



#5228000011:

05/20/1999

8190 POCO RD

E

HILDENBRANDT & ASSOCIATES, INC.

May 18, 1998

Project 980503

Trinity Construction
13115 Meadow Glen Lane
Colorado Springs, CO 80908

Attn.: Mr. Mark Lindt

Re: Percolation Test - Residence
8160 Poco Road
El Paso County, CO

Dear Mr. Lindt:

As requested, personnel of Hildenbrandt & Associates, Inc. have performed percolation testing at the above referenced site. This letter presents the results of our testing.

The percolation test was performed on May 10 & 11, 1998. The location of the percolation holes is shown in Figure 1. Soils encountered in the profile hole consisted of shallow-occurring silty to gravelly sands, with underlying sandstone bedrock. The bedrock was encountered in the profile hole at a 6-foot depth. Groundwater was not encountered in the profile hole, which was drilled to an 8-foot depth. The ground in the area of the proposed absorption system slopes moderately to the south.

The average percolation rate was determined to be 12 minutes per inch. Percolation results are shown in Figure 2. Based on a percolation rate of 12 minutes per inch, the absorption field should be 156 square feet per bedroom. The calculated size shall increase by 20% if wastes from a garbage disposal are discharged into the system and shall increase by 40% if wastes from an automatic washing machine are discharged into the system. The absorption field should be sized based on the number of bedrooms and anticipated usage.

Due to the relatively shallow depth of bedrock (6-feet), the absorption area should be no deeper than 18-inches below the existing ground surface. A terraced trench system, with a distribution box, will be necessary to minimize the depth of the system. A minimum 18-inches of earth shall be placed over the system to prevent freezing, and to shed runoff waters away from the system. Existing site materials may be used to cover the system.

A reduction in absorption area for use of a chambered system is not recommended unless the calculated area is increased 60% for a garbage disposal and washing machine, in which case a 35% reduction for use of a chambered system may be taken. One chamber shall be considered to have 15 1/2 square feet of absorption area. If a chambered system is proposed, the system shall have no less than 18 chambers.

Trinity Construction
Percolation Test - Residence
8160 Poco Road, El Paso County, CO

Project 980503
Page 2

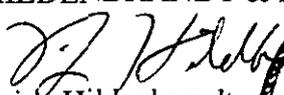
Gravity flow from the septic tank to the field should be used if possible. A pump and pumping chamber may be used if gravity flow is not possible.

The septic tank and absorption system should be installed in accordance with El Paso County Health Department regulations.

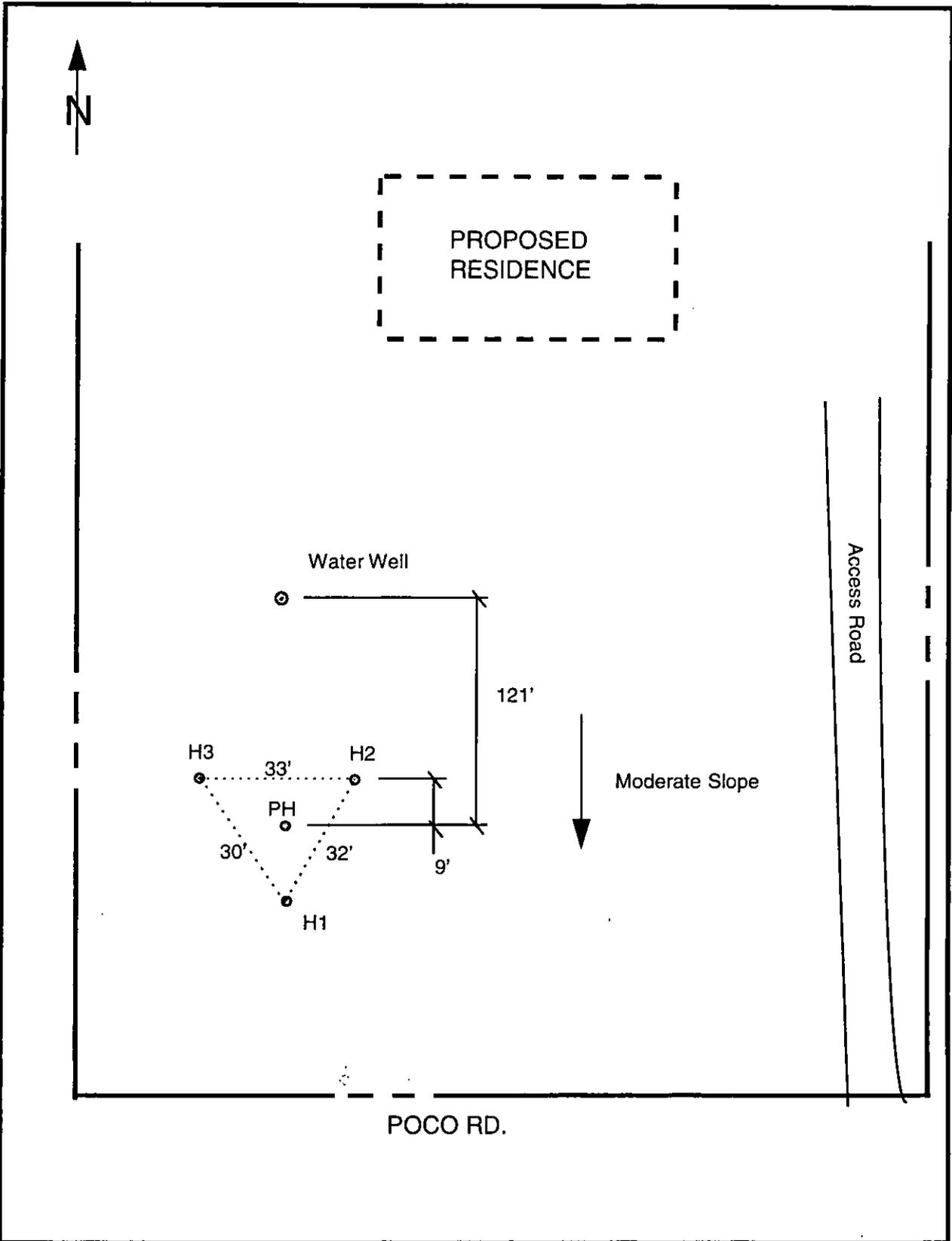
We trust this report has provided you with the information you required. If you have any questions or need additional information, please do not hesitate to contact us.

Respectfully submitted,

HILDENBRANDT & ASSOCIATES, INC.


Brian Hildenbrandt,
P.E. #29623





HILDENBRANDT & ASSOCIATES, INC. 5376 Tomah Drive, #201, Colorado Springs, CO	LOCATION PLAN	
	Project 980503	Figure 1

Client: Trinity Construction

Date: 5/18/98

Test Location: 8160 Poco Road
El Paso County

Date Test Performed: 5/11/98
Observer: B. Hildenbrandt

PERCOLATION TEST DATA

Hole No. 1

Trial	Time (min.)	Water Level Change (In.)
1	10	3.00
2	10	4.00
3	10	3.00

Hole No. 2

Trial	Time (min.)	Water Level Change (In.)
1	10	3.00
2	10	2.00
3	10	2.00

Hole No. 3

Trial	Time (min.)	Water Level Change (In.)
1	10	0.50
2	10	0.38
3	10	0.38

Depth of Hole: 34"
Perc Rate min./In.: ≤5

Depth of Hole: 35"
Perc Rate min./In.: ≤5

Depth of Hole: 36"
Perc Rate min./In.: 24

Average Perc Rate (min./In.): 12

PROFILE HOLE

Date Excavated: 5/10/98 Method: Excavated with a 4" diameter hand auger

Depth	Description
0' - 6'	Silty, Gravelly SAND, dark brown to 2-feet, then medium brown, medium dense to 2-feet, then dense
6'-8'	Silty to Gravelly SANDSTONE bedrock, medium to light brown, very dense

at 4', 40 blows for 12"
at 6', 50 blows for 6"

Total Depth = 8'
No Caving, No Water Encountered

BLOW COUNTS OBTAINED BY DRIVING A 3-INCH O.D. CALIFORNIA SAMPLER WITH A 140 LB. WEIGHT DROPPED 30 INCHES.

Required Area of Absorption Field: 0.69 Sq. Ft/gpd sewage volume
Required Area of Absorption Field: 156 Sq. Ft./bedroom

Remarks: Bedrock encountered at an 6-foot depth. Due to shallow bedrock, the absorption area shall be no deeper than 18-inches.

HILDENBRANDT & ASSOCIATES, INC.

5376 Tomah Drive #201 Colorado Springs, CO 80918

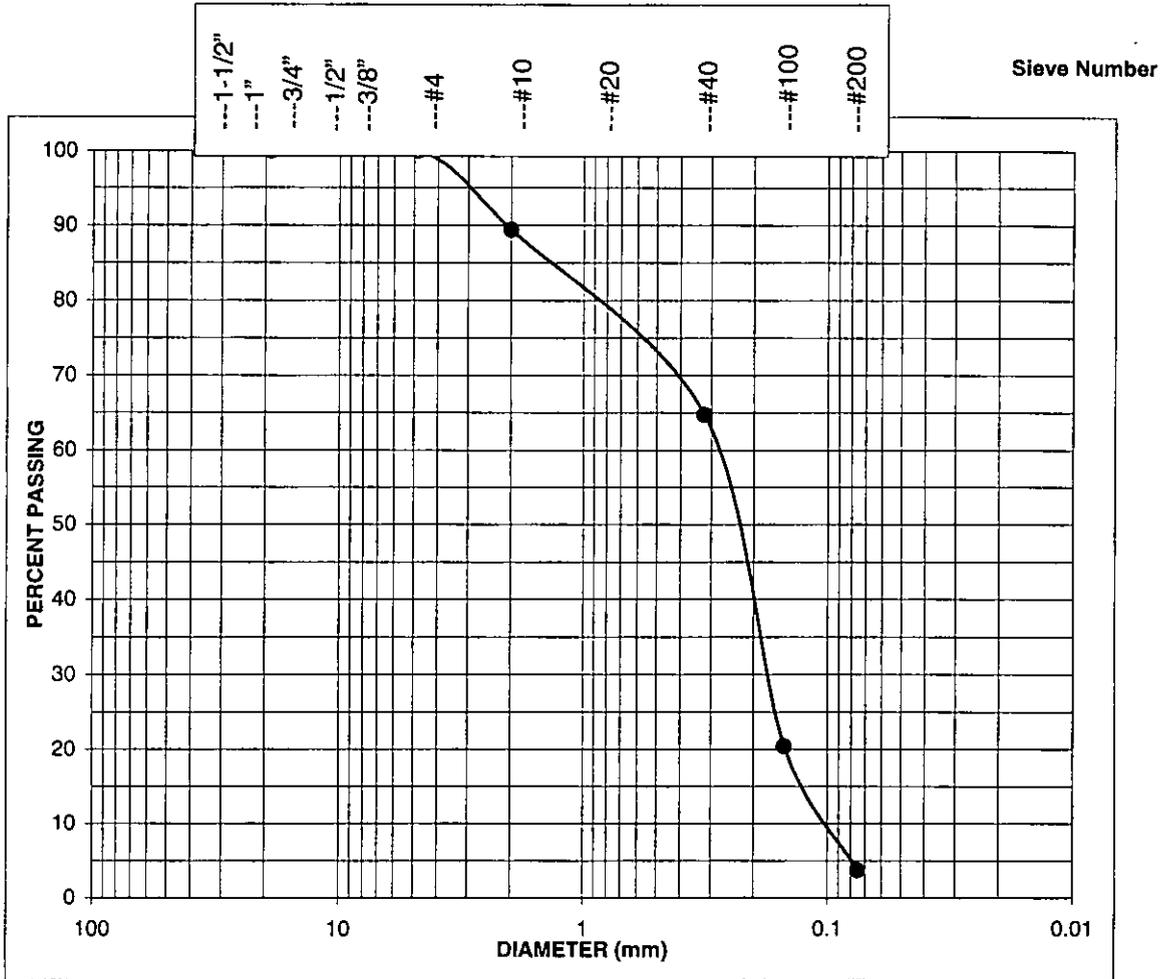
Percolation Test Results

Project 980503

Figure 2

Profile Hole PH Depth 4'

Project Location 8160 Poco Road
Colorado Springs, CO



Sieve Size	% Passing	Unified Classification:	SM
3/4"	100		
#4	100		
#10	89		
#40	65		
#100	20		
#200	4		

HILDENBRANDT & ASSOCIATES, INC.

5376 Tomah Drive #201 Colorado Springs, CO 80918

GRAIN SIZE ANALYSIS

Project 980503 Figure 3

DARLOW ENGINEERING CO.

3405 N. SINTON RD. #138
 COLO. SPGS. COLO. 80907
 (719) 633-9440



WATER LEVEL 108 +"

Depth DEEP SOIL SAMPLE HOLE DESCRIPTION

0-12"	Loose, fine-coarse moderate sand, fine trace gravel, moderate silt/clay, brown
12"-24"	Loose, fine-coarse moderate sand, fine trace gravel, moderate silt/clay, gray/brown
24"-48"	Loose packed, fine-medium moderate sand, moderate silt/clay, olive/tan, slightly moist
48"-60"	Loose packed, fine-coarse moderate heavy sand, fine trace gravel, trace moderate silt/clay, olive/tan, slightly moist
60"-72"	Loose packed, fine-coarse heavy sand, fine trace gravel, trace silt/clay, olive/tan, slightly moist
72"-84"	Loose packed, fine-coarse heavy sand, fine trace gravel, trace silt/clay, olive/tan, moist
84"-96"	Loose packed-packed, fine-coarse heavy sand, fine trace gravel, trace silt/clay, olive/tan, wet, trace mottle
96"-108"	Packed, fine-coarse moderate sand, fine trace gravel, moderate heavy silt/clay, olive/tan, wet, massive mottle

MOTTLED SOILS MAY RECORD SEASONAL WATER LEVEL, CAUTION HIGHLY VARIABLE SOILS

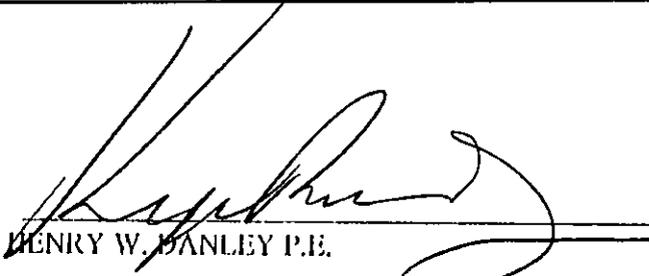
TIME	TEST HOLE # 1		TEST HOLE # 2		TEST HOLE # 3		TEST HOLE # 4		TEST HOLE # 5		TEST HOLE # 6	
	INCH	DROP	INCH	DROP	INCH	DROP	INCH	DROP	INCH	DROP	INCH	DROP
12:15	30"	37/16	30"	7/16	30"	2 1/4	30"	1/4				
12:30	30"	2 11/16	30"	3/8	30"	1 3/4	30"	1/4				
12:45	30"	29/16	30"	3/8	30"	1 13/16	30"	3/16				
1:00	30"	2 1/2	30"	5/16	30"	1 11/16	30"	1/4				
1:15	30"	29/16	30"	5/16	30"	1 3/4	30"	3/16				
1:30	30"	2 1/2	30"	5/16	30"	1 11/16	30"	3/16				
1:45	30"		30"		30"		30"					
	MIN./INCH		MIN./INCH		MIN./INCH		MIN./INCH		MIN./INCH		MIN./INCH	
	6		4.8		8.9		8.0					

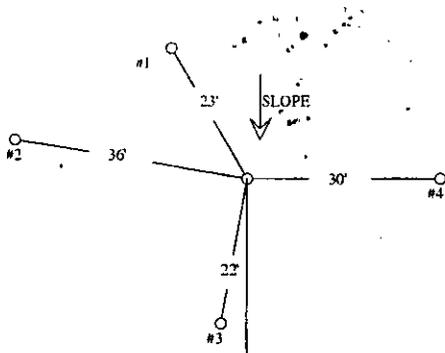
* all ratiocination subject to final approval by your local health dept. *

	DATE	TIME
DRILL	6/8/96	1:00 PM
FILL	6/9/96	11:20 AM
TEST	6/9/96	12:15 PM

CUSTOMER & LOCATION
Richard Albrecht
8190 Poco Rd.
ALL TESTS SUBJECT TO FINAL APPROVAL OF YOUR LOCAL HEALTH DEPT.

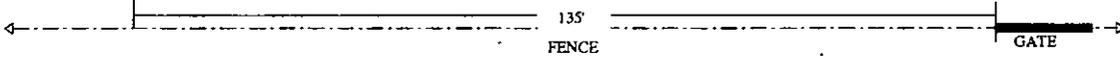
AVERAGE: 35.7 MIN./INCH


 HENRY W. DANLEY P.E.



258'

8190 Poco Rd.



Scale 1"=30'

= not to scale

DARLOW ENGINEERING CO.
3405 N. SINTON RD. #138
COLO. SPGS. COLO. 80907
(719) 633-9440

WATER LEVEL 108 +"

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96"-108"	Packed, fine-coarse moderate sand, fine trace gravel, moderate heavy silt/clay, olive/tan, wet, massive mottle

MOTTLED SOILS MAY RECORD SEASONAL WATER LEVEL, CAUTION HIGHLY VARIABLE SOILS

TIME	TEST HOLE #1		TEST HOLE #2		TEST HOLE #3		TEST HOLE #4		TEST HOLE #5		TEST HOLE #6	
	INCH	DROP	INCH	DROP	INCH	DROP	INCH	DROP	INCH	DROP	INCH	DROP
12:15	30"	37/16	30"	7/16	30"	21/4						
12:30	30"	211/16	30"	3/8	30"	13/4						
12:45	30"	29/16	30"	3/8	30"	113/16						
1:00	30"	21/2	30"	5/16	30"	111/16						
1:15	30"	29/16	30"	5/16	30"	13/4						
1:30	30"	21/2	30"	5/16	30"	111/16						
1:45	30"		30"		30"							
	MIN./INCH		MIN./INCH		MIN./INCH		MIN./INCH		MIN./INCH		MIN./INCH	
	6		48		8.9							

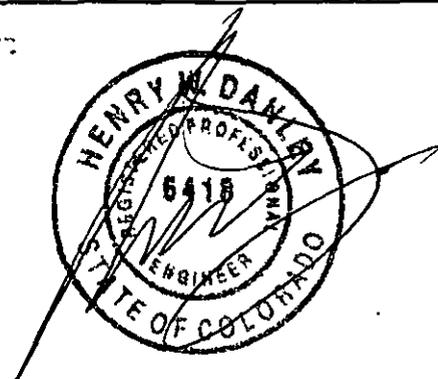
** all ratification subject to final approval by your local health dept. **

	DATE	TIME
DRILL	6/8/96	1:00 PM
FILL	6/9/96	11:20 AM
TEST	6/9/96	12:15 PM

CUSTOMER & LOCATION	
Richard Albrecht	
8190 Poco Rd.	
ALL TESTS SUBJECT TO FINAL APPROVAL OF YOUR LOCAL HEALTH DEPT.	

AVERAGE: 21 MIN./INCH

RECEIVED
NOV 13 1996
 C-CHD
 ENV. HEALTH



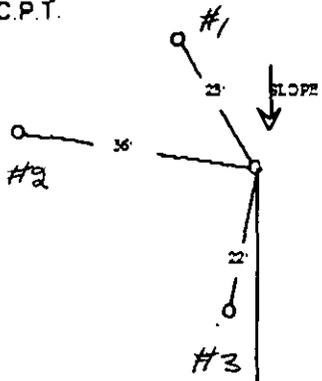
C.P.T.

7194953502
719-495-3502

6/26/1996

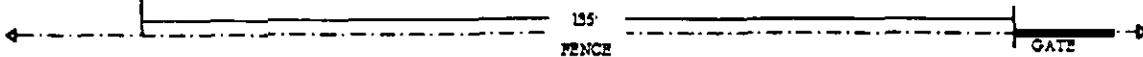
1:53 PM

4/10



258

8190 Poco Rd.



Scale 1"=30'

[] = not to scale

Acres 12 EL PASO COUNTY • DEPARTMENT OF HEALTH AND ENVIRONMENT

301 South Union Blvd. • Colorado Springs, Colorado • 578-3125

Water Supply _____

Permit 010743

PERMIT

TO CONSTRUCT, ALTER, REPAIR OR MODIFY ANY INDIVIDUAL SEWAGE DISPOSAL SYSTEM

Receipt No. _____

Issued to RICHARD ALBRECHT

Date 10-29-96

Address of Property 8190 POCO ROAD, W 2/3 OF S2, SE4, NW1., SEC: 28-12-65

Phone 495-8996

(Permit valid at this address only)

Sewage-Disposal System work to be performed by KUNAU DRILLING & EXCAV.

Phone 683-3720

This Permit is issued in accordance with 25-10-106 Colorado Revised Statutes 1973, as amended. PERMIT EXPIRES upon completion-installation of sewage-disposal system or at the end of twelve (12) months from date of issue- whichever occurs first-(unless work is in progress). This permit is revokable if all stated requirements are not met.

-THIS PERMIT DOES NOT DENOTE APPROVAL OF ZONING AND ACREAGE REQUIREMENTS-

\$150.00

PERMIT FEE (NOT REFUNDABLE)

John D. Smith, M.D.
DIRECTOR, DEPARTMENT OF HEALTH AND ENVIRONMENT

10-29-97 *expired*

DATE OF EXPIRATION

K. W. ...
ENVIRONMENTALIST

NOTE: LEAVE ENTIRE SEWAGE-DISPOSAL SYSTEM UNCOVERED FOR FINAL INSPECTION. 48 HOUR ADVANCE NOTICE REQUIRED.

SEPTIC TANK:	TRENCH SYSTEM:	BED SYSTEM:	SEEPAGE PIT SYSTEM:
1500 gallons	total square feet <u>1725-1320</u>	total square feet _____	total square feet _____
	_____ ft. of trench _____ inches wide		_____ rings or _____ diam.x _____ w/d
	_____ ft. of trench _____ inches wide		

NOTES: STAY AWAY FROM TEST HOLE #4, IF POSSIBLE. MEET ALL APPLICABLE ISDS REGULATIONS. KEEP BOTTOM OF LEACH FIELD AT 24-30 INCHES.

The Health Office shall assume no responsibility in case of failure or inadequacy of a sewage-disposal system, beyond consulting in good faith with the property owner or representative. Free access to the property shall be authorized at reasonable time for the purpose of making such inspections as are necessary to determine compliance with requirements of this law.

We require the ORIGINAL of your percolation (PERC) TEST.

The following information must be on your PLOT PLAN.

Property lines
Proposed septic system site
Well(s)
Building(s)
Water line
Subsoil drain(s)

Property dimensions
Designated alternate septic system site
Adjacent property well(s)
Proposed building(s)
Cistern

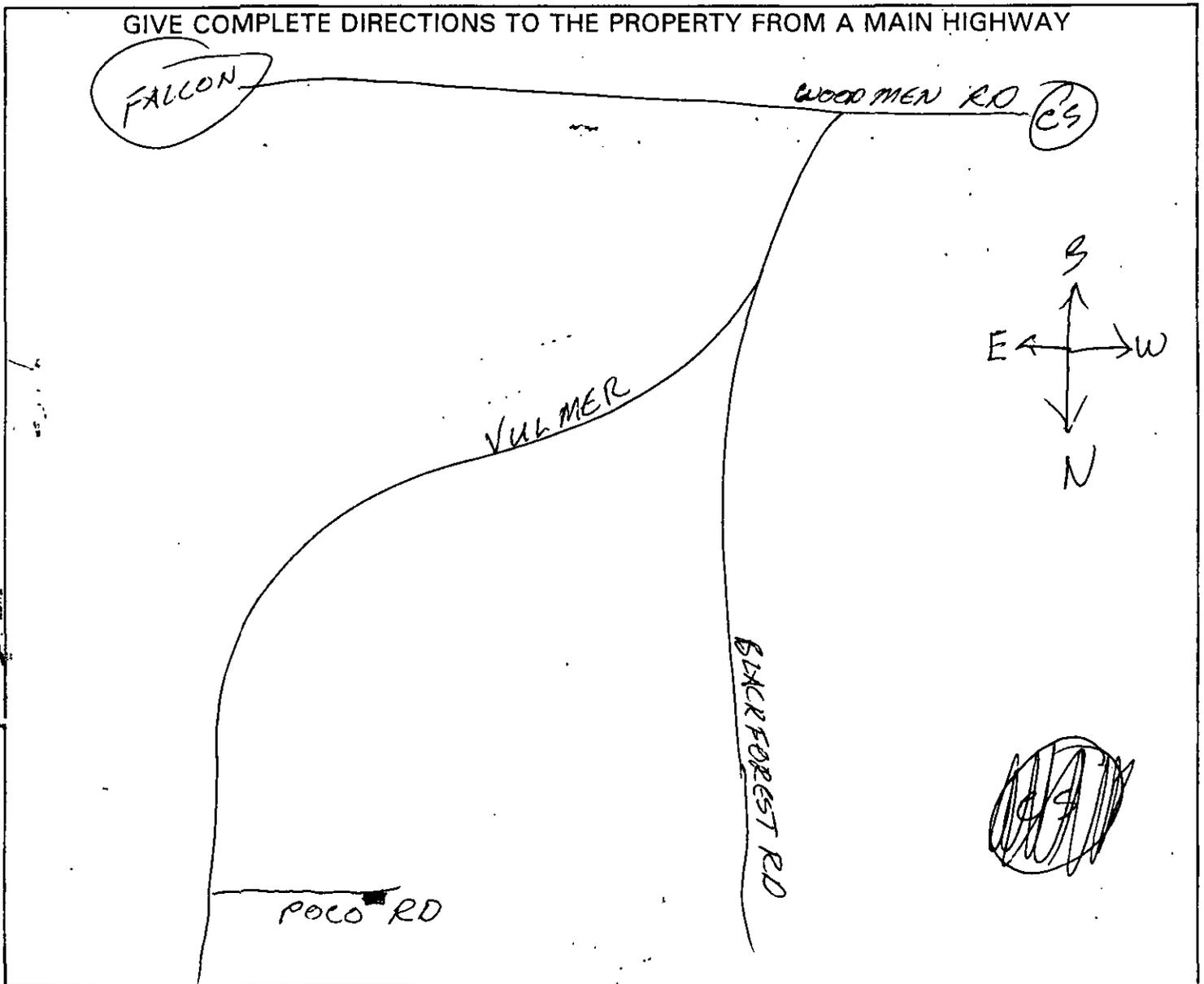
If any of these are within 100 feet of your proposed septic system include on your plot plan

Spring(s)
Pond(s)
Dry Gulch(s)

Lake(s)
Stream(s)
Natural drainage course(s)

PROPERTY AND PERC HOLES MUST BE CLEARLY MARKED OR POSTED

GIVE COMPLETE DIRECTIONS TO THE PROPERTY FROM A MAIN HIGHWAY



EL PASO COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT
INDIVIDUAL SEWAGE DISPOSAL SYSTEM INSPECTION FORM

960
Permit # 42908
Date 05/20/99

P

APPROVED: YES NO

#5228000011

ENVIRONMENTALIST J. CHRISTENSEN

Address 8190 POCO ROAD

Owner JIM AND KAREN MARTENS

Legal Description W 2/3, S2, SE4, NW4 SEC: 28-12-65

Residence , # of bedrooms 4; Commercial ; System Installer KUNAU

SEPTIC TANK:

Commercial ; Noncommercial , L , W , WD
Construction Material CONCRETE, capacity 1500 gallons.

DISPOSAL FIELD:

Rock Systems:

Trench: depth , width , total length , sq. feet

Bed: depth , length , width , sq. feet

Rock type , depth , under PVC , over PVC

Seepage Pits: # of pits , total # of rings , working depth(s)

size of pit(s) L X W , lining material , total sq. feet

Rockless Systems:

Chamber: Type INFILTRATOR, number of chambers 39, bed , trench
sq. ft./section 15.5, reduction allowed 40%, sq. ft. required 998
total sq. ft. installed 1008, depth of installation 12"-17"

Engineer Design Y or (N), Designing Engineer _____

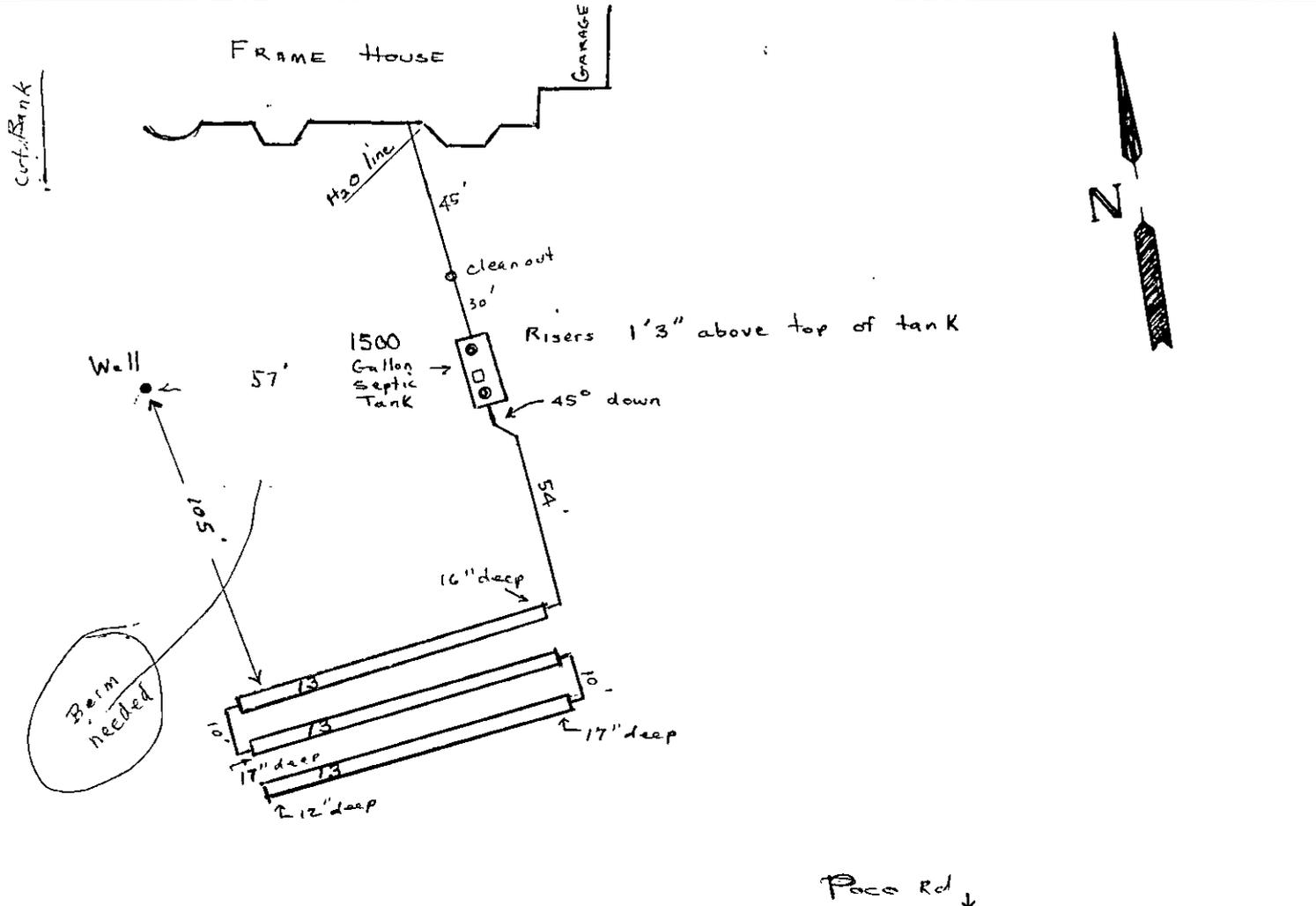
Approval letter provided? Y or (N)

Well 50 feet from tank Y or N 100 feet from leach field Y or N

Well installed at time of septic system inspection (Y) or N Public Water _____

*Approval will be revoked if in the future the well is found to be within 50 feet of the septic tank and/or 100 feet of the disposal field.

NOTES: 6" schedule 40 pipe sleeved over 4" SD1335 sewer pipe from building sewer to septic tank inlet. 05/20/99 Field is backfilled. Builders have left water running & runoff has eroded & exposed chamber in first trench. Need to divert H2O around field.



Acres 1.2 **EL PASO COUNTY • DEPARTMENT OF HEALTH AND ENVIRONMENT**
301 South Union Blvd. • Colorado Springs, Colorado • 578-3125

Water Supply WELL

Permit _____

PERMIT

TO CONSTRUCT, ALTER, REPAIR OR MODIFY ANY INDIVIDUAL SEWAGE DISPOSAL SYSTEM

Receipt No. John

Issued to JILL AND KAREN HATTIGS

Date 11-30-93

Address of Property 8190 FOOD ROAD. W 1/2, SEC. 2, T34, SEC: 26-12-65 Phone 599-8091
(Permit valid at this address only)

Sewage-Disposal System work to be performed by KUNAU Phone 683-3720

This Permit is issued in accordance with 25-10-106 Colorado Revised Statutes 1973, as amended. PERMIT EXPIRES upon completion-installation of sewage-disposal system or at the end of twelve (12) months from date of issue- whichever occurs first- (unless work is in progress). This permit is revokable if all stated requirements are not met.

-THIS PERMIT DOES NOT DENOTE APPROVAL OF ZONING AND ACREAGE REQUIREMENTS-

\$205.00
PERMIT FEE (NOT REFUNDABLE)

Steven J. Englander, MD
DIRECTOR, DEPARTMENT OF HEALTH AND ENVIRONMENT

11-30-99
DATE OF EXPIRATION

David Christensen 578-3141
ENVIRONMENTALIST

NOTE: LEAVE ENTIRE SEWAGE DISPOSAL SYSTEM UNCOVERED FOR FINAL INSPECTION. 48 HOUR ADVANCE NOTICE REQUIRED.

SEPTIC TANK: 1500 gallons	TRENCH SYSTEM:		BED SYSTEM:	SEEPAGE PIT SYSTEM:		
	total square feet	<u>998</u>		total square feet	_____	
	_____ ft. of trench	_____ inches wide		total square feet	_____ rings or	_____ diam.x _____ w/d
_____ ft. of trench	_____ inches wide	total square feet	_____ rings or	_____ diam.x _____ w/d		

NOTES: INSTALL ABSORPTION SYSTEM IN THE AREA OF THE PERCOLATION TEST. ABSORPTION AREA SHALL BE NO DEEPER THAN 18 INCHES BELOW THE EXISTING GROUND SURFACE.

The Health Office shall assume no responsibility in case of failure or inadequacy of a sewage-disposal system, beyond consulting in good faith with the property owner or representative. Free access to the property shall be authorized at reasonable time for the purpose of making such inspections as are necessary to determine compliance with requirements of this law.

EL PASO COUNTY ENVIRONMENTAL HEALTH SERVICES
301 South Union Boulevard Colorado Springs, CO 80910-3123

APPLICATION FOR A NEW, REMODEL, REPAIR, OR ADDITION
TO AN INDIVIDUAL SEWAGE DISPOSAL SYSTEM

mark ^{Leitch} 495-4705

Owner Jim & Karen Martens Phone 599-8091
Address of Property 8190 Poco Road 80908 Lot Size 12 AC Water Supply Well
Tax Sch # 52280-00-011 Septic Contractor & Phone # _____
Legal Description W 1/3 of S2, SE4, NW4, Sec 28-12-65
Type of Building frame Single Family Home Owner's Mailing Address 4910 Ramblewood 80920

MAXIMUM POTENTIAL BEDROOMS 4

Basement N Percolation Test Attached N Garbage Disposal N Clothes Washer N

I have supplied a plot plan as described on the back of this form. I acknowledge the completeness of the application is conditional upon such further mandatory and additional tests and reports as may be required by the Department to be made and furnished by a applicant for purposes of evaluating the application, and issuance of the permit is subject to such terms and conditions as deemed necessary to ensure compliance with rules and regulations adopted pursuant to C.R.S. 10-25-101 et. seq. I hereby certify all represented to be true and correct to the best of my knowledge and belief, and are designed to be relied on by the El Paso County Department of Health and Environment in evaluating the same for purposes of issuing the permit applied for herein. I further understand any falsification or misrepresentation may result in the denial of the application or revocation of any permit granted based upon said application and in legal action for perjury as provided by law.

OWNER'S SIGNATURE Jim Martens Date 11/17/98

DEPARTMENT OF HEALTH USE ONLY		
Absorption Area	Tank Capacity	Date of Site Inspection
<u>998 ft²</u>	<u>1500 GALLONS</u>	<u>11/19/98</u>
REMARKS:		
<u>Install absorption system in the area of the percolation test. Absorption area shall be no deeper than 18 inches below the existing ground surface.</u>		
EHS INSPECTOR <u>Janet Christensen</u> Date <u>11/19/98</u> <input checked="" type="radio"/> APPROVED <input type="radio"/> DENIED		
PERMIT # <u>12908</u>	<input checked="" type="radio"/> FEE <input type="radio"/> NO FEE	DATE TO EPC PLANNING DEPT <u>11-19-98</u>
<u>pd 12-1-98</u> <u>check 1100</u>		<u>attached</u> <input checked="" type="radio"/>

We require the ORIGINAL of your percolation (PERC) TEST.
 The following information must be on your PLOT PLAN.

Property lines
 Proposed septic system site
 Well(s)
 Building(s)
 Water line
 Subsoil drain(s)

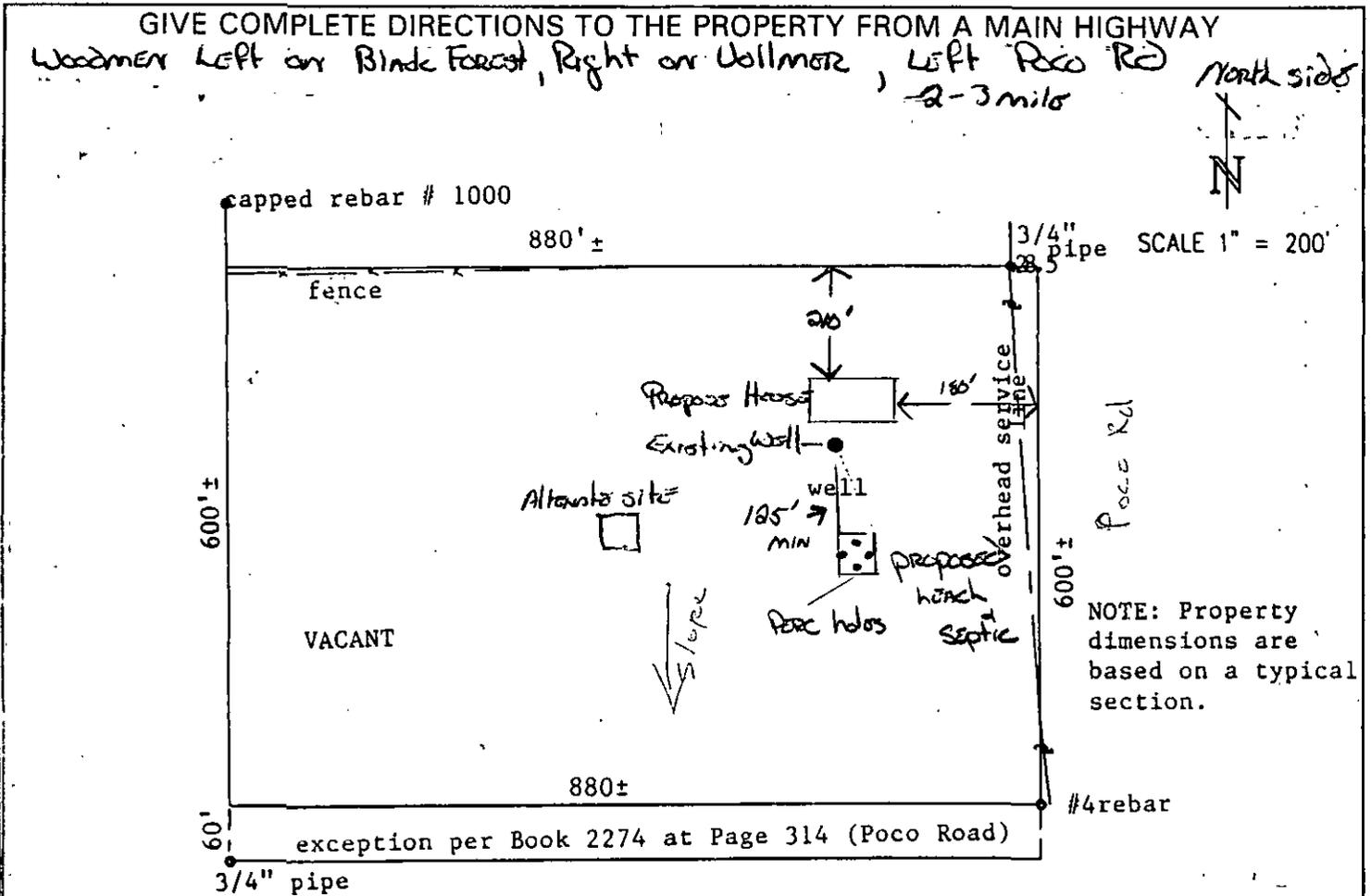
Property dimensions
 Designated alternate septic system site
 Adjacent property well(s)
 Proposed building(s)
 Cistern

If any of these are within 100 feet of your proposed septic system
 include on your plot plan

Spring(s)
 Pond(s)
 Dry Gulch(s)

Lake(s)
 Stream(s)
 Natural drainage course(s)

PROPERTY AND PERC HOLES MUST BE CLEARLY MARKED OR POSTED



LEGAL DESCRIPTION

The West two-thirds (2/3) of the South half of the Southeast Quarter of the Northwest Quarter of Section 28 in Township 12 South Range 65 West of the 6th P.M., except the South 60 feet thereof conveyed to El Paso County for road purposes by Deed recorded in Book 2274 at Page 314, El Paso County, Colorado.