

APPENDIX - *Field, recording, and processing parameters**Line 1. Wind River. Shot Oct.-Nov. '76.*

4 vibrator trucks used at all times.

32 geophones/station. Natural frequency - 7.5 Hz. Cables with 440 feet (134 meters) takeout spacing.

Recording system: MDS VIII. 48-channel with field summing and noise reject capability.

Number of channels - 48

Degree of stack - 2400% (nominal)

Channel spacing - 440 feet (134 meters)

Source spacing - 440 feet (134 meters)

Digitizing rate - 8 milliseconds

Sweep frequencies - 8 to 32 Hz

Number of sweeps per record - 16

Sweep duration - 25 seconds

Total sweep time per record - 6-2/3 minutes

Record time - 50 seconds

Filters:

Low-pass: Anti-alias for 8 milliseconds (31.25 Hz)

High-pass: Butterworth type.  $f_0 = 9$  Hz with attenuation rate of 24 decibels per octave.

(Reference sweep used for correlation was recorded through above filters.)

Spatial filters:

Geophone array: 32 geophones configured to an in-line array symmetrical about its center. Elements equally sensitive, with spatial distribution of elements according to (Petty-Ray) VADIS equation. Array oriented radial to source. Length = 600 ft (183 m).

*Line 1A. Wind River. Shot Oct. '77.*

4 vibrator trucks used at all times.

24 geophones/trace. Natural frequency - 7.5 Hz

Recording system: MDS-10. 96-channel with field summing and noise reject capability.

Number of channels - 96

Degree of stack - 2400% (nominal)

Channel spacing - 330 feet

Source spacing - 660 feet

Digitizing rate - 8 milliseconds

Sweep frequency - 8 to 32 Hz

Number of sweeps per record - 16

Sweep duration - 30 seconds

Record time - 50 seconds

Filters:

Low-pass: Anti-alias for 8 milliseconds (31.25 Hz)

High-pass: Out

**Spatial filters:**

Geophone array: 24 EV-22 B 7.5 Hz geophones were used in an in-line array. All the elements of equal sensitivity were spaced 28.7 feet on the ground to provide total array length of 660 feet.

Identical source array for lines 1, 1A: Four or five vibrators in-line, spaced 88 feet (26.8 m) apart. Move up per sweep: 29-1/3 feet (8.9 m). Sixteen summed sweeps per records.

Four unit array - 704 feet long. Five-unit (vibrating trucks) array - 792 feet: The four-unit array had a length of 704 feet with 25 elements equally spaced with weighting:

1112223334444444333222111

The five-unit array was 792 feet long with 28 elements, equally spaced, with weighting:

1112223334445555444333222111

*Processing procedures*

The data were processed by the Houston data processing center of Geosource Inc. The processing was done using the TEMPUS computer and associated software. The programs utilized by this system were developed by Geosource for seismic data processing. The following basic processing was used for the COCORP data in Wyoming.

1. Demultiplex of field data (DEMUX)
2. Vibroseis Correlation (VIBCOR)
3. CDP Sort (static corrections applied)
4. Digital AGC
5. Velocity analyses (VELSTACK & Constant Velocity Stacks)
6. Normal Moveout Corrections
7. Trace Suppression (MUTE)
8. Automatic Residual Static Corrections (ARSTAT)
9. Common Depth Point Stack (2400% CDP nominal)
10. Deconvolution
11. Digital Filter
12. Digital AGC
13. Photo Display

(from Geosource Exploration Services Division, Houston, Texas)

