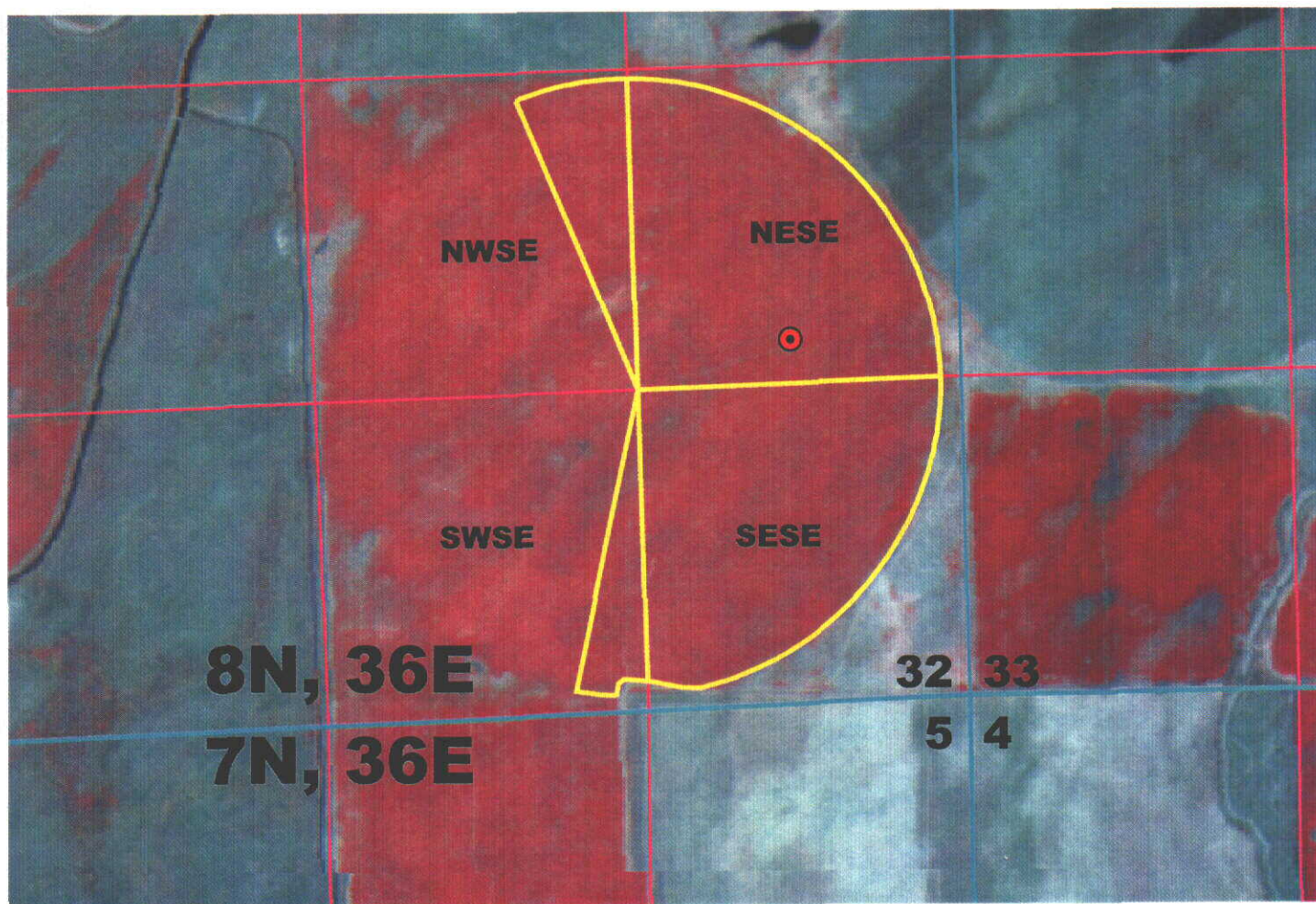




STATE OF IDAHO

Department of Water Resources
Eastern Region

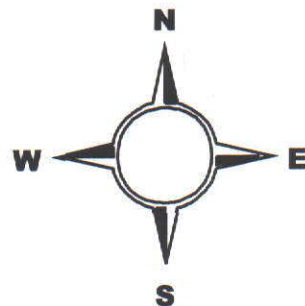
Water Right(s): 31-11417



1320 0 1320 Feet

Total Irrigated Acres: 67

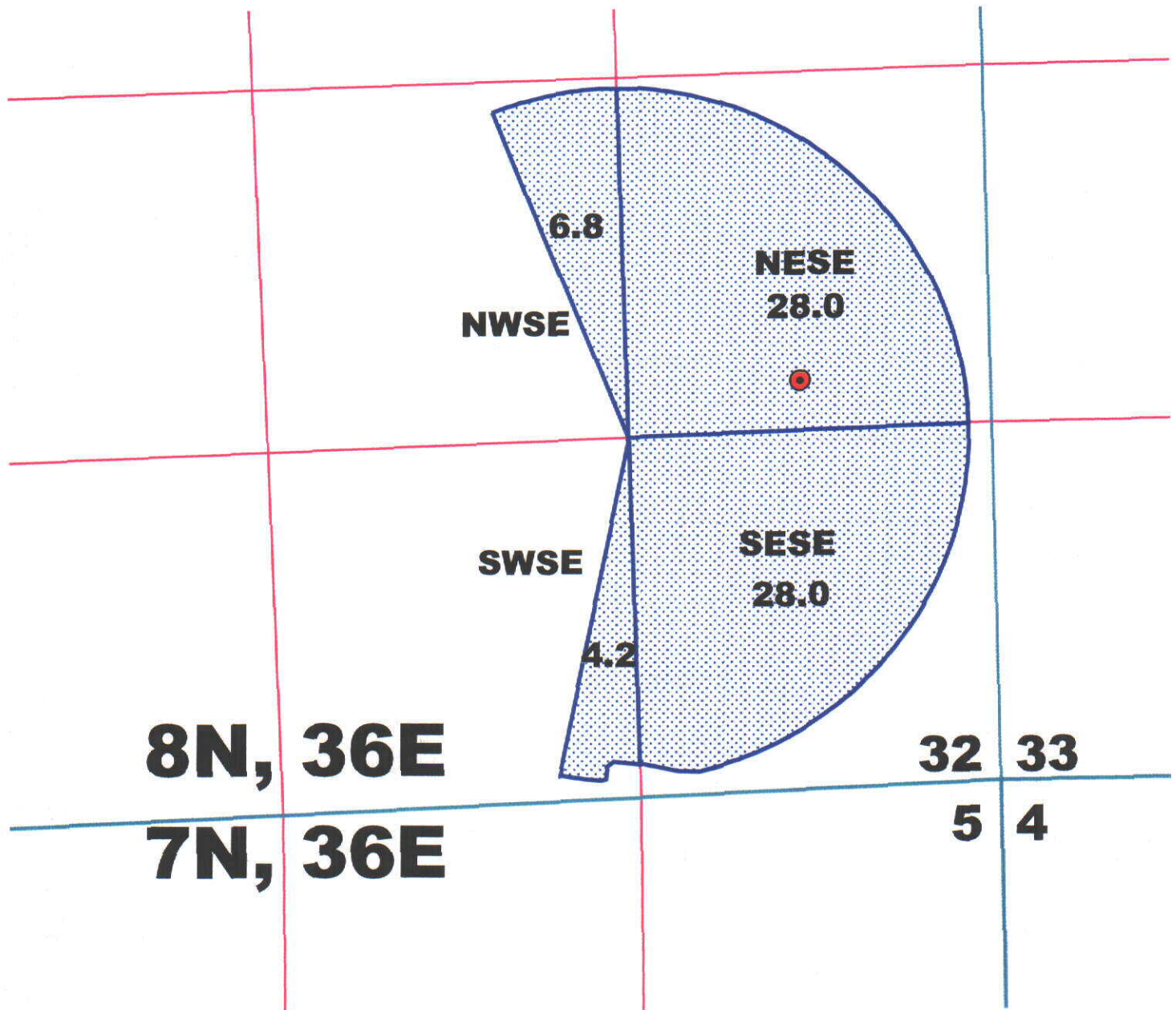
-  Point of Diversion
-  Place of Use
-  Quarter Section Lines
-  Section Lines



GIS Place of Use Illustration
1987/1988 Napp photography
Prepared by: C. Saxton
Date: October 2000

WR #: 31-11417

Ball Farms LTD

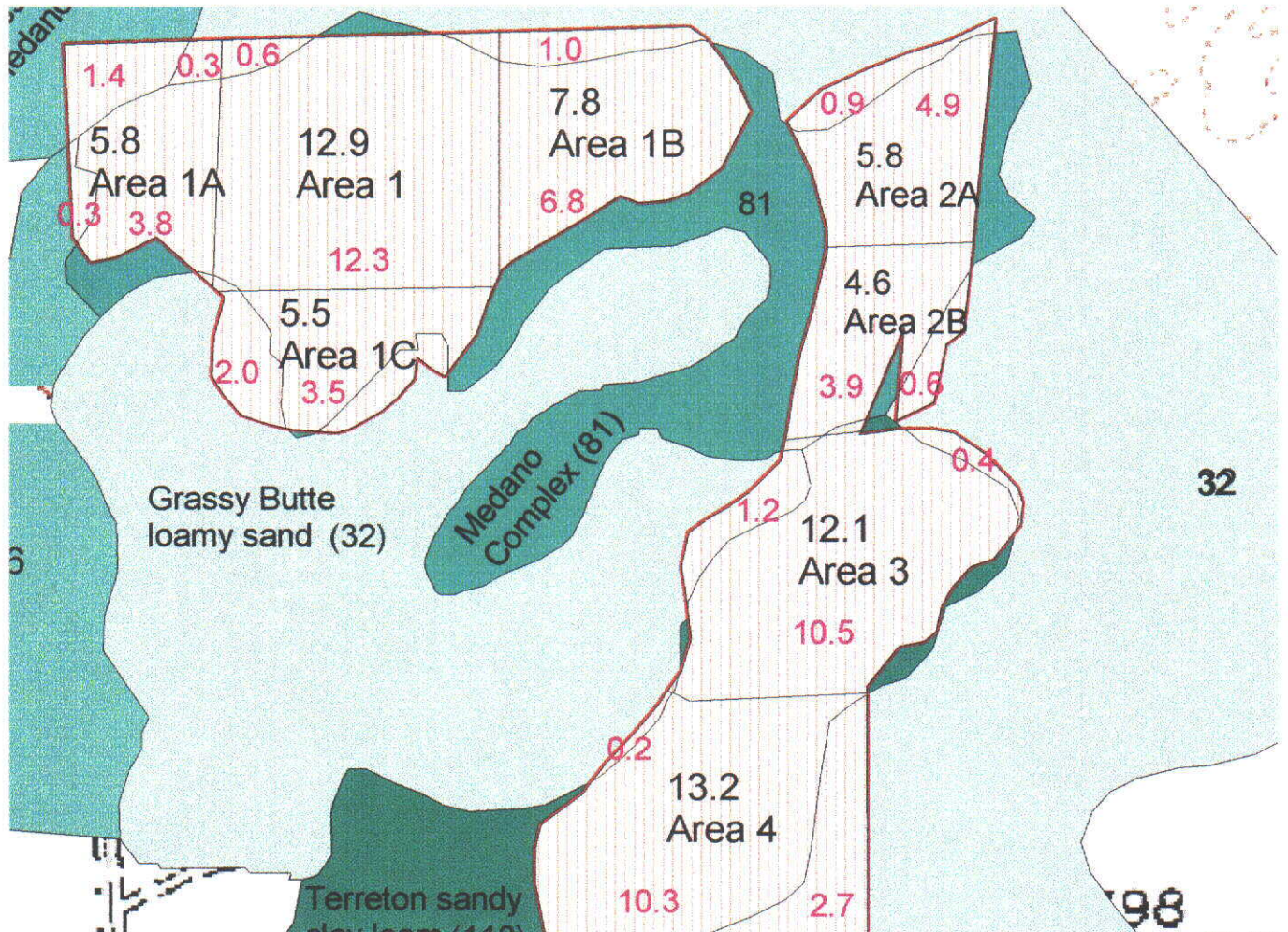


Total Irrigated Acres: 67

Acreage Distribution

Prepared By: Craig Saxton
October 2000

A31-4015 Hubble Analysis



T8N R36E Section 32

Flow direction: South

Note: grassy Butte-Medano Complex (36)
is less than 10% of the total, therefore,
it was not analyzed

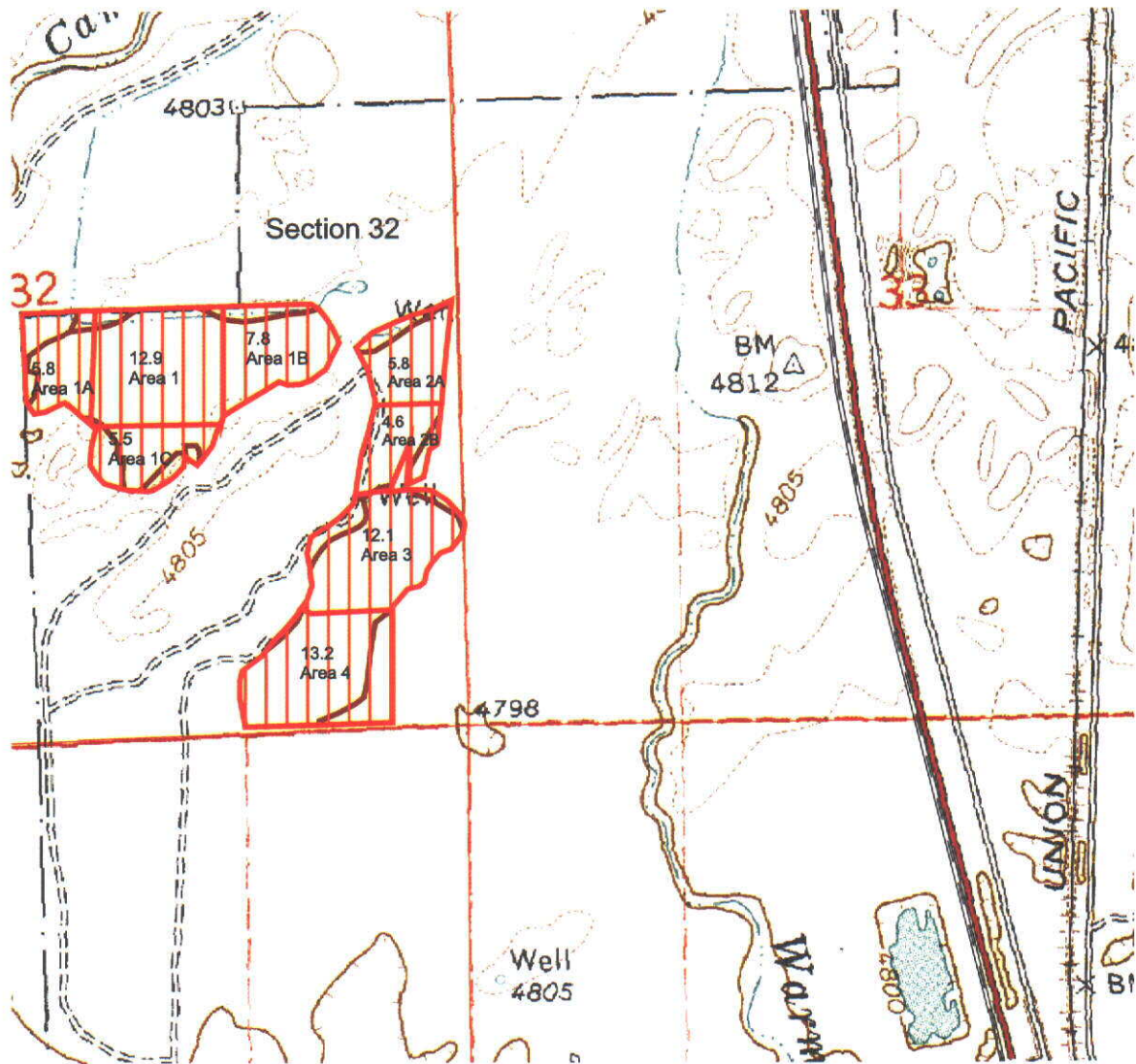


0.08 0 0.08 0.16 Miles

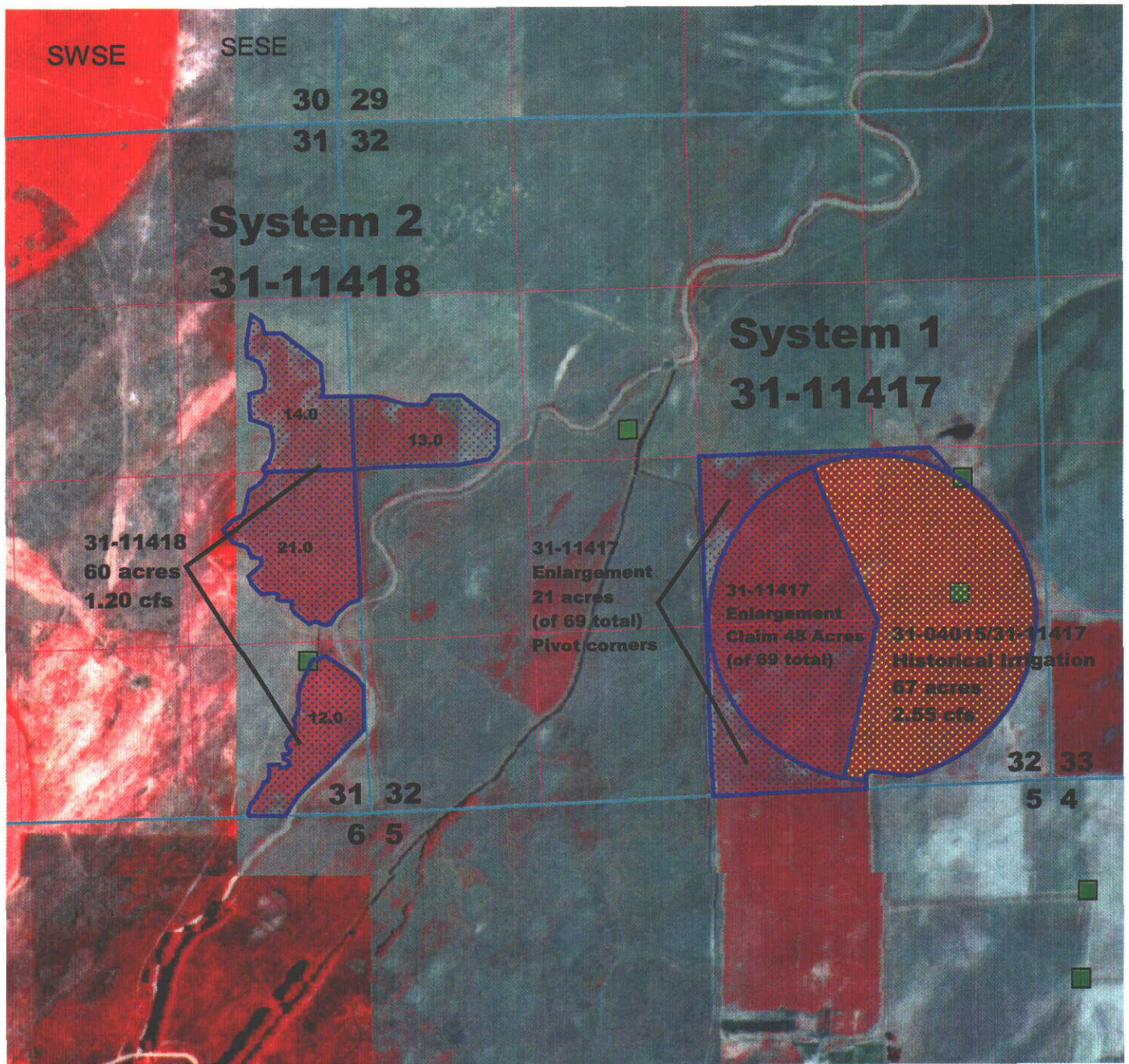
Prepared by Cbird

A31-04015

Hubble Analysis



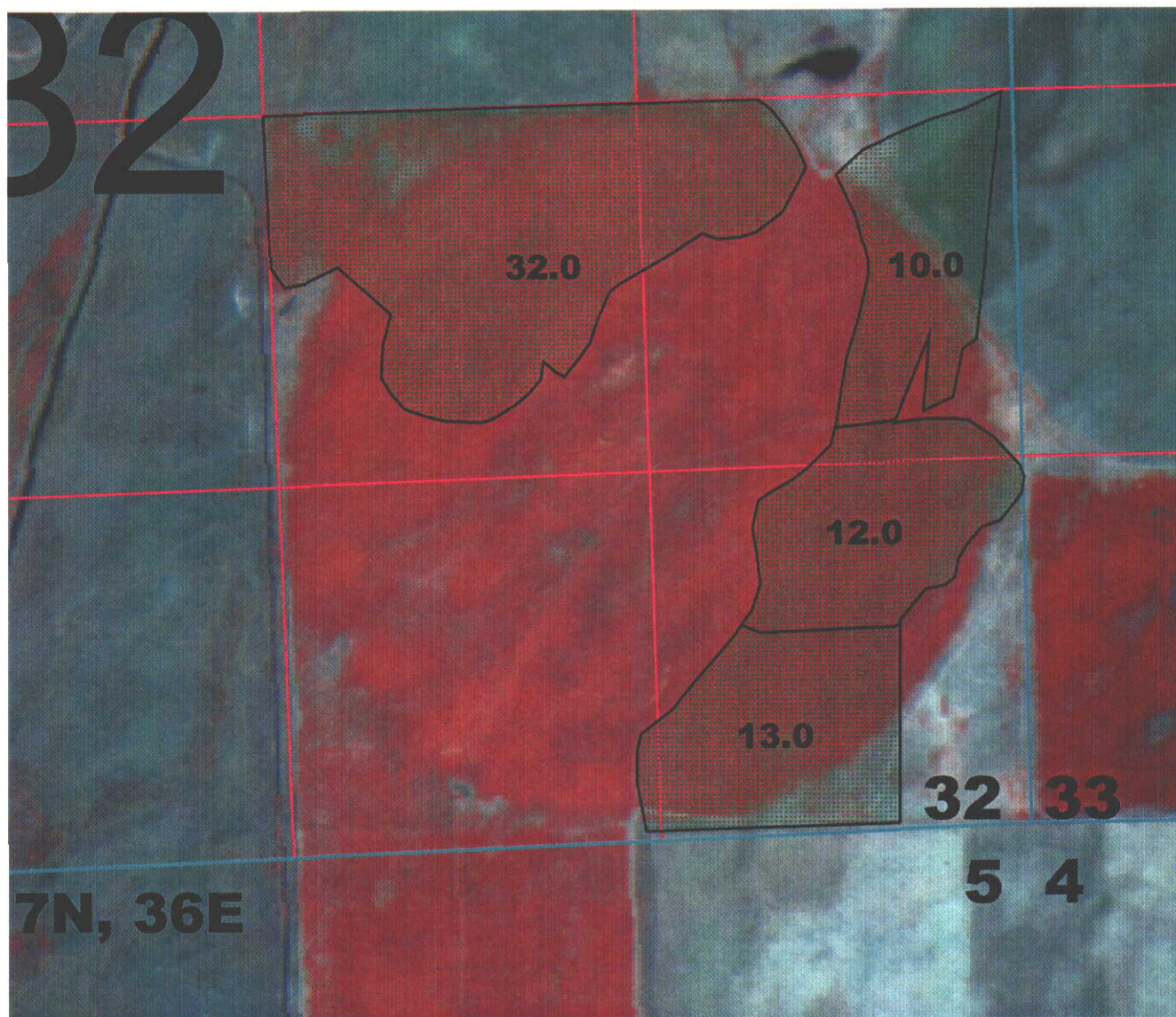
Enlargement Claim 31-11419 and Potential Recommendation



Prepared by
Craig Saxton
9-6-2000

WR#: 31-04015

Ball Farms LTD



Total Irrigated Acres: 67

Acreage Distribution

Prepared by: Craig Saxton
June, 2000

10/26/2000

IDAHO DEPARTMENT OF WATER RESOURCES
PRELIMINARY RECOMMENDATION OF WATER RIGHTS ACQUIRED UNDER STATE LAW

RIGHT NUMBER: 31-11417

NAME AND ADDRESS: BALL FARMS LTD PARTNERSHIP
CIRCLE B FARMS LTD PARTNERSHIP
PO BOX 69
LEWISVILLE, ID 83425

SOURCE: GROUND WATER

QUANTITY: 2.56 CFS
234.5 AFY

USE OF THIS RIGHT WITH RIGHT NO. 31-11419 IS LIMITED TO A
TOTAL COMBINED DIVERSION RATE OF 2.56 CFS.

PRIORITY DATE: 09/17/1956

POINT OF DIVERSION: T08N R36E S32 SWNESE Within JEFFERSON County

PURPOSE AND
PERIOD OF USE:

<u>PURPOSE OF USE</u>	<u>PERIOD OF USE</u>	<u>QUANTITY</u>
IRRIGATION	04-01 10-31	2.56 CFS 234.5 AFY

PLACE OF USE:

IRRIGATION Within JEFFERSON
County

T08N R36E S32	NESE	28	T08N R36E S32	NWSE	6.8
T08N R36E S32	SESE	28	T08N R36E S32	SWSE	4.2

67 ACRES TOTAL

OTHER PROVISIONS NECESSARY FOR DEFINITION OR ADMINISTRATION OF THIS WATER RIGHT:

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.

EXPLANATORY MATERIAL: BASIS OF CLAIM - Beneficial Use

RIGHT INCLUDES ACCOMPLISHED CHANGE IN PLACE OF USE PURSUANT TO SECTION 42-1425, IDAHO CODE.

RIGHT INCLUDES ACCOMPLISHED CHANGE IN POINT OF DIVERSION PURSUANT TO SECTION 42-1425, IDAHO CODE.

RIGHT NO. 31-11419 IS AN ENLARGEMENT OF THIS RIGHT PURSUANT TO SECTION 42-1426, IDAHO CODE.

IDAHO DEPARTMENT OF WATER RESOURCES
Adjudication Recommended Right Report

WATER RIGHT NO. 31-11417

<u>Owner Type</u>	<u>Name and Address</u>
Current Owner	CIRCLE B FARMS LTD PARTNERSHIP
Current Owner	BALL FARMS LTD PARTNERSHIP
	PO BOX 69
	LEWISVILLE, ID 83425
	(208)662-5286
Original Owner	REED MICKELSEN
Original Owner	LEVAUN MICKELSEN
	HAMER, ID 83425
	(208)662-5441

Priority Date: 09/17/1956
Basis: Beneficial Use
Status: Valid

Source Tributary to
GROUND WATER

<u>Beneficial Use</u>	<u>From</u>	<u>To</u>	<u>Diversion Rate</u>	<u>Volume</u>	<u>Subuse Code</u>
IRRIGATION	04/01	10/31	2.56 CFS	234.5 AFA	
Total Diversion			2.56 CFS	234.5 AFA	

Point(s) of Diversion:

Township	Range	Section	1/4 of 1/4 of 1/4	Lot	County
08N	36E	32	SW NE SE		JEFFERSON

IRRIGATION Use:
Acre Limit: 67

Place(s) of use:

Place of Use Legal Description: IRRIGATION JEFFERSON County

<u>Township</u>	<u>Range</u>	<u>Section</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>
08N	36E	32		NESE	28		NWSE	6.8		SESE	28		SWSE	4.2

Total Acres: 67

Conditions of Approval:

1. C05 RIGHT INCLUDES ACCOMPLISHED CHANGE IN PLACE OF USE PURSUANT TO SECTION 42-1425, IDAHO CODE.
2. C03 RIGHT INCLUDES ACCOMPLISHED CHANGE IN POINT OF DIVERSION PURSUANT TO SECTION 42-1425, IDAHO CODE.
3. 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.

Remarks:

1. Quantity USE OF THIS RIGHT WITH RIGHT NO. 31-11419 IS LIMITED TO A TOTAL COMBINED DIVERSION RATE OF 2.56 CFS.
2. Explanatory RIGHT NO. 31-11419 IS AN ENLARGEMENT OF THIS RIGHT PURSUANT TO SECTION 42-1426, IDAHO CODE.

Comments:

Author	Date	Subject
csaxton	10/26/00	Split Right

Comment

This right is the result of splitting 31-04015 into 31-11417 and 31-11418 to represent two separate, non-connecting systems for the convenience of the adjudication (csaxton 9-6-00).

Dates:

Licensed Date:
 Claim Received Date: 09/06/2000
 Enlargement Use Priority Date:
 Enlargement Statute Priority Date:
 Decreed Date:
 Date Filed with Court:
 Objection Filed Date:
 SF5 Filed:
 Special Master Recom Signed Date:

Element Reviewed/Verified Dates:

Element	Last Review Date	Reviewer	Last Verified Date	Verifier	Status
Contacts	10/26/00 9:41:52 AM	csaxton			In Process
POD	10/26/00 9:49:16 AM	csaxton			In Process
POU	10/26/00 9:58:54 AM	csaxton			In Process
Priority Date	10/26/00 9:42:38 AM	csaxton			In Process
Quantity	10/26/00 10:19:57 AM	csaxton			In Process
	10/26/00 10:08:30 AM	csaxton			In Process
Season	10/26/00 10:04:18 AM	csaxton			In Process
Source	10/26/00 9:55:48 AM	csaxton			In Process
Summary	10/26/00 10:18:53 AM		10/26/00 10:18:53 AM	csaxton	Complete
Use	10/26/00 9:56:31 AM	csaxton			In Process

Other Information:

Receipt Number(s):
 State or Federal: S
 Owner Name Connector:
 Overall Max Diversion Rate: 2.56
 Overall Max Diversion Volume: 234.5
 Generic Max Rate per Acre:
 Generic Max Volume per Acre:
 Civil Case Number:
 Old Case Number:
 Decree Plaintiff:
 Decree Defendant:
 PresumptionFlag:
 Notice of Error Flag:C
 Swan Falls Trust or Nontrust:
 Swan Falls Dismissed:
 DLE Act Number:
 Cary Act Number:
 Mitigation Plan: False
 Parent Right: 31-4015 WRADJUDICATIONCLAIM

Verification Log:

Element	Date Time Stamp	Reviewer	Log Text
Contacts	10/26/00 9:41:50 AM	csaxton	1. Appointment has not been scheduled. Comment for 1: Field exam on 6/15/2000 Edited point location
POD	10/26/00 9:50:50 AM	csaxton	1. (YES) The basis is beneficial use.
POD	10/26/00 9:49:14 AM	csaxton	4. (YES) There is evidence that there has been a change in the Point of Diversion. 5. (YES) The change can be verified as an accomplished transfer. Comment for 5: POD changed prior to 1975, from original well NENESE to SWNESE. 6. (YES) The file contains all the necessary information to verify the POD. 8. (NO) Point of Diversion remark was not required. 9. (YES) Point of Diversion condition was required.
POU	10/26/00 9:58:53 AM	csaxton	1. (YES) The POU is required.

Priority Date	10/26/00 9:42:36 AM	csaxton
Quantity	10/26/00 10:19:07 AM	csaxton
Quantity	10/26/00 10:08:28 AM	csaxton
Season	10/26/00 10:04:17 AM	csaxton
Source	10/26/00 9:55:47 AM	csaxton
Summary	10/26/00 10:18:51 AM	csaxton
Use	10/26/00 9:56:30 AM	csaxton

2. (YES) The basis of claim is beneficial use.
5. (YES) There is evidence that there has been a change in the POU.
6. (YES) The change can be verified as an accomplished transfer.
- Comment for 6: POU changed by addition of pivot prior to 1975.
9. (YES) The file contains all the necessary information to verify the POU.
- Comment for 9: Field Exam 6-15-00 and NAPP Photography
12. (NO) POU remark was not required.
13. (YES) POU condition was required.
1. (NO) There has not been a later court decree of the water right(s) from the water source.
4. (YES) The basis of claim is beneficial use.
- 4b. (NO) The priority date was not claimed after the date a permit was required for the source and water use.
10. (YES) The claim file contains sufficient evidence of priority date.
12. (YES) The claim is recommended.
13. (NO) The claim is not coded correctly.
14. (NO) Priority remark was not required.
15. (NO) Priority condition was not required.
1. (YES) The basis of claim is beneficial use.
5. (NO) A flow measurement was not required.
- Comment for 5: NWMD field Exam in 1998
6. (YES) The source is ground water and the purpose of use requires a diversion volume limit.
8. (YES) Irrigation is a purpose of use.
9. (YES) Quantity remark was required.
10. (NO) Quantity condition was not required.
1. (YES) The basis of claim is beneficial use.
5. (NO) A flow measurement was not required.
- Comment for 5: NWMD field Exam in 1998
6. (YES) The source is ground water and the purpose of use requires a diversion volume limit.
8. (YES) Irrigation is a purpose of use.
9. (NO) Quantity remark was not required.
10. (NO) Quantity condition was not required.
1. (YES) The basis of claim is beneficial use.
4. (NO) There is not evidence that there has been a change to the period of use.
9. (YES) The file contains all the necessary information to verify the period of use.
11. (NO) The basis of is not a decree, license, or a transferred beneficial use right that has had the period of use administratively determined.
13. (YES) Irrigation is the purposed use.
15. (NO) Period of Use remark was not required.
16. (NO) Period of Use condition was not required.
1. (YES) The basis is beneficial use.
4. (NO) There is not evidence that there has been a change in the Source.
7. (YES) The file contains all of the necessary information to verify the source.
- Comment for 7: Field Exam 6/15/2000
8. (NO) The source is not surface water.
10. (NO) Source remark was not required.
11. (NO) Source condition was not required.
1. (YES) The basis of the claim is beneficial use.
2. (YES) All the water being used for all the purposes is being claimed and to the extent it was claimed.
5. (NO) General remark was not required.
6. (YES) Explanatory remark was required.
7. (YES) Additional condition was required.
8. (YES) Wanted to view the recommended right.
9. (YES) This is a split right.
10. (NO) This is not a combined right.
11. (NO) Documents were not linked or attached to this file.
12. (YES) Set the verification date.
1. (YES) The basis of claim is beneficial use.
4. (NO) There is not evidence that there has been a change to the purpose of use.
9. (YES) The file contains all the necessary information to verify the purpose of use.
11. (NO) Purpose of Use remark was not required.
12. (NO) Purpose of Use condition was not required.

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE STATE OF IDAHO,
IN AND FOR THE COUNTY OF TWIN FALLS

IN RE THE GENERAL ADJUDICATION
OF RIGHTS TO THE USE OF WATER FROM
THE SNAKE RIVER BASIN WATER SYSTEM

CIVIL CASE NUMBER: 39576

Ident. Number 31-11417
Date Received: 9/6/00
Receipt No: X777777
Received By:

NOTICE OF CLAIM TO A WATER RIGHT
ACQUIRED UNDER STATE LAW

A31-11417



1. Name of Claimant(s)

CIRCLE B FARMS LTD PARTNERSHIP Phone: (208)662-5286

PO BOX 69
LEWISVILLE ID 83425

BALL FARMS LTD PARTNERSHIP Phone: (208)754-4651

PO BOX 69
LEWISVILLE ID 83425

2. Date of Priority: 09/17/1956

3. Source: GROUND WATER Trib. to:

4. Point of Diversion:

Township	Range	Section	1/4 of 1/4 of 1/4 Lot	County
08N	36E	32	NW SE SE	JEFFERSON

5. Description of diverting works:

60' WELL W/ 100 HP PUMP TO PIVOT

6. Water is used for the following purposes:

Purpose	From	To	C.F.S.	(or) A.F.A
IRRIGATION	04/01	11/01	3	

7. Total Quantity Appropriated is:

3 C.F.S.

8. Total consumptive use:

9. Non-irrigation uses:

10. Place of use:

Township	Range	Section	1/4 of 1/4	Lot	Use	Acres
08N	36E	32	NW	SE	IRRIGATION	40
			NE	SE	IRRIGATION	40
			SW	SE	IRRIGATION	40
			SE	SE	IRRIGATION	40
Section Acres						160
Total Acres						160

11. Place of use in counties: JEFFERSON

12. Do you own the property listed above as place of use? Yes

13. Other Water Rights Used:

14. Remarks:

THIS RIGHT IS THE RESULT OF SPLITTING 31-04015 INTO 31-11417 AND 31-11418 TO REPRESENT TWO SEPERATE, NON-CONNECTING SYSTEMS FOR THE CONVENIENCE OF THE ADJUDICATION (CSAXTON 9-6-00).

15. Basis of Claim: Statutory Claim

16. Signature(s)

(a.) By signing below, I/We acknowledge that I/We have received, read and understand the form entitled "How you will receive notice in the Snake River Basin Adjudication." (b.) I/We do _____ do not _____ wish to receive and pay a small annual fee for monthly copies of the docket sheet.

Number of attachments: _____

For Organizations:

I do solemnly swear or affirm that I am _____ of
Title

_____, that I have signed the foregoing
Organization

document in the space below as _____ of
Title

_____, and that the statements contained in the
Organization
foregoing document are true and correct. _____

Signature of Authorized Agent

Title and Organization

Date

State of Idaho)
County of _____) SS.

Subscribed and sworn (or affirmed) before me this

of _____ 20__

Notary Public

Residing at _____

My commission Expires _____



STATE OF IDAHO

Department of Water Resources
Eastern Region

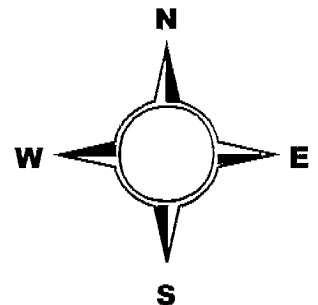
Water Right(s): 31-11417



1320 0 1320 Feet

Total Irrigated Acres: 87

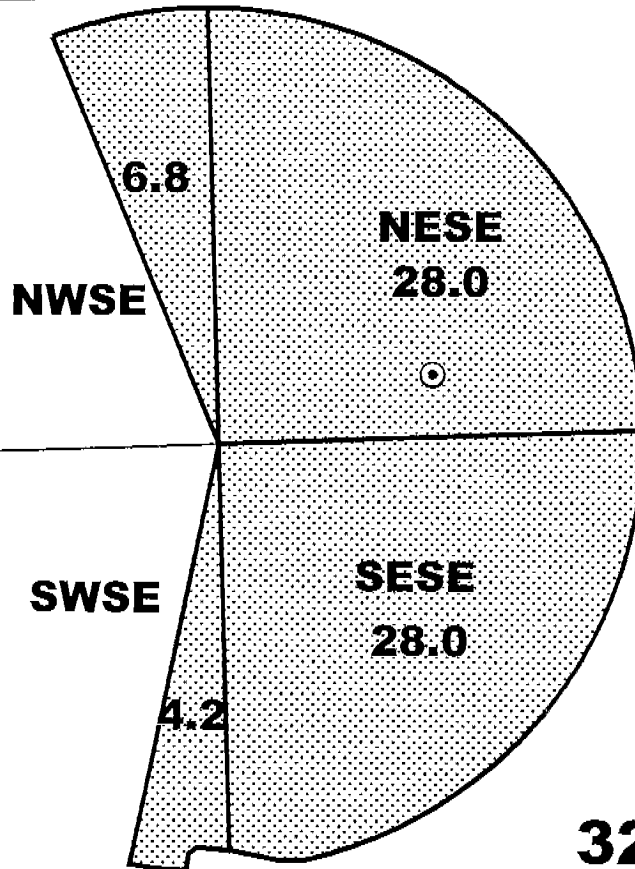
- ⊙ Point of Diversion
- Place of Use
- Quarter Section Lines
- Section Lines



GIS Place of Use Illustration
1987/1988 Napp photography
Prepared by: C. Saxton
Date: October 2000

WR #: 31-11417

Ball Farms LTD



8N, 36E

7N, 36E

32 33

5 4

Total Irrigated Acres 67

Acreage Distribution

Prepared By: Craig Saxton
October 2000

01/16/2001

NOTICE OF ERROR
REPLY

Please type or print clearly, fill out this form completely and mail.

Return this reply form to IDWR by the deadline date printed below if you want IDWR to change your recommendation or you want to let IDWR know that you agree with its recommendation.

YOUR DEADLINE FOR RETURNING A NOTICE OF ERROR REPLY IS: March 9, 2001

Water right number: 31-11417

BALL FARMS LTD PARTNERSHIP
CIRCLE B FARMS LTD PARTNERSHIP
PO BOX 69
LEWISVILLE, ID 83431

Daytime Telephone Number: (208) 754-4651
Evening Telephone Number:

1. Describe the portion of the proposed recommendation with which you disagree (e.g. priority date, period of use, source):

2. Describe the changes you wish to make in the proposed recommendation:

3. Give a brief explanation as to why you disagree with these portions:

☒ I AGREE with this proposed recommendation: no changes need to be made.

DATE: 6 March 2001 SIGNATURE: Carl M. Ball

Please print your name: Carl M. Ball

IDWR Regional Office, 900 N Skyline, Idaho Falls, ID 83402, (208) 525-7161

MEMORANDUM

To: Craig Saxton/File
From: Cindy E. Bird
Date: August 4, 2000

Reference: Hubble Analysis results on A31-04015

Crop Information: The historical crop configuration was rotated between alfalfa, spring grain and pasture. Water requirements were investigated for each crop in order to determine the critical cropping pattern.

Soil Characteristic: Soil Characteristic information was acquired from the Soil Survey of Jefferson County, December 1979, publication. Brad Duncan, Twin Falls office of N.R.C.S., was consulted for the percentage of "Organic Matter" not found in the Soil Survey publication.

The soil characteristics were analyzed to determine the Management Allowed Deficit for each crop. Field boundaries included multiple and complex soils. The different soils and crops were analyzed to determine the critical combination. The Medano Complex is either loamy sand or sandy loam. In each study, the Medano Complex soil that produced the highest water requirement was used. Grassy Butte-Medano Complex (36) was not analyzed because it was less than 10% of the total irrigated acres.

Slope and field lengths: Topographical maps were used to determine field slopes. This area is extremely flat; therefore, the maximum flow of 10-gpm flow was used as the upper limit in the Furrow analysis. The fields were defined based on the June 22, 1960 ASCS aerial photography. Theoretical areas were created to allow the Furrow program to function. Area 1 and 2 fields were reduced in length because at maximum flow the water would never reach the end of the fields. A map identifying these areas is included in the information.

Field Application Efficiency: When the Furrow program indicated efficiency less than 15%, a reasonable minimum of 15% was assumed for the Field Application Efficiency (FAE) (Idaho Dept. of Water Resources, 1999, p. 29).

Field Irrigation Requirements: The Grassy Butte loamy sand (32) is located on the fringes of the irrigated acres and is approximately 14% of the total acres. This soil was used in the final analysis because it produced a more conservative value. Therefore, the total maximum on-farm irrigation requirement for Grassy Butte loamy sand is 0.09 cfs/acre for the 67 acres or 6.03 cfs.

IRRIGATION DIVERSION RATE ANALYSIS

CLAIM NO(S): A31-04015
 FIELD ID NO: 1
 TOTAL ACRES: 12.9 AC
 FIELD SLOPE: 0.10 %
 FURROW LENGTH: 718 FT

ANALYSIS COMPLETED BY: Cindy Bird
 DATE OF ANALYSIS: 8/9/00
 Qmax PER FURROW: Qmin PER FURROW:
 For corrugates: 10.0 gpm For both: 3.0 gpm
 For furrows: 50.0 gpm

SOIL TYPE	ACRES	% OF TOTAL AC	INTAKE FAMILY	CROP = alfalfa		CROP = sgrain		CROP = pasture		CROP =		CROP =	
				MAD	EFFICIENCY	MAD	EFFICIENCY	MAD	EFFICIENCY	MAD	EFFICIENCY	MAD	EFFICIENCY
32-Grassy Butte loamy sand	0.6	5	0.85	2.10	1	1.68	15	1.28	15	***			***
81-loamy sand	12.3	95	0.70	2.58	20	2.16	15	1.74	15				

TOTAL AC TOTAL % CFS/AC FOR
 12.9 100 EACH CROP: _____

TOTAL CFS FOR FIELD : _____

Min. FAE=15%; Max. FAE=70%
 Pg 29 Jeff Peppersack's report.

FIELD ID NO: 1A
 TOTAL ACRES: 5.8 AC
 FIELD SLOPE: 0.10 %
 FURROW LENGTH: 586 FT

DATE OF ANALYSIS: 8/9/00
 Qmax PER FURROW: Qmin PER FURROW:
 For corrugates: 10.0 gpm For both: 3.0 gpm
 For furrows: 50.0 gpm

SOIL TYPE	ACRES	% OF TOTAL AC	INTAKE FAMILY	CROP = alfalfa		CROP = sgrain		CROP = pasture		CROP =		CROP =	
				MAD	EFFICIENCY	MAD	EFFICIENCY	MAD	EFFICIENCY	MAD	EFFICIENCY	MAD	EFFICIENCY
32-Grassy Butte loamy sand	0.3	5	0.85	2.10	27	1.68	17	1.28	15	***			***
81-sandy loam	3.8	66	0.70	2.86	36	2.44	28	2.02	23				
36-Grassy Butte-Medano	1.7	29											

TOTAL AC TOTAL % CFS/AC FOR
 5.8 100 EACH CROP: _____

TOTAL CFS FOR FIELD : _____

FIELD ID NO: 1B
 TOTAL ACRES: 7.8
 FIELD SLOPE: 0.10 %
 FURROW LENGTH: 517 FT

DATE OF ANALYSIS: 8/9/00
 Qmax PER FURROW: Qmin PER FURROW:
 For corrugates: 10.0 gpm For both: 3.0 gpm
 For furrows: 50.0 gpm

SOIL TYPE	ACRES	% OF TOTAL AC	INTAKE FAMILY	CROP = alfalfa		CROP = sgrain		CROP = pasture		CROP =		CROP =	
				MAD	EFFICIENCY	MAD	EFFICIENCY	MAD	EFFICIENCY	MAD	EFFICIENCY	MAD	EFFICIENCY
32-Grassy Butte loamy sand	1.0	13	0.85	2.10	26	1.68	17	1.28	15				
81-loamy sand	6.8	87	0.70	2.58	36	2.16	24	1.74	19				
0	0.0	0			***		***		***		***		***

TOTAL AC TOTAL % CFS/AC FOR
 7.8 100 EACH CROP: _____

TOTAL CFS FOR FIELD : _____

A31-04015
1C
5.5 AC
0.10 %
405 FT

Cindy Bird
8/9/00

Qmin PER FURROW:
For both: 3.0 gpm

TOTAL AC	TOTAL %	CFS/AC FOR EACH CROP:
5.5	100	

TOTAL CFS FOR FIELD :

2A
5.8 AC
0.10 %
540 FT

8/9/00
min PER FURROW:
for both: 3.0 gpm

TOTAL AC	TOTAL %	CFS/AC FOR EACH CROP:
5.8	100	

TOTAL CFS FOR FIELD :

2B
4.6
0.10 %
525 FT

8/9/00
min PER FURROW:
r both: 3.0 gpm

TOTAL AC	TOTAL %	CFS/AC FOR EACH CROP:
4.5	88	

TOTAL CFS FOR FIELD : _____

FIELD IRRIGATION REQUIREMENT

initials: cb Claimant = Circle B/Ball Farms-31-4015
date: 08/04/00 Weather Station = Hamer 4 NW

crop	acres	irrig. system	eff. (%)	Monthly ET (mm/day)								AVE IR season (mm/yr)	net irrig. app. (in)	ET ratio	irrig. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)			
				mar	apr	may	jun	jul	aug	sep	oct					mar	apr	may	jun
grain-4	13.2	can	15	0	1.35	2.5	7.16	8.19	3.6	0	0		5.24	1.05	15.5	9.45	17.50	50.12	5
grain-3	12.1	can	15	0	1.35	2.5	7.16	8.19	3.6	0	0		5.75	1.04	17.1	9.36	17.33	49.64	5
grain-2B	4.6	can	17	0	1.35	2.5	7.16	8.19	3.6	0	0		4.11	1.07	11.9	8.50	15.74	45.07	5
grain-2A	5.8	can	17	0	1.35	2.5	7.16	8.19	3.6	0	0		3.18	1.09	9.0	8.66	16.03	45.91	5
grain-1C	5.5	can	17	0	1.35	2.5	7.16	8.19	3.6	0	0		5.40	1.05	15.9	8.34	15.44	44.22	5
grain-1B	7.8	can	17	0	1.35	2.5	7.16	8.19	3.6	0	0		4.54	1.06	13.3	8.42	15.59	44.64	5
grain-1A	5.8	can	17	0	1.35	2.5	7.16	8.19	3.6	0	0		3.24	1.09	9.2	8.66	16.03	45.91	5
grain-1	12.9	can	15	0	1.35	2.5	7.16	8.19	3.6	0	0		9.86	1.02	30.0	9.18	17.00	48.69	5

Summary 67.7 8.97 16.62 47.59 5

Peak Gross Irrigation Application (mm/day) = 54.43
On-Farm Irrigation Requirement (cfs/acre) = 0.090
Total On-Farm Irrigation Requirement (cfs) = 6.09
Irrigation Diversion Volume (ft/yr) = 0.00
Total Irrigation Diversion Volume (ac-ft/yr) = 0

initials: cb Claimant = Circle B/Ball Forms-31-4015

date: 08/04/00 Weather Station = Hamer 4 NW

														Monthly ET (mm/day)				net irrig. app.		ET irrig. freq.		Gross Irrigation Application (peak period ET/eff. in mm/day)			
crop	acres	irrig. system	eff. (%)	mar	apr	may	jun	jul	aug	sep	oct	AVE IR season (mm/yr)	(in)	ratio	(days)	mar	apr	may	jun	j					
pasture-4	13.2	cor	15	0	1.86	4.73	5.96	6.32	5.04	3.71	2.31		5.24	1.05	20.1		13.02	33.11	41.72						
pasture-3	12.1	cor	15	0	1.86	4.73	5.96	6.32	5.04	3.71	2.31		5.75	1.04	22.2		12.90	32.79	41.32						
pasture-2B	4.6	cor	15	0	1.86	4.73	5.96	6.32	5.04	3.71	2.31		4.11	1.07	15.4		13.27	33.74	42.51						
pasture-2A	5.8	cor	15	0	1.86	4.73	5.96	6.32	5.04	3.71	2.31		3.18	1.09	11.7		13.52	34.37	43.31						
pasture-1C	5.5	cor	15	0	1.86	4.73	5.96	6.32	5.04	3.71	2.31		1.66	1.12	6.0		13.89	35.32	44.50						
pasture-1B	7.8	cor	15	0	1.86	4.73	5.96	6.32	5.04	3.71	2.31		4.54	1.06	17.2		13.14	33.43	42.12						
pasture-1A	5.8	cor	15	0	1.86	4.73	5.96	6.32	5.04	3.71	2.31		3.24	1.09	11.9		13.52	34.37	43.31						
pasture-1	12.9	cor	15	0	1.86	4.73	5.96	6.32	5.04	3.71	2.31		9.96	1.02	39.2		12.65	32.16	40.53						
Summary	67.7																13.11	33.35	42.02						
Peak Gross Irrigation Application (mm/day) =							44.56																		
On-Farm Irrigation Requirement (cfs/acre) =							0.074																		
Total On-Farm Irrigation Requirement (cfs) =							4.99																		
Irrigation Diversion Volume (ft³/yr) =							0.00																		
Total Irrigation Diversion Volume (ac-ft/yr) =							0																		

initials: cb Claimant = Circle B/Ball Farms-31-4015

date: 08/04/00 Weather Station = Hamer 4 NW

													net			Gross Irrigation Application				
													irrig.		(peak period ET/eff. in mm/day)					
													app.	ET	irrig.					
													(in)	ratio	freq.					
															(days)					

initials:	cb	Claimant =	Circle B/Ball Farms-31-4015	Medano Complex (B1)
date:	08/04/00	Weather Station =	Homer 4 NW	Terreton sandy clay loam (110)

													net			Gross Irrigation Application			
				Monthly ET (mm/day)								AVE IR season (mm/yr)	irrig. app. (in)	ET ratio	irrig. freq. (days)	(peak period ET/eff. in mm/day)			
crop	acres	irrig. system	eff. (%)	mar	apr	may	jun	jul	aug	sep	oct				mar	apr	may	jun	j
alfalfa-4	13.2	cor	47	1.26	4.48	6.15	7.72	8.21	6.53	4.82	3.01		4.89	1.05	14.4	2.81	10.01	13.74	17.25
alfalfa-3	12.1	cor	41	1.26	4.48	6.15	7.72	8.21	6.53	4.82	3.01		5.61	1.04	16.7	3.20	11.36	15.60	19.58
alfalfa-2B	4.6	cor	37	1.26	4.48	6.15	7.72	8.21	6.53	4.82	3.01		2.93	1.09	8.3	3.71	13.20	18.12	22.74
alfalfa-2A	5.8	cor	30	1.26	4.48	6.15	7.72	8.21	6.53	4.82	3.01		4.80	1.05	14.1	4.41	15.68	21.53	27.02
alfalfa-1C	5.5	cor	38	1.26	4.48	6.15	7.72	8.21	6.53	4.82	3.01		3.31	1.08	9.5	3.58	12.73	17.48	21.94
alfalfa-1B	7.8	cor	36	1.26	4.48	6.15	7.72	8.21	6.53	4.82	3.01		3.18	1.09	9.0	3.82	13.56	18.62	23.37
alfalfa-1A	5.8	cor	36	1.26	4.48	6.15	7.72	8.21	6.53	4.82	3.01		3.98	1.07	11.5	3.75	13.32	18.28	22.95
alfalfa-1	12.9	cor	20	1.26	4.48	6.15	7.72	8.21	6.53	4.82	3.01		5.66	1.04	16.8	6.55	23.30	31.98	40.14
Summary	67.7														4.05	14.40	19.77	24.81	
Peak Gross Irrigation Application (mm/day) =							26.39												
On-Farm Irrigation Requirement (cfs/acre) =							0.044												
Total On-Farm Irrigation Requirement (cfs) =							2.95												
Irrigation Diversion Volume (ft/yr) =							0.00												
Total Irrigation Diversion Volume (ac-ft/yr) =							0												

initials:	cb	Claimant =	Circle 8/Ball Farms-31-4015	Medano Complex (81)
date:	08/04/00	Weather Station =	Hamer 4 NW	Terraton sandy clay loam (110)

crop	acres	inrrg. system	eff. (%)	mar	apr	Monthly ET (mm/day)						AVE IR season (mm/yr)	net inrrg. app. (in)	ET ratio	inrrg. freq. (days)	Gross Irrigation Application (peak period ET/eff. in mm/day)			
						may	jun	jul	aug	sep	oct					mar	apr	may	jun
grain-4	13.2	cor	34	0	1.35	2.5	7.16	8.19	3.6	0	0	4.76	1.05	14.1	4.17	7.72	22.11		
grain-3	12.1	cor	33	0	1.35	2.5	7.16	8.19	3.6	0	0	5.07	1.05	15.0	4.30	7.95	22.78		
grain-2B	4.6	cor	26	0	1.35	2.5	7.16	8.19	3.6	0	0	3.66	1.08	10.5	5.61	10.38	29.74		
grain-2A	5.8	cor	25	0	1.35	2.5	7.16	8.19	3.6	0	0	2.97	1.09	8.5	5.89	10.90	31.22		
grain-1C	5.5	cor	25	0	1.35	2.5	7.16	8.19	3.6	0	0	4.14	1.07	12.0	5.78	10.70	30.64		
grain-1B	7.8	cor	24	0	1.35	2.5	7.16	8.19	3.6	0	0	3.98	1.07	11.5	6.02	11.15	31.92		
grain-1A	5.8	cor	24	0	1.35	2.5	7.16	8.19	3.6	0	0	3.28	1.08	9.4	6.08	11.23	32.22		
grain-1	12.9	cor	15	0	1.35	2.5	7.16	8.19	3.6	0	0	2.41	1.10	6.8	9.90	18.55	52.51		

Summary 67.7

Peak Gross Irrigation Application (mm/day) =	36.62
On-Farm Irrigation Requirement (cfs/acre) =	0.061
Total On-Farm Irrigation Requirement (cfs) =	4.10
Irrigation Diversion Volume (ft ³ /yr) =	0.00
Total Irrigation Diversion Volume (ac-ft/yr) =	0

initials:	cb	Claimant =	Circle B/Bell Farms-31-4015	Medano Complex (B1)
date:	08/04/00	Weather Station =	Hamer 4 NW	Terreton sandy clay loam (110)

												net					Gross Irrigation Application			
												irrig.	ET	irrig.	(peak period ET/eff. in mm/day)					
												app.	ratio	freq.						
												(in)		(days)						
												ave IR								
												season								
												(mm/yr)								

Map of the study area showing sampling locations and soil types. The map is divided into several areas: Area 1A, Area 1B, Area 1C, Area 2A, Area 2B, Area 3, and Area 4. Each area contains numerical values representing sampling results. A large area is labeled 'Grassy Butte loamy sand (32)'. A scale bar at the bottom indicates distances in meters (0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100). A north arrow is located in the top right corner.

Area	Sampling Values
Area 1A	1.4, 0.3, 0.6, 5.8, 3.3, 3.8
Area 1B	1.0, 7.8, 6.8
Area 1C	12.9, 12.3, 5.5, 2.0, 3.5
Area 2A	0.9, 4.9, 5.8
Area 2B	4.6, 3.9, 0.6
Area 3	12.1, 10.5, 1.2, 0.4
Area 4	13.2, 10.3, 2.7, 0.2

Grassy Butte loamy sand (32)

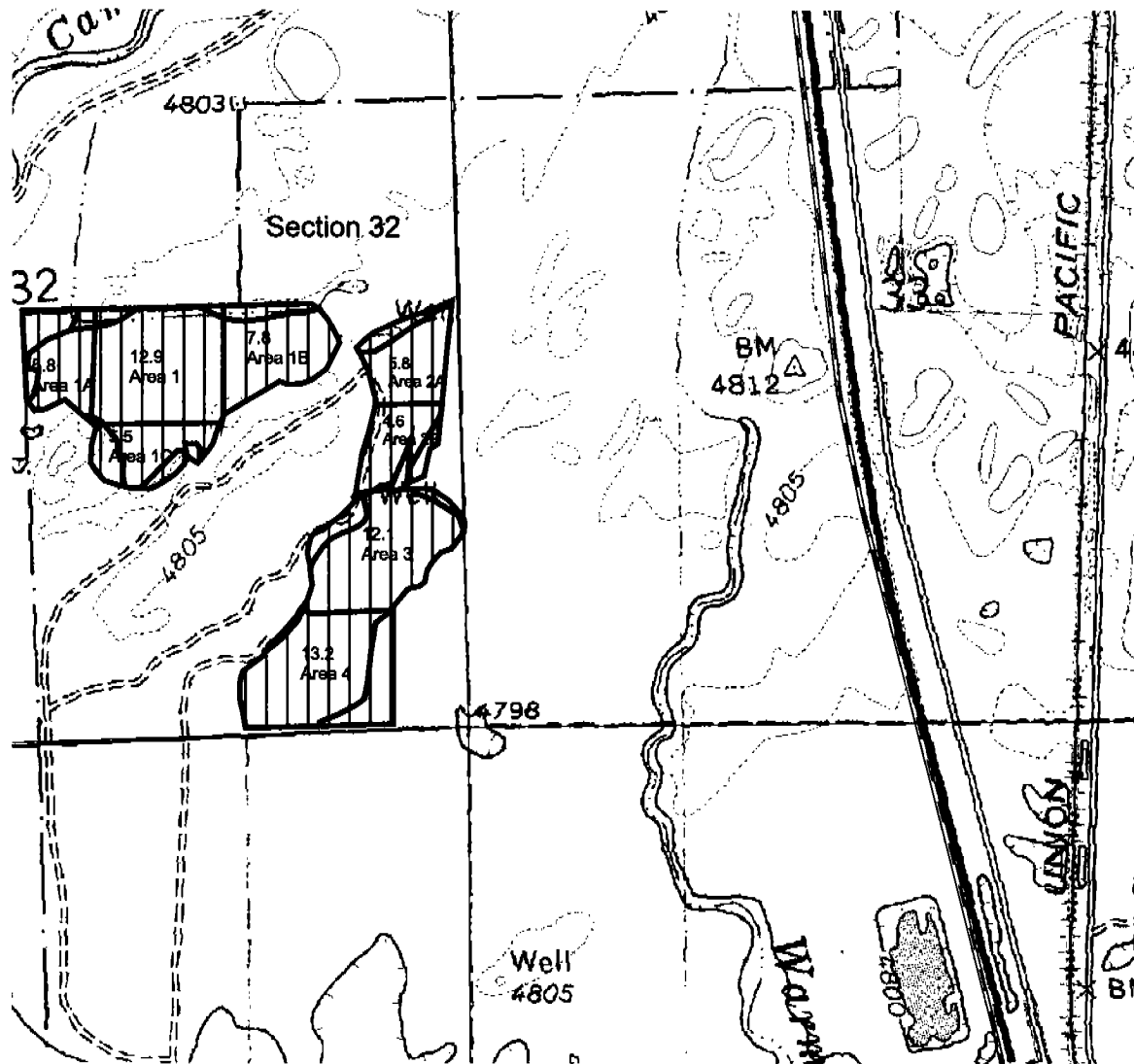
Scale: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100 meters

North Arrow

Prepared by Cbird

A31-04015

Hubble Analysis



	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
alfalfa	0.70	2.02	.001	2.00	718	8.0	24	2141.0	12.87	2.41	2.28	10.17	13.95
	0.85	2.10	.001	2.50	718	10.0	24	1471.8	12.87	2.41	2.28	10.17	13.95
grain	0.85	1.68	.001	2.00	718	10.0	36	1471.8	24.13	9.96	2.67	19.78	6.96
	0.85	1.68	.001	2.00	718	10.0	48	1471.8	32.17	17.17	4.66	25.83	5.22
pasture	0.85	1.26	.001	2.00	718	10.0	36	1471.8	24.13	9.96	2.67	20.20	5.22

Grassy Butte Loamy Sand - 32
Area 1

SOIL CHARACTERISTICS

initials: cb

date: 07/27/00

Soil Type = Terreton sandy clay loam (110)

Source of Soils Data = SCS Jefferson County Soil Survey Book

Issue date December 1979 (current)

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family
lower	upper	lower	upper	lower	upper	lower	upper			flood fu
0	6	0.14	0.18	7.9	8.4	0	2	1	1.98	1
6	60	0.16	0.18					2	4.02	
								3	6.06	
								4	8.10	alternat
								5	10.14	method
										1

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	5.07
corn (field or silage)	4	0.5	4.05
grain (winter or spring)	4	0.5	4.05
pasture (or grass hay)	3	0.5	3.03
other (enter below)			

Intake Family

choose base number for intake family from table below based on texture
base number (#'s 1 through 7) = 3

Intake Family

#	flood	furrow	texture
1	0.3	0.3	heavy clays, silty clay (> 60% clay)
2	0.5	0.35	clays, slit loam (lake laid), sandy clay
3	1	0.4	silty clay loam, clay loam, sandy clay loam, silt loam (stream laid)
4	1.5	0.5	silt loam (wind laid), loam, very fine sandy loam
5	2	0.55	sandy loam, fine sandy loam, gravelly loam
6	3	0.7	very fine sand, loamy sands, gravelly sandy loam
7	4	0.85	sand

If you wish to assign intake family by an alternate method (from Table A-3 in Hubble Report or other) enter your selection below.
Enter a value for both flood and furrow if known, otherwise enter zero.
If you do not wish to assign intake family by an alternate method enter zero for both values.

intake family (flood) = 1
intake family (furrow) = 0.4

soil depth	AWC	AWC accumulated
(inches)	(inches)	(inches)

1	0.16	0.16
2	0.16	0.32
3	0.16	0.48
4	0.16	0.64
5	0.16	0.8
6	0.16	0.96
7	0.17	1.13
8	0.17	1.3
9	0.17	1.47
10	0.17	1.64
11	0.17	1.81
12	0.17	1.98
13	0.17	2.15
14	0.17	2.32
15	0.17	2.49
16	0.17	2.66
17	0.17	2.83
18	0.17	3
19	0.17	3.17
20	0.17	3.34
21	0.17	3.51
22	0.17	3.68
23	0.17	3.85
24	0.17	4.02
25	0.17	4.19
26	0.17	4.36
27	0.17	4.53
28	0.17	4.7
29	0.17	4.87
30	0.17	5.04
31	0.17	5.21
32	0.17	5.38
33	0.17	5.55
34	0.17	5.72
35	0.17	5.89
36	0.17	6.06

37	0.17	6.23
38	0.17	6.4
39	0.17	6.57
40	0.17	6.74
41	0.17	6.91
42	0.17	7.08
43	0.17	7.25
44	0.17	7.42
45	0.17	7.59
46	0.17	7.76
47	0.17	7.93
48	0.17	8.1
49	0.17	8.27
50	0.17	8.44
51	0.17	8.61
52	0.17	8.78
53	0.17	8.95
54	0.17	9.12
55	0.17	9.29
56	0.17	9.46
57	0.17	9.63
58	0.17	9.8
59	0.17	9.97
60	0.17	10.14

[illegible]

80th Percentile Values of Monthly ET (mm/day)

Station: Hamer 4 NW

		ETR	ALFH	ALFS	BEANS	F CRN	SILGE	S CRN	PEAS	POTAT	SBEET	SGRAN	WGRAN	PAST	OR
March	AVE ET	0.86		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.00	
March	STDD ET	0.48		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	
March	80PCT ET	1.26	U	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	
			S												
April	AVE ET	4.07	E	2.27	0.00	0.00	0.00	0.00	1.22	0.00	1.22	1.22	2.82	1.69	
April	STDD ET	0.49		0.27	0.00	0.00	0.00	0.00	0.15	0.00	0.15	0.15	0.34	0.20	
April	80PCT ET	4.48		2.50	0.00	0.00	0.00	0.00	1.35	0.00	1.35	1.35	3.11	1.86	
			E												
May	AVE ET	5.74	T	4.99	0.00	0.00	0.00	0.00	2.22	1.72	1.72	2.33	5.65	4.42	
May	STDD ET	0.49	R	0.42	0.00	0.00	0.00	0.00	0.19	0.15	0.15	0.20	0.48	0.37	
May	80PCT ET	6.15		5.34	0.00	0.00	0.00	0.00	2.38	1.85	1.85	2.50	6.05	4.73	
June	AVE ET	7.37	F	6.58	0.00	0.00	2.21	0.00	6.11	3.89	2.52	6.83	7.37	5.68	
June	STDD ET	0.42	O	0.38	0.00	0.00	0.13	0.00	0.35	0.22	0.14	0.39	0.42	0.33	
June	80PCT ET	7.72	R	6.90	0.00	0.00	2.32	0.00	6.40	4.08	2.64	7.16	7.72	5.96	
July	AVE ET	7.96		6.46	0.00	0.00	4.25	0.00	4.23	6.64	6.58	7.94	7.87	6.13	
July	STDD ET	0.30	A	0.24	0.00	0.00	0.16	0.00	0.16	0.25	0.25	0.30	0.30	0.23	
July	80PCT ET	8.21	L	6.66	0.00	0.00	4.38	0.00	4.36	6.85	6.79	8.19	8.12	6.32	
			F												
August	AVE ET	6.24	A	3.26	0.00	0.00	5.89	0.00	1.09	4.99	6.22	3.44	2.52	4.81	
August	STDD ET	0.35	L	0.18	0.00	0.00	0.33	0.00	0.06	0.28	0.35	0.19	0.14	0.27	
August	80PCT ET	6.53	F	3.41	0.00	0.00	6.17	0.00	1.14	5.23	6.51	3.60	2.64	5.04	
			A												
September	AVE ET	4.48		1.63	0.00	0.00	4.02	0.00	0.00	2.97	4.09	0.00	0.00	3.45	
September	STDD ET	0.40		0.15	0.00	0.00	0.36	0.00	0.00	0.26	0.36	0.00	0.00	0.31	
September	80PCT ET	4.82	H	1.76	0.00	0.00	4.32	0.00	0.00	3.19	4.39	0.00	0.00	3.71	
			A												
October	AVE ET	2.72	Y	0.58	0.00	0.00	1.69	0.00	0.00	0.00	2.03	0.00	0.00	2.09	
October	STDD ET	0.34		0.07	0.00	0.00	0.21	0.00	0.00	0.00	0.25	0.00	0.00	0.26	
October	80PCT ET	3.01		0.64	0.00	0.00	1.87	0.00	0.00	0.00	2.24	0.00	0.00	2.31	

ET and standard deviation data (AVE ET and STDD ET) taken from Appendix E (unpublished) of Brockway, C.E., and R.G. Allen, 1983, Estimating Consumptive Irrigation Requirements for Crops in Idaho, Idaho Water and Energy Resources Research Institute.

80th Percentile ET values (80PCT ET) calculated based on Walpole, R.E., and R.H. Meyers, 1985, third edition, PROBABILITY AND STATISTICS FOR ENGINEERS AND SCIENTISTS, New York: Macmillan Publishing Company, pp. 132-144 and 574.

	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
alfalfa	0.70	2.58	.001	2.50	718	9.0	24	1313.1	11.58	1.93	1.83	7.15	22.52
	0.70	2.86	.001	2.50	718	10.0	24	888.0	12.87	5.66	2.41	7.59	22.22
grain	0.70	2.44	.001	2.00	718	10.0	24	888.0	16.09	7.08	3.02	10.63	15.17
	0.70	2.44	.001	2.00	718	9.0	24	1313.1	14.48	2.41	2.28	9.72	17.08
pasture	0.70	2.02	.001	2.00	718	10.0	24	888.0	16.09	7.08	3.02	11.05	12.56
	0.70	2.02	.001	2.00	718	9.0	24	1313.1	14.48	2.41	2.28	10.17	13.95

Medlano Complex -81 (Sandy loam)
Area 1

	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
grain =	0.70	2.16	.001	2.00	718	8.0	24	2141.0	12.87	2.41	2.28	10.03	14.92
alfalfa {	0.70	2.58	.001	2.50	718	10.0	24	888.0	12.87	5.66	2.41	7.87	20.05
	0.70	2.58	.001	2.50	718	9.0	24	1313.1	11.58	1.93	1.83	7.15	22.52

' below design
application

Medano Complex - 81 (loamy sand)

alfalfa

Area 1

	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
pasture	0.70	1.74	.001	2.00	586	6.0	24	2576.0	11.83	2.42	2.26	9.79	12.61
	0.70	1.74	.001	2.00	718	10.0	24	888.0	16.09	7.08	3.02	11.33	10.82
	0.70	1.74	.001	2.00	718	9.0	24	1313.1	14.48	2.41	2.28	10.45	12.02
	0.70	1.74	.001	2.00	718	9.0	12	1313.1	7.24	2.41	2.28	10.45	12.02
grain	0.70	2.16	.001	2.00	718	10.0	24	888.0	16.09	7.08	3.02	10.91	13.43
	0.70	2.16	.001	2.00	718	9.0	24	1313.1	14.48	2.41	2.28	10.03	14.92

Medano Complex - 81 (loamy sand)

pasture / grain

Area 1

INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Ft/Ft	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS IRRIGATION APPLICATION Inches	NET IRRIGATION APPLICATION Inches	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
~~0.70~~	~~2.58~~	~~.001~~	~~2.50~~	~~586~~	~~8.0~~	~~24~~	~~778.2~~	~~12.61~~	~~6.12~~	~~2.59~~	~~7.44~~	~~20.45~~
0.85	2.10	.001	2.50	586	10.0	24	569.8	15.77	9.52	2.71	10.95	13.32
0.85	2.10	.001	2.50	586	10.0	12	569.8	7.88	2.59	0.72	5.07	26.64
0.85	2.10	.001	2.50	586	9.0	24	823.1	14.19	7.14	1.80	10.29	14.80
0.85	2.10	.001	2.50	586	8.0	24	1303.7	12.61	2.28	1.13	9.38	16.65

Grassy Butte Loamy Sand - 32

Alfalfa

Area 1A

INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Ft/Ft	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS IRRIGATION APPLICATION Inches	NET IRRIGATION APPLICATION Inches	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
0.85	1.68	.001	2.00	586	10.0	24	569.8	19.71	11.90	3.39	14.64	8.52
0.85	1.68	.001	2.00	586	10.0	12	569.8	9.85	3.24	0.90	7.28	<u>17.05</u>
0.85	1.68	.001	2.00	586	9.0	24	823.1	17.74	8.93	2.25	13.81	9.47
0.85	1.68	.001	2.00	586	8.0	24	1303.7	15.77	2.86	1.41	12.67	10.65

Grassy Butte loamy sand-32

Spring grain

Area 1A

INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Ft/Ft	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS IRRIGATION APPLICATION Inches	NET IRRIGATION APPLICATION Inches	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
0.85	~~1.60~~	~~.001~~	~~2.00~~	~~586~~	~~7.0~~	~~24~~	~~2354.9~~	~~13.80~~	~~2.86~~	~~1.41~~	~~12.67~~	~~10.65~~
0.85	1.26	.001	2.00	586	10.0	24	569.8	19.71	11.90	3.39	15.06	6.39
0.85	1.26	.001	2.00	586	10.0	12	569.8	9.85	3.24	0.90	7.70	12.79
0.85	1.26	.001	2.00	586	9.0	24	823.1	17.74	8.93	2.25	14.23	<u>7.10</u>
0.85	1.26	.001	2.00	586	8.0	24	1303.7	15.77	2.86	1.41	13.09	7.99

Grassy Butte Loamy Sand-32

pasture or grass hay

Area 1A

INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
	Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
0.70	2.86	.001	2.50	718	9.0	24	1313.1	11.58	1.93	1.83	6.87	24.93
0.70	2.58	.001	2.50	586	10.0	24	379.5	15.77	9.20	4.73	8.46	16.36
0.70	2.58	.001	2.50	586	10.0	12	379.5	7.88	3.98	1.63	3.68	32.73
0.70	2.58	.001	2.50	586	9.0	12	522.1	7.10	2.63	1.19	3.32	36.36

Medano Complex -81 (loamy sand)

Alfalfa

Area 1A

INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
	Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
~~0.70~~	~~2.44~~	~~.001~~	~~2.00~~	~~586~~	~~7.0~~	~~24~~	~~1299.8~~	~~13.80~~	~~2.42~~	~~2.26~~	~~9.06~~	~~17.90~~
0.70	2.16	.001	2.00	586	10.0	24	379.5	19.71	11.50	5.91	11.63	10.96
0.70	2.16	.001	2.00	586	10.0	12	379.5	9.85	4.97	2.04	5.66	21.92
0.70	2.16	.001	2.00	586	9.0	12	522.1	8.87	3.28	1.49	5.22	24.35
0.70	2.16	.001	2.00	586	8.0	24	778.2	15.77	7.65	3.24	10.37	13.70
0.70	2.16	.001	2.00	586	7.0	24	1299.8	13.80	2.42	2.26	9.37	15.66

Medano Complex -81 (loamy Sand)
grain
Area 1A

INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Ft/Ft	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS IRRIGATION APPLICATION Inches	NET IRRIGATION APPLICATION Inches	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
0.70	2.16	.001	2.00	586	6.0	24	2576.0	11.83	2.42	2.26	9.37	15.66
0.70	1.74	.001	2.00	586	10.0	24	379.5	19.71	11.50	5.91	12.05	8.83
0.70	1.74	.001	2.00	586	10.0	12	379.5	9.85	4.97	2.04	6.08	17.66
0.70	1.74	.001	2.00	586	9.0	12	522.1	8.87	3.28	1.49	5.64	19.62
0.70	1.74	.001	2.00	586	9.0	24	522.1	17.74	10.05	4.50	11.49	9.81
0.70	1.74	.001	2.00	586	8.0	24	778.2	15.77	7.65	3.24	10.79	11.04
0.70	1.74	.001	2.00	586	7.0	24	1299.8	13.80	2.42	2.26	9.79	12.61

Medano Complex- 81 (loamy Sand)

pasture

Area 1A

INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET			
FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	DEEP	IRRIGATION
	Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	APPLICATION	APPLICATION	Inches	PERC.	EFFICIENCY
								Inches	Inches		In.	%
0.70	2.86	.001	2.50	586	10.0	12	379.5	7.88	3.98	1.63	3.40	36.28
0.70	2.86	.001	2.50	586	10.0	24	379.5	15.77	9.20	4.73	8.18	18.14
0.70	2.86	.001	2.50	586	9.0	24	522.1	14.19	8.04	3.60	7.73	20.15
0.70	2.86	.001	2.50	586	8.0	24	778.2	12.61	6.12	2.59	7.16	22.67

Medano Complex- 81 (Sandy loam)

alfalfa

Area 1A

	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
pasture	~~0.85~~	~~2.44~~	~~.001~~	~~2.00~~	~~586~~	~~7.0~~	~~24~~	~~2354.9~~	~~13.80~~	~~2.86~~	~~1.41~~	~~11.91~~	~~15.48~~
	0.85	2.02	.001	2.00	586	10.0	24	569.8	19.71	11.90	3.39	14.30	10.25
	0.70	2.02	.001	2.00	586	10.0	24	379.5	19.71	11.50	5.91	11.77	10.25
	0.70	2.02	.001	2.00	586	10.0	12	379.5	9.85	4.97	2.04	5.80	20.50
	0.70	2.02	.001	2.00	586	9.0	12	522.1	8.87	3.28	1.49	5.36	22.78
	0.70	2.02	.001	2.00	586	8.0	24	778.2	15.77	7.65	3.24	10.51	12.81
	0.70	2.02	.001	2.00	586	7.0	24	1299.8	13.80	2.42	2.26	9.51	14.64
grain	0.70	2.44	.001	2.00	586	10.0	24	379.5	19.71	11.50	5.91	11.35	12.38
	0.70	2.44	.001	2.00	586	10.0	12	379.5	9.85	4.97	2.04	5.38	24.76
	0.70	2.44	.001	2.00	586	9.0	12	522.1	8.87	3.28	1.49	4.94	27.51
	0.70	2.44	.001	2.00	586	9.0	24	522.1	17.74	10.05	4.50	10.79	13.76
	0.70	2.44	.001	2.00	586	9.0	24	522.1	17.74	10.05	4.50	10.79	13.76
	0.70	2.44	.001	2.00	586	8.0	24	778.2	15.77	7.65	3.24	10.09	15.48

Medano Complex - 81 (Sandy Loam)

pasture / grain

Area 1A

	INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Ft/Ft	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS IRRIGATION APPLICATION Inches	NET IRRIGATION APPLICATION Inches	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
alfalfa	~~0.85~~	~~1.26~~	~~.001~~	~~2.00~~	~~718~~	~~10.0~~	~~48~~	~~1471.8~~	~~32.17~~	~~17.17~~	~~4.66~~	~~26.25~~	~~3.92~~
	0.85	2.10	.001	2.50	517	10.0	24	340.4	17.87	11.37	4.49	11.28	11.75
	0.85	2.10	.001	2.50	517	10.0	12	340.4	8.94	5.10	1.38	5.45	23.50
	0.85	2.10	.001	2.50	517	9.0	12	470.9	8.04	3.64	0.89	5.05	26.11
	0.85	2.10	.001	2.50	517	8.0	12	706.5	7.15	0.54	0.55	4.49	29.57
	0.85	2.10	.001	2.50	517	8.0	24	706.5	14.30	7.90	2.10	10.09	14.69
	0.85	2.10	.001	2.50	517	7.0	24	1190.4	12.51	3.42	1.24	9.17	16.79
grain	0.85	1.68	.001	2.00	517	10.0	24	340.4	22.34	14.21	5.61	15.05	7.52
	0.85	1.68	.001	2.00	517	10.0	12	340.4	11.17	6.37	1.73	7.76	15.04
	0.85	1.68	.001	2.00	517	9.0	12	470.9	10.05	4.54	1.12	7.26	16.71
	0.85	1.68	.001	2.00	517	9.0	24	470.9	20.11	12.57	4.04	14.39	8.36
	0.85	1.68	.001	2.00	517	8.0	12	706.5	8.94	0.68	0.68	6.54	19.15
	0.85	1.68	.001	2.00	517	8.0	24	706.5	17.87	9.87	2.63	13.56	9.40
	0.85	1.68	.001	2.00	517	7.0	24	1190.4	15.64	4.28	1.55	12.40	10.74
pasture	0.85	1.26	.001	2.00	517	10.0	24	340.4	22.34	14.21	5.61	15.47	5.64
	0.85	1.26	.001	2.00	517	10.0	12	340.4	11.17	6.37	1.73	8.18	11.28
	0.85	1.26	.001	2.00	517	9.0	12	470.9	10.05	4.54	1.12	7.68	12.53
	0.85	1.26	.001	2.00	517	8.0	12	706.5	8.94	0.68	0.68	6.96	14.46
	0.85	1.26	.001	2.00	517	8.0	24	706.5	17.87	9.87	2.63	13.98	7.05
	0.85	1.26	.001	2.00	517	7.0	24	1190.4	15.64	4.28	1.55	12.82	8.06

Grassy Butte Loamy Sand-32
Area 1B

INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Ft/Ft	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS	NET	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
								IRRIGATION APPLICATION Inches	IRRIGATION APPLICATION Inches			
0.70	2.02	.001	2.00	517	9.0	24	316.3	20.11	11.69	6.58	11.51	10.05
0.70	2.58	.001	2.50	517	10.0	24	238.7	17.87	10.10	6.66	8.63	14.44
0.70	2.58	.001	2.50	517	10.0	12	238.7	8.94	5.12	2.47	3.88	28.87
0.70	2.58	.001	2.50	517	9.0	12	316.3	8.04	4.38	1.85	3.61	32.08
0.70	2.58	.001	2.50	517	8.0	12	449.8	7.15	3.18	1.31	3.26	36.09
0.70	2.58	.001	2.50	517	7.0	12	707.3	6.26	0.47	0.90	2.80	40.88
0.70	2.58	.001	2.50	517	7.0	24	707.3	12.51	6.39	2.72	7.21	20.62
0.70	2.58	.001	2.50	517	6.0	24	1293.3	10.72	1.93	1.80	6.32	24.28
0.70	2.58	.001	2.50	517	8.0	24	449.8	14.30	8.26	3.93	7.79	18.05
0.70	2.58	.001	2.50	517	9.0	24	316.3	16.08	9.35	5.26	8.24	16.04
0.70	2.16	.001	2.00	517	10.0	24	238.7	22.34	12.63	8.33	11.85	9.67
0.70	2.16	.001	2.00	517	10.0	12	238.7	11.17	6.40	3.09	5.92	19.34
0.70	2.16	.001	2.00	517	9.0	12	316.3	10.05	5.48	2.32	5.57	21.49
0.70	2.16	.001	2.00	517	8.0	12	449.8	8.94	3.98	1.64	5.14	24.17
0.70	2.16	.001	2.00	517	7.0	12	707.3	7.82	0.59	1.13	4.52	27.83
0.70	2.16	.001	2.00	517	7.0	24	707.3	15.64	7.98	3.41	10.07	13.81
0.70	2.16	.001	2.00	517	6.0	24	1293.3	13.40	2.41	2.25	9.00	16.11
0.70	2.16	.001	2.00	517	8.0	24	449.8	17.87	10.33	4.91	10.80	12.09
0.70	2.16	.001	2.00	517	9.0	24	316.3	20.11	11.69	6.58	11.37	10.74
0.70	1.74	.001	2.00	517	10.0	24	238.7	22.34	12.63	8.33	12.27	7.79
0.70	1.74	.001	2.00	517	10.0	12	238.7	11.17	6.40	3.09	6.34	15.58
0.70	1.74	.001	2.00	517	9.0	12	316.3	10.05	5.48	2.32	5.99	17.31
0.70	1.74	.001	2.00	517	8.0	12	449.8	8.94	3.98	1.64	5.56	19.47
0.70	1.74	.001	2.00	517	7.0	12	707.3	7.82	0.59	1.13	4.93	22.55
0.70	1.74	.001	2.00	517	7.0	24	707.3	15.64	7.98	3.41	10.49	11.13
0.70	1.74	.001	2.00	517	7.0	24	707.3	15.64	7.98	3.41	10.49	11.13
0.70	1.74	.001	2.00	517	8.0	24	449.8	17.87	10.33	4.91	11.22	9.74
0.70	1.74	.001	2.00	517	9.0	24	316.3	20.11	11.69	6.58	11.79	8.65

Medano Complex-81 (loamy Sand)

AREA 1B

	INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Ft/Ft	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS IRRIGATION APPLICATION Inches	NET IRRIGATION APPLICATION Inches	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
alfalfa	0.85	1.26	.001	2.00	517	9.0	24	470.9	20.11	12.57	4.04	14.81	6.27
	0.70	2.86	.001	2.50	517	10.0	24	238.7	17.87	10.10	6.66	8.35	16.00
	0.70	2.86	.001	2.50	517	10.0	12	238.7	8.94	5.12	2.47	3.60	32.01
	0.70	2.86	.001	2.50	517	9.0	12	316.3	8.04	4.38	1.85	3.33	35.56
	0.70	2.86	.001	2.50	517	8.0	12	449.8	7.15	3.18	1.31	2.98	40.01
	0.70	2.86	.001	2.50	517	7.0	12	707.3	6.26	~~0.47~~	0.90	2.53	~~45.06~~
	0.70	2.86	.001	2.50	517	7.0	24	707.3	12.51	6.39	2.72	6.93	22.86
	0.70	2.86	.001	2.50	517	6.0	24	1293.3	10.72	~~1.93~~	1.80	6.04	~~26.88~~
	0.70	2.86	.001	2.50	517	8.0	24	449.8	14.30	8.26	3.93	7.51	20.00
	0.70	2.86	.001	2.50	517	9.0	24	316.3	16.08	9.35	5.26	7.96	17.78
grain	0.70	2.44	.001	2.00	517	10.0	24	238.7	22.34	12.63	8.33	11.57	10.92
	0.70	2.44	.001	2.00	517	10.0	12	238.7	11.17	6.40	3.09	5.64	21.84
	0.70	2.44	.001	2.00	517	9.0	12	316.3	10.05	5.48	2.32	5.29	24.27
	0.70	2.44	.001	2.00	517	8.0	12	449.8	8.94	3.98	1.64	4.86	27.31
	0.70	2.44	.001	2.00	517	7.0	12	707.3	7.82	~~0.59~~	1.13	4.24	~~31.30~~
	0.70	2.44	.001	2.00	517	7.0	24	707.3	15.64	7.98	3.41	9.79	15.60
	0.70	2.44	.001	2.00	517	6.0	24	1293.3	13.40	~~2.41~~	2.25	8.69	~~18.41~~
	0.70	2.44	.001	2.00	517	8.0	24	449.8	17.87	10.33	4.91	10.52	13.65
	0.70	2.44	.001	2.00	517	9.0	24	316.3	20.11	11.69	6.58	11.09	12.14
	0.70	2.02	.001	2.00	517	10.0	24	238.7	22.34	12.63	8.33	11.99	9.04
pasture	0.70	2.02	.001	2.00	517	10.0	12	238.7	11.17	6.40	3.09	6.06	18.08
	0.70	2.02	.001	2.00	517	9.0	12	316.3	10.05	5.48	2.32	5.71	20.09
	0.70	2.02	.001	2.00	517	8.0	12	449.8	8.94	3.98	1.64	5.28	22.61
	0.70	2.02	.001	2.00	517	7.0	12	707.3	7.82	~~0.59~~	1.13	4.65	~~26.07~~
	0.70	2.02	.001	2.00	517	7.0	24	707.3	15.64	7.98	3.41	10.21	12.92
	0.70	2.02	.001	2.00	517	6.0	24	1293.3	13.40	2.41	2.25	9.14	15.07
	0.70	2.02	.001	2.00	517	8.0	24	449.8	17.87	10.33	4.91	10.94	11.30

Medano Complex-81 (Sandy loam)
AREA 1B

ayala
grain

INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Ft/Ft	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS IRRIGATION APPLICATION Inches	NET IRRIGATION APPLICATION Inches	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
~~0.70~~	~~1.26~~	~~.001~~	~~2.00~~	~~405~~	~~9.0~~	~~24~~	~~134.6~~	~~25.67~~	~~13.08~~	~~11.85~~	~~12.55~~	~~4.91~~
0.85	2.10	.001	2.50	405	10.0	24	141.6	22.81	12.91	9.12	11.59	9.20
0.85	2.10	.001	2.50	405	10.0	12	141.6	11.41	6.99	3.49	5.82	18.41
0.85	2.10	.001	2.50	405	9.0	12	182.6	10.27	6.44	2.63	5.54	20.46
0.85	2.10	.001	2.50	405	8.0	12	250.9	9.13	5.64	1.82	5.20	23.01
0.85	2.10	.001	2.50	405	7.0	12	377.6	7.98	4.32	1.10	4.78	26.30
0.85	2.10	.001	2.50	405	6.0	12	651.1	6.84	<u>1.33</u>	0.57	4.16	30.90
0.85	2.10	.001	2.50	405	6.0	24	651.1	13.69	<u>7.78</u>	2.22	9.37	15.34
0.85	2.10	.001	2.50	405	5.0	24	1396.1	11.41	<u>0.95</u>	1.14	8.14	18.70
0.85	2.10	.001	2.50	405	8.0	24	250.9	18.25	<u>11.40</u>	5.47	10.68	11.51
0.85	1.68	.001	2.00	405	10.0	24	141.6	28.52	16.13	11.41	15.43	5.89
0.85	1.68	.001	2.00	405	10.0	12	141.6	14.26	8.74	4.36	8.22	11.78

Grassy Butte Loamy Sand - 32
Area 1C.

Cont'd

INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Ft/Ft	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS IRRIGATION APPLICATION Inches	NET IRRIGATION APPLICATION Inches	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
0.85	1.68	.001	2.00	405	10.0	12	141.6	14.26	8.74	4.36	8.22	11.78
0.85	1.68	.001	2.00	405	9.0	12	182.6	12.83	8.05	3.29	7.86	13.09
0.85	1.68	.001	2.00	405	7.0	12	377.6	9.98	5.40	<u>1.38</u>	6.92	<u>16.83</u>
0.85	1.68	.001	2.00	405	6.0	12	651.1	8.56	<u>1.66</u>	<u>0.71</u>	6.14	19.87
0.85	1.68	.001	2.00	405	6.0	24	651.1	17.11	<u>9.73</u>	<u>2.77</u>	12.66	9.82
0.85	1.68	.001	2.00	405	8.0	12	250.9	11.41	7.05	2.28	7.45	14.73
0.85	1.68	.001	2.00	405	6.0	12	651.1	8.56	<u>1.66</u>	<u>0.71</u>	6.14	19.87
0.85	1.68	.001	2.00	405	5.0	24	1396.1	14.26	<u>1.19</u>	<u>1.42</u>	11.12	12.07
0.85	1.68	.001	2.00	405	8.0	24	250.9	22.81	14.25	6.83	14.30	7.36
0.85	1.68	.001	2.00	405	9.0	24	182.6	25.67	15.32	9.09	14.90	6.55
0.85	1.26	.001	2.00	405	10.0	24	141.6	28.52	16.13	11.41	15.85	4.42
0.85	1.26	.001	2.00	405	10.0	12	141.6	14.26	8.74	4.36	8.64	8.84
0.85	1.26	.001	2.00	405	6.0	12	651.1	8.56	1.66	0.71	6.58	<u>14.73</u>
0.85	1.26	.001	2.00	405	5.0	24	1396.1	14.26	<u>1.19</u>	<u>1.42</u>	11.54	9.11
0.85	1.26	.001	2.00	405	8.0	24	250.9	22.81	14.25	6.83	14.72	5.52

Grassy Butte Loamy sand-32
AREA 1C

below
design application

INTAKE FAMILY	DESIGN APPLIC. Inches	PURROW SLOPE Ft/Ft	PURROW SPACING Feet	PURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS	NET	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
								IRRIGATION APPLICATION Inches	IRRIGATION APPLICATION Inches			
0.70	1.74	.001	2.00	517	6.0	24	1293.3	13.40	2.41	2.25	9.42	12.98
0.70	2.58	.001	2.50	405	10.0	24	108.0	22.81	10.92	11.42	8.81	11.31
0.70	2.58	.001	2.50	405	10.0	12	108.0	11.41	6.11	4.73	4.10	22.62
0.70	2.58	.001	2.50	405	9.0	12	134.6	10.27	5.76	3.81	3.88	25.13
0.70	2.58	.001	2.50	405	8.0	12	177.4	9.13	5.29	2.92	3.63	28.27
0.70	2.58	.001	2.50	405	7.0	12	252.9	7.98	4.58	2.07	3.33	32.31
0.70	2.58	.001	2.50	405	6.0	12	405.7	6.84	3.31	1.32	2.94	37.70
0.70	2.58	.001	2.50	405	5.0	24	786.4	11.41	5.42	2.40	6.43	22.62
0.70	2.58	.001	2.50	405	6.0	24	405.7	13.69	7.96	3.95	7.15	18.85
0.70	2.58	.001	2.50	405	7.0	24	252.9	15.97	9.16	5.72	7.67	16.16
0.70	2.58	.001	2.50	405	8.0	24	177.4	18.25	9.91	7.57	8.10	14.14
0.70	2.58	.001	2.50	405	9.0	24	134.6	20.53	10.47	9.48	8.47	12.57
0.70	2.16	.001	2.00	405	10.0	24	108.0	28.52	13.65	14.28	12.08	7.57
0.70	2.16	.001	2.00	405	10.0	12	108.0	14.26	7.64	5.91	6.18	15.15
0.70	2.16	.001	2.00	405	9.0	12	134.6	12.83	7.20	4.76	5.91	16.83
0.70	2.16	.001	2.00	405	8.0	12	177.4	11.41	6.61	3.64	5.60	18.94
0.70	2.16	.001	2.00	405	7.0	12	252.9	9.98	5.73	2.59	5.23	21.64
0.70	2.16	.001	2.00	405	6.0	12	405.7	8.56	4.14	1.65	4.74	25.25
0.70	2.16	.001	2.00	405	5.0	24	786.4	14.26	6.78	3.00	9.10	15.15
0.70	2.16	.001	2.00	405	6.0	24	405.7	17.11	9.95	4.94	10.01	12.62
0.70	2.16	.001	2.00	405	7.0	24	252.9	19.96	11.44	7.15	10.66	10.82
0.70	2.16	.001	2.00	405	8.0	24	177.4	22.81	12.39	9.46	11.19	9.47
0.70	2.16	.001	2.00	405	9.0	24	134.6	25.67	13.08	11.85	11.65	8.42
0.70	1.74	.001	2.00	405	10.0	24	108.0	28.52	13.65	14.28	12.50	6.10
0.70	1.74	.001	2.00	405	10.0	12	108.0	14.26	7.64	5.91	6.60	12.20
0.70	1.74	.001	2.00	405	9.0	12	134.6	12.83	7.20	4.76	6.33	13.56
0.70	1.74	.001	2.00	405	8.0	12	177.4	11.41	6.61	3.64	6.02	15.25
0.70	1.74	.001	2.00	405	7.0	12	252.9	9.98	5.73	2.59	5.65	17.43
0.70	1.74	.001	2.00	405	6.0	12	405.7	8.56	4.14	1.65	5.16	20.34
0.70	1.74	.001	2.00	405	5.0	24	786.4	14.26	6.78	3.00	9.52	12.20
0.70	1.74	.001	2.00	405	6.0	24	405.7	17.11	9.95	4.94	10.43	10.17
0.70	1.74	.001	2.00	405	7.0	24	252.9	19.96	11.44	7.15	11.08	8.72
0.70	1.74	.001	2.00	405	8.0	24	177.4	22.81	12.39	9.46	11.61	7.63
0.70	1.74	.001	2.00	405	9.0	24	134.6	25.67	13.08	11.85	12.07	6.78

Medano Complex-81 (Loamy Sand)
Area 1C

	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
alfalfa	0.70	1.74	.001	2.00	405	9.0	24	134.6	25.67	13.08	11.85	12.07	6.78
	0.70	2.86	.001	2.50	405	10.0	24	108.0	22.81	10.92	11.42	8.53	12.54
	0.70	2.86	.001	2.50	405	10.0	12	108.0	11.41	6.11	4.73	3.82	25.07
	0.70	2.86	.001	2.50	405	9.0	12	134.6	10.27	5.76	3.81	3.60	27.86
	0.70	2.86	.001	2.50	405	8.0	12	177.4	9.13	5.29	2.92	3.35	31.34
	0.70	2.86	.001	2.50	405	7.0	12	252.9	7.98	4.58	2.07	3.05	35.82
	0.70	2.86	.001	2.50	405	6.0	12	405.7	6.84	3.31	1.32	2.66	41.79
	0.70	2.86	.001	2.50	405	5.0	24	786.4	11.41	5.42	2.40	6.15	25.07
	0.70	2.86	.001	2.50	405	6.0	24	405.7	13.69	7.96	3.95	6.87	20.89
	0.70	2.86	.001	2.50	405	7.0	24	252.9	15.97	9.16	5.72	7.39	17.91
grain	0.70	2.86	.001	2.50	405	8.0	24	177.4	18.25	9.91	7.57	7.82	15.67
	0.70	2.44	.001	2.00	405	10.0	24	108.0	28.52	13.65	14.28	11.80	8.56
	0.70	2.44	.001	2.00	405	10.0	12	108.0	14.26	7.64	5.91	5.90	17.11
	0.70	2.44	.001	2.00	405	9.0	12	134.6	12.83	7.20	4.76	5.63	19.01
	0.70	2.44	.001	2.00	405	8.0	12	177.4	11.41	6.61	3.64	5.32	21.39
	0.70	2.44	.001	2.00	405	7.0	12	252.9	9.98	5.73	2.59	4.95	24.45
	0.70	2.44	.001	2.00	405	6.0	12	405.7	8.56	4.14	1.65	4.46	28.52
	0.70	2.44	.001	2.00	405	5.0	24	786.4	14.26	6.78	3.00	8.82	17.11
	0.70	2.44	.001	2.00	405	6.0	24	405.7	17.11	9.95	4.94	9.73	14.26
	0.70	2.44	.001	2.00	405	7.0	24	252.9	19.96	11.44	7.15	10.38	12.22
Pasture	0.70	2.44	.001	2.00	405	8.0	24	177.4	22.81	12.39	9.46	10.91	10.70
	0.70	2.44	.001	2.00	405	9.0	24	134.6	25.67	13.08	11.85	11.37	9.51
	0.70	2.02	.001	2.00	405	10.0	24	108.0	28.52	13.65	14.28	12.22	7.08
	0.70	2.02	.001	2.00	405	10.0	12	108.0	14.26	7.64	5.91	6.32	14.17
	0.70	2.02	.001	2.00	405	9.0	12	134.6	12.83	7.20	4.76	6.05	15.74
	0.70	2.02	.001	2.00	405	8.0	12	177.4	11.41	6.61	3.64	5.74	17.71
	0.70	2.02	.001	2.00	405	7.0	12	252.9	9.98	5.73	2.59	5.37	20.24
	0.70	2.02	.001	2.00	405	6.0	12	405.7	8.56	4.14	1.65	4.88	23.61
	0.70	2.02	.001	2.00	405	5.0	24	786.4	14.26	6.78	3.00	9.24	14.17
	0.70	2.02	.001	2.00	405	6.0	24	405.7	17.11	9.95	4.94	10.15	11.81
	0.70	2.02	.001	2.00	405	7.0	24	252.9	19.96	11.44	7.15	10.80	10.12

Medano Complex - 81 (Sandy Loam)

Area 1C

	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
Alfalfa	0.85	1.26	.001	2.00	405	9.0	24	182.6	25.67	15.32	9.09	15.32	4.91
	0.85	2.10	.001	2.50	540	10.0	24	404.9	17.11	10.86	3.82	11.19	12.27
	0.85	2.10	.001	2.50	540	10.0	12	404.9	8.56	4.44	1.11	5.34	24.55
	0.85	2.10	.001	2.50	540	9.0	12	568.3	7.70	2.54	0.71	4.89	27.27
	0.85	2.10	.001	2.50	540	9.0	24	568.3	15.40	9.28	2.68	10.62	13.64
	0.85	2.10	.001	2.50	540	8.0	24	868.1	13.69	6.55	1.69	9.90	15.34
	0.85	2.10	.001	2.50	540	9.0	24	568.3	15.40	9.28	2.68	10.62	13.64
Grain	0.85	1.68	.001	2.00	540	10.0	24	404.9	21.39	13.57	4.78	14.93	7.85
	0.85	1.68	.001	2.00	540	10.0	12	404.9	10.69	5.55	1.39	7.62	15.71
	0.85	1.68	.001	2.00	540	9.0	12	568.3	9.62	3.18	0.88	7.06	17.46
	0.85	1.68	.001	2.00	540	8.0	24	868.1	17.11	8.18	2.11	13.32	9.82
	0.85	1.68	.001	2.00	540	9.0	24	568.3	19.25	11.59	3.35	14.22	8.73
Pasture	0.85	1.26	.001	2.00	540	10.0	24	404.9	21.39	13.57	4.78	15.35	5.89
	0.85	1.26	.001	2.00	540	10.0	12	404.9	10.69	5.55	1.39	8.04	11.78
	0.85	1.26	.001	2.00	540	9.0	12	568.3	9.62	3.18	0.88	7.48	13.09
	0.85	1.26	.001	2.00	540	8.0	24	868.1	17.11	8.18	2.11	13.74	7.36

Grassy Butte Loamy Sand-32.

Area 2A

	INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Ft/Ft	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS IRRIGATION APPLICATION Inches	NET IRRIGATION APPLICATION Inches	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
alfalfa	0.70	2.58	.001	2.00	540	7.0	12	867.9	7.49	2.97	1.40	4.57	30.16
	0.70	2.58	.001	2.50	540	10.0	24	279.1	17.11	9.85	5.95	8.58	15.08
	0.70	2.58	.001	2.50	540	10.0	12	279.1	8.56	4.80	2.15	3.82	30.16
	0.70	2.58	.001	2.50	540	8.0	12	540.9	6.84	2.38	1.12	3.13	37.84
	0.70	2.58	.001	2.50	540	7.0	24	867.9	11.98	5.32	2.35	7.05	21.54
	0.70	2.58	.001	2.50	540	9.0	24	374.5	15.40	8.99	4.64	8.18	16.75
grain	0.70	2.16	.001	2.00	540	10.0	24	279.1	21.39	12.31	7.44	11.79	10.10
	0.70	2.16	.001	2.00	540	10.0	12	279.1	10.69	6.00	2.69	5.84	20.20
	0.70	2.16	.001	2.00	540	8.0	12	540.9	8.56	2.97	1.40	4.99	25.25
	0.70	2.16	.001	2.00	540	7.0	24	867.9	14.97	6.65	2.93	9.88	14.43
	0.70	2.16	.001	2.00	540	9.0	24	374.5	19.25	11.24	5.80	11.28	11.22
pasture	0.70	1.74	.001	2.00	540	10.0	24	279.1	21.39	12.31	7.44	12.21	8.14
	0.70	1.74	.001	2.00	540	10.0	12	279.1	10.69	6.00	2.69	6.26	16.27
	0.70	1.74	.001	2.00	540	8.0	12	540.9	8.56	2.97	1.40	5.41	20.34
	0.70	1.74	.001	2.00	540	7.0	24	867.9	14.97	6.65	2.93	10.30	11.62
	0.70	1.74	.001	2.00	540	8.0	24	540.9	17.11	9.61	4.27	11.10	10.17

Medano Complex- 81 (loamy sand)

Area 2A

	INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Pt/Pt	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS IRRIGATION APPLICATION Inches	NET IRRIGATION APPLICATION Inches	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
alfalfa	~~0.85~~	~~1.26~~	~~.001~~	~~2.00~~	~~540~~	~~9.0~~	~~24~~	~~568.3~~	~~19.25~~	~~11.59~~	~~3.35~~	~~14.64~~	~~6.55~~
	0.70	2.86	.001	2.50	540	10.0	24	279.1	17.11	9.85	5.95	8.30	16.71
	0.70	2.86	.001	2.50	540	10.0	12	279.1	8.56	4.80	2.15	3.54	33.43
	0.70	2.86	.001	2.50	540	8.0	12	540.9	6.84	~~2.38~~	1.12	2.85	~~41.90~~
	0.70	2.86	.001	2.50	540	9.0	12	374.5	7.70	<u>3.91</u>	1.59	3.25	<u>37.14</u>
	0.70	2.86	.001	2.50	540	8.0	12	540.9	6.84	~~2.38~~	1.12	2.85	~~41.90~~
	0.70	2.86	.001	2.50	540	8.0	24	540.9	13.69	7.69	3.42	7.41	20.89
	0.70	2.86	.001	2.50	540	7.0	24	867.9	11.98	5.32	2.35	6.77	23.88
	0.70	2.86	.001	2.50	540	8.0	24	540.9	13.69	7.69	3.42	7.41	20.89
	0.70	2.86	.001	2.50	540	9.0	24	374.5	15.40	8.99	4.64	7.90	18.57
grain	0.70	2.44	.001	2.00	540	10.0	24	279.1	21.39	12.31	7.44	11.51	11.41
	0.70	2.44	.001	2.00	540	10.0	12	279.1	10.69	6.00	2.69	5.56	22.82
	0.70	2.44	.001	2.00	540	8.0	12	540.9	8.56	<u>2.97</u>	1.40	4.71	<u>28.52</u>
	0.70	2.44	.001	2.00	540	7.0	24	867.9	14.97	6.65	2.93	9.60	16.30
	0.70	2.44	.001	2.00	540	9.0	24	374.5	19.25	11.24	5.80	11.00	12.68
pasture	0.70	2.02	.001	2.00	540	10.0	24	279.1	21.39	12.31	7.44	11.93	9.44
	0.70	2.02	.001	2.00	540	10.0	12	279.1	10.69	6.00	2.69	5.98	18.89
	0.70	2.02	.001	2.00	540	8.0	12	540.9	8.56	<u>2.97</u>	1.40	5.13	<u>23.61</u>
	0.70	2.02	.001	2.00	540	7.0	24	867.9	14.97	6.65	2.93	10.02	13.49

Medano Complex-81 (Sandy Loam)

Area 2A

	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
alfalfa	0.70	2.02	.001	2.00	525	8.0	24	479.7	17.60	10.09	4.68	10.90	11.48
	0.85	2.10	.001	2.50	525	10.0	24	361.6	17.60	11.20	4.25	11.25	11.93
	0.85	2.10	.001	2.50	525	10.0	12	361.6	8.80	4.89	1.28	5.42	23.86
	0.85	2.10	.001	2.50	525	9.0	12	502.8	7.92	3.29	0.82	5.00	26.52
	0.85	2.10	.001	2.50	525	9.0	24	502.8	15.84	9.80	3.03	10.71	13.26
	0.85	2.10	.001	2.50	525	7.0	24	1289.4	12.32	2.37	1.16	9.06	17.05
	0.85	2.10	.001	2.50	525	9.0	24	502.8	15.84	9.80	3.03	10.71	13.26
grain	0.85	1.68	.001	2.00	525	10.0	24	361.6	22.00	14.00	5.31	15.01	7.64
	0.85	1.68	.001	2.00	525	10.0	12	361.6	11.00	6.11	1.60	7.72	15.27
	0.85	1.68	.001	2.00	525	9.0	12	502.8	9.90	4.11	1.03	7.19	16.97
	0.85	1.68	.001	2.00	525	9.0	12	502.8	9.90	4.11	1.03	7.19	16.97
	0.85	1.68	.001	2.00	525	7.0	24	1289.4	15.40	2.97	1.45	12.27	10.91
	0.85	1.68	.001	2.00	525	9.0	24	502.8	19.80	12.25	3.79	14.33	8.49
pasture	0.85	1.26	.001	2.00	525	10.0	24	361.6	22.00	14.00	5.31	15.43	5.73
	0.85	1.26	.001	2.00	525	10.0	12	361.6	11.00	6.11	1.60	8.14	11.46
	0.85	1.26	.001	2.00	525	9.0	12	502.8	9.90	4.11	1.03	7.61	12.73
	0.85	1.26	.001	2.00	525	7.0	24	1289.4	15.40	2.97	1.45	12.69	8.18
	0.85	1.26	.001	2.00	525	9.0	24	502.8	19.80	12.25	3.79	14.75	6.36

Grassy Butte Loamy sand-32
Area - 2B

	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
2/10/10	0.70	1.74	.001	2.00	525	9.0	24	335.5	19.80	11.54	6.30	11.76	8.79
	0.70	2.86	.001	2.50	525	10.0	24	252.1	17.60	10.02	6.41	8.33	16.25
	0.70	2.86	.001	2.50	525	10.0	12	252.1	8.80	5.02	2.36	3.58	32.50
	0.70	2.86	.001	2.50	525	8.0	12	479.7	7.04	2.93	1.24	2.94	40.63
	0.70	2.86	.001	2.50	525	9.0	12	335.5	7.92	4.23	1.76	3.30	36.11
	0.70	2.86	.001	2.50	525	9.0	24	335.5	15.84	9.23	5.04	7.94	18.06
	0.70	2.86	.001	2.50	525	6.0	24	1402.0	10.56	~~0.80~~	1.73	5.95	27.25
	0.70	2.86	.001	2.50	525	7.0	24	759.6	12.32	6.05	2.59	6.87	23.22
	0.70	2.86	.001	2.50	525	8.0	24	479.7	14.08	8.07	3.74	7.48	20.31
	0.70	2.86	.001	2.50	525	9.0	24	335.5	15.84	9.23	5.04	7.94	18.06
Grain	0.70	2.44	.001	2.00	525	10.0	24	252.1	22.00	12.52	8.01	11.55	11.09
	0.70	2.44	.001	2.00	525	10.0	12	252.1	11.00	6.27	2.94	5.62	22.18
	0.70	2.44	.001	2.00	525	8.0	12	479.7	8.80	3.66	1.55	4.81	27.73
	0.70	2.44	.001	2.00	525	9.0	12	335.5	9.90	5.29	2.20	5.26	24.65
	0.70	2.44	.001	2.00	525	9.0	24	335.5	19.80	11.54	6.30	11.06	12.32
	0.70	2.44	.001	2.00	525	6.0	24	1402.0	13.20	1.01	2.16	8.56	18.77
	0.70	2.44	.001	2.00	525	8.0	24	479.7	17.60	10.09	4.68	10.48	13.86
Pasture	0.70	2.02	.001	2.00	525	10.0	24	252.1	22.00	12.52	8.01	11.97	9.18
	0.70	2.02	.001	2.00	525	10.0	12	252.1	11.00	6.27	2.94	6.04	18.36
	0.70	2.02	.001	2.00	525	8.0	12	479.7	8.80	3.66	1.55	5.23	22.96
	0.70	2.02	.001	2.00	525	9.0	12	335.5	9.90	5.29	2.20	5.68	20.40
	0.70	2.02	.001	2.00	525	6.0	24	1402.0	13.20	1.01	2.16	8.98	15.60
	0.70	2.02	.001	2.00	525	7.0	24	759.6	15.40	7.56	3.23	10.15	13.12
	0.70	2.02	.001	2.00	525	9.0	24	335.5	19.80	11.54	6.30	11.48	10.20

Medano Complex - 81 (Sandy loam)

Area 2B

	INTAKE FAMILY	DESIGN APPLIC. Inches	FURROW SLOPE Ft/Ft	FURROW SPACING Feet	FURROW LENGTH Feet	INFLOW RATE Gpm	APPROXIMATE INFLOW TIME Hours	ADVANCE TIME Minutes	GROSS IRRIGATION APPLICATION Inches	NET IRRIGATION APPLICATION Inches	RUNOFF Inches	DEEP PERC. In.	IRRIGATION EFFICIENCY %
alfalfa	0.70	1.74	.001	2.00	540	9.0	24	374.5	19.25	11.24	5.80	11.70	9.84
	0.70	2.58	.001	2.50	525	10.0	24	252.1	17.60	10.02	6.41	8.61	14.66
	0.70	2.58	.001	2.50	525	10.0	12	252.1	8.80	5.02	2.36	3.86	29.32
	0.70	2.58	.001	2.50	525	8.0	12	479.7	7.04	2.93	1.24	3.22	36.65
	0.70	2.58	.001	2.50	525	6.0	24	1402.0	10.56	0.80	1.73	6.23	24.65
	0.70	2.58	.001	2.50	525	7.0	24	759.6	12.32	6.05	2.59	7.15	20.94
	0.70	2.58	.001	2.50	525	9.0	24	335.5	15.84	9.23	5.04	8.22	16.29
grain	0.70	2.16	.001	2.00	525	10.0	24	252.1	22.00	12.52	8.01	11.83	9.82
	0.70	2.16	.001	2.00	525	10.0	12	252.1	11.00	6.27	2.94	5.90	19.64
	0.70	2.16	.001	2.00	525	8.0	12	479.7	8.80	3.66	1.55	5.09	24.55
	0.70	2.16	.001	2.00	525	9.0	12	335.5	9.90	5.29	2.20	5.54	21.82
	0.70	2.16	.001	2.00	525	9.0	24	335.5	19.80	11.54	6.30	11.34	10.91
	0.70	2.16	.001	2.00	525	6.0	24	1402.0	13.20	1.01	2.16	8.84	16.66
	0.70	2.16	.001	2.00	525	8.0	24	479.7	17.60	10.09	4.68	10.76	12.27
Pasture	0.70	1.74	.001	2.00	525	10.0	24	252.1	22.00	12.52	8.01	12.25	7.91
	0.70	1.74	.001	2.00	525	10.0	12	252.1	11.00	6.27	2.94	6.32	15.82
	0.70	1.74	.001	2.00	525	8.0	12	479.7	8.80	3.66	1.55	5.51	19.77
	0.70	1.74	.001	2.00	525	9.0	12	335.5	9.90	5.29	2.20	5.96	17.58
	0.70	1.74	.001	2.00	525	9.0	24	335.5	19.80	11.54	6.30	11.76	8.79
	0.70	1.74	.001	2.00	525	6.0	24	1402.0	13.20	1.01	2.16	9.26	13.48
	0.70	1.74	.001	2.00	525	7.0	24	759.6	15.40	7.56	3.23	10.43	11.30
	0.70	1.74	.001	2.00	525	8.0	24	479.7	17.60	10.09	4.68	11.18	9.89

Medano Complex- 81 (loamy sand)
Area 2B

	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
<i>alfalfa</i>	~~0.85~~	~~1.26~~	~~.001~~	~~2.00~~	~~525~~	~~9.0~~	~~24~~	~~502.8~~	~~19.80~~	~~12.25~~	~~3.79~~	~~14.73~~	~~6.36~~
	0.85	2.10	.001	2.50	749	10.0	36	1829.2	18.50	4.60	1.73	14.67	11.35
	0.85	2.10	.001	2.50	749	10.0	48	1829.2	24.67	10.98	3.03	19.54	8.51
<i>grain</i>	~~0.85~~	~~1.68~~	~~.001~~	~~2.50~~	~~749~~	~~10.0~~	~~48~~	~~1829.2~~	~~24.67~~	~~10.98~~	~~3.03~~	~~19.96~~	~~6.81~~
	~~0.85~~	~~1.68~~	~~.001~~	~~2.50~~	~~749~~	~~10.0~~	~~36~~	~~1829.2~~	~~18.50~~	~~4.60~~	~~1.73~~	~~15.09~~	~~9.08~~
	0.85	1.68	.001	2.00	749	10.0	36	1829.2	23.13	5.75	2.17	19.28	7.26
	0.85	1.68	.001	2.00	749	10.0	48	1829.2	30.84	13.73	3.79	25.37	5.45
<i>pasture</i>	0.85	1.26	.001	2.00	749	10.0	48	1829.2	30.84	13.73	3.79	25.79	4.09
	0.85	1.26	.001	2.00	749	10.0	36	1829.2	23.13	5.75	2.17	19.70	5.45

Grassy Butte loamy Sand-32
Area 3

	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
<i>alfalfa</i>	0.40	5.07	.001	2.50	749	10.0	24	376.0	12.34	5.61	5.71	1.55	41.10
	0.40	5.07	.001	2.50	749	9.0	24	499.3	11.10	~~5.00~~	4.74	1.29	~~45.69~~
	0.40	5.07	.001	2.50	749	9.0	36	499.3	16.65	7.49	7.97	3.62	30.44
	0.40	5.07	.001	2.50	749	8.0	36	711.7	14.80	6.59	6.48	3.25	34.25
	0.40	5.07	.001	2.50	749	7.0	36	1122.6	12.95	~~5.03~~	5.10	2.77	~~39.19~~
	0.40	5.07	.001	2.50	749	7.0	48	1122.6	17.27	7.33	7.41	4.79	29.36
<i>grain</i>	0.40	4.05	.001	2.00	749	10.0	24	376.0	15.42	7.01	7.14	4.23	26.26
	0.40	4.05	.001	2.00	749	10.0	12	376.0	7.71	~~3.20~~	2.88	0.82	~~51.99~~
	0.40	4.05	.001	2.00	749	9.0	24	499.3	13.88	6.25	5.92	3.91	29.18
	0.40	4.05	.001	2.00	749	8.0	24	711.7	12.34	5.07	4.77	3.52	32.83
	0.40	4.05	.001	2.00	749	7.0	24	1122.6	10.79	~~2.77~~	3.76	2.99	~~37.47~~
	0.40	4.05	.001	2.00	749	7.0	36	1122.6	16.19	6.29	6.38	5.76	25.01
<i>pasture</i>	0.40	4.05	.001	2.00	749	7.0	48	1122.6	21.59	9.16	9.27	8.27	18.76
	0.40	3.03	.001	2.00	749	7.0	48	1122.6	21.59	9.16	9.27	9.29	14.04
	0.40	3.03	.001	2.00	749	7.0	36	1122.6	16.19	6.29	6.38	6.78	18.71
	0.40	3.03	.001	2.00	749	7.0	24	1122.6	10.79	~~2.77~~	3.76	3.99	~~28.20~~
	0.40	3.03	.001	2.00	749	8.0	24	711.7	12.34	5.07	4.77	4.54	24.56
	0.40	3.03	.001	2.00	749	9.0	24	499.3	13.88	6.25	5.92	4.93	21.83
	0.40	3.03	.001	2.00	749	10.0	24	376.0	15.42	7.01	7.14	5.25	19.65
	0.40	3.03	.001	2.00	749	10.0	12	376.0	7.71	3.20	2.88	1.80	39.30
	0.40	3.03	.001	2.00	749	9.0	12	499.3	6.94	~~2.32~~	2.36	1.55	~~43.54~~

below design application.

Terreton sandy clay loam (110)
Area 3

	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
alfalfa	0.70	2.02	.001	2.00	683	9.0	36	1032.3	22.83	11.72	5.10	15.71	8.85
	0.85	2.10	.001	2.50	683	9.0	36	1763.9	18.26	5.12	1.84	14.32	11.50
	0.85	2.10	.001	2.50	683	10.0	24	1148.8	13.53	4.19	1.24	10.19	15.52
	0.85	2.10	.001	2.50	683	10.0	36	1148.8	20.29	10.67	2.76	15.43	10.35
	0.85	2.10	.001	2.50	683	9.0	48	1763.9	24.35	11.19	3.20	19.05	8.62
	0.85	2.10	.001	2.50	683	10.0	48	1148.8	27.06	16.08	4.71	20.25	7.76
grain	0.85	2.10	.001	2.50	683	9.0	48	1763.9	24.35	11.19	3.20	19.05	8.62
	0.85	1.68	.001	2.00	683	10.0	24	1148.8	16.91	5.24	1.55	13.68	9.93
	0.85	1.68	.001	2.00	683	10.0	36	1148.8	25.36	13.33	3.45	20.24	6.62
	0.85	1.68	.001	2.00	683	10.0	48	1148.8	33.82	20.10	5.88	26.26	4.97
pasture	0.85	1.68	.001	2.00	683	9.0	48	1763.9	30.44	13.99	3.99	24.76	5.52
	0.85	1.26	.001	2.00	683	10.0	24	1148.8	16.91	5.24	1.55	14.10	7.45
	0.85	1.26	.001	2.00	683	10.0	36	1148.8	25.36	13.33	3.45	20.66	4.97
	0.85	1.26	.001	2.00	683	10.0	48	1148.8	33.82	20.10	5.88	26.68	3.73

Grassy Butte Loamy Sand- 32
Area 4

pasture

INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
	Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
0.85	1.26	.001	2.00	683	10.0	48	1148.8	33.82	20.10	5.88	26.68	3.73
0.85	1.26	.001	2.00	683	9.0	48	1763.9	30.44	13.99	3.99	25.18	4.14
0.85	1.26	.001	2.00	683	9.0	36	1763.9	22.83	6.40	2.30	19.27	5.52
0.85	1.26	.001	2.00	683	24.0	36	120.9	60.88	29.05	30.93	28.69	2.07

Grassy Butte Loamy Sand-32
Area 4

	INTAKE	DESIGN	FURROW	FURROW	FURROW	INFLOW	APPROXIMATE	ADVANCE	GROSS	NET		DEEP	IRRIGATION
	FAMILY	APPLIC.	SLOPE	SPACING	LENGTH	RATE	INFLOW TIME	TIME	IRRIGATION	IRRIGATION	RUNOFF	PERC.	EFFICIENCY
		Inches	Ft/Ft	Feet	Feet	Gpm	Hours	Minutes	Inches	Inches	Inches	In.	%
alfalfa	0.40	3.03	.001	2.00	749	9.0	24	499.3	13.88	6.25	5.92	4.93	21.83
	0.40	5.07	.001	2.50	683	10.0	24	273.9	13.53	5.98	6.83	1.63	37.48
	0.40	5.07	.001	2.50	683	9.0	24	354.7	12.18	5.53	5.71	1.40	41.64
	0.40	5.07	.001	2.50	683	8.0	24	490.0	10.82	4.89	4.63	1.12	46.85
	0.40	5.07	.001	2.50	683	8.0	36	490.0	16.23	7.30	7.79	3.38	31.23
	0.40	5.07	.001	2.50	683	7.0	36	742.4	14.20	6.28	6.16	2.97	35.69
	0.40	5.07	.001	2.50	683	6.0	36	1292.0	12.18	4.28	4.68	2.43	41.61
grain	0.40	4.05	.001	2.00	683	10.0	24	273.9	16.91	7.48	8.53	4.33	23.95
	0.40	4.05	.001	2.00	683	10.0	12	273.9	8.45	3.82	3.51	0.90	47.87
	0.40	4.05	.001	2.00	683	9.0	24	354.7	15.22	6.92	7.13	4.03	26.61
	0.40	4.05	.001	2.00	683	8.0	24	490.0	13.53	6.11	5.79	3.69	29.94
	0.40	4.05	.001	2.00	683	7.0	24	742.4	11.84	4.76	4.53	3.26	34.21
	0.40	4.05	.001	2.00	683	6.0	24	1292.0	10.15	1.62	3.46	2.68	39.46
	0.40	4.05	.001	2.00	683	6.0	36	1292.0	15.22	5.35	5.85	5.32	26.61
	0.40	4.05	.001	2.00	683	7.0	36	742.4	17.76	7.86	7.70	6.00	22.81
	0.40	4.05	.001	2.00	683	9.0	36	354.7	22.83	9.94	11.86	6.92	17.74
Pasture	0.40	3.03	.001	2.00	683	10.0	24	273.9	16.91	7.48	8.53	5.35	17.92
	0.40	3.03	.001	2.00	683	10.0	12	273.9	8.45	3.82	3.51	1.92	35.84
	0.40	3.03	.001	2.00	683	9.0	12	354.7	7.61	3.25	2.88	1.70	39.82
	0.40	3.03	.001	2.00	683	8.0	12	490.0	6.76	2.31	2.30	1.44	44.63
	0.40	3.03	.001	2.00	683	8.0	24	490.0	13.53	6.11	5.79	4.71	22.40
	0.40	3.03	.001	2.00	683	7.0	24	742.4	11.84	4.76	4.53	4.28	25.60
	0.40	3.03	.001	2.00	683	9.0	24	354.7	15.22	6.92	7.13	5.05	19.91

Terreton Sandy clay loam (110)

Area 4

Attributes of 31-04015.shp					
Shape	ID	Area	Perimeter	Length	Acres
Polygon	4	53291.618	925.990	683	13.2 ✓
Polygon	3	48767.390	895.092	749	12.1 ✓
Polygon	0	46838.189	1101.021	0	11.6
Polygon	0	84297.215	1244.867	0	20.8
Polygon	0	51387.397	968.128	0	12.7
Polygon	0	58096.164	1211.789	0	14.4
Polygon	1B	1	31421.983	739.738	517 7.8 ✓
Polygon	1A	1	23472.089	665.307	586 5.8 ✓
Polygon	1C	1	22190.879	656.629	405 5.5 ✓
Polygon	1	52369.834	911.194	718	12.9 ✓
Polygon	2B	2	18457.544	719.230	525 4.6 ✓
Polygon	2A	8	23633.387	633.368	540 5.8 ✓

A31-04015

Soil Description and texture

ID	TYPE	SOIL_NAME	TEXTURE
1	32	Grassy Butte loamy sand	Sand (0-7), Loamy sand, sand (7-60)
2	81	Medano Complex	Sandy loam (0-16), Sand, coarse sand, gravelly coarse sand (16-60)
3	36	Grassy Butte-Medano Complex	Grassy-Loamy sand (0-7), loamy sand, sand (7-60) Medano-loamy sand (0-6), Sandy loam (6-16), Sand (16-60)
4	110	Terreton sandy clay loam	Sandy clay loam (0-6), Stratified clay to silty clay loam (6-60)

GRASSY BUTTE LOAMY SAND- 32

SOIL CHARACTERISTICS

initials: cb

date: 07/27/00

Soil Type = Grassy Butte loamy sand-32

Source of Soils Data = SCS Jefferson County Soil Survey Book

Issue date December 1979 (current)

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family
lower	upper	lower	upper	lower	upper	lower	upper			flood fu
0	7	0.06	0.08	6.6	8.4	0	0.2	1	0.84	4 0
7	60	0.06	0.08					2	1.68	
								3	2.52	
								4	3.36	alternat
								5	4.20	method
										4 0

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	2.10
corn (field or silage)	4	0.5	1.68
grain (winter or spring)	4	0.5	1.68
pasture (or grass hay)	3	0.5	1.26
other (enter below)			

Intake Family

choose base number for intake family from table below based on texture
base number (#'s 1 through 7) = 7

Intake Family

#	flood	furrow	texture
1	0.3	0.3	heavy clays, silty clay (> 60% clay)
2	0.5	0.35	clays, slit loam (lake laid), sandy clay
3	1	0.4	silty clay loam, clay loam, sandy clay loam, silt loam (stream laid)
4	1.5	0.5	silt loam (wind laid), loam, very fine sandy loam
5	2	0.55	sandy loam, fine sandy loam, gravelly loam
6	3	0.7	very fine sand, loamy sands, gravelly sandy loam
7	4	0.85	sand

If you wish to assign intake family by an alternate method (from Table A-3 in Hubble Report or other) enter your selection below.
Enter a value for both flood and furrow if known, otherwise enter zero.
If you do not wish to assign intake family by an alternate method enter zero for both values.

intake family (flood) = 4
intake family (furrow) = 0.85

soil depth	AWC	AWC accumulated
(inches)	(inches)	(inches)

1	0.07	0.07
2	0.07	0.14
3	0.07	0.21
4	0.07	0.28
5	0.07	0.35
6	0.07	0.42
7	0.07	0.49
8	0.07	0.56
9	0.07	0.63
10	0.07	0.7
11	0.07	0.77
12	0.07	0.84
13	0.07	0.91
14	0.07	0.98
15	0.07	1.05
16	0.07	1.12
17	0.07	1.19
18	0.07	1.26
19	0.07	1.33
20	0.07	1.4
21	0.07	1.47
22	0.07	1.54
23	0.07	1.61
24	0.07	1.68
25	0.07	1.75
26	0.07	1.82
27	0.07	1.89
28	0.07	1.96
29	0.07	2.03
30	0.07	2.1
31	0.07	2.17
32	0.07	2.24
33	0.07	2.31
34	0.07	2.38
35	0.07	2.45
36	0.07	2.52

37	0.07	2.59
38	0.07	2.66
39	0.07	2.73
40	0.07	2.8
41	0.07	2.87
42	0.07	2.94
43	0.07	3.01
44	0.07	3.08
45	0.07	3.15
46	0.07	3.22
47	0.07	3.29
48	0.07	3.36
49	0.07	3.43
50	0.07	3.5
51	0.07	3.57
52	0.07	3.64
53	0.07	3.71
54	0.07	3.78
55	0.07	3.85
56	0.07	3.92
57	0.07	3.99
58	0.07	4.06
59	0.07	4.13
60	0.07	4.2

[illegible]

MEDANO COMPLEX - 81

SOIL CHARACTERISTICS

initials: cb

date: 07/27/00

Soil Type = Medano Complex-81 Medano part (sandy loam)

Source of Soils Data = SCS Jefferson County Soil Survey Book

Issue date December 1979 (current)

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family
lower	upper	lower	upper	lower	upper	lower	upper			flood fu
0	16	0.15	0.18	7.4	8.4	3	6	1	1.98	3
16	60	0.06	0.08					2	3.20	
								3	4.04	
								4	4.88	alternat
								5	5.72	method
										2 0

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	2.86
corn (field or silage)	4	0.5	2.44
grain (winter or spring)	4	0.5	2.44
pasture (or grass hay)	3	0.5	2.02
other (enter below)			

Intake Family

choose base number for intake family from table below based on texture
base number (#'s 1 through 7) = 5

Intake Family

#	flood	furrow	texture
1	0.3	0.3	heavy clays, silty clay (> 60% clay)
2	0.5	0.35	clays, slit loam (lake laid), sandy clay
3	1	0.4	silty clay loam, clay loam, sandy clay loam, silt loam (stream laid)
4	1.5	0.5	silt loam (wind laid), loam, very fine sandy loam
5	2	0.55	sandy loam, fine sandy loam, gravelly loam
6	3	0.7	very fine sand, loamy sands, gravelly sandy loam
7	4	0.85	sand

If you wish to assign intake family by an alternate method (from Table A-3 in Hubble Report or other) enter your selection below.
Enter a value for both flood and furrow if known, otherwise enter zero.
If you do not wish to assign intake family by an alternate method enter zero for both values.

intake family (flood) = 2
intake family (furrow) = 0.55

soil depth	AWC	AWC accumulated
(inches)	(inches)	(inches)

1	0.165	0.165
2	0.165	0.33
3	0.165	0.495
4	0.165	0.66
5	0.165	0.825
6	0.165	0.99
7	0.165	1.155
8	0.165	1.32
9	0.165	1.485
10	0.165	1.65
11	0.165	1.815
12	0.165	1.98
13	0.165	2.145
14	0.165	2.31
15	0.165	2.475
16	0.165	2.64
17	0.07	2.71
18	0.07	2.78
19	0.07	2.85
20	0.07	2.92
21	0.07	2.99
22	0.07	3.06
23	0.07	3.13
24	0.07	3.2
25	0.07	3.27
26	0.07	3.34
27	0.07	3.41
28	0.07	3.48
29	0.07	3.55
30	0.07	3.62
31	0.07	3.69
32	0.07	3.76
33	0.07	3.83
34	0.07	3.9
35	0.07	3.97
36	0.07	4.04

37	0.07	4.11
38	0.07	4.18
39	0.07	4.25
40	0.07	4.32
41	0.07	4.39
42	0.07	4.46
43	0.07	4.53
44	0.07	4.6
45	0.07	4.67
46	0.07	4.74
47	0.07	4.81
48	0.07	4.88
49	0.07	4.95
50	0.07	5.02
51	0.07	5.09
52	0.07	5.16
53	0.07	5.23
54	0.07	5.3
55	0.07	5.37
56	0.07	5.44
57	0.07	5.51
58	0.07	5.58
59	0.07	5.65
60	0.07	5.72

[illegible]

SOIL CHARACTERISTICS

initials: cb

date: 07/27/00

Soil Type = Medano Complex-81 Medano part (loamy sand)

Source of Soils Data = SCS Jefferson County Soil Survey Book

Issue date December 1979 (current)

soil depth (inches)		AWC (in/in)		PH		organic (%)		soil depth (ft)	AWC (inches)	intake family
lower	upper	lower	upper	lower	upper	lower	upper			flood fu
0	6	0.06	0.08	7.4	8.4	3	6	1	1.41	3
6	16	0.15	0.18					2	2.63	
16	60	0.06	0.08					3	3.47	
								4	4.31	alternat
								5	5.15	method
										3

Management Allowed Deficit (MAD)

crop	root depth (ft)	stress point	MAD (inches)
alfalfa (hay or seed)	5	0.5	2.58
corn (field or silage)	4	0.5	2.16
grain (winter or spring)	4	0.5	2.16
pasture (or grass hay)	3	0.5	1.74
other (enter below)			

Intake Family

choose base number for intake family from table below based on texture
base number (#'s 1 through 7) = 6

Intake Family

#	flood	furrow	texture
1	0.3	0.3	heavy clays, silty clay (> 60% clay)
2	0.5	0.35	clays, slit loam (lake laid), sandy clay
3	1	0.4	silty clay loam, clay loam, sandy clay loam, silt loam (stream laid)
4	1.5	0.5	silt loam (wind laid), loam, very fine sandy loam
5	2	0.55	sandy loam, fine sandy loam, gravelly loam
6	3	0.7	very fine sand, loamy sands, gravelly sandy loam
7	4	0.85	sand

If you wish to assign intake family by an alternate method (from Table A-3 in Hubble Report or other) enter your selection below.
Enter a value for both flood and furrow if known, otherwise enter zero.
If you do not wish to assign intake family by an alternate method enter zero for both values.

intake family (flood) = 3
intake family (furrow) = 0.7

soil depth	AWC	AWC accumulated
(inches)	(inches)	(inches)

1	0.07	0.07
2	0.07	0.14
3	0.07	0.21
4	0.07	0.28
5	0.07	0.35
6	0.07	0.42
7	0.165	0.585
8	0.165	0.75
9	0.165	0.915
10	0.165	1.08
11	0.165	1.245
12	0.165	1.41
13	0.165	1.575
14	0.165	1.74
15	0.165	1.905
16	0.165	2.07
17	0.07	2.14
18	0.07	2.21
19	0.07	2.28
20	0.07	2.35
21	0.07	2.42
22	0.07	2.49
23	0.07	2.56
24	0.07	2.63
25	0.07	2.7
26	0.07	2.77
27	0.07	2.84
28	0.07	2.91
29	0.07	2.98
30	0.07	3.05
31	0.07	3.12
32	0.07	3.19
33	0.07	3.26
34	0.07	3.33
35	0.07	3.4
36	0.07	3.47

37	0.07	3.54
38	0.07	3.61
39	0.07	3.68
40	0.07	3.75
41	0.07	3.82
42	0.07	3.89
43	0.07	3.96
44	0.07	4.03
45	0.07	4.1
46	0.07	4.17
47	0.07	4.24
48	0.07	4.31
49	0.07	4.38
50	0.07	4.45
51	0.07	4.52
52	0.07	4.59
53	0.07	4.66
54	0.07	4.73
55	0.07	4.8
56	0.07	4.87
57	0.07	4.94
58	0.07	5.01
59	0.07	5.08
60	0.07	5.15

[illegible]

TERRETON SANDY CLAY LOAM-110

Memorandum

Date: 10/26/2000

From: Craig Saxton

Subject: 31-04015

31-04015 was split into 31-11417 and 31-11418 because of the two separate systems.

31-11417: From historical evidence, I can recommend 67 acres with 2.55 cfs (pump capacity)

31-11419: Enlargement: The possible enlargement consists of two portions. One portion is 48 acres underneath the pivot. The second portion is the SW corner of the pivot. Carl has irrigated this corner in the past and plans to in the future per our discussion 10-25-00. The enlargement is 58 acres. The result is 31-11417 and 31-11419 totaling 125 acres with a diversion rate of 2.55cfs, or 0.019cfs/acre.

The priority date used for 31-11419 is based on the date the original statutory claim was filed by Reed Mickelsen on December 23, 1975.

31-11418 is in reality a 3/4 pivot: Based on historical evidence, 31-11418 was recommended for 60 acres, with a diversion of an inch to the acre, or 1.20 cfs (see enclosed map).

Notes of why I couldn't recommend the entire 3/4 Pivot:

Acreage: Pivot put in after 1987 (no enlargement). 60 acres based on 1966 and 1960 aerial photos.

Diversion Rate: Soil is lacustrine. Different type than hubble done for 31-11417 or Gasser 31-04024.

Water User

CARL BALL/ CIRCLE B ID: 15

POD

08N 36E 32 NWNESE

Site Tag #

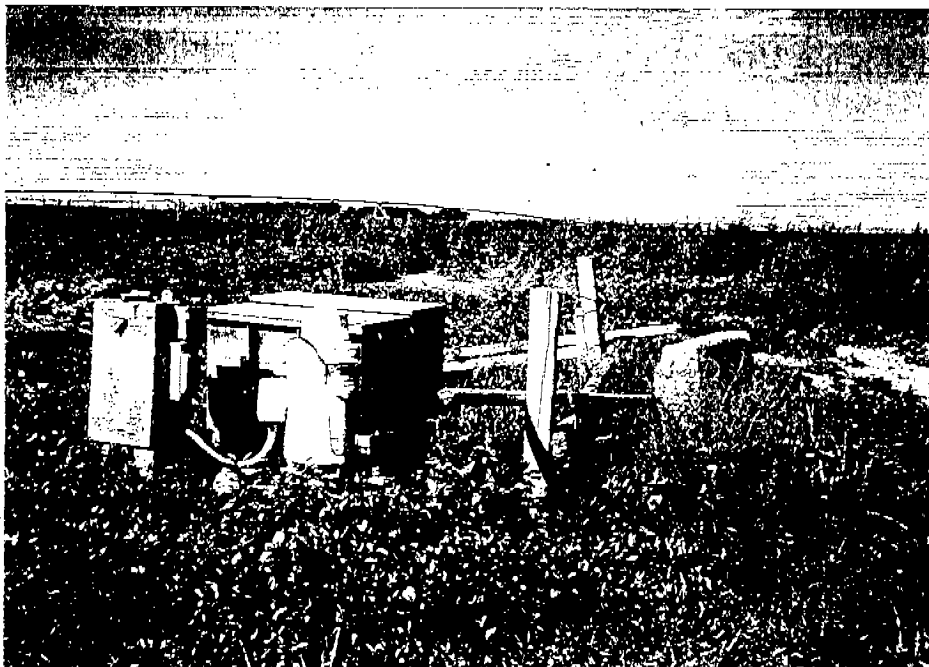
A0008545

Record #

300491

Diversion Name

#10



Name Carl Ball

PCC WORKSHEET

(attach to WMD Field Report) Rec No 300491Division Name #10SITE TAG: A0008545DATE 8/25/98EXAMINER (examiner) B Connor

KILOWATT HOURS (kwh_2) _____

IF MOTOR, PUMP, OR SYSTEM HAVE CHANGED SINCE FIELD INVENTORY, NOTE CHANGES HERE: _____

PCC_AF_QAL:

=====

Z = Zero Pumpage

1 = Simple, no tracking

2 = Complex, no tracking req.

3 = Tracking req. & provided

4 = Tracking req, not provided

5 = Complex, exam incomplete

6 = Known problem with data

7 = PCC measured @ q-meter verification

8 = Low PCC where q-meter is required but not installed

9 = Calculated or Estimated PCC

N = No PCC

Q = Other, see exam notes

FOLLOW-UP DATE 2001

Power and Water Metering Information

KILOWATT HOUR METER		WATER MEASUREMENT METER and MOUNTING PIPE INFORMATION	
Utility		METER INFORMATION	
Pole No.		Manufacturer	<u>Polysonic</u>
Meter Manufacturer		Model Number	<u>TRP</u>
Meter Serial No.		Type (std-meter)	<u>Sonic</u>
Disc Constant(Kh)		PIPE INFORMATION	
Rated Voltage	<u>see field exam</u>	Pipe material	<u>see tape</u>
Demand		Outside Diameter	
Multiplier (Mult)		Inside Diameter	
CTR (Current)		Distance of straight pipe upstream and down	Upstream /Down <u>210/210</u>
PTR (Voltage)			

Exam complete(Y) Nstd conf'd

E G

(F)

P

etermination of Power Consumption Coefficient

lowatts of Energy Consumed

$KW = 3.6 \times Kh \times \text{Multiplier} \times \text{No. of revolutions}(N) \div \text{Time}(T) \text{ in seconds per N}$

Cond.#1 $N = \underline{7}$ (No. of Disc Rev) Time (sec) = $(\underline{43.4}) + (\underline{43.6}) + (\underline{42.9}) / 3 = \underline{43.3}$ Ave

$3.6 \times \underline{3.6}$ (Kh) $\times \underline{40}$ (Mult) $\times \underline{7}$ (N) $\div \underline{43.3}$ (T) = $\underline{83.8}$ KW

2.11×40
= 84.4

Cond.#2 $N = \underline{\hspace{1cm}}$ (No. of Disc Rev) Time (sec) = $(\underline{\hspace{1cm}}) + (\underline{\hspace{1cm}}) + (\underline{\hspace{1cm}}) / 3 = \underline{\hspace{1cm}}$ Ave

$3.6 \times \underline{\hspace{1cm}}$ (Kh) $\times \underline{\hspace{1cm}}$ (Mult) $\times \underline{\hspace{1cm}}$ (N) $\div \underline{\hspace{1cm}}$ (T) = $\underline{\hspace{1cm}}$ KW

Cond.#3 $N = \underline{\hspace{1cm}}$ (No. of Disc Rev) Time (sec) = $(\underline{\hspace{1cm}}) + (\underline{\hspace{1cm}}) + (\underline{\hspace{1cm}}) / 3 = \underline{\hspace{1cm}}$ Ave

$3.6 \times \underline{\hspace{1cm}}$ (Kh) $\times \underline{\hspace{1cm}}$ (Mult) $\times \underline{\hspace{1cm}}$ (N) $\div \underline{\hspace{1cm}}$ (T) = $\underline{\hspace{1cm}}$ KW

Measured Flow Rate and Discharge Pressure - Enter flow rate as determined by the "standard" water measurement meter in GPM, and discharge pressure measured in PSI. Attach documentation to support data such as notes, printout tapes etc.

GPM Cond. #1 1147 #2 #3

PSI Cond. #1 94 #2 #3

dist. PSI DISCHG = "N"

Power Consumption Coefficient (PCC) = KW $\times$ 5431 $\div$ GPM

PCC Cond. #1 = $\underline{83.8}$ (KW) $\times$ 5431 $\div$ 1147 (gpm) = 396.8 (kWh/ac.ft)

$100 \times 4 = 400$
 $30 \times 2 = 60$
460

Percent of seasonal use 100

PCC Cond. #2 = (KW) $\times$ 5431 $\div$ (gpm) = (kWh/ac.ft)

Percent of seasonal use

PCC Cond. #3 = (KW) $\times$ 5431 $\div$ (gpm) = (kWh/ac.ft)

Percent of seasonal use

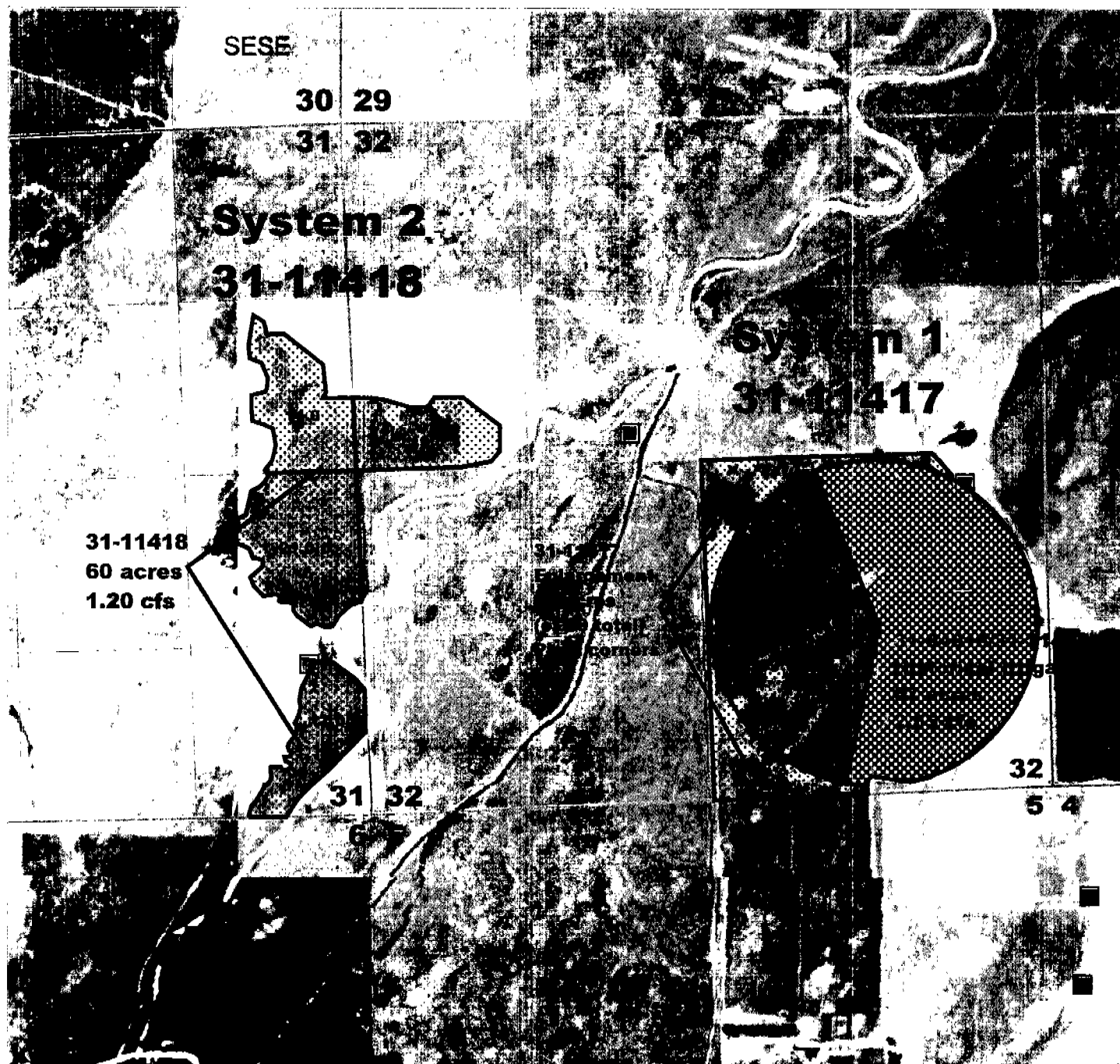
Is the system operator required to track and report changes in system operation? Yes ☒ No ☐
(see form PCC3)

Water Level Data

Does the well have access to measure water levels? Yes ☒ No ☐

Static Water Level ft Pumping Water Level ft (at condition #)
Date Date

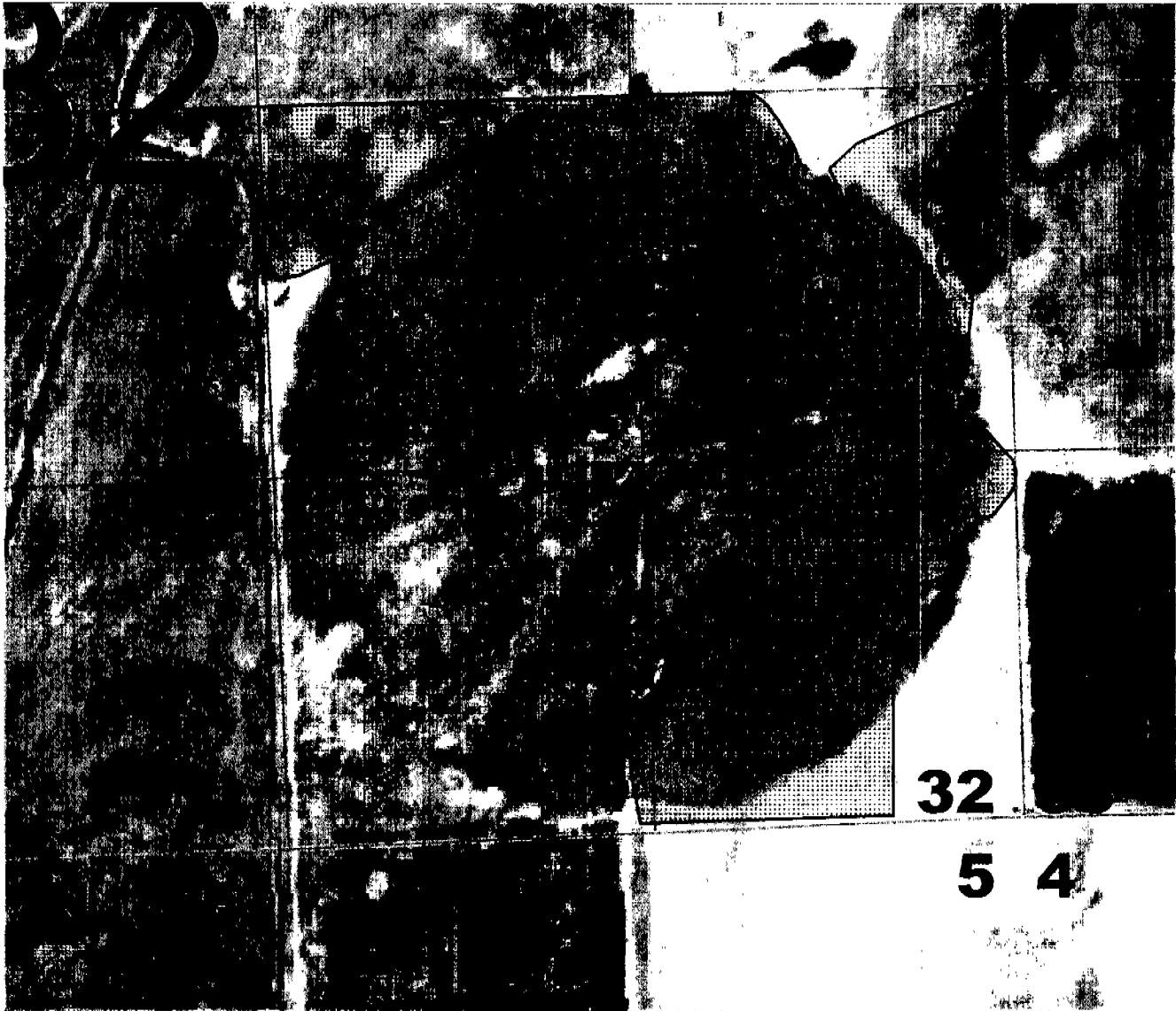
Enlargement Claim 31-11419 and Potential Recommendation



Prepared by
Craig Saxton
9-6-2000

WR#: 31-04015

Ball Farms LTD



Total Irrigated Acres: 37

Acreage Distribution

**Prepared by: Craig Saxton
June, 2000**

HEL/NW

②

62

41

HEL/NW

③

116.9

HEL

①

123.1

#11

⑤1

HEL/NW

①

32

33

34

#98

②08

5

4

HEL/NW

④

55.5

⑥ NW

⑥ NW

HEL

①

135.9

HEL

④ NW

10.6

#99

②10

#11

⑤1

#13

②09

NW

①

37.1

#1065

HEL/NW

①

40.3

NW

①

40.6

DEPT OF WATER RESOURCES
150 SHOUP AVE.
IDAHO FALLS ID 83401

WATER RIGHT # 431-04015 BENEFICIAL USE VERIFICATION

I the undersigned do verify that during the year Sept, 17 1956 I was living
in the Hamer Idaho area and can verify that the pump now owned by
Reed Mickelsen was being used for beneficial purposes.

Oley Davis
Gene J Ellis

I, Tom Brown, a notary public, do hereby certify that on this

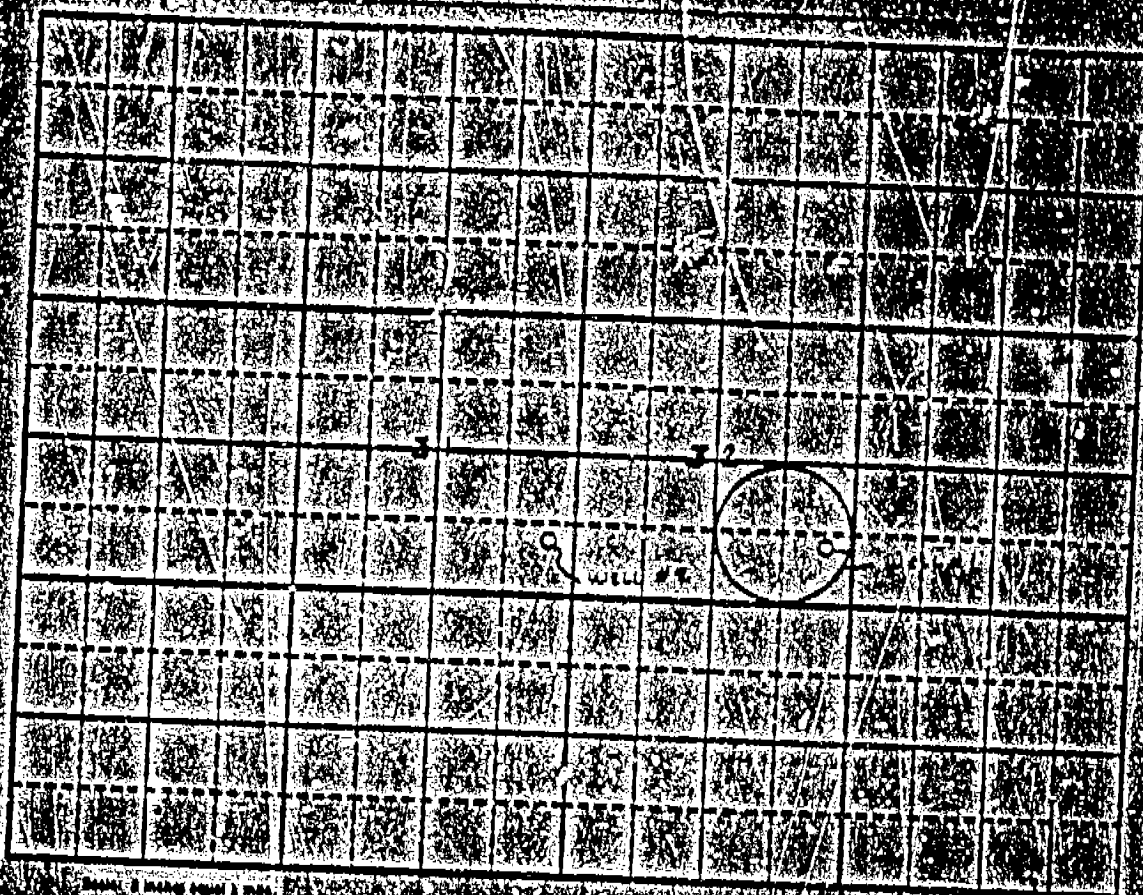
10 day of March, 19 93, personally appeared before me Oley Davis
Gene J Ellis, and has signed and declared the foregoing statement
to be true.

"My commission expires on 5/18, 19 95."

MICROFILMED

APR 14 1994

(7) If you are claiming water as a member of an organization, list name of organization



Section 1 being same as map

Map should show the location of the point of diversion and the place of use of the water by 40-foot subdivisions, section, township and range of the public land survey system.

State of Idaho

County of Blaine

Be it known that the undersigned, being duly sworn, deposes and says that he, she, they subscribed the foregoing claim to a water right, together with all attached information, and that the matters and facts therein are true to the best of the affiant's knowledge.

Sworn to before me this 23 day of December, 1972 (Claimant)

Notary Public

Residing at Blaine, Idaho

My commission expires 1/1/73

For Department Use Only

Received by <u>PPC</u>	Date <u>12/15/72</u>	Exception filed by <u>PPC</u>	Forwarded to <u>PPC</u>
Prelim. check by <u>PPC</u>	Date <u>12/15/72</u>	Claimant by <u>PPC</u>	
\$10.00 fee received by <u>PPC</u>	Date <u>12/15/72</u>		
Approved for publication by <u>PPC</u>			
Published in <u>Blaine, Idaho</u>			
Date <u>12/15/72</u>			

RECEIVED

Affidavit of Publication

JAN 22 1978

THE RIGBY STAR

Department of Water Resources
Eastern District

STATE OF IDAHO
County of Jefferson

Larry D. Anderson

Gen. Manager

I, ~~Richard Anderson~~, do solemnly swear that I am the editor of THE RIGBY STAR, a weekly newspaper as defined by Idaho Code Annotated, Section 23-106 as amended, and that said newspaper is a weekly newspaper, printed and published at Rigby, Jefferson County, Idaho, having a general circulation in said county, and that said newspaper has been printed and published as a weekly newspaper, in said county for more than 73 consecutive weeks prior to the first publication of the attached notice.

And affiant further says that at the times herein mentioned said newspaper as per clipping attached, was published in said newspaper in the regular and entire issue thereof, and not in any supplement issue thereof, for

2 Consecutive issues thereof; first publication having been made on the

Eight day of January, 1976

and the last publication on the

fifteenth day of January, 1976

And affiant further says that at the times herein mentioned said newspaper was made up of at least four pages of at least five columns each, printed from type matter of at least seventeen and three-fourths inches depth; and that there are at least two hundred bonafide subscribers in Jefferson County.

Larry D. Anderson

subscribed in my presence and sworn to before me this 13th

day of January, 1976

Anna M. Marnett

Notary Public for the State of Idaho
Residence and P. O. Address, Rigby, Idaho

My commission expires April, 1977

Publication Fee: \$-----

NOTICE OF CLAIM TO A WATER RIGHT
GIVEN VIA NEED ALLOCATION
Water, Idaho, a claim to a water right, labeled for diversion and application to beneficial use of 800 cubic feet per second of water from ground water source with points of diversion in the SE 1/4 Sec. 32, T2N, R2E, S14E, Sec. 32, T2N, R2E, S14E, Jefferson County, Idaho. The water is claimed to be used from April 1 to November 1 for the irrigation of 320 acres with priority of September 17, 1952. The place of use is within the SE 1/4 NW 1/4, Sec. 32, T2N, R2E, S14E, Sec. 32, T2N, R2E, S14E, Idaho. Any exception to this claim of water right may be filed with the Idaho Department of Water Resources, 1615 Lincoln Road, Idaho Falls, Idaho 83401.
R. Keith Higginson, Director
Published January 8, 1978

NOTICE OF CLAIM TO A WATER RIGHT

NO. 31-4015

Notice is hereby given that Reed Mickelsen,
Hailey, Idaho

has filed a claim to a water right established by diversion and application
to beneficial use of 5.00 cubic feet per second ~~XXXXXXXXXXXXXXX~~
of water from ground-water sources

with points of diversion in the SE 1/4, Sec. 32, SE 1/4, Sec. 31, T. 8N, R.
S. 4E, Jefferson County,

The water is claimed to be used from Apr. 1 to Nov. 1
for the irrigation of 220 acres

with a priority of September 17, 1956

the place of use is within the S. 1/4, Sec. 32, SE 1/4, Sec. 31, T. 8N, R. 36E, S. 4E,
T. 8N, R. 36E, S. 4E,

Any exception to this claim of water right may be filed with the
Department of Water Resources, 1515 Lincoln Road, Idaho Falls, Idaho, 83401.

R. KEITH HIGGINSON

Director

Published in the Booby Star, Booby, Idaho

on January 8, 1976 and January 15, 1976

December 24, 1975

RE: Claim to a Water Right No. 31-4013

The Rigby Star
P.O. Box 37
Rigby, Idaho 83442

Gentlemen:

Enclosed you will find a legal notice which we wish to have published once a week for two consecutive weekly issues of your newspaper. We have inserted the publication dates allowing time for you to submit us a galley proof for review before publication.

After sending us a galley proof, proceed with the publication on the dates we have inserted, assuming the notice is correct. If we have any corrections, we will notify you before the first publication. If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill.

Very truly yours,

RONALD D. CARLSON
Supervisor,
Eastern Region

Bill submitted 1-22-76

REC:ME

Legal Notice (1)



STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT

Cecil D. Andrus
Governor

R. Keith Higginson
Director

1815 Lincoln Road
Idaho Falls, Idaho 83401
(208) 823-7188

January 26, 1976

RE: Claim to a Water Right No. 31 4015

Rud Mickelsen
Hamer
Idaho 83425

Dear Mr. Mickelsen:

The Department of Water Resources has completed the processing of your claim to a water right and no further action is authorized under Sections 42-225a and 42-225b, Idaho Code. Your claim will be retained in our files and will be available at any time for use by you or the court.

As you are aware, the filing of your claim does not, in itself, guarantee you a water right; it only records and preserves the information and the evidence which you included in your claim.

If, at a later date, you find that you have additional information or supporting evidence that you would like to have included in your claim file, you may have that information or evidence added at any time. Please refer to your claim number when corresponding with this office.

We are enclosing, for your records, a copy of your claim. If you have any questions or if we can be of further assistance, please feel free to call upon us.

Very truly yours,

RONALD D. CARLSON
Supervisor,
Eastern Region

RDC:ME

Enc: Copy of Claim