

LAKE COUNTY LAND SERVICES
FINAL INSPECTION AND USE PERMIT OF INDIVIDUAL SEWAGE DISPOSAL SYSTEM

PROPERTY OWNER Jaric Hanna

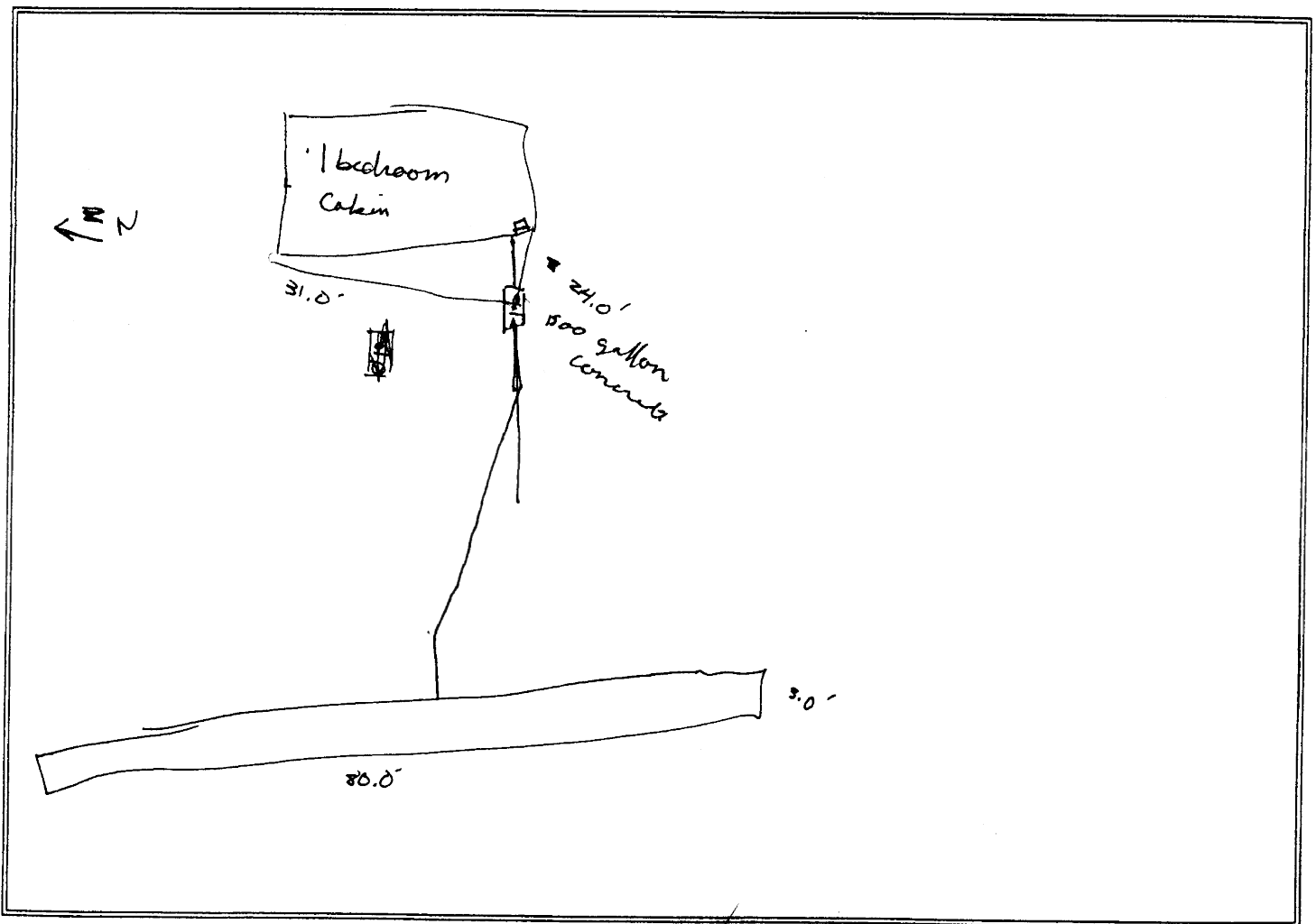
PHYSICAL ADDRESS 833 Sylvan Dr, Big Fork MT 59911

LEGAL DESCRIPTION 1/2 1/4 1/4 SECTION 18, TWP 26 N, RNG 19 W

GEOCODE 3708-18-2-06-09-0000 SUBDIVISION Flowerrees Orchard Tracts LOT 13 BLK 2

PERMIT NO. 4665 CONTRACTOR Zavala

INSPECTION SKETCH



IS SYSTEM INSTALLED ACCORDING TO APPROVED PRE-SKETCH? YES X NO

INSPECTED BY [Signature] DATE 5/17/99

SIGNATURE OF APPLICANT OR AUTHORIZED AGENT [Signature]

419

2 bedroom House

NORTH

31.0'

24.0'

4", sch. 40 discharge line as instructed
in the siphon installation manual.

A 1500 Gallon Concrete Combination Septic Tank
and Pump Chamber. Install an OSI 316, a 318 or another siphon
producing greater than or equal flows. The siphon was fit with a dose
counter. The tank included an effluent filter in the septic chamber to

A 5.0'-4" sch. 40 Manifold

80

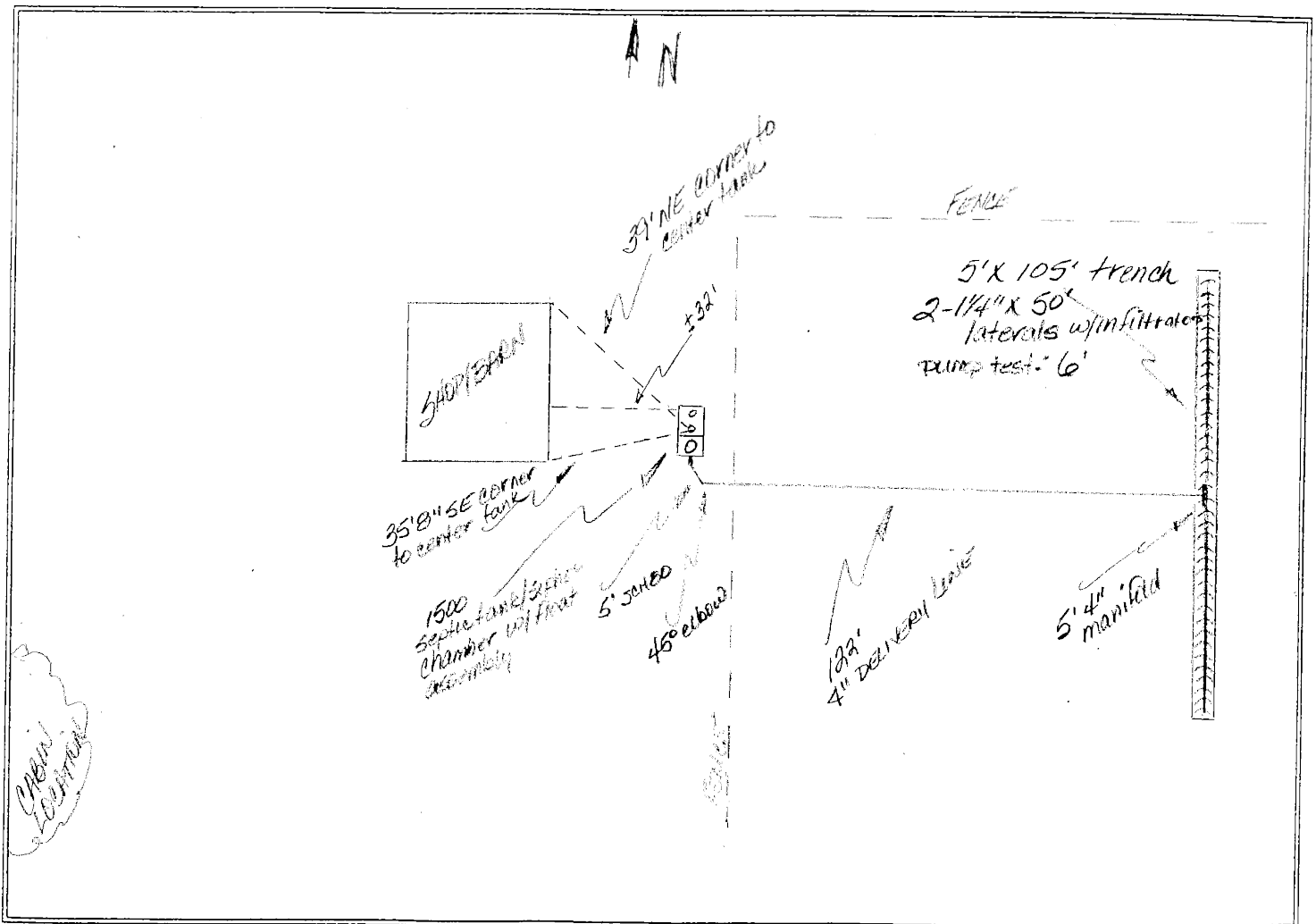
3

Jack Hanna
833 Sylvan Dr.
Bigfork, MT 59911
Sec 18, Twp 26N, Rng 19W
Flowerrees Orchard Tracts,
Lot 13, Blk 2 1.34 acres
Permit #4665, Issued 3/10/99

LAKE COUNTY LAND SERVICES
FINAL INSPECTION AND USE PERMIT OF INDIVIDUAL SEWAGE DISPOSAL SYSTEM

PROPERTY OWNER JOHN B + SUZANNE E HANNA
PHYSICAL ADDRESS 833 SYLVAN DRIVE, BIGFORK
LEGAL DESCRIPTION S 1/2 SW 1/4 NW 1/4 SECTION 18, TWP 26 N, RNG 19 W
GEOCODE 3708-18-2-06-13 SUBDIVISION FLOWER'S ORCHARD LOT 12+13 BLK 213
PERMIT NO. 4978 TRACTS
CONTRACTOR ROBERTO ZAVALA

INSPECTION SKETCH



IS SYSTEM INSTALLED ACCORDING TO APPROVED PRE-SKETCH? YES ☒ NO ☐

INSPECTED BY L. Ellsworth DATE April 22, 2000

SIGNATURE OF APPLICANT OR AUTHORIZED AGENT Jeff Reynolds

433 sk

LAKE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT
FINAL INSPECTION AND USE PERMIT OF WASTEWATER TREATMENT SYSTEM

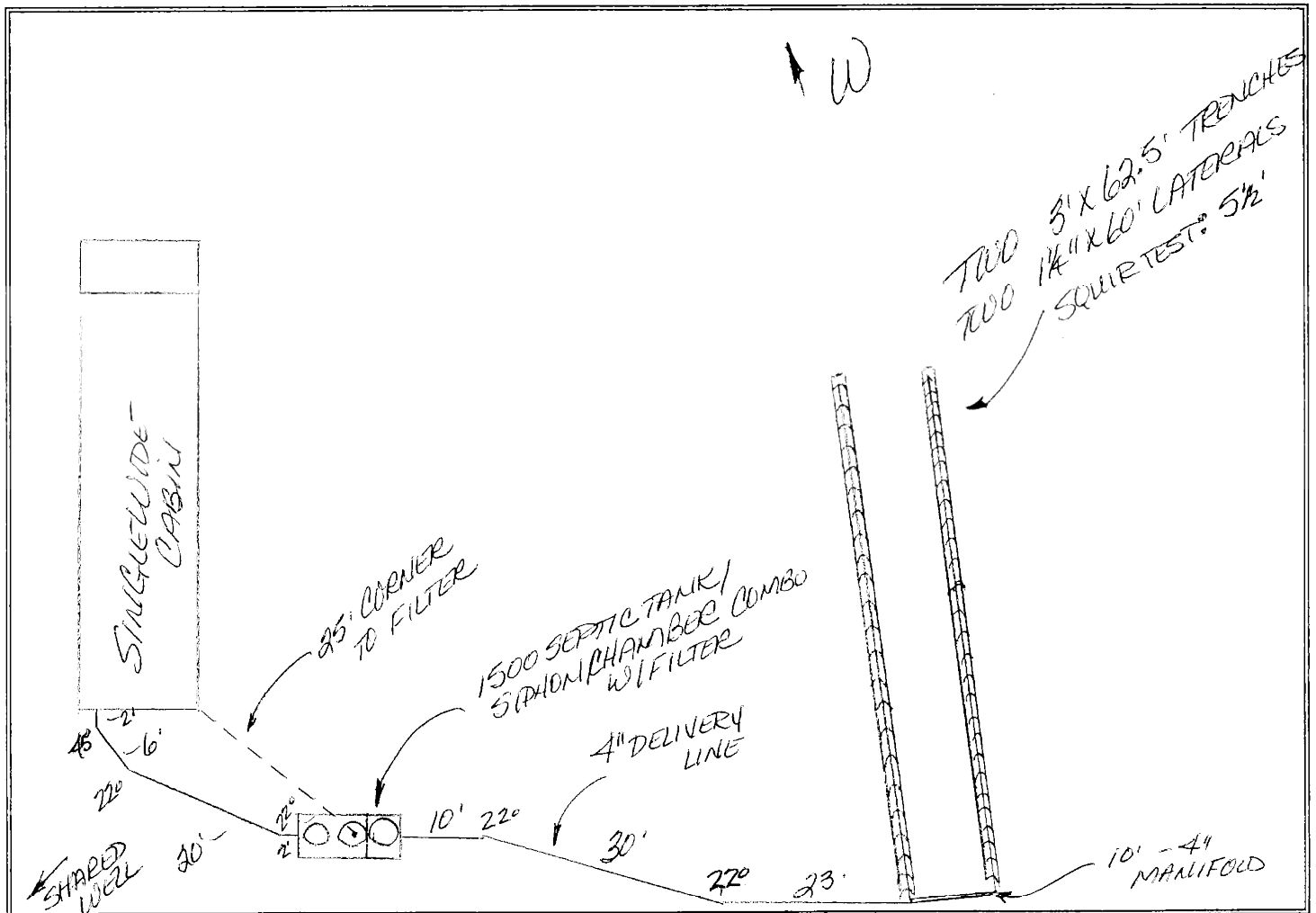
PROPERTY OWNER: JACK & SUZANNE HANNA / HAVACA RANCH LLC

PHYSICAL ADDRESS: 833 SYLVAN DR. BIGFORK

LEGAL DESCRIPTION: SECTION 18, TWP 36 N, RNG 19 W 1/2 1/4 1/4

GEOCODE: 3708-18-206-14-0000 SUBDIVISION: FLOWERZEE ^{AMENDED} LOT: 10
ORCHARD TRACTS BLK 3

PERMIT NO: 6349 CONTRACTOR: ZAVALLA EXCAVATING



APPROVED FOR 3 BEDROOMS 300 GPD

SEPTIC TANK: GPS-NS 259503.546 GPS-EW 428461.491

DRAINFIELD: GPS-NS 259521.875 GPS-EW 428460.459

INSPECTED BY: Kimberly Ellwood DATE June 1, 2005

SIGNATURE OF APPLICANT OR AUTHORIZED AGENT: Paul Day



APPLICATION FOR LAKE COUNTY WASTEWATER TREATMENT INSTALLATION PERMIT

LAKE COUNTY ENVIRONMENTAL HEALTH
106 FOURTH AVENUE EAST
POLSON, MT 59860-2175

PH: 406-883-7236
FAX: 406-883-7205
Email: envhealth@lakecounty-mt.org

Return the completed application with the \$150.00 permit fee to the above address.

Property Owner: Jack & Suzanne Hanna Phone # 250-1514
Mailing Address: 40 Robert Zavala 18675 Eastlake City Bigfork State/Zip 59911
Property Address: 833 Sylvan Drive
Legal Description: Section: 18 Township 26 Range 19
Subdivision Name: Flowercree Orchard ^{Amended} Lot 10 Block 3 Parcel Size 2.934
Bedroom # 2 Tracts

Wastewater System: (Circle) New Replacement
Water System: (Circle) Well Lake Spring Community
(Circle) Existing Proposed Property Zoned: Yes No
Dwelling: (Circle) Single Family Multi-Family Mobile Home Commercial Garage

I hereby declare that the information submitted herein is true and completed to the best of my knowledge. I understand that a final inspection and approval of the system must be conducted by Lake County Environmental Health prior to back filling and use of the system. My signature also authorizes access to the described property for purposes of reviewing this application.

Owner Signature: [Signature] Date: 4/12/05

OFFICE USE ONLY

Planning Review: No Zoning Pam 4.26.05

Geo Code: 3708-18-2-06-14 ~~0000~~ Tax Statement # 6180

Property Type: (Circle) Residential Commercial Agricultural Lakeshore

State Septic Approval: (Circle) Required Completed Not Required

Name: _____ Reference Date: _____ States Es # _____

Soil Type: 192mg sand Absorption Area Required: .6 gpd/ft² (75)

Contractor: Robert Zavala Required Septic Tank: 1500 w/Siphon

Drainfield Sizing Reference: # of Bedrooms 3 Other: _____

Type of Absorption Area Required: Two-3' x 62.5' Chamber Franchos
Installed as per accompanying specifications

Signature of Registered Sanitarian: [Signature] Date of Issue: May 2, 2005 Permit Number: 6349 Check Number: 1443

THE DESIGN, LOCATION, & ORIENTATION OF THE DRAINFIELD MAY NOT BE ALTERED
WITHOUT PRIOR APPROVAL FROM LAKE COUNTY ENVIRONMENTAL HEALTH.
APPROVED PERMIT IS INVALID IF SYSTEM IS NOT INSTALLED WITHIN TWELVE MONTHS OF ISSUANCE.

APR 14 2005

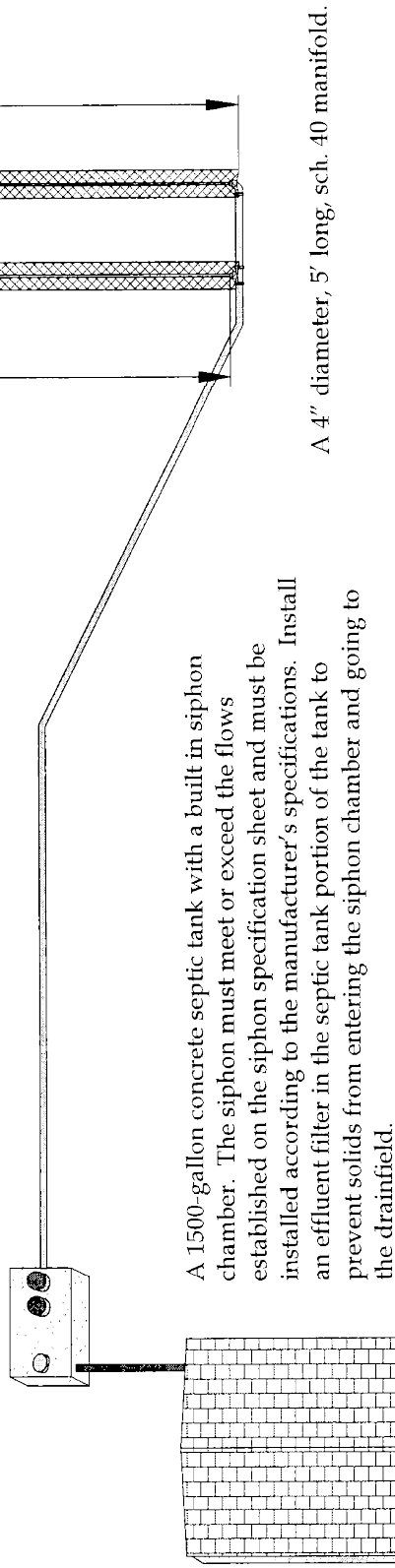


Havaca Ranch LLC
833 Sylvan Drive
Bigfork, Montana
Floweree Orchard Tracts
Amended Lot 10 Blk 3
Sec. 18, Twn. 26N, Rng. 19W
Geo-3708-18-2-06-14-0000
permit 6349 Issue May 3, 2005

Two 3' X 62.5' trenches, each with 10 sections of 34" wide chambers over the 1 1/4" X 60' sch. 40 laterals. Backfill the trenches with native material. See the cross-sectional view for construction details. Refer to the pump/siphon specification sheet for the holes sizes, separation distances, and the lead distances.

Encase the siphon discharge line in 6" diameter, sch. 40, PVC pipe at any point in which it may be driven upon.

A 4", sch. 40, discharge line from the siphon chamber to the manifold.
Install the line as described in the siphon installation manual.



A 1500-gallon concrete septic tank with a built in siphon chamber. The siphon must meet or exceed the flows established on the siphon specification sheet and must be installed according to the manufacturer's specifications. Install an effluent filter in the septic tank portion of the tank to prevent solids from entering the siphon chamber and going to the drainfield.

4" diameter, sch. 40, PVC sewer lines sloped at 1/4" per foot from the dwelling into the septic tank. Install at least one clean-out per dwelling and an additional clean-out for every 50' of run.

A 4" diameter, 5' long, sch. 40 manifold.

K-Value for Multiple Wells Using Fetter

Project: Havaca Ranch LLC
 Date: 05/03/05
 Reviewer: Terry Murphy R.S.

county check

$T = 33.6 (Q/S)^{0.67}$ $T =$ transmissivity $S =$ drawdown
 $Q = \text{ft}^3/\text{day}$ (gpm)(192.5) = ft^3/day
 Convert Q from gpm to ft^3/day

Gwic well #	79676	Gwic well #	79670	Gwic well #	79674
Yield in gpm	15	Yield in gpm	50	Yield in gpm	15
convert to ft^3	2887.5	convert to ft^3	9625	convert to ft^3	2887.5
Static water level	115	Static water level	110	Static water level	70
Pumping water level	160	Pumping water level	210	Pumping water level	184
Drawdown	45	Drawdown	100	Drawdown	114
T=	546.055	T=	716.503	T=	292.929
well depth	280	well depth	264	well depth	185
Casing length	119	Casing length	114	Casing length	43
slot length	0	slot length	0	slot length	0
open bottom	0	open bottom	0	open bottom	0
Aquifer depth	161	Aquifer depth	150	Aquifer depth	142
K=T/b	3.392	K=T/b	4.777	K=T/b	2.063

Gwic well #	156690	Gwic well #	79671	Gwic well #	177137
Yield in gpm	18	Yield in gpm	20	Yield in gpm	15
convert to ft^3	3465	convert to ft^3	3850	convert to ft^3	2887.5
Static water level	29	Static water level	84	Static water level	120
Pumping water level	70	Pumping water level	250	Pumping water level	330
Drawdown	41	Drawdown	166	Drawdown	210
T=	656.712	T=	276.138	T=	194.537
well depth	242	well depth	420	well depth	335
Casing length	242	Casing length	380	Casing length	335
slot length	10	slot length	40	slot length	15
open bottom	10	open bottom	0	open bottom	0
Aquifer depth	20	Aquifer depth	80	Aquifer depth	15
K=T/b	32.836	K=T/b	3.452	K=T/b	12.969

AVERAGE K

9.91

Total number of wells used

6

K-Value 9.91 ft/day

Flow direction South 70 West 250 degrees

Montana Ground Water Assessment

Elevation drop	75 ft	Conversion to feet	2904 ft	South Map	North Map
Measured distance	0 in	Conversion to miles	0.55 miles		0.55 miles
Scale	1: 100000	Hydraulic gradient	0.0258 ft/ft		2904 feet

Slagle 1988 USGS

Study

1/3 topographic

Triangulation

Slope calculation	drop	0 ft	drop	0 ft	
	Miles	3 miles	run	100 ft	
	run	15840 ft	percent slope	0.00%	
Calculate Hydraulic gradient		0 ft/ft	calculated gradient	0 ft/ft	0 ft/ft
			default	0	

i= hydraulic gradient	0.0258	f= discharge gpd	200
d= Mixing zone thickness	15	Qf= effluent discharge	26.7
w= width of drainfield minimum	63	p= precipitation	17
L= length of mixing zone	200	I= prec. In ground water	0.2
Ng= nitrogen in background ground water	1.97	conversion factor	0.0039
Nr= nitrogen in recharge ie. Rainwater	1	nitrogen in drainfield Level II	24
Ne= nitrogen in drainfield	50		

W=.175*L+w	W=	98	mixing zone width
Am=W*d	Am=	1470	mixing zone area
As=W*L	As=	19600	mixing zone surface area
Qg=K*i*Am	Qg=	375.85	ground water volumetric rate
Qr=As*p*I	Qr=	15.29	precipitation volumetric rate
Qe=f*Qf	Qe=	26.7	effluent volumetric rate
Qt=Qg+Qr+Qe	Qt=	417.84	total water volumetric rate
Nt=((Ng*Qg)+(Nr*Qr)+(Ne*Qe))/Qt	Nt=	5	ppm nitrogen

<i>Nitrogen value at the end of mixing zone standard</i>	<i>5.00 mg/l</i>
<i>Nitrogen value at the end of mixing zone with Level II</i>	<i>3.34 mg/l</i>



LAKE COUNTY ENVIRONMENTAL HEALTH

106 FOURTH AVENUE EAST
POLSON, MT 59860-2175
PH: 406-883-7236 FAX: 406-883-7205
Email: envhealth@lakemt.gov

WASTEWATER TREATMENT SYSTEM FINAL INSPECTION AND USE PERMIT

Lake County Environmental Health Department hereby approves Wastewater Use Permit # 7924
for the following:

OWNER: SACK & SUZANNE HANNA

MAILING ADDRESS: P.O. BOX 1450

CITY: POWELL STATE: OH ZIP: 43065

LEGAL DESCRIPTION: SECTION 18, T 26 N, R 19 W, 1/2, 1/4, 1/4

SUBDIVISION/COS: FLOWER ORCHARD TRACTS LOT/TR#: 5-9 / BLOCK #2

GEOCODE: 15-3708-18-2-06-09-0000 LOT SIZE: 17.001 ACRES

PHYSICAL ADDRESS: SYLVAN DR.

SYSTEM DESIGN: STANDARD ADVANCED EXPERIMENTAL (circle one)

GPD: 150 BEDROOMS: 1 OTHER: —

1500 GALLON HOLDING TANK

SEPTIC TANK: GPS-NS 428570.01 GPS-EW 259572.89

DRAINFIELD: GPS-NS — GPS-EW —

WELL: GPS-NS — GPS-EW —

INSTALLER SIGNATURE: Not available Roberto Zavala

I hereby certify the above system was installed in accordance with all applicable regulations and specifications.

INSPECTED BY: [Signature] DATE 5/19/17

It is the property owner's responsibility to ensure the system is properly maintained and functioning within the guidelines set forth in the Lake County Wastewater Treatment System Regulations and the Montana Circular DEQ4.

Any alteration of the wastewater treatment system not approved by Lake County Environmental Health Department invalidates this Use Permit. Any change in wastewater flow or strength from the design of this wastewater treatment system requires a Change of Use permit be issued. Examples include, but are not limited to: addition of a bedroom(s), altering a residential use, altering commercial or industrial use, replacement of structures, addition of a water treatment unit or a water fixture.

Minor repairs to the system will be allowed without an additional permit. These repairs are limited to: replacing a broken sewer line, pumping the septic tank (recommended every 3-5 years), cleaning the effluent filter (recommended annually) and replacing the effluent pump with a pump of equal specifications. Any other repairs require an approved Installation Permit from Lake County Environmental Health Department.

For more information please contact Lake County Environmental Health Department.

See attached sketch for design specifications.