

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

IN THE MATTER OF THE APPLICATION)	
OF QUESTAR GAS COMPANY FOR)	
APPROVAL OF THE VERMILLION)	DOCKET NO. 17-057-01
ACQUISITION AS A WEXPRO II)	
PROPERTY)	

REDACTED

DIRECT TESTIMONY

OF

GAVIN MANGELSON

FOR THE OFFICE OF CONSUMER SERVICES

FEBRUARY 21, 2017

DIRECT TESTIMONY OF GAVIN MANGELSON

1

INTRODUCTION2 **Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS ADDRESS.**3 A. My name is Gavin Mangelson; I am a Utility Analyst for the Office of Consumer
4 Services (Office). My business address is 160 East 300 South, Salt Lake City, Utah
5 84111.6 **Q. PLEASE DESCRIBE YOUR EDUCATION AND EXPERIENCE.**7 A. I received a B.A. in Economics from the University of Utah. I previously worked as
8 a Financial Analyst for the Department of Technology Services where my duties
9 involved the creation of rates that were subject to approval by a government
10 appointed commission. I have completed a Utility Analyst training course from New
11 Mexico State University. I have worked for the Office for three and a half years. I
12 have submitted Comments in numerous dockets and testimony in five dockets
13 including Docket No. 15-057-10, the application for inclusion of the Canyon Creek
14 Acquisition as a Wexpro II property, and participated in the settlement discussions of
15 that docket. (In addition to including a new property, the settlement in that docket
16 provided for material changes to the way that new properties are treated under the
17 Wexpro II Agreement.)18 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**19 A. The purpose of my testimony is to present the position of the Office regarding the
20 proposal of Questar Gas Company (Questar) to include several newly acquired
21 properties, collectively referred to as the Vermillion Acquisition, into the Wexpro II
22 Agreement. I will address how the Vermillion Acquisition may affect gas costs and

REDACTED

23 gas supply for ratepayers, and I will present the position of the Office for each
24 individual property.

25 **VERMILLION ACQUISITION**

26 **Q. WHAT IS BEING REQUESTED IN THIS DOCKET?**

27 A. Questar is requesting that the four new properties of the Vermillion Acquisition be
28 included in the Wexpro II Agreement. Inclusion would allow Wexpro to sell the gas
29 attained from these properties to Questar at a price determined by the combination of
30 costs and a regulated rate of return. This is referred to as Cost of Service (COS) gas.

31 **Q. PLEASE IDENTIFY THE INDIVIDUAL PROPERTIES OF THE**
32 **VERMILLION ACQUISITION.**

33 A. The current proposal includes four separate properties. These properties are located
34 within the Kinney, Trail, Whiskey Canyon and Canyon Creek Units. (The Canyon
35 Creek acquisition is composed of property outside the current participating area
36 (OPA) and the Over Riding Royalty Interest (ORRI) of certain wells within the
37 participating area).

38 **Q. PLEASE EXPLAIN HOW THIS REQUEST IS GOVERNED BY THE**
39 **WEXPRO AGREEMENTS.**

40 A. According to Section IV-1(a) & (b) of the Wexpro II Agreement:

41 *(a) Questar Gas shall apply to the Utah and Wyoming Commissions for approval to*
42 *include under this agreement any oil and gas property that Wexpro acquires within*
43 *the Wexpro I development drilling areas.*

44 *(b) Wexpro may also acquire additional oil and gas properties or undeveloped leases*
45 *outside the Wexpro I development drilling areas. Questar Gas may apply for*
46 *Commission approval to include these properties under this agreement.*

47 Questar has determined that the Kinney and Trail properties are located in the
48 Wexpro I Development Drilling Area as defined in the Wexpro Agreement, Section I-
49 26 (Development Drilling Area), and therefore Questar is required to apply for the
50 inclusion of these properties.

51 The Whiskey Canyon and Canyon Creek properties are being included in this
52 application in accordance with the option granted in Section IV-1 (b) of the Wexpro
53 II Agreement.

54 **Q. PLEASE CLARIFY THE DIFFERENT WAYS THAT THE TERM “COST OF**
55 **SERVICE” MAY BE USED.**

56 A. The Wexpro Agreements allow for Questar to purchase natural gas from Wexpro at
57 prices that are based on the actual costs of extracting, refining and delivering the gas
58 plus a regulated rate of return. This is referred to as Cost of Service gas. Individual
59 natural gas wells have different levels of output and other factors that affect the price
60 of gas from that well, this is the COS price calculated for that specific well. The total
61 COS price charged to Questar and passed on to ratepayers is an aggregate of the COS
62 of each producing well within the Wexpro Agreements. Gas from more expensive
63 wells is combined with gas from less expensive wells to determine the combined
64 COS. For informational purposes COS calculations may also be provided that group
65 the COS prices by wells with some type of commonality, such as Proved Developed
66 Producing (PDP) wells in a common property, proposed development wells in a

67 common property, a combination of PDP and proposed development wells, and in the
68 case of this filing, a COS calculation that is an aggregate of PDP wells and proposed
69 development wells within the Vermillion Acquisition.

70 **Q. DO THE PROPERTIES OF THE VERMILLION ACQUISITION ALREADY**
71 **CONTAIN PDP WELLS?**

72 A. Yes, each property contains interest in existing wells, the production of which would
73 be integrated into the combined COS gas acquired from Wexpro. According to the
74 Direct Testimony of Mr. Barrie L. McKay the number of existing wellbores in each
75 area are as follows: 7 in Kinney, 73 in Trail, 7 in the Canyon Creek OPA, interest in
76 105 wellbores in the Canyon Creek ORRI, and 4 in Whiskey Canyon (McKay Direct
77 Lines 31-43). Specific information about each wellbore and flow stream is presented
78 in Questar's Confidential Exhibits C, D and E.

79 **Q. HOW DOES THE ESTIMATED COS FROM THESE PDP WELLS**
80 **COMPARE TO CURRENT MARKET PRICES?**

81 A. Market prices fluctuate seasonally, from day to day, and are affected by a variety of
82 factors including location and unforeseen supply issues, but for general comparison I
83 will use a market price derived from the five-year Henry Hub Rockies adjusted prices
84 found in Questar's Exhibit A-1 columns B & C. This calculation results in an
85 average market price of \$2.89/dth. Averaging the first five-year price estimates for
86 existing PDP wells found in Questar's Confidential Exhibits L1-L4 (Annual COS
87 Incremental G&A) demonstrates that COS prices on existing PDP wells of the
88 Vermillion Acquisition are above the average market price calculated from Exhibit
89 A-1 for all four properties. ****BEGIN CONFIDENTIAL**** [REDACTED]

90

91

92

****END CONFIDENTIAL****

93

Q. PLEASE EXPLAIN THE IMPLICATIONS OF INCLUDING THE GAS DERIVED FROM THE EXISTING PDP WELLS OF THE VERMILLION ACQUISITION INTO THE WEXPRO II AGREEMENT.

94

95

96

While the addition of natural gas production interests, as proposed in the Vermillion

97

Acquisition, can be reviewed in the context of COS implications for the overall price

98

of COS gas being secured by Questar from Wexpro under the Wexpro Agreements,

99

it is important to acknowledge that the COS gas from the PDP wells of the Vermillion

100

Acquisition, standing alone, is higher than current market prices, and that inclusion of

101

those volumes into the Wexpro II Agreement will require ratepayers to purchase

102

volumes of natural gas from wells whose COS price is greater than market prices.

103

This is particularly true for the period of time before any potentially less expensive

104

development wells become productive.

105

Q. DOES WEXPRO PLAN TO DRILL DEVELOPMENT WELLS IN THE NEW AREAS?

106

107

A. Yes, the application identifies 117 possible development wells, 1 in Kinney, 73 in

108

Trail, 15 in Whiskey Canyon, 27 in the Canyon Creek ORRI and 1 in the Canyon

109

Creek OPA (McKay Direct Lines 31-43). The intended schedule for these wells is

110

found in Questar's Confidential Exhibit O.

111 During the Technical Conference held on February 2, 2017 representatives from
112 Wexpro and Questar stated that there may be additional sites for viable exploration,
113 but that they have not been included in the calculations for this application.

114 **Q. HOW WOULD THE ESTIMATED COST OF SERVICE FOR THESE NEW**
115 **WELLS COMPARE TO MARKET PRICES FOR NATURAL GAS?**

116 A. According to the Trail Settlement Stipulation new drilling can only be undertaken if
117 the estimated COS will be at or below the NYMEX Rockies-adjusted 5-year forward
118 price curve. The estimated COS derived from the proposed properties is presented
119 individually in Questar’s Confidential Exhibits L1 –L4 and collectively in L5. These
120 exhibits forecast that COS gas can be attained from new wells at prices that are below
121 market in most cases. Since this application has been made in 2017 and has not yet
122 been approved I have chosen to use a 5-year average for new development wells
123 starting in 2018. ****BEGIN CONFIDENTIAL**** [REDACTED]

124 [REDACTED]
125 [REDACTED]
126 [REDACTED] ****END CONFIDENTIAL****

127 **Q. WHAT WOULD BE THE RESULTING COST OF SERVICE FROM THE**
128 **VERMILLION ACQUISITION WHEN COMBINING THE PDP AND**
129 **FUTURE WELL FORECASTS?**

130 A. For this comparison I will use the COS calculations presented in the Confidential
131 Portion of the Technical Conference held on February 2, 2017. Slide number 53
132 demonstrates the 5-year Cumulative COS for the Vermillion Acquisition. ****BEGIN**
133 **CONFIDENTIAL**** [REDACTED]

134

[REDACTED]

135

[REDACTED]

136

[REDACTED] ****END CONFIDENTIAL****

137

VERMILLION ACQUISITION EFFECT ON GAS SUPPLY

138

Q. PLEASE DESCRIBE HOW THE PERCENTAGE OF GAS SUPPLY FROM

139

COS GAS HAS BEEN ADDRESSED IN PREVIOUS STIPULATIONS.

140

A. The Trail Stipulation imposed a new requirement that COS gas not exceed 65% of

141

total gas supply. This was followed by the Canyon Creek Stipulation that capped

142

COS gas at 55% of total gas supply (by the year 2020). Previous historic levels of

143

COS gas had been nearer to 40% of total gas supply, whereas prior to the Trail

144

Stipulation COS gas had risen to around 70% of total gas supply. The Office was a

145

signatory to both stipulations which established ceilings in order to drive the levels of

146

reliance on COS gas downward.

147

Q. HOW WILL THE CURRENT REQUEST TO INCLUDE NEW PROPERTIES

148

AFFECT THE LEVEL OF COS GAS?

149

A. According to Questar’s Confidential Exhibit M, the Vermillion Acquisition, including

150

the results of new developmental drilling, would not result in levels of COS gas that

151

violate the terms of the Canyon Creek Stipulation. Although the Vermillion

152

Acquisition will not necessarily cause COS gas levels to exceed 55% of total gas

153

supply, the Office asserts that the cap established in the Canyon Creek Stipulation is a

154

ceiling for COS gas levels, and not a floor or minimum. Therefore, drilling programs

155

should be prudent in avoiding a development schedule that attempts to constantly

156

hover at or near the maximum allowed level of COS gas.

157 **Q. WHAT OTHER RISKS ARE INHERENT IN THE INCLUSION OF NEW**
158 **PROPERTIES IN THE WEXPRO II AGREEMENT?**

159 A. Once a property has been accepted into the Wexpro II Agreement, ratepayers are
160 obliged to purchase the COS gas produced from those properties (up to the supply
161 ceiling previously discussed) regardless of market prices for natural gas. Therefore,
162 ratepayers will still be required to purchase the COS gas even if some of the price
163 projections turn out to be inaccurate. Furthermore, regarding development drilling,
164 the terms of the Canyon Creek Stipulation require ratepayers to absorb a certain
165 amount of risk for both non-commercial wells (dry holes) and commercial wells that
166 do not produce as much as was originally anticipated.

167 **Q. WHAT IS THE OFFICE'S RESPONSE TO MR. RASMUSSEN'S**
168 **ASSESSMENT OF THE BENEFITS OF A DRILLING PROGRAM?**

169 A. In the Direct Testimony of Mr. Brady B. Rasmussen he asserts that if volumes of
170 retired wells are not replaced with volumes from new wells, then fixed costs will be
171 distributed over fewer decatherms (Brady Direct Lines 176-182). The Office agrees
172 with Mr. Rasmussen in his assessment that declining dths can result in an increasing
173 allocation of certain fixed costs per dth. However, this could be construed as an
174 argument in favor of acquiring new properties merely to mitigate an increase in the
175 COS price regardless as to whether or not the new gas supplies themselves exceed
176 market prices. In certain cases, it could be more cost effective to pay a higher price
177 per dth due to declining volumes when the declining volumes of COS gas would
178 likely be supplemented with gas purchased at market rates, which are currently lower
179 than the price of COS gas. The Office asserts that consideration of any new property

180 must be well supported by the stand-alone merits of the property being considered,
181 and the long-term implications of adopting it into the Wexpro II Agreement.

182 **OFFICE’S POSITION ON THE VERMILLION ACQUISITION**

183 **Q. DOES THE OFFICE SUPPORT INCLUSION OF THE VERMILLION**
184 **ACQUISITION AS A WEXPRO II PROPERTY?**

185 A. Based on the price forecasts provided in Questar’s application the Office supports the
186 inclusion of the Trail and Whiskey Canyon properties as they appear to provide the
187 most cost effective gas when combining their respective PDP wells and planned
188 development wells. Both of these properties contain a proportionately high number
189 of low risk future well sites that will aid in producing COS gas from these properties
190 below market prices.

191 **Q. WHAT IS THE POSITION OF THE OFFICE REGARDING THE KINNEY**
192 **PROPERTY?**

193 A. The position of the Office is that the evidence presented in this application is
194 insufficient to justify inclusion of the Kinney property into the Wexpro II Agreement.
195 Calculations available in Confidential Exhibit L4 and in slide 53 of the confidential
196 portion of the Technical Conference show that the COS gas from the Kinney property
197 will likely be above market prices.

198 **Q. WHAT IS THE POSITION OF THE OFFICE REGARDING THE CANYON**
199 **CREEK PROPERTY?**

200 A. Although the forecasted prices for this property are lower than those for the Kinney
201 property, the projections are still sufficiently near market prices that any variations
202 manifested in the actual costs could potentially drive the price of COS gas from the

203 Canyon Creek property above market prices. The Office therefore does not
204 recommend inclusion of the Canyon Creek property based on the current price
205 projections.

206 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

207 A. Yes.