

# **Explanation**

- Proposed Well Site
- Existing Well Location
- Springs
- Hydrologic Basin Boundary
- Generalized Well Field Area

0 0.25 0.5 1 1.5 2 2.5 Miles

**Idaho General Mines, Inc**

**Kobeh Valley Exploration Wells**

**Figure 3**

**Kobeh Valley Central Well Field B Detail**



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In the event that one or more of the test wells is completed in a highly transmissive zone that is capable of supplying large volumes of water with limited drawdown, the aquifer test will be continued until the drawdown has stabilized to less than 0.1 ft of additional drawdown per hour for six consecutive hours. In such instances the well will be pumped for at least 72 hours before termination.

## **Well Discharge**

### **Rates**

Pumping rates will be measured with totalizing flow meters. An orifice plate will be used to compare with flow meter readings. Totalizing meter and orifice plate readings will be initially taken on ten-minute intervals until flow from the test well has stabilized at a relatively constant rate ( $\pm 5$  percent of the average desired pumping rate), transitioning to every couple of hours after initial startup for the first day, then to daily thereafter.

### **Conveyance of Discharged Water**

All well discharge will occur under temporary discharge permits from Nevada Division of Environmental Protection (NDEP). Discharge conveyance will be done with temporary irrigation piping or hose laid overland with minimal disturbance of land surface. Discharge will be conveyed away from the test well and any observation wells, with an anticipated minimum conveyance distance of 1,000 feet. Discharge will be to an ephemeral drainage in the vicinity of the test well, and away from any perennial streams. Water dispersion will be conducted at the discharge point, using a dispersion pipe (section of perforated pipe), and standard BMP practices will be employed to minimize any erosion associated with the temporary discharge. The discharged water will be allowed to infiltrate in an ephemeral wash under undisturbed conditions, and will not be impounded or otherwise dispersed, subject to NDEP approval.

### **Water Chemistry Data Collection**

General water chemistry samples will be collected from the pumping well during the start of pumping (within the first couple hours) and near the end of pumping. The water samples will be analyzed for common ions, common trace elements (iron, manganese, and arsenic), pH, total dissolved solids, stable isotope ratios of oxygen and hydrogen. Additional analyses for carbon isotopes and tritium may be conducted on select wells to compliment regional flow system evaluations. Streams and springs within the aquifer testing network will additionally be sampled and analyzed for the above constituents.

### **Data Evaluation**

Aquifer testing data will be evaluated to determine aquifer transmissivity, storage coefficients, identify presence of boundary conditions, and to make predictions of production well yield and sustainability. The aquifer testing data will also integrate into other evaluations of aquifer connections and flow systems. In addition, data generated from aquifer testing will be integrated into the numeric flow model for predicting long-term responses to well field pumping.

## References

SRK Consulting, Inc., 2007a, Amendment to Kobeh Valley Central-A Well Field Drilling Notice; Prepared for Idaho General Mines, Inc., 5pp.

\_\_\_\_\_, 2007b, Amendment to Kobeh Valley Central-B Well Field Drilling Notice; Prepared for Idaho General Mines, Inc., 5pp.

Stallman, R.W., 1971, Aquifer Test Design, Observation, and Data Analysis, Chapter B1, Book 3 Applications of Hydraulics, Techniques of Water-Resources Investigations of the United States Geological Survey, 19pp.

Walton, W. C., 1987, Groundwater Pumping Tests Design and Analysis, National Water Well Association and Lewis Publishers, 104 pp.



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Nevada State Office  
P.O. Box 12000 (1340 Financial Blvd.)  
Reno, Nevada 89520-0006  
<http://www.nv.blm.gov>



In Reply Refer To:  
3809 (NV923z)

JUN 25 2008

### DECISION

Obligor:	:	
Eureka Moly, LLC	:	BLM Bond Number: NVB000912
1726 Cole Blvd., Suite 115	:	Bond Amount Accepted: \$817,331
Lakewood, CO 80401	:	

### Bond Rider Accepted Obligation Under Statewide Bond Adjusted

The BLM Nevada State Office (NSO) currently holds BLM bond number NVB000912 with Eureka Moly, LLC, as principal, in the amount of \$576,309. The bond provides coverage for surface reclamation activities on operations conducted by Eureka Moly, LLC on lands in Nevada under the regulations at 43 CFR 3809.

On June 17, 2008, the NSO received a bond rider from Eureka Moly, LLC, increasing BLM bond number NVB000912 to \$817,331. The rider has been examined, found satisfactory, and is accepted effective June 17, 2008.

On June 11, 2008, the BLM Mount Lewis Field Office increased the reclamation cost estimates on N-81811, the Mount Hope Project, and N-83246, the Central "A" Well Project, to \$244,038 and \$126,313, respectively. The BLM Mount Lewis Field Office also reduced the reclamation cost estimate on N-83245, the Central "B" Well Project, to \$200,568.

Effective the date of this Decision, notices are obligated to the bond as shown in the table below.

Operations Number	Operations Name	Bond Amount Obligated
N-80914	Mount Hope East	\$ 92,570
N-81485	Mount Hope	\$ 39,127
N-81811	Mount Hope	\$ 244,038
N-83120	Mount Hope West	\$ 114,685
N-83245	Central "B" Well	\$ 200,568
N-83246	Central "A" Well	\$ 126,313
Total Obligations Under NVB000912		\$ 817,301

Considering the bond amounts accepted and obligated, \$30 remains available under BLM bond number NVB000912 for new operations or amendments to existing operations.

If you have any questions, please call Lacy Trapp at 775-861-6599; send facsimile to 775-861-6710; write to the attention of NV923z at the address on the letterhead; or send electronic mail to [Lacy\\_Trapp@nv.blm.gov](mailto:Lacy_Trapp@nv.blm.gov).

**ATANDA CLARK**

Atanda Clark  
Chief, Branch of Minerals Adjudication

cc:  
General Moly Inc.  
Attn: Brian Musser  
455 8<sup>th</sup> Street  
Elko, NV 89801

NV060 (CStrickland)  
NV923 (CDragon)

**In The Matter Of:**  
*Division of Water Resources*  
*In re Applications 70181, etc.*

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*Kobeh Valley NDWR Hearing*  
*Volume II*  
*October 14, 2008*

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*Capitol Reporters*  
*1201 Johnson Street*  
*Suite 130*  
*Carson City, Nevada 89706*  
*775-882-5322*

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1 Appreciate it. We want to look at admitting Exhibits 49 and  
2 50?

3 MS. PETERSON: Yes. Thank you.

4 HEARING OFFICER WILSON: Any objection to 49 or  
5 50?

6 MR. De LIPKAU: No, sir.

7 HEARING OFFICER WILSON: Those will be admitted.  
8 Let's go off the record a minute and discuss where we're at.

9 (A discussion was held off the record.)

10 HEARING OFFICER WILSON: Let's be back on the  
11 record. We're going to go forward with Mr. Gallagher; is  
12 that correct?

13 MS. PETERSON: Yes, thank you. Eureka County  
14 would call Jim Gallagher.

15  
16 JIM GALLAGHER  
17 called as a witness on behalf of Eureka  
18 County, having been previously duly sworn,  
19 was examined and testified further as follows:

20  
21 DIRECT EXAMINATION

22 BY MS. PETERSON:

23 Q. Would you please state your name for the record  
24 again?

25 A. Jim Gallagher.

1 Q. How long have you lived in Eureka County?  
2 A. Twenty-nine years.  
3 Q. And did you move to Eureka County in 1979?  
4 A. Yes, I did.  
5 Q. I can't remember if you testified before, so I  
6 apologize. What's your occupation?  
7 A. Farmer.  
8 Q. Are you familiar with the Hay Ranch, also known  
9 as the Risi Ranch?  
10 A. Yes, ma'am.  
11 Q. I have Exhibit 32 in front of you. Could you  
12 point out to the State Engineer's Office where the Hay Ranch  
13 or the Risi Ranch is?  
14 A. It's just as you go through Devil's Gate going  
15 west, it's on Highway 50.  
16 Q. Do you also know where the Fish Springs or also  
17 known as the Bartine Ranch is?  
18 A. Yes. It's about 26 miles from Eureka on Highway  
19 50 right at the 3-Bar Road.  
20 Q. Is that west on Highway 50?  
21 A. Yes, ma'am.  
22 Q. Is that depicted on Exhibit 32, the ranch  
23 straddles Highway 50?  
24 A. Yes.  
25 Q. Is there any writing on Exhibit 32 that would



1 indicate exactly where that ranch is?

2 A. A little bit to the left is a reservoir, above  
3 that it says Hot Springs. I can't read anything on the  
4 picture itself.

5 Q. Are you also familiar with the Willow Creek, also  
6 known as the Three F Ranch?

7 A. Yes. It also splits Highway 50 about probably 12  
8 or 15 miles to the west of Bartine.

9 Q. That's also located on your Exhibit 32?

10 A. Yes, it is.

11 Q. Could you just describe into the record where it  
12 is located on Exhibit 32?

13 A. Just east of the county line straddling Highway  
14 50.

15 Q. Have you had an occasion to be familiar with  
16 these ranch properties?

17 A. Only by driving down the road. I haven't done  
18 anything on the ranches themselves.

19 Q. Was there a period of time that you were  
20 traveling regularly on Highway 50?

21 A. Yes. I was on a bank board in Reno for nine  
22 years and had a monthly board meeting, had to be in Reno once  
23 a month for those nine years.

24 Q. What were those nine years?

25 A. '94 through 2003.

1 Q. The bank board you were on, was that the Farm  
2 Credit Board?

3 A. Yes.

4 Q. You regularly traveled along Highway 50 once a  
5 month for those nine years?

6 A. Yes.

7 Q. And on the Hay Ranch, the Fish Spring Ranch, or  
8 the Willow Creek Ranch, did you ever see any irrigation  
9 occurring on any of those ranches?

10 A. Not more than natural, the spring runoff. Never  
11 saw any pumped water.

12 Q. Where was there natural water? On which ranch?

13 A. There was on the Hay Ranch, Risi.

14 Q. Not on Fish Springs or the Willow Creek?

15 A. I never remember seeing those fields.

16 Q. At all?

17 A. Well, at Bartine, the artesian runs year-round,  
18 so that grass along the road always had water on it.

19 MS. PETERSON: That's all questions I have.

20 HEARING OFFICER WILSON: Thank you.

21 Cross-examination?

22 EXAMINATION

23 BY MR. KING:

24 Q. Do you know the nature of the water rights on the  
25 Risi Ranch, groundwater rights that is?

1 A. No more than I've heard in the testimony here.

2 Q. You did say there is flowing artesian water on  
3 the Fish Creek Ranch, the Bartine Ranch?

4 A. Yes.

5 Q. And you have no recollection of seeing water  
6 applied to the Three F Ranch?

7 A. No, I have not.

8 MR. De LIPKAU: No further questions.

9 HEARING OFFICER WILSON: Thank you. Any  
10 questions of staff? Thank you, Mr. Gallagher. You may step  
11 down. I think we'll end today with two more witnesses  
12 tomorrow morning for Eureka County; is that correct?

13 MS. PETERSON: Yes.

14 HEARING OFFICER WILSON: You have two more  
15 witnesses tomorrow and you anticipate finishing those in the  
16 morning?

17 MS. PETERSON: Yes.

18 HEARING OFFICER WILSON: In that case, we'll be  
19 off the record until 8:30 tomorrow morning. Thank you.

20

21 (The proceedings recessed at 4:30 p.m.)

22

23

24

25

**In The Matter Of:**  
*Division of Water Resources*  
*In re Applications 70181, etc.*

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*Kobeh Valley NDWR Hearing*  
*Volume I*  
*October 13, 2008*

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*Capitol Reporters*  
*1201 Johnson Street*  
*Suite 130*  
*Carson City, Nevada 89706*  
*775-882-5322*

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1 he is listed as a witness for Eureka County.

2 MS. PETERSON: We did list Mr. Halpin as a  
3 witness and I did ask Mr. De Lipkau this morning if we could  
4 take him out of order. I'm not quite sure how you want to  
5 proceed with that, but he's only available today. Whether we  
6 call him back up during our case or ask him questions now,  
7 I'd like to have him on today.

8 HEARING OFFICER WILSON: I'd like to do it now.  
9 Any objection?

10 MR. De LIPKAU: No objection.

11  
12 TIM HALPIN  
13 called as a witness on behalf of  
14 himself, having been first duly sworn,  
15 was examined and testified as follows:

16  
17 DIRECT EXAMINATION

18 BY MR. MILLER:

19 Q. Mr. Halpin, do you own any property in the  
20 valley?

21 A. Yes, I'm a small farmer.

22 Q. You're in fact a protestant in this proceeding?

23 A. Yes, I protested the original applications. I  
24 have the numbers here if you need them.

25 Q. Have you prepared a statement in connection with



1 your protest?

2 A. A brief statement, yes.

3 Q. Would you like to read that into evidence or  
4 summarize it?

5 A. Yeah. I moved to Eureka and began farming  
6 32 years ago. I had long-range plans to be able to retire  
7 and have something to pass on to my children. Farming is a  
8 lifestyle that my wife and I enjoy.

9 I never believed that my water was in jeopardy  
10 but could the moly mine get their water rights, my mine could  
11 be in jeopardy. I've got a few things I pulled off the  
12 Internet. The first thing is about from the Groundwater  
13 Resource Report 1 by O. J. Loeltz and G.T. Melford from 1961,  
14 says, "Although Nevada is known as an area of closed basins,  
15 it has many valleys that are not closed topographically and  
16 even more that are not closed hydraulically. That is,  
17 groundwater moves from one basin to another beneath  
18 topographical divides. Undoubtedly there are many.

19 "Most of the valleys are drainage basins that  
20 have underground hydraulic interconnections with other  
21 valleys that are in southern and eastern Nevada."

22 And then the same report says, "Basins or valleys  
23 that are not closed hydraulically give rise to many  
24 groundwater problems. An obvious one is it may be very  
25 difficult to manage the supply in the several interconnected

1 basins or valleys.

2 "Moreover, it may be difficult to ascertain the  
3 source, the path and the rate of movement of water that is  
4 being discharge from a valley or basin that receives  
5 groundwater inflow from another series of valleys."

6 One more thing on there is, "Problems associated  
7 with infringement of water rights, it will increase as Nevada  
8 water resources are developed more fully. Unfortunately  
9 problems relating to infringement of water rights cannot be  
10 evaluated properly unless the hydraulic systems involved and  
11 the problems are known and understood."

12 This one is from the Diamond Valley flow system  
13 phase 2, 2008-2009 by Mary Tumbusch and Russ Plume. It says,  
14 "The Diamond Valley flow system hydrographic areas in central  
15 Nevada," they are Monitor Valley, Antelope Valley, Kobeh  
16 Valley, Diamond Valley and Stevens Basin. "These  
17 hydrographic areas which cover an area of approximately  
18 3,106 miles square are interconnected by ephemeral streams,  
19 by subsurface flow in basin fill aquifers, and to a poorly  
20 understood extent by a subsurface flow in the deep carbonate  
21 rock aquifer.

22 "The need to develop a better understanding of  
23 the region's flow system arises from likely development of  
24 groundwater for agriculture and mining, ongoing groundwater  
25 declines in Diamond valley, the terminus of the flow system,

1 and possible exportation of water for urban use."

2 Another report here from Mary Tumbusch and  
3 Russell Plume says, "The Diamond Valley flow system is in an  
4 area of about 320 square miles in central Nevada and consists  
5 of five hydrographic areas; Monitor, Antelope, Kobeh, Diamond  
6 and the Stevens Basin."

7 My well, about my well. I drilled a new well in  
8 1976 or 1978, excuse me. Since 1978 according to the  
9 Department of Agriculture water readings until 2008 my water  
10 level has dropped four feet. I'm the furthest west well in  
11 Diamond Valley.

12 I believe that I have a direct flow from Kobeh  
13 Valley to my well because I do not have the drawdown the rest  
14 of Diamond Valley has. I think that proves that Kobeh Valley  
15 water is coming into Diamond Valley. That's just my opinion.

16 HEARING OFFICER WILSON: Mr. Halpin, I know you  
17 told me in the prehearing conference about where your farm  
18 is. Could you describe it again for the record?

19 THE WITNESS: I'm probably the southwestern edge  
20 of Diamond Valley near Devil's Gate, maybe two miles north of  
21 Devil's Gate. I took some water samples trying to tie my  
22 water in with somebody.

23 I don't have the knowledge or the resources to do  
24 it, but Dwight Smith at one of the meetings said that my  
25 water is dissimilar to Diamond Valley and the samples were

1 similar to Shipley Springs which is 20 miles north.

2 I'm concerned about my water being so close to  
3 Kobeh Valley and if they draw from that, what's that going to  
4 do to me? If I'm getting basin to basin flow, will that take  
5 my water?

6 Diamond Valley water is over appropriated. Any  
7 more taken from Kobeh Valley would contribute to declines in  
8 Diamond Valley. The applications, the 12 applications that  
9 they originally applied for that I protested are  
10 approximately four miles from my well.

11 We need to wait for the USGS reports so we'll  
12 understand everything better. I feel the State should not  
13 grant their permits. It will over appropriate Kobeh Valley  
14 and have a severe effect on Diamond Valley. That's all I  
15 have.

16 HEARING OFFICER WILSON: Thank you, sir. Further  
17 questions for Mr. Halpin?

18 MR. MILLER: I would defer my questioning to  
19 Karen Peterson.

20 MS. PETERSON: This is Eureka County's portion of  
21 the case.

22 DIRECT EXAMINATION

23 BY MS. PETERSON:

24 Q. Mr. Halpin, my name is Karen Peterson and I'm the  
25 attorney that's representing Eureka County in this

1 proceeding. I'm going to give you a map that you might be  
2 able to use. It's Exhibit 32 that we proposed. I'll just  
3 wait for the State Engineer, their office, to get that map  
4 out too.

5 If you want to show them on there where your  
6 ranch is, you can show them and I'll be asking some other  
7 questions about the other ranches in the area. Actually, I  
8 have another copy of it.

9 Briefly, Mr. Halpin, you came to Eureka County in  
10 1976; is that correct?

11 A. Yes.

12 Q. What is your occupation? I know you said you own  
13 a farm, but do you have another occupation?

14 A. I farm and do contract haying, hay hauling.

15 Q. How long have you been hay hauling in Eureka  
16 County?

17 A. Thirty-two years.

18 Q. Are you familiar with all the ranches in northern  
19 Nevada?

20 A. Most of them.

21 Q. Are you familiar with the ranches in Eureka  
22 County?

23 A. Pretty much all of them, yeah.

24 Q. Are you familiar with the ranches in Kobeh  
25 Valley?



1 A. Pretty much, yeah.

2 Q. Are you familiar with the Willow Ranch and it's  
3 also sometimes referred to I guess as the Three F Ranch?

4 A. Yes.

5 Q. Could you point that out on Exhibit 32?

6 A. Right here.

7 Q. The Willow Ranch, have you ever worked on that  
8 ranch?

9 A. Yes.

10 HEARING OFFICER WILSON: Mr. Halpin, when you say  
11 the ranch is right here, we can't get that on the record. If  
12 you could describe that a little better?

13 THE WITNESS: The ranch is right here on Highway  
14 50.

15 HEARING OFFICER WILSON: Can you say where along  
16 Highway 50?

17 BY MS. PETERSON:

18 Q. Are there water rights points of diversion  
19 numbers on the map that you're referring to?

20 A. Yes. 75048. I can't make out the last number.  
21 It's near the Eureka County line.

22 HEARING OFFICER WILSON: That's good, near the  
23 Eureka County line?

24 THE WITNESS: Eureka/Lander County line.

25 HEARING OFFICER WILSON: Along Highway 50.

1 THE WITNESS: It would be the third ranch from  
2 Eureka going west, private owned.

3 HEARING OFFICER WILSON: Three ranches over, in  
4 Eureka County?

5 THE WITNESS: Yes. From Diamond Valley I guess  
6 it would be.

7 MS. PETERSON: There's Bean Flat right under the  
8 8 and the ranch on Highway 50 right below that.

9 BY MS. PETERSON:

10 Q. Is that correct?

11 A. Yes, Highway 50 splits right through the middle  
12 of it.

13 HEARING OFFICER WILSON: Do you care if I write  
14 Willow Ranch on it?

15 MS. PETERSON: No. Three F, that's another name  
16 for it. They're the same ranch.

17 BY MS. PETERSON:

18 Q. Were you involved in any work on that ranch?

19 A. Yes.

20 Q. When was that?

21 A. The first time probably was, it was 1980.

22 Q. Was there any irrigation of that ranch in 1980?

23 A. That's what I was doing there. I was hired to  
24 harvest the crop they had.

25 Q. About how much of the acreage was irrigated?

1           A.    I don't know the total acreage, but according to  
2   the fields, I would estimate one-third of the acreage is in  
3   the irrigated fields.  Water would not run down the fields.  
4           Q.    Did you do any subsequent work at the Willow  
5   Ranch?  
6           A.    I've delivered hay there, yeah.  
7           Q.    Was there any attempt at irrigation in 1988?  
8           A.    Yes.  
9           Q.    Do the Russells own that then?  
10          A.    Yes.  
11          Q.    And what did you do in 1988?  
12          A.    I wasn't involved in the irrigation or nothing.  
13   I was doing work for Russell hauling hay.  
14          Q.    And was a portion of the ranch irrigated at that  
15   time?  
16          A.    Yes.  
17          Q.    Since 1988 have you ever seen any of that ranch  
18   irrigated?  
19          A.    No.  
20          Q.    And I mean 1989, 1990, 1991, 1992, all the way to  
21   2008, have you ever seen any part of that ranch irrigated  
22   with underground water?  
23          A.    No.  Russell irrigated in '88.  It could have  
24   possible been in '87, but I'm positive it was in '88, but he  
25   did it one year and it's never been irrigated since.

1 Q. Now I'm going to turn to the Hay Ranch. If you  
2 could point on the map where the Hay Ranch is?

3 A. When you go through Devil's Gate it would be the  
4 first deeded property by the Highway 50 sign into Kobeh  
5 Valley.

6 Q. Does that also split the highway?

7 A. Yes.

8 Q. That has the word ranch right underneath the  
9 green portion, is that correct, on the map?

10 A. Right.

11 Q. Is that also known as the Risi Ranch?

12 A. Yes, now it is.

13 Q. Have you ever seen, in the 30 years you've been  
14 in Eureka County seen the Risi Ranch irrigated?

15 A. I haven't seen it but I know they tried.

16 Q. Do you know when that was?

17 A. When the Risis first bought it they tried to  
18 irrigate. The water wouldn't go nowhere. Flood irrigation  
19 on meadows, no corrugation, no borders, water runs out there  
20 and goes down. It wasn't feasible.

21 Q. Can you pinpoint that time frame when that was  
22 occurring for the State Engineer?

23 A. No. I just discussed it with them over the  
24 years.

25 Q. But with your own eyes have you ever seen that

1 ranch irrigated with underground water?

2 A. No.

3 Q. Do you pass by that ranch every year?

4 A. Yeah, frequently.

5 Q. Twenty times a year?

6 A. One hundred fifty times a year.

7 Q. Then next I'll go to the Bartine Ranch.

8 HEARING OFFICER WILSON: Before you go on, you  
9 mentioned that you'd never seen it irrigated but you still  
10 really didn't give a time frame. Can you give us any type of  
11 a time frame?

12 THE WITNESS: I did some horseback work for the  
13 original owners when I moved there named Hopinga . He did a  
14 little sprinkler irrigation and I'm guessing 100 acres.

15 HEARING OFFICER WILSON: What year?

16 THE WITNESS: I'm guessing '77.

17 HEARING OFFICER WILSON: Around '77? Okay. And  
18 after 1977 did you ever see any groundwater irrigation?

19 THE WITNESS: No, I didn't.

20 BY MS. PETERSON:

21 Q. Directing your attention to, and I don't know if  
22 I'm using the right word, Bean Flat, the Damele Ranch?

23 A. I know nothing about that.

24 Q. Do you know where it is on the map?

25 A. No.



1 Q. Have you ever hauled hay out of that?  
2 A. I've hauled to the Damele Ranch but I don't know  
3 where that property is you're talking about.  
4 Q. The Bean Flat Ranch, you don't know where that  
5 is?  
6 A. No.  
7 Q. Turning your attention to the Bartine Ranch, the  
8 Fish Creek Ranch, do you know where that ranch is located?  
9 A. Yes.  
10 Q. Could you point that out on the map, Exhibit 32?  
11 A. That would be the ranch between the Willows and  
12 the Risi Ranch right near the Hot Springs reservoir sign on  
13 the ranch.  
14 Q. It looks like it has two points of diversion?  
15 A. Right.  
16 Q. And it also splits Highway 50?  
17 A. Yes.  
18 Q. And you're familiar with that ranch?  
19 A. Somewhat.  
20 Q. Is there an artesian well on that ranch?  
21 A. Yes.  
22 Q. Have you seen part of the -- well, have you seen  
23 some pasture irrigation from that artesian well?  
24 A. It runs continuously, yeah.  
25 Q. Any other crop grown on that land --

1 A. No.

2 Q. -- that to your knowledge in the 30 years that  
3 you've been in Eureka County?

4 A. Yes.

5 Q. And driving the roads, hauling hay and delivering  
6 hay in those 30 years?

7 A. I've delivered hay there.

8 MS. PETERSON: That's all the questions I have.

9 HEARING OFFICER WILSON: Thank you.

10 Cross-examination?

11 MR. De LIPKAU: Before I start cross-examination,  
12 I'd like to point out the forfeiture of water rights should  
13 not be and is not a part of this record. To begin with,  
14 Kobeh Valley Ranch purchased portions of various water rights  
15 that were here described. That means that portions of the  
16 water rights are owned by third parties, Eureka County  
17 citizens, who have not been noticed for forfeiture.

18 It's a due process issue. Clearly a water right  
19 is a property right in this state. Nobody disputes that  
20 fact. So in the interests of time saving and simplicity, if  
21 Eureka County wants to acquire or seek a declaration that a  
22 portion of the water rights have been forfeited, I'm  
23 suggesting we have a separate forfeiture hearing.

24 It can be in Eureka, it can be in Carson City or  
25 anywhere else, where the parties can be properly noticed and

1 they will have an opportunity to defend their rights. I  
2 don't think the State Engineer can just take away a water  
3 right without notice.

4 HEARING OFFICER WILSON: Ms. Peterson, do you  
5 want to say something in response?

6 MS. PETERSON: It's my understanding that the  
7 applicant on these change applications is Kobeh Valley Ranch  
8 and Kobeh Valley Ranch is the entity that is seeking to  
9 change the base rights, and their forfeiture is definitely an  
10 issue that can be brought up with regard to a change  
11 application.

12 So if we want to delay action on all these rights  
13 until this issue is heard, I don't think we necessarily have  
14 a problem with that, but it was my understanding that Kobeh  
15 Valley Ranch is the applicant and they're contending that  
16 they own these water rights.

17 MR. De LIPKAU: Can I be heard on that point?

18 HEARING OFFICER WILSON: Go ahead.

19 MR. De LIPKAU: If anybody checked the State  
20 Engineer's records on some of these ranches, it's quite  
21 obvious that a portion was acquired by the applicant, a  
22 portion remains in the name of the current owner of record.

23 The chain of title has been filed. Again if, for  
24 example, the Willow Ranch, apparently there is statement that  
25 it hasn't been irrigated in 30 years. Fine. We own a

1 portion of the water rights appurtenant to what is known as  
2 the Willow Ranch, a third party owns the balance.

3 This hearing cannot result in a statement to the  
4 effect that, well, whatever Kobeh Valley Ranch owns is  
5 forfeited and whatever is owned by the local farmer is not,  
6 that certainly is not appropriate, it's not in conformance  
7 with due process.

8 So again, I'm reiterating, why don't we put  
9 forfeiture aside and have a separate hearing. It will not  
10 delay the ultimate decision because the forfeiture issue  
11 should be pretty easy and that can simply be worked into the  
12 ultimate ruling by the State Engineer which he said will come  
13 out in January or February of next year.

14 HEARING OFFICER WILSON: Do you want to add  
15 anything else, Ms. Peterson?

16 MS. PETERSON: Obviously the only applications  
17 that are at issue here are the Kobeh Valley Ranch  
18 applications, so whatever they own and water rights they're  
19 trying to change in this proceeding are subject to the  
20 forfeiture issue that Eureka County raised in its protests  
21 and there's not anybody else that we're trying to forfeit  
22 water rights on, it's these applications filed here.

23 Of course that's one of the big issues we have  
24 here is there's 36,000 acre feet of water right applications  
25 that have been filed and yet the applicant hasn't identified

1 which ones it's going forward on, all 36,000.

2 It's perfectly appropriate. It's not an issue if  
3 you want to bifurcate the proceeding, but what we're trying  
4 to do is go after the Kobeh Valley Ranch applications because  
5 those are the applications that are at issue in this  
6 proceeding.

7 HEARING OFFICER WILSON: We discussed it over  
8 with staff and we're going to allow the questions on  
9 forfeiture. The law does allow for forfeitures of portions  
10 of water rights. It doesn't have to be the entire water  
11 right.

12 You are here today, it was a protest issue, so  
13 you're aware that it could be discussed. Your part that the  
14 forfeiture goes to has been noticed that is going to be an  
15 issue in this hearing, so I reject your argument and we'll  
16 move on. Go ahead and ask your questions.

17 CROSS-EXAMINATION

18 BY MR. De LIPKAU:

19 Q. Mr. Halpin, in the first part you were asked  
20 questions and you made the comment about a ranch four miles,  
21 that the proposed wells are four miles from Devil's Gate?

22 A. Approximately four miles to my well.

23 Q. And whose well is approximately four miles from  
24 yours?

25 A. Your applications.



1 Q. Are you aware, sir, that the well field of the  
2 applicant is approximately 20 miles north of Devil's Gate?

3 A. When you originally applied for the applications,  
4 when I protested them, the applications were, the description  
5 of the applications were four miles from my well.

6 Q. Would you have any problem if the well field were  
7 20 miles north approximately of Devil's Gate?

8 A. In Kobeh Valley, yes.

9 Q. Would you object to any applications in Kobeh  
10 Valley?

11 A. Any new applications, yes.

12 Q. Would you object to applications to change?

13 A. Kobeh Valley's taking water from Diamond Valley  
14 in my feelings.

15 Q. Do you know if Kobeh Valley has precedent over  
16 Diamond Valley?

17 A. Don't know.

18 Q. Are you aware of any pumping records maintained  
19 by the State Engineer?

20 A. Am I aware of them?

21 Q. Yes. Have you reviewed the State Engineer's  
22 records?

23 A. Some.

24 Q. In preparation for today's hearing?

25 A. Mainly mine.

1 Q. Are you aware that your permit terms state that  
2 your well, that you must expect a reasonable lowering of the  
3 water table?

4 A. No, I was not.

5 Q. You have not read your permit?

6 A. I didn't read that.

7 Q. What are your permit numbers, do you know? Is  
8 19192 of them?

9 A. I don't know if I have them with me. I don't  
10 believe I even brought them.

11 Q. Do you know whether or not all groundwater  
12 permits are issued with the understanding that the permittee  
13 must allow a reasonable lowering of the water table?

14 A. No, I didn't know that.

15 Q. You didn't know that. Are you aware of the  
16 volume of pumping annually that occurs in Diamond Valley?

17 A. Basically what I've heard and read, yes.

18 Q. What is that?

19 A. 120,000 acre feet or something like that.

20 Q. And do you know what the published papers and  
21 documents say regarding recharge?

22 A. Yes.

23 Q. What's that?

24 A. I think maybe the latest one is 30,000.

25 Q. Would you state that the basin is being over

1 pumped?

2 A. Yes.

3 Q. Do you know how to via the water law correct that

4 problem?

5 A. Do I know how to?

6 Q. Yes.

7 A. No.

8 Q. Have you ever heard of regulating a groundwater

9 basin?

10 A. Yeah, I guess.

11 Q. Would you please set forth your explanation of

12 what you understand regulation to be?

13 MR. MILLER: I'm going to object to this line of

14 questioning to the extent that it seeks legal conclusions.

15 HEARING OFFICER WILSON: I'll sustain it. I

16 don't expect Mr. Halpin to know our definitions.

17 BY MR. De LIPKAU:

18 Q. Do you know what kind of groundwater rights are

19 appurtenant to the Risi Ranch?

20 A. Do I know what kind?

21 Q. Yes.

22 A. As in?

23 Q. As in supplemental or nonsupplemental?

24 A. No, I don't.

25 Q. The Bartine or Fish Creek Ranch has flowing

1     artesian wells, does it not?

2             A.     Yes.

3             Q.     How many?

4             A.     One that I know of.

5             Q.     You drive by it all the time and you've only seen

6     one?

7             A.     Yep.

8             Q.     Do you know how many acres of that are irrigated?

9             A.     From that well?

10            Q.     Yes.

11            A.     Irrigated by farming process or just running out

12     there and flowing?

13            Q.     Both.

14            A.     By farming process I'd say zero. The water is

15     running out there since I've lived there. One time somebody

16     run some ditches and tried to irrigate some water in one year

17     in 30 years.

18            Q.     You say the Damele Ranch has no irrigation

19     whatsoever?

20            A.     I didn't say that.

21            Q.     Is that pasture ground?

22            A.     I said I didn't know nothing about the Damele

23     Ranch.

24            Q.     Oh, so you know nothing about the Damele Ranch,

25     okay.

1           A.    I know about the Damele Ranch but I don't know  
2   that particular, their water rights, the land the water  
3   rights are on or nothing about it.

4           Q.    The Risi Ranch, let's kind of back up, you don't  
5   know whether those wells are supplemental groundwater rights  
6   or not?

7           A.    No.

8           Q.    And the Bartine has flowing water?

9           A.    (Witness nods head.)

10          Q.    Some flowing water?

11          A.    (Witness nods head.)

12          Q.    And the flowing water has been utilized for  
13   pasture; is that correct?

14          A.    It runs out there in the field, yes.

15          Q.    And there are cattle there now?

16          A.    Yes.

17          Q.    And the Willow Ranch, what do you know about the  
18   Willow Ranch?

19          A.    I stated what I knew about it.

20          Q.    Pardon?

21          A.    I already said what I know about it.

22          Q.    Would you say it again, please?

23          A.    Bartarelli Ranches (phonetic) owned it in, I  
24   don't know what year they acquired it, and I worked for them  
25   in 1980 and harvested the hay for them.

1 Q. When is the last time Willow Ranch or Willow  
2 Creek Ranch utilized groundwater to your knowledge?

3 A. 1988.

4 Q. Not one drop since?

5 A. No, not from the wells.

6 Q. You say that from your personal observation?

7 A. Personal observation. I was pretty involved in  
8 the operation.

9 Q. Do you know how many acre feet of water was  
10 acquired by Kobeh Valley Ranch?

11 A. No.

12 Q. Do you know how many acre feet Kobeh Valley is  
13 seeking at today's hearing?

14 A. Total?

15 Q. Yes.

16 A. From what I've read and heard, nearly 36,000 acre  
17 feet.

18 Q. Do you know from publications and records how  
19 many acre feet are the acceptable or approximately acceptable  
20 figure of recharge to Kobeh Valley?

21 MR. MILLER: I'll object again to the extent it  
22 seeks a legal conclusion.

23 MR. De LIPKAU: My comment to that is Mr. Halpin  
24 certainly knows the approximate figures and he so stated of  
25 Diamond Valley and I'm asking the same for Kobeh Valley.

1 I've already asked him two with no objections and this is the  
2 third and last one.

3 HEARING OFFICER WILSON: I'll overrule. You can  
4 answer if you know.

5 THE WITNESS: The old surveys from the old USGS  
6 survey says Kobeh Valley is only allowed 2,000 acre feet.

7 MR. De LIPKAU: No further questions.

8 HEARING OFFICER WILSON: Thank you. Any  
9 redirected, Ms. Peterson?

10 MS. PETERSON: No.

11 MR. MILLER: No questions.

12 HEARING OFFICER WILSON: Any questions of staff?

13 EXAMINATION

14 BY MR. FELLING:

15 Q. I just have one. Could you point out your home  
16 on that map?

17 A. Just north of Devil's Gate, the first deeded  
18 property right at the end of the 6000 number there on this  
19 road. Do you see the dotted road that goes up through there?  
20 It used to go through the corner of my property. That's my  
21 place right there.

22 Q. So that's roughly three miles northeast of  
23 Devil's Gate?

24 A. Two, three. Two.

25 Q. Thank you. That's all.

1 HEARING OFFICER WILSON: Thank you, Mr. Halpin.  
2 You may step down. We appreciate your testimony. That puts  
3 us back to Mr. Miller. Was that your last witness?  
4 MR. MILLER: That was our last witness, yes.  
5 HEARING OFFICER WILSON: That brings us to  
6 Mr. Etcheverry in back.  
7 Go ahead and state your name four the record.  
8 MR. ETCHEVERRY: Martine Etcheverry. I'm with  
9 Diamond Cattle Company.  
10 HEARING OFFICER WILSON: Mr. De Lipkau?  
11 MR. De LIPKAU: I'd like to make a comment, sorry  
12 to interrupt, and that is Mr. Etcheverry and Diamond Cattle  
13 protested only applications 76364 and 76365. The proposed  
14 points of diversion are in Pine Valley. What I'm saying is  
15 that Mr. Etcheverry can certainly address his protests to  
16 those applications and to none others for the simple reason  
17 he did not file a protest, nor did he file under the  
18 regulations as an interested person.  
19 HEARING OFFICER WILSON: Mr. Etcheverry, you did  
20 protest two applications; is that correct?  
21 THE WITNESS: Yes.  
22 HEARING OFFICER WILSON: Both of those are in  
23 Pine Valley?  
24 THE WITNESS: Yes.  
25 HEARING OFFICER WILSON: Your statement here



## **Mr. REX J. MASSEY**

Willamette University, B.S., Mathematics & B.S. Business Economics, 1986  
University of Nevada, M.B.A., 1988

Currently Enrolled Level I Chartered Financial Analyst  
Passed Nevada Real Estate Licensing Exam (License Pending)

## **PROFESSIONAL EXPERIENCE**

### **Research and Consulting Services, Inc. President/Owner 1989 - 2010**

Mr. Massey is responsible for all business related functions including marketing and proposal development, client relations, project/program management and implementation, technical assignments, budget management, and public interaction. Mr. Massey has been directly responsible for execution and project completion of more than 300 individual consulting and project assignments for private and public sector clients including extensive experience managing project teams in a task oriented, schedule driven, and budget constrained environment. Professional experience and expertise includes:

#### **Project Development and Planning**

- More than 21 years of experience in land use and natural resource planning, community master planning and project review in Nevada.
- Ten years of experience with municipal utility start-up and management of more than \$35 million of initial improvements. Responsible for engineering oversight, real estate acquisition and project financing. Extensive experience with joint private-public financing arrangements to fund project construction. Created operating policies, procedures and worked with private utilities to merge operations into municipal systems.
- More than 20 years of experience with capital improvements planning and local government finance.
- Seven years of experience with financing and loan underwriting of subsidized multi-family rental projects in western Nevada.
- Spent more than 13 years on development projects in the Lake Tahoe Basin including the expansion of Sierra Nevada College and played a key role in the approval of the Tahoe Beach Club. Past experience includes work on 7 development projects in the Tahoe Basin.
- Coordinated financing for the construction of an indoor events center, developed a senior rental housing project in Battle Mountain, and various recreational improvements including projects in central Nevada.

**Environmental Compliance (NEPA)** More than 20 years of experience managing and preparing technical analysis for a variety of projects including airspace expansion, pipelines, right of way acquisition and use, utility operations, mining and redevelopment projects on public and private lands. Mr. Massey has worked on highly sensitive and controversial projects in the Lake Tahoe Basin completing and receiving approval for several projects. Mr. Massey represented clients in a cooperating agency status and has experience with legal challenges under NEPA.

**Socio-Economics and Demographic Analysis** 24 years of experience with housing market studies and assessments, fiscal and economic impact studies using regional economic models, utility rate studies, community impacts, and project feasibility studies. Demographic analysis included work as the Nevada State Demographer and preparation of official state population estimates used for tax revenue distribution.

**Public and Government Relations** Worked extensively with government bodies, and elected officials at all levels including congressional delegation and staff representing and advocating for various clients. Mr. Massey

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002710

has substantial experience with public presentations, facilitation of public meetings, and public information programs. He has operated effectively within the political arena to achieve project implementation goals and understands how to develop public support and backing for public and private initiatives.

**Science Applications International Corporation 1988-1989**

Mr. Massey provided technical contributions to environmental documents including environmental assessments and environmental impact statements pursuant to the National Environmental Policy Act (NEPA), and documents under the California Environmental Quality Act (CEQA) specializing in socioeconomics, regional economics, recreation, land use and realty. Mr. Massey also served as contractor liaison between the U.S. Army Corps of Engineers, the U.S. Army Forces Command Project Office, and command level staff at Fort Hood for a major base realignment. At SAIC he completed a number of assignments for federal government agencies including Bureau of Land Management, U.S. Air Force, and the Bureau of Reclamation.

## 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:

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DATED this 21<sup>st</sup> day of December, 2012.

/s/ Nancy Fontenot



[illegible]

### Explanation

- Legend**
- Proposed Well Site
  - Existing Well Location
  - Spring
  - Hydrologic Basin Boundary
  - Generalized Well Field Area



Exploration boreholes will be completed as 2-inch diameter nested piezometers, and will be completed in both the first encountered aquifer and the deeper confined and/or bedrock aquifer, when encountered. These piezometers will provide data on vertical gradients and will be used as observation wells during aquifer testing of test wells. Piezometer depths will be dependent on conditions encountered during drilling. Exploration drilling depths are planned to be up to approximately 1,600 feet, or shallower, depending on the geology. When possible, exploration drilling is being conducted with dual tube air methods, however, some drilling environments will necessitate use of conventional mud rotary.

As of the date of this report, exploration drilling has been completed at wells no. 203, 204, 205, and drilling is ongoing at 206 (fig. 3). The test wells will be designed with screened intervals in the primary aquifer, and are planned to be 8-inches minimum diameter (12-inch borehole). If multiple producing aquifers are present, the test well may be constructed to tap multiple aquifers. In this case, the screened intervals will be isolated by blank casing and a seal installed in the annular space between aquifer zones. This will allow for testing of individual aquifers via pumping isolation with packers, without data evaluation complications that occur when pumping from multiple aquifers.

Specific details of individual aquifer tests will need to be refined specifically for the conditions encountered during well construction and for the specific locations where test wells end up being completed. This Aquifer Testing Plan describes the general procedures and protocol planned for conducting the tests.

## **Types of Aquifer Testing**

Once a test well is completed and development accomplished, a step-drawdown aquifer test will be performed to gage the well capacity. The step-drawdown test involves pumping the well at varying rates and observing the drawdown response at the selected rates. Typically, 3 to 5 rates are pumped for durations of 1 to 3 hours depending on stabilization of pumping water level. From the step-drawdown test, the optimum rate for constant-rate aquifer testing can be established. A short recovery period is needed prior to starting the constant-rate aquifer tests, typically a day, but at least 95 percent recovery to starting static water level will be required prior to starting the constant-rate test. The constant-rate test will be run at an approximate constant rate for the planned test duration. Depending on the type of pump system used and the duration of the test, some brief non-pumping periods may be necessary to perform routine engine checks/maintenance; however, these rest periods will not exceed 15 minutes and will be minimized to the extent possible. If equipment failures are experienced that compromise the ability to achieve dependable analysis, the test will be terminated, the aquifer allowed to recover, and the test re-started.

## **Water Level Monitoring**

### **Equipment and Procedures**

Water level data collection during aquifer tests will rely upon pressure transducer records, with manual backup measurements made approximately daily using wireline sounders. Manual measurements will be recorded to the nearest 1/100th of a foot, and recorded on standard forms. A measurement reference point will be established for all monitoring locations. The range and sensitivity of the pressure transducers will vary depending on the proximity to the pumping well and anticipated range of drawdown, as understood from the step-drawdown testing. The frequency of transducer data collection will not exceed 1 hour intervals. Early time data for the pumping well and any nearby observation wells will be collected on a logarithmic time scale.

### **Extent of Monitoring Network**

Wells within an approximate 2-mile radius of the constant-rate aquifer test will be established as observation wells. The observation well network will include both piezometers installed during the exploration drilling, other completed test wells, existing stockwater and domestic well (for example the Roberts Creek Ranch wells), and other identified wells, subject to access.

### **Background Trend Monitoring**

Baseline water level monitoring will occur throughout the monitoring network for an aquifer test for a period of no less than 2 weeks prior to the start of testing. This will establish the natural trends in water levels fluctuation and barometric responses, if present.

### **Recovery Period**

Recovery water level monitoring will be made after all constant-rate aquifer tests for a period of time at least equal to the pumped duration.

### **Barometric Pressure and Precipitation Monitoring**

Barometric pressure will be recorded on 15-minute intervals in the vicinity of the Central Well Field. This data will allow for barometric pressure consideration and correction if responses to barometric pressure changes are observed in the water level data. Precipitation is currently being measured by the USGS northeast of Lone Mountain, and it is assumed that daily provisional records can be obtained from the USGS for purposes of evaluating aquifer testing data.

## **Stream, Artesian Well, and Spring Discharge Measurements**

### **Stream Flow**

Exploration well no. 207 is adjacent to Roberts Creek (fig. 2) and a temporary stage recorder is planned to be established in the adjacent stream, provided there is flow in the stream during the testing period. Current meter measurements will be made to rate stage to discharge. In the absence of stream flow adjacent to the well, an up-stream location where perennial flow exists may be selected, provided that the site is within about 2 miles of the well site. Exploration well no. 212 is near Rutabaga Creek (fig. 2),

and flows will be similarly gaged if stream discharge is present during the time testing occurs, if a test well is completed at this exploration location.

### **Artesian Wells**

To date, no flowing, artesian wells have been identified in the vicinity of the Central Well Field. The nearest known flowing artesian well is on the northwest side of Lone Mountain (Mud Spring Well, fig. 1), and is approximately 6 to 9 miles to the south of the test wells. The condition of this well will not facilitate accurate pressure head or discharge measurement, as most of the well discharge is occurring from the annual space outside the casing, and to a pooled body of water. No measurements are planned for the well during testing. It is possible that some of the completed exploration piezometers may produce artesian flow. In this case, the piezometer will be capped and equipped with a pressure gage. Artesian head during aquifer testing will be observed manually, or the well cap retrofitted with a pressure transducer – recorder. Greater sensitivity may be achieved with a piezotube retrofitted to the well head versus a pressure gage, depending on the magnitude of head.

### **Springs**

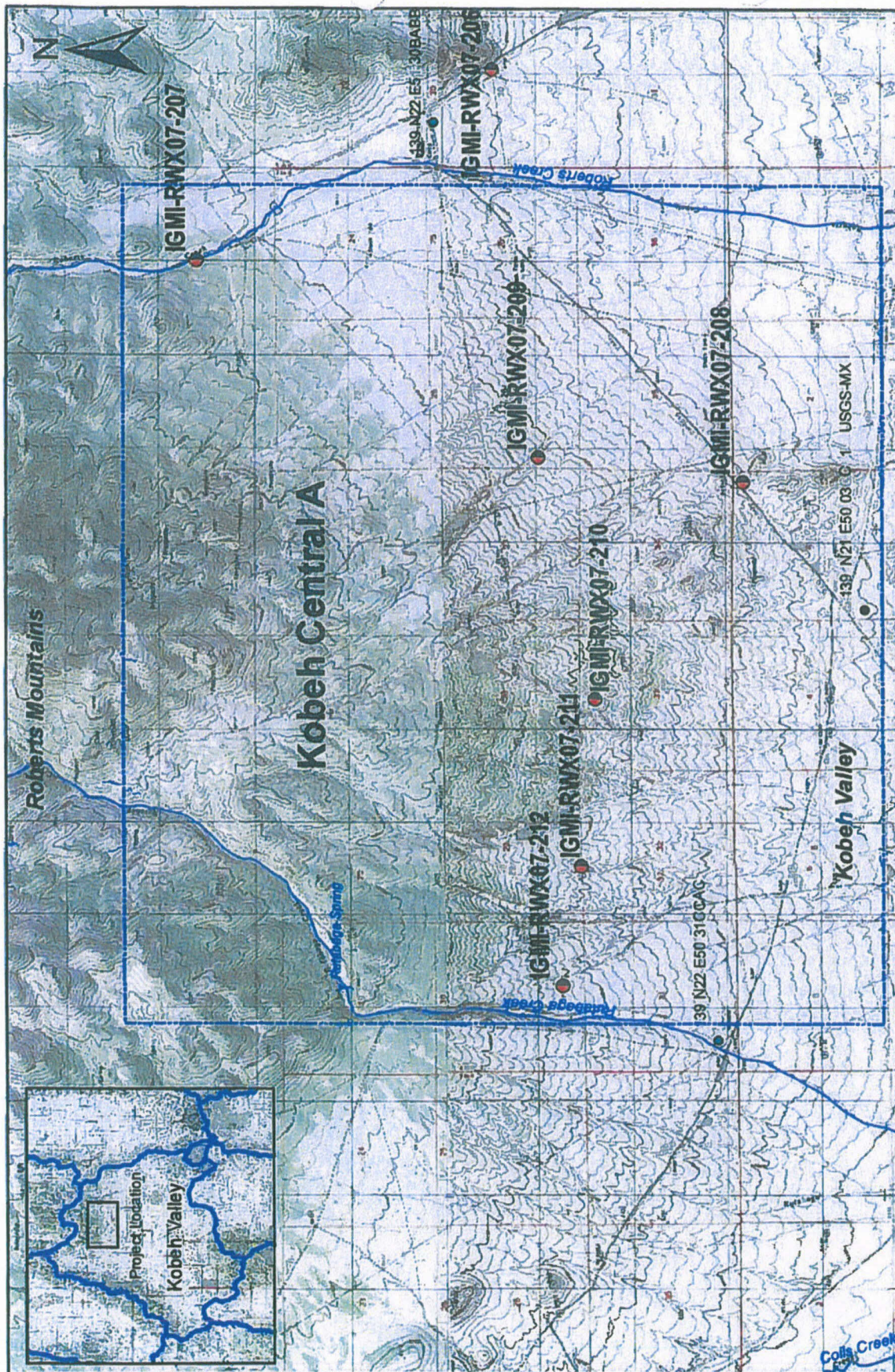
To date, very few springs have been identified in the vicinity of the Central Well Field. Farington Spring discharges to Roberts Creek upstream of well no. 207 approximately 1.4 miles. On May 15, 2007, the spring was observed seeping from the stream bank, and is reported to have perennial flow. However, the discharge is non-discrete and not of a magnitude that could be physically measured. Qualitative observations of the presence of discharge from the bank can be made.

Other springs in the mountain block to the north, such as “ans-in-dame” spring (fig. 3, west of Mt. Hope) and Rutabaga spring (fig. 2) may have discharges suitable for monitoring during aquifer testing, but have not been inspected as of the date of this plan. Prior to site-specific aquifer testing, additional review will be conducted for suitable spring monitoring sites. Temporary V-notch weirs may be installed to measure spring flows, if conditions are suitable.

### **Duration of Tests**

Durations of constant-rate aquifer tests will vary depending on the hydrogeologic setting and spatial distribution of observation wells. A minimum duration of pumping tests will be 1 week, and the maximum envisioned would be 4 weeks. Since one of the objectives of the aquifer testing is to derive well and well field- specific measures of storativity, the testing duration at each well will be based upon the observed responses in both the pumping well and the observation wells. For example, when the drawdown in the pumping well has stabilized to less than 0.25 ft of additional drawdown per hour and drawdown observed in two or more observation wells has stabilized to less than 0.1 ft of additional drawdown per hour, the test may be terminated. Prior to terminating the constant rate tests, a preliminary data review will be made so as to avoid pre-mature termination of the test if a shift in drawdown trend is occurring, or response (or lack of response) in observations wells is not clear.





- Explanation**
- Proposed Well Site
  - Existing Well Location
  - Springs
  - Hydrologic Basin Boundary
  - Generalized Well Field Area

0 0.3 0.6 1.2 1.8 2.4 3 Miles

**Idaho General Mines, Inc.**  
**Kobeh Valley Exploration Wells**  
**Figure 2**  
**Kobeh Valley Central Well Field A Detail**

**InterFlow**  
**Hydrology, Inc.**  
 Hydrology and Water Resources Consulting

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