HARMONY GROVE VILLAGE SOUTH

APPENDIX R

MINERAL RESOURCES EVALUATION

to the

DRAFT ENVIRONMENTAL IMPACT REPORT

PDS2015-GPA-15-002; PDS2015-SP-15-002
PDS2015-TM-5600; PDS2015-REZ-15-003
PDS2015-MUP-15-008; PDS2015-ER-15-08-006

APRIL 2017

Prepared for:
COUNTY OF SAN DIEGO
PLANNING & DEVELOPMENT SERVICES
5510 OVERLAND AVENUE, SUITE 310
SAN DIEGO, CALIFORNIA 92123

MINERAL RESOURCES EVALUATION

HARMONY GROVE VILLAGE SOUTH
SAN DIEGO COUNTY, CALIFORNIA

GEOCON
INCORPORATED

GEOTECHNICAL
ENVIRONMENTAL
MATERIALS

PREPARED FOR

RCS-HARMONY PARTNERS, LLC
MANHATTAN BEACH, CALIFORNIA

OCTOBER 29, 2015
PROJECT NO. 07465-32-03

Project No. 07465-32-03
October 29, 2015

RCS-Harmony Partners, LLC
321 12th Street, Suite 200
Manhattan Beach, California 90266

Attention: Ms. Kathryn Murrel

Subject: MINERAL RESOURCES EVALUATION
HARMONY GROVE VILLAGE SOUTH
SAN DIEGO COUNTY, CALIFORNIA

Dear Ms. Murrel:

In accordance with your request, we have performed an evaluation of mineral resource potential for the Harmony Grove Village South project located in the west central area of San Diego County, California (see Vicinity Map, Figure 1). The property consists of approximately 112 acres of undeveloped land located south of Harmony Grove Road and east of Country Club Drive.

PURPOSE AND SCOPE OF THE EVALUATION

The purpose of the evaluation was to assess the potential for economically viable deposits of minerals; particularly, sand and gravel. In order to assess the sand and gravel resources at the project, we reviewed the soil and geologic descriptions presented in our report titled *Update Geotechncial Report, Harmony Grove Village South, San Diego County, California,* dated February 3, 2015 (Project No. 07465-32-03).

FINDINGS

Site Description

The site topography varies from a broad relatively gentle valley to moderately steep slopes. Surface drainage is primarily to the north, where it flows into Escondido Creek. Vegetation consists of grasses and shrubs. Several unpaved roads traverse the property along with one paved road that

bisects the property from east to west in the central portion of the site. The paved road and another unpaved road provide access to existing residences located east of the property.

The site is underlain, in part, by Quaternary alluvium/colluvium and is designated as Mineral Resource Zone MRZ-3 on the map titled *Revised Mineral Land Classification Aggregate Resources Only Western San Diego County Production-Consumption Region, Rancho Santa Fe Quadrangle*, CDMG Open-File Report 96-04, 1996.

Geologic Setting and Conditions

The subject project is located within the Peninsular Ranges Geomorphic Province. The region is characterized by northwest-trending structural blocks and intervening fault zones. The rock types in the Peninsular Ranges include igneous intrusive rocks associated with the Cretaceous-age Southern California Batholith, intruded into older metamorphic units in western and central San Diego County.

Site geology generally consists of Quaternary alluvial/colluvial soils overlying highly weathered, Cretaceous age, granitic rock. Alluvial deposits generally consists of loose to medium dense, silty sands with varying amounts of gravel and cobble. The estimated thickness of the alluvium/colluvium is approximately 19 feet.

Cretaceous-age Escondido Creek Granodiorite (granitic rock) was encountered throughout the project. The rock materials exhibited a variable weathering pattern ranging from completely weathered, decomposed granite to outcrops of fresh, extremely strong, hard rock. The majority of the air-track borings revealed rippable conditions based on generally accepted drill-penetration-rate criteria. The soils derived from the decomposed granitic rock generally consist of low-expansive, silty, medium- to coarse-grained sands.

Groundwater or seepage was encountered in two of the exploratory trenches (T4 and T10) at the time of the referenced study. Seasonal variations should be expected, particularly immediately following seasons of above-average rainfall. In general, the groundwater or seepage was encountered in the surficial deposits or at the contact with the underlying bedrock.

Soil Survey

Information concerning the soil conditions at and in proximity to the subject site was obtained from a review of the United States Department of Agriculture (USDA), National Resources Conservation Service's Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/). Information available on Web

Soil Survey indicates that surficial onsite soils belong to several series including the Escondido, Wyman, and Los Posas Series. These soils are described as very fine sandy loam to loam.

Industrial Mineral Resources

To assess aggregate production and use in the region we reviewed *Aggregate Sustainability in California, Fifty-Year Aggregate Demand Compared to Permitted Aggregate Resources, Map Sheet 52* (updated 2012) by the California Geological Survey (CGS) available online at: http://www.conservation.ca.gov/cgs/information/publications/ms/Documents/MS_52_2012.pdf. This map provides estimates of aggregate demand versus permitted resources for various regions throughout California. According to the map, the estimated 50-year demand for aggregate in the Western San Diego County region is 1,014 million tons, and the permitted aggregate resources are estimated at 167 million tons. The life of the permitted reserves is estimated at 10 years or less.

We also reviewed *Mines and Mineral Resources of San Diego County California, County Report 3, California* Division of Mines and Geology, dated 1963 and the USGS Mineral Resource Data System (http://mrdata.usgs.gov/mineral-resources/mrds-us.html) and DMG Open-File Report 96-04 *Update of Mineral Land Classification: Aggregate Materials in the Western San Diego County Production-Consumption Region* for information regarding former and current mining locations in the vicinity of the project. The nearest aggregate mine is the "Harmony Grove Quarries," a Portland Cement Concrete (PCC) grade aggregate mining operation in granitic rock approximately ½-mile north of the site. The quarries were mined by Ashland Granite Corporation and Harmony Rock Product (H. G. Fenton Material Company) until 1994. The remaining reserves are below the threshold value of $5,000,000 (1978-dollars). Several other quarries were active directly north of the site (CDMG County Report 3) from 1923 through the 1950's and beyond.

To evaluate the industrial mineral resources of the subject property we analyzed logs from auger and air-percussion borings, and exploratory trench logs (Appendix A) to estimate the volume and quality of potential resources. An isopach map showing the estimated thickness of the alluvium/colluvium with boring locations and general site geology is provided as Figure 2 (map pocket). The volume of the Quaternary-age alluvium/colluvium is estimated to be 407,000 cubic yards or approximately 715,000 tons.

A review of the trench logs indicates the alluvium/colluvium is primarily comprised of silty sand to sandy clay. Based on our experience, it is our opinion that these soils would not meet the minimum requirements for commercially viable sand products such as Sand Equivalent 30 (SE-30). With respect to the potential for aggregate resources, the air-percussion borings performed on site indicate

that the granodioritic rock that underlies the alluvium/colluvium is deeply weathered to depths of at least 40 to 60 feet below the ground surface and would not be viable for aggregate production.

CONCLUSIONS

Based on our analysis of the boring log data it is our opinion that the site is not a resource for PCC-grade aggregate. It may have a potential for producing SE-30 sand; however, conservatively assuming that all alluvial/colluvial deposits at the site are SE-30 grade, given the current retail price for that type material there is not a high enough volume of material to make open-pit mining economically viable (i.e. the value of the reserves are estimated to be less than $12,500,000 in 1998 equivalent dollars).

LIMITATIONS

Our professional services were performed, our findings obtained, and our conclusions prepared in accordance with generally accepted geological principles and practices used in this area at this time. No warranty is given, either express or implied.

Should you have any questions regarding this report, or if we may be of further service, please contact the undersigned at your convenience.

Very truly yours,

GEOCON INCORPORATED

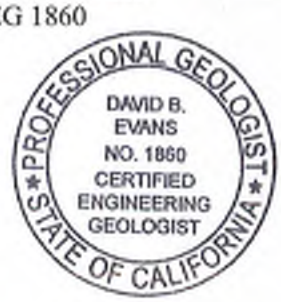
Garry W. Cannon
CEG 2201
RCE 56468

Emilio Alvarado
RCE 66915

David B. Evans
CEG 1860

GWC:EA:DBE:dmc

(2) Addressee



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NO SCALE

VICINITY MAP

GEOCON
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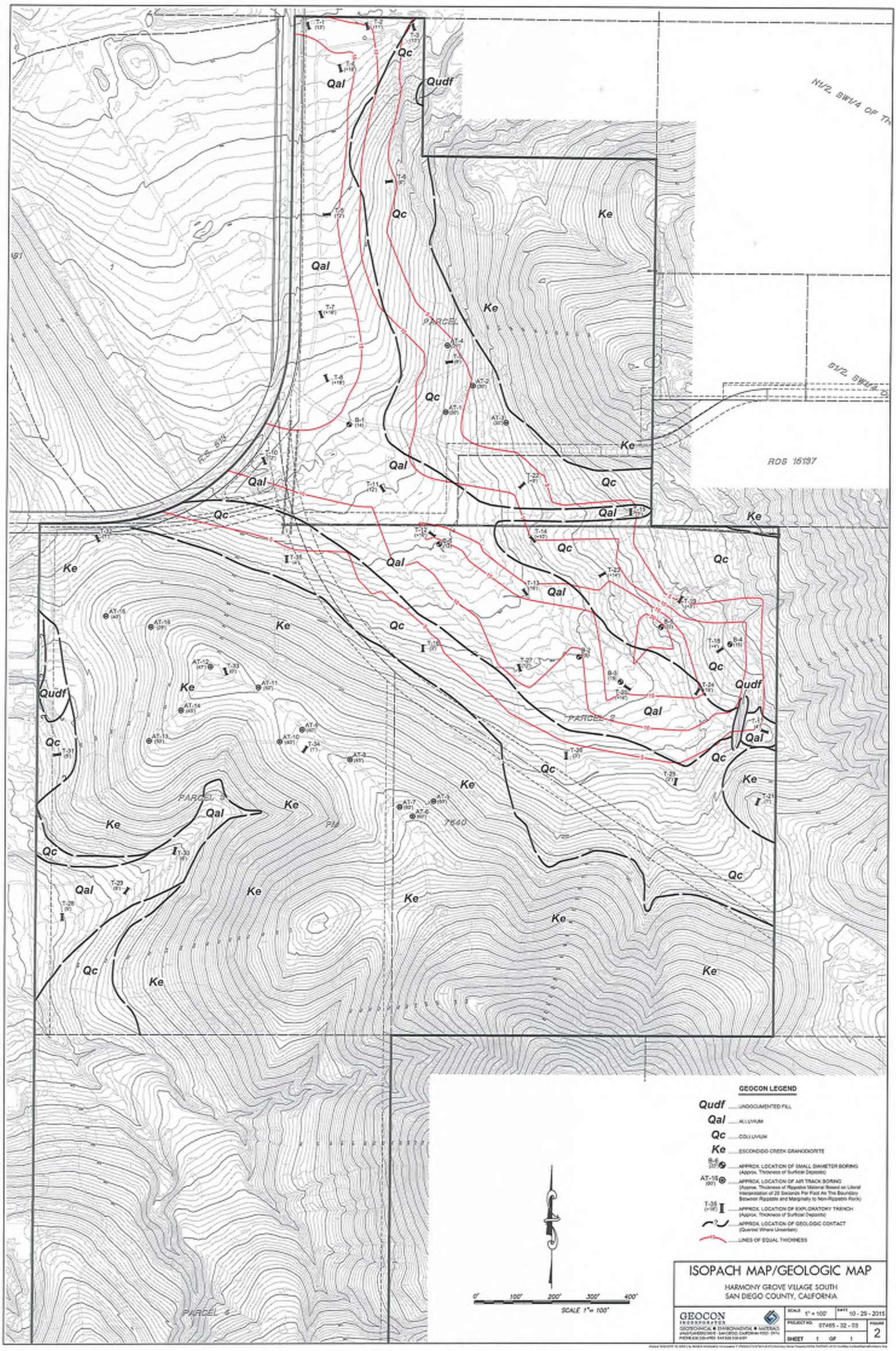
6960 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121 - 2974
PHONE 858 558-6900 - FAX 858 558-6159

EA / RA		DSK/GTYPD

HARMONY GROVE VILLAGE SOUTH
SAN DIEGO COUNTY, CALIFORNIA

DATE 10 - 29 - 2015	PROJECT NO. 07465 - 32 - 03	FIG. 1

Plotted:10/29/2015 10:28AM | By:RUBEN AGUILAR | File Location:Y:\PROJECTS\07465-32-03 (Harmony Grove Property)\DETAILS\07465-32-03 Vicinity Map.dwg



ISOPACH MAP/GEOLOGIC MAP

HARMONY GROVE VILLAGE SOUTH
SAN DIEGO COUNTY, CALIFORNIA

GEOCON INCORPORATED
GEOTECHNICAL ● ENVIRONMENTAL ● MATERIALS
6960 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
PHONE 858 558-6900 - FAX 858 558-6159

SCALE	1" = 100'
DATE	10 - 29 - 2015
PROJECT NO.	07485 - 32 - 03
FIGURE	2
SHEET	1 OF 1

APPENDIX A

APPENDIX A

BORING AND TRENCH LOGS

FOR

MINERAL RESOURCES EVALUATION
HARMONY GROVE VILLAGE SOUTH
SAN DIEGO COUNTY, CALIFORNIA

PROJECT NO. 07465-32-03

PROJECT NO. 07465-32-01

BORING B 1

ELEV. (MSL.) 620' DATE COMPLETED 04-08-2005

EQUIPMENT SMALL DIAMETER (CME)

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM**			
2					Loose to medium dense, moist, dark brown, Silty SAND, with trace clay			
4								
6	B1-1			SM	-No recovery in sample	10		
8								
10	B1-2				-No recovery in sample	32		
12								
14					**GRANITIC ROCK**			
					Highly weathered, dark gray, moderately weak GRANITIC ROCK			
	B1-3				BORING TERMINATED AT 15 FEET	58/9"		

07465-32-01.GPJ

Figure A-36,
Log of Boring B 1, Page 1 of 1

SAMPLE SYMBOLS

- .. SAMPLING UNSUCCESSFUL
- .. STANDARD PENETRATION TEST
- .. DRIVE SAMPLE (UNDISTURBED)
- .. DISTURBED OR BAG SAMPLE
- .. CHUNK SAMPLE
- .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

BORING B 2

ELEV. (MSL.) 660' DATE COMPLETED 04-08-2005

EQUIPMENT SMALL DIAMETER (CME)

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM** Loose to medium dense, moist, reddish brown, Silty SAND, with trace clay			
2								
4								
6	B2-1			SM	-Gravel present	32	125.2	13.2
8								
10					**GRANITIC ROCK** Completely weathered, dark gray, modernely weak GRANITIC ROCK			
	B2-2				BORING TERMINATED AT 10 FEET	73/10"		

07465-32-01.GPJ

Figure A-37,
Log of Boring B 2, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▩ ... DISTURBED OR BAG SAMPLE
- ◺ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

BORING B 3

ELEV. (MSL.) 665' DATE COMPLETED 04-08-2005

EQUIPMENT SMALL DIAMETER (CME)

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM** Loose to medium dense, moist, reddish brown, Silty SAND, with trace clay			
2								
4								
6	B3-1				-Gravel present below	36	117.3	15.4
8								
10				SM				
12	B3-2				-Becomes dense with more clay	56	107.7	21.3
14								
16	B3-3				-Becomes very dense	68	124.9	13.9
18								
	B3-4	+ +			**GRANITIC ROCK** Moderately weathered, dark gray, moderately strong GRANITIC ROCK BORING TERMINATED AT 19 FEET	50/5"		

07465-32-01.GPJ

Figure A-38,
Log of Boring B 3, Page 1 of 1

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

BORING B 4

ELEV. (MSL.) 702' DATE COMPLETED 04-08-2005

EQUIPMENT SMALL DIAMETER (CME)

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
2					**COLLUVIUM** Very dense, damp, gray, Silty, fine to coarse SAND, with gravel			
4								
6	B4-1			SM		50/4"	N/A	10.3
8	B4-2							
10	B4-3					50/5"	N/A	4.1
12								
14								
16	B4-4				**GRANITIC ROCK** Highly weathered, dark brown, moderately weak GRANITIC ROCK	50/4"		
					BORING TERMINATED AT 17 FEET			

07465-32-01.GPJ

Figure A-39,
Log of Boring B 4, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▩ ... DISTURBED OR BAG SAMPLE
- ◺ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

BORING B 5

ELEV. (MSL.) 680' DATE COMPLETED 04-08-2005

EQUIPMENT SMALL DIAMETER (CME)

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**COLLUVIUM** Very dense, damp, brownish gray, Silty, fine to coarse SAND, with gravel			
2								
4								
6	B5-1					50/5"	117.3	12.1
8								
10	B5-2			SM		83/10.5"	121.4	8.0
12					-Becomes brown			
14								
16	B5-3					82/11"	130.6	8.8
18								
20	B5-4				-Becomes dense	51	107.8	6.6
	B5-5				-Becomes medium dense	24		
22	B5-6	+ +			**GRANITIC ROCK** Moderately weathered, gray, moderately strong GRANITIC ROCK BORING TERMINATED AT 22 FEET	31/6"		

07465-32-01.GPJ

Figure A-40,
Log of Boring B 5, Page 1 of 1

SAMPLE SYMBOLS

- ☐ .. SAMPLING UNSUCCESSFUL
- ▮ .. STANDARD PENETRATION TEST
- ■ .. DRIVE SAMPLE (UNDISTURBED)
- ▩ .. DISTURBED OR BAG SAMPLE
- ◥ .. CHUNK SAMPLE
- ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

BORING B 6

ELEV. (MSL.) 640' DATE COMPLETED 04-08-2005

EQUIPMENT SMALL DIAMETER (CME)

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
2					**ALLUVIUM** Very loose to medium dense, moist, dark brown, Silty SAND, with trace clay			
4	B6-1			SM		4		
6								
8								
10	B6-2				-Becomes mottled reddish brown and gray	20		
12								
14		+ + + + + +			**GRANITIC ROCK** Highly weathered, gray-green, moderately weak GRANITIC ROCK			
	B6-3				BORING TERMINATED AT 15 FEET	50/6"		

07465-32-01.GPJ

Figure A-41,
Log of Boring B 6, Page 1 of 1

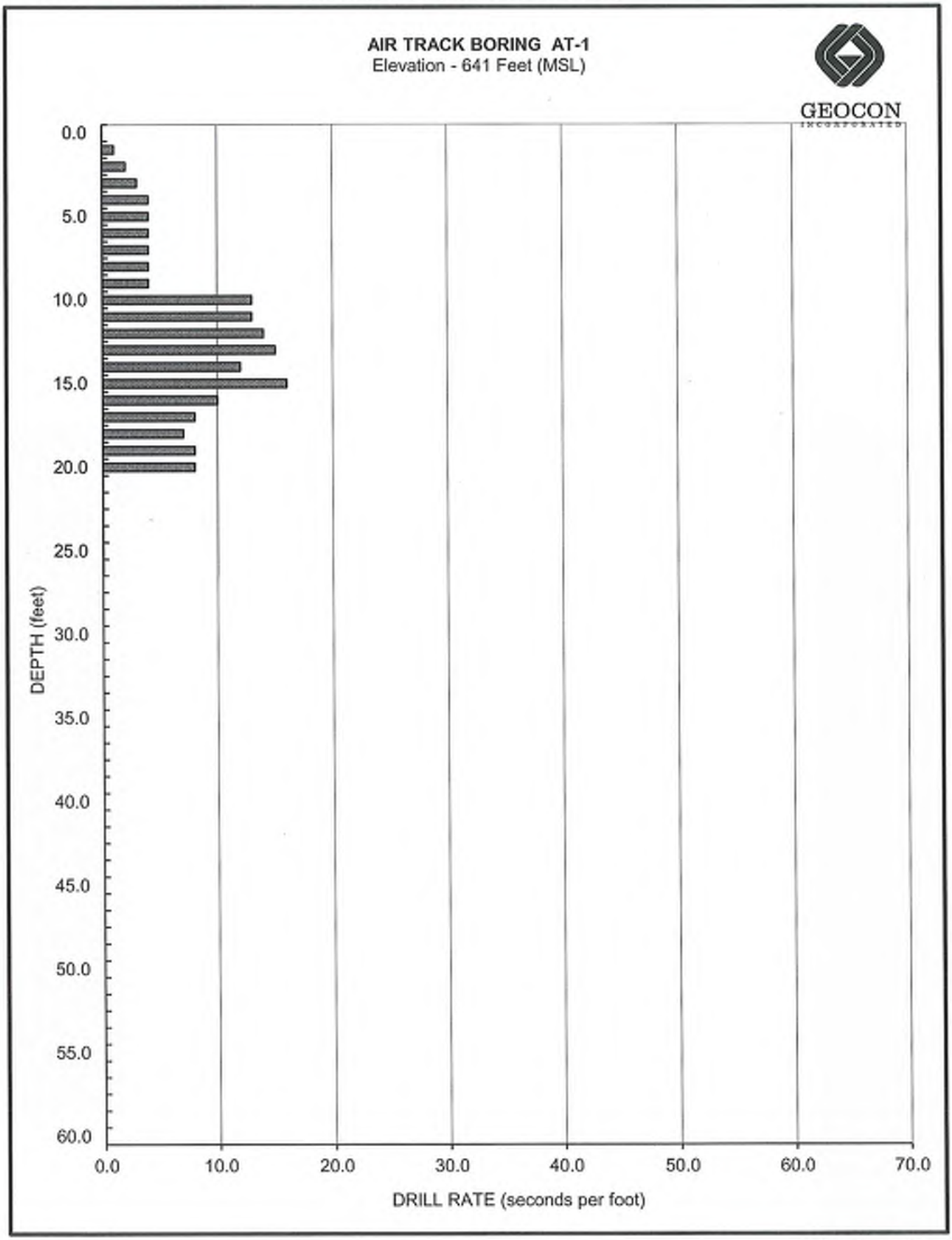
SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▩ ... DISTURBED OR BAG SAMPLE
- ◣ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY



A7001.xls

FIGURE A-42

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY

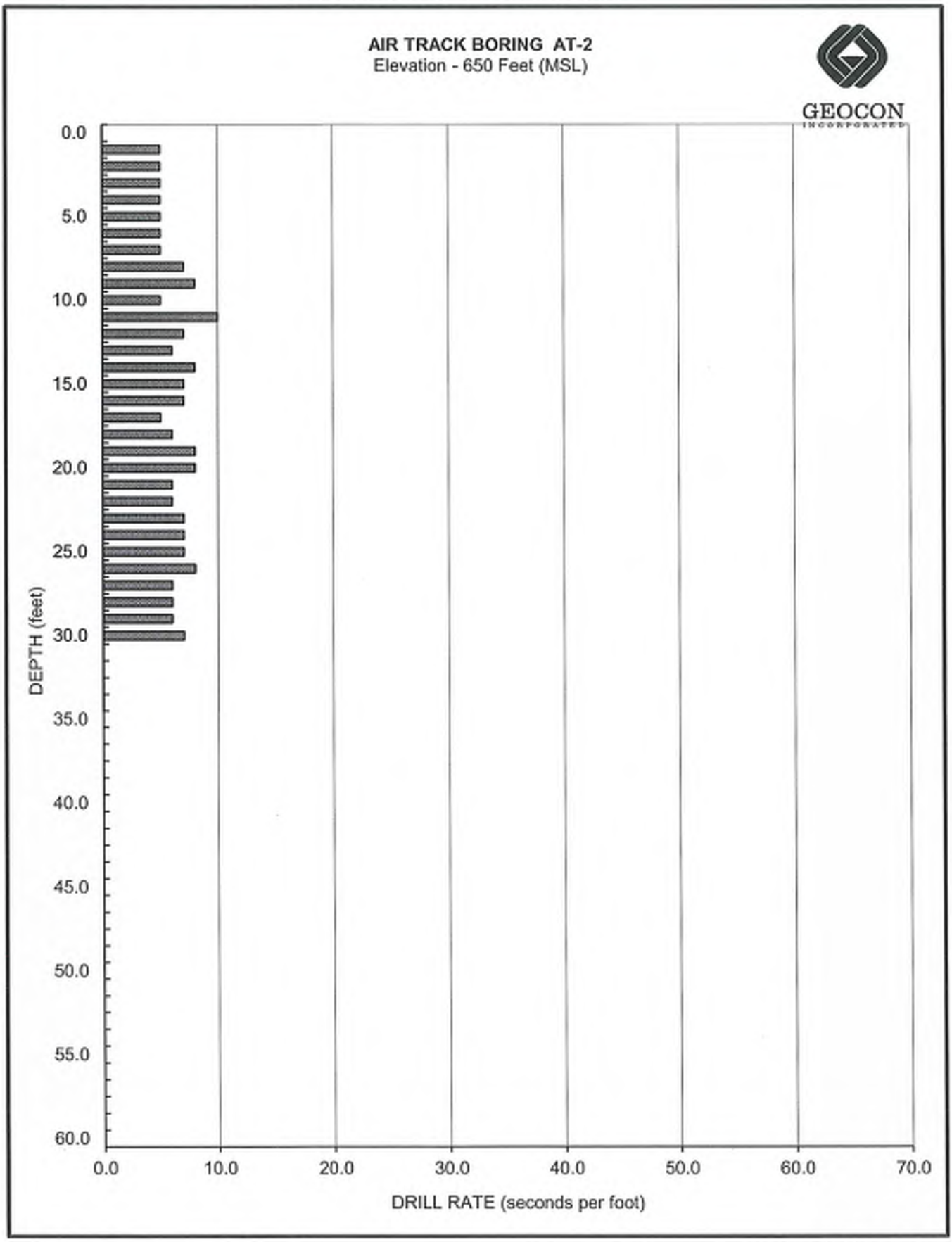


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FIGURE A-43

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY

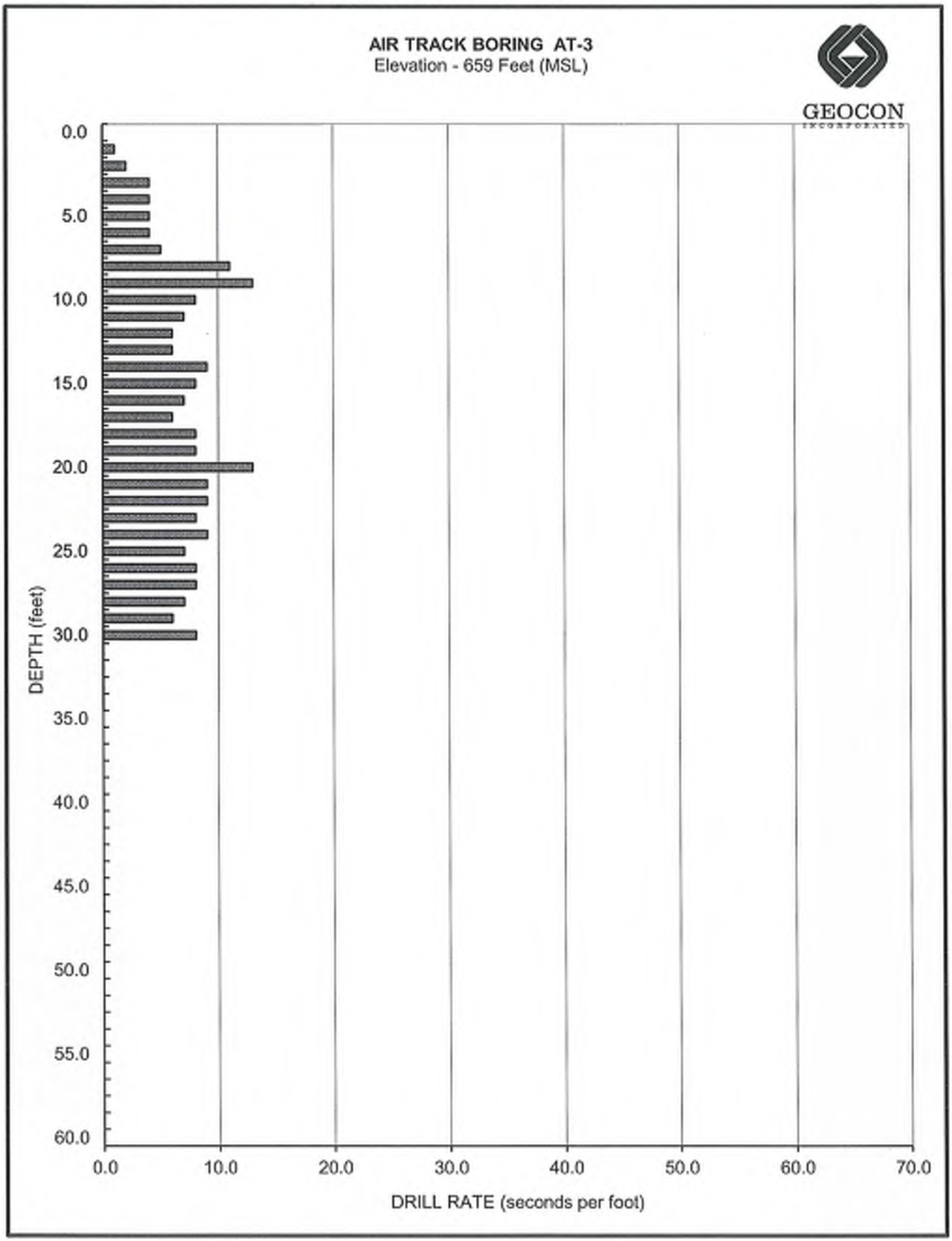

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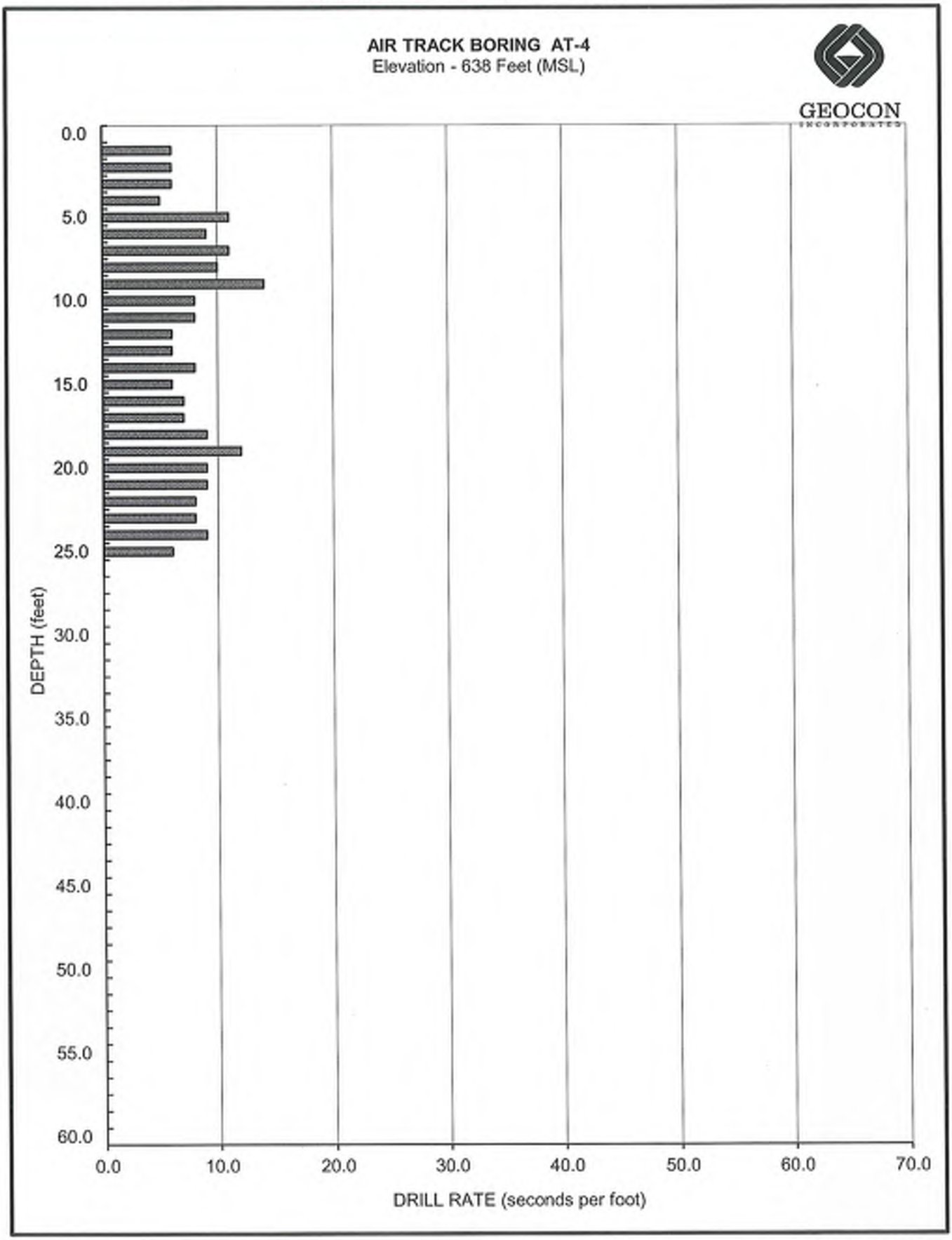
FIGURE A-44

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY

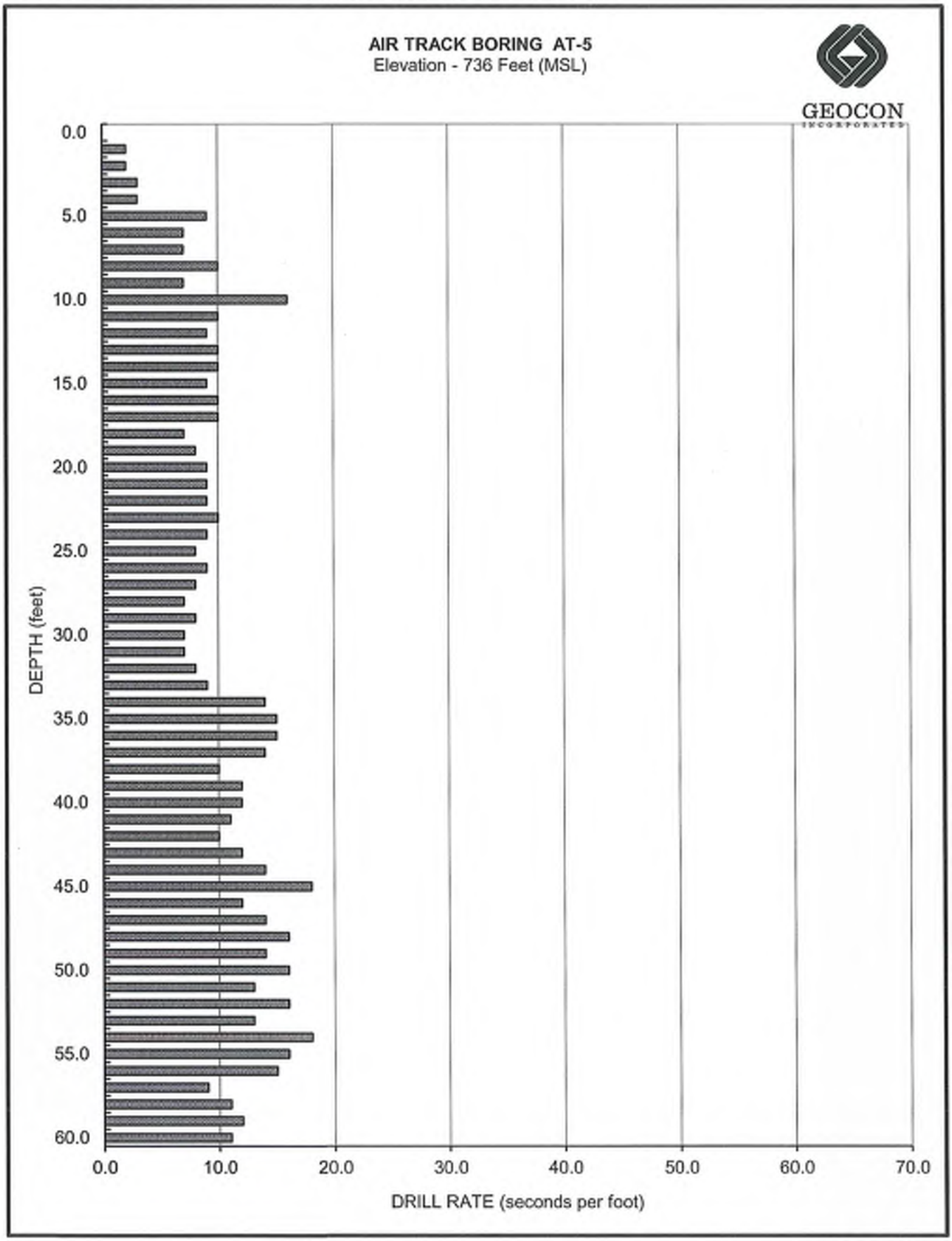


AT04-4.xls

FIGURE A-45

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY



AT005.xls

FIGURE A-46

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY

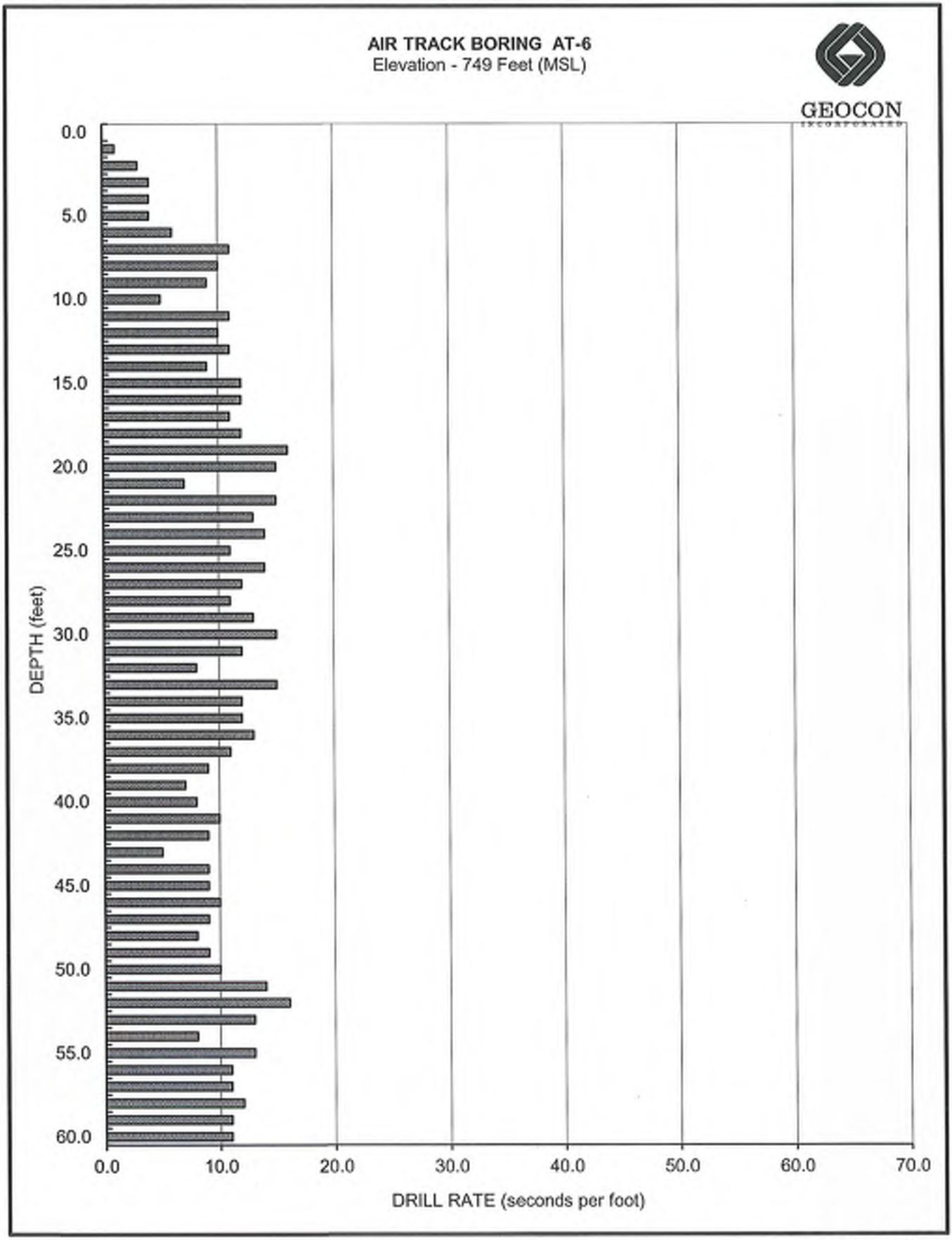


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FIGURE A-47

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY

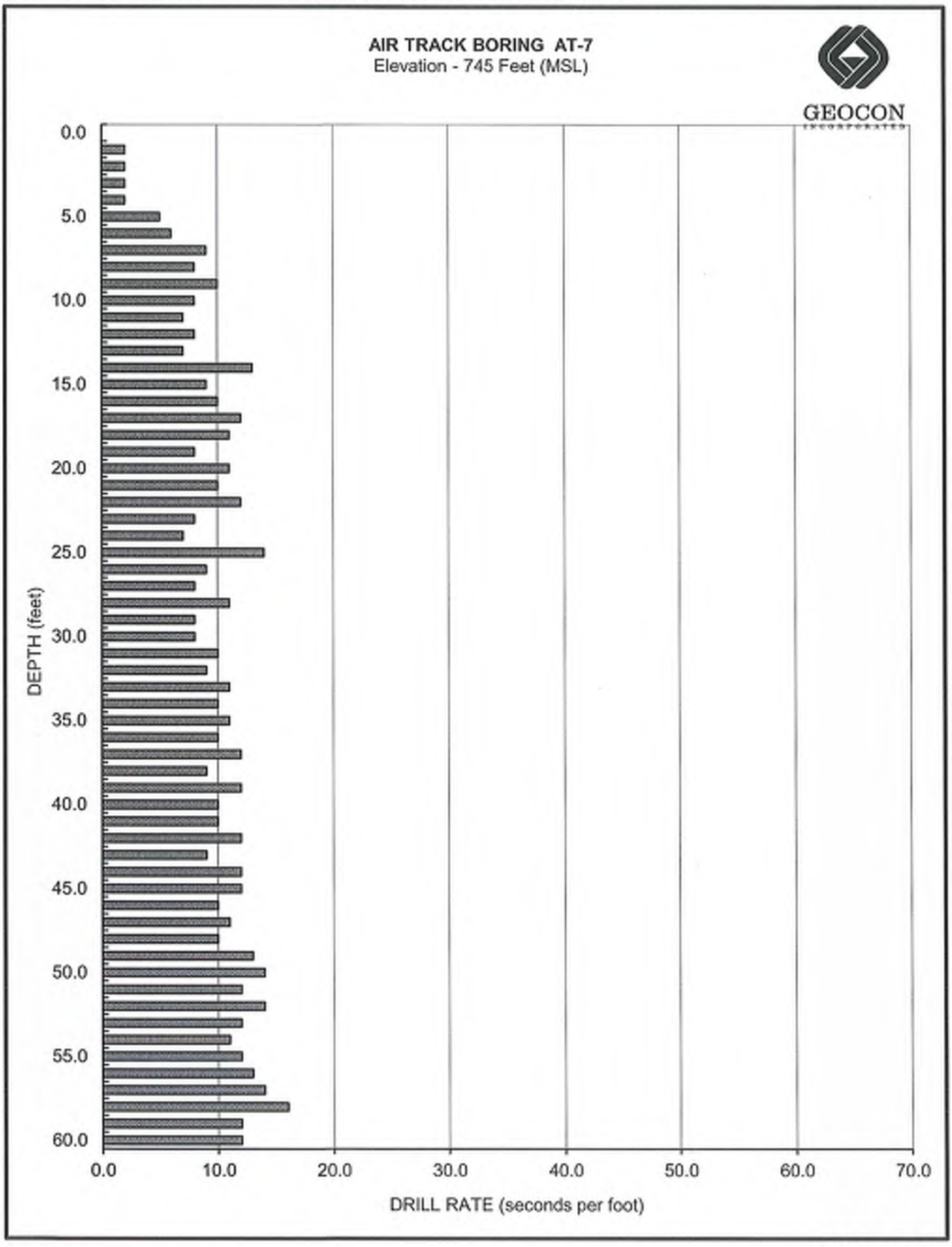

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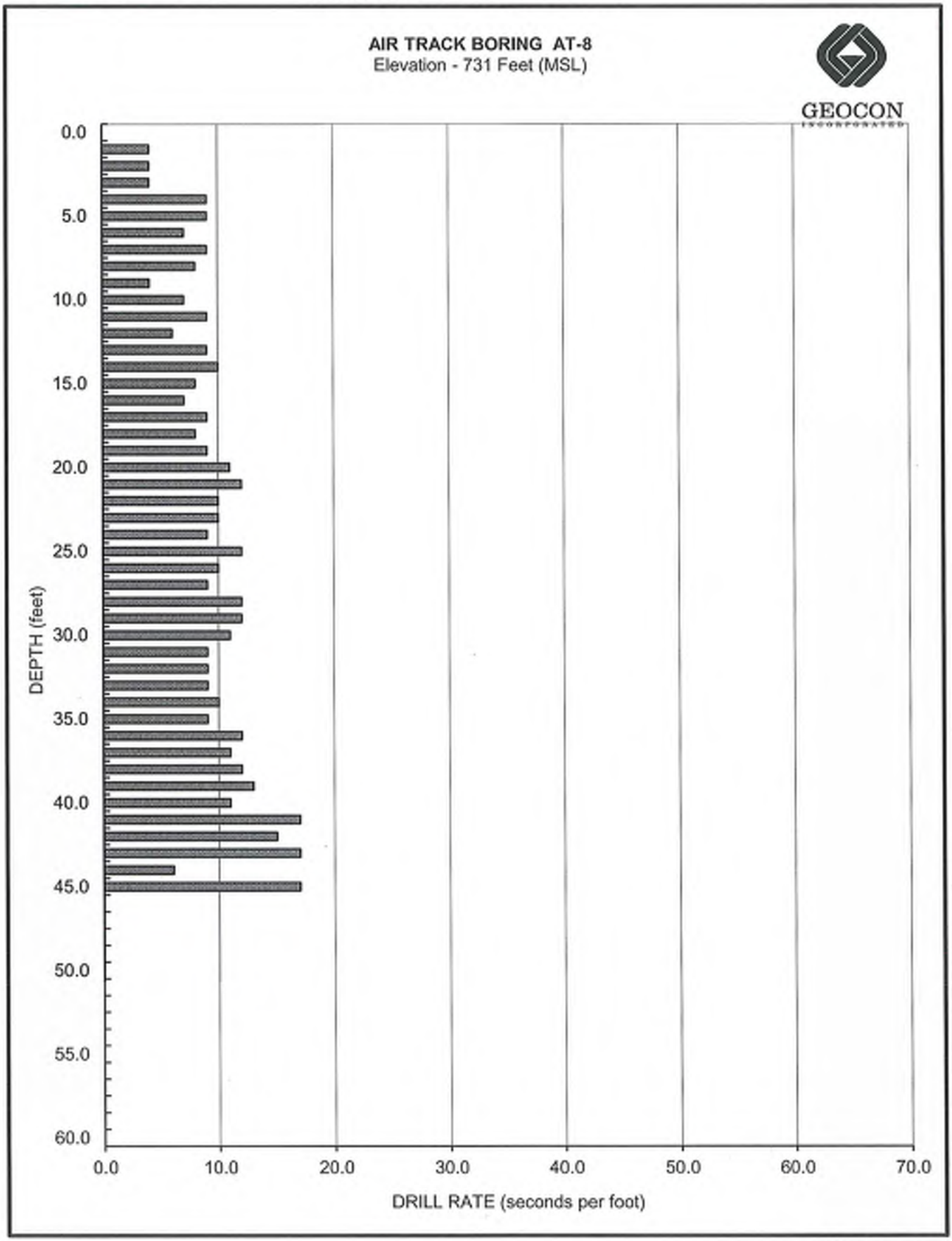
FIGURE A-48

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY



AT008.xls

FIGURE A-49

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY

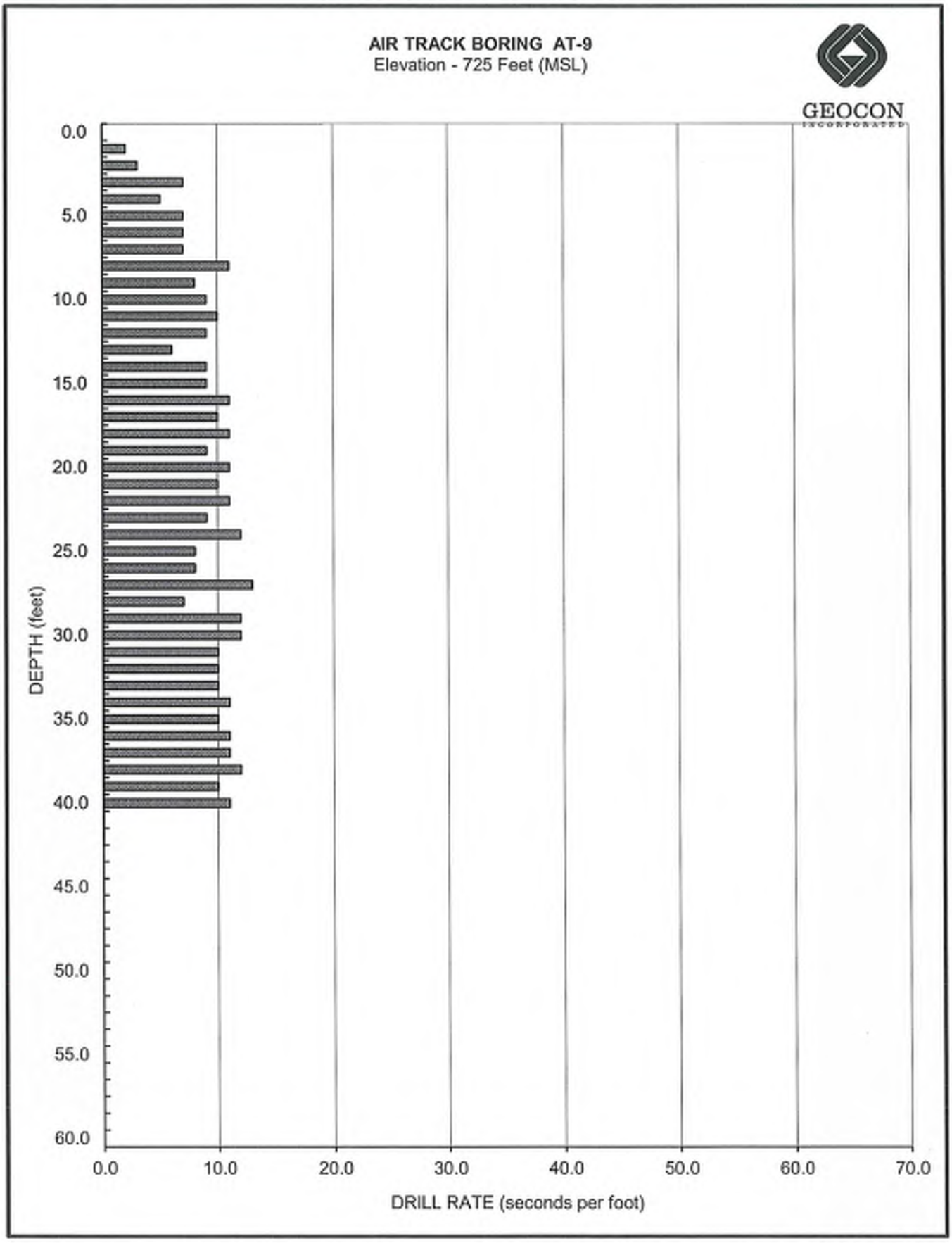


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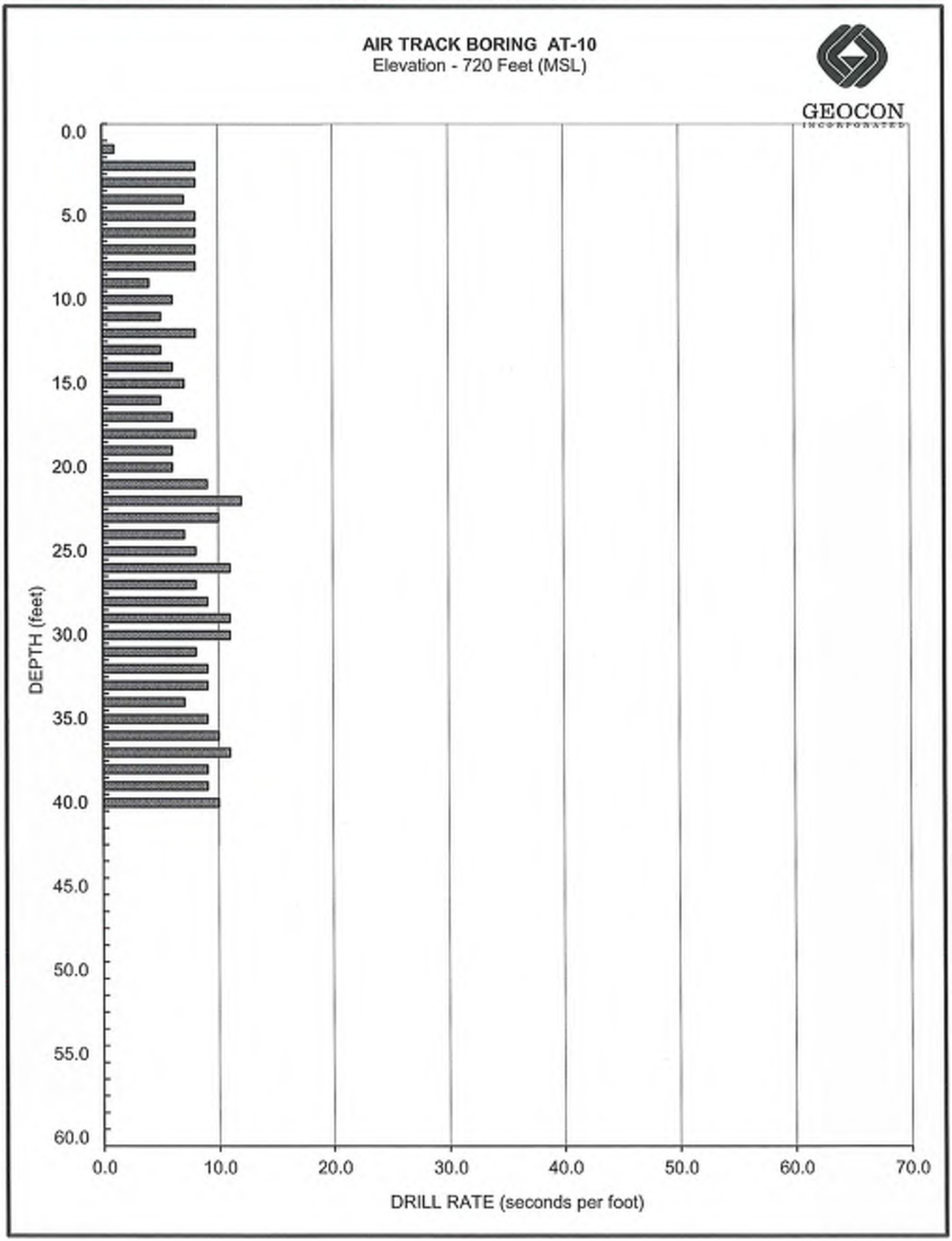
FIGURE A-50

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY



AT0010.xls

FIGURE A-51

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY

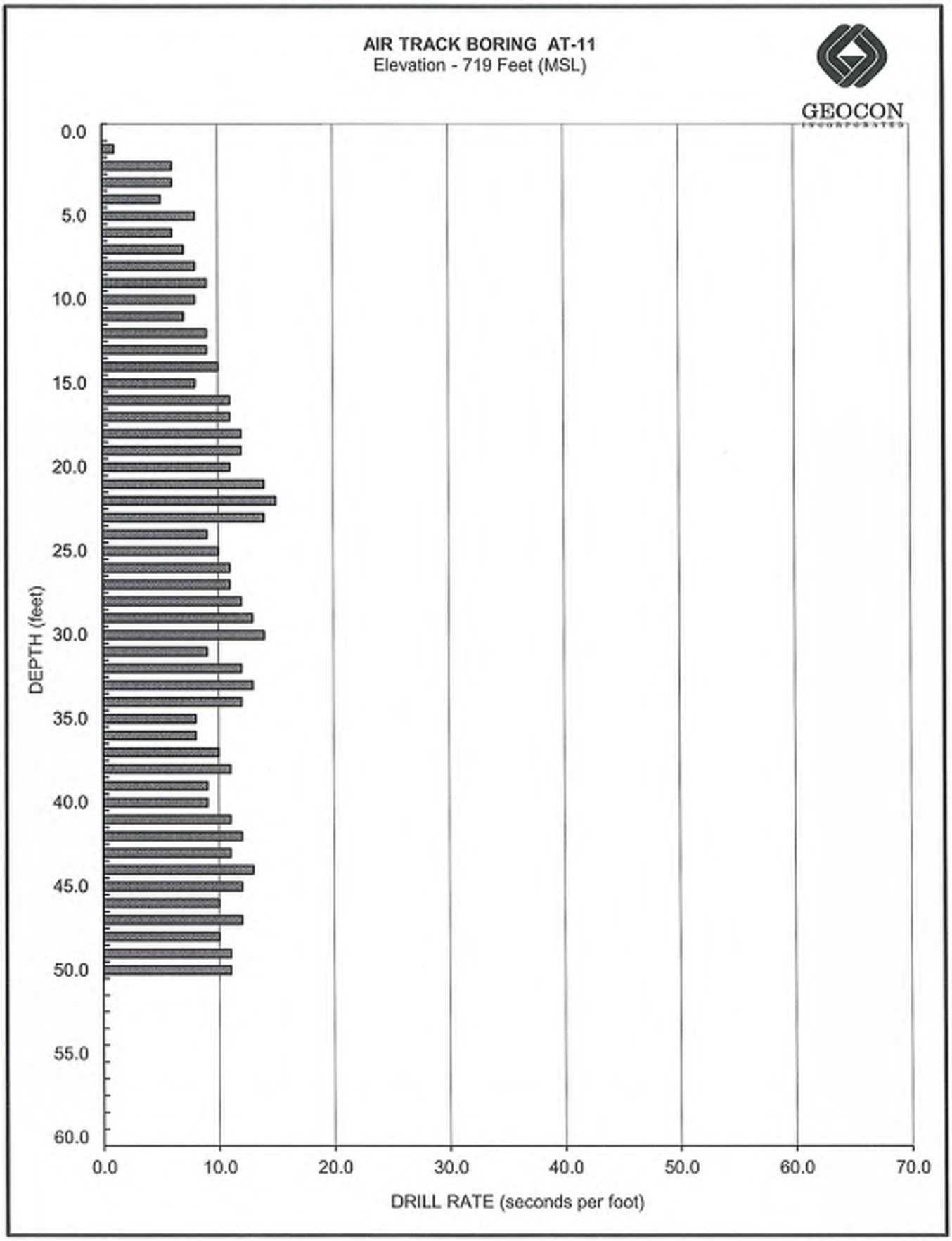


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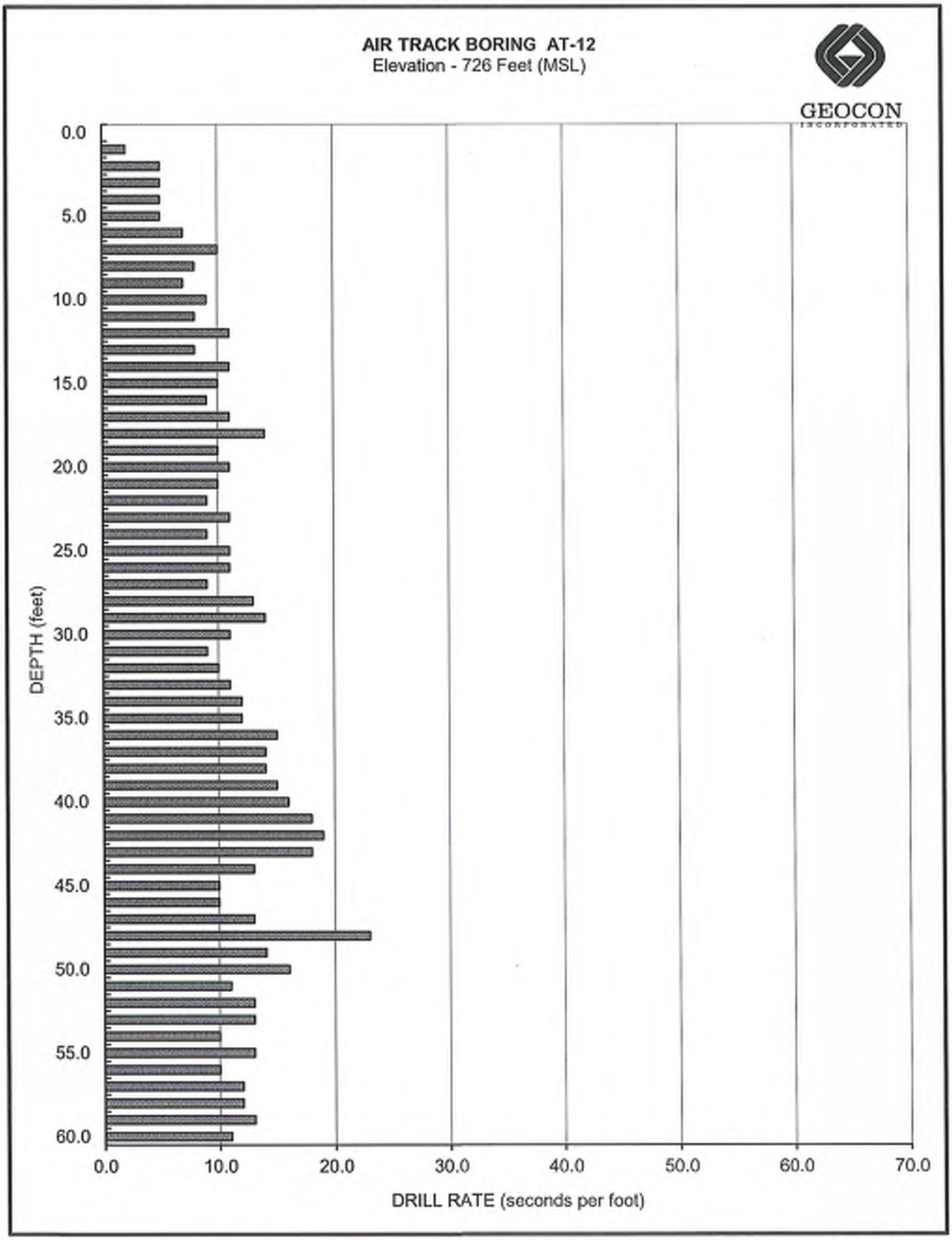
FIGURE A-52

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY



AT0012.xls

FIGURE A-53

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY

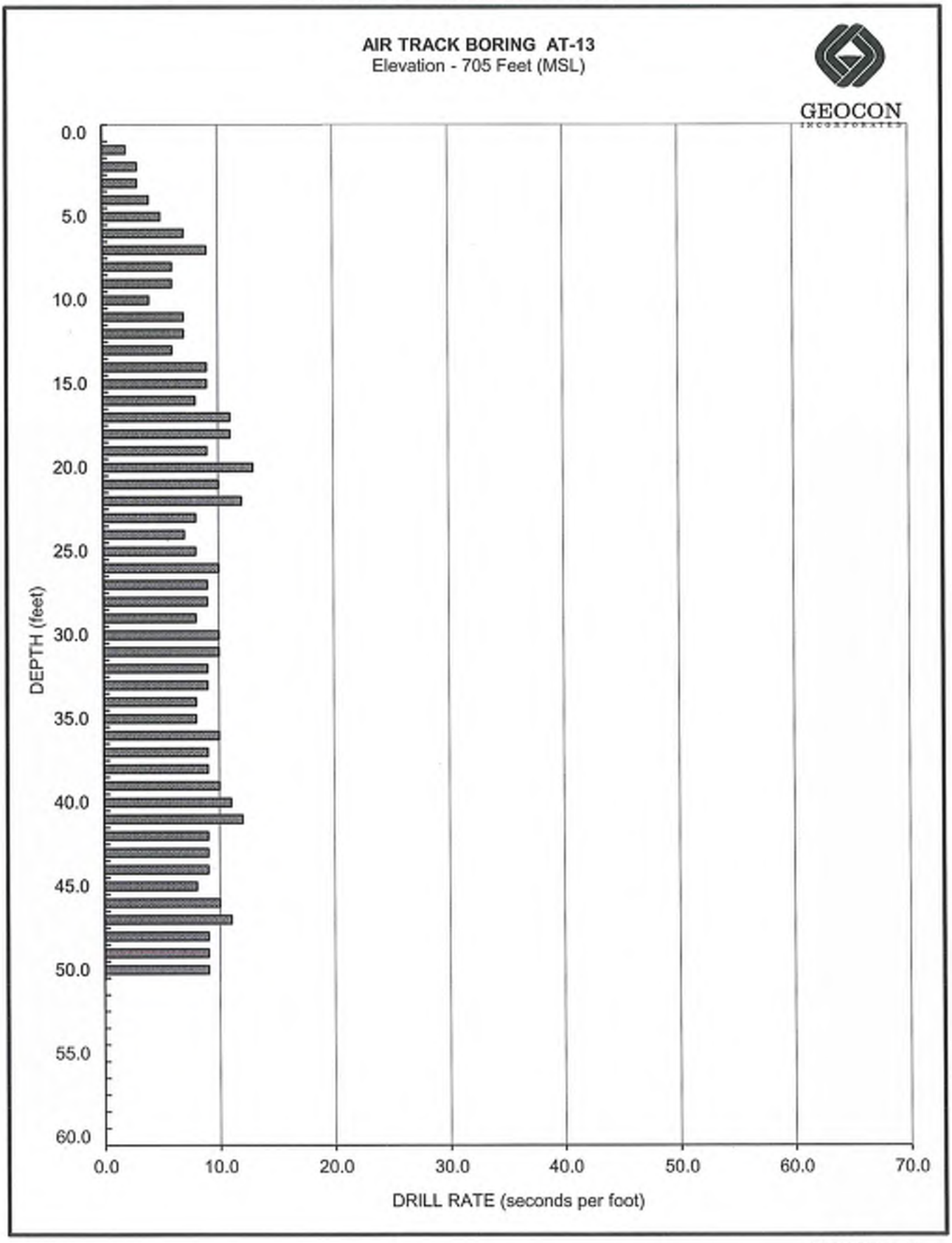


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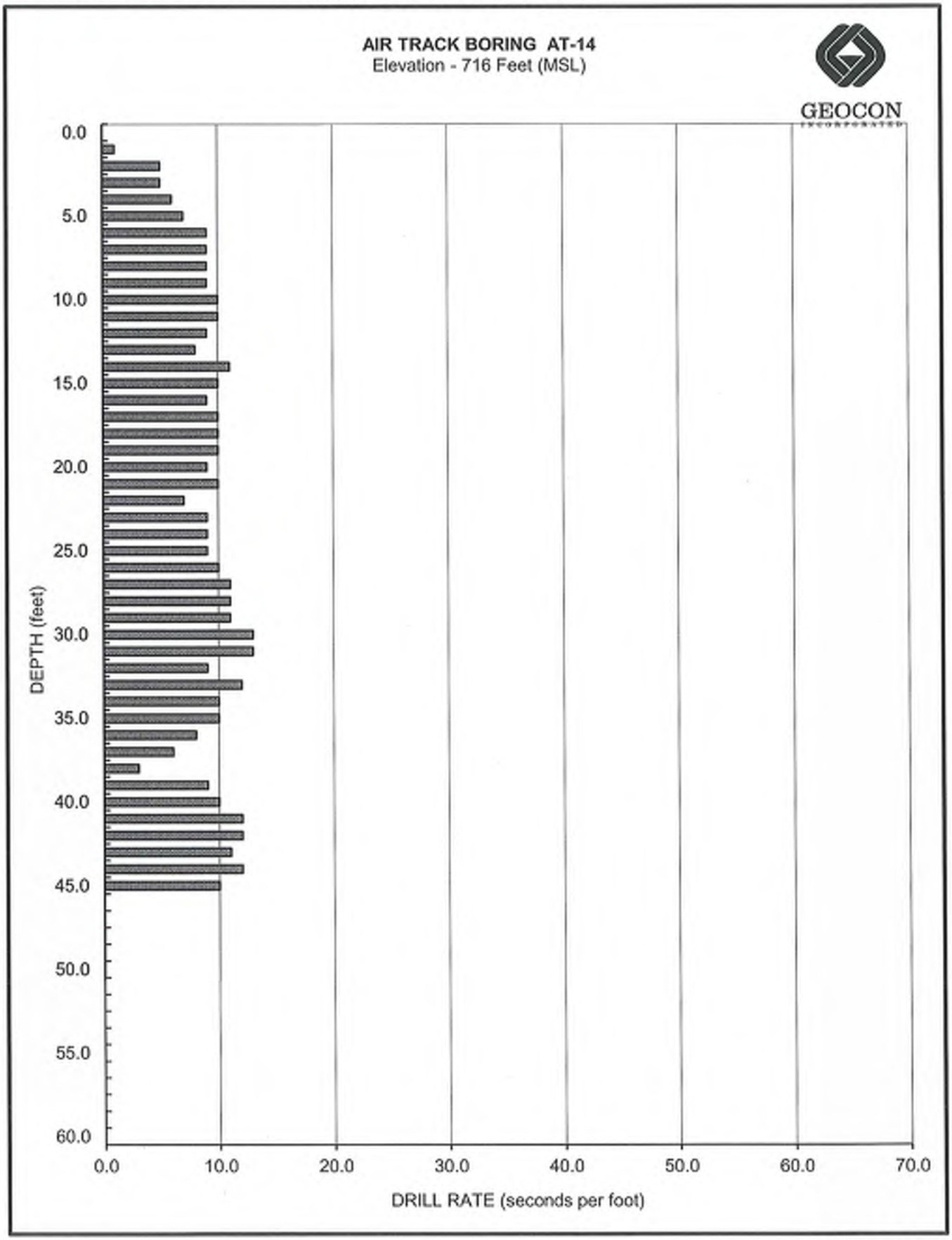
FIGURE A-54

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY

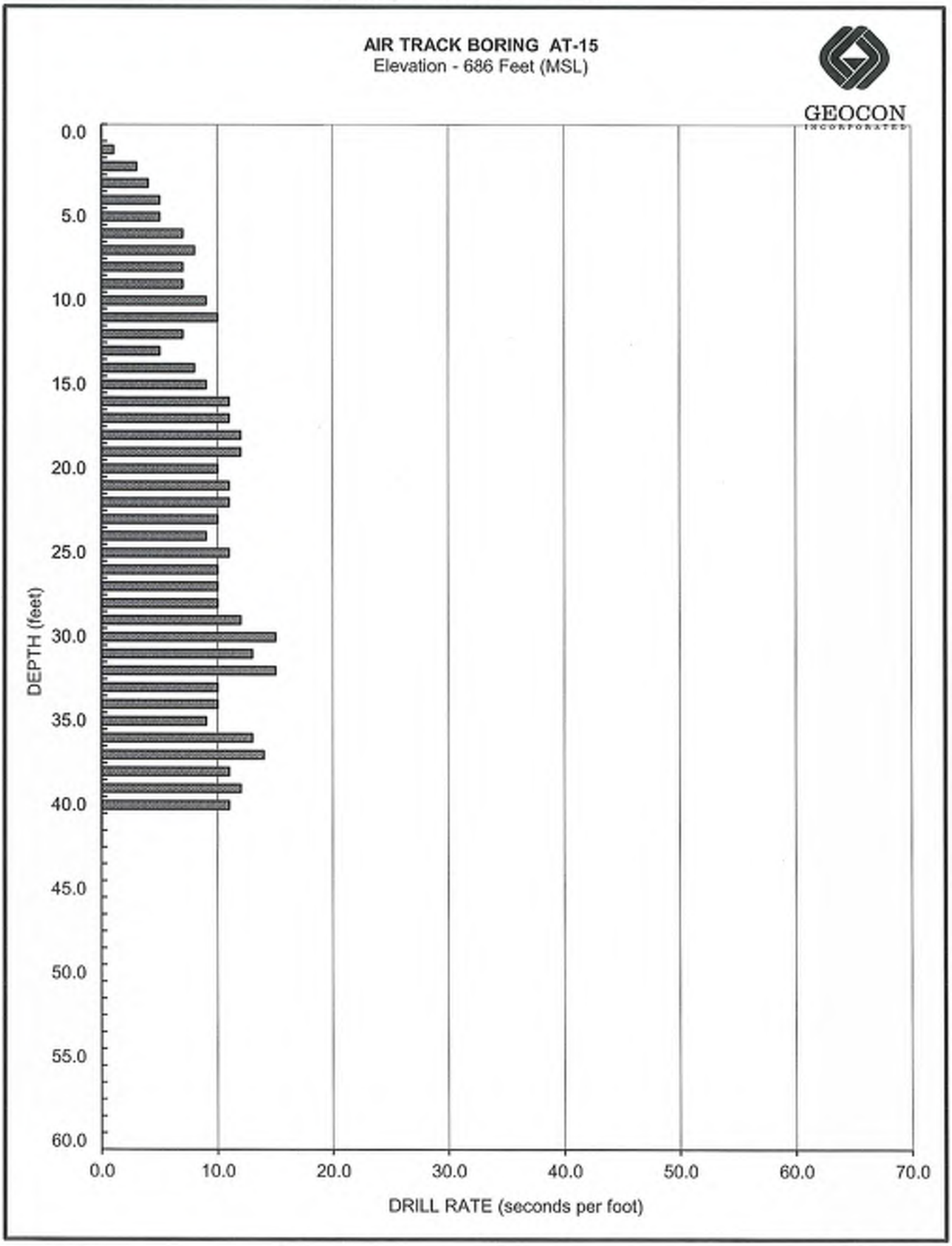


AT0014.XLS

FIGURE A-55

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY

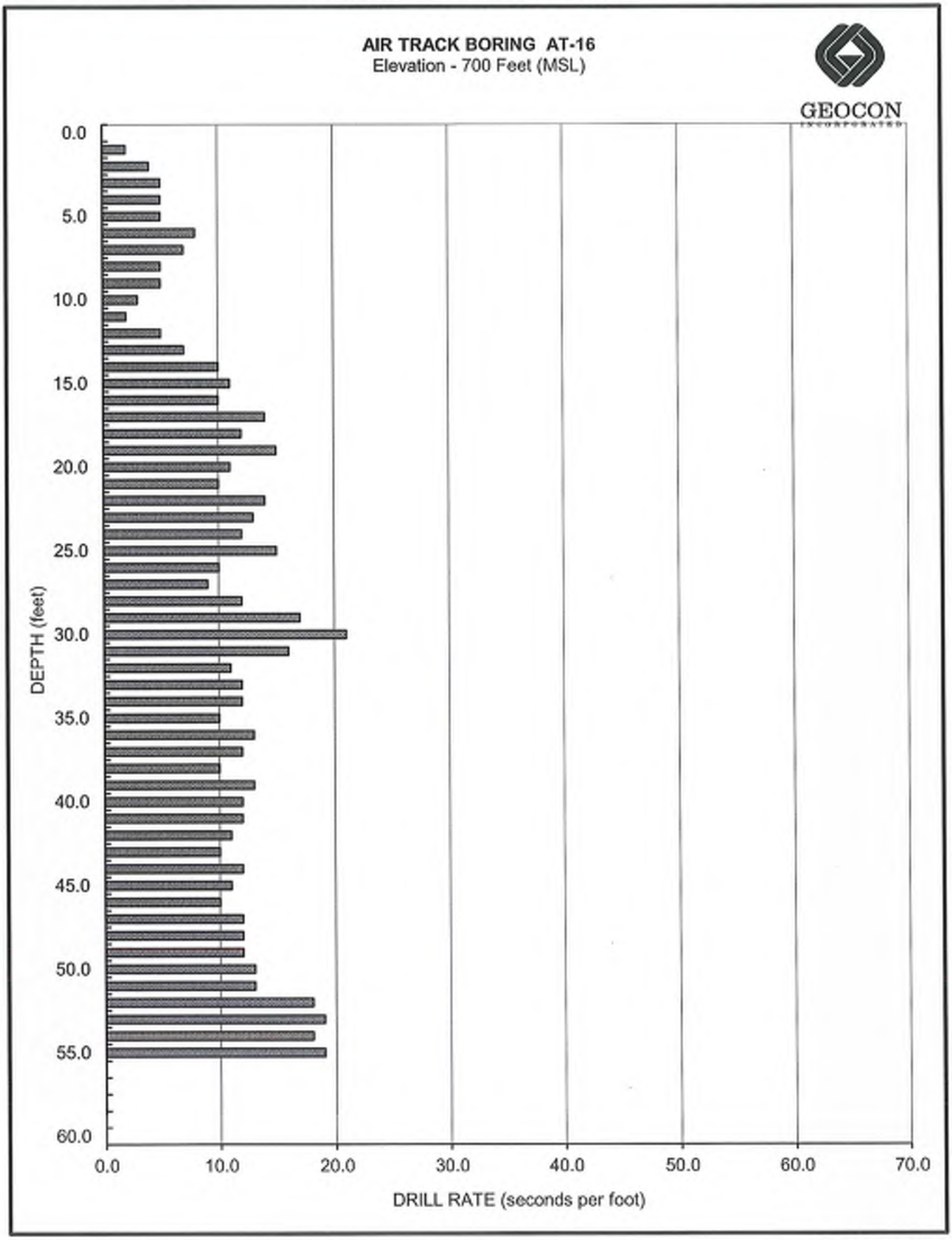


AT0015.xls

FIGURE A-56

PROJECT NO. 07465 - 32 - 01

HARMONY GROVE PROPERTY



AT0816.xls

FIGURE A-57

PROJECT NO. 07465-32-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 1	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) 570' DATE COMPLETED 03-17-2005 EQUIPMENT JD 555 TRACK HOE			
					MATERIAL DESCRIPTION			
0					**ALLUVIUM** Loose, moist, dark brown, fine to medium SAND, with some clay			
2								
4								
6				SM				
8								
10	T1-1							
12					-Becomes brown at 12 feet			
					GRANITIC ROCK Fresh, dark gray, very strong GRANITIC ROCK REFUSAL AT 13 FEET			

07465-32-01.GPJ

Figure A-1,
Log of Trench T 1, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▩ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 2	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) 570' DATE COMPLETED 03-17-2005 EQUIPMENT JD 555 TRACK HOE			
					MATERIAL DESCRIPTION			
0				SM	**ALLUVIUM** Loose, moist, dark brown, Silty, fine to medium SAND, with clay			
2								
4								
6								
8								
10					-Becomes brown at 10 feet			
12					**GRANITIC ROCK** Fresh, dark gray, strong GRANITIC ROCK REFUSAL AT 12 FEET			

07465-32-01.GPJ

Figure A-2,
Log of Trench T 2, Page 1 of 1

SAMPLE SYMBOLS

- ☐ .. SAMPLING UNSUCCESSFUL
- ▥ .. DISTURBED OR BAG SAMPLE
- ◧ .. STANDARD PENETRATION TEST
- ◺ .. CHUNK SAMPLE
- ■ .. DRIVE SAMPLE (UNDISTURBED)
- ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 3

ELEV. (MSL.) 574' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
2	T3-1			CL	**COLLUVIUM** Firm to stiff, moist, brown, Silty/Sandy CLAY			
4								
6				SM	Medium dense, damp to moist, reddish brown, Silty SAND, with some clay			
8	T3-2				-Becomes dense and damp below 8 feet -Weathered granitic rock present in matrix (very difficult to trench)			
10					**GRANITIC ROCK** Fresh, gray, very strong GRANITIC ROCK REFUSAL AT 10 FEET			

07465-32-01.GPJ

Figure A-3,
Log of Trench T 3, Page 1 of 1

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 4

ELEV. (MSL.) 572' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM** Loose, moist, dark brown, Silty, fine to medium SAND			
2				SM				
4					Stiff to very stiff, moist, reddish brown, Silty/Sandy CLAY, with trace angular gravel			
6				CL				
8					Medium dense to dense, moist, reddish brown, Silty, fine to medium SAND, with some clay			
10	T4-1						112.4	17.9
12				SM				
14								
16			▼		-Moderate seepage at 16 feet -Saturated below 16 feet -Refusal on rock, possible granitic contact at 17.5 feet			
					REFUSAL AT 17.5 FEET			

07465-32-01.GPJ

Figure A-4,
Log of Trench T 4, Page 1 of 1

SAMPLE SYMBOLS

☐ .. SAMPLING UNSUCCESSFUL ▮ .. STANDARD PENETRATION TEST ■ .. DRIVE SAMPLE (UNDISTURBED)

▩ .. DISTURBED OR BAG SAMPLE ◥ .. CHUNK SAMPLE ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 5

ELEV. (MSL.) 590' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM** Loose, moist, dark brown, Silty SAND, with some clay			
2								
4				SM				
6					-Becomes brown below 7 feet			
8								
10	T5-1			SM	Medium dense, moist, brown, Silty, fine to coarse SAND, with some gravel -Becomes grayish-brown below 11 feet			
12					**GRANITIC ROCK** Highly weathered, gray-brown, weak GRANITIC ROCK			
14	T5-2				-Becomes moderately weak below 14 feet			
					TRENCH TERMINATED AT 14.5 FEET			

07465-32-01.GPJ

Figure A-5,
Log of Trench T 5, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▨ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 6

ELEV. (MSL.) 607' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**COLLUVIUM**			
					Loose, moist, dark brown, Silty SAND			
2				SM				
4					Stiff, moist, reddish brown, Sandy CLAY			
				CL				
6					**GRANITIC ROCK**			
					Highly weathered, gray, weak to moderately weak GRANITIC ROCK			
					TRENCH TERMINATED AT 7 FEET			

07465-32-01.GPJ

Figure A-6,
Log of Trench T 6, Page 1 of 1

SAMPLE SYMBOLS

- ☐ .. SAMPLING UNSUCCESSFUL
- ◧ .. STANDARD PENETRATION TEST
- ■ .. DRIVE SAMPLE (UNDISTURBED)
- ⊠ .. DISTURBED OR BAG SAMPLE
- ◺ .. CHUNK SAMPLE
- ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 7	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) 604' DATE COMPLETED 03-17-2005 EQUIPMENT JD 555 TRACK HOE			
					MATERIAL DESCRIPTION			
0				SM	**ALLUVIUM** Loose, moist, dark brown, Silty SAND, with trace clay			
2								
4								
6								
8								
10								
12								
14					-Becomes medium dense and brown below 15 feet			
16					-Scratched fresh granitic rock with teeth at 17.5 feet (probable contact?)			
					TRENCH TERMINATED AT 17.5 FEET (Limit of backhoe)			

Figure A-7,
Log of Trench T 7, Page 1 of 1

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SAMPLE SYMBOLS

- ☐ .. SAMPLING UNSUCCESSFUL
- ◧ .. STANDARD PENETRATION TEST
- ■ .. DRIVE SAMPLE (UNDISTURBED)
- ▩ .. DISTURBED OR BAG SAMPLE
- ◪ .. CHUNK SAMPLE
- ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 8	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					ELEV. (MSL.) 614' DATE COMPLETED 03-17-2005 EQUIPMENT JD 555 TRACK HOE			
					MATERIAL DESCRIPTION			
0	T8-1			SM	**ALLUVIUM** Loose, moist, dark brown, Silty SAND, with trace clay			
2								
4								
6								
8								
10					-Becomes mottled gray and brown with increase in clay content below 11 feet			
12								
14					-Some 4-inch angular gravel present below 15.5 feet			
16								
18					TRENCH TERMINATED AT 18 FEET			

07465-32-01.GPJ

Figure A-8,
Log of Trench T 8, Page 1 of 1

SAMPLE SYMBOLS

- ☐ .. SAMPLING UNSUCCESSFUL
- ◧ .. STANDARD PENETRATION TEST
- ■ .. DRIVE SAMPLE (UNDISTURBED)
- ▨ .. DISTURBED OR BAG SAMPLE
- ◪ .. CHUNK SAMPLE
- ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 9

ELEV. (MSL.) 641' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**COLLUVIUM** Loose, moist, reddish brown, Silty/Clayey SAND			
2								
4				SM/SC	-Becomes medium dense to dense below 4 feet			
6					-Becomes dense and damp below 6 feet -Difficult trenching below 7 feet			
8					**GRANITIC ROCK** Highly weathered, gray, moderately weak GRANITIC ROCK TRENCH TERMINATED AT 8.5 FEET			

07465-32-01.GPJ

Figure A-9,
Log of Trench T 9, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▩ ... DISTURBED OR BAG SAMPLE
- ◣ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 10

ELEV. (MSL.) 618' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM** Loose, moist to wet, dark brown, Silty SAND, with some clay			
2								
4			▼		-Minor seepage at 4 feet			
6				SM	-Becomes medium dense, mottled brown and gray below 6 feet			
8	T10-1						110.0	12.9
10					-Becomes dense at 11 feet			
12					**GRANITIC ROCK** Highly weathered, gray, moderately weak GRANITIC ROCK			
					TRENCH TERMINATED AT 13 FEET			

07465-32-01.GPJ

Figure A-10,
Log of Trench T 10, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 11

ELEV. (MSL.) 631' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM** Loose, moist, dark brown, Silty SAND, with trace clay			
2								
4								
6				SM				
8					-Becomes medium dense and mottled brown and gray below 8 feet			
10								
12		+ + + + +			**GRANITIC ROCK** Highly weathered, gray, moderately weak GRANITIC ROCK			
14					TRENCH TERMINATED AT 14 FEET			

07465-32-01.GPJ

Figure A-11,
Log of Trench T 11, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▩ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 12

ELEV. (MSL.) 638' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM** Loose, moist, dark brown, Silty SAND, with some clay			
2								
4								
6								
8				SM				
10								
12					-Becomes medium dense and mottled brown and gray below 12 feet			
14								
16					TRENCH TERMINATED AT 16 FEET			

07465-32-01.GPJ

Figure A-12,
Log of Trench T 12, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 13 ELEV. (MSL.) 649' DATE COMPLETED 03-17-2005 EQUIPMENT JD 555 TRACK HOE	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**ALLUVIUM** Loose, moist, dark brown, Silty SAND			
2								
4								
6								
8				SM				
10								
12								
14					-Becomes mottled brown and gray below 15 feet			
16					**GRANITIC ROCK** Moderately to slightly weathered, gray, very strong GRANITIC ROCK TRENCH TERMINATED AT 16.5 FEET			

07465-32-01.GPJ

Figure A-13,
Log of Trench T 13, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▥ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 14

ELEV. (MSL.) 662' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**COLLUVIUM** Loose, moist, dark brown, Silty/Clayey SAND			
2								
4								
6				SM/SC				
8	T14-1				-Becomes dense and brown below 7 feet		125.6	9.1
					-Very difficult trenching below 9 feet			
10					PRACTICAL REFUSAL AT 10 FEET			

Figure A-14,
Log of Trench T 14, Page 1 of 1

07465-32-01.GPJ

SAMPLE SYMBOLS

- ☐ .. SAMPLING UNSUCCESSFUL
- ◧ .. STANDARD PENETRATION TEST
- ■ .. DRIVE SAMPLE (UNDISTURBED)
- ▨ .. DISTURBED OR BAG SAMPLE
- ◪ .. CHUNK SAMPLE
- ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 15

ELEV. (MSL.) 658' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**ALLUVIUM** Loose, moist, dark brown, Silty SAND			
8					**GRANITIC ROCK** Highly weathered, brown, moderately weak GRANITIC ROCK			
					TRENCH TERMINATED AT 9 FEET			

07465-32-01.GPJ

Figure A-15,
Log of Trench T 15, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▯ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▩ ... DISTURBED OR BAG SAMPLE
- ◺ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 16

ELEV. (MSL.) 663' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
0				SC	**COLLUVIUM** Loose, moist to wet, reddish brown, Clayey SAND			
2								
4	T16-1				**GRANITIC ROCK** Highly weathered, tan, moderately weak to moderately strong GRANITIC ROCK			
6					-Slight seepage at 6 feet			
8					TRENCH TERMINATED AT 8 FEET			

Figure A-16,
Log of Trench T 16, Page 1 of 1

07465-32-01.GPJ

SAMPLE SYMBOLS

- ☐ .. SAMPLING UNSUCCESSFUL
- ◧ .. STANDARD PENETRATION TEST
- ■ .. DRIVE SAMPLE (UNDISTURBED)
- ▨ .. DISTURBED OR BAG SAMPLE
- ◪ .. CHUNK SAMPLE
- ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 17

ELEV. (MSL.) 689' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
				SP	**ALLUVIUM** Very loose, damp, brown, Silty SAND -Minor caving below 2 feet			
2								
4					**GRANITIC ROCK** Highly weathered, tan, weak GRANITIC ROCK			
6					TRENCH TERMINATED AT 6 FEET			

07465-32-01.GPJ

Figure A-17,
Log of Trench T 17, Page 1 of 1

SAMPLE SYMBOLS

- ☐ .. SAMPLING UNSUCCESSFUL
- ◧ .. STANDARD PENETRATION TEST
- ■ .. DRIVE SAMPLE (UNDISTURBED)
- ▨ .. DISTURBED OR BAG SAMPLE
- ◪ .. CHUNK SAMPLE
- ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 18 ELEV. (MSL.) 698' DATE COMPLETED 03-17-2005 EQUIPMENT JD 555 TRACK HOE	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**COLLUVIUM** Dense, moist, mottled brown and gray, Clayey SAND, with trace gravel			
2	T18-1			SC	-Very dense below 3 feet			
					PRACTICAL REFUSAL AT 3.5 FEET			

Figure A-18,
Log of Trench T 18, Page 1 of 1

07465-32-01.GPJ

SAMPLE SYMBOLS
- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 19

ELEV. (MSL.) 691' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
				SM	**COLLUVIUM** Dense to very dense, damp, mottled gray and brown, Silty SAND, with some gravel			
2					-Very difficult trenching at 2 feet			
					PRACTICAL REFUSAL AT 2.5 FEET			

07465-32-01.GPJ

Figure A-19,
Log of Trench T 19, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▥ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 20 ELEV. (MSL.) 667' DATE COMPLETED 03-17-2005 EQUIPMENT JD 555 TRACK HOE	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**ALLUVIUM** Loose, moist, reddish brown, Silty SAND, with some clay			
2								
4								
6								
8				SM				
10					-Ocassional 6-inch rock present below 11 feet			
12								
14								
16					TRENCH TERMINATED AT 16 FEET			

Figure A-20,
Log of Trench T 20, Page 1 of 1

07465-32-01.GPJ

SAMPLE SYMBOLS

- ☐ .. SAMPLING UNSUCCESSFUL
- ◧ .. STANDARD PENETRATION TEST
- ■ .. DRIVE SAMPLE (UNDISTURBED)
- ⊠ .. DISTURBED OR BAG SAMPLE
- ◥ .. CHUNK SAMPLE
- ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 21

ELEV. (MSL.) 725' DATE COMPLETED 03-17-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**TOPSOIL** Loose, damp, brown, Silty SAND			
2					**GRANITIC ROCK** Highly weathered, gray, moderately weak GRANITIC ROCK			
4					-Becomes moderately strong below 5 feet			
6					TRENCH TERMINATED AT 6 FEET			

07465-32-01.GPJ

Figure A-21,
Log of Trench T 21, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▥ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 22

ELEV. (MSL.) 656' DATE COMPLETED 03-18-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**COLLUVIUM** Loose, moist, reddish brown, Silty, fine to medium SAND, with trace clay			
2								
4				SM				
6					-Occasional 4-inch angular gravel present below 6 feet -Becomes medium dense below 7 feet			
8					-36-inch fresh, gray, granitic rock present at 8 feet (appears to be within matrix)			
					REFUSAL AT 8.5 FEET			

Figure A-22,
Log of Trench T 22, Page 1 of 1

07465-32-01.GPJ

SAMPLE SYMBOLS

- ☐ .. SAMPLING UNSUCCESSFUL
- ◧ .. STANDARD PENETRATION TEST
- ■ .. DRIVE SAMPLE (UNDISTURBED)
- ▨ .. DISTURBED OR BAG SAMPLE
- ◪ .. CHUNK SAMPLE
- ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 23

ELEV. (MSL.) 669' DATE COMPLETED 03-18-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**COLLUVIUM** Medium dense, moist, brown, Silty SAND, with trace gravel and clay			
2								
4								
6	T23-1			SM				
8								
10								
12					-Becomes dense, damp with 3 to 4-inch angular gravel at 12 feet			
14	T23-2				-Very difficult trenching PRACTICAL REFUSAL AT 14 FEET		122.9	9.2

07465-32-01.GPJ

Figure A-23,
Log of Trench T 23, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▩ ... DISTURBED OR BAG SAMPLE
- ◣ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 24

ELEV. (MSL.) 682' DATE COMPLETED 03-18-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM/SC	**ALLUVIUM** Loose, moist, dark brown, Silty/Clayey SAND			
6				SM	Loose to medium dense, moist, reddish brown, Silty, fine to medium SAND, with clay			
14					-Becomes damp and light brown at 15 feet			
16		+ +			**GRANITIC ROCK** Highly weathered, tan, weak GRANITIC ROCK TRENCH TERMINATED AT 16.5 FEET			

07465-32-01.GPJ

Figure A-24,
Log of Trench T 24, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▩ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 25 ELEV. (MSL.) 688' DATE COMPLETED 03-18-2005 EQUIPMENT JD 555 TRACK HOE	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0				SM	**COLLUVIUM** Loose, moist, dark brown, Silty SAND, with some clay			
2					**GRANITIC ROCK** Highly weathered to moderately weathered, tan, weak to moderately weak GRANITIC ROCK			
4					TRENCH TERMINATED AT 4 FEET			

Figure A-25,
Log of Trench T 25, Page 1 of 1

07465-32-01.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 26 ELEV. (MSL.) 682' DATE COMPLETED 03-18-2005 EQUIPMENT JD 555 TRACK HOE	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**COLLUVIUM** Loose, moist, dark brown, Silty SAND			
2				SM	-Abundant 3 to 4 inch angular gravel present above contact			
					GRANITIC ROCK Highly weathered to moderately weathered, brown, moderately weak to moderately strong GRANITIC ROCK			
4								
					TRENCH TERMINATED AT 5 FEET			

Figure A-26,
Log of Trench T 26, Page 1 of 1

07465-32-01.GPJ

SAMPLE SYMBOLS

- ☐ .. SAMPLING UNSUCCESSFUL
- ◧ .. STANDARD PENETRATION TEST
- ■ .. DRIVE SAMPLE (UNDISTURBED)
- ⊠ .. DISTURBED OR BAG SAMPLE
- ◥ .. CHUNK SAMPLE
- ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 27

ELEV. (MSL.) 660' DATE COMPLETED 03-18-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM** Loose, moist, reddish brown, Silty SAND, with trace clay			
2								
4								
6				SM	-Becomes medium dense to dense and damp with 1 to 2-inch gravel			
8	T27-1						116.4	12.5
10					-Difficult trenching			
12		+ +			**GRANITIC ROCK** Highly weathered, gray, moderately weak GRANITIC ROCK PRACTICAL REFUSAL AT 12 FEET			

07465-32-01.GPJ

Figure A-27,
Log of Trench T 27, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▥ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◺ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 28

ELEV. (MSL.) 620' DATE COMPLETED 03-18-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	T28-1			SM/SC	**ALLUVIUM** Loose, damp to moist, very dark brown, Silty/Clayey SAND			
2								
4								
6					-Becomes moist, brown, Clayey SAND, with trace gravel at 6 feet			
8								
10					**GRANITIC ROCK** Highly weathered, gray, weak to moderately weak GRANITIC ROCK TRENCH TERMINATED AT 10 FEET			

07465-32-01.GPJ

Figure A-28,
Log of Trench T 28, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 29

ELEV. (MSL.) 634' DATE COMPLETED 03-18-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ALLUVIUM** Loose, damp to moist, very dark brown, Silty/Clayey SAND			
2								
4				SM/SC				
6								
8		+ + + +			**GRANITIC ROCK** Highly weathered, gray, weak to moderately weak GRANITIC ROCK			
					TRENCH TERMINATED AT 9 FEET			

Figure A-29,
Log of Trench T 29, Page 1 of 1

07465-32-01.GPJ

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▮ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▩ ... DISTURBED OR BAG SAMPLE
- ◣ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 30

ELEV. (MSL.) 649' DATE COMPLETED 03-18-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
				SM/SC	**ALLUVIUM** Loose, moist, dark brown, Silty/Clayey SAND			
2								
4								
6					**GRANITIC ROCK** Highly weathered, gray, weak to moderately weak GRANITIC ROCK			
8					TRENCH TERMINATED AT 8 FEET			

Figure A-30,
Log of Trench T 30, Page 1 of 1

07465-32-01.GPJ

SAMPLE SYMBOLS

- ☐ .. SAMPLING UNSUCCESSFUL
- ◧ .. STANDARD PENETRATION TEST
- ■ .. DRIVE SAMPLE (UNDISTURBED)
- ▨ .. DISTURBED OR BAG SAMPLE
- ◪ .. CHUNK SAMPLE
- ▼ .. WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 31

ELEV. (MSL.) 652' DATE COMPLETED 03-18-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**COLLUVIUM** Loose, damp, dark brown, Silty/Clayey SAND			
2				SM/SC				
4								
6		+ + + + + +			**GRANITIC ROCK** Highly weathered, gray, weak GRANITIC ROCK			
					TRENCH TERMINATED AT 7 FEET			

07465-32-01.GPJ

Figure A-31,
Log of Trench T 31, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ▥ ... DISTURBED OR BAG SAMPLE
- ◧ ... STANDARD PENETRATION TEST
- ◪ ... CHUNK SAMPLE
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 32

ELEV. (MSL.) 660' DATE COMPLETED 03-18-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0				SM	**TOPSOIL** Loose, damp, brown, Silty SAND, with gravel			
2					**GRANITIC ROCK** Moderately weathered, gray, moderately weak GRANITIC ROCK			
4					-Becomes moderately strong below 3.5 feet REFUSAL AT 4 FEET			

07465-32-01.GPJ

Figure A-32,
Log of Trench T 32, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 33 ELEV. (MSL.) 726' DATE COMPLETED 03-18-2005 EQUIPMENT JD 555 TRACK HOE	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0		+ + + + + + + +			**GRANITIC ROCK** Moderately weathered, gray, moderately strong GRANITIC ROCK			
2					REFUSAL AT 2.5 FEET			

07465-32-01.GPJ

Figure A-33,
Log of Trench T 33, Page 1 of 1

SAMPLE SYMBOLS

☐ ... SAMPLING UNSUCCESSFUL
◧ ... STANDARD PENETRATION TEST
■ ... DRIVE SAMPLE (UNDISTURBED)
▩ ... DISTURBED OR BAG SAMPLE
◺ ... CHUNK SAMPLE
▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 34

ELEV. (MSL.) 727' DATE COMPLETED 03-18-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
				SM	**TOPSOIL** Loose, damp, brown, Silty SAND			
2					**GRANITIC ROCK** Moderately to highly weathered, gray, moderately weak GRANITIC ROCK			
4	T34-1				-Becomes moderately weathered to moderately strong below 3 feet			
6								
8					REFUSAL AT 8 FEET			

07465-32-01.GPJ

Figure A-34,
Log of Trench T 34, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 07465-32-01

TRENCH T 35

ELEV. (MSL.) 646' DATE COMPLETED 03-18-2005

EQUIPMENT JD 555 TRACK HOE

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT.)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0								
2				SM	**COLLUVIUM** Loose, damp, brown, Silty SAND			
4					**GRANITIC ROCK** Highly weathered, grayish-brown, moderately weak GRANITIC ROCK			
6					-Becomes moderately weathered and moderately strong below 6 feet			
8					REFUSAL AT 8 FEET			

07465-32-01.GPJ

Figure A-35,
Log of Trench T 35, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ▨ ... DISTURBED OR BAG SAMPLE
- ◺ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.