

No. 57527

APPLICATION FOR PERMIT
TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF NEVADA

Date of filing in State Engineer's Office..... APR 28 1992

Returned to applicant for correction.....

Corrected application filed.....

Map filed..... APR 28 1992

The applicant..... Thomas A. & Darlene E. Moura

Route 1 Box 76, of Lovelock
Street and No. or P.O. Box No. City or Town

Nevada 89419, hereby make..... application for permission to appropriate the public
State and Zip Code No.

waters of the State of Nevada, as hereinafter stated. (If applicant is a corporation, give date and place of incorporation; if a copartnership or association, give names of members.).....

1. The source of the proposed appropriation is..... Underground
Name of stream, lake, spring, underground or other source

2. The amount of water applied for is..... 5.0second-feet
One second-foot equals 448.83 gals. per min.
(a) If stored in reservoir give number of acre-feet.....

3. The water to be used for..... irrigation purposes
Irrigation, power, mining, manufacturing, domestic, or other use. Must limit to one use.

4. If use is for:

(a) Irrigation, state number of acres to be irrigated..... 200 acres ±

(b) Stockwater, state number and kinds of animals to be watered.....

(c) Other use (describe fully under No. 12. "Remarks").....

(d) Power:

(1) Horsepower developed.....

(2) Point of return of water to stream.....

5. The water is to be diverted from its source at the following point..... within the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 31.
Describe as being within a 40-acre subdivision of public survey, and by course and distance to a section corner. If on unsurveyed land, it should be so stated.
T.28N., R.32E., M.D.B.&M., or at a point from which the SW corner of said Section 31 bears S. 84° 03' W. 3655.0'.

6. Place of use..... 200 acres within the SE $\frac{1}{4}$ of Section 31, T.28N., R.32E., M.D.B.&M., all
Describe by legal subdivision. If on unsurveyed land, it should be so stated.
of lots 1 & 2, E $\frac{1}{2}$ of lot 3, E $\frac{1}{2}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ and portions of the SE $\frac{1}{4}$ lying West of the Humboldt River within Section 6, T.27N., R.32E., M.D.B.&M., and portions of the NE $\frac{1}{4}$ of Section 7 which lies North of the Southern Pacific Railroad right-of-way and West of the Humboldt River within T.27N., R.32E., M.D.B.&M.

7. Use will begin about..... January 1stand end about..... December 31st of each year.
Month and Day Month and Day

8. Description of proposed works. (Under the provisions of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.)..... drill well, install pump & pipelines
State manner in which water is to be diverted, i.e. diversion structure, ditches and flumes, drilled well with pump and motor, etc.

9. Estimated cost of works..... in excess of \$30,000.00

10. Estimated time required to construct works..... 3 years
If well completed, describe works.

11. Estimated time required to complete the application of water to beneficial use..... 5 years

12. Remarks: For use other than irrigation or stock watering, state number and type of units to be served or annual consumptive use:
This application is to be supplemental to the Humboldt River decree

By s/John H. Milton III
John H. Milton, III
146 W. Second St.
Winnemucca, Nevada 89445

Compared bc/bc jr/cms

Protested 7/17/92 by; Pershing County Conservation District:

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit is issued subject to existing rights. It is understood that the amount of water herein granted is only a temporary allowance and that the final water right obtained under this permit will be dependent upon the amount of water actually placed to beneficial use. It is also understood that this right must allow for a reasonable lowering of the static water level. This well shall be equipped with a two (2) inch opening for measuring depth to water. If the well is flowing, a valve must be installed and maintained to prevent waste. A totalizing meter must be installed and maintained in the discharge pipeline near the point of diversion and accurate measurements must be kept of water placed to beneficial use. The totalizing meter must be installed before any use of water begins or before the Proof of Completion of Work is filed.

This permit does not extend the permittee the right of ingress and egress on public, private or corporate lands.
(CONTINUED ON PAGE 2)

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 5.0 cubic feet per second, but not to exceed 600.0 acre-feet annually, and not to exceed a yearly duty of 3.0 acre-feet per acre of land irrigated from any and/or all sources.

Work must be prosecuted with reasonable diligence and be completed on or before April 7, 2000

Proof of completion of work shall be filed before May 7, 2000

Application of water to beneficial use shall be filed on or before April 7, 2003

Proof of the application of water to beneficial use shall be filed on or before May 7, 2003

Map in support of proof of beneficial use shall be filed on or before May 7, 2003

Completion of work filed JUL 28 2003

Proof of beneficial use filed

Cultural map filed

Certificate No. Issued

IN TESTIMONY WHEREOF, I, MICHAEL TURNIPSEED, P.E.
State Engineer of Nevada, have hereunto set my hand and the seal of my

office, this 7th day of April

A.D. 1998

Michael Turnipseed
State Engineer

The issuance of this permit does not waive the requirements that the permit holder obtain other permits from State, Federal and local agencies.

The well under this permit must be constructed as to drive groundwater exclusively from below the clay zones.

The period of use is limited to the period of use of the Humboldt River Decree.

A monitoring program must be submitted for approval by the State Engineer within 90 days of the issuance of this permit. The monitoring program must be developed in cooperation with the Pershing County Water Conservation District.



Permit No. 78629

THE STATE OF NEVADA

PERMIT TO CHANGE POINT OF DIVERSION, MANNER OF USE AND PLACE OF USE OF THE PUBLIC WATERS OF THE STATE OF NEVADA HERETOFORE APPROPRIATED

Name of applicant: THOMAS A. AND DARLENE E. MOURA
Source: UNDERGROUND
Basin: LOVELOCK VALLEY
Manner of Use: IRRIGATION
Period of Use: January 1st to December 31st
Priority Date: 01/31/2007

APPROVAL OF STATE ENGINEER

This is to certify that I have examined the foregoing application, and do hereby grant the same, subject to the following limitations and conditions:

This permit to change the point of diversion of the waters of an underground source as heretofore granted under Permit 57527 is issued subject to the terms and conditions imposed in said Permit 57527 and with the understanding that no other rights on the source will be affected by the change proposed herein. The well shall be equipped with a 2-inch opening and a totalizing meter must be installed and maintained in the discharge pipeline near the point of diversion and accurate measurements must be kept of water placed to beneficial use. The totalizing meter must be installed before any use of the water begins or before the Proof of Completion of Work is filed. If the well is flowing, a valve must be installed and maintained to prevent waste. The State retains the right to regulate the use of the water herein granted at any and all times.

This permit does not extend the permittee the right of ingress and egress on public, private or corporate lands.

The issuance of this permit does not waive the requirements that the permit holder obtain other permits from State, Federal and local agencies.

This permit is entirely supplemental to surface water rights appurtenant to the place of use as set forth in the Humboldt River Decree. Pumping of groundwater under this permit is allowed only to the extent that surface water is unavailable. The period of use is also limited under this permit to the irrigation season for this area in said decree.

Any well drilled under this permit must be constructed so as to derive groundwater exclusively from below the clay zones and under no circumstances shall the well seal be less than 100 feet with cement grout, concrete grout or neat cement to ground level.

The monitoring program described in State Engineer's Ruling No. 4036, dated September 1, 1993, must be submitted for approval by the State Engineer within 90 days of the issuance of this permit. The monitoring program must be developed in cooperation with the Pershing County Water Conservation District.

(Continued on Page 2)

003517

Permit No. 78629

The point of diversion and place of use are as described on the submitted application to support this permit.

The amount of water to be appropriated shall be limited to the amount which can be applied to beneficial use, and not to exceed 5.0 cubic feet per second or 600.0 acre-feet annually for the irrigation of 200.0 acres within the described place of use and not to exceed 3.0 acre-feet per acre from any and/or all sources.

Work must be prosecuted with reasonable diligence and proof of completion of work shall be filed on or before:

April 22 2011

Water must be placed to beneficial use and proof of the application of water to beneficial use shall be filed on or before:

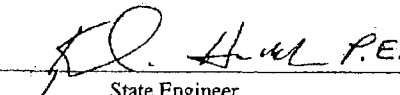
April 22 2013

Map in support of proof of beneficial use shall be filed on or before:

April 22 2013

IN TESTIMONY WHEREOF, I, JASON KING, P.E.,

State Engineer of Nevada, have hereunto set my hand and the seal of my office, this 22nd day of April, A.D. 2010


State Engineer

Completion of work filed _____

Proof of beneficial use filed _____

Cultural map filed _____

Certificate No. _____ Issued _____

003518

JA4930

Application No. **78629**

**APPLICATION FOR PERMISSION TO CHANGE POINT OF DIVERSION, MANNER
OF USE AND PLACE OF USE OF THE PUBLIC WATERS
OF THE STATE OF NEVADA HERETOFORE APPROPRIATED**

THIS SPACE FOR OFFICE USE ONLY

Date of filing in State Engineer's Office JUN 05 2009

Returned to applicant for correction _____

Corrected application filed _____ Map filed JUN 05 2009

The applicant Thomas A. and Darlene E. Moura

Route 1 Box 76 of Lovelock
Street Address or P.O. Box City or Town
Nevada, 89419, hereby make(s) application for permission to change the
State and Zip Code

☒ Point of diversion ☐ Place of use ☐ Manner of use ☐ of a portion

of water heretofore appropriated under (Identify existing right by Permit, Certificate, Proof or Claim Nos. If Decreed, give title of Decree and identify right in Decree.)
Permit 57527

1. The source of water is underground
Name of stream, lake, underground, spring or other sources
2. The amount of water to be changed 5.0 cfs
Second feet, acre-feet. One second foot equals 448.83 gallons per minute.
3. The water to be used for Irrigation purposes
Irrigation, power, mining, commercial, etc. If for stock, state number and kind of animals. Must limit to one major use.
4. The water heretofore used for Irrigation purposes
If for stock, state number and kind of animals.
5. The water is to be diverted at the following point (Describe as being within a 40-acre subdivision of public survey and by course and distance to a found section corner. If on unsurveyed land, it should be stated.)
within lot 1 of Section 6, T.27N., R.32E., M.D.B.&M., or at a point from which the SW corner of Section 31, T.28N., R.32E., M.D.B.&M. bears N88° 52'W a distance of 3834.0 feet.
6. The existing point of diversion is located within (If point of diversion is not changed, do not answer.)
within the SW1/4 SE1/4 of Section 31, T.28N., R.32E., M.D.B.&M., or at a point from which the SW corner of said Section 31 bears S84°03'W a distance of 3655.0 feet.

003519
73-2 E

7. Proposed place of use (Describe by legal subdivisions. If for irrigation, state number of acres to be irrigated.)

unchanged

8. Existing place of use (Describe by legal subdivisions. If changing place of use and/or manner of use of irrigation permit, describe acreage to be removed from irrigation.)

200 acres lying within the SE1/4 of Section 31, T.28N., R.32E., M.D.B.&M., all of Lots 1, 2 & E1/2 of Lot 3, E1/2NE1/4SW1/4, E1/2SE1/4SW1/4 & portion of the SE1/4 lying West of the Humboldt River within Section 6 and portions of the NE1/4 of Section 7 which lie North of the Union Pacific Railroad right-of-way and West of the Humboldt River within T.27N., R.32E., M.D.B.&M.

9. Proposed use will be from January 1st to December 31st of each year.
Month and Day Month and Day

10. Existing use permitted from January 1st to December 31st of each year.
Month and Day Month and Day

11. Description of proposed works. (Under the provision of NRS 535.010 you may be required to submit plans and specifications of your diversion or storage works.) (State number in which water is to be diverted, i.e. diversion structure, ditches, pipes and flumes or drilled well, pump and motor, etc.)

A drilled well and water distribution system.

12. Estimated cost of works \$50,000.00 ±

13. Estimated time required to construct works complete, see well log filed under Permit 57527
If well completed, describe well.

14. Estimated time required to complete the application of water to beneficial use 2 years

15. Provide a detailed description of the proposed project and its water usage (use attachments if necessary):
(Failure to provide a detailed description may cause a delay in processing.)

Applicant has a drilled well that provides water to ditch system that is irrigating 200 acres.

16. Miscellaneous remarks:

See the supporting map for Permit 57527 for the existing place of use. This application is being filed to correct the point of diversion.

775-623-4414

Phone No.

dms@winnemucca.net

E-mail

By John H. Milton III (agent)

Print or type name clearly

John H. Milton III
Signature, applicant or agent

Desert Mountain Surveying

Company Name

146 West Second Street

Street Address or P.O. Box

Winnemucca, Nevada, 89445

City, State, Zip Code

**APPLICATION MUST BE SIGNED
BY THE APPLICANT OR AGENT**

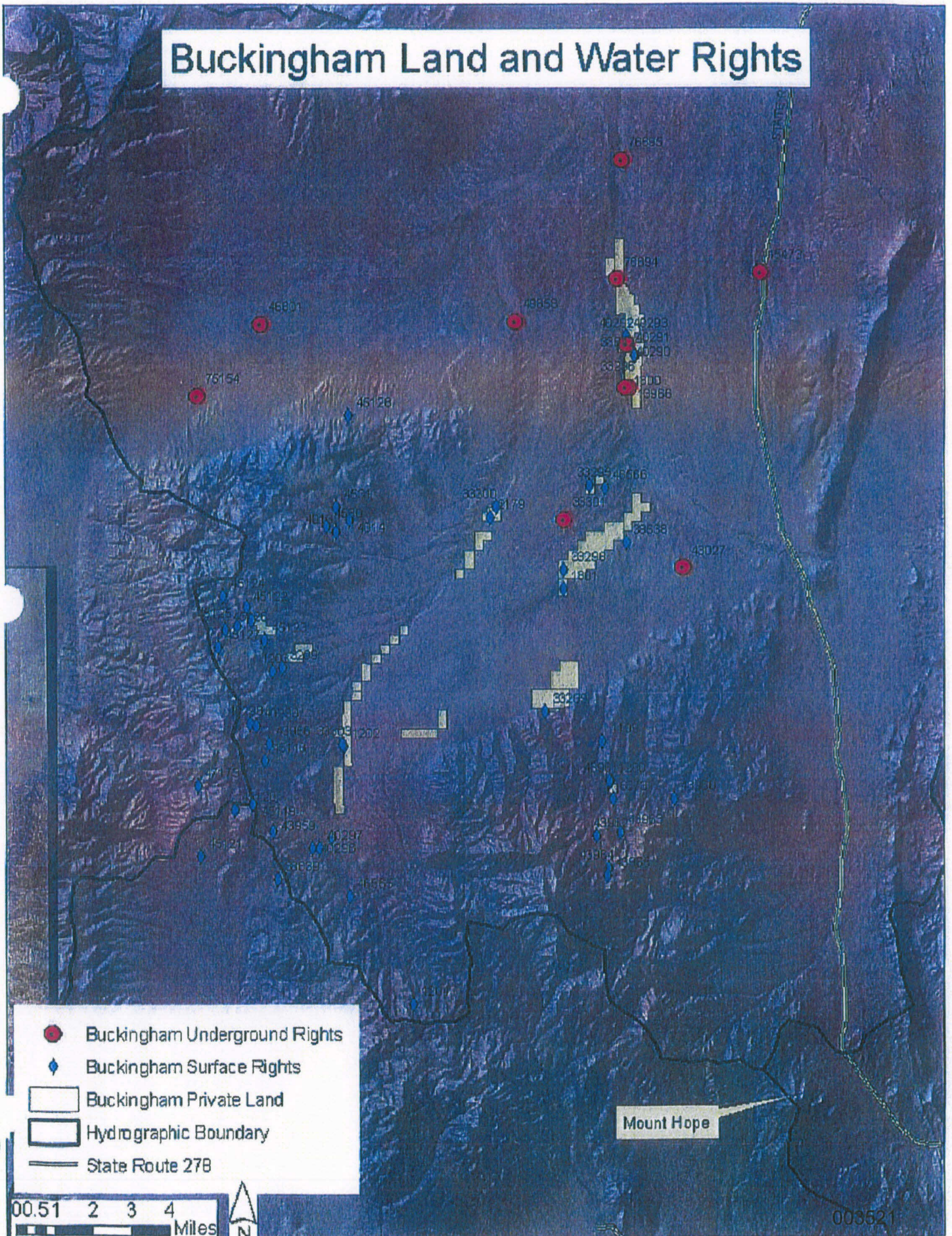
\$150 FILING FEE AND SUPPORTING MAP MUST ACCOMPANY APPLICATION

STATE OF NEVADA
2009 JUN -5 PM 2:07
OFFICE OF THE
CLERK OF THE
SUPREME COURT

003520

JA4932

Buckingham Land and Water Rights



CERTIFICATE OF SERVICE

Pursuant to NRAP Rule 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 a CD-ROM version of same to be served to all parties to this action by:

_____	Placing a true copy thereof in a sealed postage prepaid envelope in the United States Mail in Carson City, Nevada
_____	Hand-delivery - via Reno/Carson Messenger Service
_____	Facsimile
_____	Federal Express, UPS, or other overnight delivery
<u> X </u>	E-filing pursuant to Section IV of District of Nevada Electronic Filing Procedures

fully addressed as follows:

Bryan L. Stockton	bstockton@ag.nv.gov
Senior Deputy Attorney General's Office	
Nevada Attorney General's Office	
100 North Carson Street	
Carson City, NV 89701	

Ross E. de Lipkau	rdelipkau@parsonsbehle.com
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50 West Liberty Street, Ste 750	
Reno, NV 89501	

Therese A. Ure	t.ure@water-law.com
Laura A. Schroeder	schoeder@water-law.com
Schoeder Law Offices, P.C.	
400 Marsh Avenue	
Reno, NV 89509	

X

Placing a true copy of a CD-ROM version thereof in a sealed postage prepaid envelope in the United States Mail in Carson City, Nevada

fully addressed as follows:

John R. Zimmerman jzimmerman@parsonsbehle.com
Parsons Behle & Latimer
50 West Liberty Street, Ste 750
Reno, NV 89501

Francis M. Wikstrom
Parsons Behle & Latimer
201 South Main Street, Ste 1800
Salt Lake City, UT 84111

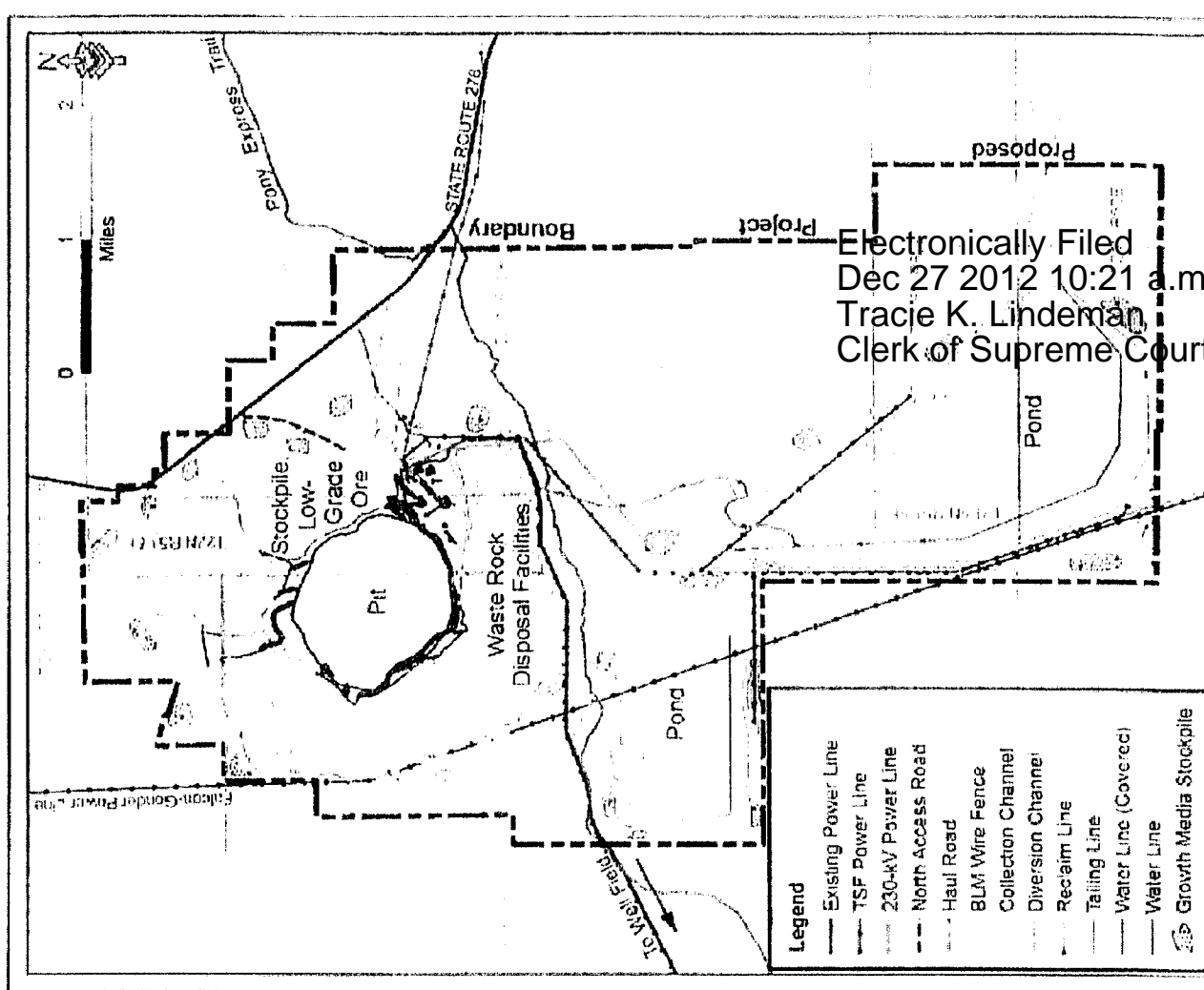
DATED this 21st day of December, 2012.

/s/ Nancy Fontenot



Tailings

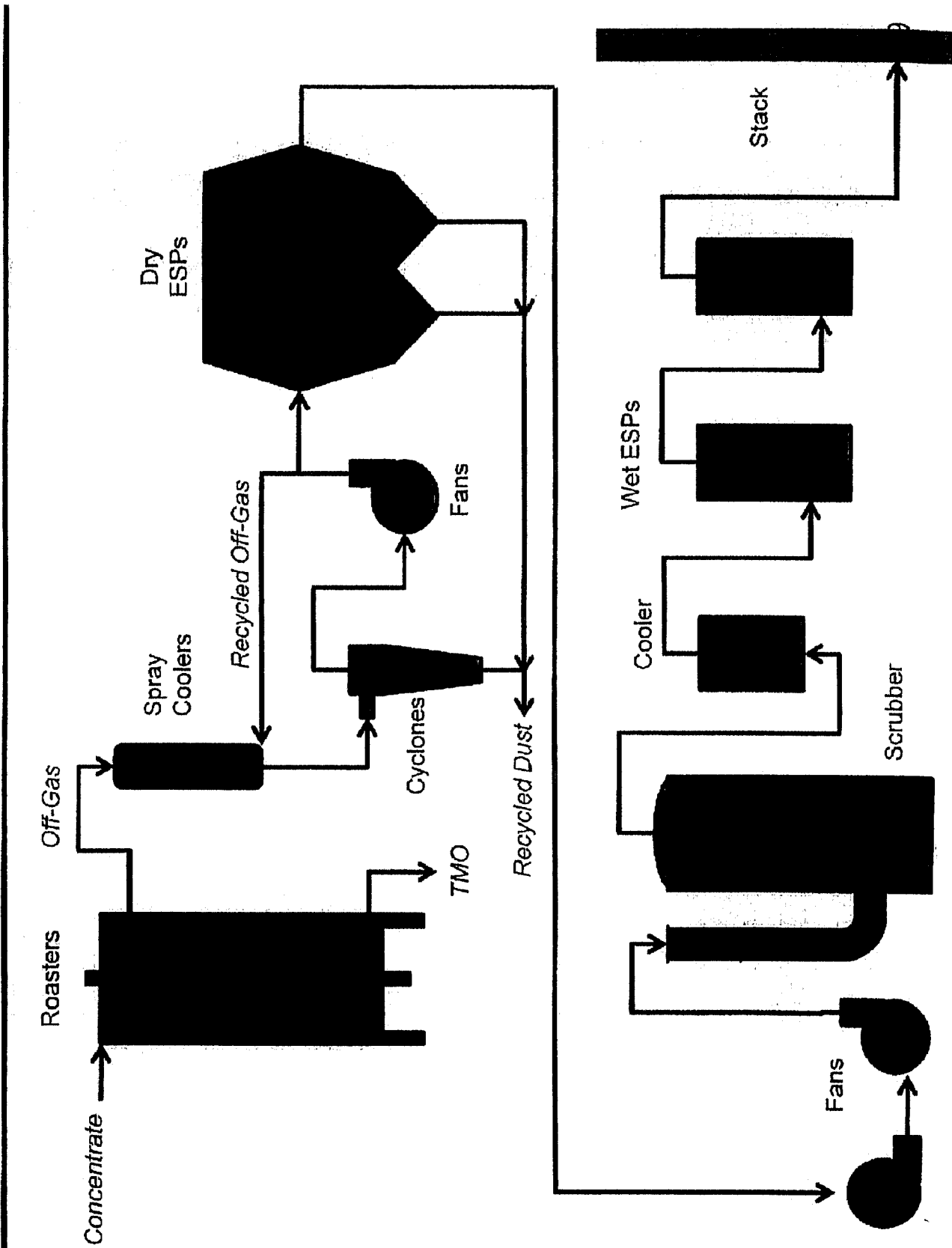
Pumped 6 miles in two 22-inch rubber-lined steel and HDPE pipelines to storage







Roasting





Off Gas

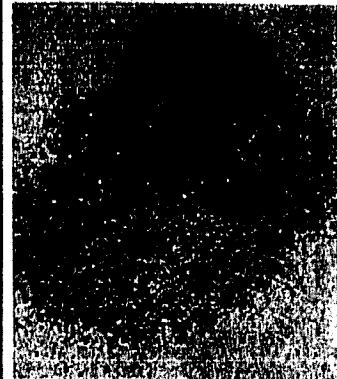
- 99.7% sulfur capture
- Tail gas less than 20 lb/h SO_2
- 100°F





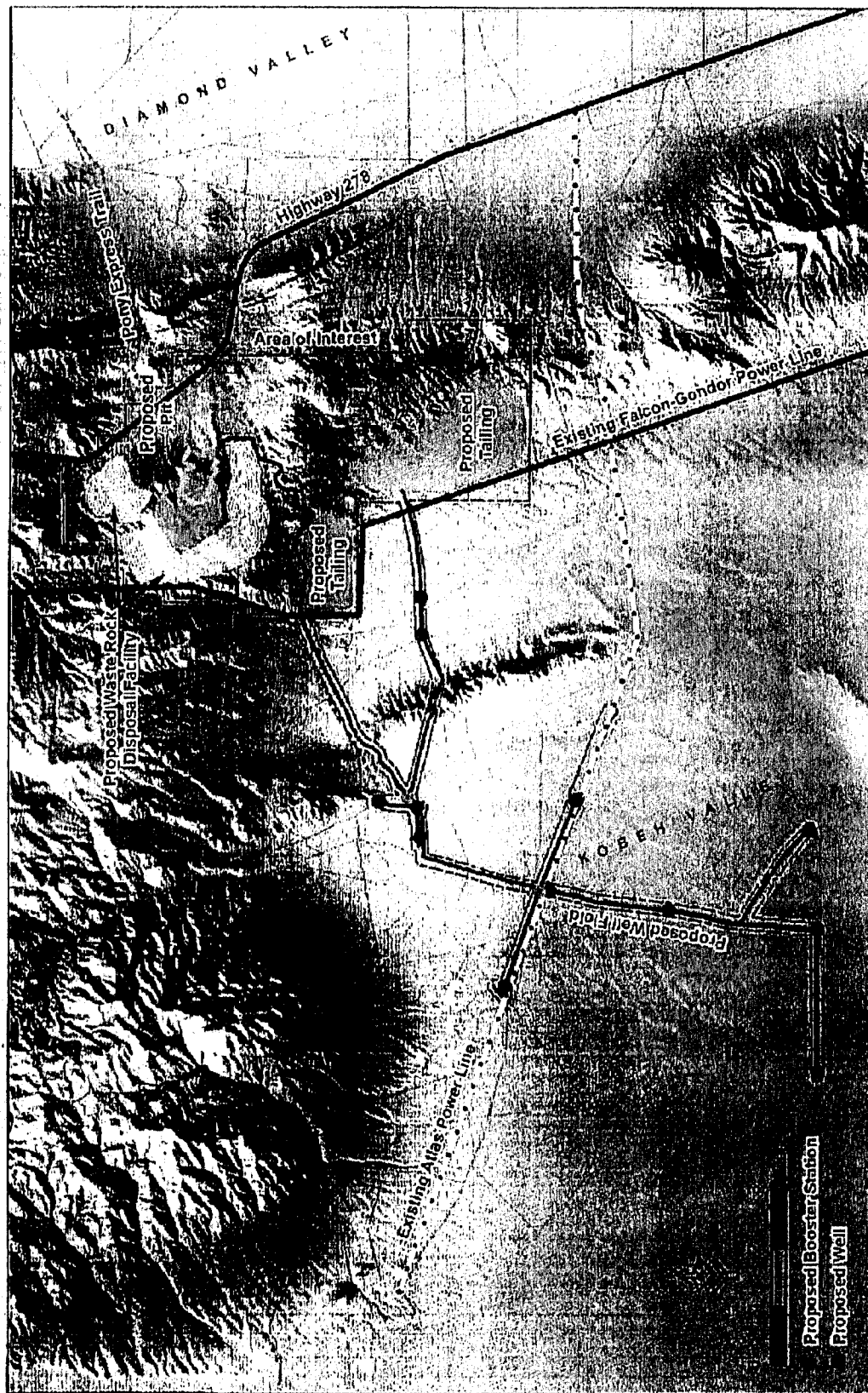
TMO

Element	Flotation Conc	Leached Conc	TMO	TMO Typical Spec
Molybdenum	52.9%	56.2%	63.6%	57% min
Iron	2.4%	2.5%	2.8%	
Insolubles	2.8%	3.0%	3.4%	
Copper	0.79%	0.015%	0.017%	0.50% max
Lead	0.25%	0.013%	0.015%	0.05% max
Zinc	0.36%	0.006%	0.007%	0.01% max
Phosphorous	0.03%	0.03%	0.03%	0.05% max
Sulfur	36.0%	39.0%	0.09%	0.10% max
Carbon	NA	NA	0.09%	0.10% max





Access to Water





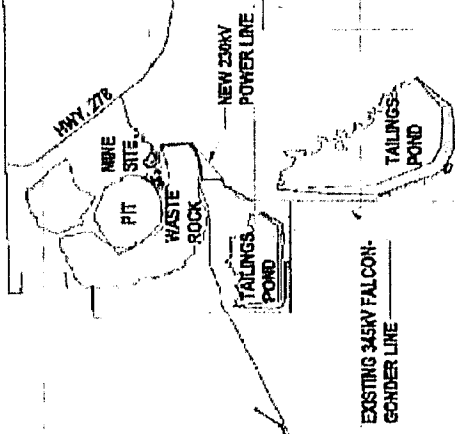
Access to Power

- Project includes powerline construction
- 24.3 miles of 230 kV transmission line
- New line will be within ROW of existing 340 Kv (Falcon-Gondor) line
- 72 MW Peak load

GENERAL NOTES	
MR. Hope Project Eureka, NV	
Plan View	1:5000
0	10000
Scale in Feet	



CLAIM BOUNDARY



230KV
POWER LINE

HWY. 278

HWY. 89

HACHADER
SUBSTATION

EUREKA





Mt. Hope Cost Structure

	1 st 5 Years, 2007 BFS	1 st 5 Years, November 09
Ore Grade, Mo %	0.100	0.103
Production, Mlbs Mo	38.3	40.1
Mining Cost per total ton	\$0.76	\$0.92
Mining Cost per processed ore ton	\$3.28	\$3.96
Milling Cost per processed ore ton	\$3.10	\$3.78
Roaster Cost per processed ore ton	\$0.59	\$0.57
Lab, G&A, Shipping per processed ore ton	\$0.68	\$1.27
Total Operating cost per processed ore ton	\$7.65	\$9.58
Direct Operating cost per pound Mo ¹	\$4.42	\$5.29

Primary source of increased production between 2007 and 2009 estimates were the result of including inferred resources in the mine plan as opposed to the BFS plan, which only included Proven & Probable reserves

Primary source of increased operating cost between 2007 and 2009 estimates were the result of:

- Higher diesel fuel price assumptions (\$80 per barrel oil equivalent)
- Higher wage rate assumptions
- Higher electricity consumption
- Higher repair parts, supplies, and reagent prices

1. Direct operating costs do not include Nevada Net Proceeds tax and Royalties, which vary with received moly prices

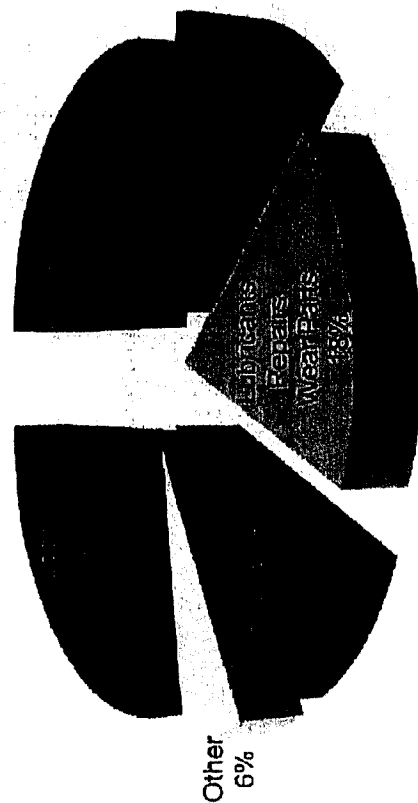


Production Costs

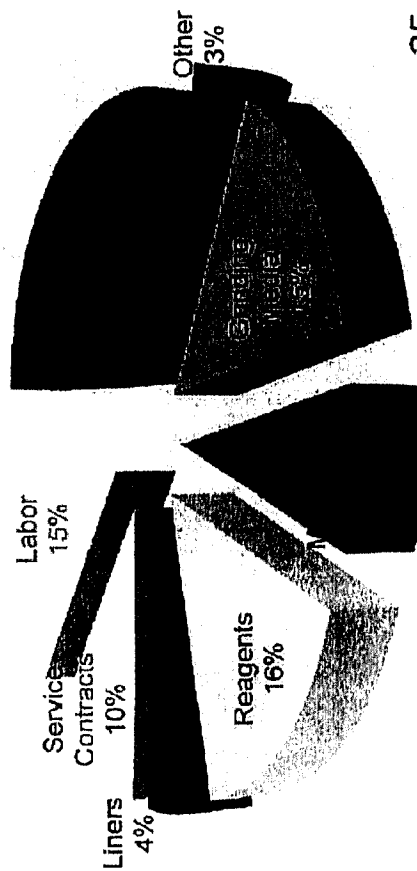
Basis of Operating Cost Estimate

- Five-year Mo lbs average over 40 million lbs/year with optimized mine plans
- Updated for actual mine equipment spread and process equipment
- Energy consumptions updated based upon updated electrical design
- Consumables such as explosives, tires, reagents, grinding balls, and lime used supplier quotations
- Energy rate of \$0.071/kWh is currently being negotiated with Deseret utility; transmission locked in for 75 MW at market rate

Mine Costs by Element



Mill Costs by Element



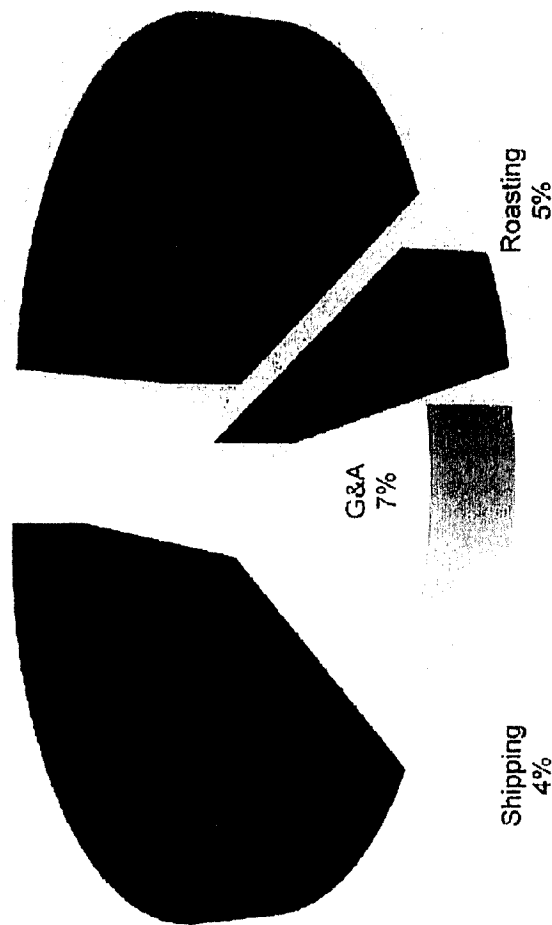


Total Costs

Total Operating Cost at Mt. Hope

- Published cost for Henderson primary mine is \$6.00/lb
- Each \$10/bbl oil price affects operating costs by \$0.10 per lb
- Each 10% incremental increase above \$0.071/kWh for electrical energy impacts unit costs by 6 cents/lb
- Cost of Sales excluded
- Corporate costs excluded

5-Year Average
Unit Costs \$5.29/lb Mo





Permitting Overview

The Mt. Hope Mine is Advantageous to Permitting

- Nevada is a top-ranked mine jurisdiction (Fraser Institute); is mine-friendly with well-defined permit processes and technically competent regulators.
- Battle Mountain District of BLM includes numerous large mines and BLM is eager to finish EIS process.
- Battle Mountain BLM office has full authority on Record Of Decision (ROD).
- No significant opposition to project has yet surfaced: broad-based support from local community illustrated in local survey.
- No substantial environmental issues (no threatened and endangered species, wetlands, or sacred Native American sites. Non-reactive waste rock. No pit dewatering discharge. Class 2 air quality permit. No mercury. Good quality post-mining pit lake water. Process does not rely on cyanide or other toxic chemicals).
- Minimal disturbance for new infrastructure (access to transportation, power and water is nearby).
- Design incorporates proven environmental controls (fully lined TSF; segregation of PAG waste rock; acclaimed sage-grouse mitigation; Pony Express Trail avoidance).



Permitting Overview

- Experienced management team committed to Environmental Excellence.
- No wetlands or Waters of the U.S.
- Minimal surface waters within footprint of proposed facilities (two springs with less than 2 gpm flow).
- Zero-discharge process facility
- Comprehensive Water Resources Monitoring Plan, developed in collaboration with stakeholders.
- Tailings facility to be completely lined with synthetic liner and approximately 2/3 of process water will be recycled.
- Very low mine pit dewatering
- Good water quality in post-mining pit-lake
- Waste rock is relatively un-reactive; PAG waste rock will be placed on a low permeability base.
- Tailings water is benign and is not a risk to wildlife.
- No Threatened or Endangered species.
- Impact to Sage Grouse will be minimized by burying powerlines and pipelines within 2 miles of leks.
- No Native American religious sites or opposition.



Permitting Overview

- Eligible cultural resources sites are predominantly associated with 19th century "carbonari".
- Minimal air emissions (Class 2 source)
- No mercury in ore; no cyanide used in process.
- Pony Express Trail enthusiasts will continue to have access to trail.
- Hazardous waste amounts will be minimal, and site will be classified as Conditional Exempt Small Quantity Generator.
- Reclamation cost estimate includes solution management and closure tasks (RCE of \$68 MM for first 3-year phase).
- Willingness to fund long-term contingency in addition to reclamation bond



Permitting Red Flags & Management

- Significant water consumption: Modeled impacts are minimal; proactive 3M Plan.
- Waste rock: Segregate reactive rock; liner system collects any seepage; reclamation cover eliminates infiltration
- Pony Express Trail: National Park Service is Cooperating Agency; 300 meter buffer either side of PET; continue to provide access to Trail.
- Lahonton Cutthroat Trout: USFWS Consultation; Nevada DOW is Cooperating Agency; Model predicts NO Impact
- Sage Grouse: Mitigation plan, including powerline burial, praised by NDOW



Permitting Overview

Baseline Report for EIS		Status
1	Waste Rock Characterization	Accepted and Approved by BLM
2	Cultural Resources Baseline Survey	Accepted by BLM; Waiting on SHPO approval
3	Wildlife Baseline Report	Accepted and Approved by BLM
4	Vegetation Survey	Accepted and Approved by BLM
5	Weed inventory	Accepted and Approved by BLM
6	Water and Wetlands Jurisdictional Survey	Accepted: No Corp of Engineers Jurisdiction
7	Geology	Accepted and Approved by BLM
8	Paleontology	Accepted and Approved by BLM
9	Soils	Accepted and Approved by BLM
10	Range Resources Report (conditions and allotments)	Accepted and Approved by BLM
11	Air Quality and Meteorology Technical Report	Accepted and Approved by BLM
12	Land Use, Transportation and Noise	Accepted and Approved by BLM
13	Socio-Economics	Accepted and Approved by BLM
14	Visual Resources	Accepted and Approved by BLM
15	Bat Survey	Accepted and Approved by BLM
16	Subsidence Report (Groundwater pumping)	Accepted and Approved by BLM
17	Seeps and Springs Survey	Accepted and Approved by BLM
18	Groundwater and Surface Quality	Accepted and Approved by BLM
19	Tailings Geochemical Characterization	Accepted and Approved by BLM
20	Ethnographic Assessment	Accepted and Approved by BLM
21	Regional Groundwater and Pit Lake*	Accepted and Approved by BLM
22	Pit Lake Geochemistry*	Accepted and Approved by BLM

* Induced approximately 15 month delay to project permitting timeline



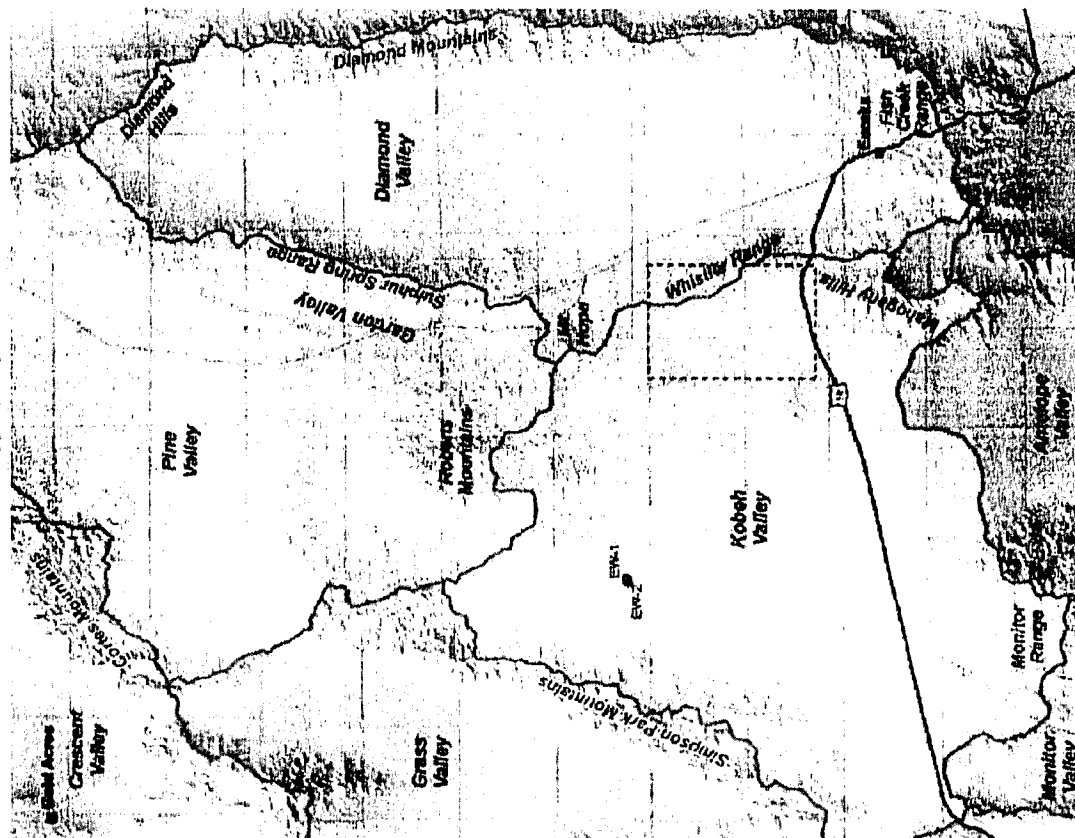
Federal EIS Process & Timing

1. PDEIS completed and circulated to Cooperating Agencies
 - Sent in late August, comments were due back late September
 - Cooperating agencies include NDEP, US Park Service, County of Eureka
 - BLM will determine what changes to make to DEIS
2. Completion of DEIS and publication in Federal Register
 - Timing dependent on completion of prior step
 - Requires series of signatures in Washington DC
 - GMI has lobbyist lined up to expedite signature receipt
 - Anticipate late this year
3. Public Comment and Review Period
 - Follows publication in Federal Register
 - BLM to determine period (likely maximum of 60 days)
 - Public, EPA, NGOs to provide comments during this time period
 - BLM will determine what changes to make to DEIS based on comments and will issue Final EIS
4. Final Comment and Review Period
 - BLM to determine review period
 - Only open to entities commenting initially
 - BLM to determine what changes to make to FEIS before issuing Record of Decision (ROD)



Hydrology

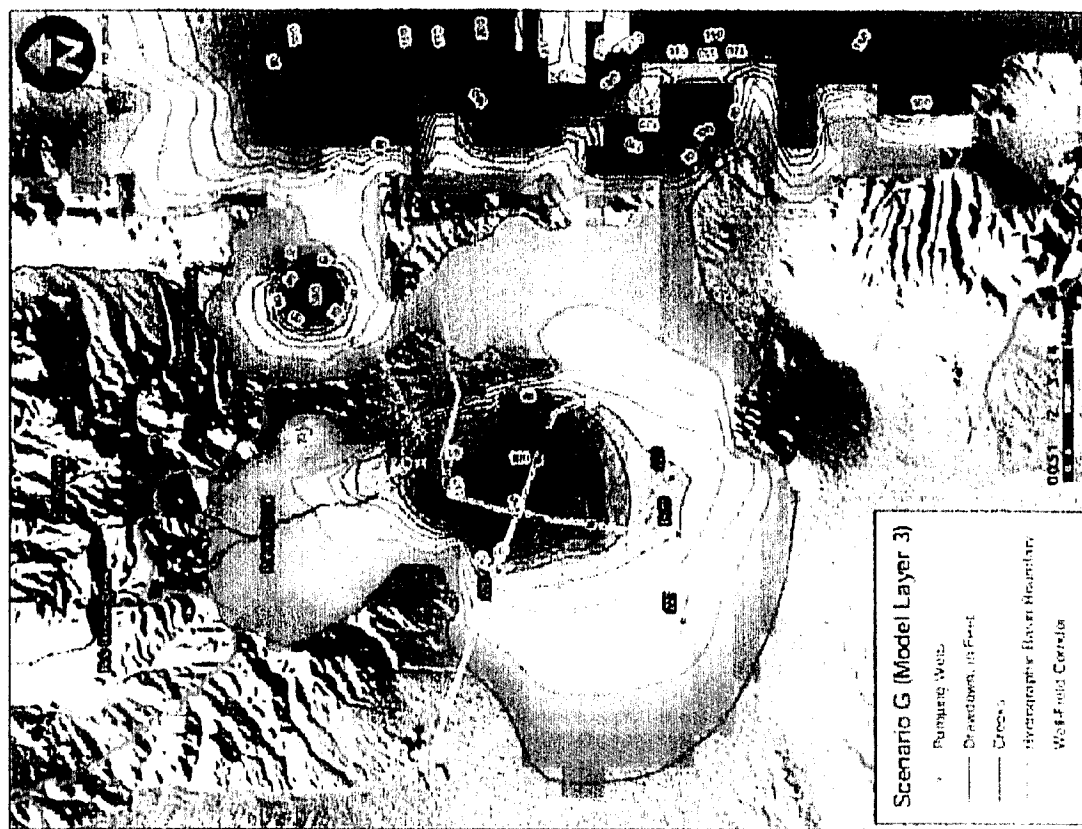
- Mt Hope straddles 3 hydrographic basins.
- 7,500 gpm well field in Kobeh Valley
- Kobeh Valley contains little farming or ranching while Diamond Valley contains alfalfa farming
- Process water balance includes 70% recycle.
- GMI has been granted KV water rights by Nevada State Engineer





Hydrology

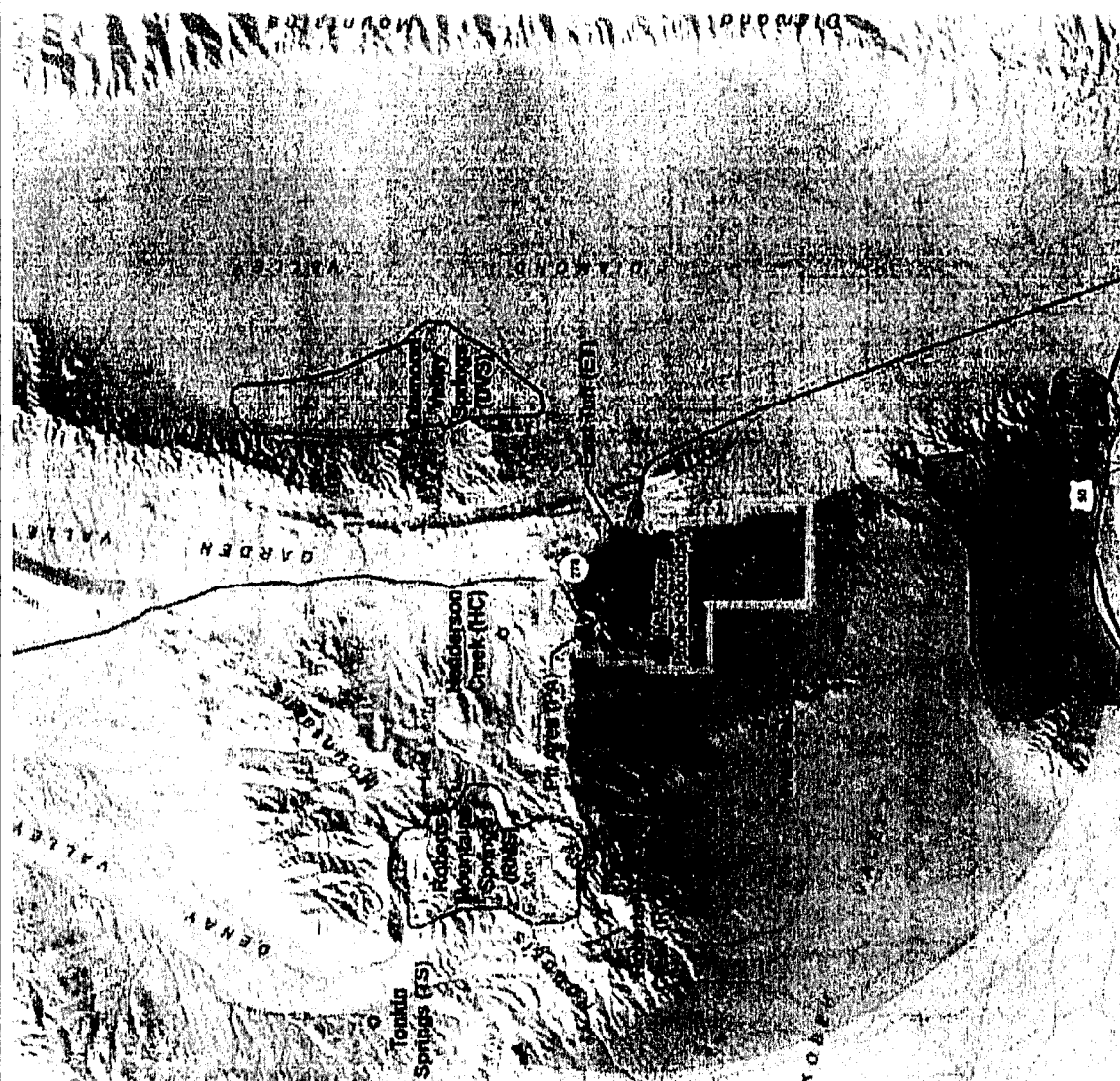
- Model supported by extensive data collection
- Predicts minimal DV drawdown
- Predicts no impact to LCT occupied streams
- Drawdown impacts are transitory in nature.
- Regional monitoring program and periodic updates of model.
- Monitoring, Mitigation, and Management (3M) Plan.
- Pit area is hydrologically tight; post mining pit lake will take hundreds of years to fill.





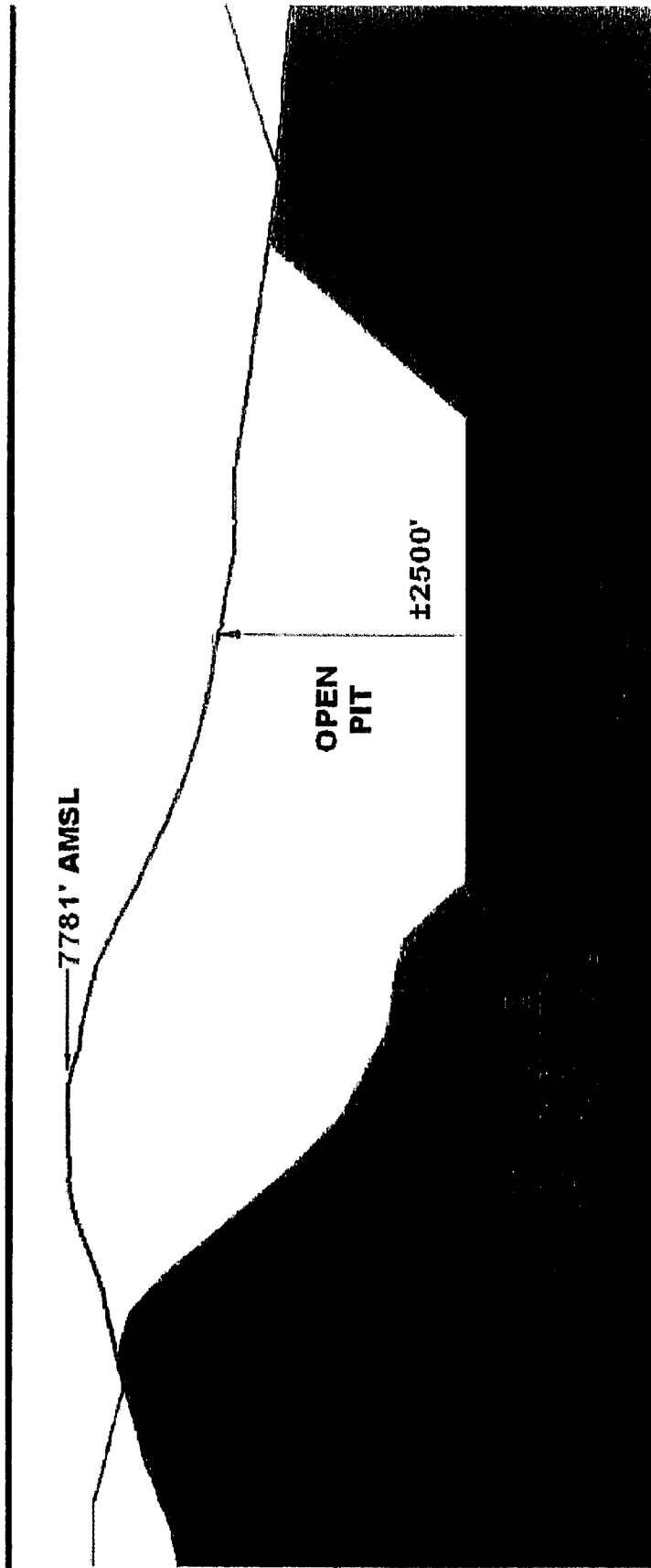
Hydrology

- 3M includes hydro, meteorological & vegetation monitoring
- 3M includes specific mitigation elements and thresholds
- TRP provides input on 3M Plan & reviews data
- TRP Members include all stakeholders: BLM, Eureka Cty, DV Growers, NDOW, DWR, USGS, USFWS





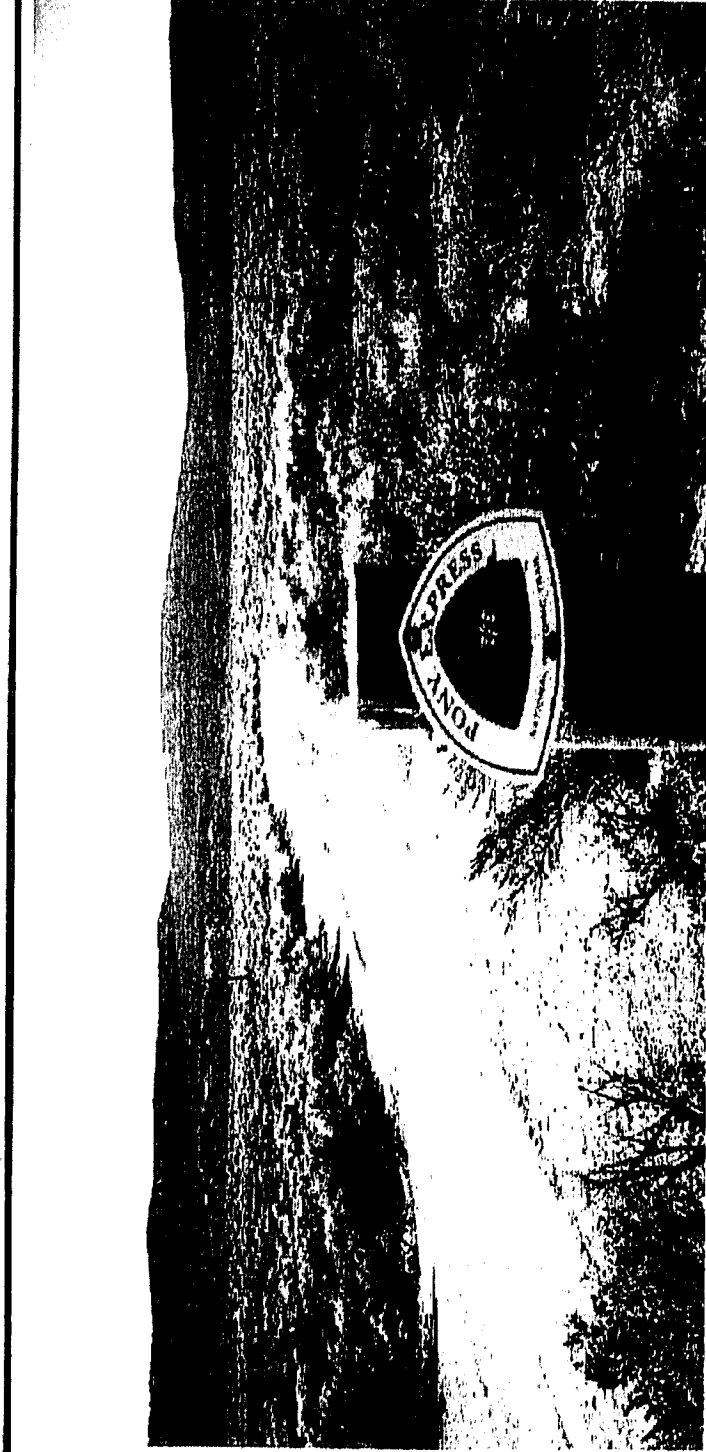
Mt. Hope Pit Lake



- Pit seepage water to be collected and pumped to Mill
- Pit in-flow rates expected to be minimal
- Post-mining pit lake at ~5,700-foot level (~970 feet deep)
- Modeling shows pit lake water quality to be benign / low risk



Pony Express Trail & Management



- PET Crosses Mt Hope Project Site
- Proximity to Road allows ORV use (project may actually decrease ORV degradation)
- Direct impacts mitigated with 300 meter buffer
- Continued access for recreational and re-ride enthusiasts



Mt. Hope Water Rights

Background:

- GMI owns ranches with senior agricultural water rights that require conversion by NV State Engineer to mining use
- GMI applied for and received mining use permits in 2009
- Ranchers in adjacent valley and Eureka County appealed that decision on the basis that an updated GMI hydrology model being developed for Federal Permitting Process was not shared during a hearing, but used to form SE's decision
- County Judge ruled in favor of the County and Ranchers, indicating that new hydrology model should be shared with all parties
- GMI recently filed additional water applications to match actual well locations with those in final hydro studies
- New hearings have been set for December 6 with final BLM hydrology models, anticipates re-issuing of water permits Q1 2011

Mt. Hope Water Rights

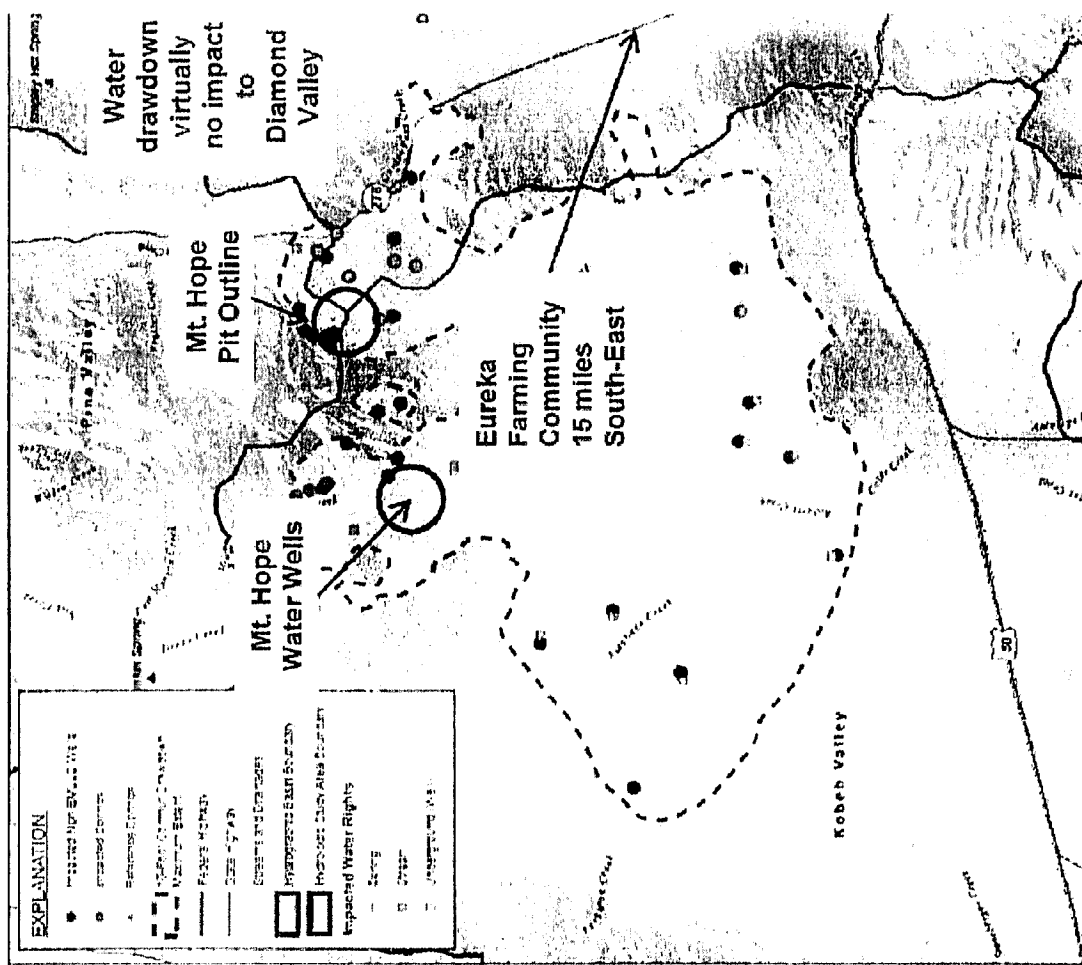
Settlement with Diamond Valley Growers

- Eureka Producers' Cooperative (EPC) was a protestant to, and appellant of, GMI's 2009 water grants
- Settlement with EPC required that they withdraw their protests and appeals and not protest future water applications until Mt. Hope was in production
- Creation of a trust, funded by GMI, over three years between \$8-\$12 million, dependant on when DEIS and ROD are received.
- Ultimate trust value will be cut in half if the County does not also settle and withdraw protests before the December 6 meeting date
- Money to be utilized to improve sustainability of Diamond Valley aquifer by either
 - Buying and retiring existing water rights
 - Supporting water conservation measures (better irrigation, different crops, etc.)

Mt. Hope Water Rights

Summary of Hydrology Findings

- Water use by GMI in Kobreh Valley is less than the perennial yield of the Valley
(means we will not deplete the water resource)
- Projected drawdown in Diamond Valley is negligible and water level drawdown in the agricultural center of Diamond valley is not detectable
(means we will not impact farmers)
- Projected reduction in water flow from Kobreh to Diamond Valleys is just 25 acre-feet per year in year 44
(not a meaningful amount)
- Post-mining pit lake to takes 1,220 years to reach equilibrium and will be a static lake
(means no impact to ultimate groundwater quality)

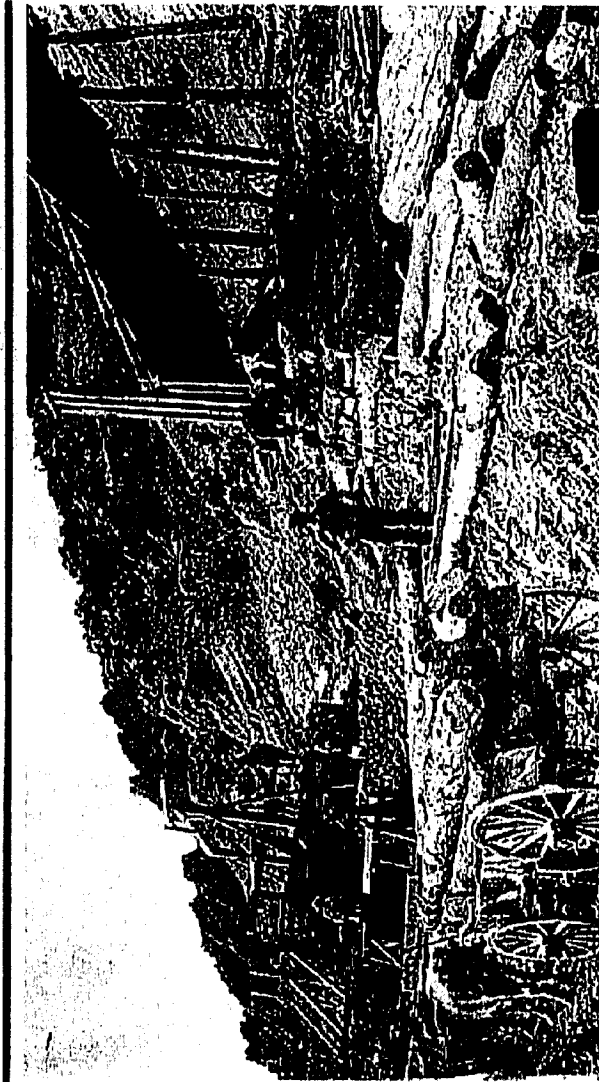


Appendix





Early Development



Company	Date	Scope
Prospectors	1870	Discovered zinc
Mount Hope Mine	1886	Began mining zinc
Callahan Zinc-Lead Co.	1943	Built small mill
Callahan Zinc-Lead Co.	1947	Closed mill after fire
Mount Hope Mines Inc.	1967	Acquired claims



Modern Development

Company	Date	Scope
Phillips	1971	Discovered molybdenum
Exxon	1978-1984	Conducted exploration and metallurgical testing
General Moly	2004	Leased property and commenced development
General Moly	2007	Prepared feasibility study
General Moly	2013	Plans first production

Outdoor Recreation Activity in the Mt. Hope and
Roberts Mountain Area and Population Growth in
Southern Eureka County

Prepared by Rex J. Massey

Outdoor Recreation in the Mt. Hope/Roberts Mountain Area

- The Mt. Hope/Roberts Mountain area supports important outdoor recreational resources and activities which provide social and economic benefits to southern Eureka County residents and visitors. Many popular recreational opportunities are directly or indirectly, related to water resources.
- According to the Bureau of Land Management, the most popular recreational activities in the area include sightseeing, pleasure driving, rock collecting, photography, winter sports, off-highway vehicle use, mountain biking, picnicking, camping, fishing, hunting, and hiking.
- Of particular relevance are outdoor recreational activities which are directly or indirectly linked to water resources. The Mt. Hope/Roberts Mountain area is important for outdoor recreation because:

Outdoor Recreation in the Mt. Hope/Roberts Mountain Area

- There is a limited availability of water resources in Eureka County. Perennial Streams in southern Eureka County are be found primarily in the Mt. Hope/Roberts Mountain area.
- Numerous wildlife species, including migratory birds and fish, require water resources as a central part of their habitat (Nevada Statewide Comprehensive Outdoor Recreation Plan, 2010).
- Major recreational surveys suggest that a vast majority (62%) of users travel less than 1 hour to outdoor recreation destinations (Outdoor Foundation, 2010). The Mt. Hope/Roberts Mountain area is within 1 hour of most locations in Eureka County.
- Respondents to the Nevada Statewide Comprehensive Outdoor Recreation Plan (SCORP, 2004) survey said that the five outdoor recreation areas and facilities that are most needed outside their local community were camping, fishing, parks, hiking, and biking.

Outdoor Recreation in the Mt. Hope/Roberts Mountain Area

- Fishing, Camping, Hiking, Hunting, and Wildlife Viewing are high participation activities among state and national survey respondents with high cross over participation rates (Outdoor Foundation, 2010).
- Outdoor recreation activities have social benefits such as public health and quality of life (SCORP, 2010). Activities such as fishing, camping and hiking function as “gateway” activities (Outdoor Foundation, 2010).

Outdoor Recreation in the Mt. Hope/Roberts Mountain Area

- Outdoor recreation associated with The Mt. Hope/Roberts Mountain area provides Economic benefits to Eureka County:

Fishing in the Mt. Hope/ Roberts Mountain Area

- According to the Nevada Department of Wildlife (NDOW), there are a number of fishable Streams in Eureka County and Mt. Hope/Roberts Mountain Area. In 2009, NDOW planted rainbow trout in Roberts Creek (550 RBT) and Tonkin Springs (1,000 RBT).
- Streams reporting fishing activity include: Tonkin Reservoir, Roberts Creek, Coils Creek, Denay Creek, Duff Creek, Frenchie Creek, Pete Hanson Creek, Pine Creek, and Fish Creek Springs (NDOW 10% Angler Survey).
- Based upon the 2006 Survey of Fishing, Hunting and Wildlife Associated Recreation; the average number of fishing days in Nevada is 13. NDOW records show that total fishing days at Eureka County streams averaged 4.11 days over the last ten years.
- Based upon the average number of trout stamps sold (281) in Eureka County in 2009, the number of days fishing and the average annual fishing related expenditures \$1,111 per fisherman, total economic contribution from Mt. Hope/Roberts Mountain streams is approximately \$154,846.

Outdoor Recreation in the Mt. Hope/Roberts Mountain Area

Big Game Hunting

- Big Game Hunting in the Mt. Hope/Roberts Mountain area consists of Mule Deer and Antelope.
- The number of big game tags issued/sold in the Mt. Hope/Roberts Mountain area was approximately 690 in 2009 for hunt units 141-145, and 155 according to NDOW records.
- The 2006 Survey of Fishing, Hunting and Wildlife Associated Recreation showed that hunters hunting in Nevada spent a total of \$1,922 per hunter for all related items. Excluding special equipment that amount declines to approximately \$1,107 per hunter. For travel related expenditures only, hunters in Nevada spent \$628 in 2006. Total economic contribution from the Roberts Mountain Area:

Hunting Expenditures	2006 Expenditures	Est. Tags Sold *	Multiplier	Total Contribution
Total All Items	\$1,922	690	1.6	\$2,121,888
Trip & Equipment	\$1,107	690	1.6	\$1,222,128
Travel Only	\$628	690	1.6	\$693,312

*Unit Group 141-145, estimated for unit 155 using % of harvest to tags sold, Implan final demand multiplier-2002.

Outdoor Recreation in the Mt. Hope/Roberts Mountain Area

Upland Game bird hunting

- According to NDOW, there were approximately 2,550 hunter days for upland game birds in Eureka County in 2009. The Mt Hope/Roberts Mountain area contains approximately 30% of the land area in Eureka County.
- Upland Game Bird Hunters spent approximately \$60 per day on hunting related expenses.
- Based upon the total number of hunter days multiplied by the land area and the expenditures per day, the total economic contribution is estimated to be approximately \$73,440 annually including the multiplier effect.

Camping/Picnicking Day Use

- Streams in the Mt. Hope/Roberts Mountain area support a variety of camping and day use activities used by Eureka County residents in the spring and summer months and by hunters in the Fall.
- Although camping and dispersed recreation use occurs throughout the area, Roberts Creek and Tonkin Reservoir provide numerous undeveloped sites for camping and picnic/day use.
- Total camping/day use days could be in the range of 800 user days annually. Assuming \$70 per day in expenditures, the total economic contribution from camping/day use could be \$56,000 annually.

Population Growth and Development in Southern Eureka County

Future Population Growth in Southern Eureka County

- State Demographer's estimates show that Eureka County's population over the last 10-20 years remained fairly constant with variations created by mining projects.
- The population of southern Eureka County is approximately 1,100 (2000 Census, Eureka County Assessor).
- The stable or base population of southern Eureka County is approximately 940. The stable or base population excludes relatively short-term and cyclical mining projects such as the Ruby Hill mine.
- Due to longevity of the proposed Mt Hope Project, workforce related population living in Eureka County should be added to the County's base population.
- There are a number of proposed mining projects (A. Johnson, 6/7/2010) likely to be developed in southern Eureka County which will increase the population of southern Eureka County by approximately 260.

Population	Base Population Estimate	Base Population With Proposed Projects
Existing	940	1,100
Mt. Hope Project	700	700
Proposed Projects		260
Total	1,640	2,060

- Over the next ten years the population of Southern Eureka should fluctuate between 1,640 and 2,060.

Population Growth and Development in Southern Eureka County

Conclusions about Population Growth and Development:

- There will be an increase in base population of southern Eureka County due to Mt. Hope Project.
- Cyclical projects and relatively short-term project will continue to create some volatility in the Eureka area with periodic declines and gains in population.
- Overtime the stable or base population of southern Eureka County will trend higher. Employment opportunities is one of the principal factors in population migration according to the Census. In future years more and more local residents could find work at the Mount Hope project and reduce the number of non-local residents working at the project.
- Based upon the pattern of growth and development in southern Nevada over the last 10-20 years, new residential areas and development will likely extend from the Town of Eureka in a northern and westerly direction.
- There are 7,471 acres of private land available in Kobeh Valley. The highest residential density currently allowed for that area by Eureka County is 2.5 acres per dwelling unit. There is a potential to create as many as 2,988 residential lots.

IN THE OFFICE OF THE STATE ENGINEER

OF THE STATE OF NEVADA

1169

ORDER

HOLDING IN ABEYANCE CARBONATE-ROCK AQUIFER SYSTEM GROUNDWATER APPLICATIONS PENDING OR TO BE FILED IN COYOTE SPRINGS VALLEY (BASIN 210), BLACK MOUNTAINS AREA (BASIN 215), GARNET VALLEY (BASIN 216), HIDDEN VALLEY (BASIN 217), MUDDY RIVER SPRINGS aka UPPER MOAPA VALLEY (BASIN 219), LOWER MOAPA VALLEY (BASIN 220), AND FOR FURTHER STUDY OF THE APPROPRIATION OF WATER FROM THE CARBONATE-ROCK AQUIFER SYSTEM, LINCOLN AND CLARK COUNTIES, NEVADA.

WHEREAS, the Nevada State Engineer is designated by the Nevada Legislature to perform the duties related to the management of the water resources belonging to the people of the State of Nevada.¹

WHEREAS, the State Engineer is empowered to make such reasonable rules and regulations as may be necessary for the proper and orderly execution of the powers conferred by law.²

WHEREAS, the State Engineer is empowered to conduct such studies as are necessary.³

WHEREAS, a large portion of the State of Nevada consisting of approximately 50,000 square miles of sparsely populated land is underlain by significant carbonate-rock sequences.⁴

WHEREAS, the carbonate-rock sequences contain groundwater aquifers, which are believed to contain significant, but undetermined, quantities of ground water.

WHEREAS, many persons or entities have filed water right applications requesting permission to appropriate substantial quantities of underground water from the carbonate-rock aquifer system.

WHEREAS, in 1984, the Water Resources Division of the United States Department of Interior, Geological Survey proposed a 10-year investigation of the entire Carbonate Terrane, which includes the carbonate-rock aquifers of the areas referenced above. This study was proposed because the water resources of the Carbonate Terrane were not well defined, the hydrology and geology of the area are complex, and data was sparse.⁵

¹ See, Nevada Revised Statutes chapters 532, 533, 534, 535 and 536.

² NRS § 532.120.

³ NRS § 532.165(1), 533.368 and 533.370(2).

⁴ Michael D. Dettinger, Distribution of Carbonate-Rock Aquifers in Southern Nevada and the Potential for their Development, Summary of Findings, 1985-1988, Summary Report No. 1, United States Geological Survey, Department of Interior and Desert Research Institute, University of Nevada System, p. 3, 1989. See also, Memorandum dated August 3, 1984, from Terry Katzer, Nevada Office Chief, Water Resources Division, United States Department of Interior Geologic Survey, Carson City, Nevada, to Members of the Carbonate Terrane Study, Attachment p. 8, which indicates that the area underlain by significant carbonate-rock sequences in Nevada is over 40,000 square miles of sparsely populated land, and includes 106 hydrographic areas and basins.

⁵ Memorandum dated August 3, 1984, from Terry Katzer, Nevada Office Chief, Water Resources Division, United States Department of Interior Geologic Survey, Carson City, Nevada, to

WHEREAS, it has been known since 1984 that to arrive at some reasonable understanding of the carbonate-rock aquifer system, substantial amounts of money would be required to develop the science, a significant period of study would be required, and that "unless this understanding is reached, the development of carbonate water is risky and the resultant effects may be disastrous for the developers and current users."⁶

WHEREAS, the United States Geological Survey has indicated that given the multiple possible avenues of hydrologic connection between the various aquifers and flow systems, and the uncertainties of recharge and discharge mechanisms and processes, an investigation of the hydrology of the carbonate-rock aquifer system in Nevada is undoubtedly a difficult undertaking.

WHEREAS, an investigation of the carbonate-rock aquifer system is additionally complicated by factors including:⁷

- basic hydrologic data such as groundwater levels in the basin-fill aquifers and the carbonate-rock aquifers, and reliable flow measurements for important springs and major streams are scarce or infrequently obtained in much of the area;
- secondary hydrologic and other data, such as hydraulic parameters, geophysical and geochemical, are lacking in many areas;
- the geometry, properties, and boundaries of the carbonate-rock and basin-fill reservoirs are generally unknown, and definition of these properties can be expensive and difficult;
- climatic conditions today are inadequately defined (particularly at higher altitudes) and conditions during the development of the flow paths within the deep-rock aquifers and flow paths within the carbonate-rock aquifer are even more uncertain;
- uncertainties and inaccuracies exist in current methods of estimating precipitation;
- uncertainties and inaccuracies exist in current methods of estimating groundwater inflow and recharge;
- uncertainties and inaccuracies exist in current methods of estimating groundwater outflow and evaporative discharge;
- only a small number of wells tap the deep carbonate-rock aquifer system;
- because there has been no significant historical pumping of ground water from the carbonate-rock aquifer system, groundwater models can only be used as a limited predictive tool for estimating the principle location and magnitude of the impacts of pumping ground water from the system;
- limited stresses on the water resources of the area under current development conditions allow hydrologists information only on the narrow band of system responses to natural conditions; and
- the relationship between geothermal systems and the deep carbonate-rock aquifers and groundwater flow systems is not well understood.

WHEREAS, in 1985, the Nevada Legislature authorized a program for the study and testing of the carbonate-rock aquifer system of eastern and southern Nevada. The program was a cooperative effort between the State of Nevada and the Federal Government. The overall plan for the program was to study the carbonate-rock aquifers of southern, east-central, and northeastern Nevada as separate phases of work, with a summary of findings to be prepared at the end of each

Members of the Carbonate Terrane Study.

⁶ Ibid.

⁷ Id., Attachment p. 7.

phase. A report, Distribution of Carbonate-Rock Aquifers in Southern Nevada and the Potential for their Development, Summary of Findings, 1985-1988,⁸ summarized the findings of the first phase of the study, which assessed the resources of the carbonate-rock aquifers of southern Nevada. The summary brought together results from more than 20 technical reports produced during the study. The summary indicated that:

The rocks that compose the carbonate-rock aquifers are layers of limestone and dolomite that were deposited hundreds of millions of years ago in much of the eastern Great Basin. Subsequently, the carbonate rocks were much deformed; as a result, they no longer exist as continuous layers beneath the region. Instead, they have been pulled apart to form a few large areas of thick and relatively continuous carbonate rocks. Separating these areas are noncarbonate rocks, within which are isolated mountain-sized blocks of carbonate rock.

Beneath southern Nevada, the thick carbonate-rock layers are continuous enough to transmit ground water at regional scales only beneath a north-south "corridor" 60-90 miles wide that extends southward from east-central Nevada to and beyond the Spring Mountains area west of Las Vegas. Within this corridor are the two major regional flow systems of southern Nevada: the Ash Meadows-Death Valley system and the White River-Muddy River Springs system. These flow systems link the ground water beneath dozens of valleys and over distances exceeding 200 miles. Flow in these systems probably is concentrated along highly transmissive zones associated with (1) recently active faults and (2) confluences of flow near major warm-water springs. Outside of the corridor, the carbonate rocks are present primarily as isolated blocks that form aquifers of limited extent, recharged mostly by local precipitation.

* * *

Large-scale development (sustained withdrawals) of water from the carbonate-rock aquifers would result in water-level declines and cause the depletion of large quantities of stored water. Ultimately, these declines would cause reductions in the flow of warm-water springs that discharge from the regional aquifers. Storage in other nearby aquifers also might be depleted, and water levels in those other aquifers could decline. In contrast, isolated smaller ground-water developments, or developments that withdraw ground water for only a short time, may result in water-level declines and springflow reductions of manageable or acceptable magnitude.

Confidence in predictions of the effects of development, however, is low; and it will remain low until observations of the initial hydrologic results of development are analyzed. A strategy of staging developments gradually and adequately monitoring the resulting hydrologic conditions would provide information that eventually could be used to improve confidence in the predictions.⁹

WHEREAS, because assurances that the adverse effects of development will not overshadow the benefits cannot be made with a high degree of confidence, development of the carbonate-rock aquifer system must be undertaken in gradual stages together with adequate

⁸ Michael D. Dettinger, Distribution of Carbonate-Rock Aquifers in Southern Nevada and the Potential for their Development, Summary of Findings, 1985-1988, Summary Report No. 1, United States Geological Survey, Department of Interior and Desert Research Institute, University of Nevada System, Forward, 1989.

⁹ Id., pp. 1-2.

monitoring in order to predict, through the use of a calibrated model, the effects of continued or increased development with a higher degree of confidence.

WHEREAS, staging development gradually means not developing the resources in one large step, but rather starting with small projects that are possibly augmented gradually if conditions and confidence warrant. This approach allows the effects of development to be observed and analyzed continually, so that the benefits and adverse effects of development can be judged and the effects reversed or mitigated if they prove to be detrimental to existing rights and the environment. This approach would hopefully avoid the havoc that could be created by the curtailment of water use by those who have come to rely on it if impacts occur requiring curtailment of the water use.

WHEREAS, the 1995 Water-Resources Investigations Report 91-4146¹⁰ estimates the total water budget of all southern Nevada aquifers from the natural recharge to the mountains and subsurface inflow to the study area¹¹ to be about 160,000 acre-feet annually, and discharges from major discharge areas to be about 77,000 acre-feet annually.¹²

WHEREAS, it is believed that all of the recharge and subsurface inflow cannot be captured for use.

WHEREAS, in July and August of 2001 nearly four weeks of public administrative hearings were conducted on applications filed by the Las Vegas Valley Water District (Applications 54055 - 54059, inclusive) and Coyote Springs Investment, LLC (Applications 63272 - 63276, inclusive, and 63867 - 63876, inclusive), which together request to appropriate approximately 135,000 acre-feet of water annually from the carbonate-rock aquifer system within the Coyote Springs Valley Hydrographic Basin.¹³

WHEREAS, testimony and evidence from the administrative hearing on the Las Vegas Valley Water District's applications indicates that using the standard Maxey-Eakin technique for estimation of groundwater recharge from precipitation, the recharge for the Coyote Springs Valley, Muddy River Springs, Hidden Valley, Garnet Valley, Black Mountains and Lower Moapa Valley

¹⁰ Michael D. Dettinger, et al., Distribution of Carbonate-Rock Aquifers and the Potential for Their Development, Southern Nevada and Adjacent Parts of California, Arizona and Utah, U.S. Geological Survey, Water-Resources Investigations Report 91-4146, p. 50, 1995.

¹¹ The study area is defined on p. 5 of Water-Resources Investigations Report 91-4146 to be most of southern Nevada south of Tonopah and Pioche.

¹² Discharge areas are identified as Muddy River Springs 36,000 acre-feet annually (afa) of spring flow, Blue Point Spring 240 afa of spring flow, Rogers Spring 920 afa of spring flow, Frenchman Mountain 2,100 afa of underflow toward Colorado River, Pahrump Valley 18,000 afa of underflow to California, Ash Meadows 17,000 afa of spring flow and evapotranspiration, Amargosa Desert 3,000 afa of underflow to Death Valley, and Grapevine Canyon 400 afa of underflow to Death Valley. Water-Resources Investigations Report 91-4146 at 53.

¹³ It is noted that at the administrative hearing on Coyote Springs Investment, LLC Applications 63272 - 63276, inclusive, and 63867 - 63876, inclusive, the applicant indicated they are requesting the State Engineer "to issue the permits as requested but limit their full use until the monitoring and mitigation program is in effect." Transcript, public administrative hearing before the State Engineer, August 20, 2001, p. 58. However, the applicant further indicated that it requested that a minimum of four permits be issued, two in each county, with the second permit in each county to be used to stress the aquifer. Two permits for a total amount of 14,478 afa would be for development, two permits for a total amount of 14,478 afa would be to stress the aquifer under some temporary development. Transcript, public administrative hearing before the State Engineer, August 20, 2001, pp. 91-96. This is after the 27,504 afa requested by the Las Vegas Valley Water District.

areas combined is approximately 3,550 acre-feet annually. Using the modified Maxey-Eakin technique introduced at the administrative hearing (known as the Donovan-Katzer 2000 technique), the recharge is estimated at approximately 6,761 acre-feet annually for the combined areas.¹⁴

WHEREAS, testimony and evidence from the administrative hearing on the Las Vegas Valley Water District's applications indicates that approximately 50,000 acre-feet of groundwater inflow comes into the Coyote Springs Valley from northern groundwater basins and approximately 53,000 acre-feet annually outflows¹⁵ from Coyote Springs Valley of which a portion may be available for capture from that groundwater underflow. While testimony presented indicated a belief that significant quantities of water may be available for capture from storage, it is unknown what quantity that would be and if any underground water could be appropriated without unreasonable and irreversible impacts.¹⁶

WHEREAS, testimony and evidence from the administrative hearing on the Las Vegas Valley Water District's applications indicates that a portion of the ground water outflow from Coyote Springs Valley is believed to discharge at a rate of approximately 37,000 acre-feet annually at the Muddy River Springs area and approximately 16,000 to 17,000 acre-feet annually flows to groundwater basins further south.¹⁷ This 37,000 acre-feet is counted as part of the 53,000 acre-feet outflow from Coyote Springs Valley resulting in 16,000-17,000 acre-feet annual flow that bypasses the Muddy River Springs area.

WHEREAS, these referenced large springs located near the central part of the Upper Moapa Valley, which that collectively discharge approximately 37,000 acre-feet annually of underground water, are fully appropriated pursuant to the Muddy River Decree.¹⁸ It is believed that the source of water discharged originates mainly from the carbonate-rock aquifer system, but it is unknown if the discharge originates solely from the White River Flow System or is also influenced by discharge from the Meadow Valley Flow System or if there is influence from the alluvial aquifer.

WHEREAS, listed endangered and/or potential threatened species exist in the Muddy Springs/Muddy River area.

WHEREAS, testimony and evidence from the administrative hearing on the Las Vegas Valley Water District's applications indicates that their own expert witnesses are unable to make a suggestion to the State Engineer as to what part of the water budget could be captured without a great deal of uncertainty, and that the question cannot be resolved without stressing the system.¹⁹

¹⁴ See, testimony of Terry Katzer and David Donavan; Exhibit 54, p. 4-25, public administrative hearing before the State Engineer, July 16-24, 2001.

¹⁵ Taking into account for 4,000 afa of in-basin recharge and 1,000 afa of evapotranspiration.

¹⁶ See, testimony of Terry Katzer and David Donavan, public administrative hearing before the State Engineer, July 16-24, 2001.

¹⁷ See, testimony of Terry Katzer and David Donavan, public administrative hearing before the State Engineer, July 16-24, 2001.

¹⁸ Judgment and Decree, In the Matter of the Determination of the Relative Rights In and To the Waters of the Muddy River and Its Tributaries in Clark County, State of Nevada, March 12, 1920, Tenth Judicial District Court of the State of Nevada, In and For the County of Clark.

¹⁹ See, testimony of Terry Katzer and David Donavan, public administrative hearing before the State Engineer, June 16-24, 2001.

WHEREAS, testimony and evidence from the administrative hearing on the Las Vegas Valley Water District's applications indicates that the State Engineer's ability to determine if development of the carbonate-rock aquifer system will impact existing rights is dependent on how the water rights are brought "on-line" and monitored.²⁰

WHEREAS, testimony and evidence from the administrative hearing on the Las Vegas Valley Water District's applications indicates that little is known about the hydrologic connectivity between the groundwater basins, that virtually nothing is known about the mountain blocks, estimates of recharge to the area can vary by a factor of two, there is probably some connectivity between the water in the carbonate-rock aquifers and the alluvial groundwater basins,²¹ there is still little data available and not much has changed from the information known in 1984.

WHEREAS, the State Engineer has been provided several different models, which though based on little pumping data, all provide the State Engineer with different analyses, and which all indicate that the pumping of substantial amounts of carbonate-rock aquifer water will likely impact the sources of the Muddy River.

WHEREAS, the State Engineer has previously granted groundwater permits, which authorize use of underground water in the area underlain by the carbonate-rock aquifer system or directly from the carbonate-rock aquifer system in the following quantities:

Coyote Springs Valley (Basin 210)	16,300 acre-feet
Black Mountain (Basin 215)	10,216 acre-feet
Garnet Valley (Basin 216)	3,380 acre-feet
Hidden Valley (Basin 217)	2,200 acre-feet ²²
Muddy River Springs aka Upper Moapa Valley (Basin 219)	14,756 acre-feet
Lower Moapa Valley (Basin 220)	5,813 acre-feet
	50,465 acre-feet

WHEREAS, of all the water rights issued from the carbonate-rock aquifer system, to date very few have actually been pumped.

WHEREAS, if 16,000 to 17,000 acre-feet is believed to by-pass the Muddy River Springs area, the water right permits already issued in Coyote Springs Valley alone equal the estimate of the amount of carbonate flow that by-passes the region and is not part of the flow discharged from the Muddy River Springs area.

WHEREAS, Nevada Revised Statute § 533.370(2)(b) provides that the State Engineer may postpone action on an application in areas where studies of water supplies are necessary.

WHEREAS, Nevada Revised Statute § 533.368 provides that if the State Engineer determines that a hydrological study, an environmental study or any other study is necessary before he makes a final determination on an application, and the applicant, a governmental agency or other person has not conducted such a study or the required study is not available, the State Engineer shall advise the applicant of the need for the study and the type of study required.

²⁰ Ibid.

²¹ Ibid.

²² This 2,200 acre-feet is combined with 2,200 acre-feet issued in Garnet Valley for a total of 2,200 afa between the two basins.

WHEREAS, Nevada Revised Statute § 533.368(4) provides that the State Engineer shall consult with the applicant and the governing body of the county or counties in which the point of diversion and place of use are located concerning the scope and progress of the study.

WHEREAS, the State Engineer believes it is prudent to work with a model, and the appropriate model will be determined in conjunction with the parties identified below who are responsible for participating in the study.

WHEREAS, the State Engineer does not believe it is prudent to issue any additional water rights to be pumped from the identified portions of the carbonate-rock aquifer until a significant portion of the water rights which have already been issued are pumped for a substantial period of time in order to determine if the pumping of those water rights will have any detrimental impacts on existing water rights or the environment.

NOW THEREFORE, the State Engineer orders:

1. All applications pending and any new filings for the appropriation of water from the carbonate-rock aquifer system in Coyote Springs Valley (Basin 210), Black Mountains Area (Basin 215), Garnet Valley (Basin 216), Hidden Valley (Basin 217), Muddy River Springs aka as Upper Moapa Valley (Basin 219), and Lower Moapa Valley (Basin 220) will be held in abeyance until further information is obtained by stressing the aquifer by those water right permits already issued to appropriate water from the carbonate-rock aquifer system.
2. While the studies proposed in 1985 were a beginning, those studies indicated that large-scale developments with sustained withdrawals of water from the carbonate-rock aquifers would result in water-level declines and depletion of stored water, but that isolated smaller groundwater developments or developments of limited duration may result in water-level declines and springflow reductions of manageable and acceptable magnitudes. However, very little additional information based on hard science has been produced since that time. Nevada Revised Statute § 533.368 provides the State Engineer with the authority to withhold action on pending applications and to advise the applicant of the need for additional study. The State Engineer finds that further hydrological study is needed before a final determination can be made on carbonate-rock aquifer system water right applications in the referenced basins.
3. The State Engineer, in conjunction with those identified below as applying for additional water rights and already having an interest in water rights permitted from the carbonate-rock aquifer system, or their successors in interest, will conduct a study to provide information on the effect of pumpage of those water rights which have already been issued from the carbonate-rock aquifer.

The entities that shall participate in the study must at a minimum include:

Las Vegas Valley Water District
Southern Nevada Water Authority
Coyote Springs Investment, LLC
Nevada Power Company
Moapa Valley Water District.

The study must cover a 5-year minimum period during which at least 50% of the water rights currently permitted in the Coyote Springs Valley groundwater basin are pumped for at least 2 consecutive years.

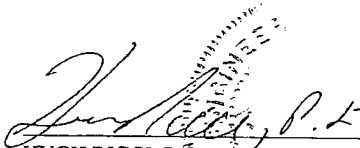
4. These referenced applicants or permittees shall bear the cost of the study, and a cash deposit divided pro rata among them will be required as set forth in NRS § 533.368(3) after a determination of the estimate of cost to complete the study.

5. The State Engineer will arrange meetings between the State Engineer and the Las Vegas Valley Water District, Southern Nevada Water Authority, Coyote Springs Investment, LLC, Nevada Power Company, and Moapa Valley Water District, or their successors, and the governing bodies of the counties in which there are proposed points of diversion and places of use under their pending applications concerning the scope of the study.

6. The State Engineer orders the Las Vegas Valley Water District, Southern Nevada Water Authority, Coyote Springs Investment, LLC, Nevada Power Company, Moapa Valley Water District, Dry Lake Water Company, LLC, Republic Environmental Technologies, Inc., Chemical Lime Co., Nevada Cogeneration Associates, or their successors, who presently hold water rights authorized for appropriation from the carbonate-rock aquifer, to provide the other parties to the study and the State Engineer with data on a quarterly basis as to the rate at which water was diverted under the specific water right permits issued, total acre-feet diverted per month, and monthly water level measurements

7. After the study period, the Las Vegas Valley Water District; Southern Nevada Water Authority; Coyote Springs Investment, LLC; Nevada Power Company; and Moapa Valley Water District are ordered to file with the State Engineer, within 180 days of the end of the fifth consecutive year, a report as to the information obtained and any impacts seen to the groundwater or surfacewater resources of the carbonate-rock aquifer or alluvial aquifer systems from the pumping of those rights presently permitted.

8. At the end of the study period, the Las Vegas Valley Water District/Southern Nevada Water Authority will update Exhibit 54 from the July 2001 hearings in order to show the State Engineer the effects, if any, of the water it requested for appropriation under Applications 54055 - 54059, inclusive, as they are filed. The State Engineer will then make a determination if he has sufficient information to proceed with ruling on those applications for which hearings have already been conducted, i.e., Las Vegas Valley Water District (Applications 54055 - 54059, inclusive) and Coyote Springs Investment, LLC (Applications 63272 - 63276, inclusive, and 63867 - 63876, inclusive), and other applications pending for the appropriation of water from the carbonate-rock aquifer system.


HUGH RICCI, P.E.
State Engineer

Dated at Carson City, Nevada,

this 8th day of March, 2002

CERTIFICATE OF SERVICE

I, the undersigned, declare under penalty of perjury, that I am an employee of the Nevada Division of Water Resources, that I am over the age of eighteen (18) years, and that I am not a party to, nor interested in, this action. On this date, I mailed a true and correct copy of Nevada Division of Water Resources' Order No. 1169, addressed to the following:

Las Vegas Valley Water District
Attn: Kay Brothers
1001 S. Valley View
Las Vegas, NV 89153
Cert. Mail #7000 0520 0023 8555 9034

Coyote Springs Investment, L.L.C.
7755 Spanish Springs Road
Sparks, NV 89436
Cert. Mail #7000 0520 0023 8555 9041

C.S. Inc.
Judy Kuban
1625 Wendy Way
Reno, NV 89509
Cert. Mail #7000 0520 0023 8555 9058

Dry Lake Water, LLC
2701 North Tenaya Way, Suite 200
Las Vegas, NV 89128
Cert. Mail #7000 0520 0023 8555 9065

Bonneville Nevada Corp.
257 East 200 South, Suite 800
Salt Lake City, UT 84111
Cert. Mail #7000 0520 0023 8555 9072

C.O. Myers, Exec. Dir.
Nevada Cogeneration Ass.
P.O. Box 81378
Bakersfield, CA 93380
Cert. Mail #7000 0520 0023 8555 9089

Nevada Power Co.
Attn: Craig York
P.O. Box 230
Las Vegas, NV 89151-0001
Cert. Mail #7000 0520 0023 8555 9096

Oxford Energy of Nevada, Inc.
3510 Unocal Place
Santa Rosa, CA 95403
Cert. Mail #7000 0520 0023 8555 9102

James W. Adams
7439 La Palma Ave., Suite 234
Buena Park, CA 90620
Cert. Mail #7000 0520 0023 8555 9119

Stallion Sand & Gravel, LLC
624 Casa del Norte
North Las Vegas, NV 89031
Cert. Mail #7000 0520 0023 8555 9126

Moapa Band of Paiute Indians
P.O. Box 340
Moapa, NV 89025
Cert. Mail #7000 0520 0023 8558 4562

Moapa Valley Water District
P.O. Box 257
Logandale, NV 89021
Cert. Mail #7000 0520 0023 8558 4579

Three Kids Enterprises
4055 S. Spencer St., Suite 106
Las Vegas, NV 89119
Cert. Mail #7000 0520 0023 8558 4586

Sandia Construction Inc.
c/o Cameron Adams
Box 1297
Susanville, CA 96103
Cert. Mail #7000 0520 0023 8558 4593

Nevada Cogeneration Associates
420 N. Nellis Blvd., #A3-148
Las Vegas, NV 89110
Cert. Mail #7000 0520 0023 8558 4609

N. Burgess
420 N. Nellis Blvd., #A3-117
Las Vegas, NV 89110
Cert. Mail #7000 0520 0023 8558 4616

North Valley Holdings
500 Damonte Ranch Parkway, Suite 1056
Reno, NV 89511
Cert. Mail #7000 0520 0023 8558 4623

Michael Buschelman
P.O. Box 51371
Sparks, NV 89435
Cert. Mail #7000 0520 0023 8558 4630

William Penn
CMS Generation Co.
330 Town Center Drive, Ste. 1100
Dearborn, MI 48126
Cert. Mail #7000 0520 0023 8558 4647

003511

JA4923

Thomas Shelton
CMS Generation Co.
2154 Hastings Ct.
Santa Rosa, CA 95495-8577
Cert. Mail #7000 0520 0023 8558 4654

Wyman Engineering Consultants
P.O. Box 60473
Boulder City, NV 89006-0473
Cert. Mail #7000 0520 0023 8558 4661

John E. Hiatt
8180 Placid St.
Las Vegas, NV 89123
Cert. Mail #7000 0520 0023 8558 4678

City of Caliente
Attn: George T. Rowe, Mayor
P.O. Box 158
Caliente, NV 89008
Cert. Mail #7000 0520 0023 8558 4685

County of Nye
P.O. Box 1767
Tonopah, NV 89049
Cert. Mail #7000 0520 0023 8558 4692

Ely Shoshone Tribe
16 Shoshone Circle
Ely, NV 89301
Cert. Mail #7000 0520 0023 8558 4708

Lincoln County, Board of Commissioners
P.O. Box 90
Pioche, NV 89043
Cert. Mail #7000 0520 0023 8558 4715

Clark County Commissioners
500 S. Grand Central Parkway
Las Vegas, NV 89106-4506
Cert. Mail #7000 0520 0023 8558 4807

Muddy Valley Irrigation District
P.O. Box 160
Logandale, NV 89021
Cert. Mail #7000 0520 0023 8558 4722

U.S. Bureau of Indian Affairs
Attn: Barry Welch
P.O. Box 10
Phoenix, Az. 85001
Cert. Mail #7000 0520 0023 8558 4739

U.S.D.I., B.L.M.
Attn: Ben F. Collins, District Manager
P.O. Box 26569
Las Vegas, NV 89126
Cert. Mail #7000 0520 0023 8558 4746

U.S. Fish and Wildlife Service
911 NE 11th Ave.
Portland, OR 97232-4184
Cert. Mail #7000 0520 0023 8558 4753

U.S. National Park Service
Dan McGlothlin
1201 Oak Ridge Drive, Suite 250
Fort Collins, CO 80525
Cert. Mail #7000 0520 0023 8558 4760

Republic Environmental Technologies, Inc.
770 E. Sahara Ave.
Las Vegas, NV 89104
Cert. Mail #7000 0520 0023 8558 4777

Chemical Lime Co.
P.O. Box 3609
North Las Vegas, NV 89036
Cert. Mail #7000 0520 0023 8558 4784

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420 N. Nellis Blvd., A3-148 and 117
Las Vegas, NV 89110
Cert. Mail #7000 0520 0023 8558 4791

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Marshall Hill Cassas & de Lipkau
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Reno, NV 89505

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U.S. Dept. of Interior
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Lakewood, CO 80215

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Marshall Hill Cassas & deLipkau
P.O. Box 2790
Reno, NV 89505

Byron Mills
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Las Vegas, NV 89101

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U.S. Dept. of Interior
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Sacramento, CA 95825-1890

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Carson City, NV 89703

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Carl Savely
Lionel, Sawyer & Collins
50 West Liberty St. Suite 1100
Reno, NV 89501

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Agent C.S. Inc.
P.O. Box 35136
Las Vegas, NV 89133

Charles Cave
2325 W. Charleston Blvd.
Las Vegas, NV 89102

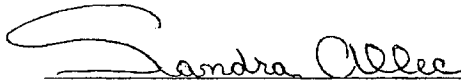
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Woodburn & Wedge
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Reno, NV 89511

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561 Keystone Ave. #200
Reno, NV 89503

Linda Bowman
540 Hammil Lane
Reno, NV 89511

George Benesch
P.O. Box 3498
Reno, NV 89505

Dated this 8 day of March, 2002.


Sandra Allee