



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE
April 6, 1992

BRUCE KING
GOVERNOR

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

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

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

Gentlemen:

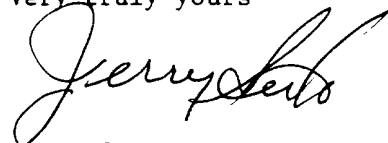
I have examined the step rate test for the:

Yates Drilling Company	Doyal	#4-M	26-12-31
Operator	Lease & Well No.	Unit	S-T-R

(Request on attached C-103)
and my recommendations are as follows:



Very truly yours



Jerry Sexton
Supervisor, District I

/bp

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.	30-005-20998
5. Indicate Type of Lease	STATE ☐ FEE ☒
6. State Oil & Gas Lease No.	
7. Lease Name or Unit Agreement Name	Doyal
8. Well No.	4
9. Pool name or Wildcat	SE Chaves On Gas Area Assoc.

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: OIL WELL ☐ GAS WELL ☐ OTHER ☒ Water Injection Well	
2. Name of Operator Yates Drilling Company	
3. Address of Operator 105 South 4th Street, Artesia, NM 88210	
4. Well Location Unit Letter <u>M</u> : <u>330</u> Feet From The <u>South</u> Line and <u>330</u> Feet From The <u>West</u> Line Section <u>26</u> Township <u>12S</u> Range <u>31E</u> NMTM Chaves County	
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 4425' GL	

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data			
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:		
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐
PULL OR ALTER CASING ☐		CASING TEST AND CEMENT JOB ☐	
OTHER: Request increase in Allowable Injection Pressure ☒		OTHER: ☐	

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

We recently authorized a step-rate test to be conducted on the subject well by John West Engineering Company of Hobbs, NM. This test was witnessed by Charlie Perrin of NMOCD. The results of this test are attached. We are requesting that our maximum allowed injection pressure be raised to a level justified by the test.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE John West TITLE Petroleum Engineer DATE 4-1-92

TYPE OR PRINT NAME: _____ TELEPHONE NO. _____

(This space for State Use)

APPROVED BY: _____ TITLE: _____ DATE: _____

CONDITIONS OF APPROVAL, IF ANY:

JOHN WEST ENGINEERING COMPANY

Hobbs, New Mexico

STEP RATE INJECTION TEST

CLIENT: Yates Drilling Company

DATE: March 19, 1992

WELL NAME: Doyal No. 4
Chaves County, New Mexico

WO#: 92140408

PERFS. = 2982 - 2985

PACKER DEPTH =

BHP GAUGE DEPTH = 2984 (MID-PERFS.)

STEP NO. & REMARKS	TIME	(1) SURFACE TUBING PRESS. (psig)	(2) CUMULATIVE 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)/34.2057	(7) MEASURED BHP (psi)
1	8:00	34.4				34.4		1292
	8:05	86.2	3.9	1123.2	31.915	54.3	32.76	1339
	8:10	117.8	7.7	1094.4	30.417	87.4	31.92	1370
	8:15	138.1	11.7	1152.0	33.445	104.7	33.60	1393
2				1123.2				
	8:20	413.4	19.2	2160.0	107.000	306.4	63.00	1560
	8:25	477.9	26.8	2188.8	109.654	368.2	63.84	1628
	8:30	533.6	34.3	2160.0	107.000	426.6	63.00	1677
3				2169.9				
	8:35	711.8	43.5	2649.6	156.145	555.7	77.28	1794
	8:40	766.3	52.5	2592.0	149.923	616.4	75.60	1845
	8:45	809.3	61.4	2563.2	146.856	662.4	74.76	1901
4				2601.6				
	8:50	998.9	72.1	3081.6	206.481	792.4	89.88	1995
	8:55	1052.1	82.8	3081.6	206.481	845.6	89.88	2051
	9:00	1095.2	93.4	3052.8	202.925	892.3	89.04	2096
5				3071.9				
	9:05	1283.8	105.6	3513.6	263.200	1020.6	102.48	2192
	9:10	1325.6	118.1	3600.0	275.298	1050.3	105.00	2240
	9:15	1367.5	130.4	3542.4	267.205	1100.3	103.32	2285
6				3551.9				
	9:20	1535.8	144.3	4003.2	335.040	1200.8	116.76	2365
	9:25	1573.9	158.1	3974.4	330.595	1243.3	115.92	2406
	9:30	1609.4	172.0	4003.2	335.040	1274.4	116.76	2449
7				3993.6				
	9:35	1805.6	187.5	4464.0	409.858	1395.7	130.20	2527
	9:40	1834.7	203.2	4521.6	419.695	1415.0	131.88	2565
	9:45	1856.3	218.8	4492.8	414.763	1441.5	131.04	2596
				4492.8				

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
STEP NO. 2		SURFACE TUBING PRESS.	CUMULATIVE VOL. INJECTED	INJECTION RATE	FRICTION HEAD LOSS	CORRECTED TUBING PRESS.	INJECTION RATE (gpm)	MEASURED BHP
REMARKS	TIME	(psig)	(bbls)	(bbls/day)	(psi)	(psi) (1)-(4)	(3)/34.2857	(psi)
8	9:50	1995.6	235.9	4924.8	491.544	1504.1	143.64	2647
	9:55	2004.5	252.8	4867.2	480.961	1523.5	141.96	2669
	10:00	1998.2	269.7	4867.2	480.961	1517.2	141.96	2686
				4886.4				
	10:05	2177.0	287.9	5241.6	551.635	1625.4	152.88	2723
9	10:10	2163.1	306.2	5270.4	557.255	1605.8	153.72	2735
	10:15	2199.9	324.3	5212.8	546.041	1653.9	152.04	2746
				5241.6				
Fall-Off	10:16	1350.3				1350.3		2662
	10:17	1319.9				1319.9		2620
	10:18	1279.5				1279.5		2579
	10:19	1244.0				1244.0		2543
	10:20	1208.6				1208.6		2509
	10:25	1070.7				1070.7		2369
	10:30	968.2				968.2		2267