

MIGRATION BY THE FINITE
DIFFERENCE METHOD

NORTHEAST

WESTERN GEOPHYSICAL CO.

OFFSHORE ALASKA

AREA : 1983 SOUTH ALEUTIAN

WGC AREA NO.45

SHOT BY WESTERN GEOPHYSICAL CO. PARTY 80 JUNE 1983
 M/V WESTERN ANCHORAGE
 PROCESSED BY WESTERN GEOPHYSICAL (MDC 1) GROUP 01 JAN 1984
 USGS * 83-66 JOB 5089

RECORDING DATA

SOURCE

ENERGY SOURCE AIRGUN
 NUMBER OF GUNS 24
 GUN DEPTH 20 FEET
 FIRING INTERVAL 82 FEET
 SHOT POINT INTERVAL 82 FEET
 DISTANCE OF SOURCE TO ANTENNA 234 FEET
 TOTAL GUN VOLUME 1450 CU. IN.
 GUN PRESSURE 4500 PSI

INSTRUMENTS

SYSTEM DFS-V
 AMPLIFIER I.F.P.
 FILTER 5.3L/120H
 SAMPLING INTERVAL 2 MSEC
 RECORD LENGTH 6.0 SEC

CABLE

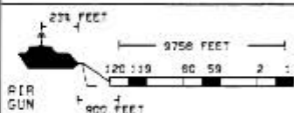
TYPE CABLE STREAMER
 CABLE LENGTH 9758 FEET
 CABLE DEPTH 40 FEET
 LEAD IN 900 FEET
 GROUP INTERVAL 82 FEET
 NUMBER OF GROUPS RECORDED 120

PROCESSING SEQUENCE AND PARAMETERS

PROCESSING SAMPLING INTERVAL 4 MSEC

1. EDIT
2. BEAM STEER
116 TRACE OUTPUT
GROUP INTERVAL 82 FEET
3. F-K FILTER
4. GEOMETRIC SPREADING VELOCITIES
5. DECONVOLVED BEFORE STACK
TYPE - MINIMUM PHASE INVERSE FILTER
WINDOW LENGTH 3 EQUAL ZONES
OVERLAP 20% OF ZONE
LENGTH OPERATOR 200 MS.
PREDICTION DISTANCE 4 MS.
6. NMO STACK 5800 %
7. AGC
8. MIGRATION
FINITE DIFFERENCE METHOD
9. AGC
10. TIME VARIANT FILTER

TIME ZONE	L.C. (HZ)	H.C.
.40 SEC	15	55
1.50 SEC	12	45
2.40 SEC	10	40
3.60 SEC	8	35
4.80 SEC	7	30
5.70 SEC	6	25



LEGEND

▼ INTERSECTIONS
 W.O. WATER DEPTH

HORIZONTAL SCALE

128 TRACE INTERVALS = 1 MILE



POLARITY CONVENTION

RECORDING : COMPRESSION PULSE NEGATIVE NUMBER
 PROCESSING : COMPRESSION PULSE NEGATIVE NUMBER
 DISPLAY : COMPRESSION PULSE TROUGH (DECREASING BLACK)

NOTATIONS

SHOTPOINT LOCATION AT ANTENNA
 PLAYBACK CORRECTION TO SEA LEVEL DATUM 12 MS
 PLAYBACK REEL: 047860