

**Laboratory Services, Inc.**

1331 Tasker Drive
Hobbs, New Mexico 88240
Telephone: (505) 397-3713

SPOT SAMPLE

FOR: ARCO Permian
Attention: Mr. Albert Smith
P. O. Box 1089
Eunice, New Mexico 88231

SAMPLE Station #546
IDENTIFICATION: H. S. Record #1
COMPANY: ARCO Permian
LEASE:
PLANT:

SAMPLE DATA: DATE SAMPLED: 8/4/97
ANALYSIS DATE: 8/5/97
PRESSURE - PSIG 25.2
SAMPLE TEMP. °F 60
ATMOS. TEMP. °F

GAS (XX) LIQUID ()
SAMPLED BY: Albert Smith
ANALYSIS BY: Vickie Walker

REMARKS: H₂S = 0

COMPONENT ANALYSIS

COMPONENT		MOL PERCENT	GPM
Hydrogen Sulfide	(H ₂ S)	0.00	
Nitrogen	(N ₂)	1.85	
Carbon Dioxide	(CO ₂)	0.46	
Methane	(C ₁)	71.28	
Ethane	(C ₂)	13.07	3.486
Propane	(C ₃)	7.56	2.079
I-Butane	(IC ₄)	1.07	0.351
N-Butane	(NC ₄)	2.51	0.788
I-Pentane	(IC ₅)	0.74	0.269
N-Pentane	(NC ₅)	0.71	0.257
Hexane Plus	(C ₆ +)	0.75	0.306
		100.00	7.536

BTU/CU.FT. - DRY 1352
AT 14.650 DRY 1347
AT 14.650 WET 1324
AT 14.73 DRY 1355
AT 14.73 WET 1331

MOLECULAR WT. 23.1867

SPECIFIC GRAVITY -
CALCULATED 0.801
MEASURED

ARCO PERMIAN



METER ID: 0679-0M0276-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 09/01/99
 RUN-NBR: 03002 TITLE: IDA WIMBERLY #20 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 95.0
 FLOW PRES: 20.00
 Z FACTOR: 0.99497 PCTS: 0.111 0.000 0.928 0.000 0.568 72.886 8.701 7.316 1.254 3.662 1.192 1.230 2.152 100.000
 SPECIFIC GRAV: 0.855 GPM: 0.015
 TEST CAR EQ. GPM: 1.832
 BTU @14.65 PSIA - SAT: 1419.5 DEL COND: 1407.9 H2S GRAINS: 000069.819

METER ID: 0680-015196-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 09/01/99
 RUN-NBR: 03009 TITLE: STATE F-DE PLANTS & SYSTEMS LAB
 H2S HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 87.0
 FLOW PRES: 10.00
 Z FACTOR: 0.99575 PCTS: 1.798 0.000 0.710 0.000 6.925 70.281 8.424 6.139 1.011 2.230 0.736 0.591 1.155 100.000
 SPECIFIC GRAV: 0.841 GPM: 0.241
 TEST CAR EQ. GPM: 1.100
 BTU @14.65 PSIA - SAT: 1222.6 DEL COND: 1209.1 H2S GRAINS: 001130.942

METER ID: 0680-015196-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 09/01/99
 RUN-NBR: 03002 TITLE: STATE 157 A #1 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 60.0
 FLOW PRES: 19.00
 Z FACTOR: 0.99593 PCTS: 0.033 0.000 1.418 0.000 1.927 74.402 10.573 6.283 0.915 2.198 0.645 0.625 0.981 100.000
 SPECIFIC GRAV: 0.789 GPM: 0.004
 TEST CAR EQ. GPM: 0.910
 BTU @14.65 PSIA - SAT: 1278.2 DEL COND: 1289.6 H2S GRAINS: 000021.169

METER ID: 0680-015196-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 09/01/99
 RUN-NBR: 03031 TITLE: H.S. RECORD #2 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 92.0
 FLOW PRES: 17.00
 Z FACTOR: 0.99486 PCTS: 0.007 0.000 1.812 0.000 0.356 65.754 15.008 9.555 1.347 3.217 0.889 0.623 1.232 100.000
 SPECIFIC GRAV: 0.866 GPM: 0.001
 TEST CAR EQ. GPM: 1.365
 BTU @14.65 PSIA - SAT: 1428.3 DEL COND: 1416.5 H2S GRAINS: 000004.930

THE EFFECTIVE DATE SHOWN ON EACH SAMPLE DETERMINES WHEN THE ANALYSIS WILL BE USED FOR SETTLEMENT.



ARCO PERMIAN

METER ID: 0680-015516-00
RUN-NBR: 03032
PRODUCER: ARCO PERMIAN
TITLE: H.S. RECORD #3
EFFECTIVE: 09/01/99
PLANTS & SYSTEMS LAB

H2S	HE	N2	O2	CO2	C1	C2	C3	IC4	NC4	IC5	NC5	C6+	TOTAL
0.002	0.000	8.531	0.000	0.196	60.083	13.508	9.679	1.465	3.469	0.942	0.908	1.217	100.000
0.000						3.593	2.653	0.477	1.088	0.343	0.327	0.521	9.002
TEST CAR EQ. GPM: 1.549													
BTU @14.65 PSIA - SAT: 1365.1 DEL COND: 1334.4													
H2S GRAINS: 000001.408													

METER ID: 0680-015516-00
RUN-NBR: 01005
PRODUCER: ARCO PERMIAN
TITLE: STATE 157 A #3
EFFECTIVE: 09/01/99
PLANTS & SYSTEMS LAB

H2S	HE	N2	O2	CO2	C1	C2	C3	IC4	NC4	IC5	NC5	C6+	TOTAL
0.012	0.000	2.536	0.000	0.595	67.940	12.656	8.329	1.254	3.038	0.925	0.927	1.788	100.000
0.002						3.367	2.283	0.408	0.953	0.337	0.334	0.766	8.450
TEST CAR EQ. GPM: 1.533													
BTU @14.65 PSIA - SAT: 1403.0 DEL COND: 1370.9													
H2S GRAINS: 000007.762													

METER ID: 0680-015623-00
RUN-NBR: 03030
PRODUCER: ARCO PERMIAN
TITLE: STATE "Y" #11
EFFECTIVE: 09/01/99
PLANTS & SYSTEMS LAB

H2S	HE	N2	O2	CO2	C1	C2	C3	IC4	NC4	IC5	NC5	C6+	TOTAL
0.022	0.000	5.953	0.000	0.668	68.435	8.463	7.212	1.231	3.394	1.141	1.125	2.356	100.000
0.003						2.251	1.976	0.401	1.064	0.415	0.405	1.009	7.524
TEST CAR EQ. GPM: 1.731													
BTU @14.65 PSIA - SAT: 1362.4 DEL COND: 1349.0													
H2S GRAINS: 000014.012													

METER ID: 0680-015625-00
RUN-NBR: 06004
PRODUCER: ARCO PERMIAN
TITLE: EUNDURA STATE "DE" #4
EFFECTIVE: 09/01/99
PLANTS & SYSTEMS LAB

H2S	HE	N2	O2	CO2	C1	C2	C3	IC4	NC4	IC5	NC5	C6+	TOTAL
0.562	0.001	1.731	0.000	2.378	71.888	10.585	6.450	1.014	2.407	0.795	0.758	1.431	100.000
0.075						2.816	1.768	0.330	0.755	0.289	0.273	0.613	6.919
TEST CAR EQ. GPM: 1.307													
BTU @14.65 PSIA - SAT: 1304.8 DEL COND: 1279.9													
H2S GRAINS: 000353.498													

THE EFFECTIVE DATE SHOWN ON EACH SAMPLE DETERMINES WHEN THE ANALYSIS WILL BE USED FOR SETTLEMENT.

GPM GAS CORPORATION
CERTIFICATE OF ANALYSIS

SEPTEMBER 13, 1999



ARCO PERMIAN

METER ID: 0680-015626-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 09/01/99
 RUN-NBR: 06005 TITLE: STATE F "DE" #2 PLANTS & SYSTEMS LAB
 H2S 99.0 HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 10.00
 FLOW PRES: 0.99574 PCTS: 1.236 0.000 1.474 0.000 5.331 70.027 10.118 6.155 0.934 2.169 0.688 0.633 1.235 100.000
 Z FACTOR: 0.834 GPM: 0.166
 SPECIFIC GRAV: 1.165
 TEST CAR EQ. GPM: 1.165
 BTU @14.65 PSIA - SAT: 1245.8 DEL COND: 1216.3 H2S GRAINS: 000777.444

METER ID: 0680-015627-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 09/01/99
 RUN-NBR: 03033 TITLE: H.S. RECORD "W" #4 PLANTS & SYSTEMS LAB
 H2S 104.0 HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 19.00
 FLOW PRES: 0.99566 PCTS: 0.022 0.000 1.481 0.000 1.564 71.339 12.586 7.461 1.030 2.415 0.652 0.619 0.831 100.000
 Z FACTOR: 0.808 GPM: 0.003
 SPECIFIC GRAV: 1.164
 TEST CAR EQ. GPM: 1.164
 BTU @14.65 PSIA - SAT: 1315.5 DEL COND: 1293.0 H2S GRAINS: 000014.088

METER ID: 0680-015652-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 09/01/99
 RUN-NBR: 06001 TITLE: BROWNLEE, J. M. #1 PLANTS & SYSTEMS LAB
 H2S 66.0 HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 08.00
 FLOW PRES: 0.99732 PCTS: 0.000 0.001 10.132 0.000 0.029 77.681 6.944 2.895 0.386 0.885 0.255 0.248 0.544 100.000
 Z FACTOR: 0.701 GPM: 0.000
 SPECIFIC GRAV: 0.493
 TEST CAR EQ. GPM: 0.493
 BTU @14.65 PSIA - SAT: 1051.1 DEL COND: 1052.8 H2S GRAINS: 000000.000

METER ID: 0680-015653-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 09/01/99
 RUN-NBR: 06002 TITLE: BROWNLEE, J.M. #4 PLANTS & SYSTEMS LAB
 H2S 978.0 HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 08.00
 FLOW PRES: 0.99689 PCTS: 0.000 0.001 5.366 0.000 0.068 79.758 7.842 3.603 0.509 1.240 0.397 0.402 0.814 100.000
 Z FACTOR: 0.713 GPM: 5.927
 SPECIFIC GRAV: 5.927
 TEST CAR EQ. GPM: 5.927
 BTU @14.65 PSIA - SAT: 1145.7 DEL COND: 2280.2 H2S GRAINS: 000000.000

THE EFFECTIVE DATE SHOWN ON EACH SAMPLE DETERMINES WHEN THE ANALYSIS WILL BE USED FOR SETTLEMENT.

GPM GAS CORPORATION
CERTIFICATE OF ANALYSIS

JUNE 10, 1999



ARCO PERMIAN

METER ID: 0680-015517-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 06/01/99
 RUN-NBR: 03014 TITLE: STATE "176" #7 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 68.0
 FLOW PRES: 27.00
 Z FACTOR: 0.99550 PCTS: 0.687 0.000 1.645 0.000 2.296 70.400 11.169 7.389 1.120 2.607 0.760 0.715 1.212 100.000
 SPECIFIC GRAV: 0.830 GPM: 0.092 2.971 2.025 0.364 0.817 0.277 0.258 0.519 7.323
 TEST CAR EQ. GPM: 1.080
 BTU @14.65 PSIA - SAT: 1320.1 DEL COND: 1331.2 H2S GRAINS: 000432.123

METER ID: 0680-015552-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 06/01/99
 RUN-NBR: 03013 TITLE: STATE "176" #7 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 77.0
 FLOW PRES: 29.00
 Z FACTOR: 0.99537 PCTS: 0.011 0.000 1.746 0.000 0.567 70.522 12.698 7.741 1.121 2.698 0.791 0.783 1.322 100.000
 SPECIFIC GRAV: 0.827 GPM: 0.001 3.378 2.121 0.365 0.846 0.288 0.282 0.566 7.847
 TEST CAR EQ. GPM: 1.193
 BTU @14.65 PSIA - SAT: 1365.0 DEL COND: 1373.0 H2S GRAINS: 000007.207

METER ID: 0680-015544-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 06/01/99
 RUN-NBR: 05011 TITLE: STATE "p" #3 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 64.0
 FLOW PRES: 26.00
 Z FACTOR: 0.99596 PCTS: 1.701 0.000 1.621 0.000 4.371 73.229 7.817 5.606 1.015 2.164 0.716 0.605 1.155 100.000
 SPECIFIC GRAV: 0.810 GPM: 0.228 2.079 1.536 0.330 0.679 0.261 0.218 0.495 5.826
 TEST CAR EQ. GPM: 0.964
 BTU @14.65 PSIA - SAT: 1225.1 DEL COND: 1236.4 H2S GRAINS: 001069.929

METER ID: 0680-015561-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 06/01/99
 RUN-NBR: 03011 TITLE: E.C. ATKINS #12 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 85.0
 FLOW PRES: 28.00
 Z FACTOR: 0.99649 PCTS: 0.453 0.000 4.218 0.000 3.850 74.537 7.775 4.928 0.779 1.761 0.508 0.466 0.725 100.000
 SPECIFIC GRAV: 0.773 GPM: 0.061 2.068 1.351 0.253 0.552 0.185 0.168 0.311 4.949
 TEST CAR EQ. GPM: 0.877
 BTU @14.65 PSIA - SAT: 1156.6 DEL COND: 1159.0 H2S GRAINS: 000284.937

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GPM GAS CORPORATION
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SEPTEMBER 13, 1999



ARCO PERMIAN

METER ID: ~~0680-015674-00~~
RUN-NBR: 01003
PRODUCER: ARCO PERMIAN
TITLE: ST. 157 A #4
H2S HE N2 O2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
FLOW TEMP: 102.0
FLOW PRES: 15.00
Z FACTOR: 0.99424 PCTS: 0.004 0.000 1.057 0.000 1.241 62.705 15.357 10.518 1.526 3.693 1.116 1.092 1.691 100.000
SPECIFIC GRAV: 0.914 GPM: 0.001
TEST CAR EQ. GPM: 1.735
BTU @14.65 PSIA - SAT: 1492.3 DEL COND: 1462.9
H2S GRAINS: 000002.822

METER ID: ~~0680-015672-00~~
RUN-NBR: 03034
PRODUCER: ARCO PERMIAN
TITLE: H.S. RECORD MN #6
H2S HE N2 O2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
FLOW TEMP: 103.0
FLOW PRES: 18.00
Z FACTOR: 0.99533 PCTS: 0.001 0.000 2.016 0.000 0.508 71.202 11.537 7.318 1.147 2.847 0.909 0.919 1.596 100.000
SPECIFIC GRAV: 0.832 GPM: 0.000
TEST CAR EQ. GPM: 1.500
BTU @14.65 PSIA - SAT: 1370.3 DEL COND: 1346.8
H2S GRAINS: 000001.056

METER ID: 0680-015673-00
RUN-NBR: 03010
PRODUCER: ARCO PERMIAN
TITLE: STATE 157D #9
H2S HE N2 O2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
FLOW TEMP: 82.0
FLOW PRES: 16.00
Z FACTOR: 0.99701 PCTS: 0.000 0.000 8.642 0.000 0.163 76.274 8.122 3.731 0.504 1.217 0.362 0.368 0.617 100.000
SPECIFIC GRAV: 0.723 GPM: 0.000
TEST CAR EQ. GPM: 0.717
BTU @14.65 PSIA - SAT: 1105.6 DEL COND: 1103.3
H2S GRAINS: 000000.000

METER ID: 0680-015674-00
RUN-NBR: 03011
PRODUCER: ARCO PERMIAN
TITLE: STATE 157 D #15
H2S HE N2 O2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
FLOW TEMP: 89.0
FLOW PRES: 16.00
Z FACTOR: 0.99688 PCTS: 0.000 0.000 5.553 0.000 0.015 79.042 8.198 3.911 0.543 1.333 0.399 0.395 0.611 100.000
SPECIFIC GRAV: 0.715 GPM: 0.000
TEST CAR EQ. GPM: 0.795
BTU @14.65 PSIA - SAT: 1146.2 DEL COND: 1138.4
H2S GRAINS: 000000.000

THE EFFECTIVE DATE SHOWN ON EACH SAMPLE DETERMINES WHEN THE ANALYSIS WILL BE USED FOR SETTLEMENT.

ARCO PERMIAN



METER ID: 0680-015659-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 03/01/99
 RUN-NBR: 03012 TITLE: PHILLIPS, J.R.A. #6 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 CO2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 74.0
 FLOW PRES: 11.00
 Z FACTOR: 0.99650 PCTS: 0.678 0.000 1.565 0.000 4.372 78.036 6.362 4.757 0.835 1.705 0.602 0.394 0.694 100.000
 SPECIFIC GRAV: 0.760 GPM: 0.091 1.692 1.304 0.272 0.535 0.219 0.142 0.297 4.552
 TEST CAR EQ. GPM: 0.827
 BTU @14.65 PSIA - SAT: 1163.2 DEL COND: 1162.4 H2S GRAINS: 000426.462

METER ID: 0680-015668-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 03/01/99
 RUN-NBR: 03019 TITLE: ~~PHILLIPS, J.R.A. #6~~ PLANTS & SYSTEMS LAB
 H2S HE N2 O2 CO2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 65.0
 FLOW PRES: 26.00
 Z FACTOR: 0.99510 PCTS: 0.001 0.000 2.263 0.000 0.257 68.371 13.009 8.518 1.276 3.117 0.908 0.874 1.406 100.000
 SPECIFIC GRAV: 0.850 GPM: 0.000 3.460 2.334 0.415 0.977 0.331 0.315 0.602 8.434
 TEST CAR EQ. GPM: 1.252
 BTU @14.65 PSIA - SAT: 1399.4 DEL COND: 1412.1 H2S GRAINS: 000000.710

METER ID: 0680-015670-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 03/01/99
 RUN-NBR: 01018 TITLE: ST. 157 A #4 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 CO2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 61.0
 FLOW PRES: 25.00
 Z FACTOR: 0.99405 PCTS: 0.009 0.000 1.399 0.000 1.163 61.511 15.559 10.666 1.566 3.833 1.176 1.162 1.956 100.000
 SPECIFIC GRAV: 0.929 GPM: 0.001 4.139 2.923 0.510 1.202 0.428 0.419 0.838 10.460
 TEST CAR EQ. GPM: 1.582
 BTU @14.65 PSIA - SAT: 1512.0 DEL COND: 1527.2 H2S GRAINS: 000005.685

METER ID: 0680-015672-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 03/01/99
 RUN-NBR: 03017 TITLE: H.S. RECORD WN #6 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 CO2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 59.0
 FLOW PRES: 26.00
 Z FACTOR: 0.99507 PCTS: 0.001 0.000 1.920 0.000 0.656 70.368 11.315 7.361 1.188 3.012 1.036 1.058 2.085 100.000
 SPECIFIC GRAV: 0.854 GPM: 0.000 3.010 2.017 0.387 0.944 0.377 0.381 0.893 8.009
 TEST CAR EQ. GPM: 1.414
 BTU @14.65 PSIA - SAT: 1401.1 DEL COND: 1415.9 H2S GRAINS: 000000.710

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GPM GAS CORPORATION
CERTIFICATE OF ANALYSIS

MARCH 10, 1999



ARCO PERMIAN

METER ID: 0680-015345-00
RUN-NBR: 01020
PRODUCER: ARCO PERMIAN
TITLE: D.D. HARRINGTON - MN
H2S 38.0
FLOW TEMP: 26.00
FLOW PRES: 0.99572
Z FACTOR: 0.809
SPECIFIC GRAV: 0.809
TEST CAR EQ. GPM: 0.809
BTU @14.65 PSIA - SAT: 1296.5
DEL COND: 1314.8
H2S GRAINS: 000070.448
SECURED: 02/16/99
ANALYZED: 02/23/99
EFFECTIVE: 03/01/99
PLANTS & SYSTEMS LAB

METER ID: 0680-015513-00
RUN-NBR: 01022
PRODUCER: ARCO PERMIAN
TITLE: D.D. HARRINGTON #5
H2S 53.0
FLOW TEMP: 27.00
FLOW PRES: 0.99505
Z FACTOR: 0.860
SPECIFIC GRAV: 1.293
TEST CAR EQ. GPM: 1.293
BTU @14.65 PSIA - SAT: 1395.3
DEL COND: 1412.1
H2S GRAINS: 000003.175
SECURED: 02/16/99
ANALYZED: 02/23/99
EFFECTIVE: 03/01/99
PLANTS & SYSTEMS LAB

METER ID: 0680-015514-00
RUN-NBR: 01008
PRODUCER: ARCO PERMIAN
TITLE: STATE 157 A #1
H2S 83.0
FLOW TEMP: 25.00
FLOW PRES: 0.99559
Z FACTOR: 0.821
SPECIFIC GRAV: 1.231
TEST CAR EQ. GPM: 1.231
BTU @14.65 PSIA - SAT: 1317.7
DEL COND: 1320.3
H2S GRAINS: 000031.981
SECURED: 02/26/99
ANALYZED: 03/03/99
EFFECTIVE: 03/01/99
PLANTS & SYSTEMS LAB

METER ID: 0680-015515-00
RUN-NBR: 01004
PRODUCER: ARCO PERMIAN
TITLE: H.S. RECORD #2
H2S 60.0
FLOW TEMP: 40.00
FLOW PRES: 0.99449
Z FACTOR: 0.894
SPECIFIC GRAV: 1.318
TEST CAR EQ. GPM: 1.318
BTU @14.65 PSIA - SAT: 1469.6
DEL COND: 1487.5
H2S GRAINS: 000004.619
SECURED: 02/26/99
ANALYZED: 03/03/99
EFFECTIVE: 03/01/99
PLANTS & SYSTEMS LAB

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GPM GAS CORPORATION
CERTIFICATE OF ANALYSIS

MARCH 10, 1999



ARCO PERMIAN

METER ID: 0680-096276-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 03/01/99
 RUN-NBR: 03043 TITLE: TOBY #7 PLANTS & SYSTEMS LAB
 FLOW TEMP: 54.0 H2S HE N2 O2 CO2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW PRES: 28.00 0.111 0.000 1.853 0.000 0.845 71.296 11.258 7.420 1.173 2.817 0.929 0.868 1.430 100.000
 Z FACTOR: 0.99538 PCTS: 0.015 GPM: 0.000 2.995 2.033 0.382 0.883 0.338 0.313 0.612 7.571
 SPECIFIC GRAV: 0.830
 TEST CAR EQ. GPM: 1.198
 BTU @14.65 PSIA - SAT: 1359.9 DEL COND: 1376.1 H2S GRAINS: 000069.819

METER ID: 0680-096292-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 03/01/99
 RUN-NBR: 01016 TITLE: ~~IDA WIMBERLY GAS COM #1~~ PLANTS & SYSTEMS LAB
 FLOW TEMP: 64.0 H2S HE N2 O2 CO2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW PRES: 27.00 0.000 0.000 1.717 0.000 0.569 66.128 13.096 9.156 1.438 3.570 1.099 1.095 2.132 100.000
 Z FACTOR: 0.99452 PCTS: 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000
 SPECIFIC GRAV: 0.894
 TEST CAR EQ. GPM: 1.506
 BTU @14.65 PSIA - SAT: 1467.4 DEL COND: 1481.4 H2S GRAINS: 000000.000

METER ID: 0680-096293-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 03/01/99
 RUN-NBR: 01005 TITLE: IDA WIMBERLY GAS COM #1 PLANTS & SYSTEMS LAB
 FLOW TEMP: 73.0 H2S HE N2 O2 CO2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW PRES: 35.00 0.443 0.000 2.079 0.000 1.142 84.480 6.987 2.830 0.262 0.884 0.174 0.270 0.449 100.000
 Z FACTOR: 0.99713 PCTS: 0.059 GPM: 0.000 1.859 0.776 0.085 0.277 0.063 0.097 0.192 3.408
 SPECIFIC GRAV: 0.676
 TEST CAR EQ. GPM: 0.500
 BTU @14.65 PSIA - SAT: 1109.7 DEL COND: 1118.9 H2S GRAINS: 000278.647

METER ID: 0680-705157-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 03/01/99
 RUN-NBR: 03042 TITLE: SINCLAIR B STATE #4 PLANTS & SYSTEMS LAB
 FLOW TEMP: 71.0 H2S HE N2 O2 CO2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW PRES: 29.00 0.222 0.000 1.063 0.000 1.969 68.882 12.551 8.363 1.263 2.960 0.846 0.777 1.104 100.000
 Z FACTOR: 0.99522 PCTS: 0.030 GPM: 0.000 3.339 2.292 0.411 0.928 0.308 0.280 0.473 8.061
 SPECIFIC GRAV: 0.845
 TEST CAR EQ. GPM: 1.188
 BTU @14.65 PSIA - SAT: 1367.1 DEL COND: 1377.9 H2S GRAINS: 000139.638

THE EFFECTIVE DATE SHOWN ON EACH SAMPLE DETERMINES WHEN THE ANALYSIS WILL BE USED FOR SETTLEMENT.

GPM GAS CORPORATION
CERTIFICATE OF ANALYSIS

SEPTEMBER 13, 1999



ARCO PERMIAN

METER ID: 0680-705157-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 09/01/99
 RUN-NBR: 05003 TITLE: SINCLAIR B STATE #4 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 CO2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 89.0
 FLOW PRES: 13.00
 Z FACTOR: 0.99521 PCTS: 0.067 0.000 1.040 0.000 1.889 69.182 12.438 8.350 1.268 2.943 0.841 0.780 1.202 100.000
 SPECIFIC GRAV: 0.845 GPM: 0.009 3.309 2.288 0.413 0.923 0.306 0.281 0.515 8.044
 TEST CAR EQ. GPM: 1.291
 BTU @14.65 PSIA - SAT: 1371.2 DEL COND: 1358.2 H2S GRAINS: 000042.150

METER ID: 0680-705158-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 09/01/99
 RUN-NBR: 01015 TITLE: RODMAN-CLAY JONES #1 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 CO2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 93.0
 FLOW PRES: 12.00
 Z FACTOR: 0.99533 PCTS: 0.005 0.000 1.514 0.000 0.868 70.134 12.473 8.256 1.213 2.869 0.792 0.748 1.128 100.000
 SPECIFIC GRAV: 0.831 GPM: 0.001 3.318 2.263 0.395 0.900 0.288 0.269 0.483 7.917
 TEST CAR EQ. GPM: 1.264
 BTU @14.65 PSIA - SAT: 1367.4 DEL COND: 1348.0 H2S GRAINS: 000003.512

METER ID: 0680-705159-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 09/01/99
 RUN-NBR: 01004 TITLE: D.D. HARRINGTON #4 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 CO2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 103.0
 FLOW PRES: 14.00
 Z FACTOR: 0.99441 PCTS: 0.007 0.000 1.072 0.000 1.116 64.023 14.732 10.181 1.519 3.686 1.060 1.038 1.566 100.000
 SPECIFIC GRAV: 0.901 GPM: 0.001 3.919 2.790 0.494 1.156 0.386 0.374 0.671 9.791
 TEST CAR EQ. GPM: 1.670
 BTU @14.65 PSIA - SAT: 1474.9 DEL COND: 1442.2 H2S GRAINS: 000004.939

METER ID: 0680-705170-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 09/01/99
 RUN-NBR: 06011 TITLE: MEDANO ST COM BATTERY PLANTS & SYSTEMS LAB
 H2S HE N2 O2 CO2 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 89.0
 FLOW PRES: 16.00
 Z FACTOR: 0.99417 PCTS: 0.000 0.000 7.046 0.000 0.149 59.180 12.589 10.145 1.510 3.992 1.302 1.237 2.850 100.000
 SPECIFIC GRAV: 0.952 GPM: 0.000 3.349 2.780 0.491 1.252 0.474 0.446 1.221 10.013
 TEST CAR EQ. GPM: 1.873
 BTU @14.65 PSIA - SAT: 1479.8 DEL COND: 1469.8 H2S GRAINS: 000000.000

THE EFFECTIVE DATE SHOWN ON EACH SAMPLE DETERMINES WHEN THE ANALYSIS WILL BE USED FOR SETTLEMENT.



ARCO PERMIAN

METER ID: 0680-015345-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 03/01/99
 RUN-NBR: 01020 TITLE: D.D.HARRINGTON - MN PLANTS & SYSTEMS LAB
 H2S HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 38.0
 FLOW PRES: 26.00
 Z FACTOR: 0.99572 PCTS: 0.112 0.000 1.035 0.000 2.630 71.979 11.513 7.180 1.019 2.421 0.680 0.633 0.798 100.000
 SPECIFIC GRAV: 0.809 GPM: 0.015
 TEST CAR EQ. GPM: 0.809
 BTU @14.65 PSIA - SAT: 1296.5 DEL COND: 1314.8
 H2S GRAINS: 000070.448

METER ID: 0680-015513-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 03/01/99
 RUN-NBR: 01022 TITLE: D.D.HARRINGTON - MN PLANTS & SYSTEMS LAB
 H2S HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 53.0
 FLOW PRES: 27.00
 Z FACTOR: 0.99505 PCTS: 0.005 0.000 2.352 0.000 0.972 68.303 12.269 8.048 1.257 3.166 0.981 0.976 1.671 100.000
 SPECIFIC GRAV: 0.860 GPM: 0.001
 TEST CAR EQ. GPM: 1.293
 BTU @14.65 PSIA - SAT: 1395.3 DEL COND: 1412.1
 H2S GRAINS: 000003.175

METER ID: 0680-015514-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 03/01/99
 RUN-NBR: 01008 TITLE: STATE 157 A #1 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 83.0
 FLOW PRES: 25.00
 Z FACTOR: 0.99559 PCTS: 0.050 0.000 1.671 0.000 2.130 72.418 10.439 6.682 1.030 2.521 0.796 0.784 1.479 100.000
 SPECIFIC GRAV: 0.821 GPM: 0.007
 TEST CAR EQ. GPM: 1.231
 BTU @14.65 PSIA - SAT: 1317.7 DEL COND: 1320.3
 H2S GRAINS: 000031.981

METER ID: 0680-015515-00 PRODUCER: ARCO PERMIAN EFFECTIVE: 03/01/99
 RUN-NBR: 01004 TITLE: H.S. RECORD #2 PLANTS & SYSTEMS LAB
 H2S HE N2 O2 C02 C1 C2 C3 IC4 NC4 IC5 NC5 C6+ TOTAL
 FLOW TEMP: 60.0
 FLOW PRES: 40.00
 Z FACTOR: 0.99449 PCTS: 0.007 0.000 1.860 0.000 0.388 63.523 15.417 10.353 1.487 3.565 0.988 0.945 1.467 100.000
 SPECIFIC GRAV: 0.894 GPM: 0.001
 TEST CAR EQ. GPM: 1.318
 BTU @14.65 PSIA - SAT: 1469.6 DEL COND: 1487.5
 H2S GRAINS: 000004.619

THE EFFECTIVE DATE SHOWN ON EACH SAMPLE DETERMINES WHEN THE ANALYSIS WILL BE USED FOR SETTLEMENT.

Top
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Thur Feb 3,
2000
2:11:30 PM

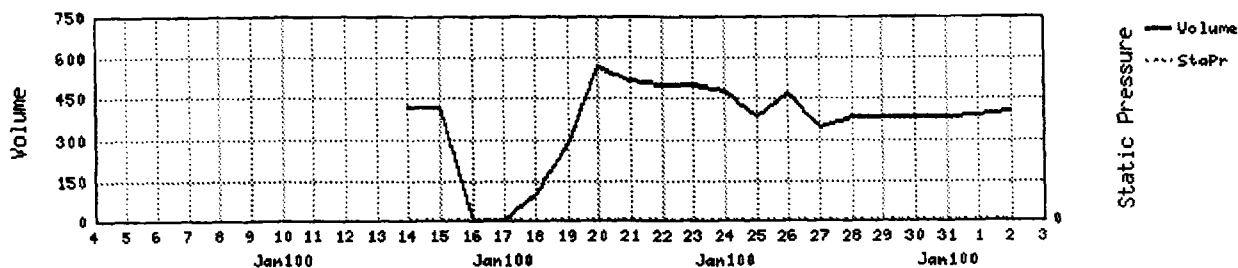
Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL RECORD H S BATTERY - 15366 - GPM - ORIFICE



Avg. Production Before Compression → 165 mcf/d

Date	StaPr	Temp	Volume	SLPres
02/02/2000	0.0	60	400	30
02/01/2000	0.0	60	389	27
01/31/2000	0.0	60	380	27
01/30/2000	0.0	60	380	27
01/29/2000	0.0	60	378	27
01/28/2000	0.0	60	378	27
01/27/2000	0.0	60	342	0
01/26/2000	0.0	60	470	0
01/25/2000	0.0	60	381	0
01/24/2000	0.0	60	477	0
01/23/2000	0.0	60	500	0
01/22/2000	0.0	60	500	0
01/21/2000	0.0	60	515	0
01/20/2000	0.0	60	562	0
01/19/2000	0.0	60	282	0
01/18/2000	0.0	60	99	0
01/17/2000	0.0	60	0	0
01/16/2000	0.0	60	0	0
01/15/2000	0.0	60	418	0
01/14/2000	0.0	60	418	0
Average:	0.0	60	363	8

↑ Compressor Up + Running



execution time = 0 seconds

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Top

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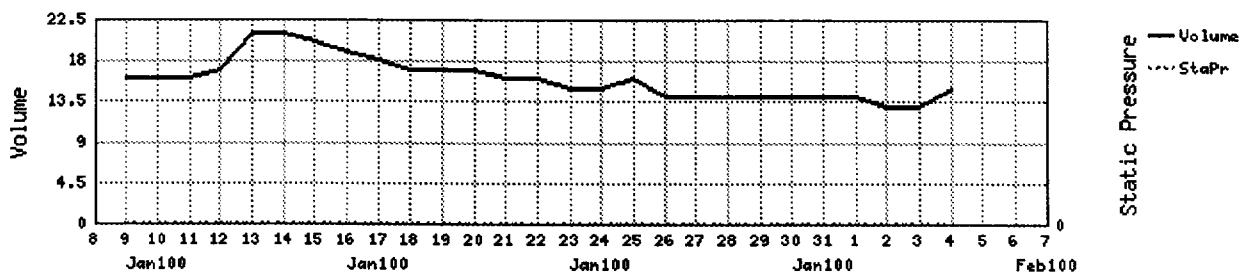
Mon Feb 7,
2000

4:21:30 PM

Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL RECORD H S WN #1 - - 16100546 - WARREN - ORIFICE



Date	StaPr	Temp	Volume	SLPres
02/04/2000	0.0	60	15	0
02/03/2000	0.0	60	13	0
02/02/2000	0.0	60	13	0
02/01/2000	0.0	60	14	0
01/31/2000	0.0	60	14	0
01/30/2000	0.0	60	14	0
01/29/2000	0.0	60	14	0
01/28/2000	0.0	60	14	0
01/27/2000	0.0	60	14	0
01/26/2000	0.0	60	14	0
01/25/2000	0.0	60	16	0
01/24/2000	0.0	60	15	0
01/23/2000	0.0	60	15	0
01/22/2000	0.0	60	16	0
01/21/2000	0.0	60	16	0
01/20/2000	0.0	60	17	0
01/19/2000	0.0	60	17	0
01/18/2000	0.0	60	17	0
01/17/2000	0.0	60	18	0
01/16/2000	0.0	60	19	0
01/15/2000	0.0	60	20	0
01/14/2000	0.0	60	21	0
01/13/2000	0.0	60	21	0
01/12/2000	0.0	60	17	0
01/11/2000	0.0	60	16	0
01/10/2000	0.0	60	16	0
01/09/2000	0.0	60	16	0
Average:	0.0	60	16	0



execution time = 1 seconds

Top

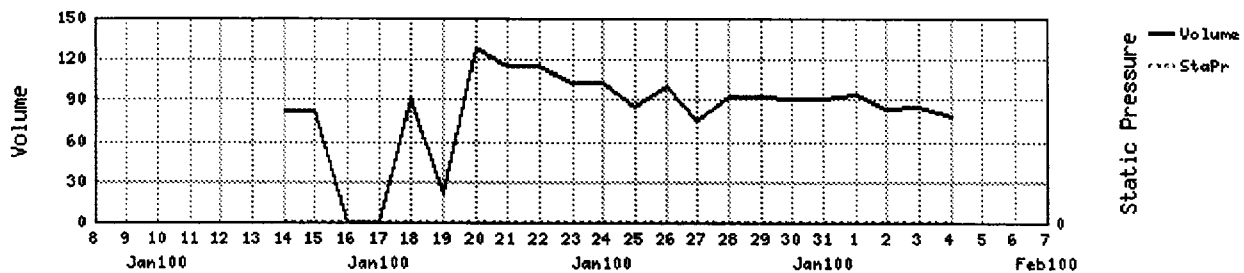
ARCO Permian

Mon Feb 7,
2000
3:59:20 PM

Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL RECORD H S #2 - 00642364 - ALLOCATION - ORIFICE



Date	StaPr	Temp	Volume	SLPres
02/04/2000	0.0	60	77	15
02/03/2000	0.0	60	85	16
02/02/2000	0.0	60	83	16
02/01/2000	0.0	60	94	15
01/31/2000	0.0	60	91	14
01/30/2000	0.0	60	91	14
01/29/2000	0.0	60	92	14
01/28/2000	0.0	60	92	14
01/27/2000	0.0	60	75	18
01/26/2000	0.0	60	100	29
01/25/2000	0.0	60	84	14
01/24/2000	0.0	60	103	30
01/23/2000	0.0	60	103	30
01/22/2000	0.0	60	115	15
01/21/2000	0.0	60	115	15
01/20/2000	0.0	60	128	12
01/19/2000	0.0	60	21	16
01/18/2000	0.0	60	91	15
01/17/2000	0.0	60	0	18
01/16/2000	0.0	60	0	18
01/15/2000	0.0	60	81	19
01/14/2000	0.0	60	81	19
Average:	0.0	60	82	18



execution time = 0 seconds

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Top

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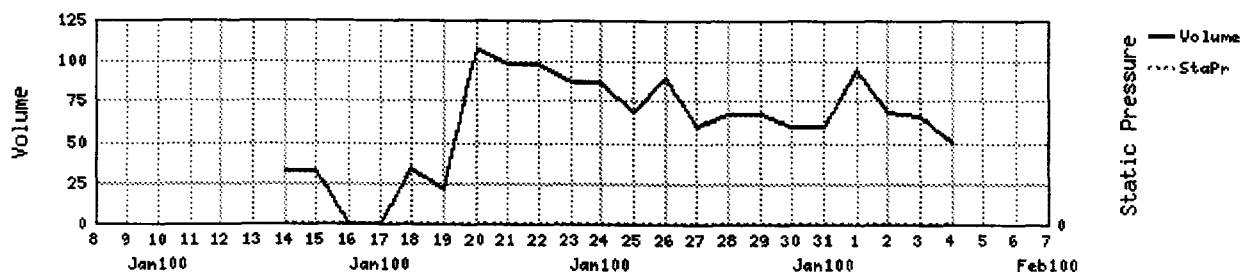
Mon Feb 7,
2000

3:59:47 PM

Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL RECORD H S #3 - 00642620 - ALLOCATION - ORIFICE



Date	StaPr	Temp	Volume	SLPres
02/04/2000	0.0	60	49	15
02/03/2000	0.0	60	66	15
02/02/2000	0.0	60	68	16
02/01/2000	0.0	60	94	15
01/31/2000	0.0	60	60	21
01/30/2000	0.0	60	60	21
01/29/2000	0.0	60	67	21
01/28/2000	0.0	60	67	21
01/27/2000	0.0	60	59	13
01/26/2000	0.0	60	89	26
01/25/2000	0.0	60	68	15
01/24/2000	0.0	60	87	16
01/23/2000	0.0	60	87	16
01/22/2000	0.0	60	98	15
01/21/2000	0.0	60	98	15
01/20/2000	0.0	60	108	15
01/19/2000	0.0	60	21	16
01/18/2000	0.0	60	33	13
01/17/2000	0.0	60	0	13
01/16/2000	0.0	60	0	13
01/15/2000	0.0	60	32	16
01/14/2000	0.0	60	32	16
Average:	0.0	60	61	16



execution time = 1 seconds

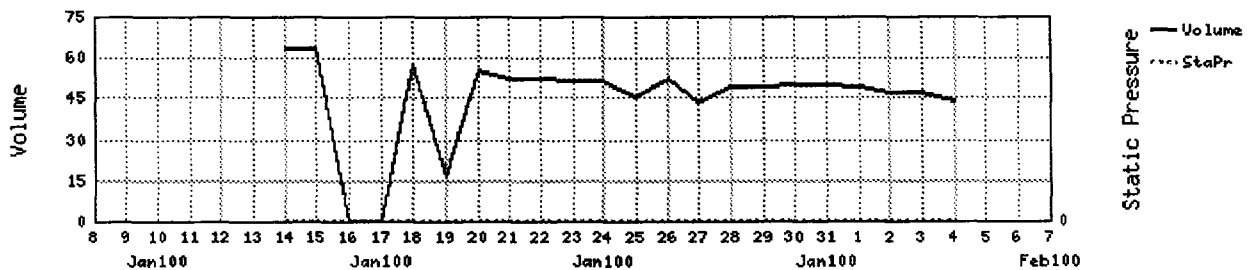
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Top ARCO Permian  Mon Feb 7, 2000 4:00:04 PM

**Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL
RECORD H S #4 - 00644683 - ALLOCATION - ORIFICE**



Date	StaPr	Temp	Volume	SLPres
02/04/2000	0.0	60	44	14
02/03/2000	0.0	60	47	16
02/02/2000	0.0	60	47	15
02/01/2000	0.0	60	49	16
01/31/2000	0.0	60	50	13
01/30/2000	0.0	60	50	13
01/29/2000	0.0	60	49	13
01/28/2000	0.0	60	49	13
01/27/2000	0.0	60	43	13
01/26/2000	0.0	60	52	13
01/25/2000	0.0	60	45	29
01/24/2000	0.0	60	51	14
01/23/2000	0.0	60	51	15
01/22/2000	0.0	60	52	15
01/21/2000	0.0	60	52	15
01/20/2000	0.0	60	55	14
01/19/2000	0.0	60	16	15
01/18/2000	0.0	60	57	13
01/17/2000	0.0	60	0	0
01/16/2000	0.0	60	0	0
01/15/2000	0.0	60	63	10
01/14/2000	0.0	60	63	10
Average:	0.0	60	45	13



exccution time = 0 seconds

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Top

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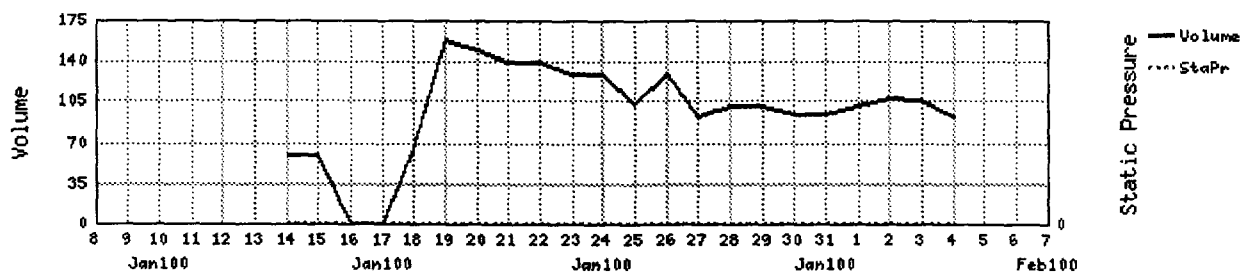
Mon Feb 7,
2000

4:00:17 PM

Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL RECORD H S #5 - 00643040 - ALLOCATION - ORIFICE



Date	StaPr	Temp	Volume	SLPres
02/04/2000	0.0	60	91	17
02/03/2000	0.0	60	106	19
02/02/2000	0.0	60	107	18
02/01/2000	0.0	60	100	21
01/31/2000	0.0	60	94	27
01/30/2000	0.0	60	94	27
01/29/2000	0.0	60	100	25
01/28/2000	0.0	60	100	25
01/27/2000	0.0	60	92	26
01/26/2000	0.0	60	128	29
01/25/2000	0.0	60	103	18
01/24/2000	0.0	60	128	22
01/23/2000	0.0	60	128	21
01/22/2000	0.0	60	138	19
01/21/2000	0.0	60	138	19
01/20/2000	0.0	60	149	18
01/19/2000	0.0	60	157	20
01/18/2000	0.0	60	64	11
01/17/2000	0.0	60	0	26
01/16/2000	0.0	60	0	26
01/15/2000	0.0	60	59	15
01/14/2000	0.0	60	59	15
Average:	0.0	60	97	21



execution time = 1 seconds

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Top

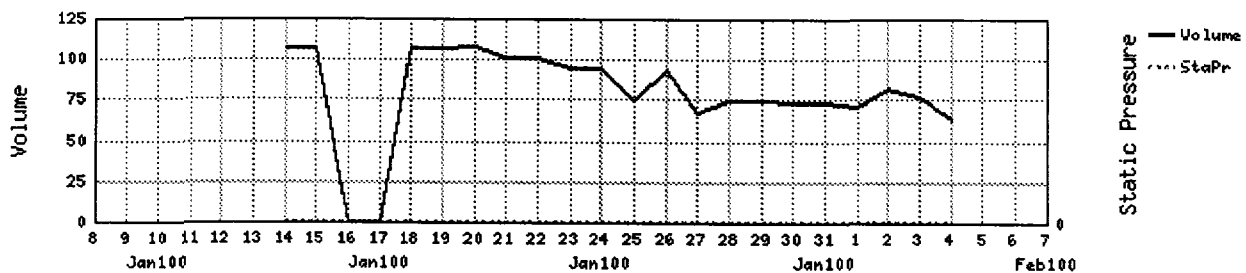
ARCO Permian

Mon Feb 7,
2000
4:00:35 PM

Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL RECORD H S #6 - 00640392 - ALLOCATION - ORIFICE



Date	StaPr	Temp	Volume	SLPres
02/04/2000	0.0	60	63	17
02/03/2000	0.0	60	77	19
02/02/2000	0.0	60	82	18
02/01/2000	0.0	60	71	18
01/31/2000	0.0	60	73	13
01/30/2000	0.0	60	73	13
01/29/2000	0.0	60	74	12
01/28/2000	0.0	60	74	12
01/27/2000	0.0	60	67	12
01/26/2000	0.0	60	93	29
01/25/2000	0.0	60	74	17
01/24/2000	0.0	60	94	20
01/23/2000	0.0	60	94	20
01/22/2000	0.0	60	100	18
01/21/2000	0.0	60	100	18
01/20/2000	0.0	60	108	18
01/19/2000	0.0	60	107	8
01/18/2000	0.0	60	107	8
01/17/2000	0.0	60	0	12
01/16/2000	0.0	60	0	12
01/15/2000	0.0	60	107	11
01/14/2000	0.0	60	107	11
Average:	0.0	60	79	15



execution time = 0 seconds

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Top

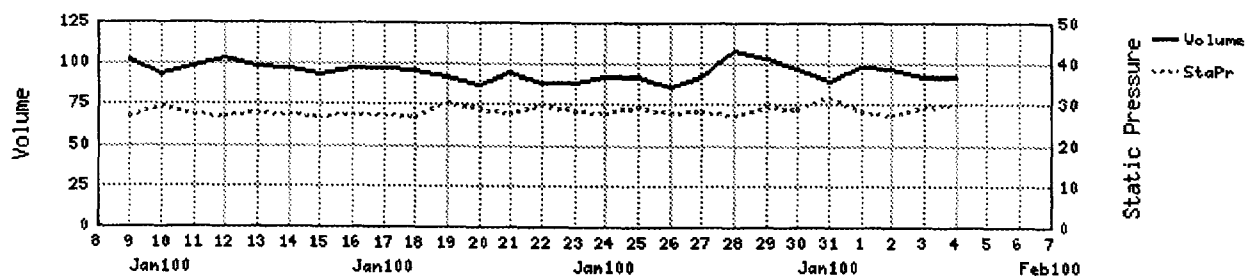
ARCO Permian

Mon Feb 7,
2000
3:57:13 PM

**Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL
STATE 157 A #1 - 80015514 - GPM - ORIFICE**



Date	StaPr	Temp	Volume	SLPres
02/04/2000	29.7	34	92	0
02/03/2000	29.0	27	91	0
02/02/2000	27.4	31	96	0
02/01/2000	28.3	38	98	0
01/31/2000	31.8	26	89	0
01/30/2000	28.8	18	97	0
01/29/2000	29.3	16	103	0
01/28/2000	27.3	26	108	0
01/27/2000	28.0	30	91	0
01/26/2000	27.9	30	86	0
01/25/2000	29.0	52	92	0
01/24/2000	27.6	33	91	0
01/23/2000	28.2	41	88	0
01/22/2000	29.5	47	88	0
01/21/2000	27.6	36	94	0
01/20/2000	28.6	43	87	0
01/19/2000	30.3	37	92	0
01/18/2000	26.9	42	95	0
01/17/2000	27.2	48	96	0
01/16/2000	27.4	44	97	0
01/15/2000	26.9	36	93	0
01/14/2000	27.0	30	96	0
01/13/2000	27.9	33	98	0
01/12/2000	26.8	48	103	0
01/11/2000	27.4	33	98	0
01/10/2000	29.1	31	93	0
01/09/2000	26.6	30	101	0
Average:	28.2	35	95	0



execution time = 1 seconds

Top

ARCO Permian

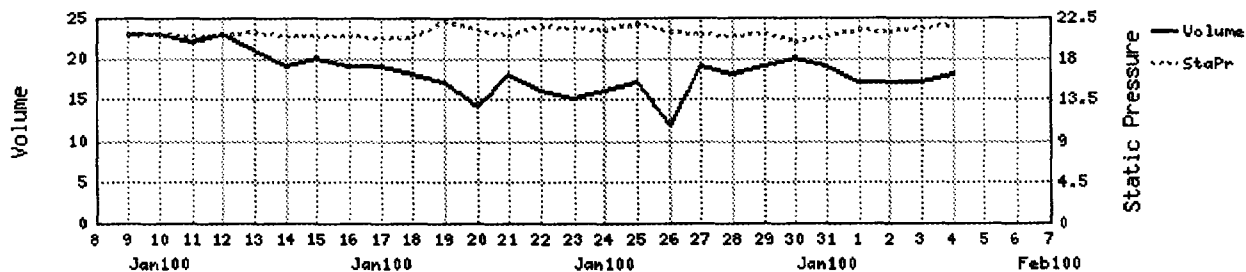
Mon Feb 7,
2000

3:57:25 PM

Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL STATE 157 A #3 - 015585 - GPM - ORIFICE



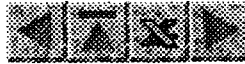
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02/04/2000	21.7	36	18	0
02/03/2000	21.3	29	17	0
02/02/2000	21.0	32	17	0
02/01/2000	21.1	35	17	0
01/31/2000	20.6	30	19	0
01/30/2000	19.9	23	20	0
01/29/2000	20.7	21	19	0
01/28/2000	20.5	29	18	0
01/27/2000	20.8	32	19	0
01/26/2000	21.0	33	12	0
01/25/2000	21.8	52	17	0
01/24/2000	21.1	36	16	0
01/23/2000	21.4	42	15	0
01/22/2000	21.5	49	16	0
01/21/2000	20.6	38	18	0
01/20/2000	21.1	45	14	0
01/19/2000	22.1	41	17	0
01/18/2000	20.3	43	18	0
01/17/2000	20.2	48	19	0
01/16/2000	20.5	44	19	0
01/15/2000	20.6	37	20	0
01/14/2000	20.5	32	19	0
01/13/2000	21.0	37	21	0
01/12/2000	20.4	49	23	0
01/11/2000	20.5	35	22	0
01/10/2000	20.8	31	23	0
01/09/2000	20.4	33	23	0
Average:	20.9	37	18	0



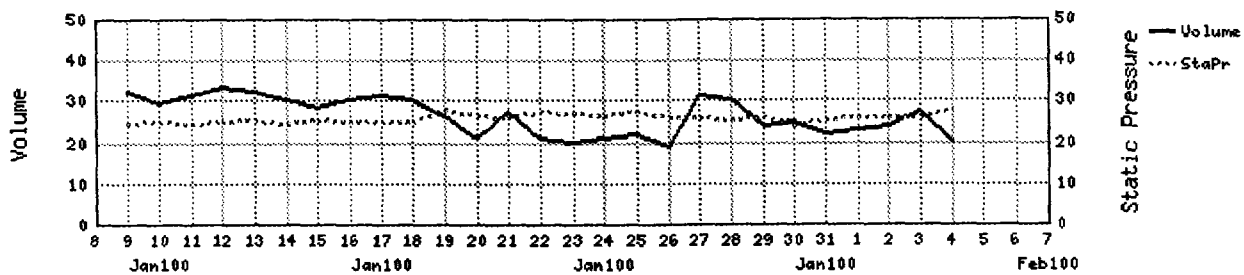
execution time = 1 seconds

Top **ARCO Permian**  Mon Feb 7, 2000 3:57:43 PM

**Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL
STATE 157 A #4 - 15670 - GPM - ORIFICE**



Date	StaPr	Temp	Volume	SLPres
02/04/2000	27.5	45	20	0
02/03/2000	25.8	25	27	0
02/02/2000	25.6	29	24	0
02/01/2000	25.8	32	23	0
01/31/2000	25.1	25	22	0
01/30/2000	24.0	14	25	0
01/29/2000	25.8	13	24	0
01/28/2000	25.1	25	30	0
01/27/2000	25.6	29	31	0
01/26/2000	25.9	29	19	0
01/25/2000	27.0	51	22	0
01/24/2000	26.2	30	21	0
01/23/2000	26.5	40	20	0
01/22/2000	27.3	47	21	0
01/21/2000	25.7	32	27	0
01/20/2000	26.1	43	21	0
01/19/2000	27.5	36	26	0
01/18/2000	24.8	41	30	0
01/17/2000	25.0	47	31	0
01/16/2000	24.9	43	30	0
01/15/2000	25.3	32	28	0
01/14/2000	24.3	26	30	0
01/13/2000	25.4	31	32	0
01/12/2000	24.6	49	33	0
01/11/2000	24.5	30	31	0
01/10/2000	24.6	27	29	0
01/09/2000	24.1	29	32	0
Average:	25.6	33	26	0



execution time = 0 seconds

Top

ARCO Permian

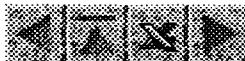
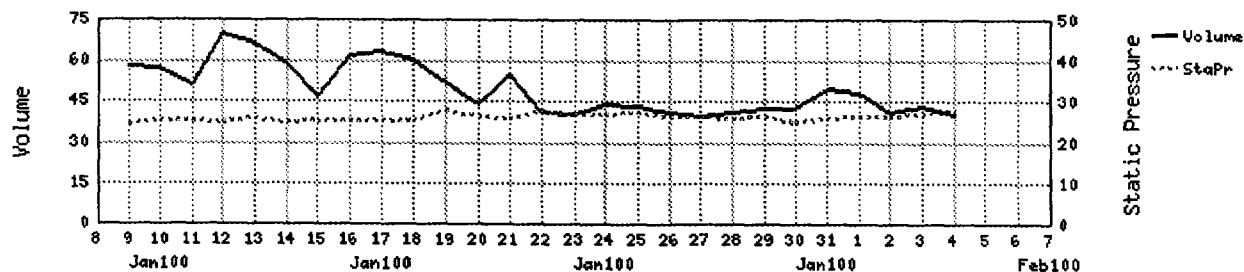
Mon Feb 7,
2000

4:22:28 PM

Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL HARRINGTON D D GAS WN #1 - 15668 - GPM - ORIFICE



Date	StaPr	Temp	Volume	SLPres
02/04/2000	27.7	34	40	0
02/03/2000	26.5	26	43	0
02/02/2000	26.0	30	41	0
02/01/2000	26.4	32	48	0
01/31/2000	25.7	25	50	0
01/30/2000	24.9	17	42	0
01/29/2000	26.1	14	42	0
01/28/2000	25.6	25	41	0
01/27/2000	26.0	29	39	0
01/26/2000	26.4	28	41	0
01/25/2000	27.3	52	43	0
01/24/2000	26.5	30	44	0
01/23/2000	26.8	42	40	0
01/22/2000	27.5	47	41	0
01/21/2000	25.7	31	55	0
01/20/2000	26.2	43	44	0
01/19/2000	27.8	37	52	0
01/18/2000	25.1	42	60	0
01/17/2000	25.1	47	63	0
01/16/2000	25.4	43	62	0
01/15/2000	25.3	33	47	0
01/14/2000	25.0	27	59	0
01/13/2000	25.5	31	66	0
01/12/2000	24.9	48	70	0
01/11/2000	25.3	36	51	0
01/10/2000	25.2	32	57	0
01/09/2000	24.5	30	58	0
Average:	25.9	34	50	0



execution time = 0 seconds

Top

ARCO Permian

Mon Feb 7,
2000

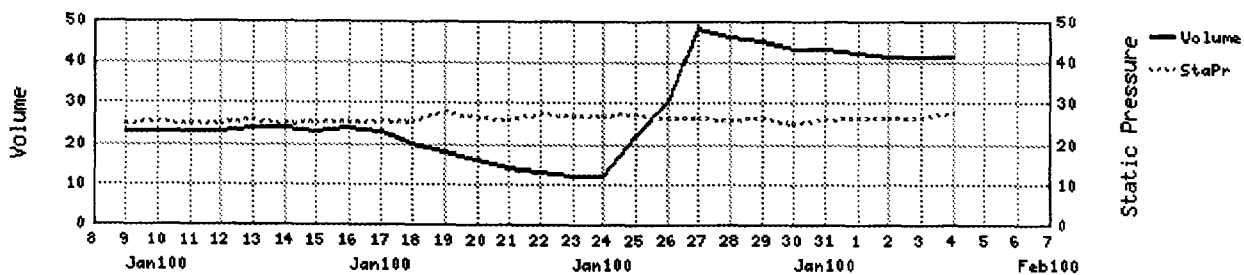
3:55:09 PM

Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL HARRINGTON D D OIL WN - - 80015345 - PHILLIPS - ORIFICE

#2



Date	StaPr	Temp	Volume	SLPres
02/04/2000	27.7	37	41	0
02/03/2000	26.2	30	41	0
02/02/2000	26.0	31	41	0
02/01/2000	26.4	35	42	0
01/31/2000	25.6	30	43	0
01/30/2000	24.7	24	43	0
01/29/2000	26.2	22	45	0
01/28/2000	25.6	29	46	0
01/27/2000	26.0	32	48	0
01/26/2000	26.2	32	30	0
01/25/2000	27.1	52	22	0
01/24/2000	26.5	34	12	0
01/23/2000	26.8	43	12	0
01/22/2000	27.3	48	13	0
01/21/2000	25.8	35	14	0
01/20/2000	26.4	44	16	0
01/19/2000	27.7	42	18	0
01/18/2000	25.1	43	20	0
01/17/2000	25.1	48	23	0
01/16/2000	25.4	44	24	0
01/15/2000	25.4	36	23	0
01/14/2000	25.0	31	24	0
01/13/2000	25.6	37	24	0
01/12/2000	24.9	48	23	0
01/11/2000	25.0	39	23	0
01/10/2000	25.1	33	23	0
01/09/2000	24.6	32	23	0
Average:	25.9	37	28	0



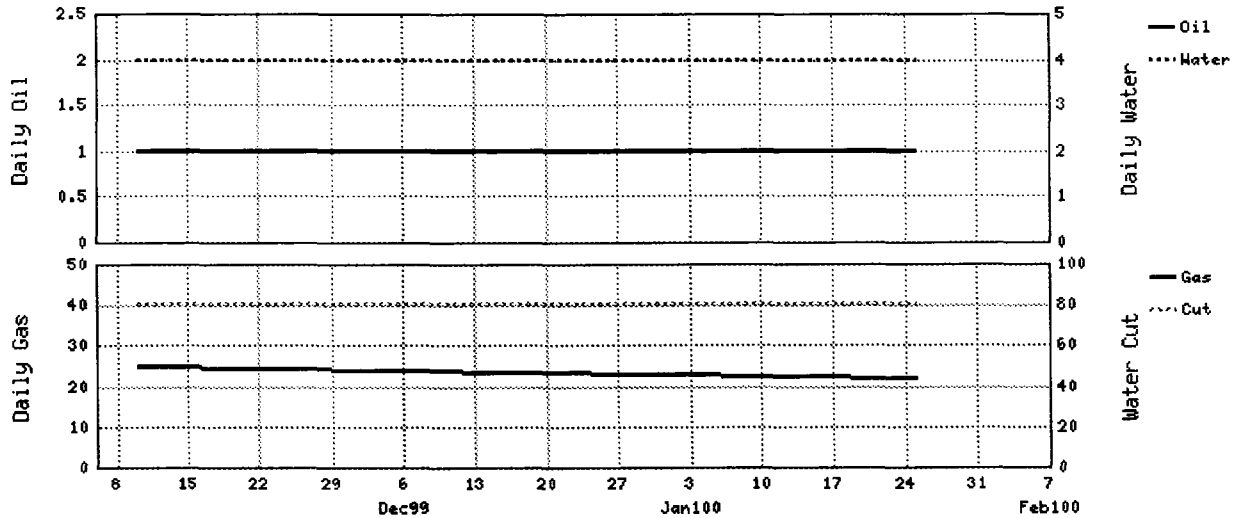
execution time = 1 seconds

Top ARCO Permian  Mon Feb 7, 2000 4:02:17 PM

**Well Test Data for SE NEW MEXICO: MANTHEI/PRICE: PUMPER 11
HARRINGTON D D /OIL/ WN 2 - 300250886500 - PO - AC**

◀ ⏮ ⏭ ⏮ Prod Down Inject ▶

Date	Oil	Water	Gas	Cut	Fl_Pd	%CO2	GasGr	GDur
01/25/2000	1	4	22	80	0	0.000	0	0
11/10/1999	1	4	25	80	0	0.000	0	0
Average:	1	4	24	80	0	0.000	0	0



◀ ⏮ ⏭ ⏮ Prod Down Inject ▶

execution time = 1 seconds

For questions or comments regarding this program, contact pagemaster@permian.arco.com

Top

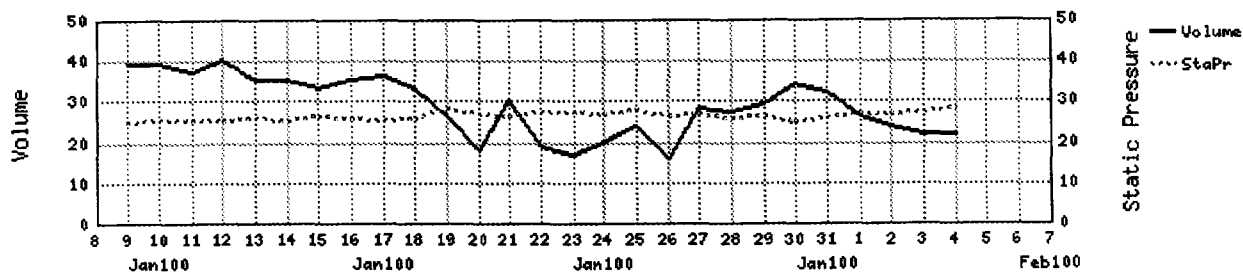
ARCO Permian

Mon Feb 7,
2000

4:23:01 PM

**Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL
HARRINGTON D D WN #3 - 96292 - GPM - ORIFICE**

Date	StaPr	Temp	Volume	SLPres
02/04/2000	28.1	34	22	0
02/03/2000	27.0	26	22	0
02/02/2000	26.6	29	24	0
02/01/2000	26.8	32	26	0
01/31/2000	25.6	27	32	0
01/30/2000	25.0	18	34	0
01/29/2000	26.3	14	29	0
01/28/2000	25.9	25	27	0
01/27/2000	26.6	29	28	0
01/26/2000	26.4	29	16	0
01/25/2000	27.6	52	24	0
01/24/2000	26.7	31	20	0
01/23/2000	27.1	42	17	0
01/22/2000	27.3	47	19	0
01/21/2000	26.3	33	30	0
01/20/2000	26.7	43	18	0
01/19/2000	28.3	40	26	0
01/18/2000	25.5	42	33	0
01/17/2000	25.4	47	36	0
01/16/2000	25.6	43	35	0
01/15/2000	26.4	33	33	0
01/14/2000	25.2	28	35	0
01/13/2000	25.9	33	35	0
01/12/2000	25.4	48	40	0
01/11/2000	25.3	36	37	0
01/10/2000	25.3	32	39	0
01/09/2000	24.7	30	39	0
Average:	26.3	34	29	0



execution time = 1 seconds

Top

ARCO Permian

Mon Feb 7,

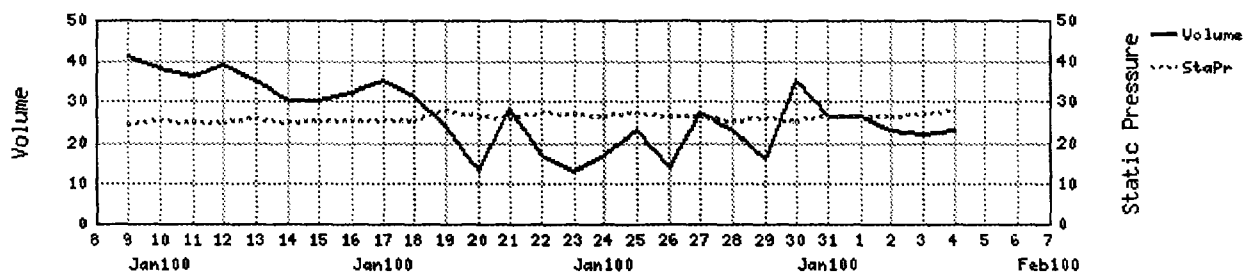
2000

3:55:48 PM

**Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL
HARRINGTON D D GAS WN #4 - 705169 - GPM - ORIFICE**



Date	StaPr	Temp	Volume	SLPres
02/04/2000	27.8	34	23	0
02/03/2000	26.7	28	22	0
02/02/2000	26.0	31	23	0
02/01/2000	26.2	36	26	0
01/31/2000	26.2	30	26	0
01/30/2000	25.3	18	35	0
01/29/2000	25.8	19	16	0
01/28/2000	25.4	25	23	0
01/27/2000	26.1	31	27	0
01/26/2000	26.2	31	14	0
01/25/2000	27.3	53	23	0
01/24/2000	26.2	33	17	0
01/23/2000	26.8	43	13	0
01/22/2000	27.1	48	17	0
01/21/2000	25.8	36	28	0
01/20/2000	26.4	43	13	0
01/19/2000	27.7	38	24	0
01/18/2000	25.3	44	31	0
01/17/2000	25.2	48	35	0
01/16/2000	25.3	44	32	0
01/15/2000	25.3	36	30	0
01/14/2000	25.0	32	30	0
01/13/2000	25.5	34	35	0
01/12/2000	25.0	50	39	0
01/11/2000	24.8	37	36	0
01/10/2000	25.2	33	38	0
01/09/2000	24.5	32	41	0
Average:	25.9	36	27	0



execution time = 1 seconds

Top

ARCO Permian

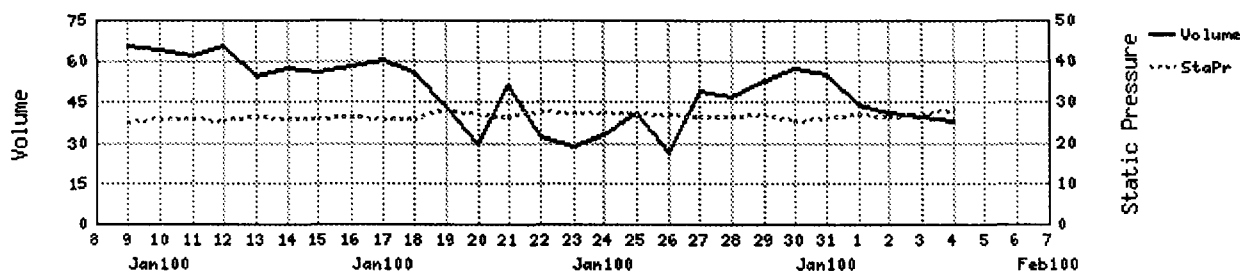
Mon Feb 7,
2000

3:56:41 PM

Gas Volume Data for SE NEW MEXICO: MANTHEI/PRICE: KEN MITCHELL HARRINGTON D D #5 - 80015513 - GPM - ORIFICE



Date	StaPr	Temp	Volume	SLPres
02/04/2000	28.2	36	38	0
02/03/2000	26.6	38	39	0
02/02/2000	26.4	38	41	0
02/01/2000	26.9	44	44	0
01/31/2000	25.9	43	55	0
01/30/2000	25.2	40	57	0
01/29/2000	26.8	34	53	0
01/28/2000	26.2	37	47	0
01/27/2000	26.4	37	49	0
01/26/2000	26.7	39	26	0
01/25/2000	27.4	53	41	0
01/24/2000	27.0	41	33	0
01/23/2000	27.3	47	28	0
01/22/2000	27.7	50	32	0
01/21/2000	26.4	46	51	0
01/20/2000	26.8	46	29	0
01/19/2000	28.1	41	43	0
01/18/2000	25.8	50	56	0
01/17/2000	25.7	51	60	0
01/16/2000	26.1	49	58	0
01/15/2000	25.8	43	56	0
01/14/2000	25.6	41	57	0
01/13/2000	26.0	43	54	0
01/12/2000	25.4	51	65	0
01/11/2000	25.5	45	62	0
01/10/2000	25.6	41	64	0
01/09/2000	25.0	41	65	0
Average:	26.4	43	48	0



execution time = 1 seconds

TopThr Feb 10,
2000
9:45:52 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE: L.
MAY
RECORD H S /GAS/ WN 1 - 300250886800 - PG - AC**



Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	0	19	0
11/01/1999	30	0	0	12	0
10/01/1999	31	0	0	12	0
09/01/1999	30	0	0	12	0
08/01/1999	31	0	0	12	0
07/01/1999	31	0	0	13	0
06/01/1999	30	0	0	13	0
05/01/1999	31	0	0	12	0
04/01/1999	30	0	0	12	0
03/01/1999	31	0	0	13	0
Average:	31	0	0	13	0



execution time = 0 seconds

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Top

Thur Feb 10,
2000
9:45:57 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE: L.
MAY
RECORD H S /GAS/ WN 2 - 300250886900 - PG - AC**



Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	0	50	0
11/01/1999	30	0	0	47	0
10/01/1999	31	0	0	56	0
09/01/1999	30	0	0	46	0
08/01/1999	31	0	1	43	0
07/01/1999	31	0	1	41	0
06/01/1999	30	0	1	40	0
05/01/1999	31	0	1	39	0
04/01/1999	30	0	1	45	0
03/01/1999	31	0	1	47	0
Average:	31	0	1	46	0



execution time = 0 seconds

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Top

Thu Feb 10,
2000
9:45:59 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE: L.
MAY
RECORD H S /GAS/ WN 3 - 300250887000 - PG - AC**



Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	0	6	0
11/01/1999	30	0	0	14	0
10/01/1999	31	0	0	32	0
09/01/1999	30	0	0	12	0
08/01/1999	31	0	1	8	0
07/01/1999	31	0	1	7	0
06/01/1999	30	0	1	5	0
05/01/1999	31	0	1	4	0
04/01/1999	30	0	1	7	0
03/01/1999	31	0	1	11	0
Average:	31	0	1	11	0



execution time = 1 seconds

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TopThr Feb 10,
2000
9:46:02 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE: L.
MAY
RECORD H S /GAS/ WN 4 - 300250887100 - PG - AC**



Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	0	18	0
11/01/1999	30	0	0	21	0
10/01/1999	31	0	0	25	0
09/01/1999	30	0	0	20	0
08/01/1999	30	0	0	17	0
07/01/1999	31	0	0	14	0
06/01/1999	30	0	0	13	0
05/01/1999	31	0	0	10	0
04/01/1999	30	0	0	12	0
03/01/1999	31	0	0	21	0
Average:	30	0	0	17	0



execution time = 1 seconds

For questions or comments regarding this program, contact pagemaster@permian.arco.com

TopThr Feb 10,
2000
9:46:05 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE: L.
MAY
RECORD H S /GAS/ WN 5 - 300252723200 - PG - AC**



Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	0	47	0
11/01/1999	30	0	0	50	0
10/01/1999	31	0	0	58	0
09/01/1999	30	0	0	42	0
08/01/1999	30	0	0	40	0
07/01/1999	31	0	0	38	0
06/01/1999	30	0	0	38	0
05/01/1999	31	0	0	33	0
04/01/1999	30	0	0	35	0
03/01/1999	31	0	0	43	0
Average:	30	0	0	42	0



execution time = 0 seconds

For questions or comments regarding this program, contact pagemaster@permian.arco.com

TopThr Feb 10,
2000
9:46:08 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE: L.
MAY
RECORD H S /GAS/ WN 6 - 300252754100 - PG - AC**



Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	1	32	0
11/01/1999	30	0	1	38	0
10/01/1999	31	0	1	34	0
09/01/1999	30	0	1	30	0
08/01/1999	31	0	1	23	0
07/01/1999	31	0	1	19	0
06/01/1999	30	0	1	16	0
05/01/1999	31	0	1	12	0
04/01/1999	30	0	1	15	0
03/01/1999	31	0	1	23	0
Average:	31	0	1	24	0



execution time = 0 seconds

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Top

Thr Feb 10,
2000
9:46:35 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE:
PUMPER 11
HARRINGTON D D /GAS/ WN 1 - 300250886400 - PG - AC**



Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	0	49	0
11/01/1999	30	0	0	58	0
10/01/1999	31	0	0	58	0
09/01/1999	30	0	0	51	0
08/01/1999	30	0	0	48	0
07/01/1999	31	0	0	44	0
06/01/1999	30	0	0	43	0
05/01/1999	31	0	0	41	0
04/01/1999	30	0	0	51	0
03/01/1999	31	0	0	61	0
Average:	30	0	0	50	0



execution time = 0 seconds

For questions or comments regarding this program, contact pagemaster@permian.arco.com

Thr Feb 10,
2000
9:46:50 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE:
PUMPER 11
HARRINGTON D D /OIL/ WN 2 - 300250886500 - PO - AC**

Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	2	4	23	0
11/01/1999	30	2	4	24	0
10/01/1999	31	1	5	25	0
09/01/1999	30	0	4	25	0
08/01/1999	31	3	5	24	0
07/01/1999	31	2	5	26	0
06/01/1999	30	0	5	25	0
05/01/1999	31	2	5	27	0
04/01/1999	30	2	5	28	0
03/01/1999	31	2	5	28	0
Average:	31	2	5	26	0

execution time = 0 seconds

For questions or comments regarding this program, contact pagemaster@permian.arco.com

Top  Thr Feb 10,
2000
9:46:42 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE:
PUMPER 11
HARRINGTON D D /GAS/ WN 3 - 300250886600 - PG - AC**



Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	0	34	0
11/01/1999	30	0	0	39	0
10/01/1999	31	0	0	36	0
09/01/1999	30	0	0	31	0
08/01/1999	30	0	0	26	0
07/01/1999	31	0	0	23	0
06/01/1999	30	0	0	22	0
05/01/1999	31	0	0	21	0
04/01/1999	30	0	0	31	0
03/01/1999	31	0	0	40	0
Average:	30	0	0	30	0



execution time = 0 seconds

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TopThr Feb 10,
2000
9:46:48 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE:
PUMPER 11
HARRINGTON D D /GAS/ WN 4 - 300250886700 - PG - AC**



Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	0	31	0
11/01/1999	30	0	0	31	0
10/01/1999	31	0	0	32	0
09/01/1999	30	0	0	30	0
08/01/1999	31	0	0	24	0
07/01/1999	31	0	0	22	0
06/01/1999	30	0	0	22	0
05/01/1999	31	0	0	18	0
04/01/1999	30	0	0	27	0
03/01/1999	31	0	0	34	0
Average:	31	0	0	27	0



execution time = 0 seconds

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TopThr Feb 10,
2000
9:46:46 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE:
PUMPER 11
HARRINGTON D D /GAS/ WN 5 - 300250886100 - PG - AC**



Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	0	58	0
11/01/1999	30	0	0	63	0
10/01/1999	31	0	0	63	0
09/01/1999	30	0	0	53	0
08/01/1999	30	0	0	45	0
07/01/1999	31	0	0	40	0
06/01/1999	30	0	0	37	0
05/01/1999	31	0	0	31	0
04/01/1999	30	0	0	45	0
03/01/1999	31	0	0	61	0
Average:	30	0	0	50	0



execution time = 0 seconds

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Top

Thu Feb 10,
2000
9:47:45 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEL/PRICE: R.
DELEON
STATE 157 A 1 - 300250884400 - PG - AC**



Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	0	95	0
11/01/1999	30	0	0	99	0
10/01/1999	31	0	0	101	0
09/01/1999	30	0	0	97	0
08/01/1999	30	0	0	96	0
07/01/1999	31	0	0	92	0
06/01/1999	30	0	0	92	0
05/01/1999	31	0	0	91	0
04/01/1999	30	0	0	96	0
03/01/1999	31	0	0	99	0
Average:	30	0	0	96	0



execution time = 0 seconds

For questions or comments regarding this program, contact pagemaster@permian.arco.com

topThr Feb 10,
2000
9:48:54 AM

**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE: R.
DELEON
STATE 157 A 3 - 300250885100 - PG - AC**



Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	3	19	0
11/01/1999	30	0	3	20	0
10/01/1999	31	0	2	21	0
09/01/1999	30	0	2	20	0
08/01/1999	31	0	2	18	0
07/01/1999	31	0	2	18	0
06/01/1999	30	0	2	2	0
05/01/1999	31	0	2	10	0
04/01/1999	30	0	2	18	0
03/01/1999	31	0	2	22	0
Average:	31	0	2	17	0



execution time = 1 seconds

For questions or comments regarding this program, contact pagemaster@permian.arco.com

TopThr Feb 10,
2000
9:48:58 AM**Average Daily Production Data for SE NEW MEXICO: MANTHEI/PRICE: R.
DELEON****STATE 157 A 4 - 300250885200 - PG - AC**

Date	Days	Oil	Water	Gas	CO2
12/01/1999	31	0	0	24	0
11/01/1999	30	0	0	29	0
10/01/1999	31	0	0	28	0
09/01/1999	30	0	0	23	0
08/01/1999	29	0	0	20	0
07/01/1999	31	0	0	18	0
06/01/1999	30	0	0	18	0
05/01/1999	31	0	0	17	0
04/01/1999	30	0	0	24	0
03/01/1999	31	0	0	29	0
Average:	30	0	0	23	0



execution time = 0 seconds

For questions or comments regarding this program, contact pagemaster@permian.arco.com