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APPLICATION OF ROBERT L. BAYLESS
Simms Com #1
Downhole Commingle
NMOCD Docket #28-93; Case #10831

July 22, 1993

EXHIBIT NO. 1

William J. Lemay, Chairman
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: Request for Administrative
Approval to Downhole Commingle
Robert L. Bayless
Simms Com #1
Unit J, Sec. 13, T30N R4W
Cabresto Gallup and East Blanco
Pictured Cliffs Fields
Rio Arriba County, New Mexico

Dear Mr. Lemay:

By this letter, Robert L. Bayless requests administrative approval to commingle production from the Gallup and Pictured Cliffs formations within the wellbore of the Simms Com #1 well. This well was drilled by Southland Royalty Company in July of 1981. Production casing, (5-1/2") was set and cemented at 8731 feet, which is the total depth of the well. The Dakota interval, (8367-8683 ft.) was tested and abandoned by setting a cast iron bridge plug at 8300 feet.

The Gallup interval (7541-7634 ft.) was perforated and fracture stimulated with 87,630 gallons of 30# crosslinked gelled fluid containing 65,000 lbs. of 20-40 sand. Southland tested this zone in September of 1981 by conducting a 3 hour flow test which resulted in an AOF of 1251 MCFD. This AOF test is presented as Attachment #1.

Southland also tested the Pictured Cliffs potential in this well. In October of 1983, a drillable bridgeplug was set at 4150 feet (this is the current PBTD of this well). The interval 3709-3715 was perforated and fracture stimulated with 31,710 gallons of 30# crosslinked gelled fluid containing 25,000 lbs. of 20-40 sand. Bayless tested this zone in July of 1993 by conducting a 3 hour flow test which resulted in an AOF of 508 MCFD. This AOF test is presented as Attachment #2.

The flow test results from each zone indicate that both have marginal gas production capability. The actual gas sales rate from each zone will be substantially lower than the AOF test rates due to line pressure which averages over 300 psi in the vicinity of this well. It is quite possible that a compressor

will be needed for the Simms Com #1 to produce into the sales line at all. If commingling is granted in this wellbore, the combined rates from these two zones will have a better chance of producing against higher line pressure without compression.

The quality of the gas produced from the Gallup and Pictured Cliffs formations is very similar in this area. The average gas gravity for the Pictured Cliff zone in this area is .652 with an average BTU value of 1154, while the average gas gravity for the Gallup interval is .628, with an average BTU of 1072. The gas gravities used for each zone were taken from the closest offsetting wells having this data available. A summary of this data is presented in Attachment #3. The small differences seen in gas gravity and BTU content from these surrounding wells indicate that the gas produced from both zones is very similar and should not cause any damage should crossflow occur between zones.

From the AOF tests discussed previously, the 1065 psi surface shutin pressure taken on the Pictured Cliff zone corresponds to a calculated bottomhole pressure of 1176 psi at 3712 ft. (mid perf of the P.C. zone). The 2431 psi surface shutin pressure taken on the Gallup zone corresponds to a calculated bottomhole pressure of 2955 psi at 7588 ft. (mid perf of the Gallup interval). Even though the Pictured Cliffs bottomhole pressure is less than 50% of the Gallup bottomhole pressure, the gas from both zones is very similar, and any crossflow occurring between zones will cause no damage to the formation.

The production from the Pictured Cliffs and Gallup zones could be allocated using the ratios of the rate of flow calculated during the AOF tests performed by Bayless. Using these tests, 29% of the commingled gas production would be allocated to the Pictured Cliffs formation, while 71% would be allocated to the Gallup formation. This allocation formula is shown in Attachment #4. The value of the gas from each zone is approximately the same, so the commingling of this natural gas will not decrease its sales value.

Attachment #5 is an acreage plat showing the ownership of leases in the vicinity of the Simms Com #1 well. The ownership (working interest, royalty, and overriding royalty) of both the Pictured Cliffs and Gallup formations is common in the Simms Com #1 well. The leases surrounding this well are owned by Bayless, Meridian Oil, or Schalk Development. These companies have been contacted by certified mail of this commingling application. An example of the letter sent to them is provided as Attachment #6. Copies of the Return Receipt slips are presented as Attachment #7. By copy of this application, we have also advised the BLM of our plans to downhole commingle the Gallup and Pictured Cliffs formation in this well.

The production tests taken on the Pictured Cliffs and Gallup zones indicate that gas production from this well will be low,

resulting in marginal gas reserves and economics for the well. Further completion and operational costs on this well could be substantially reduced by approval of downhole commingling in this well. We would appreciate your administrative approval of this application.

Sincerely,

Kevin H. McCord
Petroleum Engineer

Attachments