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SEP 9 1981

September 8, 1981

C. C. D. ARTESIA, OFFICE

C/SF

New Mexico Oil Conservation Division P. O. Drawer DD Artesia, New Mexico 88210

> Dana Federal #1-P-4-9S-25E Re: Multi Point Back Pressure Test For Gas Wells

At present, this well is producing approximately 300 MCF/day and 30 barrels of formation water and this water production makes it impossible to accurately 4-point the well. Upon completion the well was tested using an orifice well tester which I have enclosed for your information.

In light of the above information we ask that an exception be made to your request. If, in the future, the water production diminishes, as we anticipate, we will certainly submit a back pressure test in accordance with your request.

Sincerely yours,

Vaul Kuyolale Paul Ragsdale

Engineer

/Enclosure

Epreption approved 9-10-81

Enclosed are the two "prover" tests conducted on the Dana Federal No. 1. The tests were both conducted in identical manners for a 24 hour time period, except that the second test involved an intermitter and a plunger device. These tests were conducted due to the large amounts of water being produced which made the typical "four point" test inaccurate.

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A description of the well head and surface equipment which were used in each test follows:

Test #1 - The well had been shut in for approximately four days and had a build-up of approximately 950 psi tubing pressure and 1000 psi casing pressure. The tubing was opened at 11:00 A.M. 5/12/81 and flowed for 24 hours through a 32/64" choke to the separator; from the separator to a back pressure valve set at 250 psi to similate line pressure and then to an orifice well tester using a  $1\frac{1}{4}$ " orifice for the first two hours of the test; then a 3/4" orifice for the remaining 22 hours.

Using the orifice well tester chart the production was recorded and averaged to be 148 MCF/day while producing an estimated 150 bbls/day of formation fluid.

Test #2 - The well was shut in for four days with build-up pressure of 900 psi on both tubing and casing. The tubing was opened at 9:30 5/17/81 and allowed to flow through a 12/64" choke and then through the same test equipment as previously described. By using the intermitter the well was flowed for two hours and then shut in two hours throughout the test. After each shut in period the intermitter would open the tubing allowing the free falling plunger to travel to the surface clearing the tubing of water and allowing a greater production of gas.

The overall flowing time for the test was  $11\frac{1}{2}$  hours with the remaining time being shut in time. The average production against the back pressure valve was 246 MCF/day with an estimated 100 bbls/day of formation fluid.

The well tester charts and calculations and diagram of test equipment are enclosed.

Kasplale

Paul Ragsdale Engineer

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## Test #1 5/12/81 - 5/13/81

MCF/PERIOD

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Test #2			

MCF/DAY

Test #2		
TIME	MCF/DAY	MCF/PERIOD
	1113	24
9:30-10:00	721	30
10:00-11:00	475	10
11:00-11:30	Shut In	
11:30-12:30	593	5 <b>0</b>
12:30-1:30	Shut In	
1:30- 4:00	593	50
4:00- 5:00	330	14
5:00- 6:00	SSU Shut In	
6:00-7:30	292	12
7:30- 8:30	240	10
8:30- 9:30	Shut In	
9:30-11:30		6
11:30-12:00	292	10
12:00- 1:00	240 Shut In	20
1:00- 2:30		6
2:30- 3:00	292	9
3:00- 4:00	218 Shut In	2
4:00- 6:00	Shut In	6
6:00- 6:30	292	9
6:30- 7:30	218	2
7:30- 9:30	Shut In	
	Total Produced	246 MCF

TIME

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H 1 10 Flow T SEPERATOR BACK PRESSURE Valve (250 PSI) ORIFICE WEIL TESTER SEPARATOR A STANDING VAIVE B. BUMPER SUB C. PlUNGER SUB D. PlUNGER RECEPTACLE E. CHOKE F. INTERMITTER AND MOTOR VAIVE Ģ Dumis Ĩ H ઝ re-Perforantious U U 2 4 a ~