NBP9702 Processing

History

Line 1 was processed by a staff member in 2004.
Line 2 was processed by a student in 1998.
Line 3 was processed by a staff member in 2004.
Lines 5 and 6 were processed by a staff member in 1998.

Universal Parameters

All geometry and binning used the actual navigation using the time of shot and the time of the GPS fixes (i.e. variable shot spacing was honored).

Lines 1, 2, and 3 were processed with a sample interval of .002 seconds. Lines 5 and 6 were decimated to .004 seconds.

Line 1 had 11 channels.

Lines 2-6 had 48 channels.

The UKOOA navigation files were generated by using the shot lat/long in arcseconds in the SEG-Y trace header of the stacked data. Unfortunately an error was found after the data were processed where it's the lat/long of the longest range trace within the CMP gather rather than the closest. Thus, the absolute UKOOA position is offset by half a streamer length (700 meters). The GPS and gun offsets are not in the UKOOA positions either.

All processing was with the SIOSEIS processing system, http://sioseis.ucsd.edu

Line 1

Since there were only 12 groups deployed and one of those was unusable, all of the sub-lines were binned (gathered) to 25 meters. All sub-lines were processed with:
DESPIKE – Kill traces with a large noise spike.
WEIGHT – Kill trace 12 which was not in the water.
GEOM – Assign streamer geometry and CMP bin numbers.

NMO – Constant velocity of 1500m/s nmo.
GATHER – CMP gather or binning.
STACK – Summation of traces within each bin. ~3 traces/bin.
MIX – A 1 2 1 running trace mix.

Line 2

All sub-lines were binned (gathered) to 12.5 meters using the GPS navigation file. These data were not divided into sub-lines, rather they retained the original Exabyte tape file oranization. All were stacked with a constant velocity of 1500m/s.
WEIGHT – Kill noisy traces 4 and 34.
GEOM – Assign streamer geometry and CMP bin numbers.
GATHER – CMP gather or binning.
NMO – Constant velocity of 1500m/s.
STACK – Summation of traces within each bin. ~5 traces/bin.

Line 3

Line 3 was divided into segments depending on ship course changes and equipment failures. All sub-lines were binned (gathered) to 12.5 meters using the GPS navigation file. These lines had the same general processing of:
WEIGHT – Kill noisy traces 34, 42, and 47.
GEOM – Assign streamer geometry and CMP bin numbers.
GATHER – CMP gather or binning.
Semblance velocity analysis using 3 bins every 200 bins.
NMO – Spatially varying velocities (see the parameter scripts).
WBT – Water bottom time assignment (from manual picks).
MUTE – From the water bottom. Range-time pairs:
            0 -.01 1000 -.01 1050 .4 1500 .9
WEIGHT – Additional noisy trace killing. See parameter files.
STACK – Summation of traces within each bin. ~5 traces/bin.

Lines 5 and 6

Lines 5 and 6 were divided into segments depending on ship course changes and equipment failures. All sub-lines were binned (gathered) to 12.5 meters using the GPS navigation file. These lines had the same general processing of:

DISKIN – Window the data according to the water depth.
          (Changes the deep water delay).
WEIGHT – Kill noisy traces 1, 31, 34, 41, 42, and 47.
GEOM – Assign streamer geometry and CMP bin numbers.
GATHER – CMP gather or binning.
Semblance velocity analysis using 3 bins every 200 bins.
NMO – Spatially varying velocities (see the parameter scripts).
WBT – Water bottom time assignment (from manual picks).
MUTE – From the water bottom. Range-time pairs:
          1 .02   900 .02   1440 .7
STACK – Summation of traces within each bin. ~5 traces/bin.