

SW Keen

Beneficial Use Field Report
By Terry M. Scanlan, P.E., P.G.
Certified Water Rights Examiner No. 00-129

A. GENERAL INFORMATION**RECEIVED****NOV 26 2004**WATER RESOURCES
WESTERN REGION

1. Current Owner: Lloyd F. Kiff
 9999 West Star Acres Drive
 Star, ID 83669
 (208)286-9116

And

Julia Kiff
 9999 West Star Acres Drive
 Star, Idaho 83669
 (208)286-9116

2. Accompanied by: Lloyd Kiff
 Phone No:
 Address:
 Relationship to Permit Holder

3. Source
 Ground Water

Tributary**B. OVERLAP REVIEW**

1. Other water rights with the same place of use: none
 2. Other water rights with same point of diversion: none

C. DIVERSION AND DELIVERY SYSTEM**1. Location of Points of Diversion**

Ground Water SENE Section 5, T4N, R1W, B.M. Ada County

Method of Determination: Field Exam, Arc View Map

2. Place of Use: Irrigation

Twp	Rge	Sec	NE ¼				NW ¼				SW ¼				SE ¼				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
4N	1W	5				2.0													2.0

Total Acres: 2.0 Ada County

Method of Determination: Field Exam, Arc View Map

3. Y Delivery system diagram attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable. (Figure 2)
- Y Map attached showing location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater. (Figure 2)
- Y Aerial photo attached (required for irrigation of 10+ acres). (Figure 2)
- Y Photo of diversion and system attached. (Figure 2)

4.

Well or Diversion I.D. No.	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No.
	Franklin	3		Jacuzzi 3S445-11 submersible	

D. FLOW MEASUREMENTS**1. Measurement Equipment**

Type	Make	Model No.	Serial No.	Size	Calib. Date
Sprinkler gage					

2. **Measurements:** sprinkler pressure 10 psi at upper end of handline

E. FLOW CALCULATIONS

11 dual-nozzle impact-style sprinkler heads with 3/16 and 5/32 nozzles --- 5 gpm per head at 10 psi nozzle pressure = 55 gpm (0.12 cfs)

Pump Curve: Rated at 44 gpm (0.10 cfs) at 60 psi (normal sprinkler pressure) from a pumping water level of 60 feet

Limited to 0.04 cfs by permit

F. VOLUME CALCULATIONS**1. Volume Calculation for Irrigation**

$$V_{I.R.} = (\text{acres irrigated}) \times (\text{irrigation requirement}) = 2.0 \times 4.5 = 9.0 \text{ afa}$$

$$V_{D.R.} = (\text{diversion rate}) \times (\text{day in irrigation season}) \times 1.9835 \\ = 0.04 \times 260 \times 1.9835 = 20.6 \text{ afa}$$

$$V = \text{smaller of } V_{I.R.} \text{ and } V_{D.R.} = 9.0 \text{ afa}$$

2. Volume Calculations for Other Uses:

none

G. NARRATIVE/REMARKS/COMMENTS

Permit 63-12323 is authorized for irrigation of 2 acres from a groundwater source at a diversion rate of 0.04 cfs. Point of diversion and place of use are located in the SENE of Section 5, T4N, R1W. Season of use is March 1 to November 15.

Permit holders are Lloyd F. Kiff and Julia Kiff, who reside at 9999 West Star Acres Drive, Star, Idaho 83669 (i.e., the location of the place of use and point of diversion). The permit was approved on September 14, 2001 and Proof of Beneficial Use is due on September 1, 2006.

Permit 63-12323 is mitigated by a 2-acre portion of water right 63-270. The Kiffs have retained ownership of the water right for that purpose.

The entire property comprises approximately 5 acres and is located within the SENE of Section 5, T4N, R1W (Figure 1). The parcel is Lot 1 of Block 4 of Star Acres Subdivision.

A beneficial use field examination was conducted on September 30, 2004 by Terry M. Scanlan, P.E., P.G. The examination found 2.0 acres irrigated under water right permit 63-12323 from a well source with a water-bearing zone of 50 feet to 100 feet. A separate well on the property is used for domestic purposes, including irrigation of 0.5 acres of landscape. Total irrigated area on the property is 2.5 acres. Descriptions of the irrigation well, irrigation pump, irrigation system, and irrigated area follow. Supporting documents are attached.

Well. The well is located in the northwest corner of the property, and was drilled by Sylvan Adamson for irrigation use in November 2001. The well is 108 feet deep, with 10 feet of well screen from 98 to 108 feet. The drillers report lists a static water level of 46 feet and a production rate of 50+ gpm by air lift pumping from 80 feet.

Well Pump. The well is equipped with a 3-hp submersible pump (Jacuzzi 3S445-11) set at 84 feet on 2-inch galvanized pipe. The pump is rated to produce 44 gpm (0.10 cfs) at 60 psi from a pumping water level of 60 feet. The well location is shown on Figures 1 and 2.

Irrigation System. Irrigation is by buried sprinklers and by hand line. A sprinkler time clock is used to start the pump and switch sprinkler stations. The hand line is 400 feet long and equipped with 11 Lawnrite dual-nozzle impact-style sprinkler heads. The handline was operated during the field examination. Nozzle pressure at the upper end (highest elevation) of the handline was approximately 10 psi. Nozzles are 3/16 and 5/32, with an estimated flow rate of 5 gpm per head, or a total of 55 gpm (0.12 cfs). This corresponds to a discharge pressure at the well of approximately 29 psi. The buried sprinklers use less water at higher pressure than the handline.

Irrigated Area. The irrigated area consists of grass, orchard, shrubs, and trees. Total irrigated area on the property is 2.5 acres, including 2.0 acres under permit 63-12323 and 0.5 acres under the domestic well exemption. The two systems are not interconnected. The domestic well supplies a sprinkler system for the landscape around the house. Figure 2 shows the irrigated areas under permit 63-12323 and under the domestic exemption. Figures 3 through 7 are photographs of the irrigated area.

Summary

The field examination found a maximum diversion capacity of 0.12 cfs and an irrigated area of 2.0 acres. The permit holder has complied with all conditions of the permit.

H. RECOMMENDATIONS**1. Recommended Amounts**

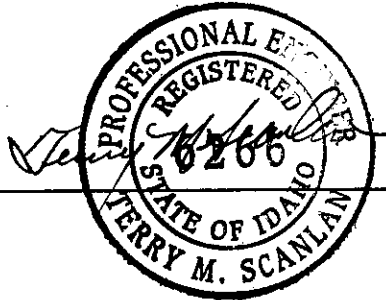
<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
Irrigation	03/01 to 11/15	0.04 cfs	9.0 acre feet
TOTALS:		0.04 cfs	9.0 acre feet

2. Recommended Amendments

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

I. AUTHENTICATION

Field Examiner's Signature _____



Date

11/24/04

Reviewer's Signature _____

Date _____

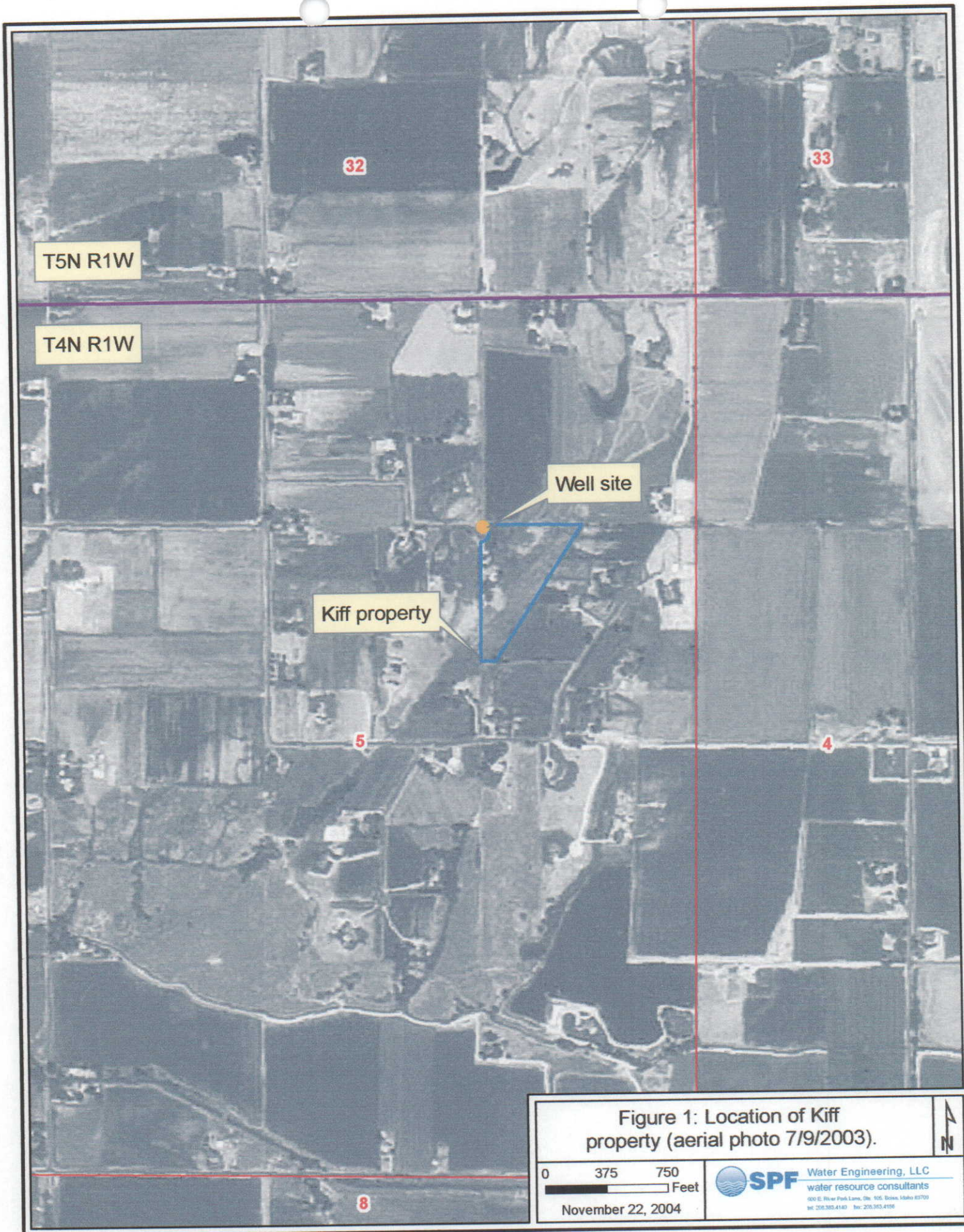


Figure 1: Location of Kiff property (aerial photo 7/9/2003).

0 375 750
Feet

November 22, 2004



Water Engineering, LLC
water resource consultants

600 E. River Park Lane, Ste. 105, Boise, Idaho 83709
tel: 208.383.4147 fax: 208.383.4150



Figure 5. View of irrigated area (in background), looking north. Non-irrigated area is in the foreground. Home is out of the picture to the left.



Figure 6. View of northwest corner of property looking east.



Figure 3. View of eastern edge of irrigated area, looking southeast. Hand line is operating. Non-irrigated area is visible in the background.



Figure 4. View of home from center of the irrigated area, looking southwest. Irrigated area is in the foreground.





Figure 7. View of orchard and turf looking south. This area is irrigated with an underground sprinkler system. Home is obscured by trees in the background.

A PARTNERSHIP

STAR ACRES SUBD
STAR, ADA COUNTY,STATE OF IDAHO
COUNTY OF ADA

I, RONALD M. BLAKLEY, a Registered Prof
sold County and State, do hereby certify
ACRES SUBDIVISION in Ada County, Idaho,
this plot was made by me or under my di
correctly shows the survey as made.
IN WITNESS WHEREOF, I have hereunto s
23rd day of January A.D.

STATE OF IDAHO S.
COUNTY OF ADA

On this 23rd day of January A.D.
1973, I, Notary Public in and
personally appeared Ronald M. Blakley, and
whose name is subscribed to the foregoing
to me that he executed the same.
IN WITNESS WHEREOF, I have hereunto set
my hand of January A.D. 1973.

Notary Public Ronald M. BlakleyResiding at Caldwell, IdahoMy Commission expires 8-25

I hereby certify that this instrument was file
Ronald M. Blakley at 4 minutes past
20th day of MARCH A.D.

Fee 5.00 InstrumentsRecorder G. M. Blakley Deputy

LEGEND

- 2-7/8" Diameter Brass Monument On 2" Diameter
Pipe By 2' Long
- 1/2" Diameter Rebar By 2' Long
- Exterior Boundary
- Interior Boundary
- Easement Line
- Center Line Street Or Road.
- Circular Curve (See Table)
- 10' Drainage, Irrigation And Utilities Easement.
- 5' Power And Telephone Easement.
- 20' Drainage, Irrigation And Utilities Easement.

SCALE 1"=300'

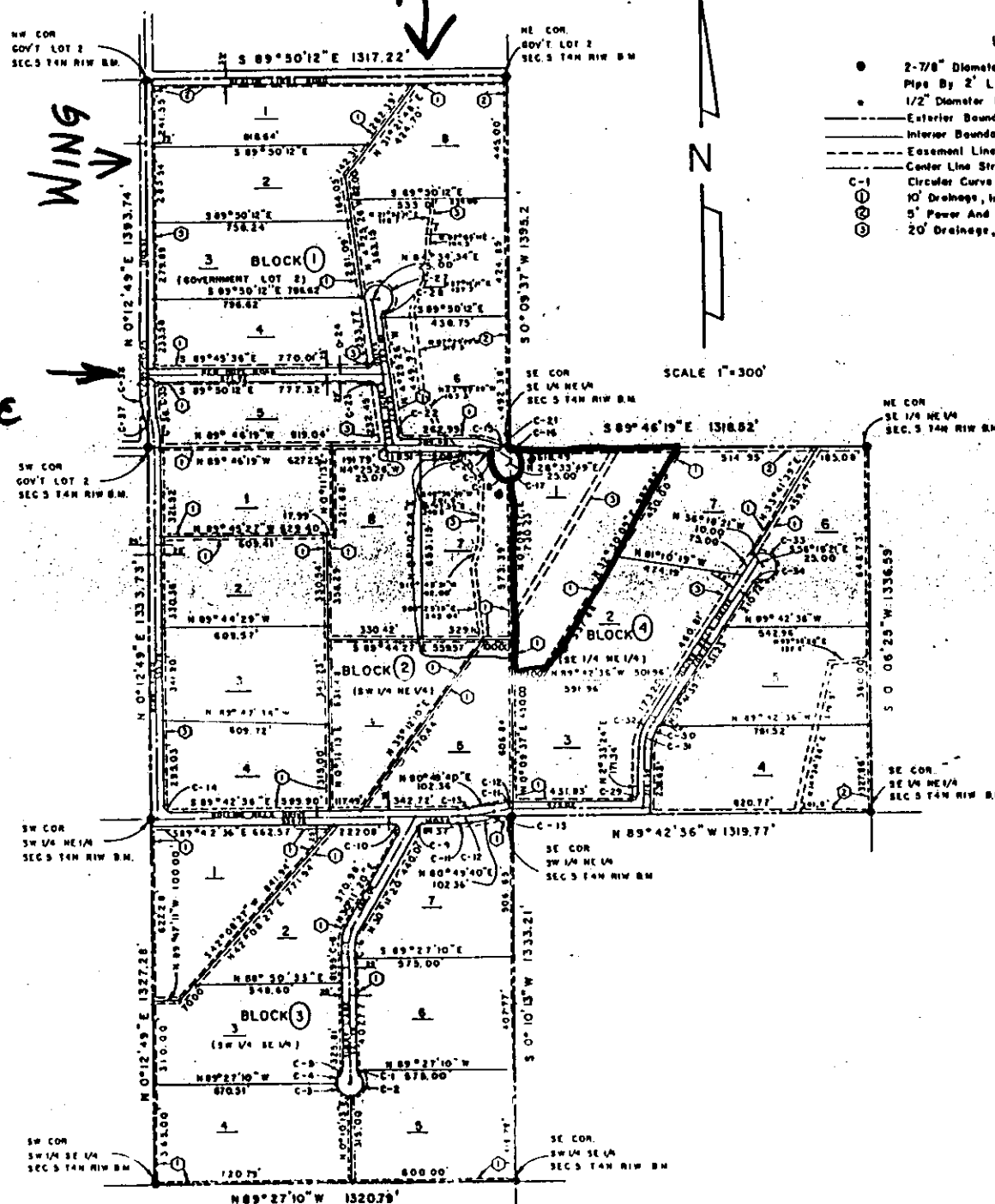
CURVE	RADIUS	ANGLE	TANGENT	LENGTH	CHORD	BEARING	CHORD	CURVE	RADIUS	ANGLE	TANGENT	LENGTH	CHORD	BEARING	CHORD
C-1	20.00	45° 33' 41"	13.33	17.45	16.50	S 24° 43' 31" E	C-20	250.00	12° 51' 15"	16.50	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-2	20.00	33° 29' 41"	13.33	12.37	9.57	S 20° 10' 22" W	C-21	215.00	26° 20' 08"	16.50	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-3	50.00	7° 0' 22' 37"	30.33	78.87	70.94	N 44° 58' 28" W	C-22	100.00	45° 33' 41"	13.33	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-4	20.00	12° 37' 04"	22.11	45.30	41.94	N 25° 21' 22" W	C-23	100.00	45° 33' 41"	13.33	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-5	20.00	12° 37' 04"	22.11	45.30	41.94	N 25° 21' 22" W	C-24	100.00	45° 33' 41"	13.33	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-6	175.00	30° 01' 07"	46.72	17.55	16.50	N 19° 10' 44" E	C-25	100.00	45° 33' 41"	13.33	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-7	200.00	30° 01' 07"	46.72	17.55	16.50	N 19° 10' 44" E	C-26	100.00	45° 33' 41"	13.33	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-8	20.00	30° 01' 07"	46.72	17.55	16.50	N 19° 10' 44" E	C-27	20.00	45° 33' 41"	13.33	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-9	20.00	30° 01' 07"	46.72	17.55	16.50	N 19° 10' 44" E	C-28	20.00	45° 33' 41"	13.33	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-10	100.00	11° 33' 58"	31.81	62.79	51.94	S 24° 43' 31" E	C-29	20.00	45° 33' 41"	13.33	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-11	113.00	9° 27' 44"	22.11	55.67	51.94	N 8° 33' 32" E	C-30	115.00	31° 04' 15"	16.50	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-12	100.00	9° 27' 44"	22.11	55.67	51.94	N 8° 33' 32" E	C-31	200.00	31° 04' 15"	16.50	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-13	275.00	9° 27' 44"	22.11	55.67	51.94	N 8° 33' 32" E	C-32	275.00	31° 04' 15"	16.50	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-14	20.00	8° 33' 25"	19.77	31.39	28.27	S 4° 44' 51" E	C-33	300.00	25° 31' 35"	16.50	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-15	300.00	21° 33' 18"	62.37	123.36	122.50	S 7° 35' 30" E	C-34	20.00	45° 33' 41"	13.33	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-16	300.00	4° 48' 30"	18.31	25.00	24.39	S 83° 49' 24" E	C-35	115.00	31° 04' 15"	16.50	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-17	20.00	20° 02' 52"	18.72	33.97	29.81	S 18° 25' 36" W	C-36	115.00	31° 04' 15"	16.50	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-18	30.00	22° 26' 39"	94.39	62.29	73.99	N 43° 37' 56" W	C-37	115.00	31° 04' 15"	16.50	17.45	16.50	S 24° 43' 31" E	13.33	17.45
C-19	20.00	81° 34' 25"	17.27	28.49	26.14	N 38° 42' 52" W	C-38	325.00	12° 51' 15"	16.50	17.45	16.50	S 24° 43' 31" E	13.33	17.45

BEACON LIGHT

WING

N

New Hope





ZIP

DATE 11/15/01

INVOICE

4/8/46

Printed 10/17/2001
Ident No. 771624
Well Tag No. D0020196
Well ID # 343546
Receipt # C056925
Approved Date

**STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
DRILLING PERMIT**

Relationship: Owner/Operator
Name: JULIA KIFF
Address: 9999 W STAR ACRES DR
STAR ID 83669

Phone: (208)286-9116

Relationship: Owner/Operator
Name: LLOYD F KIFF
Address: 9999 W STAR ACRES DR

Phone: (208)286-9116

STAR ID 83669

Proposed Well Location: Township 04N, Range 01W, Section 5, SE, NE
COUNTY ADA

Street Address of Well Site: 9999 W STAR ACRES DR
STAR ID

Proposed Use of Well: Irrigation

Well Construction Information:

- A. New Well
- B. Proposed Surface Diameter: 6 Inches. Proposed Depth 150 Feet.
- C. Anticipated Bottom Hole Temperature: 85F and less

Construction Start Date: Oct 15 2001

Anticipated Well Drilling Company: DOMESTIC PUMP & DRILLING (No. 483)

Applicant's Signature: _____ Date _____

Title: _____

Well ID # 343546

Well Tag No. D0020196

ACTION OF THE DEPARTMENT OF WATER RESOURCES

If approved, this permit authorizes the construction or modification of a well subject to the following conditions. **READ CAREFULLY!**

1. This permit does not constitute an approval of the District Health Department or the Idaho Department of Health and Welfare which may be required prior to construction of this well. The local Health Department should be contacted for septic tank/drainfield locations. Domestic wells must not be drilled closer than 100 ft. from any drainfield and 50 ft. from any septic tank. Public Water Supply wells must not be drilled closer than 100 ft. from any drainfield or septic tank.
2. The well shall be constructed by a driller currently licensed in the state of Idaho who must maintain a copy of the drilling permit at the drilling site.
3. Approval of this drilling permit does not authorize trespass on the land of another party.
4. This permit does not constitute other local, county, state or federal approvals which may be required for construction of a well.
5. This drilling permit does not represent a right to divert and use the water of the State of Idaho.
6. If a bottom hole temperature of 85 Degrees F (29.44 oC) or greater is encountered, well construction shall cease and the well driller and the well owner shall contact the Department immediately.
7. Idaho Code, S 55-2201 - 55-2210, requires the applicant and/or his contractors to contact "Digline" (DigLine is a one-call center for utility notification) not less than 2 working days prior to the start of any excavation for this project. The "Dig Line " Number for your area is &DIG-LINE-NUMBER
8. Please be advised that this drilling permit should be considered and treated as a preliminary permit. If you are in disagreement with this preliminary permit you have fourteen (14) days of the service date of this permit to petition the Department for reconsideration pursuant to Section 67-5243, Idaho Code.
9. This drilling permit is valid for two (2) months from the approval date for the start of construction and is valid for one (1) year from the approval date for completion of the well unless an extension has been granted.
10. Idaho Code, S 55-2201 - 55-2210 requires the applicant and/or his contractors to contact "Digline" (DigLine is a one-call center for utility notification) not less than 2 working days prior to the start of any excavation for this project. The "Dig Line " Number for your area is &DIG-LINE-NUMBER


Signature of Authorized Dept. Representative

10-17-01
Title

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only

Inspected by _____

Twp _____ Rge _____ Sec _____

_____ 1/4 _____ 1/4 _____ 1/4

Lat: : : Long: : :

1. WELL TAG NO. D 0020196
 DRILLING PERMIT NO. _____
 Other IDWR No. _____

2. OWNER: Lloyd K. S.
Name
Address 9999 Star Acres Dr.
City Star State 20 Zip 82169

3. LOCATION OF WELL by legal description:

Sketch map location must agree with written location.

N

			X

E

Twp. 4 North ☒ or South ☐
Rge. 1 East ☐ or West ☒
Sec. 5 1/4 SE 1/4 NE 1/4
Gov't Lot _____ County Adair 10 acres 160 acres
Lat. : : Long. :
Address of Well Site 9999 Star Acres
City Star

D.

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

Lt. _____ Blk. _____ Sub. Name _____

4. USE:

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

5. TYPE OF WORK check all that apply (Replacement etc.)

☒ New Well ☐ Modify ☐ Abandonment ☐ Other _____

6. DRILL METHOD

☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other

7. SEALING PROCEDURES

SEAL/FILTER PACK			AMOUNT	METHOD
Material	From	To	Sacks or Pounds	
Dry 3/8 Bent + Well Cutting	0	18	450 lb	Overbore

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 97
Was drive shoe seal tested? ☐ Y ☐ N How?

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6	42	97	1/4	Steel	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe 8' Length of Tailpipe 0

9. PERFORATIONS/SCREENS

Perforations Method Pull Back
Screens Screen Type SS Wire

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
98	108	16		5	SS	☐	☐
						☐	☐
						☐	☐

10. 12 STATIC WATER LEVEL OR ARTESIAN PRESSURE:

46 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or
control devices: *Sanborn Well Co.*

11. WELL TESTS:

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
50+	NA	80	1/2 Hr.

Water Temp. 59° Bottom hole temp. UN
Water Quality test or comments: Clear

Depth first Water Encounter 52

12. LITHOLOGIC LOG: (Describe repairs or abandonment)

[illegible]

Completed Depth 108 (Measurable)
Date: Started 11/6/01 Completed 11/10/01

13. DRILLER'S CERTIFICATION

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

Company Name Domestic Pump & Drill Firm No. 423

Firm Official _____ Date _____
and
Driller or Operator Donon Date 11/14/01

(Sign once if Firm Official & Operator)



"The Most Trusted Name In Water."

Performance Charts SandHandler™ High Capacity 45 GPM

CAPACITIES IN U.S. GALLONS PER MINUTE

DEPTH TO PUMPING WATER LEVEL, OR LIFT, IN FEET

SHADED AREAS INDICATE MOST EFFICIENT PERFORMANCE

PUMP MODEL	HP	PSI																		
			20	40	60	80	100	120	140	160	180	200	240	260	280	300	320	340	360	400
15S445-6	1-1/2	0	68	62	57	52	46	39	31											
		10	62	56	51	45	38	29	19											
		20	55	50	44	36	28	17	5											
		30	49	42	35	26	16	3												
		40	41	34	25	14	30													
		50	33	23	12															
		60	22	10																
Shut-off (ft.)	190	PSI	74	65	56	48	39	30	22	13	4									

2S445-8	2	0	71	65	60	56	52	48	44	40	35	29								
		10	64	59	55	51	48	44	40	34	28	20								
		20	58	54	51	47	43	39	33	27	19	9								
		30	54	50	47	43	38	32	26	17	7									
		40	50	46	42	37	32	24	16	5										
		50	45	41	36	31	23	14	3											
		60	41	36	29	22	13	1.5												
Shut-off (ft.)	250	PSI	104	95	87	78	69	61	52	43	35	26	9							

3S445-11	3	0	72	68	65	62	59	56	53	50	47	43	36	31	26	20				
		10	68	64	61	58	55	52	49	46	43	39	30	25	19	12				
		20	64	61	58	55	52	49	46	42	38	34	24							
		30	60	57	54	52	48	45	42	38	34	29	17							
		40	57	54	51	48	45	41	37	33	28	22	16							
		50	54	51	47	44	41	37	32	27	21	15								
		60	50	47	44	40	36	31	26	20	14									
		70	46	43	39	35	31	25	19	13										
		80	43	39	35	30	24	18	12											
		90	38	34	29	24	18	11												
		100	33	28	23	16	9													
Shut-off (ft.)	350	PSI	143	134	126	117	108	100	91	82	74	65	48	39	30	22	13	4		

5S445-18	5	0			69	66	63	61	59	57	55	53	50	48	46	44	42	40	38	36	33
		20	68	65	63	60	57	56	54	52	51	49	46	44	42	40	38	35	32	29	26
		40	62	60	57	56	54	52	50	48	46	44	43	41	39	37	34	32	28	25	21
		60	57	55	51	51	50	48	46	44	43	41	36	33	31	27	24	20	16		
		80	53	51	49	47	46	44	42	40	38	35	30	26	23	19					
		100	49	47	45	43	41	39	37	34	32	29	25	18							
		120	45	43	41	39	36	34	31	28	24	20	16								
		140	40	38	35	33	30	27	23	19											
		160	35	32	29	26	22	18													
		170	31	28	25	21	17														
Shut-off (ft.)	575	PSI	236	227	219	210	201	193	184	175	167	158	141	132	123	115	106	97	89	80	71

PUMP MODEL	HP	PSI																
			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
75S445-26	7-1/2	0	-	-	-	57	54	50	47	44	40	36	32	28	24	18	11	3
		20	-	-	57	54	50	47	44	40	36	32	28	24	18	11	3	
		40	-	58	54	51	48	45	41	37	33	29	24	18	11	3		
		60	58	55	52	48	45	41	37	33	29	25	19	12	5			
		80	55	52	48	45	41	37	33	29	25	19	12	5				
		100	52	48	45	42	38	34	30	25	21	14	7					
		120	49	45	42	38	34	30	25	20	14	6						
		140	45	42	38	35	30	26	21	15	7							
		160	42	39	35	31	26	21	15	8								
		180	39	35	31	27	22	16	8									
		200	35	31	27	22	16	9										
		220	32	27	22	17	10											
Shut-off (ft.)	815	PSI	331	310	288	266	245	223	201	180	158	136	115	93	71	50	28	6

Notes: 1) Pump discharge tapping and minimum riser pipe size 2". 2) Performance shown does not include friction loss in the drop pipe.
3) All performance data is based on rated motor name plate voltage.