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JUL 31 2009

WATER RESOURCES
WESTERN REGION

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

AUG 07 2009

Department of Water Resources

A. GENERAL INFORMATION

Permit No. 63-31949

1. Owner: City of Nampa Phone No.: 208-466-6000

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

2. Accompanied by: Marcos Hernandez EXAM DATE: 6/24/2009

Address: Nampa City Water Works, 24 1st St. S., Nampa, ID 83651 Phone No. 208-941-0056

Relationship to Permit Holder: Water System Technician, System Manager

3. Source: Ground Water tributary to _____

B. OVERLAP REVIEW

1. Other water rights with the same place of use: See Attachment B

2. Other water rights with the same point of diversion: None

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
			NW	SW	3	2N	2W	Canyon	Exam, 2006 Aerial Photo

2. Place(s) of Use

Indicate Method of Determination Exam

TWP	RGE	SEC	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

Municipal use within the service area
for the City of Nampa currently on
record with IDWR

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

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
Vista Ridge	US	200	J01-BF82A-1T	Simflo SV12C 6-stage	10-inch; 250-foot setting

*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
Flowmeter	Propeller	McCrometer		05-09492-10	10-inch	

2. **Measurements:** 1000 gpm @ 155 psi

3.

E. NARRATIVE/REMARKS/COMMENTS

A 200-hp variable-speed turbine well pump is installed in a 16-inch diameter well. The pump supplies water for use within the City of Nampa's municipal irrigation system. The well is completed to a depth of 520 feet, with 16-inch casing to 370 feet and 10-inch casing and well screen to 483. The 200-hp pump is set at a depth of 240 feet on 10-inch pipe. Static system pressure at well head is 50 psi.

The well and pump have a functioning flow meter. However, there is no mechanism for flushing the well to waste through the flow meter. During the field exam, irrigation demands were not high enough to allow running the well pump at full capacity. Maximum measured flow was 1000 gpm at 155 psi discharge pressure.

Included as Attachment F is memo that describes the City of Nampa's municipal water needs and indicates how water diverted under this permit provides an additional increment of water beneficially used by the City to meet their ever-increasing municipal needs. This memo is submitted in compliance with permit condition No. 7.

Water bearing zone listed on the permit is 250 to 440 feet. Water-bearing zone actually developed was 385 to 483 feet (based on well driller's information). Recommend changing the water-bearing zone to 350 to 500 feet.

Have conditions of permit approval been met? ____ yes X no (water-bearing zone exceeded)

F. FLOW CALCULATIONS

Yes Additional Computation Sheets Attached

Measured Method: (Pump Curve and Well log, Attachment B)

Static Water Level = 34.5'

Drawdown at 1500 gpm = 76.5' (±)

Pumping water level at 1500 gpm = 111 feet

Pump Curve: 3.34 cfs (1500 gpm) @ 336 feet TDH

Specific capacity = $1500 / (76.5) = 19.6$ gpm/ft

Assumed friction loss = 15 feet (250' 10"x 1.69" column @ 2'/100 + 10' misc loss)

Discharge pressure at 1500 gpm = 336 feet – 111 feet – 15 feet = 210 feet = 91 psi

Pump Curve: 3.90 cfs (1750 gpm) @ 276 feet TDH

Pumping water level = $34.5 + (1875/19.6) = 124$ feet

Assumed friction loss = 18 feet (250' 10"x 1.69" column @ 2.5'/100 + 12' misc loss)

Discharge pressure at 1500 gpm = 276 feet – 124 feet – 18 feet = 134 = 58 psi

Limit flow rate to permit maximum of 3.34 cfs

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:

Not Applicable

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	3.34	
Total			3.34 cfs	

___ Change P.D. as reflected above ___ Add P.D. as reflected above X None
___ Change P.U. as reflected above ___ Add P.U. as reflected above ___ Other

I. AUTHENTICATION

Field Examiner's Name Terry M. Scanlan, P.E., Certified Water Right Examiner 10-129 Date 7-31-09

Field Examiner's Signature

Terry M. Scanlan

Reviewer _____ Date _____

SEAL





ATTACHMENT A

PERMIT RECORD AND PROOF OF BENEFICIAL USE

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

6/14/2009

WATER RIGHT NO. 63-31949

Owner Type	Name and Address
Current Owner	CITY OF NAMPA 411 3RD ST S NAMPA, ID 83651 (208) 466-6000
Attorney	JOHN M MARSHALL GIVENS PURSLEY LLP 601 W BANNOCK PO BOX 2720 BOISE, ID 83702 (208)388-1200

Priority Date: 06/14/2004
Status: Active

Source	Tributary
GROUND WATER	

Beneficial Use	From	To	Diversion Rate	Volume
MUNICIPAL	01/01	12/31	3.4 CFS	
Total Diversion			3.4 CFS	

Location of Point(s) of Diversion:

GROUND WATER|NWSW|Sec. 03|Township 02N|Range 02W|CANYON County

Place(s) of use: [Large POU Info](#)

Conditions of Approval:

1. 26A Project construction shall commence within one year from the date of permit issuance and shall proceed diligently to completion unless it can be shown to the satisfaction of the Director of the Department of Water Resources that delays were due to circumstances over which the permit holder had no control.
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. Water bearing zone to be appropriated is from 250 to 440 feet.
4. 124 Place of use is within the service area of the City of Nampa municipal water supply system as provided for under Idaho Law.
5. In connection with the proof of beneficial use submitted for this permit, the permit holder shall also submit a report showing the total annual volume, the maximum daily volume, and the maximum instantaneous rate of flow diverted from the point of diversion authorized for this permit during the development period. The report shall also show the maximum instantaneous rate of diversion, either measured or reasonably estimated by a qualified professional engineer, geologist, or certified water rights examiner, for the entire City of Nampa municipal water system. The report shall also describe and explain how water diverted under this permit provides an additional increment of beneficial use of water for the City of Nampa municipal water system as opposed to an alternative point of diversion for prior water rights already held and used by the City of Nampa for its municipal water system.
6. 007 The right holder shall not assign or sell the permit without first securing the written approval of the Department of Water Resources.
7. 102 The right holder shall not provide water diverted under this right for the irrigation of land having appurtenant surface water rights as a primary source of irrigation water except when the surface water rights are not available for use. This condition applies to all land with appurtenant surface water rights, including land converted from irrigated agricultural use to other land uses but still requiring water to irrigate lawns and landscaping.
8. 004 This right does not grant any right-of-way or easement across the land of another.
9. 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.
10. 121 The Director retains jurisdiction to require the right holder to provide purchased or leased natural flow or stored water to offset depletion of Lower Snake River flows if needed for salmon migration purposes. The amount of water required to be released into the Snake River or a tributary, if needed for this purpose, will be determined by the Director based upon the reduction in flow caused by the use of water pursuant to this permit.

Dates:

Proof Due Date: 08/01/2009
 Proof Made Date:
 Approved Date: 08/26/2004
 Moratorium Expiration Date:
 Enlargement Use Priority Date:
 Enlargement Statute Priority Date:
 Application Received Date: 06/14/2004
 Protest Deadline Date: 07/19/2004
 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:

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
STATEMENT OF COMPLETION
FOR SUBMITTING PROOF OF BENEFICIAL USE

FOR OFFICE USE ONLY

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

The Idaho Department of Water

Resources considers this form a statement by the permit holder(s) that development of a water right has been completed and that water has been applied to beneficial use to the extent described below. This form must be accompanied by an examination fee, when necessary, or by a completed Beneficial Use Field Report prepared by a certified water right examiner. Please refer to the instructions and fee schedule for this form. If ownership of the permit has changed, please contact any Department office or visit the Department's website at: www.idwr.idaho.gov for an Assignment of Permit form. If you wish to relinquish your permit because you have not established the authorized use of the water and are not applying for an extension, please notify the Department in writing.

1. Permit No. 63-31949 Telephone No. 208-466-6000

RECEIVED

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

AUG 07 2009

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

DEPARTMENT OF
WATER RESOURCES

State ID Zip 83651 Email: _____

4. Source of Water: Ground Water If **GROUND WATER** (well), Date Drilled: mo. Mar / yr. 2005

Well Driller: Stevens & Sons Well Drilling Drilling Permit Number: No. 828367

5. Extent of use(s) completed (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 or storage volume for which proof is submitted: 3.4 cfs OR _____ acre-feet.

7. Compliance with a Measuring Device requirement and/or other Conditions of Permit: *(Refer to the approval conditions on your permit and respond accordingly.)*

Measuring Device: Is a measuring device required?

If yes, has the measuring device been installed?

Yes ☐ or No ☒
Yes ☐ or No ☐

Conditions of Permit: Does your permit require you to submit additional information in connection with your proof of beneficial use? (If yes, please list the conditions below and provide documents if necessary.)

Summary of City's municipal use

Completed?

Yes ☒ or No ☐

Completed?

Yes ☐ or No ☐

8. Fee Enclosed: \$ n/a (See Fee Schedule on back of the instructions for filing proof of beneficial use. Proofs filed without an appropriate fee, will be considered incomplete.)

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

Name: _____ Telephone Number: _____

Mailing Address: _____ City: _____

State: _____ Zip: _____ Email: _____

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 and applied to a beneficial use. I understand that any undeveloped portion of the permit is relinquished to the State of Idaho.

Signature of permit holder: [Signature] Date: 7/27/09
(include your title, if on behalf of company or organization) Public Works Dir

ATTACHMENT B
OTHER RIGHTS

City of Nampa Non-Potable Water Rights (6/26/2009)

63-2449
63-2450
63-2484
63-2780
63-2787
63-2943
63-3257
63-5257
63-7003
63-7708
63-7954
63-8312
63-9853
63-9889
63-10211
63-11894
63-12322
63-31504
63-31949
63-31961
63-32179

ATTACHMENT C
WELL LOG AND PUMP CURVE

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

828367

Office Use Only
Well ID No. 398980
Inspected by _____
Twp _____ Rge _____ Sec _____
1/4 _____ 1/4 _____ 1/4 _____
Lat: _____ : _____ : _____ Long: _____ : _____ : _____

PAGE 1 of 2

1. WELL TAG NO. D 0039705
DRILLING PERMIT NO. 828367
Water Right or Injection Well No. 63-31949

2. OWNER:

Name City of Nampa
Address 411 3rd St S
City Nampa State ID Zip 83651

3. LOCATION OF WELL by legal description:

You must provide address or Lot, Blk, Sub. or Directions to well.

Twp. 2 North ☒ or South ☐
Rge. 2 East ☐ or West ☒
Sec. 3 1/4 N/W/4 S/W/4
Gov't Lot _____ County Canyon
Lat: _____ : _____ : _____ Long: _____ : _____ : _____
Address of Well Site 12th & Locust N/E corner
City Nampa
(Give at least name of road - Distance to Road or Landmark)
Lt. 2 Blk. 1 Sub. Name Vista Ridge

4. USE:

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

5. TYPE OF WORK check all that apply

☒ New Well ☐ Modify ☐ Abandonment ☐ Other _____ (Replacement etc.)

6. DRILL METHOD:

☐ Air Rotary ☒ Cable ☐ Mud Rotary ☐ Other _____
☒ reverse rotary

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
bentonite chips	0	40	3000#	poured
bentonite grout	40	340	2800#	pumped
Was drive shoe used?	☐ Y ☒ N	Shoe Depth(s)		
Was drive shoe seal tested?	☐ Y ☒ N	How?		

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
16"	+2'	370'	250	steel	☒	☐	☒	☐
10"	350'	385'	250	steel	☐	☒	☒	☐
10"	395'	411'	250	steel	☐	☒	☒	☐
Length of Headpipe		Length of Tailpipe						
Packer	☒ Y ☐ N	Type						

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method V-Wire
Screen Type 3 Method of Installation Johnson - 304

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
385	395	25	304	10"	stnls	☐	☒
411	436	30	"	10"	stnls	☐	☒
453	483	30	"	10"	stnls	☐	☒

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method
#8-12 sand	350	485	9300#	poured
3/8 gravel	485	520	2 1/2 yd	poured

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

34.6 ft. below ground Artesian pressure _____ lb.
Depth flow encountered _____ ft. Describe access port or control devices: _____

12. WELL TESTS:

Yield gal./min.	Drawdown	Pumping Level	Time
see attached			

Water Temp. _____ Bottom hole temp. _____

Water Quality test or comments: _____

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water	Y	N
20	0	3	backfill sand & gravel		X	
	3	47	sand & gravel cemented		X	
	47	50	yellow-brown clay		X	
	50	76	yellow-brown, sandy	X		
	76	78	gravel streak		X	
	78	82	sand	X		
	82	91	tan clay		X	
	91	97	rusty clay		X	
	97	102	tan clay		X	
	102	109	sand streak	X		
	109	110 1/2	tan clay		X	
	110 1/2	132	sand	X		
	132	150	brown clay turning tan		X	
	150	153	brown clay		X	
	153	165	blue clay		X	
	165	179	brown clay-shaley		X	
	179	191	brown clay		X	
	191	193	blue clay		X	
	193	208	brown clay		X	
	208	215	sand	X		
	215	217	tan-brown clay		X	
	217	218	sand		X	
	218	220	clay		X	
	220	264	brown clay		X	
	264	273	sand		X	
	273	275	clay		X	
	275	295	sand		X	
	295	309	tan clay-stick		X	
	309	342	blue clay		X	
			cement grout 340-370 1500# pumped			
	10"	436'-453'	250 steel liner welded			

Completed Depth _____ (Measurable)

Date: Started See pg. 2 Completed _____

14. DRILLER'S CERTIFICATION

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

Company Name Stevens & Sons Firm No. 153

Principal Driller _____ Date 3/12/05

and Driller or Operator _____ Date _____

Operator I _____ Date _____

Principal Driller and Rig Operator Required.
Operator I must have signature of Driller/Operator II.

FORWARD WHITE COPY TO WATER RESOURCES

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only			
Well ID No. _____			
Inspected by _____			
Twp _____	Rge _____	Sec _____	
_____ 1/4	_____ 1/4	_____ 1/4	
Lat: _____	Long: _____	_____	_____

1. WELL TAG NO. D 0039705
 DRILLING PERMIT NO. _____
 Water Right or Injection Well No. _____

PAGE 2 of 2

12. WELL TESTS:

☐ Pump ☐ Bailer ☐ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time

Water Temp. _____ Bottom hole temp. _____

Water Quality test or comments: _____

_____ Depth first Water Encounter _____

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia.	From	To	Remarks: Lithology, Water Quality & Temperature	Water	
				Y	N
20	342	351	sand	X	
	351	395	blue clay		X
15	370				
	400	403	sand	X	
	403	425	blue clay		X
	425	436	sand	X	
	436	440	blue clay		X
	440	456 1/2	blue clay		X
	456 1/2	460 1/2	sand	X	
	460 1/2	463	blue clay		X
	463	489	sand, getting coarser at 478		
	489	493	blue clay		X
	493	495	sand streak	X	
	495	512	blue clay		X
	512	518	sand	X	
	518	520	blue clay		X

Completed Depth 483' (Measurable)
 Date: Started 1/19/05 Completed 3/9/05

14. DRILLER'S CERTIFICATION

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

Company Name Stevens & Sons Firm No. 153

Principal Driller Ron Stevens Date 3/12/05

Driller or Operator II _____ Date _____

Operator I _____ Date _____

Principal Driller and Rig Operator Required.
 Operator I must have signature of Driller/Operator II.

2. OWNER:

Name City of Nampa
 Address _____
 City _____ State _____ Zip _____

3. LOCATION OF WELL by legal description:

You must provide address or Lot, Blk, Sub. or Directions to well.

Twp. _____ North ☐ or South ☐
 Rge. _____ East ☐ or West ☐
 Sec. _____ 1/4 _____ 1/4 _____ 1/4
 Gov't Lot _____
 County _____

Lat: _____ Long: _____

Address of Well Site _____

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

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 Material	From	To	Weight / Volume	Seal Placement Method

Was drive shoe used? ☐ Y ☐ N Shoe Depth(s) _____

Was drive shoe seal tested? ☐ Y ☐ N How? _____

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☐ N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method _____

Screen Type & Method of Installation _____

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
						☐	☐
						☐	☐
						☐	☐

10. FILTER PACK

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

_____ ft. below ground Artesian pressure _____ lb.

Depth flow encountered _____ ft. Describe access port or control devices: _____

CITY OF NAMPA VISTA RIDGE PUMP TEST

page 1 of 2

Static Water Level 38.52' 8" orifice 10" discharge

Measurements Taken 4 feet Above Ground Level

time	GPM	pumping level	comments
9:50	825	9'	
9:53	825	94.16'	
10:00	1230	95.175	greenish, cloudy
10:02	1230	96.4	no sand
10:05	1230	97.17	
10:10	1230	98.51	
10:15	1230	99.4	
10:20	1230	100.25	clear
10:25	1212	100.74	
10:30	1212	101.3	
10:32	1455	108.0	
10:35	1455	108.85	
10:40	1421	109.21	
10:45	1421	109.95	
10:50	1421	110.28	
10:55	1421	110.45	
11:00	1421	110.9	
11:02	1585	118.3	clear
11:05	1585	118.74	
11:10	1585	119.22	
11:15	1585	119.62	
11:25	1302	106	dropped drawdown guage 150' stuck in pump
11:30	1471	114.4	
11:43	1471	115.34	
12:00	1460	114.65	
12:15	1471	115.33	
12:32	1471	115.59	
1:00	1471	117.15	
1:30	1471	117.7	
2:00	1471	118.0	

VISTA RIDGE

time	GPM	recovery
2:01	Ø	52.46
2:02	Ø	50.87
2:03	Ø	49.95
2:04		49.45
2:05		48.82
2:10		47.38
2:15		46.45
2:20		45.82
2:25		45.35
2:30		45.03

SECTION 202
 PAGE 54
 DATE 9/1/06
 SUPERCEDES All Previous

SV12C

1770 R.P.M.

SIMFLO

PUMPS

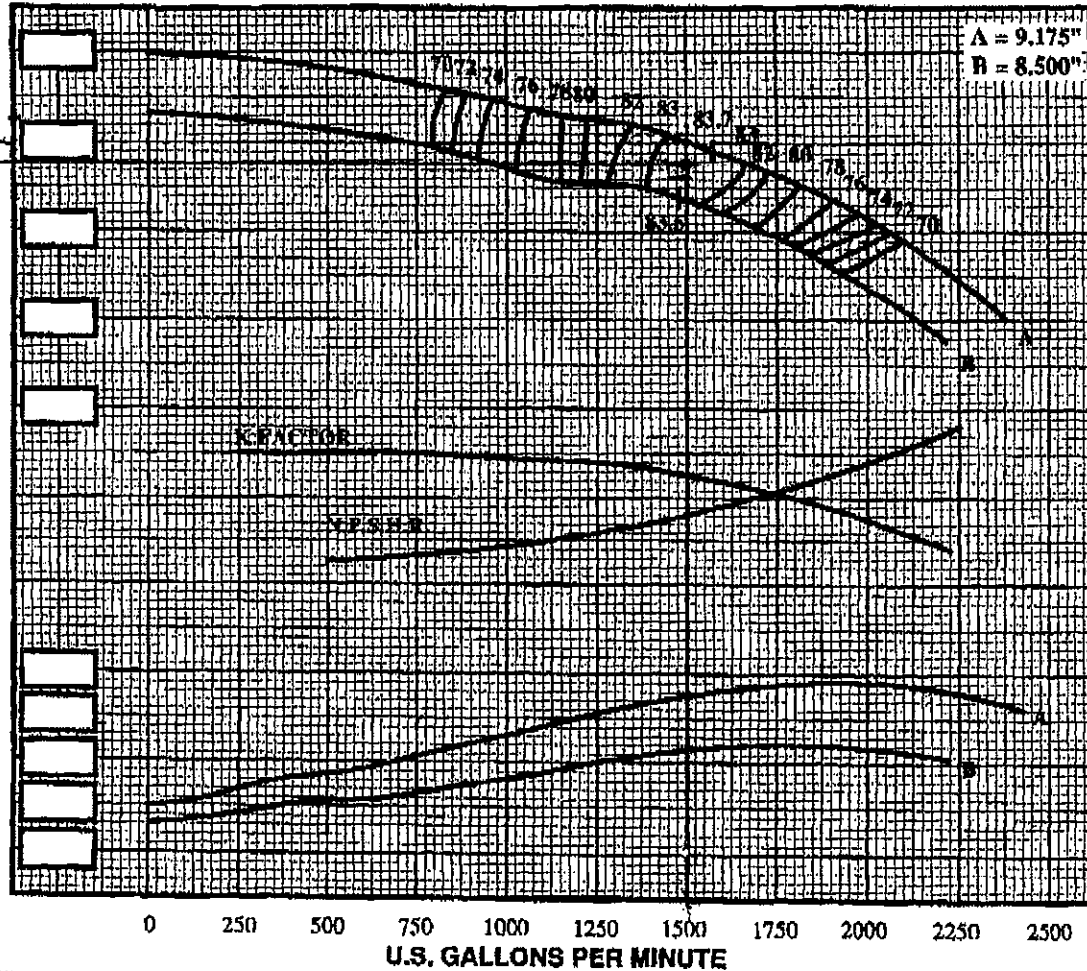
12 RH

ONE ()
STAGE STAGE

HEAD IN FEET

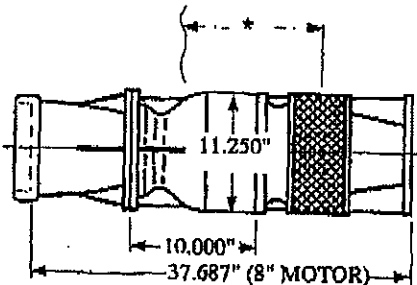
K FACTOR

HORSEPOWER

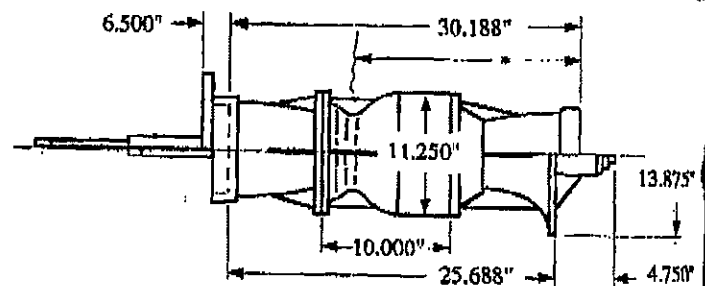


IMPELLER TYPE = ENCLOSED	STD. SHAFT DIA. = 1.937"	NO. STAGES	EFF. CHANGE	MATERIAL	B.E.P. EFF. CHANGE
IMPELLER NO. = SM13H	MAX. SHAFT DIA. = 1.937"	1	-3	IMP. - C.I.	0
IMPELLER WT. - LBS. = 14.9	STD. LATERAL = .937"	2	-2	IMP. - NI-RI	-2
ONE STAGE WT. - LBS. = 290.0	DISCHARGE SIZES = 8", 10"	3	-1	IMP. - S.S.	-2
ADD'L STAGE WT. - LBS. = 103.0	SUCTION SIZES = 8"	4	0	BOWL - BRZ.	-1
MAX. SPHERE SIZE = 1.187"	ONE STAGE WR ² = .718	5	0	BOWL - NI-RI	-1
MIN. SUBMERGENCE* = 18"				BOWL - S.S.	-2

Δ CONSULT FACTORY



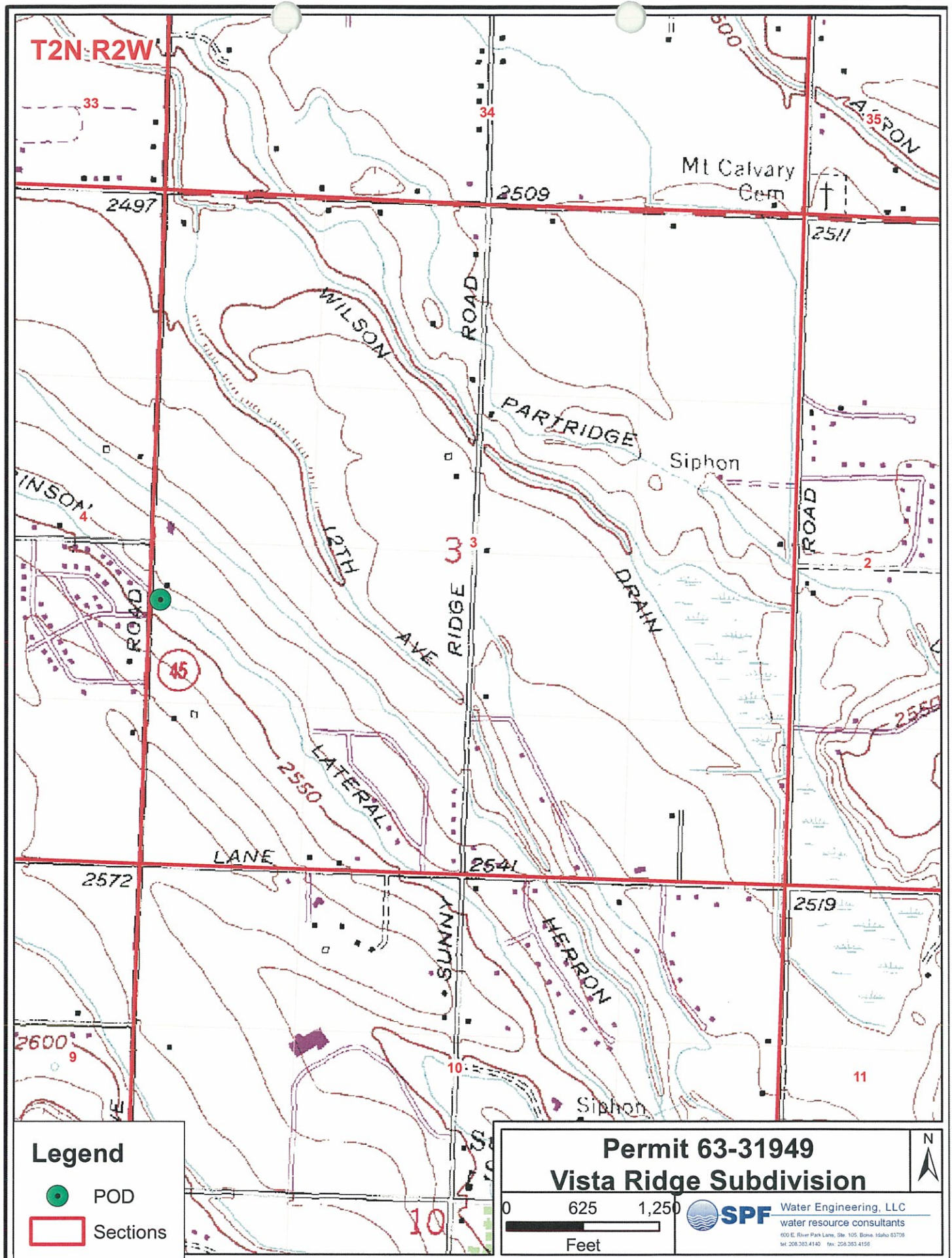
SUBMERSIBLE TURBINE



LINESHAFT TURBINE

ATTACHMENT D

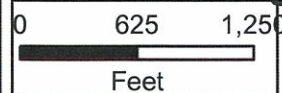
TOPO MAP AND 2006 AERIAL PHOTOS



Legend

- POD
- Sections

**Permit 63-31949
Vista Ridge Subdivision**



SPF Water Engineering, LLC
water resource consultants
600 E. River Park Lane, Ste. 105, Boise, Idaho 83708
tel: 208.383.4140 fax: 208.383.4158



T2N R2W

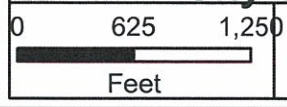
2006 Photo



Legend

-  POD
-  Sections

Permit 63-31949
City of Nampa



 **Water Engineering, LLC**
water resource consultants
600 E. River Park Lane, Ste. 105, Boise, Idaho 83708
tel: 208.383.4140 fax: 208.383.4158



2006 Photo

04N03W

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03N02W

03N01W

02N03W

02N02W

02N01W

Legend



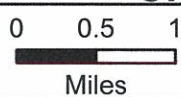
POD



Current GIS Shape for Nampa's Service Area

Permit 63-31949

City of Nampa



Water Engineering, LLC
water resource consultants
600 E. River Park Lane, Ste. 105, Boise, Idaho 83708
tel: 208.383.4140 fax: 208.383.4150



ATTACHMENT E
PHOTOS



16-inch Well and 200 HP Turbine Pump



Flowmeter



Well and Pump House

ATTACHMENT F
MEMO REGARDING PERMIT CONDITION NO. 7

TECHNICAL MEMORANDUM

DATE: July 31, 2009
TO: Idaho Department of Water Resources
FROM: Terry Scanlan, P.E., P.G., CWRE 10-129
RE: 63-31949 (Vista Ridge Well) – Permit Condition No. 7
JOB NO.: SPF 270.0070

This memo provides information requested under Condition No. 7 of Permit 63-31949. The condition is provided below for reference purposes.

In connection with the proof of beneficial use submitted for this permit, the permit holder shall also submit a report showing the total annual volume, the maximum daily volume, and the maximum instantaneous rate of flow diverted from the point of diversion authorized for this permit during the development period. The report shall also show the maximum instantaneous rate of diversion, either measured or reasonably estimated by a qualified professional engineer, geologist, or certified water rights examiner, for the entire City of Nampa municipal water system. The report shall also describe and explain how water diverted under this permit provides an additional increment of beneficial use of water for the City of Nampa municipal water system as opposed to an alternative point of diversion for prior water rights already held and used by the City of Nampa for its municipal water system.

Diversions from Authorized Point of Diversion. The City of Nampa maintains totalizing meters on most of the wells supplying water to its municipal irrigation system. City staff visit well sites regularly and record flow volumes. Copies of the Vista Ridge measurement records for 2007 and 2008 are attached. The data are summarized in Table 1.

	Total Annual Volume (Mgal)	Total Annual Volume (af)	Max. Daily Volume (af)
2007	105,902	325	2.8
2008	116700	358	4.0

Table 1: Summary of Diversion Data for Vista Ridge Well

There is no record of the maximum instantaneous rate of flow diverted from the Vista Ridge well. The calculated maximum instantaneous diversion rate is approximately 1750 gpm (3.90 cfs) based on pump performance curve and well capacity.

Diversions from Entire City of Nampa Municipal Water System. The nominal capacity of the City of Nampa municipal irrigation system under normal operating conditions is estimated at 59.23 cfs. The estimate is based on 2007 capacities determined by JUB Engineers in their "Pressure Irrigation System Master Plan Update" dated October 2008, plus the diversion rate capacities at Vista Ridge Well (3.9 cfs) and Happy Valley Well (5.57 cfs) measured or calculated during field examinations in 2009 by SPF.

It should be recognized that the 59.23 cfs estimate likely underestimates the peak system capacity when the diversion points are operating as designed. The JUB estimates are nominal capacities at normal discharge pressures. Peak capacities, occurring during times of high demand and low system pressures, will be higher. Also, as with any water system, some of the pumps or wells have experienced declines in production due to pump wear or well rehabilitation. Several well pumps are currently producing less than their licensed or decreed capacities, indicating the need for rehabilitation. On-going maintenance activities by the City, such as well cleaning or pump rebuilding, will increase these capacities. Therefore, allowing for low system pressures during peak demands and normal capacity increases due to maintenance, the maximum instantaneous diversion capacity could easily be 25 percent higher than the 59.23 cfs estimate. Therefore, installed capacity, when properly operating during peak demand periods, is likely to be as high as 74 cfs. This estimate of capacity is further justified based on the irrigation demands described below.

Additional Beneficial Use Under this Permit. The authorized diversion rate from groundwater sources for the municipal pressure irrigation system, based on current licensed or decreed water rights, is 64.36 cfs. Permits 63-32337 (Happy Valley Well, 5.0 cfs) and 63-31949 (Vista Ridge, 3.4 cfs) increase this amount to 72.76 cfs.

The current City of Nampa municipal service area boundary is shown in Figure 1. The entire area is approximately 39,000 acres. Much of this land is not currently irrigated from the municipal system, but eventually will be in the future. If we assume that 50% of the area within the municipal service area will eventually be irrigated, the total irrigation demand (at 0.02 cfs per acre) could be as high as 390 cfs in the future.

Within the municipal service area boundary, the City is currently assessed for irrigation water provided by three entities: Pioneer Irrigation District, Boise-Kuna Irrigation District and Nampa & Meridian Irrigation District. The number of acres assessed in 2008 is summarized in Table 2; the total is 10,055.68 acres.

District	2008 Assessment (acres)
Boise-Kuna	287.61
Nampa & Meridian	7,113.93
Pioneer	2,654.14
Total	10,055.68

Table 2: 2008 Irrigation Assessments

If we assume that sufficient water to irrigate 10,055.68 acres should also be supplied by supplemental ground water (for those times when surface water is not deliverable), the total demand (at 0.02 cfs per acre) is approximately 201 cfs. Using this estimate of irrigation demand, it is obvious that the current installed supplemental irrigation capacity (as much as 74 cfs) and existing licensed or decreed water rights (64.36 cfs) are insufficient to meet peak irrigation system demands from ground water sources. Therefore, the diversion authorized under permits 63-32337 and 63-31949 should be considered as additional increments of beneficial use for the City's municipal irrigation system.

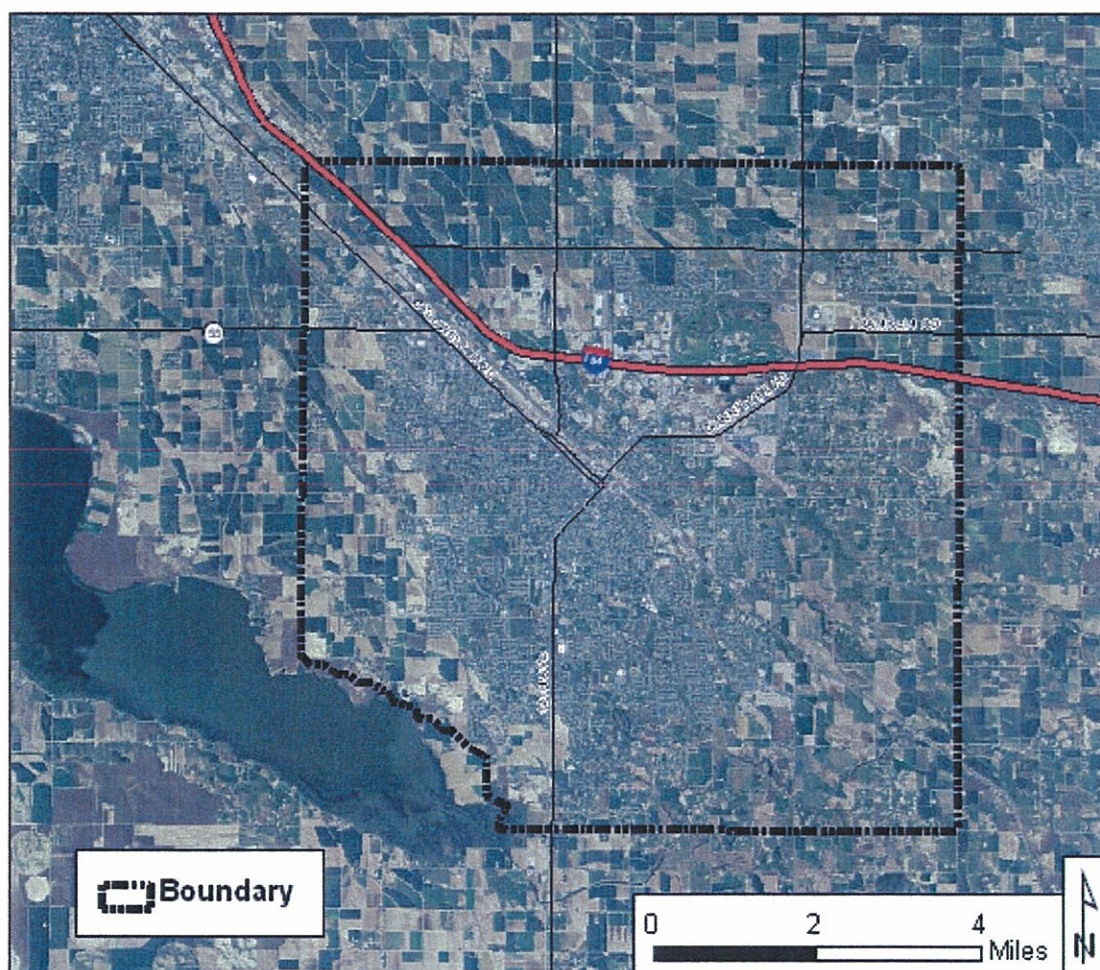


Figure 1: Municipal Service Area

Please note that it is the City's position that this and other permits it holds are for reasonably anticipated future needs and may be licensed on that basis. In this instance, however, there is no need for the Department to determine whether this permit was in fact issued for reasonably anticipated future needs (as opposed to short-term needs subject to "installed capacity" proof at the time of licensing). The reason the Department does not need to make this determination is that the City is able to demonstrate at this time that this permit, combined with its existing

licenses and decrees, is required to support its current installed capacity. If, for any reason, the Department concludes that this proof is inadequate for that purpose, the City would be pleased to provide additional documentation as required to document reasonably anticipated future needs over its planning horizon and to demonstrate that it satisfies the "capacity of the system" rule for licensing of rights held for reasonably anticipated future needs.

2008

Vista Ridge/000	Begin Read	End Read	Total
March	0	0	0
April	207552	218838	11286
May	218838	235058	16220
June	235058	248458	13400
July	248458	276882	28424
August	276882	299989	23107
September	299989	322341	22352
October	322341	324252	1911
		Season End Total	116700

2007

Vista Ridge/000	Begin Read	End Read	Total
March			0
April	101650	112484	10834
May	112484	132579	20095
June	132579	150471	17892
July	150471	172120	21649
August	172120	193583	21463
September	193583	205439	11856
October	205439	207552	2113
		Season End Total	105902

Pump:

VISTA DIOGE

Month/Year:

28 APRIL 2007

Begin Read:

101650-000

End Read:

112484-000

DAY	GPM	PSI	TOTAL GALLONS	COMMENT
1				
2				
3				
4				
5				
6	500		101651-000	SET @ 500 gpm (IN HAND)
7				
8				
9	300	46	103002-000	
10				
11				
12	200	50	103948-000	
13				
14				
15				
16	300	45	105548-000	PUT IN AUTO
17				
18	150	84	106470-000	
19				
20	200	84	107177-000	
21				
22				
23	460	84	108564-000	
24				
25				
26	400	84	110087-000	
27				
28				
29				
30	400	80	112484-000	
31				

MONTH TOTALS: 10834-000

Pump: VISTA RIDGE

Month/Year: MAY

2007

Begin Read: 112484-000

End Read: 132579-000

DAY	GPM	PSI	TOTAL GALLONS	COMMENT
1				
2	400	85	113633-000	
3				
4	300	80	114450-000	
5				
6				
7	400	80	115856-000	
8				
9	900	88	117277-000	
10				
11	500	87	118673-000	
12				
13				
14	400	90	121458-000	
15				
16	400	87	122979-000	
17				
18	500	87	124393-000	
19				
20				
21	400	87	126687-000	
22				
23	400	79	127800-000	
24				
25	500	84	129170-000	
26				
27				
28				
29	500	84	131866-000	
30				
31	500	84	132579-000	

MONTH TOTALS: 20095-000

Pump: VISTA RIDGE

Month/Year: JUNE

2007

Begin Read: 132579-000

End Read: 150471-000

DAY	GPM	PSI	TOTAL GALLONS	COMMENT
1	400	87	133337-000	
2				
3				
4	2900	30	134740-000	WAS OFF
5				
6	400	79	135409-000	
7				
8	500	79	136895-000	NEW MOTOR SAVER
9				
10				
11	100	80	138823-000	
12				
13	200	80	139598-000	
14				
15	200	80	140848-000	
16				
17				
18	200	80	142827-000	
19				
20	300	79	144189-000	
21				
22	000	79	145502-000	
23				
24				
25	500	82	147606-000	
26				
27	500	80	148990-000	
28				
29	550	80	150471-000	
30				
31				

MONTH TOTALS: 17892-000

Pump: VISTA RIDGE

Month/Year: JULY

2007

Begin Read: 150471-000

End Read: 172120-000

DAY	GPM	PSI	TOTAL GALLONS	COMMENT
1				
2	500	82	152682-000	
3				
4				
5	300	82	154948-000	
6	450	82	158854-000	
7				
8		8		
9	300	82	158244-000	
10				
11	300	60	159855-000	Set @ 60 PSI
12				
13	400	60	161223-000	
14				
15				
16	500	60	163219-000	
17				
18	200	60	164597-000	
19				
20	556	60	165648-000	
21				
22				
23	2300	70	167256-000	MOTOR SAVER ZALLET
24				
25				
26	400	60	169294-000	
27	500	60	169993-000	
28				
29				
30	400	60	172120-000	
31				

MONTH TOTALS: 21649-000

Pump: VISTA RIDGE

Month/Year: August 2007

Begin Read: 172120-000

End Read: 193583-000

DAY	GPM	PSI	TOTAL GALLONS	COMMENT
1				
2	250	60	174164-000	
3	350	60	174780-000	
4				
5	~~550~~	~~60~~	~~176917-000~~	
6	550	60	176917-000	
7				
8	350	60	178142-000	
9				
10	600	60	179464-000	
11				
12				
13	300	60	181607-000	
14				
15				
16				
17	200	74	184488-000	Put Set Point back to 60psi. 9/20
18				
19				
20	500	60	186484-000	
21				
22	400	60	187642-000	
23				
24	400	60	188894-000	
25				
26				
27	400	60	190863-000	
28				
29	250	60	192172-000	
30				
31	300	60	193583-000	

MONTH TOTALS: 21443-000

Pump: VISTA RIDGE

Month/Year: SEPT

2007

Begin Read: 193583-000

End Read: 205439-000

DAY	GPM	PSI	TOTAL GALLONS	COMMENT
1				
2				
3				
4	2400	0	193629-000	OFF
5				
6	250	60	194866-000	
7	100	60	195334-000	
8				
9				
10	400	60	196877-000	
11				
12	400	60	197939-000	
13				
14	400	60	199104-000	
15				
16				
17	400	60	200836-000	
18				
19	300	60	201811-000	
20				
21	300	60	202731-000	
22				
23				
24	350	60	203982-000	
25				
26	300	60	204756-000	
27				
28	350	60	205439-000	
29				
30				
31				

MONTH TOTALS: 11856 -000

Pump: VISTA RIDGE

Month/Year: OCT

2007

Begin Read: 205439-000

End Read:

DAY	GPM	PSI	TOTAL GALLONS	COMMENT
1	250	60	206728-000	
2				
3	150	60	207236-000	
4	450	60	207652-000	
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				

MONTH TOTALS:

Pump : Vista Ridge

Month/Year:

APRIL 2008

Begin Read:

207552

End Read: 218838-000

Day	GPM	PSI	Total Gallons	Comment
1			-000	
2			-000	
3			-000	
4	400	—	207552 -000	THROTTLED @ 400 GPM.
5			-000	
6			-000	
7	400	—	207593 -000	" " "
8	400	—	207625 -000	" " "
9	400	26	207682 -000	" " "
10	500	50	207693 -000	" " 500
11	500	60	208124 -000	AUTO 60 PSI
12			-000	
13			-000	
14	500	65	209392 -000	" 65 PSI
15			-000	
16	700	72	210177 -000	72 PSI
17	800	72	210732 -000	
18	300	72	211274 -000	
19			-000	
20			-000	
21	300	72	212952 -000	
22			-000	
23	200	72	214051 -000	
24	400	72	214542 -000	
25	400	75	215156 -000	75 PSI
26			-000	
27			-000	
28	500	75	217369 -000	
29	650	75	218145 -000	
30	700	75	218838 -000	
31			-000	

Month Totals: 11,286,000

NAVA OUTLET 2000 0000 1

Pump : Vista Ridge

Month/Year:

MAY 2008

Begin Read: 218838-000

End Read: 235058-000

Day	GPM	PSI	Total Gallons	Comment
1	—	75	219549 -000	SET @ 75 PSI.
2			-000	
3			-000	
4			-000	
5	—	75	222476 -000	
6	SAMPLES		-000	
7	700	75	223817 -000	
8	400	85	224158 -000	" " 85 P.S.I.
9	500	85	224895 -000	
10			-000	
11			-000	
12	700	85	226995 -000	
13	400	85	227662 -000	
14	600	92	228329 -000	IN HAND, 48 HZ, TO HELM R.T.
15	600	92	229194 -000	
16	2300	20	229361 -000	POWER WAS OUT!
17			-000	
18			-000	
19	500	90	231832 -000	
20	300	90	233135 -000	
21	SAMPLES		-000	
22	400	90	233714 -000	
23	600	80	233853 -000	SET @ 80 PSI.
24			-000	
25			-000	
26			-000	
27	—	80	234219 -000	
28	700	80	234536 -000	
29	200	80	234806 -000	
30	200	80	235058 -000	
31			-000	

Month Totals: 16,220,000

Pump : Vista Ridge

Month/Year:

JUNE 2008

Begin Read: 235058-000

End Read: 248458-000

Day	GPM	PSI	Total Gallons	Comment
1			-000	SET @ 80 PSI.
2	300	80	235889 -000	
3			-000	
4			-000	
5			-000	
6	300	80	237312 -000	
7			-000	
8			-000	
9	300	80	238507 -000	
10			-000	
11	100	82	239542 -000	
12			-000	
13	100	72	239920 -000	"FAULT"
14			-000	
15			-000	
16	700	80	241326 -000	
17	800	80	242437 -000	
18	600	85	242852 -000	SET @ 85 P.S.I.
19			-000	
20	500	85	244430 -000	
21			-000	
22			-000	
23	600	85	246814 -000	
24			-000	
25	400	85	248458 -000	
26			-000	
27			-000	
28			-000	
29			-000	
30			-000	
31			-000	

Month Totals: 13,400,000

Pump : Vista Ridge

Month/Year:

JULY 2008

Begin Read: 248458-000

End Read: 276882-000

Day	GPM	PSI	Total Gallons	Comment
1			-000	Sit @ 90 PSI
2	500	85	249993 -000	
3	800	90	250908 -000	
4			-000	
5			-000	
6			-000	
7	500	92	255505 -000	
8	500	90	256498 -000	
9	450	88	257425 -000	
10	650	88	258195 -000	
11	500	90	259281 -000	
12			-000	
13			-000	
14	600	88	262102 -000	
15			-000	
16	500	88	263923 -000	
17	600	88	264740 -000	
18	700	88	265661 -000	
19			-000	
20			-000	
21	600	88	268448 -000	
22	400	88	269456 -000	
23	300	88	270191 -000	
24			-000	
25	700	88	271704 -000	
26			-000	
27			-000	
28	600	88	274318 -000	
29			-000	
30	500	88	276033 -000	
31	500	88	276882 -000	

Month Totals: 28,424,000

Pump : Vista Ridge

Month/Year:

AUGUST 2008

Begin Read: 276882-000

End Read: 299989-000

Day	GPM	PSI	Total Gallons	Comment
1	700	88	277715-000	
2			-000	
3			-000	
4	500	88	280028-000	
5			-000	
6	500	88	281878-000	
7	500	88	282685-000	
8	350	40	283689-000	
9			-000	
10			-000	
11	400	88	286297-000	
12			-000	
13	500	88	287799-000	
14			-000	
15	500	88	289499-000	
16			-000	
17			-000	
18	500	88	292019-000	
19			-000	
20	1100	88	292423-000	
21	600	88	293230-000	
22	~~350~~ 500	~~70~~ 88	294095-000	
23			-000	
24			-000	
25	500	88	296573-000	
26			-000	
27	700	88	298282-000	
28			-000	
29	400	88	299108-000	
30	500	90	299989-000	
31			-000	

Month Totals: 23,107,000

Pump : Vista Ridge

Month/Year:

SEPTEMBER 2008

Begin Read: 299989-000

End Read: 322341-000

Day	GPM	PSI	Total Gallons	Comment
1			-000	
2	400	86	303256 -000	
3			-000	
4			-000	
5	500	88	305527 -000	
6			-000	
7			-000	
8	400	88	307803 -000	
9			-000	
10	450	88	309265 -000	
11			-000	
12	400	88	310796 -000	
13			-000	
14			-000	
15	500	88	312959 -000	
16	—	80	313791 -000	Set @ 80 PSI
17	400	85	314220 -000	" " 85 "
18			-000	
19	600	85	315579 -000	
20			-000	
21			-000	
22	300	85	317310 -000	
23			-000	
24	400	85	318414 -000	
25	400	85	319038 -000	
26	800	85	319541 -000	
27			-000	
28			-000	
29	400	84	321558 -000	
30	300	85	322341 -000	
31			-000	

Month Totals: 22,352,000

Pump : Vista Ridge

Month/Year:

OCTOBER 2008

Begin Read: 322391-000

End Read: 324252-000

Day	GPM	PSI	Total Gallons	Comment
1	400	85	322901-000	
2	400	85	323597-000	
3	—	—	324252-000	
4			-000	OFF
5			-000	
6			-000	
7			-000	
8			-000	
9			-000	
10			-000	
11			-000	
12			-000	
13			-000	
14			-000	
15			-000	
16			-000	
17			-000	
18			-000	
19			-000	
20			-000	
21			-000	
22			-000	
23			-000	
24			-000	
25			-000	
26			-000	
27			-000	
28			-000	
29			-000	
30			-000	
31			-000	

Month Totals: 1,911,000

YEARLY TOTAL: 116,700,000