

New insights on the predisposing factors and geomorphic response to the largest landslide on emerged Earth surface: the Seymareh rock slide - debris avalanche (Zagros Mts., Iran)

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Supplementary material – OSL sample details

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Sample No. **SEY3**

Sample Location (lat. and long required, country, state, county optional)

LAT: 32° 59.591'N; LONG: 47° 46.144'E – WESTERN IRAN

Sample depositional environment (e.g. eolian-medium sand, alluvial fan):

5 **SANDY-GRAVELLY ALLUVIAL DEPOSIT. WE SAMPLED A SANDY LAYER**

Stratigraphic and/or geomorphic context, sketch below (or attach photo):

TERRACED ALLUVIAL DEPOSIT (LEVEL 2 OF 4 – same terrace sequence of SEY10 and SEY11)



Estimate of burial moisture content:

10 **The one expected for an alluvial deposit in arid climate**

Elevation (meters above sea level)

485 m a.s.l.

Burial depth (meters from surface)

~ 1.5 m

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Sample No. **SEY4**

Sample Location (lat. and long required, country, state, county optional)

LAT: 33° 13.197'N; LONG: 47° 18.382'E – WESTERN IRAN

Sample depositional environment (e.g. eolian-medium sand, alluvial fan):

5 **VARVED LACUSTRINE DEPOSIT.**

Stratigraphic and/or geomorphic context, sketch below (or attach photo):



Estimate of burial moisture content:

10 **The one expected for a lacustrine deposit in arid climate**

Elevation (meters above sea level)

590 m a.s.l.

Burial depth (meters from surface)

~ 25 m

Sample No. **SEY5**

Sample Location (lat. and long required, country, state, county optional)

LAT: 33° 13.437'N; LONG: 47° 18.219'E – WESTERN IRAN

Sample depositional environment (e.g. eolian-medium sand, alluvial fan):

5 **ALLUVIAL PLAIN DEPOSIT. WE SAMPLED A SANDY LAYER.**

Stratigraphic and/or geomorphic context, sketch below (or attach photo):

TERRACED ALLUVIAL DEPOSIT (LEVEL 1 OF 3 – same sequence of SEY6 and SEY8)



10 Estimate of burial moisture content:

The one expected for an alluvial deposit in arid climate

Elevation (meters above sea level)

607 m a.s.l.

Burial depth (meters from surface)

15 **~ 1.5 m**

Sample No. **SEY6**

Sample Location (lat. and long required, country, state, county optional)

LAT: 33° 13.291'N; LONG: 47° 18.358'E – WESTERN IRAN

Sample depositional environment (e.g. eolian-medium sand, alluvial fan):

5 **ALLUVIAL PLAIN DEPOSIT. WE SAMPLED A SANDY LAYER.**

Stratigraphic and/or geomorphic context, sketch below (or attach photo):

TERRACED ALLUVIAL DEPOSIT (LEVEL 3 OF 3 – same terrace sequence of SEY5 and SEY8)



10 Estimate of burial moisture content:

The one expected for an alluvial deposit in arid climate

Elevation (meters above sea level)

587 m a.s.l.

Burial depth (meters from surface)

15 **~ 5 m**

Sample No. **SEY8**

Sample Location (lat. and long required, country, state, county optional)

LAT: 33° 7.402'N; LONG: 47° 28.795'E – WESTERN IRAN

Sample depositional environment (e.g. eolian-medium sand, alluvial fan):

5 **SANDY-GRAVELLY ALLUVIAL PLAIN DEPOSIT. WE SAMPLED A SANDY LAYER**

Stratigraphic and/or geomorphic context, sketch below (or attach photo):

TERRACED ALLUVIAL DEPOSIT (LEVEL 2 OF 3 – same sequence of SEY5 and SEY6)



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Estimate of burial moisture content:

The one expected for an alluvial deposit in arid climate

Elevation (meters above sea level)

561 m a.s.l.

15 Burial depth (meters from surface)

~ 2.5 m

Sample No. **SEY9**

Sample Location (lat. and long required, country, state, county optional)

LAT: 33° 4.462'N; LONG: 47° 34.197'E – WESTERN IRAN

Sample depositional environment (e.g. eolian-medium sand, alluvial fan):

5 **SANDY-GRAVELLY ALLUVIAL DEPOSIT. WE SAMPLED A SANDY LAYER**

Stratigraphic and/or geomorphic context, sketch below (or attach photo):



Estimate of burial moisture content:

10 **The one expected for an alluvial deposit in arid climate**

Elevation (meters above sea level)

570 m a.s.l.

Burial depth (meters from surface)

~ 1.5 m

Sample No. **SEY10**

Sample Location (lat. and long required, country, state, county optional)

LAT: 32° 59.335'N; LONG: 47° 46.071'E – WESTERN IRAN

Sample depositional environment (e.g. eolian-medium sand, alluvial fan):

5 **SANDY-GRAVELLY-CONGLOMERATIC ALLUVIAL PLAIN DEPOSIT. WE SAMPLED A SANDY LAYER**

Stratigraphic and/or geomorphic context, sketch below (or attach photo):

TERRACED ALLUVIAL DEPOSIT (LEVEL 3 OF 4 - same sequence as SEY3 and SEY11)



10 Estimate of burial moisture content:

The one expected for an alluvial deposit in arid climate

Elevation (meters above sea level)

436 m a.s.l.

Burial depth (meters from surface)

15 **~ 2 m**

Sample No. **SEY11**

Sample Location (lat. and long required, country, state, county optional)

LAT: 32° 59.265'N; LONG: 47° 45.869'E – WESTERN IRAN

Sample depositional environment (e.g. eolian-medium sand, alluvial fan):

5 **SANDY-GRAVELLY-CONGLOMERATIC ALLUVIAL PLAIN DEPOSIT. WE SAMPLED A SANDY LAYER**

Stratigraphic and/or geomorphic context, sketch below (or attach photo):

TERRACED ALLUVIAL DEPOSIT (LEVEL 4 OF 4 - same sequence as SEY3 and SEY10)



10 Estimate of burial moisture content:

The one expected for an alluvial deposit in arid climate

Elevation (meters above sea level)

400 m a.s.l.

Burial depth (meters from surface)

15 **~ 1 m**