File Folder #7

Starts with email Dated 3/27/09 attaching an Order
Scheduling Exchange of Information by IDWR
Dated 3/26/09

And

Ends with Notice of Service by Alan Smith
Received on 02/10/09

Gibson, Deborah

From: Gibson, Deborah
Sent: Friday, March 27, 2009 11:56 AM
To: David Head (NACGUA)
Cc: 'cjthornton6@msn.com'
Subject: FW: M3 Eagle scheduling order
Attachments: img-326180434.pdf

John Thornton asked that I forward this email to you also.

Deborah Gibson
Administrative Assistant I
Water Management Division

From: Gibson, Deborah
Sent: Friday, March 27, 2009 10:00 AM
To: Vincent, Sean; Owsley, Dennis; McVay, Michael; Michael P. Lawrence; jcf@givenspursley.com; 'cjthornton6@msn.com'; 'jlthornton@fs.fed.us'; Bill Lawton (prcarw20@cableone.net); 'Norman Edwards'
Cc: 'Lori Anderson'
Subject: M3 Eagle scheduling order

For your information, attached is an Order Scheduling Exchange of Information that is going out in today's mail regarding the M3 Eagle protested application, no. 63-32573, for preparation of the hearing starting April 15.

Deborah Gibson
Administrative Assistant
Water Management Division
322 E. Front St., Boise, ID
Phone: (208) 287-4942
Fax: (208) 287-6700
Email: deborah.gibson@idwr.idaho.gov
Website: idwr.idaho.gov

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 63-32573 IN THE NAME OF M3 EAGLE LLC	**ORDER SCHEDULING EXCHANGE OF INFORMATION**

The hearing officer previously promised the parties that a schedule for the exchange of information would be issued.

ORDER

IT IS HEREBY ORDERED that, on or before April 8, 2009, each party shall serve on the other parties:

1. Copies of documents that the party may offer as exhibits at the hearing.

2. A list of persons that may be called as witnesses at the hearing.

Service for purposes of this order means that the documents are in the possession of the person or entity being served.

IT IS FURTHER ORDERED that the parties shall prenumber documents to be offered as evidence as follows:

1. M3 Eagle LLC – numbers 1through 199

2. North Ada County Ground Water Association – numbers 200 through 299

3. Bill Lawton – numbers 300 through 399

4. Alan Smith – numbers 400 through 499

5. Eagle Pines Water Association – numbers 500 through 599

6. Norman Edwards – numbers 600 through 699.

IT IS FURTHER ORDERED that copies of the exhibits must also be provided to the hearing officer before or at the hearing.

Employees of the Idaho Department of Water Resources who authored the staff memorandum analyzing technical reports written by M3 Eagle LLC and other technical information have committed to be available to testify about the staff memorandum.

IT IS FURTHER ORDERED that, on or before April 8, 2009, a party wishing to examine a Department employee must notify the hearing officer of the identity of the Department employee who the party wishes to examine and the approximate day scheduled for hearing when the testimony will be elicited.

DATED this 26th day of March, 2009.

GARY SPACKMAN
Hearing Officer

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 27th day of March, 2009, a true and correct copy of the document described below was served on the following by placing a copy of the same in the United States mail, postage prepaid and properly addressed to the following:

Document Served: ORDER PARTIALLY GRANTING MOTION TO COMPEL DISCOVERY AND ORDER DENYING MOTION TO VACATE HEARING

JEFFREY C FEREDAY
GIVENS PURSLEY LLP
601 W BANNOCK ST
PO BOX 2720
BOISE ID 83701

M3 EAGLE LLC
533 E RIVERSIDE DR STE 110
EAGLE ID 83616

NORMAN L EDWARDS
884 W BEACON LIGHT RD
EAGLE ID 83616

ALAN SMITH
3135 OSPREY RD
EAGLE ID 83616

BILL LAWTON
3145 N OSPREY RD
EAGLE ID 83616

JOHN THORNTON
NORTH ADA COUNTY GROUNDWATER USERS ASSO.
5264 NORTH SKY HIGH LN
EAGLE ID 83616

WESTERN REGION
ATTN JOHN WESTRA
2735 AIRPORT WAY
BOISE ID 83705-5082

Deborah J. Gibson
Administrative Assistant
Water Management Division

State of Idaho
DEPARTMENT OF WATER RESOURCES
322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098
Phone: (208) 287-4800 • Fax: (208) 287-6700 • Web Site: www.idwr.idaho.gov

C. L. "BUTCH" OTTER
Governor
DAVID R. TUTHILL, JR.
Director

March 26, 2009

Re: Application for Permit No. 63-32573, in the name of M3 Eagle, LLC.

Dear Interested Parties:

Enclosed are two letters received by IDWR on March 17, 2009. These letters are referencing the M3 Eagle application and development. These letters are being provided to you for your information and they are being incorporated into the record for this matter.

Sincerely,

Deborah J. Gibson

Deborah J. Gibson
Administrative Assistant
Water Management Division

cc: Service List

Date: March 12, 2009

To: Dr. David Tuthill, Director
Idaho Department of Water Resources
322 East Front Street
Boise, ID 83702

From: Jonathan R. Seel
2906 Haven
Eagle, ID 83616

Subject: M3 Eagle Company Water Application

I have been monitoring the application submitted by M3 Eagle for a municipal water right to supply ground water for their proposed planned community north of Eagle. As you are aware, they are proposing to use ground water for over 7,000 homes, golf course, hotels, commercial businesses, parks, common areas, waste treatment faculties and fire control. They have requested 23.16 cubic feet per second, which equates to approximately 15 million gallons of water per day. Simply put, one of the largest water right applications submitted to DWR.

I live on acreage along the foothills and rely on a well for my water. Needless to say the extent of this application causes me great concern. This level of usage has the potential to impact thousands of well owners in a very negative way. The cost to extend a well runs in the thousands of dollars and is a cost many of us can ill afford.

I understand DWR is currently conducting the North Ada County Ground Water study that should be complete December of this year. I further understand the application is to be heard in April. Respectfully, I ask why DWR would rule on one of the largest water use applications to date, prior to having the facts from the study on ground water levels in North Ada County. Would it not prudent to wait until the facts are in? I simply ask that you postpone this hearing until after the study. I don't want to see DWR make a decision that in hindsight both they and existing well owners will regret.

I am not opposed to development I only ask that we have all the facts before rendering a decision.

RECEIVED
MAR 17 2009
DEPARTMENT OF
WATER RESOURCES

March 16, 2009

David Tuthill, Ph.D, P.E., Director
Idaho Department of Water Resources
322 East Front Street
Boise, ID. 83720-0098

Re: M3 Water Right Application, Permit # 63-32573
Groundwater Concerns in the North Ada County Foothills

Dear Dr. Tuthill:
Thank you for the opportunity to pass along some observations and concerns related to groundwater issues in the North Ada County Foothills and specifically the M3 Water Right Application referenced above.

I am a retired civil/geotechnical engineer and a property owner on Stillwell Drive in the foothills. We have an irrigation water right and a domestic right, utilizing two pumps in one well casing about 220' deep.

I have reviewed many of the hydrogeologic reports prepared for M3 and have also reviewed the brief reports prepared by Dale Ralston, Ph.D., P.E., and the March 2, 2009, Memo by Messers Owsley & Vincent of your staff regarding the M3 reports. The M3 studies have generated a great amount of data, and a cursory review indicates it to be generally sound data. However, I have serious concerns regarding the interpretations and conclusions drawn from that data. Specifically, I struggle to understand how the newly hypothesized "Pierce Gulch Sand Aquifer"(PGSA) generally flows in a westerly direction (as one would expect) and then makes sort of a right angle turn just past Highway 16 and runs North through the complex (and largely undefined) geology of the foothills into the Payette River drainage. I have spent some 36 years investigating and evaluating subsurface conditions in Idaho and the Treasure Valley, and I cannot find enough data to convince myself that the new aquifer actually exists as hypothesized. I particularly struggle with the concept of the right angle turn to the Payette!

As you know, mountain ranges, river valleys, and even low lying hills are typically defined/shaped by faulting in the base geology. The M3 studies identify NW/SE trending faults in the low lying hills of the M3 area and the Owsley Memo addresses potential hydrogeologic boundary issues related to these faults. It seems entirely probable that similar faulting would be present in this same low lying range of hills to the west of Highway 16. If that probability of faulting is factored into the theoretical northward trend of the PGSA, that theory becomes even more improbable!

Additionally, it seems that the M3 predictions of drawdown levels in the area are based on data from very limited and localized pumping tests on wells on the M3 property. I

have no level of comfort that those predictions will be anywhere close to reality once the actual pumping of 23.18 cfs (14.9 million gallons/day) begins.

The Treasure Valley Hydrologic Project Report published in 2004 by Christian Petrich and others presents very sound and logical conclusions regarding groundwater in our area. It is considered by many to be the current best definition of hydrogeologic conditions in the Treasure Valley. Unfortunately the conclusions proposed by M3's consultant are often at odds with the TVHP Report.

All of the above leads me to my personal fear that should M3 ever be granted the right to pump the 23.18 cfs they are requesting, my well and several hundred others will be adversely affected.

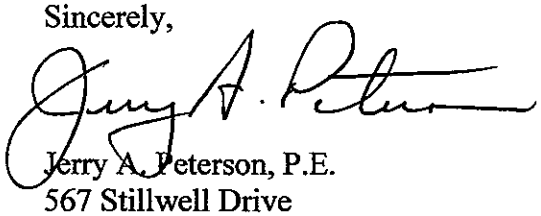
On a broader scale, I am concerned that the groundwater of the Treasure Valley be cared for in a manner that will not lead to the sort of difficulties now faced on the Eastern Snake Plain in Idaho, the area around Bend, Oregon, and many other locations in the West.

I understand that the ongoing North Ada County Hydrogeologic Investigation, conducted by your staff, may develop some conclusions in the not too distant future. Apparently Dr. Donna Cosgrove has also been commissioned by your agency to conduct additional evaluation of available hydrogeologic information regarding the Treasure Valley area. It seems to me that it would be crucial to have the results of these two efforts available before making such a critical decision as the very large 23.18 cfs water right requested by M3. Particularly in light of the very serious questions that have been raised regarding the M3 Studies and the theoretical Pierce Gulch Sand Aquifer.

Dr. Tuthill, I understand the difficult task that you and your staff have in carrying out the charge given to you by Idaho Law, and I don't envy you as you evaluate the mass of data, reports, and counter reports leading to decisions regarding the M3 application. I have great faith that a sound decision will be reached that will allow "reasonable" development of the resource while providing protection of the existing senior water rights of several hundred concerned well owners.

Thanks for your consideration of my observations and concerns. I trust that by copying this to Mr. Owsley and Mr. Spackman it will be placed in the record of the M3 Water Right Hearing/Deliberation Process.

Sincerely,



Jerry A. Peterson, P.E.
567 Stillwell Drive
Eagle, ID 83616
Ph: 939-4169

Copies to:
Mr. Gary Spackman, P.E.

Mr. Dennis Owsley, P.G.

Mr. John Westra, P.E.

Senator Chuck Winder

Rep. Mike Moyle

Rep. Raul R. Labrador

Mr. Terry T. Uhling
Chairman, IWR Board

Mr. Gary M. Chamberlin
Vice Chairman, IWR Board

Mr. Bob Graham
Member, IWR Board

Mr. Jerry R. Rigby
Member, IWR Board

Mr. Charles D. Cuddy L.S.
Member, IWR Board

Mr. Leonard Beck
Member, IWR Board

SERVICE LIST
As of March 16, 2009

JEFFREY C FEREDAY
GIVENS PURSLEY LLP
601 W BANNOCK ST
PO BOX 2720
BOISE ID 83701

M3 EAGLE LLC
533 E RIVERSIDE DR STE 110
EAGLE ID 83616

NORMAN L EDWARDS
884 W BEACON LIGHT RD
EAGLE ID 83616

ALAN SMITH
3135 OSPREY RD
EAGLE ID 83616

BILL LAWTON
3145 N OSPREY RD
EAGLE ID 83616

JOHN THORNTON
NORTH ADA COUNTY GROUNDWATER
USERS ASSO.
5264 NORTH SKY HIGH LN
EAGLE ID 83616

WESTERN REGION
ATTN JOHN WESTRA
2735 AIRPORT WAY
BOISE ID 83705-5082

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 63-32573 IN THE NAME OF M3 EAGLE LLC	**ORDER PARTIALLY GRANTING MOTION TO COMPEL DISCOVERY AND ORDER DENYING MOTION TO VACATE HEARING**

On February 10, 2009, Alan Smith ("Smith") filed a "Motion." In the document, Smith objected to the M3 Eagle LLC's ("M3") submittal of a Ground Water Geochemistry Report and a Nine Day Aquifer Test Report. Smith also attached a copy of discovery that was previously submitted to M3 and discussed M3's refusal to answer the request. Although the document does not expressly request relief, Smith's concern was discussed by the parties at a status conference conducted on January 20, 2009, and the parties on both sides presented their respective arguments. The hearing officer will interpret the document as a motion to compel discovery.

The hearing officer previously found that M3 untimely filed the geochemistry report and the aquifer test report. As a result, the hearing officer postponed the hearing previously scheduled for March 23-27, 2009. The hearing is now scheduled to begin on April 15, 2009. As a result of the delay in the hearing, the objections by Smith have already been addressed.

The hearing officer reviewed Smith's request for discovery. Approximately half of the requests are in the form of requests for admission. Many of the requests ask M3 to admit that M3's proposal cannot satisfy one of the ultimate factors the Idaho Department of Water Resources ("Department") must consider to determine whether the application should be approved or rejected. These types of requests for admission are generally posed as a trap for an unsuspecting party and do not further the discovery of information that may be helpful to prepare for hearing.

Most of the requests for admission are coupled with an interrogatory that generally asks the question, "Why didn't you admit that your application is deficient?" The interrogatories are generally overbroad or the questions have already been answered through the exchanges of information.

The hearing officer issued an order on December 4, 2008 stating that, on or before December 22, 2008, the parties could pose written questions not answered during formal discovery. Smith did not pose any questions to M3.

Nonetheless, the hearing has been delayed twice since the first deadline of November 26, 2008 expired. M3 has time to answer some limited discovery.

The hearing officer finds that interrogatories 7 through 10 of Smith's November 13, 2008 interrogatories are appropriate inquiries and should be answered by M3 on or before April 3, 2009.

Smith also filed, on behalf of Eagle Pines Water Association, a Motion to Vacate Hearing and Objection to Ex Parte Request. Smith bases his motion on the argument that the response to the Department's staff memorandum, due on April 3, 2009, will be lengthy and difficult to review prior to the hearing.

The submittal of rebuttal evidence on April 3, 2009, is not required of any of the parties. The language in the order states that the parties "may" submit documentation to rebut the department's March 2, 2009 staff memorandum. The hearing officer does not intend to require a never ending exchange and review of technical reports. Smith does not offer a basis for delaying the hearing.

M3 requested data and information from the Department. This is not ex parte communication. Nonetheless, the information is being provided to all the parties.

ORDER

IT IS HEREBY ORDERED that M3 shall answer interrogatories nos. 7 – 10 of Alan Smith's discovery requests dated November 13, 2008.

IT IS FURTHER ORDERED that Alan Smith's motion to compel M3 to answer the remainder of his discovery request is **Denied**.

IT IS FURTHER ORDERED that the Motion to Vacate Hearing filed by Eagle Pines Water Association is **Denied**.

DATED this 17th day of March, 2009.

Gary Spackman, Hearing Officer

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 18th day of March, 2009, a true and correct copy of the document described below was served on the following by placing a copy of the same in the United States mail, postage prepaid and properly addressed to the following:

Document Served: ORDER PARTIALLY GRANTING MOTION TO COMPEL DISCOVERY AND ORDER DENYING MOTION TO VACATE HEARING

JEFFREY C FEREDAY
GIVENS PURSLEY LLP
601 W BANNOCK ST
PO BOX 2720
BOISE ID 83701

M3 EAGLE LLC
533 E RIVERSIDE DR STE 110
EAGLE ID 83616

NORMAN L EDWARDS
884 W BEACON LIGHT RD
EAGLE ID 83616

ALAN SMITH
3135 OSPREY RD
EAGLE ID 83616

BILL LAWTON
3145 N OSPREY RD
EAGLE ID 83616

JOHN THORNTON
NORTH ADA COUNTY GROUNDWATER USERS ASSO.
5264 NORTH SKY HIGH LN
EAGLE ID 83616

WESTERN REGION
ATTN JOHN WESTRA
2735 AIRPORT WAY
BOISE ID 83705-5082

Deborah J. Gibson
Administrative Assistant
Water Management Division

Jeffrey C. Fereday [ISB No. 2719]
Michael P. Lawrence [ISB No. 7288]
GIVENS PURSLEY LLP
601 West Bannock Street
P.O. Box 2720
Boise, Idaho 83701-2720
Office: (208) 388-1200
Fax: (208) 388-1300
www.givenspursley.com
Attorneys for M3 Eagle LLC

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 63-32573 IN THE NAME OF M3 EAGLE LLC

M3 EAGLE'S RESPONSE TO ALAN SMITH'S MOTION TO VACATE HEARING AND OBJECTION TO EX PARTE REQUEST

Applicant M3 Eagle LLC ("M3 Eagle"), through Jeffrey C. Fereday and Michael P. Lawrence of the firm Givens Pursley LLP, hereby responds to Alan Smith's *Motion to Vacate Hearing and Objection to Ex Parte Request* ("Motion") filed with the Hearing Officer on March 16, 2009. Mr. Smith's Motion should be denied. M3 Eagle's March 10, 2009 *Request for Information Used in IDWR's March 2, 2009 Staff Memoranda* ("March 10 Request") does not require rescheduling the hearing and neither will its response to IDWR's staff memoranda. No ex parte contacts are requested.

In its March 10 Request, M3 Eagle asked for (1) the data used by IDWR staff to prepare one of its memoranda (the "McVay Memo"), along with other information pertinent to the select group of wells analyzed in the McVay Memo, and (2) the same data and information for other

wells in the area studied in the McVay Memo. On March 16, 2009, IDWR mailed this information to all parties on the service list.

M3 Eagle intends to have its consultant, Hydro Logic, Inc., review the requested information and respond as appropriate by April 3, 2009.[1] M3 Eagle's opportunity to respond by April 3 is authorized by the Hearing Officer's February 10 Order—the same Order upon which the hearing was rescheduled. Mr. Smith did not object to the scheduling when the February 10 Order was issued.[2] Mr. Smith should not be allowed to decline to respond when the Hearing Officer requests information from the parties and sets deadlines, then later ask for more time because he disagrees with another party's compliance with such requests and deadlines.

In any event, M3 Eagle does not anticipate that its response will require a change in the hearing schedule to accommodate IDWR or Protestant review.

Finally, regarding Mr. Smith's objection to M3 Eagle's suggestion that IDWR staff provide the requested information directly to Hydro Logic, Mr. Smith's concern over ex parte contacts is misplaced. IDWR Rule of Procedure 417 (IDAPA 37.01.01.417) limiting ex parte contacts applies to contacts only with the presiding officer and the agency head in a contested case. IDWR staff's provision of information—particularly information relevant to a response to staff the Hearing Officer has authorized—does not constitute an impermissible ex parte contact. In any case, as noted above, IDWR sent the requested information to all parties on the service list.

For the foregoing reasons, M3 Eagle respectfully requests that the Hearing Officer deny Mr. Smith's *Motion to Vacate Hearing and Objection to Ex Parte Request.*

---

[1] As should be obvious from M3 Eagle's March 10 Request, the information it requested from IDWR also is necessary for M3 Eagle to prepare for hearing.

[2] To M3 Eagle's knowledge, Mr. Smith did not respond to the Hearing Officer's request for unavailable hearing dates in the February 10 Order. M3 Eagle was not served with a list of unavailable hearing dates by any other party to this matter.

DATED this 18th day of March, 2009.

Respectfully submitted,

GIVENS PURSLEY LLP

By _____

Jeffrey C. Fereday
Michael P. Lawrence

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 18th of March, 2009, the foregoing was filed, served, or copied as follows:

FILED	
Idaho Department of Water Resources Attn: Gary L. Spackman 322 East Front Street P.O. Box 83720 Boise, ID 83720-0098	_____ U. S. Mail __X__ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
SERVICE	
John Westra Western Regional Office Idaho Department of Water Resources 2735 Airport Way Boise, ID 83705-5082	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Bill Lawton, Spokesman for Robert L. Wood M. Howard Goldman Timothy R. Milburn 3145 Osprey Road Eagle, ID 83616	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
North Ada County Groundwater Users Association c/o David Head 855 Stillwell Drive Eagle, ID 83616	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
North Ada County Groundwater Users Association c/o John Thornton 5264 N. Sky High Lane Eagle, ID 83616	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Norman Edwards 884 W. Beacon Light Road Eagle, ID 83616	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail

Alan Smith
3135 N. Osprey Road
Eagle, ID 83616

__X__ U. S. Mail
_____ Hand Delivered
_____ Overnight Mail
_____ Facsimile
_____ E-mail

Michael P. Lawrence

State of Idaho
DEPARTMENT OF WATER RESOURCES
322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098
Phone: (208) 287-4800 • Fax: (208) 287-6700 • Web Site: www.idwr.idaho.gov

March 16, 2009

C. L. "BUTCH" OTTER
Governor
DAVID R. TUTHILL, JR.
Director

Re: Application for Permit No. 63-32573, in the name of M3 Eagle, LLC.

Dear Interested Parties:

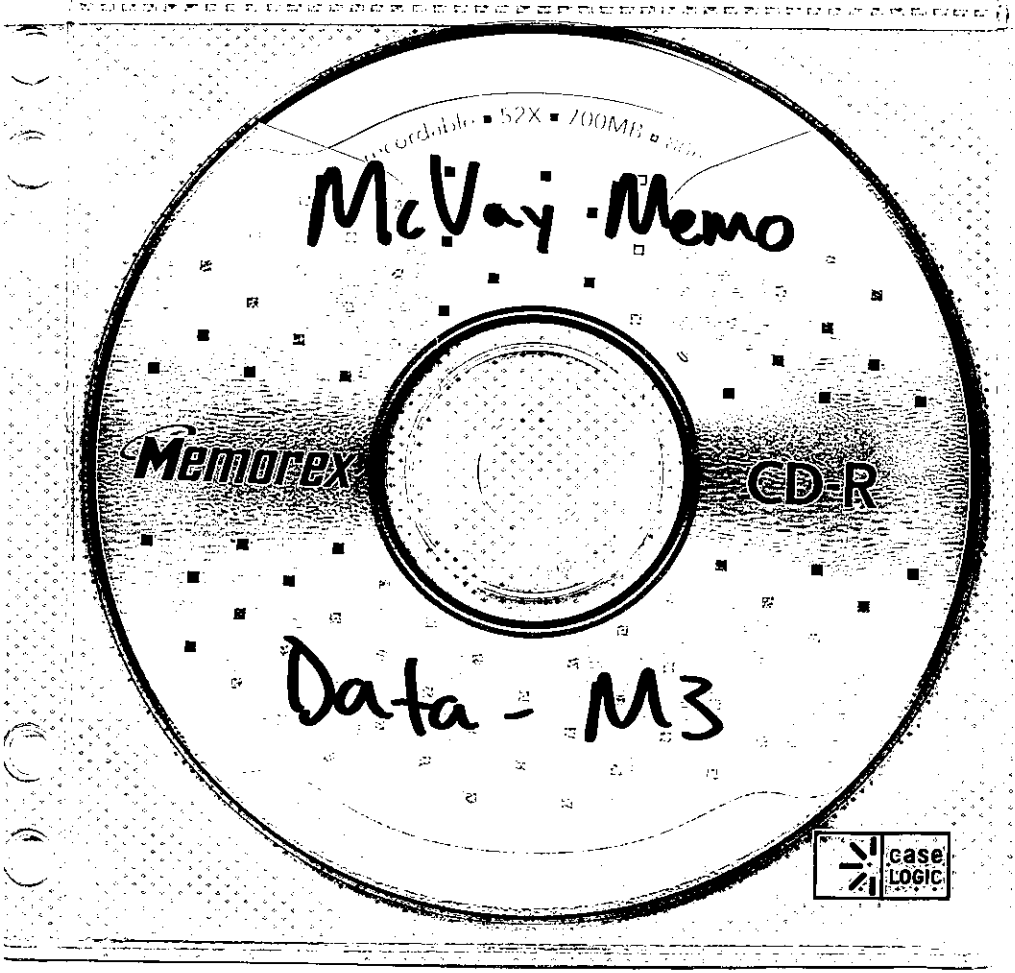
In response to *M3 Eagle's Request for Information Used in IDWR's March 2, 2009 Staff Memoranda*, enclosed is a CD that provides the information requested from Mike McVay.

Also enclosed are three letters received by IDWR that reference the M3 Eagle application and development.

Sincerely,

Deborah J. Gibson
Administrative Assistant
Water Management Division

cc: Service List


McVay - Memo
Memorex
CD-R
Data - M3
case LOGIC

CONTENTS OF CD LABELED

MCVAY MEMO M3 - DATA

Well Log Form 1
2M - 5/62

WELL LOG PAGE

RECEIVED
JUN 10 1964
Department of Reclamation

289TD 59 SL 124PL at 1500GPH
0-9 plus 289-4
Mar 17, 1964 to April 20

069881

SHEET NO. 2

Well Owner Lester Stevens
Well Driller Harden & Co
Well Location SE¼NW¼S10T4NR1EBM NE of

WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0	22½	Soil, sandy clay	No	No
22½	61	Till	No	
61	90	Above grading into the below	No	
90	136	Clayey yellow fine sand	Yes	
136	158	Quicksand	Yes	
158	165	Yellow cemented sand	No	
165	199	Brown clayey sand	Yes	
199	202	Fine, water sand	Yes	
202	224	Brown clayey sand	Yes	
224	228	Tight gray sand	Yes	
228	276	Yellow clayey sand	Yes	
276	272	Soft sandy clay	No	
282	290	Blue clay	Yes	
290	291	Brown clay, soft & sandy	Yes	
291	308	Yellow clayey sand	Yes	No

WWH

SENWS10 4N 1E

Hugh Harden
Driller

67

1808

Well Log Form 1
3M-3/63

069882

RECEIVED
MAY 24 19..
Department of Reclamation

WELL LOG AND REPORT TO THE STATE RECLAMATION ENGINEER OF IDAHO

SUBMIT WITHIN 30 DAYS AFTER COMPLETION OF WELL: SEE IDAHO STATUTES 42-238

Permit No. _____ Well No. _____ County Ada

Owner Bill Humphrey sold to Kenny Moore

Address Route 1, Boise, Idaho

Driller Orval Harden

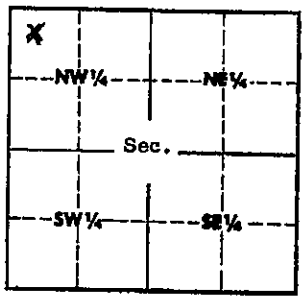
Address Route 1, Boise

Well location NW ¼ NW ¼ Sec. 11, T. 4 N. R. 1 E. B.M.

Size of drilled hole 6"

Total depth of well 203'

Locate well in section



Give depth to standing water from the ground 107' Water temp. _____ °Fahr.

Test delivery was 18 g.p.m. or _____ c.f.s. Drawdown was 13 feet. Pump? X Bail? _____

Size of pump and motor used to make test Rods and working barrell

Length of time of test 8 hours _____ minutes.

If flowing well, give flow _____ c.f.s. or _____ g.p.m. and of shut off pressure _____

If flowing well, described control works _____
(TYPE AND SIZE OF VALVE, ETC.)

Water will be used for domestic Weight of casing per lineal foot 11#

Thickness of casing .185" Casing material steel
(STEEL, CONCRETE, WOOD, ETC.)

Diameter, length and location of casing 6 5/8" OD from zero to 135'4"
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER; CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.
6 5/8"	0	135	135	Perforated and gravel packed.
				Perforations from 5' above shoe to
				15' above shoe. Six cuts per round,
				two ~~xxxx~~ rounds per lineal foot.

Number and size of perforations _____ located _____ feet to _____ feet from ground

_____ _____ _____

_____ _____ _____

Date of commencement of well Oct. 29, 1962 Date of completion of well Dec. 11, 1962

NWNW S.11 4N 1E

USGS

G-3

WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0	15	Top soil and subsoil and hardpan		
15	74	Sand and sandy clay		
74	117	Cemented gravel		
117	119	Dry yellow clay		
119	133	Yellow clay with water seams	yes	
133	203	Blue clay		
		If more space is required use Sheet No. 2		

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is complete, true and correct to the best of my knowledge and belief.

Signed Orval Harden

By Orval Harden

License No. 1

Dated _____, 19____

Well Driller's Helper _____

Form 238-7
6/89

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

USE TYPEWRITER OR BALLPOINT PEN

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER

Name Adan Ronquillo
Address 210 S. Main Star Idaho 83669
Owner's Permit No. 63-91-W-196

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other ______ (specify type)

4. METHOD DRILLED

☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other

Thickness	Diameter	From	To
.250 inches	6 inches	+ 2 feet	18 feet
.250 inches	6 inches	18 feet	140 feet
inches	inches	feet	feet
inches	inches	feet	feet

Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
Size of perforation ____ inches by ____ inches

Number	From	To
perforations	feet	feet
perforations	feet	feet
perforations	feet	feet

Well screen installed? ☐ Yes ☒ No
Manufacturer's name
Type ______ Model No.
Diameter ___ Slot size ___ Set from ___ feet to ___ feet
Diameter ___ Slot size ___ Set from ___ feet to ___ feet
Gravel packed? ☐ Yes ☐ No ☐ Size of gravel
Placed from ___ feet to ___ feet
Surface seal depth 60 Material used in seal: ☐ Cement grout ☒ Bentonite ☐ Puddling clay ☒ clay & sand
Sealing procedure used: ☒ Slurry pit ☐ Temp. surface casing ☐ Overbore to seal depth
Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata
Describe access port

6. LOCATION OF WELL

Sketch map location must agree with written location.

N / W / E / S

Subdivision Name
Lot No. ______ Block No.
County Ada
NW ¼ NW ¼ Sec. 17, T. 4 N☒ S☐ R. 1 E☐ W☒

7. WATER LEVEL

Static water level +1 feet Above land surface.
Flowing? ☐ Yes ☒ No G.P.M. flow
Artesian closed-in pressure ____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature ____ °F. Quality 4 pair
Describe artesian or temperature zones below.

8. WELL TEST DATA

☒ Pump ☐ Bailer ☐ Air ☐ Other

Discharge G.P.M.	Pumping Level	Hours Pumped
15	15	25

079548

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
6	0	4	topsoil		X
	4	8	gravel	X	
	8	12	sand	X	
	12	33	gravel + sand	X	
	33	34	clay		X
	34	59	sand	X	
	59	66	clay		X
	66	70	sand	X	
	70	76	clay		X
	76	85	sand	X	
	85	96	clay		X
	96	103	sand	X	
	103	112	clay		X
	112	116	sand	X	
	116	117	clay		X
	117	122	sand	X	
	122	124	clay		X
	124	133	sand	X	
	133	138	clay		X
	138	140	clay / hard		X
	140	149	clay with sand	X	

RECEIVED
JUL 17 1991
Department of Water Resources
Western Regional Office

10. Work started 6/12/91 finished 6/18/91

11. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name Gem State Drilling Firm No. 277
Address 2905 Eagle Rd. Eagle Date 6/18/91
Signed by (Firm Official) [signature]
and
(Operator) [signature]

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

SCANNED
APR 07 2009

WELL LOG AND REPORT OF THE STATE RECLAMATION ENGINEER OF IDAHO

JUN 4 1965
Department of Reclamation

36104

Permit No.____ Well No.____ County Ada

Owner Elbon E Ross

Address Box 246 Star, Idaho

Driller Chester D. Kinsey

Address Rt 1, Eagle, Ida

Well location ____ ¼ ____ ¼ Sec. 17, T. 4 ~~N~~ W ~~E~~ R. 1 ~~E~~ W

Size of drilled hole 4"

Total depth of well 424'

Locate well in section

NW¼	NE¼
# WELL 1/8 MILE SOUTH OF MAIN AND VALLEY ST INTERSECTON AT STAR, IDAHO ON MAIN STREET	
SW¼	SE¼

LOTS - 5 - 14 inclusive DICKINSON SUBDIVISION BOOK 3 OF PLATS AT PAGE 133

Give depth to standing water from the ground____ Water temp.____ °Fahr.

On "Pumping Test" delivery was____ g.p.m. or____ c.f.s. Drawdown was____ feet.

Size of pump and motor used to make test____

Length of time of test____ hours____ minutes.

If flowing well, give flow Seven Gallons per second c.f.s. or____ g.p.m. and of shut off pressure 10#

If flowing well, described control works 4" gate valve reduced to 4" (TYPE AND SIZE OF VALVE, ETC.)

Water will be used for Domestic & Irrig. Weight of casing per lineal foot 11#

Thickness of casing .230 Casing material steel (STEEL, CONCRETE, WOOD, ETC.)

Diameter, length and location of casing 4" .31' to 381' below surface. (CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER; CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.

Number and size of perforations____ located____ feet to____ feet from ground

Date of commencement of well ~~3-25-65~~ Date of completion of well 4-17-65

5:17 4N 1W

WRB.

WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0'	10'	top soil & sand	no	no
10'	20'	gravel	yes	no
20'	30'	Gravel	yes	no
30'	40'	conglomerate	yes	no
40'	50'	conglomerate	yes	no
50'	60'	yellow clay	no	no
60	70'	conglomerate	yes	no
70'	80'	conglomerate	yes	no
80'	90'	conglomerate	yes	nO
90'	100'	yellow clay	no	no
100'	110'	yellow clay	no	no
110'	120'	gray sand	yes	no
120'	130'	grey sand	yes	no
130'	140'	grey sand, streaks of clay	yes	no
141'	150'	Conglomerate, yellow clay& sand grey	yes	no
150'	160'	" " " " "	yes	no
160'	170'	" " " " "	yes	no
		If more space is required use Sheet No. 2		

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is true and correct to the best of my knowledge and belief.

Signed Chesley D. Kinsey

By

License No. 33

Dated 6-3-63, 19

SCANNED

APR 07 2008

Well Log Form 1
3M-3/63

RECEIVED
SEP 4 1964
Department of ...

WELL LOG AND REPORT TO THE STATE RECLAMATION ENGINEER OF IDAHO

SUBMIT WITHIN 30 DAYS AFTER COMPLETION OF WELL: SEE IDAHO STATUTES 42-238

034764

Permit No. A-31644 Well No. 2 County Canyon

Owner City of Middleton

Address Middleton Ida

Driller C. A. Baker

Address Box 41 Middleton Ida

Well location SW ¼ SE ¼ Sec. 6, T. 4 N, R. 2 W

Size of drilled hole 12 79 to 382 6" 382-420

Total depth of well 420

Locate well in section

NW ¼	NE ¼
Sec.	
SW ¼	SE ¼

Give depth to standing water from the ground + 10' Water temp. 61 °Fahr.

Test delivery was ___ g.p.m. or ___ c.f.s. Drawdown was ___ feet. Pump? ___ Bail? ___

Size of pump and motor used to make test Cleaned with 210 Compressor

Length of time of test 3 hours ___ minutes.

If flowing well, give flow ___ c.f.s. or 325 g.p.m. and of shut off pressure 4 +

If flowing well, described control works Valve & Breather pipe (TYPE AND SIZE OF VALVE, ETC.)

Water will be used for City - Domestic use Weight of casing per lineal foot 49, 59 - 13

Thickness of casing 3/8 - 3/16 Casing material steel (STEEL, CONCRETE, WOOD, ETC.)

Diameter, length and location of casing 369' - 12' 10 (0-365) 328' 6 5/8 OD (76 to 404)
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER; CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.
12"	+4	365	369	Stocked in Tough shale
6'	76	404	328	" " Blue shale
				see perf. slot #2

wdh

Number and size of perforations none located ___ feet to ___ feet from ground

Date of commencement of well July 1 '64 Date of completion of well Aug 21 '64

SWSE S.6 4N 2W

USGS

WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0	3	Top Soil — Sandy Loam	no	no
3	14	Sand Gravel	yes	4
14	38	Coarse Gravel Boulders	yes	4
38	220	Alternate Red and Clay	at times	
		Clay layers only from 2 to 6 strokes of bit		1
220	252	Broken Clay, fine sand in veins	yes	at time
252	330	Broken Blue Clay — fine sand	yes	
330	333	Hot mud not developed	some	
333	363	Alternate Blue Clay and fine sand	yes	
363	367	Tough Blue Shale (Had to stop 12 hrs at 363)	no	
367	376	Tight fine sand	yes	
376	379	Light Blue Clay	no	
379	384	Coarse sand (First artesian flow) Sulphur	yes	4
384	400	Broken Blue Clay	no	
400	420	Blue Clay on shale	no	
420	420+	medium sand (Main flow)	yes	
		If more space is required use Sheet No. 2		

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is complete, true and correct to the best of my knowledge and belief.

Signed C. T. Baker

By

Dated Sept 4, 19 64

License No.

Well Driller's Helper

Well Log Form 1
ZM - 5/62

SHEET NO. 2

Well Owner City of Middleton

Well Driller C. E. Baker

Well Location SW ¼ SE ¼ sec 6 T 4 N R 2 W

WELL LOG

034765

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
		I had to stop the 12" Casing at 365 ft the sand at 367 ft 376 was fine and shoot of water.		
		The water at 379 ft 384 wanted to flow which brought up the sand from just above it.		
		It also had Considerable sulfur smell I was unable to get a 10" into place with a threaded reinforced top at it. I put a 8" with heavy ends into the hole it stopped at 326 ft 372 only 46' long.		
		The artesian flow leaned hard on top of it. So I reduced it to 6" Solid Casing with a left hand thread at 80' and a Right handed thread at 328' from bottom end.		
		unable to stop the sulfur flow went into 20 ft more Clay and sand around the pipe towards the top (76 ft down) it bubbled quite well not much smell		
		WHS.		
		SWSE 5.6 4N 2W		

63

Form 238-7
9/82

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

USE TYPEWRITER OR BALLPOINT PEN

RECEIVED
JUN 16 1989
Department of Water Resources

1. WELL OWNER

Name SAM HAYES
Address P.O. BOX 265 MIDDLETON
Owner's Permit No. 63-89-W-072

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☐ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.250 inches	6" inches	+ 1 feet	40 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

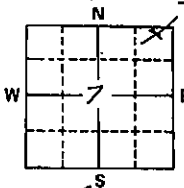
Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation _____ inches by _____ inches

Number	From	To
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

Well screen installed? ☐ Yes ☒ No
Manufacturer's name _____
Type _____ Model No. _____
Diameter ____ Slot size ____ Set from ____ feet to ____ feet
Diameter ____ Slot size ____ Set from ____ feet to ____ feet
Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____
Placed from _____ feet to _____ feet
Surface seal depth 40 Material used in seal: ☐ Cement grout
☒ Bentonite ☒ Puddling clay ☐ _____
Sealing procedure used: ☒ Slurry pit ☐ Temp. surface casing
☐ Overbore to seal depth
Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld
☐ Cemented between strata
Describe access port WELL SEAL

6. LOCATION OF WELL

Sketch map location must agree with written location



MICROFILMED
JUN 10 1991

Subdivision Name _____
Lot No. _____ Block No. _____
County CANYON
NE ¼ NE ¼ Sec. 7, T. 4N N/S, R. 2W E/W.

7. WATER LEVEL

Static water level 3 feet below land surface
Flowing? ☐ Yes ☒ No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature ____ °F. Quality _____
Describe artesian or temperature zones below.

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
APPROX 60	—	½ HR

9. LITHOLOGIC LOG

70859

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
6"	0	23	TOP SOIL GRAVEL	X	
	23	32	CLAY	—	
	32	35	SAND ALOT	X	
	35	40	CLAY	—	
	42		SAND ALOT	X	
			CLEANED UP		

RECEIVED
MAY 26 1989
Department of Water Resources

10.

Work started 5-16-89 finished 5-16-89

11. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name ADAMSON PUMP & DRILL Firm No. 457
Address NAMPA IDA Date 5-24-89
Signed by (Firm Official) Dave Adamson
and
(Operator) SAME

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

APR 07 2008

1708

Well Log Form 1
3M-3/63

RECEIVED
AUG 25 1964
Department of Reclamation

WELL LOG AND REPORT TO THE STATE RECLAMATION ENGINEER OF IDAHO 097973

SUBMIT WITHIN 30 DAYS AFTER COMPLETION OF WELL: SEE IDAHO STATUTES 42-238

Permit No. 9-32051 Well No. _____ County Ada

Owner Ben F. Stadler

Address Route 1 Boise, Idaho

Driller Russell Gowe

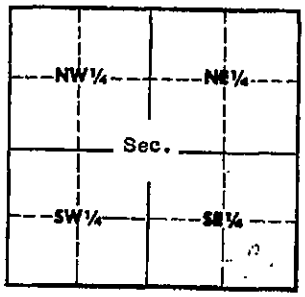
Address Boise, Idaho

Well location SE ¼ SE ¼ Sec. 26, T. 5N N/S, R. 1E E/W

Size of drilled hole 12" to 340' 10" 340' to 688'

Total depth of well 688'

Locate well in section



Give depth to standing water from the ground flowing Water temp. 82.5 °Fahr.

Test delivery was 900 g.p.m. or ✓ c.f.s. Drawdown was ✓ feet. Pump? ✓ Bail? ✓

Size of pump and motor used to make test none

Length of time of test _____ hours _____ minutes.

If flowing well, give flow _____ c.f.s. or 900 g.p.m. and of shut off pressure 5 lbs.

If flowing well, described control works 6" Gate Valve
(TYPE AND SIZE OF VALVE, ETC.)

Water will be used for Domestic+irrigation Weight of casing per lineal foot _____

Thickness of casing ¼ wall Casing material Steel
(STEEL, CONCRETE, WOOD, ETC.)

Diameter, length and location of casing 12" casing to 340' 8" casing 340 to 688'
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER; CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.
12"	0'	340'	343'	3' above ground. Casing set in hard blue shale
8"	321'	688'	367'	8" seal into 12" at 321' from ground level

Number and size of perforations 5/32" 990 perforations located 633' feet to 688' feet from ground

Date of commencement of well June 1, 1964 Date of completion of well Aug. 12, 1964

3

WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0'	35'	Brown Clay	No	No
35'	240'	Blue Shale	No	No
240'	245'	Sand & some pea gravel	Yes	No
245'	640'	Blue Shale	No	No
640'	688'	pea gravel & coarse sand	Yes	Yes
		If more space is required use Sheet No. 2		

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is complete, true and correct to the best of my knowledge and belief.

Signed Russell Cowe

By

License No. 65

Dated August 25, 1964

Well Driller's Helper Wayne E Stevens

Form 238-7
8/90

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALLPOINT PEN

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER

Name Dean Killerman
Address 2467 N. Ballantine, Eagle Id.
Drilling Permit No. 63-92-W-012
Water Right Permit No. ____

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other ____ (specify type)

4. METHOD DRILLED

☐ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary
☒ Cable ☐ Dug ☐ Other ____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other ____

Thickness	Diameter	From	To
.250 inches	6 inches +	1 feet	118 feet
.258 inches	5 inches	115 feet	120 feet
.258 inches	5 inches	123 feet	128 feet
inches	inches	feet	feet

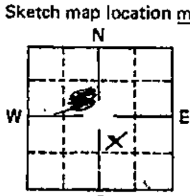
Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☒ Yes ☐ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
Size of perforation ____ inches by ____ inches

Number	From	To
perforations	feet	feet
perforations	feet	feet
perforations	feet	feet

Well screen installed? ☒ Yes ☐ No
Manufacturer's name Houston
Type Stainless Model No. 304
Diameter 5 Slot size 020 Set from 120 feet to 125 feet
Diameter ____ Slot size ____ Set from ____ feet to ____ feet
Gravel packed? ☐ Yes ☒ No ☐ Size of gravel ____
Placed from ____ feet to ____ feet
Surface seal depth 18 Material used in seal: ☐ Cement grout ☒ Bentonite ☒ Puddling clay ☐ ____
Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing ☒ Overbore to seal depth
Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata
Describe access port ____

6. LOCATION OF WELL

Sketch map location must agree with written location.



Subdivision Name ____
Lot No. ____ Block No. ____

County Ada

NW ¼ SE ¼ Sec. 32, T. 6N N☐ S☐ R. 1E E☐ W☐

7. WATER LEVEL

Static water level 50 feet below land surface.
Flowing? ☐ Yes ☒ No G.P.M. flow ____
Artesian closed-in pressure ____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature ____ °F. Quality ____
Describe artesian or temperature zones below.

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Air ☐ Other ____

Discharge G.P.M.	Pumping Level	Hours Pumped
30		1

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
6	0	2	Top Soil		X
	2	38	Sandy clay		X
	38	48	SAND		X
	48	70	S. Clay		X
	70	93	Gravel	X	
	93	120	Clay		X
	120	127	C. Sand	X	
	127	128	clay		X

RECEIVED
MAR 16 1992
Department of Water Resources
Western Regional Office

10.

Work started 10 JAN 92 finished 2-17-92

11. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name Dennis Phipps Firm No. 332
Address Meridian Id. Date 3-16-92
Signed by (Firm Official) [signature]
and
(Operator) Mark Phipps

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

RECEIVED
MAY 15 1968
Department of Reclamation

REPORT OF WELL DRILLER
State of Idaho

State law requires that this report shall be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

WELL OWNER:
Name Julius Jeker
Address Route # I, Dry Creek Road
Boise, Idaho
Owner's Permit No. 2-38423
NATURE OF WORK (check): Replacement well [x]
New well [ ] Deepened [ ] Abandoned [ ]
Water is to be used for:

METHOD OF CONSTRUCTION: Rotary [ ] Cable [x]
Dug [ ] Other (explain)

CASING SCHEDULE: Threaded — Welded —
16 "Diam. from 0 ft. to 144 ft.
12" "Diam. from 134 ft. to 220 ft. Liner
"Diam. from ft. to ft.
"Diam. from ft. to ft.
Thickness of casing: I/4 Material:
Steel [x] concrete [ ] wood [ ] other [ ]

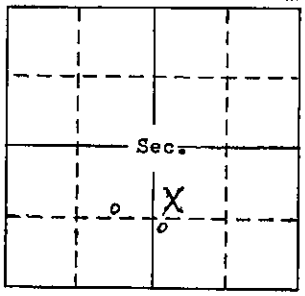
(explain)
PERFORATED? Yes [ ] No [ ] Type of perforator used:
ARMCO SCREENS 60 SLOT
Size of perforations: " by "
perforations from 144 ft. to 154 ft.
perforations from 164 ft. to 174 ft.
perforations from 184 ft. to 194 ft.
perforations from 204 ft. to 214 ft.
WAS SCREEN INSTALLED? Yes [x] No [ ]
Manufacturer's name Johnson 12" pipe size
Type Armco Iron Model No.
Diam. 12 Slot size 60 Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

CONSTRUCTION: Well gravel packed? Yes [ ]
No. [x] size of gravel Gravel placed from ft. to ft. Surface seal provided? Yes [x] No [ ] To what depth? ft. Material used in seal: Clay

Did any strata contain unusable water? Yes [ ]
No. [x] Type of water:
Depth of strata ft. Method of sealing strata off:

Surface casing used? Yes [ ] No. [x]
Cemented in place? Yes [ ] No [x]

Locate well in section



LOCATION OF WELL: County Ada
n w ¼ s e ¼ Sec. 36 T. 5 N/S R. 1 E/W

Size of drilled hole: I6" Total depth of well: 218 ft. Standing water level below ground: I5" ft. Temp. Fahr. ° Test delivery: 2500 gpm or cfs Pump? [ ] Bail [ ]
Size of pump and motor used to make test: Turbine
Length of time of test: 8 Hrs. Min.
Drawdown: I6 ft. Artesian pressure: ft. above land surface Give flow cfs or gpm. Shutoff pressure:
Controlled by: Valve [ ] Cap [ ] Plug [ ]
No control [ ] Does well leak around casing? Yes [ ] No [x]

46565

DEPTH FROM FEET	DEPTH TO FEET	MATERIAL	WATER YES OR NO
0	4	Top soil	
4	38	Decomposed sand? top soil	
38	45	Coarse sand	
45	56	" "	
56	58	Soft blue shale clay	
58	72	Gravel sand	
72	77	Qtz sand	
77	I85	Sand & gravel	
I85	I95	Coarse sand, some clay chunks	
I95	230	Coarse granite sand	
		Lead packer at I34 ft. from ground surface	
		I4" pipe on top of first screen	

Work started: 3/7/68
Work finished: 4/2/68
Well Driller's Statement: This well was drilled under my supervision and this report is true to the best of my knowledge.
Name: Kenneth Witt
Address: Route 4, Caldwell, Idaho.
Signed by: Kenneth Witt
License No. 55 Date: 5/9/68

Use other side for additional remarks

63 copied

USGS SCANNED APR 07 2008

Recorded
1.32

WELL LOG AND REPORT TO THE STATE RECLAMATION ENGINEER OF IDAHO

RECEIVED
APR 28 1961
Reclamation

Log No. 30176
Rec. ______, 19__
Well No. ______
Permit No. G-25928
63-3062
(DO NOT FILL IN)

Owner Mildred Lone Craven Address 1421 Ponderay St., Boise, Idaho

Driller Russel Cowe Company Address 1514 Longmont Boise Ida Lic. No. ______

Location of Well: NE ¼ SW ¼ Sec. 22, T. 5 N/S, R. 2 E/W Canyon County,

and 55 T feet N/S, and 130 feet E/W from C. S 1/16 Corner of NE ¼ SW ¼ Sec. 22

Size of Drilled Hole 12 Inch Total depth of Well 420

Give depth of standing water from surface 200' Water Temp. 65 degrees °Farenheit

On pumping test delivery was 820 g.p.m. or ______ c.f.s. Drawdown was 17 feet.

Size of pump and motor used to make the test 8" colum and 10" Bowles 150 H.P.

Length of time pumped during check was 12 Hours hr., ______ minutes.

If flowing well, give flow in c.f.s. ______ or g.p.m. 820 and shut in pressure ______

If flowing well, describe control works ______
(TYPE AND SIZE OF VALVE, ETC.)

Water will be used for Irrigation Weight of casing per linear foot ______

Thickness of casing 5/8 Standard Casing Casing material Pipe
E.G., PIPE, CONCRETE, WOOD.

Diameter, length and location of casing 0-305 12" Casing 284 to 402-9' 8" Perforated casing
(CASING 12" IN DIAMETER AND UNDER GIVE INSIDE DIAMETER; CASING OVER 12" IN DIAMETER GIVE OUTSIDE DIAMETER.)

Number and size of perforations 20.4" located 270 feet to 284 feet from surface of ground.

Other perforations 118' 9" 8" Perforated casing

Date of commencement of well June 17, 1957 Date of completion of well July 30, 1957

Type of well rig 24 # Bucyrus

CASING RECORD

DIAM. CASING	FROM FEET	TO FEET	LENGTH	"REMARKS" -- SEALS, GROUTING, ETC.
12"	0	305	305	
8"	284	402.9	118.9"	

udd.

GENERAL INFORMATION—Pumping Test, Quality of Water, Etc.

NE SW S.22 5N 2W

.63

2

WELL LOG

From Feet	To Feet	Type of Material	Drilling Time Hrs.	Drilling Time Min.	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0	40	Soil (2) Silty Sandy & Clay				
40	80	Clay and Silty Sand				
80	120	Clay Silty				
120	160	Dry Gravel				
160	200	Silty Clay				
200	225	Muddy Sand				
225	235	Coarse Sand			Yes	
235	265	Muddy Sand				
265	280	Muddy Sand				
280	307	Coarse Sand			Yes	Yes
307	320	Stringers of Clay and Muddy Sand				
320	360	Stringers of Clay and Muddy Sand				
360	400	Sandy Clay				
400	420	Clay				
420	430	Muddy Sand				
430	450	Clay and Muddy Sand				
		If more space is required use Sheet No. 2				

WELL DRILLER'S STATEMENT

This well was drilled under my jurisdiction and the above information is true and correct to the best of my knowledge and belief.

Signed Russel Cowe

By

License No. 65

Dated August 5, 1957

USE TYPEWRITER OR BALL POINT PEN

State of Idaho
Department of Reclamation

WELL DRILLER'S REPORT

RECEIVED
APR 14 1970
Department of Reclamation

State law requires that this report be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

1. WELL OWNER

Name Gerald Hozan
Address RR I Caldwell
Owner's Permit No.

2. NATURE OF WORK

☐ New well ☐ Deepened ☒ Replacement
☐ Abandoned (describe method of abandoning)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test
☐ Municipal ☐ Industrial ☒ Stock

4. METHOD DRILLED

☒ Cable ☐ Rotory ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 6 inches Total depth 147 feet
Casing schedule: ☐ Steel ☐ Concrete

Thickness	Diameter	From	To
.250 inches	6 inches	+1 feet	145 feet
____ inches	____ inches	____ feet	____ feet
____ inches	____ inches	____ feet	____ feet
____ inches	____ inches	____ feet	____ feet
____ inches	____ inches	____ feet	____ feet

Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation ____ inches by ____ inches

Number	From	To
____ perforations	____ feet	____ feet
____ perforations	____ feet	____ feet
____ perforations	____ feet	____ feet

Well screen installed? ☐ Yes ☒ No
Manufacturer's name
Type Model No.
Diameter Slot size Set from feet to feet
Diameter Slot size Set from feet to feet

Gravel packed? ☐ Yes ☒ No Size of gravel
Placed from feet to feet

Surface seal? ☒ Yes ☐ No To what depth 20 feet
Material used in seal ☐ Cement grout ☐ Puddling clay

6. LOCATION OF WELL

Sketch map location must agree with written location.

63

N / W / E / S

County Canyon
SE ¼ SE ¼ Sec. 15 T. 5 N. R. 3 E/W

7. WATER LEVEL

Static water level 48 feet below land surface
Flowing? ☐ Yes ☒ No G.P.M. flow
Temperature ° F. Quality
Artesian closed-in pressure p.s.i.
Controlled by ☐ Valve ☐ Cap ☐ Plug

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Other

Discharge G.P.M.	Draw Down	Hours Pumped
75		3

31998

9. LITHOLOGIC LOG

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
8	0	3	top soil & Hard Pan		X
8	3	20	sandy loam & gravel		X
6	20	90	sandy clay		X
6	90	142	sand & Gravel	X	
6	142	148	Clay		X
6	148	152	sand & Gravel	X	
6					

10.
Work started 2-4-70 finished 2-13-70

11. DRILLER'S CERTIFICATION

This well was drilled under my supervision and this report is true to the best of my knowledge.

Bill Doty Well Drilling 42
Driller's or Firm's Name Number
RR I Caldwell
Address
William E. Doty 3-18-70
Signed By Date

USE ADDITIONAL SHEETS IF NECESSARY

APR 17 1970

05N01E 35 ACA 1

Maybe 05N01E 35ACA1

Form 238-7
9/82

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALLPOINT PEN

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER

Name Julius Joker

Address Rt #1 Dry Creek Rd Boise

Owner's Permit No. 63-89-Z-168/A63-17455

2. NATURE OF WORK

☐ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

Repair old well

3. PROPOSED USE

☒ Domestic ☒ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☐ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.260 inches	6 inches +	18" feet	63 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

Was casing drive shoe used? ☐ Yes ☐ No
Was a packer or seal used? ☐ Yes ☐ No
Perforated? ☐ Yes ☐ No
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation _____ inches by _____ inches

Number	From	To
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

Well screen installed? ☐ Yes ☐ No
Manufacturer's name _____
Type _____ Model No. _____
Diameter ____ Slot size ____ Set from _____ feet to _____ feet
Diameter ____ Slot size ____ Set from _____ feet to _____ feet
Gravel packed? ☐ Yes ☐ No ☐ Size of gravel _____
Placed from _____ feet to _____ feet
Surface seal depth _____ Material used in seal: ☐ Cement grout ☐ Bentonite ☐ Puddling clay ☐ _____
Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing ☐ Overbore to seal depth
Method of joining casing: ☐ Threaded ☐ Welded ☐ Solvent Weld ☐ Cemented between strata
Describe access port _____

6. LOCATION OF WELL

Sketch map location must agree with written location

N / W / E / S

Subdivision Name _____
Lot No. _____ Block No. _____
County Ada
S/W ¼ N/E ¼ Sec. 35, T. 5 N., R. 1 E.W.

MICROFILMED AUG 13 1990

7. WATER LEVEL

Static water level _____ feet below land surface.
Flowing? ☒ Yes ☐ No G.P.M. flow 60
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☒ Valve ☐ Cap ☐ Plug
Temperature _____ °F. Quality _____
Describe artesian or temperature zones below.

8. WELL TEST DATA

☒ Pump ☐ Bailer ☐ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
150	10	1

9. LITHOLOGIC LOG 71059

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
6	0	44	sand & clays		
	44	100	blue clay		
			Ream 6" over 3" casing, drove 6" casing into blue clay		
			Pulled 3" casing 48' long		
			Drilled 6" to 100'		
			Regain flow at 100'		

RECEIVED
DEC 28 1989
Department of Water Resources
Western Regional Office

10.

Work started 8/29/89 finished 9/6/89

11. DRILLERS CERTIFICATION DL

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name W.E. Stevens & Sons Firm No. 153
Address 3709 Hawthorne Dr Date 11/29/89
Signed by (Firm Official) Wayne E Stevens
and
(Operator) Wayne E Stevens

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

1/78

05N 03W 12CCA1

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

CCA1

USE TYPEWRITER OR BALLPOINT PEN

Use 11 BCA1 as Alt

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER

Name RON HOLLAWAY

Address Rt # 7 Caldwell

Owner's Permit No.

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal

☐ Industrial ☐ Stock ☐ Waste Disposal or Injection

☐ Other (specify type)

4. METHOD DRILLED

☒ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary

☐ Cable ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other

Thickness	Diameter	From	To
.250 Inches	6 Inches + 2	feet 259' 11"	feet
Inches	Inches	feet	feet
Inches	Inches	feet	feet
Inches	Inches	feet	feet

Was casing drive shoe used? ☒ Yes ☐ No

Was a packer or seal used? ☐ Yes ☒ No

Perforated? ☐ Yes ☒ No

How perforated? ☐ Factory ☐ Knife ☐ Torch

Size of perforation inches by inches

Number	From	To
perforations	feet	feet
perforations	feet	feet
perforations	feet	feet

Well screen installed? ☐ Yes ☒ No

Manufacturer's name

Type Model No.

Diameter Slot size Set from feet to feet

Diameter Slot size Set from feet to feet

Gravel packed? ☐ Yes ☒ No ☐ Size of gravel

Placed from feet to feet

Surface seal depth 19' Material used in seal: ☐ Cement grout ☒ Puddling clay ☒ Well cuttings

Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing ☒ Overbore to seal depth

Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata

Describe access port

6. LOCATION OF WELL

Sketch map location must agree with written location.

N / W / E / S / x

Subdivision Name

Lot No. Block No.

County Canyon

SE ¼ SW ¼ Sec. 12, T. 5 N/S, R. 3 E/W.

7. WATER LEVEL

Static water level 136' feet below land surface.

Flowing? ☐ Yes ☒ No G.P.M. flow

Artesian closed-in pressure p.s.i.

Controlled by: ☐ Valve ☐ Cap ☐ Plug

Temperature °F. Quality

8. WELL TEST DATA

☐ Pump ☐ Baller ☒ Air ☐ Other

Discharge G.P.M.	Pumping Level	Hours Pumped
60		2

9. LITHOLOGIC LOG

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
8"	0'	5'	Topsoil		X
8"	5'	8'	Hard pan		X
8"	8'	19'	Sandy clay		X
6"	19'	26'	Sand		X
6"	26'	57'	Sandy clay		X
6"	57'	110'	Sand clay layers		X
6"	110'	115'	Clay		X
6"	115'	155'	Sand & clay layers		X
6"	155'	160'	Clay		X
6"	160'	171'	Sand 16 grns.	X	
6"	171'	178'	Sand & clay layers		X
6"	178'	180'	Sand	X	
6"	180'	183'	Clay		X
6"	183'	188'	Sand 12 grns.	X	
6"	188'	198'	Clay		X
6"	198'	206'	Sand 9grns.	X	
6"	206'	216'	Sand clay layers	X	
6"	216'	230'	Clay		X
6"	230'	236'	Sand 8 grns.	X	
6"	236'	248'	Clay layers		X
6"	248'	262'	Clay		X
6"	262'	265'	Sand & clay layers	X	
6"	265'	293'	Sand seams of clay	X	
6"	293'	302'	Clay		X
6"	302'	306'	Sand & clay layers	X	
6"	306'	314'	sand	X	

RECEIVED

MAY 16 1979

Department of Water Resources Western Region Office

10. Work started 3/14/79 finished 3/16/79

11. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name BILL DOTY WELL DRILLING Firm No. 42

Address Rt # 7 Caldwell Date 4/6/79

Signed by (Firm Official) Bill Doty

and

(Operator) Fred Bug

Signed

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

04N01W 13 AACC1

Form 238-7
9/82

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALLPOINT PEN

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER

Name Idaho Dept Parks & Recreation

Address 2177 Warm Springs Av 83720

Owner's Permit No. pending

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☐ Domestic ☒ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☒ Other non-consumptive (specify type)

4. METHOD DRILLED

☐ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary
☒ Cable ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other

Thickness	Diameter	From	To
.250 inches	16 inches	+ 0 feet	50 feet
.250 inches	12 inches	+10 feet	266 feet
.250 inches	8 inches	161 ⅜" feet	332 feet
inches	inches	feet	feet

Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☒ Yes ☐ No
Perforated? ☒ Yes ☐ No
How perforated? ☒ Factory ☐ Knife ☐ Torch
Size of perforation 1/8 inches by 5 inches

Number		From	To
1600	perforations	240 feet	320 feet
	perforations	feet	feet
	perforations	feet	feet

Well screen installed? ☐ Yes ☒ No
Manufacturer's name
Type Model No.
Diameter Slot size Set from feet to feet
Diameter Slot size Set from feet to feet
Gravel packed? ☒ Yes ☐ No ☐ Size of gravel ¼ minus
Placed from 161 feet to 320 feet
Surface seal depth 78 Material used in seal: ☐ Cement grout
☒ Bentonite ☒ Puddling clay ☐
Sealing procedure used: ☒ Slurry pit ☒ Surface casing ☒ Overbore to seal depth
Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld
☐ Cemented between strata
Describe access port 6" cap, 1" cap top of well

7. WATER LEVEL

Static water level feet below land surface.
Flowing? ☒ Yes ☐ No G.P.M. flow 260
Artesian closed-in pressure 5 p.s.i.
Controlled by: ☒ Valve ☒ Cap ☐ Plug
Temperature 55 °F. Quality
Describe artesian or temperature zones below:

8. WELL TEST DATA

☒ Pump ☐ Bailer ☐ Air ☐ Other

Discharge G.P.M.	Pumping Level from top of casing	Hours Pumped
375	10'0"	1
460	15'8"	15 min
560	23'	30 min
710	32'3"	15 min

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
16	0	37	sand & gravel	X	
	37	78	brown clay		X
12	78	84	cemented sand	X	
	84	94	sand	X	
	94	105	dirty sand	X	
	105	120	brown clay		X
	120	136	dirty sand	X	
	136	154	brown clay		X
	154	188	cemented sand & sandy clay	X	
	188	194	dirty sand	X	
	194	210	brown clay		X
	210	252	sand, cemented sand with clay streaks	X	
	252	268	brown clay		X
	268	318	sand & gravel	X	
	318	320	brown clay		X
	320	332	cemented sand & gravel	X	
			Plug in bottom is 6" pipe 4' long with packer on top & plate on bottom filled with 3/4" gravel		
			Lead packer is 10" pipe 5' long set 156'6" to 161'6"		

RECEIVED
JUL 22 1986
Department of Water Resources

10.

Work started 6/2/86 finished 6/30/86

8. LOCATION OF WELL

Sketch map location must agree with written location.

N / W / E / S

Eagle Island Park
Subdivision Name

Lot No. Block No.

County Ada

S/E ¼ N/E ¼ Sec. 13 T. 4 ☒ N. R. 1 ☒ W.

11. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name W. E. Stevens & Sons No. 153

Address 3709 Hawthorne Drive Date 7/15/86

Signed by (Firm Official)

and

(Operator)

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

USE TYPEWRITER OR BALL POINT PEN

State of Idaho
Department of Water Administration

WELL DRILLER'S REPORT

State law requires that this report be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

Received 1-6-72

1. WELL OWNER

Name J. A. TERTELING WELL NO. 2

Address Boise Idaho

Owner's Permit No.

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement

☐ Abandoned (describe method of abandoning)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test

☐ Municipal ☐ Industrial ☐ Stock

4. METHOD DRILLED

☒ Cable ☐ Rotary ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 12 inches Total depth 250 feet

Casing schedule: ☒ Steel ☐ Concrete

Thickness	Diameter	From	To
.250 inches	12 inches	+1 feet	143 feet
inches	inches	feet	feet
inches	inches	feet	feet
inches	inches	feet	feet
inches	inches	feet	feet

Was a packer or seal used? ☐ Yes ☒ No

Perforated? ☒ Yes ☐ No SHOP

How perforated? ☐ Factory ☐ Knife ☐ Torch

Size of perforation 1/8 inches by 3 inches

Number		From		To	
~~400~~	perforations		feet		feet
800	perforations	100	feet	140	feet
	perforations		feet		feet

Well screen installed? ☐ Yes ☒ No

Manufacturer's name

Type Model No.

Diameter Slot size Set from feet to feet

Diameter Slot size Set from feet to feet

Gravel packed? ☒ Yes ☐ No Size of gravel #3/8

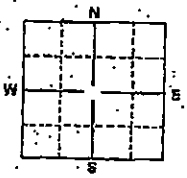
Placed from 140 feet to 40 feet

Surface seal? ☒ Yes ☐ No To what depth 40 feet

Material used in seal ☐ Cement grout ☒ Puddling clay

6. LOCATION OF WELL

Sketch map location must agree with written location.



County Ada

NE ¼ SE ¼ Sec. 3 T. 4 N/S R. 1 E/W

7. WATER LEVEL

Static water level 74 feet below land surface

Flowing? ☐ Yes ☒ No G.P.M. flow

Temperature ° F. Quality

Artesian closed-in pressure p.s.i.

Controlled by ☐ Valve ☐ Cap ☐ Plug

8. WELL TEST DATA

☐ Pump ☒ Bailer ☐ Other

Discharge G.P.M.	Draw Down	Hours Pumped
25		

36782

9. LITHOLOGIC LOG

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
12	0	10	Top Soil		
	10	102	Sandy Clay		
	102	113	Gravel 3' water		
	113	115	Brown Clay		
	115	185	Blue clay		
	185	191	Fine sand		
	191	204	Blue clay		
	~~204~~	~~224~~	~~Blue clay~~		
	~~224~~				
	204	209	Fine sand		
	209	224	Blue clay		
	224	229	Fine sand	+	
	Water came to 74' static				
	229	250	Blue clay		

10.

Work started June 72 finished June 72

11. DRILLER'S CERTIFICATION

This well was drilled under my supervision and this report is true to the best of my knowledge.

Russel Cowe Drilling Co. 65
Driller's or Firm's Name Number

Boise, Idaho
Address

Signed By Russel Cowe Date

USE ADDITIONAL SHEETS IF NECESSARY

FORWARD THE WHITE, BLUE, AND PINK COPIES TO THE DEPARTMENT

05N01W 36 ABB1

3015

Received Dec 16 1968 Dept of Reclamation

REPORT OF WELL DRILLER
State of Idaho

State law requires that this report shall be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

WELL OWNER:
Name James A House
Address Eagle Idaho

Owner's Permit No.
NATURE OF WORK (check): Replacement well ☐
New well ☑ Deepened ☐ Abandoned ☐
Water is to be used for: Domestic

METHOD OF CONSTRUCTION: Rotary ☐ Cable ☑
Dug ☐ Other
(explain)

CASING SCHEDULE: Threaded — Welded —
6" Diam. from Surf ft. to 105 ft.
" Diam. from ft. to ft.
" Diam. from ft. to ft.
" Diam. from ft. to ft.
Thickness of casing: ~~.280~~ Material:
Steel ☑ concrete ☐ wood ☐ other ☐
(explain)

PERFORATED? Yes ☐ No ☑ Type of perforator used:

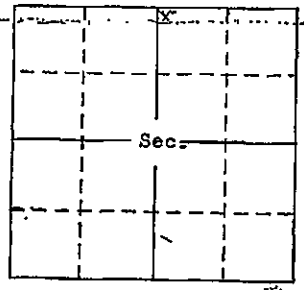
Size of perforations: " by "
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.
WAS SCREEN INSTALLED? Yes ☐ No ☑
Manufacturer's name
Type Model No.
Diam. Slot size Set from ft. to ft.
Diam. Slot size Set from ft. to ft.

CONSTRUCTION: Well gravel packed? Yes ☐
No. ☑ size of gravel Gravel placed from ft. to ft. Surface seal provided? Yes ☑ No ☐ To what depth? 24 ft. Material used in seal: Portland Cement

Did any strata contain unusable water? Yes ☐
No. ☑ Type of water:
Depth of strata ft. Method of sealing strata off:

Surface casing used? Yes ☐ No. ☑
Cemented in place? Yes ☐ No ☑

Locate well in section



LOCATION OF WELL: County
NW¼ NE¼ Sec. 36 T. 5 N/S R. 1 E/W

Size of drilled hole: 6" Total depth of well: 105' Standing water level below ground: 72' Temp. Fahr. ° Test delivery: gpm or cfs Pump? ☐ Bail ☐
Size of pump and motor used to make test: Bailer
Length of time of test: 2 Hrs. Min.
Drawdown: 10' ft. Artesian pressure: ft. above land surface. Give flow cfs or gpm. Shutoff pressure:
Controlled by: Valve ☐ Cap ☐ Plug ☐
No control ☐ Does well leak around casing? Yes ☐ No ☑

DEPTH FROM FEET	DEPTH TO FEET	MATERIAL 31571	WATER YES OR NO
0'	10'	Top soil & clay	no
10'	20'	Clay alternating thin layers sand	no
20'	30'	Clay some coarse sand & gravel	no
30'	40'	Clay some sand & gravel	no
40'	50'	Clay streaks gravel	no
50'	60'	Clay gray	no
60'	70'	Alternating clay & sand	no
70'	80'	Green clay	no
80'	90'	Sand clay some sand	yes
90'	100'	Clay	yes
100'	105'	Gravel & cobble rock	yes

Work started: 11-27-68
Work finished: 12-2-68
Well Driller's Statement: This well was drilled under my supervision and this report is true to the best of my knowledge.
Name: Chester D. & Sons
Address:
Signed by:
License No. 53 Date: 12-10-68

Use other side for additional remarks

63

Well Number,1st Use,2nd Use,Method Drilled,Total Depth,Well Open,# of WLs,# of WLs,Well Test,Lith Log,Completion Date,Firm No,LSD Elev,Elev Accy,Well Location,Location Verified,IDTM XE,IDTM YN,Driller's WL,Min Opening,Max Opening
04N01E-03DAD1,Unused,,Cable Tool,250,1,583,583,,9,06/30/1972,65,2700,<11 ft,43°42'43"/116°18'50",USGS,2313589,1392706,57.2,100,140
04N01E-10ACB2,Domestic,,Cable Tool,308,1,46,46,,15,04/20/1964,318,2636,<11 ft,43°42'06"/116°19'20",USGS,2312885,1391583,59,289,308
04N01E-11BBB1,Domestic,,Cable Tool,203,2,113,113,Other,5,12/11/1962,318,2690,<11 ft,43°42'23"/116°18'39",USGS,2313817,1392082,107,120,203
04N01W-13AACC1,Irrigation,,Cable Tool,332,1,13,13,,,06/30/1986,,2525,<11 ft,43°41'19"/116°23'50",USGS,2306800,1390305,,240,320
04N01W-17BBDB1,Domestic,,Air Rotary,149,1,80,80,,,06/18/1991,,2470,<11 ft,43°41'24"/116°29'21",USGS,2299394,1390678,,140,149
04N01W-17BBDC1,Domestic,,,424,1,81,81,,,04/17/1963,,2468,<11 ft,43°41'20"/116°29'21",USGS,2299391,1390554,,381,424
04N02W-06CDD1,Municipal,,Cable Tool,420,1,82,82,,14,08/31/1964,,2404,<11 ft,43°42'28"/116°37'27",USGS,2288576,1392988,,404,420
04N02W-07AAC1,Domestic,,Air Rotary,42,1,99,99,,5,05/16/1989,457,2395,<11 ft,43°42'14"/116°36'59",USGS,2289190,1392536,,40,42
05N01E-26DCD1,Domestic,Irrigation,Cable Tool,688,1,68,68,,5,08/12/1964,,2750,<11 ft,43°44'23"/116°17'57",USGS,2314861,1395758,,633,688
05N01E-32DBD1,Domestic,,Cable Tool,128,1,14,14,,7,02/17/1992,332,2660,<11 ft,43°43'31"/116°21'36",USGS,2309916,1394291,50,120,125
05N01E-34DBB1,Irrigation,,,175,,241,241,,,,2680,<11 ft,43°43'41"/116°19'20",USGS,2312968,1394514,,0,0
05N01E-35ACA1,Stock,,,,,113,113,,,,,2720,<11 ft,43°43'50"/116°17'57",USGS,2314832,1394740,,0,0
05N01E-36AAB1,Irrigation,,Cable Tool,230,5,94,94,,7,04/02/1968,,2780,<11 ft,43°44'04"/116°16'40",USGS,2316566,1395124,,144,230
05N01W-36ABB1,Domestic,Irrigation,Cable Tool,208,1,216,216,,21,12/02/1968,47,2618,<11 ft,43°44'06"/116°24'08",USGS,2306546,1395469,,204,208
05N02W-22CAD1,Irrigation,,Cable Tool,450,1,134,134,,11,07/30/1957,,2605,<11 ft,43°45'14"/116°33'45",USGS,2293704,1397953,200,279,403
05N03W-12CCA1,Domestic,,Air Rotary,314,1,39,39,,17,03/16/1979,,2560,<11 ft,43°46'52"/116°38'52",USGS,2286935,1401193,136,60,314
05N03W-15DDC1,Domestic,Stock,,152,1,102,102,,5,02/13/1970,,2495,<11 ft,43°45'54"/116°40'31",USGS,2284664,1399475,48,147,152

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Well Number, LithTop, LithBot, Lithology, LithColor, LithTexture
04N01E-03DAD1,0,102,Clay,,
04N01E-03DAD1,102,113,Sand+Gravel,,
04N01E-03DAD1,113,185,Clay,Blue,
04N01E-03DAD1,185,191,Sand,,
04N01E-03DAD1,191,204,Clay,Blue,
04N01E-03DAD1,204,209,Sand,,
04N01E-03DAD1,209,224,Clay,Blue,
04N01E-03DAD1,224,229,Sand,,
04N01E-03DAD1,229,250,Clay,Blue,
04N01E-10ACB2,0,22,Clay+Sand,,
04N01E-10ACB2,22,55,Gravel,,
04N01E-10ACB2,55,61,Sand+Gravel,,
04N01E-10ACB2,61,136,Clay+Sand,,
04N01E-10ACB2,136,158,Sand,,
04N01E-10ACB2,158,165,Sandstone,Yellow,
04N01E-10ACB2,165,199,Clay+Sand,Brown,
04N01E-10ACB2,199,202,Sand,,
04N01E-10ACB2,202,219,Clay+Sand,Brown,
04N01E-10ACB2,219,228,Sand,Gray,
04N01E-10ACB2,228,273,Clay+Sand,,
04N01E-10ACB2,273,276,Sand,Yellow,
04N01E-10ACB2,276,282,Clay+Sand,Yellow,
04N01E-10ACB2,282,291,Clay,Blue,
04N01E-10ACB2,291,308,Sand,Yellow,
04N01E-11BBB1,0,74,Clay,,
04N01E-11BBB1,74,117,Sand+Gravel,,
04N01E-11BBB1,117,119,Clay,Yellow,
04N01E-11BBB1,119,133,Clay,Yellow,
04N01E-11BBB1,133,203,Clay,Blue,
04N02W-06CDD1,0,3,Sand,,
04N02W-06CDD1,3,14,Sand+Gravel,,
04N02W-06CDD1,14,38,Gravel,,
04N02W-06CDD1,38,220,Clay+Sand,,
04N02W-06CDD1,220,252,Clay+Sand,,
04N02W-06CDD1,252,330,Clay+Sand,Blue,
04N02W-06CDD1,330,333,Clay,,
04N02W-06CDD1,333,363,Clay+Sand,,
04N02W-06CDD1,363,367,Shale,Blue,
04N02W-06CDD1,367,376,Sand,,
04N02W-06CDD1,376,379,Clay,Blue,
04N02W-06CDD1,379,384,Sand,,
04N02W-06CDD1,384,400,Clay,,
04N02W-06CDD1,400,420,Clay,Blue,
04N02W-07AAC1,0,23,Clay+Sand+Gravel,,
04N02W-07AAC1,23,32,Clay,,
04N02W-07AAC1,32,35,Sand,,
04N02W-07AAC1,35,40,Clay,,
04N02W-07AAC1,40,42,Sand,,
05N01E-26DCD1,0,35,Clay,Brown,
05N01E-26DCD1,35,240,Clay,Blue,
05N01E-26DCD1,240,245,Sand+Gravel,,
05N01E-26DCD1,245,640,Clay,Blue,
05N01E-26DCD1,640,688,Sand+Gravel,,
05N01E-32DBD1,0,38,Clay+Sand,,
05N01E-32DBD1,38,48,Sand,,
05N01E-32DBD1,48,70,Clay,,
05N01E-32DBD1,70,93,Gravel,,
05N01E-32DBD1,93,120,Clay,,
05N01E-32DBD1,120,127,Sand,,
05N01E-32DBD1,127,128,Clay,,
05N01E-36AAB1,0,56,Sand,,
05N01E-36AAB1,56,58,Clay,Blue,
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05N01E-36AAB1,58,72,Sand+Gravel,,
05N01E-36AAB1,72,77,Sand,,
05N01E-36AAB1,77,185,Sand+Gravel,,
05N01E-36AAB1,185,195,Clay+Sand,,
05N01E-36AAB1,195,230,Sand,,
05N01W-36ABB1,0,1,Unknown,,
05N01W-36ABB1,1,53,Clay+Sand,Brown,
05N01W-36ABB1,53,75,Clay+Sand+Gravel,Brown,
05N01W-36ABB1,75,77,Clay,Yellow,
05N01W-36ABB1,77,80,Sand,,
05N01W-36ABB1,80,88,Clay,,
05N01W-36ABB1,88,94,Clay+Sand,,
05N01W-36ABB1,94,105,Clay,,
05N01W-36ABB1,105,108,Sand,Red,
05N01W-36ABB1,108,115,Clay+Sand,Yellow,
05N01W-36ABB1,115,116,Sand,,
05N01W-36ABB1,116,134,Clay+Sand,,
05N01W-36ABB1,134,139,Clay,,
05N01W-36ABB1,139,146,Sand,Brown,
05N01W-36ABB1,146,151,Clay,,
05N01W-36ABB1,151,154,Sand,,
05N01W-36ABB1,154,167,Clay,,
05N01W-36ABB1,167,169,Sand,,
05N01W-36ABB1,169,197,Clay+Sand,Yellow,
05N01W-36ABB1,197,207,Sand,,
05N01W-36ABB1,207,208,Clay,,
05N02W-22CAD1,0,80,Clay+Sand,,
05N02W-22CAD1,80,120,Clay,,
05N02W-22CAD1,120,160,Gravel,,
05N02W-22CAD1,160,200,Clay,,
05N02W-22CAD1,200,235,Sand,,
05N02W-22CAD1,235,280,Sand,,
05N02W-22CAD1,280,287,Sand,,
05N02W-22CAD1,287,400,Clay+Sand,,
05N02W-22CAD1,400,420,Clay,,
05N02W-22CAD1,420,430,Sand,,
05N02W-22CAD1,430,450,Clay+Sand,,
05N03W-12CCA1,0,5,Clay+Sand+Gravel,,
05N03W-12CCA1,5,8,Hardpan/Caliche,,
05N03W-12CCA1,8,160,Clay+Sand,,
05N03W-12CCA1,160,171,Sand,,
05N03W-12CCA1,171,178,Clay+Sand,,
05N03W-12CCA1,178,180,Sand,,
05N03W-12CCA1,180,183,Clay,,
05N03W-12CCA1,183,188,Sand,,
05N03W-12CCA1,188,198,Clay,,
05N03W-12CCA1,198,216,Sand,,
05N03W-12CCA1,216,230,Clay,,
05N03W-12CCA1,230,236,Sand,,
05N03W-12CCA1,236,262,Clay,,
05N03W-12CCA1,262,293,Clay+Sand,,
05N03W-12CCA1,293,302,Clay,,
05N03W-12CCA1,302,306,Clay+Sand,,
05N03W-12CCA1,306,314,Sand,,
05N03W-15DDC1,0,20,Sand+Gravel,,
05N03W-15DDC1,20,90,Clay+Sand,,
05N03W-15DDC1,90,142,Sand+Gravel,,
05N03W-15DDC1,142,148,Clay,,
05N03W-15DDC1,148,152,Sand+Gravel,,
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Well Number, TestType, GPM, HrsPumped, HoleDiam, StaticLevel, PumpLevel, AqTop, AqBot, S, K
04N01E-11BBB1,Other,18,8,6,107,120,107,203,.00012,36

Well Number, OpenTop, OpenBot
04N01E-03DAD1,100,140
04N01E-10ACB2,289,308
04N01E-11BBB1,120,130
04N01E-11BBB1,135,203
04N01W-13AACC1,240,320
04N01W-17BBDB1,140,149
04N01W-17BBDC1,381,424
04N02W-06CDD1,404,420
04N02W-07AAC1,40,42
05N01E-26DCD1,633,688
05N01E-32DBD1,120,125
05N01E-36AAB1,144,154
05N01E-36AAB1,164,174
05N01E-36AAB1,184,194
05N01E-36AAB1,204,214
05N01E-36AAB1,220,230
05N01W-36ABB1,204,208
05N02W-22CAD1,279,403
05N03W-12CCA1,60,314
05N03W-15DDC1,147,152

Well Number, WLDate, WLDepth, WLStatus, WLAgency
04N01E-03DAD1,06/30/1972,57.2,,Driller
04N01E-03DAD1,03/28/1989,57.2,,USGS
04N01E-03DAD1,05/18/1989,58.3,,USGS
04N01E-03DAD1,07/24/1989,59.2,,USGS
04N01E-03DAD1,08/07/1989,59.3,,USGS
04N01E-03DAD1,08/10/1989,59.2,,USGS
04N01E-03DAD1,08/15/1989,59.2,,USGS
04N01E-03DAD1,08/20/1989,59.2,,USGS
04N01E-03DAD1,08/25/1989,59.0,,USGS
04N01E-03DAD1,08/31/1989,58.9,,USGS
04N01E-03DAD1,09/05/1989,59.1,,USGS
04N01E-03DAD1,09/10/1989,59.0,,USGS
04N01E-03DAD1,09/15/1989,59.1,,USGS
04N01E-03DAD1,09/20/1989,58.8,,USGS
04N01E-03DAD1,09/25/1989,58.7,,USGS
04N01E-03DAD1,09/30/1989,58.5,,USGS
04N01E-03DAD1,10/05/1989,58.4,,USGS
04N01E-03DAD1,10/10/1989,58.4,,USGS
04N01E-03DAD1,10/15/1989,58.3,,USGS
04N01E-03DAD1,10/20/1989,58.3,,USGS
04N01E-03DAD1,10/25/1989,58.0,,USGS
04N01E-03DAD1,10/31/1989,58.1,,USGS
04N01E-03DAD1,11/05/1989,57.9,,USGS
04N01E-03DAD1,11/10/1989,57.9,,USGS
04N01E-03DAD1,11/15/1989,57.8,,USGS
04N01E-03DAD1,11/20/1989,57.8,,USGS
04N01E-03DAD1,11/25/1989,57.6,,USGS
04N01E-03DAD1,11/30/1989,57.8,,USGS
04N01E-03DAD1,12/05/1989,57.8,,USGS
04N01E-03DAD1,12/10/1989,57.7,,USGS
04N01E-03DAD1,12/15/1989,57.6,,USGS
04N01E-03DAD1,12/20/1989,57.5,,USGS
04N01E-03DAD1,12/25/1989,57.8,,USGS
04N01E-03DAD1,12/31/1989,57.6,,USGS
04N01E-03DAD1,01/05/1990,57.6,,USGS
04N01E-03DAD1,01/10/1990,57.4,,USGS
04N01E-03DAD1,01/15/1990,57.3,,USGS
04N01E-03DAD1,01/20/1990,57.5,,USGS
04N01E-03DAD1,01/25/1990,57.6,,USGS
04N01E-03DAD1,01/31/1990,57.3,,USGS
04N01E-03DAD1,02/01/1990,57.2,,USGS
04N01E-03DAD1,02/05/1990,57.5,,USGS
04N01E-03DAD1,02/10/1990,57.5,,USGS
04N01E-03DAD1,02/15/1990,57.5,,USGS
04N01E-03DAD1,02/20/1990,57.6,,USGS
04N01E-03DAD1,02/25/1990,57.7,,USGS
04N01E-03DAD1,02/28/1990,57.7,,USGS
04N01E-03DAD1,03/05/1990,57.4,,USGS
04N01E-03DAD1,03/10/1990,57.4,,USGS
04N01E-03DAD1,03/15/1990,57.5,,USGS
04N01E-03DAD1,03/20/1990,57.6,,USGS
04N01E-03DAD1,03/25/1990,57.6,,USGS
04N01E-03DAD1,03/31/1990,57.5,,USGS
04N01E-03DAD1,04/05/1990,57.6,,USGS
04N01E-03DAD1,04/10/1990,58.0,,USGS
04N01E-03DAD1,04/15/1990,58.3,,USGS
04N01E-03DAD1,04/20/1990,58.5,,USGS
04N01E-03DAD1,04/25/1990,58.4,,USGS
04N01E-03DAD1,04/30/1990,58.2,,USGS
04N01E-03DAD1,05/05/1990,58.4,,USGS
04N01E-03DAD1,05/10/1990,58.5,,USGS
04N01E-03DAD1,05/15/1990,58.6,,USGS

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04N01E-03DAD1,05/20/1990,58.7,,USGS
04N01E-03DAD1,05/25/1990,58.6,,USGS
04N01E-03DAD1,05/31/1990,58.4,,USGS
04N01E-03DAD1,06/05/1990,58.4,,USGS
04N01E-03DAD1,06/10/1990,58.5,,USGS
04N01E-03DAD1,06/15/1990,58.7,,USGS
04N01E-03DAD1,06/20/1990,59.0,,USGS
04N01E-03DAD1,06/25/1990,59.0,,USGS
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04N01E-03DAD1,07/05/1990,59.1,,USGS
04N01E-03DAD1,07/10/1990,59.2,,USGS
04N01E-03DAD1,07/15/1990,59.3,,USGS
04N01E-03DAD1,07/20/1990,59.4,,USGS
04N01E-03DAD1,07/25/1990,59.3,,USGS
04N01E-03DAD1,07/31/1990,59.3,,USGS
04N01E-03DAD1,08/05/1990,59.4,,USGS
04N01E-03DAD1,08/10/1990,59.4,,USGS
04N01E-03DAD1,08/15/1990,59.3,,USGS
04N01E-03DAD1,08/20/1990,59.2,,USGS
04N01E-03DAD1,08/25/1990,59.1,,USGS
04N01E-03DAD1,08/31/1990,59.0,,USGS
04N01E-03DAD1,09/05/1990,59.1,,USGS
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04N01E-03DAD1,09/20/1990,59.0,,USGS
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04N01E-03DAD1,10/05/1990,58.8,,USGS
04N01E-03DAD1,10/10/1990,58.7,,USGS
04N01E-03DAD1,10/15/1990,58.4,,USGS
04N01E-03DAD1,10/20/1990,58.3,,USGS
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04N01E-03DAD1,12/03/1990,58.0,,USGS
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04N01E-03DAD1,01/30/1991,57.7,,USGS
04N01E-03DAD1,02/05/1991,57.8,,USGS
04N01E-03DAD1,02/10/1991,57.8,,USGS
04N01E-03DAD1,02/15/1991,57.7,,USGS
04N01E-03DAD1,02/20/1991,57.7,,USGS
04N01E-03DAD1,02/25/1991,57.8,,USGS
04N01E-03DAD1,02/28/1991,57.5,,USGS
04N01E-03DAD1,03/01/1991,57.2,,USGS
04N01E-03DAD1,03/05/1991,57.3,,USGS
04N01E-03DAD1,03/10/1991,57.6,,USGS
04N01E-03DAD1,03/15/1991,57.6,,USGS
04N01E-03DAD1,03/20/1991,57.5,,USGS
04N01E-03DAD1,03/25/1991,57.6,,USGS
04N01E-03DAD1,03/31/1991,57.9,,USGS
04N01E-03DAD1,04/05/1991,57.9,,USGS
04N01E-03DAD1,04/10/1991,57.9,,USGS
04N01E-03DAD1,04/15/1991,57.7,,USGS
04N01E-03DAD1,04/20/1991,57.7,,USGS
04N01E-03DAD1,04/25/1991,57.7,,USGS
04N01E-03DAD1,04/30/1991,57.9,,USGS
04N01E-03DAD1,05/05/1991,58.0,,USGS
04N01E-03DAD1,05/10/1991,58.2,,USGS
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04N01E-03DAD1,05/15/1991,58.2,,USGS
04N01E-03DAD1,05/20/1991,58.5,,USGS
04N01E-03DAD1,05/25/1991,58.4,,USGS
04N01E-03DAD1,05/31/1991,58.6,,USGS
04N01E-03DAD1,06/05/1991,58.9,,USGS
04N01E-03DAD1,06/10/1991,59.1,,USGS
04N01E-03DAD1,06/15/1991,59.2,,USGS
04N01E-03DAD1,06/20/1991,59.2,,USGS
04N01E-03DAD1,06/26/1991,59.1,,USGS
04N01E-03DAD1,06/30/1991,59.2,,USGS
04N01E-03DAD1,07/05/1991,59.1,,USGS
04N01E-03DAD1,07/10/1991,59.3,,USGS
04N01E-03DAD1,07/15/1991,59.3,,USGS
04N01E-03DAD1,07/20/1991,59.5,,USGS
04N01E-03DAD1,07/25/1991,59.6,,USGS
04N01E-03DAD1,07/31/1991,59.6,,USGS
04N01E-03DAD1,08/05/1991,59.7,,USGS
04N01E-03DAD1,08/10/1991,59.7,,USGS
04N01E-03DAD1,08/15/1991,59.8,,USGS
04N01E-03DAD1,08/20/1991,59.8,,USGS
04N01E-03DAD1,08/25/1991,59.7,,USGS
04N01E-03DAD1,08/31/1991,59.7,,USGS
04N01E-03DAD1,09/05/1991,59.9,,USGS
04N01E-03DAD1,09/10/1991,59.7,,USGS
04N01E-03DAD1,09/15/1991,59.8,,USGS
04N01E-03DAD1,09/19/1991,60.0,,USGS
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04N01E-03DAD1,09/25/1991,59.7,,USGS
04N01E-03DAD1,09/30/1991,59.5,,USGS
04N01E-03DAD1,10/05/1991,59.7,,USGS
04N01E-03DAD1,10/10/1991,59.9,,USGS
04N01E-03DAD1,10/15/1991,59.9,,USGS
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04N01E-03DAD1,10/31/1991,59.4,,USGS
04N01E-03DAD1,11/05/1991,59.1,,USGS
04N01E-03DAD1,11/10/1991,58.8,,USGS
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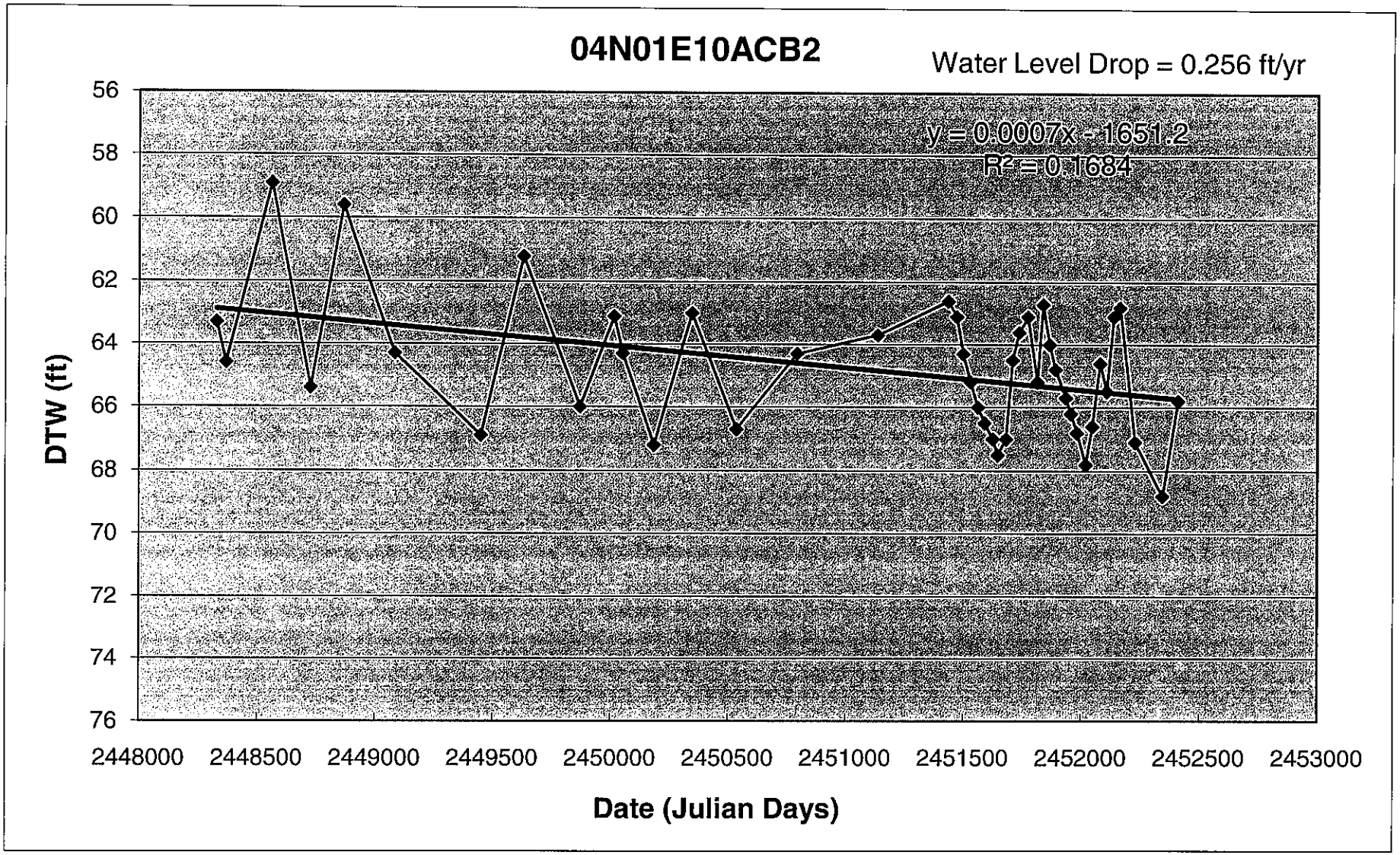
1998	60.3	2639.7
1999	60.1	2639.9
2000	60.6	2639.4
2001	60.8	2639.2
2002	61	2639
2003	61	2639
2004	61.9	2638.1
2005	62.1	2637.9
2006	61.5	2638.5
2007	61.6	2638.4

04N01E-10ACB2

GrpherYea	GrpherDTV	GrpherWL
1996	67.2	2568.8
1997	66.7	2569.3
1998		
1999		
2000	67	2569
2001	66.8	2569.2
2002	68.8	2567.2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R² = 0.1684
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60
62
64
66
68
70
72
74
76
2448000
2448500
2449000
2449500
2450000
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2451000
2451500
2452000
2452500
2453000
Date (Julian Days)

04N01E-11BBB1

GrpherYea	GrpherDTW	GrpherWL
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1997	108.2	2581.8
1998	107.2	2582.8
1999	107.2	2582.8
2000	107.6	2582.4
2001	107.5	2582.5
2002	108	2582
2003	111.8	2578.2
2004	108	2582
2005	107.2	2582.8
2006	107.4	2582.6
2007	105.4	2584.6
2008	106	2584

04N01W-13AACC1

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1998	-10.7	2535.7
2000	-10.4	2535.4
2001	-10	2535
2002	-7.9	2532.9
2003	-10.1	2535.1

04N01W-17BBDB1

GrpherYea	GrpherDTV	GrpherWL
1997	-2.2	2472.2
1998	-1.2	2471.2
1999	-1.7	2471.7
2000	-1.2	2471.2
2001	-0.8	2470.8
2002	-0.83	2470.83
2003	-1.3	2471.3

04N01W-17BBDC1

GrpherYea	GrpherDTV	GrpherWL
1996	-43.6	2511.6
1997	-44	2512
1998	-42.1	2510.1
1999	-43	2511
2000	-43.6	2511.6
2001	-42.7	2510.7
2002		
2003	-41.6	2509.6

04N02W-06CDD1

GrpherYea	GrpherDTV	GrpherWL
1996	-20	2424
1997	-19.2	2423.2
1998	-18.7	2422.7
1999	-20.1	2424.1
2000	-20	2424
2001	-19	2423
2002	-17.4	2421.4

05N01E-26DCD1

GrpherYea	GrpherDTV	GrpherWL
1996	14.5	2735.5
1997	12.6	2737.4
1998	10.2	2739.8
1999	8.6	2741.4
2000	10.3	2739.7
2001	14.4	2735.6
2002	12.4	2737.6

05N01E-36AAB1

GrpherYea	GrpherDTW	GrpherWL
1996	-24.8	2744.8
1997	-24.9	2744.9
1998	-26.9	2746.9
1999	-31.1	2751.1
2000	-32.4	2752.4
2001	-28.7	2748.7
2002	-28.7	2748.7
2003	-28.7	2748.7
2004	-27.6	2747.6
2005		
2006	-29	2749
2007	-27.8	2747.8
2008	-23.9	2743.9

05N01E-36AAB1

GrpherYea	GrpherDTV	GrpherWL
1996	22.8	2757.2
1997	19.4	2760.6
1998	17.5	2762.5
1999	15.8	2764.2
2000	17.2	2762.8
2001	18.1	2761.9
2002	19.8	2760.2
2003	20.8	2759.2
2004	21.1	2758.9
2005		
2006	21	2759
2007	21	2759
2008	23.2	2756.8

05N02W-22CAD1

GrpherYea	GrpherDTV	GrpherWL
1996	178.9	2426.1
1997	179	2426
1998	178.7	2426.3
1999	178.8	2426.2
2000	180.8	2424.2
2001	180.1	2424.9
2002	174.9	2430.1
2003	182.4	2422.6

05N03W-12CCA1

GrpherYea	GrpherDTW	GrpherWL
1996	129.9	2430.1
1998	133.8	2426.2
2000	131.5	2428.5
2004	133.6	2426.4
2005	134.5	2425.5
2006	134.4	2425.6
2007	135	2425
2008	134.3	2425.7

05N03W-15DDC1

GrpherYea	GrpherDTV	GrpherWL
1996	52.6	2442.4
1997	52.8	2442.2
1998	53.8	2441.2
1999	53.5	2441.5
2000	54	2441
2001	54.2	2440.8
2002	56.5	2438.5
2003	55.1	2439.9
2004	57.2	2437.8
2005	57.6	2437.4
2006	57.7	2437.3
2007	57.8	2437.2
2008	57.4	2437.6

04N02W-07AAC1

GrpherYea	GrpherDTV	GrpherWL
1996	4.2	2390.8
1997	3.6	2391.4
1998	4.1	2390.9
1999	3.6	2391.4
2000	4.1	2390.9
2001	3.6	2391.4
2002	3.5	2391.5
2003	3.3	2391.7
2004	4.4	2390.6
2005	4.8	2390.2
2006	4.3	2390.7
2007	4.9	2390.1

05N01W-36AABB1

GrpherYea	GrpherDTV	GrpherWL
1996	76.4	2541.6
1997	76.9	2541.1
1998	76	2542
1999	77	2541
2000	77.3	2540.7
2001	78.2	2539.8
2002	79.4	2538.6
2003	79.5	2538.5
2004	79.6	2538.4
2005	79.4	2538.6
2006	80.2	2537.8
2007	79.9	2538.1
2008	81	2537

05N01E-34DBB1

GrpherYea	GrpherDTV	GrpherWL
1996	31	2649
1997	30.4	2649.6
1998	31.4	2648.6
1999	30.4	2649.6
2000	30.6	2649.4
2001	30.5	2649.5
2002	32.1	2647.9
2003	32.9	2647.1
2004	33.1	2646.9
2005	32.5	2647.5
2006	31.9	2648.1
2007	32.2	2647.8
2008	32.9	2647.1

05N01E-32DBD1

GrpherYea	GrpherDTV	GrpherWL
1996	79	2581
1997	78.2	2581.8
1998	80.3	2579.7
1999	79.2	2580.8
2000	82.6	2577.4
2001	84.3	2575.7
2002	86	2574
2004	86.7	2573.3
2005	87.4	2572.6
2006	86.1	2573.9
2007	88.6	2571.4
2008	93	2567

Dear Dr. Tuthill,

On behalf of the thousands of water users in Ada County, I urge you to demonstrate your commitment to the fair and prudent management of Idaho water rights.

The Issue-

M3 has applied for a right to drill wells and draw 15 million gallons per day from the ground beneath North Ada County. This is one of the largest requests ever in the history of the State of Idaho M3 is pressing to have the right granted by July 2009.

M3 contracted with a hydrologist who's report estimates that existing wells in North Ada County will see there water level drop anywhere from 8 to 30 feet. The M3 report estimates that 2300 wells belonging to current residents will be affected.

At a minimum wells will need to be deepened or new wells drilled at a cost of $10,000 to $30,000 per well to be paid by the current residents. Those with artesian wells will lose them and be required to drill and pump, again at the current resident's cost. M3 claims all of this is "reasonable".

At worst M3's plan could cause severe damage to the aquifer and water balance leading to an expensive mess across the whole county, of course billable to the taxpayers.

My Request-

Let's get the real data before granting a water right of this scale.

An independent water study commissioned by the State of Idaho is scheduled to be completed in December 2009. A second independent study by a leading hydrologist is also scheduled to be completed in December 2009.

Postpone any decision until after the independent state sponsored studies are completed. Let's not be rushed head long into a costly disaster.

Questions to ponder-

Is there any real urgency to build hundreds of new homes right now? So urgent we would risk destroying a vital Treasure Valley water resource?

Why is M3 using the aquifer for this massive project when there is plentiful surface water available in the Payette River and Black Canyon canal system just north of M3?

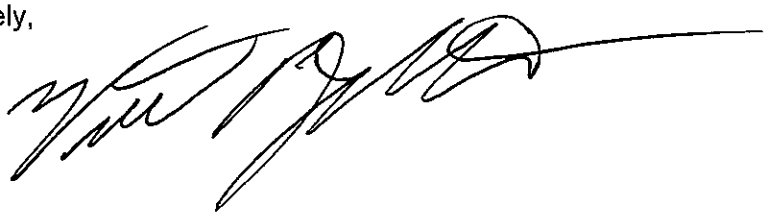
Summary-

Our state cannot afford to repeat the water management mistakes that created the incredibly expensive mess we now have over inadequate water supplies in Eastern Idaho.

Please review the facts of this issue and add sufficient support in to the concerned citizens of Ada County.

We live in a dessert and proper management of water resources is critical to the survival of the entire community.

Sincerely,



Vincent Iazzetta
4243 North Croft Place
Eagle Idaho 83616

208-938-4931 (home)
208-938-9513 (office)
208-250-9801 (mobile)

4440 N. Croft Place
Eagle, ID 83616
March 9, 2009

Dr. David Tuthill, Director
Idaho Dept. of Water Resources
322 East Front Street
Boise, ID. 83720-0098

Dear Dr. Tuthill:

We have lived in our home outside of Eagle for twelve years. Our small five acres provides us with a garden, a place to raise horses and a community. We have worked hard to build and maintain our home and raise our two children in this community. Now we hear of ground water issues which threaten to leave us without the well water we need to survive. We are writing to you to express our deep concerns about the numerous well applications in line to tap the groundwater in this area. Of particular concern is the massive amount of water the M3 Eagle Company has requested for their proposed development.

It is our understanding that data is currently being gathered by various sources to better understand the aquifer from which we obtain our water. Further, we understand that the MP3 request is partially based upon their own unverified discovery of another aquifer.

We know that as of this writing the formal hearing is to take place in April or May. We are expressing our opposition to this huge plan at this time. We are asking that at the very least, further consideration of this request be postponed until independent water studies are complete in December 2009 or sometime in early 2010. It would seem the most reasonable course to delay this huge decision until all information can be confirmed by independent hydrologic studies before making a decision this enormous.

We understand development in this area will occur. However, we must strongly encourage it be done with careful, considered planning coupled with long term comprehensive study for positive growth.

Sincerely,

Lorn and Laurie Murray Adkins
4440 N, Croft Place
Eagle, ID. 83616

208-939-7875

ILENE STINAR
1100 W BEACON LIGHT ROAD
EAGLE, IDAHO 83616

RECEIVED
MAR 11 2009
DEPARTMENT OF
WATER RESOURCES

March 9, 2009

Dave Tuthill
State of Idaho
Department of Water Resources
322 E Front Street
PO Box 83720
Boise, Idaho 83720-0098

Mr. Tuthill:

I had to drill a new well last spring because my old well that was drilled in the mid 1970's went dry. I also had to install a different pump, one that was designed to pump from a lower water static level in the new well.

I believe all the new development and new wells in the Eagle area have led to the drop of my water table. Being a more senior water right user with a domestic well drilled prior to 1978, I believe that I, along with my neighbors are entitled to our aquifer's water at our historic pumping level. I have been required to spend over $12,000 to get access to water at a deeper level. I would like to know what Water Resources intends to do about this bill since it's apparent to me that Water Resources has over allocated the water in this area causing the water table to drop.

Regards,

Ilene Stinar

cc: John Westra

SERVICE LIST
As of March 16, 2009

JEFFREY C FEREDAY
GIVENS PURSLEY LLP
601 W BANNOCK ST
PO BOX 2720
BOISE ID 83701

M3 EAGLE LLC
533 E RIVERSIDE DR STE 110
EAGLE ID 83616

NORMAN L EDWARDS
884 W BEACON LIGHT RD
EAGLE ID 83616

ALAN SMITH
3135 OSPREY RD
EAGLE ID 83616

BILL LAWTON
3145 N OSPREY RD
EAGLE ID 83616

JOHN THORNTON
NORTH ADA COUNTY GROUNDWATER
USERS ASSO.
5264 NORTH SKY HIGH LN
EAGLE ID 83616

WESTERN REGION
ATTN JOHN WESTRA
2735 AIRPORT WAY
BOISE ID 83705-5082 (No CD)

Well Log Form 1
2M - 5/62

WELL LOG PAGE 1

RECEIVED
JUN 10 1964
Department of Reclamation

289TD 59 SL 124PL at 1500GPH
0-9 plus 289-4
Mar 17, 1964 to April 20

069881

SHEET NO. 2

Well Owner Lester Stevens
Well Driller Harden & Co
Well Location SE¼NW¼S10T4NR1EBM NE of

WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0	22½	Soil, sandy clay	No	No
22½	61	Till	No	
61	90	Above grading into the below	No	
90	136	Clayey yellow fine sand	Yes	
136	158	Quicksand	Yes	
158	165	Yellow cemented sand	No	
165	199	Brown clayey sand	Yes	
199	202	Fine, water sand	Yes	
202	224	Brown clayey sand	Yes	
224	228	Tight gray sand	Yes	
228	276	Yellow clayey sand	Yes	
276	272	Soft sandy clay	No	
282	290	Blue clay	Yes	
290	291	Brown clay, soft & sandy	Yes	
291	308	Yellow clayey sand	Yes	No

WWH

SENWS10 4N 1E

Hugh Harden
Burns 301

67

1808

Well Log Form 1
3M-3/63

069882

RECEIVED
MAY 24 1963
Department of Reclamation

WELL LOG AND REPORT TO THE STATE RECLAMATION ENGINEER OF IDAHO

SUBMIT WITHIN 30 DAYS AFTER COMPLETION OF WELL: SEE IDAHO STATUTES 42-238

Permit No. _____ Well No. _____ County Ada

Owner Bill Humphrey sold to Kenny Moore

Address Route 1, Boise, Idaho

Driller Orval Harden

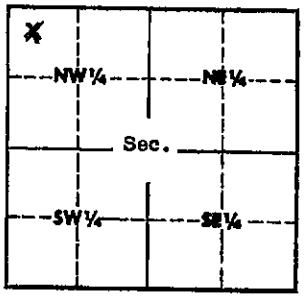
Address Route 1, Boise

Well location NW ¼ NW ¼ Sec. 11, T. 4 N/~~S~~ R. 1 E ~~B.M.~~

Size of drilled hole 6"

Total depth of well 203'

Locate well in section



Give depth to standing water from the ground 107' Water temp. _____ °Fahr.

Test delivery was 18 g.p.m. or _____ c.f.s. Drawdown was 13 feet. Pump? X Bail? _____

Size of pump and motor used to make test Rods and working barrell

Length of time of test 8 hours _____ minutes.

If flowing well, give flow _____ c.f.s. or _____ g.p.m. and of shut off pressure _____

If flowing well, described control works _____
(TYPE AND SIZE OF VALVE, ETC.)

Water will be used for domestic Weight of casing per lineal foot 11#

Thickness of casing .185" Casing material steel
(STEEL, CONCRETE, WOOD, ETC.)

Diameter, length and location of casing 6 5/8" OD from zero to 135'4"
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER; CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.
6 5/8"	0	135	135	Perforated and gravel packed.
				Perforations from 5' above shoe to
				15' above shoe. Six cuts per round,
				two ~~rows~~ rounds per lineal foot.

Number and size of perforations _____ located _____ feet to _____ feet from ground

_____ _____ _____

_____ _____ _____

Date of commencement of well Oct. 29, 1962 Date of completion of well Dec. 11, 1962

NWNW S.11 4N 1E

USGS

WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0	15	Top soil and subsoil and hardpan		
15	74	Sand and sandy clay		
74	117	Cemented gravel		
117	119	Dry yellow clay		
119	133	Yellow clay with water seams	yes	
133	203	Blue clay		
		If more space is required use Sheet No. 2		

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is complete, true and correct to the best of my knowledge and belief.

Signed Orval Harden

By Orval Harden

License No. 1

Dated _____, 19____

Well Driller's Helper _____

Form 238-7
6/89

C

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALLPOINT PEN

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER

Name Adan Rangeillo

Address 210 S. Main Star Idaho 83669

Owner's Permit No. 63-91-W-196

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☒ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness		Diameter		From		To	
.250	inches	6	inches	+ 2	feet	18	feet
.250	inches	6	inches	18	feet	140	feet
	inches		inches		feet		feet
	inches		inches		feet		feet

Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
Size of perforation _____ inches by _____ inches

Number		From		To	
	perforations		feet		feet
	perforations		feet		feet
	perforations		feet		feet

Well screen installed? ☐ Yes ☒ No
Manufacturer's name _____
Type _____ Model No. _____
Diameter ___ Slot size ___ Set from ___ feet to ___ feet
Diameter ___ Slot size ___ Set from ___ feet to ___ feet
Gravel packed? ☐ Yes ☐ No ☐ Size of gravel _____
Placed from ___ feet to ___ feet
Surface seal depth 60 Material used in seal: ☐ Cement grout ☒ Bentonite ☐ Puddling clay ☒ clay sand
Sealing procedure used: ☒ Slurry pit ☐ Temp. surface casing ☐ Overbore to seal depth
Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld ☐ Cemented between strata
Describe access port _____

6. LOCATION OF WELL

Sketch map location must agree with written location.

N / W / E / S

Subdivision Name _____
Lot No. _____ Block No. _____

County Ada

NW ¼ NW ¼ Sec. 17, T. 4 N ☒ S ☐, R. 1 E ☐ W ☒

7. WATER LEVEL

Static water level +1 feet Above ~~below~~ land surface.
Flowing? ☐ Yes ☒ No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature _____ °F. Quality 4 psi
Describe artesian or temperature zones below.

8. WELL TEST DATA

☒ Pump ☐ Bailer ☐ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
15	15	25

079548

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
6	0	4	topsoil		X
	4	8	gravel	X	
	8	12	sand	X	
	12	33	gravel + sand	X	
	33	34	clay		X
	34	59	sand	X	
	59	66	clay		X
	66	70	sand	X	
	70	76	clay		X
	76	85	sand	X	
	85	96	clay		X
	96	103	sand	X	
	103	112	clay		X
	112	116	sand	X	
	116	117	clay		X
	117	122	sand	X	
	122	124	clay		X
	124	133	sand	X	
	133	138	clay		X
	138	140	clay / hard		X
	140	149	clay with sand	X	

JUL 17 1991

Department of Water Resources
Western Regional Office

10.

Work started 6/12/91 finished 6/18/91

11. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name Gem State Drilling Firm No. 277

Address 2905 Eagle Rd. Eagle Date 6/18/91

Signed by (Firm Official) _____

and

(Operator) Daniel L. Shultz

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

WELL LOG AND REPORT OF THE STATE RECLAMATION ENGINEER OF IDAHO

JUN 4 1965
Department of Reclamation

36104

Permit No. _____ Well No. _____ County Ada

Owner Elroon E. Ross

Address Box 246 Star, Idaho

Driller Chester D. Kinsey

Address Rt. 1, Eagle, Ida

Well location _____ ¼ _____ ¼ Sec. 17, T. 4 N/S R. 1 E/W

Size of drilled hole 4"

Total depth of well 424'

Locate well in section

* WELL NW¼	NE¼
SW¼	SE¼

1/8 MILE South of Main and Valley St Intersecton At Star, Idaho on Main Street

LOTS - 5 - 14 inclusive DICKINSON SUBDIVISION BOOK 3 OF PLATS AT PAGE 133

Give depth to standing water from the ground _____ Water temp. _____ °Fahr.

On "Pumping Test" delivery was _____ g.p.m. or _____ c.f.s. Drawdown was _____ feet.

Size of pump and motor used to make test _____

Length of time of test _____ hours _____ minutes.

If flowing well, give flow Seven Gallons per second c.f.s. or _____ g.p.m. and of shut off pressure 10#

If flowing well, described control works 4½" gate valve reduced to 4" (TYPE AND SIZE OF VALVE, ETC.)

Water will be used for Domestic and Irrig. Weight of casing per lineal foot 11#

Thickness of casing .230 Casing material steel (STEEL, CONCRETE, WOOD, ETC.)

Diameter, length and location of casing 4", 3' to 381' below surface. (CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER; CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.

Number and size of perforations _____ located _____ feet to _____ feet from ground

Date of commencement of well 3-25-65 Date of completion of well 4-17-65

5.17 4N 1W

WSS.

WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0'	10'	top soil & sand	no	no
10'	20'	gravel	yes	no
20'	30'	Gravel	yes	no
30'	40'	conglomerate	yes	no
40'	50'	conglomerate	yes	no
50'	60'	yellow clay	no	no
60	70'	conglomerate	yes	no
70'	80'	conglomerate	yes	no
80'	90'	conglomerate	yes	nO
90'	100'	yellow clay	no	no
100'	110'	yellow clay	no	no
110'	120'	gray sand	yes	no
120'	130'	grey sand	yes	no
130'	140'	grey sand, streaks of clay	yes	no
141'	150'	Conglomerate, yellow clay& sand grey	yes	no
150'	160'	" " " " "	yes	no
160'	170'	" " " " "	yes	no
		If more space is required use Sheet No. 2		

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is true and correct to the best of my knowledge and belief.

Signed Chesley D. Kinsey

By

License No. 33

Dated 6-3-63, 19

Well Log Form 1
3M-3/63

RECEIVED
SEP 4 1964
Department ...

WELL LOG AND REPORT TO THE STATE RECLAMATION ENGINEER OF IDAHO

SUBMIT WITHIN 30 DAYS AFTER COMPLETION OF WELL: SEE IDAHO STATUTES 42-238

034764

Permit No. ~~W-3164~~ Well No. 2 County Canyon

Owner City of Middleton

Address Middleton Ida

Driller C.A. Baker

Address Box 41 Middleton Ida

Well location SW ¼ SE ¼ Sec. 6, T. 4 N, R. 2 W

Size of drilled hole 12 79 to 382 6" 382-420

Total depth of well 420

Locate well in section: NW¼ | NE¼ | Sec. | SW¼ | SE¼

Give depth to standing water from the ground +10' Water temp. 61 °Fahr.

Test delivery was ____ g.p.m. or ____ c.f.s. Drawdown was ____ feet. Pump? ____ Bail? ____

Size of pump and motor used to make test Cleaned with 210 Compressor

Length of time of test 3 hours ____ minutes.

If flowing well, give flow ____ c.f.s. or 325 g.p.m. and of shut off pressure 4 +

If flowing well, described control works Valve & Brother pipe (TYPE AND SIZE OF VALVE, ETC.)

Water will be used for City - Domestic use Weight of casing per lineal foot 49, 54 - 13

Thickness of casing 3/8 - 5/16 Casing material steel (STEEL, CONCRETE, WOOD, ETC.)

Diameter, length and location of casing 369' - 12" 10 (0-365) 328' 6 5/8" OD (76 to 404)
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER; CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.
12"	+4	365	369	Stopped in Tough shale
6'	76	404	328	" " Blue shale
				see ~~rep~~ sheet # 2

wdh

Number and size of perforations none located ____ feet to ____ feet from ground

Date of commencement of well July 1 '64 Date of completion of well Aug 21 '64

SWSE S.6 4N 2W USGS

6 3

WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0	3	Top soil – Sandy loam	no	no
3	14	Sand Gravel	yes	1
14	38	Coarse Gravel Boulders	yes	1
38	220	Alternate Sand and Clay	at times	
		Clay layers only from 2 to 6 strokes of bit		1
220	252	Broken Clay, fine sand in veins	yes	at time
252	330	Broken Blue Clay fine sand	yes	
330	333	Hot mud not developed	some	
333	363	Alternate Blue Clay and fine sand	yes	
363	367	Tough Blue Slate (Had to stop 12 pipe at 363)	no	
367	376	Light fine sand	yes	
376	379	Light Blue Clay	no	
379	384	Coarse sand (First artesian flow) Sulphur	yes	Oil
384	400	Broken Blue Clay	no	
400	420	Blue Clay or Shale	no	
420	420+	medium sand (Main flow)	yes	
		If more space is required use Sheet No. 2		

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is complete, true and correct to the best of my knowledge and belief.

Signed C. F. Baker

By

License No.

Dated Sept 4, 19 64

Well Driller's Helper

Well Log Form 1
2M - 5/62

SHEET NO. 2

Well Owner: City of Middleton
Well Driller: C. F. Baker
Well Location: SW 1/4 SE 1/4 sec 6 4/2

WELL LOG 034765

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No

I had to stop the 12" Casing at 365 ft
the sand at 367 to 376 was fine and
short of Water.
The water at 379 to 384 wanted to
Flow which brought up the sand from just
above it.
It also had Considerable sulphur smell
I was unable to get a 10" into place
with a shoe and reinforced top of it.
I put a 8" with heavy ends into
place the hole it stopped at 326 to 372
only 46' long.
The artesian flow heaved sand
on top of it. So I reduced to 6"
Solid Column with a left hand thread
at 80' and a Right handed thread at
328' from bottom end.
unable to stop in the sulphur
Vein went into 20 ft more Clay
and unscrewed the pipe towards
the top (76 ft down) it developed
Quite well not much smell

USGS.

SW SE S.6 4N 2W

63

Form 238-7
9/82

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

USE TYPEWRITER OR BALLPOINT PEN

RECEIVED
JUN 16 1989
Department of Water Resources

1. WELL OWNER

Name SAM HAYES

Address P.O. BOX 265 MIDDLETON

Owner's Permit No. 63-89-W-072

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☒ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary
☐ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☐ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.250 inches	6" inches	+ 1 feet	40 feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet
_____ inches	_____ inches	_____ feet	_____ feet

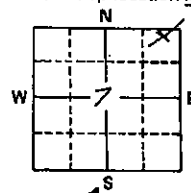
Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation _____ inches by _____ inches

Number	From	To
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

Well screen installed? ☐ Yes ☒ No
Manufacturer's name _____
Type _____ Model No. _____
Diameter ___ Slot size ___ Set from _____ feet to _____ feet
Diameter ___ Slot size ___ Set from _____ feet to _____ feet
Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____
Placed from _____ feet to _____ feet
Surface seal depth 20 Material used in seal: ☐ Cement grout
☒ Bentonite ☒ Puddling clay ☐ _____
Sealing procedure used: ☒ Slurry pit ☐ Temp. surface casing
☐ Overbore to seal depth
Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld
☐ Cemented between strata
Describe access port WELL SEAL

6. LOCATION OF WELL

Sketch map location must agree with written



Subdivision Name _____
Lot No. _____ Block No. _____
County CANYON
NE ¼ NE ¼ Sec. 7, T. 4N N/S, R 2W E/W.

MICROFILMED
JUN 10 1991

7. WATER LEVEL

Static water level 3 feet below land surface
Flowing? ☐ Yes ☒ No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature _____ °F. Quality _____
Describe artesian or temperature zones below.

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
APPROX 60	—	½ HR

9. LITHOLOGIC LOG

70859

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
6"	0	23	TOP SOIL GRAVEL	X	
	23	32	CLAY	—	
	32	35	SAND ALOT	X	
	35	40	CLAY	—	
	42		SAND ALOT	X	
			CLEANED UP		

DEQ-WQ
MAY 26 1989
Department of Water Resources

10.

Work started 5-16-89 finished 5-16-89

11. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed,

Firm Name ADAMSON PUMP & DRILL Firm No. 457
Address NAMPA IDA Date 5-24-89
Signed by (Firm Official) Dave Adamson
and
(Operator) SAME

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

1708

Well Log Form 1
3M-3/63

RECEIVED
AUG 25 1964
Department of Reclamation

WELL LOG AND REPORT TO THE STATE RECLAMATION ENGINEER OF IDAHO 097973

SUBMIT WITHIN 30 DAYS AFTER COMPLETION OF WELL: SEE IDAHO STATUTES 42-238

Permit No. 9-32051 Well No. _____ County Ada

Owner Ben F. Stadler

Address Route 1 Boise, Idaho

Driller Russell Cowie

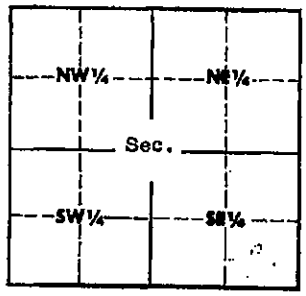
Address Boise, Idaho

Well location SE ¼ SE ¼ Sec. 26, T. 5N N/S, R. 1E E/W

Size of drilled hole 12" to 340' 10" 340' to 688'

Total depth of well 688'

Locate well in section



Give depth to standing water from the ground flowing Water temp. 82.5 °Fahr.

Test delivery was 900 g.p.m. or ✓ c.f.s. Drawdown was ✓ feet. Pump? ✓ Bail? ✓

Size of pump and motor used to make test None

Length of time of test _____ hours _____ minutes.

If flowing well, give flow _____ c.f.s. or 900 g.p.m. and of shut off pressure 5 lbs.

If flowing well, described control works 6" Gate Valve
(TYPE AND SIZE OF VALVE, ETC.)

Water will be used for Domestic+irrigation Weight of casing per lineal foot _____

Thickness of casing ¼ wall Casing material Steel
(STEEL, CONCRETE, WOOD, ETC.)

Diameter, length and location of casing 12" casing to 340' 8" casing 340 to 688'
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER; CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.
12"	0'	340'	343'	3' above ground. Casing set in hard, blue shale
8"	321'	688'	367'	8" seal into 12" at 321' from ground level
				WWS.

Number and size of perforations 5/32" 990 perforations located _____ feet to _____ feet from ground
perforations 633' to 688'

Date of commencement of well June 1, 1964 Date of completion of well Aug. 12, 1964

3

WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0'	35'	Brown clay	No	No
35'	240'	Blue Shale	No	No
240'	245'	Sand & some pea gravel	Yes	No
245'	640'	Blue Shale	No	No
640'	688'	pea gravel & coarse sand	Yes	Yes
		If more space is required use Sheet No. 2		

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is complete, true and correct to the best of my knowledge and belief.

Signed Russell Cowl

By

License No. 65

Dated August 25, 1964

Well Driller's Helper Wayne E. Stevens

Form 238-7
8/90

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR BALLPOINT PEN

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER

Name Dean K. Hennon.
Address 2467 N. Ballentine, Eagle Id
Drilling Permit No. 63-92-W-012
Water Right Permit No. _____

2. NATURE OF WORK

☒ New well ☐ Deepened ☐ Replacement
☐ Well diameter increase
☐ Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test ☐ Municipal
☐ Industrial ☐ Stock ☐ Waste Disposal or Injection
☐ Other _____ (specify type)

4. METHOD DRILLED

☐ Rotary ☐ Air ☐ Hydraulic ☐ Reverse rotary
☒ Cable ☐ Dug ☐ Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
.250 inches	6 inches +	1 feet	118 feet
.258 inches	5 inches	115 feet	120 feet
.258 inches	5 inches	125 feet	128 feet
_____ inches	_____ inches	_____ feet	_____ feet

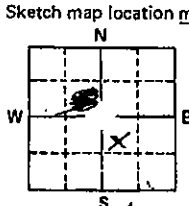
Was casing drive shoe used? ☒ Yes ☐ No
Was a packer or seal used? ☒ Yes ☐ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun
Size of perforation _____ inches by _____ inches

Number	From	To
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

Well screen installed? ☒ Yes ☐ No
Manufacturer's name Houston
Type Stainless Model No. 304
Diameter 5 Slot size .020 Set from 120 feet to 125 feet
Diameter ____ Slot size ____ Set from ____ feet to ____ feet
Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____
Placed from _____ feet to _____ feet
Surface seal depth 18 Material used in seal: ☐ Cement grout
☒ Bentonite ☒ Puddling clay ☐ _____
Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing
☒ Overbore to seal depth
Method of joining casing: ☐ Threaded ☒ Welded ☐ Solvent Weld
☐ Cemented between strata
Describe access port _____

6. LOCATION OF WELL

Sketch map location must agree with written location.



Subdivision Name _____
Lot No. _____ Block No. _____
County Ada
NW ¼ SE ¼ Sec. 32, T. 5N N ☐ S ☐ R. 1E E ☐ W ☐

7. WATER LEVEL

Static water level 50 feet below land surface.
Flowing? ☐ Yes ☒ No G.P.M. flow _____
Artesian closed-in pressure _____ p.s.i.
Controlled by: ☐ Valve ☐ Cap ☐ Plug
Temperature _____ °F. Quality _____
Describe artesian or temperature zones below.

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Air ☐ Other _____

Discharge G.P.M.	Pumping Level	Hours Pumped
30		1

9. LITHOLOGIC LOG

Bore Diam.	Depth From	Depth To	Material	Water Yes	Water No
6	0	2	Top Soil		X
	2	38	Sandy clay		X
	38	48	SAND		X
	48	70	S. Clay		X
	70	93	Gravel	X	
	93	120	Clay		X
	120	127	F. Sand	X	
	127	128	Clay		X

RECEIVED
MAR 16 1992
Department of Water Resources
Western Region
Boise

10.

Work started 10 JAN 92 finished 2-17-92

11. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Firm Name Dennis Phipps Firm No. 332
Address Meridian Id Date 3-16-92
Signed by (Firm Official) _____
and
(Operator) Mark Phipps

USE ADDITIONAL SHEETS IF NECESSARY — FORWARD THE WHITE COPY TO THE DEPARTMENT

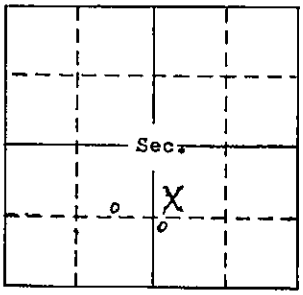
RECEIVED
MAY 15 1968
Department of Reclamation

REPORT OF WELL DRILLER
State of Idaho

State law requires that this report shall be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

WELL OWNER:
Name Julius Jeker
Address Route # I, Dry Creek Road
Boise, Idaho
Owner's Permit No. G-5842
NATURE OF WORK (check): Replacement well [x]
New well [ ] Deepened [ ] Abandoned [ ]
Water is to be used for:
METHOD OF CONSTRUCTION: Rotary [ ] Cable [x]
Dug [ ] Other (explain)
CASING SCHEDULE: Threaded [ ] Welded [ ]
16 "Diam. from 0 ft. to 144 ft.
12" "Diam. from 134 ft. to 220 ft.
"Diam. from ft. to ft.
"Diam. from ft. to ft.
Thickness of casing: I/4 Material:
Steel [x] concrete [ ] wood [ ] other [ ]
(explain)
PERFORATED? Yes [ ] No [ ] Type of perforator used:
ARMCO SCREENS 60 SLOT
Size of perforations: " by "
perforations from 144 ft. to 154 ft.
perforations from 164 ft. to 174 ft.
perforations from 184 ft. to 194 ft.
perforations from 204 ft. to 214 ft.
WAS SCREEN INSTALLED? Yes [x] No [ ]
Manufacturer's name Johnson 12" pipe size
Type Armco Iron Model No.
Diam. 12 Slot size 60 Set from ft. to ft.
Diam. Slot size Set from ft. to ft.
CONSTRUCTION: Well gravel packed? Yes [ ]
No [x] size of gravel Gravel placed from ft. to ft. Surface seal provided? Yes [x] No [ ] To what depth? ft. Material used in seal: Clay
Did any strata contain unusable water? Yes [ ]
No [x] Type of water:
Depth of strata ft. Method of sealing strata off:
Surface casing used? Yes [ ] No. [x]
Cemented in place? Yes [ ] No [x]

Locate well in section



LOCATION OF WELL: County Ada
n w ¼ s e ¼ Sec. 36 T. 5 N/S R. 1 E/W

Size of drilled hole: I6" Total depth of well: 2I8 ft. Standing water level below ground: I5" ft. Temp. Fahr. ° Test delivery: 2400 gpm or cfs Pump? [ ] Bail [ ]
Size of pump and motor used to make test: Turbine
Length of time of test: 8 Hrs. Min.
Drawdown: I6 ft. Artesian pressure: ft. above land surface Give flow cfs or gpm. Shutoff pressure:
Controlled by: Valve [ ] Cap [ ] Plug [ ]
No control [ ] Does well leak around casing? Yes [ ] No [x]

DEPTH FROM FEET	DEPTH TO FEET	MATERIAL 46565	WATER YES OR NO
0	4	Top soil	
4	38	Decomposed sand & top soil	
38	45	Coarse sand	
45	56	" "	
56	58	Soft blue shale clay	
58	72	Gravel sand	
72	77	Qtz sand	
77	I85	Sand & gravel	
I85	I95	Coarse sand, some clay chunks	
I95	230	Coarse granite sand	
		Lead packer at I34 ft. from ground surface	
		I4" pipe on top of first screen	

Work started: 3/7/68
Work finished: 4/2/68
Well Driller's Statement: This well was drilled under my supervision and this report is true to the best of my knowledge.
Name: Kenneth Witt
Address: Route 4, Caldwell, Idaho.
Signed by: Kenneth Witt
License No. 55 Date: 5/9/68

Use other side for additional remarks

USGS

63 copied

Leeann
1.32

WELL LOG AND REPORT TO THE STATE RECLAMATION ENGINEER OF IDAHO

RECEIVED APR 28 1961 Reclamation

Log No. 39176
Rec. ____, 19__
Well No. ____
Permit No. 9-35928
63-3062
(DO NOT FILL IN)

Owner Mildred Ione Cravon Address 1401 Ponderay St., Boise, Idaho

Driller Russel Gowe Company Address 1514 Longmont Boise Ida. Lic. No. ____

Location of Well: NE ¼ SW ¼ Sec. 22, T. 5 N, R. 2 W B. Canyon County,

and 55 ? feet N/S, and 150 feet E/W from C. S 1/16 Corner of NE ¼ SW ¼ Sec. 22

Size of Drilled Hole 12 Inch Total depth of Well 450

Give depth of standing water from surface 200' Water Temp. 65 degrees °Farenheit

On pumping test delivery was 820 g.p.m. or ____ c.f.s. Drawdown was 17 feet.

Size of pump and motor used to make the test 8" colum and 10" Bowles 150 H.P.

Length of time pumped during check was 12 Hours hr., ____ minutes.

If flowing well, give flow in c.f.s. ____ or g.p.m. 820 and shut in pressure ____

If flowing well, describe control works ____
(TYPE AND SIZE OF VALVE, ETC.)

Water will be used for Irrigation Weight of casing per linear foot ____

Thickness of casing 5/8 Standard Casing Casing material Pipe
E.G., PIPE, CONCRETE, WOOD.

Diameter, length and location of casing 0-305 12" Casing 204 to 400-9" 8" Perforated casing
(CASING 12" IN DIAMETER AND UNDER GIVE INSIDE DIAMETER; CASING OVER 12" IN DIAMETER GIVE OUTSIDE DIAMETER.)

Number and size of perforations 20.4" located 270 feet to 304 feet from surface of ground.

Other perforations 115' 9" 8" Perforated casing

Date of commencement of well June 17, 1957 Date of completion of well July 30, 1957

Type of well rig 24 B Bucyrus

CASING RECORD

DIAM. CASING	FROM FEET	TO FEET	LENGTH	"REMARKS" -- SEALS, GROUTING, ETC.
12"	0	305	305	
8"	204	400.9	115.9"	

udd.

GENERAL INFORMATION—Pumping Test, Quality of Water, Etc.

NE SW S.22 5N 2W

.63

2

WELL LOG

From Feet	To Feet	Type of Material	Drilling Time Hrs.	Drilling Time Min.	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0	40	Soil (2) Silty Sandy & Clay				
40	80	Clay and Silty Sand				
80	120	Clay Silty				
120	160	Dry Gravel				
160	200	Silty Clay				
200	225	Muddy Sand				
225	235	Coarse Sand			Yes	
235	265	Muddy Sand				
265	280	Muddy Sand				
280	307	Coarse Sand			Yes	Yes
307	320	Stringers of Clay and Muddy Sand				
320	360	Stringers of Clay and Muddy Sand				
360	400	Sandy Clay				
400	420	Clay				
420	430	Muddy Sand				
430	450	Clay and Muddy Sand				
		If more space is required use Sheet No. 2				

WELL DRILLER'S STATEMENT

This well was drilled under my jurisdiction and the above information is true and correct to the best of my knowledge and belief.

Signed Russel Cone

By .....

License No. 65

Dated August 5 1957

USE TYPEWRITER OR BALL POINT PEN

State of Idaho
Department of Reclamation

WELL DRILLER'S REPORT

RECEIVED
APR 14 1970
Department of Reclamation

State law requires that this report be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

1. WELL OWNER

Name Gerald Horzen
Address RR I Caldwell
Owner's Permit No.

2. NATURE OF WORK

☐ New well ☐ Deepened ☒ Replacement
☐ Abandoned (describe method of abandoning)

3. PROPOSED USE

☒ Domestic ☐ Irrigation ☐ Test
☐ Municipal ☐ Industrial ☒ Stock

4. METHOD DRILLED

☒ Cable ☐ Rotory ☐ Dug ☐ Other

5. WELL CONSTRUCTION

Diameter of hole 6 inches Total depth 147 feet
Casing schedule: ☐ Steel ☐ Concrete

Thickness	Diameter	From	To
.250 inches	6 inches	+1 feet	145 feet
____ inches	____ inches	____ feet	____ feet
____ inches	____ inches	____ feet	____ feet
____ inches	____ inches	____ feet	____ feet
____ inches	____ inches	____ feet	____ feet

Was a packer or seal used? ☐ Yes ☒ No
Perforated? ☐ Yes ☒ No
How perforated? ☐ Factory ☐ Knife ☐ Torch
Size of perforation ____ inches by ____ inches

Number	From	To
____ perforations	____ feet	____ feet
____ perforations	____ feet	____ feet
____ perforations	____ feet	____ feet

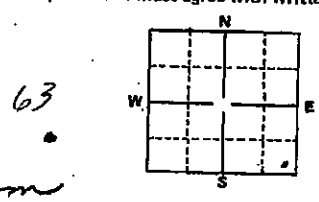
Well screen installed? ☐ Yes ☒ No
Manufacturer's name
Type Model No.
Diameter Slot size Set from feet to feet
Diameter Slot size Set from feet to feet

Gravel packed? ☐ Yes ☒ No Size of gravel
Placed from feet to feet

Surface seal? ☒ Yes ☐ No To what depth 20 feet
Material used in seal ☐ Cement grout ☐ Puddling clay

6. LOCATION OF WELL

Sketch map location must agree with written location.



County Canyon
SE ¼ SE ¼ Sec. 15 T. 5 N, R. 3 E/W

7. WATER LEVEL

Static water level 48 feet below land surface
Flowing? ☐ Yes ☒ No G.P.M. flow
Temperature ° F. Quality
Artesian closed-in pressure p.s.i.
Controlled by ☐ Valve ☐ Cap ☐ Plug

8. WELL TEST DATA

☐ Pump ☐ Bailer ☒ Other

Discharge G.P.M.	Draw Down	Hours Pumped
7.5		3

31998

9. LITHOLOGIC LOG

Hole Diam.	Depth From	Depth To	Material	Water Yes	Water No
8	0	3	Top soil & Hard Pan		X
8	3	20	sandy loam & Gravel		X
6	20	90	sandy clay		X
6	90	142	sand & Gravel	X	
6	142	148	Clay		X
6	148	152	sand & Gravel	X	
6					

10.
Work started 2-4-70 finished 2-13-70

11. DRILLER'S CERTIFICATION

This well was drilled under my supervision and this report is true to the best of my knowledge.

Bill Doty Well Drilling 42
Driller's or Firm's Name Number
RR I Caldwell
Address
William E. Doty 3-18-70
Signed By Date

USE ADDITIONAL SHEETS IF NECESSARY

Dear Dr. Tuthill,

On behalf of the thousands of water users in Ada County, I urge you to demonstrate your commitment to the fair and prudent management of Idaho water rights.

The Issue-

M3 has applied for a right to drill wells and draw 15 million gallons per day from the ground beneath North Ada County. This is one of the largest requests ever in the history of the State of Idaho M3 is pressing to have the right granted by July 2009.

M3 contracted with a hydrologist who's report estimates that existing wells in North Ada County will see there water level drop anywhere from 8 to 30 feet. The M3 report estimates that 2300 wells belonging to current residents will be affected.

At a minimum wells will need to be deepened or new wells drilled at a cost of $10,000 to $30,000 per well to be paid by the current residents. Those with artesian wells will lose them and be required to drill and pump, again at the current resident's cost. M3 claims all of this is "reasonable".

At worst M3's plan could cause severe damage to the aquifer and water balance leading to an expensive mess across the whole county, of course billable to the taxpayers.

My Request-

Let's get the real data before granting a water right of this scale.

An independent water study commissioned by the State of Idaho is scheduled to be completed in December 2009. A second independent study by a leading hydrologist is also scheduled to be completed in December 2009.

Postpone any decision until after the independent state sponsored studies are completed. Let's not be rushed head long into a costly disaster.

Questions to ponder-

Is there any real urgency to build hundreds of new homes right now? So urgent we would risk destroying a vital Treasure Valley water resource?

Why is M3 using the aquifer for this massive project when there is plentiful surface water available in the Payette River and Black Canyon canal system just north of M3?

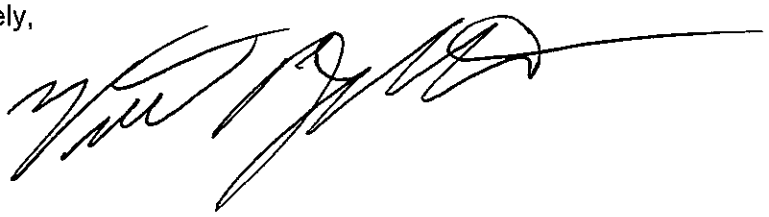
Summary-

Our state cannot afford to repeat the water management mistakes that created the incredibly expensive mess we now have over inadequate water supplies in Eastern Idaho.

Please review the facts of this issue and add sufficient support in to the concerned citizens of Ada County.

We live in a dessert and proper management of water resources is critical to the survival of the entire community.

Sincerely,



Vincent Iazzetta
4243 North Croft Place
Eagle Idaho 83616

208-938-4931 (home)
208-938-9513 (office)
208-250-9801 (mobile)

4440 N. Croft Place
Eagle, ID 83616
March 9, 2009

Dr. David Tuthill, Director
Idaho Dept. of Water Resources
322 East Front Street
Boise, ID. 83720-0098

Dear Dr. Tuthill:

We have lived in our home outside of Eagle for twelve years. Our small five acres provides us with a garden, a place to raise horses and a community. We have worked hard to build and maintain our home and raise our two children in this community. Now we hear of ground water issues which threaten to leave us without the well water we need to survive. We are writing to you to express our deep concerns about the numerous well applications in line to tap the groundwater in this area. Of particular concern is the massive amount of water the M3 Eagle Company has requested for their proposed development.

It is our understanding that data is currently being gathered by various sources to better understand the aquifer from which we obtain our water. Further, we understand that the MP3 request is partially based upon their own unverified discovery of another aquifer.

We know that as of this writing the formal hearing is to take place in April or May. We are expressing our opposition to this huge plan at this time. We are asking that at the very least, further consideration of this request be postponed until independent water studies are complete in December 2009 or sometime in early 2010. It would seem the most reasonable course to delay this huge decision until all information can be confirmed by independent hydrologic studies before making a decision this enormous.

We understand development in this area will occur. However, we must strongly encourage it be done with careful, considered planning coupled with long term comprehensive study for positive growth.

Sincerely,

Lorn and Laurie Murray Adkins
4440 N, Croft Place
Eagle, ID. 83616

208-939-7875

ILENE STINAR
1100 W BEACON LIGHT ROAD
EAGLE, IDAHO 83616

RECEIVED
MAR 11 2009
DEPARTMENT OF
WATER RESOURCES

March 9, 2009

Dave Tuthill
State of Idaho
Department of Water Resources
322 E Front Street
PO Box 83720
Boise, Idaho 83720-0098

Mr. Tuthill:

I had to drill a new well last spring because my old well that was drilled in the mid 1970's went dry. I also had to install a different pump, one that was designed to pump from a lower water static level in the new well.

I believe all the new development and new wells in the Eagle area have led to the drop of my water table. Being a more senior water right user with a domestic well drilled prior to 1978, I believe that I, along with my neighbors are entitled to our aquifer's water at our historic pumping level. I have been required to spend over $12,000 to get access to water at a deeper level. I would like to know what Water Resources intends to do about this bill since it's apparent to me that Water Resources has over allocated the water in this area causing the water table to drop.

Regards,

Ilene Stinar

cc: John Westra

SERVICE LIST
As of March 16, 2009

JEFFREY C FEREDAY
GIVENS PURSLEY LLP
601 W BANNOCK ST
PO BOX 2720
BOISE ID 83701

M3 EAGLE LLC
533 E RIVERSIDE DR STE 110
EAGLE ID 83616

NORMAN L EDWARDS
884 W BEACON LIGHT RD
EAGLE ID 83616

ALAN SMITH
3135 OSPREY RD
EAGLE ID 83616

BILL LAWTON
3145 N OSPREY RD
EAGLE ID 83616

JOHN THORNTON
NORTH ADA COUNTY GROUNDWATER
USERS ASSO.
5264 NORTH SKY HIGH LN
EAGLE ID 83616

WESTERN REGION
ATTN JOHN WESTRA
2735 AIRPORT WAY
BOISE ID 83705-5082 (No CD)

EAGLE PINES WATER ASSOCIATION
ALAN SMITH
3135 OSPREY
EAGLE, IDAHO 83616-2725
PROTESTANTS
(208) 939-6575

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 63-32576 IN THE NAME OF M3 EAGLE LLC	**MOTION TO VACATE HEARING AND OBJECTION TO EX PARTE REQUEST**

Eagle Pines Water Users Association by and through spokesperson therefor, Alan Smith and Alan Smith, individually hereby move that the hearing of April 15th be vacated and rescheduled for the following reasons:

1. M3 Eagle has requested voluminous and substantial information to rebut and analyze the March 2, 2009 IDWR Memorandum.

2. M3 Eagle states in that March 10, 2009 request that it intends to "offer documents,

technical information, and/or data to respond to the March 2nd, Memorandum by April 3, 2009 as allowed by the Hearing Officer's February 10, 2009 Order."

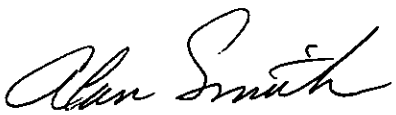
WRITTEN ARGUMENT

1. M3 Eagle has requested (1) well water level data, (2) measurement data, (3) well driller's reports, (4) geologic logs, (5) well construction information, (6) video surveys, (7) pump test data, (8) monitored well information, and (9) GPS on well locations.
2. The prolixity and verbosity of M3 Eagle makes it very clear that it intents to submit a substantial amount of documents, technical data, and well analysis in rebuttal to the "McVay Memo" and the "March 2, 2009 IDWR Memorandum" by the April 3rd deadline.
3. The Protestors herein will have very little time before the April 15th hearing in which to review the M3 response which will contain significant data and will likely raise additional issues.
4. IDWR Rule 057 allows for the three (3) days additional time after service by mail further reducing the time for Protestants to review and analyze the M3 response.
5. IDWR staff should also be allowed adequate time to review the M3 response and the voluminous data rebutting the "March 2, 2009 IDWR Memorandum to Hearing Officer".
6. The Protestants herein also object to any direct or indirect ex parte delivery of the information and technical data between IDWR staff and Ed Squires of HLI, Inc., that does not take place with "Notice" to all parties to insure "full participation" as required by IDWR Rule 157.

This request by M3 is, in essence, a motion to produce documents which does not give Protestants 14 days to respond.

Wherefor, Protestants respectfully request that the hearing be vacated and rescheduled for a later date and that an ex parte submission of documents as requested by M3 be denied.

Respectfully submitted,



Alan Smith, Spokesperson for Eagle Pines and individually.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 16th day of March, 2009, the foregoing was filed, served, or copied as follows:

NOTICE OF SERVICE AND DISCOVERY

North Ada County Groundwater Users Association John Thornton 5264 N Sky High Lane Eagle, ID 83616	X U.S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Bill Lawton, Spokesman for Robert L. and Kip C. Wood M. Howard Goldman Timothy R. and Judy L. Milburn 3145 Osprey Road Eagle, ID 83616	_____ U.S. Mail X Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Norman Edwards 884 W Beacon Light Road Eagle, ID 83616	_____ U.S. Mail X Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Jeffrey C. Fereday GIVENS PURSLEY LLP 601 West Bannock Street PO Box 2720 Boise, ID 83701-2720	X U.S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Gary Spackman, Hearing Officer State of Idaho Department of Water Resources 322 E Front Street Boise, Idaho	_____ U.S. Mail X Hand Delivered _____ Overnight Mail _____ Facsmile _____ E-mail

Jeffrey C. Fereday [ISB No. 2719]
Michael P. Lawrence [ISB No. 7288]
GIVENS PURSLEY LLP
601 West Bannock Street
P.O. Box 2720
Boise, Idaho 83701-2720
Office: (208) 388-1200
Fax: (208) 388-1300
www.givenspursley.com
Attorneys for M3 Eagle LLC

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 63-32573 IN THE NAME OF M3 EAGLE LLC	**M3 EAGLE'S REQUEST FOR INFORMATION USED IN IDWR'S MARCH 2, 2009 STAFF MEMORANDA**

M3 Eagle LLC ("M3 Eagle") hereby requests that the Idaho Department of Water Resources ("IDWR") provide M3 Eagle with the following information relating to the IDWR staff memoranda submitted to the Hearing Officer on March 2, 2009 ("March 2 Memoranda"):

1. Information regarding each of the wells plotted and analyzed in the March 2, 2009 Memo from Mike McVay to Dennis Owsley ("McVay Memo"), including:

   a. the water level data points, times, and measurement data; and

   b. all Well Driller's reports, geologic logs, construction information, video surveys, pump-test data, and location information (GPS coordinates – latitude/longitude).

2. Information regarding each of the wells monitored within the area shown on Figure 1 of the McVay Memo, including:

a. all well water level data for wells monitored by IDWR and/or by contractors to IDWR and/or wells measured under the IDWR/USGS cooperative agreement; and

b. all Well Driller's reports, geologic logs, construction information, video surveys, pump-test data, and location information (GPS coordinates – latitude/longitude).

M3 Eagle needs this information so it can offer documents, technical information, and/or data to respond to the March 2 Memoranda by April 3, 2009, as allowed by the Hearing Officer's February 10, 2009 Order.

M3 Eagle suggests IDWR staff contact Ed Squires at Hydro Logic, Inc., directly about this request. M3 Eagle and Hydro Logic would appreciate receiving this information by March 17, 2009.

DATED this 10th day of March, 2009.

Respectfully submitted,

GIVENS PURSLEY LLP

By _____
Jeffrey C. Fereday
Michael P. Lawrence

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 10th day of March, 2009, the foregoing was filed, served, or copied as follows:

FILED	
Idaho Department of Water Resources Attn: Gary L. Spackman 322 East Front Street P.O. Box 83720 Boise, ID 83720-0098	_____ U. S. Mail __X__ Hand Delivered _____ Overnight Mail _____ Facsimile __X__ E-mail
SERVICE	
John Westra Western Regional Office Idaho Department of Water Resources 2735 Airport Way Boise, ID 83705-5082	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Bill Lawton, Spokesman for Robert L. Wood M. Howard Goldman Timothy R. Milburn 3145 Osprey Road Eagle, ID 83616	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
North Ada County Groundwater Users Association c/o David Head 855 Stillwell Drive Eagle, ID 83616	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
North Ada County Groundwater Users Association c/o John Thornton 5264 N. Sky High Lane Eagle, ID 83616	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Norman Edwards 884 W. Beacon Light Road Eagle, ID 83616	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail

Alan Smith
3135 N. Osprey Road
Eagle, ID 83616

__X__ U. S. Mail
_____ Hand Delivered
_____ Overnight Mail
_____ Facsimile
_____ E-mail

Michael P. Lawrence

Jeffrey C. Fereday [ISB No. 2719]
Michael P. Lawrence [ISB No. 7288]
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www.givenspursley.com
Attorneys for M3 Eagle LLC

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 63-32573 IN THE NAME OF M3 EAGLE LLC	**M3 EAGLE'S REQUEST FOR IDWR STAFF ATTENDANCE AT HEARING**

M3 Eagle LLC ("M3 Eagle"), pursuant to Rules 201 and 602 of the IDWR's Rules of Procedure (IDAPA 37.01.01.201 and .602), hereby requests that IDWR staff employees Sean Vincent, Dennis Owsley, Mike McVay, and Allan Wylie attend the hearing scheduled in this matter and be made available for cross-examination pertaining to their memoranda submitted to the Hearing Officer on March 2, 2009.

The Hearing Officer, in his December 8, 2008 *Request for Staff Memorandum*, stated "[t]he Department will require attendance of staff participating in writing staff memoranda for examination at any hearing . . . ." By requesting the attendance and availability of the specific individuals named above, M3 Eagle intends to avoid confusion by clarifying the identities of

which IDWR staff employees it needs to attend the hearing and have available for cross-examination.[1]

DATED this 6th day of March, 2009.

Respectfully submitted,

GIVENS PURSLEY LLP

By Jeffrey C. Fereday

Jeffrey C. Fereday
Michael P. Lawrence

[1] M3 Eagle previously has notified IDWR and the parties that it may call IDWR employee Rob Whitney as its own witness.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 6th of March, 2009, the foregoing was filed, served, or copied as follows:

FILED	
Idaho Department of Water Resources Attn: Gary L. Spackman 322 East Front Street P.O. Box 83720 Boise, ID 83720-0098	___ U. S. Mail _X_ Hand Delivered ___ Overnight Mail ___ Facsimile _X_ E-mail
SERVICE	
John Westra Western Regional Office Idaho Department of Water Resources 2735 Airport Way Boise, ID 83705-5082	_X_ U. S. Mail ___ Hand Delivered ___ Overnight Mail ___ Facsimile ___ E-mail
Bill Lawton, Spokesman for Robert L. Wood M. Howard Goldman Timothy R. Milburn 3145 Osprey Road Eagle, ID 83616	_X_ U. S. Mail ___ Hand Delivered ___ Overnight Mail ___ Facsimile ___ E-mail
North Ada County Groundwater Users Association c/o David Head 855 Stillwell Drive Eagle, ID 83616	_X_ U. S. Mail ___ Hand Delivered ___ Overnight Mail ___ Facsimile ___ E-mail
North Ada County Groundwater Users Association c/o John Thornton 5264 N. Sky High Lane Eagle, ID 83616	_X_ U. S. Mail ___ Hand Delivered ___ Overnight Mail ___ Facsimile ___ E-mail
Norman Edwards 884 W. Beacon Light Road Eagle, ID 83616	_X_ U. S. Mail ___ Hand Delivered ___ Overnight Mail ___ Facsimile ___ E-mail

Alan Smith
3135 N. Osprey Road
Eagle, ID 83616

__X__ U. S. Mail
_____ Hand Delivered
_____ Overnight Mail
_____ Facsimile
_____ E-mail

Jeffrey C. Fereday

Jeffrey C. Fereday

Gibson, Deborah

From: Gibson, Deborah

Sent: Wednesday, March 04, 2009 3:18 PM

To: 'Jeffrey C Fereday'; 'jthornton@fs.fed.us'; 'cjthornton6@msn.com'; Bill Lawton (prcarw20@cableone.net); 'Norman Edwards'

Cc: 'Lori Anderson'; Spackman, Gary; Owsley, Dennis

Subject: Revised Part 2 - IDWR Staff Memorandum re: M3 Eagle (Appendixes A & B)

Attachments: img-304145231.pdf

This is a follow-up to the previous emails I sent you. I found a two sided document within the memo issued by Mike McVay under the Appendix A page. Please delete the previous "Part 2" email and use the attached document in it's place.

Sorry for the confusion, or inconvenience. The copies you are being provided by U.S. Mail reflect all pages.

Deborah Gibson
Administrative Assistant
Water Management Division
322 E. Front St., Boise, ID
Phone: (208) 287-4942
Fax: (208) 287-6700
Email: deborah.gibson@idwr.idaho.gov
Website: idwr.idaho.gov

Gibson, Deborah

From: Gibson, Deborah

Sent: Wednesday, March 04, 2009 2:35 PM

To: 'Jeffrey C Fereday'; 'jthornton@fs.fed.us'; 'cjthornton6@msn.com'; Bill Lawton (prcarw20@cableone.net); 'Norman Edwards'

Cc: 'Lori Anderson'

Subject: IDWR Staff Memorandum re: M3 Eagle

Attachments: img-304141254.pdf

Please see attached Memorandum issued by IDWR's Hydrology staff regarding technical reports filed with IDWR regarding M3 Eagle's application.

Earlier this morning I tried to send the memo as one attachment. Because it was too large to send through our system, I rescanned the document in two parts. Part one is attached and I will send the second part in a second email. Also, a copy is going out to everyone via U.S. Mail in tomorrow morning's mail.

Deborah Gibson
Administrative Assistant
Water Management Division
322 E. Front St., Boise, ID
Phone: (208) 287-4942
Fax: (208) 287-6700
Email: deborah.gibson@idwr.idaho.gov
Website: idwr.idaho.gov

Gibson, Deborah

From: Gibson, Deborah

Sent: Wednesday, March 04, 2009 2:39 PM

To: 'Jeffrey C Fereday'; 'jthornton@fs.fed.us'; 'cjthornton6@msn.com'; Bill Lawton (prcarw20@cableone.net); 'Norman Edwards'

Cc: 'Lori Anderson'

Subject: Part 2 - IDWR Staff Memorandum re: M3 Eagle

Attachments: img-304141436.pdf

Here is Part 2 (with Appendixes A & B) of the Memorandum issued by IDWR's Hydrology staff regarding technical reports filed with IDWR regarding M3 Eagle's application.

If anyone has any problems opening these documents, please let me know.

Deborah Gibson
Administrative Assistant
Water Management Division
322 E. Front St., Boise, ID
Phone: (208) 287-4942
Fax: (208) 287-6700
Email: deborah.gibson@idwr.idaho.gov
Website: idwr.idaho.gov

MEMO

State of Idaho
Department of Water Resources
322 E Front Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 287-4800 Fax: (208) 287-6700

Date: March 2, 2009

To: Gary Spackman, Hearing Officer

From: Dennis Owsley DEO and Sean Vincent SV, Hydrology Section, State Office

cc: Rick Raymondi

Subject: Application for Water Right 63-32573

Overview

M3 Eagle, LLC (M3) is planning to construct a 7,153 unit planned community development on property the company owns in North Ada County. M3 has contracted with HydroLogic, Inc. (HLI), a Boise-based hydrogeologic consulting firm, to conduct an investigation of the area in order to determine the potential for developing a ground-water supply to support the planned community. According to HLI, all of the major municipal supply wells and many irrigation wells within the greater Eagle-Star-M3 area derive their water from the target, regional aquifer. M3 proposes to further develop the aquifer by installing up to fifteen water supply wells within the southwest portion of the property. M3 is seeking a water right with a maximum diversion rate of 23.18 ft^3/sec (cfs).

The primary conclusions based on our review of the data and reports submitted in response to the September 12, 2008 *Order Authorizing Discovery and Schedule Order,* are as follows:

- A highly productive sedimentary aquifer exists beneath a portion of the M3 property.
- The stratigraphy beneath the M3 site is complex, consisting of a thick sequence of coarse and fine grained sediment layers that pinch out and are faulted.
- Hydrologic boundaries and recharge mechanisms are not well defined for the target aquifer.
- The long-term sustainability of the aquifer beneath the M3 property is difficult to assess; some lines of evidence suggest that it may be limited.

- Despite remaining uncertainties, the work that was commissioned by M3 has significantly improved our understanding of the hydrogeology in North Ada County.

- The ongoing North Ada County Hydrogeologic Investigation will help reduce the uncertainty.

Introduction

This memorandum has been prepared in response to the request for staff memorandum dated December 8, 2008 in the matter of applications to appropriate water No. 63-32573 in the name of M3 Eagle, LLC (M3). The following information was requested:

1. A full analysis of the methods of gathering data, the data presented, and results of the aquifer tests or other tests or modeling contained in the information submitted by the parties.
2. A secondary review of any review and analysis of the original documents submitted by the parties.
3. Presentation and analysis of additional data available to Department staff to enhance the hearing officer's understanding of the hydrogeology and aquifers in the vicinity of the proposed appropriations of water.
4. Conclusions about the impacts on other water users and aquifers caused by pumping of ground water as proposed by the application to appropriate water no. 63-32573.
5. Any analysis of M3 Eagle LLC's demographic and economic modeling and forecasting.

1) Request #1 -- *A full analysis of the methods of gathering data, the data presented, and results of the aquifer tests or other tests or modeling contained in the information submitted by the parties.*

HLI has collected, analyzed, and reviewed a significant amount of data in an attempt to characterize the aquifer beneath the M3 property on behalf of the applicant. The following sections summarize our review of HLI's aquifer characterization work.

a) Subsurface Exploration: Well Drilling and Geophysical Logging
HLI drilled four exploratory test wells (TW#1, TW#2, TW#3, and TW#4) on M3 property, with depths ranging from 672 to 900 feet below ground surface (Figure 1). All four test wells were completed with multiple monitoring ports to facilitate water level measurements and water quality sampling at various depths within the aquifer. Geophysical data (resistivity and natural gamma) were collected in each of the test wells. Composite diagrams that summarize well construction, geophysical, geologic, water chemistry, and water level data were developed for the M3 test wells and six other nearby wells.

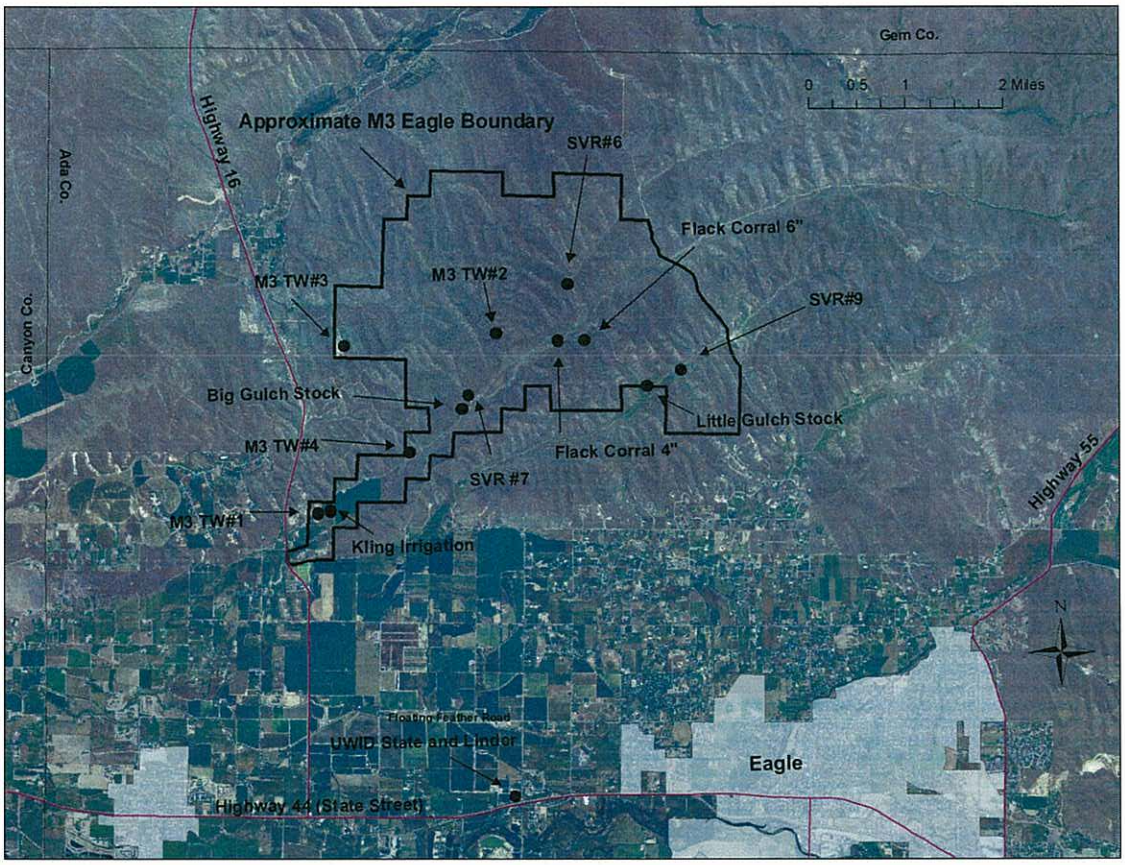

Figure 1. Approximate locations of wells on the M3 property.

A review of the composite diagrams indicates that the stratigraphy of the area is complex, consisting of alternating layers of sand, silt, gravel, and clay. The Pierce Gulch Sand (PGS) Formation has been identified by HLI beneath the southern half of the M3 property. Previous investigators have defined the PGS as a thick sequence of arkosic sand with interbedded units of silt, clay, and gravel (Othburg and Stanford, 1992). Where saturated, the PGS forms an aquifer that is referred to by HLI as the Pierce Gulch Sand Aquifer (PGSA). The PGSA is the aquifer targeted for development in this water right application.

b) Surface Geophysical Investigations

HLI commissioned magnetometer and seismic profiling surveys on and around the M3 property. The purpose of these investigations was to obtain additional stratigraphic information beneath the area of investigation.

The magnetometer survey was conducted by BSU in 2006, with the results interpreted by Dr. Spence Wood. Wood identified two NW/SE trending "major" faults that transect the M3 property (Figure 2) and determined that sediments beneath M3 extend to a depth of more than 3,000 ft (Wood, 2007). Wood also identified several other off-site faults with the same NW/SE orientation.

beneath M3 extend to a depth of more than 3,000 ft (Wood, 2007). Wood also identified several other off-site faults with the same NW/SE orientation.

The seismic survey was also conducted by BSU during the summer of 2006. The objectives of the survey were to define the shallow (<1,000 ft deep) sedimentary section and to delineate aquifers, the deeper volcanic bedrock, and structural faulting. After acquisition and attempted analysis of data from several locations, it was decided to terminate the investigation based on poor data quality (Bradford, 2006). Therefore, no significant information was obtained from the seismic survey.

c) Geologic Cross-Sections

Four geologic cross-sections were developed by HLI based on geophysical and geological data collected from deep wells in the area. The cross-sections extend from the M3 property to the Boise River and from the City of Star to Garden City. In general, the four cross-sections represent the PGSA as a laterally extensive, approximately 300-foot thick section of sand that dips to the southwest. Observations concerning the stratigraphy depicted on the cross-sections are as follows:

- The cross-section that bisects Big Gulch does not show the fault between TW#1 and TW#4 that was identified in surface geophysical work contracted by HLI (Wood, 2007). The offset from this fault could account for, at least in part, some of the differences in elevation of the tops and bottoms of the various strata that are represented as uninterrupted. The identification of faults is important for the characterization of the hydrogeology because faults often affect hydraulic communication between hydrostratigaphic units.

- It is difficult to distinguish the PGSA from the "undifferentiated alluvial aquifers and aquitards" in UWID test wells along the Boise River. Based upon geologic and geophysical data shown on the cross-sections, there is a lack of fine-grained sediments that define the top of the PGSA under the M3 property. The absence of a thick, laterally continuous confining layer provides a mechanism for hydraulic communication between the PGSA and overlying undifferentiated sediments.

- The stratigraphic profile of SVR#7 (the pumping well for a nine day aquifer test conducted on the M3 property) is not included on the cross-section that bisects Big Gulch. If included, the cross-section would require modification.

- The stratigraphic and geophysical logs for TW#4 do not show a strong correlation with the depiction of the mudstone unit drawn in the cross-section that runs from TW#3 to the UWID State and Linder well.

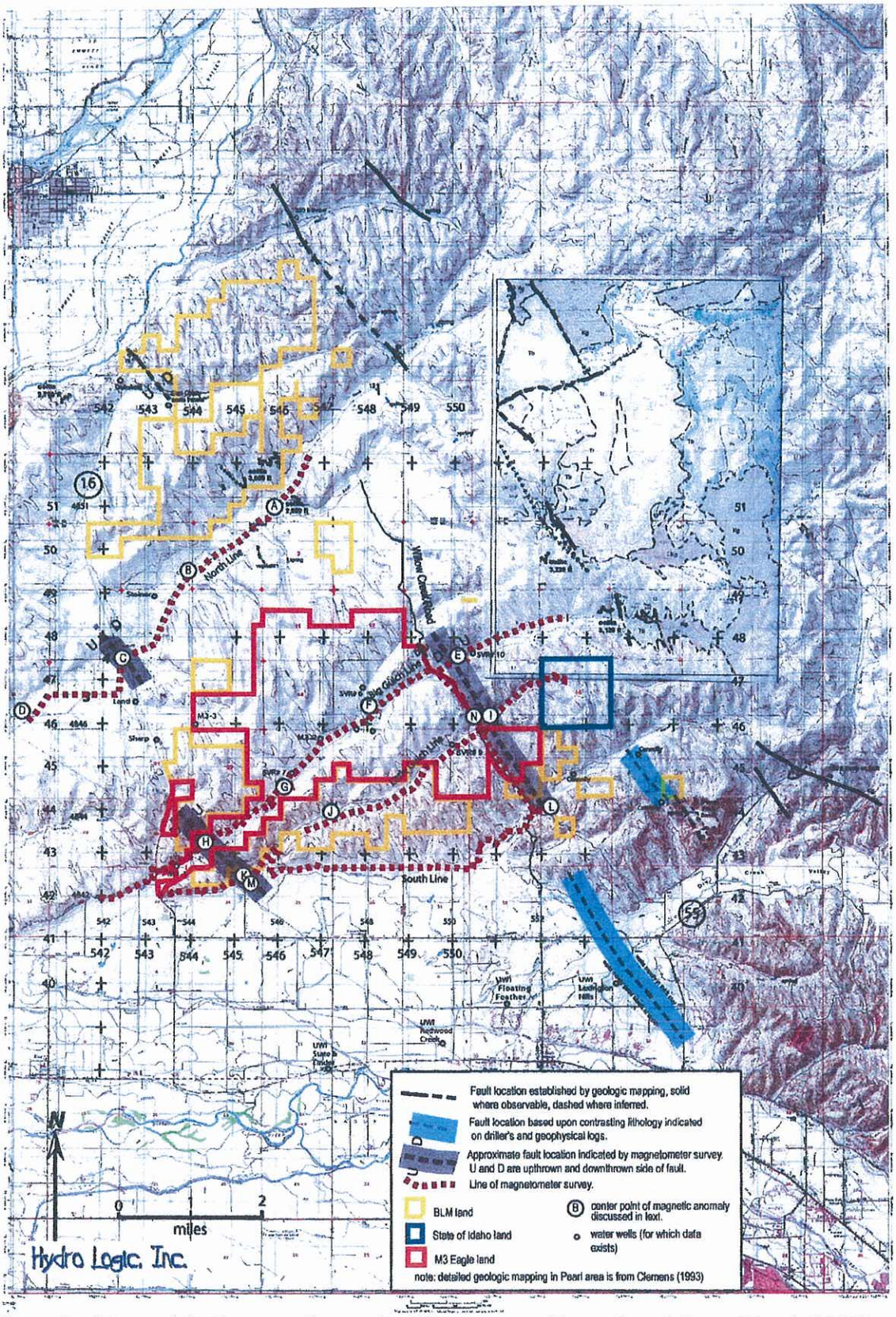

Figure 2. Mapped faults on and near the M3 property (Reproduced from Wood, 2007).

- The base of the PGSA is drawn at different elevations on the two cross-sections in which TW#4 stratigraphy is shown. Also, the top of the PGS in the UWID State and Linder well is at a different elevation in the two cross-sections that transect this well.

In summary, the above observations demonstrate that the delineation of the hydrostratigraphy based on available geophysical and geologic data is a detailed, difficult, and subjective undertaking. Moreover, it is unclear based on our analysis of the presented data whether the PGS is a distinct, laterally continuous layer, as conceptualized by HLI, or if it possibly merges with overlying undifferentiated sediments basinward and/or is hydrologically compartmentalized by faults. The contribution of basin margin faults to hydrogeologic uncertainty was previously identified in a study that was conducted for the Treasure Valley Hydrologic Project:

"In addition to complexity inherent in deposition and erosion, a series of major faults bisect the stratigraphic section along the northern basin margin. The hydrologic impact of these faults is poorly understood, but they are likely to be an important influence on ground water flow in the Boise-area aquifers." (Hutchings and Petrich, 2002, p. 2)

d) Water Level Data

During the past three years, HLI has conducted two synoptic mass measurements in North Ada County and has instrumented wells to collect routine water levels in a network of wells on and near the M3 property. The following sections summarize the water level data collection and analysis performed by HLI.

i) Mass Measurements

During the summer of 2006, HLI collected 167 water level measurements in the greater M3 area. Location and elevation data were also collected at each well with a GPS unit and used to develop a water elevation contour map for the PGSA. The data and contour map were presented in a technical memorandum submitted to the Department that suggests that ground water flows to the west underneath the M3 property and northwest toward the Payette River after leaving M3 (HLI, 2007b). According to HLI well completion data, water levels used to create this contour map were collected from wells within the PGSA, the Willow Creek Aquifer, and in "*undifferentiated alluvial aquifers*".

A second mass measurement was completed during June and July of 2007 to refine the assessment of ground water direction in the PGSA. The 59 wells selected for this mass measurement were a subset of the PGSA wells that were measured in the 2006 mass measurement, along with 16 additional wells that were chosen to provide additional control points for determining ground water flow direction in the PGSA. Twenty-eight of the wells had wellhead elevations surveyed to the nearest 0.01 ft prior to the measurements. The mass measurement

data were submitted to the Department as a technical memorandum which included an updated water level contour map. The updated map suggests that the ground water flow direction beneath the M3 property is to the west, and the flow direction is northwest toward the Payette River after leaving M3 (HLI, 2008c).

Observations concerning the mass measurement data and updated water level contour maps are as follows:

- The contour map shows that only four wells west of the Ada/Canyon County line were used to determine the northwest regional flow direction. Of these four wells, two (Rio Lobo and Shalako) are located within the same section and the elevations and locations of the other two (Zigler and Caldwell Test Well #19) were not surveyed. The scarcity of surveyed control points west of the Ada/Canyon county line creates uncertainty in the determination of the regional flow direction.

- The Zigler well is the only control point in the Payette River valley. Well completion data for this well was not included in the HLI submittal (HLI, 2008c). It has not been established that the PGSA is present at this location.

- The water level for the Caldwell Test Well #19 that is posted on the updated contour map is 2,450 feet above mean sea level (ft-msl). The only water level measurement reported for this well is 2,442 ft-msl and this measurement was collected in 2005 rather than in 2007. In addition, the data submitted by HLI indicates that this well is "*above the PGSA*" (HLI, 2008c). These considerations suggest that the data point should not be relied upon for determining ground water flow direction in the PGSA.

- Use of water levels that were collected during the irrigation season adds uncertainty to the determination of ground-water flow direction.

- The intersection of the geologic contact between the PGSA and the Willow Creek Aquifer and surficial sediments on the M3 property was treated as a no-flow/barrier boundary in the initial development of ground water contours with a commercially available contouring program (Surfer®). The existence of this flow barrier helps explain water level and water chemistry differences between the PGSA and the Willow Creek Aquifer. However, the flow barrier that was used for contouring abruptly stops approximately three miles to the northwest of the M3 property, allowing PGSA water to flow north and merge with ground water in the Willow Creek Aquifer. The basis for terminating the no-flow/barrier boundary is unclear based upon the information that was submitted to the Department.

- A previous study (Wood, 2007) indicates that the PGS outcrops along the southern bluffs of the Payette River Valley. These PGS outcrops are unsaturated with no visible springs or other evidence of ground water

discharge. The HLI conceptual model does not include an explanation of where and how the PGSA discharges into the Payette River Basin Aquifer.

In summary, available water level data clearly indicate a west ground water flow direction in the PGSA beneath the M3 property. The determination that the regional flow direction is northwest toward the Payette River is less convincing, however, because of the scarcity of surveyed control points and an incomplete hydrogeologic conceptual model.

ii) Routine Measurements

In addition to mass measurements, HLI has installed data loggers to collect water levels on a regular basis. Thirteen wells (four with multiple observation ports) currently are equipped with data loggers to monitor different levels within the PGSA. Data submitted to the Department spans back to July of 2006 for some of these wells.

A figure summarizing data logger measurements from nine of the PGSA wells was submitted to the Department as part of the SVR#7 aquifer test report (HLI, 2009, Figure 46). Observations related to this figure are as follows:

- Although presented on the figure, water levels in the Kling domestic well are not discussed in any of the HLI submittals. It appears from inspection of the figure that the Kling domestic well did not fully recover from the Kling irrigation well aquifer test that was conducted in January 2007.

- Comparison of the water level fluctuation patterns allows the wells to be grouped. Wells in the first group include the State and Linder monitoring well, TW#1, and the Kling domestic well (Group 1). The second group includes TW#4, SVR#7, SVR#9, TW#2, and TW#3 (Group 2). Distinguishing characteristics of the two different water level trend patterns are as follows:

    - The seasonal fluctuation seen in Group 1 wells is nearly an order of magnitude greater than the fluctuations seen in Group 2 wells. For example, the seasonal fluctuation was approximately 13 feet in TW#1, but was only 1.5 feet in TW#3 is approximately 1.5 feet.

    - Responses to "*hydraulic events*" (April 2007, June 2007, August 2007, and May 2008) are apparent in the hydrographs for Group 1 wells but are not apparent in the Group 2 hydrographs.

- The NW/SE trending normal fault identified by Wood (2007) separates the two well groups and potentially accounts for the different water level fluctuation patterns.

- Over the past three years, the water levels in the Group 2 wells have a distinct downward trend. This trend is similar to the results obtained from a water level trend analysis that was conducted by the Department (Appendix A). Downward trends are not apparent in Group 1 wells, possibly because of greater water level fluctuations and incomplete data records.

- The hydrograph for the Big Gulch Well was not included in Figure 46 even though this well had the greatest drawdown among the observation wells measured during the SVR#7 aquifer test.

In summary, water levels collected with data loggers on the M3 property over the past three years have provided valuable information regarding water level fluctuations beneath the site. Analysis of these data reveals two distinct patterns of water level fluctuations in the PGSA. The patterns are different on each side of a mapped normal fault. Knowledge of the hydrologic significance of basin margin faults appears to be critical to understanding the hydrogeology in the vicinity of M3.

e) Aquifer Testing

i) Kling irrigation Test

HLI conducted two constant rate aquifer tests on the M3 property. The first test was conducted in the summer of 2007 using the Kling irrigation well, a 408-foot deep well which, according to HLI, is completed in the upper 109 feet of the PGSA. The Kling irrigation well was first rehabilitated and then pumped at 900 gallons per minute (gpm) for 50 hours while monitoring the water levels in the pumping well and six nearby observation wells. Noteworthy items related to the Kling irrigation well aquifer test are as follows:

- Drawdown was only observed in the pumping well and the closest observation well, TW#1, a multi-level monitoring well with four PGSA monitoring zones. Although the response to pumping from the upper PGSA was first measured in the deeper PGSA zones, the upper zone at TW#1 had the greatest drawdown at the end of the test (HLI, 2008b).

- Based on the analysis of the pumping well test data, HLI's estimate of aquifer transmissivity in the region of the pumping well is 39,000 gallons per day per foot (gpd/ft). Because of well construction issues, HLI feels that the transmissivity estimate may be unrealistically low (HLI, 2008b, p. 215).

- Water level data were collected in the Kling domestic well (see Figure 46 of HLI, 2009), but were not discussed in the write-up for the aquifer test analysis.

- A fault lies between the pumping well and the non-responding observation wells. Although HLI modeled this fault as a no-flow/barrier boundary in their computer-aided analysis of aquifer test data, they seem less certain of its

impact in concluding "*A no-flow boundary could, in theory, have affected responses in the lower part of the aquifer*" (HLI, 2008b, p. 206).

- HLI recommended that an aquifer test lasting at least a week be conducted using a properly designed and constructed high capacity well (1,000 to 2,000 gpm) to better characterize the nature of the aquifer beneath M3 (HLI, 2008b, p. 215).

In summary, although of limited duration and despite well construction issues, the Kling irrigation well aquifer test provided valuable information regarding aquifer properties under this portion of the property and highlighted the potential importance of a NW/SE trending fault on water level declines caused by pumping in the PGSA.

ii) SVR#7 Aquifer Test

The second HLI constant rate aquifer test was conducted in March of 2008. SVR#7, a Spring Valley Ranch well completed in the PGSA on M3 property, was pumped at approximately 900 gpm for nine days. The purpose of this test was to collect on-site hydrogeologic data to further characterize the PGSA and to evaluate possible constraints that would impact the execution of a longer duration aquifer test. The following observations are based upon our review of the SVR#7 aquifer test report (HLI, 2009):

- Measurable drawdown was reported in eight of the 13 wells monitored during the test. Drawdown at the end of test ranged from 1.71 feet in a well approximately 845 feet from the pumping well to 0.09 feet in a well approximately 11,660 feet (2.2 miles) from the pumping well.

- Two well completions in the shallow "unnamed fluvial sand aquifers" were monitored during the test. Drawdown was measured in the closest shallow well completion (TW#4, Zone 3), which is approximately 4,500 feet from the pumping well, but not detected in the more distant shallow well completion (TW#1, Zone 5), which is approximately 11,000 feet from the pumping well.

- Small but "measurable" drawdown was noted in the Little Gulch stock well and SVR#9, at distances of 9,740 and 11,660 feet from the pumping well, respectively (HLI, 2009, Table1). Drawdown was not "measurable" in either the Kling irrigation well, which is 9,908 feet away from the pumping well, or in any of the monitoring zones at TW#1, which is 10,916 feet from the pumping well. In relation to the pumping well, the Kling irrigation well and TW#1 are on the opposite side of the "major" normal fault which is located between TW#1 and TW#4.

- Drawdown plots were analyzed to estimate aquifer properties (transmissivity and storage coefficient) beneath the site. Transmissivity estimates range from

180,000 to 580,000 gpd/ft, with an average value of 420,000 gpd/ft. The average storage coefficient estimate is 3×10^{-3}.

- There is an increase in slope on the semi-logarithmic plot of drawdown versus time for the Big Gulch stock well approximately 6,000 minutes (~4 days) into the test (HLI, 2009, Figure 24). An increase in slope is characteristic of the cone of depression encountering a no flow/barrier boundary (Driscoll, 1986; p. 231 and USBR, 1995, p. 251). HLI instead attributes the slope increase to a declining regional aquifer water level trend, which is a plausible concept. Unfortunately, a plot of trend-corrected drawdown is not presented for the Big Gulch stock well. Our calculations indicate that the regional trend (Figure C-2) does not fully account for the increase in slope that was observed on the semi-logarithmic plot for the Big Gulch stock well.

- The Big Gulch stock well had not fully recovered from pumping at the end of the 12-day water level recovery monitoring period. Although there are other possible explanations, the fact that water levels did not recover to the pre-pumping levels suggests that the aquifer may be of limited extent (Driscoll, 1986, p. 259). HLI attributes incomplete recovery to the declining regional water level trend but the residual drawdown after correcting for the declining trend was still approximately 0.5 feet at the end of the water level recovery monitoring period.

- Although the duration of this test exceeded most of the previous aquifer tests in the area, a longer duration test (~30 days) with additional monitoring in the shallow aquifers, would stress a greater portion of the aquifer, facilitate evaluation of hydrologic boundaries, and provide data for better estimating the long term impacts of pumping.

In summary, the aquifer testing conducted by HLI demonstrates that the PGSA beneath the M3 property is highly productive. The results from the nine-day test are reliable because of careful planning and data collection. Several lines of evidence suggest that the aquifer may be bounded by faults. An aquifer test of longer duration could be used to evaluate the hydrologic significance of the fault.

f) Aquifer Test Analysis

HLI submitted a report to the Department in August of 2008 titled "*Re-Analysis of 16 Aquifer tests in the Greater Eagle-Star Area of North Ada County, Idaho.*" The report summarizes the original testing and reanalysis of 16 aquifer tests previously conducted in the greater Eagle area by various entities. Of the 16 reanalyzed tests, HLI suggests that 10 were conducted in the PGSA, one was conducted in an overlying shallow alluvial aquifer, and the remaining five were conducted in various other vicinity aquifers.

Based on reanalysis of the data, HLI concludes that the PGSA in the vicinity of M3 is a single, continuous, heterogeneous, highly productive aquifer with

transmissivity estimates ranging from 40,000 gpd/ft to 800,000 gpd/ft. The average transmissivity (210,000 gpd/ft) is higher than the high end of the range of previous estimates (100,000 to 200,000 gpd/ft). The differences between the original estimates and the revised estimates are attributable to HLI's determination that the PGSA is much thicker than estimated by previous investigators. HLI estimates that the PGSA thickness is typically on the order of 275 feet, and over 500 feet is some areas (HLI, 2007b, p. i).

Other noteworthy conclusions made by HLI are as follows:

- The PGSA in the vicinity of M3 is the same regional aquifer that is relied upon as the primary water supply for the cities of Eagle, Star, and Meridian (p. ii).

- The Willow Creek Aquifer that underlies the northeast portion of the M3 property is described as "*A highly permeable, but isolated and bounded, sand unit with limited recharge*" (p. 239).

- "*Potential well yields from the Willow Creek Aquifer are high but we expect that long term production could be severely constrained by small amounts of recharge and a bounded system that would significantly increase water-level drawdowns and pumping lifts*" (p. 240).

- The Sandy Hill Aquifer northeast of Eagle is described as "*Another highly permeable, isolated and bounded sand unit with limited recharge*" that has high short-term well yields but long-term production that "*would be severely limited by small amounts of natural recharge*" (p. 240).

In summary, the compilation and reanalysis of data from 16 previous aquifer tests represents a significant undertaking on the part of HLI. The reanalysis yielded an updated hydrogeologic conceptual model and revised estimates of aquifer properties for vicinity aquifers. HLI concludes that other vicinity aquifers have limited long-term sustainability owing to hydraulic isolation and limited on-site recharge. In our opinion, the possibility of limited long-term sustainability for the PGSA also cannot be discounted based upon currently available data.

g) Geochemical Investigations

In 2007, HLI concluded that the chemistry of PGSA ground water is distinguishable from the chemistry of ground water from wells completed in the Willow Creek Aquifer (HLI, 2007a). This distinction was based primarily on differences in total dissolved solids and nitrate concentrations.

A more in-depth geochemical analysis of historic and recently acquired ground water chemistry data was submitted to the Department on January 20 of this year (Glanzman and Squires, 2009). Samples were collected from approximately 40 wells and springs across the region and analyzed for field parameters, major ions,

and selected trace elements. Major ion chemistry was plotted on Trilinear (Piper) diagrams for each sample location. Findings from the 2009 geochemical analysis include the following:

- "*PGSA groundwater originated almost exclusively from ancestral Boise River surface water*" (p. 4).

- Wells located in the Payette River valley near Emmett are not hydraulically connected to the PGSA (p. 9).

In summary, historical and newly acquired water quality analyses have been interpreted to indicate that there is a difference between the water chemistry in the PGSA and the water chemistry in surrounding aquifers. The data also have been interpreted to indicate that PGSA water originated almost exclusively from the ancestral Boise River. Department staff believe that an isotopic study of ground water in the PGSA could help to evaluate the determination that modern day recharge sources are not contributing recharge to the PGSA.

h) Ground-water Flow Modeling

HLI contracted with Pacific Groundwater Group (PGG) to develop a ground water flow model that could be used to predict impacts caused by pumping in the PGSA at M3. PGG developed a seven layer model that comprises approximately 80,000 active cells and covers 520 square miles in the area surrounding M3. A report summarizing the model and its development, including a review of existing models in the area, was reviewed by Department staff (HLI, 2008a). The following are observations regarding the M3 modeling report:

- HLI conducted a review of existing models in the area and attempted to incorporate the knowledge and experience gained from these efforts into the new M3 model.

- Two versions of the model were developed. One version (Tmatch) was forced to honor the range of available transmissivity estimates and the second version (Hmatch) used transmissivities outside the range of available estimates in order to achieve a better calibration. Both versions were first calibrated to "*quasi-steady state conditions*" (water level measurements collected in 2007) and then to water levels measured during three constant rate aquifer tests (Lexington Hills, Eaglefield, and SVR#7).

- Simulated underflow directly into the PGSA at the southeast corner of the model is conceptualized to be seepage from the Boise River and the New York Canal (HLI, 2008a, p. 33). The idea that seepage from the modern day Boise River and its canal system recharges the PGSA seemingly is at odds with HLI's conclusion that the original source of PGSA water is almost exclusively the ancestral Boise River (Glanzman and Squires, 2009, p. 4).

- The simulated discharge area for the PGSA is the Payette River Valley.

- The model representation does not include a NW/SE trending fault between TW#1 and TW#4 that was identified by Wood (2007) using surface geophysics.

- The model was run to predict long-term impacts from pumping on the M3 property and influences from a reduction in seepage from the New York Canal. Model predictions are discussed in our response to the fourth bulleted item in the *Request for Staff Memorandum*, which starts on page 20 of this memorandum.

- One of IDWR's ground water modelers reviewed the modeling report and identified the following three concerns: (1) the use of the general head boundary at the inlet of the model should be used cautiously; (2) having two different versions of the model doesn't necessarily bracket uncertainty, as asserted by HLI on page 13 of the M3 modeling report (HLI, 2008a); and (3) the M3 modeling report indicates that the model calibration was sensitive to vertical hydraulic conductivity but the sensitivity of the model predictions to this input are not discussed (Appendix B).

In conclusion, a ground-water flow model based upon HLI's hydrogeologic conceptual model has been developed for prediction of hydrogeologic impacts. As described elsewhere, the basis for several important elements of the HLI conceptual model has not been provided. A potentially significant hydrogeologic feature (i.e., a fault) has not been incorporated into the model.

2) Request #2 -- *A secondary review of any review and analysis of the original documents submitted by the parties.*

The North Ada County Groundwater Users Association (NACGUA) hired a hydrogeologic consultant to provide a technical review of the data and reports submitted by HLI. Ralston Hydrologic Services, Inc., conducted the review and reported the findings in two technical memoranda, an expert report, and a supplement to the expert report based upon review of a recently submitted geochemistry report. The following sections summarize the reviews that were submitted on behalf of the protestants.

a) *Initial Hydrogeologic Analysis*, dated November 6, 2008.
This memo is organized into four sections. The first section provides a summary of the hydrogeologic information provided to date on behalf of the applicant. The second section is an analysis of the HLI's hydrogeologic conceptual model. The third section is review of HLI's analysis of the ground water flow system. The fourth section is a review of HLI's analysis of the likely impacts from full project development.

The first section provides quotes from the characterization report submitted by HLI (HLI, 2007a) but does not make any conclusions. The primary conclusions from the other three sections of the memo are as follows:

> *"I conclude that there is not sufficient evidence to support the presumption of lateral extent and continuity of what has been called the Pierce Gulch Sand Aquifer from the M3 Eagle site to the Payette River. Also, additional work is needed to assemble and present the available information to support the presumption of lateral extent and continuity of what has been called the Pierce Gulch Sand Aquifer from the M3 Eagle site to the presumed recharge area in the Boise River drainage."* (p. 3)

> *"I conclude that there is not sufficient evidence to support the presumption that ground water flows in the manner and quantity described within what has been called the Pierce Gulch Sand Aquifer from the presumed recharge area in the Boise River drainage to the presumed discharge area in the Payette River drainage."* (p. 4)

> *"I conclude that the characterization of the target aquifer system, including a pre-development water balance, has not been complete enough to support an analysis of impacts from full project development."* (p. 5)

b) *Review of 2008 HydroLogic, Inc. Report*, dated November 26, 2008.
The second memo is a review of the report entitled "*Re-Analysis of 16 Aquifer Tests in the Greater Eagle-Star Area of North Ada County, Idaho*" (HLI, 2008b). The one paragraph memo concludes:

> *"I found no information that would change the conclusions stated in my November 6, 2008 report on the M3 Eagle development. My November 6, 2008 report is an accurate statement of my professional conclusions relative to the project."*

c) *Hydrogeologic Analysis of the M3 Eagle Site, Expert Report Prepared for the North Ada County Ground Water Users Association*, dated January 2009.
This expert report is the most comprehensive review conducted on behalf of the protestants. Four HLI reports are reviewed (HLI, 2007a; HLI, 2008a; HLI, 2008b, and HLI, 2008c). The expert report includes a summary of hydrogeologic information developed by HLI and identifies issues with the conceptual and numerical models.

The 2009 review provides the following conclusions:

> *"I conclude that there is insufficient evidence to support the assumption that the Pierce Gulch Sand Aquifer is laterally continuous from the Boise River Valley to the Payette River Valley."* (p. 9)

"I conclude that the 2007 water-level data provide insufficient evidence that ground-water flow occurs from the Boise River Valley to the Payette River Valley." (p. 10)

"In my opinion, the inability to have the M3 Eagle model reproduce aquifer water levels using the calculated transmissivity values indicates that problems exist in the model formulation (such as boundaries) and/or with the input data sets. I do not believe that development of two parallel numerical models is a reasonable solution to the problem. Also, I do not believe that general agreement between the "Hmatch" and "Tmatch" indicates that the numerical model is a reasonable representation of the hydrogeologic system.

Questions come to mind whenever a numerical ground-water model is used to predict impacts on a time scale that greatly exceed the data set used for transient calibration. This is defiantly (sic) *the case with the M3 Eagle numerical model. The data sets used for transient calibration were short (30 and 7 days) and the stress potentially did not cause water-level changes at all aquifer boundaries. Prediction of long-term pumping effects (such as 50 years) involves stressing a much larger portion of the model and likely a number of boundaries. This creates major uncertainty relative to reliability of the drawdown values predicted using the model."* (p. 12)

"The hydrogeologic investigation of the M3 Eagle site has resulted in an improved knowledge of the ground water condition under the site. However, my concerns about development impacts from the project are focused on large scale issues rather than on-site impacts. Specifically, I believe that postulated ground-water flow through a laterally continuous sand aquifer from the Boise River valley to the Payette River valley is not supported by field data. Thus, I believe that the drawdown values predicted either by analytical methods or the numerical model have a high degree of uncertainty." (p. 13)

Three alternative pathways to allow the M3 Eagle project to move forward were also proposed:

1. Formulate an administrative/legal solution that might involve the development of the project under a phased water right.
2. Conduct additional studies to further define the hydrogeology of the PGSA and update the M3 ground water flow model accordingly.
3. Validate the predicted impacts using model boundaries and aquifer properties that were developed as part of the Treasure Valley Hydrologic Project. It is further suggested that the Treasure Valley ground-water flow model might be altered to achieve this purpose.

d) *Hydrogeologic Analysis of the M3 Eagle Site: Supplement #1 Comments from the Review of the Geochemistry Report*, dated January 2009.
This memo provides a summary of the geochemistry report prepared in support of the M3 water right application (Glanzman and Squires, 2009). This memo

provides a general overview of the geochemical investigation and the following primary conclusion:

> *"The geochemical investigation of the general M3 Eagle site has resulted in an improved knowledge of the ground-water conditions in the area. However, the Glanzman and Squires (2009) report does not include information that addressed the major hydrogeologic questions raised in my expert report (Ralston Hydrologic Services, Inc., 2009)".*

3) Request #3 -- *Presentation and analysis of additional data available to Department staff to enhance the hearing officer's understanding of the hydrogeology and aquifers in the vicinity of the proposed appropriations of water.*

Understanding and quantifying recharge rates to the targeted aquifer are critical in order to evaluate its long term sustainability because without recharge, groundwater withdrawals at even a modest rate will result in aquifer mining. The following sections summarize our concerns relative to the conceptualization and simulation of PGSA recharge.

a) Recharge Sources

The current water budget for the Treasure Valley aquifer system (Urban, 2004, Table 8) indicates that over 80% of the annual recharge returns to the Boise River, limiting the amount available to the deeper aquifers. These numbers agree with conclusions from a previous investigation:

> "*recharge rates to the deeper regional aquifers are limited*" and "*most recharge occurring in shallow aquifer zones does not reach lower zones.*" (Petrich, 2004, pgs. 19 and 21, respectively)

HLI postulates that leakage from the Boise River and New York Canal are significant sources of recharge to the PGSA (HLI, 2008a, p. 28). According to their conceptual and numerical models, the PGSA is recharged from Boise River seepage and from New York Canal losses upstream from Cole Road. A discussion of the potential contribution from each of these sources is presented below.

i) Boise River

HLI's estimate of losses from the Boise River is based on information presented in reports that were prepared for the Treasure Valley Hydrologic Project (Urban and Petrich, 1998; Urban, 2004). As explained in the report documenting the M3 ground-water flow model:

> "*Urban reported a Boise River loss to the underlying ground-water system of 15,500 ac-ft/yr (about 21 cfs) during 1996 and 77,000 ac-ft/yr (about 110 cfs) during 2000. Both sets of measurements were made over the reach upstream from Capital Bridge.*" (HLI, 2008a, p. 28).

However, our analysis of available information indicates there is considerable uncertainty in the seepage estimates and suggests that the river reach between Lucky Peak and Glenwood Bridge may actually be gaining during certain times of the year. Our review of USGS gage data during the non-irrigation season between 1999 and 2008 (IDWR, 2009a), for example, indicates that the river between Lucky Peak Reservoir and Glenwood Bridge gained approximately 14 cfs on average (Table 1). Similarly, a seepage survey conducted by the USGS (1997) during November of 1996 indicated an overall gain of 52 cfs for this same reach. In addition, some water level contour maps show groundwater flow toward the Boise River through the reach between Lucky Peak and Glenwood Bridge (e.g., Dion, 1972 and Newton, 1991).

Table 1. Estimates of the Boise River gains and losses for the Lucky Peak to Glenwood Bridge Reach.

	IDWR, 2009	**USGS, 1997**	**Urban and Petrich, 1998**	**Urban, 2005**
Estimated Gain or Loss (cfs)[1]	14	52	-21	-110

[1] Gains are indicated by positive values and losses are indicated by negative values.

As previously discussed, geochemical characterization work supports the concept that the water currently being withdrawn from PGSA wells in the M3 area is from the river but available information suggests that it was recharged a long time ago. As expressed in Glanzman and Squires (2009, p. 4), PGSA ground water "*originated almost exclusively from ancestral Boise River surface water*". The idea that the PGSA water was recharged a long time ago is supported by the conclusions of previous investigators:

> "*contemporary seepage from rivers and/or irrigation diversions is not the primary source of recharge for most deeper regional aquifers.*" (Hutchings and Petrich, 2002, p. 58)
>
> And
>
> "*This finding indicates that ground water in the deeper aquifers entered the flow regime prior to atmospheric testing*" (Hutchings and Petrich, 2002, p. 58)
>
> And
>
> "*Residence time estimates in the regional aquifer system ranged from thousands to tens of thousands of years. The youngest waters entered the subsurface a few thousand years ago and were found along the northeastern boundary of the basin, adjacent to the Boise foothills.*" (Petrich, 2004, p.19).

However, our preliminary calculations of travel time using M3 model inputs suggest that water entering the regional aquifer from the southeast corner of the M3 model domain would reach the M3 property in a relatively short amount of

time, approximately an order of magnitude less than the estimated age of the water in the regional aquifer system adjacent to the Boise foothills (Petrich, 2004). Additional data collection and analysis are needed in order to resolve the apparent discrepancy between the HLI conceptual and numerical models.

ii) New York Canal

Only a portion of the total length of the New York Canal is upgradient from the general head boundary in the M3 ground-water flow model that represents recharge into the PGSA from river and canal seepage. The measured loss from the upgradient reach (between Diversion Dam and Cole Road) was 24 cfs in March of 1997 (Berenbrock, 1999). Information that could be used to estimate the percentage of the canal leakage that would recharge the PGSA is lacking.

While there is uncertainty regarding whether and how much seepage occurs upgradient from the PGSA recharge area identified by HLI, a bigger technical question for Department staff is how the water that seeps out of the Boise River and New York Canal could directly recharge the PGSA, as simulated by the M3 numerical model. According to HLI (pg. 33), "*The model estimates that about 102 to 115 cfs (about 65 to 74 mgd) flows into the Pierce Gulch Sand Aquifer from areas lying to the southeast of the model domain. This water is believed to originate as seepage from the Boise River and the New York Canal.*" HLI has not presented geologic data to support the existence of the PGSA beneath the Boise River or provided an explanation of how the canal and river losses end up recharging the PGSA instead of the shallow alluvial system.

b) Water level trend analysis

The possibility that the PGSA did not fully recover following the SVR #7 constant rate test raised a concern to Department staff regarding the ability of the targeted aquifer to sustain pumping at the rate proposed in the water right application. This concern led us to investigate water level trends in other vicinity wells.

Water level data from the IDWR water level database for the 16 historically monitored wells in North Ada County were analyzed for determination of water level trends (Appendix A). The available data for these wells spanned various time-frames and had a variety of measurement frequencies. To facilitate comparison of trends, the data were filtered so that the measurements generally are from the same time of year (the first measurement between 3/01 and 05/31) and the records span a similar time-frame (generally 1996 – 2003). Although subject to interpretation, the producing formation was determined to be the PGSA for eight wells, undifferentiated sediments for four wells, shallow alluvium for one well, and Terteling Springs mudstone for the remaining three wells.

Significant findings from the trend analysis are as follows:

- All eight of the PGSA wells displayed a negative or declining trend. Rates of decline range from 0.21 ft/year to 0.49 ft/year, with an average of 0.27 ft/year. The rates of decline in the PGSA are consistent with those observed between 2006 and 2008 in PGSA monitoring wells that lie north of the fault identified between TW#1 and TW#4 (HLI, 2009, Figure 46).

- There was a slight increase over the same time-frame in all three wells that are located within the Dry Creek Valley.

- The water levels also trended upward in the shallow alluvial well.

- All four undifferentiated wells exhibited declines within the range that was observed for the PGSA wells. These declines are consistent with the finding of a previous investigator that "*ground water level declines were observed in the areas between northwest Boise and Eagle.*" (Petrich, 2004, p. 14).

- The water level trends observed in the four wells completed in undifferentiated sediments are not distinguishable from those for PGSA wells.

- The results of this water level trend analysis were checked with more recent data for 10 of the wells. This effort generally confirmed the results of the earlier analysis, and indicated that the average water trend for the area (not including Dry Creek) is approximately -0.29 ft/year.

In summary, our review of available water level data indicates that water levels in the PGSA near M3 are declining and suggests that current aquifer discharge rates exceed current recharge rates.

4) **Request #4 -- *Conclusions about the impacts on other water users and aquifers caused by pumping of ground water as proposed by the application to appropriate water no. 63-32573.***

Pumping induces flow to a well by creating a cone-shaped depression in the potentiometric surface. Pumping in high capacity wells for the M3 development will induce drawdown in hydraulically connected aquifers. The questions that need to be addressed are (a) how significant will the impacts be and (b) what water users will be impacted?

a) <u>How significant will the impacts be?</u>

HLI first presented calculations of the predicted impacts on water levels in the *Year-One Progress Report* (HLI, 2007a). An image well analysis (see for example, Freeze and Cherry, 1979, p. 330) was performed to estimate drawdown caused by six supply wells,

each pumping at 1,000 gpm. The drawdown was computed for a 90-day pumping period, using the high aquifer transmissivity and storage coefficients estimates to represent a "best case" scenario, and the low aquifer transmissivity and storage coefficients to represent a "worst case" scenario. It is worth mentioning that the use of a lower transmissivity is indeed more conservative for locations proximate to the pumping center but it is not conservative for distant locations because the cone of depression caused by pumping in a low transmissivity aquifer is steeper but not as extensive.

Approximately two miles south of the M3 property, at the intersection of Floating Feather Road and Highway 16, the image well analysis predicted drawdowns of approximately four feet for the best case and eight feet for the worst case (see Figures 9 and 10 in HLI, 2007a). Using the same general methodology but substituting aquifer properties from HLI's SVR#7 aquifer test (transmissivity = 400,000 gpd/ft, storage = 0.0045), IDWR staff calculated drawdown for a revised pumping rate of 4,500 gpm and a pumping period of 50-years (the same time-frame evaluated with the M3 model). Our calculation is conservative in the sense that it neglects to consider recharge but not-conservative because it assumes that the aquifer extends infinitely in the southwest (down-dip) direction. The predicted drawdown at the intersection of Floating Feather Road and Highway 16 is approximately 18 feet after 50 years of pumping (Figure 3).

It is common practice to predict long-term aquifer performance using time-frames that are less than 50 years when applying analytical methods which are based on the Theis (1935) nonequilibrium solution. The Idaho Department of Environmental Quality, for example, recommends that a one-year time-frame be used to project long-term drawdown for public water supply wells. The use of a shorter time-frame can be appropriate, in part because the Theis (1935) solution is premised on the assumption that there are no sources of recharge. With all other input unchanged, application of the image well analysis using a pumping period of one year instead of 50 years results in a similar water level drawdown pattern but the drawdowns are of lower magnitude. The calculated drawdown after one year of pumping at 10 cfs is approximately 8 feet at the intersection of Floating Feather Road and Highway 16.

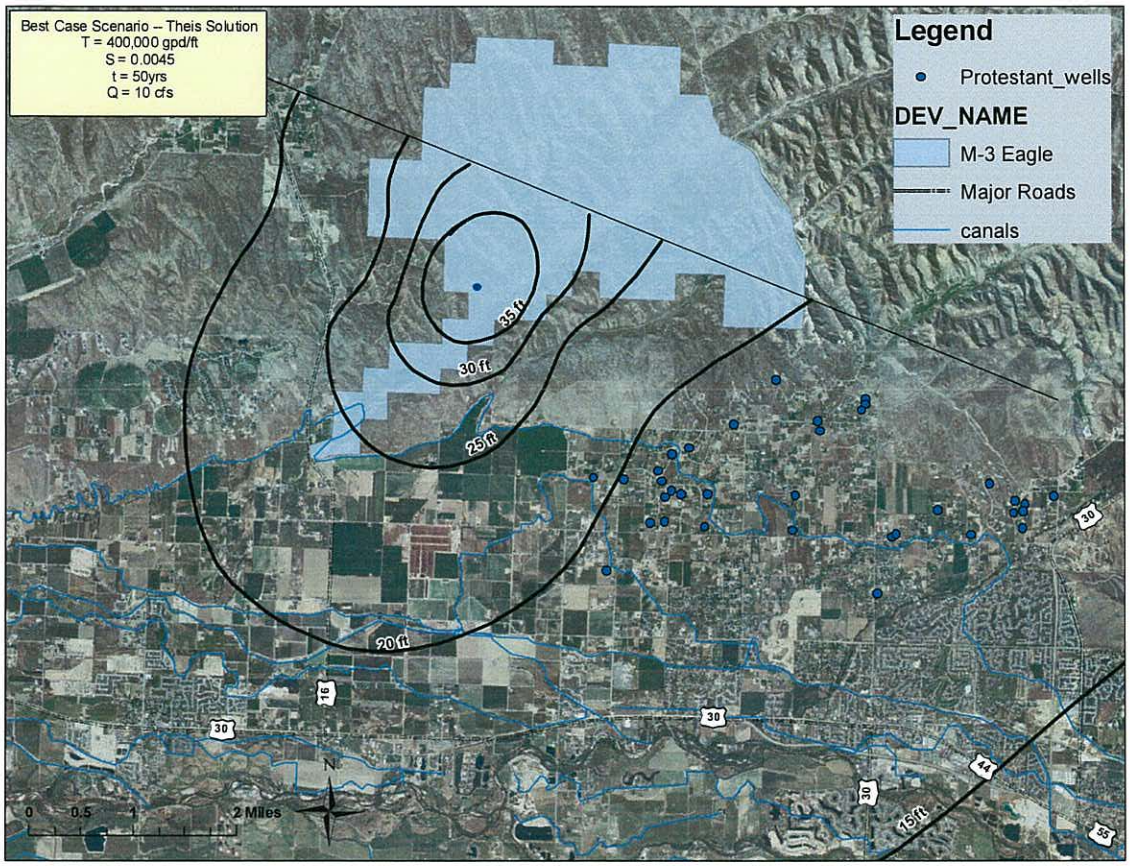

Figure 3. Predicted drawdowns using image well analysis after 50 years of pumping at 10 cfs from the PGSA beneath M3 property.

As previously discussed, HLI contracted the development of a ground water flow model that was used to predict impacts from the pumping of high capacity wells on the M3 property. The "Hmatch" version of the model indicates that 50 years of pumping three wells at a combined total rate of 10 cfs will cause drawdown in the PGSA that ranges from approximatley 30 feet on the property to around five feet at the intersection of Floating Feather Road and Highway 16 near Eagle (Figure 4).

The NW/SE trending fault identified between TW#4 and TW#1 through magnetometer studies was not included in any of the impact assessments performed by HLI or the Department. Based on HLI's aquifer test analysis, this fault potentially represents a no-flow boundary, which could significantly alter the predictions by causing more drawdown on the pumping side of the fault and less drawdown on the non-pumping side.

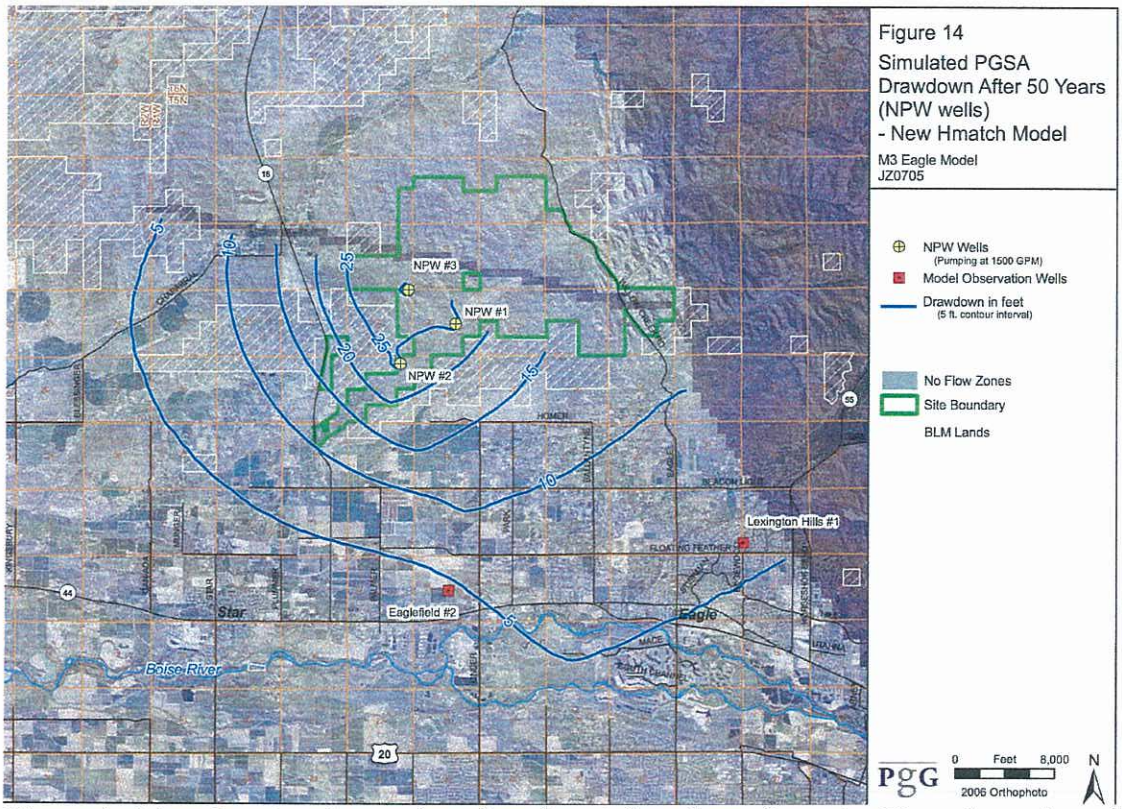

Figure 4. Map showing the results of predicted drawdown from the Hmatch version of the M3 ground water flow model (HLI, 2008a, Appendix B, Figure 14).

b) Impacts to water users

i) Well impacts

Impacts to water levels in wells completed in the PGSA are inevitable. Drawdown could be expected to reduce or eliminate discharge from flowing artesian wells and may require that pumps be installed (HLI, 2008b, p. 241). Non-flowing PGSA wells may have to be deepened or replaced, depending on the current depths of the wells and their proximity to the site.

Shallow aquifers overlying the PGSA appear to have a delayed hydraulic connection with the PGSA based upon the conclusions of investigators:

> "*Clay layers within and above the regional Pierce Gulch Sand Aquifer cause confined-aquifer responses to short-term pumping, but do not eliminate hydraulic connection to the upper water-bearing zones under longer-term pumping.*" (HLI, 2008c, p. 239).
>
> And
>
> "*interference in shallow wells could possibly approach the same levels as those predicted for wells completed in the Pierce Gulch Sand Aquifer after an extended period of pumping.*" (HLI, 2007a, p. 9).

And

> *"We feel fairly certain that there is a "long term" hydraulic connection in the sands of the upper delta sequence (Figure 10); however, local lenses of mudstone in that section may prevent short-term detection of well-drawdown responses. It may take months to decades for large drawdowns to propagate through the seemingly continuous section of interbedded sand and thin muds."* (Squires and Wood, 2001, p. 14).

Based on the existence of a delayed hydraulic connection between the PGSA and overlying aquifers, pumping in the PGSA is likely to eventually impact the majority of area well owners. Impacts to wells completed in aquifers below the PGSA have not been investigated.

ii) Boise River impacts

Potential impacts to the Boise River were not quantified as part of the analysis in support of the M3 water right application. According to HLI:

> *"The Boise River receives discharge from the Pierce Gulch Sand Aquifer and a shallow surficial aquifer via the upward vertical ground water gradients that prevail in the Eagle area."* (HLI, 2007a, p. 13)

Based on the above finding, pumping in the PGSA at M3 would cause a reduction in ground water discharge to the river. The magnitude and location of these impacts has not been determined.

5) Request #5 -- *Any analysis of M3 Eagle LLC's demographic and economic modeling and forecasting.*

IDWR staff have not analyzed the demographic and economic modeling and forecasting.

Summary and Conclusions

On behalf of the applicant, HLI has collected and analyzed a significant amount of hydrogeologic data over the past three years. The information has been compiled, analyzed, and submitted to the Department in a series of reports and memoranda for distribution to the public via our website. The information and analyses have been extremely beneficial to developing an improved understanding of the hydrogeology in M3 area.

HLI has shown that an aquifer beneath the M3 site is capable of producing substantial quantities of water. HLI also has developed conceptual and numerical models of the hydrogeology and applied the models to predict impacts to area well owners. Development of this water right by M3 is predicted to result in water level declines on the order of five to 15 feet near the City of Eagle assuming the water budget and aquifer boundary conditions of the M3 model. Significant questions still remain regarding aquifer recharge and sustainability. Impacts to surface water users have not been evaluated.

The primary conclusions based on the review of the data and reports submitted in response to the September 12, 2008 *Order Authorizing Discovery and Schedule Order,* are as follows:

- A highly productive sedimentary aquifer exists beneath a portion of the M3 property.
- The stratigraphy beneath the M3 site is complex, consisting of a thick sequence of coarse and fine grained sediment layers that pinch out and are faulted.
- Hydrologic boundaries and recharge mechanisms are not well defined for the target aquifer.
- The long-term sustainability of the aquifer beneath the M3 property is difficult to assess; some lines of evidence suggest that it may be limited.
- Despite remaining uncertainties, the work that was commissioned by M3 has significantly improved our understanding of the hydrogeology in North Ada County.
- The ongoing North Ada County Hydrogeologic Investigation will help reduce uncertainty.

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APPENDIX A
Memo from Mike McVay

MEMO

State of Idaho
Department of Water Resources
322 E Front Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 287-4800 Fax: (208) 287-6700

Date: March 2, 2009

To: Dennis Owsley

From: Mike McVay

cc: Sean Vincent and Rick Raymondi

Subject: Evaluation North Ada County historical water level trends

Introduction

Per you request, I have reviewed the water level data for 10 wells located in the North Ada County investigation area. This review is intended as a supplemental to the analysis entitled "Evaluation North Ada County historical water level trends, January 28, 2009." The data were reviewed to assess water level trends for the years 1996 – 2008.

IDWR Review

The water level data available were collected over different time-frames and varying collection schedules. Therefore, it was necessary to filter the data and select a common evaluation time-span. The following steps were taken to prepare the data for analyses.

1. Depth-to-water measurements were converted to water level elevations using the land surface datum values listed in the "well-log" database. Elevation accuracy is reported to be +/- 11 feet in well-log. Wells used in this review are presented in Table 1.
2. The data was filtered for yearly spring measurements in each well. Spring measurements were defined as those taken between 03/01 and 05/31 of each year. All attempts were made to choose the most similar date for each year; with preference given to the earliest date in the spring range.
3. **For the January 28, 2009 analysis**, the data period 1996 – 2003 was chosen for comparison. Due to data constraints, wells 04N01E10ACB2, 04N01E03DAD1, 04N02W06CDD1, and 05N01E26DCD1 were evaluated for the period 1996 – 2002; and well 05N03W12CCA1 was evaluated for the period 1996 – 2004. This general period allowed the comparative analyses of 16 wells.

4. **For this analysis,** the data period 1996 – 2008 was chosen for evaluation. This period was chosen to determine water level trends up to the most current data. Data constraints allowed for the comparative analysis of 10 wells.
5. Water level data from all wells were plotted on the same X-Y scale for visual comparison.
6. Linear trends of the spring water level data were developed using the linear function option in Grapher©, and were plotted with the data.
7. Well logs were reviewed to determine if each well was located in the upper undifferentiated sediments (Undifferentiated), the Pierce Gulch sands (Pierce Gulch), Terteling Springs mudstones (Terteling Springs), or shallow water table system (Shallow). These classifications were based on well location and production zone depth, geologic material inventoried in the driller's logs, and comparison with nearby wells that were identified by HLI.
8. Well locations were plotted in ArcMap to give spatial reference (Figure 1).

Table 1. Wells included in water level data review.

Well	Trend Slope	Average Spring WL	Geology ID	Area ID
04N01E-03DAD1	-0.187	2639.1	Undiff	NAda
04N01E-11BBB1	0.127	2582.3	Undiff	NAda
05N01W-36ABB1	-0.398	2539.5	PG	NAda
05N03W-12CCA1	-0.322	2426.6	PG	NAda
05N03W-15DDC1	-0.489	2439.6	Undiff	NAda
05N01E-34DBB1	-0.198	2648.3	Tert	NAda
04N02W-07AAC1	-0.071	2391	Shallow	NAda
[1]05N01E-35ACA1	-0.01	2747.9	Tert	Dry Creek
[1]05N01E-36AAB1	-0.272	2760.2	UNK	Dry Creek
[2,3]05N01E-32DBD1	-1.06	2575.7	PG	NAda

[1] Water level data suggest that wells in the Dry Creek area are completed in a different aquifer system than other North Ada wells. These wells were not included in the average trend estimation.

[2] No spring water level data is available for well 05N01E32DBD1.

[3] Fall water level data for years 1996 - 2004 were used for well 05N01E32DBD1.

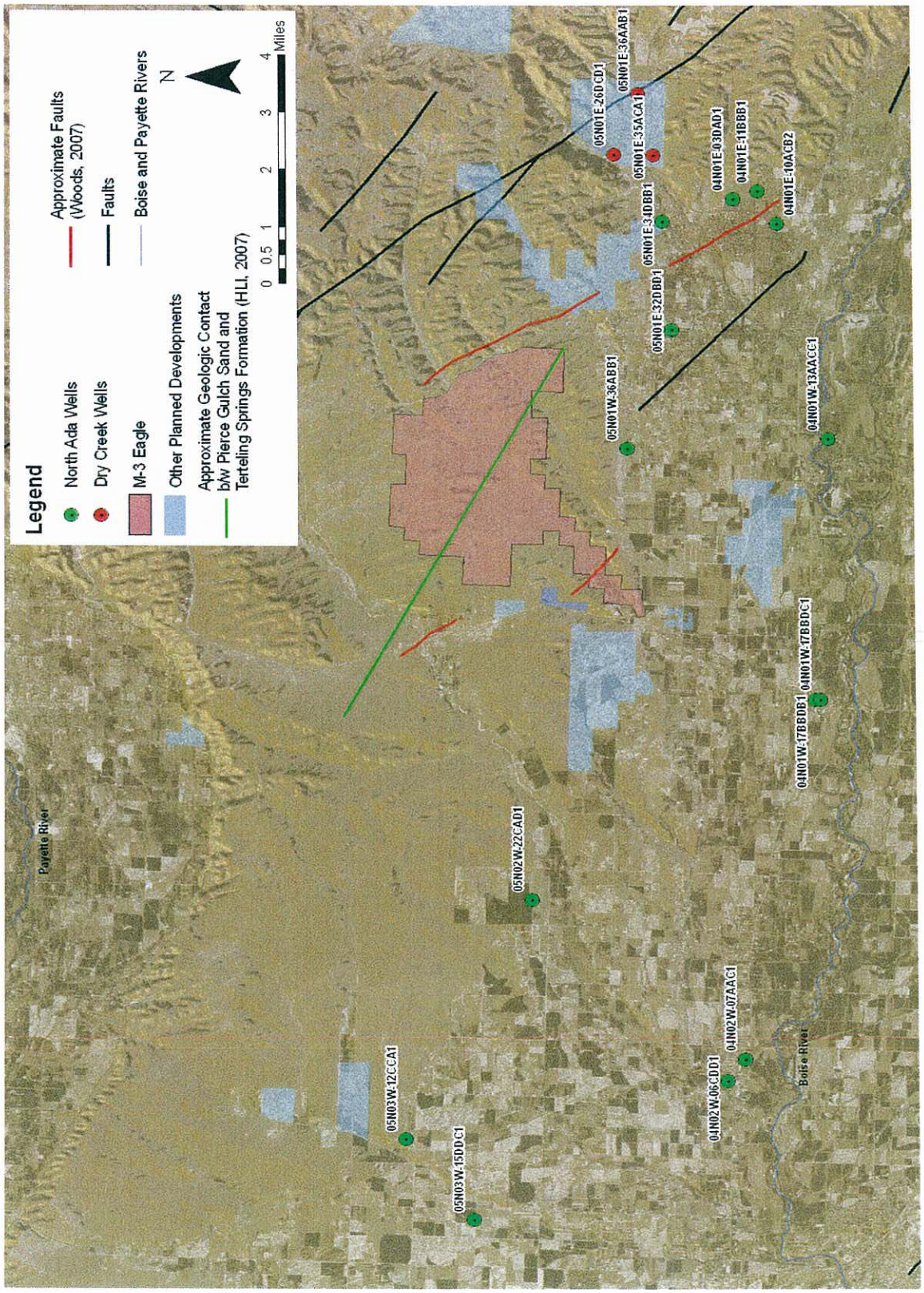


Figure 1. Location of wells used for historical water-level review.

Conclusions

The variable length of data records and sporadic data collection intervals did not allow a statistically rigorous data evaluation. However, linear trend estimations provided the following conclusions:

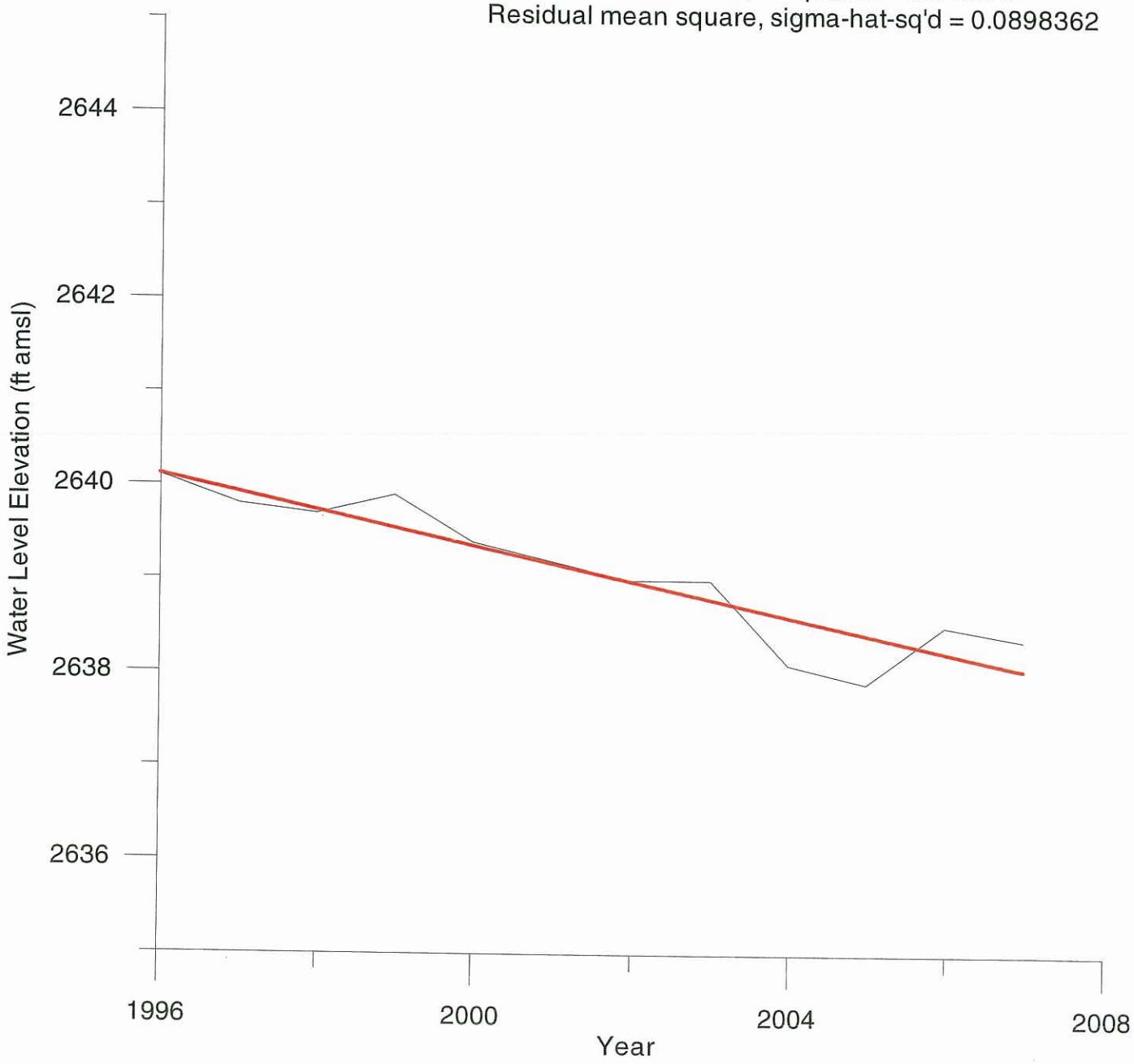
1. Grouping wells based on visual inspection of gross water level behavior leads to three conclusions;
    a. Wells in the Dry Creek area show similar behavior that is different than the other wells in the area.
    b. There is no serial water level behavior present that allows the identification of Pierce Gulch completions.
2. All wells in the area (except 04N01E11BBB1) exhibit negative water level trends that range from -0.11 ft/year to -1.06 ft/year, with an average trend for all wells of -0.29 ft/year.

Unfit

Fit Results

04N01E-03DAD1

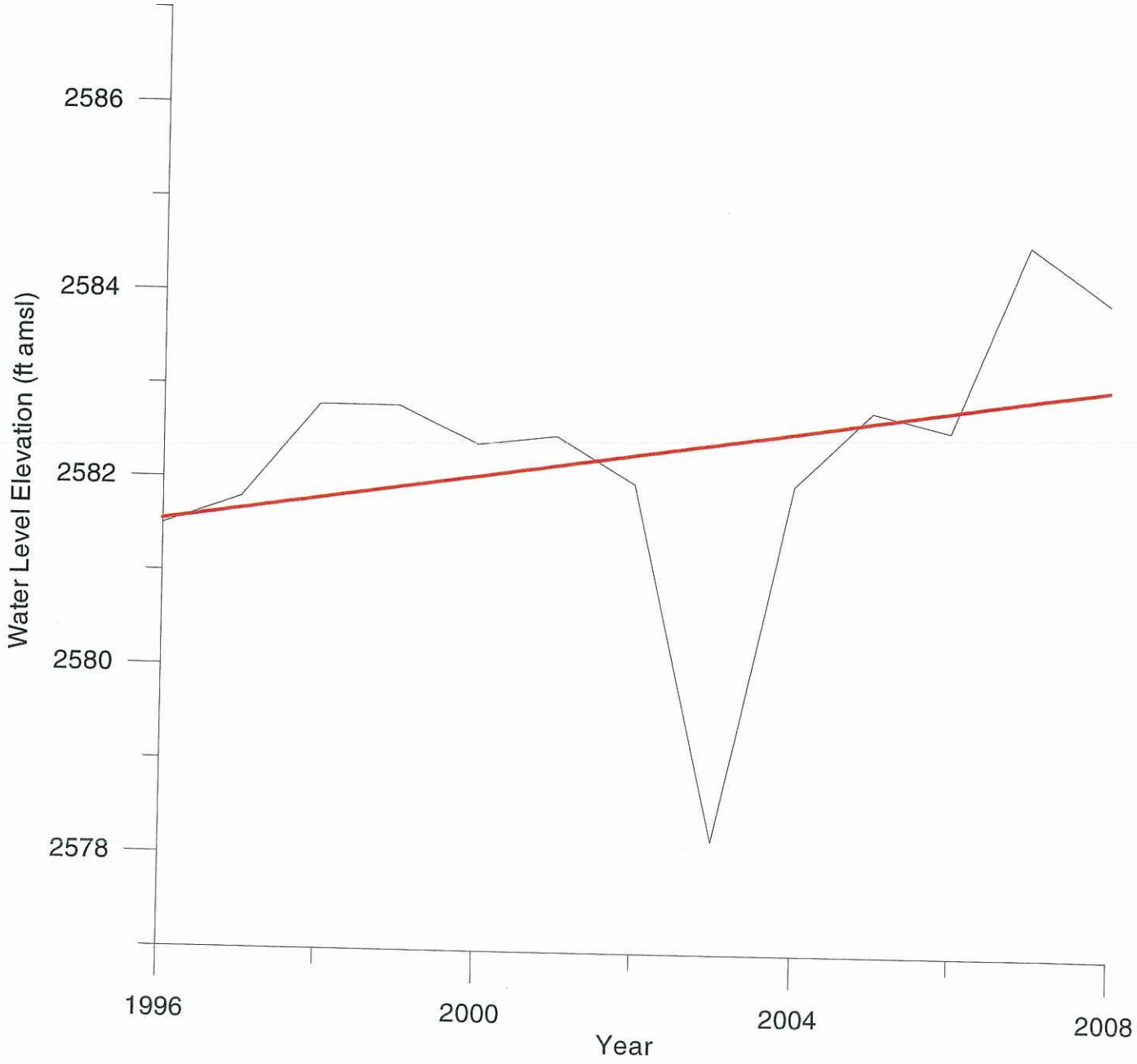
Fit 1: Linear
Equation Y = -0.1874708625 * X + 3014.304876
Number of data points used = 12
Average X = 2001.5
Average Y = 2639.08
Residual sum of squares = 0.898362
Regression sum of squares = 5.02578
Coef of determination, R-squared = 0.848356
Residual mean square, sigma-hat-sq'd = 0.0898362



Draft

04N01E-11BBB1

Fit 1: Linear
Equation Y = 0.1269230769 * X + 2328.207692
Number of data points used = 13
Average X = 2002
Average Y = 2582.31
Residual sum of squares = 24.0173
Regression sum of squares = 2.93192
Coef of determination, R-squared = 0.108794
Residual mean square, sigma-hat-sq'd = 2.18339

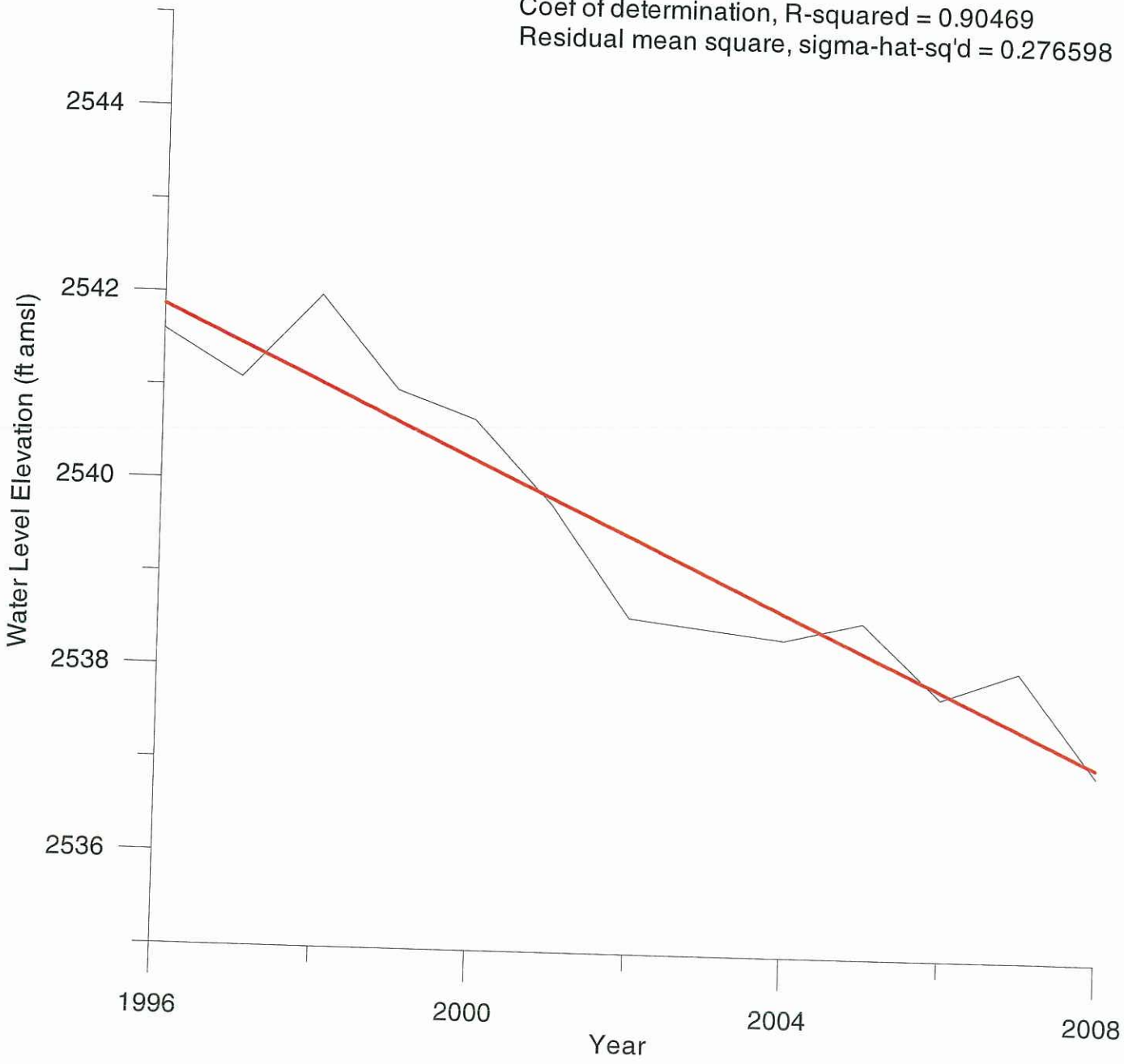


F 67

Fit Results

05N01W-36ABB1

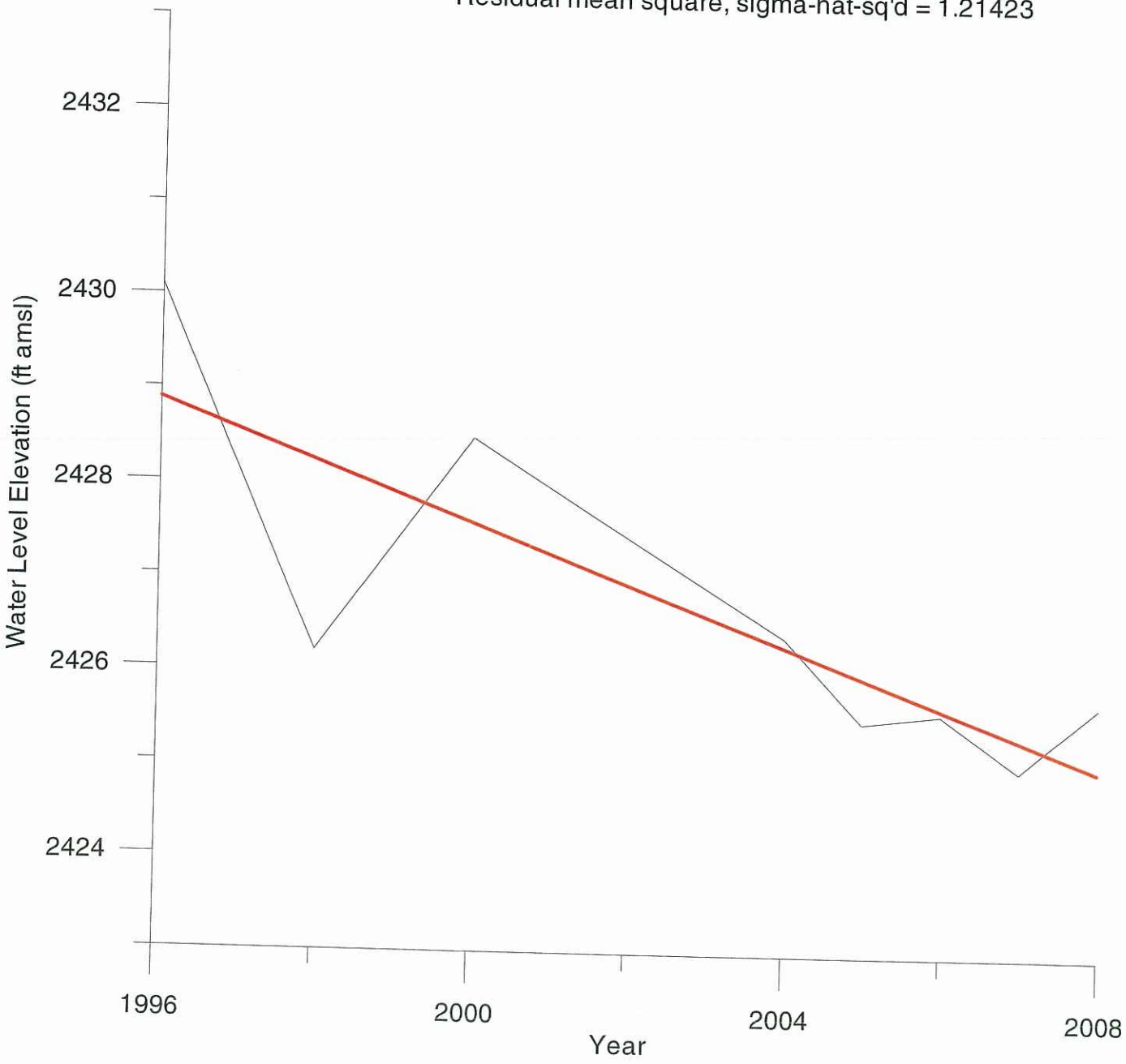
Fit 1: Linear
Equation Y = -0.3983516484 * X + 3336.976923
Number of data points used = 13
Average X = 2002
Average Y = 2539.48
Residual sum of squares = 3.04258
Regression sum of squares = 28.8805
Coef of determination, R-squared = 0.90469
Residual mean square, sigma-hat-sq'd = 0.276598



Fit Results

Fit 1: Linear
Equation Y = -0.3224637681 * X + 3072.519928
Number of data points used = 8
Average X = 2003
Average Y = 2426.63
Residual sum of squares = 7.28536
Regression sum of squares = 14.3496
Coef of determination, R-squared = 0.66326
Residual mean square, sigma-hat-sq'd = 1.21423

05N03W-12CCA1

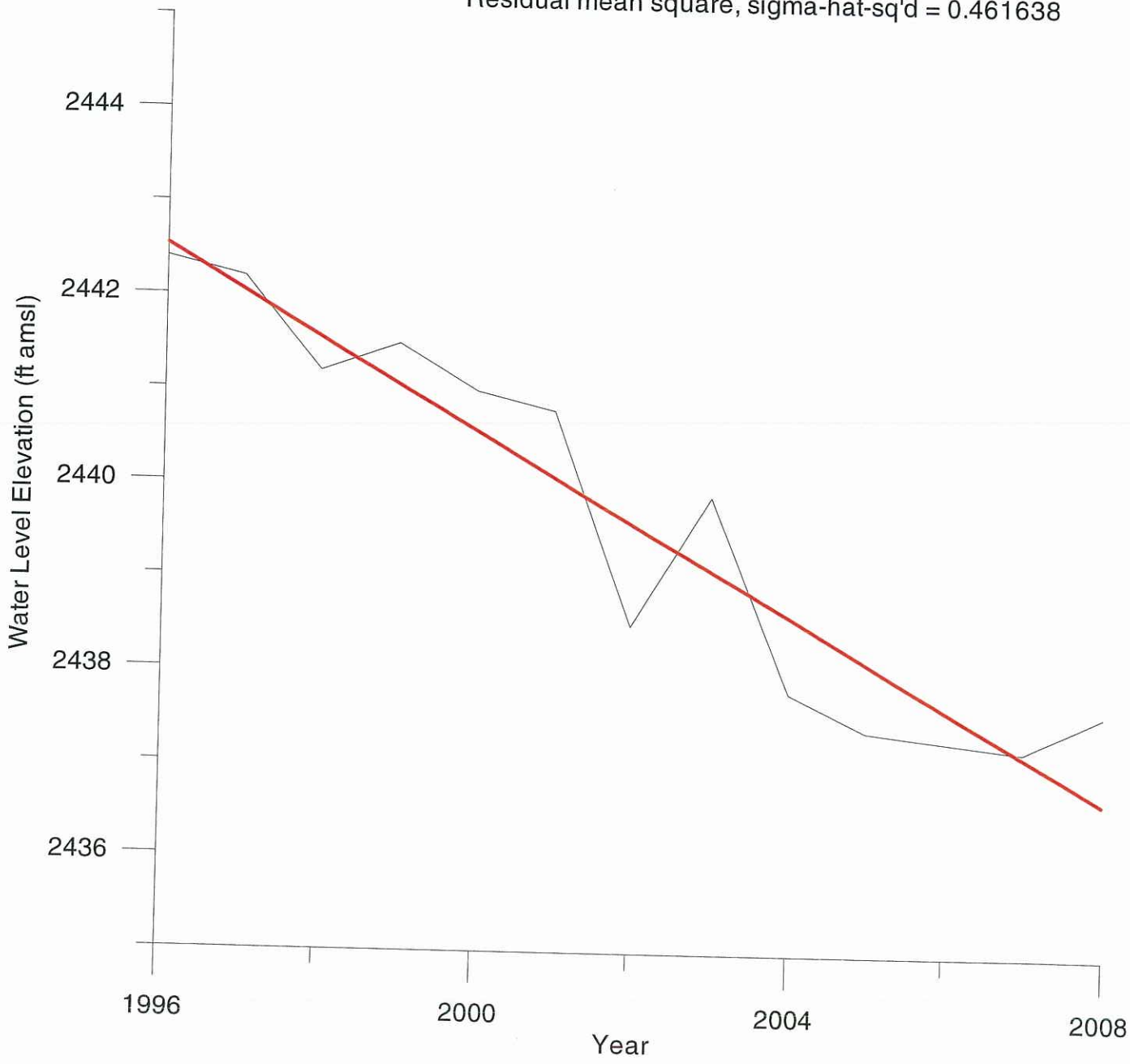


Undift

Fit Results

05N03W-15DDC1

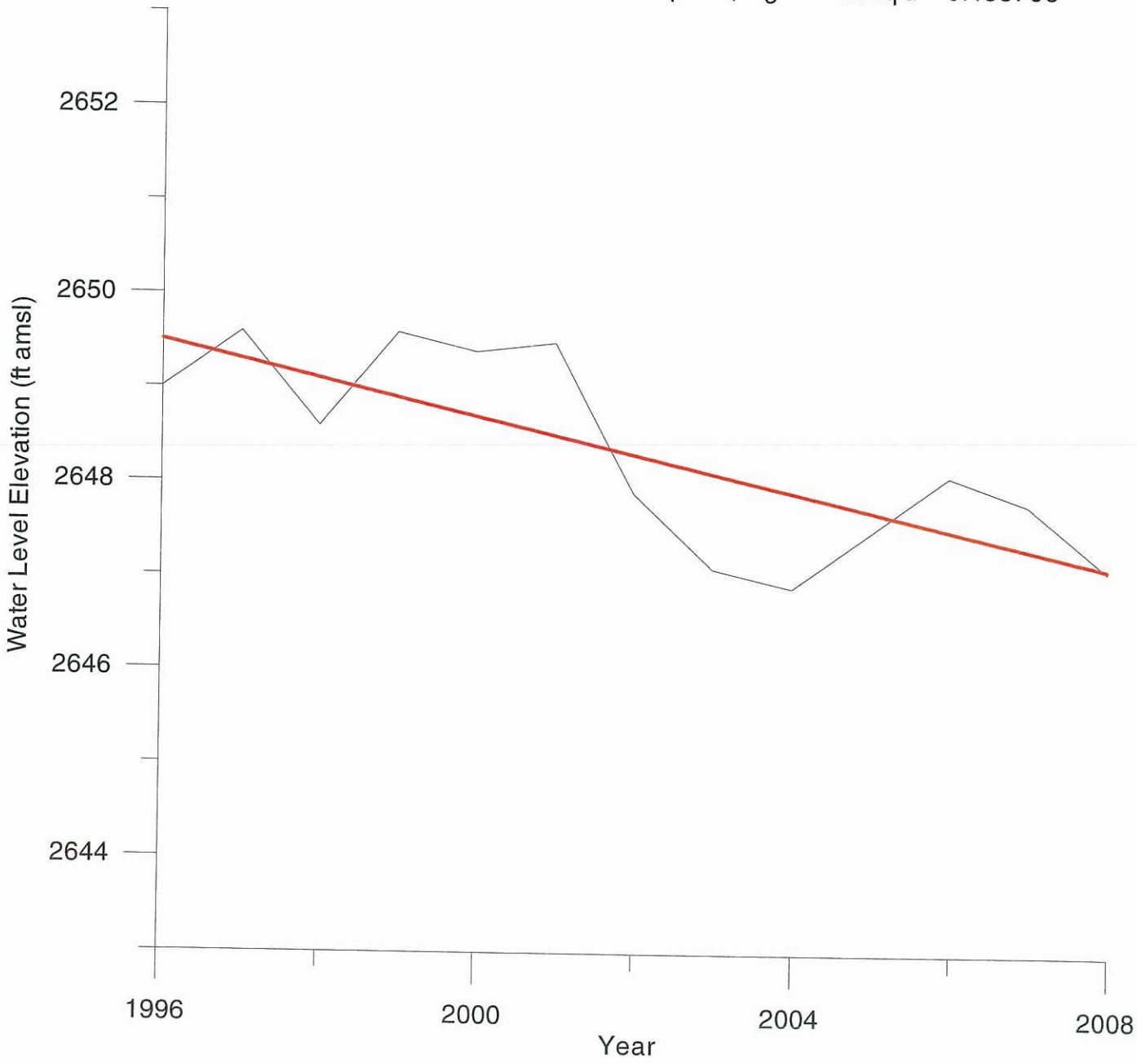
Fit 1: Linear
Equation Y = -0.489010989 * X + 3418.6
Number of data points used = 13
Average X = 2002
Average Y = 2439.6
Residual sum of squares = 5.07802
Regression sum of squares = 43.522
Coef of determination, R-squared = 0.895514
Residual mean square, sigma-hat-sq'd = 0.461638



Fit Results

05N01E-34DBB1

Fit 1: Linear
Equation Y = -0.1983516484 * X + 3045.415385
Number of data points used = 13
Average X = 2002
Average Y = 2648.32
Residual sum of squares = 5.37643
Regression sum of squares = 7.16049
Coef of determination, R-squared = 0.571152
Residual mean square, sigma-hat-sq'd = 0.488766

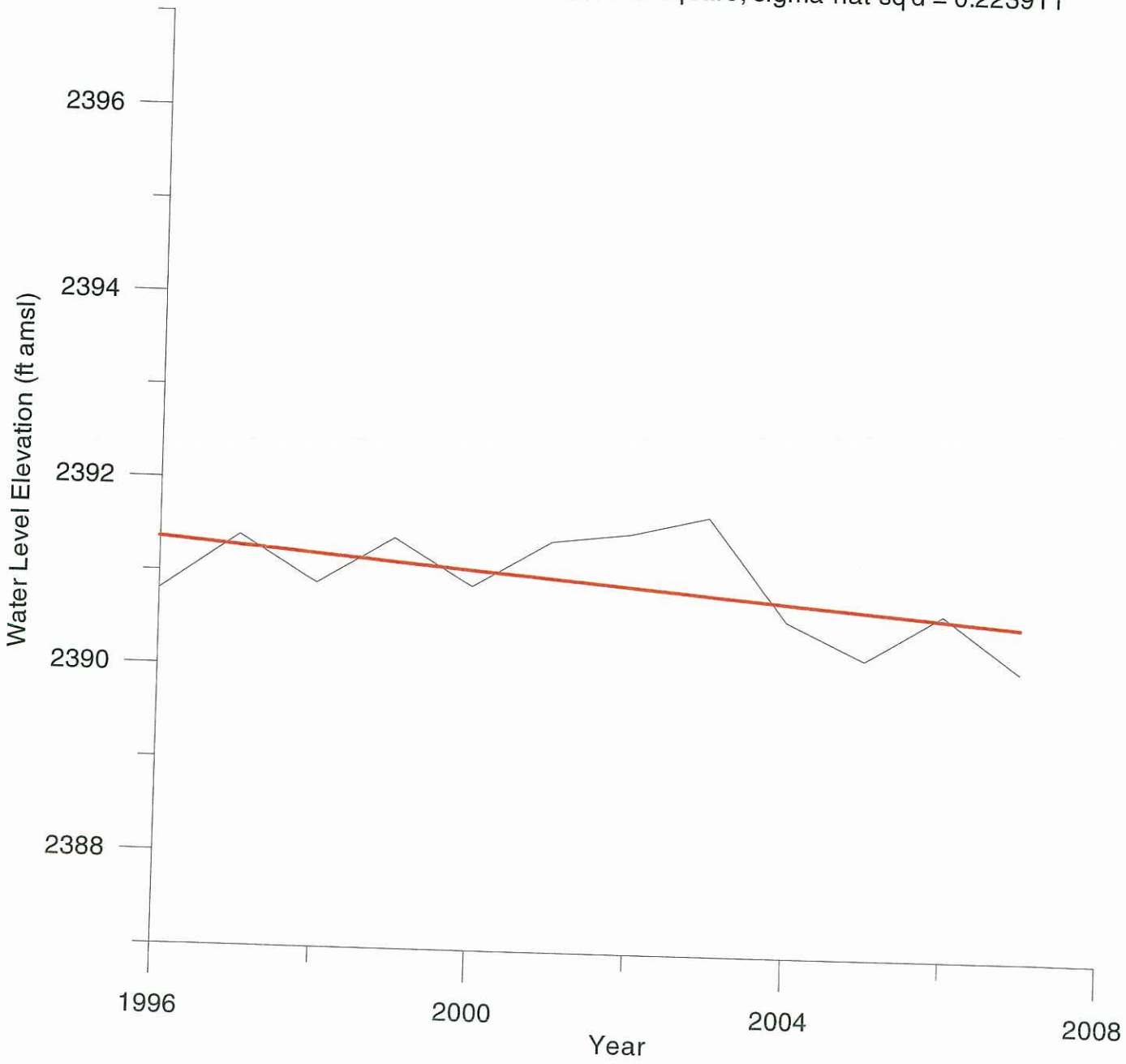


Fit Results

Shallow

04N02W-07AAC1

Fit 1: Linear
Equation Y = -0.07132867133 * X + 2533.731002
Number of data points used = 12
Average X = 2001.5
Average Y = 2390.97
Residual sum of squares = 2.23911
Regression sum of squares = 0.727552
Coef of determination, R-squared = 0.245242
Residual mean square, sigma-hat-sq'd = 0.223911

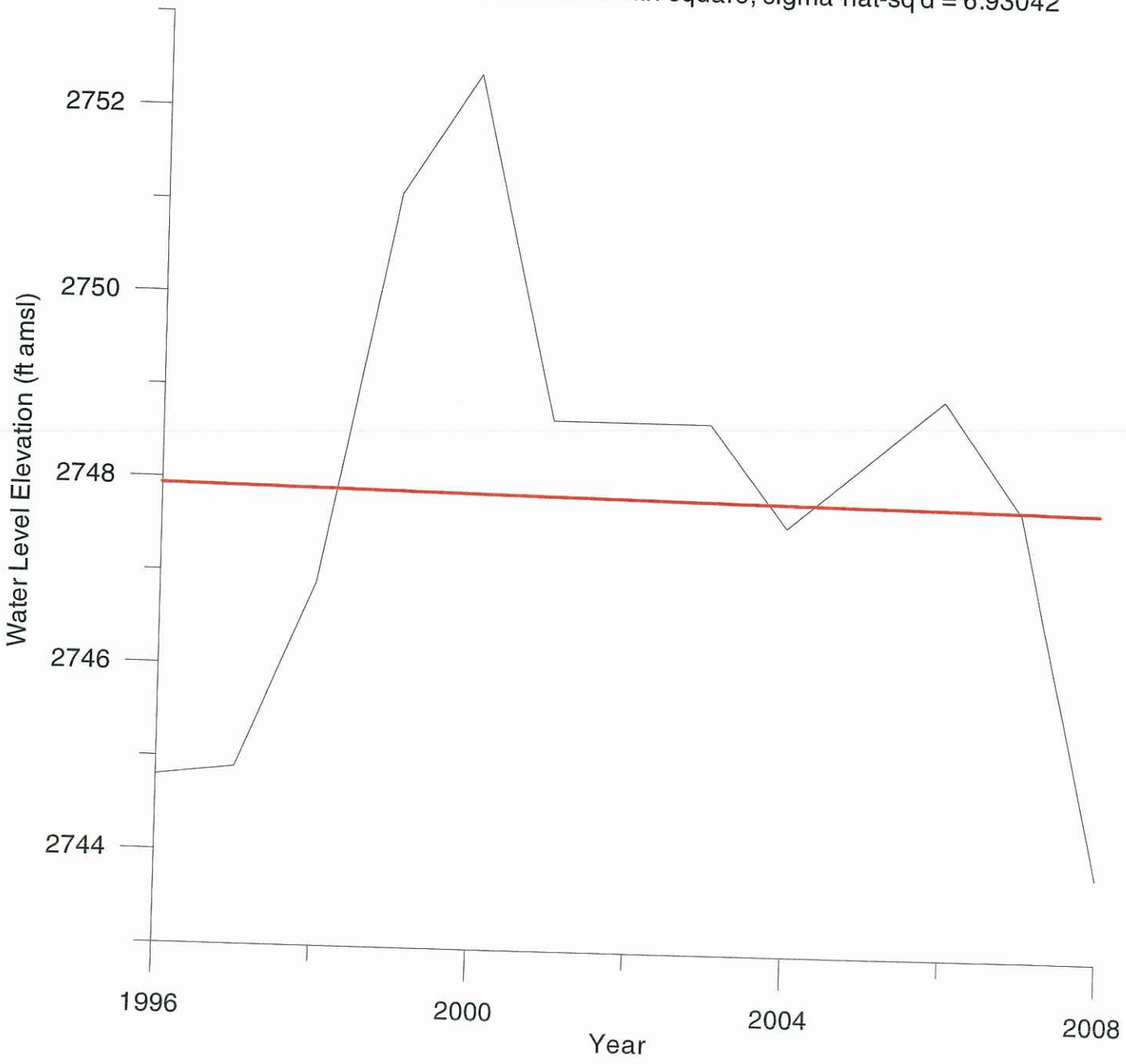


Fit Results

Pert

05N01E-35ACA1

Fit 1: Linear
Equation Y = -0.01030478955 * X + 2768.502612
Number of data points used = 12
Average X = 2001.75
Average Y = 2747.88
Residual sum of squares = 69.3042
Regression sum of squares = 0.018291
Coef of determination, R-squared = 0.000263854
Residual mean square, sigma-hat-sq'd = 6.93042

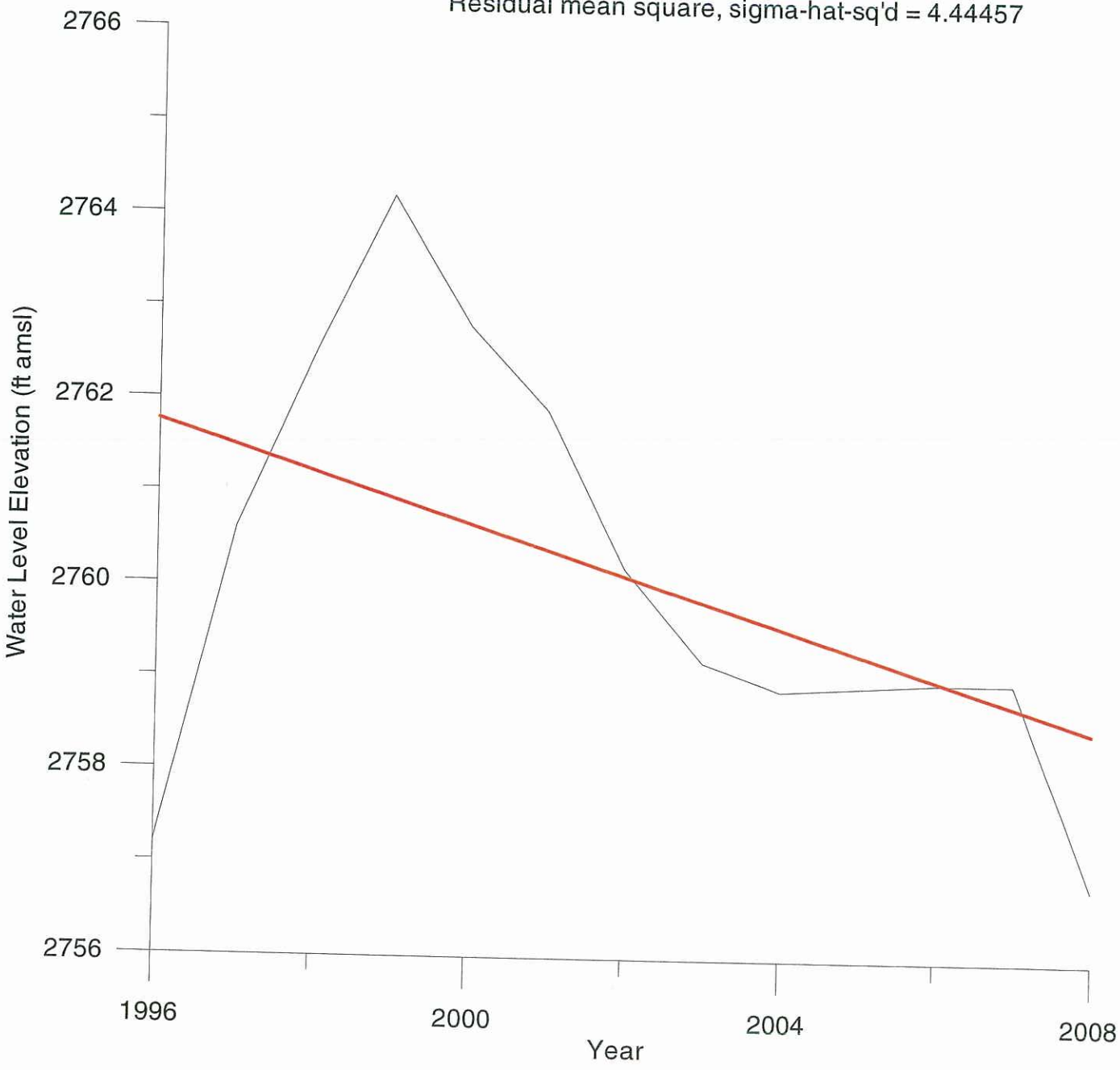


UNK

Fit Results

05N01E-36AAB1

Fit 1: Linear
Equation Y = -0.2724238026 * X + 3305.516014
Number of data points used = 12
Average X = 2001.75
Average Y = 2760.19
Residual sum of squares = 44.4457
Regression sum of squares = 12.7835
Coef of determination, R-squared = 0.223374
Residual mean square, sigma-hat-sq'd = 4.44457

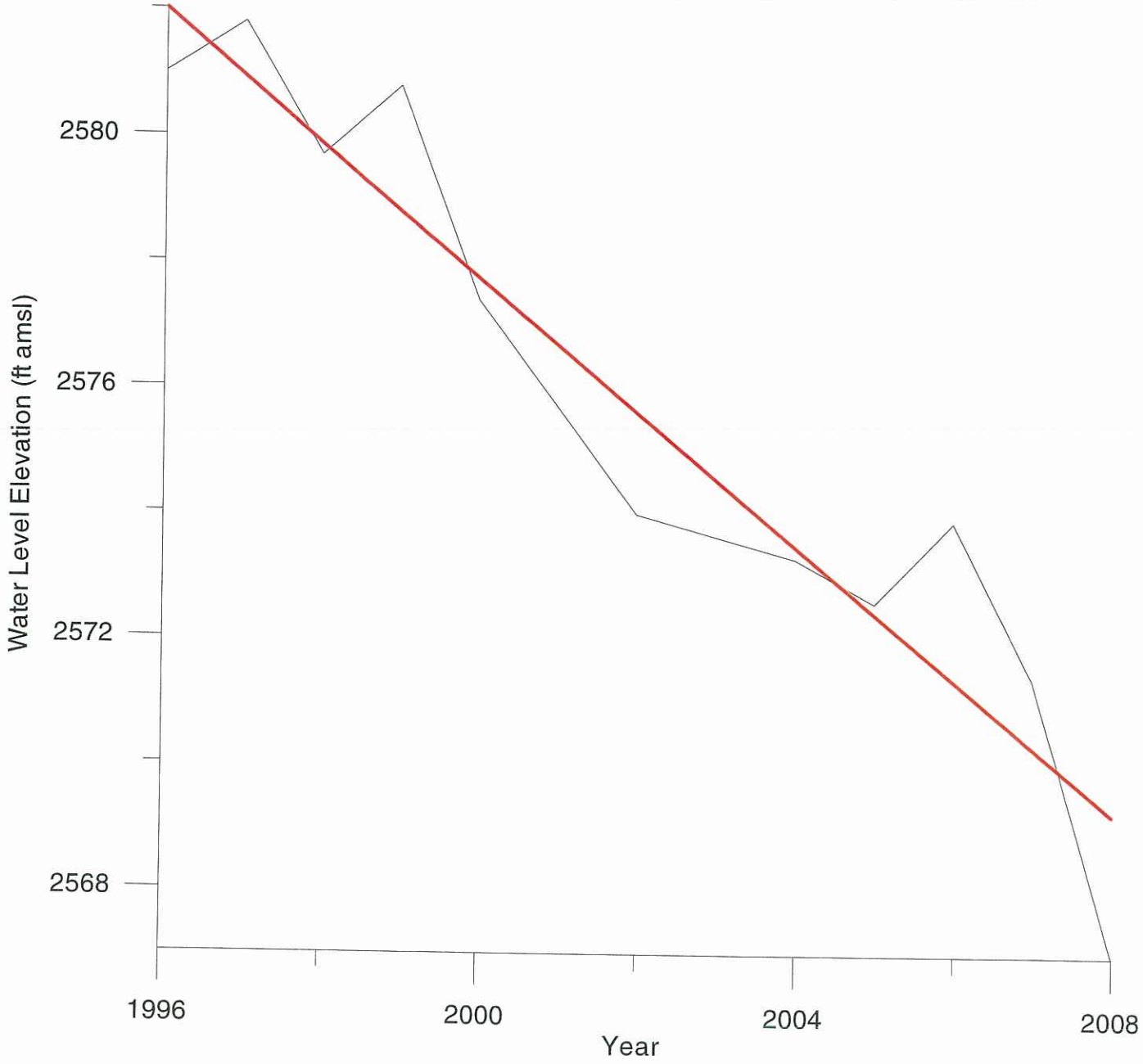


PG7

Fit Results

05N01E-32DBD1

Fit 1: Linear
Equation Y = -1.061169968 * X + 4700.090511
Number of data points used = 12
Average X = 2001.92
Average Y = 2575.72
Residual sum of squares = 22.1497
Regression sum of squares = 203.727
Coef of determination, R-squared = 0.901939
Residual mean square, sigma-hat-sq'd = 2.21497



APPENDIX B
Memo from Allan Wylie

MEMO

State of Idaho
Department of Water Resources
322 E Front Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 287-4800 Fax: (208) 287-6700

Date: January 15, 2009

To: Dennis Owsley

From: Allan Wylie

cc: Sean Vincent, Rick Raymondi

Subject: Analysis of M3 Modeling

Dennis

I have reviewed the document titled 'Modeling of Ground-Water Flow in the Pierce Gulch Sand Aquifer: Five Models: History, Updates, and Predictions of Impacts Caused by Pumping at the M3 Eagle Planned Residential Community Ada County, Idaho' prepared by Hydro Logic, Inc and PGG. I did not check the hydrogeologic conceptual model or evaluate the water balance.

There are several things I like about the M3 model: 1) they developed multiple models and this allows them some evaluation of predictive uncertainty; 2) the modeling process involved a genuine team effort; and 3) they incorporated knowledge and experience gained from previous efforts.

I found examples of things I would have done differently if I had been developing the M3 model. However, I think most of these things are matters of preference, and I don't think they would substantially alter the final result.

I found three issues that I will discuss that I think might matter.

1) I don't like constant head and general head boundaries in water supply models. These boundaries allow essentially unlimited volumes of water to enter or exit the model. The M3 model incorporates both general head and constant head boundaries. Some along the northeast edge and some on the southwest edge. PGG conducted some of their predictive model runs after replacing the general head boundary with a fixed flux boundary at the inlet of the model, this is good. I

don't see that the change was made permanent, so watch how this model is used in the future.

2) I don't think two models bracket uncertainty as claimed on page 13. Two observations do give you a better idea of the underlying variability than one, but two observations probably do not represent the possible extremes.

3) The M3 model is multilayer, so the model needs to simulate the vertical hydraulic conductivity between layers. The discussion regarding where the values used in the model come from is brief suggesting that the values are unknown and therefore are calibration parameters. Although PGG noted that vertical conductance was a sensitive calibration parameter (pg 14 Appendix A), they do not discuss its sensitivity to the prediction. Perhaps the drawdowns observed both in the shallow and deep aquifer are sensitive to reasonable adjustments in vertical conductivity.

Allan Wylie

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 5th day of March, 2009, a true and correct copy of the document described below was served on the following by placing a copy of the same in the United States mail, postage prepaid and properly addressed to the following:

Document Served: MEMO DATED MARCH 2, 2009, FROM HYDROLOGY SECTION STAFF, RE: APPLICATION FOR WATER RIGHT 63-32573

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Attorneys for M3 Eagle LLC

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 63-32573 IN THE NAME OF M3 EAGLE LLC	**M3 EAGLE LLC'S SUBMISSION OF WRITTEN ANALYSIS OF RALSTON'S TECHNICAL REPORTS**

Applicant M3 Eagle LLC, through Jeffrey C. Fereday and Michael P. Lawrence of the firm Givens Pursley LLP, and pursuant to the Hearing Officer's February 10, 2009 *Order Establishing Deadline for Completion of Staff Memorandum and Comments, Order Continuing Hearing, Order Authorizing Additional Discovery*, submits herewith the March 3, 2009 Memorandum from Ed Squires of Hydro Logic, Inc. containing his written analysis of Dr. Dale Ralston's technical reports.

DATED March 2, 2009.

Respectfully submitted,

GIVENS PURSLEY LLP

By Jeffrey C. Fereday
Jeffrey C. Fereday
Michael P. Lawrence

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on March 2, 2009, the foregoing was filed, served, or copied as follows:

FILED

Idaho Department of Water Resources Attn: Gary L. Spackman 322 East Front Street P.O. Box 83720 Boise, ID 83720-0098	____ U. S. Mail __X__ Hand Delivered ____ Overnight Mail ____ Facsimile __X__ E-mail

SERVICE

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North Ada County Groundwater Users Association c/o John Thornton 5264 N. Sky High Lane Eagle, ID 83616	__X__ U. S. Mail ____ Hand Delivered ____ Overnight Mail ____ Facsimile ____ E-mail
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Alan Smith
3135 N. Osprey Road
Eagle, ID 83616

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_____ E-mail

Jeffrey C. Fereday

Jeffrey C. Fereday

Hydro Logic, Inc.

1002 W. Franklin Street, Boise, ID 83702 (208) 342-8369, (Fax) 342-3100, hydrologic@qwest.net

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DEPARTMENT OF
WATER RESOURCES

TECHNICAL MEMORANDUM

TO: Dennis Owsley/ Idaho Department of Water Resources/ Boise, Idaho

FROM: Ed Squires/ Hydro Logic, Inc. / Boise, Idaho

DATE: March 2, 2009

SUBJECT: Written Analysis of Dale Ralston's Technical Report
Per Hearing Officer's February 10th , 2009 Order

This Memorandum has been prepared in response to the Hearing Officer's February 10, 2009 Order in this matter ("February 10 Order") authorizing parties to submit a written analysis addressing the other parties' technical reports previously submitted in this matter. In response to the February 10 Order, Hydro Logic, Inc. ("Hydro Logic") believes it appropriate to provide, on behalf of Applicant M3 Eagle, a brief analysis of two points in the January 2009 *Hydrogeologic Analysis of the M3 Eagle Site* prepared for the North Ada County Ground Water Users Association by Dr. Dale Ralston of Ralston Hydrologic Services, Inc. ("Ralston Report").

In addressing these two points, Hydro Logic does not imply that these are the only statements in the Ralston Report on which it is prepared to comment in this matter. At the hearing, Hydro Logic will provide testimony on several additional points concerning the Ralston Report. However, these two points are appropriate for a written response before the hearing.

Point One: Hydrogeologic data west and northwest of the M3 Eagle site. The Ralston Report, at page 8, states, in reference to the reports and other materials M3 Eagle submitted on November 26, 2008, that:

> Essentially no hydrogeologic data are presented to support the boundary of the Pierce Gulch Sand Aquifer more than about one mile northwest of the M3 Eagle site, as shown on Figure 4.

This is incorrect. Several of the peer-reviewed publications cited by Dr. Ralston clearly describe the regional extent of the of the prograding delta system that comprises the Pierce Gulch Sand Aquifer.[1] These same reports also provide sub-surface cross-sectional

[1] These cited publications, copies of which also were included in M3 Eagle's November 26, 2008 submission in this matter, include: Wood, S.H., and Clemens, D.M., 2002, *Geologic and Tectonic History of the Snake River Plain, Idaho and Oregon*: in Bill Bonnichsen, P.M. White, and Michael McCurry, eds, *Tectonic and Magmatic Evolution of the Snake River Plain Volcanic Province*: Idaho Geologic Survey Bull. 340, pp. 69-103; Squires, E. and Wood, S.H., 2001, *Stratigraphic Studies of the Boise (Idaho) Aquifer System Using Borehole Geophysical Logs with Emphasis on Facies Identification of Sand Aquifers; Report to the Treasure Valley Hydrologic Study, Idaho Department of Water Resources*: Hydrologic, Inc. and

diagrams of the extensive sand body supported by deep borehole geophysical logs. In addition, substantial hydrogeological and geophysical data were provided with M3 Eagle's November 26, 2008 submitted materials demonstrating that the Pierce Gulch Sand Aquifer ("PGSA") extends at least 24 miles to the west-northwest of the M3 Eagle site. Specifically, a large-scale map[2] and associated report showing several deep oil and gas exploratory wells to the west-northwest of the M3 Eagle site was submitted with several geophysical traces from the plotted boreholes. Among these is the Ted Daws #1 bore (labeled as the TD1 geophysical log), which is located in Payette Valley in the exact direction, and along the geologic strike, of the Pierce Gulch Sand Aquifer as described by Hydro Logic in its conceptual model for the aquifer. In this boring, the base of the Pierce Gulch Sand is approximately 600 feet below land surface which also fits well with the conceptual model and suggests that, if structural faulting is present in the sub-surface, the offset is not significant. Another example is the submitted geophysical logs for the Upper Deer Flat exploratory bore by Champlin Petroleum (labeled DF geophysical log) shows the same geophysical signature 18 miles to the southwest of the M3 Eagle site south of Lake Lowell.

It is possible that Dr. Ralston did not recognize that the reports cited by Hydro Logic (and cited by Dr. Ralston's own reports)[3] show the geologic extent of the Pierce Gulch Sand Aquifer and that M3 Eagle, LLC's submittal on November 26, 2008 included the data from these wells (at Tab 19 of the binders provided to the Department in November 2008). Although the geophysical log data were available only in copies having very small print and are difficult to read without magnification, the accompanying reports and sub-surface cross-sections make the three-dimensional geometry and extent of the Pierce Gulch Sand abundantly clear. In any event, these data to the west and west-northwest show that the subsurface contains the same Pierce Gulch Sand Aquifer signature, including the geophysical signature of the underlying transgressive sand of the Terteling Springs Formation underlying it, as is present under the western portion of the M3 Eagle property. The PGSA also shows up in these data along the same approximate dip angle as that under the M3Eagle property and elsewhere.

In summary, the existing data and reports show the continuity of the PGSA from at least the area around Garden City to the west-northwest through the M3 Eagle area and beyond

---

Boise State University, 15 pp.; Wood, S.H., 2004, *Geology Across and Under the Western Snake River Plain, Idaho: Owyhee Mountains to the Boise Foothills*, in USGS Open File Report 2004-1222, Geological *Field Trips in Southern Idaho, Eastern Oregon, and Northern Nevada*, eds K.M. Haller and S.H. Wood; Wood, S.H., 1994, *Seismic Expression and Geologic Significance of a Lacustrine Delta in Neogene Deposits of the Western Snake River Plain, Idaho:* AAPPG Bulletin V-79, No. 1 pp. 101-121; S.H. Wood and J. E. Anderson, 1981, Chapter 2-*Geology, in Geothermal Investigations in Idaho, Part 2, Geological, Hydrological, Geochemical and Geophysical Investigations of the Nampa-Caldwell and Adjacent Areas, Southwestern Idaho*, J. C. Mitchell, editor, IDWR Water Information Bulletin No. 30 (Demember 1981).

[2] Spencer A. Wood, *Structure Contour Map of Top of the Mudstone Facies, Western Snake River Plain, Idaho, Contribution to the Treasure Valley Hydrologic Project* (August 1997).

[3] These wells include: Oroco Oil & Gas Richardson #1; Sundance-Hunter Linning #1-36; Chevron Highland L&L #1; El Paso Natural Gas Webber State #1; Oroco Oil & Gas Cleveland #1; Oroco-Simplot Ted Daws #1; and El Paso Natural Gas Virgil Johnson #2.

to the Payette Basin. Furthermore, the aquifer testing and modeling conducted or evaluated by Hydro Logic supports this conceptual model. Indeed, we believe the Pierce Gulch Sand Aquifer, and the ground water flow within it, extends/flows to the Payette Basin, the Snake River Basin, and the Boise Basin. We believe our maps and graphs show this.

However, we further believe that whether a component of the ground water within the aquifer flows to the Payette Basin, or not, is immaterial to the question whether there is sufficient water in the PGSA to support the M3 Eagle water right application without causing injury to existing water rights. This point is further discussed below.

Point Two: Pacific Groundwater Group's additional model run with a no-flow boundary at the assumed north boundary used in the Treasure Valley Hydrologic Study.
As a further check of Hydro Logic's conceptual model, and because of the comments in the Ralston Report discussed above, Pacific Groundwater Group conducted an additional model run using the M3 numerical model but imposing on it the assumed northern (no-flow) boundary described in the Treasure Valley Hydrologic Project model. In other words, we cut off the Payette basin flux and used the H-match version of the M3 model.

Attached hereto, we provide the following four figures depicting the "no-flow-to-the-Payette" model run:

1) A map of the model showing the area converted to no flow in the model based on the TVHP boundary (Gray).
2) A map of the entire M3 model area depicting the imposed no flow boundary of the TVHP.
3) A figure showing a comparison of the two model boundaries (original M3 model versus TVHP boundary) and the target heads of the model run.
4) A figure showing the 50-year predicted long-term drawdown from the M3 ground water withdrawals at full build out.

As predicted, there is essentially no difference with respect to predicted drawdowns in the Pierce Gulch Sand Aquifer as a result of imposing a no flow boundary between the Boise and Payette Basins.

Respectfully submitted,

Ed Squires
Hydro Logic, Inc.

Figure 1. Potentiometric surface Contour Map from March 2008 Submittal to IDWR with Approximate Northern Boundary of TVHP Model.

Model Boundary Derived from Figures 1-1 and 3-1 from Petrich 2004.

Approximate Location of Northern No-Flow Boundary

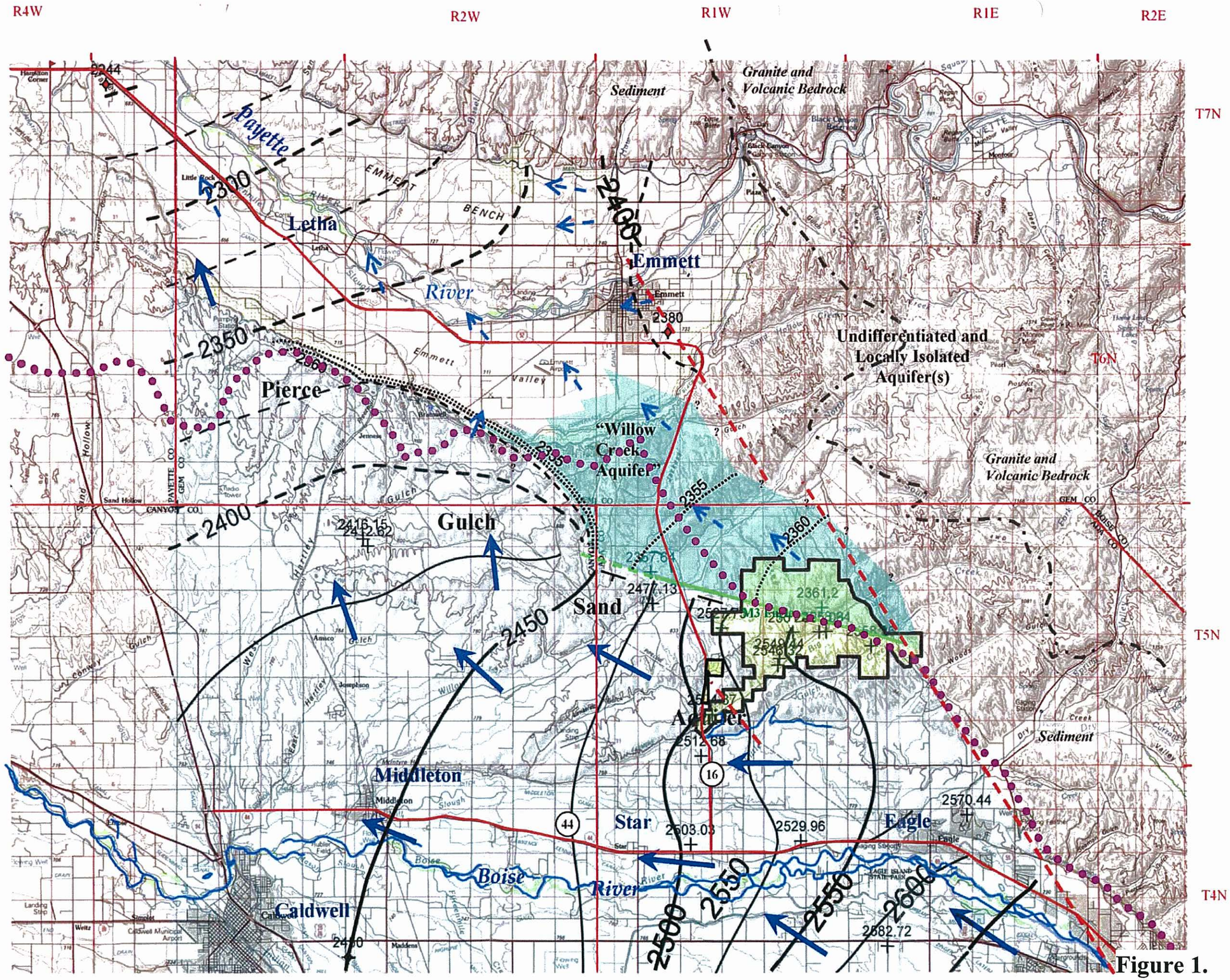


Figure 1.

January 28, 2009

GRAY = NO FLOW BOUNDARY (ALL MODEL LAYERS)

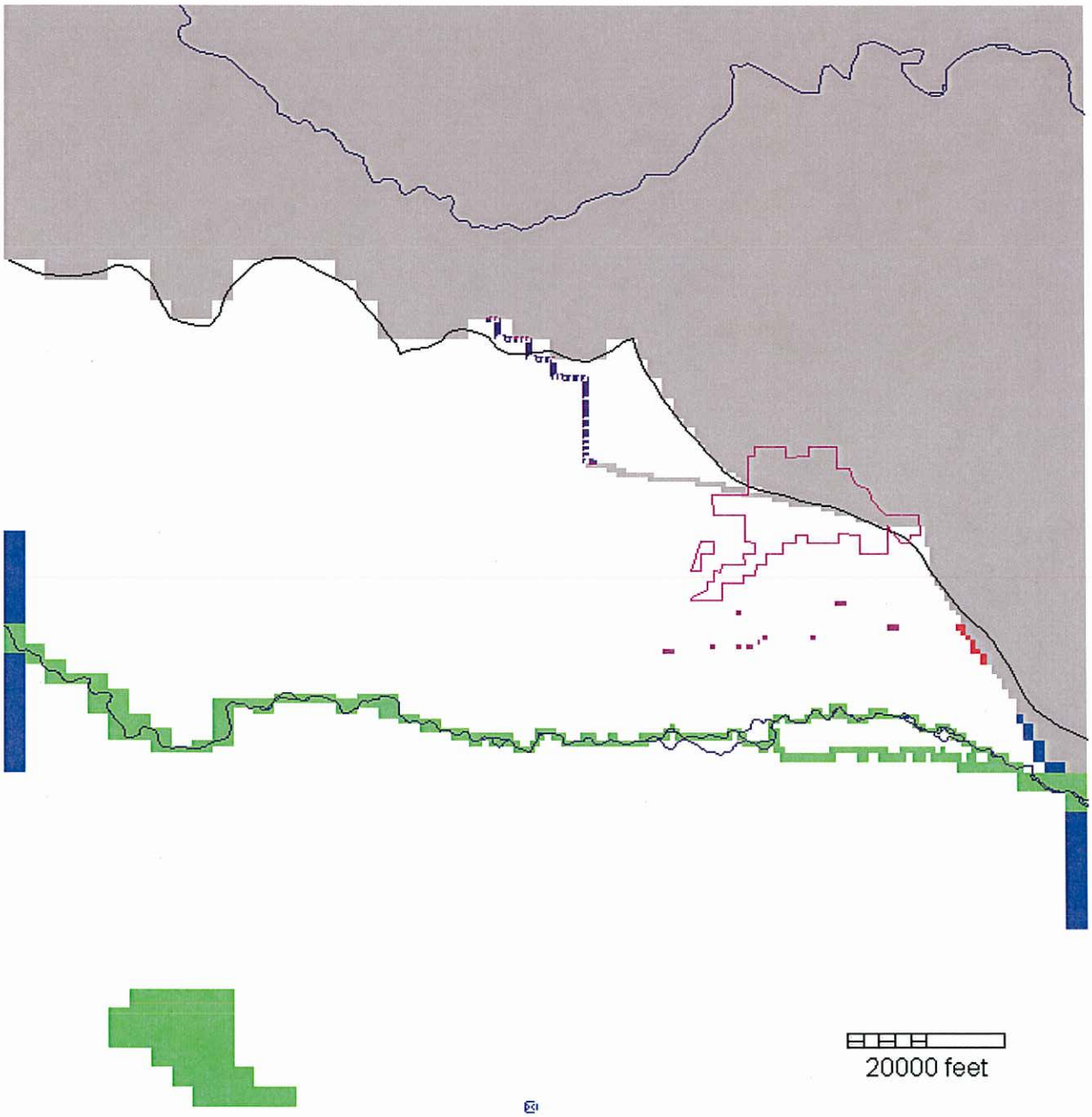
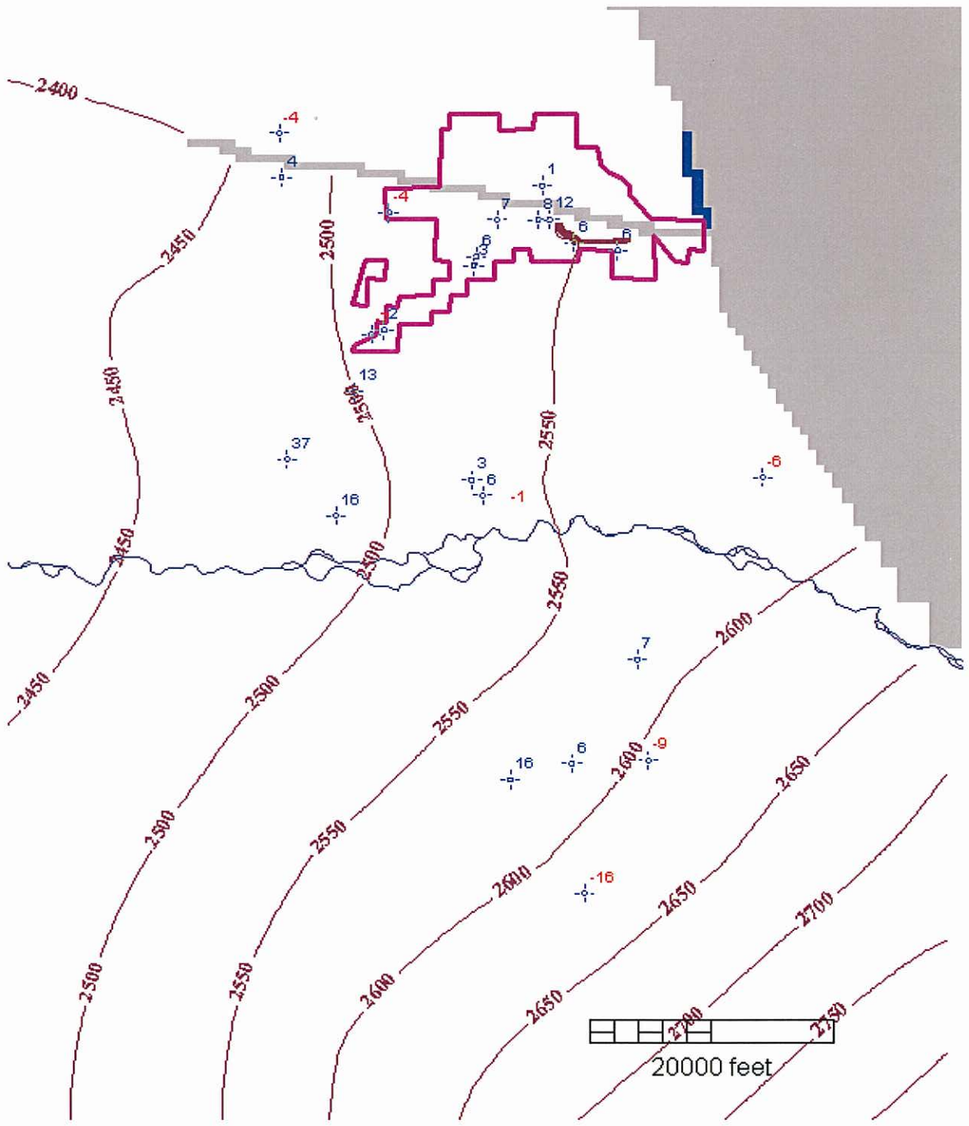


Figure 2.

Original M3 Eagle Model Run
Layer 6 (PGSA)



Payette Boundary (No Flow)
Layer 6 (PGSA)

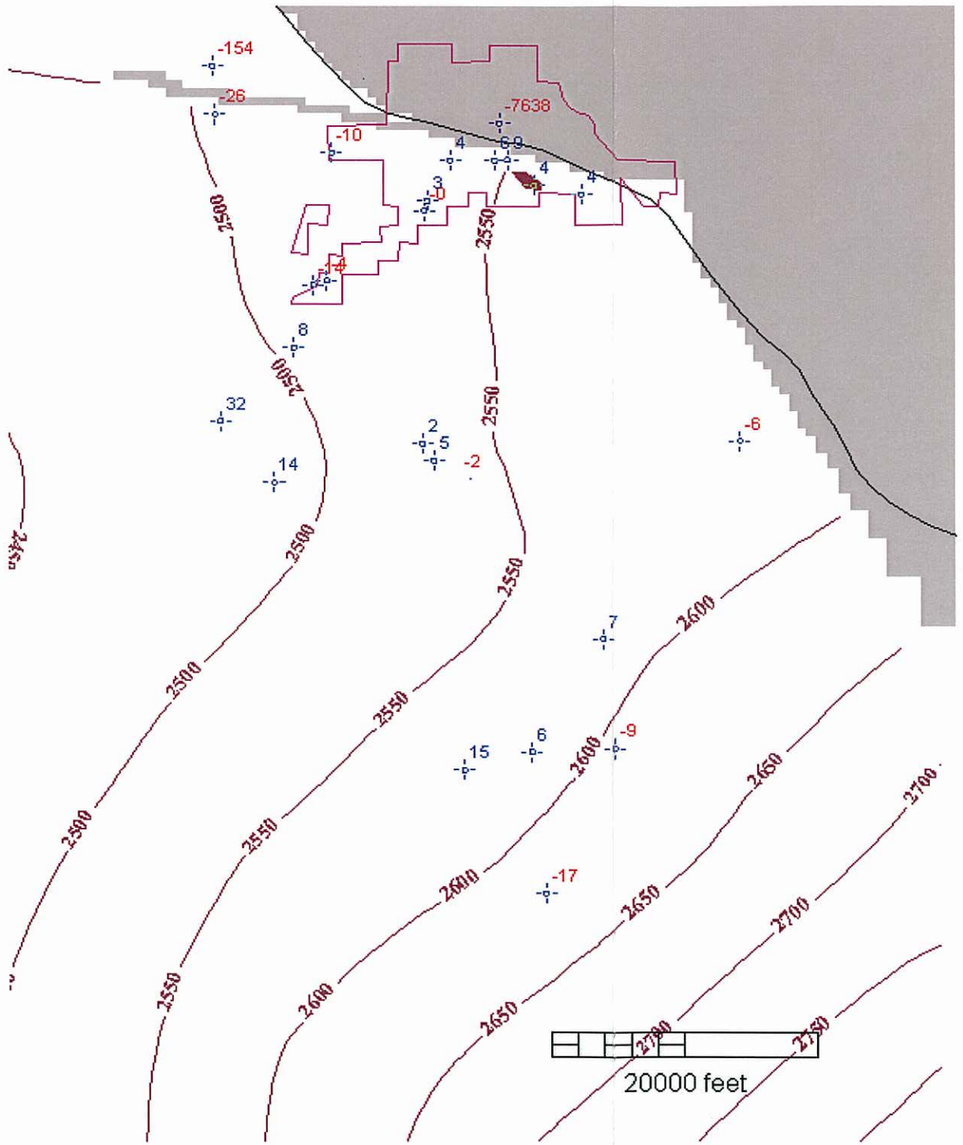
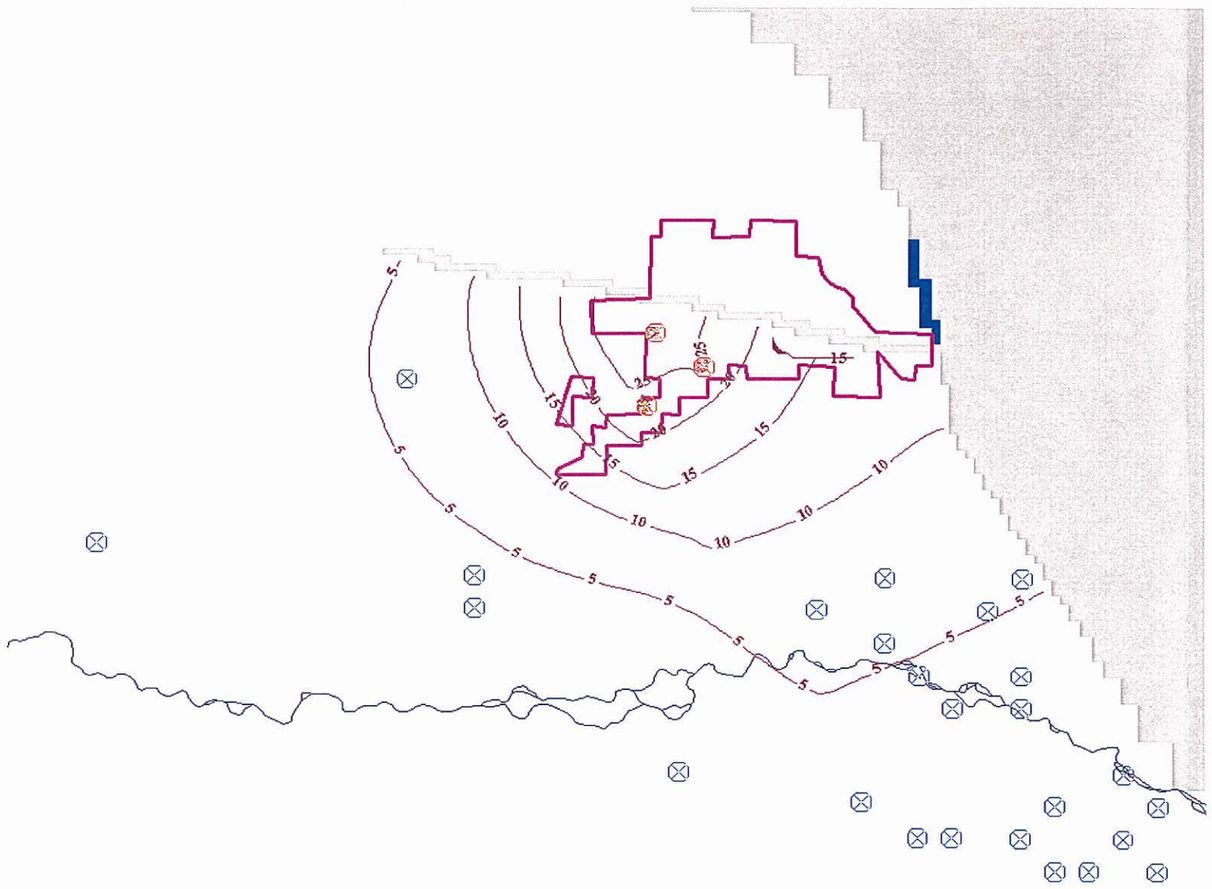


Figure 3.

Original M3 Eagle Model Run
Layer 6 (PGSA)



Payette Boundary (No Flow)
Layer 6 (PGSA)

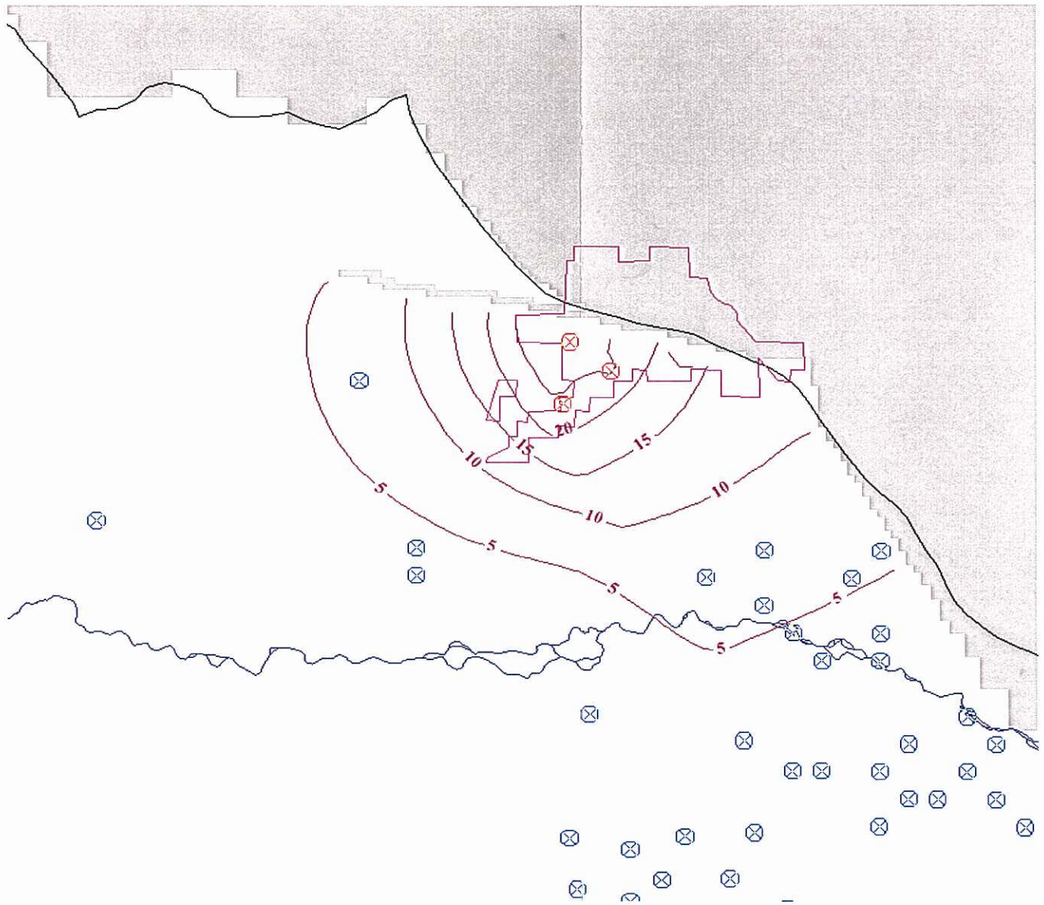


Figure 4.

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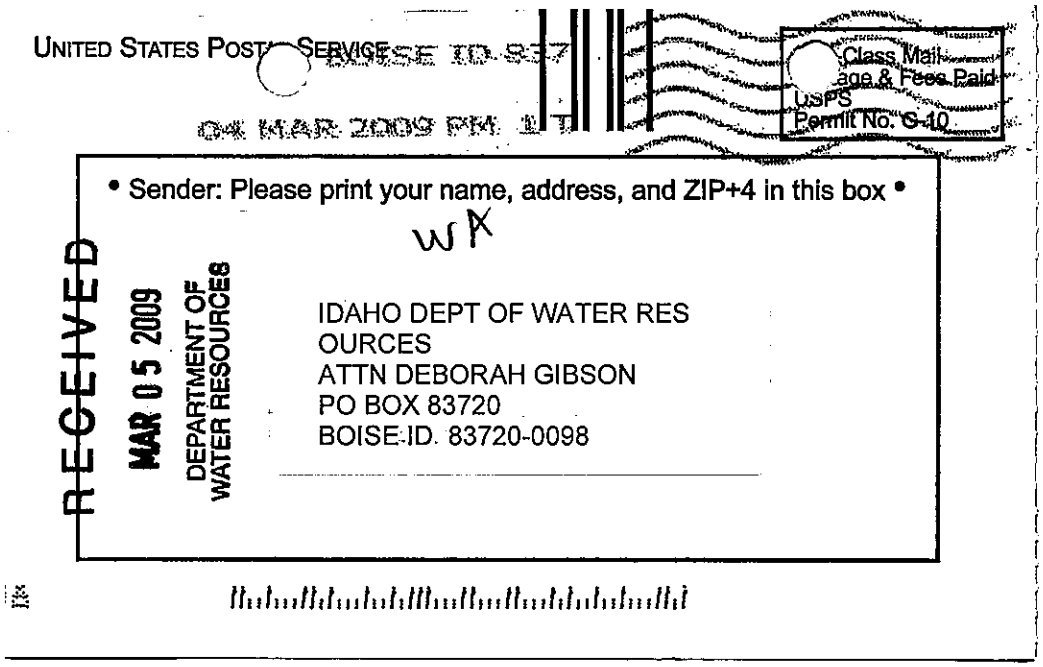
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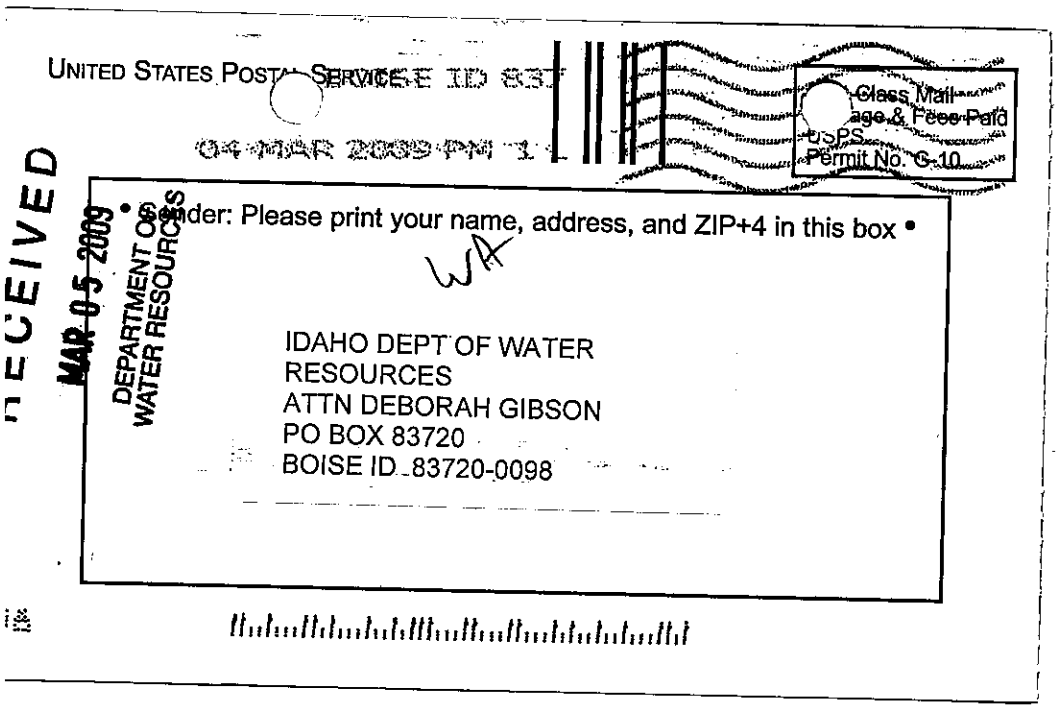
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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATIONS TO APPROPRIATE WATER NO. 63-32573 IN THE NAME OF THE M-3 EAGLE	))))	**SECOND NOTICE OF HEARING**

On February 10, 2009, the Idaho Department of Water Resources ("Department") issued an *Order Establishing Deadline For Completion of Staff Memorandum and Comments, Order Continuing Hearing, and Order Authorizing Discovery* that postponed the hearing. The Department requested the parties to submit information about their unavailable dates for setting new hearing dates on or before February 20, 2009.

Applicant's representative and Protestant North Ada County Groundwater Users Association's ("NACGUA") representative have submitted their unavailable dates. No other protestants responded by the deadline set. Therefore, it is proper to issue a Notice of Hearing for this matter.

PLEASE TAKE NOTICE that the formal hearing has been rescheduled at the parties' request and will be held on the following dates: **April 15 & 16, 22 through 24, and May 4 & 5, 2009.** The hearing will begin at 9:00 a.m., MDT, at the offices of the Idaho Department of Water Resources, located at 322 East Front Street, 6th Floor Conference Rooms, Boise, Idaho. The presiding officer at the hearing will be Gary Spackman.

If you plan to offer exhibits for the record at the hearing, note that Rule 606 of the department's Rules of Procedure requires that a copy be provided to each party and to the presiding officer.

The hearing will be held in accordance with the provisions of Chapters 2 and 17, Title 42 and Chapter 52, Title 67, Idaho Code, and the adopted Rules of Procedure of the department. IDAPA 37.01.01. A copy of the rules may be obtained from the department upon request.

The hearing will be conducted in accordance with the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise the department no later than ten (10) days prior to the hearing. Inquires about scheduling, hearing facilities, etc., should be directed to Deborah Gibson, Administrative Assistant, Idaho Department of Water Resources, P.O. Box 83720, Boise, Idaho 83720-0098, telephone: (208) 287-4942, fax: (208) 287-6700.

All parties appearing in this matter will have the opportunity to present information, examine witnesses, and provide argument on issues related to the appropriation of water this application has bearing on, during the course of this hearing.

Dated this 27th day of February, 2009.

Gary Spackman
Hearing Officer

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 3rd day of March, 2009, a true and correct copy of the document described below was served on the following by placing a copy of the same in the United States mail, certified mail with return receipts, postage prepaid and properly addressed to the following:

Document(s) Served: SECOND NOTICE OF HEARING

JEFFREY C FEREDAY
GIVENS PURSLEY LLP
601 W BANNOCK ST
PO BOX 2720
BOISE ID 83701

M3 EAGLE LLC
533 E RIVERSIDE DR STE 110
EAGLE ID 83616

NORMAN L EDWARDS
884 W BEACON LIGHT RD
EAGLE ID 83616

ALAN SMITH
3135 OSPREY RD
EAGLE ID 83616

BILL LAWTON
3145 N OSPREY RD
EAGLE ID 83616

JOHN THORNTON
NORTH ADA COUNTY GROUNDWATER USERS ASSO.
5264 NORTH SKY HIGH LN
EAGLE ID 83616

WESTERN REGION
ATTN JOHN WESTRA
2735 AIRPORT WAY
BOISE ID 83705-5082

Deborah J. Gibson

Deborah J. Gibson
Administrative Assistant
Water Management Division

State of Idaho
DEPARTMENT OF WATER RESOURCES
322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098
Phone: (208) 287-4800 • Fax: (208) 287-6700 • Web Site: www.idwr.idaho.gov

C. L. "BUTCH" OTTER
Governor
DAVID R. TUTHILL, JR.
Director

March 2, 2009

JEFFREY C FEREDAY
GIVENS PURSLEY LLP
601 W BANNOCK ST
PO BOX 2720
BOISE ID 83701

M3 EAGLE LLC
533 E RIVERSIDE DR STE 110
EAGLE ID 83616

NORMAN L EDWARDS
884 W BEACON LIGHT RD
EAGLE ID 83616

ALAN SMITH
3135 OSPREY RD
EAGLE ID 83616

BILL LAWTON
3145 N OSPREY RD
EAGLE ID 83616

JOHN THORNTON
NORTH ADA COUNTY
GROUNDWATER USERS ASSO.
5264 NORTH SKY HIGH LN
EAGLE ID 83616

Re: Application for Permit No. 63-32573, in the name of M3 Eagle, LLC.

Dear Interested Parties:

On February 23, 2009, the Director received two letters referring to the M3 Eagle matter. Gary Spackman has asked that the parties in this matter be provided a copy of these letters. I believe the Department does not plan to issue a response. These letters will placed in the referenced file, and made a part of this record.

Sincerely,

Deborah J. Gibson

Deborah J. Gibson
Administrative Assistant
Water Management Division

cc: Western region

From: Larry Fischer [mailto:larryf@radixconstruction.com]
Sent: Tuesday, February 24, 2009 2:48 PM
T

From: Larry Fischer [mailto:larryf@radixconstruction.com]
Sent: Monday, February 23, 2009 3:32 PM
To Dr David Tuthill, Director Idaho Dept of Water Resources
Subject: M3 Eagle water

Dear Dr David Tuthill, as a long time resident of Eagle, I find great concern in this issue. Certain obvious questions are to be asked about the quanity and quality of existing ground water levels, how will this water level be sustained if M3 Eagle is allowed their request ? It seems to me that at the growth levels experienced in this area now are sufficient pressure on ground water reserves. I believe that the request of M3 Eagle for water at their requested volume, if taken from the existing known aquifer, can only adversely affect the water supply to many long time as well as many newer residents of this part of Eagle. Are there any reasons why we collectively must face costs to maintain a natural resource long used conservatively to allow a big developer to reap profits as they burden us with the long term consequences of their poor and one sided hydraulic engineering. I sincerely hope that you and your advisors will see our viewpoint and require sound, provable science and reasonable logic in where you put your influence
Thanks,.....Larry Fischer, 1275 W Beacon Light Rd, Eagle

Dr. David Tuthill, Director
Idaho Dept. of Water Resources
322 East Front St.
Boise, ID 83702-0098
Feb. 19, 2009

Dear Dr. Tuthill:

This request is to urge restraint in the M-3 request for about 14 million gallons daily to serve their approximate 6,000 acre project near Highway 16 & Firebird Raceway.

During 2008, 4 wells went dry with a mile of our property. I understand M-3 has hired hydrologists to provide supportive data for their request & That some existing well monitoring is planned or underway.

First & foremost, I expect Water Resources to protect existing water rights. This will be difficult when junior domestic water supplies are involved, such as with M-3 construction projects. Therefore, I urge M-3's request & other large projects be allowed in phases. A small percentage allowed initially with multi-year monitoring before additional percentages are considered.

If existing wells are being drawn down, developers such as M-3 must provide water from other sources, such as water right purchases from the Payette, Boise, Snake Rivers & other sources.

I believe Idaho water belongs to Idaho & should not be given to private development interests that

could profit by selling it back to those in the area who need water. At such times, the true value of water will be determined.

All existing citizens & future economic growth opportunities depend on water. Your responsibilities are enormous. I'm thankful that we have a regulatory source that will protect this priceless resource. Snow packs vary & I believe there is a finite amount of ground water. It took eons to be established, may we not use it up in a few generations of man's use.

Sincerely,

Dick Lagerstrom

Dick Lagerstrom
1262 W. Beaconlight Rd
Eagle, ID 83616

Jeffrey C. Fereday [ISB No. 2719]
Michael P. Lawrence [ISB No. 7288]
GIVENS PURSLEY LLP
601 West Bannock Street
P.O. Box 2720
Boise, Idaho 83701-2720
Office: (208) 388-1200
Fax: (208) 388-1300
www.givenspursley.com
Attorneys for M3 Eagle LLC

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 63-32573 IN THE NAME OF M3 EAGLE LLC

M3 EAGLE'S RESPONSE TO ALAN SMITH'S FEBRUARY 6 MOTION

Applicant M3 Eagle LLC ("M3 Eagle"), through Jeffrey C. Fereday and Michael P. Lawrence of the firm Givens Pursley LLP, hereby responds to Alan Smith's February 6, 2008 pleading entitled "Motion." For the reasons that follow, Mr. Smith is not entitled to relief.

Mr. Smith's Motion contains no express request for relief. As such, the Motion should be denied because it does not comply with IDAPA 37.01.01.260.02 ("Motions should . . . (c) state the relief sought") and I.R.C.P. 7(b)(1) ("An application to the court for an order shall be by motion which . . . shall set forth the relief or order sought").

To the extent Mr. Smith's Motion could be interpreted to request relief in relation to the timeliness of M3 Eagle's technical reports submitted in January 2009, he is entitled to none. The Hearing Officer, in his *Order Establishing Deadline for Completion of Staff Memorandum and Comments, Order Continuing Hearing, Order Authorizing Additional Discovery* ("February 10

Order"), already addressed this issue by asking IDWR to prepare a staff memorandum on the reports and by continuing the hearing to a later date to allow IDWR and the parties, including Mr. Smith, more time to analyze the reports.

To the extent Mr. Smith requests an order compelling M3 Eagle to respond to his untimely discovery requests, he is not entitled to one. M3 Eagle refers the Hearing Officer to the discussion in *M3 Eagle's Response to Alan Smith's December 19 Filing Regarding Discovery* dated December 23, 2008, and at the January 20, 2009, status conference. To summarize, M3 Eagle believes Mr. Smith's discovery requests were untimely under the Department's Rules of Procedure, the Idaho Rules of Civil Procedure, and the Hearing Officer's order; that M3 Eagle responded to Mr. Smith's discovery requests when it was not obligated to do so by providing him with M3 Eagle's responses to NACGUA's nearly identical discovery; and that Mr. Smith did not comply with the Hearing Officer's order to list specific discovery requests that he alleges M3 Eagle has not answered.

Accordingly, Mr. Smith's Motion should be denied.

DATED this 23rd day of February 2009.

Respectfully submitted,

GIVENS PURSLEY LLP

By Jeffrey C. Fereday

Jeffrey C. Fereday
Michael P. Lawrence

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 23rd of February, 2009, the foregoing was filed, served, or copied as follows:

FILED	
Idaho Department of Water Resources Attn: Gary L. Spackman 322 East Front Street P.O. Box 83720 Boise, ID 83720-0098	_____ U. S. Mail __X__ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
SERVICE	
John Westra Western Regional Office Idaho Department of Water Resources 2735 Airport Way Boise, ID 83705-5082	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Bill Lawton, Spokesman for Robert L. Wood M. Howard Goldman Timothy R. Milburn 3145 Osprey Road Eagle, ID 83616	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
North Ada County Groundwater Users Association c/o David Head 855 Stillwell Drive Eagle, ID 83616	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
North Ada County Groundwater Users Association c/o John Thornton 5264 N. Sky High Lane Eagle, ID 83616	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Norman Edwards 884 W. Beacon Light Road Eagle, ID 83616	__X__ U. S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail

Alan Smith
3135 N. Osprey Road
Eagle, ID 83616

__X__ U. S. Mail
_____ Hand Delivered
_____ Overnight Mail
_____ Facsimile
_____ E-mail

Jeffrey C. Fereday

Gibson, Deborah

From: John L Thornton [jlthornton@fs.fed.us]
Sent: Friday, February 20, 2009 3:55 PM
To: Spackman, Gary; Gibson, Deborah
Cc: John L Thornton; cjthornton6@msn.com; head@firstsourceidaho.com
Subject: Non-availability dates for John Thornton regarding the M# water rights hearing

Howdy Gary and Deborah,

The following dates are unavailable for me to participate in the M3 water rights hearing:

April 1, 2 14, 17, 20, 21

May 19, 20, 21, 22, 25, 27

June 4, 5, 8, 9, 10, 11, 12

If possible, I would prefer not to have the hearing in June as I am very busy working and training my summer field crews.

At yesterdays North Ada County Groundwater Technical meeting, Helen Harrington identified that IDWR was contracting with a groundwater specialist, (Susan Cosgrove?) to complete a critical and objective review of various groundwater models that have been developed for use in the Treasure Valley or portions thereof. Apparently this review will identify pros and cons, weaknesses, strengths, limitations and data gaps of each model. This includes a review of the two models utilized by Hydrologic LLC. Helen identified that this work was to be completed in or around August of this year. It appears to me to be value added to utilize the results of this assessment in determining the outcome of the M3 water rights decision. I would appreciate your thoughts on the use of this new information in preparing a decision for the M3 water rights application.

Please, if you haven't already add the following two email addresses in which to send me information:

cjthornton6@msn.com

jlthornton@fs.fed.us

Thanks you and make it a great day!! John ThorntonT

Jeffrey C. Fereday [ISB No. 2719]
Michael P. Lawrence [ISB No. 7288]
GIVENS PURSLEY LLP
601 West Bannock Street
P.O. Box 2720
Boise, Idaho 83701-2720
Office: (208) 388-1200
Fax: (208) 388-1300
www.givenspursley.com
Attorneys for M3 Eagle LLC

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 63-32573 IN THE NAME OF M3 EAGLE LLC	**M3 EAGLE'S SECOND NOTICE OF UNAVAILABLE DATES**

Pursuant to the Hearing Officer's February 10, 2009 *Order Establishing Deadline for Completion of Staff Memorandum and Comments, Order Continuing Hearing, Order Authorizing Additional Discovery*, M3 Eagle LLC ("M3 Eagle") submits the following unavailable dates for hearing in April, May, and June 2009:

- April 1-3
- April 27 – May 1
- May 6 – June 30.

M3 Eagle respectfully requests that the hearing be scheduled during the weeks of April 6, April 13, or April 20, and that May 4 – 5 be reserved for any potential continuation.

DATED this 20th day of February, 2009.

Respectfully submitted,

GIVENS PURSLEY LLP

By _____
Jeffrey C. Fereday
Michael P. Lawrence

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 20th of February, 2009, the foregoing was filed, served, or copied as follows:

FILED	
Idaho Department of Water Resources Attn: Gary L. Spackman 322 East Front Street P.O. Box 83720 Boise, ID 83720-0098	___ U. S. Mail _X_ Hand Delivered ___ Overnight Mail ___ Facsimile _X_ E-mail
SERVICE	
John Westra Western Regional Office Idaho Department of Water Resources 2735 Airport Way Boise, ID 83705-5082	_X_ U. S. Mail ___ Hand Delivered ___ Overnight Mail ___ Facsimile ___ E-mail
Bill Lawton, Spokesman for Robert L. Wood M. Howard Goldman Timothy R. Milburn 3145 Osprey Road Eagle, ID 83616	_X_ U. S. Mail ___ Hand Delivered ___ Overnight Mail ___ Facsimile ___ E-mail
North Ada County Groundwater Users Association c/o David Head 855 Stillwell Drive Eagle, ID 83616	_X_ U. S. Mail ___ Hand Delivered ___ Overnight Mail ___ Facsimile ___ E-mail
North Ada County Groundwater Users Association c/o John Thornton 5264 N. Sky High Lane Eagle, ID 83616	_X_ U. S. Mail ___ Hand Delivered ___ Overnight Mail ___ Facsimile ___ E-mail
Norman Edwards 884 W. Beacon Light Road Eagle, ID 83616	_X_ U. S. Mail ___ Hand Delivered ___ Overnight Mail ___ Facsimile ___ E-mail

Alan Smith
3135 N. Osprey Road
Eagle, ID 83616

__X__ U. S. Mail
_____ Hand Delivered
_____ Overnight Mail
_____ Facsimile
_____ E-mail

Michael P. Lawrence

ALAN SMITH
3135 OSPREY
EAGLE, IDAHO 83616-2725
(208) 939-6575

WA

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 63-32576 IN THE NAME OF M3 EAGLE LLC

MOTION

Eagle Pines Water Users Association, by and through its spokesman, Alan Smith and also as an individual protestant, hereby files its response to M3's Hydrologic Ground Water Geochemistry Report and the Nine-Day Aquifer Test Report filed on January 21 and 23, respectively and sets forth as follows:

1. Protestants, herein, object to the filing of the above mentioned Ground Water Geochemistry Report filed January 21, 2009.
2. Protestants, herein, object to the filing of the Nine-Day Aquifer Test Pump Report filed on or about January 23, 2009.

WRITTEN ARGUMENT

The Ground Water Geochemistry Report filed on or about January 21, 2009 contains eleven (11) pages of technical data and nineteen (19) pages of maps, charts, and graphs containing more technical data.

The Nine-Day Aquifer Test Pump Report contains fifty-seven (57) pages of technical

data, analysis thereof, technical opinions, and conclusions, and speculative assumptions along with over fifty (50) maps, charts and graphs.

M3's assertion at the January 20, 2009 hearing that these are only "narrative supplemental reports" is absurd. Voluminous technical data is being submitted long after the deadline.

The IDWR deadline for the submission of technical data was 26 November, 2008. In the event IDWR allows the untimely submission of such technical data it would seem that fundamental fairness and impartiality would require that M3 be required to answer the protestants' discovery requests which it contends are untimely.

Moreover, M3 asserts that it is entitled to a full 30 days to answer discovery requests under Rule 524. That Rule merely sets for the discovery procedure which IDWR will allow, i.e. interrogatories, depositions, requests for admissions, etc.

The more specific and controlling rules are IDWR Rule 052 and Rule 521 which provides that "the Idaho Rules of Civil Procedure do not apply" and an "order for authorizing and scheduling discovery need not conform to the time tables of the Idaho Rules of Civil Procedure", respectively.

Attached is a copy of the protestants' discovery requests for your review.

Respectfully submitted,

Alan Smith

Alan Smith, individually and as a representative of
Protestant Eagle Pines Association

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 6th day of February, 2009, the foregoing was filed, served, or copied as follows:

NOTICE OF SERVICE AND DISCOVERY

North Ada County Groundwater Users Association John Thornton 5264 N Sky High Lane Eagle, ID 83616	__X__ U.S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Bill Lawton, Spokesman for Robert L. and Kip C. Wood M. Howard Goldman Timothy R. and Judy L. Milburn 3145 Osprey Road Eagle, ID 83616	_____ U.S. Mail __X__ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Norman Edwards 884 W Beacon Light Road Eagle, ID 83616	_____ U.S. Mail __X__ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Jeffrey C. Fereday GIVENS PURSLEY LLP 601 West Bannock Street PO Box 2720 Boise, ID 83701-2720	__X__ U.S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Gary Spackman, Hearing Officer State of Idaho Department of Water Resources 322 E Front Street Boise, Idaho	_____ U.S. Mail __X__ Hand Delivered _____ Overnight Mail _____ Facsmile _____ E-mail

Alan Smith
3135 Osprey Road
Eagle, Idaho 83616-2725

RECEIVED
FEB 10 2009
DEPARTMENT OF
WATER RESOURCES

BEFORE THE DEPARTMENT OF WATER RESOURCES

FOR THE STATE OF IDAHO

IN THE MATTER OF APPLICATION)
FOR PERMIT NO. 63-32573)
BY M3 EAGLE LLC)
)

REQUESTS FOR ADMISSIONS
INTERROGATORIES AND
PRODUCTION OF DOCUMENTS

To: Applicant M3 Eagle, LLC, Jeffrey Fereday

Please take notice that Alan Smith, an individual ground water user and Protestant herein, and as Representative of Eagle Pines Water Association hereby requires M3 Eagle LLC to respond to the Discovery Request herein under Rule 33, 34, and 36, IRCP and the IDWR Hearing Officer Order of September 12, 2008 on or before November 26, 2008.

REQUEST FOR ADMISSION NO. 1: Admit that the water to be appropriated under M3 Application #63-32573 can not and/or will not be put to "beneficial use" within a reasonable time under Idaho law and Idaho Water Resources five (5) year approval criteria.

REQUEST FOR ADMISSION NO. 2: Admit that M3 Application #63-32573 is speculative for the following reasons:

The May 4, 2007 Hydro Logic report on which Application #63-32573 by M3 Eagle, LLC relies to support said Application states as follows:

1. The transmissivity of water flow through the Pierce Gulch Sand Aquifer is calculated or estimated. See page 7.
2. Vertical flow gradients are not yet fully understood. See page 6.
3. That other hydrologic studies do not support Hydro Logics conclusion that water flow through the Pierce Gulch Sand Aquifer is from the Boise Basin to the Payette Basin. See page 6.
4. That Urban does not support Hydro Logics theory of Pierce Gulch Aquifer flow from the Boise Basin to the Payette Basin because there is "not sufficient data to substantiate it". See page 6.
5. The actual extent of future impacts on existing wells can not be truly known until actual pumping wells are in place on M3 property. See page 7.
6. The actual total quantity of water pumped from individual wells and the actual number of wells has not been determined. Further monitoring wells will be utilized to understand impacts on the aquifer. See page 8.
7. Long term pumping tests have not been conducted at the M3 Eagle site. See page 8.

REQUEST FOR ADMISSION NO 3: Admit that the long term effect of extensive pumping at the M3 Eagle Site on domestic wells and wells with senior water rights is not known.

INTERROGATORY NO. 1: If the answer to Request No. 3 is a denial or other than an unqualified admission set forth the basis for your answer and identify any evidence or documents that supports or in any way pertains to that answer.

REQUEST FOR ADMISSION NO. 4: Admit that the volume and source of underground water flow into the Pierce Gulch Sand Aquifer and the ability of said aquifer to recharge or rejuvenate itself is unknown.

INTERROGATORY NO. 2: If the answer to Request for Admission No. 4 is anything other than an unqualified admission, set forth the basis for your answer and identify any studies or documents which support, contradict, or in an way relate to that answer.

REQUEST FOR ADMISSION NO. 5: Admit that Application #63-32573 was not made in good faith in that it is based on substantial speculation, conjecture, and incomplete data to support such an extensive water rights request, to wit: nearly 15 millon gallons of water daily.

INTERROGATORY NO. 3: In the event the answer is other than an unqualified admission, set forth the basis for your answer and any facts, documents, or evidence which supports or in any way relates thereto.

REQUEST FOR ADMISSION NO. 6 : Admit that M3 Eagle, LLC was not a municipal corporation or a municipal provider at the time of filling Application #63-32573, and is not now a municipal entity under 39-103, I.C.

INTERROGATORY NO. 4: In the event the answer is anything other than an unqualified admission, set forth the basis for your answer and any evidence or documentation that in any way

shows M3 Eagle, LLC is a municipality.

REQUEST FOR ADMISSION NO. 7: Admit that the larger and deeper wells which M3 intends to construct on the M3 site if this Application #63-32573 is granted will have or could have a detrimental impact on small domestic wells and wells holding a senior water right and may require lowering of a pump or deepening of said wells.

INTERROGATORY NO. 5: In the event your answer is other than an unquantified admission, set forth the basis for your answer and any hydrology data, documentation or other evidence to suggest such answer.

REQUEST FOR ADMISSION NO. 8: Admit that there is not presently any municipality on the M3 site which can utilize any of the ground water sought under Application #63-32573 and that no municipal water system will be in existence which can apply the water to a "beneficial use" within 5 years.

INTERROGATORY NO.6: In the event your answer is other than an unqualified admission, set forth the basis for your answer and any evidence or documents pertaining thereto.

INTERROGATORY NO 7: Set forth whether the M3 project will be built in "phases", the number of "phases", what each "phase" will include, and the projected date of completion of each "phase".

INTERROGATORY NO 8: Set forth the financial resources of M3 Eagle which will enable it to complete the M3 7,100 home community, its golf courses, parks, schools, and other community infra-structures.

INTERROGATORY NO 9: Set forth each water right or source of water M3 owns or holds or has a right to the use thereof.

INTERROGATORY NO 10: Provide the name, business address, and telephone number of each expert witness or potential expert which M3 or its attorneys have retained or used as a consultant for the M3 application and set forth the witness fees or other compensation paid to that expert and who is obligated to pay therefor.

Submitted this 13th day of November, 2008.

Alan Smith, individually and as Representative of Eagle Pines Water Association.

Alan Smith
3135 Osprey Road
Eagle, Idaho 83616-2725

BEFORE THE DEPARTMENT OF WATER RESOURCES

FOR THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 63-32573 BY M3 EAGLE LLC	))))	**NOTICE OF SERVICE**

REQUESTS FOR ADMISSIONS INTERROGATORIES AND PRODUCTION OF DOCUMENTS

Alan Smith, individually and as representative for Eagle Pines Water Association hereby gives notice to all parties and counsel of record that Requests for Admission, Interrogatories, and for Production of Documents were served on Jeffrey Fereday, Givens Pursley, LLP; Josephine Beeman, Beeman & Associates; Bill Lawton; and Norman Edwards.

Dated this 13th day of November, 2008.

Alan Smith, individually and as representative of Eagle Pines Water Association.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 13th day of November, 2008, I served a true and correct copy of the foregoing Requests for Admissions and Interrogatories by U.S. mail or hand delivery on

NOTICE OF SERVICE AND DISCOVERY

North Ada County Groundwater Users Association Josephine P. Beeman Beeman & Associates PC 409 West Jefferson Boise, ID 83702-6049	X U.S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Bill Lawton, Spokesman for Robert L. and Kip C. Wood M. Howard Goldman Timothy R. And Judy L. Milburn 3145 Osprey Road Eagle, ID 83616	_____ U.S. Mail X Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Norman Edwards 884 W Beacon Light Road Eagle, ID 83616	_____ U.S. Mail X Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail
Jeffrey C. Fereday GIVENS PURSLEY LLP 601 West Bannock Street PO Box 2720 Boise, ID 83701-2720	X U.S. Mail _____ Hand Delivered _____ Overnight Mail _____ Facsimile _____ E-mail