BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

IN THE MATTER OF THE APPLICATION OF QUESTAR GAS COMPANY FOR APPROVAL TO INCLUDE A PROPERTY UNDER THE WEXPRO II AGREEMENT	))))))	DPU EXHIBIT 1.0 DIR DOCKET NO. 13-057-13

Pre-filed Direct Testimony

Of

Douglas D. Wheelwright

On Behalf of

Utah Division of Public Utilities

December 12, 2013

Q: Please state your name, title, and business address.

A: My name is Douglas D. Wheelwright. I am a Technical Consultant with the Division of Public Utilities (Division). My business address is 160 East 300 South, Salt Lake City, Utah 84114.

Q: On whose behalf are you testifying?

A: I am testifying on the Division's behalf.

Q: Please describe your position and duties with the Division.

A: As a Technical Consultant, I examine public utility financial data and review filings for compliance with existing programs as well as applications for rate increases. I research, analyze, document, and establish regulatory positions on a variety of regulatory matters. I review operations reports and evaluate compliance with laws and regulations. I provide written and sworn testimony in hearings before the Public Service Commission of Utah (Commission) and assist in case preparation and analysis of testimony.

Q: Did you participate in the analysis and recommendation for approval of the Wexpro II Agreement in Docket No. 12-057-13 (Wexpro II Docket)?

A: Yes. I was the Division witness in the Wexpro II Docket and recommended approval of the Wexpro II Agreement. The Commission's order issued March 28, 2013 approved the Wexpro II Agreement as filed. That docket created a mechanism or a framework allowing Questar Gas Company (Questar Gas or Company), through subsequent filings, to present specific properties[1] to the Commission for consideration and possible inclusion as Cost of Service gas production under the Wexpro II Agreement. Under the terms of the Wexpro II Agreement, before any property may be presented for consideration, Wexpro must have completed its analysis and purchased the property.

Q. Was the application in this docket filed pursuant to the Wexpro II Agreement?

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[1] I am not an attorney, and am not using the term "property," "properties," or "[redacted]" in the technical "real property" legal sense.

A. Yes. Questar Gas filed its application for approval to include the [redacted] in the Cost of Service gas purchased by Questar Gas pursuant to the Wexpro II Agreement (Application).

Q: Is the information filed in this docket consistent with what the Company represented would be submitted in future filings?

A: Yes. As part of the approval of the Wexpro II Agreement, the Company identified 16 items that would be included with future specific property applications. Exhibits A through P of the Application provide the details of the assumptions used in the analysis and the model used to evaluate the [redacted].

Q. What is the Division's recommendation regarding the inclusion of the [redacted] under the Wexpro II Agreement?

A. After independent review and analysis, the Division is satisfied that Wexpro has done a thorough analysis of the Trail property and recommends that the Samson acquisition (Trail Unit) property be approved and included under the Wexpro II agreement.

Through this transaction, Wexpro acquired a larger ownership percentage in existing (Wexpro I) wells with known production. Wexpro has experience with drilling wells in this field and is familiar with the geology, current production levels, and has an opportunity to develop additional long-term assets.

Under the Wexpro I agreement, both the Company and ratepayers have enjoyed significant benefits. The Wexpro I properties are, however, finite resources. The inclusion of the additional ownership rights in the existing wells and the potential to develop future wells from the acquisition of the [redacted] should provide supply resources for current and future natural gas production. The [redacted] provides Wexpro and Questar Gas additional gas resources as the current Wexpro I properties are depleted.

Q. Can you provide a brief summary of the [redacted]?

Yes. Wexpro currently owns a [redacted] interest in a group of wells located in the field in which the [redacted] is located, with others owning the remaining interests in those wells. Through the [redacted], Wexpro purchased an additional [redacted] in these same wells, bringing its total ownership interest to [redacted]. Wexpro purchased its additional [redacted] from a single party for a total price of [redacted].

Q. Why isn't the [redacted] Acquisition being presented through the Wexpro I Agreement rather than through the Wexpro II Agreement?

A. I am not an attorney, but it is my understanding that properties covered by Wexpro I were specifically defined and identified. Thus, Questar Gas is making this Application pursuant to the Wexpro II Agreement. The Wexpro I Agreement governs Wexpo's current [redacted] ownership (i.e. production and development) in the [redacted]. If approved by the Commission, the Wexpro II Agrement will govern the additional [redacted].

Q: Do you have any broad concerns about the information included in the Application?

A: I do have a concern that review of the information in isolation could potentially lead to the wrong conclusions. The majority of the analysis looks at the initial acquisition cost and future drilling potential for this specific property. While this type of analysis is critical to review the risks and possible benefits of the acquisition, this property represents only a portion of the total cost of service gas production from Wexpro. If approved, the production from the existing and future wells will be included with production from other existing and future wells to calculate the total cost of service gas production. In addition to looking at the individual aspects of this particular property, the risks and possible benefits should be examined from its potential impact on the total production and the weighted average cost of gas.

Furthermore, as anticipated under the Wexpro II Agreement, Wexpro acquired the additional ownership interest in the Trial Unit at its own risk and if not approved will be developed as a Wexpro owned asset. If approved under Wexpro II, the rate of future development will be determined both by market conditions and the supply requirements of Questar Gas.

Q. If the Application were approved, how would gas volumes from the [redacted] be managed?

If the Application is approved, under Wexpro II, “gas volumes will be managed under the direction of Questar Gas."[2] If the Commission does not approve the Application, Wexpro will manage the gas volumes as a Wexpro-company owned asset.

Q: Do you know how much of the total gas supply in the future the [redacted] represents?

A: In response to Field Data Request 1.05, the Company provided a summary of the potential gas supply percentages for [redacted] below. The existing [redacted] ownership from Wexpro I is referred to as [redacted] ownership percentage that would result from approval of the Application is referred to as [redacted]

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

The increased volumes in 2016 through 2018 represent the production from [redacted] projected to be drilled.[3] All production from existing and future wells will be designated as either [redacted] production (coming from the [redacted] ownership interest under Wexpro I) or [redacted] production (coming from the [redacted] ownership if the [redacted] Application is approved under Wexpro II). As the majority interest owner with its [redacted] ownership interest, Wexpro can better control the rate of future development and the production from the [redacted]

Q: Have you been able to determine how the approval of the Application will affect the total price of the cost of service gas from Wexpro?

A: In response to Field Data Request 1.01, the Company provided an estimate of the impact to the cost of service gas for 2014 through 2018. Wexpro did not provide a forecast beyond five years since a drilling schedule has not been determined beyond 2018. Since production from the [redacted] would represent a small portion of the total natural gas production available to Questar Gas under Wexpro I and Wexpro II, the impact on the total cost of

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[2] Wexpro II Agreement, IV-8, page 15.
[3] Application Exhibit O

service gas is likely minimal. As shown by the table below, new wells drilled in the future could bring the price of cost of service gas down. If the Application is approved, for the first few years, the price of gas produced from existing wells from the [redacted] would be more expensive than the cost of service gas from existing Wexpro I wells. Then, in later years, gas produced from the [redacted] would be less expensive than gas produced from Wexpro I wells, and the gas produced from the [redacted] would bring down the combined cost of service gas from Wexpro I and Wexpro II. A depiction of this relationship is in the table below.

	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

Q: Why does the price of the gas from the [redacted] go down in future years?

A: As represented in Application Exhibit L, all of the acquisition costs have been assigned to the proved producing wells and represent the highest cost resource. The new wells are projected to be drilled and to produce gas at a lower cost than the existing wells, which will reduce the average price of the gas from this field. The Company's analysis assumes successful drilling of [redacted] as outlined in Application Exhibit O. If these assumptions are accurate and the Application is approved, the new wells could help to reduce the average price of cost of service gas for Questar Gas' customers in future years. Reproduced here is a chart from Application Exhibit L showing how the future wells drilled at lower prices will reduce the average price of production.

[redacted]

Q: How does the projected price of the cost of service gas compare with the forecast market price for natural gas?

A: At the present time, the cost of gas produced from the [redacted] and the other existing Wexpro I producing wells is higher than the current market price. Below is a chart I prepared comparing the forecast cost of service gas for the Wexpro I wells and wells from the [redacted] to the NYMEX forward strip price both as filed by the Company and as of December 6, 2013.

[redacted]

This analysis is not all inclusive. It looks only at the next five years and does not accurately represent the price paid by Questar Gas for outside purchases. Because all of Questar Gas' supply requirements in the summer months are met by Wexpro production, Questar Gas has no need to purchase gas from third parties during the summer months. Because Wexpro production, even if the Application is approved, would not satisfy all of Questar Gas' demand during the winter months, Questar Gas would have to purchase additional gas at the higher prices that occur during those months of the year.

Q: If the market price for gas is lower than the Wexpro cost of service price, why should the [redacted] be included in the cost of service production?

A: This acquisition represents the purchase of a long-term asset that has potential benefits for many years. The original Wexpro wells have produced much more natural gas than was originally anticipated. The existing wells continue to produce natural gas but are being depleted. In order to maintain the current production and prepare for future years, additional wells must be drilled. The purpose of the Wexpro II Agreement is to allow Wexpro to look for potential properties that could be purchased now for potential benefit for Questar Gas customers in the future. If Wexpro waits until the demand and the price for natural gas increases, the opportunities to purchase may not be available, or may be available only at a much higher price. Wexpro has already purchased this property. Given Wexpro's risk, it likely would not have completed the transaction if it were not economically attractive for current and future production in the absence of the Wexpro II Agreement.

Q: Can you comment on the proposal to manage future gas production to [redacted] of the forecast requirement?

A: Yes. The Company has indicated that gas supplies will be managed to meet [redacted] of the forecast IRP gas requirement with a minimum of [redacted]. Mr. McKay's direct testimony indicates that the Company can effectively manage [redacted] of the production coming from Wexpro and can shut-in an additional [redacted] without incurring significant cost. [4] Application Exhibit M indicates that the production from the Wexpro I and Wexpro II properties, if the Application is approved, is projected to be [redacted] of the forecasted need in 2014 and then remain in the [redacted] range through 2018.

Q: Has the Company explained or defined what it considers to be "significant shut –in cost?"

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[4] Direct Testimony of Barrie L. McKay, lines 88-104.

A: Yes. In response to DPU data requests, the Company provided the following:

[redacted]

[redacted]

At the present time, [redacted] of the production from specific wells can be shut-in at a relatively low cost. However, all of the existing wells are being depleted, including the low cost wells. In answer to DPU Data requests, the Company indicated:

[redacted]

As these low cost wells are depleted, the cost to shut-in wells in the future will increase. As indicated in Mr. McKay's direct testimony, the shut-in cost increases significantly beyond these low cost wells.[5] Managing to the [redacted] levels should be reviewed and reevaluated periodically to determine the shut-in cost and the appropriate level of production. In that reconsideration, due regard should be given to Wexpro's planning horizons and other factors that weigh against too-frequent adjustments to the targeted production level. That is to say that the targeted production level cannot fluctuate too much or too often given planning, drilling, and production timelines and other factors.

Q: How does the [redacted] production level compare to the historical production from Wexpro?

A: In the annual 10K filing made by its parent, Questar Corporation, Questar Gas provides a breakdown of the percentage of gas supplied from Wexpro production and the percentage from outside purchases. Prior to 2012, Wexpro had been providing approximately 51% of the natural gas requirement. That volume changed in 2012 to 68% with the additional

[5] QGC Exhibit 1.4.

drilling and production that had occurred in prior years. The increase in the percentage was compounded by lower demand due to warmer than normal temperatures in 2012. The lower demand in 2012 can be seen in Application Exhibit M. The table below is a summary of the actual gas supply percentage from Wexpro and outside purchases for the last five years.

Natural Gas Supply						
	2008	**2009**	**2010**	**2011**	**2012**	**AVG**
WEXPRO Gas	49.0%	51.0%	51.0%	52.0%	68.0%	54.2%
Purchased Gas	51.0%	49.0%	49.0%	48.0%	32.0%	45.8%

Q: Do you have any comments about the [redacted] forecast production level for 2014?

A: While the [redacted] is an increase from the historical average of 54%, the projected [redacted] represents a [redacted] increase from the actual production in 2012. The forecast for 2014 includes [redacted] from the purchase of the [redacted] additional interest in the existing wells. Without the [redacted], the production is projected to be [redacted], or roughly the same percentage as 2012. The larger percentage in 2014 is also due to the production of wells that have been drilled in previous years. While the Division is concerned with a prolonged level of overly high Wexpro gas volumes, a number of factors suggest acceptance of the 2012-2014 aberrations.

Some of the added production is from drilling activity in the Pinedale area. Because of land management considerations, Wexpro wells in that area may be drilled at a single time or not at all. Forfeiting the right to drill in those areas to decrease supply in the short term would have been shortsighted and imprudent. Furthermore, accepting a temporary increase in annual supplies with the addition of the [redacted] volumes is reasonable because it will provide long-term gas supplies as Wexpro I properties' production tapers off. The nature of the [redacted] purchase was such that Wexpro could not plan for its availability or assume the existence of the deal in a manner that allowed Wexpro to abruptly change drilling plans or Questar Gas to include the existing production volumes to be factored in to the IRP.

Notwithstanding the factors that weigh in favor of accepting a temporary oversupply of Wexpro gas, the Division would prefer that Wexpro and Questar Gas explore ways to mitigate the impact of the oversupply. The Division lacks the operational expertise to construct such plans, but the economic sale of gas or shut-in of properties, as appropriate, may offer such opportunities and they should not be foreclosed.

Q. Has the hydrocarbon monitor provided an analysis concerning the [redacted]?

A: Yes. As specified by the Wexpro II Agreement, the hydrocarbon monitor, Mr. David Evans, has completed an independent analysis of the assumptions used by the Company to evaluate the [redacted]. The Wexpro II Agreement states that the hydrocarbon monitor will provide an analysis but will not provide a recommendation.[6] It is my understanding that Wexpro officials have worked closely with Mr. Evans to provide access to information and additional sensitivity analysis runs using different assumptions to aid in his evaluation process. On November 7, 2013, Mr. Evans filed a report with the Division outlining his findings concerning the [redacted].

Q. What did Mr. Evans state in his analysis?

A. In the summary conclusion of the evaluation, Mr. Evans made the following comments.

[redacted]

[redacted]

While Mr. Evans does not disagree with the information filed in the Application, his independent analysis takes a more conservative look at the acquisition and includes only [redacted] proved undeveloped wells versus the [redacted] undeveloped wells included in the Application.

[6] Wexpro II Agreement, IV-4, pages 14-15.

Q: Does the lower well count change the cost of service calculation?

A: Yes. On page 7 of Mr. Evan's analysis, he calculates the difference in the cost of service gas on a yearly basis as well as the cumulative change to the cost of service production. The report provides an analysis of lower well counts over five year time periods as well as over the estimated 30-year life of the wells (2013, 2018, 2023, 2028 and 2043). A review of the five-year estimate for 2018 indicates an increase of [redacted] As stated above, this analysis is a comparison of the change in price for just the [redacted] and is not the calculated change in price for the entire cost of service gas production. In 2018, the total production from the [redacted] (Wexpro I and Wexpro II) is estimated to be approximately [redacted] of the total, assuming the [redacted] future wells.

Q: Do you have comments regarding the assumptions that were used in the Application?

A: Yes. One of the key assumptions in the analysis is the forecast price of natural gas in future years. Application Exhibit A includes a monthly forecast for gas and oil through December 2018. The forecast follows the seasonal change in the commodity price between the summer and winter months and is consistent with historical price movement. The Company analysis estimates the price for natural gas using the NYMEX forward strip price through 2018. Since price estimates beyond five years are not as reliable, the analysis held the price for gas and oil constant at the 2018 levels through 2034. While prices are not likely to hold constant in future years, using a constant value provides a more conservative estimate of the future prices but does not reflect the more likely increase in prices going forward.

Q: Have you seen an analysis using different price assumptions?

A: Yes. For comparison and as another sensitivity analysis measure, I asked Wexpro to complete an analysis of the [redacted] using both the lower well count identified in the Evans report and the EIA long-term natural gas price forecast. The EIA price forecast is published in the 2013 Annual Energy Outlook[7] and provides an estimate of the nominal Henry Hub spot price. This analysis does not attempt to forecast the NYMEX forward strip price in future years. The results of the analysis have been used to examine the possible

[7] EIA Annual Energy Outlook 2013, April 2013, Table 13. Natural Gas Supply, Disposition and Prices

impact of increasing gas prices in future years instead of holding prices flat beyond 2018. The complete analysis is available in FDR 1.06.

Q: What were the results from this sensitivity analysis?

A: The results of the analysis have been summarized below in similar format to the Evans' report. I have included a comparison to the estimated Henry Hub Spot market price used in the analysis; however as mentioned above, Questar Gas is only purchasing gas from third parties during the winter months when prices are higher and would not be purchasing at the annual average price. Under this analysis, the market price increases at a much faster rate than the cost of service gas. This could potentially create a greater benefit to Questar Gas' customers as a long-term asset. The increase in the cost of service gas is partially due to the higher royalty fees as the price of natural gas increases.

[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[redacted]

[redacted]

Q: Do you have any information on the well production and the need for future drilling to meet the needs of Questar Gas' customers?

A: The Division does not have historical production volumes for each well, but the forecast production for each well has been included in prior Account 191 filings. DPU Exhibit 1.1 DIR is a summary of the forecast well production from previous filings with the totals for the various production fields identified. A summary report clearly shows a decline in forecast production from the Church Buttes field over time. A similar decline can be seen from the Bruff Unit and the summary decline in the All Other Wells category located at the bottom of the report. Increased production can be seen from the Canyon Creek and Pinedale fields attributed to more recent drilling in these areas.

Q: Are there other items to be considered as part of the evaluation?

A: Yes. The projections of the Company and my analysis use a conservative estimate of production in future years. Additional production could be realized in future years if Wexpro adds compression or if well production is greater than forecast. These events would reduce the cost of service production and would be a greater benefit to ratepayers in the future. This would be similar to the ratepayer benefit that has occurred from the original Wexpro production.

Q: Do you feel that approving the [redacted] under the Wexpro II Agreement is in the public interest?

A: Yes. The existing portfolio of gas producing properties available to Questar Gas through Wexpro I will deplete over time and at some point will need to be replaced with new Wexpro production or other production. Approving the [redacted] as a Wexpro II property represents the purchase of a long-term resource that could be advantageous to ratepayers for many years. The price of natural gas in the future is unknown. but in my opinion, the probability that prices will increase is greater than the probability that prices will decrease.

Q: Does that conclude your prepared direct testimony?

A: Yes it does.