Appendix B.

DATA PROCESSING REPORT

SURVEY - BONAPARTE

COMPANY: AUSTRALIAN AQUITANE

PETROLEUM PTY. LTD.

COMPANY ADDRESS:-

GEOPHYSICAL SERVICE INTERNATIONAL

UNIT D, 8 BYFIELD STREET,

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PARTY 4855

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SECTION I

INTRODUCTION

This survey consisted of 19 lines shot in the Bonaparte Gulf. Twelve lines were located in West Australia and seven lines in the Northern Territories.

The following recording parameters were used:-

-	Cable Configuration	- Split spread 48 traces equally spaced Near offset - 240M Far offset - 2080M
-	Shot Interval	- 160M
-	Source	- Vibroseis 3XY 900 in line (8 Sweeps/VP)
-	Sweep	- 14-70HZ 15 sec up
-	Filter Settings	- 12 - 128HZ
-	Record Length	- 19 secs
-	Sample Rate	- 2 Mls
-	Geophone Array	- 30 Geophones/Group
-	Datum	- + 60M ASL
-	Recording Instrument	- DFS5/CDX2

BONAPARTE GULF-WEST AUSTRALIA

LINES	NO RECORDS	SP'S
BWA 100	63	224-100
BWA 101	90	100-278
BWA 102A	89	250-100
BWA 102B	79	180-102
BWA 103	176	604-254
BWA 104	89	254-103
BWA 105	89	275-100
BWA 106	88	260-108
BWA 107	293	96-670
BWA 108	135	124-330
BWA 110	131	100-360
BWA 112	91	100-280

BONAPARTE GULF-NORTHERN TERRITORY

LINES	NO RECORDS	SP'S
BNT 200	157	100-346
BNT 201	91	280-100
BNT 202A	169	104-395
BNT 203	120	330-92
BNT 204	115	
BNT 205	221	106-500
BNT 207	113	330-106

SECTION II

EXPERIMENTAL

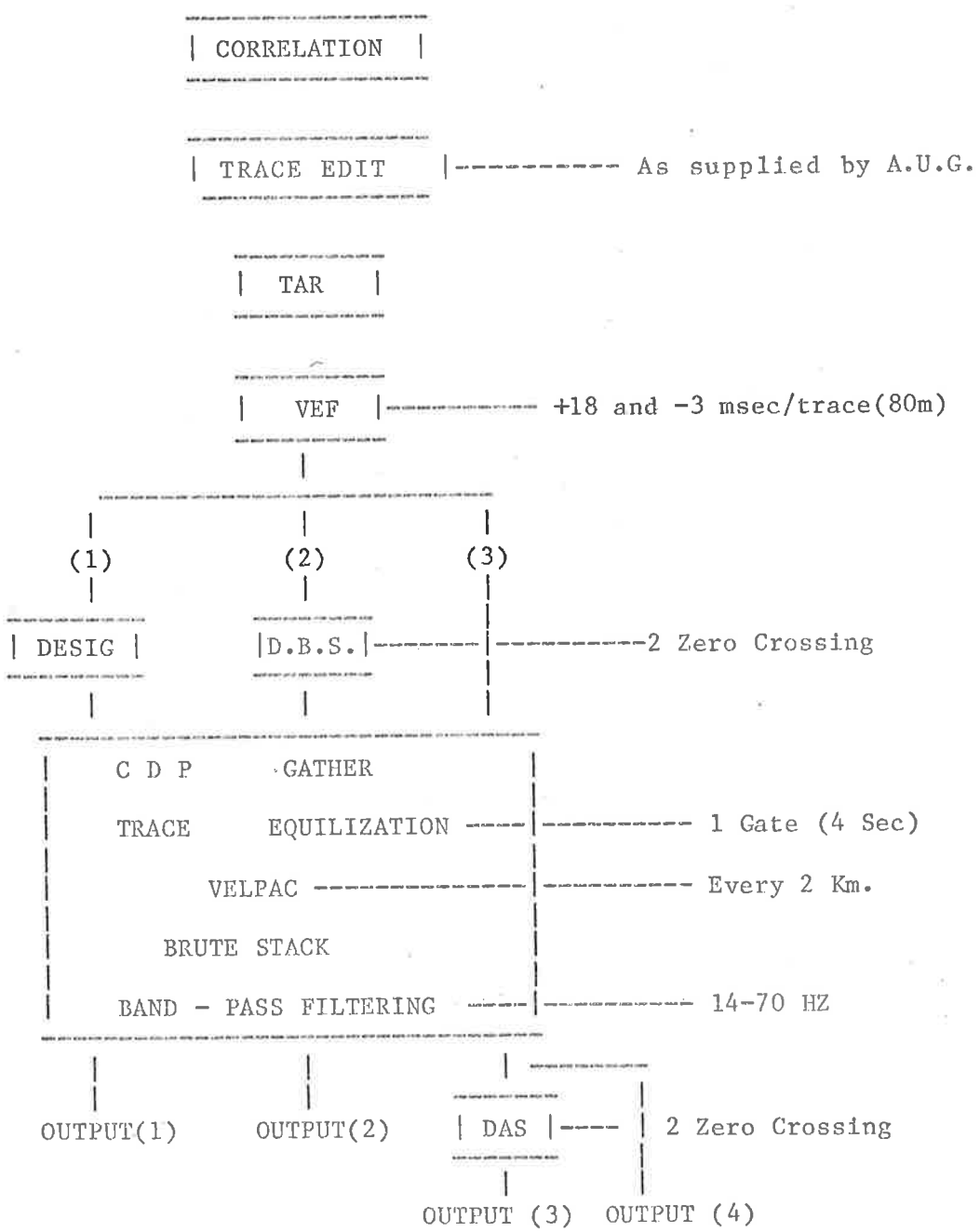
LINE BWA 80-105

Tar Test	3 records with different alpha - applied
Velfilt Test VP 160, 164, 168	3 consecutive records, 3 different cuts based around (+25, -5) (+18, -3) (+12, -2) Msec/Tr F/K noise analysis of both input and output were displayed.
Decon Test VP 150-230 (Velfilt cuts picked from above)	A 32 Msec gapped Decon 2 operators 200 Msec long compared to designature over 40 input records (48 trace) compared to same panel with just Velfilt.
Brute Stack	See Test Sequence Flow Diagram.
Das	Included in the Brute Stack comparisons.
Filter Analysis	Run on Line BNT 80-203 and BWA 80-110 The following panels were used out-out, 14-70HZ, 5-10, 10-15, 15-30, 30-45, 45-60, 60-70, 50-70HZ

LINE BNT 80-205

TAR TEST	SP'S 280-340 3 Records with different alpha applied
Velfilt Test VP 160, 164, 168	3 consecutive records, 3 different cuts based around (+25, -5) (+18, -3) (+12, -2) Msec/Tr F/K noise analysis of both input and output were displayed.
Decon Test VP 150-230	A 32 Msec gapped Decon 2 operators 200 Msec long compared to designature over 40 input records (48 Trace) compared to same panel with just velfilt.
Brute Stack	See Test Sequence Flow Diagram. A bandpass filter of 16-70HZ.
Das	Included in the brute stack comparisons.
Filter Analysis	Run on line BNT80-203 and BWA 80-110 The following panels were used out-out, 14-70HZ, 5-10, 10-15, 15-30, 30-45, 45-60, 60-70, 50-70HZ.

FLOW DIAGRAM OF THE TEST SEQUENCE
USED ON THE BONAPARTE PILOT LINES
BWA 80-105 BNT 80-205



SECTION III

Correlation	-	Minimum phase correlation was performed with GSI's PRELILT* program - output signature was minimum phase.
Trace Edit	-	Bad individual traces were band edited.
Tar	-	Inelastic attentuation parameter (exponential factor) = 4.0 db/sec T2 (Cut off time for factor) = 3.0 secs.
PDR	-	Start time of ramp 0 MLS Velocity used in computation of ramp times with increasing 2100M/sec offset Length of ramp 100Msec
Velfilt	-	Velocity filtering was performed using the following velocity cuts - +18, -3Ms/TR
Decon	-	Time variant Deconvolution 32Ms Gap Operator?
CDP	-	Gather 48 Trace 12 Fold
TVS	-	Long gate trace scaling was performed using 1000Msec gates & 10% overlap.
NMO	-	Initial Velocity analysis were performed using 12DP VELPACS.
STACK	-	A Brute Stack was produced 48 trace 12 fold.

Residual Statics/ Velscan – Residual statics were computed and 12 DP Velscans run every 2 kms for better controlled velocity analyses.

Stack – Total static correction wasx applied and NMO using the revised velocities.

TVF – The following time variant Band Pass filter was applied to the data

Time	Passband(Hz)
0.0	15-60
1.0	15-50
2.0	15-45
4.0	10-35

Migration – The final raw stack was migrated using GSI's F-K Kirchoeff Wave Equation routine on BWA-107 CDP's 800-1197

Display – One normal polarity final and final migration film with 1 blackline print.

3.75 IPS – vertical scale
14 TPL – horizontal scale
10% Bias, variable area/wiggle trace mode

Respectfully submitted,

P.H. BRAZIER
Data Processing Party Chief

PLATE 1

PROCESSING FLOW CHART