Bell PETROLEUM LABORATORIES

DAMSON OIL CORPORATION

FINGERPRINT ANALYSIS

STATE OF NEW MEXICO CR #1
PLAINS UNIT FEDERAL # 7
SOUTHERN CALIFORNIA FEDERAL #1

2057 Commerce Drive P. O. Box 2988 Midland, Texas 79702 915-694-9653 915-563-2628

Bell PETROLEUM LABORATORIES

May 8, 1987

Damson Oil Corporation
3300 North "A" Street
Building 8, Suite 100
Midland, Texas 79705

Attn: Brent Lowery

RE: Fingerprints on the State of New Mexico CR #1, Plains Unit Federal #7 and the Southern California Federal #1

Dear Mr. Lowery:

These fingerprints were performed on a Hewlett Packard 5880 gas chromatograph with a flame ionization detector, a splitter injection system, a 0.5 micron film thickness crosslinked methyl silicone liquid phase on a 50 meter-0.21 mm I. D. fused capillary column which was programmed as follows:

| | | |
|---|---|---|
| Initial Temperature | = | 34°C |
| Initial Time | = | 5.00 min. |
| First Program | | |
| Program Rate | = | 5.00°C/min. |
| Final Temperature | = | 130°C |
| No Hold on 130°C | | |
| Second Program | | |
| Program Rate | = | 12.00°C/min. |
| Final Temperature | = | 300°C |
| Final Time | = | 20.00 min. |
| Injection Temperature | = | 325°C |
| Detector Temperature | = | 325°C |

The State of New Mexico CR #1, Plains Unit Federal #7 and the Southern California Federal #1 had API gravities of 41.3, 38.2 and 41.5 at 60°F respectively.

However, due to potential differences in weathering of the samples, the relative ratios of the normal paraffinic hydrocarbons from C14 through C30 to C13 as well as the isoprenoids farnesane, pristane and phytane compared to C14, C17 and C18 respectively were used for comparison. A difference in the pristane/C17 ratio between the State of New Mexico CR #1 and

Damson Oil Corporation
Midland, Texas



Plains Unit Federal #7 was demonstrated by analyzing both samples twice. The Southern California Federal #1 indicated the same ratio of pristane/C17 as the State of New Mexico CR #1. This fact in conjunction with nearly identical molecular weights of the heptanes + fractions of the two samples establishes the similarity between the State of New Mexico CR #1 and the Southern California Federal #1 samples. Copies of the chromatograms are included for an eyeball comparison.

Thank you for using our laboratory and if we may be of further service to you, please do not hesitate to contact us at 915-694-9653.

Sincerely,

Jim Barnett

JIM BARNETT
Bell Petroleum Laboratories

JB/bar

Bell PETROLEUM LABORATORIES

# RELATIVE RATIO OF NORMAL PARAFFINIC HYDROCARBONS TO C13

| | State of New Mexico CR #1 West Lusk Delaware | | Plains Unit Fed. #7 Lusk Delaware | | Southern California Fed. #1 Unknown |
|---|---|---|---|---|---|
| RELATIVE RATIO | #1 | #2 | #1 | #2 | |
| Farnesane/C14 | 0.52 | 0.50 | 0.50 | 0.48 | 0.51 |
| C14/C13 | 0.92 | 0.91 | 0.93 | 0.93 | 0.90 |
| C15/C13 | 0.89 | 0.84 | 0.86 | 0.88 | 0.86 |
| C16/C13 | 0.80 | 0.75 | 0.77 | 0.78 | 0.75 |
| Pristane/C17 | 1.13 | 1.13 | 0.99 | 0.99 | 1.13* |
| C17/C13 | 0.71 | 0.66 | 0.69 | 0.70 | 0.67 |
| Phytane/C13 | 0.97 | 0.96 | 0.92 | 0.92 | 0.93 |
| C18/C13 | 0.65 | 0.61 | 0.62 | 0.63 | 0.62 |
| C19/C13 | 0.70 | 0.64 | 0.64 | 0.67 | 0.66 |
| C20/C13 | 0.63 | 0.59 | 0.58 | 0.60 | 0.59 |
| C21/C13 | 0.54 | 0.51 | 0.50 | 0.52 | 0.51 |
| C22/C13 | 0.44 | 0.42 | 0.42 | 0.45 | 0.42 |
| C23/C13 | 0.35 | 0.33 | 0.33 | 0.36 | 0.33 |
| C24/C13 | 0.29 | 0.27 | 0.26 | 0.32 | 0.27 |
| C25/C13 | 0.20 | 0.19 | 0.18 | 0.23 | 0.19 |
| C26/C13 | 0.16 | 0.15 | 0.12 | 0.19 | 0.15 |
| C27/C13 | 0.13 | 0.12 | 0.09 | 0.14 | 0.11 |
| C28/C13 | 0.10 | 0.09 | 0.07 | 0.11 | 0.08 |
| C29/C13 | 0.09 | 0.08 | 0.06 | 0.09 | 0.07 |
| C30/C13 | 0.07 | 0.05 | 0.04 | 0.06 | 0.05 |
| API Gravities | 42.2 at 71°F | | 39.0 at 71°F | | 42.4 at 71°F |
| | 41.3 at 60°F | | 38.2 at 60°F | | 41.5 at 60°F |
| Molecular Weights of Heptanes + | 204.2 | | 211.0 | | 203.4 |

* Same as State of New Mexico CR #1

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**BELL PETROLEUM LABORATORIES** Page _____ of _____

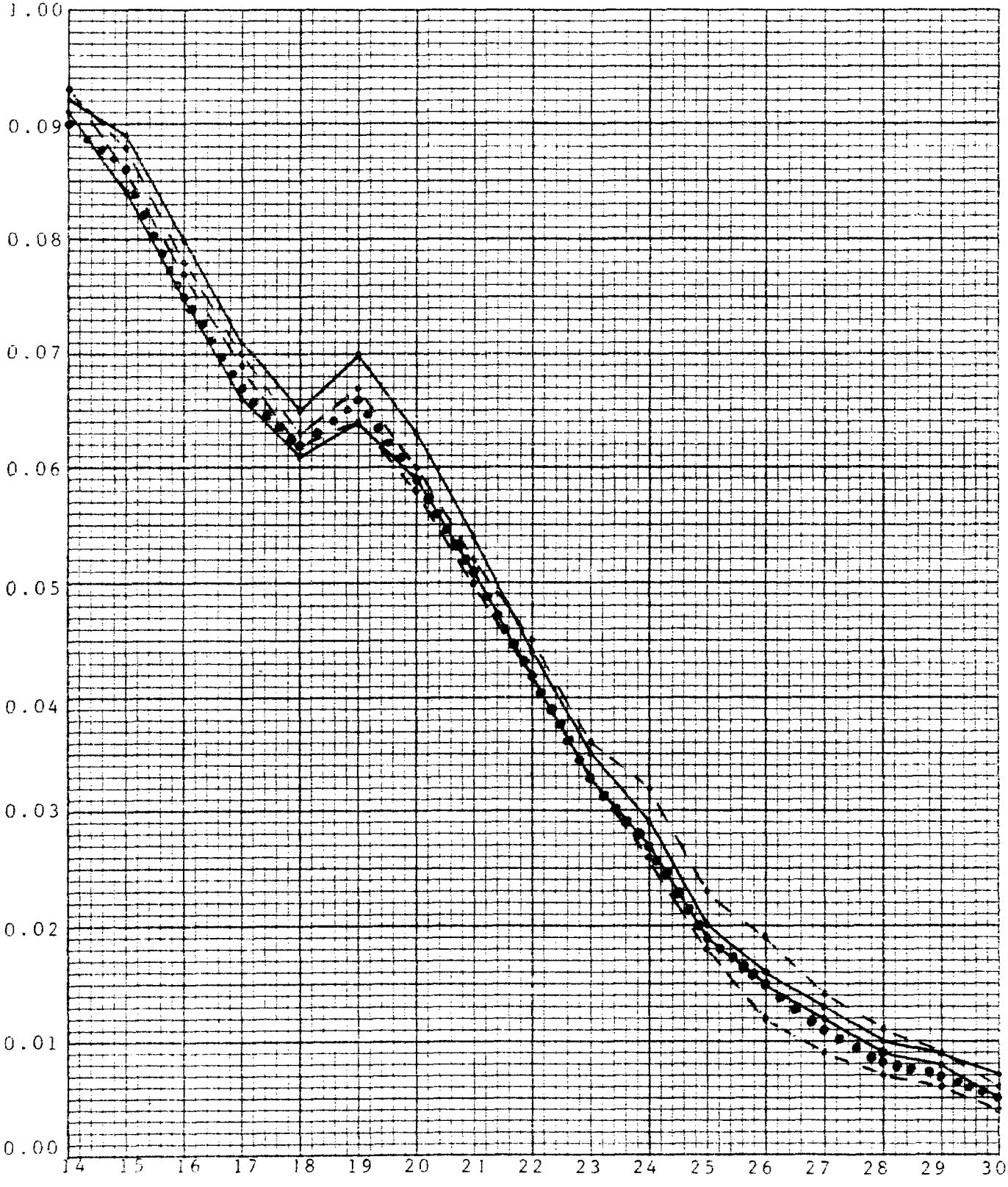
*Reservoir Fluid Analysis Section*
MIDLAND, TEXAS

State of New Mexico CR #1 ._____.
Plains Unit Fed. # 7 ._____.
Southern Calif. Fed. #1 ._____.

Company Damson Oil Corp. Formation Lusk & West Lusk Delaware

Well _____ County Lea

Field _____ State New Mexico



********* BELL PETROLEUM LABORATORIES *********

P.O. BOX 2988 * 24 HOUR PHONE 915/563-2628
MIDLAND, TEXAS 79701

RUN NUMBER...37679

DATE SECURED:5/04/87

A SAMPLE OF: AMOCO PLAINS UNIT #7 @ CASINGHEAD VALVE
SECURED FROM: DAMSON OIL CORP
AT: NW/4 OF NW/4 SEC/.33 T19S R32E SECURED BY: BRENT LOWERY
SAMPLING CONDITIONS: PRESS: 26# TEMP: 65 F TIME: 12:35 PM DATE: 5/04/87

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********* FRACTIONAL ANALYSIS *********
@ 14.696 & 60 DEG. F.

| | MOL. % | GPM |
|---|---|---|
| CARBON DIOXIDE | 0.00 | |
| NITROGEN | 9.57 | |
| METHANE | 68.93 | |
| ETHANE | 10.38 | 2.769 |
| PROPANE | 5.94 | 1.633 |
| ISO-BUTANE | 0.70 | 0.228 |
| N-BUTANE | 1.81 | 0.569 |
| ISO-PENTANE | 0.54 | 0.197 |
| N-PENTANE | 0.59 | 0.213 |
| HEXANES | 0.52 | 0.213 |
| HEPTANES + | 1.02 | 0.494 |
| TOTAL | 100.00 | 6.316 |

| | |
|---|---|
| CALC. SP. GR. | 0.8075 |
| PROPANE CAL GPM | 1.633 |
| BUTANES CAL GPM | 0.797 |
| PENTANES + GPM | 1.117 |
| ETHANE CALC GPM | 2.769 |
| B.T.U./CU.FT. | |
| DRY BASIS | 1246 |
| WET BASIS | 1224 |
| 26 # PRODUCT | 1.759 |
| 12 # PRODUCT | 1.207 |

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RUN BY: BARNETT CHECKED BY: COOKE APPROVED BY: James L. Barnett

********* ADDITIONAL DATA AND REMARKS *********

Z = 0.996

COPIES TO:

********* BELL PETROLEUM LABORATORIES *********

P.O. BOX 2988 * 24 HOUR PHONE 915/563-2628
MIDLAND, TEXAS 79701

RUN NUMBER...37680

DATE SECURED: 5/04/87

A SAMPLE OF: SOUTHERN CALIFORNIA FED #1 @ CASINGHEAD VALVE
SECURED FROM: DAMSON OIL CORP
AT: SE/4 OFD NE/4 SEC.29 T19S R32E SECURED BY: BRENT LOWERY
SAMPLING CONDITIONS: PRESS: 185# TEMP: 65 F TIME: 1:10 PM DATE: 5/04/87

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********* FRACTIONAL ANALYSIS *********
@ 14.696 & 60 DEG. F.

| | MOL. % | GPM |
|---|---|---|
| CARBON DIOXIDE | 0.02 | |
| NITROGEN | 8.94 | |
| METHANE | 67.18 | |
| ETHANE | 13.13 | 3.503 |
| PROPANE | 7.52 | 2.067 |
| ISO-BUTANE | 0.75 | 0.245 |
| N-BUTANE | 1.44 | 0.453 |
| ISO-PENTANE | 0.33 | 0.120 |
| N-PENTANE | 0.26 | 0.094 |
| HEXANES | 0.17 | 0.070 |
| HEPTANES + | 0.26 | 0.126 |
| TOTAL | 100.00 | 6.678 |

| | |
|---|---|
| CALC. SP. GR. | 0.7859 |
| PROPANE CAL GPM | 2.067 |
| BUTANES CAL GPM | 0.698 |
| PENTANES + GPM | 0.410 |
| ETHANE CALC GPM | 3.503 |
| B.T.U./CU.FT. | |
| DRY BASIS | 1223 |
| WET BASIS | 1202 |
| 26 # PRODUCT | 0.619 |
| 12 # PRODUCT | 0.422 |

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RUN BY: BARNETT CHECKED BY: COOKE APPROVED BY: James L Barnett

********* ADDITIONAL DATA AND REMARKS *********

Z = 0.996

COPIES TO:

********** BELL PETROLEUM LABORATORIES **********

P.O. BOX 2988 * 24 HOUR PHONE 915/563-2628
MIDLAND, TEXAS 79701

RUN NUMBER...37681

DATE SECURED:5/04/87

A SAMPLE OF: STATE OF NEW MEXICO "CR" #1 @ CASINGHEAD VALVE
SECURED FROM: DAMSON OIL CORP
AT: NW/4 OF NW/4 SEC.32 T19S R32E SECURED BY: BRENT LOWERY
SAMPLING CONDITIONS: PRESS: 42# TEMP: 60 F TIME: 12:00 PM DATE: 5/04/87

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********** FRACTIONAL ANALYSIS **********
@ 14.696 & 60 DEG. F.

| | MOL. % | GPM |
|---|---|---|
| CARBON DIOXIDE | 0.00 | |
| NITROGEN | 12.95 | |
| METHANE | 66.98 | |
| ETHANE | 9.83 | 2.623 |
| PROPANE | 5.99 | 1.647 |
| ISO-BUTANE | 0.71 | 0.232 |
| N-BUTANE | 1.53 | 0.481 |
| ISO-PENTANE | 0.50 | 0.183 |
| N-PENTANE | 0.44 | 0.159 |
| HEXANES | 0.38 | 0.156 |
| HEPTANES + | 0.69 | 0.334 |
| TOTAL | 100.00 | 5.815 |

| | |
|---|---|
| CALC. SP. GR. | 0.7975 |
| PROPANE CAL GPM | 1.647 |
| BUTANES CAL GPM | 0.713 |
| PENTANES + GPM | 0.832 |
| ETHANE CALC GPM | 2.623 |
| B.T.U./CU.FT. | |
| DRY BASIS | 1175 |
| WET BASIS | 1154 |
| 26 # PRODUCT | 1.292 |
| 12 # PRODUCT | 0.885 |

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RUN BY: BARNETT CHECKED BY: COOKE APPROVED BY: James A Barnett

********** ADDITIONAL DATA AND REMARKS **********

Z = 0.997

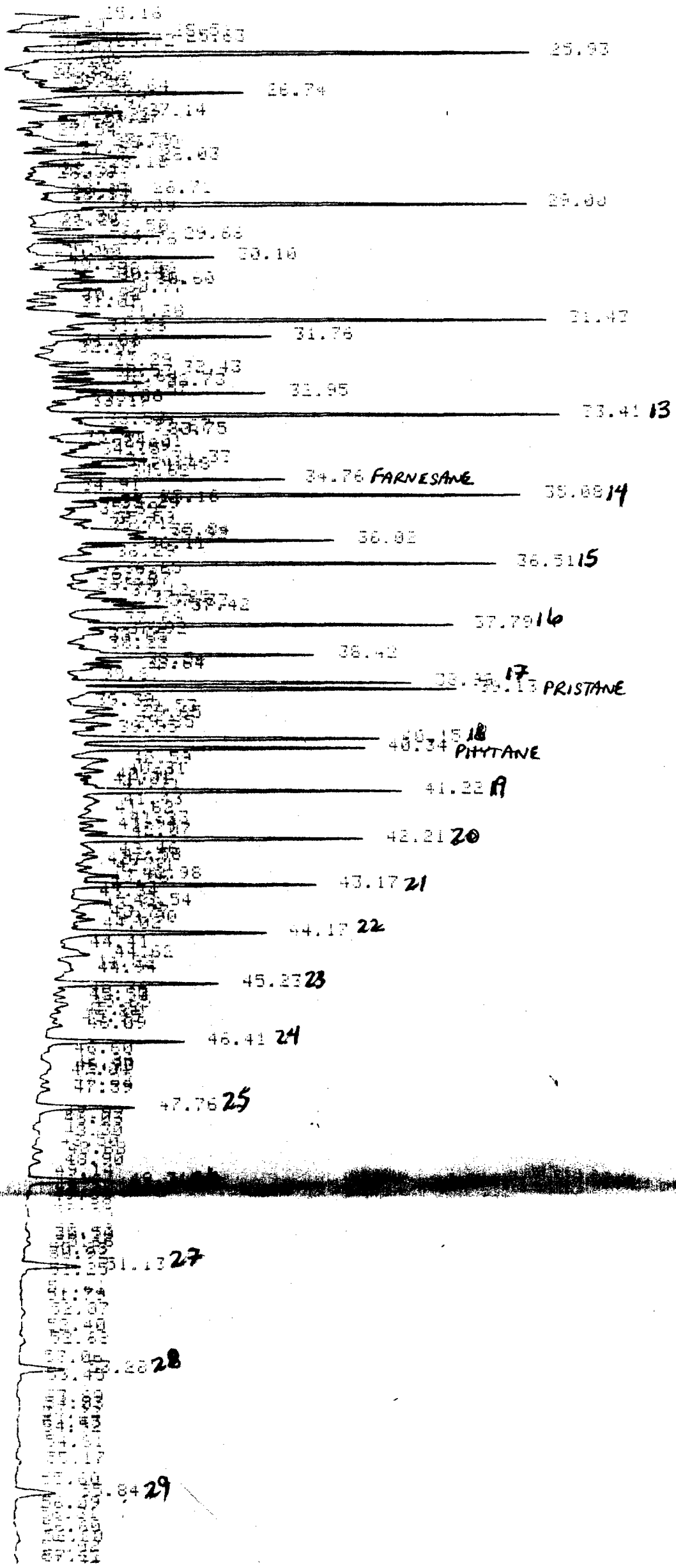
COPIES TO:

cont. State of N. M. "CR" #1

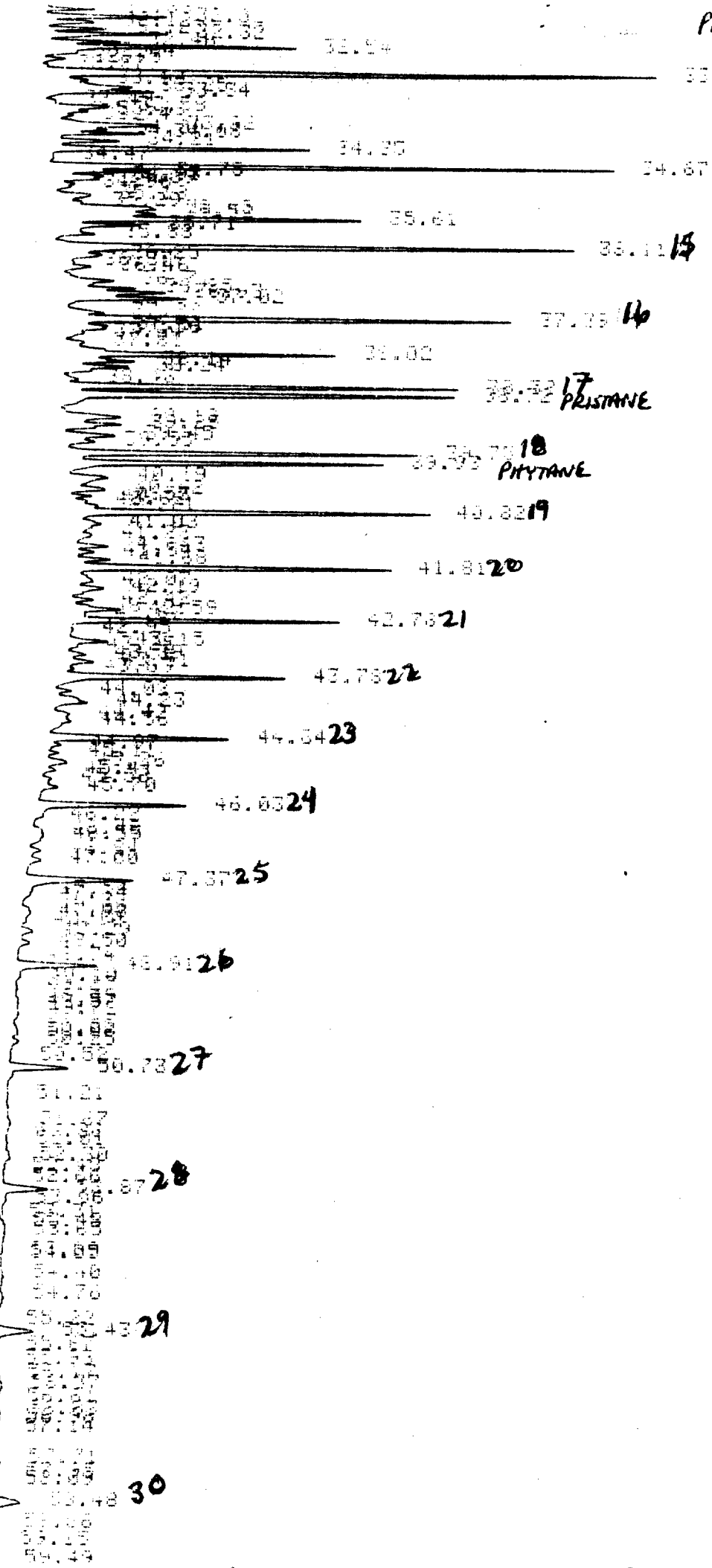
5-7-67

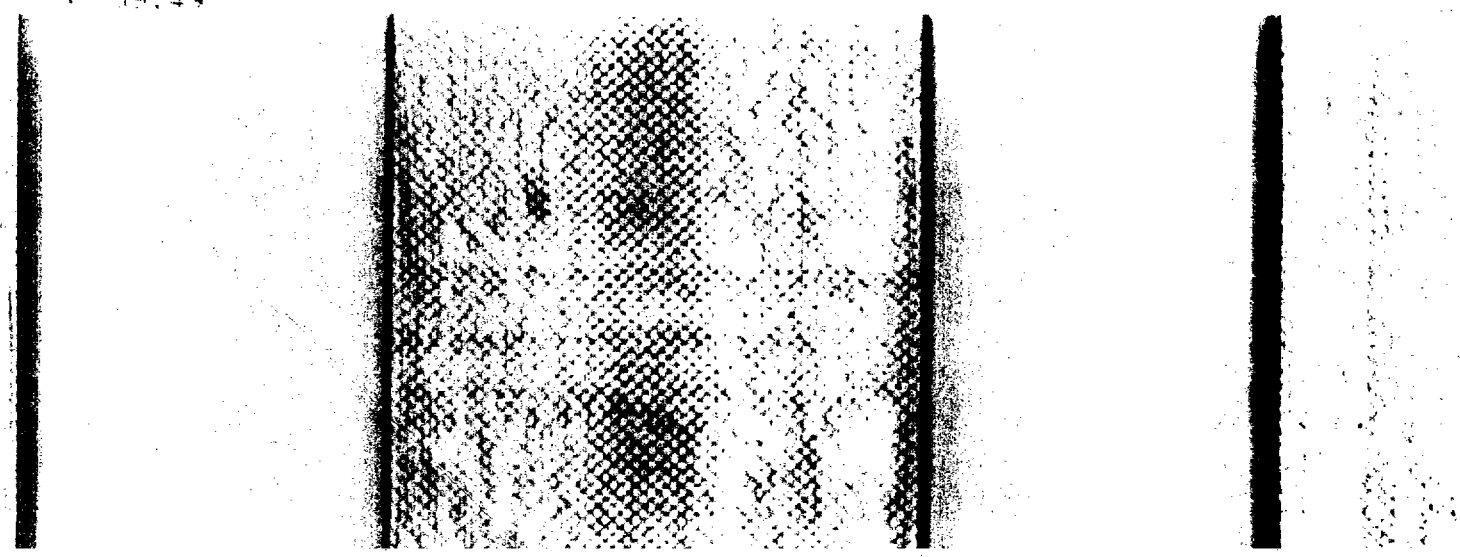






PLAINS UNIT FEDERAL #7



SOUTHERN CALIFORNIA
FEDERAL #1