

50 YEARS



1935 - 1985

STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
OIL CONSERVATION DIVISION

September 4, 1986

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

**TONEY ANAYA**  
GOVERNOR

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

Attn: Doug Harris

Re: Injection Pressure Increase  
**McGrath No. 4 Well**  
Section 34, T-30N, R-12W,  
San Juan County, New Mexico

Dear Sir:

Reference is made to your request of August 26, 1986 to increase the surface injection pressure on your McGrath No. 4 SWD Well. This request is based on a step rate test conducted on the well on August 25, 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:

<u>Well &amp; Location</u>	<u>Maximum Injection Surface Pressure</u>
McGrath No. 4	2370 PSIG
800 FNL & 1730 FEL	
Unit B, Sec. 34, T-30N, R-12W	
San Juan County, New Mexico	

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

Sincerely,

R. L. STAMETS  
Director

xc: OCD Aztec  
D. Catanach  
Donna McDonald

**RECEIVED**  
OCT 16 1986  
OIL CON. DIV.  
DIST. 2

# MERIDIAN OIL

August 26, 1986

Mr. Frank Chavez  
Oil Conservation Division  
1000 Rio Brazos Road  
Aztec, New Mexico 87410

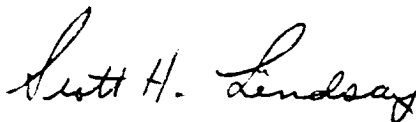
Re: McGrath #4  
NE/4, Sec. 34, T-30-N, R-12-W  
San Juan County, New Mexico

Dear Mr. Chavez:

Meridian Oil, Inc., recently ran a step-rate test on the subject well. The data on the next page indicate that an injection pressure of 2,370 psi at a rate of 7 BBL/min. can be achieved without breakover. As a result of this test, Meridian Oil, Inc., requests administrative approval for an increase of injection pressure and rate to a maximum of 2,370 psi at 7 BBL/min. Average injection pressure and rate is expected to be 1,320 psi at 4 BBL/min.

If I can be of further assistance in this matter, or if you have questions regarding this application, I may be contacted at 327-0251 extension 3209.

Sincerely,



Scott H. Lindsay  
Production Engineer

te  
Attachments

Mr. Frank Chavez

Page 2

August 26, 1986

McGrath #4 (continued)

Wellhead Pressure = 50 psig

ISIP= 1150 psig

<u>Rate (BBL/min)</u>	<u>Pressure (psig)</u>
0.3	50
1.0	250
1.5	390
2.0	570
3.0	915
4.0	1320
5.1	1715
6.1	2050
6.5	2190
7.0	2370

## ENGINEERING CALCULATION

Sheet: 1 of 1  
 Date: 8/25/86  
 By: S. H. L.  
 File: \_\_\_\_\_

MS Grath # 4  
 NE 1/4, Section 34, T-30-N, R-12-W  
 San Juan County, New Mexico

MW		gals/mol
16.04	C <sub>1</sub>	6.4
30.07	C <sub>2</sub>	10.12
44.10	C <sub>3</sub>	10.42
58.12	iC <sub>4</sub>	12.38
58.12	nC <sub>4</sub>	11.93
72.15	iC <sub>5</sub>	13.85
72.15	nC <sub>5</sub>	13.71
86.18	iC <sub>6</sub>	15.50
86.18	C <sub>6</sub>	15.57
100.21	iC <sub>7</sub>	17.2
100.21	C <sub>7</sub>	17.46
114.23	C <sub>8</sub>	19.39
28.05	C <sub>2</sub> <sup>i</sup>	9.64
42.08	C <sub>3</sub> <sup>i</sup>	9.67

PRESSURE  
 (psia) 2400

2000

MISC. 1600

MW		gals/mol
32.00	O <sub>2</sub>	3.37
28.01	CO	4.19
44.01	CO <sub>2</sub>	6.38
64.06	SO <sub>2</sub>	5.50
34.08	H <sub>2</sub> S	5.17
28.01	N <sub>2</sub>	4.16
2.02	H <sub>2</sub>	3.38

1200

800

400

