

S209 SEISMIC LINES

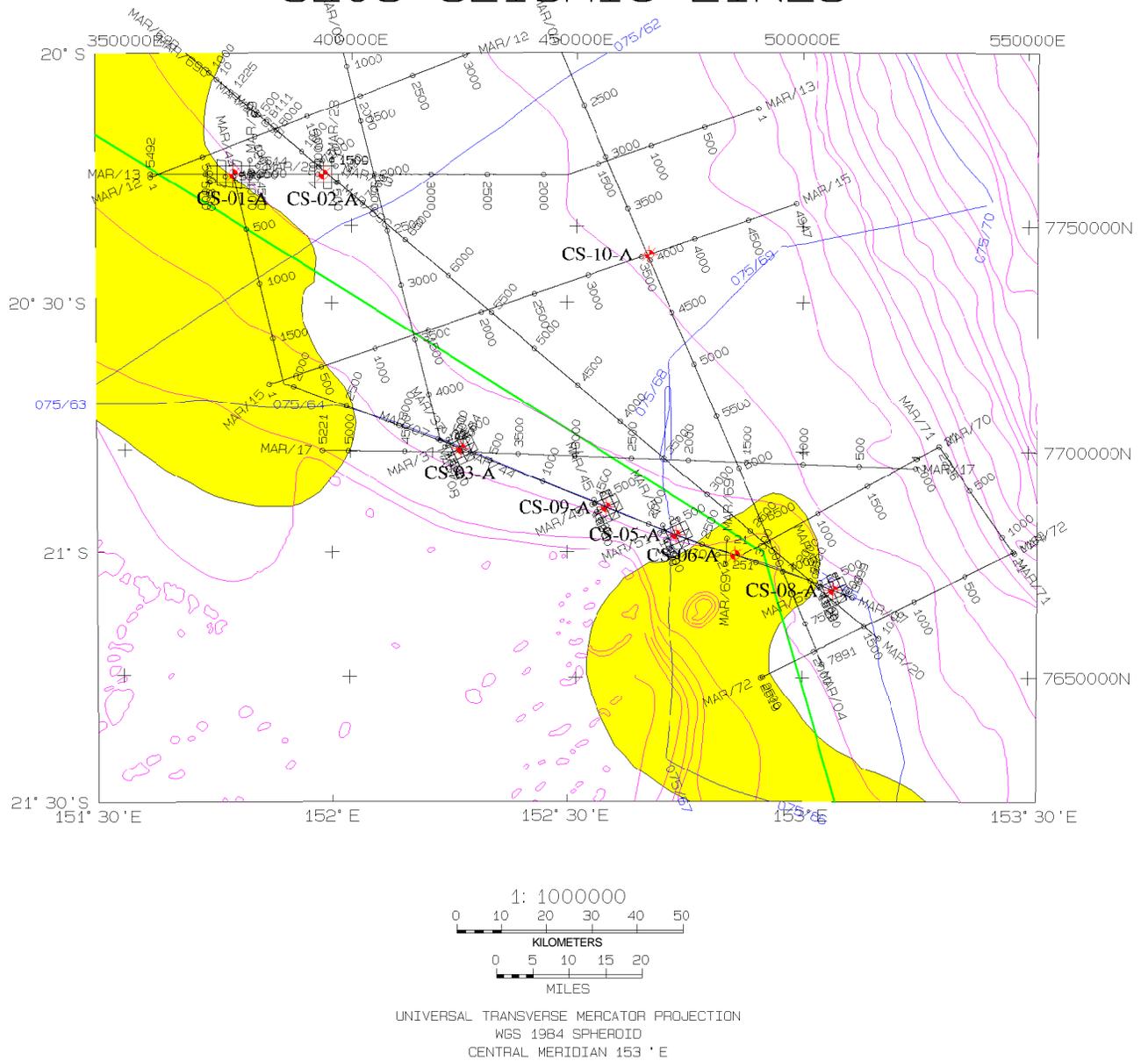


Figure 14. Track line for Leg 194 seismic data

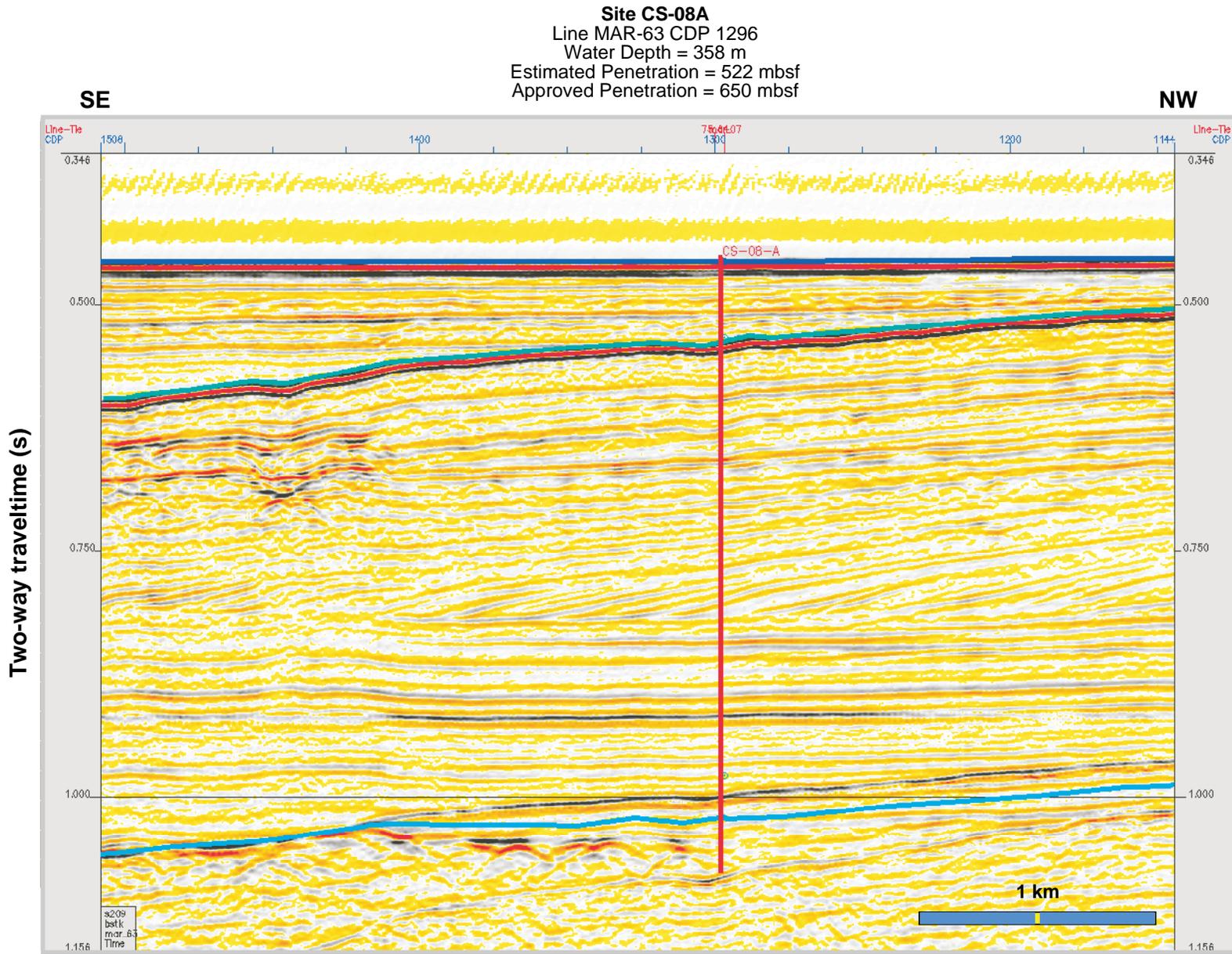


Figure 25. Detailed high-resolution northwest-southeast seismic section (two-way traveltimes) used to locate Site CS-08A.

Site CS-08A
Line MAR-63 CDP 1814
Water Depth = 358 m
Estimated Penetration = 522 mbsf
Approved Penetration = 650 mbsf

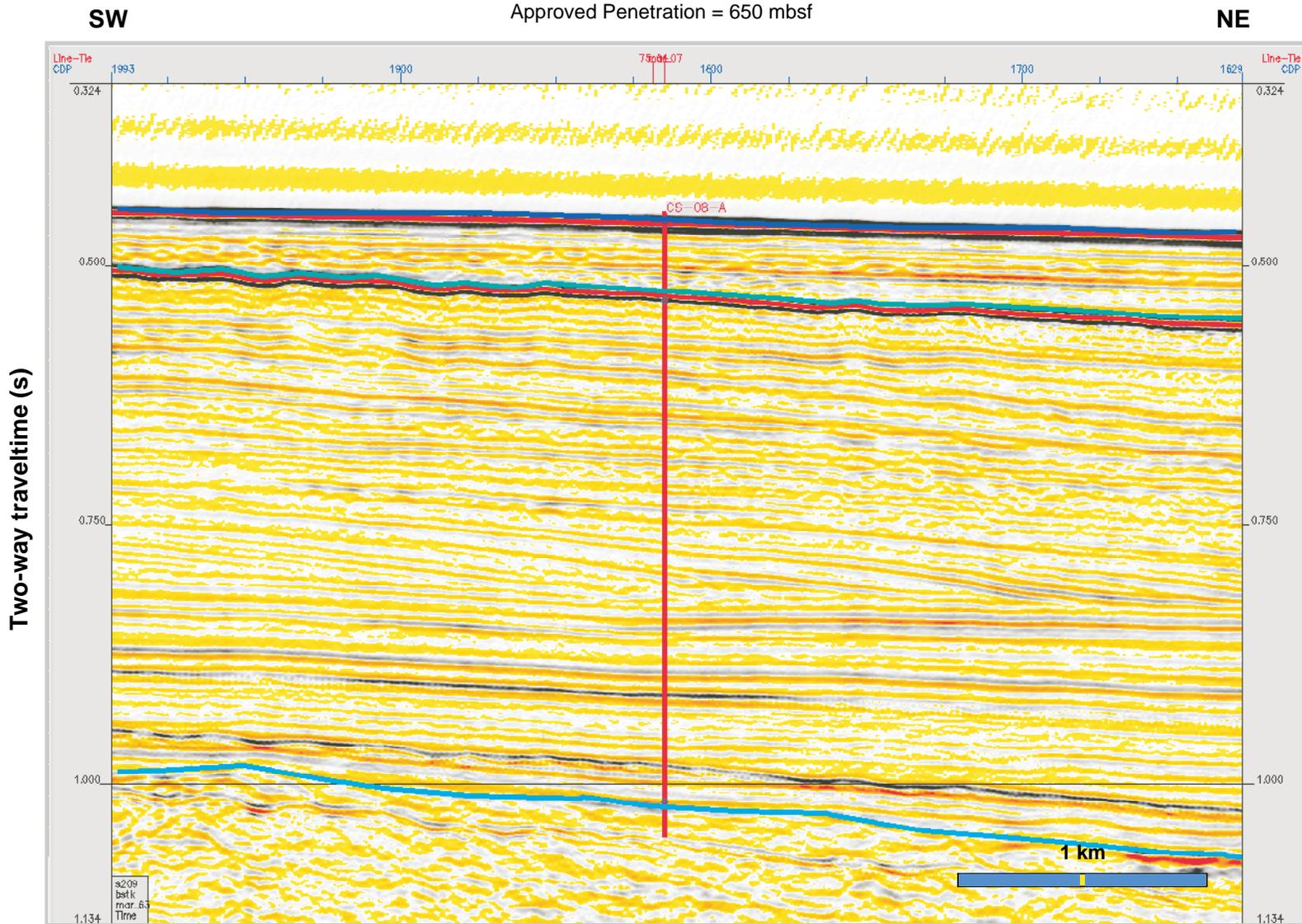


Figure 26. Detailed high-resolution northeast-southwest seismic section (two-way traveltimes) used to locate Site CS-08A.

Site: CS-08A

Priority: 2

Position: 21°04.60'S, 153°03.98'E

Water Depth: 358 m

Sediment Thickness: 513 m

Target Depth: 522 mbsf

Approved Maximum Penetration: 650 mbsf

Seismic Coverage: Regional Line MAR-07 shotpoint 3721; crossing Line MAR-63 at shotpoints 903 and 644, CDPs 1814 and 1296

Objectives: The objectives of Site CS-08A are the following.

1. Determine the age and describe the facies of Megasequences A-D.
2. Determine the age and paleowater depth of the initial phase of MP3.
3. Determine the duration of the unconformities separating each platform phase.
4. Determine the nature of the basement.
5. Measure the fluid flow processes within the MP3 platform and adjacent sediments.
6. Calibrate the seismic stratigraphy.

Drilling Program: Double APC/XCB to refusal, XCB or RCB (~1 core into basement)

Logging and Downhole Operations: Triple-combo, sonic-FMS, WST, GHMT (if available)

Nature of Rock Anticipated: Approximately 69 m of hemipelagic ooze overlying ~444 m of periplatform ooze, wackestones with some siltstones, mudstones, and turbidites; underlying basement composed of Paleozoic quartz-feldspar mafic metasediment

Site CS-09A
Line MAR-45 CDP 1300
Water Depth = 342 m
Estimated Penetration = 486 mbsf
Approved Penetration = 600 mbsf

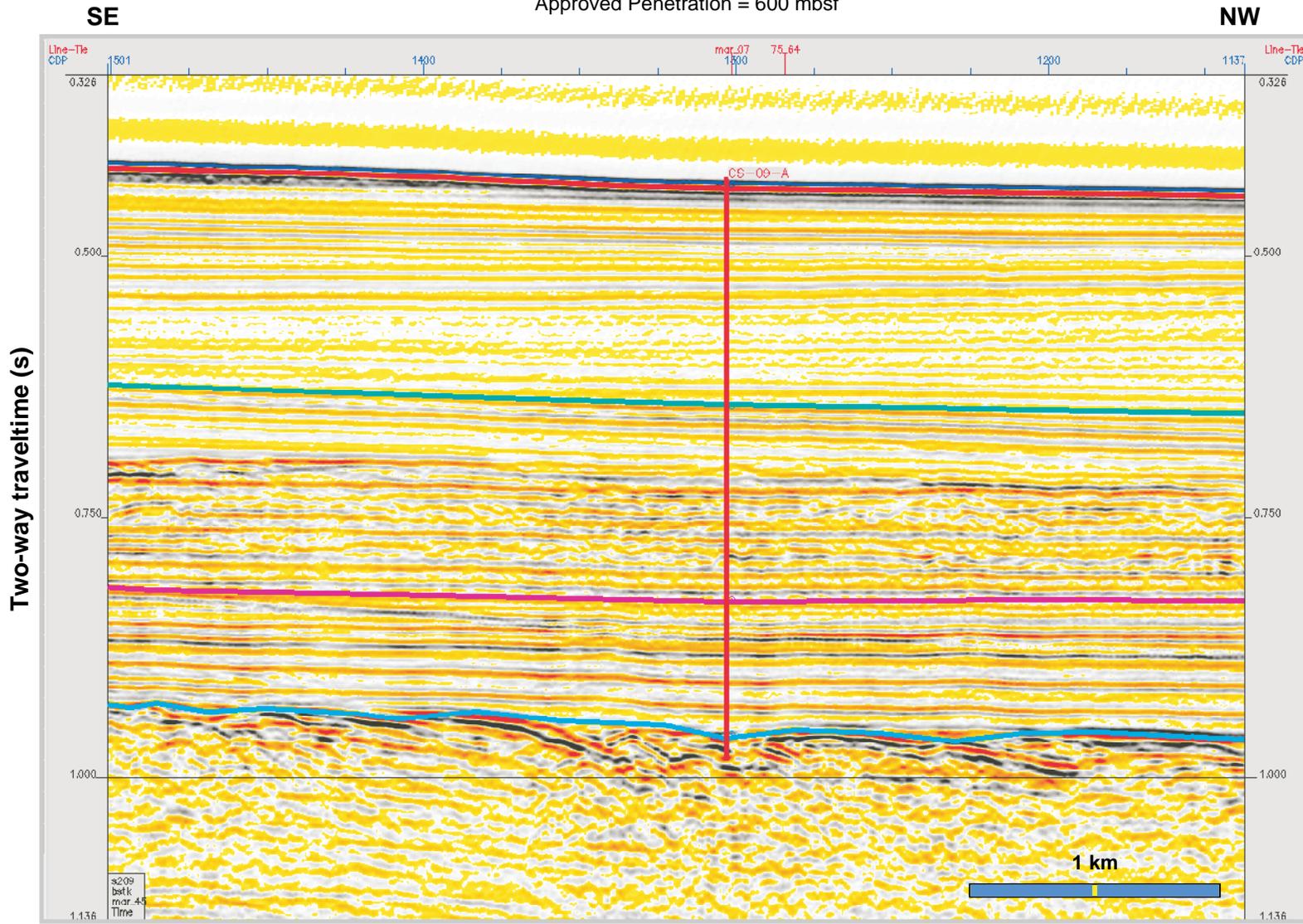


Figure 27. Detailed high-resolution northwest-southeast seismic section (two-way traveltimes) used to locate Site CS-09A.

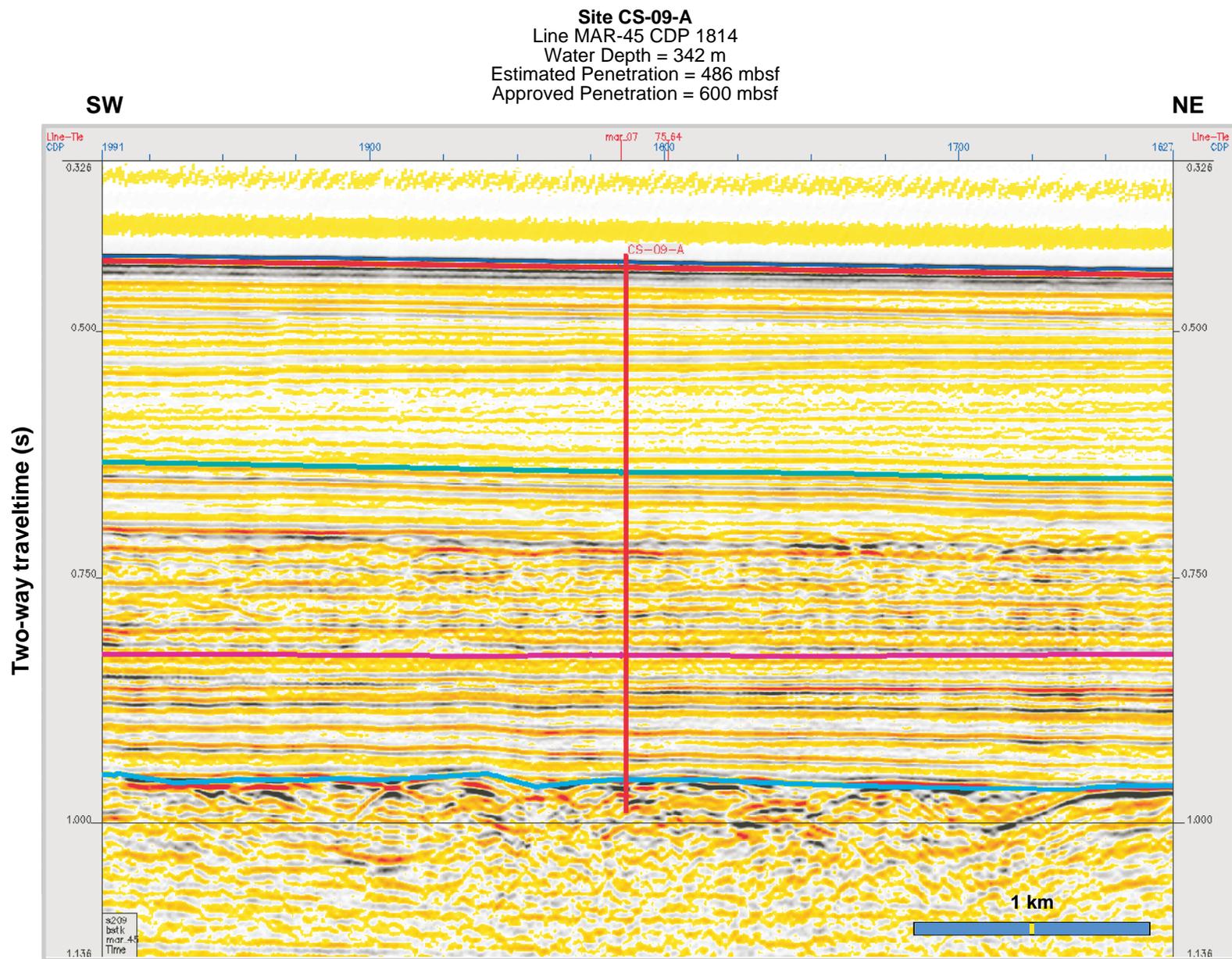


Figure 28. Detailed high-resolution northeast-southwest seismic section (two-way traveltimes) used to locate Site CS-09A.

Site: CS-09A

Priority: 2

Position: 20°54.66'S, 152°35.05'E

Water Depth: 342 m

Sediment Thickness: 477 m

Target Depth: 486 mbsf

Approved Maximum Penetration: 600 mbsf

Seismic Coverage: Regional Line MAR-07 shotpoint 1601; crossing Line MAR-45 at shotpoints 903 and 646, CDPs 1814 and 1300

Objectives: The objectives of Site CS-09A are the following.

1. Determine the age and facies description of Megasequences B-D, particularly the initiation of the MP3 platform.
2. Determine the age and duration of the unconformities separating each platform phase.
3. Determine the paleowater depth of the initial growth phase of MP3.
4. Determine the age and nature of the condensed section equivalent to MP2 and the basement.
5. Measure fluid flow processes within the Marion Plateau.
6. Determine the nature of the mounds imaged in the seismic data.
7. Calibrate the seismic sequence stratigraphy.

Drilling Program: Double APC/XCB to refusal, XCB or RCB (~1 core into basement)

Logging and Downhole Operations: Triple-combo, sonic-FMS, WST, GHMT (if available)

Nature of Rock Anticipated: Approximately 181 m of hemipelagic ooze overlying ~296 m of periplatform ooze, wackestones with some siltstones, mudstones and turbidites; underlying basement composed of Paleozoic quartz-feldspar mafic metasediment

Site CS-10A
Line MAR-15 CDP 7050
Water Depth = 431 m
Estimated Penetration = 493 mbsf
Approved Penetration = 600 mbsf



Figure 29. Detailed high-resolution east-west seismic section (two-way traveltimes) used to locate Site CS-10A.

Site: CS-10A

Priority: 1

Position: 20°24.18'S, 152°40.23'E

Water Depth: 431 m

Sediment Thickness: 484 m

Target Depth: 493 mbsf

Approved Maximum Penetration: 600 mbsf

Seismic Coverage: Intersection of regional Lines MAR-04 (shotpoint 3945, CDP 7898) and MAR-15 (shotpoint 3558 and CDP 7050)

Objectives: The objectives of Site CS-10A are the following.

1. Determine the chronostratigraphy for Megasequences A-D.
2. Determine the age of the initial marine transgression over basement.
3. Determine the age and facies of lowstand deposits.
4. Determine the age and nature of basement.
5. Calibrate the seismic stratigraphy.

Drilling Program: Triple APC/XCB (~1 core into basement)

Logging and Downhole Operations: Triple-combo, sonic-FMS, WST, GHMT (if available)

Nature of Rock Anticipated: Approximately 122 m of hemipelagic ooze overlying ~312 m of periplatform ooze, wackestones with some siltstones, mudstones, and turbidites; underlying basement composed of Paleozoic quartz-feldspar mafic metasediment

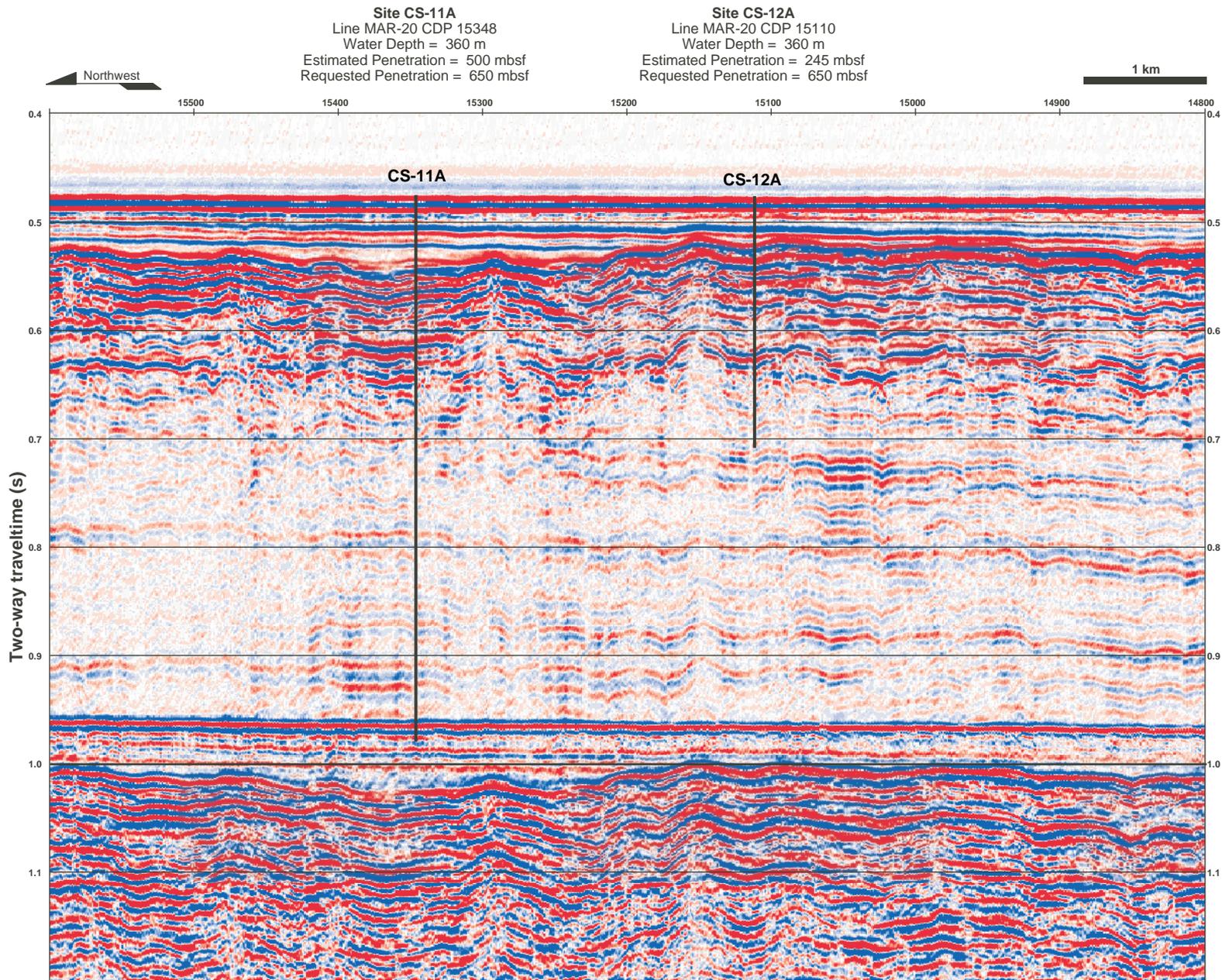


Figure 30. Regional seismic section (two-way traveltime) used to locate Sites CS-11A and CS-12A.

Site: CS-11A

Priority: 2

Position: 20°03.40'S, 151°45.77'E

Water Depth: 360 m

Sediment Thickness: 500 m

Target Depth: ~500 mbsf

Approved Maximum Penetration: 650 mbsf

Seismic Coverage: Regional Line MAR-20, shotpoint 7670, CDP 15348

Objectives: The objectives of Site CS-11A are the following.

1. Determine the age of the MP2 platform drowning phase.
2. Determine the age and duration of regional unconformities.
3. Determine the total thickness of MP2.
4. Determine the age of the initial marine transgression over basement.
5. Determine the age and nature of the basement.
6. Measure and describe fluid flow within the MP2 platform.
7. Describe the MP2 platform carbonates.
8. Calibrate the seismic sequence stratigraphy.

Drilling Program: Single APC/XCB to refusal, XCB or RCB (~1 core into basement)

Logging and Downhole Operations: Triple-combo, sonic-FMS, WST, GHMT (if available)

Nature of Rock Anticipated: Approximately 49 m of hemipelagic ooze overlying ~442 m of periplatform ooze and dolomitized reefal carbonates; underlying basement composed of Paleozoic quartz-feldspar mafic metasediment

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Site: CS-12A

Priority: 2

Position: 20°04.45'S, 151°47.08'E

Water Depth: 360 m

Sediment Thickness: 500 m

Target Depth: 245 mbsf

Approved Maximum Penetration: 650 mbsf

Seismic Coverage: Regional Line MAR-20, shotpoint 7551, CDP 15110

Objectives: The objectives of Site CS-12A are the following.

1. Determine the water depth of the shallowest part of the MP2 platform
2. Determine the age of the MP2 platform drowning
3. Determine the age and duration of unconformities that can be carried into the platform.
4. Calibrate the seismic sequence stratigraphy.

Drilling Program: Single APC/XCB or RCB to 245 mbsf; possibly ADCB of reefal carbonates

Logging and Downhole Operations: None

Nature of Rock Anticipated: Approximately 32 m of hemipelagic ooze overlying 213 m of periplatform ooze and dolomitized reefal carbonates

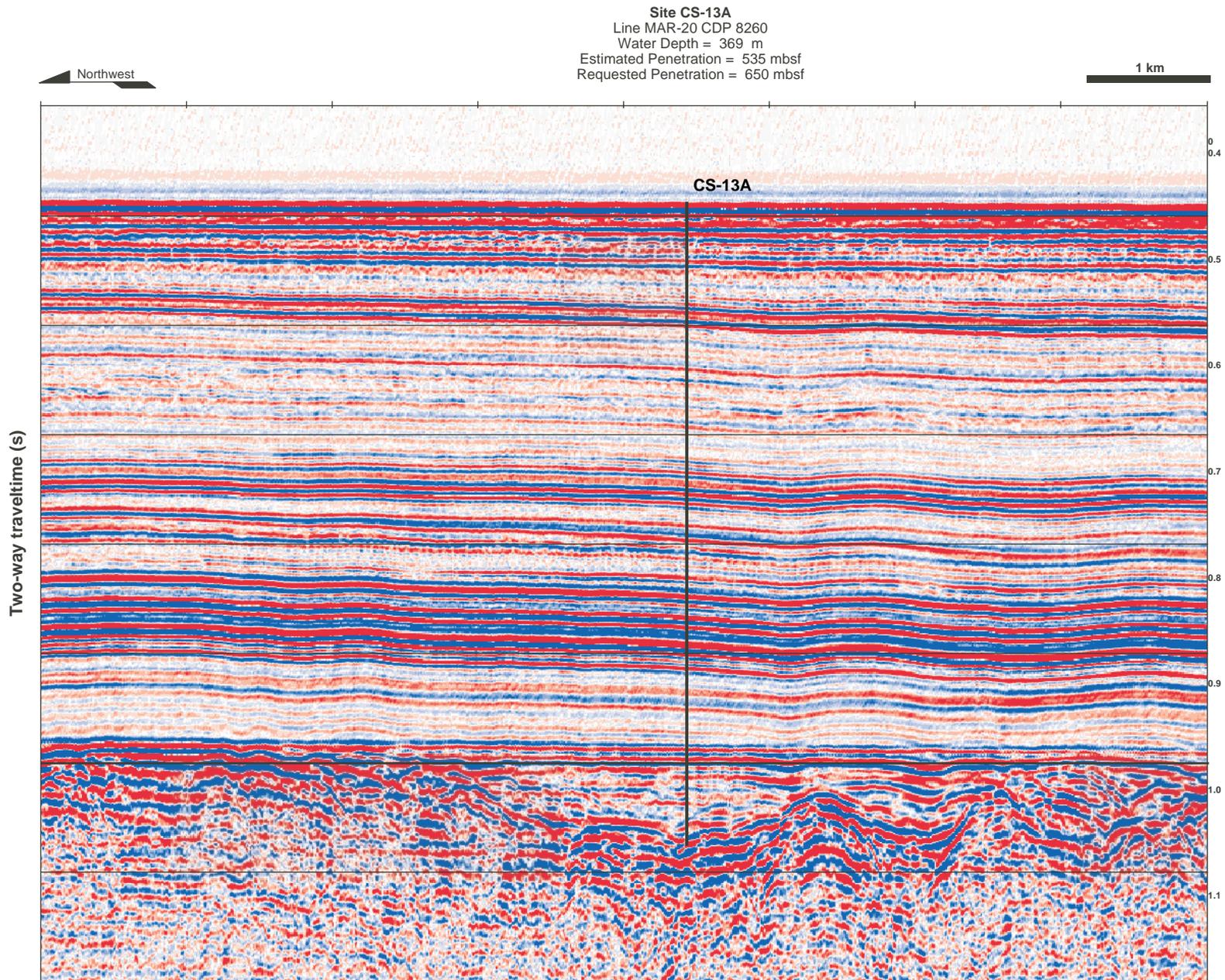


Figure 31. Regional seismic section (two-way traveltme) used to locate Site CS-13A.

Site: CS-13A

Priority: 2

Position: 20°34.53'S, 152°24.55'E

Water Depth: 369 m

Sediment Thickness: 526 m

Target Depth: 535 mbsf

Approved Maximum Penetration: 650 mbsf

Seismic Coverage: Regional Line MAR-20 shotpoint 4126, CDP 8260

Objectives: The objectives of Site CS-13A are the following.

1. Determine the age and describe the facies of Megasequences B-D.
2. Determine the age of the initial marine transgression over basement.
3. Determine the age and describe the facies of lowstand deposits.
4. Determine the age and nature of the basement.
5. Measure fluid-flow processes within the MP2 platform and adjacent sediments.
6. Determine the lithologic signature of basinward unconformities.
7. Calibrate the seismic sequence stratigraphies.

Drilling Program: Double APC/XCB (~1 core into basement)

Logging and Downhole Operations: Triple-combo, sonic-FMS, WST, GHMT (if available)

Nature of Rock Anticipated: Approximately 124 m of hemipelagic ooze overlying ~326 m of periplatform ooze, wackestones with some siltstones, mudstones, and turbidites; underlying basement composed of Paleozoic quartz-feldspar mafic metasediment

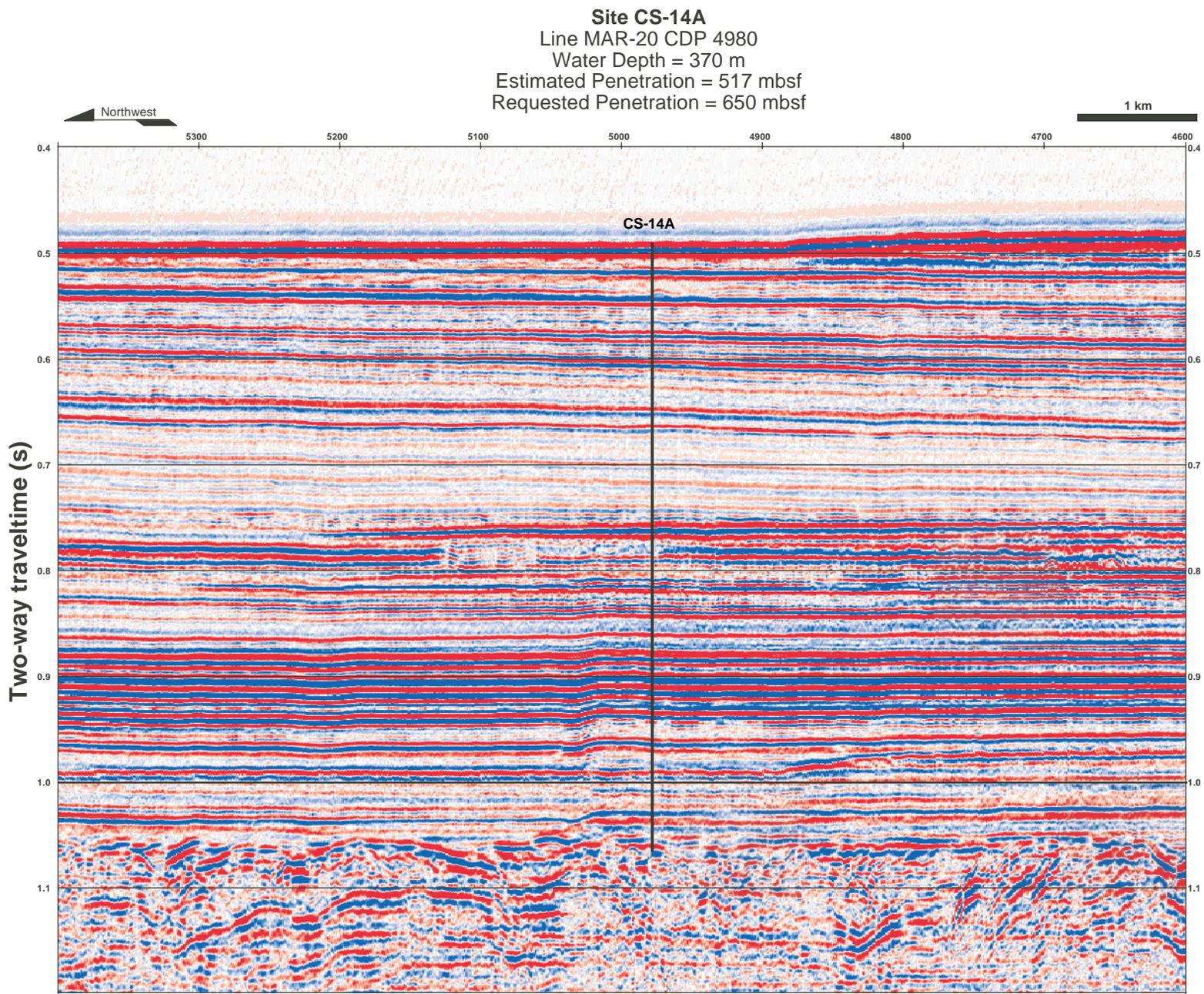


Figure 32. Regional seismic section (two-way traveltimes) used to locate Site CS-14A.

Site: CS-14A

Priority: 2

Position: 20°48.89'S, 152°42.58'E

Water Depth: 370 m

Sediment Thickness: 508 m

Target Depth: 517 mbsf

Approved Maximum Penetration: 650 mbsf

Seismic Coverage: Regional Line MAR-20, CDP 4980

Objectives: The objectives of Site CS-14A are the following.

1. Determine the age and facies description of Megasequences B-D, particularly the initiation of the MP3 platform.
2. Determine the age and duration of the unconformities separating each platform phase.
3. Determine the paleowater depth of the initial growth phase of MP3.
4. Determine the age and nature of the condensed section equivalent to MP2 and the basement.
5. Measure fluid flow processes within the Marion Plateau.
6. Determine the nature of the mounds imaged in the seismic data.
7. Calibrate the seismic sequence stratigraphy.

Drilling Program: Double APC/XCB (~1 core into basement)

Logging and Downhole Operations: Triple-combo, sonic-FMS, WST, GHMT (if available)

Nature of Rock Anticipated: Approximately 184 m of hemipelagic ooze overlying ~324 m of periplatform ooze, wackestones with some siltstones, mudstones, and turbidites; underlying basement composed of Paleozoic quartz-feldspar mafic metasediment

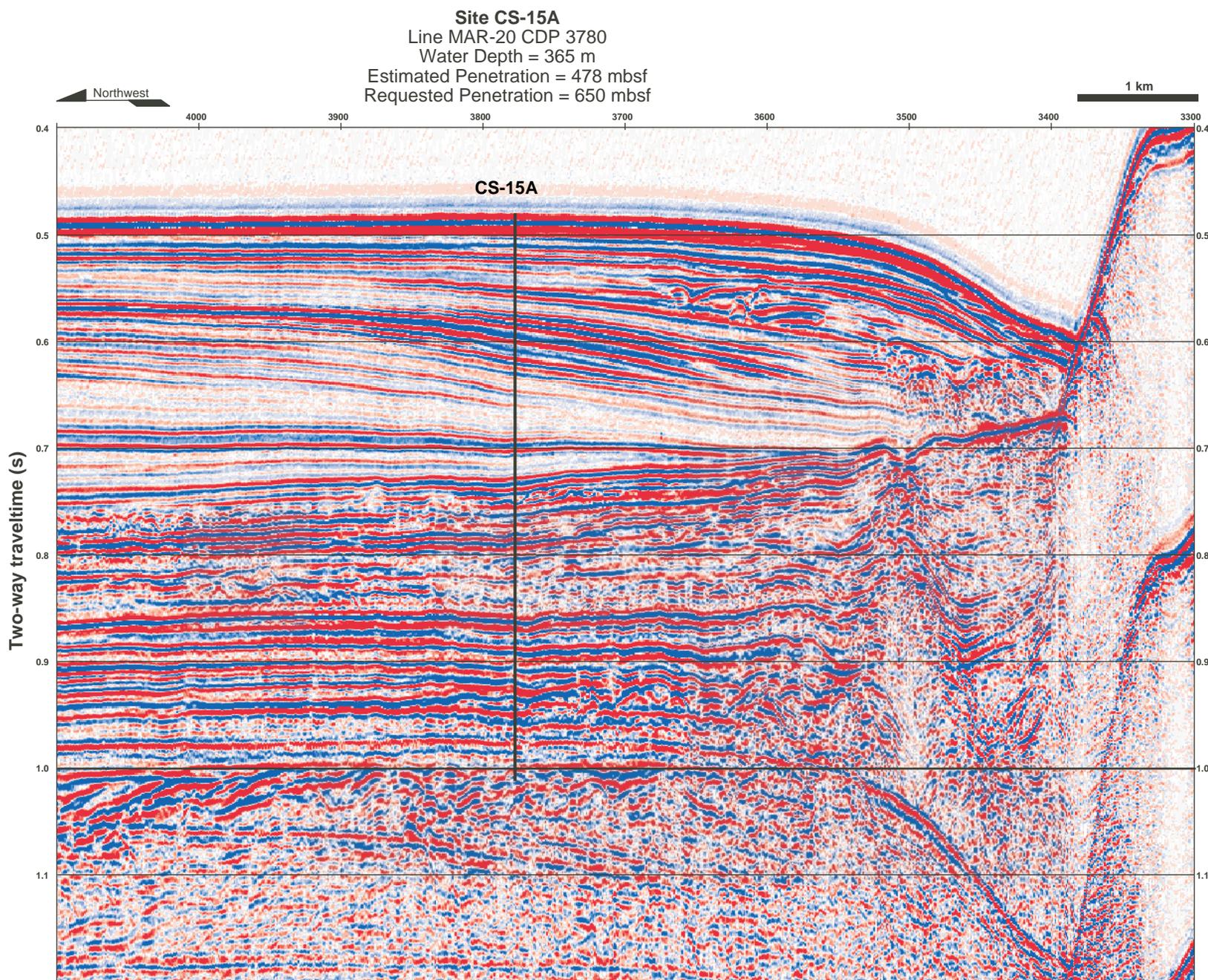


Figure 33. Regional seismic section (two-way traveltimes) used to locate Site CS-15A.

Site: CS-15A

Priority: 2

Position: 20°54.14'S, 152°49.19'E

Water Depth: 365 m

Sediment Thickness: 469 m

Target Depth: 478 mbsf

Approved Maximum Penetration: 650 mbsf

Seismic Coverage: Regional Line MAR-20, CDP 3780

Objectives: The objectives of Site CS-15A are the following.

1. Determine the age and facies description of Megasequences B-D, particularly the initiation of the MP3 platform.
2. Determine the age and duration of the unconformities that can be carried into the MP3 platform and those separating each sequence in the proximal slope adjacent to MP3.
3. Determine the paleowater depth of the initial growth phase of MP2.
4. Determine the age and nature of the condensed section equivalent to MP2.
5. Determine the age and nature of the basement.
6. Measure fluid flow processes within the MP3 platform and adjacent sediments.
7. Determine Pliocene-Holocene paleoceanography from the Megasequence D drift deposit.
8. Calibrate the seismic sequence stratigraphy.

Drilling Program: Double APC/XCB (~1 core into basement)

Logging and Downhole Operations: Triple-combo, sonic-FMS, WST, GHMT (if available)

Nature of Rock Anticipated: Approximately 203 m of hemipelagic ooze overlying ~266 m of periplatform ooze, wackestones with some siltstones, mudstones, and turbidites; underlying basement composed of Paleozoic quartz-feldspar mafic metasediment

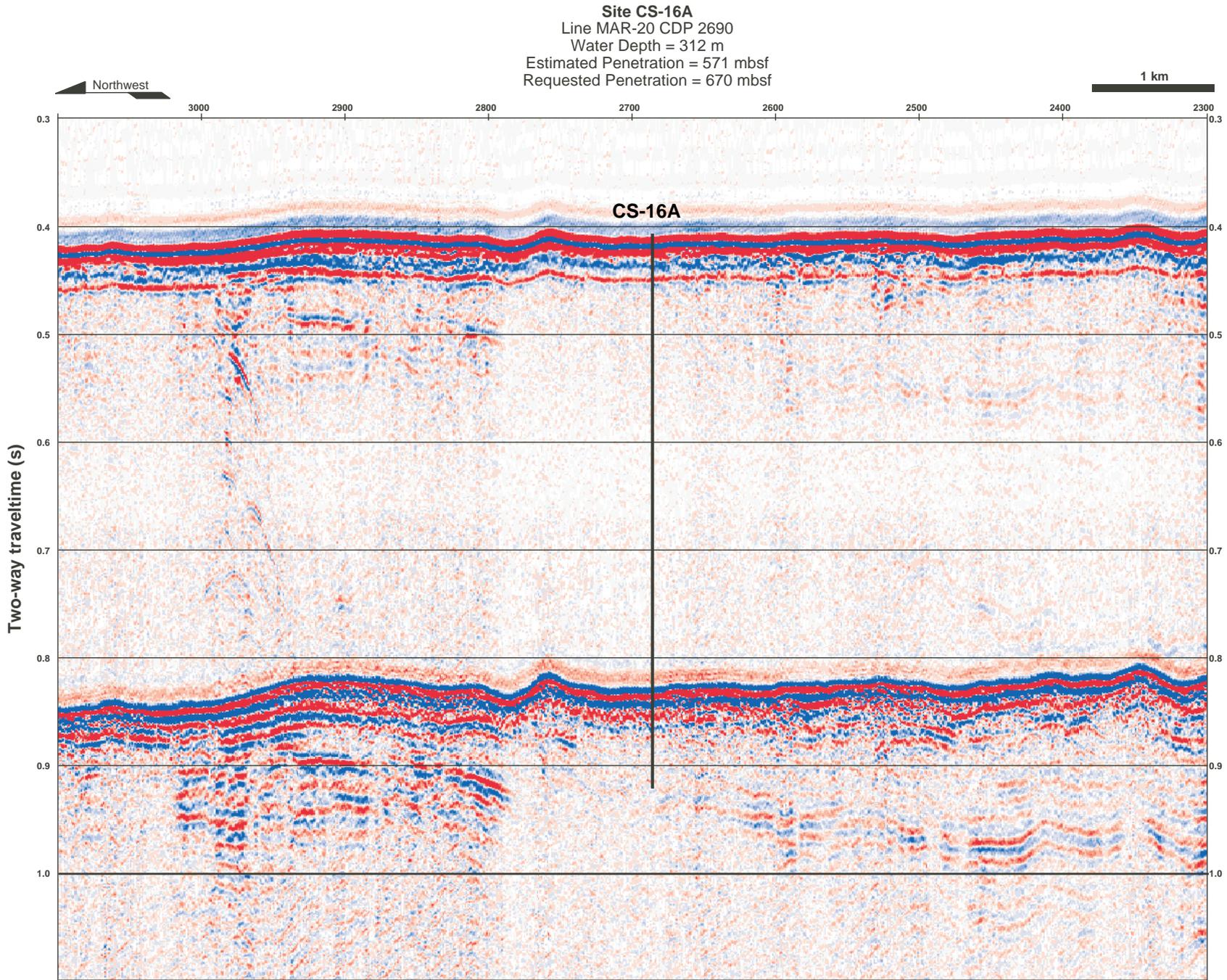


Figure 34. Regional seismic section (two-way traveltimes) used to locate Site CS-16A.

Site: CS-16A

Priority: 2

Position: 20°58.90'S, 152°55.21'E

Water Depth: 312 m

Sediment Thickness: 561 m

Target Depth: 571 mbsf

Approved Maximum Penetration: 600 mbsf

Seismic Coverage: Intersection of regional Lines MAR-04 (shotpoint 3945) and MAR-15 (shotpoint 3558); Regional Line MAR-20, CDP 2690

Objectives: The objectives of Site CS-16A are the following.

1. Determine the Initiation and facies development of the MP3 platform.
2. Determine the age and paleowater depth of the initial growth phase of MP3.
3. Describe the MP3 platform carbonates
4. Determine the age and duration of unconformities separating each platform phase.
5. Determine the age and nature of the condensed section equivalent to MP2.
6. Measure the fluid flow processes within the MP3 platform.
7. Calibrate the seismic stratigraphy.

Drilling Program: Single XCB to refusal, RCB (~1 core into basement), ADCB may be used for selected intervals

Logging and Downhole Operations: Triple-combo, sonic-FMS, WST, GHMT (if available)

Nature of Rock Anticipated: Approximately 561 m of hemipelagic ooze, dolomitized framestone, packstone, wackestone with a thin cover of periplatform ooze; underlying basement composed of Paleozoic quartz-feldspar mafic metasediment

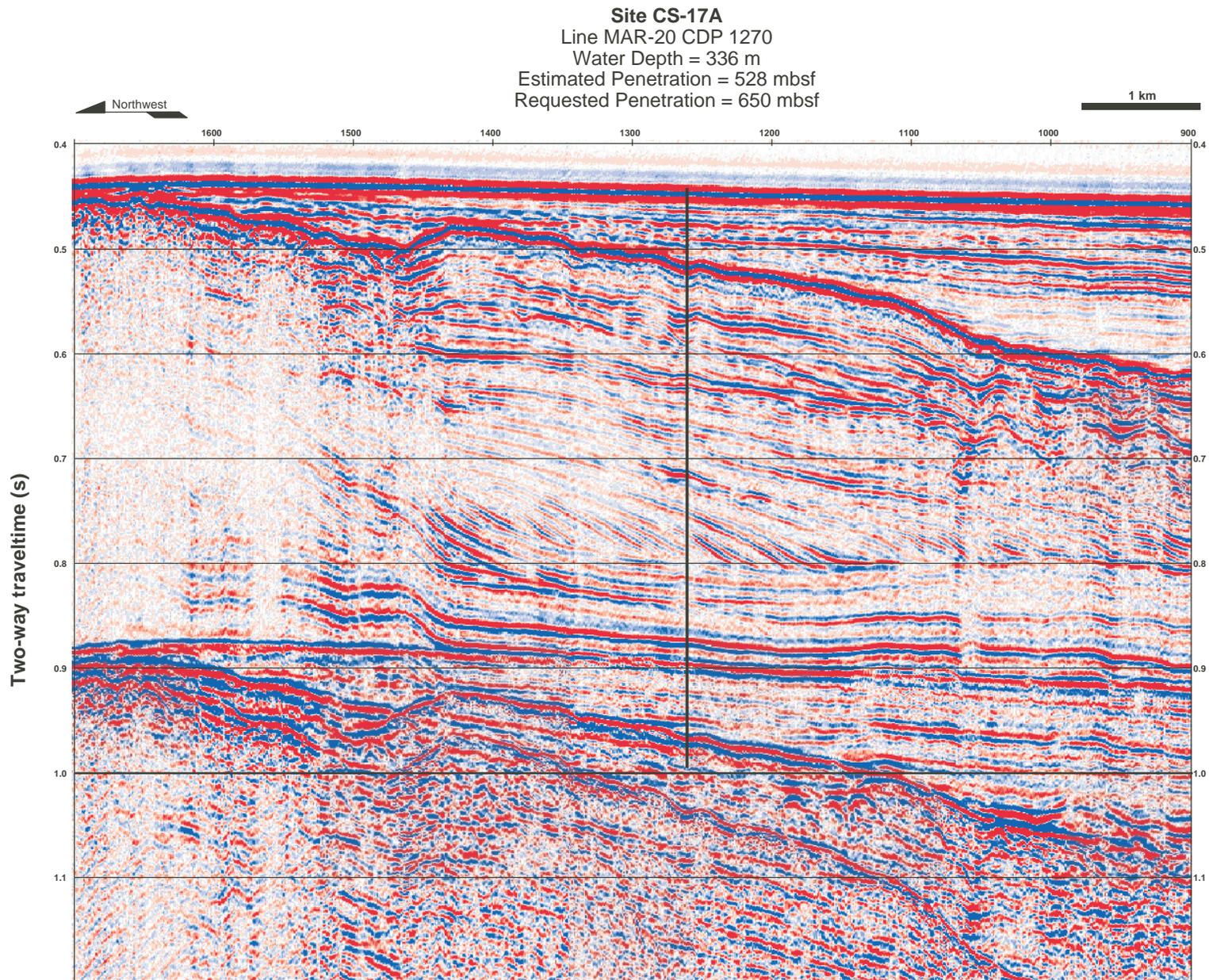


Figure 35. Regional seismic section (two-way traveltimes) used to locate Site CS-17A.

Site: CS-17A

Priority: 2

Position: 21°05.09'S, 153°03.05'E

Water Depth: 336 m

Sediment Thickness: 519 m

Target Depth: 528 mbsf

Approved Maximum Penetration: 650 mbsf

Seismic Coverage: Regional Line MAR-20, CDP 1270; Line MAR-63

Objectives: The objectives of Site CS-17A are the following.

1. Determine the age and describe the facies of Megasequences A-D.
2. Determine the age and paleowater depth of the initial phase of MP3.
3. Determine the duration of the unconformities separating each platform phase.
4. Determine the nature of the basement.
5. Measure the fluid flow processes within the MP3 platform and adjacent sediments.
6. Calibrate the seismic stratigraphy.

Drilling Program: Double APC and XCB (~1 core into basement)

Logging and Downhole Operations: Triple-combo, sonic-FMS, WST, GHMT (if available)

Nature of Rock Anticipated: 50 m of hemipelagic ooze overlying 469 m of periplatform ooze, wackestones with some siltstones, mudstones, and turbidites; underlying basement composed of Paleozoic quartz-feldspar mafic metasediment