



Deep Basin

Play Characterization

A FORWARD ENERGY GROUP MULTICLIENT STUDY

Independent, current and innovative analysis by industry experts on the trends, sources and operators of new gas supply in Western Canada.

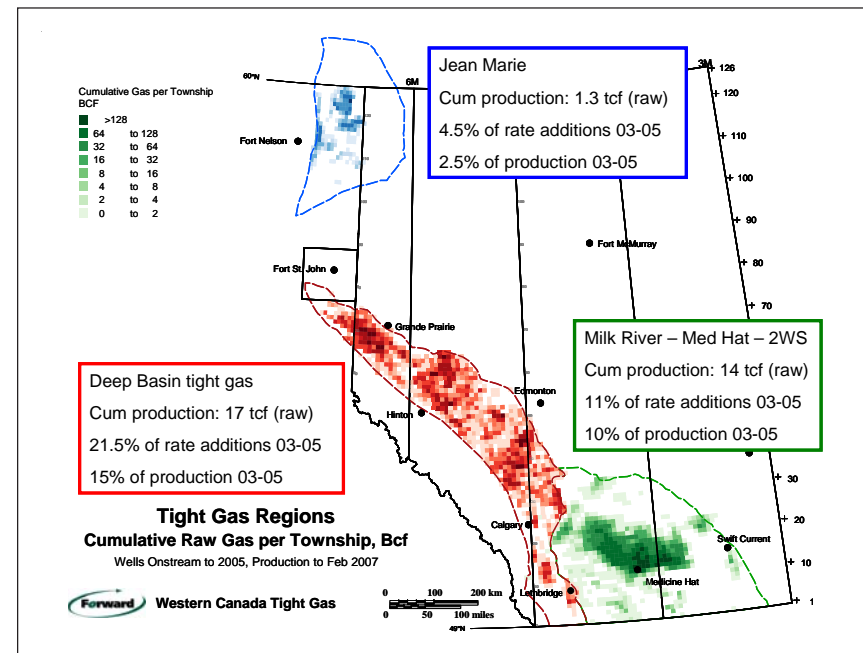
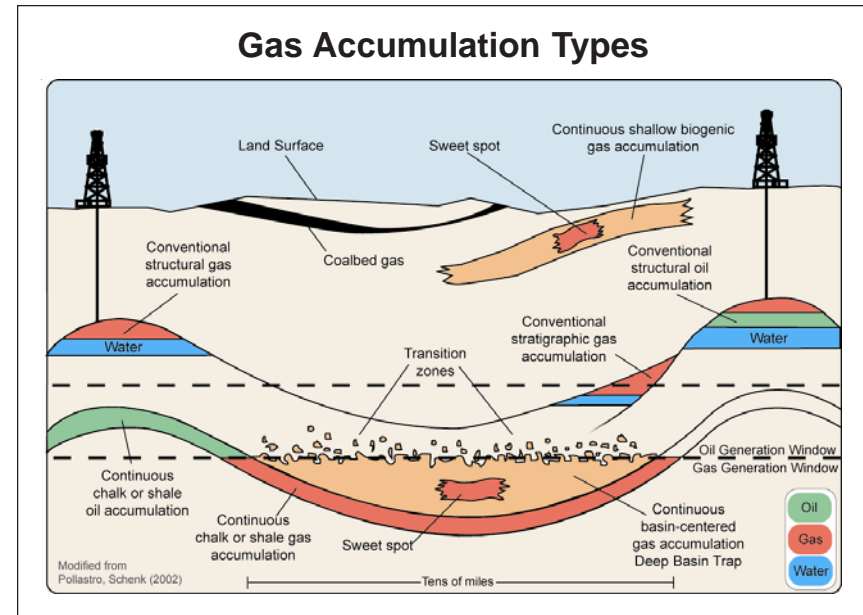
Tight Gas

With supply declining from conventional sources, tight gas clearly is, and will be, an increasingly important source of natural gas supply in Canada and the United States. Forward Energy has estimated tight gas production at 30% of total Western Canadian Sedimentary Basin (WCSB) output in recent years.

Tight gas includes all the gas resources occurring as free gas in the pores of clastic and carbonate reservoirs in regionally pervasive continuous gas accumulations.

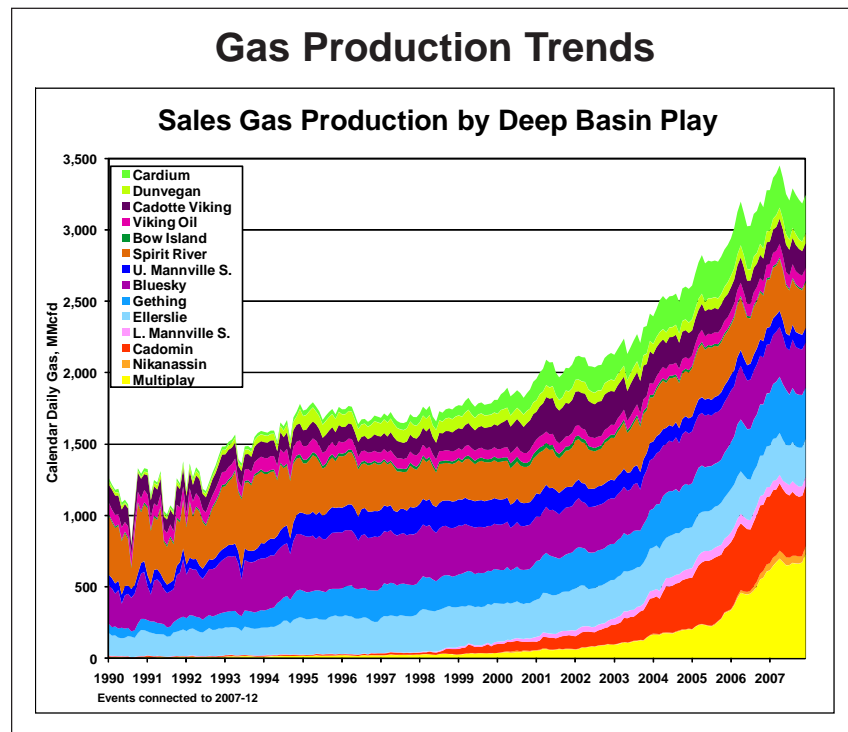
Significant reservoir stimulation and/or advanced drilling technologies are required to establish economic flow rates and recovery. Within this broad definition, however, significant variances in reservoir properties occur. High permeability zones are often referred to as ‘sweet spots’.

There are 3 major continuous gas accumulations developed in the WCSB that we consider as tight gas areas: Deep Basin, Jean Marie and Medicine Hat/Milk River. All of these regions demonstrate recent growth.



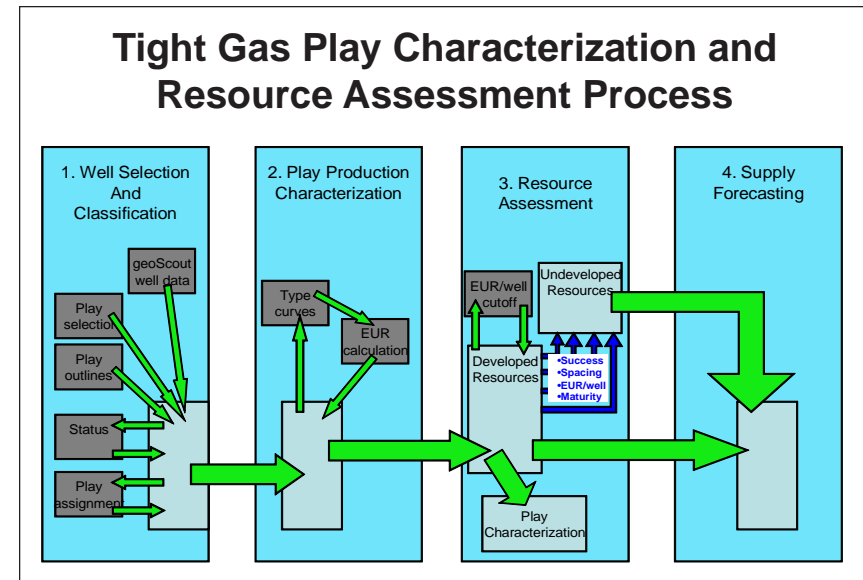
WCSB Deep Basin

The Deep Basin region is the largest and one of very few growth areas in the WCSB. The current rate of 3.2 Bcfd is more than triple the 1990 rate. Over the 18 year period, to 2007, the region's production rate increased at a compound rate exceeding 7% per year. The Deep Basin plays in aggregate accounted for 19% of all 2007 WCSB output. Forward Energy has characterized the production performance of zones producing from 14 Deep Basin plays covering 8 stratigraphic intervals.



Forward Energy's Play Characterization Process

The Forward Energy process, refined over the past eight years is rigorous, consistent and complete. Commencing with data collection, the overall process includes database development, analysis and interpretation, and ends with output creation. Database and analysis sub-processes are as follows.



Well Selection and Characterization

As the foundation for the subsequent analysis, Forward Energy has established a well database. Although initiated from public data sources (geoSCOUT, et al), many value added features are incorporated. Years of experience at building similar databases, combined with innovation, result in enhanced data. These features include:

- Play definition: stratigraphic and geographic
- Target play and producing play assignment (Although 52% of Deep Basin producers occur in commingled pools, we were able to assign 40% to pure Deep Basin plays)
- EUR / IP rate / decline rate estimation
- Surface loss and producing status
- Well orientation, fracture stimulation, producing zone depth, well completion type
- Initiating and current operator (with succeeding operator as appropriate) assignment
- Year drilled and year onstream assignment
- Township and section assignment
- Data ‘cleansing’ and filtering

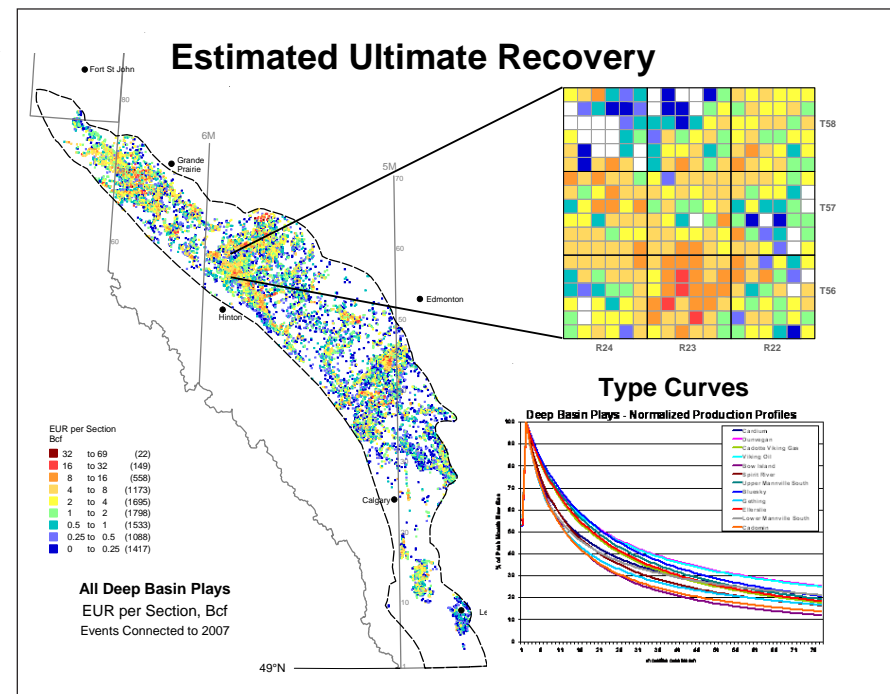
With respect to the 40,000 square mile WCSB Deep Basin region, the Forward Energy database currently contains data on almost 73,000 wells drilled, through all time. 14,500 gas-producing events, in 13,300 wells, have been connected to year-end 2007 from one or more of the 14 producing Deep Basin plays.

Regional Characterization

From this proprietary database, Forward Energy develops analysis customized to each client’s specifications. The tools and metrics include:

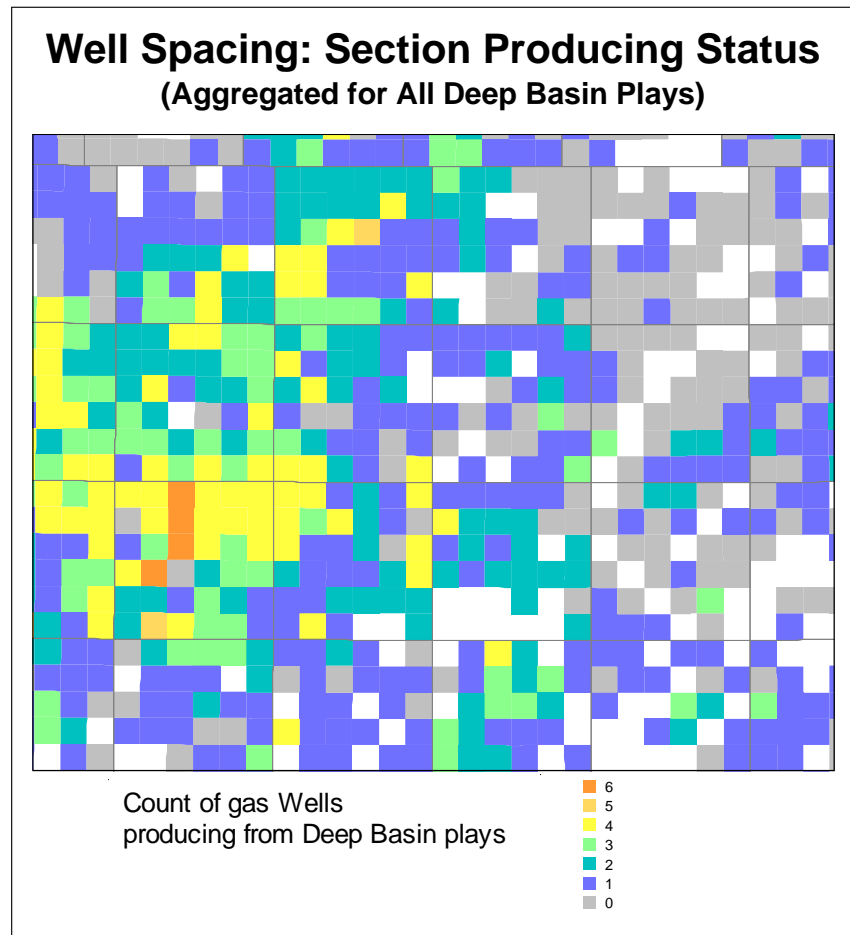
- Trending charts (by play, by operator, by area, by technology, etc.)
- Maps
- Type curve development
- EUR estimation, by R/P method
- EUR distributions, with cutoff
- Interval penetration, play maturity
- Success rate (by play penetrated, by area, by time period, etc.)
- Well spacing analysis
- Resource estimates
- Future supply forecasts

The outputs from any phase of the Analysis are a mix of



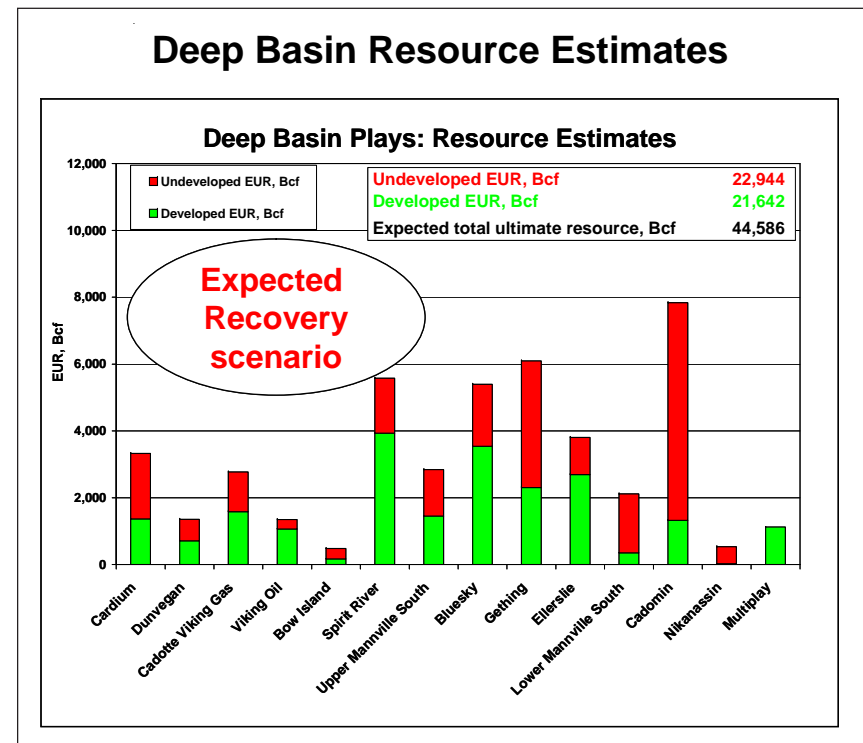
graphical charts, summary tables, detailed maps and focused interpretation/commentary.

With the recent changes to regulations, commingling within Deep Basin wells has become a significant operational process. While well production performance has generally increased, there has been a coincident loss of precise source play information. Forward Energy has developed proprietary characterization processes to identify zones contributing to Multiplay performance.



Resource Assessment

Many resource assessments for unconventional gas are based on gas-in-place, or bottom-up approaches. In contrast Forward Energy's resource assessment is conducted from a successful efforts, or top-down approach. Expectations for undrilled areas are extrapolated based on existing connections of gas production, future success rates, successful productivity and downspacing. Each play, or sub-play is evaluated uniquely. In the 'Expected Development' scenario, a total recoverable resource of 45 Tcf was forecast. This represents an increase of 100% from the 22 Tcf developed and connected by the end of 2005.



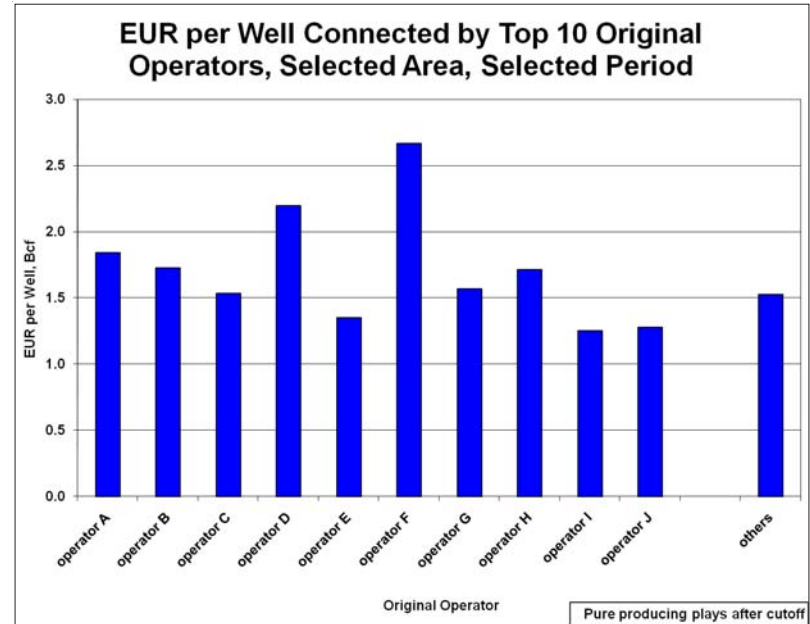
Additional Analysis

In addition to the basic Deep Basin play characterization, Forward Energy offers supplementary, value-added analyses. The **Operators/Benchmarking** process incorporates publicly available data for well ownership/operatorship. Within the Benchmarking component, selected peer operators are compared for their well activity, production, completion styles, entry timing, efficiency and many other physical metrics. In selected cases this data is supplemented with client data (such as well working interest and non-operated wells).

Value analysis addresses questions such as: Which operators (or plays) are (how) profitable? In the Value phase, financial inputs (commodity prices, capital costs, operating expenses, inflation factors, etc.) are integrated with the physical models. From these economic models, value performance indicators such as Rate of Return, Risked F&D cost, and NPV are determined.

The Benchmarking and Value phases of the analysis are conducted as confidential and exclusive projects. Significant value added can be achieved when incorporating confidential client information on well results/forecasts, capital and operating cost estimates, facility and infrastructure positions, working interest positions, etc.

Selected Area Top Operators



Summary

Forward Energy's consistent and rigorous study process, combined with our experience and insights are a preeminent tool for any client evaluating an existing position within, or considering entry into, the Deep Basin region of the WCSB.

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