



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

July 16, 1996

SWD-528
PDEV0020900528

Giant Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413-0159

Attn: Mr. Lynn Shelton

**RE: Injection Pressure Increase, Bloomfield Refining Well No.1
San Juan County, New Mexico**

Dear Mr. Shelton:

Reference is made to your request dated May 3, 1996 to increase the surface injection pressure on the above referenced well. This request is based on a step rate test conducted on March 1, 1996. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on this well is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following well:

<i>Well and Location</i>	<i>Maximum Surface Injection Pressure</i>
Bloomfield Refining Well No.1	1150 PSIG
Located in Unit Letter 'I', Section 27, Township 29 North, Range 11 West, San Juan County, New Mexico.	

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

William J. LeMay
Director

WJL/BES

cc: Oil Conservation Division - Aztec
Files:SWD-528; PSI-X 1st QTR-97 /

PSIX

SND-528

OIL CONSERVATION DIVISION
RECEIVED



'96 MAR 3 AM 8 52

50 Road 4990
P.O. Box 159
Bloomfield, New Mexico 87413
505
632-8013

April 30, 1996

Mr. Roger Anderson
Environmental Bureau Chief
New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

**Re: Permit Modification, GW 130, Injection Well WD #1
Giant Refining Company - Bloomfield, San Juan County**

Dear Mr. Anderson:

Pursuant to Sections 3-109 and 5-101 of the New Mexico Water Quality Control Commission, Giant Refining Company - Bloomfield requests a permit modification to our existing permit GW 130. Specifically, Giant is requesting an increase in the allowable surface injection pressure of 955 psi to 1150 psi.

To insure that the injection well would perform satisfactorily at the higher injection pressures, the well was sand fractured on March 1, 1996 by BJ Services. After cleanup, a Step Rate Injection Test was performed, with Ernie Busch of the Aztec OCD office observing. Copies of the original frac data, step rate test data (including the Tefteller downhole data) and the graph of the step rate test are included to document the reasoning for the increase in injection pressure.

Please note that the Step Rate Injection Test was run to a maximum of 1435 psi surface pressure, but due to a problem with the surface equipment, and the subsequent failure to let the bottom hole pressure stabilize, the data has been disputed, even though the bottom hole pressure rose only 25 psi during the test. Rather than go to the expense of another Step Rate Test, Giant is accepting the 1150 psi limit and reserves the right to perform another Step Rate Test if additional work is performed on the well. 1150 psi will allow for adequate day to day injection rates that should handle refinery demand, but it does not give Giant the leeway to inject extra water during periods of high flow or low evaporation when inventories are high.

As required by Section 3-114.B.1.(a) of the WQCC Regulations, Giant is submitting a check for fifty (50) dollars. Since this is an existing permit, Giant requests a waiver of the flat fee as noted in Section 3-114.B.5.

If there is additional information that you require, please do not hesitate to contact me at (505) 632 8013.

Sincerely:

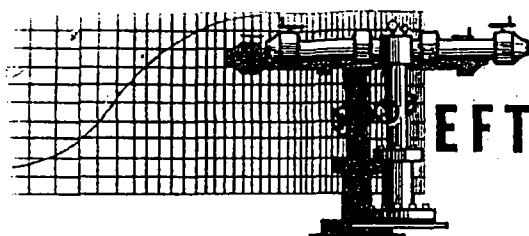
A handwritten signature in cursive script, appearing to read "Lynn Shelton".

Lynn Shelton
Environmental Manager
Giant Refining Company - Bloomfield

Enclosures

cc: John Stokes, Refinery Manager, Giant Refining Company - Bloomfield
Ernie Busch, NM OCD, Aztec
Mark Ashley, NM OCD, Santa Fe

[illegible]



BHP • SU • PI • DD • GWT • RFS • GOR • FL • TS

EFTELLER, INC.

reservoir engineering data

FARMINGTON, NEW MEXICO / MIDLAND, TEXAS
GRAND JUNCTION, COLORADO

P. O. Box 1198
Farmington, New Mexico 87499
(505) 325-1731

Farmington Fax (505) 325-1148
Midland Fax (915) 682-5329
Grand Junction Fax (303) 241-7634

GIANT REFINING

SWD (CLASS 1) NO. WD-1

MARCH 7, 1996

Serving the Rocky Mountain Area & Permian Basin Area

File Reference F224307.RED

Page A

Customer	GIANT REFINING
Street	7415 E. MAIN
City/State.....	FARMINGTON, NM 87402
Country	U.S.A.
Service Company	TEFTELLER, INC.
Well Name	SWD (CLASS I) NO. WD-1
Well Location	SAN JUAN COUNTY, NM
Field / Pool	MESA VERDE FORMATION
Status (Oil, Gas, Other)	WATER DISPOSAL
Test Type	STEP RATE TEST
Date of Test	3-7-96
Producing Interval	3276' - 3514'
Recorder Depth	3400'
Recorder Position	
Shut In Date	Start: 3-7-96
	Stop: 3-7-96
	Duration: 7 HOURS
Bottom Hole Temperature	

Gauge Identification

```
Gauge Manufacturer ..... MICRO-SMART SYSTEMS
Serial Number ..... 224
Model Number ..... SP2000
Pressure Range .....
Battery Type .....
Calibration I.D. ....
Last Calibration ..... 10/ 3/95
```

Gauge Setup Parameters

```
Probe Set Up Time ..... 3/ 7/96    7:46: 0
Time Delay to First Reading ....
Test Type Selection ..... STEP RATE TEST
Test Duration Selection ..... 7 HOURS
```

COMPANY: GIANT REFINING

PAGE 1 OF 11

WELL NAME : SWD (CLASS I) NO. WD-1

DATE : 03/08/96

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F224307.RED

Date MM/DD	Time hh:mm:ss	Test Time hhhh.hhhh	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
03/07	07:46:00	.0000	.01	67.58		
03/07	08:16:30	.5083	.47	46.90		
03/07	08:19:00	.5500	.89	44.34		
03/07	08:19:15	.5542	.93	44.16		
03/07	08:22:00	.6000	1.35	41.84		
03/07	08:22:15	.6042	1.38	41.69		
03/07	08:27:00	.6833	1.78	38.85		
03/07	08:27:15	.6875	1.81	38.73		
03/07	08:38:15	.8708	2.04	36.47		
03/07	08:38:30	.8750	8.77	36.51		
03/07	08:38:45	.8792	701.41	36.53		
03/07	08:39:00	.8833	667.26	36.55		
03/07	08:39:15	.8875	654.50	36.58		
03/07	08:39:30	.8917	663.26	36.60		
03/07	08:39:45	.8958	686.24	36.63		
03/07	08:39:48	.8969	690.35	36.72		
03/07	08:39:52	.8979	702.55	36.85		
03/07	08:39:56	.8990	711.16	36.99		
03/07	08:40:00	.9000	714.85	37.12		
03/07	08:40:03	.9010	722.01	37.25		
03/07	08:40:07	.9021	730.35	37.38		
03/07	08:40:11	.9031	736.44	37.52		
03/07	08:40:15	.9042	741.33	37.65		
03/07	08:40:18	.9052	748.88	37.78		
03/07	08:40:22	.9063	757.63	37.91		
03/07	08:40:26	.9073	762.79	38.05		
03/07	08:40:30	.9083	769.41	38.18		
03/07	08:40:33	.9094	775.09	38.33		
03/07	08:40:37	.9104	780.64	38.52		
03/07	08:40:41	.9115	784.19	38.70		
03/07	08:40:45	.9125	790.41	38.88		
03/07	08:40:48	.9135	796.62	39.07		
03/07	08:40:52	.9146	800.84	39.25		
03/07	08:40:56	.9156	806.92	39.43		
03/07	08:41:00	.9167	814.99	39.61		
03/07	08:41:03	.9177	824.66	39.80		
03/07	08:41:07	.9187	833.53	39.98		
03/07	08:41:11	.9198	841.07	40.17		
03/07	08:41:15	.9208	848.88	40.35		
03/07	08:41:18	.9219	857.74	40.55		
03/07	08:41:22	.9229	864.35	40.76		
03/07	08:41:26	.9240	869.89	40.97		
03/07	08:41:30	.9250	877.29	41.19		
03/07	08:41:33	.9260	884.43	41.40		
03/07	08:41:37	.9271	891.04	41.61		
03/07	08:41:41	.9281	897.11	41.83		
03/07	08:41:45	.9292	905.31	42.04		
03/07	08:41:48	.9302	908.99	42.25		
03/07	08:41:52	.9312	915.33	42.46		
03/07	08:41:56	.9323	921.93	42.68		
03/07	08:42:00	.9333	927.21	42.89		
03/07	08:42:03	.9344	933.15	43.10		
03/07	08:42:07	.9354	937.36	43.32		
03/07	08:42:11	.9365	944.23	43.55		
03/07	08:42:15	.9375	948.84	43.78		
03/07	08:42:18	.9385	955.17	43.99		
03/07	08:42:22	.9396	960.71	44.22		
03/07	08:42:26	.9406	967.58	44.45		
03/07	08:42:30	.9417	973.12	44.67		
03/07	08:42:33	.9427	977.06	44.90		
03/07	08:42:37	.9438	983.13	45.12		
03/07	08:42:41	.9448	989.47	45.35		
03/07	08:42:45	.9458	995.00	45.58		
03/07	08:42:48	.9469	1001.34	45.80		
03/07	08:42:52	.9479	1007.67	46.03		

COMPANY: GIANT REFINING

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WELL NAME : SWD (CLASS I) NO. WD-1

DATE : 03/08/96

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F224307.RED

Date MM/DD	Time hh:mm:ss	Test Time hhhh.hhhh	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
03/07	08:42:56	.9490	1015.20	46.25		
03/07	08:43:00	.9500	1023.40	46.48		
03/07	08:43:03	.9510	1031.72	46.71		
03/07	08:43:07	.9521	1039.52	46.94		
03/07	08:43:11	.9531	1046.79	47.16		
03/07	08:43:15	.9542	1052.98	47.39		
03/07	08:43:18	.9552	1059.32	47.61		
03/07	08:43:22	.9563	1066.45	47.84		
03/07	08:43:26	.9573	1072.12	48.07		
03/07	08:43:30	.9583	1081.64	48.30		
03/07	08:43:33	.9594	1085.05	48.51		
03/07	08:43:37	.9604	1089.92	48.74		
03/07	08:43:41	.9615	1097.45	48.97		
03/07	08:43:45	.9625	1104.18	49.19		
03/07	08:43:48	.9635	1112.63	49.42		
03/07	08:43:52	.9646	1119.90	49.65		
03/07	08:43:56	.9656	1129.02	49.88		
03/07	08:44:00	.9667	1137.34	50.10		
03/07	08:44:03	.9677	1146.06	50.33		
03/07	08:44:07	.9688	1154.25	50.55		
03/07	08:44:11	.9698	1161.78	50.78		
03/07	08:44:15	.9708	1171.30	51.00		
03/07	08:44:18	.9719	1179.75	51.23		
03/07	08:44:22	.9729	1186.61	51.46		
03/07	08:44:26	.9740	1194.67	51.69		
03/07	08:44:30	.9750	1201.93	51.91		
03/07	08:44:33	.9760	1211.04	52.14		
03/07	08:44:37	.9771	1216.04	52.36		
03/07	08:44:41	.9781	1227.55	52.59		
03/07	08:44:45	.9792	1236.40	52.81		
03/07	08:44:48	.9802	1244.45	53.04		
03/07	08:44:52	.9812	1251.71	53.27		
03/07	08:44:56	.9823	1260.69	53.49		
03/07	08:45:00	.9833	1268.35	53.72		
03/07	08:45:03	.9844	1275.47	53.93		
03/07	08:45:07	.9854	1286.05	54.16		
03/07	08:45:11	.9865	1292.10	54.40		
03/07	08:45:15	.9875	1300.29	54.63		
03/07	08:45:18	.9885	1308.87	54.86		
03/07	08:45:22	.9896	1316.65	55.09		
03/07	08:45:26	.9906	1323.37	55.31		
03/07	08:45:30	.9917	1329.69	55.54		
03/07	08:45:33	.9927	1339.60	55.78		
03/07	08:45:37	.9937	1340.87	56.01		
03/07	08:45:41	.9948	1342.81	56.24		
03/07	08:45:45	.9958	1350.46	56.47		
03/07	08:45:48	.9969	1354.65	56.71		
03/07	08:45:52	.9979	1353.14	56.94		
03/07	08:45:56	.9990	1363.44	57.18		
03/07	08:46:00	1.0000	1378.65	57.41		
03/07	08:46:03	1.0010	1385.90	57.65		
03/07	08:46:07	1.0021	1393.14	57.88		
03/07	08:46:11	1.0031	1404.51	58.12		
03/07	08:46:15	1.0042	1414.27	58.35		
03/07	08:46:18	1.0052	1424.17	58.59		
03/07	08:46:22	1.0063	1432.48	58.82		
03/07	08:46:26	1.0073	1443.97	59.06		
03/07	08:46:30	1.0083	1458.25	59.30		
03/07	08:46:33	1.0094	1467.22	59.54		
03/07	08:46:37	1.0104	1475.79	59.78		
03/07	08:46:41	1.0115	1489.80	60.02		
03/07	08:46:45	1.0125	1502.61	60.27		
03/07	08:46:48	1.0135	1511.57	60.51		
03/07	08:46:52	1.0146	1518.94	60.75		
03/07	08:46:56	1.0156	1527.91	61.00		

COMPANY: GIANT REFINING

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WELL NAME : SWD (CLASS I) NO. WD-1

DATE : 03/08/96

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F224307.RED

Date MM/DD	Time hh:mm:ss	Test Time hhhh.hhhh	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
03/07	08:47:00	1.0167	1537.13	61.24		
03/07	08:47:03	1.0177	1547.95	61.48		
03/07	08:47:07	1.0187	1557.84	61.73		
03/07	08:47:11	1.0198	1568.40	61.97		
03/07	08:47:15	1.0208	1576.56	62.21		
03/07	08:47:18	1.0219	1587.77	62.46		
03/07	08:47:22	1.0229	1598.06	62.71		
03/07	08:47:26	1.0240	1605.15	62.96		
03/07	08:47:30	1.0250	1614.24	63.22		
03/07	08:47:33	1.0260	1623.59	63.47		
03/07	08:47:37	1.0271	1633.34	63.72		
03/07	08:47:41	1.0281	1640.57	63.98		
03/07	08:47:45	1.0292	1650.18	64.23		
03/07	08:47:48	1.0302	1659.53	64.48		
03/07	08:47:52	1.0313	1670.74	64.74		
03/07	08:47:56	1.0323	1679.95	64.99		
03/07	08:48:00	1.0333	1690.63	65.24		
03/07	08:48:03	1.0344	1701.82	65.51		
03/07	08:48:07	1.0354	1713.16	65.78		
03/07	08:48:11	1.0365	1723.16	66.05		
03/07	08:48:15	1.0375	1732.36	66.32		
03/07	08:48:18	1.0385	1744.75	66.60		
03/07	08:48:22	1.0396	1756.47	66.87		
03/07	08:48:26	1.0406	1766.47	67.14		
03/07	08:48:30	1.0417	1775.01	67.41		
03/07	08:48:33	1.0427	1785.41	67.68		
03/07	08:48:37	1.0438	1795.01	67.95		
03/07	08:48:41	1.0448	1805.93	68.22		
03/07	08:48:45	1.0458	1816.59	68.50		
03/07	08:48:48	1.0469	1822.47	68.79		
03/07	08:48:52	1.0479	1832.72	69.08		
03/07	08:48:56	1.0490	1842.30	69.38		
03/07	08:49:00	1.0500	1845.52	69.67		
03/07	08:49:03	1.0510	1854.97	69.97		
03/07	08:49:07	1.0521	1865.22	70.27		
03/07	08:49:11	1.0531	1875.73	70.56		
03/07	08:49:15	1.0542	1886.24	70.86		
03/07	08:49:18	1.0552	1898.08	71.15		
03/07	08:49:22	1.0562	1910.84	71.44		
03/07	08:49:26	1.0573	1922.81	71.74		
03/07	08:49:30	1.0583	1934.11	72.04		
03/07	08:49:33	1.0594	1945.94	72.33		
03/07	08:49:37	1.0604	1958.46	72.56		
03/07	08:49:41	1.0615	1969.38	72.79		
03/07	08:49:45	1.0625	1981.11	73.01		
03/07	08:49:48	1.0635	1993.35	73.24		
03/07	08:49:52	1.0646	2006.27	73.47		
03/07	08:49:56	1.0656	2018.25	73.70		
03/07	08:50:00	1.0667	2030.23	73.92		
03/07	08:50:03	1.0677	2043.80	74.16		
03/07	08:50:07	1.0688	2056.71	74.38		
03/07	08:50:11	1.0698	2069.88	74.61		
03/07	08:50:15	1.0708	2081.20	74.84		
03/07	08:50:18	1.0719	2091.21	75.01		
03/07	08:50:22	1.0729	2100.81	75.20		
03/07	08:50:26	1.0740	2109.89	75.39		
03/07	08:50:30	1.0750	2115.12	75.58		
03/07	08:50:33	1.0760	2118.09	75.77		
03/07	08:51:22	1.0896	2118.23	78.56		
03/07	08:51:41	1.0948	2117.88	79.80		
03/07	08:51:45	1.0958	2117.79	80.09		
03/07	08:52:00	1.1000	2117.44	81.15		
03/07	08:52:03	1.1010	2117.36	81.42		
03/07	08:52:18	1.1052	2117.08	82.47		
03/07	08:52:22	1.1063	2116.73	82.74		

INSTRUMENT @ 3400'

COMPANY: GIANT REFINING

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WELL NAME : SWD (CLASS I) NO. WD-1

DATE : 03/08/96

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F224307.RED

Date MM/DD	Time hh:mm:ss	Test Time hhhh.hhhh	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
03/07	08:53:15	1.1208	2116.67	86.12		
03/07	08:54:15	1.1375	2117.04	89.75		
03/07	08:54:45	1.1458	2117.29	91.56		
03/07	08:55:00	1.1500	2117.51	92.47		
03/07	08:55:48	1.1635	2117.64	95.13		
03/07	08:56:37	1.1771	2117.93	97.22		
03/07	08:57:30	1.1917	2118.04	99.00		
03/07	08:58:30	1.2083	2118.34	100.51		
03/07	08:59:30	1.2250	2118.45	102.04		
03/07	09:00:30	1.2417	2118.53	103.26		
03/07	09:01:30	1.2583	2118.79	104.02		
03/07	09:02:30	1.2750	2118.71	104.78		
03/07	09:03:30	1.2917	2118.77	105.37		
03/07	09:04:30	1.3083	2118.81	105.75		
03/07	09:05:30	1.3250	2118.86	106.12		
03/07	09:06:30	1.3417	2118.90	106.41		
03/07	09:07:30	1.3583	2118.95	106.59		
03/07	09:08:30	1.3750	2118.99	106.78		
03/07	09:09:30	1.3917	2119.02	106.92		
03/07	09:10:30	1.4083	2119.04	107.00		
03/07	09:11:30	1.4250	2119.07	107.09		
03/07	09:12:30	1.4417	2119.10	107.17		
03/07	09:13:30	1.4583	2119.12	107.22		
03/07	09:14:30	1.4750	2119.15	107.26		
03/07	09:15:30	1.4917	2119.14	107.30		
03/07	09:16:30	1.5083	2119.14	107.33		
03/07	09:17:30	1.5250	2119.14	107.35		
03/07	09:18:30	1.5417	2119.14	107.36		
03/07	09:19:30	1.5583	2119.15	107.38		
03/07	09:20:30	1.5750	2119.15	107.41		
03/07	09:21:30	1.5917	2119.15	107.43		
03/07	09:22:30	1.6083	2119.14	107.44		
03/07	09:23:30	1.6250	2119.16	107.45		
03/07	09:24:30	1.6417	2119.14	107.45		
03/07	09:25:30	1.6583	2119.16	107.45		
03/07	09:26:30	1.6750	2119.17	107.45		
03/07	09:27:30	1.6917	2119.15	107.47		
03/07	09:28:30	1.7083	2119.14	107.48		
03/07	09:29:30	1.7250	2119.14	107.49		
03/07	09:30:30	1.7417	2119.17	107.49		
03/07	09:31:30	1.7583	2119.11	107.49		
03/07	09:32:30	1.7750	2119.10	107.50		
03/07	09:33:30	1.7917	2119.11	107.51		
03/07	09:34:30	1.8083	2119.11	107.51		
03/07	09:35:30	1.8250	2119.14	107.51		
03/07	09:36:30	1.8417	2119.11	107.52		
03/07	09:37:30	1.8583	2119.41	107.53		
03/07	09:38:30	1.8750	2119.00	107.54		
03/07	09:39:30	1.8917	2119.05	107.54		
03/07	09:40:30	1.9083	2119.08	107.54		
03/07	09:41:30	1.9250	2119.08	107.54		
03/07	09:42:30	1.9417	2119.10	107.54		
03/07	09:43:30	1.9583	2119.11	107.54		
03/07	09:44:30	1.9750	2119.10	107.55		
03/07	09:45:30	1.9917	2119.08	107.55		
03/07	09:46:30	2.0083	2119.06	107.55		
03/07	09:47:30	2.0250	2119.12	107.56		
03/07	09:48:30	2.0417	2119.10	107.56		
03/07	09:49:30	2.0583	2119.09	107.56		
03/07	09:50:30	2.0750	2119.44	107.56		
03/07	09:51:30	2.0917	2119.39	107.57		
03/07	09:52:30	2.1083	2119.57	107.57		
03/07	09:53:30	2.1250	2119.65	107.57		
03/07	09:53:45	2.1292	2119.69	107.57		
03/07	09:54:00	2.1333	2119.20	107.58		

RATE #1 - 0.06 BPM

START TEST

COMPANY: GIANT REFINING

PAGE 6 OF 11

WELL NAME : SWD (CLASS 1) NO. WD-1

DATE : 03/08/96

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F224307.RED

Date MM/DD	Time hh:mm:ss	Test Time hhhh.hhhh	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
03/07	10:55:45	3.1625	2125.47	107.49		
03/07	10:56:45	3.1792	2125.59	107.49		
03/07	10:57:45	3.1958	2125.72	107.47		
03/07	10:58:45	3.2125	2125.83	107.46		
03/07	10:59:45	3.2292	2125.91	107.44		
03/07	11:00:45	3.2458	2126.00	107.44		RATE #5 - 3.0 BPM
03/07	11:01:45	3.2625	2126.09	107.42		
03/07	11:02:45	3.2792	2126.19	107.41		
03/07	11:03:45	3.2958	2126.28	107.39		
03/07	11:04:45	3.3125	2126.38	107.38		
03/07	11:05:45	3.3292	2126.44	107.37		
03/07	11:06:45	3.3458	2126.52	107.37		
03/07	11:07:15	3.3542	2126.59	107.36		
03/07	11:07:30	3.3583	2127.17	107.35		
03/07	11:07:45	3.3625	2127.47	107.35		
03/07	11:08:00	3.3667	2127.65	107.35		
03/07	11:09:00	3.3833	2127.76	107.33		
03/07	11:10:00	3.4000	2127.84	107.33		
03/07	11:11:00	3.4167	2127.98	107.32		
03/07	11:12:00	3.4333	2128.09	107.32		
03/07	11:13:00	3.4500	2128.20	107.32		
03/07	11:14:00	3.4667	2128.31	107.32		
03/07	11:15:00	3.4833	2128.43	107.32		
03/07	11:16:00	3.5000	2128.51	107.32		RATE #6 - 3.6 BPM
03/07	11:17:00	3.5167	2128.59	107.32		
03/07	11:18:00	3.5333	2128.68	107.31		
03/07	11:19:00	3.5500	2128.80	107.32		
03/07	11:20:00	3.5667	2128.91	107.32		
03/07	11:21:00	3.5833	2129.01	107.32		
03/07	11:21:45	3.5958	2129.05	107.32		
03/07	11:22:00	3.6000	2129.55	107.32		
03/07	11:22:15	3.6042	2130.20	107.32		
03/07	11:23:15	3.6208	2130.43	107.32		
03/07	11:24:15	3.6375	2130.48	107.33		
03/07	11:25:15	3.6542	2130.60	107.34		
03/07	11:26:15	3.6708	2130.75	107.35		
03/07	11:27:15	3.6875	2130.89	107.36		
03/07	11:28:15	3.7042	2131.06	107.36		
03/07	11:29:15	3.7208	2131.23	107.37		
03/07	11:30:15	3.7375	2131.38	107.37		
03/07	11:31:15	3.7542	2131.53	107.37		RATE #7 - 4.4 BPM
03/07	11:32:15	3.7708	2131.65	107.37		
03/07	11:33:15	3.7875	2131.75	107.37		
03/07	11:34:15	3.8042	2131.89	107.37		
03/07	11:35:15	3.8208	2132.00	107.36		
03/07	11:36:15	3.8375	2132.09	107.37		
03/07	11:36:45	3.8458	2132.16	107.37		
03/07	11:37:00	3.8500	2130.31	107.37		
03/07	11:37:15	3.8542	2130.87	107.37		
03/07	11:37:30	3.8583	2132.81	107.37		
03/07	11:38:00	3.8667	2133.18	107.37		
03/07	11:38:15	3.8708	2133.27	107.37		
03/07	11:39:15	3.8875	2133.36	107.37		
03/07	11:40:15	3.9042	2133.45	107.37		
03/07	11:41:15	3.9208	2133.56	107.37		
03/07	11:42:15	3.9375	2133.69	107.37		
03/07	11:43:15	3.9542	2133.81	107.37		
03/07	11:44:15	3.9708	2133.93	107.36		
03/07	11:45:15	3.9875	2134.07	107.35		
03/07	11:46:15	4.0042	2134.23	107.35		
03/07	11:47:15	4.0208	2134.38	107.34		
03/07	11:48:15	4.0375	2134.53	107.33		
03/07	11:49:15	4.0542	2134.65	107.32		RATE #8 - 5.5 BPM
03/07	11:50:15	4.0708	2134.78	107.31		
03/07	11:51:15	4.0875	2134.90	107.32		

COMPANY: GIANT REFINING

PAGE 7 OF 11

WELL NAME : SWD (CLASS I) NO. WD-1

DATE : 03/08/96

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F224307.RED

Date MM/DD	Time hh:mm:ss	Test Time hhhh.hhhh	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
03/07	11:52:15	4.1042	2135.01	107.31		
03/07	11:52:30	4.1083	2134.92	107.31		
03/07	11:52:45	4.1125	2134.47	107.31		
03/07	11:53:00	4.1167	2131.52	107.31		
03/07	11:53:15	4.1208	2131.31	107.31		
03/07	11:53:30	4.1250	2136.13	107.31		
03/07	11:53:45	4.1292	2137.31	107.31		
03/07	11:54:33	4.1427	2137.66	107.33		
03/07	11:55:22	4.1563	2137.96	107.35		
03/07	11:56:15	4.1708	2138.08	107.35		
03/07	11:57:15	4.1875	2138.18	107.36		
03/07	11:58:15	4.2042	2138.32	107.38		
03/07	11:59:15	4.2208	2138.47	107.39		
03/07	11:59:45	4.2292	2138.53	107.39		
03/07	12:00:00	4.2333	2139.02	107.39		
03/07	12:00:15	4.2375	2139.28	107.39		
03/07	12:00:30	4.2417	2139.59	107.39		
03/07	12:01:30	4.2583	2139.40	107.39		
03/07	12:02:30	4.2750	2139.44	107.39		
03/07	12:03:30	4.2917	2139.52	107.38		
03/07	12:04:30	4.3083	2139.64	107.37		
03/07	12:05:00	4.3167	2139.72	107.36		
03/07	12:05:15	4.3208	2137.55	107.36		
03/07	12:05:30	4.3250	2141.24	107.36		
03/07	12:05:45	4.3292	2144.53	107.36		
03/07	12:06:00	4.3333	2143.98	107.36		
03/07	12:07:00	4.3500	2143.85	107.36		
03/07	12:07:48	4.3635	2144.23	107.37		
03/07	12:08:03	4.3677	2143.80	107.37		
03/07	12:08:07	4.3688	2143.58	107.37		
03/07	12:08:22	4.3729	2143.44	107.39		
03/07	12:08:26	4.3740	2133.73	107.39		
03/07	12:08:56	4.3823	2133.33	107.39		
03/07	12:09:00	4.3833	2133.23	107.39		
03/07	12:09:45	4.3958	2132.82	107.40		
03/07	12:10:00	4.4000	2132.59	107.39		
03/07	12:10:30	4.4083	2132.24	107.37		
03/07	12:10:45	4.4125	2132.09	107.37		
03/07	12:11:45	4.4292	2131.82	107.34		
03/07	12:12:45	4.4458	2131.49	107.31		
03/07	12:13:45	4.4625	2131.18	107.29		RECALIBRATE FLOW METER
03/07	12:14:45	4.4792	2131.09	107.28		
03/07	12:15:45	4.4958	2130.95	107.26		
03/07	12:16:15	4.5042	2130.85	107.25		
03/07	12:16:30	4.5083	2130.28	107.25		
03/07	12:16:45	4.5125	2129.83	107.25		
03/07	12:17:00	4.5167	2130.31	107.25		
03/07	12:17:30	4.5250	2130.65	107.24		
03/07	12:17:45	4.5292	2131.72	107.24		
03/07	12:18:45	4.5458	2131.60	107.24		RATE #1-A - 2.0 BPM
03/07	12:19:45	4.5625	2131.66	107.23		
03/07	12:20:45	4.5792	2131.79	107.23		
03/07	12:21:45	4.5958	2131.83	107.24		
03/07	12:22:45	4.6125	2132.21	107.24		
03/07	12:23:00	4.6167	2132.94	107.24		
03/07	12:24:00	4.6333	2133.07	107.24		RATE #2-A - 3.0 BPM
03/07	12:24:30	4.6417	2133.42	107.24		
03/07	12:24:45	4.6458	2133.55	107.24		
03/07	12:25:45	4.6625	2133.68	107.25		
03/07	12:26:45	4.6792	2133.64	107.26		
03/07	12:27:45	4.6958	2133.56	107.27		
03/07	12:28:30	4.7083	2133.56	107.28		
03/07	12:28:45	4.7125	2135.74	107.28		RATE #3-A - 4.0 BPM
03/07	12:29:45	4.7292	2135.93	107.30		
03/07	12:30:45	4.7458	2136.02	107.31		

COMPANY: GIANT REFINING

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WELL NAME : SWD (CLASS I) NO. WD-1

DATE : 03/08/96

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F224307.RED

Date MM/DD	Time hh:mm:ss	Test Time hhhh.hhhh	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
03/07	12:30:48	4.7469	2136.06	107.32		
03/07	12:30:52	4.7479	2136.59	107.32		
03/07	12:31:41	4.7615	2136.61	107.35		
03/07	12:32:30	4.7750	2136.83	107.35		
03/07	12:33:30	4.7917	2136.72	107.36		
03/07	12:34:30	4.8083	2136.74	107.36		RATE #4-A - 5.0 BPH
03/07	12:34:45	4.8125	2138.34	107.36		
03/07	12:35:00	4.8167	2139.11	107.36		
03/07	12:35:48	4.8302	2139.51	107.37		
03/07	12:36:37	4.8438	2139.83	107.39		
03/07	12:37:30	4.8583	2139.93	107.39		
03/07	12:38:30	4.8750	2140.01	107.39		RATE #5-A - 5.0 BPH
03/07	12:39:30	4.8917	2140.16	107.40		
03/07	12:40:30	4.9083	2140.33	107.41		
03/07	12:41:30	4.9250	2140.50	107.41		
03/07	12:42:30	4.9417	2140.68	107.41		
03/07	12:43:30	4.9583	2140.86	107.41		
03/07	12:44:30	4.9750	2141.03	107.40		RATE #6-A - 5.0 BPH
03/07	12:45:30	4.9917	2141.20	107.40		
03/07	12:46:30	5.0083	2141.37	107.39		
03/07	12:47:30	5.0250	2141.54	107.39		
03/07	12:48:30	5.0417	2141.71	107.39		
03/07	12:49:30	5.0583	2141.87	107.37		
03/07	12:49:45	5.0625	2141.90	107.37		
03/07	12:50:00	5.0667	2135.05	107.37		SHUT PUMPING DOWN — END TEST
03/07	12:50:30	5.0750	2134.77	107.37		
03/07	12:50:45	5.0792	2134.59	107.37		
03/07	12:51:45	5.0958	2134.22	107.37		
03/07	12:52:33	5.1094	2133.94	107.37		
03/07	12:53:30	5.1250	2133.77	107.35		
03/07	12:54:30	5.1417	2133.43	107.34		
03/07	12:55:30	5.1583	2133.16	107.32		
03/07	12:56:30	5.1750	2133.00	107.32		
03/07	12:57:30	5.1917	2132.89	107.32		
03/07	12:58:30	5.2083	2132.76	107.32		
03/07	12:59:30	5.2250	2132.63	107.31		
03/07	13:00:30	5.2417	2132.49	107.30		
03/07	13:01:30	5.2583	2132.35	107.30		
03/07	13:02:30	5.2750	2132.20	107.30		
03/07	13:03:30	5.2917	2132.07	107.30		
03/07	13:04:30	5.3083	2131.95	107.30		
03/07	13:05:30	5.3250	2131.82	107.30		
03/07	13:06:30	5.3417	2131.70	107.30		
03/07	13:07:30	5.3583	2131.59	107.30		
03/07	13:08:30	5.3750	2131.50	107.30		
03/07	13:09:30	5.3917	2131.42	107.30		
03/07	13:10:30	5.4083	2131.34	107.31		
03/07	13:11:30	5.4250	2131.25	107.32		
03/07	13:12:30	5.4417	2131.16	107.32		
03/07	13:13:30	5.4583	2131.07	107.33		
03/07	13:14:30	5.4750	2131.00	107.34		
03/07	13:15:30	5.4917	2130.92	107.35		
03/07	13:16:30	5.5083	2130.83	107.36		
03/07	13:17:30	5.5250	2130.76	107.36		
03/07	13:18:30	5.5417	2130.70	107.37		
03/07	13:19:30	5.5583	2130.65	107.37		
03/07	13:19:45	5.5625	2130.64	107.37		
03/07	13:20:00	5.5667	2121.09	107.37		INSTRUMENT OFF BOTTOM
03/07	13:20:15	5.5708	2116.62	107.37		
03/07	13:20:18	5.5719	2113.06	107.37		
03/07	13:20:22	5.5729	2109.66	107.32		
03/07	13:20:26	5.5740	2106.12	107.27		
03/07	13:20:30	5.5750	2102.19	107.22		
03/07	13:20:33	5.5760	2098.39	107.17		
03/07	13:20:37	5.5771	2094.33	107.12		

COMPANY: GIANT REFINING

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WELL NAME : SWD (CLASS I) NO. WD-1

DATE : 03/08/96

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F224307.RED

Date MM/DD	Time hh:mm:ss	Test Time hhhh.hhhh	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
03/07	13:20:41	5.5781	2090.27	107.07		
03/07	13:20:45	5.5792	2086.07	107.02		
03/07	13:20:48	5.5802	2082.27	106.97		
03/07	13:20:52	5.5813	2078.60	106.93		
03/07	13:20:56	5.5823	2074.41	106.88		
03/07	13:21:00	5.5833	2070.21	106.83		
03/07	13:21:03	5.5844	2066.05	106.68		
03/07	13:21:07	5.5854	2061.93	106.43		
03/07	13:21:11	5.5865	2060.17	106.19		
03/07	13:21:15	5.5875	2058.55	105.95		
03/07	13:21:18	5.5885	2056.92	105.71		
03/07	13:21:22	5.5896	2054.90	105.46		
03/07	13:21:26	5.5906	2051.56	105.22		
03/07	13:21:30	5.5917	2049.15	104.98		
03/07	13:21:33	5.5927	2046.73	104.74		
03/07	13:21:37	5.5938	2044.19	104.50		
03/07	13:21:41	5.5948	2041.51	104.26		
03/07	13:21:45	5.5958	2038.70	104.01		
03/07	13:21:48	5.5969	2035.78	103.70		
03/07	13:21:52	5.5979	2033.13	103.35		
03/07	13:21:56	5.5990	2030.23	103.00		
03/07	13:22:00	5.6000	2027.32	102.66		
03/07	13:22:03	5.6010	2024.15	102.31		
03/07	13:22:07	5.6021	2018.60	101.96		
03/07	13:22:11	5.6031	2011.21	101.62		
03/07	13:22:15	5.6042	2003.56	101.27		
03/07	13:22:18	5.6052	1995.90	100.92		
03/07	13:22:22	5.6062	1987.98	100.57		
03/07	13:22:26	5.6073	1980.06	100.22		
03/07	13:22:30	5.6083	1970.82	99.88		
03/07	13:22:33	5.6094	1954.60	99.50		
03/07	13:22:37	5.6104	1935.87	99.14		
03/07	13:22:41	5.6115	1917.14	98.79		
03/07	13:22:45	5.6125	1898.01	98.43		
03/07	13:22:48	5.6135	1879.80	98.07		
03/07	13:22:52	5.6146	1860.53	97.72		
03/07	13:22:56	5.6156	1840.60	97.36		
03/07	13:23:00	5.6167	1820.54	97.01		
03/07	13:23:03	5.6177	1800.61	96.65		
03/07	13:23:07	5.6188	1780.80	96.30		
03/07	13:23:11	5.6198	1762.32	95.94		
03/07	13:23:15	5.6208	1742.11	95.58		
03/07	13:23:18	5.6219	1721.77	95.24		
03/07	13:23:22	5.6229	1703.41	94.90		
03/07	13:23:26	5.6240	1683.72	94.57		
03/07	13:23:30	5.6250	1663.90	94.24		
03/07	13:23:33	5.6260	1643.81	93.89		
03/07	13:23:37	5.6271	1622.27	93.56		
03/07	13:23:41	5.6281	1602.58	93.23		
03/07	13:23:45	5.6292	1582.75	92.89		
03/07	13:23:48	5.6302	1562.79	92.55		
03/07	13:23:52	5.6312	1542.95	92.22		
03/07	13:23:56	5.6323	1522.19	91.89		
03/07	13:24:00	5.6333	1502.35	91.55		
03/07	13:24:03	5.6344	1482.91	91.23		
03/07	13:24:07	5.6354	1461.75	90.90		
03/07	13:24:11	5.6365	1441.11	90.58		
03/07	13:24:15	5.6375	1420.86	90.26		
03/07	13:24:18	5.6385	1400.75	89.94		
03/07	13:24:22	5.6396	1378.39	89.61		
03/07	13:24:26	5.6406	1359.19	89.29		
03/07	13:24:30	5.6417	1338.42	88.97		
03/07	13:24:33	5.6427	1318.69	88.65		
03/07	13:24:37	5.6438	1297.38	88.33		
03/07	13:24:41	5.6448	1275.67	88.01		

COMPANY: GIANT REFINING

PAGE 10 OF 11

WELL NAME : SWD (CLASS 1) NO. WD-1

DATE : 03/08/96

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F224307.RED

Date MM/DD	Time hh:mm:ss	Test Time hhhh.hhhh	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
03/07	13:24:45	5.6458	1255.68	87.68		
03/07	13:24:48	5.6469	1233.96	87.37		
03/07	13:24:52	5.6479	1213.96	87.06		
03/07	13:24:56	5.6490	1192.90	86.74		
03/07	13:25:00	5.6500	1173.29	86.43		
03/07	13:25:03	5.6510	1152.23	86.12		
03/07	13:25:07	5.6521	1130.24	85.81		
03/07	13:25:11	5.6531	1109.17	85.50		
03/07	13:25:15	5.6542	1087.97	85.18		
03/07	13:25:18	5.6552	1066.90	84.88		
03/07	13:25:22	5.6563	1047.54	84.57		
03/07	13:25:26	5.6573	1032.41	84.25		
03/07	13:25:30	5.6583	1017.80	83.94		
03/07	13:25:33	5.6594	1000.95	83.63		
03/07	13:25:37	5.6604	984.75	83.33		
03/07	13:25:41	5.6615	970.14	83.03		
03/07	13:25:45	5.6625	955.92	82.73		
03/07	13:25:48	5.6635	941.04	82.43		
03/07	13:25:52	5.6646	926.95	82.12		
03/07	13:25:56	5.6656	913.39	81.82		
03/07	13:26:00	5.6667	899.96	81.52		
03/07	13:26:03	5.6677	887.05	81.22		
03/07	13:26:07	5.6687	875.47	80.91		
03/07	13:26:11	5.6698	864.41	80.61		
03/07	13:26:15	5.6708	852.95	80.32		
03/07	13:26:18	5.6719	842.29	80.01		
03/07	13:26:22	5.6729	831.89	79.73		
03/07	13:26:26	5.6740	820.95	79.44		
03/07	13:26:30	5.6750	810.15	79.15		
03/07	13:26:33	5.6760	799.09	78.86		
03/07	13:26:37	5.6771	788.81	78.58		
03/07	13:26:41	5.6781	778.01	78.29		
03/07	13:26:45	5.6792	768.13	78.00		
03/07	13:26:48	5.6802	758.38	77.72		
03/07	13:26:52	5.6813	749.82	77.43		
03/07	13:26:56	5.6823	741.40	77.14		
03/07	13:27:00	5.6833	733.89	76.86		
03/07	13:27:03	5.6844	726.92	76.58		
03/07	13:27:07	5.6854	719.41	76.32		
03/07	13:27:11	5.6865	712.30	76.06		
03/07	13:27:15	5.6875	706.38	75.79		
03/07	13:27:18	5.6885	700.98	75.53		
03/07	13:27:22	5.6896	696.11	75.26		
03/07	13:27:26	5.6906	691.78	74.99		
03/07	13:27:30	5.6917	687.57	74.73		
03/07	13:27:33	5.6927	683.63	74.46		
03/07	13:27:37	5.6937	679.42	74.20		
03/07	13:27:41	5.6948	675.35	73.93		
03/07	13:27:45	5.6958	672.07	73.67		
03/07	13:27:48	5.6969	668.79	73.41		
03/07	13:27:52	5.6979	665.77	73.18		
03/07	13:27:56	5.6990	663.01	72.94		
03/07	13:28:00	5.7000	660.39	72.69		
03/07	13:28:03	5.7010	658.43	72.46		
03/07	13:28:07	5.7021	657.00	72.22		
03/07	13:28:11	5.7031	655.70	71.97		
03/07	13:28:15	5.7042	654.13	71.74		
03/07	13:28:18	5.7052	652.83	71.50		
03/07	13:28:22	5.7063	652.57	71.25		
03/07	13:28:26	5.7073	652.13	71.02		
03/07	13:28:30	5.7083	651.46	70.78		
03/07	13:29:18	5.7219	651.46	68.12		
03/07	13:29:37	5.7271	651.36	67.29		
03/07	13:29:41	5.7281	654.43	67.12		
03/07	13:29:45	5.7292	654.38	66.96		

COMPANY: GIANT REFINING

PAGE 11 OF 11

WELL NAME : SWD (CLASS I) NO. WD-1

DATE : 03/08/96

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F224307.RED

Date MM/DD	Time hh:mm:ss	Test Time hhhh.hhhh	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
03/07	13:29:48	5.7302	434.67	66.79		
03/07	13:29:52	5.7312	233.34	66.63		
03/07	13:29:56	5.7323	188.64	66.46		
03/07	13:30:00	5.7333	140.10	66.30		
03/07	13:30:03	5.7344	108.90	66.15		
03/07	13:30:07	5.7354	67.50	66.01		
03/07	13:30:11	5.7365	37.22	65.88		
03/07	13:30:15	5.7375	22.81	65.74		
03/07	13:30:18	5.7385	16.20	65.61		
03/07	13:30:22	5.7396	.07	65.47		

 *
 * EVENT SUMMARY *
 *

COMPANY : GIANT REFINING

PAGE : B

WELL NAME : SWD (CLASS I) NO. WD-1

DATE : 03/08/96

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F224307.RED

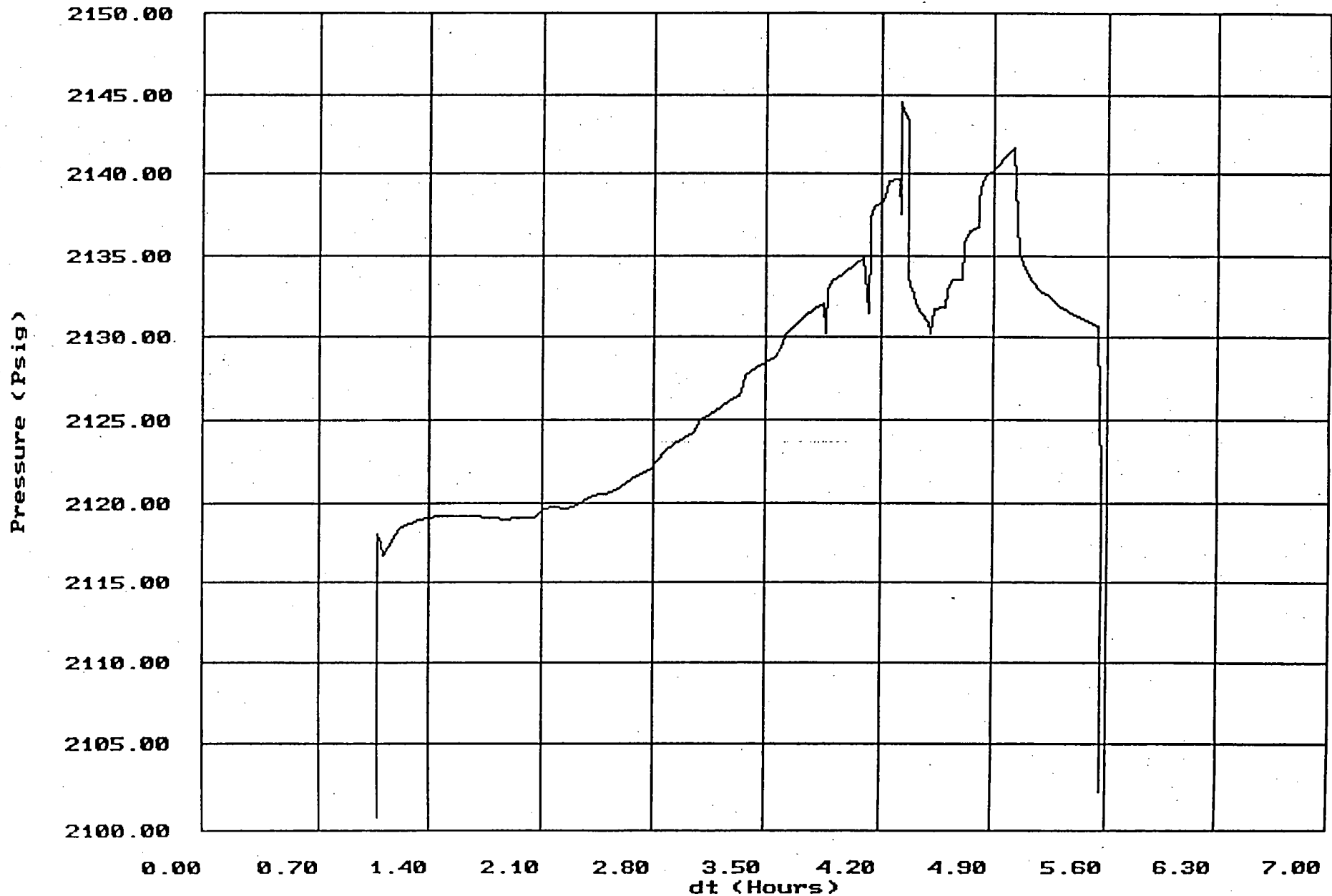
Date MM/DD	Time hh:mm:ss	Test Time hhhh.hhhh	Key Event	Pressure Psig	Temp Deg F
03/07	08:51:22	1.0896	INSTRUMENT @ 3400'	2118.23	78.56
03/07	09:46:30	2.0083	RATE #1 - 0.86 BPM	2119.06	107.55
03/07	10:01:30	2.2583	RATE #2 - 1.1 BPM	2119.69	107.57
03/07	10:31:30	2.7583	RATE #3 - 2.0 BPM	2121.88	107.61
03/07	10:46:00	3.0000	RATE #4 - 2.5 BPM	2123.96	107.51
03/07	11:00:45	3.2458	RATE #5 - 3.0 BPM	2126.00	107.44
03/07	11:16:00	3.5000	RATE #6 - 3.6 BPM	2128.51	107.32
03/07	11:31:15	3.7542	RATE #7 - 4.4 BPM	2131.53	107.37
03/07	11:49:15	4.0542	RATE #8 - 5.5 BPM	2134.65	107.32
03/07	12:13:45	4.4625	RECALIBRATE FLOW METER	2131.18	107.29
03/07	12:18:45	4.5458	RATE #1-A - 2.0 BPM	2131.60	107.24
03/07	12:24:00	4.6333	RATE #2-A - 3.0 BPM	2133.07	107.24
03/07	12:28:45	4.7125	RATE #3-A - 4.0 BPM	2135.74	107.28
03/07	12:34:30	4.8083	RATE #4-A - 5.0 BPM	2136.74	107.36
03/07	12:38:30	4.8750	RATE #5-A - 5.0 BPM	2140.01	107.39
03/07	12:44:30	4.9750	RATE #6-A - 5.0 BPM	2141.03	107.40
03/07	12:49:45	5.0625	SHUT PUMPING DOWN	2141.90	107.37
03/07	13:19:45	5.5625	INSTRUMENT OFF BOTTOM	2130.64	107.37

GIANT REFINING

Pressure vs dt

SWD (CLASS I) NO. WD-1
SAN JUAN COUNTY, NM
F224307-RED

TEFTELLER, INC.
3-7-96
STEP RATE TEST



46 1323

16 X 16 TO 1 INCH / 16 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

