

The Big Ten: Best Western Canadian Discoveries of the 1990's - Part 1 - Alberta Plains

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ABSTRACT

Explorationists all over the world are fascinated by the largest and most significant oil and gas pool discoveries. In a mature basin such as Alberta, these discoveries are becoming less frequent, yet they still inspire, and remain the stuff of dreams. Usually, potential large discoveries are amongst the best studied, publicized, and talked about. Everyone wants to know where and why these large pools were found. There is wealth of information to be learned from these discoveries.

The last decade of exploration in Alberta has resulted in some very impressive discoveries. Our interest is in examining just how big these pools are, where they are located, and how they rank amongst each other. We also wanted to know who discovered them, what formations stand out, and are they oil or gas. To be considered, we searched the discoveries in Alberta for pools where the discovery well was drilled in the 1990's, where cumulative production has exceeded 2 MMBOE (based on a 10:1 conversion), and where good production is expected to continue. We attempted to include pool reserves, although accurate reserve data is not always publicly available. In this portion of the study we did not consider the foothills or structurally complex settings.

Basing the rankings on cumulative numbers would appear to give the advantage to pools discovered in the early 1990's. This is somewhat true, but half of the significant discoveries we have identified were made after 1995. The oldest pool was discovered in 1990, and the youngest in 1997. A full 70% of the pools were discovered in 1994 and 1995. It is not surprising to discover that most of the Top Ten were found in deep Devonian formations. However, discoveries in other formations ranked highly on our list, and a Cretaceous Glauconitic pool made the Top Ten. The recent focus on big gas is not really reflected in the distribution of discoveries as there is a general split between oil and gas.

Some aspects of the details and distribution of significant discoveries surprised us. This compilation may not lead towards any new play concepts; but the very idea that there are still significant finds in such a mature basin is comforting, and keep explorationists looking for the members of the next Big Ten.