

EXHIBIT B-5

SUPPLEMENTAL SUMMARY REPORT: CHEVRON U.S.A. INC. DILIGENCE APPLICATION FOR THE GETTY OIL COMPANY WATER SYSTEM WATER RIGHTS

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1. INTRODUCTION

On January 3, 2014, Chevron U.S.A. Inc. (“Chevron”) submitted a Summary Report (the “Summary Report”) to Western Resource Advocates (“WRA”) regarding certain matters relating to Chevron’s diligence application in Water Division No. 5, Case No. 13CW3005 for its Getty Oil Company Water System conditional water rights (“Getty Water Rights”). The Summary Report provided certain background information regarding the Getty Water Rights and the planned use of those water rights. WRA subsequently requested that Chevron provide additional information regarding the Getty Water Rights. This Supplemental Summary Report provides that information. Capitalized and other defined terms in this Supplemental Summary Report have the same meanings as set forth in the Summary Report.

2. WATER RIGHTS TO BE STORED IN ROAN CREEK RESERVOIR

In the Summary Report, Chevron described the Getty resource lands now owned by Chevron and how the Getty Water Rights would be used to develop the shale oil from those lands. The Summary Report also mentioned that Chevron owns additional oil shale resource lands in Western Colorado (“Chevron resource lands”) and additional water rights that will be used to develop the shale oil from the Chevron resource lands. The Summary Report stated that some of these additional water rights are also decreed to be stored in Roan Creek Reservoir. WRA has requested more information about the additional Chevron water rights that will be stored in Roan Creek Reservoir.

In addition to the Getty Water Rights, Chevron’s other primary conditional shale oil water rights in the Colorado River Basin (collectively, the “Chevron Water Rights”) are:

- Dragert Pumping Plant and Pipeline, decreed for 94 c.f.s. out of the Colorado River
- Eaton Pumping Plant and Pipeline, decreed for 100 c.f.s. out of the Colorado River
- Pacific Oil Company Pipeline and Pumping Plant No. 1, decreed for 57.25 c.f.s. out of the Colorado River
- Parachute Creek Reservoir, in the amount of 16,886.5 acre-feet out of Parachute Creek and the Colorado River. The water right for Parachute Creek Reservoir was decreed in the amount of 33,773 acre feet and was originally jointly owned by Chevron and Unocal. Several years ago the parties agreed to change the joint ownership so that each party owned one-half of the decreed amount of the water

right. The amount of 16,886.5 acre feet is Chevron's fully divided one-half interest in this water right.

Chevron intends to use the Getty and Chevron Water Rights to produce shale oil from the Getty and Chevron resource lands. These lands contain an estimated 29 billion barrels of shale oil in place, and estimates of the water available under the Getty and Chevron Water Rights indicate that they can support up to five 100,000 BPD projects. In order to assure that the shale oil on the Getty and Chevron resource lands can be produced under all hydrologic conditions using the Getty and Chevron Water Rights, and based upon the information currently available to it, Chevron has determined that approximately 100,000 acre-feet of live reservoir storage capacity will be required.

Chevron plans to use Roan Creek Reservoir and Parachute Creek Reservoir to provide the necessary storage capacity for its shale oil projects. The Getty Pipeline, the Dragert Pumping Plant and Pipeline, the Eaton Pumping Plant and Pipeline and the Pacific Oil Company Pipeline and Pumping Plant No. 1 water rights are all decreed for storage in Roan Creek Reservoir. Accordingly, Chevron intends to store water diverted under all of these water rights in Roan Creek Reservoir.

Diversions to storage under the water rights decreed to Roan Creek Reservoir and Roan Creek Reservoir Enlarged (as opposed to the four direct flow water rights that are also decreed for storage in Roan Creek Reservoir) will be limited to 71,300 acre-feet per year, which is the total decreed amount of these two storage rights. Chevron anticipates that it will capture as much Roan Creek water as possible in Roan Creek Reservoir, up to the total decreed amount, when it is available in priority. Roan Creek water that can be stored is water that will not have to be pumped from the Colorado River. This, in turn, will reduce electrical energy use for pumping and the costs associated with pumping, both of which are important considerations for Chevron. However, water supplies in Roan Creek are limited, and water to fill Roan Creek Reservoir will also need to be supplied from the Colorado River most years in order to provide an adequate supply for Chevron's shale oil projects.

3. CHEVRON'S ESTIMATED WATER USE REQUIREMENTS

In the Summary Report, Chevron stated:

“At this time, Chevron estimates that it will need approximately 16,000 acre feet of water per year for the industrial uses associated with a 100,000 BPD commercial shale oil project. It is also possible that Chevron may have to supplement local public water supplies if required in the permitting process for the project. Chevron estimates that it could need to supply up to 8,000 acre feet of water per year for such purposes for a 100,000 BPD project. Therefore, Chevron anticipates that it will need approximately 24,000 acre feet of water per year to support a 100,000 BPD commercial shale oil project.”

WRA has requested additional information on and justification for the 8,000 acre feet of water for local public water supplies discussed in this statement.

A. Introduction.

The figure of 24,000 acre feet of water per year for a 100,000 BPD commercial shale oil project is an estimate used by Chevron to plan its shale oil projects. This estimate is based upon work performed by Chevron and Conoco in connection with their proposed 100,000 BPD Clear Creek Shale Oil Project (“CCSOP”), including work on the Environmental Impact Statement pertaining to this project (“CCSOP EIS”). The final CCSOP EIS is dated September 30, 1983. The decrees for the Getty and Chevron Water Rights do not limit the diversions under them to this amount. This estimate is only a planning number, based upon projections of water needs that Chevron believes to be reasonable and appropriate for its shale oil projects. However, once a commercial project is constructed and operating, actual water use could be more or less than the estimated 24,000 acre feet per year. This planning estimate should not be considered as a limit on the Getty and Chevron Water Rights.

Other energy companies have developed estimates of water use for their own planned shale oil projects. For example, as discussed in the Summary Report, Getty Oil Company originally owned the Getty Water Rights. Getty’s planning documents anticipated an annual water requirement for a 100,000 BPD shale oil project of nearly 30,000 acre feet. This number included 4,939 acre feet for “community” needs and 2,555 acre feet for power generation. By contrast, Chevron’s projected annual water requirements for a 100,000 BPD project are almost 6,000 acre feet per year less than the Getty estimated amount.

WRA has questioned the projected requirement of 8,000 acre feet per year, which was described in the Summary Report as water to supplement public water supplies. Upon review of the Summary Report, this estimated amount should have more accurately been characterized as water needed for additional purposes related to a commercial shale oil project, including but not limited to public water supplies. Possible additional uses are discussed in the next section of this report.

B. Additional Water Uses for a Shale Oil Project.

A 100,000 BPD shale oil project will require numerous permits from local, state and federal governments and agencies. Permitting requirements have become much more stringent since the CCSOP EIS was issued in 1983. Water could be required for meeting permit requirements and conditions in a variety of contexts. Dedication of water for fish, wildlife or other environmental concerns may be conditions of any permit approval. Chevron’s current shale oil plans contemplate mining which requires a mining permit(s) from the Colorado Division of Reclamation, Mining and Safety. Such a permit could impose reclamation conditions that require substantial amounts of water. Permits from local governments in the area of the project could also impose requirements for water, as discussed in more detail below. The actual permitting requirements for a major shale oil project will not be known until the project is designed and permit applications are submitted to the appropriate governmental entities. Thus, it is important for an energy company such as Chevron to plan for various permitting contingencies and to

maintain an adequate water supply to meet whatever permit conditions may reasonably be imposed.

Chevron has reviewed the 8,000 acre foot planning estimate for supplementing public water supplies that was developed in conjunction with the CCSOP EIS. As mentioned above, limiting this estimate to supplementing public water supplies is too restrictive. Chevron views this number as an estimate of water needed to meet any permitting and other additional requirements that may arise for its shale oil projects. Examples are detailed below.

1. *Domestic Water Use for Man Camps and Other On Site Project Facilities.*

In the CCSOP EIS, the peak number of workers for that 100,000 BPD project (for both construction and operations) was estimated to be 9,000. Many, but not all, of those workers would live in man camps which would need a supply of domestic water. Operations personnel would work in field office complexes, laydown yards, shops, and other such facilities that would also require domestic water supplies.

Assuming that half of the workers, or 4,500 people, would live in man camps and that 600 workers would work in project field office complexes and other facilities, Chevron projects that it would need approximately 500 acre feet of water per year to supply the domestic water needs of these facilities. This number assumes use of 80 gallons of water per capita per day for the man camps and 50 gallons per capita per day for the field office complexes and other facilities, and factoring in a 20% contingency for planning purposes. The per capita water use numbers are reasonable and are based on recent engineering work performed for Chevron in connection with planning man camps, a field office and other facilities for a natural gas project in the Roan Creek basin.

2. *Power Generation.*

Chevron will require electrical power for its shale oil project. Chevron believes that it may not be able to purchase power from the grid to meet all of the needs of a 100,000 BPD shale oil project. The estimated power requirements for the CCSOP were 375 megawatts (MW). Initial estimates from Chevron's engineers are that 250 gallons of water are needed per megawatt hour (MWH) of power production (using natural gas to produce the power, not coal). This amounts to a water requirement of approximately 2,520 acre feet per year. Adding a planning contingency of 20%, the requirement for power production would be a little over 3,000 acre feet of water per year.

3. *Water for Socioeconomic and Environmental Mitigation.*

Water needs for socioeconomic and environmental mitigation are difficult to project. Although the amounts needed for these purposes cannot be determined until the project is designed and permit applications are submitted and reviewed, Chevron is confident that some water will be needed to address socioeconomic and environmental issues.

State and local statutes, codes and planning documents provide support for the concept that energy companies need to plan to address socioeconomic and environmental issues. The Colorado Local Government Land Use Control Enabling Act provides that each local government has the authority to regulate the use of land within its jurisdiction, including regulating activities that may result in significant changes in population density and regulating land use based on the impact of a development on the community and surrounding areas. See C.R.S. 29-20-104. Colorado has also enacted a comprehensive set of statutes requiring that a developer of land provide an adequate water supply to meet the needs of the proposed development. See C.R.S. 29-20-301 *et seq.* Building on these statutory authorizations, Garfield County's Comprehensive Plan 2030 states that one of its strategies and actions for mineral extraction projects is to "[e]nsure that developers of energy or mineral extraction projects contribute proportionately to the construction and operation of any public improvements which are, or will be, required by their projects." Comprehensive Plan 2030, p. 64. Accordingly, any responsible energy company planning a substantial shale oil project will incorporate water for socioeconomic and environmental mitigation purposes into its estimates of water needs.

One way to look at the water needs for these purposes is to base those needs upon the number of employees anticipated for a 100,000 BPD shale oil project. The CCSOP EIS anticipated that after the project is constructed, approximately 5,000 employees will be required to operate the project. Their families will also live in the area of the project and will need water for domestic needs. In addition, a project of this size will result in population growth in the project area associated with businesses and industries that will provide support for the project and for the workers and their families. Assuming that the number of workers, their families and other people moving into the area for related businesses and activities totals approximately 22,000 people, assuming per capita water demands of 150 gallons per day, and applying a 20% contingency, the water requirement to serve these people would be approximately 4,500 acre feet per year. (The CCSOP EIS projected a peak population growth of 28,000 people as a result of the Project). Permitting requirements by affected local governments may require that Chevron provide adequate water to supply the needs of these people, consistent with the statutes and plans cited above and in much the same way that a developer of a typical residential development is required to provide adequate water to supply the needs of the development.

The 22,000 person number mentioned in the preceding paragraph is again merely a number that can be used for planning purposes. The needs for that number of people, plus the needs for the field facilities and power generation as described above, total approximately 8,000 acre feet per year. If Chevron were only required to provide water for Chevron's employees and their families, the number of people for whom domestic water supplies are needed would be lower than 22,000. However, Chevron must also assume that it will be required to provide water for environmental or other purposes related to the project, such as water for fish, wildlife or other environmental concerns, reclamation concerns and other matters that will be the subject of project permits.

Chevron believes that planning to supply approximately 4,500 acre feet of water to address socioeconomic and environmental issues for a 100,000 BPD shale oil project is a reasonable assumption in planning its water supply for such a project. The exact amounts of the uses that need to be supplied will not be determined until the project is permitted, but this is a reasonable amount of water to assume for addressing these issues.

4. *Conclusion.*

The total of the three potential uses of water discussed above is as follows:

Man camps and other field facilities	500 acre feet/year
Power generation	3,000 acre feet/year
Socioeconomic/environmental issues	<u>4,500 acre feet/year</u>
Total	8,000 acre feet/year

As discussed above, this figure is a planning number. The mix and magnitude of the various uses is approximate and most likely will change as planning for the project progresses. However, the discussion above illustrates the reasonable need to plan for at least 8,000 acre feet of water to address additional water needs for a substantial shale oil project.