Gambling on the Market:
Are Oil companies hedging away their profits?

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Executive Summary

In recent years, the primary focus of the world has been on watching the growing hunger for energy and commodities by India and China. The energy sector, in particular oil and gas, has been the benefactors of riding this boom to amazingly high prices reaching US $70/barrel at times. These abnormally high prices coupled with new technology has spurred on immense develop in the oil sands. But the uncertainty of fluctuating prices has forced some companies to take large hedging positions in order to mitigate the exposure risks and attempts to capture the rise in prices before they dropped. Unfortunately for many companies, the prices have continued to climb and they have suffered losses due to aggressive hedging. Although the press has focused on the negative aspects of lost revenue, it is clear that derivatives are effective hedging instruments for companies to mitigate or neutralize exposure to risk. The use of sophisticated combinations of collars, swaps and forward contracts allow companies to effectively hedge foreign currency, interest rate and commodity pricing risks. Even though there is no consistent hedging strategy for the oil industry, derivatives offer companies the ability to tailor plans to hedge against their identified risks. Companies hedging largely in the industry are protecting cash flows for huge capital expenditure programs that promise to bring in billions in profits. Thus, it may be sad to miss out on huge gains today for the comforts of certainty, but the investments being made will surely provide pay-offs that will over shadow recent memories.
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Introduction

In recent years the extreme boom of the oil and gas industry has drawn immense attention from consumers, to industry, to investors and financial markets. The significance of this recent boom in the industry has been capped by sharp increases in crude oil up to almost US $70/barrel. This intense boom has also raised attention to the fiercely hunger need from energy displayed by a rapidly advancing India and China. At the national level, Alberta’s oil sands reserves have become a focal point for the world of energy consumers. Along with the incredible boom and revenues comes greater uncertainty in the energy markets, but with every positive comes some negatives.

The flat period in the market preceding the boom created a cautious environment based on US $20/barrel of crude, leading to cautious decisions among corporate executives to make prudent decisions to maximize profits. Thus, many companies were hedging their bets on using portfolios of derivatives to ensure that steady cash flows and exposure to price risks were mitigated. The use of complex financial instruments were sought in order to maintain margins and profits to plan for future developments. Risk management was hitting high and derivatives were seen as the key to mitigating financial risks. But no company could have anticipated the energy boom to come and consequently were chastised in the media for hedging away huge earnings. Throughout the past few years, numerous articles were written discussing the huge decline in revenues due to poor hedging decisions and share holders reacted with displeasure.
This paper seeks to identify whether a consistent hedging strategy exists for the oil and gas industry, whether accounting regulations provide sufficient information to understand what companies are doing, and whether hedging is in deed negative.

The paper will begin with a detailed overview of derivatives and commonly used financial instruments to achieve hedging. Then a description of the methodology for the review of the top oil and gas companies in Canada. The analysis will begin with a discussion on the world oil markets and national trends within Canada. Finally, a review of the various companies studied will be discussed with a view to identifying hedging strategies for the oil and gas industry.

**Derivatives**

Derivatives are financial instruments based on some form of underlying primary security. This means that the value of a derivative is derived from the natural exposures that affect the primary security on which it is based. Financial securities have been used for thousands of years and the existence of derivatives can be traced back to the middle ages. Derivatives were initiated in the middle ages to meet the needs of agricultural markets and to benefit the farmers producing agricultural products. The derivatives used were based on the agricultural product produced and gave farmers the ability to smooth out cash flows and address financial uncertainty through selling these financial instruments backed by their products. In essence, the early form of derivatives were contracts that allowed farmers to sell future production at set prices to ensure that costs would be met while delivering the products. This concept of selling future
commitments through financial instruments has become a very valuable tool throughout the financial world and offers new dynamics to risk management. Although the concept of a derivative is quite simple, modern finance has developed complex models and theory to value and structure derivatives to meet ever need or situation. The majority of these theories are based on pricing theory of derivatives due to the fact that the value of a derivative is based on a known value component, the primary security, and an unknown value, value of time. The fundamental problem remains with the inability to assess the true value of time. Although accepted pricing models have been developed, it is this fundamental balance of the known and unknown that gives derivatives the flexibility in mitigating risks.

The risks that the original farmers were seeking to mitigate are not much different than modern investors or companies. Risks range from market activities, economic trends, social-political instability, financial risks, operational risks and environmental risks. The use of derivatives to mitigate risk is achieved through hedging practices. Hedging is a form of insurance or a tool for neutralizing risk in which an identified risk is offset through the use of derivatives as a financial market commitment. Therefore, hedging through derivatives can be tailored to specific risk exposures. These practices clearly make use of the value of the unknown component of derivatives. Hedges neutralize risk when set prices are committed for the future while insurance is provided through minimizing the downside effects of the identified risk exposure the company or investor wishes to mitigate. The use of hedging also allows companies to ensure a level of stability and certainty to their operations and financial performance. These insurances
allow for better planning of future operations, much like the original farmer’s wish to plan for crop production. But derivatives are not limited to risk management but can also be engaged in speculation practices. Speculators are opposite to that of a hedger, in that speculators seek to take risks in betting on future positions in the market. In speculation, the unknown component value of a derivative is what is being bet on for the future. This dynamic relationship of completely opposed strategies makes derivatives a very valuable tool for the financial world, on one hand offering insurance and minimizing risk while on the other hand being used as a method of accepting risk and betting on future outcomes.

Derivatives are based on two positions available to any user, a long position and a short position. The long position simply represents that user or the party of the contract who intends to buy. Long positions generally reflect positive relations to price movements and benefits, thus as a holder the higher the price of the underlying asset the more value is gained. Thus, the long position also represents the natural asset holdings of a company, which is positively affected when its products sell at higher market prices to generate higher gains. The short position is the opposite, a user or party holding the other end of the contract who intends to sell. The short position has the opposite relationship to price movements and benefits, thus a short position gains value when prices of the underlying asset drop. A short position also represents anything that a company may need to fulfill operations, thus a cost item which lowers gains if prices increase. Companies need detailed understandings of which positions they are facing when attempting to mitigate risks, the act of hedging involves parties to counter their exposure through taking the opposite position in a derivative.
Derivatives can be traded in a couple fashions, through organized exchanges or over-the-counter markets. Organized exchanges such as Futures markets and Options markets allow for structured exchanges of these types of derivatives. Futures markets have been in operation since the mid-eighteen hundreds. The value of organized exchanges is they allow for one central place for trading which helps buyers connect with sellers more easily. Exchanges also guard against default risk issues in contracts between counter-parties. An Options Exchange generally deals with the financial instruments and pay outs only, which means that delivery of products do not usually take place. But Futures Exchanges deal with the actual delivery of the underlying asset. Thus, exchanges can offer a financial means of achieving risk management or standardized contracts for trading assets. Exchanges are also more efficient as they are regulated, offer security and set products, derivatives, for sale. Thus, each contract is the same and priced at market values. Due to the standardized nature of exchange markets, the contracts are fixed to standard time frames and quantities for each contract. Finally, exchanges are sufficiently large and thus offer higher liquidity to users. This liquidity and access to buyers and sellers attracts speculators to the exchange. Speculators use the exchange to enter into positions to bet on the future. Derivative contracts can be transferred/traded numerous times before the expiration/delivery date. Over-the-counter markets are composed on informal networks of dealers or parties. This market is also extremely valuable as it offers the flexibility for customized contracts to be created to meet each parties needs. This freedom allows for parties to negotiate very specific terms of derivative contracts to help meet their needs of mitigating risk. This flexibility allows for parties to determine various quantities and time frames for each contract to suit the party’s needs. The over-
the-counter market also allows for contracts that actually meet the needs of selling and delivering the final product, instead of just dealing with a pure financial instrument.

**Options**

An option is a contract for an agreement to buy or sell an asset at a set price, strike price (X) or exercise price. An option is like a form of insurance as a derivative. Options act as insurance because it gives the right for execution of a transaction but not the obligation, therefore the holder of the option can choose to exercise its rights selective to gain the most benefit. Options can be executed through the physical exchange of the asset or simply settled through transferring the difference in monetary terms between the counter-parties. European options are options that are only exercisable on its expiry date. This restriction means that the holder of the option must wait until the final date in order to decide whether the options are exercised or not. A more flexible option is the American option that allows the holder to exercise the option anytime from inception to the expiry date. This flexibility gives the holder of the option more value since the contract can be closed out early if the level of gains desired is achieved.

**Calls**

Call options are specific in giving the holder the right to buy an asset at the exercise date at the strike price. The call option is used to set the ceiling price the holder is willing to pay for an asset. This option allows the holder to minimize the exposure to rising prices of the asset. Therefore the pay-off diagram for the holder of a call option
(Figure 1) enables the holder of the option to gain value from the option if the price of the asset exceeds that of the strike price. The long position in a call option is held by the owner of the option while the writer (seller) of the option is in a short position. The pay-off diagram for the writer of the option (Figure 2) shows that the writer makes the money from selling the option but looses as the price of the asset exceeds the strike price.

### Puts

Put options are the opposite of a call option; puts give the right to sell an asset at a set strike price at the expiration date. The put option essentially sets a floor price that the holder is willing to sell the asset at. This form of insurance protects the holder from declining price effects of the asset. The pay-off diagram for the holder of the put option (Figure 3) allows the holder to gain value as the price of the asset declines below that of the strike price. The holder of the put option is in a long position of the put and the writer of the put is in a short position of the put. The pay-off diagram for the writer of the put
(Figure 4) shows the writer making money from the sale of the option but loosing money when the asset price drops below the strike price.

Collars

Collars are a combination of puts and calls that create a ceiling and a floor for the option. Collars will limit both the gain and lose depending on the selected combinations available for pairing calls and puts. For the combination of a long call and short put (Figure 5), the holder of the collar is setting up a range of prices for buying the asset. Essentially this collar creates a long position on the asset to curb the up side costs if the price of the asset exceeds the set ceiling price. The second combination of a short call and a long put (Figure 6) creates a ceiling and floor price for selling the asset. This type of collar allows the holder to create a short position to mitigate the risk of the asset price dropping below the floor price. These collars are used as a method of acquiring the insurance required from an option at no cost since the short put or call in the collar are used to generate the proceeds required to buy the opposing long call or put position to
make the collar. Collars are not necessarily costless if the proceeds from the sale of the short positions do not cover the desired long positions, but as a costless tool for mitigating exposure risk, costless collars are very effective. The only drawback from a collar is that the price for minimizing losses, the holder will also curb the ability to take advantage of great gains if they occur.

![Figure 5 – Costless Collar Pay-Off (Long Call/ Short Put)](image1)

![Figure 6 – Costless Collar Pay-Off (Short Call/ Long Put)](image2)

**Forward Contracts**

Forward contracts are the simplest form of a derivative. Forward contracts are agreements between parties to buy or sell an asset at a set price on a set date. This derivative is dealt purely on the over-the-counter market. The flexibility of the forward contract is based on the independent negotiations between the parties to reach the best agreement to suit each party’s needs. Forward contracts are different then options as the delivery of the asset is required on the delivery date. Forward contracts are also a no cost derivative as the two parties enter into the agreement based on the mutual acceptance of the contract stipulations. This derivative completely neutralizes the exposure risk the
parties may have with the underlying asset since the quantity and price is set in the forward contract. However, there is still credit risk for the two counter-parties for default on the contract.

**Futures Contract**

Futures contracts are similar to forward contracts but they are traded on organized exchanges. Futures contracts are also standardized in quantities and price of the assets unlike the individually negotiated forward contracts. Futures contracts are also more transparent as all the prices and requirements for the contracts are public knowledge. The liquidity of the futures contracts and the facilitation of trading through the exchange also mitigate the default risks. Default risk is mitigated through the requirements for a margin account which each counter party must pre-deposit funds to back each contract held. Futures contracts are also costless to enter into, except for the margin requirements, and payments are settled on the delivery dates. Futures contracts are limited for mitigating all exposure risks due to the set time frames for each contract. The inability to precisely match time frame requirements for exposure risk may reduce the effectiveness of the hedge position taken. Two common futures markets for commodities are the New York Mercantile Exchange (NYMEX) and the Intercontinental Exchange (IPE), which includes the International Petroleum Exchange.
**SWAPs**

Swaps are an agreement between two companies in which cash flows are exchanged throughout a set period of time based on the value of the underlying asset. Swaps are purely financial agreements between the counter-parties and no delivery of assets takes place, the quantities used to set the cash flow exchanges are based on a notional quantity of the underlying asset. Swaps are exchanged in the over-the-counter markets and each swap is negotiated separately. Swaps are another method of neutralizing the exposure risk of a company through accepting a fixed price for an asset in the future. Swaps as a derivative originated in the 1980s and was subsequently popularized by Enron through their use of natural gas swaps. The most basic swaps are referred to as plain vanilla swaps: simple swaps of one security for another to exchange for maturity dates, fixed prices for floating prices or differing interest rates. Swaps are commonly used for foreign exchange and interest rate exposure. But commodities are using swaps more to eliminate exposure to price changes. Commodity swaps are specialized swaps to mitigate commodity price exposure (Figure 7). Using an oil company for example, the commodity swap would be the arrangement set between the oil company and an energy trader to exchange a fixed price per barrel of oil for the spot price, this agreement neutralizes the price exposure for the oil company since they will receive a fixed and steady cash flow and avoid the uncertainty of spot prices in the future. The oil company will then sell the oil on the market as per normal at market prices and pass the market price back to the energy trader. The cash flow exchange in a swap usually results in the payment of the difference in prices vice transferring all the stated monetary values. The swap will provide a similar pay-off diagram to that of a forward contract but
a swap will include multiple transactions throughout a set time frame vice one transaction on the delivery date. The swap is also similar to that of a long put position since the company holding the commodity will fail to gain full value if the spot price is above the fixed price stated in the swap.

![Commodity SWAP Diagram]

**Methodology**

The methodology for the research performed on hedging practices for oil companies were firmly based on public sources of information through annual reports. The use of public sources allowed for easy access to information and tested the value of hedge accounting standards set by Financial Accounting Standards Board (FASB) 133 and the Canadian Institute of Chartered Accountants (CICA) Handbook: section 3865 – Hedges. The importance of the Financial Accounting Standards Board 133 on hedging is based on the fact that all oil companies operate in the United States and were required to
report financial states in accordance to FASB 133 since January 1, 2001. FASB 133 instituted the standard of mandatory reporting of hedging practices for all companies in terms of recording all derivative activities on the balance sheet as either an asset or liability based on fair value assessments of each hedge position taken. This regulation attempts to add transparency in reporting hedging gains and losses for companies. The updated CICA handbook regulation on hedging does not officially take effect until 2006. The CICA handbook attempts to detail clearer guidelines on hedging relationships and accounting practices. Thus, the research will enable comments on the usefulness of the reporting standards in place currently.

Companies reviewed were selected based on being in the top twenty in market capitalization within the oil and gas industry. These selections include all the major oil and gas companies in Canada with a cross section of some oil sands specific companies, oil trust companies, pure gas companies and services companies. Several international companies were also selected to round out the evaluation of hedging practices. The following companies were selected for review: Suncor Energy Inc., Imperial Oil Limited, Canadian Natural Resources Limited, Shell Canada Limited, Husky Energy Inc., Petro-Canada, Syncrude Canada Ltd., Canadian Oil Sands Trust, Western Oils Sands Inc., Encana Corporation, Talisman Energy Inc., TransCanada Corporation, Nexen Inc, British Petroleum, Royal Dutch Shell and Exxon Mobil.

Finally, only oil commodity hedges were focused on due to complexity of complete hedging practices of all the companies. This focus was also based on the fact
that oil hedges accounted for major financial news throughout the past few years as several companies were reporting marginal profits due to heavy hedging losses.

World Oil Market Trends

The recent explosion in the oil market around the world has spurred on massive financial and media attention. The upward trend in prices has not been experienced since the early eighties and the mid-eighteen hundreds before\(^1\). The highest price experienced being upwards of US $70/barrel, all this adding to the magnitude of the trend as the industry was coming out of extremely low prices (approximately US $12/barrel) in the mid to late nineties\(^2\). These extreme trends in the oil market are quite rare especially considering the overall average price for a barrel of crude is at about US $18.59/barrel\(^3\). In short, the oil market is very volatile and exposed to many risks and world influences.

In modern history, the formation of the Organization of Petroleum Exporting Countries (OPEC) in the sixties between the world’s major oil producers (Iran, Iraq, Kuwait, Saudi Arabia, Venezuela, Qatar, Indonesia, Libya, United Arab Emirates, Algeria and Nigeria) began to demonstrate their power in influencing world oil prices. Although not considered a cartel, OPEC certainly represents a major portion of the world’s oil reserves but the failure to control member quotas in fact drove prices down in the sixties. But in relation to OPEC, the political instability in the Middle East contributed to sharp increases as the Iran and Iraq war curbed their production in the early


\(^{2}\) Ibid.

\(^{3}\) Ibid.
eighties. The instability continued in the early nineties during the first Gulf War as the United States defended Kuwait from Iraq. In recent years, the price of oil has been on a steady climb spurred on by the tragic events of 9-1-1 and the subsequent invasion of Iraq by the United States three years ago. Finally, just last year, oil prices rose sharply again as the devastation of the Gulf Coast was caused by a horrendous hurricane season.

Although it seems that based on past trends the high price in oil will not be sustainable in the long run, but the fast pace advancement of growing economies such as India and China may force the oil prices even higher in coming years. As the demand for oil continues to rise in relation to Asia’s drive to become first world nations, the consumption of commodities around the world will increase dramatically pressuring supply curves around the world. These pressures are being felt in the oil markets as well as similar effects in world demand for steel and concrete.

![Figure 8 - WTI - Spot Prices of Crude Oil (past 28 years)](http://www.oilnergy.com/1opost.htm#2mo)

4 Graph of WTI Crude Oil Prices – Average monthly prices for the past 28 years, from website: [http://www.oilnergy.com/1opost.htm#2mo](http://www.oilnergy.com/1opost.htm#2mo), last visited 24 March 2006.
A look at the trends for the previous twelve months is also important for understanding the short run oil price effects. It is clear that the oil prices are far from steady and there has been and continues to be major fluctuations in oil prices ranging from a low of US $43/barrel to highs of US $67/barrel. These fluctuations can be disastrous for oil companies planning for the future since they make the task of planning for future revenues very uncertain.

The combination of the long term and short term trends of the oil industry provide very little certainty and comfort for oil companies. As demands in Asia increase, political instability continues in the Middle East and environmental disasters mount continues to drive uncertainty enhancing all the exposure risks of oil companies which

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5 Graph of WTI Crude Oil Prices – Daily prices for the past 2 months, from website: http://www.oilnergy.com/1opost.htm#2mo , last visited 24 March 2006.
ultimately hinder effective planning for future operations. These instabilities are pressing oil companies for answers on mitigating risks for the future.

**Canadian Oil Industry Trends**

After looking at the world oil market trends, it becomes clearer as to how the Canadian oil industry has reacted and developed in recent years. Canada’s position as the number nine world producer of oil is projected to place Canada in the fifth position by 2015 due to the massive development of the oil sands projects in northern Alberta. This drive for development and production has ultimately accelerated due to the intense rise in oil prices. Original oil sands development started in the sixties, the high costs and technology kept it from being a viable prospect. It is without a doubt that the planned development has been strongly influenced by the world market trends in price and demand. Thus, with the world recognition of the oil sands reserves moves Canada into the second position in the world with 175 billion barrels in reserves behind Saudi Arabia. These reserves and development also contribute to future productions of almost five million barrels per day by 2015.

The intense boom of the oil industry has spurred on many capital spending projects pushing companies to commit billions of dollars in development to the oil sands. This commitment to spend capital is severely exposed to the price of oil on the market, thus it has been publicly noted that oil companies are hedging more to ensure that the future cash flows required to fund development projects are certain and protected. Thus, a natural correlation between increasing oil prices generating more revenue to support
increased capital spending to increased hedging practices should exist in the Canadian oil industry.

The Canadian oil industry trends (Figure 10) clearly shows a positive relationship between increased revenues to increased capital spending to increased hedging practices. Although the media has been hot on the topic of large hedging losses within the industry, it is clear for the numbers that the hedging losses are clearly miniscule at less than three percent of industry revenues. The hedging losses are also quite small compared to the capital spending taken within the oil sands projects, representing no more than thirty-three percent of capital. In addition, the major drivers for the large hedging losses come

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from primarily three companies within the industry: Canadian Natural Resources Limited, Husky Energy Inc. and Suncor Energy Inc.

**Canadian National Companies**

The major national oil companies in Canada present a very interesting split on their hedging practices. Three of the top oil companies do not engage in hedging practices at all, while two of the companies suffered severe losses in hedges in the past few years.

Imperial Oil Limited, Shell Canada Limited and Petro-Canada all avoid or practice very little in commodity hedging. All three companies are heavily involved in the oil sands development through mainly joint ventures and some individual projects. All three companies are sufficiently large and feel that there is no need to hedge productions for the future, even with the pressures of heavy capital expenditure programs.

Imperial Oil Limited strictly does not engage in the selling forward of any oil productions. Imperial’s oil sands involvements include a 25% share of Syncrude along with a private project, Kearl Lake. Shell Canada Limited engages in very minor hedging practices for foreign currency, interest rate and some commodity risks. But the activity for the company has been very minimal and insignificant to operations. Shell is involved in major oil sands projects as a joint partner in the Athabasca Oil Sands Project along with private ventures in the Muskeg River Mine and the Jack Pine Mine. Shell is similar to Imperial in that they are both heavily committed to the oil sands development but engage in very little hedging to protect future cash flows. But Shell and Imperial are
backed by large international oil companies in Royal Dutch Shell and Exxon Mobil. These connections may be a reason for the lack of aggressive hedging.

Petro-Canada is the only company that is a solely a Canadian company without international backing. Petro-Canada does not hedge and considers it policy to manage operations in a prudent manner to minimize the company’s exposure to price exposures. Petro-Canada’s philosophy is that price fluctuations are too difficult to predict and thus hedging only hinders overall performance for the company. Although it is stated that Petro-Canada may hedge from time to time to capture extraordinary value if it should occur. Petro-Canada’s involvement in the oil sands comprises of a 12% share of Syncrude and independent projects in the Mackay River.

The following three major oil companies all engaged in heavy hedging throughout the past few years in preparation to mitigate cash flow and pricing risks for dedicated capital expenditures. Suncor Energy Inc., Canadian Natural Resources Limited and Husky Energy Inc. all acted oppositely to the previous oil companies and engaged in aggressive hedging programs to mitigate exposure risks. All three companies also committed to large oil sands projects but the projects are mainly independent.

Suncor Energy Inc. engaged in aggressive hedging arrangements in for 36%, 16% and 9% of production for 2003, 2004 and 2005 respectively. But the hedge costless collars were all set at an average price of US $35/barrel, which is significantly higher than all the other companies were able to hedge at. The losses suffered for Suncor was
quite minimal in the end at $155 million and $397 million in 2003 and 2004 when considering the level of production that was hedged. As the second largest market capitalized oil company in Canada, Suncor managed to avoid major losses and earned revenues of $9.7 billion in 2005. In 2005, Suncor also publicly announced that the company will no longer engage in forward sales of production.

Canadian Natural Resources Limited also engaged in aggressive hedging contracts to mitigate risks in preparation for the company’s Horizon Oil Sands Project at a total cost of approximately $10.8 billion over a ten year period. CNRL engaged in hedges through swaps and costless collar, as the most aggressive hedger in the industry. CNRL hedged upwards of 25% to 75% of production throughout recent years. These hedges accounted for massive losses $381 million, $576 million and $679 million in 2003 to 2005. But the company continued to post high revenues and earned over $7 billion in 2005. CNRL continues to hedge into 2006 and 2007 with fixed prices of approximately US $50/barrel. The heavy hedging seems to follow the intense capital commitments required for the Horizon Oil Sands Project, which is projected to produce 232,000 bbls/day in 2012. This heavy commitment is also more intensive since it is a sole project of CNRL, without any joint partners to share the risks.

Husky Energy Inc. is the third of the companies which was hit the hardest by hedging losses. Husky also engaged in aggressive hedging in 2003 and 2004 in an effort to secure cash flow for major capital expenditure projects. Husky is slightly different in that the company only has minor investments in the oil sands through the Tucker Project
for $500 million generating approximately 30,000 to 35,000 bbls/day. Husky now has a
second huge project starting in 2006, Sunrise Thermal Project projected to produce up to
200,000 bbls/day. Husky planned to hedge no more than 50% of production throughout
recent years and it cost them losses of $109 million and $561 million in 2003 and 2004.
Husky’s hedging did not heavily reflect its commitments to the oil sands at the time but
with the Sunrise Thermal Project coming online it will be uncertain whether Husky will
need to hedge bets on current prices to meet cash flow requirements.

Overall the major oil companies are quite split on hedging practices and it does
not clearly reflect the need for mitigating capital expenditure commitments. But it is
clear that the three companies that lost on aggressive hedging plans were all involved in
strictly independent oil sands operations bearing all the risks internally vice sharing risks
among joint venture partners.

### Specific Oil Sands Companies

There are a few companies that are specific to the oil sands operation and own
primarily assets in the oil sands region. For this purpose, these companies are among the
most active hedgers in the industry. But these companies are also sufficiently small
compared to the major competitors thus even their aggressive hedging practices fail to
materialize into any great effects on the industry as a whole. The only pure oil sands
company which does not hedge any production is Syncrude Canada Ltd. Syncrude does
not engage in any hedging practices because it is a completely joint venture ownership
for the oil sands region. Syncrude’s joint venture comprises: Canadian Oil Sands Limited
Partnership, Canadian Oil Sands Limited, Conoco Phillips Oilsands Partnership II, Imperial Oil Resources, Mocal Energy Limited, Murphy Oil Company Ltd., Nexen Oil Sands Partnership, and Petro-Canada. Syncrude’s productions are passed down to the respective partners and all expenditures are equally shared, by ownership, among the partners. Syncrude’s among the largest oils sands players and has been in operation since 1964.

The second oils sands company reviewed was the Canadian Oil Sands Trust. Canadian Oil Sands Trust is the largest joint venture partner in Syncrude with ownership of 35.49% working interest. Therefore, Canadian Oil Sands Trust also pays a huge share of the capital investments required in the Syncrude operations. Canadian Oil Sands Trust has a very active hedging plan. In 2000, the company’s board of directors approved an aggressive hedging plan for 18%, 32% and 62% of production in 2001, 2002 and 2003 respectively. These aggressive commitments led to major losses due to the low oil prices at the inception of these hedge contracts. Canadian Oil Sands employs some foreign exchange forward contracts and interest rate swaps to hedge its exposure to US$ bonds and debts. The company also uses some call options to hedge its natural short position in natural gas costs. But its aggressive hedging primarily involves swaps for fixed prices, long puts and costless collars (long puts and short calls) to mitigate exposure risks. The aggressive hedges led to growing losses from 2001, most notably losses of $99.9 million and $274.3 million in 2003 and 2004. The company did pull back hedging with no activity in commodities for 2005. Although the hedge losses are large, the company still managed to make healthy profits earning $1,983.6 million in revenues for 2005.
Canadian Oil Sands Trust represented the expected hedging plans for a company so dependent on heavy capital expenditures for oil sands development.

Western Oil Sands Inc. is another joint venture company operation in the oil sands. Western Oil Sands Inc. is involved in joint ventures with Shell and Chevron Texaco in the Athabasca Oil Sands Project with an overall cost of $5.6 billion. Similar to that of Canadian Oil Sands Trust, the company employs aggressive hedging plans. Western Oil Sands Inc. entered into minor fixed rate swaps in 2002 with little production levels and increasing hedges in 2003 to 2005 to match its increase in production. The company was hedging as much as 50% of productions to cover capital funds required in 2004 and 2005. The company suffered losses of $131.4 million and $85.4 million in 2004 and 2005 respectively, with no hedges in 2006. Western Oil Sands Inc. also gained solid revenues of $685.5 million in 2005. The slight difference in this companies operations are that they have continued to place hedges for 2007 to 2009 production escalating in quantities of 2% to 50% of productions.

In general, the pure oil sands companies fit the trend of aggressive hedging due to heavy reliance on oil sands production for revenues and committed to large capital expenditures. But these companies are still quite small and do not generate significant losses in terms of the overall industry performance.
Pure Gas and Services Companies

The pure gas play companies and oil services companies have very different hedging practices and strategies for minimizing risks. Overall these companies are not engaged in any heavy hedging practices even though they are all actively spending on capital investments, drilling and exploration.

The trend for service companies is that there are very minimal hedging practices of any of the commodities due to the nature of the service business. These companies reap the benefits of booming oil markets but are not in any fixed positions with respect to oil price movements. Thus, these companies, such as TransCanada Corporation, which primarily focuses on a pipeline business, simply execute some minor hedges in foreign currency and interest rates to offset their exposure to US currency as the majority of its debt is in US bonds. Foreign currency forward contracts and interest rate swaps are common derivatives used for currency hedges among the industry.

The gas companies are primarily the same in terms of hedging practices. Both Nexen Inc. and Talisman Energy Inc. have very minimal hedging practices. They both employ minor foreign currency and interest rate hedges similar to that of the services companies. But due to the diverse nature of both companies with operations spreading around the world, there is very little hedging taken on its gas production. The natural diversification allows for some natural hedges in costs and price fluctuations around the world. Talisman Energy Inc. hedges less than two percent of its gas production primarily through fixed price swap contracts and collars to create floor and ceiling prices for
production. Although Talisman Energy Inc. has minor oil production, the majority of its production is hedged through fixed price swaps. The likely reason for these hedges is due to the small portions of operations that are focused on oil. Similarly, Nexen Inc. employs minimal hedges on its gas production. Although Nexen Inc. has more oil production, primarily due to a seven percent share of Syncrude, it only takes long put options in hedging its oil sales. Still these levels of production are not very significant, thus the willingness to hedge more of its production to ensure a healthy margin on sales.

Encana Corporation is the slightly different than the previous gas companies due to the fact that the company actively moved to a strategy in the past few years to focus on gas plays in North America. Thus, Encana was not as diversified in world operations like Nexen Inc. or Talisman Energy Inc. Due to these reasons, Encana Corporation employs a more aggressive hedging plan for its natural gas resources. These hedges are also more sophisticated than the other gas companies. Encana uses a combination of fixed price contracts through the NYMEX, collars, calls and puts at various quantities (sometime at fifty percent of daily production rates). Encana also use basis contracts to mitigate location price differences among its multiple operations in North America. The basis contracts allow Encana to fix its natural gas prices at different locations to meet their preferred markets to avoid varying prices due to transportation and gas availability at locations due to the difficulty in gas transportation. Encana also has much larger productions in oil compared to the other two gas companies. It did reduce its production through selling its share Syncrude in 2003. But overall its hedging practice for oil is
similar to that of the other gas companies with aggressive hedging for its small productions

In general the gas and services companies selectively use its hedging practices to mitigate identified risks from time to time. Generally, the hedging plans are not overly aggressive and the companies rely on its diversification through operations to mitigate exposure risks.

**International Companies**

The review of international oil companies failed to produce any useful information. The prime reason being the consolidated nature of the reports and different standards used by British Petroleum and Royal Dutch Shell. Although Exxon Mobile is American, all three companies simply presented consolidated numbers indicating some form of hedging practice with no specific details. Thus, it can be assumed that subsidiaries of large international oil companies may not need to engage in small level hedging plans when the parent companies are performing the task at a higher corporate level.
Conclusion

In conclusion, it is clear that there are no standard hedging practices that are ideal for the oil and gas industry. The accounting regulations in place offer the first steps to forcing transparency in how companies deal with hedge accounting, but the detail to which the companies disclosed the information to shareholders varied from detailed contract descriptions to simply a consolidated line item giving the gain or lose. Although further information would benefit shareholder in assessing their investments, it is unlikely that companies will reveal all their strategies for staying ahead of competitors.

Ultimately, derivatives are reliable financial instruments in mitigating and neutralizing risks as almost all companies use some form of derivative to hedge against foreign currency and interest rate exposures. The decisions to hedge commodity productions for fixed future sales will remain an active debate. But it is fair to note that hedging offers insurance to companies from dramatic negative impacts, thus when hedging works there is little or no fanfare to promote the prudent decisions made by management. Where as severely limiting the ability to take advantage of abnormally large returns becomes negative news. In the end, every company still rode the energy boom to record revenues and profits, thus the losses become a source of “what could have been?”
References


