

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 37-8748

Exam Date: 6/19/2014

1. Current Owner: DEER CREEK RANCH INC
ATTN JOHN FLYNN
PO BOX 3090
NEWPORT BEACH CA 92658
(949)720-3400
2. Accompanied by: Bill Murphy
Phone No: (208) 788-9813
Address: P.O. Box 187; Hailey, ID 83333
Relationship to Permit Holder: Ranch Manager

3. SOURCEDEER CREEK
GROUND WATERTRIBUTARY

BIG WOOD RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 37-5
2. Other water rights with the same point of diversion: 37-466 and 37-11329

C. DIVERSION AND DELIVERY SYSTEM1. LOCATION OF POINT(S) OF DIVERSION:

GROUND WATER	NW1/4SE1/4	Sec. 30, Twp 03N, Rge 18E, B.M.
BLAINE County	(Rediversion)	
GROUND WATER	NW1/4SW1/4	Sec. 25, Twp 03N, Rge 17E, B.M.
BLAINE County	(Injection)	
GROUND WATER	SE1/4SW1/4	Sec. 30, Twp 03N, Rge 18E, B.M.
BLAINE County	(Injection)	
GROUND WATER	SE1/4SE1/4	Sec. 30, Twp 03N, Rge 18E, B.M.
BLAINE County	(Rediversion)	
GROUND WATER	SW1/4SE1/4	Sec. 30, Twp 03N, Rge 18E, B.M.
BLAINE County	(Rediversion)	
GROUND WATER	SE1/4SE1/4	Sec. 30, Twp 03N, Rge 18E, B.M.
BLAINE County	(Rediversion)	
DEER CREEK	NW1/4SE1/4	Sec. 30, Twp 03N, Rge 18E, B.M.
BLAINE County		
DEER CREEK	SE1/4SE1/4	Sec. 30, Twp 03N, Rge 18E, B.M.
BLAINE County		
DEER CREEK	NW1/4SE1/4	Sec. 30, Twp 03N, Rge 18E, B.M.
BLAINE County		
DEER CREEK	SW1/4SE1/4	Sec. 30, Twp 03N, Rge 18E, B.M.
BLAINE County		
DEER CREEK	NE1/4SE1/4	Sec. 30, Twp 03N, Rge 18E, B.M.
BLAINE County		
DEER CREEK	SE1/4SE1/4	Sec. 30, Twp 03N, Rge 18E, B.M.
BLAINE County		

DEER CREEK	SE1/4SW1/4	Sec. 30,	Twp 03N,	Rge 18E, B.M.
BLAINE County				
GROUND WATER	SE1/4SE1/4	Sec. 30,	Twp 03N,	Rge 18E, B.M.
BLAINE County				
GROUND WATER	NE1/4SE1/4	Sec. 26,	Twp 03N,	Rge 17E, B.M.
BLAINE County				
DEER CREEK	SE1/4SW1/4	Sec. 30,	Twp 03N,	Rge 18E, B.M.
BLAINE County				
DEER CREEK	NW1/4SE1/4	Sec. 30,	Twp 03N,	Rge 18E, B.M.
BLAINE County				
DEER CREEK	NE1/4SE1/4	Sec. 30,	Twp 03N,	Rge 18E, B.M.
BLAINE County				
GROUND WATER	SE1/4SW1/4	Sec. 30,	Twp 03N,	Rge 18E, B.M.
BLAINE County	(Rediversion)			
GROUND WATER	SE1/4SW1/4	Sec. 30,	Twp 03N,	Rge 18E, B.M.
BLAINE County	(Rediversion)			
GROUND WATER	NE1/4SE1/4	Sec. 30,	Twp 03N,	Rge 18E, B.M.
BLAINE County	(Rediversion)			
GROUND WATER	NE1/4SE1/4	Sec. 30,	Twp 03N,	Rge 18E, B.M.
BLAINE County	(Rediversion)			
GROUND WATER	NW1/4SE1/4	Sec. 30,	Twp 03N,	Rge 18E, B.M.
BLAINE County	(Rediversion)			
GROUND WATER	NW1/4SE1/4	Sec. 30,	Twp 03N,	Rge 18E, B.M.
BLAINE County	(Rediversion)			

Method of Determination: Waypoints were collected with a Garmin GPSmap 60CSx receiver and manually entered into ArcMap. Aerial imagery from 2011 and 2013 was used to verify that the points of diversion are located as recorded. See attached map.

2.

PLACE OF USE: RECREATION STORAGE

Twp	Rge	Sec	NE				NW				SW				SE				Totals	
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE		
03N	18E	30																		
										X	X	X	X	X	X	X	X	X		

DIVERSION TO STORAGE same as RECREATION STORAGE

Method of Determination: Aerial imagery from 2011 and 2013 was used to verify that the place of use is located as recorded. See attached map.

3. x Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

 x Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

☒ Aerial Photo Attached (required for irrigation of 10+ acres).

☒ Photo of Diversion and System Attached

4.

<u>Well or Diversion</u> <u>ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge</u> <u>Size</u>
	General Electric	125	5K405DP6005C		
	General Electric	150	5K444DP6006A		

D. FLOW MEASUREMENTS

1.

<u>Measurement</u> <u>Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Flow Meter	Sonic	Fuji	Portaflow	7K0085TB		March 2014

2. Measurements:

Flow meter measured a rate 469.5 gpm or 1.05 cfs being pumped into Deer Creek for delivery to ponds under standard use conditions for this permit.

E. FLOW CALCULATIONS

 Additional Computation Sheets Attached

Measured Method: N/A

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$$

2. Volume Calculations for Other Uses: Recreation Storage: An average 4' pond depth was used as that was the original design depth of the ponds and what the estimates for storage in the application for permit were based on (ponds are numbered from upstream to downstream):

Pond 1: 0.38 Acre x 4' = 1.52 af

Pond 2: 2.2 Acres x 4' = 8.80 af

Pond 3: 0.95 acres x 4' = 3.80 af

Pond 4: 0.72 acres x 4' = 2.88 af

Pond 5: 0.36 acres x 4' = 1.44 af

Pond 6: 0.17 acres x 4' = 0.68 af

Pond 7: 0.31 acres x 4' = 1.24 af

Pond 8: 0.21 acres x 4' = 0.84 af

Pond 9: 0.22 acres x 4' = 0.88 af

Pond 10: 1.16 acres x 4' = 4.64 af

Total = 6.68 acres x 4' = 26.72 af

G. NARRATIVE/REMARKS/COMMENTS

Permit 37-8748 was permitted for 26.7 acre feet (af) of Recreation Storage and 1.00 cubic foot per second (cfs) for Diversion to Storage. Application for permit was filed February 11, 1992, an Extension of Time request was submitted on March 3, 1993 and Proof of Beneficial Use was filed on March 11, 1994.

This pond system contains ten ponds constructed on stream, using natural materials (mostly boulders), to impound water in the constructed ponds. There are two ground water wells that are used to inject water into the stream to help maintain the pond levels in late summer when stream flows are reduced. The well upstream of the ponds is the primary source of ground water used in this system, although a secondary well near the most downstream pond can also be used to supply water through the same ground water delivery system used to supplement natural flows in the system.

When I conducted the field exam on June 19, 2014, I met the Ranch Manager, Bill Murphy, at the most downstream pond (pond #10) and we walked upstream along the road and the creek to view all ten ponds. The water was fairly high and swift from recent rains and snow. We agreed to use the original depth estimate of 4' that was submitted with the original application for permit and the current surface area of the ponds to estimate overall storage, as that would be much more practical than actually attempting to measure pond depth in those conditions.

We then drove up to the well located in the NESE of Sec. 29, Twp 03N, Rge 18E, upstream of all ten ponds. This is the primary well used for irrigation of the ranch and the diversion to storage under this permit. The second well is located in the SESE of

Sec. 30, Twp 03N, Rge 18E, just below pond #10, and it can be used for both irrigation and diversion to storage, but is rarely used. The Beaver Creek Fire of 2013 had burned through both well locations and the lower well was not operational on the day of the exam. The upper well was running, but marginally. I could hear the pump surging and could feel the water sloshing around inside the pipe. I attempted a measurement with the Fuji Portaflow, but was not successful. The Seametrics flow meter installed on the pipeline below the pump was measuring highly variable flows from approximately 620 gpm upwards to 820 gpm. Mr. Murphy said he would call a pump service and we could reschedule the flow measurement.

I returned on July 11, 2014 after the pump had been serviced and Mr. Murphy indicated that the pump was operational. I asked him to operate the pump under the normal operating conditions used when only diverting to the ponds. We stopped and opened the two valves on the water line that supply water to the ponds, one at pond #2, and one on the creek just below the upper well, upstream of the ponds. We returned to the well, he powered up the pump and I set up the Fuji Portaflow. The flow measurement averaged a flow of 469.5 gpm, which is approximately 1.05 cfs, under normal operating conditions for this permit. I inquired about the lower well and Mr. Murphy indicated it was still down, as they wanted to focus on repairing the upper well and pump, as it was cheaper to operate for irrigation and diversion to storage.

When I initially calculated the volume of the ponds, I used 2013 imagery and a 4' average depth and I calculated the capacity at 32.2 af, which is 17% more storage than permitted. After presenting that information to the ranch manager and indicating they may need to mitigate for the additional storage, I was contacted by Paul Arrington of Barker, Simpson and Rosholt, LLP and he presented me with calculations of surface area using 2009 aerial imagery that used the same 4' average depth, and the volume was estimated at 26.72 af. Mr. Arrington suggested the increased water flows resulting from the Beaver Creek Fire had temporarily increased surface area of the ponds and that my calculations may be skewed as a result. So, I agreed to revisit the surface area calculations. When I recalculated surface area in ArcMap using the 2009 imagery, I was able to obtain similar results to theirs. I also viewed the pond shapes using 2004, 2006 and 2011 imagery and feel that the shapes adequately represent the overall surface area of the ponds. Based on that and the following criteria, I decided it would be prudent to recommend licensing the ponds at the permitted volume: These are only estimations and not precise measurements; the volumes are based on the flat bottom reservoir equation of surface area x depth, while the ponds actually vary between flat bottom and v-shaped bottom ponds (Ponds #2 and #3 are flat bottomed, while the rest are v-shaped). Therefore, the actual storage is likely somewhat less than calculated.

Overlap review indicates place of use overlap with water right 37-5, a Big Wood River water right for 1.16 irrigation and 3.00 cfs for wildlife and recreation. This right is currently undeliverable due to natural alterations in the Big Wood River channel at the

point of diversion (POD) in the NESWSW of Sec. 29, Twp 03N, Rge 18E. The right is currently leased to the Water Supply Bank and the lease expires 12/31/2015. Both ground water wells associated with this permit also serve as the PODs for primary irrigation right 37-466, a 9.77 cfs water right used to irrigate 489 acres within the 672.4 acre permissible place of use (PPU) on the ranch. There is a condition on the permit limiting pumping of both rights to 9.77 cfs when combined and that condition will be retained on the license. Ground water irrigation right 37-11329 is also diverted from the "upper" well in the NESE of Sec. 26, Twp 03n, Rge 18E. This right allows the diversion of 2.48 cfs, use of a volume up to 500.5 af and is limited to the irrigation of 143 acres within a 235.1 acre PPU. Rights 37-11329 and 37-466 have a combined limit of 9.78 cfs. I have placed a condition on the license for this right limiting the combined use of all three rights to 9.78 cfs.

The license was amended to add the upper well located in the NESE of Sec. 26, Twp 03N, Rge 18E and drop the well that is no longer in use located in the NESESE of Sec. 30, Twp 03N, Rge 18E. Two PODs for the ponds were also changed to reflect actual pond diversion locations (SWNESW to SESW; NESWSE to NWSE), also the SWSW and NWSW 1/4s were added to the legal description for the place of use. Ten acre tract legal descriptions were dropped from all PODs for convenience. Two PODs were added as points of injection for the ground water use in the SESW of Sec. 30, and the NWSW of Sec. 25, in Twp 03N, Rge 18E. Ten PODs were also added as points of redirection for the groundwater use in the pond system. These ten PODs are the same physical PODs used as the surface water diversions for the ponds.

Recommend licensing 1.00 cfs for Diversion to Storage and 26.7 af for Recreation Storage.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

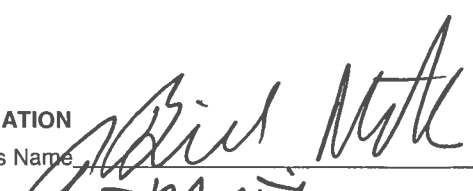
<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
RECREATION STORAGE	01/01 to 12/31		26.70 AF
DIVERSION TO STORAGE	01/01 to 12/31	1.000 CFS	
	<u>Totals:</u>	1.000 CFS	26.70 AF

2. Recommended Amendments

☒ Change P.D. as reflected above ☒ Add P.D. as reflected above ☐ None

☐ Change P.U. as reflected above ☒ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name  Date 10-30-14

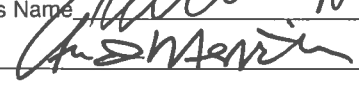
Reviewer  Date 11/28/14



Figure 1: Pond #2 looking northwesterly. This is the largest of the ten ponds with approximately 2.2 acres of surface area.



Figure 2: Pond #1. Silt was deposited after Beaver Creek Fire and pond was supposed to be dredged in the fall of 2014.

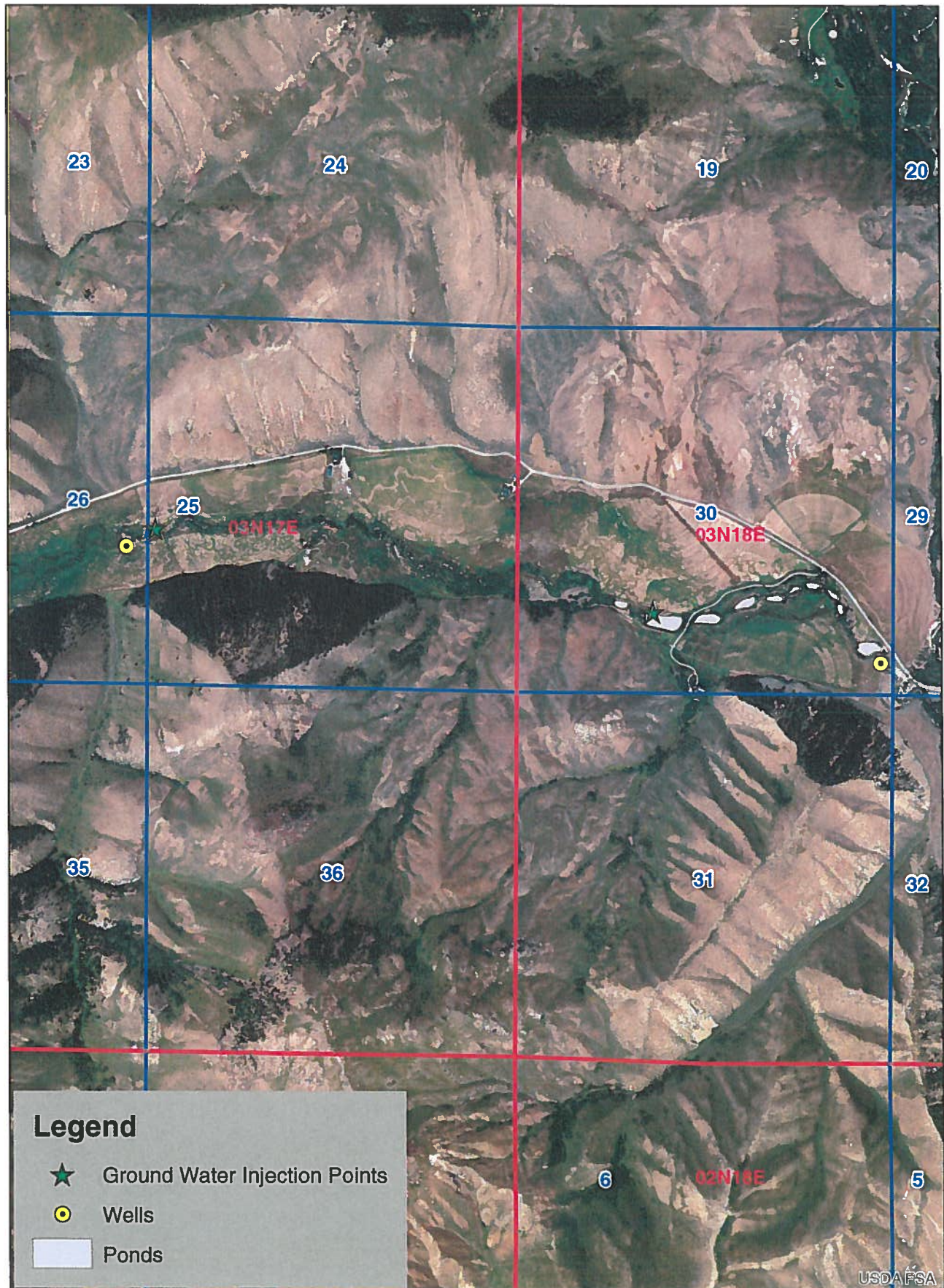


Figure 3: Pond #3, the third largest pond in the system with an approximately 0.95 acre surface area.



Figure 4: Pond #10, the second largest pond at approximately 1.16 acres of surface area.

System Diagram





Deer Creek Ranch
No. 03
LOG NAME:DCR
START :07-11 12:28
END :07-11 12:38
INTERVAL:00:01:00

7/11/2014 12:33
+1.328E+0 ft/s
+4.529E+2 gal/m
+ TOTAL 0002348 gal
NORMAL

7/11/2014 12:28
+1.159E+0 ft/s
+3.952E+2 gal/m
+ TOTAL 0000000 gal
NORMAL

7/11/2014 12:34
+1.512E+0 ft/s
+5.155E+2 gal/m
+ TOTAL 0002815 gal
NORMAL

7/11/2014 12:29
+1.349E+0 ft/s
+4.601E+2 gal/m
+ TOTAL 0000465 gal
NORMAL

7/11/2014 12:35
+1.455E+0 ft/s
+4.962E+2 gal/m
+ TOTAL 0003288 gal
NORMAL

7/11/2014 12:30
+1.328E+0 ft/s
+4.529E+2 gal/m
+ TOTAL 0000939 gal
NORMAL

7/11/2014 12:36
+1.439E+0 ft/s
+4.906E+2 gal/m
+ TOTAL 0003755 gal
NORMAL

7/11/2014 12:31
+1.648E+0 ft/s
+5.619E+2 gal/m
+ TOTAL 0001409 gal
NORMAL

7/11/2014 12:37
+1.445E+0 ft/s
+4.928E+2 gal/m
+ TOTAL 0004226 gal
NORMAL

7/11/2014 12:32
+1.260E+0 ft/s
+4.297E+2 gal/m
+ TOTAL 0002278 gal
NORMAL

7/11/2014 12:38
+1.325E+0 ft/s
+4.517E+2 gal/m
+ TOTAL 0004695 gal
NORMAL

469.5 gpm
1.05 cfs

Original Estimates for Permit from Jay Sevy

LEGAL DESCRIPTIONS OF DAMS AND PONDS
(DAM = Location of impoundment structure)

Pond #	Surface Area (acres)	Storage Capacity (ac.ft.)	1/4	1/4	1/4	Section	
1	0.57	2.28	NW SW	SE NE	SW 1 SW 4	30 30	DAM
2	0.50	2.00	NW	SE	SW 1	30	DAM
3	0.67	2.68	NE	SE	SW 3	30	DAM
4	1.00	4.00	NW	SW	SE 4	30	DAM
5	0.58	2.32	SE NW SW NW	NW SW NW SW	SE 5 SE 4 SE 11 SE 4	30 30 30 30	DAM
6	1.10	4.40	SE NE	NW SW	SE 5 SE 6	30 30	DAM
7	0.87	3.48	SW	NE	SE 7	30	DAM
8	0.48	1.90	SW	NE	SE 7	30	DAM
9	0.45	1.78	NW NE	SE SE	SE 4 SE 1	30 30	DAM
10	0.47	1.86	NE	SE	SE 1	30	DAM

GROUNDWATER DIVERSIONS

NE 1/4 SE 1/4 Sec. 30 T. 3N R. 18E (existing well) 1

SE 1/4 SE 1/4 Sec. 30 " " (new well to be drilled) 10

MICROFILMED
APR 08 1992

37-08748