February 15, 2022

ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, CO 80907
PHONE (719) 531-5599
FAX (719) 531-5238

Scott McDermott
12930 Herring Road
Colorado Springs, CO 80908

Re: Wastewater Study
McDermott Subdivision, Filing 1
12930 Herring Road
Parcel No. 52080-00-030
El Paso County, Colorado

Dear Mr. McDermott:

GENERAL SITE CONDITIONS AND PROJECT DESCRIPTION

The site is located in a portion of the NE¼ of the SE ¼ of Section 8, Township 12 South, Range 65 West of the 6th Principal Meridian in El Paso County, Colorado. The site is located approximately 2.5 miles northeast of Colorado Springs city limits, northwest of Shoup Road and Herring Road in El Paso County, Colorado. The location of the site is as shown on the Vicinity Map, Figure 1.

The topography of the site is generally gradually-moderately sloping to the south-southwest and northwest with moderate slopes trending away from the crest of the ridge that bisects the central site. Two minor drainage swales are located in the south-central portion of the property and southeast portion. Water was not observed in the drainages at the time of this investigation. The site boundaries are indicated on the USGS Map, Figure 2. Previous land uses have included undeveloped and a rural residential development. The site is located within the Black Forest burn scar. The site contains primarily field grasses and weeds with areas of burned ponderosa pines in the western portion of the site. Site photographs, taken December 23, 2021, are included in Appendix A.

Total acreage involved in the proposed subdivision is 29.32-acres. Three rural residential lots are proposed as part of the replat. The proposed lot sizes range from approximately 5-acres to 20-acres. The existing house located on Lot 1 will remain. The new lots will be serviced by individual wells and on-site wastewater treatment systems. The Site Plan with the proposed replat is presented in Figure 3.

SCOPE OF THE REPORT

The scope of the report will include the following:

- A general geologic analysis utilizing published geologic data. Detailed site-specific mapping will be conducted to obtain general information in respect to major geographic and geologic features, geologic descriptions and their effects on the development of the property with regards to on-site wastewater Treatment Systems.

FIELD INVESTIGATION

Our field investigation consisted of the preparation of a geologic map of any bedrock features and significant surficial deposits. The Natural Resource Conservation Service (NRCS), previously the Soil Conservation Service (SCS) survey was also reviewed to evaluate the site. The position of mappable units within the subject property are shown on the Geologic Map. Our mapping procedures involved both field reconnaissance and measurements, and aerial photo reconnaissance and interpretation. The same mapping procedures have also been utilized to produce the Geology/Engineering Geology Map which identified pertinent geologic conditions affecting development. The field mapping was performed by personnel of Entech Engineering, Inc. on December 23, 2021.

Two test borings were drilled by Entech on the site to determine general suitability for the use of on-site wastewater treatment systems and general soil characteristics. The location of the test pits and drill borings is indicated on the Site Plan/Testing Location Map, Figure 3. The Test Boring Log is presented in Appendix B and the Profile Pit Report by Geoquest, LLC is presented in (Appendix C, Reference 1). Results of this testing will be discussed later in this report.

Laboratory testing was also performed on some of the soils to classify and determine the soils engineering characteristics. Laboratory tests included grain-size analysis, ASTM D-422, and Atterberg Limits, ASTM D-4318. Results of the laboratory testing are included in Appendix C. A Summary of Laboratory Test Results is presented in Table 1.

SOIL AND GEOLOGIC CONDITIONS

Soil Survey

The Natural Resource Conservation Service (NRCS) (Reference 1, Figure 4), previously the Soil Conservation Service (Reference 2) has mapped three soil types on the site. Complete descriptions of the soil types are presented in Appendix D. In general, the soils consist of sandy loam and sandy clay loam to sandy clay bedrock. The soils are described as follows:

Type	Description
26	Elbeth Sandy Loam, 8 – 15% Slopes
40	Kettle Gravelly Loamy Sand, 3 – 8% Slopes
41	Kettle Gravelly Loamy Sand, 8-40% Slopes

The soils have been described to have moderate to rapid to moderate permeabilities. The soils are described as well suited for use as homesites. Possible hazards with soils erosion are present on the site. The erosion potential can be controlled with vegetation. The soils have been described to have moderate erosion hazards (Reference 2).

Soils

The soils encountered in the test borings and test pits consisted of silty sand to sandy clay overlying clayey sandstone to sandy claystone. Bedrock was encountered at depths ranging from

2 to 4 feet. The upper sands were encountered at dense and firm states and moderate moisture conditions, and the sandstone was encountered at very dense states and moderate moisture conditions. The claystone was encountered at hard consistencies and moderate moisture conditions. The samples of sand tested had approximately 13 to 37 percent of the soil size particles passing the No. 200 sieve. FHA Swell Testing on a sample of the clayey sand resulted in an expansion pressure of 480 psf, which indicates a low expansion potential. The samples of sandstone tested had 17 percent of the soil size particles passing the No. 200 sieve. The samples of claystone tested had 73 percent of the soil size particles passing the No. 200 sieve. A Swell/Consolidation Test indicated a volume change of 0.1% which is in the low consolidation range for a sample of sandy clay from Test Boring No. 2 at a depth of 2 to 3 feet. Highly expansive claystone lenses are commonly interbedded in the Dawson Formation.

Groundwater

Groundwater or signs of seasonally occurring water were encountered in Profile Pit No. 1 at 24 inches below grade, which was excavated to 8 feet. It is anticipated groundwater will not affect shallow foundations on the majority of the site. Areas of potentially seasonal shallow and seasonal shallow groundwater have been mapped in drainages on the site that are discussed in the following sections. Fluctuations in groundwater conditions may occur due to variations in rainfall or other factors not readily apparent at this time. Isolated sand layers within the soil profile can carry water in the subsurface. Contractors should be cognizant of the potential for the occurrence of subsurface water features during construction.

Geology

Approximately 12 miles west of the site is a major structural feature known as the Rampart Range Fault. This fault marks the boundary between the Great Plains Physiographic Province and the Southern Rocky Mountain Province. The site exists within a large structural feature known as the Denver Basin. Bedrock in the area is typically gently dipping in a northerly direction (Reference 3). The bedrock underlying the site consists of the Dawson Formation of Cretaceous Age. The Dawson Formation typically consists of coarse-grained arkosic sandstone with interbedded layers claystone or siltstone.

The geology of the site was evaluated using the *Geologic Map of the Black Forest,* by Thorson in 2003, (Reference 4, Figure 5). The Geology Map for the site is presented in Figure 6. One mappable unit was identified on this site which is described as follows:

Qc/Tkd **Colluvium of Quaternary Age overlying Dawson Formation of Tertiary to Cretaceous Age:** The materials consist of colluvial or residual soils overlying the bedrock materials on-site. The colluvial soils were deposited by the action of sheetwash and gravity. The residual soils were derived from the in-situ weathering of the bedrock on site. These materials typically consist of silty to clayey sand with potential areas of sandy clays. The bedrock consists of the Dawson Formation. The Dawson Formation typically consists of coarse-grained, arkosic sandstone with interbedded lenses of fine-grained sandstone, siltstone and claystone.

Some fill deposits may be encountered around the existing residence on Lot No. 1. Ash burned logs were encountered throughout the site overlying the above-mentioned colluvium soils.

The soils listed above were mapped from site-specific mapping, the *Geologic Map of the Black Forest Quadrangle* distributed by the Colorado Geologic Survey in 2003 (Reference 4, Figure 5), The *Geologic Map of the Colorado Springs-Castle Rock Area,* distributed by the US Geological Survey in 1979 (Reference 5), and the *Geologic Map of the Pueblo 1° x 2° Quadrangle,* distributed by the US Geological Survey in 1978 (Reference 6). The test borings and test pits were used in evaluating the site and is included in Appendix B. The Geology Map prepared for the site is presented in Figure 6.

Drainage Areas

Minor drainages exist on-site that flow in southwesterly directions. The minor drainages were encountered in the south-central portion and southeast corner of this site. No water was observed flowing in these drainages at the time of the investigation. Areas of seasonal and potentially seasonal shallow groundwater have been mapped in the drainages on the site (Figure 6).

In these areas, we would anticipate the potential for periodically high subsurface moisture conditions, frost heave potential and highly organic soils. These areas lie within minor drainage areas which can be avoided by the proposed development. Due to the potential for seasonal high groundwater conditions, on-site wastewater treatment systems are not recommended in these areas. Due to lot sizes, it is anticipated these areas can be avoided by systems. The site does not lie within any floodplain zones according to the FEMA Map No. 08041CO320G dated December 7, 2018 (Figure 7, Reference 7). Exact locations of floodplain and specific drainage studies are beyond the scope of this report. Individual wastewater treatment systems must be located a minimum of 25 feet from dry gulches.

ON-SITE WASTEWATER TREATMENT

The Natural Resource Conservation Service (Reference 1), previously the Soil Conservation Service (Reference 2) has been mapped with three soil descriptions. The Soil Survey Map (Reference 1) is presented in Figure 4, and the Soil Survey Descriptions (Reference 2) are presented in Appendix D. The soils are described as having moderate to rapid percolation rates. Records for the existing septic system located on Lot 1 are included in Appendix E. This system is a conventional trench system.

Soils encountered in the tactile test pits observed by Geoquest, LLC consisted of sandy loam overlying sandy clay to sandy clay loam bedrock. The limiting layers encountered in the test pit is the bedrock, which corresponds with USDA Soil Type R-1 with an LTAR value of 0.15 gallons per day per square foot and the redoximorphic features (Reference 1, Appendix D). Bedrock was encountered at approximately 2 to 2.5 feet in the test pits. Signs of seasonally occurring groundwater were observed in the test pits at depths of approximately 24 inches. Absorption fields must be maintained a minimum of 4 feet above groundwater or bedrock, or confining layer.

Should groundwater or bedrock be encountered within 6 feet of the surface, designed systems will be required. Designed systems are anticipated for the lots.

In summary, it is our opinion the site is suitable for individual on-site wastewater treatment systems (OWTS) and that contamination of surface and subsurface water resources should not occur provided the OWTS sites are evaluated and installed according to El Paso County and State Guidelines and properly maintained. Based on the testing performed designed systems will be required for the new lots. The Septic Suitability Map is presented in Figure 8. A possible house location, water well, and two septic sites for the new lots are indicated on Figure 8. Areas that should be avoided by septic systems are indicated on the septic suitability map.

Individual soil testing is required for proposed construction on each lot prior to construction. Absorption fields must be located a minimum of 100 feet from any well, including those on adjacent properties. Absorption fields must also be located a minimum of 50 feet from any drainages, floodplains or ponded areas and 25 feet from dry gulches.

CLOSURE

This report has been prepared for Scott McDermott, for application to the proposed project in accordance with generally accepted geologic soil and engineering practices. No other warranty expressed or implied is made.

We trust that this report has provided you with all the information that you required. Should you require additional information, please do not hesitate to contact Entech Engineering, Inc.

Respectfully Submitted,

ENTECH ENGINEERING, INC.

Reviewed by:

Logan L. Langford, P.G.
Geologist

Joseph C. Goode, Jr., P.E.
President

LLL/jhr

Encl.

Entech Job No. 213346
AAprojects/2021/213346wws

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1. Geoquest, LLC., *Profile Pit Evaluation, 12930 Herring Road, El Paso County, Colorado,* November 10, 2021, Geoquest Job No. 21-1209

2. Natural Resource Conservation *Service,* September 23, 2016. *Web Soil Survey.* United States Department Agriculture, http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

3. United States Department of Agriculture Soil Conservation Service. June 1981. *Soil Survey of El Paso County Area, Colorado.*

4. Scott, Glen R.; Taylor Richard B.; Epis, Rudy C; and Wobus, Reinhard A. 1978. *Geologic Structure Map of the Pueblo 1° x 2° Quadrangle, South-Central Colorado*. Sheet 2. U.S. Geologic Survey. Map I-1022, Sheet 2.

5. Thorson, Jon P., 2003. *Geologic Map of the Black Forest Quadrangle, El Paso County, Colorado*. Colorado Geological Survey. Open-File Report 03-6.

6. Trimble, Donald E. and Machette, Michael N. 1979. *Geologic Map of the Colorado Springs-Castle Rock Area, Front Range Urban Corridor, Colorado*. USGS, Map I-857-F.

7. Scott, Glen R.; Taylor Richard B.; Epis, Rudy C; and Wobus, Reinhard A. 1978. *Geologic Structure Map of the Pueblo 1° x 2° Quadrangle, South-Central Colorado*. Sheet 2. U.S. Geologic Survey. Map I-1022.

8. Federal Emergency Management Agency. December 7, 2018. *Flood Insurance Rate Maps for the City of Colorado Springs, Colorado.* Map Number 08041CO320G

TABLES

TABLE 1

SUMMARY OF LABORATORY TEST RESULTS

CLIENT SCOTT MCDERMOTT
PROJECT 12930 HERRING ROAD
JOB NO. 213346

SOIL TYPE	TEST BORING NO.	DEPTH (FT)	WATER (%)	DRY DENSITY (PCF)	PASSING NO. 200 SIEVE (%)	LIQUID LIMIT (%)	PLASTIC INDEX (%)	SULFATE (WT %)	FHA SWELL (PSF)	SWELL/ CONSOL (%)	UNIFIED CLASSIFICATION	SOIL DESCRIPTION
1	1	2-3			13.4						SM	SAND, SILTY
2	2	2-3	15.9	114.8	73.0					0.1	CL	CLAY, SANDY
3	1	5			36.6				480		SC	SANDSTONE, CLAYEY
3	2	15			17.3						SM	SANDSTONE, SILTY
4	2	5	14.7	117.9						-0.1	CL	CLAYSTONE, SANDY

Table 2: Summary Test Boring Results

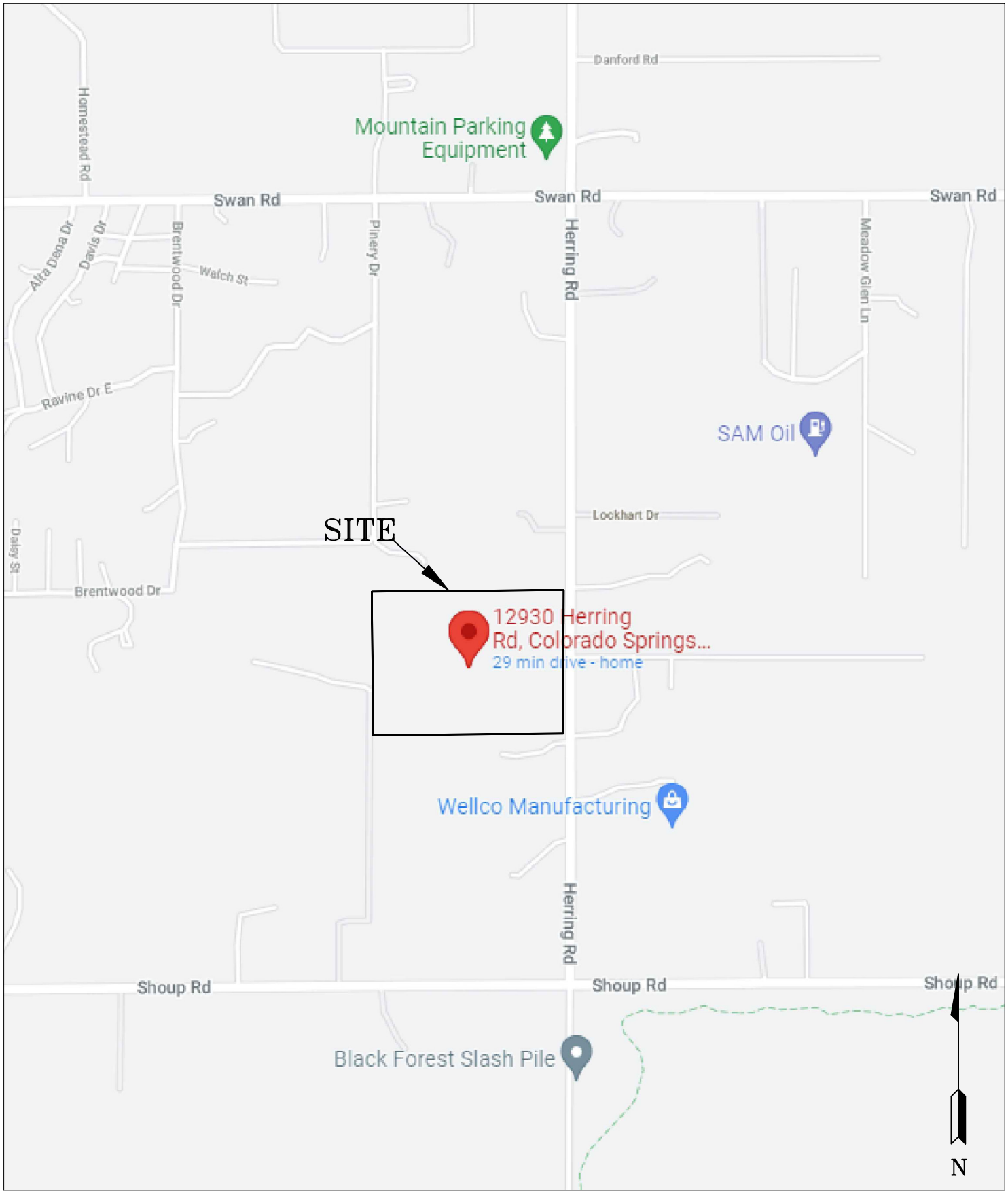
Test Boring No.	Depth to Bedrock (ft.)	Depth to Groundwater (ft.)
1	4	N/A
2	4	N/A

Table 3: Summary of GEOQUEST Profile Pit Results

Test Pit No.	Depth to Bedrock (ft.)	Depth to Groundwater (ft.)	USDA Soil Type
1	2*	2*	4A*
2	2.5*	>8	3A*

*- Conditions that will require an engineered OWTS

FIGURES



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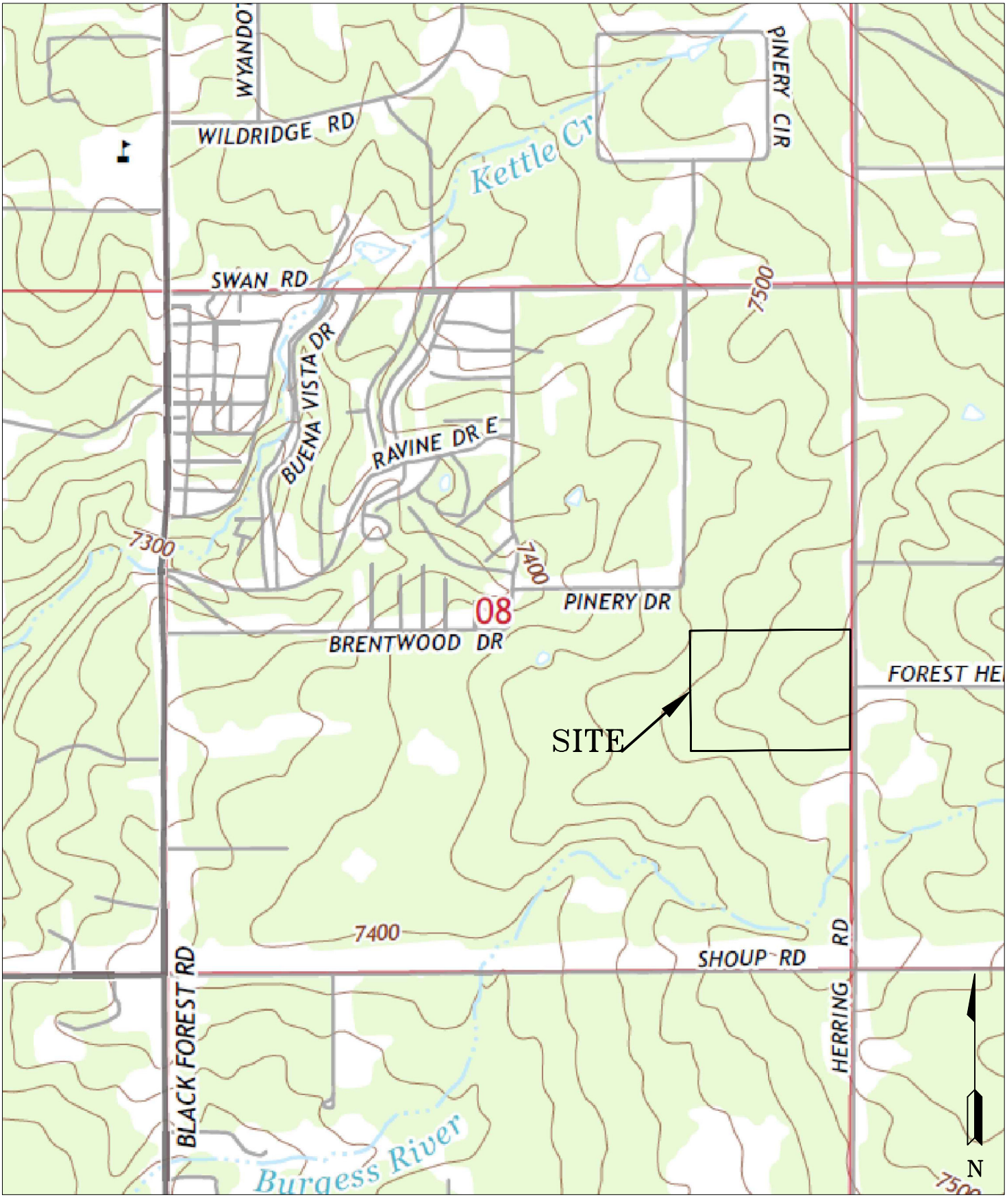
VICINITY MAP
MCDERMOTT SUBDIVISION, FILING 1
12930 HERRING ROAD
EL PASO COUNTY, CO.
FOR: SCOTT MCDERMOTT

DRAWN:	DATE:	CHECKED:	DATE:
JHR	1/10/22	LLL	

JOB NO.: 213346

FIG NO.: 1



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USGS MAP
MCDERMOTT SUBDIVISION, FILING 1
12930 HERRING ROAD
EL PASO COUNTY, CO.
FOR: SCOTT MCDERMOTT

DRAWN:	DATE:	CHECKED:	DATE:
JHR	1/10/22	LLL	

JOB NO.: 213346

FIG NO.: 2

P1 - approximate photograph location and number

- approximate test boring location and number

- approximate test pit location and number (Geoquest, LLC)

N

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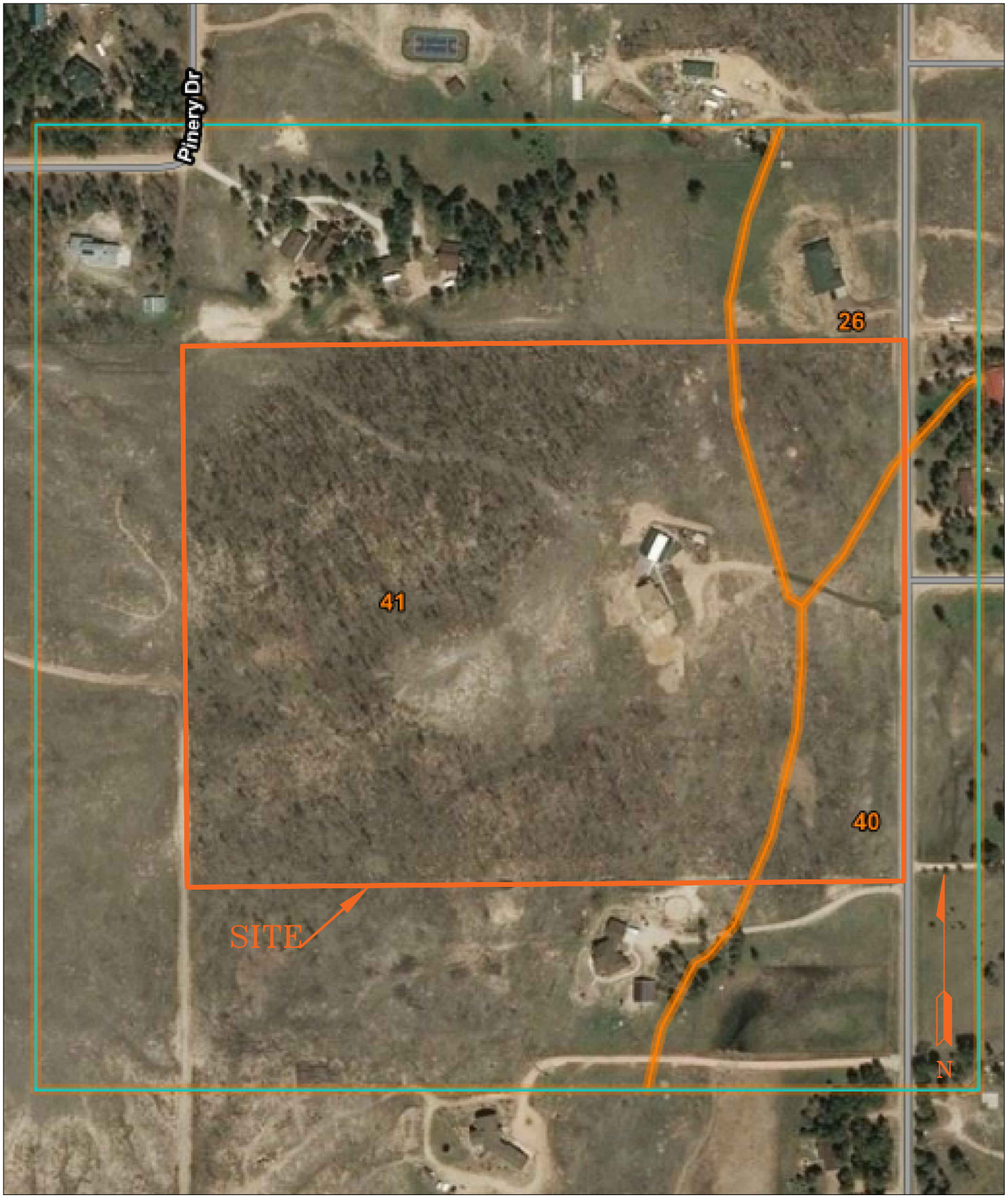
SITE PLAN/TESTING LOCATION MAP
MCDERMOTT SUBDIVISION, FILING 1
12930 HERRING ROAD
EL PASO COUNTY, CO.
FOR: SCOTT MCDERMOTT

DRAWN	JHR
CHECKED	LLL
DATE	1/10/22
SCALE	AS SHOWN
JOB NO.	213346
FIGURE No.	3



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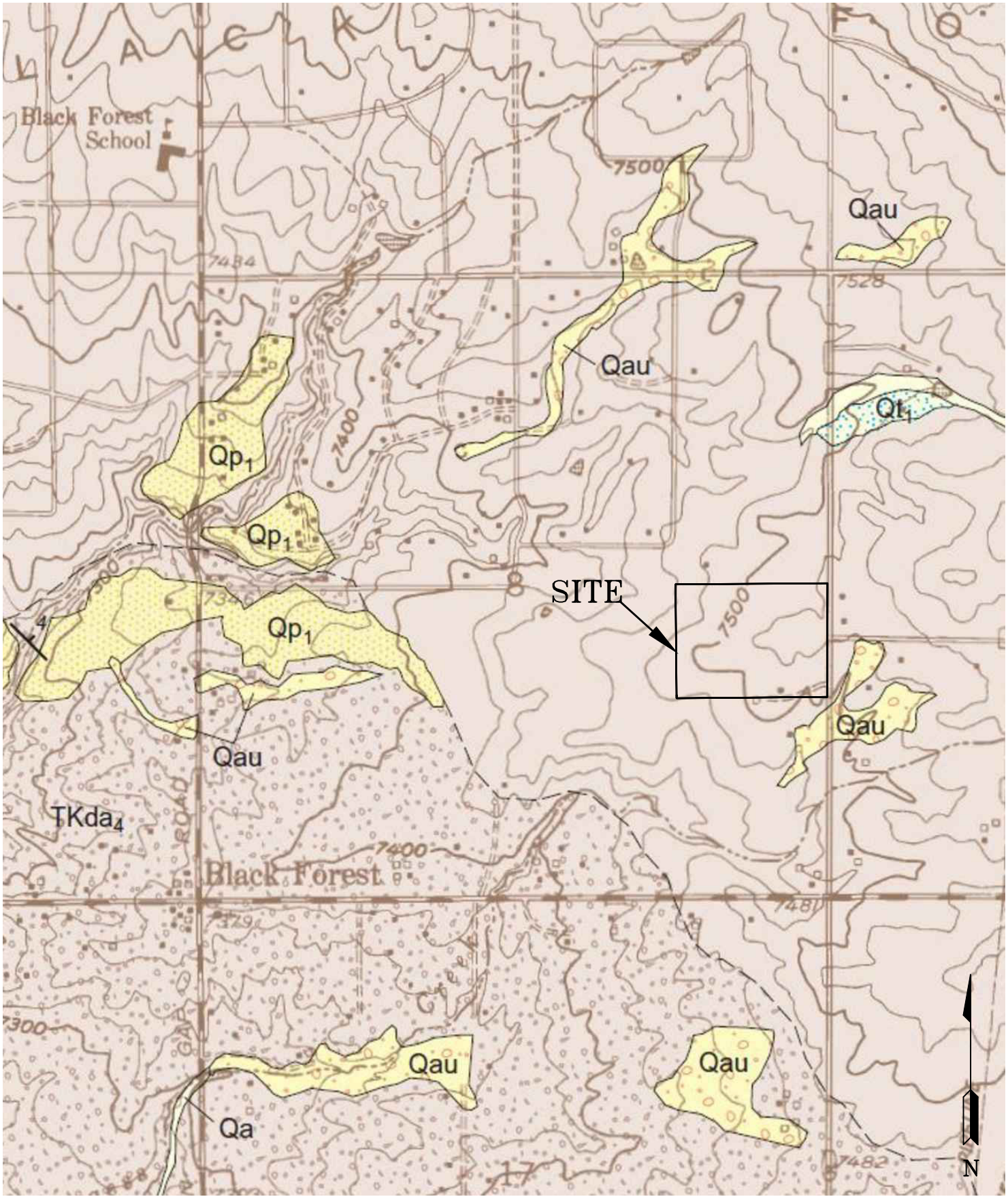
SOIL SURVEY MAP
MCDERMOTT SUBDIVISION, FILING 1
12930 HERRING ROAD
EL PASO COUNTY, CO.
FOR: SCOTT MCDERMOTT

DRAWN:	DATE:	CHECKED:	DATE:
JHR	1/10/22	LLL	

JOB NO.: 213346

FIG NO.: 4



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BLACK FOREST QUADRANGLE GEOLOGIC MAP
MCDERMOTT SUBDIVISION, FILING 1
12930 HERRING ROAD
EL PASO COUNTY, CO.
FOR: SCOTT MCDERMOTT

DRAWN:	DATE:	CHECKED:	DATE:
JHR	1/10/22	LLL	

JOB NO.: 213346

FIG NO.: 5

Legend:

QcTKd - Colluvium of Quaternary Age overlying Dawson Formation of Tertiary to Cretaceous Age:
colluvial and residual soils overlying arkosic sandstone with interbedded fine-grained sandstone, siltstone and claystone

psw - potentially shallow groundwater area

N

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GEOLOGY/ENGINEERING GEOLOGY MAP
MCDERMOTT SUBDIVISION, FILING 1
12930 HERRING ROAD
EL PASO COUNTY, CO.
FOR: SCOTT MCDERMOTT

DRAWN	JHR
CHECKED	LLL
DATE	1/10/22
SCALE	AS SHOWN
JOB NO.	213346
FIGURE No.	6

N

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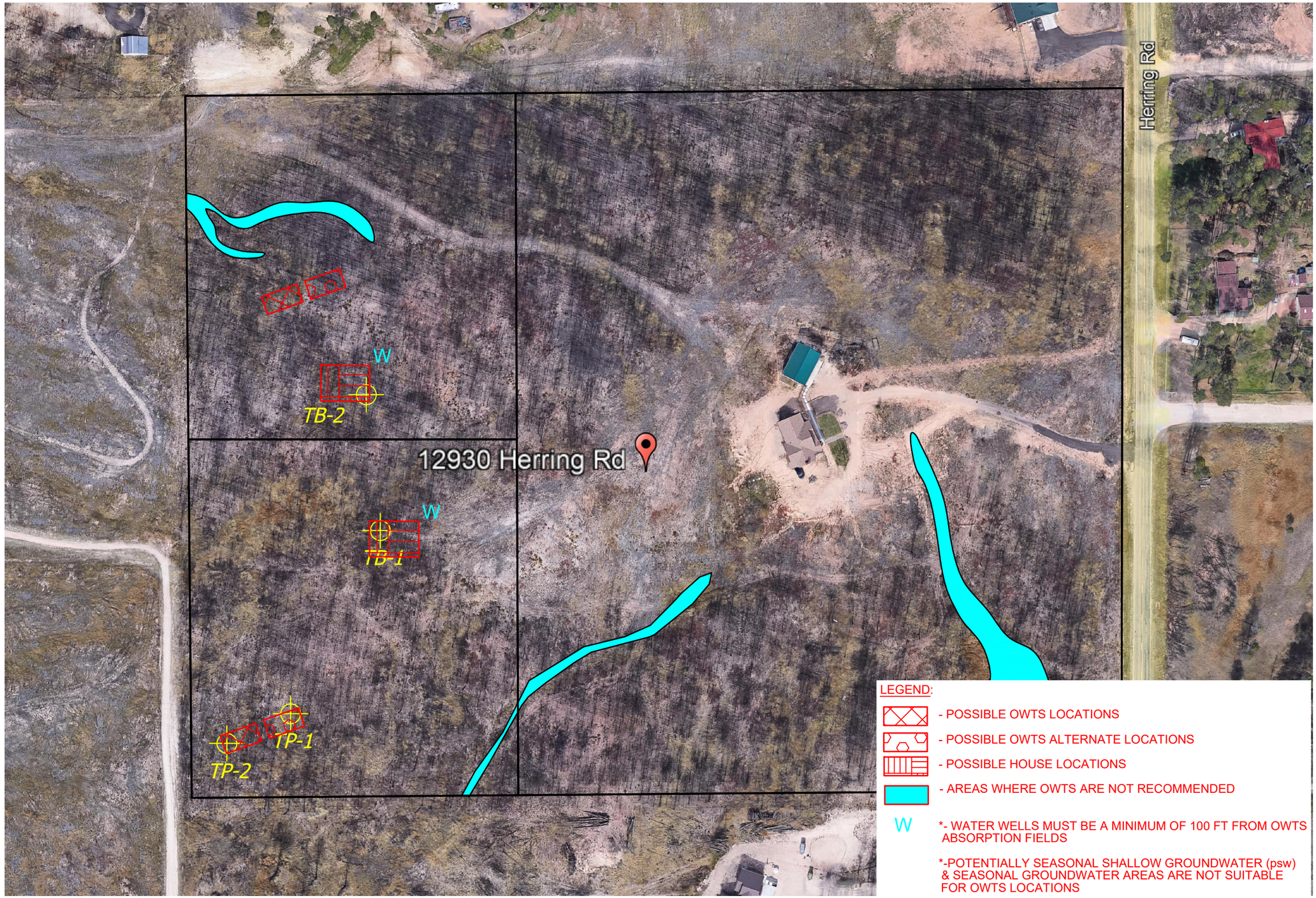
FEMA FLOODPLAIN MAP
MCDERMOTT SUBDIVISION, FILING 1
12930 HERRING ROAD
EL PASO COUNTY, CO.
FOR: SCOTT MCDERMOTT

DRAWN:	DATE:	CHECKED:	DATE:
JHR	1/10/22	LLL	

JOB NO.: 213346

FIG NO.: 7



LEGEND:

- POSSIBLE OWTS LOCATIONS
- POSSIBLE OWTS ALTERNATE LOCATIONS
- POSSIBLE HOUSE LOCATIONS
- AREAS WHERE OWTS ARE NOT RECOMMENDED

W *- WATER WELLS MUST BE A MINIMUM OF 100 FT FROM OWTS ABSORPTION FIELDS

*-POTENTIALLY SEASONAL SHALLOW GROUNDWATER (psw) & SEASONAL GROUNDWATER AREAS ARE NOT SUITABLE FOR OWTS LOCATIONS

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OWTS SUITABILITY MAP
MCDERMOTT SUBDIVISION, FILING 1
12930 HERRING ROAD
EL PASO COUNTY, CO.
FOR: SCOTT MCDERMOTT

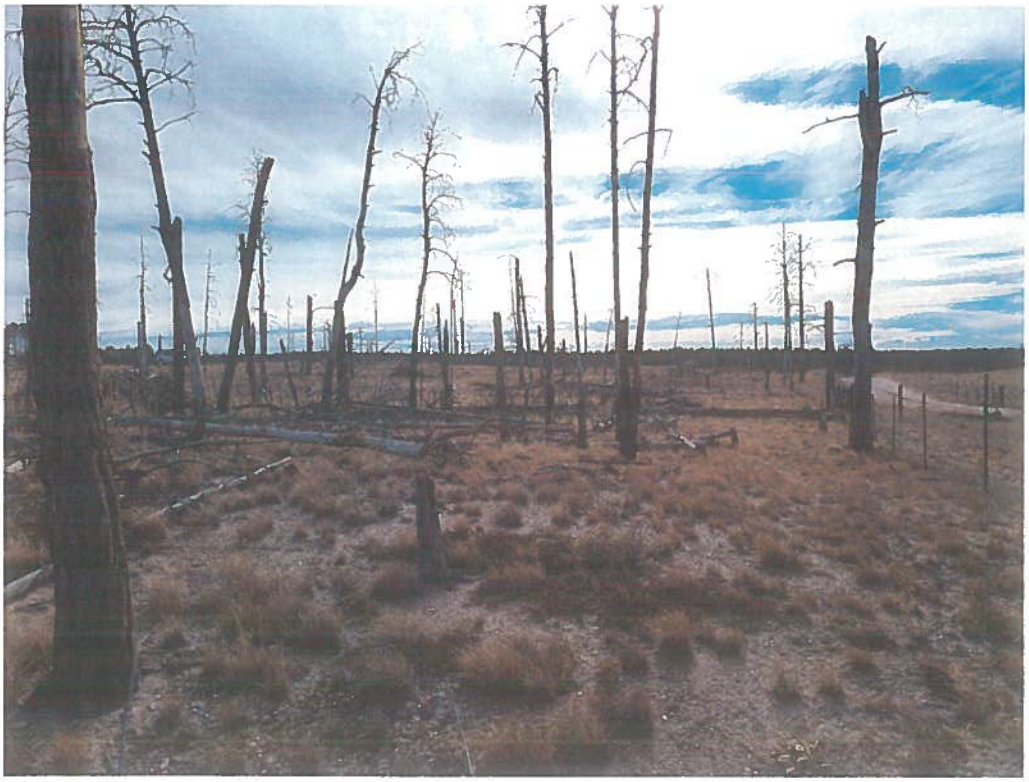
DRAWN	JHR
CHECKED	LLL
DATE	1/10/22
SCALE	AS SHOWN
JOB NO.	213346
FIGURE No.	8

APPENDIX A: Photographs

1

Looking East from West-Central portion of the site.

December 23, 2021

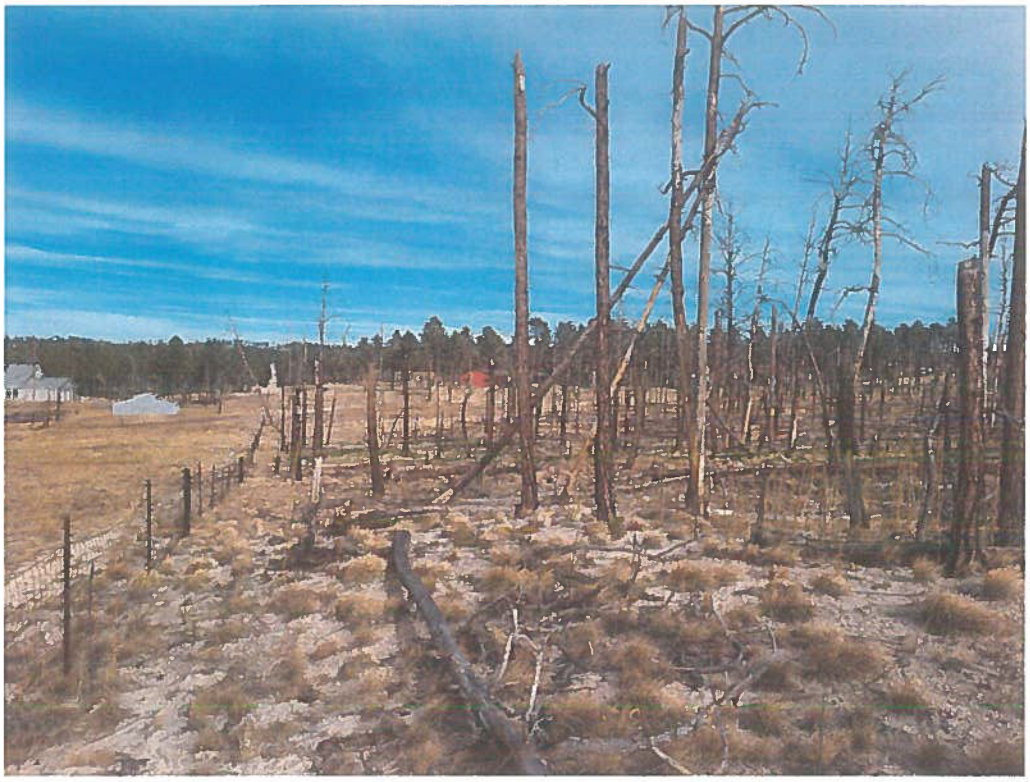


2

Looking South from the Western Side of the site.

December 23, 2021

Job No. 213346



3

Looking north from western side of the site.

December 23, 2021

4

Looking West from the Central portion of the site.

December 23, 2021

Job No. 213346

APPENDIX B: Test Borings

TEST BORING NO. 1
DATE DRILLED 1/5/2022
Job # 213346

REMARKS

DRY TO 20', 1/5/22

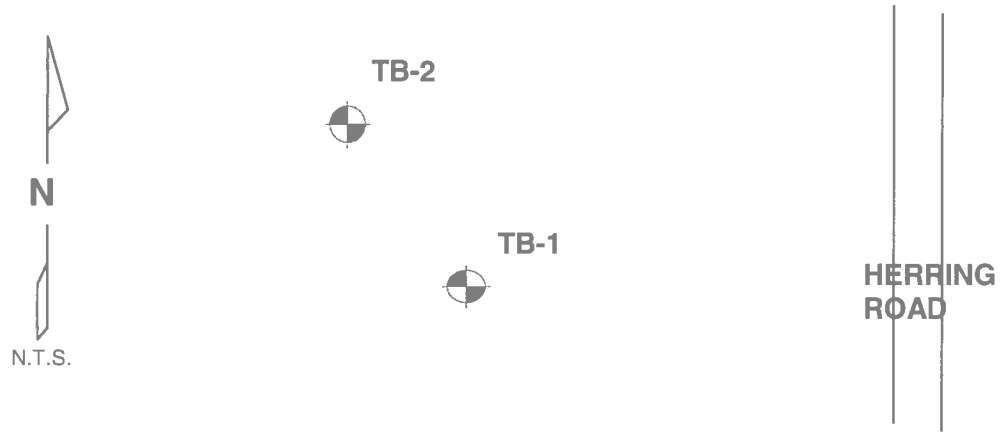
Depth (ft)	Symbol	Samples	Blows per foot	Watercontent %	Soil Type
	SAND, SILTY, FINE TO COARSE GRAINED, TAN, DENSE, MOIST		43	6.6	1
5	SANDSTONE, CLAYEY, FINE TO COARSE GRAINED, LIGHT BROWN, VERY DENSE, MOIST		50	12.4	3
10			50	9.8	3
15			50/5"	8.7	3
20			50/4"	9.0	3

TEST BORING NO. 2
DATE DRILLED 1/5/2022
CLIENT SCOTT MCDERMOTT
LOCATION 12930 HERRING ROAD

REMARKS

DRY TO 20', 1/5/22

Depth (ft)	Symbol	Samples	Blows per foot	Watercontent %	Soil Type
	CLAY, SANDY, DARK BROWN, FIRM, MOIST		12	14.9	2
5	CLAYSTONE, SANDY, BROWN, HARD, MOIST		50	11.7	4
10	SANDSTONE, CLAYEY, FINE TO COARSE GRAINED, LIGHT BROWN, VERY DENSE, MOIST		50/5"	9.8	3
15			50/4"	6.8	3
20			50/4"	8.9	3



LOCATIONS OF TEST BORINGS ARE APPROXIMATE

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TEST BORING LOG

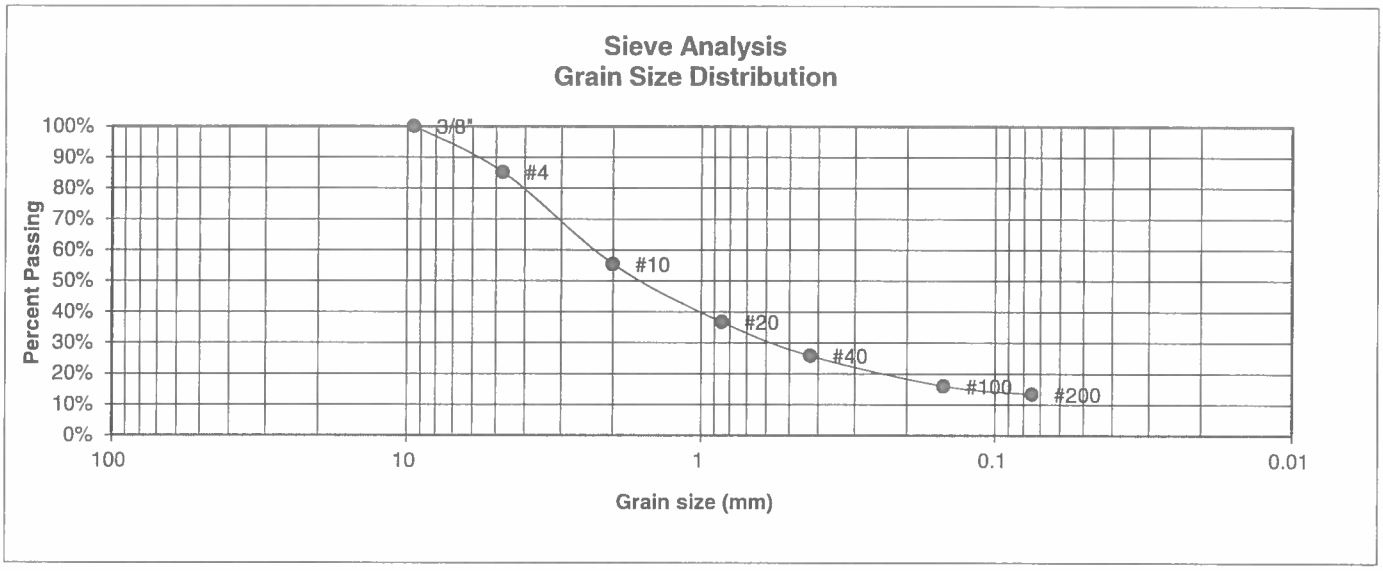
DRAWN:	DATE:	CHECKED:	DATE:
		LLL	2/15/22

JOB NO. 213346

FIG NO. B-1

APPENDIX C: Laboratory Test Results

BORING NO.	1	UNIFIED CLASSIFICATION	SM	TEST BY	BL
DEPTH(ft)	2-3	AASHTO CLASSIFICATION		JOB NO.	213346
CLIENT	SCOTT MCDERMOTT				
PROJECT	12930 HERRING ROAD				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	85.2%
10	55.4%
20	36.7%
40	25.8%
100	16.0%
200	13.4%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

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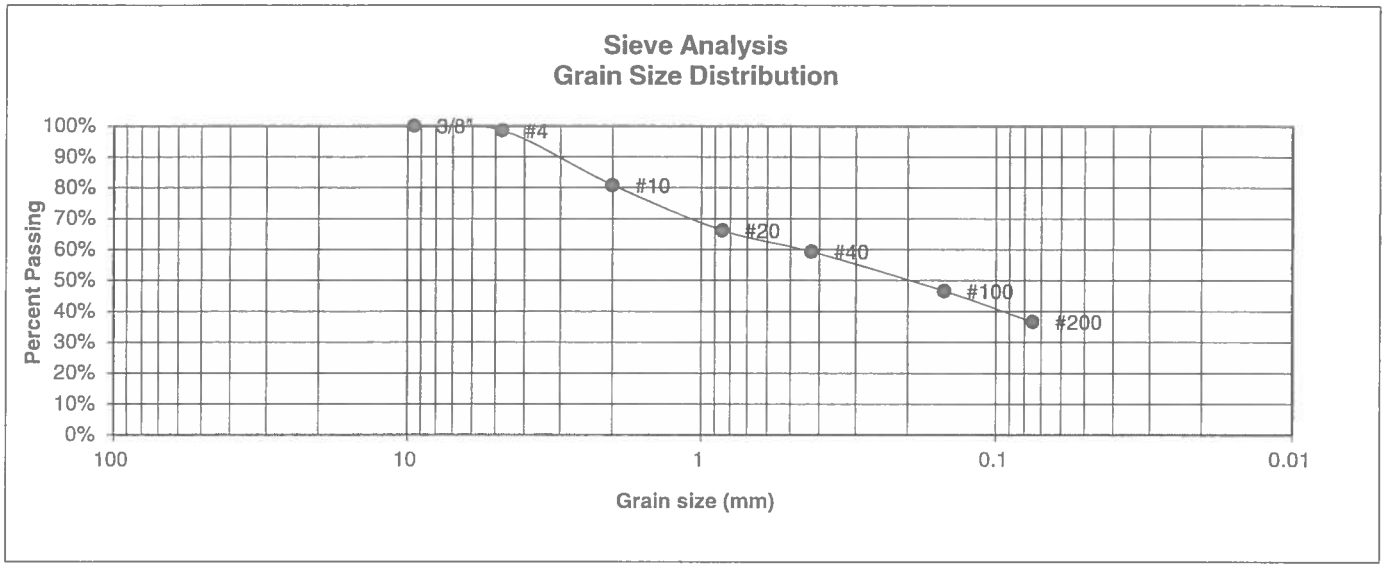
LABORATORY TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		LLL	1/12/22

JOB NO.: 213346

FIG NO.: C-1

BORING NO.	1	UNIFIED CLASSIFICATION	SC	TEST BY	BL
DEPTH(ft)	5	AASHTO CLASSIFICATION		JOB NO.	213346
CLIENT	SCOTT MCDERMOTT				
PROJECT	12930 HERRING ROAD				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	98.5%
10	80.8%
20	66.2%
40	59.4%
100	46.6%
200	36.6%

Atterberg Limits

Plastic Limit

Liquid Limit

Plastic Index

Swell

Moisture at start	12.4%
Moisture at finish	22.1%
Moisture increase	9.7%
Initial dry density (pcf)	101
Swell (psf)	480

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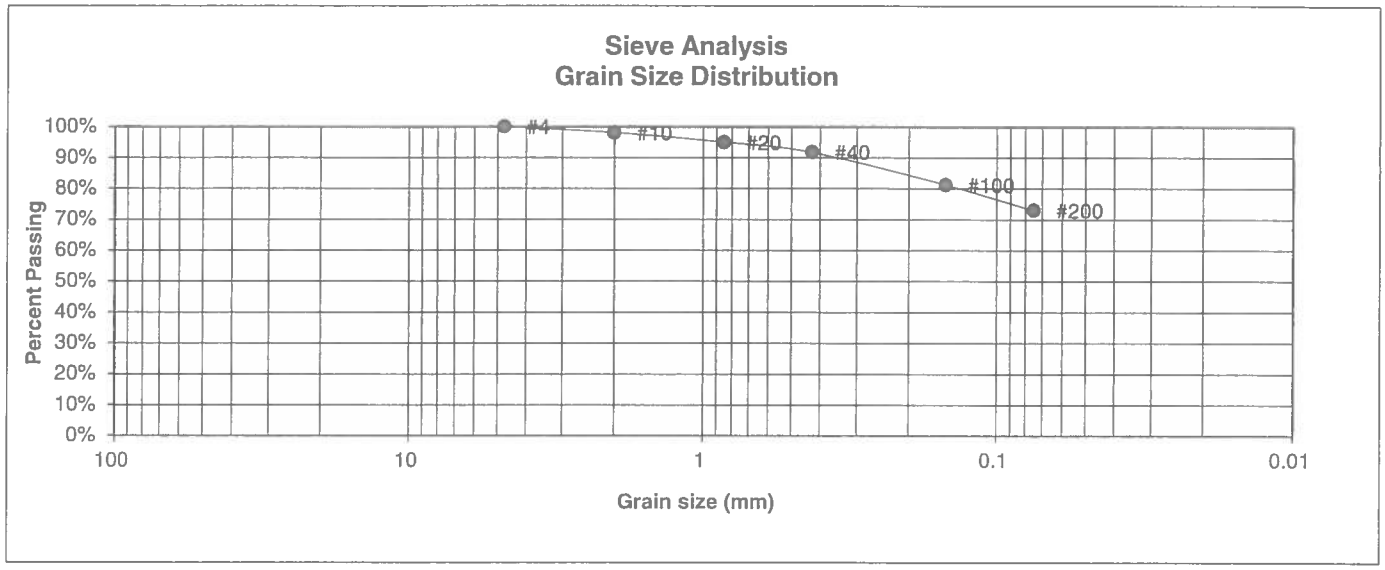
LABORATORY TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		LLL	1/12/22

JOB NO.: 213346

FIG NO.: C-2

BORING NO.	2	UNIFIED CLASSIFICATION	CL	TEST BY	BL
DEPTH(ft)	2-3	AASHTO CLASSIFICATION		JOB NO.	213346
CLIENT	SCOTT MCDERMOTT				
PROJECT	12930 HERRING ROAD				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	
4	100.0%
10	98.1%
20	94.9%
40	91.8%
100	81.2%
200	73.0%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

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COLORADO SPRINGS, COLORADO 80907

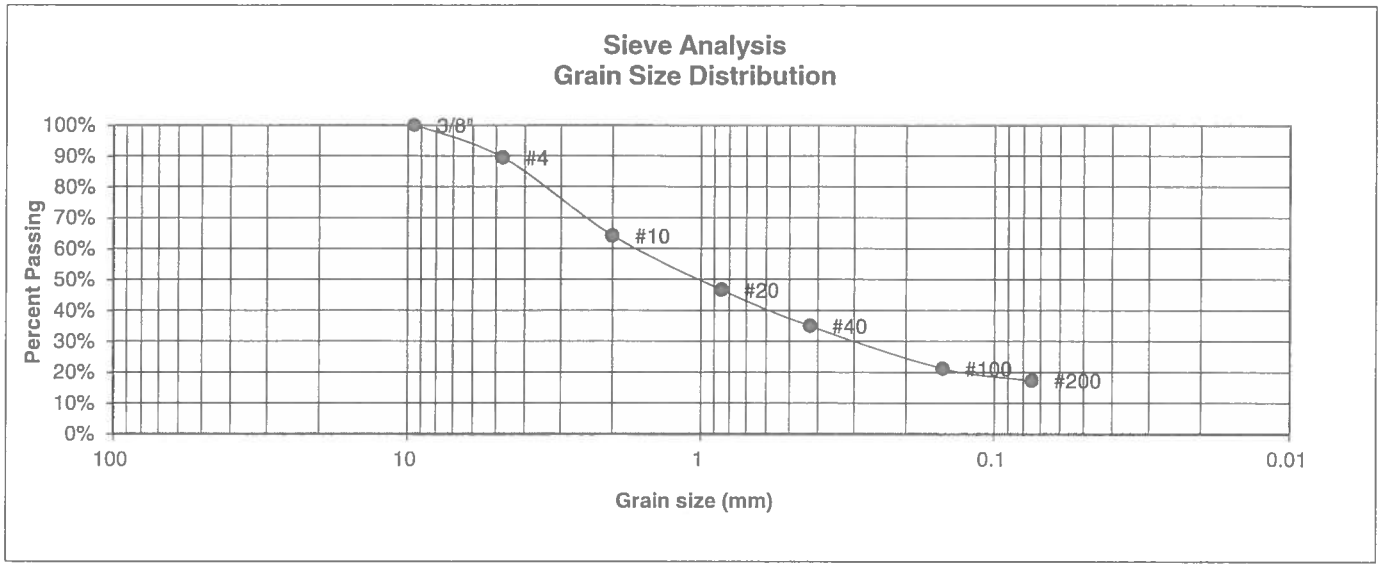
LABORATORY TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		LLL	1/12/22

JOB NO.: 213346

FIG NO.: C-3

BORING NO.	2	UNIFIED CLASSIFICATION	SM	TEST BY	BL
DEPTH(ft)	15	AASHTO CLASSIFICATION		JOB NO.	213346
CLIENT	SCOTT MCDERMOTT				
PROJECT	12930 HERRING ROAD				



U.S. Sieve #	Percent Finer
3"	
1 1/2"	
3/4"	
1/2"	
3/8"	100.0%
4	89.4%
10	64.1%
20	46.6%
40	34.9%
100	21.2%
200	17.3%

Atterberg Limits
Plastic Limit
Liquid Limit
Plastic Index

Swell
Moisture at start
Moisture at finish
Moisture increase
Initial dry density (pcf)
Swell (psf)

ENTECH ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

LABORATORY TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		LLL	1/12/22

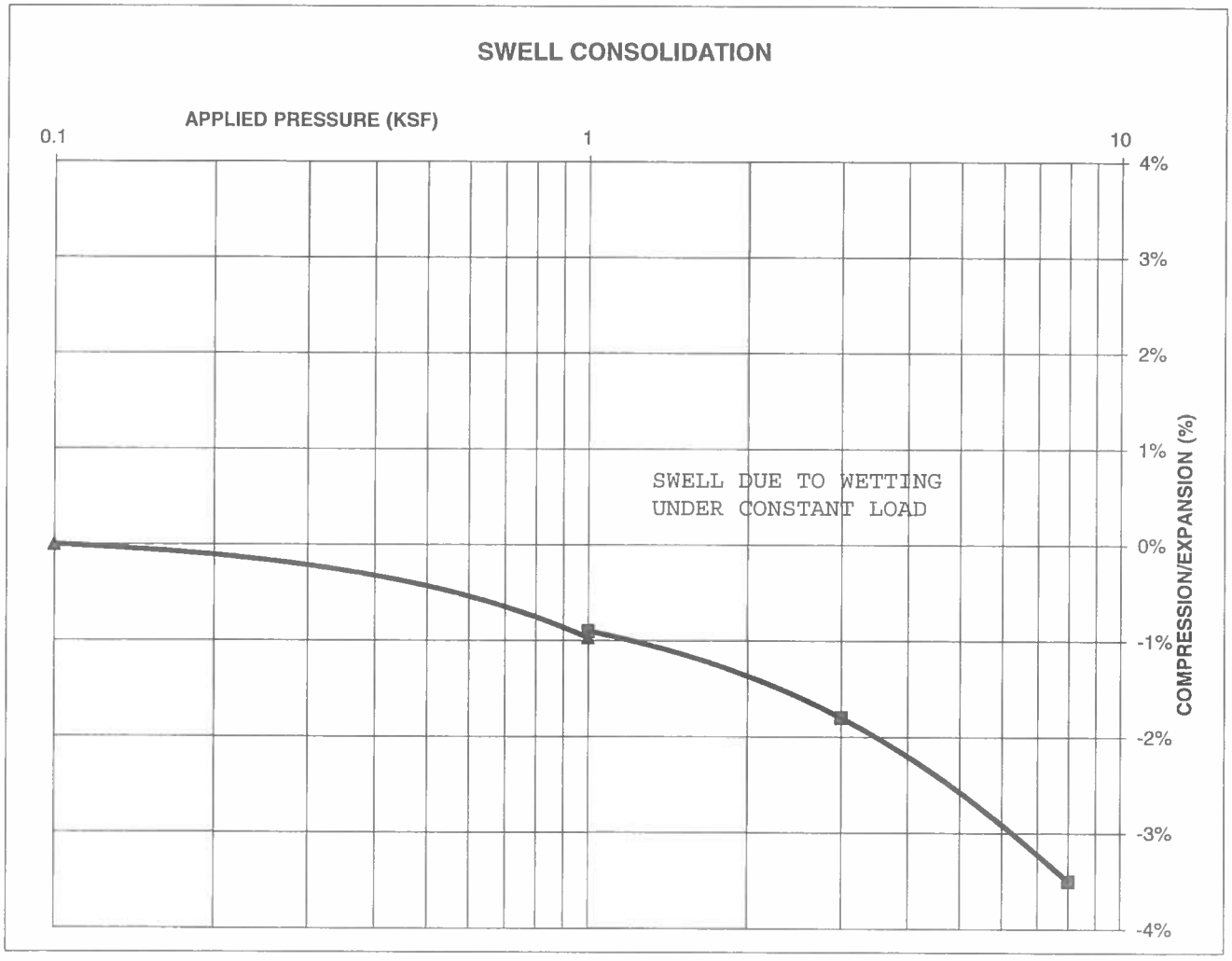
JOB NO.: 213346

FIG NO.: C-4

CONSOLIDATION TEST RESULTS

SAMPLE FROM:	2	DEPTH(ft)	2-3
DESCRIPTION	CLAY, SANDY		
NATURAL UNIT DRY WEIGHT (PCF)			115
NATURAL MOISTURE CONTENT			15.9%
SWELL/CONSOLIDATION (%)			0.1%

JOB NO. 213346
CLIENT SCOTT MCDERMOTT
PROJECT 12930 HERRING ROAD



ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

SWELL CONSOLIDATION
TEST RESULTS

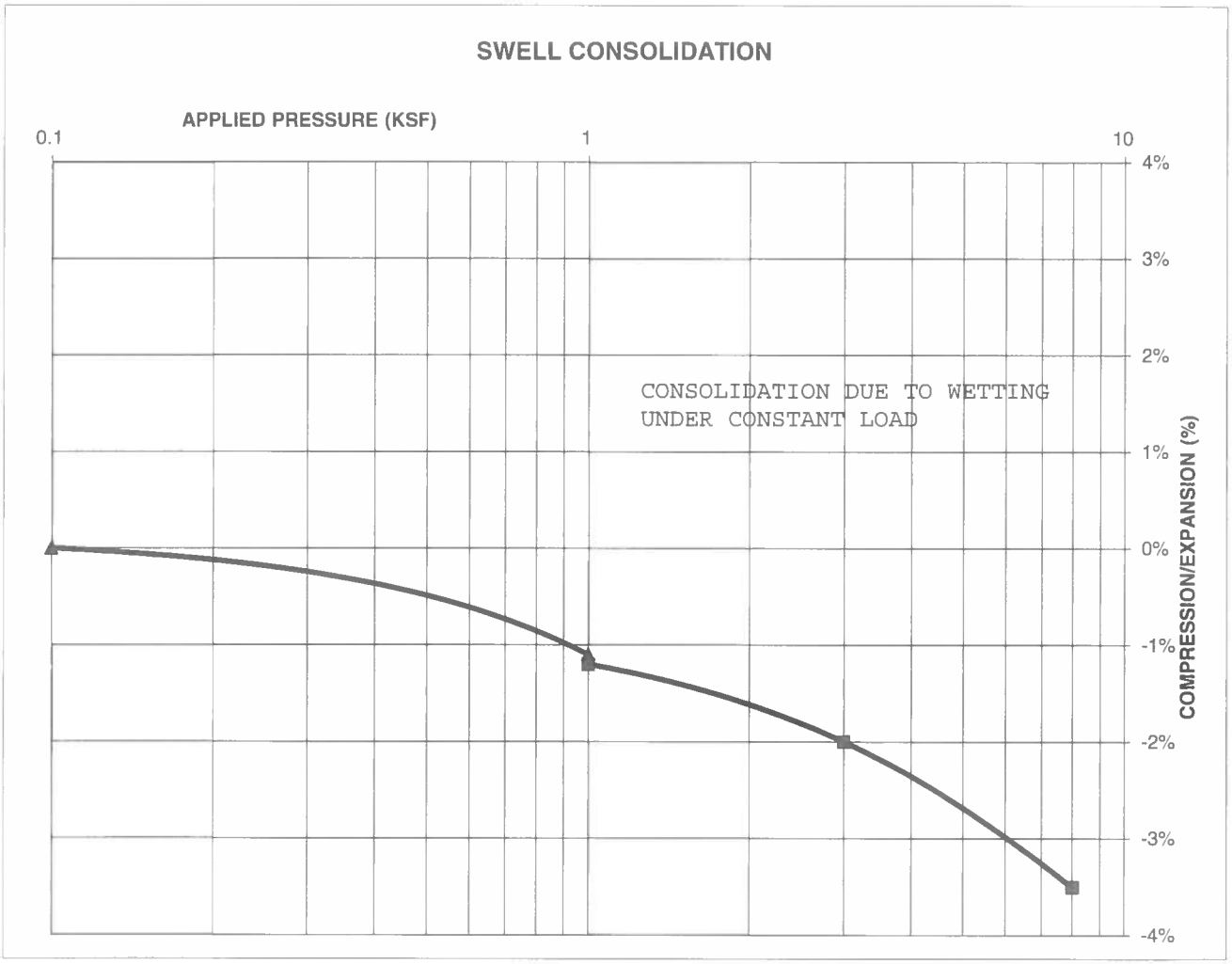
DRAWN:	DATE:	CHECKED:	DATE:
		LL	1/12/22

JOB NO.: 213346
FIG NO.: C-5

CONSOLIDATION TEST RESULTS

SAMPLE FROM:	2	DEPTH(ft)	5
DESCRIPTION	CLAYSTONE, SANDY		
NATURAL UNIT DRY WEIGHT (PCF)			118
NATURAL MOISTURE CONTENT			14.7%
SWELL/CONSOLIDATION (%)			-0.1%

JOB NO. 213346
CLIENT SCOTT MCDERMOTT
PROJECT 12930 HERRING ROAD



ENTECH
ENGINEERING, INC.
505 ELKTON DRIVE
COLORADO SPRINGS, COLORADO 80907

SWELL CONSOLIDATION
TEST RESULTS

DRAWN:	DATE:	CHECKED:	DATE:
		LLL	2/15/22

JOB NO. 213346
FIG NO. C-6

APPENDIX D: **Profile Pit Evaluation by Geoqust, LLC., dated November 10, 2021, Geoquest Job No. 21-1209**

GEOQUEST, LLC
6825 Silver Ponds Heights #101
Colorado Springs, CO 80908
(719) 481-4560

PROFILE PIT EVALUATION

FOR

SCOTT MCDERMOTT

JOB #21-1209

12930 Herring Road,
El Paso County,
Colorado

Sincerely,

Douglas J Pretzer

Douglas J. Pretzer, P.E.
Civil Engineer

PROFILE PIT FINDINGS

Enclosed are the results of the profile pit for the septic system to be installed at **12930 Herring Road, El Paso County, Colorado.** The location of the test pits was determined by Scott McDermott. The residence will not be on a public water system. The number of bedrooms in the design for the residence is unknown. Due to the natural slope of the property, the entire system will feed to the southwest at approximately 7% at least 20 feet. All applicable portions of the El Paso County Public Health Department Onsite Wastewater Treatment System Regulations (OWTS) must be complied with for the installation of the treatment system.

The inspection was performed on November 2, 2021, in accordance with Table 10-1 of the **E.P.C.P.H. OWTS Regulations.**

Soil Profile #1:

0 to 4" - Topsoil - loam, organic composition.

4" to 24" - USDA soil texture sandy loam, soil type 2A, structure shape granular, structure grade 1, non-cemented, LTAR 0.50, light brownish grey in color, 10 YR 6/2, 17% rock.

24" to 8' - USDA soil texture sandy clay, soil type R-1, structure shape massive, structure grade 0, moderately cemented, LTAR 0.15, light yellowish brown in color, 10 YR 6/4, redoximorphic features at interface, soil type 4A with 47% rock, sandstone.

Soil Profile #2:

0 to 6" - Topsoil - loam, organic composition.

6" to 30" - USDA soil texture sandy loam, soil type 2A, structure shape granular, structure grade 1, non-cemented, LTAR 0.50, light brownish grey in color, 10 YR 6/2, 21% rock.

30" to 8' - USDA soil texture sandy clay loam, soil type R-1, structure shape massive, structure grade 0, moderately cemented, LTAR 0.30, pale brown in color, 10 YR 6/3, soil type 3A with 39% rock, sandstone.

Groundwater evidence was encountered at the depth of 24 inches in Profile Pit #1 during the inspection. Bedrock was encountered at the depth of 24 inches in Profile Pit #1 and 30 inches in Profile Pit #2 during the inspection. No known wells were observed within 100 feet of the proposed system. **All setbacks shall conform to county regulations.**

Due to encountering bedrock and groundwater evidence, the septic system to be installed on this site shall be designed by a Colorado Licensed Engineer. Based on the observed conditions, we feel a design based on an LTAR of 0.50 GPD/SF (USDA soil type 2A, treatment soil, treatment level 1) is reasonable. An above grade uniformly pressure dosed soil treatment area is required.

If during construction of the field itself, subsurface conditions change considerably or if the location of the proposed field changes, this office shall be notified to determine whether the conditions are adequate for the system as designed or whether a new system needs to be designed.

Weather conditions at the time of the test consisted of overcast skies with cold temperatures.

PROFILE PIT LOG - Profile Pit #1

JOB#: 21-1209
DATE EVALUATED: 02 November 2021
EQUIPMENT USED: MINI-EX

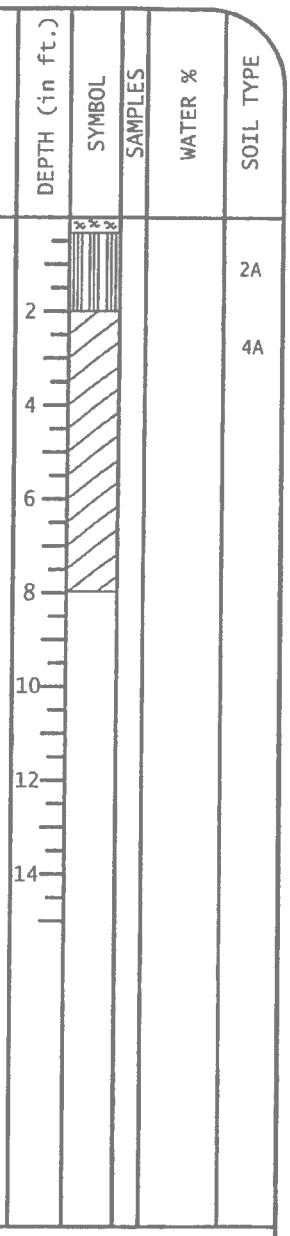
0"-4" **TOPSOIL**
Loam
Organic Composition

4"- 24" **Sand**

Fine-coarse Grained	USDA Soil Texture: Sandy Loam
Moderate Density	USDA Soil Type: 2A
Low Moisture Content	USDA Structure Shape: Granular
Low-moderate Clay Content	USDA Structure Grade: 1
Low-moderate Cohesion	Cementation Class: Non-cemented
Low-moderate Plasticity	Long Term Acceptance Rate (LTAR, Treatment Level 1):0.50
Light Brownish Grey Color	17% Rock
10YR 6/2	

24"- 8' **Sandstone**

Fine-coarse Grained	USDA Soil Texture: Sandy Clay
High Density	USDA Soil Type: R-1
Low-moderate Moisture Content	USDA Structure Shape: Massive
Moderate-high Clay Content	USDA Structure Grade: 0
Moderate-high Cohesion	Cementation Class: Moderately
Moderate-high Plasticity	Long Term Acceptance Rate (LTAR, Treatment Level 1):0.15
Light Yellowish Brown Color	Redox @ Interface
10YR 6/4	Soil Type 4A w/ 47% Rock



LTAR to be Used for OWTS Sizing: **0.50GPD/SF (USDA Type 2A, Treatment soil, Treatment Level 1)**
Depth to Groundwater (Permanent or Seasonal): Seasonal at 24"
Depth to Bedrock and Type: Sandstone @ 24"
Depth to Proposed Infiltrative Surface from Ground Surface: Above Grade (Uniformly Pressure Dosed)
Soil Treatment Area Slope and Direction: Southwest @ 7%

Note: See El Paso County Board of Health Regulation Chapter 8: On-Site Wastewater Treatments Systems (OWTS) Regulations for Additional Information. Refer to Table 10-1 for Corresponding LTAR if Treatment Level 2, 2N, 3, or 3N will be Implemented in the Design of the OWTS. System Sizing Depends on a Number of Factors (i.e. LTAR, # of Bedrooms, Type of Soil Treatment Area (STA), Method of Transfer to the STA (Gravity, Dosed, or Pressure Dosed), and Type of Storage / Distribution Media Used in the STA)

Project: 21-12098
Sheet: 1 of 2
Date: 05 Nov 2021
Scale: 1/4" = 1'
Drawn by: rah
Checked by: djp

Project Name and Address

Scott Mcdermott

12930 Herring Rd
Sch. No. 5208000030
El Paso County, Colorado

GEOQUEST, LLC.
6825 SILVER PONDS HEIGHTS
SUITE 101
COLORADO SPRINGS, CO
80908

OFFICE: (719) 481-4560
FAX: (719) 481-9204

PROFILE PIT LOG - Profile Pit #2

JOB#: 21-1209
DATE EVALUATED: 02 November 2021
EQUIPMENT USED: MINI-EX

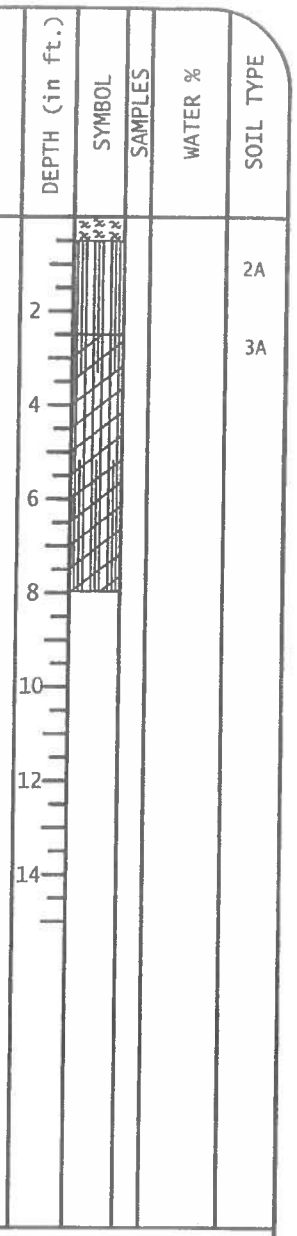
0"-6" **TOPSOIL**
Loam
Organic Composition

6"- 30" **Sand**

Fine-coarse Grained	USDA Soil Texture: Sandy Loam
Moderate Density	USDA Soil Type: 2A
Low Moisture Content	USDA Structure Shape: Granular
Low-moderate Clay Content	USDA Structure Grade: 1
Low-moderate Cohesion	Cementation Class: Non-cemented
Low-moderate Plasticity	Long Term Acceptance Rate (LTAR, Treatment Level 1):0.50
Light Brownish Grey Color 10YR 6/2	21% Rock

30"- 8' **Sandstone**

Fine-coarse Grained	USDA Soil Texture: Sandy Clay Loam
High Density	USDA Soil Type: R-1
Low Moisture Content	USDA Structure Shape: Massive
Moderate Clay Content	USDA Structure Grade: 0
Moderate Cohesion	Cementation Class: Moderately
Moderate Plasticity	Long Term Acceptance Rate (LTAR, Treatment Level 1):0.30
Pale Brown Color 10YR 6/3	Soil Type 3A w/ 39% Rock



LTAR to be Used for OWTS Sizing: **0.50GPD/SF (USDA Type 2A, Treatment soil, Treatment Level 1)**
Depth to Groundwater (Permanent or Seasonal): Not Encountered
Depth to Bedrock and Type: Sandstone @ 30"
Depth to Proposed Infiltrative Surface from Ground Surface: Above Grade (Uniformly Pressure Dosed)
Soil Treatment Area Slope and Direction: Southwest @ 7%

Note: See El Paso County Board of Health Regulation Chapter 8: On-Site Wastewater Treatments Systems (OWTS) Regulations for Additional Information. Refer to Table 10-1 for Corresponding LTAR if Treatment Level 2, 2N, 3, or 3N will be Implemented in the Design of the OWTS. System Sizing Depends on a Number of Factors (i.e. LTAR, # of Bedrooms, Type of Soil Treatment Area (STA), Method of Transfer to the STA (Gravity, Dosed, or Pressure Dosed), and Type of Storage / Distribution Media Used in the STA)

Project: 21-12098	Project Name and Address
Sheet: 2 of 2	Scott Mcdermott
Date: 05 Nov 2021	12930 Herring Rd
	Sch. No. 5208000030
	El Paso County, Colorado
Scale: 1/4" = 1'	
Drawn by: rah	
Checked by: djp	

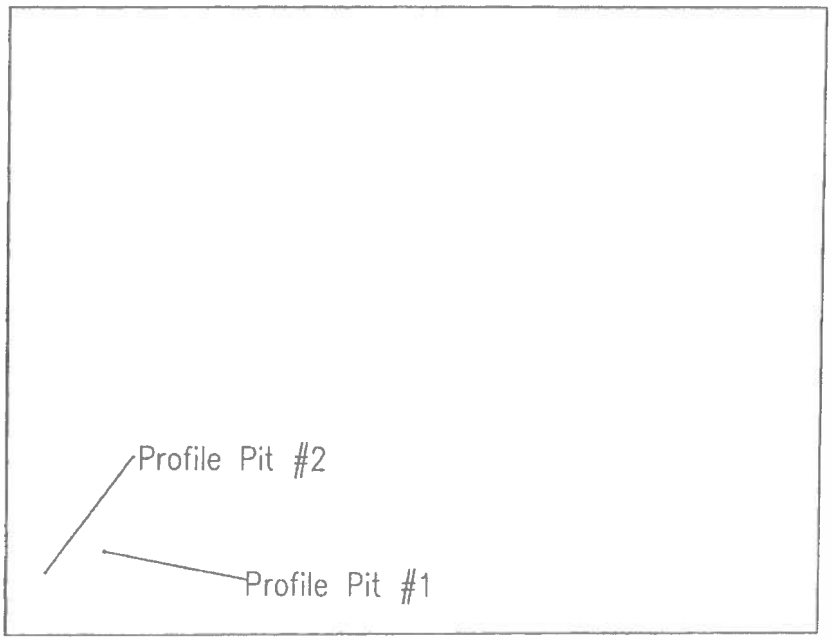
GEOQUEST, LLC.
6825 SILVER PONDS HEIGHTS
SUITE 101
COLORADO SPRINGS, CO
80908

OFFICE: (719) 481-4560
FAX: (719) 481-9204

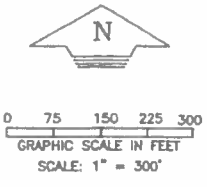
GEOQUEST LLC

SITE MAP

12930 Herring Road
El Paso County
Colorado
Job #21-1209



Location from Southwest Lot Corner to Profile Pit #1:
N. 50° E. – 210'
Location from Profile Pit #1 to Profile Pit #2:
S. 20° W. – 100'
GPS Coordinates:
Pit 1; N. 39° 01' 4.1" W. 104° 41' 9.2"
Pit 2; N. 39° 01' 3.8" W. 104° 41' 10.4"



APPENDIX D: Soil Survey Descriptions

El Paso County Area, Colorado

26—Elbeth sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 367y
Elevation: 7,300 to 7,600 feet
Farmland classification: Not prime farmland

Map Unit Composition

Elbeth and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elbeth

Setting

Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from arkose

Typical profile

A - 0 to 3 inches: sandy loam
E - 3 to 23 inches: loamy sand
Bt - 23 to 68 inches: sandy clay loam
C - 68 to 74 inches: sandy clay loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F048AY908CO - Mixed Conifer
Hydric soil rating: No

Minor Components

Pleasant

Percent of map unit:
Landform: Depressions
Hydric soil rating: Yes

Other soils

Percent of map unit:

Hydric soil rating: No

40—Kettle gravelly loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 368g
Elevation: 7,000 to 7,700 feet
Farmland classification: Not prime farmland

Map Unit Composition

Kettle and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kettle

Setting

Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy alluvium derived from arkose

Typical profile

E - 0 to 16 inches: gravelly loamy sand
Bt - 16 to 40 inches: gravelly sandy loam
C - 40 to 60 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F048AY908CO - Mixed Conifer
Hydric soil rating: No

Minor Components

Other soils

Percent of map unit:
Hydric soil rating: No

Pleasant

Percent of map unit:
Landform: Depressions
Hydric soil rating: Yes

41—Kettle gravelly loamy sand, 8 to 40 percent slopes

Map Unit Setting

National map unit symbol: 368h
Elevation: 7,000 to 7,700 feet
Farmland classification: Not prime farmland

Map Unit Composition

Kettle and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kettle

Setting

Landform: Hills
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy alluvium derived from arkose

Typical profile

E - 0 to 16 inches: gravelly loamy sand
Bt - 16 to 40 inches: gravelly sandy loam
C - 40 to 60 inches: extremely gravelly loamy sand

Properties and qualities

Slope: 8 to 40 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F048AY908CO - Mixed Conifer
Hydric soil rating: No

Minor Components

Pleasant

Percent of map unit:
Landform: Depressions
Hydric soil rating: Yes

Other soils

Percent of map unit:
Hydric soil rating: No

APPENDIX E: El Paso County Health Department Septic Records

MAY-19-99 03:47P flood enumeration
MAY-17-1999 10:09 EL PASO CTY HEALTH

#0325
zone x out
(59)

Inspector Janet

Record I.D. 0501

PAID 4/28/99 AC

EL PASO COUNTY ENVIRONMENTAL HEALTH SERVICES

301 South Union Boulevard • Colorado Springs, CO • 80910-3123 • (719) 578-3126

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

BY

Owner Craig McDermott — Daytime Phone (WK) 596-1234 (HM) 596-4109

Address of Property 12930 Herring Road — City & Zip Black Forest 80908

Legal Description See Attached SE4 S8 T12S R65W

Tax Schedule # 52080-00-030 — Lot Size 30 acres — Septic Contractor/Phone Owner

Inside City Limits ☒ No ☐ Yes-City _____ — Water Supply ☒ Well or Spring ☐ Cistern ☐ Public

Type of Building ☒ Frame ☐ Mobile ☐ Modular ☑ Other Log w/Std Stick Frame

Owner's Mailing Address 6960 Quicksilver Drive — City, State & Zip Colo Spgs CO 80922

MAXIMUM POTENTIAL BEDROOMS 4

Basement (Y) N — Percolation Test Attached (Y) N — Garbage Disposal (Y) N — Clothes Washer (Y) 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 an 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. 25-10-107 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 Craig A. McDermott — 05-19-99 APPROVED FLOODPLAIN ENUMERATIONS — Date 4/28/99

MAY 18 1999

DEPARTMENT OF HEALTH USE ONLY

815 ft²	1500 Gallons	05/03/99
Minimum Absorption Area	Minimum Tank Capacity	Date of Site Inspection

REMARKS 05/03/99 H2O standing in all 3 perc holes & profile hole, saturated condition. Bedrock @ 6'

05/04/99 Called Craig w/ rmc and informed him of situation.

05/04/99 Informed owner, Craig McDermott.

05/13/99 Letter Attached 05/12/99, from P.E. site is OK.

ABSORPTION SYSTEM TO BE INSTALLED IN THE AREA OF THE SOIL PERCOLATION TEST. THE DEPTH MAY NOT EXCEED 2' BELOW NATIVE GROUND SURFACE DUE TO BEDROCK AT 6'. (32 STANDARD CHAMBERS IN A TRENCH OR 35 STANDARD CHAMBERS IN A BED). MAINTAIN REQUIRED I.S.D.S MINIMUM SETBACK DISTANCES.

DATE 05/04/99 — APPROVED — DENIED

DATE TO PLANNING DEPT 4/30/99

DATE TO WASTEWATER DISTRICT N/A

Send directly to Joann EHS thanks — re-sent - 5/17/99 to Planning and Regional

Post-it® Fax Note 7671 — Date 5/17 — # of pages ▶ 4

To Regional Bldg — From Joann EHS

Co./Dept. Flood Plain Addressing — Co. EPC Health

Phone # 327-2902 — Phone # 578-3126

Fax # 327-2953 — Fax # 578 3192

POSTED 5-19-99

SAVE

5208000030

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

Permit # ON0000506
Date 4 NOV. 99

APPROVED: YES ✓ NO _____

ENVIRONMENTALIST J. CHRISTENSEN

Address 12930 HERRING RD. 80908 Owner CRAIG MCDERMOTT

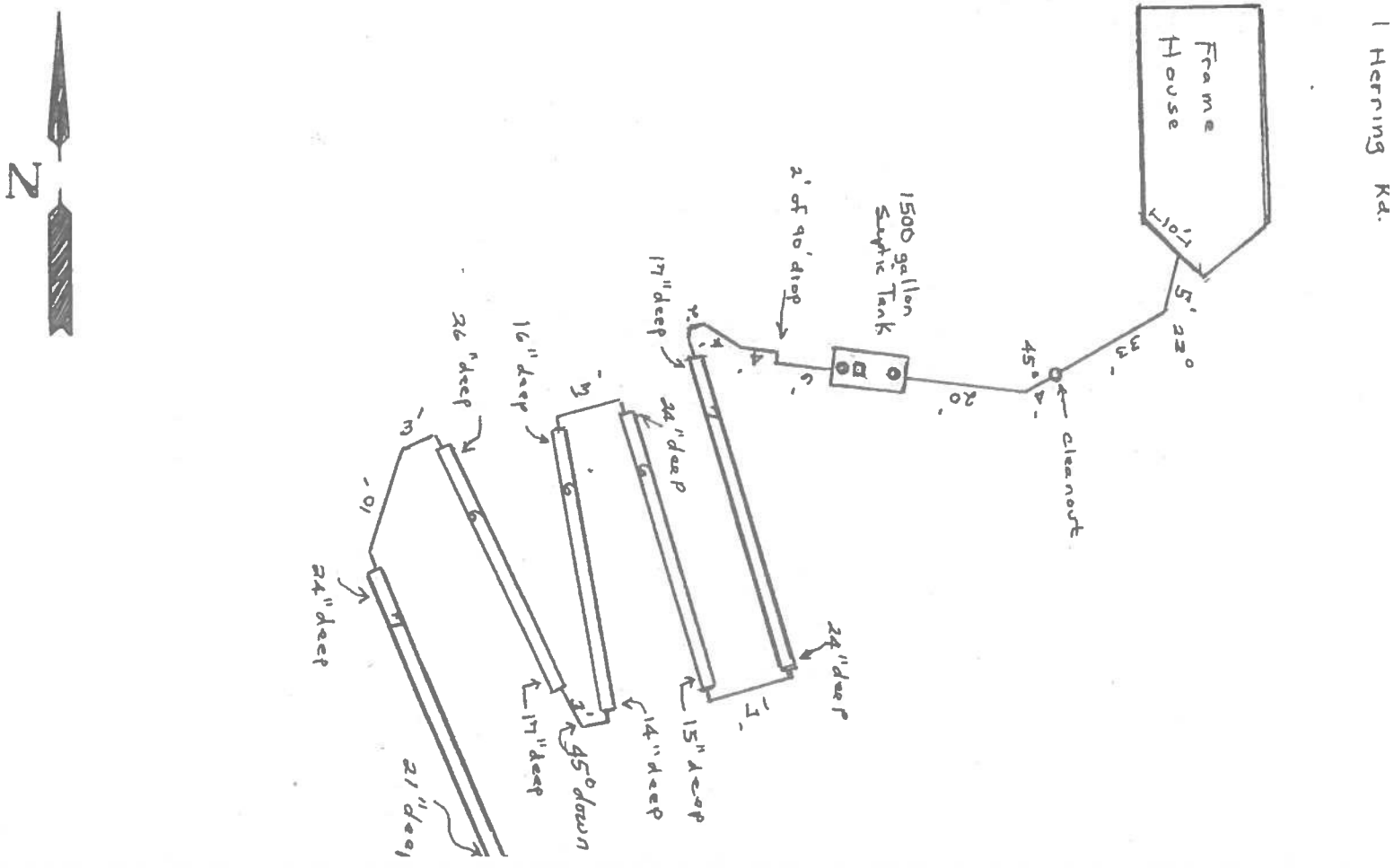
Legal Description SE4 SB 12S 65W
Residence ✓, # of bedrooms 4; Commercial _____; System Installer Owner

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 EQUALIZER, number of chambers 32, bed _____ trench ✓
sq. ft./section 27.77, reduction allowed None %, sq. ft required 815
total sq. ft. installed 888.64, depth of installation 14" - 24"
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: Building sewer is 3' deep. 4" SDR 35, ASTM D 3034 pipe.
Top of septic tank is above natural grade - no risers needed.
Well not drilled at time of inspection.



PAID 4/28/99

EL PASO COUNTY

DEPARTMENT OF HEALTH AND ENVIRONMENT
301 S Union Blvd, Colorado Springs, Colorado 719-578-3126

INDIVIDUAL SEWAGE DISPOSAL SYSTEM PERMIT

WATER SOURCE: WELL

PERMIT NUMBER: ON0000501

OWNER NAME: CRAIG MCDERMOTT

DATE PERMITTED: 5/20/99

ADDRESS: 12930 HERRING RD

CITY,STATE,ZIP: BLACK FOREST 80908

PHONE NUMBER: 7195961234

INSTALLED BY: OWNER

This permit is issued in accordance with 25-10-107 Colorado Revised Statues. 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.
Sewage disposal system to be installed by an El Paso County Licensed System Contractor or the property owner.

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

Kimberly Rodriguez

DIRECTOR, EL PASO COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT

PERMIT FEE(NON REFUNDABLE) :
New Permit --$ 300.00 pd 4/28/99
~~ISDS Repair - $ 50.00~~
Voided/Altered permit --$ 25.00

PERMIT EXPIRATION DATE :
Expires twelve months from date of issue

Janet Christensen 578-3141
ENVIRONMENTALIST / PHONE NUMBER

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

MINIMUM SEPTIC TANK SIZE: 1,500 GALLONS *MINIMUM ABSORPTION AREA REQUIRED* 815 SQ FT

PLANNING DEPARTMEN [redacted] ENUMERATION [redacted] FLOOD PLAIN [redacted] WASTEWATER [redacted]

COMMENTS:

ABSORPTION SYSTEM TO BE INSTALLED IN THE AREA OF THE SOIL PERCOLATION TEST. THE DEPTH MAY NOT EXCEED 2 FEET BELOW NATIVE GROUND SURFACE DUE TO BEDROCK AT 6 FEET. (32 STANDARD CHAMBERS IN A TRENCH OR 35 STANDARD CHAMBERS IN A BED). MAINTAIN REQUIRED I.S.D.S. MINIMUM SETBACK DISTANCES.

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.

ON0000501 #5280000050 E

Inspector Janet Record I.D. 0501 AC

PAID 4/28/99

EL PASO COUNTY ENVIRONMENTAL HEALTH SERVICES

301 South Union Boulevard • Colorado Springs, CO • 80910-3123 • (719) 578-3126

11/4/99 AC

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

Owner Craig McDermott Daytime Phone (WK) 596-1234 (HM) 596-4109

Address of Property 12930 Herring Road City & Zip Black Forest 80908

Legal Description See Attached SE4 S8 T12S R65W

Tax Schedule # 52080-00-030 Lot Size 30 acres Septic Contractor/Phone owner

Inside City Limits ☒ No ☐ Yes-City _____ Water Supply ☒ Well or Spring ☐ Cistern ☐ Public

Type of Building ☒ Frame ☐ Mobile ☐ Modular ☑ Other Log w/ Std Stick Frame

Owner's Mailing Address 6960 Quicksilver Drive City, State & Zip Colo Spgs CO 80922

MAXIMUM POTENTIAL BEDROOMS 4

Basement (Y) N Percolation Test Attached (Y) N Garbage Disposal (Y) N Clothes Washer (Y) 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 an 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. 25-10-107 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 Craig A. McDermott Date 4/25/99

DEPARTMENT OF HEALTH USE ONLY

815 ft²	1500 GALLONS	05/03/99
Minimum Absorption Area	Minimum Tank Capacity	Date of Site Inspection

REMARKS 05/03/99 H2O standing in all 3 perc holes & profile hole, saturated condition. Bedrock @ 6'.
05/04/99 Called Craig w/ RMG and informed him of situation.
05/04/99 Informed owner Craig McDermott.
05/13/99 Letter Attached 05/12/99, from P.E., site is OK.

ABSORPTION SYSTEM TO BE INSTALLED IN THE AREA OF THE SOIL PERCOLATION TEST. THE DEPTH MAY NOT EXCEED 2' BELOW NATIVE GROUND SURFACE DUE TO BEDROCK AT 6'. (32 STANDARD CHAMBERS IN A TRENCH OR 35 STANDARD CHAMBERS IN A BED). MAINTAIN REQUIRED I.S.D.S MINIMUM SETBACK DISTANCES.

EHS INSPECTOR Janet Christensen DATE 05/04/99 APPROVED DENIED

PERMIT # ON0000501 ~~FEE~~ NO FEE DATE TO PLANNING DEPT 4/30/99 attached

DATE TO WASTEWATER DISTRICT N/A

mail 5/21/99 gm

re-sent - 5/7/99 to Planning after Regional

1) We require a copy of your percolation **(PERC) TEST** with an original professional engineer's (PE) stamp and

2) A **PL** n (not to scale) on a 8 ½ x 11 sheet of paper. The plot plan must include
   1) a) all buildings (proposed or existing) 7) driveway (proposed or
   2) pl) proposed septic system site existing and name of
   3) pl) designated alternate septic system site adjoining street)

3) Initial ures that apply to your property and include them on your plot plan.
   CA ___ Adjacent property well(s) ___ Subsoil drain
   ___ ___ Water line

4) Initial re within 100 feet of your proposed septic system and include on your plot plan.
   ___ _____Lake(s)
   ___ _____Stream(s)
   ___ _____Natural drainage course(s)

EL PASO COUNTY HEALTH
ENV HLTH/AIR QUALITY
(719) 575-8636

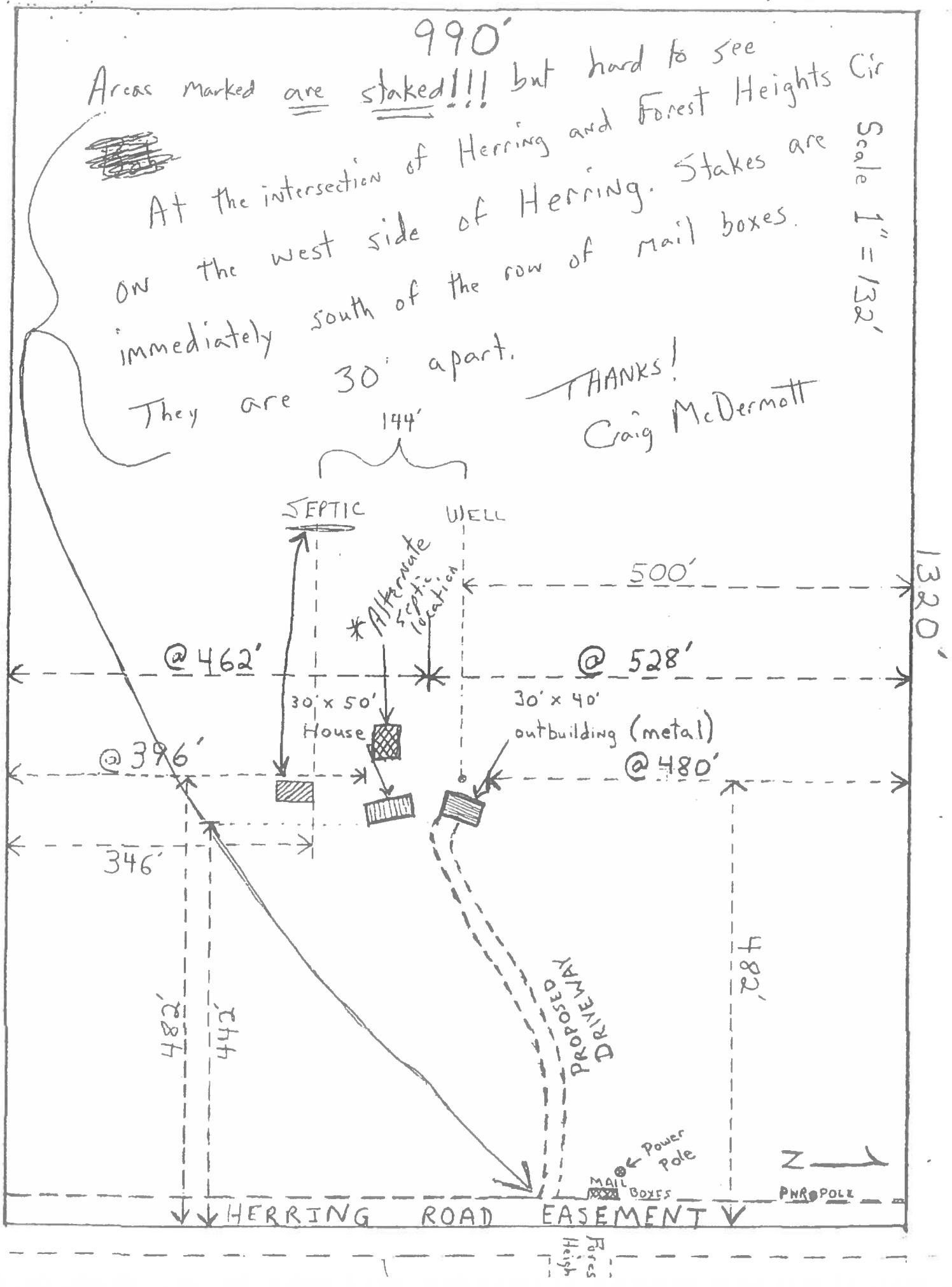
DATE 04.28.'99 WED

NEW SEPTIC	$300.00
SUBTOTAL	$300.00
TOTAL	$300.00
CHECK	$300.00
ARLENE	NO.000013
TIME 11:45	0001

5) **PROPE ADDRESS OR LOT NUMBER MUST BE POSTED AND CLEARLY VISIBLE FROM ROAD. PERC HOLES MUST BE CLEARLY MARKED.**

6) GIVE COMPLETE DIRECTIONS TO THE PROPERTY FROM A MAIN HIGHWAY

SEE ATTACHED MAP!!!
Property is raw undeveloped land.
No means of addressing is available.
Owner can be contacted to meet at property if possible at (wk) 596-1234 or (cell) 330-6118.
Everything is staked, but stakes are difficult to see.


990'
Areas marked are staked!!! but hard to see
At the intersection of Herring and Forest Heights Cir on the west side of Herring. Stakes are immediately south of the row of mail boxes. They are 30' apart.
THANKS!
Craig McDermott
Scale 1" = 132'
144'
SEPTIC
WELL
*Alternate septic location
500'
1320'
@462'
@528'
30' x 50' House
30' x 40' outbuilding (metal)
@396'
@480'
346'
282'
244'
284'
PROPOSED DRIVEWAY
Power pole
MAIL BOXES
PWR POLE
HERRING ROAD EASEMENT
Forest Heights

SEPTIC SITE REVIEW

ATE 5/17/99

ROPERTY ADDRESS 12930 Herring Rd

X SCHEDULE # 52080-00-030

GAL DESCRIPTION N 990 FT of NE¼SE¼ EX E 30 FT Sec 8-12-65

EDIVISION PLAT# ___ BOOK ___ PAGE ___ RECORDER ___

T AREA 29.32 AC ZONE RR-3

CHECKLIST/REMARKS

	APPROVED BY	DISAPPROVED BY
ANNING		
OODPLAIN	OK see attached	
DRESSING	OK see attached	

AT NOTES/REMARKS

TENDED SOLELY AS A CHECKLIST TO FOREWARN BUILDER/LANDOWNER OF POTENTIAL VELOPMENT PROBLEMS.

AT INFORMATION AND GENERAL REMARKS MAY AFFECT DEVELOPMENT AND SHOULD BE TED.

IOR TO ISSUANCE OF A BUILDING PERMIT FINAL PLOT PLAN APPROVAL IS QUIRED.

EL PASO COUNTY PLANNING DEPARTMENT
27 E VERMIJO AVE 5TH FLOOR
COLORADO SPRINGS CO 80903
PH # 520-6300

SAVE