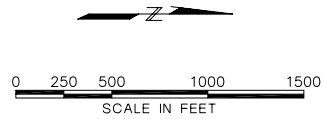




LEGEND:

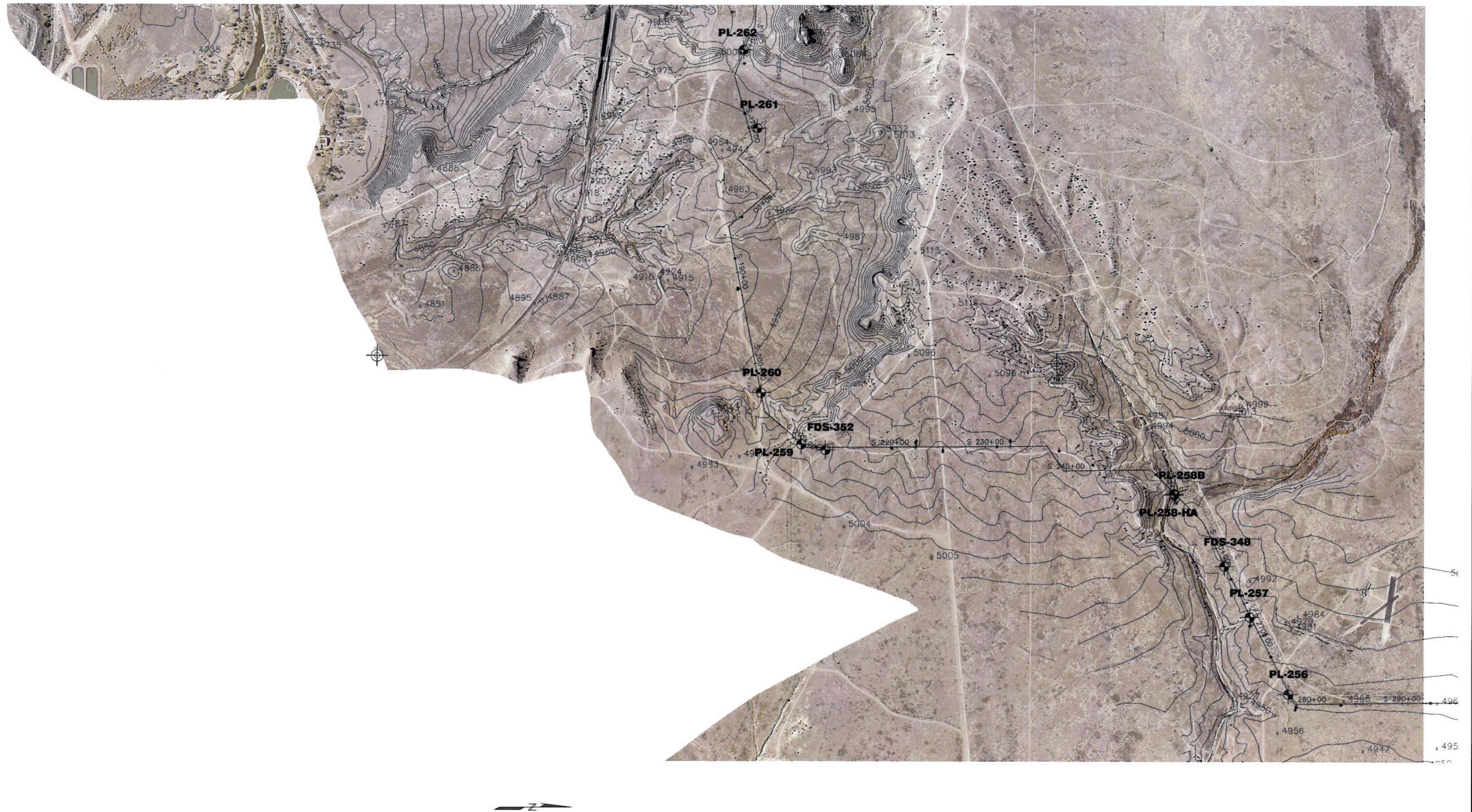
- BOREHOLE
- PIEZOMETER





NOTES:

ALIGNMENT FROM CH2M HILL DATED 7-28-05

 Southern Delivery System Colorado Springs and Pueblo, CO		 BOREHOLE LOCATIONS STA. 10+00 TO STA. 180+00
CH2M HILL Colorado Springs, Colorado	Project 02295	Oct. 2005 Fig. 7-G.2.4A-1



LEGEND:

-  BOREHOLE
-  PIEZOMETER

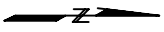
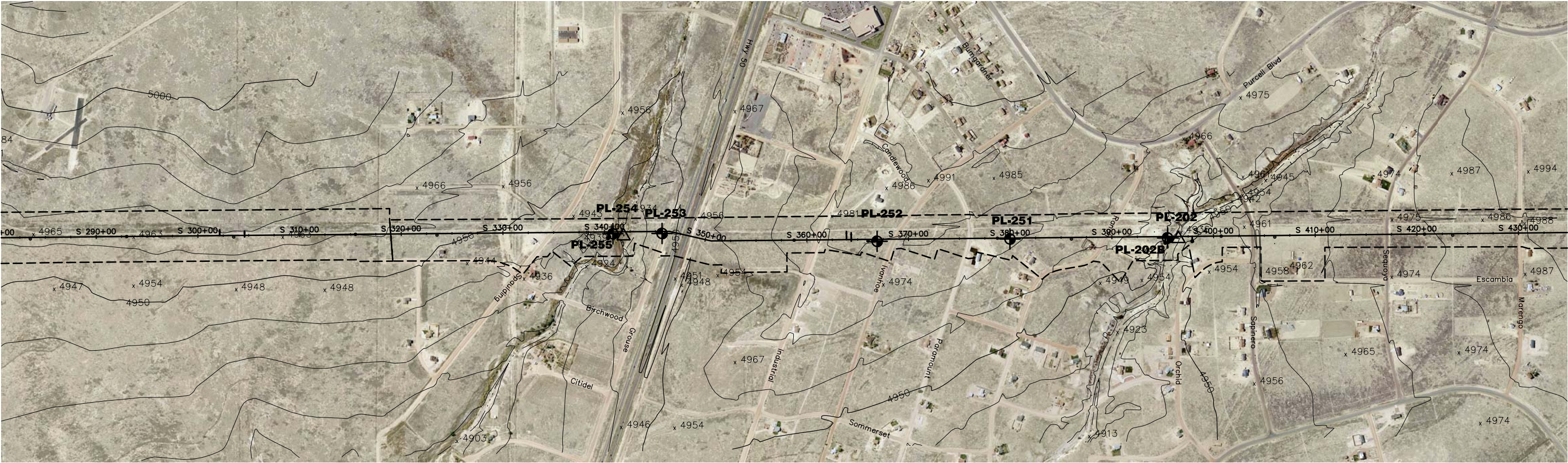
0 250 500 1000 1500
SCALE IN FEET

NOTES:

ALIGNMENT FROM CH2M HILL DATED 7-28-05

 SDS Southern Delivery System Colorado Springs and Pueblo, CO	 CH2M HILL Consultants	 GEI Consultants	BOREHOLE LOCATIONS STA. 160+00 TO STA. 290+00
CH2M HILL Colorado Springs, Colorado	Project 02295	Oct. 2005	Fig. 7-G.2.4A-2

P:\02295\South SCH ALIGNMENT\GEO TECH DATA\TM SOUTH BOREHOLES DRILLED (PAGE 9).DWG 10/05



0 250 500 1000 1500
SCALE IN FEET

LEGEND:

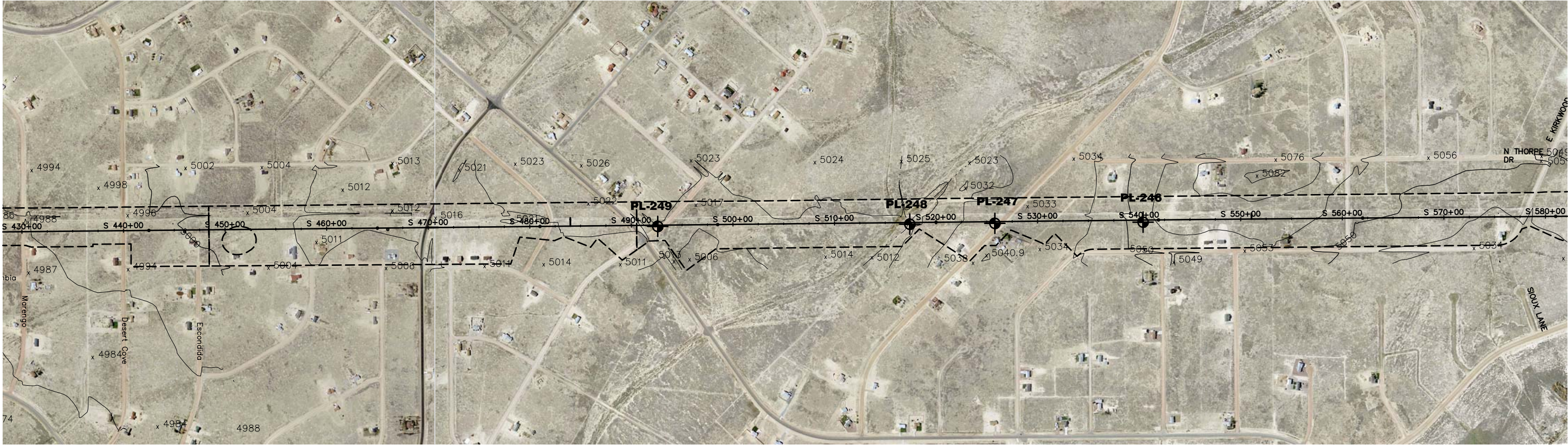
- BOREHOLE
- PIEZOMETER

NOTES:

ALIGNMENT FROM CH2M HILL DATED 7-28-05

 Southern Delivery System Colorado Springs and Pueblo, CO			BOREHOLE LOCATIONS STA. 290+00 TO STA. 430+00
CH2M HILL Colorado Springs, Colorado		Project 02295	Oct. 2005 Fig. 7-G.2.4A-3

P:\02295\South SCH ALIGNMENT\GEO TECH DATA\TM SOUTH BOREHOLES DRILLED (PAGE 8).DWG 10/05



0 250 500 1000 1500
SCALE IN FEET

LEGEND:

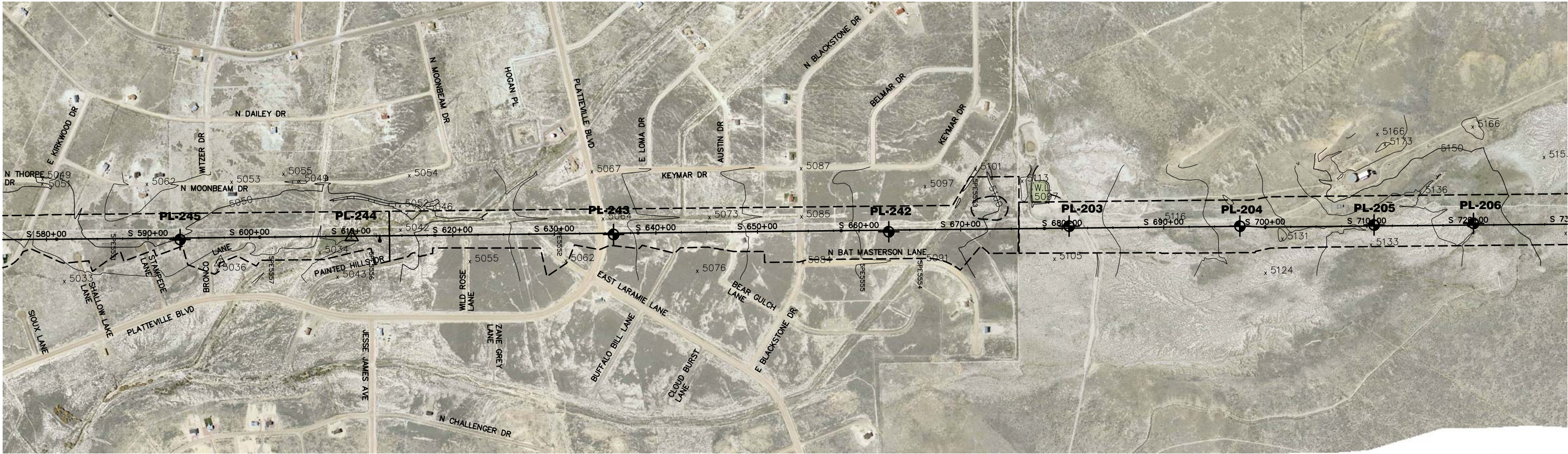
- BOREHOLE
- PIEZOMETER

NOTES:

ALIGNMENT FROM CH2M HILL DATED 7-28-05

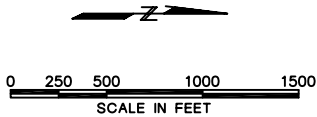
 Southern Delivery System Colorado Springs and Pueblo, CO		 Borehole Locations Sta. 430+00 to Sta. 580+00
CH2M HILL Colorado Springs, Colorado	Project 02295	Oct. 2005 Fig. 7-G.2.4A-4

P:\02295\South SCH ALIGNMENT\GEO TECH DATA TM SOUTH BOREHOLES DRILLED (PAGE 7).DWG 10/05



LEGEND:

- BOREHOLE
- PIEZOMETER

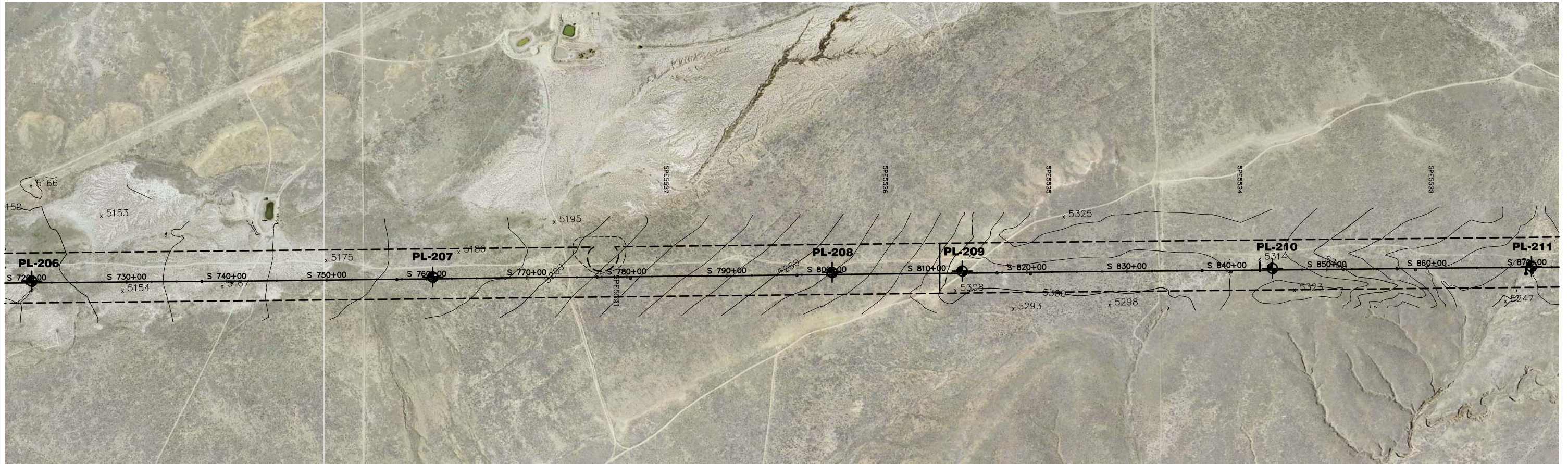


NOTES:

ALIGNMENT FROM CH2M HILL DATED 7-28-05

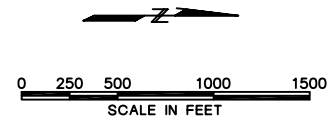
 Southern Delivery System Colorado Springs and Pueblo, CO			BOREHOLE LOCATIONS STA. 580+00 TO STA. 720+00
CH2M HILL Colorado Springs, Colorado		Project 02295	Oct. 2005
			Fig. 7-G.2.4A-5

P:\02295\South SCH ALIGNMENT\GEO TECH DATA TM SOUTH BOREHOLES DRILLED (PAGE 6).DWG 10/05



LEGEND:

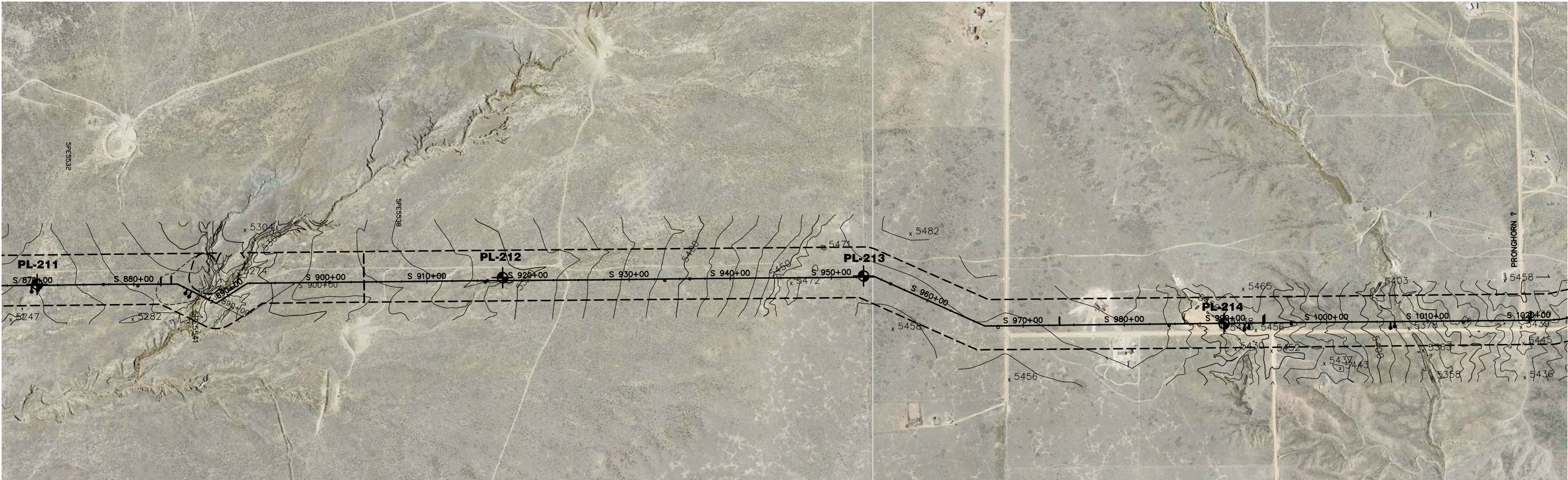
- BOREHOLE
- PIEZOMETER



NOTES:

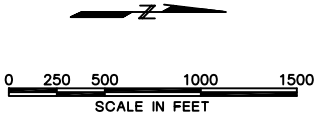
ALIGNMENT FROM CH2M HILL DATED 7-28-05

P:\02295\SDS SCH ALIGNMENT\GEO TECH DATA TM\ SOUTH BOREHOLES DRILLED (PAGE 5)DWG 10.DWG



LEGEND:

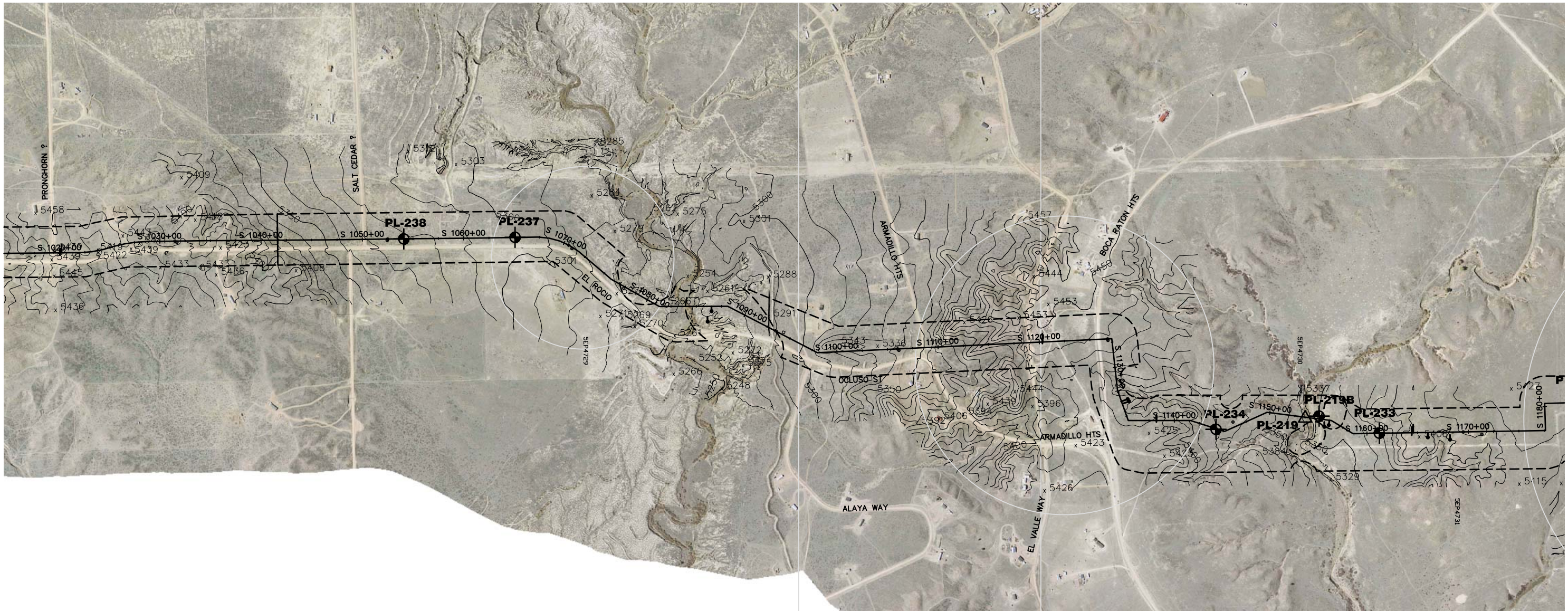
- BOREHOLE
- PIEZOMETER



NOTES:
ALIGNMENT FROM CH2M HILL DATED 7-28-05

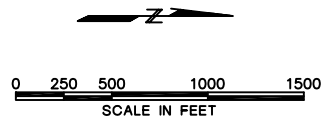
 Southern Delivery System Colorado Springs and Pueblo, CO		 BOREHOLE LOCATIONS STA. 870+00 TO STA. 1020+00
CH2M HILL Colorado Springs, Colorado	Project 02295	Oct. 2005 Fig. 7-G.2.4A-7

P:\02295\02295 SOUTH SCH ALIGNMENT\GEO TECH DATA TM\02295 SOUTH BOREHOLES DRILLED (PAGE 4).DWG 10/05



LEGEND:


- BOREHOLE
- PIEZOMETER



NOTES:

ALIGNMENT FROM CH2M HILL DATED 7-28-05

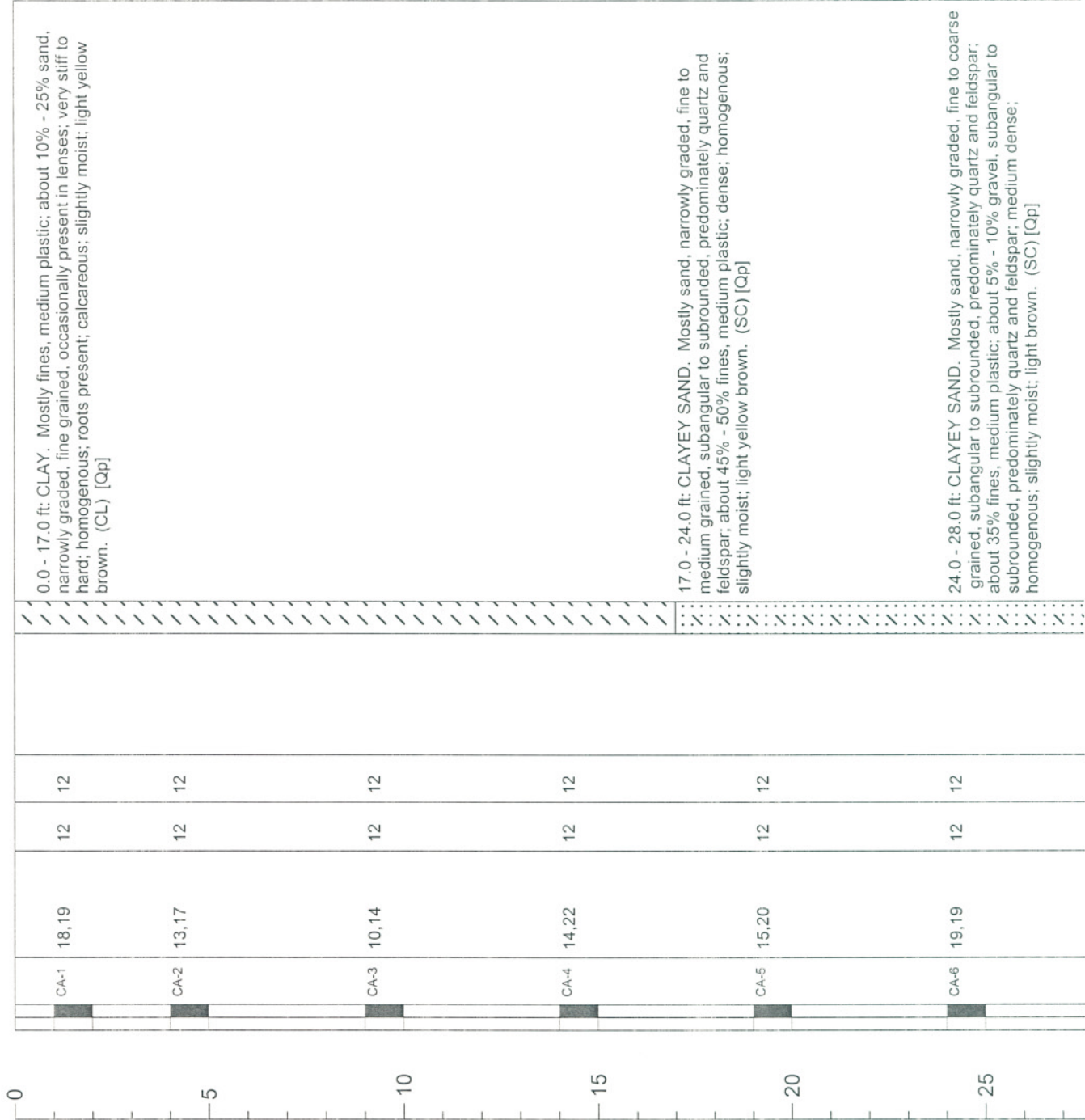
 Southern Delivery System Colorado Springs and Pueblo, CO	 BOREHOLE LOCATIONS STA. 1020+00 TO STA. 1180+00
CH2M HILL Colorado Springs, Colorado	 Project 02295 Oct. 2005 Fig. 7-G.2.4A-8




Geotechnical Environmental & Water Resources Engineering				LOG OF DRILL HOLE		PL-203							
PROJECT NAME : Southern Delivery System						PAGE: 1	OF 2						
PROJECT NUMBER : 022950						DATE: 12/14/04 / 12/14/04							
BORING LOCATION : N 1211814.1, E 3232041.4													
GROUND SURFACE ELEVATION (LOCAL - FT) : 5106.3													
GROUNDWATER ELEVATION : 5078 DATE 12/14/04													
DRILLED BY : HIGH PLAINS													
LOGGED BY : TCM/BAS TOTAL DEPTH (FT) : 34.0													
NOTES: RIG: Truck-mounted CME 75													
4-inch diameter solid flight augers													
DEPTH FT.		TYPE and NO.		SAMPLE - 1 - BLOWS PER 6 IN.		- 2 - PEN IN.		- 3 - REC IN.		REMARKS		SOIL AND ROCK DESCRIPTIONS	

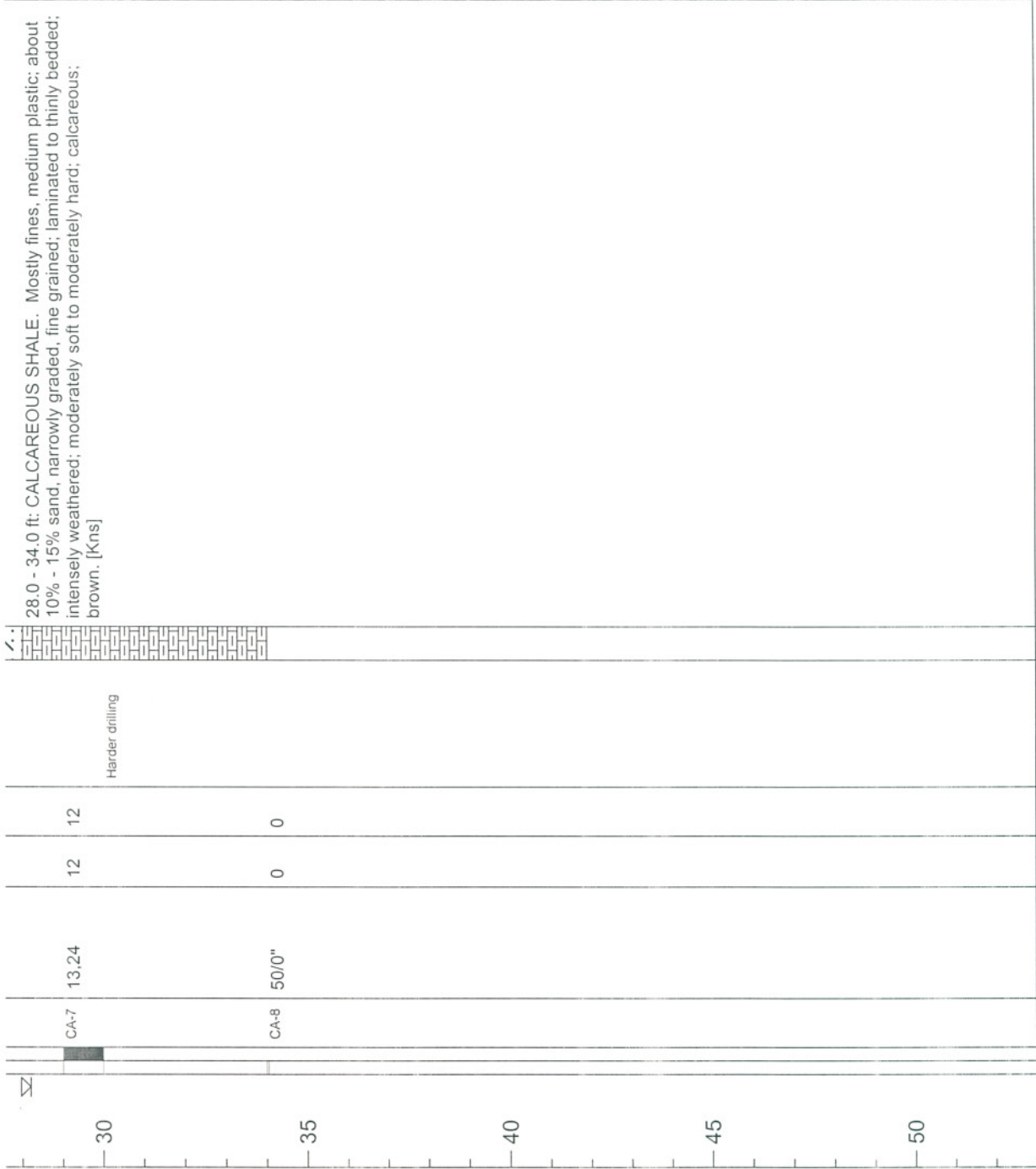
- LEGEND
- 1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
 - 2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
 - 3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

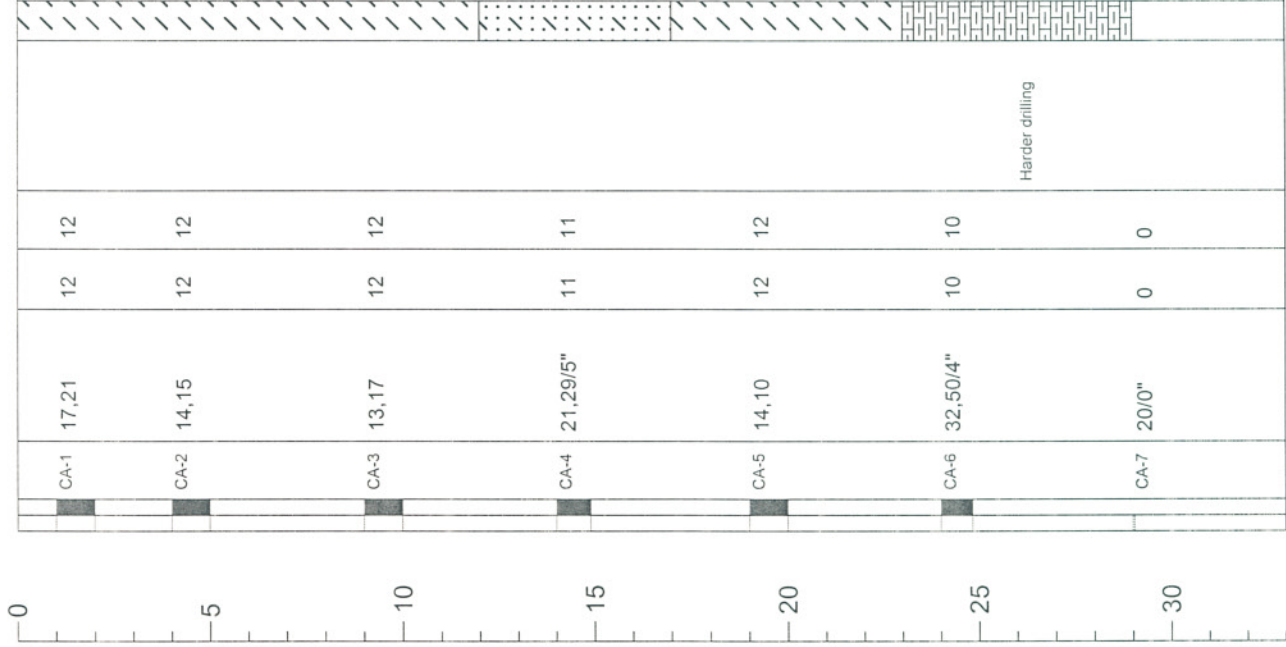
GROUNDWATER ESTIMATED GROUNDWATER SZ



 Geotechnical Environmental & Water Resources Engineering		LOG OF DRILL HOLE		PL-203
PROJECT NAME : Southern Delivery System			PAGE: 2 OF 2	DATE: 12/14/04 / 12/14/04
PROJECT NUMBER : 022950				
BORING LOCATION : N 1211814.1, E 3232041.4				
GROUND SURFACE ELEVATION (LOCAL - FT) : 5106.3				
GROUNDWATER ELEVATION : 5078 DATE 12/14/04			LEGEND 1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER 2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL 3) REC - RECOVERY LENGTH OF SAMPLE S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE GROUNDWATER  ESTIMATED GROUNDWATER 	
DRILLED BY : HIGH PLAINS				
LOGGED BY : TCM/BAS TOTAL DEPTH (FT) : 34.0				
NOTES: RIG: Truck-mounted CME 75 4-inch diameter solid flight augers SAMPLE METHOD: Auto safety hammer BACKFILL: Drill cuttings				



<div>Geotechnical Environmental & Water Resources Engineering</div> <div>GEI Consultants</div>			LOG OF DRILL HOLE		PL-204	
PROJECT NAME : Southern Delivery System					PAGE: 1	OF 1
PROJECT NUMBER : 022950					DATE: 12/14/04 / 12/14/04	
BORING LOCATION : N 1213495.1, E 3232041.4						
GROUND SURFACE ELEVATION (LOCAL - FT) : 5123.6						
GROUNDWATER ELEVATION : DRY DATE 12/14/04						
DRILLED BY : HIGH PLAINS						
LOGGED BY : TCM/BAS TOTAL DEPTH (FT) : 29.0						
NOTES: RIG: Truck-mounted CME 75					SAMPLE METHOD: Auto safety hammer	
4-inch diameter solid flight augers					BACKFILL: Drill cuttings	
DEPTH FT.	TYPE and NO.	SAMPLE			REMARKS	SOIL AND ROCK DESCRIPTIONS
		- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		
	CA-1	17,21	12	12		0.0 - 12.0 ft: CLAY WITH SAND. Mostly fines, medium plastic; about 10% - 20% sand, narrowly graded, fine grained; homogenous; roots present in upper 3 feet; porous; calcareous; very stiff to hard; slightly moist; brown to yellow-brown. (CL) [Qp]
	CA-2	14,15	12	12		
	CA-3	13,17	12	12		
	CA-4	21,29/5"	11	11		12.0 - 17.0 ft: CLAYEY SAND. Mostly sand, narrowly graded, fine to coarse grained, subangular to subrounded, predominately quartz and feldspar; about 20% - 25% fines, medium plastic; about 5% - 10% gravel, subangular to subrounded, predominantly quartz and feldspar; homogenous; calcareous; very dense; slightly moist; light yellow-brown. (SC) [Qp]
	CA-5	14,10	12	12		17.0 - 23.0 ft: CLAY. Mostly fines, low plastic; about 15% - 25% sand, narrowly graded, fine grained; very stiff; homogenous; slightly moist; light yellow-brown. (CL) [Qp]
	CA-6	32,50/4"	10	10		23.0 - 29.0 ft: CALCAREOUS SHALE. Mostly fines, medium plastic; about 10% - 15% sand, narrowly graded, fine grained; thinly bedded; intensely to moderately weathered; calcareous; moderately soft to moderately hard; slightly moist; brown to dark blue-gray. [Kns]
	CA-7	20/0"	0	0		



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1214816.1, E 3232029.6
GROUND SURFACE ELEVATION (LOCAL - FT) \$133.9
GROUNDWATER ELEVATION : DRY DATE 12/14/04
DRILLED BY : HIGH PLAINS
LOGGED BY : TCM/BAS TOTAL DEPTH (FT) : 24.0

LOG OF DRILL HOLE

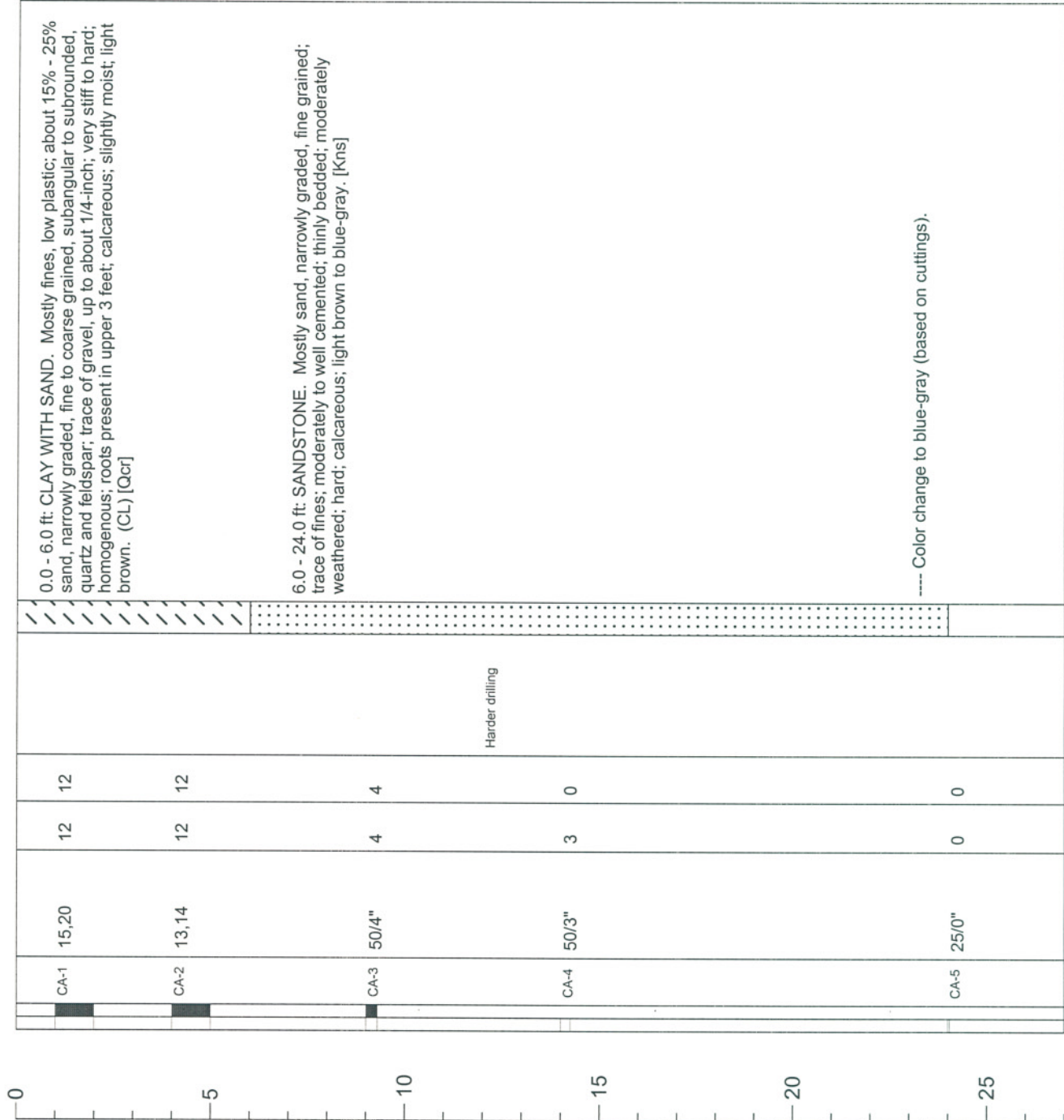
PL-205

PAGE: 1 OF 1
DATE: 12/14/04 / 12/14/04

LEGEND
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER  ESTIMATED GROUNDWATER 

NOTES: RIG: Truck-mounted CME 75
4-inch diameter solid flight augers
SAMPLE METHOD: Auto safety hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.			



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1215795.3, E 3232013.9
GROUND SURFACE ELEVATION (LOCAL - FT) : 5146.0
GROUNDWATER ELEVATION : DRY DATE 12/14/04
DRILLED BY : HIGH PLAINS
LOGGED BY : TCM/BAS TOTAL DEPTH (FT) : 25.0

LOG OF DRILL HOLE

PL-206

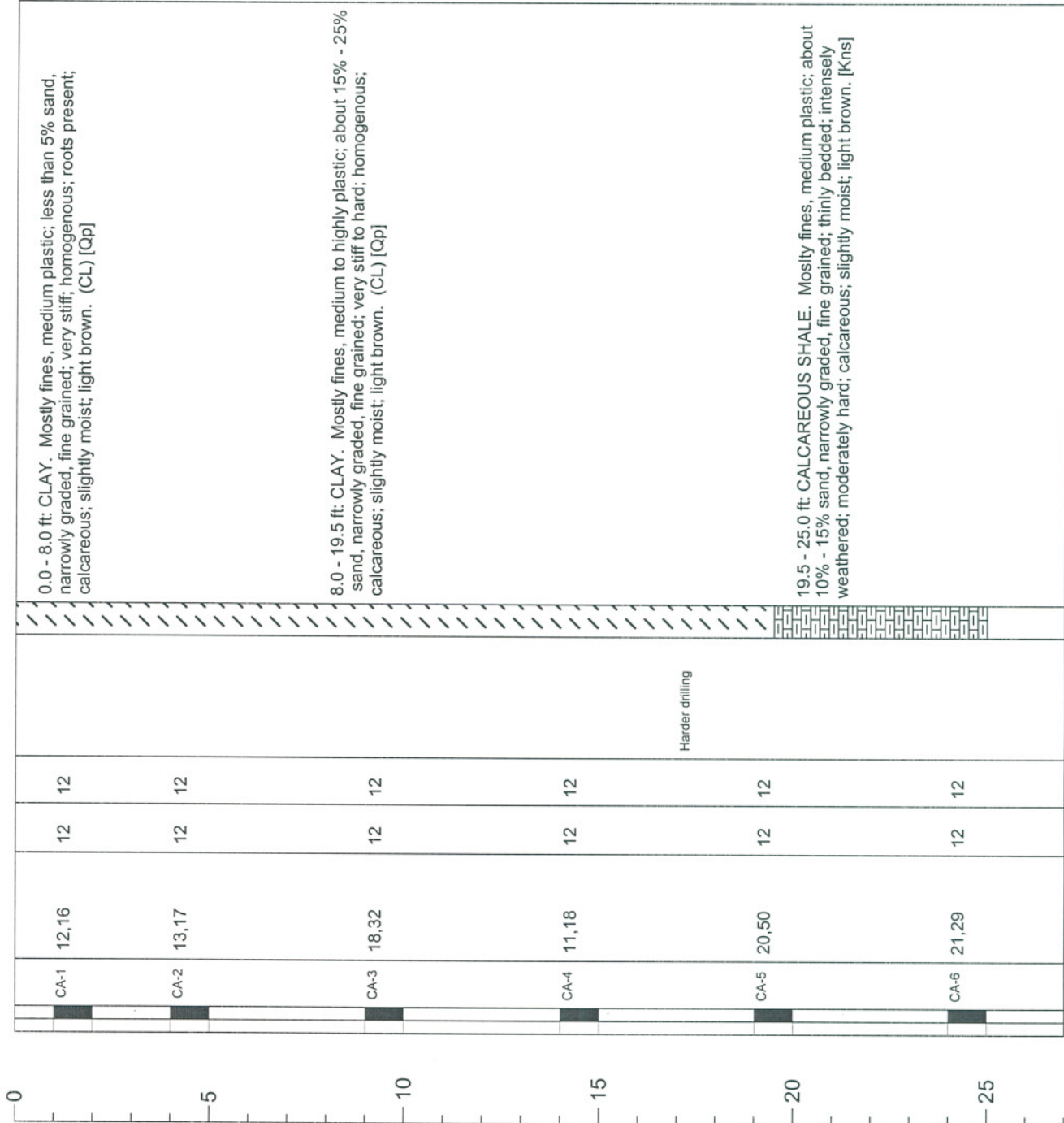
PAGE: 1 OF 1
DATE: 12/14/04 / 12/14/04

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER  ESTIMATED GROUNDWATER 

NOTES: RIC: Truck-mounted CME 75
4-inch diameter solid flight augers
SAMPLE METHOD: Auto safety hammer
BACKFILL: Drill cuttings

DEPTH FT.	TYPE and NO.	SAMPLE			REMARKS	GR LOG CH	SOIL AND ROCK DESCRIPTIONS
		- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.			



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1219803.7, E 3231973.6
GROUND SURFACE ELEVATION (LOCAL - FT) : 5185.0
GROUNDWATER ELEVATION : DRY DATE 12/14/04
DRILLED BY : HIGH PLAINS
LOGGED BY : TCM/BAS TOTAL DEPTH (FT) : 20.0

LOG OF DRILL HOLE

PL-207

PAGE: 1 OF 1
DATE: 12/14/04 / 12/14/04

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia. UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER ➤ ESTIMATED GROUNDWATER SZ

NOTES: RIG: Truck-mounted CME 75
4-inch diameter solid flight augers
SAMPLE METHOD: Auto safety hammer
BACKFILL: Drill cuttings

DEPTH FT.

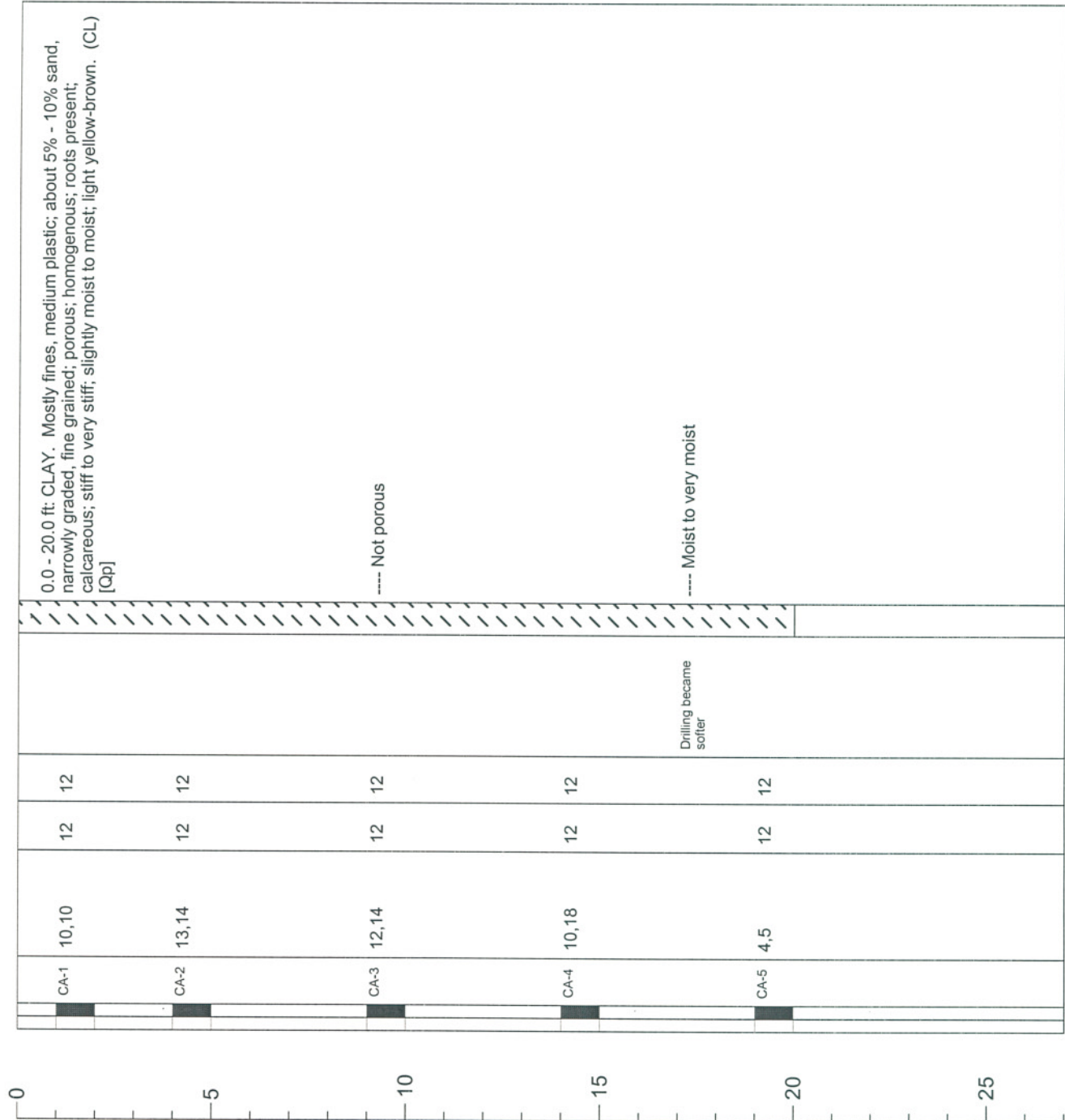
TYPE and NO.

SAMPLE

REMARKS

LOGIC

SOIL AND ROCK DESCRIPTIONS



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1223797.4, E 3231926.9
GROUND SURFACE ELEVATION (LOCAL - FT) \$260.0
GROUNDWATER ELEVATION : DRY DATE 12/14/04
DRILLED BY : HIGH PLAINS
LOGGED BY : TCM/BAS TOTAL DEPTH (FT) : 24.3

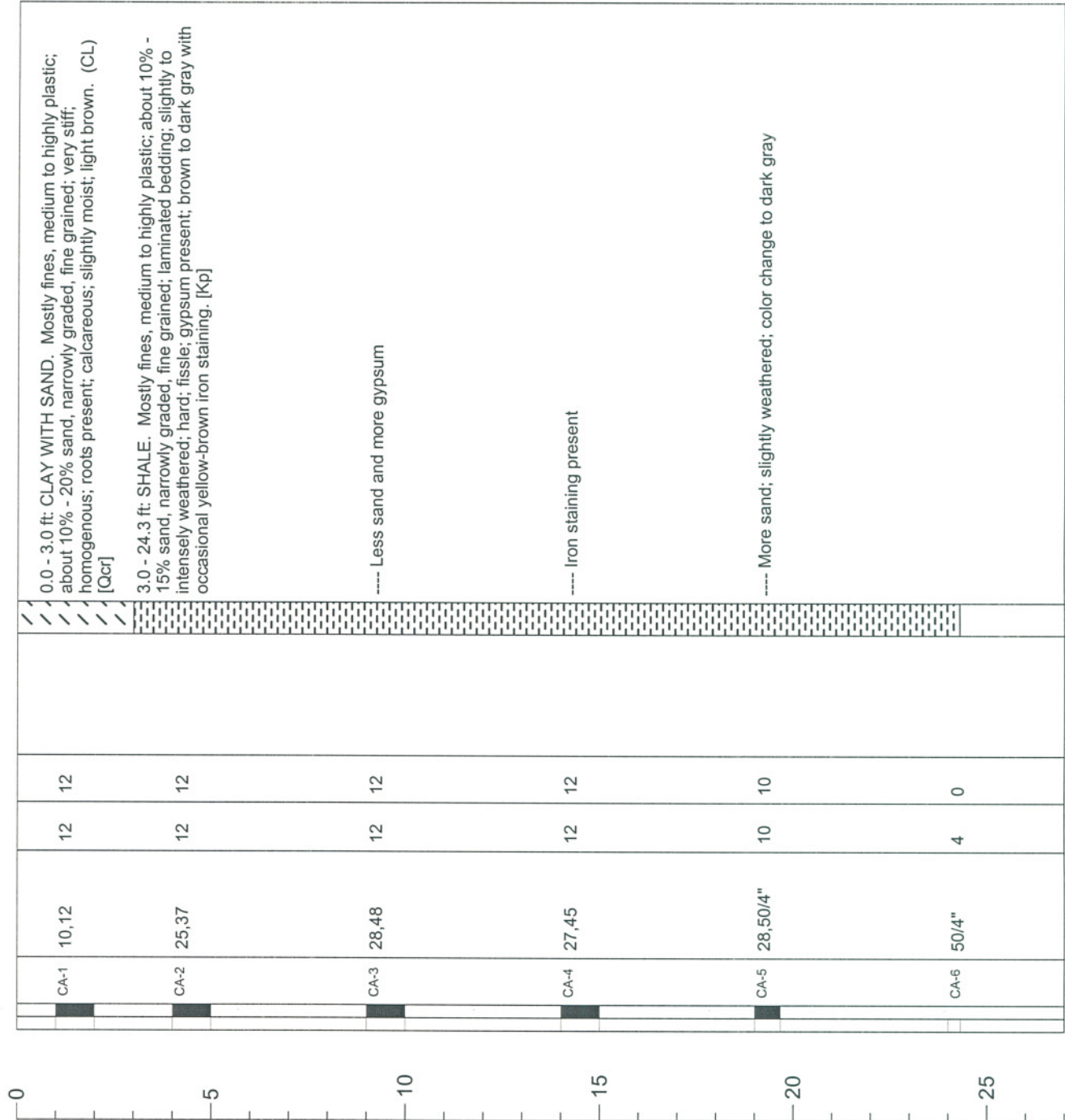
LOG OF DRILL HOLE

PL-208
PAGE: 1 OF 1
DATE: 12/14/04 / 12/14/04

LEGEND
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER  ESTIMATED GROUNDWATER 

NOTES: RIG: Truck-mounted CME 75
SAMPLE METHOD: Auto safety hammer
4-inch solid flight augers
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	-1- BLOWS PER 6 IN.	-2- PEN IN.	-3- REC IN.		



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1225097.4, E 3231913.7
GROUND SURFACE ELEVATION (LOCAL - FT) : 5307.9
GROUNDWATER ELEVATION : DRY DATE 12/15/04
DRILLED BY : HIGH PLAINS
LOGGED BY : TCM/BAS TOTAL DEPTH (FT) : 25.0

LOG OF DRILL HOLE

PL-209

PAGE: 1 OF 1
DATE: 12/15/04 / 12/15/04

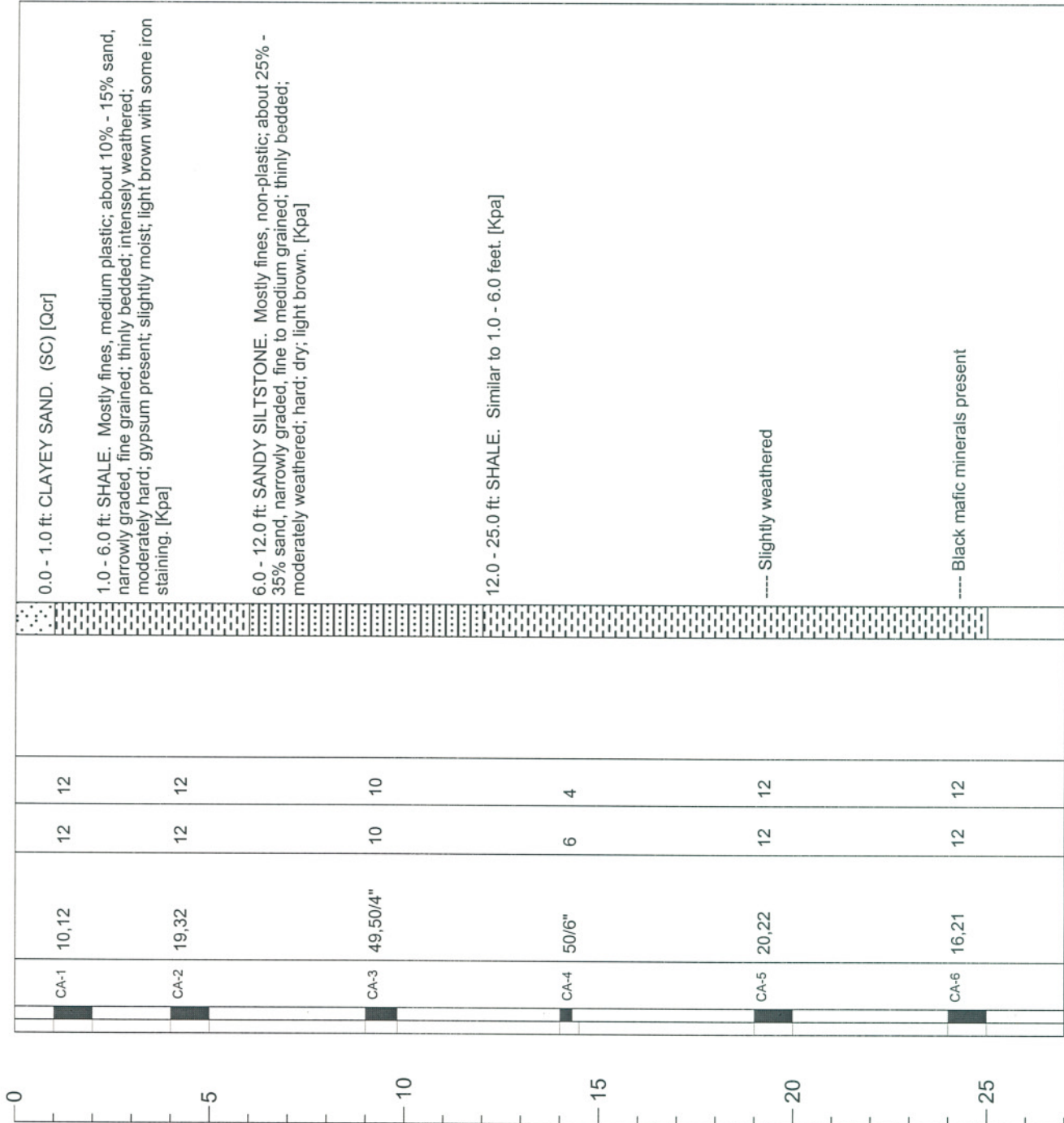
LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER  ESTIMATED GROUNDWATER 

NOTES: RIG: Truck-mounted CME 75
4-inch solid flight augers

SAMPLE METHOD: Auto safety hammer
BACKFILL: Drill cuttings

DEPTH FT.	TYPE and NO.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
		- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.			



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1228198.9, E 3231886.8
GROUND SURFACE ELEVATION (LOCAL - FT) : 5315.5
GROUNDWATER ELEVATION : DRY DATE 12/15/04
DRILLED BY : HIGH PLAINS
LOGGED BY : TCM/BAS TOTAL DEPTH (FT) : 25.0

LOG OF DRILL HOLE


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PAGE: 1 OF 1
DATE: 12/15/04 / 12/15/04

LEGEND

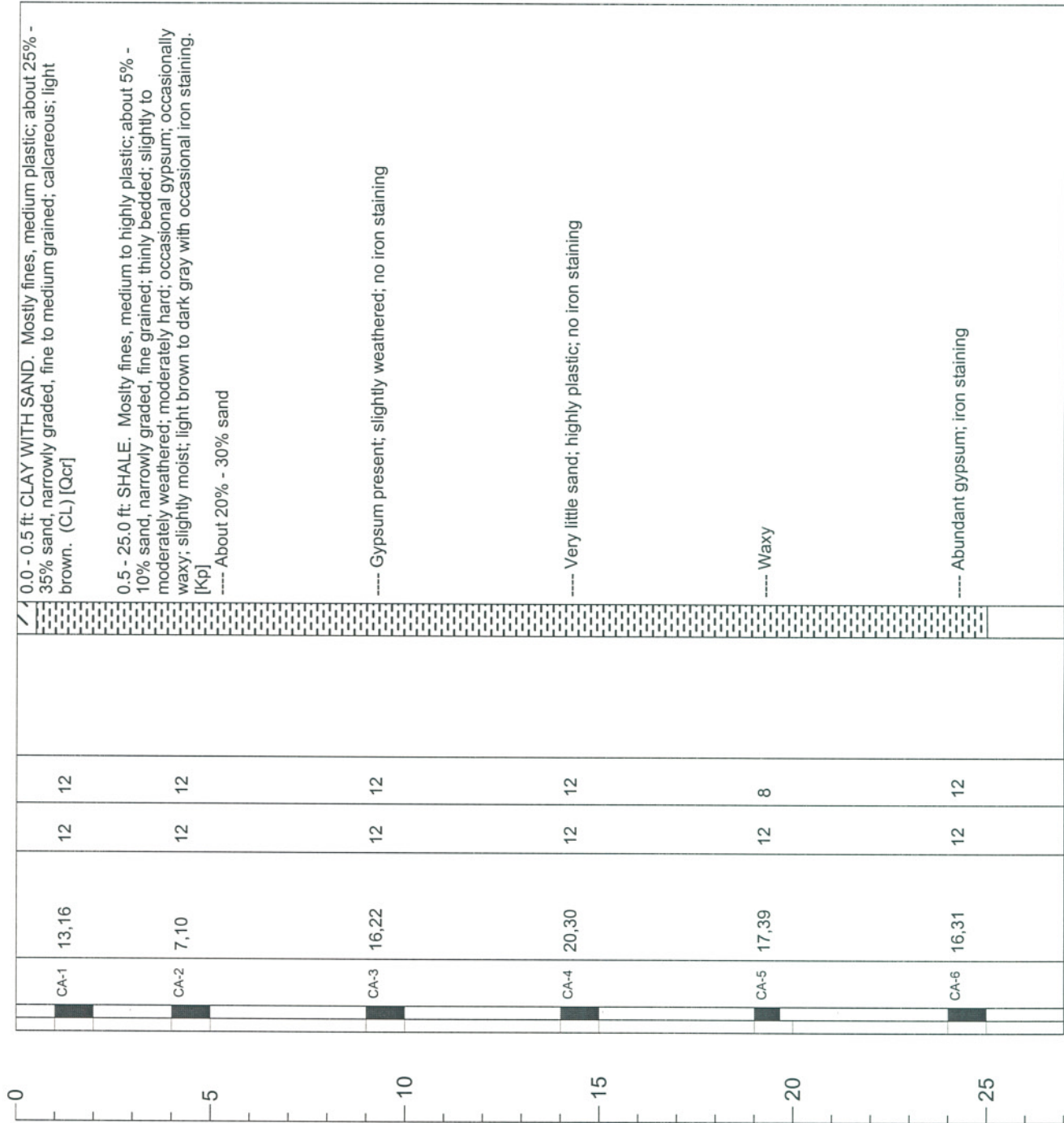
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER  ESTIMATED GROUNDWATER SZ

SAMPLE METHOD: Auto safety hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		



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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1230788.0, E 3231866.6

GROUND SURFACE ELEVATION (LOCAL - FT) : 5259.8

GROUNDWATER ELEVATION : DRY DATE 12/15/04

DRILLED BY : HIGH PLAINS

LOGGED BY : TCM/BAS TOTAL DEPTH (FT) : 24.3

LOG OF DRILL HOLE

PL-211



PAGE: 1 OF 1

DATE: 12/15/04 / 12/15/04

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER  ESTIMATED GROUNDWATER 

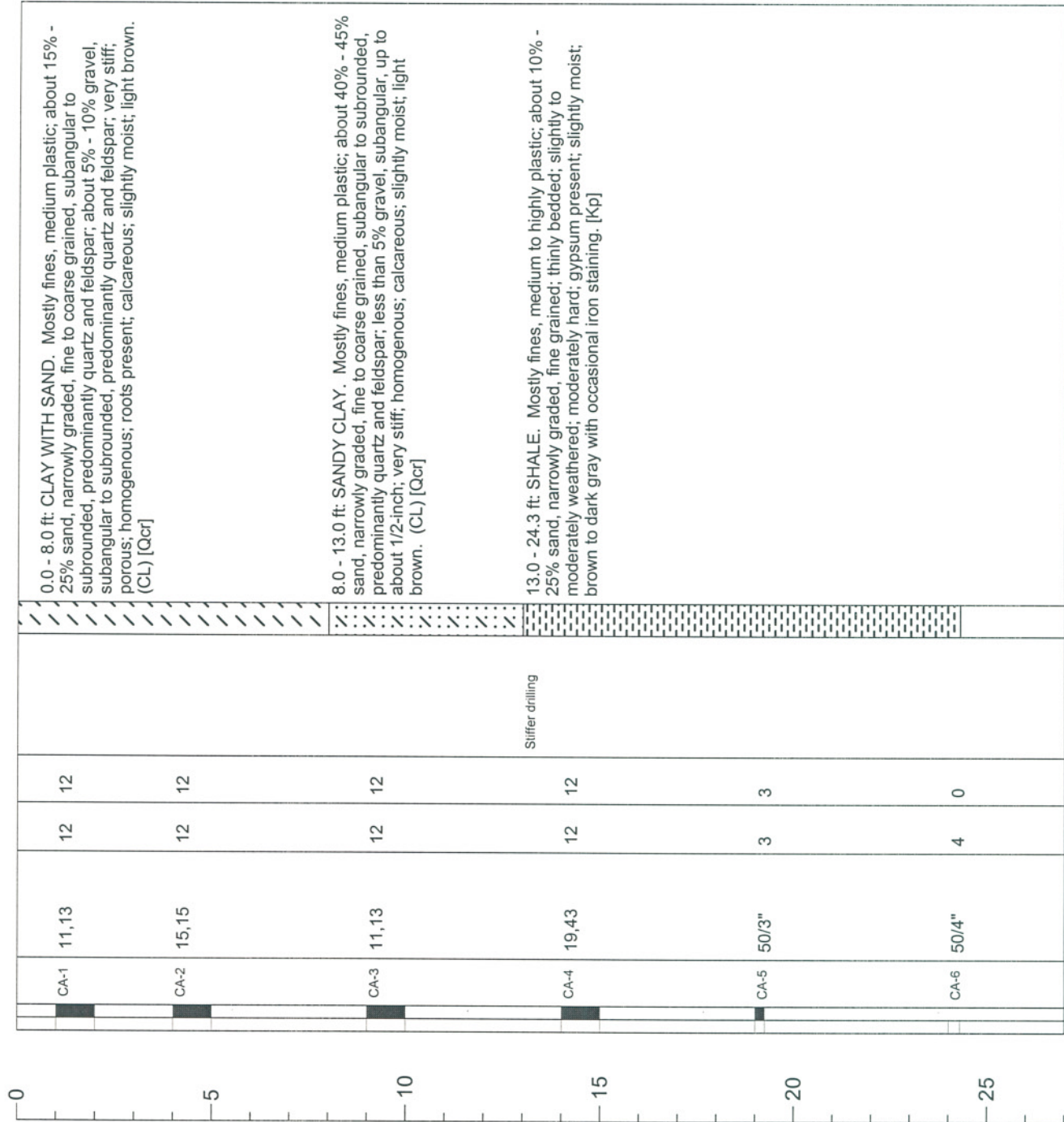
NOTES: RIG: Truck-mounted CME 75

4-inch solid flight augers

SAMPLE METHOD: Auto safety hammer

BACKFILL: Drill cuttings

DEPTH FT.	TYPE and NO.	SAMPLE			REMARKS	LOG GRAPHIC	SOIL AND ROCK DESCRIPTIONS
		- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.			



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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1235390.7, E 3231799.9

GROUND SURFACE ELEVATION (LOCAL - FT) : 5344.4

GROUNDWATER ELEVATION : DRY DATE 12/15/04

DRILLED BY : HIGH PLAINS

LOGGED BY : TCM/BAS TOTAL DEPTH (FT) : 24.6

LOG OF DRILL HOLE

PL-212

PAGE: 1 OF 1

DATE: 12/15/04 / 12/15/04

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER ESTIMATED GROUNDWATER sz

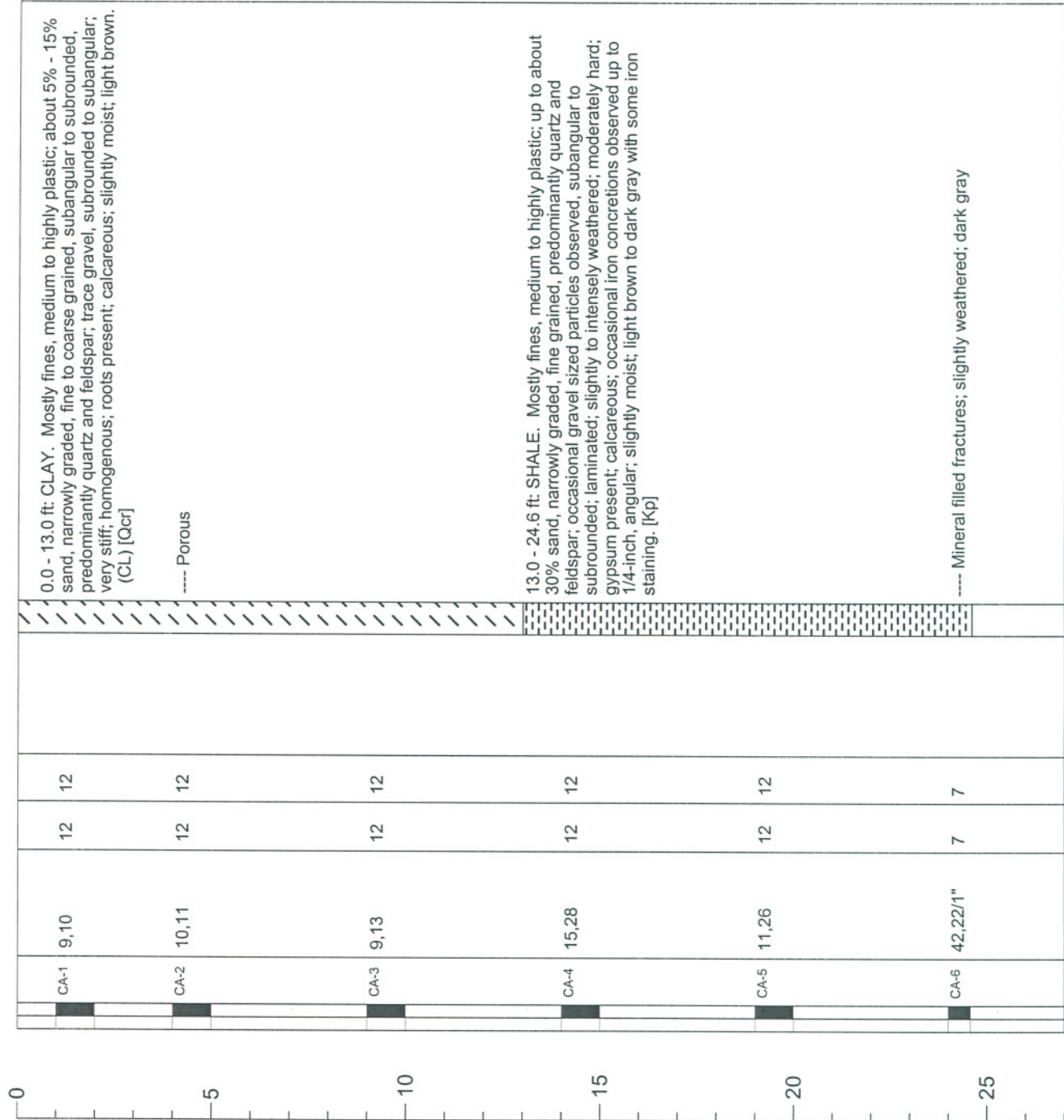
NOTES: RIG: Truck-mounted CME 75

SAMPLE METHOD: Auto safety hammer

4-inch solid flight augers

BACKFILL: Drill cuttings

DEPTH FT.	TYPE and NO.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
		- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.			



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GEI Consultants

PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1238959.8, E 3231784.1
GROUND SURFACE ELEVATION (LOCAL - FT) : 5466.2
GROUNDWATER ELEVATION : DRY DATE 12/15/04
DRILLED BY : HIGH PLAINS
LOGGED BY : TCM/BAS TOTAL DEPTH (FT) : 24.5

LOG OF DRILL HOLE

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PAGE: 1 OF 1
DATE: 12/15/04 / 12/15/04

LEGEND

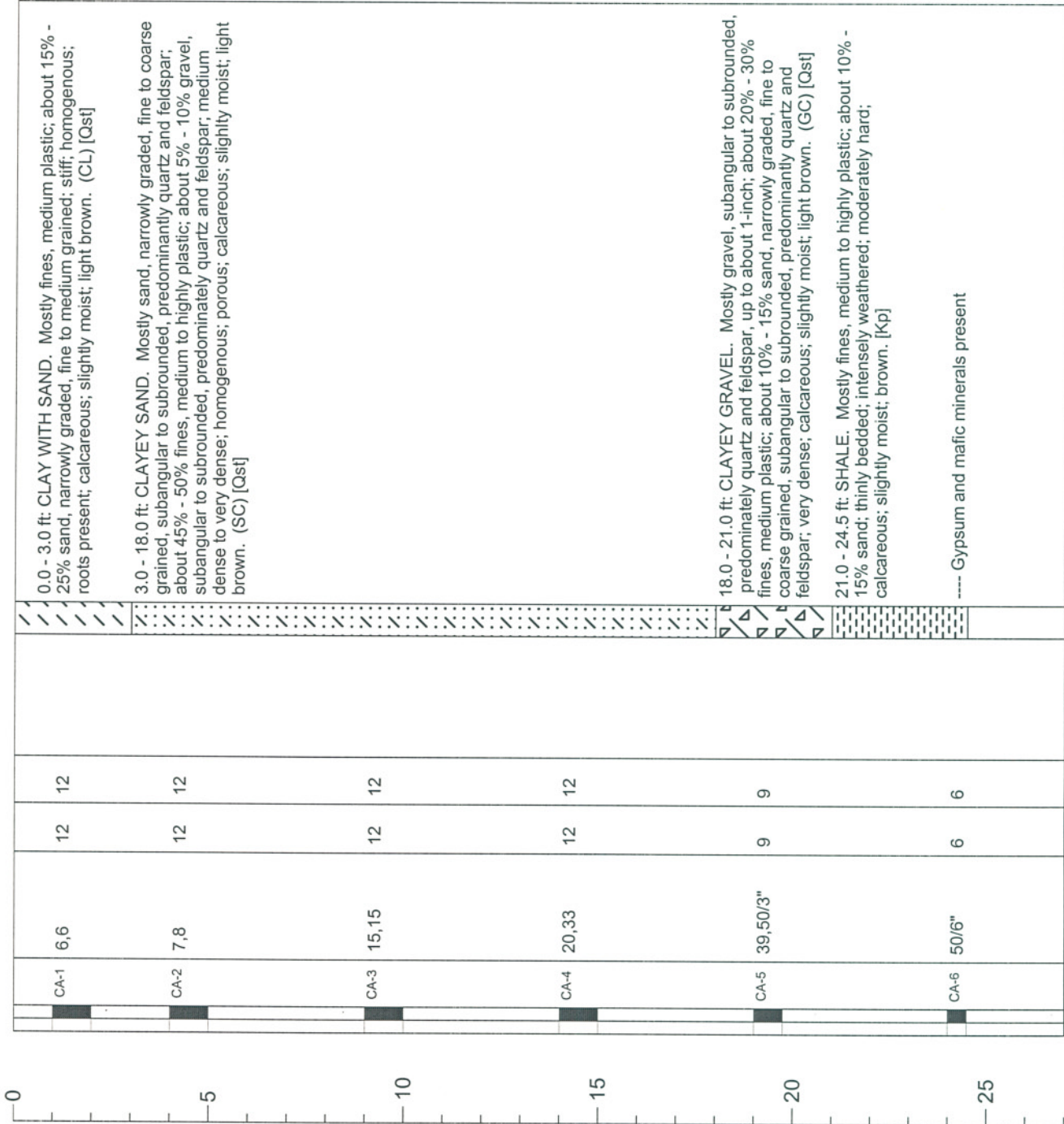
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER ESTIMATED GROUNDWATER

SAMPLE METHOD: Auto safety hammer
BACKFILL: Drill cuttings

DEPTH FT.	TYPE and NO.	SAMPLE			REMARKS	SOIL AND ROCK DESCRIPTIONS
		- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1242524.0 E 3232252.0
GROUND SURFACE ELEVATION (LOCAL - FT) 5438.1
GROUNDWATER ELEVATION : DRY DATE 8/3/05
DRILLED BY : HIGH PLAINS
LOGGED BY : NDM TOTAL DEPTH (FT) : 30.0

LOG OF DRILL HOLE

PL - 214

PAGE: 1 OF 1
DATE: 8/3/05 / 8/3/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

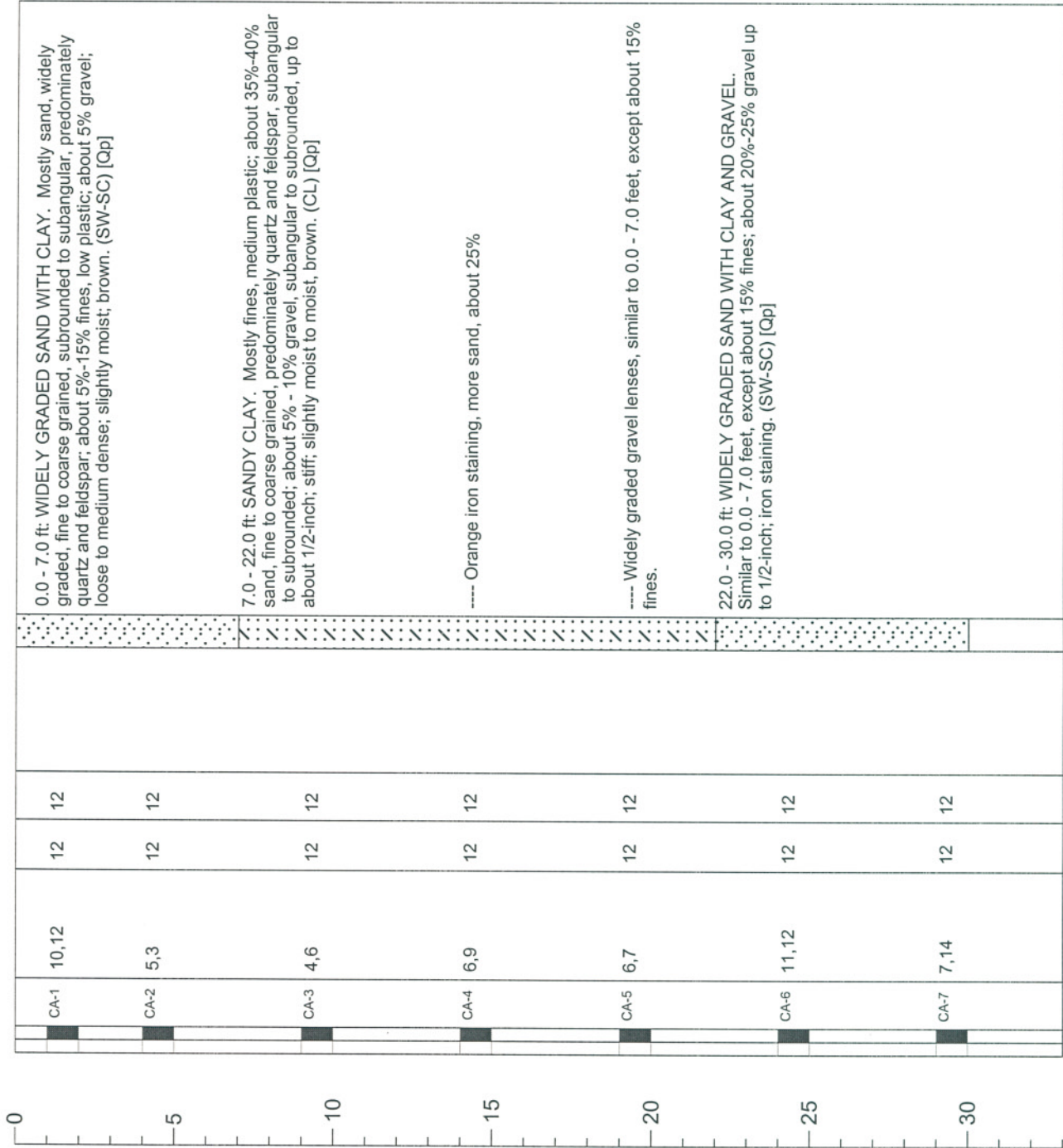
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER ESTIMATED GROUNDWATER SZ

NOTES: RIG: Truck Mounted CME - 75
4" Diameter solid flight auger

SAMPLE METHOD: Automatic safety hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.	



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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1250033.9, E 3232068.1

GROUND SURFACE ELEVATION (LOCAL - FT) : 5305.4

GROUNDWATER ELEVATION : DRY DATE 8/2/05

DRILLED BY : HIGH PLAINS

LOGGED BY : NDM TOTAL DEPTH (FT) : 25.0

LOG OF DRILL HOLE

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PAGE: 1 OF 1

DATE: 8/2/05 / 8/2/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER

2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL

3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON

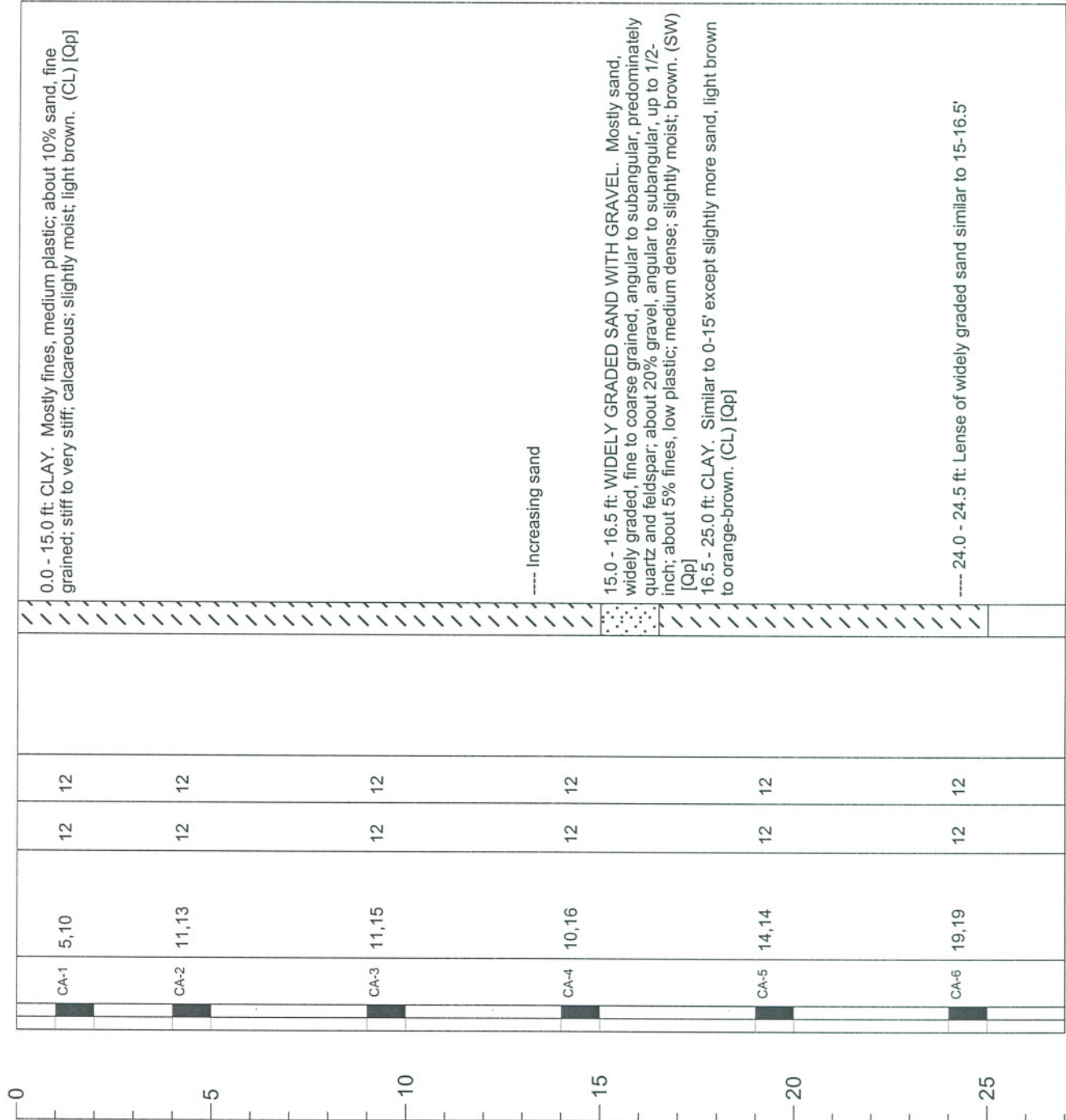
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER ✕ ESTIMATED GROUNDWATER sz

SAMPLE METHOD: Automatic safety hammer

BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.	



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GEC
Consultants

PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1248935.8 E 3232083.7

GROUND SURFACE ELEVATION (LOCAL - FT) : 5321.7

GROUNDWATER ELEVATION : DRY DATE 8/3/05

DRILLED BY : HIGH PLAINS

LOGGED BY : NDM TOTAL DEPTH (FT) : 24.5

LOG OF DRILL HOLE

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PAGE: 1 OF 1

DATE: 8/3/05 / 8/3/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER

2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL

3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON

CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER ESTIMATED GROUNDWATER

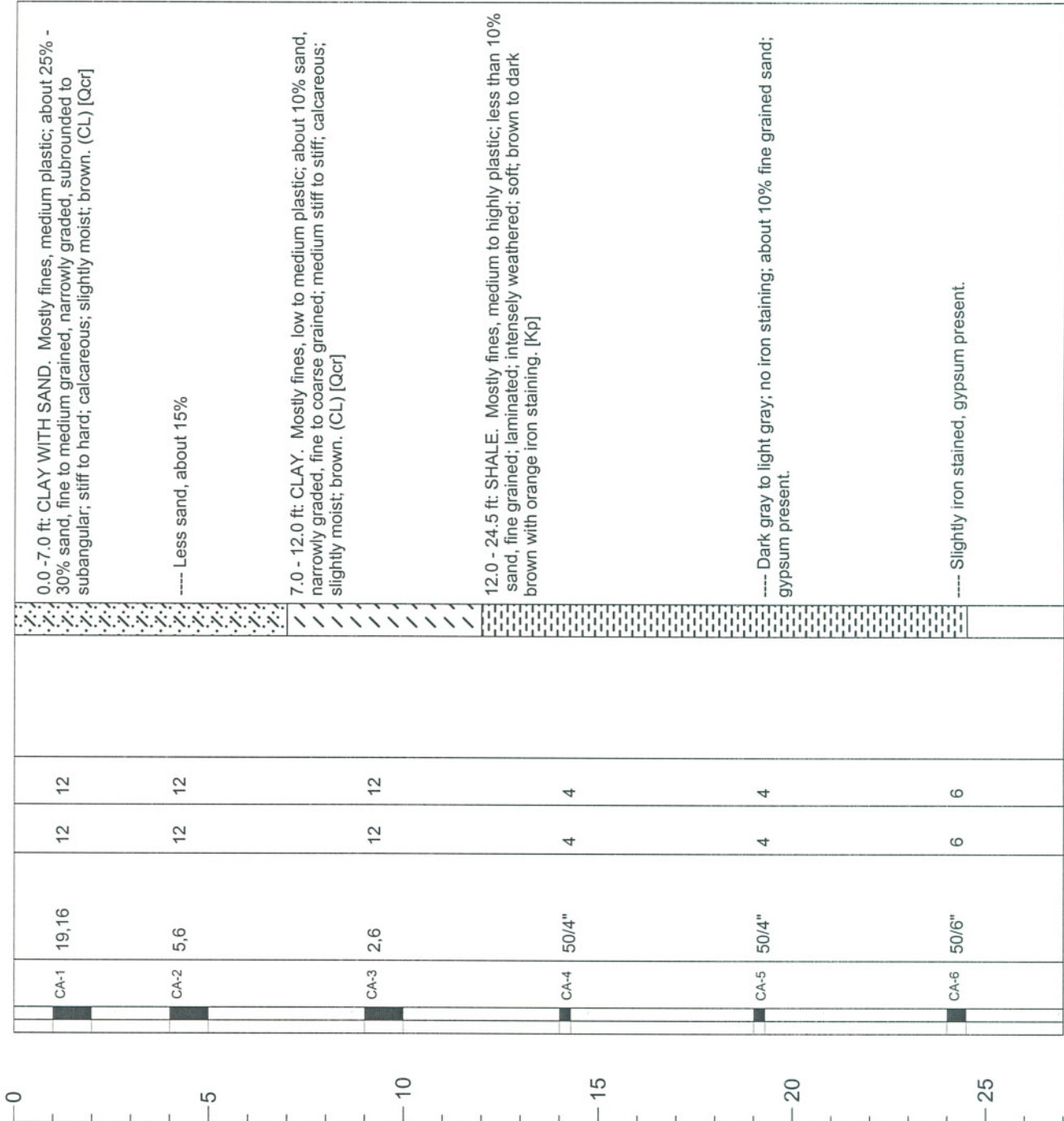
NOTES: RIG: Truck Mounted CME - 75

SAMPLE METHOD: Automatic safety hammer

4-inch diameter solid flight auger

BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	LOG GRAPHIC	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		



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GEI Consultants

PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1210038.0 E 3232096.1
GROUND SURFACE ELEVATION (LOCAL - FT) \$092.7
GROUNDWATER ELEVATION : DRY DATE 8/4/05
DRILLED BY : HIGH PLAINS
LOGGED BY : NDM TOTAL DEPTH (FT) : 33.2

LOG OF DRILL HOLE

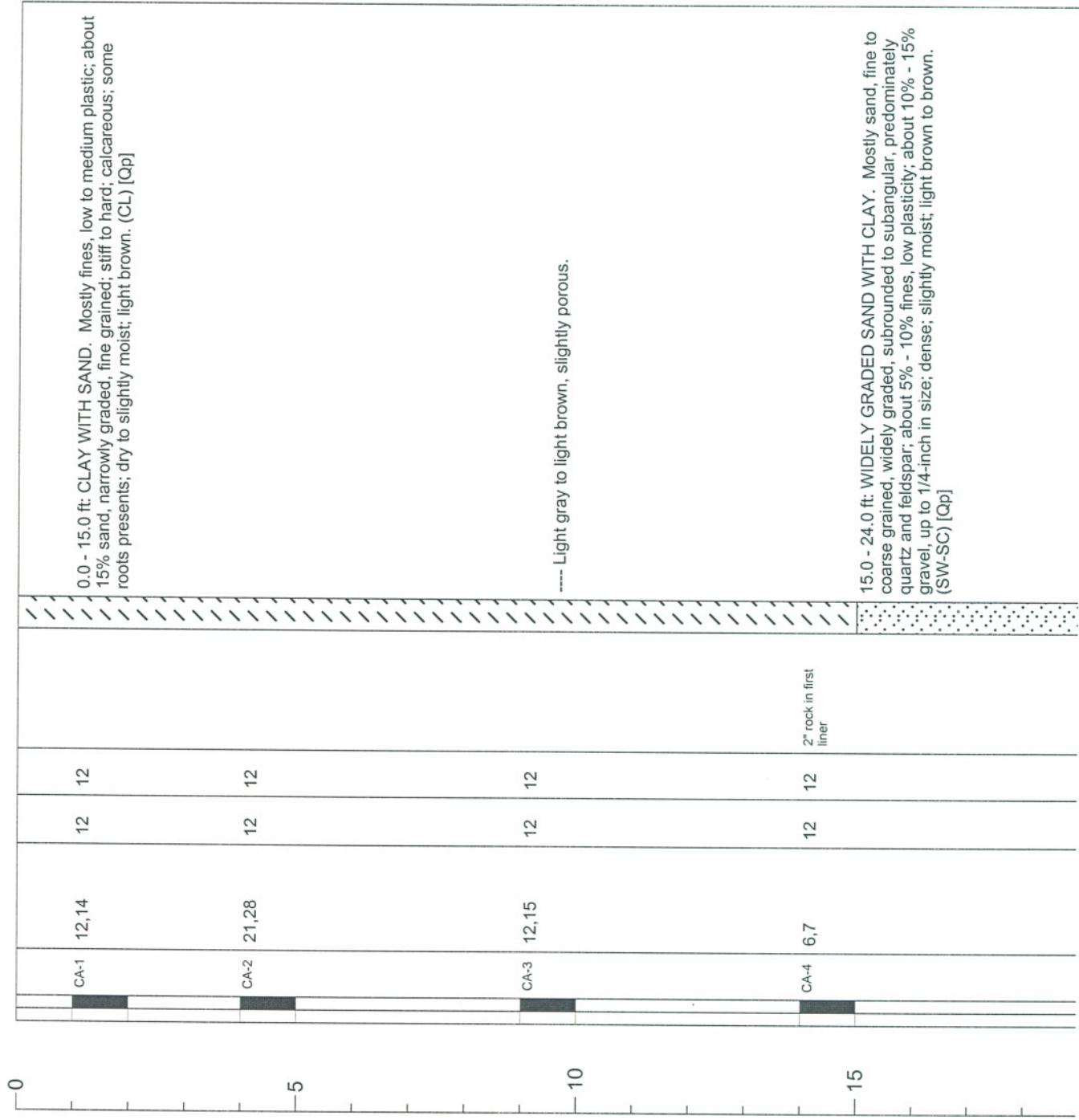
PL - 242
PAGE: 1 OF 2
DATE: 8/4/05 / 8/4/05

LEGEND
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER  ESTIMATED GROUNDWATER 


NOTES: RIG: Truck Mounted CME - 75
4" Diameter solid flight auger

SAMPLE METHOD: Automatic safety hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.			



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1210038.0 E 3232096.1
GROUND SURFACE ELEVATION (LOCAL - FT) 5092.7
GROUNDWATER ELEVATION : DRY DATE 8/4/05
DRILLED BY : HIGH PLAINS
LOGGED BY : NDM TOTAL DEPTH (FT) : 33.2

LOG OF DRILL HOLE

PL - 242

PAGE: 2 OF 2
DATE: 8/4/05 / 8/4/05

LEGEND

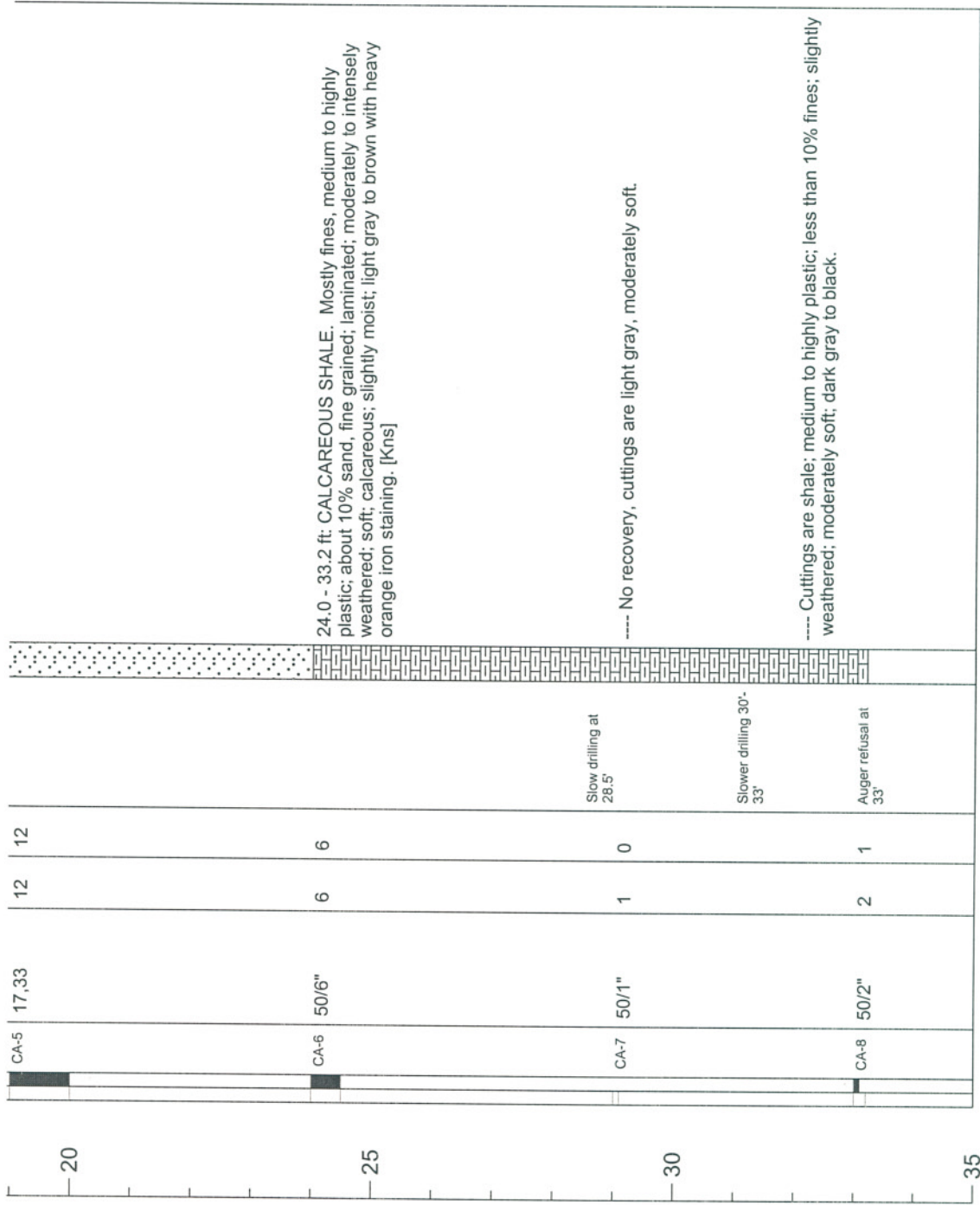
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE


GROUNDWATER ESTIMATED GROUNDWATER SZ

NOTES: RIG: Truck Mounted CME - 75
4" Diameter solid flight auger
SAMPLE METHOD: Automatic safety hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		



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LOG OF DRILL HOLE

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PAGE: 1 OF 1
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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1207329.1, E 3232123.1

GROUND SURFACE ELEVATION (LOCAL - FT) : 5067.3

GROUNDWATER ELEVATION : DRY DATE 7/14/05

DRILLED BY : HIGH PLAINS

LOGGED BY : NDM TOTAL DEPTH (FT) : 29.0

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER ➤ ESTIMATED GROUNDWATER ✕

SAMPLE METHOD: Auto Safety Hammer

BACKFILL: Drill cuttings

DEPTH FT.	TYPE and NO.	SAMPLE			REMARKS	SOIL AND ROCK DESCRIPTIONS
		-1- BLOWS PER 6 IN.	-2- PEN IN.	-3- REC IN.		
6.12, 15	S-1	18	18	18		0.0 - 14.0 ft: CLAY. Mostly fines, low to medium plastic; less than 10% sand, fine to medium grained, widely graded; medium stiff to stiff; calcareous; slightly moist; light brown to brown. (CL) [Op]
8.13, 15	S-2	18	18	18		
8.9, 10	S-3	18	18	18		
8.10, 11	S-4	18	18	18		14.0 - 18.0 ft: SANDY CLAY. More sand; about 30% - 35%, fine to medium grained; calcareous; iron staining. (CL) [Op]
50/6"	CA-5	6	6	6		18.0 - 29 ft: CALCAREOUS SHALE. Mostly fines, medium to highly plastic; less than 10% sand, fine grained; laminated; slightly to intensely weathered; soft; calcareous lenses; slightly moist; light brown to gray to dark gray. [Kns]
32.39	CA-6	12	12	12		
50/0	CA-7	0	0	0		

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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1204751.8 E 3232141.0
GROUND SURFACE ELEVATION (LOCAL - FT) 5041.0
GROUNDWATER ELEVATION : 5014 DATE 7/14/05
DRILLED BY : HIGH PLAINS
LOGGED BY : NDM TOTAL DEPTH (FT) : 34.1

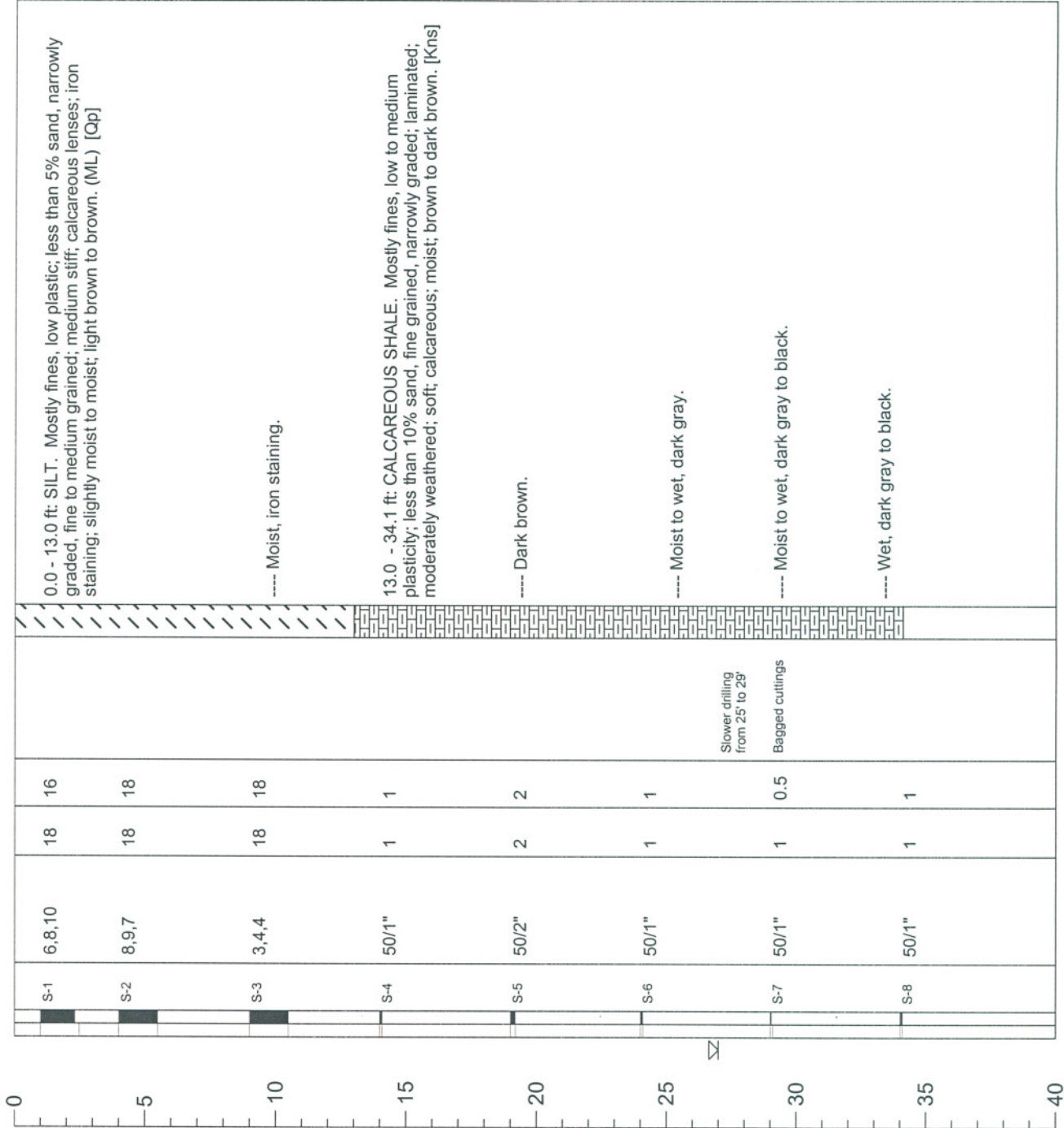
LOG OF DRILL HOLE

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PAGE: 1 OF 1
DATE: 7/14/05 / 7/14/05

LEGEND
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER ➤ ESTIMATED GROUNDWATER ➤

NOTES:RIG: Truck mounted CME - 75
4-inch diameter solid flight auger
SAMPLE METHOD: Auto Safety Hammer
Completed as a groundwater observation well

DEPTH FT.	SAMPLE			REMARKS	LOG GRAPHIC	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.			



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1203061.7 E 3232173.7
GROUND SURFACE ELEVATION (LOCAL - FT) 5048.8
GROUNDWATER ELEVATION : DRY DATE 8/4/05
DRILLED BY : HIGH PLAINS
LOGGED BY : NDM TOTAL DEPTH (FT) : 27.0

LOG OF DRILL HOLE

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PAGE: 1 OF 1
DATE: 8/4/05 / 8/4/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

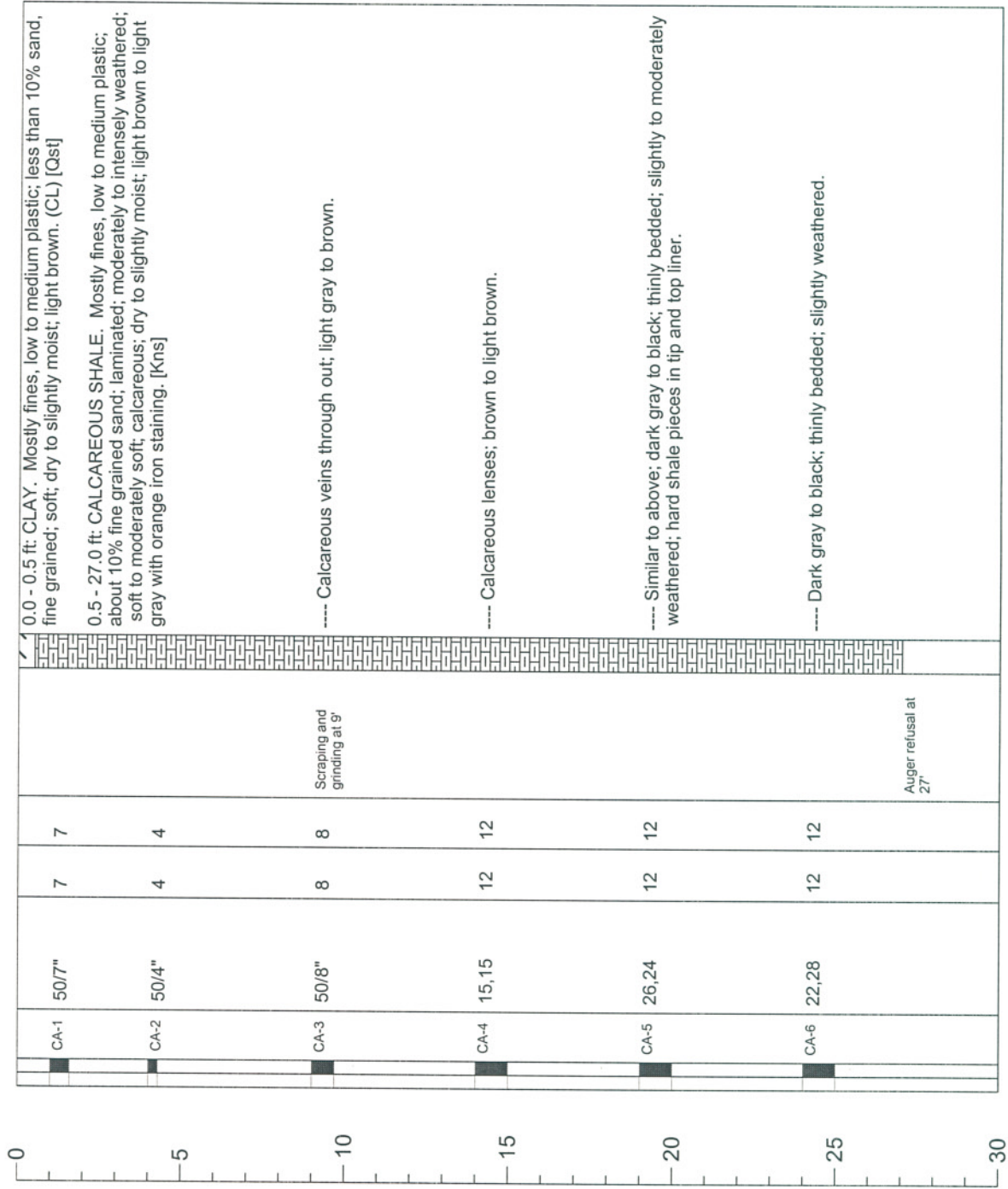
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER ESTIMATED GROUNDWATER

NOTES: RIG: Truck Mounted CME - 75
4" Diameter solid flight auger

SAMPLE METHOD: Automatic safety hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN. IN.		



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1197784.1 E 3232226.1
GROUND SURFACE ELEVATION (LOCAL - FT) \$055.9
GROUNDWATER ELEVATION : DRY DATE 7/15/05
DRILLED BY : HIGH PLAINS
LOGGED BY : NDM TOTAL DEPTH (FT) : 24.2

LOG OF DRILL HOLE

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PAGE: 1 OF 1
DATE: 7/15/05 / 7/15/05

LEGEND
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

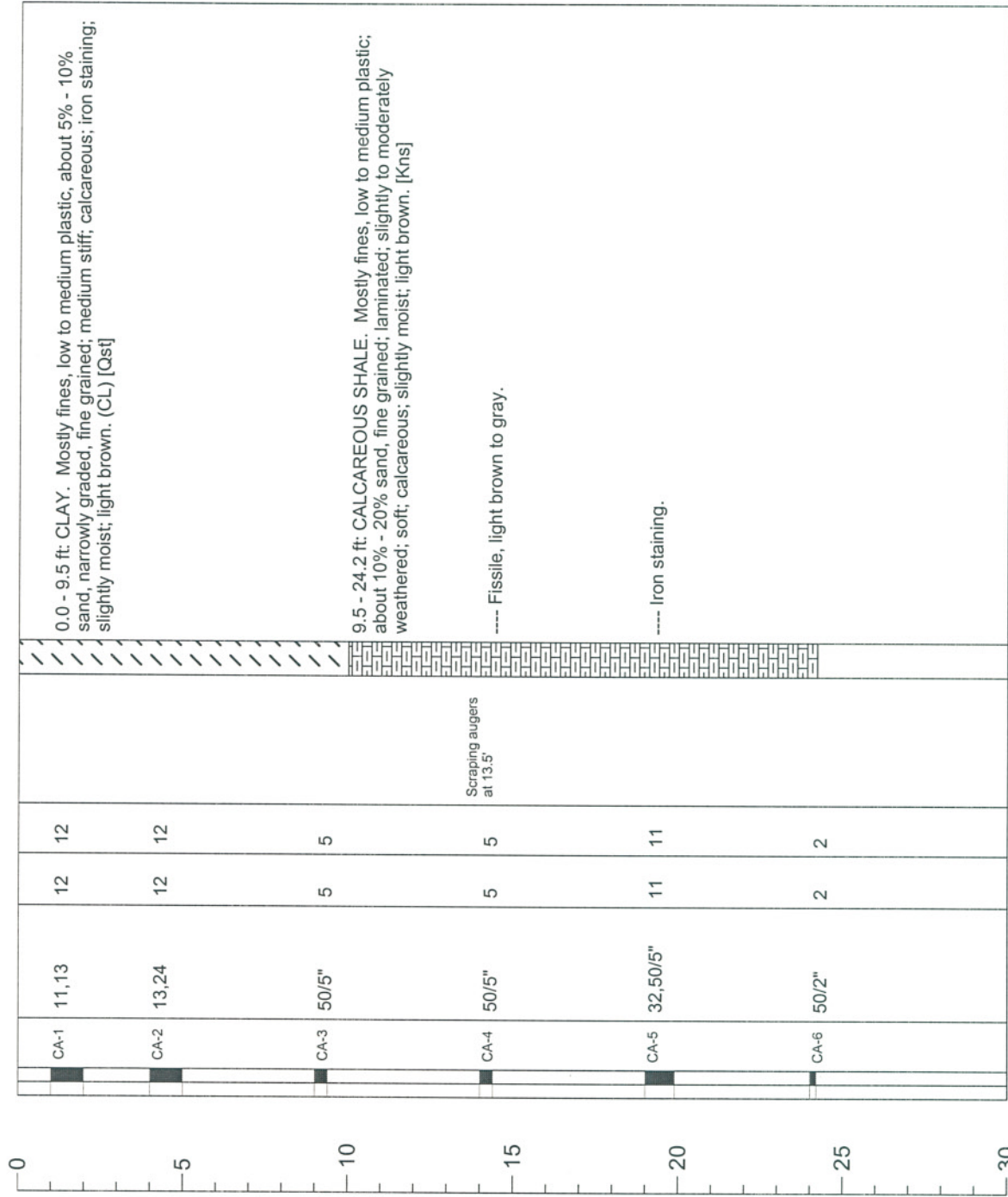
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER  ESTIMATED GROUNDWATER sz


NOTES:RIG: Truck mounted CME - 75
4-inch diameter solid flight auger

SAMPLE METHOD: Auto Safety Hammer
BACKFILL: Drill cuttings/bentonite chips

DEPTH FT.	SAMPLE			REMARKS	LOG GRAPHIC	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1196325.1 E 32322238.0
GROUND SURFACE ELEVATION (LOCAL - FT) : 5035.5
GROUNDWATER ELEVATION : DRY DATE 8/4/05
DRILLED BY : HIGH PLAINS
LOGGED BY : NDM TOTAL DEPTH (FT) : 24.6

LOG OF DRILL HOLE

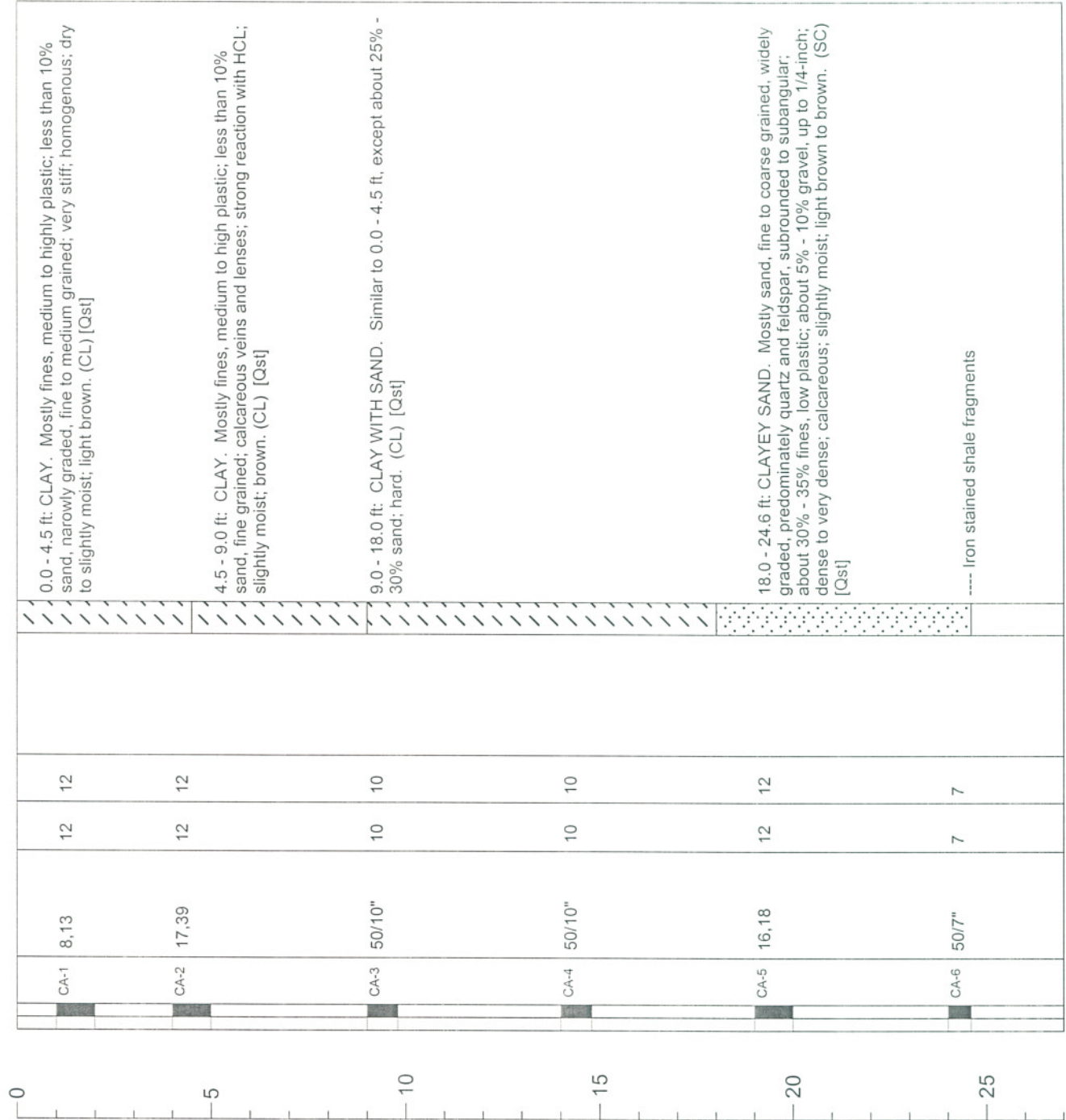
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PAGE: 1 OF 1
DATE: 8/4/05 / 8/4/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER ➤ ESTIMATED GROUNDWATER ☒

SAMPLE METHOD: Automatic safety hammer
BACKFILL: Drill cuttings



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1195487.8 E 3232246.8
GROUND SURFACE ELEVATION (LOCAL - FT) 5017.9
GROUNDWATER ELEVATION : DRY DATE 7/14/05
DRILLED BY : HIGH PLAINS
LOGGED BY : NDM TOTAL DEPTH (FT) : 34.1

LOG OF DRILL HOLE

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PAGE: 1 OF 2
DATE: 7/14/05 / 7/14/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

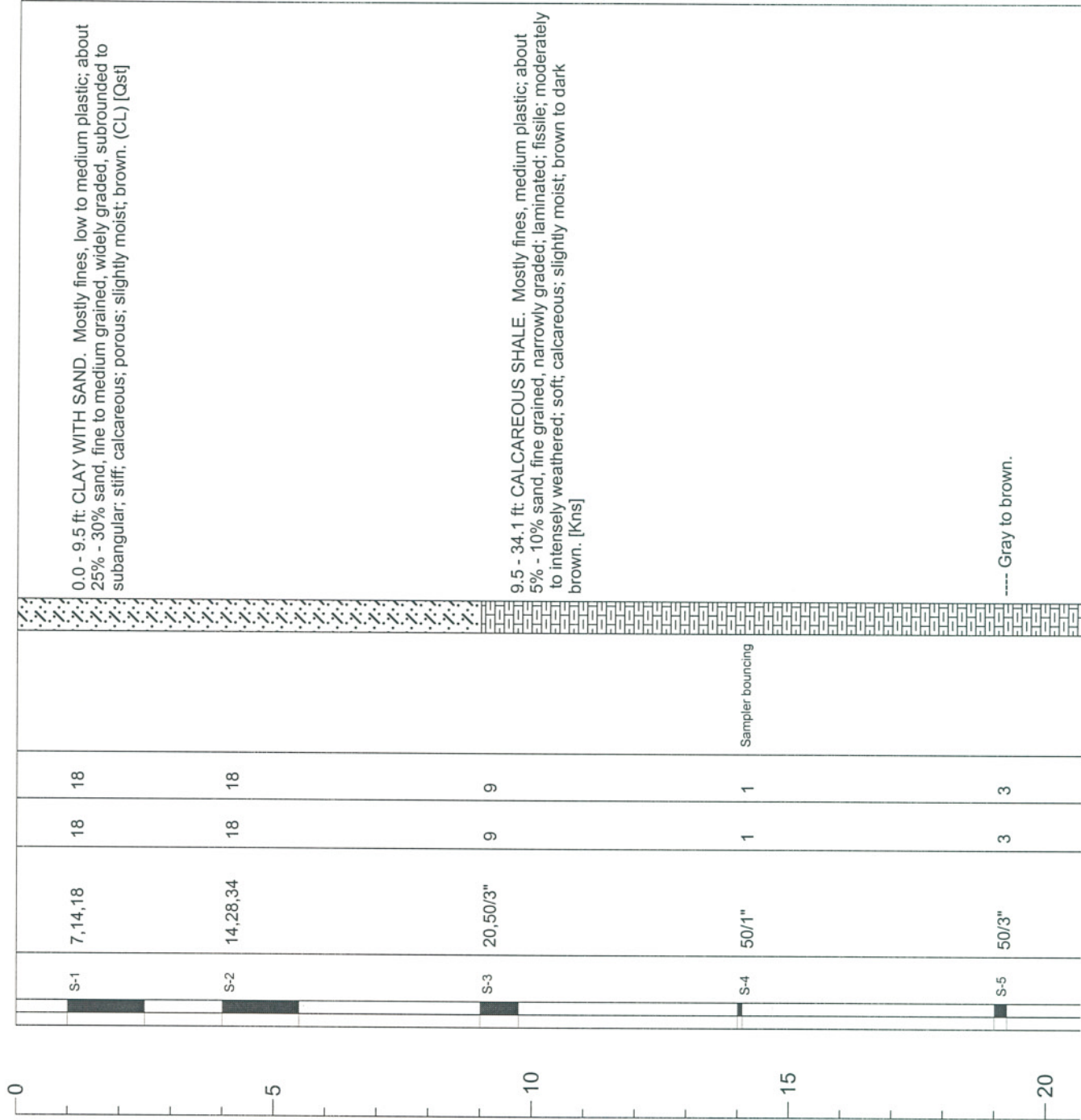
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER ESTIMATED GROUNDWATER

NOTES: RIG: Truck mounted CME - 75
4-inch diameter solid flight auger

SAMPLE METHOD: Auto Safety Hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN. IN.			



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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1195487.8 E 3232246.8

GROUND SURFACE ELEVATION (LOCAL - FT) 5017.9

GROUNDWATER ELEVATION : DRY DATE 7/14/05

DRILLED BY : HIGH PLAINS

LOGGED BY : NDM TOTAL DEPTH (FT) : 34.1

LOG OF DRILL HOLE

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PAGE: 2 OF 2
DATE: 7/14/05 / 7/14/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

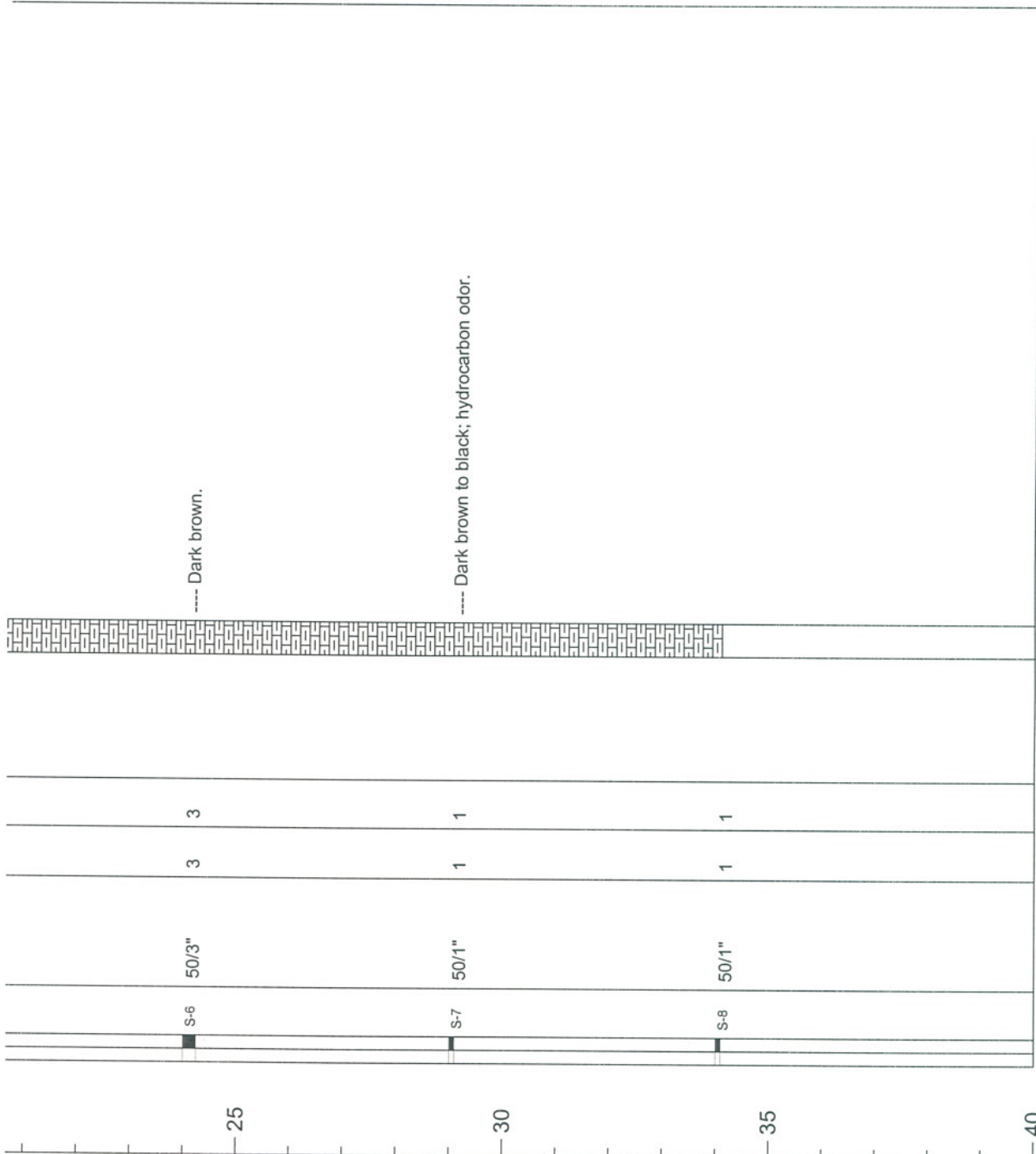
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE




GROUNDWATER ESTIMATED GROUNDWATER

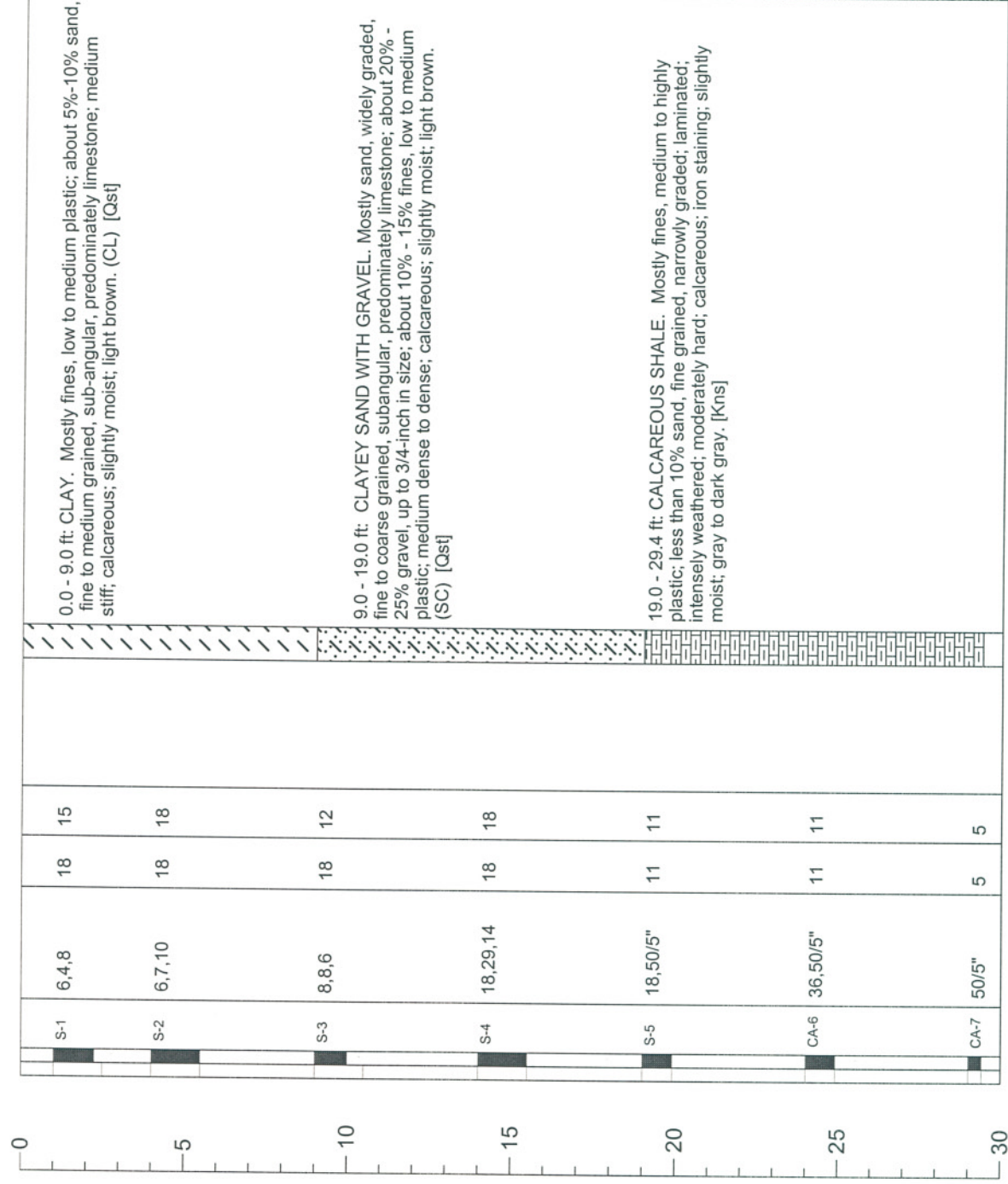
NOTES: RIG: Truck mounted CME - 75
4-inch diameter solid flight auger

SAMPLE METHOD: Auto Safety Hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		



 Geotechnical Environmental & Water Resources Engineering		LOG OF DRILL HOLE		PL - 249	
PROJECT NAME : Southern Delivery System PROJECT NUMBER : 022950 BORING LOCATION : N 1193006.2 E 3232268.3 GROUND SURFACE ELEVATION (LOCAL - FT) 5020.4 GROUNDWATER ELEVATION : DRY DATE 7/14/05 DRILLED BY : HIGH PLAINS LOGGED BY : NDM TOTAL DEPTH (FT) : 29.4 NOTES: RIG: Truck mounted CME - 75 4-inch diameter solid flight auger		LEGEND 1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER 2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL 3) REC - RECOVERY LENGTH OF SAMPLE S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE GROUNDWATER  ESTIMATED GROUNDWATER 		PAGE: 1 OF 1 DATE: 7/14/05 / 7/14/05	
SAMPLE METHOD: Auto Safety Hammer BACKFILL: Drill cuttings		SOIL AND ROCK DESCRIPTIONS			



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1181745.2 E 3232378.8
GROUND SURFACE ELEVATION (LOCAL - FT) 4971.5
GROUNDWATER ELEVATION : DRY DATE 7/15/05
DRILLED BY : HIGH PLAINS
LOGGED BY : NDM TOTAL DEPTH (FT) : 24.5

LOG OF DRILL HOLE

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DATE: 7/15/05 / 7/15/05

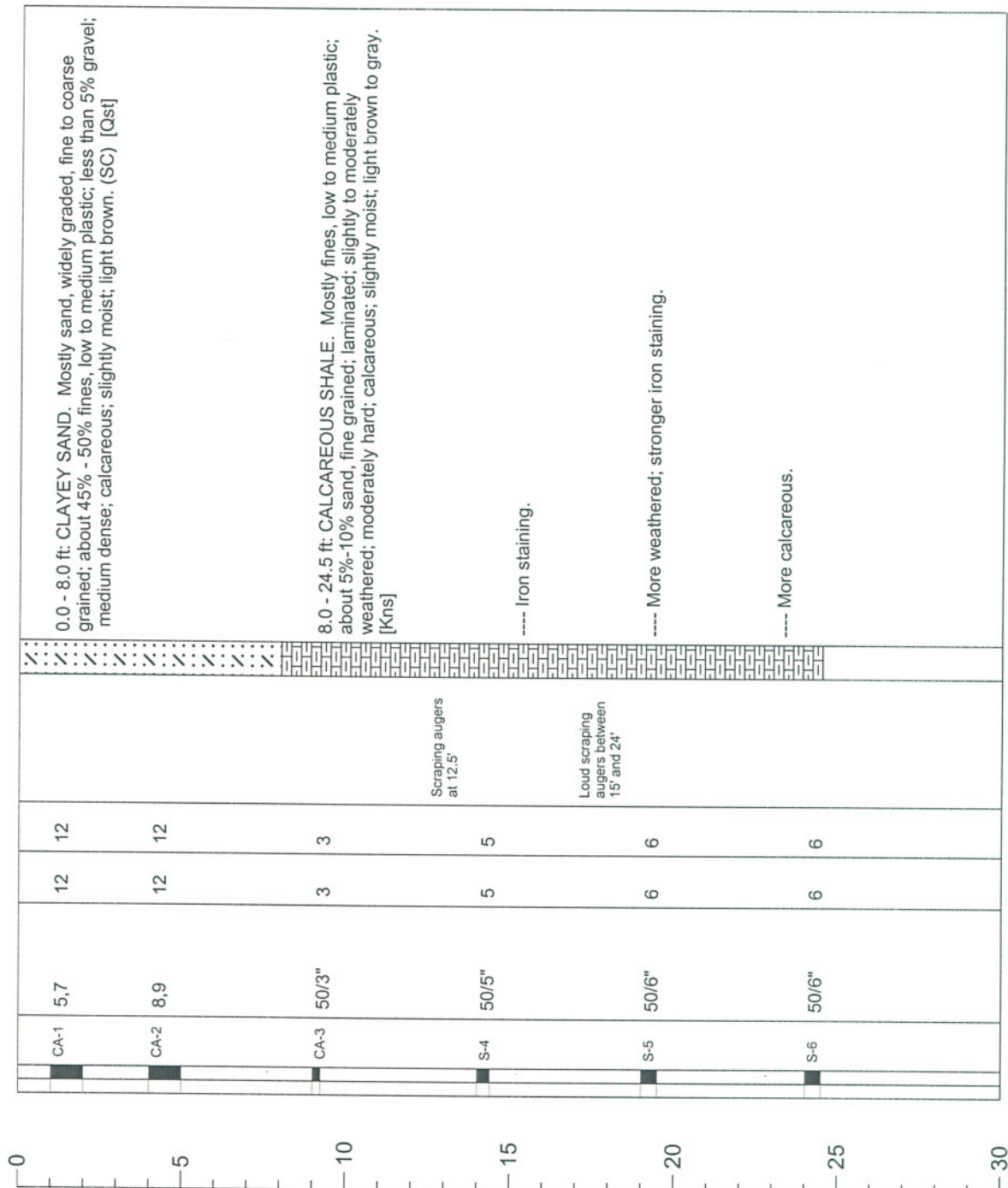
LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER  ESTIMATED GROUNDWATER 

NOTES: RIG: Truck mounted CME - 75
4-inch diameter solid flight auger

SAMPLE METHOD: Auto Safety Hammer
BACKFILL: Drill cuttings

DEPTH FT.	TYPE and NO.	SAMPLE			REMARKS	SOIL AND ROCK DESCRIPTIONS
		- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1180438.4 E 3232402.0
GROUND SURFACE ELEVATION (LOCAL - FT) 4980.7
GROUNDWATER ELEVATION : DRY DATE 7/15/05
DRILLED BY : HIGH PLAINS
LOGGED BY : NDM TOTAL DEPTH (FT) : 31.5

LOG OF DRILL HOLE



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PAGE: 1 OF 2
DATE: 7/15/05 / 7/15/05

LEGEND

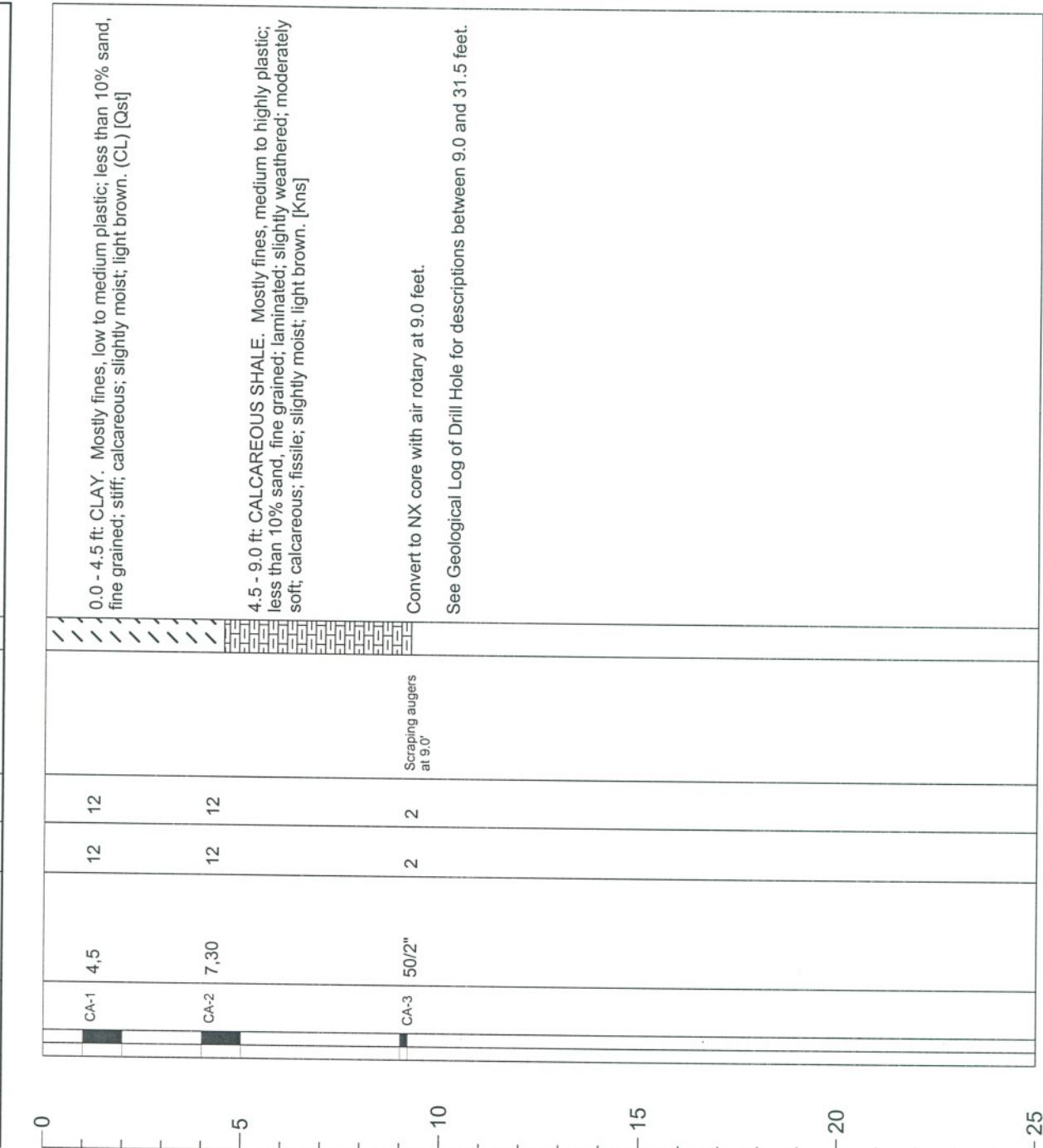
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER  ESTIMATED GROUNDWATER 

SAMPLE METHOD: Auto Safety Hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN. IN.	- 3 - REC IN. IN.		



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1178323.5 E 3232325.1
GROUND SURFACE ELEVATION (LOCAL - FT) : 4940.7
GROUNDWATER ELEVATION : DRY DATE 7/13/05
DRILLED BY : HIGH PLAINS
LOGGED BY : NDM TOTAL DEPTH (FT) : 28.0

LOG OF DRILL HOLE

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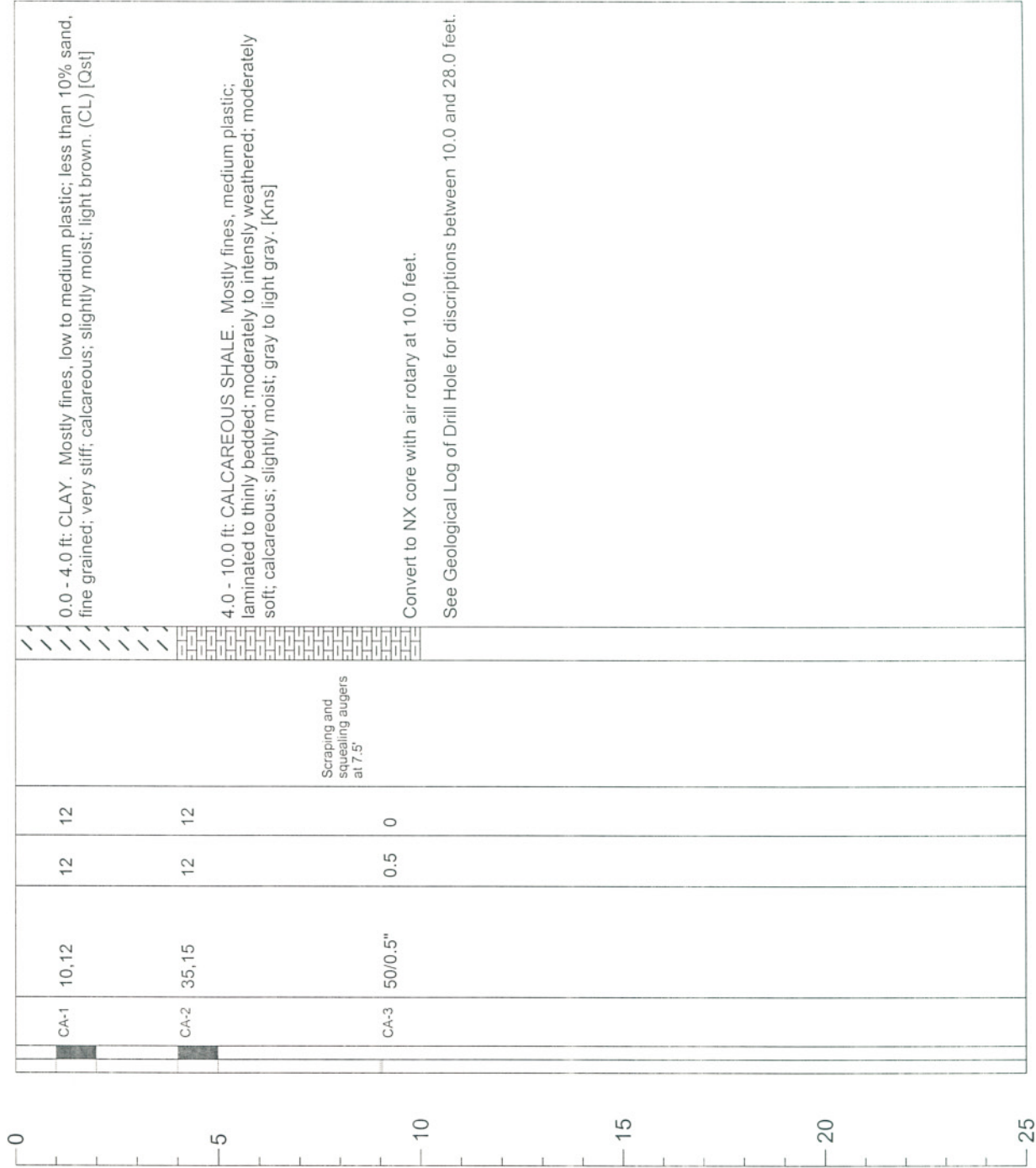
PAGE: 1 OF 2
DATE: 7/13/05 / 7/13/05

LEGEND

1) BLOWS PER 6 IN. - 140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER ➤ ESTIMATED GROUNDWATER ✕

NOTES: RIG: Truck mounted CME - 75
SAMPLE METHOD: Auto Safety Hammer
4-inch diameter solid flight auger
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN. - 3 - REC IN.			



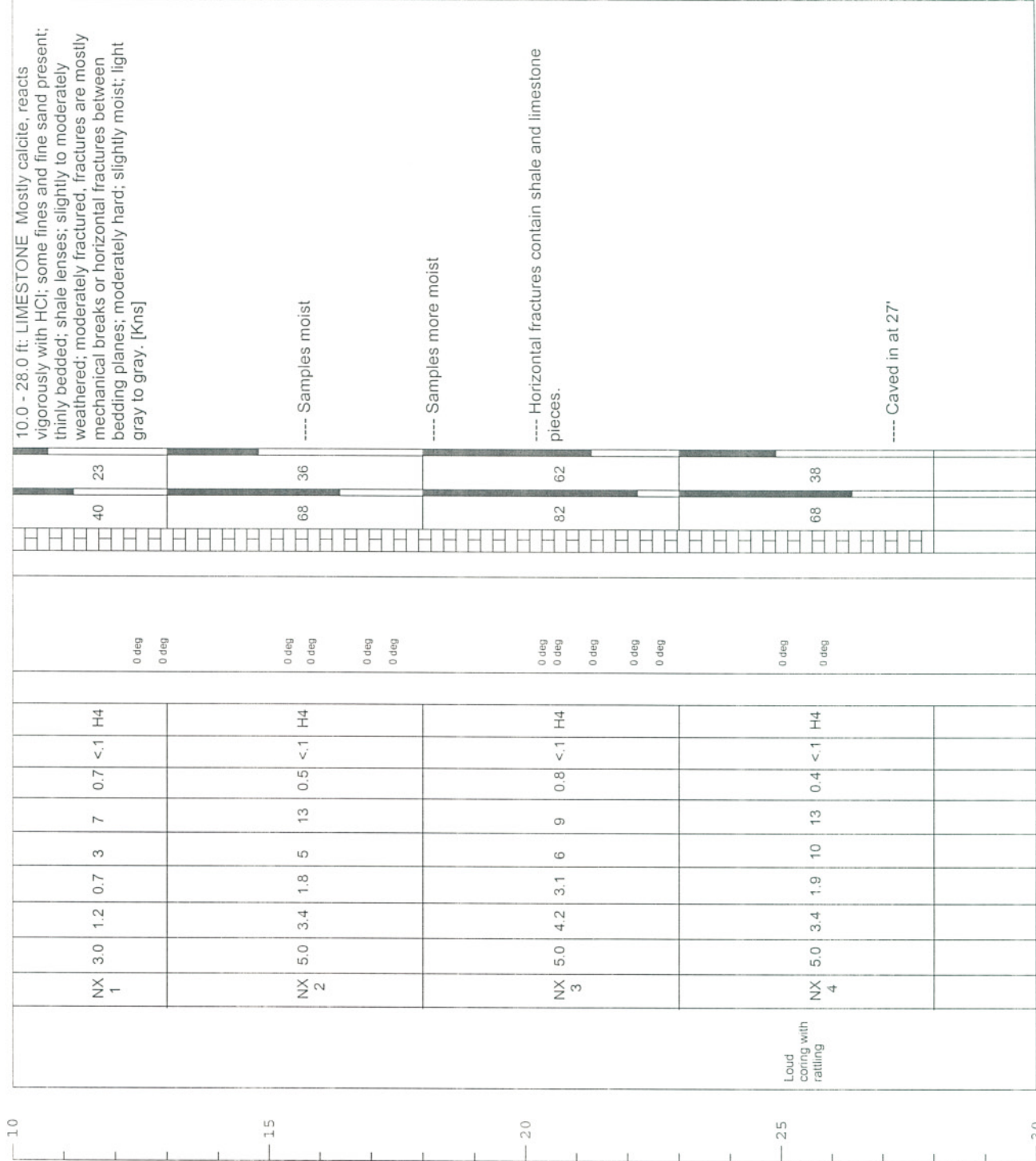


GEOLOGICAL LOG OF DRILL HOLE

HOLE NO.
PL-253

PROJECT NAME Southern Delivery System PROJECT NO. 022950 SHEET 2 OF 2
LOCATION N1178323.5 GROUND SURFACE ELEV. (FT) 4940.7 TREND - PLUNGE 90
DATE STARTED/FINISHED 7/13/05 / 7/13/05 DRILLED BY HIGH PLAINS LOGGED BY NDM
GROUNDWATER EL. 16.0 DATE 7/13/05 OVERBURDEN DEPTH (FT) 4.0 TOTAL DEPTH (FT) 28.0

ELEVATION DEPTH (FT)	NOTES GROUNDWATER CONDITIONS DRILLING CONDITIONS	CORING (SEE LEGEND)								JOINT DESCRIPTION (SEE LEGEND)	JOINT SYMBOL	GRAPHIC LOG	PERCENT RECOVERY	PERCENT ROD	ENGINEERING AND GEOLOGICAL DESCRIPTION AND CLASSIFICATION
		INTERVAL	PENETRATION (FT)	RECOVERY (FT)	ROD (FT)	CORING TIME (MIN)	NO. OF PIECES	LONGEST (FT)	SHORTEST (FT)	HARDNESS					



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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1177945.3 E 3232343.5

GROUND SURFACE ELEVATION (LOCAL - FT) 4931.5

GROUNDWATER ELEVATION : 4930.5 DATE 6/28/05

DRILLED BY : HIGH PLAINS

LOGGED BY : TCM/NDM TOTAL DEPTH (FT) : 10.0

LOG OF DRILL HOLE

PL - 254

PAGE: 1 OF 1

DATE: 6/28/05 / 6/28/05

LEGEND

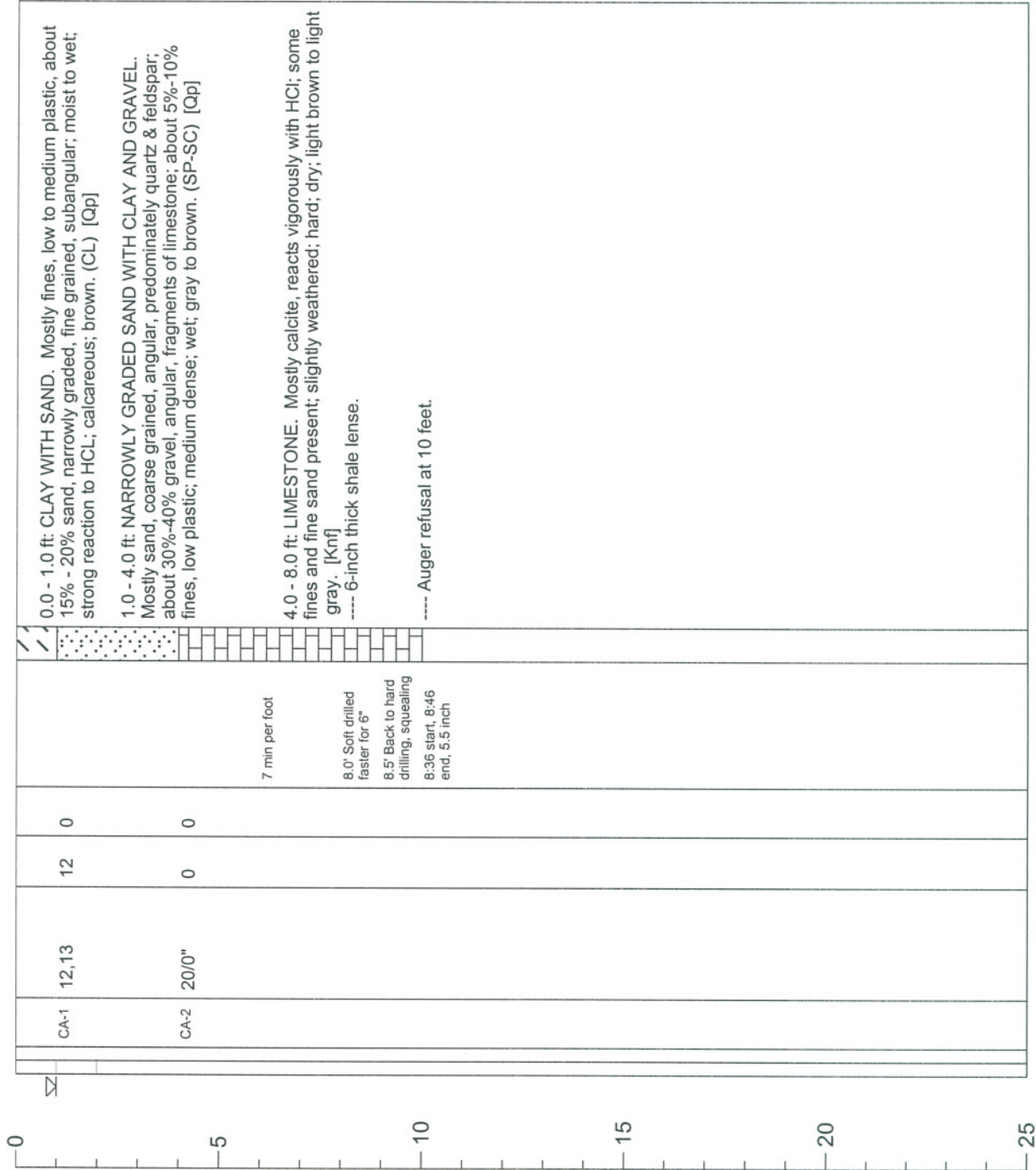
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE


GROUNDWATER ➤ ESTIMATED GROUNDWATER ➤

NOTES:RIG: Truck mounted CME - 45
4-inch diameter solid flight auger
SAMPLE METHOD: Rope and cathode to drive safety hammer
Completed as a groundwater observation well

DEPTH FT.	SAMPLE			REMARKS	LOG GRAPHIC	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		



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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1177840.4 E 3232327.6

GROUND SURFACE ELEVATION (LOCAL - FT) :4938.4

GROUNDWATER ELEVATION : DRY DATE 6/28/05

DRILLED BY : HIGH PLAINS

LOGGED BY : TCM/NDM TOTAL DEPTH (FT) : 19.0

NOTES: RIG: CME - 45

4-in. DIAMETER SOLID STEM AUGER

SAMPLE METHOD: Rope and cathead to drive safety hammer
BACKFILL: Drill cuttings/bentonite chips

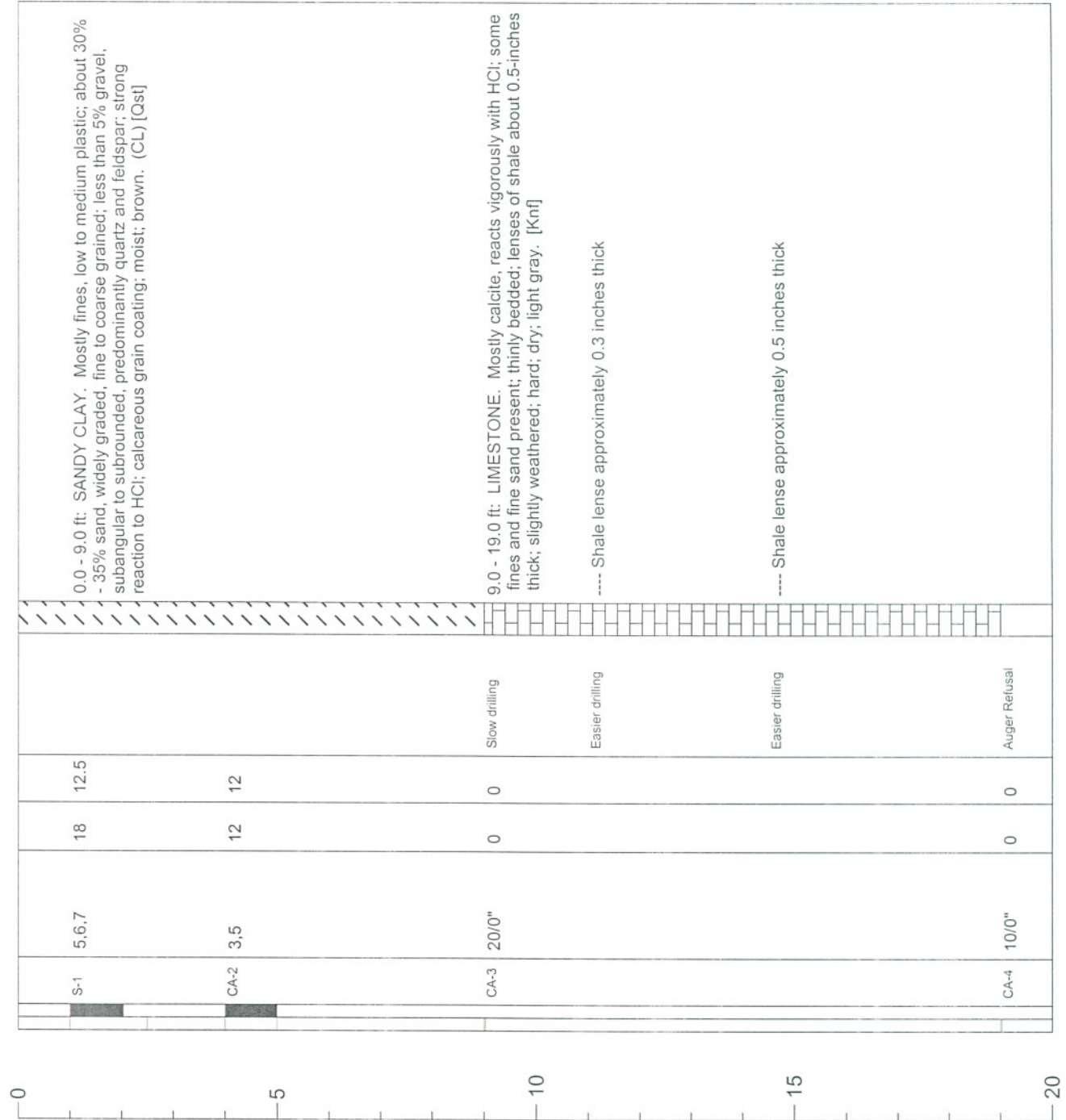
LOG OF DRILL HOLE

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PAGE: 1 OF 1
DATE: 6/28/05 / 6/28/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER ESTIMATED GROUNDWATER



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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1171555.0 E 3232265.1

GROUND SURFACE ELEVATION (LOCAL - FT) :4960.2

GROUNDWATER ELEVATION : DRY DATE 7/13/05

DRILLED BY : HIGH PLAINS

LOGGED BY : NDM TOTAL DEPTH (FT) : 22.0

LOG OF DRILL HOLE

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PAGE: 1 OF 2

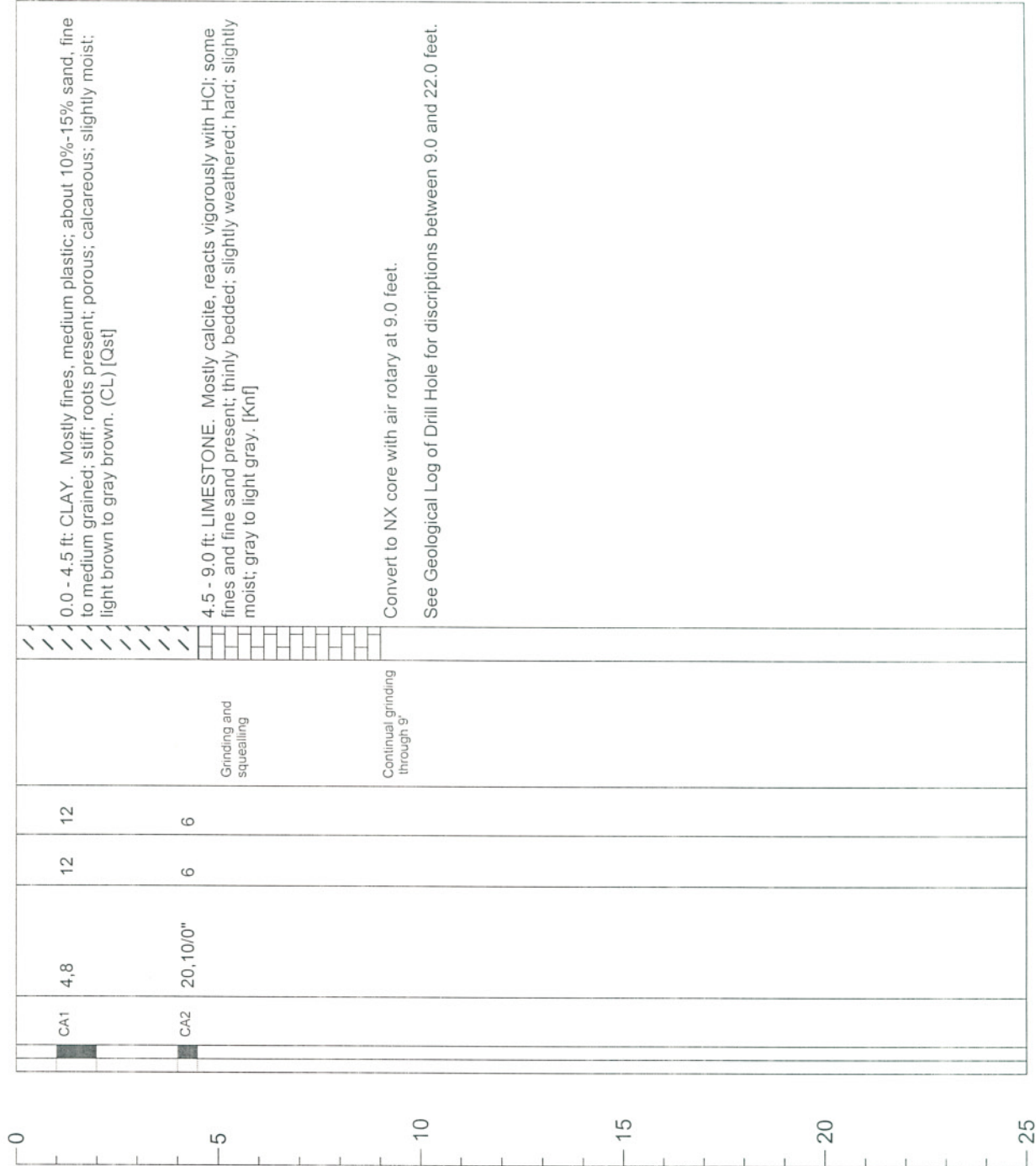
DATE: 7/13/05 / 7/13/05

LEGEND
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER ➤ ESTIMATED GROUNDWATER ✕

NOTES: RIG: Truck mounted CME - 75
4-inch diameter solid flight auger

SAMPLE METHOD: Auto Safety Hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN. IN.	- 3 - REC IN. IN.		



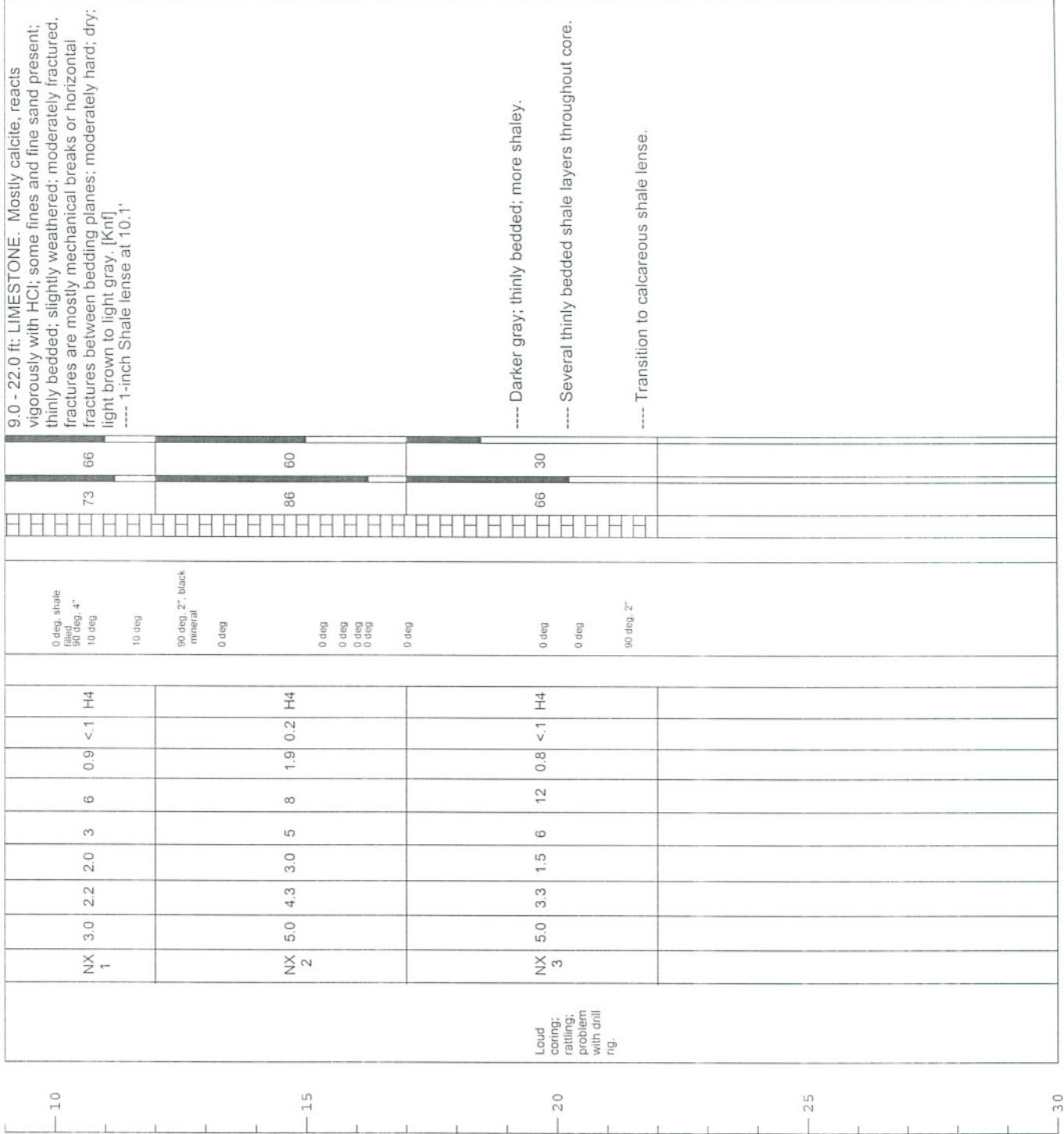



GEOLOGICAL LOG OF DRILL HOLE

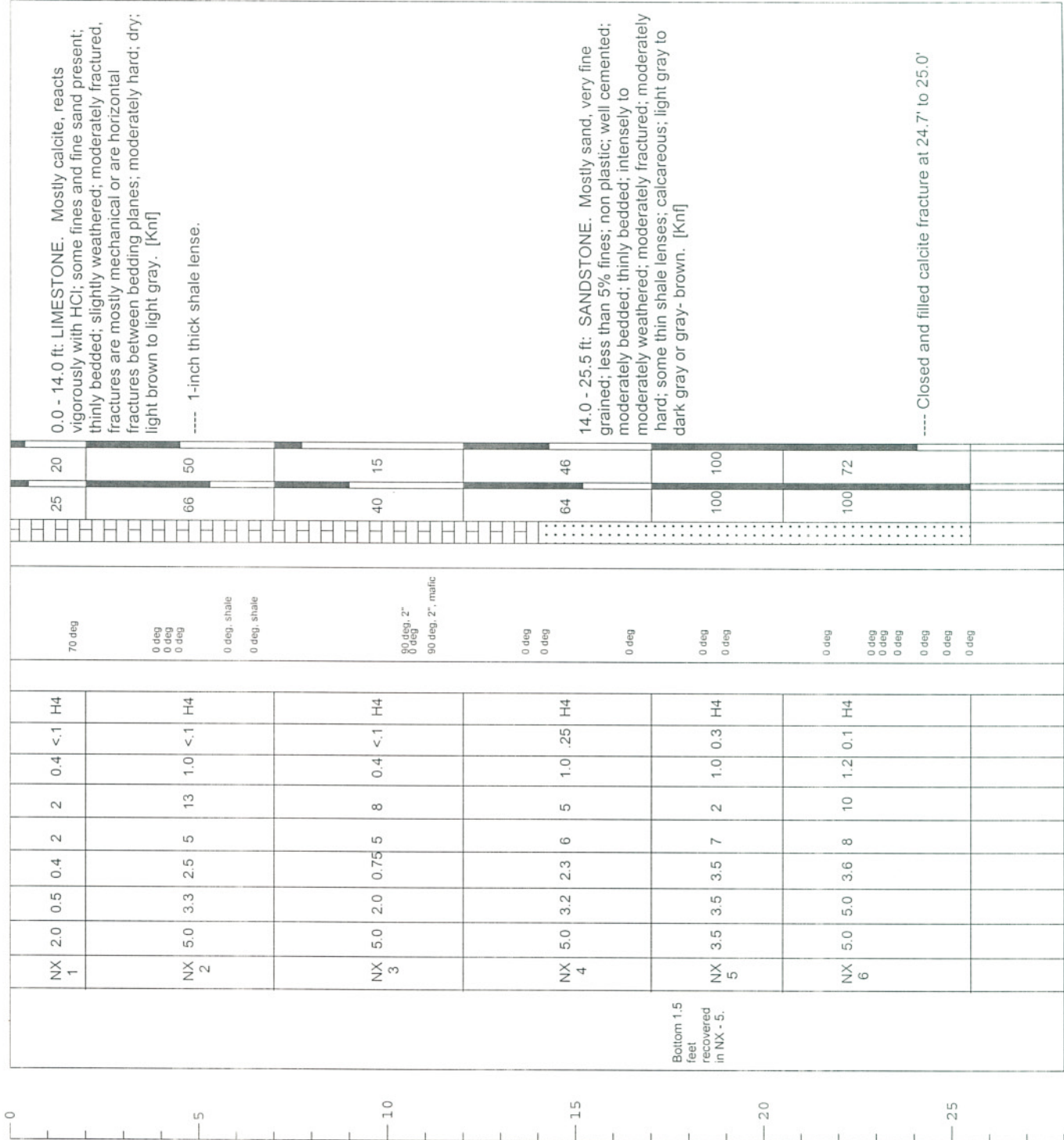
HOLE NO.
PL-256

PROJECT NAME Southern Delivery System PROJECT NO. 022950 SHEET 2 OF 2
 LOCATION N 1171555.0 GROUND SURFACE ELEV. (FT) 4960.2 TREND - PLUNGE 90
 DATE STARTED/FINISHED 7/13/05 / 7/13/05 DRILLED BY HIGH PLAINS LOGGED BY NDM
 GROUNDWATER EL. DRY DATE 7/13/05 OVERBURDEN DEPTH (FT) 4.5 TOTAL DEPTH (FT) 22.0

ELEVATION DEPTH (FT)	NOTES GROUNDWATER CONDITIONS DRILLING CONDITIONS	CORING (SEE LEGEND)							JOINT DESCRIPTION (SEE LEGEND)	JOINT SYMBOL	GRAPHIC LOG	PERCENT RECOVERY	PERCENT ROD	ENGINEERING AND GEOLOGICAL DESCRIPTION AND CLASSIFICATION
		INTERVAL	PENETRATION (FT)	RECOVERY (FT)	ROD (FT)	CORING TIME (MIN)	NO. OF PIECES	LONGEST (FT)	SHORTEST (FT)	HARDNESS				



Geotechnical Environmental & Water Resources Engineering				GEOLOGICAL LOG OF DRILL HOLE		HOLE NO. PL-257	
PROJECT NAME Southern Delivery System		PROJECT NO. 022950		SHEET 1		OF 1	
LOCATION N 1171149.5 E 3231437.2		GROUND SURFACE ELEV. (FT) 4963.7		TREND -		PLUNGE 90	
DATE STARTED/FINISHED 7/12/05		/		7/12/05		DRILLED BY HIGH PLAINS	
GROUNDWATER EL. DRY		DATE 7/12/05		OVERBURDEN DEPTH (FT) 0		LOGGED BY NDM	
TOTAL DEPTH (FT) 25.5							
ELEVATION		DEPTH (FT)		NOTES		CORING (SEE LEGEND)	
GROUNDWATER		INTERVAL		PENETRATION (FT)		RECOVERY (FT)	
CONDITIONS		ROD (FT)		CORING TIME (MIN)		NO. OF PIECES	
DRILLING		HARDNESS		SHORTEST (FT)		LONGEST (FT)	
CONDITIONS		INSITU TESTING		JOINT DESCRIPTION		(SEE LEGEND)	
		JOINT SYMBOL		GRAPHIC LOG		PERCENT RECOVERY	
		PERCENT ROD		ENGINEERING AND GEOLOGICAL		DESCRIPTION AND CLASSIFICATION	



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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1170349.9, E 3230117.7

GROUND SURFACE ELEVATION (LOCAL - FT) 4964.8

GROUNDWATER ELEVATION : DRY DATE 7/12/05

DRILLED BY : HIGH PLAINS

LOGGED BY : NDM TOTAL DEPTH (FT) : 25.0


LOG OF DRILL HOLE

PL - 258B

PAGE: 1 OF 1

DATE: 7/12/05 / 7/12/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER  ESTIMATED GROUNDWATER SZ

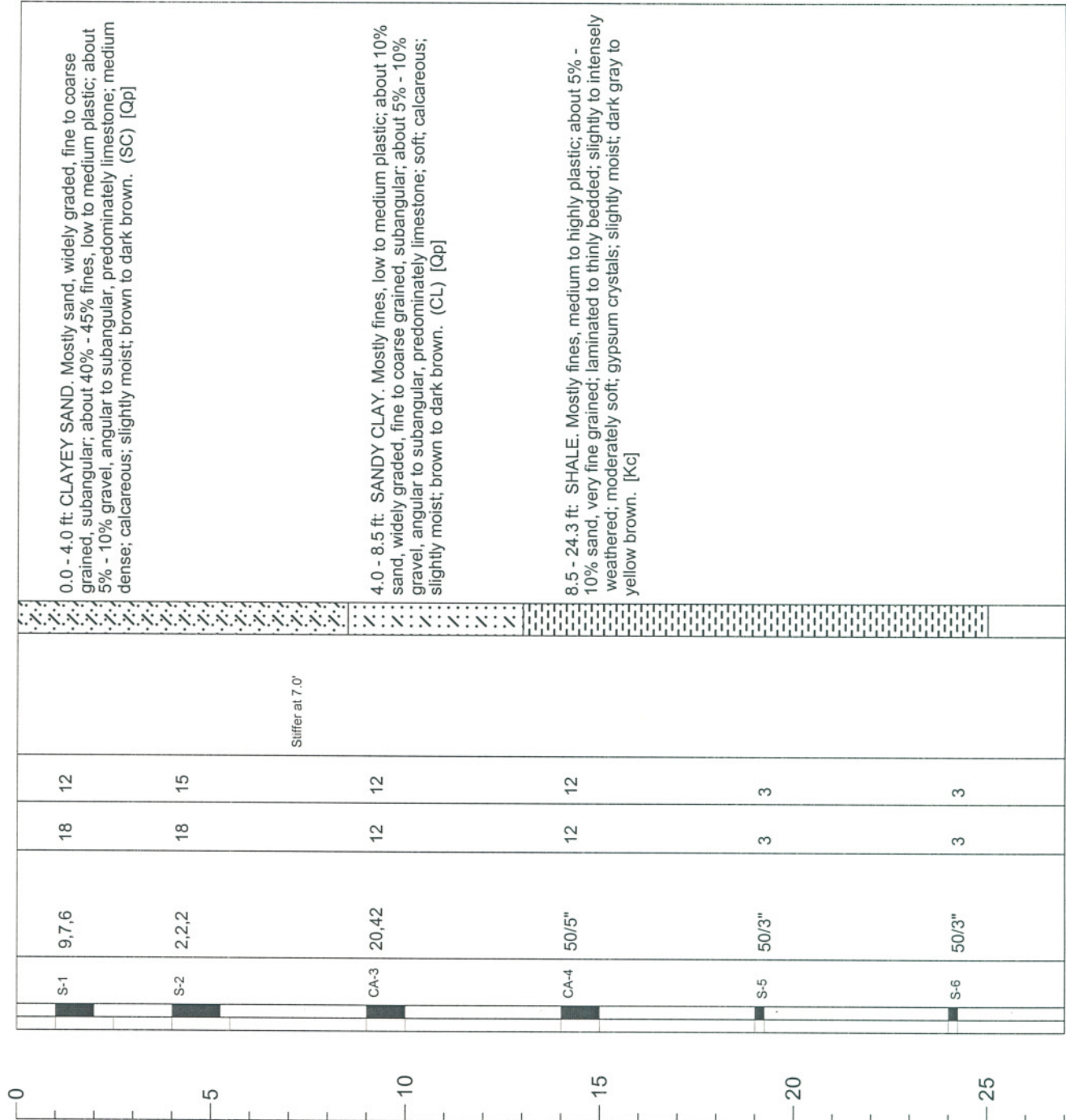
NOTES: RIG: Truck mounted CME - 75

SAMPLE METHOD: Auto Safety Hammer

4-inch diameter solid flight auger

BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE				REMARKS	LOG GRAPHIC	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.			



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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1166405.0 E 3229589.9

GROUND SURFACE ELEVATION (LOCAL - FT) : 5037.7

GROUNDWATER ELEVATION : DRY DATE 7/12/05

DRILLED BY : HIGH PLAINS



LOGGED BY : NDM TOTAL DEPTH (FT) : 32.0

LOG OF DRILL HOLE

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PAGE: 1 OF 2
DATE: 7/12/05 / 7/12/05


LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER  ESTIMATED GROUNDWATER 

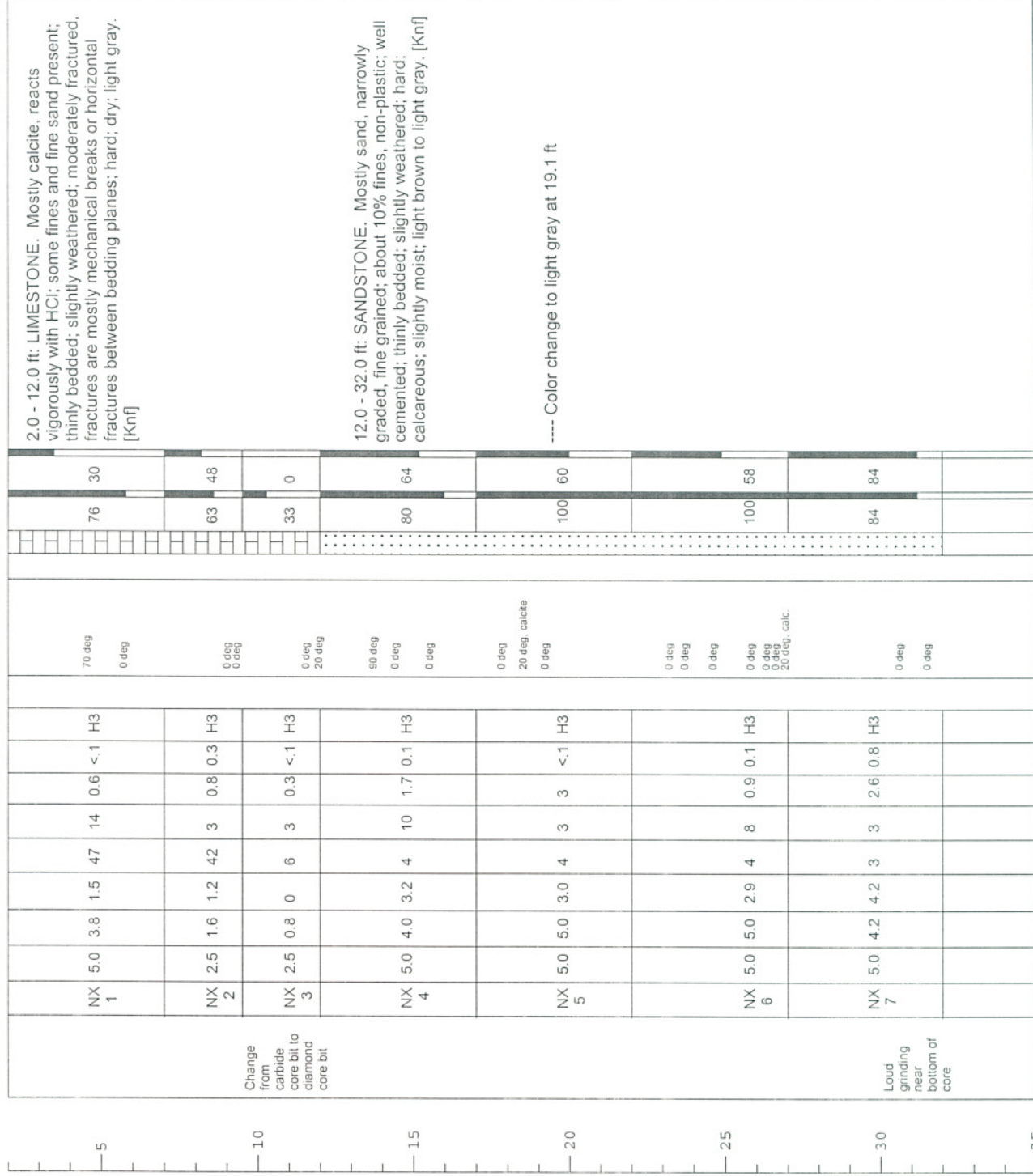
NOTES: RIG: Truck mounted CME - 75
4-inch diameter solid flight auger

SAMPLE METHOD: Auto Safety Hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	LOG GRAPHIC	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		

0						0 - 0.5 ft: LIMESTONE COBBLES WITH CLAY. Mostly cobbles; about 10% - 15% gravel; subangular to angular, thin shards; strong reaction with HCl; about 35% - 40% fines, low plastic; slightly moist; light brown. [Qcr]
5						0.5 - 2.0 ft: LIMESTONE. Mostly calcite, reacts vigorously with HCl; some fines and fine sand present; thinly bedded; slightly weathered; hard; slightly moist; gray to light gray. [Knf] Convert to NX core with air rotary at 2.0 feet.
10						See Geological Log of Drill Hole for descriptions between 2.0 and 32.0 feet.

PROJECT NAME		Southern Delivery System		PROJECT NO.		022950		SHEET 2 OF 2	
LOCATION		N 1166405.0 E 3229589.9		GROUND SURFACE ELEV. (FT)		5037.7		TREND	
DATE STARTED/FINISHED		7/12/05		/		7/12/05		DRILLED BY HIGH PLAINS	
GROUNDWATER EL.		DRY		DATE		7/12/05		OVERBURDEN DEPTH (FT) 0.5	
								PLUNGE 90	
								LOGGED BY NDM	
								TOTAL DEPTH (FT) 32.0	

[illegible]

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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1165975, E 3229036
GROUND SURFACE ELEVATION (LOCAL - FT) 4965
GROUNDWATER ELEVATION : DRY DATE 7/11/05
DRILLED BY : HIGH PLAINS
LOGGED BY : NDM/KGA TOTAL DEPTH (FT) : 24.4

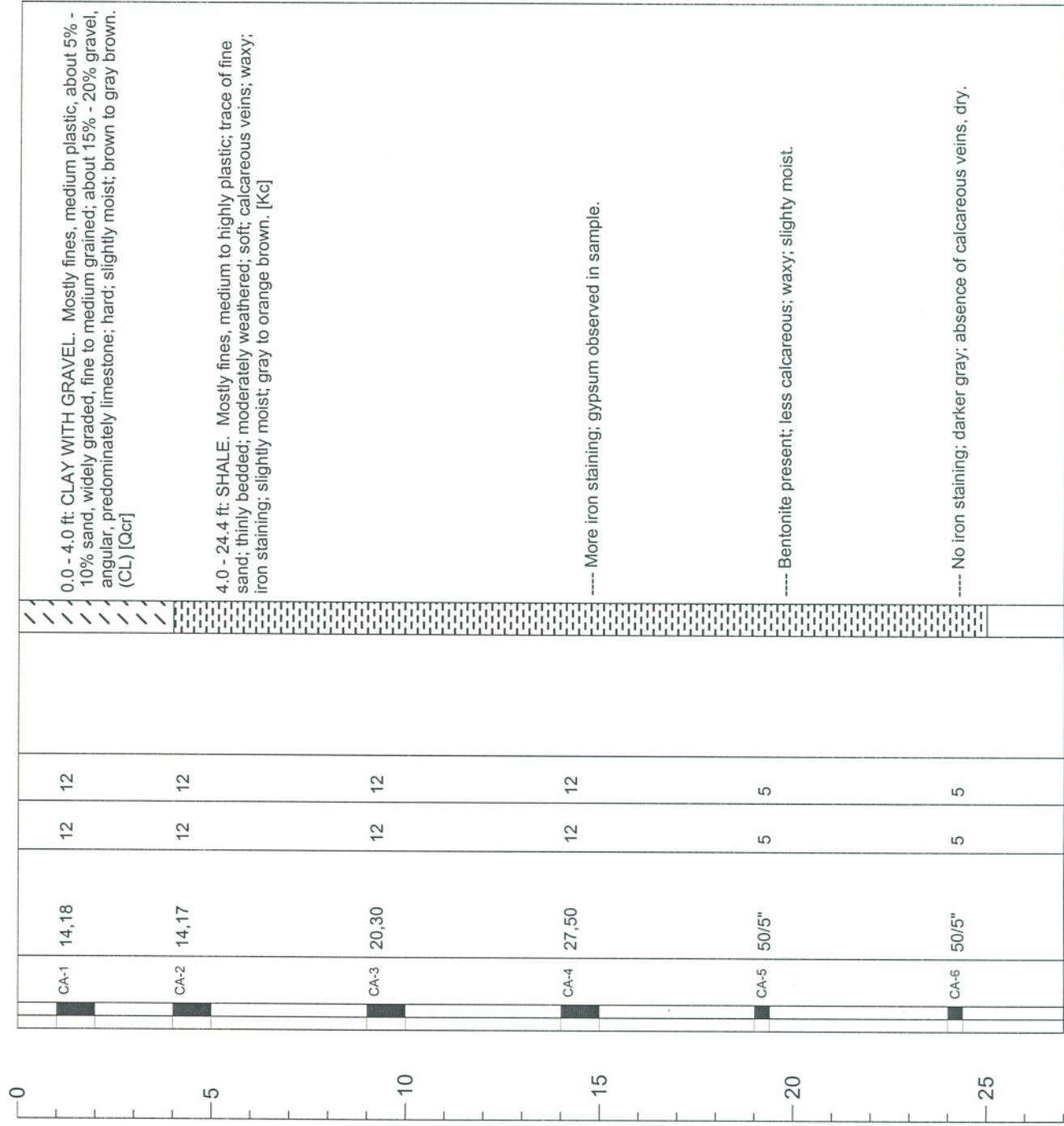
LOG OF DRILL HOLE




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PAGE: 1 OF 1
DATE: 7/11/05 / 7/11/05

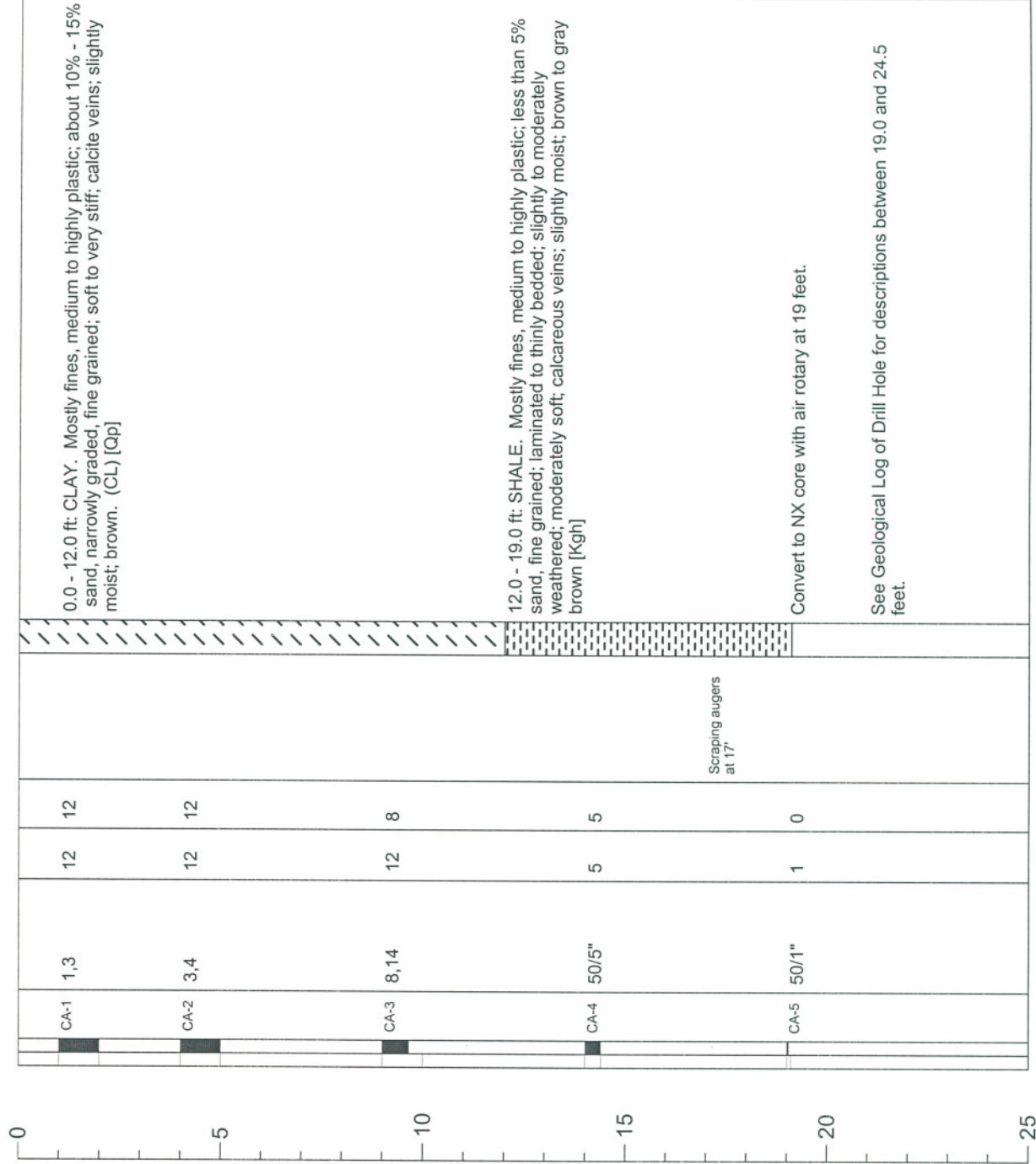
LEGEND
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER ➤ ESTIMATED GROUNDWATER ⚡

SAMPLE METHOD: Auto Safe Hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	LOG GRAPHIC	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - IN.	- 3 - REC IN.		



 Geotechnical Environmental & Water Resources Engineering		LOG OF DRILL HOLE		PL - 261	
PROJECT NAME : Southern Delivery System PROJECT NUMBER : 022950 BORING LOCATION : N 1165928.9, E 3226188.8 GROUND SURFACE ELEVATION (LOCAL - FT) : 4959.0 GROUNDWATER ELEVATION : DRY DATE 7/11/05 DRILLED BY : HIGH PLAINS LOGGED BY : NDM/KGA TOTAL DEPTH (FT) : 24.5 NOTES: RIG: Truck mounted CME - 75 4-inch diameter solid flight auger		LEGEND 1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER 2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL 3) REC - RECOVERY LENGTH OF SAMPLE S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE GROUNDWATER  ESTIMATED GROUNDWATER 		PAGE: 1 OF 2 DATE: 7/11/05 / 7/11/05	
SAMPLE METHOD: Auto Safety Hammer BACKFILL: Drill cuttings		SOIL AND ROCK DESCRIPTIONS			





PROJECT NAME Southern Delivery System

GEOLOGICAL LOG OF DRILL HOLE

HOLE NO.

PL-261

LOCATION N 1165928.9

GROUND SURFACE ELEV. (FT) 4959.0

TREND -

PROJECT NO. 022950

SHEET 2

OF 2

DATE STARTED/FINISHED 7/11/05

DRILLED BY HIGH PLAINS

LOGGED BY NDM/KGA

PLUNGE 90

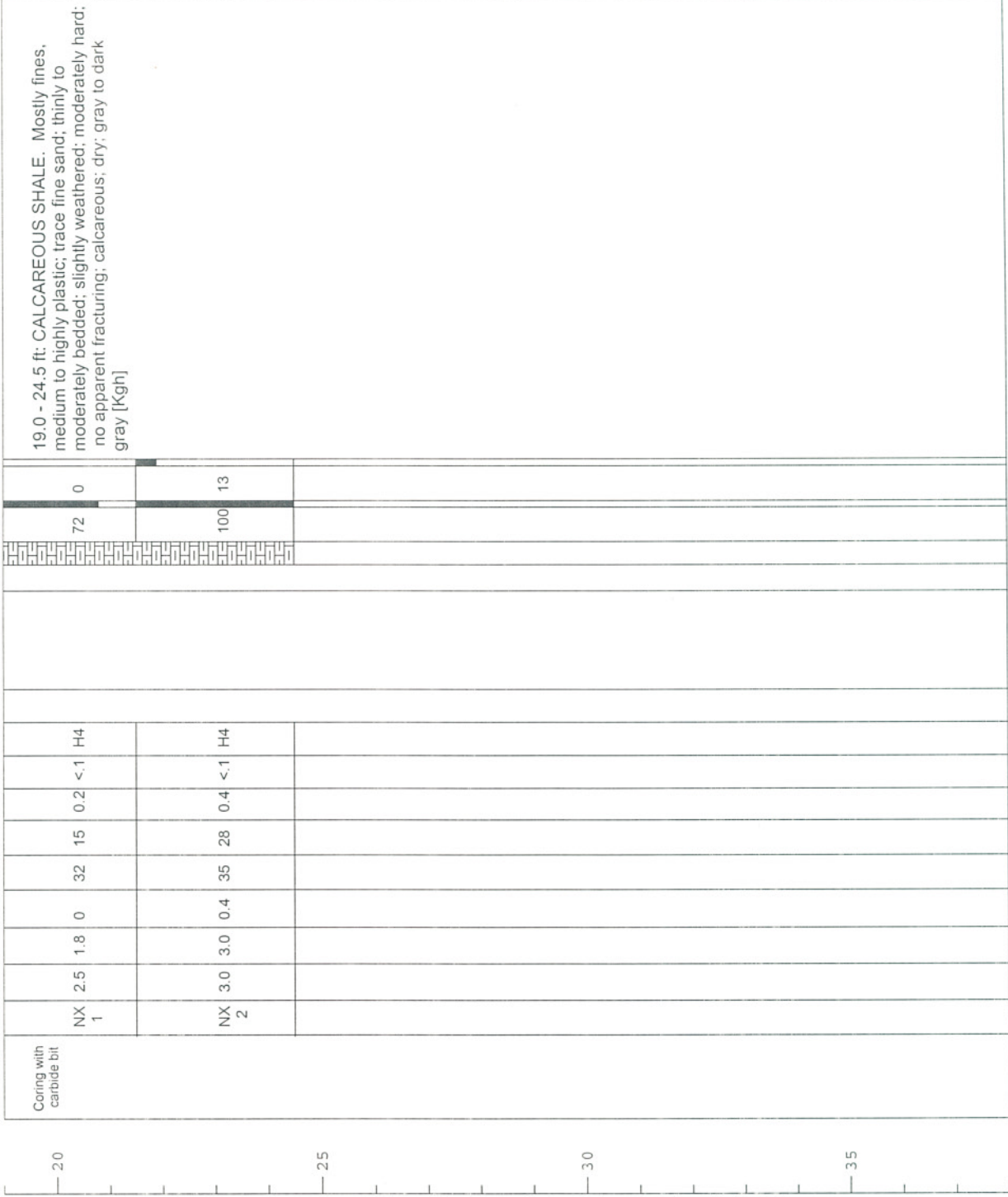
TOTAL DEPTH (FT) 24.5


GROUNDWATER EL. DRY


DATE 7/11/05

OVERBURDEN DEPTH (FT) 12.0

DEPTH (FT)	ELEVATION	NOTES	INTERVAL	PENETRATION (FT)	RECOVERY (FT)	R/D (FT)	CORING TIME (MIN)	NO. OF PIECES	LONGEST (FT)	SHORTEST (FT)	HARDNESS	INSITU TESTING	JOINT DESCRIPTION	(SEE LEGEND)	JOINT SYMBOL	GRAPHIC LOG	PERCENT RECOVERY	PERCENT ROD	ENGINEERING AND GEOLOGICAL DESCRIPTION AND CLASSIFICATION
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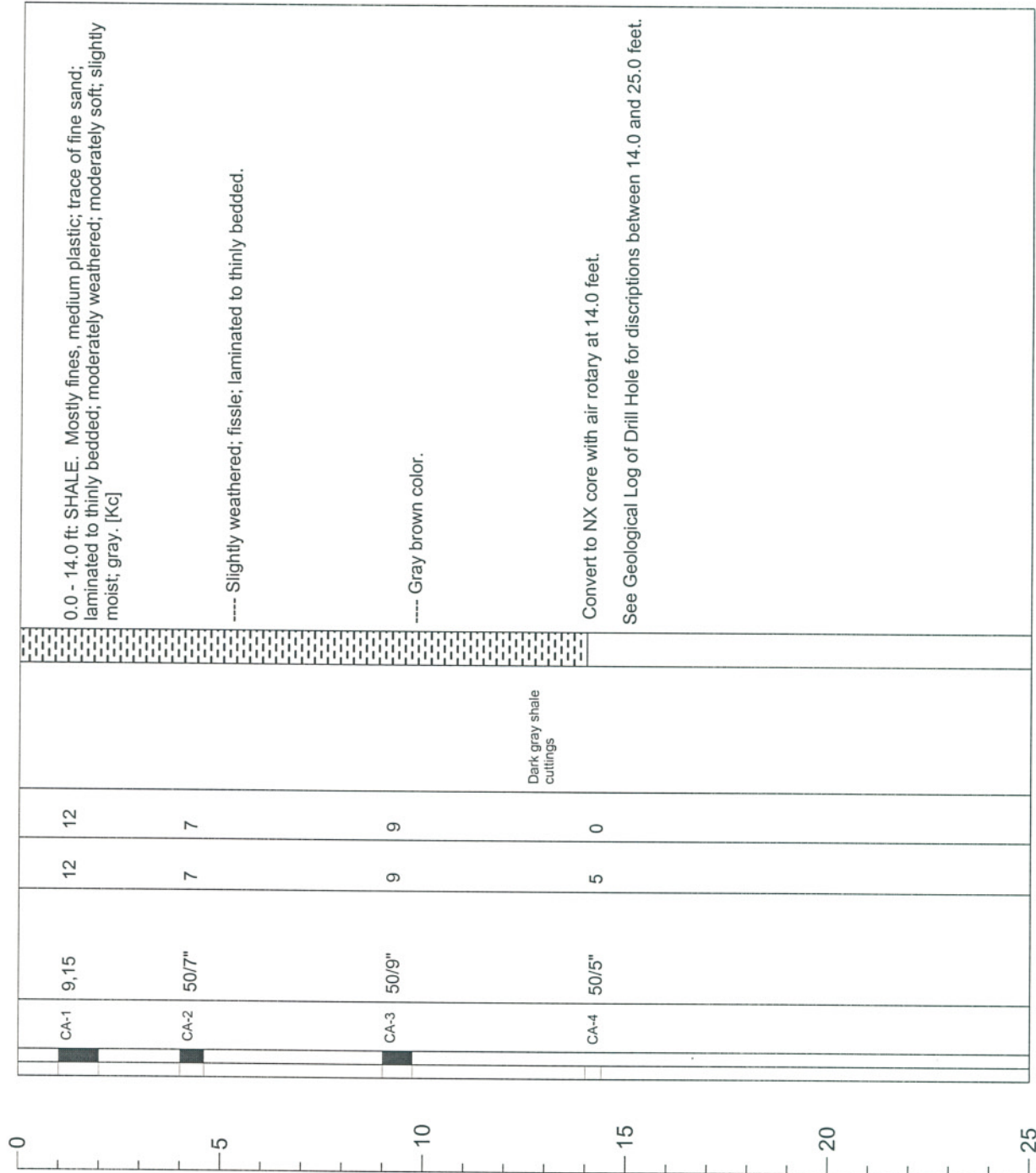


Geotechnical Environmental & Water Resources Engineering				PL - 262	
PROJECT NAME : Southern Delivery System				PAGE: 1 OF 2	
PROJECT NUMBER : 022950				DATE: 7/11/05 / 7/11/05	
BORING LOCATION : N 1165781.7, E 3225346.5					
GROUND SURFACE ELEVATION (LOCAL - FT) 4969.9					
GROUNDWATER ELEVATION : DRY DATE 7/11/05					
DRILLED BY : HIGH PLAINS					
LOGGED BY : NDM/KGA TOTAL DEPTH (FT) : 25.0					
NOTES: RIG: Truck mounted CME - 75					

LOG OF DRILL HOLE	
LEGEND 1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER 2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL 3) REC - RECOVERY LENGTH OF SAMPLE S - SPLIT SPOON SAMPLER 2.0 in. dia. UF - FIXED PISTON CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE GROUNDWATER  ESTIMATED GROUNDWATER sz	

SAMPLE METHOD: Auto Safety Hammer	
BACKFILL: Drill cuttings	

DEPTH FT.	SAMPLE			REMARKS	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.	

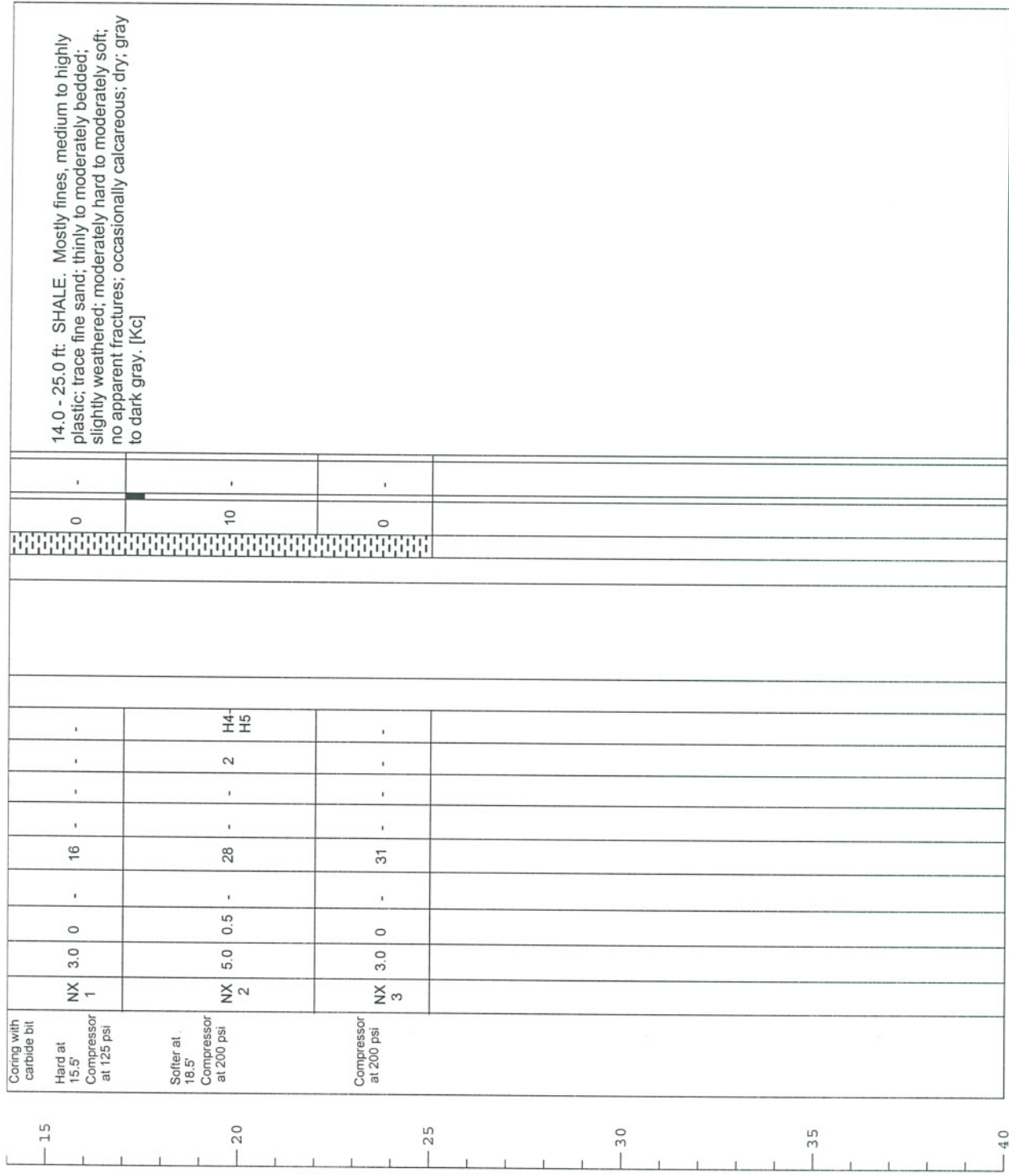


GEOLOGICAL LOG OF DRILL HOLE

HOLE NO. **PL-262**

PROJECT NAME		Southern Delivery System		PROJECT NO.	022950	SHEET	2	OF	2
LOCATION	N 1165781.7 E 3225346.5	GROUND SURFACE ELEV. (FT)	4969.9	TREND		PLUNGE	90		
DATE STARTED/FINISHED	7/11/05	/	7/11/05	DRILLED BY	HIGH PLAINS	LOGGED BY	NDM/		
GROUNDWATER EL.	NDM/KGA	DATE	7/11/05	OVERBURDEN DEPTH (FT)	0.0	TOTAL DEPTH (FT)	25.0		

ELEVATION	DEPTH (FT)	NOTES	CORING (SEE LEGEND)	INSTITU TESTING	JOINT DESCRIPTION (SEE LEGEND)	JOINT SYMBOL	GRAPHIC LOG	PERCENT RECOVERY	PERCENT ROD		
		GROUNDWATER CONDITIONS DRILLING CONDITIONS	INTERVAL	PENETRATION (FT)	RECOVERY (FT)	ROD (FT)	CORING TIME (MIN)	NO. OF PIECES	LONGEST (FT)	SHORTEST (FT)	HARDNESS



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1165658.1, E 3224006.9
GROUND SURFACE ELEVATION (LOCAL - FT) 4982.8
GROUNDWATER ELEVATION : DRY DATE 6/20/05
DRILLED BY : HIGH PLAINS
LOGGED BY : KGA TOTAL DEPTH (FT) : 29.0

LOG OF DRILL HOLE

PL - 263

PAGE: 1 OF 1
DATE: 6/28/05 / 6/28/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

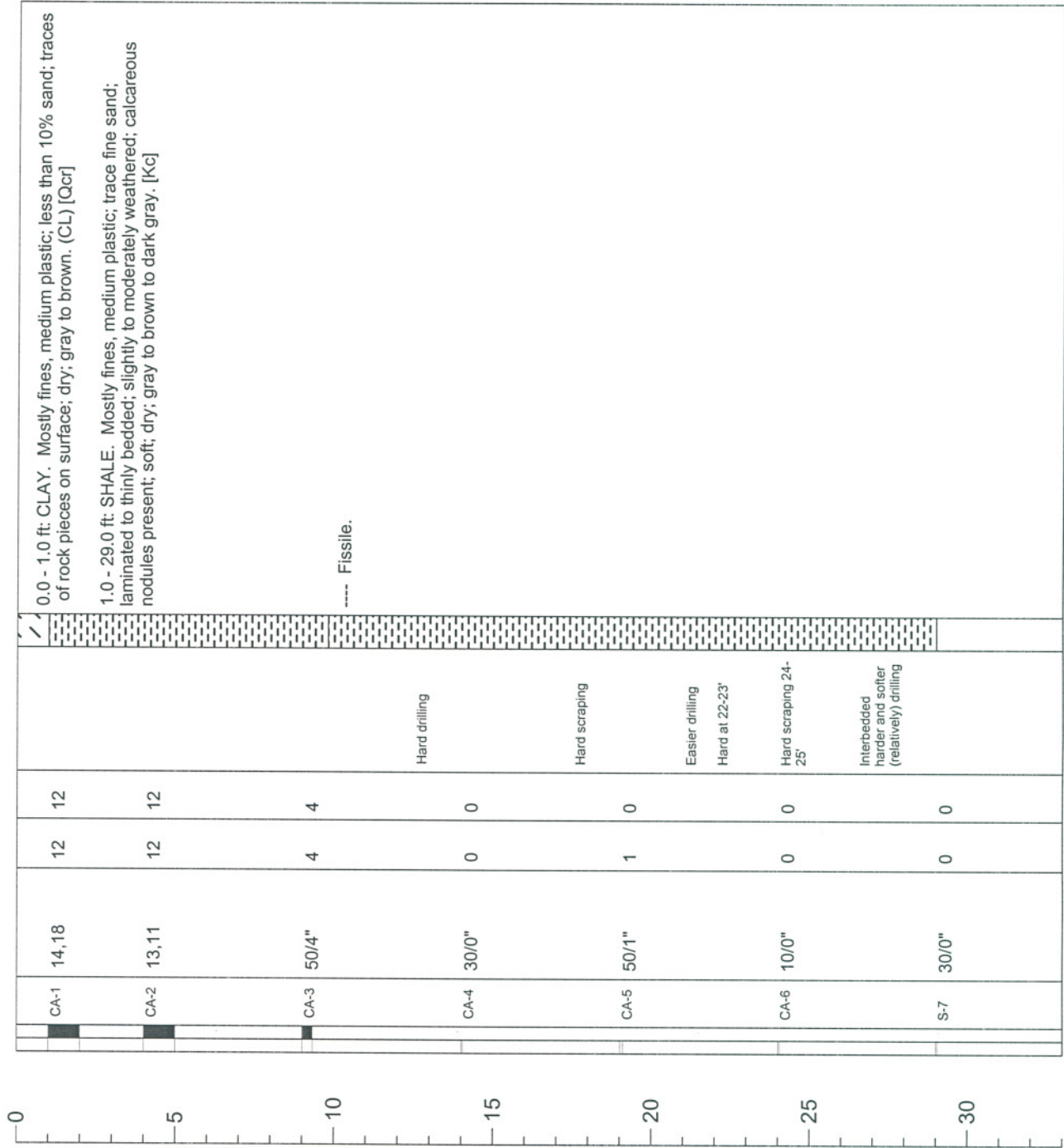
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER ESTIMATED GROUNDWATER

NOTES:RIG: Truck mounted CME - 75
4-inch diameter solid flight augers

SAMPLE METHOD: Auto Safety Hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.			



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1164258.3, E 3224131.1
GROUND SURFACE ELEVATION (LOCAL - FT) : 4881.7
GROUNDWATER ELEVATION : DRY DATE 6/28/05
DRILLED BY : HIGH PLAINS
LOGGED BY : KGA TOTAL DEPTH (FT) : 29.0

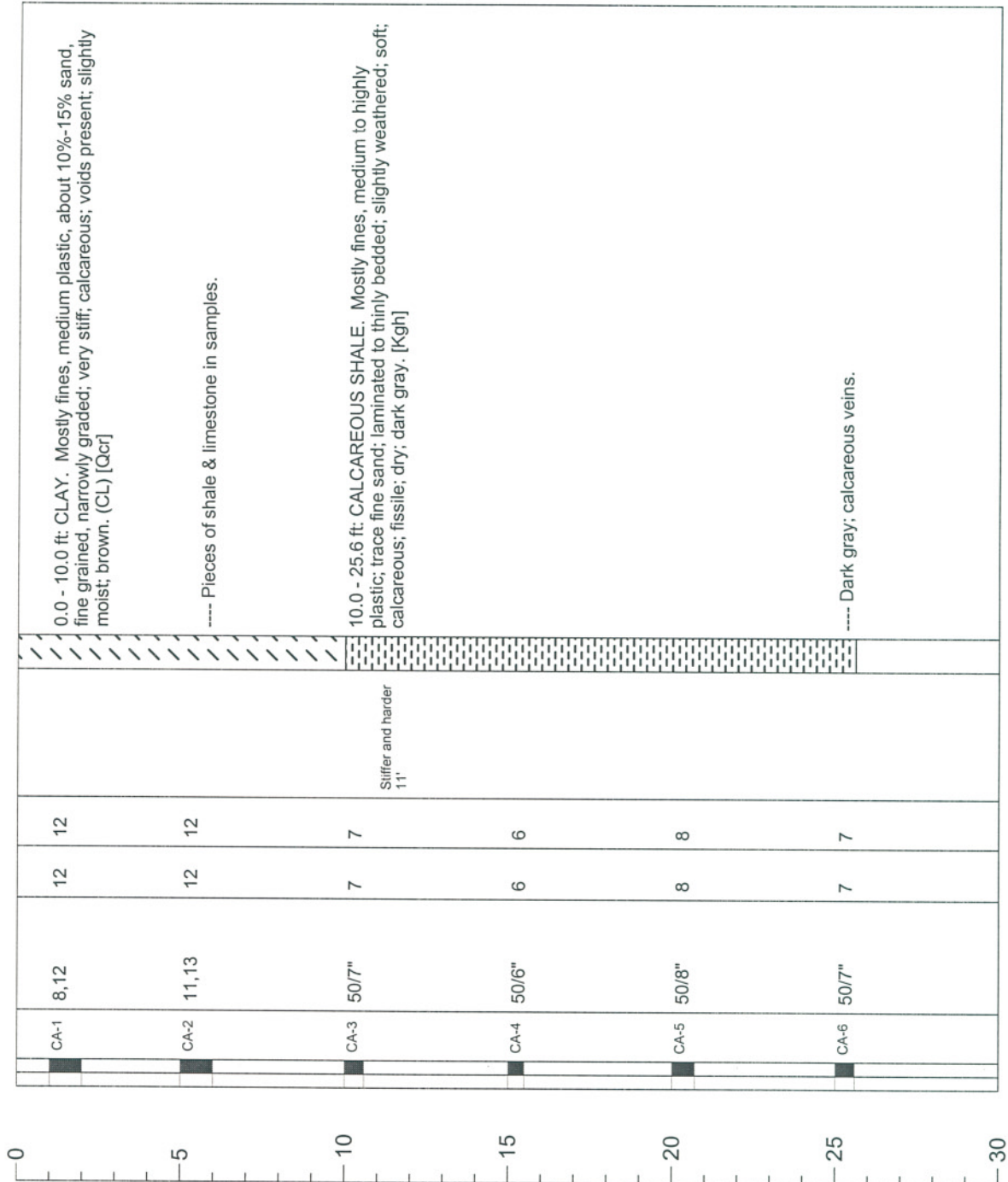
LOG OF DRILL HOLE

PL - 265
PAGE: 1 OF 1
DATE: 6/28/05 / 6/28/05

LEGEND
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER  ESTIMATED GROUNDWATER 

NOTES: RIG: Truck mounted CME - 75
4-inch diameter solid flight augers
SAMPLE METHOD: Auto Safety Hammer
BACKFILL: Drill cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.			





PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1162553.9, E 3223800.8

GROUND SURFACE ELEVATION (LOCAL - FT) .4804.7

GROUNDWATER ELEVATION : DRY DATE 6/28/05

DRILLED BY : HIGH PLAINS

LOGGED BY : KGA TOTAL DEPTH (FT) : 24.4

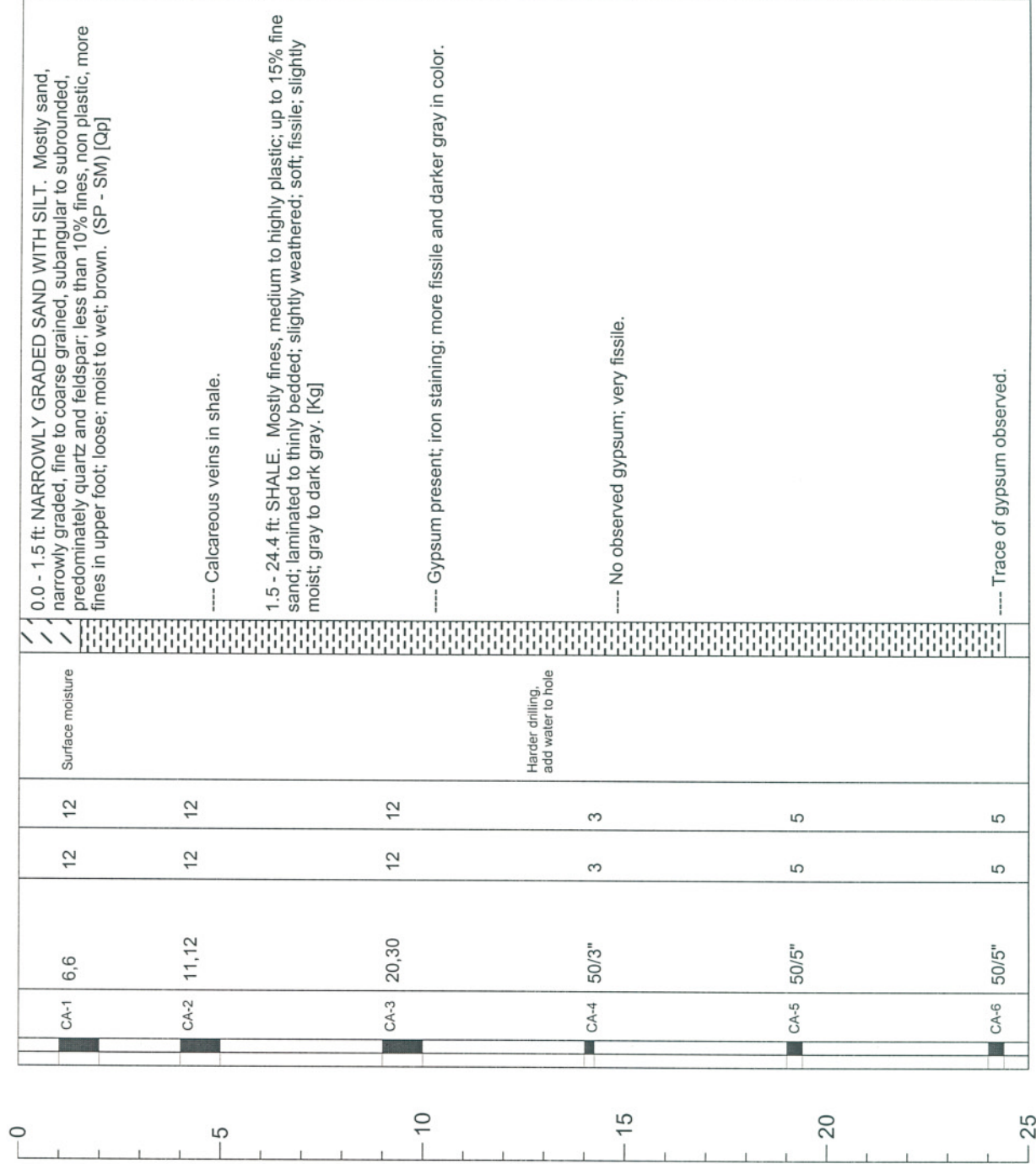
NOTES: RIG: Truck mounted CME - 75

4-inch diameter solid flight auger

SAMPLE METHOD: Auto Safety Hammer

BACKFILL: Drill cuttings

<p>LOG OF DRILL HOLE</p>		<p>PL - 266</p>	
		<p>PAGE: 1 OF 1</p> <p>DATE: 6/28/05 / 6/28/05</p>	
<p>LEGEND</p> <p>1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER</p> <p>2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL</p> <p>3) REC - RECOVERY LENGTH OF SAMPLE</p> <p>S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON</p> <p>CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE</p> <p>GROUNDWATER ESTIMATED GROUNDWATER </p>			
<p>SAMPLE METHOD: Auto Safety Hammer</p> <p>BACKFILL: Drill cuttings</p>			
DEPTH FT.	TYPE and NO.	SAMPLE - 1 - BLOWS PER 6 IN.	SOIL AND ROCK DESCRIPTIONS



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PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1160535 E 3223934
GROUND SURFACE ELEVATION (LOCAL - FT) : ~4750
GROUNDWATER ELEVATION : ~4736 DATE 7/21/05
DRILLED BY : Spectrum Exploration
LOGGED BY : KGA TOTAL DEPTH (FT) : 26.2

LOG OF DRILL HOLE

PL-267
PAGE: 1 OF 1
DATE: 7/21/05 / 7/21/05

LEGEND
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER ➤ ESTIMATED GROUNDWATER SZ

NOTES: RIG: Track Mounted CME - 55
4-inch diameter solid flight auger

SAMPLE METHOD: Automatic safety hammer
BACKFILL: Cuttings

DEPTH FT.	SAMPLE			REMARKS	GRA LOG TIC	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - IN.	- 3 - PEN REC IN.		

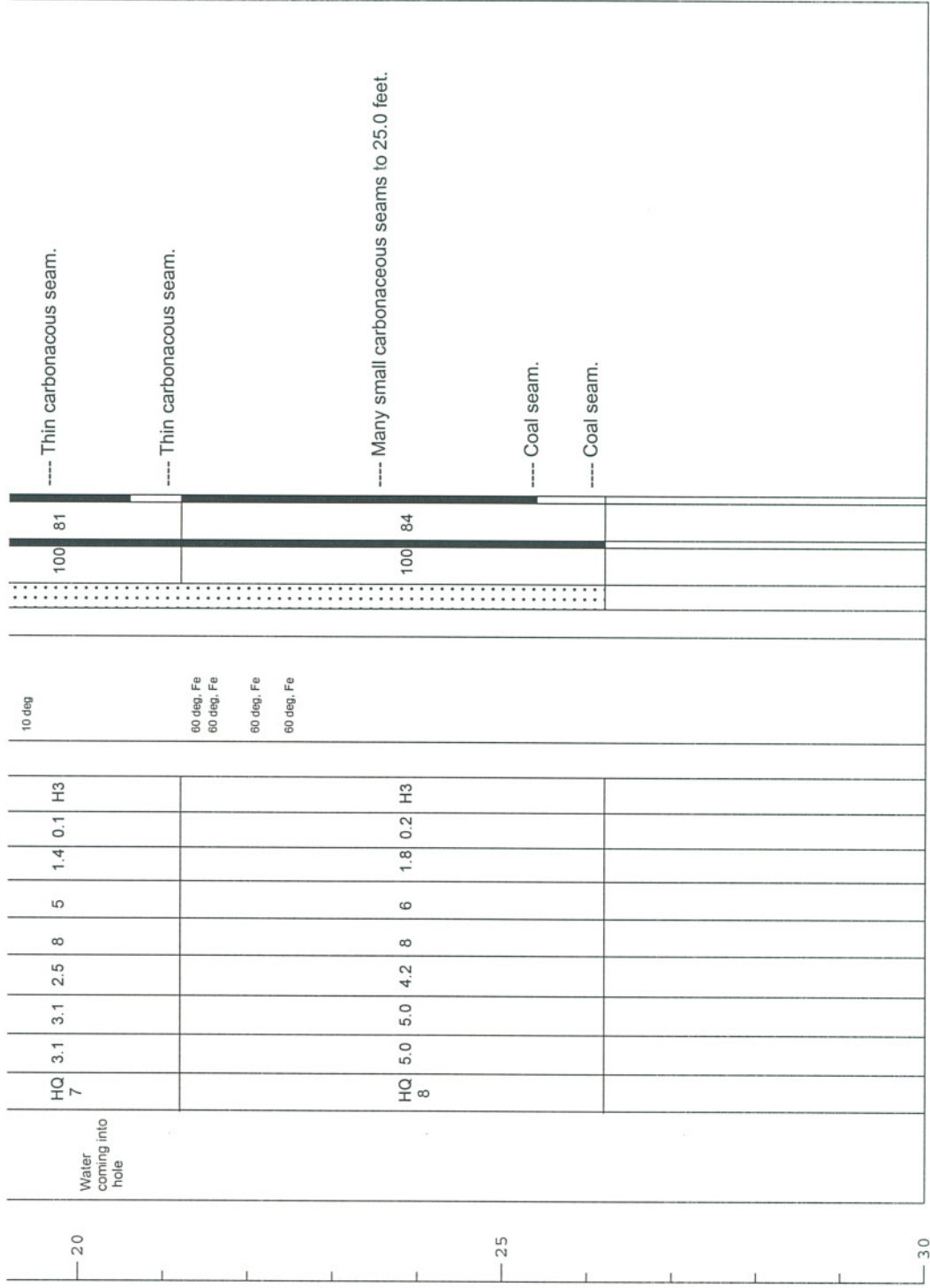
0						0.0 - 2.5 ft.: CLAYEY SAND WITH GRAVEL AND COBBLES. Dry; brown; (no samples obtained). (SC) [Qst]
5				Augers scraping		2.5 - 4.4 ft: SANDSTONE. Mostly sand, narrowly graded, fine to medium grained, subangular to subrounded, predominantly quartz; well cemented; intensely to moderately weathered; hard; moist to wet; light gray to tan white with iron staining. [Kd]
10						Convert to HQ core with air rotary at 4.4 feet.
15						See Geological Log of Drill Hole for descriptions between 4.4 and 26.2 feet.
20						

GEOLOGICAL LOG OF DRILL HOLE

HOLE NO.
PL-267

PROJECT NAME		Southern Delivery System		PROJECT NO.		022950		SHEET		2		OF		2	
LOCATION		N 1160535 E 3223934		GROUND SURFACE ELEV. (FT)		-4750		TREND		-		PLUNGE		90	
DATE STARTED/FINISHED		7/21/05		/		7/21/05		DRILLED BY		Spectrum Exploration		LOGGED BY		KGA	
GROUNDWATER EL.		-4736		DATE		7/21/05		OVERBURDEN DEPTH (FT)		2.5		TOTAL DEPTH (FT)		26.2	

ELEVATION	DEPTH (FT)	NOTES	CORING (SEE LEGEND)	INSITU TESTING	JOINT DESCRIPTION (SEE LEGEND)	JOINT SYMBOL	GRAPHIC LOG	PERCENT RECOVERY	PERCENT ROD	ENGINEERING AND GEOLOGICAL DESCRIPTION AND CLASSIFICATION	
		GROUNDWATER CONDITIONS DRILLING CONDITIONS	INTERVAL	PENETRATION (FT)	RECOVERY (FT)	ROD (FT)	CORING TIME (MIN)	NO. OF PIECES	LONGEST (FT)	SHORTEST (FT)	HARDNESS



Geotechnical
Environmental &
Water Resources
Engineering

GEI
Consultants

PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1160219, E 3224062

GROUND SURFACE ELEVATION (LOCAL - FT) : 4745

GROUNDWATER ELEVATION : ~4735 DATE 7/21/05

DRILLED BY : Spectrum Exploration

LOGGED BY : KGA TOTAL DEPTH (FT) : 25.4

LOG OF DRILL HOLE

PL - 268

PAGE: 1 OF 1

DATE: 7/21/05 / 7/21/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

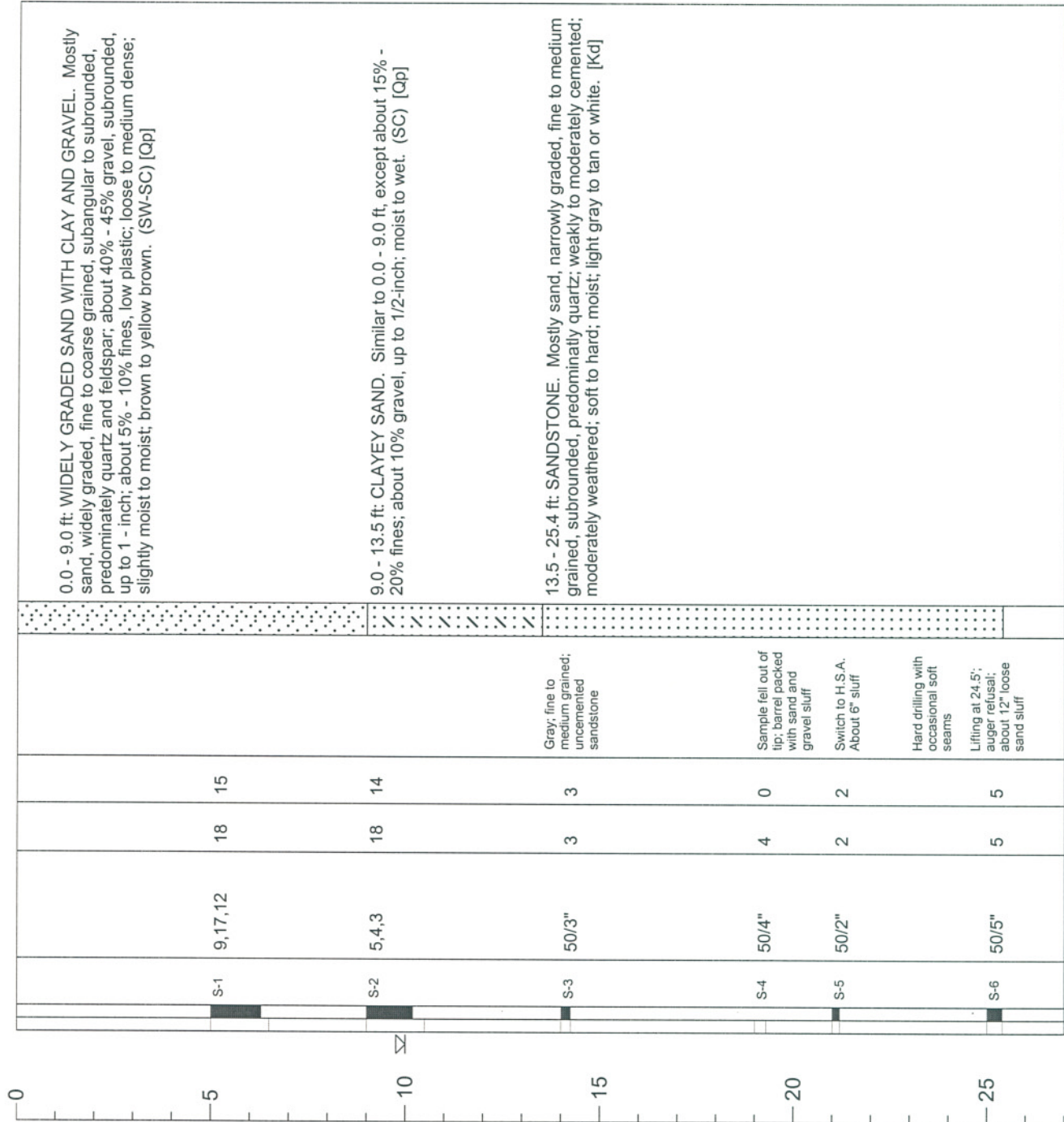
GROUNDWATER ➤ ESTIMATED GROUNDWATER ⚡

NOTES: RIG: Track Mounted CME 55

SAMPLE METHOD: Automatic safety hammer

4-inch dia. solid flight auger, 4 1/4" I.D. H.S.A. with center bit BACKFILL: Cuttings

DEPTH FT.	SAMPLE			REMARKS	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.	





PROJECT NAME : Southern Delivery System

PROJECT NUMBER: 022950

BORING LOCATION: N 1159141 E 3222948

GROUND SURFACE ELEVATION (LOCAL - FT) : ~4758

GROUNDWATER ELEVATION: Dry DATE 7/22/0

DRILLIED BY: Spectrum Exploration

LOGGED BY: KGA TOTAL DEPTH (FT): 25.0

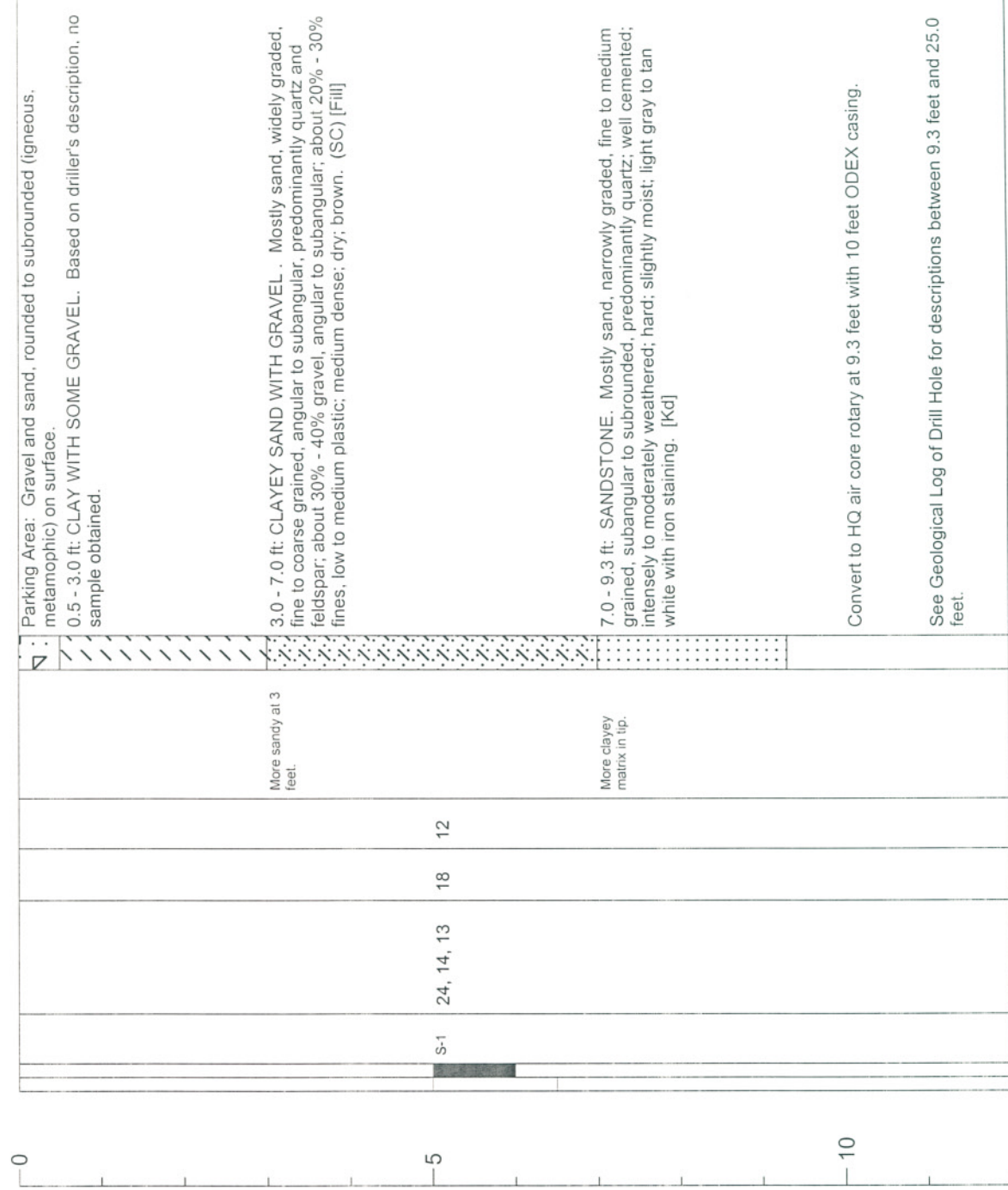
NOTES: RIG: Track Mounted CME - 55

DRILLING METHOD: ODEX downhole hammer air percussion system

SAMPLE METHOD: Automatic safety hammer

BACKFILL: Bentonite chips

DEPTH FT.	SAMPLE				REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.			



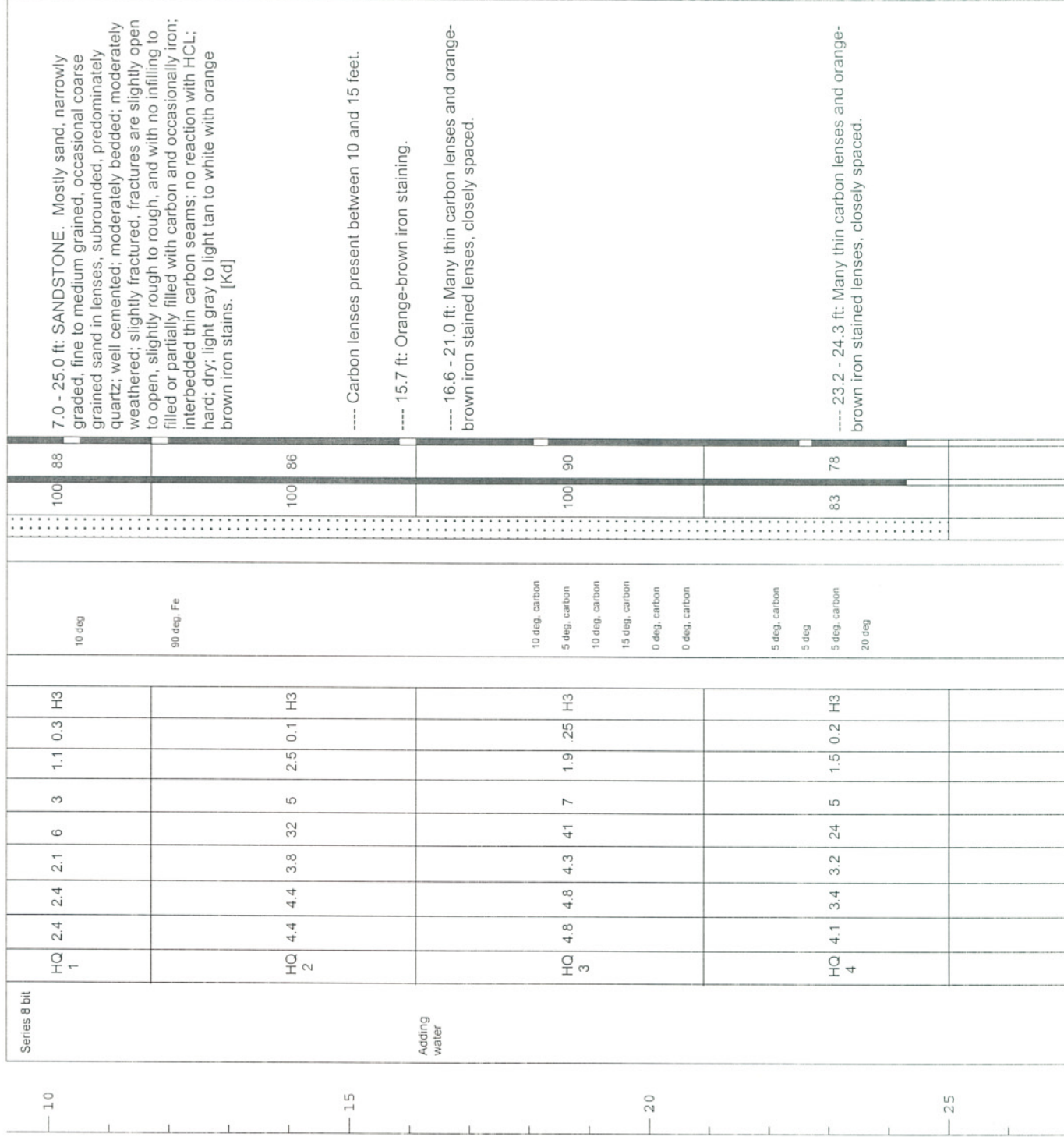





GEOLOGICAL LOG OF DRILL HOLE

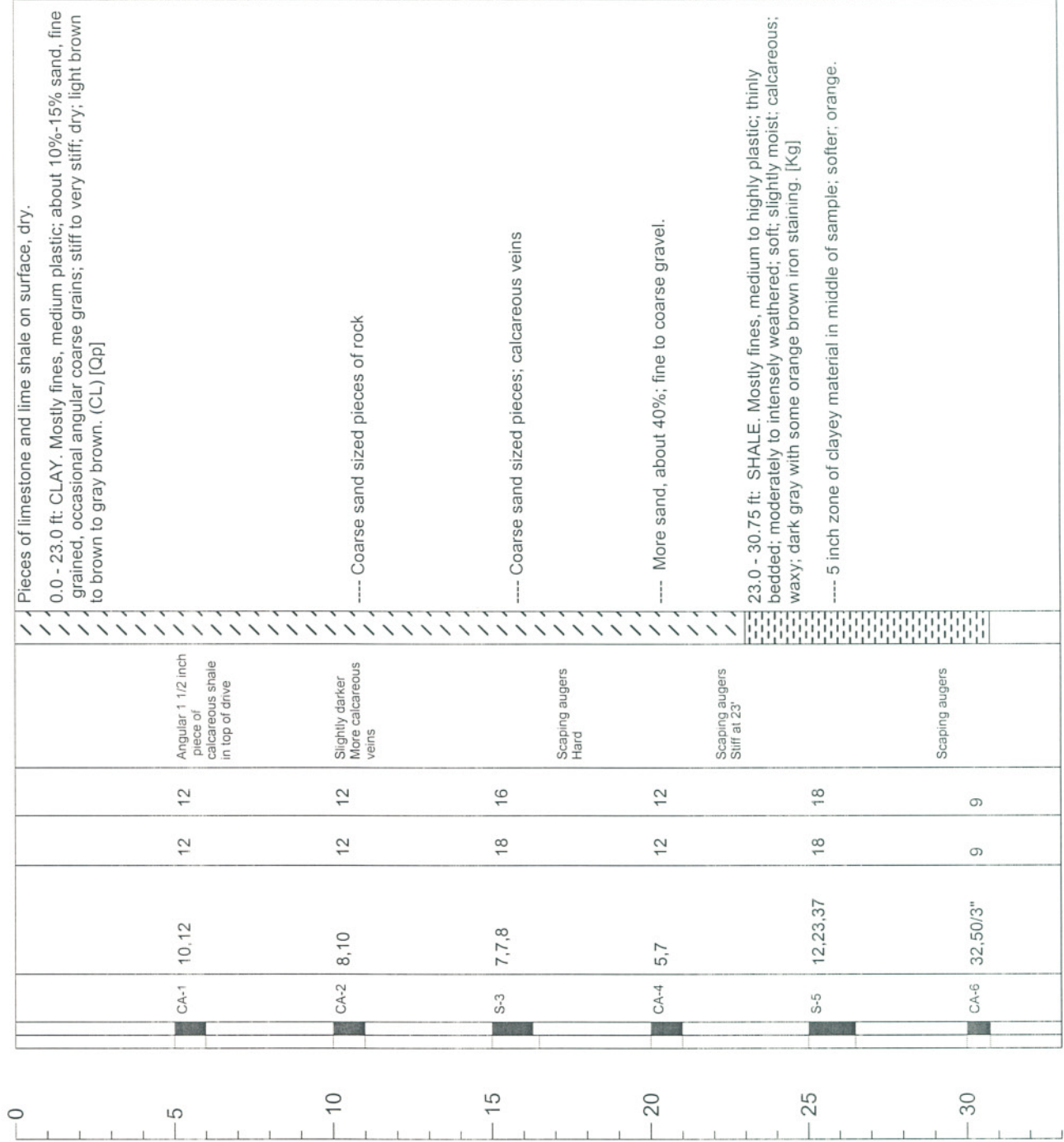
HOLE NO.

PL-269


PROJECT NAME		Southern Delivery System		PROJECT NO.		022950		SHEET 2 OF 2	
LOCATION		N 1159141 E 3222948		GROUND SURFACE ELEV. (FT)		~4758		TREND	
DATE STARTED/FINISHED		7/22/05		/		7/22/05		DRILLED BY Spectrum Exploration	
GROUNDWATER EL.		Dry		DATE		7/22/05		OVERBURDEN DEPTH (FT) 2.5	
ELEVATION		DEPTH (FT)		NOTES		CORING (SEE LEGEND)		JOINT DESCRIPTION	
GROUNDWATER		INTERVAL		PENETRATION (FT)		RECOVERY (FT)		ROD (FT)	
CONDITIONS		CORING TIME (MIN)		NO. OF PIECES		LONGEST (FT)		HARDNESS	
DRILLING		SHORTTEST (FT)		INSITU TESTING		(SEE LEGEND)		JOINT SYMBOL	
CONDITIONS		GRAPHIC LOG		PERCENT RECOVERY		PERCENT ROD		JOINT SYMBOL	
ELEVATION		DEPTH (FT)		NOTES		CORING (SEE LEGEND)		JOINT DESCRIPTION	
GROUNDWATER		INTERVAL		PENETRATION (FT)		RECOVERY (FT)		ROD (FT)	
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DRILLING		SHORTTEST (FT)		INSITU TESTING		(SEE LEGEND)		JOINT SYMBOL	
CONDITIONS		GRAPHIC LOG		PERCENT RECOVERY		PERCENT ROD		JOINT SYMBOL	
ELEVATION		DEPTH (FT)		NOTES		CORING (SEE LEGEND)		JOINT DESCRIPTION	
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ELEVATION		DEPTH (FT)		NOTES		CORING (SEE LEGEND)		JOINT DESCRIPTION	
GROUNDWATER		INTERVAL		PENETRATION (FT)		RECOVERY (FT)		ROD (FT)	
CONDITIONS		CORING TIME (MIN)		NO. OF PIECES		LONGEST (FT)		HARDNESS	
DRILLING		SHORTTEST (FT)		INSITU TESTING		(SEE LEGEND)		JOINT SYMBOL	
CONDITIONS		GRAPHIC LOG		PERCENT RECOVERY		PERCENT ROD		JOINT SYMBOL	
ELEVATION		DEPTH (FT)		NOTES		CORING (SEE LEGEND)		JOINT DESCRIPTION	
GROUNDWATER		INTERVAL		PENETRATION (FT)		RECOVERY (FT)		ROD (FT)	
CONDITIONS		CORING TIME (MIN)		NO. OF PIECES		LONGEST (FT)		HARDNESS	
DRILLING									



Geotechnical Environmental & Water Resources Engineering				LOG OF DRILL HOLE		PL-270			
PROJECT NAME : Southern Delivery System						PAGE: 1 OF 1			
PROJECT NUMBER : 022950						DATE: 7/21/05 / 7/21/05			
BORING LOCATION : N 1164088 E 3224190						LEGEND 1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER 2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL 3) REC - RECOVERY LENGTH OF SAMPLE S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE GROUNDWATER  ESTIMATED GROUNDWATER 			
GROUND SURFACE ELEVATION (LOCAL - FT) : ~4860									
GROUNDWATER ELEVATION : DRY DATE 7/21/05									
DRILLED BY : SPECTRUM EXPLORATION									
LOGGED BY : KGA TOTAL DEPTH (FT) : 30.75									
NOTES: RIG: Truck mounted CME - 55						SAMPLE METHOD: Auto Safety Hammer			
4-inch diameter solid flight auger						BACKFILL: Drill cuttings			
DEPTH FT.	TYPE and NO.		SAMPLE - 1 - BLOWS PER 6 IN.		- 2 - PEN IN.	- 3 - REC IN.	REMARKS	LOG SYMBOL	SOIL AND ROCK DESCRIPTIONS



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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1170881.9 E 3230893.4

GROUND SURFACE ELEVATION (LOCAL - FT) : 4965.4

GROUNDWATER ELEVATION : DRY DATE 7/12/05

DRILLED BY : HIGH PLAINS

LOGGED BY : NDM/TCM TOTAL DEPTH (FT) : 28.0

LOG OF DRILL HOLE

FDS-348

PAGE: 1 OF 2
DATE: 7/12/05 / 7/12/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER ✕ ESTIMATED GROUNDWATER ✕

SAMPLE METHOD: Auto Safety Hammer
BACKFILL: Drill cuttings

DEPTH FT.

TYPE and NO.

SAMPLE

REMARKS

SOIL AND ROCK DESCRIPTIONS

LOG

0

5

10

15

20

25

S-1

S-2

S-3

5, 5, 5

50/6"

50/6"

18

6

6

14

4

6

0.0 - 8.0 ft: CLAYEY SAND WITH GRAVEL. Mostly sand, widely graded, fine to coarse grained; subangular to angular; predominately limestone; about 30% - 35% fines, low to medium plastic; about 15% - 20% gravel, sub-angular to angular, predominately limestone; loose to very dense; slightly moist; light brown to brown. (SC) [Qcr]

---- Cobbles at 7.5'
8.0 - 10.0 ft: SANDSTONE. Mostly sand, very fine grained, less than 5% fines, non plastic; well cemented; thinly bedded; intensely to moderately weathered; moderately hard; calcareous; strong reaction to HCL; slightly moist; iron staining in fractures; dark gray. [Knf]

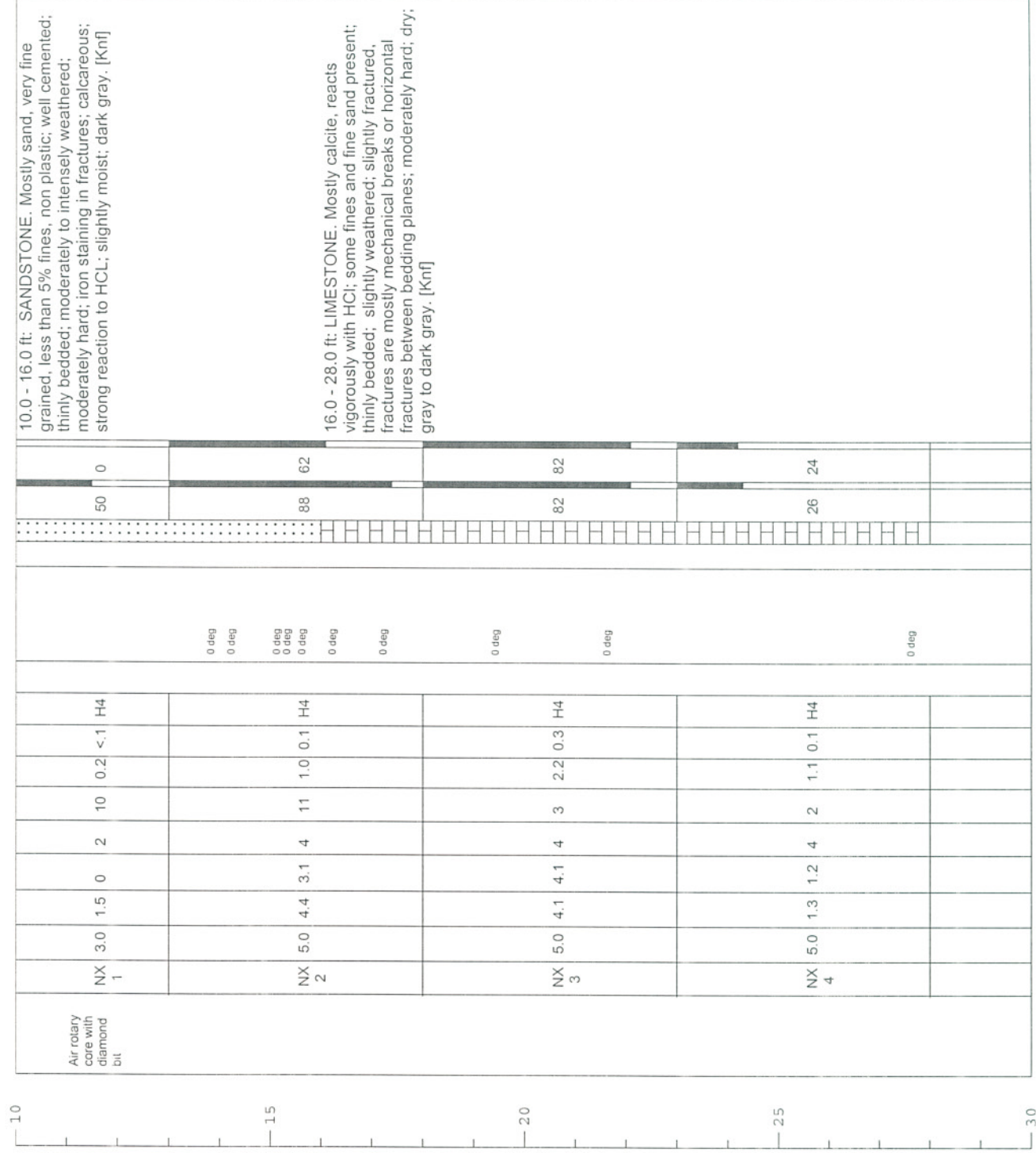
---- Convert to NX core with air rotary at 10.0'

See Geological Log of Drill Hole for descriptions between 10.0 and 28.0 feet.

GEOLOGICAL LOG OF DRILL HOLE

HOLE NO.
FDS-348

PROJECT NAME		Southern Delivery System		PROJECT NO.	022950	SHEET	2	OF	2			
LOCATION		N 1170881.9 E 3230893.4		GROUND SURFACE ELEV. (FT)	4965.4	TREND	-	PLUNGE	90			
DATE STARTED/FINISHED		7/12/05		DRILLED BY	HIGH PLAINS	LOGGED BY	NDM/TCM					
GROUNDWATER EL.		DRY		DATE	7/12/05	OVERBURDEN DEPTH (FT)	8.0	TOTAL DEPTH (FT)	28.0			
ELEVATION	DEPTH (FT)	GROUNDWATER CONDITIONS DRILLING CONDITIONS	NOTES	CORING (SEE LEGEND)				JOINT DESCRIPTION (SEE LEGEND)	JOINT SYMBOL	GRAPHIC LOG	PERCENT RECOVERY	PERCENT ROD
				INTERVAL	PENETRATION (FT)	RECOVERY (FT)	ROD (FT)					
ENGINEERING AND GEOLOGICAL												
DESCRIPTION AND CLASSIFICATION												



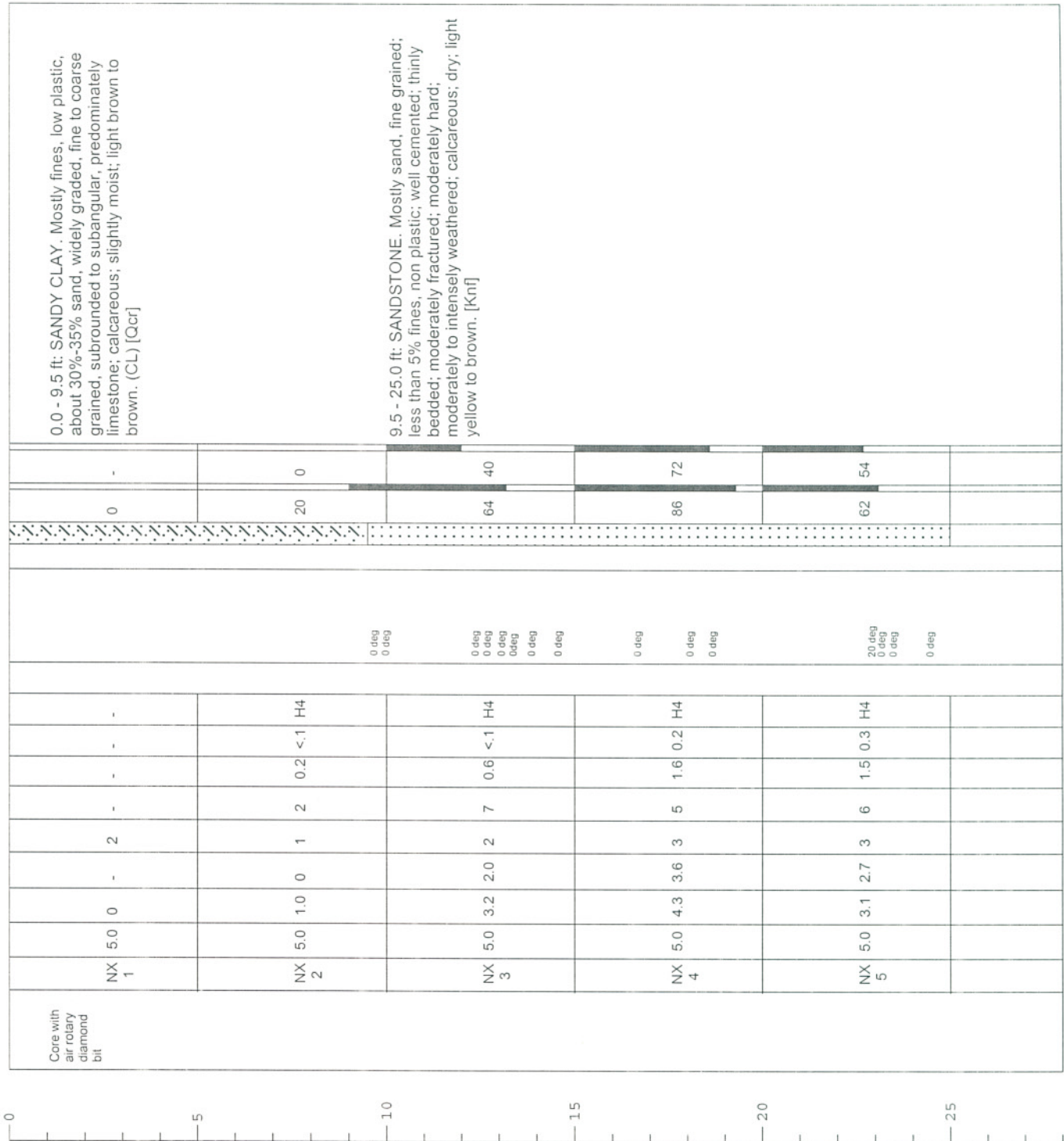
PROJECT NAME Southern Delivery System PROJECT NO. 022950 SHEET 1 OF 1

LOCATION N 1166661.1 GROUND SURFACE ELEV. (FT) 5036.7 TREND - PLUNGE 90

DATE STARTED/FINISHED 7/12/05 / 7/12/05 DRILLED BY HIGH PLAINS LOGGED BY NDM

GROUNDWATER EL. DRY DATE 7/12/05 OVERBURDEN DEPTH (FT) 9.5 TOTAL DEPTH (FT) 25.0

ELEVATION DEPTH (FT)	NOTES	CORING (SEE LEGEND)						INSITU TESTING	JOINT DESCRIPTION (SEE LEGEND)	JOINT SYMBOL	GRAPHIC LOG	PERCENT RECOVERY	PERCENT ROD	ENGINEERING AND GEOLOGICAL DESCRIPTION AND CLASSIFICATION
		GROUNDWATER CONDITIONS	DRILLING CONDITIONS	INTERVAL	PENETRATION (FT)	RECOVERY (FT)	ROD (FT)	CORING TIME (MIN)	NO. OF PIECES	LONGEST (FT)	SHORTEST (FT)	HARDNESS		



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GEI Consultants

PROJECT NAME : Southern Delivery System
PROJECT NUMBER : 022950
BORING LOCATION : N 1163454.0 E 3223552.0
GROUND SURFACE ELEVATION (LOCAL - FT) 4837.5
GROUNDWATER ELEVATION : DRY DATE 9/15/05
DRILLED BY : High Plains
LOGGED BY : NDM TOTAL DEPTH (FT) : 24.25

LOG OF DRILL HOLE

FDS-357

PAGE: 1 OF 1
DATE: 9/15/05 / 9/15/05

LEGEND

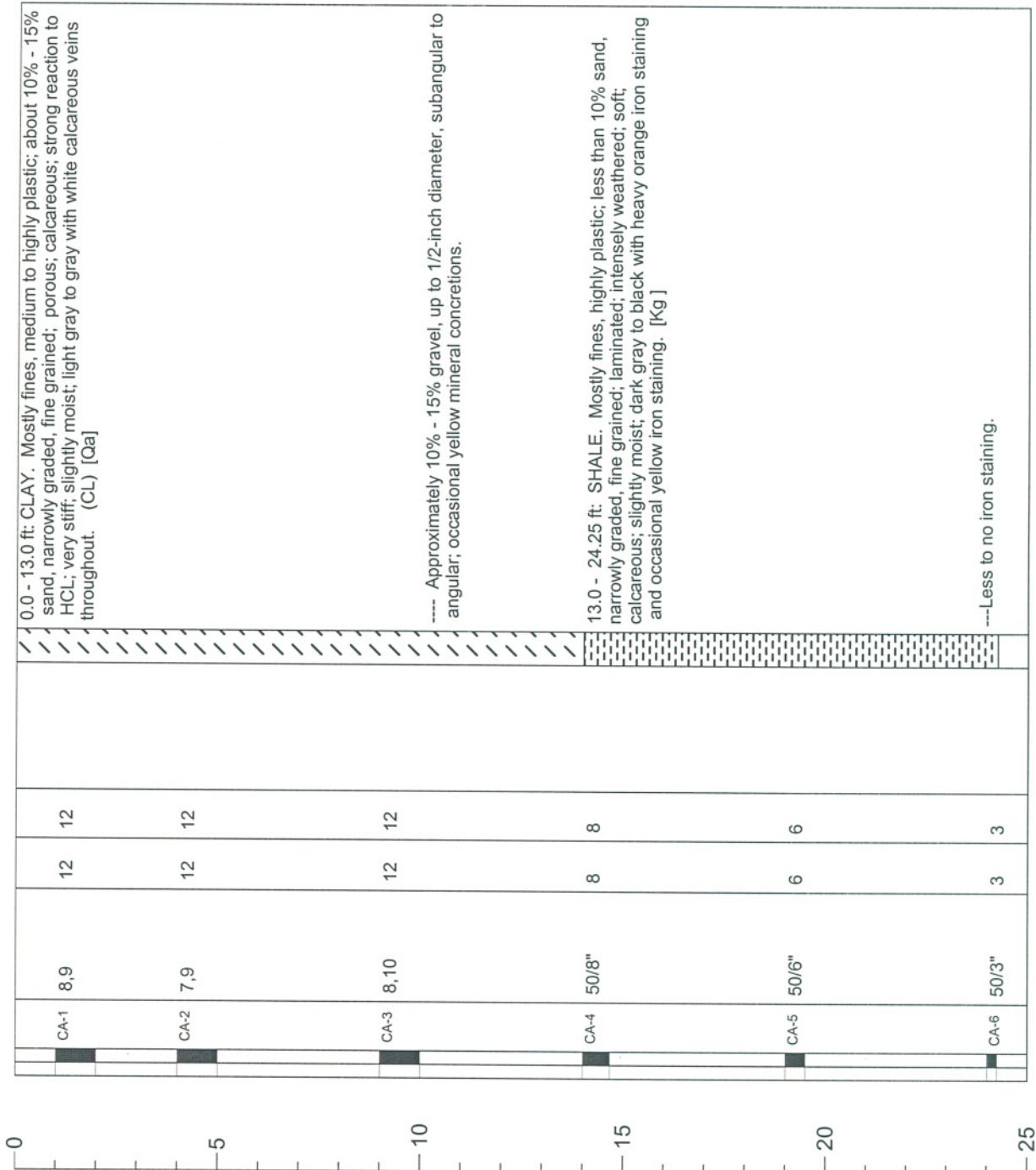
1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER ESTIMATED GROUNDWATER sz

NOTES: RIG: Truck mounted CME-75
AUGER: 4-inch-dia. solid stem auger
SAMPLE METHOD: Automatic Safety Hammer
BACKFILL: Cuttings

DEPTH FT.	SAMPLE			REMARKS	LOG GRAPHIC	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		



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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1162206.9 E 3223854.9

GROUND SURFACE ELEVATION (LOCAL - FT) 4798.7

GROUNDWATER ELEVATION : 4776 DATE 9/16/05

DRILLED BY : High Plains

LOGGED BY : NDM TOTAL DEPTH (FT) : 27.0

LOG OF DRILL HOLE

FDS-358

PAGE: 1 OF 1

DATE: 9/16/05 / 9/16/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE

S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE

GROUNDWATER ESTIMATED GROUNDWATER SZ

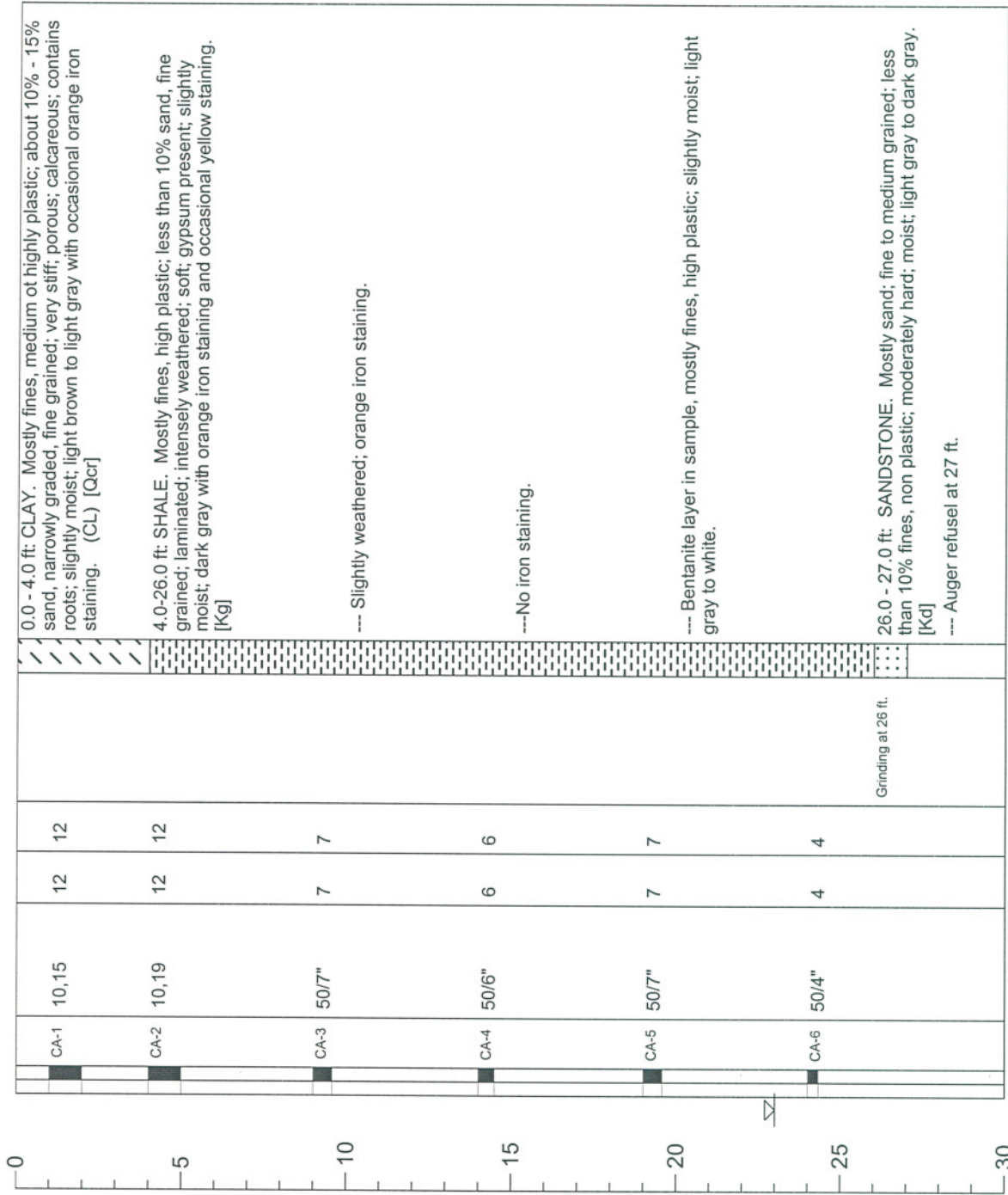
NOTES: RIG: Truck mounted CME-75

SAMPLE METHOD: Automatic Safety Hammer

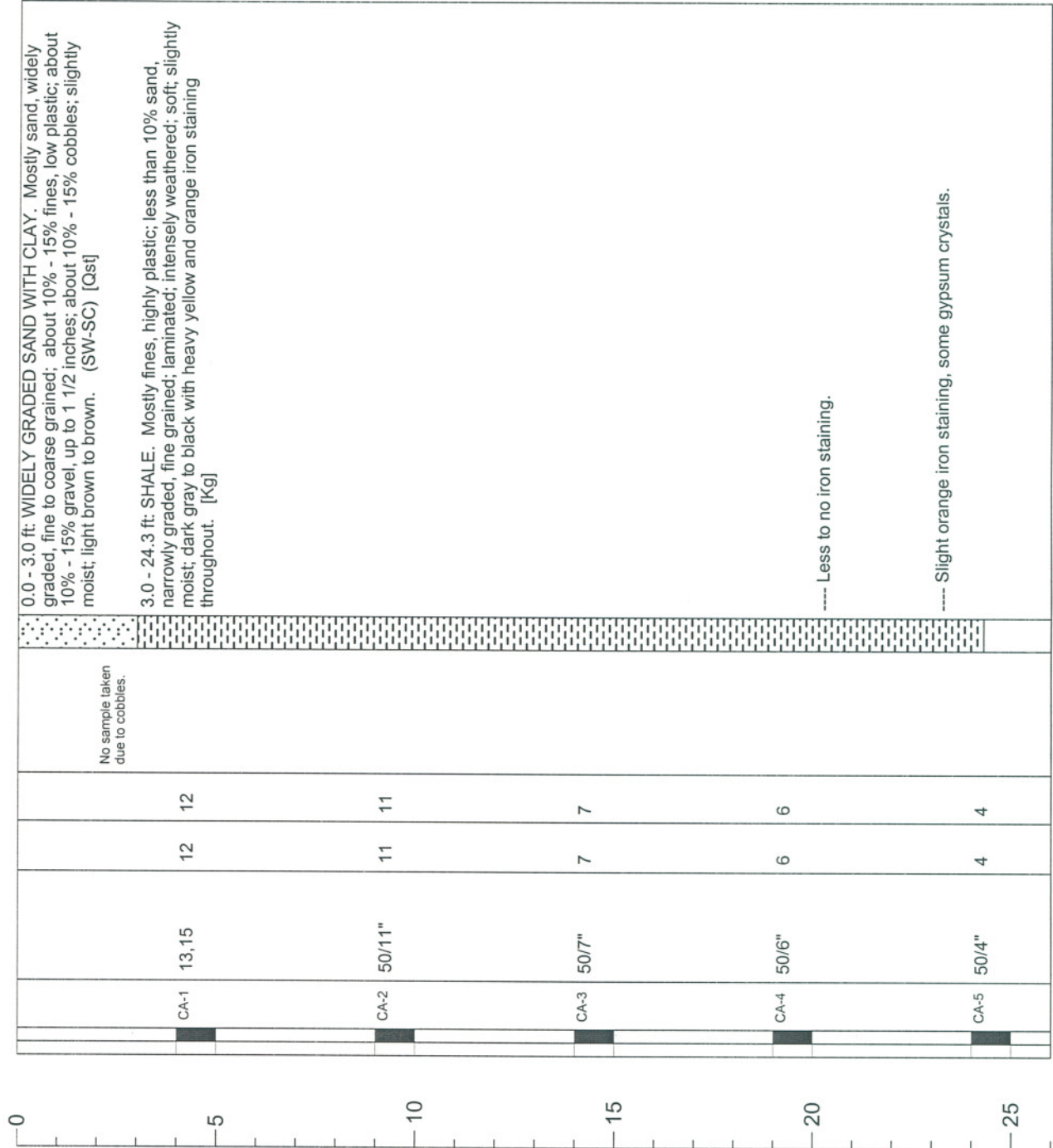
AUGER: 4-inch-dia. solid stem auger

BACKFILL: Cuttings

DEPTH FT.	SAMPLE			REMARKS	GRAPHIC LOG	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		



<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: left;"> Geotechnical Environmental & Water Resources Engineering </div> <div style="text-align: center;"> GEI Consultants </div> <div style="text-align: right;"> FDS-359 </div> </div>	
LOG OF DRILL HOLE	
PAGE: 1 OF 1 DATE: 9/16/05 / 9/16/05	
<div style="text-align: center;">LEGEND</div> 1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER 2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL 3) REC - RECOVERY LENGTH OF SAMPLE S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE GROUNDWATER ➤ ESTIMATED GROUNDWATER SZ	
SAMPLE METHOD: Automatic Safety Hammer BACKFILL: Cuttings	
SOIL AND ROCK DESCRIPTIONS	



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PROJECT NAME : Southern Delivery System

PROJECT NUMBER : 022950

BORING LOCATION : N 1159810.9, E 3223786.1

GROUND SURFACE ELEVATION (LOCAL - FT) 4746.9

GROUNDWATER ELEVATION : ~4739 DATE 9/15/05

DRILLED BY : High Plains

LOGGED BY : NDM TOTAL DEPTH (FT) : 18.0

LOG OF DRILL HOLE

FDS-360

PAGE: 1 OF 2

DATE: 9/15/05 / 9/15/05

LEGEND

1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER
2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL
3) REC - RECOVERY LENGTH OF SAMPLE
S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON
CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE
GROUNDWATER ➤ ESTIMATED GROUNDWATER ➤

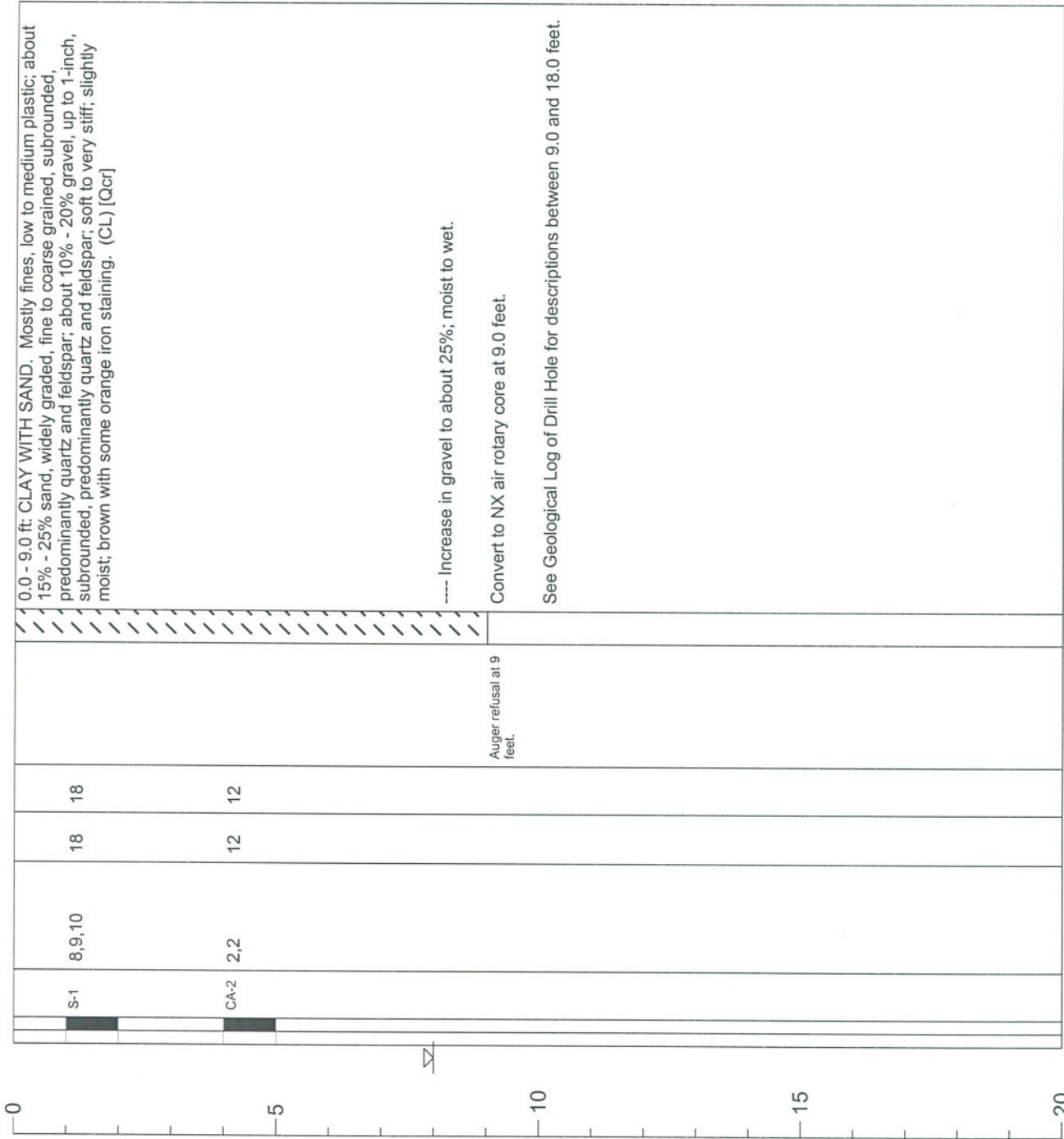
NOTES: RIG: Truck mounted CME-75

AUGER: 4-inch-diameter solid flight auger

SAMPLE METHOD: Automatic Safety Hammer

BACKFILL: Cuttings

DEPTH FT.	SAMPLE			REMARKS	LOG GRAPHIC	SOIL AND ROCK DESCRIPTIONS
	TYPE and NO.	- 1 - BLOWS PER 6 IN.	- 2 - PEN IN.	- 3 - REC IN.		





GEOLOGICAL LOG OF DRILL HOLE

HOLE NO.
FDS-360

PROJECT NAME Southern Delivery System

PROJECT NO. 022950

SHEET 2 OF 2

LOCATION N 1159810.9 GROUND SURFACE ELEV. (FT) 4746.9

TREND -

PLUNGE 90

DATE STARTED/FINISHED 9/15/05

DRILLED BY High Plains

LOGGED BY NDM

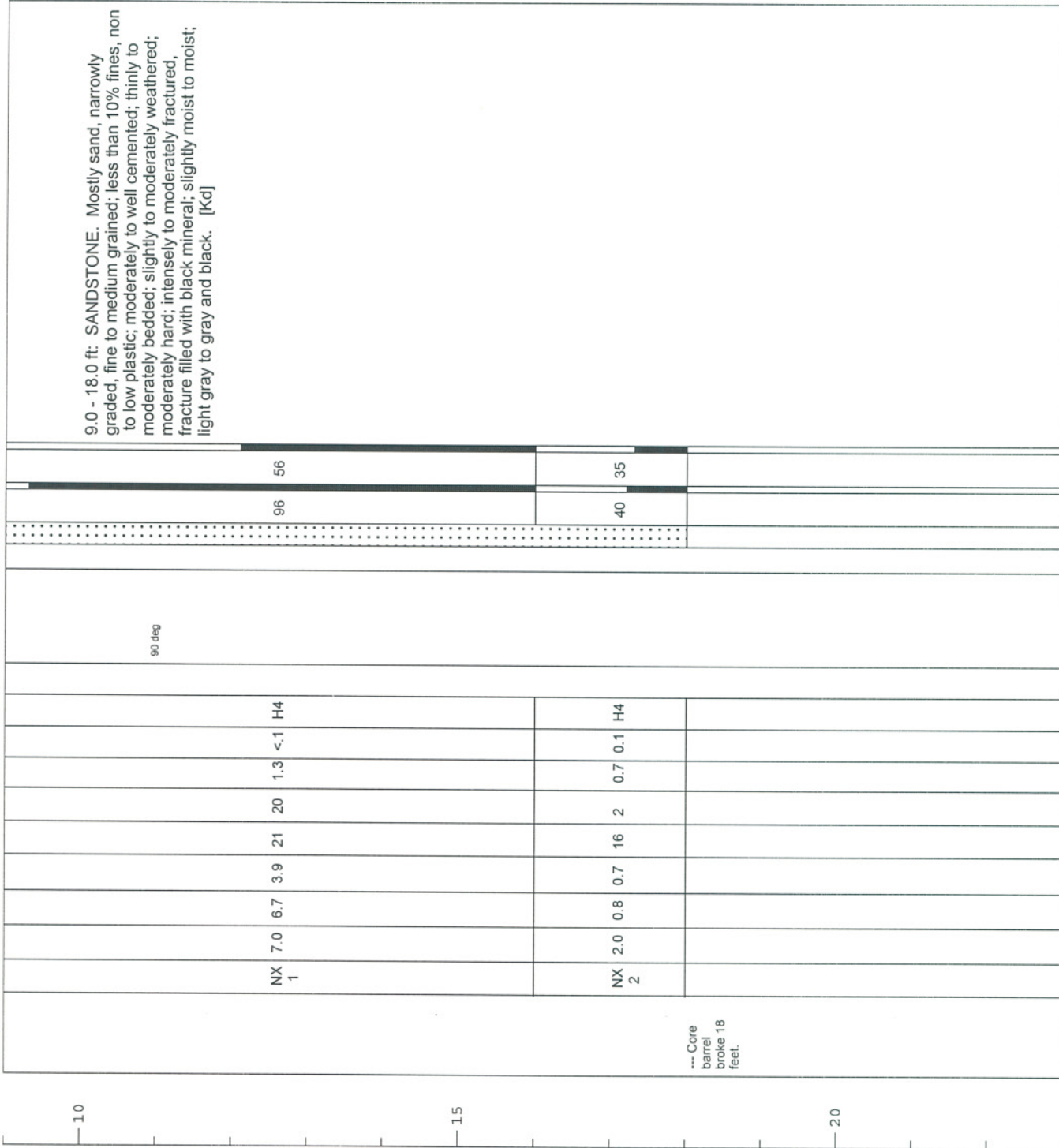
GROUNDWATER EL. ~4739


DATE 9/15/05

OVERBURDEN DEPTH (FT) 9.0

TOTAL DEPTH (FT) 18.0

ELEVATION DEPTH (FT)		NOTES	CORING (SEE LEGEND)								INSITU TESTING	JOINT DESCRIPTION (SEE LEGEND)	JOINT SYMBOL	GRAPHIC LOG	PERCENT RECOVERY	PERCENT ROD	ENGINEERING AND GEOLOGICAL DESCRIPTION AND CLASSIFICATION
			INTERVAL	PENETRATION (FT)	RECOVERY (FT)	ROD (FT)	CORING TIME (MIN)	NO. OF PIECES	LONGEST (FT)	SHORTEST (FT)							



<div>Geotechnical Environmental & Water Resources Engineering</div> <div><div>GEI Consultants</div></div>				LOG OF DRILL HOLE		FDS-361							
PROJECT NAME : Southern Delivery System				PAGE: 1 OF 2		DATE: 9/15/05 / 9/15/05							
PROJECT NUMBER : 022950				<div>LEGEND</div> <div>1) BLOWS PER 6 IN.-140 LB. HAMMER FALLING 30 IN. TO DRIVE SAMPLER</div> <div>2) PEN - PENETRATION LENGTH OF SAMPLER OR CORE BARREL</div> <div>3) REC - RECOVERY LENGTH OF SAMPLE</div> <div>S - SPLIT SPOON SAMPLER 2.0 in. dia UF - FIXED PISTON</div> <div>CA - SPLIT SPOON SAMPLER 2.5 in. dia. ST - SHELBY TUBE</div> <div>GROUNDWATER ➤ ESTIMATED GROUNDWATER ⚡</div>									
BORING LOCATION : N 1159362.9, E 3223391.0													
GROUND SURFACE ELEVATION (LOCAL - FT) :4750.3													
GROUNDWATER ELEVATION : N/M DATE 9/15/05													
DRILLED BY : High Plains													
LOGGED BY : NDM TOTAL DEPTH (FT) : 22.0													
NOTES: RIG: Truck mounted CME-75				SAMPLE METHOD: Automatic Safety Hammer									
AUGER: 4-inch-diameter solid flight auger				BACKFILL: Cuttings									
DEPTH FT.		TYPE and NO.		SAMPLE - 1 - BLOWS PER 6 IN.		- 2 - PEN IN.		- 3 - REC IN.		REMARKS		SOIL AND ROCK DESCRIPTIONS	
												GRAPHC	
		S-1		5,7,6		18		16				0.0 - 1.0 ft: WIDELY GRADED SAND WITH CLAY AND GRAVEL. Mostly sand, widely graded, fine to coarse grained; about 20% - 30% gravel, up to 1 inch, subrounded to subangular; about 10% - 15% fines; low plastic; dry; light brown. (SW-SC) [Fill]	
		CA-2		50/5"		5		5				1.0 - 4.5 ft: CLAY. Mostly fines, low plastic; less than 10% sand, narrowly graded, fine grained; stiff, slightly moist; brown. (CL) [Fill]	
												4.5 - 7.0 ft: SANDSTONE: Mostly sand, narrowly graded, fine to medium grained; less than 10% fines, non to low plastic; moderately cemented; slightly weathered; moderately hard; slightly moist; light gray with some orange iron staining. [Kd]	
												Convert to NX air rotary core at 7.0 feet.	
												See Geological Log of Drill Hole for descriptions between 7.0 and 22.0 feet.	





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PROJECT NAME Southern Delivery System

LOCATION N 1159362.9

GROUND SURFACE ELEV. (FT) 4750.33

TREND -

PLUNGE 90

LOGGED BY NDM

TOTAL DEPTH (FT) 22.0

PERCENT ROD

PERCENT RECOVERY

GRAPHIC LOG

JOINT SYMBOL

JOINT DESCRIPTION (SEE LEGEND)

INSITU TESTING

HARDNESS

SHORTEST (FT)

LONGEST (FT)

NO. OF PIECES

CORING TIME (MIN)

ROD (FT)

RECOVERY (FT)

PENETRATION (FT)

INTERVAL

CONDITIONS

DRILLING

CONDITIONS

DEPT (FT)

ELEVATION

NOTES

GROUNDWATER

CONDITIONS

DRILLING

CONDITIONS

DEPT (FT)

ELEVATION

NOTES

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GROUNDWATER

CONDITIONS

DRILLING

CONDITIONS

DEPT (FT)

ELEVATION

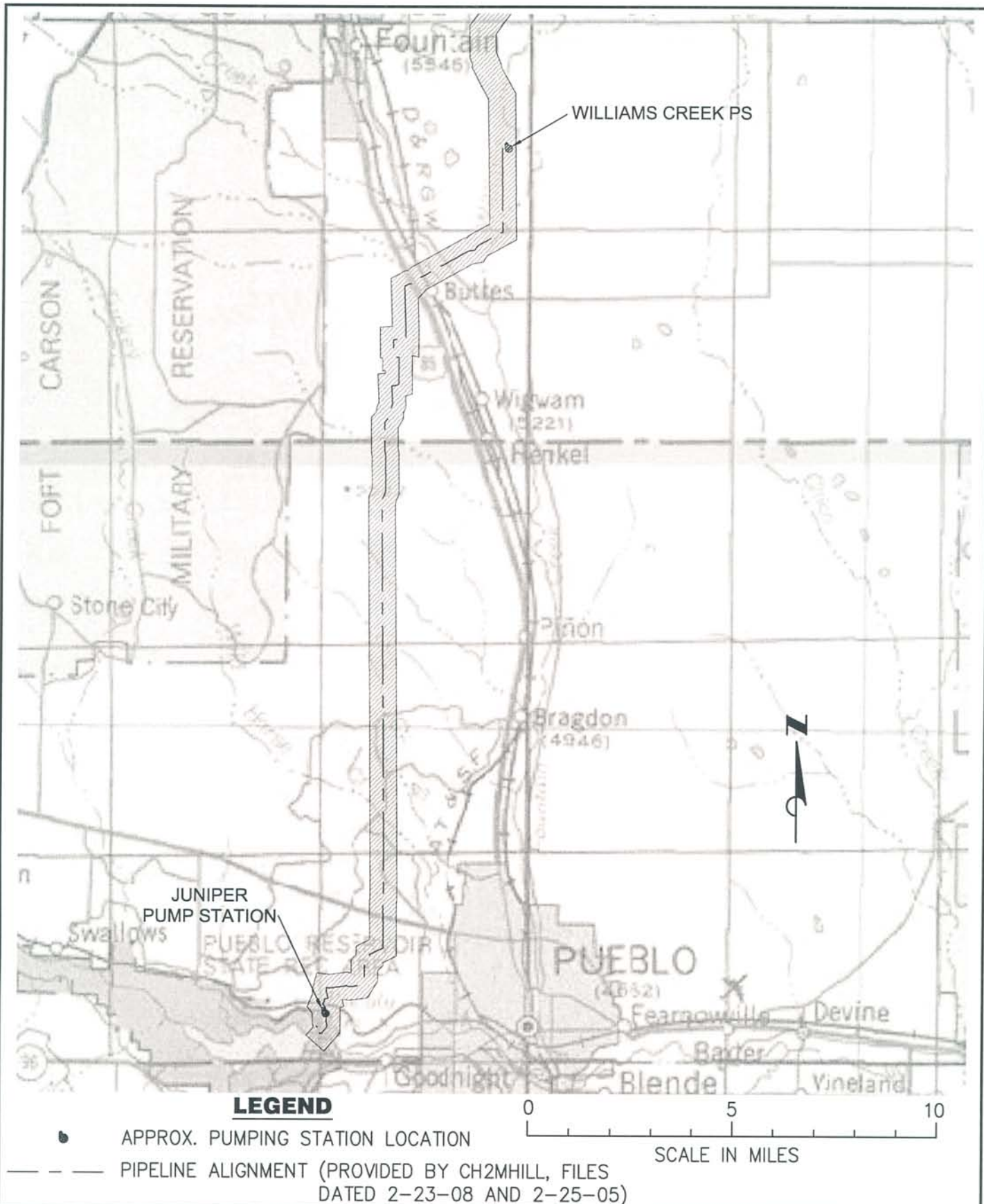
NOTES

GROUNDWATER

CONDITIONS

DRILLING

Appendix Q.2
Juniper Pump Station Geologic Data



Southern Delivery System

CH2M HILL
Colorado Springs, Colorado



CH2MHILL



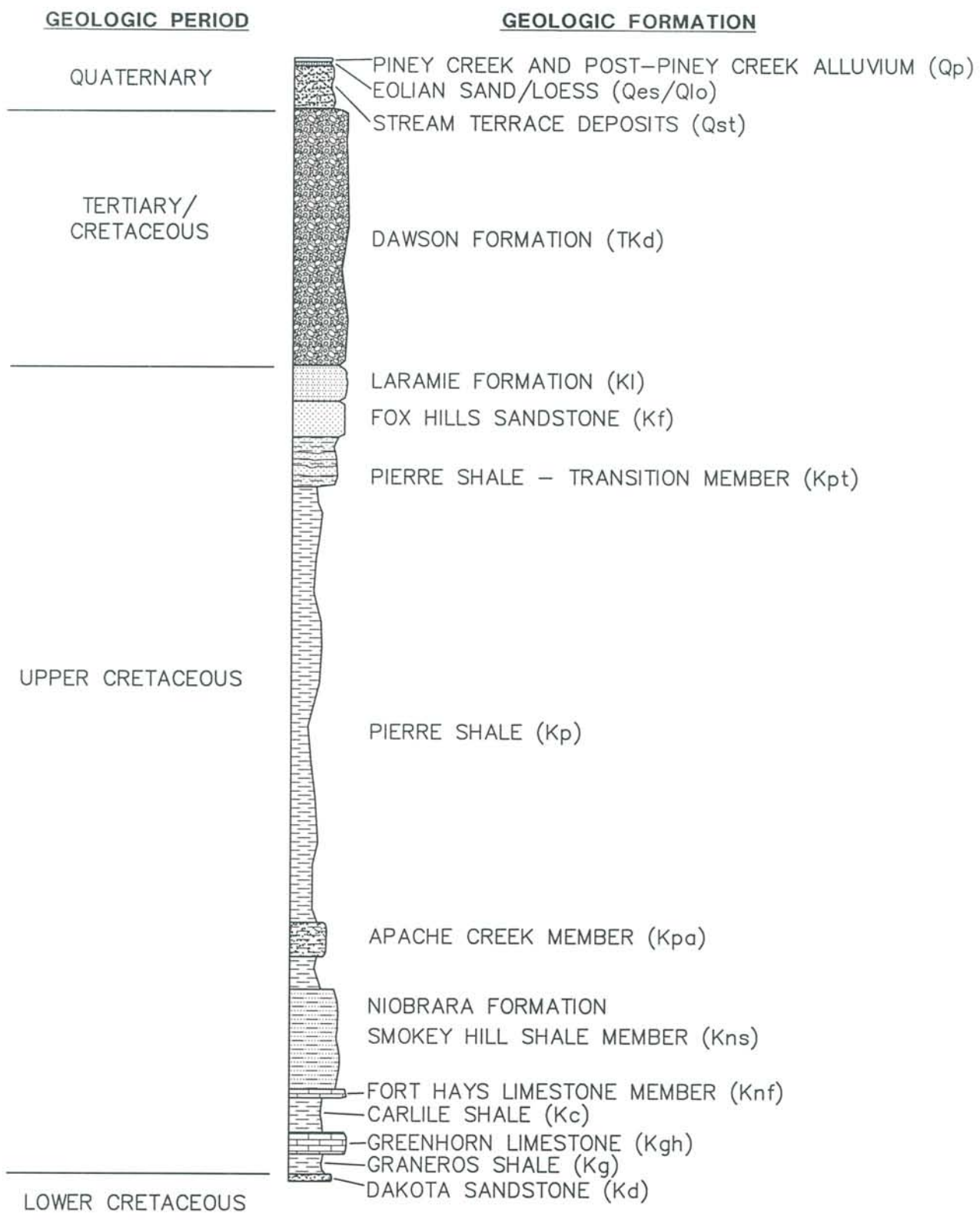
Project 02295

PROJECT VICINITY MAP
JUNIPER PUMP STATION

January 2005

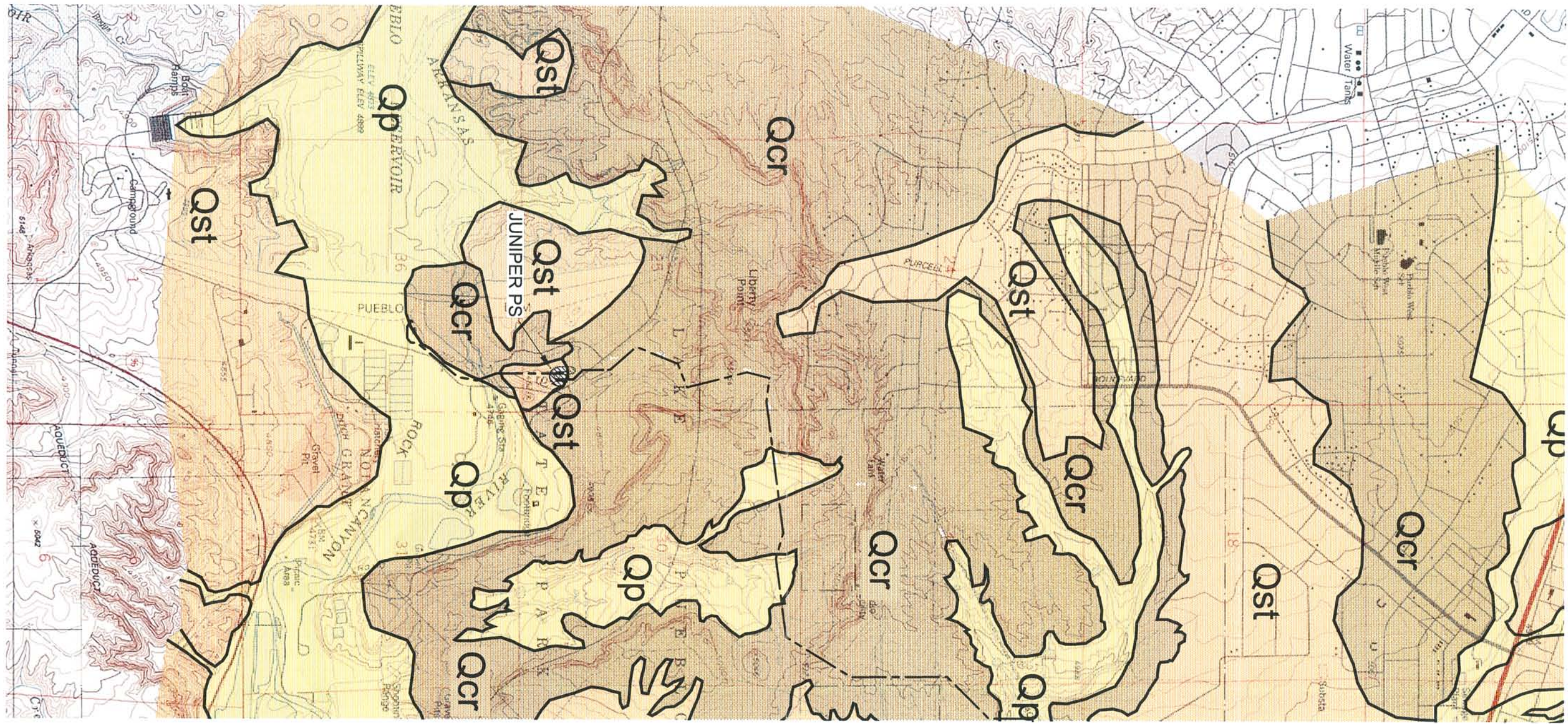
FIG. 7-B.1.5E-1

P:\DRAFTING\02295\JUNIPER PUMP STATION\JUNIPER STRAT COLUMN.DWG 1/05



NOTE:
1. THICKNESS OF UNITS NOT TO SCALE

 CH2M HILL Colorado Springs, Colorado		 Project 02295	GENERALIZED STRATIGRAPHIC COLUMN January 2005 Fig. 7-B.1.5E-2
--	---	---	---



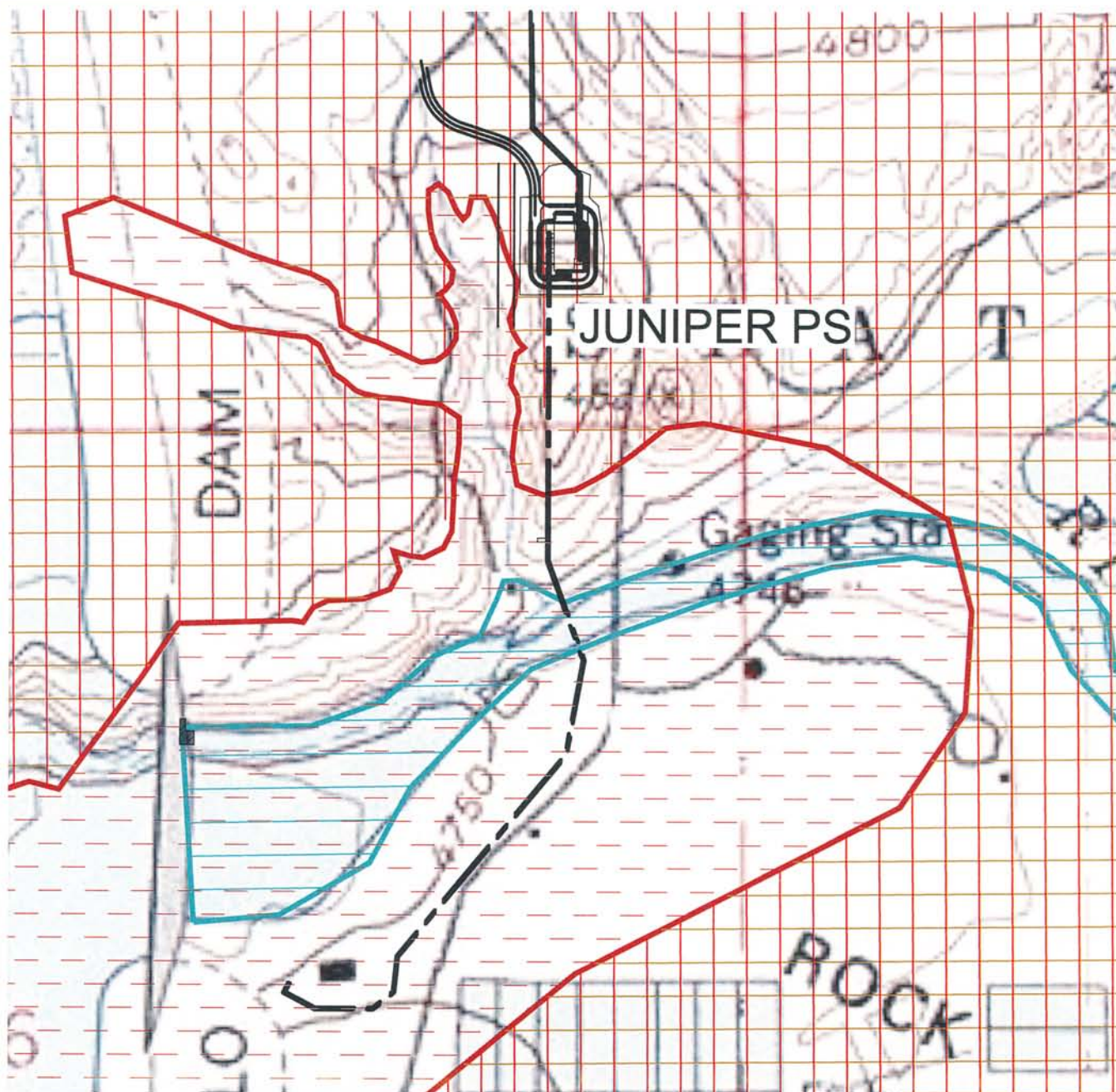
- LEGEND**
- Qp - PINEY CREEK AND POST-PINEY CREEK ALLUVIUM
 - Qst - OLDER STREAM TERRACE
 - Qcr - COLLUVIUM AND RESIDUAL SOIL
 - GEOLOGIC CONTACT (DASHED WHERE INFERRED)
 - APPROXIMATE PUMPING STATION LOCATION
 - PIPELINE ALIGNMENT

0 500 1000 2000 3000
SCALE IN FEET



NOTE:
1. PIPELINE ALIGNMENT PROVIDED BY CH2MHILL, FILES DATED 2-23-05 AND 2-25-05.

 Southern Delivery System	 CH2M HILL	 GEI	SURFICIAL GEOLOGY
			Project 02295 January 2005 Fig. 7-B.1.5E-3



LEGEND - APPROXIMATE AREAS OF POTENTIAL GEOLOGIC HAZARDS

 CORROSIVE SOILS AND BEDROCK

 EXPANSIVE SOILS AND BEDROCK

 SHALLOW GROUNDWATER

 HARD BEDROCK

 PIPELINE ALIGNMENT (PROVIDED BY CH2MHILL, FILES DATED 2-23-05 AND 2-25-05)



0 300 600 1200 1800
SCALE IN FEET



Southern Delivery System

CH2M HILL
Colorado Springs, Colorado



Project 02295

JUNIPER
PUMP STATION
POTENTIAL
GEOLOGIC HAZARDS

January 2005 Fig .7-B.1.5E-5