



ON-SITE WASTEWATER TREATMENT SYSTEM PERMIT
Lewis & Clark City-County Health Division
ENVIRONMENTAL DIVISION
316 North Park
Helena, MT 59623
(406) 447-8351

PERMIT 111054

15235
PROPERTY OWNER John H. Clark
PROPERTY ADDRESS 4509 Dearborn Canyon Rd.
SUBDIVISION NAME _____ LOT # _____
LEGAL DESCRIPTION: 1/4 1/4 1/4 SEC 27 T 18 N R 7 W
PERMIT ISSUED BY: Jay Plant, R.S. DATE WRITTEN 9-8-11
INSTALLER: CI (NC) John Clark PHONE #: 562-3325
TYPE OF SYSTEM: New-Standard

Date Issued

ISSUED

SEP 08 2011

ENVIRONMENTAL HEALTH
PERMIT OFFICE

MINIMUM CONSTRUCTION REQUIREMENTS FOR A SINGLE FAMILY DWELLING UNLESS OTHERWISE SPECIFIED:
SYSTEM SIZING BASED ON: SOIL TYPE IV # OF BEDROOMS 2

ALL SEPTIC Tanks must be equipped with an effluent filter and risers to grade

Septic Tank: a) Size 1000 gallon

b) Material Must provide.

Dose Tank: a) Yes _____ b) No ✓ If Yes - Size _____

Treatment Field: a) Pressure Dosed Yes _____ No ✓

b) 170 Linear feet of chambers 22" ✓ 34" _____

c) 225 Linear feet of perforated pipe

d) Trench Depth 24"-36" (24" min to 36" max)

e) Sand-Lined Trenches Yes _____ No ✓
If Yes: You are required to line bottom of drainfield
trenches with 12" of ASTM C-33 concrete sand

Distribution System: a) D-Box Yes _____ No _____ *if needed.

DISTANCE TO WATER SOURCE FROM: a) septic tank (50' minimum)

b) treatment field (100' minimum)

OK ✓

OK Concrete

ACTUAL —

OK —

ACTUAL 176'

ACTUAL —

OK ✓

OK —

OK none

ACTUAL 250'

ACTUAL 7100'

SPECIAL REQUIREMENTS: Place drainfield within 25' of test hole. All laterals to be equal length and not to exceed 100'. Distribution box to be used if uneven number of laterals. Maintain 100' from all wells & surface water & 10' from property lines. Tank, D Box & drainfield to have 10' separations.

This system shall be installed in accordance with current Lewis & Clark City-County Health Department rules governing the on-site treatment of wastewater, and the minimum construction requirements and special requirements provided for in this permit. This permit is issued, based on the information provided on the permit application. If any of this information is found to be incorrect, or if the system is not installed as provided for, this permit shall be rendered null and void.

The system may not be backfilled without prior approval of the Department or as provided for Certified Installers. The pink copy of this permit shall be posted in a conspicuous spot at the construction site until permission is given to backfill the system.

This permit will expire one (1) year after the date of issuance. If your system has not been installed prior to the expiration of this permit, you will have to reapply and meet current standards at that time.

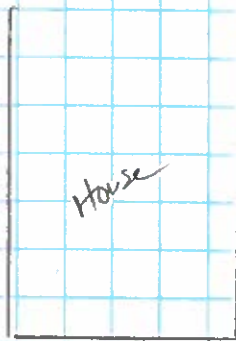
SEE ATTACHED DIAGRAM SHOWING LAYOUT AND LOCATION OF SYSTEM

INSPECTION CALLED FOR:
READY

TIME 10:00 DATE 10-6-11
TIME _____ DATE 10-10-11

HEALTH AUTHORITY APPROVAL

DATE 10/11/11



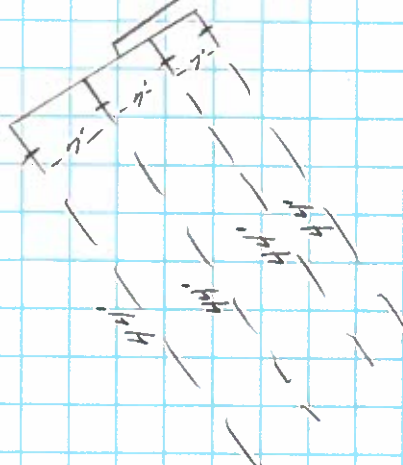
25'



24'

5'

50'





LEWIS & CLARK CITY-COUNTY Health Department

316 N. Park. Rm. 230
Helena, MT 59623
Ph: 406.447.8351
Fax: 406.447.8398

PERMIT REQUEST ONLY

*** NO CONSTRUCTION** of dwellings, domestic wells, or septic systems shall take place until the Lewis and Clark City-County Health Department has issued a numbered Septic permit. The homeowner must have an assigned address for this property and must provide septic installers name before the permit will be written.

If any construction occurs prior to a permit being issued, the permit fee will be doubled and additional civil administrative penalty fees may be charged

Property Owner JOHN H. CLARK

Owner Phone # 406-562-3325

Subdivision Name: NONE

Lot # _____

Property Address: 4509 DEARBORN DRAYON RD.
(PROPERTY MUST HAVE A CURRENT ADDRESS
ASSIGNED BY THE ADDRESS COORDINATOR)

Type of Water Supply well

Number of Bedrooms* 2

OFFICE USE ONLY		
Permit Request Received	<u>9-8-11</u>	
PERMIT FEE PAID:	<u>240.00</u>	
RECEIPT #:	<u>1201696</u>	
	CI	Non CI
☒ Gravity system	120.00	<u>240.00</u>
☐ Dose System	240.00	*****
☐ Individual engineered	360.00	
☐ Multi user/public	540.00	*****
☐ Tank Permit	60.00	
ADDITIONAL TIME CHARGED (AT \$ 50.00 PER HOUR)		
DATE	TIME	
_____	_____	
_____	_____	

***Bedroom** shall mean any room that is or can be used for sleeping or any room or space such as a den, study, storage area, or other area, which can be easily converted to a bedroom. An unfinished basement shall be considered as an additional bedroom.

******* ONLY CERTIFIED INSTALLERS MAY INSTALL THESE SYSTEMS**

Certified Septic Installers Name: _____ Phone: _____

Noncertified Septic Installers Name: JOHN H. CLARK Phone: 562-3325

THE ABOVE INFORMATION IS TRUE TO THE BEST OF MY KNOWLEDGE AND I UNDERSTAND THAT IF ANY OF THE INFORMATION IS FOUND TO BE UNTRUE, MY APPLICATION WILL NOT BE VALID AND ANY PERMITS ISSUED BASED ON THIS INFORMATION MAY BE VOIDED.

SIGNATURE OF APPLICANT

DATE: 9/1/11

*"To Improve and Protect the Health of all Lewis and Clark
County Residents."*



LEWIS & CLARK CITY-COUNTY Health Department

Environmental Division
316 N. Park. Rm. 230
Helena, MT 59623
Ph: 406.447.8351
Fax: 406.447.8398

15235 APPLICATION FOR A SITE EVALUATION FOR AN ON-SITE
WASTEWATER TREATMENT SYSTEM

NO CONSTRUCTION of dwellings, domestic wells, or septic systems shall take place until: 1) this site evaluation is complete and 2) a numbered septic permit is issued for this system by the Lewis and Clark City-County Health Department.

If any construction occurs prior to a permit being issued, the permit fee will be doubled and additional civil administrative penalty fees may be charged.

JP

Office Use
Date Rec'd 6-1-11
Fee Paid 300.00
Receipt # 1106871

Fee for site evaluation only:

☒ New Site	\$300/per system
☐ Existing Field Replacement	\$300/per system
☐ Review of Existing System	\$300/per system

OFFICE USE
Add'l Time charged
DATE TIME

Has the existing system failed or malfunctioned? NO
Is there surfacing sewage? NO

Property Owner JOHN H. CLARK

Property Address Applied for 4509 Dearborn Canyon Rd.

Installer JOHN CLARK CI NC Phone _____

Treatment system to serve: Residential ☒ Commercial _____ Other _____

Total Living Space 1300 square feet and 2 number of bedrooms

Type of Water Supply SPRING

Who should we contact to arrange a site visit? JOHN

Phone # 562-3325

THE ABOVE INFORMATION IS TRUE TO THE BEST OF MY KNOWLEDGE AND I UNDERSTAND THAT IF ANY OF THE INFORMATION IS FOUND TO BE UNTRUE, MY APPLICATION WILL NOT BE VALID AND ANY PERMITS ISSUED BASED ON THIS INFORMATION MAY BE VOIDED.

Signature of Applicant [Signature] Date _____

"To Improve and Protect the Health of all Lewis and Clark
County Residents."

LEWIS AND CLARK COUNTY
OFFICE OF THE PERMIT
COORDINATOR
City County Administration Building
316 NORTH PARK
ROOM 230
HELENA MT 406-447-8392

BEFORE YOU SUBMIT ANY APPLICATION
YOU MUST HAVE A COPY OF THE FILED
CERTIFICATE OF SURVEY FROM THE CLERK
AND RECORDERS OFFICE TO ACCOMPANY
THE APPLICATION (S). WE WILL NOT ACCEPT
ANY APPLICATIONS WITHOUT IT.

CPA NUMBER 9439 GEO CODE _____ WATER SAMPLE YES _____ NO _____

Comprehensive Permitting Application

Applicant: JOHN H. CLARK
(Please Print)
Current Address Box 610 City: AUGUSTA State MT Zip 59410
Daytime Telephone: 562-3325 Home Telephone: _____ Cell Phone: _____
Property Owner: JOHN H. CLARK / CLAUDIA CLARK Daytime Telephone: 562-3325
Address: Box 610 City: AUGUSTA State: MT Zip: 59410
Contact Person: JOHN Daytime Telephone: 562-3325
Address: SAME City: _____ State: _____ Zip: _____

Property Description:

SW 1/4 SE 1/4 SE 1/4 SW 1/4 Section 27, Township 18 N, Range 7 W, Lot No. 1

Lot Size: 10.0 Acres Subdivision Name: NONE
Property Address: _____ City: AUGUSTA State: MT Zip: 59410

DEED NO: 3075914 (PLEASE ATTACH A COPY OF THE DEED IF NECESSARY)

Address must be applied for and assigned to your property (if you have not had one assigned)

General Location of Property: 4 mi west of Bear Lake on Dearborn Canyon Road
Left on Joslin Creek Road, site 1st on left (100 yds) -

Description of Proposed Project: CONSTRUCTION OF 1300 SQ FT CAMP

Property Owner	John Clark
Property Address	Dearborn Canyon Road – Diamond Bar X

SCS SYMBOL		3	3	3	SECTION	TOWNSHIP	RANGE
SCS NAME					27	18N	7W

LIMITATIONS			
TYPE	DEPTH	TEXTURE	PERM. IN/HOUR
Test hole	0-14"	Course loamy sand, 25% gravel, 10yr, 3/3, roots	
	14-35"	Course loamy sand, 50% gravel, 10 yr, 3/4, cobbly	
	35-96"	Sandy loam, 35% gravel, 10yr, 3/6, cobbly	

Application complete?		On-site visit required	
Depth to seasonally high groundwater:	> 8 feet	Verified by:	Test hole
Groundwater monitoring required ?	No	Vegetative indicators	Grass/ pine
Depth to unsuitable treatment material:	> 8 feet	How verified	Test hole
Is property in the floodplain	No	Or within 100' of 100 yr flood way	No
Slope at treatment area:	2-4%	8 foot test hole required?	
Is phosphorus breakthrough required?	Yes	Is nitrate sensitivity required ?	Yes
Is there room for a replacement system?	Yes	Are all separation requirements met ?	yes

APPROVED? Yes

BASIS FOR DENIAL :

SITE OBSERVATIONS: open site. Dearborn River north across road. Test hole at base of hill. House and well to be located southwest of test hole.

DOES THIS SITE MEET THE REQUIREMENTS OF THE 2011 ON-SITE WASTEWATER TREATMENT REGULATIONS? Yes.

SOIL TYPE: IV

TEXTURAL CLASSIFICATION: Loamy sand

REVIEWED BY: Jay Plant

DATE: 6/16/11

Property Owner/Project Name: John Clark - Diamond Bar X
 Location: Dearbon Canyon Road - Auguste 4809
 Site/Test Hole #: 1 Date: 6/16/11 Time: _____ Vegetation: grass/pine Slope: 2-4%
 Elevation: _____ Aspect: _____ Geomorphic Surface: _____ Parent Materials: _____
 Described By: Jay R

Depth	Horizon	Color	Structure	% Gravel	Consistence			Texture		Boundaries		Notes
		Moist/Dry			Wet	Moist	Dry			a	s	
0 to 14		10yR 3/3	m vf gr sg f pl 1 m pr 2 c cpr 3 vc abk sbk	0 50 <10 75 10 >75 25	so po ss ps s p vs vp	lo vfr fr fi vfi efi	lo so sh h vh eh	S SiCL LS SiL SL Si SCL SiC L C CL SC		a s c w g i d b		Mottles Present? <u>NO</u> Course Roots
14 to 35		10yR 3/4	vr gr sg f pi 1 m pr 2 c cpr 3 vc abk sbk	0 50 <10 75 10 >75 25	so po ss ps s p vs vp	lo vfr fr fi vfi efi	lo so sh h vh eh	S SiCL LS SiL SL Si SCL SiC L C CL SC		a s c w g i d b		Mottles Present? <u>NO</u> Course some cobbles
35 to 96		10yR 3/6	vr gr sg f pi 1 m pr 2 c cpr 3 vc abk sbk	0 50 <10 75 10 >75 25 35%	so po ss ps s p vs vp	lo vfr fr fi vfi efi	lo so sh h vh eh	S SiCL LS SiL SL Si SCL SiC L C CL SC		a s c w g i d b		Mottles Present? <u>NO</u> cobbly
to			vr gr sg f pi 1 m pr 2 c cpr 3 vc abk sbk	0 50 <10 75 10 >75 25	so po ss ps s p vs vp	lo vfr fr fi vfi efi	lo so sh h vh eh	S SiCL LS SiL SL Si SCL SiC L C CL SC		a s c w g i d b		Mottles Present? _____
to			vr gr sg f pi 1 m pr 2 c cpr 3 vc abk sbk	0 50 <10 75 10 >75 25	so po ss ps s p vs vp	lo vfr fr fi vfi efi	lo so sh h vh eh	S SiCL LS SiL SL Si SCL SiC L C CL SC		a s c w g i d b		Mottles Present? _____
to			vr gr sg f pi 1 m pr 2 c cpr 3 vc abk sbk	0 50 <10 75 10 >75 25	so po ss ps s p vs vp	lo vfr fr fi vfi efi	lo so sh h vh eh	S SiCL LS SiL SL Si SCL SiC L C CL SC		a s c w g i d b		Mottles Present? _____
to			vr gr sg f pi 1 m pr 2 c cpr 3 vc abk sbk	0 50 <10 75 10 >75 25	so po ss ps s p vs vp	lo vfr fr fi vfi efi	lo so sh h vh eh	S SiCL LS SiL SL Si SCL SiC L C CL SC		a s c w g i d b		Mottled Present? _____

Additional Notes/Comments: New site. River to North. Setbacks no problem

State of Montana
Department of Public Health and Human Services
ENVIRONMENTAL LABORATORY
1400 Broadway, Room B 221 Helena, MT 59620
PO Box 4369 Helena, MT 59604
phone: 406-444-2642 fax: 406-444-2617

RESULTS OF CHEMICAL ANALYSIS

BillingID: G0018489

Account #: G0018489

PWSID #:

JOHN CLARK
BOX 610
AUGUSTA MT 59410

Collected: 6/10/2011

Time: 10:00

By: J C

Received Date: 6/11/2011

Sample Type: RT

Matrix: Water

Report Date: 6/17/2011

Lab#: C1106-0791

Sample ID: CLARK KITCHEN TAP AUGUSTA

TEST	FLAG	RESULT	UNITS	** EPA Drinking Water Limit	ANALYSIS DATE	METHOD
Specific Conductance		406	umho/cm		6/17/2011	2510
Nitrate plus Nitrite as N		0.475	mg/l	10	6/16/2011	353.2

Reviewed by: 

Comments:

Flags: < = less-than
> = greater-than
H = above EPA limit for drinking Water
* = holding time exceeded
**Not all parameters have EPA Drinking Water Limits

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

NITRATE SENSITIVITY ANALYSIS

Model Updated 01/24/96

SITE NAME: John Clark
COUNTY: Lewis and Clark
LOT #:
NOTES:

<u>VARIABLES</u>	<u>DESCRIPTION</u>	<u>VALUE</u>	<u>UNITS</u>
K	Hydraulic Conductivity	36.5	ft/day
I	Hydraulic Gradient	0.010	ft/ft
D	Depth of Aquifer (usually constant)	15.0	ft
L	Mixing Zone Length (see ARM 17.30.517(1)(d)(viii))	500	ft
Y	Width of Drainfield Perpendicular to Ground Water Flow	85	ft
Ng	Background Nitrate (as Nitrogen)	0.48	mg/L
Nr	Nitrate (as Nitrogen) in Precipitation (usually constant)	1.0	mg/L
Ne	Nitrates in Effluent (50 for conventional; 24 for level II)	50	mg/L
#I	Number of Single Family Homes on the Drainfield	1.0	
QI	Quantity of Effluent per Single Family Home (constant)	26.70	ft ³ /day
P	Precipitation	11.0	in/year
V	Percent of Precipitation Recharging Ground Water (usually constant)	0.20	

EQUATIONS

W	Width of Mixing Zone Perpendicular to Ground Water Flow = (0.175)(L)+(Y)	172.50	ft
Am	Cross Sectional Area of Aquifer Mixing Zone = (D)(W)	2587.50	ft ²
As	Surface Area of Mixing Zone = (L)(W)	86250.00	ft ²
Qg	Ground Water Flow Rate = (K)(I)(Am)	942.98	ft ³ /day
Qr	Recharge Flow Rate = (As)(P/12/365)(V)	43.32	ft ³ /day
Qe	Effluent Flow Rate = (#I)(QI)	26.70	ft ³ /day

SOLUTION

Nt	Nitrate (as Nitrogen) Concentration at End of Mixing Zone = ((Ng)(Qg)+(Nr)(Qr)+(Ne)(Qe)) / ((Qg)+(Qr)+(Qe))	1.80	mg/L
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BY: Jay Plant
DATE: July 12, 2011

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

PHOSPHOROUS BREAKTHROUGH ANALYSIS

SITE NAME: John H. Clark
COUNTY: Lewis and Clark
LOT #:
NOTES:

<u>VARIABLES</u>	<u>DESCRIPTION</u>	<u>VALUE</u>	<u>UNITS</u>
Lg	Length of Primary Drainfield as Measured Perpendicular to Ground Water Flow	85.0	ft
L	Length of Primary Drainfield's Long Axis	85.0	ft
W	Width of Primary Drainfield's Short Axis	10.0	ft
B	Depth to Limiting Layer from Bottom of Drainfield Laterals*	6.0	ft
D	Distance from Drainfield to Surface Water	300.0	ft
T	Phosphorous Mixing Depth in Ground Water (0.5 ft for coarse soils, 1.0 ft for fine soils)**	0.5	ft
Ne			
Sw	Soil Weight (usually constant)	100.0	lb/ft ³
Pa	Phosphorous Adsorption Capacity of Soil (usually constant)	200.0	ppm
#I	Number of Single Family Homes on the Drainfield	1.0	

CONSTANTS

PI	Phosphorous Load per Single Family Home (constant)	6.44	lbs/yr
X	Conversion Factor for ppm to percentage (constant)	1.0E+06	

EQUATIONS

Pt	Total Phosphorous Load = (PI)(#I)	6.44	lbs/yr
W1	Soil Weight under Drainfield = (L)(W)(B)(Sw)	510000.0	lbs
W2	Soil Weight from Drainfield to Surface Water = [(Lg)(D) + (0.0875)(D)(D)] (T)(Sw)	1668750.0	lbs
P	Total Phosphorous Adsorption by Soils = (W1 + W2)/[(Pa)/(X)]	435.8	lbs

SOLUTION

BT	Breakthrough Time to Surface Water = P / Pt	67.7	years
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BY: Jay Plant
DATE: July 12, 2011

NOTES: * Depth to limiting layer is typically based on depth to water in a test pit or bottom of a dry test pit minus two feet to account for burial depth of standard drainfield laterals.
** Material type is usually based on test pit. A soil that contains more than 35% silt and clay sized particles is considered fine grained.

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

PHOSPHOROUS BREAKTHROUGH ANALYSIS

SITE NAME: John H. Clark
COUNTY: Lewis and Clark
LOT #:
NOTES:

<u>VARIABLES</u>	<u>DESCRIPTION</u>	<u>VALUE</u>	<u>UNITS</u>
Lg	Length of Primary Drainfield as Measured Perpendicular to Ground Water Flow	57.0	ft
L	Length of Primary Drainfield's Long Axis	57.0	ft
W	Width of Primary Drainfield's Short Axis	18.0	ft
B	Depth to Limiting Layer from Bottom of Drainfield Laterals*	6.0	ft
D	Distance from Drainfield to Surface Water	300.0	ft
T	Phosphorous Mixing Depth in Ground Water (0.5 ft for coarse soils, 1.0 ft for fine soils)**	0.5	ft
Ne			
Sw	Soil Weight (usually constant)	100.0	lb/ft3
Pa	Phosphorous Adsorption Capacity of Soil (usually constant)	200.0	ppm
#I	Number of Single Family Homes on the Drainfield	1.0	

CONSTANTS

Pl	Phosphorous Load per Single Family Home (constant)	6.44	lbs/yr
X	Conversion Factor for ppm to percentage (constant)	1.0E+06	

EQUATIONS

Pt	Total Phosphorous Load = (Pl)(#I)	6.44	lbs/yr
W1	Soil Weight under Drainfield = (L)(W)(B)(Sw)	615600.0	lbs
W2	Soil Weight from Drainfield to Surface Water = [(Lg)(D) + (0.0875)(D)(D)] (T)(Sw)	1248750.0	lbs
P	Total Phosphorous Adsorption by Soils = (W1 + W2)/[(Pa)/(X)]	372.9	lbs

SOLUTION

BT	Breakthrough Time to Surface Water = P / Pt	57.9	years
----	---	------	-------

BY: Jay Plant
DATE: July 12, 2011

NOTES: * Depth to limiting layer is typically based on depth to water in a test pit or bottom of a dry test pit minus two feet to account for burial depth of standard drainfield laterals.
** Material type is usually based on test pit. A soil that contains more than 35% silt and clay sized particles is considered fine grained.

HYDRAULIC CONDUCTIVITY (K) WORKSHEET

Property Owner:	John H. Clark
Lot Number:	
Property Address:	Augusta, MT

	1	2	3
GWIC #	73325	126711	177644
Site Name:	Dammen	Ellingson	Raisler
Yield	4	2	25
Pwl	190	232	55
Swl	60	70	25
Screened Interval	20	20	10

Equations: (don't change)

Pumping Rate (Q)	$Q = [\text{Yield (gpm)} \times 1440 (\text{min/day})] / 7.48$	770.05	385.03	4812.83
Drawdown (ft) (s)	$s = Pwl - Swl$	130.00	162.00	30.00
Screened Interval (B)	length in ft. (if not completed or <10 enter 10)	20.00	20.00	10.00
Transmissivity (T)	$T = 33.6 (Q/s)^{0.67}$	110.65	60.01	1008.97
Hydraulic Conductivity (K)	$K = T/B$	5.53	3.00	100.90

Average Hydraulic Conductivity based on the above 3 well logs

36.48

Attach well logs to this worksheet

Other Options

Plot this site on a topographic map
View scanned well log (8/10/2006 10:46:13 AM)

Section 7: Well Test Data

Total Depth: 242
Static Water Level: 70
Water Temperature:

Air Test *

2 gpm with drill stem set at feet for 1 hours.
Time of recovery 2 hours.
Recovery water level 70 feet.
Pumping water level 232 feet.

** During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.*

Section 8: Remarks

Section 9: Well Log
Geologic Source
Unassigned

[illegible]

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name: SHAWN TONEY
Company: H & L DRILLING INC
License No: WWC-447
Date 2/20/1992
Completed:

Date well completed: Thursday, February 20, 1992

Borehole dimensions

From	To	Diameter
0	18.5	10
18.5	242	6

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-1.5	18.5	6	0.25		WELDED	STEEL
10	242	4		160.00		PVC

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
222	242	4		8X3/16	SAW SLOTS

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	18.5	CEMENT & BENTONITE	

Other Options

Plot this site on a topographic map
View scanned well log (8/10/2006 10:37:29 AM)

Section 7: Well Test Data

Total Depth: 60
Static Water Level: 25
Water Temperature:

Air Test *

25 gpm with drill stem set at 55 feet for 1 hours.
Time of recovery 0.2 hours.
Recovery water level 25 feet.
Pumping water level feet.

14773 AVON ALLEN RD

City	State	Zip Code
MT VERNON	WA	98723

* During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

Township	Range	Section	Quarter Sections
18N	07W	34	SE¼ NW¼
	County		Geocode

LEWIS AND CLARK

Latitude	Longitude	Geomethod	Datum
47.27243	112.482647	TRS-SEC	NAD83

Section 8: Remarks

Ground Surface Altitude	Method	Datum	Date
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Section 9: Well Log

Addition	Block	Lot
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Geologic Source

Unassigned

DOMESTIC (1)

[illegible]

Drilling Method: ROTARY

Driller Certification

Date well completed: Tuesday, November 23, 1999

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Borehole dimensions

From	To	Diameter
0	60	8

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
-2	60	6	0.25		WELDED	STEEL

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
57	60	6	10	1/4X6	TORCH OR PLASMA CUTS

Annular Space (Seal/Grout/Packer)

From	To	Description	Cont. Fed?
0	18	BENTONITE	

Name:
Company: AQUA SOURCE DRILLING
License No: WWC-107
Date Completed: 11/23/1999

EXHIBIT A

A tract of land in the SW1/4SE1/4 and the SE1/4SW1/4 of SECTION 27, TOWNSHIP 18 NORTH, RANGE 7 WEST, in Lewis and Clark County, Montana, more particularly described as follows:

10,08 ACRES
Beginning at a Brass Cap which is the south quarter corner of Section 27; T.18 N., R.7 W., P.M.M., thence North 556.00 feet to a steel pin and the true point of beginning; thence East 50.00 feet to a steel pin; thence N. 44°42' E., 1086.17 feet to steel pin; thence West 756.00 feet to a steel pin; thence S. 13°58' W., 787.27 feet to a steel pin; thence East 190.00 feet to a steel pin and the true point of beginning.

ALSO a tract of land in the NW1/4NE1/4 and NE1/4NW1/4 of SECTION 34 and the SE1/4SW1/4 of SECTION 27, TOWNSHIP 18 NORTH, RANGE 7 WEST, P.M.M., Lewis and Clark County, Montana, more particularly described as follows:

Beginning at a Brass Cap which is the south quarter corner of Section 27, T.18 N., R. 7 W., P.M.M., and the true point of beginning; thence N. 556.00 feet to a steel pin; thence West 413.00 feet to a steel pin; thence S. 38°04' W., 400.00 feet to a steel pin; thence S. 28°39' W., 273.30 feet to a steel pin; thence S. 21°04' W., 430.00 feet to a steel pin; thence S. 36°26' E., 117.00 feet to a steel pin; thence S. 38°14' W., 190.00 feet to a steel pin; thence S. 69°52'53" E., 94.28 feet to a steel pin; thence S. 81°00' E., 58.55 feet to a steel pin; thence S. 30°00' E., 179.30 feet to a steel pin; thence S. 68°28' E., 268.00 feet to a steel pin; thence N. 59°29' E., 10.00 feet to a steel pin; thence S. 30°31' E., 104.00 feet to a steel pin; thence S. 6°38' E., 216.00 feet to a steel pin; thence S. 86°46' E., 317.80 feet to a steel pin; thence N. 24°30'12" E., 830.40 feet to a steel pin; thence North 500.00 feet to a steel pin; thence West along the section line 240.04 feet to a brass cap which is the South quarter corner of Section 27 and the true point of beginning. Excluding from this area the previously recorded Joslin Creek Tracts. As disclosed by Quiet Title Decree filed under M Book 14, page 8077, records of Lewis and Clark County, Montana.

EXCEPTING THEREFROM:

A tract of land being a portion of M Book 14, Page 8077 located in NW1/4 SECTION 34, TOWNSHIP 18 NORTH, RANGE 7 WEST, P.M.M., Lewis and Clark County, Montana, particularly described as follows: Commencing at the S1/4 of Section 27, Township 18 North, Range 7 West, S. 15°45'09" W, 302.31 feet to the point of beginning: Thence S. 45°00'00" W. 295.00 feet; thence N. 45°00'00" W. 295.00 feet; thence N. 45°00'00" E. 295.00 feet; thence S. 45°00'00" E. 295.00 feet to the point of beginning. As shown on Certificate of Survey filed under Document Number 605734/M.



Lewis & Clark County, Montana
 Paulette DeHart, Treasurer
 316 N. Park Ave., Room 113
 Helena, MT 59623

YEAR 2010 Real Estate STATEMENT OF TAXES PAYABLE

PROPERTY ID NO.: 276827401170000
 PROPERTY LOCATION:
 LEGAL DESCRIPTION: M&B TRACT IN SW4SE4 & SE4SW4, SEE BK M5,
 PG 3498

SEC-TWN-RGE: 27-18 N-07 W

	MARKET VALUE	TAXABLE VALUE
LAND	451	89
BUILDINGS		
PERSONAL		
TOTAL VALUE	451	89

COUNTY MILL VALUE 113,195

276827401170000
 CLARK JOHN H & CLAUDIA R
 PO BOX 610
 AUGUSTA MT 59410-0610

C3
 S 726



726 2 AV 0.400

10 PCRD

General Tax Detail

L & C Co.		SCHL		ST of MT	
All Prop	3.32	Co Elem Rtr	2.74	St. Univ	0.54
Co. Agent	0.12	Co Hi Rtrm	1.48	State Eqn	3.56
Dst Courts	0.30	Co Trans	0.54	Vo-Tech	0.14
Emplie Ins	0.86	* (SCHL SUBTOTAL)	4.76	* (STAT SUBTOTAL)	4.24
Entitlement	1.52				
Fair	1.12	SCHM			
Health	0.68	Co Elemtry	2.94		
Hlth Fclts	0.12	Co Hi Schl	1.86		
Library	1.88	* (SCHM SUBTOTAL)	4.90		
Mental Hlt	0.06				
Parks	0.02	SD 45			
Planning	0.26	Elem Bus Rs	0.42		
PublicCity	5.16	Elem Gen	6.20		
Road	2.96	Elem Tran	0.44		
Sr. Cizns.	0.10	Hi Bus Rsrv	0.32		
* (LCCY SUBTOTAL)	18.48	Hi General	5.32		
		Hi Trans	0.08		
		* (SD SUBTOTAL)	12.78		

Special Assessments

Description	Code	First Half	Second Half	Description	Code	First Half	Second Half
AUGUSTA CEMETERY	8002	0.06	0.05				
SOIL & WATER	8013	0.18					

Total Special Assessments: 0.24 0.05

General Taxes

	Mill Levy	First Half	Second Half
L & C Co.	207.57	9.24	9.24
Co Schools	53.53	2.38	2.38
CoSchStat	55.00	2.45	2.45
S.D. 45	143.78	6.39	6.39
St of MT	47.50	2.12	2.12
Total Mill Levy	507.38		
Total Special Assessments		0.24	0.05
Total Taxes Due Current Year		22.82	22.63

This property may qualify for a Property Tax Assistance Program. This may include: Property Tax Assistance, Disabled or Deceased Veterans' Residential Exemption, the Extended Property Tax Assistance Program and/or Elderly Homeowner's Tax Credit. Contact the Local Department of Revenue at 406-447-8000 for further information.

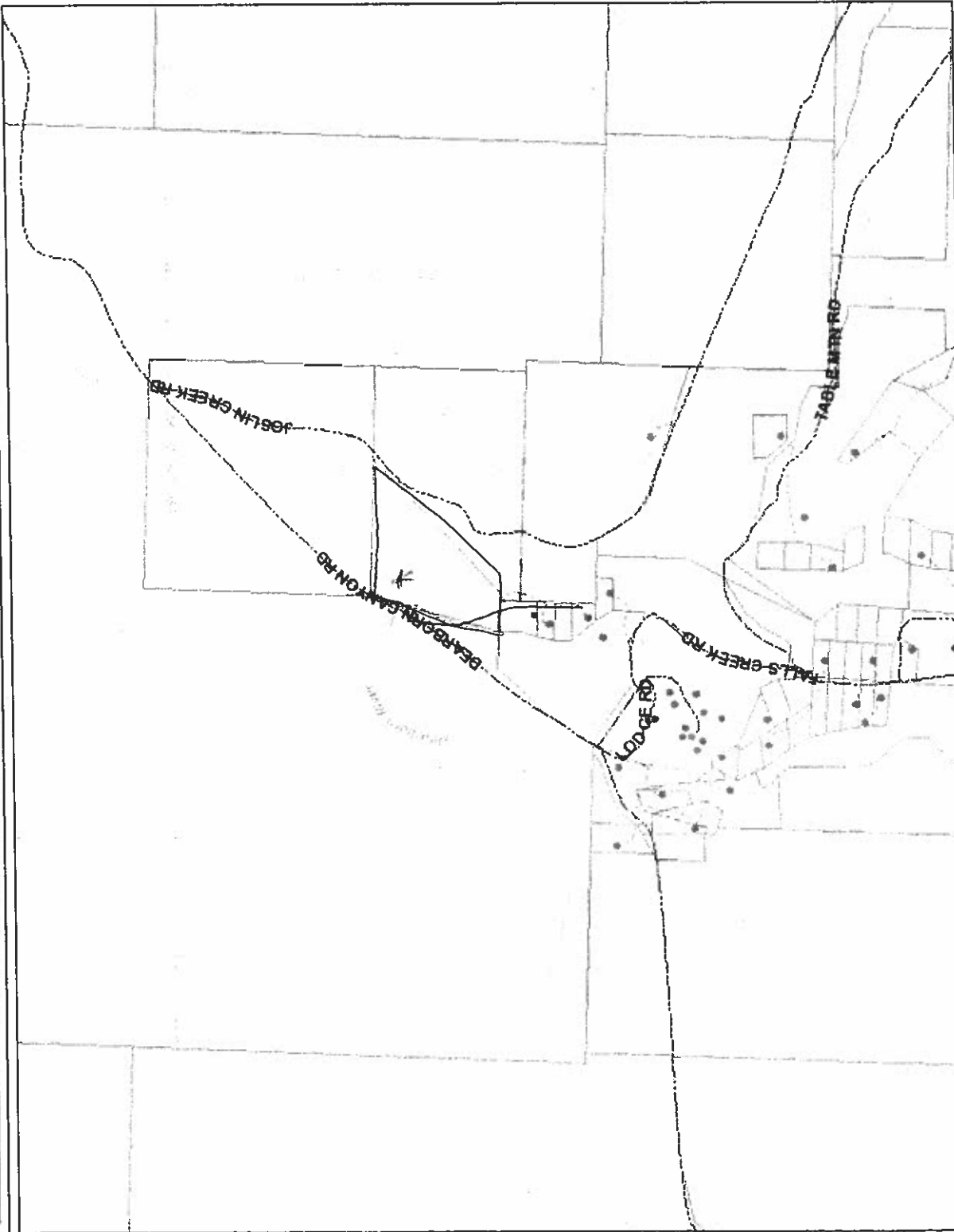
Total Prior Year(s) Delinquent Tax Including Penalty and Interest:

If Paid By*:

*Additional Penalty and Interest shall be added if not paid by above date. Questions? Call 406-447-8329 or 406-447-8362. Taxpayers may pay taxes that are delinquent at anytime if they pay the full amount of the delinquency. If taxpayer wants to pay only part of their delinquent taxes, then the current year has to be paid in full before they can pay a delinquent year. Delinquent payments must be credited to the oldest year first.

FOR PAYMENTS USING CREDIT CARDS, DIAL TOLL FREE 1-800-272-9829. YOU WILL BE ASKED FOR A JURISDICTION NUMBER. THIS NUMBER IS 3602. YOU WILL THEN BE PROMPTED FOR PAYMENT INFORMATION. FOR INTERNET PAYMENTS PLEASE LOG ONTO www.officialpayments.com

KEEP THIS PART FOR YOUR RECORDS. IT IS THE ONLY NOTICE THAT YOU WILL RECEIVE.



Legend

Streams

Lakes

Addresses (18,035)

Residential

Commercial

Public

Private Non-Profit

Residential Multi-Family

School

Wilderness Areas

County Boundary

County Boundary Extent

County Boundaries

Cities and towns

City or town

City or town

Highways

Interstate

US Hwy

Montana Hwy

Secondary Hwy

Interstate on-off ramp

Roadways (Full Extent)

Roadways (59,999)

INTERSTATE

DIVIDED 4 LANE

PAVED

UNPAVED

DRIVEWAY

ONEWAY

TwoSymbol 0

NON MOTORIZED

ABANDONED

WATER ACCESS ONLY

ALLEY

Roadways (9,028)

Roadways (4,514)

Railroads

Parcel Boundaries

1:10,086



Notes

Enter Map Notes

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THIS MAP IS NOT TO BE USED FOR NAVIGATION

0.3 0 0.16 0.3 Miles