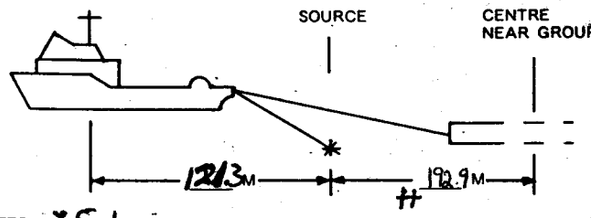
TITAN 1000

MARINE SEISMIC OBSERVER'S DATA

FOR PROSPECT PAGES 1 TO 7

CLIENT I.S.P.G	PROSPECT	AREA Beaufort Sea	VESSEL M/V E.O. Vetter	PARTY No. 2972
LINE No. ISPG2C	LINE ID. 2003	DIR'N 273.7°	DATE MO 09 DAY 21 YR 89	PARTY MANAGER Wayne Nowry
				SHIPMENT No. 2972-ISP-89-01-01

DISTANCES:



CNP TO STERN 35.1 M

PRIMARY ANTENNA 1.1 M TO CNP BERING TO CNP 250 DEG

FATHOMETER 1.7 M AFT OF PRIMARY ANTENNA

GROUP LOCATIONS IN STREAMER OF:

DEPTH TRANSDUCERS	476	428	380	320	272	212	164	104	56	8	
DEPTH CONTROLLERS	476	428	380	320	272	212	164	104	56	8	
COMPASS SENSORS	476	428	380	320	272	212	164	104	56	8	

H OFFSET AVERAGE OF VALUES DERIVED FOR ALL SIX (6) STRINGS.
GUN SPREAD EQUALS 87 METERS OUTER TO OUTER.

RECORDING PARAMETERS:

INSTRUMENT TYPE = FCS (TITAN 1000)

S/N = 5

FILTER SETTINGS HI 64 HZ. SLOPE 72 DB/OCT

LO 8 HZ. SLOPE 18 DB/OCT

PREAMPLIFIER GAIN H M (L) 12 DB

SAMPLE RATE 4 MS

RECORD LENGTH SECS

TAPE FORMAT: SEG D GAPPED

PACKING DENSITY 6250 BPI

BYTES IN HEADER 3456

EXTENDED HEADER USED (YES) NO

DELAY RECORD MODULE USED 0 SECS

TAPE LENGTH: 3600 FT.

REVERSED TRACES (IN TSR): NONE

GAIN MODE: FIXED (FLOAT)

TIMEBREAK WINDOW: N/A MS

POLARITY: POSITVE PRESSURE ON PHONE GIVES

NEGATIVE ■ UPBREAK □ ON
POSITIVE □ NO. ON TAPE DOWNBREAK ■ DISPLAY

CAMERA DISPLAY METHOD Digital 480T

SINGLE TRACE DISPLAY SOURCE 480

REMARKS
(eg. - Line Status, Overlap Diagram, Bad Traces, Excess Noise, Etc.)

DIGI COURSE SMART Birds (396) HAVE COMPASS, DEPTH TRANSDUCER, AND CABLE LEVELER IN ONE UNIT.

LINE STATUS:
(PROC/COMPLETE) - DNP - HOLD - DBSH - UNDS

FSP = 101 FRN = 101

LSP = 1682 LRN = 1681

TOT SPS = 1532 TOT RNS = 1581

BAD RECORDS

AF = 4 75 ONLENIE

OTHER = 12 NOISE RECS

MSP = 1

NS = INST = 12

TAPES USED = 40

DEAD TRACES

426 POOR RESPONSE

438 POOR RESPONSE

NOISY TRACES

SOURCE DETAILS: -

SOURCE TYPE AND SIZE PNU CON 7200 in³

SOURCE DEPTH 7 M

AIRGUN PRESSURE 2000 PSI

SOURCE FIRING DELAY 5.2 MS

STREAMER TYPE: DFOS 480T

CABLE DETAILS: -

NUMBER OF GROUPS 480

GROUP LENGTH 6.25 M

NUMBER OF PHONES/GROUP 16

TARGET STREAMER DEPTH 12 M

STREAMER LENGTH (CENTRE NEAR GP TO CENTRE FAR GP) 2962.5 M

GROUP CHARGE SENSITIVITY: 53.4 μV/μBar

NUMBER OF SEMS: 40

NUMBER OF SEMS IN USE: 40

LENGTH OF EACH STRETCH SECTION 50 M

NUMBER OF STRETCHES IN FRONT END 4

NUMBER OF REPEATERS IN USE: 4

FOLD COVERAGE 3000

SHOT INTERVAL 50 M

NOISE DETAILS: -

BOL 0-1 uB

EOL 0-1 uB

04/85-02

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MARINE SEISMIC OBSERVER'S LOG

DATE MO 09 DAY 21 YR 89

CLIENT: E.O.P.G.

PROSPECT: WEST HERSCHEL

AREA: BEAUFORT SEA

M/V: E.O. VIZIER

PARTY: 2972

LINE No.: TSPG2C

LINE ID#: 2003

DIR'N: 273.7°

DUAL STREAMER SPREAD: _____ M

OBSERVER: BURNHAM

REEL NUMBER	TXP	SHOTPT	RECORD NUMBER	TIME (GMT)	WATER DEPTH METERS	NEAR 10	9	8	7	6	5	4	3	2	1			BAD RECORDS NS	Other	MSP	AF	INST	F.A.	REMARKS
302501	0		100																					BOL NOISE.
		101	101	06:51	65	12	12	11	11	12	12	12	12	12	12.								3.8	BOL
	0	139	139																					EOT
302502	1	140	140	07:05	60	12	11	11	12	12	12	11	12	12	12								3.6	BOT
	1	179	179																					EOT
302503	2	180	180	07:18	53	12.5	11	11	12	12	12	12	12	12	12								3.2	BOT
		201	-1																✓					ON LINE NOISE STRIP
	2	219	219																					EOT
302504	0	220	220	07:32	47	12.8	12	11	12	12	12	12	12	12	11								4.0	BOT
		222	-1																					"SPU B" (REC # 221)
		223	-1																					" " (REC # 222)
		224	-1																					" " (REC # 223)
	0	259	259																					EOT
302505	1	260	260	07:45	44	13	12	11	12	12	12	11	12	12	12.								5.6	BOT
	1	299	299																					EOT
302506	2	300	300	07:59	41	13	12	11	11	12	12	12	12	12	12								5.1	BOT
		301	-1																					ON LINE NOISE STRIP.
	2	339	339																					EOT
302507	0	340	340	08:12	41	13	12	11	12	12	12	12	12	12	12								7.5	BOT
	0	379	379																					EOT
302508	1	380	380	08:25	42	13	12	12	12	12	12	12	12	12	12								8.7	BOT

MARINE SEISMIC OBSERVER'S LOG

DATE MO 09 DAY 21 YR 89

CLIENT: I.S.P.G.

PROSPECT: WEST HERSCHEL

AREA: BEAUFORT SEA

M/V: E.O. VETTER

PARTY: 2972

LINE No.: ISPG2C

LINE ID#: 2003

DIR'N: 273.7°

DUAL STREAMER SPREAD: _____ M

OBSERVER: BURNHAM

REEL NUMBER	TXP	SHOTPT	RECORD NUMBER	TIME (GMT)	WATER DEPTH METERS	STREAMER DEPTH IN METERS NEAR 10	9	8	7	6	5	4	3	2	1			BAD RECORDS NS	Other	MSP	AF	INST	F.A.	REMARKS
302508	1	401	-1																					ON LINE NOISE
		412	-1																		✓			A/F GUN #27
302508	1	419	419																					EOT
302509	2	420	420	08:38	41	12	11	11	12	12	12	12	12	12	12								9.0	BOT
	2	440	-1																					LOST SEM #1 DATA
	2	441	-1																					LOST SEM #1 DATA
	2	442	-1																					LOST SEM #1 DATA
	2	443	-1																					LOST SEM #1 DATA
	2	447	-1																					LOST SEM #1 DATA
	2	448	-1																					LOST SEM #1 DATA
	2	449	-1																					LOST SEM #1 DATA
	2	451	-1																					LOST SEM #1 DATA.
	2	459	459																					EOT
302510	0	460	460(-1)	08:51	40	12	11	11	11	12	11	11	12	11	11								4.7	BOT
	0	461	-1																					LOST SEM #1 DATA
	0	462	-1																					LOST SEM #1 DATA
	0	463	-1																					LOST SEM #1 DATA
	0	480	-1																					LOST SEM #1 DATA
	0	499	499																					EOT
302511	1	500	500	09:03	39	12	11	11	12	12	12	12	12	12	12								1.4	BOT
	1	501	-1																					ON LINE NOISE

MARINE SEISMIC OBSERVER'S LOG

CLIENT: 1SPG	PROSPECT: WEST HERSHEL	AREA: BEAUFORT SEA	M/V: E.O. VETTER
LINE No.: 1SPG 2C	LINE ID#: 20003	DIR'N: 273.7°	DUAL STREAMER SPREAD: _____ M

DATE: MO 09 DAY 21 YR 89

PARTY: 2972

OBSERVER: BURNHAM

REEL NUMBER	TXP	SHOTPT	RECORD NUMBER	TIME (GMT)	WATER DEPTH METERS	NEAR 10	9	8	7	6	5	4	3	2	1			BAD RECORDS NS	Other	MSP	AF	INST	F.A.	REMARKS
	1	530	530																					NOTICE NOISE ON TAIL TRACES
	1	539	539																					EOT
302512	2	540	540	09:16	38	12	11	11	12	12	12	12	12	12	11								-5.5	BOT
	2	560	560																					NOISE DECREASING ON TAIL TRACES
	2	579	579																					EOT
302513	0	580	580	09:30	37	12	12	11	12	12	12	12	12	12	12								-6.9	BOT
		601	-1																					ON LINE NOISE TEST
	0	619	619																					EOT
302514	1	620	620	09:44	37	12	11	11	12	12	11	11	12	12	12								-6.3	BOT
		648	-1																					"SPU B" REC# 648
	1	659	659																					EOT
302515	2	660	660																					BOT
		670	-1																					SPU "B" REC# 670
		701	-1																					ON LINE NOISE STRIP
	2	699	699																					EOT
302516	0	700	700	10:11	37	13	12	12	12	12	12	12	12	12	12								1.8	BOT
	0	739	739																					EOT
302517	1	740	740	10:24	35	12	11	11	12	12	12	12	12	12	12								1.6	BOT
	1	779	779																					EOT
302518	2	780	730	10:38	36	12	12	11	11	12	11	12	12	12	11								0.0	BOT
		801	-1																					ON LINE NOISE

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MARINE SEISMIC OBSERVER'S LOG

CLIENT: I.O.S.P.G.	PROSPECT: WEST HERSCHEL	AREA: BEAUFORT SEA	DATE: MO 09 DAY 21 YR 89	PAGE 5 OF 7	
LINE No.: ISPG2C	LINE ID#: 20003	DIR'N: 273.7°	M/V: E.O. VETTER	PARTY: 2972	
			DUAL STREAMER SPREAD: ____ M	OBSERVER: BURNHAM	

REEL NUMBER	TXP	SHOTPT	RECORD NUMBER	TIME (GMT)	WATER DEPTH METERS	NEAR 10	9	8	7	6	5	4	3	2	1			BAD RECORDS NS	Other	MSP	AF	INST	F.A.	REMARKS
302518	2	819	819																					EOT
302519	0	820	820	10:51	37	12	11	11	11	12	11	12	12	12	12								-4.0	BOT
		853	-1																					"SPU A" REC # 853
		854	-1																					" " REC # 854
	0	859	859																					EOT
302520	1	860	860	11:05	36	12	11	11	12	12	12	12	12	12	11								-5.4	BOT
	1	899	899																					EOT
302521	2	900	900	11:19	32	12	11	11	12	12	12	12	11	12	11								-5.6	BOT
		901	-1																					ON LINE NOISE STRIP.
	2	939	939																					EOT
302522	0	940	940	11:33	33	11	12	12	12	12	12	12	12	12	12								-3.7	BOT
	0	979	979																					EOT
302523	1	980	980	11:47	33	11	12	11	12	12	12	12	12	12	11								-7.6	BOT
		1004	-1																	✓				MISSED SP
	1	1005	-1																		✓			A/F REC # 1004
	1	1013	-1																					ON LINE NOISE STRIP
	1	1020	1019																					EOT
302524	2	1021	1020	12:01	34	11	12	11	11	12	11	11	12	12	12								-3.5	BOT
	2	1060	1059																					EOT
302525	0	1061	1060	12:15	34	11	12	12	11	12	12	12	12	12	12								-2.7	BOT
		1100	1099	12:29																				EOT

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MARINE SEISMIC OBSERVER'S LOG

DATE MO 09 DAY 21 YR 89

CLIENT: I.S.P. 6

PROSPECT: WEST HERSCHEL

AREA: BEAUFORT SEA

M/V: E.O. VETTER

PARTY: 2972

LINE No.: ISP62C

LINE ID#: 20002

DIR'N: 273.7°

DUAL STREAMER SPREAD: _____ M

OBSERVER: BURNHAM

REEL NUMBER	TXP	SHOTPT	RECORD NUMBER	TIME (GMT)	WATER DEPTH METERS	STREAMER DEPTH IN METERS NEAR 10	9	8	7	6	5	4	3	2	1			BAD RECORDS NS	Other	MSP	AF	INST	F.A.	REMARKS
302526	1	1101	1100	12:29	33	11	11	11	11	12	12	12	12	12	11								2.6	BOT
		1102	-1																					ON LINE NOISE STRIP
		1122	+1																			✓		"SPU A" REC# 1121
		1123	-1																			✓		" " REC# 1122
		1124	-1																		✓			A/F
	1	1140	1139																					EOT
302527	2	1141	1140	12:43	34	11	12	11	12	12	12	12	12	12	11								1.9	BOT
	2	1180	1179																					EOT
302528	0	1181	1180	12:56	33	11	12	12	12	12	12	11	12	12	12								.7	BOT
		1201	-1																					ON LINE NOISE STRIP
	0	1220	1219																					EOT
302529	1	1221	1220	13:10	33	12	12	12	11	12	12	12	12	12	11								.4	BOT
	1	1260	1259																					EOT
302530	2	1261	1260	13:23	33	12	12	12	12	12	11	12	12	12	12								1.4	BOT
	2	1300	1299																					EOT
302531	0	1301	1300	13:38		12	12	12	12	11	12	12	12	12	12								2.0	BOT
		1303	-1																					ON LINE NOISE STRIP
	0	1340	1339																					EOT
302532	1	1341	1340	13:51	35	12	12	12	11	12	12	12	12	12	11								2.1	BOT
	1	1380	1379																					EOT
302533	2	1381	1380	14:05	34	12	12	12	12	12	12	12	12	12	12								2.6	BOT

MARINE SEISMIC OBSERVER'S LOG

CLIENT	PROSPECT	AREA	DATE	PAGE
ISPG.	WEST HERSCHEL	BEAUFORT SEA	MO 09 DAY 21 YR 89	#2 OF 7
LINE No.	**LINE ID#**	**DIR'N**	**M/V**	**PARTY**
ISP62C	20002	273.7°	E.O. JETTER	2972
			DUAL STREAMER SPREAD _____ M	**OBSERVER** BURNHAM

REEL NUMBER	TXP	SHOTPT	RECORD NUMBER	TIME (GMT)	WATER DEPTH METERS	STREAMER DEPTH IN METERS (NEAR) 10	9	8	7	6	5	4	3	2	1			BAD RECORDS NS	Other	MSP	AF	INST	F.A.	REMARKS
302533	2.	1401	-1																					ON LINE NOISE STRIP
	2	1420	1414																					EOT
302534	0	1421	1420	14:19		12	12	12	12	12	12	11	12	12	11								2.0	BOT
		1451	-1																		✓			A/F GUN #22
	0	1460	1459																					EOT
302535	1	1461	1460	14:33	34	12	12	12	12	12	12	12	12	12	12								3.6	BOT
	1	1500	1499																					EOT
302536	2	1501	-1	14:46	33	12	12	11	12	12	12	11	12	12	12								4.3	BOT (REC #1500) ON LINE NOISE TEST
	2	1540	1539																					EOT
302537	0	1541	1540	15:00	33	12	12	12	12	12	11	12	12	12	12								4.2	BOT
	0	1580	1579																					EOT
302538	1	1581	1580	15:14	36	12	12	11	11	12	12	12	12	12	11								2.5	BOT
		1601	-1																					ON LINE NOISE STRIP
		1602	-1																					DCIZ
		1603	-1																					DCE
	1	1620	1619																					EOT
302539	2	1621	1620	15:27	33	11	12	12	11	11	12	12	12	11	12.								1.1	BOT
		1624	-1																✓					UNCORRECTABLE TAPE ERROR.
	2	1660	1659																					EOT
302540	0	1661	1660	15:41	32	12	12	12	12	12	12	12	12	12	11								0°	BOT
		1682	1681	1548	34	12	12	12	12	12	12	12	12	12	12								0	EOL

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1620?

Fog Notes

HALLIBURTON GEOPHYSICAL SERVICES

Client: I.S.P.G. Prospect: HERSCHEL WEST Vessel: m/v E.O VETTER

Date: SEPT. 21/89 Julian Day: 264 Shipment # 2972-ISP-89-01-01

BOL: ISPG 2C Time (GMT): 06:51 CMS ID#: 20003

Record Length: 16 seconds Shot point interval: 50 meters

FSP: 101 FRN: 101 Speed: 4.6 knts Water Depth: 65 m

Direction: 273.7° Heading: 272.3°

Feather Angle: +3.9 degrees Ave. Cable Noise: 0.7205 uB

Bad Traces: 426 INSENSITIVE/POOR RESPONSE, 438 POOR RESPONSE.

Cable Depths At BOL:

10 12.5	9 11.6	8 11.2	7 11.2	6 11.6	5 11.2	4 11.6	3 11.6	2 11.6	1 11.2

Offset: 192.9 Meters (Centre Source to Center Near Group)

Weather Conditions> Wind: SE 10 knts. Seas: 1.5 ft.

Spread: 87 Meters

Gun Status Array Volume: 6960 cu.in. Array Pressure: 1950 p.s.i

Gun Off		40	53														
Gun On	CH61 15			CH64 56													

Navigation Primary: SYL/ARGO ✓ Secondary: ARGO x

Syledis Herschel [✓] Garry [ ] Pitt [ ] Komakuk [✓]

Argo Monument [x] Garry W [x] King [✓ x]

Coordinates at BOL: 69 48 00.06 N
138 59 59.93 W

Comments:

1/ LINE RECORDED WITH 16 SEC RECORDS

2/ FILTERS LO CUT 3 HZ 13 db/oct HI CUT 64 HZ 72 db/oct

3/ OYO PLOTTER NOT SET UP PROPERLY FOR PORTION OF LINE

4/ EVENT MARKS ON BAROMETER STRIP CHART EVERY 40 SPs.

Line ISPG 2C ONLINE LOG

GMT	SP#	Comments
06:51	101	BOL ISPG 2C FSP 101 FRN 101
	201	ONLINE NOISE TEST NO GUNS FIRED
	202	A/F
	223	SPU BUS B HANG UP (FIBRE A) DATA CHECK ERROR
	223	SPU BUS B HANG UP (FIBRE A) DATA CHECK ERROR
	224	SPU BUS B HANG UP (FIBRE A) DATA CHECK ERROR
	279	DROPPED SUN/ARGO BASE 7 (KING) ADDED BASE 5 (MONUMENT) to Lower
		CEP's.
	301	ON LINE NOISE TEST NO GUNS FIRED
	401	ON LINE NOISE TEST NO GUNS FIRED
	412	A/F GUN # 27
	440	LOST SEM #1 DATA
	441	LOST SEM #1 DATA
	442	LOST SEM #1 DATA
	443	LOST SEM #1 DATA
	447	LOST SEM #1 DATA
	448	LOST SEM #1 DATA
	449	LOST SEM #1 DATA
	451	LOST SEM #1 DATA
	460	LOST SEM #1 DATA
	461	LOST SEM #1 DATA
	462	LOST SEM #1 DATA
	463	LOST SEM #1 DATA
	480	LOST SEM #1 DATA
	501	ONLINE NOISE TEST

Line KSPG 2C ONLINE LOG

GMT	SP#	Comments
	601	ONLINE NOISE TEST NO GUNS FIRED
	648	SPU BUS B
	670	SPU BUS B NOTE: BIRD #10 TENDS SLIGHTLY DEEP 13.5m
	701	ON LINE NOISE NO GUNS FIRED
	710	NOTE: WILL INCREASE SPEED IN ATTEMPT TO BRING BIRD #10 SHALLOWER.
	725	DEPTHS IN SPEC.
	801	ON LINE NOISE TEST NO GUNS FIRED
	853	SPU BUS A
	854	SPU BUS A.
	901	ON LINE NOISE TEST NO GUNS FIRED
	1004	MISSED SP
	1005	A/F
	1013	ONLINE NOISE TEST NO GUNS FIRED
	1102	ONLINE NOISE TEST NO GUNS FIRED
	1122	SPU BUS A HANG UP
	1123	SPU BUS A HANG UP
	1201	ONLINE NOISE TEST NO GUNS FIRED
	1303	ONLINE NOISE TEST NO GUNS FIRED
	1401	ONLINE NOISE TEST NO GUNS FIRED
	1451	A/F GUN #22
	1501	ONLINE NOISE TEST.
	1601	ONLINE NOISE TEST

Line 1SPG 2C ONLINE LOG Page 4 of 5

GMT	SP#	Comments
	1602	DATA CHECK ERROR
	1603	DATA CHECK ERROR
	1624	UNCORRECTED TAPE ERRORS.
15:48	1682	EOL 1SPG 2C LSP 1682 LRN 1681

HALLIBURTON GEOPHYSICAL SERVICES

Client: I.S.P.G. Prospect: HERSCHEL WEST Vessel: m/v E.O VETTER

Date: SEPT. 21/89 Julian Day: 264 Shipment # 2972-ISP-89-01-01

EOL: ISPG 2C Time (GMT): 15:48 CMS ID#: 20003

Record Length: 16 seconds Shot point interval: 50 meters

LSP: 1682 LRN: 1681 Speed: 4.7 knts Water Depth: 35.5 m

Direction: 273.7° Heading: 272.8°

Feather Angle: +0.3 degrees Ave. Cable Noise: 0.5538 uB

Bad Traces: 426 INSENSITIVE POR RESPONSE, 438 POOR RESPONSE.

Cable Depths At EOL:

10 11.6	9 11.6	8 11.2	7 11.2	6 11.6	5 11.6	4 11.6	3 11.6	2 11.6	1 11.6

Offset: 192.9 Meters (Centre Source to Center Near Group)

Weather Conditions> Wind: E 20 knts. Seas: 4-5 ft.

Spread: 87 Meters

Gun Status Array Volume: 6960 cu.in. Array Pressure: 1950 p.s.i

Gun Off		40	53														
Gun On	CH61 15			CH64 56													

Navigation Primary: SYL/ARGO ✓ Secondary: ARGO x

Syledis Herschel [✓] Garry [ ] Pitt [ ] Komakuk [✓]

Argo Monument [✓ x] Garry W [x] King [x]

Coordinates at EOL: 69 50 01.72 N

141 03 02.49 W

Comments:

1/ LOST SEM #1 DATA FOR PORTIONS OF LINE

2/ BLASTER POWER TURNED OFF TO TAKE ON LINE NOISE TESTS REASON FOR N/F ∅ DISPLAYED.

LINE COMPLETE / PROLESS.

TOTAL SP = 1582 = 79.10 Km.