

MERIDIAN OIL

February 28, 1989

State of New Mexico
Oil Conservation Division
1000 Rio Brazos
Aztec, NM 87410

R E C E I V E D
MAR 02 1989

ATTENTION: Mr. Ernie Bush

OIL CON. DIV.
DIST. 3

Dear Mr. Bush:

In order to comply with Order No. SWD-350, the following has been enclosed:

1. Revised Completion Procedure and wellbore diagram. This represents completion only in the Entrada/Bluff formations.
2. Bottom hole pressure data and curves from the step rate test performed on February 4, 1989.
3. Water analysis from swab runs made prior to formation stimulation. The sample appears to be representative of the Bluff formation.
4. Cement bond log, showing 7" casing with cement top at ±6632'. The CBL also shows good bond across perforated intervals.
5. After-frac Gamma Ray logs of Entrada and Bluff formations that show isolation of stimulation treatments.
6. Maximum Surface Injection Pressure calculations that provide documentation and justification of the 4396.2 psi limit.

As more data becomes available, the results will be sent directly to your office.

The following conditions prior to the initiation of water injection have been met:

1. Annular pressure test of 3 1/2" internally coated tubing string. This ensured casing integrity and the absence of communication between the seals and Bluff/Entrada formations.
2. 3 1/2" - 7" annulus has been filled with a corrosion inhibited packer fluid.

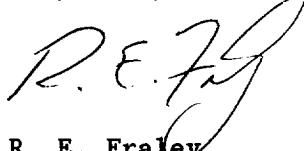
Mr. Ernie Bush
State of New Mexico
Oil Conservation Division
February 28, 1989
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Verbal approval is sought to initiate water injection operations after the following conditions have been met:

- Pressure recording devices that will be installed to continuously monitor tubing and annular pressure.
- Maximum Pump Pressure of 2020 psi will serve as the pressure limiting device (maximum allowable 4396.2 psi).
- A volume totalizer that will measure cumulative barrels injected.

Please contact me at 326-9712 at your earliest convenience.

Very Truly Yours,



R. E. Fraley
Regional Production Engineer

REF:CJS:lar

CJS
enclosures (as stated)

Completion Procedure
Middle Mesa SWD #1

*****NOTIFY BLM AND NMOCD THAT COMPLETION PROCEDURES ARE COMMENCING*****

1. Place 14 - 400 bbl. cleaned tanks on location. Fill with 1% KCl water filtered to 1 micron nominal and heat to 75° F.
2. MOL with completion rig, hold safety meeting, install fire and safety equipment in strategic locations. Comply with all BLM, NMOCD and MOI safety regulations. RU.
3. NU 11" x 7 1/16" 3000# adapter and 7 1/16" 5000# double BOP. Pressure test BOP.
4. TIH with 6 1/4" bit and float sub with float on 2 7/8" L-80 workstring. Clean out to 9400'. Circulate hole clean. TOOH. Pressure test casing to 800 psi.
5. RU wireline with low pressure pack-off and run GR-CCL-CBL from PBTD to 6500' or TOC. If microannulus exist, relog with 1000 psi on casing. Evaluate CBL for necessary squeezing operations across perforated interval. Pressure test casing to 5000 psi.
6. Perforate the Entrada using a 4" hollow steel carrier gun with PML-23 charges (0.5" diameter, 11.95" ECP) at 9219-9227 (2 SPF), 9231-9237 (1 SPF), 9240-9247 (2 SPF), 9251-9261 (2 SPF), 9264-9268 (1 SPF), 9271-9275 (1 SPF), 9297-9302 (1 SPF), 9317-9324 (2 SPF), and 9326-9330 (1 SPF), for a total of 87 holes.
7. TIH with 7" retrievable packer, 10' sub, and Baker model E tubing control valve in closed position. Set packer at 9185'. Pressure test annulus to 1000 psi. Open control valve with right hand rotation (6 1/2 turns at valve).
8. RU swabbing unit, recover a total fluid volume of 50 bbls. Obtain and analyze fluid samples at 20, 30, 40 and 50 bbls to ensure formation fluid is recovered. RD swabbing unit. TOOH with packer.
9. RU frac crew. Test frac lines to 6000 psi. Breakdown formation and establish rate. Record ISIP. Ball off formation with 3275 gal. of 15% HCL, 2% CIA-1 inhibitor, and 130 7/8" RCN ball sealers. Maximum treating pressure is 5000 psi. Ball schedule will be determined by number of holes initially open. Run junk basket to knock balls off perfs and retrieve balls.

Completion Procedure
 Middle Mesa SWD #1
 page two

10. Fracture stimulate Entrada formation using 40# low residual gel (mix on fly) and 160,000# 20/40 Brady proppant at a fluid rate of 75 BPM using the following schedule:

Stage	Stage	Slurry	Cum	Stage	Total	Remarks
	Vol (Gals)	Vol (Bbls)	Vol (Bbls)	Sand (Lbs)	Sand (Lbs)	
Prepad	10,000	238	238	---	---	Slickwater
Pad	20,000	476	714	---	---	40# HPG Gel
1/2 PPG	7,500	183	897	3,750	3,750	IR 192 @ .4 mcr/1000#
1 PPG	10,000	249	1,146	10,000	13,750	IR 192 @ .4 mcr/1000#
1 1/2 PPG	10,000	254	1,400	15,000	28,750	IR 192 @ .4 mcr/1000#
2 PPG	10,000	260	1,660	20,000	48,750	IR 192 @ .4 mcr/1000#
2 1/2 PPG	10,000	265	1,925	25,000	73,750	IR 192 @ .4 mcr/1000#
3 PPG	10,000	270	2,195	30,000	103,750	IR 192 @ .4 mcr/1000#
3 1/2 PPG	7,500	207	2,402	26,250	130,000	IR 192 @ .4 mcr/1000#
4 PPG	7,500	211	2,613	30,000	160,000	IR 192 @ .4 mcr/1000#
Flush	15,245	363	2,976	---	---	Slickwater

All water - 1% KCL All gel w/0.25 lb/1000 gal. WCB-1 breaker.

Anticipated surface treating pressure of 1185 psi.
 Record ISIP 5, 10, and 15 minute shut-in pressures.

11. Wait 4 hours for gel to break. TIH with 2 7/8" tubing and clean out to 9400'. TOOH. Run after-frac gamma ray across treated interval.
12. Prepare to run step rate test. Preset recorder to every 30 seconds for 5 hours, then every minute for the remainder of the test. Set pressure bomb at ±9265.
13. Rig up pump trucks and treater van. Inject as follows:
 - Load hole with 1% KCL water.
 - Start pumping at 1/2 BPM for 15 minutes. Then increase by 1/2 BPM increments every 15 minutes.
 - Using surface pressures and calculated bottom hole pressures, plot pressure vs rate until parting pressure observed.
 - Recover bomb.
14. RU wireline. Run gauge ring to 9150'. Set retrievable bridge plug at 9150'. Pressure test plug to 5000 psi. TIH with dump bailer and place 100# of 20/40 sand on top of bridge plug for a sand plug of 4'.

Completion Procedure
 Middle Mesa SWD #1
 page three

15. Perforate the Bluff using a 4" hollow steel carrier gun with PML-23 charges for 1 SPF at 8959' - 8966', 8981' - 8999', 9005' - 9013', 9021' - 9037', 9050' - 9058', 9069' - 9079', and 9089' - 9101' for a total of 79 holes.
16. TIH with 7" retrievable packer, 10' sub, and Baker Model E tubing control valve in closed position. Set packer at 8930'. Pressure test annulus to 1000 psi. Open control valve.
17. RU swabbing unit, recover a total fluid volume of 50 bbls. Obtain and analyze fluid samples at 20, 30, 40 and 50 bbls. to ensure that formation fluid is recovered. RD swabbing unit. TOOH with packer.
18. RU frac crew. Test frac lines to 6000 psi. Break down formation and establish rate. Record ISIP. Ball off formation with 2980 gal. 15% HC1, 2% CIA-1 inhibitor, and 120 7/8" RCN ball sealers. Maximum treating pressure 5000 psi. Run junk basket to knock balls off perfs and retrieve balls.
19. Fracture stimulate Bluff formation using 40#/ low residual gel and 222,500#/ 20/40 Brady proppant at a fluid rate of 80 BPM using the following schedule:

<u>Stage</u>	<u>Stage Volume (Gal.)</u>	<u>Slurry Volume (Bbls.)</u>	<u>Cum Vol. (Bbls.)</u>	<u>Stage Sand (Lbs.)</u>	<u>Total Sand (Lbs.)</u>	<u>Remarks</u>
Prepad	12,500	298	298	---	---	Slickwater
Pad	27,500	655	952	---	---	40#/ HPG Gel
1/2 PPG	7,500	183	1,135	3,750	3,750	IR 192 @ .4 mcr/1000#
1 PPG	10,000	249	1,384	10,000	13,750	IR 192 @ .4 mcr/1000#
1½ PPG	10,000	254	1,638	15,000	28,750	IR 192 @ .4 mcr/1000#
2 PPG	12,500	325	1,963	25,000	53,750	IR 192 @ .4 mcr/1000#
2½ PPG	12,500	331	2,294	31,250	85,000	IR 192 @ .4 mcr/1000#
3 PPG	15,000	406	2,700	45,000	130,000	IR 192 @ .4 mcr/1000#
3½ PPG	15,000	414	3,113	52,500	182,500	IR 192 @ .4 mcr/1000#
4 PPG	10,000	281	3,387	40,000	222,500	IR 192 @ .4 mcr/1000#
Flush	14,815	353	3,740	---	---	Slickwater

All water 1% KC1; All gel w/0.25 lb./1000 gal. WCB-1 breaker.

Anticipated surface treating pressure of 1590 psi. Record ISIP, 5, 10, and 15 minute shut-in pressures.

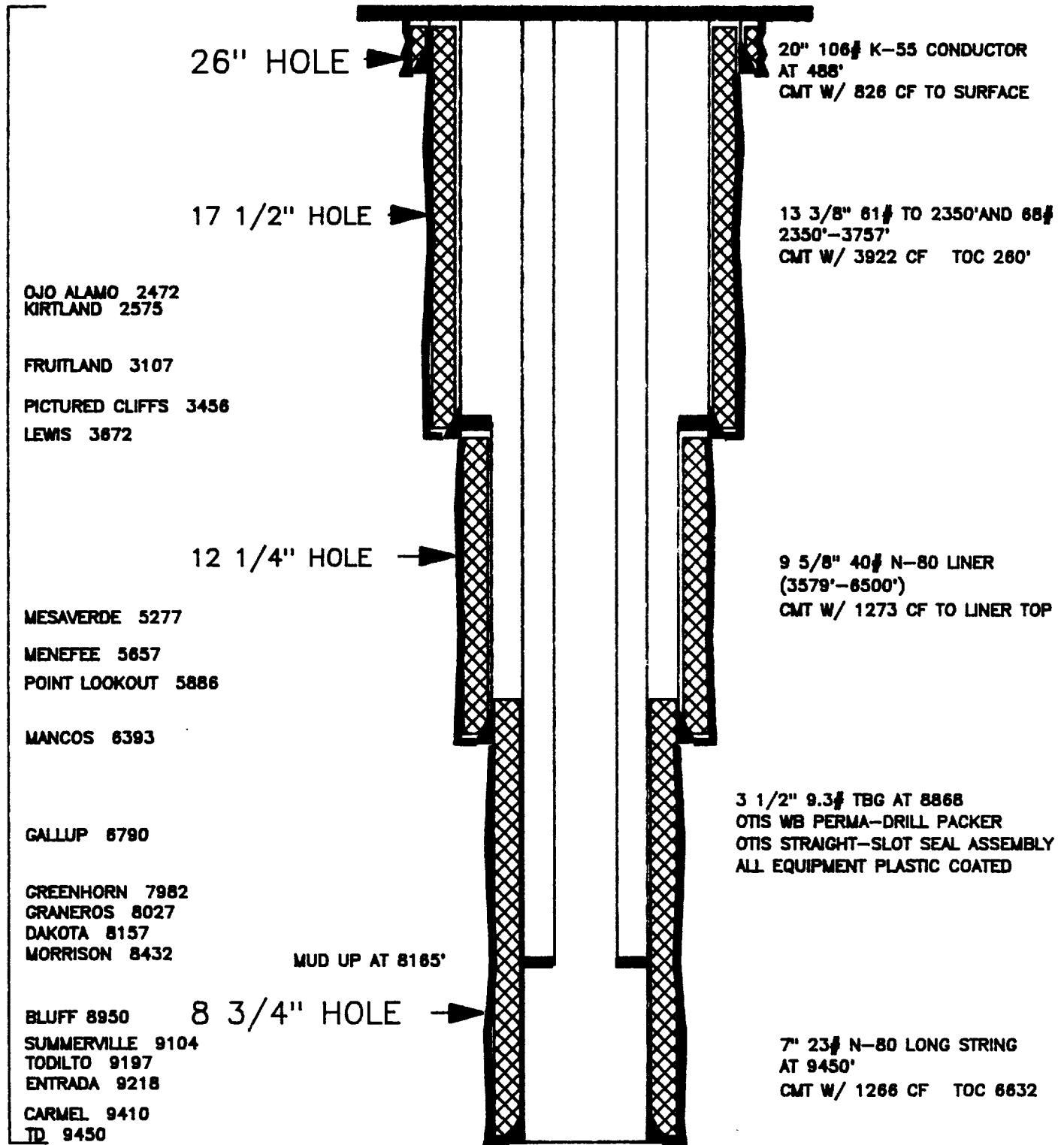
Completion Procedure
Middle Mesa SWD #1
page four

20. Wait 4 hours for gel to break. TIH and clean to bridge plug set at 9150'. TOOH.
21. Run after-frac gamma ray. Prepare to run step rate test on Bluff formation. Preset pressure bomb to every 30 seconds for 5 hours. Then one minute intervals for remainder of test. Set bomb at ±9030'.
22. RU pump truck and treater van. Pressure test lines to 3000 psi.
 - Load hole with 1% KCL water.
 - Start pumping at 1/2 BPM for 15 minutes. Then increase by 1/2 BPM increments every 15 minutes.
 - Using surface pressures and calculated bottom hole pressures, plot pressure vs rate until parting pressure observed.
 - Recover bomb.
23. TIH to bridge plug at 9150'. Latch and retrieve bridge plug. TOOH.
24. Prepare to run injectivity test. Set bomb to record every 15 seconds for 5 hours and every minute for the rest of the test. Set pressure bomb at 9150'. Have BLM and NMOCD witness step rate test.
25. Rig up pump trucks and treater van. Pressure test lines to 3000 psi. Inject produced coal water (1 micron minimal) at 400 psi for the initial stage. Increase injection rate by 1 BPM increments every 10 minutes. Continue increasing rate until 4 points over formation breakdown.
26. After step rate test, rig down pumps. Retrieve pressure bomb after 8 hours to obtain fall-off data.
27. Rig up wireline. Run 7" Otis Perma-drill WB packer with rentry guide and 4" bore. Set at 8858'.
28. RU 2.97" ID sealing unit. Run sealing unit in hole on 3 1/2" 9.3# J-55 8RD plastic coated tubing. Sting into packer and land tubing with 30,000# on packer. Test annulus to 750 psi for 10 minutes. Add corrosion inhibitor to annulus. RD BOP. RU wellhead. Release rig.

MIDDLE MESA SWD #1

WELLBORE DIAGRAM

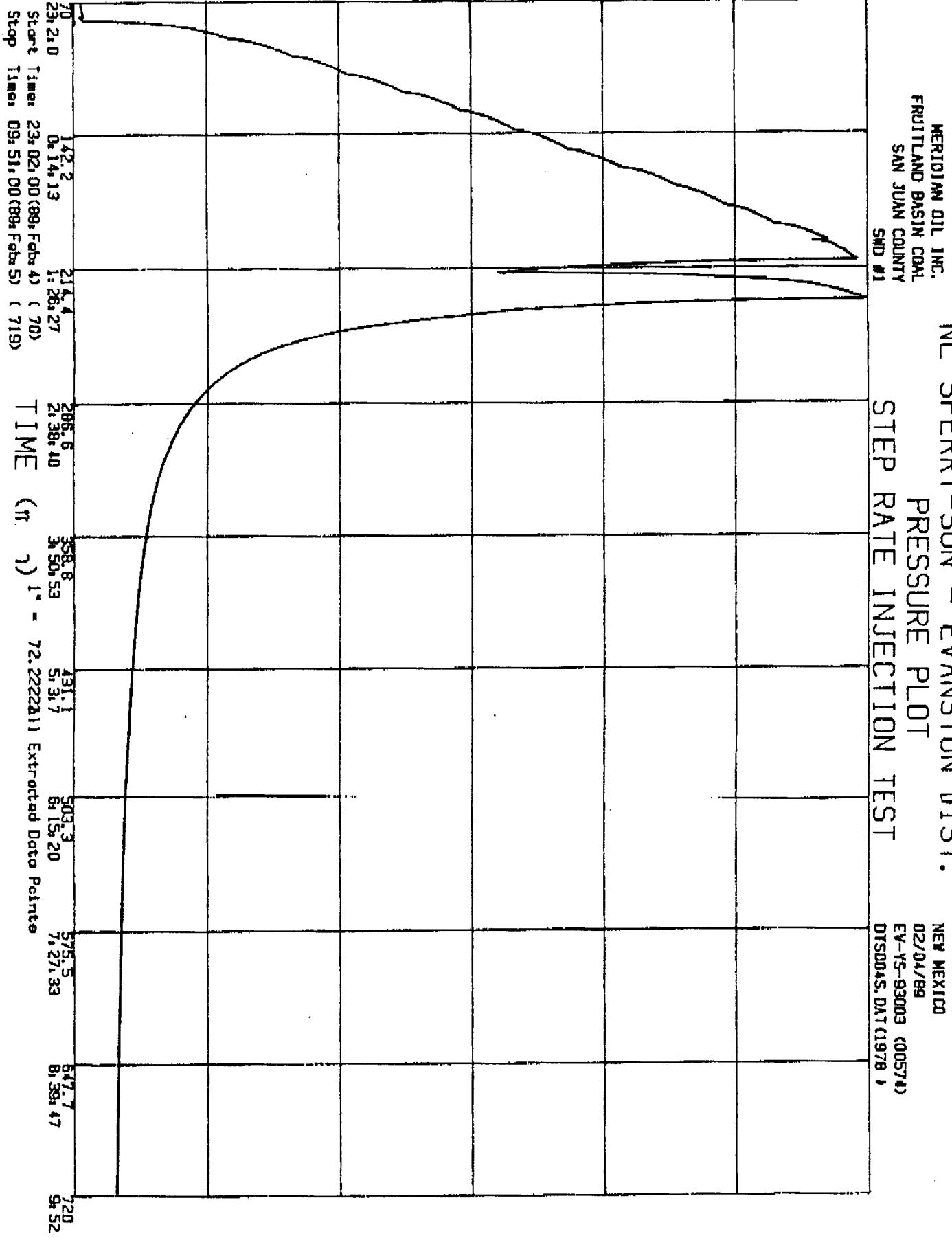
NW/SW SECTION 25 T32N-R7W
MORRISON/ENTRADA



Meridian Oil Inc.
Fruitland Basin Coal
Middle Mesa SWD #1
Step Rate Injection Test
Combined Entrada & Bluff Formations

Min/Max : 3977.65 / 5148.484
Scale is 1" = 196.86

PRESSURE (PSI-G)



NEW MEXICO

02/04/89

MERIDIAN OIL INC.
 FRUITLAND BASIN COAL
 SWD #1

EV--YS-93003 (Recorder: 00574)

BASIC FORMAT

STEP RATE INJECTION TEST

JOB NUMBER :	EV-YS-93003
DATA FILE :	DT9004S.DAT
RECORDER FILE :	R00574.DAT
COMPANY :	MERIDIAN OIL INC.
DATE OF TEST :	02/04/89
DATE OF REPORT :	02/05/89 / 10:44:11
FIELD NAME :	FRUITLAND BASIN COAL
FIELD LOCATION :	SAN JUAN COUNTY
WELL NAME :	SWD #1
AREA NAME :	NEW MEXICO
RECORDER ELECTRONICS NUMBER :	00574
RECORDER POSITION :	BOTTOM
RECORDER SAMPLE RATE1:	10 HR 15 SECOND
2:	10 HR 1 MINUTE
3:	28 HR 2 MINUTE
4:	N/A
RECORDER START TIME [HH:MM:SS]	21:52:00
RECORDER START DATE :	02/04/89
RECORDER DEPTH :	9150.00 F
PRESSURE UNITS :	PSI-G
TEMPERATURE UNITS :	F
TIME UNITS :	HOURS
COMMENTS :	

DATA REDUCTION: All Extracted Data Points

FIRST REPORTED RECORD AT :	23:02:00 02/04/89
LAST REPORTED RECORD AT :	09:51:00 02/05/89

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX:
02/04/
EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/04/89

RECORDER ELAPSED TIME	TEMPERATURE (F)	PRESSURE (PSI-G)	TIME OF DAY	COMMENTS
TIME (HOURS)				
1.1667	242.03	3979.395	23:02:00	GAUGES ON BOTTOM
1.1708	242.23	3979.690	23:02:15	
1.1750	242.44	3979.984	23:02:30	
1.1792	242.64	3980.055	23:02:45	
1.1833	242.84	3979.901	23:03:00	
1.1875	243.05	3979.971	23:03:15	
1.1917	243.25	3980.042	23:03:30	
1.1958	243.45	3980.336	23:03:45	
1.2000	243.63	3980.460	23:04:00	
1.2042	243.83	3980.754	23:04:15	
1.2083	244.03	3980.824	23:04:30	
1.2125	244.21	3980.948	23:04:45	
1.2167	244.39	3981.206	23:05:00	
1.2208	244.59	3981.142	23:05:15	
1.2250	244.73	3981.096	23:05:30	
1.2292	244.91	3981.668	23:05:45	
1.2333	245.08	3981.568	23:06:00	
1.2375	245.20	3981.799	23:06:15	
1.2417	245.37	3981.923	23:06:30	
1.2458	245.52	3982.101	23:06:45	
1.2500	245.66	3982.502	23:07:00	
1.2542	245.78	3982.510	23:07:15	
1.2583	245.95	3982.410	23:07:30	
1.2625	246.07	3982.866	23:07:45	
1.2667	246.18	3982.649	23:08:00	
1.2708	246.33	3983.051	23:08:15	
1.2750	246.49	3983.336	23:08:30	
1.2792	246.53	3983.344	23:08:45	
1.2833	246.65	3983.352	23:09:00	
1.2875	246.76	3983.583	23:09:15	
1.2917	246.88	3983.591	23:09:30	
1.2958	247.00	3983.598	23:09:45	
1.3000	247.08	3983.884	23:10:00	
1.3042	247.17	3984.169	23:10:15	
1.3083	247.29	3983.953	23:10:30	
1.3125	247.35	3984.293	23:10:45	
1.3167	247.43	3984.354	23:11:00	
1.3208	247.55	3977.650	23:11:15	
1.3250	247.61	3981.793	23:11:30	
1.3292	247.69	3981.630	23:11:45	
1.3333	247.78	3981.021	23:12:00	
1.3375	247.84	3981.584	23:12:15	
1.3417	247.93	3982.764	23:12:30	START INJECTION TEST
1.3458	248.01	3993.340	23:12:45	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX
02/04/
EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/04/89

RECORDER	ELAPSED	TEMPERATURE	PRESSURE	TIME OF DAY	COMMENTS
TIME (HOURS)	(F)	(PSI-G)			

1.3500	248.07	4001.809	23:13:00	
1.3542	248.16	4024.165	23:13:15	
1.3583	248.19	4033.954	23:13:30	
1.3625	248.27	4047.661	23:13:45	
1.3667	248.33	4062.316	23:14:00	
1.3708	248.39	4075.182	23:14:15	
1.3750	248.42	4084.971	23:14:30	
1.3792	248.48	4093.362	23:14:45	
1.3833	248.54	4101.082	23:15:00	
1.3875	248.57	4108.185	23:15:15	
1.3917	248.57	4114.449	23:15:30	
1.3958	248.59	4120.211	23:15:45	
1.4000	248.59	4125.580	23:16:00	
1.4042	248.59	4130.501	23:16:15	
1.4083	248.57	4135.031	23:16:30	
1.4125	248.59	4139.450	23:16:45	
1.4167	248.57	4143.533	23:17:00	
1.4208	248.57	4147.560	23:17:15	
1.4250	248.54	4151.418	23:17:30	
1.4292	248.54	4154.774	23:17:45	
1.4333	248.54	4157.906	23:18:00	
1.4375	248.54	4161.262	23:18:15	
1.4417	248.57	4164.339	23:18:30	
1.4458	248.57	4167.024	23:18:45	
1.4500	248.54	4169.764	23:19:00	
1.4542	248.57	4172.393	23:19:15	
1.4583	248.57	4175.078	23:19:30	
1.4625	248.59	4177.483	23:19:45	
1.4667	248.59	4179.944	23:20:00	
1.4708	248.59	4182.406	23:20:15	
1.4750	248.59	4184.643	23:20:30	
1.4792	248.62	4186.824	23:20:45	
1.4833	248.62	4188.614	23:21:00	
1.4875	248.65	4190.372	23:21:15	
1.4917	248.68	4192.530	23:21:30	
1.4958	248.68	4194.320	23:21:45	
1.5000	248.71	4196.277	23:22:00	
1.5042	248.71	4198.067	23:22:15	
1.5083	248.74	4199.577	23:22:30	
1.5125	248.71	4201.647	23:22:45	
1.5167	248.74	4210.988	23:23:00	
1.5208	248.77	4216.077	23:23:15	
1.5250	248.74	4220.161	23:23:30	
1.5292	248.77	4223.908	23:23:45	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1NEW MEX
02/04/
EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/04/89

RECORDER TIME (HOURS)	ELAPSED TIME	TEMPERATURE (F)	PRESSURE (PSI-G)	TIME OF DAY	COMMENTS
1.5333		248.80	4227.208	23:24:00	
1.5375		248.80	4230.564	23:24:15	
1.5417		248.77	4233.529	23:24:30	
1.5458		248.80	4236.381	23:24:45	
1.5500		248.77	4239.122	23:25:00	
1.5542		248.77	4241.583	23:25:15	
1.5583		248.77	4244.044	23:25:30	
1.5625		248.80	4246.449	23:25:45	
1.5667		248.77	4248.743	23:26:00	
1.5708		248.77	4250.980	23:26:15	
1.5750		248.77	4253.218	23:26:30	
1.5792		248.74	4255.288	23:26:45	
1.5833		248.74	4257.525	23:27:00	
1.5875		248.71	4259.372	23:27:15	
1.5917		248.68	4261.442	23:27:30	
1.5958		248.65	4263.288	23:27:45	
1.6000		248.65	4265.526	23:28:00	
1.6042		248.62	4267.372	23:28:15	
1.6083		248.59	4269.443	23:28:30	
1.6125		248.57	4271.289	23:28:45	
1.6167		248.54	4272.912	23:29:00	
1.6208		248.51	4274.982	23:29:15	
1.6250		249.45	4276.662	23:29:30	
1.6292		248.42	4278.285	23:29:45	
1.6333		248.42	4279.627	23:30:00	
1.6375		248.36	4281.531	23:30:15	
1.6417		240.33	4282.930	23:30:30	
1.6458		248.27	4284.610	23:30:45	
1.6500		248.22	4286.066	23:31:00	
1.6542		248.16	4287.522	23:31:15	
1.6583		248.10	4288.978	23:31:30	
1.6625		248.07	4290.601	23:31:45	
1.6667		248.01	4291.833	23:32:00	
1.6708		247.96	4293.065	23:32:15	
1.6750		247.90	4294.522	23:32:30	
1.6792		247.84	4295.754	23:32:45	
1.6833		247.78	4303.477	23:33:00	
1.6875		247.69	4308.124	23:33:15	
1.6917		247.66	4311.762	23:33:30	
1.6958		247.58	4315.067	23:33:45	
1.7000		247.52	4317.866	23:34:00	
1.7042		247.43	4320.723	23:34:15	
1.7083		247.37	4323.299	23:34:30	
1.7125		247.26	4325.990	23:34:45	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEXI

02/04/

EV-YS-93003 (Recorder: 0057)

BASIC FORMAT

STEP RATE INJECTION TEST

02/04/89

RECORDER	ELAPSED	TEMPERATURE	PRESSURE	TIME OF DAY	COMMENTS
TIME (HOURS)		(F)	(PSI-6)		

1.7167		247.17	4328.399	23:35:00	
1.7208		247.08	4330.361	23:35:15	
1.7250		247.00	4332.771	23:35:30	
1.7292		246.91	4334.957	23:35:45	
1.7333		246.82	4336.919	23:36:00	
1.7375		246.71	4338.938	23:36:15	
1.7417		246.59	4340.734	23:36:30	
1.7458		246.50	4342.696	23:36:45	
1.7500		246.39	4344.268	23:37:00	
1.7542		246.27	4346.288	23:37:15	
1.7583		246.18	4347.803	23:37:30	
1.7625		246.04	4349.656	23:37:45	
1.7667		245.92	4351.004	23:38:00	
1.7708		245.81	4352.576	23:38:15	
1.7750		245.69	4354.149	23:38:30	
1.7792		245.57	4355.721	23:38:45	
1.7833		245.43	4356.903	23:39:00	
1.7875		245.28	4358.533	23:39:15	
1.7917		245.17	4359.881	23:39:30	
1.7958		245.05	4361.230	23:39:45	
1.8000		244.91	4362.636	23:40:00	
1.8042		244.79	4363.985	23:40:15	
1.8083		244.67	4365.110	23:40:30	
1.8125		244.56	4366.459	23:40:45	
1.8167		244.38	4367.923	23:41:00	
1.8208		244.27	4369.497	23:41:15	
1.8250		244.15	4370.622	23:41:30	
1.8292		244.03	4372.253	23:41:45	
1.8333		243.06	4373.435	23:42:00	
1.8375		243.74	4375.009	23:42:15	
1.8417		243.63	4376.135	23:42:30	
1.8458		243.48	4377.990	23:42:45	
1.8500		243.37	4385.616	23:43:00	
1.8542		243.19	4389.995	23:43:15	
1.8583		243.08	4393.362	23:43:30	
1.8625		242.93	4396.339	23:43:45	
1.8667		242.79	4399.317	23:44:00	
1.8708		242.64	4401.846	23:44:15	
1.8750		242.50	4404.375	23:44:30	
1.8792		242.35	4406.905	23:44:45	
1.8833		242.23	4408.929	23:45:00	
1.8875		242.06	4411.292	23:45:15	
1.8917		241.91	4414.047	23:45:30	
1.8958		241.74	4416.410	23:45:45	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD 81

NEW MEXICO

02/04/

EV-YS-93003 (Recorder: 0057)

BASIC FORMAT

STEP RATE INJECTION TEST

02/04/89

RECORDER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-G)	PRESSURE	TIME OF DAY	COMMENTS
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1.9000	241.57	4418.550		23:46:00	
1.9042	241.42	4420.632		23:46:15	
1.9083	241.25	4422.772		23:46:30	
1.9125	241.04	4424.746		23:46:45	
1.9167	240.90	4426.604		23:47:00	
1.9208	240.69	4428.354		23:47:15	
1.9250	240.52	4430.046		23:47:30	
1.9292	240.35	4431.963		23:47:45	
1.9333	240.14	4433.713		23:48:00	
1.9375	239.97	4435.405		23:48:15	
1.9417	239.74	4437.213		23:48:30	
1.9458	239.56	4438.906		23:48:45	
1.9500	239.36	4440.208		23:49:00	
1.9542	239.18	4441.677		23:49:15	
1.9583	238.98	4443.428		23:49:30	
1.9625	238.81	4444.897		23:49:45	
1.9667	238.57	4446.257		23:50:00	
1.9708	238.40	4447.726		23:50:15	
1.9750	238.20	4449.253		23:50:30	
1.9792	237.99	4450.556		23:50:45	
1.9833	237.82	4451.801		23:51:00	
1.9875	237.62	4453.329		23:51:15	
1.9917	237.41	4454.632		23:51:30	
1.9958	237.21	4455.935		23:51:45	
2.0000	237.01	4457.014		23:52:00	
2.0042	236.77	4458.373		23:52:15	
2.0083	236.60	4459.621		23:52:30	
2.0125	236.37	4463.004		23:52:45	
2.0167	236.19	4470.764		23:53:00	
2.0208	235.96	4474.821		23:53:15	
2.0250	235.76	4478.148		23:53:30	
2.0292	235.55	4481.250		23:53:45	
2.0333	235.35	4484.353		23:54:00	
2.0375	235.15	4487.006		23:54:15	
2.0417	234.99	4490.001		23:54:30	
2.0458	234.68	4492.655		23:54:45	
2.0500	234.45	4495.142		23:55:00	
2.0542	234.22	4497.855		23:55:15	
2.0583	233.96	4500.402		23:55:30	
2.0625	233.72	4502.665		23:55:45	
2.0667	233.46	4504.763		23:56:00	
2.0708	233.20	4507.310		23:56:15	
2.0750	232.94	4509.184		23:56:30	
2.0792	232.65	4511.565		23:56:45	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1NEW MEXI
02/04/
EV-Y5-93003 (Recorder: 0057)

BASIC FORMAT

STEP RATE INJECTION TEST

02/04/89

RECORDER TIME (HOURS)	ELAPSED TIME	TEMPERATURE (F)	PRESSURE (PSI-6)	TIME OF DAY	COMMENTS
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2.0833		232.42	4513.380	23:57:00	
2.0075		232.13	4515.313	23:57:15	
2.0917		231.87	4517.187	23:57:30	
2.0958		231.58	4519.119	23:57:45	
2.1000		231.28	4520.827	23:58:00	
2.1042		231.02	4522.702	23:58:15	
2.1083		230.73	4524.186	23:58:30	
2.1125		230.41	4525.953	23:58:45	
2.1167		230.15	4527.378	23:59:00	
2.1208		229.86	4529.087	23:59:15	
2.1250		229.57	4530.571	23:59:30	
2.1292		229.31	4531.997	23:59:45	

02/05/89

2.1333		229.02	4533.482	00:00:00	
2.1375		228.70	4534.800	00:00:15	
2.1417		228.41	4536.060	00:00:30	
2.1458		228.15	4537.712	00:00:45	
2.1500		227.89	4538.688	00:01:00	
2.1542		227.60	4539.948	00:01:15	
2.1583		227.28	4541.492	00:01:30	
2.1625		227.02	4542.469	00:01:45	
2.1667		226.75	4543.671	00:02:00	
2.1708		226.46	4544.932	00:02:15	
2.1750		226.17	4545.968	00:02:30	
2.1792		225.88	4551.284	00:02:45	
2.1833		225.62	4556.542	00:03:00	
2.1875		225.36	4560.224	00:03:15	
2.1917		225.07	4563.289	00:03:30	
2.1958		224.81	4566.071	00:03:45	
2.2000		224.52	4568.686	00:04:00	
2.2042		224.23	4570.851	00:04:15	
2.2083		223.94	4573.692	00:04:30	
2.2125		223.65	4575.858	00:04:45	
2.2167		223.33	4578.308	00:05:00	
2.2208		223.07	4579.964	00:05:15	
2.2250		222.75	4582.190	00:05:30	
2.2292		222.46	4584.131	00:05:45	
2.2333		222.14	4586.131	00:06:00	
2.2375		221.85	4588.299	00:06:15	
2.2417		221.53	4589.849	00:06:30	
2.2458		221.18	4591.909	00:06:45	
2.2500		220.86	4593.685	00:07:00	
2.2542		220.57	4595.402	00:07:15	
2.2583		220.25	4597.179	00:07:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEXICO

02/04/

EV-YS-93003 (Recorder: 0057)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECODER TIME (HOURS)	ELAPSED (F)	TEMPERATURE (PSI-G)	PRESSURE	TIME OF DAY	COMMENTS
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2.2625	219.93	4598.730	00:07:45
2.2667	219.58	4600.566	00:08:00
2.2708	219.26	4602.118	00:08:15
2.2750	218.94	4603.670	00:08:30
2.2792	218.62	4605.448	00:08:45
2.2833	218.30	4607.001	00:09:00
2.2875	217.95	4608.387	00:09:15
2.2917	217.63	4609.940	00:09:30
2.2959	217.29	4611.327	00:09:45
2.3000	217.00	4612.596	00:10:00
2.3042	216.65	4614.209	00:10:15
2.3083	216.33	4615.311	00:10:30
2.3125	215.98	4616.699	00:10:45
2.3167	215.66	4618.029	00:11:00
2.3208	215.34	4619.357	00:11:15
2.3250	214.99	4620.520	00:11:30
2.3292	214.67	4621.624	00:11:45
2.3333	214.32	4623.013	00:12:00
2.3375	214.00	4624.117	00:12:15
2.3417	213.68	4625.448	00:12:30
2.3458	213.34	4629.324	00:12:45
2.3500	213.02	4634.725	00:13:00
2.3542	212.70	4638.996	00:13:15
2.3583	212.38	4642.138	00:13:30
2.3625	212.03	4645.113	00:13:45
2.3667	211.74	4647.744	00:14:00
2.3708	211.36	4650.554	00:14:15
2.3750	211.04	4652.793	00:14:30
2.3792	210.69	4655.093	00:14:45
2.3833	210.35	4657.392	00:15:00
2.3875	210.00	4659.466	00:15:15
2.3917	209.65	4661.767	00:15:30
2.3958	209.24	4663.962	00:15:45
2.4000	208.86	4666.098	00:16:00
2.4042	208.49	4667.782	00:16:15
2.4083	208.14	4669.859	00:16:30
2.4125	207.73	4671.603	00:16:45
2.4167	207.38	4673.455	00:17:00
2.4208	206.98	4675.201	00:17:15
2.4250	206.60	4676.888	00:17:30
2.4292	206.19	4678.635	00:17:45
2.4333	205.79	4680.156	00:18:00
2.4375	205.44	4681.558	00:18:15
2.4417	205.03	4683.308	00:18:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEXI
02/04/
EV-YS-93003 (Recorder: 0057)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECODER TIME (HOURS)	ELAPSED (F)	TEMPERATURE (PSI-G)	PRESSURE	TIME OF DAY	COMMENTS
2.4458	204.65	4684.545		00:18:45	
2.4500	204.20	4685.782		00:19:00	
2.4542	203.87	4687.534		00:19:15	
2.4583	203.49	4688.999		00:19:30	
2.4625	203.08	4690.299		00:19:45	
2.4667	202.68	4691.374		00:20:00	
2.4708	202.30	4692.841		00:20:15	
2.4750	201.89	4694.144		00:20:30	
2.4792	201.52	4695.614		00:20:45	
2.4833	201.14	4696.630		00:21:00	
2.4875	200.73	4698.163		00:21:15	
2.4917	200.35	4699.408		00:21:30	
2.4958	199.95	4700.489		00:21:45	
2.5000	199.57	4701.736		00:22:00	
2.5042	199.19	4702.985		00:22:15	
2.5083	198.82	4704.235		00:22:30	
2.5125	198.44	4703.216		00:22:45	
2.5167	198.03	4710.430		00:23:00	
2.5208	197.68	4715.934		00:23:15	
2.5250	197.30	4719.686		00:23:30	
2.5292	196.93	4722.759		00:23:45	
2.5333	196.52	4725.441		00:24:00	
2.5375	196.14	4728.063		00:24:15	
2.5417	195.77	4730.460		00:24:30	
2.5458	195.33	4732.983		00:24:45	
2.5500	194.95	4735.611		00:25:00	
2.5542	194.52	4738.139		00:25:15	
2.5583	194.11	4740.153		00:25:30	
2.5625	193.70	4742.169		00:25:45	
2.5667	193.30	4744.188		00:26:00	
2.5708	192.83	4746.334		00:26:15	
2.5750	192.43	4748.589		00:26:30	
2.5792	191.99	4750.226		00:26:45	
2.5833	191.53	4752.159		00:27:00	
2.5875	191.12	4754.195		00:27:15	
2.5917	190.65	4756.137		00:27:30	
2.5958	190.22	4757.792		00:27:45	
2.6000	189.78	4759.453		00:28:00	
2.6042	189.38	4761.054		00:28:15	
2.6083	188.94	4762.727		00:28:30	
2.6125	188.50	4764.407		00:28:45	
2.6167	188.07	4765.868		00:29:00	
2.6208	187.66	4767.271		00:29:15	
2.6250	187.20	4769.047		00:29:30	

NEW MEXICO
02/04/
EV-YS-93003 (Recorder: 0057)MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME	TEMPERATURE (F)	PRESSURE (PSI-G)	TIME OF DAY	COMMENTS
2.6292		186.76	4770.540	00:29:45	
2.6333		186.36	4771.977	00:30:00	
2.6375		185.92	4773.501	00:30:15	
2.6417		185.51	4774.973	00:30:30	
2.6458		185.08	4776.542	00:30:45	
2.6500		184.67	4778.068	00:31:00	
2.6542		184.21	4779.796	00:31:15	
2.6583		183.83	4780.889	00:31:30	
2.6625		183.39	4782.948	00:31:45	
2.6667		182.99	4784.542	00:32:00	
2.6708		182.58	4786.945	00:32:15	
2.6750		182.14	4788.348	00:32:30	
2.6792		181.74	4793.105	00:32:45	
2.6833		181.33	4798.773	00:33:00	
2.6875		180.92	4802.393	00:33:15	
2.6917		180.49	4805.392	00:33:30	
2.6958		180.08	4808.101	00:33:45	
2.7000		179.70	4810.747	00:34:00	
2.7042		179.27	4813.520	00:34:15	
2.7083		178.89	4815.939	00:34:30	
2.7125		178.46	4818.029	00:34:45	
2.7167		178.02	4820.347	00:35:00	
2.7208		177.64	4822.539	00:35:15	
2.7250		177.18	4824.465	00:35:30	
2.7292		176.77	4826.721	00:35:45	
2.7333		176.34	4828.585	00:36:00	
2.7375		175.90	4830.676	00:36:15	
2.7417		175.49	4832.477	00:36:30	
2.7458		175.06	4834.569	00:36:45	
2.7500		174.65	4836.141	00:37:00	
2.7542		174.19	4838.069	00:37:15	
2.7583		173.78	4839.642	00:37:30	
2.7625		173.37	4841.215	00:37:45	
2.7667		172.91	4842.916	00:38:00	
2.7708		172.53	4844.426	00:38:15	
2.7750		172.07	4846.355	00:38:30	
2.7792		171.66	4847.700	00:38:45	
2.7833		171.25	4849.503	00:39:00	
2.7875		170.82	4850.912	00:39:15	
2.7917		170.44	4852.423	00:39:30	
2.7958		170.00	4853.832	00:39:45	
2.8000		169.63	4854.887	00:40:00	
2.8042		169.19	4856.753	00:40:15	
2.8083		168.78	4857.643	00:40:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEXI
02/04/

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/06/89

RECORDED ELAPSED TIME TIME (HOURS)	TEMPERATURE (F)	PRESSURE (PSI-G)	TTMF OF DAY	COMMENTS
2.8125	168.41	4858.926	00:40:45	
2.8167	168.00	4860.272	00:41:00	
2.8200	167.62	4861.784	00:41:15	
2.8250	167.22	4862.902	00:41:30	
2.8292	166.81	4864.249	00:41:45	
2.8333	166.43	4865.533	00:42:00	
2.8375	166.03	4866.652	00:42:15	
2.8417	165.65	4867.707	00:42:30	
2.8458	165.24	4872.942	00:42:45	
2.8500	164.86	4876.972	00:43:00	
2.8542	164.52	4879.566	00:43:15	
2.8583	164.14	4902.223	00:43:30	
2.8625	163.76	4884.653	00:43:45	
2.8667	163.35	4886.688	00:44:00	
2.8708	163.01	4888.826	00:44:15	
2.8750	162.63	4891.027	00:44:30	
2.8792	162.25	4893.228	00:44:45	
2.8833	161.87	4895.430	00:45:00	
2.8875	161.50	4897.404	00:45:15	
2.8917	161.12	4899.606	00:45:30	
2.8958	160.74	4901.351	00:45:45	
2.9000	160.36	4903.096	00:46:00	
2.9042	159.98	4904.841	00:46:15	
2.9083	159.61	4906.586	00:46:30	
2.9125	159.23	4908.561	00:46:45	
2.9167	158.85	4909.848	00:47:00	
2.9208	158.50	4911.530	00:47:15	
2.9250	158.13	4913.047	00:47:30	
2.9292	157.75	4914.564	00:47:45	
2.9333	157.40	4916.247	00:48:00	
2.9375	156.99	4917.828	00:48:15	
2.9417	156.64	4919.053	00:48:30	
2.9458	156.30	4920.277	00:48:45	
2.9500	155.95	4921.731	00:49:00	
2.9542	155.60	4923.185	00:49:15	
2.9583	155.22	4924.704	00:49:30	
2.9625	154.87	4925.929	00:49:45	
2.9667	154.52	4927.154	00:50:00	
2.9709	154.21	4928.315	00:50:15	
2.9750	153.83	4930.063	00:50:30	
2.9792	153.48	4931.060	00:50:45	
2.9833	153.16	4932.221	00:51:00	
2.9875	152.81	4933.676	00:51:15	
2.9917	152.49	4934.838	00:51:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEXI

02/04/

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME (F)	PRESSURE (PSI G)	TIME OF DAY	COMMENTS
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2.9958	152.17	4936.000	00:51:45
3.0000	151.82	4936.997	00:52:00
3.0042	151.50	4938.399	00:52:15
3.0083	151.21	4939.487	00:52:30
3.0125	150.99	4943.175	00:52:45
3.0167	150.55	4948.763	00:53:00
3.0208	150.26	4952.618	00:53:15
3.0250	149.94	4955.618	00:53:30
3.0292	149.62	4958.160	00:53:45
3.0333	149.36	4960.803	00:54:00
3.0375	149.04	4963.115	00:54:15
3.0417	148.72	4965.428	00:54:30
3.0458	148.43	4967.447	00:54:45
3.0500	148.11	4969.761	00:55:00
3.0542	147.82	4971.551	00:55:15
3.0583	147.53	4973.341	00:55:30
3.0625	147.21	4975.655	00:55:45
3.0667	146.92	4977.215	00:56:00
3.0708	146.60	4978.611	00:56:15
3.0750	146.28	4980.236	00:56:30
3.0792	145.99	4981.567	00:56:45
3.0833	145.70	4983.128	00:57:00
3.0875	145.38	4984.294	00:57:15
3.0917	145.12	4985.792	00:57:30
3.0958	144.82	4987.124	00:57:45
3.1000	144.53	4988.915	00:58:00
3.1042	144.21	4990.312	00:58:15
3.1083	143.95	4991.350	00:58:30
3.1125	143.63	4992.976	00:58:45
3.1167	143.34	4994.309	00:59:00
3.1208	143.08	4995.577	00:59:15
3.1250	142.82	4997.075	00:59:30
3.1292	142.53	4998.638	00:59:45
3.1333	142.27	4999.907	01:00:00
3.1375	141.98	5001.010	01:00:15
3.1417	141.69	5002.343	01:00:30
3.1458	141.46	5003.548	01:00:45
3.1500	141.19	5004.587	01:01:00
3.1542	140.90	5005.920	01:01:15
3.1583	140.67	5007.125	01:01:30
3.1625	140.41	5008.164	01:01:45
3.1667	140.15	5009.434	01:02:00
3.1708	139.89	5010.703	01:02:15
3.1750	139.63	5011.743	01:02:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD 81

NEW MEX:

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED (F)	TEMPERATURE (PSI-G)	PRESSURE TIME OF DAY	COMMENTS
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3.1792	139.36	5013.012	01:02:45	
3.1833	139.13	5018.023	01:03:00	
3.1875	138.90	5026.015	01:03:15	
3.1917	138.67	5029.985	01:03:30	
3.1958	138.41	5033.328	01:03:45	
3.2000	138.17	5036.608	01:04:00	
3.2042	137.91	5039.491	01:04:15	
3.2083	137.71	5042.016	01:04:30	
3.2125	137.45	5044.670	01:04:45	
3.2167	137.22	5047.029	01:05:00	
3.2208	136.95	5049.223	01:05:15	
3.2250	136.69	5051.647	01:05:30	
3.2292	136.49	5053.482	01:05:45	
3.2333	136.20	5055.511	01:06:00	
3.2375	136.00	5057.576	01:06:15	
3.2417	135.71	5059.374	01:06:30	
3.2458	135.50	5061.440	01:06:45	
3.2500	135.24	5063.174	01:07:00	
3.2542	134.98	5064.909	01:07:15	
3.2583	134.75	5066.579	01:07:30	
3.2625	134.51	5068.479	01:07:45	
3.2667	134.28	5070.150	01:08:00	
3.2708	134.05	5071.590	01:08:15	
3.2750	133.79	5073.555	01:08:30	
3.2792	133.56	5074.765	01:08:45	
3.2833	133.35	5076.371	01:09:00	
3.2875	133.12	5078.042	01:09:15	
3.2917	132.92	5079.648	01:09:30	
3.2958	132.66	5081.154	01:09:45	
3.3000	132.42	5082.594	01:10:00	
3.3042	132.22	5084.201	01:10:15	
3.3083	131.99	5085.642	01:10:30	
3.3125	131.81	5086.953	01:10:45	
3.3167	131.55	5088.229	01:11:00	
3.3208	131.38	5089.771	01:11:15	
3.3250	131.15	5091.213	01:11:30	
3.3292	130.94	5092.359	01:11:45	
3.3333	130.74	5069.048	01:12:00	
3.3375	130.51	5077.641	01:12:15	
3.3417	130.33	5082.875	01:12:30	
3.3458	130.13	5085.175	01:12:45	
3.3500	129.93	5090.243	01:13:00	
3.3542	129.75	5092.709	01:13:15	
3.3583	129.55	5094.779	01:13:30	

HERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEXI

02/04/

EV-Y9-93003 (Recorder: 0057)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECODER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-G)	PRESSURE	TIME OF DAY	COMMENTS
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3.3625	129.37	5096.553		01:13:45	
3.3667	129.17	5098.392		01:14:00	
3.3708	129.00	5099.704		01:14:15	
3.3750	128.79	5101.082		01:14:30	
3.3792	128.62	5102.394		01:14:45	
3.3833	128.47	5103.642		01:15:00	
3.3075	128.27	5105.251		01:15:15	
3.3917	120.10	5106.333		01:15:30	
3.3958	127.89	5107.711		01:15:45	
3.4000	127.75	5108.959		01:16:00	
3.4042	127.57	5109.811		01:16:15	
3.4083	127.37	5111.189		01:16:30	
3.4125	127.22	5112.437		01:16:45	
3.4167	127.05	5113.751		01:17:00	
3.4208	126.88	5114.833		01:17:15	
3.4250	126.73	5116.082		01:17:30	
3.4292	126.56	5116.703		01:17:45	
3.4333	126.35	5118.082		01:18:00	
3.4375	126.21	5118.869		01:18:15	
3.4417	126.06	5119.886		01:18:30	
3.4458	125.86	5121.034		01:18:45	
3.4500	125.74	5121.757		01:19:00	
3.4542	125.57	5123.071		01:19:15	
3.4583	125.42	5123.858		01:19:30	
3.4625	125.25	5124.710		01:19:45	
3.4667	125.10	5125.728		01:20:00	
3.4708	124.93	5126.581		01:20:15	
3.4750	124.81	5127.534		01:20:30	
3.4792	124.64	5128.849		01:20:45	
3.4833	124.52	5129.571		01:21:00	
3.4875	124.35	5130.423		01:21:15	
3.4917	124.20	5131.442		01:21:30	
3.4958	124.06	5132.461		01:21:45	
3.5000	123.91	5133.248		01:22:00	
3.5042	123.77	5134.498		01:22:15	
3.5083	123.65	5134.990		01:22:30	INJECTION STOPPED
3.5125	123.51	5086.315		01:22:45	
3.5167	123.36	4996.501		01:23:00	
3.5208	123.25	4947.300		01:23:15	
3.5250	123.10	4913.416		01:23:30	
3.5292	122.98	4885.013		01:23:45	
3.5333	122.90	4860.937		01:24:00	
3.5375	122.84	4839.802		01:24:15	
3.5417	122.93	4819.971		01:24:30	

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N L S P E N N I

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MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SND #1

NEW MEX

02/04/

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-G)	PRESSURE TIME OF DAY	COMMENTS
3.5458	123.10	4801.338	01:24:45	
3.5500	123.45	4783.719	01:25:00	
3.5542	123.91	4767.008	01:25:15	
3.5583	124.49	4750.975	01:25:30	
3.5625	125.22	4735.558	01:25:45	
3.5667	126.06	4720.822	01:26:00	
3.5708	126.96	4706.660	01:26:15	
3.5750	128.01	4692.886	01:26:30	
3.5792	129.11	4680.149	01:26:45	
3.5833	130.27	4668.908	01:27:00	
3.5875	131.55	4657.886	01:27:15	
3.5917	132.86	4649.805	01:27:30	
3.5958	134.25	4640.852	01:27:45	
3.6000	135.68	4633.915	01:28:00	
3.6042	137.16	4628.240	01:28:15	
3.6083	138.70	4615.769	01:28:30	
3.6125	140.24	4613.429	01:28:45	
3.6167	141.80	4599.299	01:29:00	START INJECTION
3.6208	143.40	4609.715	01:29:15	
3.6250	145.00	4686.767	01:29:30	
3.6292	146.63	4758.417	01:29:45	
3.6333	148.28	4795.499	01:30:00	
3.6375	149.88	4833.596	01:30:15	
3.6417	151.50	4867.468	01:30:30	
3.6458	153.07	4805.300	01:30:45	
3.6500	154.67	4899.314	01:31:00	
3.6542	156.21	4904.650	01:31:15	
3.6583	157.57	4918.843	01:31:30	
3.6625	158.71	4931.246	01:31:45	
3.6667	159.58	4945.133	01:32:00	
3.6708	160.13	4958.804	01:32:15	
3.6750	160.36	4971.575	01:32:30	
3.6792	160.42	4982.898	01:32:45	
3.6833	160.28	4993.526	01:33:00	
3.6875	159.98	5003.562	01:33:15	
3.6917	159.58	5012.483	01:33:30	
3.6958	159.14	5020.783	01:33:45	
3.7000	158.62	5028.362	01:34:00	
3.7042	158.04	5035.385	01:34:15	
3.7083	157.46	5041.722	01:34:30	
3.7125	156.82	5047.272	01:34:45	
3.7167	156.18	5053.054	01:35:00	
3.7208	155.54	5057.690	01:35:15	
3.7250	154.84	5062.457	01:35:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW ME.

02/0

EV-YS-93003 (Recorder: 00)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME	TEMPERATURE (F)	PRESSURE (PSI-G)	TIME OF DAY	COMMENTS
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3.7292		154.15	5066.996	01:35:45	
3.7333		153.48	5070.783	01:36:00	
3.7375		152.78	5074.636	01:36:15	
3.7417		152.06	5078.554	01:36:30	
3.7458		151.36	5081.949	01:36:45	
3.7500		150.63	5084.951	01:37:00	
3.7542		149.94	5088.348	01:37:15	
3.7583		149.18	5091.186	01:37:30	
3.7625		148.48	5094.124	01:37:45	
3.7667		147.79	5096.604	01:38:00	
3.7708		147.09	5099.773	01:38:15	
3.7750		146.39	5102.484	01:38:30	
3.7792		145.70	5105.194	01:38:45	
3.7833		145.00	5107.906	01:39:00	
3.7875		144.33	5110.323	01:39:15	
3.7917		143.66	5112.970	01:39:30	
3.7958		142.99	5115.617	01:39:45	
3.8000		142.30	5117.870	01:40:00	
3.8042		141.66	5120.224	01:40:15	
3.8083		141.02	5122.577	01:40:30	
3.8125		140.38	5124.701	01:40:45	
3.8167		139.74	5126.825	01:41:00	
3.8208		139.16	5128.819	01:41:15	
3.8250		138.55	5131.109	01:41:30	
3.8292		137.94	5133.169	01:41:45	
3.8333		137.36	5134.933	01:42:00	
3.8375		136.78	5137.389	01:42:15	
3.8417		136.20	5139.385	01:42:30	
3.8458		135.65	5141.316	01:42:45	
3.8500		135.15	5142.885	01:43:00	
3.8542		134.60	5145.047	01:43:15	
3.8583		134.08	5146.913	01:43:30	
3.8625		133.59	5148.484	01:43:45	
3.8667		133.09	5144.750	01:44:00 STOP INJECTION	
3.8708		132.60	5040.695	01:44:15	
3.8750		132.10	4972.603	01:44:30	
3.8792		131.64	4933.496	01:44:45	
3.8833		131.20	4904.466	01:45:00	
3.8875		130.77	4880.507	01:45:15	
3.8917		130.36	4858.786	01:45:30	
3.8958		130.04	4838.949	01:45:45	
3.9000		129.84	4820.011	01:46:00	
3.9042		129.75	4801.974	01:46:15	
3.9083		129.81	4784.776	01:46:30	

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H L S P E R R Y - S U N - E V A N S I O N P I C K I

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MERIDIAN OIL INC.
 FRUITLAND BASIN COAL
 SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED (F)	TEMPERATURE (PSI-G)	PRESSURE	TIME OF DAY	COMMENTS
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3.9125	130.01	4768.190		01:46:45	
3.9167	130.33	4752.278		01:47:00	
3.9208	130.77	4737.504		01:47:15	
3.9250	131.38	4722.359		01:47:30	
3.9292	132.02	4708.310		01:47:45	
3.9333	132.80	4694.646		01:48:00	
3.9375	133.64	4682.015		01:48:15	
3.9417	134.60	4669.142		01:48:30	
3.9458	135.65	4657.471		01:48:45	
3.9500	136.72	4645.743		01:49:00	
3.9542	137.88	4634.987		01:49:15	
3.9583	139.10	4625.494		01:49:30	
3.9625	140.35	4615.714		01:49:45	
3.9667	141.66	4607.886		01:50:00	
3.9708	142.99	4599.540		01:50:15	
3.9750	144.36	4592.056		01:50:30	
3.9792	145.78	4583.305		01:50:45	
3.9833	147.21	4582.137		01:51:00	
3.9875	148.63	4572.015		01:51:15	
3.9917	150.11	4562.234		01:51:30	
3.9958	151.59	4560.260		01:51:45	
4.0000	153.01	4551.986		01:52:00	
4.0042	154.52	4548.576		01:52:15	
4.0083	155.98	4549.186		01:52:30	
4.0125	157.46	4530.489		01:52:45	
4.0167	158.91	4533.849		01:53:00	
4.0208	160.36	4520.951		01:53:15	
4.0250	161.76	4510.930		01:53:30	
4.0292	163.21	4503.765		01:53:45	
4.0333	164.60	4496.726		01:54:00	
4.0375	166.00	4497.462		01:54:15	
4.0417	167.36	4485.460		01:54:30	
4.0458	168.73	4481.004		01:54:45	
4.0500	170.03	4474.150		01:55:00	
4.0542	171.34	4467.772		01:55:15	
4.0583	172.62	4463.503		01:55:30	
4.0625	173.87	4457.015		01:55:45	
4.0667	175.12	4452.354		01:56:00	
4.0708	176.31	4446.440		01:56:15	
4.0750	177.53	4442.535		01:56:30	
4.0792	178.69	4436.238		01:56:45	
4.0833	179.79	4431.431		01:57:00	
4.0875	180.92	4426.566		01:57:15	
4.0917	182.00	4422.050		01:57:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEXI

02/04/

EV-YG-93003 (Recorder: 0057)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER	ELAPSED	TEMPERATURE	PRESSURE	TIME OF DAY	COMMENTS
TIME (HOURS)	(F)		(PSI-G)		

4.0958	183.04	4415.742	01:57:45
4.1000	184.12	4409.761	01:58:00
4.1042	185.11	4404.886	01:58:15
4.1083	186.12	4400.355	01:58:30
4.1125	187.05	4395.679	01:58:45
4.1167	188.01	4391.000	01:59:00
4.1208	188.94	4386.889	01:59:15
4.1250	189.81	4382.711	01:59:30
4.1292	190.68	4378.786	01:59:45
4.1333	191.55	4374.882	02:00:00
4.1375	192.37	4370.664	02:00:15
4.1417	193.15	4366.740	02:00:30
4.1458	193.96	4363.009	02:00:45
4.1500	194.75	4359.341	02:01:00
4.1542	195.48	4355.802	02:01:15
4.1583	196.20	4352.269	02:01:30
4.1625	196.90	4348.803	02:01:45
4.1667	197.57	4345.400	02:02:00
4.1708	198.26	4341.944	02:02:15
4.1750	198.90	4338.610	02:02:30
4.1792	199.54	4335.507	02:02:45
4.1833	200.15	4332.465	02:03:00
4.1875	200.73	4329.485	02:03:15
4.1917	201.31	4326.734	02:03:30
4.1958	201.89	4323.532	02:03:45
4.2000	202.47	4320.786	02:04:00
4.2042	202.97	4317.990	02:04:15
4.2083	203.49	4315.137	02:04:30
4.2125	204.01	4312.513	02:04:45
4.2167	204.51	4309.721	02:05:00
4.2200	204.97	4306.989	02:05:15
4.2250	205.44	4304.484	02:05:30
4.2292	205.90	4301.754	02:05:45
4.2333	206.37	4299.252	02:06:00
4.2375	206.77	4296.865	02:06:15
4.2417	207.18	4294.706	02:06:30
4.2458	207.62	4292.038	02:06:45
4.2500	207.99	4289.711	02:07:00
4.2542	208.37	4287.611	02:07:15
4.2583	208.78	4285.003	02:07:30
4.2625	209.13	4283.188	02:07:45
4.2667	209.47	4280.921	02:08:00
4.2708	209.82	4278.881	02:08:15
4.2750	210.14	4276.673	02:08:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-G)	PRESSURE TIME OF DAY	COMMENTS
4.2792	210.49	4274.634	02:08:45	
4.2833	210.78	4272.709	02:09:00	
4.285	211.13	4270.446	02:09:15	
4.2917	211.39	4268.352	02:09:30	
4.2958	211.68	4266.429	02:09:45	
4.3000	211.97	4264.506	02:10:00	
4.3042	212.29	4262.753	02:10:15	
4.3083	212.55	4260.662	02:10:30	
4.3125	212.81	4259.248	02:10:45	
4.3167	213.08	4256.932	02:11:00	
4.3208	213.31	4255.350	02:11:15	
4.3250	213.54	4253.542	02:11:30	
4.3292	213.77	4251.961	02:11:45	
4.3333	214.00	4250.154	02:12:00	
4.3375	214.24	4248.573	02:12:15	
4.3417	214.47	4246.766	02:12:30	
4.3458	214.64	4245.298	02:12:45	
4.3500	214.88	4243.718	02:13:00	
4.3542	215.05	4242.025	02:13:15	
4.3583	215.28	4240.671	02:13:30	
4.3625	215.46	4239.204	02:13:45	
4.3667	215.66	4237.455	02:14:00	
4.3708	215.81	4236.045	02:14:15	
4.3750	216.01	4234.522	02:14:30	
4.3792	216.15	4233.338	02:14:45	
4.3833	216.33	4231.646	02:15:00	
4.3875	216.50	4230.180	02:15:15	
4.3917	216.68	4228.714	02:15:30	
4.3958	216.79	4227.361	02:15:45	
4.4000	216.97	4225.895	02:16:00	
4.4042	217.11	4224.712	02:16:15	
4.4083	217.26	4223.303	02:16:30	
4.4125	217.37	4221.950	02:16:45	
4.4167	217.52	4220.766	02:17:00	
4.4208	217.66	4219.358	02:17:15	
4.4250	217.81	4217.949	02:17:30	
4.4292	217.93	4216.822	02:17:45	
4.4333	218.04	4215.695	02:18:00	
4.4375	218.16	4214.569	02:18:15	
4.4417	218.27	4213.216	02:18:30	
4.4458	218.39	4212.090	02:18:45	
4.4500	218.51	4210.738	02:19:00	
4.4542	218.62	4209.611	02:19:15	
4.4583	218.74	4208.485	02:19:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX
02/04
EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME	TEMPERATURE (F)	PRESSURE (PSI-G)	TIME OF DAY	COMMENTS
4.4625		218.83	4207.415	02:19:45	
4.4667		218.91	4206.119	02:20:00	
4.4708		219.03	4204.993	02:20:15	
4.4750		219.12	4203.923	02:20:30	
4.4792		219.23	4202.797	02:20:45	
4.4833		219.29	4201.783	02:21:00	
4.4875		219.38	4200.713	02:21:15	
4.4917		219.49	4199.587	02:21:30	
4.4958		219.55	4198.573	02:21:45	
4.5000		219.67	4197.673	02:22:00	
4.5042		219.75	4196.378	02:22:15	
4.5083		219.81	4195.590	02:22:30	
4.5125		219.90	4194.520	02:22:45	
4.5167		219.99	4193.450	02:23:00	
4.5208		220.05	4192.662	02:23:15	
4.5250		220.13	4191.593	02:23:30	
4.5292		220.19	4190.805	02:23:45	
4.5333		220.28	4189.735	02:24:00	
4.5375		220.31	4188.777	02:24:15	
4.5417		220.39	4187.934	02:24:30	
4.5458		220.48	4186.864	02:24:45	
4.5500		220.51	4185.907	02:25:00	
4.5542		220.60	4185.063	02:25:15	
4.5583		220.63	4184.105	02:25:30	
4.5625		220.68	4183.543	02:25:45	
4.5667		220.74	4182.530	02:26:00	
4.5708		220.80	4181.516	02:26:15	
4.5750		220.89	4180.673	02:26:30	
4.5792		220.92	4179.941	02:26:45	
4.5833		221.00	4178.872	02:27:00	
4.5875		221.03	4178.365	02:27:15	
4.5917		221.09	4177.352	02:27:30	
4.5958		221.12	4176.395	02:27:45	
4.6000		221.18	4175.607	02:28:00	
4.6042		221.24	4174.819	02:28:15	
4.6083		221.29	4174.257	02:28:30	
4.6125		221.32	4173.300	02:28:45	
4.6167		221.38	4172.738	02:29:00	
4.6208		221.41	4171.780	02:29:15	
4.6250		221.47	4170.993	02:29:30	
4.6292		221.50	4170.486	02:29:45	
4.6333		221.56	4169.473	02:30:00	
4.6375		221.61	4168.911	02:30:15	
4.6417		221.64	4168.180	02:30:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED (F)	TEMPERATURE (PSI-G)	PRESSURE	TIME OF DAY	COMMENTS
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4.6458	221.70	4167.167		02:30:45	
4.6500	221.73	4166.660		02:31:00	
4.6542	221.76	4165.929		02:31:15	
4.6583	221.79	4165.422		02:31:30	
4.6625	221.85	4164.409		02:31:45	
4.6667	221.88	4163.678		02:32:00	
4.6708	221.93	4163.116		02:32:15	
4.6750	221.93	4162.665		02:32:30	
4.6792	221.99	4161.878		02:32:45	
4.6833	222.02	4161.146		02:33:00	
4.6875	222.08	4160.134		02:33:15	
4.6917	222.08	4159.683		02:33:30	
4.6958	222.11	4158.951		02:33:45	
4.7000	222.17	4158.389		02:34:00	
4.7042	222.19	4157.658		02:34:15	
4.7083	222.22	4157.151		02:34:30	
4.7125	222.25	4156.645		02:34:45	
4.7167	222.31	4155.858		02:35:00	
4.7208	222.34	4155.127		02:35:15	
4.7250	222.34	4154.676		02:35:30	
4.7292	222.40	4153.889		02:35:45	
4.7333	222.43	4153.383		02:36:00	
4.7375	222.46	4152.651		02:36:15	
4.7417	222.48	4152.145		02:36:30	
4.7458	222.51	4151.413		02:36:45	
4.7500	222.54	4150.907		02:37:00	
4.7542	222.57	4150.401		02:37:15	
4.7583	222.57	4149.725		02:37:30	
4.7625	222.63	4149.163		02:37:45	
4.7667	222.63	4148.713		02:38:00	
4.7708	222.66	4148.207		02:38:15	
4.7750	222.69	4147.475		02:38:30	
4.7792	222.72	4146.969		02:38:45	
4.7833	222.75	4146.463		02:39:00	
4.7875	222.78	4145.732		02:39:15	
4.7917	222.78	4145.506		02:39:30	
4.7958	222.80	4145.000		02:39:45	
4.8000	222.83	4144.269		02:40:00	
4.8042	222.86	4143.763		02:40:15	
4.8083	222.89	4143.257		02:40:30	
4.8125	222.89	4142.806		02:40:45	
4.8167	222.92	4142.300		02:41:00	
4.8208	222.98	4141.739		02:41:15	
4.8250	222.98	4141.063		02:41:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX
02/04/
EV-YS-93003 (Recorder: 0057)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-6)	PRESSURE	TIME OF DAY	COMMENTS
4.8292	223.01	4140.782	02:41:45		
4.8333	223.04	4140.276	02:42:00		
4.8375	223.04	4139.600	02:42:15		
4.8417	223.09	4139.264	02:42:30		
4.8458	223.09	4138.813	02:42:45		
4.8500	223.12	4138.307	02:43:00		
4.8542	223.15	4137.802	02:43:15		
4.8583	223.15	4137.351	02:43:30		
4.8625	223.21	4136.790	02:43:45		
4.8667	223.21	4136.339	02:44:00		
4.8708	223.24	4135.833	02:44:15		
4.8750	223.24	4135.382	02:44:30		
4.8792	223.30	4135.047	02:44:45		
4.8833	223.30	4134.596	02:45:00		
4.8875	223.33	4134.090	02:45:15		
4.8917	223.36	4133.359	02:45:30		
4.8958	223.36	4132.908	02:45:45		
4.9000	223.39	4132.628	02:46:00		
4.9042	223.39	4132.177	02:46:15		
4.9083	223.44	4131.841	02:46:30		
4.9125	223.44	4131.391	02:46:45		
4.9167	223.44	4130.940	02:47:00		
4.9208	223.50	4130.379	02:47:15		
4.9250	223.50	4130.154	02:47:30		
4.9292	223.53	4129.423	02:47:45		
4.9333	223.53	4129.423	02:48:00		
4.9375	223.56	4128.917	02:48:15		
4.9417	223.59	4128.411	02:48:30		
4.9458	223.59	4128.186	02:48:45		
4.9500	223.65	4127.625	02:49:00		
4.9542	223.65	4126.949	02:49:15		
4.9583	223.65	4126.949	02:49:30		
4.9625	223.70	4126.388	02:49:45		
4.9667	223.70	4125.937	02:50:00		
4.9708	223.70	4125.487	02:50:15		
4.9750	223.76	4124.926	02:50:30		
4.9792	223.76	4124.926	02:50:45		
4.9833	223.79	4124.420	02:51:00		
4.9875	223.82	4123.914	02:51:15		
4.9917	223.82	4123.689	02:51:30		
4.9958	223.82	4123.464	02:51:45		
5.0000	223.85	4122.958	02:52:00		
5.0042	223.88	4122.677	02:52:15		
5.0083	223.91	4122.172	02:52:30		

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEXI

02/04/

EV-Y\$-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECODER TIME (HOURS)	ELAPSED (F)	TEMPERATURE (PSI-G)	PRESSURE TIME OF DAY	COMMENTS
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5.0125	223.91	4121.721	02:52:45
5.0167	223.94	4121.441	02:53:00
5.0208	223.97	4121.160	02:53:15
5.0250	223.97	4120.710	02:53:30
5.0292	223.97	4120.485	02:53:45
5.0333	224.02	4119.924	02:54:00
5.0375	224.02	4119.698	02:54:15
5.0417	224.02	4119.473	02:54:30
5.0458	224.08	4118.912	02:54:45
5.0500	224.08	4118.687	02:55:00
5.0542	224.08	4118.237	02:55:15
5.0583	224.11	4117.956	02:55:30
5.0625	224.14	4117.676	02:55:45
5.0667	224.17	4117.395	02:56:00
5.0708	224.17	4116.945	02:56:15
5.0750	224.17	4116.720	02:56:30
5.0792	224.23	4116.159	02:56:45
5.0833	224.20	4115.989	02:57:00
5.0875	224.26	4115.428	02:57:15
5.0917	224.26	4115.203	02:57:30
5.0958	224.26	4114.978	02:57:45
5.1000	224.29	4114.697	02:58:00
5.1042	224.31	4114.417	02:58:15
5.1083	224.34	4114.137	02:58:30
5.1125	224.34	4113.686	02:58:45
5.1167	224.34	4113.461	02:59:00
5.1208	224.37	4112.955	02:59:15
5.1250	224.40	4112.900	02:59:30
5.1292	224.43	4112.620	02:59:45
5.1333	224.43	4112.395	03:00:00
5.1375	224.43	4111.944	03:00:15
5.1417	224.46	4111.439	03:00:30
5.1450	224.49	4111.384	03:00:45
5.1500	224.52	4111.103	03:01:00
5.1542	224.52	4110.653	03:01:15
5.1583	224.52	4110.428	03:01:30
5.1625	224.55	4109.922	03:01:45
5.1667	224.58	4109.442	03:02:00
5.1708	224.61	4109.587	03:02:15
5.1750	224.61	4109.362	03:02:30
5.1792	224.61	4108.911	03:02:45
5.1833	224.63	4108.406	03:03:00
5.1875	224.66	4108.351	03:03:15
5.1917	224.69	4108.295	03:03:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-G)	PRESSURE TIME OF DAY	COMMENTS
5.1958	224.69	4107.845	03:03:45	
5.2000	224.69	4107.620	03:04:00	
5.2042	224.72	4107.340	03:04:15	
5.2083	224.72	4107.114	03:04:30	
5.2125	224.75	4106.609	03:04:45	
5.2167	224.78	4106.554	03:05:00	
5.2208	224.81	4106.274	03:05:15	
5.2250	224.81	4106.048	03:05:30	
5.2292	224.81	4105.823	03:05:45	
5.2333	224.84	4105.543	03:06:00	
5.2375	224.84	4105.318	03:06:15	
5.2417	224.90	4104.983	03:06:30	
5.2458	224.90	4104.532	03:06:45	
5.2500	224.92	4104.477	03:07:00	
5.2542	224.92	4104.252	03:07:15	
5.2583	224.92	4103.801	03:07:30	
5.2625	224.95	4103.571	03:07:45	
5.2667	224.98	4103.466	03:08:00	
5.2708	225.01	4103.186	03:08:15	
5.2750	225.01	4102.961	03:08:30	
5.2792	225.01	4102.736	03:08:45	
5.2833	225.04	4102.456	03:09:00	
5.2875	225.04	4102.230	03:09:15	
5.2917	225.10	4101.670	03:09:30	
5.2958	225.10	4101.670	03:09:45	
5.3000	225.10	4101.445	03:10:00	
5.3042	225.13	4101.165	03:10:15	
5.3083	225.13	4100.939	03:10:30	
5.3125	225.16	4100.659	03:10:45	
5.3167	225.16	4100.434	03:11:00	
5.3208	225.19	4100.379	03:11:15	
5.3250	225.21	4100.099	03:11:30	
5.3292	225.24	4099.819	03:11:45	
5.3333	225.24	4099.594	03:12:00	
5.3375	225.27	4099.313	03:12:15	
5.3417	225.27	4099.088	03:12:30	
5.3458	225.27	4099.088	03:12:45	
5.3500	225.30	4098.808	03:13:00	
5.3542	225.33	4098.528	03:13:15	
5.3583	225.36	4098.248	03:13:30	
5.3625	225.36	4098.023	03:13:45	
5.3667	225.36	4097.797	03:14:00	
5.3708	225.39	4097.517	03:14:15	
5.3750	225.39	4097.517	03:14:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04,

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED (F)	TEMPERATURE (PSI-G)	PRESSURE TIME OF DAY	COMMENTS
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5.3792	225.45	4096.957	03:14:45	
5.3833	225.45	4096.957	03:15:00	
5.3875	225.48	4096.677	03:15:15	
5.3917	225.48	4096.452	03:15:30	
5.3958	225.51	4096.172	03:15:45	
5.4000	225.51	4096.397	03:16:00	
5.4042	225.51	4095.947	03:16:15	
5.4083	225.53	4095.666	03:16:30	
5.4125	225.53	4095.666	03:16:45	
5.4167	225.59	4095.331	03:17:00	
5.4208	225.59	4095.106	03:17:15	
5.4250	225.59	4094.881	03:17:30	
5.4292	225.59	4094.656	03:17:45	
5.4333	225.62	4094.826	03:18:00	
5.4375	225.65	4094.546	03:18:15	
5.4417	225.65	4094.096	03:18:30	
5.4458	225.68	4094.041	03:18:45	
5.4500	225.71	4093.761	03:19:00	
5.4542	225.71	4093.536	03:19:15	
5.4583	225.74	4093.256	03:19:30	
5.4625	225.74	4093.256	03:19:45	
5.4667	225.74	4093.030	03:20:00	
5.4708	225.77	4092.750	03:20:15	
5.4750	225.77	4092.750	03:20:30	
5.4792	225.80	4092.470	03:20:45	
5.4833	225.80	4092.245	03:21:00	
5.4875	225.82	4091.965	03:21:15	
5.4917	225.82	4091.740	03:21:30	
5.4958	225.85	4091.685	03:21:45	
5.5000	225.85	4091.235	03:22:00	
5.5042	225.91	4091.125	03:22:15	
5.5083	225.91	4091.125	03:22:30	
5.5125	225.94	4090.845	03:22:45	
5.5167	225.94	4090.845	03:23:00	
5.5208	225.97	4090.565	03:23:15	
5.5250	225.97	4090.340	03:23:30	
5.5292	226.00	4090.285	03:23:45	
5.5333	226.00	4090.060	03:24:00	
5.5375	226.03	4089.780	03:24:15	
5.5417	226.03	4089.555	03:24:30	
5.5458	226.03	4089.555	03:24:45	
5.5500	226.06	4089.050	03:25:00	
5.5542	226.09	4089.220	03:25:15	
5.5583	226.06	4089.050	03:25:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW ME

02/C

EV-YS-93003 (Recorder: 00)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER ELAPSED TIME (HOURS)	TEMPERATURE (F)	PRESSURE (PSI-G)	TIME OF DAY	COMMENTS
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5.5625	226.09	4088.770	03:25:45
5.5667	226.12	4088.715	03:26:00
5.5708	226.14	4088.435	03:26:15
5.5750	226.14	4088.210	03:26:30
5.5792	226.17	4087.930	03:26:45
5.5833	226.17	4087.930	03:27:00
5.5875	226.20	4087.650	03:27:15
5.5917	226.20	4087.425	03:27:30
5.5958	226.23	4087.370	03:27:45
5.6000	226.23	4087.370	03:28:00
5.6042	226.26	4087.315	03:28:15
5.6083	226.26	4087.090	03:28:30
5.6125	226.26	4086.865	03:28:45
5.6167	226.29	4086.810	03:29:00
5.6208	226.32	4086.530	03:29:15
5.6250	226.32	4086.305	03:29:30
5.6292	226.32	4086.080	03:29:45
5.6333	226.35	4086.025	03:30:00
5.6375	226.35	4086.025	03:30:15
5.6417	226.38	4085.745	03:30:30
5.6458	226.38	4085.520	03:30:45
5.6500	226.41	4085.240	03:31:00
5.6542	226.41	4085.240	03:31:15
5.6583	226.43	4085.185	03:31:30
5.6625	226.43	4084.960	03:31:45
5.6667	226.49	4084.850	03:32:00
5.6708	226.46	4084.680	03:32:15
5.6750	226.49	4084.400	03:32:30
5.6792	226.52	4084.345	03:32:45
5.6833	226.52	4084.345	03:33:00
5.6875	226.55	4084.065	03:33:15
5.6917	226.55	4084.065	03:33:30
5.6958	226.58	4083.560	03:33:45
5.7000	226.58	4083.560	03:34:00
5.7042	226.58	4083.335	03:34:15
5.7083	226.61	4083.505	03:34:30
5.7125	226.61	4083.280	03:34:45
5.7167	226.64	4083.000	03:35:00
5.7208	226.64	4083.000	03:35:15
5.7250	226.67	4082.720	03:35:30
5.7292	226.70	4082.666	03:35:45
5.7333	226.73	4082.611	03:36:00
5.7375	226.73	4082.161	03:36:15
5.7417	226.75	4082.331	03:36:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECODER	ELAPSED	TEMPERATURE	PRESSURE	TIME OF DAY	COMMENTS
TIME (HOURS)	(F)		(PSI-6)		

5.7458	226.75	4082.106	03:36:45
5.7500	226.78	4081.826	03:37:00
5.7542	226.78	4081.826	03:37:15
5.7583	226.81	4081.546	03:37:30
5.7625	226.81	4081.546	03:37:45
5.7667	226.84	4081.266	03:38:00
5.7708	226.84	4081.041	03:38:15
5.7750	226.84	4081.266	03:38:30
5.7792	226.87	4081.211	03:38:45
5.7833	226.07	4080.761	03:39:00
5.7875	226.90	4080.706	03:39:15
5.7917	226.90	4080.481	03:39:30
5.7958	226.93	4080.426	03:39:45
5.8000	226.93	4080.201	03:40:00
5.8042	226.96	4080.147	03:40:15
5.8083	226.99	4079.867	03:40:30
5.8125	226.99	4079.867	03:40:45
5.8167	227.02	4079.587	03:41:00
5.8208	227.02	4079.587	03:41:15
5.8250	227.04	4079.532	03:41:30
5.8292	227.04	4079.532	03:41:45
5.8333	227.07	4079.252	03:42:00
5.8375	227.07	4079.252	03:42:15
5.8417	227.07	4079.027	03:42:30
5.8458	227.10	4078.972	03:42:45
5.8500	227.10	4078.747	03:43:00
5.8542	227.13	4078.693	03:43:15
5.8583	227.13	4078.468	03:43:30
5.8625	227.16	4078.413	03:43:45
5.8667	227.16	4078.413	03:44:00
5.8708	227.19	4078.133	03:44:15
5.8750	227.19	4078.133	03:44:30
5.8792	227.22	4077.953	03:44:45
5.8833	227.22	4077.628	03:45:00
5.8875	227.25	4077.798	03:45:15
5.8917	227.25	4077.798	03:45:30
5.8958	227.31	4077.464	03:45:45
5.9000	227.28	4077.293	03:46:00
5.9042	227.34	4077.184	03:46:15
5.9083	227.34	4076.734	03:46:30
5.9125	227.36	4076.904	03:46:45
5.9167	227.36	4076.679	03:47:00
5.9208	227.39	4076.624	03:47:15
5.9250	227.39	4076.624	03:47:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW ME
02/0
EV-YS-93003 (Recorder: 00)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-G)	PRESSURE TIME OF DAY	COMMENTS
5.9292	227.42	4076.344	03:47:45	
5.9333	227.42	4076.344	03:48:00	
5.9375	227.45	4076.290	03:48:15	
5.9417	227.45	4076.065	03:48:30	
5.9458	227.48	4076.010	03:48:45	
5.9500	227.48	4075.785	03:49:00	
5.9542	227.51	4075.730	03:49:15	
5.9583	227.51	4075.730	03:49:30	
5.9625	227.51	4075.505	03:49:45	
5.9667	227.51	4075.505	03:50:00	
5.9708	227.54	4075.450	03:50:15	
5.9750	227.54	4075.225	03:50:30	
5.9792	227.57	4074.946	03:50:45	
5.9833	227.57	4074.946	03:51:00	
5.9875	227.60	4074.891	03:51:15	
5.9917	227.60	4074.891	03:51:30	
5.9958	227.63	4074.611	03:51:45	
6.0000	227.63	4074.611	03:52:00	
6.0042	227.65	4074.556	03:52:15	
6.0083	227.65	4074.556	03:52:30	
6.0125	227.68	4074.277	03:52:45	
6.0167	227.68	4074.277	03:53:00	
6.0208	227.71	4073.997	03:53:15	
6.0250	227.71	4073.997	03:53:30	
6.0292	227.74	4073.942	03:53:45	
6.0333	227.77	4073.662	03:54:00	
6.0375	227.77	4073.662	03:54:15	
6.0417	227.80	4073.383	03:54:30	
6.0458	227.80	4073.608	03:54:45	
6.0500	227.83	4073.103	03:55:00	
6.0542	227.83	4073.103	03:55:15	
6.0583	227.86	4073.273	03:55:30	
6.0625	227.86	4072.823	03:55:45	
6.0667	227.89	4072.768	03:56:00	
6.0708	227.89	4072.768	03:56:15	
6.0750	227.92	4072.714	03:56:30	
6.0792	227.89	4072.543	03:56:45	
6.0833	227.92	4072.489	03:57:00	
6.0875	227.92	4072.489	03:57:15	
6.0917	227.94	4072.434	03:57:30	
6.0958	227.94	4072.209	03:57:45	
6.1000	227.94	4071.984	03:58:00	
6.1042	228.00	4072.099	03:58:15	
6.1083	228.00	4071.874	03:58:30	

HERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX)

02/04/

EV-YS-93003 (Recorder: 0057

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECODER	ELAPSED	TEMPERATURE	PRESSURE	TIME OF DAY	COMMENTS
TIME (HOURS)		(F)	(PSI-G)		

6.1125	228.00	4071.874	03:58:45
6.1167	228.03	4071.595	03:59:00
6.1208	228.03	4071.820	03:59:15
6.1250	228.06	4071.315	03:59:30
6.1292	228.06	4071.315	03:59:45
6.1333	228.06	4071.315	04:00:00
6.1375	228.06	4071.315	04:00:15
6.1417	228.09	4071.260	04:00:30
6.1458	228.09	4071.260	04:00:45
6.1500	228.12	4071.206	04:01:00
6.1542	228.12	4070.756	04:01:15
6.1583	228.15	4070.701	04:01:30
6.1625	228.15	4070.701	04:01:45
6.1667	228.18	4070.196	04:02:00
6.1708	228.21	4070.591	04:02:15
6.1750	228.21	4070.142	04:02:30
6.1792	228.24	4070.087	04:02:45
6.1833	228.24	4070.087	04:03:00
6.1875	228.26	4070.032	04:03:15
6.1917	228.26	4070.032	04:03:30
6.1958	228.26	4069.807	04:03:45
6.2000	228.26	4070.032	04:04:00
6.2042	228.29	4069.527	04:04:15
6.2083	228.29	4069.527	04:04:30
6.2125	228.32	4069.473	04:04:45
6.2167	228.32	4069.248	04:05:00
6.2208	228.35	4069.418	04:05:15
6.2250	228.35	4069.193	04:05:30
6.2292	228.38	4069.138	04:05:45
6.2333	228.38	4069.138	04:06:00
6.2375	228.41	4068.859	04:06:15
6.2417	228.41	4068.859	04:06:30
6.2458	228.44	4068.804	04:06:45
6.2500	228.44	4068.804	04:07:00
6.2542	228.44	4068.354	04:07:15
6.2583	228.47	4068.524	04:07:30
6.2625	228.47	4068.524	04:07:45
6.2667	228.50	4068.245	04:08:00
6.2708	228.50	4068.245	04:08:15
6.2750	228.53	4068.190	04:08:30
6.2792	228.53	4068.190	04:08:45
6.2833	228.55	4067.910	04:09:00
6.2875	228.55	4067.910	04:09:15
6.2917	228.58	4067.856	04:09:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1NEW ME
02/0

EV-YS-93003 (Recorder: 00)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECODER TIME (HOURS)	ELAPSED (F)	TEMPERATURE (PSI-G)	TIME OF DAY	COMMENTS
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6.2958	228.61	4067.801	04:09:45	
6.3000	228.61	4067.576	04:10:00	
6.3042	228.64	4067.521	04:10:15	
6.3083	228.64	4067.521	04:10:30	
6.3125	228.67	4067.242	04:10:45	
6.3167	228.67	4067.242	04:11:00	
6.3208	228.70	4067.187	04:11:15	
6.3250	228.70	4067.187	04:11:30	
6.3292	228.70	4067.187	04:11:45	
6.3333	228.70	4067.187	04:12:00	
6.3375	228.73	4066.907	04:12:15	
6.3417	228.73	4066.683	04:12:30	
6.3458	228.76	4066.853	04:12:45	
6.3500	228.79	4066.573	04:13:00	
6.3542	228.79	4066.573	04:13:15	
6.3583	228.82	4066.519	04:13:30	
6.3625	228.82	4066.294	04:13:45	
6.3667	228.85	4066.239	04:14:00	
6.3708	228.85	4066.239	04:14:15	
6.3750	228.85	4066.239	04:14:30	
6.3792	228.85	4066.239	04:14:45	
6.3833	228.87	4066.184	04:15:00	
6.3875	228.90	4065.905	04:15:15	
6.3917	228.87	4065.959	04:15:30	
6.3958	228.93	4065.850	04:15:45	
6.4000	228.90	4065.680	04:16:00	
6.4042	228.93	4065.625	04:16:15	
6.4083	228.96	4065.570	04:16:30	
6.4125	228.96	4065.570	04:16:45	
6.4167	228.99	4065.291	04:17:00	
6.4208	228.96	4065.345	04:17:15	
6.4250	228.99	4065.516	04:17:30	
6.4292	228.99	4065.066	04:17:45	
6.4333	229.02	4065.011	04:18:00	
6.4375	229.05	4065.181	04:18:15	
6.4417	229.05	4064.957	04:18:30	
6.4458	229.08	4064.902	04:18:45	
6.4500	229.05	4064.957	04:19:00	
6.4542	229.08	4064.902	04:19:15	
6.4583	229.11	4064.622	04:19:30	
6.4625	229.11	4064.397	04:19:45	
6.4667	229.14	4064.568	04:20:00	
6.4708	229.11	4064.622	04:20:15	
6.4750	229.14	4064.343	04:20:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED (F)	TEMPERATURE (PSI-G)	TIME OF DAY	COMMENTS
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6.4792	229.14	4064.343	04:20:45	
6.4833	229.16	4064.288	04:21:00	
6.4875	229.19	4064.233	04:21:15	
6.4917	229.16	4064.063	04:21:30	
6.4958	229.19	4064.008	04:21:45	
6.5000	229.19	4063.784	04:22:00	
6.5042	229.22	4063.729	04:22:15	
6.5083	229.25	4063.899	04:22:30	
6.5125	229.22	4063.729	04:22:45	
6.5167	229.25	4063.449	04:23:00	
6.5208	229.28	4063.395	04:23:15	
6.5250	229.28	4063.620	04:23:30	
6.5292	229.31	4063.340	04:23:45	
6.5333	229.28	4063.395	04:24:00	
6.5375	229.31	4063.340	04:24:15	
6.5417	229.31	4063.115	04:24:30	
6.5458	229.31	4063.340	04:24:45	
6.5500	229.34	4063.061	04:25:00	
6.5542	229.34	4063.061	04:25:15	
6.5583	229.37	4062.781	04:25:30	
6.5625	229.37	4062.781	04:25:45	
6.5667	229.40	4062.951	04:26:00	
6.5708	229.40	4062.501	04:26:15	
6.5750	229.43	4062.672	04:26:30	
6.5792	229.43	4062.672	04:26:45	
6.5833	229.46	4062.392	04:27:00	
6.5875	229.43	4062.447	04:27:15	
6.5917	229.46	4062.392	04:27:30	
6.5958	229.48	4062.338	04:27:45	
6.6000	229.48	4062.338	04:28:00	
6.6042	229.51	4062.058	04:28:15	
6.6083	229.48	4062.113	04:28:30	
6.6125	229.51	4062.058	04:28:45	
6.6167	229.54	4062.003	04:29:00	
6.6208	229.54	4062.003	04:29:15	
6.6250	229.57	4061.724	04:29:30	
6.6292	229.54	4061.778	04:29:45	
6.6333	229.57	4061.949	04:30:00	
6.6375	229.60	4061.669	04:30:15	
6.6417	229.60	4061.669	04:30:30	
6.6458	229.60	4061.669	04:30:45	
6.6500	229.60	4061.444	04:31:00	
6.6542	229.63	4061.165	04:31:15	
6.6583	229.66	4061.560	04:31:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECODER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-G)	PRESSURE	TIME OF DAY	COMMENTS
6.6625	229.66	4061.335	04:31:45		
6.6667	229.69	4061.280	04:32:00		
6.6708	229.66	4061.110	04:32:15		
6.6750	229.69	4061.056	04:32:30		
6.6792	229.72	4061.001	04:32:45		
6.6833	229.72	4060.776	04:33:00		
6.6875	229.75	4060.946	04:33:15		
6.6917	229.72	4061.001	04:33:30		
6.6958	229.75	4060.946	04:33:45		
6.7000	229.77	4060.667	04:34:00		
6.7042	229.77	4060.442	04:34:15		
6.7083	229.77	4060.667	04:34:30		
6.7125	229.77	4060.892	04:34:45		
6.7167	229.80	4060.387	04:35:00		
6.7208	229.80	4060.387	04:35:15		
6.7250	229.83	4060.333	04:35:30		
6.7292	229.83	4060.108	04:35:45		
6.7333	229.83	4060.108	04:36:00		
6.7375	229.83	4060.108	04:36:15		
6.7417	229.86	4060.053	04:36:30		
6.7458	229.89	4059.999	04:36:45		
6.7500	229.86	4059.828	04:37:00		
6.7542	229.89	4059.999	04:37:15		
6.7583	229.92	4059.944	04:37:30		
6.7625	229.92	4059.719	04:37:45		
6.7667	229.92	4059.719	04:38:00		
6.7708	229.92	4059.719	04:38:15		
6.7750	229.95	4059.665	04:38:30		
6.7792	229.98	4059.610	04:38:45		
6.7833	229.98	4059.610	04:39:00		
6.7875	229.98	4059.610	04:39:15		
6.7917	229.98	4059.385	04:39:30		
6.7958	230.01	4059.555	04:39:45		
6.8000	230.04	4059.276	04:40:00		
6.8042	230.04	4059.276	04:40:15		
6.8083	230.07	4058.996	04:40:30		
6.8125	230.04	4059.051	04:40:45		
6.8167	230.07	4058.996	04:41:00		
6.8208	230.09	4058.942	04:41:15		
6.8250	230.09	4058.942	04:41:30		
6.8292	230.09	4058.942	04:41:45		
6.8333	230.09	4058.717	04:42:00		
6.8375	230.12	4058.662	04:42:15		
6.8417	230.15	4058.833	04:42:30		

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED (F)	TEMPERATURE (PSI-G)	PRESSURE	TIME OF DAY	COMMENTS
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6.8458	230.15	4058.608	04:42:45
6.8500	230.15	4058.608	04:43:00
6.8542	230.15	4058.833	04:43:15
6.8583	230.18	4058.553	04:43:30
6.8625	230.21	4058.274	04:43:45
6.8667	230.18	4058.328	04:44:00
6.8708	230.21	4058.499	04:44:15
6.8750	230.24	4058.219	04:44:30
6.8792	230.24	4058.219	04:44:45
6.8833	230.24	4058.219	04:45:00
6.8875	230.24	4058.219	04:45:15
6.8917	230.27	4057.940	04:45:30
6.8958	230.27	4057.940	04:45:45
6.9000	230.27	4057.940	04:46:00
6.9042	230.30	4057.885	04:46:15
6.9083	230.30	4057.885	04:46:30
6.9125	230.30	4058.110	04:46:45
6.9167	230.36	4057.776	04:47:00
6.9208	230.36	4057.551	04:47:15
6.9250	230.36	4057.551	04:47:30
6.9292	230.36	4057.551	04:47:45
6.9333	230.36	4057.551	04:48:00
6.9375	230.38	4057.721	04:48:15
6.9417	230.38	4057.496	04:48:30
6.9458	230.38	4057.496	04:48:45
6.9500	230.41	4057.442	04:49:00
6.9542	230.41	4057.442	04:49:15
6.9583	230.41	4057.217	04:49:30
6.9625	230.44	4057.162	04:49:45
6.9667	230.47	4057.108	04:50:00
6.9708	230.44	4057.162	04:50:15
6.9750	230.47	4056.883	04:50:30
6.9792	230.50	4057.053	04:50:45
6.9833	230.47	4056.883	04:51:00
6.9875	230.50	4056.828	04:51:15
6.9917	230.53	4056.774	04:51:30
6.9958	230.53	4056.774	04:51:45
7.0000	230.53	4056.549	04:52:00
7.0042	230.56	4056.719	04:52:15
7.0083	230.56	4056.719	04:52:30
7.0125	230.59	4056.440	04:52:45
7.0167	230.56	4056.494	04:53:00
7.0208	230.59	4056.215	04:53:15
7.0250	230.62	4056.385	04:53:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECODER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-G)	PRESSURE	TIME OF DAY	COMMENTS
7.0292	230.59	4056.665	04:53:45		
7.0333	230.62	4056.160	04:54:00		
7.0375	230.65	4056.106	04:54:15		
7.0417	230.65	4056.106	04:54:30		
7.0458	230.65	4056.331	04:54:45		
7.0500	230.65	4056.106	04:55:00		
7.0542	230.67	4056.051	04:55:15		
7.0583	230.70	4055.997	04:55:30		
7.0625	230.67	4056.051	04:55:45		
7.0667	230.70	4055.772	04:56:00		
7.0708	230.70	4055.772	04:56:15		
7.0750	230.73	4055.942	04:56:30		
7.0792	230.73	4055.493	04:56:45		
7.0833	230.76	4055.663	04:57:00		
7.0875	230.73	4055.942	04:57:15		
7.0917	230.76	4055.663	04:57:30		
7.0958	230.76	4055.888	04:57:45		
7.1000	230.79	4055.383	04:58:00		
7.1042	230.79	4055.383	04:58:15		
7.1083	230.79	4055.608	04:58:30		
7.1125	230.82	4055.329	04:58:45		
7.1167	230.85	4055.274	04:59:00		
7.1208	230.85	4055.274	04:59:15		
7.1250	230.85	4055.274	04:59:30		
7.1292	230.85	4055.274	04:59:45		
7.1333	230.88	4055.220	05:00:00		
7.1375	230.91	4055.165	05:00:15		
7.1417	230.88	4054.995	05:00:30		
7.1458	230.91	4055.165	05:00:45		
7.1500	230.94	4054.886	05:01:00		
7.1542	230.94	4054.886	05:01:15		
7.1583	230.94	4055.111	05:01:30		
7.1625	230.94	4054.886	05:01:45		
7.1667	230.97	4054.606	05:02:00		
7.1708	230.99	4054.552	05:02:15		
7.1750	230.97	4054.831	05:02:30		
7.1792	230.99	4054.552	05:02:45		
7.1833	231.02	4054.722	05:03:00		
7.1875	231.02	4054.497	05:03:15		
7.1917	231.02	4054.497	05:03:30		
7.1958	231.02	4054.497	05:03:45		
7.2000	231.05	4054.443	05:04:00		
7.2042	231.08	4054.388	05:04:15		
7.2083	231.05	4054.443	05:04:30		

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SND #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER	ELAPSED	TEMPERATURE	PRESSURE	TIME OF DAY	COMMENTS
TIME (HOURS)	(F)		(PSI-6)		

7.2125	231.08	4054.388	05:04:45
7.2167	231.08	4054.163	05:05:00
7.2208	231.11	4054.109	05:05:15
7.2250	231.14	4054.279	05:05:30
7.2292	231.14	4053.830	05:05:45
7.2333	231.14	4054.054	05:06:00
7.2375	231.14	4053.830	05:06:15
7.2417	231.17	4054.000	05:06:30
7.2458	231.20	4053.720	05:06:45
7.2500	231.17	4053.775	05:07:00
7.2542	231.17	4054.000	05:07:15
7.2583	231.20	4053.720	05:07:30
7.2625	231.20	4053.720	05:07:45
7.2667	231.23	4053.666	05:08:00
7.2708	231.26	4053.611	05:08:15
7.2750	231.23	4053.666	05:08:30
7.2792	231.26	4053.611	05:08:45
7.2833	231.28	4053.557	05:09:00
7.2875	231.28	4053.332	05:09:15
7.2917	231.28	4053.557	05:09:30
7.2958	231.31	4053.502	05:09:45
7.3000	231.31	4053.277	05:10:00
7.3042	231.31	4053.502	05:10:15
7.3083	231.31	4053.277	05:10:30
7.3125	231.34	4053.448	05:10:45
7.3167	231.37	4053.168	05:11:00
7.3208	231.34	4053.448	05:11:15
7.3250	231.37	4053.168	05:11:30
7.3292	231.40	4053.114	05:11:45
7.3333	231.40	4053.114	05:12:00
7.3375	231.40	4052.099	05:12:15
7.3417	231.40	4052.889	05:12:30
7.3458	231.43	4052.834	05:12:45
7.3500	231.43	4052.834	05:13:00
7.3542	231.43	4052.834	05:13:15
7.3583	231.46	4052.555	05:13:30
7.3625	231.49	4052.725	05:13:45
7.3667	231.46	4052.780	05:14:00
7.3708	231.49	4052.501	05:14:15
7.3750	231.52	4052.671	05:14:30
7.3792	231.52	4052.446	05:14:45
7.3833	231.52	4052.671	05:15:00
7.3875	231.55	4052.392	05:15:15
7.3917	231.55	4052.167	05:15:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-G)	PRESSURE	TIME OF DAY	COMMENTS
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7.3958	231.55	4052.392	05:15:45
7.4000	231.55	4052.392	05:16:00
7.4042	231.58	4052.337	05:16:15
7.4083	231.60	4052.282	05:16:30
7.4125	231.58	4052.112	05:16:45
7.4167	231.60	4052.058	05:17:00
7.4208	231.63	4052.228	05:17:15
7.4250	231.60	4052.058	05:17:30
7.4292	231.63	4052.003	05:17:45
7.4333	231.66	4051.724	05:18:00
7.4375	231.63	4052.003	05:18:15
7.4417	231.66	4051.724	05:18:30
7.4458	231.69	4051.894	05:18:45
7.4500	231.66	4051.949	05:19:00
7.4542	231.69	4051.669	05:19:15
7.4583	231.72	4051.615	05:19:30
7.4625	231.69	4051.894	05:19:45
7.4667	231.69	4051.669	05:20:00
7.4708	231.72	4051.615	05:20:15
7.4750	231.75	4051.336	05:20:30
7.4792	231.72	4051.615	05:20:45
7.4833	231.75	4051.336	05:21:00
7.4875	231.78	4051.506	05:21:15
7.4917	231.75	4051.336	05:21:30
7.4958	231.78	4051.281	05:21:45
7.5000	231.81	4051.226	05:22:00
7.5042	231.81	4051.451	05:22:15
7.5083	231.81	4051.226	05:22:30
7.5125	231.84	4051.172	05:22:45
7.5167	231.81	4051.226	05:23:00
7.5208	231.84	4050.947	05:23:15
7.5250	231.87	4051.117	05:23:30
7.5292	231.84	4051.172	05:23:45
7.5333	231.87	4050.893	05:24:00
7.5375	231.89	4050.838	05:24:15
7.5417	231.87	4051.117	05:24:30
7.5458	231.89	4050.838	05:24:45
7.5500	231.92	4050.784	05:25:00
7.5542	231.89	4050.613	05:25:15
7.5583	231.92	4050.784	05:25:30
7.5625	231.95	4050.504	05:25:45
7.5667	231.92	4050.559	05:26:00
7.5708	231.95	4050.504	05:26:15
7.5750	231.98	4050.675	05:26:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-G)	PRESSURE	TIME OF DAY	COMMENTS
7.5792	231.95	4050.729	05:26:45		
7.5833	231.98	4050.450	05:27:00		
7.5875	231.98	4050.450	05:27:15		
7.5917	231.98	4050.450	05:27:30		
7.5958	232.01	4050.395	05:27:45		
7.6000	232.01	4050.395	05:28:00		
7.6042	232.04	4050.341	05:28:15		
7.6083	232.04	4050.341	05:28:30		
7.6125	232.04	4050.341	05:28:45		
7.6167	232.07	4050.062	05:29:00		
7.6208	232.07	4050.062	05:29:15		
7.6250	232.07	4050.062	05:29:30		
7.6292	232.10	4050.232	05:29:45		
7.6333	232.07	4050.286	05:30:00		
7.6375	232.10	4050.007	05:30:15		
7.6417	232.13	4049.952	05:30:30		
7.6458	232.10	4050.007	05:30:45		
7.6500	232.10	4050.007	05:31:00		
7.6542	232.13	4049.952	05:31:15		
7.6583	232.13	4049.952	05:31:30		
7.6625	232.13	4049.952	05:31:45		
7.6667	232.16	4049.673	05:32:00		
7.6708	232.16	4049.898	05:32:15		
7.6750	232.19	4049.619	05:32:30		
7.6792	232.19	4049.843	05:32:45		
7.6833	232.19	4049.619	05:33:00		
7.6875	232.19	4049.619	05:33:15		
7.6917	232.21	4049.564	05:33:30		
7.6958	232.21	4049.564	05:33:45		
7.7000	232.21	4049.564	05:34:00		
7.7042	232.24	4049.510	05:34:15		
7.7083	232.24	4049.510	05:34:30		
7.7125	232.27	4049.455	05:34:45		
7.7167	232.27	4049.230	05:35:00		
7.7208	232.27	4049.230	05:35:15		
7.7250	232.30	4049.401	05:35:30		
7.7292	232.30	4049.176	05:35:45		
7.7333	232.30	4048.951	05:36:00		
7.7375	232.33	4049.346	05:36:15		
7.7417	232.33	4049.121	05:36:30		
7.7458	232.33	4048.897	05:36:45		
7.7500	232.36	4049.067	05:37:00		
7.7542	232.33	4048.897	05:37:15		
7.7583	232.36	4049.067	05:37:30		

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1NEW MEX
02/04
EV-YS-93003 (Recorder: UUS)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-G)	PRESSURE	TIME OF DAY	COMMENTS
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7.7625	232.39	4048.788	05:37:45	
7.7667	232.36	4048.842	05:38:00	
7.7708	232.39	4048.788	05:38:15	
7.7750	232.42	4048.733	05:38:30	
7.7792	232.39	4048.788	05:38:45	
7.7833	232.42	4048.733	05:39:00	
7.7875	232.45	4048.679	05:39:15	
7.7917	232.42	4048.733	05:39:30	
7.7958	232.45	4048.679	05:39:45	
7.8000	232.45	4048.679	05:40:00	
7.8042	232.48	4048.624	05:40:15	
7.8083	232.48	4048.399	05:40:30	
7.8125	232.48	4048.624	05:40:45	
7.8167	232.50	4048.570	05:41:00	
7.8208	232.48	4048.624	05:41:15	
7.8250	232.50	4048.570	05:41:30	
7.8292	232.53	4048.290	05:41:45	
7.8333	232.50	4048.345	05:42:00	
7.8375	232.53	4048.066	05:42:15	
7.8417	232.53	4048.066	05:42:30	
7.8458	232.56	4048.236	05:42:45	
7.8500	232.56	4048.236	05:43:00	
7.8542	232.56	4048.011	05:43:15	
7.8583	232.59	4047.957	05:43:30	
7.8625	232.56	4048.236	05:43:45	
7.8667	232.56	4048.011	05:44:00	
7.8708	232.62	4047.902	05:44:15	
7.8750	232.59	4048.181	05:44:30	
7.8792	232.59	4047.957	05:44:45	
7.8833	232.62	4047.902	05:45:00	
7.8875	232.62	4047.902	05:45:15	
7.8917	232.62	4047.902	05:45:30	
7.8958	232.65	4047.848	05:45:45	
7.9000	232.65	4047.848	05:46:00	
7.9042	232.65	4047.848	05:46:15	
7.9083	232.65	4047.848	05:46:30	
7.9125	232.68	4047.793	05:46:45	
7.9167	232.71	4047.739	05:47:00	
7.9208	232.68	4047.793	05:47:15	
7.9250	232.71	4047.514	05:47:30	
7.9292	232.74	4047.460	05:47:45	
7.9333	232.71	4047.739	05:48:00	
7.9375	232.74	4047.684	05:48:15	
7.9417	232.74	4047.235	05:48:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER	ELAPSED	TEMPERATURE	PRESSURE	TIME OF DAY	COMMENTS
TIME (HOURS)	(F)		(PSI-G)		

7.9458	232.77	4047.405	05:48:45
7.9500	232.77	4047.180	05:49:00
7.9542	232.77	4047.180	05:49:15
7.9503	232.80	4047.351	05:49:30
7.9625	232.80	4047.351	05:49:45
7.9667	232.80	4047.351	05:50:00
7.9708	232.82	4047.296	05:50:15
7.9750	232.80	4047.126	05:50:30
7.9792	232.82	4047.071	05:50:45
7.9833	232.85	4047.017	05:51:00
7.9875	232.82	4047.071	05:51:15
7.9917	232.85	4047.017	05:51:30
7.9958	232.88	4046.962	05:51:45
8.0000	232.85	4047.017	05:52:00
8.0042	232.88	4046.962	05:52:15
8.0083	232.91	4046.908	05:52:30
8.0125	232.88	4046.738	05:52:45
8.0167	232.91	4046.908	05:53:00
8.0208	232.91	4046.908	05:53:15
8.0250	232.91	4046.908	05:53:30
8.0292	232.94	4046.629	05:53:45
8.0333	232.94	4046.629	05:54:00
8.0375	232.97	4046.799	05:54:15
8.0417	232.97	4046.574	05:54:30
8.0458	232.97	4046.574	05:54:45
8.0500	233.00	4046.744	05:55:00
8.0542	232.97	4046.799	05:55:15
8.0583	233.00	4046.520	05:55:30
8.0625	233.03	4046.465	05:55:45
8.0667	233.00	4046.295	05:56:00
8.0708	233.03	4046.241	05:56:15
8.0750	233.03	4046.465	05:56:30
8.0792	233.03	4046.465	05:56:45
8.0833	233.06	4046.186	05:57:00
8.0875	233.06	4046.411	05:57:15
8.0917	233.09	4046.356	05:57:30
8.0958	233.06	4046.186	05:57:45
8.1000	233.09	4046.356	05:58:00
8.1042	233.11	4046.077	05:58:15
8.1083	233.11	4046.077	05:58:30
8.1125	233.09	4046.132	05:58:45
8.1167	233.11	4046.077	05:59:00
8.1208	233.14	4046.023	05:59:15
8.1250	233.14	4046.023	05:59:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD 81

NEW MEX

02/04

EV-Y5-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECODER TIME (HOURS)	ELAPSED (F)	TEMPERATURE (PSI-G)	PRESSURE TIME OF DAY	COMMENTS
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8.1292	233.14	4046.023	05:59:45
8.1333	233.17	4045.968	06:00:00
8.1375	233.14	4046.023	06:00:15
8.1417	233.17	4045.968	06:00:30
8.1458	233.20	4045.914	06:00:45
8.1500	233.17	4045.744	06:01:00
8.1542	233.20	4045.914	06:01:15
8.1583	233.20	4045.689	06:01:30
8.1625	233.23	4045.859	06:01:45
8.1667	233.23	4045.859	06:02:00
8.1708	233.23	4045.635	06:02:15
8.1750	233.26	4045.805	06:02:30
8.1792	233.23	4045.859	06:02:45
8.1833	233.26	4045.580	06:03:00
8.1875	233.29	4045.526	06:03:15
8.1917	233.26	4045.805	06:03:30
8.1958	233.29	4045.750	06:03:45
8.2000	233.32	4045.471	06:04:00
8.2042	233.29	4045.526	06:04:15
8.2083	233.32	4045.471	06:04:30
8.2125	233.32	4045.696	06:04:45
8.2167	233.35	4045.192	06:05:00
8.2208	233.32	4045.471	06:05:15
8.2250	233.35	4045.417	06:05:30
8.2292	233.35	4045.192	06:05:45
8.2333	233.35	4045.417	06:06:00
8.2375	233.38	4045.138	06:06:15
8.2417	233.38	4045.138	06:06:30
8.2458	233.40	4045.308	06:06:45
8.2500	233.38	4045.138	06:07:00
8.2542	233.40	4045.308	06:07:15
8.2583	233.43	4045.029	06:07:30
8.2625	233.43	4045.029	06:07:45
8.2667	233.40	4045.083	06:08:00
8.2708	233.43	4045.029	06:08:15
8.2750	233.46	4044.974	06:08:30
8.2792	233.43	4045.029	06:08:45
8.2833	233.46	4044.974	06:09:00
8.2875	233.46	4044.974	06:09:15
8.2917	233.49	4044.920	06:09:30
8.2958	233.46	4044.749	06:09:45
8.3000	233.49	4044.920	06:10:00
8.3042	233.49	4044.920	06:10:15
8.3083	233.52	4044.641	06:10:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW ME
02/C

EV-YS-93003 (Recorder: 00)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER ELAPSED TIME	TEMPERATURE (F)	PRESSURE (PSI-6)	TIME OF DAY	COMMENTS
TIME (HOURS)				

8.3125	233.49	4044.920	06:10:45
8.3167	233.52	4044.641	06:11:00
8.3208	233.55	4044.586	06:11:15
8.3250	233.55	4044.586	06:11:30
8.3292	233.55	4044.361	06:11:45
8.3333	233.55	4044.361	06:12:00
8.3375	233.58	4044.532	06:12:15
8.3417	233.55	4044.586	06:12:30
8.3458	233.58	4044.532	06:12:45
8.3500	233.58	4044.756	06:13:00
8.3542	233.58	4044.756	06:13:15
8.3583	233.58	4044.532	06:13:30
8.3625	233.61	4044.477	06:13:45
8.3667	233.61	4044.252	06:14:00
8.3708	233.61	4044.252	06:14:15
8.3750	233.64	4044.198	06:14:30
8.3792	233.64	4044.423	06:14:45
8.3833	233.67	4044.144	06:15:00
8.3075	233.64	4044.423	06:15:15
8.3917	233.67	4044.368	06:15:30
8.3958	233.70	4044.089	06:15:45
8.4000	233.67	4044.368	06:16:00
8.4042	233.70	4044.314	06:16:15
8.4083	233.70	4044.089	06:16:30
8.4125	233.72	4044.259	06:16:45
8.4167	233.70	4044.089	06:17:00
8.4208	233.72	4044.035	06:17:15
8.4250	233.72	4044.035	06:17:30
8.4292	233.72	4044.035	06:17:45
8.4333	233.75	4043.756	06:18:00
8.4375	233.75	4043.980	06:18:15
8.4417	233.78	4043.926	06:18:30
8.4458	233.75	4043.980	06:18:45
8.4500	233.78	4043.926	06:19:00
8.4542	233.78	4043.926	06:19:15
8.4583	233.81	4043.871	06:19:30
8.4625	233.78	4043.701	06:19:45
8.4667	233.81	4043.871	06:20:00
8.4708	233.81	4043.871	06:20:15
8.4750	233.81	4043.647	06:20:30
8.4792	233.84	4043.592	06:20:45
8.4833	233.84	4043.592	06:21:00
8.4875	233.87	4043.313	06:21:15
8.4917	233.84	4043.368	06:21:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW ME

02/01

EV-YS-93003 (Recorder: 00)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME	TEMPERATURE (F)	PRESSURE (PSI-G)	TIME OF DAY	COMMENTS
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8.4958	233.87	4043.313	06:21:45	
8.5000	233.87	4043.313	06:22:00	
8.5042	233.90	4043.483	06:22:15	
8.5083	233.87	4043.538	06:22:30	
8.5125	233.90	4043.483	06:22:45	
8.5167	233.90	4043.483	06:23:00	
8.5208	233.90	4043.483	06:23:15	
8.5250	233.93	4043.429	06:23:30	
8.5292	233.93	4043.204	06:23:45	
8.5333	233.96	4043.150	06:24:00	
8.5375	233.93	4043.429	06:24:15	
8.5417	233.96	4043.150	06:24:30	
8.5458	233.96	4043.374	06:24:45	
8.5500	233.99	4043.095	06:25:00	
8.5542	233.96	4043.150	06:25:15	
8.5583	233.99	4043.095	06:25:30	
8.5625	233.99	4043.095	06:25:45	
8.5667	233.99	4043.095	06:26:00	
8.5708	233.99	4043.095	06:26:15	
8.5750	233.99	4043.095	06:26:30	
8.5792	234.01	4043.041	06:26:45	
8.5833	234.04	4042.986	06:27:00	
8.5875	234.01	4043.041	06:27:15	
8.5917	234.04	4042.762	06:27:30	
8.5958	234.07	4042.932	06:27:45	
8.6000	234.04	4042.206	06:28:00	
8.6042	234.07	4042.932	06:28:15	
8.6083	234.10	4042.877	06:28:30	
8.6125	234.10	4042.653	06:28:45	
8.6167	234.07	4042.932	06:29:00	
8.6208	234.10	4042.653	06:29:15	
8.6250	234.10	4042.653	06:29:30	
8.6292	234.13	4042.598	06:29:45	
8.6333	234.10	4042.877	06:30:00	
8.6375	234.13	4042.598	06:30:15	
8.6417	234.13	4042.823	06:30:30	
8.6458	234.16	4042.544	06:30:45	
8.6500	234.13	4042.823	06:31:00	
8.6542	234.16	4042.769	06:31:15	
8.6583	234.16	4042.769	06:31:30	
8.6625	234.19	4042.265	06:31:45	
8.6667	234.16	4042.544	06:32:00	
8.6708	234.19	4042.489	06:32:15	
8.6750	234.19	4042.489	06:32:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW ME
02/0
EV-YS-93003 (Recorder: 00)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER ELAPSED TIME (HOURS)	TEMPERATURE (F)	PRESSURE (PSI-6)	TIME OF DAY	COMMENTS
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8.6792	234.22	4042.435	06:32:45	
8.6833	234.19	4042.499	06:33:00	
8.6875	234.22	4042.435	06:33:15	
8.6917	234.22	4042.435	06:33:30	
8.6958	234.25	4042.381	06:33:45	
8.7000	234.22	4042.435	06:34:00	
8.7042	234.25	4042.381	06:34:15	
8.7083	234.28	4042.326	06:34:30	
8.7125	234.28	4042.326	06:34:45	
8.7167	234.25	4042.156	06:35:00	
8.7208	234.28	4042.101	06:35:15	
8.7250	234.31	4042.272	06:35:30	
8.7292	234.31	4042.047	06:35:45	
8.7333	234.28	4042.326	06:36:00	
8.7375	234.31	4042.047	06:36:15	
8.7417	234.33	4041.993	06:36:30	
8.7458	234.31	4042.047	06:36:45	
8.7500	234.33	4041.993	06:37:00	
8.7542	234.33	4041.993	06:37:15	
8.7583	234.36	4041.938	06:37:30	
8.7625	234.33	4041.993	06:37:45	
8.7667	234.36	4041.938	06:38:00	
8.7708	234.36	4041.938	06:38:15	
8.7750	234.39	4041.884	06:38:30	
8.7792	234.36	4041.938	06:38:45	
8.7833	234.39	4041.659	06:39:00	
8.7875	234.39	4041.659	06:39:15	
8.7917	234.42	4041.605	06:39:30	
8.7958	234.39	4041.884	06:39:45	
8.8000	234.42	4041.829	06:40:00	
8.8042	234.42	4041.829	06:40:15	
8.8083	234.45	4041.550	06:40:30	
8.8125	234.42	4041.829	06:40:45	
8.8167	234.42	4041.829	06:41:00	
8.8208	234.45	4041.775	06:41:15	
8.8250	234.45	4041.775	06:41:30	
8.8292	234.48	4041.720	06:41:45	
8.8333	234.45	4041.775	06:42:00	
8.8375	234.48	4041.720	06:42:15	
8.8417	234.51	4041.441	06:42:30	
8.8458	234.48	4041.720	06:42:45	
8.8500	234.48	4041.720	06:43:00	
8.8542	234.51	4041.441	06:43:15	
8.8583	234.51	4041.441	06:43:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-Y5-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER	ELAPSED	TEMPERATURE	PRESSURE	TIME OF DAY	COMMENTS
TTMF (HOURS)	(F)	(PSI-G)			

8.8625	234.51	4041.666	06:43:45
8.8667	234.51	4041.441	06:44:00
8.8708	234.54	4041.387	06:44:15
8.8750	234.57	4041.332	06:44:30
8.8792	234.54	4041.387	06:44:45
8.8833	234.57	4041.332	06:45:00
8.8875	234.57	4041.108	06:45:15
8.8917	234.60	4041.503	06:45:30
8.8958	234.57	4041.332	06:45:45
8.9000	234.60	4041.053	06:46:00
8.9042	234.60	4041.278	06:46:15
8.9083	234.62	4040.999	06:46:30
8.9125	234.60	4041.278	06:46:45
8.9167	234.62	4041.224	06:47:00
8.9208	234.62	4041.224	06:47:15
8.9250	234.65	4040.945	06:47:30
8.9292	234.62	4040.999	06:47:45
8.9333	234.65	4040.945	06:48:00
8.9375	234.68	4040.890	06:48:15
8.9417	234.65	4040.945	06:48:30
8.9458	234.65	4040.945	06:48:45
8.9500	234.68	4040.890	06:49:00
8.9542	234.68	4040.890	06:49:15
8.9583	234.68	4040.890	06:49:30
8.9625	234.71	4040.836	06:49:45
8.9667	234.71	4040.836	06:50:00
8.9708	234.74	4040.781	06:50:15
8.9750	234.71	4040.836	06:50:30
8.9792	234.74	4040.781	06:50:45
8.9833	234.74	4040.781	06:51:00
8.9875	234.77	4040.727	06:51:15
8.9917	234.74	4040.781	06:51:30
8.9958	234.77	4040.727	06:51:45
9.0000	234.77	4040.727	06:52:00
9.0042	234.80	4040.672	06:52:15
9.0083	234.77	4040.727	06:52:30
9.0125	234.80	4040.672	06:52:45
9.0167	234.80	4040.672	06:53:00
9.0208	234.83	4040.618	06:53:15
9.0250	234.80	4040.672	06:53:30
9.0292	234.83	4040.618	06:53:45
9.0333	234.83	4040.618	06:54:00
9.0375	234.86	4040.563	06:54:15
9.0417	234.83	4040.618	06:54:30

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX
02/04
EV-Y5-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME	TEMPERATURE (F)	PRESSURE (PSI-G)	TIME OF DAY	COMMENTS
9.0458	234.86	4040.563	06:54:45		
9.0500	234.86	4040.563	06:55:00		
9.0542	234.89	4040.509	06:55:15		
9.0583	234.86	4040.563	06:55:30		
9.0625	234.89	4040.284	06:55:45		
9.0667	234.89	4040.509	06:56:00		
9.0708	234.92	4040.455	06:56:15		
9.0750	234.89	4040.060	06:56:30		
9.0792	234.92	4040.455	06:56:45		
9.0833	234.92	4040.455	06:57:00		
9.0875	234.92	4040.455	06:57:15		
9.0917	234.92	4040.230	06:57:30		
9.0958	234.92	4040.230	06:57:45		
9.1000	234.94	4040.176	06:58:00		
9.1042	234.94	4040.176	06:58:15		
9.1083	234.94	4040.176	06:58:30		
9.1125	234.94	4040.176	06:58:45		
9.1167	234.94	4039.951	06:59:00		
9.1208	234.97	4040.121	06:59:15		
9.1250	234.97	4040.121	06:59:30		
9.1292	234.97	4040.121	06:59:45		
9.1333	234.97	4039.897	07:00:00		
9.1375	235.00	4040.067	07:00:15		
9.1417	235.00	4039.842	07:00:30		
9.1458	235.03	4039.788	07:00:45		
9.1500	235.03	4039.788	07:01:00		
9.1542	235.03	4039.788	07:01:15		
9.1583	235.06	4039.733	07:01:30		
9.1625	235.06	4039.733	07:01:45		
9.1667	235.03	4039.788	07:02:00		
9.1708	235.06	4039.733	07:02:15		
9.1750	235.06	4039.733	07:02:30		
9.1792	235.09	4039.679	07:02:45		
9.1833	235.06	4039.733	07:03:00		
9.1875	235.09	4039.679	07:03:15		
9.1917	235.09	4039.679	07:03:30		
9.1958	235.12	4039.625	07:03:45		
9.2000	235.09	4039.679	07:04:00		
9.2042	235.12	4039.625	07:04:15		
9.2083	235.12	4039.625	07:04:30		
9.2125	235.15	4039.570	07:04:45		
9.2167	235.12	4039.625	07:05:00		
9.2208	235.15	4039.570	07:05:15		
9.2250	235.15	4039.570	07:05:30		

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER	ELAPSED	TEMPERATURE	PRESSURE	TIME OF DAY	COMMENTS
TIME (HOURS)	(F)	(PSI-G)			

9.2292	235.18	4039.516	07:05:45	
9.2333	235.15	4039.346	07:06:00	
9.2375	235.18	4039.516	07:06:15	
9.2417	235.18	4039.291	07:06:30	
9.2458	235.21	4039.461	07:06:45	
9.2500	235.10	4039.291	07:07:00	
9.2542	235.21	4039.237	07:07:15	
9.2583	235.21	4039.461	07:07:30	
9.2625	235.23	4039.182	07:07:45	
9.2667	235.21	4039.237	07:08:00	
9.2708	235.23	4039.182	07:08:15	
9.2750	235.23	4039.182	07:08:30	
9.2792	235.26	4039.128	07:08:45	
9.2833	235.23	4039.182	07:09:00	
9.2075	235.23	4039.182	07:09:15	
9.2917	235.26	4039.128	07:09:30	
9.2958	235.29	4039.073	07:09:45	
9.3000	235.29	4039.073	07:10:00	
9.3042	235.26	4039.128	07:10:15	
9.3083	235.29	4039.073	07:10:30	
9.3125	235.32	4039.019	07:10:45	
9.3167	235.32	4039.019	07:11:00	
9.3208	235.29	4039.073	07:11:15	
9.3250	235.32	4039.019	07:11:30	
9.3292	235.32	4039.019	07:11:45	
9.3333	235.35	4038.965	07:12:00	
9.3375	235.32	4039.019	07:12:15	
9.3417	235.35	4038.965	07:12:30	
9.3458	235.35	4038.965	07:12:45	
9.3500	235.38	4038.910	07:13:00	
9.3542	235.35	4038.965	07:13:15	
9.3583	235.38	4038.910	07:13:30	
9.3625	235.38	4038.686	07:13:45	
9.3667	235.38	4038.910	07:14:00	
9.3708	235.38	4039.135	07:14:15	
9.3750	235.30	4039.135	07:14:30	
9.3792	235.38	4038.686	07:14:45	
9.3833	235.41	4038.856	07:15:00	
9.3875	235.41	4038.856	07:15:15	
9.3917	235.41	4038.631	07:15:30	
9.3958	235.44	4038.577	07:15:45	
9.4000	235.44	4038.577	07:16:00	
9.4042	235.47	4038.522	07:16:15	
9.4083	235.47	4038.522	07:16:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX
02/04
EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER	ELAPSED	TEMPERATURE	PRESSURE	TIME OF DAY	COMMENTS
TIME (HOURS)	(F)	(PSI-G)			
9.4125	235.47	4038.522	07:16:45		
9.4167	235.47	4038.522	07:17:00		
9.4208	235.47	4038.522	07:17:15		
9.4250	235.50	4038.468	07:17:30		
9.4292	235.47	4038.522	07:17:45		
9.4333	235.50	4038.468	07:18:00		
9.4375	235.50	4038.468	07:18:15		
9.4417	235.53	4038.414	07:18:30		
9.4458	235.50	4038.692	07:18:45		
9.4500	235.53	4038.638	07:19:00		
9.4542	235.53	4038.414	07:19:15		
9.4583	235.55	4038.584	07:19:30		
9.4625	235.53	4038.414	07:19:45		
9.4667	235.55	4038.359	07:20:00		
9.4708	235.55	4038.359	07:20:15		
9.4750	235.58	4038.305	07:20:30		
9.4792	235.58	4038.305	07:20:45		
9.4833	235.58	4038.305	07:21:00		
9.4875	235.58	4038.305	07:21:15		
9.4917	235.58	4038.305	07:21:30		
9.4958	235.61	4038.250	07:21:45		
9.5000	235.58	4038.303	07:22:00		
9.5042	235.61	4038.250	07:22:15		
9.5003	235.61	4038.250	07:22:30		
9.5125	235.64	4038.196	07:22:45		
9.5167	235.61	4038.250	07:23:00		
9.5208	235.64	4038.196	07:23:15		
9.5250	235.64	4038.196	07:23:30		
9.5292	235.67	4038.141	07:23:45		
9.5333	235.64	4037.971	07:24:00		
9.5375	235.67	4037.917	07:24:15		
9.5417	235.67	4038.141	07:24:30		
9.5458	235.70	4038.087	07:24:45		
9.5500	235.67	4037.917	07:25:00		
9.5542	235.70	4037.862	07:25:15		
9.5583	235.70	4037.862	07:25:30		
9.5625	235.70	4037.862	07:25:45		
9.5667	235.70	4037.862	07:26:00		
9.5700	235.70	4038.087	07:26:15		
9.5750	235.73	4037.808	07:26:30		
9.5792	235.73	4038.033	07:26:45		
9.5833	235.76	4037.754	07:27:00		
9.5875	235.73	4037.808	07:27:15		
9.5917	235.76	4037.754	07:27:30		

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX

02/04

EV-YS-93003 (Recorder: 005)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PSI-6)	PRESSURE	TIME OF DAY	COMMENTS
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9.5958	235.76	4037.978		07:27:45	
9.6000	235.76	4037.754		07:28:00	
9.6042	235.76	4037.754		07:28:15	
9.6083	235.76	4037.754		07:28:30	
9.6125	235.79	4037.699		07:28:45	
9.6167	235.79	4037.924		07:29:00	
9.6208	235.82	4037.420		07:29:15	
9.6250	235.79	4037.475		07:29:30	
9.6292	235.82	4037.869		07:29:45	
9.6333	235.82	4037.869		07:30:00	
9.6375	235.84	4037.590		07:30:15	
9.6417	235.84	4037.590		07:30:30	
9.6458	235.82	4037.645		07:30:45	
9.6500	235.84	4037.590		07:31:00	
9.6542	235.84	4037.366		07:31:15	
9.6583	235.84	4037.815		07:31:30	
9.6625	235.87	4037.312		07:31:45	
9.6667	235.87	4037.312		07:32:00	
9.6708	235.84	4037.366		07:32:15	
9.6750	235.87	4037.312		07:32:30	
9.6792	235.90	4037.482		07:32:45	
9.6833	235.90	4037.482		07:33:00	
9.6875	235.07	4037.536		07:33:15	
9.6917	235.90	4037.482		07:33:30	
9.6958	235.93	4037.427		07:33:45	
9.7000	235.93	4037.203		07:34:00	
9.7042	235.93	4037.203		07:34:15	
9.7083	235.93	4037.203		07:34:30	
9.7125	235.93	4037.427		07:34:45	
9.7167	235.93	4037.427		07:35:00	
9.7208	235.93	4037.427		07:35:15	
9.7250	235.96	4037.373		07:35:30	
9.7292	235.96	4037.148		07:35:45	
9.7333	235.96	4037.373		07:36:00	
9.7375	235.99	4037.094		07:36:15	
9.7417	235.96	4037.148		07:36:30	
9.7458	235.99	4037.318		07:36:45	
9.7500	235.99	4037.094		07:37:00	
9.7542	236.02	4037.264		07:37:15	
9.7583	236.02	4037.264		07:37:30	
9.7625	235.99	4037.094		07:37:45	
9.7667	236.02	4037.039		07:38:00	
9.7708	236.02	4037.264		07:38:15	
9.7750	236.02	4037.039		07:38:30	

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEX
02/04
EV-YS-93003 (Recorder: 001)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECODER TIME (HOURS)	ELAPSED TIME (F)	TEMPERATURE (PST-G)	PRESSURE	TIME OF DAY	COMMENTS
9.7792	236.05	4036.985	07:38:45		
9.7833	236.02	4037.039	07:39:00		
9.7875	236.05	4036.985	07:39:15		
9.7917	236.05	4036.985	07:39:30		
9.7958	236.08	4036.931	07:39:45		
9.8000	236.08	4036.931	07:40:00		
9.8042	236.05	4036.985	07:40:15		
9.8083	236.08	4036.931	07:40:30		
9.8125	236.08	4037.155	07:40:45		
9.8167	236.11	4036.876	07:41:00		
9.8208	236.08	4037.155	07:41:15		
9.8250	236.08	4036.931	07:41:30		
9.8292	236.11	4036.876	07:41:45		
9.8333	236.11	4036.876	07:42:00		
9.8375	236.13	4036.822	07:42:15		
9.8417	236.11	4036.876	07:42:30		
9.8458	236.13	4036.822	07:42:45		
9.8500	236.13	4036.822	07:43:00		
9.8542	236.16	4036.543	07:43:15		
9.8583	236.16	4036.543	07:43:30		
9.8625	236.13	4036.822	07:43:45		
9.8667	236.16	4036.767	07:44:00		
9.8708	236.16	4036.767	07:44:15		
9.8750	236.19	4036.713	07:44:30		
9.8792	236.16	4036.543	07:44:45		
9.8833	236.19	4036.489	07:45:00		
9.8875	236.19	4036.713	07:45:15		
9.8917	236.19	4036.489	07:45:30		
9.8958	236.22	4036.659	07:45:45		
9.9000	236.19	4036.713	07:46:00		
9.9042	236.22	4036.434	07:46:15		
9.9083	236.22	4036.434	07:46:30		
9.9125	236.22	4036.434	07:46:45		
9.9167	236.25	4036.380	07:47:00		
9.9208	236.22	4036.210	07:47:15		
9.9250	236.22	4036.434	07:47:30		
9.9292	236.25	4036.380	07:47:45		
9.9333	236.25	4036.380	07:48:00		
9.9375	236.20	4036.325	07:48:15		
9.9417	236.25	4036.604	07:48:30		
9.9458	236.28	4036.550	07:48:45		
9.9500	236.28	4036.550	07:49:00		
9.9542	236.31	4036.271	07:49:15		
9.9583	236.31	4036.271	07:49:30		

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW ME

02/0

EV-YS-93003 (Recorder: 001)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED (F)	TEMPERATURE (PSI-6)	PRESSURE	TIME OF DAY	COMMENTS
9.9625	236.28	4036.325	07:49:45		
9.9667	236.31	4036.495	07:50:00		
9.9708	236.31	4036.495	07:50:15		
9.9750	236.31	4036.495	07:50:30		
9.9792	236.31	4036.271	07:50:45		
9.9833	236.34	4036.217	07:51:00		
9.9875	236.31	4036.271	07:51:15		
9.9917	236.34	4036.217	07:51:30		
9.9958	236.34	4036.441	07:51:45		
10.0667	236.13	4036.597	07:56:00		
10.0833	236.11	4036.427	07:57:00		
10.1000	236.02	4036.366	07:58:00		
10.1167	235.96	4036.250	07:59:00		
10.1333	235.90	4035.910	08:00:00		
10.1500	235.87	4035.740	08:01:00		
10.1667	235.82	4035.849	08:02:00		
10.1833	235.79	4035.679	08:03:00		
10.2000	235.76	4035.284	08:04:00		
10.2167	235.76	4035.509	08:05:00		
10.2333	235.73	4035.338	08:06:00		
10.2500	235.70	4035.393	08:07:00		
10.2667	235.73	4035.114	08:08:00		
10.2833	235.70	4035.168	08:09:00		
10.3000	235.70	4034.944	08:10:00		
10.3167	235.70	4034.944	08:11:00		
10.3333	235.73	4034.889	08:12:00		
10.3500	235.70	4034.944	08:13:00		
10.3667	235.73	4034.899	08:14:00		
10.3833	235.73	4034.665	08:15:00		
10.4000	235.73	4034.440	08:16:00		
10.4167	235.76	4034.611	08:17:00		
10.4333	235.76	4034.611	08:18:00		
10.4500	235.79	4034.332	08:19:00		
10.4667	235.79	4034.332	08:20:00		
10.4833	235.82	4034.502	08:21:00		
10.5000	235.84	4034.223	08:22:00		
10.5167	235.84	4034.447	08:23:00		
10.5333	235.84	4034.223	08:24:00		
10.5500	235.87	4034.168	08:25:00		
10.5667	235.90	4034.339	08:26:00		
10.5833	235.90	4034.114	08:27:00		
10.6000	235.93	4034.060	08:28:00		
10.6167	235.96	4034.005	08:29:00		
10.6333	235.96	4034.005	08:30:00		

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1

NEW MEC

02/0

EV-YS-93063 (Recorder: 001)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER TIME (HOURS)	ELAPSED TIME	TEMPERATURE (F)	PRESSURE (PSI-G)	TIME OF DAY	COMMENTS
10.6500	236.02	4033.672	08:31:00		
10.6667	236.02	4033.897	08:32:00		
10.6833	236.05	4033.842	08:33:00		
10.7000	236.05	4033.618	08:34:00		
10.7167	236.08	4033.563	08:35:00		
10.7333	236.11	4033.733	08:36:00		
10.7500	236.11	4033.733	08:37:00		
10.7667	236.16	4033.625	08:38:00		
10.7833	236.16	4033.625	08:39:00		
10.8000	236.16	4033.400	08:40:00		
10.8167	236.22	4033.516	08:41:00		
10.8333	236.22	4033.516	08:42:00		
10.8500	236.22	4033.516	08:43:00		
10.8667	236.25	4033.237	08:44:00		
10.8833	236.28	4033.183	08:45:00		
10.9000	236.28	4033.407	08:46:00		
10.9167	236.31	4033.128	08:47:00		
10.9333	236.34	4033.074	08:48:00		
10.9500	236.37	4033.244	08:49:00		
10.9667	236.37	4032.795	08:50:00		
10.9833	236.40	4032.965	08:51:00		
11.0000	236.40	4032.965	08:52:00		
11.0167	236.43	4033.135	08:53:00		
11.0333	236.43	4032.911	08:54:00		
11.0500	236.48	4032.802	08:55:00		
11.0667	236.48	4032.802	08:56:00		
11.0833	236.48	4032.578	08:57:00		
11.1000	236.54	4032.469	08:58:00		
11.1167	236.54	4032.693	08:59:00		
11.1333	236.54	4032.693	09:00:00		
11.1500	236.60	4032.360	09:01:00		
11.1667	236.60	4032.585	09:02:00		
11.1833	236.60	4032.585	09:03:00		
11.2000	236.66	4032.251	09:04:00		
11.2167	236.66	4032.251	09:05:00		
11.2333	236.66	4032.476	09:06:00		
11.2500	236.72	4032.367	09:07:00		
11.2667	236.72	4032.367	09:08:00		
11.2833	236.72	4032.367	09:09:00		
11.3000	236.77	4032.034	09:10:00		
11.3167	236.77	4032.034	09:11:00		
11.3333	236.77	4032.034	09:12:00		
11.3500	236.80	4031.980	09:13:00		
11.3667	236.83	4031.925	09:14:00		

MERIDIAN OIL INC.
FRUITLAND BASIN COAL
SWD #1NEW ME
02/0

EV-YG-93003 (Recorder: 00)

BASIC FORMAT

STEP RATE INJECTION TEST

02/05/89

RECORDER ELAPSED TIME	TEMPERATURE	PRESSURE	TIME OF DAY	COMMENTS
TIME (HOURS)	(F)	(PSI-6)		
11.3033	236.83	4031.925	09:15:00	
11.4000	236.86	4032.095	09:16:00	
11.4167	236.86	4031.871	09:17:00	
11.4333	236.89	4032.041	09:18:00	
11.4500	236.92	4031.762	09:19:00	
11.4667	236.92	4031.762	09:20:00	
11.4833	236.95	4031.708	09:21:00	
11.5000	236.98	4031.653	09:22:00	
11.5167	237.01	4031.599	09:23:00	
11.5333	237.01	4031.599	09:24:00	
11.5500	237.01	4031.599	09:25:00	
11.5667	237.06	4031.490	09:26:00	
11.5833	237.06	4031.490	09:27:00	
11.6000	237.09	4031.436	09:28:00	
11.6167	237.09	4031.436	09:29:00	
11.6333	237.09	4031.436	09:30:00	
11.6500	237.15	4031.327	09:31:00	
11.6667	237.15	4031.327	09:32:00	
11.6833	237.15	4031.327	09:33:00	
11.7000	237.21	4031.218	09:34:00	
11.7167	237.21	4031.218	09:35:00	
11.7333	237.21	4031.218	09:36:00	
11.7500	237.24	4030.940	09:37:00	
11.7667	237.24	4031.164	09:38:00	
11.7833	237.30	4031.055	09:39:00	
11.8000	237.30	4031.055	09:40:00	
11.8167	237.33	4031.001	09:41:00	
11.8333	237.33	4031.001	09:42:00	
11.8500	237.33	4031.001	09:43:00	
11.8667	237.35	4030.947	09:44:00	
11.8833	237.35	4030.947	09:45:00	
11.9000	237.41	4030.838	09:46:00	
11.9167	237.41	4030.613	09:47:00	
11.9333	237.41	4030.838	09:48:00	
11.9500	237.44	4030.784	09:49:00	
11.9667	237.44	4030.784	09:50:00	
11.9833	237.47	4030.729	09:51:00	GAUGES OFF BOTTOM

*** END OF REPORT ***

SMITH ENERGY SERVICES

RESEARCH AND DEVELOPMENT

Report No: 89017
Date: February 2, 1989
Company: Meridian Oil, Inc. County: San Juan, New Mexico
Address: PO Box 4289 Field: _____
Farmington, NM 87499 Formation: Bluff
Attention: Chris Settle Lease: Middle Mesa, S.W.D.
Date Sampled: February 1, 1989 Well: #1

WATER ANALYSIS

Specific Gravity: 1.004 pH: 7.76
Chloride: 1800 mg/l Calcium: 104 mg/l
Bicarbonate: 915 mg/l Magnesium: 67 mg/l
Sulfate: 4800 mg/l Total Iron: 0
Sulfide: 0. mg/l Sodium: 3388 mg/l
Total Hardness: 380 mg/l (As CaCO₃) Total Dissolved Solids: 11,374 mg/l
Resistivity: 1.48 Ohm Meters @: 60° F

Sample Source: Potassium (K+) 300 mg/l
Iron spot test - fair

Remarks:

Analyst: Mike Conrey

Smith Representative: _____

SMITH ENERGY SERVICES

RESEARCH AND DEVELOPMENT

Report No: 89014
Date: February 2, 1989
Company: Meridian Oil, Inc. County: San Juan, New Mexico
Address: PO Box 4289 Field: _____
Farmington, NM 87499 Formation: Bluff
Attention: Chris Settle Lease: Middle Mesa, S.W.D.
Date Sampled: February 1, 1989 Well: #1

WATER ANALYSIS

Specific Gravity: 1.004 pH: 8.32
Chloride: 1800 mg/l Calcium: 80 mg/l
Bicarbonate: 695 mg/l Magnesium: 44 mg/l
Sulfate: 5300 mg/l Total Iron: 0
Sulfide: 0. mg/l Sodium: 3616 mg/l
Total Hardness: 260 mg/l (As CaCO₃) Total Dissolved Solids: 11,835 mg/l
Resistivity: 1.45 Ohm Meters @: 60° F

Sample Source: Potassium (K+) 300 mg/l
Iron spot test - fair

Remarks:

Analyst: Mike Conrey

Smith Representative: _____

MIDDLE MESA SWD#1

ENTRADA/BLUFF FORMATIONS

RATE	BHP	SURFACE PRESSURE	FRICTION PRESSURE	CALC. FRICTION	PERCENT ERROR
0.00	3981.6	0	0	0	0.0%
6.95	4201.6	390	170	65	-58.8%
8.00	4295.8	486	171	84	-48.0%
9.00	4378.0	575	179	105	-38.6%
10.00	4459.6	665	187	129	-28.5%
11.00	4546.0	763	199	155	-19.7%
12.10	4625.4	860	216	186	-11.5%
13.20	4704.2	953	230	220	-2.2%
14.00	4788.3	1050	243	246	0.0%
15.20	4867.7	1162	276	288	2.5%
16.00	4939.5	1251	293	319	7.2%
17.00	5011.7	1388	358	358	0.0%
18.50	5092.4	1539	428	421	-0.3%
19.40	5135.0	1551	398	463	15.1%
20.00	5148.5				

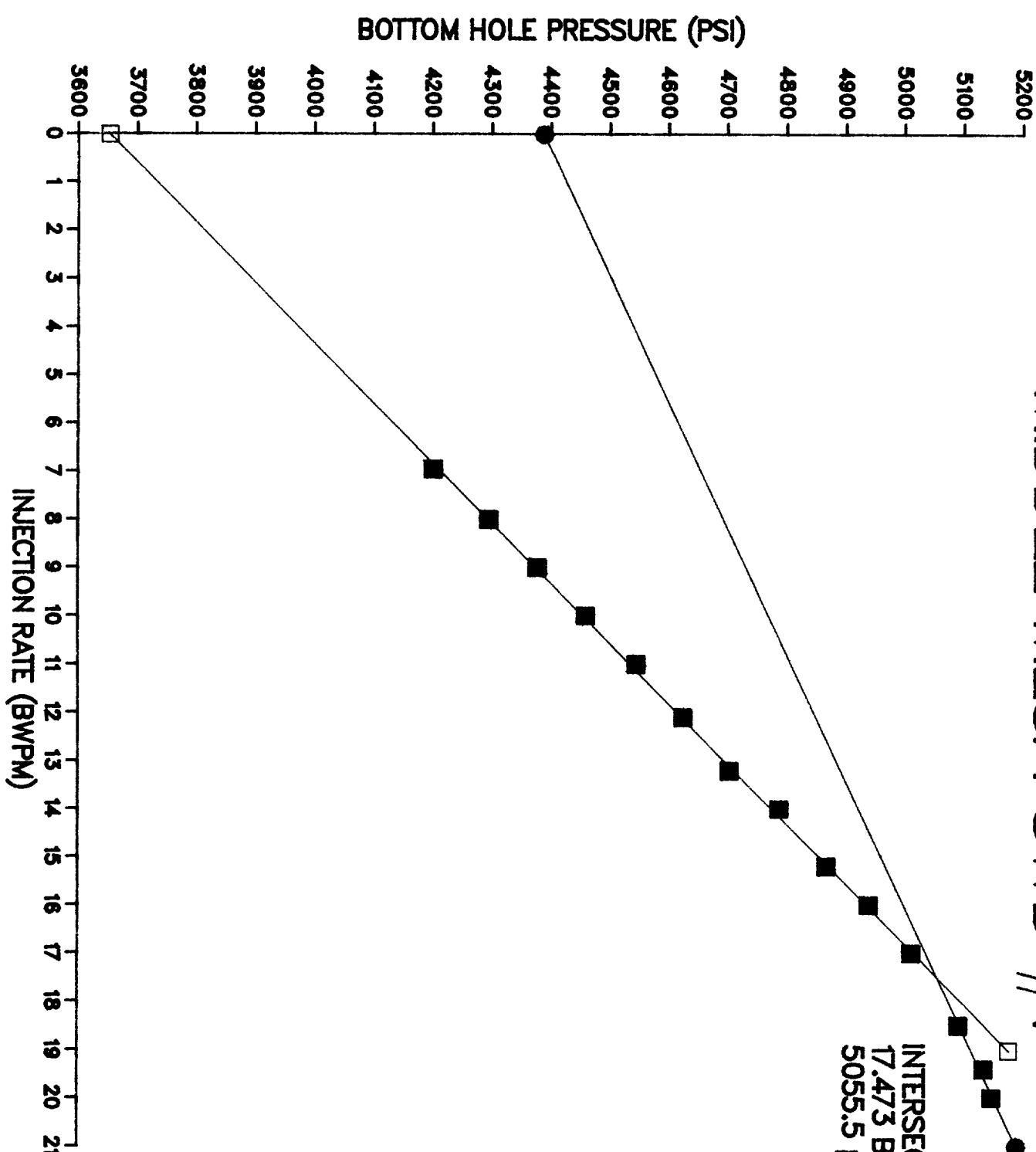
AVERAGE ERROR (10-19.4 BPM) 8.7%
 AVERAGE ERROR (13.2-18.5 BPM) 2.0%

EQUATION TO REPRESENT BHP BELOW BREAK $BHP=3653.95+80.214(\text{RATE})$
 EQUATION TO REPRESENT BHP ABOVE BREAK $BHP=4388.34+38.184(\text{RATE})$

EQUATIONS INTERCEPT AT:

17.473 BWPM
 5055.5 PSI BHP

MIDDLE MESA SWD #1

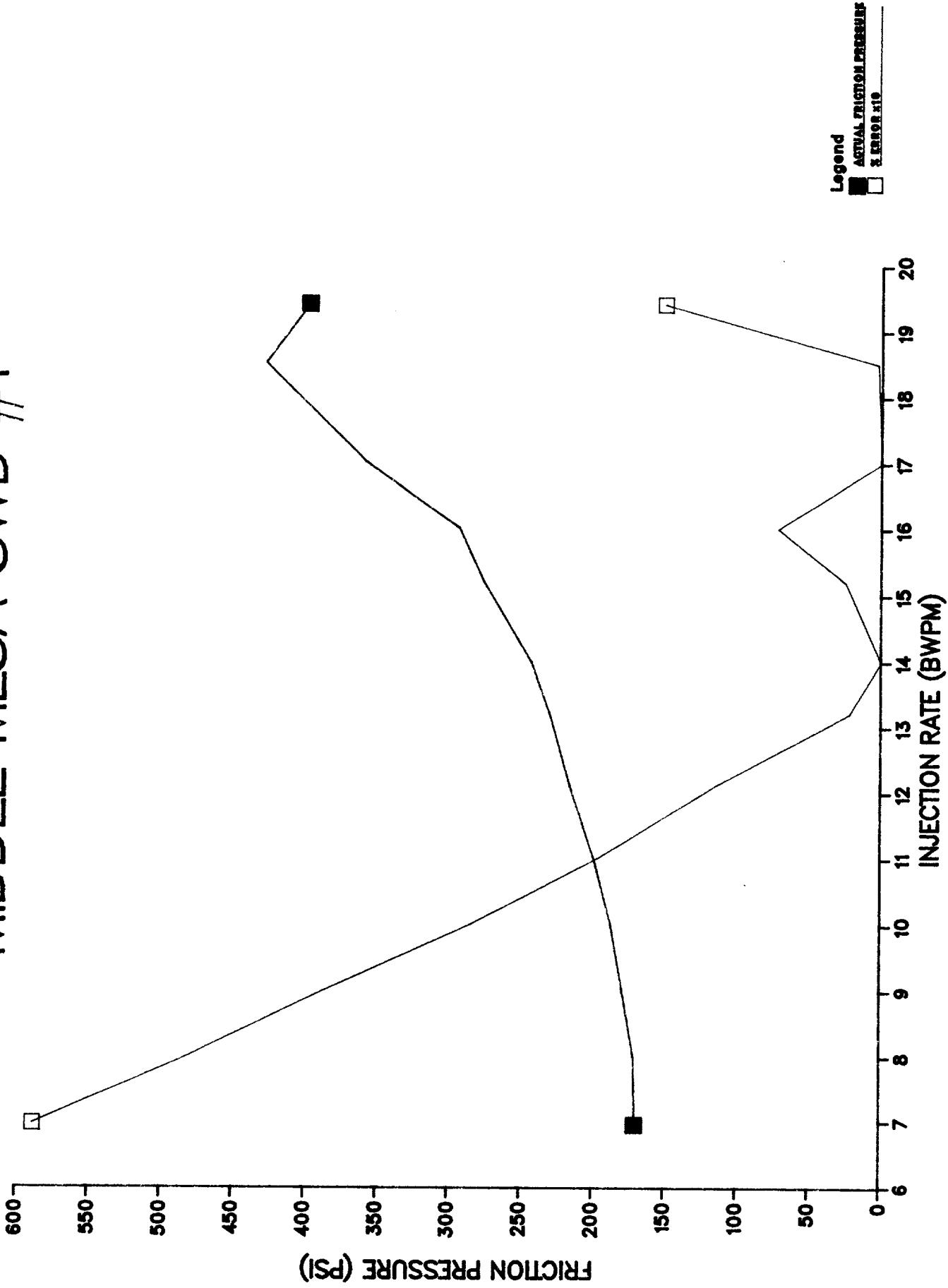


INTERSECTION OF LINES AT:
17.473 BWPM
5055.5 psi BHP

Legend

- RECORDED PRESSURE
- EQ. FOR BELOW BREAK
- EQ. FOR ABOVE BREAK

MIDDLE MESA SWD #1



MERIDIAN OIL CO.
ENGINEERING CALCULATION

Sheet: 1 of 3
 Date: 2/21/89
 By: CJ Settle
 File: _____

Middle Mesa SWD #1

Sec 25 T32N - R7W

New Mexico

Entrada / Bluff Formations

Determination of Friction Pressure Losses in $3\frac{1}{2}$ " tbg

Input Parameters:

Flow Rate	17.473 BPM
Tbg ID	2.992 in
Fluid Density	8.368 ppg
Fluid Viscosity	1 cP
Tbg Length	8868 ft

Velocity

$$V = \frac{Q}{A} = \frac{17.473 \text{ BPM}}{\pi/4(2.992 \text{ in})^2} \times \left(\frac{5.6146 \text{ ft}^3/\text{bbl} \times 144 \text{ in}^2/\text{ft}^2}{60 \text{ sec/min}} \right)$$

$$V = 33.488 \text{ ft/sec}$$

Reynold's Number

$$N_{Re} = \frac{q \nu D}{\eta} = \frac{928 \text{ ft/sec} \times 2.992 \text{ in}}{1 \text{ cP}}$$

$$N_{Re} = 778,066.8$$

Because $N_{Re} > 2100$, turbulent flow equations are used.

Absolute Roughness

$$\epsilon = 0.0000615 D^{-1.028077} = 0.0000615 (2.992 \text{ in})^{-1.028077}$$

$$\epsilon = 1.993196 \times 10^{-5} \text{ in}$$

Friction Factor

The friction factor (f) is determined by solving the following equation:

$$\frac{1}{f} = -4 \log \left(\frac{\epsilon}{D} + 1.255 / N_{Re} \cdot f \right)$$

By iteration, it was determined that f was 3.075016×10^{-3} .

MERIDIAN OIL CO.
ENGINEERING CALCULATIONSheet: 2 of 3
Date: 2/21/89
By: CJ Settle
File:

Middle Mesa SW 1/4

Sec 25 T32N - R7W

New Mexico

Entrada/Bluff Formations

$$\frac{1}{f} = -4 \log \left(\frac{2.61 \times 1.993196 \times 10^{-5} \text{ in}}{2.992 \text{ in}} + 1.255 \right) / 778066.8 \times \sqrt{3.075016 \times 10^{-3}}$$

$$18.03 = 18.04$$

Friction Pressure

$$\Delta P = \frac{\gamma \rho V L}{25.8 D} = \frac{3.075016 \times 10^{-3} \times 8.368 \text{ ppg} \times 33.488 \text{ ft/sec} \times 8868 \text{ ft}}{25.8 \times 2.992 \text{ in}}$$

$$\Delta P = 3315 \text{ psi}$$

Determination of Frictional Pressure Losses in 7" casing

Input Parameters:

ID csg 6.366 in
Length 9150 - 8868 ft

$$V = 17.157 \text{ (17.473 BPM)} = 7.3973 \text{ ft/sec}$$

$$(6.366 \text{ in})^2$$

$$N_{Re} = \frac{928 (8.368 \text{ ppg})(7.3973 \text{ ft/sec})(6.366 \text{ in})}{1cp} = 365,688.9$$

$$\epsilon = 0.0000615 (6.366 \text{ in})^{-1.028077} = 0.0000091714576 \text{ in}$$

For $f = 0.003490019$

$$\frac{1}{f} = -4 \log \left(\frac{2.16 \times 0.0000091714576}{6.366} + 1.255 \right) / 365,688.9 \times \sqrt{0.003490019}$$

$$16.927 = 16.932$$

$$\Delta P = \frac{0.003490019 \times 8.368 \text{ ppg} \times (7.3973 \text{ ft/sec})^2 \times 282 \text{ ft}}{25.8 \times 6.366 \text{ in}}$$

$$\Delta P = 2.7 \text{ psi}$$

MERIDIAN OIL CO.
ENGINEERING CALCULATIONSheet: 3 of 3
Date: 2/21/89
By: CJ Settle
File: _____

Middle Mesa SWD #1

Sec 25 T32N - R7W

New Mexico

Entrada/Bluff Formations

Determination of Friction Pressure Losses due to Sudden Expansion

Input Parameters:

Flow Rate 17.473 BPM

Fluid Specific Gravity 1.004

Diameter of Upstream D_{up} 2.992 inDiameter of Downstream D_{down} 6.366 in

$$\Delta P = \frac{(V_{up} - V_{down})^2}{2g} = \frac{(33.488 \text{ ft/sec} - 7.3173 \text{ ft/sec})^2}{2 \times 32.2 \text{ ft/sec}^2} \times \left(\frac{62.4 \text{ lb/ft}^3 \times 1.004}{144 \text{ in}^2/\text{ft}^2} \right)$$

$$\Delta P = 4.6 \text{ psi}$$

Determination of Maximum Surface Injection Pressure

$$BHP = 3653.95 + 80.214 \text{ (Rate)} \\ @break$$

$$BHP = 3653.95 + 80.214 \times 17.473 \text{ BPM}$$

$$BHP = 5055.5 \text{ psi}$$

Surface Pressure

$$SP = BHP + \text{Friction Pressure} - \text{Hydrostatic Pressure}$$

$$SP = 5055.5 + (3315 + 2.7 + 4.6) - 3981.6$$

$$SP = 4396.2 \text{ psi}$$