

JUL 02 2008

DEPARTMENT OF
WATER RESOURCES

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No. 63-12463

1. Owner: City of Nampa Phone No.: 208.466.6000

Current Address: 411 3rd St. South., Nampa, ID 83651

2. Accompanied by: Albert Garcia EXAM DATE: 6/11/2008

Address: Nampa City Water Works, 24 1st St. S., Nampa, ID 83651 Phone No. 208.941.0047

Relationship to Permit Holder: Water System Technician

3. Source: Ground Water tributary to _____

B. OVERLAP REVIEW

1. Other water rights with the same place of use: See attached list

2. Other water rights with the same point of diversion: None. The City plans to file a future transfer to reflect an integrated system.

C. DIVERSION AND DELIVERY SYSTEM

1. Point(s) of Diversion:

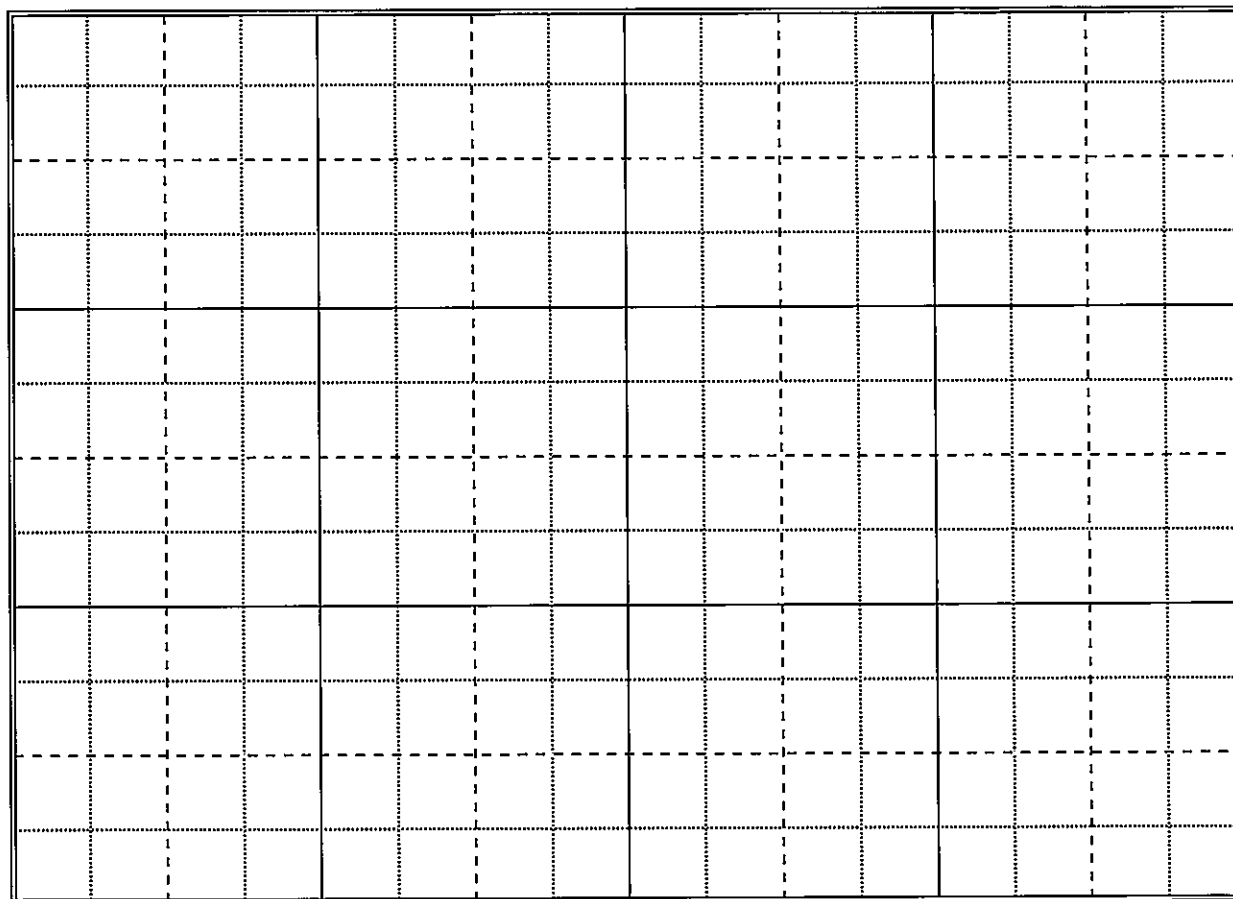
[illegible]

2. Place(s) of Use: Municipal use within the service area for the City of Nampa as described on the permit. Please note that the current GIS shape file for Nampa's service area does not match the tabular data listed on Nampa's water rights. See attached maps for omitted service areas.

Indicate Method of Determination City Records

[illegible]

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe id as applicable. **See attached photos**



Scale: 1" = _____

X Copy of USGS Quadrangle Attached Showing location(s) of point(s) of diversion and place(s) of use (required).

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

X 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
Pump No. 1	Hitachi	30	G8917503H	Goulds - Model 7TLC	FR416394; 6-inch discharge; 4-inch submersible column pipe
Pump No. 2	Hitachi	100	G8901804H	Goulds - Model 12CLC	10-inch discharge; 6-inch submersible column pipe

*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
#1 Flowmeter (30 hp pump)	Mini-Mag	F & P	10D1475HN1 4PLZ8	99W0119522	4"	2003
#2 Flowmeter (100 hp pump)		McCrometer		06-08140	8"	8/15/2006

2. Measurements: Pump curves supplied by UWID

30 hp Pump:

Pumping Water Level (PWL): The well log shows 700 gpm with 51.5' drawdown (13.6 gpm/ft of drawdown) after 7.5 hours of pumping. At 1350 gpm, drawdown will be 99' (1,350/13.6'). Static water level was reported at 53'. PWL calculated to be 152' (53' static + 99' drawdown).

Total Dynamic Head: 257' (152' PWL, *8' friction loss, 42 psi discharge)

Discharge Rate at 257' TDH = 295 gpm (from pump curve)

*Friction Loss: 165' pump setting, 4" column. Head loss (friction) = $6'/100$ or $165'/100 \times 5' = 8.3'$ (assume 8')

100 hp Pump: Total Dynamic Head: 266' (152' PWL, *17' friction loss, 42 psi discharge)

Discharge Rate at 266' TDH = 1065 gpm

*Friction Loss: 185' pump setting, 6" column.. Head loss (friction) = $9'/100$ or $185'/100 \times 9' = 16.7'$ (assume 17')

E. NARRATIVE/REMARKS/COMMENTS

An 18-inch well equipped with two submersible pumps (30 hp and 100 hp) supplies municipal water to the City of Nampa's potable water system. The system is designed so that the 100 hp pump kicks on when demand exceeds the limits of the 30 hp pump or when water for fire protection is needed. Flowmeter 1 measures the water pumped by the 30 hp pump and flowmeter 2 measures water pumped by the 100 hp pump. Data from both flowmeters is continuously downloaded to the City's Supervisory Control and Data Acquisition (SCADA) System which allows the City to monitor all their potable wells from a centralized location located at 24 1st Street South, Nampa. A chlorination system is also located in the well house for disinfection of the ground water prior to municipal use. The permit was originally filed by United Water Idaho (UWID) for a stand-alone system serving Carriage Hill Subdivision. UWID assigned the permit to the City during the development period. The City connected Well 17 to their potable municipal water system at two locations as indicated on the attached topographic map.

Two wells were originally proposed and only one well was developed. The well location is also known as Lot 14, Block 1, Carriage Hill Subdivision #1.

As mentioned on C.2. above, the GIS map for Nampa's current service area does not match the tabular data listed on their water rights (see their most recent license 63-12543). The place of use listed for this permit reflects Nampa's current service. The omitted GIS areas are indicated on the attached maps.

Have conditions of permit approval been met? ☒ yes ☐ no

F. FLOW CALCULATIONS

Yes Additional Computation Sheets Attached
(Pump Curves)

Measured Method:

100 hp pump curve: 1,065 gpm or 2.37 cfs

30 hp pump curve: 295 gpm or 0.66 cfs

When combined, system capacity = 3.03 cfs

Limited to 3.0 cfs per permit

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses:

Potential volume = 3.0 cfs x 365 days x 1.9835 af/cfs-day = 2,171.9 afa

Volume not applicable for a municipal water right

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Municipal	1/1	12/31	3.0	Not Applicable

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 Terry M. Scanlan Date 6/25/08

Field Examiner's Signature Terry M. Scanlan

Reviewer _____ Date _____



ATTACHMENT A
PLACE OF USE OVERLAPS

B.1. Water rights with the same place of use for City's potable municipal system (does not include City's water rights used in their municipal irrigation system):

Water Right No.	Water Right Status	Well No.
63-02533	License	1,2
63-02779	License	3
63-02781	License	4
63-02782	License	5
63-05258	Claim	6
63-07567	License	8
63-08324	License	9
63-09180	License	10
63-10212	License	7
63-11511	License	9
63-28219	Claim	1,2
63-28220	Claim	5
63-11729	License	12
63-12463	Permit	17
63-12474	Permit	11
63-12543	License	16
63-12591	Permit	14
63-32337	Permit	15
63-32835	Application	Coyote Springs



ATTACHMENT B

PERMIT & PROOF OF BENEFICIAL USE RECORDS

[Close](#)IDAHO DEPARTMENT OF WATER RESOURCES
Water Permit Report

06/16/2008

WATER RIGHT NO. 63-12463

Owner Type	Name and Address
Current Owner	CITY OF NAMPA 411 3RD ST S NAMPA, ID 83651 (208) 466-6000
Original Owner	UNITED WATER IDAHO INC 8248 W VICTORY RD PO BOX 190420 BOISE, ID 83719-0420 (208)362-7358

Priority Date: 06/25/1998
Status: Active

Source	Tributary
GROUND WATER	

Beneficial Use	From	To	Diversion Rate	Volume
MUNICIPAL	01/01	12/31	3 CFS	
Total Diversion			3 CFS	

Location of Point(s) of Diversion:

GROUND WATER|NWSE|Sec. 31|Township 03N|Range 02W|CANYON County
GROUND WATER|NWSE|Sec. 31|Township 03N|Range 02W|CANYON CountyPlace(s) of use: [Large POU Info](#)

Conditions of Approval:

1. 004 This right does not grant any right-of-way or easement across the land of another.
2. 046 Right holder shall comply with the drilling permit requirements of Section 42-235, Idaho Code and applicable Well Construction Rules of the Department.
3. 01M After specific notification by the Department, the right holder shall install a suitable measuring device or shall enter into an agreement with the Department to determine the amount of water diverted from power records and shall annually report the information to the Department.
4. 125 Place of use is within the service area of United Water Idaho as provided for under Idaho law. The place of use is generally described as within the city limits of Boise and the surrounding service area.
5. Water bearing zone to be appropriated is 250 to 500 feet.

Dates:
 Proof Due Date: 09/01/2008
 Proof Made Date:
 Approved Date: 09/14/1998
 Moratorium Expiration Date:
 Enlargement Use Priority Date:
 Enlargement Statute Priority Date:
 Application Received Date: 01/21/2003
 Protest Deadline Date:
 Number of Protests: 0
 Field Exam Date:
 Date Sent to State Off:
 Date Received at State Off:

Other Information:
 State or Federal:
 Owner Name Connector:
 Water District Number:
 Generic Max Rate per Acre:
 Generic Max Volume per Acre:
 Swan Falls Trust or Nontrust:
 Swan Falls Dismissed:
 DLE Act Number:
 Cary Act Number:
 Mitigation Plan: False

[Close](#)

FOR OFFICE USE ONLY

Amt. of Fee \$: N/A
Receipt No. _____
Receipt By: _____
Date Received: _____

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

PROOF OF BENEFICIAL USE

The Idaho Department of Water Resources considers this form a statement that the permit holder(s) has/have completed all development that will occur under this permit and that water has been applied according to the provisions of the permit for the beneficial use(s) described below. This form must be accompanied by a license examination fee, when necessary, and be accompanied by a completed field examination report prepared by a certified water right examiner.

1. Permit No. 63-12463 Telephone No. 208-466-6000

2. Name of Permit Holder(s): City of Nampa

3. Mailing Address: 411 3rd St. S.

City Nampa State Idaho Zip 83651

4. Source of Water: Ground Water If GROUNDWATER (well), Date Drilled: mo. June / yr. 1999

Well Driller: Riverside, Inc. Drilling Permit Number: 63-99-W-0244-000

Use(s) (as authorized by the water right permit):

Domestic (No. of households): _____ Stockwater (No. and type of stock): _____

Irrigation (No. of acres): _____ Other: Municipal

6. Total rate of diversion and/or volume for which proof is submitted: 3.0 cfs _____ cfs OR _____ acre-feet

7. Measuring Device Requirement: (refer to the approval conditions on your permit and respond accordingly)

(This question is not optional. Please check either yes or no. Proofs returned not checked accordingly, will be considered incomplete)

Measuring Device: Is a measuring device required?

Yes X or No _____

Has the measuring device been installed?

Yes X or No _____

8. Fee Enclosed: \$: N/A (See Fee Schedule on back of the instruction for filing proof of beneficial use)

9. Person to contact to accompany the Department representative during field examination of the water system.

Name: Waterworks Division Telephone Number: 208-468-5860

Address: 24 1st St. S., Nampa, ID 83651

10. The information given on this form is my true statement of the extent to which the above numbered permit has been developed and water has been diverted, I agree to relinquish any undeveloped portion of the permit to the State of Idaho.

Signature of permit holder: [Signature]
(include your title, if on behalf of company or organization)

Date: June 25, 2008

ATTACHMENT C
WELL LOG & PUMP CURVES

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

USE TYPEWRITER OR
BALLPOINT PEN

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources within 30 days after the completion or abandonment of the well.

1. WELL OWNER <u>D 9390</u> Name <u>United Water Idaho, Inc</u> Address <u>8248 West Victory Road, No. 988</u> Drilling Permit No. <u>63-99-W-0244-000</u> Water Right Permit No. <u>63-12463</u>	7. WATER LEVEL Static water level <u>53'</u> feet below land surface. Flowing? ☐ Yes ☒ No G.P.M. flow _____ Artesian closed-in pressure _____ p.s.i. Controlled by: ☐ Valve ☐ Cap ☐ Plug Temperature <u>70.5</u> °F. Quality <u>Great</u> Describe artesian or temperature zones below.																																																																																																																																																										
2. NATURE OF WORK ☒ New well ☐ Deepened ☐ Replacement ☐ Well diameter increase ☐ Modification ☐ Abandoned (describe abandonment or modification procedures such as liners, screen, materials, plug depths, etc. in lithologic log, section 9.)	8. WELL TEST DATA ☒ Pump ☐ Bailer ☐ Air ☐ Other _____ <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Discharge G.P.M.</th> <th>Pumping Level</th> <th>Hours Pumped</th> </tr> <tr> <td><u>700</u></td> <td><u>104.5</u></td> <td><u>7.5 hrs</u></td> </tr> </table>	Discharge G.P.M.	Pumping Level	Hours Pumped	<u>700</u>	<u>104.5</u>	<u>7.5 hrs</u>																																																																																																																																																				
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3. PROPOSED USE ☐ Domestic ☐ Irrigation ☐ Monitor ☐ Industrial ☐ Stock ☐ Waste Disposal or Injection ☐ Other <u>Municipal</u> (specify type)	9. LITHOLOGIC LOG <u>090975</u> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Bore Diam.</th> <th colspan="2">Depth</th> <th rowspan="2">Material</th> <th colspan="2">Water</th> </tr> <tr> <th>From</th> <th>To</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>28"</td> <td>0</td> <td>11</td> <td>Top soil</td> <td></td> <td></td> </tr> <tr> <td></td> <td>11</td> <td>13</td> <td>Clay</td> <td></td> <td></td> </tr> <tr> <td></td> <td>13</td> <td>85</td> <td>Sand & Gravel</td> <td></td> <td></td> </tr> <tr> <td></td> <td>85</td> <td>210</td> <td>Ben Clay str. Sand</td> <td></td> <td></td> </tr> <tr> <td></td> <td>210</td> <td>223</td> <td>Coarse Sand str. Clay</td> <td></td> <td></td> </tr> <tr> <td></td> <td>223</td> <td>260</td> <td>Clay Sand mix</td> <td></td> <td></td> </tr> <tr> <td></td> <td>260</td> <td>266</td> <td>Tan Clay</td> <td></td> <td></td> </tr> <tr> <td>18"</td> <td>266</td> <td>296</td> <td>Tan Clay str. Sand</td> <td></td> <td></td> </tr> <tr> <td></td> <td>296</td> <td>301</td> <td>Fine to Coarse Sand</td> <td></td> <td></td> </tr> <tr> <td></td> <td>301</td> <td>305</td> <td>Tan Clay</td> <td></td> <td></td> </tr> <tr> <td></td> <td>305</td> <td>322</td> <td>Tan Clay</td> <td></td> <td></td> </tr> <tr> <td></td> <td>322</td> <td>335</td> <td>Fine to Med Sand</td> <td></td> <td></td> </tr> <tr> <td></td> <td>335</td> <td>337</td> <td>Ben Clay & Sand</td> <td></td> <td></td> </tr> <tr> <td></td> <td>337</td> <td>340</td> <td>Fine Sand</td> <td></td> <td></td> </tr> <tr> <td></td> <td>340</td> <td>365</td> <td>Tan Clay str. Sand</td> <td></td> <td></td> </tr> <tr> <td></td> <td>365</td> <td>392</td> <td>Fine to Med Sand</td> <td></td> <td></td> </tr> <tr> <td></td> <td>392</td> <td>394</td> <td>Clay Sand mix</td> <td></td> <td></td> </tr> <tr> <td></td> <td>394</td> <td>399</td> <td>Fine Sand</td> <td></td> <td></td> </tr> <tr> <td></td> <td>399</td> <td>415</td> <td>Tan Clay</td> <td></td> <td></td> </tr> <tr> <td></td> <td>415</td> <td>416</td> <td>Fine Med Sand</td> <td></td> <td></td> </tr> <tr> <td></td> <td>416</td> <td>417</td> <td>Clay & Sand mix Blue</td> <td></td> <td></td> </tr> <tr> <td></td> <td>417</td> <td>424</td> <td>Fine to Med Sand</td> <td></td> <td></td> </tr> <tr> <td></td> <td>424</td> <td>431</td> <td>Blue Clay</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>Sand & Clay</td> <td></td> <td></td> </tr> </tbody> </table>	Bore Diam.	Depth		Material	Water		From	To	Yes	No	28"	0	11	Top soil				11	13	Clay				13	85	Sand & Gravel				85	210	Ben Clay str. Sand				210	223	Coarse Sand str. Clay				223	260	Clay Sand mix				260	266	Tan Clay			18"	266	296	Tan Clay str. Sand				296	301	Fine to Coarse Sand				301	305	Tan Clay				305	322	Tan Clay				322	335	Fine to Med Sand				335	337	Ben Clay & Sand				337	340	Fine Sand				340	365	Tan Clay str. Sand				365	392	Fine to Med Sand				392	394	Clay Sand mix				394	399	Fine Sand				399	415	Tan Clay				415	416	Fine Med Sand				416	417	Clay & Sand mix Blue				417	424	Fine to Med Sand				424	431	Blue Clay						Sand & Clay		
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4. METHOD DRILLED ☐ Rotary ☐ Air ☐ Auger ☒ Reverse rotary ☐ Cable ☐ Mud ☐ Other _____ (backhoe, hydraulic, etc.)	6. LOCATION OF WELL Sketch map location must agree with written location. Subdivision Name <u>Carriage Hill</u> Lot No. _____ Block No. _____ County <u>Canyon</u> Address of Well Site <u>Town Ave</u> (give at least name of road) <u>NW 1/4 SE 1/4 Sec. 31</u> T. <u>3</u> N or S ☐ R. <u>2</u> E or W ☒																																																																																																																																																										
5. WELL CONSTRUCTION Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____ <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Thickness</th> <th>Diameter</th> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr> <td><u>1.315</u> inches</td> <td><u>18</u> inches</td> <td><u>2</u> feet</td> <td><u>261</u> feet</td> </tr> <tr> <td>_____ inches</td> <td>_____ inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ inches</td> <td>_____ inches</td> <td>_____ feet</td> <td>_____ feet</td> </tr> </tbody> </table> Was casing drive shoe used? ☐ Yes ☒ No Was a packer or seal used? ☒ Yes ☐ No Perforated? ☐ Yes ☒ No How perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun Size of perforation? _____ inches by _____ inches <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Number</th> <th>From</th> <th>To</th> </tr> </thead> <tbody> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> <tr> <td>_____ perforations</td> <td>_____ feet</td> <td>_____ feet</td> </tr> </tbody> </table> Well screen installed? ☒ Yes ☐ No Manufacturer <u>Tubson</u> Type <u>Wirewrap</u> Top Packer or Headpipe <u>252'</u> Bottom of Tailpipe _____ Diameter _____ Slot size _____ Set from _____ feet to _____ feet Diameter _____ Slot size _____ Set from _____ feet to _____ feet Gravel packed? ☐ Yes ☐ No ☐ Size of gravel _____ Placed from _____ feet to _____ feet Surface seal depth _____ Material used in seal: ☐ Cement grout ☐ Bentonite ☐ Pudding clay ☐ _____ Sealing procedure used: ☐ Slurry pit ☐ Overbore to seal depth Method of joining casing: ☐ Threaded ☐ Welded ☐ Solvent Weld ☐ Cemented between strata Describe access port <u>2"</u>	Thickness	Diameter	From	To	<u>1.315</u> inches	<u>18</u> inches	<u>2</u> feet	<u>261</u> feet	_____ inches	_____ inches	_____ feet	_____ feet	_____ inches	_____ inches	_____ feet	_____ feet	Number	From	To	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	_____ perforations	_____ feet	_____ feet	11. DRILLER'S CERTIFICATION I/we certify that all minimum well construction standards were complied with at the time the rig was removed. Firm Name <u>Riverside Inc</u> Firm No. <u>333</u> Address <u>P.O. Box 920</u> Date <u>6-2-99</u> Signed by Drilling Supervisor _____ and _____ (Operator) _____ (If different than the Drilling Supervisor)																																																																																																																														
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RECEIVED

JUN - 4 1999

Department of Water Resources

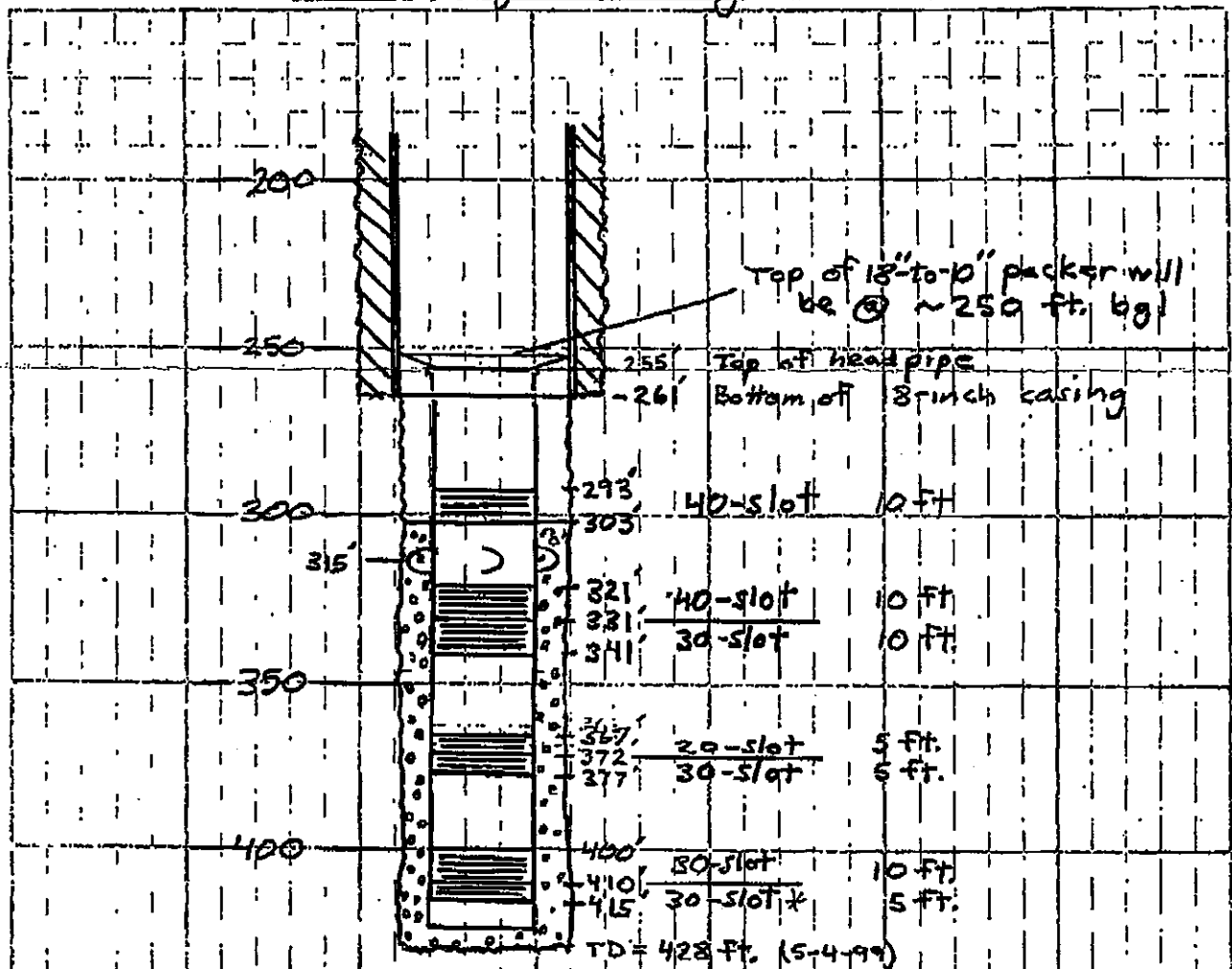
MICROFILMED

Work started 4-20-99 finished 6-1-99

AUG 25 1999

63-99-W-0244-000

95918 SHEET 1 OF 1

BY Dittus 1999 DATE Cinco de Mayo PROJECT _____ CONTACT _____DESCRIPTION Final Design - Carraige Hill WNO# _____

Depth (bgl)	Materials	Length
255 ft to 293 ft	10-inch (.365"-wall) casing "blank"	38 ft.
293 303	stainless 40-slot	10
303 321	blank	18
321 331	stainless 40-slot	10
331 341	stainless 30-slot	10
341 367	blank	26
367 372	stainless 20-slot	5
372 377	stainless 30-slot MICROFILMED	5
377 400	blank	23
400 410	stainless 30-slot AUG 25 1999	10
410 415	stainless 30 slot	5
415 425	blank (tail pipe)	10
55 ft. total	screen	115 ft. of 10-inch casing

1999

WELL SETTING DATA

DATE INSTALLED

09/07/99

SETTING TO TOP OF BOWLS

165 FT

LOCATION

CARRIAGE HILLS (PUMP #1)

STATIC

OR. STATIC

PUMP

MANUFACTURER	GUOLD		SERIAL NO.	FR416394	
NUMBER OF COLUMNS	8	SIZE	4 IN	LENGHT	20 FT TAPERED Y/N
NUMBER OF COLUMNS	1	SIZE	4 IN	LENGHT	5 FT TAPERED Y/N
NUMBER OF SHAFTS		SIZE		LENGHT	THREADS
NUMBER OF SHAFTS		SIZE		LENGHT	THREADS
NO. OF STAGES	19	IMP QUA		IMP DIAM	7.130 IMP TRIM
SIZE/MODEL	7TLC	IMP QUA		IMP DIAM	IMP TRIM
TYPE	SUB		DISCH DIAMETER		IMP NUMBER
GPM	300		LENGTH OF TAIL PIECE		TAPERED Y/N
RPM	1750		HEAD SHAFT LENGTH		SHAFT SIZE
TDH	260		GLAND SHAFT LENGTH		SHAFT SIZE
LENGTH OF MOTOR			LENGTH OF BOWLS		153 IN
CURVE NUMBER					

MOTOR

MANUFACTURER	HATACHI		EFFICIENCY	74.90%	
SERIAL NO	G8917503H				
TYPE	SUB		VOLTS	460	
MAKE			AMPS	43	
MODEL			PHASE	3	
HP	30		CYCLES	60	
UPPER BEARING			RPM	1750	
LOWER BEARING			FRAME	8 IN	

AIR & AQUA LINES

AIR LINE	3/8 IN	CHEM LINE	1/2 IN
CL2 LINE	COVERED 5/8 IN	SOUNDER	1 IN

CREW

TAG #

ELEVATION

REMARKS

SUPERVISOR

CHECK VALVE 20 FT ABOVE BOWLS

DATE RECIEVED BY DATA ENTRY

NAME

B. SEITZ

10/8/99

08/18/99

PUMP DATA SHEET
Goulds Turbine 80 Hz

Selection file: (unfilled)
Catalog: TURB80.MPC v 1.4.3

no: E8607TAPCO

ign Point: Flow: 300 US gpm
Head: 255 ft

tp: TURBINE - 1800
Speed: 1730 rpm

Size: 7TLC; (10 stages)
Dia: 4.93 in

its: Temperature: — °F
Pressure: 310 psi_g

Sphere size: 0.89 in
Power: — bhp

icific Speed: No: 3684

Na: —

iansions:

tical Turbine: Bowl Dia: 7.13 in Max Lateral: 0.5 in
Thrust K Factor: 4.5

tor: 30 hp Speed: 1800
NEMA Standard
sized for Max Power on Design Curve

Fluid: Water

Temperature: 60 °F

SG: 1

Viscosity: 1.122 cP

Vapor pressure: 0.2568 psi_a

Atm pressure: 14.7 psi_a

NPSHa: — ft

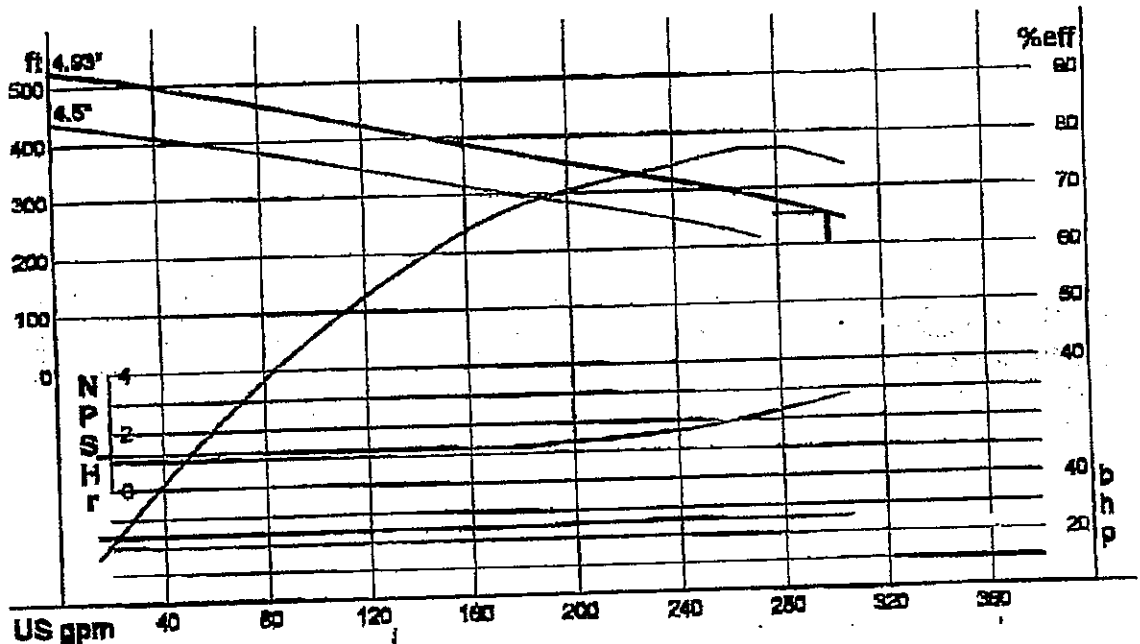
Piping:

System: —

Suction: — in

Discharge: — in

— Data Point —
Flow: 300 US gpm
Head: 254 ft
Eff: 74.8%
Power: 25.8 bhp
NPSHr: 2.71 ft
Design Curve —
Shutoff Head: 527 ft
Pressure: 228 psi_g
Min Flow: — US gpm
BEP: 77% eff
@ 277 US gpm
NOL Pwr: 25.8 bhp
@ 236 US gpm
— Max Curve —
Max Pwr: 25.8 bhp
@ 236 US gpm



— PERFORMANCE EVALUATION —

Flow	Speed	Head	Pump	Power	NPSHr	Motor	Motor	Hrs/Yr	Cost
US gpm	rpm	ft	%eff	bhp	ft	%eff	hp		/kW
300	Flow Rate is Out of Range for this Pump								
300	1730	254	74.8	25.8	2.71				
240	1730	317	74.4	25.8	1.88				
180	1730	370	67.8	24.8	1.23				
120	1730	425	51.5	24.4	1.23				

1999

WELL SETTING DATA

DATE INSTALLED

09/07/99

SETTING TO TOP OF BOWLS

185 FT

LOCATION

CARRIAGE HILLS (PUMP #2)

STATIC
OR. STATIC

PUMP

MANUFACTURER	GUOLD		SERIAL NO.		
NUMBER OF COLUMNS	9	SIZE	6 IN	LENGHT	20 FT TAPERED Y/N
NUMBER OF COLUMNS	1	SIZE	6 IN	LENGHT	5 FT TAPERED Y/N
NUMBER OF SHAFTS		SIZE		LENGHT	THREADS
NUMBER OF SHAFTS		SIZE		LENGHT	THREADS
NO. OF STAGES	6	IMP QUA	6	IMP DIAM	11.75 IN IMP TRIM
SIZE/MODEL	12CLC	IMP QUA		IMP DIAM	IMP TRIM
TYPE	SUB	DISCH DIAMETER		IMP NUMBER	
GPM	1100	LENGTH OF TAIL PIECE		TAPERED Y/N	
RPM	1750	HEAD SHAFT LENGTH		SHAFT SIZE	
TDH	255	GLAND SHAFT LENGTH		SHAFT SIZE	
LENGTH OF MOTOR		LENGTH OF BOWLS		91 IN	
CURVE NUMBER					

MOTOR

MANUFACTURER	HITACHI	EFFICIENCY	80.50%
SERIAL NO	G8901804H		
TYPE	SUB	VOLTS	460
MAKE		AMPS	145
MODEL		PHASE	3
HP	100	CYCLES	60
UPPER BEARING		RPM	1750
LOWER BEARING		FRAME	10 IN

AIR & AQUA LINES

AIR LINE	3/8 IN	CHEM LINE	1/2 IN
CL2 LINE	COVERED 5/8 IN	SOUNDER	1 IN

CREW

TAG #

ELEVATION

REMARKS

SUPERVISOR

CHECK VALVE 20 FT ABOVE BOWLS

CHECK VALVE 1/2 WAY ON COLUMN

DATE RECIEVED BY DATA ENTRY

NAME B. SEITZ

10/8/99

PUMP DATA SHEET
 Goulds Turbine 80 Hz

Selection file: (unfilled)
 Catalog: TURB80.MPC v 1.4.3

Curves: E8412CFPCO

Point: Flow: 1100 US gpm
 Head: 255 ft

Pump: TURBINE - 1800
 Speed: 1740 rpm

Size: 12CLC (5 stages)
 Dia: 8.24 in

Limits: Temperature: — °F
 Pressure: 340 psig

Sphere size: 0.73 in
 Power: — bhp

Specific speed: Ns: —

Ns: 2900

Dimensions:

Discharge: 8 in

Vertical Turbine: Bowl Dia: 11.75 in Max Lateral: 1 in
 Thrust K Factor: 7.5

Motor: 100 hp

Speed: 1800

NEMA Standard

sized for Max Power on Design Curve

Fluid: Water

Temperature: 50 °F

SG: 1

Viscosity: 1.122 cP

Vapor pressure: 0.2568 psia

Aim pressure: 14.7 psia

NPSHa: — ft

Piping:

System: —

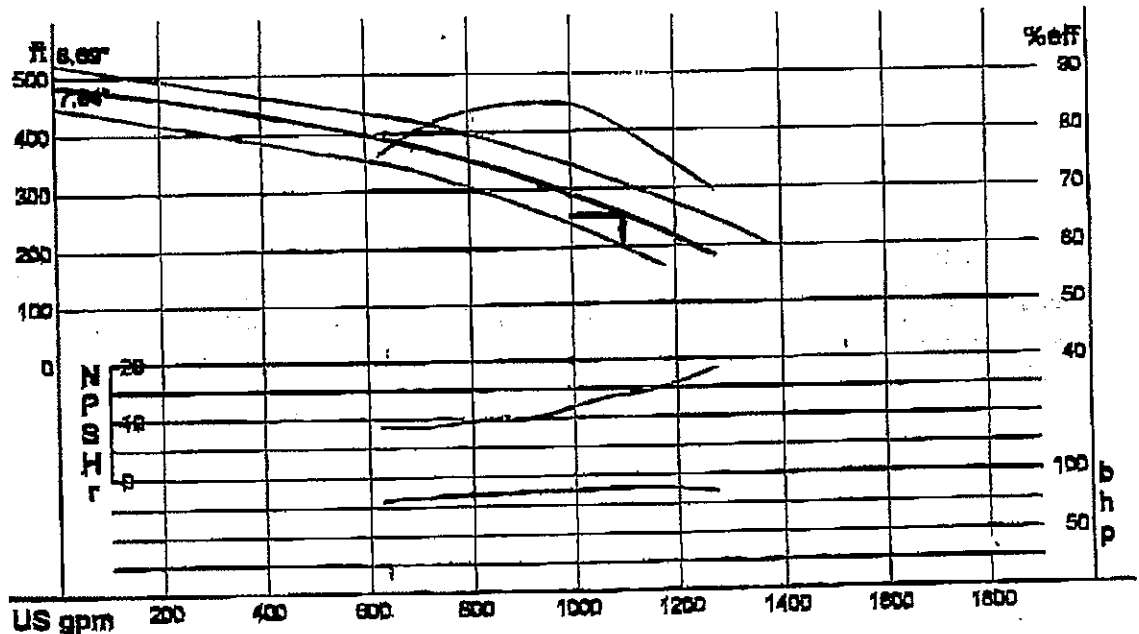
Suction: — in

Discharge: — in

— Data Point —
 Flow: 1100 US gpm
 Head: 257 ft
 Eff: 80.5%
 Power: 88.6 bhp
 NPSHr: 14 ft

— Design Curve —
 Shutoff Head: 494 ft
 Pressure: 210 psig
 Min Flow: — US gpm
 BEP: 85.1% eff
 @ 855 US gpm
 NOL Pwr: 89 bhp
 @ 1142 US gpm

— Max Curve —
 Max Pwr: 103 bhp
 @ 1281 US gpm

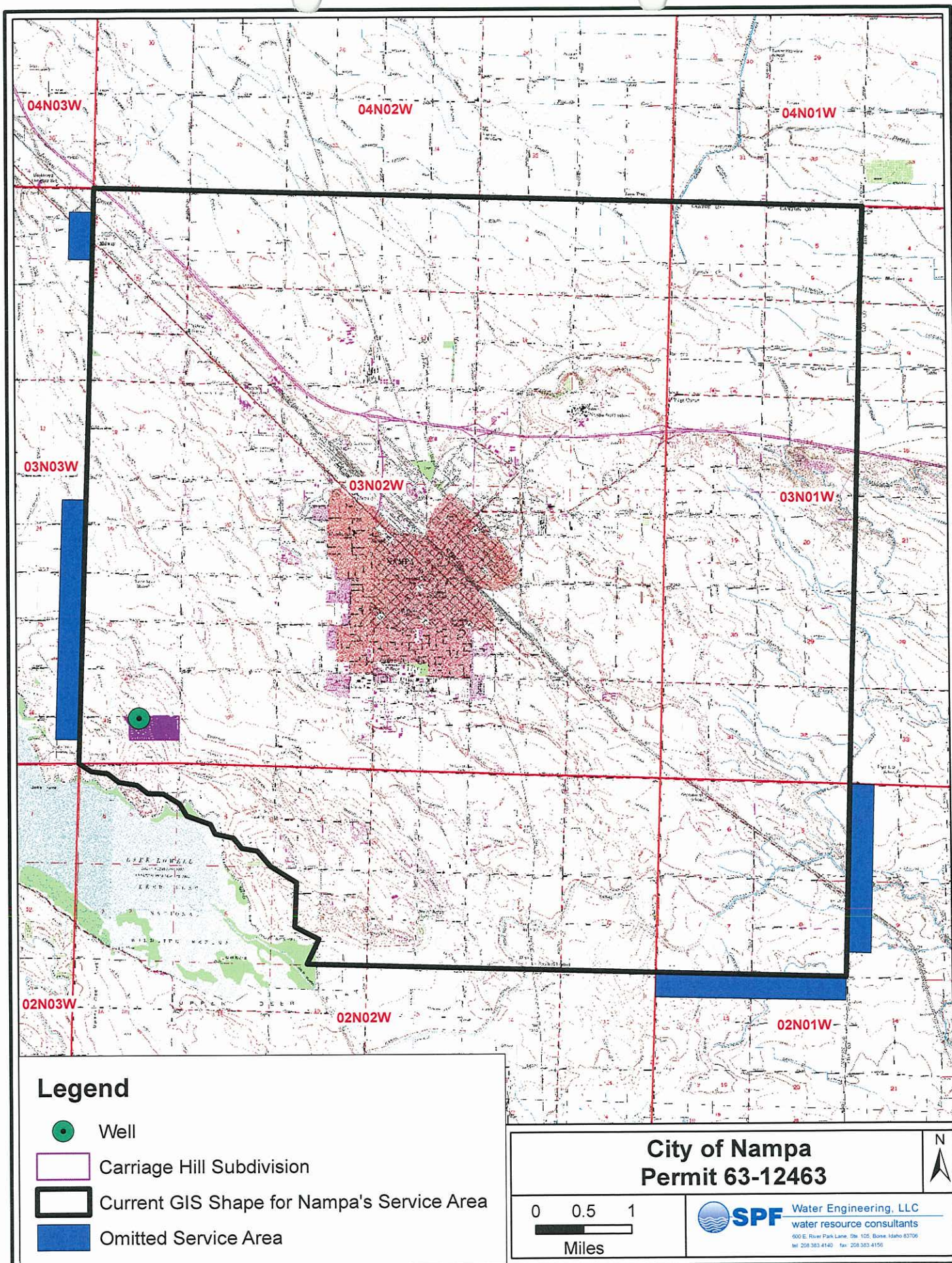


— PERFORMANCE EVALUATION —

Flow	Speed	Head	Pump	Power	NPSHr	Motor	Motor	Hz/yr	Cost
US gpm	rpm	ft	%eff	bhp	ft	%eff	hp		/KW
1320	Flow Rate is Out of Range for this Pump								
1100	1740	257	80.5	88.6	14				
880	1740	330	84.9	85.2	2.73				
880	1740	385	78.8	81.2	8.78				
440	Flow Rate is Out of Range for this Pump								

ATTACHMENT D

**RECOMMENDED PLACE OF USE & POINT OF DIVERSION
(TOPO MAPS & 2006 AERIAL PHOTOS)**



Legend

-  Well
-  Carriage Hill Subdivision
-  Current GIS Shape for Nampa's Service Area
-  Omitted Service Area

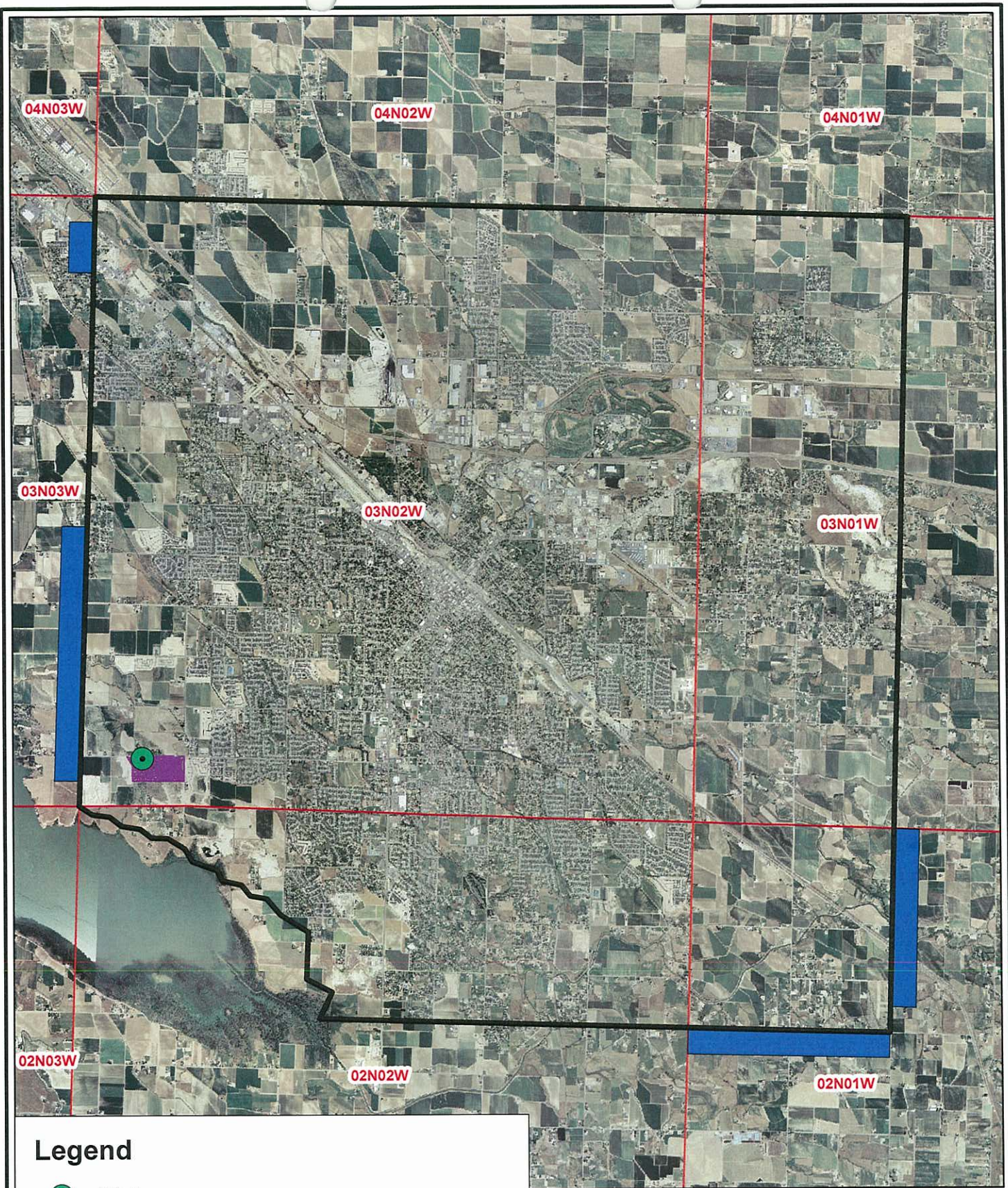
City of Nampa
Permit 63-12463

0 0.5 1
Miles



Water Engineering, LLC
water resource consultants
400 E. River Park Lane, Ste. 105, Boise, Idaho 83706
Tel: 208.383.4140 Fax: 208.383.4156





Legend

-  Well
-  Carriage Hill Subdivision
-  Current GIS Shape for Nampa's Service Area
-  Omitted Service Area

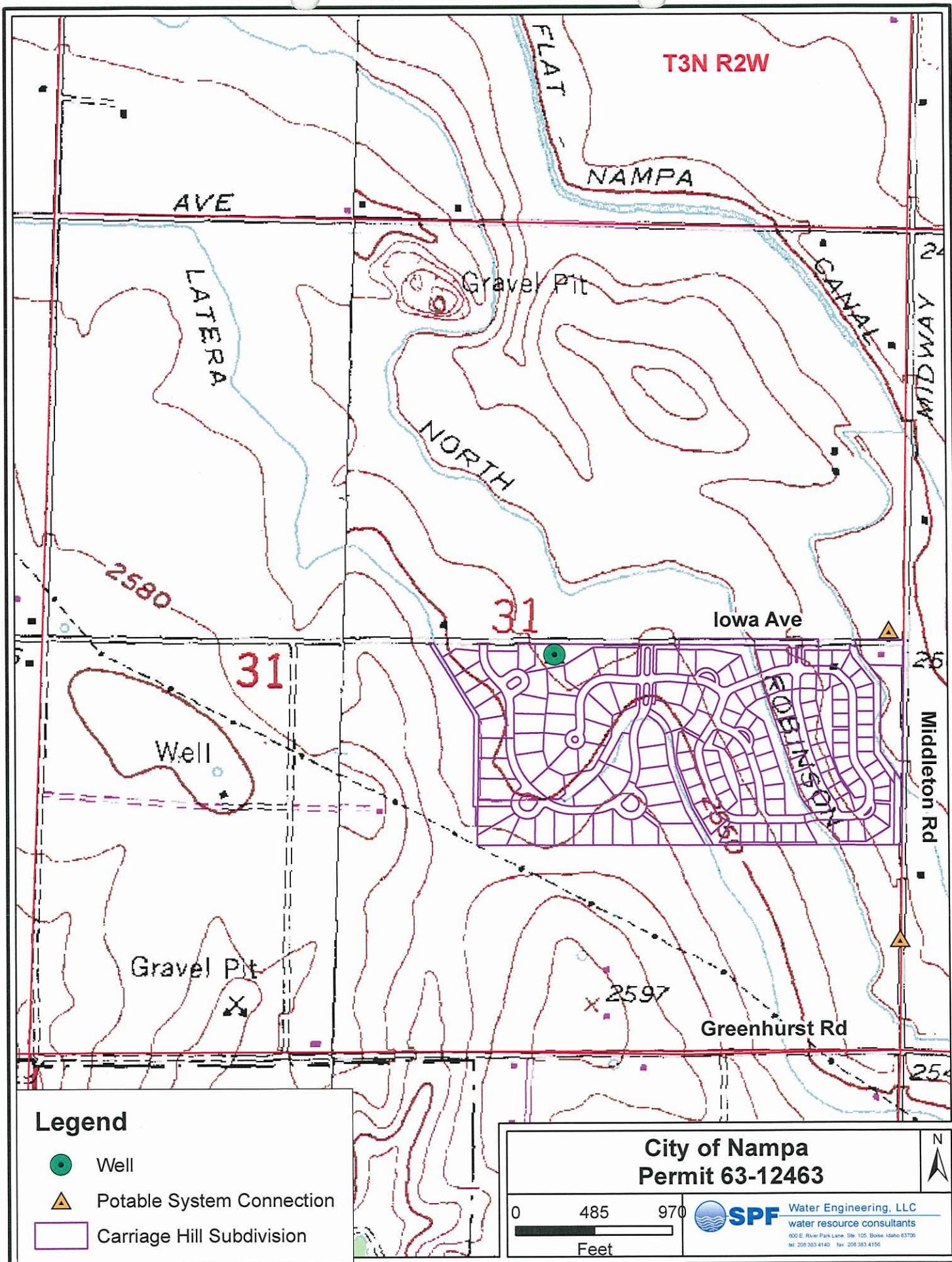
City of Nampa
Permit 63-12463

0 0.5 1
Miles



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water resource consultants
600 E. River Park Lane, Ste. 105, Boise, Idaho 83706
tel: 208.383.4140 fax: 208.383.4150





T3N R2W

Iowa Ave

Middleton Rd

Greenhurst Rd

Legend



Well



Potable System Connection



Carriage Hill Subdivision

City of Nampa
Permit 63-12463



0 485 970

Feet



Water Engineering, LLC
water resource consultants
600 E. River Park Lane, Ste. 105, Boise, Idaho 83706
tel: 208.363.4140 fax: 208.363.4155

ATTACHMENT E
SYSTEM PHOTOS



Well/Pump House

Well/Pumps

8-inch Pipe

Pressure Gage

Flowmeter 2

4-inch Pipe

Flowmeter 1

To Chlorinator



To City's Potable System



18-inch Well with 30 hp and 100 hp Submersible Pumps



Chlorinating System



Potable System Connection on NW corner of Iowa Ave and Middleton Rd
(other manhole connection is about $\frac{1}{4}$ mile north of Greenhurst Rd located in the center of Middleton Rd)