

Lincoln State Com

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MEMORANDUM

June 7, 1978

TO: J. L. FARRELL AND L. M. CARNES

JUN - 8 1978

FROM: D. W. DENNEY

RE: BOTTOM HOLE PRESSURE BUILDUP TESTS
LINCOLN STATE COM #1 and
RINGER FEDERAL COM #2
EDDY CO., NEW MEXICO

JLF
SD

LC

As requested, the subject buildup tests on the Morrow formation have been evaluated and the results tabulated below:

	<u>LINCOLN STATE COM #1</u>	<u>RINGER FEDERAL COM #2</u>
Date of Tests	5-27-78	5-22-78
Shutin Time - hrs.	72	48
Static BHP - psig	3180	4180
Flowing BHP - psig	707	1779
Flowing Tubing Pressure - psig	259	300
Pretest Flow Rate - MCF/D	3500	8000
Capacity - md/ft.	50.2	73.3
Permeability - md	3.14	2.9
Completion Efficiency - %	40	81
Est. Undamaged Flow Rate - MCF/D	7000	8600
Pressure Gradient - psi/ft.	0.374	0.361

As shown above the completion efficiency of the Lincoln State Com #1 is only 40%, indicating formation damage around the wellbore. The estimated flow rate by removing the damage is approximately 7000 MCF/D or double the pretest rate. Due to this possible large increased rate, I recommend that some type of clean-up stimulation treatment be performed on this well. Since the Morrow formation is generally water sensitive, I suggest some type of nonaqueous fluid be used, incorporating nitrogen or CO₂ to aid in rapid clean-up of the well.