DESIGN INSTRUCTIONS
and
WORKSHEETS
for a
LESS than 2000 Gallons Per Day
SEPTIC SYSTEM
utilizing a
LEACHFIELD

$150.00

For Office Use Only

Approved RM 7/21/09
(date)

System shall not be covered until inspected. Request inspection 24 hours in advance.

Inspected by RM 7/28/09
(date)

Permit 3-48-09

A. General Information.

1. Name of Owner: David & Shelley Born
2. Location: Address 419 Meade Creek
   1/4 Section SE¼NW¼, Section 33, Township 55 N, Range 83 W
3. Subdivision or Tract: a) Name #3 tract
   b) Lot # _____, c) Block # _____, d) Date Platted or Approved _____
   e) Attach legal description of property (from Sales Contract or Deed)

B. Site Information.

1. Lot Size: _____ft. by _____ft. Area:_____sf or 35.73 Acres
2. Water Supply: ____community, or X private well
3. Ground Slope (at location of leachfield): _____ft./100ft., or _____%
4. Soil Description: Sandy Loam, Cleache
5. Percolation Rate in minutes per inch (mpi) as determined from Percolation Test Procedure attachment. (The actual percolation test data must be submitted with the application).
   a. If 3 to 5 holes were tested, the slowest rate (largest number) was 40 mpi.
   b. If 6 or more holes were tested, the average percolation rate was_____mpi.
   c. If the percolation rate is less than 1 mpi or greater than 60 mpi, this site is unsuitable for a typical leachfield. Please contact the County Engineer's office for assistance.

6. The seasonally high groundwater level is N/A feet below the ground surface.

How and where was this determined? (Ground water test pits MUST be inspected by Sheridan County)

Contractor dug 7' ± inspected. The test pit had no standing water and no sign of seasonal high water mark. The soil was a sandy loam and may perc well. No impermeables were observed.

Who determined this? Contractor Cindy Anderson Date 7/13/09 7/14/09

7. The depth to bedrock or to an unpermeable soil layer (perk rate greater than 60 mpi) is 0 N/A feet below the ground surface. (If the depth to bedrock is greater than 12 feet, the exact depth is not necessary - answer: more than 12 ft.)

How was this determined?

MORE THAN 12 FEET

Who determined this and qualifications? SM

8. Complete the blank *Site Plan detail sheet* included herein.

C. Septic Tank Information.

1. Tank size: 1,000 gallons, 1 compartment_____, or 2 compartment X
2. Manufacturer: ~~Skyline~~ Poto Mold, Model _____
3. Supplier: Shippons, Phone _____
4. Standard Septic Tank Detail Sheet must be completed.

D. Dosing Systems.

1. Is a dosing system required? Yes_____ No X
   (If no, skip to Section E.)

2. Pump information:

   Manufacturer_____ Model_____ Flow_____

3. Pump Tank:

   Manufacturer_____ Size_____

   (The electrical control of the pump system requires a pump "On" switch, a pump "Off" switch, and a high water alarm).

E. Absorption system (leachfield) size calculations.

1. Design wastewater volume (circle a, b, or c - and complete that section):

   a. Permanent Structure: 150 gpd/bedroom x 2 bedrooms = 300 gpd

   b. Mobile home: 1 or 2 bdrms = 350, 3 bdrms = 500, 4 bdrms = 650gpd (circle one)

   c. Non-residential design loads (show calculations as appropriate)

   _____

   _____

   _____

2. The absorption system loading rate is: 0. .35 gpd/sf.

   (The loading rate is determined from your percolation rate and the "Loading Rate Table", Appendix PT, in the *Percolation Test Procedure attachment*)

3. The minimum required infiltrative surface area is calculated as follows:

   Wastewater volume (E.1.) / Loading rate (E.2.) = 300 gpd / .35 gpd/sf = 857.14 sf

F. Absorption system layout (Leachfield):

1. Type of system: (check one)

Rock and perforated pipe **Trench** _____	complete part F.2.
Rock and perforated pipe **Bed** _____	complete part F.3.
Chamber Trench system __X__	complete part F.4.
Chamber Bed system _____	complete part F.5.

2. Trench Design for Washed Rock and Perforated Pipe: (Distinct trenches with at least 3 feet of undisturbed soil between trenches)

   a. Minimum infiltrative surface area required = _____ sf from E.3.

   Choose your trench dimensions:

   b. Total depth = _____ inches

   c. Width = _____ inches

   d. Depth below bottom of pipe = _____ inches (6" minimum)

   Calculate minimum length of trench needed:

   e. Square feet per linear foot =

   (side + bottom + side) / 12 = _____ sf / foot [(d. + c. + d.) divided by 12].

   f. Total minimum trench length = F.2.a. / F.2.e. = _____ linear feet

   g. Trench layout - (check one) Depending on the total minimum trench length required (F.2.f.); choose one of the following:

_____	1 single trench	see *Single Trench Pipe Leachfield detail sheet*
_____	2 trenches	see *Two Trench Pipe Leachfield detail sheet*
_____	4 trenches	see *Four Trench Pipe Leachfield detail sheet*
_____	Multiple trenches (requires "D" Box)	see *Multiple Trench Pipe Leachfield detail sheet*

3. Bed Design for Washed Rock and Perforated Pipe: (one continuous excavation - no distinct trenches)

   a. Minimum infiltrative surface area required = _____ sf from E.3.

   Choose your bed dimensions (must always be more than the minimum area required.)

   b. Width _____ ft. Length _____ ft. = Total square feet _____ sf.

   c. Bed layout: Complete *Bed Type Pipe Leachfield detail sheet*

4. Trench Design for Chamber Leachfied Systems: (Distinct trenches with at least 3 feet of undisturbed soil between trenches)

a. Minimum infiltrative surface area required = 857 sf from E.3.

b. Choose your make and model of leachfield Chamber:

Manufacturer ADS, Model Arc 36

Width _____ inches, Height _____ inches, Length _____ feet & inches

c. Equivalent area per unit = 34.7 (See *Chamber Systems Attachment*)

d. Minimum number of units required is:

(Minimum area [F.4.a.] / Equivalent unit area [F.4.c.]) =
(857 / 34.7) = 25 units [round up]

e. Number of units to be used = 25 (same or more than F.4.d.)

f. Trench layout - Depending on the number of units to be used, choose one of the following:

_____	1 single trench	see *Single Trench Chambered Leachfield detail sheet*
X	2 trenches 12 + 13 units	see *Two Trench Chambered Leachfield detail sheet*
_____	4 trenches	see *Four Trench Chambered Leachfield detail sheet*
_____	Multiple trenches (requires "D" Box)	see *Multiple Trench Chambered Leachfield detail sheet*

5. Bed Design for Chamber Leachfield Systems: (one continuous excavation - no distinct trenches)

a. Minimum infiltrative surface area required = _____ sf from E.3.

b. Choose your make and model of leachfield Chamber:

Manufacturer _____, Model _____

Width _____ inches, Height _____ inches, Length _____ feet & inches

c. Equivalent bed area per unit = _____ (See *Chamber Systems Attachment*)

d. Minimum number of units required is:

(Minimum area [F.5.a.] / Equivalent unit area [F.5.c.]) =
(_____ / _____) = _____ units [round up]

e. Number of units to be used = _____ (same or more than F.5.d.)

f. Bed layout: Complete *Bed Type Chambered Leachfield detail sheet*

G. Site Plan and detail sheets:

1. A site plan sheet (site sketch) of your property showing the septic system and leachfield layout along with detail sheets which are appropriate for your specific system must be completed and submitted with these worksheets. Sheets which do not apply to your system need not be submitted. Empty boxes will appear throughout the plan and detail sheets. These boxes require that you fill in information and/or dimensions that apply to your specific design. Much, but not all, of this information can be obtained from the blanks you have just filled out throughout the worksheets. Please select and complete the appropriate sheets for your system.

2. A profile plan showing the elevations of flow from the house to the absorption system must be submitted with this application.

H. Installer Information:

Agent or Contractor's Name: Rick Orlandi

Business Name (if applicable): Elite Excavation

Mailing Address: 1511 Mydland Rd.

Phone number: Shrndy wy

I. General Comments:

Such as unusual site conditions or physical limitations, special requests, or any other pertinent information not previously explained in the worksheets.

J. Owner's name David & Shelley Born

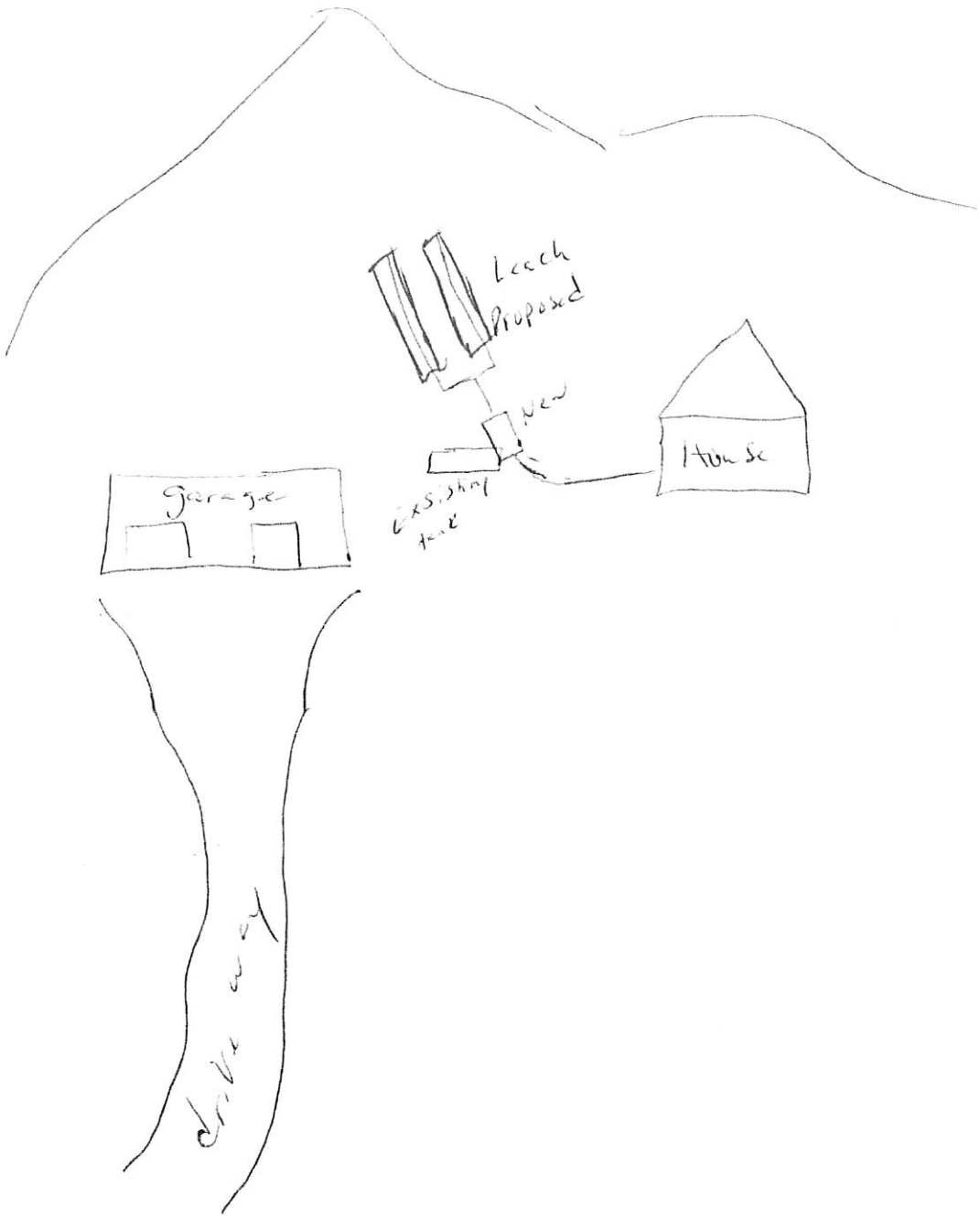
Mailing Address 2161 Coffeen Ave. Suite 503

Phone number 751-5092

Owners signature David K Born Shelley N Born

(application will not be processed without owner's signature)

SITE PLAN



Standard Septic Tank

Manufacturer: Roto Mold Model: 1000g

Rated Size: _____ gallons One Compartment _____, or Two Compartments X

Is this septic tank on the Wyoming DEQ Approved Septic Tank List?
if YES _____ ---- STOP HERE!
if NO _____ ---- CONTINUE!

The requirements listed below and shown on the illustration apply to any tank used or site-built.

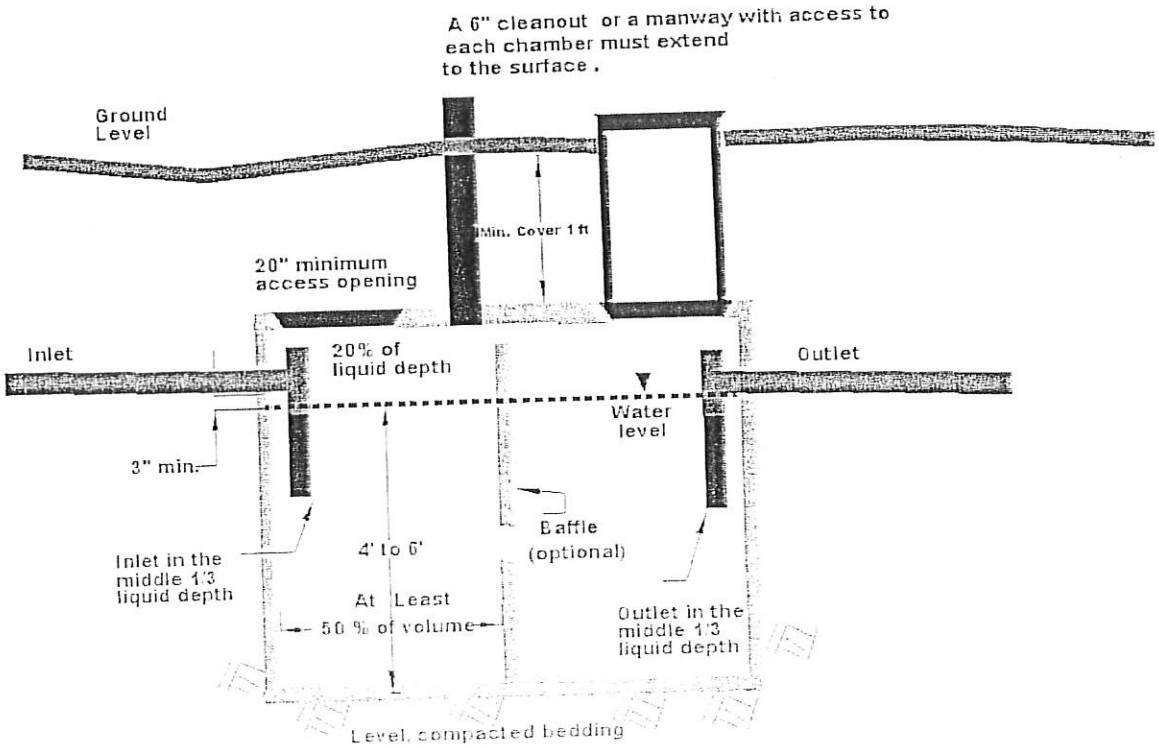
7. All small wastewater systems using a septic tank must have a minimum operating capacity of 1000 gallons. Additional capacity of 250 gallons per bedroom is required for each bedroom past four. Either one or two tanks may be used to meet this requirement.
8. The septic tank must be constructed of durable material not subject to rapid corrosion or decay and must be structurally sound and watertight. Steel tanks are not allowed.
9. Single compartment tanks shall have a minimum length to width ratio of 2:1.
10. Two compartment tanks shall have at least 50% of the volume in the first compartment.
11. Each compartment of the tank shall have an access opening with a minimum dimension of 20 inches in the least direction. Both inlet and outlet devices shall be accessible.
12. Clean-outs extending from each compartment to the surface with a minimum diameter of 6 inches must be provided. The access openings may be extended to the ground surface by use of a manway in lieu of a clean-out riser. All openings must be capped.

Material:_____ (such as concrete, polyethylene, etc.)

Inside dimensions in *Inches*
Length_____ Width_____ Height_____ Liquid Depth_____ Air Space_____

Operating Capacity = (Length * Width * Liquid Depth) / 231 = _____ gallons

Please complete the cross-section drawing below:



Two Trench Chambered Leachfield

This worksheet is for a trench type leachfield using chamber units. Where boxes appear please supply the dimensions of your leachfield.

☐ **Type of Chamber:**

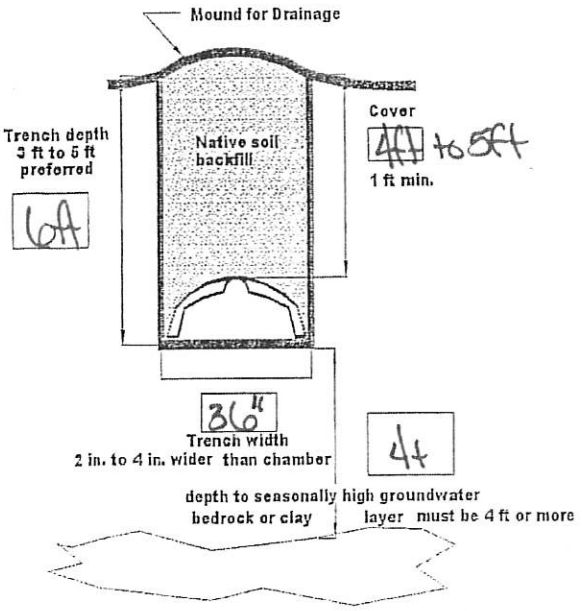
Brand Biodiffuser or ADS

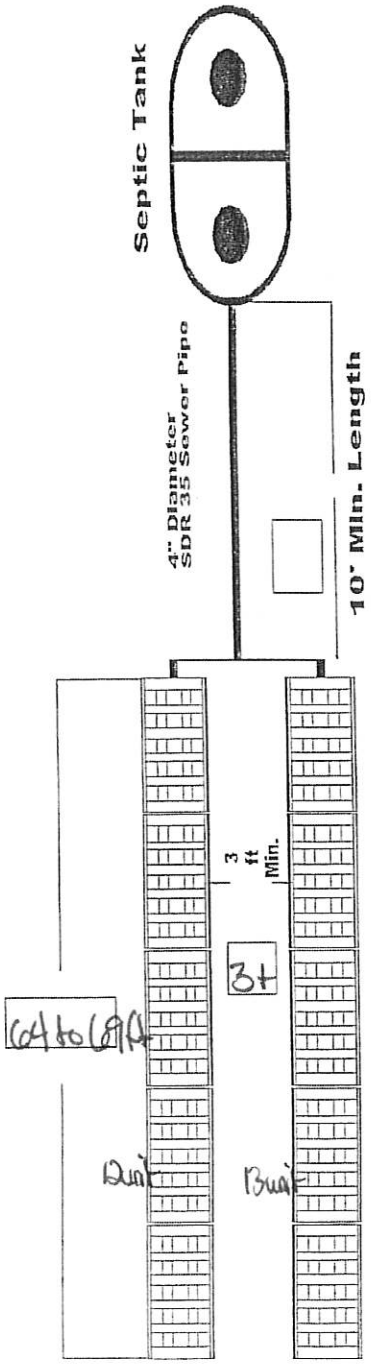
Model ARCH 36

Dimensions: Length _____

Width _____ Height _____

Number of Sections Req'd 25
(From Section E.4)





PERCOLATION TEST RESULTS

Name of Property Owner David & Shelley Born

Address of Property 419 Meade Creek

1. Performed by: Elite Excavation Test Date(s): 6/19/09 - 6/18/09

Credentials or Status of Tester: Contractor, installer

(Owner, contractor, installer, engineer, geologist, sanitarian, soil scientist, or other)

2. The **time interval (ti)** between water level measurements was: 10 minutes.

3. **TEST DATA**: The test holes were **PRESOAKED** for: ____ hours, or X overnight.

Test Hole # is:		1		2		3	
Hole depth (inches) =		34"		37"		48"	
Interval Number	Elapsed Time	Water Level / Drop		Water Level / Drop		Water Level / Drop	
Start =	0 min						
1	10	1/2		1"		1/4	
2	20	1/2		1"		1/2	
3	30	1/2		1"		1/4	
4	40	1/2		1"		1/4	
5	50	1/2		1"		1/4	ok
6	60	1/2		1"		1/4	
7							
8							
9							
10							
Final Drop **(NOT Total)** =		1/2		1		1/4	
Perc rate(mpi) is: [**ti** / Final Drop] =		20		10		40	

a. If **6 or more holes** were tested, the **average perc rate** was: _____mpi, or

b. If **3 to 5 holes** were tested, the **slowest perc rate** (largest number) was: 40 mpi. Slow enough for soil observed

Signature of person performing test _____

7/14/09

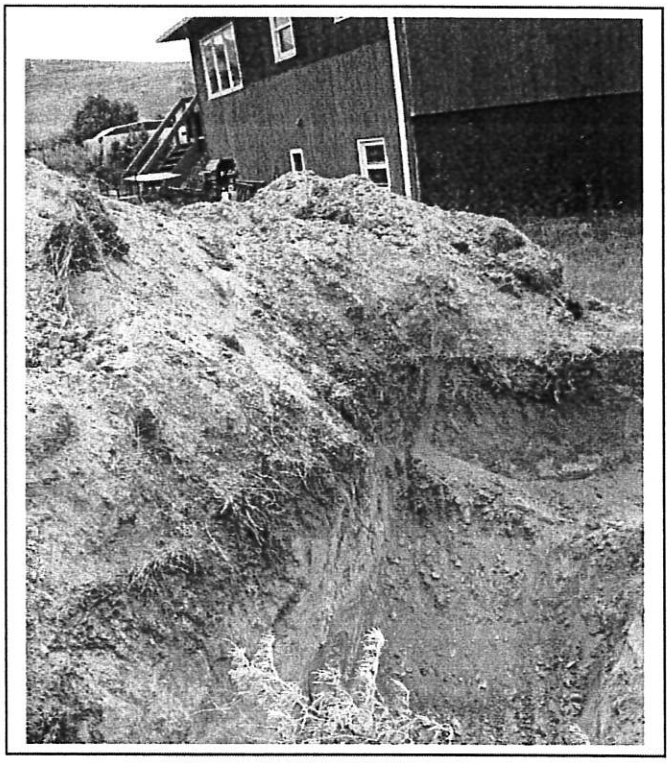
47 Neale Creek

7ft Test Pit dug with no standing water and no sign of seasonal High Water Mark. Soil is sandy loam. It may perc alright. No sign of any impermeable layers. Would make great fill soil or beach soil.

Soil Exploration Pit – Sheridan County

521 Cat Creek Rd. – Test pit was dug to 7'0" with no ground water or seasonal ground water indicators present. No other impermeable layers were observed. The soil was mainly a sandy loam and the perc rate should be good.

RM – 7/14/09



3-48-09
Permit No.

SHERIDAN COUNTY, WYOMING

PERMIT TO CONSTRUCT

☒ Residential	☐ New	☒ Modified (Replacement)
☐ Commercial		☐ Permit Renewal

SITE ADDRESS: 419 MEADE CREEK RD.

Applicant: BORN, DAVE & SHELLY
(Last) (First)

Mailing Address: 2161 COFFEEN AVE STE. 503
(Street or P.O. Box)

SHERIDAN, WY 82801
(City) (State) (Zip)

This permit hereby authorizes the Applicant to construct, install or modify a small wastewater facility located in _____ Subdivision, Block ____, Lot____; or Unplatted Legal Description SE¼NW¼ ¼; Sec. 33 ; T 55 N; R 83 W; in the County of Sheridan, Wyoming. This permit will be effective for a period of one (1) year from the date of issuance.

Authorized by:

K.A. Nielsen
County Engineer's Office
County Inspector

7/21/09
Date of Issuance

SEPTIC PMT

7/21/09 DAVE + SHELLY BROWN 419 MEADE CREEK RD. PERMIT: 3-48-09

PERC RATE: 40mpi

TANK: 1000g ROTO Mold 2 chamber

ABSORPTION SYSTEM

WASTE WATER VOLUME:

150gpd / BEDROOM × 2 bedrooms = 300gpd

LOAD RATING: 0.35

MINIMUM REQUIRED INFILTRATIVE SURFACE AREA:

300gpd ÷ 0.35 = 857.14

ABSORPTION SYSTEM LAYOUT:

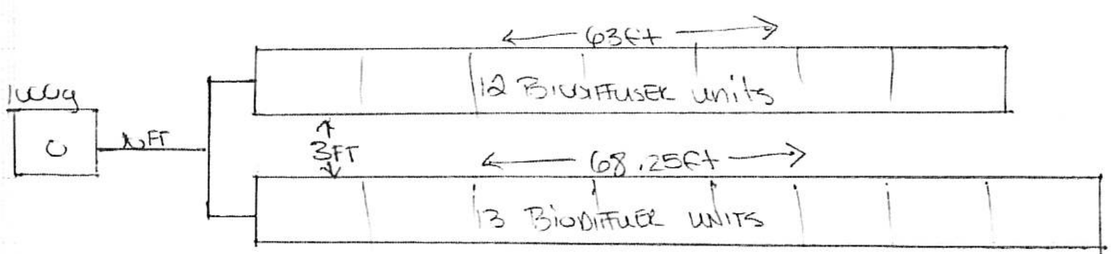
CHAMBER TRENCH SYSTEM

857 sf ÷ 34.7sf per unit = 25 units

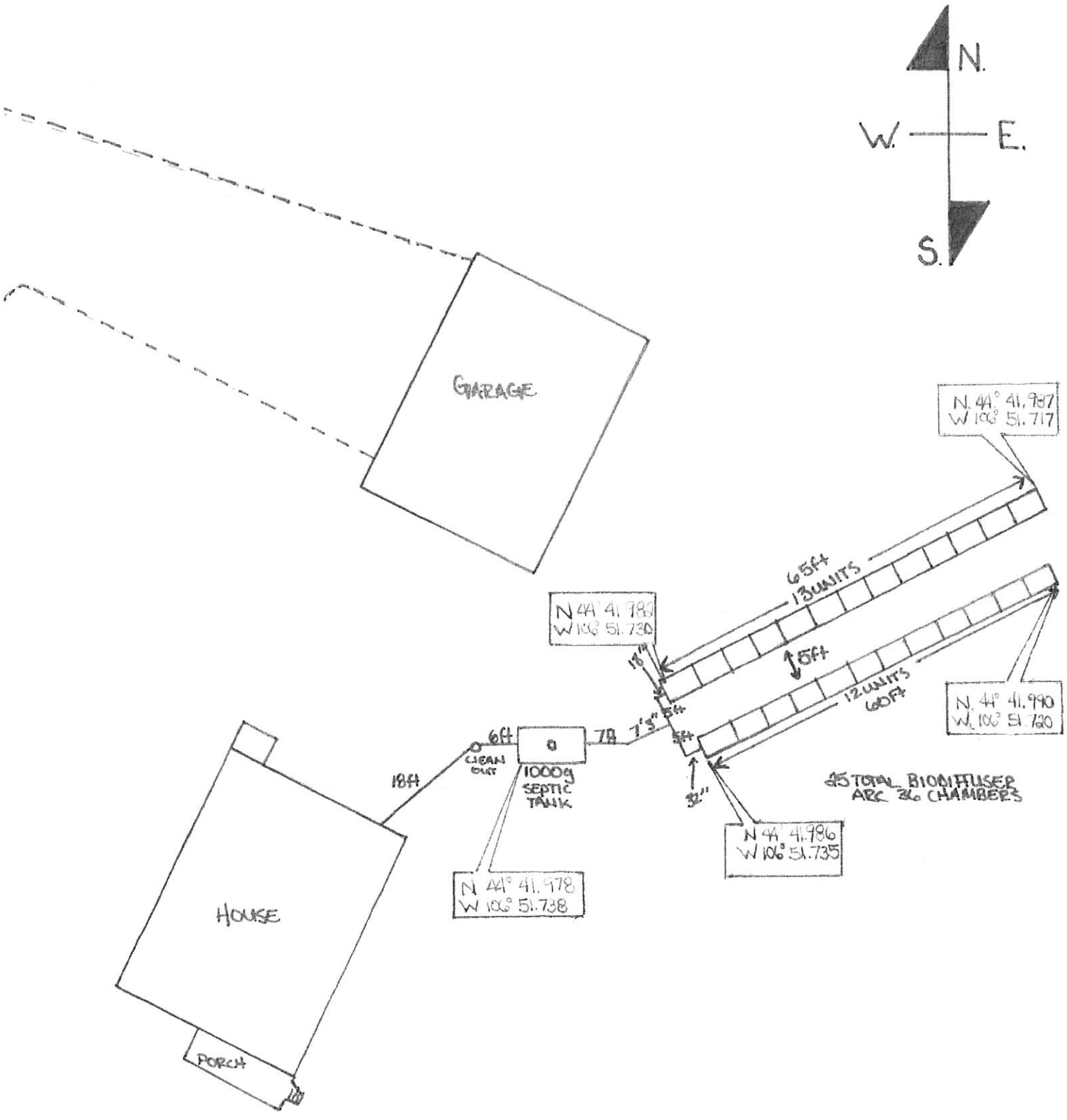
BIODIFFUSER ARC 36 = 34.7sf for TRENCH

PROPOSED: 12 units in one Row + 13 in another Row.

25 TOTAL



DAVID & SHELLY BORN
419 MEADE CREEK Rd.
SHERIDAN, WY 82801
PERMIT: 3-48-09
INSPECTED: 7/28/09
RJM

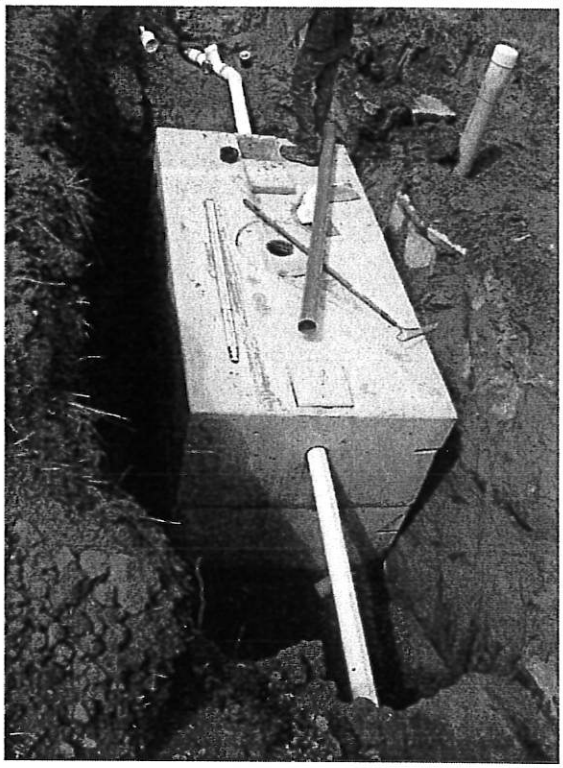


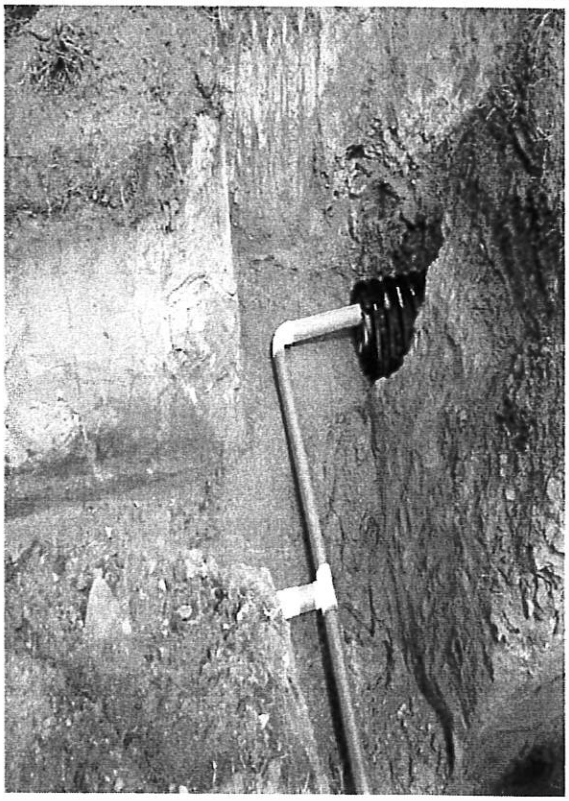
* NOT TO SCALE.

Final Inspection – Sheridan County

419 Meade Creek Rd - Final inspection photos showing leaching chamber absorption field and septic tank. Photos also show final design and location of the septic system on this property.

07/28/09 _RM



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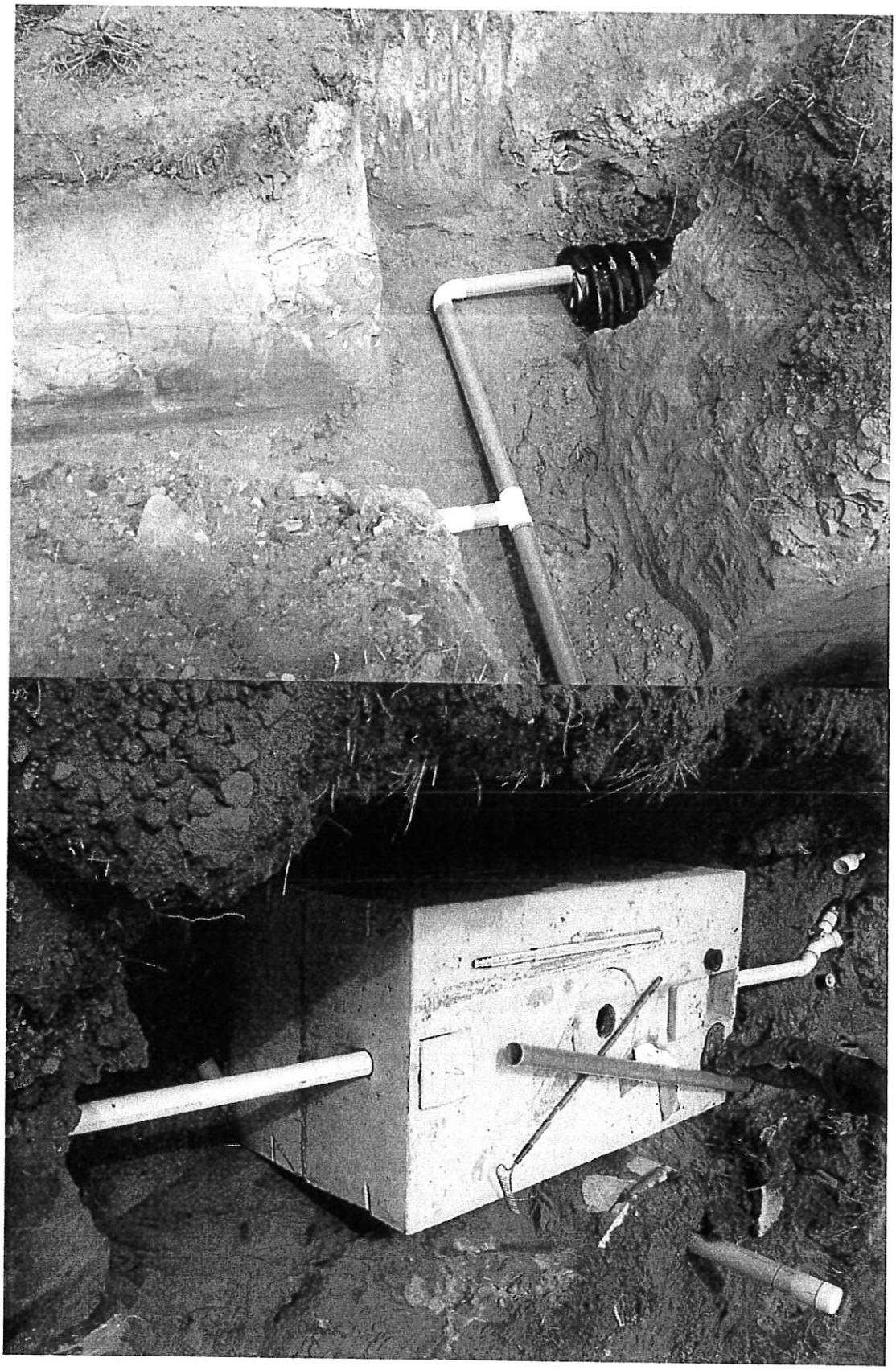
CAT



PERMIT TO CONSTRUCT

☒ New

☐ Renewal

☐ Modified

Permit No. 3-54-82

This permit hereby authorizes the applicant:

Pinkerton	Luman/Sandra	
(Last)	(First)	(Middle)

Route 1 Box 120C
(Street or P.O. Box)

Sheridan, Wyoming 82801
(City) (State) (Zip Code)

to construct, install or modify a small waste water facility located in (Subdivision) _____

BK _____ LT _____ (Legal Description) _____ ¼: Sect. 33

T 55 N R 83 W in the County of Sheridan in the State of Wyoming. This permit shall be effective for a period of two years from the date of issuance.

Authorized by:

J.T.H.
Sheridan County Engineer
by John Isaacson

September 13, 1982
Date of Issuance

Fee paid.

THE MILLS COMPANY SHERIDAN 152117

SMALL WASTEWATER FACILITY PERMIT

SHERIDAN COUNTY, WYOMING

Fee $25.00

Subdivision ______ Bk ____ Lot ____ ____¼; Sec. 32 ; T 56 N; R 83 W

419 Meade Cr. Rd.

Owner or Sponsor [illegible]

Mail Address [illegible]

[illegible] Telephone ______

Installer Tom Buckley

Mail Address ______

______ Telephone ______

GENERAL INFORMATION

1. No. of Living Units One
2. No. of Bedrooms Two
3. Soil type Sandy [illegible]
4. Average of percolation test [illegible] min / inch
5. Ground slope ______ feet/100 ft.
6. Water supply ______
   Municipal ____ Community ____
   Private ______
7. Size of lot 39.9 Acres
8. Remarks ______

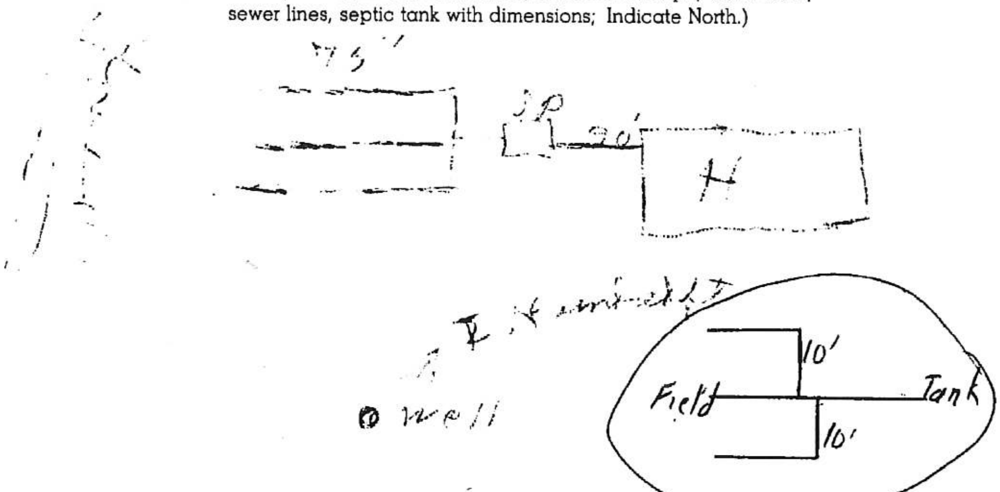
SEPTIC TANK

1. Liquid Capacity 1,000 gallons
2. Material Cement
3. Length ____ Width ____ Depth ____
4. Outlet Depth (from ground level) 3 ft.
5. Distance from: Well 300' Waterlines 25'

SECONDARY TREATMENT

1. Field 75' Bed ~~1~~ Other ____
2. Total Sq. Ft. Required 250
3. Number of lines 3 Ends Connected NO
4. Trench/Bed (width) 3' (length) 75'
5. Depth of gravel (below pipe) 6"
   above 1 ft"
6. Washed gravel Scoria Size 2" (18"-48")
7. Depth of cover over pipe one Foot
8. Distance from: Well 300' Waterlines 25'

PLOT PLAN (show lot lines, well, house, direction or slope, water lines, sewer lines, septic tank with dimensions; Indicate North.)



This system will be constructed in accordance with above specifications, design standards and regulations governing sewage systems in the State of Wyoming and Sheridan County.

The plans and specifications as shown are approved.

COUNTY ENGINEER J.T.H.

DATE 9-13-82 by JJ

APPLICANT [illegible signature]

Do not write below this line.

The above system has been inspected and found to comply with the plans and specifications, but this permit in no way guarantees the continued performance of the system. System shall not be covered until inspected. Request in advance.

Installed by: Tom Buckley Inspected by: John [illegible] Date: 9-10-82

Approved: JTH County Engineer. Date: 9-10-82

by JJ

THE MILLS COMPANY SHERIDAN 1521/78