

RECEIVED

NOV 08 2011

Department of Water Resources
Eastern RegionSTATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

APPLICATION FOR TRANSFER OF WATER RIGHT – POINT(S) OF DIVERSION

This form may be used to apply to change and/or add points of diversion for existing water rights and to report an ownership change for an entire water right(s) in connection with the proposed point of diversion change(s). Do not use this form to apply for changes to other elements of a water right or to report an ownership change for a portion of a water right. See the [Application for Transfer Instructions](#) for help completing this form and for mailing addresses of Department offices where your application can be submitted.

Check all that apply:

☐ Change diversion point(s)☒ Add diversion point(s)☐ Ownership change1. APPLICANT(S) Parkinson Farms Phone 208-527-31612. MAILING ADDRESS 2253 N 3100 W City ArcoState Idaho Zip 83213 Email _____☐ If the applicant is not an individual and not registered to do business in the State of Idaho, attach documentation identifying officers authorized to sign for the applicant.☐ If the applicant is not the current water right(s) owner, attach documentation of authority to file the application.☐ If the application includes a change in ownership of water right(s), attach a copy of the conveyance document, such as a warranty deed, court decree, contract of sale, etc. The conveyance document must include a legal description of the property conveyed or description of the water right if no land is conveyed. Additional fee(s) required for water right ownership changes; see [fee schedule](#).☐ If the application is not signed by the applicant, attach a Power of Attorney or other documentation providing authority to sign for the applicant.3. LIST WATER RIGHT NUMBER(S) 34-4008 34-2497, 34-2490☒ Attach a copy of the water right(s) as recorded, available at www.idwr.idaho.gov, *Water Right Transfers, Step 1*, or by contacting any Department office.4. TOTAL AMOUNT OF WATER transferred is 4.0 cubic feet per second and/or _____ acre-feet per annum.
(diversion rate) (storage volume)5. POINT OF DIVERSION – Describe all the point(s) of diversion to be included on the water right(s) after the proposed change.☒ Attach Eastern Snake Plain Aquifer (ESPA) analysis if this transfer proposes to change a point of diversion affecting the ESPA. ESPA analysis information is available at www.idwr.idaho.gov, *Water Right Transfers, Online Resources*.

Twp	Rge	Sec	Govt Lot	¼	¼	¼	County	Source	Local name or tag #
05N	26E	34		NE	SW	SW	Butte	Ground water	
04N	26E	26		NW	NW	NW	Butte	Ground water (POI)	
04N	26E	26		NW	NW	NW	Butte	Ground water (POR)	
03N	26E	11		NE	NE	SE	Butte	Ground water	
03N	26E	11		NE	NE	SE	Butte	Ground water	
03N	26E	11		NW	NE	SW	Butte	Ground water	
03N	26E	14		NE	NE	SE	Butte	Ground water	

6. GENERAL INFORMATION

- a. Describe the complete diversion system, including how you will accommodate a measuring device and lockable controlling works should they be required now or in the future:

Point of diversion located in the NESWSW of 05N, 26E, Sec. ³⁴ pumps water into the ^{Island Canal, then} East Side ^{Canal} Ditch, injects and re-diverts from the Big Lost into the Munsey Ditch. Other diversions consist of pumps, mainline, to pivots and sprinkler

- b. Who owns the property at the point(s) of diversion? Applicant, James and Colleen Babcock

If other than the applicant, describe the arrangement enabling the applicant to access the property for the diversion system:
Easement agreement

- c. To your knowledge, has/is any portion of the water right(s) proposed to be changed:

Yes No

- ☐ ☒ undergone a period of five or more consecutive years of non-use,
☐ ☒ currently leased to the Water Supply Bank,
☐ ☒ currently used in a mitigation plan limiting the use of water under the right(s), or
☐ ☒ currently enrolled in a Federal set-aside program limiting the use of water under the right(s)?

If yes, describe _____

7. **MAP** - ☒ Attach a map of the diversion, measurement, control and distribution system. Clearly label the map with township, range, section and $\frac{1}{4}$ $\frac{1}{4}$ of section information. The *Map Tool*, available at <http://maps.idwr.idaho.gov/TransferApplicationLayouts/> provides a satisfactory template for creating the required map.

8. **SIGNATURE** - The information in this application is true to the best of my knowledge. I understand any willful misrepresentations in this application may result in rejection of the application or cancellation of an approval.

Ralph S. Parkinson
Signature of applicant or authorized agent
For Parkinson Farms

RALPH S. PARKINSON
Print name and title if applicable

Nov 8, 2011
Date

Signature of applicant or authorized agent

Print name and title if applicable

Date

9. **FEE** - ☐ The application filing fee provided in Section 42-221, Idaho Code, must be submitted with the application for transfer. The Application fee is based on the total amount of water proposed for transfer in Item 4: the larger fee for either cubic feet per second (diversion rate) or acre-feet per annum (storage volume). The *Fee Schedule* is available at www.idwr.idaho.gov, *Water Right Transfers, Step 4* and in the *Application for Transfer Instructions*.

FOR DEPARTMENT USE ONLY

Transfer includes _____ pages of attachments.

Received by Blue

Date 11/8/2011

Fee paid 4740.00

Date 11/8/2011

Received by Blue

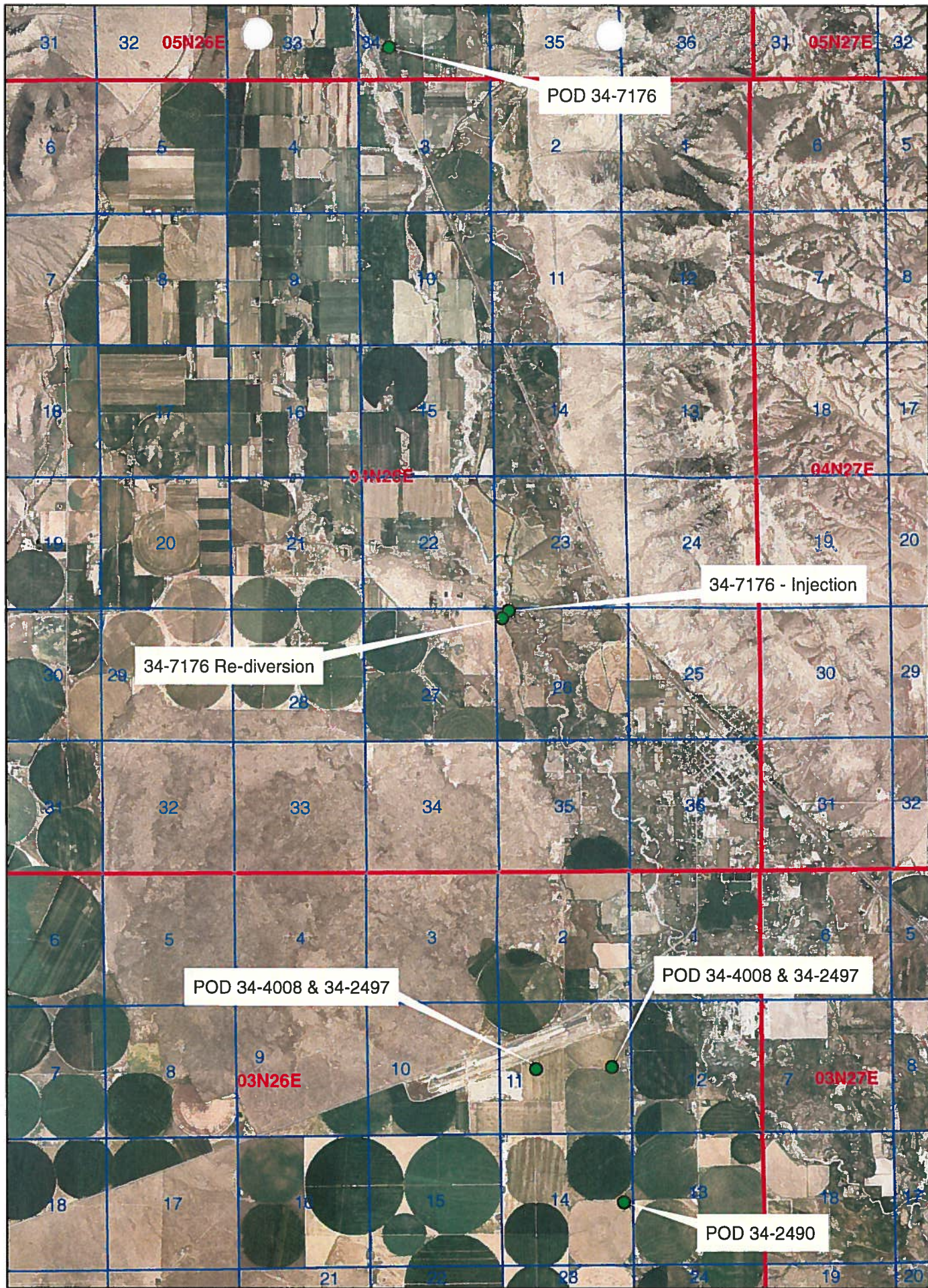
Receipt # E037107

Preliminary review completed by _____

Date _____

Proposed Transfer Narrative.

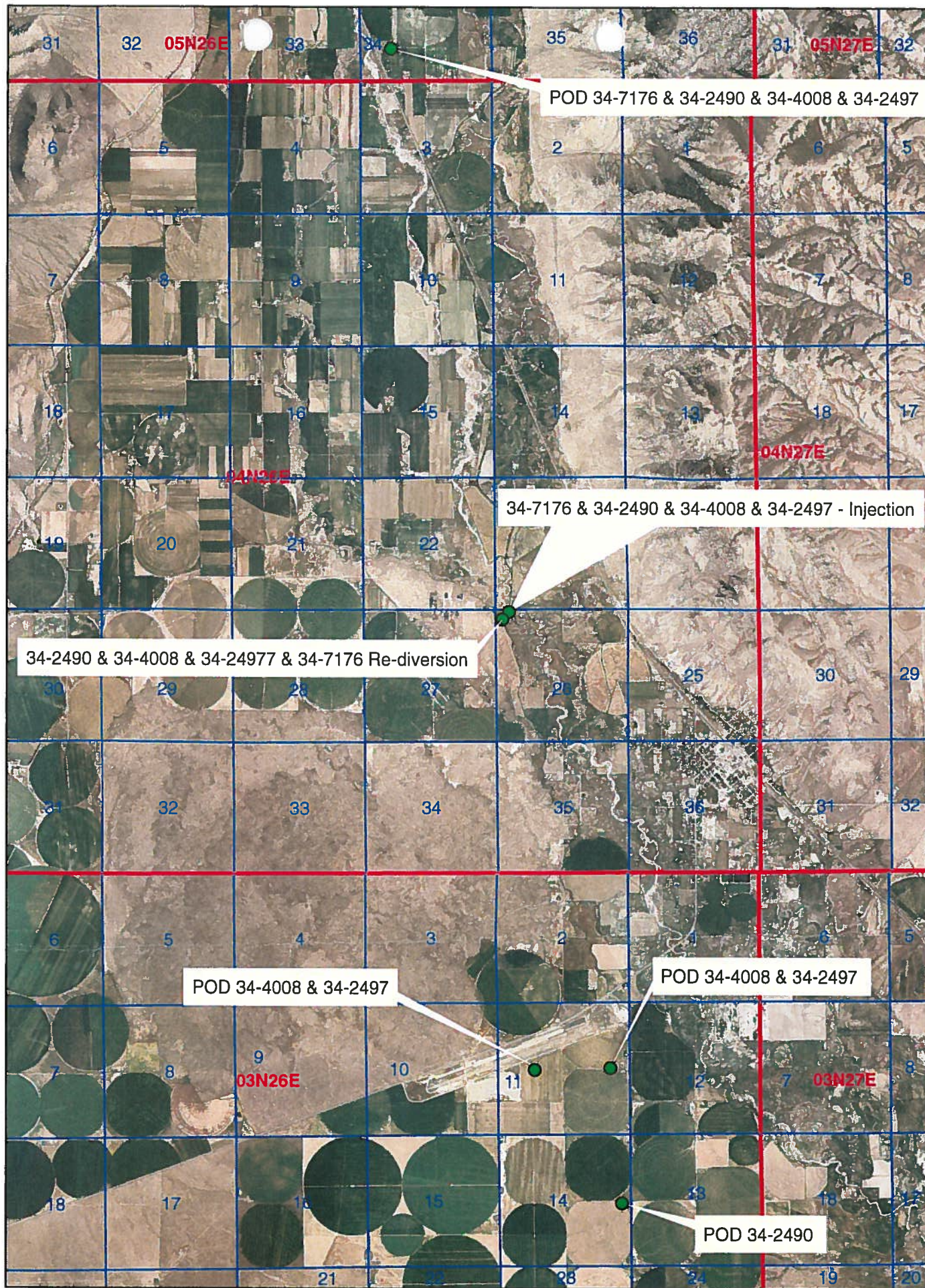
This transfer proposes to add points of diversion for water rights 34-4008, 34-2497 and 34-2490. This transfer seeks to transfer a combined total of 4.0 cfs to an existing point of diversion located in the NESWSW of 05N, 26E, Section 34. The water will be diverted into the Island canal, which is then dumps into the East Side canal, then injected into and re-diverted from the Big Lost River into the Munsey canal, where it will then be used through an existing pivots and sprinkler system.



Current Points of Diversion

77 61 0

0 0.5 1 2 Miles



New Points of Diversion

77 61 0

0 0.5 1 2 Miles

IDAHO DEPARTMENT OF WATER RESOURCES

Water Right Report 34-4008

WATER RIGHT NUMBER: 34-4008

<u>Owner Type</u>	<u>Name and Address</u>
Current Owner	PARKINSON FARMS 2253 N 3100 W ARCO, ID 83213 (208)527-3161
Original Owner	FARM CREDIT BANK OF SPOKANE 409 SHOSHONE S STE 25 PO BOX 308 TWIN FALLS, ID 83303-0308 (208)734-0882
Directors Report Owner	RALPH S PARKINSON RT 1 BOX 228 ARCO, ID 83213 (208)527-3161

Priority Date: 04/01/1967

Basis: Decreed

Status: Active

SourceTributary

GROUND WATER

<u>Beneficial Use</u>	<u>From</u> <u>To</u>	<u>Diversion Rate</u>	<u>Annual Volume</u>
IRRIGATION	4/01 to 10/31	2.600 CFS	
	<u>Total Diversion:</u>	2.600 CFS	

Location of Point(s) of Diversion

GROUND WATER	NE1/4NE1/4SE1/4	Sec. 11, Twp 03N, Rge 26E, B.M.
BUTTE County		
GROUND WATER	NW1/4NE1/4SW1/4	Sec. 11, Twp 03N, Rge 26E, B.M.
BUTTE County		

Place of Use

IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	26E	10													20.0			37.0	57.0
03N	26E	11	7.0		34.0	37.0			7.0	21.0	40.0	40.0	40.0	40.0	38.0	40.0	40.0	39.0	423.0

Total Acres: 480

Conditions of Approval:

IDAHO DEPARTMENT OF WATER RESOURCES

Water Right Report 34-4008

1. USE OF THIS RIGHT WITH RIGHT NOS. 34-02497, 34-02505 AND 34-02506 IS LIMITED TO THE IRRIGATION OF A COMBINED TOTAL OF 472 ACRES IN A SINGLE IRRIGATION SEASON.
USE OF THIS RIGHT WITH RIGHT NOS. 34-00635, 34-02289, 34-02490, 34-02497, 34-02505, 34-02506, 34-07145 AND 34-10393 IS LIMITED TO THE IRRIGATION OF A COMBINED TOTAL OF 786 ACRES IN A SINGLE IRRIGATION SEASON.
USE OF THIS RIGHT WITH THE RIGHTS LISTED BELOW IS LIMITED TO THE IRRIGATION OF A COMBINED TOTAL OF 885 ACRES IN A SINGLE IRRIGATION SEASON.
COMBINED RIGHT NOS.: 34-00635, 34-02289, 34-02313, 34-02490, 34-02497, 34-02505, 34-02506, 34-07145, 34-07176, 34-10393 AND 34-12368.
THIS RIGHT IS LIMITED TO THE IRRIGATION OF 200 ACRES WITHIN THE PLACE OF USE DESCRIBED ABOVE IN A SINGLE IRRIGATION SEASON.
2. C03 RIGHT INCLUDES ACCOMPLISHED CHANGE IN POINT OF DIVERSION PURSUANT TO SECTION 42-1425, IDAHO CODE.
3. C05 RIGHT INCLUDES ACCOMPLISHED CHANGE IN PLACE OF USE PURSUANT TO SECTION 42-1425, IDAHO CODE.
4. TWO POINTS OF DIVERSION LOCATED IN T03N, R26E, S11, NENESE.
5. USE OF THIS RIGHT WITH RIGHT NOS. 34-02497, 34-02505 AND 34-02506 IS LIMITED TO A TOTAL COMBINED DIVERSION RATE OF 5.32 CFS.
USE OF THIS RIGHT WITH RIGHTS LISTED BELOW IS LIMITED TO A TOTAL COMBINED DIVERSION RATE OF 21.62 CFS AND A TOTAL COMBINED ANNUAL DIVERSION VOLUME OF 3784.0 AF.
COMBINED RIGHT NOS.: 34-00635, 34-02289, 34-02313, 34-02490, 34-02497, 34-02505, 34-02506, 34-07145, 34-07176, 34-10393 AND 34-12368.
6. C18 THIS PARTIAL DECREE IS SUBJECT TO SUCH GENERAL PROVISIONS NECESSARY FOR THE DEFINITION OF THE RIGHTS OR FOR THE EFFICIENT ADMINISTRATION OF THE WATER RIGHTS AS MAY BE ULTIMATELY DETERMINED BY THE COURT AT A POINT IN TIME NO LATER THAN THE ENTRY OF A FINAL UNIFIED DECREE. SECTION 42-1412(6), IDAHO CODE.
7. THE FOLLOWING RIGHTS ARE ALSO DIVERTED THROUGH POINTS OF DIVERSION DESCRIBED ABOVE: 34-02497, 34-02505 AND 34-02506.

Remarks:

IDAHO DEPARTMENT OF WATER RESOURCES

Water Right Report 34-2490

WATER RIGHT NUMBER: 34-2490

<u>Owner Type</u>	<u>Name and Address</u>
Directors Report Owner	RALPH S PARKINSON RT 1 BOX 228 ARCO, ID 83213 (208)527-3161
Original Owner	MOUNTY L DICK PO BOX 67 ARCO, ID 83213
Current Owner	PARKINSON FARMS 2253 N 3100 W ARCO, ID 83213 (208)527-3161
Original Owner	N RULON BURKE 3490 W 3600 N MOORE, ID 83255-8731

Priority Date: 10/25/1966

Basis: Decreed

Status: Active

<u>Source</u>	<u>Tributary</u>
GROUND WATER	

<u>Beneficial Use</u>	<u>From</u>	<u>To</u>	<u>Diversion Rate</u>	<u>Annual Volume</u>
IRRIGATION	4/01	to 11/01	2.090 CFS	
	<u>Total Diversion:</u>		2.090 CFS	

Location of Point(s) of Diversion

GROUND WATER	NE1/4NE1/4SE1/4	Sec. 14, Twp 03N, Rge 26E, B.M.
BUTTE County		

Place of Use

IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	26E	14													36.5	37.5	40.0	39.0	153.0
03N	26E	23	39.0	40.0	37.5	36.5													153.0

Total Acres: 306

Conditions of Approval:

IDAHO DEPARTMENT OF WATER RESOURCES

Water Right Report 34-2490

1. C18 THIS PARTIAL DECREE IS SUBJECT TO SUCH GENERAL PROVISIONS NECESSARY FOR THE DEFINITION OF THE RIGHTS OR FOR THE EFFICIENT ADMINISTRATION OF THE WATER RIGHTS AS MAY BE ULTIMATELY DETERMINED BY THE COURT AT A POINT IN TIME NO LATER THAN THE ENTRY OF A FINAL UNIFIED DECREE. SECTION 42-1412(6), IDAHO CODE.
2. USE OF THIS RIGHT WITH RIGHT NOS. 34-02289 AND 34-10393 IS LIMITED TO A TOTAL COMBINED DIVERSION RATE OF 3.09 CFS.
USE OF THIS RIGHT WITH RIGHTS LISTED BELOW IS LIMITED TO A TOTAL COMBINED DIVERSION RATE OF 21.62 CFS AND A TOTAL COMBINED ANNUAL DIVERSION VOLUME OF 3784.0 AF.
COMBINED RIGHT NOS.: 34-00635, 34-02289, 34-02313, 34-02497, 34-02505, 34-02506, 34-04008, 34-07145, 34-07176, 34-10393 AND 34-12368.
3. E16 THIS WATER RIGHT SHALL BE ADMINISTERED AS SEPARATE FROM THE BIG LOST RIVER AND ITS TRIBUTARIES.
4. THE FOLLOWING RIGHTS ARE ALSO DIVERTED THROUGH POINT OF DIVERSION DESCRIBED ABOVE: 34-02289 AND 34-10393.
RIGHT NO. 34-10393 IS AN EXPANSION OF THIS RIGHT PURSUANT TO SECTION 42-1426, IDAHO CODE.
5. C05 RIGHT INCLUDES ACCOMPLISHED CHANGE IN PLACE OF USE PURSUANT TO SECTION 42-1425, IDAHO CODE.
6. USE OF THIS RIGHT WITH RIGHT NOS. 34-02289, 34-10393 AND 34-00635 IS LIMITED TO IRRIGATION OF A COMBINED TOTAL OF 306 ACRES IN A SINGLE IRRIGATION SEASON.
USE OF THIS RIGHT WITH RIGHT NOS. 34-00635, 34-02289, 34-02497, 34-02505, 34-02506, 34-04008, 34-07145 AND 34-10393 IS LIMITED TO THE IRRIGATION OF A COMBINED TOTAL OF 786 ACRES IN A SINGLE IRRIGATION SEASON.
USE OF THIS RIGHT WITH THE RIGHTS LISTED BELOW IS LIMITED TO THE IRRIGATION OF A COMBINED TOTAL OF 885 ACRES IN A SINGLE IRRIGATION SEASON.
COMBINED RIGHT NOS.: 34-00635, 34-02289, 34-02313, 34-02497, 34-02505, 34-02506, 34-04008, 34-07145, 34-07176, 34-10393 AND 34-12368.
THIS RIGHT IS LIMITED TO THE IRRIGATION OF 119 ACRES WITHIN THE PLACE OF USE DESCRIBED ABOVE IN A SINGLE IRRIGATION SEASON.

Remarks:

IDAHO DEPARTMENT OF WATER RESOURCES

Water Right Report 34-2497

WATER RIGHT NUMBER: 34-2497

<u>Owner Type</u>	<u>Name and Address</u>
Current Owner	PARKINSON FARMS 2253 N 3100 W ARCO, ID 83213 (208)527-3161
Original Owner	FARM CREDIT BANK OF SPOKANE 409 SHOSHONE S STE 25 PO BOX 308 TWIN FALLS, ID 83303-0308 (208)734-0882
Directors Report Owner	RALPH S PARKINSON RT 1 BOX 228 ARCO, ID 83213 (208)527-3161

Priority Date: 09/27/1966

Basis: Decreed

Status: Active

<u>Source</u>	<u>Tributary</u>
GROUND WATER	

<u>Beneficial Use</u>	<u>From</u> <u>To</u>	<u>Diversion Rate</u>	<u>Annual Volume</u>
IRRIGATION	4/01 to 10/31	0.570 CFS	
	<u>Total Diversion:</u>	0.570 CFS	

Location of Point(s) of Diversion

GROUND WATER	NE1/4NE1/4SE1/4	Sec. 11, Twp 03N, Rge 26E, B.M.
BUTTE County		
GROUND WATER	NW1/4NE1/4SW1/4	Sec. 11, Twp 03N, Rge 26E, B.M.
BUTTE County		

Place of Use

IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	26E	10													20.0			37.0	57.0
03N	26E	11	7.0		34.0	37.0			7.0	21.0	40.0	40.0	40.0	40.0	38.0	40.0	40.0	39.0	423.0

Total Acres: 480

Conditions of Approval:

IDAHO DEPARTMENT OF WATER RESOURCES

Water Right Report 34-2497

1. USE OF THIS RIGHT WITH RIGHT NOS. 34-02505, 34-02506 AND 34-04008 IS LIMITED TO THE IRRIGATION OF A COMBINED TOTAL OF 472 ACRES IN A SINGLE IRRIGATION SEASON.
USE OF THIS RIGHT WITH RIGHT NOS. 34-00635, 34-02289, 34-02490, 34-02505, 34-02506, 34-04008, 34-07145 AND 34-10393 IS LIMITED TO THE IRRIGATION OF A COMBINED TOTAL OF 786 ACRES IN A SINGLE IRRIGATION SEASON.
USE OF THIS RIGHT WITH THE RIGHTS LISTED BELOW IS LIMITED TO THE IRRIGATION OF A COMBINED TOTAL OF 885 ACRES IN A SINGLE IRRIGATION SEASON.
COMBINED RIGHT NOS.: 34-00635, 34-02289, 34-02313, 34-02490, 34-02505, 34-02506, 34-04008, 34-07145, 34-07146, 34-10393 AND 34-12368.
THIS RIGHT IS LIMITED TO THE IRRIGATION OF 55 ACRES WITHIN THE PLACE OF USE DESCRIBED ABOVE IN A SINGLE IRRIGATION SEASON.
2. C05 RIGHT INCLUDES ACCOMPLISHED CHANGE IN PLACE OF USE PURSUANT TO SECTION 42-1425, IDAHO CODE.
3. TWO POINTS OF DIVERSION LOCATED IN T03N, R26E, S11, NENESE.
4. USE OF THIS RIGHT WITH RIGHT NOS. 34-02505, 34-02506 AND 34-04008 IS LIMITED TO A TOTAL COMBINED DIVERSION RATE OF 5.32 CFS.
USE OF THIS RIGHT WITH THE RIGHTS LISTED BELOW IS LIMITED TO A TOTAL COMBINED DIVERSION RATE OF 21.62 CFS AND A TOTAL COMBINED ANNUAL DIVERSION VOLUME OF 3784.0 AF.
COMBINED RIGHT NOS.: 34-00635, 34-02289, 34-02313, 34-02490, 34-02505, 34-02506, 34-04008, 34-07145, 34-07146, 34-10393 AND 34-12368.
5. C18 THIS PARTIAL DECREE IS SUBJECT TO SUCH GENERAL PROVISIONS NECESSARY FOR THE DEFINITION OF THE RIGHTS OR FOR THE EFFICIENT ADMINISTRATION OF THE WATER RIGHTS AS MAY BE ULTIMATELY DETERMINED BY THE COURT AT A POINT IN TIME NO LATER THAN THE ENTRY OF A FINAL UNIFIED DECREE. SECTION 42-1412(6), IDAHO CODE.
6. THE FOLLOWING RIGHTS ARE ALSO DIVERTED THROUGH POINTS OF DIVERSION DESCRIBED ABOVE: 34-02505, 34-02506 AND 34-04008.
7. C03 RIGHT INCLUDES ACCOMPLISHED CHANGE IN POINT OF DIVERSION PURSUANT TO SECTION 42-1425, IDAHO CODE.

Remarks:

BIG LOST RIVER IRRIGATION DISTRICT

P.O. BOX 205 · MACKAY, IDAHO 83251 · (208) 588-2231 · FAX: (208) 588-2863

Ralph Parkinson
2253N 3100W
Arco, Idaho 83213

Dear Ralph:

Thank you for presenting your request to the Big Lost River Irrigation District's (BLRID) Board of Directors at its April 5, 2011 meeting. As you are aware, the board via motion agreed to approve your pump test for your plans to increase the CFS transported through BLRID canal system. Please also accept this as our authorization that the approved transfer would not exceed our canal capacities. Thus at this point, there is sufficient room to transport the additional requested CFS. Please let Jim and Kyle know when you plan on performing the tests.

Following your approved transfer, we request that you finalize our transport agreement for the increased CFS usage.

Sincerely,



James Rindfleisch Mgr, Big Lost River Irrigation District

Parkinson - Island well
Parkinson Tel

Telford

14 5
472" 472"

472² 470³

4704 *off*

475" 



Watermaster District #34

~~Henrik Pihlman~~ Pihlman, H. C. 1866

77 61 0

9/22/11

TAX MASTER INQUIRY - BUTTE COUNTY

PMPKEY: RP 03N26E110551 A YEAR 2010

BILL# 1691

TXPKEY: RP03N26E110551A

BILLED TO: PARKINSON FARMS

NAME PARKINSON FARMS

CODE AREA 4-0000

ACCT TYP

BANK

FLB

OWNER

PUP

ADDRESS 2195 N 3000 W

MARKET VALUE

300,760

HARDSHIP

HOMEOWNER

NET MARKET

300,760

TAX AMOUNT

3,849.10

LEGAL FR N2 T# 30-72 LESS AIRPORT
& LESS T#32923

LESS: CIRCUIT

PLUS: SPECIALS

S2

NET TAX BILLED

3,849.10

SEC 11

TAX PAYMENTS

3,849.10

TAX CANCELLED

SPEC CANCELLED

REMAINING TAX DUE

TA AMOUNT(PMPKEY)

NEXT PARCEL# RP _____ A OR NEXT BILL# RP _____ 2010

F3=EXIT F14=OTHER TAXES F2=PRT SCREEN F5=PAYMNTS F6=TRANSACTIONS F24=MORE
F4=TAX COMMENTS

9/22/11

TAX MASTER INQUIRY - BUTTE COUNTY

PMPKEY: RP 03N26E107200 A YEAR 2010

BILL# 1686

TXPKEY: RP03N26E107200A

BILLED TO: PARKINSON FARMS

NAME PARKINSON FARMS

CODE AREA 4-0000

ACCT TYP

BANK

FLB

OWNER

PUP

ADDRESS 2195 N 3000 W

MARKET VALUE

25,280

HARDSHIP

HOMEOWNER

NET MARKET

25,280

TAX AMOUNT

323.50

LEGAL FR NE4SE4 T# 3-66 LESS T#19859

LESS: CIRCUIT

& LESS AIRPORT

PLUS: SPECIALS

SE4SE4 LESS T# 32-80

NET TAX BILLED

323.50

SEC 10

TAX PAYMENTS

323.50

TAX CANCELLED

SPEC CANCELLED

REMAINING TAX DUE

TA AMOUNT(PMPKEY)

NEXT PARCEL# RP _____ A OR NEXT BILL# RP _____ 2010

F3=EXIT F14=OTHER TAXES F2=PRT SCREEN F5=PAYMNTS F6=TRANSACTIONS F24=MORE

F4=TAX COMMENTS

9/22/11

TAX MASTER INQUIRY - BUTTE COUNTY

PMPKEY: RP 03N26E230002 A YEAR 2010

BILL# 1741

TXPKEY: RP03N26E230002A

BILLED TO: PARKINSON FARMS

NAME PARKINSON FARMS

CODE AREA 4-0000

ACCT TYP

BANK

FLB

OWNER

PUP

ADDRESS 2195 N 3000 W

MARKET VALUE

74,400

HARDSHIP

HOMEOWNER

ARCO

ID 83213

NET MARKET

74,400

TAX AMOUNT

952.14

LEGAL

N2NE4

LESS: CIRCUIT

SE4NE4

PLUS: SPECIALS

SW4NE4

NET TAX BILLED

952.14

SEC 23

TAX PAYMENTS

952.14

TAX CANCELLED

SPEC CANCELLED

REMAINING TAX DUE

TA AMOUNT (PMPKEY)

NEXT PARCEL# RP _____ A OR NEXT BILL# RP _____ 2010

F3=EXIT F14=OTHER TAXES F2=PRT SCREEN F5=PAYMNTS F6=TRANSACTIONS F24=MORE

F4=TAX COMMENTS

9/22/11

TAX MASTER INQUIRY - BUTTE COUNTY

PMPKEY: RP 03N26E147200 A YEAR 2010

BILL# 1717

TXPKEY: RP03N26E147200A

BILLED TO: PARKINSON FARMS

NAME PARKINSON FARMS

CODE AREA 4-0000

ACCT TYP

BANK

FLB

OWNER

PUP

ADDRESS 2195 N 3000 W

MARKET VALUE

73,238

HARDSHIP

HOMEOWNER

ARCO

ID 83213

NET MARKET

73,238

TAX AMOUNT

937.26

LEGAL SE4

LESS: CIRCUIT

SEC 14

PLUS: SPECIALS

NET TAX BILLED

937.26

TAX PAYMENTS

937.26

TAX CANCELLED

SPEC CANCELLED

REMAINING TAX DUE

TA AMOUNT(PMPKEY)

NEXT PARCEL# RP _____ A OR NEXT BILL# RP _____ 2010

F3=EXIT F14=OTHER TAXES F2=PRT SCREEN F5=PAYMNTS F6=TRANSACTIONS F24=MORE
F4=TAX COMMENTS

9/22/11

TAX MASTER INQUIRY - BUTTE COUNTY

PMPKEY: RP 03N27E182400 A YEAR 2010

BILL# 1880

TXPKEY: RP03N27E182400A

BILLED TO: PARKINSON FARMS

NAME PARKINSON FARMS

CODE AREA 4-0000

ACCT TYP

BANK

FLB

OWNER

PUP

ADDRESS 2195 N 3000 W

MARKET VALUE

40,211

HARDSHIP

HOMEOWNER

NET MARKET

40,211

TAX AMOUNT

514.60

LEGAL LOT 1 (NW4NW4) LESS T#10-81

LESS: CIRCUIT

& LESS T#37082;

PLUS: SPECIALS

LOT 2 (SW4NW4); E2NW

NET TAX BILLED

514.60

SEC 18

TAX PAYMENTS

514.60

TAX CANCELLED

SPEC CANCELLED

REMAINING TAX DUE

TA AMOUNT(PMPKEY)

NEXT PARCEL# RP _____ A OR NEXT BILL# RP _____ 2010

F3=EXIT F14=OTHER TAXES F2=PRT SCREEN F5=PAYMNTS F6=TRANSACTIONS F24=MORE

F4=TAX COMMENTS

EASEMENT FOR IRRIGATION WELL

THIS AGREEMENT, Made this 8 day of April, 1997, by and between JAMES S. BABCOCK and COLLEEN BABCOCK, Husband and Wife, of Butte County, Idaho, hereinafter called "Grantors", and PARKINSON FARMS, a partnership, of Butte County, Idaho, hereinafter called "Grantee".

WITNESSETH:

For Value Received, Grantors hereby grant, bargain, sell and convey to Grantee, an Easement and Right-of-Way across the SW1/4, SW1/4, Sec. 34, R26 EBM T. 5 N, for the purpose of repair, maintenance, operation, and reconstruction of a 20" by 160' irrigation well drilled and equipped in 1977. It is understood and agreed that Grantee shall be responsible for, and obligated to pay, all costs of repair, reconstruction, maintenance and operation of well and associated electrical equipment. Water will be discharged into the Island Canal to be transported to appurtenant land.

This Easement and Right-of-Way shall be perpetual, and shall insure to the benefit of and be deemed appurtenant to the described lands of Grantee.

127

IN WITNESS WHEREOF, The parties have set their hands this 8 day of April, 1997.

Grantors:

James S. Babcock

James S. Babcock

Colleen Babcock

Colleen Babcock

Grantee:

PARKINSON FARMS, a partnershipRalph S. Parkinson

Ralph S. Parkinson: partner

STATE OF IDAHO)

: ss.

County of Butte)

On this 8th day of April, 1997, before me, the undersigned, a Notary Public in and for said State, personally appeared JAMES S. BABCOCK and COLLEEN BABCOCK and RALPH S. PARKINSON for PARKINSON FARMS, known to me to be the persons whose names are subscribed to this instrument, and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

(SEAL)

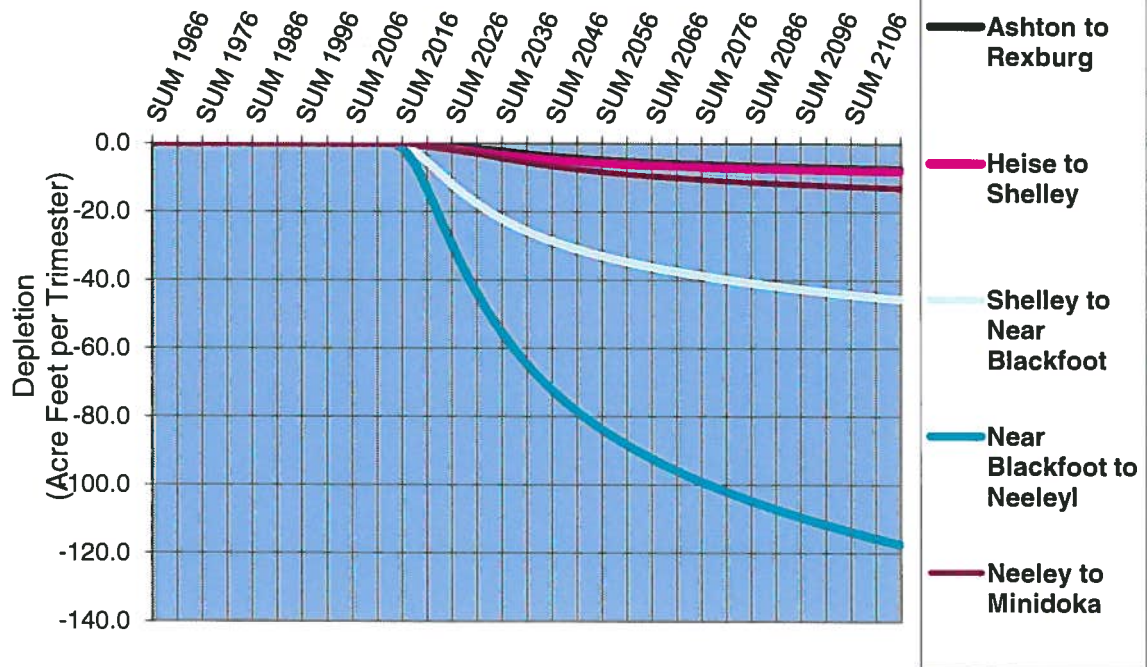
Ralph S. Parkinson

Notary Public for State of Idaho

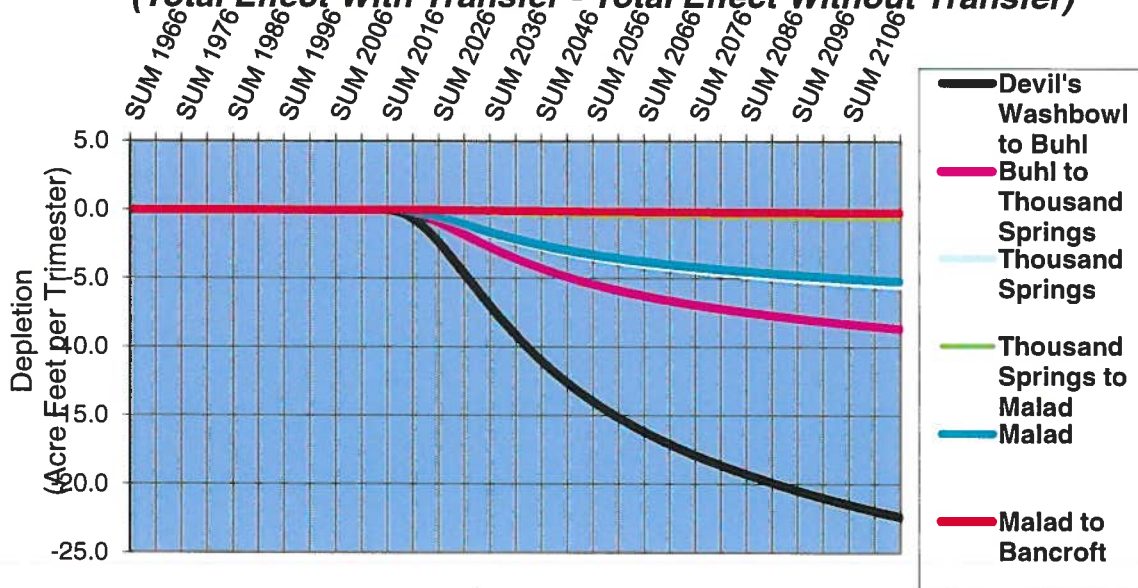
Residing at Arco, Idaho

My Commission Expires 2-27-2003

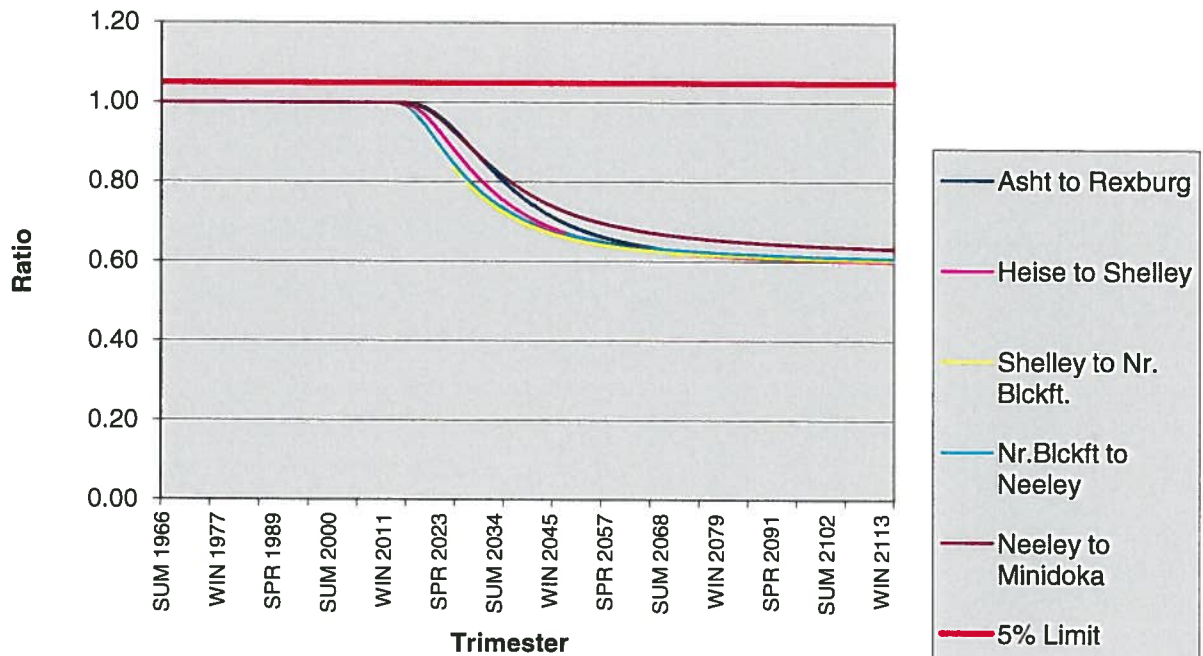
Net Transfer Effect Above Milner (Total Effect With Transfer - Total Effect Without Transfer)



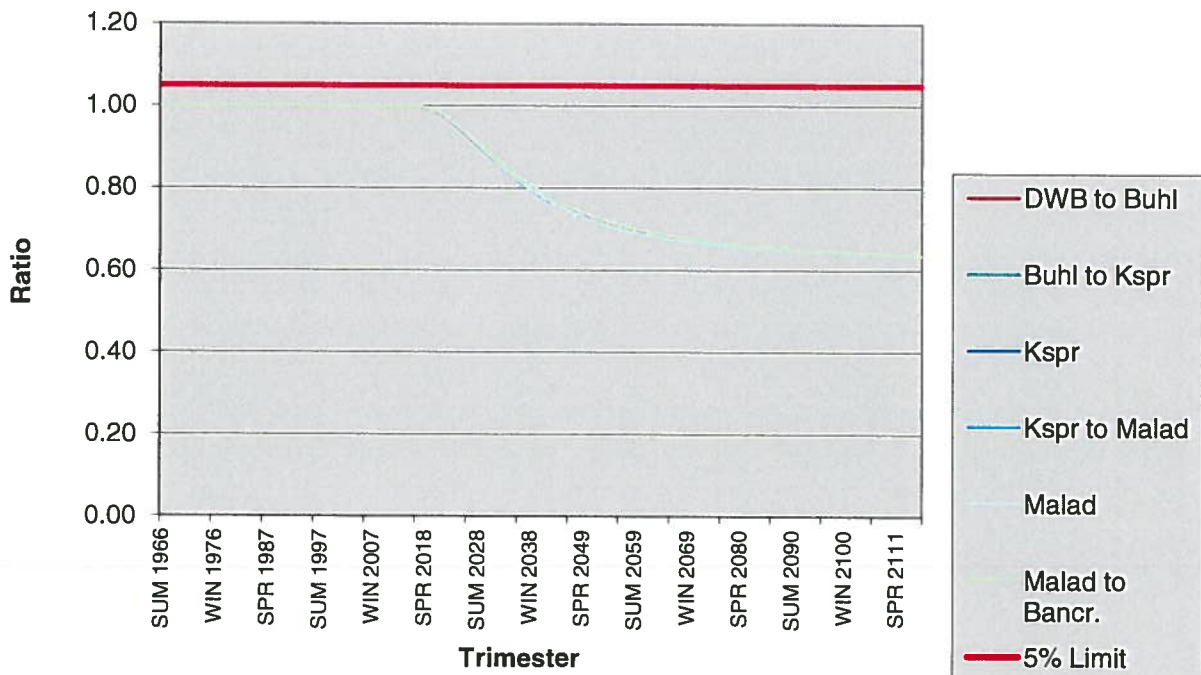
Net Transfer Effect Below Milner (Total Effect With Transfer - Total Effect Without Transfer)



Change Above Milner as Ratio of Impact With Transfer to Impact Without Transfer



Change Below Milner as Ratio of Impact With Transfer to Impact Without Transfer

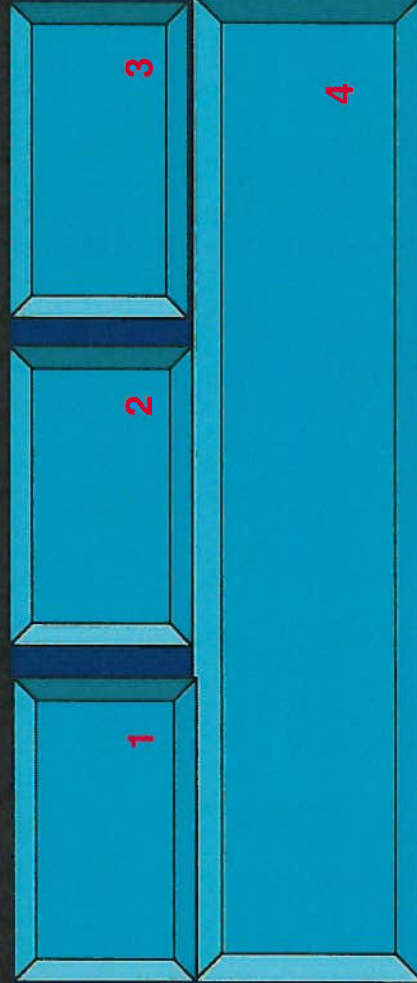


ENHANCED GROUND-WATER RIGHTS

UNIVERSITY OF IDAHO - IDAHO WATER RESOURCES RESEARCH INSTITUTE

Cells this color are set up for user entries

ENTER STARTING DATE FOR SIMULATION. THEN PUSH "UPDATE DATES" BUTTON	
YEAR	1966
SEASON	SUMMER ▼
TRANSFER NO:	
TRANSFER NAME	
Parkinson Farms	



ENTER CELL LOCATIONS:			
ROW	'TO' CELL	'FROM1' CELL	'FROM2' CELL
	26	35	34
	111	108	109
COLUMN			

TRIMESTER OF ACTIVITY	TO WELL		FROM1 WELL		FROM2 WELL		FROM3 W	
	Protected Use AF/TRIMESTER	With Transfer AF/TRIMESTER	Without Transfer AF/TRIMESTER	With Transfer AF/TRIMESTER	Without Transfer AF/TRIMESTER	With Transfer AF/TRIMESTER	Without Transfer AF/TRIMESTER	With Transfer AF/TRIMESTER
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WIN 1966	0	139	139	139	64	64	64	64
SPR 1967	0	139	139	139	298	298	298	298
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WIN 1969	0	139	139	298	298	298
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WIN 1989	0	139	139	298	298	298

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SUM 2002	0	139	139	298	298	298
WIN 2002	0	139	139	298	298	298
SPR 2003	0	139	139	298	298	298
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WIN 2003	0	139	139	298	298	298
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WIN 2004	0	139	139	298	298	298
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SUM 2005	0	139	139	298	298	298
WIN 2005	0	139	139	298	298	298
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WIN 2008	0	139	139	298	298	298
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WIN 2009	0	139	139	298	298	298
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WIN 2010	0	139	139	298	298	298
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WIN 2011	0	139	139	298	298	298
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SPR 2013	436	0	139	0	298	0

SUM 2013	436	0	139	0	298	0
WIN 2013	436	0	139	0	298	0
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WIN 2014	436	0	139	0	298	0
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WIN 2020	436	0	139	0	298	0
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WIN 2036	436	0	139	0	298	0
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SPR 2045	436	0	139	0	298	0
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WIN 2100	436	0	139	0	298	0
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SUM 2106	436	0	139	0	298	0



October 13, 2011

Mr. Blake Jordan
Idaho Department of Water Resources
900 North Skyline Drive, Suite A
Idaho Falls, ID 83402-1718

RECEIVED

OCT 17 2011

Department of Water Resources
Eastern Region

RE: REVISED AQUIFER ANALYSIS - PARKINSON WATER RIGHT TRANSFER

Dear Mr. Jordan:

A REVISED groundwater impact assessment is provided in this report for the Ralph Parkinson Water Right transfer application near Arco, Idaho. Mr. Parkinson has been working with you on the water right transfer from his property southwest of Arco to this property near Moore. This letter provides an assessment of the impact of adding an additional 200 inches (1800 gpm) to the Moore location (Figure 1). For this impact analysis a pumping test was conducted July 28 to August 1 in the Parkinson well. The parameters from the aquifer test are used in a computer simulation to predict the potential impacts (i.e. drawdown) to neighboring wells within ½ mile of the proposed point of diversion (POD). The results of the computer analysis show that the proposed diversion rate will have a minimal or negligible impact on neighboring wells.

The lithology in this area is a series of unconsolidated gravels and sands with minor layers of clay. There is not a marker layer or geologic unit that can be correlated over distances between wells based on a comparison of the lithology recorded on the well logs. The inability to correlate geologic layers is consistent with the area being situated in a cut and fill sequence of the Big Lost River. For the purposes of this investigation it is assumed that the aquifer thickness here is 200 ft. This is based on the driller's log for the deepened Parkinson Well described below and on regional considerations of the hydrogeology. It should be noted that the aquifer is not one homogenous layer but a sequence of permeable lens of sand and gravel stringers. It is anticipated that locally the shallow aquifer is unconfined.

Parkinson Well

The Parkinson Well is located in the SW of the SW quarter of Section 34, T5N, R26E. It was originally drilled to 160 ft in 1977 using perforated 20-inch steel casing. The original well was pump tested at 4200 gpm for 9 hours and had 50 ft of drawdown. In 2010, the well was deepened to increase the water yield. The hole was drilled to 249 ft when it was noted that the water level began to drop. This is likely an indication of a deeper water bearing layer having lower hydraulic head than the upper layer. The bottom ten feet of the hole was plugged with rock and cement to seal off the lower water bearing layer and prevent co-mingling of water. The water level returned to its original level and perforated 16 inch casing was installed from 153 ft to 239 ft. The pumping test described in a later section indicates that deepening of the well was successful in increasing the well yield and decreasing the drawdown caused by pumping. The driller's reports for the original well and deepening of the Parkinson well are provided in Attachment 1.



Nearby Wells

An evaluation was made for all existing water rights within a ½ mile radius of the proposed well location. Figure 2 shows a circle of ½ mile radius centered on the Parkinson well. The circle encompasses portions of sections 34 and 33, T5N, R26E and sections 3 and 4, T4N, R26E. A search of the IDWR on-line data base indicates that there are numerous groundwater diversion permits in Sections 33, 34, 3 and 4. The results of the water right search are provided in Tables 2-1 through 2-4 in Attachment 2.

Pumping Test

A pumping test was conducted on the Parkinson Well beginning on July 28, 2011 and ending August 1, 2011 (see Figures 1 and 2). Permission was gained for one observation well ¼ mile to the south of the Parkinson Well (Figure 2). Physical access could not be obtained to the Telford Well due to its construction. Both the Parkinson Well and the Observation well were equipped with INSITU brand downhole pressure transducers to collect automated water levels during the pumping test. Flow was measured using a box weir. The pumping test began at 3:30 PM on July 28, 2011 and the well was pumped at an average rate of 5117 gpm for four days. Plots of the data can be found in Attachment 3.

Curve matching methods were conducted using the AQTESOLV aquifer test software. Output plots from the AQTESOLV analyses are presented in Attachment 3. Figure 3-4 shows the match of the data to the Theis unconfined solution. The calculated transmissivity is $2.9 \times 10^4 \text{ ft}^2/\text{day}$ and the storage coefficient is 0.37. The match of the data to the Cooper-Jacob solution is shown in Figure 3-6 and the calculated transmissivity is $3.5 \times 10^4 \text{ ft}^2/\text{day}$ with a storativity of 0.12. The calculated storage coefficient using the Theis solution, although theoretically possible, is a bit too high. The reason for this is unknown. The storage coefficient for the Cooper-Jacob solution is more realistic and for long term pumping calculations the value from the Cooper-Jacob solution are assumed. The transmissivity and storage coefficient are typical for these types of unconsolidated aquifer materials (Freeze and Cherry, 1979).

Impact Assessment

Mr. Parkinson wishes to add 200 inches or 1800 gpm flow to the water flow he already pumps from this well. For assessing the potential impact to nearby wells it is only necessary to calculate the additional drawdown caused by pumping an additional 1800 gpm and not the entire volume pumped by Mr. Parkinson, which includes previously approved water rights. This is because of linear relationship between pumping and drawdown (Freeze and Cherry, 1979).

To estimate the long-term drawdown and impact to neighboring wells from pumping of the proposed increase, the forward solution capabilities of the AQTESOLV program were employed. The input parameters to the model are listed in Table 4-1 (see Attachment 4). Boundaries in AQTESOLV were enabled as shown in Figure 4-1 to represent Big Lost River Valley. As depicted in Figure 4-1 and listed in Table 4-2 the model is 9,600 ft wide and 38,000 ft long. Because the Big Lost River Valley is bounded by mountains consisting of Paleozoic and Mesozoic sedimentary rock that do not provide as much water compared to the unconsolidated valley fill, the east and west boundaries are set as impermeable or “no flow” boundaries. Because it is known from regional ground water mapping that the direction of ground water flow is down the axis of the valley (Crosthwaite, et al., 1970) it was assumed that pumping of the



Parkinson Well would not be able to pull water upgradient from the south beyond the model domain. The southern boundary is specified as a no-flow boundary. Water is allowed to enter the model domain only through the north boundary. These boundary conditions are conservative, that is, it is expected that pumping will cause less drawdown than predicted using these boundary conditions.

Figure 4-2 shows the AQTESOLV[®] output plot of the forward calculation for the Parkinson well pumping at 1800 gpm constantly for 6 months (April 15 to Oct 15). At the end of the time period the predicted drawdown is estimated to be about 20 feet in the Parkinson well. The calculated drawdown for a well ½ mile to the east is About 5 ft. The calculated drawdown for a well ¼ mile to the south is a little less than 7 ft. In order to evaluate the sensitivity of the predictive calculation to transmissivity a second simulation was performed using the lower value of transmissivity from the pumping test data (i.e. Figure 3-4). Figure 4-3 is a plot of the results, which shows that the Parkinson well would have a drawdown of about 24 ft, the ¼ mile well a drawdown of about 8 ft and the ½ mile well a drawdown of less than 6 feet. It appears that a lower transmissivity has a greater effect on the drawdown in the Parkinson well than in the neighboring wells, implying a steeper cone of depression. It is noted that in both cases an unrealistic pumping scenario (i.e. 24/7 for 6 months) was used. It is much more likely that the well will pump intermittently for about half the period of use and the drawdown would be less. In my professional opinion, under the worse case scenario the nearest neighbor might experience about 5 or 6 feet of drawdown at the end of the season from the transferred water right. In any case the amount of drawdown caused by the transfer will be negligible for other groundwater users in the area.

River-Aquifer Interactions

The Big Lost River runs to the west of the Parkinson well and there is some concern that additional drawdown in the aquifer might reduce aquifer recharge to the river or cause more seepage to occur from the river to the aquifer. An examination of water levels measured during the pumping test indicates that either possibility is unlikely given the unsaturated zone separating the bottom of the river channel from the top of the aquifer. When the Parkinson Well was drilled in May of 1977 the static water level was reported as 20 ft below land surface by the well driller. During May and June of this year the depth to water in the Parkinson Well was 32 ft below land surface. The depth to water in the observation well was measured as 25 ft below land surface. In both locations, tens of feet separate the top of the aquifer from land surface (i.e. the bottom of the river channel). This means that in this reach of the river water from the aquifer is not recharging the river. It is physically impossible due to the separation between the bottom of the river channel and the aquifer.

The winter and spring of 2011 has been one of the wettest in recent memory and the Big Lost River was observed to be flowing. There is no doubt that in many reaches of the river and probably in the reach near the Parkinson Well that river water leaks through the gravelly river bottom to the underlying aquifer. However, even 'if' additional pumping by Parkinson under this water right caused a foot or two decline in the aquifer, leakage through the river bed would not increase. It should be noted that most of the time water does not flow in this reach of the Big Lost River. When there is no flow in the river there can be no interaction between the river and



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the aquifer. This would certainly be the case during drought periods when well pumping would be needed the most by Mr. Parkinson. It is clear that additional pumping by Parkinson of his water well will have no impact on flow in or recharge to the Big Lost River.

Conclusions

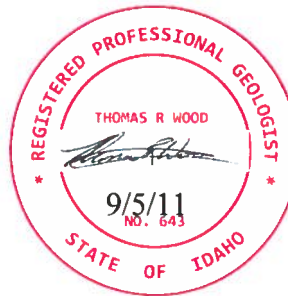
It is my professional opinion that Mr. Parkinson's water right transfer application will not excessively impact his neighbors' right to divert water, nor will it impact flow in the Big Lost River. For several reasons I believe that the calculated drawdown to the aquifer presented in this report over estimates the actual drawdown to be expected. These reasons include: 1) Mr. Parkinson will never pump continuously at the maximum rate for 180 days; 2) the Paleozoic/Mesozoic rocks of the mountains are not totally impermeable and will provide some water to the system, thus reducing drawdown, and 3) several canals and the Big Lost River are within the domain of the model and no credit for leakage from these surface water bodies is taken in the model. All of these factors will reduce the predicted drawdown presented here.

Please do not hesitate to call me if you have any questions about this letter or the calculations presented.

Respectfully,

A handwritten signature in black ink, appearing to read "Thomas R. Wood".

Thomas R. Wood, PhD, PG



cc

Mr. Ralph Parkinson, 2253 North 3100 West, Arco, ID 83213

References

- Freeze, R.A. and J.A. Cherry, 1979, Groundwater, ISBN 0-13-365312-9, Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632.
- Crosthwaite, E. G., C. A. Thomas, and K.L. Dyer, 1970, Water Resources in the Big Lost River Basin, South-Central Idaho, Open-File Report 70-93, U.S. Geological Survey.

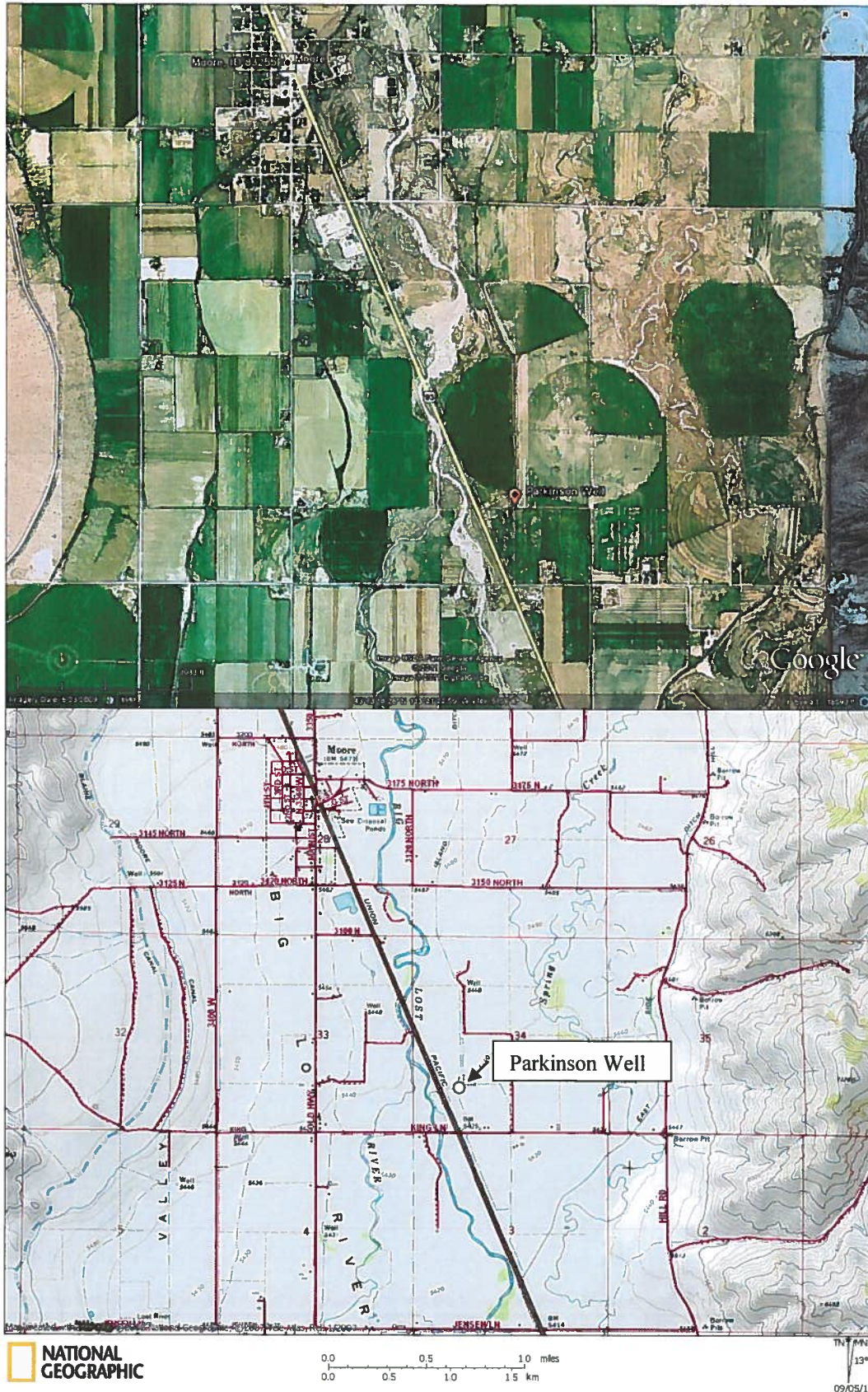


Figure 1 Google Earth image (upper) and topographic map (lower) of the Parkinson location.

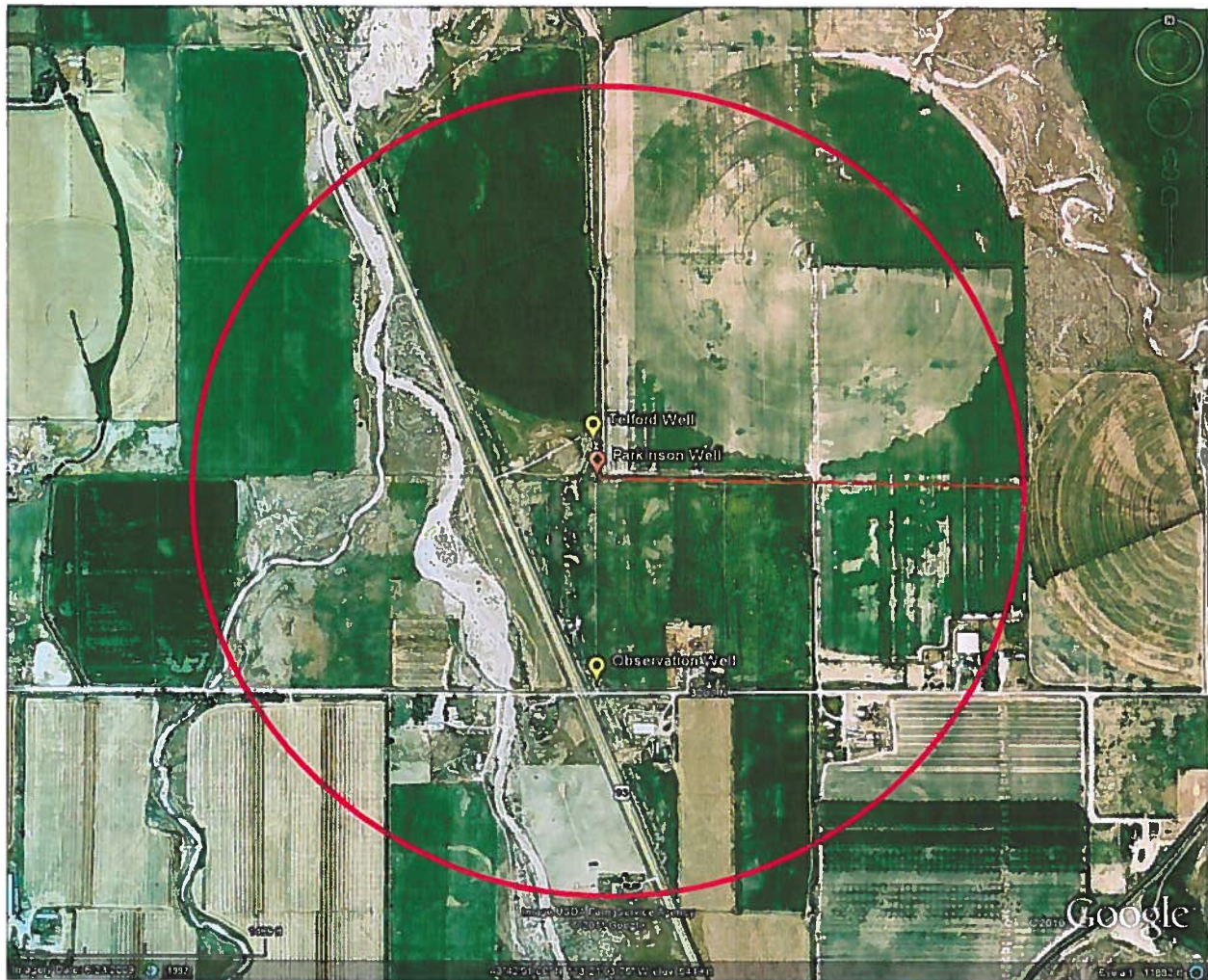


Figure 2 Google Earth image of area with a red circle of $\frac{1}{2}$ mile radius.



Attachment 1

WELL LOGS



Clearwater Geosciences, LLP
Ground Water Development and Exploration

USE TYPEWRITER OR
BALL POINT PEN

State of Idaho
Department of Water Resources
WELL DRILLER'S REPORT

RECEIVED
SEP 27 1977

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 <u>RALPH S. PARKINSON</u> <u>JAMES S. BARBOCK</u> Address <u>ARCO IDAHO 83213</u> Owner's Permit No. <u>34-7176</u>		7. WATER LEVEL Department of Water Resources Eastern District Office Static water level <u>20</u> feet below land surface Flowing? ☐ Yes ☒ No G.P.M. flow _____ Temperature _____ F. Quality <u>good</u> Artesian closed-in pressure _____ p.s.i. Controlled by ☐ Valve ☐ Cap ☐ Plug																																																							
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Abandoned (describe method of abandoning)		8. WELL TEST DATA ☒ Pump ☐ Bailor ☐ Other Discharge G.P.M. <u>4200</u> Draw Down <u>50'</u> Hours Pumped <u>9</u>																																																							
3. PROPOSED USE ☐ Domestic ☒ Irrigation ☐ Test ☐ Other (specify type) _____ ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection		9. LITHOLOGIC LOG <u>042745</u> <table border="1"><thead><tr><th>Hole Diam.</th><th>Depth From</th><th>To</th><th>Material</th><th>Water Yes</th><th>No</th></tr></thead><tbody><tr><td>20"</td><td>0</td><td>5</td><td>SOIL</td><td></td><td></td></tr><tr><td></td><td>5</td><td>15</td><td>GRAVEL</td><td></td><td></td></tr><tr><td></td><td>15</td><td>26</td><td>CLAY + GRAVEL</td><td></td><td></td></tr><tr><td></td><td>26</td><td>70</td><td>SAND + GRAVEL</td><td></td><td></td></tr><tr><td></td><td>70</td><td>77</td><td>CLAY</td><td></td><td></td></tr><tr><td></td><td>77</td><td>110</td><td>SAND + GRAVEL</td><td></td><td></td></tr><tr><td></td><td>110</td><td>118</td><td>SAND CLAY</td><td></td><td></td></tr><tr><td></td><td>118</td><td>160</td><td>SAND + GRAVEL</td><td></td><td></td></tr></tbody></table>		Hole Diam.	Depth From	To	Material	Water Yes	No	20"	0	5	SOIL				5	15	GRAVEL				15	26	CLAY + GRAVEL				26	70	SAND + GRAVEL				70	77	CLAY				77	110	SAND + GRAVEL				110	118	SAND CLAY				118	160	SAND + GRAVEL		
Hole Diam.	Depth From	To	Material	Water Yes	No																																																				
20"	0	5	SOIL																																																						
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	15	26	CLAY + GRAVEL																																																						
	26	70	SAND + GRAVEL																																																						
	70	77	CLAY																																																						
	77	110	SAND + GRAVEL																																																						
	110	118	SAND CLAY																																																						
	118	160	SAND + GRAVEL																																																						
4. METHOD DRILLED ☒ Cable ☐ Rotary ☐ Dug ☐ Other																																																									
5. WELL CONSTRUCTION Diameter of hole <u>20</u> inches Total depth <u>160</u> feet Casing schedule: ☒ Steel ☐ Concrete Thickness <u>250</u> inches Diameter <u>20</u> inches From <u>1</u> foot <u>160</u> feet Inches _____ inches _____ feet _____ 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 <u>3500</u> perforations <u>30</u> feet <u>150</u> feet <u>720</u> perforations <u>30</u> feet <u>120</u> 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 <u>20</u> Material used in seal ☐ Cement grout ☐ Pudding clay ☒ Well cuttings Sealing procedure used ☐ Shurry pit ☐ Temporary surface casing ☐ Overbore to seal depth																																																									
6. LOCATION OF WELL Sketch map location must agree with written location.  Subdivision Name _____ Lot No. _____ Block No. _____ County <u>BUTTE</u> <u>SW</u> x <u>SW</u> 1/4 Sec. <u>34</u> T. <u>5</u> N. R. <u>26</u> E. M.		10. Work started <u>May 9/77</u> finished <u>May 27/77</u>																																																							
		11. DRILLERS CERTIFICATION Firm Name <u>Butcher Well Drilling Firm</u> No. <u>326</u> Address <u>PO Box 319</u> Date <u>9/24/77</u> <u>ARCO, IDAHO 83213</u> Signed by (Firm Official) <u>J. L. Butcher</u> and <u>3664</u> (Operator) <u>J. T. Gutierrez</u>																																																							

Figure 1-1 Well log for the original Parkinson Well.



Clearwater Geosciences, LLP
Ground Water Development and Exploration

Form 238-7
11/97
10/01
Independent

RECEIVED

JAN 20 2010

Department of Water Resources
Eastern Region

IDAHO DEPARTMENT OF WATER RESOURCES

WELL DRILLER'S REPORT

Use Typewriter or Ballpoint pen

Office Use Only			
Inspected by: _____			
Twp	Rge	Sec	
1/4	1/4	1/4	
Lat:	:	:	Long: :

1 WELL TAG NO.
DRILLING PERMIT NC

Other IDWR NO. D0056967

2 OWNER:

Name: Ralph Parkinson

Address: 2253 North 3100 West

City: Arco State: ID Zip 83213

3 LOCATION OF WELL by legal description.

N E S W	Twp	<u>5</u>	☒ North	☐ South
	Rge	<u>28</u>	☒ East	☐ West
	Sec	<u>34</u>		
	1/4 8W 1/4 SW 1/4			
Gov't Lot		County <u>Butte</u>		
Lat: <u>43 42.862</u>		Long: <u>113 21.088</u>		

Address of Well Site: 2053 West 3100 North
City: Arco

(Give at least name of Road + Distance to Road or Landmark)

Lot No. _____ Bk No. _____ Subd. Name: _____

4 USE:

☐ Domestic ☐ Municipal ☐ Monitor ☒ Irrigation
☐ Thermal ☐ Injection ☐ Other

5 TYPE OF WORK:

☐ New Well ☒ Modify ☐ Abandonment ☐ Other Deepen

6 DRILL METHOD:

☐ Air Rotary ☒ Cable ☐ Mud Rotary ☐ Other

7 SEALING PROCEDURES:

SEAL/FILTER PACK		AMOUNT		Method
From	To			
Deepen				Annular

Was drive shoe used? ☒ Yes ☐ No Shoe Depth(s) -249
Was drive shoe seal tested? ☐ Yes ☒ No How? _____

8 CASING/LINER:

Dia.	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
16"	-153	-249	0.25	Steel	☒	☐	☒	☐
					☐	☐	☐	☐

Length of headpipe: _____ Length of Tailpipe: _____

9 PERFORATIONS/SCREENS:

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
-160	-244	3/16"	2400		Steel	☒	☐
						☐	☐

STATIC WATER LEVEL OR ARTESIAN PRESSURE:

46 ft below ground Artesian Pressure: _____ lb

Describe access port or control devices: Well Cap

11 WELL TESTS:

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Flowing Artesian

Yield	Drawdown	Pumping Level	Time

Water Temp _____ Cold _____ Bottom hole temp _____

Water Quality test or comments: _____

12 LITHOLOGIC LOG:

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
20	0	159	Existing 20" casing		
16	159	169	Sand & Gravel	X	
16	169	178	Clay		X
16	178	227	Gravel	X	
16	227	232	Sand & Small Gravel	X	
16	232	242	Gravel	X	
16	242	246	Clay & Gravel	X	
16	246	249	Gravel & Sand	X	
			Cut 16" casing off at -153'		
			-153 to -160 .250 blank		
			-160 to -244 .375 Perf		
			-244 to -249 .25 blank		
			Plugged bottom of hole with rock and		
			cement from -239 to -249.		

Completed Depth: 239 ft

Date Started: 11/01/09

Date Completed: 12/24/09

13 DRILLER'S CERTIFICATION:

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

Firm: Independent Drilling BF Firm No. 343

Firm Official: [Signature] Date: 1/14/2010

and

Supervisor/Operator: [Signature] Date: 1/14/2010

Figure 1-2 Parkinson Well log for modification by Independent Drilling in 2010.



Attachment 2

WATER RIGHTS



Table 2-1 Water right point of diversions in Section 34, T5N, R26E.

Basin	Sequence	Basis	Status	Priority Date	Diversion Rate	Source List	Water Uses	Owner List
34	2284	Decreed	Active	1957-08-14	1.5	GROUND WATER	IRRIGATION	FELTON FARMS LLC (Current)
34	2302	Decreed	Active	1953-02-28	3.14	GROUND WATER	IRRIGATION	SOWARDS, NORMAN K (Current)
34	2422	Decreed	Active	1961-06-09	2.4	GROUND WATER	IRRIGATION	SOWARDS, NORMAN K (Current); SOWARDS, W T (Current)
34	2480	Decreed	Active	1986-05-01	0.79	GROUND WATER	IRRIGATION	MC DONALD, DARRELL E (Current); MC DONALD, NANCY M (Current)
34	7028	Decreed	Active	1972-08-01	4.3	GROUND WATER	IRRIGATION	MC DONALD, DARRELL E (Current); MC DONALD, NANCY M (Current)
34	7037	Decreed	Active	1973-05-04	12	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7176	Decreed	Active	1977-05-29	7.8	GROUND WATER	IRRIGATION	PARKINSON FARMS (Current)
34	7228	Decreed	Active	1979-05-03	0.98	GROUND WATER	IRRIGATION	SOWARDS, NORMAN K (Current)
34	7234	Decreed	Active	1979-08-15	1.66	GROUND WATER	IRRIGATION	MC DONALD, DARRELL E (Current); MC DONALD, NANCY M (Current)
34	10050	Decreed	Active	1892-01-01	0.07	GROUND WATER	DOMESTIC, STOCKWATER	RATHBUN, MILDRED (Current); RATHBUN, WAYNE (Current)
34	10051	Decreed	Active	1980-02-15	0.06	GROUND WATER	DOMESTIC, STOCKWATER	RATHBUN, MILDRED (Current); RATHBUN, WAYNE (Current)
34	10345	Decreed	Active	1885-06-01	0.04	GROUND WATER	DOMESTIC, STOCKWATER	BABCOCK, COLLEEN (Current); BABCOCK, JAMES S (Current)
34	10869	Decreed	Active	1989-03-01	0.04	GROUND WATER	DOMESTIC, STOCKWATER	SOWARDS, NORMAN K (Current)
34	10871	Decreed	Active	1980-06-15	0.2	GROUND WATER	IRRIGATION	SOWARDS, NORMAN K (Current)
34	12045	Decreed	Active	1930-12-31	0.04	GROUND WATER	DOMESTIC	MAYNARD, CHERI (Current)
34	12047	Decreed	Active	1989-09-16	0.04	GROUND WATER	DOMESTIC	HAYS, MARY M (Current)
34	12368	Decreed	Active	1985-08-01	3.75	GROUND WATER	IRRIGATION	PARKINSON FARMS (Current)
34	13649	Decreed	Active	1923-03-16	0.02	SPRING CREEK	STOCKWATER	BOYACK, RAY MILTON (Current)



Table 2-2 Water right point of diversions in Section 33, T5N, R26E.

Basin	Sequence	Basis	Status	Priority Date	Diversion Rate	Source List	Water Uses	Owner List
34	2284	Decreed	Active	1948-07-01	1.2	GROUND WATER	IRRIGATION	FELTON FARMS LLC (Current)
34	2404	Decreed	Active	1961-03-01	1.4	GROUND WATER	IRRIGATION, STOCKWATER	SMITH, DALE E (Current)
34	2424	Decreed	Active	1961-06-13	3.03	GROUND WATER	IRRIGATION	BROWNE, JERRY L (Current)
34	2424	Decreed	Active	1961-06-13	2.27	GROUND WATER	IRRIGATION	SORENSEN, ELAINE R (Current); SORENSEN, MITCHELL D (Current)
34	7527	License	Active	1989-12-20	0.04	GROUND WATER	DOMESTIC	MUFFETT, JOHN (Current); MUFFETT, MARY (Current)
34	10152	Decreed	Active	1929-06-01	0.06	GROUND WATER	DOMESTIC, STOCKWATER	BINGHAM, LLOYD A (Current)
34	10235	Decreed	Active	1933-04-01	0.09	GROUND WATER	DOMESTIC, STOCKWATER	SMITH, DALE E (Current)
34	10245	Decreed	Active	1912-04-01	0.06	GROUND WATER	DOMESTIC, STOCKWATER	PACE, JAMES LEE (Current)
34	10276	Decreed	Active	1962-10-15	0.07	GROUND WATER	DOMESTIC, STOCKWATER	GOODSON, PATSY A (Current)
34	10313	Decreed	Active	1988-08-24	0.1	GROUND WATER	DOMESTIC, STOCKWATER	HYMAS, DONALD S (Current); HYMAS, GEORGANNA C (Current)
34	10335	Decreed	Active	1896-06-01	0.04	GROUND WATER	DOMESTIC	ESTATE OF CHESTER E HARPER (Current)
34	10367	Decreed	Active	1959-05-20	0.055	GROUND WATER	DOMESTIC	HAIL, CLARA V (Current); HAIL, VIRGIL L (Current)
34	10492	Decreed	Active	1896-06-01	0.07	GROUND WATER	DOMESTIC, STOCKWATER	WADDOUNS, LE ANNE (Current); WADDOUNS, WADE (Current)
34	10576	Decreed	Active	1983-07-07	0.06	GROUND WATER	DOMESTIC, STOCKWATER	HUTCHISON, DAVID M (Current)
34	14129	Decreed	Active	1974-02-12	1.13	GROUND WATER	IRRIGATION	BLEAK, BRUCE (Current); BLEAK, CARMA (Current)
34	14130	Decreed	Active	1974-02-12	1.26	GROUND WATER	IRRIGATION	TOELCKE, KERRI L (Current); TOELCKE, WILLIAM E (Current)



Table 2-3 Water right point of diversions in Section 3, T4N, R26E.

Basin	Sequence	Basis	Status	Priority Date	Rate	Source List	Water Uses	Owner List
34	2400	Decreed	Active	1961-03-02	2.1	GROUND WATER	IRRIGATION	FELTON FARMS LLC (Current)
34	2452	Decreed	Active	1961-08-01	1.68	GROUND WATER	IRRIGATION	BLACKMER, BRUCE E (Current)
34	4132	Decreed	Active	1955-06-01	2	GROUND WATER	IRRIGATION	SCHUREMAN, DOUGLAS D (Current); SCHUREMAN, LORE
34	7037	Decreed	Active	1973-05-04	12	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7075	Decreed	Active	1974-08-18	7.07	GROUND WATER	IRRIGATION	SUNSET TRUST ORGANIZATION (Current)
34	7100	Decreed	Active	1975-02-06	2.72	GROUND WATER	IRRIGATION	SCHUREMAN, DOUGLAS D; SCHUREMAN, LORE
34	7181	Decreed	Active	1977-04-19	7.07	GROUND WATER	IRRIGATION	QUIST, LARRY A (Current)
34	7205	Decreed	Active	1977-08-01	4.67	GROUND WATER	IRRIGATION	RASMUSSEN, LARRY E (Current); RASMUSSEN, SHERRY A (Current)
34	10058	Decreed	Active	1955-07-07	1.67	GROUND WATER	IRRIGATION	SCHUREMAN, DOUGLAS D (Current); SCHUREMAN, LORE
34	10107	Decreed	Active	1949-07-01	0.06	GROUND WATER	DOMESTIC, STOCKWATER	BLACKMER, BRUCE E (Current)
34	10444	Decreed	Active	1989-05-15	0.04	GROUND WATER	DOMESTIC	CLIMER, CAROL I (Current); CLIMER, CHARLES R (Current)
34	10739	Decreed	Active	1979-08-08	0.04	GROUND WATER	DOMESTIC	WOODBRIIDGE, FRED E (Current); WOODBRIDGE, SANDRA J (Current)
34	10753	Decreed	Active	1930-06-01	0.07	GROUND WATER	DOMESTIC, STOCKWATER	RATHBUN, CYNTHIA L (Current); RATHBUN, PHILLIP A (Current)
34	10846	Decreed	Active	1884-12-31	0.04	GROUND WATER	DOMESTIC	BAIRD, STELLA H (Current); BAIRD, WILLIAM L (Current)
34	10850	Decreed	Active	1987-08-31	0.04	GROUND WATER	DOMESTIC	HARVEY, JACK D (Current); HARVEY, NANCY L (Current)
34	12421	Decreed	Active	1987-05-30	2.15	GROUND WATER	IRRIGATION	QUIST, LARRY A (Current)
34	13843	Decreed	Active	1961-03-02	1.72	GROUND WATER	IRRIGATION	RATHBUN, CYNTHIA L (Current); RATHBUN, PHILLIP A (Current)
34	13844	Decreed	Active	1961-03-02	0.38	GROUND WATER	IRRIGATION	LORD, GRANT (Current); LORD, JULIE (Current)



Table 2-4 Water right point of diversions in Section 4, T4N, R26E.

Basin	Sequence	Basis	Status	Priority Date	Diversion Rate	Source List	Water Uses	Owner List
34	2330	Decreed	Active	1977-06-01	1.75	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	2340	Decreed	Active	1958-01-08	3.06	GROUND WATER	IRRIGATION	JENSEN, DIANA (Current); JENSEN, JACK A (Current)
34	2340	Decreed	Active	1958-01-08	1.4	GROUND WATER	IRRIGATION	JENSEN, DARLENE B (Current); JENSEN, L VAUGHN (Current)
34	2397	Decreed	Active	1961-02-20	2.4	GROUND WATER	IRRIGATION	HANEY, LONNIE (Current)
34	2397	Decreed	Active	1961-02-20	2.36	GROUND WATER	IRRIGATION	BEAL, SETH E (Current); BEAL, SHELLEY (Current)
34	2397	Decreed	Active	1961-02-20	1.5	GROUND WATER	IRRIGATION	BEAL, RICHARD E (Current); BEAL, THORA (Current)
34	2412	Decreed	Active	1961-04-13	3.52	GROUND WATER	IRRIGATION	ANDERSEN, ANN S (Current); ANDERSEN, LARMAN D (Current)
34	2439	Decreed	Active	1961-10-06	0.8	GROUND WATER	IRRIGATION	GOODSON, PATSY A (Current)
34	7077	Decreed	Active	1974-09-05	8	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7080	Decreed	Active	1974-09-23	5.33	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7092	Decreed	Active	1975-01-14	12	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7121	Decreed	Active	1976-01-09	0.46	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7121	Decreed	Active	1976-01-09	3.74	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7179	Decreed	Active	1982-04-06	2.78	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7184	Decreed	Active	1977-04-26	0.56	GROUND WATER	IRRIGATION	ANDERSEN, BELVA E (Current); ANDERSEN, JOEL S (Current)
34	7201	Decreed	Active	1977-06-28	0.98	GROUND WATER	IRRIGATION	SCOUTEN, JIM L (Current); SCOUTEN, LINDA (Current)
34	7201	Decreed	Active	1977-06-28	0.02	GROUND WATER	IRRIGATION	BOWDEN, JOSEPH (Current)
34	10279	Decreed	Active	1952-01-01	0.07	GROUND WATER	DOMESTIC, STOCKWATER	GOODSON, PATSY A (Current)
34	10423	Decreed	Active	1935-05-01	0.1	GROUND WATER	DOMESTIC, STOCKWATER	BEAL, RICHARD E (Current); BEAL, THORA (Current)
34	10481	Decreed	Active	1939-12-31	0.07	GROUND WATER	DOMESTIC, STOCKWATER	JENSEN, DIANA (Current); JENSEN, JACK A (Current)



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Basin	Sequence	Basis	Status	Priority Date	Diversion Rate	Source List	Water Uses	Owner List
34	10762	Decreed	Active	1930-01-15	0.08	GROUND WATER	DOMESTIC	HANEY, LONNIE (Current)
34	10788	Decreed	Active	1989-07-15	0.04	GROUND WATER	DOMESTIC	ACOR, DARYN P (Current)
34	10790	Decreed	Active	1945-05-17	0.04	GROUND WATER	DOMESTIC	ACOR, DARYN P (Current)
34	10793	Decreed	Active	1900-06-15	0.04	GROUND WATER	DOMESTIC	ACOR JR, EVERETT T (Current)
34	12376	Decreed	Active	1977-06-01	1.25	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	13840	Decreed	Active	1982-04-06	1.26	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	13842	Decreed	Active	1975-12-17	0.46	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)



Attachment 3

Pumping Test Data



Table 3-1 Flow data for Parkinson Well during pumping test.

Date	Time	Q, gpm	min	Q, gpm
28-Jul	3:28 PM	5400	0	5400
	3:29 PM	5518	1	5518
	3:30 PM	5400	2	5400
	3:31 PM	5350	3	5350
	3:32 PM	5400	4	5400
	3:33 PM	5400	5	5400
	3:34 PM	5450	6	5450
	3:35 PM	5425	7	5425
	3:37 PM	5400	9	5400
	3:40 PM	5350	12	5350
	3:43 PM	5350	15	5350
	3:49 PM	5340	21	5340
	3:56 PM	5390	28	5390
	4:07 PM	5328	39	5328
	7:15 PM	5270	227	5270
	11:20 PM	5240	472	5240
29-Jul	3:25 AM	5210	717	5210
	7:20 AM	5220	952	5220
	11:20 AM	5155	1192	5155
	3:30 PM	5105	1442	5105
	7:10 PM	5125	1662	5125
	11:00 PM	5135	1892	5135
30-Jul	3:00 AM	5130	2132	5130
	7:00 AM	5130	2372	5130
	11:30 AM	5080	2642	5080
	3:10 PM	5060	2862	5060
	7:00 PM	5080	3092	5080
1-Aug	12:05 PM	5045	5557	5045

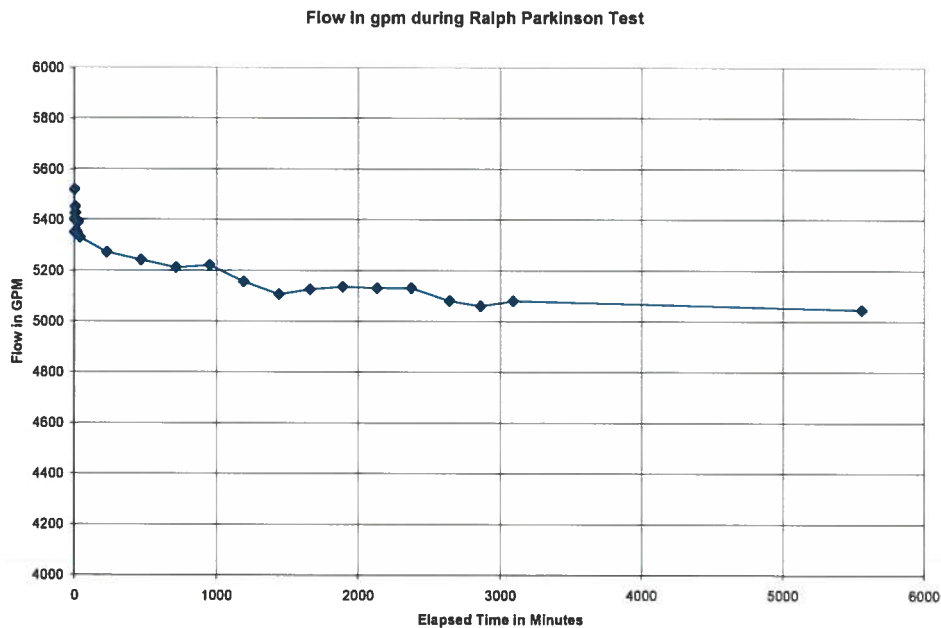


Figure 3-1 Plot of flow data.

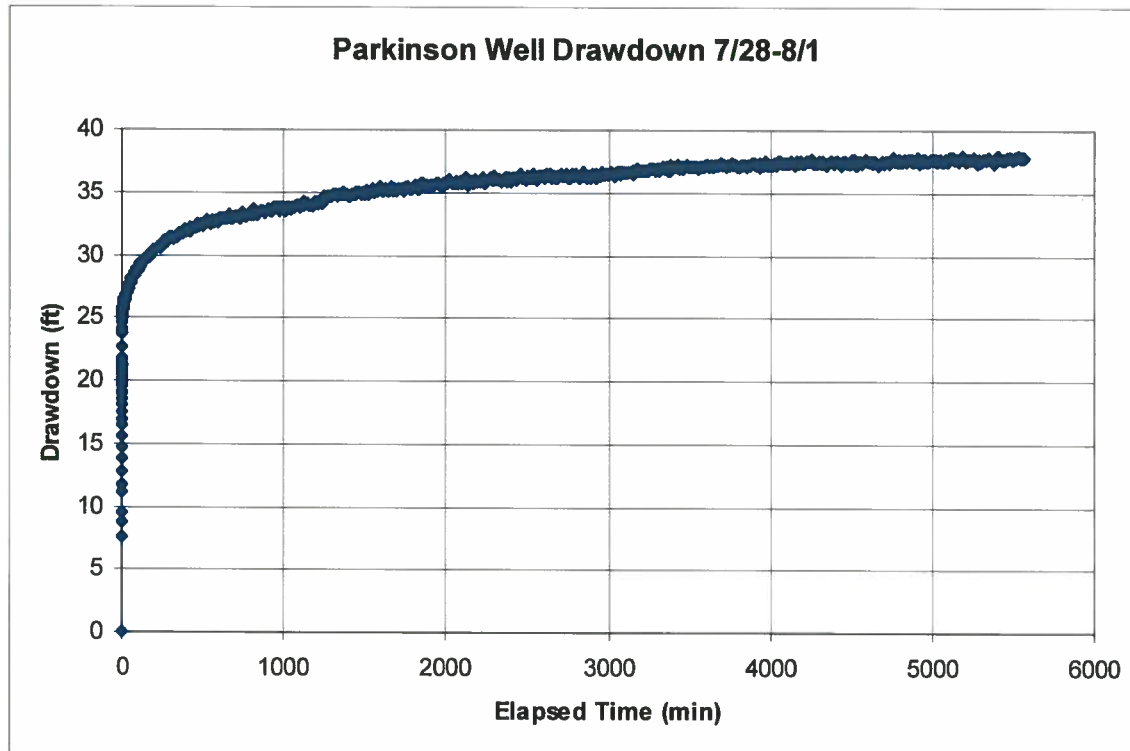


Figure 3-2. Plot of entire data set for pumping test of the Ralph Parkinson Irrigation well.

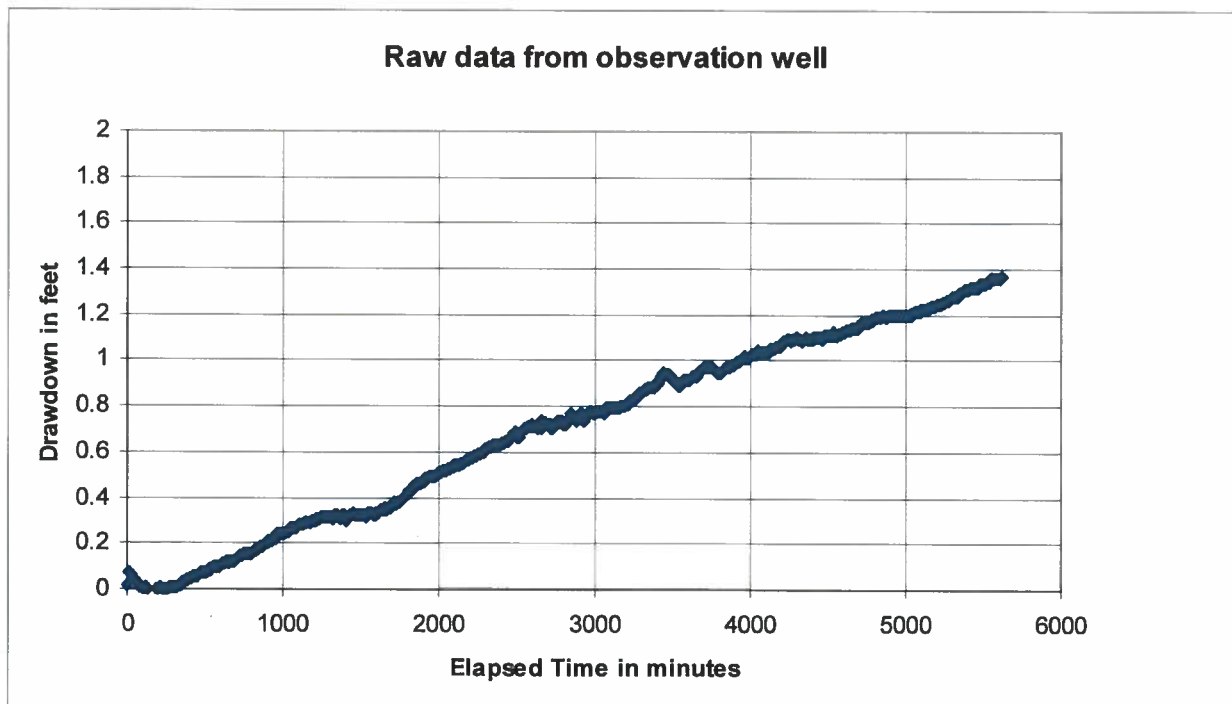


Figure 3-3. Plot of data from observation well.

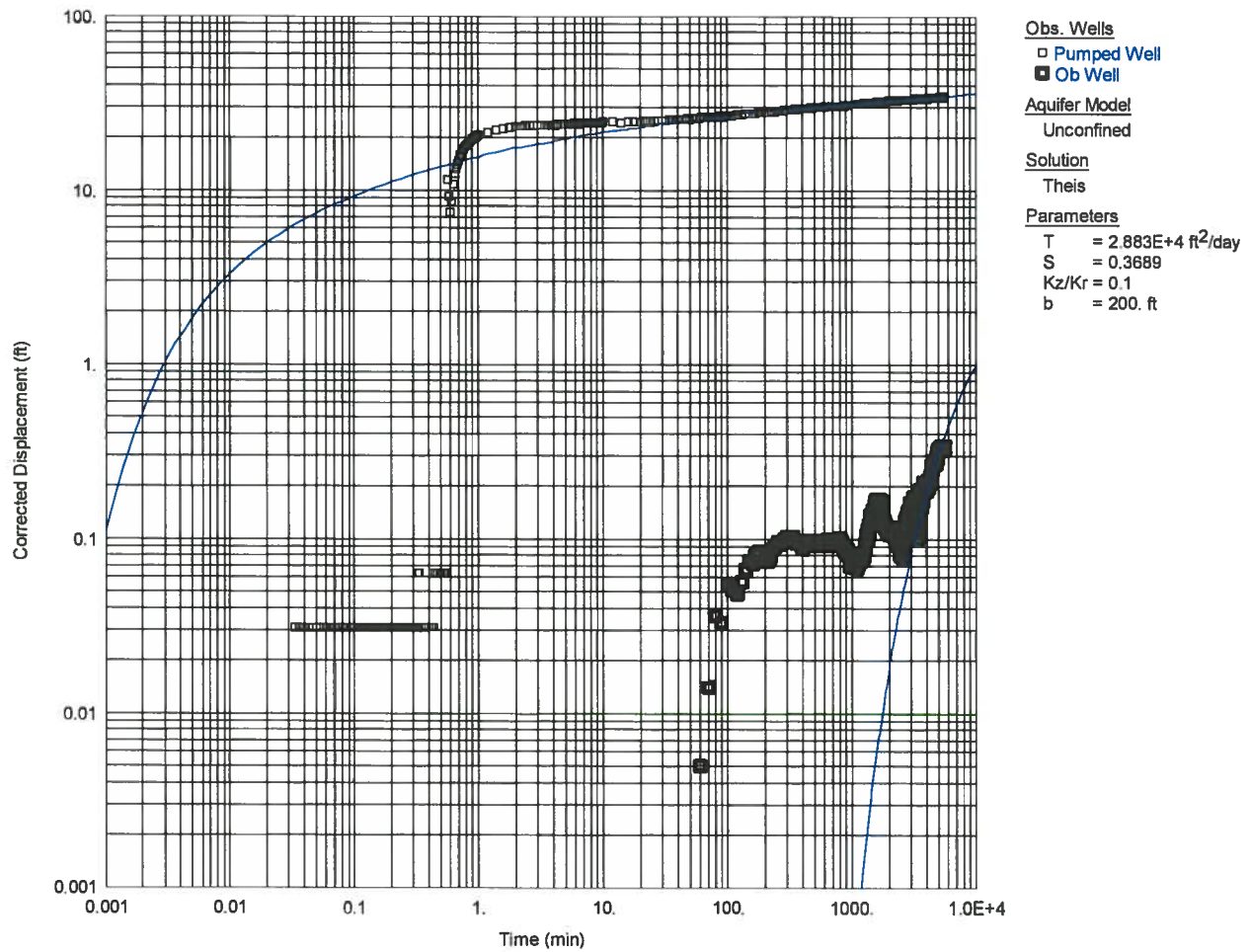


Figure 3-4 Theis unconfined solution matched to well data.

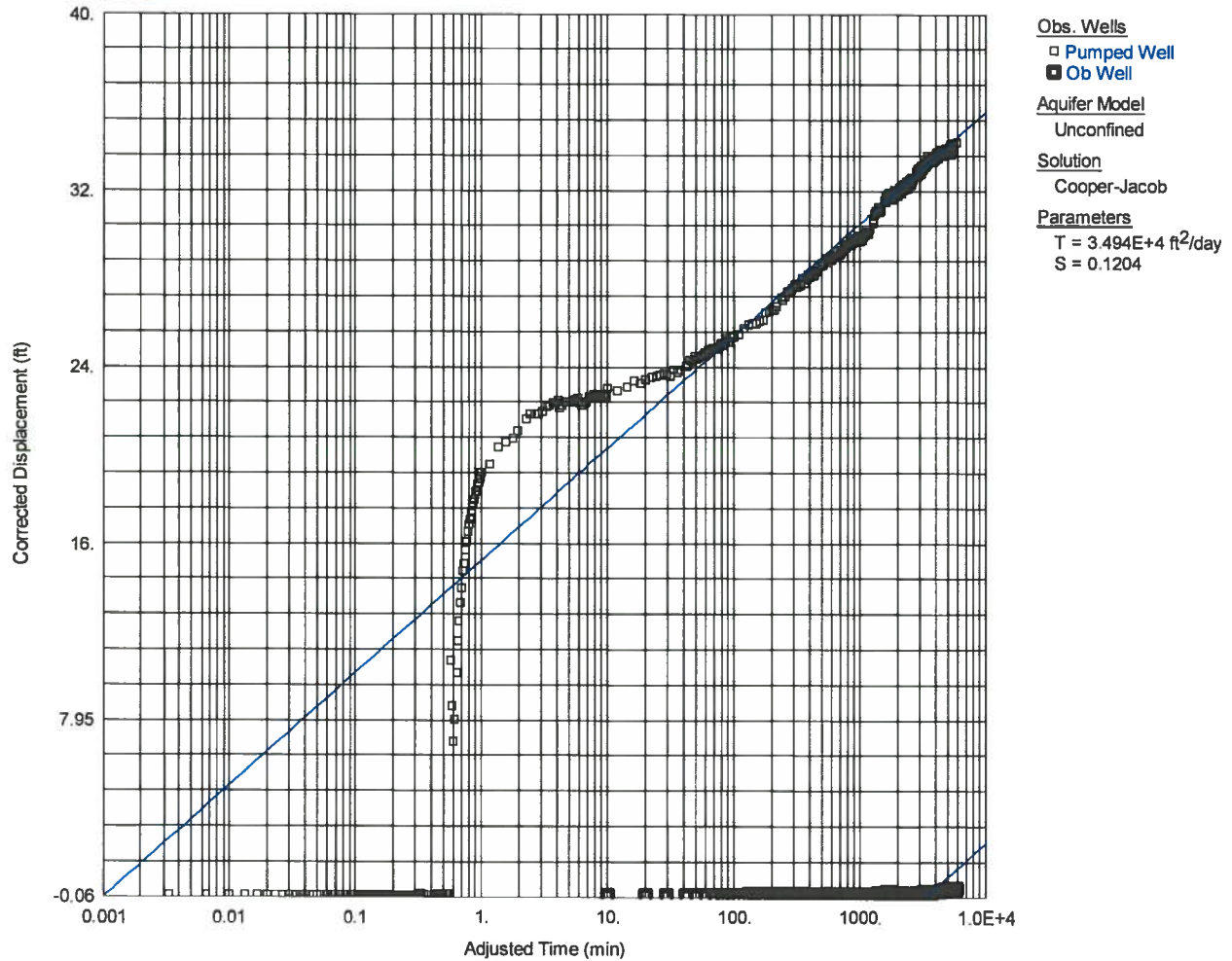


Figure 3-5 Cooper-Jacob unconfined solution matched to well data.



Attachment 4

AQUIFER IMPACT ANALYSIS



Table 4-1 Table of values used in AQTESOLV simulation.

Parameter	Value	Unit
Transmissivity	35,000	ft ² /d
Storativity	0.12	unitless
Flow Rate	900	gpm
Duration	259,200	min
Total volume	716	ac-ft
aquifer thickness (b)	200	ft
kz/Kr	0.1	na

Table 4-2 Table of locations for various boundary corners and wells used in the AQESOLV simulation.

Location	x	y
NW Corner	0	38000
NE Corner	15250	38000
SW Corner	0	0
SE Corner	15250	0
Parkinson POD	9500	21600



Figure 4-1 Outline of the boundaries used in the AQTESOLV forward solution calculation. Note for scale that the red line is 10,000 ft long.

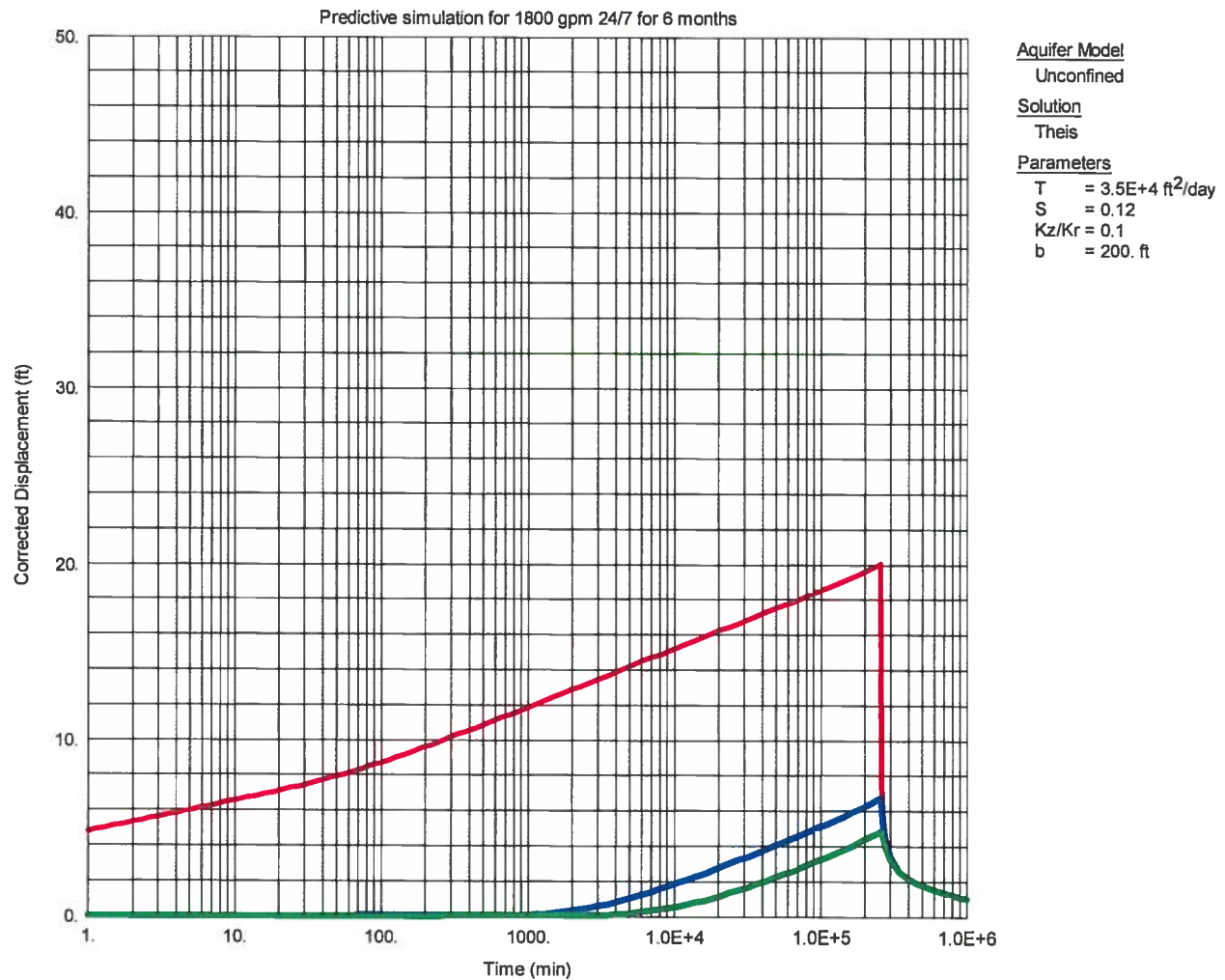


Figure 4-2 Predictive plot of drawdown at 1800 gpm for the full period of use 180 days. The red line is for the water level in the Parkinson Well, blue line is the water level predicted in a well $\frac{1}{4}$ mile south, and the green line is the water level in a well $\frac{1}{2}$ mile to the east of the Parkinson Well.

Key to line colors

- Green Imaginary well $\frac{1}{2}$ mile east of the Parkinson Well
- Blue Imaginary well $\frac{1}{4}$ mile south of the Parkinson Well
- Red Parkinson Well

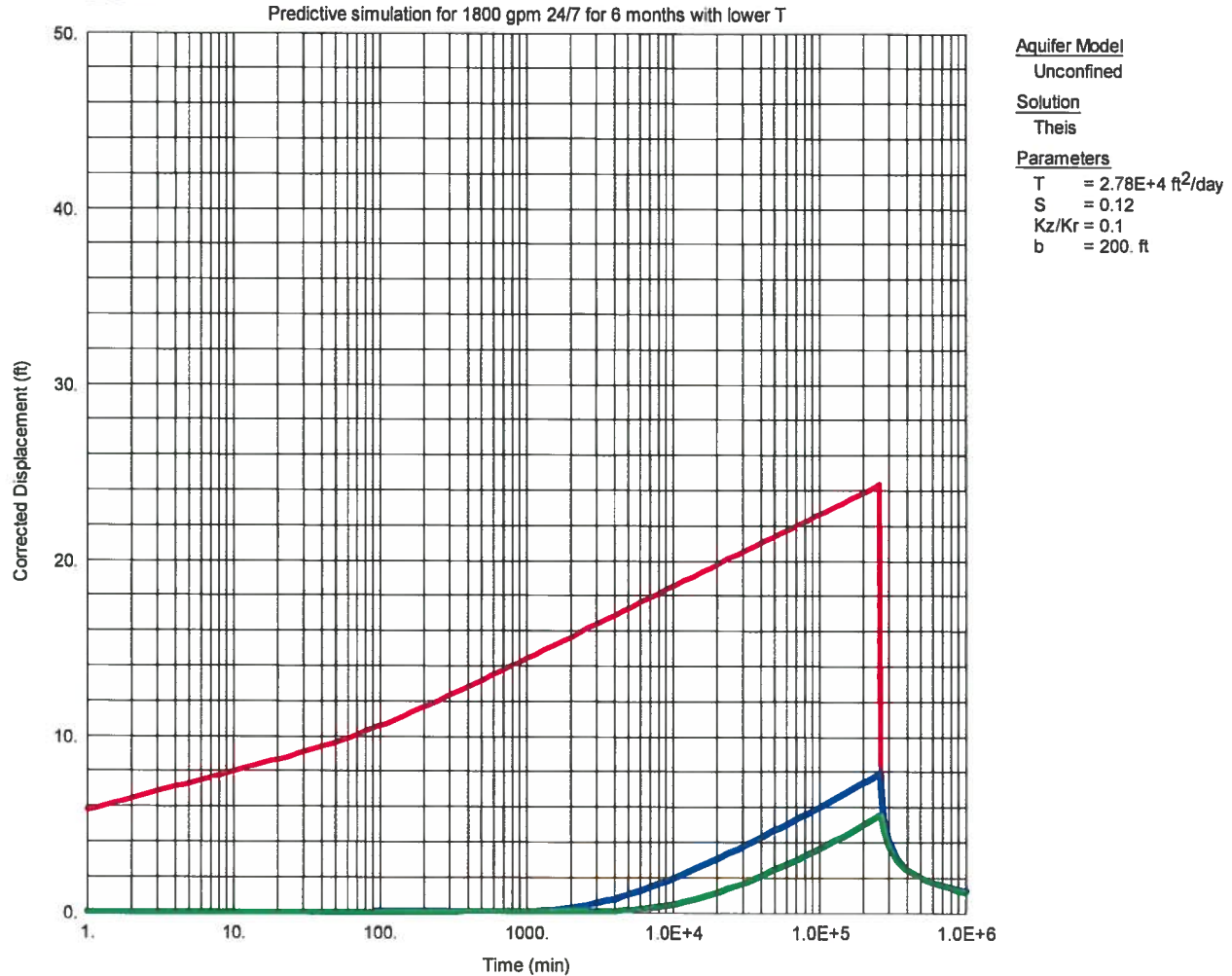


Figure 4-3 Sensitivity to Transmissivity - Predictive plot of drawdown at 1800 gpm for the full period of use 180 days using a lower, representing the lower interpreted pumping test value (Figure 3-4). The red line is for the water level in the Parkinson Well, blue line is the water level predicted in a well ¼ mile south, and the green line is the water level in a well ½ mile to the east of the Parkinson Well.

Key to line colors

Green Imaginary well ½ mile east of the Parkinson Well
Blue Imaginary well ¼ mile south of the Parkinson Well
Red Parkinson Well



SEP 07 2011

Department of Water Resources
Eastern Region

September 5, 2011

Mr. Blake Jordan
Idaho Department of Water Resources
900 North Skyline Drive, Suite A
Idaho Falls, ID 83402-1718

RE: AQUIFER TEST/IMPACT ANALYSIS - PARKINSON WATER RIGHT TRANSFER

Dear Mr. Jordan:

A groundwater impact assessment is provided in this report for the Ralph Parkinson Water Right transfer application near Arco, Idaho. Mr. Parkinson has been working with you on the water right transfer from his property southwest of Arco to this property near Moore. This letter provides an assessment of the impact of adding an additional 100 inches (900 gpm) to the Moore location (Figure 1). For this impact analysis a pumping test was conducted July 28 to August 1 in the Parkinson well. The parameters from the aquifer test are used in a computer simulation to predict the potential impacts (i.e. drawdown) to neighboring wells within ½ mile of the proposed point of diversion (POD). The results of the computer analysis show that the proposed diversion rate will have a minimal or negligible impact on neighboring wells.

The lithology in this area is a series of unconsolidated gravels and sands with minor layers of clay. There is not a marker layer or geologic unit that can be correlated over distances between wells based on a comparison of the lithology recorded on the well logs. The inability to correlate geologic layers is consistent with the area being situated in a cut and fill sequence of the Big Lost River. For the purposes of this investigation it is assumed that the aquifer thickness here is 200 ft. This is based on the driller's log for the deepened Parkinson Well described below and on regional considerations of the hydrogeology. It should be noted that the aquifer is not one homogenous layer but a sequence of permeable lens of sand and gravel stringers. However, it is anticipated that locally the shallow aquifer are unconfined.

Parkinson Well

The Parkinson Well is located in the SW of the SW quarter of Section 34, T5N, R26E. It was originally drilled to 160 ft in 1977 using perforated 20-inch steel casing. It was pump tested at 4200 gpm for 9 hours and had 50 ft of drawdown. In 2010, the well was deepened to increase the water yield. The hole was drilled to 249 ft when it was noted that the water level began to drop. This is likely an indication of a deeper water bearing layer having lower hydraulic head than the upper layer. The bottom ten feet of the hole was plugged with rock and cement to seal off the lower water bearing layer and prevent co-mingling of water. The water level returned to its original level and perforated 16 inch casing was installed from 153 ft to 239 ft. The pumping test described in a later section indicates that deepening of the well was successful in increasing the well yield and decreasing the drawdown caused by pumping. The driller's reports for the original well and deepening of the Parkinson well are provided in Attachment 1.



Nearby Wells

An evaluation was made for all existing water rights within a ½ mile radius of the proposed well location. Figure 2 shows a circle of ½ mile radius centered on the Parkinson well. The circle encompasses portions of sections 34 and 33, T5N, R26E and sections 3 and 4, T4N, R26E. A search of the IDWR on-line data base indicates that there are numerous groundwater diversion permits in Sections 33, 34, 3 and 4. The results of the water right search are provided in Tables 2-1 through 2-4 in Attachment 2.

Pumping Test

A pumping test was conducted on the Parkinson Well beginning on July 28, 2011 and ending August 1, 2011 (see Figures 1 and 2). Permission was gained for one observation well ¼ mile to the south of the Parkinson Well (Figure 2). Physical access could not be obtained to the Telford Well. Both the Parkinson Well and the Observation well were equipped with INSITU brand downhole pressure transducers to collect automated water levels during the pumping test. Flow was measured using a box weir. The pumping test began at 3:30 PM on July 28, 2011 and the well was pumped at an average rate of 5117 gpm for four days. Plots of the data can be found in Attachment 3.

Curve matching methods were conducted using the AQTESOLV aquifer test software. Output plots from the AQTESOLV analyses are presented in Attachment 3. Figure 3-4 shows the match of the data to the Theis unconfined solution. The calculated transmissivity is $2.9 \times 10^4 \text{ ft}^2/\text{day}$ and the storage coefficient is 0.37. The match of the data to the Cooper-Jacob solution is shown in Figure 3-6 and the calculated transmissivity is $3.5 \times 10^4 \text{ ft}^2/\text{day}$ with a storativity of 0.12. The calculated storage coefficient using the Theis solution, although theoretically possible, is a bit too high. The reason for this is unknown. The storage coefficient for the Cooper-Jacob solution is more realistic and for long term pumping calculations the value from the Cooper-Jacob solution are assumed. The transmissivity and storage coefficient are typical for these types of unconsolidated aquifer materials (Freeze and Cherry, 1979).

Impact Assessment

Mr. Parkinson wishes to add 100 inches or 900 gpm flow to the water flow he already pumps from this well. For assessing the potential impact to nearby wells it is only necessary to calculate the additional drawdown caused by pumping an additional 900 gpm and not the entire volume pumped by Mr. Parkinson, which includes previously approved water rights. This is because of linear relationship between pumping and drawdown (Freeze and Cherry, 1979).

To estimate the long-term drawdown and impact to neighboring wells from pumping of the proposed increase, the forward solution capabilities of the AQTESOLV program were employed. The input parameters to the model are listed in Table 4-1 (see Attachment 4). Boundaries in AQTESOLV were enabled as shown in Figure 4-1 to represent Big Lost River Valley. As depicted in Figure 4-1 and listed in Table 4-2 the model is 9,600 ft wide and 38,000 ft long. Because the Big Lost River Valley is bounded by mountains consisting of Paleozoic and Mesozoic sedimentary rock that do not provide as much water compared to the unconsolidated valley fill, the east and west boundaries are set as impermeable or “no flow” boundaries. Because it is known from regional ground water mapping that the direction of ground water flow is down the axis of the valley (Crosthwaite, et al., 1970) it was assumed that pumping of the



Parkinson Well would not be able to pull water upgradient from the south beyond the model domain. The southern boundary is specified as a no-flow boundary. Water is allowed to enter the model domain only through the north boundary. These boundary conditions are conservative, that is, it is expected that pumping will cause less drawdown than predicted using these boundary conditions.

Figure 4-2 shows the AQTESOLV[®] output plot of the forward calculation for the Parkinson well pumping at 900 gpm constantly for 6 months (April 15 to Oct 15). At the end of the time period the predicted drawdown is estimated to be about 10 feet in the Parkinson well. The calculated drawdown for a well ½ mile to the east is a little over 2 ft. The calculated drawdown for a well ¼ mile to the south is a little over 3 ft. This amount of drawdown will be negligible to other groundwater users in the area.

River-Aquifer Interactions

The Big Lost River runs to the west of the Parkinson well and there is some concern that additional drawdown in the aquifer might reduce aquifer recharge to the river or cause more seepage to occur from the river to the aquifer. An examination of water levels measured during the pumping test indicates that either possibility is unlikely given the unsaturated zone separating the bottom of the river channel from the top of the aquifer. When the Parkinson Well was drilled in May of 1977 the static water level was reported as 20 ft below land surface by the well driller. During May and June of this year the depth to water in the Parkinson Well was 32 ft below land surface. The depth to water in the observation well was measured as 25 ft below land surface. In both locations, tens of feet separate the top of the aquifer from land surface (i.e. the bottom of the river channel). This means that in this reach of the river water from the aquifer is not recharging the river. It is physically impossible due to the separation between the bottom of the river channel and the aquifer.

The winter and spring of 2011 has been one of the wettest in recent memory and the Big Lost River was observed to be flowing. There is no doubt that in many reaches of the river and probably in the reach near the Parkinson Well that river water leaks through the gravelly river bottom to the underlying aquifer. However, even 'if' additional pumping by Parkinson under this water right caused a foot or two decline in the aquifer, leakage through the river bed would not increase. It should be noted that most of the time water does not flow in this reach of the Big Lost River. When there is no flow in the river there can be no interaction between the river and the aquifer. This would certainly be the case during drought periods when well pumping would be needed the most by Mr. Parkinson. It is clear that additional pumping by Parkinson of his water well will have no impact on flow in or recharge to the Big Lost River.

Conclusions

It is my professional opinion that Mr. Parkinson's water right transfer application will not excessively impact his neighbors' right to divert water, nor will it impact flow in the Big Lost River. For several reasons I believe that the calculated drawdown to the aquifer presented in this report over estimates the actual drawdown to be expected. These reasons include: 1) Mr. Parkinson will never pump continuously at the maximum rate for 180 days; 2) the



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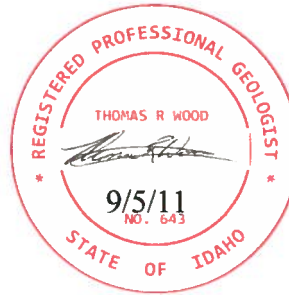
Paleozoic/Mesozoic rocks of the mountains are not totally impermeable and will provide some water to the system, thus reducing drawdown, and 3) several canals and the Big Lost River are within the domain of the model and no credit for leakage from these surface water bodies is taken in the model. All of these factors will reduce the predicted drawdown presented here.

Please do not hesitate to call me if you have any questions about this letter or the calculations presented.

Respectfully,

A handwritten signature in black ink, appearing to read "Thomas R. Wood".

Thomas R. Wood, PhD, PG



cc

Mr. Ralph Parkinson, 2253 North 3100 West, Arco, ID 83213

References

- Freeze, R.A. and J.A. Cherry, 1979, Groundwater, ISBN 0-13-365312-9, Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632.
- Crosthwaite, E. G., C. A. Thomas, and K.L. Dyer, 1970, Water Resources in the Big Lost River Basin, South-Central Idaho, Open-File Report 70-93, U.S. Geological Survey.

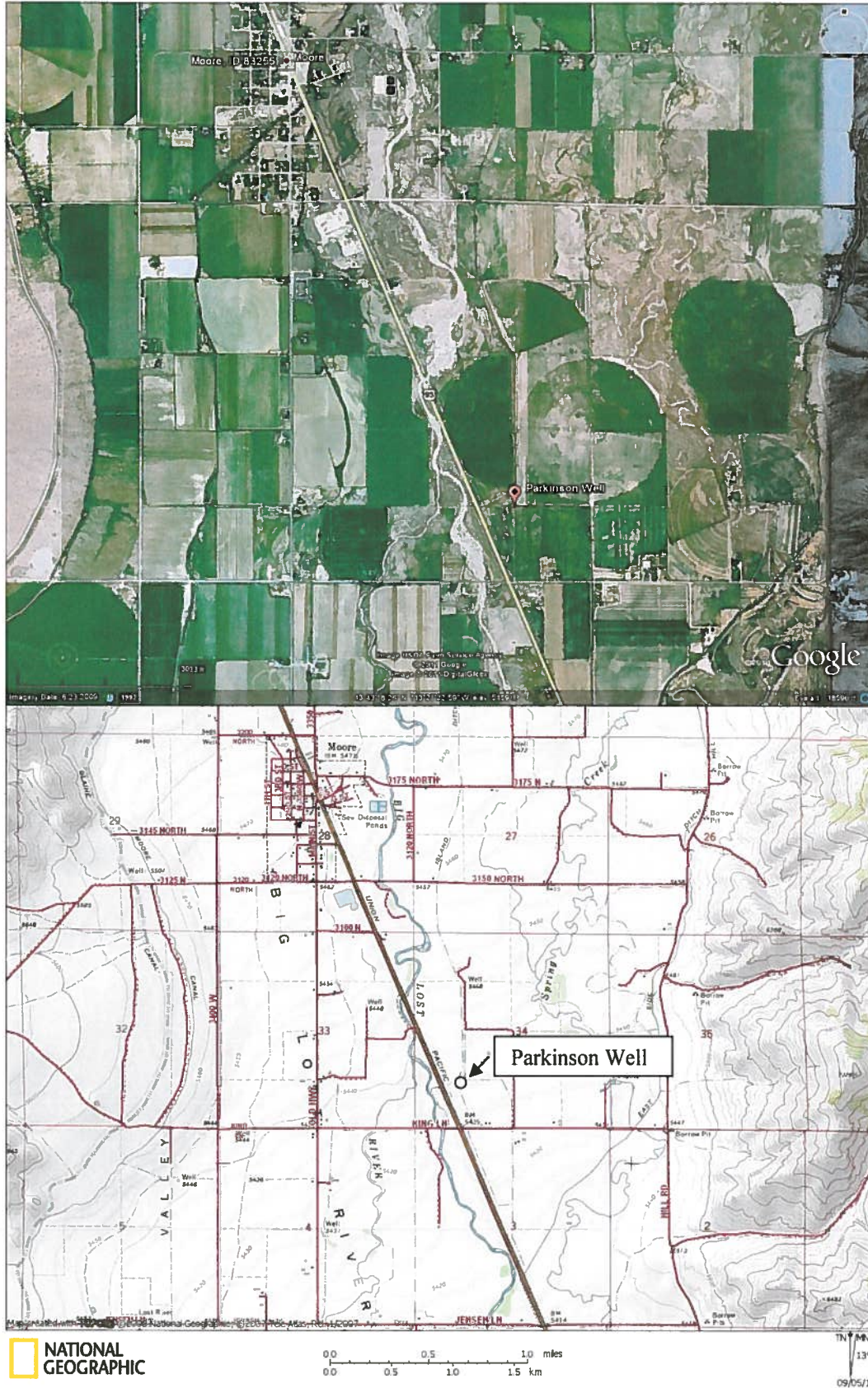


Figure 1 Google Earth image (upper) and topographic map (lower) of the Parkinson location.

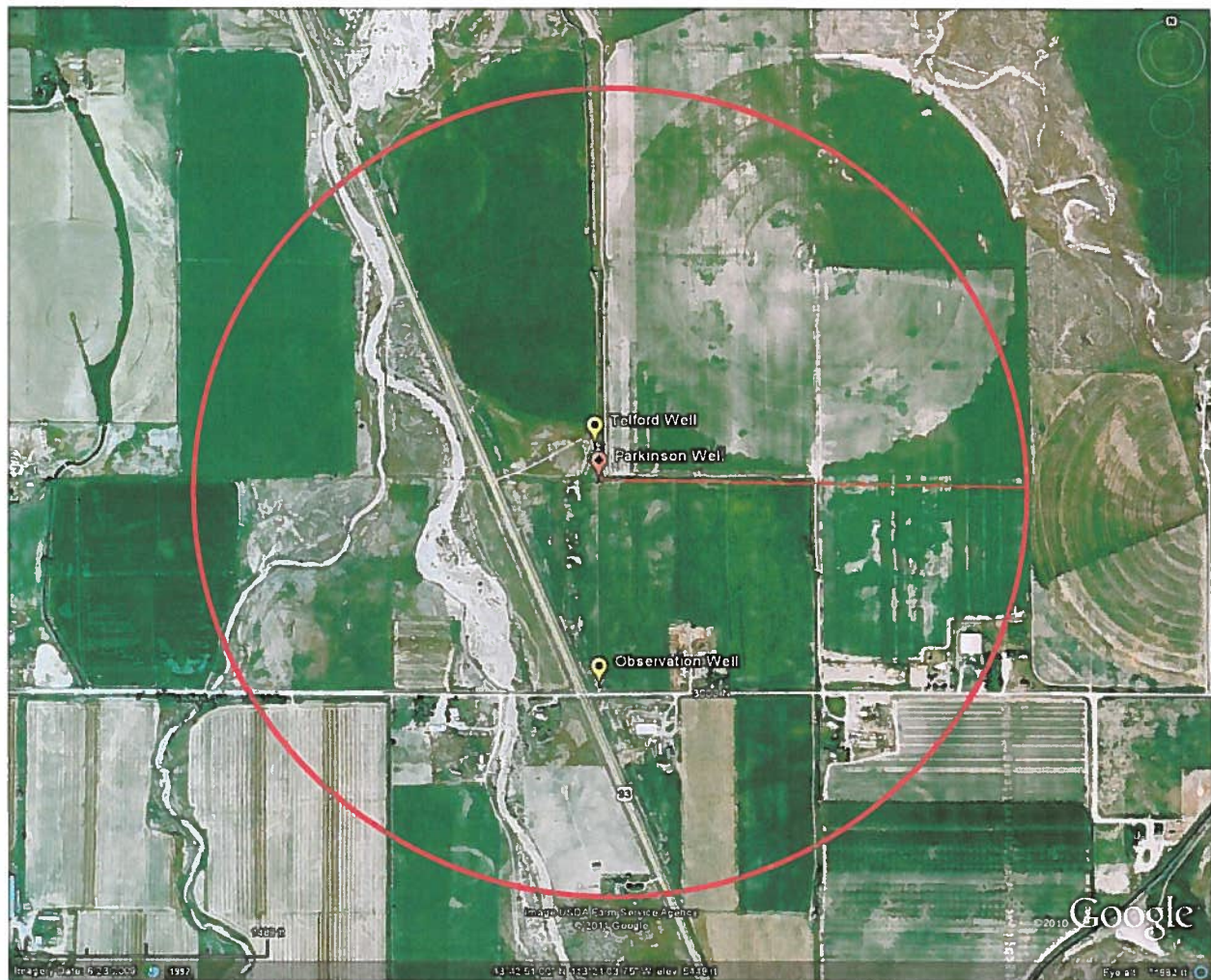


Figure 2 Google Earth image of area with a red circle of 1/2 mile radius.



Attachment 1

WELL LOGS



Clearwater Geosciences, LLP
Ground Water Development and Exploration

USE TYPEWRITER OR
BALL POINT PEN

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.

RECEIVED
SEP 27 1977

1. WELL OWNER Name <u>RALPH S. PARKINSON</u> <u>JAMES S. BRADCOCK</u> Address <u>ARCO IDAHO 83213</u> Owner's Permit No. <u>34-7176</u>		7. WATER LEVEL Department of Water Resources Eastern District Office Static water level <u>20</u> feet below land surface Flowing? ☐ Yes ☒ No G.P.M. flow Temperature <u>90.0</u> ° F. Quality <u>good</u> Artesian closed-in pressure <u>0</u> p.s.i. Controlled by ☐ Valve ☐ Cap ☐ Plug																																																											
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Abandoned (describe method of abandoning)		8. WELL TEST DATA ☒ Pump ☐ Bailor ☐ Other Discharge G.P.M. <u>4200</u> Draw Down <u>50'</u> Hours Pumped <u>9</u>																																																											
3. PROPOSED USE ☐ Domestic ☒ Irrigation ☐ Test ☐ Other (specify type) ☐ Municipal ☐ Industrial ☐ Stock ☐ Waste Disposal or injection		9. LITHOLOGIC LOG <u>042745</u> <table border="1"><thead><tr><th rowspan="2">Hole Diam.</th><th colspan="2">Depth</th><th rowspan="2">Material</th><th colspan="2">Water</th></tr><tr><th>From</th><th>To</th><th>Yes</th><th>No</th></tr></thead><tbody><tr><td>20"</td><td>0</td><td>5</td><td>SOIL</td><td></td><td></td></tr><tr><td></td><td>5</td><td>15</td><td>GRAVEL</td><td></td><td></td></tr><tr><td></td><td>15</td><td>26</td><td>CLAY + GRAVEL</td><td></td><td></td></tr><tr><td></td><td>26</td><td>70</td><td>SAND + GRAVEL</td><td></td><td></td></tr><tr><td></td><td>70</td><td>77</td><td>CLAY</td><td></td><td></td></tr><tr><td></td><td>77</td><td>110</td><td>SAND + GRAVEL</td><td></td><td></td></tr><tr><td></td><td>110</td><td>118</td><td>SANDY CLAY</td><td></td><td></td></tr><tr><td></td><td>118</td><td>160</td><td>SAND + GRAVEL</td><td></td><td></td></tr></tbody></table>		Hole Diam.	Depth		Material	Water		From	To	Yes	No	20"	0	5	SOIL				5	15	GRAVEL				15	26	CLAY + GRAVEL				26	70	SAND + GRAVEL				70	77	CLAY				77	110	SAND + GRAVEL				110	118	SANDY CLAY				118	160	SAND + GRAVEL		
Hole Diam.	Depth		Material		Water																																																								
	From	To		Yes	No																																																								
20"	0	5	SOIL																																																										
	5	15	GRAVEL																																																										
	15	26	CLAY + GRAVEL																																																										
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	77	110	SAND + GRAVEL																																																										
	110	118	SANDY CLAY																																																										
	118	160	SAND + GRAVEL																																																										
4. METHOD DRILLED ☒ Cable ☐ Rotary ☐ Dug ☐ Other																																																													
5. WELL CONSTRUCTION Diameter of hole <u>20</u> inches Total depth <u>160</u> feet Casing schedule: ☒ Steel ☐ Concrete <table border="1"><thead><tr><th>Thickness</th><th>Diameter</th><th>From</th><th>To</th></tr></thead><tbody><tr><td><u>2.50</u> inches</td><td><u>20</u> inches</td><td><u>1</u> feet</td><td><u>160</u> feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr><tr><td>_____ inches</td><td>_____ inches</td><td>_____ feet</td><td>_____ feet</td></tr></tbody></table> 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 <u>1/8</u> inches by <u>3</u> inches <table border="1"><thead><tr><th>Number</th><th>From</th><th>To</th></tr></thead><tbody><tr><td><u>3500</u> perforations</td><td><u>30</u> feet</td><td><u>150</u> feet</td></tr><tr><td><u>720</u> perforations</td><td><u>30</u> feet</td><td><u>120</u> feet</td></tr><tr><td>_____ perforations</td><td>_____ feet</td><td>_____ feet</td></tr></tbody></table> 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 <u>20</u> Material used in seal ☐ Cement grout ☐ Pudding clay ☒ Well cuttings Sealing procedure used ☐ Sherry pit ☐ Temporary surface casing ☐ Overbore to seal depth		Thickness	Diameter	From	To	<u>2.50</u> inches	<u>20</u> inches	<u>1</u> feet	<u>160</u> feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	Number	From	To	<u>3500</u> perforations	<u>30</u> feet	<u>150</u> feet	<u>720</u> perforations	<u>30</u> feet	<u>120</u> feet	_____ perforations	_____ feet	_____ feet																								
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_____ perforations	_____ feet	_____ feet																																																											
6. LOCATION OF WELL Sketch map location must agree with written location. Subdivision Name _____ Lot No. _____ Block No. _____ County <u>BUTTE</u> <u>SW 1/4 SW 1/4 Sec 34 T. 5 N. R. 26 E. M.</u>		10. Work started <u>May 9/77</u> finished <u>May 27/77</u>																																																											
		11. DRILLER'S CERTIFICATION Firm Name <u>Butter's Well Drilling</u> Firm No. <u>326</u> Address <u>PO Box 319 ARCO, IDAHO 83213</u> Date <u>9/24/77</u> Signed by (Firm Official) <u>H. T. Butter</u> and <u>H. T. Butter</u> (Operator) <u>3664</u>																																																											

Figure 1-1 Well log for the original Parkinson Well.



Attachment 2

WATER RIGHTS



Table 2-1 Water right point of diversions in Section 34, T5N, R26E.

Basin	Sequence	Basis	Status	Priority Date	Diversion Rate	Source List	Water Uses	Owner List
34	2284	Decreed	Active	1957-08-14	1.5	GROUND WATER	IRRIGATION	FELTON FARMS LLC (Current)
34	2302	Decreed	Active	1953-02-28	3.14	GROUND WATER	IRRIGATION	SOWARDS, NORMAN K (Current)
34	2422	Decreed	Active	1961-06-09	2.4	GROUND WATER	IRRIGATION	SOWARDS, NORMAN K (Current); SOWARDS, W T (Current)
34	2480	Decreed	Active	1986-05-01	0.79	GROUND WATER	IRRIGATION	MC DONALD, DARRELL E (Current); MC DONALD, NANCY M (Current)
34	7028	Decreed	Active	1972-08-01	4.3	GROUND WATER	IRRIGATION	MC DONALD, DARRELL E (Current); MC DONALD, NANCY M (Current)
34	7037	Decreed	Active	1973-05-04	12	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7176	Decreed	Active	1977-05-29	7.8	GROUND WATER	IRRIGATION	PARKINSON FARMS (Current)
34	7228	Decreed	Active	1979-05-03	0.98	GROUND WATER	IRRIGATION	SOWARDS, NORMAN K (Current)
34	7234	Decreed	Active	1979-08-15	1.66	GROUND WATER	IRRIGATION	MC DONALD, DARRELL E (Current); MC DONALD, NANCY M (Current)
34	10050	Decreed	Active	1892-01-01	0.07	GROUND WATER	DOMESTIC, STOCKWATER	RATHBUN, MILDRED (Current); RATHBUN, WAYNE (Current)
34	10051	Decreed	Active	1980-02-15	0.06	GROUND WATER	DOMESTIC, STOCKWATER	RATHBUN, MILDRED (Current); RATHBUN, WAYNE (Current)
34	10345	Decreed	Active	1885-06-01	0.04	GROUND WATER	DOMESTIC, STOCKWATER	BABCOCK, COLLEEN (Current); BABCOCK, JAMES S (Current)
34	10869	Decreed	Active	1989-03-01	0.04	GROUND WATER	DOMESTIC, STOCKWATER	SOWARDS, NORMAN K (Current)
34	10871	Decreed	Active	1980-06-15	0.2	GROUND WATER	IRRIGATION	SOWARDS, NORMAN K (Current)
34	12045	Decreed	Active	1930-12-31	0.04	GROUND WATER	DOMESTIC	MAYNARD, CHERI (Current)
34	12047	Decreed	Active	1989-09-16	0.04	GROUND WATER	DOMESTIC	HAYS, MARY M (Current)
34	12368	Decreed	Active	1985-08-01	3.75	GROUND WATER	IRRIGATION	PARKINSON FARMS (Current)
34	13649	Decreed	Active	1923-03-16	0.02	SPRING CREEK	STOCKWATER	BOYACK, RAY MILTON (Current)



Table 2-2 Water right point of diversions in Section 33, T5N, R26E.

Basin	Sequence	Basis	Status	Priority Date	Diversion Rate	Source List	Water Uses	Owner List
34	2284	Decreed	Active	1948-07-01	1.2	GROUND WATER	IRRIGATION	FELTON FARMS LLC (Current)
34	2404	Decreed	Active	1961-03-01	1.4	GROUND WATER	IRRIGATION, STOCKWATER	SMITH, DALE E (Current)
34	2424	Decreed	Active	1961-06-13	3.03	GROUND WATER	IRRIGATION	BROWNE, JERRY L (Current)
34	2424	Decreed	Active	1961-06-13	2.27	GROUND WATER	IRRIGATION	SORENSEN, ELAINE R (Current); SORENSEN, MITCHELL D (Current)
34	7527	License	Active	1989-12-20	0.04	GROUND WATER	DOMESTIC	MUFFETT, JOHN (Current); MUFFETT, MARY (Current)
34	10152	Decreed	Active	1929-06-01	0.06	GROUND WATER	DOMESTIC, STOCKWATER	BINGHAM, LLOYD A (Current)
34	10235	Decreed	Active	1933-04-01	0.09	GROUND WATER	DOMESTIC, STOCKWATER	SMITH, DALE E (Current)
34	10245	Decreed	Active	1912-04-01	0.06	GROUND WATER	DOMESTIC, STOCKWATER	PACE, JAMES LEE (Current)
34	10276	Decreed	Active	1962-10-15	0.07	GROUND WATER	DOMESTIC, STOCKWATER	GOODSON, PATSY A (Current)
34	10313	Decreed	Active	1988-08-24	0.1	GROUND WATER	DOMESTIC, STOCKWATER	HYMAS, DONALD S (Current); HYMAS, GEORGANNA C (Current)
34	10335	Decreed	Active	1896-06-01	0.04	GROUND WATER	DOMESTIC	ESTATE OF CHESTER E HARPER (Current)
34	10367	Decreed	Active	1959-05-20	0.055	GROUND WATER	DOMESTIC	HAIL, CLARA V (Current); HAIL, VIRGIL L (Current)
34	10492	Decreed	Active	1896-06-01	0.07	GROUND WATER	DOMESTIC, STOCKWATER	WADDOUPS, LE ANNE (Current); WADDOUPS, WADE (Current)
34	10576	Decreed	Active	1983-07-07	0.06	GROUND WATER	DOMESTIC, STOCKWATER	HUTCHISON, DAVID M (Current)
34	14129	Decreed	Active	1974-02-12	1.13	GROUND WATER	IRRIGATION	BLEAK, BRUCE (Current); BLEAK, CARMA (Current)
34	14130	Decreed	Active	1974-02-12	1.26	GROUND WATER	IRRIGATION	TOELCKE, KERRI L (Current); TOELCKE, WILLIAM E (Current)



Table 2-3 Water right point of diversions in Section 3, T4N, R26E.

Basin	Sequence	Basis	Status	Priority Date	Rate	Source List	Water Uses	Owner List
34	2400	Decreed	Active	1961-03-02	2.1	GROUND WATER	IRRIGATION	FELTON FARMS LLC (Current)
34	2452	Decreed	Active	1961-08-01	1.68	GROUND WATER	IRRIGATION	BLACKMER, BRUCE E (Current)
34	4132	Decreed	Active	1955-06-01	2	GROUND WATER	IRRIGATION	SCHUREMAN, DOUGLAS D (Current); SCHUREMAN, LORE
34	7037	Decreed	Active	1973-05-04	12	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7075	Decreed	Active	1974-08-18	7.07	GROUND WATER	IRRIGATION	SUNSET TRUST ORGANIZATION (Current)
34	7100	Decreed	Active	1975-02-06	2.72	GROUND WATER	IRRIGATION	SCHUREMAN, DOUGLAS D; SCHUREMAN, LORE
34	7181	Decreed	Active	1977-04-19	7.07	GROUND WATER	IRRIGATION	QUIST, LARRY A (Current)
34	7205	Decreed	Active	1977-08-01	4.67	GROUND WATER	IRRIGATION	RASMUSSEN, LARRY E (Current); RASMUSSEN, SHERRY A (Current)
34	10058	Decreed	Active	1955-07-07	1.67	GROUND WATER	IRRIGATION	SCHUREMAN, DOUGLAS D (Current); SCHUREMAN, LORE
34	10107	Decreed	Active	1949-07-01	0.06	GROUND WATER	DOMESTIC, STOCK WATER	BLACKMER, BRUCE E (Current)
34	10444	Decreed	Active	1989-05-15	0.04	GROUND WATER	DOMESTIC	CLIMER, CAROL I (Current); CLIMER, CHARLES R (Current)
34	10739	Decreed	Active	1979-08-08	0.04	GROUND WATER	DOMESTIC	WOODBIDGE, FRED E (Current); WOODBRIDGE, SANDRA J (Current)
34	10753	Decreed	Active	1930-06-01	0.07	GROUND WATER	DOMESTIC, STOCK WATER	RATHBUN, CYNTHIA L (Current); RATHBUN, PHILLIP A (Current)
34	10846	Decreed	Active	1884-12-31	0.04	GROUND WATER	DOMESTIC	BAIRD, STELLA H (Current); BAIRD, WILLIAM L (Current)
34	10850	Decreed	Active	1987-08-31	0.04	GROUND WATER	DOMESTIC	HARVEY, JACK D (Current); HARVEY, NANCY L (Current)
34	12421	Decreed	Active	1987-05-30	2.15	GROUND WATER	IRRIGATION	QUIST, LARRY A (Current)
34	13843	Decreed	Active	1961-03-02	1.72	GROUND WATER	IRRIGATION	RATHBUN, CYNTHIA L (Current); RATHBUN, PHILLIP A (Current)
34	13844	Decreed	Active	1961-03-02	0.38	GROUND WATER	IRRIGATION	LORD, GRANT (Current); LORD, JULIE (Current)



Table 2-4 Water right point of diversions in Section 4, T4N, R26E.

Basin	Sequence	Basis	Status	Priority Date	Diversion Rate	Source List	Water Uses	Owner List
34	2330	Decreed	Active	1977-06-01	1.75	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	2340	Decreed	Active	1958-01-08	3.06	GROUND WATER	IRRIGATION	JENSEN, DIANA (Current); JENSEN, JACK A (Current)
34	2340	Decreed	Active	1958-01-08	1.4	GROUND WATER	IRRIGATION	JENSEN, DARLENE B (Current); JENSEN, L VAUGHN (Current)
34	2397	Decreed	Active	1961-02-20	2.4	GROUND WATER	IRRIGATION	HANEY, LONNIE (Current)
34	2397	Decreed	Active	1961-02-20	2.36	GROUND WATER	IRRIGATION	BEAL, SETH E (Current); BEAL, SHELLEY (Current)
34	2397	Decreed	Active	1961-02-20	1.5	GROUND WATER	IRRIGATION	BEAL, RICHARD E (Current); BEAL, THORA (Current)
34	2412	Decreed	Active	1961-04-13	3.52	GROUND WATER	IRRIGATION	ANDERSEN, ANN S (Current); ANDERSEN, LARMAN D (Current)
34	2439	Decreed	Active	1961-10-06	0.8	GROUND WATER	IRRIGATION	GOODSON, PATSY A (Current)
34	7077	Decreed	Active	1974-09-05	8	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7080	Decreed	Active	1974-09-23	5.33	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7092	Decreed	Active	1975-01-14	12	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7121	Decreed	Active	1976-01-09	0.46	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7121	Decreed	Active	1976-01-09	3.74	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7179	Decreed	Active	1982-04-06	2.78	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	7184	Decreed	Active	1977-04-26	0.56	GROUND WATER	IRRIGATION	ANDERSEN, BELVA E (Current); ANDERSEN, JOEL S (Current)
34	7201	Decreed	Active	1977-06-28	0.98	GROUND WATER	IRRIGATION	SCOUTEN, JIM L (Current); SCOUTEN, LINDA (Current)
34	7201	Decreed	Active	1977-06-28	0.02	GROUND WATER	IRRIGATION	BOWDEN, JOSEPH (Current)
34	10279	Decreed	Active	1952-01-01	0.07	GROUND WATER	DOMESTIC, STOCKWATER	GOODSON, PATSY A (Current)
34	10423	Decreed	Active	1935-05-01	0.1	GROUND WATER	DOMESTIC, STOCKWATER	BEAL, RICHARD E (Current); BEAL, THORA (Current)
34	10481	Decreed	Active	1939-12-31	0.07	GROUND WATER	DOMESTIC, STOCKWATER	JENSEN, DIANA (Current); JENSEN, JACK A (Current)



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Basin	Sequence	Basis	Status	Priority Date	Diversion Rate	Source List	Water Uses	Owner List
34	10762	Decreed	Active	1930-01-15	0.08	GROUND WATER	DOMESTIC	HANEY, LONNIE (Current)
34	10788	Decreed	Active	1989-07-15	0.04	GROUND WATER	DOMESTIC	ACOR, DARYN P (Current)
34	10790	Decreed	Active	1945-05-17	0.04	GROUND WATER	DOMESTIC	ACOR, DARYN P (Current)
34	10793	Decreed	Active	1900-06-15	0.04	GROUND WATER	DOMESTIC	ACOR JR, EVERETT T (Current)
34	12376	Decreed	Active	1977-06-01	1.25	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	13840	Decreed	Active	1982-04-06	1.26	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)
34	13842	Decreed	Active	1975-12-17	0.46	GROUND WATER	IRRIGATION	TELFORD LANDS LLC (Current)



Attachment 3

Pumping Test Data



Table 3-1 Flow data for Parkinson Well during pumping test.

Date	Time	Q, gpm	min	Q, gpm
28-Jul	3:28 PM	5400	0	5400
	3:29 PM	5518	1	5518
	3:30 PM	5400	2	5400
	3:31 PM	5350	3	5350
	3:32 PM	5400	4	5400
	3:33 PM	5400	5	5400
	3:34 PM	5450	6	5450
	3:35 PM	5425	7	5425
	3:37 PM	5400	9	5400
	3:40 PM	5350	12	5350
	3:43 PM	5350	15	5350
	3:49 PM	5340	21	5340
	3:56 PM	5390	28	5390
	4:07 PM	5328	39	5328
	7:15 PM	5270	227	5270
	11:20 PM	5240	472	5240
29-Jul	3:25 AM	5210	717	5210
	7:20 AM	5220	952	5220
	11:20 AM	5155	1192	5155
	3:30 PM	5105	1442	5105
	7:10 PM	5125	1662	5125
	11:00 PM	5135	1892	5135
30-Jul	3:00 AM	5130	2132	5130
	7:00 AM	5130	2372	5130
	11:30 AM	5080	2642	5080
	3:10 PM	5060	2862	5060
	7:00 PM	5080	3092	5080
1-Aug	12:05 PM	5045	5557	5045

Flow In gpm during Ralph Parkinson Test

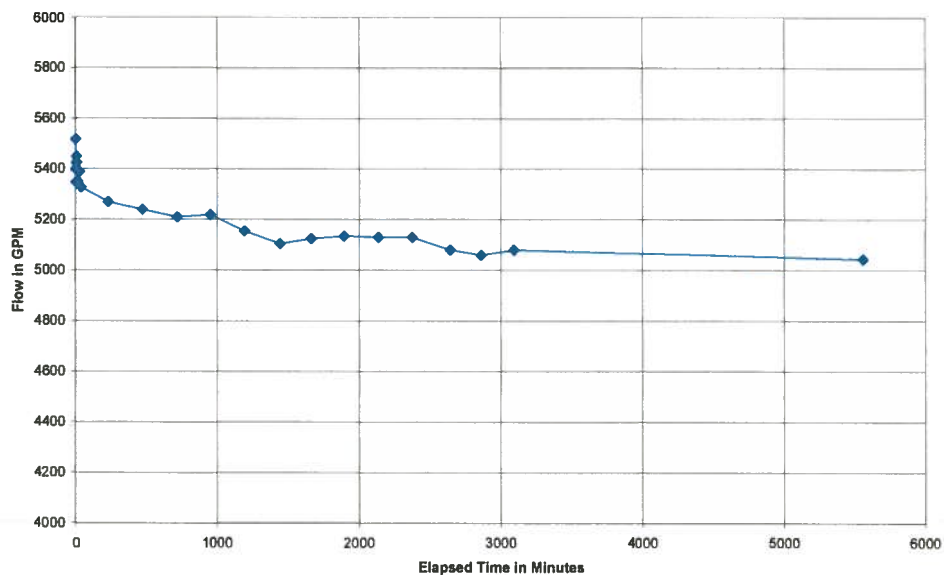


Figure 3-1 Plot of flow data.

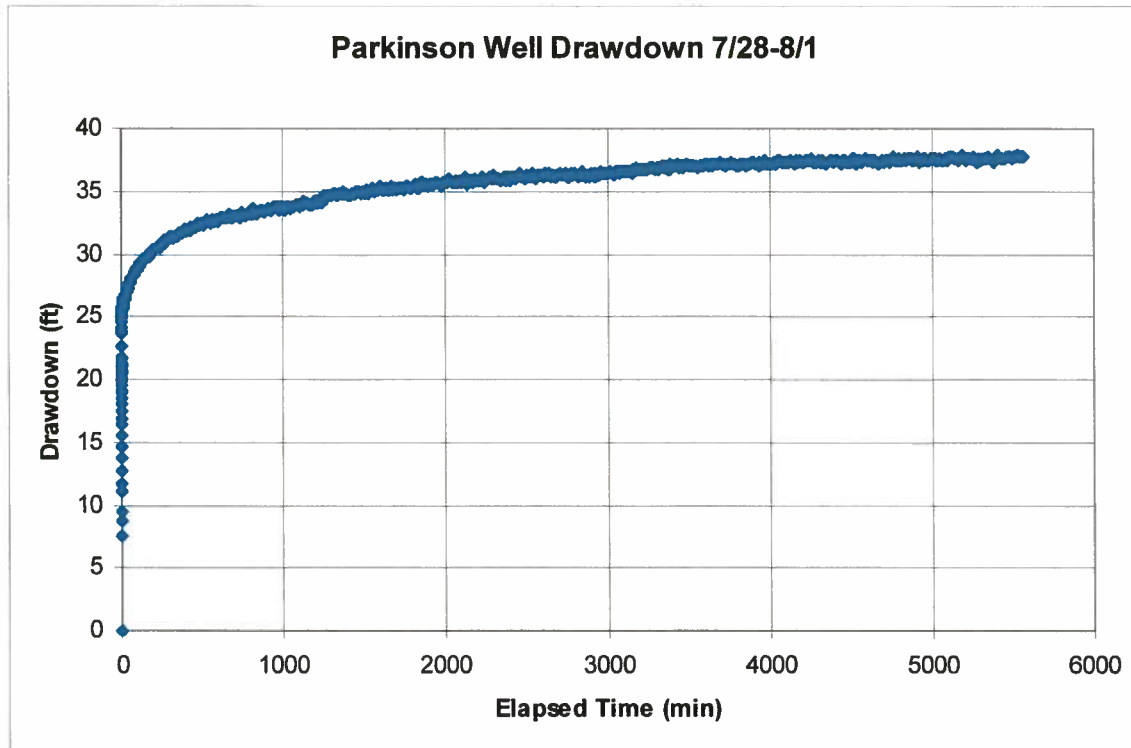


Figure 3-2. Plot of entire data set for pumping test of the Ralph Parkinson Irrigation well.

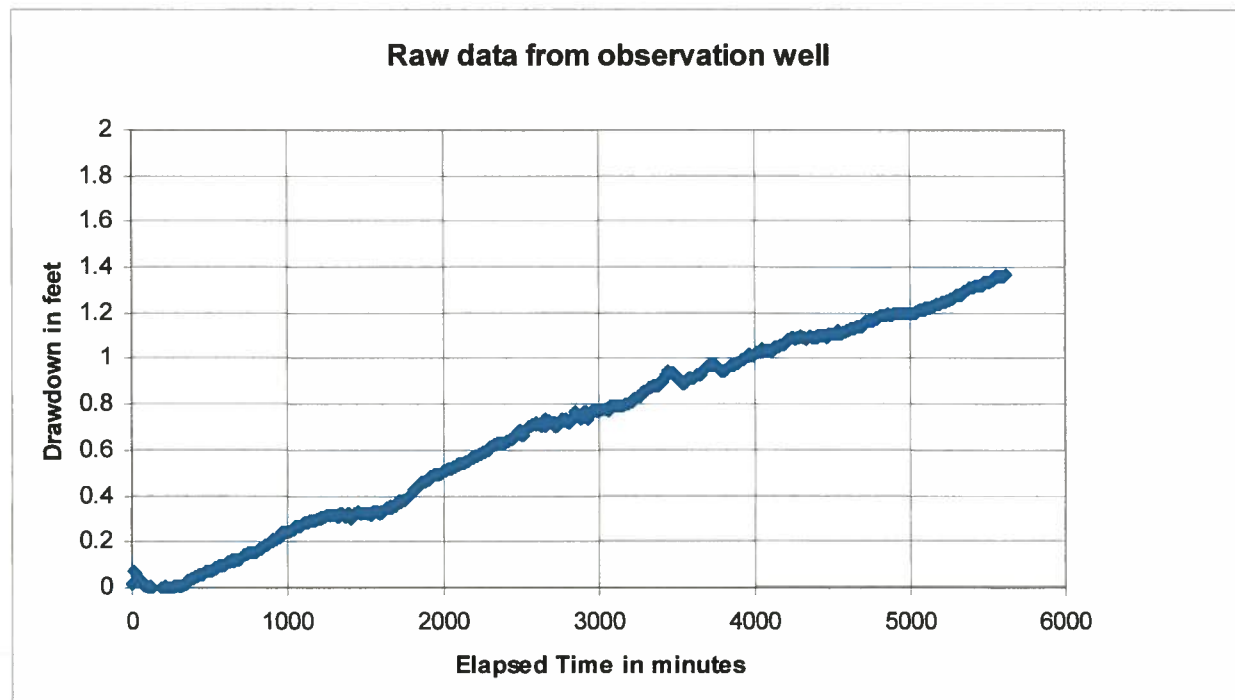


Figure 3-3. Plot of data from observation well.

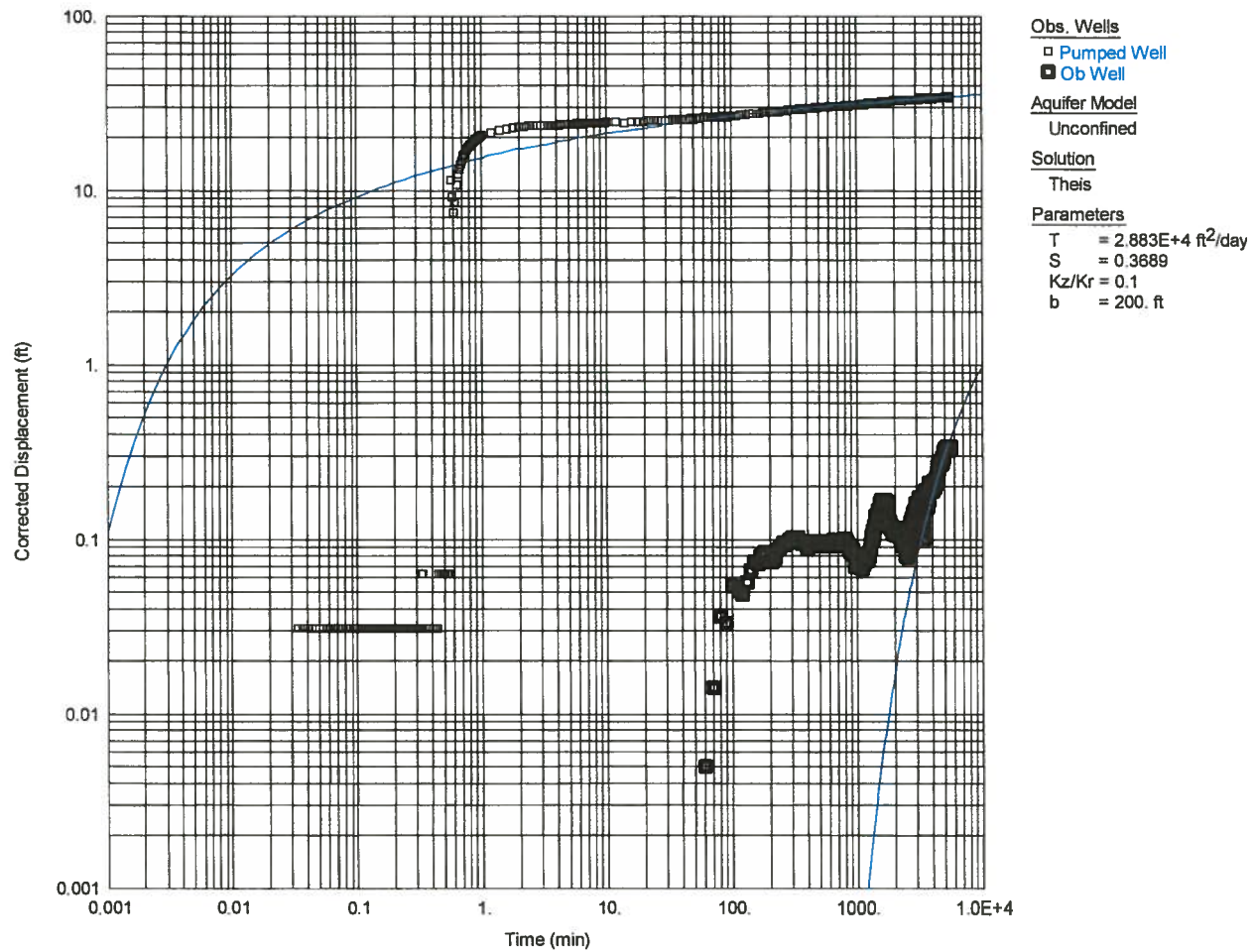


Figure 3-4 Theis unconfined solution matched to well data.

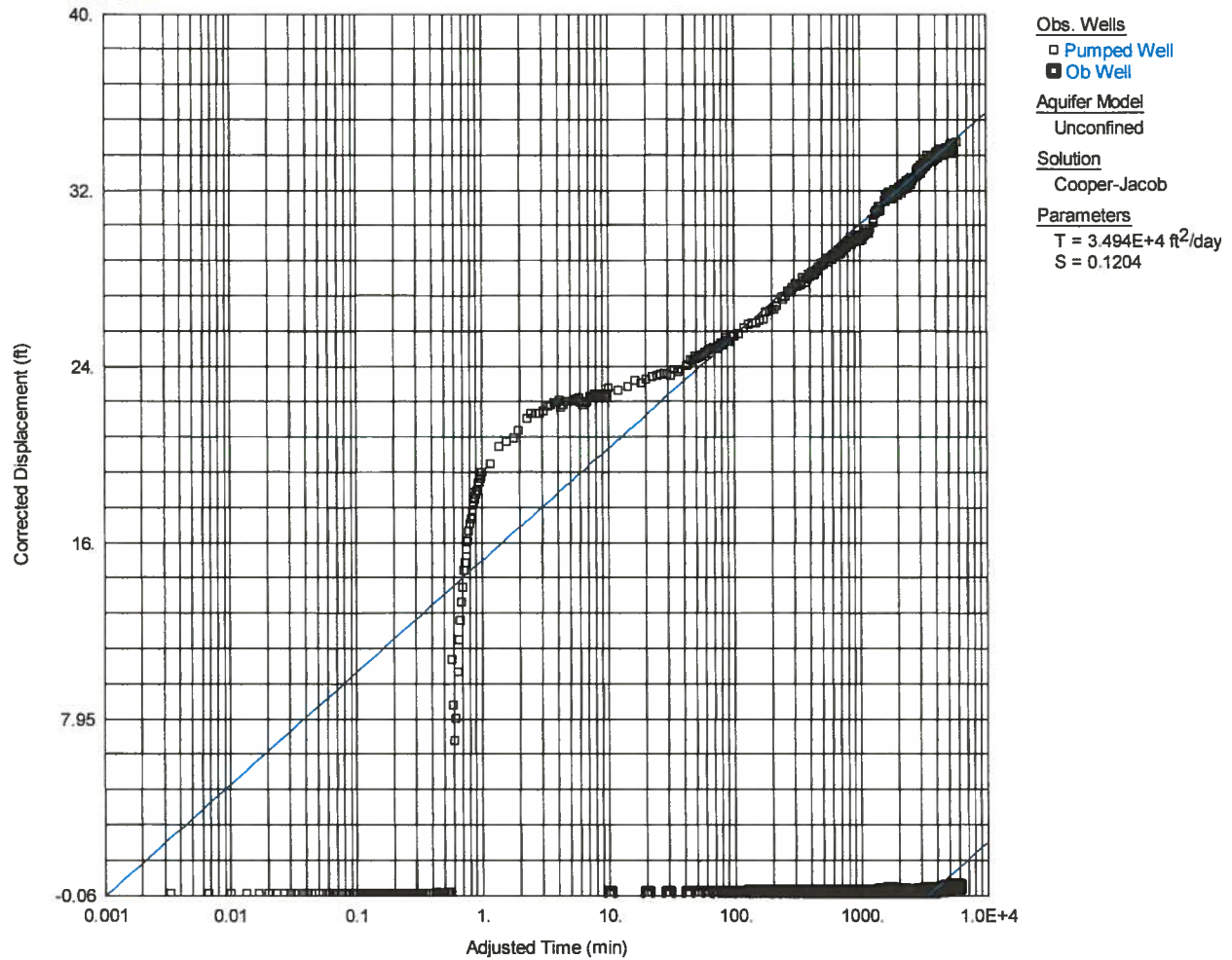


Figure 3-5 Cooper-Jacob unconfined solution matched to well data.



Attachment 4

AQUIFER IMPACT ANALYSIS



Table 4-1 Table of values used in AQTESOLV simulation.

Parameter	Value	Unit
Transmissivity	35,000	ft ² /d
Storativity	0.12	unitless
Flow Rate	900	gpm
Duration	259,200	min
Total volume	716	ac-ft
aquifer thickness (b)	200	ft
kz/Kr	0.1	na

Table 4-2 Table of locations for various boundary corners and wells used in the AQESOLV simulation.

Location	x	y
NW Corner	0	38000
NE Corner	15250	38000
SW Corner	0	0
SE Corner	15250	0
Parkinson POD	9500	21600

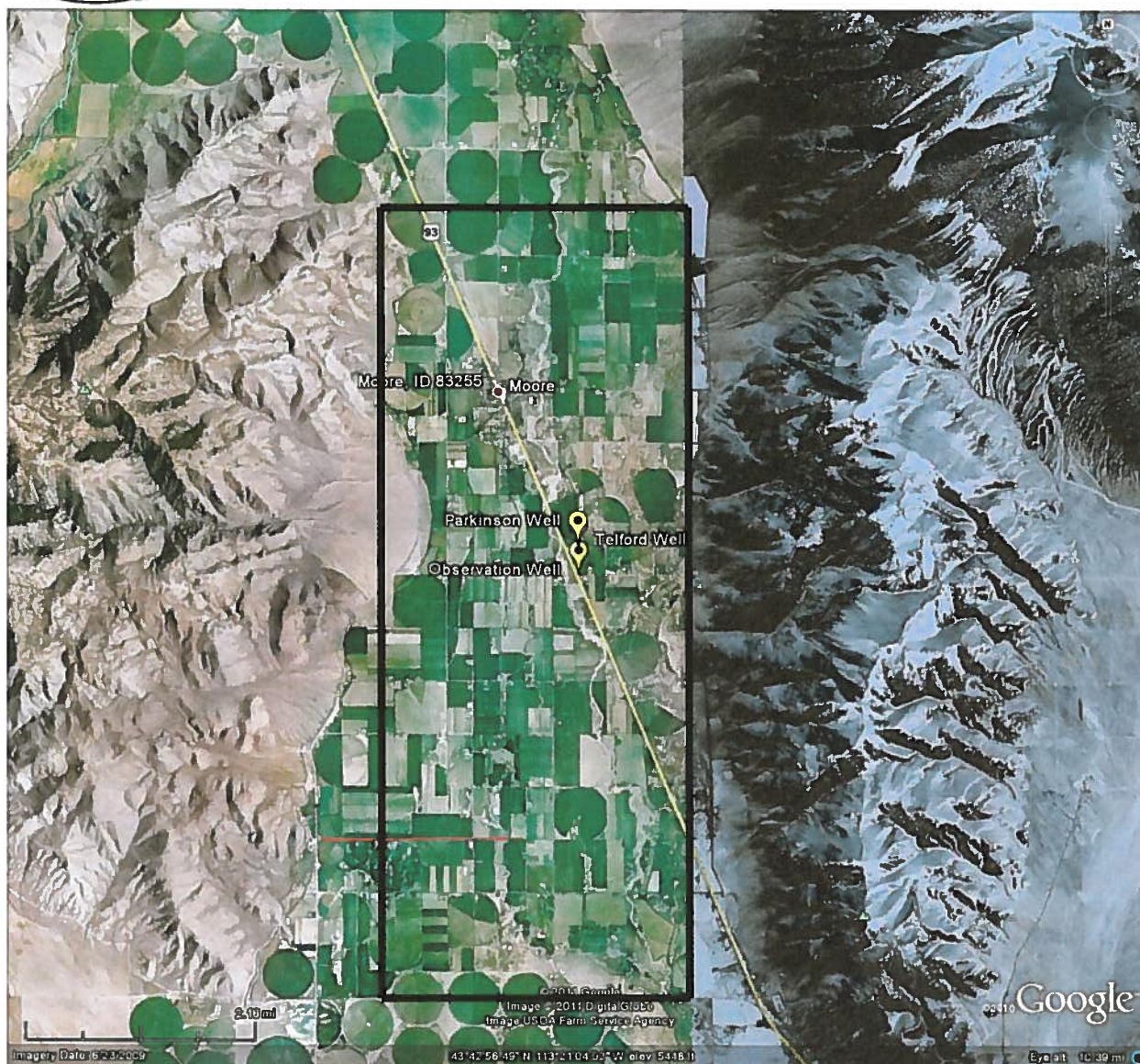


Figure 4-1 Outline of the boundaries used in the AQTESOLV forward solution calculation. Note for scale that the red line is 10,000 ft long.

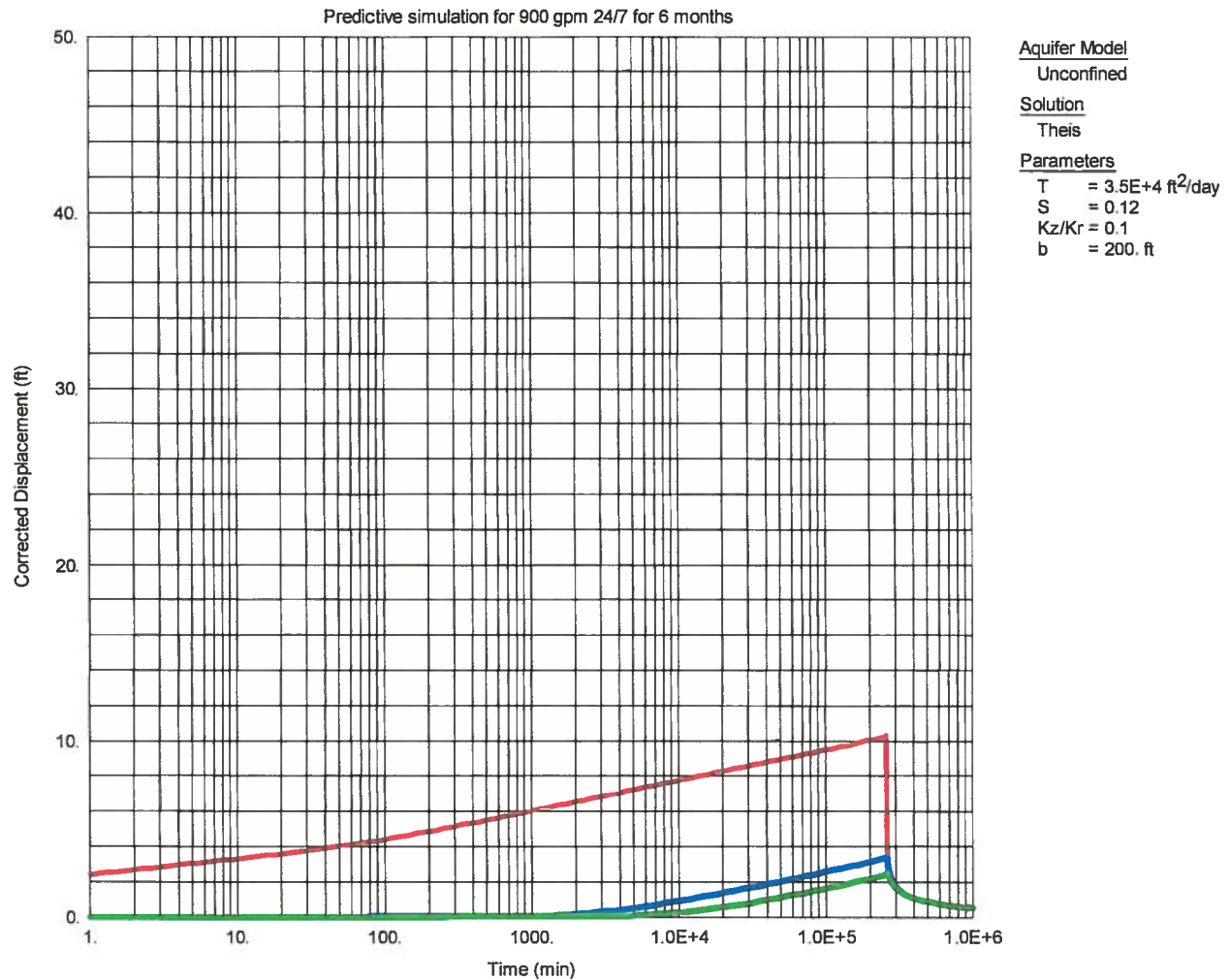


Figure 4-2 Predictive plot of drawdown at 900 gpm for the full period of use 180 days. The red line is for the water level in the Parkinson Well, blue line is the water level predicted in a well $\frac{1}{4}$ mile south, and the green line is the water level in a well $\frac{1}{2}$ mile to the east of the Parkinson Well.

Key to line colors

- Green Imaginary well $\frac{1}{2}$ mile east of the Parkinson Well
- Blue Imaginary well $\frac{1}{4}$ mile south of the Parkinson Well
- Red Parkinson Well