MERIDIAN OIL

October 1, 1986

Mr. R. L. Staments
New Mexico Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: San Juan 30-6 Unit #112Y Disposal Well

Dear Mr. Staments:

Attached is an analysis of a step-rate injectivity test on the subject well which was conducted by Meridian Oil Inc. on September 26, 1986. This test was witnessed by Mr. Frank Chavez of your Aztec office.

This information is being submitted as an amendment to our request for a maximum injection rate and pressure of 12,000 barrels of water per day at 2000 psig, respectively as shown on Attachment #4 of our application. We request this information be changed to 18,720 barrels of water per day at 1852 psig.

Sincerely,

J. D. Falconi

James D. Falconi
Drilling Engineer

JDF:pd

cc: Mr. Frank Chavez

MERIDIAN OIL

Memorandum

To: Mr. C. W. Dein

Date: September 29, 1986

From: J. D. Falconi

Location: Farmington, NM

Subject: San Juan 30-6 Unit #112Y
Step-Rate Injection Test

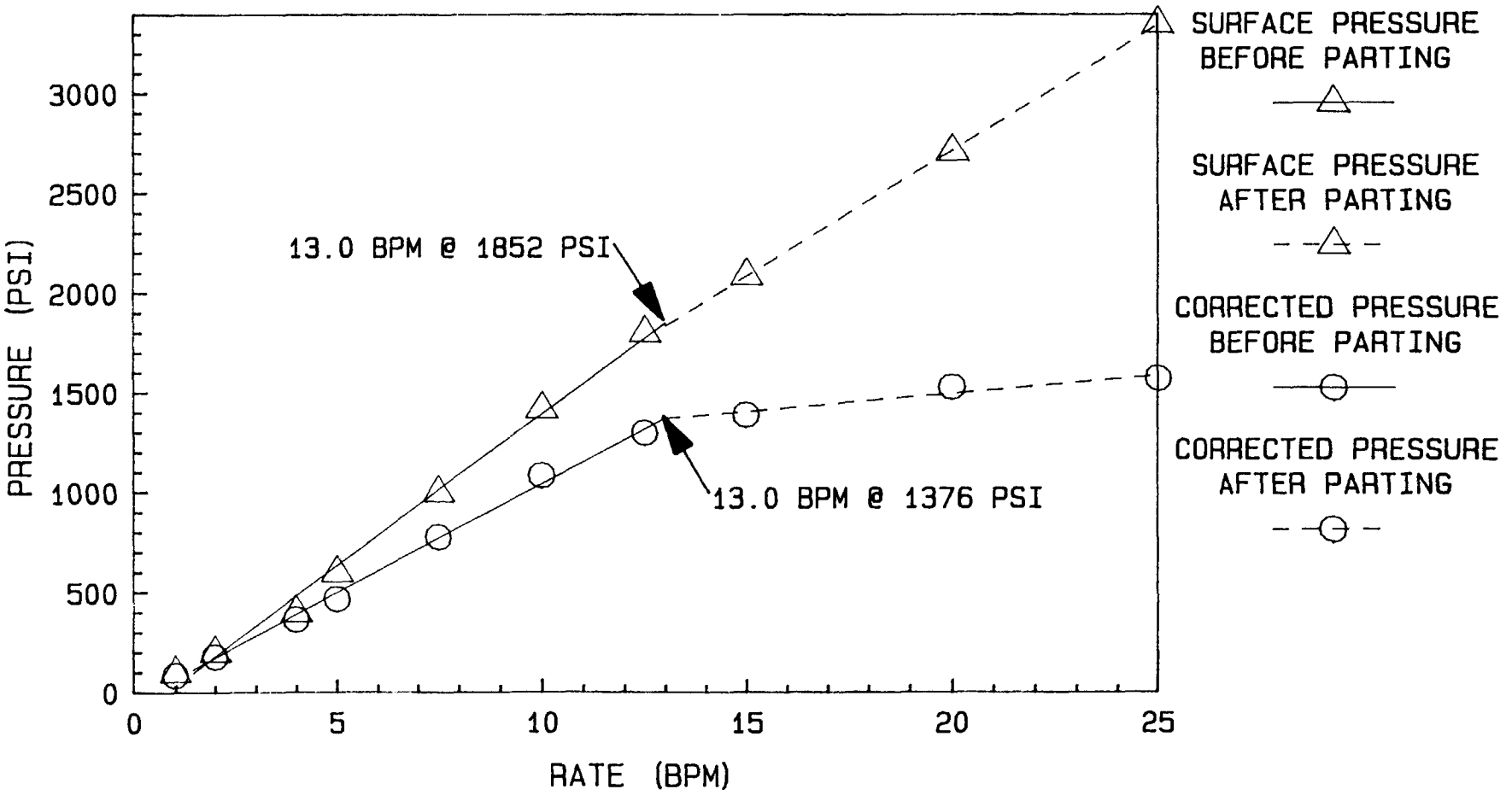
Attached is an analysis of the data from the step-rate injection test on the subject well. This test was conducted September 26, 1986 by R. M. Pinkett and J. K. Dennington, and witnessed by Mr. Frank Chavez of the New Mexico Oil Conservation Division. In accordance with New Mexico Oil Conservation Division rules, fluid was injected for a minimum of fifteen minutes at various rates. Results of the test indicate a maximum injection rate of 13.0 BPM (18,720 BWPD) at 1852 psig surface pressure.

J. D. Falconi

JDF:pd

cc: J. K. Dennington
D. R. Harris
R. M. Pinkett
D. C. Walker

SAN JUAN 30-6 UNIT #112Y
DISPOSAL WELL



STEP-RATE TEST RUN 09-26-86
BY R.M.PINKETT & J.K.DENNINGTON
CORRECTED PRESSURE = SURFACE - FRICTION PRESSURE

INJECTION DATA

Data Set #1

Surface pressure before parting

Rate(BPM)	Pressure(psig)
1.0	100
2.0	200
4.0	400
5.0	600
7.5	1,000
10.0	1,420
12.5	1,800

Data Set #2

Surface pressure after parting

Rate(BPM)	Pressure(psig)
15.0	2,090
20.0	2,710
25.0	3,350

Data Set #3

Corrected pressure before parting

Rate(BPM)	Pressure(psig)
1.0	90
2.0	183
4.0	369
5.0	472
7.5	782
10.0	1,091
12.5	1,303

Data Set #4

Corrected pressure after parting

Rate(BPM)	Pressure(psig)
15.0	1,395
20.0	1,535
25.0	1,579

NOTE: Corrected pressure = surface pressure - friction pressure

Regression Data

Date Set	Regression Type	R^2	Slope	Y-intercept
#1	linear	0.994	151.9	-123.0
#2	linear	0.995	126.0	196.7
#3	linear	0.997	109.1	- 41.5
#4	linear	0.917	18.4	1135.0

Form CV-022 (11-79)

STEP RATE INJECTION TEST

MERIDIAN OIL INC.

TREATMENT REPORT

PAGE ____ OF ____
STAGE ____ OF ____
DATE 9-26-86

WELL NAME SAN JUAN 30-6 #112Y	SEC. 26 T 30 R 6	COUNTY RIO ARRIBA	STATE N. MEX.
FORMATION MORRISON/ENTRADA	FIELD	TD 14030 PBTD	COTD

WELL DATA

CASING: Size 9 5/8 O.D.	LINER: Size 7 O.D.	TUBING: Size 4 1/2 O.D.	BRIDGE PLUG ☐ PACKER ☒
Weight 47 #/ft. Type SS-95	Weight 38# Type S-95	Weight 11.6 #/ft. Type K-55	Type Baker FA-1
Depth 8105	From 7756 To 14,026	Depth 8000	Set At 8000'

PERFORATING -- TREATING

PERFORATING CO. Basin	TREATING CO. Western
SPF 1 Type Shot	Equipment Van, Pumps, Blender, Iron
Perf. Diameter .64" Total Holes 551 Missfires	Number and Type Pumps 3-1000's
Perf. Intervals 9052-9245, 8520-8562, 8574-8634, 8646-8670, 8780-8732, 8766-8780, 8800-8880, 8911-8920, 8247-8254, 8260-8300, 8310-8344, 8398-8440, 8456-8468	Tanks: El Paso (Yes) No : Other
	Number and Size Tanks 6-400's 555-Water

MATERIALS USED: Sand: ____ Mesh: ____ Pounds; Other ____
Fluid ____ ; Load ____ Gal.; Breakdown ____ Gal.; Treat ____ Gal.; Flush ____ Gal.
Total Fluid 68,690 Gal. Chemicals Used ____

TREATMENT SUMMARY Average Rates -- BPM: Treating ____ Displ. ____ Overall ____
Ball Sealers: Type ____ ; Diameter ____ Inch; Total No. ____ ; (____ Sets of ____ Each. Other ____)
Pressures -- PSI: Maximum Allowable ____ . Breakdown ____ Max. Trtg. ____
Minimum Trtg. ____ Aug. Trtg. ____ ISIP 1650 5 Min. 1200 15 Min. 900
Sand Density ____ #/Gal.: Max. ____ Min. ____ Overall ____

DETAILS OF TREATMENT $P_{sig} - P_f = P_{LH}$

STAGE NO.	SAND (LBS.)	FLUID - GAL.	PRESSURE	IR - BPM	NO. BALLS DROPPED	REMARKS
1	—	630	100	1	—	100-10=90
		1260	200	2		200-17=183
		2540	430	4		400-61.5=368.5
		3150	600	5		600-128=472
		4725	1000	7½		1000-218=782
		6300	1420	10		1420-329=1091
		13 860	2090	15		2090-695=1395
		12,600	2710	20		2710-1175=1535
		15,750	3350	25		3350-1771=1579
		7875	1800	12½		1800-479=1303

GENERAL DISCUSSION

MOL/RU. TEFTELLER RAN Pressure bomb TO 8200'. WESTERN RAN STEP RATE TEST AS SHOWN ABOVE

JOB COMPLETE: DATE 9-26-86
TIME 2:00 PM

EXPLORATION REPRESENTATIVE

san Juan repro Form 71-2

MERIDIAN OIL

October 2, 1986

Mr. R. L. Staments
New Mexico Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: San Juan 30-6 Unit #112Y

Dear Mr. Staments

Attached is an analysis of bottom hole pressure data on the subject well. Analysis of this data indicates a maximum injection rate of 19,152 barrels of water per day at 1960 psig wellhead injection pressure. Meridian Oil considers the bottom hole pressure data to be more reliable and a better indication of parting pressure.

Please amend my letter of October 1, 1986 to reflect this change.

Sincerely,

J. D. Falconi

J. D. Falconi
Drilling Engineer

JDF:pd

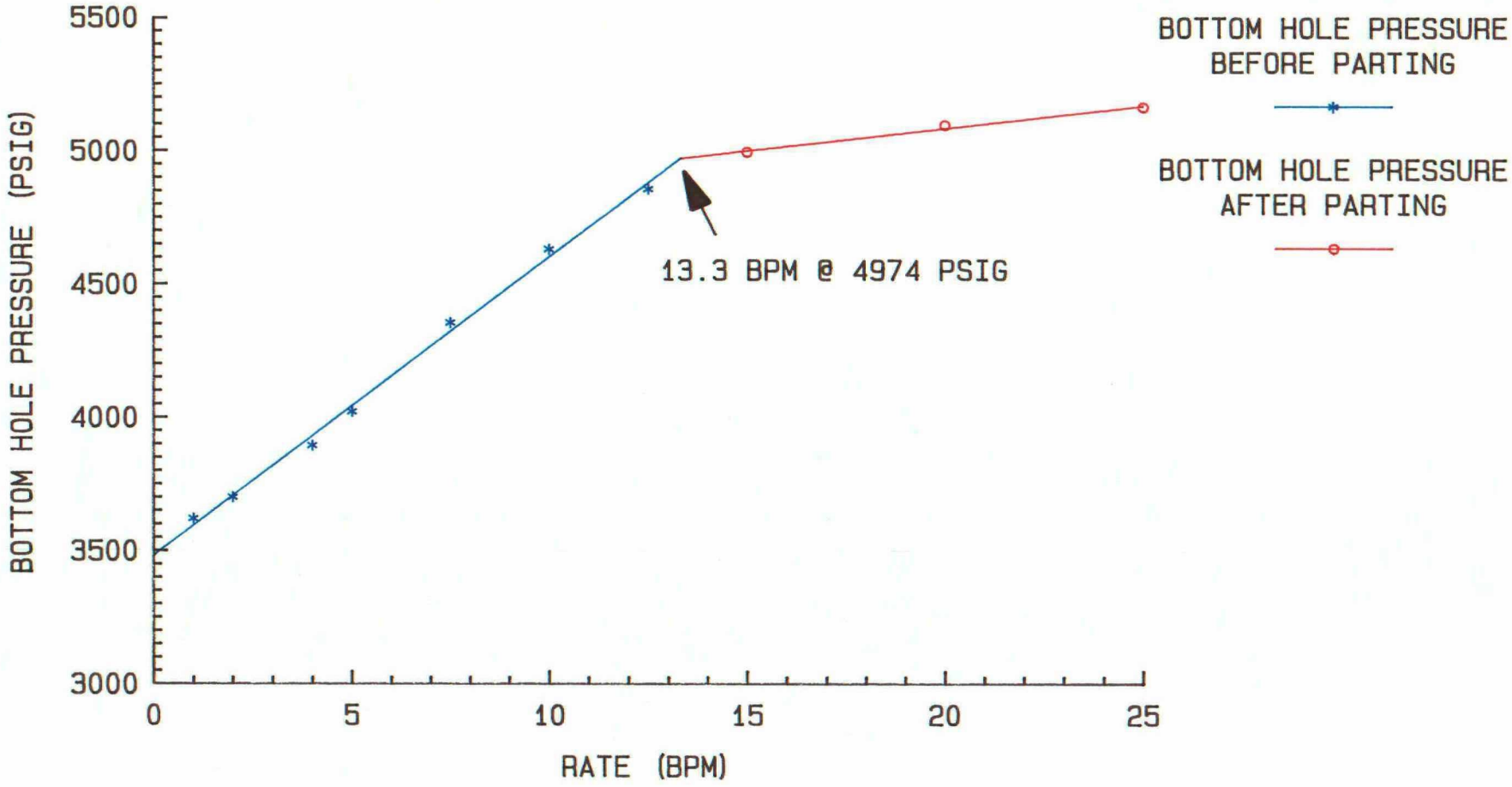
att.

cc: Mr. Frank Chavez

MERIDIAN OIL INC.

SAN JUAN 30-6 UNIT #112Y

STEP-RATE INJECTION TEST



DATE OF TEST 09-26-86

J.A.S.

San Juan 30-6 Unit #112Y

Data

4 1/2" tbg. set @ 8016'
Bottom hole pressure bomb @ 8200'
Bottom hole pressure from data analysis = 4974 psig @ 8200'

Calculations

Friction pressure through 4 1/2" tbg. = 8016' x 6.7 psi/100'
= 537 psi

Hydrostatic head to pressure bomb = 8200' x 0.433 psi/ft.
= 3551 psi

Wellhead injection pressure @ 13.3 BPM = 4974 psig (BHP)
- 3551 psi (fluid head)
+ 537 psi (friction)
= 1960 psig

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

October 20, 1986

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Meridian Oil Inc.
P. O. Box 4289
Farmington, New Mexico 87499

Attention: James D. Falconi

Re: Injection Pressure Increase
San Juan 30-6 Unit Well No.
112Y, Rio Arriba County, New
Mexico.

Dear Sir:

Reference is made to your request of October 1, 1986 to increase the surface injection pressure on your San Juan 30-6 Unit No. 112Y Well. This request is based on a step rate test conducted on the well on September 26, 1986. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on this well is justified at this time.

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

Well & Location	Maximum Injection Surface Pressure
San Juan 30-6 Unit No. 112Y 1120 FNL & 870 FEL (Unit A) Sec. 26, T-30N, R-6W, NMPM Rio Arriba County, New Mexico	1910 PSIG

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

Sincerely,

R. L. STAMETS
Director

RLS/DRC/et

cc: Oil Conservation Division - Aztec
File SWD 305
D. McDonald
D. Catanach