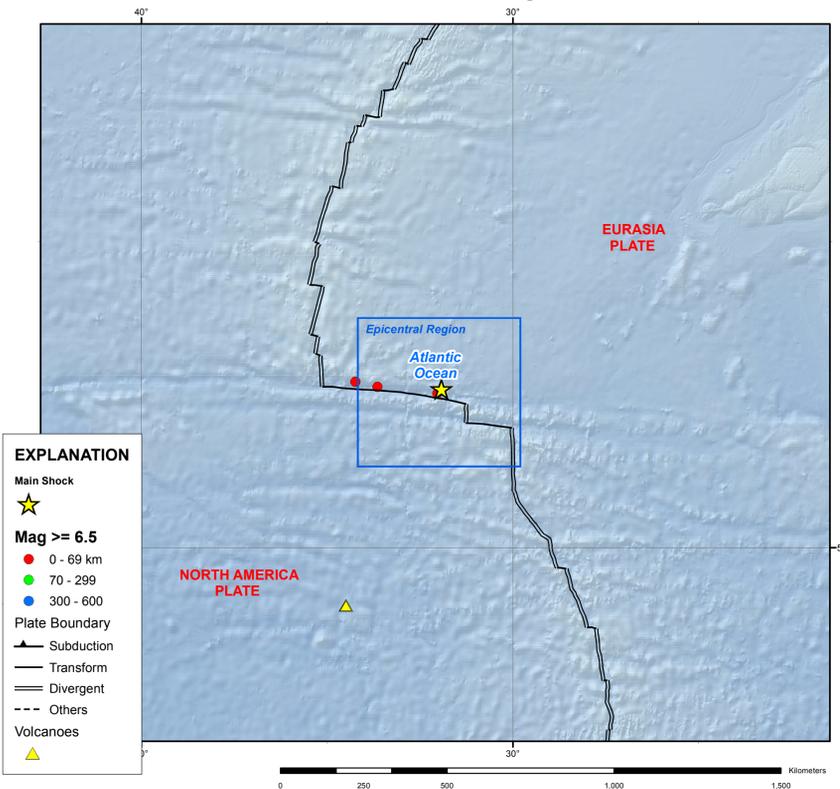


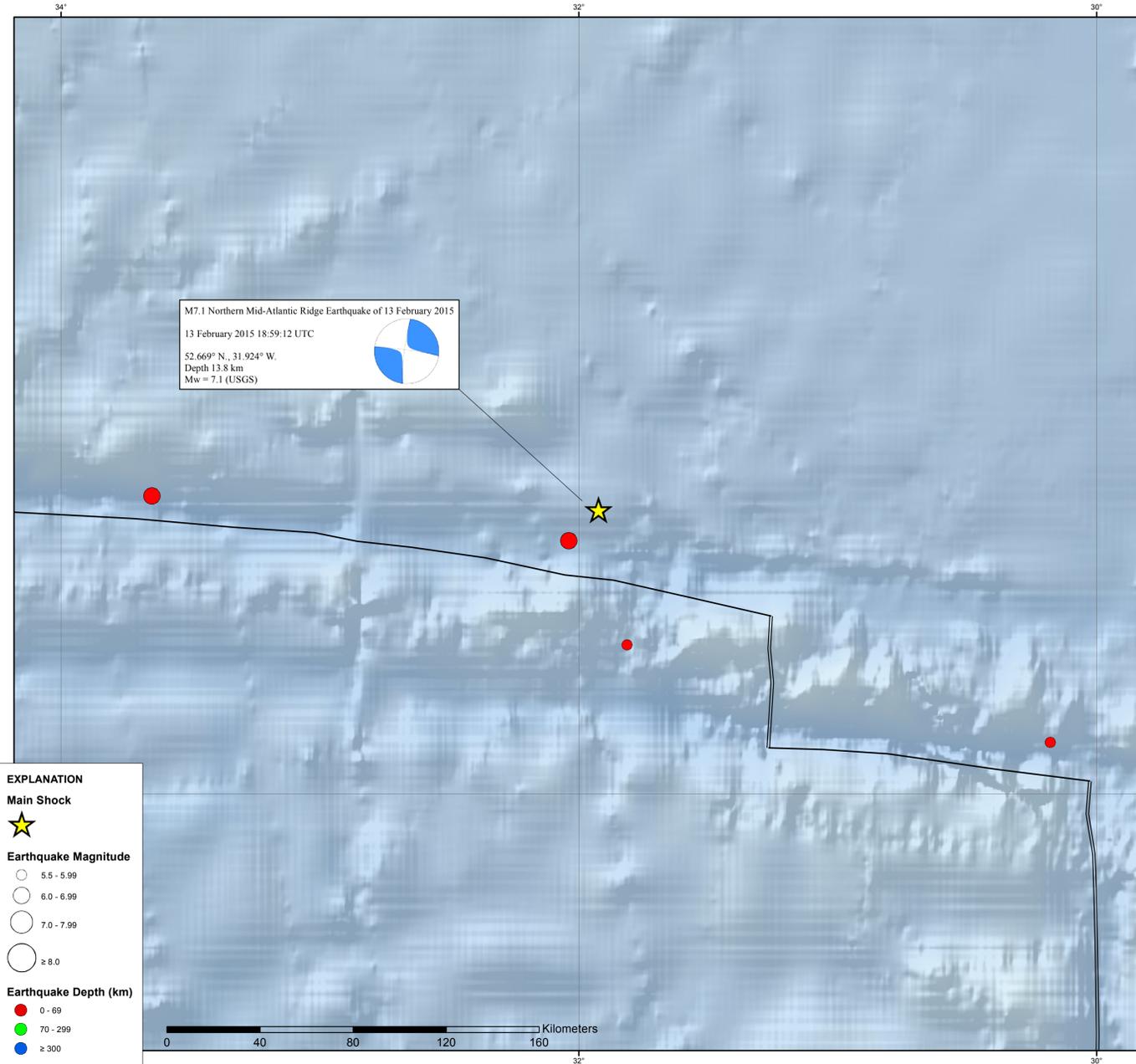
M7.1 Northern Mid-Atlantic Ridge Earthquake of 13 February 2015



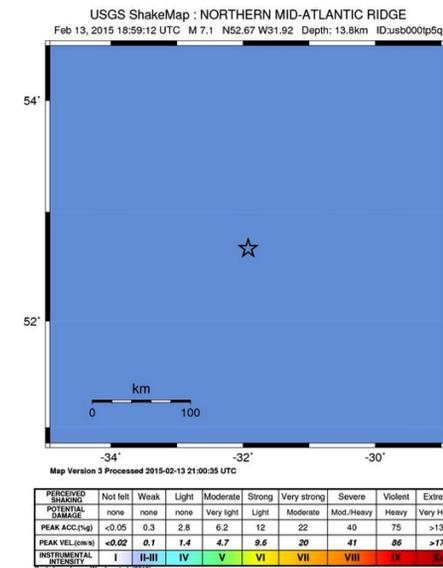
Tectonic Setting



Epicentral Region



ShakeMap

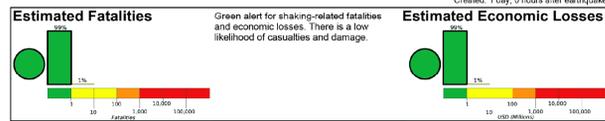


PAGER

USGS Earthquake Shaking Green Alert

M 7.1, NORTHERN MID-ATLANTIC RIDGE
Origin Time: Fri 2015-02-13 18:59:12 UTC (16:59:12 local)
Location: 52.64°N 31.88°W Depth: 16 km

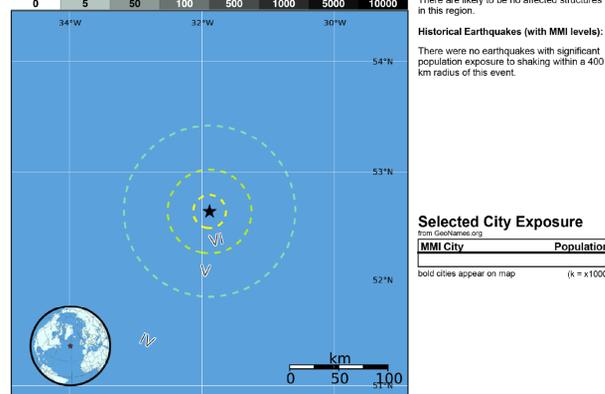
USAID PAGER Version 4
Created: 1 day, 0 hours after earthquake



Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k = x1000)	0	0	0	0	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures: none	Resistant Structures: none	Resistant Structures: none	Resistant Structures: V. Light	Resistant Structures: Light	Resistant Structures: Moderate	Resistant Structures: Moderate/Heavy	Resistant Structures: Heavy	Resistant Structures: V. Heavy
POTENTIAL DAMAGE	Vulnerable Structures: none	Vulnerable Structures: none	Vulnerable Structures: none	Vulnerable Structures: Light	Vulnerable Structures: Moderate	Vulnerable Structures: Moderate/Heavy	Vulnerable Structures: Heavy	Vulnerable Structures: V. Heavy	Vulnerable Structures: V. Heavy

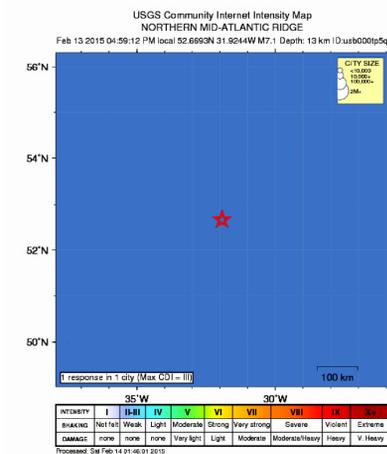
Population Exposure: population per -1 sq. km from Landsat



PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty. <http://earthquake.usgs.gov/pager>

Event ID: usb000tp5q

DYFI?



TECTONIC SUMMARY

The February 13, 2015 M7.1 Northern Mid-Atlantic Ridge earthquake occurred as the result of right-lateral strike-slip faulting on or near a transform fault forming part of the North America:Eurasia plate boundary. At the latitude of this earthquake, the North America plate moves approximately westward at a rate of 21 mm/yr with respect to Eurasia. The preliminary location and mechanism of the earthquake are consistent with its occurrence on the Charlie-Gibbs Transform (the seismically active section of the Charlie-Gibbs Fracture Zone), though more detailed analyses of the event will be required to definitively determine the causative structure.

Moderate-to-large earthquakes in this region of the north Atlantic are not uncommon – over the past century, five other earthquakes of M 6.3-7.0 have occurred within 250 km of the February 13, 2015 event, likely along the same fracture zone. The largest of these was a M 7.0 event on the same day in 1967, 48 years before today's M 7.1 earthquake. Because of their strike-slip mechanisms and locations in the remote north Atlantic, none of these historic events are known to have caused damage.

DATA SOURCES

EARTHQUAKES AND SEISMIC HAZARD
USGS, National Earthquake Information Center
NOAA, National Geophysical Data Center
IASPEI, Centennial Catalog (1900 - 1999) and extensions (Engdahl and Villaseñor, 2002)
EHB catalog (Engdahl et al., 1998)
HDF (unpublished earthquake catalog, Engdahl, 2003)
Global Seismic Hazard Assessment Program

PLATE TECTONICS AND FAULT MODEL
PB2002 (Bird, 2003)
Hayes, G. P., Wald, D. J., and Johnson R. L., 2012, A three-dimensional model of global subduction zone geometries: Journal of Geophysical Research, v. 117, B01302, doi:10.1029/2011JB008524.
DeMets, C., Gordon, R.G., Argus, D.F., 2010, Geologically current plate motions, Geophys. J. Int. 181, 1-80.

BASE MAP
NIMA and ESRI, Digital Chart of the World
USGS, EROS Data Center
NOAA GEBCO and GLOBE Elevation Models

REFERENCES

Bird, P., 2003, An updated digital model of plate boundaries: Geochim. Geophys. v. 4, no. 3, pp. 1027-80.
Engdahl, E.R., and Villaseñor, A., 2002, Global Seismicity: 1900-1999, chap. 41 of Lee, W.H.K., and others, eds., International Earthquake and Engineering Seismology, Part A: New York, N.Y., Elsevier Academic Press, 932 p.

Engdahl, E.R., Van der Hilst, R.D., and Buland, R.P., 1998, Global teleseismic earthquake relocation with improved travel times and procedures for depth determination, Bull. Seism. Soc. Amer., v. 88, p. 722-743.

DISCLAIMER

Base map data, such as place names and political boundaries, are the best available but may not be current or may contain inaccuracies and therefore should not be regarded as having official significance.

Map updated by U.S. Geological Survey National Earthquake Information Center
14 February 2015
<http://earthquake.usgs.gov/>
Map not approved for release by Director USGS