

**IN THE OFFICE OF THE STATE ENGINEER
OF THE STATE OF NEVADA**

IN THE MATTER OF APPLICATIONS 72695, 72696,)
72697, 72698, 73545, 73546, 73547, 73548, 73549,)
73550, 73551, 73552, 74587, 75988, 75989, 75990,)
75991, 75992, 75993, 75994, 75995, 75996, 75997,)
75998, 75999, 76000, 76001, 76002, 76003, 76004,)
76005, 76006, 76007, 76008, 76009, 76483, 76484,)
76485, 76486, 76744, 76745, 76746, 76802, 76803,)
76804, 76805, 76989, 76990, 77171, 77174, 77175,)
77525, 77526, 77527, 77553, 78424, 79911, 79912,)
79913, 79914, 79915, 79916, 79917, 79918, 79919,)
79920, 79921, 79922, 79923, 79924, 79925, 79926,)
79927, 79928, 79929, 79930, 79931, 79932, 79933,)
79934, 79935, 79936, 79937, 79938, 79939, 79940,)
79941, AND 79942 FILED TO APPROPRIATE OR TO)
CHANGE THE POINT OF DIVERSION, PLACE OF)
USE AND MANNER OF USE OF THE PUBLIC)
WATERS OF UNDERGROUND SOURCES WITHIN)
THE KOBEH VALLEY (139) AND DIAMOND)
VALLEY (153) HYDROGRAPHIC BASINS, LANDER)
COUNTY AND EUREKA COUNTY, NEVADA.)

RULING
#6127

GENERAL

I.

Applications 72695 thru 72698 were filed on May 3, 2005, by Idaho General Mines, Inc., later assigned to Kobeh Valley Ranch, LLC, to appropriate 22.28 cubic feet per second (cfs) each of underground water for mining and milling and dewatering purposes. The project is further described as the mining and processing of molybdenum ore at the proposed Mount Hope Mine. The applications were protested by David A. Stine (Conley Land and Livestock, LLC), Eureka County and Lloyd Morrison.¹

Applications 73545 thru 73552 were filed on December 5, 2005, by Idaho General Mines, Inc., later assigned to Kobeh Valley Ranch, LLC, to appropriate 22.28 cfs each of underground water for mining, milling and dewatering purposes. The project is further described as the mining and processing of molybdenum ore at the proposed

¹ File Nos. 72695 thru 72698, official records in the Office of the State Engineer.

Mount Hope Mine. The applications were protested by David A. Stine (Conley Land and Livestock, LLC), Eureka County and Lloyd Morrison.²

Application 74587 was filed on August 2, 2006, by Idaho General Mines, Inc., later assigned to Kobeh Valley Ranch, LLC, to appropriate 22.28 cfs of underground water for mining, milling and dewatering purposes. The project is further described as the mining and processing of molybdenum ore at the proposed Mount Hope Mine. This application was not protested.³

Applications 75988 thru 76004 were filed on June 29, 2007, by Kobeh Valley Ranch, LLC, to change the point of diversion, place of use and manner of use of Permit 54093, Permit 54094, Permit 60281, Permit 60282, Permit 60283, Permit 60284, Permit 60285, Permit 60286, Permit 72580, Permit 72581, Permit 72582, Permit 72583, Permit 72584, Permit 72585, Permit 72586, Permit 72587, and Permit 72588. The proposed manner of use is mining and milling purposes. The project is further described as the mining and processing of molybdenum ore at the proposed Mount Hope Mine. The applications were protested by Eureka County.⁴

Applications 76005 thru 76009 were filed on June 29, 2007, by Kobeh Valley Ranch, LLC, to change the point of diversion, place of use and manner of use of Permit 57835, Permit 57836, Permit 57839, Permit 57840 and Permit 66062, respectively. The proposed manner of use is for mining, milling and dewatering purposes. The project is further described as the mining and processing of molybdenum ore at the proposed Mount Hope Mine. The applications were protested by Eureka County.⁵

Applications 76483 thru 76486 were filed on November 14, 2007, by Kobeh Valley Ranch, LLC, to change the point of diversion, place of use and manner of use of Permit 10426 Certificate 2782, Permit 18544 Certificate 6457, Permit 23951 Certificate 8002 and Permit 23952 Certificate 8003, respectively. The proposed manner of use is for mining and milling purposes. The project is further described as the mining and processing of molybdenum ore at the proposed Mount Hope Mine. The applications were protested by Eureka County.⁶

² File Nos. 73545 thru 73552, official records in the Office of the State Engineer.

³ File No. 74587, official records in the Office of the State Engineer.

⁴ File Nos. 75988 thru 76004, official records in the Office of the State Engineer.

⁵ File Nos. 76005 thru 76009, official records in the Office of the State Engineer.

⁶ File Nos. 76483 thru 76486, official records in the Office of the State Engineer.

Applications 76744, 76745, and 76746 were filed on February 13, 2008, by Kobeh Valley Ranch, LLC, to change the point of diversion, place of use and manner of use of portions of Permit 13849 Certificate 4922, Permit 35866, and Permit 64616, respectively. The proposed manner of use is for mining and milling purposes. The project is further described as the mining and processing of molybdenum ore at the proposed Mount Hope Mine. Application 76744 was protested by Cedar Ranches, LLC, and Eureka County and Applications 76745 and 76746 were protested by Cedar Ranches, LLC, Eureka County and Lander County.⁷

Applications 76802, 76803, 76804 and 76805 were filed on March 11, 2008, by Kobeh Valley Ranch, LLC, to change the point of diversion of Applications 76005, 76006, 76007, and 76009. The proposed manner of use is for mining, milling and dewatering purposes. The project is further described as the mining and processing of molybdenum ore at the proposed Mount Hope Mine. The applications were protested by Eureka County.⁸

Applications 76989 and 76990 were filed on April 23, 2008, by Kobeh Valley Ranch, LLC, to change the point of diversion, place of use and manner of use of Permit 9682 Certificate 2780 and Permit 11072 Certificate 2880, respectively. The proposed manner of use is for mining and milling purposes. The project is further described as the mining and processing of molybdenum ore at the proposed Mount Hope Mine. The applications were protested by Eureka County.⁹

Applications 77171, 77174 and 77175 were filed on June 20, 2008, by Kobeh Valley Ranch, LLC, to change the point of diversion of Applications 76003, 76485 and 76484, respectively. The proposed manner of use is for mining and milling purposes. The project is further described as the mining and processing of molybdenum ore at the proposed Mount Hope Mine. The applications were protested by Eureka County.¹⁰

Applications 77525, 77526 and 77527 were filed on October 23, 2008, by Kobeh Valley Ranch, LLC, to change the point of diversion of Applications 75990, 75996 and 75997 (portion), respectively. The proposed manner of use is for mining and milling purposes. The project is further described as the mining and processing of molybdenum

⁷ File Nos. 76744, 76745, and 76746, official records in the Office of the State Engineer.

⁸ File Nos. 76802, 76803, 76804 and 76805, official records in the Office of the State Engineer.

⁹ File Nos. 76989 and 76990, official records in the Office of the State Engineer.

¹⁰ File Nos. 77171, 77174 and 77175, official records in the Office of the State Engineer.

ore at the proposed Mount Hope Mine. The applications were protested by Eureka County.¹¹

Application 77553 was filed on November 3, 2008, by Kobeh Valley Ranch, LLC, to change the point of diversion of a portion of Application 75997. The proposed manner of use is for mining and milling purposes. The project is further described as the mining and processing of molybdenum ore at the proposed Mount Hope Mine. The application was protested by Eureka County.¹²

Application 78424 was filed on April 30, 2009, by Kobeh Valley Ranch, LLC, to change the point of diversion of Application 76803. The proposed manner of use is for mining, milling and dewatering purposes. The project is further described as the mining and processing of molybdenum ore at the proposed Mount Hope Mine. The application was protested by Eureka County.¹³

Applications 79911 thru 79942 were filed on June 15, 2010, by Kobeh Valley Ranch, LLC, to change the point of diversion, place of use and/or manner of use of Applications 73551, 73552, 76004, 72695, 76003, 72696, 75997, 72697, 75988, 75996, 75999, 75989, 76989, 75995, 72698, 76000, 76002, 73545, 75992, 75993, 75994, 75998, 73546, 76745, 76990, 75990, 75991, 74587, 73547, 74587, 76746, 76001. The proposed manner of use is for mining and milling purposes. The project is further described as the mining and processing of molybdenum ore at the proposed Mount Hope Mine. The applications were protested by Eureka County, Lloyd Morrison, Baxter Glenn Tackett (79914, 79918, 79925), and Kenneth Benson (79934, 79935, 79936, 79937, 79938, 79939).¹⁴

II.

Applications 72695 thru 72698 and Applications 73545 thru 73552 were timely protested by the following Protestants and on the following summarized grounds:

David Stine (Conley Land and Livestock, LLC, as Successor)^{1,2}

- The basin is fully appropriated and the applications would substantially over-appropriate the basin.
- Kobeh Valley provides recharge to Diamond Valley and therefore, Diamond Valley water levels will decrease at an accelerated rate.

¹¹ File Nos. 77525, 77526 and 77527, official records in the Office of the State Engineer.

¹² File No. 77553, official records in the Office of the State Engineer.

¹³ File No. 78424, official records in the Office of the State Engineer.

¹⁴ File Nos. 79911 thru 79942, official records in the Office of the State Engineer.

- The applications list dewatering as a manner of use, but the points of diversion are at least 7 miles from the pit location. Applicant should specify actual points of diversion for dewatering.
- The mine site straddles Kobeh Valley and Diamond Valley and dewatering may involve an interbasin transfer of groundwater.
- Any application approved should be assigned a temporary status.

Eureka County

- Perennial Yield - The basin is fully appropriated and the applications would substantially over-appropriate the basin.
- Impact to existing rights in Kobeh Valley, Pine Valley and Diamond Valley.
- Place of use is listed as 90,000 acres and is inconsistent with stated purpose.
- The points of diversion are within Basin 139 and the place of use includes Basins 153 and 53; Applicant has not shown compliance with NRS § 533.370(6) (Interbasin transfers).
- There is no unappropriated water at the proposed source of supply, the proposed use conflicts with or will impair existing rights and protectable interests in domestic wells and threatens to prove detrimental to the public interest.
- Applicant has failed to provide the State Engineer with all relevant information required by statute.

Lloyd Morrison

- Perennial Yield - The basin is fully appropriated and the applications would substantially over-appropriate the basin.
- Over-pumping in Kobeh could stop underground recharge of Diamond Valley.

III.

Applications 75988 thru 76009 were timely protested by Eureka County on the following summarized grounds:^{4,5}

- Perennial Yield - The basin is fully appropriated and the applications would substantially over-appropriate the basin.
- Direct conflict with forfeiture provisions of Nevada water law.
- The points of diversion are within basin 139 and the place of use includes basins 153 and 53; Applicant has not shown compliance with NRS § 533.370(6).
- There is no unappropriated water at the proposed source of supply, the proposed use conflicts with or will impair existing rights and protectable interests in domestic wells and threatens to prove detrimental to the public interest.
- Applicant has failed to provide the State Engineer with all relevant information required by statute.
- Kobeh Valley may provide underflow to Diamond Valley and sustained pumping in Kobeh will likely reduce that amount and affect prior existing water rights held by Eureka County and others.
- Applicant lacks ability to finance the proposed works.
- Any application approved should be assigned a temporary status.
- Only consumptive portion of base rights should be subject to change.

IV.

Applications 76483 thru 76486 were timely protested by Eureka County on the following summarized grounds:⁶

- Perennial Yield - The basin is fully appropriated and the applications would substantially over-appropriate the basin.
- Direct conflict with forfeiture provisions of Nevada water law.
- Impact to existing rights in Kobeh Valley, Pine Valley and Diamond Valley.
- The points of diversion are within basin 139 and the place of use includes basins 153 and 53; Applicant has not shown compliance with NRS § 533.370(6).
- Applicant has failed to provide the State Engineer with all relevant information required by statute.
- Kobeh Valley may provide underflow to Diamond Valley and sustained pumping in Kobeh will likely reduce that amount and affect prior existing water rights held by Eureka County.
- Applicant lacks ability to finance the proposed works.
- Any application approved should be assigned a temporary status.
- Only consumptive portion of base rights should be subject to change.

V.

Applications 76744, 76745, and 76746 were timely protested by the following Protestants and on the following summarized grounds:⁷

Eureka County

- Perennial Yield - The basin is fully appropriated and the applications would substantially over-appropriate the basin.
- Direct conflict with forfeiture provisions of Nevada water law.
- Impact to existing rights in Kobeh Valley, Pine Valley and Diamond Valley.
- The points of diversion are within basin 139 and the place of use includes basins 153 and 53; Applicant has not shown compliance with NRS § 533.370(6).
- Applicant has failed to provide the State Engineer with all relevant information required by statute.
- Kobeh Valley may provide underflow to Diamond Valley and sustained pumping in Kobeh will likely reduce that amount and affect prior existing water rights held by Eureka County.
- Applicant lacks ability to finance the proposed works.
- Any application approved should be assigned a temporary status.
- Only consumptive portion of base rights should be subject to change.

Cedar Ranches, LLC

- There is no geologic and/or hydrologic evidence that the quantity of water exists in the mine region.

- New geologic data shows that eastern great basin carbonate aquifer ground-water system of Kobeh, Diamond, and Pine Valleys and other valleys of the region are interconnected.
- Water mining in Kobeh Valley will aggravate the over allocation of water permits in Diamond Valley.

Lander County (76745 and 76746 only)

- Perennial Yield - The basin is fully appropriated and the applications would substantially over-appropriate the basin.
- Direct conflict with forfeiture provisions of Nevada water law.
- Impact to existing rights in Kobeh Valley, Pine Valley and Diamond Valley.
- The points of diversion are within basin 139 and the place of use includes basins 153 and 53; Applicant has not shown compliance with NRS § 533.370(6).
- Applicant has failed to provide the State Engineer with all relevant information required by statute.
- Kobeh Valley may provide underflow to Diamond Valley and sustained pumping in Kobeh will likely reduce that amount and affect prior existing water rights held by Eureka County.
- Applicant lacks ability to finance the proposed works.
- Any application approved should be assigned a temporary status.
- Only consumptive portion of base rights should be subject to change.
- Inter-basin and Inter-County transfer as proposed should be carefully examined.

VI.

Applications 76802, 76803, 76804 and 76805 were timely protested by Eureka County on the following summarized grounds:⁸

- Perennial Yield - The basin is fully appropriated and the applications would substantially over-appropriate the basin.
- Direct conflict with forfeiture provisions of Nevada water law.
- Impact to existing rights in Kobeh Valley, Pine Valley and Diamond Valley.
- The points of diversion are within basin 139 and the place of use includes basins 153 and 53; Applicant has not shown compliance with NRS § 533.370(6).
- Applicant has failed to provide the State Engineer with all relevant information required by statute.
- Kobeh Valley may provide underflow to Diamond Valley and sustained pumping in Kobeh will likely reduce that amount and affect prior existing water rights held by Eureka County.
- Applicant lacks ability to finance the proposed works.
- Any application approved should be assigned a temporary status.
- Only consumptive portion of base rights should be subject to change.

VII.

Applications 76989 and 76990 were timely protested by Eureka County on the following summarized grounds:⁹

- Perennial Yield - The basin is fully appropriated and the applications would substantially over-appropriate the basin.
- Direct conflict with forfeiture provisions of Nevada water law.
- Impact to existing rights in Kobeh Valley, Pine Valley and Diamond Valley.
- The points of diversion are within basin 139 and the place of use includes basins 153 and 53; Applicant has not shown compliance with NRS § 533.370(6).
- Applicant has failed to provide the State Engineer with all relevant information required by statute.
- Kobeh Valley may provide underflow to Diamond Valley and sustained pumping in Kobeh will likely reduce that amount and affect prior existing water rights held by Eureka County.
- All applications filed for this project cannot be approved as the aggregate is greater than 16,000 afa.
- Applicant lacks ability to finance the proposed works.
- Any application approved should be assigned a temporary status.
- Only consumptive portion of base rights should be subject to change.

VIII.

Applications 77171, 77174, 77175, 77525, 77526, 77527, 77553 and 78424 were timely protested by Eureka County on the following summarized grounds:^{10,11,12,13}

- Perennial Yield - The basin is fully appropriated and the applications would substantially over-pump the basin.
- Existing USGS reports suggests that Kobeh Valley may provide underground flow to Diamond Valley and affect existing municipal rights.
- Impact to existing stockwater and irrigation rights in Kobeh Valley and domestic wells in Diamond Valley.
- Effective monitoring and mitigation plan is necessary prior to development of any water and Eureka County should be involved in additional study, modeling and plan.
- Impacts associated with sustained pumping at the proposed points of diversion are unknown.
- The points of diversion are within basin 139 and the place of use includes basins 153 and 53; Compliance with the requirements of NRS § 533.370(6) must be met.
- All applications filed for this project cannot be approved as the aggregate is greater than 11,300 afa the Applicant is seeking.
- Applicant lacks ability to finance the proposed works.
- Any application approved should be assigned a temporary status.

- Only consumptive portion of base rights should be subject to change.
- Any protest hearings to be held should be in Eureka.
- The Applicant's groundwater model is not technically adequate and cannot be used as a basis to approve the applications.
- The point of diversion for Application 77553 is 1,500 feet west of the boundary between Kobeh Valley and Diamond Valley. The proposed location may suggest significant secondary permeability exists in the rocks at this locale; the well may intercept flow from Kobeh Valley to Diamond Valley.
- Hydraulic properties of the proposed point of diversion are not known.
- Further applications for the mines project should not be considered until the USGS study is complete and additional data and analysis is complete.

IX.

Applications 79911 thru 79942 were timely protested by Eureka County and Lloyd Morrison on the following summarized grounds:¹⁴

- Perennial Yield - The basin is fully appropriated and the applications would substantially over-pump the basin.
- Existing USGS reports suggests that Kobeh Valley may provide underground flow to Diamond Valley and effect existing municipal rights.
- Impact to existing stockwater and irrigation rights in Kobeh Valley and domestic wells in Diamond Valley.
- Effective monitoring and mitigation plan is necessary prior to development of any water and Eureka County should be involved in additional study, modeling and plan.
- There are other pending applications to appropriate water and the applicant must withdraw these applications or a decision rendered on these applications prior to ruling.
- Not all of the proposed points of diversion have been explored. Impacts associated with sustained pumping at the proposed points of diversion are unknown.
- The applicant must prove that pumping will not impact any of the sources contributing to Pete Hanson Creek and Henderson Creek.
- The proposed place of use is larger than the mine's Plan of Operations project boundary.
- Further applications for the mines project should not be considered until the USGS study is complete and additional data and analysis is complete.
- Propagation of the cones of depression from pit dewatering in Diamond Valley must be determined.
- The points of diversion are within basin 139 and the place of use includes basins 153 and 53; Compliance with the requirements of NRS § 533.370(6) must be met.
- Kobeh Valley may provide underflow to Diamond Valley and sustained pumping in Kobeh Valley will likely reduce that amount and affect prior existing water rights held by Eureka County.
- All applications filed for this project cannot be approved as the aggregate is greater than 11,300 afa the Applicant is seeking.

- Applicant lacks ability to finance the proposed works.
- Any application approved should be assigned a temporary status.
- Only consumptive portion of base rights should be subject to change.
- Any protest hearings to be held should be in Eureka.
- The applicant holds notices filed with the BLM associated with water supply exploration activities within Diamond Valley.
- Monitoring, Management and Mitigation Plan must be developed prior to approval.
- The State Engineer should conduct a full and fair hearing.
- Forfeiture of existing rights.

X.

Applications 79934 thru 79939 were timely protested by Kenneth F. Benson on the following summarized grounds:¹⁵

- Forthcoming USGS studies could indicate a greater contribution from Kobeh Valley to Diamond Valley. Possible flow of 10,000 to 12,000 acre-feet annually, if substantiated, would diminish the water balance and the mining project applications could not be supported.

XI.

Applications 79914, 79918 and 79925 were timely protested by Baxter Glenn Tackett on the following summarized grounds:¹⁶

- In summary, I protest the Application based on an ill conceived interbasin transfer of water, an erroneous definition of beneficial use of those waters and consumption for beneficial use in Kobeh Valley, and the very real potential that artesian flows in both Kobeh Valley and Antelope Valleys will be adversely affected.
- Protestant is owner and operator of Hot Springs Ranch in Antelope Valley and is concerned that artesian flows will be affected.

XII.

The applications at issue represent an attempt by the Applicant to procure sufficient water for a proposed molybdenum mine to be located near Mount Hope, approximately 25 miles northwest of the Town of Eureka, Eureka County, Nevada. The applications are a combination of new appropriations of water and change applications for existing water rights. The Applicant has amended its original request of 16,000 afa and is now requesting a total combined duty of 11,300 acre-feet annually (afa). The

¹⁵ File Nos. 79934 thru 79939, official records in the Office of the State Engineer.

¹⁶ File Nos. 79914, 79918 and 79925, official records in the Office of the State Engineer.

Applicant is Kobeh Valley Ranch, LLC; a company formed by General Moly, Inc. to handle, hold and control the water rights for the project.

On October 13-17, 2008, the State Engineer held an administrative hearing in the matter of applications filed to appropriate or change underground water to support the Mount Hope mining project. Some of the applications were approved and others were denied by State Engineer's Ruling No. 5966, issued March 26, 2009. The ruling was appealed to district court in accordance with NRS § 533.450. The Seventh Judicial District Court vacated Ruling No. 5966 in its Order entered April 21, 2010. Subsequently, change Applications 79911 thru 79942 were filed on applications subject to State Engineer's Ruling No. 5966. The State Engineer held a new administrative hearing on December 6, 7, 9 and 10, 2010, that included the additional Applications.

After all parties were duly noticed by certified mail, a public administrative hearing was held in Carson City, Nevada starting on December 6, 2010, in the matter of the above-referenced applications before representatives of the Office of the State Engineer.¹⁷ Protestant Benson filed a Motion to adopt the previous record from the hearing of October 13-17, 2008, and the motion was unopposed.^{18,19}

On May 10, 2011, an additional day of hearing was held to consider additional information regarding specific water usage at the proposed mining project. All parties were notified and additional testimony and exhibits were admitted as part of the record.²⁰

FINDINGS OF FACT

I.

STATUTORY STANDARD TO GRANT

The State Engineer finds that NRS § 533.370(1) provides that the State Engineer shall approve an application submitted in the proper form, which contemplates the application of water to beneficial use if the applicant provides proof satisfactory of his intention in good faith to construct any work necessary to apply the water to the intended beneficial use with reasonable diligence, and his financial ability and reasonable

¹⁷ Exhibits and Transcript, public administrative hearing before the State Engineer, December 6, 7, 9, 10, 2010, official records in the Office of the State Engineer (Hereafter, Transcript, December 2010 and Exhibits, December 2010).

¹⁸ Exhibit No. 13, December 2010.

¹⁹ Exhibits and Transcript, public administrative hearing before the State Engineer, October 13-17, 2008, official records in the Office of the State Engineer (Hereafter, Transcript, October 2008 and Exhibits, October 2008).

²⁰ Transcript, May 10, 2011, and Exhibit Nos. 2, 3, 4 and 5.

expectation actually to construct the work and apply the water to the intended beneficial use with reasonable diligence.

**II.
APPLICATIONS SUBMITTED IN PROPER FORM**

The protests allege that the applications should be denied because they fail to adequately describe the proposed points of diversion and place of use. The application form used by the Division of Water Resources (Division) requires a description of the proposed point of diversion by survey description and the description must match the illustrated point of diversion on the supporting map. If and when a well is drilled, it must be within 300 feet and within the same quarter-quarter section as described or an additional change application is required. Prior to an application being published, the Division reviews incoming applications and maps to ensure statutory compliance. Any application or map that does not meet the requirements for acceptance and that cannot be corrected during the review process is rejected and returned for correction with time limits for the applicant to re-submit. The State Engineer finds that the Applicant has met the requirements for describing the points of diversion and place of use on the application forms and supporting maps. The State Engineer finds that all applications subject to this ruling have been submitted in the proper form.

**III.
FINANCIAL ABILITY, BENEFICIAL USE AND
REASONABLE DILIGENCE**

Nevada water law requires the State Engineer to consider whether the Applicant has an intention in good faith to construct the work necessary to place any approved water to beneficial use. The Applicant also must show that it has the financial ability and reasonable expectation to construct the work necessary to apply the water to its beneficial use.²¹

The chief financial officer of General Moly, Inc. stated that the total expenditure of funds required for the project is \$1,154,000,000. The Applicant has expended about \$163,000,000 on such things as buying equipment, hydrology, drilling, engineering, permitting, land and water rights. General Moly, Inc. will provide 80% of the funding and partner POSCO, a Korean steel producer, will provide the remaining 20%. General Moly Inc. has arranged much of its financing through its Hanlong transaction. The

²¹ NRS § 533.370(1)(c).

Hanlong transaction includes a \$665,000,000 bank loan from a Chinese bank sourced and fully guaranteed by Hanlong Group. It also includes an \$80,000,000 purchase of 25% of General Moly's fully diluted shares, a \$20,000,000 bridging loan from Hanlong Group, and a molybdenum supply agreement. Hanlong is a private Chinese company headquartered in Sichuan Province in China with experience in mining projects. The financial ability of the Applicant is further detailed in the Applicant's financial exhibit and testimony.²²

The State Engineer finds the evidence presented demonstrates that the Applicant has a reasonable expectation of financial ability to construct the work and apply the water to the intended beneficial use with reasonable diligence.

IV. STATUTORY STANDARD TO REJECT

The State Engineer finds that NRS § 533.370(5) provides that the State Engineer shall reject an application and refuse to issue the permit where there is no unappropriated water in the proposed source of supply, or where the proposed use conflicts with existing rights or with protectable interests in existing domestic wells as set forth in NRS § 533.024, or where the proposed use threatens to prove detrimental to the public interest.

V. UNAPPROPRIATED WATER - PERENNIAL YIELD

Nevada Revised Statute § 533.370(5) provides that the State Engineer must reject an application where there is no unappropriated water in the proposed source of supply. In determining the amount of groundwater available for appropriation in a given hydrographic basin, the State Engineer relies on available hydrologic studies to provide relevant data to determine the perennial yield of a basin. The perennial yield of a groundwater reservoir may be defined as the maximum amount of groundwater that can be salvaged each year over the long term without depleting the groundwater reservoir. Perennial yield is ultimately limited to the maximum amount of natural discharge that can be salvaged for beneficial use. The perennial yield cannot be more than the natural recharge to a groundwater basin and in some cases is less. If the perennial yield is exceeded, groundwater levels will decline and steady-state conditions will not be achieved, a situation commonly referred to as groundwater mining. Additionally, withdrawals of groundwater in excess of the perennial yield may contribute to adverse

²² Exhibit No. 37 and Transcript, pp. 27-36, December 2010.

conditions such as water quality degradation, storage depletion, diminishing yield of wells, increase in cost due to increased pumping lifts, and land subsidence.²³

The perennial yields of hydrographic basins that are part of interbasin flow systems are often difficult to establish, and in the past, groundwater has sometimes been double counted, so that the sum of the perennial yields of the basins in the flow system is more than the sum of either the evapotranspiration (ET) discharge or natural recharge of the basins in the flow system. Such is the case with the Diamond Valley groundwater flow system. The Diamond Valley flow system is comprised of seven hydrographic basins: Monitor Valley South, Monitor Valley North, Kobeh Valley, Antelope Valley, Stevens Basin, Pine Valley, and Diamond Valley.²⁴ Diamond Valley is the terminus of the groundwater flow system. Groundwater flows from South Monitor Valley to North Monitor Valley, then to Kobeh Valley, and finally to Diamond Valley. Groundwater from Antelope Valley may flow to Kobeh Valley and then to Diamond Valley. Groundwater from Stevens Basin flows to Diamond Valley and/or Antelope Valley. Groundwater from the Garden Valley area, a part of the Pine Valley Hydrographic Basin, flows to Diamond Valley.²⁵ Monitor Valley, Antelope Valley, Kobeh Valley and Diamond Valley lose much of their annually recharged groundwater to ET, and the actual amount of subsurface flow between basins is uncertain. Previous publications have estimated the amount of subsurface flow,^{26,27,28} and the Applicant has also provided estimates of subsurface interbasin flow between selected basins.²⁹ While the estimated amount of subsurface interbasin flow may be uncertain or disputed, there is general agreement on the direction of flow. Figure 1, shown on page 16, shows basin water budgets and interbasin flows as estimated in the Reconnaissance Series reports, and for reference, also shows interbasin flow as computed by the Applicant's groundwater flow model. Monitor Valley South provides an estimated 2,000 afa of subsurface inflow to Monitor Valley North, which in turn supplies 6,000 afa of subsurface inflow to Kobeh Valley. The Applicant estimated 1,370 to 1,680 afa of subsurface flow

²³ State Engineer's Office, *Water for Nevada, State of Nevada Water Planning Report No. 3*, p. 13, October 1971.

²⁴ Exhibit No. 10, October 2008.

²⁵ Exhibit No. 13, October 2008.

²⁶ Exhibit No. 17, October 2008.

²⁷ Exhibit No. 16, October 2008.

²⁸ Exhibit No. 134, December 2010.

²⁹ Exhibit No. 39, Tables 3.5-2 and 4.1-13, December 2010.

from Northern Monitor Valley to Kobeh Valley.³⁰ Subsurface flow from Kobeh Valley to Diamond Valley was estimated by Harrill to be less than approximately 40 afa.³¹ The Applicant estimated 1,100 to 1,600 afa of subsurface flow from Kobeh to Diamond Valley.³² As can be seen from Figure 1, the established perennial yields of Monitor Valley North and South, and Kobeh Valley exceed both the recharge and the ET. In Reconnaissance Report 30,³³ Rush and Everett recognize that substantial development in one of the basins could affect the yields of adjacent basins. The Applicant's groundwater flow model simulates ET, and ET for each basin has been tabulated in its exhibit.³⁴ However, those tabulations do not represent the result of a specific study whose goal was to re-estimate groundwater ET, and will not be used in place of the existing published water budgets from the reconnaissance reports.

To resolve these issues with interbasin flow and to establish safe and conservative perennial yields in these basins, the perennial yield of each of the basins will be equal to the basin's groundwater ET. In this way, subsurface flow into or out of a basin will not be included in its perennial yield and there will be no double counting. Water that flows in the subsurface from Kobeh Valley to Diamond Valley, however much that may be, will not be part of Kobeh Valley's perennial yield. The State Engineer hereby establishes the perennial yield of the following six basins in the Diamond Valley Flow System as follows:

<u>Basin</u>	<u>Perennial Yield (acre-feet)</u>	
	<u>Previous</u>	<u>Revised</u>
Monitor Valley, Southern Part - Basin 140B:	10,000	9,000
Monitor Valley, Northern Part - Basin 140A:	8,000	2,000
Kobeh Valley, Basin 139:	16,000	15,000
Antelope Valley, Basin 151:	4,000	4,000
Stevens Basin, Basin 152:	100	100
Diamond Valley, Basin 153:	30,000	30,000

³⁰ Exhibit No. 39, Table 4.1-13, December 2010.

³¹ Exhibit No. 13, October 2008.

³² Exhibit No. 39, Table 4.1-13, December 2010.

³³ Exhibit No. 17, p. 26, October 2008.

³⁴ Exhibit No. 39, Table 4.1-12, December 2010.

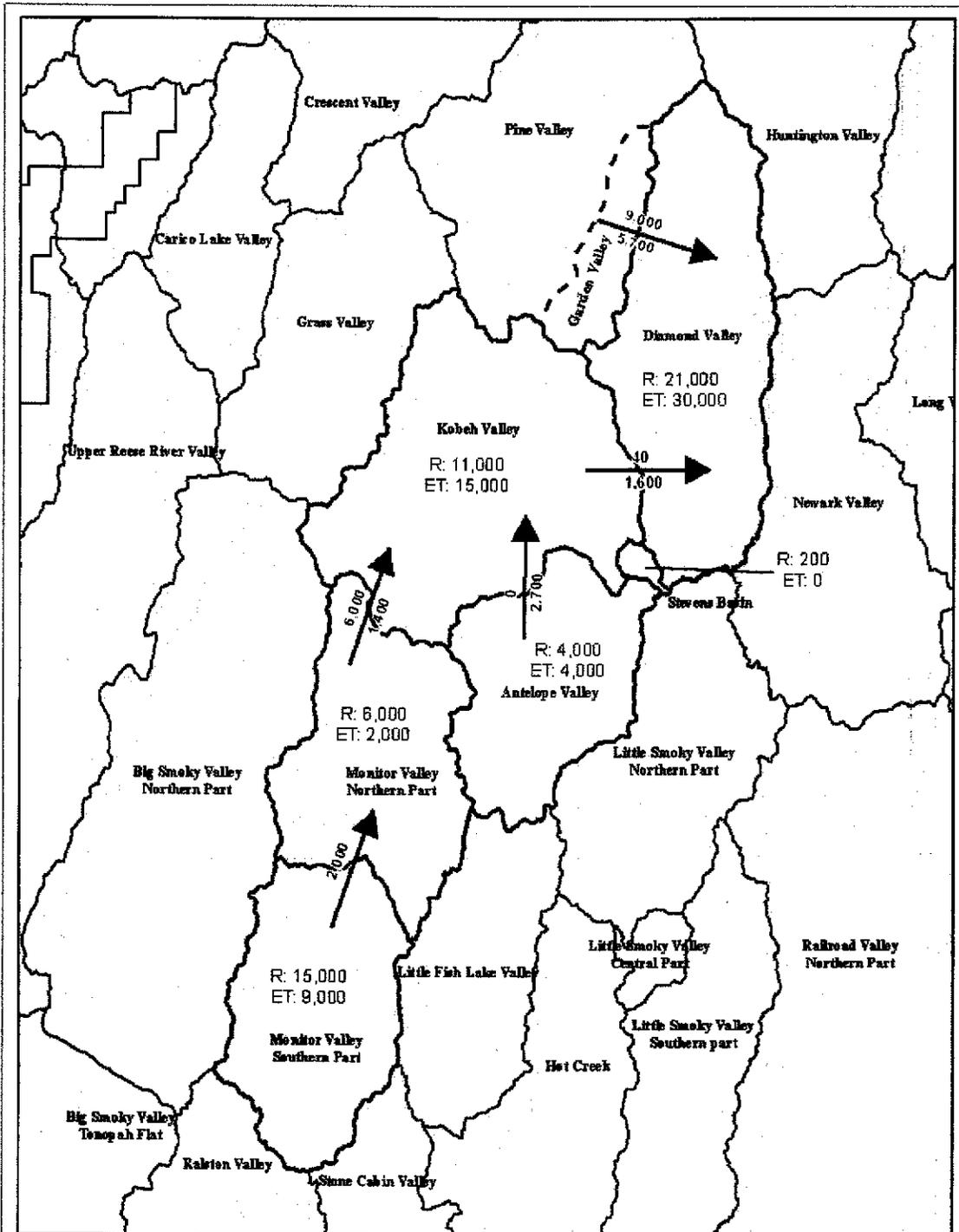


Figure 1. Hydrographic basins of the Diamond Valley groundwater flow system, showing reconnaissance report estimates of groundwater recharge and ET discharge. Arrows show estimated annual interbasin flow from both reconnaissance reports and groundwater flow model.

Interbasin groundwater flow
 Reconnaissance (solid arrow)
 Modeled (dashed arrow)
 R: In-basin recharge (afa)
 ET: Evapotranspiration (afa)

Prior to the administrative hearing, the Applicant acquired nearly all of the existing groundwater rights within the Kobeh Valley Hydrographic Basin, excepting approximately 1,100 afa. The Applicant has filed new applications and change applications seeking a total combined duty of 11,300 afa from Kobeh Valley. If the subject applications were to be approved, the total committed groundwater resources in Kobeh Valley would be approximately 12,400 afa, which is less than the revised perennial yield of 15,000 afa. The State Engineer finds that there is sufficient water within the perennial yield of Kobeh Valley to satisfy the water appropriation requirements of the project. The State Engineer finds that no new appropriation of underground water is sought within Diamond Valley.

VI.

CONFLICT WITH EXISTING RIGHTS OR DOMESTIC WELLS

All of the Protestants raised the issue of potential conflicts with existing rights or domestic wells. They allege there could be potential impacts to water rights in Diamond Valley due to a reduction of subsurface flow from Kobeh Valley to Diamond Valley or due to drawdown from pumping. These potential impacts were evaluated by the Applicant in both its testimony and the groundwater flow model.³⁵ In Reconnaissance Series Report No. 6,³⁶ Eakin suggests minimal subsurface flow from Kobeh to Diamond Valley through the narrow alluvium-filled gap at Devil's Gate. Harrill suggests 40 afa through the same gap.³⁷ Rush and Everett concur on the minimal flow through Devil's Gate, and go on to state that flow from Kobeh to Diamond Valley through the carbonate bedrock is possible, but found no evidence to suggest such flow occurs.³⁸ Tumbusch and Plume did not provide a revised estimate of subsurface flow from Kobeh to Diamond Valley, but did pointedly recognize the potential for flow in the carbonate bedrock as evidenced by fault structures with solution cavities in carbonate outcrops at Devil's Gate.³⁹

The Applicant used Darcy's Law to develop a conceptual estimate of interbasin flow, and estimated 50 to 290 afa of subsurface flow from Kobeh Valley to Diamond Valley at Devil's Gate through alluvium and carbonate bedrock.⁴⁰ Its witnesses further estimated 810 to 1,050 afa of deep flow in bedrock from Kobeh Valley to Diamond

³⁵ Exhibit No. 39, December 2010.

³⁶ Exhibit No. 16, p. 18, October 2008.

³⁷ Exhibit No. 13, pp. 21-23, October 2008.

³⁸ Exhibit No. 17, p. 16, October 2008.

³⁹ Exhibit No. 10, p. 13, October 2008.

⁴⁰ Exhibit No. 39, Table 4.1-13, December 2010.

Valley in the area north of Whistler Peak.⁴¹ Next, they developed a numerical groundwater flow model to simulate both pre-development steady state conditions as well as the effects of pumping on groundwater levels and interbasin flow. With the groundwater flow model, it was estimated that pre-development flow was 1,583 afa from Kobeh to Diamond Valley.⁴² For the present-day conditions, the model indicates water table drawdown due to agricultural pumping in Diamond Valley has increased inflow from Kobeh Valley to 2,001 afa,⁴³ which is estimated to further increase to 2,365 afa in year 2055 without any mine pumpage. For its predictive analyses, the Applicant completed multiple model simulations. A 'no action' alternative simulated continued agricultural pumping through year 2105. The Applicant's 'cumulative action' alternative simulated continued agricultural pumping as in the 'no action' alternative, but also simulated the pumping of 11,300 afa in Kobeh and Diamond Valley for the 44-year mine life ending in 2055. The net effect of the mine's pumping on groundwater levels and interbasin flow is then computed as the difference between the two model simulations.^{44,45} The analyses of the future effects of pumping, by the Office of the State Engineer, used both the Exhibit No. 39 report as well as the computer model. The model results show a 15 afa increase in subsurface flow from Kobeh to Diamond Valley as a result of the mining project and its associated pumping.⁴⁶ The small increase in interbasin flow was explained as the net of a 40 afa increase in Kobeh to Diamond Valley flow at the site of the open pit due to dewatering, partially offset by a 25 afa decrease in Kobeh to Diamond Valley flow along the basin boundary at Whistler Mountain.⁴⁷

Water level drawdown due to simulated mine pumping is thoroughly documented.⁴⁸ Predicted drawdown due to mine pumping at the nearest agricultural well in Diamond Valley is estimated to be less than two feet at the end of mine life. However,

⁴¹ Exhibit No. 39, Table 4.1-13, December 2010.

⁴² Exhibit No. 39, Table 4.1-13, December 2010.

⁴³ Exhibit No. 39, Table 4.4-4, December 2010.

⁴⁴ Exhibit No. 39, pp. 177-178, December, 2010.

⁴⁵ There is a discrepancy in the naming of the alternatives. In Exhibit No. 39, pp. 177-178, the scenario that includes mine pumping is called 'cumulative action', however, the model files that simulate mine pumping are named 'base case'.

⁴⁶ Exhibit No. 39, Table 4.4-5 and 4.4-6, December 2010.

⁴⁷ Transcript, pp. 308-309, December 2010.

⁴⁸ Exhibit No. 39, Figures 4.4-12 to 4.4-17, and groundwater flow model data files, December 2010.

additional drawdown at that same location due solely to continuing agricultural pumping in Diamond Valley is predicted to be about 90 feet.⁴⁹

The model structure and simulation results were addressed by Protestant Eureka County's expert witnesses. Witness Bugenig testified that the model's predictive estimates of proposed mine pumping on Kobeh to Diamond Valley subsurface flow was at least approximately accurate.⁵⁰ Witness Oberholtzer authored a May 2010 report in which the model was described as not having fatal flaws,⁵¹ but in a November 2010 report she expressed concern that the model may not be accurate enough to be used as a predictive tool.⁵² Ms. Oberholtzer testified that calibration issues in Diamond Valley raised concern and the model had limited abilities as a predictive tool.⁵³ In general, the expert witnesses brought forward by Protestant Eureka County testified that the model has shortcomings, but failed to present convincing evidence that the model predictions are not substantially valid.

Because the groundwater flow model is only an approximation of a complex and partially understood flow system, the estimates of interbasin flow and drawdown cannot be considered as absolute values. However, the modeling evidence does strongly suggest that the proposed mine pumping under these applications will not measurably decrease subsurface groundwater flow from Kobeh to Diamond Valley and will not cause significant water level decline (less than 2 feet over entire mine life) at the points of diversion under existing water rights in Diamond Valley. The State Engineer finds the Applications will not conflict with existing rights in Diamond Valley by reducing the subsurface interbasin flow into the Diamond Valley hydrographic basin. Groundwater drawdown in Diamond Valley is not unreasonable at the locations of existing water rights and domestic wells, and meets the statutory requirements of NRS § 534.110. The State Engineer finds the applications will not conflict with existing rights or the protectable interest in domestic wells in Diamond Valley.

The Applicant's groundwater flow model indicates water level decline attributable to these applications is significant in the well field area in Kobeh Valley and at the open pit mine. The Applicant's water level drawdown maps only show drawdown of ten feet

⁴⁹ Exhibit 39, Groundwater flow model output data, December 2010.

⁵⁰ Transcript, p. 686, December 2010.

⁵¹ Exhibit No. 402, December 2010.

⁵² Exhibit No. 503, December 2010.

⁵³ Transcript, pp. 619-621, December 2010.

or more,⁵⁴ although the data files contain detailed information on drawdown to the fractions of a foot.⁵⁵ Many of the Protestants argued that water level declines of less than ten feet can cause impacts to surface waters in springs and streams, both in the mountains and on the valley floors. They point out that the model predicts drawdown of the water table below Henderson and Vinini Creeks and along the lower reaches of Roberts Creek. Since Henderson Creek is included in the Pete Hanson Creek Decree, they argue that these applications should be denied because they would conflict with existing rights. The Applicant's expert witnesses argue that these mountain springs and streams are not hydrologically connected to the saturated aquifer.⁵⁶ They argue that an unsaturated zone lies between these springs and streams and the aquifer; therefore, the relative level of the water table, so long as it is disconnected from the surface water feature, is immaterial, and no amount of decline in the water table could affect surface flows. This argument of the Applicant's expert witnesses is technically sound and is accepted by the State Engineer. In the testimony of Katzer, he refers to water levels in wells adjacent to Robert's Creek that demonstrate a disconnection between Robert's Creek and the groundwater aquifer that would prevent any decrease in stream flow due to the proposed pumping.⁵⁷ However, similar data is not available for Henderson and Vinini Creeks. Nevertheless, in the Henderson Creek area, Mr. Katzer argues that springs and streamflow are simply runoff from precipitation and draining of saturated soil, and are not directly connected to the groundwater aquifer. He argues that they are perched waters and similar to the Robert's Creek argument, could not be affected by a lowered water table. Mr. Katzer was asked about the depth to the water table relative to Henderson Creek and he stated that lower parts of Henderson Creek are probably close to the water table, but it would require drilling of monitor wells to know for certain.⁵⁸ As discussed above, the only way groundwater pumping could affect streamflow would be if the water table was in direct contact with the stream bed. It is important to note here that predicted groundwater level decline along Henderson Creek due to future agricultural pumping in Diamond Valley is greater than the predicted water level decline due to

⁵⁴ Exhibit No. 39, Figures 4.4-12 to 4.4-16, December 2010.

⁵⁵ Exhibit No. 30, groundwater flow model digital data, December 2010.

⁵⁶ Testimony of Katzer and Smith, Transcripts, December 2010.

⁵⁷ Exhibit No. 38, pp. 3-4, December 2010.

⁵⁸ Transcript, pp. 213-214, December 2010.

proposed mine pumping.⁵⁹ The State Engineer accepts the expert opinions of the Applicant that mine pumping is unlikely to affect streamflow in Roberts, Henderson or Vinini Creek and finds that the applications will not conflict with existing rights on those streams. However, because there are uncertainties with respect to the complex hydrogeology of the area and the ability of a model to accurately simulate future effects of pumping, the State Engineer will require a substantial surface and groundwater monitoring program to establish baseline groundwater and stream flow conditions to improve the predictive capability of the model and to increase the ability to detect future changes in the hydrologic regime.

Protestant Eureka County presented a comprehensive case with numerous witnesses and accompanying exhibits. In the 2008 hearing, Eureka County focused much of its argument on potential conflicts with Diamond Valley water rights. In the 2010 hearing, Eureka County stressed conflicts with existing rights in Kobeh and Pine Valleys. As discussed above, the State Engineer has found the applications will not conflict with existing rights in either Diamond or Pine Valley. Eureka County witnesses included the owners of the three largest ranches in the well field area in Kobeh Valley. Witnesses included Martin Etcheverry, owner of the Roberts Creek Ranch, Jim Etcheverry, owner of the 3-Bar Ranch, and John Colby, owner of the MW Cattle Company and the Santa Fe/Ferguson grazing allotment. Those three ranchers utilize available surface waters across the grazing allotments and own a variety of surface and groundwater rights in Kobeh Valley. The groundwater flow model predicts water table drawdown at the end of mine life of three feet or more in the general area of Kobeh Valley north of U.S. Highway 50 and east of 3-Bars Road. This includes the well field area, where drawdown is extensive. Drawdown of ten feet or less extends westerly to the Bobcat Ranch and southerly to the Antelope Valley boundary. Water rights that could potentially be impacted are those rights on springs and streams in hydrologic connection with the water table. That would include valley floor springs. Testimony from the Applicant's expert witnesses Katzer and Childress argue that faults at the base of the Robert's Mountains act as barriers to hydrologic flow and that surface water rights in the Roberts Mountains will not be impacted by proposed mine pumpage.⁶⁰ There was no expert testimony or

⁵⁹ Exhibit No. 39, Groundwater flow model output data, December 2010.

⁶⁰ Transcript, pp. 169-177 and 227-260.

evidence submitted that indicates surface water rights in the Simpson Park Mountains would be impacted by the proposed applications. In Eureka County's Exhibit Nos. 526, 527, 529 and 530, numerous spring and stream water rights are shown. Water rights that could potentially be impacted are those rights on the valley floor where there is predicted drawdown of the water table due to mine pumping. The Applicant recognizes that certain water rights on springs in Kobeh Valley are likely to be impacted by the proposed pumping.^{61,62} These springs produce less than one gallon per minute and provide water for livestock purposes.⁶³ The State Engineer finds that this flow loss can be adequately and fully mitigated by the Applicant should predicted impacts occur. To ensure funding exists for any required future mitigation, including mitigation after the cessation of active mining activities, the Applicant must demonstrate the financial capability to complete any mitigation work necessary in a monitoring, management, and mitigation plan. This monitoring, management, and mitigation plan must be approved by the State Engineer prior to diverting any water under these applications.

VII. PUBLIC INTEREST

Nevada Revised Statute § 533.370(5) provides that the State Engineer must reject an application if the proposed use of the water threatens to prove detrimental to the public interest. The State Engineer has found that the Applicant has demonstrated a need for the water and a beneficial use for the water and it does not threaten to prove detrimental to the public interest to allow the use of the water for reasonable and economic mining and milling purposes as proposed. The Applicant has acquired about 16,000 afa of existing water rights within Kobeh Valley and requires 11,300 afa for its project. The Applicant has confirmed its commitment to developing this project, has demonstrated the ability to finance the project, and will be required to monitor any groundwater development. Water level drawdown due to simulated mine pumping is thoroughly documented.⁶⁴ Predicted drawdown due to mine pumping at the nearest agricultural well in Diamond Valley is estimated to be less than two feet at the end of mine life. In regards to the importance of mining, Protestant Eureka County testified that mining is a life blood of

⁶¹ Transcript, pp. 163 and 187, December 2010.

⁶² Exhibit No. 39, pp. 189-190, December 2010.

⁶³ Exhibit No. 116, Appendix B, October 2008.

⁶⁴ Exhibit No. 39, Figures 4.4-12 to 4.4-17, and groundwater flow model data files, December 2010.

Eureka County⁶⁵ and that Eureka County has and always will be a mining and agricultural county.⁶⁶ In addition, Protestant Eureka County indicated that the mine will provide an economic benefit in the form of increased employment and tax revenue for the county.⁶⁷ The State Engineer finds under these facts and circumstances the proposed use of the water does not threaten to prove detrimental to the public interest.

VIII. STATUTORY STANDARD FOR INTERBASIN TRANSFERS

Nevada Revised Statute provides that in determining whether an application for an interbasin transfer of groundwater must be rejected, the State Engineer shall consider: (a) whether the applicant has justified the need to import the water from another basin; (b) if the State Engineer determines a plan for conservation is advisable for the basin into which the water is imported, whether the applicant has demonstrated that such a plan has been adopted and is being effectively carried out; (c) whether the proposed action is environmentally sound as it relates to the basin from which the water is exported; (d) whether the proposed action is an appropriate long-term use, which will not unduly limit the future growth and development in the basin from which the water is exported; and (e) any other factor the State Engineer determines to be relevant. NRS § 533.370(6).

The Applicant is requesting an interbasin transfer of groundwater from both Kobeh Valley and Diamond Valley to a place of use that includes portions of the Kobeh Valley, Diamond Valley and Pine Valley Hydrographic Basins.

IX. OTHER RELAVANT FACTORS

In Diamond Valley, the Applicant has acquired existing water rights and the water sought for transfer in this ruling totals about 616 afa (about 385 afa when adjusted for consumptive use reduction). This water is primarily needed to account for inflow of water into the mine pit. All applications in Diamond Valley (Applications 76005-76009, 76802-76805, and 78424) seek to change existing water rights acquired by the Applicant; no new water appropriations are being sought within the Diamond Valley Hydrographic Basin. Whether the groundwater is fully developed under the existing water rights or under the proposed changes to point of diversion, place of use and manner of use, there would be no increase in demand on the groundwater resource in Diamond Valley.

⁶⁵ Transcript, p. 715, December 2010.

⁶⁶ Transcript, p. 438, October 2008.

⁶⁷ Transcript, pp. 438-439, October 2008.

A review of the Diamond Valley Hydrographic Basin shows that there are more committed groundwater rights in the form of permits and certificates than the estimated perennial yield of the basin, while the Kobeh Valley Hydrographic Basin has excess groundwater available for this project. Unless additional restrictions are put in place through permit terms, a situation could exist where water from an over-allocated basin could be exported to a basin that is under-allocated and the State Engineer finds that this would be contrary to the proper management of the Diamond Valley Hydrographic Basin's groundwater resource at this time. The State Engineer finds that any permit issued for the mining project with a point of diversion within the Diamond Valley Hydrographic Basin must contain permit terms restricting the use of water to within the Diamond Valley Hydrographic Basin and any excess water produced that is not consumed within the basin must be returned to the groundwater aquifer in Diamond Valley. The State Engineer finds that any approval of Applications 76005-76009, 76802-76805, and 78424 will restrict the use of any groundwater developed to within the Diamond Valley Hydrographic Basin; therefore, there will be no interbasin transfer of water allowed and NRS § 533.370(6) will not be applicable to these applications.

**X.
NEED TO IMPORT WATER**

The interbasin transfer criteria were adopted in 1999. The impetus for the legislation was the proposed transfer of groundwater from rural hydrographic basins in eastern Nevada to the greater Las Vegas area to meet anticipated municipal growth; however, there is no exclusionary language for other manners of use. The requirements of NRS § 533.370(6) along with other statutory criteria are addressed in the following sections.

The groundwater developed for the project will come primarily from a well field located within Kobeh Valley. The mine project area straddles the basin boundary between Diamond Valley and Kobeh Valley and the proposed place of use also encompasses a small portion of Pine Valley. The Applicant presented evidence of its water requirements necessary to operate the project. Water use estimates were made for the operation of the mill and other ancillary uses such as dust control and potable water

supply.⁶⁸ The maximum water demand for the project is estimated at 7,000 gpm or about 11,300 afa, which is the amount of water requested by the Applicant.⁶⁹

The Mt. Hope mine straddles the Diamond Valley - Kobeh Valley basin boundaries. The amount of water needed to dewater the pit is less than ten percent of the amount needed for the entire mining operation. Most of the groundwater will be used in the mine's milling circuit. The mill is to be located within Diamond Valley and the tailings storage facility is to be located within Kobeh Valley. Water in the tailings facility will then evaporate from the tailings, be recycled back to the mill, or permanently stored in the tailings facility. A review of the Kobeh Valley Hydrographic Basin shows that there is sufficient unappropriated groundwater to satisfy the demands of the mining project without exceeding the perennial yield of Kobeh Valley. The State Engineer finds that the Applicant has justified the need to import water to Diamond Valley from points of diversion located within the Kobeh Valley Hydrographic Basin.

XI. PLAN FOR CONSERVATION OF WATER

If the State Engineer determines a plan for conservation is advisable for the basin into which the water is imported, the State Engineer shall consider whether the applicant has demonstrated that such a plan has been adopted and is being effectively carried out. Since July 1, 1992, water conservation plans are required for any supplier of municipal and industrial water uses based on the climate and living conditions of its service area.⁷⁰ The provisions of the plan must apply only to the supplier's property and its customers. The Applicant is not a municipal supplier of water, there are no municipal and industrial purveyors in Kobeh Valley or Pine Valley and the Applicant does not own or control the municipal water supply to the Town of Eureka in Diamond Valley or any other municipal or quasi-municipal water supply. Eureka County has a water conservation plan on file in the Office of the State Engineer for the Town of Eureka Water System, Devil's Gate GID District #1 and District #2, and Crescent Valley Town Water System.⁷¹ The Applicant

⁶⁸ Transcript, pp. 564-571, October 2008; Exhibit Nos. 105, 108 and 112, October 2008.

⁶⁹ Transcript, p. 106, December 2010.

⁷⁰ NRS § 540.131.

⁷¹ Eureka County - Joint Water Conservation Plan for Town of Eureka Water System, Devil's Gate GID District #1 and District #2, and Crescent Valley Town Water System, official records in the Office of the State Engineer.

will use proven molybdenum mining and milling technologies that will conserve water through reuse and recycling methods.⁷²

The State Engineer has considered this statutory provision and hereby determines that requiring additional plans for water conservation is not necessary.

XII. ENVIRONMENTALLY SOUND

The interbasin transfer statute requires a determination of whether the use of water as proposed under the applications is environmentally sound as it relates to the basin from which the water is exported. The words environmentally sound have intuitive appeal, but the public record and discussion leading up to the enactment of NRS § 533.370(6)(c) do not specify any operational or measureable criteria for use as the basis for a quantitative definition. This provision of the water law provides the State Engineer with no guidance as to what constitutes the parameters of “environmentally sound;” therefore, it has been left to the State Engineer’s discretion to interpret the meaning of environmentally sound.

The legislative history of NRS § 533.370(6)(c) shows that there was minimal discussion regarding the term environmentally sound. However, the State Engineer at that time indicated to the Subcommittee on Natural Resources that he did not consider the State Engineer to be the guardian of the environment, but rather the guardian of the groundwater and surface water. The State Engineer noted that he was not a range manager or environmental scientist. Senator Mark A. James pointed out that by the language ‘environmentally sound’ it was not his intention to create an environmental impact statement process for every interbasin water transfer application and that the State Engineer’s responsibility should be for the hydrologic environmental impact in the basin of export.⁷³

The State Engineer finds that the meaning of ‘environmentally sound’ for basin of origin must be found within the parameters of Nevada water law and this means that whether the use of the water is sustainable over the long-term without unreasonable impacts to the water resources and the hydrologic-related natural resources that are dependent on those water resources. The State Engineer finds that in consideration of

⁷² Transcript, p. 118, December 2010.

⁷³ Nevada Legislature Seventieth Session, *Summary of Legislation*, Carson City, Nevada: 1999, Web, Mar. 2, 2011. <http://www.leg.state.nv.us/Division/Research/Library/LegHistory/LHs/1999/SB108,1999.pdf>.

whether a proposed project is environmentally sound there can be a reasonable impact on the hydrologic related natural resources in the basin of origin.

Existing water rights in Kobeh Valley, not owned or controlled by the Applicant, total around 1,100 afa, and if the water for the project is approved the committed groundwater resource from the basin would be about 12,400 afa, which is far less than the perennial yield of the Kobeh Valley Hydrographic Basin. A review of records in the Office of the State Engineer show that there are 71 water-righted springs within the Kobeh Valley Hydrographic Basin. Of these 71 water rights, 29 are un-adjudicated claims of reserved water right filed by the United States Bureau of Land Management (BLM). The BLM was a protestant to the initial applications in this matter, but withdrew its protests after reaching a stipulation on monitoring, management and mitigation with the Applicant. The State Engineer finds that none of the remaining water rights are owned by any of the Protestants in this matter. Most of the remaining springs are either located far away from the proposed well sites or will not be affected due to topography and geology. However, the Applicant's groundwater model does indicate that there may be an impact to several small springs located on the valley floor of Kobeh Valley near the proposed well locations. These small springs are estimated to flow less than 1 gallon per minute.⁷⁴ Because these springs exist in the valley floor and produce minimal amounts of water, any affect caused by the proposed pumping can be easily mitigated such that there will be no impairment to the hydrologic related natural resources in the basin of origin. The monitoring, management and mitigation plan will allow access for wildlife that customarily uses the source and will ensure that any existing water rights are satisfied to the extent of the water right permit.

The State Engineer finds that the Applicant is only requesting 11,300 afa for its mining project, which when combined with other existing water rights is less than the perennial yield of the Kobeh Valley Hydrographic Basin. The State Engineer finds that prior to the October 2008 hearing, the Applicant had acquired about 16,000 afa of previously permitted or certificated groundwater rights within the Kobeh Valley Hydrographic Basin. The State Engineer finds that the required monitoring, management and mitigation plan, that must be approved prior to the pumping of water for the project,

⁷⁴ Exhibit No. 116, Appendix B, October 2008.

will ensure that the proposed interbasin transfer of groundwater from the Kobeh Valley Hydrographic Basin remains environmentally sound throughout the life of the project.

**XIII.
LONG-TERM USE OF THE WATER AND FUTURE GROWTH AND
DEVELOPMENT IN THE BASIN OF ORIGIN**

Nevada has been known for containing vast deposits of minerals located throughout the state and mining has been a predominant economic force in Nevada since before statehood. Due to the availability of those mineral deposits, mining is one of the larger industries in Nevada and has traditionally provided many high-paying jobs for local communities and has contributed to the communities in other ways such as investing in infrastructure and services for those communities. It has had such an impact that the Nevada legislature declared mining and related activities to be recognized as a paramount interest of the state.⁷⁵ Mining operations are highly regulated by numerous governmental entities at the state and federal levels, including but not limited to regulation by Congress, the Secretary of Agriculture, the Secretary of the Interior, the United States Bureau of Land Management, the United States Forest Service, and the Nevada Department of Conservation and Natural Resources, which includes the Nevada Division of Environmental Protection, the Nevada Division of Minerals and the Nevada Division of Water Resources.

The proposed mining project is located within Eureka County. Eureka County's protest states in part:

Eureka County recognizes that the custom and culture of mining is part of its history and appreciates the role mining plays in its local and regional economy. Eureka County welcomes new opportunity for mining in its communities as long as mine development is not detrimental to existing economic or cultural activity. This protest is aimed at ensuring that any development of water resources in Kobeh Valley is conducted in full accordance with Nevada law, the Eureka County Master Plan and related ordinances, and does not unduly threaten the health and welfare of Eureka County citizens.⁷⁶

Protestant Eureka County presented testimony that there could potentially be mining-related projects and other activities in Kobeh Valley as an example of future growth that may occur in Kobeh Valley; however, no water right applications have been

⁷⁵ NRS § 37.010 (f)(1).

⁷⁶ Exhibit No. 509, December 2010.

filed on these potential projects.⁷⁷ Protestant Eureka County also argues that the population of southern Eureka County may increase from 940 to over 2,000, although that includes an estimated 700 people from the mine assuming the Mount Hope project proceeds as planned.⁷⁸ A review of pumpage records submitted to the Office of the State Engineer shows that the Town of Eureka currently reports a usage of about 175 afa out of about 1,226 afa of available water rights.⁷⁹ It should be noted that there are no permitted municipal or quasi-municipal water users in the basin of origin, Kobeh Valley. The only existing groundwater uses permitted at this time in Kobeh Valley are mining and milling, irrigation, and stock watering.

The State Engineer finds that the water sought for appropriation in Kobeh Valley is less than the estimated perennial yield of the basin; therefore, substantial water remains within the basin for future growth and development. The State Engineer finds that the project will not unduly limit the future growth and development in the Kobeh Valley Hydrographic Basin. The State Engineer finds that the proposed mining project is the type of future growth and development that would be anticipated in this area of Nevada. The State Engineer finds that mining provides an economic base for Eureka County.

XIV. FORFEITURE

The Applicant has filed applications to change existing water rights. Once a certificate of appropriation for groundwater is issued, the owner is subject to the provisions of NRS § 534.090, which provides in part that the water right may be subject to forfeiture after five consecutive years of nonuse.⁸⁰

Protestant Eureka County provided testimony and evidence regarding the alleged forfeiture of the following water right certificates; note, the associated change application(s) is in parentheses: Certificates 2780 (App. 76989, 79223), 2880 (App. 76990, 79935), 2782 (App. 76483), 6457 (App. 76484, 77174), 8002 (App. 76485, 77175), 8003 (App. 76486) and 4922 (App. 76744). The certificates are associated with three separate areas:

⁷⁷ Transcript, pp. 749 and 750 and Exhibit No. 531, December 2010.

⁷⁸ Transcript, pp. 703 and 704, December 2010.

⁷⁹ See, Permit No. 76526, total combined duty of water not to exceed 1,226.22 afa, official records in the Office of the State Engineer.

⁸⁰ NRS § 534.090.

1. Bartine a.k.a. Fish Creek Ranch
 - a. Certificate 2780 (Permit 9682)
 - b. Certificate 2880 (Permit 11072)
2. Willow a.k.a. 3F Ranch
 - a. Certificate 2782 (Permit 10426)
 - b. Certificate 6457 (Permit 18544)
 - c. Certificate 8002 (Permit 23951)
 - d. Certificate 8003 (Permit 23952)
3. Bean Flat a.k.a. Damele Ranch
 - a. Certificate 4922 (Permit 13849)

All certificates were issued for irrigation and/or domestic purposes and the testimony and evidence indicates extensive periods of non-use. The Division has conducted crop inventories in Kobeh Valley and records from those pumpage inventories from 1983 to 2007 were introduced at the hearing.⁸¹ The following is a summary of the crop inventories that are available. There is no inventory data for any omitted years in the following Table 1.

Ranch & Cert./Year	1984	1985	1986	1993	1995	1998	2002	2003	2004	2005	2006	2007	2008	2010
Bartine Cert. 2780											65.54	65.54	15	59.5
Bartine Cert. 2880							20	20	20	20	0	0	45	45
Willow Cert. 2782											0	0	0	0
Willow Cert. 6457	0	0	0	0	0						0	0	0	0
Willow Cert. 8002	0	0	0	0	0	0					0	0	0	0
Willow Cert. 8003											0	0	0	
Bean Flat Cert. 4922											0	0	0	0

Table 1. Crop inventory summary (acres).

For the Bartine a.k.a. Fish Creek Ranch, the crop inventories indicate some usage of water in recent years. The Protestant has argued that the water is not used for active irrigation, rather the water flows uncontrolled from artesian wells on an area of pasture land and no crop has been planted and/or harvested; therefore, this use should not be counted as beneficial use as noted on the crop inventories. There was substantial

⁸¹ Exhibit No. 29, October 2008.

testimony stating that there was no irrigation of a crop on the property,⁸² but most of the witnesses appeared to agree that there was some artesian flow of water on the property. Certificate 2780 indicates that the proposed works include an artesian well, supporting structures and a small ditch. Certificate 2880 indicates that the proposed works consists of a groundwater well providing water to ditches. Both certificates irrigate the same acreage being 65.54 acres of land and are supplemental to each other by place of use. The crop inventories credit the entire acreage as irrigated pasture grass from an artesian well in 2006 and 2007, as seen in Table 1. The Protestant makes an argument that the artesian flow does not comply with the intent of the Certificates, does not constitute a beneficial use of water, and does not meet the definition of irrigate or irrigation water. However, because the Protestant's evidence of non-use conflicts with the 2006 and 2007 crop inventories, which show use on the entire place of use of 65.54 acres, and substantial use in 2008 and 2010, the State Engineer finds that there is not clear and convincing evidence of forfeiture for Certificates 2780 and 2880.

For the Willow Ranch, a.k.a. 3F Ranch, four witnesses testified that there has been no water use or irrigated land under the certificates, since the early 1980s, or at least 1989.⁸³ The witnesses consist of a resident who has hauled hay in the general area for 32 years and had assisted in harvesting crops on the ranch in 1980, a long-time resident that drove the area at least once a month between 1994-2003, the current Chairman of the Eureka County Board of Commissioners who was also the County Assessor for thirty years and visited the properties every five years as Assessor, and the Public Works Director for Eureka County who is a long-time resident and for a seven-year period was road superintendent. The available crop inventories corroborate the testimony of the witnesses as illustrated in Table 1. A review of the record shows no evidence was provided at the administrative hearing as to water use on the ranch from at least 1989 to 2010.

The evidence demonstrates that the water represented by Certificates 2782, 6457, 8002, and 8003 has not been placed to beneficial use for a period of time in excess of more than the statutory five-year period necessary to work a forfeiture. The State

⁸² Transcript, pp. 117, 118, 401, 423 and 484, October 2008.

⁸³ Transcript, pp. 113-114, 402, 422, 423 and 485, October 2008.

Engineer finds that the water under Certificates 2782, 6457, 8002 and 8003 is subject to forfeiture.

For Bean Flat, a.k.a. Damele Ranch, the crop inventories show no water use in 2006, 2007, 2008 and 2010.⁸⁴ Aerial photos from 1954, 1975 and 1981 compared to Google Earth today show no differences in the area and it appears the area has not changed significantly since at least 1954.⁸⁵ The Protestant's witness concluded that his review of the crop inventories and aerial photos show no beneficial use of water on this property.⁸⁶ The former Eureka County Assessor also testified that during his assessment duties he had never seen any water used for irrigation purposes at the ranch.⁸⁷ The evidence demonstrates that the water represented by Certificate 4922 (Permit 13849) has not been placed to beneficial use for more than the statutory five-year period necessary to work a forfeiture. The State Engineer finds that the water under Certificate 4922 is subject to forfeiture.

XV. CROP CONSUMPTIVE USE

The State Engineer defines the consumptive use of a crop as that portion of the annual volume of water diverted under a water right that is transpired by growing vegetation, evaporated from soils, converted to non-recoverable water vapor, or otherwise does not return to the waters of the state. Consumptive use does not include irrigation inefficiencies or waste. The net irrigation water requirement of a crop is equal to the consumptive use of the crop less the amount of effective precipitation that falls on the crop. Therefore, the net irrigation water requirement is the amount of the crop's consumptively used water that is provided by the water right, and is the quantity considered under NRS § 533.3703 in allowing for the consideration of a crop's consumptive use in a water right transfer.

The State Engineer's consumptive use estimate for the Kobeh Valley and Diamond Valley Hydrographic Basins is based on the Penman-Monteith short reference evapotranspiration and dual-crop coefficient approach for estimating crop evapotranspiration, similar to methods described by the American Society of Civil

⁸⁴ Crop/pumpage/well measurement data for Kobeh Valley (139), official records in the Office of the State Engineer.

⁸⁵ Transcript, pp. 169-170 and Exhibit No. 29, October 2008.

⁸⁶ Transcript, p. 171, October 2008.

⁸⁷ Transcript, p. 424, October 2008.

Engineers,⁸⁸ Food and Agriculture Organization of the United Nations,⁸⁹ and Allen et al., (2005).⁹⁰ Net irrigation water requirement estimates for each of Nevada's Hydrographic Basins are listed in the Evapotranspiration and Net Irrigation water Requirements for Nevada.⁹¹ For Kobeh Valley, the State Engineer finds that the net irrigation water requirement of both alfalfa and highly-managed pasture grass is estimated to be 2.7 feet per year. For Diamond Valley, the State Engineer finds that the net irrigation water requirement of both alfalfa and highly-managed pasture grass is estimated to be 2.5 feet per year.

XVI. GEOLOGIC ARGUMENT OF CHAMBERLAIN

Dr. Chamberlain is Protestant Cedar Ranches, LLC (Cedar), and testified on his own behalf and as the expert witness for Lloyd Morrison at the October 2008 hearing. Dr. Chamberlain was qualified as an expert in geology and as a petroleum geologist for the purposes of the 2008 hearing. Cedar Ranches is a Protestant to change Applications 76744, 76745, and 76746 in Kobeh Valley. The crux of this Protestant's argument was that the existing published geologic data is not adequate and without an accurate geologic model it is impossible for the Applicant to develop a hydrologic model of the area.⁹² A computer slide presentation was submitted in support of the Protestant's geologic theory and a shortened version of the presentation was given at the hearing.⁹³ The Protestant provided an exhibit for the December 2010 hearing, but as the Protestant did not appear at that hearing, the exhibit was not offered or admitted.

A review of the prior hearing testimony shows that the Protestant did a substantial amount of work as a petroleum geologist for the Placid Oil Company.⁹⁴ The Protestant also formed the Cedar Stratigraphic Corporation to generate geologic data for oil companies to use in their exploration programs.⁹⁵

⁸⁸ State Engineer's Office, *The ASCE Standardized Reference Evapotranspiration Equation*, 2005.

⁸⁹ State Engineer's Office, *Crop Evapotranspiration: Guidelines for Computing Crop Water Requirements*, FAO Irrigation and Drainage Paper No. 56, 1998.

⁹⁰ State Engineer's Office, Allen, R.G., Pereira, L.S., Smith, M., Raes, D., and Wright, J.L., *FAO-56 Dual Crop Coefficient Method for Estimating Evaporation from Soil and Application Extensions*, Journal of Irrigation and Drainage Engineering, 2005, pp. 131(1), 2-13.

⁹¹ *Evapotranspiration and Net Irrigation water Requirements for Nevada*, Huntington and Allen, 2010, available online at http://water.nv.gov/mapping/et/et_general.cfm

⁹² Transcript, p. 54, October 2008.

⁹³ Exhibit Nos. 75 and 84, October 2008; Transcript, pp. 49-93, October 2008.

⁹⁴ Transcript, p. 57, October 2008.

⁹⁵ Transcript, p. 53, October 2008.

The Protestant presented the results of some of the geological studies he has completed over the years; however, most of the studies were outside of the project area at issue in this case and their relevance appears tenuous at best.⁹⁶ One of his major points is that there is a hydrologic connection between Diamond Valley and Kobeh Valley, and that pumping in Kobeh Valley could impact water levels in Diamond Valley. The Protestant concluded by stating, "...this presentation establishes that an accurate geologic model is critical for the applicants to create an accurate hydrologic model..." and "[a]n accurate hydrologic model is necessary because the geology demonstrates there are huge horizontal and vertical conduits for the transfer of water from Diamond Valley to Kobeh Valley."⁹⁷ The existence of a hydrologic connection between Kobeh and Diamond Valleys, or between numerous other basins in the Diamond Valley Flow System, is generally accepted by hydrologists and the State Engineer. The Protestant provided documents stating, "Neither the State Engineer nor the BLM have the knowledge or necessary data to make major responsible resource or land use decisions concerning the eastern Great Basin Aquifer."⁹⁸ "The State of Nevada has yet to conduct a detailed and accurate State Geological Survey for proper land and resource decisions can be made."⁹⁹ "Meanwhile, Cedar Strat has already initiated a proprietary Great Basin Geological Survey that can be used for land and resource decisions and natural resource exploration."¹⁰⁰ "Cedar Strat's Great Basin Geological Survey has been recently valued at more than \$850 MM but it has only begun the work that needs to be done."¹⁰¹

The State Engineer finds the Protestant did not appear at the hearing on remand to support his protest. The State Engineer finds the basin and range extensional tectonics in the Great Basin is widely accepted by the scientific community in every peer-reviewed publication analyzed by the Office of the State Engineer and cannot be discounted based on this lone Protestant's contrary interpretation. The State Engineer finds that the Protestant is not an expert in hydrology or hydrogeology and any testimony or evidence provided by the Protestant in those areas of study carry no weight. The State Engineer

⁹⁶ Exhibit Nos. 75 and 84, October 2008; Transcript, pp. 49-93, October 2008.

⁹⁷ Transcript, p. 92, October 2008.

⁹⁸ Exhibit No. 75, October 2008.

⁹⁹ Exhibit No. 75, October 2008.

¹⁰⁰ Exhibit No. 75, October 2008.

¹⁰¹ Exhibit No. 75, October 2008.

finds that the Protestant failed to provide substantial evidence and testimony in support of his protests.

**XVII.
OTHER PROTEST ISSUES**

Nevada Revised Statute § 533.370(5) provides that the State Engineer shall reject an application where the proposed use conflicts with existing water rights. Witnesses testified to their various concerns primarily related to their respective water rights, business, farming, ranching and county interests.

The Eureka Producers Cooperative withdrew all protests prior to the remand hearing after reaching an agreement with the Applicant in August 2010. Lander County did not present a case at the December 2010 hearing. Tim Halpin, Lloyd Morrison and Cedar Ranches were represented by one attorney and presented a joint case at the 2008 hearing. Tim Halpin reached an agreement with the Applicant and withdrew his protests prior to the December 2010 hearing. Cedar Ranches did not attend the December 2010 hearing and did not present a case on remand.

Protestant Tackett attended the December 2010 hearing and indicated in testimony that he owns Klobe Hot Springs in the Northern part of Antelope Valley, south of Kober Valley, and expressed concern that the entire Diamond Valley flow system was not studied in its entirety. He asked that the Klobe Hot Springs be part of any monitoring efforts to protect his existing rights.¹⁰² The State Engineer finds that the entire flow system has been considered, specifically in 'Findings Section V.' of this ruling, and a monitoring, management and mitigation plan will be required. The State Engineer finds that the predicted groundwater drawdowns in the area of Klobe Hot Springs to be minimal to non-existent and no effects on the Hot Springs area are predicted.¹⁰³

Lloyd Morrison testified on his own behalf and raised concerns over impacts to his existing water rights. His property is located on the west side of Diamond Valley and is one of the closest properties to the proposed mine pit. He believes that a concise monitoring, management and mitigation plan must be in place before the permits are granted.¹⁰⁴ The State Engineer finds that an approved monitoring, management and mitigation plan will be required prior to diversion of water for the project. The State

¹⁰² Transcript, pp. 814-830, December 2010.

¹⁰³ Exhibit No. 39, Figures 4.4-12 to 4.4-16, December 2010.

¹⁰⁴ Transcript, pp. 428-430, December 2010.

Engineer has previously found, based on the scientific evidence, that there will be an impact of less than 2 feet on the water table at Mr. Morrison's wells in Diamond Valley due to the mine's proposed pumping. The State Engineer finds that this amount of drawdown over the 44-year life of the mine is not unreasonable and will not conflict with the Protestant's existing water rights.

Protestant Benson, through witness and son Craig Benson, offered testimony that the water level has been falling at a fairly steady rate of decline in Diamond Valley at the Benson agricultural properties.¹⁰⁵ He asked that the State Engineer consider impacts to the entire flow system and to existing rights in Diamond Valley.¹⁰⁶ The State Engineer finds that the entire flow system and impacts to existing rights are addressed throughout this ruling. Protestant Benson personally testified at the hearing of October 13-17, 2008, and again at the December 2010 hearing. Protestant Benson indicated that the water level in one of his wells has dropped 69 feet over a period of 49 years or about 1.4 feet per year.¹⁰⁷ The State Engineer finds that water level decline at Mr. Benson's well is due to agricultural pumping within Diamond Valley, and has found earlier in this ruling that there will not be unreasonable impacts to his water rights due to proposed mine pumping.

Protestant Conley testified that he acquired his property in Diamond Valley in 2007 and the water level has declined about two feet per year since that time.¹⁰⁸ Protestant Conley also believes pumping under these applications will have an adverse impact on his existing water rights. This claim is based on his belief in a hydrologic connection between Kobeh Valley and Diamond Valley. Protestant Conley stated that he believed the mine project should have acquired water from active water permits in Diamond Valley.¹⁰⁹ The Applicant has acquired 16,000 afa of existing water rights in Kobeh Valley and is seeking to develop 11,300 afa of water from the Kobeh Valley aquifer. The Applicant has also acquired substantial amounts of existing groundwater rights within Diamond Valley. A review of the record shows that the Applicant has justified the need for 11,300 afa of water from Kobeh Valley. The committed resources of the Kobeh Valley Hydrographic Basin are well below the estimated perennial yield, including the changes and appropriations sought by the Applicant in this ruling. The

¹⁰⁵ Transcript, pp. 771-772, December 2010.

¹⁰⁶ Transcript, p. 778, December 2010.

¹⁰⁷ Transcript, p. 796, December 2010.

¹⁰⁸ Transcript, p. 432, December 2010.

¹⁰⁹ Transcript, p. 437, December 2010.

scientific evidence, including hydrologic studies and groundwater modeling, estimated future effects and this evidence shows that no unreasonable impacts will occur. The State Engineer finds that the applications will not conflict with the Protestant's existing water rights.

XVIII.

Protestant Eureka County, through its closing brief, requests that the applications filed by the Applicant be denied because the proposed use or change conflicts with existing rights, a mitigation plan to prevent impacts to existing users has not been provided, the applications propose an interbasin transfer but the applicant has failed to provide evidence to satisfy the statutory requirements for the State Engineer to grant an interbasin transfer, there is a lack of water available to appropriate, and there is a lack of specificity in the applications. However, Protestant Eureka County also spoke in favor of mining.

In its protest, Eureka County states,

Eureka County recognizes that the custom and culture of mining is part of its history and appreciates the role mining plays in its local and regional economy. Eureka County welcomes new opportunity for mining in its communities as long as mine development is not detrimental to existing economic or cultural activity. This protest is aimed at ensuring that any development of water resources in Kobeh Valley is conducted in full accordance with Nevada law, the Eureka County Master Plan and related ordinances, and does not unduly threaten the health and welfare of Eureka County citizens.¹¹⁰

In testimony, the Eureka County Natural Resource Manager indicated that Eureka County did not want to kill the project but wanted it done right.¹¹¹ He indicated that the monitoring, management and mitigation plan was very important and that Eureka County wants full participation in developing the plan.¹¹² In testimony, the Chairman of the Eureka County Board of Commissioners confirmed that to his knowledge no one representing Eureka County has ever directed its consultants, employees or attorneys to try and kill the mine project.¹¹³ The Chairman indicated that it was his understanding that Eureka County had to protest to maintain standing with the State Engineer and if there is

¹¹⁰ Exhibit No. 509, December 2010.

¹¹¹ Transcript, p. 755, December 2010.

¹¹² Transcript, p. 756, December 2010.

¹¹³ Transcript, p. 714, December 2010.

not a settlement with the Applicant that the County would be denied the right to participate in a monitoring, management and mitigation plan.¹¹⁴ The Chairman testified that mining is a life blood of Eureka County¹¹⁵ and that Eureka County has and always will be a mining and agricultural county.¹¹⁶ In addition, the mine will provide an economic benefit in the form of increased employment and tax revenue for the county.¹¹⁷

While substantial evidence exists that pumping 11,300 afa of water from Kobeh Valley, which is considerably less than the revised and more conservative perennial yield of 15,000 afa, can be safely carried out, the only way to fully ensure that existing water rights are protected is by closely monitoring hydrologic conditions while groundwater pumping occurs. The State Engineer has wide latitude and broad authority in terms of imposing permit terms and conditions. This includes the authority to require a comprehensive monitoring, management and mitigation plan prepared with assistance from Eureka County.

The State Engineer finds that a monitoring, management and mitigation plan prepared with input from Eureka County must be approved by the State Engineer prior to pumping groundwater for the project.

CONCLUSIONS

I.

The State Engineer has jurisdiction over the parties and the subject matter of this action and determination.¹¹⁸

II.

The State Engineer is prohibited by law from granting an application to appropriate or change the public waters where:¹¹⁹

- A. there is no unappropriated water at the proposed source;
- B. the change conflicts with existing rights;
- C. the proposed change conflicts with protectable interests in existing domestic wells as set forth in NRS § 533.024; or
- D. the proposed use or change threatens to prove detrimental to the public interest.

¹¹⁴ Transcript, p. 714 and pp. 716-717, December 2010.

¹¹⁵ Transcript, p. 715, December 2010.

¹¹⁶ Transcript, p. 438, October 2008.

¹¹⁷ Transcript, pp. 438-439, October 2008.

¹¹⁸ NRS Chapters 533 and 534.

¹¹⁹ NRS § 533.370(5).

III.

The evidence and testimony show that select springs on the floor of Kobeh Valley and one domestic well near Roberts Creek may be impacted by the proposed pumping in Kobeh Valley; however, any impacts can be detected and mitigated through a comprehensive monitoring, management and mitigation plan. The State Engineer has found that the domestic well and spring flow reduction can be adequately and fully mitigated by the Applicant should impacts to existing rights or the domestic well occur. To ensure funding exists for any required future mitigation, including mitigation after the cessation of active mining activities, the Applicant must demonstrate the financial capability to complete any mitigation work necessary in a monitoring, management, and mitigation plan prior to pumping groundwater for the project.

Based on substantial evidence and testimony, and the monitoring, management and mitigation plan requirement, the State Engineer concludes that the approval of the applications will not conflict with existing water rights, will not conflict with protectable interests in existing domestic wells as set forth in NRS § 533.024, and will not threaten to prove detrimental to the public interest.

IV.

The State Engineer concludes the Applicant provided proof satisfactory of its intention in good faith to construct any work necessary to apply the water to the intended beneficial use with reasonable diligence, and its financial ability and reasonable expectation actually to construct the work and apply the water to the intended beneficial use with reasonable diligence.

V.

The State Engineer concludes that based on the findings the Applicant meets the additional statutory criteria required for an interbasin transfer of water from Kobeh Valley under NRS § 533.370(6); therefore, the applications filed within Kobeh Valley can be considered for approval. The State Engineer concludes any groundwater developed in Diamond Valley will be limited to use within Diamond Valley; therefore, the interbasin transfer statute is not applicable to these applications.

VI.

Concerns were raised at the administrative hearing that the State Engineer had not provided notice under NRS § 534.090 that the water right might be subject to forfeiture.

Nevada Revised Statute § 534.090 provides:

For water rights in basins for which the State Engineer keeps pumping records, if the records of the State Engineer indicate at least 4 consecutive years, but less than 5 consecutive years, of nonuse of all or any part of such a water right which is governed by this chapter, the State Engineer shall notify the owner of the water right, as determined in the records of the Office of the State Engineer, by registered or certified mail that he has 1 year after the date of the notice in which to use the water rights beneficially and to provide proof of such use to the State Engineer or apply for relief pursuant to subsection 2 to avoid forfeiting the water right.

The argument was raised that the State Engineer was required to notify the holders of the possible forfeiture one year before commencing the forfeiture proceeding. The statutory language quoted above was added to NRS § 534.090 in 1995 as Assembly Bill 435, which became effective on July 1, 1995. Accordingly, any water right for which there was more than five consecutive years of complete or partial non-use on the effective date of the notice provision, July 1, 1995, is not entitled to notice by the express terms of the statute. As to Certificates 2782, 4922, 6457, 8002, and 8003, the water rights had not been used for more than five consecutive years before the notice provision was enacted in 1995. Therefore, the holders of the water right were not entitled to notice of possible forfeiture. Such an interpretation is clear from the express provisions of the statute. The plain language of the statute lends itself to only one possible interpretation: any certificated underground water right or portion of water right that had not been put to beneficial use for five years or more when the notice provision became effective is not entitled to notice. The Applicant's argument can only be accepted if the phrase "but less than 5 consecutive years" is ignored.

Such an interpretation would not only be inconsistent with the express language of NRS § 534.090, but would give retroactive effect to the statute when the legislative history clearly intended the notice provision not apply retroactively. According to Assemblyman Neighbors, one of the sponsors of Assembly Bill 435, "there are not retroactive provisions in [A.B. 435]."¹²⁰ In testimony regarding A.B. 435, the State Engineer stated, "this office has

¹²⁰ *Hearing on A.B. 435 before the Senate Committee on Natural Resources*, 1995 Leg., 68th Sess. 2 (June 7, 1995).

taken the position that if 5 years have already past [sic], those non-users of water rights are not to be notified. Under the measure, it is only the ones where 4 years of non-use of water rights have occurred, but not yet 5.”¹²¹ The reason A.B. 435 was not applied to existing rights that had not been used for five years or more was that such a requirement would have placed a tremendous burden on the Office of the State Engineer. The State Engineer commented that “probably 4,000 water rights in the state . . . are subject to forfeiture.”¹²²

Accordingly, the Legislature understood from one of the drafters of A.B. 435 that the notice provision was not intended to be applied in situations where five years of non-use had already occurred prior to the enactment of the law and thereby resurrect rights that were already subject to forfeiture. Generally, a statute will only be interpreted to have prospective effect unless there is a clear expression of legislative intent that it applies retroactively.¹²³ Here not only has the Legislature not stated an intention that the notice provision of NRS § 534.090(1) apply retroactively, they specifically indicated in both the language of the statute and the legislative history that the notice provision was not intended to be retroactive.

The State Engineer concludes that since more than five consecutive years of non-use of water under Certificates 2782, 4922, 6457, 8002, and 8003, had passed prior to the enactment of the notice provision of NRS § 534.090, he was not required to provide one-year notice as set forth in NRS § 534.090.

VII.

The State Engineer concludes, based on the revised perennial yield of Kobeh Valley compared to committed resource, that the actual withdrawal of groundwater within the basin is well below the perennial yield and water is available for appropriation for the temporary manner of use contemplated under these applications.

VIII.

The protests of Eureka County and Benson cite that further applications for the mining project should not be considered until a United States Geological Survey (USGS) study is completed. There is nothing in Nevada water law that requires or compels applications to be held for an indefinite period of time while a third party not associated with the project completes a study of the area. The State Engineer concludes there is

¹²¹ *Id.* at Sess. 4.

¹²² *Ibid.*

¹²³ *See, Nevada Power Co. v. Metropolitan Development Co.*, 104 Nev. 684, 686, 765 P.2d 1162 (1988).

sufficient existing hydrologic information to proceed with these applications and this protest issue does not provide valid grounds for denial of the applications.

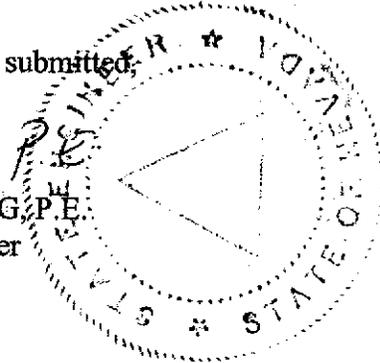
RULING

Certificates 2782, 4922, 6457, 8002 and 8003 are hereby declared forfeit; therefore, Applications 76483, 76484, 76485, 76486, 76744, 77174 and 77175 are denied. The remaining protests are overruled and Applications 72695, 72696, 72697, 72698, 73545, 73546, 73547, 73548, 73549, 73550, 73551, 73552, 74587, 75988, 75989, 75990, 75991, 75992, 75993, 75994, 75995, 75996, 75997, 75998, 75999, 76000, 76001, 76002, 76003, 76004, 76005, 76006, 76007, 76008, 76009, 76745, 76746, 76802, 76803, 76804, 76805, 76989, 76990, 77171, 77525, 77526, 77527, 77553, 78424, 79911, 79912, 79913, 79914, 79915, 79916, 79917, 79918, 79919, 79920, 79921, 79922, 79923, 79924, 79925, 79926, 79927, 79928, 79929, 79930, 79931, 79932, 79933, 79934, 79935, 79936, 79937, 79938, 79939, 79940, 79941 and 79942 are hereby granted subject to:

1. Existing rights;
2. Payment of the statutory permit fees;
3. A monitoring, management, and mitigation plan prepared in cooperation with Eureka County and approved by the State Engineer before any water is developed for mining;
4. All changes of irrigation rights will be limited to their respective consumptive uses;
5. No export of water from the Diamond Valley Hydrographic Basin;
6. A total combined duty of 11,300 afa.

Respectfully submitted,


JASON KING, P.E.
State Engineer



Dated this 15th day of
July, 2011.