

VOLUME D22

GEOPHYSICAL INVESTIGATION

SEISMIC SURVEY

Volume	Km from	Km to	Task	Length	Survey Type
D01	800	1+300	i	0.5	Seismic
D02	27+200	27+500	i	0.3	Seismic
D03	28+400	28+600	i	0.2	Seismic
D04	28+600	29+600	i	1	Resistivity
D05	36+800	37+300	i	0.5	Resistivity
D06	37+300	37+800	i	0.5	Seismic
D07	37+800	38+900	i	1.2	Resistivity
D08	10+200	10+700	iii LLR	0.5	Seismic
D09	300	900	iii	0.6	Resistivity
D10	900	1+300	iii	0.4	Seismic
D11	1+300	2+700	iii	1.4	Resistivity
D12	2+700	3+100	iii	0.4	Seismic
D13	3+100	5+300	iii	3.2	Resistivity
D14	8+500	11+000	iii	2.5	Resistivity
D15	12+000	13+000	iii	1	Resistivity
D16	15+000	18+000	iii	3	Resistivity
D17	20+000	21+000	iii	1	Resistivity
D18	25+200	25+900	iii	0.7	Resistivity
D19	29+500	30+700	iii	1.2	Resistivity
D20	36+400	36+800	iii	0.4	Seismic
D21	38+600	39+300	iii	0.7	Resistivity
D22	39+300	39+700	iii	0.4	Seismic
D23	39+800	41+300	iii	0.5	Resistivity
D24	43+200	43+500	iii	0.3	Seismic
D25	51+700	55+300	iii	3.6	Seismic
D26	68+600	69+800	iii	0.2	Seismic
D27	70+800	71+600	iii	0.8	Resistivity
D28	90+700	91+300	iii	0.6	Seismic
D29	91+800	92+600	iii	0.8	Resistivity
D30	96+200	98+200	iii	2	Resistivity
D31	1+000	1400	ii	0.4	Seismic
D32	9+000	10+000	ii	1	Seismic
D33	14+500	14+900	ii	0.4	Seismic
D34	20+900	21+600	ii	0.7	Seismic
D35	27+300	27+700	ii	0.4	Seismic
D36	29+500	29+900	ii	0.4	Seismic
D37	32+000	32+400	ii	0.4	Seismic
D38	27+700	29+000	ii	1.3	Resistivity
D39	62+500	64+000	ii	1.5	Seismic
D40	71+000	71+700	ii	0.7	Seismic
D41	73+000	73+400	ii	0.4	Seismic

General Information

Survey Line Parameters

Projected Parameters	Volume name	D22
	Survey type	Seismic Refraction
	Task	iii
	Km from	39+300
	Km to	39+700
	Length (km)	0.4
Survey Parameters	Length (km)	0.54
	Maximum offset from projected line	15 meters
	Data acquisition period	09.09.2008
	Weather condition	warm
	Brief terrain description	Medium terrain covered by scattered dense vegetation
Notes:		
<ul style="list-style-type: none"> Maximum offset is due to projected motorway curvature 		

See Annex 22/41 (Survey Line Location and Results)

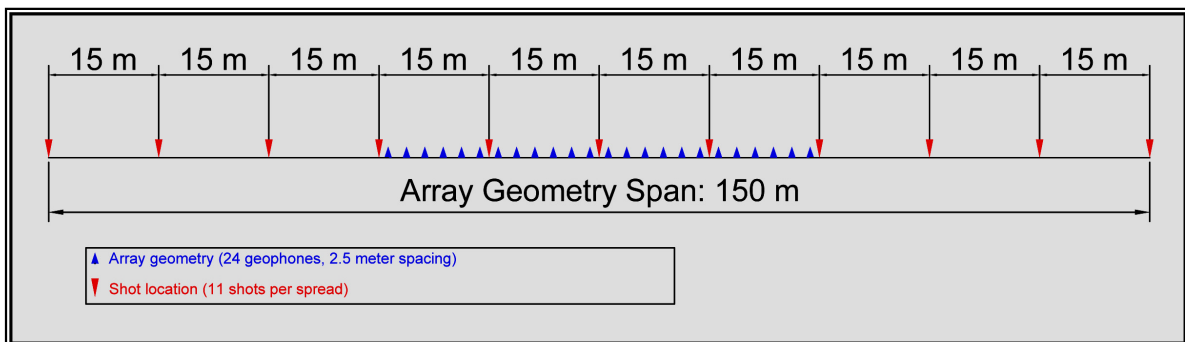
Survey equipment

Data acquisition stage was completed using the following equipment:

- GEOMETRICS GEODE Full Seismic Equipment

Survey type: **seismic refraction**

- 20 - 80 meters depth (depending on refractor position and overall velocities)
- 24 geophones, 2.5 meters spaced; 11 shots / spread.



Data Acquisition Parameters

Measurement Parameters

Seismic trace length was set to 1024 ms sampled at 0.512 ms for 24 simultaneous recordings per shot.

Quality Control

To insure reliability of acquired data several stages for quality control were applied to data processing workflow:

- For each recording, up to 5 shots were used to insure high signal to noise ratio
- Quality control was applied in each stage of the processing workflow using specific programs and routines to filter any abnormalities found within raw data

Results

Results were organized as follows:

1. Three Longitudinal Sections (*See. Annex 22/41*) covering all volume length containing:
 - a. *Inverted Velocity Section* (Horizontal Scale 1 : 1000, Vertical Scale 1 : 200)
 - b. Plan location of Survey Line and Projected (Scale 1 : 5000)
 - c. Interpretation of physical parameters distribution
2. Raw data available in SEG2 standard format
3. Topographic data for each measurement location
4. Inverted Result Data in suitable formats (easy to integrate into any follow up workflow).

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