G E O L O G I C A L S U R V E Y O F C A N A D A.

ATLANTIC GEOSCIENCE CENTRE

OPEN FILE REPORT

SEISMIC REPROCESSING RESULTS FROM GULF CANADA LINE 8047-08, JEANNE D'ARC BASIN, NEWFOUNDLAND

by

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INTRODUCTION.

The original field data for seismic line 8047-08 (Fig. 1) was provided to AGC by Gulf Canada in order that the data could be reprocessed to enhance reflector continuity and correlability. AGC engaged Western Geophysical, a Division of Western Atlas of Calgary to perform state of the art digital processing of the data. The results of this work are displayed in three 2.5"/sec time sections. In addition a portion of the line was displayed as a depth section.The three time versions produced include a normal polarity scaled stack, a normal polarity scaled migration and a reverse polarity scaled migration.

The line is located on the edge of the Jeanne d'Arc in the region of the Flying foam feature, however, the bulk of the line is located over the Bonavista Platform Basin. Although no dramatic data improvement was achieved, definition of events within the Bonavista platform were improved as was the definition of data near the basin margin.

PROCESSING SEQUENCE

1. Format conversion/demultiplex

2. Geometric spreading compensation

3. Single-channel deconvolution
Minimum Phase Inverse Prediction Filter

Two windows	1. 320-3200	MSEC
	2. 3000-6000	MSEC
Operator length	600	MSEC
Prediction distance	12	MSEC
Number of channels	60	
White noise	0.1%	

4. Trace balance

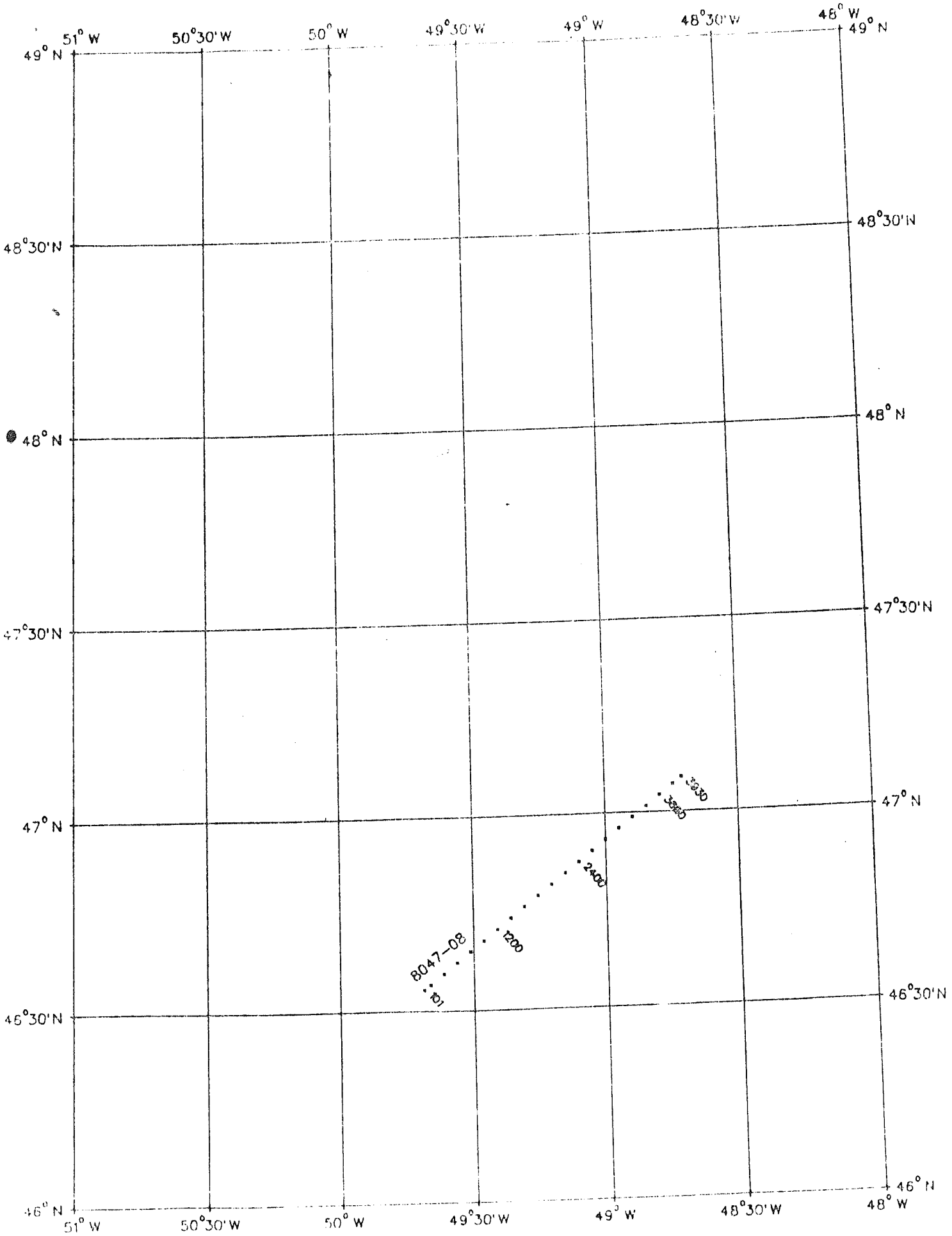
5. Velocity analysis (VELAN)

6. FK demultiple

7. Velocity analysis (VELAN)
Post FK demultiple

8. DMO moveout correction
Outside mute and stack 6000%

9. RMS gain 128-512 MSEC


51° W
50°30'W
50° W
49°30'W
49° W
48°30'W
48° W
49° N
48°30'N
48° N
47°30'N
47° N
46°30'N
46° N
3030
3060
2400
1200
8047–08
101

10. Deconvolution after stack

Type	Minimum phase inverse filter
Window	200-3200 MSEC
Operator length	400 MSEC
Prediction distance	60 MSEC
Number of channels	101
White noise	0.1%

11. Time variant filter

Filter interpolation in time and space

Location	Time(MSEC)	L.C.(HZ)	H.C.(HZ)
SP 101	0	8	55
	800	6	50
	1600	5	40
	2500	5	30
	5900	4	25
SP 1900	0	8	55
	1000	6	50
	1800	5	40
	2600	5	30
	5900	4	25
SP 2800	0	8	55
	1500	6	50
	2600	5	40
	4000	5	30
	5900	4	25

12. FK migration

13. Bandpass filter

Low cut 8 HZ

14. Reflection strength gain.