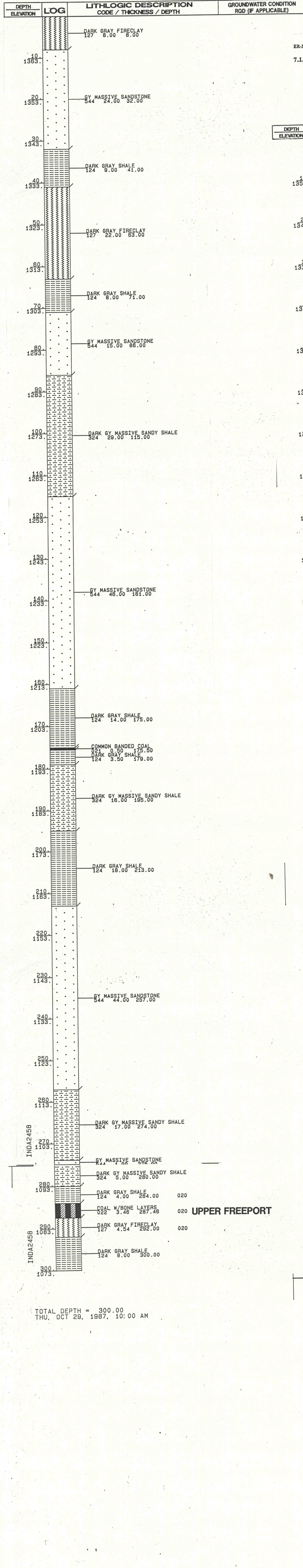


ER-MR-317: 191

7.1A Geologic Logs, Drill Holes

Hole Number: TND-A-245B
Surface Elevation (MSL): 1373.36
Coal(bottom)Elevations: 1085.90
Ground Water Elevation(s)(MSL): 1333.36
Coordinates: PA PLANE N 473809
Drilling Method: AIR ROTARY

Total Depth: 300
Date Drilled: 7/82
Logged by: DRILLER
Date(s) water level was taken: 7/82
E 1566854

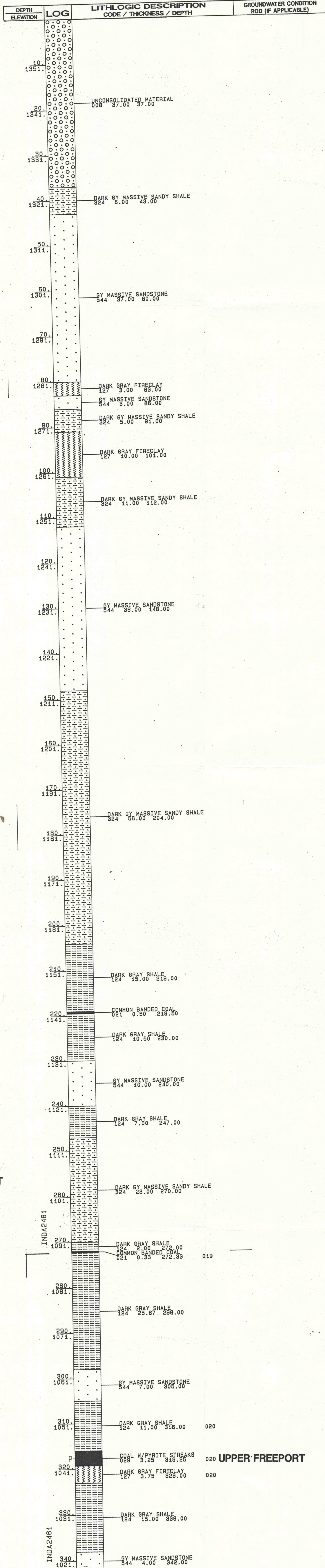


ER-MR-317: 191

7.1A Geologic Logs, Drill Holes

Hole Number: TND-A-246I
Surface Elevation (MSL): 1342.29
Coal(bottom)Elevations: 1041.49
Ground Water Elevation(s)(MSL): 1310.69
Coordinates: PA PLANE N 5190
Drilling Method: AIR ROTARY

Total Depth: 342
Date Drilled: 7/82
Logged by: DRILLER
Date(s) water level was taken: 7/82
E 1504409

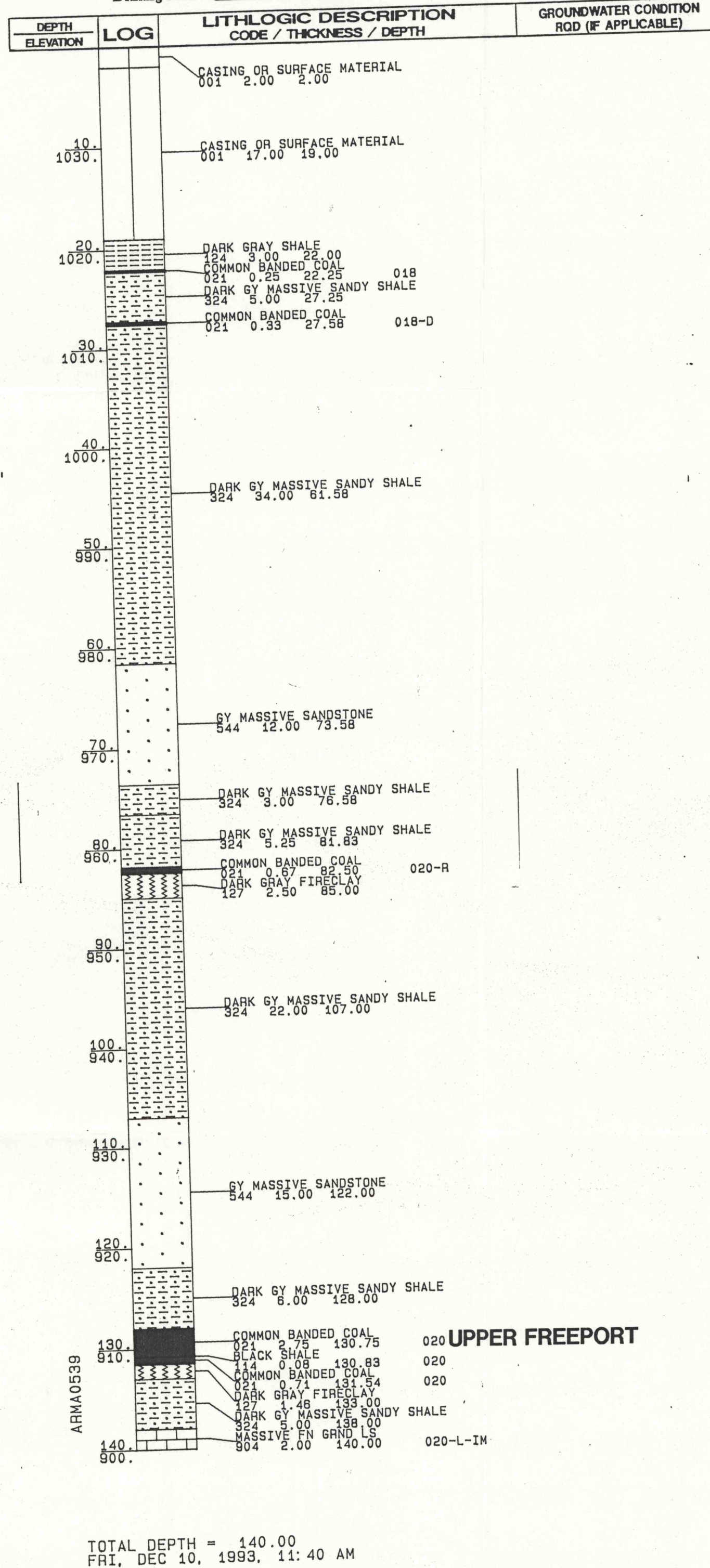


ER-MR-317: 191

7.1A Geologic Logs, Drill Holes

Hole Number: ARM-A-0539
Surface Elevation (MSL): 1040
Coal(bottom)Elevations: 908.46
Ground Water Elevation(s)(MSL): NONE
Coordinates: PA PLANE N 51028.71
Drilling Method: AIR ROTARY

Total Depth: 140
Date Drilled: 7/59
Logged by: DRILLER
Date(s) water level was taken:
E 1570752.50

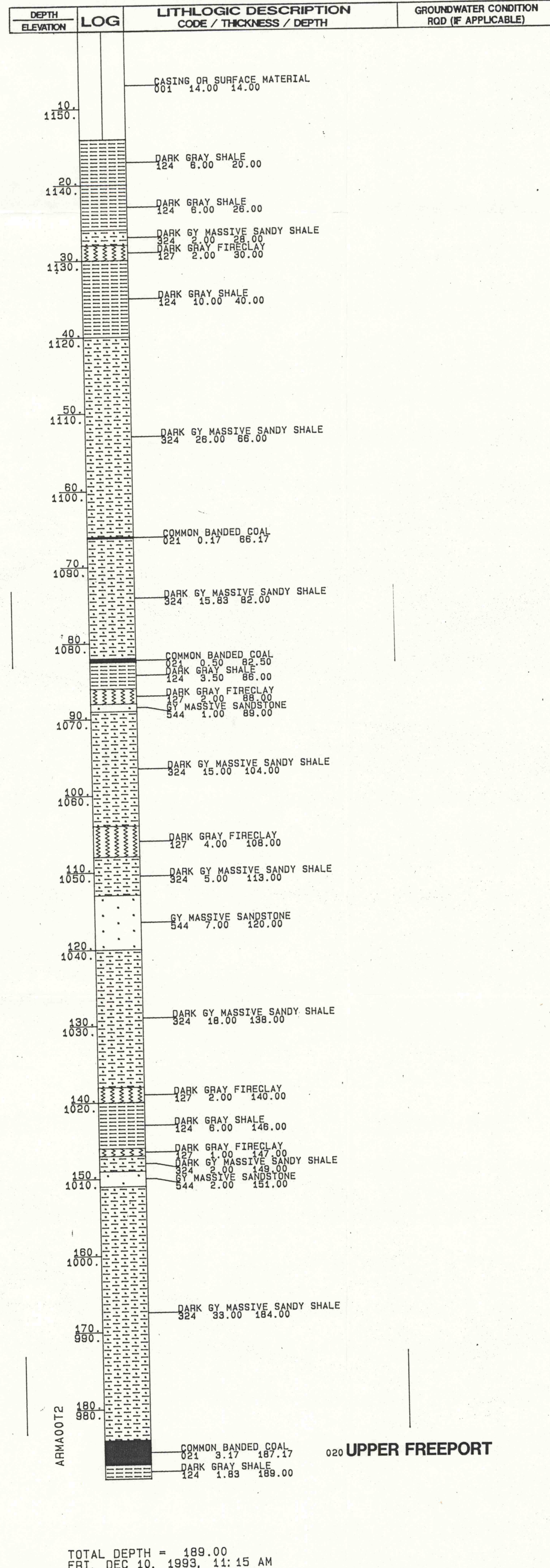


ER-MR-317: 191

7.1A Geologic Logs, Drill Holes

Hole Number: ARM-A-0072
Surface Elevation (MSL): 1160
Coal(bottom)Elevations: 972.83
Ground Water Elevation(s)(MSL): NONE
Coordinates: PA PLANE N 55532.90
Drilling Method: AIR ROTARY

Total Depth: 189
Date Drilled: 10/77
Logged by: DRILLER
Date(s) water level was taken:
E 1578727.45

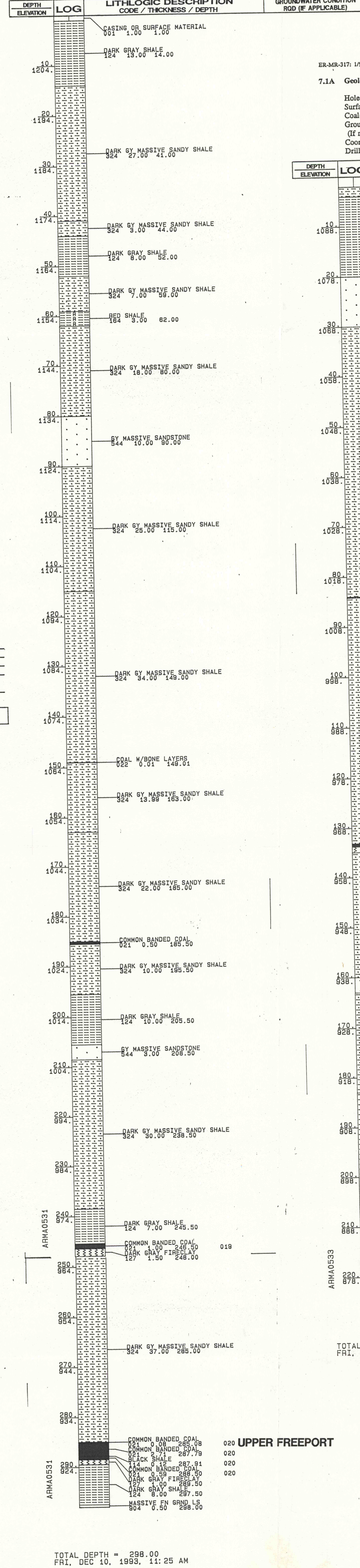


ER-MR-317: 191

7.1A Geologic Logs, Drill Holes

Hole Number: ARM-A-0531
Surface Elevation (MSL): 1214
Coal(bottom)Elevations: 925.50
Ground Water Elevation(s)(MSL): NONE
Coordinates: PA PLANE N 515670.46
Drilling Method: AIR ROTARY

Total Depth: 298
Date Drilled: 7/59
Logged by: DRILLER
Date(s) water level was taken:
E 1577560.39

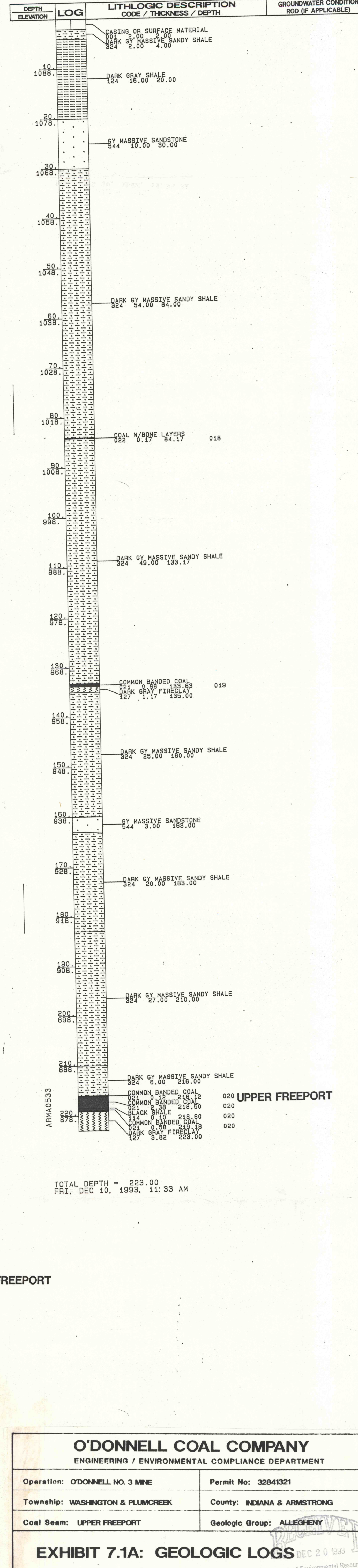


ER-MR-317: 191

7.1A Geologic Logs, Drill Holes

Hole Number: ARM-A-0533
Surface Elevation (MSL): 1098
Coal(bottom)Elevations: 878.92
Ground Water Elevation(s)(MSL): NONE
Coordinates: PA PLANE N 515146.89
Drilling Method: AIR ROTARY

Total Depth: 223
Date Drilled: 7/59
Logged by: DRILLER
Date(s) water level was taken:
E 1572772.56



O'DONNELL COAL COMPANY
ENGINEERING / ENVIRONMENTAL COMPLIANCE DEPARTMENT
Operation: O'DONNELL NO. 3 MINE
Township: WASHINGTON & PLUMCREEK
Coal Seam: UPPER FREEPORT
Geologic Group: ALLEGHENY
EXHIBIT 7.1A: GEOLOGIC LOGS
Date: 12/17/93
Scale: AS NOTED
Approved By: R. V. HGBEE