



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87605
(505) 827-7131

PDEV0020900623

September 10, 1997

Southwest Royalties, Inc.
P.O. Box 11390
Midland, Texas 79702-8390

Attn: Ms. Beverly Hatfield

**RE: Injection Pressure Increase,
Eilliams '34' Federal Well No.12,
Lea County, New Mexico**

Dear Ms. Hatfield:

Reference is made to your request dated August 22, 1997 to increase the surface injection pressure on the above referenced well. This request is based on a step rate test conducted on August 16, 1997. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on this well is justified at this time.

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

<i>Well and Location</i>	<i>Maximum Surface Injection Pressure</i>
Eilliams '34' Federal Well No.12	1935 PSIG
Located in 'A' of Section 34, Township 17 South, Range 33 East, Lea County, New Mexico.	

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

Sincerely,

by [Signature] Deputy Director

William J. LeMay
Director

WJL/BES

cc: Oil Conservation Division - Hobbs
Files: SWD-623; PSI-X 1stQTR98 /

PSI-X

N/R

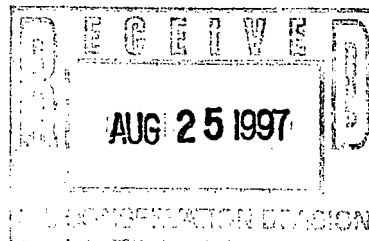


SOUTHWEST ROYALTIES, INC.
Southwest Royalties Building
407 N. Big Spring, Midland, TX. 79701-4326
P.O. Box 11390, Midland, TX. 79702-8390
(915) 686-9927, 1-800-433-7945

SOUTHWEST ROYALTIES

AUGUST 22, 1997

A 34-175-33E



OCD - DISTRICT IV
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505

SWD-623

RE: EILLIAMS FEDERAL #12
LEA COUNTY, NEW MEXICO
SOUTHWEST ROYALTIES, INC.

TO WHOM IT MAY CONCERN:

SOUTHWEST ROYALTIES, INC., IS HEREBY REQUESTING AN INCREASE IN THE MAXIMUM INJECTION PRESSURE FROM 858 psi TO 1935 psi FOR THE EILLIAMS FEDERAL #12 WELL.

A STEP RATE TEST IS ATTACHED SHOWING A FRACTURE PRESSURE OF 1985 psi.

IF YOU HAVE ANY QUESTIONS OR NEED FURTHER INFORMATION PLEASE CONTACT JIM BLOUNT, ENGINEER/AREA SUPERVISOR AT 1 800 433-7945.

THANK YOU,

BEVERLY HATFIELD
REGULATORY COORDINATOR

ATTACHMENT

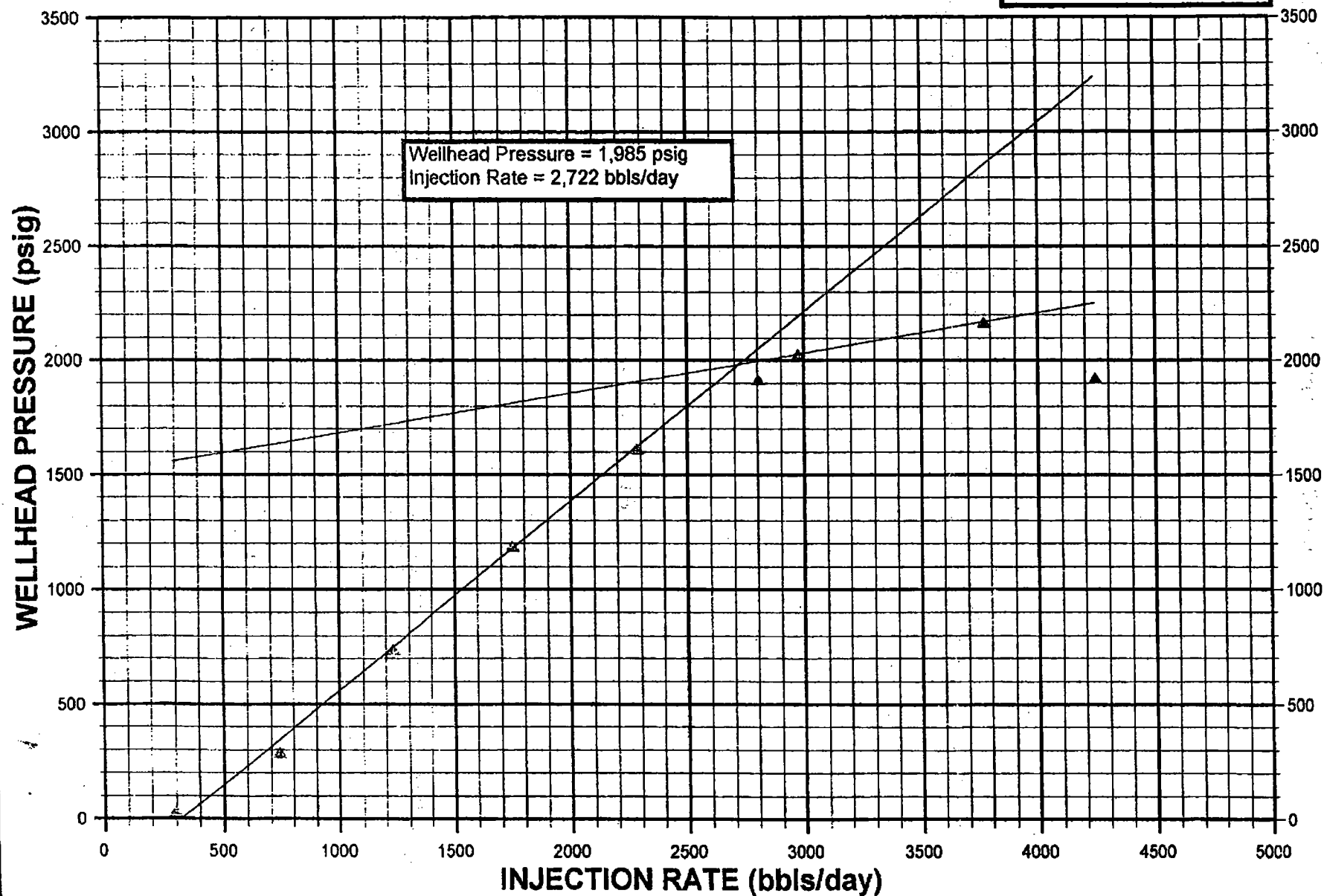
FAXED 8-22-97

CC: DISTRICT I

STEP RATE INJECTION TEST

SOUTHWEST ROYALTIES

Well Name:
 Elliains 34 Federal No. 12
 Lea County, New Mexico



▲ RECORDED WELLHEAD PRESSURE

A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY
Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: SOUTHWEST ROYALTIES

DATE: AUGUST 16, 1997

WELL NAME: EILLIAMS 34 FEDERAL NO. 12
LEA COUNTY, NEW MEXICO

WO#: 97-14-1387

PERFS -- 4290-4833

PACKER DEPTH -- 4204

BHP GAUGE DEPTH -- SURFACE ONLY

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
STEP NO.		SURFACE	CUMMULATIVE	INJECTION	FRICTION	CORRECTED	INJECTION	MEASURED
&		TUBING PRESS.	VOL INJECTED	RATE	HEAD LOSS	TUBING PRESS.	RATE (gpm)	BHP
REMARKS	TIME	(psig)	(bbls)	(bbls/day)	(psi)	(psi) (1)-(4)	(3)/34.2837	(psi)
	8:50	18.2				18.2		
	8:55	33.1	1.1	316.8	1.758	31.3	9.24	
	9:00	29.5	2.1	288.0	1.474	28.0	8.40	
1	9:05	34.5	3.1	288.0	1.474	33.0	8.40	
				297.6				
	9:10	114.1	5.7	748.8	8.635	105.5	21.84	
	9:15	212.3	8.3	748.8	8.635	203.7	21.84	
2	9:20	290.9	10.8	720.0	8.030	282.9	21.00	
				739.2				
	9:25	508.9	15.0	1209.6	20.968	487.9	35.28	
	9:30	636.0	19.3	1238.4	21.901	614.1	36.12	
3	9:35	744.4	23.6	1238.4	21.901	722.5	36.12	
				1228.8				
	9:40	983.6	29.6	1728.0	40.562	943.0	50.40	
	9:45	1115.9	35.9	1814.4	44.393	1071.5	52.92	
4	9:50	1190.8	41.8	1699.2	39.320	1151.5	49.56	
				1747.2				
	9:55	1433.1	49.8	2304.0	69.064	1364.0	67.20	
	10:00	1533.0	57.7	2275.2	67.476	1465.5	66.36	
5	10:05	1617.9	65.6	2275.2	67.476	1550.4	66.36	
				2284.8				
	10:10	1802.7	75.4	2822.4	100.532	1702.2	82.32	
	10:15	1871.4	85.1	2793.6	98.643	1772.8	81.48	
6	10:20	1921.4	94.8	2793.6	98.643	1822.8	81.48	
				2803.2				
	10:25	2047.5	106.2	3283.2	132.988	1914.5	95.76	
	10:30	2068.7	117.6	3283.2	132.988	1935.7	95.76	
7	10:35	2029.9	125.8	2361.6	72.292	1957.6	68.88	
				2976.0				

PAGE 1

STEP NO. & REMARKS	TIME	(1) SURFACE TUBING PRESS. (psig)	(2) CUMMULATIVE VOL. INJECTED (bbls)	(3) INJECTION RATE (bbls/day)	(4) FRICTION HEAD LOSS (psi)	(5) CORRECTED TUBING PRESS. (psi) (1) - (4)	(6) INJECTION RATE (gpm) (3)/34.2857	(7) MEASURED BHP (psi)
8	10:40	2151.2	138.9	3772.8	171.984	1979.2	110.04	
	10:45	2169.9	151.9	3744.0	169.564	2000.3	109.20	
	10:50	2169.9	165.1	3801.6	174.421	1995.5	110.88	
9				3772.8				
	10:55	2204.9	179.3	4089.6	199.651	2005.2	119.28	
	11:00	1971.2	194.3	4320.0	220.956	1750.2	126.00	
	11:05	1925.0	209.3	4320.0	220.956	1704.0	126.00	
FALLOFF				4243.2				
	11:10	1423.1				1423.1		
	11:11	1383.2				1383.2		
	11:12	1335.8				1335.8		
	11:13	1295.8				1295.8		
	11:14	1260.9				1260.9		
	11:15	1229.7				1229.7		
	11:20	1109.8				1109.8		
	11:25	1025.0				1025.0		



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SOUTHWEST ROYALTIES

AUGUST 22, 1997

**OCD - DISTRICT IV
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505**

**RE: EILLIAMS FEDERAL #12
LEA COUNTY, NEW MEXICO
SOUTHWEST ROYALTIES, INC.**

TO WHOM IT MAY CONCERN:

**SOUTHWEST ROYALTIES, INC., IS HEREBY REQUESTING AN INCREASE IN THE
MAXIMUM INJECTION PRESSURE FROM 858 psi TO 1935 psi FOR THE
EILLIAMS FEDERAL #12 WELL.**

**A STEP RATE TEST IS ATTACHED SHOWING A FRACTURE PRESSURE OF 1985
psi.**

**IF YOU HAVE ANY QUESTIONS OR NEED FURTHER INFORMATION PLEASE
CONTACT JIM BLOUNT, ENGINEER/AREA SUPERVISOR AT 1 800 433-7945.**

THANK YOU,

**BEVERLY HATFIELD
REGULATORY COORDINATOR**

ATTACHMENT

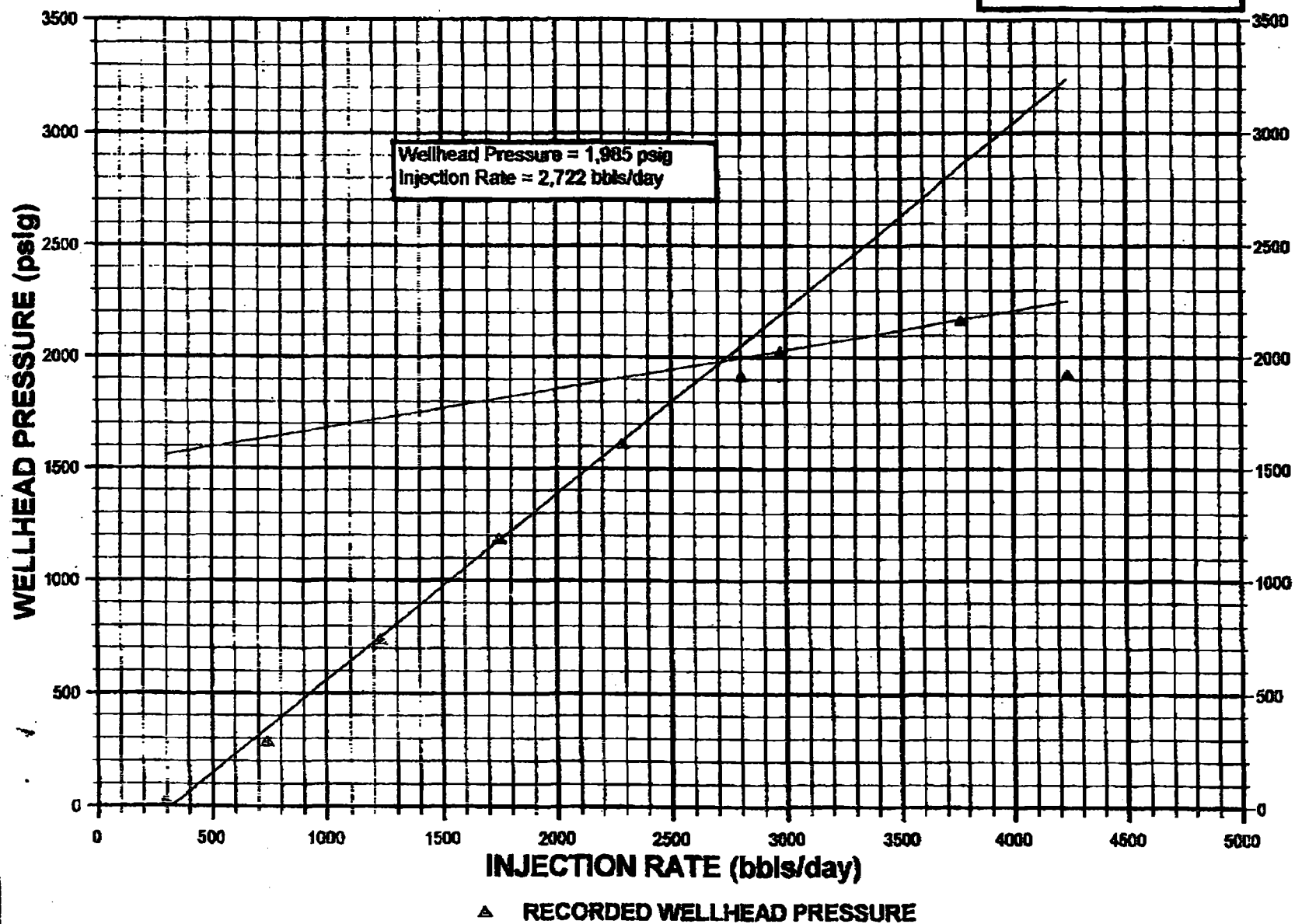
FAKED 8-22-97

CC: DISTRICT I

STEP RATE INJECTION TEST

SOUTHWEST ROYALTIES

Well Name:
Williams 34 Federal No. 12
Lea County, New Mexico



August 16, 1997 (97-14-1387)

08-22-97 02:54 PM
WV 02:00 48-22-80

UTIC-202-202 JWB

A SUBSIDIARY OF JOHN WEST ENGINEERING COMPANY
Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: SOUTHWEST ROYALTIES

DATE: AUGUST 16, 1997

WELL NAME: EILLIAMS 34 FEDERAL NO. 12
LEA COUNTY, NEW MEXICO

WO#: 97-14-1387

PERFID : 4290-4833

PACKER DEPTH : 4304

BHP GAUGE DEPTH : SURFACE ONLY

STEP NO.	TIME	(1) SURFACE TUBING PRESS (PSI)	(2) CUMULATIVE VOL INJECTED (GAL)	(3) INJECTION RATE (GAL/HR)	(4) FRICION HEAD LOSS (PSI)	(5) CORRECTED TUBING PRESS (PSI)	(6) INJECTION RATE (PSI/HR)	(7) MEASURED BHP (PSI)
1	8:50	18.2				18.2		
	8:55	33.1	1.1	318.8	1.758	31.3	9.24	
	9:00	29.6	2.1	288.0	1.474	28.0	8.40	
	9:05	34.5	3.1	288.0	1.474	33.0	8.40	
				287.6				
	9:10	114.1	5.7	748.8	8.635	105.5	21.84	
	9:15	212.3	8.3	748.8	8.635	203.7	21.84	
2	9:20	290.9	10.8	720.0	8.030	282.9	21.00	
				739.2				
	9:25	508.9	15.0	1209.6	20.988	487.9	35.28	
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	9:45	1115.9	35.9	1814.4	44.393	1071.5	52.92	
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	10:30	2068.7	117.6	3283.2	132.988	1935.7	95.76	
7	10:35	2029.9	125.8	2361.6	72.292	1957.6	68.68	
				2976.0				

PAGE 1

STEP NO.		(1)	(2)	(3)	(4)	(5)	(6)	(7)
REMARKS	TIME	SURFACE TUBING PRESS (psi)	CUMULATIVE VOL. INJECTED (bbl)	INJECTION RATE (bbl/day)	FRICTION HEAD LOSS (psi)	CORRECTED TUBING PRESS (psi) (1)-(4)	INJECTION RATE (gpm) (5)/24.2537	MEASURED BHP (psi)
8	10:40	2151.2	138.9	3772.8	171.984	1979.2	110.04	
	10:45	2169.9	151.9	3744.0	169.564	2000.8	109.20	
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	11:13	1295.8				1295.8		
	11:14	1260.9				1260.9		
	11:15	1229.7				1229.7		
	11:20	1109.8				1109.8		
	11:25	1025.0				1025.0		

9/10/97



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

August 26, 1997

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISON
P.O. BOX 2088
SANTA FE, NEW MEXICO 87504-2088

RE: APPLICATION FOR PRESSURE LIMIT INCREASE FOR DISPOSAL & INJECTION WELLS

Gentlemen:

I have examined the step rate test for the:

Southwest Royalties	Elliams Federal (SWD) #12-A	34-17-33
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

Pressure limit should be no higher than 1900 psi.

Very truly yours

A handwritten signature in cursive script that reads "Chris Williams".

Chris Williams
Supervisor, District I

/bp