporation
Street, Apt. No., or PO Box No.: 2198 Bloomfield Hwy.
City, State, ZIP+4: Farmington, NM 87402

PS Form 3800, January 2001 — See Reverse for Instructions

## U.S. Postal Service
## CERTIFIED MAIL RECEIPT
*(Domestic Mail Only; No Insurance Coverage Provided)*

TATUM, NM 88267

| | |
|---|---|
| Postage | $ 1.95 |
| Certified Fee | 2.10 |
| Return Receipt Fee (Endorsement Required) | 1.50 |
| Restricted Delivery Fee (Endorsement Required) | |
| **Total Postage & Fees** | $ 5.55 |

Postmark Here — HOBBS NM — MAR 2002 — 03/04/02

7001 2510 0007 4767 0935

Sent To: DKD LLC.
Street, Apt. No., or PO Box No.: P.O. Box 682
City, State, ZIP+4: Tatum, NM 88267

PS Form 3800, January 2001 — See Reverse for Instructions

## U.S. Postal Service
## CERTIFIED MAIL RECEIPT
*(Domestic Mail Only; No Insurance Coverage Provided)*

OKLAHOMA CITY, OK 73154

| | |
|---|---|
| Postage | $ 1.95 |
| Certified Fee | 2.10 |
| Return Receipt Fee (Endorsement Required) | 1.50 |
| Restricted Delivery Fee (Endorsement Required) | |
| **Total Postage & Fees** | $ 5.55 |

Postmark Here — HOBBS NM — MAR 2002 — 03/04/02

7001 2510 0007 4767 0942

Sent To: Chesapeake Operating, Inc.
Street, Apt. No., or PO Box No.: P.O. Box 18496
City, State, ZIP+4: Oklahoma City, OK 73154-0496

PS Form 3800, January 2001 — See Reverse for Instructions

## U.S. Postal Service
## CERTIFIED MAIL RECEIPT
*(Domestic Mail Only; No Insurance Coverage Provided)*

MIDLAND, TX 79701

| | |
|---|---|
| Postage | $ 1.95 |
| Certified Fee | 2.10 |
| Return Receipt Fee (Endorsement Required) | 1.50 |
| Restricted Delivery Fee (Endorsement Required) | |
| **Total Postage & Fees** | $ 5.55 |

Postmark Here — HOBBS NM — 2002 — 03/04/02

7001 2510 0007 4767 0959

Sent To: Charles B. Gillespie, Jr.
Street, Apt. No., or PO Box No.: Box 8, 500 W. Texas, Ste. 890
City, State, ZIP+4: Midland, TX 79701

PS Form 3800, January 2001 — See Reverse for Instructions

## U.S. Postal Service
## CERTIFIED MAIL RECEIPT
*(Domestic Mail Only; No Insurance Coverage Provided)*

HOBBS, NM 88241

| | |
|---|---|
| Postage | $ 1.95 |
| Certified Fee | 2.10 |
| Return Receipt Fee (Endorsement Required) | 1.50 |
| Restricted Delivery Fee (Endorsement Required) | |
| **Total Postage & Fees** | $ 5.55 |

Postmark Here — HOBBS NM — 2002

7001 2510 0007 4767 0966

Sent To: Pronghorn Management Corporation
Street, Apt. No., or PO Box No.: Box 1772
City, State, ZIP+4: Hobbs, NM 88241

PS Form 3800, January 2001 — See Reverse for Instructions

SWD-834

# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**GARY E. JOHNSON**
**Governor**
Betty Rivera
Cabinet Secretary

**Lori Wrotenbery**
**Director**
**Oil Conservation Division**

Oil Conservation Division
1220 S. Francis Drive
Santa Fe, NM 87505

RE: Proposed:
MC
DHC
NSL
NSP
SWD X
WFX
PMX

Gentlemen:

I have examined the application for the:

DKD LLC Watson b #1-N, b-16s-36e
Operator Lease & Well No. Unit S-T-R API # 30-025-34197

and my recommendations are as follows:

OK

Yours very truly,

Chris Williams
Chris Williams
Supervisor, District 1

## LEGAL NOTICE

Pursuant to the rules and regulations of the Oil Conservation Division of the State of New Mexico, DKD, LLC of Box 682, Tatum, New Mexico 88267, is filing application for a commercial salt water disposal. The well being applied for is the Watson 6 well #1 located in Unit letter N, 2857/FSL and 1417/FWL in Section 6, Township 16 S., Range 36 E., Lea Co., New Mexico. The injection formation is the Cisco and Canyon from 10,340' to 11,062' below the surface. Expected maximum rate of injection will be 2000 bls. per day and the expected maximum injection pressure will be 1000 psi. Any questions about the application can be directed to Eddie W. Seay, (505)392-2236, or any objections or request for hearing must be directed to the Oil Conservation Division, (505)476-3440, Box 6429, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87504, within 15 days.

# Affidavit of Publication

STATE OF NEW MEXICO )
) ss.
COUNTY OF LEA )

Joyce Clemens being first duly sworn on oath deposes and says that she is Advertisting Director of **THE LOVINGTON DAILY LEADER**, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled

Legal Notice

was published in a regular and entire issue of **THE LOVINGTON DAILY LEADER** and not in any supplement thereof, for one (1) day, beginning with the issue of February 28, 2002 and ending with the issue of February 28, 2002.

And that the cost of publishing said notice is the sum of $ 18. 68 which sum has been (Paid) as Court Costs.

Joyce Clemens

Subscribed and sworn to before me this 28th day of February 2002.

Debbie Schilling

Debbie Schilling
Notary Public, Lea County, New Mexico
My Commission Expires June 22, 2002

LEGAL NOTICE
Pursuant to the rules and regulations of the Oil Conservation Division of the State of New Mexico, DKD, LLC of Box 682, Tatum, New Mexico 88267, is filing application for a commercial salt water disposal. The well being applied for is the Watson 6 well #1 located in Unit letter N, 2857/FSL and 1417/FWL in Section 6, Township 16 S., Range 36 E., Lea Co., New Mexico. The injection formation is the Cisco and Canyon from 10,340' to 11,062' below the surface. Expected maximum rate of injection will be 2000 bls. per day and the [redacted] psi. Any questions about the application can be directed to Eddie W. Seay, (505) 392-2236, or any objections or request for hearing must be directed to the Oil Conservation Division, (505) 476-3440, Box 6429, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87504, within 15 days.

Published in the Lovington Daily Leader February 28, 2002.

# 11524

## WARRANTY DEED

PATTI KIM WATSON, A SINGLE WOMAN, DEBBIE KAY BELL FLEET, JOINED PRO-FORMA BY ROBERT FLEET, HER HUSBAND AND BILLY RAY PATTERSON, JOINED PRO-FORMA BY BETTY PATTERSON, HIS WIFE

for consideration paid grants to

DKD L.L.C.

whose address is PO BOX 682 TATUM, NM 88267

the following described real estate in LEA county, New Mexico

FOR SURFACE TITLE ONLY:

A tract of land located in the South Half of the South Half (S/2S/2) of Lot Eleven (11), Section 6, Township 16 South, Range 36 East, N.M.P.M. Subject to a 30 foot easement off the East side for a street.

AND

Lot Fourteen (14), Section 6, Township 16 South, Range 36 East, N.M.P.M., Lea County, New Mexico.
Subject to reservations, restrictions and easements appearing of record

with warranty covenants.

WITNESS our hands and seals on 9/11/01

LINDA HAMMOND NOTARY PUBLIC IN AND FOR STATE OF OKLAHOMA PONTOTOC COUNTY

Linda Hammond
My Commission Exp March 10, 2004

Patti Kim Watson
PATTI KIM WATSON

Debbie Kay Bell Fleet
DEBBIE KAY BELL FLEET

Robert Fleet
ROBERT FLEET

Billy Ray Patterson
BILLY RAY PATTERSON

Betty Patterson
BETTY PATTERSON

SEE NEXT PAGE FOR ACKNOWLEDGEMENTS

# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

2nd

GARY E. JOHNSON
Governor
Carol Leach
Acting Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

January 23, 2002

Mr. Danny Watson
DKD, L.L.C.
P.O Box 682
Tatum, NM 88267

Re: Letter of Credit No. 2122839-70
DKD, L.L.C., Principal
First National Bank of Hobbs, Depository
$10,000 one-well
Watson 6 No. 1 – 2857' FSL and 1417' FWL
Section 6, Township 16 South, Range 36 East,
Lea County, NM

Dear Mr. Watson:

The New Mexico Oil Conservation Division hereby approves the above-captioned Letter of Credit.

Sincerely,

David K. Brooks

DAVID K. BROOKS
Assistant General Counsel

DKb/dp

cc: Oil Conservation Division – Hobbs, NM

First National Bank of Hobbs
600 West Bender
Hobbs, NM 88240

Side 1

# INJECTION WELL DATA SHEET

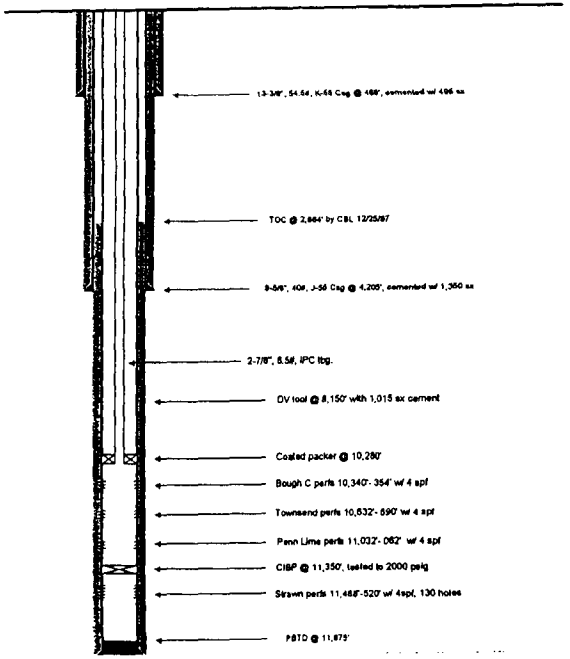
OPERATOR: DKD L.L.C.

WELL NAME & NUMBER: Watson 6 #1 (30-025-34197)

WELL LOCATION: 2857/S 1417/W N 6 16 36 E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

## *WELLBORE SCHEMATIC*




## *WELL CONSTRUCTION DATA*

### Surface Casing

Hole Size: 17 1/2" Casing Size: 13 3/8"

Cemented with: 495 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Circulated

### Intermediate Casing

Hole Size: 11" Casing Size: 9 5/8"

Cemented with: 1350 sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Circulated

### Production Casing

Hole Size: 7 7/8" Casing Size: 5 1/2"

Cemented with: 1720 sx. *or* _____ ft³

Top of Cement: 2864 Method Determined: CBL

Total Depth: 11,856

### Injection Interval

10,340 feet to 11,062

(Perforated or Open Hole; indicate which)

Side 2

## INJECTION WELL DATA SHEET

Tubing Size: 2 7/8" Lining Material: IPC or X13 Chromed

Type of Packer: Baker Model "R"

Packer Setting Depth: 10,280

Other Type of Tubing/Casing Seal (if applicable): _____

### Additional Data

1. Is this a new well drilled for injection? _____Yes _X_No

   If no, for what purpose was the well originally drilled? _____

   Producing oil well

2. Name of the Injection Formation: Cisco / Canyon

3. Name of Field or Pool (if applicable): NE Shoe Bar

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. Strawn 11,488 / 11,520 CIBP set at 11,350 and tested to 2000 psig

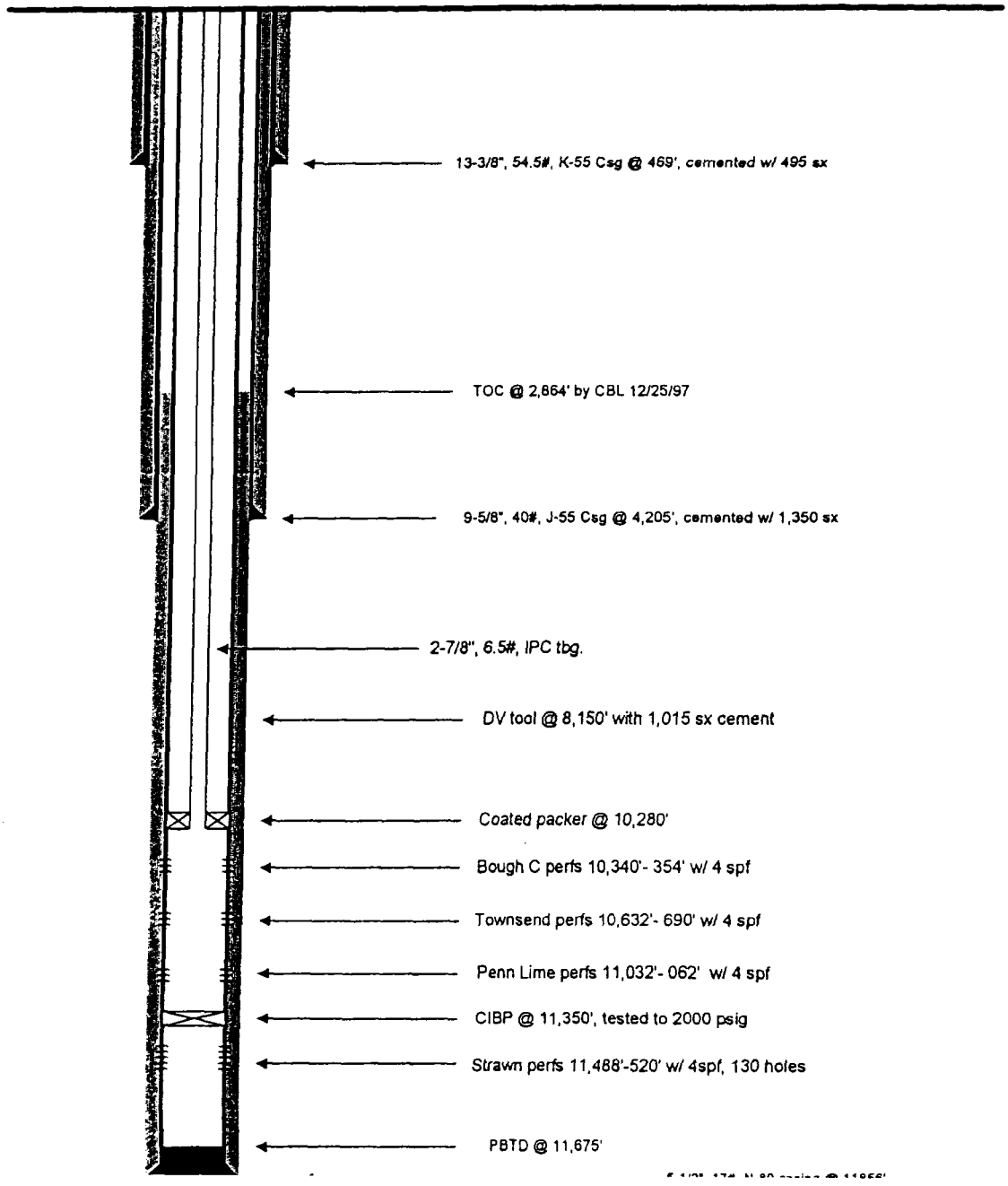
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: _____

   the Strawn underlyes the injection zone and is at 11,500 ±. The Wolfcamp overlyes the injection zone at 9680 ±.

D.K.D. L.L.C.

## Wellbore Schematic

WELL : WATSON 1-6
LOCATION : SECTION 6-16S-36 E
COUNTY : LEA STATE : NEW MEXICO
FIELD : LOVINGTON STRAWN PROJECT
ELEVATION : GL: 3,869' KB: 3,887'



District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87504

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87504

Form C-104A
August 11, 2000

Submit 1 copy of the final affected wells list along with 2 copies of this form per number of wells on that list to appropriate District Office

# Change of Operator

| Previous Operator Information: | | New Operator Information: | |
|---|---|---|---|
| | | Effective Date: | 02/01/02 |
| OGRID: | 147179 | New Ogrid: | |
| Name: | Chesapeake Operating, Inc. | New Name: | DKD, L.L.C. |
| Address: | P. O. Box 18496 | Address: | P. O. Box 682 |
| Address: | | Address: | |
| City, State, Zip: | Oklahoma City, OK 73154-0496 | City, State, Zip: | Tatum, NM 88267 |

I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information on this form and the attached list of wells is true and complete to the best of my knowledge and belief.

New Operator Signature: Danny R. Watson

Printed name: DANNY R. WATSON

Title: PRES.

Date: 4/1/02 Phone: (505) 398-3490

Previous operator complete below:

Previous Operator: Chesapeake Operating, Inc.

Previous OGRID: 147179

Signature: Douglas J. Jacobson

Printed Name: Douglas J. Jacobson

Sr. Vice Pres. - Acq. & Divest.

**NMOCD Approval**

Signature:

Printed Name:

District:

Date:

Chesapeake
*Natural Gas.*
*Natural Advantages.*

**Hank Scheel**
*Manager - Acquisitions and Divestitures*

March 25, 2002

DKD, L.L.C.
P. O. Box 682
Tatum, NM 88267

Re: Watson 1-6
Section 6-16S-36E
Lea County, NM

Dear Sirs:

Please find enclosed an Assignment, Bill of Sale and Conveyance, as well as Form C-104A, Change of Operator, to affect the assignment of ownership and operations of the referenced property from Chesapeake Operating, Inc., et al, to DKD, L.L.C., effective December 1, 2001.

Please sign and notarize each original where indicated, and return to the undersigned for completion and filing with the appropriate agencies. As soon as the recording is complete, a recorded copy of the documents will be forwarded to you, along with the land and engineering files.

If you have any questions or need additional information, please contact the undersigned.

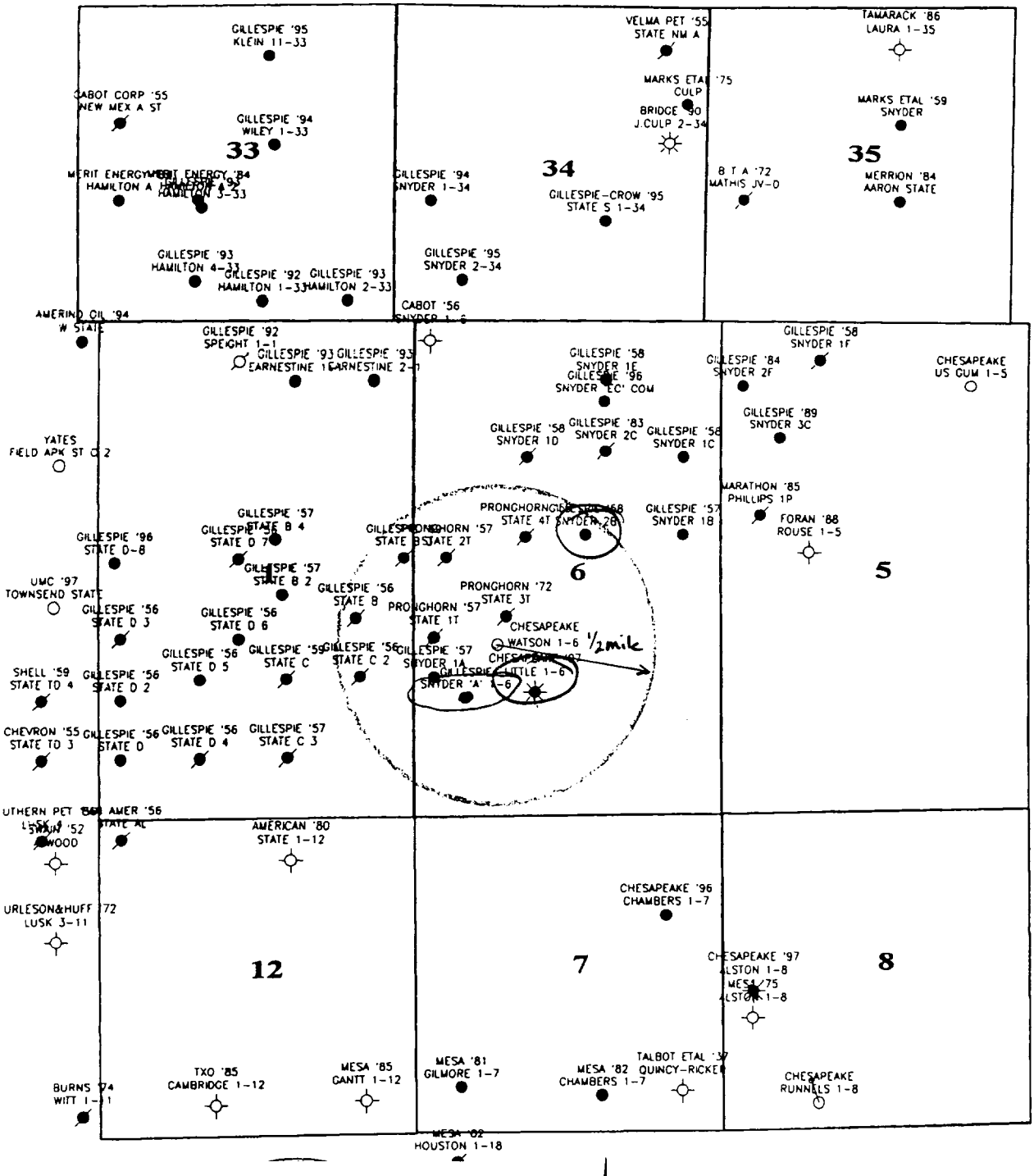
Sincerely,

Hank Scheel

Hank Scheel

HAS/blc
Enlcosures

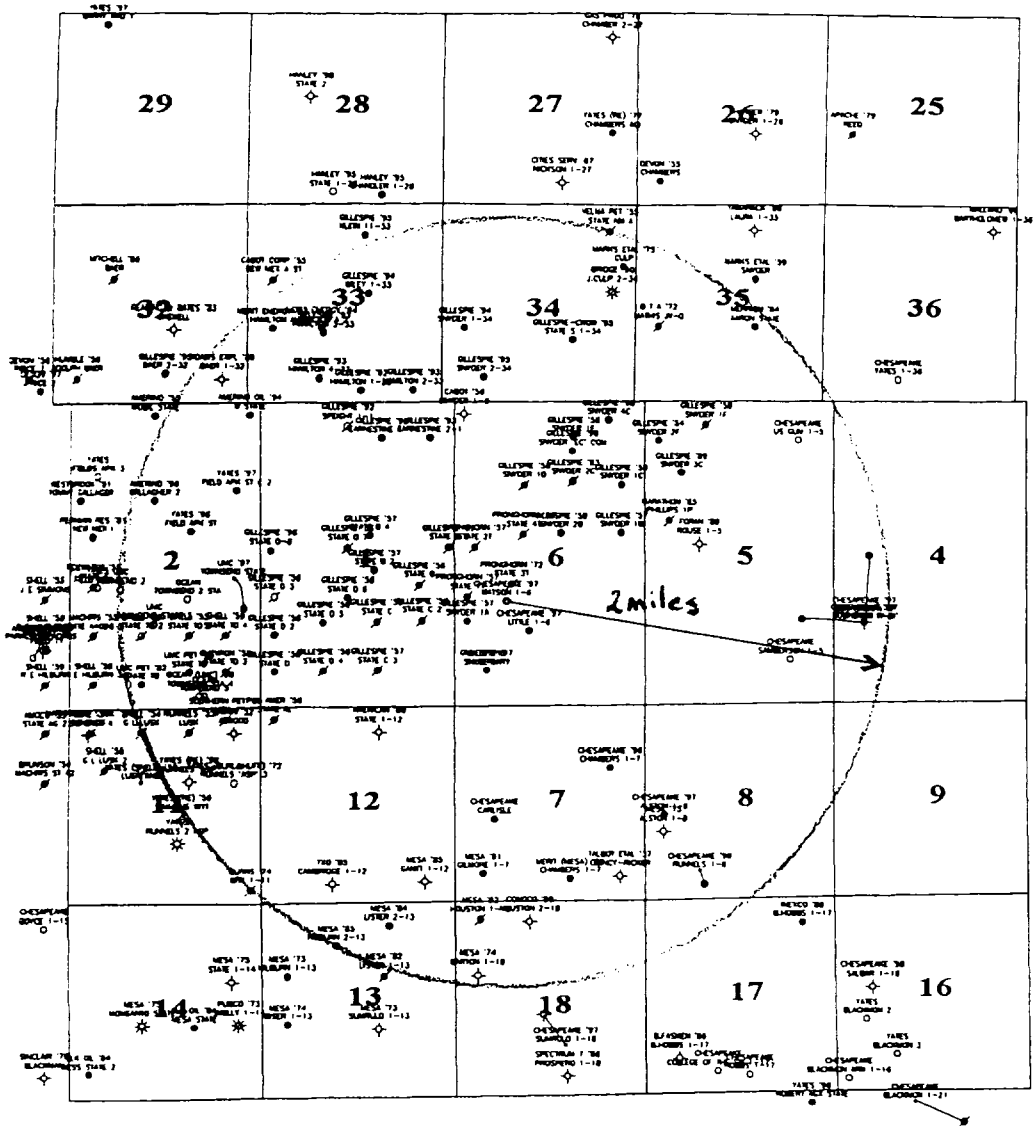
**Chesapeake Energy Corporation**
6100 N. Western Ave. • Oklahoma City, OK 73118 • P.O. Box 18496 • Oklahoma City, OK 73154-0496
405.879.9303 • fax 405.879.9557 • hscheel@chkenergy.com




D.K.D L.L.C.

**Watson 1-6**
**Lea County, New Mexico**
**Section 6-16S-36E**

| | | |
|---|---|---|
| GREG KNIGHT | | 3/16/00 |
| | 2" = 1 Mile | |




D.K.D. L.L.C.

Watson 1-6
Section 6-16S-36E
Lea County, Oklahoma

| | | |
|---|---|---|
| GREG KNIGHT | | 3/16/08 |
| | 1" = 1 mile | |

N

# ATTACHMENT TO APPLICATION C-108

Watson 6 #1
Unit N, Sect. 6, T. 16 S., R. 36 E.
Lea Co., NM

III. Well data information sheets attached.

IV. No.

V. Map attached.

VI. List of wells and data attached.

VII. Proposed Operation

1) Average daily injection volume is 1500 bls. per day.
2) Closed system.
3) The average injection pressure is 500 psig with a maximum injection pressure of 1000 psig.
4) Produced water from the area, see attached water analysis.
5) Attached analysis.

VIII. The proposed disposal formation is interbedded shale and limestone.
The primary Geologic name is Cisco and Canyon with secondary zone such as Bough C and Townsend. The Cisco/Canyon is from 10,340' to 11,088'.
The fresh water formation in this area is the Ogallala which ranges in thickness from top of H20 at 60 ft. to the base of the fresh water at 240'.

IX. Acid as needed.

X. Previously submitted.

XI. Attached.

XII. I, Eddie W. Seay, have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water pertaining to this well.

Eddie W. Seay
Signature

2/28/2002
Date

XIII. Proof of Notices attached.

XIV. Signed Application.