

EN465 Acquisition Geometries

Table 1: Summary of seismic lines, source, time of acquisition, and geometry used.

Line	Source	Start Time (GMT)	End Time (GMT)	First Shot	Last Shot	Shot Spacing	Streamer Geometry
3	2 GI guns	8/12/09 21:55	8/13/09 16:32	1	10412	5s	1
1a	sparker	8/13/09 18:01		1001		1.5s	1
1b	sparker	8/13/09 21:00	8/13/09 21:49		10247	1.5s	1
3c	sparker	8/13/09 23:25	8/14/09 7:52	10248	28888	1.5s	1
Turn3_1	sparker	8/14/09 8:11	8/14/09 11:05	2889	35363	1.5s	1
1	2 GI guns	8/14/09 22:58	8/15/09 14:42	10413	19189	5s then 6s	2
21	2 GI guns	8/15/09 14:43	8/15/09 16:43	19189	20397	6s	2
12	2 GI guns	8/15/09 18:21	8/15/09 21:47	20398	22444	6s	2
5a	2 GI guns	8/15/09 22:03	8/15/09 22:36	24445	22776	6s	2
7	2 to 1 GI Guns	8/15/09 22:41	8/16/09 1:46	22777	24616	6s	2
13	1 GI Gun	8/16/09 1:49	8/16/09 6:57	24617	27687	6s	2
8	1 GI Gun	8/16/09 8:04	8/16/09 12:53	28326	31214	6s	2
14	1 GI Gun	8/16/09 12:55		31215		6s	2
14a	1 GI Gun		8/16/09 18:51		34249	6s	2
9	1 GI Gun	8/16/09 19:12	8/17/09 1:04	34250	37779	6s	2
15	1 GI Gun	8/17/09 1:05	8/17/09 7:24	37780	41530	6s	2
10	1 GI Gun	8/17/09 7:30	8/17/09 13:30	41530	45342	6s	2
16	1 GI Gun	8/17/09 13:51	8/17/09 20:11	45343	49113	6s	2
11	1 GI Gun	8/17/09 20:48		49114		6s	2
11a	1 GI Gun		8/18/09 0:16		50310	6s	2
4	sparker	8/18/09 0:20	8/18/09 2:25	1001	5966	1.5s	2
4a	1 GI Gun	8/18/09 2:36	8/18/09 16:35	50311	58689	6s	2
2	1 GI Gun	8/18/09 22:11	8/19/09 18:16	58690	70734	6s	2
5	1 GI Gun	8/19/09 20:17	8/20/09 15:13	70735	82083	6s	2
17	1 GI Gun	8/20/09 15:18	8/21/09 1:11	82084	87393	6s	2
20	1 GI Gun	8/21/09 1:16	8/21/09 9:20	87394	92774	6s	2
19	1 GI Gun	8/21/09 9:24	8/21/09 13:26	92775	95171	6s	2
24	1 GI Gun	8/21/09 17:06	8/21/09 22:29	95176	98393	6s	2
32	1 GI Gun	8/21/09 22:32	8/22/09 3:48	98394	101575	6s	2

Appendix 1

Acquisition Geometries

SIO Portable Marine Seismic System

Geometry 1

GeoEel Streamer and Airguns

Cruise: **EN465**

Vessel: **R/V Endeavor**

Date: **Aug 2009**

Chief Sci: **Dugan**

Techs:

Lee Ellett

Brandi Murphy

Jim Dorrance

Item or Channel	Distance (m) from Stern	Distance (m) from Source	Distance (m) From GPS	Distance (m) off center line	Depth/Height from water
1	101.25	76.25	129.25	2	3
48	688.75	663.75	716.75	2	3
49	698.13	673.13	726.13	2	3
72	841.88	816.88	869.88	2	3
Source	25	0	53	2	2
GPS	28	53	0	3.3	?

Section	Length	Number of Channels
Towing Cables	95 m	
Active @ 12.5 Grp Int	600 m	48
Active @ 6.25 Grp Int	150 m	24

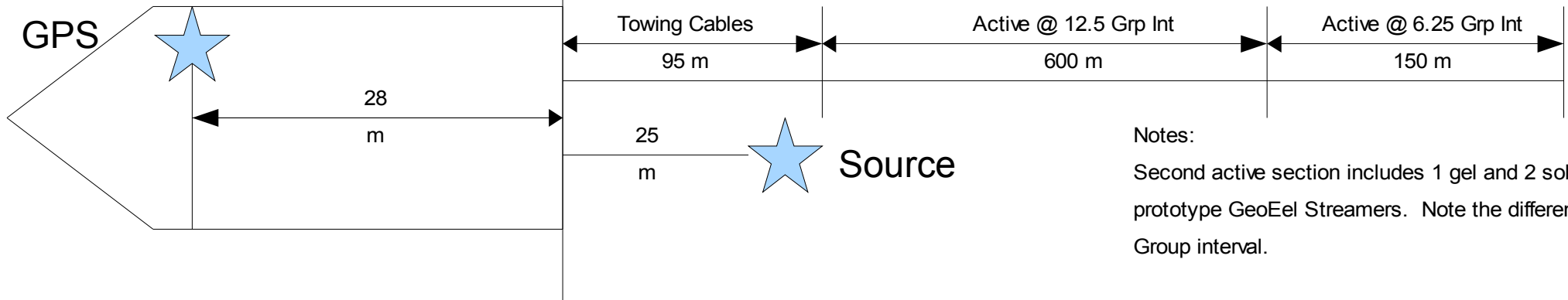
Source:	Airguns	45/105 Cu In	Qty:	1/2
Acq. Sys.	GeoEel	PreAmp Gain:	18 db	
Sample Int:	.500ms	# of Channels:	72	
File Format:	SEGD	D 8058 Rev 1		
Rec. Length:	4 sec	Shot Interval:	5/6 sec	

FOLD =

$$\frac{\text{No. Traces} * \text{Grp. Int}}{2 * (\text{Shot Interval})}$$

Bird Locations

Bird 1	Start of Ch 9 (Active 2)
Bird 2	Start of Ch 17 (Active 3)
Bird 3	Start of Ch 33 (Active 5)
Bird 4	Start of Tail Stretch



Notes:

Second active section includes 1 gel and 2 solid prototype GeoEel Streamers. Note the different Group interval.

* Not drawn to Scale

SIO Portable Marine Seismic System

Geometry 2

GeoEel streamer and Airguns

Cruise: **EN465**

Vessel: **R/V Endeavor**

Date: **Aug 2009**

Chief Sci: **Dugan**

Techs:

Lee Ellett

Brandi Murphy

Jim Dorrance

Item OR Channel	Distance (m) from Stern	Distance (m) from Source	Distance (m) From GPS	Distance (m) off center line	Depth/Height from water
9	81.25	55.25	109.25	2 starboard	3
56	668.75	642.75	696.75	2 starboard	3
57	678.13	652.13	706.13	2 starboard	3
64	721.88	695.88	749.88	2 starboard	3
Source	26	0	54	2 port	2
GPS	28	54	0	3.3 starboard	?

Section	Length	Number of Channels
Towing W/ Active Sect	75 m	8
Active @ 12.5 Grp Int	600 m	48
Active @ 6.25 Grp Int	50m m	8

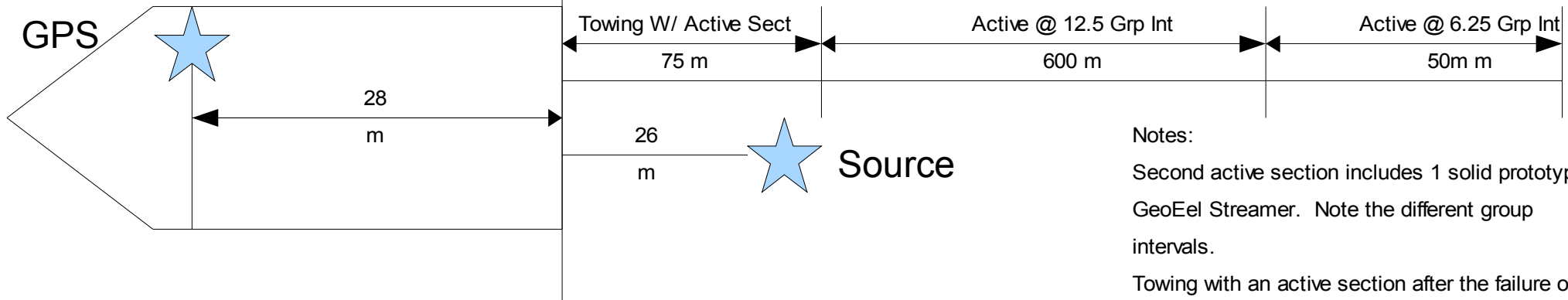
Source:	Airguns	45/105 Cu In	Qty:	1/2
Acq. Sys.	GeoEel	PreAmp Gain:	18 db	
Sample Int:	.500ms	# of Channels:	64	
File Format:	SEGD	D 8058 Rev 1		
Rec. Length:	4 sec	Shot Interval:	5/6 sec	

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Bird Locations

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Bird 3	Start of Ch 33 (Active 5)
Bird 4	Start of Tail Stretch



Notes:

Second active section includes 1 solid prototype GeoEel Streamer. Note the different group intervals.

Towing with an active section after the failure of the tow cable

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SIO Portable Marine Seismic System

Geometry 1

GeoEel Streamer and Sparker

Cruise: **EN465**

Vessel: **R/V Endeavor**

Date: **Aug 2009**

Chief Sci: **Dugan**

Techs:

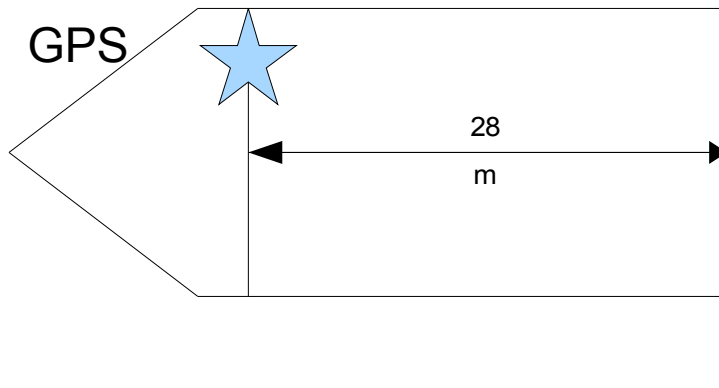
Lee Ellett

Brandi Murphy

Jim Dorrance

Item or Channel	Distance (m) from Stern	Distance (m) from Source	Distance (m) From GPS	Distance (m) off center line		Depth/Height from water
1	101.25	61.25	129.25	2	starboard	3
48	688.75	648.75	716.75	2	starboard	3
49	698.13	658.13	726.13	2	starboard	3
72	841.88	801.88	869.88	2	starboard	3
Source	40	0	68	3.5	port	2
GPS	28	68	0	3.3	starboard	?

Source:		USGS	Sparker	Qty:	1
Acq. Sys.	GeoEel	PreAmp Gain:	18 db		
Sample Int:	.500ms	# of Channels:	72		
File Format:	SEGD	D 8058 Rev 1			
Rec. Length:	1 sec	Shot Interval:	1.5 sec		

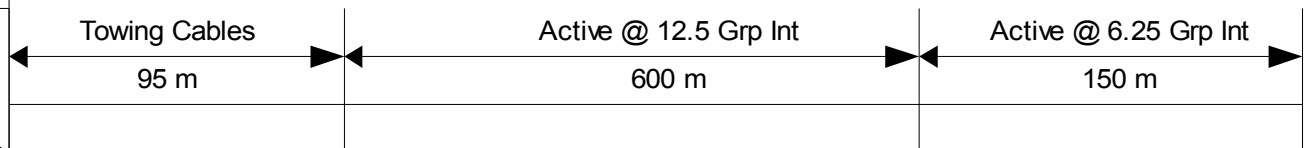


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57	678.13	648.13	706.13	2 starboard	3
64	721.88	691.88	749.88	2 starboard	3
Source	30	0	58	3.5 starboard	?
GPS	28	58	0	3.3 starboard	?

Section	Length	Number of Channels
Towing W/ Active Sect	75 m	8
Active @ 12.5 Grp Int	600 m	48
Active @ 6.25 Grp Int	50m m	8

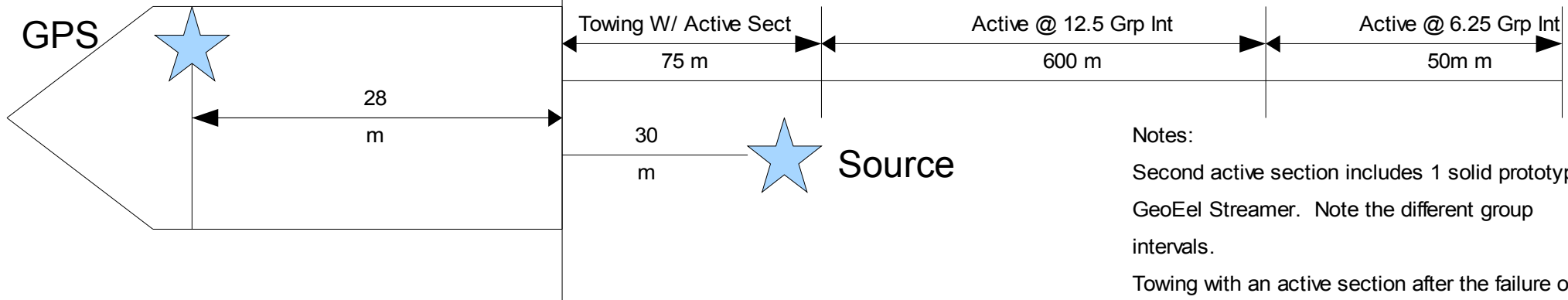
Source:	USGS	Sparker	Qty:	1
Acq. Sys.	GeoEel	PreAmp Gain:	18 db	
Sample Int:	.500ms	# of Channels:	64	
File Format:	SEGD	D 8058 Rev 1		
Rec. Length:	1 sec	Shot Interval:	1.5 sec	

FOLD =

$$\frac{\text{No. Traces} * \text{Grp. Int}}{2 * (\text{Shot Interval})}$$

Bird Locations

Bird 1	Start of Ch 9 (Active 2) ??
Bird 2	Start of Ch 33 (Active 5)
Bird 3	Start of Ch 33 (Active 5)
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