

**NBP9702 - CANDE/STOCK/MUELLER ANTARCTICA CRUISE**  
**Multichannel & Single Channel Seismic Streamer Configurations**  
**Recorded on OYO - DAS 1 software version 1.26B**

**SCS 12 configuration (Seistapes # 1 - 6 ) (LINE 1)**

GPS antenna to stern -44 meters  
stern to guns -55 meters  
last geophone of group 32 on deck - so channels 33 - 48 off of ship  
83 phones in water.  
channels 33 & 34 out of the water  
recording channels 37-48 (channels 1-12) (active section 300 m)  
gun to channel 1 (37) offset = 100 - 48m = 52m  
gun depths 12 ft. (4 meters)  
streamer depth 30-50 ft (10 - 16 meters)  
2 guns firing (2 - 210 cubic inch)  
noise below data caused by "out of control" bird - fixed during tape 3.

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**MCS 48 configuration (Seistape # 7 - 24 ) (LINE 2)**

GPS antenna to stern -44 meters  
stern to guns -55 meters  
guns to near channel 265 meters  
5 geophones per channel group - 5 meters apart  
channel groups 25 meters long  
total cable length 1.2 km  
gun depths ~ 12 ft. (4 meters)  
streamer depth ~ 30-50 ft (10 - 16 meters)  
5 guns firing (5 - 210 cubic inches)

*channel 34 dead;*

*Seistape 10 - aux channel and channels 4, 31, 34, and 38 are crosstalking; practice  
sonobuoy signal recorded on four mcs channels.*

*Seistapes 7, 8, and 9 gun firing problems, and problems with gun controller*

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**MCS 48 configuration (Seistape # 25 - 35 ) (LINE 3)**

GPS antenna to stern -44 meters  
stern to guns -55 meters  
guns to near channel 265 meters  
5 geophones per channel group - 5 meters apart  
channel groups 25 meters long  
total cable length 1.2 km  
gun depths ~ 12 ft. (4 meters)  
streamer depth ~ 30-50 ft (10 - 16 meters)  
5 guns firing (5 - 210 cubic inches)

\*\*\*\* after storm; \*\*\*\*

*Dead channels 34, 42 and 47;*  
*Noisy channels - 6, 9, 14, 17, 18, 23*  
*"Wimpy channels" - 31 & 48*

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#### **MCS 48 configuration (Seistape 36) ( LINE 4)**

##### **single channel streamer configuration (Seistape # 36 ) (LINE 4)**

GPS antenna to stern	-44 meters
stern to guns	-55 meters
active section	- 50 meters ( 10 phones at 5 meter spacing)
length of streamer	- 350 meters
gun to channel 1 offset	= 300 - 55m = 245m
gun depths	~12 ft. (4 meters)
streamer depth	~30-50 ft (10 - 16 meters)
2 guns firing (2 - 210 cubic inch)	

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#### **MCS 48 configuration (Seistape # 37 - 41 ) (LINE 5)**

GPS antenna to stern	-44 meters
stern to guns	-55 meters
guns to near channel	265 meters
5 geophones per channel group - 5 meters apart	
channel groups	25 meters long
total cable length	1.2 km
gun depths	~ 12 ft. (4 meters)
streamer depth	~ 30-50 ft (10 - 16 meters)
5 guns firing	(5 - 210 cubic inches)

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*Dead channels 1, 34, 42 and 47;*  
*Noisy channels - 6, 9, 14, 17, 18, 23*  
*"Wimpy channels" - 31 & 48*

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#### **MCS 48 configuration (Seistape # 41 - 48 ) (LINE 6)**

GPS antenna to stern	-44 meters
stern to guns	-55 meters
guns to near channel	265 meters
5 geophones per channel group - 5 meters apart	
channel groups	25 meters long
total cable length	1.2 km
gun depths	~ 12 ft. (4 meters)
streamer depth	~ 30-50 ft (10 - 16 meters)
5 guns firing	(5 - 210 cubic inches)

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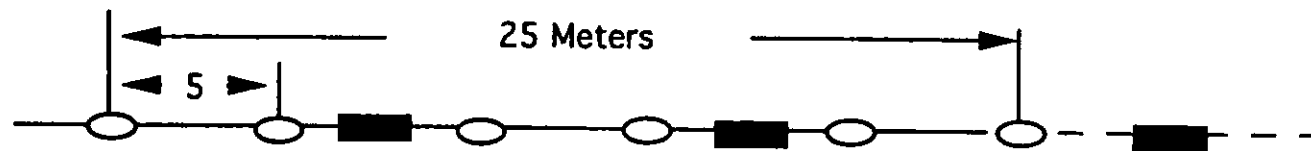
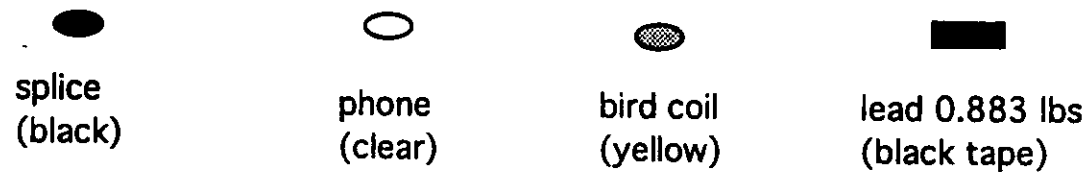
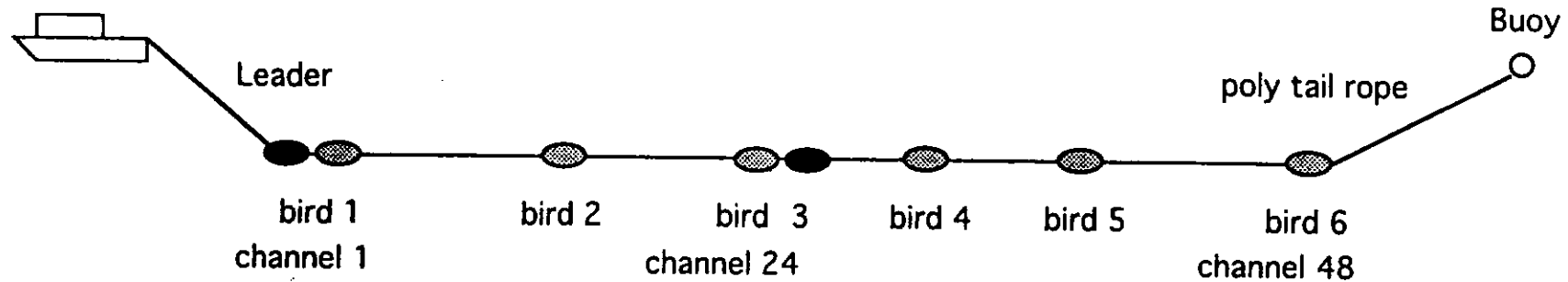
*Dead channels 1, 34, 42 and 47;*  
*Noisy channels - 6, 9, 14, 17, 18, 23, 31, 48 (not consistent on all shots)*

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# NBP 9702 Multichannel Streamer

ITI serial number 9536

48 channels / 1200 m / 25 meters per group / 5 phones per group



Single channel group of 5 phones -  
preamp is inside forward phone

Notes:

Cable buoyancy is  $50 \text{ lbs}/1000 \text{ ft} = 194 \text{ lbs}$  per active section  
each phone is  $0.25 \text{ lbs} * 240 = -60 \text{ lbs}$  buoyancy = net 134 lbs light  
(per Rick Pearce at installation; the manual says otherwise!)  
each lead weight is 4 inch x 12 inch of  $2.5 \text{ lbs}/\text{ft}^2$  lead sheet,  
120 lead weights (every other phone) \*  $0.833 \text{ lbs} = 100 \text{ lbs}$   
so active portion should be 34 lbs light.

Leader is negatively buoyant but of undocumented density.

Total electrical length from lab should be about 10 m of lab  
splice, 400 m of leader and deck cable, 1200 m of active wires.  
Channels 3, 34, 37 and 46 seem to be wire continuous via TDR  
to the preamp in each channel, but each has no signal in the lab.

Offsets and depths:

GPS antenna to stern	44 m	(from frames 0 to 72)
stern to guns midpoint	53 m	(Barney's estimate)
guns to near channel mid	265 m	(from dwave, channels 1-10 at derived water velocity)

gun depths	15 ft	(by ballons)
streamer depth	30 ft	(by birds)