

Application No: A.11-11-002
Exhibit No.: _____
Witness: Todd Van de Putte and Joel Mumford

_____))
In the Matter of the Application of San Diego Gas &))
Electric Company (U 902 G) and Southern California))
Gas Company (U 904 G) for Authority to Revise Their))
Rates Effective January 1, 2013, in Their Triennial Cost))
Allocation Proceeding.))
_____))

A.11-11-002
(Filed November 1, 2011)

REBUTTAL TESTIMONY OF
TODD VAN DE PUTTE AND JOEL MUMFORD
SAN DIEGO GAS & ELECTRIC COMPANY
AND
SOUTHERN CALIFORNIA GAS COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

December 14, 2012

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1 **REBUTTAL TESTIMONY OF**

2 **TODD VAN DE PUTTE AND JOEL MUMFORD**

3 **A. PURPOSE**

4 The purpose of our rebuttal testimony is to respond to the Southern California Generation
5 Coalition (SCGC) and the Division of Ratepayer Advocates (DRA) regarding the additional
6 costs required to complete the Honor Rancho Natural Gas Facility Expansion Project and meet the
7 inventory expansion agreed upon by the 2009 BCAP Settlement parties - which included DRA and
8 SCGC.

9 **B. INTRODUCTION**

10 Although SoCalGas incurred additional costs during the Honor Rancho Natural Gas
11 Facility Expansion Project, the costs were both prudent and necessary to the success of the
12 project. SoCalGas successfully drilled and completed the necessary wells and made the plant
13 and piping modifications required to meet the project requirements. SoCalGas adequately
14 planned the facilities and prudently managed the project. All the facilities, equipment and wells
15 needed to meet the project objectives are currently in service. The inventory of the Honor
16 Rancho Storage Field has increased from 23 BCF to 25 BCF at this time and is on schedule to
17 provide an additional 1 BCF in 2013 as outlined in D.09-11-006, which adopted the 2009 BCAP
18 Settlement Agreement.

19 The BCAP Settlement and D.09-11-006 required SoCalGas to take commercially
20 reasonable efforts to expand its inventory capacity which is exactly what SoCalGas did. In fact,
21 the motion to adopt the settlement (of which DRA and SCGC were party to) cited to a cost

1 estimate of \$56 million to expand inventory capacity by 7 Bcf: “Thus, SoCalGas estimates that a
2 7 Bcf inventory expansion will total approximately \$56 million.”¹

3 The reasonableness of SoCalGas’ efforts were demonstrated by the estimated well costs
4 being recorded on a daily basis for each well drilled. SoCalGas monitored those estimated costs
5 and made decisions in order to mitigate costs throughout each phase of a given well. All the
6 contractors on site were managed via a 24/7 on-site wellsite supervisor, in addition to SoCalGas
7 personnel being available 24/7 during all drilling operations.

8 During a well drilling operation, however, drilling difficulties are not uncommon. A well
9 drilling operation is somewhat at the mercy of the drilled formations and there are only limited
10 opportunities to mitigate costs during a drilling operation should difficulties be encountered.
11 However, unless a given well is drilled and completed to the objective target depth that
12 incomplete well has no value and would simply be a sunk cost. As such, despite increased costs,
13 SoCalGas completed the Honor Rancho Natural Gas Facility Expansion Project consistent with the
14 BCAP Settlement.

15 **C. SCGC’S RECOMMENDED DISALLOWANCE SHOULD BE REJECTED**

16 SCGC recommends that the Commission disallow \$11.1 million related to cost increases,
17 including \$2.9 million for process plant modifications and \$8.2 million for the first liquid
18 production well.² It should be noted that SCGC later states in testimony that they are requesting
19 a \$4.9 million disallowance for process plant modifications.³ This is inconsistent with, and
20 unsupported by, their testimony and appears to be an error. In addition, SCGC states that

¹ Joint Motion of San Diego Gas and Electric Company, Southern California Gas Company, the Division of Ratepayer Advocates, Southern California Edison Company, the Indicated Producers, the Southern California Generation Coalition, the City of Long Beach, Southwest Gas Corporation, Watson Cogeneration Company and the California Cogeneration Council, and the California Manufacturers and Technology Association for Adoption of Settlement Agreement and Immediate Suspension of Briefing Schedule for Phase One Issues at 11.

² Prepared Direct Testimony of the Southern California Generation Coalition (Yap), at 21.

³ Prepared Direct Testimony of the Southern California Generation Coalition (Yap), at 22.

1 SoCalGas is requesting approval for \$18.9 million of incremental costs, however, the correct
2 amount, as shown in SoCalGas' testimony, is \$16.2 million.⁴

3 **i. Processing Plant Modifications**

4 SCGC recommends that the Commission disallow "\$2.9 million...associated with the
5 delays in the commencement of the modification work."⁵ To support this disallowance, SCGC
6 argues:

7 The Applicants have failed to explain why they waited until August to
8 commence the construction when the CPCN was approved in April. The
9 Applicants had plenty of opportunity to select contractors in advance of the
10 approval of the CPCN knowing that the plant's availability would be highly
11 constrained once the winter storage season commenced in November.
12 Construction should have started well before August in a timeframe that
13 would have allowed for isolation of the processing equipment.⁶

14 SCGC's conclusions are incorrect and provide no factual basis for their conclusive statement.

15 SCGC appears to argue that the delay was somehow caused by SoCalGas, that SoCalGas
16 engaged in *no* work from December 2009 until April 2010, and that the remaining \$2.9 million is
17 entirely associated with the 4 month delay in shutting down the existing processing plant. This is
18 incorrect.

19 Notably, in SoCalGas' CPCN application for the Honor Rancho Natural Gas Facility
20 Expansion Project SoCalGas requested a schedule that that would have resulted in a final
21 Commission decision in November of 2009.⁷ That would have allowed the physical dehy work
22 to commence in April, when both trains could have operationally been taken out of service.
23 However, a decision was not received until April. That 4 month delay pushed the required dehy
24 work into August. SCGC should know that the period of August and September is critical to

⁴ SoCalGas and SDG&E Testimony (Mumford/Van de Putte), at 14.

⁵ Prepared Direct Testimony of the Southern California Generation Coalition (Yap), at 22.

⁶ Prepared Direct Testimony of the Southern California Generation Coalition (Yap), at 22.

⁷ Application of Southern California Gas Company to Amend its Certificate of Public Convenience and Necessity for the Honor Rancho Natural Gas Storage Facility (A.09-07-014), at 32.

1 electric generation load and SoCalGas could not remove both dehy trains from service and
2 jeopardize service to electric generators during this period. Thus, whatever costs were added to
3 the project due to delays were due to the delay in Commission approval of the CPCN and not any
4 alleged SoCalGas caused delay from April until August. Indeed, SoCalGas was engaged in
5 preparation during that time period.

6 The delay from April to August only impacted the direct work on the dehy processing
7 portion of the project, as work continued throughout the entire period even before the decision
8 approving the CPCN. SoCalGas continued work as planned within the timeframe allowed by the
9 decision date. As stated in response to the 7th data request from SCGC,⁸ the project management
10 and engineering for the project started in December 2008 when the Settlement Agreement was
11 approved. As stated in testimony, the changes to the processing plant were made between the
12 time the CPCN was approved and the start of the winter withdrawal season in November 2011.
13 During the time between the CPCN filing and its approval, engineering for the required plant
14 modifications was completed, long lead items were ordered and purchased, construction bids
15 were received, required plant shut-ins were planned and several field piping tie-ins were
16 completed. The construction process ramped up in April 2010 after the CPCN was approved:
17 contractors were scheduled, plant shut-ins were scheduled and pre-fabrication work for the plant
18 modifications started. Then, in August, half of the processing plant was isolated at a time to
19 install the pre-fabricated equipment and make the necessary plant modifications. Only half of the
20 plant could be taken out of service due to the need to maintain withdrawal capacity to serve
21 electric generations loads during that period. There was no waiting period and the construction
22 process was well under way as soon as the CPCN Decision was approved. SCGC's inference that

⁸ SCGC-07-06.

1 SoCalGas caused the delay or performed no work during delay is completely false and their use
2 of this rationale for disallowing the additional costs should be rejected by the Commission.

3 **ii. Liquid Production Well #1, WEZU-C2C Cost Overrun**

4 SCGC alleges that SoCalGas “failed to do their due diligence regarding the choice of
5 directional drilling technology”⁹ and recommends that the Commission “disallow \$7.0 million in
6 direct costs”¹⁰ and “\$1.2 million”¹¹ in incremental indirect costs. The basis for SCGC’s
7 argument is:

8 Had the Applicants selected Baker Hughes there may not have been the
9 extensive loss of equipment in drilling this first well. Allowing for the
10 estimated materials amount of \$1.5 million in addition to the \$5.7 million cost
11 for Baker Hughes, the total cost for drilling the first well would have been \$7.2
12 million.¹²

13 SCGC’s position relies on erroneous speculation. SoCalGas could not have accurately
14 anticipated the geological and site conditions below ground, nor could it have anticipated that
15 Halliburton’s drilling technology would prove incapable of navigating those conditions.

16 In order to support its allegations, however, SCGC argues that due diligence was not
17 performed and that SoCalGas “bid sheet shows no reference to the difference in the directional
18 drilling technology...Therefore the superiority of the drilling technology offered by the Baker-
19 Hughes company, albeit at a higher bid price, was not taken into account in the selection
20 process.”¹³ SCGC appears to rely on a data response to attack the propriety of the contractor
21 selection:

22 In response to Data Request SCGC-07, Q.7.2, which asked for “a copy of the
23 notes, reports, memos, emails, minutes or any other written documentation of
24 the selection process that was employed to select each of the two drilling

⁹ Prepared Direct Testimony of the Southern California Generation Coalition (Yap), at 22-23.

¹⁰ Prepared Direct Testimony of the Southern California Generation Coalition (Yap), at 24.

¹¹ Prepared Direct Testimony of the Southern California Generation Coalition (Yap), at 24.

¹² Prepared Direct Testimony of the Southern California Generation Coalition (Yap), at 24.

¹³ Prepared Direct Testimony of the Southern California Generation Coalition (Yap), at 22.

1 contractors that SoCalGas employed to complete the wells at Honor Rancho,”
2 the Applicants sent a single page bid sheet that summarized the comparison of
3 three drilling contractors.¹⁴

4 The data request response, however, only asked for written evaluations and the single
5 spreadsheet does not capture the extensive verbal analysis and comparisons performed prior to
6 selecting the contractor. SoCalGas reviewed the rotary steerable technologies offered by all the
7 vendors considered via phone calls and personal meetings. All of the vendors were found to be
8 different in their capability, pricing, and availability. The entirety of this directional drilling
9 contractor review was not officially reflected in writing; however it was an important factor in
10 the decision making process.

11 Ultimately, the rotary steerable directional tools offered by both Halliburton and Baker
12 Hughes appeared to be appropriate during the initial evaluation process. Halliburton was
13 ultimately selected because of their commitment to providing a highly experienced Senior
14 Directional Driller who had 20+yrs of directional drilling experience and had previously drilled
15 wells at the Honor Rancho Field. Baker Hughes did not commit to providing that level of
16 experienced personnel due to their high workload and manpower shortage at that time. The staff
17 to be provided is important to a successful well since the directional drilling equipment doesn't
18 drill the well by itself. The directional driller runs and directs the operation of that equipment
19 and that person's skill in using the directional drilling equipment is an important factor in
20 determining the potential quality of the directional drilling work. SoCalGas used its numerous
21 combined years of drilling and operating experience, not only at Honor Rancho, but throughout
22 the SoCalGas storage fields, in weighing a number of reasonable factors in selecting the drilling
23 contractor. These factors included the availability of experienced personnel, technology, and

¹⁴ Prepared Direct Testimony of the Southern California Generation Coalition (Yap), at 23.

1 cost. The selection of Halliburton was entirely reasonable based on the information available at
2 the time.

3 Next, SCGC argues that “Had the Applicants selected Baker Hughes there may have not
4 been the extensive loss of equipment in the drilling this first well.”¹⁵ This statement further
5 demonstrates SCGC’s lack of foundation for their recommended disallowance and inadequate
6 well drilling knowledge. In making their recommendation, SCGC bases the total amount of the
7 disallowance on a simple calculation using the planned number of days for drilling (60 days).
8 SCGC seems to assume that had Baker Hughes been selected everything would have gone
9 perfectly. Ms. Yap makes this conclusion without having any stated experience in well drilling
10 or an understanding of the geological issues faced in the well. While the Baker Hughes tools
11 may have worked better, there were no assurances that would be the case.

12 To be clear, well drilling is a highly uncertain activity that can range from no drilling
13 problems at all, problems like the ones encountered that are surmountable but increase costs, or
14 even insurmountable problems that result in unusable or unproductive wells that must be
15 abandoned or redrilled. Even with the available advanced rotary steerable drilling technologies
16 and a mature, proven field/formation it is impossible to predict drilling problems at depth. No
17 one or thing can accurately know with a high level of certainty what lies 2 miles below the
18 earth’s surface.

19 Notably, of the 479 gas storage fields listed in the American Gas Association’s 2007
20 database of North American gas storage fields, Honor Rancho is the second deepest gas storage
21 field. The drilling difficulties are exacerbated in the Honor Rancho Field because, in addition to
22 the unusual depth, the formations encountered during the well drilling operations are not
23 consistent across the field. The reason for the unusually variable formations at Honor Rancho is

¹⁵ Prepared Direct Testimony of the Southern California Generation Coalition (Yap), at 24.

1 that Honor Rancho was located at the edge of the Ventura basin during the Miocene epoch when
2 the formations were deposited. During that time, the San Gabriel Mountains on the North
3 American plate were sliding past Honor Rancho on the Pacific plate. Because of this, there is a
4 lot of variability in the sediments that were being eroded from the adjacent mountains, and being
5 dumped across the San Gabriel strike-slip fault.

6 To provide examples of the unpredictable and inconsistent nature of the geologic
7 formations and drilling conditions at the Honor Rancho Storage Field, the two horizontal wells
8 that had previously been successfully drilled in different areas of the Honor Rancho Storage
9 Field encountered relatively little drilling difficulty. For this reason, it was our initial belief that
10 the new liquid production wells would encounter formations that were consistent with those to
11 the prior horizontal wells and as such would not pose any unusual drilling difficulty. However,
12 this was not the case.

13 The drilling difficulties experienced during the drilling of WEZU C2C were primarily
14 related to the ability of the directional drilling tools to steer the bit along the planned directional
15 well path in the lower section of the wellbore. Although the GEOPilot rotary steerable tools
16 performed well during the early-mid stages of the well (i.e. the well was in the process of being
17 drilled a number of days ahead of schedule), it became apparent that the GEOPilot rotary
18 steerable tool didn't have sufficient capability to build angle at a higher rate when difficult well
19 course correction scenarios occurred at the Honor Rancho Field. After re-reviewing the rotary
20 steerable tools specifications for both contractors, it was determined that Baker Hughes'
21 Autotrak tools were likely (but by no means guaranteed) to have the additional capability of a
22 higher build rate, should it be required, for the remaining wells in the project.

1 In the case of the second liquid production well, WEZU C7, there were no difficulties in
2 maintaining the planned directional well course with Baker Hughes' directional drilling tools.
3 However, during the drilling of the second liquid production well WEZU C7, the lower section
4 of the wellbore and the geologic formation in that section of the wellbore became mechanically
5 unstable; causing wellbore sloughing and the hole began to cave in. In this instance, Baker
6 Hughes' directional drilling bottomhole assembly and cleanout bottomhole assembly became
7 stuck in the wellbore during the wellbore cleanout operations because of the wellbore sloughing,
8 and the drilling tools were lost in the wellbore.¹⁶ Thus, in spite of the directional drilling
9 contractor change along with the change in rotary steerable tool technology, the different, yet
10 difficult drilling conditions continued. Meaning, it was unpredictable and difficult drilling
11 conditions which resulted in increased costs, not alleged deficiencies in drilling contractor
12 selection.

13 **D. DRA'S PROPOSED DISALLOWANCE SHOULD BE REJECTED**

14 DRA recommends that SoCalGas only recover \$39,196,037.¹⁷ Yet their table on page 2
15 of their testimony shows \$45,436,037 as the estimated Capital Expenditure. That would amount
16 to a disallowance recommendation of approximately \$6.1 million when using DRA statement in
17 the same table of SoCalGas estimate of \$51,529,354. DRA elsewhere in the testimony cite a
18 disallowance of \$6.8 million and in another place cite \$5.9 million adjustment. Even though their
19 numbers are inconsistent, DRA appears to be generally arguing that SoCalGas' well drilling
20 estimate was inaccurate and "additional costs SoCalGas incurred should be disallowed as
21 unreasonable due to imprudence in the following areas: preconstruction planning, contract terms

¹⁶ It is relatively common to damage or lose drilling tools in wells as part of the normal well drilling process, which is one reason drilling is expensive and Lost-In-Hole tool insurance is a standard (and relatively expensive) offering in the drilling industry.

¹⁷ Prepared Direct Testimony the Division of Ratepayer Advocates (Enyinwa), at 1.

1 and conditions, and selection of the contractor.”¹⁸ DRA does not appear to argue disallowance
2 of specific costs it deems unreasonable, but rather that the estimates were inaccurate and
3 additional costs incurred should not be recovered. This is not a basis for a disallowance.

4 Although SoCalGas incurred additional costs during the well drilling phase of the project,
5 the costs were both reasonable and necessary. SoCalGas successfully drilled and completed all
6 four of the wells required to complete the project. SoCalGas also appropriately planned the
7 wells and appropriately managed the well drilling operations.

8 **i. Preconstruction Planning**

9 DRA’s allegation that SoCalGas lacked “preconstruction planning”¹⁹ for the well drilling
10 phase is incorrect and not factually supported. Prior to commencing drilling operations for the
11 project, SoCalGas reviewed the historical and recent drilling and geologic data from the existing
12 Honor Rancho Storage Wells in order to obtain estimated drilling time for each well. This
13 drilling data also included two horizontal wells that were recently drilled at the Honor Rancho
14 Storage Field. The current SoCalGas geologic model was also used to site the surface locations
15 of the wells in addition to providing the successful geologic targets for each well. Numerous
16 meetings and discussions were had with the contractors involved before as well as during the
17 project in order to plan and coordinate all the well drilling activities.

18 DRA references SoCalGas response to DRA-OCE-3 but apparently misunderstands the
19 response – certainly the response does not indicate that we used 40-year old data and did not
20 complete a current geological study. The request asks “Was a geological survey done before the
21 commencement of drilling?”²⁰ In response, SoCalGas explained:

¹⁸ Prepared Direct Testimony the Division of Ratepayer Advocates (Enyinwa), at 3-4.

¹⁹ Prepared Direct Testimony the Division of Ratepayer Advocates (Enyinwa), at 6.

²⁰ DRA-OCE-3-21.

1 Geologic studies of the Honor Rancho field were first performed by the oil
2 company that discovered the field, and these studies were updated by
3 SoCalGas when we took over the field. SoCalGas has a working geologic
4 model of the Honor Rancho field which is based on historical and current
5 geologic data, and is updated whenever new data is available such as from
6 new wells. The most recent update of the Honor Rancho geologic model was
7 performed by Dr. Thom Davis, in which he built a 3 dimensional computer
8 based geologic model. Dr. Davis is well known for his work in petroleum
9 geology as well as having worked for the USGS and the Southern California
10 Earthquake Center in furthering understanding of fault systems in California
11 and how earthquakes are generated. See his website
12 <http://www.thomasldavisgeologist.com>. This model has been successfully
13 utilized in the past to select/target and drill wells in the field. This geologic
14 model for the Honor Rancho Storage Field proved to be accurate and
15 successful in targeting and drilling all 4 of the required wells for this project,
16 as all the wells reached their objectives and at the anticipated targeted depths.

17 SoCalGas utilizes and utilized prudent practices in reviewing the geology of the field, creating
18 and maintaining a geological model of the field, and utilizing that model and information to plan
19 drilling.

20 **ii. Drilling Contractor Selection**

21 DRA next argues that “From the information SoCalGas has provided DRA it does not
22 appear that SoCalGas considered directional drilling technology in its selection of the first
23 contractor.”²¹ DRA’s contention is incorrect for the same reasons articulated in Section C(ii)
24 above. SoCalGas properly evaluated the potential contractor using technical data, pricing and its
25 own extensive knowledge.²²

²¹ Prepared Direct Testimony the Division of Ratepayer Advocates (Enyinwa), at 6.

²² DRA even comments in its testimony that “SoCalGas is not a novice in the business of drilling wells . . .”
Prepared Direct Testimony the Division of Ratepayer Advocates (Enyinwa), at 6.

1 **iii. Contract Terms and Conditions**

2 DRA also notes that the contracts executed with the drilling vendors “appeared to lack
3 any meaningful schedule incentives or intermediate milestones.”²³ DRA provides no addition
4 support for this statement.

5 Based on SoCalGas’ experience in contracting with drilling contractors, the contract used
6 was a typical contract in the oil and gas industry. As is typical in the industry, contractors were
7 hired on a time-and-material basis and directly managed by the client, in this case SoCalGas.
8 The incentive for the contractors to perform well is the potential to get future work from
9 SoCalGas, in addition to the effect on their reputation within the relatively small California oil
10 and gas drilling industry and its effect on their ability to get future work from other operators.

11 SoCalGas did not have contractual “intermediate milestones” with the drilling vendors.
12 Drilling wells are not typically managed like a surface facilities or a pipeline construction
13 contract. However, SoCalGas did have project phases with expected completion durations
14 planned for each well drilled for the project.

15 DRA speculates that a contract with these undefined schedule incentive or immediate
16 milestones is achievable with vendors providing the services. DRA is incorrect. The contracts
17 were prudent and typical of drilling contracts used by SoCalGas and the rest of the industry and
18 no costs should be disallowed for the reasons DRA states.

19 **E. CONCLUSION**

20 In conclusion, although cost increases occurred during the Honor Rancho Natural Gas
21 Facility Expansion Project, the additional costs incurred were prudent, reasonable and necessary
22 to complete the project. The Commission should allow for full recovery.

²³ Prepared Direct Testimony the Division of Ratepayer Advocates (Enyinwa), at 6.