IN THE SUPREME COURT OF THE STATE OF NEVADA

EUREKA COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF NEVADA; KENNETH F. BENSON, INDIVIDUALLY; DIAMOND CATTLE COMPANY, LLC, A NEVADA LIMITED LIABILITY COMPANY; AND MICHEL AND MARGARET ANN ETCHEVERRY FAMILY, LP, A NEVADA REGISTERED FOREIGN LIMITED PARTNERSHIP,

Appellants,

vs.

THE STATE OF NEVADA STATE ENGINEER; THE STATE OF NEVADA DIVISION OF WATER RESOURCES; AND KOBEH VALLEY RANCH, LLC, A NEVADA LIMITED LIABILITY COMPANY,

Respondents.

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Case No. 61324

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District Court Case Nos.
CV 1108-15; CV 1108-156;
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CV 1112-165; CV 1202-170

EUREKA COUNTY'S REPLY APPENDIX

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CHRONOLOGICAL INDEX

DOCUMENT	DATE	VOL	RA NO.
Excerpts from Exhibit No. 116, October 2008	Oct. 2008	1	01-04
Exhibit No. 116, Appendix B, October 2008, entitled "Spring Inventory Dataset" referenced by the STATE ENGINEER in Ruling 6127	Oct. 2008	1	05-15
Excerpts of Testimony from KVR witnesses, James Moore and Patrick Rogers, at 2008 Hearing before the STATE ENGINEER	10/15/2008	1	16-33
Excerpts of Testimony from KVR witnesses, Thomas K. Buqo and Terry Katzer, at 2008 Hearing before the STATE ENGINEER	10/16/2008	1	34-47
Excerpts of Testimony from KVR witness, Terry Katzer, at 2008 Hearing before the STATE ENGINEER	10/17/2008	1	48-57

ALPHABETICAL INDEX

CERTIFICATE OF APPENDIX (NRAP 30(g)(1)

In compliance with NRAP 30(g)(1) I hereby certify that this Appendix consists of true and correct copies of the papers in the District Court file.

DATED: April 5, 2013.

/s/ Karen A. Peterson
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4.0 Water Rights

4.1 Nevada Water Rights Overview

In Nevada, surface water and groundwater belong to the public although water right permits are treated like real property. The process of obtaining a water right begins with filing an application with the State Engineer to appropriate water. If the applicant is granted a permit, then the process of perfecting the water right begins. Proof of Completion of Work must be filed and accepted by the State Engineer, followed by Proof of Beneficial Use. Once Proof of Beneficial Use is accepted by the State Engineer, then a Certificate of Appropriation of Water is issued.

Most water rights have a surveyed point of diversion, designated place of use, manner of use, rate of diversion, duty, and period of use, and often contain specific conditions of water use as specified by the State Engineer. Applications to change the point of diversion, place of use and/or manner of use of existing water right permits is a common practice because operations and demands for water frequently change over time. Changes to points of diversions for underground water rights (and most surface water rights) historically have been allowed only within the same hydrographic basin, though some interbasin transfers have been approved. Water rights, like real property, are freely transferable and may be severed by deed (sold separate from the land). Water rights remain appurtenant to the place of use.

Rulings, orders, and adjudications are issued by the State Engineer or judicial courts to resolve disputes regarding water rights. Most of the major streams and rivers in Nevada have been subject to adjudication.

The State Engineer manages groundwater by individual hydrographic basin, of which there are over 232 defined groundwater basins in Nevada (NDWR, 2005). The perennial yield of a hydrographic basin is the maximum amount of natural discharge that can be salvaged for beneficial use and establishes the total duty of groundwater rights which may be issued on a permanent basis within a specific groundwater basin as per the policy of the State Engineer (NDWR, 1977). While this sounds simple, it becomes complex, as estimating the perennial yield of a basin always involves complicating issues, such as interactions between basins, the quantity of consumptive water use versus the quantity pumped, the ability to develop groundwater at the location of interest without detrimental impacts. The State Engineer reviews each application on a case-by-case basis, and where the State Engineer considers a basin to be in need of administration, the basin often becomes designated for preferred uses.

At times, groundwater rights are issued as supplemental to other water rights. For example, an underground water right might be issued to provide water to irrigate surface water irrigated pasture when the surface water source is insufficient. In some cases, water rights have been issued on the basis of a combined duty, whereby the total annual duty of several permits cannot exceed a combined total amount. A complicating issue which can be encountered entails the granting of multiple water rights covering the same place of use. In some cases, a determination of the amount of water rights that are supplemental has not been made. This

9.1.1 Kobeh Valley

The perennial yield of Kobeh Valley, based on the Rush and Everett (1964) Reconnaissance Report is approximately 16,000 af/yr, which assumes that the natural groundwater discharge (phreatophyte evapotranspiration) from the basin can be captured over the long-term. This perennial yield was estimated by adding estimated groundwater inflow from northern Monitor Valley of 6,000 af/yr and 11,000 af/yr of recharge derived from estimated in-basin recharge from precipitation over upland areas. Rush and Everett (1964) estimated ET discharge to be 15,000 af/yr based on reconnaissance-level mapping of phreatophyte areas and estimated ET rates derived from observations on the ground and elsewhere in the Great Basin. The water balance difference between inflow and outflow was averaged to derive a perennial yield estimate of 16,000 af/yr. The Mount Hope process water pumping of 11,238 af/yr will be within the presently defined perennial yield of basin. GMI has acquired existing water right permits on the valley floor to accommodate this pumping withdrawal (Section 4) from previously permitted mining and agriculture. The total planned basin extraction is within the estimated perennial yield, and by retiring previous permitted uses, the mining operation plans to avoid any over-appropriation or over-draft of water resources in the basin.

TABLE 9.2- ESTIMATES OF PERENNIAL YIELD FOR STUDY AREA VALLEYS

Basin	Perennial Yield (af/yr)
Kobeh Valley	16,000
Antelope Valley	4,000
Diamond Valley	30,000*
Pine Valley including Garden Valley	24,000**

* Eakin (1962) estimate was 23,000 af/yr
** Berger (2000) suggests the water budget, and by association, perennial yield may be significantly greater.

After review of the reconnaissance-level estimates of recharge in the Study Area, it is believed that the recharge quantities and ET discharge quantities in Study Area basins could be underestimated to some degree. However, subsurface inflow and outflow from the basins in the Study Area are uncertain, and could be compensating errors.

Based on the present available data, relying on the published perennial yield values appears to be a conservative assumption for purposes of evaluating project pumping.

13.2 Simulation Results

Two predictive scenarios have been developed for simulating regional pumping effects of the proposed Mount Hope project. One simulation is a mine-only scenario, whereby only pumping from the Kobeh Central Well Field and pit dewatering are simulated for a 44-year period. Transient conditions elsewhere in the model area are ignored in this scenario. Mine pumping at the pit and well field is simplified to represent the average annual pumping, rather than a variable pumping scheme as shown in Table 13.2. This scenario has been created in order to assess more clearly the pumping affects of the mine.

The second scenario is a cumulative pumping scenario, whereby 99 years are simulated, from 1955 forward to year 2053, and mine pumping is differentiated on an annual basis. This scenario is truer to actual conditions that exist, particular in regard to comingled pumping affects that occur in Diamond Valley. The cumulative pumping model shows the combined effects of historic and future predicted pumping in both Diamond and Kobeh Valleys. This scenario is useful to gain a boarder and potentially more accurate perspective on future water levels in the region, but it is difficult to impossible to differentiate pumping affects that are geographically between the mine and the agricultural center.

13.2.1 Mount Hope Mine-Only Pumping Scenario

Predicted water level drawdown in model after 44 years of mine pumping are shown in Figures 13.2 through 13.4, for model layers 1, 3, and 5. Drawdown in model layer 6-8 appear very similar to those shown in Figure 13.4 for layer 5. Table 13.3 presents a comparison of predicted changes to the flow system fluxes at the end of 44 years, as compared with fluxes in the steady-state model.

Moderate levels of potentiometric drawdown are predicted to occur throughout northern Kobeh Valley, including up into the southern flanks of the Roberts Mountains. Drawdown in the vicinity of the well field is predicted to range from 50 to 150 feet. Geologic structures represented in the model guide the propagation of drawdown to the north in the Roberts Mountains. Predicted drawdown into the mountain block should be viewed caution, as the model ability to simulate drawdown in this complex mountain terrain is limited. The model can, however, provide a general understanding of the potential magnitude and extent of drawdown and should be used as guidance for developing a regional monitoring network to detect and gauge the extent of actual pumping effects. For example, drawdown is predicted to extend northwest through the Roberts Mountains to the vicinity of Tonkin Spring (Figures 13.2-13.4). Spring flow can be measured, along with monitoring of water levels and other spring discharges at intermediate location to assess the real-world potential for detrimental impact to the spring. It is very likely and intervening geologic structure(s) will curtail or preclude drawdown to the regional extent simulated by the model in the mountain blocks.

An examination of water mass balance in the mine-only pumping scenario indicates that phreatophyte water consumption in the Kobeh basin decreases by approximately 8 percent (1,095 af/yr) after 44 years of pumping (Table 13.3), suggesting that most of the water pumped in the 44 year frame is from aquifer storage withdrawal, and equilibrium conditions have not occurred. The volume of water in storage in the basin fill materials in Kobeh Valley is large, and the spatial geometry of basin, and spatial occurrence of ET to the south of the well field all play a part in the dynamic responses of the aquifer to pumping and ET capture.

No tangible detrimental effect to Diamond Valley is simulated in the mine-only scenario. The simulated outflow from Kobeh Valley to Diamond Valley is not effected, as no significant degree of drawdown occurs at the eastern edge of the basin.

One unusual observation in the mass balance comparison, is a predicted decrease in inflow from Monitor Valley, which is believed to attributable to numeric instability at the General Head boundary rather than a physical response to mine pumping.

While drawdown projections are mild (generally less than 5 feet) in southern portion of Kobeh Valley, south of Lone Mountain, a notable decrease in ET occurs in Antelope Valley (29 percent decrease) which suggests a mild yet broad extent of drawdown. Predicted drawdown to the shallow water table at Bean Flat is approximately 0.2 feet and at Devils Gate is 0.1 feet. The model suggests minimal pumping impacts to salt grass and meadow environments in Kobeh Valley. At the Bartine Ranch flowing wells, the drawdown is only about 0.1 feet, and the flowing artesian wells may experience a mild decline in flow. However, these wells may be required to be plugged, since their water rights have been acquired by the mine, and are planned to be transferred to the well field.

To the northeast of the Bartine Ranch is the Hot Spring Hill flowing well. This well is plumbed deeper in the model (layer 6), under the assumption that the water resource reflects upwelling of a deeper and hotter water source, which is also supported by isotopic chemistry (Section 11). Simulated drawdown is approximately 3 feet at this hot spring after 44 years of mine pumping. This geothermal well flows only a couple gallons per minute, and the model suggests it may be affected.

The magnitude and degree of simulated drawdown in Kobeh Valley suggests that pumping impacts to phreatophyte vegetation in Kobeh Valley will be minimal. The northern edge of the shrub communities (greasewood and rabbitbrush) may experience a mild decrease in density or shift to the south over time. Because of the geographic distance between the well field and the phreatophyte populations, the pumping drawdown at the northeastern phreatophyte areas will be gradual and delayed in time, taking several years to begin realizing an impact. The extent and degree of simulated drawdown to the water table aquifer is mild and is not likely to impose significant changes to interior phreatophyte communities of salt grass and meadow grasses (simulated drawdown less than 1 foot).

In Antelope Valley, the Kitchen Meadows and the Klobe geothermal spring are not predicted to experience any water level declines

In the Pine Valley, the model simulates drawdown extending through Roberts Mountains. Springs exist at the northern base of Roberts Mountains some of which form

ID	SRK Spring ID	Chem ID	Spring Name	Date	General Area: (Valley)	UTM NAD 83 East, Feet	UTM NAD 83 North, Feet	Geologic Association	pH (Field)	Temp. (°C)	Temp. (°F)	Conductivity (μS)	TDS (ppm)	ORP (mV)	Flow (gpm avg)	Flow (cfs avg)	Notes
1	DV001	C-71	Unknown	10/8/2007	Diamond	1968532.72	14384434.93	Alluvium	5.94	9.2	48.6	359.5	235.1	146	0.41	0.001	Not all of flow is captured by steel pipe that sample was taken from.
2	DV002	--	Unknown	10/8/2007	Diamond	1969224.52	14383213.02	Alluvium	--	--	--	--	--	--	--	--	Spring has visible flow.
3	DV003	C-69	Unknown	10/8/2007	Diamond	1968846.08	14381371.12	Alluvium	5.97	7.8	46	305.3	197.5	149	2.26	0.005	Sample taken from pvc pipe.
4	DV004	--	Unknown	10/24/2007	Diamond	1918228.71	14490225.56	Alluvium	--	--	--	--	--	--	--	--	No water present.
5	DV005	--	Unknown	10/24/2007	Diamond	1918704.88	14490095.99	Alluvium	--	--	--	--	--	--	--	--	No water present
6	DV006	--	Unknown	10/24/2007	Diamond	1917239.88	14489915.51	Alluvuim	--	--	--	--	--	--	--	--	No water present.
7	DV007	--	Unknown	10/24/2007	Diamond	1918126.57	14489574.3	Alluvium	--	--	--	--	--	--	--	--	No water present.
8	DV008	--	Unknown	10/24/2007	Diamond	1920538.96	14485773.2	Alluvium	--	--	--	--	--	--	--	--	No water present.
9	DV009	--	Unknown	10/24/2007	Diamond	1919258.71	14485451.67	Alluvium	--	--	--	--	--	--	--	--	No sign of spring.
10	DV010	--	Unknown	10/24/2007	Diamond	1918981.05	14484866	Alluvium	--	--	--	--	--	--	--	--	Moist but no water present.
11	DV011	C-48	Unknown	10/5/2007	Diamond	1951160.87	14365418.08	Fractured Bedrock	6.89	4.8	40.6	366.4	245.4	129	0.78	0.002	Snowing heavily while sample was taken.
12	DV012	--	Unknown	10/8/2007	Diamond	1952956.99	14356423.8	Fractured Bedrock	--	--	--	--	--	--	--	--	Stagnant water present.
13	DV013	--	Richmond Spring	10/8/2007	Diamond	1938841.42	14347470.91	Fractured Bedrock	--	--	--	--	--	--	--	--	--
14	DV014	C-31, C-32	Milk Ranch Spring	10/8/2007	Diamond	1939914.33	14340506.87	Alluvium, Fractured Bedrock	5.84	11.9	53.4	459.2	304.7	140	3.98	0.009	*Duplicate Sample taken. Sample taken from steel pipe.
15	DV017	--	Unknown	10/5/2007	Diamond	1951140.93	14367676.72	Alluvium	--	--	--	--	--	--	--	--	--
16	DV018	C-54, C-55	Unknown	10/5/2007	Diamond	1949009.71	14367483.41	Fracture Flow	4.57	9.7	49.5	406.6	283	226	32.35	0.072	* Duplicate Sample Taken.
17	DV019	--	Unknown	10/8/2007	Diamond	1945326.68	14350726.76	Volcanic	--	--	--	--	--	--	--	--	No measurable flow.
18	DV020	--	Unknown	10/8/2007	Diamond	1947888.41	14350483.71	Volcanic Tuff	--	--	--	--	--	--	--	--	No measurable flow.
19	DV021	--	Unknown	10/8/2007	Diamond	1954568.91	14349250.01	Basalt	--	--	--	--	--	--	--	--	--
20	DV022	C-38	Simpson Springs	10/8/2007	Diamond	1954004.21	14349293.29	Volcanic	7.15	13	55.4	217.5	146.2	122	1.89	0.004	Spring Complex.
21	DV023	--	Unknown	10/8/2007	Diamond	1945921.42	14349150.64	Volcanic	--	--	--	--	--	--	--	--	No water present.
22	DV024	--	Unknown	10/16/2007	Diamond	1948619	14346948.57	Fractured Bedrock	--	--	--	--	--	--	--	--	Heavily impacted by livestock.
23	DV025	C-35, C-36	Spanish Gulch Spring	10/16/2007	Diamond	1948582.97	14344481.08	Fractured Bedrock	6.85	10.9	51.6	528.8	371	118	1.31	0.003	Damaged iron pipe adjacent to sample.
24	DV026	--	Unknown	10/16/2007	Diamond	1933355.65	14335099.02	Rock Outcropping	--	--	--	--	--	--	--	--	Moist but no surface water.
25	DV027	C-26	Unknown	10/16/2007	Diamond	1936826.8	14330948.66	Fractured Bedrock	7.59	8.3	46.9	441.5	296.4	148	0.19	0	Sample taken from pvc pipe.

ID	SRK Spring ID	Chem ID	Spring Name	Date	General Area: (Valley)	UTM NAD 83 East, Feet	UTM NAD 83 North, Feet	Geologic Association	pH (Field)	Temp. (°C)	Temp. (°F)	Conductivity (µS)	TDS (ppm)	ORP (mV)	Flow (gpm avg)	Flow (cfs avg)	Notes
26	DV028	C-29, C-30	Unknown	10/22/2007	Diamond	1931180.81	14337071.65	Conglomerate	7.23	9.8	49.6	519.8	366	111	1.89	0.004	Old tank on site.
27	DV029	C-28	Unknown	10/22/2007	Diamond	1927128.16	14333891.72	Alluvium	7.03	7.8	46	491	340.4	173	0.79	0.002	--
28	DV030	--	Unknown	10/16/2007	Diamond	1933523.26	14332314.21	Fractured Bedrock	--	--	--	--	--	--	--	--	Stagnant pond.
29	DV031	--	Unknown	10/16/2007	Diamond	1934706.31	14332381.42	Alluvium	--	--	--	--	--	--	--	--	No water present.
30	DV032	C-27	Unknown	10/22/2007	Diamond	1939282.38	14332355.13	Fractured Bedrock	6.94	9	48.2	353.1	245.1	114	0.32	0.001	--
31	DV033	--	Unknown	10/16/2007	Diamond	1936303.35	14331524.56	Fractured Bedrock	--	--	--	--	--	--	--	--	Pipe damaged before entering pipe. Artificial source 40 yds. From actual.
32	DV035	C-37	Bullwhacker Spring	10/8/2007	Diamond	1939046.19	14346723.71	Fractured Bedrock	6.58	11.1	52	143.7	89.89	112	2.18	0.005	Sample taken from steel pipe.
33	DV036	C-33	Cherry Spring	10/8/2007	Diamond	1937528.52	14342353.42	Fractured Bedrock	5.85	11.9	53.4	415.7	274	144	1.38	0.003	Adit has collapsed and has metal grate covering.
34	DV037	--	Four-eyed Nicks Springs	10/5/2007	Diamond	1950079.17	14367494.08	Fractured Bedrock	--	--	--	--	--	--	--	--	Spring had visible flow.
35	DV038	C-70	Cottonwood Spring	10/8/2007	Diamond	1965851.14	14383269.13	Alluvium	6.08	8.1	46.6	584.7	389.5	167	1.56	0.003	Sample taken from pvc pipe.
36	DV039	--	Unknown	10/25/2007	Diamond	1903871.78	14480516.89	Alluvium	--	--	--	--	--	--	NT	NT	No water present.
37	DV040	--	Unknown	10/25/2007	Diamond	1902131.4	14479534.22	Alluvium	--	--	--	--	--	--	--	--	No sign of spring.
38	DV041	--	Unknown	10/25/2007	Diamond	1903132.35	14479444.02	Alluvium	--	--	--	--	--	--	--	--	No water present.
39	DV042	--	Unknown	10/25/2007	Diamond	1903431.11	14476154.77	Alluvium	--	--	--	--	--	--	--	--	No water present.
40	DV043	--	Unknown	10/25/2007	Diamond	1902824.12	14476015.29	Alluvium	--	--	--	--	--	--	--	--	No water present.
41	DV044	--	Unknown	10/25/2007	Diamond	1901984.19	14474973.58	Alluvium	--	--	--	--	--	--	--	--	No water present.
42	DV045	--	Unknown	10/25/2007	Diamond	1903372.45	14474469.95	Alluvium	--	--	--	--	--	--	--	--	No sign of spring.
43	DV046	--	Tule Dam Spring	10/25/2007	Diamond	1903231.57	14472693.25	Alluvium	--	--	--	--	--	--	--	--	No water present. Heavily grazed.
44	DV047	--	Unknown	10/25/2007	Diamond	1901826.03	14469837.11	Alluvium	--	--	--	--	--	--	--	--	No water present. Heavily grazed.
45	DV048	--	Sulphur Spring	10/25/2007	Diamond	1901982.71	14469156.29	Alluvium	--	--	--	--	--	--	--	--	No water present. Area high in Organic Matter.
46	DV049	--	Unknown	10/25/2007	Diamond	1901971.23	14468623.13	Alluvium	--	--	--	--	--	--	--	--	No water present.
47	DV050	--	Sulphur Spring	10/25/2007	Diamond	1901932.03	14467514.13	Alluvium	--	--	--	--	--	--	--	--	No water present.
48	DV051	--	Sulphur Spring	10/25/2007	Diamond	1902049.63	14467708.94	Alluvium	--	--	--	--	--	--	--	--	No sign of spring.
49	DV052	--	Unknown	10/24/2007	Diamond	1909604.43	14479806.65	Alluvium	--	--	--	--	--	--	--	--	No water present.
50	DV053	--	Unknown	10/24/2007	Diamond	1907689.86	14487256.2	Alluvium	--	--	--	--	--	--	--	--	No water present.

ID	SRK Spring ID	Chem ID	Spring Name	Date	General Area: (Valley)	UTM NAD 83 East. Feet	UTM NAD 83 North. Feet	Geologic Association	pH (Field)	Temp. (°C)	Temp. (°F)	Conductivity (µS)	TDS (ppm)	ORP (mV)	Flow (gpm avg)	Flow (cfs avg)	Notes
51	DV054	--	Unknown	10/24/2007	Diamond	1909196.25	14486619.7	Alluvium	--	--	--	--	--	--	--	--	Small amount of water present.
52	DV055	--	Unknown	10/24/2007	Diamond	1909122.66	14485610.75	Alluvium	--	--	--	--	--	--	--	--	No water present.
53	DV056	--	Unknown	10/24/2007	Diamond	1911116.88	14485381.1	Alluvium	--	--	--	--	--	--	--	--	No water present.
54	DV057	--	Unknown	10/24/2007	Diamond	1906981.18	14484731.44	Alluvium	--	--	--	--	--	--	--	--	No water present.
55	DV058	--	Unknown	10/24/2007	Diamond	1912153.23	14484214.69	Alluvium	--	--	--	--	--	--	--	--	No water present.
56	DV059	--	Unknown	10/24/2007	Diamond	1911588.72	14483985.03	Alluvium	--	--	--	--	--	--	--	--	No sign of spring.
57	DV060	--	Unknown	10/24/2007	Diamond	1911122.62	14483939.08	Alluvium	--	--	--	--	--	--	--	--	No water present.
58	DV061	--	Unknown	10/24/2007	Diamond	1910098.13	14483870.19	Alluvium	--	--	--	--	--	--	--	--	No water present.
59	DV062	--	Unknown	10/24/2007	Diamond	1907166.13	14483707.74	Alluvium	--	--	--	--	--	--	--	--	No water present.
60	DV063	--	Unknown	10/24/2007	Diamond	1912026.54	14483547	Alluvium	--	--	--	--	--	--	--	--	No water present.
61	DV064	--	Unknown	10/24/2007	Diamond	1910978.44	14479928	Alluvium	--	--	--	--	--	--	--	--	No water present.
62	DV065	C-188	Shipley Hot Spring	10/24/2007	Diamond	1899867.73	14507355.87	Alluvium	7	39.3	102.7	573	376.3	138	1596.3	3.56	Site is a natural hot spring.
63	DV068	--	Unnamed Spring from Recon	10/24/2007	Diamond	1900839.54	14503800.33	Alluvium	--	--	--	--	--	--	--	--	Dry site. Heavy livestock impacts.
64	DV069	--	Bailey Ranch Spring	10/24/2007	Diamond	1901880.19	14496835.98	Alluvium	--	--	--	--	--	--	--	--	Owner claims site becomes artesian in early winter.
65	DV070	C-154	Potato Spring	10/9/2007	Diamond	1965812.07	14462555.56	Fractured Bedrock	7.2	8.4	47.1	412,5	282	166	0.46	0.001	Sample taken from pvc pipe.
66	DV071	--	Duck Pond	10/9/2007	Diamond	1956025.52	14503180.98	Alluvium	--	--	--	--	--	--	--	--	Pond moist but surface water.
67	DV072	--	Unknown	10/9/2007	Diamond	1956038.26	14502838.11	Alluvium	--	--	--	--	--	--	--	--	Damaged pvc pipe in area but no visible flow.
68	DV073	--	Diamond Springs	10/9/2007	Diamond	1956349.76	14497942.79	Alluvium	--	--	--	--	--	--	--	--	Large amount of thistle. No water present.
69	DV074	--	Cottonwood Spring	10/9/2007	Diamond	1965443.1	14493255.84	Unknown	--	--	--	--	--	--	--	--	*Site was inaccessible. No photo was taken.
70	DV075	--	Diamond Springs	10/9/2007	Diamond	1956001.72	14498234.12	Alluvium	--	--	--	--	--	--	--	--	Large amount of thistle. No water present.
71	DV076	--	Echemendy Number Five	10/9/2007	Diamond	1962181.13	14510799.96	Glacial Valley Wall	--	--	--	--	--	--	--	--	No source found at location.
72	DV077	--	Echemendy Number Seven	10/9/2007	Diamond	1962802.06	14505041.8	Glacial Cirque	--	--	--	--	--	--	--	--	No source found at location.
73	DV078	--	Echemendy Number Six	10/9/2007	Diamond	1960897.03	14507748.63	Glacial Till	--	--	--	--	--	--	--	--	No source found at location.
74	DV079	--	Echemendy Number Ten	10/9/2007	Diamond	1962684.15	14502003.6	Fractured Bedrock	--	--	--	--	--	--	--	--	No source found at location.
75	DV081	--	Box Spring Creek Spring	10/18/2007	Diamond	1963785.95	14531256.99	Fractured Bedrock	--	--	--	--	--	--	--	--	Moist but no surface water present.

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76	DV082	--	Unknown	10/18/2007	Diamond	1965691.65	14552103.27	Conglomerate	--	--	--	--	--	--	--	--	Dry site. Unable to locate source.
77	DV083	--	Unknown	10/18/2007	Diamond	1965972.17	14551665.24	Fractured Bedrock	--	--	--	--	--	--	--	--	Spring and Box inaccessible by livestock.
78	DV084	C-205	Etchemendy Number Four	10/18/2007	Diamond	1966705.63	14551937.13	Fractured Bedrock	6.93	12.5	54.5	364.7	244.3	141	4.65	0.01	Water leaking from around spring box.
79	DV085	--	Etchemendy Number One	10/18/2007	Diamond	1964777.84	14550596.85	Fractured Conglomerate	--	--	--	--	--	--	--	--	Unable to determine flow or acquire sample due to being frozen.
80	DV086	C-210	Unknown	10/18/2007	Diamond	1949981.66	14565265.08	Alluvium	8.96	6.2	43.2	1539	1093	142	--	--	No flow available.
81	DV087	--	Unknown	10/18/2007	Diamond	1950114.74	14561324.53	Alluvium	--	--	--	--	--	--	--	--	No water present.
82	DV088	--	Unknown	10/18/2007	Diamond	1948362.48	14558177.97	Alluvium	--	--	--	--	--	--	--	--	Stagnant water present.
83	DV089	C-207	Unknown	10/18/2007	Diamond	1946454.17	14557503.68	Alluvium	7.18	13.4	56.1	1377	960.8	-47	--	--	No flow available.
84	DV091	--	Unknown	10/18/2007	Diamond	1947644.28	14557593.11	Alluvium	--	--	--	--	--	--	--	--	Stagnant water present.
85	DV092	--	Unknown	10/18/2007	Diamond	1947350.27	14556489.86	Alluvium	--	--	--	--	--	--	--	--	No sign of spring.
86	DV093	C-206	Unknown	10/18/2007	Diamond	1946616.15	14555221.73	Alluvium	6.92	14	57.2	1181	789	20	--	--	No flow available.
87	DV094	--	Unknown	10/18/2007	Diamond	1946013.89	14554088.09	Alluvium	--	--	--	--	--	--	--	--	Stagnant water present.
88	DV095	--	Unknown	10/18/2007	Diamond	1945206.35	14553353.16	Alluvium	--	--	--	--	--	--	--	--	Stagnant water present.
89	DV096	--	Unknown	10/18/2007	Diamond	1944425.44	14552485.32	Alluvium	--	--	--	--	--	--	--	--	No sign of spring.
90	DV097	--	Unknown	10/18/2007	Diamond	1943248.39	14549327.27	Alluvium	--	--	--	--	--	--	--	--	Stagnant water present.
91	DV098	C-202	Unknown	10/18/2007	Diamond	1945224.62	14549269.87	Alluvium	8.87	10.7	51.3	1182	826.9	10.8	--	--	No flow available.
92	DV099	--	Unknown	10/18/2007	Diamond	1945668.35	14546466.23	Alluvium	--	--	--	--	--	--	--	--	Heavily grazed. Water quality too low for sample.
93	DV100	--	Unknown	10/18/2007	Diamond	1945067.95	14545824.76	Alluvium	--	--	--	--	--	--	--	--	--
94	DV101	--	Unknown	10/18/2007	Diamond	1945770.26	14544993.06	Alluvium	--	--	--	--	--	--	--	--	Stagnant water present.
95	DV102	--	Unknown	10/18/2007	Diamond	1946086.69	14544354.9	Alluvium	--	--	--	--	--	--	--	--	Stagnant water present.
96	DV103	--	Unknown	10/18/2007	Diamond	1945390.69	14542704.51	Alluvium	--	--	--	--	--	--	--	--	Stagnant water present.
97	DV104	--	Unknown	10/18/2007	Diamond	1944743.72	14541795.63	Alluvium, Alkali Flat	--	--	--	--	--	--	--	--	Unable to find source at location.
98	DV105	--	Unknown	10/18/2007	Diamond	1945379.01	14541654.59	Alluvium, Alkali Flat	--	--	--	--	--	--	--	--	Dry site.
99	DV106	--	Unknown	10/18/2007	Diamond	1945201.02	14540568.55	Alluvium, Alkali Flat	--	--	--	--	--	--	--	--	--
100	DV107	C-200	Unknown	10/18/2007	Diamond	1945266.44	14539351.28	Alluvium, Alkali Flat	7.12	10.6	51.1	589.4	403.8	-43	--	--	No flow obtainable.

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101	DV108	--	Unknown	10/15/2007	Diamond	1944416.66	14539316.82	Alluvium	--	--	--	--	--	--	--	--	No Photos
102	DV109	C-199	Unknown	10/18/2007	Diamond	1943186.49	14539059.26	Alluvium, Alkali Flat	9.59	10.5	50.9	1021	716.5	-117	--	--	--
103	DV110	C-221	Pump Spring	10/2/2007	Diamond	1910029.14	14597865.05	Alluvium	7.35	11.9	53.4	442	382	104.7	1.86	0.004	Heavily grazed.
104	DV111	--	Chokecherry Spring	10/2/2007	Diamond	1911054.41	14597858.51	Alluvium	--	--	--	--	--	--	--	--	No water present.
105	HV001	--	Unknown	9/28/2007	Huntington	1928732.57	14635389.37	Alluvium	--	--	--	--	--	--	--	--	No water present.
106	HV002	--	Unknown	10/9/2007	Huntington	1974726.27	14520302.42	Pyroclastic Flow	--	--	--	--	--	--	--	--	No water present.
107	HV003	--	Unknown	10/9/2007	Huntington	1974344.78	14543079.98	Fractured Bedrock	--	--	--	--	--	--	--	--	No water present.
108	HV004	C-233	Unknown	9/28/2007	Huntington	1934512.3	14633380.71	Fractured Bedrock	6.76	10.31	50.6	169	--	--	--	--	No sample taken.
109	HV005	C-225	Unknown	10/18/2007	Huntington	1952863.61	14607849.18	Alluvium	7.16	11.6	52.9	1760	1236	135	6.89	0.015	Sample taken from pvc pipe.
110	HV006	C-229	Unknown	9/27/2007	Huntington	1931181.58	14611934.44	Alluvium	7.56	16.63	61.9	239	--	--	0.95	0.002	Sample taken from metal pipe.
111	HV007	--	Unknown	9/28/2007	Huntington	1931182.46	14632318.37	Fractured Bedrock	--	--	--	--	--	--	--	--	Unable to sample due to lack of flow and poor water quality.
112	HV008	C-235	Unknown	9/28/2007	Huntington	1925684.62	14640348.36	Alluvium	7.28	12.94	55.3	259	--	--	0.14	0	Sample taken from pipe.
113	HV009	--	Unknown	9/28/2007	Huntington	1928903.18	14637154.55	Volcanic Tuff	--	--	--	--	--	--	--	--	Heavily grazed.
114	HV010	--	Unknown	9/28/2007	Huntington	1928149.71	14639196.43	Alluvium	--	--	--	--	--	--	--	--	--
115	HV012	C-234	Unknown	9/28/2007	Huntington	1928867.05	14633713.61	Volcanic Tuff	6.84	11.34	52.4	168	--	--	2.61	0.006	Large amount of thistle.
116	HV013	C-231	Unknown	9/28/2007	Huntington	1930227.02	14626546.51	Alluvium	7.51	13.38	56.1	156	--	--	0.25	0.001	Parameters taken out of trough.
117	HV014	C-183	Unknown	10/9/2007	Huntington	1979012.72	14498735.88	Alluvium	7.14	14.7	58.5	429.8	285.31	105	--	--	Not sampleable.
118	KV001	--	Unknown	10/10/2007	Kobeh	1768957.36	14437171.67	Alluvium	--	--	--	--	--	--	--	--	No water at source.
119	KV002	C-96	Potato Canyon Spring	10/10/2007	Kobeh	1767974.52	14433260.47	Fractured Rhyolite	6.95	11.4	52.5	277.1	182.2	165	5.43	0.012	Spring source covered w/sheet metal. Sample taken from pvc pipe.
120	KV003	--	Fagin Spring	10/10/2007	Kobeh	1760030.6	14441435.22	Rhyodacite Fracture	--	--	--	--	--	--	--	--	Very low flow.
121	KV004	C-99	Unknown	10/10/2007	Kobeh	1760426.31	14439691.64	Fractured Rhyolite	6.88	11.1	52	121.3	78.17	143	0.24	0.001	Sample taken from pvc pipe.
122	KV005	C-140	Unknown	10/10/2007	Kobeh	1769541.1	14455041.58	Alluvium	6.92	10.9	51.6	142.2	220.5	40	0.67	0.001	Heavily grazed.
123	KV006	--	Unknown	10/10/2007	Kobeh	1770488.93	14453571.67	Fractured bedrock	--	--	--	--	--	--	--	--	--
124	KV007	--	Unknown	10/10/2007	Kobeh	1764663.96	14453294.82	Alluvium	--	--	--	--	--	--	NT	NT	No water present.
125	KV008	C-109	Unknown	10/10/2007	Kobeh	1762158.76	14449057.98	Shale/Limestone Bedrock	6.87	9.8	49.6	346.7	232.9	137	1.45	0.003	Sample taken from pvc pipe.

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126	KV009	--	Unknown	10/10/2007	Kobeh	1769930.07	14454820.95	Alluvium	--	--	--	--	--	--	--	--	Site had good flow.
127	KV010	--	Unknown	10/10/2007	Kobeh	1771871.26	14475736.55	Fractured Bedrock	--	--	--	--	--	--	--	--	No water present.
128	KV011	--	Basin Spring	10/10/2007	Kobeh	1770090.98	14472995.59	Alluvium	--	--	--	--	--	--	--	--	No water present.
129	KV012	C-172	Unknown	10/10/2007	Kobeh	1770250.33	14472754.54	Fractured bedrock	6.97	7.8	46	165.1	105.8	47	0.17	0	Sample taken from pvc pipe.
130	KV013	--	Unknown	10/4/2007	Kobeh	1827271.14	14468523.77	Alluvium	--	--	--	--	--	--	--	--	Not enough water available for sample.
131	KV014	--	Unknown	10/4/2007	Kobeh	1827407.48	14474084.38	Alluvium	--	--	--	--	--	--	--	--	No water present.
132	KV015	C-173	Unknown	10/4/2007	Kobeh	1827576.66	14473726.74	Bedrock	7.22	11.4	52.5	223	148	161	4.92	0.011	Sample taken from pvc pipe.
133	KV016	C-174	Unknown	10/4/2007	Kobeh	1833161.21	14477791.96	Glacial Cirque	4.33	9.1	48.4	400.1	272	236	0.82	0.002	Sample taken with pvc pipe.
134	KV017	--	Unknown	10/4/2007	Kobeh	1841634.11	14472549.85	Ash Flow Tuff	--	--	--	--	--	--	--	--	Spring was a BLM Restoration Site. No Flow.
135	KV018	--	Unknown	10/4/2007	Kobeh	1839027.82	14472489.4	Travertine/Sinter	--	--	--	--	--	--	--	--	No actual source found.
136	KV019	--	Unknown	10/4/2007	Kobeh	1837525.17	14471653.87	Fractured Bedrock	--	--	--	--	--	--	--	--	No actual spring source found
137	KV020	C-171	Unknown	10/4/2007	Kobeh	1835995.56	14471101.47	Bedrock	4.35	10.1	50.2	488.7	344.7	249	4.39	0.01	--
138	KV021	--	Unknown	10/3/2007	Kobeh	1806297.26	14482470.45	Ash Flow Tuff	--	--	--	--	--	--	--	--	Seep on hillside. Developments were not in working condition.
139	KV022	C-169	Unknown	10/3/2007	Kobeh	1814148.37	14468057.26	Quartzite/Rhyolite	6.87	7.6	45.7	465.5	329.1	183	0.42	0.001	Large Aspen patch.
140	KV023	C-178	Tonkin Spring	10/3/2007	Kobeh	1803929.17	14491021.19	Alluvium	4.4	13.1	55.6	430.7	303.4	260	868.8	1.938	obvious signs of development in the past.
141	KV024	--	Cherry Spring	10/4/2007	Kobeh	1839403.45	14450039.12	Alluvium	--	--	--	--	--	--	--	--	No sign of spring.
142	KV025	--	Unknown	10/3/2007	Kobeh	1809576.35	14458016.17	Alluvium	--	--	--	--	--	--	--	--	No water present. Heavily grazed.
143	KV026	C-101	Unknown	10/3/2007	Kobeh	1811853.67	14440692.61	Alluvium	7.67	12.7	54.9	541	458	130.5	8.61	0.019	Spring Complex.
144	KV027	C-150	Unknown	10/3/2007	Kobeh	1813077.16	14460331.94	Fractured Bedrock	7.29	11.42	52.6	427	381	84.1	0.86	0.002	--
145	KV028	--	Unknown	10/3/2007	Kobeh	1811445.51	14457021.86	Alluvium	--	--	--	--	--	--	--	--	Seeping out of hillside.
146	KV029	--	Unknown	10/3/2007	Kobeh	1811056.09	14456087.44	Fractured Bedrock	--	--	--	--	--	--	--	--	Very low flow.
147	KV030	--	Unknown	10/3/2007	Kobeh	1811516.22	14454704.96	Quartzite Fractured Bedrock	--	--	--	--	--	--	--	--	Heavily impacted by horses around source.
148	KV031	--	Unknown	10/4/2007	Kobeh	1816601.8	14452047.34	Fractured Bedrock	--	--	--	--	--	--	--	--	High amount of thistle present.
149	KV032	--	Deer Spring	10/3/2007	Kobeh	1812383.8	14452366.99	Alluvium	--	--	--	--	--	--	--	--	No sign of spring.
150	KV033	C-145	Unknown	10/3/2007	Kobeh	1811858.52	14455968.87	Fractured Bedrock	8.1	11.3	52.3	458.1	323.3	67	0.65	0.001	Sample taken from pvc pipe.

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151	KV034	C-78	Mud Spring	10/11/2007	Kobeh	1842183.84	14395171.3	Alluvium	7.41	10.4	50.7	402.1	272.4	62	--	--	Source ponded, no flow available.
152	KV035	C-72	Lone Mountain Spring	10/11/2007	Kobeh	1839815.29	14387004.28	Alluvium	7.35	16.1	61	367.7	245	73	--	--	No flow available. Heavily grazed.
153	KV036	--	Woods Spring One	10/19/2007	Kobeh	1792023.76	14372833.91	Alluvium	--	--	--	--	--	--	--	--	Stagnant water present.
154	KV037	--	Woods Spring Three	10/19/2007	Kobeh	1786852.29	14360156.12	Alluvium	--	--	--	--	--	--	--	--	No water present.
155	KV038	--	Woods Spring Two	10/19/2007	Kobeh	1794394.69	14369001.7	Alluvium	--	--	--	--	--	--	--	--	Stagnant water present.
156	KV039	--	Cold Spring	10/17/2007	Kobeh	1812331.54	14355486.18	Alluvium	--	--	--	--	--	--	--	--	Dry Site
157	KV040	--	Unknown	10/17/2007	Kobeh	1812516.8	14355212.47	Alluvium	--	--	--	--	--	--	--	--	Dry Site.
158	KV041	--	Clover Spring	10/17/2007	Antelope	1817063.65	14350893.57	Alluvium	--	--	--	--	--	--	--	--	Stagnant Pond
159	KV042	--	Shamrock Spring	10/17/2007	Antelope	1816095.57	14348711.72	Alluvium	--	--	--	--	--	--	--	--	No Moisture.
160	KV043	--	Hot Springs	10/19/2007	Kobeh	1820707.56	14367444.62	Alluvium	--	--	--	--	--	--	--	--	Hot Spring
161	KV044	C-53	Hot Springs	10/19/2007	Kobeh	1820852.13	14367029.57	Alluvium	7.18	39.4	102.9	619	413.1	-35	--	--	Hot Spring. Flow unobtainable.
162	KV045	--	Twin Springs	10/17/2007	Kobeh	1811683.85	14352730.99	Alluvium	--	--	--	--	--	--	--	--	Stagnant pond.
163	KV046	--	Unknown	10/17/2007	Antelope	1816910.92	14351308.64	Alluvium	--	--	--	--	--	--	--	--	Remnants of old structure. Stagnant pond.
164	KV047	--	Cold Spring	10/17/2007	Kobeh	1812182.43	14355359.3	Alluvium	--	--	--	--	--	--	--	--	No sign of a spring at locaiton.
165	KV048	C-46	Warm Spring	10/17/2007	Kobeh	1812801.51	14356376.41	Aluvium	8.6	11.3	52.3	351.1	235.9	70	NT	NT	No flow available. Sample taken using dip pole.
166	KV049	--	Jackrabbit Spring	10/17/2007	Kobeh	1779214.57	14329757.09	Fractured Bedrock	--	--	--	--	--	--	--	--	Stagnant trough. Minimal flow from pipe. Heavily impacted by livestock.
167	KV050	--	Paroni Spring	10/17/2007	Antelope	1808423.78	14329070.18	Unknown	--	--	--	--	--	--	--	--	Water in hole disrupted and oily. Troughs in area.
168	KV051	--	Unknown	10/17/2007	Antelope	1797724.31	14325562.47	Volcanic	--	--	--	--	--	--	--	--	No water present.
169	KV052	--	Unknown	10/17/2007	Antelope	1798318.5	14314695.04	Alluvium	--	--	--	--	--	--	--	--	Area moist, but no water present.
170	KV056	--	Unknown	10/23/2007	Antelope	1896726.13	14290758.41	Fractured Quartzite Bluff	--	--	--	--	--	--	--	--	Dry Site.
171	KV057	--	Marteletti Spring	10/23/2007	Antelope	1895955.58	14290211.76	Fractured Bedrock	--	--	--	--	--	--	--	--	Dry Site.
172	KV058	--	McCulloughs Spring	10/23/2007	Antelope	1900062.56	14316343.91	Fractured Bedrock	--	--	--	--	--	--	--	--	Site moist but no surface water present.
173	KV059	--	Stinking Spring	10/11/2007	Diamond	1889897.31	14426730.58	Rhyolite, Fractured Bedrock	--	--	--	--	--	--	--	--	Small adit 200 yards down drainage.
174	KV060	--	Hash Spring	10/11/2007	Diamond	1897350.92	14404117.96	Quartzite, Fractured Bedrock	--	--	--	--	--	--	--	--	Pond stagnant
175	KV061	--	Railroad Spring	10/11/2007	Diamond	1897954.83	14402872.77	Rhyolite, Fractured Bedrock	--	--	--	--	--	--	--	--	Small stagnant pools present.

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176	KV062	--	Trap Corral Spring	10/11/2007	Diamond	1900690.56	14400940.29	Rhyolite, Fractured Bedrock	--	--	--	--	--	--	--	--	Pond and fence are not maintained.
177	KV063	--	Unknown	10/19/2007	Kobeh	1880892.37	14376504.9	Alluvium	--	--	--	--	--	--	--	--	Very little surface water.
178	KV064	C-62	Unknown	10/11/2007	Kobeh	1884189.13	14376011.08	Alluvium	6.89	13.3	55.9	622.4	427	152	15.85	0.035	Sample taken from metal pipe.
179	KV065	C-61	Unknown	10/11/2007	Kobeh	1884994.64	14375461.51	Alluvium	7.23	16.3	61.3	611.9	416.1	97	5.3	0.012	Sample taken from steel pipe.
180	KV066	--	Dave Keane Spring	10/23/2007	Antelope	1901640.14	14297144.63	Alluvium	--	--	--	--	--	--	--	--	No water present.
181	KV069 CONV	C-11	Fish Creek Spring	10/23/2007	Little Smoky	1916732.99	14265302.34	Alluvium	7.44	17.5	63.5	573.5	393.2	111	6310.8	14.074	Sample site is at convergence of several springs.
182	KV070	--	Unknown	10/23/2007	Antelope	1913839.93	14265951.01	Alluvium	--	--	--	--	--	--	--	--	Source feeds into KV69 CONV.
183	PV001	C-224	Willow Spring	10/2/2007	Pine Valley	1906823.72	14605185.08	Fractured Bedrock	7.37	12.41	54.3	428	--	--	3.07	0.007	--
184	PV002	--	Unknown	10/2/2007	Pine Valley	1899794.15	14608934.88	Ash Flow/Alluvium Contact	--	--	--	--	--	--	--	--	Water is hot to touch. Site is on private property.
185	PV003	--	Unknown	10/2/2007	Pine Valley	1900563.84	14608664.95	Travertine/Sinter Rock	--	--	--	--	--	--	NT	NT	Hot Spring. Site is on private property.
186	PV004	C-228	Unknown	10/2/2007	Pine Valley	1900578.55	14608988.6	Travertine/Sinter Rock	6.21	57.2	135	572.2	371.1	135	0.57	0.001	Rancher plans to bury and pipe all springs in area to one point.
187	PV005	C-230	Unknown	10/2/2007	Pine Valley	1896629.63	14618902.4	Alluvium	5.28	12.4	54.3	1317	970.1	181	0.33	0.001	--
188	PV006	--	Unknown	10/2/2007	Pine Valley	1897628.7	14616969.88	Ash Flow Tuff	--	--	--	--	--	--	--	--	Water present but very low flow.
189	PV007	--	Sulphur Spring	10/2/2007	Pine Valley	1896210.04	14617498.7	Ash Flow Tuff	--	--	--	--	--	--	--	0	Upper and lower pond at site were dry.
190	PV008	--	Willow Spring	10/2/2007	Pine Valley	1888754.66	14604381.8	Ash Flow Tuff	--	--	--	--	--	--	--	0	Valve shut off. No water in spring box.
191	PV009	C-223	Willow Springs	10/2/2007	Pine Valley	1889739.47	14604241.46	Ash Flow/Alluvium Contact	6.07	15.6	60.1	581.3	413.8	131	0.44	0.001	Sample taken from pvc pipe.
192	PV010	C-219	Cliff Spring	10/2/2007	Pine Valley	1894962.44	14595158.11	Fractured Metasediments	6.05	13.5	56.3	546.9	388	131	0.86	0.002	Wildlife ramps located in trough.
193	PV011	C-222	McCoy Spring	10/2/2007	Pine Valley	1880173.06	14599013.22	Alluvium	6.28	11.1	52	579.9	416.2	125	0.43	0.001	Sample taken from steel pipe.
194	PV012	C-216	Willow Spring	10/31/2007	Pine Valley	1881495.36	14580632.88	Alluvium	7.28	11.8	53.2	848.4	591.5	112	--	--	Too many seeps to take accurate flow measurement.
195	PV013	C-215	Cave Spring	10/31/2007	Pine Valley	1894168.28	14579282.2	Alluvium	7.12	10.2	50.4	625.9	432.2	116	24.77	0.055	--
196	PV014	C-213	Aiken Spring	10/31/2007	Pine Valley	1887429.13	14576407.39	Alluvium	7.44	9.1	48.4	361.8	245.3	117	0.5	0.001	Sample taken from steel pipe.
197	PV015	C-211	Cadet Trough Spring	10/31/2007	Pine Valley	1806132.04	14550019.1	Alluvium	6.99	11.6	52.9	649.5	437.6	141	0.78	0.002	Sample taken from steel pipe. Severe livestock impacts.
198	PV015	C-211a	Stimpson Spring	10/31/2007	Pine Valley	1895807.74	14572730.57	Sandstone/Shale	7.25	14.3	57.7	740.6	512.1	164	3.27	0.007	Sample taken from pipe.
199	PV016	C-214	Williams Spring	10/2/2007	Diamond	1913681.9	14577248.67	Fractured Bedrock	7.49	12.65	54.8	602	0.511	107.1	1.77	0.004	Sample taken from trough.
200	PV017	--	Ten Voord Spring	10/2/2007	Diamond	1911820.82	14588548.28	Alluvium				--	--	--	--	--	Flow immeasurable, but water present.

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201	PV018	C-209	Unknown	10/24/2007	Diamond	1910644.29	14561525.93	Fractured Bedrock	7.11	10.8	51.4	590	412.6	187	237.75	0.53	--
202	PV019	--	Unknown	10/24/2007	Diamond	1911224.6	14560989.48	Alluvium	--	--	--	--	--	--	--	--	Site had good flow.
203	PV020	--	Unknown	10/24/2007	Diamond	1910147.78	14557770.77	Fractured Bedrock	--	--	--	--	--	--	--	--	No water present.
204	PV021	--	Unknown	10/24/2007	Diamond	1911170.89	14552880.41	Alluvium	--	--	--	--	--	--	--	--	No sign of spring
205	PV022	C-201	Tunnel Spring	10/24/2007	Diamond	1907793.47	14540345.17	Alluvium	7.24	12.4	54.3	515.1	360.3	125	1.47	0.003	--
206	PV023	--	Flynn Ranch Springs	10/24/2007	Diamond	1910199.43	14557936.44	Alluvium	--	--	--	--	--	--	--	--	--
207	PV024	--	Josephine Spring	10/24/2007	Diamond	1911189.47	14552585.13	Fractured Bedrock	--	--	--	--	--	--	--	--	--
208	PV025	C-218	N-T Spring	10/2/2007	Diamond	1916650.49	14585931.58	Alluvium	7.5	11.79	53.2	600	522	87.3	1.53	0.003	Sample taken from pipe.
209	PV026	--	Siri Spring	10/24/2007	Diamond	1908035.41	14542433.72	Fractured Bedrock	--	--	--	--	--	--	--	--	Site had good flow.
210	PV027	--	Siri Ranch Spring	10/24/2007	Diamond	1908308.56	14524591.24	Alluvium	--	--	--	--	--	--	--	--	No water present.
211	PV028	--	Bennett Spring	10/24/2007	Diamond	1913807.3	14533594.7	Alluvium	--	--	--	--	--	--	--	--	--
212	PV029	--	Bennett Spring Number One	10/24/2007	Diamond	1915478.56	14537456.44	Alluvium	--	--	--	--	--	--	--	--	No water present.
213	PV030	--	Siri Ranch Spring	10/24/2007	Diamond	1908225.5	14524731.08	Alluvium	--	--	--	--	--	--	--	--	No water present.
214	PV031	C-203, C-204	Cadet Trough Spring	10/31/2007	Pine Valley	1806131.44	14550017.75	Alluvium	6.99	14.3	57.7	649.5	437.6	141	0.78	0.002	Sample taken from pipe.
215	PV032	C-193	Rabbit Spring	10/25/2007	Pine Valley	1860212.38	14523711.69	Alluvium	6.79	10.2	50.4	656.6	453.4	93	1.9	0.004	Sample taken from pvc pipe.
216	PV033	--	Unknown	10/25/2007	Pine Valley	1874005.31	14530303.77	Volcanic Basalt	--	--	--	--	--	--	--	--	--
217	PV034	--	Unknown	10/25/2007	Pine Valley	1874259.56	14529872.83	Alluvium	--	--	--	--	--	--	--	--	Surface water present. Heavily grazed.
218	PV035	--	Chimney Springs	10/25/2007	Pine Valley	1873927.7	14529719.6	Alluvium	--	--	--	--	--	--	--	--	Convergence of two natural springs.
219	PV036	C-197	Unknown	10/25/2007	Pine Valley	1874263.09	14529514.54	Volcanic	7.48	15.5	59.9	432.8	296.9	191	18.65	0.042	--
220	PV037	--	Unknown	10/25/2007	Pine Valley	1874422.69	14530232.85	Alluvime	--	--	--	--	--	--	--	--	Stagnant water present.
221	PV038	--	Chimney Springs	10/25/2007	Pine Valley	1874013.08	14529851.08	Alluvium	--	--	--	--	--	--	--	--	No water present.
222	PV039	--	Unknown	10/30/2007	Pine Valley	1841560.4	14533308.38	Alluvium	--	--	--	--	--	--	--	--	Moist but no water present.
223	PV040	--	Unknown	10/30/2007	Pine Valley	1843998.55	14532650.39	Alluvium	--	--	--	--	--	--	--	--	Appears to have two sources very close together.
224	PV041	--	Unknown	10/30/2007	Pine Valley	1838623.84	14532546.1	Alluvium	--	--	--	--	--	--	--	--	Site is moist but no water present.
225	PV042	--	Unknown	10/30/2007	Pine Valley	1844560.52	14532137.64	Alluvium	--	--	--	--	--	--	--	--	--

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226	PV043	--	Unknown	10/30/2007	Pine Valley	1837869.67	14530757.28	Alluvium	--	--	--	--	--	--	--	--	Stagnant water present.
227	PV044	--	Unknown	10/30/2007	Pine Valley	1837385.56	14529678.25	Alluvium	--	--	--	--	--	--	--	--	Site is moist but no water present.
228	PV045	C-196	Unknown	10/30/2007	Pine Valley	1837019.94	14529509.28	Alluvium	6.98	11.6	52.9	545.1	374.8	99	7.06	0.016	Sample taken from pvc pipe.
229	PV046	--	Unknown	10/30/2007	Pine Valley	1836762.4	14529399.38	Alluvium	--	--	--	--	--	--	--	--	Multiple sources flowing well.
230	PV047	--	Unknown	10/30/2007	Pine Valley	1836398.41	14529013.86	Alluvium	--	--	--	--	--	--	--	--	Surface water present.
231	PV048	--	Geyser Canyon Spring	10/31/2007	Pine Valley	1805140.99	14532941.78	None	--	--	--	--	--	--	--	--	No sign of spring.
232	PV049	--	Rocky Hill Spring	10/31/2007	Pine Valley	1806368.9	14535277.86	Alluvium	--	--	--	--	--	--	--	--	No sign of spring but moist drainage near area.
233	PV050	C-192	Indian Spring	10/30/2007	Pine Valley	1795767.58	14514167.9	Fractured Bedrock	7.61	10.1	50.2	362.3	391	130	1.57	0.004	Sample taken from pvc pipe.
234	PV051	--	Unknown	10/30/2007	Pine Valley	1788008.72	14517655.06	Alluvium	--	--	--	--	--	--	--	--	Water quality too poor for sample.
235	PV052	--	Pat Canyon Number One	10/30/2007	Pine Valley	1789038.05	14519993.32	Alluvium	--	--	--	--	--	--	--	--	Heavily grazed. Water quality too poor for sample.
236	PV053	--	Lower Tonkin Creek Spring	10/30/2007	Pine Valley	1811980.23	14499808.61	Alluvium	--	--	--	--	--	--	--	--	No sign of spring.
237	PV054	--	Upper Tonkin Creek Spring	10/30/2007	Pine Valley	1815093.9	14500033.35	Alluvium	--	--	--	--	--	--	--	--	No sign of spring.
238		C-121	Zinc Adit	5/13/2006	Diamond	1875132.92	14450419.7	Mine Drainage	6.56	12.4	54.3	861.3	620	27	8	0.018	--
239		C-107	SP-7	10/4/2006	Diamond	1870746.42	14447046.98	Alluvium	7.29	13	55.4	1623	1136	96	NT	NT	Flow too small to measure
240		C-25	Kitchen Meadow	10/10/2007	Antelope	1844457.23	14323616.37	Alluvium	8.24	--	--	--	--	--	--	--	--
241	SP-4	C-149	Mt Hope Spring SP-4		Diamond	1869037.1	14457896.76	Alluvium	7.75	--	--	327.4	492	71	0.03	<0.005	--
242	D-1	C-217	D-1	8/18/2007	Diamond	1916553.13	14585190.65	Alluvium	8.04	--	--	--	--	--	--	--	--
243		C-45	Warm Springs Kobeh	4/12/2007	Kobeh	1812709.42	14355647.14	Alluvium	8.58	--	--	--	--	--	--	--	--
244		C-49	Hotspring Hill B	8/9/2006	Kobeh	1820763.75	14366291.46	Travertine	7.2	37.1	98.8	629.9	413	78	--	--	--
245		C-52	Hotspring Hill A	8/9/2006	Kobeh	1820525.5	14366539.56	Travertine	7.32	40.1	104.2	621.9	404	64	--	--	--
246		C-77	Lone Mtn Artesian (Muddy Spring)	5/15/2007	Kobeh	1842246.97	14394400.35	Alluvium	8.03	11.6	52.8	--	--	--	<1	<0.005	--
247		C-111	Pond Spring		Kobeh	1848526	14449288	Alluvium	8.06	--	--	--	--	--	NT	NT	--
248	OT-7	C-113	OT-7	5/12/2006	Kobeh	1848548.18	14449540.3	Alluvium	7.32	12.7	52.8	697	467	108	2.36	0.005	--
249	SP-6	C-124	SP-6	8/8/2006	Kobeh	1862632.88	14450826.53	Alluvium	7.93	14.7	52.8	865	601	109	1.59	0.004	--
250	SP-6	C-125	SP-6	5/12/2006	Kobeh	1862632.88	14450826.53	Alluvium	7.52	8.7	52.8	924.4	628	150	8.6	0.019	--

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251		C-129	Farington Spring	5/15/2007	Kobeh	1836646.39	14451488.86	Alluvium	8.03	8	12.8	55	585	--	<1	<0.002	Seepage face in cutbank along Roberts Creek
252	OT-8	C-133	OT-8	8/8/2006	Kobeh	1847209.59	14453060.78	Alluvium	7.45	12.6	54.7	631	437	197	6.97	0.016	--
253	SP-5	C-135	SP-5	8/8/2006	Kobeh	1862012.8	14453221.55	Alluvium	7.49	20.3	68.5	1134	797	61			usually dry
254	OT-3	C-151	OT-3	8/11/2006	Pine Valley	1859945.86	14460354.12	Alluvium	6.99	13.7	56.7	497.5	341	156	1.53	0.003	--
255	OT-4	C-153	OT-4	5/11/2006	Pine Valley	1859673.55	14461436.8	Alluvium	7.84	17.7	63.9	887.5	604	96	0.15	<0.005	usually dry
256	SP-3	C-155	SP-3	10/4/2006	Pine Valley	1873098.79	14462880.37	Alluvium	9.26	18	64.4	979.8	663	76	<0.1	<0.005	usually dry or impacted by livestock
257	SP-2A	C-156	Garden Spring	9/22/2005	Pine Valley	1873069.26	14462886.93	Alluvium	7.64	9.3	48.7	4297	3394	--	<0.1	<0.005	usually dry or impacted by livestock
258	SP-2	C-157	Garden Spring	10/4/2006	Pine Valley	1873069.26	14462886.93	Alluvium	8.24	20.7	69.3	2473	1767	36	<0.1	<0.005	usually dry or impacted by livestock
259	OT - 11	C-160	OT - 11	10/3/2006	Pine Valley	1850326.4	14463254.39	Alluvium	6.71	12.6	54.7	284.2	187	101	7.5	0.017	--
260	OT-2	C-162	OT-2	5/10/2006	Pine Valley	1859384.83	14463680.9	Alluvium	7.52	12.7	54.9	683	468	94	9.03	0.02	--
261	OT-1	C-164	OT-1	5/10/2006	Pine Valley	1853820.51	14464707.81	Alluvium	7.8	15.2	59.4	280.2	186	132	1.91	0.004	usually dry
262	OT - 12	C-166	OT - 12	5/16/2006	Pine Valley	1849516.03	14465780.65	Alluvium	6.81	13.4	56.1	85.8	54	100	23.1	0.052	--
263	OT - 10	C-167	OT - 10	5/16/2006	Pine Valley	1848869.71	14466299.02	Alluvium	6.28	8	46.4	1531	981	163	28.8	0.064	--
264	OT-10A	C-168	OT-10A	5/16/2006	Pine Valley	1849814.59	14466755.51	Alluvium	7.31	20.7	69.3	129.9	81	91	--	--	--
265		C-220	Chokecherry (Cow) Springs	8/18/2007	Pine Valley	1910909.89	14597067.26	Fractured Bedrock	8.3	14.2	57.5	837	--	--	est. 4	~0.008	Travertine (?) cave nearby, below current spring orifice
266		C-226	Bruffey's Hot Springs	7/20/2007	Pine Valley	1900317.31	14608284.43	Travertine	7	55.4	131.7	--	--	--	--	--	Rancher estimates 20-30 gpm from multiple travertine mounds
267		C-232	Box Spring	4/13/2007	Pine Valley	1873884.05	14631893.31	Unknown	7.87	--	--	--	--	--	--	--	--
268		C-237	Hot Creek Springs		Pine Valley	1902491.6	14646831.7	Alluvium	7.3	--	--	--	--	--	--	--	--
269			McCloud Spring	4/13/2007	Diamond	1872761.09	14455469.91	Alluvium	7.9	9.7	49.5	550	--	--	est. 10	<0.02	Spring is dammed to form a small pond
270	SP-1		McBrides Spring	10/9/2006	Diamond	1878364.56	14457936.13	Alluvium	6.97	14.6	58.3	2522	1815	220	1.8	<0.05	Dry from 9/22/2005 - 10/9/2006

In The Matter Of:

Division of Water Resources

In re Applications 70181, etc.

Kobeh Valley NDWR Hearing

Volume III

October 15, 2008

Capitol Reporters

1201 Johnson Street

Suite 130

Carson City, Nevada 89706

775-882-5322

Original File 101508b1.txt

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STATE OF NEVADA

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

In the Matter of Application Nos.:

70181, 70819, 70820, 70821, 70822, 70823, 70824, 70825, 70826, 70827, 72695, 72696, 72697, 72698, 73545, 73546, 73547, 73538, 73549, 73550, 73551, 73552, 74587, 75979, 75980, 75981, 75983, 75983, 75984, 75985, 75986, 75987, 75988, 75989, 75990, 75991, 75992, 75993, 75994, 75995, 75996, 75997, 75998, 75999, 76000, 76001, 76002, 76003, 76004, 76005, 76006, 76007, 76008, 76009, 76364, 76365, 76483, 76484, 76485, 76486, 76744, 76745, 76746, 76802, 76803, 76804, 76805, 76989 and 76990 to appropriate the public waters of an underground source within Kobeh Valley Hydrographic Basin (#139), Diamond Valley Hydrographic Basin (#153) and Pine Valley Hydrographic Basin (#053).
______________________________________/

VOLUME III - TRANSCRIPT OF PROCEEDINGS

PUBLIC HEARING

WEDNESDAY, OCTOBER 15, 2008

CARSON CITY, NEVADA

Reported by:

CAPITOL REPORTERS
Certified Shorthand Reporters
BY: MARY E. CAMERON, CCR, RPR
Nevada CCR #98
410 East John Street, Ste. A
Carson City, Nevada 89706
(775) 882-5322

APPEARANCES:

For the Division:	TIM WILSON, Hearing Officer JASON KING, Deputy State Engineer KELVIN HICKENBOTTOM, Deputy State Engineer RICK FELLING, Chief Hydrogeologist
For the Applicant:	PARSONS, BEHLE & LATIMER Attorneys at Law BY: ROSS E. De LIPKAU 50 West Liberty Street Suite 750 Reno, Nevada MICHAEL BRANSTETTER General Moly General Counsel
For the Protestant - Eureka County:	ALLISON, MacKENZIE, PAVLAKIS, WRIGHT & FAGAN Attorneys at Law BY: KAREN PETERSON 402 North Division Street Carson City, Nevada THEODORE BEUTEL District Attorney 701 South Main Street Eureka, Nevada
For the Protestants - Halpin, Morrison & Cedar Ranches, LLC:	ROBERTSON & BENEVENTO Attorneys at Law BY: JARRAD C. MILLER 50 West Liberty Street Suite 600 Reno, Nevada
For the Protestants - Eureka Producers Co-Op:	GEORGE N. BENESCH Attorney at Law 190 West Huffaker Lane Reno, Nevada

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(A discussion was held off the record.)

HEARING OFFICER WILSON: Let's be on the record. Mr. De Lipkau, we're on the next witness?

MR. De LIPKAU: Thank you. I'd like to call Mr. James Moore.

JAMES MOORE

called as a witness on behalf of the Applicant, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. De LIPKAU:

Q. Would you please state your full name?

A. James Moore.

Q. What is your business address?

A. 290 South Palmer School Road, Chandler, Arizona, suite 13.

Q. What is your occupation?

A. I'm the technical director and project manager for the company.

Q. For the company. Who is your employer?

A. General Moly.

Q. What are your duties as technical director?

A. I've got duties regarding the project with engineering and support in other areas of the project such as permitting.

Q. Would you please turn to Exhibit 111 which is your resume? Would you briefly describe this?

A. This is in reverse order, the most recent experience first.

Q. Maybe we should, pardon me for interrupting, start with your educational background.

A. Okay. I have a metallurgical engineering bachelor of science degree from the Colorado School of Mines. I received that in 1978.

Q. Any further education?

A. No other formal education other than course work here and there, managerial training.

Q. Are you a registered professional engineer?

A. I am.

Q. In what states?

A. Arizona and Colorado.

Q. When did you commence your mining engineering career?

A. In 1978, though I started in the engineering field before that, '76.

Q. You have quite a few years in engineering?

A. Over 30.

Q. Briefly go through your resume, then.

A. I've been working for General Moly in this technical director capacity since 2005. Prior to that I ran my own business which was from 2002 to 2004. During that period of time I also was a consultant for Idaho General at that time and I was in business in various fields within metallurgy and mining.

Q. When you say you're a consultant, what do consultants do?

A. The consultants advise people on how to proceed on projects, they do engineering work, they perform services in general.

Q. For the mining industry?

A. Mining industry, yes. Before that I was working overseas in Zambia as a manager of a tailings leach operation. That was for four years. Prior to that various managerial positions within Phelps Dodge and Cyprus Copper Corporation, and also with Anglo America with Inspiration Consolidated Copper Company.

I've got a background in copper, cobalt, coal and iron. It's been advanced positions of more responsibility either as an engineer or as a manager as you can kind of see from the resume. I started out in the ferrous industry with CF&I.

Q. What's CF&I mean?

A. It an abbreviation but it used to stand for

Colorado Fuel & Iron.

Q. So how many years experience do you have in the minerals extraction business?

A. Roughly 30, counting the coal work as well.

Q. How many years experience do you have in the design of mining and milling equipment?

A. About six years.

Q. Have you ever performed a water balance for a mill?

A. Yes, several.

Q. How many times?

A. More than ten.

Q. Would you give an example of what the water balance is in one of your sampler mining operations?

A. Okay. Generally there's a consumptive value you're trying to get, so you've got water inputs and water usages. Usually inside of that overall balance you've got several smaller balances around the mill, for example, around the tailings pond. I've worked on leach pads as well.

The basic answer at the end of the day is how much water do you need, fresh water pumped out of wells or from a river to provide the operation's production rate.

Q. Did you work on the design of the Eureka Moly plant?

A. Yes.

A. Yes.

Q. That would be the contribution from rainfall?

A. Rainfall over the course of a year.

Q. So that would be 500 gallons a minute day in and day out for rainfall over the whole year?

A. Well, understand some days there would be no contribution from it. Other days it may be three times that.

Q. That just seems like it's a relatively large number. I'm not trying to argue with you, I'm trying to understand.

A. It's a large area that it's being captured under too.

Q. I believe you've answered the rest of my questions.

MR. BENESCH: That's it.

HEARING OFFICER WILSON: Thank you. Ms. Peterson?

CROSS-EXAMINATION

BY MS. PETERSON:

Q. My name is Karen Peterson and I'm the attorney that is representing Eureka County. About how big is the tailings pond at the end of the life of the mine?

A. There's in fact two of them. The larger one is close to four and a half square miles in surface area.

Q. And how about the smaller one?

A. It's about two.

Q. Two miles?

A. Yeah, two square miles.

Q. How large is the area where the water will be used with all the facilities that are going to use water? How big is that area?

A. It fully encompasses 13, 14,000 acres.

Q. So it's not 90,000 acres?

A. No, not 90,000.

Q. The place of use would not be 90,000 acres?

A. I guess not, okay?

Q. So it would be 13 to 14,000. I'm going to borrow Mr. Benesch's Exhibit 116. That's not a General Moly exhibit and I'm going to direct you to page 12. Have you had a chance to read the first paragraph?

A. Yes.

Q. Is there a statement there that initially at startup the Mount Hope project will require approximately 9,395 acre feet a year?

A. Yes, there's that statement there.

Q. And that processed water demands will increase approximately seven years into operation to approximately 11,238 acre feet?

A. Yes.

Q. Is that different from what your testimony was?

A. It is different, yes.

Q. Do you know where that statement came from in Exhibit 116?

A. I'm not positive, other than as we mentioned earlier, there were two designs initially. We were starting up at a smaller rate and increasing to a larger rate after so many years.

Q. This document was prepared in June of 2008. So would you have any idea where that statement came from?

A. Sorry, I'm not sure.

Q. It just differs and contradicts your testimony; is that correct?

A. Yes.

Q. Once the operation is up and running and you're pumping 9,000 or 11,000 gallons per minute, for the operation to run efficiently, do you need to keep pumping at that rate?

MR. De LIPKAU: Excuse me. I believe there was a misstatement there. It's 7,000 gallons per minute in operation, not 11,000.

MS. PETERSON: I'm sorry. I meant acre feet annually.

MR. De LIPKAU: Please rephrase the question.

BY MS. PETERSON:

Q. I will. When the mine is up and running and the mine is pumping water of 11,000 acre feet annually or

approximately 7,000 gallons per minute, the mine will be in full operation; is that correct?
A. Yes.
Q. And what would happen -- well, would it be feasible for the mine to stop pumping as a mitigation measure?
A. No.
Q. Why not?
A. The operation requires water to function. If you turn that off, you can't process any ore. You'd have trouble continuing to mine since you'd need some water for haul road dust control.
Q. So ceasing pumping is not really a mitigation option that is available to the mine; is that correct?
A. Yes.
Q. Then in Exhibit 108, do you have that in front of you?
A. Yes, the letter to Ms. Lefler.
Q. Paragraph two.
A. Which page?
Q. I'm sorry, number two on page one. It says the name of the party who will own, pump and is responsible for the proposed well. Do you see that?
A. Yes.
Q. And that lists General Moly?

A. Right.

Q. So what I'm asking is if that amount is more, would it then reduce the fresh water from wells component in that table?

A. Yes, yes, it would.

MR. FELLING: Well, that's all then. No more questions.

HEARING OFFICER WILSON: Thank you, sir. Next witness, please.

PATRICK ROGERS

called as a witness on behalf of the Applicant, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. De LIPKAU:

Q. Please state your name.

A. Patrick Rogers.

Q. What is your business address?

A. 2215 North Fifth Street, Elko, Nevada.

Q. By whom are you employed?

A. General Moly.

Q. What is your title?

A. I'm the director of environmental and permitting.

Q. What is your educational experience?
A. I have bachelor's and master's degrees in geology.
Q. From what school?
A. University of Idaho.
Q. I'd like to clarify a point again. This is applicant's Exhibit 116, page 12. Would you please review paragraph 2.4? Would you tell me what the water requirements of the plan are?
A. 11,300 acre feet approximately.
Q. Does that answer supersede the language set forth in Exhibit 116?
A. Yes.
Q. Do you know the source of the language that you just reviewed?
A. I believe an earlier mine plan. As Mr. Moore stated we had a mine plan that included a lower initial processing rate increasing after a few years of mining.
Q. Do you have the exhibits in front of you?
A. I do.
Q. I think you testified earlier that your job is overseeing the permitting; is that correct?
A. I don't think I testified to that, but that's correct.
Q. What are your responsibilities, then?

A. In addition to permitting you mean?

Q. How do you go about carrying out the duties of mine permitting I guess is a better question?

A. I assemble the necessary technical studies and application forms using a team consisting of our own employees and consultants, communicate to the agencies and submit the applications.

Q. How many years experience do you have in mine permitting?

A. About 18.

Q. How many years of mine permitting do you have in the state of Nevada?

A. Virtually all that experience is in Nevada.

Q. Who was your prior employer?

A. I previously worked for Newmont Mining. I was manager of their permitting for all their operations in the state of Nevada. I worked for a consulting company where we did all types of permitting for numerous mines mostly in Nevada, primarily in Nevada, and I also worked for Freeport at the Jarrick (phonetic) Canyon Big Spring mine doing permitting.

Q. Would it be a fair statement to say that you are responsible for federal, state and local permits as required to place the Mount Hope mine into operation?

A. Yes.

Q. How long have you been employed by General Moly?
A. It will be two years in January.
Q. Would you please look or refer to Exhibit 106? Do you have Exhibit 106 in front of you?
A. I do.
Q. What does that consist of?
A. That is a tabulation of the permits that will be required to operate the Mount Hope mine.
Q. And you were responsible for all of these permits?
A. Yes.
Q. And as can be seen by the chart, some are pending, some have been approved. What does NA mean?
A. Not applicable.
Q. What does that mean?
A. It means it has not been approved or submitted.
Q. For example, we'll go to air quality permit NDEP. An air quality permit will of course have to be obtained, will it not?
A. Correct, and this table -- I have to retract my previous statement regarding NA. In this case the air quality permit has been submitted as has the water pollution control permit.
Q. And this report was filed with the State Engineer June 15th of this year, correct? Do you know that?

A. Not to me, no.

Q. So the fact that it may not have been used from the groundwater for ten years and they may be subject to forfeiture isn't a consideration of validity in your opinion?

MR. De LIPKAU: That's an incorrect question and it misrepresents the law. It is legally impossible to forfeit a permitted water right.

HEARING OFFICER WILSON: Mr. Benesch?

MR. BENESCH: He didn't indicate that they were permitted water rights.

BY MR. BENESCH:

Q. In previous testimony, I believe it was Mr. Moore -- were you here when Mr. Moore testified?

A. Yes.

Q. He indicated that he didn't think it was as a mitigation measure feasible to shut down the mine. Do you recall that testimony?

A. Yes.

Q. Do you agree or disagree with that?

A. I agree.

Q. Are you familiar with the stipulation that was entered into with the BLM?

A. Yes.

Q. Let's say or assume there's some kind of catastrophic, fairly significant developments from pumping this large amount of water, and there wasn't adequate water available to satisfy the needs of the mine. How in your mind would you propose to mitigate that particular instance?

A. I don't know. It's a very general hypothetical situation. It would depend on what the circumstances were at the time.

Q. As an environmental specialist for this project, do you have any concerns with concentrating all the pumping in Kobeh Valley in that one small area?

A. I don't think it's overly concentrated.

Q. Well, from the standpoint of let's say the Etcheverry Ranch which is right across the fence from one of the wells, don't you think that that may be significant to the Etcheverry family?

A. Based on the modeling that's been done and the lack of groundwater rights at Etcheverry Ranch, I don't see it as a substantial concern.

Q. How about with regard to the surface water rights?

A. I don't know.

MR. BENESCH: No further questions.

HEARING OFFICER JOSEPH-TAYLOR: Ms. Peterson?

MS. PETERSON: Thank you.

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In The Matter Of:

Division of Water Resources

In re Applications 70181, etc.

Kobeh Valley NDWR Hearing

Volume IV

October 16, 2008

Capitol Reporters

1201 Johnson Street

Suite 130

Carson City, Nevada 89706

775-882-5322

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STATE OF NEVADA

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

In the Matter of Application Nos.:

70181, 70819, 70820, 70821, 70822, 70823, 70824, 70825, 70826, 70827, 72695, 72696, 72697, 72698, 73545, 73546, 73547, 73538, 73549, 73550, 73551, 73552, 74587, 75979, 75980, 75981, 75983, 75983, 75984, 75985, 75986, 75987, 75988, 75989, 75990, 75991, 75992, 75993, 75994, 75995, 75996, 75997, 75998, 75999, 76000, 76001, 76002, 76003, 76004, 76005, 76006, 76007, 76008, 76009, 76364, 76365, 76483, 76484, 76485, 76486, 76744, 76745, 76746, 76802, 76803, 76804, 76805, 76989 and 76990 to appropriate the public waters of an underground source within Kobeh Valley Hydrographic Basin (#139), Diamond Valley Hydrographic Basin (#153) and Pine Valley Hydrographic Basin (#053).

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VOLUME IV - TRANSCRIPT OF PROCEEDINGS

PUBLIC HEARING

THURSDAY, OCTOBER 16, 2008

CARSON CITY, NEVADA

Reported by:

CAPITOL REPORTERS
Certified Shorthand Reporters
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adjustments needed to be made, but the fact still remains that those two wells are completed in impermeable formations.

Q. What does impermeable mean?

A. They don't tend to transmit water very quickly. They have a low permeability. They're not completely impermeable but they sure don't transmit water very quickly, and that's why we saw the response that we did in 206T. So there's nothing from making those adjustments that would change my overall characterization of the system out there.

The next area that he covered was well field development and he stated that our characterization was an area concept approach, and as I said before, that is an accurate reflection. That's exactly what we did.

We're looking for areas in Kobeh Valley where we can accomplish two objectives. Number one is get the water that the mine needs, and number two is not have unmanageable impacts on either Diamond Valley, on the residents out there, on Mr. Etcheverry's ranch, or on the natural environment, and to do that we have to evaluate different areas, determine what water is available from which areas so that the mine knows going in where they can get the water.

I believe there was some testimony about, well, what happens if you have impacts? Are you going to shut that water off? And the answer was no. Now, for a hydrogeologist like me that means I've got to have alternatives available to the mine identified well in advance. We need to know what the water production capability is. We have to go in there and move water withdrawals around. We need to know what the performance of the wells is going to be and what the impacts will be.

The next area that Mr. Bugenig discussed was monitoring and mitigation. He stated that the wells and springs between the well field and Diamond Valley should be monitored. I concur with that, and in fact, the mine has already put in a number of monitoring wells.

Mary Tumbusch with the USGS noted that the USGS with the support of General Moly has put in monitoring wells both in the Devil's Gate area and in the Whistler area, and I believe we have it adequate, but I'm certain down the road when we speak further with Eureka County and they identify additional monitoring requirements or needs, we'll discuss it and see what we can do.

Mr. Bugenig also stated that there's a lag time in impacts showing up, and he's absolutely correct. We start pumping that well next year or the year after, we may not start seeing impacts for months or years after that.

Q. When you say wells, you mean the well field or an individual well?

A. Both. Both. The well field as a whole of course will be turned on because no single well will be able to bore holes have been drilled. We've been able to airlift between 40 and 80 gallons per minute. Two test wells are planned and will be completed. In fact, the drilling of one of them I believe is going on right now.

Our best estimate at present is that those wells will be 1,000 feet deep and capable of producing around 250 gallons a minute each, for a total combined production of about 1,000 gallons per minute.

Now, as Mr. Bugenig pointed out, it's like a pin cushion up on the mountain because they're studying the ore body, they put in a lot of holes, they wanted detailed information for the pit area model. So in addition to these few bore holes and test wells, there's been 65-plus piezometers and condemnation holes drilled in the vicinity.

The next slide covers Kobeh central. We've had two aspects of the drilling there. One was the carbonate drilling. That was our initial focus, and we put in one bore hole. Now, in labeling these I simply abbreviated the numbers for clarity. You'll see in the report where it's RWXIGMI-207. On this slide I just show it as 207.

207 was a bore hole. Great location for water. Unfortunately we found an archaeological resource that precluded the development of a test well at that site. We drilled a test well at 206 and at 214. Those have been completed and tested.

At 206, that was a very productive test, 1,450 gallons a minute with a drawdown of 28 feet after 32 days of continuous pumping. The other well, 214, was not as productive. We were able to get 450 gallons per minute with a drawdown of 95 feet after four days of continuous pumping.

Now, we believe that we have a production capacity in Kobeh central for the carbonate aquifer of 1,000 to 2,000 gallons per minute per well. They'll be larger diameter, in some cases they'll be deeper. The good news is we don't need that much. For the 11,300 acre foot pumping scenario we only need a pumping rate of 1,750 a minute out of the carbonate aquifer.

So we've demonstrated that the water is physically there in the ground and we can get it out.

The valley fill aquifer in Kobeh south, when we did the analysis as I mentioned on 206, we saw more drawdown, we saw boundary conditions and we said we better start identifying some alternatives.

The team got together, we batted around ideas to make sure we had a consensus. We said we need to get down into the valley fill sediments. So we put in some test wells down in there. I show them as numbers 228 has been drilled, 229 is being drilled.

Overall we've put eight monitoring and three test wells in the valley fill aquifer in Kobeh central. We have had one test so far at 500 gallons per minute with a drawdown of 78 feet after two days.

We have little or no potential whatsoever in the area to the east of the basalt ridge which runs diagonally through this slide. Over here at wells 204, 203, they are to the east of that ridge. They did not produce enough water during well development to justify even doing an aquifer test. That's why we did the following head tests in there.

We went up here to KVFE, Kobeh Valley far east. As you can see, that sits on a little bedrock knob. That was mapped on the Roberts Mountain creek map quadrangle as a lake bed sediments. So we thought, okay, we'll get up there and punch through those sediments into the carbonate and hopefully we'll get some water. Wrong.

It's not a lake sediment, it was Vinini, Vinini and more Vinini and we put in a monitoring well, but there was no reason to put a test well in there. We did some additional work and we came can up with the location over here at 219. We thought it was going to be favorable conditions when we got over there. Got in and drilled, and again, Vinini and more Vinini.

We still believe that there might be some potential in this area because when we look at the location of 219 with respect to faults, it looks like maybe we could have done a better job of locating it, but frankly, we put a lot of money into drilling four wells in this one area and haven't come up with any water. So I don't think there's a lot of potential there.

Over to the west it's a different story. In 228 that's our good producing well, 229, we expect the conditions are almost identical. You'll note the lighter shades of materials. These are the channel deposits that I was talking about earlier that cut through those lacustrine deposits and are quite transmissive compared to the lacustrine deposits.

From what we've seen, we expect the production capacity of 500 to 1,000 gallons per minute per well. We know we can get 500 out. We're going to go in with larger diameter production wells. We'll site them in the best possible locations. And we expect a production capacity of 2,000 gallons per minute out of the valley fill aquifer in Kobeh central.

Moving along to the next slide -- I'm sorry, that last slide on Kobeh central should be labeled slide number 36. Kobeh south should be slide 37. We have drilled one carbonate well there in Kobeh south. That is at 220 up near the northern limit, and it's interesting, this gives you the idea of the complexity of what we're faced with.

We drilled an exploration well at 208, Vinini and not enough water to justify putting a test well in it. As I mentioned earlier, there was some detailed mapping done by the mine and Jack Childress in Kobeh Valley, and when we got their map we noticed, well, it's a different unit over here. So we put in 220T and sure enough, it's in the carbonates. It was tested at 470 gallons a minute with a drawdown of 102 feet after seven days.

We expect the production capacity from the carbonates in Kobeh south to be 1,000 gallons a minute from one or two wells, and I'll be talking later about how it all fits together. From the valley fill aquifer, we've completed two wells, 222 and 223. 223 was a pretty good well. In fact, it's our best alluvial well so far, 600 gallons per minute with a drawdown of 32 feet after seven days of pumping.

Over here at 223, Vinini, Vinini and more Vinini unfortunately. That tells us we can't draw water from this eastern portion of Kobeh south, but that's not all bad news. That says that the Vinini formation is sitting in here and that gives us a barrier between water production over here to the west in Kobeh south and Kobeh east and Diamond Valley much further to the east.

Q. Does the Vinini act as an aquitard?

A. Yes, a very effective aquitard. So, overall we found that we can get production from the carbonates here, we can get good production from the valley fill sediments here. We've got a large unexplored area. We know not to go to the east, but we've got a large area here available for further development.

We expect a production capacity of 900 gallons a minute or greater, so two to four wells would provide 3,500 gallons a minute from this area of Kobeh.

Now, of course when we get in there and drill we might find out, no, it's not an average of 900, it's an average of 700, so we might need one or two more wells. That's the way it works.

The next slide should be labeled as number 38 and that would be the Kobeh west area. The Kobeh west area has a large light-colored area right in the center that is the old Atlas operation. There's a pit out there, there's all sorts of facilities out there, and there's also a couple of existing old production wells.

We went in and tested one of those wells and the result was 490 gallons per minute with a drawdown of 40 feet after a day of pumping. We believe there's the capacity out in Kobeh west which the pretty good. We can put in two to four wells and we should be able to generate 2,000 gallons per minute total, but there's a power line which shows up as a linear right in here that's close to those wells, but it's an awful long ways from Mount Hope. So this is what I would call a reserve area.

The next slide should be labeled number 39.

HEARING OFFICER WILSON: Mr. Buqo, I notice you've got about six or seven slides left. Can you give us a time estimate? Can you get through those fairly quickly?

THE WITNESS: Yes, I will do so. Kobeh east. This should be figure 39 as shown, not encouraging. We went in there and found what I called a duster up at TM-1, less than ten gallons a minute. We had one success at KV-11, close to 500 gallons a minute, and KV-01 and KV-05, a lot of significant silt and clay increasing with depth.

You could get some production out of a few feet of alluvium but you're going to draw that down probably with time. It's only when you get down in the Risi Ranch area that we found any appreciable well yield, 600 gallons per minute with 19 feet of drawdown.

Our conclusion is, yes, there's good production potential in the Risi Ranch area, not so good in the central part of Kobeh east. Although we have hit a good well, we've also hit a very bad well. This area includes the greatest lift to get it to the mine and it's also the closest to Devil's Gate, so we don't consider this as a prime alternative.

BY MR. De LIPKAU:

Q. Mr. Buqo, going back, two bullets from the bottom, I think you said 1900 feet of drawdown.

A. I'm sorry. For 92-11-R we pumped 600 gallons per

MS. PETERSON: No.

HEARING OFFICER WILSON: Hearing none, they will be admitted.

MR. De LIPKAU: My next witness is Mr. Terry Katzer.

TERRY KATZER

called as a witness on behalf of the
Applicant, having been first duly sworn,
was examined and testified as follows:

DIRECT EXAMINATION

BY MR. De LIPKAU:

Q. Would you please state and spell your name for the record?

A. Terry Katzer, K-A-T-Z-E-R. Address is 12975 Broiley Drive, Reno, Nevada, 89511.

HEARING OFFICER WILSON: Mr. Katzer has been qualified before as an expert in hydrogeology.

MR. De LIPKAU: I would like to offer the testimony of Mr. Katzer as an expert in the field of hydrogeology as well as admit as evidence his resume 117.

HEARING OFFICER WILSON: Any objection to Exhibit 117?

MR. MILLER: No objection.

MR. BENESCH: No objection.

In The Matter Of:

Division of Water Resources

In re Applications 70181, etc.

Kobeh Valley NDWR Hearing

Volume V

October 17, 2008

Capitol Reporters

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STATE OF NEVADA

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

DIVISION OF WATER RESOURCES

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VOLUME V - TRANSCRIPT OF PROCEEDINGS

PUBLIC HEARING

FRIDAY, OCTOBER 17, 2008

CARSON CITY, NEVADA

Reported by:

CAPITOL REPORTERS
Certified Shorthand Reporters
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INDEX

A. Yes.

Q. It says, "Personnel yield of Kobeh Valley based on Rush's number is approximately 16,000 acre feet per year, which assumes that the natural groundwater discharge, phreatophyte, evapotranspiration from the basin can be captured over the long-term".

A. Yes.

Q. Do you see that?

A. Yes.

Q. Do you agree with that statement?

A. Yes.

Q. And you testified that the ET discharge is 15,000 acre feet per year?

A. Yes.

Q. The natural groundwater discharge that is assumed that can be captured from the basin over the long term is that 15,000 acre feet per year?

A. Yes.

Q. So is it fair to say the way I read the sentence is that the perennial yield of Kobeh Valley of 16,000 acre feet per year is based on being able to capture the phreatophytic evapotranspiration?

A. That's correct.

Q. You've read the Rush and Everett report?

A. Yes.

Q. It is an exhibit in these proceedings. Maybe I should have asked another follow up to that last series of questions. Is the mine's pumping going to capture the phreatophytic evapotranspiration from the basin?

A. I think in the long-term at the end if I recall in conversations with Dwight Smith, I think the groundwater levels immediately west of Devil's Gate do go down about a foot or so, I can't remember the exact numbers, so they start to capture that, but they have not captured it all, no.

Q. In their pumping of the 11,300 acre feet?

A. Right. Now, that's in the Devil's Gate area. I don't know what happens to the phreatophytes in the far western part of the valley.

Q. You were here for Mr. Buqo's testimony yesterday?

A. Yes.

Q. And I think it was figure 17 from his report that showed a lot of phreatophytic discharge in that central part of Kobeh Valley?

A. Yes.

Q. Just for the record, Rush is Exhibit 17.

If you could turn to page 24, there's a heading that says groundwater budget and then there's a paragraph that starts with table 6?

A. Yes.

Q. Then towards the end of that paragraph there's a perennial yield.

Q. Well, you're not going to be capturing the personnel yield because you're not capturing ET, right?

A. Eventually you will start to capture ET and it all depends on where the well fields end up being located, which we --

Q. -- don't know?

A. -- don't know yet. Stay tuned.

Q. You already testified the ET is 15,000, perennial yield is 16,000, and you've also testified that you're not capturing the ET?

A. Not in the first few years of the project you're not. In the first few years it all comes out of your transitional storage, but as time goes on eventually if that mine project lasted for 100, 150 years, eventually you would probably capture everything out of evapotranspiration.

Q. But it's not going to be that long, correct?

A. That's my understanding.

Q. And is there a figure for transitional storage?

A. A figure?

Q. Yes, a volume, a quantity, that you've calculated for transitional storage?

A. No, I haven't calculated that, but the transitional storage, just taking the half a million that you just defined, that would be transitional storage.

A. No, I have not. I was here for the testimony but I have not reviewed the pit model.

Q. You haven't looked at the report to see what the drawdown contours are after the pumping and what the model simulates?

A. Just cursory.

Q. So hypothetically if there's 40 feet of drawdown for the Mount Hope springs, the Garden Springs and the McBride Spring that is simulated by the pumping from the pit, would you agree that the pit is going to go in and there's not any mitigation that's going to occur with regard to those springs?

A. I'm not familiar with those springs. I can't discuss that.

Q. You don't know if there's any vested right claims on those springs?

A. I do not.

Q. Or if the BLM even has any claims on those springs?

A. I do not.

Q. Do you know who would be testifying about that for the team?

A. Boy, I'd like to lay it on Dwight Smith but I don't know if that's fair. He'll do it.

Q. Would you agree that the State Engineer manages each groundwater basin separately in the state of Nevada?

A. Yes.

Q. So that Diamond Valley and Kobeh Valley are managed separately by the State Engineer?

A. Yes.

Q. Would you also agree -- well, let's go to page 66 of Exhibit 116. Do you have that, groundwater conditions?

A. Yes.

Q. Then the third paragraph down starts, "On the northern slopes, this report conceptualizes --" well, I don't know if it's conceptual. It states that the groundwater conditions are that the groundwater flow is northward from Mount Hope in the Roberts Mountains. The groundwater flow is northward into Pine Valley." Do you see that.

A. Yes.

Q. And then, "The groundwater not discharged from Pine Valley into Garden Valley and discharged to ET goes northward and ultimately discharges to the Humboldt River west of Carlin." Do you see that?

A. Yes, do.

Q. Do you agree with that? Do you agree with those statements?

A. Well, it's sort of out of context because the water that is discharged into Diamond Valley from Pine Valley includes Garden Valley which is a tributary to Pine Valley, and groundwater from Garden Valley does indeed flow naturally into Diamond Valley.

Q. Do you agree with these statements or you don't agree with these statements?

A. Well, I think it probably needs a little more definition. That's pretty general. It does happen in the larger sense, yes, because Garden Valley is tributary to Pine Valley and water from Garden Valley gets into Diamond Valley.

Q. And anything that doesn't go there goes northward ultimately discharging to the Humboldt River; is that correct?

A. That's true, yes.

Q. So then let's go to page 91. Actually, I'm sorry, it's page 199. The area I'm directing you to is the end of page 198 to the top of page 199. That's where the report states that most of the water pumped in the 44-year time frame is from aquifer storage withdrawal. Do you see that statement?

A. No. Where are you?

Q. It starts at the end of 198 and goes into the top of page 199.

A. All right.

Q. Is it your testimony that you don't agree with that statement?

A. No, that's basically true.

CERTIFICATE OF SERVICE

Pursuant to NRAP 25(1)(c), I hereby certify that I am an employee of ALLISON, MacKENZIE, PAVLAKIS, WRIGHT & FAGAN, LTD., Attorneys at Law, and that on this date, I caused the foregoing document to be served on all parties to this action by:

_✓_ Court's eFlex electronic filing system

as follows:

Bryan L. Stockton, Esq.
Therese A. Ure, Esq.
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/////

✓_ Placing a true copy thereof in a sealed postage prepaid envelope in the United States Mail in Carson City, Nevada

as follows:

Michael Smiley Rowe, Esq.
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DATED this 5th day of April, 2013.

<u>/s/ Nancy Fontenot</u>
NANCY FONTENOT