



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

June 11, 2002

Lori Wrotenbery
Director
Oil Conservation Division

Richardson Operating Company
3100 La Plata Highway
Farmington, New Mexico 87401

Attn: Mr. David Richardson

RE: Injection Pressure Increase, -178
Navajo Tribal No. H-13 (API No. 30-045-08280)
San Juan County, New Mexico

Reference is made to your request received in this office on June 6, 2002, to increase the surface injection pressure on the above-referenced well. This request is based on a step rate test conducted on May 30, 2002. After reviewing this test, 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>
Navajo Tribal No. H-13	550 PSIG
Located in NE/4 SW/4, Section 13, Township 29 North, Range 14 West, NMPM, San Juan County, New Mexico.	

This maximum surface injection pressure limit is valid only through the existing 2 3/8 inch plastic coated injection tubing.

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,
Lori Wrotenbery (wvd)
Lori Wrotenbery
Director

cc: Oil Conservation Division – Aztec
Bureau of Land Management - Farmington
Files: SWD-215, IPI-2002



TRANSMITTAL COVER SHEET

OIL CONSERVATION DIVISION
1220 S. ST. FRANCIS DRIVE
SANTA FE, NM 87505
(505) 476-3440
(505)476-3462 (Fax)

PLEASE DELIVER THIS FAX:

TO: DAVID RICHARDSON

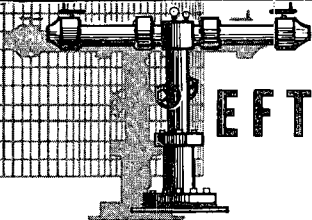
FROM: WILLIAM V. JONES - NMDCD (3448)

DATE: 5/11/02

PAGES: 2 = 1 + (cover)

SUBJECT: IPI (SWD-215) 5/11/02

IF YOU HAVE TROUBLE RECEIVING THIS FAX, PLEASE CALL THE OFFICE NUMBER ABOVE.



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216134236

191-178 NA

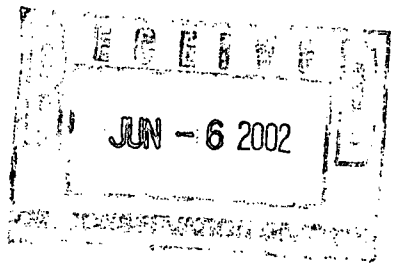
PFEIFFER, INC.

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

reservoir engineering data

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

Midland Fax (915) 694-7602
Farmington Fax (505) 325-1148
Grand Junction Fax (970) 241-7634



564-3100
DAVID
RICHARDSON OPERATING COMPANY

564-3109 Fax

✓
K/

Sec 13 T29N R14W
1830 FSL / 1830 FWL

SWD-215

MAX Prod 300

MVRD 2490

NAVAJO TRIBAL NO. H-13
(30-045-08280)

MAY 30, 2002

Customer RICHARDSON OPERATING COMPANY
Street 3100 LA PLATA HIGHWAY
City/State..... FARMINGTON, NM 87401
Country USA
Service Company TEFTELLER, INC.

Well Name NAVAJO TRIBAL NO. H-13
Well Location SAN JUAN COUNTY, NM
Field / Pool BLANCO MESA VERDE FIELD/MESA VERDE FORM
Status (Oil, Gas, Other) GAS

Test Type STEP RATE TEST
Date of Test 5-30-02
Producing Interval 2490 - 2520'
Recorder Depth 2500'
Recorder Position 2500'
Shut In Date Start: 5-30-2002
 Stop: 5-30-2002
 Duration: 8 HOURS
Bottom Hole Temperature 92 DEGREES

Gauge Identification

Gauge Manufacturer MICRO-SMART SYSTEMS
Serial Number 154
Model Number SP2000
Pressure Range
Battery Type
Calibration I.D.
Last Calibration 12/17/ 1

Gauge Setup Parameters

Probe Set Up Time 5/30/ 2 7: 4: 0
Time Delay to First Reading
Test Type Selection STEP RATE TEST
Test Duration Selection 8 HOURS

WELL NAME : NAVAJO TRIBAL NO. H-13

DATE : 06/04/02

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F154604.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
05/30	07:04:00	.0000	.01	75.26		
05/30	07:06:15	2.2500	.01	75.26	.00	
05/30	07:44:00	40.0000	.01	71.61	.00	
05/30	07:44:15	40.2500	12.01	71.65	12.00	PRESSURED UP LUBRICATOR
05/30	07:46:15	42.2500	5.02	71.84	-6.99	
05/30	07:46:30	42.5000	29.09	71.86	24.07	
05/30	07:47:30	43.5000	35.23	71.90	6.14	
05/30	07:47:45	43.7500	35.21	71.92	-.02	
05/30	07:48:00	44.0000	21.44	71.93	-13.76	
05/30	07:49:00	45.0000	23.90	71.61	2.45	
05/30	07:49:15	45.2500	69.52	71.52	45.63	
05/30	07:49:30	45.5000	158.58	71.43	89.06	
05/30	07:50:00	46.0000	152.85	71.26	-5.74	
05/30	07:50:15	46.2500	26.07	71.17	-126.77	
05/30	07:50:30	46.5000	43.29	71.08	17.21	
05/30	07:50:45	46.7500	32.22	70.99	-11.07	
05/30	07:51:00	47.0000	52.30	70.91	20.08	
05/30	07:51:15	47.2500	132.09	70.82	79.78	
05/30	07:52:00	48.0000	135.51	70.62	3.42	
05/30	07:52:15	48.2500	229.07	70.55	93.57	
05/30	07:52:30	48.5000	240.55	70.48	11.48	
05/30	07:52:45	48.7500	19.77	70.42	-220.78	
05/30	07:53:30	49.5000	26.31	70.22	6.53	
05/30	07:53:45	49.7500	445.67	70.14	419.37	
05/30	07:54:00	50.0000	620.27	70.08	174.60	
05/30	07:54:15	50.2500	2058.10	70.04	1437.83	PRESS.TEST SURFACE LINES & LUBRICATOR
05/30	07:54:30	50.5000	252.45	70.01	-1805.65	
05/30	07:54:45	50.7500	183.47	69.98	-68.98	
05/30	07:55:00	51.0000	985.02	69.95	801.55	
05/30	07:55:15	51.2500	257.92	69.92	-727.10	
05/30	07:55:30	51.5000	18.53	69.88	-239.38	
05/30	07:55:45	51.7500	20.45	69.86	1.91	
05/30	07:56:00	52.0000	51.20	69.82	30.75	
05/30	07:56:15	52.2500	66.50	69.79	15.31	
05/30	07:56:30	52.5000	102.72	69.76	36.21	
05/30	07:56:45	52.7500	143.99	69.73	41.27	
05/30	07:57:00	53.0000	144.15	69.69	.16	
05/30	07:57:15	53.2500	18.26	69.69	-125.89	
05/30	07:57:30	53.5000	38.35	69.71	20.09	
05/30	07:57:45	53.7500	104.50	69.71	66.15	
05/30	07:58:00	54.0000	298.90	69.73	194.41	
05/30	07:58:15	54.2500	327.99	69.73	29.09	
05/30	07:58:30	54.5000	98.07	69.75	-229.92	
05/30	07:58:45	54.7500	27.55	69.75	-70.52	
05/30	07:59:00	55.0000	76.89	69.77	49.34	
05/30	07:59:15	55.2500	185.93	69.77	109.04	
05/30	07:59:30	55.5000	127.04	69.79	-58.89	
05/30	07:59:45	55.7500	110.10	69.79	-16.94	
05/30	08:00:00	56.0000	933.62	69.81	823.52	
05/30	08:00:15	56.2500	1648.37	69.82	714.75	
05/30	08:00:30	56.5000	2025.88	69.83	377.51	PRESS.TEST SURFACE LINES & LUBRICATOR
05/30	08:00:45	56.7500	397.64	69.84	-1628.24	
05/30	08:01:00	57.0000	233.47	69.85	-164.17	
05/30	08:01:15	57.2500	184.15	69.86	-49.32	
05/30	08:01:30	57.5000	158.19	69.87	-25.96	
05/30	08:01:45	57.7500	141.66	69.88	-16.53	
05/30	08:02:00	58.0000	133.74	69.88	-7.93	
05/30	08:02:15	58.2500	127.59	69.89	-6.15	
05/30	08:03:00	59.0000	119.53	69.92	-8.06	
05/30	08:03:15	59.2500	116.25	69.93	-3.28	
05/30	08:03:30	59.5000	113.38	69.95	-2.87	
05/30	08:03:45	59.7500	2148.10	69.98	2034.73	PRESS.TEST SURFACE LINES & LUBRICATOR'62
05/30	08:04:00	60.0000	2120.42	70.00	-27.68	
05/30	08:04:15	60.2500	2027.57	70.02	-92.85	
05/30	08:04:30	60.5000	1988.03	70.05	-39.55	

WELL NAME : NAVAJO TRIBAL NO. H-13

DATE : 06/04/02

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F154604.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
05/30	08:04:45	60.7500	586.02	70.08	-1402.01	
05/30	08:05:00	61.0000	209.01	70.11	-377.01	
05/30	08:05:15	61.2500	149.58	70.13	-59.43	
05/30	08:05:30	61.5000	121.03	70.15	-28.56	
05/30	08:05:45	61.7500	120.87	70.18	-.16	
05/30	08:06:00	62.0000	95.07	70.20	-25.80	OPEN MASTER VALVE
05/30	08:06:15	62.2500	114.88	70.24	19.81	
05/30	08:07:15	63.2500	117.84	70.00	2.96	TRIPPED TANDEM INSTRUMENTS IN HOLE
05/30	08:07:45	63.7500	121.17	69.89	3.33	
05/30	08:08:00	64.0000	21.40	69.83	-99.76	
05/30	08:08:45	64.7500	30.15	69.65	8.75	
05/30	08:09:00	65.0000	55.30	69.59	25.15	
05/30	08:09:15	65.2500	83.31	69.43	28.02	
05/30	08:09:30	65.5000	112.69	69.44	29.38	
05/30	08:09:45	65.7500	142.62	69.45	29.93	
05/30	08:10:00	66.0000	174.19	69.45	31.56	
05/30	08:10:15	66.2500	212.44	69.46	38.26	
05/30	08:10:30	66.5000	253.15	69.46	40.71	
05/30	08:10:45	66.7500	296.87	69.46	43.71	
05/30	08:11:00	67.0000	330.06	69.47	33.19	
05/30	08:11:15	67.2500	369.80	69.48	39.74	
05/30	08:11:30	67.5000	417.60	69.48	47.80	
05/30	08:11:45	67.7500	464.44	69.48	46.84	
05/30	08:12:00	68.0000	514.00	69.49	49.56	
05/30	08:12:15	68.2500	563.51	69.92	49.51	
05/30	08:12:30	68.5000	678.60	70.73	115.09	
05/30	08:12:45	68.7500	739.47	71.54	60.87	
05/30	08:13:00	69.0000	805.64	72.35	66.17	
05/30	08:13:15	69.2500	867.28	73.17	61.64	
05/30	08:13:30	69.5000	931.21	73.98	63.93	
05/30	08:13:45	69.7500	994.70	74.79	63.49	
05/30	08:14:00	70.0000	1051.22	75.61	56.52	
05/30	08:14:15	70.2500	1095.87	76.43	44.65	
05/30	08:14:30	70.5000	1142.00	77.24	46.13	
05/30	08:14:45	70.7500	1182.40	78.06	40.39	
05/30	08:15:00	71.0000	1219.92	78.87	37.52	TANDEM INSTRUMENTS @ 2500'
05/30	08:16:00	72.0000	1229.10	80.37	9.18	
05/30	08:17:00	73.0000	1226.40	81.38	-2.70	
05/30	08:18:00	74.0000	1226.91	82.38	.51	
05/30	08:19:00	75.0000	1227.46	82.19	.55	BEGAN PUMPING
05/30	08:19:15	75.2500	1227.59	82.13	.13	
05/30	08:19:30	75.5000	1144.77	82.06	-82.82	
05/30	08:20:00	76.0000	1144.25	81.94	-.52	
05/30	08:20:15	76.2500	1163.58	81.88	19.33	
05/30	08:20:45	76.7500	1173.17	81.76	9.58	
05/30	08:21:00	77.0000	1178.72	81.70	5.56	
05/30	08:21:15	77.2500	1197.65	81.62	18.93	
05/30	08:22:15	78.2500	1199.74	81.36	2.09	
05/30	08:23:15	79.2500	1203.13	81.10	3.39	
05/30	08:24:15	80.2500	1201.41	80.85	-1.72	
05/30	08:25:15	81.2500	1199.20	80.69	-2.21	
05/30	08:26:15	82.2500	1199.81	80.54	.61	
05/30	08:27:15	83.2500	1197.39	80.39	-2.43	
05/30	08:28:15	84.2500	1196.90	80.32	-.49	
05/30	08:29:15	85.2500	1196.31	80.25	-.59	
05/30	08:30:15	86.2500	1196.26	80.18	-.04	
05/30	08:31:15	87.2500	1196.28	80.15	.02	
05/30	08:32:15	88.2500	1196.33	80.11	.05	
05/30	08:33:15	89.2500	1196.44	80.09	.11	
05/30	08:34:15	90.2500	1196.34	80.07	-.10	
05/30	08:35:15	91.2500	1199.04	80.06	2.70	
05/30	08:35:30	91.5000	1181.81	80.06	-17.23	
05/30	08:36:30	92.5000	1174.66	80.04	-7.15	
05/30	08:36:45	92.7500	1174.47	80.04	-.19	
05/30	08:37:00	93.0000	1220.73	80.04	46.26	RATE #1, .25 BPM, 100 PSIG SURFACE

WELL NAME : NAVAJO TRIBAL NO. H-13

DATE : 06/04/02

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F154604.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
05/30	08:37:15	93.2500	1229.31	80.04	8.57	
05/30	08:37:30	93.5000	1232.03	80.04	2.72	
05/30	08:37:45	93.7500	1243.05	80.05	11.02	
05/30	08:38:00	94.0000	1281.02	80.05	37.97	
05/30	08:39:00	95.0000	1290.00	80.05	8.98	
05/30	08:40:00	96.0000	1293.95	80.26	3.95	
05/30	08:41:00	97.0000	1295.08	80.51	1.13	
05/30	08:42:00	98.0000	1299.21	80.76	4.14	
05/30	08:43:00	99.0000	1299.41	81.53	.19	
05/30	08:44:00	100.0000	1301.04	82.42	1.64	
05/30	08:45:00	101.0000	1301.33	83.29	.28	
05/30	08:46:00	102.0000	1304.15	84.47	2.82	
05/30	08:47:00	103.0000	1304.36	85.67	.21	
05/30	08:48:00	104.0000	1305.05	86.86	.69	
05/30	08:49:00	105.0000	1305.97	87.89	.92	
05/30	08:50:00	106.0000	1307.20	88.86	1.23	
05/30	08:51:00	107.0000	1308.35	89.83	1.15	
05/30	08:51:45	107.7500	1308.51	90.32	.15	
05/30	08:52:00	108.0000	1319.15	90.46	10.64	
05/30	08:52:15	108.2500	1374.64	90.61	55.49	
05/30	08:53:15	109.2500	1383.46	91.17	8.82	
05/30	08:54:15	110.2500	1387.00	91.66	3.54	
05/30	08:55:15	111.2500	1387.92	91.70	.92	
05/30	08:56:15	112.2500	1389.54	91.72	1.62	
05/30	08:57:15	113.2500	1393.45	91.68	3.91	
05/30	08:58:15	114.2500	1394.73	91.19	1.29	
05/30	08:59:15	115.2500	1396.49	90.70	1.76	
05/30	09:00:15	116.2500	1398.23	90.17	1.74	
05/30	09:01:15	117.2500	1400.09	89.48	1.86	
05/30	09:02:15	118.2500	1401.85	88.81	1.77	
05/30	09:03:15	119.2500	1404.00	88.12	2.14	
05/30	09:04:15	120.2500	1406.60	87.52	2.61	
05/30	09:05:15	121.2500	1409.35	86.91	2.75	
05/30	09:06:15	122.2500	1411.86	86.32	2.51	
05/30	09:07:00	123.0000	1417.27	85.96	5.41	
05/30	09:07:15	123.2500	1477.24	85.83	59.97	
05/30	09:08:15	124.2500	1484.57	85.35	7.34	
05/30	09:09:15	125.2500	1493.00	84.88	8.42	
05/30	09:10:15	126.2500	1500.07	84.40	7.07	
05/30	09:11:15	127.2500	1506.32	83.93	6.25	
05/30	09:12:15	128.2500	1513.12	83.46	6.80	
05/30	09:13:15	129.2500	1517.55	83.00	4.44	
05/30	09:14:15	130.2500	1523.72	82.54	6.17	
05/30	09:15:15	131.2500	1528.88	82.10	5.16	
05/30	09:16:15	132.2500	1531.91	81.74	3.02	
05/30	09:17:15	133.2500	1537.54	81.39	5.64	
05/30	09:18:15	134.2500	1542.79	81.06	5.24	
05/30	09:19:15	135.2500	1546.94	80.82	4.15	
05/30	09:20:15	136.2500	1548.99	80.59	2.05	
05/30	09:21:15	137.2500	1551.86	80.37	2.87	
05/30	09:22:00	138.0000	1553.13	80.26	1.27	
05/30	09:22:15	138.2500	1581.27	80.22	28.14	
05/30	09:22:30	138.5000	1606.73	80.18	25.46	
05/30	09:23:30	139.5000	1617.39	80.03	10.66	
05/30	09:24:30	140.5000	1623.59	79.87	6.20	
05/30	09:25:30	141.5000	1628.90	79.72	5.31	
05/30	09:26:30	142.5000	1638.35	79.57	9.45	
05/30	09:27:30	143.5000	1642.89	79.41	4.54	
05/30	09:28:30	144.5000	1647.26	79.26	4.37	
05/30	09:29:30	145.5000	1652.92	79.11	5.66	
05/30	09:30:30	146.5000	1646.09	78.97	-6.83	
05/30	09:31:30	147.5000	1649.06	78.86	2.97	
05/30	09:32:30	148.5000	1651.12	78.76	2.06	
05/30	09:33:30	149.5000	1652.47	78.68	1.35	
05/30	09:34:30	150.5000	1656.12	78.63	3.65	

RATE #2, .70 BPM, 210 PSIG SURFACE

RATE #3, 1.30 BPM, 320 PSIG SURFACE

RATE #4, 1.75 BPM, 440 PSIG SURFACE

WELL NAME : NAVAJO TRIBAL NO. H-13

DATE : 06/04/02

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F154604.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
05/30	09:35:30	151.5000	1658.67	78.58	2.55	
05/30	09:36:30	152.5000	1660.20	78.56	1.53	
05/30	09:37:00	153.0000	1660.49	78.56	.30	
05/30	09:37:15	153.2500	1683.18	78.56	22.68	RATE #5, 2.25 BPM. 600 PSIG SURFACE
05/30	09:37:30	153.5000	1656.23	78.56	-26.95	
05/30	09:37:45	153.7500	1656.34	78.56	.11	
05/30	09:38:00	154.0000	1670.93	78.56	14.58	
05/30	09:38:15	154.2500	1677.32	78.56	6.40	
05/30	09:38:30	154.5000	1683.04	78.56	5.72	
05/30	09:39:30	155.5000	1680.06	78.56	-2.98	
05/30	09:40:15	156.2500	1686.58	78.56	6.52	
05/30	09:40:30	156.5000	1691.07	78.56	4.49	
05/30	09:41:00	157.0000	1681.95	78.56	-9.12	
05/30	09:41:15	157.2500	1680.32	78.56	-1.63	
05/30	09:42:15	158.2500	1680.70	78.54	.39	
05/30	09:43:15	159.2500	1681.05	78.54	.35	
05/30	09:44:15	160.2500	1682.20	78.54	1.15	
05/30	09:45:15	161.2500	1685.00	78.54	2.79	
05/30	09:46:15	162.2500	1684.97	78.55	-.02	
05/30	09:47:15	163.2500	1685.28	78.57	.31	
05/30	09:48:15	164.2500	1685.90	78.60	.62	
05/30	09:49:15	165.2500	1688.05	78.63	2.16	
05/30	09:50:15	166.2500	1688.26	78.65	.21	
05/30	09:51:15	167.2500	1688.19	78.68	-.07	
05/30	09:52:00	168.0000	1688.29	78.69	.09	RATE #6, 2.70 BPM, 720 PSIG SURFACE
05/30	09:52:15	168.2500	1700.69	78.70	12.40	
05/30	09:52:45	168.7500	1710.07	78.71	9.39	
05/30	09:53:00	169.0000	1713.47	78.72	3.40	
05/30	09:54:00	170.0000	1719.59	78.74	6.12	
05/30	09:55:00	171.0000	1720.44	78.76	.85	
05/30	09:56:00	172.0000	1719.17	78.76	-1.27	
05/30	09:57:00	173.0000	1719.68	78.78	.50	
05/30	09:58:00	174.0000	1721.26	78.79	1.59	
05/30	09:59:00	175.0000	1723.21	78.80	1.94	
05/30	10:00:00	176.0000	1724.45	78.82	1.24	
05/30	10:01:00	177.0000	1726.90	78.84	2.46	
05/30	10:02:00	178.0000	1726.71	78.87	-.19	
05/30	10:03:00	179.0000	1724.87	78.90	-1.85	
05/30	10:04:00	180.0000	1725.92	78.92	1.06	
05/30	10:05:00	181.0000	1727.19	78.95	1.26	
05/30	10:06:00	182.0000	1729.47	78.97	2.28	
05/30	10:07:00	183.0000	1723.58	79.00	-5.88	RATE #7, 3.26 BPM, 760 PSIG SURFACE
05/30	10:07:30	183.5000	1731.06	79.01	7.48	
05/30	10:07:45	183.7500	1737.60	79.01	6.53	
05/30	10:08:45	184.7500	1747.25	79.04	9.65	
05/30	10:09:45	185.7500	1749.56	79.05	2.31	
05/30	10:10:45	186.7500	1748.33	79.06	-1.23	
05/30	10:11:45	187.7500	1749.14	79.07	.81	
05/30	10:12:45	188.7500	1740.56	79.09	-8.58	
05/30	10:13:45	189.7500	1749.11	79.10	8.55	
05/30	10:14:45	190.7500	1750.68	79.12	1.57	
05/30	10:15:45	191.7500	1748.03	79.14	-2.65	
05/30	10:16:45	192.7500	1750.16	79.15	2.13	
05/30	10:17:45	193.7500	1751.63	79.17	1.47	
05/30	10:18:45	194.7500	1751.93	79.17	.30	
05/30	10:19:45	195.7500	1754.00	79.18	2.07	
05/30	10:20:45	196.7500	1753.75	79.19	-.25	
05/30	10:21:45	197.7500	1754.81	79.21	1.05	
05/30	10:22:00	198.0000	1755.31	79.21	.50	RATE #8, 3.80 BPM, 850 PSIG SURFACE
05/30	10:22:15	198.2500	1776.85	79.21	21.55	
05/30	10:22:30	198.5000	1793.86	79.21	17.01	
05/30	10:23:00	199.0000	1793.81	79.22	-.06	
05/30	10:23:15	199.2500	1782.02	79.22	-11.78	
05/30	10:24:15	200.2500	1773.99	79.24	-8.03	
05/30	10:25:15	201.2500	1772.83	79.27	-1.16	

WELL NAME : NAVAJO TRIBAL NO. H-13

DATE : 06/04/02

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F154604.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
05/30	10:26:15	202.2500	1774.31	79.29	1.48	
05/30	10:27:15	203.2500	1774.87	79.32	.56	
05/30	10:28:15	204.2500	1775.94	79.36	1.07	
05/30	10:29:15	205.2500	1776.00	79.40	.06	
05/30	10:30:15	206.2500	1776.08	79.44	.08	
05/30	10:31:15	207.2500	1777.07	79.47	.99	
05/30	10:32:15	208.2500	1777.75	79.50	.68	
05/30	10:33:15	209.2500	1780.96	79.53	3.21	
05/30	10:34:15	210.2500	1780.47	79.55	-.49	
05/30	10:35:15	211.2500	1780.76	79.57	.29	
05/30	10:36:15	212.2500	1782.16	79.60	1.40	
05/30	10:37:00	213.0000	1781.89	79.61	-.28	RATE #9, 4.30 BPM, 920 PSIG SURFACE
05/30	10:37:15	213.2500	1794.13	79.61	12.24	
05/30	10:38:15	214.2500	1794.76	79.64	.63	
05/30	10:39:15	215.2500	1795.93	79.67	1.17	
05/30	10:40:15	216.2500	1797.02	79.71	1.09	
05/30	10:41:15	217.2500	1798.44	79.76	1.42	
05/30	10:42:15	218.2500	1802.49	79.83	4.05	
05/30	10:43:15	219.2500	1802.24	79.89	-.25	
05/30	10:44:15	220.2500	1802.84	79.97	.60	
05/30	10:45:15	221.2500	1804.54	80.04	1.70	
05/30	10:46:15	222.2500	1808.43	79.94	3.89	
05/30	10:47:15	223.2500	1806.83	79.85	-1.60	
05/30	10:48:15	224.2500	1810.54	79.76	3.70	
05/30	10:49:15	225.2500	1810.95	79.60	.41	
05/30	10:50:15	226.2500	1812.97	79.44	2.02	
05/30	10:51:15	227.2500	1810.99	79.26	-1.98	
05/30	10:52:15	228.2500	1816.24	79.04	5.25	RATE #10, 4.73 BPM, 980 PSIG SURFACE
05/30	10:53:15	229.2500	1824.61	78.83	8.38	
05/30	10:54:15	230.2500	1825.91	78.63	1.30	
05/30	10:55:15	231.2500	1827.46	78.50	1.54	
05/30	10:56:15	232.2500	1825.46	78.37	-1.99	
05/30	10:57:15	233.2500	1825.98	78.26	.52	
05/30	10:58:15	234.2500	1826.41	78.22	.43	
05/30	10:59:15	235.2500	1826.77	78.18	.36	
05/30	11:00:15	236.2500	1827.31	78.15	.55	
05/30	11:01:15	237.2500	1829.12	78.18	1.81	
05/30	11:02:15	238.2500	1829.47	78.20	.35	
05/30	11:03:15	239.2500	1830.14	78.22	.67	
05/30	11:04:15	240.2500	1829.77	78.25	-.38	
05/30	11:05:15	241.2500	1830.96	78.29	1.19	
05/30	11:06:15	242.2500	1832.53	78.32	1.57	
05/30	11:07:15	243.2500	1832.22	78.39	-.31	RATE #11, 5.30 BPM, 1060 PSIG SURFACE
05/30	11:08:15	244.2500	1840.69	78.45	8.47	
05/30	11:09:15	245.2500	1843.56	78.51	2.88	
05/30	11:10:15	246.2500	1843.89	78.60	.33	
05/30	11:11:15	247.2500	1844.31	78.69	.43	
05/30	11:12:15	248.2500	1845.14	78.79	.83	
05/30	11:13:15	249.2500	1847.10	78.89	1.96	
05/30	11:14:15	250.2500	1848.23	78.99	1.14	
05/30	11:15:15	251.2500	1846.16	79.09	-2.08	
05/30	11:16:15	252.2500	1846.02	79.17	-.14	
05/30	11:17:15	253.2500	1848.95	79.26	2.93	
05/30	11:18:15	254.2500	1848.96	79.33	.01	
05/30	11:19:15	255.2500	1848.82	79.24	-.14	
05/30	11:20:15	256.2500	1849.78	79.14	.96	
05/30	11:21:15	257.2500	1851.49	79.01	1.71	
05/30	11:22:15	258.2500	1848.70	78.83	-2.79	RATE #12, 5.80 BPM, 1160 PSIG SURFACE
05/30	11:23:00	259.0000	1858.28	78.69	9.58	
05/30	11:23:15	259.2500	1859.65	78.65	1.38	
05/30	11:24:15	260.2500	1861.20	78.47	1.55	
05/30	11:25:15	261.2500	1862.88	78.40	1.67	
05/30	11:26:15	262.2500	1863.19	78.33	.31	
05/30	11:27:15	263.2500	1863.60	78.27	.42	
05/30	11:28:15	264.2500	1865.68	78.37	2.08	

WELL NAME : NAVAJO TRIBAL NO. H-13

DATE : 06/04/02

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F154604.RED

Date	Time	Test Time	Pressure	Temp	deltaP	Comment
MM/DD	hh:mm:ss	mmmmmm.mmmm	Psig	Deg F	Psi	Ga. Press Ref. to 14.7 Psi Atm.
05/30	11:29:15	265.2500	1867.93	78.48	2.25	
05/30	11:30:15	266.2500	1867.22	78.59	-.71	
05/30	11:31:15	267.2500	1868.87	78.76	1.65	
05/30	11:32:15	268.2500	1869.08	78.92	.21	
05/30	11:33:15	269.2500	1871.74	79.08	2.66	
05/30	11:34:15	270.2500	1869.11	79.23	-2.63	
05/30	11:35:15	271.2500	1873.40	79.38	4.29	
05/30	11:36:15	272.2500	1871.50	79.53	-1.90	
05/30	11:37:15	273.2500	1876.16	79.66	4.66	
05/30	11:38:15	274.2500	1883.18	79.79	7.03	
05/30	11:39:15	275.2500	1882.56	79.90	-.62	
05/30	11:40:15	276.2500	1884.33	80.02	1.77	
05/30	11:41:15	277.2500	1884.01	80.13	-.32	
05/30	11:42:15	278.2500	1886.07	80.23	2.06	
05/30	11:43:15	279.2500	1886.39	80.32	.32	
05/30	11:44:15	280.2500	1886.76	80.40	.38	
05/30	11:45:15	281.2500	1889.19	80.47	2.42	
05/30	11:46:15	282.2500	1890.11	80.54	.93	
05/30	11:47:15	283.2500	1888.32	80.61	-1.79	
05/30	11:48:15	284.2500	1888.55	80.67	.23	
05/30	11:49:15	285.2500	1889.40	80.71	.84	
05/30	11:50:15	286.2500	1890.21	80.75	.82	
05/30	11:51:15	287.2500	1891.43	80.80	1.21	
05/30	11:52:15	288.2500	1896.94	80.84	5.51	
05/30	11:53:15	289.2500	1902.44	80.88	5.50	
05/30	11:54:15	290.2500	1905.19	80.92	2.75	
05/30	11:55:15	291.2500	1908.04	80.97	2.86	
05/30	11:56:15	292.2500	1909.25	81.01	1.21	
05/30	11:57:15	293.2500	1908.83	81.05	-.42	
05/30	11:58:15	294.2500	1910.72	81.09	1.89	
05/30	11:59:15	295.2500	1909.91	81.13	-.81	
05/30	12:00:15	296.2500	1909.60	81.17	-.31	
05/30	12:01:15	297.2500	1912.31	81.20	2.71	
05/30	12:02:15	298.2500	1911.21	81.23	-1.10	
05/30	12:03:15	299.2500	1912.74	81.26	1.53	
05/30	12:04:15	300.2500	1912.00	81.29	-.74	
05/30	12:05:15	301.2500	1913.63	81.32	1.62	
05/30	12:06:15	302.2500	1915.11	81.34	1.49	
05/30	12:07:15	303.2500	1922.31	81.37	7.20	
05/30	12:08:15	304.2500	1922.89	81.40	.58	
05/30	12:09:15	305.2500	1927.46	81.43	4.57	
05/30	12:10:15	306.2500	1931.79	81.47	4.33	
05/30	12:11:15	307.2500	1929.74	81.51	-2.05	
05/30	12:12:15	308.2500	1933.94	81.55	4.20	
05/30	12:13:15	309.2500	1930.27	81.60	-3.67	
05/30	12:14:15	310.2500	1929.96	81.65	-.31	
05/30	12:15:15	311.2500	1931.06	81.69	1.10	
05/30	12:16:15	312.2500	1929.83	81.74	-1.22	
05/30	12:17:15	313.2500	1929.25	81.79	-.58	
05/30	12:18:15	314.2500	1928.26	81.82	-.99	
05/30	12:19:15	315.2500	1930.13	81.88	1.87	
05/30	12:20:15	316.2500	1932.02	81.94	1.89	
05/30	12:21:15	317.2500	1930.64	82.01	-1.39	
05/30	12:22:15	318.2500	1930.88	82.08	.25	
05/30	12:23:15	319.2500	1934.10	82.16	3.22	
05/30	12:24:15	320.2500	1933.33	82.22	-.77	
05/30	12:25:15	321.2500	1936.52	82.20	3.19	
05/30	12:26:15	322.2500	1934.02	82.19	-2.50	
05/30	12:27:15	323.2500	1934.38	82.16	.35	
05/30	12:28:15	324.2500	1943.63	82.04	9.25	
05/30	12:29:15	325.2500	1942.72	81.92	-.91	
05/30	12:30:15	326.2500	1941.46	81.81	-1.26	
05/30	12:31:15	327.2500	1944.60	81.77	3.14	
05/30	12:32:15	328.2500	1943.96	81.72	-.64	
05/30	12:33:15	329.2500	1943.71	81.70	-.25	

RATE #13, 6.28 BPM, 1250 PSIG SURFACE

RATE #14, 6.78 BPM, 1310 PSIG SURFACE

RATE #15, 7.25 BPM, 1400 PSIG SURFACE

RATE #16, 7.80 BPM, 1500 PSIG SURFACE

WELL NAME : NAVAJO TRIBAL NO. H-13

DATE : 06/04/02

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F154604.RED

Date MM/DD	Time hh:mm:ss	Test Time mmmmmm.mmmmm	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
05/30	12:34:15	330.2500	1944.50	81.62	.79	
05/30	12:35:15	331.2500	1943.33	81.53	-1.17	
05/30	12:36:15	332.2500	1943.11	81.40	-.22	
05/30	12:37:15	333.2500	1946.24	81.03	3.13	
05/30	12:38:15	334.2500	1944.47	80.67	-1.77	
05/30	12:39:15	335.2500	1943.75	80.32	-.72	
05/30	12:40:15	336.2500	1943.38	80.06	-.37	
05/30	12:41:15	337.2500	1942.90	79.81	-.47	
05/30	12:42:15	338.2500	1943.39	79.59	.49	RATE #17, 8.34 BPM, 1600 PSIG SURFACE
05/30	12:43:15	339.2500	1947.30	79.51	3.90	
05/30	12:44:15	340.2500	1947.96	79.43	.67	
05/30	12:45:15	341.2500	1951.37	79.38	3.40	
05/30	12:46:15	342.2500	1948.36	79.40	-3.00	
05/30	12:47:15	343.2500	1950.94	79.43	2.57	
05/30	12:48:15	344.2500	1950.43	79.47	-.51	
05/30	12:49:15	345.2500	1953.76	79.53	3.33	
05/30	12:50:15	346.2500	1952.42	79.60	-1.33	
05/30	12:51:15	347.2500	1954.32	79.67	1.90	
05/30	12:52:15	348.2500	1953.87	79.75	-.45	
05/30	12:53:15	349.2500	1955.26	79.84	1.38	
05/30	12:54:15	350.2500	1954.42	79.93	-.84	
05/30	12:55:15	351.2500	1953.97	80.02	-.45	
05/30	12:56:15	352.2500	1952.17	80.11	-1.80	
05/30	12:57:15	353.2500	1958.67	80.19	6.50	RATE #18, 8.70 BPM, 1670 PSIG SURFACE
05/30	12:58:15	354.2500	1963.72	80.29	5.06	
05/30	12:59:15	355.2500	1964.05	80.40	.32	
05/30	13:00:15	356.2500	1964.47	80.50	.42	
05/30	13:01:15	357.2500	1968.57	80.63	4.10	
05/30	13:02:15	358.2500	1965.25	80.76	-3.31	
05/30	13:03:15	359.2500	1967.89	80.90	2.63	
05/30	13:04:15	360.2500	1967.93	81.01	.05	
05/30	13:05:15	361.2500	1967.80	81.12	-.14	
05/30	13:06:15	362.2500	1967.53	81.23	-.27	
05/30	13:07:15	363.2500	1967.61	81.34	.09	
05/30	13:08:15	364.2500	1967.72	81.44	.11	
05/30	13:09:15	365.2500	1968.89	81.55	1.17	
05/30	13:10:15	366.2500	1967.09	81.64	-1.80	RATE #19, 9.30 BPM, 1800 PSIG SURFACE
05/30	13:11:15	367.2500	1976.16	81.75	9.07	
05/30	13:12:15	368.2500	1976.40	81.85	.25	
05/30	13:13:15	369.2500	1977.42	82.00	1.02	
05/30	13:14:15	370.2500	1979.81	82.15	2.39	
05/30	13:15:15	371.2500	1984.78	82.30	4.97	
05/30	13:16:15	372.2500	1983.40	82.30	-1.38	
05/30	13:17:15	373.2500	1991.31	82.31	7.91	
05/30	13:18:15	374.2500	1988.32	82.29	-2.98	
05/30	13:19:15	375.2500	1990.30	82.10	1.98	
05/30	13:20:15	376.2500	1988.23	81.92	-2.07	
05/30	13:21:15	377.2500	1988.24	81.73	.02	
05/30	13:22:15	378.2500	1987.95	81.49	-.29	
05/30	13:23:15	379.2500	1989.27	81.27	1.31	
05/30	13:24:15	380.2500	1989.08	81.06	-.18	
05/30	13:25:15	381.2500	1989.41	80.89	.33	RATE #20, 9.70 BPM, 1860 PSIG SURFACE
05/30	13:26:15	382.2500	1996.83	80.72	7.41	
05/30	13:27:15	383.2500	1998.10	80.60	1.27	
05/30	13:28:15	384.2500	1997.25	80.84	-.85	
05/30	13:29:15	385.2500	1996.72	81.09	-.53	
05/30	13:30:15	386.2500	1999.58	81.35	2.86	
05/30	13:31:15	387.2500	1998.07	81.71	-1.51	
05/30	13:32:15	388.2500	1999.37	82.05	1.30	
05/30	13:33:15	389.2500	1998.21	82.39	-1.16	
05/30	13:34:15	390.2500	1996.75	82.64	-1.46	
05/30	13:35:15	391.2500	1998.55	82.89	1.80	
05/30	13:36:15	392.2500	1997.37	83.14	-1.18	
05/30	13:37:15	393.2500	1996.76	83.32	-.61	
05/30	13:38:15	394.2500	1997.69	83.50	.93	

WELL NAME : NAVAJO TRIBAL NO. H-13

DATE : 06/04/02

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F154604.RED

Date	Time	Test Time	Pressure	Temp	deltaP	Comment
MM/DD	hh:mm:ss	mmmmmm.mmmmm	Psig	Deg F	Psi	Ga. Press Ref. to 14.7 Psi Atm.
05/30	13:39:15	395.2500	1996.97	83.69	-.72	RATE #21, 10.30 BPM, 2000 PSIG SURFACE
05/30	13:40:15	396.2500	1998.34	83.83	1.37	
05/30	13:41:15	397.2500	2002.34	83.98	4.01	
05/30	13:42:15	398.2500	2010.03	84.13	7.69	
05/30	13:42:30	398.5000	2027.28	84.17	17.25	
05/30	13:43:30	399.5000	2023.08	84.34	-4.20	
05/30	13:44:30	400.5000	2026.87	84.52	3.79	
05/30	13:45:30	401.5000	2024.49	84.63	-2.38	
05/30	13:46:00	402.0000	2015.14	84.63	-9.35	
05/30	13:46:15	402.2500	1995.16	84.62	-19.98	
05/30	13:47:15	403.2500	1992.18	84.61	-2.99	
05/30	13:48:15	404.2500	2001.80	84.56	9.62	
05/30	13:49:15	405.2500	2004.87	84.44	3.07	
05/30	13:50:15	406.2500	2005.20	84.33	.33	
05/30	13:51:15	407.2500	2004.71	84.25	-.49	
05/30	13:52:15	408.2500	2006.27	84.38	1.55	
05/30	13:53:15	409.2500	2006.77	84.51	.51	
05/30	13:54:15	410.2500	2007.79	84.64	1.02	
05/30	13:55:15	411.2500	2007.63	84.71	-.16	
05/30	13:56:15	412.2500	2008.73	84.77	1.10	RATE #22, 10.70 BPM, 2350 PSIG SURFACE
05/30	13:56:30	412.5000	2012.90	84.79	4.17	PRESSURE FALL-OFF
05/30	13:56:45	412.7500	1981.64	84.80	-31.26	
05/30	13:57:00	413.0000	1961.79	84.82	-19.85	
05/30	13:57:15	413.2500	1915.57	84.83	-46.21	
05/30	13:57:30	413.5000	1878.89	84.79	-36.68	
05/30	13:57:45	413.7500	1850.23	84.75	-28.66	
05/30	13:58:00	414.0000	1825.64	84.72	-24.59	
05/30	13:58:15	414.2500	1803.09	84.68	-22.55	
05/30	13:58:30	414.5000	1781.90	84.64	-21.19	
05/30	13:58:45	414.7500	1761.66	84.61	-20.24	
05/30	13:59:00	415.0000	1742.24	84.57	-19.42	
05/30	13:59:15	415.2500	1723.90	84.53	-18.34	
05/30	13:59:30	415.5000	1706.65	84.50	-17.25	
05/30	13:59:45	415.7500	1690.63	84.46	-16.03	
05/30	14:00:00	416.0000	1675.28	84.42	-15.35	
05/30	14:00:15	416.2500	1661.42	84.40	-13.86	
05/30	14:00:30	416.5000	1648.51	84.39	-12.91	
05/30	14:00:45	416.7500	1636.82	84.39	-11.69	
05/30	14:01:00	417.0000	1626.22	84.39	-10.60	
05/30	14:01:15	417.2500	1616.43	84.38	-9.78	
05/30	14:01:30	417.5000	1607.87	84.37	-8.56	
05/30	14:01:45	417.7500	1599.99	84.37	-7.88	
05/30	14:02:00	418.0000	1593.06	84.37	-6.93	
05/30	14:02:15	418.2500	1586.67	84.36	-6.39	
05/30	14:02:30	418.5000	1580.96	84.36	-5.71	
05/30	14:02:45	418.7500	1575.80	84.35	-5.16	
05/30	14:03:15	419.2500	1566.69	84.36	-9.11	
05/30	14:03:30	419.5000	1562.60	84.39	-4.09	
05/30	14:04:15	420.2500	1551.97	84.48	-10.63	
05/30	14:04:30	420.5000	1549.25	84.50	-2.72	
05/30	14:05:30	421.5000	1539.02	84.61	-10.23	
05/30	14:06:30	422.5000	1530.01	84.73	-9.01	
05/30	14:07:30	423.5000	1522.77	84.86	-7.24	
05/30	14:08:30	424.5000	1516.21	84.99	-6.56	
05/30	14:09:30	425.5000	1510.33	85.12	-5.88	
05/30	14:10:30	426.5000	1506.04	85.24	-4.29	
05/30	14:11:30	427.5000	1504.26	85.35	-1.78	
05/30	14:12:30	428.5000	1499.28	85.46	-4.98	
05/30	14:13:30	429.5000	1493.18	85.54	-6.10	
05/30	14:14:00	430.0000	1483.40	85.58	-9.77	
05/30	14:14:15	430.2500	1472.41	85.60	-11.00	
05/30	14:15:00	431.0000	1471.62	85.66	-.79	END FALL-OFF
05/30	14:15:15	431.2500	1456.09	85.65	-15.53	TANDEM INSTRUMENTS OFF BOTTOM
05/30	14:15:30	431.5000	1437.34	85.61	-18.75	
05/30	14:15:45	431.7500	1405.82	85.59	-31.52	

WELL NAME : NAVAJO TRIBAL NO. H-13

DATE : 06/04/02

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F154604.RED

Date	Time	Test Time	Pressure	Temp	deltaP	Comment
MM/DD	hh:mm:ss	mmmmmm.mmmm	Psig	Deg F	Psi	Ga. Press Ref. to 14.7 Psi Atm.
05/30	14:16:00	432.0000	1362.20	85.56	-43.62	
05/30	14:16:15	432.2500	1313.82	85.53	-48.38	
05/30	14:16:30	432.5000	1281.34	85.50	-32.48	
05/30	14:16:45	432.7500	1252.66	85.48	-28.67	
05/30	14:17:00	433.0000	1185.11	85.45	-67.55	
05/30	14:17:15	433.2500	1113.20	85.42	-71.91	
05/30	14:17:30	433.5000	1039.93	85.40	-73.27	
05/30	14:17:45	433.7500	966.38	85.37	-73.55	
05/30	14:18:00	434.0000	892.42	85.33	-73.96	
05/30	14:18:15	434.2500	817.91	85.27	-74.51	
05/30	14:18:30	434.5000	742.72	85.14	-75.19	
05/30	14:18:45	434.7500	666.30	85.00	-76.42	
05/30	14:19:00	435.0000	590.40	84.87	-75.90	
05/30	14:19:15	435.2500	513.27	84.74	-77.13	
05/30	14:19:30	435.5000	444.56	84.60	-68.71	
05/30	14:19:45	435.7500	391.08	84.46	-53.48	
05/30	14:20:00	436.0000	364.68	84.33	-26.40	
05/30	14:20:30	436.5000	355.46	84.06	-9.23	
05/30	14:20:45	436.7500	180.22	83.92	-175.24	
05/30	14:21:30	437.5000	173.55	84.44	-6.67	
05/30	14:21:45	437.7500	79.88	84.92	-93.67	
05/30	14:22:00	438.0000	48.44	85.39	-31.44	
05/30	14:22:15	438.2500	33.62	85.86	-14.82	
05/30	14:22:30	438.5000	10.77	86.34	-22.85	
05/30	14:22:45	438.7500	.01	86.80	-10.76	

 *
 * EVENT SUMMARY *
 *

COMPANY : RICHARDSON OPERATING COMPANY

PAGE : B1

WELL NAME : NAVAJO TRIBAL NO. H-13

DATE : 06/04/02

WELL LOCATION : SAN JUAN COUNTY, NM

FILE REF: F154604.RED

Date	Time	Test Time	Key Event	Pressure	Temp
MM/DD	hh:mm:ss	mmmmmm.mmm		Psig	Deg F
05/30	07:44:15	40.2500	PRESSURED UP LUBRICATOR	12.01	71.65
05/30	07:54:15	50.2500	PRESS.TEST SURFACE LINES & LUBRICATOR	2058.10	70.04
05/30	08:00:30	56.5000	PRESS.TEST SURFACE LINES & LUBRICATOR	2025.88	69.83
05/30	08:03:45	59.7500	PRESS.TEST SURFACE LINES & LUBRICATOR'62	2148.10	69.98
05/30	08:06:00	62.0000	OPEN MASTER VALVE	95.07	70.20
05/30	08:07:15	63.2500	TRIPPED TANDEM INSTRUMENTS IN HOLE	117.84	70.00
05/30	08:15:00	71.0000	TANDEM INSTRUMENTS @ 2500'	1219.92	78.87
05/30	08:19:00	75.0000	BEGAN PUMPING	1227.46	82.19
05/30	08:35:15	91.2500	RATE #1, .25 BPM, 100 PSIG SURFACE	1199.04	80.06
05/30	08:51:45	107.7500	RATE #2, .70 BPM, 210 PSIG SURFACE	1308.51	90.32
05/30	09:07:00	123.0000	RATE #3, 1.30 BPM, 320 PSIG SURFACE	1417.27	85.96
05/30	09:22:00	138.0000	RATE #4, 1.75 BPM, 440 PSIG SURFACE	1553.13	80.26
05/30	09:37:00	153.0000	RATE #5, 2.25 BPM, 600 PSIG SURFACE	1660.49	78.56
05/30	09:52:00	168.0000	RATE #6, 2.70 BPM, 720 PSIG SURFACE	1688.29	78.69
05/30	10:07:00	183.0000	RATE #7, 3.26 BPM, 760 PSIG SURFACE	1723.58	79.00
05/30	10:22:00	198.0000	RATE #8, 3.80 BPM, 850 PSIG SURFACE	1755.31	79.21
05/30	10:37:00	213.0000	RATE #9, 4.30 BPM, 920 PSIG SURFACE	1781.89	79.61
05/30	10:52:15	228.2500	RATE #10, 4.73 BPM, 980 PSIG SURFACE	1816.24	79.04
05/30	11:07:15	243.2500	RATE #11, 5.30 BPM, 1060 PSIG SURFACE	1832.22	78.39
05/30	11:22:15	258.2500	RATE #12, 5.80 BPM, 1160 PSIG SURFACE	1848.70	78.83
05/30	11:37:15	273.2500	RATE #13, 6.28 BPM, 1250 PSIG SURFACE	1876.16	79.66
05/30	11:58:15	294.2500	RATE #14, 6.78 BPM, 1310 PSIG SURFACE	1910.72	81.09
05/30	12:12:15	308.2500	RATE #15, 7.25 BPM, 1400 PSIG SURFACE	1933.94	81.55
05/30	12:27:15	323.2500	RATE #16, 7.80 BPM, 1500 PSIG SURFACE	1934.38	82.16
05/30	12:42:15	338.2500	RATE #17, 8.34 BPM, 1600 PSIG SURFACE	1943.39	79.59
05/30	12:57:15	353.2500	RATE #18, 8.70 BPM, 1670 PSIG SURFACE	1958.67	80.19
05/30	13:10:15	366.2500	RATE #19, 9.30 BPM, 1800 PSIG SURFACE	1967.09	81.64
05/30	13:25:15	381.2500	RATE #20, 9.70 BPM, 1860 PSIG SURFACE	1989.41	80.89
05/30	13:39:15	395.2500	RATE #21, 10.30 BPM, 2000 PSIG SURFACE	1996.97	83.69
05/30	13:56:15	412.2500	RATE #22, 10.70 BPM, 2350 PSIG SURFACE	2008.73	84.77
05/30	13:56:30	412.5000	PRESSURE FALL-OFF	2012.90	84.79
05/30	14:15:00	431.0000	END FALL-OFF	1471.62	85.66
05/30	14:15:15	431.2500	TANDEM INSTRUMENTS OFF BOTTOM	1456.09	85.65

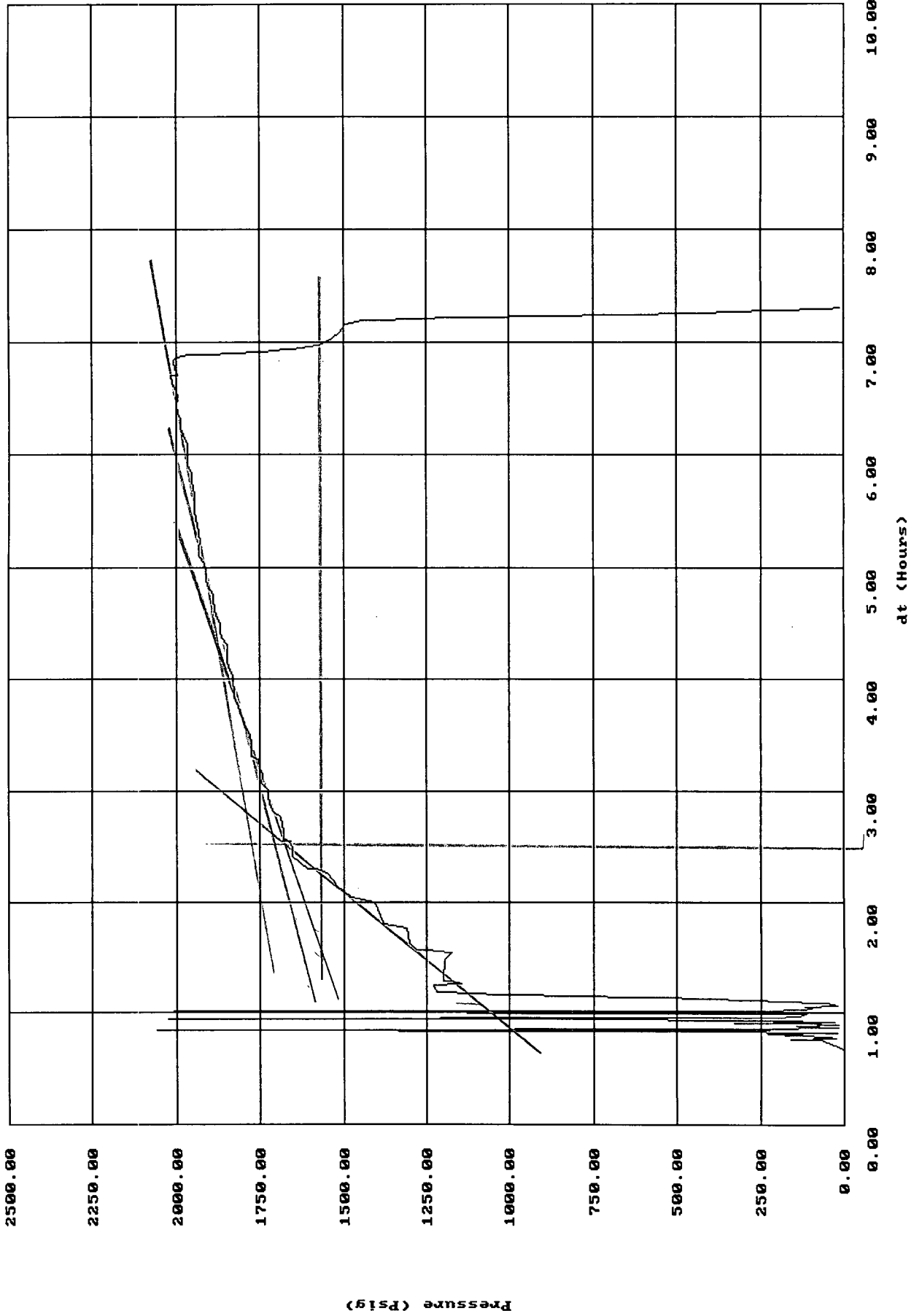
*600-50 = 550
 Psig*

RICHARDSON OPERATING COMPANY

Pressure vs dt

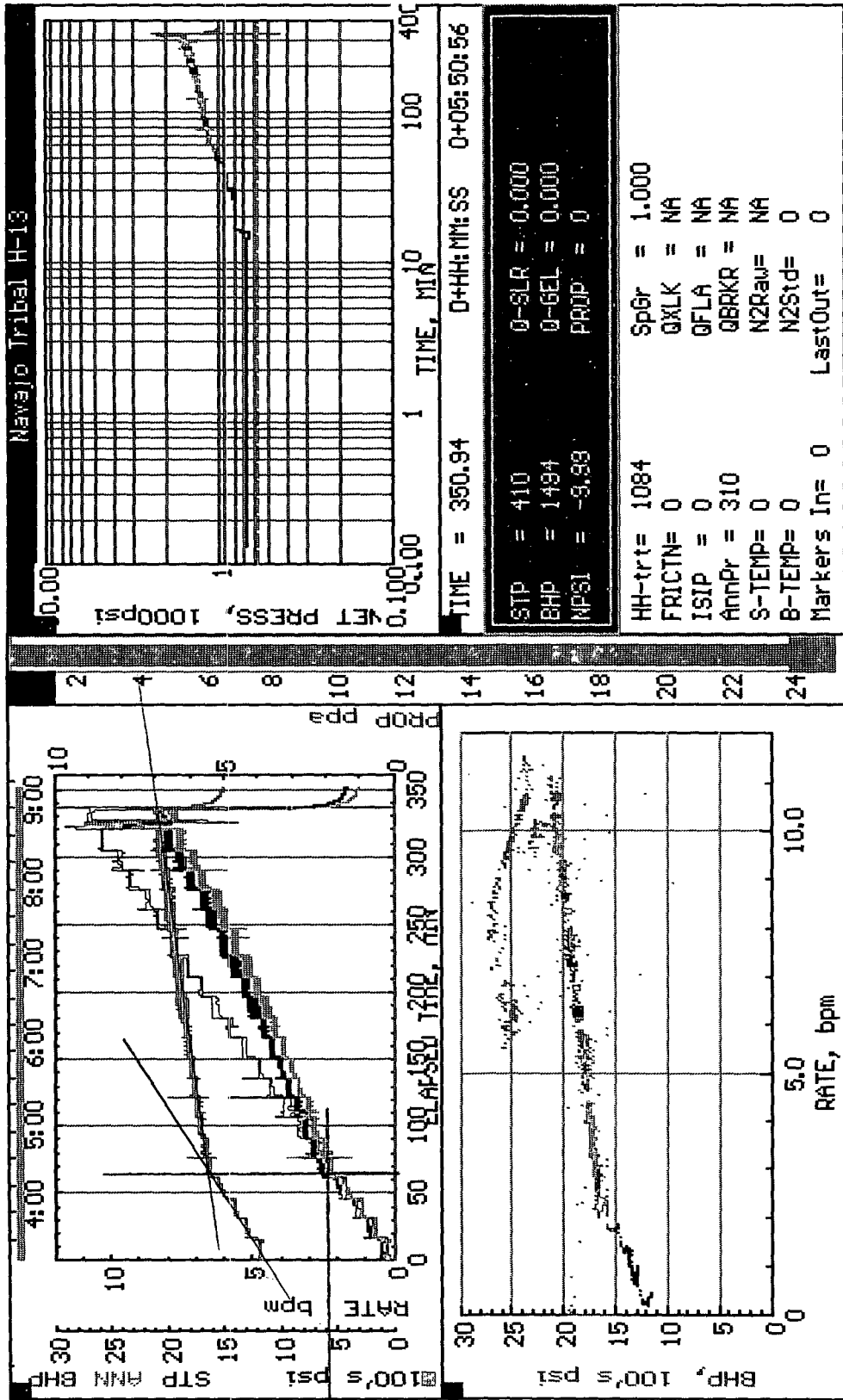
NAVAJO TRIBAL NO. H-13
SAN JUAN COUNTY, NM
F154604.REB

TEFFELLER, INC.
S-30-02
STEP RATE TEST



Desc: Navajo Tribal H-13
 Mesaverde
 Richardson Operating
 Step Rate Test - May 30, 2002

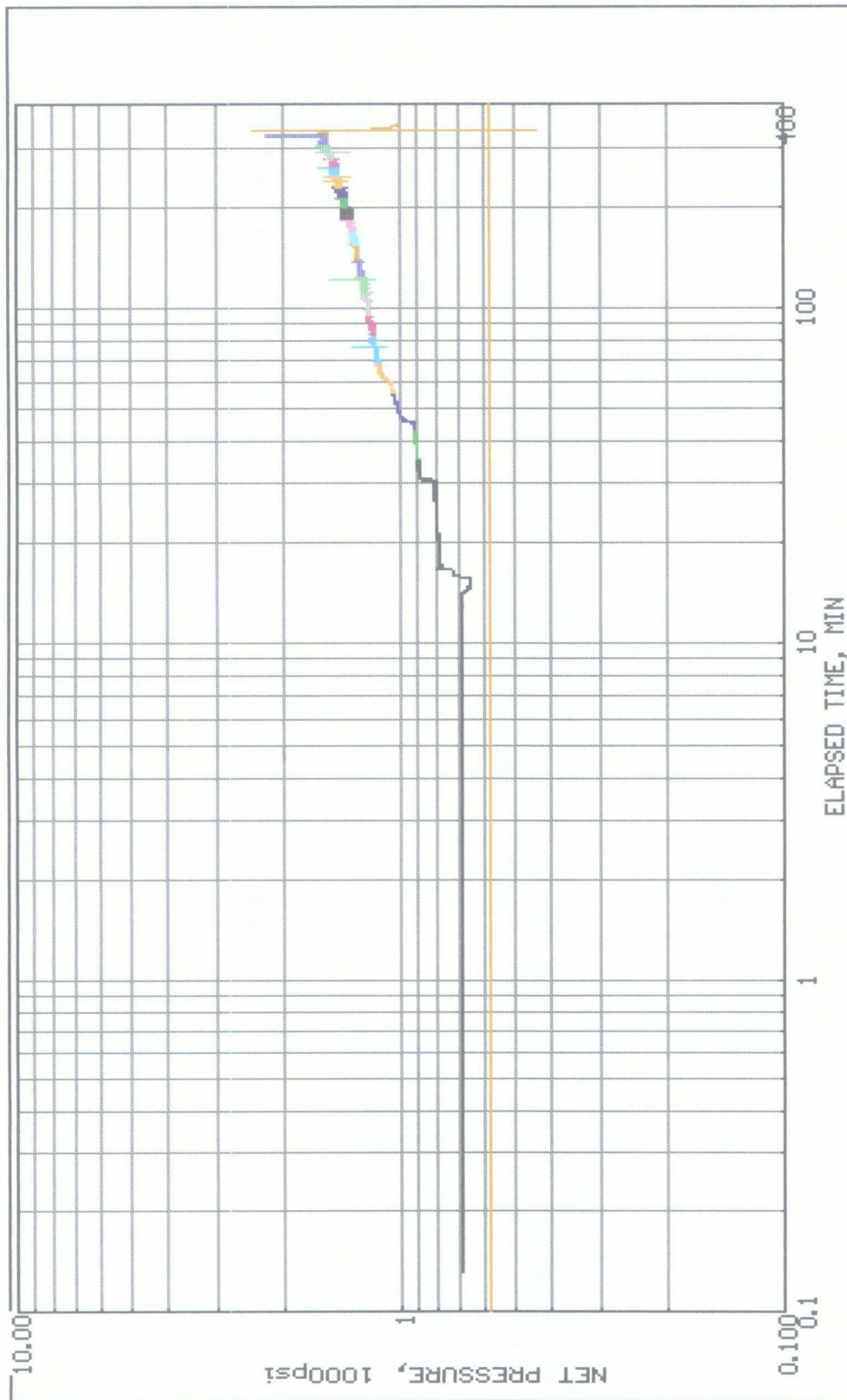
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60

Desc: Navajo Tribal H-13
Mesaverde
Richardson Operating
Step Rate Test - May 30, 2002

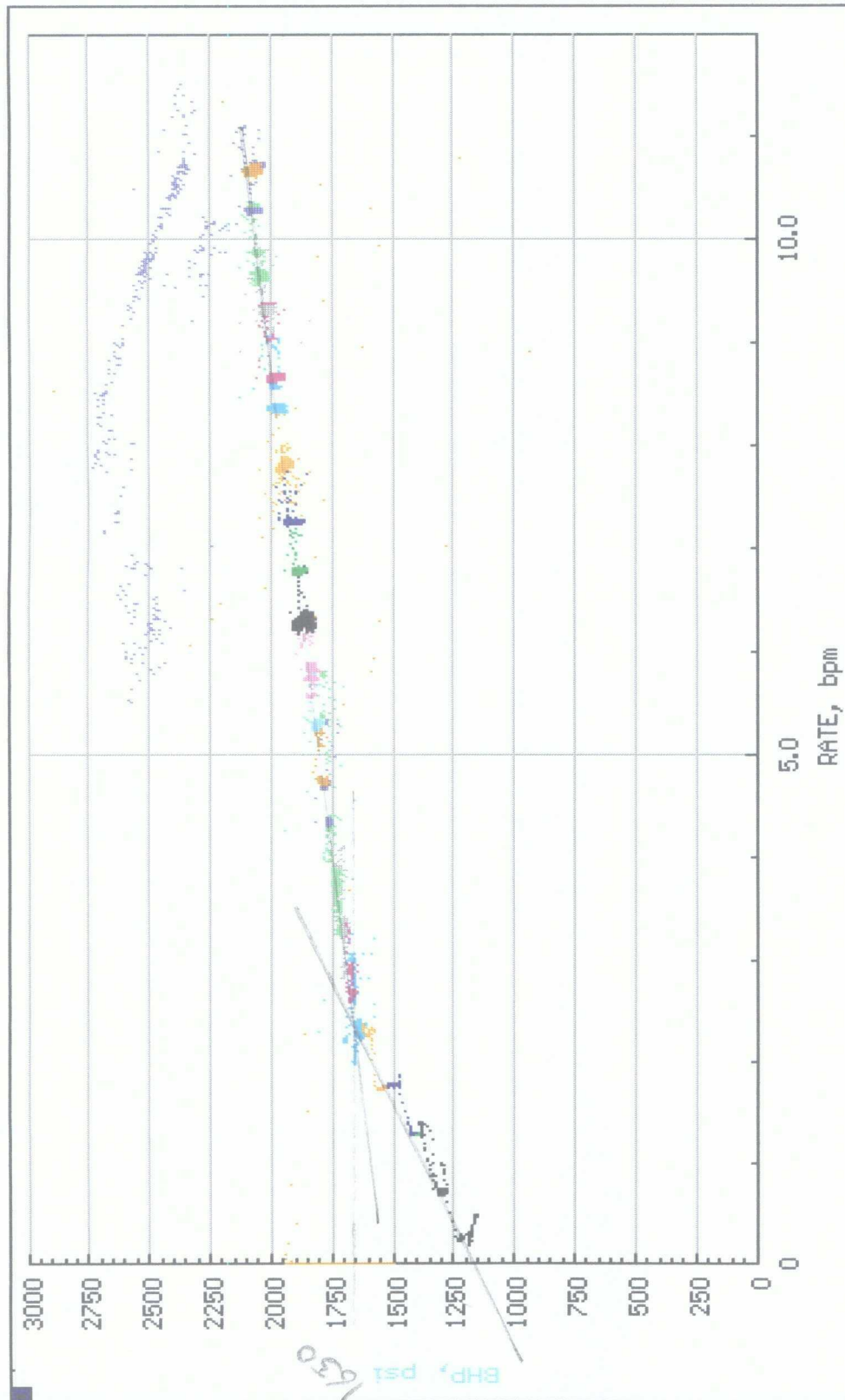
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Desc: Navajo Tribal H-13
Mesaverde
Richardson Operating

Step Rate Test - May 30, 2002

PAGE : 3-G (5/30/2002 14:14:41) Data stored in C:\SMARTS\DATADIR\NAVTRH



Description : Richardson Operating / 5-30-02
 Navajo Tribal H-13 / Mesa Verde

PAGE :1 Data printed approx. every 0.50 min. Data stored in C:\SMARTS\DATADIR
 \NAVTRH13.DAT

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+++++
ELAPSED      Calc      A      SLURRY      4INCH
  TIME      BH      Pressure      PUMP      PUMP
           Press  TREATING      RATE      TOTAL
           psi      PSI      BPM      BBLs
=====
0.515      1184.10  100.0000000  0.2500000  0.0000000
1.015      1184.20  100.0000000  0.2200000  0.0000000
1.515      1184.20  100.0000000  0.2100000  0.0000000
2.016      1184.20  100.0000000  0.1900000  0.0000000
2.516      1184.20  100.0000000  0.2200000  0.0000000
3.032      1184.20  100.0000000  0.2000000  0.0000000
3.532      1184.20  100.0000000  0.2400000  0.0000000
4.048      1184.10  100.0000000  0.2400000  0.0000000
4.548      1184.20  100.0000000  0.2300000  0.0000000
5.049      1184.20  100.0000000  0.2200000  0.0000000
5.564      1184.20  100.0000000  0.2200000  0.0000000
6.064      1184.20  100.0000000  0.2200000  0.0000000
6.564      1184.10  100.0000000  0.2600000  0.0000000
7.064      1184.10  100.0000000  0.2600000  0.0000000
7.581      1184.10  100.0000000  0.2700000  0.0000000
8.081      1184.10  100.0000000  0.2600000  0.0000000
8.598      1184.10  100.0000000  0.2600000  0.0000000
9.113      1184.10  100.0000000  0.2600000  0.0000000
9.613      1184.10  100.0000000  0.2600000  0.0000000
10.113     1184.10  100.0000000  0.2600000  0.0000000
10.613     1184.10  100.0000000  0.2500000  0.0000000
11.130     1184.10  100.0000000  0.2500000  0.0000000
11.630     1184.10  100.0000000  0.2400000  0.0000000
12.146     1184.10  100.0000000  0.2500000  0.0000000
12.646     1184.10  100.0000000  0.2500000  0.0000000
13.146     1184.10  100.0000000  0.2600000  0.0000000
13.662     1184.20  100.0000000  0.2200000  0.0000000
14.162     1184.20  100.0000000  0.2100000  0.0000000
14.662     1163.10  80.0000000  0.4700000  0.0000000
15.178     1153.60  70.0000000  0.4700000  0.0000000
15.678     1155.60  80.0000000  0.4600000  0.0000000
16.195     1217.80  130.0000000  0.2300000  0.0000000
16.695     1242.30  170.0000000  0.3800000  0.0000000
17.195     1276.80  200.0000000  0.7000000  0.0000000
17.711     1281.30  200.0000000  0.7100000  0.0000000
18.228     1287.60  210.0000000  0.7000000  0.0000000
18.744     1289.50  210.0000000  0.7000000  0.0000000
19.244     1286.70  210.0000000  0.6900000  0.0000000
19.744     1290.50  210.0000000  0.6900000  0.0000000
20.244     1290.50  210.0000000  0.7000000  0.0000000
20.745     1294.60  210.0000000  0.7000000  0.0000000
21.260     1292.70  210.0000000  0.6900000  0.0000000
21.760     1294.60  210.0000000  0.7000000  0.0000000
22.260     1294.80  220.0000000  0.7000000  0.0000000
22.776     1299.90  220.0000000  0.6800000  0.0000000
23.276     1296.50  220.0000000  0.6900000  0.0000000
23.776     1297.70  220.0000000  0.6900000  0.0000000
24.293     1297.80  220.0000000  0.7000000  0.0000000
24.793     1300.70  220.0000000  0.6700000  0.0000000

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25.310	1300.80	220.0000000	0.6700000	0.0000000
25.825	1300.50	220.0000000	0.7100000	0.0000000
26.325	1300.40	220.0000000	0.7100000	0.0000000
26.825	1304.30	220.0000000	0.7000000	0.0000000
27.325	1305.40	220.0000000	0.7100000	0.0000000
27.842	1305.00	220.0000000	0.7000000	0.0000000
28.358	1306.20	220.0000000	0.7100000	0.0000000
28.859	1303.30	230.0000000	0.7200000	0.0000000
29.359	1309.30	230.0000000	0.7100000	0.0000000
29.874	1302.70	220.0000000	0.7000000	0.0000000
30.374	1306.20	230.0000000	0.6700000	0.0000000
30.875	1331.40	250.0000000	0.9400000	3.2000000
31.391	1384.10	320.0000000	1.3500000	3.3000000
31.907	1380.20	310.0000000	1.2800000	3.4000000
32.407	1385.20	320.0000000	1.3000000	3.6000000
32.907	1386.20	320.0000000	1.2800000	3.8000000
33.407	1386.00	320.0000000	1.2900000	3.9000000
33.907	1390.50	320.0000000	1.2600000	4.1000000
34.423	1393.80	330.0000000	1.2800000	4.3000000
34.923	1392.90	330.0000000	1.2900000	4.4000000
35.423	1393.10	330.0000000	1.2800000	4.6000000
35.939	1392.60	330.0000000	1.3000000	4.7000000
36.439	1395.80	330.0000000	1.2900000	4.9000000
36.939	1396.90	340.0000000	1.2900000	5.0000000
37.446	1399.00	330.0000000	1.2800000	5.2000000
37.947	1400.40	330.0000000	1.2800000	5.3000000
38.455	1402.80	340.0000000	1.2900000	5.4000000
38.963	1400.10	330.0000000	1.2900000	5.6000000
39.463	1402.40	330.0000000	1.2800000	5.8000000
39.964	1401.30	340.0000000	1.2900000	6.0000000
40.479	1404.80	340.0000000	1.2900000	6.2000000
40.979	1405.40	340.0000000	1.2800000	6.3000000
41.479	1407.80	340.0000000	1.2800000	6.6000000
41.979	1405.60	340.0000000	1.2700000	6.9000000
42.495	1407.30	340.0000000	1.2900000	7.2000000
42.996	1408.00	340.0000000	1.2900000	7.5000000
43.496	1409.40	340.0000000	1.2900000	7.6000000
44.012	1414.70	350.0000000	1.2800000	7.8000000
44.514	1414.70	350.0000000	1.2700000	8.0000000
45.029	1417.50	350.0000000	1.2800000	8.2000000
45.544	1417.80	360.0000000	1.2900000	8.4000000
46.044	1438.50	390.0000000	1.4200000	8.6000000
46.544	1473.70	430.0000000	1.7700000	8.7000000
47.045	1478.20	440.0000000	1.7700000	8.9000000
47.545	1486.50	450.0000000	1.7500000	9.1000000
48.061	1492.20	450.0000000	1.7600000	9.5000000
48.577	1495.00	450.0000000	1.7600000	9.8000000
49.077	1498.50	460.0000000	1.7600000	10.0000000
49.577	1502.50	460.0000000	1.7600000	10.2000000
50.077	1504.40	460.0000000	1.7700000	10.4000000
50.577	1505.90	470.0000000	1.7700000	10.6000000
51.093	1512.90	480.0000000	1.7600000	10.8000000
51.593	1515.00	470.0000000	1.7600000	11.1000000
52.110	1512.70	470.0000000	1.7500000	11.4000000
52.626	1515.30	470.0000000	1.7600000	11.5000000
53.126	1522.90	480.0000000	1.7500000	11.6000000
53.626	1524.60	480.0000000	1.7400000	11.9000000
54.126	1525.70	480.0000000	1.7500000	12.1000000
54.626	1525.50	480.0000000	1.7400000	12.4000000
55.142	1534.20	490.0000000	1.7500000	12.6000000

55.658	1532.90	490.0000000	1.7400000	12.8000000
56.158	1541.70	500.0000000	1.7400000	13.1000000
56.675	1538.50	490.0000000	1.7400000	13.3000000
57.176	1542.60	500.0000000	1.7300000	13.5000000
57.691	1545.90	500.0000000	1.7400000	13.7000000
58.192	1545.60	500.0000000	1.7300000	13.9000000
58.708	1546.60	500.0000000	1.7300000	14.1000000
59.208	1547.30	510.0000000	1.7300000	14.3000000
59.724	1549.10	510.0000000	1.7200000	14.5000000
60.224	1550.50	500.0000000	1.7300000	14.7000000
60.725	1553.80	510.0000000	1.7200000	14.9000000
61.240	1584.80	580.0000000	2.2300000	15.0000000
61.740	1602.00	600.0000000	2.2600000	15.2000000
62.241	1603.00	600.0000000	2.2500000	15.3000000
62.756	1603.00	600.0000000	2.2500000	15.5000000
63.257	1601.10	600.0000000	2.2700000	15.7000000
63.773	1612.00	610.0000000	2.2600000	15.9000000
64.273	1613.00	610.0000000	2.2500000	16.1000000
64.790	1621.10	620.0000000	2.2700000	16.3000000
65.305	1618.20	620.0000000	2.3000000	16.5000000
65.805	1624.20	630.0000000	2.3400000	16.7000000
66.305	1615.20	620.0000000	2.3300000	16.9000000
66.805	1633.20	640.0000000	2.3500000	17.1000000
67.305	1641.20	650.0000000	2.3700000	17.2000000
67.805	1629.20	640.0000000	2.3900000	17.4000000
68.305	1638.10	650.0000000	2.4000000	17.7000000
68.821	1648.10	660.0000000	2.4000000	17.8000000
69.339	1622.00	620.0000000	2.2600000	18.0000000
69.854	1640.10	640.0000000	2.2800000	18.2000000
70.354	1630.10	630.0000000	2.2800000	18.3000000
70.854	1638.20	640.0000000	2.3000000	18.5000000
71.355	1639.20	640.0000000	2.2900000	18.7000000
71.871	1638.20	640.0000000	2.3000000	18.9000000
72.386	1637.20	640.0000000	2.3100000	19.0000000
72.887	1636.20	640.0000000	2.3200000	19.2000000
73.387	1643.20	650.0000000	2.3500000	19.4000000
73.887	1653.20	660.0000000	2.3500000	19.7000000
74.387	1630.20	640.0000000	2.3800000	19.9000000
74.903	1650.20	660.0000000	2.3800000	20.0000000
75.403	1648.10	660.0000000	2.4000000	20.2000000
75.919	1638.10	650.0000000	2.4000000	20.3000000
76.420	1664.40	640.0000000	2.0000000	20.7000000
76.920	1659.00	690.0000000	2.6600000	21.2000000
77.436	1659.60	710.0000000	2.9300000	21.6000000
77.936	1658.30	690.0000000	2.6700000	22.5000000
78.452	1657.60	690.0000000	2.6800000	24.0000000
78.952	1656.90	700.0000000	2.8300000	25.5000000
79.453	1679.90	740.0000000	3.0600000	27.3000000
79.969	1663.10	690.0000000	2.6000000	28.8000000
80.469	1688.50	680.0000000	2.1900000	30.0000000
80.984	1656.90	690.0000000	2.6900000	31.0000000
81.485	1657.60	690.0000000	2.6800000	31.7000000
82.001	1666.20	700.0000000	2.7000000	32.2000000
82.501	1666.90	700.0000000	2.6900000	32.8000000
83.001	1666.90	700.0000000	2.6900000	33.8000000
83.501	1666.20	700.0000000	2.7000000	35.0000000
84.018	1656.20	690.0000000	2.7000000	36.2000000
84.533	1656.20	690.0000000	2.7000000	37.3000000
85.034	1666.20	700.0000000	2.7000000	38.3000000
85.550	1676.90	710.0000000	2.6900000	39.2000000

86.050	1667.60	700.0000000	2.6800000	39.9000000
86.550	1666.20	700.0000000	2.7000000	40.4000000
87.050	1666.90	700.0000000	2.6900000	41.4000000
87.550	1678.10	730.0000000	2.9500000	42.4000000
88.050	1681.70	710.0000000	2.6200000	43.5000000
88.565	1667.60	700.0000000	2.6800000	44.7000000
89.066	1676.90	710.0000000	2.6900000	45.8000000
89.582	1666.90	700.0000000	2.6900000	46.7000000
90.082	1666.20	700.0000000	2.7000000	47.5000000
90.599	1677.60	710.0000000	2.6800000	48.2000000
91.107	1688.40	750.0000000	3.0800000	49.0000000
91.615	1682.00	760.0000000	3.2900000	50.0000000
92.115	1699.60	780.0000000	3.3200000	51.2000000
92.615	1696.40	780.0000000	3.3600000	52.5000000
93.115	1696.40	780.0000000	3.3600000	53.7000000
93.622	1694.80	780.0000000	3.3800000	54.9000000
94.123	1702.40	790.0000000	3.4100000	55.8000000
94.630	1696.00	770.0000000	3.2400000	56.6000000
95.131	1692.80	770.0000000	3.2800000	57.4000000
95.638	1701.20	780.0000000	3.3000000	58.2000000
96.139	1698.90	780.0000000	3.3300000	59.1000000
96.639	1697.30	780.0000000	3.3500000	60.2000000
97.139	1696.40	780.0000000	3.3600000	61.4000000
97.655	1704.00	790.0000000	3.3900000	62.7000000
98.156	1713.20	800.0000000	3.4000000	63.9000000
98.671	1701.20	780.0000000	3.3000000	64.9000000
99.171	1708.90	790.0000000	3.3300000	65.7000000
99.671	1694.80	780.0000000	3.3800000	66.3000000
100.171	1704.00	790.0000000	3.3900000	66.8000000
100.687	1718.10	800.0000000	3.3400000	67.7000000
101.187	1696.80	770.0000000	3.2300000	69.1000000
101.687	1702.80	780.0000000	3.2800000	70.7000000
102.187	1702.80	780.0000000	3.2800000	72.3000000
102.687	1702.00	780.0000000	3.2900000	73.7000000
103.187	1700.40	780.0000000	3.3100000	74.9000000
103.687	1699.60	780.0000000	3.3200000	75.8000000
104.203	1706.40	790.0000000	3.3600000	76.3000000
104.703	1714.00	800.0000000	3.3900000	76.8000000
105.203	1691.10	740.0000000	2.9100000	78.0000000
105.719	1691.40	760.0000000	3.1700000	79.3000000
106.219	1701.20	780.0000000	3.3000000	80.3000000
106.719	1733.60	860.0000000	3.8700000	81.5000000
107.236	1741.40	860.0000000	3.7800000	82.8000000
107.736	1719.70	840.0000000	3.8000000	83.9000000
108.252	1741.80	870.0000000	3.8900000	84.8000000
108.752	1722.30	840.0000000	3.7700000	85.8000000
109.268	1727.10	850.0000000	3.8300000	87.1000000
109.768	1726.60	840.0000000	3.7200000	88.5000000
110.284	1735.10	840.0000000	3.6200000	90.3000000
110.784	1670.60	790.0000000	3.7900000	92.2000000
111.284	1718.10	800.0000000	3.3400000	94.0000000
111.784	1729.10	840.0000000	3.6900000	95.4000000
112.284	1733.60	860.0000000	3.8700000	96.6000000
112.784	1720.60	840.0000000	3.7900000	97.7000000
113.284	1726.20	850.0000000	3.8400000	98.5000000
113.784	1732.30	850.0000000	3.7700000	99.5000000
114.284	1737.10	860.0000000	3.8300000	100.8000000
114.800	1735.90	840.0000000	3.6100000	102.3000000
115.300	1743.10	860.0000000	3.7600000	104.1000000
115.800	1723.10	840.0000000	3.7600000	105.9000000

116.317	1718.80	840.0000000	3.8100000	107.5000000
116.832	1721.70	830.0000000	3.6600000	108.9000000
117.332	1727.40	840.0000000	3.7100000	110.3000000
117.833	1734.00	850.0000000	3.7500000	111.6000000
118.333	1735.30	860.0000000	3.8500000	112.8000000
118.850	1739.10	850.0000000	3.6900000	114.0000000
119.366	1725.70	840.0000000	3.7300000	115.3000000
119.868	1722.30	840.0000000	3.7700000	116.6000000
120.381	1748.00	870.0000000	3.8200000	118.2000000
120.881	1743.60	870.0000000	3.8700000	119.5000000
121.381	1784.80	1100.0000000	5.7600000	122.0000000
121.881	1773.00	1010.0000000	5.0300000	124.8000000
122.381	1756.50	890.0000000	3.9500000	126.6000000
122.881	1750.20	910.0000000	4.2400000	128.2000000
123.381	1753.70	920.0000000	4.3100000	129.7000000
123.881	1750.90	920.0000000	4.3400000	131.1000000
124.381	1750.90	920.0000000	4.3400000	132.5000000
124.892	1751.80	920.0000000	4.3300000	133.9000000
125.397	1755.60	920.0000000	4.2900000	135.5000000
125.897	1750.90	920.0000000	4.3400000	137.2000000
126.413	1763.70	930.0000000	4.3100000	139.1000000
126.913	1751.80	920.0000000	4.3300000	141.1000000
127.413	1750.90	920.0000000	4.3400000	142.9000000
127.913	1755.60	920.0000000	4.2900000	144.5000000
128.430	1750.00	920.0000000	4.3500000	145.9000000
128.947	1754.60	920.0000000	4.3000000	147.2000000
129.462	1749.00	920.0000000	4.3600000	148.5000000
129.963	1752.80	920.0000000	4.3200000	149.9000000
130.479	1763.70	930.0000000	4.3100000	151.6000000
130.996	1759.00	930.0000000	4.3600000	153.5000000
131.496	1764.60	930.0000000	4.3000000	155.5000000
131.996	1750.90	920.0000000	4.3400000	157.4000000
132.512	1759.00	930.0000000	4.3600000	159.2000000
133.029	1763.70	930.0000000	4.3100000	160.7000000
133.544	1760.90	930.0000000	4.3400000	161.9000000
134.044	1758.10	930.0000000	4.3700000	163.0000000
134.544	1749.00	920.0000000	4.3600000	164.3000000
135.044	1751.80	920.0000000	4.3300000	165.7000000
135.561	1750.90	920.0000000	4.3400000	167.4000000
136.078	1819.00	1010.0000000	4.5700000	169.2000000
136.593	1773.30	980.0000000	4.7300000	171.6000000
137.093	1753.30	960.0000000	4.7300000	173.8000000
137.593	1778.20	980.0000000	4.6800000	175.9000000
138.093	1776.20	980.0000000	4.7000000	177.8000000
138.594	1777.20	980.0000000	4.6900000	179.7000000
139.111	1765.30	970.0000000	4.7100000	181.7000000
139.626	1764.30	970.0000000	4.7200000	183.6000000
140.127	1784.30	990.0000000	4.7200000	185.5000000
140.627	1776.20	980.0000000	4.7000000	187.3000000
141.143	1785.30	990.0000000	4.7100000	189.2000000
141.658	1774.30	980.0000000	4.7200000	191.3000000
142.158	1785.30	990.0000000	4.7100000	193.3000000
142.659	1785.30	990.0000000	4.7100000	195.4000000
143.159	1782.30	990.0000000	4.7400000	197.3000000
143.659	1782.30	990.0000000	4.7400000	199.3000000
144.175	1801.30	1010.0000000	4.7500000	201.2000000
144.675	1780.30	990.0000000	4.7600000	203.1000000
145.175	1781.30	990.0000000	4.7500000	205.0000000
145.691	1791.30	1000.0000000	4.7500000	207.1000000
146.191	1770.30	980.0000000	4.7600000	209.2000000

146.699	1780.30	990.0000000	4.7600000	211.3000000
147.199	1794.30	1000.0000000	4.7200000	213.4000000
147.707	1793.30	1000.0000000	4.7300000	215.6000000
148.232	1804.30	1010.0000000	4.7200000	217.8000000
148.748	1801.30	1010.0000000	4.7500000	219.7000000
149.248	1792.30	1000.0000000	4.7400000	221.6000000
149.765	1783.30	990.0000000	4.7300000	223.5000000
150.282	1802.30	1010.0000000	4.7400000	225.4000000
150.798	1792.30	1000.0000000	4.7400000	227.4000000
151.299	1804.80	1050.0000000	5.1100000	229.5000000
151.814	1786.90	1050.0000000	5.2800000	232.2000000
152.314	1821.20	1080.0000000	5.2400000	234.8000000
152.814	1808.00	1070.0000000	5.2700000	367.5000000
153.314	1794.80	1060.0000000	5.3000000	390.2000000
153.830	1783.80	1050.0000000	5.3100000	392.9000000
154.330	1805.90	1070.0000000	5.2900000	395.6000000
154.847	1820.10	1080.0000000	5.2500000	398.3000000
155.347	1795.90	1060.0000000	5.2900000	401.0000000
155.847	1798.00	1060.0000000	5.2700000	403.6000000
156.364	1820.10	1080.0000000	5.2500000	406.4000000
156.880	1819.10	1080.0000000	5.2600000	409.1000000
157.380	1813.80	1080.0000000	5.3100000	411.7000000
157.896	1795.90	1060.0000000	5.2900000	414.4000000
158.396	1822.20	1080.0000000	5.2300000	417.1000000
158.896	1812.70	1080.0000000	5.3200000	419.7000000
159.396	1805.90	1070.0000000	5.2900000	422.4000000
159.896	1808.00	1070.0000000	5.2700000	425.0000000
160.412	1816.90	1080.0000000	5.2800000	427.8000000
160.929	1804.80	1070.0000000	5.3000000	430.5000000
161.444	1806.90	1070.0000000	5.2800000	433.2000000
161.944	1792.70	1060.0000000	5.3200000	435.9000000
162.444	1829.10	1090.0000000	5.2600000	438.6000000
162.945	1805.90	1070.0000000	5.2900000	441.2000000
163.445	1818.00	1080.0000000	5.2700000	443.9000000
163.945	1801.60	1070.0000000	5.3300000	446.6000000
164.461	1803.80	1070.0000000	5.3100000	449.3000000
164.977	1819.10	1080.0000000	5.2600000	452.0000000
165.477	1813.80	1080.0000000	5.3100000	454.7000000
165.977	1792.70	1060.0000000	5.3200000	457.3000000
166.477	1813.60	1120.0000000	5.6800000	460.1000000
166.977	1828.00	1150.0000000	5.8200000	463.1000000
167.493	1839.20	1160.0000000	5.8100000	466.2000000
167.993	1836.90	1160.0000000	5.8300000	469.2000000
168.493	1820.30	1140.0000000	5.8000000	472.2000000
168.993	1816.90	1140.0000000	5.8300000	475.2000000
169.493	1816.90	1140.0000000	5.8300000	478.2000000
169.993	1849.20	1170.0000000	5.8100000	481.2000000
170.493	1829.20	1150.0000000	5.8100000	484.3000000
170.993	1838.00	1160.0000000	5.8200000	487.3000000
171.508	1828.00	1150.0000000	5.8200000	490.4000000
172.008	1846.90	1170.0000000	5.8300000	493.4000000
172.508	1825.80	1150.0000000	5.8400000	496.4000000
173.009	1826.90	1150.0000000	5.8300000	499.4000000
173.524	1842.40	1170.0000000	5.8700000	502.5000000
174.024	1821.30	1150.0000000	5.8800000	505.5000000
174.524	1829.20	1130.0000000	5.6300000	508.4000000
175.024	1819.20	1130.0000000	5.7200000	511.4000000
175.525	1845.90	1160.0000000	5.7500000	514.3000000
176.041	1844.80	1160.0000000	5.7600000	517.3000000
176.541	1835.90	1150.0000000	5.7500000	520.3000000

177.041	1838.10	1150.0000000	5.7300000	523.2000000
177.541	1857.00	1170.0000000	5.7400000	526.2000000
178.041	1847.00	1160.0000000	5.7400000	529.1000000
178.541	1825.90	1140.0000000	5.7500000	532.0000000
179.056	1824.80	1140.0000000	5.7600000	535.1000000
179.556	1844.80	1160.0000000	5.7600000	538.0000000
180.057	1818.10	1130.0000000	5.7300000	541.0000000
180.573	1845.90	1160.0000000	5.7500000	544.0000000
181.073	1845.90	1160.0000000	5.7500000	546.9000000
181.573	1841.60	1220.0000000	6.3100000	549.9000000
182.073	1844.50	1230.0000000	6.3700000	553.2000000
182.589	1841.50	1200.0000000	6.1400000	556.5000000
183.089	1822.20	1190.0000000	6.2200000	559.7000000
183.589	1829.30	1210.0000000	6.3300000	562.9000000
184.105	1835.70	1200.0000000	6.1900000	566.2000000
184.605	1830.50	1210.0000000	6.3200000	569.4000000
185.105	1849.30	1230.0000000	6.3300000	572.6000000
185.605	1849.30	1230.0000000	6.3300000	575.9000000
186.105	1853.40	1240.0000000	6.3800000	579.0000000
186.621	1852.20	1220.0000000	6.2200000	582.3000000
187.121	1889.90	1260.0000000	6.2400000	585.6000000
187.621	1849.30	1230.0000000	6.3300000	588.8000000
188.121	1865.20	1240.0000000	6.2800000	592.0000000
188.621	1884.00	1260.0000000	6.2900000	595.2000000
189.138	1855.70	1240.0000000	6.3600000	598.5000000
189.653	1907.50	1280.0000000	6.2600000	601.8000000
190.153	1873.40	1260.0000000	6.3800000	605.1000000
190.653	1848.70	1220.0000000	6.2500000	608.3000000
191.154	1843.40	1230.0000000	6.3800000	611.6000000
191.670	1874.00	1250.0000000	6.2900000	614.8000000
192.170	1873.40	1260.0000000	6.3800000	618.1000000
192.670	1846.30	1220.0000000	6.2700000	621.3000000
193.186	1833.40	1220.0000000	6.3800000	624.7000000
193.686	1847.50	1220.0000000	6.2600000	627.9000000
194.202	1853.40	1240.0000000	6.3800000	631.2000000
194.702	1896.30	1270.0000000	6.2700000	634.4000000
195.203	1853.40	1240.0000000	6.3800000	637.7000000
195.719	1827.50	1200.0000000	6.2600000	641.0000000
196.219	1883.00	1290.0000000	6.5500000	644.2000000
196.719	1863.70	1300.0000000	6.7900000	647.6000000
197.235	1867.40	1300.0000000	6.7600000	651.2000000
197.752	1852.50	1290.0000000	6.8000000	654.8000000
198.268	1883.70	1320.0000000	6.7900000	658.4000000
198.768	1875.00	1310.0000000	6.7800000	661.8000000
199.284	1875.00	1310.0000000	6.7800000	665.4000000
199.784	1867.40	1300.0000000	6.7600000	668.9000000
200.284	1896.20	1330.0000000	6.7700000	672.3000000
200.784	1876.20	1310.0000000	6.7700000	675.8000000
201.284	1882.50	1320.0000000	6.8000000	679.2000000
201.784	1880.00	1320.0000000	6.8200000	682.7000000
202.308	1903.70	1340.0000000	6.7900000	686.3000000
202.808	1895.00	1330.0000000	6.7800000	689.8000000
203.308	1875.00	1310.0000000	6.7800000	693.3000000
203.816	1883.70	1320.0000000	6.7900000	696.8000000
204.324	1896.20	1330.0000000	6.7700000	700.3000000
204.825	1896.20	1330.0000000	6.7700000	703.8000000
205.341	1905.00	1340.0000000	6.7800000	707.3000000
205.841	1906.20	1340.0000000	6.7700000	710.8000000
206.341	1872.50	1310.0000000	6.8000000	714.2000000
206.857	1888.70	1320.0000000	6.7500000	717.8000000

207.357	1883.70	1320.0000000	6.7900000	721.3000000
207.857	1872.50	1310.0000000	6.8000000	724.7000000
208.373	1867.40	1300.0000000	6.7600000	728.3000000
208.873	1885.00	1320.0000000	6.7800000	731.7000000
209.391	1905.00	1340.0000000	6.7800000	735.3000000
209.891	1887.40	1320.0000000	6.7600000	738.7000000
210.406	1873.70	1310.0000000	6.7900000	742.3000000
210.906	1889.90	1320.0000000	6.7400000	745.7000000
211.406	1935.90	1430.0000000	7.2500000	749.3000000
211.922	1915.90	1410.0000000	7.2500000	753.1000000
212.423	1885.90	1380.0000000	7.2500000	756.8000000
212.939	1930.70	1430.0000000	7.2900000	760.6000000
213.439	1923.30	1420.0000000	7.2700000	764.3000000
213.939	1874.60	1370.0000000	7.2600000	768.0000000
214.455	1884.60	1380.0000000	7.2600000	771.8000000
214.955	1924.60	1420.0000000	7.2600000	775.6000000
215.471	1883.30	1380.0000000	7.2700000	779.4000000
215.971	1935.90	1430.0000000	7.2500000	783.1000000
216.472	1924.60	1420.0000000	7.2600000	786.8000000
216.988	1875.90	1370.0000000	7.2500000	790.6000000
217.488	1935.90	1430.0000000	7.2500000	794.3000000
218.005	1904.60	1400.0000000	7.2600000	798.1000000
218.521	1884.60	1380.0000000	7.2600000	802.0000000
219.036	1915.90	1410.0000000	7.2500000	805.8000000
219.536	1885.90	1380.0000000	7.2500000	809.5000000
220.036	1904.60	1400.0000000	7.2600000	813.2000000
220.536	1885.90	1380.0000000	7.2500000	816.9000000
221.036	1913.30	1410.0000000	7.2700000	820.6000000
221.536	1933.30	1430.0000000	7.2700000	824.3000000
222.036	1907.20	1400.0000000	7.2400000	828.0000000
222.536	1914.60	1410.0000000	7.2600000	831.7000000
223.036	1943.30	1440.0000000	7.2700000	835.4000000
223.536	1924.60	1420.0000000	7.2600000	839.1000000
224.036	1905.90	1400.0000000	7.2500000	842.8000000
224.536	1933.30	1430.0000000	7.2700000	846.5000000
225.053	1930.70	1430.0000000	7.2900000	850.3000000
225.568	1893.30	1390.0000000	7.2700000	854.1000000
226.068	1933.30	1430.0000000	7.2700000	857.8000000
226.569	1892.60	1410.0000000	7.4300000	861.7000000
227.069	1912.40	1480.0000000	7.8100000	865.6000000
227.585	1935.10	1500.0000000	7.7900000	869.7000000
228.101	1941.70	1500.0000000	7.7400000	873.8000000
228.601	1938.30	1510.0000000	7.8400000	877.8000000
229.101	1922.40	1490.0000000	7.8100000	881.8000000
229.601	1937.00	1510.0000000	7.8500000	885.7000000
230.101	1961.70	1520.0000000	7.7400000	889.8000000
230.617	1937.00	1510.0000000	7.8500000	893.9000000
231.117	1942.40	1510.0000000	7.8100000	897.9000000
231.634	1921.00	1490.0000000	7.8200000	902.0000000
232.150	1927.00	1500.0000000	7.8500000	906.1000000
232.650	1931.00	1500.0000000	7.8200000	910.1000000
233.150	1909.70	1480.0000000	7.8300000	914.1000000
233.666	1933.00	1510.0000000	7.8800000	918.2000000
234.166	1959.10	1520.0000000	7.7600000	922.2000000
234.666	1928.30	1500.0000000	7.8400000	926.2000000
235.182	1933.00	1510.0000000	7.8800000	930.3000000
235.682	1967.70	1530.0000000	7.7700000	934.3000000
236.199	1918.30	1490.0000000	7.8400000	938.4000000
236.700	1939.70	1510.0000000	7.8300000	942.4000000
237.200	1938.30	1510.0000000	7.8400000	946.4000000

237.716	1945.10	1510.0000000	7.7900000	950.5000000
238.231	1941.60	1520.0000000	7.8900000	954.6000000
238.731	1941.00	1510.0000000	7.8200000	958.6000000
239.231	1949.70	1520.0000000	7.8300000	962.6000000
239.731	1991.30	1510.0000000	7.4400000	966.6000000
240.248	1927.70	1490.0000000	7.7700000	970.8000000
240.748	1937.00	1510.0000000	7.8500000	974.7000000
241.248	1941.00	1510.0000000	7.8200000	978.7000000
241.748	1967.70	1530.0000000	7.7700000	982.7000000
242.264	1934.30	1510.0000000	7.8700000	986.8000000
242.780	1959.70	1530.0000000	7.8300000	990.9000000
243.280	1944.30	1520.0000000	7.8700000	994.9000000
243.780	1939.70	1510.0000000	7.8300000	998.9000000
244.296	1949.70	1520.0000000	7.8300000	1003.0000000
244.796	1932.40	1500.0000000	7.8100000	1007.0000000
245.296	1925.60	1500.0000000	7.8600000	1011.0000000
245.796	1908.30	1480.0000000	7.8400000	1015.0000000
246.296	1970.80	1560.0000000	7.9700000	1019.0000000
246.796	1978.40	1620.0000000	8.3500000	1023.1000000
247.296	1991.20	1630.0000000	8.3300000	1027.4000000
247.796	1945.60	1590.0000000	8.3700000	1031.6000000
248.312	1955.60	1600.0000000	8.3700000	1036.0000000
248.812	1959.80	1600.0000000	8.3400000	1040.3000000
249.328	1949.80	1590.0000000	8.3400000	1044.7000000
249.828	1967.00	1610.0000000	8.3600000	1049.0000000
250.329	1979.80	1620.0000000	8.3400000	1053.2000000
250.845	1959.80	1600.0000000	8.3400000	1057.6000000
251.362	1938.40	1580.0000000	8.3500000	1062.1000000
251.877	1949.80	1590.0000000	8.3400000	1066.4000000
252.378	1974.20	1620.0000000	8.3800000	1070.7000000
252.894	1965.60	1610.0000000	8.3700000	1075.1000000
253.394	1958.40	1600.0000000	8.3500000	1079.4000000
253.911	1958.40	1600.0000000	8.3500000	1083.8000000
254.427	1939.80	1580.0000000	8.3400000	1088.2000000
254.927	1975.60	1620.0000000	8.3700000	1092.4000000
255.443	1955.60	1600.0000000	8.3700000	1096.9000000
255.943	1981.40	1630.0000000	8.4000000	1101.1000000
256.444	1995.60	1640.0000000	8.3700000	1105.4000000
256.951	1991.20	1630.0000000	8.3300000	1109.7000000
257.459	1971.20	1610.0000000	8.3300000	1114.1000000
257.959	1957.00	1600.0000000	8.3600000	1118.4000000
258.459	1975.60	1620.0000000	8.3700000	1122.6000000
258.967	1954.20	1600.0000000	8.3800000	1127.0000000
259.467	1954.20	1600.0000000	8.3800000	1131.2000000
259.968	1952.80	1600.0000000	8.3900000	1135.5000000
260.475	1947.00	1590.0000000	8.3600000	1139.9000000
260.983	1984.20	1630.0000000	8.3800000	1144.2000000
261.483	2026.80	1760.0000000	8.9900000	1148.5000000
261.983	1957.40	1630.0000000	8.5700000	1153.0000000
262.483	1980.30	1670.0000000	8.6900000	1157.4000000
263.000	1998.80	1690.0000000	8.7000000	1162.0000000
263.500	2001.70	1690.0000000	8.6800000	1166.4000000
264.017	1971.70	1660.0000000	8.6800000	1171.0000000
264.533	1991.70	1680.0000000	8.6800000	1175.6000000
265.033	1960.30	1650.0000000	8.6900000	1180.0000000
265.561	1960.30	1650.0000000	8.6900000	1184.5000000
266.065	1973.10	1660.0000000	8.6700000	1189.2000000
266.565	1996.00	1680.0000000	8.6500000	1193.6000000
267.065	1994.50	1680.0000000	8.6600000	1198.0000000
267.565	2007.40	1690.0000000	8.6400000	1202.4000000

268.065	1953.10	1640.0000000	8.6700000	1206.8000000
268.565	1974.50	1660.0000000	8.6600000	1211.3000000
269.065	1971.70	1660.0000000	8.6800000	1215.7000000
269.581	1996.00	1680.0000000	8.6500000	1220.2000000
270.097	1993.10	1680.0000000	8.6700000	1224.8000000
270.597	1993.10	1680.0000000	8.6700000	1229.2000000
271.098	1950.30	1640.0000000	8.6900000	1233.6000000
271.614	2001.70	1690.0000000	8.6800000	1238.2000000
272.114	1984.50	1670.0000000	8.6600000	1242.6000000
272.630	1993.10	1680.0000000	8.6700000	1247.2000000
273.130	1963.10	1650.0000000	8.6700000	1251.6000000
273.631	2001.70	1690.0000000	8.6800000	1256.0000000
274.146	1994.50	1680.0000000	8.6600000	1260.6000000
274.646	1997.40	1680.0000000	8.6400000	1265.0000000
275.146	1966.00	1650.0000000	8.6500000	1269.4000000
275.646	1977.40	1660.0000000	8.6400000	1273.8000000
276.163	2017.70	1770.0000000	9.1200000	1278.4000000
276.679	1992.00	1780.0000000	9.3600000	1283.2000000
277.180	1989.00	1780.0000000	9.3800000	1288.0000000
277.695	2007.00	1780.0000000	9.2600000	1292.8000000
278.195	2002.50	1780.0000000	9.2900000	1297.6000000
278.695	2016.50	1800.0000000	9.3300000	1302.3000000
279.195	2022.50	1800.0000000	9.2900000	1307.1000000
279.711	2019.50	1800.0000000	9.3100000	1312.0000000
280.211	1979.50	1760.0000000	9.3100000	1316.7000000
280.728	2006.50	1790.0000000	9.3300000	1321.6000000
281.228	2005.00	1790.0000000	9.3400000	1326.4000000
281.728	2005.00	1790.0000000	9.3400000	1331.2000000
282.244	2005.00	1790.0000000	9.3400000	1336.1000000
282.744	2029.50	1810.0000000	9.3100000	1340.8000000
283.260	2025.00	1810.0000000	9.3400000	1345.8000000
283.760	1993.50	1780.0000000	9.3500000	1350.5000000
284.261	2022.00	1810.0000000	9.3600000	1355.3000000
284.777	1995.00	1780.0000000	9.3400000	1360.2000000
285.277	2013.50	1800.0000000	9.3500000	1365.0000000
285.793	1996.50	1780.0000000	9.3300000	1369.9000000
286.293	2026.50	1810.0000000	9.3300000	1374.6000000
286.793	1979.50	1760.0000000	9.3100000	1379.4000000
287.293	2005.00	1790.0000000	9.3400000	1384.2000000
287.810	2039.50	1820.0000000	9.3100000	1389.1000000
288.326	2021.00	1800.0000000	9.3000000	1394.0000000
288.826	2038.00	1820.0000000	9.3200000	1398.8000000
289.342	1989.50	1770.0000000	9.3100000	1403.7000000
289.843	2023.50	1810.0000000	9.3500000	1408.4000000
290.358	2014.20	1840.0000000	9.6100000	1413.3000000
290.859	2058.10	1930.0000000	9.9100000	1418.2000000
291.359	2038.10	1870.0000000	9.6500000	1423.2000000
291.874	2048.10	1880.0000000	9.6500000	1428.2000000
292.374	2006.60	1840.0000000	9.6600000	1433.1000000
292.874	2042.70	1870.0000000	9.6200000	1438.0000000
293.391	2039.70	1870.0000000	9.6400000	1443.0000000
293.891	2059.70	1890.0000000	9.6400000	1447.9000000
294.391	2049.70	1880.0000000	9.6400000	1452.7000000
294.891	2049.70	1880.0000000	9.6400000	1457.6000000
295.407	2041.20	1870.0000000	9.6300000	1462.7000000
295.923	2055.80	1920.0000000	9.8600000	1467.7000000
296.423	2022.70	1890.0000000	9.8800000	1472.7000000
296.923	2053.50	1890.0000000	9.6800000	1477.7000000
297.423	2043.50	1880.0000000	9.6800000	1482.6000000
297.940	2052.00	1890.0000000	9.6900000	1487.6000000

298.440	2043.50	1880.0000000	9.6800000	1492.6000000
298.956	2055.10	1890.0000000	9.6700000	1497.6000000
299.456	2043.50	1880.0000000	9.6800000	1502.5000000
299.972	2042.00	1880.0000000	9.6900000	1507.6000000
300.473	2055.10	1890.0000000	9.6700000	1512.5000000
300.988	2043.50	1880.0000000	9.6800000	1517.5000000
301.488	2062.00	1900.0000000	9.6900000	1522.4000000
301.988	2043.50	1880.0000000	9.6800000	1527.3000000
302.488	2026.60	1860.0000000	9.6600000	1532.3000000
302.988	2065.10	1900.0000000	9.6700000	1537.2000000
303.488	2022.00	1860.0000000	9.6900000	1542.1000000
303.988	2060.50	1900.0000000	9.7000000	1547.0000000
304.488	2045.10	1880.0000000	9.6700000	1551.9000000
304.988	2055.10	1890.0000000	9.6700000	1556.8000000
305.488	2074.10	2020.0000000	10.3800000	1562.0000000
306.004	2066.80	2000.0000000	10.3000000	1567.4000000
306.520	2055.20	1990.0000000	10.3100000	1572.8000000
307.020	2068.40	2000.0000000	10.2900000	1578.1000000
307.520	2041.60	1970.0000000	10.2700000	1583.3000000
308.020	2036.80	1970.0000000	10.3000000	1588.6000000
308.538	2053.20	1980.0000000	10.2600000	1594.0000000
309.053	2090.00	2020.0000000	10.2800000	1599.4000000
309.554	2091.60	2020.0000000	10.2700000	1604.7000000
310.069	2038.40	1970.0000000	10.2900000	1610.1000000
310.569	2088.40	2020.0000000	10.2900000	1615.3000000
311.069	2080.00	2010.0000000	10.2800000	1620.6000000
311.570	2068.40	2000.0000000	10.2900000	1625.8000000
312.077	2086.80	2020.0000000	10.3000000	1631.1000000
312.586	2074.70	2000.0000000	10.2500000	1636.5000000
313.102	2033.20	1960.0000000	10.2600000	1641.9000000
313.610	2035.20	1970.0000000	10.3100000	1647.3000000
314.110	2088.40	2020.0000000	10.2900000	1652.5000000
314.611	2048.40	1980.0000000	10.2900000	1657.8000000
315.118	2038.40	1970.0000000	10.2900000	1663.1000000
315.618	2066.80	2000.0000000	10.3000000	1668.3000000
316.126	2050.00	1980.0000000	10.2800000	1673.7000000
316.643	2090.00	2020.0000000	10.2800000	1679.0000000
317.159	2060.00	1990.0000000	10.2800000	1684.5000000
317.660	2060.00	1990.0000000	10.2800000	1689.7000000
318.176	2078.40	2010.0000000	10.2900000	1695.1000000
318.692	2090.00	2020.0000000	10.2800000	1700.5000000
319.209	2068.40	2000.0000000	10.2900000	1706.0000000
319.709	2068.40	2000.0000000	10.2900000	1711.2000000
320.226	2076.80	2050.0000000	10.5500000	1716.6000000
320.726	2255.10	2090.0000000	9.6700000	1722.1000000
321.241	2267.80	2160.0000000	10.0400000	1727.8000000
321.741	2309.60	2330.0000000	10.8400000	1733.9000000
322.241	2386.80	2360.0000000	10.5500000	1739.9000000
322.741	2414.50	2370.0000000	10.4400000	1746.0000000
323.257	2509.00	2350.0000000	9.7100000	1752.3000000
323.757	2497.40	2360.0000000	9.8500000	1758.3000000
324.257	2687.30	2350.0000000	8.5000000	1764.4000000
324.757	2657.10	2260.0000000	8.0700000	1770.4000000
325.257	2430.20	1760.0000000	5.8900000	1775.9000000
325.757	2579.00	1870.0000000	5.5400000	1780.7000000
326.257	2631.80	2040.0000000	6.5600000	1785.8000000
327.833	2069.20	2070.0000000	6.7100000	1802.5000000
328.337	2032.70	2040.0000000	7.2000000	1808.1000000
328.837	2070.80	2070.0000000	7.7800000	1813.5000000
329.352	2075.90	2080.0000000	7.5100000	1819.0000000

329.859	2060.80	2060.0000000	7.4100000	1824.3000000
330.368	2080.60	2070.0000000	7.4300000	1829.9000000
330.872	2077.30	2070.0000000	6.8700000	1835.0000000
331.385	2085.70	2080.0000000	6.6900000	1840.7000000
331.885	2082.50	2080.0000000	6.6500000	1846.1000000
332.385	2075.70	2070.0000000	6.9000000	1851.4000000
332.885	2062.50	2060.0000000	6.4700000	1856.7000000
333.401	2077.30	2070.0000000	6.7100000	1862.2000000
333.901	2060.60	2050.0000000	6.9200000	1867.6000000
334.401	2075.70	2070.0000000	7.1600000	1872.9000000
334.917	2065.70	2060.0000000	7.0700000	1878.4000000
335.417	2075.70	2070.0000000	8.0700000	1883.8000000
335.917	2891.60	2560.0000000	4.7300000	1888.1000000
336.435	1882.60	790.0000000	0.0000000	1890.0000000
336.950	1826.30	740.0000000	0.0000000	1890.0000000
337.450	1781.90	690.0000000	0.0000000	1890.0000000
337.951	1744.30	660.0000000	0.0000000	1890.0000000
338.466	1704.50	620.0000000	0.0000000	1890.0000000
338.966	1674.40	590.0000000	0.0000000	1890.0000000
339.467	1644.80	560.0000000	0.0000000	1890.0000000
339.973	1624.40	540.0000000	0.0000000	1890.0000000
340.483	1604.30	520.0000000	0.0000000	1890.0000000
340.989	1594.20	510.0000000	0.0000000	1890.0000000
341.500	1579.20	490.0000000	0.0000000	1890.0000000
342.015	1564.80	480.0000000	0.0000000	1890.0000000
342.515	1564.20	480.0000000	0.0000000	1890.0000000
343.015	1554.20	470.0000000	0.0000000	1890.0000000
343.515	1544.20	460.0000000	0.0000000	1890.0000000
344.015	1544.20	460.0000000	0.0000000	1890.0000000
344.532	1534.20	450.0000000	0.0000000	1890.0000000
345.048	1534.20	450.0000000	0.0000000	1890.0000000
345.548	1524.20	440.0000000	0.0000000	1890.0000000
346.048	1524.20	440.0000000	0.0000000	1890.0000000
346.564	1524.20	440.0000000	0.0000000	1890.0000000
347.064	1514.20	430.0000000	0.0000000	1890.0000000
347.581	1514.20	430.0000000	0.0000000	1890.0000000
348.097	1514.20	430.0000000	0.0000000	1890.0000000
348.597	1504.20	420.0000000	0.0000000	1890.0000000
349.097	1504.20	420.0000000	0.0000000	1890.0000000
349.597	1504.20	420.0000000	0.0000000	1890.0000000
350.113	1504.20	420.0000000	0.0000000	1890.0000000
350.613	1504.20	420.0000000	0.0000000	1890.0000000