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Barrett Resources Corporation: Growth of an Independent Through Exploration

By William J. Barrett, Barrett Resources

Barrett is an independent natural gas and oil exploration and production company. Barrett uses its own exploration staff to develop a geologic concept into an exploration prospect, which is drilled either solely by Barrett or with partners. Barrett also operates gas gathering systems and a gas processing plant in the areas that are synergistic to the Company's production. Barrett has a gas marketing and trading subsidiary, which allows the Company to market the Company's own natural gas production and to purchase and resale of other companies' natural gas. Barrett is headquartered in Denver, Colorado, and its common stock is traded on the New York Stock Exchange under the symbol BRR.

Barrett's key areas of operation and focus are in the Rocky Mountain and Mid-Continent regions. Barrett's areas of greatest reserves are in Kansas, Colorado, Oklahoma, and Wyoming. The greatest concentration of wells is located in the Piceance Basin in northwestern Colorado, the Arkoma and Anadarko Basins in Oklahoma and Kansas, and the Wind River and Greater Green River Basins in Wyoming. Two areas have played key roles in Barrett's past growth and are expected to play equally key roles in Barrett's future growth. The areas are very different geologically, but have one thing in common, their very large potential. These two areas are the Grand Valley-Parachute-Rulison Gas Fields located in the Piceance Basin of Colorado and the recently discovered prolific Cave Gulch Gas Field located in the Wind River Basin of Wyoming. The following two paragraphs give synopses of these two areas and will be the focus of our presentation.

Piceance Basin Summary. The Piceance Basin of Northwestern Colorado is one of Barrett's core areas with long-life program gas reserves totaling over 386 bcf gross. Future reserve growth is expected to increase the ultimate recovery from the area to over 1 trillion cubic feet of gas. The

Company drilled its first Piceance well in 1984 and currently owns or has a working interest in 286 gross wells in the Basin. Barrett operates 263 of these wells. The Company's activities in the Piceance Basin are conducted primarily in the Grand Valley, Parachute, and Rulison Fields. The Company is currently producing a gross 80 mmcf/d from this area. Current drilling activities primarily target the tight fluvial sandstones of the Williams Fork Formation of the Mesaverde Group. The Williams Fork formation, ranging in thickness from 2,900 to 3,700 feet, is composed of interbedded mudstones, siltstones, and sandstones with a section of abundant interbedded coals at its base. The sandstones are characterized as being heterogeneous, discontinuous, highly compartmentalized, and limited in areal extent. In Barrett's area of operation, the Williams Fork contains from 1,700 to 2,400 feet of gas-saturated section. A given wellbore will penetrate between 30 and 50 of these tight gas-bearing sand bodies that average less than 20 acres in size. Natural fracturing is pervasive throughout the sands and is instrumental in obtaining commercial production. However, even with these natural fractures, massive hydraulic stimulation is still necessary to yield commercial production. An average Mesaverde gas well is expected to produce 1.5 bcf of gas in Grand Valley and Parachute Fields and 1.8 bcf of gas in Rulison Field during the first 20 years of its life. Many of the wells will exceed these amounts, producing 2 to 3 bcf of gas. The average production life of these Mesaverde wells is expected to exceed 50 years.

Cave Gulch Summary. Cave Gulch Field is a faulted anticlinal feature with over 1,200 feet of closure in the footwall of the northwest-southeast trending Casper Arch Thrust along the northeast terminus of the Wind River Basin, Wyoming. Cave Gulch is a pressure depletion reservoir that produces out of gas-charged fluvial, lenticular sands of the Upper Cretaceous

Meeteetse, Lance, and Tertiary (Paleocene) Ft. Union Formations. A typical well, drilled to 9,200 feet, has a combined net pay thickness in excess of 1,800 feet with density (2.65) porosities ranging from 12% to 26% and deep resistivities averaging about 100 ohm-m. Although no single well has been completed in all zones, current daily rates range from 3,500 mcf/gpd to 25,000 mcf/gpd on a per well basis; several of the wells have flat decline rates. Nominally, the Company expects to realize approximately 10 to 15 bcf/g for 40-acre locations from the wells located on the high part of the structure. Proved reserves are currently estimated at approximately 150 bcf in the Lance and Ft. Union Formations, but could ultimately be much higher. Barrett Resources acquired a proprietary 3-D seismic survey in early 1995 to corroborate additional development locations in the shallower pay horizons as well as to help substantiate deeper potential in the lower Mesozoic and Paleozoic sections. Since August of 1994, Barrett has drilled eight wells, completed seven, and is currently drilling two development wells. ■



William J. Barrett has been Chief Executive Officer since December 1983 and chairman of the Board of Directors since March 1994. He was President of the company from

December 1983 through September 1994. He has also been a director of Barrett Fuels Corporation since its formation in September 1990. Mr. Barrett's previous experience includes serving as Vice-President of Exploration and Director of Rainbow Resources, Inc., President and Director of B&C Exploration, and Chief Geologist for Inexco Oil Company.