





Form	ACO1 - Well Completion
Operator	Natural Gas Pipeline Company of America LLC
Well Name	AMA 425-A B3 NGPL 3
Doc ID	1809231

#### Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	14	10.75	9.1	20	Bentonite	15	N/A

CITATION

DEEP GROUND BED DRILL LOG & RECTIFIER FORM

DRILLING & BORING

CLIENT INFORMATION

Client	Kinder Morgan				Job Number	2024-0309	
Facility	AMA 425A DW-3				Customer Contact	Kevin Brown	
City	Haddam	County	WASHINGTON	State	Ks	Phone No.	+1 (308) 325-3563

DEEP GROUND BED & DRILLING LOG INFORMATION

☒ New Installation ☐ Existing Rectifier

Hole Dia.	10"	Total Depth	250'	Casing Feet	20'	Dia.	10"	Type	SDR-21 PVC	Groundbed GPS	
No. Anodes	13	Size & Type	2660 cast iron	Anode Lead	275'	Size	#8	Type	Halar	N	39.871708
Lbs. Coke	5000	Coke Type	SC-3	Top of Coke Column	89'	Vent	140'	W	-97.245417		
Lbs. Plug	2950	Plug Type	Bentonite	Top of Plug	3'	Logging Volts			13.2		

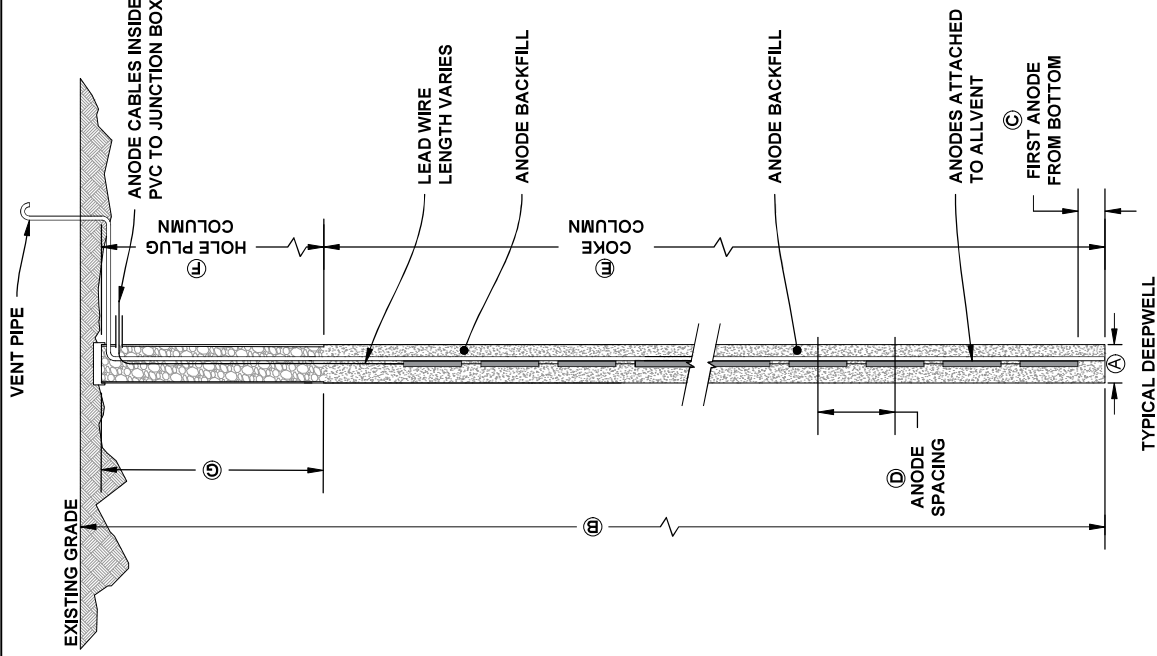
Depth Ft.	DRILLER'S LOG	Anode NO.	Electric Log				Depth Ft.	DRILLER'S LOG	Anode NO.	Electric Log			
			Volts	Amps Before	Amps After	Remarks				Volts	Amps Before	Amps After	Remarks
0							205		5			7.7	
5							210	Sand stone			1.5		
10	Casing						215		4			7.0	
15							220	Rock			1.1		
20	Casing						225		3			8.1	
25							230	Rock			1.3		
30	Sand			1.1			235		2			7.9	
35							240	Rock			1.2		
40	Red clay			1.7			245		1			6.0	
45							250	Rock			1.3		
50	Red clay			1.6			255						
55							260						
60	Red clay			1.7			265						
65							270						
70	Red clay			1.4			275						
75							280						
80	Red clay			1.4			285						
85							290						
90	Red clay			1.3			295						
95							300						
100	Red clay			1.6			305						
105							310						
110	Red clay			1.5			315						
115							320						
120	Red clay			1.7			325						
125		13			8.2		330						
130	Red clay			1.7			335						
135		12			8.4		340						
140	Red clay			1.5			345						
145		11			9.0		350						
150	Red clay			1.6			355						
155		10			9.8		360						
160	Red clay			1.6			365						
165		9			9.8		370						
170	Sand stone			1.6			375						
175		8			8.7		380						
180	Sand stone			1.8			385						
185		7			7.4		390						
190	Rock			1.5			395						
195		6			7.8		400						
200	Sand stone			1.6			Total						

ANODE JUNCTION BOX INFORMATION

ANODE JUNCTION BOX												COMMENTS
Cir.	Amp	Cir.	Amp	Cir.	Amp	Cir.	Amp	Cir.	Amp	Cir.	Amp	
1		6		11		16		21		26		
2		7		12		17		22		27		
3		8		13		18		23		28		
4		9		14		19		24		29		
5		10		15		20		25		30		
Shunt	Mv		Amp							TOTAL		

BILL OF MATERIALS			
ITEM	DESCRIPTION	QTY.	UNITS
1	ANODES, SET OF 13, 2660 CAST IRON, 10' CENTERS AT 250', #8 HALAR	1	EACH
2	SC-3 COKE BREEZE	100	50 LB BAGS
3	BENTONITE PLUG	59	50 LB BAGS

DIMENSIONS		
CALLOUT	ITEM	UNITS
A	HOLE DIAMETER	10 IN
B	HOLE DEPTH	250 FT
C	FIRST ANODE FROM BOTTOM	5 FT
D	ANODE SPACING	10 FT CTC
E	ANODE BACKFILL COLUMN	161 FT
F	HOLE PLUG COLUMN	89 FT
G	CASING LENGTH	20 FT



REVISIONS				DEEP GROUNDED LEGEND				DRAWN BY		DATE		PROJECT NO.		SHEET NO.		REVISION	
No.	Description	Drawn By	Date	Checked By	Date	DEEP GROUNDED	ANODE JBOX	NEG. CONNECTION	RECTIFIER	Drawn By	Date	Checked By	Date	4 of 5	0	0	0
										J. GREENFIELD	2024	R. McCLEAN	2024				



CATHODIC PROTECTION LAYOUT  
AMA 425A - DW3  
DEEP GROUNDED INSTALLATION

WASHINGTON  
Project No. 2024-0309  
Sheet No. 4 of 5  
Revision 0