

Alberta
Drilled and Completed
Engineering Costs Breakdown

Costs Update
to June 30, 2009

Prepared for

Alberta Municipal Affairs and Housing
Assessment Services Branch
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By

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Summary of Cost Factors

Industry Overview

While already suffering from a “gas bubble”, changes in oil and gas royalty rates and overall slowing in demand for petroleum, the industry in Alberta was a large target for the “global recession” which hit in late 2008 and carried through to the present time in 2009.

With significantly lower commodity prices for both oil and gas during the first half of 2009, the industry has not yet recovered, even with slowly increasing prices for petroleum.

Drilling rig and service rig working activity rates in mid 2009, are around half those of 2008, which in itself was a poor year. June drilling activity in Alberta saw an average of around 100 drilling rigs working (out of a fleet of over 500), and about 79 out of 519 available service rigs working. With 20% of drilling rigs and service rigs working, one could say things are definitely slow.

If there is an upside to this situation, it is that some costs have tumbled, given that many contractors are close to shutting their doors. In the areas of services and materials where many competitors exist, costs have dropped by 30% or more. In most areas of costs, the average reductions from 2008 are in the range of 12-25%. Drilling rigs, service rigs and equipment rentals have dropped in price on an average of 15-20%, depending on the Contractor. Larger contractors have tried to hold prices up, but are being undercut by smaller ones.

A few costs have held, such as rig transport, and other services where equipment can be used for other industries and uses, thereby maintaining equipment utilization without having to depend solely on oil and gas clients.

In many cases, Contractors have moved equipment and personnel to B.C and Saskatchewan in hopes of obtaining work there, however activity levels in those provinces, while higher than in Alberta, are still much reduced from the previous 3-4 years.

While fuel prices have dropped by .30 to .40 cents per litre, the reduction isn't having much effect on spurring drilling or service activity.

With Oil prices hovering around \$70.00USD and natural gas prices in Canada at around \$CAD2.50, it could be some time before we see anything near to 2006/07 activity levels.

The Catch-22 is that while there is an increase of available personnel for contractors to hire, they are generally not needed and layoffs which have been ongoing for several months, continue.

With the resulting decrease in world demand for commodities, some prices for equipment or materials made of steel, aluminum and other metals have decreased by as much as 8-10%, however, prices seem to be holding for many items, such as machined and milled goods (packers, wellheads, down-hole hardware), as inventories have dwindled over the past two years and supplies are running short of many goods which are not currently being manufactured.

The big problem here is that when drilling does kick off again, and it will, costs will be considerably higher for goods as they will be in very short supply, such as happened in 2006.

As a result of all of the above, a comparison of the current costs for the 2009 Drilling and Completions Cost Estimates for Area 5, WL10, WL20, WL40, WL50, WL70, WL90, WL110, WL230 and WL240, shows that while activity has continued to decrease in the last 12 months, in most cases costs have also decreased in most areas, albeit modestly in those cases in which inventory shortages exist, or where services have moved out of the province, or are working for non-“oil patch” industry.

With significant additional reductions in the number of wells drilled in Alberta to June 2009, activity levels are expected to continue to be low for the balance of the year.

Depending on who you talk to, expectations are for more of the same, or for an uptick in the fall, as oil and gas prices are expected to firm. It is unlikely, however, that any reasonable amount of increased activity will occur until early 2010.

Application of Price Information

Cooperation from suppliers and contractors has improved, as they mostly have little to do, currently, however, a much wider variety of costs and prices were obtained in the pursuit of this study, which required more than the usual three prices per category in many cases. In some cases, prices quoted by individual contractors were much lower than their competitors for the same services. In those cases, so as not to allow discounting to skew results, median prices were used, instead of averages.

There was little concern this year for guaranteeing prices quoted, even though some inventories are short, as “clearing out inventories would be a good thing.

In order to create the presentation of prices which are supplied with this report, several steps are taken in its construction:

1. Service and materials suppliers are contacted for prices in each category of cost. These suppliers are based mostly in Alberta, but most are major and have bases and operations all over North America, and some are international.
2. While a minimum of 3 suppliers are contacted where possible, it is not always possible to get 3, and for the most part a minimum of 2 are provided.

3. Both Operators and Contractors are contacted to discuss current industry trends, such as days required to drill, days required to service, time and costs in general and areas where increases have occurred. Also discussed are topics on technology change if any, problems which they are dealing with and where they see the industry going.
4. Contractors and Operators are also polled as to what they are currently paying field and base personnel. Many are not willing to discuss this due to fears of poaching, but the author has developed relationships with many, over the years, and feels that enough information is provided to feel comfortable in making both suppositions and predictions in this regard. As such, percentage increases in wages, and the facts that labour is in short supply, is common industry knowledge.
5. Cost developed for this survey do not specifically use either industry or government Cost Price Indexes. For the most part, these indices are too general or do not represent the specifics of what is actually happening in Alberta on a local basis. Most C.P.I's do not adequately reflect the scope of either the Oil and Gas activity levels in the business locally, nor do they take into account regional challenges.
6. While some Operators deal with suppliers outside of the local area, they do so through local offices of those businesses. As such, prices quoted are usually and mostly provided either in Canadian or U.S dollars. While currency exchanges are taken into account for equipment which may be supplied from the U.S., for the most part, over the past 3 years, the exchange rate for equipment imported does not provide a large differential, and in fact, the \$CAD vs the \$USD continues to be relatively close and stable and has been for over two years.
7. All costs acquired for the purposes of this report are based on supply within a 50 km radius of Edmonton, Alberta. This area is central to both Alberta and to the major supply depots of most suppliers contacted. As a result, it would be unusual for any equipment or service to NOT be available in this area.
8. In order to maintain the minimum standards of both the government and industry, only those contractors and suppliers are contacted who are certified as required for their particular industry segment, and are accepted by major Oil and Gas Operators. Few Contractors or Suppliers in Alberta do not have requisite certification, as the must do so to achieve placement on the Bid Lists of Major Operators.
9. Unless otherwise requested, all costs are based on those in place on June 30, of the current years study.
10. In order to do the requisite calculations required for all the well depths, in all the WL categories, an MS Excel spreadsheet program, which was created by the author, several years ago, for the generation of A.F.E's (Authority for Expenditure) for Oil and Gas Operators, and which has been used for several years to that purpose, is used.

The program utilizes a very detailed input of factors used to calculate costs in drilling a well.

Every service provided, every tool required, every type of material needed, indeed every aspect of the costs of drilling a well is included, and costs for each and every service are updated, as required.

11. Specific price information for every cost is input into the program. That price information along with all the other data relating to drilling, completing and tying in the well is input into the calculations done by the program which determines actual category and total well cost.
12. The program then transfers specific information to the Individual Well Cost Summary sheet which does additional calculations for other parameters input into it. A total of 70 such spreadsheets are used, one for each well in the 10 WL categories and the 7 wells in each category.
13. The numbers from each of these Individual Well Cost Summary sheets are then transferred to the "Drilled Wells Cost Study Update" Summary sheets for each WKL category, which are then provided to the A.M.A.

The costs which are presented to the A.M.A, are derived by a highly complex and sophisticated system, which ensures that the most accurate data available is provided.

Conclusion

With world oil markets still fluctuating significantly and with natural gas prices suppressed, it does not appear that things will return to anywhere near normal in the Oil and Gas industry in Alberta for some time to come. That being said, should a return to higher commodity prices occur, or should demand for petroleum increase, then perhaps things will improve.

The financial incentives, bail-out packages and programs for ending the recession which have been implemented by both the U.S. and Canadian governments seem to be beginning to take effect. Recession talk is slowly giving way to some optimism that things are improving, and other markets such a real estate are beginning to slowly come back.

Pushed mainly by commodity speculators, the price of oil worldwide is expected to continue to increase beyond USD\$70.00/Bbl, and effects of continuing worldwide tension especially in the middle east could exacerbate demand.

With natural gas prices returning to higher levels of \$4-6.00USD/Mcf from previously lower levels of \$3-4.00USD/Mcf., drilling activity in Alberta is may once again increase in early 2010. While this is considered highly optimistic by many, the most likely scenario expected by most is for a slow return to normal activity levels (such as 2007) over the next 1-2 years.