

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

SEP 01 2011

Department of Water Resources

A. GENERAL INFORMATION

Permit No. 25-14226

1. Owner City of Ucon Phone No. 208-523-3971

Current address PO Box 98, Ucon, Idaho 83454

2. Examiner's name Paul H. Scoresby, PE EXAM DATE May 12, May 16, 2011

3. Accompanied by Craig Sturman Email ucon98@ida.net

Address Same as above

Relationship to permit holder Public Works Employee Phone No. 208-523-3971

4. Source Groundwater tributary to NA

B. OVERLAP REVIEW

1. Other water rights with the same place of use 25-7000, 25-7007

2. Other water rights with the same point of diversion 25-7000, 25-7007

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

Ident. No.	Gov't Lot	1/4	1/4	1/4	Sec	Twp	Rge	County	Method of Determination/Remarks
1		SE	NW	NW	14	3N	38E	Bonneville	On sight
3			SE	NE	14	3N	38E	Bonneville	On sight

2. Place(s) of Use: Method of determination IDWR Map Server

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
3N	38E	11													M				
		13					M	M											
		14	M	M	M	M	M	M	M	M					M				
		15	M	M	M	M									M	M			

Service area of the City of Ucon Municipal water system.

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☐ see attached.

See attached well and well house site plans for wells #1 and #3

Scale: 1" = _____

- ☐ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (**required**)
- ☐ Aerial photo attached (required for irrigation of 10+ acres)
- ☐ Photo of diversion and system attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size
Well No. 3	US Motors	200	P-01-7332205-0004-R-00-01	Goulds	Model 14RJMC (5 stages), 10" Column
Well No. 1	US Motors	60	R-6233-04-146-R2147467	American Turbine	Model 12-M-100 C or 12-H-150 B (3 stages), 8" Column

*Code to correspond with no. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Well No. 3 - Flowmeter	Electromagnetic	McCrometer	Ultra-Mag 10 IN.	MX09-0210	10 inch	11-12-09
Well NO. 1 - Flowmeter	Propeller	McCrometer	MM808	97-9084-8	8 inch	1-22-98

2. Measurements:

Well No. 3 flow meter reading was read as an instantaneous meter reading which was 1975 gpm at 58 psi.

Well No. 1 flow meter reading was a volumetric reading conducted over five minutes of time. The flow rate was determined to be 1,400 gpm.

E. NARRATIVE/REMARKS/COMMENTS

The electromagnetic flow meter at Well No. 3 is equipped with a digital output box attached to the wall near the flow meter. The make of the unit is McCrometer Ultra-Mag. The model no. is MX10-W. The serial no. is MX09-0210.

The Well No. 3 vertical turbine pump/motor lifts the water to the surface, pressurizes the water to system pressure and discharges directly into the system. System pressure is approximately 70 psi.

The flow meter at Well No. 1 is a vertical down-flow type propeller meter meaning that the flow meter is installed where a vertical elbow would go in the ductile iron piping that changes directions from horizontal to downward vertical. I suppose this type of flow meter was used as a space saving mechanism in the small building. Water enters the flow meter from the horizontal upstream piping, continues downward and passes by the propeller on its way to the storage tank.

The Well No. 1 vertical turbine pump/motor lifts the water to the surface and discharges the water into a 250,000 gallon buried storage tank. Booster pumps then lift the water out of the storage tank and boost the pressure to system pressure, which is approximately 70 psi. The combined horsepower of available booster pumps is 105 horsepower.

There is no verifiable way except to pull the pump to determine which American Turbine model no. of pump was installed in Well No. 1. The pump now in place was installed 10 years ago under emergency conditions and specific records were not kept. Both pump models noted in Item C.4 above are capable of pumping 1,400 gpm.

NOTE:

Decreed Diversion Rate = $(0.48 \text{ cfs}) + (1.10 \text{ cfs}) = 1.58 \text{ cfs}$

Calculated Decreed Volume = $(1.58 \text{ cfs})(1.9835)(365 \text{ days}) = 1143.9 \text{ afa}$

Permit 25-14226 is for Diversion Rate Capacity only

Permit 25-14226 does not request any additional volume above decreed volume of 1143.9 afa.

Permit 25-14226 in combination with 25-7000 and 25-7007 cannot exceed the 1143.9 afa.

Therefore, Permit 25-14226 has no net gain.

See Attached Water District 120, 2011 Annual Assessment Notice as evidence of participation in a mitigation plan administered by Ground Water District 120.

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

F. FLOW CALCULATIONS

Additional computation sheets attached

Measured Method:

Well No. 1: (End Meter Reading) - (Starting Meter Reading) = 61,221,400 gal - 61,214,400 = 7000 gal/5 min.

7,000 gal/5 min = 1400 gal/min

Well No. 3: 1,975 gpm Total System Capacity = (1400 gal/min)+(1975 gal/min) = 3375 gpm
= 3375 gpm/448.8 gal/cfs = 7.52 cfs

Water Right 25-7000 = 0.48 cfs Water Right 25-7007 = 1.10 cfs Permitted Diversion = 4.85 cfs

Decreases & Permitted Diversions = (0.48 cfs)+(1.10 cfs)+(4.85 cfs) = 6.43 cfs; System Capacity = 7.52 cfs > 6.43 cfs

25-14226 Recommend Permitted Diversion Rate= 4.85 cfs

G. VOLUME CALCULATIONS

No Volume Increase requested above Calculated Decreed of 1143.9 afa

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
	From	To	Q (cfs)	V (afa)
Municipal	01/01	12/31	4.85 cfs	
Totals:			4.85 cfs	

2. Recommended Amendments

- ☐ Change P.D. as reflected on page 1 ☐ Add P.D. as reflected on page 1 ☒ None
☐ Change P.U. as reflected on page 1 ☐ Add P.U. as reflected on page 1 ☐ Other

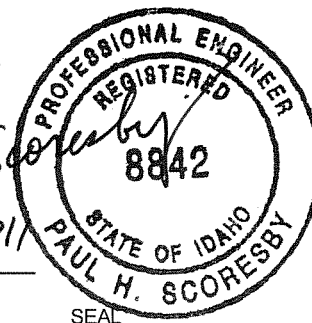
I. AUTHENTICATION

Field Examiner's Signature

Date

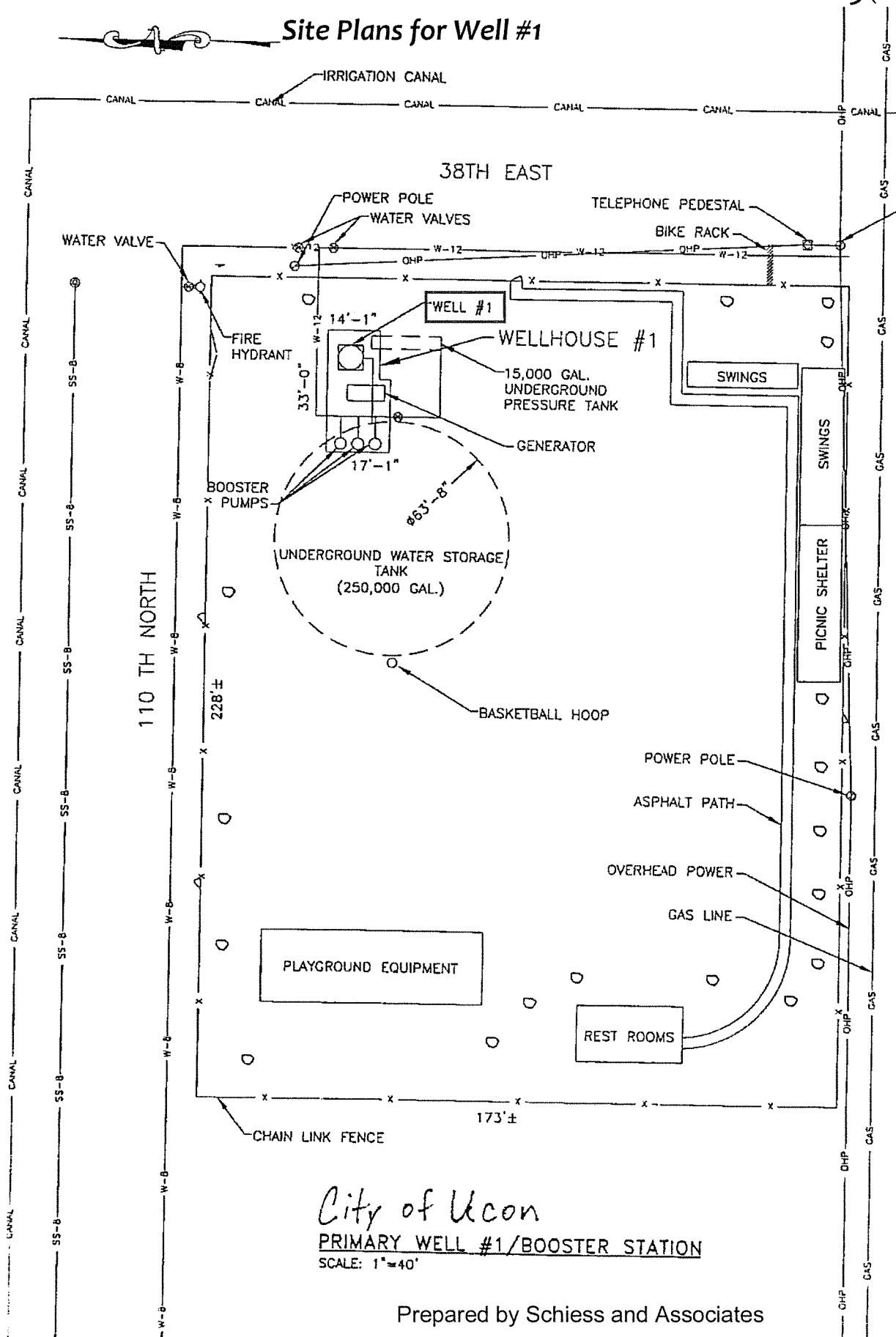
Reviewer

Date





Site Plans for Well #1



City of Ucon

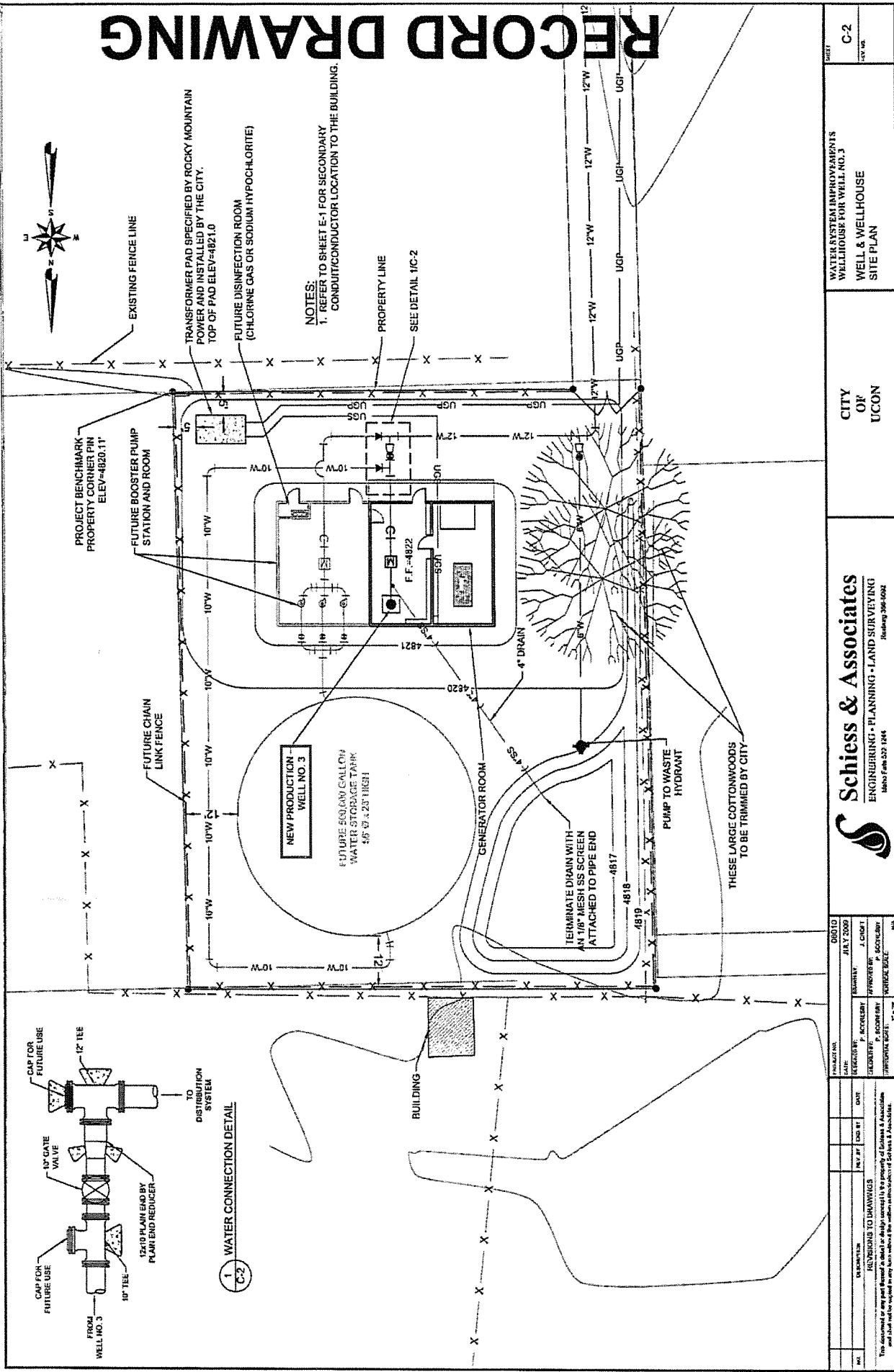
PRIMARY WELL #1/BOOSTER STATION

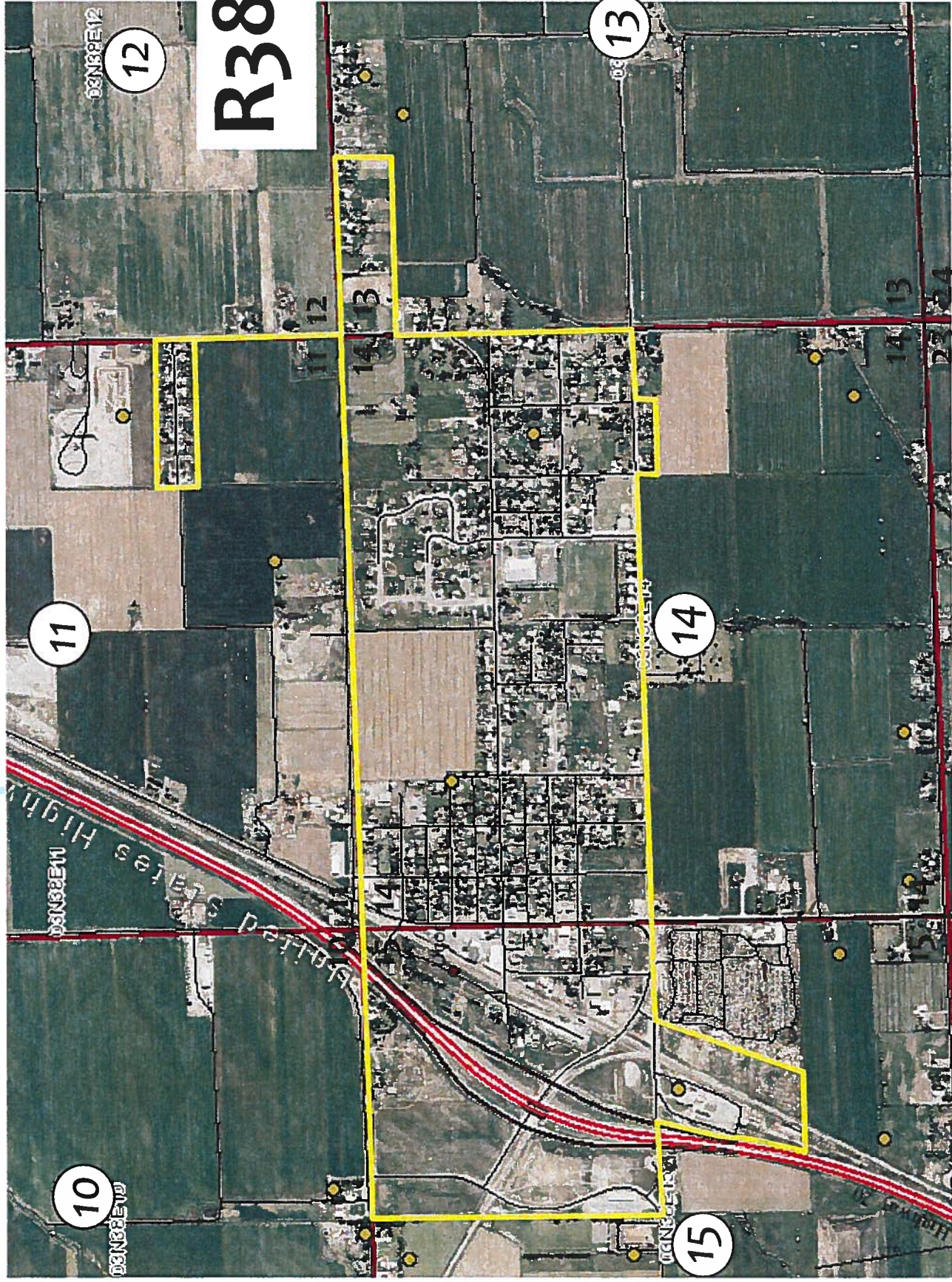
SCALE: 1"=40'

Prepared by Schiess and Associates

SITE PLANS

WELLS #1 & #3 (Page 2 of 2)





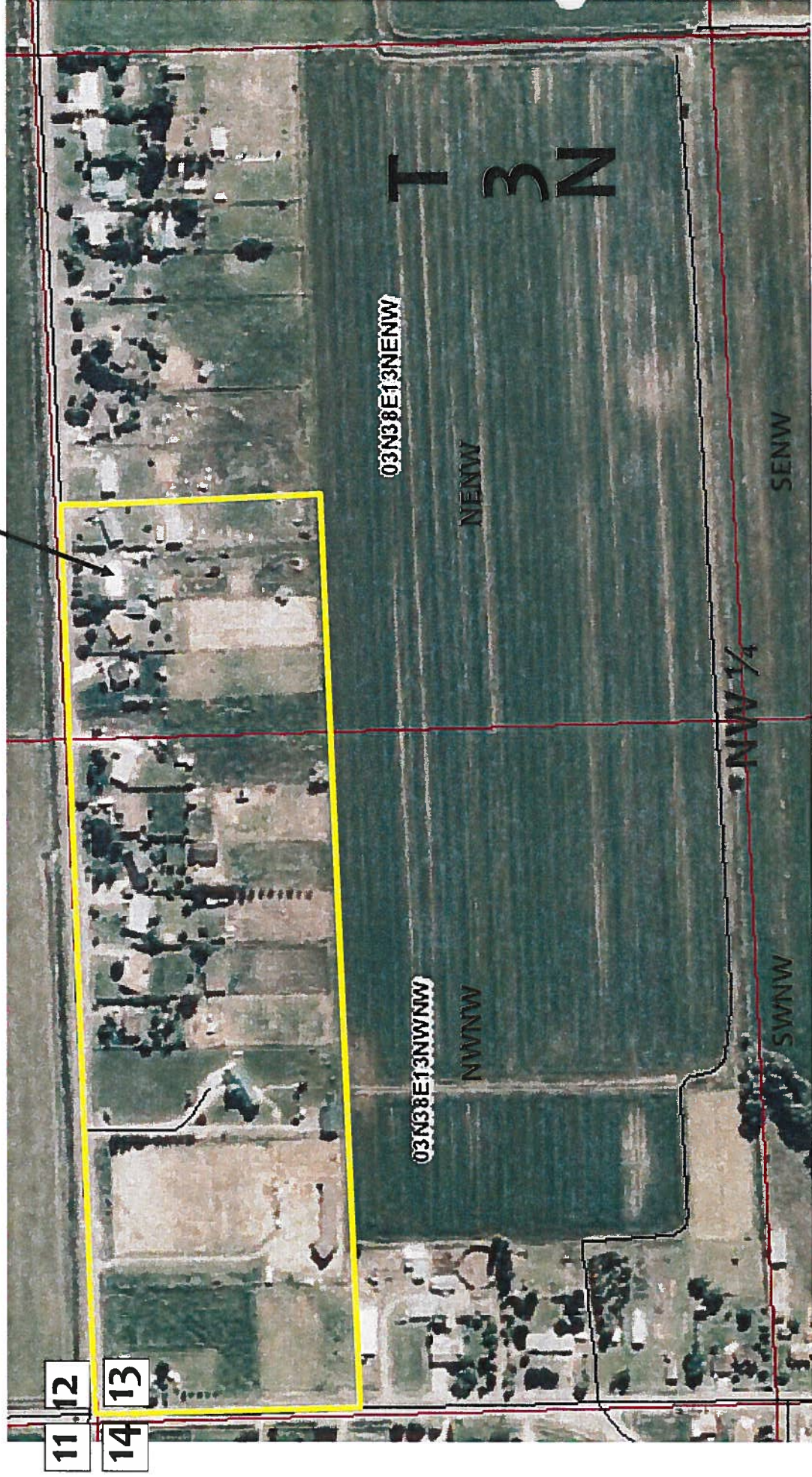
SE 1/4 Sec 11

R38E T 3N



R38E

Place of Use





25-Mar-11

Reporter No. 507

CITY OF UCON

PO BOX 98

UCON

ID

83454

Record	Legal Location	Diversion Name	Site Tag No.	5 Year Average Water
NEW WELL	03N 38E 14 SENE			AF
200221	03N 38E 14 NWNW	MAIN WELL #1	E0007136	351.5 AF
200222	03N 38E 14 SENE	STAND-BY PUMP #	E0007137	173.4 AF
NEW WELL	03N 38E 14 SENWNW			AF

Total Acre-Foot Billing Rate: 524.9 AF

Cost factor = \$0.65 per acre-foot

(1) Assessed cost: \$341.18

Total number of diversions: 2

2) measurement fee= \$75.00 per diversion: \$150.00

Total 2011 assessment (1) + (2) : \$491.18

PLEASE REMIT PAYMENT ON OR BEFORE MAY 1, 2011

All payments for assessments not received by May 1, 2011 shall accrue penalties in the amount of 10% of the charge and interest in the amount of 1% per month, as provided pursuant to Idaho Code § 42-617

Please note that if a diversion has multiple owners, each owner will receive a copy of this bill. However, it only needs to be paid once.

If you have any questions about this bill or Water District 120 in general, please contact Kenda Jones, Secretary, or James Cefalo, Water District 120 Watermaster, at 208-525-7171, or 900 N. Skyline Dr, Ste. A, Idaho Falls, ID 83402. Please have a copy of the bill with you for reference when you call so that we may better serve you. Also, please contact the district with any new phone, email, or operator information. This will enable our water agents to have better success contacting you before an exam.

Additional information about Water District 120 is available on the internet at http://www.idwr.state.id.us/water/districts/wd120_american_falls.htm.

(keep this portion for your records)

WATER DISTRICT 120

25-Mar-11

2011 ANNUAL ASSESSMENT NOTICE

Reporter No. 507

CITY OF UCON

PO BOX 98

UCON ID 83454

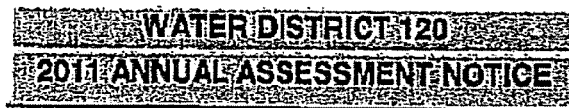
Water Right Number	Name on Water Right	CFS
2507007	UCON, CITY OF	0.48
2514226	CITY OF UCON	4.85
2507000	UCON, CITY OF	1.1

The Standard Assessments is calculated as follows:

1) a minimum fee of seventy-five dollars (\$75.00) per year for each diversion that is required to be measured and reported, plus \$0.60 per acre-foot used, plus;

2) a \$0.05 per acre-foot used are for administrative fees for Water District 120.

The total charge for your diversions listed above and your pro-rata cost is summarized on page 1 of this notice. Keep this page for your records.



25-Mar-11

Reporter No. 607

(return this portion with payment)

PLEASE REMIT PAYMENT ON OR BEFORE
MAY 1, 2011 PAYABLE TO:

WATER DISTRICT 120
800 N SKYLINE DR STE A
IDAHO FALLS ID 83402-171B

Total 2011 assessment : \$491.18

507

CITY OF UCON

Address correction requested

PO BOX 98
UCON ID 83454

25-Mar-11

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the end

WATER DISTRICT 120
2011 ANNUAL ASSESSMENT NOTICE

25-Mar-11

Reporter No. 507

CITY OF UCON

PO BOX 98

UCON

ID

83454

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WATER DISTRICT 120

25-Mar-11

2011 ANNUAL ASSESSMENT NOTICE

Reporter No. 507

CITY OF UCON

PO BOX 98

UCON ID 83454

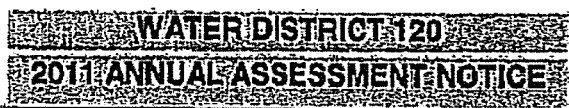
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WATER DISTRICT 120
800 N SKYLINE DR STE A
IDAHO FALLS ID 83402-171B

Total 2011 assessment : \$491.18

507

CITY OF UCON

Address correction requested

PO BOX 98

UCON ID 83454

25-Mar-11

Memo

To: 25-14226

1. shemenway 5/24/2011 Combined Limit on Volume

Comment: Here is the logic the agent reviewing this application must have taken for the combined limit condition (X35):

The Application for Permit stated that the applicant applied for additional diversion rate to accommodate the city's needs. That no annual volume exceeding the existing water rights were sought.

$25-700 (1.10 \text{ cfs}) + 25-7007 (0.48 \text{ cfs}) = 1.58 \text{ cfs}$

$1.58 \times 365 \text{ days} \times 1.9835 = 1143.9 \text{ af (the maximum annual volume)}$

Historical uses, submitted with the application for permit showed water consumption for 2005 (557.38 af), 2006 (448.85 af), and 2007 (510.04 af), to be less than half of the allowed volume.

After speaking with management, some concerns with Licensing may be proving additional diversion rate, without an increase in volume.

2. ecarlsen 11/19/2008 PODs

Comment: Presently the City of Ucon has two wells. With this application they propose to drill a new well in the SENE S14 and abandon the existing well in the same QQ leaving them still with two wells.

August 24, 2011

Craig Saxton
Idaho Department of Water Resources
233 East Front St.
PO Box 83270
Boise, Idaho 83720-0098

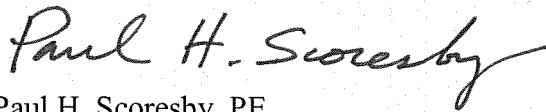
Re: Statement of Completion & Beneficial Use Field Report for Permit No. 25-14226
Schuess & Associates Project No. 11057

Dear Mr. Saxton:

We have prepared the Statement of Completion and Beneficial Use Field Report for Permit No. 25-14226 on behalf of the City of Ucon. Please prepare the water right license and send to the City. The City's address remains the same which is PO Box 98, Ucon, Idaho 83454.

Rocky Mountain Environmental Associates of Idaho Falls assisted us in the preparation of these documents. Please let me know if you have any questions concerning the preparation of these documents.

Sincerely,



Paul H. Scoresby, PE

Attachments: Statement of Completion
Beneficial use Field Report