

## **New Opportunities in a Mature Basin: Gas Discoveries in the Western Canada Sedimentary Basin**

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Mature basins are highly-evaluated areas with limited remaining undiscovered potential for growth. Exploration opportunities that remain occur in accumulations that are uneconomic due to a number of factors: small pool size, low productivity, higher exploratory risk or distance to infrastructure. Conventional wisdom advises investors targeting growth to redirect exploration investment from mature basins to frontier basins.

The Western Canadian Sedimentary Basin (WCSB) was declared mature as early as the 1970's and some firms reduced exploration investment or chose to exit. Since then, annual gas production from the WCSB has grown by over 10 Bcf per day and currently supplies over 20% of North American demand.

Analysis of over 100,000 gas zones connected between 1990 and 2004 shows that production from new pools is a significant component of the basin output. New discoveries have occurred throughout the basin in a wide range of plays. The size, characteristics and development of these new pools contrasts with pools from older discovery periods. Why were these recent opportunities not recognized earlier in this "mature" basin?

Industry's perception of the WCSB's remaining potential has increased as stranded gas became connected to a growing continental market and as the area of the basin connected by gas gathering infrastructure doubled. Economic, regulatory and technology factors have also served to broaden the opportunity set. Development of the WCSB provides a useful analog for other "mature" basins with stranded gas.