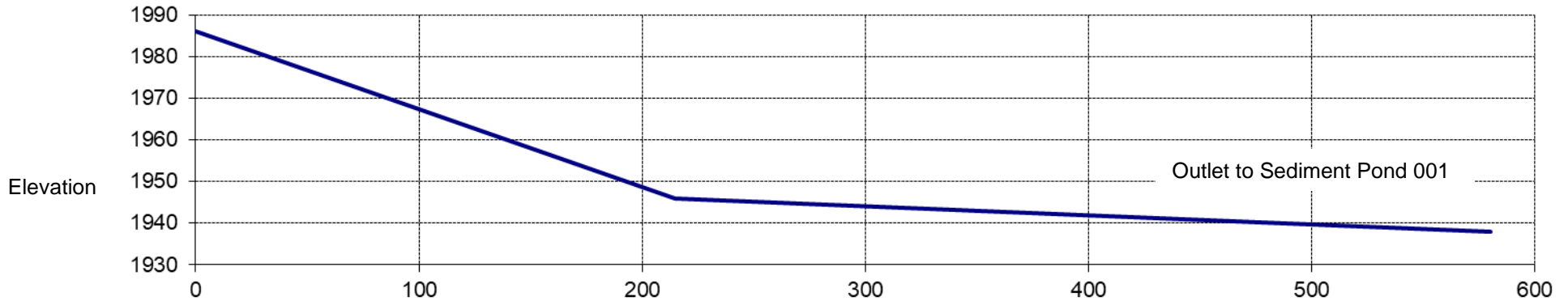


DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (CD-1)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet 1 of 1
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard			
Start	End																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs	
0+00	1986	1.4	10	16	85	5.09	18.60	0.50	R-4	0.0535	0.0	3:1, 2:1	1.41	0.75	3.75	5.92	8.3	1.25	6.25	37.9	
2+15	1946																				
5+80	1938	3.7	10	16	85	13.45	2.19	0.50	R-3	0.0347	0.0	3:1, 2:1	5.63	1.50	7.50	4.97	27.9	2.00	10.00	62.4	



PROFILE

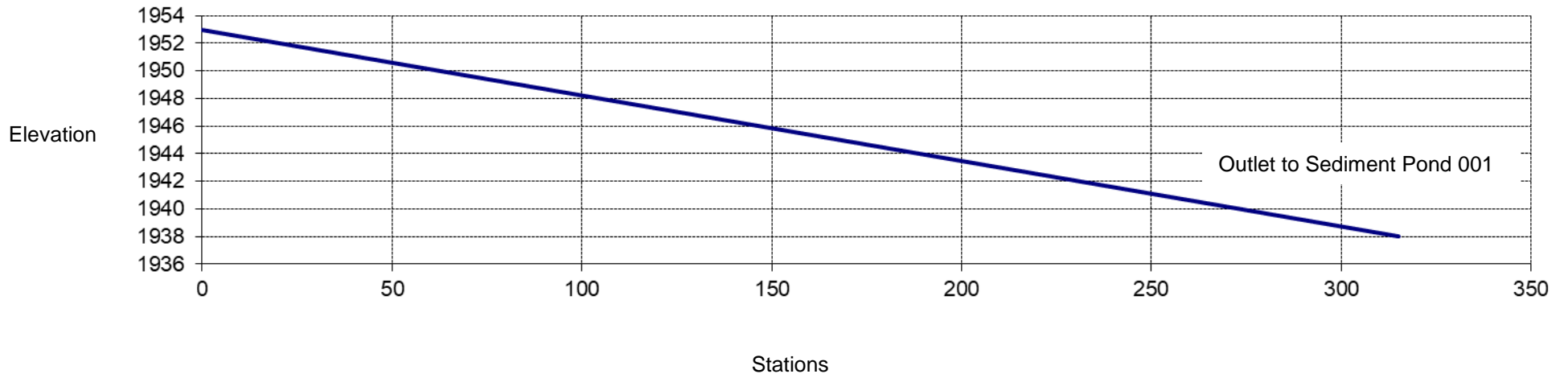
Stations

Vertical Scale 1" = _____

DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (CD-2)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet 1 of 1
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard		
Start End	Elevation																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs
0+00	1953	0.5	10	16	85	1.82	4.76	0.50	Grass	0.0464	0.0	3:1, 2:1	1.41	0.75	3.75	3.45	4.9	1.25	6.25	23.3



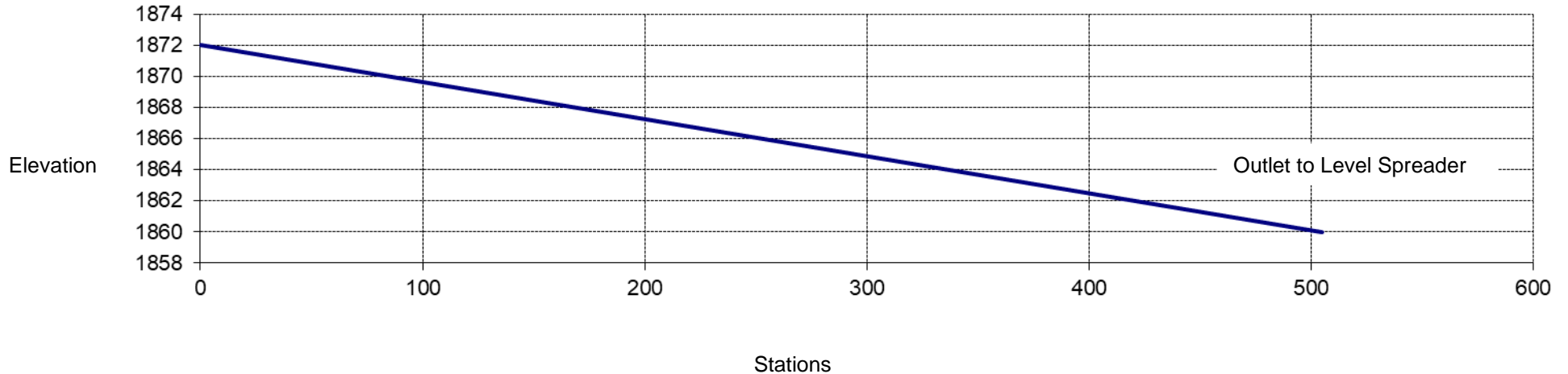
PROFILE

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DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (CD-3)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet 1 of 1
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard			
Start	End																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs	
0+00	5+5	3	10	16	85	10.91	2.38	0.50	Grass	0.0500	0.0	3:1, 2:1	3.91	1.25	6.25	3.18	12.4	1.75	8.75	34.9	



Stations

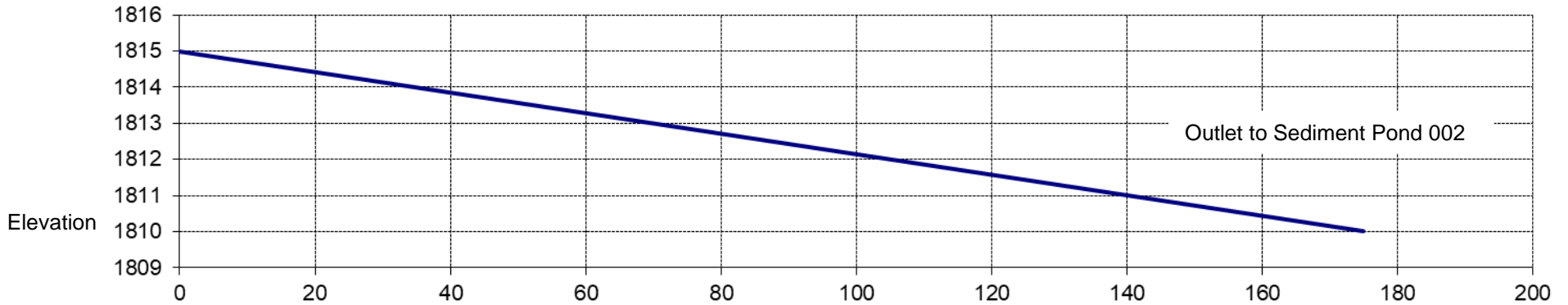
PROFILE

Vertical Scale 1" = _____

DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (CD-3A)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet 1 of 1
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard			
Start	End																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs	
0+00	1815	5.7	10	16	85	15.85	2.86	0.50	R-3	0.0347	0.0	3:1, 2:1	5.63	1.50	7.50	5.67	31.9	2.00	10.00	71.2	
1+75	1810																				



Stations

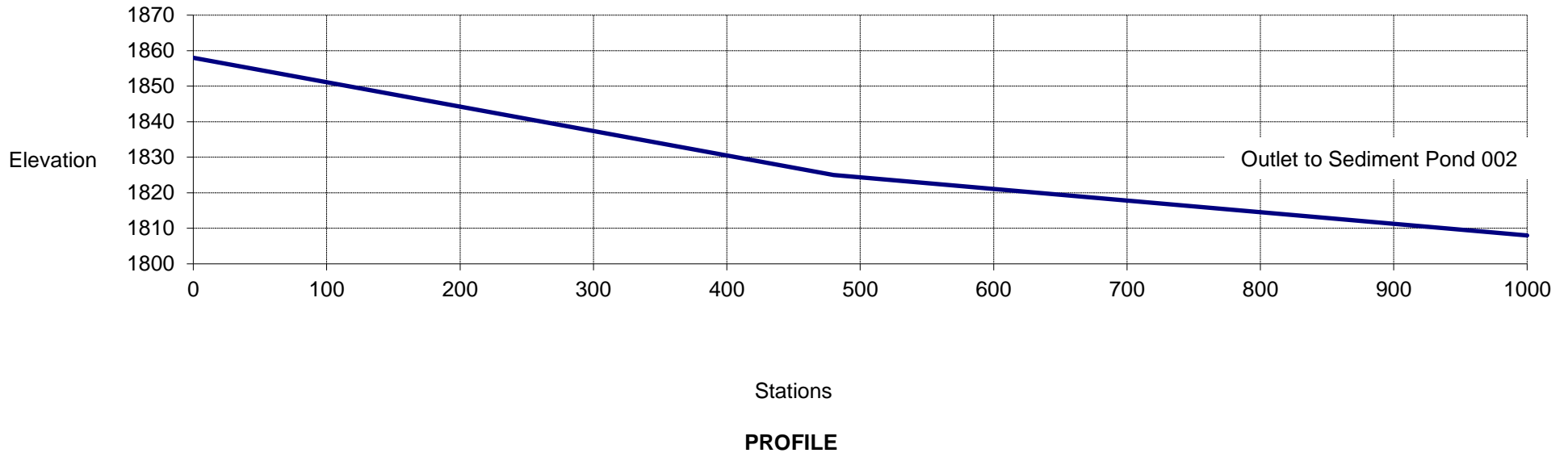
PROFILE

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DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (CD-4)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet 1 of 1
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard		
Start End	Elevation																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs
0+00	1858	7.2	10	29	85	20.01	6.88	0.50	R-4	0.0459	0.0	3:1, 2:1	3.91	1.25	6.25	5.89	23.0	1.75	8.75	60.8
4+80	1825																	1.75	8.75	60.8
10+00	1810	19.2	10	29	85	53.37	2.88	0.50	R-4	0.0416	0.0	3:1, 2:1	10.00	2.00	10.00	5.77	57.7	2.50	12.50	108.6

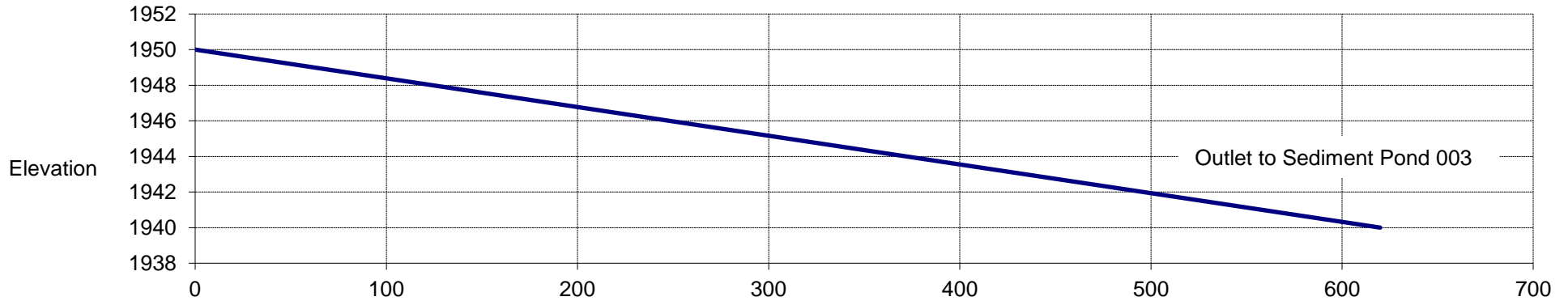


Vertical Scale 1" = _____

DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (CD-5)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet 1 of 1
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard			
Start End	Elevation																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs	
0+00 6+20	1950 1940	2.3	10	33	85	8.36	1.61	0.50	Grass	0.05	0.0	3:1, 2:1	5.63	1.50	7.50	2.73	15.4	2.00	10.00	37.1	
6+20	0	0	0	0	0	0	0.00	0.00	0.0	0.00	0.0	:1, :1	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.0	



Stations

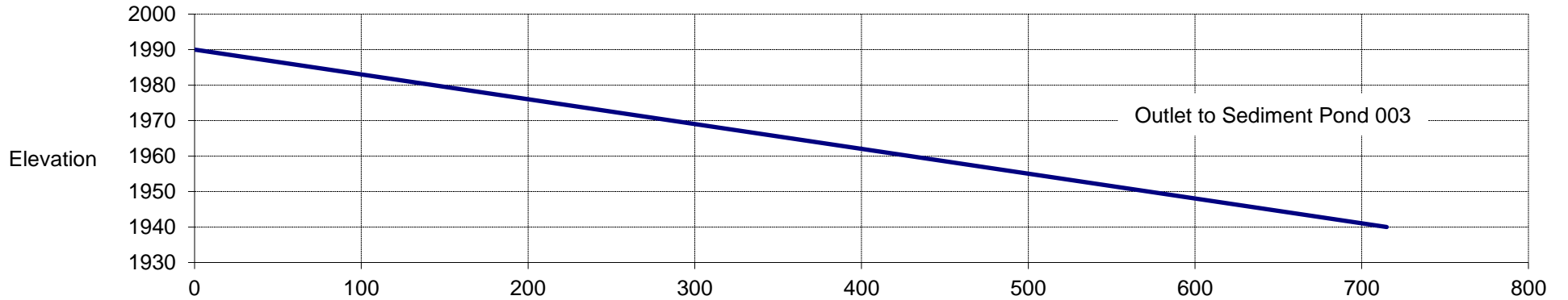
PROFILE

Vertical Scale 1" = _____

DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (CD-6)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet 1 of 1
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard		
																		Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs
Start 0+00	Elevation 1990	6.7	10	33	85	24.36	6.99	0.50	R-4	0.04	0.0	3:1, 2:1	5.63	1.50	7.50	7.00	39.4	2.00	10.00	89.8
End 7+15	1940																			



Stations

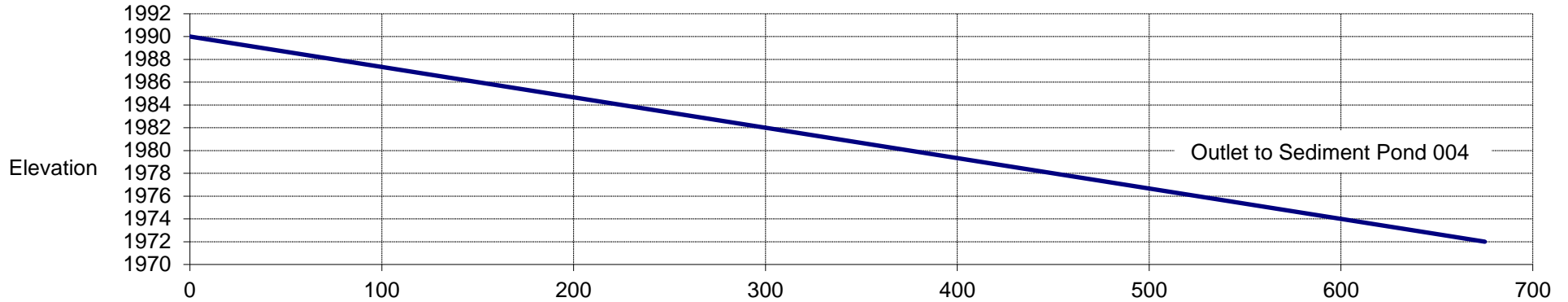
PROFILE

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DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (CD-7)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet 1 of 1
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard			
Start End	Elevation 1990 1972																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs	
0+00 6+75	1990 1972	7.6	10	36	85	27.64	2.67	0.50	R-3	0.03	0.0	3:1, 2:1	7.66	1.75	8.75	6.20	47.5	2.25	11.25	95.4	



Stations

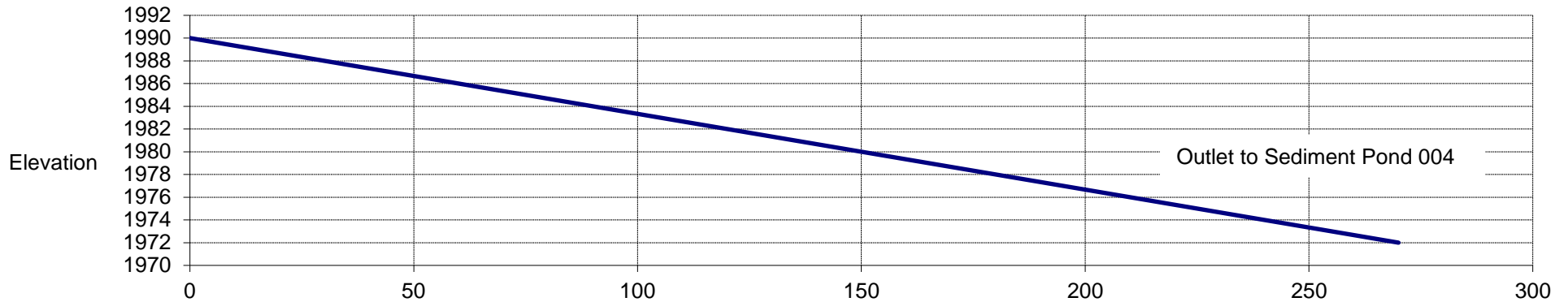
PROFILE

Vertical Scale 1" = _____

DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (CD-8)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet 1 of 1
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard			
Start End	Elevation 1972																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs	
0+00 2+70	1990 1972	2.5	10	36	85	9.09	6.67	0.50	R-3	0.04	0.0	3:1, 2:1	2.50	1.00	5.00	6.20	15.5	1.50	7.50	48.7	



Stations

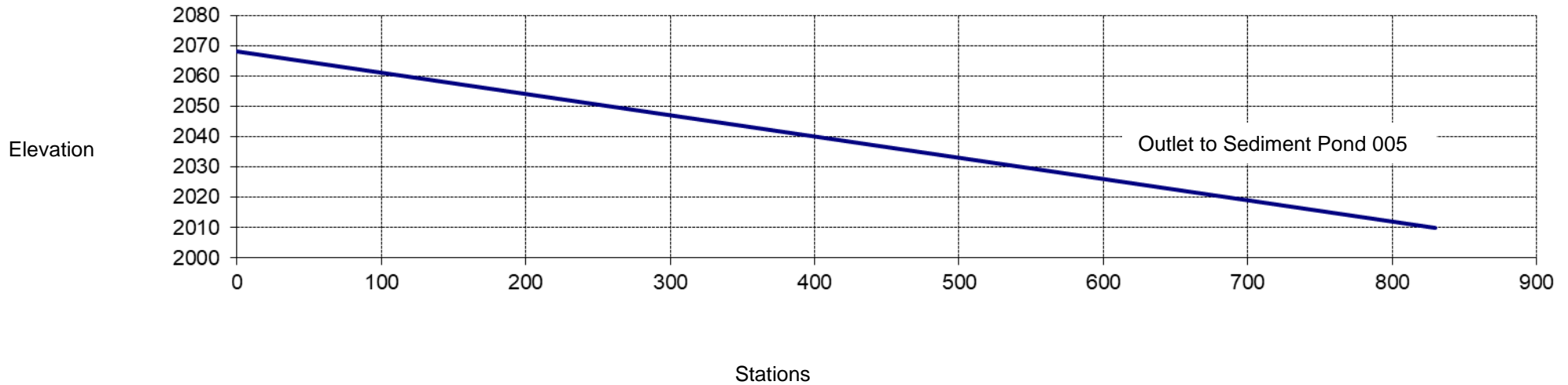
PROFILE

Vertical Scale 1" = _____

DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (CD-9)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet <u> 1 </u> of <u> 1 </u>
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard		
																		Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs
Start 0+00	Elevation 2068	2.9	10	20	85	8.06	6.99	0.50	R-3	0.0370	0.0	3:1, 2:1	2.50	1.00	5.00	6.35	15.9	1.50	7.50	49.9
End 8+30	2010																			



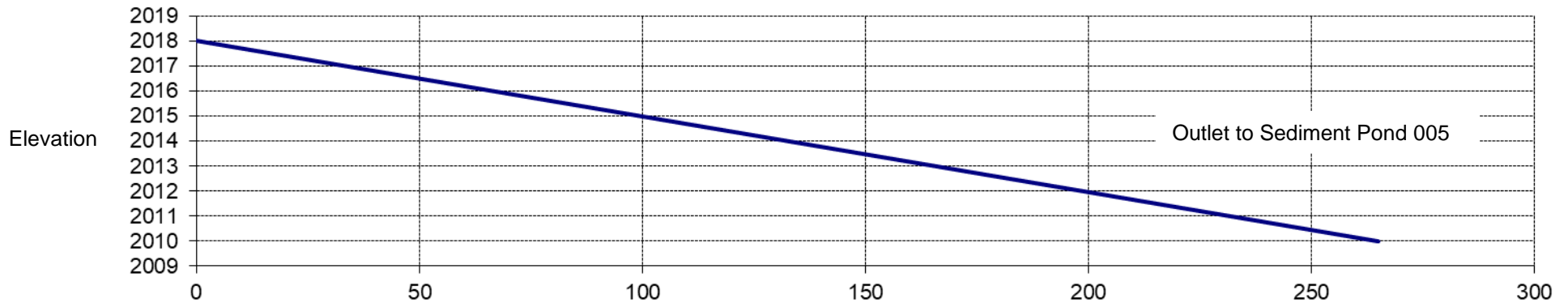
PROFILE

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DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (CD-10)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet 1 of 1
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard			
Start	End																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs	
0+00	2018	1.5	10	29	85	4.17	3.02	0.50	Grass	0.0496	0.0	3:1, 2:1	2.50	1.00	5.00	3.11	7.8	1.50	7.50	27.0	
2+65	2010																				



Stations

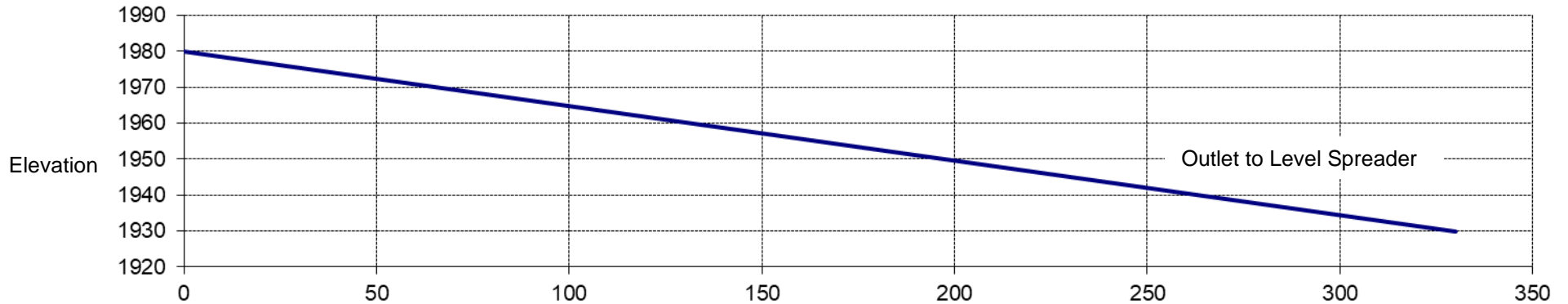
PROFILE

Vertical Scale 1" = _____

DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (DD-1)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet 1 of 1
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard		
Start End	Elevation 1980 1930																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs
0+00	1980	3.6	10	29	85	10.01	15.15	0.50	R-4	0.0488	0.0	3:1, 2:1	2.50	1.00	5.00	7.10	17.7	1.50	7.50	58.0



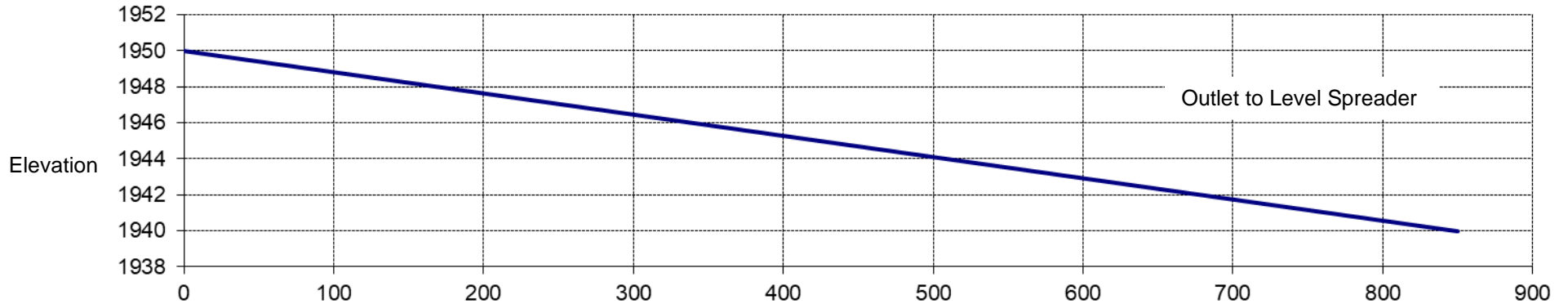
PROFILE

Vertical Scale 1" = _____

DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: Collection (DD-2)	Mine Operation Mine 78 Surface No. 3 Mine Name	Company: Rosebud Mining Company	Sheet 1 of 1
Channel Cross-Section Type: V-Ditch	Prepared by: Rosebud Mining Company	Telephone Number: (724) 545-6222	Date: April 19, 2021

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard		
Start End	Elevation																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs
0+00	1950	23	10	24	85	63.94	1.18	0.50	R-3	0.0327	0.0	3:1, 2:1	15.63	2.50	12.50	5.43	84.9	3.00	15.00	140.3
8+50	1940																			



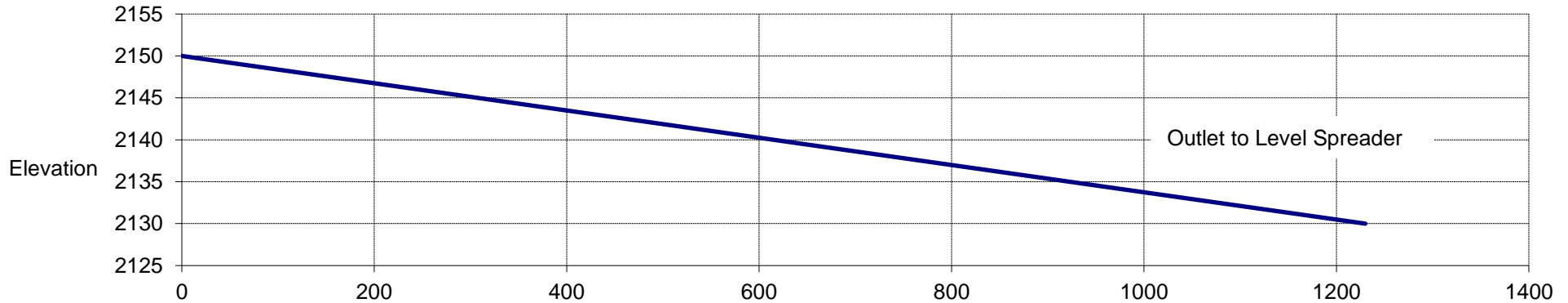
PROFILE

Vertical Scale 1" = _____

DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: <u>Diversion Ditch (DD-3)</u>	Mine Operation <u>Mine 78 Surface No. 3 Mine</u> Name	Company: <u>Rosebud Mining Company</u>	Sheet <u>1</u> of <u>1</u>
Channel Cross-Section Type: <u>V-Ditch</u>	Prepared by: <u>Rosebud Mining Company</u>	Telephone Number: <u>(724) 545-6222</u>	Date: <u>April 19, 2021</u>

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard			
Start End	Elevation																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs	
0+00 12+30	2150 2130	9	10	13	75	22.6	1.6	0.5	R-3	0.03	0.0	3:1, 2:1	7.66	1.75	8.75	4.8	37.1	2.25	11.25	74.5	



Stations

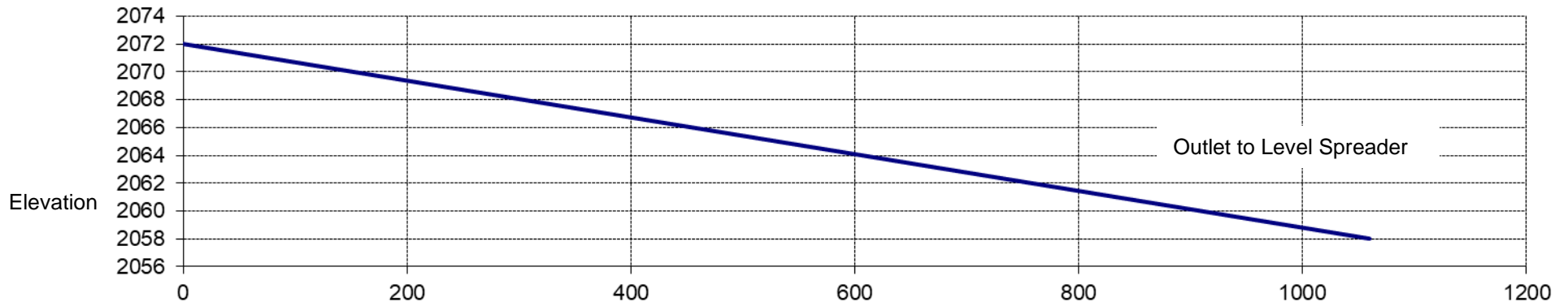
PROFILE

Vertical Scale 1" = _____

DIVERSION/COLLECTION DITCH DATA SHEET

Type Ditch: <u>Diversion Ditch (DD-4)</u>	Mine Operation <u>Mine 78 Surface No. 3 Mine</u> Name	Company: <u>Rosebud Mining Company</u>	Sheet <u>1</u> of <u>1</u>
Channel Cross-Section Type: <u>V-Ditch</u>	Prepared by: <u>Rosebud Mining Company</u>	Telephone Number: <u>(724) 545-6222</u>	Date: <u>April 19, 2021</u>

Station		Drainage Area acres	Design Storm (yrs.)	Average Watershed Slope (%)	Curve Number	Peak Discharge Q cfs	Channel Bed Slope (%)	Freeboard (ft)	Channel Lining (specify average rock size)	Manning's Coefficient (n)	Channel Bottom Width (ft.)	Channel Side Slopes L/R	Flow Area (sq.ft.)	Flow Depth (ft.)	Top Flow Width (ft)	Flow Velocity (ft/sec.)	Q Available cfs	With Freeboard			
Start End	Elevation																	Channel Depth (ft.)	Top Channel Width (ft.)	Q Available cfs	
0+00 10+60	2072 2058	14.6	10	11	85	39.99	1.32	0.50	R-3	0.0335	0.0	3:1, 2:1	10.0 0	2.00	10.00	4.84	48.4	2.50	12.50	89.9	



Stations

PROFILE

Vertical Scale 1" = _____