## **MASTER APPLICATION**

1892

CANYON COUNTY DEVELOPMENT SERVICES DEPARTMENT 111 North 11<sup>th</sup> Avenue, #140, Caldwell, ID 83605 www.canyonco.org/dsd.aspx Phone: 208-454-7458 Fax: 208-454-6633

	OWNER NAME: Thornton Gallup LLC.	
OWNER	MAILING ADDRESS: PO BOX 1495 Nampa ID 83653	
• milli	PHONE: JO8. 880. 0539 EMAIL: athorntonestee head metal.	د٥
I consent to this	application and allow DSD staff / Commissioners to enter the property for site inspections. If owner(s) are a business entity, — please include business documents, including those that indicate the person(s) who are eligible to sign.	
Signature:	toren attonte Date: 12 14.21	
(AGENT)	CONTACT NAME: Will Mason	
ARCHITECT	COMPANY NAME: Mason & Associates, Inc	
ENGINEER BUILDER	MAILING ADDRESS: 924 3rd street South ste B Nampa	
	PHONE: 208-454-0256 EMAIL: WATASON@Masonardassociator. us	
	STREET ADDRESS: 23442 Freeze out Rd	
	PARCEL #: R3447900000 LOT SIZE/AREA: 31.41 acres	
SITE INFO	LOT: BLOCK: SUBDIVISION:	
	QUARTER: NW SECTION: 3 TOWNSHIP: 4N RANGE: 3W	
	ZONING DISTRICT: AG FLOODZONE (YES/10)	
HEARING	CONDITIONAL USECOMP PLAN AMENDMENTCONDITIONAL REZONE	
LEVEL	ZONING AMENDMENT (REZONE) DEV. AGREEMENT MODIFICATIONVARIANCE > 33%	
APPS	MINOR REPLAT VACATIONAPPEAL	
	SHORT PLAT SUBDIVISIONPRELIMINARY PLAT SUBDIVISIONFINAL PLAT SUBDIVISION	
DIRECTORS	ADMINISTRATIVE LAND DIVISIONEASEMENT REDUCTIONSIGN PERMIT	
DECISION	PROPERTY BOUNDARY ADJUSTMENTHOME BUSINESSVARIANCE 33% >	
APPS	PRIVATE ROAD NAMETEMPORARY USEDAY CARE	
	OTHER	
CASE NUMB	ER: RZ 2021-0053 DATE RECEIVED:	
RECEIVED B	APPLICATION FEE: CK MO CC CASH	

Master Application	
Canyon County Development Services 1115 Albany Stree	et, Caldwell, ID 83605.
www.canyoncounty.org Phone 208-454-7458 fax 208-454-	-6633
Owner(s) information:	Address: 719 12+ 5. St. B
Name: Pioneer Homes	
Telephone: (208) 468 - 9200 Fax	Email: briane pioncerhonesidaho.com
City: Nampa State: 10 Zip: 83/51	<u>Tione or Humas</u> Contraction Signature: (Owpers) Date
I consent to this application and agree to allow DSD Staff / Commissioners to enter the property for site inspections.	If owner(s) are a business entity, please include business documents, including those that indicate the person(s) who is eligible to sign.
Applicant: Representative / Business Name: Name: Mason & Associates Inc.	Additional Contact if applicable: Business Name: Name:
Address: 924 3rd St. S. Ste.8	Address:
City: <u>Nompo</u> State: <u>10</u> Zip: <u>83051</u>	City: State: Zip:
Telephone: (208) 454 - 0256 Fax: 208 - 467 - 4130	Telephone: Fax:
Email: WM250n@mason and associates.us	Email:
I certify this information is correct to the best of my	Engineer// Surveyor if applicable: Business Name:
knowledge.	Name: Will (110.50n Phone: (208) 454-0250
1) JINIE () (10000 10/14/202	Address: 924 3rd St. S. St. 8 Fax: N/A
Signature: (Applicant)	1 City: Nompo- State: 1D Zip 83651
Signature. (Applicant) Date	Email: Whisph & mason and associates us
Site Information: Address: 23442 Free Tax Parcel Number(s): <u>R 3447900000</u>	zeout Rd. 83607 Total Acreage: ± 31.41
Quarter Section: <u>NW</u> Section: <u>3</u> T	ownship: <u>4 N.</u> Range: <u>3 W.</u> Zoning: <u>AG</u>
City of Area of Immaster minister Subdivisions	Lat: Plack:
Area of Impact: <u>middleton</u> Subdivision:	Lot Block
Check application type:	
Administr	rative Applications
Assisted Care Facility	Parcel Inquiry
Bed and Breakfast	Property Boundary Adjustment     Oursei-Public Lice
Reduction Frontage, Easement, Road Lot	□ Sign
□ Floodplain Development	Temporary Use I New Application Renewal
□ Home Business□ New Application □ Renewal	Utility Facility
Land Division Administrative	Variance up to 33%
Mineral Extraction short term     Public Service Agency Telecom >75'	Zoning Compliance Certificate
Hearing J	Level Applications
Comprehensive Plan Change Text Map	□ Variance
Conditional Use	🛱 Zoning Ordinance Amendment 🖻 Map 🗖 Text
Road Name Change	
Subdivi	sion Applications
🗇 Final Plat	Plat Amendment or Minor Replat
Short Plat	Simple Changes to a Plat
Preliminary Plat	vacation of Plat, Lot, Koad, Easement

015-1001 frm

Office Use Only:	Case #:	Received by:	Date: 0/18 Fees:	Receipt #:
	BZAZI	-1153	\$852	5
	500001	2005	+ \$1780	2
	2001	-005-	10,21	T
			Naal	,

Master Application must be accompanied with an application checklist relative to application type. Rev.11.5.10

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**CANYON COUNTY DEVELOPMENT SERVICES DEPARTMENT** 

111 N. 11<sup>th</sup> Ave. #140 • Caldwell, Idaho • 83605 • Phone (208) 454-7458 Fax: (208) 454-6633 • www.canyoncounty.org/dsd

## **APPLICATION FOR IRRIGATION PLAN APPROVAL**

(Idaho Code 31-3805)

Applicant(s)	Pioneer Homes Name 719 1st Street of Street Address	(208) 468 - Daytime Telep <u>5. Suite B Nampa, 10</u> City, State	9200 hone Number <u>83651</u> Zip			
Representative Name	Brian Falck 719 15t St. S. Suit Street Address	(208) 468 - 9200 aytime Telephone Number / E-mail Add re B Nampa, ID City, State	lress <u>83651</u> Zlp			
Location of Subject Property: <u>23442 Freezeout Rd. Caldwell, 10</u> 83607 Two Nearest Cross Streets or Property Address City						
Assessor's Account Nur	nber(s): R <u>344790000</u>	Section <u>3</u> Township <u>4N</u>	Range $\underline{SW}$ .			
Case No.: This land:						
	nd has no water rights available to i	it if day places size this descent				

return to the Development Services Department representative from whom you received it.

Idaho Code 31-3805 states that when all or part of a subdivision is "located within the boundaries of an existing irrigation district or canal company, ditch association, or like irrigation water delivery entity ... no subdivision plat or amendment to a subdivision plat or any other plat or may recognized by the city or county for the division of land will be accepted, approved, and recorded unless:"

- a. The appropriate water rights and assessment of those water rights have been transferred from said lands or excluded from an irrigation entity by the owner; or
- b. The owner, person, firm, or corporation filing the subdivision plat or amendment to a subdivision plat or map has provided underground tile or conduit for lots of one (1) acre or less, or a suitable system for lots of more than one (1) acre which will deliver water to those land owners within the subdivision who are also within the irrigation entity with the appropriate approvals:

- 1. For proposed subdivisions located within negotiated area of city impact, both city and county zoning authorities must approve such irrigation system in accordance with Idaho Code Section 50-1306. In addition, the irrigation entity charged with the delivery of water to said lands must be advised regarding the irrigation system.
- 2. For proposed subdivisions outside of negotiated areas of city impact, the delivery system must be approved by the Planning and Zoning Commission and the Board of County Commissioners with the advice of the irrigation entity charged with the delivery of water to said lands.

To better understand your irrigation request, we need to ask you a few questions. A list of the map requirements follows the short questionnaire. Any information missing information may result in the delay of your request before the Planning and Zoning Commission and ultimately the approval of your irrigation plan by the Board of County Commissioners.

1.	Are you within an area of negotiated City Impact? X Yes No
2.	What is the name of the irrigation and drainage entities servicing the property?
	Irrigation: Black Canyon Irrigation District
	Drainage: Black Canyon Irrigation District
3.	How many acres is the property being subdivided? $\frac{\pm}{31.41}$ ACRES
4.	What percentage of this property has water? $\pm 65\%$
5.	How many inches of water are available to the property? 20.52 acres of water
6.	How is the land currently irrigated?       Surface       Irrigation Well         Sprinkler       Above Ground Pipe       Underground Pipe
7.	How is the land to be irrigated <u>after</u> it is subdivided? Surface Irrigation Well Sprinkler Above Ground Pipe Underground Pipe
8.	Please describe how the head gate/pump connects to the canal and irrigated land and where ditches and/or pipes go.
2	le are proposing the new headgate be in the last box in the
00	into a muchated on the south side of property. The head
3	to mill a weir box that treas our proposed pump statio
9.	Is there an irrigation easement(s) on the property?
10 <u> </u> r	How do you plan to retain storm and excess water on each lot? dividual lots are responsible for retention i treatment of storm
N	ater runott including the application of perimeter lot berming
10	prevent arrest 1st discharge into irrigation facilities.

O:\Department Forms\Subdivisions\Applications\360 Application for Irrigation Plan.docApplication for Irrigation Plan Approval Canyon County Development Services Department Page 2 **all a** 

11. How do you plan to process this storm water /excess irrigation water prior to it entering the established drainage system? (i.e. oil, grease, contaminated aggregates)

Through	Fil	tration	NO	dischar	ap of	PXCRSS	Win ter	will
enter	the	estab	libbed	drainage	SVSte	m		- well
				0	partition of the local dist	- formal		

#### **Irrigation Plan Map Requirements**

The irrigation plan must be on a scalable map and show all of the irrigation system including all supply and drainage structures and easements. Please include the following information on you map:

- 1 All canals, ditches, and laterals with their respective names.
- 2 Head gate location and/or point if delivery of water to the property by the irrigation entity.
- Rise locations and types, if any.
- Easements of all private ditches that supply adjacent properties (i.e. supply ditches and drainage ways).
- 5 Slope of the property in various locations.
- **6** Direction of water flow (use short arrows  $\rightarrow$  on your map to indicate water flow direction).
- 8 Location of drainage ponds or swales, if any where wastewater will be retained on the property.
- 9 Other information: \_\_\_\_\_

Also, provide the following documentation:

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- Copy of any water users' association / agreement currently in effect which shows water schedules and maintenance responsibilities.
  - Copy of all new easements ready for recording (irrigation supply and drainage).

If you are in a city area of impact, please include a copy of the approvals by the city planning and zoning commission and city council of your irrigation plan.

I, the undersigned, agree that prior to the Development Services Department accepting this application I am responsible to have all of the required information and site plans.

I further acknowledge that the irrigation system, as approved by the Planning and Zoning Commission and ultimately the Board of County Commissioners, must be <u>bonded</u> and/or <u>installed</u> prior to the issuance of a zoning compliance or building permit.

Signed: Pioneen Homes + Se Fach	Date: / /
Applicant / Property Owner	(Application Submitted)
Accepted By:	Date://

Director / Staff

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### CANYON COUNTY DEVELOPMENT SERVICES 111 North 11<sup>th</sup> Avenue, Caldwell, ID 83605 Phone: 208-454-7458 Fax: 208-454-6633

COUNTRO S
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GENERAL (4 Common	
1. How Many Lots are you proposing? 24 (20 Residental)	
2. Average Lot Size of the Residential Parcels? Acres	
IRRIGATION	
1. Irrigation Water is Provided via 🛛 Irrigation Well 🛛 🖬 Surface Water	
2. What percentage of the property has water? $\frac{205}{5}$ %	
3. How many inches of water are available to property? 20.52 ocres of water	
4. How do you plan to retain storm and excess water on each lot? Individual lots are responsible for retention i treatment of storr	הר
water runoff including the application of perimeter lot bermin to prevent direct lot discharge into irrigation facilities	rg
5. How do you plan to process storm water / excess irrigation water prior to it entering the established drainage system? <u>Through filtratism No discharge of excess water</u>	ed
will enter the established drainage system.	
ROADS	
1. Roads within the Development will be: M Public L Private L N/A	
HILLSIDE DEVELOPMENT	
1. Of the total lots requested, how many of the lots will contain slopes greater than 15%?	
Residential Non-Buildable Common	
2. Will the proposed Road(s) be located within any area that has slopes greater than 15%	
🗆 Yes 🙀 No	
SUBDIVISIONS WITHIN AN AREA OF CITY IMPACT	
1. Will you be requesting waivers of Subdivision Improvements from the City?	
🕅 Yes 🗆 No	
2. If yes, which waivers will you be requesting?	
🕅 Curbs 🕅 Gutters 🕅 Sidewalks 🕅 Streetlights 🕅 Landscaping	

## PRELIMINARY PLAT SUBMITTAL LIST

CANYON COUNTY DEVELOPMENT SERVICES DEPARTMENT

111 North 11<sup>th</sup> Avenue, #140, Caldwell, ID 83605 www.canyonco.org/dsd.aspx Phone: 208-454-7458



### THE FOLLOWING ITEMS MUST BE SUBMITTED WITH THIS CHECKLIST:

- Master Application completed and signed
- Irrigation Plan
- Detailed letter fully describing the request or project, include total number of lots, buildable lots, open space lots, size of lots, improvements and how you will mitigate adverse impacts

Fax: 208-454-6633

- Subdivision Worksheet
- Private Road Name application (if internal roads are private)
- Easement reduction application (if requesting an easement width less than 60 feet)
- 🔽 Preliminary Drainage Plan
- Preliminary Irrigation Plan
- D Preliminary Grading plan
- Copy of Preliminary Plat
- Deed or evidence of property interest to all subject properties.
- abla \$1440 + \$10/lot +\$100 (if in a city area of impact) non-refundable fee

#### NOTES:

- 1. After the plat is reviewed and found to be in compliance, an **additional five (5) copies and one electronic version of the final plat** shall be submitted.
- 2. It is highly recommended you approach Idaho Department of Water Resources and Southwest District Health to have a pre-application regarding your proposed development meeting prior to submittal to this department.

#### **PROCESS: PUBLIC HEARING**

### CANYON COUNTY DEVELOPMENT SERVICES

111 North 11th Avenue, Caldwell, ID 83605 Phone: 208-454-7458 Fax: 208-454-6633

PRELIMINARY PLAT CHECKLIST				
APPLICANT: Pioneer Homes	SUBIVISION NAME: Freezeout Ridge Estates			
LAND USE CASE #:	SUBDIVISION CASE #:			

#### CANYON COUNTY CODE OF ORDINANCES 12-008, § 07-17-09

The information hereinafter required as part of the preliminary plat submitted shall be shown graphically or by note on plans, and may comprise several sheets showing various elements or required data.

	Α.	FORM OF PRESENTATION:	APP.	DSD/SRT
	1.	Scale of Drawing (No more than $1''=100'$ unless approved by DSD prior to submission).	⊠	
	2.	Size of Drawing (No larger than 24"x36").	⊠	□
В.	INC	DENTIFICATION AND DESCRIPTIVE DATA:		
	1.	Proposed name of subdivision and its location by section, township and range.	⊠	
	2.	Reference by dimension and bearing to a section corner or quarter section corner.	Ø	□
	3.	Name, address and phone number of developer.	⊠	
	4.	Name address and phone number of the person preparing the plat.	⊠	□
	5.	North arrow.	⊠	
	6.	Date of preparation	⊠	
	7.	Revision block showing dates if any revisions subsequent to the original prepar- aration date. The revision block shall be part of the title block which shall be placed along the right edge of the drawing sheet.	⊠	
	8.	Vicinity map drawn to scale, clearly showing proposed subdivision location in relationship to adjacent subdivisions, main arterial routes, collector streets, etc.	⊠	□
<b>C</b> .	EXI	STING CONDITIONS DATA:		
	1.	2 foot Contours shown unless otherwise approved; show all areas in excess of 15% slope.		□
	2.	Location of water wells, streams, canals, irrigation laterals, private ditches, washes, lakes or other water features; direction of flow; location and extent of known areas subject to inundation.	⊠	□
	3.	Location, widths and names of all platted streets, railroads, utility rights of way of public record, public areas, permanent structures to remain including water wells and municipal corporation lines within or adjacent to the tract.	×	
	4.	Name, book and page numbers of any recorded adjacent subdivisions having a common boundary with the tract.	8	

5.	Existing zoning classification, by note.	X	
В.	EXISTING CONDITIONS DATA (continued):	APP.	DSD/SRT
6.	Approximate acreage of the tract, by note.	⊠	
7.	Boundary dimensions of the tract.		
8.	Names and addresses of adjoining property owners within three hundred (300) feet of the exterior boundary of the tract.	<b>X</b>	□
D. PR	OPOSED CONDITIONS DATA:		
1.	Road layout, including location, width and proposed names of roads, alleys, pathways, easements, and roadway connections, if any, to an adjoining platted tract.	⊠	□
2.	Typical lot dimensions including curvilinear data to scale; each lot numbered individually; total number of lots by type and grand total. A private road must be a lot.	<b>X</b>	
3.	Location, width and use of easements.	□	
4.	Designation of all land to be dedicated or reserved for public use with use indicated.	⊠	□
5.	If plat includes land for which multi-family, commercial, or industrial use is proposed, such areas shall be clearly designated together with existing zoning classification and status of zoning change, if any.	X	
6.	If the proposed subdivision is part of a larger area intended for development, a development master plan of the entire area shall be provided.	⊠	
7.	Appropriate information that sufficiently details the proposed development within any special development area such as hillside, PUD, flood plain, cemetery, manufactured home, large scale development, hazardous and unique areas of development.	X	□
8.	All roads must be labeled as either "private" or "public" behind or beneath the road name.	Ø	□
E. PR	OPOSED UTILITY METHODS:		
1.	Sewage: A statement as to the type of proposed sanitary sewage facilities.	⊠	
2.	Water Supply: A statement as to the type of proposed water supply facilities.		
3.	<b>Storm Water Disposal:</b> A statement as to the type of storm water disposal facilities which may include evidence as may be required relative to the design and operation of proposed storm water system.	x	□
4.	<b>Irrigation System:</b> A statement as to the proposed irrigation system, which may include evidence as may be required relative to the design and operation of any proposed irrigation system.	×	
5.	<b>Utility Easement:</b> The utility easement width shall be a minimum of ten (10) feet from the exterior boundaries and five (5) feet from the interior boundaries. Utility easements shall be shown graphically on the plat.	8	<u> </u>

Mason &

Professional Engineers, Land Surveyors and Planners

924 3rd St. So. Ste B, Nampa, ID 83651 Ph (208) 454-0256 Fax (208) 467-4130 Email: wmason@masonandassociates.us

### LETTER OF EXPLANATION REZONE AND PRELIMINARY PLAT FREEZEOUT ESTATES SUBDIVISION

This is a request for a rezone and preliminary plat for parcel number R34479 located east of Freezeout Road and south of Willis Road, Middleton, Canyon County Idaho. The property is currently zoned County Agricultural. The parcel is approximately 31 acres. We are requesting County Residential (R-1) zoning. The lots will range in size from 1-1.24 acres.

Canyon County's future land use map indicates the future designation of this property as residential. This property is also in the City of Middleton's impact area and their future land use zone is residential. The City of Middleton has requested the developer enter into an agreement to annex the lots into the City as soon as the City reaches the property. The City has also asked for easements to be provided for future City sewer and water services. The City Engineer has reviewed the preliminary plat and believe right-of-way easements will accommodate future City water and sewer.

A Nutrient Pathogen Study has been completed. Southwest District Health (SWDH) and the Idaho Department of Environmental Quality (DEQ) have both reviewed the study.

A Phase One Environmental Assessment was also done and is included.

There are four subdivisions within 300 feet or less of this property, Willis Estates, Saddleback Ridge, Ranchette Estates, and North Slope Estates. Lot sizes in these four subdivisions vary from 4.88 acres to 0.36 acres. The average size lot size for these subdivisions is 1.25 acres. The request for the R-1 zone with the preliminary plat depicted lots ranging from 1-1.24 acres is consistent with the surrounding subdivision land use and lot size.

Neighbor Concerns: The neighbors have voiced their concerns for endangered species. There is an irrigation drainage area on the west side of the property. There are no plans to disturb the area that may house wildlife. Included in this packet is the United States Fish and Wildlife Services endangered species list for this specific property. Per U.S Fish and Wildlife's Information for Planning and Consulting (IPaC), this location is likely to be home to a threatened plant called the Slickspot Peppergrass. It is also likely to be home to the monarch butterfly which is only considered a candidate. There are no other plants or animals that U.S Fish or Wildlife is concerned about in this area and there are no endangered plants or animals that utilize this property. The irrigation drainage area will not be used for a building area. It will remain a drainage area.

Mason &

Professional Engineers, Land Surveyors and Planners Page 2 of 2

The neighbors have also expressed concern their wells are in danger of going dry. Included in this packet are the results of Idaho Department of Water Resources (IDWR) monitoring well closest to this subdivision. These results indicate water levels vary from year to year but this area is not an area of concern for IDWR. The monitoring well 04N 03W 04DCB1 is approximately 1.2 miles from this location. The highest level of groundwater recorded was in 2019.

We believe that a request for R-1 zoning is in compliance with the County's comprehensive plan and is desired by the City of Middleton. The layout fits well with the surrounding residential subdivisions.



DEPARTMENT OF THE ARMY WALLA WALLA DISTRICT, CORPS OF ENGINEERS BOISE REGULATORY OFFICE 720 EAST PARK BOULEVARD, SUITE 245 BOISE, IDAHO 83704-9754

August 23, 2021

Walla Walla District Regulatory Division

SUBJECT: NWW-2021-00298

Mr. Robert T. Gallup Thornton Gallup LLC P.O. Box 1495 Nampa, Idaho 83653

Dear Mr. Gallup:

We have reviewed your September 16, 2020 application for permit in accordance with Section 404 of the Clean Water Act and have determined that the subject project area contains water features which are (b)(5) excluded waters, and not considered waters of the United States. Therefore, a Department of Army authorization is not required.

Enclosed is our Department of Army (DA) Approved Jurisdictional Determination (AJD) that there are no waters of the United States, including wetlands, within your proposed project area. Therefore, no DA authorization is required. This decision is based upon our review of the information your agent provided and additional information available to our office. Your project site is located at the C.L.E. 10.2 Lateral at the Freezeout Ridge Estates, within Section 3 of Township 4 North, Range 3 West, near latitude 43.715278° N and longitude -116.675556° W, in Canyon County, in Caldwell, Idaho. Your request has been assigned file number NWW-2021-00298, which should be referred to in future correspondence with our office regarding this site.

The DA exerts regulatory jurisdiction over waters of the United States (U.S.), including wetlands, pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344). Section 404 of the Clean Water Act requires a DA permit be obtained prior to discharging dredged or fill material into waters of the U.S., which are defined at 33 CFR 328.3.

This approved JD is valid for a period of 5-years from the date of this letter, unless new information supporting a revision is provided to this office before the expiration date. Also enclosed, you will find the Approved Jurisdictional Determination Form addressing wetlands and waters of the U.S. located within the JD review area, and a Notification of Administrative Appeals Options and Process and Request for Appeal Form (RFA) regarding this DA Approved Jurisdictional Determination. Should you disagree with certain terms and/or conditions this Approved JD, the Notification of Administrative Appeal Options form outlines the steps to take to file your objection. Please note, the RFA form must be received by the Northwest Division Office no later than October 22, 2021.

Nothing in this letter shall be construed as excusing you from compliance with other Federal, state, or local statutes, ordinances or regulations which may affect this work.

If you have any questions about this determination, please contact Sarah Windham by telephone at 208-433-4464, by mail at the address in the above letterhead, or via email at <u>sarah.v.windham@usace.army.mil</u>. We appreciate your cooperation with the Corps of Engineers' Regulatory Program.

Sincerely Shane Skaar

Environmental Resources Specialist Regulatory Division

Enclosures:

Wetland/Waters Delineation Map Approved JD Form Notification of Administrative Appeal Options and Request for Appeal Form

Mason & Associates Inc

Professional Engineers, Land Surveyors and Planners

924 3<sup>rd</sup> St. So. Suite B, Nampa, ID 83651 Ph (208) 454-0256 Fax (208) 467-4130

April 20, 2021

Dear Property Owner and Neighbor,

You are invited to participate in an onsite neighborhood meeting on May 5<sup>th,</sup> 2021 between 6:00-6:30 pm. The location of the meeting is 23442 Freezeout Road, Caldwell. For further clarification please refer to the attached exhibit.

If you are uncomfortable due to the COVID-19 you may utilize one of the avenues below to voice your concern and questions. Please be willing to offer your name and address so that your opinions can be passed along to Canyon County Development Services.

A rezone is being requested to change the current agricultural land use to residential (R-1) land use along with a preliminary plat.

Contact information:

Mail:

**Email:** 

**Phone:** 

(208) 454-0256 Ask for Angie

Mason & Associates, Inc. Attn: Angie Cuellar 924 3<sup>rd</sup> Street South, Ste. B Nampa, ID 83651

acuellar@masonandassociates.us

Thank you,

. lle

Angie Cuellar, Planner Mason & Associates, Inc.



### **NEIGHBORHOOD MEETING SIGN-UP**

CANYON COUNTY DEVELOPMENT SERVICES DEPARTMENT 111 North 11<sup>th</sup> Avenue, #140, Caldwell, ID 83605



 111 North 11<sup>th</sup> Avenue, #140, Caldwell, ID 83605

 www.canyonco.org/dsd.aspx
 Phone: 208-454-7458
 Fax: 208-454-6633

NEIGHBORHOOD MEE CANYON COUNTY ZONIN	TING SIGN UP SH g ordinance §07-01-1	HEET 5		
Applicants shall conduct a neighborhood meeting for any proposed comprehensive plan amendment, zoning map amendment (rezone), subdivision, variance, conditional use, zoning ordinance map amendment, or other requests requiring a public hearing.				
SITE INFORMATION				
Site Address: O Freezeout Rd	Parcel Number: R 34479			
City: Middleton	State: ID	ZIP Code:		
Notices Mailed Date: April 20, 2021	Number of Acres: 3	Current Zoning: AG		
Description of the Request: rezone and preliminary plat.				
APPLICANT / REPRESENTATIVE INFORMATION				
Contact Name: Will Mason / Br	ian Falk			
Company Name: Mason and Associat	es / Pioneer H	bries		
Current address: 924 3rd Street S				
City: Nampa	State: ±D	ZIP Code: 8365/		
Phone: (208) 454-0256	Cell:	Fax:		
Email: wmasone mason and associates.	21			

MEETING INFORMATION				
DATE OF MEETING: May 5, 2021	MEETING LOCATION: On site			
MEETING START TIME: 6Pm	MEETING END TIME: 7pm			
ATTENDEES: See below				
NAME (PLEASE PRINT)	SIGNATURE: ADDRESS:			
1. Harman Menne	Lynn 2337 + Free quet of			
2. STEVE DEBLASIO (DED)	14217 LANGO LANE			
3. Farl Burchavel Ja	Idy Cordeniz 23464 FVEEROUT Rd			
4. VALERIE ORR	1 33444 FREEZEDUT RP			
5. CHARLENE ORR	23444 FREEZEDUT PD			
6. DEDDIE WMTC	23441			
7. DEN B. SCHNELDER	L3176			
B. Wrand (7, 6 20m	h 23417 theereput Bd			
sin in i lomic and				

Revised 11/25/20

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10.	STEVE	AND DANA	CAROSAHAM	See	- 1405h	LOANTOR /	1045 14
11.	STOREN	FAIRWOATHO	n Ston A	munut	23434	FREEZEUVT	RODO
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### NEIGHBORHOOD MEETING CERTIFICATION:

I certify that a neighborhood meeting was conducted at the time and location noted on this form and in accordance with Canyon County Zoning Ordinance § 07-01-15.

APPLICANT/REPRESENTATIVE (Please print);-

BRTAN FALCK APPLICANT/REPRESENTATIVE (Signature):

DATE: 5 / 5 / 21

IPaC

NSUL

18

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

# **Project information**

NAME

Freezeout Ridge Estates

LOCATION



DESCRIPTION None

Chukar S

## Local office

Idaho Fish And Wildlife Office

(208) 378-5243
(208) 378-5262

https://ecos.fws.gov/ipac/project/XYDI4W2MQVD3HBMZ2FGUTK6NF4/resources

ale Bay Un

2445 ft

2/7

# Endangered species

# This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Log in to IPaC.
- 2. Go to your My Projects list.
- 3. Click PROJECT HOME for this project.
- 4. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the <u>Ecological Services Program</u> of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact <u>NOAA Fisheries</u> for <u>species under their jurisdiction</u>.

- 1. Species listed under the <u>Endangered Species Act</u> are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the <u>listing status page</u> for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
- 2. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Insects

NAME

20

Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. http://ecos.fws.gov/ecp/species/9743

# **Flowering Plants**

NAME

Slickspot Peppergrass Lepidium papilliferum There is proposed critical habitat for this species. The location of the critical habitat is not available. http://ecos.fws.gov/ecp/species/4027

# Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves. NSUL

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

# Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.

2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <u>http://www.fws.gov/birds/management/managed-species/</u> birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/ conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

THERE ARE NO MIGRATORY BIRDS OF CONSERVATION CONCERN EXPECTED TO OCCUR AT THIS LOCATION.

4/7

Candidate

STATUS

Threatened

#### IPaC: Explore Location resources

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

## What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern (BCC)</u> and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network</u> (<u>AKN</u>). The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>AKN Phenology Tool</u>.

# What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen</u> science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

## How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: <u>The Cornell Lab of Ornithology All About Birds Bird Guide</u>, or (if you are unsuccessful in locating the bird of interest there), the <u>Cornell Lab of Ornithology Neotropical Birds</u> guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <u>Eagle Act</u> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from

#### IPaC: Explore Location resources

certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the <u>Northeast Ocean Data Portal</u>. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the <u>NOAA NCCOS</u> Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam</u> Loring.

#### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to <u>obtain a permit</u> to avoid violating the Eagle Act should such impacts occur.

### Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Facilities

### Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

# Wetlands in the National Wetlands Inventory

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of</u> <u>Engineers District</u>.

### WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the <u>NWI map</u> to view wetlands at this location.

### **Data limitations**

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

## LEVEL 1 NUTRIENT PATHOGEN STUDY FREEZEOUT RIDGE ESTATES SUBDIVISION

23442 Freezeout Road Caldwell, ID

-

#### **PREPARED FOR:**

Mr. Brian Falck Pioneer Homes 719 1st Street South, Suite B Nampa, ID 83651

### PREPARED BY:

Atlas Technical Consultants, LLC 2791 South Victory View Way Boise, ID 83709

January 14, 2021 B201724g



2791 South Victory View Way Boise, ID 83709 (208) 376-4748 | oneatlas.com

January 14, 2021

Atlas No. B201724g

Mr. Brian Falck Pioneer Homes 719 1st Street South, Suite B Nampa, ID 83651

Subject: Level 1 Nutrient Pathogen Study Freezeout Ridge Estates Subdivision 23442 Freezeout Road Caldwell, ID

Dear Mr. Falck:

In compliance with your instructions, Atlas has conducted a Level 1 Nutrient Pathogen Study for the above referenced development. Atlas researched and analyzed pertinent geologic conditions in the vicinity of the project site, and the data was used to estimate the downgradient nitrate concentration from the proposed development. Our scope of services is provided in the following report, and the components of this report are listed in the **Table of Contents**. We have provided a PDF copy for your review and distribution.

Atlas would be pleased to continue our role as geotechnical engineers during project implementation. Additionally, Atlas has great interest in providing materials testing and special inspection services during construction of this project. If you will advise us of the appropriate time to discuss these services, we will meet with you at your convenience.

If you have any questions, please call us at (208) 376-4748.

Respectfully submitted,

Ethan Salove, PE Geotechnical Engineer

Monica Saculles, PE Senior Geotechnical Engineer

Distribution: Fritz Durham, Idaho Department of Environmental Quality (PDF Copy); Brigitta Gruenberg, Southwest District Health (PDF Copy); William Mason, Mason & Associates, Inc. (PDF Copy).



### CONTENTS

1.	INTE	RODUCT	ION	1	
	1.1	Authoriz	zation	1	
	1.2	Purpos	e	1	
	1.3	Scope	of Investigation	1	
	1.4	Warran	ty and Limiting Conditions	1	
2.	PRO	JECT D	ESCRIPTION AND EXISTING SITE CONDITIONS	2	
	2.1	Project	and Vicinity Description Including Site Topography and Drainage	2	
	2.2	Region	al Geology	3	
	2.3	Localize	ed Geology and Hydrogeology	3	
	2.4	Soil Su	rvey Review	4	
	2.5	Review	of Nutrient Pathogen Studies in the Vicinity of the Project Site	4	
3.	SITE	PARAN	IETERS FOR LEVEL 1 NITRATE MASS-BALANCE ANALYSIS	5	
	3.1 Water Budge Parameters		5		
		3.1.1	Well Driller's Report Review	5	
		3.1.2	Hydraulic Conductivity	5	
		3.1.3	Groundwater Gradient and Direction	6	
		3.1.4	Mixing Zone Thickness	6	
		3.1.5	Aquifer Widths Perpendicular to Flow	7	
		3.1.6	Area of Parcel, Percent of Lot Impervious, and Number of Proposed Lots	7	
		3.1.7	Gallons of Septic Tank Effluent	7	
		3.1.8	Regional Climatology and Natural Recharge Rate	7	
	3.2	3.2 Nitrogen Budget Parameters		8	
		3.2.1	Vicinity Water Quality and Background Groundwater Nitrate Concentration	8	
		3.2.2	Septic Tank Effluent Concentrations	8	
		3.2.3	Denitrification Rate and Nitrate in Natural Recharge Rate	8	
4.	LEV	/EL 1 NITRATE MASS-BALANCE ANALYSIS 8			
5.	CON	NCLUSIONS AND RECOMMENDATIONS			
6.	REFERENCES11				
7.	LIST OF APPENDICES				

### TABLES

Table 1 – Parameters Used in the Level 1 Nitrate Mass-Balance Analysis	9
Table 2 – Individual Lot Mass-Balance Analysis for Various Septic Tank Systems	9



### **APPENDICES**

- Appendix I Topographic Map and General Site Map
- Appendix II Geologic Map with Approximate Project Site Location
- Appendix III Soil Survey Information
- Appendix IV Site Location with Vicinity Wells Map and IDWR Driller's Well Logs
- Appendix V IDEQ Groundwater Contour Map
- Appendix VI Site Plan with Aquifer Width Map for Individual Lots
- Appendix VII Historic Precipitation/Climate Data for Project Location
- Appendix VIII Site Location with Vicinity Monitoring Wells Map and Monitored Well Data
- Appendix IX Nitrate Mass-Balance Spreadsheets for Individual Lots



### 1. INTRODUCTION

This report presents results of a Level 1 Nutrient Pathogen (NP) Study conducted for the proposed Freezeout Ridge Estates Subdivision in Caldwell, ID. This study has been conducted to determine whether the proposed number of residential lots for the site will exhibit a negligible impact on groundwater conditions and whether a comprehensive Level 2 NP Study, as outlined by Southwest District Health (SWDH), will be required.

### 1.1 Authorization

Authorization to perform this analysis was given in the form of written authorization to proceed from Mr. Brian Falck of Pioneer Homes to Monica Saculles of Atlas Technical Consultants (Atlas), on October 14, 2020. Said authorization is subject to terms, conditions, and limitations described in the Professional Services Contract entered into between Pioneer Homes and Atlas. Our scope of services for the proposed development has been provided below.

### 1.2 Purpose

The purpose of this study is to determine the various site parameters present, which in turn will determine whether the proposed number of residential lots for the site will exhibit a negligible impact on groundwater conditions. Specifically, this study complies with requirements established by Canyon County and the SWDH for area developments in accordance with the Idaho Department of Environmental Quality (IDEQ) guidelines dated 6 May 2002.

### 1.3 Scope of Investigation

The scope of this study included reviewing geologic literature, assembling an inventory of available reports of wells (domestic, irrigation, or other) in the immediate area, reviewing available water resource reports, and performing a site reconnaissance of the project site. At an additional fee, Atlas will perform on-site evaluation of soils within the proposed septic system drainfield locations following approval of the preliminary plat; however, at that time, a SWDH or IDEQ representative must be present to observe and approve this work.

### **1.4 Warranty and Limiting Conditions**

The field observations and research reported herein are considered sufficient in detail and scope to form a reasonable basis for the purposes cited above. Atlas warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted professional engineering practice in the fields of site civil engineering, soil mechanics, and engineering geology, only for the site described in this report. No other warranties are implied or expressed.



These engineering methods have been developed to provide the client with information regarding apparent or potential engineering conditions relating to the subject property within the scope cited above and are necessarily limited to the conditions observed at the time of the site visit and research. The report is also limited to the information available at the time it was prepared. In the event additional information is provided to Atlas following the report, it will be forwarded to the client in the form received for evaluation by the client. There is a distinct possibility that conditions may exist which could not be identified within the scope of the investigation or which were not apparent during the site investigation.

This report was prepared for the use of Pioneer Homes, and their retained design consultants ("Client"). Conclusions and recommendations presented in this report are based on the agreed upon scope of work outlined in the report and the Contract for Professional Services between Client and Atlas Technical Consultants ("Consultant"). Use or misuse of this report, or reliance upon the findings hereof by any parties other than the Client, is at their own risk. Neither Client nor Consultant make any representation of warranty to such other parties as to the accuracy or completeness of this report or the suitability of its use by such other parties for any purpose whatever, known or unknown to Client or Consultant. Neither Client non Consultant shall have any liability to, or indemnifies or holds harmless third parties for any losses incurred by the actual or purported use or misuse of this report. No other warranties are implied or expressed.

### 2. PROJECT DESCRIPTION AND EXISTING SITE CONDITIONS

### 2.1 **Project and Vicinity Description Including Site Topography and Drainage**

The proposed development is located north of the City of Caldwell, Canyon County, ID, and occupies a portion of the SE¼NE¼ and SW¼NE¼ of Section 3, Township 4 North, Range 3 West, Boise Meridian. The site address is 23442 Freezeout Road in Caldwell, Idaho.

Currently, the proposed development consists of 31.4 acres of agricultural land with a residence located in the southeastern portion of the parcel. A general westerly slope is present across the site. The project site is bordered on the south by a private driveway, bordered by a small drainage swale to the west, and bordered on the north and east by existing rural residential/agricultural properties. The proposed development will consist of 20 single-family residential lots with individual wells and septic systems.

No stormwater drainage facilities are located in the vicinity of the site, and the project site does not receive off-site drainage. Stormwater drainage for the project site is achieved by percolation through surficial soils. Regional drainage is north and west towards the Boise River. A topographic map and general site map are located in **Appendix I**.



### 2.2 Regional Geology

The project site is located within the western Snake River Plain of southwestern Idaho and eastern Oregon. The plain is a northwest trending rift basin, about 45 miles wide and 200 miles long, that developed about 14 million years ago (Ma) and has since been occupied sporadically by large inland lakes. Geologic materials found within and along the plain's margins reflect volcanic and fluvial/lacustrine sedimentary processes that have led to an accumulation of approximately 1 to 2 km of interbedded volcanic and sedimentary deposits within the plain. Along the margins of the plain, streams that drained the highlands to the north and south provided coarse to fine-grained sediments eroded from granitic and volcanic rocks, respectively. About 2 million years ago the last of the lakes was drained and since that time fluvial erosion and deposition has dominated the evolution of the landscape.

The project site is underlain by "Gravel of Deer Flat Terrace" as mapped by Othberg and Stanford (1993). Gravel of Deer Flat Terrace extends from Lake Lowell northeast to the area just south of Wilder. The surface of this terrace may have been offset by several northwest trending faults. Deposits include sandy pebble gravel grading at depth to coarse pebbly sand. Deposited on the fourth terrace above the floodplain in the western Boise Valley. North of Caldwell and Middleton Tertiary sediments are exposed between terrace remnants. Terrace sediments are typically greater than 30 feet thick and mantled with loess 1-4 meters (3-13 feet) thick, contain 45% pedogenic clay and very well developed duripans. A geologic map showing the approximate site boundary is included in **Appendix II**.

### 2.3 Localized Geology and Hydrogeology

Based on review of Well Driller's Reports (well logs) maintained at the IDWR website for portions of three immediately adjacent sections, Atlas assessed the localized geology and hydrogeology for the site and surrounding areas. Further description of the well log research can be found in the **Well Driller's Report Review** section of this report. In general, well logs in the area show that near surface soils consist primarily of topsoil and hardpan/cemented soils that are underlain by sands and gravels with intermittent clay layers.

The well logs also showed static groundwater levels generally ranging from around 6 to 75 feet below ground surface. First encountered water was not always listed on the well logs, but based on available data and assessing depths of the first water bearing zones that were documented, first encountered water appears to range from roughly 8 to 95 feet below ground surface. In some limited instances, first encountered water wasn't noted until depths of up to 134 feet. The water depths appear to vary with location and topography.



### 2.4 Soil Survey Review

Atlas reviewed the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Service website for soil survey information on Canyon County. Research indicated that the project site is characterized by Elijah-Chilcott silt loams and Elijah-Vickery silt loams. Specific soils characteristics, as defined by the USDA NRCS, have been listed below for each of these soils and soil survey data from the NRCS website has been included in **Appendix III** of this report:

- Elijah-Chilcott silt loam Elijah-Chilcott soils occur on terraces. These soils are classified as well drained and the most limiting soil layer has a very low to moderately low capacity to transmit water. Typical soil profiles of the Elijah-Chilcott silt loams include silt loam and silty clay loam at the surface, followed by cemented material underlain by very gravelly sand. Slopes of Elijah-Chilcott soils are typically 1 to 3 percent.
- Elijah-Vickery silt loam Elijah-Vickery soils occur on terraces. These soils are classified as well drained and the most limiting soil layer has a very low to moderately low capacity to transmit water. Typical soil profiles of the Elijah-Vickery silt loams include silt loam, loam, and silty clay loam at the surface, followed by cemented material underlain by very gravelly sand or coarse sand. Slopes of Elijah-Vickery soils are typically 3 to 7 percent.

### 2.5 Review of Nutrient Pathogen Studies in the Vicinity of the Project Site

Atlas has filed a request for information with IDEQ and the SWDH to view nutrient pathogen studies completed near the referenced site. Atlas was provided copies of 6 such studies (outlined below). Information gathered from review of these documents is referenced within the **Hydraulic Conductivity** section of this report.

- Addendum to Level I Nutrient Pathogen Study, Proposed Sagebrush Estates Subdivision, Canyon County, Idaho, prepared by Terracon and dated September 18, 2007
- Addendum for Level 1 Nutrient-Pathogen Evaluation, Purple Sage Estates Subdivision No. 2, SW of Purple Sage Road and El Paso Road, Portion of Canyon County parcel No. R38128010 Canyon County, Idaho, prepared by Allwest Testing and Engineering and dated December 22, 2017
- Level 1 Nutrient-Pathogen Evaluation, Sunset Ridge Subdivision, SEC of Willis Road and El Paso Road, Canyon County, Idaho, prepared by Allwest Testing and Engineering and dated July 13, 2017
- Level 1 Nutrient-Pathogen Evaluation, Willis Road Subdivision, NEC of Willis Road and El Paso Road, Canyon County, Idaho, prepared by Allwest Testing and Engineering and dated March 1, 2017
- Revised Level 1 Nutrient-Pathogen Evaluation, Purple Sage Subdivision No. 3, South of Purple Sage and West of El Paso Road, Canyon County, Idaho, prepared by Allwest Testing and Engineering and dated September 11, 2019
- Level One Nutrient Pathogen Study, Saddleback Ridge Estates, Middleton, Idaho, prepared by Applied Intellect and dated April 30, 2019



### 3. SITE PARAMETERS FOR LEVEL 1 NITRATE MASS-BALANCE ANALYSIS

### 3.1 Water Budge Parameters

### 3.1.1 Well Driller's Report Review

Prior to 1967 in the State of Idaho, driller's logs for wells were submitted to Idaho Department of Water Resources (IDWR) on a voluntary basis. After 1967, it became and Idaho requirement to submit logs for all wells drilled. However, the state was unable to track or enforce completion of this requirement until 1987 when well permits were also required by the state. Therefore, available records maintained by the IDWR may be incomplete for the area researched.

Atlas conducted a review of Well Driller's Reports (well logs) maintained at the IDWR website for portions of three immediately adjacent sections. A total of 31 Well Driller's Reports on file for this area were copied and are included in **Appendix IV** of this report, along with a map showing approximate well locations. Although numerous well logs are available for the site vicinity, only 17 wells provided complete pump test data. A spreadsheet showing tabulated data from these 17 well logs can be found in **Appendix IV**.

Of these wells, several did not have aquifer bottom recorded and were excluded from analysis. Well number 4 was drilled greater than 100 feet past first encountered water and was likewise eliminated from analysis. Atlas was left with 12 well logs that were used for hydraulic conductivity analysis.

From the 17 wells with complete pump test data, discharge rates ranging from 12 to 60 gallons per minute were reported. Drawdown data generally ranged from 5 to 80 feet, though some well logs reported drawdown as high as 150 feet. Soils commonly encountered included sand and gravel sediments with intermittent clay layers.

### 3.1.2 Hydraulic Conductivity

Atlas calculated the transmissivity of each of the wells using the following relationship provided by Razack and Huntley (C.W. Fetter, 2001):

$$T = 33.6 \left(\frac{Q}{h_0 - h}\right)^{0.67}$$

Where:

T = Transmissivity (feet²/day) Q = Pumping Rate (feet³/day) h<sub>0</sub>-h = Drawdown (feet)

The hydraulic conductivity values for each of the wells were then obtained by the following relationship (C.W.Fetter, 2001):

 $K = \frac{T}{h}$ 

Where:

K = Hydraulic Conductivity (feet/day) T = Transmissivity (feet<sup>2</sup>/day) b = Aquifer Thickness (feet)

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Using the previously stated equations with the stated input data, Atlas obtained calculated hydraulic conductivity values that ranged from 7 to 181 feet/day. Atlas calculated the average hydraulic conductivity value as 65 feet/day. Additionally, based on six previous NP Studies that have been conducted within the vicinity of the project site, hydraulic conductivity values of 70 feet per day were used and approved during the IDEQ/SWDH review process. Based on this evidence, hydraulic conductivity values reflective of fine sand to coarse sand with some gravel are considered to be most reflective of the shallow groundwater flow regime across the site, and typical hydraulic conductivity rates for these sediments vary approximately from 3 to 300 feet/day (C.W. Fetter, 2001). For the mass-balance spreadsheets, Atlas used a hydraulic conductivity of 65 feet/day, which is the calculated average of the well logs and more conservative than the values used in previous NP studies.

### 3.1.3 Groundwater Gradient and Direction

For groundwater gradient information within the vicinity of the site, a review of the available literature developed for the region was conducted. Specifically, Atlas reviewed the map provided to Atlas by the IDEQ during the public records request. This map showed the groundwater contour elevations in the vicinity of the site. Based on these groundwater contour elevations, Atlas found that a 50 foot drop in elevation occurs in the area over a distance of roughly 10,475 linear feet. This drop in groundwater elevation yields a hydraulic gradient of 0.00477 feet/feet. A southwestern groundwater flow direction (roughly 220° Azimuth) was also determined based on this map. For this report, Atlas used a hydraulic gradient of 0.00477 feet/feet for the mass-balance spreadsheet. Atlas has presented a map of the IDEQ groundwater flow contours in **Appendix V** of this report.

### 3.1.4 Mixing Zone Thickness

In the mass-balance spreadsheets, the mixing zone thickness refers to the induction zone anticipated for the septic tank effluent or contaminate source. IDEQ guidance states that the value of the mixing zone thickness varies with distance from the proposed location of the septic system to the property boundary as follows:

- If distance is less than 500 feet to the property boundary, use a mixing zone thickness of 15 feet.
- If distance is between 500 and 1,000 feet to the property boundary, use a mixing zone thickness of 30 feet.
- If distance is greater than 1,000 feet to the property boundary, use a mixing zone thickness of 60 feet.

Since the distance between the closest individual septic system location to the property boundary will be less than 500 feet, Atlas used a value of 15 feet as the mixing zone thickness for the massbalance spreadsheets.



### 3.1.5 Aquifer Widths Perpendicular to Flow

Atlas used a southwest groundwater flow direction (approximately 220° Azimuth) and the property site plan to determine the aquifer widths for the mass-balance spreadsheets. For the individual lots on the project site, Atlas determined that 179.20 to 362.88 feet are the aquifer widths that are perpendicular to the southwesterly flow direction. A site map with the perpendicular widths identified is located in **Appendix VI** of the report.

### 3.1.6 Area of Parcel, Percent of Lot Impervious, and Number of Proposed Lots

The Client described the project as 31.4 acres with 20 proposed lots that are approximately 1.00 to 1.89 acres in size. For the mass-balance spreadsheets, Atlas analyzed each of the 20 lots on 1.00 to 1.89 acres and estimated that less than five percent of the parcel would be impervious to percolation as a result of the proposed development.

### 3.1.7 Gallons of Septic Tank Effluent

The Client described the project as having individual septic tank systems for each proposed single-family residential lot. For the mass-balance spreadsheets, Atlas used the default value of 300 gallons per day for the septic system as the amount of effluent discharge.

### 3.1.8 Regional Climatology and Natural Recharge Rate

For the region, the annual average temperature ranges from 20°F to 91°F with extremes from roughly -4°F to 102°F. The region has average wind speeds of up to 11 miles per hour in spring with a prevailing direction from the southeast. The pH of surface water, groundwater, and soil in the region typically range from 7 to 9. Average precipitation for the region is on the order of 10 to 12 inches per year.

The natural recharge rate (NRR) has been estimated using the following relationship provided by IDEQ:

NRR = 0.0046(Annual Precipitation in inches)<sup>2</sup>

Using the above relationship, an annual precipitation rate of 11.45 inches yields an estimated natural recharge rate of 0.6 inches per year, and this value was used in the mass-balance spreadsheets. A copy of the research data showing the annual precipitation for the project area is included in **Appendix VII**.



### 3.2 Nitrogen Budget Parameters

### 3.2.1 Vicinity Water Quality and Background Groundwater Nitrate Concentration

Atlas reviewed well monitoring data from the IDEQ and IDWR websites for 12 wells in the project site vicinity. Of these 12 wells, only 5 of them had been monitored within the past 10 years. The most recent monitoring event for these 5 wells occurred in 2013 and nitrate concentration ranged from 2.3 to 6.3 mg/L. Atlas averaged the highest nitrate value obtained from each of the 5 assessed wells, which resulted in a nitrate concentration of 4.1 mg/L. Therefore, Atlas used a value of 4.1 mg/L as the background nitrate level for the mass-balance spreadsheets in this report. A spreadsheet showing tabulated data from these 12 well logs, as well as a map showing the well locations, can be found in **Appendix VIII**.

### 3.2.2 Septic Tank Effluent Concentrations

In the mass-balance spreadsheets, the value for septic tank effluent concentrations refers to the amount of nitrate (nitrate concentration) that is anticipated to be released into the groundwater system from effluent or a contaminate source. Currently, there are three types of septic tank systems: a regular septic tank system and two nitrate reducing systems:

- A regular septic tank releases a nitrate concentration of 45 mg/L in the effluent discharge.
- A 40 percent nitrate reducing system releases a nitrate concentration of 27 mg/L in the effluent discharge.
- A 65 percent nitrate reducing system releases a nitrate concentration of 16 mg/L in the effluent discharge.

### 3.2.3 Denitrification Rate and Nitrate in Natural Recharge Rate

In the mass-balance spreadsheets, the values for the denitrification rate and nitrate in natural recharge are preset default values set by IDEQ. Atlas used the default value of 0 for the Denitrification Rate and 0.3 mg/L for the Nitrate in Natural Recharge for the mass-balance spreadsheets.

### 4. LEVEL 1 NITRATE MASS-BALANCE ANALYSIS

Nitrate is the most mobile constituent of concern in domestic wastewater and has an impact on public health when the maximum contaminant level (MCL) is exceeded (nitrate-N >10.0 mg/L). For this reason, nitrate is usually the limiting factor in determining appropriate lot sizes and onsite wastewater treatment system design and placement. According to the <u>Nutrient-Pathogen</u> <u>Evaluation Program for On-Site Wastewater Treatment Systems May 2002</u>, IDEQ considers an increase of 1.0 mg/L nitrate, or less, predicted to occur at the down-gradient boundary of each individual lot as demonstrating a negligible impact. To evaluate the impact of nitrate on the groundwater system in the vicinity of the proposed project, a mass-balance approach, recommended by SWDH and IDEQ, has been performed. Note that calculations for this approach do not take into consideration actual alignment of individual wastewater treatment systems.


The mass-balance spreadsheets for down-gradient nitrate concentration of the individual lots with the smallest aquifer width perpendicular to groundwater flow for each size of lot are present in **Appendix IX**. A summary of values used in the analysis are presented in **Table 1** and results of the analyses are presented in **Table 2**.

Water Budget	Value Used
Hydraulic Conductivity (ft/day)	65
Hydraulic Gradient	0.00477
Mixing Zone Thickness (ft)	15
Percent of Parcel that is Impervious (%)	5
Septic Tank Effluent (gpd/home)	300*
Natural Recharge Rate (in/yr)	0.6
Nitrogen Budget	Value Used
Upgradient Groundwater Concentration (mg/L)	4.1
Denitrification Rate (decimal fraction)	0*
Nitrate in Natural Recharge (mg/L)	0.3*
Point of Compliance Nitrate Concentration Goal (mg/L)**	5.1

Table 1 – Parameters	Used in the Level	1 Nitrate Mass	-Balance Anal	vsis
				,

\*Numbers represent the default values recommended by IDEQ and SWDH.

\*\*Upgradient groundwater concentration (mg/L) plus 1 mg/L equates to point of compliance nitrate concentration goal.

Results of the mass-balance analysis for the individual lots with the smallest aquifer widths perpendicular to groundwater flow for each size of lot are outlined below. Mass-balance spreadsheets for 40% nitrate reducing septic systems were only prepared for the lots that were incapable of supporting a standard septic system.

#### Table 2 – Individual Lot Mass-Balance Analysis for Various Septic Tank Systems

	Smallest Aquifer Width	Downgradient Nitrate Concentration (mg/L)				
Lot Area (acres)	Flow Direction (feet)	Standard Septic Systems	40% Nitrate Reducing Systems			
1.00	228.41	5.6*	4.9			
1.01	226.05	5.6*	4.9			
1.04	179.20	5.9*	5.1			
1.14	290.89	5.3*	4.7			
1.20	326.11	5.1	N/A			
1.24	262.50	5.4*	4.8			
1.30	302.70	5.2*	4.7			
1.34	300.99	5.2*	4.7			

\*Value exceeds the point of compliance nitrate concentration goal of 5.1 mg/L.



	Smallest Aquifer Width	Downgradient Nitrate Concentration (mg				
Lot Area (acres)	Flow Direction (feet)	Standard Septic Systems	40% Nitrate Reducing Systems			
1.40	313.27	5.2*	4.7			
1.42	302.05	5.2*	4.7			
1.46	326.11	5.1	N/A			
1.50	211.51	5.7*	5.0			
1.69	345.17	5.1	N/A			
1.87	344.61	5.1	N/A			
1.89	236.19	5.5*	4.9			

#### Table 2 (cont'd) – Individual Lot Mass-Balance Analysis for Various Septic Tank Systems

\*Value exceeds the point of compliance nitrate concentration goal of 5.1 mg/L.

#### 5. CONCLUSIONS AND RECOMMENDATIONS

Mass-balance spreadsheets for down-gradient nitrate concentration have been prepared for the individual lots with the smallest aquifer widths perpendicular to groundwater flow for each lot size. All spreadsheets are presented in the **Appendices** of this report. The results indicated that all lots were below the Point of Compliance Nitrate Concentration of 5.1 mg/L when using the 40 percent nitrate reduction septic system; however, lots 4, 7, 8, and 10 were below using a standard septic system. Therefore, the proposed development does not exceed the down-gradient Point of Compliance Nitrate Concentration of 5.1 mg/L when using a 40 percent nitrate reduction septic system for above mentioned lots. As a result, the development meets the criteria of a negligible impact as defined by the IDEQ.

Note that IDEQ and SWDH must review and approve the parameter values developed for this Level 1 NP Study and the mass-balance spreadsheets prior to subdivision approval. Also, note the following:

- If changes in the number of lots are desired, a revised lot layout must be provided to Atlas, and this study must be resubmitted or amended.
- This report must be submitted to the SWDH with a preliminary plat as well as the Subdivision Engineering Report (SER). Also, SWDH requires a preliminary development meeting to begin the SER process.
- To verify soil profile components at actual drainfield locations, soil exploration by test pits or borings, with approval by SWDH personnel, will be required following development of the preliminary plat.

Again, these results, as of the completion of this report, have not been reviewed by IDEQ or SWDH. Therefore, a revision in assumed hydraulic conductivity value, or other parameters used in the mass-balance spreadsheet, may be required subsequent to the SWDH and IDEQ review, and consequently, the allowable number of lots may change significantly. If so, the SWDH and IDEQ will request that this report be resubmitted or amended with revised values.



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#### 7. LIST OF APPENDICES

Appendix I	Topographic Map and General Site Map
Appendix II	Geologic Map with Approximate Project Site Location
Appendix III	Soil Survey Information
Appendix IV	Site Location with Vicinity Wells Map and IDWR Driller's Well Logs
Appendix V	IDEQ Groundwater Contour Map
Appendix VI	Site Plan with Aquifer Width Map for Individual Lots
Appendix VII	Historic Precipitation/Climate Data for Project Location
Appendix VIII	Site Location with Vicinity Monitoring Wells Map and Monitored Well Data
Appendix IX	Nitrate Mass-Balance Spreadsheets for Individual Lots

Appendix I TOPOGRAPHIC MAP AND GENERAL SITE MAP







# GEOLOGIC MAP OF THE BOISE VALLEY AND ADJOINING AREA, WESTERN SNAKE RIVER PLAIN, IDAHO BY KURT L. OTHBERG AND LOUDON R. STANFORD





Published and sold by the Idaho Geological Survey University of Idaho, Moscow, Idaho 83843

45



## Pedogenic<sup>1</sup> clay and duripans<sup>2</sup> on terraces.

			Map	Unit		
	Qbg Qbgc Qwig <sup>3</sup>	Qwg Qds	Qsg	Qgg	Qag Qdg <sup>4</sup> Qpdg	QTtg
CLAY (percent) 50 25 0						
DURIPAN (meters) 2 1 0						

Soil data adapted from Collett (1980), Priest and others (1972), and the University of Idaho Soil Characterization Laboratory Collett, R. A., 1980, Soil survey of Ada County area, Idaho: U.S. Department of Agriculture, Soil Conservation Service, 327 p., 72

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commonly called caliche. <sup>3</sup> The Bonneville Flood slack-water sediments that form the surface of Qwig (gravel of Wilder terrace) bury a duripan about 0.5 meter thick that formed in the top of the gravel.

<sup>4</sup> The surface of Qdg (gravel of Deer Flat terrace) is buried by loess from near Lake Lowell to near Wilder. The thick duripan lies at depths of 1-4 meters (3-13 feet).

> U.S.G.S. 1:100,000 topographic base Projection and 10,000 meter grid, zone 11, Universal Transverse Mercator

> > 1927 North American Datum

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- Map reviewed by Roy M. Breckenridge, Willis L. Burnham, and Monte D. Wilson
- Digital four-color separations by Optronics Specialty, Inc., Chatsworth, California Printed by Joslyn & Morris, Inc., Boise



TERTIARY RHYOLITES

	where concealed; ball and bar on downthrown side
15	Strike and dip of bedding
	Approximate upper limit of Bonneville Flood slack water
	Sand dune fields

Basalt sampling site

### Magnetic Polarities, K/Ar Ages, and <sup>40</sup>Ar/<sup>39</sup>Ar Ages of Basalts

Rock Unit	Field Number	Polarity	Latitude	Longitude	Age (Ma) <sup>1</sup> potassium-argon <sup>2</sup> argon-argon
Basalt of Mores Creek	MC-1	N	43°31.52′	116°3.76'	0.107 0.012 1
Basalt of Gowen terrace	GT-4	N	43°31.33'	116°4.24'	0.572 0.210 1
Basalt of Kuna Butte (South Side)	SS	N	43°31.51′	116°32.03′	0.387 0.031 2
Basalt of Lucky Peak	LP-4	N	43°31.85′	116°3.66'	1.364 0.210 1*
Caldwell lava flow	CBR	R	43°41.31'	116°41.06′	0.799 0.095 2
Upper Deer Flat lava flow	UDF	R	43°30.29′	116°34.38′	0.922 0.184 2
Basalt of Fivemile Creek	30-3	N	43°32.67′	116°9.38′	0.974 0.098 1
Basalt of Fivemile Creek	FM1	N	43°30.27′	116°6.91′	
Basalt of Fivemile Creek	FM2	N	43°31.52'	116°4.45'	
Basalt of Hubbard surface	TCC-1	N	43°31.92'	116°20.20'	1.001 0.098 1
Mason Creek lava flow	ма	N?	43°33.72'	116°28.23'	1.231 0.123 2
Black Cat Road lava flow	BC	R	43°31.43′	116°27.15′	
East Nampa lava flow	NSS	R	43°36.23′	116°31.12′	1.165 0.125 <sup>2</sup>
Rawson Canal lava flow	RC	R	43°34.09′	116°27.12′	

Potassium-argon and argon-argon analyses provided by the Berkeley Geochronology Center. Institute of Human Origins, University of California, Berkeley, California. Magnetic polarity results from field fluxgate magnetometer using five samples per site.

\* Stratigraphic relationships indicate the K-Ar age of the basalt of Lucky Peak is too old (Othberg and Burnham, 1990).

## Appendix III SOIL SURVEY INFORMATION



**Conservation Service** 

1/11/2021 Page 1 of 3

MAP L	EGEND	MAP INFORMATION
Area of Interest (AOI) Area of Interest (AOI)	Spoil Area	The soil surveys that comprise your AOI were mapped at 1:20,000.
Area of Interest (AOI)SoilsSoil Map Unit PolygonsSoil Map Unit LinesSoil Map Unit PointsSpecial Forth FeaturesImage: Special Constraint of the sector of the s	Image: Stony SpotImage: Stony Spot <td< td=""><td><ul> <li>Warning: Soil Map may not be valid at this scale.</li> <li>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</li> <li>Please rely on the bar scale on each map sheet for map measurements.</li> <li>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)</li> <li>Maps from the Web Soil Survey are based on the Web Mercator</li> </ul></td></td<>	<ul> <li>Warning: Soil Map may not be valid at this scale.</li> <li>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</li> <li>Please rely on the bar scale on each map sheet for map measurements.</li> <li>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)</li> <li>Maps from the Web Soil Survey are based on the Web Mercator</li> </ul>
<ul> <li>Gravelly Spot</li> <li>Landfill</li> <li>Lava Flow</li> <li>Marsh or swamp</li> <li>Mine or Quarry</li> <li>Miscellaneous Water</li> <li>Perennial Water</li> <li>Rock Outcrop</li> <li>Saline Spot</li> <li>Sandy Spot</li> <li>Severely Eroded Spot</li> <li>Sinkhole</li> <li>Slide or Slip</li> <li>Sodic Spot</li> </ul>	Major Roads Local Roads Background Maior Roads	<ul> <li>projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</li> <li>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</li> <li>Soil Survey Area: Canyon Area, Idaho Survey Area Data: Version 17, Jun 3, 2020</li> <li>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</li> <li>Date(s) aerial images were photographed: Jun 10, 2020—Jun 26, 2020</li> <li>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</li> </ul>

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EsB	Elijah-Chilcott silt loams, 1 to 3 percent slopes	10.1	36.3%
EvC	Elijah-Vickery silt loams, 3 to 7 percent slopes	17.3	62.1%
W	Water	0.4	1.6%
Totals for Area of Interest		27.9	100.0%

### Canyon Area, Idaho

#### EsB—Elijah-Chilcott silt loams, 1 to 3 percent slopes

#### Map Unit Setting

National map unit symbol: 2q0v Elevation: 2,300 to 5,300 feet Mean annual precipitation: 8 to 12 inches Mean annual air temperature: 45 to 54 degrees F Frost-free period: 90 to 170 days Farmland classification: Prime farmland if irrigated

#### **Map Unit Composition**

Elijah and similar soils: 55 percent Chilcott and similar soils: 25 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### **Description of Elijah**

#### Setting

Landform: Terraces Down-slope shape: Linear Across-slope shape: Linear Parent material: Lacustrine deposits and/or loess and/or alluvium

#### **Typical profile**

Ap - 0 to 9 inches: silt loam Bt - 9 to 19 inches: silty clay loam Bk - 19 to 22 inches: silt loam Bkqm - 22 to 40 inches: cemented material C - 40 to 65 inches: very gravelly sand

#### **Properties and qualities**

Slope: 1 to 3 percent
Depth to restrictive feature: 20 to 40 inches to duripan
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 4.4 inches)

#### Interpretive groups

Land capability classification (irrigated): 3e Land capability classification (nonirrigated): 6c Hydrologic Soil Group: C Hydric soil rating: No

USDA

#### **Description of Chilcott**

#### Setting

Landform: Terraces Down-slope shape: Linear Across-slope shape: Linear Parent material: Volcanic ash and/or mixed alluvium and/or loess

#### **Typical profile**

A - 0 to 10 inches: silt loam Bt - 10 to 26 inches: silty clay Bk - 26 to 31 inches: loam Bkqm - 31 to 46 inches: cemented material 2C - 46 to 60 inches: very gravelly sand

#### **Properties and qualities**

Slope: 1 to 3 percent
Depth to restrictive feature: 3 to 19 inches to abrupt textural change; 20 to 40 inches to duripan
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Very low (about 2.0 inches)

#### Interpretive groups

Land capability classification (irrigated): 3e Land capability classification (nonirrigated): 6c Hydrologic Soil Group: D Ecological site: R011XY001ID - LOAMY 8-12 - Provisional Hydric soil rating: No

#### Data Source Information

Soil Survey Area: Canyon Area, Idaho Survey Area Data: Version 17, Jun 3, 2020



### Canyon Area, Idaho

#### EvC—Elijah-Vickery silt loams, 3 to 7 percent slopes

#### Map Unit Setting

National map unit symbol: 2q0w Elevation: 2,000 to 5,200 feet Mean annual precipitation: 8 to 12 inches Mean annual air temperature: 45 to 54 degrees F Frost-free period: 100 to 160 days Farmland classification: Farmland of statewide importance, if irrigated

#### Map Unit Composition

Elijah and similar soils: 60 percent Vickery and similar soils: 25 percent Estimates are based on observations, descriptions, and transects of the mapunit.

#### Description of Elijah

#### Setting

Landform: Terraces Down-slope shape: Linear Across-slope shape: Linear Parent material: Lacustrine deposits and/or loess and/or alluvium

#### **Typical profile**

Ap - 0 to 9 inches: silt loam Bt - 9 to 19 inches: silty clay loam Bk - 19 to 22 inches: silt loam Bkqm - 22 to 40 inches: cemented material C - 40 to 65 inches: very gravelly sand

#### **Properties and qualities**

Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to duripan
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Low (about 4.4 inches)

#### Interpretive groups

Land capability classification (irrigated): 4e Land capability classification (nonirrigated): 6c Hydrologic Soil Group: C Hydric soil rating: No

USDA

#### **Description of Vickery**

#### Setting

Landform: Terraces Down-slope shape: Linear Across-slope shape: Linear Parent material: Loess and/or volcanic ash and/or alluvium derived from igneous rock

#### **Typical profile**

A - 0 to 4 inches: silt loam Bw - 4 to 17 inches: silt loam Bk - 17 to 34 inches: loam Bkqm - 34 to 47 inches: cemented material 2C - 47 to 60 inches: coarse sand

#### **Properties and qualities**

Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 40 inches to duripan
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water capacity: Moderate (about 6.1 inches)

#### Interpretive groups

Land capability classification (irrigated): 3e Land capability classification (nonirrigated): 6c Hydrologic Soil Group: C Hydric soil rating: No

#### **Data Source Information**

Soil Survey Area: Canyon Area, Idaho Survey Area Data: Version 17, Jun 3, 2020 Appendix IV SITE LOCATION WITH VICINITY WELLS MAP AND IDWR DRILLER'S WELL LOGS



Describe control device \_

#### IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

1. WELL	TAG N	о. р <u>0</u>	0662	80							
Drilling F	<sup>p</sup> ermit N	<sub>o.</sub> <u>965</u>	483-8	3715	542						
Water rig	ght or inje	ction w	all # <u>63</u>	-33	545						
2. OWNE	ER:										
Name <u>C</u>	)aniel	McLe	ran / .	Josh	ו Sy	/lve	ster				
Address	13758	3 Willi	s Rd					~~~~~			
<sub>City</sub> <u>Ca</u>	ldwell		www.w	***	s	tate	ID	Zip	<u>, 83</u>	607	
3.WELL	LOCAT	ION:									
Twp. 5	Nor	th 🗵	or Sc	outh [	ב	R	<sub>ge.</sub> <u>3</u>	Eas	st 🗖	or W	/est 🔀
Sec. 35			S/E	1/-	4 <u>S</u>	Ŵ	1/4	S/W	1/4		
			10 acre	°an	von	U BCRG	8	160 Bores			
Gov't Lot	······	43 (	Lounty	514	yon						
Lat	11	6 4	10.00	$\frac{10}{10}$				(Deg.	and D	ecimal mir	nutes)
Long		13	758 V	Villis	3		(1)) <sup>27</sup> 1 <sup>2</sup>	(Deg.	and D	ecimal mir	iutes)
adress	ot vveil s	site <u>···</u>					Caldw	/ell			
Give al least n	ame of mad	Bietolicen	Received.	977		HEY Y	- 4 4 °	ere .	<u></u>		ē,
Lot	Bi	مستحمر ک	Sub	. Nar	ne						
4. USE:		NA		1	iter	ر م	الاستناميرو	<u>.</u> п.	The-		Inightic -
Other	suc L	MUNICI		IVION	ntor	لگا 	irrigatio		i nem		injection
5. TYPE	OF WO	RK:									
New v		Repla	cement	well		Мо	dify exis	sting wel	ł		
e nou i	METL	 									***
Air Ro	otary	Mud	Rotary		Cat	ole	0	ther			
7. SEAL	ING PR	OCED	URES	:							
Seal	material	From	1 (ft) To	o (ft)	Quan	tity (I	bs or ft <sup>3</sup> )	Placer	nent n	nethod/pro	cedure
5&3/40	entoni		,	+/	1,7	50	LBS	overo	ore	агуро	ur I
L											]
8. CASI	NG/LIN	ER:	Gauge	a/			•	1			
(nominal)	rion (n)	407	Schedu	ile	IV La al	aten	aı		_iner		vveideo
	C.1+	137	.23		leei						
			ļ								
ļ			ļ								
L									Ц	Ц	L
Was driv	e shoe ι	used?	<u> X</u> Y [	N	Shoe	e De	pth(s)	137			
9. PERF	ORATI	ONS/S	CREE	NS:							
Perforati	ons 🗖	1 X Y	N Met	nod _							
Manufac	tured sc	reen D	OY C	NT	ype _	18 :	slot Jo	ohnso	n		
Method of	of install	ation W	ash ir	nto s	sano	d					
From (ft)	To (ft)	Slot siz	e Numt	per/ft	Diam	eter	Ma	terial	G	auge or So	chedule
140	150	18			(nomi 5	inal)	stain	lace	25	0	
	100	+					Stann		1.20	<u> </u>	
Length of Tailoine ValVe 6"											
Dackor	n neaup ISI∨ Γ	чос <u>.</u> 1 м. т.,	a 3 lin	o rul	bbe	r K	nulid	whihe 🗍			
		ын ту чис-									
Fillo	r Material	<u>и.</u> Е	rom (ft)	To	(ft)	0	antity (llw	or ft <sup>3</sup>	pi	acement -	lethord
					~~/				r-14		
				ļ							
				L		L					]
11. FLO	WING	ARTES	IAN:								
Flowing	Artesian	? 🛛 Y	ΠN	Arte	sian	Pre	ssure (l	PSIG)_			

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water encountered (ft) $\frac{75}{100}$	Static water level (ft) 75			
Water temp. ( <sup>0</sup> F) Cold	Bottom hole temp. ( <sup>0</sup> F)			
romovobio woli con				

Describe access port removable well cap

		Test m	ethod:		
Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
45 gpm	1/2 HR			X	
		] 🗆			
	Discharge or yield (gpm) 45 gpm	Discharge or Test duration yield (gpm) (minutes) 45 gpm 1/2 HR	Discharge or yield (gpm)     Test duration (minutes)     Pump       45 gpm     1/2 HR     I	Discharge or yield (gpm)     Test duration (minutes)     Pump Baller       45 gpm     1/2 HR     IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Discharge or yield (gpm)     Test duration (minutes)     Pump     Bailer     Air       45 gpm     1/2 HR     I     I     I     I

13 LITHOLOGIC LOG and/or repairs or abandonmen

Bore Dia	From	To	Remarks, lithology or description of repairs or	Wa	ter
(in)	(ft)	(ft)	abandonment, water temp.	Y	N
12	0	4	fill dirt		х
12	4	12	clay and cleachy		Х
12	12	30	sand		Х
10	30	47	sandy clay		Х
6	47	57	sandy clay		х
6	57	75	sand with small gravels		Х
6	75	112	gravel	Х	
6	112	141	sand with clay layers	х	
6	141	150	sand	X	
				1	
				1	
				+	
	<u> </u>	<u> </u>			
		<u> </u>			
			HECEIVED	+	
					<u> </u>
		<u> </u>	APR 2 1 2016		
			4 91 15 K. 9 K. 41 1		<u> </u>
		<u> </u>	WATER RESOURCES		
	<b> </b>		WESTERN REGION		
		<b> </b>			
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	l	L			
	<u> </u>				
Compl	eted Dep	th (Meas	surable):150		
Date S	tarted: A	pr 8, 2	014 Date Completed: Apr 10, 20	14	
14. DI I/We c	RILLER ertify the	'S CER at all mir was re	TIFICATION: imum well construction standards were compli moved.	ed with	at

Company Name Nu Acre Drilling LLC	Co. No. 701
*Principal Driller	Date Apr 17, 2014
*Driller	_ Date
*Operator II	Date
Operator I	Date

\* Signature of Principal Driller and rig operator are required.

JSE TYPEWRITER OR	
BALL POINT PEN	

# State of Idaho Department of Water Administration

## WELL DRILLER'S REPORT

WELL DRILLI	ER'S	5 RE	POF	<b>R</b> T	() yg	í AN	
State law requires that this report be filed with the Dir days after the completion of	ector, E r aband	Departm onment	ent of W of the v	/ater Administration within 3 well.	30 14 0	<u> </u>	
1. WELLOWNER NameA. A. Jackaon	7. V	VATER	LEVEL	feet below land s	surface		
Address 1223 N Michigan	Flowing?  Yes X No G.P.M. flow Temperature° F. Quality						
Owner's Permit No	Artesian closed-in pressurep.s.i. Controlled by 🔲 Valve 🔲 Cap 🔲 Plug						
2. NATURE OF WORK	8. V	VELLT	EST DA	ATA			
V New well Deepened Replacement		] Pump	<u> </u>	Bailer 🗆 Othe	er Hours f		
Abandoned (describe method of abandoning)		2.0	7 7				
3. PROPOSED USE	•						
🖉 Domestic 🗆 Irrigation 🗆 Test	9.	LITHO	OGIC I	LOG	04156	ر 	
🗆 Municipal 🛛 Industrial 🗖 Stock	Hole Diam,	De From	pth To	Material		Wa Yes	ter No
4. METHOD DRILLED	10	6	6	Top sail + How	2 pon		X
💢 Cable 🗆 Rotory 🗆 Dug 🗆 Other	8	18 58	58 68	Sandy clash	<u>ek</u>	+	$\hat{\mathbf{x}}$
5. WELL CONSTRUCTION	8	68 20	20	Sand cloyto	der -		X
Diameter of hole inches Total depthfeet Casing schedule:X Steel Concrete	8	95	120	dand & day &	tratus		
1250 inches 8 inches +1.5 feet 855 feet				······			
inches inches feet feet feet feet						+	
inches inches feet feet feet feet feet						<b></b>	
Was a packer or seal used? 🖸 Yes 🖉 No		<u> </u>		······································			
How perforated? How perforated? Factory Knife Torch							
Size of perforation inches by inches Number From To							
perforations feet feet feet feet							
perforations feet feet		·)				+	
Well screen installed? 🛛 🖓 Yes 💢 No Manufacturer's name				· · · · · · · · · · · · · · · · · · ·	······		
Type Model No Diameter Slot size Set from feet to feet		∲			<u> </u>		
Diameter Slot size Set from feet to feet	 						
Gravel packed?  Yes X No Size of gravel	·						
Surface seal? Yes I No To what depth B feet							
Sketch map location must agree with written location.	10				1	~ ^	
10 <sup>7</sup> se		ork sta	rted	<u>/-27-72</u> finished	12-4-	<u> 10</u>	
W	11. C T ti	<b>DRILLE</b> This well rue to th	<b>R'S CE</b> I was dri he best o	RTIFICATION illed under my supervision a of my knowledge.	and this report	is	
	Bil	I Do riller's of	ly W	Drilling & Devel	apment "	<u>42</u> ber	_
County Canyon	$\mathcal{P}_{A}$	ddress	<u>7</u> . C.	Id well d	daho	/ 	-
<u>→ <sup>17</sup>/<sub>4</sub> 5 F <sup>1</sup>/<sub>4</sub> Sec. <u>34</u>, T. <u>5</u> N/8, R. <u>3</u> <u>#</u>/W</u>		igned By	Ľ.	yoty 1	2-19-7 Date	<u>~2</u>	-
LISE ADDITIONAL SUSETS IS NEODOCOMMU							_

USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE, BLUE, AND PINK COPIES TO THE DEPARTMENT. and the second sec

#### STATE OF IDAHO DEPARTMENT OF WATER RESOURCES

## 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	7. WATER LEVEL	
D. M. C		
Name funct alafozer	Static water level 5 feet below land surface.	
RS Enlowed Uda	Flowing? U Yes 🛛 No G.P.M. flow	
	Artesian closed-in pressure p.s.i.	
Owner's Permit No.	Temperature OF. Quality Curl	
2. NATURE OF WORK	8. WELL TEST DATA	
Abandoned (describe method of abandoning)	$\mathcal{A}$ Pump $\Box$ Bailer $\mathcal{A}$ $\Box$ Other	
	Discharge G.P.M. Pumping Level Hours (	Pumped
	110 65 24	
3. PROPOSED USE		<b>.</b>
	1004 42	,
$\square$ Industrial $\square$ Stock $\square$ Waste Disposal or Injection	9. LITHOLOGIC LOG	
□ Other (specify type)	Hole Depth	Water
	Diam. From To	Yes No
4. METHOD DRILLED	1 1/ 29 Der Alex	
	6 24 53 Firefred	
X Cable Dug Dother	6 53 LT Good Clay	
	6" 617 79 Car 28 Jour X grand 1	X
5. WELL CONSTRUCTION	- Completed Well open for thomas	
	- in Cox is cyconet	
Casing schedule: 🗖 Steel 📋 Concrete 🗔 Other		
Thickness Diameter From To		
inches inches feet feet		
inches inches feet feet		
inches feet feet		
Was casing drive shoe used? 🗭 Yes 🛛 No		
Was a packer or seal used?  Yes  No		•
Perforated? Yes X No		
Size of perforation inches by inches		
Number Erom To		
perforations feet feet		
perforations feet feet		
perforations feet feet		
Manufacturer's name	THE REPORT OF TH	
Type Model No.	mrcceuv cult	
Diameter Slot size Set from feet to feet		┦┈┝─
DiameterSlot sizeSet fromfeet tofeet		+
Gravel packed? □ Yes \$\$\$ No □ Size of gravel		++
Surface seal depth 2 / Material used in seal:	LILIWater Resources	
$\mathbb{X}$ Puddling clav $\square$ Well cuttings	Department of the Department o	
Sealing procedure used:	AUG 0 1000 Western	
X Overbore to seal depth	P A Mator Resources	
Method of joining casing: U Threaded 🦧 Welded 🗆 Solvent		
Weid		
Describe access port	10. 2 2 -10	112
	Work started 2n XO/Y Tinished Zeb //	180
B. LOCATION OF WELL	11. DRILLERS CERTIFICATION	
Sketch map location must agree with written location.	I/We certify that all minimum well construction standa	ards were
	complied with at the time the rig was removed.	(6
	Firm Name Arawick Kree Willies Firm No 26	$\overline{S}$
	323 mali all lille as w	- <u>K</u>
	Address Culdwell Add Date Itm 5	100
Lot No Block No	and the analy build a	
	Signed by (Firm Official) No 1444 AV 11 3761	
County Confort	and $\tilde{L}$	
CI KE Die Frie Out	(Operator) factore 1	
$\underline{\mathbf{V}}_{\underline{\mathbf{U}}} \overset{M}{\overset{M}} \overset{M}} \overset{M} \overset{M} \overset{M}} \overset{M} \overset{M}} \overset{M} \overset{M} \mathsf{$	-	

USE ADDITIONAL SHEETS IF NECESSARY - FORWARD THE WHITE COPY TO THE DEPARTMENT

Form 238-7 6/07

### IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

Drilling Permit No.       101910 - 000000         Water right or injection well #
Water right or injection well #
2. OWNER:
Name       Otovini Levinic         Address       P.O. Box 400         City       Middleton       State       ID       Zip       83644         3.WELL LOCATION:       Twp.       4       North 🖾 or South 🗆 Rge.       3       East 🗋 or West 🖾         Sec.       3
Address       I.O. Dox 100         City       Middleton       State       ID       Zip       83644         3.WELL LOCATION:       Twp.       4       North Image: Nor
City Induction       State ID       Zip 00044         3.WELL LOCATION:       Twp. 4       North IX or South II       Rge. 3       East II or West IX         Sec. 3
3.WELL LOCATION:         Twp. <u>4</u> North X       North X       or South C       Rge. <u>3</u> East C       or West X         Sec. <u>3</u> 1/4       NE1/4       NWELL LOCATION:         Sec. <u>3</u> 1/4       NWELL NE1/4         Gov't Lot       County Canyon         Long. <u>116</u> 043.094 (Deg. and Decimal minutes)       Long. (Deg. and Decimal minutes)         23854 Stopp Lange
Twp. 4       North I or South Rge. 5       East or West I or West I or West I or West I and the or West I a
Sec.           I/4         NE 40 acres         1/4         NV TEO acres         1/4           Gov't Lot          County         Canyon
Gov't Lot         County         Canyon           Lat.         43         ○ 43.094         (Deg. and Decimal minutes)           Long.         116         ○41.092         (Deg. and Decimal minutes)
Lat. <u>43</u> 0 43.094 (Deg. and Decimal minutes) Long. <u>116</u> 041.092 (Deg. and Decimal minutes) 23854 Stopp Lang
Long. <u>116</u> 041.092 (Deg. and Decimal minutes) 23854 Stoppe Longe (Deg. and Decimal minutes)
23854 Stopo Lano
Address of Well Site 20004 Stone Lane
City Middleton
(Give at least name of mad + Distance to Road or Landmark)
Lot Blk Sub. Name
4. USE:
5. TYPE OF WORK:
New well Replacement well Modify existing well
Abandonment D Other
6. DRILL METHOD: Air Rotary  Mud Rotary  Cable  Other
7. SEALING PROCEDURES:
3/4 Bent. 0' 44' 27 bags Overbore
8 CASING/LINEP:
Diameter From (fft) To (fft) Gauge/ Material Casing Liner Throaded Welded
6" +2 116 250 Stool XI II II X
Was drive shoe used? X Y N Shoe Depth(s)         116'
Was drive shoe used? X Y N Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:
Was drive shoe used? X Y N Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:         Perforations Y X N Method
Was drive shoe used? X Y N Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:         Perforations Y X N Method         Manufactured screen X Y N Type Johnson
Was drive shoe used? X Y N Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:         Perforations Y N Method         Manufactured screen X Y N N Type         Johnson         Method of installation
Was drive shoe used? X Y N Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:         Perforations Y X N Method         Manufactured screen X Y N N Type         Johnson         Method of installation         Wash Down
Was drive shoe used?       X       N       Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:       116'       116'         Perforations       Y       N       Method         Manufactured screen       X       N       N Type         Johnson       Wash Down         From (ft)       To (ft)       Slot size       Number/ft         Diameter       Material       Gauge or Schedule
Was drive shoe used?       X       N       Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:       116'       116'         Perforations       Y       N       Method         Manufactured screen       X       N       Ntype         Method of installation       Wash Down         From (ft)       To (ft)       Slot size       Number/ft       Diameter (nominal)       Material       Gauge or Schedule         124'       119'       18       5       SS       N/A
Was drive shoe used?       X       N       Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:       116'       116'         Perforations       Y       N       Method         Manufactured screen       X       N       Type         Johnson       Wash Down         From (ft)       To (ft)       Slot size       Number/ft         124'       119'       18       5       SS
Was drive shoe used? X Y N Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:         Perforations Y X N Method         Manufactured screen X Y N N type         Johnson         Method of installation         From (ft) To (ft) Slot size Number/ft Diameter (nominal)         Material         Gauge or Schedule         124'         119'         18         5         SS         N/A
Was drive shoe used? X Y N Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:         Perforations Y X N Method         Manufactured screen X Y N N Type         Johnson         Method of installation         From (ft) To (ft) Slot size Number/ft Nominal)         From (ft) To (ft) Slot size Number/ft         Diameter (nominal)         Material         Gauge or Schedule         124' 119' 18         5         SS         N/A         Length of Headpipe
Was drive shoe used? X Y N Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:         Perforations Y X N Method         Manufactured screen X Y N N type         Johnson         Method of installation         Wash Down         From (ft) To (ft) Slot size Number/ft Original)         Material       Gauge or Schedule         124' 119' 18       5 SS         Length of Headpipe       10'         Length of Headpipe       10'         Length of Headpipe       N Type
Was drive shoe used?       Y       N Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:       116'         Perforations       Y       N Method         Manufactured screen       Y       N Type         Johnson       Wash Down         From (ft)       To (ft)       Slot size         Number/ft       Diameter (nominal)       Material       Gauge or Schedule         124'       119'       18       5       SS         Length of Headpipe       10'       Length of Tailpipe
Was drive shoe used?       Y       N Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:       Perforations       Y       N Method         Manufactured screen       X       N Type       Johnson         Method of installation       Wash Down
Was drive shoe used? X Y N Shoe Depth(s) 116'         9. PERFORATIONS/SCREENS:         Perforations Y X N Method
Was drive shoe used? X   N Shoe Depth(s)       116'         9. PERFORATIONS/SCREENS:         Perforations Y X N Method         Manufactured screen X Y N N Type         Johnson         Method of installation         Wash Down         From (ft) To (ft) Slot size Number/ft         Diameter (nominal)         Material         Gauge or Schedule         124'         119'         18         5         SS         N/A         Length of Headpipe         10'         Length of Headpipe         10'         Length of Headpipe 10'         Length of Headpipe         10.FILTER PACK:         Filter Material       From (ft)         To (ft)       Quantity (lbs or ft <sup>3</sup> )         Placement method

Flowing Artesian?	X N Artesian Pressure (PSIG)
Describe control device	

12. STATIC WATER LEVEL and WELL TESTS:

Depth first water	encountered (ft) 15	5' Static water level (	(ft) 10'
Water temp. ( <sup>0</sup> F)	56	Bottom hole temp. ( <sup>0</sup> F)	

Describe access port Well Cap

Well test:			Test m	ethod:		
Drawdown (feet)	Discharge or yield (gpm)	Test duration (minutes)	Pump	Bailer	Air	Flowing artesian
75'	50 GPM	30 min.			$\mathbf{X}$	
Water quality tes	t or comments:	Iron 1 PH 7.5 I	lardne	ss 4		

#### 13. LITHOLOGIC LOG and/or repairs or abandonment:

13. LII	HULUG	IC LUG	and/or repairs or abandonment:			
Bore Dia.	From	To	Remarks, lithology or description of repairs or	Wa	ter	
(in)	0	(11)		Y	N	
10	0	3			<u>X</u>	
10"	3	5'	Tan Clay		X	
10"	5'	32'	Gravel	X		
10"	32'	35'	Brown Clay		Х	
10"	35'	40'	Tan Clay		Х	
10"	40'	44'	Tan Clay		Х	
6"	44'	57'	Sand	Х		
6"	57'	64'	Tan Clay		Х	
6"	64'	73'	Sand	Х		
6"	73'	77'	Tan Clay		Х	
6"	77'	80'	Sandy Clay	Х		
6"	80'	90'	Sand	Х		
6"	90'	112'	Sandy Clay	Х		
6"	112'	116'	Tan Clay		Х	
6"	116'	124'	Sand	Х		
					·	
					•	
			DECEIVE	ED		
			HEULIN			
				2		
			JUN 12 200	<i>#</i>		
			PESOURC	ËS		
			WATER HEO	N		
			AAPO . D.			
Comple	ted Dept	h (Meas	urable): 124'			
Date Started: Jun 3, 2013 Date Completed: Jun 5, 2013						

14. DRILLER'S CERTIFICATION:

 $\ensuremath{\text{I/We}}$  certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name Adamson Pump & Drilling	Co. No. 457
*Principal Driller Dave Rechamse	Date Jun 10, 2013
*Driller_phi Subr	<sub>Date</sub> Jun 10, 2013
*Operator II	<sub>Date</sub> Jun 10, 2013
Operator I_Sam Navarro	Date

\* Signature of Principal Driller and rig operator are required.

USE TYPEWRITER OR
BALL POINT PEN

#### State of Idaho Department of Water Administration

	· ~ et 60	)
$\bigcirc$	22.1	
$\langle \not b \rangle$	241	
Y 8	Nim	

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WELL DRILLER'S REPORT

	State law requires that this report be within 30 days after complete	filed w tion or	vith the abando	e State onment	Reclamation Engineer	8 2	_ <i>+</i>	
1.	WELLOWNER	7. V	VATER	LEVEL				
	Name RON BALE	s	tatic w	ater leve	elfeet below land su	rface		
	Address ROUTE #7 CALDWELL, IDAHO	ј F Т	lowing	? 🗆 Y sture	′es ⊠KNo G.P.M. flow °F. Quality		<b></b>	
		A	rtesian	closed-i	n pressurep.s.i.			<b>-n</b>
_		`		ed by		_] Plug 		
2.	NATURE OF WORK	8. W	/ELL T	EST DA	<b>TA</b>			
	🕱 New well 🛛 Deepened 🗆 Replacement		C Pump	r	🗆 Bailer 🔍 Other			
	Abandoned (describe method of abandoning)	D	ischarge	G.P.M. O	Draw Down	Hours Pu	Imped	
3.	PROPOSED USE							
			ITUOI	<b>A</b> C10.1				
		Hole	De De	pth			We	nter
	Municipal      Industrial      Stock	Diam.	From	То	Material		Yes	No
4.	METHOD DRILLED	<b>q</b> "	5	5	HARD PAN + SAN(	 7		$\mathbf{\hat{\mathbf{X}}}$
	🕅 Cable 🔲 Rotory 🗆 Dug 🗔 Other	8''	_10 _15	15	SAND BRAUZL		┿━━━	X
5.	WELL CONSTRUCTION	6"	19	20	GRAVEL		<u> </u>	X
	Dismeter of hole 6" inches Total depth (1)5" foot	6"	40	50	GAND CLAY		x	
	Casing schedule: X Steel Concrete	_6" 	50 65	55	SANDYCLAY LAVER SANDY	25		X
	Thickness Diameter From To	611	60	64	SANDY CLAY			X
		611	64. 70	85	SANDY CLAY LAY	ERS		X
	inches inches feet feet	6"	85 07	97	CIAY SAND	<u>_</u>	1 1 1 1	×
	inches inches feet feet	_6″	105	?	SAN O		Ŷ	
	Was a packer or seal used?  Ves Xo Perforated?							
	How perforated?  Factory  Knife  Torch						1	
	Size of perforation inches by inches Number From To						╄╾╍╌┥ ┥────┥	
	perforations feet feet		-		· · · · · · · · · · · · · · · · · · ·			
	perforations feet feet					<u></u>		
	Well screen installed?							
	Manufacturer's name				001167			
	Diameter Slot size Set from feet to feet to feet					<u>_</u>		
							$\square$	
	Gravel packed?  Yes  Yes Ko Size of gravel  Placed from feet to feet to				······································			
	Surface seal? STY S [] No. To what depth /9 fact							
	Material used in seal						$\vdash$	-
6.	LOCATION OF WELL							
	Sketch map location must agree with written location.	10.						
		W.	ork star	ted	<u>///v _29,/97/</u> finished	Aug. 6, 1	<u>'97/</u>	
		11. D	RILLE	B'S CEI				
		TI	nis well	was dri	lled under my supervision and	J this report i	S	
		tri	ue to th	ie best o	or my knowledge.		S. S	
•	S S	Ý	<u> </u>	DOTY	WELL DRELLING	- 4 Nitime	2_	_
	County CONYON	K	<u></u>	= # <sub>7</sub>	CALDWELL, IL	DAHO		_
	NEW NE 1/2 Sec. 3 T. H N/S R R 2011	Ас <i>7</i>	idress	72	For. 8-13	- 71		
	, , , , <u></u> _, , , , , , <u></u> _, , , , , , <u></u> _, , , , , , , , , , , , , , , , , ,	Sig	ned By	7		Date		-

USE ADDITIONAL SHEETS IF NECESSARY

FORWARD THE WHITE, BLUE, AND PINK COPIES TO THE DEPARTMENT

REC	CEI	VE	D
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Form 238-7	
4/92	

61 STATE OF IDAHO SEP 0 3 1993 USE TYPEWRITER OR DEPARTMENT OF WATER RESOURCES Department of Water Resources

61

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	7. V	VATER	LEVE			
		Static w	otor lov	- vel 6 feet below	land surface	
Name OULDY LUNICE ON CLARENCE I RIEND		lowing	2.01 10. ? □	Yes 🖄 No	G.P.M. flow	
Address 23853 STONE LANE CALOWell \$3605	Á	rtesiar	closed	d-in pressure	D.S.i.	
Drilling Permit No. <u>63-93-W-0480</u>		Controll	ed by:	🗆 Valve 🗆 Cap	🗆 Plug	
Water Bight Permit No	ד	empera	ature	ºF. Quality	zones below	]
2. NATURE OF WORK	8. V	VELL 1	EST D	ATA		
		···		🗖 Bailer 🕅 Air		
□ Well diameter increase □ Modification			μ			
Abandoned (describe abandonment or modification procedures		lischarge	G.P.M.	Pumping Level	Hours Pumpe	ed
such as liners, screen, materials, plug depths, etc. in lithologic	25			40	15HRS.	
log, section 9.)		<u> </u>				
3. PROPOSED USE	<u>├</u> ──			<u>l</u>	70651	
XX Domestic 🗆 Irrigation 🗆 Monitor	9. L	ITHOL	OGIC	LOG	ICOOL	
□ Industrial □ Stock □ Waste Disposal or Injection	Bore	De	pth		N	ater
	Diam.	From	То	material	Yes	No
	6	0	14	TOP SOIL		X
	6	14	26	GRAVEL	······································	<u>X</u>
L HOTARY LI AIR LI Auger Li Reverse rotary	6	<u>20</u> 31		SAND & CLAV		<u> </u> X
(backhoe, hydraulic, etc.)	6	45	53	SAND & CLAY		
······	6	53	59	SAND		
5. WELL CONSTRUCTION	6	59	62	CLAY		X
Casing schedule: XX Steel  Concrete  Other	6	62		SAND	X	<u></u>
Thickness Diameter From To		<u> </u>				
• <u>250</u> inches <u>6</u> inches + <u>2</u> feet <u>62</u> feet	<u> </u>	<u> </u>		······································		+
Inches Inches feet feet						+
Was casing drive shoe used? XX Yes					· .	
Was a packer or seal used?	<u> </u>	<u> </u>				
Perforated?						
How perforated?  Factory  Knife  Torch  Gun	┣──	<u> </u>				
Size of perforation? inches by inches		[				
perforations feet feet						
perforations feet feet	<u> </u>			<u></u>		
perforations feet feet	<u> </u>			· · · · · · · · · · · · · · · · · · ·		
Well screen installed?  Yes XXNo						
Top Packer or Headbine					······	+
Bottom of Tailpipe						
–	<u> </u>					
Diameter Slot size Set from feet to feet						·
Diameter Slot size Set from feet to feet	┣───	<u></u>		MEREN		+
Placed from feet to feet	<b></b>				╧╧╧	+ -
Surface seal depth20_ Material used in seal: 🗆 Cement grout				SEP 0 8 199	3	
XX Bentonite  Puddling clay	<u> </u>				1000	
Sealing procedure used: Tomp surface casing KV Overbore to applied on the				Department of Waterva		
Method of joining casing:				Western Regional C	ffice	1
□ Solvent Weld □ Cemented between strata	10				FED 09 100 4	
	10.				° ° 1994	
Describe access port		Work s	tarted	<u>7–17–93</u> finis	hed <u>8-7-93</u>	
		···			<u> </u>	
	11.	DRILLI	R'S C		والمعادية والمعادية والمعادية	
Sketch map location must agree with written location.	l	l/We c	ertify tl	hat all minimum well con	struction standards	wøre
Subdivision Name		complie	ed with R	at the time the rig was r ILL DOTY DRIIITMG	emoved.	
		Firm N	ame 🛴	0., INC. F	irm No. <u>42</u>	
Lot No Block No		۵ddroo	1	06 CALLOWAY	sto 8-94-93	
County <u>CANYON</u>	l '		с — с	ALDWELL, ID 83605	and the second s	
Address of Well Site 23853 STONE LANE		Signed	by Dri	lling Supervisor	LAG.	
(give at least name of road)			â	and	/	ľ
T. <u>4N</u> N Ø or S □			(Op	erator)	<b></b>	
<u>NE ¼_NW</u> ¼ Sec <u>5</u> , H. <u>≾W</u> E □ or W Ø				(If different than	the Drilling Supervise	or)

USE ADDITIONAL SHEETS IF NECESSARY --- FORWARD THE WHITE COPY TO THE DEPARTMENT

USE TYPEWRITER OR BALL POINT PEN Department of Wa	of Idah iter A(	10 dminist	tration	l.	$\cap$	2/2)	, 9,
State law requires that this report be filed with the Directory	ER'S	<b>3 RE</b> Departm	<b>POF</b>	<b>RT</b> Vater Administration within 30	WW	N ,	ħ.
days after the completion or	aband	onment	of the v	well.	<u> </u>	7	
1. WELLOWNER Name Jogan Kerr	7. W	VATER Static wa Howing?	LEVEL	- el_ <u>H_3_</u> feet below land su ∕es  ጆ No _ G.P.M. flow	7 / rface		
Owner's Permit No.	م د	Artesian Controlle	closed-i ed by	in pressurep.s.i.	🗆 Plug		
2. NATURE OF WORK	8. V	VELL TI	EST DA	ATA			
💢 New well 🗆 Deepened 🖾 Replacement		] Pump		Bailer 🗌 Other			
Abandoned (describe method of abandoning)	<b>ا</b>	ischarge	Ğ.Р.м. ົ	Draw Down	Hours ru	impea	[ 
			<u></u>				
	┟──				}		
3. PROPOSED USE	9.1				<u></u>		
	Hole	De	pth			Wa	iter
🗅 Municipal 🔅 Industrial 🗖 Stock	Diam.	From	То	Material	,,	Yes	No
4. METHOD DRILLED	10	2	0	No DAN	<u>v</u>	┨	<b>¦</b> ≹
	10	15	18	closed -	Lana	<u> </u>	伭
A Cable L Rotory L Dug L Utner	[ P	<u>[8</u> ]	38	bandy cloy	ayers.	<b> </b>	R
5. WELL CONSTRUCTION	5	18	17 N_	Clair the	thet	<del> </del>	<del> </del> 令
Discussion of Local American Total damph 70 fact	8	20	80	Pand & Cloy	layero	$\mathbf{X}$	
Casing schedule: X Steel Concrete		<u> </u>		<i>V</i>	- 0	<u> </u>	<u> </u>
Thickness Diameter From To	<b> </b>	<del> </del>				+	┼╼╌─
1250 inches 0 inches + 2 feet 68 feet							
Inches Inches Teel reel	┣───	╂────┤		<u> </u>		┨	
inches inches feet feet		╂┦			<u></u>	<u> </u>	
inches inches feet feet							
Was a packer or seal used? 🔲 Yes 📈 No	<b> </b>						
Perforated?	<b></b>	┟──┤				+	
How perforated?  Factory  Knife  Torch Size of perforation inches by inches							
Number From To	'	┝┈╼╾┥		   	<u> </u>		[
perforations feet feet		<u></u>			<u></u>	┨	
perforations feet feet				· <u> </u>			
	┝ <b>-</b> ── <sup>!</sup>		<b> </b>	-00115	<b></b>	┨───┤	<b> </b>
Well screen installed?	<b> </b>		<b> -</b>		<u> </u>	╉──┤	
Manufacturer's name Model No				· · · · · · · · · · · · · · · · · · ·			
Diameter Slot size Set from feet to feet	<sup>/</sup>	┝	 	<u> </u>	<u> </u>		
Diameter Slot size Set from feet to feet							
Gravel packed?	'	<b></b>					<b>—</b> —
Placed from feet to feet	[]			<u> </u>		<u> </u> 4	<b></b>
Surface coal? NVac DNo To what depth / 8 feet			r 				
Material used in seal	<sup>_</sup>	┞──┤		· · · · · · · · · · · · · · · · · · ·		┝╼┈╼┥	[;
	[!					╞─┤	
6. LOCATION OF WELL		<u></u>		· · ·			
Sketch map location must agree with written location.	10.			7-24-71	7-28	,7	° 🤊
	VV	ork star	ted	<u>// / / // TINISNEO _</u>	/ 0-0		
ν <sub>0</sub> 3, []	11 1	1011 F	יפיפ רב		G	Ð	:
<sup>™</sup> <del>− − − − − − − − − − − − − − − − − − −</del>	т Т	his well	was dri	illed under my supervision an	d this report	is	
 	l tr	rue to th	ne best (	of my knowledge.	<b>u</b>		
	D.L	1 A	aten	IND 1: 1 PM	<i>Л.</i>	ų.	1
° f	/DUL	riller's or	Firm's I	Ull Viciny & Jun	<u>Numt</u>		
County CAMAON	19	メ	10	alwell	• ••=••=	-U1	
	Â	ddress	10	In. F. 19	111.0	72	-
<u>N I=_¼ N E ¼</u> Sec. <u>3</u> , T. <u>4</u> N/ <b>∂</b> , R. <u>3</u> <b>∉</b> /W	$\mathcal{M}_{si}$	JAX igned By	<u>1</u>	yory it	Date	0	

USE ADDITIONAL SHEETS IF NECESSARY

FORWARD THE WHITE, BLUE, AND PINK COPIES TO THE DEPARTMENT

		75	ROISI	<i>с</i>	20	
Form 238-7			51156	<u> </u> C	53	r
		Ins	Office Use Only			
		l Tw	peciea by p Rae (	Sec		
1. WELL TAG NO. D -002333			1/41/4	1/4		
	11. WELL TEST	S: Lat:	: : Long:	: :		
	A Pump :	Bailer D/	Air 🗆 Flowing /	Artesian		
2. OWNER: TEFE BEIL	30	2.5	Pumping Level		100	<u> </u>
Address 1357 E. PITKIN						<u></u>
City MERIDIAN State 10 Zip 83612					-	
	Water Temp. <u>5</u> 3°	, 	Bottom ho	ile temp.		
3. LUCATION OF WELL by legal description:	Water Quality test or co	mments:			_	~/
Sketch map location must agree with written location.			Depth first Water	Encounter	70	<u> </u>
	Bore				₩a	ter
Twp North or South	Dia, From To	Remarks: Llihology,	Water Quality & Temp	erature	¥	N
w East □ or West	002	TOP SOIL				$\vdash$
Sec. $\underline{3}$ $\frac{1}{10} \frac{1}{10^{10}} \frac{1}{10$	10 2 8	HARV M	RECON		_	$\geq$
Lat: : Long: : ;	6 45 68	SANDY	FLAU RA	ROWN		$\mathbf{R}$
s Address of Well Site 14133 Willis RD	6 6890	GRAUE 1-	PitBUN	7	X	$\mathbf{\mathbf{k}}$
(Give at least north of road + Distance to Board or Londrow) City MiDDLETON	6 90 95	SANDY (	SRAVEL _	<i>"</i>	ĸ	
		/				
LT BIKSub. Name		<u> </u>		<del> </del> _		
4 USE:						
ZDomestic 🗆 Municipal 🗇 Monitor 🗆 Irrigation					;	- <u>-</u> -
🗋 Thermal 🔲 Injection 📋 Other					,	
5. TYPE OF WORK check all that apply (Replacement etc.)						 
K New Well Modify Abandonment Other					_	
O. DRILL METHOD ☐ Air Botary Cable ☐ Mud Botary ☐ Other						
7. SEALING PROCEDURES						
Material From To Sacks or						
RENTANSTE OF 30 15 BAG DUE BADE		<u>     .                               </u>		<u> </u>		
		BE	CEIVED			
Was drive shoe used?		DEC	2 7 2082			
8 CASING/LINER		WAT			-	
Diameter, From To Gauge Material Casing Liner Welded Threaded		WE	STERN REGION	·	-	
6" 72 95 1/4 STEEL X 0 X 0					-1	
Length of Headpipe Length of Tailpipe				<u>`</u>		
9. PERFORATIONS/SCREENS Perforations Method				- +	-	
Screens Screen Type	Completed Dept	th . 951		(Measu	irabl	
	Date: Starled	-19-02	Completed_//	-25-	07	ź
From To Slot Size Number Diameter Material Casing Liner						,
	13. URILLER'S		N standards wors complied	t with at		
	the time the rig was rem	ioved:		i wint) at		
	Call	N'sUsell F	Rillina	217		
10. STATIC WATER LEVEL OR ARTESIAN PRESSURE	Company Name	1 11/1/	////////_Firm N	0_2/_	-	
<u>45'</u> ft. below ground Artesian pressure Ib.	Firm Official	W.U.L	Date 12-2	20-0.	2	
Depth flow encounteredft. Describe access port or	and T	0,00		- <u>-</u>		
control devices:	Driller or Operator V	K Willo	<u> Date 12-2</u>	<u>0</u> -02		

(Sign once if Firm Official & Operator)
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FORWARD WHITE COPY TO WATER RESOURCES

Form	238-7
6/07	

#### IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

WELL TAG NO. D 2055974	12. S <sup>-</sup>	TATIC W	ATER	LEVEL and WELL TESTS:	47	,
Driving Permit No. $101117-500010$	Depth	first wate	er encou	ntered (ft) Static water level (ft	TIN	
Water nghi or injection well # (1) - U - U - U - U - U - U - U - U - U -	Water	temp. ( <sup>o</sup> l	F)_ <b>/</b>	Bottom hole temp. ( $^{\circ}F$ ) _/	2/14	
WINER: CHAPTER STOTTS LODSTUCTION	Descr	ibe acces	ss port _	weitcap		
Name (Multing Stort)	Well t	est:	- Die	Test method:	-	louina
Address <u>F.C.DOX &amp; Y.T.</u>	Draw	down (feet)	) yie	ld (gpm) (minutes) Pump Bailer	Air a	rtesian
City <u>1/07(5</u> State <u>1</u> ] Zip <u>85(65</u> (6	5	70	4	Dapm 60min 0 0	R	
WELL LOCATION:						
wpNorth 🕰 or South 🗌 Rge. 紀 East 🗋 or West 🕅	Water	quality to	est or co	mments: <u>NOV C</u>		
iec. <u>113</u> 1/4 <u>N/E</u> _1/4 <u>//E</u> _1/4	13. LII Bore	HOLOG	IC LOG	and/or repairs or abandonment:		
	Dia.	(ft)	(ft)	abandonment, water temp.	Y Y	N
iov't Lot County <u>/0000</u>		0	2	Tarsal		1
at (Deg. and Decimal minutes)	19	2	14	Brun Cau		1
ong. $110^{\circ}$ $70^{\circ}$ $50^{\circ}$ (Deg. and Decimal minutes)	2	14	19	Sandi Clare _		
ddress of Well Site Bryer CD	$\sum$	19	38	Brund Clay		
ve at least name of road + Distance to Road or Landmark)	6	38	43	Clay Brown		
Dt Bik Sub. Name////////////////////////////////	4	43	97	Groubel	_×_	
USE:				· · · · · · · · · · · · · · · · · · ·		
Domestic 🗋 Municipal 📋 Monitor 📋 Irrigation 📋 Thermal 🍂 Injection		+		<b>↓</b>		
Other``		+		<u> </u>		
						†
Abandonment Other						1
						1
Air Rotary 🔲 Mud Rotary 🗍 Cable 🗍 Other						
SEALING PROCEDURES:	L					
Seal material From (ft) To (ft) Quantity (lbs or ft <sup>3</sup> ) Placement method/procedure						
Bentonie Chip D 38 1200/65 porchale hydrated		ļ				∔
			<b> </b>	· · · · · · · · · · · · · · · · · · ·		
. CASING/LINER:	}	┦───				+
Diameter From To (ft) Gauge/ Material Casing Liner Threaded Welded						+
	}	1	<u> </u>			+
6 +2 85 250 Step1 & 0 & 0			1			
		BE	he-			
/as drive shoe used? DAY LIN Shoe Depth(s)			NA	2010		
. PERFORATIONS/SCREENS:		<u></u>	רט א	2010		+
Perforations Y X Method		WATE	RES	OURCES		
lanufactured screen 🕅 Y 🔲 N Type		WEST	FERN I			
ethod of installation <u>Set with Sand line out 15ack</u>	·					
From (ft) To (ft) Slot size Number/ft Diameter Material Gauge or Schedule				071		
$\frac{(\text{nominal})}{D}$	Comp	leted Dep	th (Meas		10	- 0
7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Date S	Started:	12-	11-09 Date Completed: 12-	18-0	24
	14. D	RILLER	'S CER	TIFICATION:	and with	at
	the tir	ne the rig	) was ref	moved.		
ength of Headpipe Length of Tailpipe	0		A	more la most An Il ine	45	-7
acker LIY JAN Type 10/14	Comp	any Narr		No.		
O.FILTER PACK: VIDN C	*Princ	cipal Drille	SA	We (CALLION Date /	2-2;	5-01
Filter Material         From (ft)         To (ft)         Quantity (lbs or ft <sup>3</sup> )         Placement method	*Drille	er 🔪	Dhr	Saton . Data	マー	⊋⁄-
	Dine	~ <b>`</b>	11	Dalle fe	ケーラ	$\vec{\tau}$
					(	1-6
	*Oper	rator II	7n	Lave Days		<u> </u>
1. FLOWING ARTESIAN:	*Oper	ator II/	-n	Date		<u>,                                    </u>

Form 238-7 6/07

IDAHO	DEPART	ИENT OF W	ATER F	RESOURCES
	WELL	DRILLER'S	REPO	RT

1. WELL TAG NO. D 0070229	12. ST		VATER	LEVEL and WELL TESTS:		
Drilling Permit No. 97/230-877187	Depth first water encountered (ft) 52' Static water level (ft) 51'					
Water right or injection well #	Water temp ( <sup>0</sup> E) 56° Bottom hole temp ( <sup>0</sup> E)					
2. OWNER:	Descri	ne acces	ss port	Vell Cap		
<sub>Name</sub> Allen & Rachelle Boshaw	Well to	ist.	poit_	Test method:		
Address 5 S. Honey Dr.	Drawd	lown (feet	) Dis	icharge or Test duration Pump Bailer	Air F	Flowing
City Nampa State ID Zip 83687	70'		40 G	PM 45 minutes	x a	artesian
3.WELL LOCATION:						
Two 4 North V or South D Boo 3 East D or Most V	Water (	quality t	est or co	omments: Hardness 9 PH 7.6 Iron .8		
son 2 4/4 NW 1/4 NW 1/4	13. LITI	IOLOG		and/or repairs or abandonment:		
10 acres 1/4 10 acres 1/4 180 acres 1/4	Bore Dia.	From	To	Remarks, lithology or description of repairs or	W	later
Gov't Lot County Canyon	(in)	(11)	(ft)	abandonment, water temp.	Y	N
Lat 43 0 43.132 (Dec. and Decimal minutes)	10"	<u>U'</u>	5	Hardpan		
Long, 116 0 40.289 (Deg. and Decimal minutes)	10"	1 <u>0</u>	22	Brown Clay		<u>  ×</u>
Address of Well Site End of Canyon Lane - 1-1/4 mile north of	10"	221	33	Brown Sandy Clay		┼╤╴
Hwy 44 City Caldwell	6"	42'	52'	Brown Sandy Clay		₩÷
(Give at least name of road + Distance to Hoad or Lundmark)	6"	52'	93'	Sand and Gravel	+	
Lot Blk Sub. Name	6"	93'	97'	Clay	+	† <del>x</del>
4. USE:	6"	97'	106'	Sand	T X	+
Domestic Municipal Monitor I Irrigation Thermal I Injection	6"	106'	119'	Sandy Clay	1	X
	6"	119'	128'	Clay w/Sand Strips	X	1
X New well Replacement well Modify existing well	6"	128'	142'	Clay		X
Abandonment Other	6"	142'	149'	Sand	X	
6. DRILL METHOD:			*****			
7. SEALING PROCEDURES:						1
Seal material From (ft) To (ft) Quantity (lbs or ft <sup>2</sup> ) Placement method/procedure		***				
3/4 Bent. 0' 42' 23 bags 10" Overbore						
			····	BECEIVED		
8. CASING/LINER:	-					
Diameter From (tt) To (ft) Gauge/ Schedule Material Casing Liner Threaded Welded				NOV 1 2 2015		──
6" +2 139' .250 Steel 🛛 🗆 🖾				107 17 2013	+	+
				WATER RESOURCES		+
	-			WESTERN REGION		<u> </u>
	1					
Was drive shoe used? X Y D N Shoe Depth(s)						
9. PERFORATIONS/SCREENS:		***************				ļ
Perforations Y X N Method		************	ninalalandhalanna arlanladh do a			
Manufactured screen 🖾 Y 🔲 N Type Alloy						
Method of installation Wash Down						<u> </u>
From (ft) To (ft) Slot size Number/ft Diameter Material Gauge or Schedule		······································		149'		L
(nominal)	Comple	led Dept	h (Measi			
	Date Sta	arted: INC	OV 2, 20	Date Completed: NOV 4, 20	15	
	14. DR	ILLER'	S CERT	TIFICATION:		
	the time	rtity that the rio	l all mini was ren	mum well construction standards were compli noved.	ed with a	at
Length of Headpipe Length of Tailpipe			Δdar	nson Rump & Drilling AF	:7	
Packer X Y N Type C-Packel	Compa	ny Namo		Co. No. 40	+ <b> </b>	-
10.FILTER PACK:	*Princip	al Dri <u>lle</u>	$\mathcal{D}_{i}$	TOL (CARINSEN Date Nov	5, 201	5
Filter Material From (ft) To (ft) Quantity (lbs or ft <sup>3</sup> ) Placement method	*Driller	<u></u>	im N	Date Nov	5, 201	5
	*Operal	or 11		Date		<del></del>
11. FLOWING ARTESIAN:	Operato	n1 <u>Ja</u>	osh	Young Date Nov	5, 201	5
Flowing Artesian? 🔲 Y 🗵 N Artesian Pressure (PSIG)	* Siona	ture of	Princina	al Driller and rig operator are required		

Describe control device \_

65

USE-TYPEWRITER OR
BALL POINT PEN

#### State of Idaho Department of Water Administration

Re	(j)	-	ļį	
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WELL DRILLER'S REPORT

	State law requires that this report be filed with the Dira days after the completion or	ector, D r aband	)epartm onment	ent of W of the v	later Administration within 30 well.	)	,	M
1.	WELL OWNER	7. ¥	VATER	LEVEL	Department o	lf Water Alimini		
	Name JOHN BISHOP	s	itatic wa	ater leve	el _26_ feet below land su	rface	iliauu	ימ
	Address CALDWELL FORHO	F T	lowing? Tempera	? 🔲 Y sture	'es □ No G.P.M. flow ° F. Quality	0		
	Owner's Permit No.	A C	Artesian Controlle	closed-i ed by	in pressurep.s.i.		-	
2							<u> </u>	
<b>e</b>			/ELL	291 64				
			J Pump Jischarge	G.P.M.	Bailer LI Utner	Hours Pu	mped	
	Abandoned (describe method of abandoning)		72		7			
-					-	<b> </b>		
3.	PROPOSED USE			<b></b>	<u></u>	<u> </u>		
	🗶 Domestic 🛛 Irrigation 🗖 Test	9. 1		.OGIC I	LOG			
	🛛 Municipal 🛛 Industrial 📈 Stock	Hole Diam,	De From	pth To	- Material		Wa Yes	No
4.	METHOD DRILLED	6	20	20	SANDY BROWN REAWN SAND	CLAY		K
	🕅 Cable 🗆 Rotory 🗇 Dug 🗇 Other		52	60	BROWNSAND		Z	
5.				/·				
-	Dimensional dente 7/ feet			<u> </u>				
	Casing schedule: X Steel Concrete		<u> </u> '	<u> </u>	·			
	Thickness Diameter From To 1280 inches inches + feet feet	['	<b>[</b> '					$\left  - \right $
	inches inches feet feet feet		ţ	ļ				$\square$
	inches inches feet feet	'	<mark>}┈┈╴</mark> ┥ ┽╍╺───	<u> </u>				<u>}</u>
		<u> </u>	<u> </u>	<u> </u>				
	Perforated?	['						$\left[ - \right]$
	How perforated?  Factory  Knife  Torch Size of perforation inches by inches	[						
	Number From To	<b></b>	<b>├</b> ────┤ <b>├</b> ─────┤	<b></b>				
	perforations feet feet		<u>↓</u>	<u> </u>				
			<u> </u>	<u> </u>				
	Well screen installed?   Yes   Xanufacturer's name	<u> </u>			10445-			$\square$
	Type Model No Diameter Slot size Set from feet to feet	[		<b></b>	001191		'   '	
	Diameter Slot size Set from feet to feet	<b> </b>	<u> </u>	<b> </b>				
I	Gravel packed?  Yes  No Size of gravel		<u>}</u>	<b> </b> _				
	Contraction of Version Class To what donth 18 feet	J	<mark>┟┈┈┈┙</mark>	<u> </u>	ļ ļ			
	Material used in seal Cement grout Puddling clay	<u> </u>						
6.	LOCATION OF WELL	<u> </u>	[]					
	Sketch map location must agree with written location.	10.	· · _•_		T- 25-D2 Sinched		12	22
						<u> </u>	<u>5                                    </u>	<u> </u>
	W F	11. C	ORILLE	R'S CE	RTIFICATION	· · ·		
		t t	his wen rue to ti	i was dri he best	illed under my supervision an of my knowledge.	id this report i	.S	
		1	Mai	アコール	PILL DR. LL	NOG 9	13	,
-	- Onlyndd	Í R	riller's or	r Firm's I	Name	Numb	ier	-
I	County CHAVYON		2 X T ddress	<u>ر برد</u> ار	1 - A m	<u>v</u> <sub>H</sub> ,		
1	NW 1/2 NW 1/2 Sec. 2_, T, 4/ N/4, R. 5 //W	4	igned By	IT.	111 2500 1100-	 Date	<u> </u>	

USE ADDITIONAL SHEETS IF NECESSARY

FORWARD THE WHITE, BLUE, AND PINK COPIES TO THE DEPARTMENT

1

7	
	Form 238-7 3/95-C96

50ft. below ground

devices: WELL CAP

Depth flow encountered 140 ft.

0

#### **IDAHO DEPARTMENT OF WATER RESOURCES** WELL DRILLER'S REPORT

	837:	570	) 67
Inspec	Office ted by	Use On	ly
Twp_	Rge		Sec
·	1/4	1/4	1/4

Long:

Ν Y

1 DOLLING DEDMIT NO				TC.	Lat: : :	Long: : :
A DRILLING PERMIT NO	11.	WEL	L IES Dumo	15:		Flouring Astacion
2 OWNED.	Yield	ب <u>ا</u> gal/min		awdown	Pumping Level	Time
2. UWNER: Nome DDIAN MC MILLAN/CHDIS DELL	50		30		80	4 HR
Address 720 DANKSIDE		•				
Address 729 DAINKSIDE						
City EAGLE State ID Zip 83010	Wate	er Temj	)		Bottom hole te	mp
3. LUCATION OF WELL by legal description:	Wate	er Qual	ity test	or comments		
N				D	epth first Water Er	countered 68
	12.	LITH	DLOG	IC LOG: (	Describe repairs	or abandonment)
Twp. <u>4</u> North Or South						
W Rge. <u>3</u> East or West	Bore	From	To	Domentral	theleas Water One	Ber & Tomm V
<sup>E</sup> Sec 2 1/4 NW 1/4 NW 1/4	Dia	FIOI		Remarks:Li	anology, water Qua	uty & Temp. Y
10 acres 40 acres 150 acres	10"	0	2	TOP SOIL		
	10"	2	18	BROWN C	LAY	
s Governor County CANTON	6"	18	22	BROWN C	LAY	
Lat:: Long::_:	6"	22	53	GRAVEL		
Address of Well Site 13832 RED TIDE LN	6"	53	68	BROWN C	LAY	
City CALDWELL	6"	68	127	SAND CL	AY STRIPS	X
(Give at least name of road + Distance to Road or Landmark)	6"	127	140	BROWN C	LAY	
Lt. 26 Blk. 1 Sub. Name NORTH SLOPE #2	6"	140	147	FINE SAN	D	
				<u> </u>		<u>~</u>
4. USE:				<u> </u>		
🖾 Domestic 📋 Municipal 📋 Monitor 📋 Irrigation			· · · ·	[		
Thermal Injection Other		<u> </u>	1 · · · ·			
5. TYPE OF WORK check all that apply (Replacement etc.)		<b>1</b>		<b>I</b>		
🛛 New Well 🗌 Modify 🗌 Abandonment 🗌 Other		· · · ·		<u> </u>		
6. DRILL METHOD						
Air Rotary 🗌 Cable 🗌 Mud Rotary 🗌 Other		l				
7. SEALING PROCEDURES						
SEAL/FILTER PACK AMOUNT METHOD				1		
Material From 10 Sacks or Pounds		1	<u> </u>			
BENTONITE 0 18 450 POUR	·			H	EGEIVEI	9
				<b>-</b>	<del>VOV 252005</del>	
Was drive share used? MY FI N Share Durth(s) 129		l	<b> </b>			
Was drive shoe seal tested? $\square$ N $\square$ N $\square$ N $\square$ N $\square$ N				W N	ESTERN REGION	
CASINC/I INFD.				00	CINA	
Diameter From To Gauge Material Casing Liner Welded Threaded						
6" +2 138 250 STEEL 🛛 🗋 🖾			<u> </u>			
5" 131 142 250 STEEL 🛛 🗆 🖾						<u> </u>
	<b>—</b>	<u> </u>	<u> </u>			
Langth of Handning 11' Langth of Tailning	<b>.</b>	- · · · · · ·				
		nnleter	l Denti	h. 147	<del></del>	(Massurable)
7. FERFORATIONS/SCREE/NS	Date	·· Starte	н 11/1 М 11/1	7/2005	Com	<u>11</u> vicasuratic)
Screens Screen Type sand stopper	13		ED'C	CEDTIE	CATION	pictua <u>11/21/2005</u>
	וייים, זעזי⊲	v ALLI certifi	that al	LERIII!	vell construction st	andarda were
From To Slot Size Number Diameter Material Casing Liner	COM	olied w	ith at th	e time the ri	g was removed	
142 147 <b>20</b> 5" SS 🗆	von				D THE POINT TOU.	
	Firm	ı Name	GEOR	<u>GE POST W</u>	ELL DRILLING	Firm No. 5
				1	1	
	Firm	ı Offici	al 🦯	ar p		Date 11/22
IU, STATIC WATEK LEVEL UK AKTESIAN DDESSUDE.			Ð			
FREDURE:	Supe	ervisor	or Oper	ator		Date

Artesian Pressure

Describe access port or control

lb

Date 11/22/2005

**T T** ----

Firm No. 563

isor or Operator_			······································
(Sign	once if Firm	Official &	c Operator)

Date: 11/22/2005 Time:9:04:35 AM

	-
USE TYPEWRITER	d l
BALL POINT PE	N





WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Administration within 30 days after the completion or abandonment of the well. Terrenten 1. WELL OWNER 7. WATER LEVEL Name DONCAWARD Static water level \_\_\_\_\_\_ feet below land surface RT-7 Address CALDWELL IDAHO Flowing? 
Yes No G.P.M. flow \_\_\_\_\_\_ 
Temperature \_\_\_\_\_\_ 
F. Quality <u>Goo</u> Artesian closed-in pressure \_\_\_p.s.i. Controlled by 🔲 Valve 🗌 Cap Owner's Permit No. D Plug 2. NATURE OF WORK 8. WELL TEST DATA 🕅 New well Deepened C Replacement 🗆 Pump St Bailer Other Discharge G.P.M. Draw Down Hours Pumped □ Abandoned (describe method of abandoning) 2 10 3. PROPOSED USE 041702 Domestic Irrigation 🔲 Test 👘 D Other (specify type) 9. LITHOLOGIC LOG Depth Water 🛄 Municipal Stock 🔲 Waste Disposal or Hole Industrial Material Diam. From To Yes No Injection 21 93 BROWNSAND & GRAVEL 23 22 BROWNSAND & GRAVEL 21 4. METHOD DRILLED 21 🕱 Cable Rotory 🗆 Dug C Other WHITESAND 82 5. WELL CONSTRUCTION Total depth 82 feet Diameter of hole \_\_\_\_\_ inches Casing schedule: Steel 🛛 Concrete Thickness Diameter From 6\_\_\_\_\_ inches +\_\_\_\_\_ feet \_\_\_\_\_\_ feet \_\_\_\_\_\_ inches \_\_\_\_ inches \_\_\_\_ \_\_\_\_ inches \_\_\_\_ feet \_\_\_\_ feet \_\_ inches \_\_ \_\_\_\_ inches \_\_\_\_\_ feet \_ feet \_\_\_ inches \_\_ \_ inches \_ feet feet \_\_\_\_ inches \_\_\_ \_\_ inches \_\_\_\_ \_\_ feet ... feet Was a packer or seal used? 🗆 Yes ∭⊠ No Size of perforation \_\_\_\_\_ inches by \_\_\_\_\_ \_\_\_ inches Number From То \_\_\_\_ perforations \_\_\_\_ \_\_\_\_\_ feet feet \_\_\_\_ perforations \_\_\_\_\_\_ feet \_\_\_\_ feet \_\_\_ perforations \_\_\_\_\_\_ feet \_\_\_ feet Well screen installed? 🗆 Yes 🛛 📈 No Manufacturer's name \_ Туре\_\_\_\_ \_\_\_\_ Model No. \_\_ 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 Puddling clay 🔀 Well cuttings Starry pit 🛛 Temporery surface casing Sealing procedure used X Overbore to seci depth 10. 6. LOCATION OF WELL Work started HARCH-13-24 finished 11A KCH-20-14 Sketch map location must agree with written location. H. DRILLERS CERTIFICATION Firm Nome HETZER WELL DRILLINGTIM No. 93 Subdivision Name E Address BOX SIL HOMEDAL C Date 3-21-74 Lot No.\_\_\_\_ Block No.\_\_\_ Signed by (Firm Official) County CANYON and 1 11 (Operator) NE\_1 NW VA Sec. 2, T. 4\_N/8, R. 3 @/W USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE COPY TO THE DEPARTMEN

68

USE TYPEWRITER OR
BALL POINT PEN

#### State of Idaho Department of Water Resources

WELL	DRIL	LER'S	REP	ORT
------	------	-------	-----	-----

USE TYPEWRITER OR Department, of	of Ida Wate	aho r Bes	ources			6950		
	ED'S			) 7	Awer	16		
State law requires that this report be filed with th days after the completion o	e Direct r aband	or, Dep	artment of the v	of Water Resources within 30 velt.	(Di-1)			
1. WELLOWNER	7. V	VATER	LEVEL			<u> </u>		
Name James France		tatic w:	ator lovo	20' feet below land su	rfacu			
	Flowing? [] Yes No G.P.M. flow							
Address UTTA QUIEAL	Temperature° F. Quality Gae C							
Owner's Permit No	Controlled by Valve Cap Plug							
2. NATURE OF WORK	8. V	VELL T	EST DA	ТА				
New well Deepened Replacement		] Pump		Bailer Other				
Abandoned (describe method of abandoning)		ischarge	G.P.M.	Draw Down	Nours Pu	mped		
	<b>_</b>		<u> </u>					
	┢╌╌┈	·				{		
3. PROPOSED USE				, <u>.</u>	<u></u>			
Domestic Irrigation Test Other (specify type)	9. 1	LITHOL	.OGIC L	.0G				
Municipal 🔲 Industrial 🔲 Stock 🖨 Waste Disposal or	Hole	De	pth	Material	<u></u>	Water		
Injection		rrom	10	TOSOL		Tez NC		
4. METHOD DRILLED	Ž	10	20	HANJ PAN	)	Ý		
Cable 🗆 Rotory 🗆 Dug 🗆 Other	6	20	30	Graug L	TA PAN	y Č		
	6	40	50	SANLY CHA	V	Ŷ		
5. WELL CONSTRUCTION	6	50	60	Sanly CL	<u>Ay</u>	X		
Diameter of hole inches Total depthfeet	0	10	20	CAAY				
Casing schedule: Steel Concrete	6	80	91	Chay with	SANIL			
Thickeess Diameter From To		<u> </u>	· · · ·	YAINS OF W	<u>ate</u>			
inches feet feet	}			· IN OFROL	HONT_			
inches inches feet feet		ļ						
inches inches feet feet	<u> </u>	ļ						
Was casing drive shoe used? 🕅 Yes 🔲 No				· · - · ·				
Was a packer or seal used?  Yes X No Perforated?	-							
How perforated?								
Size of perforation inches by inches								
Number Prom To	╞──-				···			
perforations feet feet	├──	· · ·			·	┠──┤		
perforations feet feet				· · · · · · · · · · · · · · · · · · ·				
Well screen installed? 🛛 🗆 Yes 🛛 🕅 No	<b>├</b> ──	<u> </u>		001160		┟╌┼╍┥		
Manufacturer's name		1		<u>~~.vv</u>				
Diameter Slot size Set from feet to feet	<b> </b>	<u>+</u>	 					
Diameter Slot size Set from feet to feet	<u> </u>							
Gravel packed? [] Yes 🗙 No. Size of gravel		ļ						
Placed from feet to feet	<u> </u>							
Surface seal depth 30 Material used in each TC Compart and		ļ. <u></u>						
D Puddling clay Well cuttings		┝━───				├┼┨		
Sealing procedure used X Starry pit - Temporary surface casing								
Overbore to seel depth								
6. LOCATION OF WELL	10. M	/ork sta	rted <u>//</u>	- 15- finished	1-29-7	5		
Sketch map location must agree with written location.	<b>[</b>	<u> </u>	··					
	1 H. C	RILLER	S CERT		/	$\gamma$		
Subdivision Name	F	Firm Na	me P	D WELL Prilli	ALCA Firm No	<b>1</b> 54		
w		<b>Add</b> ese and	311	s Il	1-1-24	5.75		
Lot No Block No	′	-vvi 885')	<u>~/ U</u>	<u> </u>	 )			
	5	Signed by	(Firm) a	official)	· · · · · · · · · · · · · · · · · · ·	<u> </u>		
County ( TYVOIV	]		(Оре	rator)	A A A A A A A A A A A A A A A A A A A			
USE ADDITIONAL SHEETS IF NECESSARY EORWARD								

BALL POINT PEN
DALETOINTTEN

# State caratho Department of Water Administration

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# WELL DRILLER'S REPORT

State law requires that this report be filed with the Di days after the completion o	rector, ( r aband	Departn onmen	nent of V t of the	Vater Administration within 30 well.	".	ŕ	:***
1. WELL OWNER	7. WATER LEVEL						
Name LARRY LENHASTER	Static water level $35$ feet below land surface Flowing? $\Box$ Yes $\Box$ No. G.P.M. flow						
Address CALOWELL DPRITO	Temperature			° F. Quality <i>F00.0</i>			
Owner's Permit No		Artesian Controll	closed- ed by	in pressurep.s.i. □ Valve □ Cap 〔	3 Plug		
2. NATURE OF WORK	8. WELL TEST DATA						
🛠 New well 🛛 Deepened 🔲 Replacement	🗆 Pump 🗆 Bailer 🙀 Other 🗛 🥆 🥂						
Abandoned (describe method of abandoning)		S C	<u>G.P.M,</u>	Draw Down	Hours Pur	nped	
·	<u> </u>						
3. PROPOSED USE	·[			^	33069		
😼 Domestic 🔲 Irrigation 🔲 Test 🖾 Other (specify type)	9. 1			LOG	00000		
Municipal Industrial Stock Waste Disposal or	Hole Diam,	De	pth To	Material		Wat	er
4. METHOD DRILLED	6	0	2	Topsol	·		$\overline{\zeta}$
		d 11	28	BROWN SAND			/
	<b>_</b>	28	42	GRAVEL RRAVEL			Ż
5. WELL CONSTRUCTION		92	105	BROWNCLAY			$\overline{Z}$
Diameter of hole inches Total depth 105_feet		105		WHITESAND	p	4	<u></u>
Casing schedule: Steel Concrete							
_250 inches _6_ inches +_1_ feet _99 feet	<u> </u>	L	[ 		······		
inches inches feet feet							
inches feet feet feet	<u> </u>	· .	. 	· ·	<u> </u>		
inches inches feet feet	<u> </u>			1 			
Was a packer or seal used? 🛛 🗆 Yes 🛛 🕱 No							
Perforated?  Yes X No	· · · · ·					$\rightarrow$	
Size of perforation inches by inches		·	· · · ·				
Number From To					<u> </u>		
perforations feet feet		·•				-+	
perforations feet feet						$\square$	
						-+	
Manufacturer's name							
Type Model No Diameter Slot size Set from feet to feet				······································			
DiameterSlot sizeSet fromfeet tofeet						$\square$	
Gravel nacked? 🔲 Vec 🕅 No. Size of sympt					<u> </u>		<u> </u>
Placed from feet to feet							
Surface seal death Material used in each						╌┼╴	
Puddling clay 52' Well cuttings							
Sealing procedure used 🔲 Sharry pit 🗖 Temporary surface casing							
were to seal depth		· · · · · · · · · · · · ·	A	· · · · · · · · · · · · · · · · · · ·		<u> </u>	-
6. COCATION OF WELL	10. Wa	ork star	ted <u>7</u> -	- <u>30-74</u> finished <u>8</u>	1-2-74		_
Sketch map location must agree with written location. 63							
	H. D	RILLER	S CERTI	FICATION			
Subdivision Name	Fi	rm Nor	no <u>H</u> e	TZER WELL DR	Firm No	<u>95</u>	7
	A	idress Á	<u>.</u>	511 HOHEDAL C	Date 8-6	-14	/
LUI NO EROCK NO			/=	p. olm	- Po-		
County CANYON	5	yned by	(rinn C an	nticial) <u>ex. sectors ///</u> . id	gu		
SW & NE & Sec. 3 T. 4 N/ R 7 ANN			Юрен	rator)	<u> </u>	<u></u>	

USE TYPEWRITER C
BALL POINT PEN
BREET ONTIT EN

# State of ho Department of Water Administration

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And it so	~ ~ ////

## WELL DRILLER'S REPORT

State law requires that this report be filed with the Di days after the completion o	rector, or aband	Departr Jonmen	nent of \	Nater Administration within :	30		1
1. WELL OWNER	7.	WATEF	LEVE		it of Water Long		<u> </u>
Name EARY LASHER		Static w	ater lev	el 35 feet below land s	urface		il ann
Address CALOWELL IORHO		Flowin <mark>ç</mark> Temper	g? □ ` ature	Yes 🗇 No G.P.M. flov	N		<b>_</b> ,
Owner's Permit No		Artesiar	closed-	in pressurep.s.i.	<u></u>	• <u> </u>	<b></b>
	·	Control	led by	□ Valve □ Cap	🗆 Plug		
2. NATURE OF WORK	8. 1	VELLI	EST D	ΑΤΑ			
🗡 New well 🛛 Deepened 🗆 Replacement		🗆 Pump	<b>.</b>	🗆 Bailer 🛛 🛱 Othe	r R	ĨR	
Abandoned (describe method of abandoning)		Discharge	G.P.M.	Draw Down	Hours F	'umpe	d
3. PROPOSED USE							
🔀 Domestic 🔲 Irrigation 💭 Test 🔲 Other (specify type)	9.	LITHO	LOGIC	LOG	0417	03	•
Municipal Industrial DT Stock Disposal or	Hole Diam.	De	pth To	Material		W	ster
4. METHOD DRILLED	8	0	12	BROWN CLAY			Z
	<u> </u>	12 21	21	BROWN SAND	10	+	+
A Cable Li Rotory Li Dug Li Other		26	38	SANDY BROWN	J CLAY	+	$\mathbb{Z}$
5. WELL CONSTRUCTION		83	105	BROWN CLAN	ROW N	+	$\vdash$
Diameter of hole inches Total depth _/0,5 feet		105		BROWN SAND	)		
Casing schedule: X Steel Concrete	<u> </u>					+	╉──
250 inches inches + feet 85 feet						+	
inches feet feet						4	
inches inches feet feet feet				· · · · · · · · · · · · · · · · · · ·			
inches inches feet feet			<u> </u>	i 		<u> </u>	<u> </u>
Was a packer or seal used? 🔲 Yes 🛛 😡 No						+	┼──
Perforated?   Yes  No						1	
Size of perforation inches by inches				·····		+	-
Number From To					····		
perforations feet feet					<u> </u>	┼──┤	
perforations feet feet							
Well screen installed?					<u></u>		
Manufacturer's name	<u> </u>						
Diameter Slot size Set from feet to fact						$\left  - \right $	
Diameter Slot size Set from feet to feet				······································			
Gravel packed?  Yes X No. Size of gravel					<u> </u>		
Placed from feet to feet							
Surface seal depth Material used in seal Cement arout							
Puddling clay     Mell cuttings	<u> </u>			· · · · · · · · · · · · · · · · · · ·			
Sealing procedure used 🔲 Starry pit 🗆 Temporary surface casing						+	
) 🖾 Overbore to esci depth							
5. LOCATION OF WELL	10. Wa	rk start	ed HA	RCH-27-74 finished A	PR1 -	24	
Sketch map location must agree with written location.							
	H. DR	ILLERS	CERTIF	TCATION			•
Subdivision Name	Fir	m Nam	Her	ZER WELL DRILL	140 Firm No	.93	3
E	<u>م</u> م	draes R	9 X 5	I HALLENDIE		-26	
LOT NO Block No	~		<u>~</u> , <u>,</u> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	v _/	_ Date <u>977</u>	-17	-
County COAlizati	Sig	ned by	(Firm Of	fficial) <u>Aunult III</u>	for f	<u> </u>	-
wonty torryon			and (Opera	ntor)	1	77	
<u>SW % HE % Sec. 3, T. 7 N&amp; R. 3 MW</u>			1- <b>6 6</b> 1 6			犐	× I
USE ADDITIONAL SHEETS IS NEOFOOD THE					nunui n	487 <b>34</b> 4	

USE ADDITIONAL SHEETS IF NECESSARY

FORWARD THE WHITE COPY TO THE DEPARTMENT

1	Form 2	238-7
3	8/95-0	.96

#### IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

83	72					
	Office Use Only					
Inspec	ted b	у		_		
Twp_		_Rge		_Sec_		
	_1/4		_1/4 _		_1/4	
Lat:	:	:	Long:	;		

1. DRILLING PERMIT NO. 0 -0 -3 -9156 -	11. WELL TESTS:							
Other IDWR No.	Vau		Pump	Bailer	Air 🗌 Flo	wing Artesian		
2. OWNER:	60GP	<u>gai/min.</u> Mí	T	awdown	135ft	2hours		-
Name Larry Meridith	0001	<u> </u>			13510	2110013	•	1
Address 26190 Moonglow Dr.								-
City Middleton State ID Zip 83644	Wate	r Temp	57De	gF	Bottom hole temp	)		_
3. LOCATION OF WELL by legal description:	Wate	r Quali	ity test	or comments:				_
Sketch map location <u>must</u> agree with written location				Dej	oth first Water Encou	untered 42ft		_
	1 <b>2</b> , I	LITH(	DLOG	HC LOG: (I	Describe repairs or	abandonme	ent)	
Twp. <u>4</u> North Or South								
W Rge. <u>3</u> East or West	Wat	er Ernm		Demandres 1 it	holom: Water Onelity	8. Tomas	<u>र</u> ने	NT.
$E = \frac{1}{2}$ Sec 3 1/4 NE 1/4 SE 1/4	Dia	гющ	10	Reinalites: Lat	notogy, wheer Quanty	ø remp.	r	N
10 acres 40 acres 160 acres	10"	0	2	Sandy Top	Soil			Х
Gov't lot County Convon	*	2	8	Brown Clay	<i>r</i>			${\mathbb X}$
S Coverage County Carlyon	. "	. 8	-18-	Tan Sandy	Clay			${\mathbb X}$
Lat::Long::	"	18	20	Gravel and	Sand			$\mathbf{X}$
Address of Well Site South Side of Red Tide .25mile	6"	20	50	Gravel and	Sand		$\square$	
West of Canyon City Middleton		50	57	Tan Clay			$\square$	$\ge$
(Give at reast manie of road + Disparies to Koad of Tarkingark)	**	57	97	Sand			$\boxtimes$	
Lt. <u>27</u> Blk. <u>1</u> Sub. Name	"	97	108	Tan Clay				${\times}$
	"	108	123	Sand			$\square$	
4. USE:	Ħ	123	133	Tan Clay			$\Box$	$[\Sigma]$
Domestic    Municipal    Monitor    Irrigation	**	133	140	Fine Sand			$\square$	$\square$
Thermal Other							$\Box$	
5. TYPE OF WORK check all that apply (Replacement etc.)								
							$\Box$	Γ
0, DKILL METHUD M Aiz Datas: C Cable C Med Datas: C Other								$\square$
							$\Box$	$\square$
7. SEALING PROCEDURES								Γ
Material From To Sacks or							$\square$	Γ
Pounds		·						Γ
Bentonite 0 20 750Lbs Dry Pour								Ē
							$\Box$	
Was drive shoe used? 🛛 Y 🗖 N Shoe Depth(s) 133ft								
Was drive shoe seal tested?  Y X N How?				I RE	CEIVED		Π	Γ
8. CASING/LINER:								
Diameter From To Gauge Material Casing Liner Welded Threaded				M	ay 2 5 2005			$\square$
6'' +2 133 250 Steel X L X L								$\square$
				WAI	ER HESOURCES		$\square$	Γ
·							$\square$	Γ
Length of Headpipe <u>5tt</u> Length of Tailpipe								
9. PERFORATIONS/SCREENS	Cor	npleteo	i Dept	h <u>: 140 _</u>	0	feasurable)		
Perforations Method	Date	: Starte	d <u>5-18</u>	-05	Comple	eted <u>5-18-05</u>		
Screens Screen Type johnson	<b>13.</b> ]	DRILI	LER'S	CERTIFIC	CATION			
From To Slot Size Number Director Metail Conting Time	I/We	certify	that al	l minimum w	ell construction stand	dards were		
135 140 010 $-$ 5" SS $\square$	com	plied wi	ith at th	ie time the rig	, was removed.			
	17:	NT	noor	ער זיזינע איז		T2:		0
	FIII	i iname		SE WELL DI		Firm No	). <u>40</u> '	<u>9</u>
	Г <b>'</b> —	om.		An. L.	. //	Data 5 (	12 04	<
10. STATIC WATER LEVEL OR ARTESIAN	rum	UIII	┉╧┩	they The	1 page	$-$ Date $\frac{5-2}{2}$	4 <b>3-</b> 0.	<u>,</u>
PRESSURE:	Sur	mvieor ·		ator UM	61 V. //	Data 5 1	12.04	Ę
<u>44ft. below ground</u> Artesian Pressure <u>1b</u>	եր	** 7 1.PV1 \	or obei	(Sign once if Fi	inn Official & Operator)	) )		<u>.</u>
Lepth Low encountered the Describe access port or control				· · ·				

Date: 5/23/2005 Time:5:51:11 PM

Artesian Pressure \_\_\_\_\_1b 44ft. below ground 
 44ft. below ground
 Antesian Pressure
 10

 Depth flow encountered
 ft.
 Describe access port or control
 devices:
103	837844	-
		(B
6/02 WELL DRILLER'S REDORT	inspected by	-
	Twp Rge Sec	-
1. WELL TAG NO. D <u>UU76683</u>		
Water Bight or Injection Well No.	12. WELL TESTS:	
	Pump      Bailer      Air      Flowing Artesian	
2. OWNER: IS THERE RELEDENT	Yield gal/min. Drawdown Pumping Level Time	
Name CO DIGOTOS INCIDENT.	1 70 144 70 1314	
City MERIDIAN State II Zip 83642		
	Water TempBottom hole temp /	T/
3. LOCATION OF WELL by legal description:	Water Quality test or comments: <u>C.LEAN</u>	
Two. North D or South D	Depth first Water Encounter	20
Rge East 🗆 🗠 West 🗶	13. LITHOLOGIC LOG: (Describe repairs or abandonment) Wa	ater
Sec $\underline{Z}$ $\underline{NW}_{1/4}$ $\frac{1/4}{10 \text{ acres}}$ $\frac{1/4}{10 \text{ acres}}$ $\frac{1/4}{100 \text{ acres}}$	Bore From To Remarks: Lithology Water Quality & Temperature Y	N
dov't Lot County Configure	10 0 15 Brn Clay	X
Address of Well Site 23281 Canum Ln	10 15 18 Gravel / Clay Layers	K
City Caldwell	6 18 33 Gravel / Thin Clay Layers X	_
(Give all port name of road + Distance to Road or Landmark)	6 33 45 Grevel X	-
	6 75 60 Clay	~
	6 86 90 Clay	12
l⊪ USE: Monitor ⊡ Prigation	6 90 100 Corse Sand X	
Thermal Injection Other		
	· ·	1
TYPE OF WORK check all that apply (Replacement etc.)		<u> </u>
		-
. DRJLL METHOD:		+
Air Rotary Cable Mud Rotary Other		
SEALING PROCEDURES		
Seal Material From To Weight / Volume Seal Placement Method		<u> </u>
VIY granual U 18 GOOLS OVER bore		$\vdash$
DENTIMITE + Well Cuttings		+
vas unive shoe seal tested?		
CASING/LINER:		<u> </u>
Diameter From To Gauge Material Casing Liner Welded Threaded		<u> </u>
	DECEIVES	$\vdash$
		<u> </u>
ength of Headpipe Length of Tailpipe	IAN 1.2 2005	
acker ⊯KY ∐N Type <u>Liguic K</u>	57111 1 2 2000	$\square$
PERFORATIONS/SCREENS PACKER TYPE	WATER RESOURCES	_
erforation Method		$\vdash$
creen Type & Method of installation >> Wire / Full back		<u> </u>
95 100 14 5 CS Recreen	Completed Depth // / // // // // // // // // // // //	uble)
	Date: Started 12/8/205 Completed 12/8/20	2-
	14. DRILLER'S CERTIFICATION	13
0. FILTER PACK	/We certify that all minimum well construction standards were complied with at the	е
Filter Material From To Weight / Volume Placement Method	time the rig was removed BYLUATIV HTUATISON	~
	Company Name DATATOTIC PUMP + DRAMAN 4	8
	Holling Holling 1/ets	in
I STATIC WATER LEVEL OR ARTESIAN PRESSURE:	and Driver Date D	VU
epth_flow encountered / ft Describe/access port or control devices:	Driller or Operator II Date	
Solutory Nerl Cap	Operator   Date	

FORWARD WHITE COPY TO WATER RESOURCES

63 INJECTION WELL						840115 Office Use O	nly,,,,, <b>7</b>	74	
6/02 IDAHO DEPARTMENT OF WATER RESC 6/02 WELL DRILLER'S REPORT		JES			Inspected	o. <u>71(</u> by Boe	Sec	_	
1. WELL TAG NO. D $0046511$ DRILLING PERMIT NO. $894729 - 840115$ Water Right or Injection Well No. $63 - W - 217 - 001$	12. V	VELL 1	ESTS:	Bailer	Lat: :	↓ 1/4 : Long: □ Flowing Ar	1/4 1/4 tesian	:	
2. OWNER: Name X John Antonucci Address X ZO N Wildgoose X 23/42		rield gal. - 、 - 、 - 、 - 、 - 、 - 、 - 、 - 、 - 、 - 、	min.	Drawdov <b>30 G</b>	wn F <b>?Pw/</b>	pumping Level	Tim	18	
3. LOCATION OF WELL by legal description:	Water	r Temp.	. toot or	590	Aland	Botton	n hole temp	. 🖊	<u>/</u> #
You must provide address or Lot, Blk, Sub. or Directions to well. Twp North X or South					, yuune	_ Depth first Wat	ter Encount	er /	₽
Rge.    3     East     □     or     West     X       Sec.    ,    ,    ,     1/4    ,    ,       Gov't Lot    ,     County    ,    ,    ,	Bore Dia.	From		Remarks:	Lithology, Wate	r abandonment) er Quality & Temp	perature	Wate Y	ər N
Lat: ::: Long: Canym Lane Address of Well Site 23281 Canym Lane City Caldwell	000	0 3 15	> 15 18	Brn Cl	lay lay +G	Pravel			K K
Lt. 28 Blk. 1 Sub. Name North Slope Estates	6	18	42	Grave	/			×	
USE:     Domestic Municipal Monitor Irrigation     Thermal Injection									
5. TYPE OF WORK check all that apply       (Replacement etc.)         New Well       Modify       Abandonment       Other									
6. DRILL METHOD: XAir Rotary Cable Mud Rotary Other									
7. SEALING PROCEDURES									
Gran Kent 0 18 40016 Overbore									
Was drive shoe used?       Image: Was drive shoe seal tested?       Image: Was drive shoe seal tested?       Image: Was drive shoe seal tested?         Was drive shoe seal tested?       Image: Was drive shoe seal tested?       Image: Was drive shoe seal tested?									
8. CASING/LINER: Diameter From To Gauge Material Casing Liner Welded Threaded Casing Liner Welded Threaded Casing Liner Welded Threaded				i	RECE	IVED			
					JUN 2	6-2006			
Length of Headpipe Length of Tailpipe Packer					WATER RE WESTERM	SOURCES NREGION			
9. PERFORATIONS/SCREENS PACKER TYPE Perforation Method									
Screen Type & Method of Installation From To Slot Size Number Diameter Material Casing Liner					42				
42 22 20 42 FVC Screen	Dat	npietea e: Stai	rted	29/04	1	Completed	6/g/		le)
10. FILTËR PACK	14. C	DRILLE	R'S CE		ON onstr <u>action</u> sta	ndards were obr	mplied with	at the	
Filter Material         From         To         Weight / Volume         Placement Method	time t Comp	he rig v bany Na	vas Di	Hed ATV	TC P	UMP	_ Fjrm No.	48	3
11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:	Princi and	ipal Dril	ier	flat	Journ 1	Date	6/19	10	6
Image: Point Depth flow encountered       Artesian pressure       Ib.         Depth flow encountered       ft. Describe access port or control devices:	Drille	r or Ope	erator (	Jung 1	m	Date	- 119	/0	0
	Opera	ator I	One	Principal Drille	er and Rig Op ave signature	Date erator <i>Required.</i> of Driller/Operate	e or II.		
FORWARD WHITE COPY	то W	ATER	RESOU	RCES					

- 7				i	836032	.		
62					Office Use	Only	<b>a</b> 5	
Form 238-7 IDAHO DEPARTMENT OF WATER RESC	URCE	S		Well II	D No. 40	679	<u>7                                    </u>	
6/02 WELL DRILLER'S REPORT	Ē			Inspec	cted by	-		Í
1 WELLTAG NO D 004/972				Twp_	Hge	_Sec		
DRILLING PERMIT NO.					_ 1/4 1/4	1/ 	4	
Water Right or Injection Well No.	12. WEL		): L] Deller		LUII	Artonian	•	l
• •	Viold		Drawdow	Alf Car	Pumping Level	Artesian	Time	—
2. OWNER: Joff Shalon	34	5		···	7.36	3	hrs.	
Name SCIP Spreiman					,			
City January State To Zip 83687								
	Water Ten	np			Bott	om hole te	mp	
3. LOCATION OF WELL by legal description:	Water Qua	ality test o	r comments:	900	d clear	col	ж_	
You must provide address or Lot, Blk, Sub. or Directions to well.				·	Depth first V	Vater Encol	unter _	
Iwp North 2d or South ⊡ Page 27 East □ or West 27	13. LITH	OLOGIC	LOG: (Descr	ibe repai	rs or abandonme	nt)	Wa	iter
Sec. 3	Bore Fro	om To	Remarks:	Litholoay.	Water Quality & Te	mperature	Y	N
Gov't Lot County 160 acres		i	1000			•		Y
Lat: : : Long:	64	1-20	Shad	601	la v			F
Address of Well Site 03303 / CAOPA CF.	12	2 49	Sond	i a	a vel		-	F
(Give at least name of road + Digtance to Road or Landmark)	149	7 67	Brack	e p	<u> </u>		1	m
Lt. 18 Blk Sub. Name_Vorth Stope EST.	16	7 73	meds	anc			X	
	7	3 94	Brac	lay				+
4. USF:	12	4/05	Sandy	ĊÇ/a	¥			
L Domestic 🗆 Municipal 🗌 Monitor 🕞 Irrigation	1/0	5/18	Isme	ay				1
Thermal Injection Other		8 1	FILSO	and			+	سل
	12	7/28	ISPACI	ay			1	
5. ITPE OF WORK cneck all that apply (neplacement etc.)	1.5	<u>s 7 30</u>	Mea S.	are			<u>n</u>	+
							-	
6. DRILL METHOD:								
Air Rotary Cable Mud Rotary Other								
7 SEALING PROCEDURES								
Seal Material From To Veight Volume Seal Placement Method					<u> </u>		—	
Derme Dlag O 18 550/65 10"ourbar							—	1
dry pour,								+
Was drive shoe used?			-				-	+
Was drive shoe seal tested?						· ·		1
8. CASING/LINER:								
Diameter From To Gauge Material Casing Liner Welded Threaded								
6 +2 133.8 250 Steel * -								
								+
				- R	ECEIVI	= U		+
Length of Headpipe Length of Talipipe						05		
			-		OCT 25 20	<b>U</b> D		+ - 1
9. PERFORATIONS/SCREENS PACKER TYPE				1	NATER RESOUR	ACES	-	
Perforation Method					WESTERN REC	SION		
Screen Type & Method of Installation	د				01			
133 138 20 6 Tele S.S. LI	Comple	ted Depth		13	ØTT		<b>Jeasur</b> a	able)
	Date:	Started _	9/26	105	Completed	1 <u>I/</u>	<u>'7/</u>	S
	14. DRII		CERTIFICATIO	ON				
10. FILTER PACK	I/We certi	ify that all	minimum well c	onstructio	on standards were	complied w	ith at th	ne
Filter Material From To Weight / Volume Placement Method	time the r	rig was rer	noved.		, , ,			
	Company	Name	1665:0	n le	el /drshing	JAC mm	No. <u>-5</u>	22
			1 NN	2	/		Ini	lo c
11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:	Principal and		gy l	all			'ai f	100
	Driller or	Operator	II			Date		
Same Sen Liel/Cr.D	Operator	I			г	)ate		
	operator	,	Principal Drill	ler and Ri	ig Operator Requir	ed.		
		$\cap$	inerator I muet h	iave einns	ature of Uriller/One	rator II		

Operator I must have signature of Driller/Operator



# IDAHO DEPARTMENT OF WATER RESOURCES

835629 7	6
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	VATER RESOURCES	Office Use Only
WELL DRILLE	'S REPORT	Two 4A/ Roa 3() Sec 7
1. WELL TAG NO. D0041755		1/4 Sid 1/4 A/1-11/4
DRILLING PERMIT NO.		Lat: Long
Other IDWR No.		
2. OWNER:		XIAir Flowing Antesian
Name MCCLURE - BLUE CANYON HOMES	40	n Pumping Level Time
Address 23444 WHALE BAY		<u>110</u> <u>2 HR</u>
City MIDDLETON State ID Zip 83644	-	•·····
	Water Temp	Rotten hale to un
3. LOCATION OF WELL by legal description:	Water Quality test or comments:	
Sketch map location must agree with written location.		Depth first Water Encounter
<u>N</u>	12. LITHOLOGIC LOG	Describe repairs or abandonment)
		Water
WP4 North X or South	Dia. From To Remark	s: Lithology, Water Quality & Temperature Y N
ERDO. 3 East Or West X	10 0 5 TOP S	OIL/ HARD PAN
Sec. 2 1/4 SW1/4 NV	1/4 5 20 SAND	Y CLAY
Gov't Lot County CANYON	6 20 30 SAND	SOME CLAY
S Lat. Long:	30 70 SAND	GRAVEL X
Address of Well Site SAME	70 85 SAND	X
(City City	85 109 SAND	YCLAY
Lt. Bik. Sub. Name		
	- 130 124 MARU	
4. USE:		
X Domestic Municipal Monitor Inrigation		
Thermal Injection Other		
6. DRILL METHOD: X Air Rotary Cable Mud Rotary Other		
Sect/Either Back	┓╏┈╌┾╌╴┾╴╴┥╴╺╴	
Method		
Alex trive shoe used r LA Y LIN Shoe Depth(s) 118		
Was drive shoe seal tested? LAY []N How? AIR	_	
3. CASING/LINER		
Diameter From To Guage Material Casing Liner Weldard Thread		
6 +2 118 250STEEL X . X		
4.5 114 134 PVC X	<b>   &lt;₹₽</b>	<del>0 6 2005</del>
ength of Headpipe Length of Tailpipe	WATER	FBN REGION
	- WEDI	
FT Screen Type	Completed Depth 134	(Measurable)
From To. Slot Size Number Diameter Material Casing Line	Date: Started 8/29/2005	Completed 8/30/2005
114 134 20 4.5 PVC		
	13. DRILLER'S CERTIFICA	TION:
	the time the rig was removed.	coon standards were complied with at
	Company Name PLALAS INTEL 4 .	
0. STATIC WATER LEVEL OR ARTESIAN PRESSURE:		- umr

57	ft. below ground	Artes	ian pressure	ib.
Depth flow encou	ntered	ft.	Describe access po	int or control
devices:			•	

Firm Official	and and	Date	9/2/2005
and Driffer or Operator _	Chris Jaus (Sign once # Firm Official & Operator)	Date	9/2/2005

1						835570	5		
0 <sup>5</sup>						Office Use (	Only	77	1
Form 238-7 IDAHO DEPARTMENT OF WATER RES	OURCE	ΞS			Well I	D No. <u>46</u>	0000	>/_	
WELL DRILLER'S REPOR	Т				Inspe	cted by			
1 WELLTAGNOD MACHITTI					Twp_	Rge	_Sec _		
					I	_ 1/4 1/4	1	/4	
Water Bight or Injection Well No	12. WE	ELL T	ESTS:		Lat:	; ; Long	g: :	:	
		C Pi	ump	🗌 Bailer	🗡 Air	E Flowing A	Artesian		
2. OWNER:	Yie	ld gal./	min.	Drawdow	'n	Pumping Level	-	Time	
Name Blackherse Construction		00				123	dh	15	
Address 3910 H: 11 Rd.									
City <u>15015C</u> State <u>20</u> Zip <u>85/05</u>									
3 LOCATION OF WELL by legal description:	Water Te	emp.			0	Botto	om hole te	emp	
You must provide address or Lot. Blk. Sub. or Directions to well.	Water C	Juality	test or	comments: (	900	C CIEW (	Colo		~ _
Twp. 4 North T or South	NO	Sn	11/	/		Depth first W	ater Enco	ounter _	18
Rge East 🗆 or West 🗶	13. LIT	HOL	OGIC	LOG: (Descri	be repai	rs or abandonmen	it)	Wa	ater
Sec. 3, NE 1/4 SEC 1/4 1/4	Bore	From	То	Remarks: L	ithology,	Water Quality & Ten	nperature	Y	N
Gov't Lot County Clan on the count		~	U	7000			•	_	سلم
Lat: : : Long:		J J	4	O Lo V	12:	ad			1
Address of Well Site 23330 TUNOTO CT.	. ┟╉╌╌┼╺┦	5	6	Los de	5-20	nc	-		F
(Give at least name of road + Distance to Road or Landmark)	; <b> }  </b> ;	ź	13	Saha					1 X
.t. <u>23</u> Blk. / Sub. Name <u>NORTH Stope EST</u>	nai	17	21	Class	. C.	ad			مذ
	6 4 3	zi l	41	0/2.11	<u></u> 0	<u>e · C</u>			Ŕ
	14	11	53	Sandy	ch	V		-	منا
). USE: Monitor I Inviginal (Manitor I Irrigation	1 2	53	7/	Renc	Tax	7		- <u> </u> '	1
☐ Thermal ☐ Injection ☐ Other		71	78	Snacy	· la	/			4
		78	81	Sand					ト
. TYPE OF WORK check all that apply (Replacement etc.)	1 2	51	96	Brack	la v				V
XNew Well 🗌 Modify 🗌 Abandonment 🗌 Other	9	16	104	Sandy	ic/	r.y			i
	12	54	107	meds	San	I		T	
5. DRILL METHOD:		67	115	Brack	x x				X
Air Rotary Li Cable Li Mud Rotary Li Other		15	125	med s	Son	ć		X	
7. SEALING PROCEDURES			• -	·					
Seal Material From To Weight Volume Seal Placement Method									
Derma Ding 0 19 550/6 10'overbore									
Vas drive shoe used? XY	.							_	
Vas drive shoe seal tested? CY 🕅 How?								_ <b>_</b>	
5. CASING/LINER:	_ <del>                                     </del>							-	
$\overline{1}$	' ├─┼							-	
									-
	<b>├</b>			-				-	
enoth of Headoice 5 Lenoth of Tailoice 🛷							FD		
acker XY IN Type 3-R16	$\vdash$				F	RECEIVI			
					•	-	ነበհ	-	
. PERFORATIONS/SCREENS PACKER TYPE						OCT 23 A	עט	_	
erforation Method							IRCES	_	+
creen Type & Method of Installation <u>JOMNSON SET PULLOUCK</u>						WESTERN RE	GION	-	
From To Slot Size Number Diameter Material Casing Liner	Comp	L leted [	Depth		25	ff.	(1	Measura	ible)
117 LAU AU LO ACIC SIS.	_			alari	at	-	01.	7/1	
	Date:	Starl	ed(	5/ <i>13</i> /	00	Completed	0/1	6/ 9	<u>~</u>
	14. DR	ILLE	R'S CE	RTIFICATIO	N		!! - !		
U. FILIEN PACK	I/We cer	rtity th crig we	at all m	inimum well coi wed	nstructio	n standards were co	omplied w	nth at th	e
rinter Material From to Weight / Volume Placement Method	ane lite	ng wi		)		× , , , , , , , , , , , , , , , , , , ,			
	Compar	iy Nar	ne 📶	CC'SFOR	n Le	ell drilling	<u>Tille</u>	No. <u>5</u>	22
	Deletion	1.0-29	$\sim$	7.00/	7	sa -	. 0	161	la c
1. STATIC WATER LEVEL OR ARTESIAN PRESSURE:	and	⊩ Drill€	r Y	qpa	an	En Da		101	
Ω Delow ground Artesian pressureib.     The provide access part of control devices:	Driller or	r Opei	rator II			Da		•	
epinnow encountered II. Describe access port or control devices:	_		-						
_ supprised a contraction	Operato	r I		Deineinel D. <sup>10</sup>		Da	te		
			Ope	Principal Drille erator I must ha	r and Rig ve signat	Operator Hequirect ture of Driller/Operator	a. itor II.		

FORWARD WHITE COPY TO WATER RESOURCES

	TER RESOURCES Office Use Only
Use Typewriter or Ballpo	Dint Pen 060915 TwpRgeSec
1. DRILLING PERMIT NO. 63 - 97 - 6 - 0406 - 000 Other IDWR No.	11. WELL TESTS:      1/41/41/4        2 Pump      Air      Flowing Artesian
2. OWNER: Hector Villarreal NameVillarreal	Yield gal./min.     Drawdown     Pumping Level     Time       30     5'     10'     1
City Cald well State J. Zip 836 05	
3. LOCATION OF WELL by legal description:	Water Quality test or comments: Bottom hole temp
	12. LITHOLOGIC LOG: (Describe repairs or abandonment) Wate
Twp. <u>4</u> North $\square$ or South $\square$ Rge. <u>3</u> East $\square$ or West $\square$ Sec. <u>3</u> , <u>10 acres</u> 1/4 <u>NL</u> 1/4 <u>SW</u> 1/4 Gov't Lot <u>County</u> <u>10 acres</u> 1/4 <u>SW</u> 1/4 Address of Well Site <u>23547</u> Stone Ln	Bore Dia.       From       To       Remarks: Lithology, Water Quality & Temperature       Y         8"       0       4       dirf       1         1"       4       9       Soundy       dirf       1         1"       8       9       girarel       1         6       9       22       Soundy       clary       1         22       30       5; 14       14       14
(Give at least name of road + Distance to Read or Landmark)	30 38 Fine sund 4 38 41 white clay
LtBlkSub. Name	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Local Municipal Monitor Irrigation     Thermal Injection Other	75 76 gred sand 76 96 Sift in this layers clag 96 ict gred sand
New Well Modify Abandonment Other      Air Rotary Cable Mud Rotary Other      SEALING PROCEDURES	
Material From To Sacks or Bentonite 325 150 pour in	
	MAR 0 4 1998 FEB 1 3 1998
Was drive shoe used? If Y = N Shoe Depth(s) Was drive shoe seal tested? TY IFN How? 8. CASING/LINER:	MAR 0 4 1993 FEB 1 3 1998 WATER RESOURCES Department of Waler Resources WESTERN REGION
Was drive shoe used?       EY       N       Shoe Depth(s)         Was drive shoe seal tested?       EY       EN       How?         8. CASING/LINER:       Diameter       From       To       Gauge       Material         Casing       F 2       9.8       255       57 e el       E       E	MAR 0 4 1993 FEB 1 3 1998 MAR 0 4 1993 FEB 1 3 1998 WATER RESOURCES WESTERN REGION RECEIVED RECEIVED
Was drive shoe used?       EY = N Shoe Depth(s)         Was drive shoe seal tested?       Y DEN How?         8. CASING/LINER:         Diameter       From To Gauge Material         Casing Liner Welded Threaded         Casing Liner Welded Threaded         B. CASING/LINER:         Diameter         From To Gauge Material         Casing Liner Welded Threaded         Diameter         From To Gauge Material         Casing Liner Welded Threaded         Diameter         MIC Poorcutar	MAR         0         4         1998           MAR         0         4         1998         FEB 1         3         1998           Department of Water Resources         Water Resources         WESTERN REGION         WESTERN REGION           R         E         C         E         I         V         E         D           DEC         1         2         1997         DEC         0         5         1997
Was drive shoe used? EY = N Shoe Depth(s)         Was drive shoe seal tested? Y EN How?         8. CASING/LINER:         Diameter       From To Gauge Material         C3/8 + 2       9.8         Length of Headpipe       Cauge Material         Call       Image Material         Was drive shoe seal tested?       Steel         Material       Casing Liner Welded Threaded         Microsoft       Image Material         Image Material       Image Material         Image Materia	MAR 0 4 1993 FEB 1 3 1998 MAR 0 4 1993 FEB 1 3 1998 WATER RESOURCES WESTERN REGION RECEIVED DEC 1 2 1997 DEC 0 5 1997 WATER RESOURCES WESTERN REGION WATER RESOURCES WESTERN REGION
Was drive shoe used? EY = N Shoe Depth(s)         Was drive shoe seal tested? Y EN How?         8. CASING/LINER:         Diameter       From To Gauge Material         Casing Liner Welded Threaded         Casing Liner Welded Threaded         Casing Liner Welded Threaded         Casing Liner Welded Threaded         B. CASING/LINER:         Diameter       From To Gauge Material         Casing Liner Welded Threaded         Casing Liner Welded Threaded         B. Particle         Diameter         From To Gauge Material         Casing Liner Welded Threaded         Diameter         From To Gauge Material         Casing Liner Welded Threaded         Diameter         B. Particle         Diameter	MAR       0       4       1993       FEB 1       3       1998         MAR       0       4       1993       FEB 1       3       1998         Department of Waier Resources       Waier Resources       WESTERN REGION       Wester Resources         R       E       C       E       I       V       E       D         DEC       1       2       1997       DEC       0       5       1997         Department of Water Resources       Water Resources       WESTERN REGION       Water Resources       Wester Resources         Completed Depth       1       0       1 <td< td=""></td<>
Was drive shoe used?       WY = N Shoe Depth(s)         Was drive shoe seal tested?       Y IPN How?         8. CASING/LINER:       Casing Liner Welded Threaded         Orangeter       From To Gauge Material         Casing Liner Welded Threaded       Casing Liner Welded Threaded         Casing Liner Welded Threaded       Casing Liner         Will PPOFILME       Casing Liner         Perforations       Method         Perforations       Method         Screens       Screen Type 304       StainLess         From To Slot Size Number Plameter Material       Casing Liner         99       104       016         Casing Liner       Casing Liner	MAR       0       4       1993       FEB       1       1998         MAR       0       4       1993       FEB       1       1998         Department of Water Resources       WESTERN REGION       WESTERN REGION       Image: Completed Depth       Image: Completed D
Was drive shoe used? LY = N Shoe Depth(s)         Was drive shoe seal tested? Y LPN How?         8. CASING/LINER:         Diameter From To Gauge Material         Casing Liner Welded Threaded         Deptember         Casing Liner Welded Threaded         Deptember         Casing Liner Welded Threaded         Deptember         Casing Liner         Deptember         Screen Type         Screen Type         Screen Type         Screen Type         Screen Type         Casing Liner         Perforations         Method         Screen Type         Screen Type         Casing Liner         Perforations         Method         Screen Type         Screen Type         Casing Liner         Perforations         Casing Liner         Perforat	MAR       0       4       1933       FEB 1       3       1998         Department of Water Resources       Water Resources       WESTERN REGION       Wester Resources         R E C E I V E D       RECEIVED       DEC 1       2       1997       DEC 0       5       1997         DEC 1       2       1997       DEC 0       5       1997         DEC 1       2       1997       DEC 0       5       1997         Department of Water Resources       Water Resources       Water Resources       Wester Resources         Department of Water Resources       Water Resources       Wester Resources       Wester Resources         Completed Depth       05       (Measurable Date: Started       7/7/97       Completed       7/7/97         13. DRILLER'S CERTIFICATION       We certify that all minimum well construction standards were complied with the time the rig was removed.       Participant Well Dividing. Firm No. 497         Firm Name       Obj in Scin       Vell Dividing. Firm No. 497         Firm Official       Math       Math       Dete       1/16/97

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USE TYPEWRIT	ER OR
BALL POINT	PEN

State of Idaho Department of Water Resources

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2	d:	<u>م</u> ص(	<b>. So</b> .	7 14	n -

WELL DRILLER'S REPORT

days after the completion or	abando	onment	of the w		·····
1. WELL OWNER	7. W	ATER	LEVEL		
Name LARRY LEMHASTER	S	tatic wa	iter level	60 feet below land surface	
Address CALDWELL DOAMO	Temperature° F. Quality <u>6000 46RPS;</u>				,
	Artesian closed-in pressurep.s.i.				
2. NATURE OF WORK	8. W	ELL TI	EST DA	ТА	
🕅 New well 🔅 Deepened 🛛 Replacement		] Pump	C B M	Bailer      Other      Ail	R
		15 15		20 - 3	
		·			
3. PROPOSED USE					
🖾 Domestic 📋 Irrigation 🔲 Test 🔲 Other (specify type)	9. L	ITHOL	.OGIC L	.0G	
🗇 Municipal 🗇 Industrial 😡 Stock 🗖 Waste Disposal or	Hole	De	pth	Material	Water
Injection	6	From	10	TOPSOIL	
4. METHOD DRILLED		4	5	HAROPAN	+
🕅 Cable 📋 Rotory 🔲 Dug 🗆 Other	┝	5	32	BROWNSAND	+
		74	RO	BROWNSAND	
5. WELL CONSTRUCTION		80	110	SANDY BROWN CLAU	
		110	130	BROWN SAND	
Diameter of hole <u>6</u> inches 1 otal depth <u>707</u> reet		130	134	BROWN CLAY	+
Casing schedule: A Steel Concrete		<u>134</u>		WHITE SAND	
3.50 inches 6 inches + / feet $1.33$ feet					
inches inches feet feet					╶┥╴╺┽┈╌╴
inches inches feet feet			+		
inches inches feet feet					
inches inches feet feet	L		I		
Was casing drive shoe used? X Yes LJ No					
Was a packer or seal used? Lifes points	ļ		-		-+
How perforated?			· · · · ·	······································	<u> </u>
Size of perforation inches by inches			<u> </u>	·····	
Number From To			· · · ·		-++
perforations feet feet		1			
perforations feet feet					
perforations feet feet	<u> </u>	ļ	<u> </u>	·	
Well screen installed? 💭 Yes 🛛 No		<u> </u>	<del> </del>	COA A tria	╺╅─╌┼──╸
Manufacturer's name	<u>├</u> ──	1			+-+
Type Model No	L	† _			
Diameter Slot size Set from feet to feet					
Diameter Slot size Set from feet to feet	<u> </u>	ļ			
Gravel nacked? 🔲 Yes 🐱 No. Size of gravel	<b> </b>	+	+		+ +
Placed from feet to feet	<u> </u>				
	<b> </b>	+			
Surface seal depth Material used in seal 🛛 Cement grout					
🗖 Puddling clay 🛛 🕅 Well cuttings					
Sealing procedure used 🛛 🖾 Starry pit 🗖 Temporery surface casing	<u> </u>	1	L _	I	
🔀 Overbore to seel depth	1				
6. LOCATION OF WELL	10. V	Vork sta	rted <u>3</u>	-15-75 finished 3-24-	15
$\sqrt{5}$ Sketch map location must agree with written location.	1				-
	H. I	DRILLEI	RS CERT	FIFICATION	1
		Firm No	ime <u>H</u>	ETZER WELL DRLFirm	No. 93
	'				II DE
	1	Address	RT:	HOMEDALE JOA Date	<u></u>
	V ulm to				
	Signed by (Firm Official) 1 MALT 11-20				
County CANYON			( (~~	engtor)	
NW 15 E 1/2 Sec. 3. T. 4 N/8. R. 3 MW	ļ		(UP	۳۱ ۴۱ ۴۱ /	

	Form 238-7 3/95-C96	,
ţ	$\bigvee$	

devices: WELL CAP

### **IDAHO DEPARTMENT OF WATER RESOURCES** WELL DRILLER'S REPORT

83622580					
Inspec	Office Use Only Inspected by				
Twp	Rge		Sec		
	_1/4	1/4	1/4		

1. DRILLING PERMIT NO	11.	WELL	TES	TS:	Lat: : :	Long: :	:	<u> </u>
Other IDWR No.	1 12:11		<u>ump</u>	Bailer		owing Artesia	an	_
2. OWNER:	50	gal/min.		awdown	Pumping Level			-
Name <u>CORY HAMRICK</u>	µ∕⊻							-
Address 9935 GANTERBURY			1			<u></u>		-1
City BOISE State ID Zip 83704	Wate	r Temp			Bottom hole tem	<u>г.                                    </u>		-
3. LOCATION OF WELL by legal description:	Wate	er Qualit	ty test	or comments:			-	_
Sketch map location <u>must</u> agree with written location				Dep	oth first Water Enco	ountered 75		
	1 <b>2.</b> J	LITHO	DLOG	IC LOG: (I	Describe repairs of	r abandonme	ent)	
Twp. <u>4</u> North 🛛 or South 🗌								
w Rge. 3 East or West 🛛	Wat	er Erann I		D	L.L		ाज	<b>.</b>
E Sec. 2 1/4 SW 1/4 SW 1/4	Dia.	FIOM	10	Nellains; Liu	nology, water Quant	y & Temp.	r	Ν
10 acres 40 acres 160 acres	10"	0	4	TOP SOIL				$\boxtimes$
Gov't lat County CANVON	10"	4	18	BROWN CI	LAY			$\boxtimes$
S CONTROL COUNTY CAN TON	6"	18	35	BROWN CI	LAY			$\boxtimes$
Lat::Long::	6"	35	75	GRAVEL				$\boxtimes$
Address of Well Site TUNDRA CT.	6"	75	114	SAND CLA	Y STRIPS		M	П
City MIDDLETON	6"	114	120	TAN CLAY	*****		ŢŢ	$\boxtimes$
(Gree at least name of road + Distance to Road or Landmark)	6"	120	128	SAND	· · · · · · · · · · · · · · · · · · ·		M	Π
Lt. <u>20</u> Blk. <u>1</u> Sub. Name <u>NORTHSLOPE ESTA</u> TE	S						ĨĨ	
· · · · · · · · · · · · · · · · · · ·							Ē	П
4. USE:						-	T	$\square$
🖾 Domestic 📋 Municipal 📋 Monitor 🔲 Irrigation				RE	CEIVED			$\square$
☐ Ihermal ☐ Injection ☐ Other								Π
5. TYPE OF WORK check all that apply (Replacement etc.)				SF	P 2 7 2005			$\square$
New Well Modify Abandonment Other								
				WAT	ER RESOURCES			
Air Rotary Cable Mud Rotary Other				VVE	SIEHA HEGION		T	П
7. SEALING PROUEDURES						· · ·	Ī	$\square$
Material From To Sacks or					Biau		ΤÌ	
Pounds					RIGIN	Δ		П
BENTONITE 0 18 450 POUR							П	П
								Π
					· · -			Π
Was drive shoe used? 🛛 Y 🔲 N Shoe Depth(s)								$\square$
Was drive shoe seal tested? 🛛 Y 🔲 N How? air								$\square$
8. CASING/LINER:							$\square$	П
Diameter From To Gauge Material Casing Liner Welded Threaded								$\Box$
								$\Box$
Length of Headpipe <u>8'</u> Length of Tailpipe								
9. PERFORATIONS/SCREENS	Con	npleted	Depth	n <u>: 128</u>	a	Measurable)	I	
Perforations Method	Date	: Started	d <u>09/2</u> 2	/2005	Compl	eted 09/22/2	005	
Screen Screen Type <u>huston</u>	13. I	DRILL	ÆR'S	CERTIFIC	ATION			
From To Stot Size Number Diameter Material Casing Line	I/We	certify	that all	minimum we	ell construction star	idards were		
123 128 250 5" SS	comp	plied wit	th at th	e time the rig	was removed.			
	<b>F</b>	Nome	aron	ייד דיייי		E >T		2
	гши	i maine <u>(</u>	JEOK	<u>10 1601 01</u>	CE DRULLING	rum No	u. <u>30</u>	2
· · · · · · · · · · · · · · · · · · ·	Firm	Officia	1		2	Data 00	mar	<b>3</b> 004
10. STATIC WATER LEVEL OR ARTESIAN	T. 11 111			<u></u>		_ Date 09	143/1	200
PRESSURE:	Supe	nvisor o	r ()nor	ator		Data		
63ft. below ground Artesian Pressurelb	Եսիե	A V 1504 U	a Oper	(Sign once if Fi	rm Official & Operato	. Daus		
Depth flow encountered <u>120</u> ft. Describe access port or control				·	Opvind	~/		

Date: 9/23/2005 Time:2:19:52 PM

Attn: Rob Amended well Loy O.K. Phil 5/1/86

Form 238-7 3/95-C96

devices: WELL CAP

**IDAHO DEPARTMENT OF WATER RESOURCES** 

WELL DRILLER'S REPORT

		~/ `	· /	84
	Office	Use O	nly	
Inspec	ted by 🔡	8 <i>36</i>	$\underline{U}$	5_
Twp_	Rge		_Sec_	
	_1/4	1/4		1/4
Lat		Long		· .

1. DRILLING PERMIT NO419-55	11. WEI	L TES	STS:	Lat: : !	Long:	:	
Other IDWR No. REVISED 04/28/2006		Pump	Bailer D	⊿ir □ Flow	ing Artesi	an	
2. OWNER:	Yield gal/mi	in. D	rawdown P	umping Level	Time		
Name BOB WRIGHT	90		100	01	HR		
Address 318							_
City PETRA WAY State ID Zip 83607	Water Tan			Pottom hala tama			
3. LOCATION OF WELL by legal description:	Water Oua	up: ility test	Or comments	soutom noie temp.			-
Sketch map location must agree with written location	mater Que	uity use	Depth	first Water Encour	ntered 75		—
N	12. LITH	01.00	FIC LOG: Des	ribe repairs or a	handonme		<u> </u>
Two 4 North X or South 7	12, 1111	ULU	JIC DOG. (DC.	cribe repairs of a	vangoanne	здту	
Bas 3 Fort C at Wort	Water						
W E E Rgc <u>3</u> Last I of West A	Bore From	i To	Remarks: Litholo	gy, Water Quality &	t Temp	Y	N
X Sec. <u>3</u> 1/4 <u>SE 1/4</u> <u>NW 1/4</u>	10" 0	4	TOP SOIL		<u>,                                 </u>		
	10" 4	18	BROWNCLAY	7		┢╌┤	$\Theta$
s Gov't lot County CANYON	6" 18	37	BROWNCLAY	7		┢╌┤	×
Lat: : : Long: : :	6" 37	56	GRAVEL			┝─┤	Ø
Address of Well Site 14085 SILVER RIDGE RD.	6" 56	75	BROWN CLAY	7		$\vdash$	æ
City CALDWELL	6" 75	109	SAND AND CI	AY STRIPS		$\forall$	H
(Give at least name of road + Distance to Road or I andmark)	6" 109	114	TAN CLAY			H	M
Lt 2 Blk 1 Sub_Name SLEEPY HOLBIN	6" 114	120	SAND	<u></u>		$\bigtriangledown$	A
						台	
4. USE:		+				-1	H
🛛 Domestic 🗌 Municipal 🔲 Monitor 🔲 Irrigation		+		······································		H	
☐ Thermal ☐ Injection ☐ Other			WELL MADE I	TINE SAND/PUT		H	
5. TYPE OF WORK check all that apply (Replacement etc.)		1	4" SCREEN AN	DLINER IN TO	STOP	H	
New Well Modify Abandonment Other		<b>†</b>	FINE SAND			i i	-
6. DRILL METHOD			· _				
X Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other		FOI	EIVED		}Et∀	E	5
7. SEALING PROCEDURES	- H	F					
Material From To Sades or		LANV.	n 5 7006	MAY	<u> </u>	6	-1
Pounds		MAT		14/ADYE/2			
BENTONTITE 0 18 450 POUR		WATER	RESOURCES	WEST	FRM REA	25	<del>)</del> – (
		WEST	ERN RECIO				
		1	nn	MINIAI		Ť	-
Was drive shoe used? $\boxtimes$ Y $\square$ N Shoe Depth(s) 113			UNI	UNAL		Ï	-1
Was drive shoe seal tested? X I N How? air			Dr	NICE	- 1	٦,	
8. CASING/LINER:			NE	VITE	7)1	-1	1
Diameter From To Gauge Material Casing Liner Welded Threaded						Ť	1
6" +2 113 250 STEEL 🛛 🗌 🖾						Ť	-
$\frac{5}{4^{"}} 15 115 120 151 EEE \square$						-İ	1
╺┶╍╍╸╪╼┿╪╺╍┙╬┿┽ <u>╴┞╴╶┍┉</u> ╪╍╧╸⋎ <del>╱╶╎╴╚╝┈╸╘╝</del> ╸╴╶┝┙ <sub>╴╼╼</sub> ╘╝┈╶╶						-1	1
Length of Headpipe <u>8'</u> Length of Tailpipe						_1	
9. PERFORATIONS/SCREENS	Completed	l Depth	: 120	(Mea	surable)		7
Perforations Method	Date: Starte	d <del>09/29</del>	12005-4-27	$-\alpha_{\varphi}$ Completed	1 <u>09/30/20(</u>	<del>05</del>	_
Screen Type huston/sand stopper	13. DRILI	ER'S	CERTIFICAT	ION	4-27	-0	6
From To Slot Size Number Diameter Material Contract	I/We certify	that all	minimum well co	Instruction standar	ds were	-	•
115 120 020 5" S.S.	complied wi	ith at the	e time the rig was	removed.			
	E	OBOD (			<del>.</del>	<b>.</b>	
	Firm Name	GEORC	JE POST WELL I	<u> JRILLING</u>	Firm No.	<u>563</u>	
	Eirm Officia	.1 .	1	_	D-1. 00/2	0.0	0.05
10. STATIC WATER LEVEL OR ARTESIAN		u		<u></u>		0/2	<del></del>
PRESSURE:	Supervisor	n Onero	tor		Data 4-0	27	1-0L
58tt. below ground Artesian Pressurelb	~ april 1004 (	л орога (	(Sign once if Firm Of	ficial & Operator)	Date		
Depth now encountered 114 ft Describe access port or control				1			

Date: 4/28/2006 Time:8:14:21 AM

12	
10 1	Form 238-7
<b>W</b>	3/95-C96

### IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

	82	$b^{\prime}$	415			
1	C	Office	Use O	nly		
Inspec	ted b	У		•		
Twp_		_Rge		Sec		-
	1/4		1/4		1/4	-
Lat:	:	:	Long:	:	:	

1. DRILLING PERMIT NO419-55	11.	WEL	L TES	575.	Lat: : :	Long: :	:	
Other IDWR No		$\Box$	Pump	Bailer	🛛 Air 🗆 F	lowing Artes	sian	
2. OWNER:	Yield	l gal/min	L D	rawdown	Pumping Level	Time	1011	_
Name BOB WRIGHT	90				100	1 HR		
Address 318							<u> </u>	
City PETRA WAY State ID Zip 83607	L	or Torn			D-# 1.1.4			_
3. LOCATION OF WELL by legal description:	Wat	er Onal	itv test	or commente	_ Bottom noie ter	mp		-
Sketch map location must agree with written location	1140	or Quit	<i>(y</i> (0.5)	Der	th first Water Fro	countered 75		,
N	12.	LITH	DLOC	HC LOG: M	escribe repairs (	v abandonn	antì	*******
Two 4 North 🛛 or South				u, 1997 De 19	eseribe repairs (		ent)	
W Rge 3 Fast or West	Wat	er	_					
$E = \frac{1}{2} $	Bore	From	То	Remarks:Lith	iology, Water Quali	ity & Temp.	Y	N
$\frac{1}{10 \text{ acres}} = \frac{1}{10 \text{ acres}} = \frac{1}{10 \text{ acres}} = \frac{1}{10 \text{ acres}} = \frac{1}{10 \text{ acres}} = \frac{1}{100 \text{ acres}} = 1$	10"	0	4	TOP SOIL			┶╾┥	$\nabla$
Gov <sup>2</sup> t lot	10"	4	18	BROWN CL	AY		┺┨	$\bigotimes$
s Governot Country CANYON	6"	18	37	BROWN CL	AY		╉┤	뛵
Lat: Long:	6"	37	56	GRAVEL			╧	Ŕ
Address of Well Site 14085 SILVER RIDGE RD.	6"	56	75	BROWN CL	AY		╉	反
City CALDWELL	6"	75	109	SAND AND	CLAY STRIPS			Ê
	6"	109	114	TAN CLAY			- 1	
Lt <u>2</u> Blk <u>1</u> Sub Name <u>SLEEPY HOLBIN</u>	6"	114	120	SAND			M	Ē
							ŕì	
							Ť	Π
Domestic   Municipal   Monitor   Imigation								
5 TVPF OF WORK shock all that are the (Baulan of the)								
New Well Modify Abundanmant O Other								
6 DRILL METHOD					, <u>, , , , , , , , , , , , , , , , , , </u>		T	
$\square$ Air Rotary $\square$ Cable $\square$ Myd Botary $\square$ Other							ŤŤ	
7 SEALING PROCEDURES				······		nia.	1−i	
SEAL FILTED DACK AMOUNT LATTION					····		╧	
Material From To Sacks or							ij	-
Pounds							'nή	-1
BENTONTITE 0 18 450 POUR		†		w.			┝╋	┥
							ΠÏ	┨
							┝╢	
Was drive shoe used? 🛛 Y 🔲 N Shoe Depth(s) 113				ND	MALAI	Ĭ	╞╌╠	-
Was drive shoe seal tested? X Y IN How? air					UINA		┝─╫	-
8. CASING/LINER:							╞──╢╴	┥
Diameter From To Gauge Material Casing Liner Welded Threaded					IVED		Ηİ	$\neg$
$\begin{bmatrix} 6^{\circ} & +2 & 113 & 250 & \text{STEEL} \\ \hline & & & & & \\ \hline & & & & & \\ \hline & & & &$					• • • • •		┢╼╟╴	-
┝━━╍╋━╋┉┹╋┉╍┫╠╸╠╸╠╴╏╴╏		. 1		<u> </u>	4 2005	·		-
							μĻ	$\neg$
Length of Headpipe <u>8'</u> Length of Tailpipe				WESTERI	N REGION			-
9. PERFORATIONS/SCREENS	Com	oleted 1	Depth	: 120	(1)	(leasurable)	U	-
Perforations Method	Date:	Started	09/29/	2005	Comple	eted 09/30/20	05	
Screen Screen Type <u>huston</u>	13. D	RILLI	cr's (	CERTIFICA	TION	- i - ine -		
From To Slot Size Number Dispute Aten int of the	I/We c	ertify tl	nat all a	minimum well	construction stan	dards were		
195-200 020 5" SS I M	compli	ed with	1 at the	time the rig w	as removed.			
115 18 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								
	Firm N	lame <u>G</u>	EORG	<u>E POSI WELI</u>	L DRILLING	Firm No.	<u>563</u>	
	т:	VOT - 1 - 1		Son.	1e-			
10. STATIC WATER LEVEL OR ARTESIAN	rum (			<u>//</u>		Date 09/3	30/20	)05
PRESSURE:	Sumar	inor or	0	<i>t</i> -		<b>D</b> .		
58ft. below ground Artesian Pressurelb	Superv	1501 01	Operat	OI	Official & Onernter	Date		
Depth flow encountered 114 ft. Describe access port or control			(i		ornorial of Operatory	,		
devices: WELL CAP	Date: 10	/3/2005	Time:7	:51:25 AM	<b>A A A</b>			

SCANNED



w

55\_\_\_\_\_ ft. below ground

Depth flow encountered 65

devices: Cap

Artesian pressure

	844113
Form 238-7 11/97 JGE IDAHO DEPARTMENT OF WAT	ER RESOURCES Office Use Only
WELL DRILLER'S F	REPORT Inspected by
1. WELL TAG NO. D 0047730	1/4 1/4
DRILLING PERMIT NO.	11. WELL TESTS:
Other IDWR No. 63.W. 228.001	Pump Bailer X Air Flowing Artesi
2. OWNER:	Yield gal./min. Drawdown Pumping Level
Name Sidney Roberts	40 gpm 80' 80'
City Caldwell State ID Zip 83605	
3 LOCATION OF WELL by legal description:	Water Temp. 56 Bottom hole temp. 56
Sketch man location must agree with written location	Water Quality test or comments:
N	12. LITHOLOGIC LOG: (Describe repairs or abandonment
Two <b>4</b> North <b>X</b> or South	Bore
Roe 3 East or West X	Dia From 10 Remarks: Lithology, Water Quality & Temperat
Sec. 3 1/4 SE 1/4 SE 1/4	10"
Gov't Lot     Gov't Lot	6'' 18' 30' Brown Clay
Lat: 43 42.481' Long: 116 40.606'	6" 30' 48' Gravel
Address of Well Site 23117 White Oak Dr.	6" 63' 76' Heaving Sand
(Give at least name of road + Distance to Road or Landmark)	6" 76' 83' Sand
Lt. 5 Blk. 1 Sub. Name Sleepy Hollow	6" 83' 88' Brown Clay
Thermal       Injection       Other         5. TYPE OF WORK: check all that apply       (Replacement etc.)         Image: I	
7. SEALING PROCEDURES:	
Material From To Sacks or	
Bentonite 0 18' 10 Sacks Overbore	
	· · · · · · · · · · · · · · · · · · ·
Was drive shoe used? XY N Shoe Depth(s) 86'	
Was drive shoe seal tested? XY N How? Air	
8. CASING/LINER:	
Diameter From To Guage Material Casing Liner Welded Threaded	
5" 80' 88' 250 Steel X X	SCANNED RECEIVED
Length of Headpipe 8' Length of Tailpipe 0	JAN 17 2007
9. PERFORATIONS/SCREENS:	WATER RESOURCES
Perforations Method Washdown	WESTERN REGION
A Screens Screen Type Johnson	Completed Depth 98'
From To Slot Size Number Diameter Material Casing Liner	Date: Started 1/5/2007 Completed 1/8/2007
88' 98' .020 5" SS X	<b>13. DRILLER'S CERTIFICATION:</b> I/We certify that all minimum well construction standards were complied the time the rig was removed.
10. STATIC WATER LEVEL OR ARTESIAN PRESSURE:	Company Name Treasure Valley Drilling Firm No.

Firm Official and Driller or Operator <u>11111 Stoffer</u> (Sign once if Firm official & Operator) Date 1/9/2007

FORMARD	WHITE COP	V TO \λ/ΔT	EB BESUI	IRCES
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Sec

1/4 \_\_\_\_\_1/4 Long:

Pump	Bailer	XAir	Flowing A	rtesian
Yield gal./min.	Drawdown	Pumping	Level	Time
40 gpm	80'		30'	1 Hr.

Water Encounter 65'

12.	LITHOL	OGIC LOG:	(Describe repairs or abandonment)
-----	--------	-----------	-----------------------------------

Decc			· · · · · · · · · · · · · · · · · · ·	Wate
bore Dia	From	То	Remarks: Lithology, Water Quality & Temperature	Y
10''	0	4'	Top Soil	
10"	4'	18'	Brown Clay	
6"	18'	30'	Brown Clay	
6''	30'	48'	Gravel	
6''	48'	63'	Sand	
6"	63'	76'	Heaving Sand	X
6"	76'	83'	Sand	
6''	83'	88'	Brown Clay	
6"	88'	98'	Sand	X
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v.				
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	AUG	152	007	
	ļ.		JAN 1 / 2007	
				· . 
			WATER RESOURCES	
	i			<u> </u>
omplete	ed Depth	98'	(Meas	surable)
	tarted 41			,

rds were complied with at

lb. and ft. Describe access port or control

irm	No.	560	

 Date	1/9/2007	
 Date	1/9/2007	

Form 238-7 9/82

## STATE OF IDAHO DEPARTMENT OF WATER RESOURCES

USE TYPEWRIT BAL

## 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	7.	WAT	ERLEV	ËL			
Name Darvel + Shervi Anglen		Static	water I	evel 186 feet below lar	nd surface.		
Address 8212 Rive Rube Lu. R. I. 183705		Flowi Artes	ing?     □ ian close	] Yes IZHNÖ G.P.M. flo ed-in pressuren.s.i	w		
$\frac{1}{2} = \frac{1}{2} = \frac{1}$		Contr	olled by	/: 🗆 Valve 🗆 Cap	] Plug		
Owner's Permit No. $\underline{-63-70-2-0.3}_{0}$	<u> </u>	Temp	Derature Desc	OF. Quality ribe artesian or temperature zones	below.		
2. NATURE OF WORK	8.	WEL	L TEST	DATA			
Replacement		🗆 Pu	Imp	🗆 Bailer 🛛 🗗 Air 🗆	Other		<u> </u>
Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)		Discharç	e G.P.M.	Pumping Level	Hours Pu	mped	
		10					
3. PROPOSED USE	[						
🕾 Domestic 🛛 Irrigation 🔲 Test 🗆 Municipal	9,	LITH	OLOGI	C LOG	0801.0	9	
□ Industrial □ Stock □ Waste Disposal or Injection □ Other(specify type)	Bore	De	pth			Wa	ter
	Diam.	From	To ⊄	Material	<u></u>	Yes	No
4. METHOD DRILLED		8	21	silf + sind			2
☑ Rotary ☑ Air □ Hydraulic □ Reverse rotary □ Cable □ Dug □ Other		21 22	22	clay clayt sand			2
		25	30	alay	····		4
5. WELL CONSTRUCTION		32	40	alay + Sind			
Casing schedule: Steel Concrete Other		45	43 54	chy			
<u></u>	~	54	55	Sdnal		-	
inches feet feet feet feet		505	RA				
inches inches feet feet		2	5U				
Was a packer or seal used?		1		9 1990	MIL		
Perforated? U Yes 2-1176 How perforated? E Factory I Knife I Torch						[]	
Size of perforation inches by inches		Dep	artment	of Water Resources			
perforations feet feet							
perforations feet feet feet			 	۶/۵۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰۰			
Well screen installed? 🗆 Yes 🛛 🖆 No Manufacturer's name							
Type Model No							
Diameter Slot size Set from feet to feet							
Gravel packed?  Ves ETNo Size of gravel Placed from feet to feet							
Surface seal depth <u>30</u> Material used in seal: Buddling day							
Sealing procedure used:				·······			
□ Overbore to seal depth Method of joining casing: □ Threaded   營 Welded □ Solvent				· · · · · · · · · · · · · · · · · · ·			
Weld				······································			
Describe access port	10.	Me	rk ctart	ed 7/4/20 finished	z le la	<b>ว</b>	
						<u> </u>	_
6. LOCATION OF WELL	11.		LERS C		ustion standar	de	
	'n	compl	lied with	) at the time the rig was remov	/ed.	us we	16
Subdivision Name		,∕Firm I	Name_(	Sem State Drilling F	irm No. <u>27</u>	<u>Z</u>	_
W E E	1	? Addre	ss 29	N. Goule Rol. Faster	ate 3/6/9	v	
Lot No Block No		C:	- <u> </u>	- Official ID- P	<u>, 7</u>	<u> </u>	-
S A	Ĵ	Signed	) by (Fi	and -	2 1		-
County Canyon	/		((	Operator) Duniel h	tuille		_
<u>SE % SE % Sec. 3, T. 4</u> OS, R. 3 ED.							
USE ADDITIONAL SHEETS IF NECESSARY - F	ORWA	RDT	IE WHI		IENT		

## 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

State law requires that this report be filed within 30 days after the compl	th the C etion o	)irector r aband	', Depa Ionmer	artment of Water Resources nt of the well.	m	
1. WELL OWNER	7.	WATE	ER LEY	VEL	<u></u>	
Name <u>Phillip Villarreal c/o Rick Sweaney</u>		Static Flowi	water ' ng? [	level <u>6</u> feet below land □ Yes 및 No G.P.M. flow	d surface. w	
Address <u>Caldwell, Idaho # 83605</u>		Artesi: Contr	an clos olled b	sed-in pressure p.s.i, pv:	Plug	
Owner's Permit No		Tempe	erature Des	eOF. Qualityscribe artesian or temperature zones t	below.	
2. NATURE OF WORK	8.	WELL	. TEST	ΓΟΑΤΑ		
⊠ New well  □ Deepened  □ Replacement □ Abandoned (describe abandonment procedures such as		🗆 Pur	mp	□ Bailer	Other	<u> </u>
materials, plug depths, etc. in lithologic log)		Discharge	<u>∍ G.P.</u> M.	1. Pumping Level	Hours Pumpe	<u>ed</u>
3. PROPOSED USE	<b> </b>	<u> </u>	<u> </u>			
🛛 Domestic 🗆 Irrigation 🗆 Test 🗔 Municipal	9.		OLOG	I		
Industrial Stock Waste Disposal or Injection Other (specify type)	Bore	Der	oth		;	Water
	Diam. 8	From 0	20	sand & clay layers		<u>/es No</u> x
	6		<u>  55  </u>	sand & clay layers	x	×—
⊠ Rotary ⊠ Air □ Hydraulic ⊔ Reverse rotary □ Cable □ Dug □ Other	6	62	70	sand		x
5. WELL CONSTRUCTION		<b>  </b>	<b>1</b>			
Casing schedule: 🖈 Steel 🗀 Concrete 🗆 Other			]			
Thickness Diameter From To .250 inches <u>6</u> inches + <u>2'6''</u> feet <u>58</u> feet	<b> </b> !		]			
inches inches feet feet	<b>!</b>	[]	[]		·	
inches inches feet feet	!	<u></u> −−−				
Was casing drive shoe used? 🖪 Yes 🗆 No		<b>├</b>	·			
Was a packer or seal used?  Ves IX No Performed? Ves IX No						
How perforated?	[]	┢━━━━┤				
Size of perforation inches by inches	<b>├</b> ──┤	r	†			<u> </u>
Number From To perforations feet feet		<u> </u>				
perforations feet feet	<b>├</b> ──┤					——
perforationsfeetfeetfeet			†	MICEN	ABUT	
Manufacturer's name		┍━━┥		The second secon		
Type Model No	┣+	r <b></b>		131 N T N S S N T A 10		
Diameter Slot size Set from feet to feet					<del>ئە</del>	
Gravel packed?  Yes  Yes  Gravel Size of gravel	$\vdash \downarrow$			Department of Water-	Resources	<del></del>
Placed from feet to feet	<b>├</b> ───┤		-	Western Regional	-0ffice	
Surface seal depth <u>20'</u> Material used in seal: U Cement grout						
Sealing procedure used:	┣+					
Method of joining esting:  Threaded Method of joining esting:  Threaded Method Solvent				00202	COLUMNIE	
Welld Weld	ĺ			<b>M</b> IU	ROLIN	<b>9</b>
Cemented between strata     Describe access port	10.	L	<u></u>		I	<u> </u>
	L	Wor	k starte	.ed <u>10-05-84</u> finished	_10-05-84	
6. LOCATION OF WELL	11.	DRILI	LERS(	CERTIFICATION	2	
Sketch map location <u>must</u> agree with written location.	ł	l/We c compli	ertify ed with	that all minimum well construc h at the time the rig was remove	ction standards <sup>,</sup> xd.	were
Subdivision Name	l	Firm N	lame <u>R</u> '	ТТ.Т. DOTY_ <u>WET.I.</u> Firi	m No. <u>4</u> 2	
w	1	م الم	DI	RILLING		
Lot No. Block No.	1 '	Address	\$ <u>R</u> ] C	$\Gamma_{-7}$ BX, 311 Uat -1-1-11 Idaha 83605	.e <u>1-15-85</u>	
	l	Signed	by (Fir	irm Official)	Joly_	
County <u>Canyon</u>	I		(t	and Operator)	~	
<u></u>	1			7		

USE ADDITIONAL SHEETS IF NECESSARY - FORWARD THE WHITE COPY TO THE DEPARTMENT

JSE TYPEWRITER OR	
BALL POINT PEN	

USE ADDITIONAL SHEETS IF NECESSARY

State of Idaho Department of Water Administration

## WELL DRILLER'S REPORT

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Ň		( <sup>9</sup> )
J H	$\mathbb{N}^{+}$	ſ

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

Name	1. WELL OWNER	7. V	ATER	LEVEL				
Address       LTIBELTON I D.         Owner's Permit No.       Temperature	Name	s	tatic wa	ater level	feet below land su	urface		
Owner's Permit No	Address MIDELTON ID.	ר   ד	lowing empera	? 🗆 Ye ture	es   ⊠ No  G.P.M. flow F. Quality <u>good</u>	/ d		
2. NATURE OF WORK       8. WELL TEST DATA <sup>1</sup> New well <sup>1</sup> Despend <sup>1</sup> Abandoned (describe method of abandoning) <sup>1</sup> Abandoned (describe method of abandoning) <sup>1</sup> Other Bound <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga G.P.M. <sup>1</sup> Dickerga	Owner's Permit No		rtesian Controlle	closed-ir ed by	pressurep.s.i.	C Plug		
È Nev well □ Despened □ Replacement □ Abandoned (describe method of abandoning) □ 3. PROPOSED USE □ Denetic □ triggton □ Test □ Other facet/r type) □ Municipal □ Industrial □ Stock □ Weste Disposal of Index □ Total depth 48 Casing schedule: □ Stock □ Concrete □ Diameter of hola 6 □ Industrial □ Concrete □ Diameter of hola 6 □ Industrial □ Stock □ Concrete □ Diameter of hola 6 □ Industrial □ Total depth 48 Casing schedule: □ Stock □ Concrete □ Diameter of hola 6 □ Industrial □ Test □ Total depth 48 Casing schedule: □ Stock □ Concrete □ Diameter of hola 6 □ Industrial □ Test □ Total depth 48 Casing schedule: □ Stock □ Concrete □ Diameter of hola 6 □ Industrial □ Test □ Total depth 48 □ Industrial □ Test □ Concrete □ Diameter of hola 6 □ Industrial □ Test □ Total depth 48 □ Industrial □ Test □ Concrete □ Diameter of hola 6 □ Industrial □ Test □ Total depth 48 □ Industrial □ Test □ Total depth 48 □ Industrial □ Test □ Concrete □ Diameter of hola 6 □ Industrial □ Test □ Total depth 48 □ Industrial □ Test □ □ Test □ Industrial □ Indu	2. NATURE OF WORK	8. V	ELL T	EST DA	та			<u>.</u>
Abandoned (describe method of abandoning)       Discharge G.P.M.       Dorw Down       Houre Printed         3. PROPOSED USE       Domestic       Imagina       To       Difference         D. Donestic       Imagina       Test       Other facesity type)       B. UTHOLOGIC Log         Maxicpic       Industrial       Stock // Wester Disposed or Impletion       Stock // Wester Disposed or Impletion       Stock // Wester Disposed or Impletion       Name         4. METHOD DRILLED       Stock // Wester Disposed or Impletion       Name       X         § Cable       Retory       Dug       Other       Stock // Sto	Y D New well □ Deepened □ Replacement	l r	] Pump	1	🗍 Bailer — 🏠 Other			
D Addition (used inscription of addition inty)       00       10       2         S. PROPOSED USE       Imparison       Test       Other (specify type)       8. LITHOLOGIC LOG         Manicipal       Industrial       Stock       Wester Dispond of type)       8. LITHOLOGIC LOG         Manicipal       Industrial       Stock       Wester Dispond of type)       8. LITHOLOGIC LOG         Manicipal       Industrial       Stock       Wester Dispond of type)       8. LITHOLOGIC LOG         Manicipal       Industrial       Stock       Wester Dispond of type)       8. LITHOLOGIC LOG         Manicipal       Industrial       Stock       Wester Dispond of type)       8. LITHOLOGIC LOG         Manicipal       Industrial       Stock       Wester Dispond of type)       8. LITHOLOGIC LOG         Manicipal       Diameter       Form       50       Stock       X         G cable       Rotory       Dug       Other       6       10       X         S. WELL CONSTRUCTION       Estimate       Concrete       X       X         Diameter       Stock       Diameter       From       Y       X         250       Thomes       feet       feet       Feet       X         Inches       i	Abandonad (describe method of abandoning)		ischarge	G.P.M.	Draw Down	Hours	umped	
3. PROPOSED USE       Image: Construction of the second process of the second proces of the second process of the second process of the			0	- <del>.</del>	10	2	····	
3. PROPOSED USE       Importion       Test       Other (seeify type)         Municipal       Industrial       Stock       Wester Discond or Industrial       Material       Water         4. METHOD DRILLED       Bits       0       -1       10       100       600       000       110       500       601.1       % Material       Water								
Domestic       Imagedion       Test       Other faceoffy type       9. LITHOLOGIC LOG         Municipal       Industrial       Stock       Investo Disposal or historial       Mean       Water         Municipal       Industrial       Stock       Investo Disposal or historial       Mean       Water         Municipal       Industrial       Stock       Investo Disposal or historial       Mean       Municipal       Mean         4. METHOD DRILLED       8       10       18       Olary       Lithologic Log       X         6       10       18       Olary       Lithologic Log       X       X         5. WELL CONSTRUCTION       5       40       48       Clary       Addition       Lithologic Log         1       Diameter of hole       1       Total depth       48       feet       10       18       Olary into gravel       X       X         Casing schedule:       Steel       Connerte       20       44       45       Clary into gravel       X       X         250 Thickness       Diameter       From       To       10       10       10       10       10       10       10       10       10       10         250 Thickness       Di	3. PROPOSED USE			· · · ·		<u> </u>		······
Image: Construction       Hole injection       Kaserial       Wetter injection         4. METHOD DRILLED       Init injection       Init inject	X Domestic Irrigation Test Other (specify type)	9. 1	ITHOL	OGIC L	OG			
4. METHOD DRILLED       5       -1       D       top Soll & hacd pan       X	Municipal Industrial IStock Waste Disposal or     Injection	Hole Diam.	De From	pth To	Material		Wa Yes	ter No
Image: Scale       Rotory       Dug       Other       Image: Scale Scal	4. METHOD DRILLED	8	-1	10 18	top soil & haed clay	pan	┨──	XX
S. WELL CONSTRUCTION       6 40 48 olsy late light gray sand light gra	X Cable — Rotopy — Due — Other	6	18	30	clay into gravel		X	
5. WELL CONSTRUCTION Diameter of hole 6 inches Total depth 48 feet Casing schedule: 3 Steel Concrete 250 Thideness 6 inches 1 feet 7 feet inches inches feet 1 feet inches inches feet 1 feet inches inches 1 feet 1 feet inches inches 1 feet 1 feet inches inches 1 feet 1 feet inches 2 feet 1 feet inches 2		6	40	40 <b>4</b> 8	clay into light gi	ay sand	XX	
Diameter of hole 6 inches Total depth 48 feet Casing schedule: 23 Steel Concrete 250 Thickness 6 inches From 47 To inches inches feet feet inches inches feet feet inches inches feet feet inches inches feet feet was a packer or seal used? Yes No Perforated? Yes No How perforated? From To perforations feet feet perforations feet feet perforations feet feet well screen installed? Yes No Manufacturer's name Type Slot size St from feet to feet Diameter Slot size St from feet to feet Gravel packed? Yes EN oSize of gravel Placed from 18 Model No. Diameter Slot size St from feet to feet Surface seal depth 18 Model No. Diameter Slot size St from feet to feet Surface seal depth 18 Model No. Diameter Slot size St from feet to feet Diameter Slot size St from feet to feet Surface seal depth 18 Model No. Diameter Slot size St from feet to feet Surface seal depth 18 Model No. Diameter Slot size St from feet to feet Surface seal depth 18 Model No. Diameter Slot size St from feet to feet Surface seal depth 18 Model No. Diameter Slot size St from feet to feet Surface seal depth 18 Model No. Diameter Slot size St from feet to feet Surface seal depth 18 Moderial used in seal C cement grout Diameter Slot size St from feet to feet Diameter Slot size St form feet to feet Diameter Slot size St from feet to feet Diameter Surface seal depth 18 Moderial used in seal C cement grout D Overbore to seal depth 10 Work started <u>5/10/74</u> finished <u>12/74</u>	5. WELL CONSTRUCTION							
Casing schedule: B Steel Concrete   250 <sup>Thickness</sup> 6   inches inches   d>Diameter of hole inches Total depth feet</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Diameter of hole inches Total depth feet							
250       inches       6       inches       feet       feet         inches       inches       feet       feet       feet         Was a packer or seal used?       Yes       No       Perforated?       Factory       Knife         How perforated?       Factory       Knife       Torch       feet	Casing schedule: 🖾 Steel 🔂 Concrete							
inches       inches       feet       feet         inches       inches       feet       feet         inches       inches       feet       feet         inches       inches       feet       feet         inches       inches       feet       feet         inches       inches       feet       feet         inches       inches       feet       feet         inches       inches       feet       feet         inches       inches       feet       feet         inches       inches       feet       feet         inches       feet       feet       feet         inches       feet to       feet       feet         inameter_Slot size       Set from       feet to       feet         planeter_Slot size of gravel       feet to       feet       feet         gravel packed? <t< td=""><td> inches inches + feet <math>47</math> feet</td><td></td><td></td><td></td><td><u> </u></td><td></td><td></td><td></td></t<>	inches inches + feet $47$ feet				<u> </u>			
inches       inches       feet       feet         inches       inches       feet       feet         was a packer or seal used?       Yes       No         Perforated?       Pactory       Yes       No         How perforated?       Pactory       Inches       Inches         Number       From       To	inches inches feet feet feet						-	
	inches inches feet feet				· · · · · · · · · · · · · · · · · · ·	<u></u>		
Was a packer or seal used? Yes No   Perforated? Yes No   How perforated? Factory Knife   Top inches by inches   Number From To   perforations feet   operforations feet   feet feet   operforations feet   perforations feet   operforations feet   perforations feet   operforations feet   feet feet   operforations feet to   feet feet   operforations feet to   feet feet   operforations feet to   feet feet   operforation feet to   feet feet   operforation feet to   feet feet   operforation feet to   operforation feet to   operforation feet to   feet feet   operforation feet to   operforation	inches inches feet feet							
Perforated? Yes Yes No   How perforated? Factory Knife Torch   Size of perforationinches byinchesinches   Number From To  perforationsfeet feet  perforations feet to feet  nome feet to feet  nome feet to feet  nome feet to feet  nome feet to feet  press No Size of gravel feet	Was a packer or seal used? 🛛 Yes 🎽 No				,	<u> </u>		
Size of perforation      inches byinches       To	Perforated?							
Number From To	Size of perforation inches by inches			: .	· · · · ·	· · · ·		
	Number From To					<u></u>		
	perforations feet feet							
Well screen installed? Yes   Manufacturer's name   Type   Model No.   Diameter   Slot size   Set from   feet to   feet	perforations feet feet							
Manufacturer's name   Type   Model No.   Diameter   Slot size   Set from   feet   Diameter   Slot size   Set from   feet   Gravel packed?   Yes   No Size of gravel   Placed from   feet to   feet to   feet to   Placed from   feet to   feet to   Placed from   feet to   Puddling clay   Well cuttings   Overbore to sed depth     10.   Work started   5/10/74   finished   12/74	Well screen installed? 🛛 🖓 Yes 🗗 No	_			00115	}	+	
Diameter Slot size Set fromfeet tofeet   Diameter Slot size Set fromfeet tofeet   Gravel packed? Yes   Yes No   Size of gravelfeet tofeet   Placed fromfeet tofeet   Image: second depth 18   Material used in second	Manufacturer's name Model No				·			
Diameter Slot size Set from feet to feet   Gravel packed? Yes   Placed from feet to feet   Placed from feet to feet   Surface seal depth 18   Image: Puddling clay Well cuttings   Image: Puddling clay Well cuttings   Image: Puddling clay Well cuttings   Image: Puddling clay Image: Puddling clay   Imag	Diameter Slot size Set from feet to feet							
Gravel packed? Yes No Size of gravel	Diameter Slot size Set from feet to feet				· ·			
Placed from	Gravel packed? 🗆 Yes 🖺 No Size of gravel				•••			
Surface seal depth_18Material used in seat	Placed from feet to feet to feet				· · · · · · · · · · · · · · · · · · ·			
Puddling clay      Well cuttings     Secting procedure used     Sturry pit     Temporary surface casing     Overbore to sectidepth     10.     Work started _5/10/74	Surface seal depth				·· · · · · · · · · · · · · · · · · · ·	<u> </u>		
Overbore to seci depth     Overbore to seci	Puddling clay     Well cuttings				······			
6. LOCATION OF WELL 10. Work started <u>5/10/74</u> finished <u>511/74</u>	Security processive uses La starty pri Li temporary surrace caung							
6. EUCATION OF WELL Work started $\frac{-2/10}{14}$ finished $\frac{511}{74}$		10.		E .	h . / .			
	Skatch man location must care with written location	W	ork sta	rted _ <u>_ </u> 7	<u>10/14</u> finished .	<u><b>1</b>1/74</u>		
	N			-	EIG ATION	-	~~~	~ ]
BAD WELL DRULLING - 1. 254	63	( I. L		<b>э сел</b> н П&	D WELL DRTLUING		/ 	4
W Subdivision Name Firm No.224	W Subdivision Name	F	irm Na	me		Firm N	10. <u></u>	Ľ
Lot No.         Block No.         Address 310 s, 11street         Date 9/17/74	Lot No Block No		vidress .	310 s,		Date _2/17	(/74	-
Signed by (Firm Official)			<b>Signed b</b> y	/ (Firm (	Official)	<u>fr</u>		_
County CANYON and War/Jun	CountyCAN YON			ar	N NOV/	Jun		
SE XSEX Secs 3 TAI A/S R 3 EAR	SF XSEX Ser ? + 1 AVE . ? = A	•		(Ope	rator)			-

FORWARD THE WHITE COPY TO THE DEPARTMENT

Form 238-7 1/78 STATE O DEPARTMENT OF W WELL DRILLE State law requires that this report be filed with within 30 days after the complete	USE TYPEWRITER USE TYPEWRITER BALLPOINT PE BALLPOINT PE BALLPOINT PE In the Director, Department of Water Resources Intion or abandonment of the well.	I OR
1. WELL OWNER Name <u>Ray</u> JOHNSON Address <u>Box</u> 123 Middleton TOAHTO Owner's Permit No.	7. WATER LEVEL Static water levelfeet below land surface. Flowing? □ Yes X No G.P.M. flow Artesian closed-in pressure p.s.i. Controlled by: □ Valve □ Cap □ Plug Temperature °F. Quality	
2. NATURE OF WORK  X New well  Deepened  Replacement  Abandoned (describe method of abandoning)	8. WELL TEST DATA	
3. PROPOSED USE	85296	
A Domestic I irrigation I lest Municipal Industrial Stock Waste Disposal or Injection Other (specify type)	9. LITHOLOGIC LOG Hole Depth Wa Diam. From To Material Yes 8. Top I. Top So i L	iter s No
□ Rotary □ Air □ Hydraulic □ Reverse rotary X Cable □ Dug □ Other	6 5 10 HARI PHN 6 10 18 CLOW & SAND 6 18 28 SARAYEL 6 18 28 SARAYEL	
5. WELL CONSTRUCTION Casing schedule: Steel Concrete Other Thickness Diameter inches inches feet feet inches feet feet inches feet feet Was casing drive shoe used? Yes No Was a packer or seal used? Yes No Perforated? Yes No How perforated? Factory Knife Torch Size of perforation inches by inches Number From To perforations feet feet feet feet feet feet feet feet	6 40 55 SANd - 6 55 80 Hearing SANd - 6 80 fal Chay 45treaks of SANd - - - - - - - - - - - - - -	
perforations      feet         Well screen installed?       Yes         Wanufacturer's name	DEC 15 1982 Department of Water Resources Western Regional Office Note: 12 12 12 12 12 12 12 12 12 12 12 12 12	
6. LOCATION OF WELL Sketch map location must agree with written location. Subdivision Name W W W E Lot No. Block No. Scounty Canyon FRU: +Dale Farms Sec 3-4-3 SW 14 SE 14 Sec. 1, T. 405, R. 3 ED	Work started 12-1- finished 12-2-0 11. DRILLERS CERTIFICATION & I/We certify that all minimum well construction standards w complied with at the time the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm Name Any for the rig was removed. Firm No. 3.3.3 Address At 2 Wilder To At Day Any for the rig was removed. Signed by (Firm Official Angle To At Day Angle to Argent Angle to Argent Ar	/ /ere / / /

USE ADDITIONAL SHEETS IF NECESSARY - FORWARD THE WHITE COPY TO THE DEPARTMENT

Appendix V IDEQ GROUNDWATER CONTOUR MAP



Appendix VI SITE PLAN WITH AQUIFER WIDTH MAP FOR INDIVIDUAL LOTS



## Appendix VII HISTORIC PRECIPITATION/CLIMATE DATA FOR PROJECT LOCATION



Monthly Geo

#### Climate Caldwell - Idaho

### 

	Ja (January)	Fe (February)	Ma (March)	Ap (April)	Ma (May)	Ju (June)
Hi	37	46	57	66	75	84
Lo	21	26	33	38	46	53
Pre.	1.54	1.10	1.30	1.14	1.02	0.67

	Ju (July)	Au (August)	Se (September)	Oc (October)	No (November)	De (December)
Hi	93	92	81	67	49	38
Lo	58	56	46	37	28	21
Pre.	0.31	0.35	0.59	0.75	1.30	1.38

Hi : Average high in °F - Lo : Average low in °F - Pre. : Average precipitation in inch - DP : Days with precipitation - Sun : Hours of sunshine



#### Caldwell Climate Graph - Idaho Climate Chart

#### **Tensar International**

Tensar Geogrids, The Advanced Geosynthetic Stabilization Solutio

Average annual precip.	11.45 inch	
Annual low temperature	39°F	
Annual high temperature	65°F	

#### Share

#### Station Data

Monthly averages Caldwell Longitude: -116.636, Latitude: 43.6419 Average weather Caldwell, ID - 83605

Monthly: 1981-2010 normals

#### Abbreviations

Ja (January): January, Fe (February): February, ...

	-34%	-30%	⊳×
Black Diamond Helio 105 Alpine Touring Ski in Blue			
<del>\$879.95</del>			
\$659.98			
Shop Now	Shop Now	Shop Now	

## Appendix VIII SITE LOCATION WITH VICINITY MONITORING WELLS MAP AND MONITORED WELL DATA



Well #	Agency	WellNumber	AgencyWellName	SampleDate	Туре	Name	Value	Units
А	IDEQ	25	04N03W03BACA1	19970821	Nutr	Nitrate	2.94	mg/l
В	IDEQ	26	04N03W03CABA1	19970820	Nutr	Nitrate	0.184	mg/l
С	IDEQ	27	04N03W03DDCC	19970821	Nutr	Nitrate	0.312	mg/l
Л	IDEQ	2122	04N03W03AAD	20130521	Nutr	Nitrate	2.68	mg/l
	IDEQ	2122	04N03W03AAD	20130521	Nutr	Nitrate	2.3	mg/l
F	IDEQ	2126	04N03W03AAA	20130521	Nutr	Nitrate	4.2	mg/l
L	IDEQ	2126	04N03W03AAA	20130521	Nutr	Nitrate	3.99	mg/l
	IDEQ	2134	04N03W03AAA	20130521	Nutr	Nitrate	3.28	mg/l
F	IDEQ	2134	04N03W03AAA	20130521	Nutr	Nitrate	2.8	mg/l
I	IDEQ	2134	04N03W03AAA	20130521	Nutr	Nitrate	3.41	mg/l
	IDEQ	2134	04N03W03AAA	20130521	Nutr	Nitrate	3.4	mg/l
G	IDEQ	2151	04N03W02BCA	20130521	Nutr	Nitrate	3.4	mg/l
	IDEQ	2151	04N03W02BCA	20130521	Nutr	Nitrate	4.07	mg/l
н	IDEQ	2180	04N03W02BCA	20130528	Nutr	Nitrate	6.3	mg/l
	IDEQ	2180	04N03W02BCA	20130528	Nutr	Nitrate	6.12	mg/l
I	DEQ	587		20071025		Nitrate	0.32	mg/l
J	ISDA	6601001		19960306		Nitrate	0.01	mg/l
К	DEQ	4371591166714		20060706		Nitrate	5.05	mg/l
L	ISDA	DY16270851		20060222		Nitrate	4.9	mg/l

Appendix IX NITRATE MASS-BALANCE SPREADSHEETS FOR INDIVIDUAL LOTS

IDEQ LEVEL 1 NUTRIENT-PATHOGEI	N EVALUA	TION NITROC	GEN MASS-BA	LANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approac In Proceedings of 5th Northwest On-Site Wastewater Tr	ch documented	in: 1985.Bauman, E ourse_September 1	B.J. and W.M. Schaet 0-11 1985 Universit	fer.Estimating Ground-Water Quality Impacts From On-Site Sewa y of Washington Seattle, WA Pages 23-41, See <b>Instructions fr</b>	ge_Treatment Sy <b>or Use</b> below	ystems.
INPUT		<u></u>		OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.10E+04	95.9
Hydraulic Gradient	0.00477	Site-specific		Efluent	4.14E+02	3.6
Mixing Zone Thickness (ft)	15	15	Default	Recharge	5.86E+01	0.5
Aquifer Width Perpendicular to Flow (ft)	228.41	Site-specific		Total Water Volume	1.15E+04	
Parcel Area (acres)	1	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.6	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.0	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget		
					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	4.54E+07	70.9
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	29.1
						1
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	1.76E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	6.41E+07	1
						1

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com he average prope	SITE INFORMATION			
			Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.00 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR (inches/vr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing th	is software.	OPEPARTIN
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality mal	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dam	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		COLONINI CO

IDEQ LEVEL 1 NUTRIENT-PATHOGEI	N EVALUA	TION NITRC	GEN MASS-BAL	ANCE SPREADSHEET	V. 1.3	5/2/2002	
This spreadsheet is based on the mass balance approad In Proceedings of 5th Northwest On-Site Wastewater Tr	This spreadsheet is based on the mass balance approach documented in: 1985.Bauman, B.J. and W.M. Schaefer.Estimating Ground-Water Quality Impacts From On-Site Sewage 1 In Proceedings of 5th Northwest On-Site Wastewater Treatment Shortcourse, September 10-11, 1985. University of Washington, Seattle, WA. Pages 23-41. See Instructions for Us						
INPUT		<u>,</u>		OUTPUT	<u></u> .		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total	
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.10E+04	95.9	
Hydraulic Gradient	0.00477	Site-specific		Efluent	4.14E+02	3.6	
Mixing Zone Thickness (ft)	15	15	Default	Recharge	5.86E+01	0.5	
Aquifer Width Perpendicular to Flow (ft)	228.41	Site-specific		Total Water Volume	1.15E+04		
Parcel Area (acres)	1	Site-specific					
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1		
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific		· · · ·			
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	4.9	1	
· · · · · · · · · · · · · · · · · · ·						1	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.0		
	, ,					1	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget			
· ·					Mass (mg)	% of Total	
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	4.54E+07	80.2	
	· · · · · · · · · · · · · · · · · · ·						
Septic Tank Effluent Concentration (mg/l)	27.0	45.0	Provide Justification	Septic Tank Effluent Nitrate Mass	1.12E+07	19.8	
· · · · · · · · · · · · · · · · · · ·							
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	1.76E+04	0.0	
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	5.66E+07		

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com ne average prope	SITE INFORMATION			
			Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	1.00 Acre Lots - 40% Nitrate Reducing System	Parcel Identi	ication	
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR (inches/vr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	is software.	OPERARTIN
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	nages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		COMPANYAL CON

IDEQ LEVEL 1 NUTRIENT-PATHOGE	N EVALUA	TION NITROC	SEN MASS-BA	LANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approa In Proceedings of 5th Northwest On-Site Wastewater Tr	ch documented	in: 1985.Bauman, E ourse, September 1	3.J. and W.M. Schaef 0-11 1985 Universit	er.Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment Sy <b>yr Use</b> below	ystems.
INPUT				OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.09E+04	95.8
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	3.7
Mixing Zone Thickness (ft)	15	15	Default	Recharge	5.92E+01	0.5
Aquifer Width Perpendicular to Flow (ft)	226.05	Site-specific		Total Water Volume	1.13E+04	
Parcel Area (acres)	1.01	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.6	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.0	
Nitrogen Budget (all concentrations represent nitrate n	nitrogen)			Yearly Nitrogen Budget		
·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	4.46E+07	70.5
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	29.5
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	1.78E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	6.33E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com he average prope	SITE INFORMATION			
	0		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.01 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR $(inches/vr) = (TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing th	s software.	OPERARTIN
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality mal	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dam	ages resulting	AND A
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		COLONIAL COM

<b>IDEQ LEVEL 1 NUTRIENT-PATHOGEI</b>	N EVALUA	TION NITRC	GEN MASS-BAL	ANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman	, B.J. and W.M. Schaefer	Estimating Ground-Water Quality Impacts From On-Site Sewar	ge Treatment Sy	ystems.
In Proceedings of 5th Northwest On-Site Wastewater Tr	eatment Shortco	ourse, September	10-11, 1985. University of	of Washington, Seattle, WA. Pages 23-41. See Instructions fo	r Use below.	
INPUT				OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	70	Site-specific		Ground Water	1.17E+04	96.1
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	3.4
Mixing Zone Thickness (ft)	15	15	Default	Recharge	5.92E+01	0.5
Aquifer Width Perpendicular to Flow (ft)	226.05	Site-specific		Total Water Volume	1.22E+04	
Parcel Area (acres)	1.01	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	1
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	4.9	
						1
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.0	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget		
· ·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	4.80E+07	81.1
·• · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·					
Septic Tank Effluent Concentration (mg/l)	27.0	45.0	Provide Justification	Septic Tank Effluent Nitrate Mass	1.12E+07	18.9
· · · · · · · · · · · · · · · · · · ·						
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	1.78E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	5.92E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com ne average prope	SITE INFORMATION			
	0		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.01 Acre Lots - 40% Nitrate Reducing System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(IAF) using the equation. NRR $(inches/yr) = (TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing th	is software.	O DEPARTNERA
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	nages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CONCENTION CON

<b>IDEQ LEVEL 1 NUTRIENT-PATHOGE</b>	N EVALUA	TION NITRO	GEN MASS-BA	LANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman,	B.J. and W.M. Schaet	fer.Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment S	ystems.
In Proceedings of 5th Northwest On-Site Wastewater Tr	eatment Shortco	ourse, September	10-11, 1985. Universit	y of Washington, Seattle, WA. Pages 23-41. See Instructions for	or Use below.	
INPUT				OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	8.62E+03	94.8
Hydraulic Gradient	0.00477	Site-specific		Efluent	4.14E+02	4.6
Mixing Zone Thickness (ft)	15	15	Default	Recharge	6.09E+01	0.7
Aquifer Width Perpendicular to Flow (ft)	179.2	Site-specific		Total Water Volume	9.10E+03	
Parcel Area (acres)	1.04	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.9	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.0	
Nitrogen Budget (all concentrations represent nitrate n	nitrogen)			Yearly Nitrogen Budget		
·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	3.53E+07	65.4
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	34.5
	]					
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	1.83E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	5.40E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the blue shaded cells on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com	SITE INFORMATION			
			Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.04 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR $(inches/yr) = (TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	is software.	OPERATTING
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	nages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CINCINICS CON

IDEQ LEVEL 1 NUTRIENT-PATHOGEI	N EVALUA	TION NITRO	DGEN MASS-BAL	ANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approad	ch documented	in: 1985.Bauman	, B.J. and W.M. Schaefer	Estimating Ground-Water Quality Impacts From On-Site Seway	ge Treatment S	ystems.
In Proceedings of 5th Northwest On-Site Wastewater Tr	eatment Shortco	ourse, September	r 10-11, 1985. University (	of Washington, Seattle, WA. Pages 23-41. See Instructions fo	r Use below.	
INPUT				OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	8.62E+03	94.8
Hydraulic Gradient	0.00477	Site-specific		Efluent	4.14E+02	4.6
Mixing Zone Thickness (ft)	15	15	Default	Recharge	6.09E+01	0.7
Aquifer Width Perpendicular to Flow (ft)	179.2	Site-specific		Total Water Volume	9.10E+03	
Parcel Area (acres)	1.04	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.1	
· · · · · · · · · · · · · · · · · · ·	,					
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.0	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget		
· · ·	, j				Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	3.53E+07	75.9
	· · · · · ·					
Septic Tank Effluent Concentration (mg/l)	27.0	45.0	Provide Justification	Septic Tank Effluent Nitrate Mass	1.12E+07	24.0
· · · · · · · · · · · · · · · · · · ·						
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	1.83E+04	0.0
· · · · ·						
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	4.66E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	t projects not com he average proper	SITE INFORMATION			
	0.1.1		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.04 Acre Lots - 40% Nitrate Reducing System	Parcel Identif	fication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR (inches/vr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	is software.	NO DEPARTITION
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CONCENTIAL CON

IDEQ LEVEL 1 NUTRIENT-PATHOGE	N EVALUA	TION NITROG	GEN MASS-BAL	LANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman, E	3.J. and W.M. Schaefe	er.Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment Sy	ystems.
In Proceedings of 5th Northwest On-Site Wastewater Tr	eatment Shortco	ourse, September 1	0-11, 1985. University	of Washington, Seattle, WA. Pages 23-41. See Instructions for	r Use below.	
INPUT				OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.40E+04	96.7
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.9
Mixing Zone Thickness (ft)	15	15	Default	Recharge	6.68E+01	0.5
Aquifer Width Perpendicular to Flow (ft)	290.89	Site-specific		Total Water Volume	1.45E+04	
Parcel Area (acres)	1.14	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.3	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.1	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget		
·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	5.74E+07	75.4
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	24.5
				· · ·		
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.00E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	7.60E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the blue shaded cells on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	t projects not com he average prope	SITE INFORMATION			
			Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.14 Acre Lots - Standard Septic System	Parcel Identif	fication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR $(inches/yr) = (TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing th	is software.	O DEPARTMENT
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	nages resulting	A AND
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CONCENTRAL CON

IDEQ LEVEL 1 NUTRIENT-PATHOGE	N EVALUA	TION NITRC	GEN MASS-BAL	ANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman	, B.J. and W.M. Schaefer	Estimating Ground-Water Quality Impacts From On-Site Sewag	ge Treatment Sy	ystems.
In Proceedings of 5th Northwest On-Site Wastewater Tr	eatment Shortco	ourse, September	10-11, 1985. University of	of Washington, Seattle, WA. Pages 23-41. See Instructions fo	r Use below.	
INPUT				OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.40E+04	96.7
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.9
Mixing Zone Thickness (ft)	15	15	Default	Recharge	6.68E+01	0.5
Aquifer Width Perpendicular to Flow (ft)	290.89	Site-specific		Total Water Volume	1.45E+04	
Parcel Area (acres)	1.14	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	1
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				1
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	4.7	1
						1
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.1	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget		
·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	5.74E+07	83.7
Septic Tank Effluent Concentration (mg/l)	27.0	45.0	Provide Justification	Septic Tank Effluent Nitrate Mass	1.12E+07	16.3
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.00E+04	0.0
						. <u></u>
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	6.86E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com ne average prope	SITE INFORMATION			
			Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.14 Acre Lots - 40% Nitrate Reducing System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR $(inches/yr) = (TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	is software.	OPERARTIN
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	nages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		COMPANYAL CON

<b>IDEQ LEVEL 1 NUTRIENT-PATHOGE</b>	N EVALUA	TION NITRO	GEN MASS-BA	LANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman,	B.J. and W.M. Schaef	er.Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment Sy	ystems.
In Proceedings of 5th Northwest On-Site Wastewater Tr	eatment Shortco	ourse, September ´	10-11, 1985. Universit	y of Washington, Seattle, WA. Pages 23-41. See Instructions for	r Use below.	
INPUT				OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.57E+04	97.0
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.6
Mixing Zone Thickness (ft)	15	15	Default	Recharge	7.03E+01	0.4
Aquifer Width Perpendicular to Flow (ft)	326.11	Site-specific		Total Water Volume	1.62E+04	
Parcel Area (acres)	1.2	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.1	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.2	
Nitrogen Budget (all concentrations represent nitrate n	nitrogen)			Yearly Nitrogen Budget		
·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	6.43E+07	77.5
	]					
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	22.5
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.11E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	8.30E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com he average prope	SITE INFORMATION			
	0		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.20 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR $(inches/vr) = (TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	is software.	OPERARTIN
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	nages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		COMONTAL CON

IDEQ LEVEL 1 NUTRIENT-PATHOGEI	N EVALUA	TION NITROG	SEN MASS-BA	LANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approad	ch documented	in: 1985.Bauman, B	3.J. and W.M. Schaef	er.Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment Sy	ystems.
In Proceedings of 5th Northwest On-Site Wastewater Tr	eatment Shortco	burse, September 1	0-11, 1985. Universit	y of Washington, Seattle, WA. Pages 23-41. See Instructions to	r Use below.	
INPUT				OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.26E+04	96.3
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	3.2
Mixing Zone Thickness (ft)	15	15	Default	Recharge	7.27E+01	0.6
Aquifer Width Perpendicular to Flow (ft)	262.5	Site-specific		Total Water Volume	1.31E+04	
						1
Parcel Area (acres)	1.24	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.4	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.2	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget		
·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	5.18E+07	73.5
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	26.5
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.18E+04	0.0
· · · · · · · · · · · · · · · · · · ·						
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	7.04E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development projects not completely oriented perpendicular to ground water flow, the site specific aquifer width value is determined using the average property width that is perpendicular to flow.			SITE INFORMATION			
	0		Freezeout Ridge Estates Subdivision	Site Name		
Ranges of Hydraulic Conductivity (K) for Unconsolidated Sediments Natural Recharge Rate (NRR) can be		1.24 Acre Lots - Standard Septic System	Parcel Identification			
(feet/day)		estimated from total annual precipitation	1/11/2021	Date		
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR $(inches/vr) = (TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By		
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing th	is software.		
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality makes no warranty			
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	nages resulting	A AND	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		COLONIAL COM	
IDEQ LEVEL 1 NUTRIENT-PATHOGE	N EVALUA	TION NITRO	<b>DGEN MASS-BAL</b>	ANCE SPREADSHEET	V. 1.3	5/2/2002
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This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman	, B.J. and W.M. Schaefer	Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment S	ystems.
In Proceedings of 5th Northwest On-Site Wastewater Th	eatment Shortco	burse, September	10-11, 1965. University	of Washington, Seallie, WA. Pages 23-41. See Instructions fo	or Use below.	
INPUT				001P01		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.26E+04	96.3
Hydraulic Gradient	0.00477	Site-specific		Efluent	4.14E+02	3.2
Mixing Zone Thickness (ft)	15	15	Default	Recharge	7.27E+01	0.6
Aquifer Width Perpendicular to Flow (ft)	262.5	Site-specific		Total Water Volume	1.31E+04	
Parcel Area (acres)	1.24	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	4.8	
· · · · · · · · · · · · · · · · ·						
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.2	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget		
· · ·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	5.18E+07	82.2
Septic Tank Effluent Concentration (mg/l)	27.0	45.0	Provide Justification	Septic Tank Effluent Nitrate Mass	1.12E+07	17.8
· · · ·						
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.18E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	6.30E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com ne average prope	SITE INFORMATION			
	0		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.24 Acre Lots - 40% Nitrate Reducing System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	$(IAF)$ using the equation. NRR (inches/ur) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing th	is software.	O DEPARTNERA
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	nages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CONCENTION CON

IDEQ LEVEL 1 NUTRIENT-PATHOGE	<b>N EVALUA</b>	TION NITRO	GEN MASS-BA	LANCE SPREADSHEET	V. 1.3	5/2/2002	
This spreadsheet is based on the mass balance appro-	ach documented	in: 1985.Bauman,	B.J. and W.M. Schae	fer.Estimating Ground-Water Quality Impacts From On-Site Sewa	ige Treatment S	ystems.	
INPICEEdings of 5th Northwest On-Site Wastewater I	realment Shorto	burse, September	10-11, 1985. Universi				
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total	
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.46E+04	96.7	
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.8	
Mixing Zone Thickness (ft)	15	15	Default	Recharge	7.62E+01	0.5	
Aquifer Width Perpendicular to Flow (ft)	302.7	Site-specific		Total Water Volume	1.51E+04		
Parcel Area (acres)	1.3	Site-specific					
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1		
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific					
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.2		
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.3		
Nitrogen Budget (all concentrations represent nitrate	nitrogen)			Yearly Nitrogen Budget			
· ·	, j				Mass (mg)	% of Total	
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	5.97E+07	76.2	
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	23.8	
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.29E+04	0.0	
Nitrata in Natural Bacharga (mg/l)	0.2	0.3	Default	Total Nitrata Masa	7.945.07		
Initiate in Natural Recharge (Ing/I)	0.3	0.3	Delault		1.04E+U1		
	1	1					

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com ne average prope	pletely oriented perpendicular to ground water rty width that is perpendicular to flow.	SITE INFORMATION		
	0.1.1		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.30 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR (inches/vr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	is software.	O DEPARTMENT
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality make	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dam	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CILLINIA CON

IDEQ LEVEL 1 NUTRIENT-PATHOGE	N EVALUA	TION NITRO	<b>DGEN MASS-BAL</b>	ANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approa In Proceedings of 5th Northwest On-Site Wastewater T	ach documented reatment Shortco	in: 1985.Bauman ourse, Septembe	, B.J. and W.M. Schaefer r 10-11, 1985. University	Estimating Ground-Water Quality Impacts From On-Site Sewa of Washington, Seattle, WA. Pages 23-41. See Instructions for	ge Treatment S or Use below.	ystems.
INPUT	•	•		OUTPUT	•	
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.46E+04	96.7
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.8
Mixing Zone Thickness (ft)	15	15	Default	Recharge	7.62E+01	0.5
Aquifer Width Perpendicular to Flow (ft)	302.7	Site-specific		Total Water Volume	1.51E+04	
Parcel Area (acres)	13	Site specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Accentable Number of Homes in Parcel	1.0	Site-specific		i ont of comphance Mitate concentration coar (mg/)	0.1	
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	4.7	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.3	
Nitrogen Budget (all concentrations represent nitrate	nitrogen)			Yearly Nitrogen Budget		
· ·	1 ,				Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	5.97E+07	84.2
Septic Tank Effluent Concentration (mg/l)	27.0	45.0	Provide Justification	Septic Tank Effluent Nitrate Mass	1.12E+07	15.8
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.29E+04	0.0
		0.0	Defeult		7.005.07	
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	I Otal Nitrate Mass	7.09E+07	
		1				

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com ne average prope	SITE INFORMATION			
			Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.30 Acre Lots - 40% Nitrate Reducing System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR $(inches/vr) = (TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	is software.	OPERARTIN
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	nages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		COMPANYAL CON

IDEQ LEVEL 1 NUTRIENT-PATHOGE	N EVALUA	TION NITRO	<b>GEN MASS-BAL</b>	LANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman,	, B.J. and W.M. Schaefe	er.Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment Sy	ystems.
In Proceedings of 5th Northwest On-Site Wastewater Tr	eatment Shortco	ourse, September	10-11, 1985. University	of Washington, Seattle, WA. Pages 23-41. See Instructions for	or Use below.	
INPUT				OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.45E+04	96.7
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.8
Mixing Zone Thickness (ft)	15	15	Default	Recharge	7.85E+01	0.5
Aquifer Width Perpendicular to Flow (ft)	300.99	Site-specific		Total Water Volume	1.50E+04	
Parcel Area (acres)	1.34	Site-specific				ſ
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	l I
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				1
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.2	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.3	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget		
· · · · · · · · · · · · · · · · · · ·	- /				Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	5.94E+07	76.1
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	23.9
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.36E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	7.80E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the blue shaded cells on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com ne average proper	SITE INFORMATION			
			Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.34 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR $(inches/yr) = (TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing th	is software.	OPEPARTITI
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dam	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CONCENTRAL CON

IDEQ LEVEL 1 NUTRIENT-PATHOGEI	N EVALUA	TION NITRC	GEN MASS-BAL	ANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approad In Proceedings of 5th Northwest On-Site Wastewater Tr	ch documented eatment Shortco	in: 1985.Bauman ourse, September	, B.J. and W.M. Schaefer r 10-11, 1985. University (	Estimating Ground-Water Quality Impacts From On-Site Sewa of Washington, Seattle, WA. Pages 23-41. See <b>Instructions fo</b>	ge_Treatment Sy <b>or Use</b> below.	ystems.
INPUT		<u> </u>		OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.45E+04	96.7
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.8
Mixing Zone Thickness (ft)	15	15	Default	Recharge	7.85E+01	0.5
Aquifer Width Perpendicular to Flow (ft)	300.99	Site-specific		Total Water Volume	1.50E+04	
Parcel Area (acres)	1.34	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	1
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	4.7	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.3	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget	<u> </u>	
·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	5.94E+07	84.1
	· · · · · · · · · · · · · · · · · · ·					
Septic Tank Effluent Concentration (mg/l)	27.0	45.0	Provide Justification	Septic Tank Effluent Nitrate Mass	1.12E+07	15.9
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.36E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	7.06E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	t projects not com he average proper	SITE INFORMATION			
	0.1.1		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.34 Acre Lots - 40% Nitrate Reducing System	Parcel Identit	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR (inches/vr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	is software.	O DEPARTITION
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	nages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		COMPANYAL CON

IDEQ LEVEL 1 NUTRIENT-PATHOGEI	N EVALUA	TION NITROG	GEN MASS-BA	LANCE SPREADSHEET	V. 1.3	5/2/2002	
This spreadsheet is based on the mass balance approad	ch documented	in: 1985.Bauman, B	B.J. and W.M. Schaef	er.Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment Sy	ystems.	
INPUT	eatment Shorted	Jurse, September 10	0-11, 1965. Universit	OUTPUT			
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total	
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.51E+04	96.8	
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.7	
Mixing Zone Thickness (ft)	15	15	Default	Recharge	8.20E+01	0.5	
Aquifer Width Perpendicular to Flow (ft)	313.27	Site-specific		Total Water Volume	1.56E+04		
Parcel Area (acres)	1.4	Site-specific					
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1		
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				1	
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.2	1	
						1	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.4	l	
Nitrogen Budget (all concentrations represent nitrate n	nitrogen)			Yearly Nitrogen Budget			
· · · · · · · · · · · · · · · · · · ·					Mass (mg)	% of Total	
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	6.18E+07	76.8	
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	23.2	
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.46E+04	0.0	
						 I	
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	8.05E+07		
						I	

Input parameter values appropriate to conditions at the site under consideration are entered in the blue shaded cells on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com he average prope	pletely oriented perpendicular to ground water rty width that is perpendicular to flow.	SITE INFORMATION		
	0		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.40 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR (inches/vr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing th	is software.	ODEPARTITION
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality mal	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dam	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		COMPANYAL CON

IDEQ LEVEL 1 NUTRIENT-PATHOGE	N EVALUA	TION NITRO	<b>GEN MASS-BAL</b>	ANCE SPREADSHEET	V. 1.3	5/2/2002	
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman	, B.J. and W.M. Schaefer	Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment Sy	ystems.	
INPICEEdings of Stri Northwest On-Site Wastewater II		burse, September	10-11, 1965. Oniversity				
Water Budget	Input Value	Default Value		Vearly Water Budget	Volume (m <sup>3</sup> )	% of Total	
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.51E+04	96.8	
Hydraulic Gradient	0.00477	Site-specific		Effluent	4 14F+02	27	
Mixing Zone Thickness (ft)	15	15	Default	Recharge	8 20F+01	0.5	
Aguifer Width Perpendicular to Flow (ft)	313.27	Site-specific		Total Water Volume	1.56E+04	0.0	
	1						
Parcel Area (acres)	1.4	Site-specific					
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1		
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific					
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	4.7		
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.4		
Nitrogen Budget (all concentrations represent nitrate r	nitrogen)			Yearly Nitrogen Budget			
					Mass (mg)	% of Total	
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	6.18E+07	84.6	
Septic Tank Effluent Concentration (mg/l)	27.0	45.0	Provide Justification	Septic Tank Effluent Nitrate Mass	1.12E+07	15.3	
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.46E+04	0.0	
				no			
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	7.30E+07		

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com ne average prope	SITE INFORMATION			
			Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.40 Acre Lots - 40% Nitrate Reducing System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(IAF) using the equation. NRR $(inches/yr) = (TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing th	s software.	O DEPARTNERA
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality mal	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dam	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CONCENTION CON

IDEQ LEVEL 1 NUTRIENT-PATHOGE	N EVALUA	TION NITRO	GEN MASS-BA	LANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman, I	B.J. and W.M. Schae	fer.Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment Sy	ystems.
IN Proceedings of 5th Northwest On-Site Wastewater Th	eatment Shortco	burse, September	10-11, 1985. Universi	Instructions to a sealure, WA. Pages 23-41. See Instructions to	or use below.	
	1			001F01		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m°)	<u>% of Total</u>
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.45E+04	96.7
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.8
Mixing Zone Thickness (ft)	15	15	Default	Recharge	8.32E+01	0.6
Aquifer Width Perpendicular to Flow (ft)	302.05	Site-specific		Total Water Volume	1.50E+04	
	]					
Parcel Area (acres)	1.42	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.2	
' ''						
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.4	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget		
· · ·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	5.96E+07	76.1
	1					
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	23.8
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.50E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	7.82E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com he average prope	SITE INFORMATION			
	0		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.42 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR (inches/yr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing th	is software.	ODEPARTITION
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality mal	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dam	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		COMPANYAL CON

IDEQ LEVEL 1 NUTRIENT-PATHOGE	N EVALUA	TION NITRO	DGEN MASS-BAL	ANCE SPREADSHEET	V. 1.3	5/2/2002	
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Baumar	. B.J. and W.M. Schaefer	Estimating Ground-Water Quality Impacts From On-Site Sewa	age Treatment S	vstems.	
In Proceedings of 5th Northwest On-Site Wastewater T	reatment Shortc	ourse, Septembe	r 10-11, 1985. University	of Washington, Seattle, WA. Pages 23-41. See Instructions f	or Use below.	, ,	
INPUT				OUTPUT			
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total	
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.45E+04	96.7	
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.8	
Mixing Zone Thickness (ft)	15	15	Default	Recharge	8.32E+01	0.6	
Aquifer Width Perpendicular to Flow (ft)	302.05	Site-specific		Total Water Volume	1.50E+04		
Parcel Area (acres)	1.42	Site-specific					
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1		
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific					
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	4.7		
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.4		
Nitrogen Budget (all concentrations represent nitrate r	nitrogen)			Yearly Nitrogen Budget			
					Mass (mg)	% of Total	
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	5.96E+07	84.2	
Septic Tank Effluent Concentration (mg/l)	27.0	45.0	Provide Justification	Septic Tank Effluent Nitrate Mass	1.12E+07	15.8	
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.50E+04	0.0	
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	7.08E+07		

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com he average prope	SITE INFORMATION			
	0		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.42 Acre Lots - 40% Nitrate Reducing System	Parcel Identif	fication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR (inches/vr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	is software.	NO DEPARTITION
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CONCENTIAL CON

IDEQ LEVEL 1 NUTRIENT-PATHOGE	N EVALUA	TION NITROC	SEN MASS-BA	LANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approa In Proceedings of 5th Northwest On-Site Wastewater Tr	ch documented	in: 1985.Bauman, B ourse, September 1	3.J. and W.M. Schaef 0-11 1985 Universit	er.Estimating Ground-Water Quality Impacts From On-Site Sewar	ge Treatment Sy <b>yr Use</b> below	ystems.
INPUT				OUTPUT	1 030 below.	
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.57E+04	96.9
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.6
Mixing Zone Thickness (ft)	15	15	Default	Recharge	8.55E+01	0.5
Aquifer Width Perpendicular to Flow (ft)	326.11	Site-specific		Total Water Volume	1.62E+04	
Parcel Area (acres)	1.46	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.1	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.5	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget	<u> </u>	
·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	6.43E+07	77.5
	· · · · · · · · · · · · · · · · · · ·					
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	22.5
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.57E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	8.30E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com ne average prope	SITE INFORMATION			
	0.1.1		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.46 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/8/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR (inches/vr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	s software.	OPERATTING
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality make	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dam	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CIDENTIA CON

IDEQ LEVEL 1 NUTRIENT-PATHOGE	N EVALUA	TION NITRO	GEN MASS-BA	LANCE SPREADSHEET	V. 1.3	5/2/2002
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman, I	B.J. and W.M. Schae	fer.Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment S	ystems.
IN Proceedings of 5th Northwest On-Site Wastewater Th	earment Shortco	burse, September	10-11, 1985. Universi	output	or use below.	
INPUT				001P01		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	<u>% of Total</u>
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.02E+04	95.3
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	3.9
Mixing Zone Thickness (ft)	15	15	Default	Recharge	8.79E+01	0.8
Aquifer Width Perpendicular to Flow (ft)	211.51	Site-specific		Total Water Volume	1.07E+04	
	]					
Parcel Area (acres)	1.5	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.7	
	1					
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.5	
	]					
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget		
· · ·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	4.17E+07	69.1
	1					
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	30.9
· · · · · · · · · · · · · · · · · · ·						
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.64E+04	0.0
	]					
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	6.04E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com ne average prope	SITE INFORMATION			
	0.1.1		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.50 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR $(inches/yr) = (TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	s software.	O DEPARTING
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality make	es no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dam	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CIDENTIA CON

IDEQ LEVEL 1 NUTRIENT-PATHOGE	N EVALUA	TION NITRC	GEN MASS-BAL	ANCE SPREADSHEET	V. 1.3	5/2/2002	
This spreadsheet is based on the mass balance approa In Proceedings of 5th Northwest On-Site Wastewater Tr	ch documented eatment Shortco	in: 1985.Bauman ourse. September	, B.J. and W.M. Schaefer r 10-11. 1985. University (	Estimating Ground-Water Quality Impacts From On-Site Seway of Washington, Seattle, WA, Pages 23-41, See Instructions fo	ge_Treatment Sy <b>or Use</b> below.	ystems.	
INPUT		<u>,</u>		ΟυΤΡυτ			
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total	
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.02E+04	95.3	
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	3.9	
Mixing Zone Thickness (ft)	15	15	Default	Recharge	8.79E+01	0.8	
Aquifer Width Perpendicular to Flow (ft)	211.51	Site-specific		Total Water Volume	1.07E+04		
Parcel Area (acres)	1.5	Site-specific					
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				1	
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.0		
· · · · · · · · · · · · · · · · · · ·							
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.5	1	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget			
· · ·					Mass (mg)	% of Total	
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	4.17E+07	78.8	
	· · · · · · · · · · · · · · · · · · ·						
Septic Tank Effluent Concentration (mg/l)	27.0	45.0	Provide Justification	Septic Tank Effluent Nitrate Mass	1.12E+07	21.1	
· · · ·							
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.64E+04	0.0	
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	5.29E+07		

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	t projects not com he average prope	SITE INFORMATION			
	0.1.1		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolid	ated Sediments	Natural Recharge Rate (NRR) can be	1.50 Acre Lots - 40% Nitrate Reducing System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR (inches/vr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	is software.	O DEPARTITION
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CONCENTION CON

IDEQ LEVEL 1 NUTRIENT-PATHOGEN EVALUATION NITROGEN MASS-BALANCE SPREADSHEET V. 1.3 5/2/					5/2/2002	
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman, I	B.J. and W.M. Schaef	er.Estimating Ground-Water Quality Impacts From On-Site Seway	ge Treatment S	ystems.
In Proceedings of 5th Northwest On-Site Wastewater Tr	eatment Shortco	ourse, September 1	10-11, 1985. University	y of Washington, Seattle, WA. Pages 23-41. See Instructions fo	r Use below.	
INPUT				OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.66E+04	97.0
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.4
Mixing Zone Thickness (ft)	15	15	Default	Recharge	9.90E+01	0.6
Aquifer Width Perpendicular to Flow (ft)	345.17	Site-specific		Total Water Volume	1.71E+04	
Parcel Area (acres)	1.69	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.1	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.7	
Nitrogen Budget (all concentrations represent nitrate n	nitrogen)			Yearly Nitrogen Budget	<u> </u>	
·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	6.81E+07	78.5
	]					
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	21.5
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	2.97E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	8.68E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the blue shaded cells on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development projects not completely oriented perpendicular to ground water flow, the site specific aquifer width value is determined using the average property width that is perpendicular to flow.			SITE INFORMATION		
			Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolidated Sediments Natural Recharge Rate (NRR) can be			1.69 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR (inches/vr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing th	is software.	OPERARTIN
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dam	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CONCENTRAL CON

IDEQ LEVEL 1 NUTRIENT-PATHOGEN EVALUATION NITROGEN MASS-BALANCE SPREADSHEET V. 1.3 5/2/2					5/2/2002	
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman,	B.J. and W.M. Schaef	er.Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment Sy	ystems.
In Proceedings of 5th Northwest On-Site Wastewater Tr	eatment Shortco	ourse, September ´	10-11, 1985. University	y of Washington, Seattle, WA. Pages 23-41. See Instructions for	r Use below.	
INPUT				OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.66E+04	96.9
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	2.4
Mixing Zone Thickness (ft)	15	15	Default	Recharge	1.10E+02	0.6
Aquifer Width Perpendicular to Flow (ft)	344.61	Site-specific		Total Water Volume	1.71E+04	
Parcel Area (acres)	1.87	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.1	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.9	
Nitrogen Budget (all concentrations represent nitrate n	nitrogen)			Yearly Nitrogen Budget		
·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	6.80E+07	78.4
	]					
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	21.5
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	3.29E+04	0.0
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	8.67E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com ne average prope	bletely oriented perpendicular to ground water ty width that is perpendicular to flow.	SITE INFORMATION		
	0.1.1		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolidated Sediments Natural Recharge Rate (NRR) can			1.87 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR $(inches/yr) = (TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing thi	s software.	O DEPARTING
Well-sorted sands and glacial outwash	3 to 300	······································	However, the Idaho Department of Environmental Quality make	es no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dam	ages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CIDENTIA CON

IDEQ LEVEL 1 NUTRIENT-PATHOGEN EVALUATION NITROGEN MASS-BALANCE SPREADSHEET V. 1.3 5/2/					5/2/2002	
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman, E	3.J. and W.M. Schaef	er.Estimating Ground-Water Quality Impacts From On-Site Sewa	ge Treatment S	ystems.
In Proceedings of 5th Northwest On-Site Wastewater Tr	eatment Shortco	ourse, September 1	0-11, 1985. University	y of Washington, Seattle, WA. Pages 23-41. See Instructions fo	r Use below.	
INPUT				OUTPUT		
Water Budget	Input Value	Default Value		Yearly Water Budget	Volume (m <sup>3</sup> )	% of Total
Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.14E+04	95.6
Hydraulic Gradient	0.00477	Site-specific		Efluent	4.14E+02	3.5
Mixing Zone Thickness (ft)	15	15	Default	Recharge	1.11E+02	0.9
Aquifer Width Perpendicular to Flow (ft)	236.19	Site-specific		Total Water Volume	1.19E+04	
Parcel Area (acres)	1.89	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	5.5	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.9	
Nitrogen Budget (all concentrations represent nitrate n	nitrogen)			Yearly Nitrogen Budget		
·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	4.66E+07	71.4
Septic Tank Effluent Concentration (mg/l)	45.0	45.0	Default	Septic Tank Effluent Nitrate Mass	1.87E+07	28.6
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	3.32E+04	0.1
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	6.53E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	projects not com he average prope	pletely oriented perpendicular to ground water rty width that is perpendicular to flow.	SITE INFORMATION		
	0		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolidated Sediments Natural Recharge Rate (NRR) can be			1.89 Acre Lots - Standard Septic System	Parcel Identif	ication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(IAP) using the equation: NRR (inches/vr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing th	is software.	OPERATTING
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000	-	regarding its accuracy and shall not be held liable for any dam	ages resulting	A AND
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CONCENTRA CON

IDEQ LEVEL 1 NUTRIENT-PATHOGEN EVALUATION NITROGEN MASS-BALANCE SPREADSHEET V. 1.3 5/2/					5/2/2002	
This spreadsheet is based on the mass balance approa	ch documented	in: 1985.Bauman	, B.J. and W.M. Schaefer	Estimating Ground-Water Quality Impacts From On-Site Sewag	ge Treatment Sy	ystems.
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Hydraulic Conductivity (ft/day)	65	Site-specific		Ground Water	1.14E+04	95.6
Hydraulic Gradient	0.00477	Site-specific		Eflluent	4.14E+02	3.5
Mixing Zone Thickness (ft)	15	15	Default	Recharge	1.11E+02	0.9
Aquifer Width Perpendicular to Flow (ft)	236.19	Site-specific		Total Water Volume	1.19E+04	
Parcel Area (acres)	1.89	Site-specific				
Percent of Parcel That Is Impervious (Percent)	5	Site-specific		Point of Compliance Nitrate Concentration Goal (mg/l)	5.1	1
Current/Acceptable Number of Homes in Parcel	1.0	Site-specific				1
Septic Tank Effluent (gallons/d/home)	300	300	Default	Avg. Downgradient Nitrate Concentration in GW (mg/l)	4.9	
Natural Recharge rate (inches/yr)	0.6	Site-specific		Current/Acceptable Lot Size (Acres)	1.9	
Nitrogen Budget (all concentrations represent nitrate n	itrogen)			Yearly Nitrogen Budget		
· ·					Mass (mg)	% of Total
Upgradient Ground Water Concentration (mg/l)	4.1	Site-specific		Background GW Nitrate Mass	4.66E+07	80.6
	· · · · · · · · · · · · · · · · · · ·					
Septic Tank Effluent Concentration (mg/l)	27.0	45.0	Provide Justification	Septic Tank Effluent Nitrate Mass	1.12E+07	19.4
· · · · · · · · · · · · · · · · · · ·						
Denitrification Rate (decimal fraction)	0	0	Default	Recharge Nitrate Mass	3.32E+04	0.1
				n		
Nitrate in Natural Recharge (mg/l)	0.3	0.3	Default	Total Nitrate Mass	5.78E+07	

Input parameter values appropriate to conditions at the site under consideration are entered in the <u>blue shaded cells</u> on the *INPUT* side of the spreadsheet. These input values form the basis for calculating yearly water and nitrogen budgets. Default values for selected parameters are provided, as described in the accompanying N-P guidance. Selecting values other than these defaults will require providing adequate justification. Sources of water and nitrogen include ground water inflow from upgradient, natural recharge on pervious portions of the site, and from septic tank effluent. The total yearly nitrogen mass input is then divided by the total yearly volume of water available to recharge groundwater to arrive at an estimated Average Downgradient Nitrate Concentration in GW (shown in the *OUTPUT* side of the spreadsheet).

Aquifer Width Perpendicular to Flow: For land development flow, the site specific aquifer width value is determined using the	t projects not com he average prope	SITE INFORMATION			
	0.1.1		Freezeout Ridge Estates Subdivision	Site Name	
Ranges of Hydraulic Conductivity (K) for Unconsolidated Sediments Natural Recharge Rate (NRR) can be			1.89 Acre Lots - 40% Nitrate Reducing System	Parcel Identi	fication
(feet/day)		estimated from total annual precipitation	1/11/2021	Date	
Silt and sandy silt	0.003 to 0.3	(TAP) using the equation: NRR (inches/vr) = $(TAP)^2 * 0.0046$	Ethan Salove, PE	Prepared By	
Silty sands and fine sands	0.03 to 3	TAP is input in inches/vr.	Disclaimer: Considerable care was exercised in developing the	is software.	NO DEPARTITION
Well-sorted sands and glacial outwash	3 to 300		However, the Idaho Department of Environmental Quality ma	kes no warranty	
Well-sorted gravel	30 to 3000		regarding its accuracy and shall not be held liable for any dan	nages resulting	
Typical Range of Hydraulic Gradient	0.0001 to 0.1		from its use.		CONCENTIAL CON

# PHASE I ENVIRONMENTAL SITE ASSESSMENT

OF THE



Rural Homesite & Undeveloped Pasture

LOCATED AT

23442 FREEZEOUT ROAD

ΙN

CALDWELL, IDAHO

# PREPARED FOR:

PIONEER HOMES ATTN: BRIAN FALCK 719 1ST STREET SOUTH, STE. B NAMPA, IDAHO 83651

# EFFECTIVE DATE:

April 21, 2021

# SAGE FILE NO. 21-03640

PREPARED BY

Bunda Magnesson

AND

Kendra Spudera

Kendra M. Szudera Associate

BRENDA L. MAGNUSON CAL/EPA REA#06973



18123 N. HIGHFIELD WAY NAMPA, IDAHO 83653 208-867-8876



April 21, 2021

Pioneer Homes ATTN: Brian Falck 719 1st Street South, Ste. B Nampa, Idaho 83651

Re: Phase I Environmental Site Assessment for the Rural Homesite & Undeveloped Pasture Property located at 23442 Freezeout Road in Caldwell, Idaho.

Dear Mr. Falck:

The following Executive Summary provides a synopsis of our findings and conclusions for this Phase I Environmental Site Assessment Report of the above-referenced property. More detail is presented in the text of this report.

#### EXECUTIVE SUMMARY

SAGE ENVIRONMENTAL SERVICES, LLC (SAGE ENVIRONMENTAL or SAGE) has performed a Phase I Environmental Site Assessment in conformance with the ASTM Practice E 1527-13 for the Rural Homesite & Undeveloped Pasture Property located at 23442 Freezeout Road in Caldwell, Idaho. Any exception to or deletion from this practice is described in Section 2.3 "Scope of Services" and Section 2.5 "Limitations and Restrictions" of this report.

#### Findings

The findings listed below identify any possible concerns that could be recognized environmental conditions, historical recognized environmental conditions, and are de minimis conditions.

Type of Information Evaluated	Finding
User-Provided Information	No environmental concerns
Environmental Database Records	See below
Nitrate Priority Area	The Property is located just inside the Ada/Canyon County; Purple Sage Nitrate priority area. Well sampling on nearby sites have revealed nitrate levels ranging from 0.01 mg/l (west) and 0.32 mg/L (northwest), to 5.05 mg/L (northeast) and are considered elevated, but are well below the EPA and State drinking water standard of 10.0 mg/L.
HISTORICAL USE INFORMATION	No environmental concerns
SITE RECONNAISSANCE	See below
Potable Water Supply/ Wells	A private well, located northeast of the dwelling, provides potable water to the home site on the Property. According the Well Construction Log we obtained from the Idaho Department of Water Resources, the domestic well was installed during 1974 and was constructed to a depth of 67 feet below ground surface (bgs). During construction, water was first encountered at a depth of 40 feet bgs.
Sewage Disposal System/ Septic Systens	An on site septic tank and drainfield system provides sewage disposal for the dwelling on the Property. It is likely that this septic system is located near the dwelling; however, we have no information about the exact location of this system.



Hazardous Substances and Petroleum Products	Several containers of oils, lubes, household maintenance products, and a few cans of gasoline are stored inside the shop building; these materials are stored in containers of 5-gallons in size or smaller. None of these containers appeared to be leaking or have leaked. Of the nearly fifty (50) 55-gallon drums we identified on the site, two to three (2-3) of the drums and three (3) 5-gallon containers contain an unknown liquid; a small amount of staining around two (2) of the containers indicate that they may contain waste oil. During our inspection of the Property, we saw no visual indications that the site has been, or is being contaminated by hazardous waste or other hazardous substances. We did not observe any visual evidence of the historic use of hazardous materials and we observed no significant stains, odors, or unnaturally stressed vegetation (indicators that the improper use of these material has occurred).
Drums/Unidentified Substance Containers	Approximately fifty (50) 55-gallon drums are located on the Property. Most of these drums are empty or contain trash; however, two (2) to three (3) drums located in the field to the northeast of the dwelling contain unknown liquids. The two (2) to three (3) drums containing liquids have tight-fitting lids. One (1) drum has limited staining on the ground that appears to be waste oil. This drum is located within "Area #2" on the Site Plan. Note: The number of drums is an approximate number because some of the empty drums are located within piles of material and debris that are difficult or impossible to see.
Pits, Ponds, or Lagoons	Although not currently present, aerial photos indicate that Sand Hollow Creek, forms a seasonal pond or shallow pool of water near the mid-point of the western Property boundary. During inspection of the site, we observed the area on the site were the creek temporarily ponds or pools along the western boundary.
Stained Soil or Pavement	Minor surface stains are visible on the gravel drive in front of the shop building (south side). These surface stains appear to have been caused by fluid drips from parked vehicles or equipment. We observed staining on the ground beneath one of the drums and a 5- gallon container within "Area #2" (shown on the Site Plan). This staining is limited and appears to be caused by waste oil.
Vapor Encroachment Concerns	No environmental concerns

## OPINIONS

Listed below are our professional opinions of the impact (if any) on the Property of the conditions identified in the Findings:

Type of Information Evaluated	Opinion
ENVIRONMENTAL DATABASE Records	See below
Nitrate Priority Area	Although it is possible that the groundwater beneath the Property may contain elevated levels of nitrates, our review of area well sampling data indicates that nitrate levels would likely be well below the EPA and Idaho drinking water standard of 10.0 mg/L. This is not a "recognized environmental condition" or "REC".
SITE RECONNAISSANCE	See below



Potable Water Supply/ Wells	The presence of a private well on the Property is not a cause for concern; however, if the future use of the Property does not include the use of the well, it should be properly abandoned in accordance with the Idaho Department of Water Resources (IDWR) rules. Due to the relatively shallow depth of the well (less than 100 feet bgs), we recommend sampling of the well prior to it's continued use as a potable water source. The analyses should include bacteria (Total Coliform and E. Coli) and Nitrates.
Sewage Disposal System/ Septic Systens	The presence of an on site septic tank and drainfield system is not a cause for concern; however, if the future use of the Property doe not include the use of the septic system, it should be closed in accordance with Idaho Health Department Rules.
Hazardous Substances and Petroleum Products	In their current state, the use and storage of oils, lubes, household maintenance products, and cans of gasoline on the site are not a cause for concern and are not considered a "REC"; however, any of these materials that are no longer in use should be disposed of in accordance with Federal, State, and local rules and regulations.
Drums/Unidentified Substance Containers	Of the fifty (50)± drums located on the site, two (2) to three (3) drums located in the field to the northeast of the dwelling (area #2 on Site Plan) contain an unknown liquid. All of these drums/containers have been on the Property for an extended period of time; it is unclear if the staining around the drum/container in area #2 was caused by spills or if the container has leaked; however, it is our opinion that these drums and the soil staining is not considered a "REC" because the staining on the ground around one (1) drum and one (1) 5-gallon container appears limited to the top 6-inches of soil, a "de minimus" condition. Although not considered a "REC" the contents of the drums should be determined and properly disposed of in accordance with Federal, State, and local rules and regulations.
Pits, Ponds, or Lagoons	The seasonal pond/pool formed by Sand Hollow Creek is not a cause for concern with respect to the environmental integrity of the Property.
Stained Soil or Pavement	One of the drums and/or 5-gallon containers (area #2 on Site Plan) appears to have leaked waste oil onto to the ground. This staining appears to be waste oil and to the extent observable, the leakage appears to be have been present for some time. Currently, this staining appears to be minor (limited to the top six-inches of soil or less). This type of surface stain is considered "de minimus" and is not a "REC". It is possible that the removal of drums, containers, or piles of debris could reveal additional staining that was not observable during the site visit. Any staining extending beyond the top 6-inches of soil may require further evaluation.

Based on our review of available information, SAGE ENVIRONMENTAL has identified no "recognized environmental conditions" or "RECs" in connection with the Property. We do recommend that the contents of the drums and containers of liquids stored outside the shop should be determined and disposed of in accordance with Federal, State, and local rules/regulations.

The Client should be aware that the removal of the piles of equipment, miscellaneous materials, and debris, may reveal additional drums, containers, and/or soil staining that require further evaluation.

This report is limited to the information made available to or known to SAGE ENVIRONMENTAL at the time this report was issued. If any additional information becomes available, it will be forwarded to you for your evaluation. We appreciate having the opportunity to assist you with this project. Please feel free to contact me if you have any questions concerning this report.



Sincerely,

Brendar а usa

Brenda Magnuson Principal/Registered Environmental Assessor Cert. #06973

Reviewed By:

Spidera

Kendra Szudera, Associate

# TABLE OF CONTENTS

Definition of Acronyms Used	3
1.0 Property Summary	4
2.0 Introduction	5
2.1 General	5
2.2 Location & Legal Description	5
2.3 Detailed Scope of Services	5
2.4 Significant Assumptions	5
2.5 Limitations & Restrictions	6
2.6 User Reliance	6
3.0 Site Description	7
3.1 Purpose	7
3.1.2 Additional Environmental Terms	7
3.2 Site Vicinity & General Characteristics	8
3.3 Physical Setting	8
3.4 Geology & Hydrology	9
3.4.1 Geology	9
3.4.2 Hydrology	9
3.5 Current Use of Surrounding Area	10
4.0 User-Provided Information	11
4.1 Title Records	11
4.2 Environmental Liens or Activity & Use Limitations	11
4.3 Specialized Knowledge	11
4.4 Commonly Known or Reasonably Ascertainable Information	11
4.5 Valuation Reduction For Environmental Issues	12
4.6 Owner, Property Manager, and Occupant Information	12
4.7 Reason for Performing the Phase I ESA	12
5.0 Historical Records & Environmental Database Review	13
5.1 Standard Environmental Records	13
5.1.1 Additional Environmental Record Sources	15
5.2 Physical Setting Sources	16
5.3 Historical Use Information	16
5.3.1 Aerial Photograph Review	16
5.3.2 Historical USGS Quadrangle Map(s)	18
5.3.3 Sanborn Fire Insurance Maps	
5.3.4 Property Assessor Files	18 10
5.3.6 Polk's City Directories	10 10
5.3.7 Zoning/L and Use Records	19
5.3.8 Historical Plat Maps	19
5.4 Prior Use Assessment of the Property	20
5.5 Prior Uses of Adjoining Properties	20
6.0 Site Reconnaissance	21
6.1 Methodology & Limiting Conditions	21
6.2 General Site Visit Observations	
7.0 Interviews	25
8.0 Vapor Encroachment	25
•	



9.0 Evaluation	26
9.1 Findings	26
9.2 Opinions	27
9.3 Conclusions	28
9.4 Data Gaps & Failures	29
9.5 Deviations from ASTM 1527-13	29
9.6 Non-Scope Issues	29
9.7 Qualifications of Environmental Professional & Signatures	29
10.0 References Sited	30
11.0 Persons contacted/interviewed	30
Addenda	31
Maps & Figures	32
Aerial Photographs	
Site Photos	47
Environmental Database	59
Environmental Questionnaire & Disclosure Statement	75
Chain-of-Title Report	79
Well Construction Log	89
Qualifications of Environmental Assessor	91
INDEX OF TABLES	
Table 1: Summary of Environmental Database Sites	15
Table 2: Aerial Photograph Review Summary	17
Table 3: Summary of Prior Property Use(s)	20
Table 4: Summary of Prior Adjacent Property Use(s)	
Table 5: Summary of Site Visit Observations	22
-	



## DEFINITION OF ACRONYMS USED

ASTM:	American Standards for Testing and Materials
AST:	Aboveground Storage Tank
AULs:	Activity and Use Limitations
CERCLA:	Comprehensive Environmental Restoration, Compensation, and Liability Act
CERCLIS:	Comprehensive Environmental Response, Compensation, and Liability Information System
CERCLIS-NFRAP:	Comprehensive Environmental Response, Compensation, and Liability Information System-
	No Further Remedial Action Planned
CFR:	Code of Federal Regulations
CESQG:	Conditionally Exempt Small Quantity Generator
CORRACTS:	Corrective Action Sites
CREC:	Controlled Recognized Environmental Condition
DEQ:	Division of Environmental Quality
EPA:	Environmental Protection Agency
EPCRA:	Emergency Planning and Community Right to Know Act ((also known as SARA Title III)
ERNS:	Emergency Response Notification System
ESA:	Environmental Site Assessment
FOIA:	U.S. Freedom of Information Act
FR:	Federal Register
HREC:	Historic Recognized Environmental Condition
IC:	Institutional Controls
LLP:	Landowner Liability Protections under the Brownfields Amendments
LQG:	Large Quantity Generator
LUST:	Leaking Underground Storage Tank
MSDS:	Material Safety Data Sheet
NCP:	National Contingency Plan
NPL:	National Priority List
NFRAP:	former CERCLIS sites where no further remedial action is planned under CERCLA.
NPDES:	National Pollutant Discharge Elimination System
PCBs:	Polychlorinated Biphenyls
PRP:	Potentially Responsible Party (pursuant to CERCLA
RCRA:	Resource Conservation and Recovery Act
RCRIS:	RCRA Information Systems
RECs:	Recognized Environmental Conditions
SARA:	Superfund Amendments and Reauthorization Act of 1986 (amendment to CERCLA)
SQG:	Small Quantity Generator
TSCA:	Toxic Substances Control Act
TSD:	Treatment Storage and Disposal
TSDF:	Hazardous Waste Treatment, Storage or Disposal Facility
USC:	United States Code
USG:	United States Geological Survey
UST:	Underground Storage Tank
VEC:	Vapor Encroachment Condition
VES:	Vapor Encroachment Screening



PAGE 3

## **1.0 PROPERTY SUMMARY**

PROPERTY TYPE:	Rural Homesite and Pasture		
Address:	23442 Freezeout Road Caldwell, Idaho		
LOCATION:	The Property is located along the north side of a gravel access lane for Freezeout Road, east of Freezeout Road between Willis Road (north) and State Highway 44 (south), northeast of Caldwell and west of Middleton, in Caldwell, Canyon County, Idaho.		
LEGAL DESCRIPTION:	"Tax 19480 in the South ½ of the Northeast ¼ , Less Tax #97652, and situated in the Southwest ¼ of the Northeast ¼ and the Southeast ¼ of the Northwest ¼ of Section 3, Township 4 North, Range 3 West of the Boise-Meridian in Canyon County, Idaho."		
Owner of Record:	Thornton Gallup, LLC PO Box 1495 Nampa, Idaho 83653		
SITE SIZE/CONFIGURATION:	31.40± acres; irregular, in shape (Figure 2)		
DESCRIPTION OF IMPROVEMENTS:	Site improvements are limited to the homesite (southeast quadrant of the Property) and consist of the following: One (1), 1,404 SF, single-level dwelling constructed during 1976; One (1), three-bay shop building located northwest of dwellin This is a steel framed structure with a metal roof and exterior In this building, the west <sup>2</sup> / <sub>3</sub> of the floor is dirt; the east <sup>1</sup> / <sub>3</sub> of th floor is a concrete slab.		
DATE OF SITE RECONNAISSANCE:	April 12, 2021 & April 20, 2021 (follow-up)		
DATE OF REPORT:	April 21, 2021		
CONCLUSIONS:	SAGE ENVIRONMENTAL SERVICES, LLC has performed a Phase I Environmental Site Assessment in substantial conformance with the ASTM Practice E 1527-13 for the Rural Homesite & Undeveloped Pasture Property located at 23442 Freezeout Road in Caldwell, Idaho. Based on our review of reasonably ascertainable information, SAGE ENVIRONMENTAL SERVICES has no "recognized environmental conditions" or "RECs" in connection with the Property.		
	The removal of the piles of equipment, miscellaneous materials, and debris, may reveal additional drums, containers, and/or soil staining that require further evaluation.		

<sup>1</sup> "recognized environmental condition": The presence or likely presence of any hazardous substances or petroleum products on a Property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include "de minimis" conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of governmental agencies. Conditions determined to be de "minimis" are not recognized environmental conditions.



## 2.0 INTRODUCTION

## 2.1 GENERAL

SAGE ENVIRONMENTAL SERVICES, LLC (SAGE ENVIRONMENTAL) was contracted by Mr. Brian Falck of Pioneer Homes (the Client) to perform a Phase One Environmental Site Assessment (ESA) of the Property located at 23442 Freezeout Road (hereinafter referred to as "Property" or "site") in Caldwell, Idaho (Figure 1).

## 2.2 LOCATION & LEGAL DESCRIPTION

LOCATION:	The Property is located along the north side of a gravel access lane for Freezeout Road, east of Freezeout Road, between Willis Road (north) and State Highway 44 (south), in Canyon County, Idaho.
Legal Description:	"Tax 19480 in the South $\frac{1}{2}$ of the Northeast $\frac{1}{4}$ , Less Tax #97652, and situated in the Southwest $\frac{1}{4}$ of the Northeast $\frac{1}{4}$ and the Southeast $\frac{1}{4}$ of the Northwest $\frac{1}{4}$ of Section 3, Township 4 North, Range 3 West of the Boise-Meridian in Canyon County, Idaho."
Address:	23442 Freezeout Road in Caldwell, Idaho.

## 2.3 DETAILED SCOPE OF SERVICES

This Environmental Site Assessment followed the methodology set forth in ASTM Standard Practice E-1527-13 and is based on site observations and the use of readily available information. The Scope of Work for this assessment includes the following:

- Reviewing the Federal, State, and local regulatory agency lists and databases of facilities that use, store, and/or generate hazardous substances or petroleum products, and to determine the impacts of such sites on the Property with respect to "recognized environmental conditions";
- Reviewing site information for geologic and hydrogeologic characteristics for vulnerability and other possible areas of concern;
- Reviewing available city directories (i.e. Polk's City Directories), historical maps, geological maps, available historic aerial photographs, and other records to evaluate past property uses and occupancy;
- Reviewing available information regarding the historical use of the property and the adjacent properties;
- Reviewing 50-year chain-of-title information for historical background, as requested by the client;
- Conducting an on-site inspection of the property to observe and evaluate evidence of contamination from hazardous petroleum substances or wastes (stained soil, stressed vegetation, etc.), and other potential sources of contamination, including transformers or other electrical equipment possibly containing polychlorinated biphenyls (PCBs);
- Contacting electric utilities to determine PCB content of utility-owned transformers or other electrical equipment, if necessary;
- Interviewing available people familiar with past use of the property and adjacent properties;
- Visually inspecting adjacent properties and classifying their possible effects on the subject property; and
- Documenting findings and site conditions with photographs.

#### 2.4 SIGNIFICANT ASSUMPTIONS

In preparing this report, SAGE has relied upon certain verbal information and representations provided by State and local government employees, as well as others familiar with the Property history. SAGE ENVIRONMENTAL did not attempt to independently verify the accuracy or the completeness of that information, but we did not detect any inconsistency or omission of a nature



134

that would affect the conclusions in this report; the conclusions are based in whole or in part on the validity of such information.

#### 2.5 LIMITATIONS & RESTRICTIONS

This Phase I Environmental Site Assessment is restricted to the Scope of Services outlined in Section 2.3 of this report and is restricted to observations made by SAGE during the inspection of the Property and research of standard environmental record sources. With the exception of recorded violations discovered upon routine review of environmental regulatory records, the Scope of Services did not address compliance with Federal, State or local laws, regulations, ordinances, or codes. This report also expressly excludes the collection or analysis of any samples for asbestoscontaining materials, radon gas, or lead-based paint. In addition, radon screening, lead in drinking water, endangered species, indoor air quality, cultural resources, industrial hygiene, health and safety, and high voltage power lines were not included in this report. No samples of soil, air, water, asbestos or lead-based paint were collected as part of this investigation, and SAGE makes no representations or warranty regarding the presence of asbestos or lead-based paint and the quality of the air, water, or soil on the Property. This Scope of Services did not include sampling of drums, tanks, and other containers for laboratory analysis.

Phase I Environmental Site Assessments are non-comprehensive in nature and are subject to a variety of limitations, including those limitations presented below. This report is not intended to identify all potential concerns or to eliminate all risk associated with the operational responsibilities or transferring property title. SAGE did not consider other factors or site information other than that presented in this report. The agencies and individuals contacted by SAGE had only limited information concerning the Property. When necessary, SAGE made efforts to interview agency personnel and individuals with knowledge of the site, but information collected in this manner can be subject to errors, including personal interpretation and memory. Judgments that lead to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface and historical conditions applicable to the site. More extensive studies, including sampling and/or chemical analysis, may reduce the uncertainties associated with this assessment. SAGE should be notified for additional consultation if the client would like to reduce uncertainties beyond the level associated with this assessment.

#### 2.6 USER RELIANCE

Authorization to perform this assessment was given in the form of an email request from Mr. Brian Falck, Project Manager for Pioneer Homes (hereinafter, "Client" and also the "User" of this report), on March 29, 2021. As agreed, the scope of this assessment report is limited to the matters expressly covered herein. This report is prepared for the sole benefit of the Client and persons doing business with the Client. Any other person or entity, without the express written authorization of the Client may not rely upon the information contained in this report.



## **3.0 SITE DESCRIPTION**

#### **3.1 PURPOSE**

The purpose of this Phase I Environmental Site Assessment is to qualify for the innocent landowner defense and the Bona Fide Prospective Purchaser (BFPP) defense under 2002 Brownfields amendment to the Comprehensive Environmental Restoration, Compensation, and Liability Act (CERCLA). In addition to CERCLA liability, the purpose of this Phase I Environmental Site Assessment is to identify and understand potential environmental conditions that could materially impact the operation of the business associated with the property. The purpose of the ASTM E1527 standard is to define good commercial and customary practice for conducting a Phase I Environmental Site Assessment, with the goal of identifying "recognized environmental conditions" (RECs) at the subject property.

RECOGNIZED ENVIRONMENTAL CONDITION (REC): A REC is defined in E1527-13 as "the presence or likely presence of any hazardous substances or petroleum products in, on or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment". The term includes hazardous substances or petroleum products even under conditions in compliance with existing laws. The term is not intended to include "de minimis" conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be "de minimis" are not "recognized environmental conditions."

## 3.1.2 Additional Environmental Terms

HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS (HRECS): A Historical Recognized Environmental Condition (HREC) refers to a past release that has been remediated to below "residential" standards and given regulatory closure with no use restrictions. HREC is defined by ASTM E1527-13 as "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

The HREC category is distinct from the Controlled Recognized Environmental Condition (CREC), which applies to sites that have received regulatory closure but are still subject to controls.

CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS (CRECS): The term CREC is intended to clarify the level of risk these sites represent. The environmental professional is required to list any CRECs (as well as RECs) identified in the findings and conclusions section of the Phase I Environmental Site Assessment report.

PAGE 7



The ASTM definition of CREC in the E1527-13 standard is as follows: "a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

BUSINESS ENVIRONMENTAL RISK: Business Environmental Risk is defined by ASTM as "a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice. Consideration of business environmental risk issues may involve addressing one or more non-scope considerations."

The common non-scope environmental business risk items referred to include:

- Asbestos
- Lead Paint
- Lead in Drinking Water
- Radon
- Wetlands
- Ecological Resources
- Endangered Species

- Cultural and Historic Resources
- Regulatory Compliance
- Industrial Hygiene
- Health and Safety
- Indoor Air Quality
- Biological Agents
- Mold

Any non-scope environmental business risk items addressed by SAGE (if required by the Lender and/or Client) is discussed in Section 9.0 "Non-ASTM-Scope Items and Additional Services".

## 3.2 SITE VICINITY & GENERAL CHARACTERISTICS

The Property is comprised of a single parcel of land, 31.40± acres in size and is located in Canyon County, outside the city limits of Caldwell, Idaho. The Property is located within an area of Caldwell characterized by rural residential uses and irrigated farmland/pasture, many of which are being developed as residential subdivisions (Figure 2).

## 3.3 PHYSICAL SETTING

According to the USGS Quadrangle map for the site and vicinity, the Property is located on the foothill bench northeast of Caldwell. The site is generally level and lies at an elevation of approximately 2,520 feet above mean sea level. The north end of the site, just north of the C.L.E. Lateral lies 7-10 feet below the bank of the lateral. The C.L.E. Lateral irrigation ditch is the closest surface water to the site; it borders a portion of the eastern Property boundary from the north before traversing westward along the homesite, angling southward along the west side of the homesite, then finally, traversing eastward along the south end of the homesite before exiting the Property along the southern boundary. Sand Hollow Creek borders the Property along the west (Figure 3a).



#### 3.4 GEOLOGY & HYDROLOGY

#### 3.4.1 Geology

We compiled information regarding generalized local hydrogeologic and geologic conditions from published technical literature. In the vicinity of the Property, groundwater data for both the shallow water table aquifer and for the deeper water supply aquifer systems were modified from Dion (1972), Squires et al (1992), and from previous investigations conducted by other consultants. Information about the surface and subsurface materials located under the Property was retrieved from Malde and Powers (1962), and Othberg and Stanford (1992), and from previous investigations conducted by other consultants.

The Property is situated within the western portion of the Snake River Plain subdivision of the Columbia Plateau Physiographic Province. Landforms consist of six terrace levels of alluvial gravel deposits. The Property is located on the foothill bench above the flood plain of the current channel of the Boise River. The shallow subsurface contains 100 to 500 feet of Quaternary-age alluvium that consists of interfingered and interlayered sand, silt, clay, and gravel; all primarily deposited by the Boise River. These fluvial and lacustrine (river and lake) sediments unconformably overlay the Quaternary-Tertiary-age Idaho Group deposits, which consist of several thousand feet of poorly consolidated clastic sediments and basaltic volcanic rock. The sediments consist of sand, silt, and clay of variable thickness and lateral extent.

#### 3.4.2 Hydrology

In the area, two aquifers are known to exist. Throughout much of the valley, an unconfined water table aquifer is found within the shallow alluvium, normally at a depth of less than 50 feet. According to a Well Construction Log for the Property, groundwater for this shallow, unconfined aquifer is probably at a depth of 40 to 45 feet below ground surface. Many domestic wells draw water from the shallow aquifers. The general groundwater flow direction in the area is to the west/ southwest towards the Boise River, although seasonal changes and localized impacts from canals and irrigation ditches can create varying flow directions. The delineated source water assessment area for the Property can best be described as an eastward trending corridor approximately four miles long and one-quarter mile wide (IDEQ, 2003).

At a depth of approximately 300 to 500 feet below ground surface, the region's principal water supply aquifer is contained within the Upper Idaho Group strata. In the vicinity of the Property, several hundred feet of silt and clay separate the water supply and water table aquifers, thereby reducing the potential for flow between the two aquifers; however, recently compiled subsurface data suggests that the boundaries between aquifer units and hydrogeologic settings are gradational and may result in hydraulic communication across the system. This appears to be most evident through pump test data obtained from the east Boise area. To date, due to an incomplete database, an adequate hydrogeologic model describing the nature and extent of the hydraulic continuity between the shallow and deep aquifers has not been fully developed. Until such a study is completed, the potential for migration between the two aquifers will remain poorly understood.



#### 3.5 CURRENT USE OF SURROUNDING AREA

The Property lies within a rural area of northeast of Caldwell where development is characterized by a mixture of rural residential uses and irrigated farm land, some of which are being converted to residential subdivision developments.



## 4.0 USER-PROVIDED INFORMATION

## 4.1 TITLE RECORDS

A Chain of Title was not requested by the Client.

## 4.2 Environmental Liens or Activity & Use Limitations

We use the following resources, when available, to determine the presence of activity use limitations (AULs) or engineering controls (ECs) that may be recorded or connected to the Property title:

- Title Commitment (when provided by the Client)
- Environmental Database Records
- Environmental Questionnaire and Disclosure Statement
- Title Commitment: For this report, a Title Commitment was not provided by the Client.

ENVIRONMENTAL DATABASE RECORDS: We used information obtained from the Environmental Database Records to identify those sites that were assigned a "no further action" status from the Idaho DEQ using activity use limitations (AULs) or engineering controls (ECs). We did not find deed restrictions limiting the use of the Property (AULs), nor did we find any institutional or engineering controls (ECs) listed for the site.

ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENTS: We used the Environmental Questionnaire and Disclosure Statement to determine the Owner's knowledge of activity use limitations (AULs) or engineering controls (ECs) for the Property. According to the Environmental Questionnaire and Disclosure Statement, completed by Brian Falck of Pioneer Homes (the Client/ User and also a representative of the Property Owner), the Property Owner has no knowledge of Environmental Liens or Activity and Use Limitations for the Property that may exist on the Property.

## 4.3 SPECIALIZED KNOWLEDGE

We have no knowledge of previous Environmental Site Assessments for the Property, nor do we have any knowledge of "recognized environmental conditions" that may have existed on the Property prior to the completion of this report. The Client/User, also the Property Owner, has no knowledge of previous Environmental Site Assessments for the Property, nor do they have any knowledge of "recognized environmental conditions" that may have existed on the Property.

#### 4.4 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

Under the standards as outlined in ASTM E 1527-13 "Standard Practice for Environmental Site Assessments", the User of this report has certain responsibilities regarding notification to the preparer of this report. Specifically, the User must notify the preparer of the report of any environmental liens encumbering the Property or any specialized knowledge or information about previous ownership or uses of the Property that may be material to identifying "recognized environmental conditions". Brian Falck of Pioneer Homes is not aware of any environmental issues in connection with the Property.



#### 4.5 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

The client has no reason to believe that the value of the Property has been reduced for any environmental issues and asserts that the purchase price reasonably reflects the fair market value of the Property.

#### 4.6 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The owner/manager of the Property is:

Thornton Gallup, LLC PO Box 1495 Nampa, Idaho 83653

The site is currently unoccupied.

#### 4.7 REASON FOR PERFORMING THE PHASE I ESA

It is the understanding of SAGE ENVIRONMENTAL that the Property is under development by the Client. This development requires relocating and/or retiling a portion of the C.L.E. Lateral. The Bureau of Reclamation, the agency responsible for maintaining and modifying irrigation systems within the State, requires permit for such activities and this Phase I Environmental Site Assessment (ESA) report is a part of the permit requirements. This Phase I ESA also fulfills one of the requirements for the innocent landowner defense and a "Bona Fide Prospective Purchaser" (BFPP) defense subject to CERCLA liability



## 5.0 HISTORICAL RECORDS & ENVIRONMENTAL DATABASE REVIEW

## 5.1 STANDARD ENVIRONMENTAL RECORDS

The purpose of the records review is to obtain and review records that will help identify recognized environmental conditions in connection with the property. A description of the environmental databases is described in the following paragraphs:

<u>NATIONAL PRIORITIES LIST (NPL), LISTED AND DELISTED SITES:</u> A list of hazardous waste sites in the United States eligible for long-term remedial action (cleanup) financed under the federal Superfund program. Environmental Protection Agency (EPA) regulations outline a formal process for assessing hazardous waste sites and placing them on the NPL. The NPL is intended primarily to guide EPA in determining which sites warrant further investigation.

The inclusion of a facility in the National Priorities List does not reflect a judgment of its owner or operator or make the owner or operator take any action. It also does not assign any liability to any person or company. It serves as a source of information by identifying facilities or other hazardous substance releases that appear to warrant remedial actions.

<u>SUPERFUND (CERCLIS)</u>: Superfund is a program administered by the EPA to locate, investigate, and clean up uncontrolled hazardous waste sites throughout the United States. We reviewed the Idaho DEQ's "Waste Remediation Site Locator", DEQ's equivalent of the EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) list, a registry which lists those sites which are suspected of having received, generated, transported, or disposed of hazardous wastes prior to December 1380; or areas where hazardous wastes were suspected of having been released into the environment. The inclusion on this list is not in itself a judgment about the activities of a Property's owners or operators, but is used to identify those sites which may require further investigation because they may cause environmental or public health problems. The CERCLIS list is used by the Idaho DEQ to track potentially uncontrolled hazardous materials or hazardous waste sites. The Idaho DEQ also maintains a registry of those sites where clean up or remediation activities have taken place but no further action is planned.

<u>RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION RCRA INFO:</u> Hazardous waste generators, transporters, treaters, storers and disposers of hazardous waste are required to provide information on their activities to state environmental agencies. These agencies then provide the information to regional and national US Environmental Protection Agency (EPA) offices through the Resource Conservation and Recovery Act Information (RCRA Info) System. Information on cleaning up after accidents or other activities that result in a release of hazardous materials to the water, air or land must also be reported through RCRA Info.

INSTITUTIONAL CONTROL/ENGINEERING CONTROL REGISTRIES: Institutional controls are nonengineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Although it is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable, ICs play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use and guide human behavior at a site. For instance, zoning restrictions prevent site land uses, like residential uses, that are not consistent with the level of cleanup.

ICs are used when contamination is first discovered, when remedies are ongoing and when residual contamination remains onsite at a level that does not allow for unrestricted use and unlimited exposure after cleanup. The National Contingency Plan (NCP) emphasizes that ICs are meant to supplement engineering controls and that ICs will rarely be the sole remedy at a site.

<u>VOLUNTARY CLEANUP SITES:</u> In Idaho, DEQ's Voluntary Cleanup Program (VCP) was created in 1996 by the Idaho Land Remediation Act to encourage innovation and cooperation between the state, local communities and private parties to revitalize properties with hazardous substance or petroleum contamination. The Idaho Land Remediation Rules, adopted in 1997, detail implementation procedures for the program. The Idaho Land Remediation Act was modified in 2005 to incorporate the Community Reinvestment Pilot Initiative, a state-funded program to assist with cleanup costs of up to 10 properties whose development is complicated by contamination issues. Currently, all 10 slots in the pilot program are filled.



142

<u>EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS) LIST:</u> The Emergency Response Notification System (ERNS) is a computer database containing information on reports of oil and hazardous substance releases that have occurred throughout the United States and have been reported to the National Response Center (NRC), the ten EPA Regions, or the U.S. Coast Guard. The initial notification data may be updated with information from various Federal, State, and local response authorities as appropriate. ERNS data can be used to analyze reports of releases, support emergency planning efforts, and assist decision makers in developing spill prevention programs.

STATE AND TRIBAL LANDFILL OR SOLID WASTE DISPOSAL SITES: A listing of solid waste landfills (active and closed sites) is maintained by various agencies, including the Idaho DEQ. The list of closed solid waste landfills and dumps is not necessarily complete because older landfills or dumping areas may not be known.

STATE AND TRIBAL VOLUNTARY CLEANUP SITES: During 1996, the Idaho Legislature created the Idaho Land Remediation Act, DEQ's Voluntary Cleanup Program (VCP), to encourage innovation and cooperation between the state, local communities, and private parties working to revitalize properties with hazardous substance or petroleum contamination. During 1997, DEQ developed the Idaho Land Remediation Rules that detail the implementation of the Voluntary Cleanup Program. Sites that have entered in to the Voluntary Cleanup Program are identified on the Idaho Waste Division Inventory database.

<u>BROWNFIELDS (BMS):</u> The EPA Brownfields Management System (BMS) stores information reported by EPA Brownfields grant recipients on Brownfields properties assessed or cleaned up with grant funding. The Idaho DEQ's Brownfields Assessment Program funds and conducts environmental assessments of Brownfield sites when a lack of environmental information has complicated site redevelopment or reuse. For each site, DEQ will produce a final report that reveals whether a site is clean, lightly contaminated, or heavily contaminated, determines the nature and extent of the contamination, identifies potential cleanup options, and estimates cleanup costs (if any). Brownfields are abandoned or underutilized properties where the reuse is complicated by actual or perceived environmental contamination. With the help of Idaho Counties, Cities, Economic Development Districts, Urban Renewal Entities, developers and brokers, DEQ is developing a comprehensive, statewide inventory of Brownfields. Sites that qualify for and are being remediated under the Brownfields program are identified on the Idaho Waste Division Inventory database and on EPA's EnviroMapper for Brownfields site. DEQ's Brownfields Assessment Program funds and conducts environmental assessments of Brownfields sites when a lack of environmental information has complicated site redevelopment or reuse. For each site, DEQ will produce a final report that:

- · Reveals whether a site is clean, lightly contaminated, or heavily contaminated
- · Determines the nature and extent of the contamination
- · Identifies potential cleanup options estimates cleanup costs (if any).

<u>TOXICS RELEASE INVENTORY (TRI)</u>: The Toxics Release Inventory (TRI) contains information about more than 650 toxic chemicals that are being used, manufactured, treated, transported, or released into the environment. Manufacturers of these chemicals are required to report the locations and quantities of chemicals stored on-site to State and local governments. The reports are submitted to the EPA and state governments. EPA compiles this data in an on-line, publicly accessible national computerized database.

<u>ADDITIONAL ENVIRONMENTAL DATABASE SOURCES</u>: For our Federal database information, we used a database operated by Nationwide Environmental Title Research Company (NETROnline) and crosschecked by SAGE, using a database (Idaho Waste Remediation Facility Mapper) maintained by the Idaho DEQ, for properties or incidents reported within the area defined by the ASTM E 1527-13 Minimum Search Distances. The NETROnline database report is presented in the addenda of this report.



A summary of those sites identified in the Environmental Database that are located within the ASTM search radii is provided in Table 1, below:

TABLE 1: SU	MMARY OF	ENVIRONMENTAL	DATABASE SITES
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Standard Environmental Record Source	ASTM Search Dist. (Miles)	Number of Sites Identified	Identification of Sites Found: Distance and Direction From Property
Federal NPL site list	1.0	0	
Federal Delisted NPL site list	0.5	0	
Federal CERCLIS list	0.5	0	
Federal CERCLIS NFRAP (no further remedial action planned)	0.5	0	
Federal CORRACTS facilities list	0.5	0	
Federal RCRA non-CORRACTS TSD facilities list	1.0	0	
Federal RCRA generators list	Subject & adj. sites	0	RCRA generators appear in the database; however, none are located within the ASTM-defined search radius.
Federal institutional control/ engineering control registries	Subject & adj. sites	0	
Federal ERNS list	Subject property	0	
State and tribal equivalent NPL	1.0	0	
State and tribal equivalent CERCLIS	0.5	0	
State and tribal landfill or Solid Waste Disposal site list	0.5	0	
State and tribal underground storage tank (UST) lists	Subject & adj. sites	0	
State and tribal leaking underground storage tank (LUST) lists	0.5	0	
State and tribal institutional/ engineering control registries	Subject property	0	
State and tribal voluntary cleanup sites	0.5	0	
State and tribal Brownfield sites	0.5	0	

## 5.1.1 Additional Environmental Record Sources

We routinely cross-check our database information provided by outside sources with the Idaho DEQ's "Waste Remediation Facility Mapper" program available on the DEQ website. Our crosscheck did not identify any additional sites.

We used the Idaho DEQ's "Nitrate Priority Area Mapping Tool" available on the IDEQ website for information regarding known elevated nitrate levels present within regional groundwater.


A major source of the elevated nitrates is from historic agricultural uses in the area. Our review of this map indicates that most of the Property is located just inside the Ada/Canyon County; Purple Sage Nitrate priority area. Well sampling from nearby sites have revealed nitrate levels ranging from 0.01 mg/l (west) and 0.32 mg/L (northwest), to 5.05 mg/L (northeast). These nitrate level are considered elevated, but are well below the EPA and State drinking water standard of 10.0 mg/L.

### 5.2 PHYSICAL SETTING SOURCES

According to the current (2017) United States Geological Survey (USGS) "Sand Hollow, Idaho" 7.5-Minute Series Quadrangle map, the elevation of the site is approximately 2,520 feet above mean sea level. The site is generally level and lies at an elevation of approximately 2,520 feet above mean sea level. The north end of the site, just north of the C.L.E. Lateral lies 7-10 feet below the bank of the lateral. The C.L.E. Lateral irrigation ditch is the closest surface water to the site; it borders a portion of the eastern Property boundary from the north before traversing westward along the homesite, angling southward along the west side of the homesite, then finally, traversing eastward along the south end of the homesite before exiting the Property along the southern boundary. Sand Hollow Creek borders the Property along the west (Figure 3a).

#### **5.3 HISTORICAL USE INFORMATION**

We established the site history utilizing several sources of information including:

- Historic USGS Quad Maps
- Aerial Photography
- Sanborn Fire Insurance Maps
- Historical Plat Maps
- Canyon County Assessor's Office
- Recorded Land Title Records
- Polk's City Directories for Caldwell, Idaho
- Interviews and/or questionnaires completed by persons having knowledge of the Property and/or its history

The information obtained from these sources regarding past and current uses of the Property and adjoining properties may be incomplete but typically provides a general synopsis of site history.

# 5.3.1 Aerial Photograph Review

Aerial photography can reveal historical activities or uses of the Property not otherwise documented or observable during the reconnaissance of the site. Aerial photography can also be used to confirm information obtained from other historical sources. The effectiveness of this review technique depends on the quality of the photographs, the available coverage, and the scale of photographs printed.

We obtained aerial photos, including the earliest available and the most recent historical aerial photos displaying the Property and vicinity taken during 1954, 1969, and 1981 from NETROnline Historic Aerials. We also reviewed current and historical satellite imagery for the Property taken during 1992, 2002, 2010, and 2020 from Google Earth<sup>™</sup>. We reviewed these aerial



photos for historic information on the use of the site and adjacent properties. Photocopies of these aerial photos are presented in the Addenda of this report.

Aerial photographs only provide information on visual indications of land use. No conclusions can be drawn from the photographs alone; however, our review of the aerial photographs did not reveal any obvious signs of dumping, significant spillage, leaks, storage, disposal of hazardous substances, or land use that would necessitate further investigation. A summary of the aerial photography review is presented in Table 2, below:

Site Features	1954	1969	1981	1992	2002	2010	2020	Comments
Crop Patterns	Y	Y	Y	Y	Y	Y	Y	Crop patterns and/or pasture is visible on the Property in all photos.
Streets	N	Y	Y	Y	Y	Y	Y	The gravel Freezeout Road access lane is visible along the southern Property boundary from 1969 through 2020.
Buildings	N	N	N	Y	Y	Y	Y	The dwelling is visible on the southeast quadrant fo the site in the 1981 and subsequent photos; the shop building is visible on the site in the 1992 and subsequent photos.
Paved Parking Areas	N	N	N	N	N	N	N	
Drainage	Y	Y	Y	Y	Y	Y	Y	The C.L.E Lateral irrigation canal is visible traversing and bordering the Property in all photos. Sand Hollow Creek is visible along the western boundary in all photos.
CIRCULAR OBJECTS (ABOVE GROUND STORAGE TANKS OR WATER TANKS)	N	N	N	N	N	N	N	
Lagoon or Impoundment	Y	Y	Y	Y	Y	Y	Y	Visible ponding of Sand Hollow Creek, along the western boundary, is visible in all photos.
GROUND SCARS	N	N	N	N	N	N	N	
Standing Liquid	N	N	N	N	N	N	N	
Stacked Materials/ Objects	N	N	N	N	N	N	N	
Scattered Materials/ Objects	N	N	N	Y	Y	Y	Y	Scattered materials begin to appear north and east of the homesite starting with the 1992 photo, with more materials appearing in subsequent photos.
Piles	N	N	N	Y	Y	Y	Y	Piles of material and debris begin to appear north and east of the homesite starting with the 1992 photo, with more materials appearing in subsequent photos.

### TABLE 2: AERIAL PHOTOGRAPH REVIEW SUMMARY

(Key: Y=Yes; N=Not Observed; P=Possible, but not clearly resolved; U=Undetermined, not resolvable)



# 5.3.2 Historical USGS Quadrangle Map(s)

We consulted the 1970 United States Geological Survey (USGS) "Sand Hollow, Idaho" 7.5-Minute Series Quadrangle map for any buildings located on the Property. This map did not indicate the presence of buildings or other developments o the site (Figure 3b).

# 5.3.3 Sanborn Fire Insurance Maps

Sanborn Maps, constructed by the Sanborn Fire Insurance Company for fire insurance underwriting purposes dating as far back as the late 1800s, can show details of buildings, improvements, and land uses; however, the coverage of these maps is usually limited to older or outdated districts in established towns and cities. During our research of available Sanborn Fire Insurance maps, we found no coverage for the Property and vicinity.

### 5.3.4 Property Assessor Files

According to the Canyon County Assessor's Office, the current ownership of the Property is as follows:

Thornton Gallup, LLC PO Box 1495 Nampa, Idaho 83653

# 5.3.5 Recorded Land Title Records

A Chain of Title was not requested by the Client. The prior use of the subject Property was determined by SAGE ENVIRONMENTAL, with the aid of historical records and interviews with persons having knowledge of the site and its history. We also use the following resources, when available, to determine the presence of activity use limitations (AULs) or engineering controls (ECs) that may be recorded or connected to the Property title:

- Title Commitment (when provided by the Client) or Chain-of-Title report; For this report, a Chain-of-Title report dating back to 1982 was provided by the Client.
- Environmental Database Records
- Environmental Questionnaire and Disclosure Statement

CHAIN OF TITLE REPORT: The Chain of Title report indicated that the Property was sold or conveyed three times since 1982:

1982: Arthur & Bonnie Ashcraft sold/conveyed the Property to Robert & Virginia Figueredo

2018: Virginia Figueredo sold the Property to Dorothy & Melvin Bonham, and Melvin Bonham, Jr.

ENVIRONMENTAL DATABASE RECORDS: We used information obtained from the Environmental Database Records to identify those sites that were assigned a "no further action" status from the Idaho DEQ using activity use limitations (AULs) or engineering controls (ECs). We did not find deed restrictions limiting the use of the Property (AULs), nor did we find any institution or engineering controls (ECs) listed for the site.

ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT: We used the Environmental Questionnaire and Disclosure Statement to determine the Owner's knowledge of activity use limitations (AULs) or engineering controls (ECs) for the Property. According to the Environmental



Questionnaire and Disclosure Statements, Brian Falck (a representative of the Property owner and developer) has no knowledge of Environmental Liens or Activity and Use Limitations for the Property that may exist on the Property.

# 5.3.6 Polk's City Directories

Polk's City Directories, published by the R.L. Polk Company as a telephone/address/ business locating publication, can be useful when researching the historical occupants of the Property (by address). SAGE ENVIRONMENTAL reviewed the available Polk's City Directories at the Idaho Historical Library in Boise, Idaho; we found Polk directory coverage for Caldwell that included the Property's immediate vicinity, beginning in 2000 (earliest available) through 2020. As expected, the Property does not appear in the Polk Directory listings (the site has never been developed). The Polk Directory listings indicate that the area surrounding the Property has been used for rural residential purposes.

# 5.3.7 Zoning/Land Use Records

We reviewed the current and land use designations for the Property from the Canyon County Assessor. Our review of this map indicated that currently, the Property is located outside of the city limits of Caldwell, Idaho and within a Canyon County zoning area designated as "Agricultural" zoning district. According to the Canyon County Zoning Ordinance, "The purposes of the A (Agricultural) Zone are to:

A. Promote the public health, safety, and welfare of the people of the County by encouraging the protection of viable farmland and farming operations;

B. Limit urban density development to Areas of City Impact in accordance with the comprehensive plan;

C. Protect fish, wildlife, and recreation resources, consistent with the purposes of the "Local Land Use Planning Act", Idaho Code title 67, chapter 65;

D. Protect agricultural land uses, and rangeland uses, and wildlife management areas from unreasonable adverse impacts from development; and

E. Provide for the development of schools, churches, and other public and quasi-public uses consistent with the comprehensive plan." (Canyon County Code 7-10-25)

# 5.3.8 Historical Plat Maps

We researched historical plat maps and/or Atlases, potential resources for identifying past owners of the Property from Historic MapWorks Residential Geneaology™. The earliest map, The Standard Atlas of Canyon County, published in 1915 by George A. Ogle and Co., indicated that the Property was part of an 80-acre parcel of land owned by George Struthers. A second map, Metsker's Atlas of Canyon County, Idaho, published in 1939, indicated that the Property was part of two larger parcels owned by W.W. Waterman (west end) and Daniel W. Kennedy (east end). Neither plat map indicated the presence of buildings or other developments on the site.



#### 5.4 PRIOR USE ASSESSMENT OF THE PROPERTY

We compiled a history of the past Property uses through our review of available maps, aerial photographs, and interviews with individuals associated with the Property. A summary of the past Property uses is presented in the following table:

#### TABLE 3: PRIOR USE SUMMARY OF PROPERTY

1939-1975	1976 - 2021
Irrigated Farm Land and/or pasture	Rural Homesite and Pasture

#### 5.5 PRIOR USES OF ADJOINING PROPERTIES

We also compiled a history of the past uses of the adjoining properties through our review of available maps, aerial photographs, and interviews with individuals associated with the Property. Listed below is a summary of the past uses of the adjoining sites:

#### TABLE 4: PRIOR USE SUMMARY OF ADJACENT PROPERTIES

	1939	1954	1969	1981	1992	2002	2010	2020
North:	Undeveloped or Irrigated Farm Land	Irrigated Farm Land	Irrigated Farm Land	Irrigated Farm Land	Irrigated Farm Land	Irrigated Farm Land	Rural Residential & Irrigated Farm Land	Rural Residential & Irrigated Farm Land
SOUTH:	Rural Farm Site & Irrigated Farm Land	Rural Farm Site & Irrigated Farm Land	Rural Farm Site & Irrigated Farm Land	Rural Farm Site & Irrigated Farm Land	Rural Residential & Irrigated Farm Land	Rural Residential & Irrigated Farm Land	Rural Residential & Irrigated Farm Land	Rural Residential
East:	Irrigated Farm Land	Irrigated Farm Land	Irrigated Farm Land	Rural Residential & Irrigated Farm Land	Rural Residential & Irrigated Farm Land	Rural Residential & Irrigated Farm Land	Rural Residential & Irrigated Farm Land	Rural Residential & Irrigated Farm Land
West:	Undeveloped or Irrigated Farm Land	Irrigated Farm Land	Irrigated Farm Land	Irrigated Farm Land	Irrigated Farm Land	Rural Residential & Pasture	Rural Residential & Pasture	Rural Residential & Pasture



PAGE 20

# 6.0 SITE RECONNAISSANCE

Brenda Magnuson of SAGE ENVIRONMENTAL conducted a site reconnaissance of the Property on April 12, 2021 and again on April 2021. At the time of the site reconnaissance, the weather conditions were mostly sunny and cool; the ambient air temperature was 43±°F (April 12th), and 60±°F (April 20th).

### 6.1 METHODOLOGY & LIMITING CONDITIONS

A visual reconnaissance was conducted on the Property in general accordance with SAGE ENVIRONMENTAL's standard environmental assessment procedures. This reconnaissance consisted of systematically walking the Property to provide an overlapping field of view and noting any "recognized environmental conditions" as encountered. Photographic documentation of pertinent "recognized environmental conditions" and site improvements and also adjacent property uses was made; some of which have been included in the Addenda of this report. In the case of multi-tenant commercial Properties, and the Property has five or fewer current occupants, we make a reasonable attempt to inspect and interview a representative of each tenant space. If there are more than five current occupants, we make a reasonable attempt to inspect and interview the major occupants and those other occupants whose operations are likely to indicate recognized environmental conditions in connection with the Property. For this assessment, the entire site was accessible.

The reconnaissance of the adjacent properties was performed by walking the perimeter of the subject site and observing and photographing the readily accessible and visible areas bordering or adjacent to the subject property and noting potential environmental conditions. During and after the site reconnaissance, we also evaluated adjacent parcels for their potential environmental impact to the Property. Photographs documenting the current condition of the Property are presented in the Addenda. The site reconnaissance focused on the following:

- Evaluating the presence of surface waters on the Property
- An evaluation of the materials used and stored on the Property
- Evidence of contamination by hazardous substances (stains, odors, etc.)
- The presence of aboveground storage tanks (ASTs) or visual indication of underground storage tanks (USTs)
- Evidence of buried solid waste
- Identification of transformers and other electrical equipment potentially containing Polychlorinated Biphenyls (PCBs)
- An evaluation of current land use



# 6.2 GENERAL SITE VISIT OBSERVATIONS

#### TABLE 5: SUMMARY OF SITE VISIT OBSERVATIONS

GENERAL SITE OBSERVATIONS	DESCRIPTION				
Current Use(s) of the Property	Rural Homesite and Pasture				
Current Uses of Adjoining Properties	North: Rural Residential & Pasture South: Developing Residential Subdivision West: Rural Residential & Pasture East: Rural Residential & Pasture				
Description of Structures & Other Improvements (Figure 4)	One, 1,404 SF, single-level dwelling constructed during 1976, located on the southeast portion of site. Three-bay shop building located northwest of dwelling. This is a steel framed structure with a metal roof and exterior. In this building, the west $\frac{2}{3}$ of the floor is dirt; the east $\frac{1}{3}$ of the floor is a concrete slab.				
DESCRIPTION OF ROADS	Access to the Property is from a access gravel roadway/lane located along the southern boundary. This unimproved, private road extends to Freezeout Road (west), a paved, two-lane rural roadway with no curbs, gutter, or sidewalks.				
Geologic, Hydrogeologic & Topographical Conditions	Most of the site is generally level and at-grade with nearby streets; the north end of the site, just north of the E.L.C. Lateral, lies approximately 7 to 10 feet below the lateral; the west end of the site, near Sand Hollow Creek, slopes slightly downward toward the creek. None of the information we obtained during the course of this assessment indicates that hazardous substances or petroleum products are likely to migrate onto the Property from nearby sites.				
Potable Water Supply	A private well, located northeast of the dwelling, provides potable water to the home site on the Property. According the Well Construction Log we obtained from the Idaho Department of Water Resources, the domestic well was constructed during 1974 to a depth of 67 feet below ground surface (bgs). Water was first encountered at a depth of 40 feet bgs. A copy of the well log is included in the Addenda.				
Sewage Disposal System	An on site septic tank and drainfield system provides sewage disposal for the dwelling on the Property. It is likely that this septic system is located near the dwelling; however, we have no information about the size and exact location of this system.				
Hazardous Substances and Petroleum Products	Several containers of oils, lubes, household maintenance products, and a few cans of gasoline are stored inside the shop building; these materials are stored in containers of 5-gallons in size or smaller. None of these containers appeared to be leaking or have leaked. Of the nearly fifty (50) 55-gallon drums we identified on the site, two (2) to three (3) of the drums and three (3) 5-gallon containers contain an unknown liquid; stains around two of the containers indicate that they may contain waste oil. During our inspection of the Property, we saw no visual indications that the site has been, or is being contaminated by hazardous waste or other hazardous substances. We did not observe any visual evidence of the historic use of hazardous materials and we observed no significant stains, odors, or unnaturally stressed vegetation (indicators that the improper use of these material has occurred).				
USTS OR ASTS	None were identified on the Property.				
Odors	None were identified on the Property.				
POOLS OF LIQUID	None were identified on the Property.				



	Approximately fifty (50) 55-gallon drums are located on the Property. Most of these drums are empty or contain trash; however, there are three (3) drums located in the field to the northeast of the dwelling that contain unknown liquids. The drums are located northeast of the dwelling (within "Area #2" on the Site Plan).
	The drums have tight-fitting lids and most did not show evidence of leaks; however, we did see limited staining on the ground next to the one drum (along with a 5-gallon container next to the drum) located in "Area #2" with limited staining on the ground. This staining appears to be caused by waste oil.
Drums	Note #1: During our April 12, 2021 inspection, SAGE noted that three (3) drums were located at the northeast corner of the Property, next to the E.L.C. Lateral. Two (2) of the drums contained unknown liquids. Due to the proximity of the drums to the irrigation lateral and the presence of unknown contents, Sage notified the Client of this concern. The Client subsequently removed the three (3) drums. On April 20, 2021, Sage returned to the site to verify the removal of the drums and inspect the ground for evidence of spills or leaks and verified that none were present. A photo of this location is included in the Addenda.
	Note #2: The number of drums is an approximate number because some of the empty drums are located within piles of debris and are difficult or impossible to see.
Unidentified Substance Containers	See "Hazardous Substance and Petroleum Products" and "Drums" (above).
Pits, Ponds, or Lagoons	Although not currently present, aerial photos indicate that Sand Hollow Creek, forms a seasonal pond or shallow pool of water near the mid-point of the western Property boundary. During our inspection of the site, we observed the area on the site where the creek temporarily ponds or pools along the western boundary. A pile of discarded water heaters, pressure tanks, and miscellaneous equipment is located on the southeastern edge of the pond area. Evidence of contamination was not observed in this area
Storm Drains	None were identified on the Property but may be part of the underground utilities/infrastructure.
Stained Soil or Pavement	Minor surface stains are visible on the gravel drive in front of the shop building (south side). These surface stains appear to have been caused by fluid drips from parked vehicles or equipment. Surface staining was observed on the ground beneath one (1) drum and one (1) 5-gallon container within "Area #2" on the Site Plan. This staining is
	limited and appears to be caused by waste oil. This stain also appears to be a surface stain limited to the top 6-inches of soil.
STRESSED VEGETATION	During our inspection of the Property, we did not see any unnaturally stressed vegetation on the Property.
Solid Waste	Evidence of buried solid waste disposal was not observed on the Property during our site reconnaissance; however, several piles of wood/lumber waste; concrete waste; miscellaneous equipment; 50+ tires; and other miscellaneous items are located on the home site north and east of the dwelling.
WASTE WATER	Wastewater generated on the Property has been limited to domestic-type sewage from the dwelling.
WELLS	As discussed previously, a private well, located northeast of the dwelling, provides potable water to the home site on the Property. According the Well Construction Log we obtained from the Idaho Department of Water Resources, the domestic well was constructed during 1974 to a depth of 67 feet below ground surface (bgs). Water was first encountered at a depth of 40 feet bgs. A copy of the Well Construction Log is included in the Addenda of this report.



Septic Systems	As discussed previously, an on site septic tank and drainfield system provides sewage disposal for the dwelling on the Property. It is likely that this septic system is located near the dwelling; however, we have no information about the exact location of this system.
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# 7.0 INTERVIEWS

Owner(s):	In lieu of an interview, we submitted an "Environmental Questionnaire and Disclosure Statements" to Brian Falck, a representative of the Property owner and developer; a copy of the questionnaire is included in the Addenda of this report.
Key Site Manager:	See above.
Occupants:	Currently, no occupants.
Past Owners and/ or Operators:	We did not interview any past owners and/or occupants of the site.
Local Government Officials:	For this report, we did not interview any local government officials with to the Property or nearby sites.

# 8.0 VAPOR ENCROACHMENT

In accordance with ASTM Standard 1527-13, SAGE conducted a vapor encroachment evaluation for the Property utilizing the environmental database and evaluating the contaminated properties within the ASTM-defined "area of concern" (AOC) of <sup>1</sup>/<sub>3</sub>-mile from the Property.

Our review of the environmental databases indicated that there are no contaminated sites situated within the <sup>1</sup>/<sub>3</sub>-mile AOC.



## 9.0 EVALUATION

#### 9.1 FINDINGS

The findings listed below summarize the information we identified during the course of our inspection of the Property and our research into its history and appropriate database sources. These findings may or may not lead to the identification of any known or suspected recognized environmental conditions, historical recognized environmental conditions, and de minimis conditions:

Type of Information Evaluated	Finding		
User-Provided Information	No environmental concerns		
Environmental Database Records	See below		
Nitrate Priority Area	The Property is located just inside the Ada/Canyon County; Purple Sage Nitrate priority area. Well sampling on nearby sites have revealed nitrate levels ranging from 0.01 mg/l (west) and 0.32 mg/L (northwest), to 5.05 mg/L (northeast) and are considered elevated, but are well below the EPA and State drinking water standard of 10.0 mg/L.		
HISTORICAL USE INFORMATION	No environmental concerns		
SITE RECONNAISSANCE	See below		
Potable Water Supply/ Wells	A private well, located northeast of the dwelling, provides potable water to the home site on the Property. According the Well Construction Log we obtained from the Idaho Department of Water Resources, the domestic well was installed during 1974 and was constructed to a depth of 67 feet below ground surface (bgs). During construction, water was first encountered at a depth of 40 feet bgs.		
Sewage Disposal System/ Septic Systens	An on site septic tank and drainfield system provides sewage disposal for the dwelling on the Property. It is likely that this septic system is located near the dwelling; however, we have no information about the exact location of this system.		
Hazardous Substances and Petroleum Products	Several containers of oils, lubes, household maintenance products, and a few cans of gasoline are stored inside the shop building; these materials are stored in containers of 5-gallons in size or smaller. None of these containers appeared to be leaking or have leaked. Of the nearly fifty (50) 55-gallon drums we identified on the site, two to three (2-3) of the drums and three (3) 5-gallon containers contain an unknown liquid; a small amount of staining around two (2) of the containers indicate that they may contain waste oil. During our inspection of the Property, we saw no visual indications that the site has been, or is being contaminated by hazardous waste or other hazardous substances. We did not observe any visual evidence of the historic use of hazardous materials and we observed no significant stains, odors, or unnaturally stressed vegetation (indicators that the improper use of these material has occurred).		



Drums/Unidentified Substance Containers	Approximately fifty (50) 55-gallon drums are located on the Property. Most of these drums are empty or contain trash; however, two (2) to three (3) drums located in the field to the northeast of the dwelling contain unknown liquids. The two (2) to three (3) drums containing liquids have tight-fitting lids. One (1) drum has limited staining on the ground that appears to be waste oil. This drum is located within "Area #2" on the Site Plan. Note: The number of drums is an approximate number because some of the empty drums are located within piles of material and debris that are difficult or impossible to see.
Pits, Ponds, or Lagoons	Although not currently present, aerial photos indicate that Sand Hollow Creek, forms a seasonal pond or shallow pool of water near the mid-point of the western Property boundary. During inspection of the site, we observed the area on the site were the creek temporarily ponds or pools along the western boundary.
Stained Soil or Pavement	Minor surface stains are visible on the gravel drive in front of the shop building (south side). These surface stains appear to have been caused by fluid drips from parked vehicles or equipment. We observed staining on the ground beneath one of the drums and a 5-gallon container within "Area #2" (shown on the Site Plan). This staining is limited and appears to be caused by waste oil.
Vapor Encroachment Concerns	No environmental concerns

## 9.2 OPINIONS

Listed below are our professional opinions of the impact (if any) on the Property of the conditions identified in the Findings listed in Section 9.1:

Type of Information Evaluated	Opinion			
Environmental Database Records	See below			
NITRATE PRIORITY AREA	Although it is possible that the groundwater beneath the Property may contain elevated levels of nitrates, our review of area well sampling data indicates that nitrate levels would likely be well below the EPA and Idaho drinking water standard of 10.0 mg/L. This is not a "recognized environmental condition" or "REC".			
SITE RECONNAISSANCE	See below			
Potable Water Supply/ Wells	The presence of a private well on the Property is not a cause for concern; however, if the future use of the Property does not include the use of the well, it should be properly abandoned in accordance with the Idaho Department of Water Resources (IDWR) rules. Due to the relatively shallow depth of the well (less than 100 feet bgs), we recommend sampling of the well prior to it's continued use as a potable water source. The analyses should include bacteria (Total Coliform and E. Coli) and Nitrates.			
Sewage Disposal System/ Septic Systens	The presence of an on site septic tank and drainfield system is not a cause for concern; however, if the future use of the Property doe not include the use of the septic system, it should be closed in accordance with Idaho Health Department Rules.			
	18123 N. HIGHFIELD WAY			



Hazardous Substances and Petroleum Products	In their current state, the use and storage of oils, lubes, household maintenance products, and cans of gasoline on the site are not a cause for concern and are not considered a "REC"; however, any of these materials that are no longer in use should be disposed of in accordance with Federal, State, and local rules and regulations.
Drums/Unidentified Substance Containers	Of the fifty (50)± drums located on the site, two (2) to three (3) drums located in the field to the northeast of the dwelling (area #2 on Site Plan) contain an unknown liquid. All of these drums/containers have been on the Property for an extended period of time; it is unclear if the staining around the drum/container in area #2 was caused by spills or if the container has leaked; however, it is our opinion that these drums and the soil staining is not considered a "REC" because the staining on the ground around one (1) drum and one (1) 5-gallon container appears limited to the top 6-inches of soil, a "de minimus" condition. Although not considered a "REC" the contents of the drums should be determined and properly disposed of in accordance with Federal, State, and local rules and regulations.
Pits, Ponds, or Lagoons	The seasonal pond/pool formed by Sand Hollow Creek is not a cause for concern with respect to the environmental integrity of the Property.
Stained Soil or Pavement	One of the drums and/or 5-gallon containers (area #2 on Site Plan) appears to have leaked waste oil onto to the ground. This staining appears to be waste oil and to the extent observable, the leakage appears to be have been present for some time. Currently, this staining appears to be minor (limited to the top six-inches of soil or less). This type of surface stain is considered "de minimus" and is not a "REC". It is possible that the removal of drums, containers, or piles of debris could reveal additional staining that was not observable during the site visit. Any staining extending beyond the top 6- inches of soil may require further evaluation.

#### 9.3 CONCLUSIONS

SAGE ENVIRONMENTAL SERVICES, LLC has performed a Phase I Environmental Site Assessment in conformance with the ASTM Practice E 1527-13 for the Rural Homesite & Undeveloped Pasture Property located at 23442 Freezeout Road in Caldwell, Idaho. Any exception to or deletion from this practice is described in Section 2.3 "Scope of Services" and Section 2.5 "Limitations and Restrictions" of this report.

Based on our review of available information, Sage Environmental has identified no "recognized environmental conditions" or "RECs" in connection with t the Property. Although not considered a "REC", the contents of any drums and containers of liquids stored outside the shop should be determined and disposed of in accordance with Federal, State, and local rules/ regulations.

The removal of the piles of equipment, miscellaneous materials, and debris, may reveal additional drums, containers, and/or soil staining that require further evaluation.



#### 9.4 DATA GAPS & FAILURES

We identified four data gaps that were greater than 10 years; 1915-1939 (24 years); 1939-1954 (15 years); 1954-1969 (15 years); and 1981-1992 (11 years). Based upon the known history of the Property, these data gaps are considered insignificant with respect to the historic use(s) of the Property and any resulting environmental impacts.

The lack of Sanborn Map and Polk Directory coverage for the Property is considered a data failures. Based upon the known history of the Property, these data failures are considered insignificant with respect to the historic use(s) of the Property and any resulting environmental impacts.

#### 9.5 DEVIATIONS FROM ASTM 1527-13

We did not deviate from ASTM 1527-13 "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process".

#### 9.6 NON-SCOPE ISSUES

There may be environmental issues or conditions at the Property that parties may wish to assess in connection with commercial real estate that are outside the scope of ASTM E 1527-13. There may be other issues related to the Property or adjacent properties that are not included in CERCLA's definition of hazardous substances (42 USC§ 9601(14)) or do not otherwise present potential CERCLA liability. Such non-scope considerations include, but are not limited to the following: radon screening, asbestos-containing material survey, lead-based paint survey, lead in drinking water, wetland assessment, interior PCB sampling, regulatory compliance, ecological resources, endangered species, indoor air quality, cultural resources, industrial hygiene, health and safety, and high voltage power lines. Addressing such non-scope issues was not requested by the client.

#### 9.7 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL & SIGNATURES

As required by 40 CFR 312.21(d), SAGE is providing the following statements as to the qualifications of the environmental professional(s) responsible for conducting this Phase I Environmental Site Assessment and the preparation of this report:

- 1. I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental professional as defined in §312.10 of 40 CFR312, and
- 2. I have the specific qualifications, based on education, training, and experience, to assess a property of the nature, history, and setting to the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Prepared By:

SAGE ENVIRONMENTAL SERVICES, LLC

Bunda Magnesson

BRENDA L. MAGNUSON, REA REGISTERED ENVIRONMENTAL ASSESSOR, CERT. #06973



# **10.0 REFERENCES SITED**

CANYON COUNTY ASSESSOR'S OFFICE, PUBLIC FILES FOR 23443 FREEZEOUT ROAD IN CALDWELL, IDAHO.

- BIG SKY MAPS, 2005. ADA AND CANYON COUNTY STREET ATLAS. SKY MAPS/GM JOHNSON & ASSOCIATED, LTD, 2005.
- DION, N.P., 1972, "SOME EFFECTS OF LAND USE CHANGES ON THE SHALLOW GROUNDWATER SYSTEM IN THE BOISE-MERIDIAN AREA, IDAHO"; IDAHO DEPARTMENT OF WATER ADMINISTRATION, WATER INFORMATION BULLETIN NO. 26, 47P.

GOOGLE EARTH, 1992, 2002, 2010, AND 2020 AERIAL PHOTOGRAPHS. HTTP://WWW. EARTH.GOOGLE.COM.

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- MALDE, H.E. AND POWERS, H.A. 1962, "UPPER CENOZOIC STRATIGRAPHY OF WESTERN SNAKE RIVER PLAIN, IDAHO"; GEOLOGICAL SOCIETY OF AMERICA BULLETIN, V. 73, P1197-1220.

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NETRONLINE: NATIONWIDE ENVIRONMENTAL TITLE RESEARCH, LLC. 1954, 1969, AND 1981 HISTORIC AERIAL PHOTOS.

OTHBERG, K.L. AND STANFORD, L.R., 1992. "GEOLOGIC MAPS OF THE BOISE VALLEY AND ADJOINING AREAS; WESTERN SNAKE RIVER PLAIN, IDAHO"; IDAHO GEOLOGIC SURVEY MAP SERIES. SCALE 1:100,000.

R.L. POLK COMPANY. POLK'S CITY DIRECTORIES FOR CALDWELL, IDAHO.

UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY, 1979 AND 2017. "SAND HOLLOW, IDAHO QUADRANGLE, 7.5-MINUTE SERIES TOPOGRAPHIC MAPS".

# ENVIRONMENTAL DATABASE SOURCES:

ENVIRONMENTAL RESPONSE NOTIFICATION SYSTEM (ERNS) DATABASE INFORMATION: HTTP://WWW.NRC.USCG.MIL/WBDCGI.EXE

- IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY WASTE DIVISION INVENTORY (WDI) HTTP://WWW.DEQ.IDAHO.GOV/APPLICATIONS/WDI/
- NETRONLINE: NATIONWIDE ENVIRONMENTAL TITLE RESEARCH, LLC. TEMPE, ARIZONA; ENVIRONMENTAL DATABASE REPORT; HTTP://WWW.NETRONLINE.COM
- RTK.NET: RIGHT-TO-KNOW ENVIRONMENTAL DATABASES; HTTP://WWW.RTKNET.ORG/RTKDATA.PHP

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) ENVIRONMENTAL DATABASE SOURCES:

NPL, CERCLIS AND RCRA GENERATORS FROM THE USEPA "ENVIROMAPPER STOREFRONT": HTTP://WWW.EPA.GOV/ENVIRO/HTML/EM/INDEX.HTML HTTP://WWW.EPA.GOV/SUPERFUND/SITES/PHONEFAX/PRODUCTS/.HTML HTTP://WWW.EPA.GOV/ENVIRO/HTML/RCRIS/ HTTP://WWW.EPA-ECHO.GOV/ECHO/INDEX.HTML

CORRACTS DATA FROM USEPA WEBSITE: HTTP://YOSEMITE.EPA.GOV/RIO/OWCM.NSF/WEBPAGE

BROWNFIELDS INFORMATION FROM USEPA WEBSITE: HTTP://YOSEMITE.EPA.GOV/RIO/CLEANUP.NSF/SITES/BF

# 11.0 PERSONS CONTACTED/INTERVIEWED

Ναμε	Address	TELEPHONE	Relationship to Site Use
Brian Falck	Pioneer Homes 719 1st Street South, Ste. B Boise, Idaho 83709	208.941.2686	Representative of Client (Pioneer Homes) Completed User Questionnaire



ADDENDA



MAPS & FIGURES









18123 N. HIGHFIELD WAY BOISE, IDAHO 83714 208-867-8876

163

PAGE 34









18123 N. HIGHFIELD WAY BOISE, IDAHO 83714 208-867-8876

PAGE 36







18123 N. HIGHFIELD WAY BOISE, IDAHO 83714 208-867-8876

167

PAGE 38

**AERIAL PHOTOS** 



























18123 N. HIGHFIELD WAY BOISE, IDAHO 83714 208-867-8876





18123 N. HIGHFIELD WAY BOISE, IDAHO 83714 208-867-8876

PAGE 46

176

SITE PHOTOS





PHOTOGRAPH #1: A VIEW OF THE PROPERTY AS SEEN LOOKING NORTH ALONG THE DRIVEWAY SHOWING THE SHOP BUILDING (LEFT) AND DWELLING (RIGHT).

PHOTOGRAPH #2: A VIEW OF THE PROPERTY AS SEEN LOOKING NORTHWEST FROM NEAR THE SOUTHEASTERN CORNER.



PHOTOGRAPH #3: LOOKING NORTH ALONG THE EASTERN BOUNDARY, AS SEEN FROM NEAR THE SOUTHEASTERN CORNER.





PHOTOGRAPH #4: LOOKING WEST ALONG THE SOUTHERN PROPERTY BOUNDARY. THE DIRT/GRAVEL ACCESS ROAD FROM FREEZEOUT ROAD IS VISIBLE ON THE LEFT SIDE OF THE PHOTO.

# PHOTOGRAPH #5: LOOKING EAST ALONG THE SOUTHERN PROPERTY BOUNDARY. THE DIRT/GRAVEL ACCESS ROAD FROM FREEZEOUT ROAD IS VISIBLE ON THE RIGHT SIDE OF THE PHOTO.





PHOTOGRAPH #6: A VIEW OF THE PROPERTY AS SEEN LOOKING NORTHEAST FROM NEAR THE SOUTHWESTERN CORNER.



PHOTOGRAPH #7: LOOKING NORTH ALONG THE WESTERN PROPERTY BOUNDARY, AS SEEN FROM NEAR THE SOUTHWESTERN CORNER.

PHOTOGRAPH #8: THIS PHOTO SHOWS THE SOUTH (FRONT) SIDE OF THE SHOP, AS SEEN LOOKING NORTH FROM THE DRIVEWAY.





PHOTOGRAPH #9: This photo SHOWS THE WEST (FRONT) SIDE OF THE HOUSE, AS SEEN LOOKING NORTHEAST FROM THE DRIVEWAY.





PHOTOGRAPH #10: A VIEW OF THE SITE AS SEEN LOOKING WEST ACROSS THE BACK YARD, TOWARD THE EAST SIDE OF THE HOUSE.

PHOTOGRAPH #11: This photo SHOWS THE DISCARDED HOT WATER HEATERS, PRESSURE TANKS, AND MISCELLANEOUS METAL ITEMS LOCATED AT THE SEASONAL POND AREA (WEST END OF SITE).





PHOTOGRAPH #12: This PHOTO SHOWS THE SEASONAL POND AREA LOCATED ON THE WEST END OF THE SITE. THIS VIEW IS LOOKING NORTH.




PHOTOGRAPH #13: LOOKING SOUTH ALONG THE WESTERN BOUNDARY, AS SEEN FROM NEAR THE NORTHWESTERN CORNER.

PHOTOGRAPH #14: LOOKING EAST ALONG THE NORTHERN BOUNDARY, AS SEEN FROM NEAR THE NORTHWESTERN CORNER.





PHOTOGRAPH #15: A VIEW OF THE PROPERTY AS SEEN LOOKING SOUTHEAST FROM NEAR THE NORTHWESTERN.



PHOTOGRAPH #16: LOOKING WEST ALONG THE NORTHERN PROPERTY BOUNDARY, AS SEEN FROM NEAR THE NORTHWESTERN CORNER.

PHOTOGRAPH #17: LOOKING SOUTH ALONG THE EASTERN BOUNDARY, AS SEEN FROM NEAR THE NORTHEASTERN CORNER.





PHOTOGRAPH #18: A VIEW OF THE PROPERTY AS SEEN LOOKING SOUTHWEST FROM NEAR THE NORTHEASTERN CORNER.





PHOTOGRAPH #19: LOOKING WEST ALONG THE C.L.E. LATERAL AND ACCESS ROAD.



PHOTOGRAPH #20: This photo SHOWS THREE OF THE DRUMS LOCATED ON THE PROPERTY, NORTHEAST OF THE DWELLING IN AREA #2.



PHOTOGRAPH #21: LOOKING SOUTH ACROSS THE PASTURE, TOWARD THE HOMESITE.





PHOTOGRAPH #22: This photo SHOWS A PILE OF APPROXIMATELY 50 TIRES (SOME WITH WHEELS ATTACHED), DRUMS, AND MISCELLANEOUS LOCATED ON THE SOUTHEAST QUADRANT (NORTHEAST OF HOME SITE).

PHOTOGRAPH #23: This photo SHOWS ANOTHER AREA OF DISCARDED MATERIALS; HOUSEHOLD GOODS, TIRES, MISCELLANEOUS, AND SEVEN (7) DRUMS IN THE BACKGROUND.





PHOTOGRAPH #24: This photo shows two (2) trailers full of discarded materials and LUMBER.





PHOTOGRAPH #25: This photo shows a pile of dirt, scrap concrete, and other building materials.



PHOTOGRAPH #26: AN INTERIOR VIEW OF THE SHOP AS SEEN LOOKING EAST.



PHOTOGRAPH #27: ANOTHER INTERIOR VIEW OF THE SHOP; THIS PHOTO SHOWING CONTAINERS OF OILS, LUBES, PAINTS AND OTHER MISCELLANEOUS STORED INSIDE.





PHOTOGRAPH #28: AN INTERIOR VIEW OF THE DWELLING AS SEEN LOOKING NORTHWEST TOWARD THE KITCHEN/DINING AREA.



PHOTOGRAPH #29: This photo SHOWS THE WATER PRESSURE TANK INSIDE THE GARAGE.



PHOTOGRAPH #30: THIS PHOTO SHOWS TWO (2) MORE DRUMS LOCATED ON THE SOUTHEAST QUADRANT OF THE SITE.





PHOTOGRAPH #21: THIS PHOTO SHOWS THE SOIL STATING NEXT TO A DRUM AND CONTAINER, AS DESCRIBED IN THE REPORT (AREA #2).







PHOTOGRAPH #30: This photo shows the ground where three (3) drums were previously located (during our Aril 12, 2021 inspection). This area is near the northwest corner of the Property, next to the E.L.C. Lateral. Sage returned to the site on April 20, 2021 and found no Evidence of spills or leaks on the ground where the drums were

PRESENT.





ENVIRONMENTAL DATABASE



ENVIRONMENTAL QUESTIONNAIRE & DISCLOSURE STATEMENT





#### ENVIRONMENTAL QUESTIONNAIRE AND DISCLOSURE STATEMENT FOR PROPERTY OWNER

As per ASTM Standard 1527-13, in order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the User must provide the following information (if available) to the Environmental Professional. Failure to provide this information could result in a determination the "all appropriate inquiry" is not complete.

PROJ	ect Number/Name: <u>21-03640</u> Property Address: <u>23442 Freezeout Road in</u> PERTY TYPE: Commercial Industrial Multi-Tenant Residential Farm Lan	n Cald	well, cant l	ld. Land
QUE Nam Addr	stionnaire Completed By: e: <u>BRTAN FALCK</u> signature: <u>Signature</u> ress: 719 1ª Street South Ste B			
City/	State/Zip: Jampa Ib 85651	-		
Tele	phone: <u>208-941-2686</u>		-	
Emai	I Address: brian@ pionern homes i dahe.com			
1 /	Are there any buildings/structures on the property? f yes, type of construction: 1404 sq # house built in 1976 2,628 sq # 5hop built in 1987	YES	NO	UNK
2 1	lave there ever been any environmental problems at the property?	YES	NO	UNK
	f yes, explain:			V
3 1	Has a gas station or dry cleaner operated anywhere on the property? Not likely	YES	NO	UNK
4 1	Do any tenants use hazardous chemicals in relatively large quantities on the property? If yes, explain:	YES	NO	UNK
5	Have any tenants ever complained about odors in the building or experienced health-related problems that may have been associated with the building?	YES	NO	UNF
	If yes, explain:			V
6	Are there any underground storage tanks (USTs) or above ground storage tanks (ASTs)?	YES	NO	UNF
	If yes, describe # of USTs/ASTs; size; contents; date(s) Installed:			1
7	Have there been any USTS or ASTs located on the Property in the past?	YES	NO	UNH
	If ves, describe # of USTs/ASTs; size; contents; date(s) Installed/removed or closed:		10.00	V

8 Are there or have there been any on site sewage disposal systems (septic, drainfields, drywells, etc.) on the Property? If yes, explain: services house



Page 1 of 3



Are there any wells located on the Property?

18123 N. HIGHFIELD WAY BOISE, IDAHO 83714 208.867.8876 SAGE.BOISE@GMAIL.COM

YES

YES	NO	UNK
~		

NO

UNK

10 Did a search of recorded land title records (or judicial records where appropriate) identify any environmental liens filed or recorded against the property under federal, tribal, state or local law?

somestic well behad home.

If yes, explain:

If yes, explain:

If yes, explain:

If yes, describe:

If yes, explain:

If yes, explain:

If yes, explain:

If yes, explain:

14 Do you know the past use(s) of the property?

If yes, explain:

9

11 Do you have any specialized knowledge or experience related to the property or nearby properties? For example, Are you involved in the same line of business as the current or former

knowledge of the chemical s and processes used by this type of business?

occupants of the property or an adjoining property so that you should have specialized

15 Do you know of specific chemicals that are present or once were present at the property?

16 Do you know of spills or other chemical release that have taken place at the property?

17 Do you know of any environmental cleanups that have taken place at the property?

18 Based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

19 What is the reason for conducting the Phase I Environmental Site Assessment?

14.1

YES NO UNK

		and the second s		1
12	Does the purchase price being paid for this Property reasonably reflect the fair market value	YES	NO	UNK
	of the property?	/		
13	If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?	YES	NO	UNK

-		-
YES	NO	UNK
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		And and a second second second second second second second second second second second second second second se

V

YES	NO	UNK
	/	

YES	NO	UNK
	V	

YES	NO	UNK
	1	

YES	NO	UNK
	~	

YES	NO	UNK
		2

YES	NO	UNK
1		

If yes, explain: Required part of Bureau of Reclamation request to retignealign a drainage slitch. Page 2 of 3

AGE

PAGE 77



18123 N. HIGHFIELD WAY BOISE, IDAHO 83714 208.867.8876 SAGE.BOISE@GMAIL.COM

- 20 Have any previous Environmental Assessment Reports been prepared for the Property? YES NO UNK If yes, provide date when prepared and include copy or report: PLEASE ATTACH THE FOLLOWING INFORMATION OR DOCUMENTS, IF AVAILABLE: Names/phone numbers of key individuals with knowledge of the property use/history; Map showing the boundaries of the property: Copies of past environmental site assessments or other environmental reports: Copies of Environmental permits: Registrations for Underground or Aboveground storage tanks (if any): Material Safety Data Sheets (MSDS) for hazardous substances used or store on site (if any): Community Right-toKnow Plans pertaining to the Property. Notices of other correspondence from any governmental agency relating to any inspections \* or violations of environmental rules retarding the property or environmental liens encumbering the Property. Recorded Activity Use Limitations (AULs) (if any). \*
- Chain of Title or other Title Report documents.

4	Н	4	1-	
/	Π	1	-	

\*



PAGE 78

CHAIN-OF-TITLE RECORD



610 S. Kimball Avenue Caldwell, ID 83605

ELECTRONICALLY RECORDED-DO NOT REMOVE THE COUNTY STAMPED FIRST PAGE AS IT IS NOW INCORPORATED AS PART OF THE ORIGINAL DOCUMENT

File No. 688622 TK/

#### WARRANTY DEED

For Value Received Virginia Figuredo, Trustee of the Virginia Figueredo Trust dated October

25, 2018

hereinafter referred to as Grantor, does hereby grant, bargain, sell, warrant and convey unto

#### Dorothy Ann Bonham and Melvin Edward Bonham, Trustees of The Dorothy Ann Honham and Melvin Edward Bonham 2004 Revocable Trust and Melvin Bonham Jr., an unmarried man, each as to an undivided 50% interest

hereinafter referred to as Grantee, whose current address is 3905 Curran Road, Ione, CA 95640

The following described premises, to-wit:

See Exhibit A attached hereto and made a part hereof.

To HAVE AND TO HOLD the said premises, with their appurtenances unto the said Grantee(s), and Grantees(s) heirs and assigns forever. And the said Grantor(s) does (do) hereby covenant to and with the said Grantee(s), the Grantor(s) is/are the owner(s) in fee simple of said premises; that said premises are free from all encumbrances EXCEPT those to which this conveyance is expressly made subject and those made, suffered or done by the Grantee(s); and subject to U.S. Patent reservations, restrictions, dedications, easements, rights of way and agreements, (if any) of record, and current years taxes, levies, and assessments, includes irrigation and utility assessments, (if any) which are not yet due and payable, and that Grantor(s) will warrant and defend the same from all lawful claims whatsoever.

Dated: July 17, 2019

The Virginia Figueredo Trust

By: <u>Virginia Eiguerado</u>, Trustee Virginia Figueredo, Trustee

State of California, County of

This record was acknowledged before me on \_\_\_\_\_ by Virginia Figueredo, as trustee of the Virginia Figueredo Trust.

Signature of notary public Commission Expires:

Page 1 of 3 06/19/2020 3:34 PM



2019-033320 RECORDED

07/24/2019 12:38 PM CHRIS YAMAMOTO CANYON COUNTY RECORDER

PIONEER TITLE CANYON - CALDWELL ELECTRONICALLY RECORDED

\$15,00

Pgs=3 MBROWN

TYPE: DEED



A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California County of Nevada On July 23, 2019 , before me, Christy Mane Summer , Notary Public, personally appeared Mirginia D. Figueredo who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of State of California that the foregoing paragraph is true and correct. CHRISTY MARIE SUMMER Notary Public - California Nevada County WITNESS my hand and official seal. Commission # 2251067 ly Comm, Expires Jul 26, 2022 SIGNATUR PLACE NOTARY SEAL ABOVE Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document. **Description of attached document** Title or type of document: 11/2 man +1/ Deed Document Date: July 23, 2019 Number of Pages: 5 Signer(s) Other than Named Above:\_\_\_\_

Page 2 of 3 06/19/2020 3:34 PM



#### EXHIBIT A

A part of the SE1/4 of the NE1/4 and the SW1/4 of the NE1/4, Section 3, Township 4 North, Range 3 West, Boise Meridian, more particularly described as follows:

BEGINNING at the southeast corner of said SW1/4 of the NE1/4; thence

south 89°08'36" West along the south boundary of said SW1/4 of the NE1/4 a distance of 681.58 feet to a point on the westerly boundary of the parcel described in the quit claim deed recorded as Instrument No. 945974, Records of Canyon County, Idaho; thence traversing said westerly boundary as follows: North 14°39'26" East a distnce of 51.96 feet; North 89°08'36" East a distance of 468.46 feet; North 28°55'40" East a distance of 397.26 feet; North 28°44'21" West a distance of 169.92 feet: North 13°10'27" East a distance of 268.10 feet; North 66°40'49" East a distance of 65.01 feet; North 18°34'52" East a distance of 523.27 feet to a point on the north boundary of said SE1/4 of the NE1/4; thence North 89°24'56" East along said north boundary a distance of 832.99 feet; thence South 1°27'37" East a distance of 258.22 feet along the centerline of an existing irrigation lateral; thence South 6°00'26" East continuing along said centerline a distance of 479.39 feet to a point on the northerly boundary of the parcel described in the warranty deed recorded as Instrument No. 729194, records of Canyon County, Idaho; thence traversing the boundary of said parcel as follows: North 81°39'12" West a distance of 28.29 feet; North 58°24'52" West a distance of 122.26 feet: South 0°49'14" East a distance of 654.97 feet to a point on the south boundary of said SE1/4 of the NE1/4; thence

South 89°12'20" West along said south boundary a distance of 965.08 feet to the POINT OF BEGINNING.

EXCEPT THEREFROM the following described property hereinafter referred to as Parcel B, described as follows:

Parcel B:

Commencing at the southwest corner of said SW1/4 of the NE1/4; thence

North 89°08'36" East along the south boundary of said SW1/4 of the NE1/4 a distance of 633.76 feet to the TRUE POINT OF BEGINNING; thence

North 14°30'08" East a distance of 51.91 feet; thence

North 89°08'30" East a distance of 30.00 feet; thence

South 0°51'24" East a distance of 50.05 feet to a point on the said south boundary; thence

South 89°08'36" West along said south boundary a distance of 43.79 feet to the True Point of Beginning.

TOGETHER WITH an easement for ingress and egress over and across said Parcel B

Page 3 of 3 06/19/2020 3:34 PM

RECORDING REQUESTED BY AND WHEN RECORDED MAIL TO: Intermountain Legal Group 132 SW 5<sup>th</sup> Avenue, Suite 150 Meridian ID 83642

SEND TAX STATEMENTS TO: Virginia Figueredo 305 W Main St. Apt 210 Grass Valley, CA 95945



CHRIS YAMAMOTO CANYON COUNTY RECORDER Pgs=4 EHOWELL \$15.00 DEED INTERMOUNTAIN LEGAL GROUP



CHRIS YAMAMOTO CANYON COUNTY RECORDER Pgs=4 EHOWELL \$15.00 DEED JOSEPH L MORTON III PC

#### (SPACE ABOVE LINE FOR RECORDER'S USE) QUITCLAIM DEED BEING RE-RECORDED TO CORRECT INSTRUMENT NUMBER 2018-055754 Trustee name

For value received, VIRGINIA FIGUEREDO, TRUSTEE OF THE FIGUEREDO FAMILY TRUST, WHOSE CURRENT ADDRESS IS 305 W MAIN ST., APT 210, GRASS VALLEY, CA 95945, Grantor, hereby quitclaims to:

Figueredo Virginia VIRGINIA INSTEE OF THE VIRGINAL TOUREDO TRUST DATED OCTOBER 25, 2018, AND ANY AMENDMENTS THERETO, Grantee, whose current address is 305 W Main St. Apt 210, Grass Valley, CA 95945, all of its interest in that real property situated in Canyon County, State of Idaho, described as follows:

See Legal Description on Exhibit "A", attached hereto and incorporated herein by this reference.

The true consideration for this conveyance is to transfer property to the same party.

Witness the hand of said Grantor this	day of February	2019
---------------------------------------	-----------------	------

Seemached

STATE OF ) SS. COUNTY OF

On this day of

20 , before me

personally appeared Virginia Figueredo, personally known to me (or proved to me on the basis of satisfactory evidence) to be the individual whose name is subscribed to the foregoing instrument, and acknowledged that she executed the same as her voluntary act and deed for the purposes therein contained.

WITNESS MY HAND AND OFFICIAL SEAL.

Notary Public My commission expires on \_\_\_\_\_ QUITCLAIM DEED - 1

EOFID State of Idaho County of Canyon } ss. I hereby certify that the foregoing instrument is a true and correct copy of the original as the the same appears in this office. DATED A WAY OF AMAMOTO, Clerk of the District Court CHRIS d Ex Officio Recorder Page 1 of 4 06/19/2020 3:34 PM



#### Exhibit "A"

A part of the Southwest Quarter of the Northeast Quarter and the Southeast Quarter of the Northeast Quarter, Section 3, Township 4 North, Range 3 West, Boise Meridian, more particularly described as follows:

BEGINNING at the Southwest corner of said Southeast Quarter of the Northeast Quarter (CE 1/16 cor.), monumented with a Government Land Office brass cap monument; thence South 89°12'20" West, 681.58 feet; along the South boundary of said Southwest Quarter of the Northeast Quarter; thence North 14°34'50" East 51.86 feet; thence North 89°12'20" East 468.46 feet parallel with the South boundary of said Southwest Quarter of the Northeast Quarter; thence North 14°34'50" East 51.86 feet; thence North 89°12'20" East 468.46 feet parallel with the South boundary of said Southwest Quarter of the Northeast Quarter; thence North 28°55'55" East 397.51 feet; thence North 28°40'15" West 170.55 feet; thence North 13°12'35" East 267.66 feet; thence North 66°50'45" East 65.05 feet; thence North 18°36'25" East 523.48 feet (of record as 523.43 feet); thence North 89°25'22" East 1138.29 feet along the North boundary of said Southeast Quarter of the Northeast Quarter; thence North boundary of said Southeast Quarter of the Northeast Quarter; thence North 89°02"40" West 26.93 feet (of record as 27.00 feet); thence North 23°28'40" West 255.33 feet; thence North 81°34'25" West 133.16 feet; thence North 58°24'15" West 122.26 feet; thence South 0°47'40" East, 655.00 feet; thence South 89°12'20" West 965.09 feet along the South boundary of said Southeast Quarter of the Northeast Quarter to the POINT OF BEGINNING.

This parcel is subject to road easement along the South 30 feet and is subject to an easement for an irrigation lateral.

Subject to the following Exceptions:

Exception 1:

That portion of the Southeast quarter of the Northeast quarter of Section 3, Township 4 North, Range 3 West of the Boise Meridian, Canyon County, Idaho and is more particularly described as follows: Beginning at the Northeast corner of said Southeast quarter of the Northeast quarter; thence South 0°56'21" West along the East boundary of said Southeast quarter of the Northeast quarter a distance of 988.14 feet to a point on the Northerly boundary of the parcel described in the Warranty Deed recorded as Instrument No. 729194, records of Canyon County, Idaho; thence traversing said boundary as follows: North 89°03'23" West a distance of 27.08 feet; North 23°29'23" West a distance of 255.33 feet; North 81°34'03" West a distance of 104.87 feet; thence leaving said boundary and bearing North 6°00'26" West along the centerline of an existing irrigation lateral a distance of 479.39 Feet; thence North 1427'37" West continuing along said centerline a distance of 258.22 feet to a point on the North boundary of said Southeast quarter of the Northeast quarter; thence North 89"24'56" East along said North boundary a distance of 305.55 feet to the POINT OF BEGINNING.

**QUITCLAIM DEED - 2** 

Page 2 of 4 06/19/2020 3:34 PM



**Exception 2:** 

This parcel is a portion of the SW1/4 N£1/4 of Section 3. Township 4 North, Range 3 West of the Boise Meridian and is more particularly described as follows:

CONCRENCING at the southwest corner of said SW1/4 NE1/4;

thence North 89° 06' 36" East along the south boundary of said SW1/4 NE1/4 a distance of 633.75 feet to the TRUE POINT OF EXGINNING;

thence North 14° 30' 08" East a distance of 51.91 feet;

thence North 89° 08' 30" Bast a distance of 30.00 feet;

2

thence South 0° 51' 24" East a distance of 50.05 feet to a point on said south boundary;

thence South B9° 08' 36" West along said south boundary a distance of 43.75 feet to the TRUE POINT OF BEGINNING.

Page 3 of 4 06/19/2020 3:34 PM



the individual who signed the document to which this certificate is attached, and	y of not
State of California	
County of <u>New aan</u> )	
on <u>2.1.2019</u> before me, <u>Susan</u>	C. Williams, Notary Rublic
personally appeared <u>VIRGINIA FIGUEFEAD</u>	
who proved to me on the basis of satisfactory evidence to be the perturbed to me on the basis of satisfactory evidence to be the perturbed to me that he/she/ authorized capacity(ies), and that by his/her/their signature(s) on upon behalf of which the person(s) acted, executed the instrument	erson(s) whose name(s) is/are subscribed to they executed the same in his/her/their the instrument the person(s), or the entity
I certify under PENALTY OF PERHIPY under the jours of the	
State of California that the foregoing paragraph is true and correct.	Chicase o white and
WITNESS my hand and official seal.	COMM. #2112491 z Notary Public - California z Nevada Comty
	My Comm. Expires May 21, 2019
Simpture Ausami C. Tulipliama	
	(Seal)
	(Seal)
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Although the information in this section is not required by law, it could prevent fraudulent remo	(Seal)
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Page 4 of 4 06/19/2020 3:34 PM



-1

9	945972			
	HSININEN SUCCESSION WARRANTY DEED			
	For Value Received ARTHUR E. ASHCRAFT and BONNIE L. ASHCRAFT, husband and wife,			
	the grantors, do hereby grant, bargain, sell and convey unto ROBERT V. FIGUEREDO and VIRGINIA D. FIGUEREDO, husband and wife,			
	of: 1604 W. 218th, Torrance, CA. 90501 the grantees, the following described premises, situated in Canyon County, State of Idaho, to-wit:			
	A part of the Southwest Quarter of the Northeast Quarter and the Southeast Quarter of the Northeast Quarter. Section 3. Township 4 North, Pange 3 West, Boise Meridian, more particularly described as follows:			
<u>uth 0°4/'40' tast, 625.00 reet;</u>	BEGINNING at the Southwest corner of said Southeast Quarter of the Northeast Quarter (CE 1/16 cor.), monumented with a Government Land Office brass cap monument; thence South 89°12'20" West, 661.58 feet; along the South boundary of said Southwest Quarter of the Northeast Quarter; thence North 14°34'50" East 51.86 feet; thence North 89°12'20" East 468.46 feet parallel with the South boundary of said Southwest Quarter of the Northeast Quarter; thence North 28°55'55" East 397.51 feet; thence North 28°40'15" West 170.55 feet; thence North 13°12'35" East 267.66 feet; thence North 68°50'45" East 65.05 feet; thence North 18°36'25" East 523.48 feet (of record as 523.43 feet); thence North 18°36'25" East 900 and the North boundary of said Southeast Quarter of the Northeast Quarter; thence South 0°56'31" West 988.51 feet along the East boundary of said Southeast Quarter of the North- east Quarter; thence North 89°02'40" West 26.93 feet (of record as 27.00 feet); thence North 23°28'40" West 255.33 feet; thence North 81°34'25" West 133.16 feet; thence North 58°24'15" West 122.26 feet; thence South 89°12'20" West 965.09 feet along the South boundary of said Southeast Quarter of the Northeast Quarter to the POINT OF BEGINNING. This parcel is subject to a road easement along the South 30 feet and is subject to an easement for an irrigation lateral. SUBJECT TO That certain mortgage, dated July 14, 1976, in favor of Kome Federal Savings & Loan Association of Boise, a corporation, which said mortgage was recorded on July 14, 1976, as Document No. 778725, in the records of Canyon County, Idaho, and which said mortgage, the Grantees here- in assume and agree to pay according to the terms and tenor thereof. Together with all of the Grantors' oil, gas and geothermal rights; mineral			
and mineral rights appurtenant to the above described property TO HAVE AND TO HOLD the said premises, with their appurtenances who the said Grantees, their hens and assigns forever. And the said Grantor S do hereby covenant to and with the said Grantees, that they are the owners in fee simple of said premises: that said premises are free from all incumbrances				
	and that they will warrant and defend the same from all law ful claims whatsoever. Dated: April 30, 1982 Getting E. Gilconft Bonnie, P. Osheraft			
	STATE OF IDAHO, COUNTY OF CANYON) SS. On this 30 <sup></sup>			
	known to the the person's _who so names are subscribed to the within instrument, and acknowledged to me that they?			
	Depury. Notary Public. Fees \$			







WELL CONSTRUCTION LOG



#### State of Idaho Department of Water Administration

### WELL DRILLER'S REPORT

State law requires that this report he filed with the Director, Department of Water Administration within 20
State law requires that this report be med with the Director, Department of water Administration within 50
days after the completion or abandooment of the wall

1. WELL OWNER       7. WATER LEVEL         Name ABIL CRAFT	days after the completion of	raband	onment	of the v	vell.	7 10	/	
Name       ABBI CELOP         Addres, EP       I. CALDBELL         Owner's Permit No	1. WELL OWNER	7. W	ATER	LEVEL		/		
Address: EP:       I. CALTORETLI.         Address: EP:       I. CALTORETLI.         Owner's Permit No.       Paint formation of the Construction of the Consthe Construction of	Name ASH CRAFT	s	tatic wa	ter leve	40 feet below land su	rface		
Address _DD       L       Light		F	lowing?	P D Y	es 🖉 No G.P.M. flow			
Owner's Permit No	Address Rit L. CALDWRLD.		empera Irtesian	closed-in	pressure p.s.i.			
2. NATURE OF WORK       B. WELL TEST DATA	Owner's Permit No	<u> </u>	ontrolle	ed by	Valve Cap	Plug		
New well     Despend     Abandoned (describe method of abandoning)     Abandoned (describe method of abandoni	2. NATURE OF WORK	8. W	ELL T	EST DA	ТА			
□ Abardoned (describe method of abandoning)       □ Discharge G.A.       □ Draw Down       Near Namede         □ Abardoned (describe method of abandoning)       □       □       □       □       □         3. PROPOSED USE       □       □ method       □ Test       □ Other facebrity type       3. LITHOLOGIC LOG         □ Mainingial       □ Industrial       □ Steck       □ Weath Disposed or       0       0       0         4. METHOD DRILLED       0       0       0       0       0       0       0       0       0         28 Cable       □ Rotory       □ Dus       □ Other       6       0       20       0	🏝 New well 🛛 Deepened 🗖 Replacement	□ Pump Bailer @Cother ,						
3. PROPOSED USE	Abandoned (describe method of abandoning)	Discharge G.P.M.		G.P.M.	Draw Down Hours		'umped	
3. PROFOGED USE         Mailed       Industrial       Discel       Discelor         Mailed       Industrial       Discelor       Built HOLOGIC LOG         Mailed       Industrial       Discelor       Fin       Total       Total       Total         A. METHOD DRILLED       B       ID       2005       Book 11       Into       Compacity       Total         Sold       Cable       Rotory       Dug       Other       Cable       Sold       Cable       Bandto       Sold								
3. PROPOSED USE       Dimentic       Information       Test       Other faces/r typed         B. LITHOLOGIC LOG       Netrial       Stock       Watern Disposed or inplaction       Netrial       Vest         4. METHOD DRILLED       Stock       Watern Disposed or inplaction       Stock       Netrial       Vest       Netrial       Vest         252       Cable       Rotory       Dug       Other       6       20       20       Diamates and the stock       XE         Casing schedule:       Disenser       From       Total depth       67       60       610       20       200       200/transl       Diamates       75         Tableoses       Diamates       From       Total depth       67       60       60       67       craveal       cpurpel       25.         Tableoses       Diamates       From       Total depth       67       feet       60       67       craveal       cpurpel       25.         Tableoses       Diamates       From       Feet       fe		┢──					_	
Consetie       Imagetien       Test       Other facebring types         Manifold       Industrial       Steck       Water Dispaced or building types         Manifold       Industrial       Steck       Water Dispaced or building types         4. METHOD DRILLED       6       10       10       toppsoil       Maserial       Water Dispaced or building types         V2E Cable       Rotory       Dug       Other       6       10       2000; soil into cracel       x         V2E Cable       Rotory       Dug       Other       6       50       60       clay       x       x         Diameter of hole       inches       Total depth       67       feet       10       200       clay       x       x         Diameter of hole       5       inches       feet       feet       10       200       clay       x       x         Thickes       Dishes       feet       feet       feet       10       200       clay       x       x         Total spite       Yes       Concrete       feet       feet       10       10       x       x       x       x       x       x       x       x       x       x       x       x	3. PROPOSED USE							
□ Municipal       □ Industrial       □ Stock       □ Weeter Dispond or byte       □ 10       □ 1000       □ 1000       □ 100       □ 100	🖄 Domestic 🔲 Irrigation 🔲 Test 🔲 Other (specify type)	9. 1	ITHOL	OGIC L	.OG			
Image: Image: Construction         Date: Term         Term	Municipal 🖸 Industrial 📑 Stock 💭 Waste Disposal or	Hole	De	pth	Material		Wa	ter
4. METHOD DRILLED       8       0       2015       solid into       soli	Injection	Diam.	From	10	topsoil		Yes	No
Věš Cable       Rotory       Dug       Other       6       20       30       Říževněl And send       x         5. WELL CONSTRUCTION       6       40       6       30       40       2520       and send       x         Diameter of hole 6       inches       Total depth       67       feet       6       40       50       pravel       and send       x         Tybickos       Diameter of hole 6       inches       Total depth       67       feet       6       40       50       pravel       and send       x         Tybickos       Diameter of hole 6       inches       inches       feet	4. METHOD DRILLED	8	10	20t	o soil into gracel		-	x
S. WELL CONSTRUCTION       6       40       50       C20724       JINE 0 LAY       x         Diameter of hole 6       inches       Total depth 67       feet       6       60       50       C20724       JINE 0 LAY       x         Casing schedule:       B Steel       Concrete       Frem       6       60       67       creavel       and       x         Totaches       Diameter of hole 6       Inches       feet       6       60       67       creavel       and       x         Casing schedule:       B Steel       Concrete       Feet       6       60       67       creavel       and       x       x         Casing schedule:       B Steel       Feet	VA Cable	6	20	30	bravel and sand	2		x
5. WELL CONSTRUCTION       6       50       60       clay sinto       gravel ar.       9 and x x         Diameter of hole 6       inches       Total depth 67       feet       6       60       67       gravel courses       925         Casing schedule:       Dismester       From       Total depth 67       feet       6       60       67       gravel courses       925         Casing schedule:       Dismester       From       Total depth 66       feet       6       60       67       gravel courses       925         Inches       inches       inches       feet       feet       6       60       67       gravel courses       925         Inches       inches       feet       feet       feet       6       60<		6	30	40 50	gravel and san	a y	-	x
Diameter of hole 6 inches       Total depth 67 feet       5 60 67 created course       Stell       Course         Thickes       Diameter       From 6 feet       feet       Feet<	5. WELL CONSTRUCTION	6	50	60	clay into gravel	an. san	x	x
Casing schedule:       ED Steel       Concrete         Thicknes       Diameter       From       To         250       Inches       -       Feet       Feet         inches       inches       feet       Feet       Feet         inches       feet       For       Feet       Feet         perforation       inches       feet       feet       Feet         perforations       feet       feet       Feet       Feet         perforations       feet       feet       Feet       Feet         DiameterStot size       Set from	Diameter of hole 6 inches Total depth _67feet		60	67	gravel cour	Se	XX	
Thickness       Diameter       From       To         250       inchess       finches       feet	Casing schedule:					***		
Inches       Inches       feet       feet         Inches       inches       feet       feet         Inches       inches       feet       feet         Inches       inches       feet       feet         Inches       inches       feet       feet         Inches       inches       feet       feet         Inches       inches       feet       feet         Inches       feet       feet       feet         Inantacturer's name       Model No.       feet       feet         Diameter       Slot size       Set from       feet to       feet         Inantacturer's name       feet to       feet       feet       feet         Inantacturer's name       feet to       feet       feet       feet         Inanterid used in seol       censot growt	Thickness Diameter From To	_						
inches       inches       feet       feet         inches       inches       feet       feet         inches       inches       feet       feet         Was a packer or seal used?       Yes       Z No         Perforated?       Yes       Z No         member       From       To         perforation       inches       feet         perforations       feet       feet         perforations       feet       feet         perforations       feet       feet         perforations       feet       feet         Diameter       Slot size       Set from         feet to       feet to       feet         Diameter       Slot size       Set from         feet to       feet to       feet         Placed from       feet to       feet         Overbors to seal depth       20       Motellolux         6. LOCATION OF WELL       Subdivision Name       feet Ne	inches inches feet feet				· · ·		$\vdash$	+
	inches feet feet							
Was a packer or seal used?       Yes       IF No         Was a packer or seal used?       Yes       ICNO         How parforated?       Factory       Knife       Torch         Size of perforation       inches by       inches       Inches	inches feet feet feet						1	
Was a packer or seal used?       Yes       GE No         Perforated?       Factory       Knife       Torch         Size of perforation      inches by      inches s         Number       From       To		-						
Perforated?       I Factory       Knife       Torch         Size of perforation      inches byinches       Torch	Was a packer or seal used?  Yes S No							
Size of perforation       inches       From       To         perforations       feet       feet       feet         well screen installed?       Yes       No         Manufacturer's name       Model No.       feet       feet         Diameter_Slot size_Set from       feet to       feet       feet         Diameter_Slot size_Set from       feet to       feet       feet         Placed from       feet to       feet       feet       feet         Surfice seal depth_20       Matherid used in seal       Cemant groat       feet       feet         Placed from       feet to       feet       feet       feet       feet       feet         Surfice seal depth_20       Matherid used in seal       Cemant groat       feet       feet       feet       feet       feet         Surfice seal depth_20       Matherid used in seal       feet seal       feet       feet       feet       feet       feet       feet       feet	How perforated? C Factory C Knife C Torch						-	
Number       From       To	Size of perforation inches by inches	<u>├</u>			· · · · · · · · · · · · · · · · · · ·	·····		
Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Image: Section installed?         Image: Section installed?       Section installed?         Im	Number From To							
	perforations feet feet	$\vdash$						
Well screen installed?       I Yes       I No         Manufacturer's name	perforations feet feet							L
Manufacturer's name       Model No.         Type	Well screen installed? 🗇 Yes 🎽 No					~		
Type       Model No.         Diameter_Slot size       Set from         feet to       feet to         gravel packed?       Yes B No Size of gravel         Placed from       feet to         feet to       feet         Placed from       feet to         Starting procedure used       Starting procedure used         Subdivision nust agree with written location.       It         N       Subd	Manufacturer's name					8		-
DiameterSlot sizeSet fromfeet tofeet         DiameterSlot sizeSet fromfeet tofeet         Gravel packed?YesNo Size of gravel         Placed fromfeet tofeet            Budding clay         Widling clay            Widling clay            Budding clay         Widling clay            Widling clay            Widling clay            Widling clay            Widling clay            Widling clay	Type Model No							
Gravel packed?       Yes       Yes       No       Size of gravel         Placed from	Diameter Slot size Set from feet to feet to feet	<u> </u>					-	–
Graver packed/       Yes       ENNO       Size of gravel         Placed from       feet to       feet to       feet         Surface seal depth       20       Material used in seal       Cement grout         Puddling clay       E       Well cuttings         Image: Dependence used       Grame       Image: Dependence used       Image: Dependence used         Image: Dependence used       Grame       Image: Dependence used       Image: Dependence used         Image: Dependence used       Grame       Image: Dependence used       Image: Dependence used         Image: Dependence used       Grame       Image: Dependence used       Image: Dependence used         Image: Dependence used       Grame       Image: Dependence used       Image: Dependence used         Image: Dependence used       Grame       Image: Dependence used       Image: Dependence used         Image: Dependence used       Grame       Image: Dependence used       Image: Dependence used         Image: Dependence used       Image: Dependence used       Image: Dependence used       Image: Dependence used         Image: Dependence used       Image: Dependence used       Image: Dependence used       Image: Dependence used         Image: Dependence used       Image: Dependence used       Image: Dependence used       Image: Depane							-	-
Surface seal depth_20	Placed from feet to feet							
Surface seal depth_2       Material used in seal if Cement growt         Puddling clay       Well cuttings         Overbore to seal depth       0         Overbore to seal depth       10.         With the seal depth       10.         Subdivision Name       10.         Sign		<u> </u>					†~	
Seeling procedure used       Image: Seeling procedure used       <	Surface seal depth Material used in seal Coment grout							
CAN YON CAN Y	Secting procedure used for Shurry air Termenerary surface contings						-	-
6. LOCATION OF WELL Sketch map location must agree with written location.	Overbore to seel desth							
With the started of				-	-15-74	8-19. 7	V	
W       Subdivision Name         W       Subdivision Name         E       Lot No         Block No         Signed by (Firm Official)         W         W         Signed by (Firm Official)         W         W         Signed by (Firm Official)         W         W         W         Signed by (Firm Official)         W      <	Sketch map location must arrea with written location			rtedo	// finished	· · · · ·	1	
Subdivision Name W E Lot NoBlock No S W S W S W USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE COPY TO THE DEPARTMENT					ELC ATION		m	
W       Subdivision Name         W       E         Lot No.       Block No.         Signed by (Firm Official)       Date 9/17/74         Signed by (Firm Official)       Cault         Signed by (Firm Official)       <	11. DRILLERS CERTIFICATION			0	5.4			
Image: Section of the section of t	Firm Name Firm Name Firm Name Firm NameD_D_VISLL_DRLD.LING_Firm No			02	24			
Signed by (Firm Official) Signed by (Firm Official) Signed by (Firm Official) Signed by (Firm Official) (Operator) USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE COPY TO THE DEPARTMENT	Address 310 s 11 street Opto 9/17/2			7/7	4_			
Sounty ond (Operator) ond (Operator) (Operator) USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE COPY TO THE DEPARTMENT								
USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE COPY TO THE DEPARTMENT	S CAN YON	and and				-		
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USE ADDITIONAL SHEETS IF NECESSARY FORWARD THE WHITE COPY TO THE DEPARTMENT	SW KNEWSER 3 T. 4 AVS. R. 3 B							
The second s	USE ADDITIONAL SHEETS IF NECESSARY FORWARD	THE W	HITE C	OPY T	O THE DEPARTMENT			



18123 N. HIGHFIELD WAY BOISE, IDAHO 83714 208-867-8876 QUALIFICATIONS OF ENVIRONMENTAL ASSESSOR



### DEFINITION OF ENVIRONMENTAL PROFESSIONAL AND RELEVANT EXPERIENCE THERETO, PURSUANT TO 40 CFR312.10

#### 1) Environmental Professional

- a) Environmental Professional means:
  - A person who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases (se §312.1(c) on, at, in, or to a property, sufficient to meet the objectives and performance factors in §312.20(e) and (f).
  - ii) Such a person must: (i) hold a current Professional Engineer's or Professional Geologist's license or registration from a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) and have the equivalent of three (3) years of full-time relevant experience; or (ii) be licensed or certified by the federal government, a state, tribe, or U.S. territory (or the Commonwealth of Puerto Rico) to perform environmental inquiries as defined in §312.21 and have the equivalent of three (3) years of full-time relevant experience; or (iii) have a Baccalaureate or higher degree from an accredited institution of higher education in a discipline of engineering or science and the equivalent of five (5) years of full-time relevant experience; or (iv) have the equivalent of ten (10) years of full-time relevant experience.
  - iii) An environmental professional should remain current in his or her field through participation in continuing education or other activities.
  - iv) The definition of environmental professional provided above does not preempt state professional licensing or registration requirements such as those for a professional geologist, engineer, or site remediation professional. Before commencing work, a person should determine the applicability of state professional licensing or registration laws to the activities to be undertaken as part of the inquiry identified in §312.21(b).
  - v) A person who does not qualify as an environmental professional under the foregoing definition may assist in the conduct of all appropriate inquiries in accordance with this part if such person is under the supervision or responsible charge of a person meeting the definition of an environmental professional provided above when conducting such activities.

#### 2) Relevant Experience

vi) *Relevant Experience*, as used in the definition of environmental professional in this section, means: participation in the performance of all appropriate inquiries investigations, environmental site assessments, or other site investigations that may include environmental analyses, investigations, and remediation which involve the understanding of surface and subsurface environmental conditions and the processes used to evaluate these conditions and for which professional judgment was used to develop opinions regarding conditions indicative of releases or threatened releases (see §312.1(c)) to the subject property.



## Sage Environmental Services, LLC 2112 N. 33RD STREET, BOISE, IDAHO 83703

**BRENDA L. MAGNUSON, REA** 

(208) 867-8876

#### PROFESSIONAL EXPERIENCE

# Sage Environmental Services, LLC 2000-Present Owner

Complete property transfer site assessments, asbestos management plans, asbestos and lead paint surveys and radon testing. I also conduct subsurface investigations including soil sampling, groundwater sampling, and provide project oversight in the installation of groundwater monitoring wells.

## Langston-Williams, Inc. 1997 - 2000 Environmental Scientist

Complete property transfer site assessments, asbestos management plans, asbestos and lead paint surveys and radon testing. I also conduct subsurface investigations including soil sampling, groundwater sampling, and provide project oversight in the installation of groundwater monitoring wells.

## <u>EnviroSearch International</u> 1995 - 1997 Environmental Scientist

Assessed commercial properties for environmental conditions prior to property transfer, prepared asbestos management plans, conducted asbestos and lead paint surveys, and collected samples for radon analyses. I also provided technical field support to the Boise office

#### Osprey Environmental, Inc. 1991 - 1995

#### Environmental Specialist

Completed property transfer site assessments, asbestos management plans, asbestos and lead paint surveys and radon testing. Conducted subsurface investigations including soil sampling, groundwater sampling, and provided project oversight in the installation of groundwater monitoring wells.

#### Power Environmental Services, Inc. 1992 - 1993

Environmental Specialist

IDAHO STATE UNIVERSITY

Completed property transfer site assessments and Spill Containment and Countermeasures Plans for a number of Idaho Power's hydroelectric power plants.

Boise City Public Works Department – Environmental Div: 1987 - 1992	Boise, ID
City of Blackfoot - Water Pollution Control 1984 - 1987	Blackfoot, ID

#### EDUCATION

Bachelol of Science. Biology- 1983	
Certifications	
Idaho Wastewater Operator Certificate, Class I	1986
Idaho Water/Wastewater Laboratory Operator Certificate; Class II	1986
Hazardous Materials and Hazardous Waste Seminar, Boise State University	1988
Solvent Management for Idaho Businesses, Boise State University	1989
Treatment of Metal Wastestreams - California State University, Sacramento	1990
Pretreatment Facility Inspection - California State University, Sacramento	1990
Basic Understanding and Complying with the Hazardous Waste Management Regulations	1991
OSHA Hazardous Waste Operation and Emergency Response Training Course August	1992
Idaho Groundwater Resources Course, University of Idaho Extension Office, Boise, Idaho	1993
Practices and Procedures for Asbestos Inspectors and Management Planner	1993
NESHAPS Asbestos Inspector/Management Planner Certification	1993
OSHA Hazardous Waste Operation and Emergency Response Training Course	1993
AHERA Asbestos Inspector/Management Planner Certification (updated annually)	1994



### Boise, ID

Boise, ID

Boise, ID

Boise, ID

Boise, ID

Pocatello, ID

#### MEMBERSHIPS & APPOINTMENTS Cal/EPA Registered Environmental Assessor (REA) Certificate #06973

#### EXPERTISE

- Phase One and Two Site Assessments
- Pollution Prevention
- Waste Minimization
- Water/Groundwater Sampling
- Underground Storage Tank Management

#### **REPRESENTATIVE CLIENTS**

First Security Bank of Idaho, N.A. Bank of America U.S. BANCORP Seafirst Bank Environmental Consulting Group Washington Trust Bank DK Commercial Real Estate Idaho Independent Bank Construction Lending Corporation of America Washington Mutual Bank Western Bank Wells Fargo Bank Key Bank National Association Farmers and Merchants Bank Washington Federal Savings & Loan DL Evans Bank The Clawson Group, Inc. D.B. Fitzpatrick & Company

Asbestos Inspections

Asbestos Management Plans

Soil Sampling/Characterization

Asbestos Sampling

As well as a number of local attorneys, insurance companies, out-of-state financial institutions, developers, real estate agencies, developers, and private parties.

#### REFERENCES

DK Commercial Real Estate 1880 S. Cobalt Point Way Boise, Idaho 83714 Ms. Brenda Clay (208) 371-5804

RA Schultz & Company 1524 W. Franklin Street Boise, Idaho 83702 Mr. Richard A. Schultz (208) 343-7070

Idaho Independent Bank 8351 W. Overland Road Boise, Idaho 83709 Contact: Mr. Charlie Kouba (208) 345-2960 Sterling Savings Bank 420 W. Main Street, Suite 205 Boise, Idaho 83702 Mr. Jeffrey Jones (208) 424-2000

Thornton-Oliver-Keller Commercial Real Estate 250 S. 5th Street Boise, Idaho 83702 Contact: Mr. Jerry VanEngen (208) 378-4600

Capital Matrix, Inc. 1471 Shoreline Dr., Suite 123 Boise, ID 83702 Contact: Ms. Deborah Brown (208) 383-3473 Ms. Ann Munroe



## Groundwater Levels for 04N 03W 04DCB1

...

WellNumber	04N 03W 04DCB1
WellID	363470
Driller's Report	More info
# of WL Records	2,469
Min WL Year	1964
Max WL Year	2019
WaterUse	Domestic
CompletionDate	5/31/1964
MinOpening	259
MaxOpening	293
TotalDepth	293
Elevation	2,430
County	CANYON
Zoom to	10

None Cano

33

1

-

209 Hill Cana/  $\square \times$ Hill Canal

## **Groundwater Levels**

Well Number: 04N 03W 04DCB1



Showing a subset of 2469 measurements, for 1964 through 2019.

Water Use Well Number County Domestic 04N 03W 04DCB1 CANYON

Well ID Basin Number

Year Drilled	5/31/1964	# of Measurements	2469	
Min Well Opening	259	Last Year Measured	2019	211
Max Well Opening	293	First Year Measured	1964	
Total Depth	293	LSD Elevation (feet)	2430	

#### Disclaimer

The Idaho Department of Water Resources is making this data available as a public service. The Idaho Department of Water Resources strives to ensure that all technical data and other information made available to the public is accurate, complete and in conformance with the Idaho Public Records Act.

Neither the Department of Water Resources nor the State of Idaho, however, assumes any legal responsibility for the accuracy or completeness of the information contained on this site. Persons using information from this site for official purposes, or other purposes, for which accuracy and completeness are required, are hereby notified that they should first verify the information with the public records or other primary sources from which the information was obtained.

If you have questions please send an e-mail message to <u>HydroInfo@idwr.idaho.gov.</u> This page was created by the *Idaho Department of Water Resources on 7/8/2021*.





CHRIS YAMAMOTO CANYON COUNTY RECORDER Pgs=12 HCRETAL NO FEE MISC CITY OF MIDDLETON

Space above this line for Recorder's use

#### CONSENT TO ANNEXATION

THIS CONSENT TO ANNEXATION ("Consent"), is made this / day of <u>September</u>, <u>2021</u>, between the City of Middleton, Idaho, an Idaho municipal corporation ("City") and <u>Thornton Gallup</u>, <u>ALC</u>.

WHEREAS, Developer is the owner of the Subject Property located in Canyon County, Idaho and more particularly described below; and

WHEREAS, the Subject Property is located outside the City corporate limits but within the City's area of impact as established by Idaho Code Section 67-6526; and

WHEREAS, Developer is in the process of developing the Subject Property under the land use jurisdiction of Canyon County, Idaho, but the parties acknowledge that the orderly development of the City will encompass the Subject Property within the foreseeable future; and

WHEREAS, Both City and Developer have an interest in the thoughtful, well-planned, and coordinated growth of Canyon County and City; and

WHEREAS, Developer desires to agree and consent to the annexation of the Subject Property into the corporate limits of City (the "Annexation") as soon as the Subject Property becomes contiguous to City limits; and

WHEREAS, there are costs associated with processing applications and noticing hearings for annexations when a property proposes itself as a candidate for annexation into the City ("Costs"); and,

WHEREAS, said costs are the responsibility of the property owner of the land proposing annexation.

NOW, THEREFORE, based upon the foregoing recitals, and the mutual consideration for the

ANNEXATION AND UTILITY CORRIDOR AGREEMENT, Page 1

execution of this Consent described herein, the parties agree as follows:

### I. <u>General</u>

A. The Subject Property is legally described on **Exhibit** A attached and incorporated by this reference ("Subject Property").

B. In recognition of this binding commitment and consent to annexation, City shall be responsible for all Costs associated with the Annexation of the Subject Property into the City.

C. City staff shall support the Annexation application at the time of said application so long as the same is in the best interests of City, at the time thereof.

D. Developer's subsequent and/or associated applications for the development of the Subject Property shall be granted no special privilege, license, priority, approval, or entitlement hereby, and shall progresses in accordance with the then-current and applicable law.

E. This Consent shall be recorded in the Canyon County Recorder's Office following complete execution by the Developer and the City. This Consent shall run with the land. By the execution of this Consent, Developer is bound and likewise binds its heirs, assigns, and any and all successors in interests to the terms of this Consent.

#### II. Annexation:

A. The Subject Property is not currently contiguous to the Middleton City limits and cannot, therefore, be immediately annexed into City. The annexation process shall proceed immediately at such time as an annexation path, as required by Idaho law, becomes available.

B. The Annexation shall be initiated and consummated pursuant to Idaho Code 50-222, and the same shall be a "Category A" annexation, as the term is used therein.

C. At such time as the Subject Property shall become contiguous to the City limits, the Developer, his heirs, successors, and assigns shall support the Annexation of the Subject Property in whole into the City limits to become part of the same with a  $\frac{2}{2}$  zone designation. The Annexation application, and associated application for the designation of a zone to the Subject Property, may be initiated by the City. The failure of any application to result in the annexation of the Subject Property shall not prevent or prohibit future annexation applications under this Consent.

D. In consideration of City's assumption of the Costs of the Annexation of the Subject Property in the impact area, Developer and its successors, forever, hereby irrevocably consent to the annexation of the Subject Property into the City limits as a voluntary "Category A Annexation" under Idaho law.

E. Developer, for itself and its heirs, assigns, and any and all successors in interest,

#### ANNEXATION AND UTILITY CORRIDOR AGREEMENT, Page 2

forever, waive the right to object to annexation of the Subject Property or revoke consent to the Annexation of the Subject Property.

F. Notice of such consent and waiver shall appear on any plat recorded in the office of the Canyon County Recorder and upon the covenants of any subsequent development occurring on the Subject Property.

### IV. Effective Date/Binding Effect:

This Consent shall become effective at the time that both parties execute the same. This Consent constitutes the legal, valid, and binding obligation of each party. The individuals executing this Consent warrants that he or she has full power and has been duly authorized to execute and deliver this Consent on behalf of the entity for which he or she signs.

V. <u>Termination</u>: Termination of this Consent shall occur upon complete satisfaction of its terms.

[end of text.]

IN WITNESS WHEREOF the parties hereto have set their hands the day and year written below.

Date: 9.3-21

Thornton Gallup. LLC.	
[name of entity]	
By: Non clout	
Its: Member	

Date: 9/17/2021 By: STEVEN

CITY OF MIDDLETON, IDAHO

Its Mayor

ATTEST:

Date: 9-17-2021

BE lerk

### STATE OF IDAHO ) ss. COUNTY OF CANYON ) On this <u>17</u> day of <u>September</u>, 20<u>21</u>, before me the undersigned, a Notary Public in and for said State personally appeared Steven Rule and Becky Crofts known or

Public in and for said State personally appeared Steven Rule and Becky Crofts known or identified to me to be the Mayor and City Clerk of the City of Middleton, Idaho that executed the said instrument, and acknowledged to me that such City executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.



Residence: My Commission Expires:

#### STATE OF IDAHO

#### **COUNTY OF CANYON**

On this 3 day of September , in the year 20 21, before me the undersigned, a Notary Public in and for said State personally appeared bon Thornton known or identified to me to be the manager or a member of the limited liability company that executed the instrument or the person who executed the instrument on behalf of said limited liability company and acknowledged to me that such limited liability company executed the same.

) ss.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

NOTA

Residence: Canyon County My Commission Expires: April 22 2006

JULIE R VAUDREY SEALTY Public - State of Idaho Commission Number 20201512 My Commission Expires Apr 22, 2026
# Exhibit A

Legal Description of the Subject Property

Mason &. Assocíates Inc

Professional Engineers, Land Surveyors and Planners

924 3<sup>rd</sup> St. So. Nampa, ID 83651 Ph (208) 454-0256 Fax (208) 467-4130

e-mail: dholzhey@masonandassociates.us

FOR: Pioneer Homes JOB NO.: JY1420 DATE: September 9, 2021

#### SUBDIVISION BOUNDARY PARCEL

A parcel of land being a portion of the SW1/4 NE1/4 and a portion of the SE1/4 NE1/4 of Section 3, Township 4 North, Range 3 West, Boise Meridian, Canyon County Idaho, more particularly described as follows:

Commencing at the southwest corner of the SW1/4 NE1/4, marked with a found G.L.O. brass monument;

Thence N 89° 47' 50" E a distance of 677.27 feet along the south boundary of the SW1/4 NE1/4 to the **POINT OF BEGINNING** marked with a found 1/2 rebar BBCE 940, replaced with a 5/8 rebar pls 9366;

Thence N 00° 01' 01" W a distance of 50.05 feet to a found 5/8 rebar PLS 8960;

Thence N 89° 49' 42" E a distance of 438.55 feet to a found 1/2 rebar, replaced with a 5/8 rebar PLS 9366;

Thence N 29° 32' 40" E a distance of 397.27 feet to a found 5/8 rebar PLS 8960;

Thence N 28° 07' 21" W a distance of 169.92 feet to a found 5/8 rebar PLS 8960;

Thence N 13° 47' 27" E a distance of 268.10 feet to a found 1/2 rebar, replaced with a 5/8 rebar PLS 9366;

Thence N 67° 17' 49" E a distance of 65.01 feet to a found 1/2 rebar, replaced with a 5/8 rebar PLS 9366;

Thence N 19° 11' 52" E a distance of 523.26 feet to a found 1/2 rebar on the north boundary of the SE1/4 NW1/4, replaced with a 5/8 rebar PLS 9366;

Mason &

Professional Engineers, Land Surveyors and Planners  $\mathsf{Page}\ 1\ \mathsf{of}\ 2$ 

Thence S 89° 58' 08" E a distance of 832.99 feet along the north boundary of the SE1/4 NE1/4 to a found 1/2 rebar, replaced with a 5/8 rebar PLS 9366;

Thence S 00° 50' 23" E a distance of 258.22 feet to a point marked with a 5/8 rebar PLS 9366;

Thence S 05° 23' 12" E a distance of 479.39 feet to a found 1/2 rebar, replaced with a 5/8 rebar PLS 9366;

Thence N 81° 01' 58" W a distance of 28.29 feet to a point marked with a 5/8 rebar PLS 9366;

Thence N 57° 47' 44" W a distance of 122.26 feet to a point, witness with a found 1/2 rebar replaced with a 5/8 rebar PLS 9366, bearing S 00° 11' 44" E a distance of 6.97 feet to said point;

Thence S 00° 11' 44" E a distance of 654.93 feet to a found 1/2 rebar on the south boundary of the SE1/4 NW1/4, replaced with a 5/8 rebar PLS 9366;

Thence S 89° 49' 13" W a distance of 965.15 feet along the south boundary of the SE1/4 NE1/4 to a found G.L.O. brass monument at the southwest corner of the SE1/4 NE1/4;

Thence S 89° 47' 50" W a distance of 637.76 feet along the south boundary of the SW1/4 NE1/4 to the **POINT OF BEGINNING**.

This parcel contains 31.408 acres more or less.

SUBJECT TO: All existing rights of way and easements of record or implied appearing on the abovedescribed parcel of land.



ason & ssociates Inc.

Professional Engineers, Land Surveyors and Planners  $P_{age \ 2 \ of \ 2}$ 

# Exhibit B

**Preliminary Plat or Site Plan** 

4

ANNEXATION AND UTILITY CORRIDOR AGREEMENT, Page 7

.









June 15, 2021

Brian Falck Pioneer Homes 719 1<sup>st</sup> Street South, Suite B Nampa, Idaho 836

RE: Freezeout Ridge Estates, Level 1 Nutrient Pathogen (NP) Study Approval

Dear Mr. Falck:

Southwest District Health (SWDH) and the Idaho Department of Environmental Quality (DEQ) received your Level 1 Nutrient-Pathogen study for review on April 19, 2021 for the proposed <u>Freezeout Ridge</u> <u>Estates</u>, located north of Caldwell, Canyon County, Idaho in SE1/4NE1/4 and SW1/4NE1/4, Section 3, Township 4N, Range 3W, Boise Meridian. The NP study was prepared by Atlas Technical Consultants, LLC, for Pioneer Homes of Nampa, Idaho.

The Property is reported to be an approximate 31-acre area of land. The proposed development includes 20 residential lots, with lot sizes ranging from approximately one (1) acre to 1.9 acres. Individual wastewater disposal systems and individual water wells for single family residences are planned.

Based on the data presented in the NP Study, Freezeout Ridge Estates will likely not significantly impact ground water quality downgradient of the proposed subdivision. The NP Study is approved, and the following conditions apply:

- <u>DEQ's review of the MB Spreadsheets indicate all lots, apart from lots 4,7,8 and 10, will need</u> extended treatment systems to reduce nitrate concentrations in wastewater to 27 mg/L or less.
- Maximum house size permitted is a four (4) bedroom house (300 gallons per day). 300 gallons per day is the value used in the NP study as the amount of effluent discharged from each individual subsurface disposal system.
- If lots are added the study must be resubmitted and/or amended before additional lots are approved.
- Secondary dwellings are not approved for this proposed subdivision, without resubmitting and/or amending the NP study to include additional dwellings. Approval of secondary dwellings is based on the resubmittal/amended NP study findings.

Based upon the review and results provided by DEQ, Freezeout Ridge Estates can now move forward with the next stage in the process by meeting the requirements of SWHD's Subdivision Engineering Report (SER). The SER and subsurface sewage disposal design must incorporate the findings of the Nutrient-Pathogen study. For lot design care should be taken to locate septic systems so potential

# Healthier Together

13307 Miami Lane • Caldwell, ID 83607 • (208) 455-5400 • FAX (208) 455-5405

impacts to downgradient wells are minimized. Once an SER is submitted to our office, SWDH can review it. A pre-development meeting is required to being the SER process. During this meeting an on-site evaluation, including test holes can be scheduled.

If you have questions, please call our office at 208-899-3907 or <a href="mailto:brigita.gruenberg@phd3.idaho.gov">brigita.gruenberg@phd3.idaho.gov</a>.

Sincerely,

Brigitta Gruenberg, RCHS

Brigitta Gruenberg, REHS/RS Land Development Senior

c Monica Saculles, Atlas Technical Consultants, LLC Angie Cuellar, Mason & Associates Inc. File copy



CANYON HIGHWAY DISTRICT No. 4 15435 HIGHWAY 44 CALDWELL, IDAHO 83607

> TELEPHONE 208/454-8135 FAX 208/454-2008

June 27, 2023

Canyon County Board of Commissioners and Planning & Zoning Commission 111 N. 11<sup>th</sup> Street Caldwell, Idaho 83605 Attention: Dan Lister, Planner Director Mason & Associates 924 3<sup>rd</sup> St. South Nampa, Id Attention: William J. Mason, PE

## RE: Freezeout Ridge Estates Preliminary Plat Canyon County Parcel R34479000 0

Dear Commissioners:

Canyon Highway District No. 4 (CHD4) has reviewed the application for preliminary plat of Freezeout Ridge Estates, parcel R34479000 0, approximately 31 acres, located in the SE <sup>1</sup>/<sub>4</sub> and a part of the SW <sup>1</sup>/<sub>4</sub> NE <sup>1</sup>/<sub>4</sub> of Section 3 T4N R3W. CHD4 provides the following comments on the proposed development:

### General

The subject property is located on the east side of Freezeout Road approximately 2620-feet north of Hwy 44. Freezeout Road is under the jurisdiction of CHD4. Freezeout Road is classified as a Collector on the long range functional classification map. Property is considered rural by CHD4 for purposes of development.

CHD4 provides the following comments on the preliminary plat dated 10/25/22:

#### **Right-of-Way**

- 1. Relocate all encroachments out utilities out of right-of-way north and south side of Yellowstone Road.
- 2. Relocate mailboxes out of right-of -way on the east side of Freezeout Road.
- 3. Need dedicated right-of-way for parcel R34482012.
- 4. Verify legal access and crossing for parcel R34482012.

### **Preliminary Plat**

- 1. CL radius C4 needs to be 200 feet. (AASHTO standards)
- 2. Label ROW radius at Yellowstone road and Big Sky Drive (40 feet).

### **Internal Street Improvements**

1. CHD4 will require a 56 foot stub street 310 feet north of Yellowstone Road west of Big sky drive for parcels R34482 and R34482010 preventing any landlock.

2. CHD4 would allow a reduction in Yellowstone Road from the section that is 60 feet to 56 feet and Big Sky Way from 60 feet to 56 feet.

All other platting and improvement requirements to be in accordance with the current edition of the Highway Standards and Development Procedures Manual in effect at the time of preliminary plat consideration by the CHD4 Board.

Respectfully,

Star Penberta

Steve Pemberton Engineer Tech

228

August 24, 2023

Canyon County Commissioners, P&Z Commission, & Development Services 111 N. 11<sup>th</sup> Ave Suite 140 Caldwell, Idaho 83605 Attention: Michelle Barron, Planner

Mason & Associates 924 3<sup>rd</sup> St South Suite B Nampa, Idaho 83657

## RE: SD2022-0055 Freezeout Ridge Estates Subdivision Canyon County Parcel R34479 aka 23442 Freezeout Rd

Dear Commissioners:

Canyon Highway District No. 4 (CHD4) has reviewed the application and agency notice for Freezeout Ridge Subdivision, a proposed 24 lot rural subdivision on 31 acres located in the NE <sup>1</sup>/<sub>4</sub> Section 3 T4N R3W. CHD4 offers the following comments on the proposed use:

### General

The subject property has frontage available to one public highway, Freezeout Rd, at the west end of the 50-foot wide flag lot portion of the parcel. Freezeout Rd is identified as a major collector on the functional classification maps adopted by Canyon Co and CHD4. The development is proposed to be served by extension of a public road (Faithful Road) east from Freezeout Rd, and public local roads within the development.

### Access

Access to the public highway system is available only at the west end of the 50-foot wide flag extension of the parcel. This access location is suitable for the proposed R-1 development density.

## **Transportation Impacts**

The 23 proposed residential lots will generate approximately 218 new vehicle trips per day, about half of the 500 trips/day threshold which would require a traffic impact study. The approximate 20 peak hour trips from the development are not anticipated to have significant direct effect on the public roadway intersections at Freezeout/SH 44 or Freezeout/Willis Rd. The cumulative effects of the new vehicle trips will be mitigated through collection of transportation impact fees at the time of access permit issuance. These impact fees will be used to provide for improvements at nearby arterial intersections to mitigate the indirect impacts from the development.

## **Preliminary Plat**

In a letter dated March 8, 2023, CHD4 provided the following comments on the preliminary plat dated October 24, 2022:

### **Right-of-Way**

- 1. Relocate all encroachments out of right-of-way south side of Yellowstone Road.
- 2. Relocate all encroachments and power poles out of the right-of-way on the north side of Yellowstone Road.
- 3. Relocate mailboxes out of right-of -way on the east side of Freezeout Road.
- 4. Need dedicated right-of-way for parcel R34482012.
- 5. Verify legal access and crossing for parcel R34482012.

### **Preliminary Plat**

- 1. Wide CL radius C4 needs to be 200 feet.
- 2. Label CL radius at Yellowstone road and Big Sky Drive (40 feet).

## **Internal Street Improvements**

- 1. CHD4 would require a 56 foot stub street 310 feet north of Yellowstone Road west of Big sky drive for parcels R34482 and R34482010 preventing any landlock unless other legal means of access for this parcel can be demonstrated.
- 2. CHD4 would allow a reduction in Yellowstone Road from 60 feet to 56 feet and Big Sky Way from 60 feet to 56 feet.

Yellowstone Rd appears to have been renamed to Faithful Road on the January 23, 2023 plat. The curve C4 at the end of White Wolf Ct does not meet the minimum 200-ft centerline radius for a 25 mph design speed.

All other platting and improvement requirements to be in accordance with the current edition of the Highway Standards and Development Procedures Manual in effect at the time of preliminary plat consideration by the CHD4 Board.

CHD4 recommends the applicant confirm the comments above have been addressed, and submit a revised preliminary plat to the highway district for approval. CHD4 does not have record of preliminary plat review fees being paid; these fees in the amount of \$338 are due prior to scheduling a hearing for preliminary plat approval by the CHD4 Board.

CHD4 does not opposed the requested land use changes, but requests that the Planning & Zoning Commission and Canyon County Commissioners consider these comments, and make any conditional approval of the applicant's request subject to the requirements listed above.

Please feel free to contact me with any questions on this matter.

Respectfully,

Chris Hopper, P.E. District Engineer

File: Subdivision\_Freezeout Rd- Freezeout Ridge Estates Subdivision

#### MIDDLETON RURAL FIRE DISTRICT

100



STAR FIRE PROTECTION DISTRICT

#### FIRE DEPARTMENT PRELIMINARY PLAT APPLICATION

PLEASE PRINT			Date: 6/15/2023	
Applicant Name: Pioneer Hor	nes	Primary Contact:	Applicant Owner Representative	
Address: 719 1 5+ St. 5	. Suit	e B City:	Nampa Zip: 83651	
Phone/Mobile: (208) 468-9:	200 Ei	nail Address: brian	@ pioneerhomesidaho. Com	
Owner(s): Thornton G	allup	LLC		
Address: P.O. Box 1495	5	City:	Nampa Zip: 83653	
Phone/Mobile:	Eı	nail Address:		
Representative: Mason and	Associate	S Contact Name:	Will Mason	
Phone/Mobile: (208) 454 -	0256 EI	nail Address: wma	son @ mason and associates, us	
Billing: Name and Email:				
	PRO	JECT INFORMATIO	ON	
Subdivision Name: Freezeour	- Rid	ge Estate	25	
Site Location: 23442 Freez	eout	Rd. Cald	well, ID	
Approved Zoning Designation of Site: A	n Reques	ting RI Legal Des	scription: Section 3 THN R3W	
Total Acreage of Site: 31.41 AC		Dwelling	Units Per Gross Acre:	
Minimum Lot Size: 1.00 AC		Minimum Lot	Width: 125 min	
Total Number of Lots: 27	Residential: 23		Commercial: N/A	
Industrial: N/A	Common: 4		Other: N/A	
Total Number of Units: N/A	Single-family: N/A		Duplex: N/A	
Multi-family N/A	Other:	N/A	Water Services: Individual Wells	
Streets: Public Private	# Entrance	s:	Gated: □Yes ■No	
REVIEW NOTES:	FIRE CO	ODE OFFICAL USE	ONLY	
See attached staff report.		Application & Plans Received: (Date/By) 6121123 Droport-NSine		
		Permit Fee: \$200.00 (Paid) Cash Credit Card Check #14190		
		Fire Authority Having Jurisdiction: Middleton Rural FD		
		Fire District Permit # 23 MS - 135		
		City/County Jurisdiction: Middleton / Canyon		
		County/City Permit #		
		FIRE DISTRICT APPLICATION STATUS		
		Approved	Approved with Conditions Denied	
		Fire Code Official:	Date: 8/28/2023	

(208) 286-7772 11665 W. STATE ST., SUITE B STAR, IDAHO 83669



DATE: August 28, 2023

TO: Pioneer Homes Mason and Associates

FROM: Victor Islas, Deputy Chief

SUBJECT: Fire District Review (23MS-135)

PROJECT NAME: Freezeout Ridge Estates 23442 Freezeout Rd., Caldwell, Idaho

#### **Fire District Summary Report:**

#### 1. Overview

- a. This development can be serviced by the Middleton Rural Fire District. This development shall comply with the 2018 International Fire Code (IFC), Authority Having Jurisdiction (AHJ) and any codes set forth by the Canyon County, Idaho
- b. Scope: New Development
- c. Construction Type VB
- d. Purposed Lots = 27 (Residential =23, Common =4)
- e. Zoning R1 Rural Residential
- f. Any overlooked hazardous condition and/or violation of the International Building and/or Fire Code does not imply approval of such condition or violation.

#### 2. Fire Response Time:

a. This development will be served by the Middleton Rural Fire District Station 53, located at 302 E. Main St., ., Middleton, Idaho 83644. Station 53 is 3.7 mile with a travel time of 7 minutes under ideal driving conditions to the purposed entrance off Freezeout Rd.

#### 3. Accessibility: Roadway Access, Traffic, Radio Coverage

- a. Access roads shall be provided and maintained following Appendix D and Section 503 of the IFC. Access shall include adequate roadway widths, signage, turnarounds, and turning radius for fire apparatus.
- b. Access road design shall be designed and constructed to allow for evacuation simultaneously with emergency response operations.
- c. All access roads in this development shall remain clear and unobstructed during construction of the development. Additional parking restrictions may be required as to maintain access for emergency vehicles at all times.
- d. Purposed access roads meet the intent of the fire code for subdivision under 30 lots.
- e. If the home sites more than 150 ft off the road way additional turnaround will be required.
- f. No parking signs will be required in all cul de sac.

**Project:** Freezeout Ridge Estates Preliminary Plat Review (23MS-135)

Fire District Headquarters • 11665 W. State St., Suite B • Star, Idaho 83669 • (208) 286-7772 • www.midstarfire.org



#### 4. Addressing/Street Signs:

- a. Addressing/building identification sign shall be placed in a position that is plainly legible and visible from the street or road fronting the property.
  - i. Approved residential address numbers a minimum of six inches (6") in height and in a contrasting color shall be placed on all new buildings in such a position as to be clearly visible and legible from the street or road fronting the property.
- b. Upon commencement of initial construction of a new structure, a clear visible freestanding sign or post shall be erected and maintained in place until the permanent address numerals are attached or otherwise displaced upon the premises at completion.
- 5. <u>Water Supply:</u> Water supply requirements will be followed as described in Appendix B of the 2018 International Fire Code unless agreed upon by the Fire District.
  - a. Fire Flow: The fire-flow calculation area shall be the total floor area of all floor levels within the exterior walls, and under the horizontal projections of the roof of a building.
  - b. Fire Flow: One and two family dwellings not exceeding 3,600 square feet require a fire-flow of 1,000 gallons per minute for a duration of 1 hour to service the entire project. One and two family dwellings in excess of 3,600 square feet require a minimum fire flow as specified in Appendix B of the International Fire Code.
  - c. Water Supply: Water Supply Options
    - i. Municipal Water System
    - ii. Private or Community well capable of supplying required fire flow.
    - iii. Elevated and pressure tanks
    - iv. NFPA 13D Residential Fire Sprinkler System

#### 6. Additional Comments:

a. Final inspection by the Fire District of the above listed must be completed before building permits are issued by Canyon County.

## **Michelle Barron**

From:	Niki Benyakhlef <niki.benyakhlef@itd.idaho.gov></niki.benyakhlef@itd.idaho.gov>
Sent:	Tuesday, August 1, 2023 1:43 PM
То:	Michelle Barron
Cc:	Bonnie Puleo
Subject:	[External] RE: Agency Notification RZ2021-0053 & SD2021-0055 / Mason & Assoc

Hello Michelle -

After careful review of the transmittal submitted to ITD on July 31, 2023 regarding RZ2021-0053 & SD2021- / Mason & Assoc, the Department has no comments or concerns to make at this time. This development is only proposing 23 buildable lots which will not warrant enough impact to our state highway system.

Thank you,



Niki Benyakhlef Development Services Coordinator

District 3 Development Services O: 208.334.8337 | C: 208.296.9750 Email: <u>niki.benyakhlef@itd.idaho.gov</u> Website: <u>itd.idaho.gov</u>

From: Bonnie Puleo <Bonnie.Puleo@canyoncounty.id.gov>

Sent: Monday, July 31, 2023 1:08 PM

To: 'lgrooms@msd134.org' <lgrooms@msd134.org>; Marc Gee <mgee@msd134.org>; 'mitch.kiester@phd3.idaho.gov' <mitch.kiester@phd3.idaho.gov>; Anthony Lee <anthony.lee@phd3.idaho.gov>; 'Kent, Lori - NRCS-CD, Caldwell, ID' <Lori.Kent@id.nacdnet.net>;'permits@starfirerescue.org' <permits@starfirerescue.org>; 'CHOPPER@CANYONHD4.ORG' <CHOPPER@CANYONHD4.ORG>; 'JESSICA.MANSELL@INTGAS.COM' <JESSICA.MANSELL@INTGAS.COM>; 'MONICA.TAYLOR@INTGAS.COM' <MONICA.TAYLOR@INTGAS.COM>; Idaho Power <easements@idahopower.com>; Megan Kelly <mkelly@idahopower.com>; 'BRO.Admin@deq.idaho.gov' <BRO.Admin@deq.idaho.gov>; 'CARL@BLACKCANYONIRRIGATION.COM' <CARL@BLACKCANYONIRRIGATION.COM>; dpopoff@rh2.com; COMPASS <gis@compassidaho.org>; Niki Benyakhlef <Niki.Benyakhlef@itd.idaho.gov>; D3 Development Services <D3Development.Services@itd.idaho.gov>; 'GMPRDJENNIFER@GMAIL.COM' <GMPRDJENNIFER@GMAIL.COM>; 'westerninfo@idwr.idaho.gov' <westerninfo@idwr.idaho.gov>

Subject: Agency Notification RZ2021-0053 & SD2021-0055 / Mason & Assoc

CAUTION: This email originated outside the State of Idaho network. Verify links and attachments BEFORE you click or open, even if you recognize and/or trust the sender. Contact your agency service desk with any concerns.

Good afternoon;

Please see the attached agency notice. You are invited to provide written testimony or comments by August 31, 2023, although as of this point, no hearing date has been set. You will receive a separate notification when the hearing date has been set for this case. The deadline for written testimony or additional exhibits is to ensure planners can consider

the information as they develop their staff report and recommended findings. All items received by the deadline will also be placed in the hearing packet, allowing the hearing body adequate time to review the submitted information.

Please direct your comments or questions to Planner Michelle Barron at michelle.barron@canyoncounty.id.gov

Thank you,

## Bonnie Puleo Hearing Specialist



Hearing Specialist Canyon County Development Services 111 No 11<sup>th</sup> Ave. Suite 310 Caldwell, ID 83605 bonnie.puleo@canyoncounty.id.gov (208) 454-6631 *direct NEW* public office hours **effective January 3, 2023** Monday, Tuesday, Thursday and Friday 8 am – 5 pm Wednesday 1 pm – 5 pm \*\*We will not be closed during lunch hour\*\*

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60.000 IRRIGABLE ACRES

August 30th, 2023

Canyon County Development Services Department 111 North 11<sup>th</sup> Ave. Suite 140 Caldwell, ID 83605 (208) 454-7458

RE: Freezeout Ridge Subdivison, Parcel R3447900000 Case No. RZ2021-0053/SD2023-0008 Applicant: Mason & Associates, Inc. Planner: Michelle Barron

The parcel is located at 23442 Freezeout Rd, Nampa ID 83653.

The Black Canyon Irrigation District (District) is providing PRE-PLAT CONCURRENCE APPROVAL with the following conditions and comments regarding this proposed rezone/preliminary plat.

#### General Comments

- The District requests that all District requirements be met (as indicated below) prior to rezone approval, preliminary plat approval, construction drawing approval and final plat approval respectively.
- This project was previously approved by the District on November 4, 2021. Unknown delays have required this project to be re-approved with the District, with some very minor revisions that the District has identified with the Developer.
- The District has begun the review process with the developer for the Freezeout Ridge subdivision. The developer has filled out an intake sheet and is on track with the District's development review process. We appreciate this coordination from the Developer.

#### Prior to District Pre-plat Concurrence / Rezone Approval

• The provided pre-plat shows a 35-foot District easement along the north edge of the parcel. A portion of this easement is shown to be on the Developer's property. Please provide the additional easement width as discussed and as requested of the Developer for future access to this pipeline. Please show the required easement on pre-plat documents.

#### Prior to District Construction Plan Concurrence Approval

- The pre-plat map shows an assumed "private" gravity irrigation line extending west and south to the parcel located at 23440 Freezeout Rd. The developer will need to ensure that water is delivered to this parcel as has historically been delivered. A separate weir box for District's flow measurements may be required. This detail will need to be resolved during construction plan review approval.
- Initial approval documents with the District shows the adjacent property owner providing an easement along the eastern edge of this plat. Pipe location will be determined based on the successful acquisition of this easement. This detail will need to be resolved during construction plan review approval.
- A turnout off Freezeout road to access the last irrigation and weir boxes along the south side of property has been shown and approved. This access will be reviewed and any changes resolved based on pipeline location during construction plan review approval.
- An agreement with the Bureau of Reclamation will be required prior to working in the District's easement. This agreement was almost completed, but is waiting on concurrence of construction drawings with the

District. Once construction plans are approved a letter will be provided to the Bureau for concurrence.

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#### Prior to District Final Plat Concurrence Approval

- A legal, standalone, recorded easement for the District will be required prior to final plat concurrence from the District for the east-west running easement across the northern property line. A 20-foot easement is shown on the final plat for the southern edge of the neighboring subdivision (Willis Estates). Please ensure that a minimum of 15' of easement is provided (completing the 35-foot easement) within the Freezeout Ridge subdivision. No other utilities will be allowed within the District's easement including pressure irrigation or fencing.
- All items required in the Bureau's license agreement will be required to be completed.
- All District construction standard items relevant to this project, including hydrostatic pipe testing, will need to be completed.
- District policy requires that all easements are fenced along the District facility easement/right-of-way boundary line located within the subdivision. Specifically for this subdivision, the easement along the east edge and southeast corner of the plat will be required to be fenced prior to concurrence of final plat.
- District policy requires that a 12' wide all-weather road be constructed along the District's easement as shown. A 12' wide all-weather road will be required to be constructed prior to concurrence of final plat.
- A lot division fee will be assessed to the developer of this project prior to final plat.
- All fees will need to be paid in full to the District.
- As-constructed surveyed plans will be required to be provided to the District / along with digital pipe network design drawings.

#### **General Comments**

- Runoff and drainage from the proposed land subdivision should be addressed as well to ensure downstream users are not adversely affected by the proposed land use changes.
- All Maintenance road right-of ways, lateral right-of ways and drainage right-of ways will need to be protected (including the restriction of all encroachments). Also, any crossing agreement(s) and/or piping agreement(s) will need to be acquired from the Bureau of Reclamation (Reclamation), once approved by the District, to cross over or under any existing lateral, pipe any lateral or encroach in any way the right-of ways of the District or the Reclamation.
- As long as this property has irrigation water attached to it, an irrigation system with an adequate overflow needs to be installed to ensure the delivery of irrigation water to each lot and/or parcel of land entitled to receive irrigation water.

All the above requirements are requested to be met, including any others that arise during future reviews.

Thank You,

Donald Popoff P.E. District Engineer Black Canyon Irrigation District