

MAGMA POWER COMPANY  
993 OAK LANE  
ESCONDIDO, CA. 92025

*See Mike A  
to keep*

(619) 743-7008

April 22, 1986

Dr. Marcello Lippmann  
Lawrence Berkely Laboratory  
Earth Science Division  
Bldg. 50E  
1 Cyclotron Road  
Berkeley, Ca. 94720

Dr. Mike Wright ✓  
UURI  
391 Chipeta Way  
Salt Lake City, Utah 84108

Dear Marcello and Mike:

Enclosed is the East Mesa monthly report for the month of March and the initial chemical analysis of recently completed well # 81-7 (#9).

Best regards,

T. C. Hinrichs

cc: S. Stiger  
S. Prestwich

# MAGMA ELECTRIC CO.

P.O. Box 56

HOLTVILLE, CALIFORNIA 92250

(619) 356-4635

EAST MESA PLANT

SUBJECT: Well #81-7 (#9)

April 9, 1986

On April 7, 1986, Well #9 was sampled after 10 days of continuous production. The well was analyzed to determine it's chemical parameters and to establish a base line analysis for future reference. All of the following are reported in ppm, except the gases, which are mole percent by volume.

ITEM: (In ppm)	WELL # U.S. 81-7
pH	5.80
TDS	2160
Ammonia (NH3)	8.0
Bicarbonate alkalinity	320
Calcium hardness (CaCO3)	22.0
Chlorides (cl-)	810
Hydrogen sulfide (H2S)	0.90
Silica (SiO2)	200
Sulfate (SO4)	110
Temperature (Deg. F)	345 degrees
Pressure (Wellhead PSIG)	290
Flow (gpm)	331

## METALS: (In ppm)

Calcium (Ca)	9.0
Iron (Fe)	0.10
Lithium (Li)	1.63
Potassium (K)	55.0
Sodium (Na)	524
Strontium (Sr)	0.76

## GASES: (Mole % by volume)

H2O vapor	5.10
Nitrogen (N2)	20.56
Methane (CH4)	22.22
Carbon dioxide (CO2)	51.96
Ethane (C2H6)	0.16

  
HECTOR GALARTE

CC: A.W. Hoch  
Tom Hinrichs  
Russ Tenney  
Dennis Downs  
Fred Teeters

# MAGMA ELECTRIC CO.

P.O. Box 56  
HOLTVILLE, CALIFORNIA 92250  
(619) 356-4635

EAST MESA PLANT

April 1, 1986

A. W. HOCH, President  
Magma Power Company  
P.O. Box 17760  
Los Angeles, CA 90017

SUBJECT: March, 1986 Record Breaking Month for East Mesa

Dear Andy:

PLANT OPERATION HIGHLIGHTS: The plant had an on line percentage of 99.89% with gross generation of 8,680,000 KWH and sales of 5,364,000 KWH. This has broken our previous generation record which was 7,882,000 KWH gross and netted 4,623,000 KWH for December 1985.

Down time was contributed to a power dip on March 2, on IID grid.

WELL OPERATION HIGHLIGHTS: Average brine flow of 1,350,753 lb/hr (3,039 gpm). Well 61-7 was taken out of service on March 12th due to mechanical problems and Well 83-7 was put into service March 27th with average brine flow of 151,400 lb/hr (341 gpm). Completion of the Weir in Well 88-7 should be complete by April 21st.

Sincerely,



DENNIS D. DOWNS

Plant Superintendent

cc: B.C. McCabe  
J.W. Aidlin  
T.C. Hinrichs  
R.L. Tenney  
Buck McCabe  
E. Zajac  
G.R. Crane  
S. Hagerly  
A. Taylor  
J. Shepard  
A.L. Johnson  
P.M. Pankratz  
J.M. Leathers  
R.L. Walzel  
Fred Teeters

MEGAWATTS MAR 86	PEAK PER DAY	MID PEAK PER DAY	OFF PEAK PER DAY	PEAK AVERAGE	MID PEAK AVERAGE	OFF PEAK AVERAGE	TOTAL PER DAY	AVERAGE PER HOUR
1			175	0.00	0.00	7.29	175	7.29
2			158	0.00	0.00	6.58	158	6.58
3	29	70	78	7.25	7.78	7.09	177	7.38
4	30	69	77	7.50	7.67	7.00	176	7.33
5	29	69	78	7.25	7.67	7.09	176	7.33
6	29	69	78	7.25	7.67	7.09	176	7.33
7	30	69	79	7.50	7.67	7.18	178	7.42
8			175	0.00	0.00	7.29	175	7.29
9			181	0.00	0.00	7.54	181	7.54
10	30	71	81	7.50	7.89	7.36	182	7.58
11	30	71	83	7.50	7.89	7.55	184	7.67
12	29	68	82	7.25	7.56	7.45	179	7.46
13	27	69	81	6.75	7.67	7.36	177	7.38
14	29	67	77	7.25	7.44	7.00	173	7.21
15			172	0.00	0.00	7.17	172	7.17
16			171	0.00	0.00	7.13	171	7.13
17	29	66	77	7.25	7.33	7.00	172	7.17
18	28	67	77	7.00	7.44	7.00	172	7.17
19	29	68	77	7.25	7.56	7.00	174	7.25
20	29	67	76	7.25	7.44	6.91	172	7.17
21	27	66	74	6.75	7.33	6.73	167	6.96
22			164	0.00	0.00	6.83	164	6.83
23			163	0.00	0.00	6.79	163	6.79
24	26	64	72	6.50	7.11	6.55	162	6.75
25	27	64	70	6.75	7.11	6.36	161	6.71
26	27	63	71	6.75	7.00	6.45	161	6.71
27	29	67	73	7.25	7.44	6.64	169	7.04
28	28	69	80	7.00	7.67	7.27	177	7.38
29			181	0.00	0.00	7.54	181	7.54
30			182	0.00	0.00	7.58	182	7.58
31	29	70	78	7.25	7.78	7.09	177	7.38
TOTAL	600	1423	3341				5364	
AVERAGE	28.6	67.8	107.8	7.14	7.53	7.06	173.0	7.21

AK EARNINGS = 62582.40

D PEAK = 66355.40

F PEAK = 165195.60

GUS PAYMENT = 12330.00

TOTAL 294133.40

PLANT	BRINE FLOW	TEMP IN	TEMP OUT	GROSS MW	NET MW	HOURS	COOLING H2O	COND	NET WILD	HEAT RATE	PLANT	TURBINE IN	TURBINE OUT
MAR 86	LBS/HR	DEGREES	DEGREES F	DAY	DAY	DAY	DEGREES F	PRESS	DEGREES F	LBS/KWH	EFF.	DEGREES F	DEGREES F
1	1407333	349	157	294	175	24.0	69.0	50.5	63.0	114.9	15.5	300	151
2	1413666	349	159	266	158	23.2	69.0	51.0	61.6	123.3	11.6	301	154
3	1396000	349	157	280	177	24.0	69.0	50.0	60.3	119.7	14.9	300	153
4	1400000	349	157	280	176	24.0	69.0	49.7	60.3	120.0	14.8	300	149
5	1392000	349	156	280	176	24.0	69.8	49.7	62.7	119.3	14.8	300	149
6	1385000	349	156	294	176	24.0	69.8	49.7	62.3	113.1	15.4	300	147
7	1383333	349	154	280	178	24.0	68.7	48.0	67.7	118.6	14.8	300	146
8	1376000	349	153	280	175	24.0	68.0	48.0	61.0	117.9	14.8	300	145
9	1376333	349	152	294	181	24.0	65.0	46.0	57.0	112.4	15.4	300	144
10	1372667	349	151	294	182	24.0	64.7	44.7	56.0	112.1	15.4	300	143
11	1373333	348	150	294	184	24.0	62.0	43.0	53.0	112.1	15.4	297	141
12	1338333	348	149	280	179	24.0	62.0	42.5	55.7	114.7	14.9	300	141
13	1292667	348	150	280	177	24.0	61.0	42.5	52.3	110.8	15.6	300	140
14	1292667	348	150	280	173	24.0	63.3	42.8	53.3	110.8	15.6	300	143
15	1294333	348	152	280	172	24.0	63.0	42.9	52.7	110.9	15.7	300	141
16	1296000	348	153	266	171	24.0	64.0	43.5	52.0	116.9	15.0	300	141
17	1295000	348	153	280	172	24.0	63.0	43.0	53.0	111.0	15.8	300	145
18	1295000	348	152	280	172	24.0	63.0	42.8	52.7	111.0	15.7	300	145
19	1292333	349	152	280	174	24.0	61.7	42.7	52.3	110.8	15.6	300	144
20	1296333	349	153	280	172	24.0	63.0	43.0	56.0	111.1	15.7	300	145
21	1296333	349	154	266	167	24.0	65.0	46.0	58.3	117.0	15.0	300	144
22	1298000	349	155	280	164	24.0	67.3	48.0	59.7	111.3	15.8	300	145
23	1300000	349	155	266	163	24.0	67.8	48.7	59.0	117.3	15.0	300	145
24	1306000	349	157	266	162	24.0	69.0	50.0	58.0	117.8	15.1	300	150
25	1306667	349	157	266	161	24.0	69.0	50.0	58.0	117.9	15.1	300	150
26	1292667	349	155	266	161	24.0	67.8	48.0	60.3	116.6	15.1	300	147
27	1376000	348	158	280	169	24.0	68.3	51.0	64.7	117.9	15.2	301	152
28	1430333	348	160	294	177	24.0	68.7	51.3	63.0	116.8	15.5	300	152
29	1435000	348	158	280	181	24.0	67.0	48.3	61.7	123.0	14.6	301	150
30	1433333	348	158	294	182	24.0	67.7	48.7	61.7	117.0	15.3	301	151
31	1430667	348	158	280	177	24.0	69.0	48.7	65.0	122.6	14.6	301	151
AVERAGE	1350753	349	155	280	173		66.2	46.9	58.5	115.7	15.2	300.1	147
TOTAL	1003879342			8680	5364	743.2							

H LINE PERCENTAGE = 99.89  
 PEAK PERIOD AVERAGE = 7.14  
 TD PEAK AVERAGE = 7.53  
 FF PEAK AVERAGE = 7.06

POWER DATE	SPRAYS PANEL	WELLS PANEL	TOSHIBA PANEL	KVA PANEL	ELEC BFP PANEL	GROSS MW PANEL	MW BOUGHT 31 DK METER	MW SOLD 31 K METER	DEMAND METER
MAR 86	201	202	203	204	206	207			
1	14.0	33.6	33.6	2.8	24.5	294.0	0.0	175.0	0.0
2	15.4	33.6	33.6	2.8	21.0	266.0	1.0	158.0	2.1
3	14.0	33.6	33.6	4.2	24.5	280.0	0.0	177.0	2.1
4	14.0	33.6	37.8	2.8	24.5	280.0	0.0	176.0	2.1
5	14.0	29.4	33.6	2.8	21.0	280.0	0.0	176.0	2.1
6	14.0	33.6	33.6	4.2	24.5	294.0	0.0	176.0	2.1
7	14.0	29.4	33.6	2.8	24.5	280.0	0.0	178.0	2.1
8	14.0	33.6	33.6	2.8	21.0	280.0	0.0	175.0	2.1
9	15.4	29.4	33.6	2.8	24.5	294.0	0.0	181.0	2.1
10	12.6	29.4	33.6	4.2	24.5	294.0	0.0	182.0	2.1
11	15.4	33.6	33.6	2.8	24.5	294.0	0.0	184.0	2.1
12	11.2	29.4	37.8	2.8	21.0	280.0	0.0	179.0	2.1
13	8.4	33.6	33.6	2.8	24.5	280.0	0.0	177.0	2.1
14	12.6	29.4	33.6	4.2	21.0	280.0	0.0	173.0	2.1
15	14.0	33.6	33.6	2.8	24.5	280.0	0.0	172.0	2.1
16	11.2	29.4	33.6	2.8	21.0	266.0	0.0	171.0	2.1
17	12.6	33.6	33.6	2.8	24.5	280.0	0.0	172.0	2.1
18	12.6	29.4	37.8	4.2	24.5	280.0	0.0	172.0	2.1
19	12.6	29.4	33.6	2.8	21.0	280.0	0.0	174.0	2.1
20	11.2	33.6	33.6	2.8	24.5	280.0	0.0	172.0	2.1
21	12.6	29.4	33.6	2.8	21.0	266.0	0.0	167.0	2.1
22	12.6	33.6	33.6	4.2	24.5	280.0	0.0	164.0	2.1
23	12.6	29.4	33.6	2.8	24.5	266.0	0.0	163.0	2.1
24	12.6	29.4	33.6	2.8	24.5	266.0	0.0	162.0	2.1
25	12.6	29.4	33.6	2.8	24.5	266.0	0.0	161.0	2.1
26	14.0	29.4	33.6	4.2	24.5	266.0	0.0	161.0	2.1
27	14.0	33.6	33.6	2.8	24.5	280.0	0.0	169.0	0.0
28	15.4	29.4	33.6	4.2	21.0	294.0	0.0	177.0	0.0
29	14.0	33.6	33.6	2.8	24.5	280.0	0.0	181.0	0.0
30	14.0	33.6	33.6	2.8	21.0	294.0	0.0	182.0	0.0
31	14.0	29.4	33.6	2.8	24.5	280.0	0.0	177.0	0.0
AVERAGE	13.3	31.4	34.0	3.2	23.4	280.0		173.0	
TOTAL	411.6	974.4	1054.2	98.0	724.5	8680.0	1.0	5364.0	

METER DIFFERENCE = 54.3

WELLS	WELL #1	WELL #2	WELL #3	WELL #4	WELL #5	WELL #6	WELL #7	WELL #8	WELL #9	WELL #10	TOTAL
DATE	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	FLOW	BRINE FLOW
BAR 86	44-7A	44-7	44-7B	48-7A	48-7	88-7	63-7	61-7	81-7	83-7	
1	1373000		1246000	1241000	1298000		61000	70000		146000	1405000
2	1375000		1253000	1242000	1300000		60000	70000		146000	1416000
3	1370000		1250000	1240000	1300000		60000	69000		146000	1405000
4	1368000		1249000	1240000	1300000		59000	69000		144000	1429000
5	1375000		1250000	1238000	1298000		58000	68000		144000	1431000
6	1370000		1250000	1235000	1298000		59000	68000		146000	1426000
7	1370000		1245000	1232000	1294000		58000	68000		145000	1412000
8	1367000		1248000	1231000	1294000		58000	65000		144000	1407000
9	1368000		1245000	1231000	1293000		56000	65000		144000	1402000
10	1365000		1245000	1237000	1284000		57000	66000		144000	1398000
11	1365000		1242000	1238000	1289000		57000	66000		144000	1401000
12	1368000		1242000	1235000	1290000		56000	64000		144000	1397000
13	1367000		1244000	1235000	1288000		56000			144000	1394000
14	1366000		1245000	1234000	1287000		56000			144000	1392000
15	1364000		1245000	1234000	1292000		56000			144000	1395000
16	1364000		1243000	1235000	1291000		56000			144000	1393000
17	1365000		1245000	1235000	1291000		56000			144000	1394000
18	1366000		1247000	1231000	1290000		56000			144000	1394000
19	1372000		1245000	1226000	1288000		56000			144000	1391000
20	1372000		1243000	1229000	1287000		56000			144000	1391000
21	1373000		1244000	1229000	1288000		56000			144000	1391000
22	1375000		1244000	1231000	1289000		56000			144000	1392000
23	1375000		1241000	1232000	1289000		56000			144000	1392000
24	1378000		1245000	1230000	1290000		56000			144000	1393000
25	1378000		1243000	1231000	1290000		56000			144000	1392000
26	1376000		1240000	1228000	1290000		56000			144000	1394000
27	1379000		1241000	1229000	1288000		52000		154000	150000	1419000
28	1381000		1239000	1229000	1290000		50000		152000	146000	1418000
29	1379000		1239000	1230000	1290000		48000		151000	144000	1401000
30	1375000		1238000	1229000	1290000		47000		150000	143000	1401000
31	1380000		1238000	1228000	1289000		46000		150000	142000	1407000
AVG	371581		244323	233065	291452		55677	67333	151400	144457	1391937

INJECTION WELLS MAR 86	46-7B #1 PSIG	WELL 46-7B #1 FLOW	46-7 #3 PSIG	WELL 46-7 #3 FLOW	84-7 #4 PSIG	WELL 84-7 #4 FLOW	TOTAL BRINE FLOW
1	446	930000	470	138000	450	366000	1434000
2	446	930000	469	138000	446	366000	1434000
3	447	940000	463	126000	442	366000	1432000
4	447	940000	463	126000	442	366000	1432000
5	445	940000	464	114000	440	360000	1414000
6	445	930000	462	114000	440	360000	1404000
7	444	930000	460	114000	440	366000	1410000
8	443	920000	460	108000	440	366000	1394000
9	435	900000	468	120000	448	378000	1398000
10	430	890000	470	120000	448	384000	1394000
11	428	890000	468	114000	445	378000	1382000
12	420	860000	469	114000	447	384000	1358000
13	405	800000	470	120000	449	384000	1304000
14	406	810000	472	114000	450	384000	1308000
15	407	820000	473	114000	452	384000	1318000
16	407	820000	473	114000	450	384000	1318000
17	408	820000	472	120000	451	384000	1324000
18	408	820000	474	120000	451	384000	1324000
19	408	820000	473	120000	451	384000	1324000
20	409	820000	474	120000	453	384000	1324000
21	409	820000	476	114000	455	384000	1318000
22	411	820000	479	114000	457	390000	1324000
23	412	820000	480	114000	459	390000	1324000
24	413	820000	481	114000	460	390000	1324000
25	415	820000	481	120000	460	390000	1330000
26	412	820000	480	120000	460	390000	1330000
27	437	910000	477	108000	457	378000	1396000
28	464	980000	472	90000	451	366000	1436000
29	464	990000	471	90000	451	366000	1446000
30	464	980000	471	90000	450	366000	1436000
31	464	980000	471	90000	451	366000	1436000
AVERAGE TOTAL	429	880323	471	114581	450	377032	1371935
		654960000		85248000		280512000	1020720000



WELL NUMBER	WELLHEAD	TEMPERATURE	NITROGEN	ANNULUS	FLOW	HOURS	ANFS	WFSH	WFSH	FLOW	POWER CONSUMPTION
WGR 86	PSIG	DEGREES F.	PSIG	PSIG	LBS/HR			FEET	PSIG	GPM	KWH/1,000,000 LBS
1	301	335	285	90	373000	24.0	299	497.3	291.4	839.3	658.7
2	299	335	285	91	375000	23.0	299	494.7	291.5	843.8	647.4
3	300	335	283	90	370000	24.0	298	492.2	279.5	832.5	668.8
4	304	335	284	92	368000	24.0	298	489.6	280.5	828.0	672.4
5	303	335	283	91	375000	24.0	295	489.6	279.5	843.8	657.7
6	303	335	282	90	370000	24.0	300	489.6	278.5	832.5	671.1
7	303	335	285	90	370000	24.0	300	497.3	281.4	832.5	673.7
8	302	335	283	90	367000	24.0	300	492.2	279.5	825.8	675.8
9	302	335	283	90	368000	24.0	300	492.2	279.5	828.0	677.9
10	301	335	282	90	365000	24.0	300	489.6	278.5	821.3	682.1
11	297	335	282	90	365000	24.0	300	489.6	278.5	821.3	682.5
12	297	335	282	90	368000	23.6	300	489.6	278.5	828.0	677.9
13	296	335	282	90	367000	24.0	300	489.6	278.5	825.8	678.3
14	298	334	282	90	366000	24.0	300	489.6	278.5	823.5	680.1
15	297	334	280	90	364000	24.0	300	484.5	276.5	819.0	681.4
16	297	334	280	90	364000	24.0	300	484.5	276.5	819.0	684.1
17	296	334	282	90	365000	24.0	297	489.6	278.5	821.3	675.7
18	295	334	283	90	366000	24.0	298	492.2	279.5	823.5	674.4
19	290	334	282	90	372000	24.0	297	489.6	278.5	837.0	653.1
20	291	334	282	90	372000	24.0	298	489.6	278.5	837.0	656.2
21	290	334	282	90	373000	24.0	298	489.6	278.5	839.3	647.4
22	291	334	281	90	375000	24.0	295	487.1	277.5	843.8	657.7
23	291	334	281	90	375000	24.0	298	487.1	277.5	843.8	658.8
24	291	334	281	90	378000	24.0	295	487.1	277.5	850.5	648.1
25	290	334	281	90	378000	24.0	297	487.1	277.5	850.5	657.5
26	290	334	281	90	376000	24.0	298	487.1	277.5	846.0	658.1
27	288	334	282	91	379000	24.0	297	487.1	278.5	852.8	650.7
28	285	334	282	91	381000	24.0	299	487.1	278.5	857.3	651.7
29	286	334	282	90	379000	24.0	300	489.6	278.5	852.8	657.7
30	286	334	282	90	375000	24.0	300	487.6	278.5	843.8	661.1
31	285	334	282	91	380000	24.0	299	487.1	278.5	855.0	652.4
AVERAGE	295.0	334.4	282.2	90.2	371580.6		298.6	489.6	278.7	836.1	667.1
TOTAL					275935787.1	742.6					

WELL NUMBER 3 BAR 96	WELLHEAD PSIG	TEMPERATURE DEGREES F.	NITROGEN PSIG	ANNULUS PSIG	FLOW LBS/HR	HOURS	AMPS	HPSH FEET	HPSH PSIG	FLOW BFH	POWER CONSUMPTION KWH/1,000,000 LBS
1	345	355	232	125	246000	24.0	256	272.9	230.0	553.5	844.2
2	341	356	233	124	253000	23.0	257	278.0	231.0	549.3	841.5
3	343	356	232	125	250000	24.0	255	272.9	230.0	542.5	841.0
4	344	355	235	125	249000	24.0	254	280.5	233.0	540.3	837.1
5	344	355	235	123	250000	24.0	250	285.6	233.0	562.5	830.4
6	343	356	233	125	250000	24.0	259	275.4	231.0	562.5	830.7
7	343	355	233	122	245000	24.0	260	283.1	231.0	551.3	881.2
8	343	356	234	125	248000	24.0	258	278.0	232.0	558.0	841.5
9	343	356	233	123	245000	24.0	258	280.5	231.0	551.3	874.5
10	342	356	232	122	245000	24.0	259	280.5	230.0	551.3	871.5
11	343	356	233	122	242000	24.0	258	283.1	231.0	544.5	885.2
12	343	356	235	122	242000	23.2	259	288.2	232.9	544.5	888.7
13	340	356	230	122	244000	24.0	260	275.4	228.0	549.0	884.9
14	342	356	232	122	245000	24.0	260	286.5	230.0	551.3	851.2
15	341	356	230	123	245000	24.0	260	272.9	228.0	551.3	881.2
16	342	356	230	122	243000	24.0	260	275.4	228.0	546.8	853.5
17	342	356	230	123	245000	24.0	258	272.9	228.0	551.3	874.5
18	341	356	230	125	247000	24.0	257	267.8	228.1	555.6	844.0
19	341	356	230	125	245000	24.0	258	267.8	228.1	551.3	871.3
20	340	356	230	125	243000	24.0	259	267.8	228.1	546.8	855.1
21	341	356	231	123	241000	24.0	259	275.4	229.0	542.3	882.4
22	340	356	230	125	244000	24.0	259	267.8	228.1	549.0	891.4
23	341	356	230	124	244000	24.0	259	270.3	228.1	549.0	891.4
24	341	356	230	122	245000	24.0	255	275.4	228.0	551.3	844.2
25	342	356	230	122	243000	24.0	259	275.4	228.0	546.8	853.5
26	344	356	232	122	240000	24.0	260	280.5	230.0	540.0	833.8
27	344	356	231	122	241000	24.0	258	278.0	229.0	542.3	883.0
28	344	356	234	122	239000	24.0	260	285.6	232.0	537.8	862.1
29	344	356	233	121	239000	24.0	260	285.6	231.0	537.8	863.1
30	342	356	232	122	238000	24.0	260	280.5	230.0	535.5	837.2
31	342	356	232	122	238000	24.0	260	280.5	230.0	535.5	837.2
AVERAGE	342.3	355.9	231.8	123.1	244322.6		258.2	277.2	229.9	549.7	877.8
TOTAL					181336219.4	742.2					

WELL NUMBER 4 BAR 86	WELLHEAD PSIG	TEMPERATURE DEGREES F.	NITROGEN PSIG	ANNULUS PSIG	FLOW LBS/HR	HOURS	AKPS	NPSH FEET	NPSH PSIG	FLOW GPM	FIBER CONSUMPTION KW/1,000,000LBS
1	344	348	242	100	241000	24.0	278	362.1	239.4	542.3	957.5
2	342	348	242	100	242000	23.0	277	362.1	239.4	544.5	959.5
3	342	348	240	100	240000	24.0	275	357.0	237.4	549.0	951.5
4	342	348	240	100	240000	24.0	275	357.0	237.4	549.0	951.5
5	345	348	240	98	238000	24.0	274	362.1	237.4	535.5	956.0
6	344	348	240	98	235000	24.0	276	362.1	237.4	528.8	945.3
7	345	347	240	98	232000	24.0	274	362.1	237.4	522.0	940.7
8	346	348	240	98	231000	24.0	272	362.1	237.4	519.8	937.5
9	346	348	240	97	231000	24.0	273	364.7	237.4	519.8	937.4
10	338	348	235	97	237000	24.0	276	351.9	232.5	533.3	961.1
11	338	348	235	97	238000	24.0	276	351.9	232.5	535.5	963.4
12	337	347	235	98	235000	23.5	274	349.4	232.5	528.8	948.3
13	339	348	234	100	235000	24.0	274	341.7	231.6	528.8	948.2
14	338	348	235	100	234000	24.0	274	344.3	232.5	526.5	942.3
15	337	348	232	100	234000	24.0	274	336.6	229.6	526.5	942.7
16	337	348	232	100	235000	24.0	274	336.6	229.6	528.8	945.2
17	338	348	231	100	235000	24.0	274	334.1	228.6	528.8	945.7
18	345	348	233	99	231000	24.0	274	341.7	232.6	519.8	945.0
19	345	348	240	98	226000	24.0	273	362.1	237.4	508.3	1002.1
20	343	347	239	99	229000	24.0	274	357.0	236.4	515.3	983.3
21	344	347	239	99	229000	24.0	274	357.0	236.4	515.3	983.6
22	344	347	238	97	231000	24.0	274	359.6	235.4	519.8	985.0
23	343	347	234	97	232000	24.0	273	349.4	231.5	522.0	977.2
24	340	348	235	98	230000	24.0	276	349.4	232.5	517.5	976.5
25	343	348	235	98	231000	24.0	272	349.4	232.5	519.8	977.5
26	346	347	238	98	228000	24.0	272	357.0	235.4	513.0	969.7
27	345	347	238	97	229000	24.0	273	359.6	235.4	515.3	970.1
28	346	347	240	96	229000	24.0	274	367.2	237.4	515.3	973.4
29	345	347	240	96	230000	24.0	273	367.2	237.4	517.5	983.6
30	346	347	240	96	229000	24.0	273	367.2	237.4	515.3	980.0
31	346	347	240	96	228000	24.0	273	367.2	237.4	513.0	981.3
AVERAGE	342.5	347.6	237.5	98.2	233064.5		274.1	355.1	234.9	524.4	977.0
TOTAL					173050403.2	742.5					

WELL NUMBER 5 MAR 86	WELLHEAD PSIG	TEMPERATURE DEGREES F.	NITROGEN PSIG	ANNULUS PSIG	FLOW LBS/HR	HOURS	AMPS	NPSH FEET	NPSH PSIG	FLOW GPM	POWER CONSUMPTION KW/1,000,000 LBS
1	324	350	246	100	298000	24.0	222	372.3	243.3	670.5	618.6
2	327	350	238	99	300000	23.0	222	354.5	235.5	675.0	611.5
3	325	350	242	99	300000	24.0	226	364.7	239.4	675.0	625.5
4	330	350	241	99	300000	24.0	230	362.1	238.4	675.0	636.6
5	332	350	250	99	298000	24.0	230	385.1	247.2	670.5	610.8
6	331	350	231	100	298000	24.0	231	330.1	228.6	670.5	613.7
7	332	350	246	100	294000	24.0	230	372.3	243.3	661.5	645.6
8	330	350	246	103	294000	24.0	236	364.7	243.4	661.5	666.6
9	332	350	251	103	293000	24.0	235	377.4	248.3	659.3	664.0
10	336	350	248	102	284000	24.0	234	372.3	245.3	639.0	681.2
11	332	350	237	102	289000	24.0	235	349.3	234.5	650.3	673.2
12	328	350	235	100	290000	23.6	232	344.3	232.5	652.5	664.3
13	331	350	244	98	288000	24.0	234	372.3	241.3	648.0	674.7
14	332	350	241	100	287000	24.0	231	359.6	238.4	645.8	662.4
15	334	350	232	99	292000	24.0	230	339.2	229.6	657.0	654.1
16	330	350	232	99	291000	24.0	230	339.2	229.6	654.8	656.3
17	332	350	236	100	291000	24.0	230	346.8	233.5	654.8	656.3
18	333	350	248	101	290000	24.0	232	374.9	245.3	652.5	661.5
19	332	350	240	103	288000	24.0	232	345.4	237.5	648.0	662.8
20	334	350	246	103	287000	24.0	232	364.7	243.4	645.8	671.2
21	332	350	245	104	288000	24.0	232	359.6	242.4	648.0	658.8
22	332	350	228	104	289000	24.0	231	316.2	225.7	650.3	661.7
23	333	350	234	103	289000	24.0	232	334.1	231.6	650.3	666.6
24	332	350	258	106	290000	24.0	232	387.6	255.2	652.5	661.7
25	333	350	243	107	290000	24.0	231	346.8	240.5	652.5	661.5
26	333	350	246	111	290000	24.0	231	341.3	243.5	652.5	661.5
27	330	350	252	122	288000	24.0	232	331.5	249.6	648.0	668.7
28	333	350	262	133	290000	24.0	232	329.0	259.6	652.5	661.7
29	331	350	234	144	290000	24.0	231	229.5	232.4	652.5	661.5
30	331	350	254	154	290000	24.0	231	255.0	252.2	652.5	661.5
31	332	350	254	137	289000	24.0	231	298.4	251.9	650.3	661.7
AVERAGE TOTAL	331.3	350.0	243.2	107.5	291451.6		231.0	346.0	240.7	655.8	658.3
					216431967.7	742.6					

WELL NUMBER 7 MAR 86	WELLHEAD PSIG	TEMPERATURE DEGREES F.	NITROGEN PSIG	ANNULUS PSIG	FLDW LBS/HR	HOURS	ANPS PSIG	HPSH FEET	HPSH PSIG	FLOW GPH	FORMED CONCENTRATION LB/1,000,000 LBS
1	265	349	357	106	61000	24	100	640.1	352.4	137.3	1351.5
2	265	349	359	105	60000	23	100	647.7	354.4	135.0	1394.1
3	267	349	359	102	60000	24	100	655.4	354.3	135.9	1384.0
4	265	349	355	102	59000	24	97	645.2	350.4	132.8	1377.4
5	265	349	355	102	58000	24	100	645.2	350.4	130.5	1431.7
6	266	349	353	102	59000	24	102	640.1	348.4	132.8	1475.4
7	265	349	352	103	58000	24	97	635.0	347.5	130.5	1382.9
8	265	349	352	102	58000	24	98	637.5	347.4	130.5	1403.1
9	266	349	352	102	56000	24	98	637.5	347.4	126.0	1453.2
10	265	348	350	100	57000	24	98	637.5	345.4	128.3	1423.7
11	266	348	350	100	57000	24	96	637.5	345.4	128.3	1398.6
12	265	348	345	100	56000	23	96	624.8	340.5	126.0	1423.7
13	264	348	345	102	56000	24	98	619.7	340.6	126.0	1453.2
14	264	348	350	102	56000	24	98	632.4	345.5	126.0	1433.1
15	263	348	350	102	56000	24	96	632.4	345.5	126.0	1423.5
16	263	348	350	102	56000	24	97	632.4	345.5	126.0	1438.4
17	264	348	350	100	56000	24	98	637.5	345.4	126.0	1453.2
18	264	348	350	100	56000	24	99	637.5	345.4	126.0	1468.0
19	263	348	350	102	56000	24	99	632.4	345.5	126.0	1468.0
20	263	348	350	103	56000	24	98	629.9	345.5	126.0	1453.7
21	263	348	350	103	56000	24	98	629.9	345.5	126.0	1453.7
22	263	348	350	103	56000	24	98	629.9	345.5	126.0	1453.7
23	263	348	350	103	56000	24	97	629.9	345.5	126.0	1438.4
24	262	348	350	102	56000	24	97	632.4	345.5	126.0	1438.4
25	262	348	349	102	56000	24	97	629.9	344.5	126.0	1433.1
26	262	348	349	102	56000	24	96	629.9	344.5	126.0	1423.5
27	265	347	348	102	52000	24	96	627.3	343.5	117.0	1533.9
28	267	348	345	100	50000	24	96	624.8	340.5	112.5	1591.7
29	266	347	345	100	48000	24	96	624.8	340.5	108.0	1650.8
30	266	347	345	100	47000	24	96	624.8	340.5	105.8	1624.1
31	266	347	342	100	46000	24	95	617.1	337.6	103.5	1715.0
AVERAGE TOTAL	264.5	348.2	350.2	101.8	55677.4		97.7	633.5	345.7	126.3	1442.6
					41312645.2	742.0					

WELL NUMBER & HAR 86	WELLHEAD PSIG	TEMPERATURE DEGREES F.	NITROGEN PSIG	ANNULUS PSIG	FLOW LBS/HR	HOURS	ANFS	NFSH FEET	NFSH PSIG	FLOW GPH	POWER CONSUMPTION KW/1,000,000LBS
1	274	346	369	111	70000	24	94	657.9	364.3	157.5	1115.1
2	274	346	370	111	70000	23	94	660.5	365.3	157.5	1115.1
3	274	346	370	110	69000	24	94	663.0	365.3	155.3	1117.2
4	274	346	369	110	69000	24	93	660.5	364.3	155.3	1117.2
5	274	346	369	110	68000	24	93	660.5	364.3	153.0	1135.7
6	273	346	369	111	68000	24	93	657.9	364.3	153.0	1135.7
7	274	346	368	111	68000	24	93	655.4	363.3	153.0	1135.7
8	274	346	365	111	65000	24	93	647.7	360.4	146.3	1189.1
9	275	346	365	111	65000	24	94	647.7	360.4	146.3	1200.9
10	273	346	363	110	66000	24	93	645.2	359.4	148.5	1170.1
11	274	346	364	109	66000	24	93	650.3	359.3	148.5	1170.1
12	274	346	355	108	64000	12	93	629.9	350.5	144.0	1206.7
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											
31											
AVERAGE TOTAL	273.9	346.0	366.3	110.3	67333.3 18516666.7	275.0	93.3	653.0	361.7	151.5	1153.0

WELL NUMBER 9 MAR 86	WELLHEAD PSIG	TEMPERATURE DEGREES F.	NITROGEN PSIG	ANNULUS PSIG	FLOW LBS/HR	HOURS	AMPS	NPSH FEET	HPSH PSIG	FLOW GPM	POWER CONSUMPTION KW/1,000,000 LBS
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27	291	338	272	68	154000	13.5	126	520.2	268.3	346.5	677.4
28	296	340	268	64	152000	23.5	126	520.2	264.3	342.0	688.4
29	295	343	289	68	151000	24.0	125	563.6	285.0	339.8	687.4
30	296	344	255	71	150000	24.0	125	469.2	251.6	337.5	692.0
31	295	344	252	72	150000	24.0	125	459.0	248.7	337.5	692.0
AVERAGE	294.6	341.8	267.2	68.6	151400.0		125.4	506.4	263.6	340.7	697.8
TOTAL					16502600.0	109.0					

WELL NUMBER	WELLHEAD PSIG	TEMPERATURE DEGREES F.	NITROGEN PSIG	ANNULUS PSIG	FLOW LBS/HR	HOURS	AMPS	NPSH FEET	NPSH PSIG	FLOW GPM	POWER CONSUMPTION KW/1,000,000 LBS
1	300	345	265	89	146000	24.0	116	448.8	261.8	328.5	655.8
2	300	345	256	87	146000	23.0	116	431.0	252.9	328.5	659.8
3	300	345	242	89	146000	23.5	116	390.2	239.2	328.5	655.8
4	300	345	286	89	144000	24.0	116	502.4	282.4	324.0	648.8
5	300	345	285	89	144000	24.0	117	499.8	281.4	324.0	674.7
6	298	345	267	89	146000	24.0	116	453.9	263.8	328.5	659.8
7	296	345	257	89	145000	24.0	115	428.4	253.9	326.3	658.6
8	298	345	255	89	144000	24.0	117	423.3	252.0	324.0	674.7
9	297	345	276	87	144000	24.0	117	476.9	272.6	324.0	674.7
10	296	345	283	89	144000	24.0	117	494.7	279.5	324.0	674.7
11	295	345	256	89	144000	24.0	117	425.9	253.0	324.0	674.7
12	293	345	226	89	144000	23.2	117	349.4	223.5	324.0	674.7
13	294	345	238	89	144000	24.0	117	380.0	235.3	324.0	674.7
14	293	345	239	89	144000	24.0	118	382.5	236.3	324.0	680.5
15	292	345	230	89	144000	24.0	118	359.6	227.4	324.0	680.5
16	291	345	234	89	144000	24.0	118	369.8	231.4	324.0	680.5
17	291	345	245	89	144000	24.0	120	397.8	242.2	324.0	692.8
18	289	345	257	88	144000	24.0	121	431.0	253.9	324.0	672.8
19	289	345	249	88	144000	24.0	123	410.6	246.1	324.0	705.7
20	287	345	265	89	144000	24.0	122	448.8	261.8	324.0	703.5
21	288	346	264	89	144000	24.0	122	446.3	260.8	324.0	703.5
22	288	346	253	89	144000	24.0	121	418.2	250.0	324.0	692.8
23	288	346	245	89	144000	24.0	120	397.8	242.2	324.0	692.8
24	288	346	282	89	144000	24.0	120	472.2	278.5	324.0	692.8
25	283	346	265	89	144000	24.0	120	448.8	261.8	324.0	672.8
26	280	346	248	89	144000	24.0	119	405.5	245.1	324.0	664.2
27	284	346	253	89	150000	24.0	120	418.2	250.0	337.5	674.7
28	284	346	251	89	146000	24.0	120	413.1	248.0	328.5	682.8
29	285	346	255	91	144000	24.0	120	418.2	252.0	324.0	692.8
30	285	346	249	91	143000	24.0	119	402.9	246.1	321.8	691.8
31	284	346	249	92	142000	24.0	119	400.4	246.1	319.5	685.8
AVERAGE TOTAL	291.5	345.4	255.6	89.1	144451.6		118.5	424.7	252.6	325.0	681.1
					107139761.3	741.7					