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5. Transect EG66 Results[1]

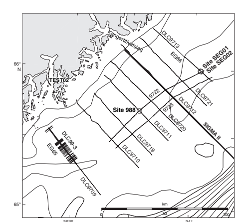
Scientific Party[2]

SCIENTIFIC OBJECTIVES

Drilling on Transect EG66 (Fig. F1) had three primary objectives. The first objective was to determine the age of igneous crust at latitude 66°N northeast of Ocean Drilling Program (ODP) Site 988 (Duncan, Larsen, Allan, et al., 1996). Curiously, ^{40}Ar-^{39}Ar dating of one of the two Site 988 igneous units yielded anomalously young ages of 49.6 ± 0.2 Ma (Tegner and Duncan, 1999). This young age was unexpected because Site 988, from seismic and magnetic information, was interpreted to be located within 56- to 53-Ma Chron C24r basal lavas of the landward featheredge of the seaward-dipping reflector sequence. Site 988 results offered two equally plausible interpretations: (1) lava or sill from young, off-axis magmatism had been drilled, despite the lack of indications in the seismic data; and (2) the upper crust is indeed ~50 Ma in the latter region. Given the rather poorly developed seafloor magnetic zones in this area (see Fig. F6 in the "Introduction" chapter), this is a permissible hypothesis. Resolving these questions is most important for understanding the plate kinematic and accretionary processes of this part of the margin.

Subsequent to ODP Leg 163, high-resolution seismic data were collected by the H/V *Dana* cruise in the vicinity of Site 988 (Hopper et al., 1997). This work showed that the smooth morphology of the inner shelf landward of Site 988, originally interpreted as continental basement, was actually underlain by strong seaward-dipping reflectors. This landward continuation of oceanic crust was more consistent with the young age of basalt from Site 988, although the seafloor magnetic anomalies remained problematic. Thus, the second objective of Transect EG66 drilling was to sample crust from the inner shelf in the hope of closing the gap in our knowledge of the composition and age of the oldest volcanic crust in the region. The third objective was to recover the youngest crust possible for comparison with basalts from the

F1. Transect EG66 area, p. 8.



[1]Examples of how to reference the whole or part of this volume.
[2]Scientific Party addresses.

Ms 163XIR-105

Paleogene of Iceland and those recovered from Deep Sea Drilling Project Sites 407, 408, and 409 in Miocene crust of the Irminger Basin (Luyendyk, Cann, et al., 1979). This latter objective was also a priority for Leg 163 but was unrealized because of equipment problems.

PRINCIPAL RESULTS

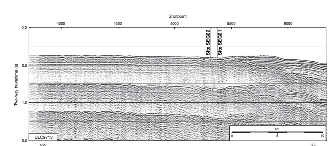
Two closely spaced sites (SEG01 and SEG02) were drilled into volcanic basement on the outer part of Transect EG66. These sites are located ~55 km northeast of Site 988 and on strike with magnetic Chron C24r. Site SEG02 is located immediately landward of Site SEG01 and so was intended to sample marginally older crust. The sedimentary cover was only recovered at Site SEG02 and is composed of 6 m of highly compact diamicton. Despite the inherent difficulties with drilling in this material, the recovery by diamond coring approached 100%. The single igneous flow unit recovered at Site SEG01 is a massive, vesicular, plagioclase-clinopyroxene-olivine phyric basalt. The unit has normal magnetic polarity and yielded a preliminary ^{40}Ar-^{39}Ar age of 50.0 ± 0.4 Ma (C. Tegner, unpubl. data). These latter results show that eruption most likely took place during Chron C22n (50.8–49.7 Ma), as previously shown for Site 988 (49.6 ± 0.2 Ma) (Tegner and Duncan, 1999). This agreement with the findings from drilling Site 988 are important, as they show that (1) young crust is more widespread than previously thought and (2) the averaged seafloor magnetic signature does not correspond well with the age of crust sampled at the surface. Both of these conclusions have important implications for models of volcanic rifted margin formation. Igneous basement was also sampled at Site SEG02, where highly fractured, massive, and sparsely plagioclase phyric basalt was recovered. These igneous units did not yield precise ^{40}Ar-^{39}Ar ages because of excess argon, but the data suggest an age of ~52 Ma (C. Tegner, unpubl. data), which, together with its reversed magnetic polarity, suggests eruption during Chron C23r.

Both analyzed igneous units are relatively evolved with Mg numbers between 0.36 and 0.47 and TiO_2 contents of 2.3–3.6 wt%, with the Site SEG02 unit being the more evolved. These Fe-Ti basalts are similar in composition to those from Site 988, the plateau basalts of East Greenland, as well as Paleogene lavas of western Iceland (Hardarson et al., 1997).

GEOPHYSICS AND SITE SELECTION

Poor ice conditions in August 1998 prevented us from accessing our original drilling targets landward of Site 988. Instead, we selected alternate sites along the outer part of seismic Line DLC9713, 55 km northeast of Site 988 (Fig. F1). The deep crustal seismic profile SIGMA II (Holbrook et al., 2001) runs midway between these two locations. According to the interpretation of seafloor magnetic anomalies, the new drill sites were located in igneous crust similar in age to that for Site 988 (later stage of Chron C24r; 54–53 Ma). The two sites are on relatively flat, smooth basement with little glacial cover based on seismic data (Fig. F2). The second site, Site SEG02, had to be relocated at the very last moment because of approaching ice and later proved to be ~200 m off the seismic line. Therefore, no detailed seismic image exists of Site SEG02.

F2. Seismic Line DLC9713, p. 9.



OPERATIONS

We boarded the drilling vessel M/S *Norskald* in Reykjavik, Iceland, on 22 August 1998 and departed the following morning. During the short transit across the Denmark Strait, we established the laboratory (thin sections, X-ray fluorescence [XRF], and paleomagnetic) and computer (database and digital photography) facilities. The geographic locations of the drilled sites on Transect SEG66 are summarized in Table T1. We arrived at the Site SEG01 in good weather late on 24 August and immediately commenced drilling. Bedrock coring and recovery at Site SEG01 began in the early morning of 25 August, but drifting icebergs forced us to abandon the site the same evening. Drilling at Site SEG02 started early the next morning. The recovery rate was high despite slow penetration rates (1 m/hr) and frequent withdrawal of the core barrel. The recovered cores were consolidated diamicton overlying highly fractured basalt. By late afternoon, increasing wind and bad weather forecasts forced us to terminate drilling, recover the seafloor template and drill string, and reposition the ship in less ice congested waters a few kilometers to the southeast.

T1. Core summaries, p. 12.

During the night of 26 August, the storm intensified to Force 10/11. At 0130 hr on 27 August, the fire alarm sounded from the engine room. Rescue procedures were initiated with all crew and scientists summoned to their muster points. The fire was quickly contained and the alarm called off. Inspection of the damage, however, showed that one of the two main generators used for the dynamic positioning system was damaged. Repair of the generator was not possible at sea, and proper inspection would require a port call. Because of the length of the expected port call and the unusually poor ice conditions off East Greenland, the Shipboard Scientific Party elected to terminate drilling operations for the 1998 season. We began the demobilization of our equipment en route to Reykjavik, Iceland. We arrived in port in the early afternoon of 29 August after a short, but eventful cruise.

SITE SUMMARIES

Three holes were drilled at two sites on Transect EG66. Site and hole summaries are provided below. Site and hole locations and core recoveries are summarized in Table T1. Drilling in all holes recovered volcanic basement and drilling sampled the overlying sediment in one hole.

Site SEG01

Holes SEG01A (Unit I-1) and SEG01B (Unit I-1)

Two holes were drilled at Site SEG01. The recovery from these holes are treated together as they represent essentially the same interval. During drilling of Hole SEG01A the drill string had to be retracted. On reentry the drill bit wandered off-center, partially coring the wall of Hole SEG01A. Because drilling was initiated in new basement we designated this second core as Hole SEG01B, consistent with our site/hole classification. Holes SEG01A and SEG01B penetrated 1.39 m before coring began and terminated at 3.09 meters below seafloor (mbsf). Unit I-1 is composed of 1.5 m of massive plagioclase-clinopyroxene-olivine phyric basalt. This unit constitutes a single flow without obvious internal lithologic contacts or flow tops and bases. The phenocrysts typically form glomerocrysts with 10% plagioclase, 6% clinopyroxene, and trace amounts of olivine. Plagioclase and clinopyroxene are largely unaltered, whereas olivine is completely altered to iddingsite, lizardite, and clay. The groundmass consists of plagioclase, clinopyroxene, Fe-Ti oxide minerals, and mesostasis. Minor, irregular calcite-filled veins (<1 mm wide) occur in Samples 163X-SEG01A-2-1, 46–60 cm, and 163X-SEG01B-1-2, 6–12 cm.

Site SEG02

Hole SEG02A (Units S-1 and I-1)

Drilling in Hole SEG02A penetrated 1.37 m before coring began and terminated at 11.21 mbsf. Unit S-1 is composed of 5.34 m of highly compacted diamicton. The diamicton is matrix-supported conglomerate with rounded to subangular clasts (from 0.2 to >10 cm) in a clay matrix. A diverse range of clast types, including basalt, gabbro, granite, and quartzite, are represented within the clast assemblage without stratigraphic pattern to their distribution. Unit I-1 is 3.85 m of dark gray, highly fractured, sparsely plagioclase phyric basalt. The groundmass is composed of plagioclase, clinopyroxene, and Fe-Ti oxide minerals. No mesostasis is present. Distinct banding on a decimeter scale is defined by alternating fine- and medium-grained zones. Vesicles and amygdules are rare, whereas calcite-filled veins are common throughout the unit. The fractures form conjugate sets and often show slickensides on surfaces.

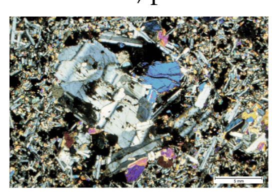
SEDIMENTARY PETROLOGY

The sedimentary cover was recovered only at Site SEG02. Unit S-1 is a highly compacted diamicton. Despite the inherently difficult coring conditions in this material, recovery by the diamond coring technique was close to 100%. The lower boundary of Unit S-1 is sharp against the brecciated basalt of Unit I-1. Unit S-1 is composed of rounded to subangular clasts of basalt, gabbro, granite, and quartzite, ranging in size from 2 mm to >10 cm and fully supported by a clay matrix. No size grading of clasts was observed. Clast type is also independent of stratigraphic height, but clasts >3 cm are dominated by aphyric to sparsely phyric vesicular basalt. This sedimentary unit is interpreted as glaciomarine.

IGNEOUS PETROLOGY

The two igneous units recovered from Transect EG66 are significantly different. Unit I-1 in Holes SEG01A and SEG01B is a fine-grained, plagioclase-olivine-augite phyric to glomerocrystic basalt interpreted to be a lava flow. Typical glomerocrystic textures involving interlocking euhedral to subhedral, 1–3 mm plagioclase and clinopyroxene are shown in Figure F3. Plagioclase and clinopyroxene phenocrysts compose 10% and 6%, respectively, of the rock based on point-counting, whereas olivine is completely replaced by iddingsite and lizardite. Oscillatory zoning is common in plagioclase. The groundmass is composed of 55% plagioclase, 24% clinopyroxene, and 6% Fe-Ti oxide minerals. Fe-Ti oxides

F3. Lava textures, p. 10.



are commonly found associated with overgrowing or partially overgrowing glomerocrysts. Unit I-1 is massive with sparse vesicles and amygdules, suggesting that the core sample is from a flow interior.

Unit I-1 in Hole SEG02A is an aphyric to sparsely plagioclase phyric basalt with a fine-grained groundmass of plagioclase (50%), clinopyroxene (27%), and Fe-Ti oxides (3%). The unit is massive with sparse ellipsoidal vesicles from 1 to 3 mm in diameter and partially filled by secondary material. Unit I-1 in Hole SEG02A also lacks distinguishing features related to primary emplacement, except for weak decimeter-scale banding oriented approximately normal to the core axis and possibly originating by flow. The highly fractured character of this unit coupled with abundant slickensides on fracture surfaces suggests that drilling penetrated a shallow fault zone.

COMPOSITION OF IGNEOUS UNITS

Shipboard X-Ray Fluorescence Results

Three intervals of Holes SEG01A and SEG01B were analyzed with a portable XRF spectrometer (see "X-Ray Fluorescence Analyses," p. 7, in the "Explanatory Notes" chapter). These analyses gave broadly similar results, consistent with their interpretation as part of a single igneous unit. The shipboard XRF analyses from the igneous units in Holes SEG01A, SEG01B, and SEG02A are presented in Table T2. In order to improve counting statistics and to check for sample heterogeneity, each analysis was performed in triplicate. Several intervals were analyzed to assess heterogeneity within the flow unit. Three of the measured intervals from Hole SEG02A gave similar results, but the fourth interval (163X-SEG02A-8-1, 28 cm) has distinctly lower TiO_2 (2.88 ± 0.06 wt% [1 σ], vs. 3.25 ± 0.08 wt% [1 σ] for the rest of the unit).

T2. Shipboard XRF results, p. 13.

An average composition for each of these units, as determined by shore-based XRF procedures, is included in Table T2 for comparison with the shipboard XRF data. It is readily apparent from these results that portable XRF analysis is reasonably accurate for TiO_2 and Sr, less so for Zr and FeO (total Fe), and completely unreliable for Rb, Cr, and Ni. Most significantly, it was possible to establish the high TiO_2 content of the igneous units soon after the core was received on deck.

Shore-Based X-Ray Fluorescence Analyses

A total of four samples from igneous units were analyzed by shore-based XRF procedures. The results are summarized in Table T3. All units are evolved basalts with Mg numbers between 0.47 and 0.36, TiO_2 contents of 2.3 to 3.6 wt%, and are mostly slightly hypersthene normative (Hy = 1.5–2.6 wt%). Alteration is moderate with volatile content between 1.3 and 2.1 wt%. Fe_2O_3/FeO ratios are between 0.37 and 0.87, with the high values reported for the highly fractured unit from Hole SEG02A.

T3. XRF data, p. 14.

The Transect SEG66 lavas share a close compositional affinity with the lavas from nearby Site 988 and the bulk of the main onshore plateau lava sequence along the Blosseville Kyst. They are quite unlike the majority of offshore lavas drilled much farther south at 63°N during ODP Legs 152 and 163. The Transect EG63 units in general have low TiO_2 (<2 wt%), and the few samples with higher TiO_2 also have relatively high Sr contents (>300 ppm) in contrast to the data for Sites

SEG01 and SEG02 (TiO_2 = 2.3 and 3.6 wt%, Sr = 241 and 257 ppm; respectively).

PHENOCRYST COMPOSITIONS

Phenocryst compositions were determined by electron microprobe for five igneous samples from Sites SEG01 and SEG02. Coexisting plagioclase and clinopyroxene phenocrysts are presented in "Appendix B," p. 13, of the "Explanatory Notes" chapter and summarized in Table T4. Olivine is completely replaced and unsuitable for analysis. The plagioclase An mol% varies from An_{67} to An_{55} and corresponds to the variation in Na_2O of the whole rocks. Plagioclase with $An_{76–79}$ is present in Core 163X-SEG01A-2 and may be xenocrystic. Clinopyroxene has Mg numbers from 0.79 to 0.65 that systematically decrease with increasing Ab content of coexisting plagioclase phenocrysts, mirroring the compositional variation of the host basalt.

T4. Phenocryst summary, p. 15.

PALEOMAGNETIC RESULTS

Five intervals from three sites of Transect EG66 were studied. Figure F4 presents a typical demagnetization result shown on a Zijderveld diagram. After removal of small secondary components related to viscous and/or drill-induced magnetization, the direction of the characteristic magnetic remanence is defined using standard principal component analysis (Kirschvink, 1980). Note that the azimuth of the drill cores is unknown and so only the characteristic inclination is meaningful.

F4. AF demagnetization, p. 11.

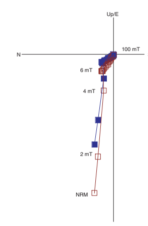


Table T5 lists characteristic inclination, intensity of the natural remnant magnetization, magnetic susceptibility, and Königsberger ratio (Q ratio). Also given is the interpreted polarity together with important notes offered as a first interpretation of the paleomagnetic results.

T5. Paleomagnetic results, p. 16.

Both intervals from Hole SEG01A, as well as the interval from nearby Hole SEG01B, exhibit normal polarity. The similar characteristic inclinations indicate that all three samples are from the same igneous cooling unit. A characteristic component could be isolated above 6–12 mT and the direction calculated using standard principal component analysis. The inclinations of this presumably primary component are 46.8°, 49.7°, and 50.0°, respectively, and are therefore of normal polarity. The two intervals from Hole SEG02A are of reversed polarity.

CORE AND THIN SECTION DESCRIPTIONS

Brief lithologic descriptions of all recovered cores and thin section descriptions from sites drilled along Transect EG68, as well as digital core photographs taken onboard, are included on summary sheets in Supplementary Material. The same information can be obtained from the ODIN database (see "ODIN Database," p. 9, in the "Explanatory Notes" chapter) available from the authors.

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Figure F1. Transect EG66 area. Thin lines = H/S *Dana* reflection seismic lines (Hopper et al., 1997), thick lines = SIGMA II line (Holbrook et al., 2001). Sites SEG01 and SEG02 are located at the intersection of Lines DLC9713 (see Fig. F2, p. 9) and DLC9722. ODP Site 988 is located at the intersection of the DLC9711 and DLC9722 lines.

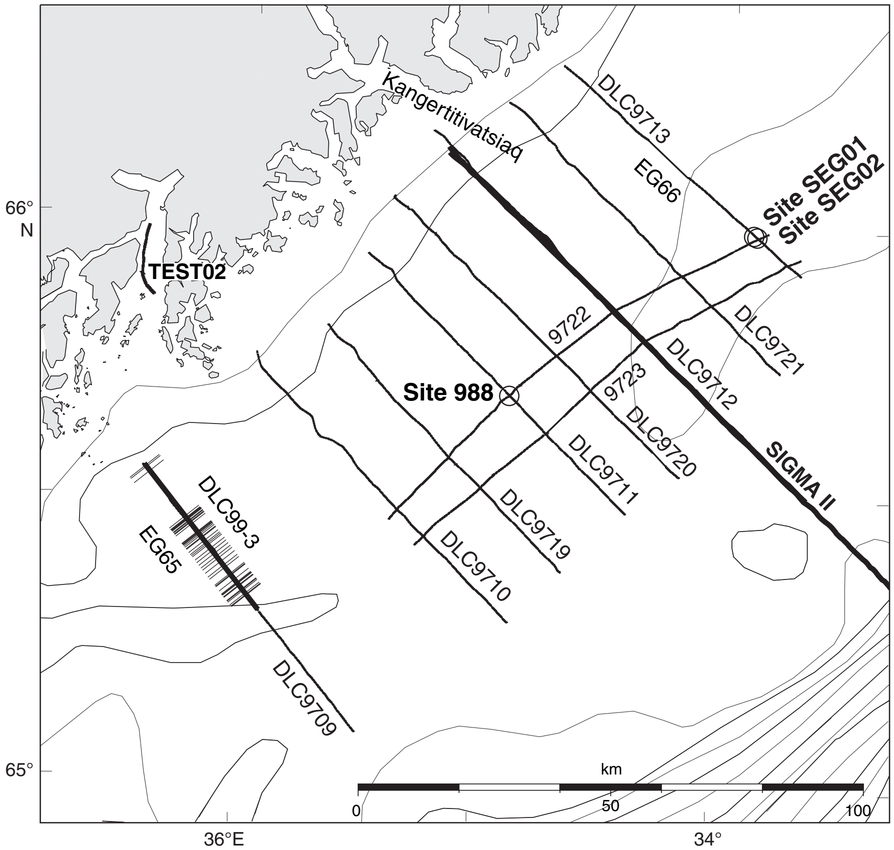

Figure F2. Reflection seismic Line DLC9713 (Hopper et al., 1997). No sparker seismic line was acquired in this area. The positions of drill sites are shown as thin vertical lines. Three first multiples can be seen lower in the section. See Table T1, p. 12.

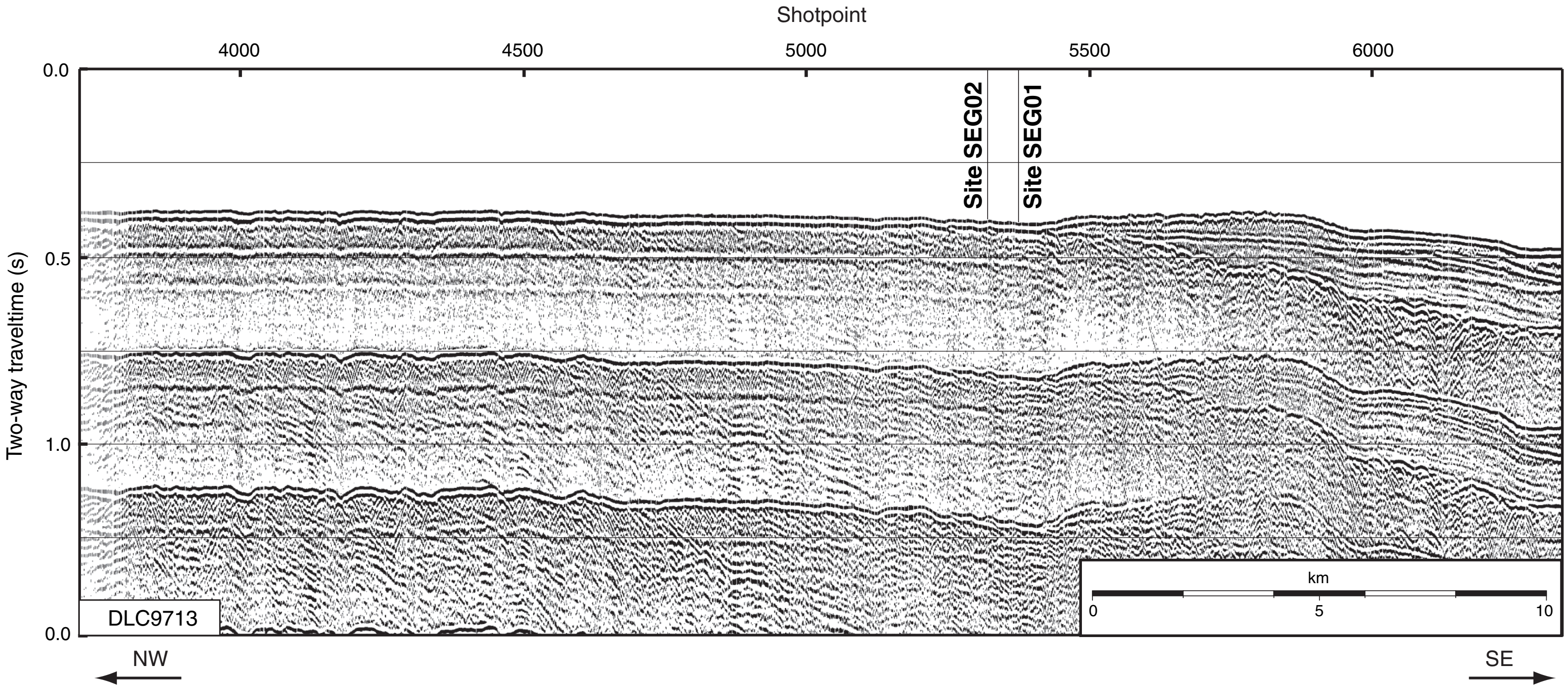

Figure F3. Typical textures of Transect EG66 lavas. Glomerocrysts of plagioclase and clinopyroxene occur in a groundmass of plagioclase, clinopyroxene, and Fe-Ti oxide minerals. The groundmass Fe-Ti oxides cluster along the margin of the glomerocryst (Sample 163X-SEG01A-1-1, 57–61 cm).

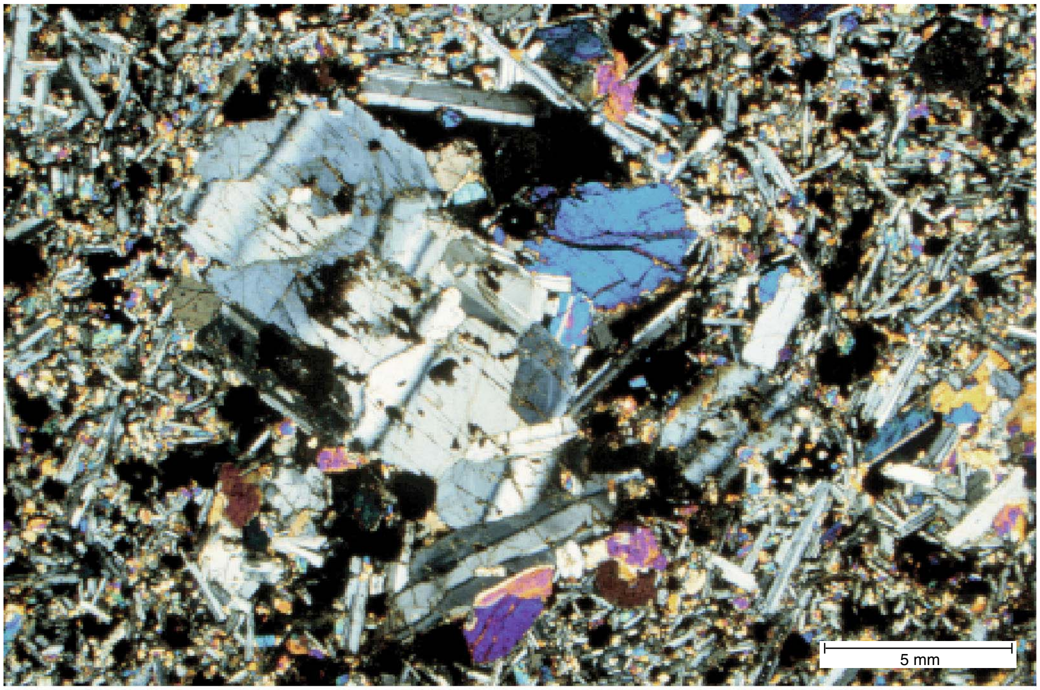

Figure F4. Response of Sample 163X-SEG01B1-2 (Piece 8J, 4–7 cm) to alternating-field demagnetization. Solid symbols = points on the horizontal plane, open symbols = points on the vertical plane.

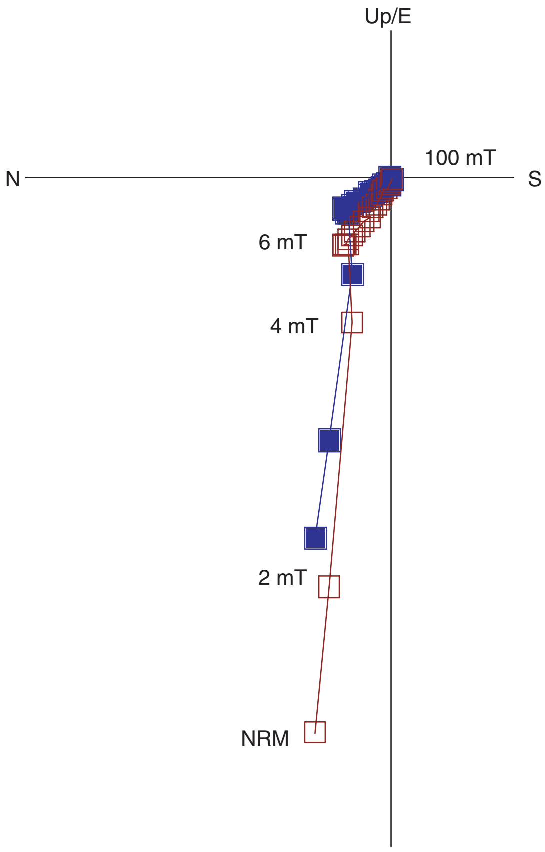

Table T1. Transect EG66 core summaries.

Core recovery (m)	UTC Date (August 1998)	UTC Time (hr)	Position Latitude	Position Longitude	Air gun line shotpoint	Coring intervals (mbsf) Top	Coring intervals (mbsf) Bottom	Core recovery (m)
163X-								
SEG01A-1	25	0905	65°59.614′N	33°48.498′W	5374	1.39	2.19	0.69
SEG01A-2	25	1154	65°59.614′N	33°48.498′W	5374	2.19	2.89	0.70
SEG01B-1	25	1638	68°59.614′N	33°48.498′W	5374	2.04	3.09	1.15
SEG02A-1	26	0330	65°59.752′N	33°49.284′W	5320	1.37	2.87	1.22
SEG02A-2	26	0545	65°59.752′N	33°49.284′W	5320	2.87	5.47	2.60
SEG02A-3	26	0755	65°59.752′N	33°49.284′W	5320	5.47	5.94	0.18
SEG02A-4	26	0935	65°59.752′N	33°49.284′W	5320	5.94	7.37	1.38
SEG02A-5	26	1136	65°59.752′N	33°49.284′W	5320	7.37	8.07	0.56
SEG02A-6	26	1350	65°59.752′N	33°49.284′W	5320	8.07	9.12	1.00
SEG02A-7	26	1550	65°59.752′N	33°49.284′W	5320	9.12	9.93	0.77
SEG02A-8	26	1757	65°59.752′N	33°49.284′W	5320	9.93	10.66	0.94
SEG02A-9	26	1935	65°59.752′N	33°49.284′W	5320	10.66	11.21	0.54

Notes: Air gun Line DLC9713. UTC = Universal Time Coordinated.

Table T2. Shipboard X-ray fluorescence results, Transect EG66.

Core, section, interval (cm)	Element oxides (wt%)		Trace elements (ppm)				
	TiO_2	FeO*	Zr	Cr	Ni	Sr	Rb
163X-							
SEG01A-1-1, 49	2.34	12.79	159	631	399	236	4.4
± 1 σ	±0.06	±0.06	±7	±48	±36	±10	±0.2
SEG01A-1-1, 49	2.34	13.16	160	604	379	231	4.5
± 1 σ	±0.06	±0.06	±7	±46	±35	±10	±0.2
SEG01A-1-1, 49	2.32	13.05	158	558	344	254	4.4
± 1 σ	±0.06	±0.06	±7	±47	±35	±11	±0.2
SEG01A-2-1, 58	2.37	12.71	150	711	458	245	5.7
± 1 σ	±0.06	±0.06	±7	±53	±39	±11	±0.2
SEG01B-1-2, 3	2.06	12.63	140	827	544	279	4.7
± 1 σ	±0.06	±0.06	±7	±57	±43	±11	±0.2
Average (Unit 1)	2.29	12.87	153	666	425	249	4.7
± 1 σ	±0.12	±0.23	±8	±106	±78	±19	±0.6
Onshore XRF analysis	2.33	12.98	130	109	66	241	1.2
SEG02A-6-1, 30	3.11	13.94	290	704	453	228	6.1
SEG02A-6-1, 30	3.29	13.73	286	749	487	247	5.8
SEG02A-6-1, 30	3.22	14.09	291	777	508	241	5.6
SEG02A-7-1, 48	3.33	12.47	288	552	339	298	5.3
SEG02A-7-1, 48	3.32	12.8	281	578	359	275	5.6
SEG02A-7-1, 48	3.23	12.62	292	532	325	294	5.6
SEG02A-8-1, 28	2.88	13.81	249	582	362	230	5.2
SEG02A-8-1, 28	2.94	13.41	257	622	392	247	5
SEG02A-8-1, 28	2.82	13.63	265	738	478	225	4.9
SEG02A-8-1, 78	3.16	13.16	255	619	389	247	6.1
SEG02A-8-1, 78	3.23	13.18	265	585	364	257	5.2
SEG02A-8-1, 78	3.35	13.15	260	535	327	251	5.8
Average (Unit 1)	3.16	13.33	273	631	399	253	5.5
± 1 σ	±0.18	±0.53	±16	±88	±66	±24	±0.4
Onshore XRF analysis	3.52	14.59	230	60	42	257	11.4

Note: FeO* = total Fe. XRF = X-ray fluorescence.

Table T3. Representative X-ray fluorescence element data, Transect EG66.

Core, section, interval (cm)	Major element oxides (wt%)												Iron oxide (wt%)			CIPW (wt%)		Trace elements (ppm)						
	SiO_2	TiO_2	Al_2O_3	FeO*	MnO	MgO	CaO	Na_2O	K_2O	P_2O_5	LOI	Total	Fe_2O_3	FeO	Mg #	Hy	Ne	V	Cr	Ni	Cu	Zn	Sr	Zr
163X-																								
SEG01A-1-1, 57–61	47.62	2.33	14.29	13.08	0.22	6.46	11.52	2.78	0.15	0.21	1.35	100.21	4.07	9.4	0.469	2		399	88	80	165	143	204	170
SEG01A-2-1, 62–66	47.2	2.34	14.37	12.87	0.22	6.52	10.91	2.93	0.33	0.2	2.11	99.84	3.58	9.59	0.461		0.8	388	87	111	238	135	225	158
SEG02A-6-1, 29–34	47.55	3.6	14.32	14.93	0.26	4.67	8.46	3.47	0.96	0.44	1.31	99.63	6.93	8.54	0.36	1.51		403	22	37	337	197	254	306
SEG02A-7-1, 46–50	47.3	3.44	14.84	14.25	0.29	5.19	8.75	3.41	0.66	0.42	1.44	99.97	6.59	8.22	0.395	2.56		465	45	34	219	187	256	287
163-																								
988A-4R-1, 92–98	49.47	2.47	14.18	12.76	0.21	6.2	11.41	2.66	0.34	0.28	0.84	99.12	4.22	8.8				380	128	71			242	165

Notes: FeO* = all iron calculated as FeO. Fe_2O_3 and FeO = originally analyzed concentrations. Loss on ignition (LOI) has been corrected for iron oxidation. Major elements, including LOI, have been normalized to 100%. Total = sum of oxides as originally analyzed. Mg# = Mg/(Mg + Fe_{total}). CIPW = Cross, Iddings, Pirsson, and Washington normative content (all iron calculated as FeO), Hy = hypersthene, Ne = nepheline. Data for Sample 163-988-4R-1 from Saunders et al. (1997).

Table T4. Summary of phenocryst compositions, Transect EG66.

Core, section, interval (cm)	Plagioclase (An mol%)		Augite (Mg number)	
	Average	Range	Average	Range
163X-				
SEG01A-1-1, 57–61	0.67	0.60–0.74	0.77	0.70–0.80
SEG01A-2-1, 60–65	0.79	0.77–0.82	0.79	0.78–0.80
SEG01A-2-1 (Piece 1B, 61–66)	0.76	0.76–0.79	0.77	0.77–0.77
SEG02A-6-1, 29–34	0.55	0.46–0.58	0.65	0.62–0.67
SEG02A-7-1, 46–50	0.55	0.53–0.56	—	—

Note: See **"Appendix B,"** p. 13, in the "Explanatory Notes" chapter for details. An = anorthite, Mg number = Mg/(Mg + Fe), with all iron as Fe^{2+}. — = no data.

Table T5. Paleomagnetic results, Transect EG66.

Core, section, interval (cm)	NRM (nA/m)	χ (10^{-3} SI)	Q ratio	CI (°)	Polarity
163X-					
SEG01A-1-1 (Piece 6, 62–64)	4938.6	28.59	4.32	49.7	N
SEG01A-2-1 (Piece 1B, 66–68)	538.6	6.81	1.98	46.8	N
SEG01B-1-2 (Piece 8J, 4–6)	2784.1	29.59	2.35	50	N
SEG02A-6-1 (Piece 1, 34–36)	1332.4	27.51	1.21	–61.6	R
SEG02A-7-1 (Piece 1, 44–46)	320.2	8.43	0.95	–49.5	R

Notes: NRM = natural remanent magnetization, χ = magnetic susceptibility, Q ratio = Königsberger ratio, CI = characteristic inclination. N = normal, R = reversed.