Exhibit No. ___ (BJC-1T)
Docket UG-11_____
WITNESS: BARBARA J. CRONISE

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of NORTHWEST NATURAL GAS COMPANY, dba NW Natural, Revision to Schedule P to include acknowledging the recovery of the cost of gas acquired through Gas Reserves.	Docket UG-11_____

NORTHWEST NATURAL GAS COMPANY

DIRECT TESTIMONY OF

BARBARA J. CRONISE

REDACTED

July 5, 2011

Q. Please state your name, business address, and occupation.

A. My name is Barbara J. Cronise. My business address is 220 NW Second Avenue, Portland, Oregon 97209. My current position is Director of Business Development for Northwest Natural Gas Company, d/b/a NW Natural ("NW Natural" or the "Company").

Q. Please summarize your educational background and business experience.

A. Prior to joining NW Natural as Director, Business Development, I held similar positions with PacifiCorp and Scottish Power as Vice President, Business Development and Vice President PacifiCorp Power Marketing, now PPM. In addition to my natural gas and electric utility experience in business development and transactions, I worked for five years in the telecommunications industry where I was again responsible for negotiating and evaluating acquisitions and joint ventures as well as potential start up businesses. I have a BS in Business Administration from Portland State University.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to describe the Company's agreement to purchase gas reserves through a joint venture with Encana Oil & Gas (USA) Inc. ("Encana") (hereinafter, the "Transaction"). I discuss the structure of the Transaction, the risks and benefits presented by the Transaction, and the due diligence that the Company has performed.

OVERALL STRUCTURE OF TRANSACTION

Q. What is the overall structure of the Transaction?

A. On May 1, 2011, NW Natural and Encana entered into a joint venture to acquire gas reserves. Under the terms of the Transaction, Encana contributes to the joint venture its interest in certain natural gas leases and wells in the Jonah Field, which is located in the Green River Basin in Sublette County, Wyoming. NW Natural participates with Encana in drilling *[Confidential]* ****** *[Confidential]* new wells referred to in the agreements as "Carry Wells" because NW Natural carries a portion of Encana's cost in those wells. In exchange, the Company earns a working interest in the gas produced in certain sections of the Jonah Field.

Q. Who is Encana?

A. Encana is the U.S. subsidiary of Encana Corporation—one of North America's largest natural gas producers. The company, which is headquartered in Alberta, has operations in Alberta, British Columbia, and Nova Scotia, as well as Colorado, Wyoming, Texas, and Louisiana. In 2009 Encana Corporation produced 1.1 trillion cubic feet of natural gas.

Q. What is the Jonah Field?

A. The Jonah Field is one of the top gas fields in the United States by proved reserves. Covering approximately 36 sections (each section equals one square mile), with approximately 1,600 existing producing wells, Jonah produces over 1 million dekatherms a day, or 1.5 percent of total U.S consumption. By way of comparison, NW Natural's daily consumption is approximately 200,000 dekatherms per day, or about 0.3 percent of total U.S. consumption.

Q. What are the basic obligations of the arrangement?

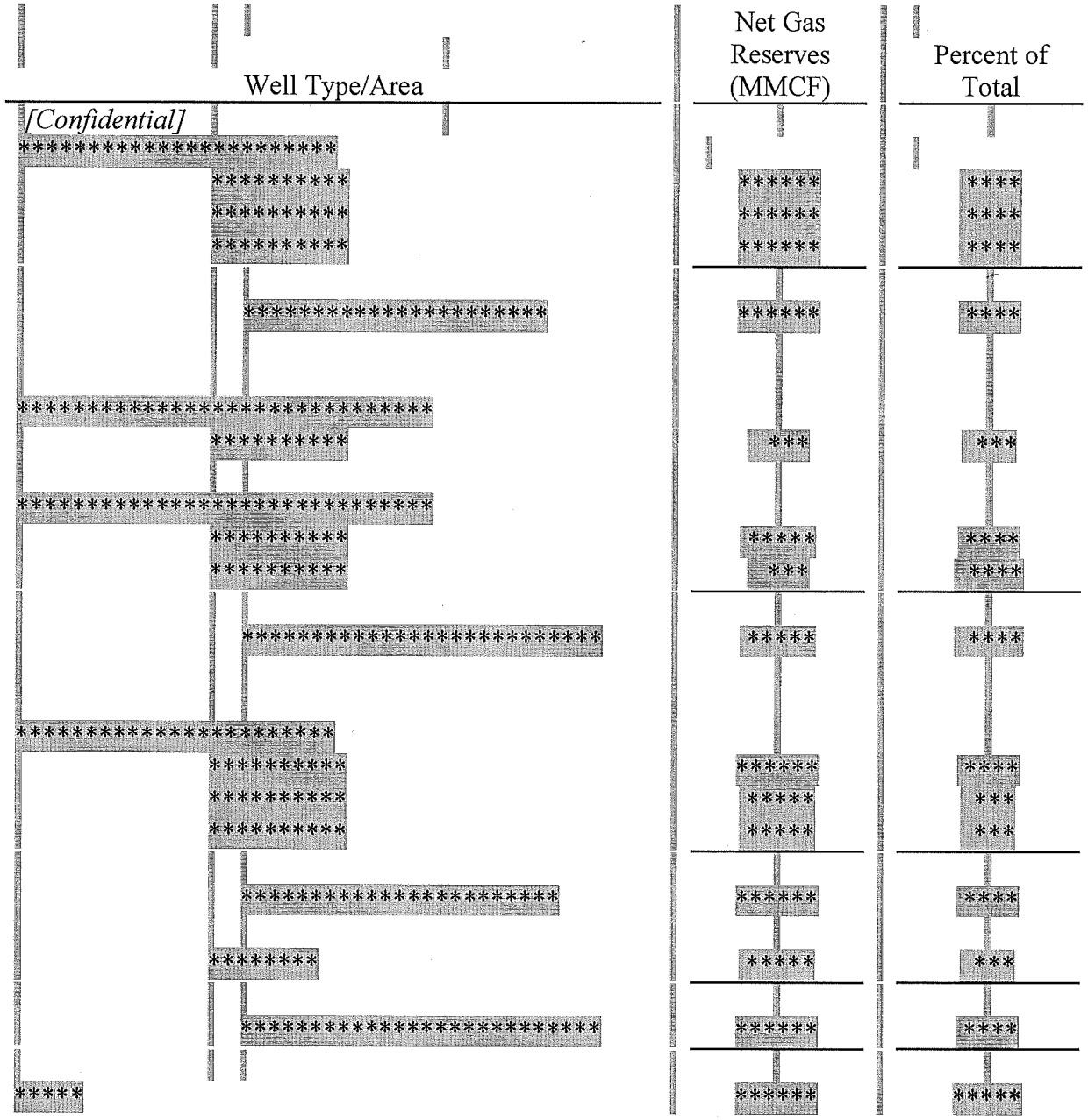
A. Over the course of the Transaction, Encana will contribute to the joint venture three oil and gas leases and related rights in existing producing sections of the Jonah Field—Sections 32, 33, and 34, collectively referred to as the "Updip Area." Approximately *[Confidential]* ***** *[Confidential]* Carry Wells will be drilled in the Updip Area. In addition, on the date of closing, there were *[Confidential]*****[Confidential]* producing wells in those sections. Encana will also contribute rights in additional oil and gas leases in Sections 8-17 to the north, collectively referred to as the "Downdip Area." The rights contributed will be sufficient to allow the joint venture to drill new wells and to own the production from the new (but not the existing) wellbores, in the Downdip Area. Encana and NW Natural will jointly fund the drilling of approximately *[Confidential]* **** *[Confidential]* Carry Wells in the Downdip Areas. Encana will also contribute about *[Confidential]* $********** *[Confidential]* to fund approximately *[Confidential]****[Confidential]* percent of the average cost of the *[Confidential* *****[Confidential]* total Carry Wells. NW Natural will contribute approximately $251 million over five years to fund *[Confidential]***** *[Confidential]* percent of the average cost of drilling *[Confidential]***** *[Confidential]* Carry Wells.

Q. How much gas does the Company expect to receive from the Transaction and over what time period?

A. In total, the parties estimate that NW Natural will receive 93.1 BCF over an approximately 30 year period: 63 percent in the first 10 years; 83 percent in the

first 15 years; and 94 percent by the end of year 20. The following table details the net gas estimated from the Updip and Downdip sections as well as from existing and new wells. Aggregate gas deliveries will ramp up under the five year investment program; the maximum delivery expected in any one year is projected to be about *[Confidential]* ****** *[Confidential]* in years *[Confidential]* ****** ***** . *[Confidential]*

Table 1
Drilling Schedule



[Confidential]

Q. When will the Company cease receiving gas under the agreements?

A. The Company will cease receiving gas under the Transaction when the last well in which the Company has earned an interest (all wells in Sections 32-34 in the

Updip area, and the individual wells the Company participates in drilling in the Downdip area) is capped.

Q. Why is the joint venture structured as a tax partnership?

A. The tax partnership structure is essential because it allows the Company to take tax deductions for all of its drilling costs.

Q. What are the tax deductions available to NW Natural under this structure?

A. The costs of drilling for and developing oil or gas wells are ordinarily capital expenditures recovered through depreciation or depletion. However, certain drilling and development costs termed "intangible drilling costs," or IDCs, can be deducted immediately as current business expenses if the costs are connected to drilling wells in which the taxpayer owns an operating or working interest. Thus, the Transaction has been structured to ensure that NW Natural has a working interest in the wells in which it participates in drilling, thus allowing the Company to immediately deduct its drilling costs. All of the funds NW Natural contributes will be applied to well drilling costs that qualify as IDCs and are deductible in the year incurred.

Q. What agreements comprise the Transaction?

A. Encana and NW Natural have executed the following documents that comprise the Transaction: Carry and Earning Agreement ("C&E") and Joint Operating Agreement ("JOA"). These agreements are attached as Exhibit No. ___(BJC-2T). The bracketed material in these exhibits is confidential.

DETAILS OF TRANSACTION

Q. Please explain in more detail how and where the drilling will occur.

A. Under the agreements, Encana will designate and drill *[Confidential]* ******* *Confidential]* Carry Wells—approximately *[Confidential]* ****** *[Confidential]* Carry Wells during each of the *[Confidential]* ********** *[Confidential]* periods commencing May 1, 2011, through December 31, 2015. All Carry Wells will be drilled within either the Updip Area or the Downdip Area, with about *[Confidential* ****[Confidential]* wells per year drilled in the Updip Area. At the end of five years, Encana will have drilled all locations with proved undeveloped reserves in the Updip Area per the most recent reserve report. Each Carry Well in the Downdip Area will also be at a location with proved undeveloped reserves.

Q. What are the Updip and Downdip Areas.

A. Sections 32 to 35 of the Jonah Field compose the Updip geologic area and have been contributed to the joint venture. The rock layers that contain the gas reserves are sandstones and shales that were originally flat-lying. Mountain building forces, however, have lifted the south end of the area, tilting the layers to the north. The Lance Formation in the northern sections is more deeply buried by subsequent formations. Geologists refer to the tilt of rock layers as their "dip", hence the southern sections are "Updip" and the northern sections are "Downdip".

Q. Why does the Company acquire an interest in individual well bore interests in the Downdip section?

A. Unlike Sections 32 through 34, Sections 8 through 17 were not contributed to the joint venture. So for those wells, the Company acquires an interest in the wellbores themselves in order to gain an interest in the gas produced.

Q. What is the cost to NW Natural of the drilling?

A. NW Natural is responsible for *[Confidential]* ******* *[Confidential]* percent of the drilling costs for each Carry Well, estimated *[Confidential]* ********** **********. *[Confidential]* NW Natural estimates that the annual amounts it will pay for the drilling each calendar year will be between *[Confidential]*$***** *[Confidential]* and *[Confidential]* $******* *[Confidential]* million. NW Natural's obligation to fund drilling terminates when NW Natural has paid $250,929,000 toward the drilling of Carry Wells.

Q. What reserves are NW Natural entitled to as a result of these payments?

A. NW Natural's interest depends on whether the Carry Wells are drilled in the Updidp or Downdip Area. For each Carry Well drilled in *either* the Updip Area or the Downdip Area, Ecana assigns to NW Natural a 1.2 percent working interest in one of the three sections in the Updip Area. Interests are assigned starting with Section 32 until NW Natural's interest is 45 percent, then in Section 33 until the interest in that section is 45 percent, and finally in Section 34 until 32.4 percent has been assigned. If not all of NW Natural's contributions have been expended after *[Confidential]* ******* *[Confidential]* Carry Wells are drilled, the possibility

exists that NW Natural will earn an interest in an additional well or wells, resulting in additional interests in Section 34.

For each Carry Well drilled in the Downdip area, Encana also assigns to NW Natural a 5 percent working interest in the wellbore for that well. That means NW Natural is entitled to 5 percent of the production from that wellbore (subject to deductions for royalty, gathering, processing, taxes, etc.) but not in any wells in that section that were not drilled pursuant to the Transaction.

Q. What exactly is a "working interest?"

A. "Working interest" means an interest in an oil and gas lease that gives the owner of the interest the right to drill and produce oil and gas on the leased acreage. It requires the owner to pay a share of the costs of drilling and production operations. The share of production to which a working interest owner is entitled will always be smaller than the share of costs that the working interest owner is required to bear, with the balance of the production accruing to the owners of royalties. For example, the owner of a 100 percent working interest in a lease burdened by a landowner's royalty of 12.5 percent would be required to pay 100 percent of the costs of a well but would be entitled to retain 87.5 percent of the production, referred to as the "Net Revenue Interest". In some leases, lessees have conveyed royalties to third parties out of the lessee's share of production, called "overriding royalties." In other cases the landowner may have conveyed royalties to third parties before or after leasing. All such royalties are deducted from production to determine the Net Revenue Interest.

A party entering into a working interest agreement is acquiring an interest in an oil and gas lease that obligates that person to pay a proportionate share of development costs (and bear risks) in return for that share of production from successful wells. Such an interest may be acquired one of two basic ways—by purchase or by farmout. A farmout is a type of agreement where a party acquires a working interest in an oil and gas lease in return for drilling (or funding the drilling of) one or more wells on the lease.

The specific working interest agreement between Encana and NW Natural is in the nature of a farmout agreement. The agreement requires NW Natural to fund approximately *[Confidential]* ******** *[Confidential]* percent of the cost of drilling *[Confidential]*******[Confidential]* new wells in the Jonah Field. In return, NW Natural earns a working interest in three square miles of the Jonah Field (between 32 percent and 45 percent in certain sections) and a working interest limited to an additional *[Confidential]* ******* *[Confidential]* wellbores in other sections.

Q. What specific legal interests will the Company earn in the Updip and Downdip areas?

A. In the Updip Area, NW Natural will earn an interest in the two underlying federal oil and gas leases for the entire sections, including all existing wells, in addition to the wells drilled under the Transaction. In the Downdip Area, NW Natural will earn leasehold interests only in the individual wellbores of the wells drilled under the Transaction, and not in existing wells.

Q. Does the Transaction grant NW Natural any additional rights after the *[Confidential]* ****** *[Confidential]* Carry Wells have been drilled?**

A. Yes. After all Carry Wells have been drilled, either Encana or NW Natural could propose additional wells in the Updip Area, and the other party would have the right, but not the obligation to participate in drilling those additional wells.

Q. What are the operating arrangements under the Transaction?

A. Encana has been designated as the Operator of all of the Carry Wells drilled under the Transaction, pursuant to the JOA. The JOA also governs operation of the entire Updip Area in which NW Natural earns an interest, including the operation of existing wells in those sections.

Q. How are the operational costs handled under the JOA?

A. Under the JOA, NW Natural is responsible to reimburse Encana for operational costs based on its proportional interest in the field. As such, as NW Natural participates in drilling additional wells, its responsibility for operating costs will increase, reaching approximately *[Confidential]* ******* [Confidential]* percent of total Jonah operating costs in year six.

Q. Please explain more about how operational costs are handled.

A. A special feature of the Transaction is that *[Confidential]* *****************
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********** *[Confidential]*

Also, under the JOA, NW Natural can elect to take its share of production in kind, to either sell the production or to transport it to NW Natural's distribution system. Alternatively, NW Natural may elect to have the operator (Encana) sell NW Natural's share of production at market prices. Then NW Natural could purchase similar quantities monthly at Opal or elsewhere depending on market prices. The testimony of Randolph S. Friedman discusses in more detail these transactions and the Company's decision to allow Encana to market its gas pursuant to the JOA.

Q. What are the details of delivery?

A. The Company gas leaves the wellhead and travels to a central delivery point ("CDP"), where petroleum liquids and water are removed from the gas stream. The facilities at the CDP are owned by Encana, as are the liquids separated at the CDP. The remaining gas is delivered to a third party gathering system owned by *[Confidential]* ********** *[Confidential]* The gas is shipped on the gathering system approximately 75 miles to the Pioneer processing plant owned by Enterprise Gas Processing, LLC, adjacent to the Opal market hub on Northwest Pipeline. At the processing plant, natural gas liquids are removed, rendering the gas pipeline quality. *[Confidential]* ********** ********** ********** *[Confidential]* of the Pioneer plant or at the Opal market hub.

Q. How does NW Natural get the gas from Pioneer to its distribution system?

A. At the tailgate of the Pioneer plant NW Natural may either place its gas on Northwest Pipeline for transportation to its distribution system, using NW Natural's firm pipeline capacity, or sell its gas and purchase similar supplies at Opal or other market hubs. Given this structure, a utility can purchase reserve interests in any location in North America.

Q. What is the total cost of the Transaction to NW Natural?

A. As noted above, NW Natural will invest $250,929,000 in the drilling of Carry Wells plus transaction costs that also will be capitalized. In addition, the Company will incur variable operational costs over the life of the Transaction.

Q. Have you estimated the total costs of the Transaction as represented in a per dekatherm cost?

A. Yes. The total fixed capital costs and forecast variable costs result in a forecast per dekatherm cost of $5.385 over the life of the contract.

Q. Why did the Company move so quickly to finalize the Transaction?

A. The Company filed for approval of the Transaction in Oregon on January 31, 2011, and requested an approval order by April 28, 2011. There are two reasons the Transaction required the Company—and the parties—to move quickly. First, over the last two years, NW Natural has been exploring options to secure long term supplies to reduce our customer's exposure to price volatility. We believe it to be prudent and in the best interest of our customers to do so. However, despite our best efforts, we have found our options to be limited. Suppliers are unwilling to commit for 10 years due to market risk, unknown cost structure of future

supplies, and credit provisions. The Company, on the other hand is unwilling to enter into a 10-year physical contract due to credit risks—specifically the risk of counter party default which would leave customers exposed to replacing supplies in uncertain market conditions. Further, while our derivatives policy allows for swaps up to 5 years, tenors of over 3 years and up to 5 years require an AAA rating, which none of our counterparties any longer have.

The Company investigated acquiring supplies under a Volumetric Production Payment but was not successful. For all of these reasons, acquiring a working interest in a joint venture with a financially secure owner and operator became the preferred option. However, these types of opportunities are quite limited, and we had found that we would need to move quickly. While Encana had entered into a number of these joint ventures, prior to the Transaction none had been with a regulated utility. The Company has attempted to balance the needs and expectations of Encana with the needs and expectations of our regulatory authorities. While the Transaction timeline moved very fast for a utility, it was not atypical for a commercial transaction.

RISK ALLOCATION

Q. What are risks involved in the Transaction, and who will bears them?

A. There are a number of risks associated with the Transaction—*[Confidential]* ********** *[Confidential]* and some of which will be borne primarily by NW Natural and its customers.

Q. Describe the risks that are borne by Encana.

A. *[Confidential]* ********** ********** ********** ********** ********** ********** ********** ********** *[Confidential]*

Q. How are risks associated with the costs of drilling handled in the documents?

A. As discussed above, NW Natural's obligation to cover the costs of drilling is *[Confidential]* ********** ********** ********** ********** ********** ********** ********** *[Confidential]*

Q. How are environmental risks handled in the documents?

A. *[Confidential]* ********** ********** ********** ********** ********** ********** ********** *[Confidential]*

Q. How are title risks handled in the documents?

A. *[Confidential]* ********** ********** ********** *[Confidential]*

Q. How are capital costs handled in the documents?

A. *[Confidential]* ********** ********** ********** ********** *[Confidential]*

Q. What risks are borne by NW Natural's customers?

A. The Transaction involves limited uncertainty. NW Natural and its customers primarily bear price risk, reserve risk, and operating cost risks. The Company also bears a minimal risk related to sales to counterparties on a proportionate basis if Encana markets gas on its behalf. However, NW Natural's gas sales are forecast to account for less than 3 percent of Encana sales volumes over the first five years, and *[Confidential]* ********** ********** *[Confidential]*

Q. Describe the price risk borne by NW Natural's customers.

A. The Transaction effects a reduction in price risks borne by customers by providing price certainty and stability for a portion of customer's volume requirements. As I explained, the Company believes that the Transaction results in significant cost savings relative to other longer-term options that inure to the benefit of both customers and the Company. However, it is possible that the cost of gas received under the Transaction will be more than the market price of gas over time. Customers bear that market risk, as they do with any hedge. Of course, the reverse is true. If gas prices are significantly higher than anticipated,

then the additional savings resulting from the Transaction accrue entirely to the customers.

Q. But most hedges are 10 years or less, whereas the Transaction has a 30 year life. Doesn't that mean that the customers are accepting a greater price risk than with a typical 10 year hedge?

A. Again, I would say that the Transaction actually effects a reduction in price risks borne by customers by providing price certainty and stability for a portion of the customer's volume requirements not available through traditional financial hedges or physical transactions. It is true that it becomes more difficult to predict gas prices as you go out farther in the future; however the Company is not aware of any forecasts that suggest natural gas prices will decline over the long term. That being said, it is somewhat misleading to think of the Transaction as a 30 year transaction: 63 percent of the gas will be delivered to the Company within the first 10 years, 83 percent within 15 years, and 94 percent within 20 years

Q. Describe the reserve risk borne by the NW Natural's customers.

A. Our customers bear the risk that the reserves will be less than estimated. However, our due diligence on that issue indicates that the reserve risk is extremely small. *[Confidential]* ********** ********** *[Confidential]*

Q. What due diligence has been conducted by the Company regarding the reserve risk?

A. Prior to negotiating the Transaction, NW Natural hired Netherland Sewell & Associates, Inc. ("NSAI") to fully investigate and prepare a report as to the

existing reserves in the Updip Sections and the projected reserves to be earned under the Transaction. NSAI also reviewed past operating costs for the Jonah Field and advised NW Natural about the consistency of wells and reserves in that field.

Q. Who is NSAI?

A. NSAI is an oil and gas consulting firm that provides independent reserve reports and services to the worldwide petroleum industry and financial community. NSAI is well respected within the oil and gas industry and has significant experience in tight gas evaluations. Importantly, NSAI has extensive experience in the Jonah Field, where it has performed independent reserve evaluations going back to 2002.

Q. What analysis did NW Natural retain NSAI to perform?

A. NW Natural retained NSAI to investigate and prepare a report as to the existing reserves in the Updip Sections in which it will be earning an interest, and the projected reserves to be developed under the Transaction. Specifically, NSAI was asked to: (1) estimate the net proved reserves attributable to the property interests represented to NSAI to be included in the joint venture and (2) estimate the future net gas flowstreams and revenue to be realized with respect to such reserves based on economic forecasts of producing rates, product prices, development timing, and operating costs along with joint venture development costs.

Q. How did NSAI go about its investigation?

A. NSAI began by examining the history of the Jonah Field. This analysis included a detailed investigation of its geology and geophysics. To determine these

characteristics, NSAI reviewed proprietary 3-D seismic data throughout the field and used this data to qualitatively estimate the net pay trends, structural trends, and reservoir distribution for the entire Jonah Field.

NSAI also performed a petrophysical analysis of selected wells throughout the field and compared those results to Encana's 2009 petrophysical analysis. Using this information, NSAI was able to develop comprehensive analysis of the reserves present in the Jonah Field and the interests being acquired by NW Natural in the Transaction.

Q. What did NSAI find?

A. NSAI confirmed that the reserves to be acquired in the Transaction are the highest quality reserves, defined as Proved Reserves. To meet this definition, actual volumes must have a 90 percent probability of meeting or exceeding estimated volumes. Said another way, to be categorized as Proved Reserves, nine times out of ten, actual volumes must meet or exceed estimates. NSAI further confirmed that the variability of reserve estimates for an aggregation of wells decreases as additional historical production data are obtained. And, with the average age of the producing wells in Jonah Field in Sections 32, 33 and 34 at 5.9 years, significant data was available to forecast future volumes with reasonable certainty. Although not included in the Company's base case, probable reserves exist that could result in additional volumes and upside for customers. Probable reserves have a 50 percent probability that the actual quantities recovered will equal or exceed the estimate.

The report prepared by NSAI is attached to this testimony as Exhibit No. (BJC-3T).

Q. You stated that the reserve risk is also mitigated in the transactional documents. Could you explain?

A. *[Confidential]* ********** ********** ********** *[Confidential]*

Q. What are the operational risks borne by NW Natural's customers?

A. As discussed above, NW Natural is responsible for its proportionate share of the operating costs. While we have confidence in our estimates of those costs, it is possible that certain costs could be higher than expected.

Q. How did you model operating costs?

A. Operating costs are forecast at a standard rate per well, of *[Confidential]* $******* *[Confidential]* per well per month, and maintained at that amount, even as volumes decline.

Q. What if any factors mitigate the risk that operating costs will be greater than estimated?

A. Encana is recognized as a "first in class" well operator. Moreover, NW Natural's share of operating costs of the Jonah field is about *[Confidential]* ******* *[Confidential]* percent leaving Encana incented to continue to efficiently operate the field. Further, it should be noted that about half of the operating costs are predictable in nature, *e.g.*, labor and overhead, and that the remaining costs would

have to be almost five times the current amount in year one to eliminate the anticipated customer benefit.

Q. Under what circumstances can NW Natural terminate the agreement?

A. Under the Carry and Earning Agreement, NW Natural has the right to terminate the agreement if certain events should occur that deprive NW Natural's customers of the benefits of drilling additional Carry Wells as result of *[Confidential]* ********** *[Confidential]*

Q. How does the Transaction handle the risk of the operator of the reserves going bankrupt?

A. Under the Transaction, NW Natural's ownership interest is secured as a separate real property interest that would survive an Encana bankruptcy. *[Confidential]* ********** *[Confidential]*

It should also be noted that it is highly unlikely that gas production would be interrupted even in the event of an Encana bankruptcy. Any bankruptcy trustee that might administer Encana's bankruptcy estate would be obligated to maximize

the value of Encana's interest. Encana's working interest in the individual well bores is 95 percent and will be no less than 55 percent in the sections in which NWN holds a working interest.

Q. Does the Transaction include any warranties or indemnities by the Encana?

A. *[Confidential]* ********** ********** ********** ********** *[Confidential]*

Q. How do the risks associated with the Transaction compare with those associated with a long-term hedge?

A. As with all hedging options, the Transaction reduces the risks faced by NW Natural and its customers. Moreover, when compared to other physical supply options, the Transaction presents significantly lower price and transactional risks.

As I explained above, it is by no means certain that the Company could—even if it wanted to—find an acceptable counter party with which it could enter into a long term fixed price physical contract. However, even if we could, we would face the risk that the counter party defaults and the Company and customers are exposed to replacing those supplies in uncertain market conditions. This simply is not a risk the Company would accept. It is true that the Company could hedge prices financially through the Intercontinental Exchange (ICE)—but for only 9 years out and this approach does not actually secure physical gas supplies. Both hedges transacted through ICE and those transacted physically require credit facilities to protect counter parties against market price volatility.

Q. What are the risks associated with the potential sale by Encana of its interests in the wells subject to the Transaction?

A. The terms of the Carry and Earning Agreement provide significant protection to the Company in the event that Encana chooses to sell all or a portion of its interests. Section 13 of the agreement provides that if this occurs NW Natural can require Encana to markets its interests on the same terms as Encana's or NW Natural can terminate the agreement. If NW Natural does not select either of these options, the buyer of Encana's interests will be subject to the terms of the Carry and Earning Agreement.

Q. Have you prepared a table describing how the terms of the Carry and Earning Agreement mitigate the risks inherent in the Transaction?

A. Yes and the table is attached to my testimony as Exhibit No. ___ (BJC-4T).

Q. Has the Company attempted to quantify the risks associated with the Transaction?

A. Yes and that table quantifying the risks is attached to my testimony as Exhibit No. ___(BJC-5T).

DUE DILIGENCE

Q. What due diligence did the Company perform to investigate the Transaction?

A. The Company conducted extensive due diligence on the Transaction. In addition to extensive internal analyses, the Company engaged several outside consulting firms to address potential risk associated with the Transaction. In addition to hiring NSAI to provide a reserve report, the Company also engaged ENVIRON

International Corporation ("ENVIRON"), several law firms, and the accounting firm of KPMG to conduct thorough due diligence.

ENVIRON International Corporation

Q. Who is ENVIRON?

A. ENVIRON is an international consulting firm that provides environmental consulting services.

Q. What analysis did NW Natural retain Environ to perform?

A. The Company retained ENVIRON—through its environmental attorneys at Stoel Rives—to study and report on the environmental risks associated with the Transaction.

Q. What work did Environ perform in conducting its analysis?

A. ENVIRON's environmental review consisted of two parts: (1) a Phase I environmental site assessment ("ESA") conducted in conformance with ASTM International's Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment for Forestland or Rural Property, E2247-08; and (2) a limited review of regulatory compliance and other environmental matters. Accordingly, Environ conducted site visits, interviewed Encana personnel responsible for Jonah Field operations, reviewed and analyzed environmental information contained in state and federal databases, reviewed standard historical sources and local agency inquiries, reviewed documents such as permits and facility plans and procedures, reviewed documents provided by the Bureau of Land Management ("BLM"), the agency responsible for administration of the Jonah Field leases, and reviewed detailed physical maps of the field.

Q. What is an ESA?

A. An ESA is designed to identify any Recognized Environmental Conditions ("RECs"). A REC exists if any hazardous substances or petroleum products are present or likely to be present on a property in such a way that indicates there is an existing release, there was a past release, or there is a material threat of a future release of any hazardous substances or petroleum products. In short, ENVIRON was searching for indications that Encana's facilities and properties in the Jonah Field were releasing hazardous substances or petroleum products, even if those releases were in compliance with applicable laws.

Q. Did ENVIRON identify any RECs in facilities subject to the Transaction?

A. No. ENVIRON found no RECs or historical RECs in connection with Encana's facilities in Jonah Field.

Q. Please summarize ENVIRON's conclusions with respect to regulatory compliance?

A. ENVIRON found no material compliance violations in its review of Encana's operations in the Jonah Field. ENVIRON did identify two non-material potential compliance issues that it considered "noteworthy"—a term used to indicate a condition that is not reasonably likely to result in compliance or remediation costs in excess of $100,000. The first issue involved two notices of violation received by Encana related to vapor emission from condensate tanks. ENVIRON concluded Encana had resolved this issue with the Wyoming Department of Environmental Quality and that remaining costs associated with the resolution of the issue are not expected to be material. The second issue involved Encana's

renewal of groundwater well permits. ENVIRON was unable to confirm that the well permits were renewed, but noted that the costs of renewal are not material.

Q. What is the significance of ENVIRON's ESA report on the future statutory liability of the Company for environmental contamination?

A. ENVIRON's work established that NW Natural completed a pre-transaction ESA in compliance with the applicable all appropriate inquiry standard, which is a prerequisite to raising a defense against statutory liability for environmental contamination that may have occurred prior to the effective date of the Transaction.

Q. Is the ENVIRON ESA report included in the record?

A. Yes, it is attached to this testimony as Exhibit No. (BJC-6T).

Legal Due Diligence

Q. Please describe the work performed by NW Natural's legal advisors.

A. The Company retained the law firm of Stoel Rives to review all transactional agreements, with the exception of the title documents. Stoel Rives also assessed the environmental issues that could interrupt production in the Jonah Field, including the appeal of the field's Environmental Impact Statement ("EIS") that is currently pending before the United States Court of Appeals for the Tenth Circuit. The firm also worked to ensure that the structure of the Transaction provided NW Natural a real property interest in the reserves and access to a gathering system that would not be negatively impacted by an Encana bankruptcy.

With respect to the title documents, the Company retained Laura Lindley, a well respected Wyoming attorney who specializes in oil and gas transactions.

Ms. Lindley advised the Company regarding the status of the title it obtained as a result of the Transaction. Her analysis concluded that Encana has good title to the oil and gas leases subject to the Transaction, as represented by Encana, subject to routine curative measures and permitted encumbrances, and has adequate title to convey the promised percentages in each asset to NW Natural, free of real property liens.

KPMG

Q. Please describe the work performed by KPMG.

A. After the Transaction had been negotiated, and in consultation with the parties to the Public Utility Commission of Oregon ("OPUC") proceedings, NW Natural retained the accounting firm of KPMG to serve as an independent consultant to provide: (1) an economic assessment of the Transaction and the "drill to earn" arrangement; (2) an evaluation of the Transaction's economics to assess the value versus risk; (3) comment on the scope of the Company's due diligence efforts; and (4) compare the Transaction to other long-term gas supply alternatives.

KPMG's work was intended to be transparent to ensure an unbiased, independent evaluation of the Transaction. To that end, the parties to the OPUC proceedings were involved in defining the scope of KPMG's work, received copies of all communications between NW Natural and KPMG, and had the opportunity to ask questions of KPMG during its review.

Q. What were KPMG's conclusions?

A. With respect to these four issues, KPMG found:

- The Transaction provides the Company with a reliable long-term supply of gas at a reasonable price.
- The Company's financial models, which were included with its filed testimony, agree with the terms of the Transaction.
- The Company's due diligence was comprehensive.
  - NSAI is a well respected engineering firm and its pricing assumptions were consistent with market estimates and its reserve study includes several conservative estimates and few, if any, aggressive ones.
- The Transaction is consistent with common agreements seen in the industry except that many of the risk generally borne by the party in NW Natural's position have been mitigated.
- The Transaction has several non-standard terms that benefit the Company. These include the Company receiving a working interest in existing production, *[Confidential]* ********** ********** *[Confidential]* receipt of actual land title, and a cancellation clause.
- KPMG identified no risks that had not already been accounted for by NW Natural.
- The Transaction compares favorably to other long-term gas supply alternatives.

- It would be difficult for the Company to replicate the Transaction with a credible partner, open negotiations, flexible terms, and an asset with a similar risk profile.

Q. Is the KPMG report included in the record?

A. Yes. It is attached to this testimony as Exhibit No. (BJC-7T).

BENEFITS OF THE TRANSACTION

Q. Has NW Natural calculated the financial benefits to its customers of the Transaction?

A. Yes. The Company has calculated that the Transaction provides its customers with a financial benefit of an estimated $66.3 million (system-wide) in net present value over its life. If the Washington Utilities and Transportation Commission approves the Transaction, those benefits will be allocated between NW Natural's Oregon and Washington customers.

Q. What will happen if the Commission does not approve the Transaction?

A. In that case Oregon customers will be responsible for all costs and will receive all of the benefits of the Transaction.

Q. How did you calculate the $66.3 million benefit?

A. We attempted, as best we could, to compare the Transaction to our other options to purchase long-term physical gas supplies that would add price stability to our portfolio.

Q. What options does the Company have to secure long term physical supplies other than the Transaction?

A. As I explained above, there are no real viable options for the Company to do so.

Q. Can't the Company choose to purchase gas based on a futures price forecasts?

A. No. Forecasts of future prices from firms like EIA, CERA, and Woods MacKenzie are not prices at which we can actually purchase gas. They are just forecasts.

Q. But aren't forecasts indicative of prices at which gas can be purchased?

A. Certainly not for long term supplies. It is true that in the early years, forecast prices will often be similar to actual prices on ICE, but will spread as you move further out. *[Confidential]* ********** ********** [1] *[Confidential]* However, that price is not one at which we could transact a financial hedge. In fact, the price at which we could transact on ICE is $6.39—*[Confidential]*$*****[Confidential]* higher than the forecast price.

Q. How did the Company establish a price to which the Transaction could be compared?

A. The Company obtained an indicative quote from BP for a comparable 10-year hedge. When this price, $6.10 per dekatherm, was added to the per-dekatherm price for the accompanying credit facility, $0.37 per dekatherm, it yielded a total cost of a 10-year hedge equal to $6.47 per dekatherm. The per-dekatherm cost of gas under the Transaction (which includes carrying costs) is substantially less than the $6.47 benchmark.

[1] *[Confidential]* ********** *[Confidential]*

Q. How reasonable is it for NW Natural to rely on BP's indicative price quote?

A. NW Natural conferred with Tenaska and Encana as to how they would develop a quote for long term physical sale. We applied their methodologies in an attempt to recreate BP's quote and found it to be within the potential range. Tenaska and Encana explained that forecast prices have two components: (1) a view of the price of gas at Henry Hub; and (2) a view of the basis difference between Henry Hub and wherever the gas is to be purchased (in our case Opal). Individual producers have different views of those items. In addition, producers will add a premium to cover the transaction risks unique to its physical position. *[Confidential]* ********** ********** *[Confidential]* reflecting an adjustment of about *[Confidential]* $******** *[Confidential]* for BP's premium and different view of forward prices. In addition, the Company would add a cost of a credit facility associated with the transaction, bringing the cost of the long term physical deal to $6.47.

Q. What conclusion did you draw from this comparison?

A. As explained above, the weighted average cost of gas under the Transaction is $5.385 per dekatherm. This cost compares quite favorably to the cost of a physical deal, providing our customers with a very significant benefit.

Q. In your testimony in Oregon you stated that the Transaction was estimated to provide a financial benefit to customers of $52 million. Why are you estimating the benefit as $66.3 in this testimony?

A. The estimated benefit increased on net for three reasons. First, the Oregon calculation included the state tax benefits of accelerated depreciation. Because Washington has no state tax, Washington carries a higher rate base, which results in a lower net present value. Second, the cost of capital used in the analysis was different. Oregon's calculation was based upon the cost of capital authorized by the OPUC in the Company's last Oregon rate case in 2003. In this filing, on the other hand, the Company calculated the financial benefits based upon the cost of capital authorized by the Commission in the Company's 2008 Washington rate case. Finally, the above elements that decrease the NPV benefit to ratepayers are more than offset by comparing the deal with an updated price point obtained since the Oregon proceeding.

Q. Have you reviewed other long term gas supply purchases in the market by which the Transaction can be evaluated?

A. Yes. The Company reviewed the recently announced transaction between Public Service of Colorado (Excel Energy Services, Inc.) and Anadarko as a second comparison transaction. This transaction arose under newly enacted CRS § 40-3.2, which allows cost recovery of the long term gas agreement irrespective of future market prices of natural gas and the cost of replacement gas in the event of default. The transaction has a forecast nominal price of $5.48 per dekatherm over a 10 year term as compared to an average nominal cost of $6.73 per dekatherm in

its Base Gas price forecast. NWN determined this transaction to be not comparable given the significant credit risks customers are asked to bear in the transaction for replacement gas. Of note, however, if NW Natural assumed the same forward price forecast that Public Service Company of Colorado used, and assumed the volumes in the Encana transaction our NPV would be $109.3 million over the life and about $55.8 million in the first 10 years. The average volume weighted price in the Encana transaction is $5.385 over 30 years.

Q. Does this conclude your testimony?

A. Yes.