



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	Cactus Queen Unit #5-C	34-12-31
Operator	Lease & Well No.	Unit
Request on attached C-103		S-T-R

and my recommendations are as follows:

OK

Very truly yours

Jerry Sexton
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.
5. Indicate Type of Lease STATE ☐ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Cactus Queen Unit
8. Well No. 5
9. Pool name or Wildcat SE Chaves Qn 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>C</u> : <u>330</u> Feet From The <u>North</u> Line and <u>2310</u> Feet From The <u>West</u> Line Section <u>34</u> Township <u>12S</u> Range <u>31E</u> NMPM Chaves County	
10. Elevation (Show whether DF, RKB, RT, GR, etc.) 4438' GL	

11.

Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐

OTHER: Request Increase in Allowable Injection Pressure ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐
CASING TEST AND CEMENT JOB ☐

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 NMCD. 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.

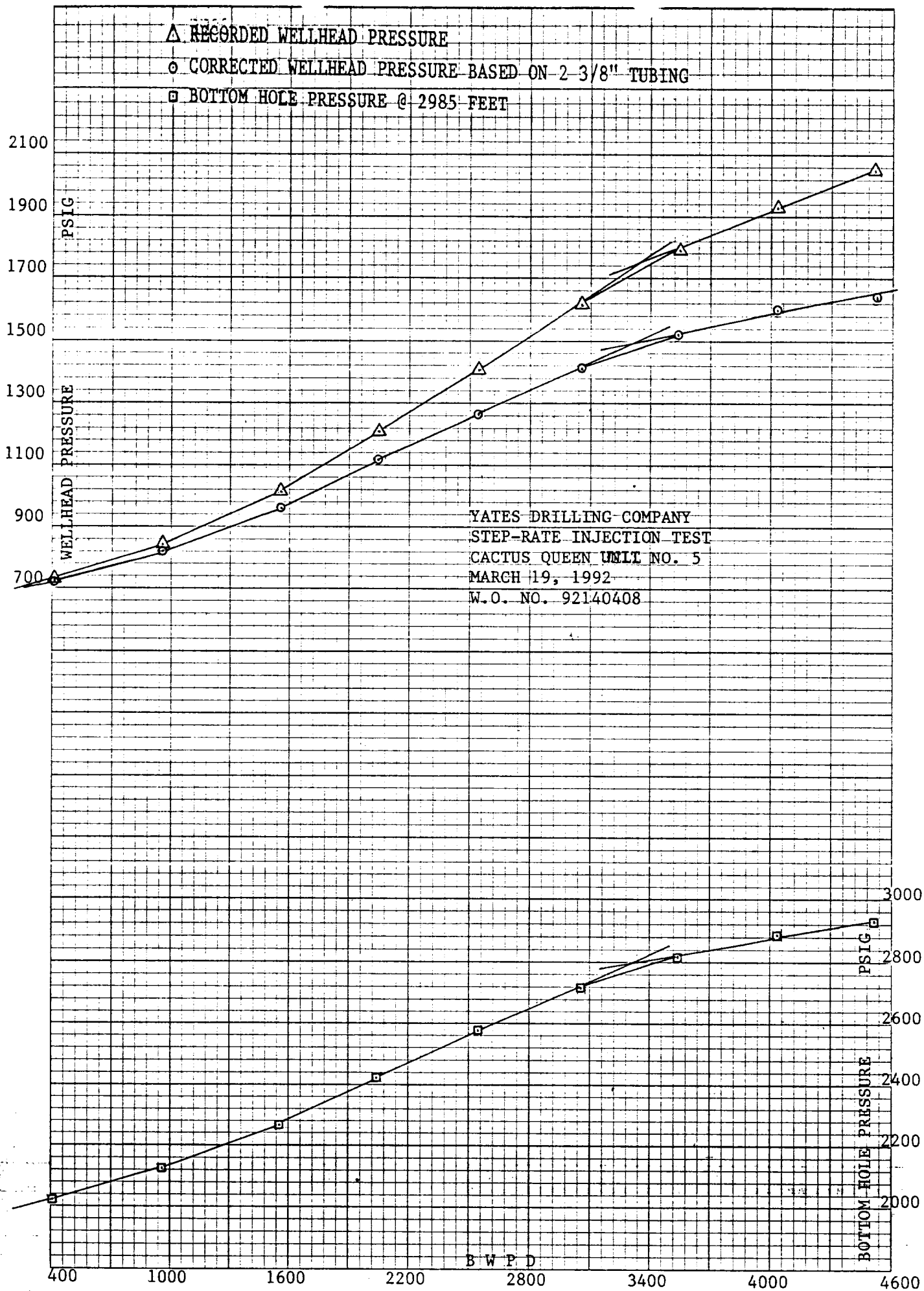
SIGNATURE John Rhoad TITLE Petroleum Engineer DATE 4-1-92

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 18, 1992

WELL NAME: Cactus Queen Unit No. 5

WO#: 92140408

Chaves County, New Mexico

PERF. = 2988 - 2992

PACKER DEPTH =

BHP GAUGE DEPTH = 2985

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) (5)/34.2957	(7) MEASURED BHP (psi)
1	11:35	684.7				684.7		1979
	11:40	708.7	1.3	374.4	4.183	704.5	10.92	1998
	11:45	715.1	2.6	374.4	4.183	710.9	10.92	2011
	11:50	737.9	4.2	460.8	6.142	731.8	13.44	2028
				403.2				
2	11:55	801.0	7.6	979.2	24.769	776.2	28.56	2071
	12:00	825.0	10.9	950.4	23.438	801.6	27.72	2100
	12:05	845.2	14.2	950.4	23.438	821.8	27.72	2126
				960.0				
3	12:10	948.8	19.6	1555.2	58.290	890.5	45.36	2189
	12:15	980.3	25.0	1555.2	58.290	922.0	45.36	2229
	12:20	1018.2	30.4	1555.2	58.290	959.9	45.36	2267
				1555.2				
4	12:25	1124.5	37.5	2044.8	96.715	1027.8	59.64	2330
	12:30	1170.0	44.6	2044.8	96.715	1073.3	59.64	2377
	12:35	1213.0	51.7	2044.8	96.715	1116.3	59.64	2421
				2044.8				
5	12:40	1323.8	60.6	2563.2	146.905	1176.9	74.76	2486
	12:45	1373.8	69.4	2534.4	143.866	1229.9	73.92	2534
	12:50	1411.8	78.3	2563.2	146.905	1264.9	74.76	2576
				2553.6				
6	12:55	1537.1	88.9	3052.8	202.993	1334.1	89.04	2636
	1:00	1581.4	99.5	3052.8	202.993	1378.4	89.04	2682
	1:05	1618.1	110.1	3052.8	202.993	1415.1	89.04	2719
				3052.8				
7	1:10	1740.9	122.4	3542.4	267.294	1473.6	103.32	2767
	1:15	1766.2	134.7	3542.4	267.294	1498.9	103.32	2799
	1:20	1786.5	147.0	3542.4	267.294	1519.2	103.32	2820
				3542.4				

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
STEP NO.		SURFACE	CUMMULATIVE	INJECTION	FRICTION	CORRECTED	INJECTION	MEASURED
REMARKS	TIME	TUBING PRESS.	VOL. INJECTED	RATE	HEAD LOSS	TUBING PRESS.	RATE (gpm)	BHP
		(psig)	(bbls)	(bbls/day)	(psi)	(psi) (1)-(4)	(8)/34.2857	(psi)
8	1:25	1909.2	161.0	4032.0	339.627	1569.6	117.60	2850
	1:30	1920.6	175.0	4032.0	339.627	1581.0	117.60	2870
	1:35	1935.8	189.0	4032.0	339.627	1596.2	117.60	2886
				4032.0				
9	1:40	2043.3	204.7	4521.6	419.836	1623.5	131.88	2907
	1:45	2049.6	220.4	4521.6	419.836	1629.8	131.88	2916
	1:50	2053.4	236.1	4521.6	419.836	1633.6	131.88	2925
				4521.6				
Fall-Off	1:51	1597.7				1597.7		2900
	1:52	1593.9				1593.9		2892
	1:53	1587.6				1587.6		2886
	1:54	1581.3				1581.3		2879
	1:55	1576.2				1576.2		2874
	2:00	1553.5				1553.5		2850
	2:05	1534.4				1534.4		2830