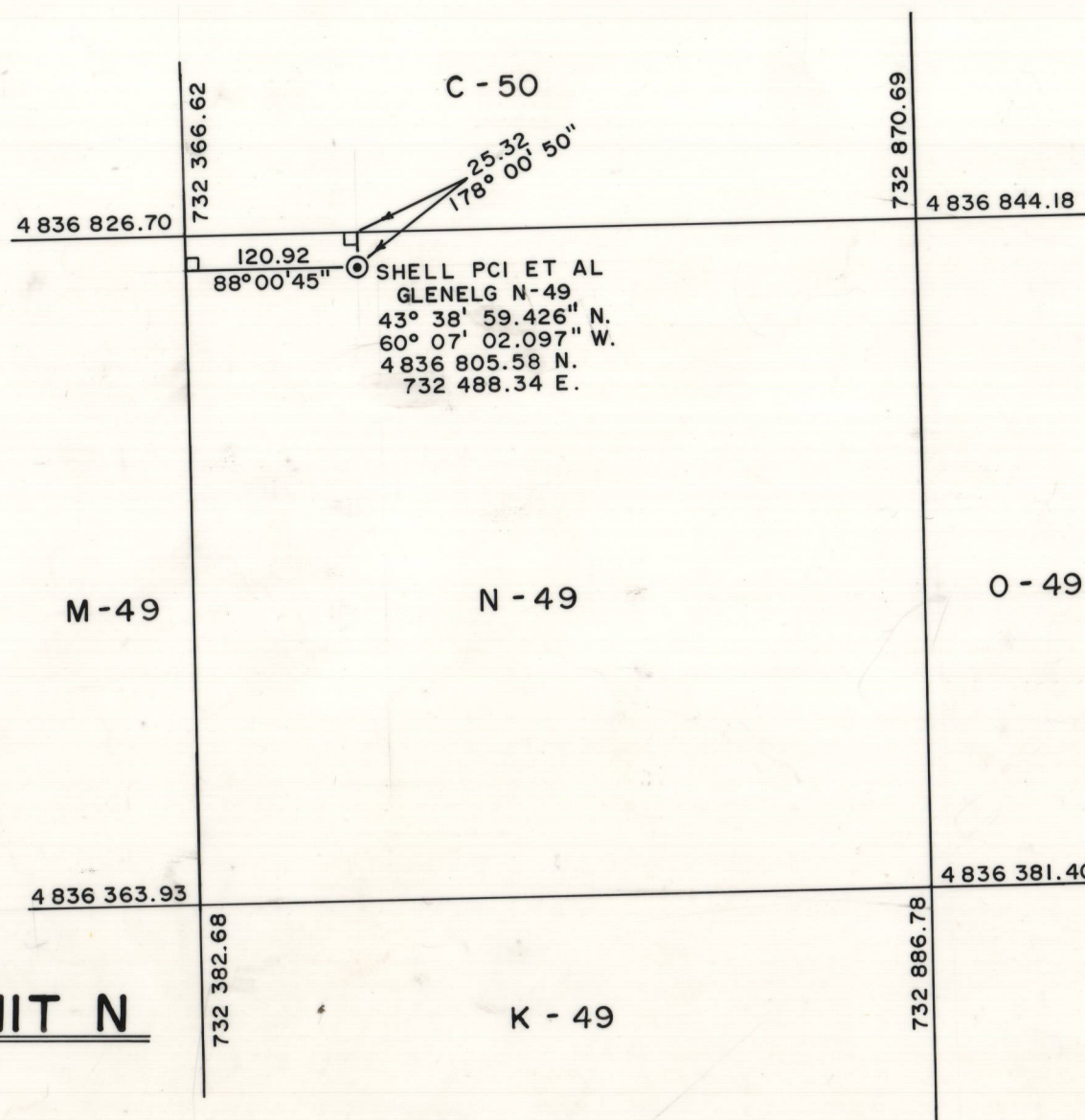


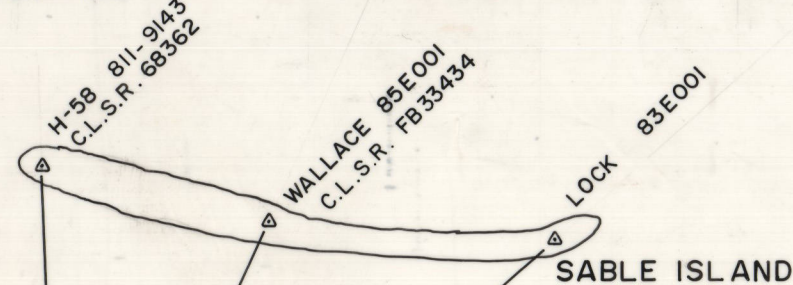
SABLE ISLAND  
SHELL PCI ET AL  
GLENELG N-49  
43° 38' 59.426" N.  
60° 07' 02.097" W.

### DETAIL OF UNIT N



SUMMARY OF GYRO BIAS DETERMINATION						
RIG	LATITUDE (N.)	LONGITUDE (W.)	COMPUTED AZM. FROM VINLAND	OBSV'D. RADAR AZM.	C-O TRUE - RADAR	WELL NAME
ROWAN GORILLA I	43°53'05.34"	60°11'35.62"	346.8	348.0	-1.2	THEBAUD C-74
BOW DRILL II	43°39'44.63"	59°47'32.44"	86.8	87.9	-1.1	W.CHEBUCTO K-20
			MEAN		-1.2	

BIAS BETWEEN MASTER GYRO AND RADAR = (MASTER-RADAR) = 0.16° (MEAN OF 10)  
CORRECTION TO MASTER GYRO = -1.36°  
BIAS BETWEEN MASTER GYRO AND THE REPEATER USED (MAGNOVOX) MASTER-REPEATER = 0.04 (MEAN OF 10)  
CORRECTION TO REPEATER = -1.32°



### GLENELG N-49

SUMMARY OF GLOBAL POSITIONING SYSTEM SURVEY (PRIMARY)					
1) POSITIONING IS A WEIGHTED MEAN OF 4109 TRANSLOCATED FIXES OBSERVED FROM 23:20h G.M.T. DAY 152 TO 04:11h G.M.T. DAY 153 AND 11:30h G.M.T. DAY 153 TO 12:30h G.M.T. DAY 153.					
2) OFFSETS OF N. = 15.58m. AND E. = 45.96m. WERE ADDED TO THE ANTENNA COORDINATES TO DERIVE THE DRILL CENTRE COORDINATES.					
3) THE ANTENNA HEIGHT AT GLENELG N-49 WAS MEASURED AS 22.9m. THIS HEIGHT WAS HELD FIXED IN WHEN DETERMINING THE GEODETIC COORDINATES OF THE ANTENNA.					
CONTROL STATION NORTECH WAREHOUSE C.L.S.R. 69327			DERIVED STATION GLENELG N-49 DRILL CENTRE		
	WGS 72	NAD 27	WGS 72	NAD 27	
LATITUDE	44°42'49.932"	44°42'49.804"		43°38'59.426"	
LONGITUDE	63°35'41.249"	63°35'43.094"		60°07'02.097"	
GEOID UNDULATION	N -20.0	17.4	-14.5	18.7	
ELEVATION AMSL	H 63.24	63.24	22.9 (held fixed)	22.9	
SPHEROID HEIGHT	h 43.24	80.64	8.4	41.6	
H.I.	1.45	1.45	0.0	0.0	
SPHEROID OFFSETS	ΔX		-40.0	-40.8	
NWL 9D - NAD 27	ΔY		+159	+157.5	
	ΔZ		+182	+184	
CARTESIAN COORDINATES	X	2 019 071.28		2 303 092.62	
	Y	-4 066 555.79		-4 007 992.56	
	Z	4464 659.23		4 379 849.30	
GPS ANTENNA COORDINATES 43° 38' 59.82" N 60° 07' 04.122" W USING UTM OFFSETS OF 15.6m N. AND -46.0m E.					

### DETAIL OF ANTENNA OFFSETS ONBOARD SDS VINLAND

HEADING FROM RIG'S GYRO COMPASS  
CORRECTED FOR GYRO BIAS  
NOT TO SCALE

SUMMARY OF U.H.F. TRISPONDER SURVEY (CONFIRMATION)					
1) THE TABLED OBSERVED DISTANCES ARE THE MEAN OF 54 RANGES OBSERVED BETWEEN 13:08h G.M.T. AND 14:42h G.M.T. ON DAY 152.					
2) THE U.H.F. ANTENNA WAS OFFSET 50.2m. NORTH AND 20.30m. WEST OF THE DRILL CENTRE. THE MEASURED HEIGHT OF THE U.H.F. ANTENNA WAS 22.5m. AMSL.					
STATION	NUM	LATITUDE (N.) (NAD 27)	LONGITUDE (W.) (NAD 27)	H. AMSL	DIST. OBSV'D.
H-58	CLSR 68362	43° 57' 28.040"	60° 07' 39.176"	4.3	18.9
WALLACE	GSC 85E001	43° 56' 06.137"	59° 59' 15.660"	12.5	12.5
LOCK	GSC 83E001	43° 57' 32.975"	59° 46' 49.205"	11.4	18.6
DERIVED DRILL CENTRE COORDINATES OF GLENELG N-49 (NAD 27) 43° 38' 59.44" N. 60° 07' 01.97" W. UHF TRISPONDER ANTENNA COORDINATES (NAD 27) 43° 39' 01.09" N. 60° 07' 02.80" W. USING UTM OFFSETS OF -50.2m N. AND 20.3m E.					

CANADA LANDS SURVEYS RECORDS  
7 1 1 7 4  
DATE 18 DEC. 1987

## PLAN AND FIELD NOTES OF SURVEY OF OFFSHORE EXPLORATION WELL SHELL PCI ET AL GLENELG N-49 IN UNIT N SECTION 49 GRID AREA 43° 40' N., 60° 00' W. SOUTH OF SABLE ISLAND

CANADA OIL AND GAS LAND REGULATIONS  
EXPLORATION AGREEMENT 121  
SURVEYED UNDER THE DIRECT SUPERVISION OF T.J. CRAGO C.L.S.

FOR SHELL CANADA LIMITED  
BY: NORTECH ATLANTIC LTD.  
BETWEEN MAY 29 AND JUNE 02, 1986.  
WELL LOCATION 43° 38' 59.426" N. 60° 07' 02.097" W.

### LEGEND

POSITIONING WAS DONE BY SIMULTANEOUS GPS SATELLITE OBSERVATIONS USING TEXAS INSTRUMENTS TI 4100 RECEIVERS. POSITIONS WERE COMPUTED USING PROGRAM REALGPS (DOCUMENTATION AVAILABLE FROM NORTECH SURVEYS (Canada) INC.). POSITIONING WAS CONFIRMED BY USING ULTRA HIGH FREQUENCY TRISPONDER. RANGES WERE MEASURED TO THREE STATIONS ON SABLE ISLAND. A TOTAL OF 54 RANGES TO EACH STATION WERE OBSERVED. THE MEANS OF WHICH WERE USED IN A LEAST SQUARES ADJUSTMENT TO PRODUCE THE COORDINATES OF THE ANTENNA. DISTANCES ARE U.T.M. AND IN METRES EXCEPT AS NOTED. BEARINGS ARE U.T.M. GRID EXCEPT AS NOTED. ALL GEOGRAPHIC COORDINATES ARE REFERRED TO THE 1927 NORTH AMERICAN DATUM (NAD 27). ALL U.T.M. COORDINATES ARE COMPUTED FOR ZONE 20, CENTRAL MERIDIAN 63° W. WITH A FALSE EASTING OF 500 000m. AT THE CENTRAL MERIDIAN. WATER DEPTH AT LOCATION IS 72m. (DRILL STRING MEASUREMENT) TRAVERSE LINES OFFSHORE EXPLORATORY WELL LOCATION GEOD UNDULATIONS ARE FROM GODDARD EARTH MODEL 10 C WITH ΔX = -40.8m. ΔY = 157.5m. ΔZ = 184.0m. AND X<sub>no</sub> = 0 DATUM OFFSETS FROM SURVEYING OFFSHORE CANADA LANDS FOR MINERAL RESOURCE DEVELOPMENT THIRD EDITION DECEMBER 1982.

SHELL CANADA LIMITED

I HEREBY CERTIFY THAT THIS PLAN OF SURVEY WAS MADE UNDER MY PERSONAL SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

Witness  
DATE July 22, 1986

Witness  
DATE July 14, 1986

Examined and approved 4-9-87