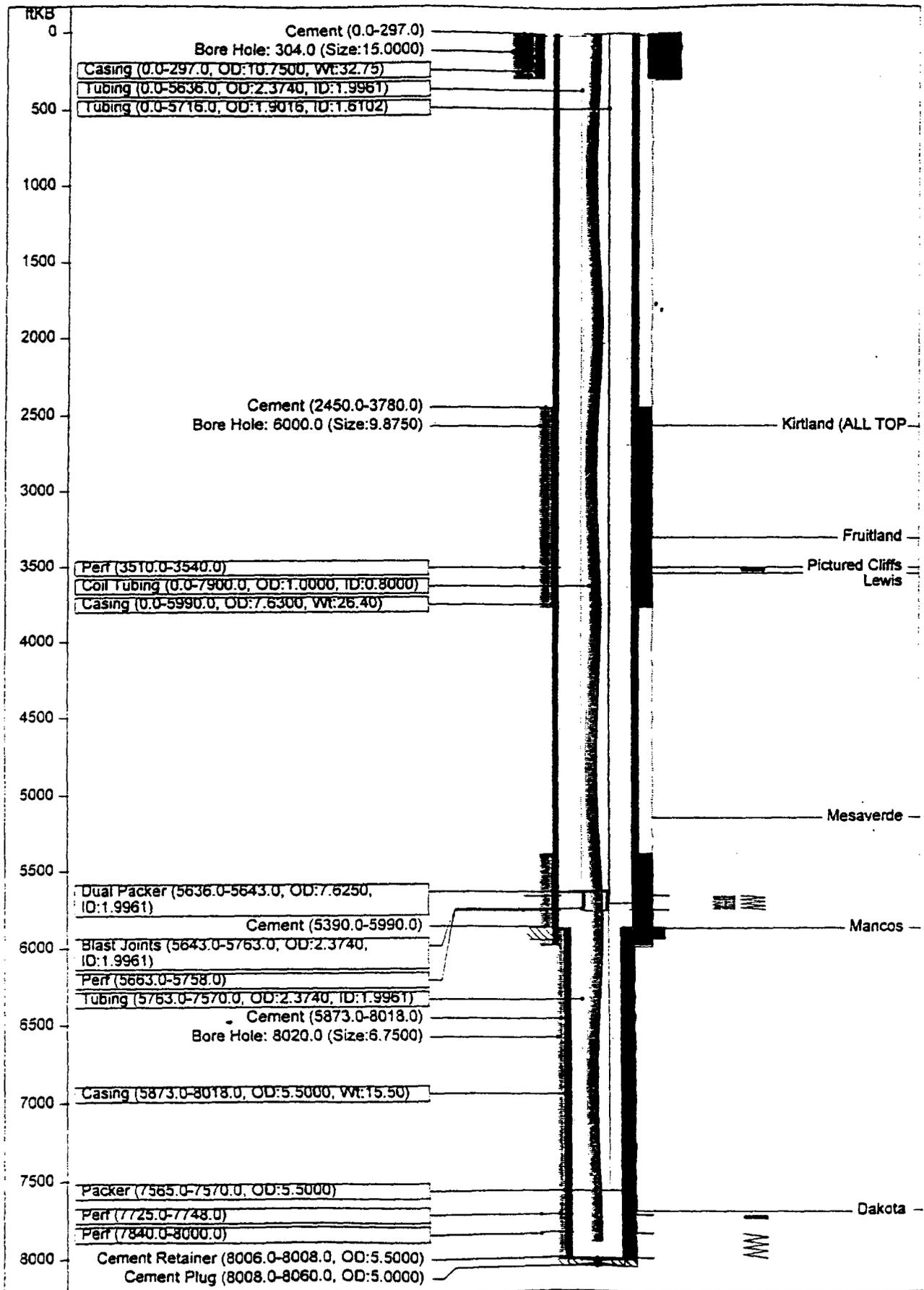
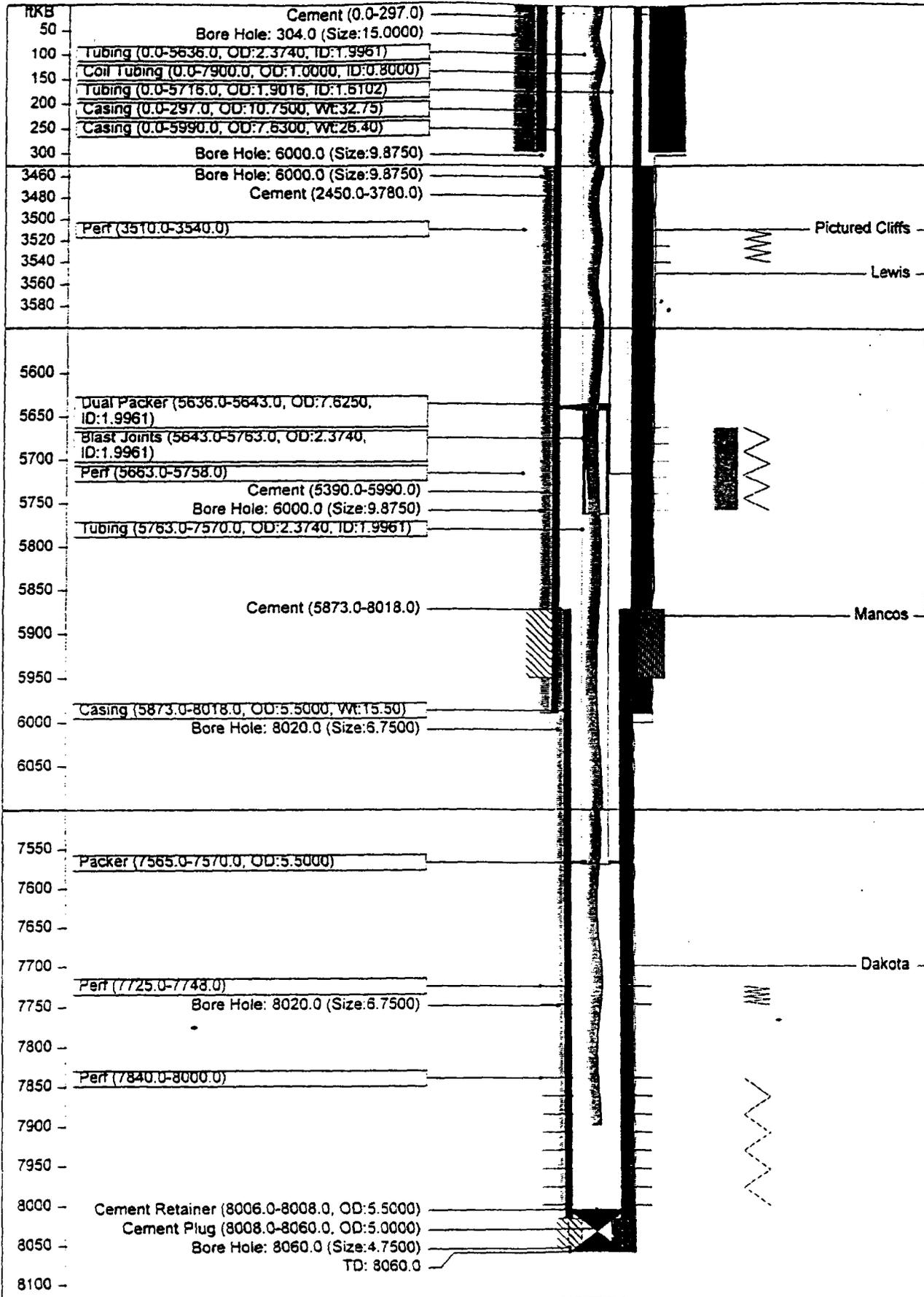


# JICARILLA B 9 A (GMH 9/9/97)



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**Conoco, Inc  
Jicarilla B Well # 9A  
Section 26, T-26-N, R-4-W  
Rio Arriba County, NM**

**RE: Downhole Commingle Application**

**Offset Operators:**

Chateau Oil & Gas, Inc.  
2515 McKinney Ave, STE 840  
Dallas, TX 75201

Burlington Resources  
PO Box 4289  
Farmington, NM 87499

## Jicarilla B No. 9A

### Downhole Commingling Justification

The royalty interests of the Jicarilla Tribe in all leases operated by Conoco are identical across all producing formations and will in no way be affected by the commingling process or the allocation of production to the various pools. The production and revenue benefits to be gained through downhole commingling will be equally realized by Conoco and the Jicarilla Tribe. This is specifically true of the Jicarilla B No. 9A well which will benefit as described in the following justification.

The goal of any prudent operator, to the benefit of all interest owners, is to develop and produce the maximum volume of hydrocarbons in the most efficient manner and with the minimum costs possible. Downhole commingling of San Juan Basin gas wells provides several significant benefits to all of the interest owners involved in those wells such as:

1. More efficient rate of recovery
2. Greater ultimate recovery
3. Less expensive maintenance and operation
4. Development of otherwise uneconomical reserves

The continued production of multiple gas pools from the same wellbore in most San Juan Basin wells is inherently inefficient and not only results in restricted producing rates, but reduces their ultimate recovery. Separately producing multiple gas pools is currently accomplished either by using multiple tubing strings or by producing one zone up the casing behind a single tubing string.

One of the major problems associated with such operational schemes is related to the production of fluids (oil, condensate and/or water). Efficient recovery mandates that these fluids be continuously lifted to keep the wells from loading up and either killing the wells or severely restricting their flow rates. However, another major problem is associated with the fact that most of the gas pools in the San Juan Basin, and especially the large Mesaverde and Dakota pools, are largely depleted and are down to very low reservoir pressures as a recovery mechanism. Therefore, most of these wells do not have sufficient remaining reservoir energy to adequately lift these fluids and maintain efficient flow.

With low reservoir pressures, the only way to keep these wells unloaded and producing efficiently is to pump these fluids either by beam pump or downhole plungers. The major impediment to resolving this problem lies in the fact that these wells are typically completed with either 4 1/2" to 5 1/2" production casing. This restricts the size of tubing that can be utilized for multiple zones. Many of the tubing strings are only 1 1/16" and will not accommodate plunger installation. Plunger lift becomes increasingly less efficient in smaller than 2 3/8" tubing.

Through the use of plunger lift operations, to keep these low pressure wells unloaded, Conoco has experienced dramatic increases in production. Such increases in producing efficiency will result not only in higher current rates but will promote greater ultimate recoveries. However, these significant improvements in production cannot be accomplished in wells with small multiple tubing strings or with dualled production up the casing.

Downhole commingling to increase efficiency, development, and ultimate recovery from these mature gas reservoirs is the most important basin activity to occur in several years. The major emphasis of downhole commingling is, after all, on increasing produced volumes. Through this procedure

1. Many shut-in and abandoned zones are being reactivated
2. Many low rate completions are being revitalized or even doubled in rate
3. Even higher rate wells are benefiting from rate and recovery increases
4. Many new wells are being drilled initially as downhole commingled wells that could not be economically developed otherwise.

As a side light to production advantages, there are numerous additional benefits to be realized from reduced operational costs and maintenance. Reducing these costs are not only for the benefit of the operator. This results in longer well life and higher margins of income for all interest owners. However, operational costs savings are secondary to the benefits of improved recovery and should not be the focus of this program.