NEVADA BUREAU OF MINES AND GEOLOGY

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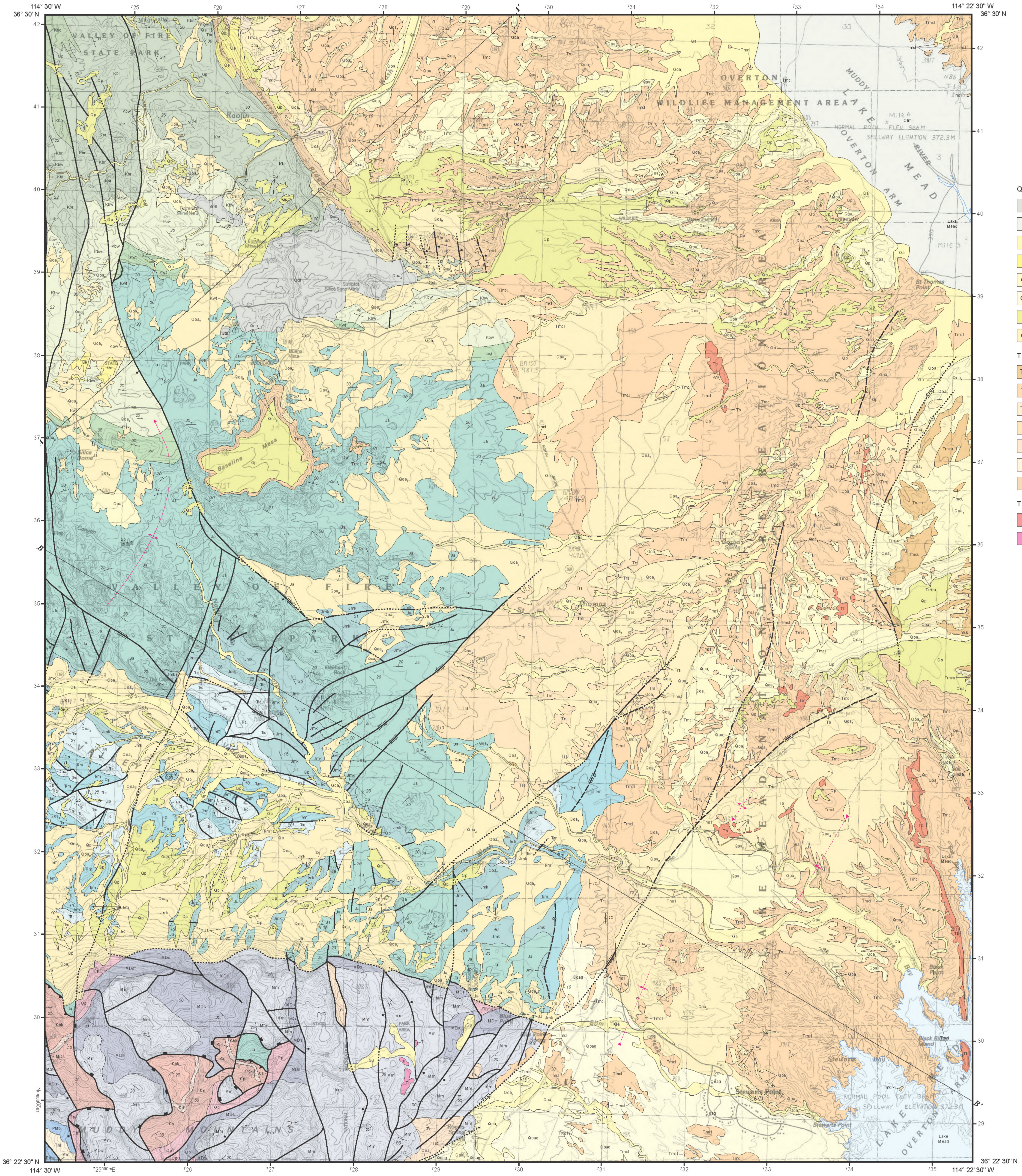

114° 30' W
36° 30' N
114° 22' 30" W
36° 22' 30" N
725000mE
726
727
728
729
730
731
732
733
734
735
4029000mN
29
30
31
32
33
34
35
36
37
38
39
40
41
42
A
A'
B
B'
VALLEY OF FIRE STATE PARK
OVERTON WILDLIFE MANAGEMENT AREA
LAKE MEAD NATIONAL RECREATION AREA
MUDDY MOUNTAINS
MUDDY RIVER
LAKE MEAD OVERTON ARM
NORMAL POOL ELEV 366M
SPILLWAY ELEVATION 372.3M
Overton Ridge
Kaolin
Wash
Baseline Mesa
Silica Dome
Fire Canyon Wash
Florence Mine No 2
Simplot Silica Sand Mine
Buena Vista
Elephant Rock
St Thomas
St Thomas Point
Getchell Spring
Fire Bay
Black Point
Black Ridge Island
Stewarts Bay
Stewarts Point
Blue Point Spring
Rogers Spring
Slim Creek
Lake Mead

PRELIMINARY GEOLOGIC MAP OF THE VALLEY OF FIRE EAST QUADRANGLE, CLARK COUNTY, NEVADA

Thomas W. Muntean

Geology Department, Adrian College, Adrian, MI

2013

QUATERNARY DEPOSITS

Qdl	Disturbed land
Qlm	Lake Mead deposits
Qa	Alluvium
Qe	Eolian deposits
Qoa$_1$	Older alluvium (1)
Qoag	Older alluvium - gypsiferous
Qp	Petrocalcic soil, undivided
Qoa$_2$	Older alluvium (2)

TERTIARY SEDIMENTARY ROCKS

Tmcu	Muddy Creek Formation; upper sandstone and conglomerate facies
Tmcl	Muddy Creek Formation; lower sandstone, siltstone, and gypsiferous siltstone facies
Tmcc	Muddy Creek Formation; lower coarse-grained facies
Trs	Red sandstone unit
Trc	Red sandstone unit - conglomerate facies
Thl	Horse Spring Formation - Lovell Wash Member
Thr	Horse Spring Formation - Rainbow Gardens Member

TERTIARY IGNEOUS ROCKS

Tb	Basalt - flows
Ti	Mafic rocks - intrusive

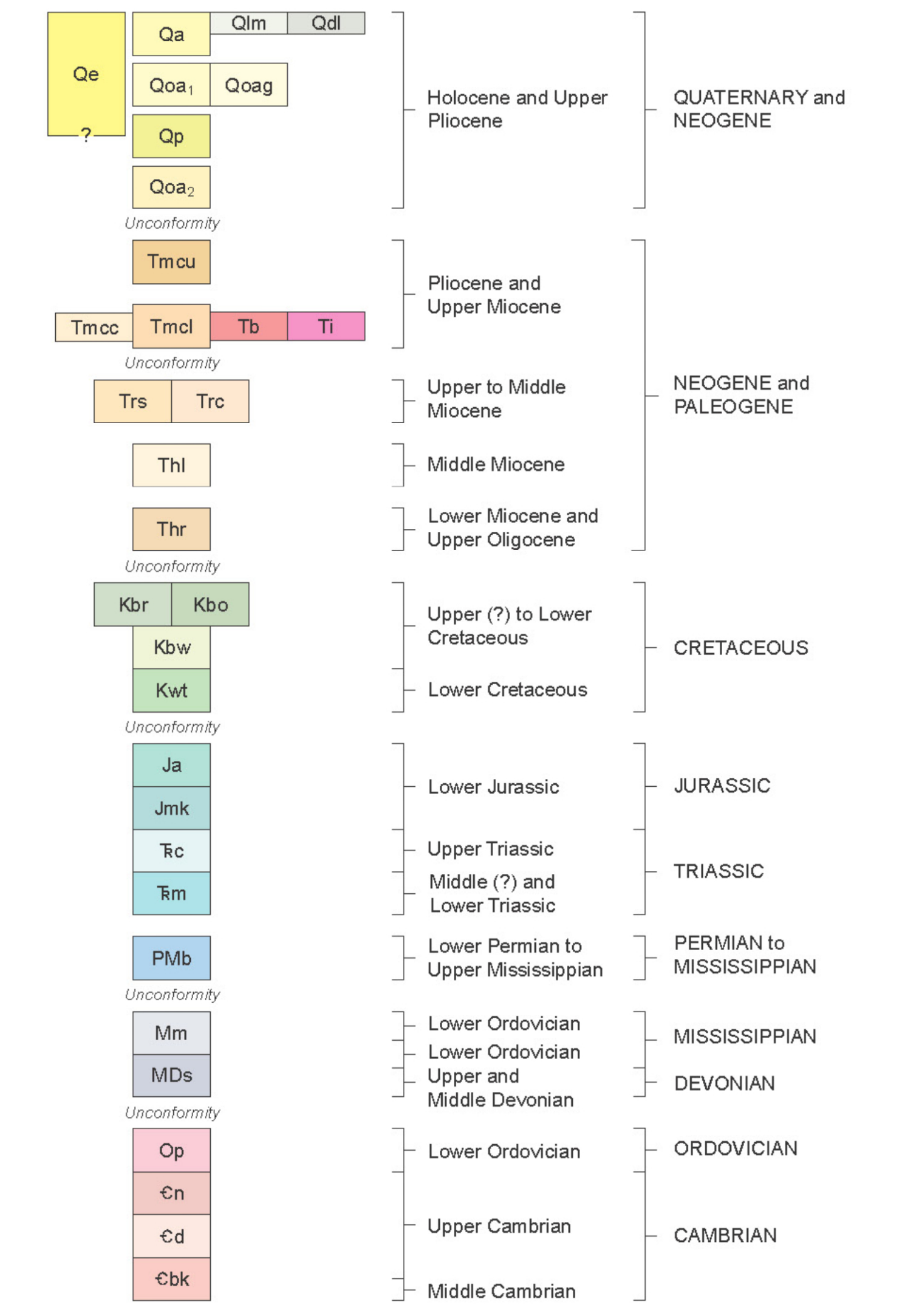
MESOZOIC SEDIMENTARY ROCKS

Kbr	Baseline Sandstone - red sandstone member
Kbo	Baseline Sandstone - Overton Conglomerate Member
Kbw	Baseline Sandstone - white sandstone member
Kwt	Willow Tank Formation
Ja	Aztec Sandstone
Jmk	Moenave and Kayenta Formations, undivided
Ŧc	Chinle Formation
Ŧm	Moenkopi Formation

PALEOZOIC SEDIMENTARY ROCKS

PMb	Bird Spring Formation
Mm	Monte Cristo Limestone
MDs	Sultan Limestone
Op	Pogonip Formation
Ꞓn	Nopah Formation
Ꞓd	Dunderburg Shale Member of Nopah Formation
Ꞓbk	Bonanza King Formation

See accompanying text for full unit descriptions and references for this map.


Qe
?
Qa
Qlm
Qdl
Qoa1
Qoag
Qp
Qoa2
Unconformity
Holocene and Upper Pliocene
QUATERNARY and NEOGENE
Tmcu
Tmcc
Tmcl
Tb
Ti
Unconformity
Pliocene and Upper Miocene
Trs
Trc
Upper to Middle Miocene
NEOGENE and PALEOGENE
Thl
Middle Miocene
Thr
Lower Miocene and Upper Oligocene
Unconformity
Kbr
Kbo
Kbw
Kwt
Upper (?) to Lower Cretaceous
Lower Cretaceous
CRETACEOUS
Unconformity
Ja
Jmk
Ŧc
Ŧm
Lower Jurassic
JURASSIC
Upper Triassic
Middle (?) and Lower Triassic
TRIASSIC
PMb
Lower Permian to Upper Mississippian
PERMIAN to MISSISSIPPIAN
Unconformity
Mm
MDs
Lower Ordovician
Lower Ordovician
Upper and Middle Devonian
MISSISSIPPIAN
DEVONIAN
Unconformity
Op
Ꞓn
Ꞓd
Ꞓbk
Lower Ordovician
Upper Cambrian
Middle Cambrian
ORDOVICIAN
CAMBRIAN

Symbology (from FGDC-STD-013-2006)

Contact Solid where certain; dashed where approximate or inferred.

Normal fault Solid where certain; dashed where approximate or inferred; dotted where concealed; ball on downthrown side

Strike-slip fault Solid where certain; dashed where approximate or inferred; dotted where concealed; arrows indicate direction of relative motion

Oblique-slip fault Solid where certain; dashed where approximate or inferred; dotted where concealed; arrows indicate direction of relative horizontal motion; ball on downthrown side

Thrust fault Barb on upper plate

Reverse fault Rectangle on upthrown block

Fault Solid where certain; dashed where approximate or inferred; queried where uncertain; dotted where concealed

Anticline Large arrow shows direction of plunge; dashed where approximate or inferred; dotted where concealed

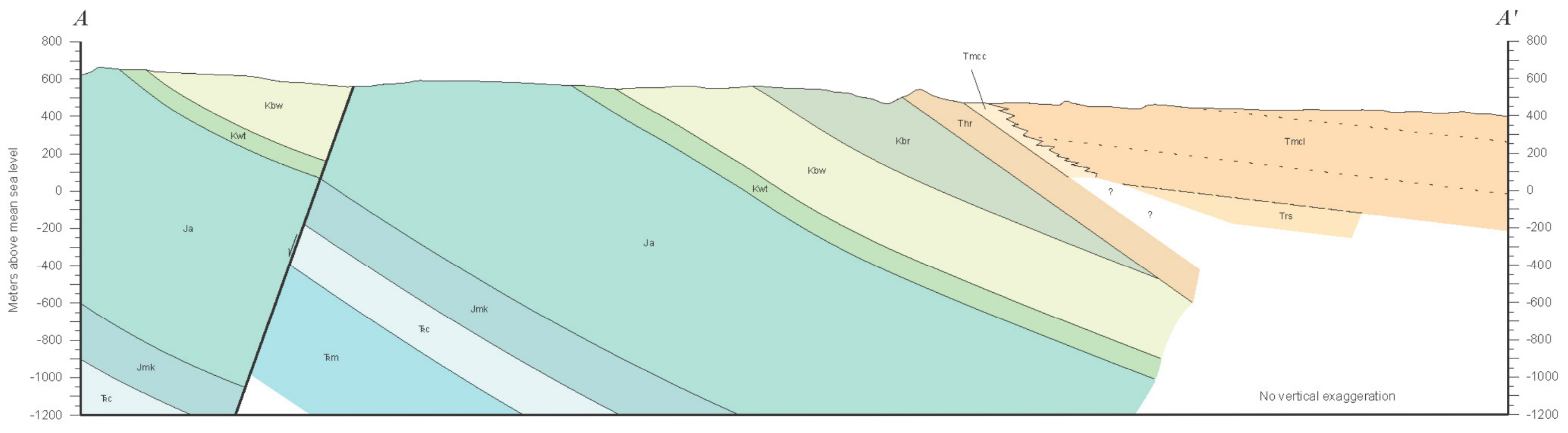
Syncline Large arrow shows direction of plunge; dashed where approximate or inferred; dotted where concealed

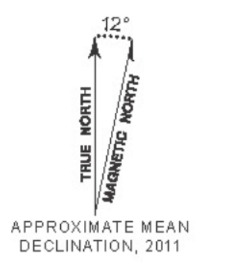
Strike and dip of bedding

10 Inclined

Strike-slip fault (in cross section) Minus, away from observer; plus, toward observer

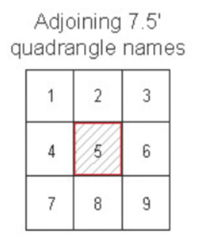
⊕⊖


A
A'
800
600
400
200
0
-200
-400
-600
-800
-1000
-1200
Meters above mean sea level
Kbw
Kwt
Ja
Jmk
Ŧc
Ŧm
Kbr
Thr
Tmcc
Tmcl
Trs
?
No vertical exaggeration


12°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 2011

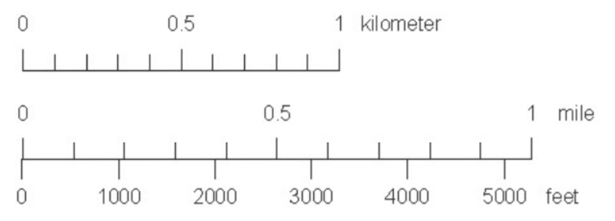
Map Location

Adjoining 7.5' quadrangle names



1 Weiser Ridge
2 Overton
3 Overton SE
4 Valley of Fire West
5 Valley of Fire East
6 Overton Beach
7 Bitter Spring
8 Echo Bay
9 Lime Wash

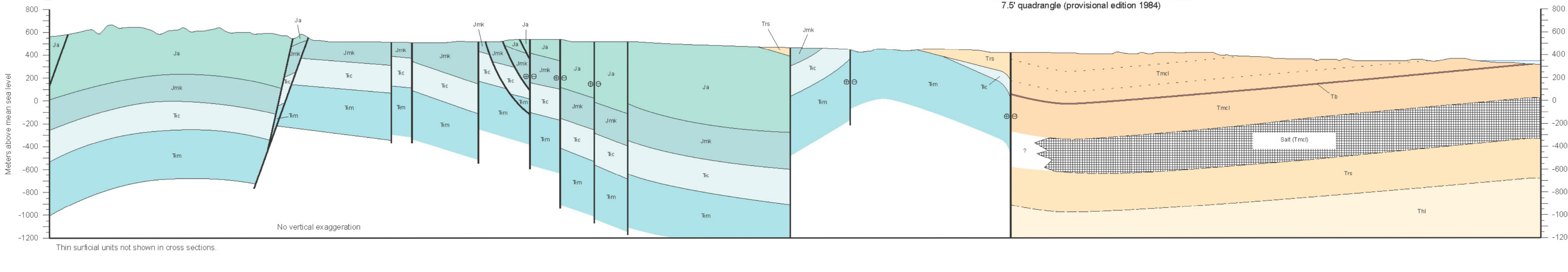
Scale 1:24,000


0
0.5
1 kilometer
0
0.5
1 mile
0
1000
2000
3000
4000
5000
feet

CONTOUR INTERVAL 10 Meters

Projection: Universal Transverse Mercator, Zone 11,
North American Datum 1927 (m)

Base map: U.S. Geological Survey Valley of Fire East
7.5' quadrangle (provisional edition 1984)


B
B'
800
600
400
200
0
-200
-400
-600
-800
-1000
-1200
Meters above mean sea level
Ja
Jmk
Ŧc
Ŧm
Trs
Tmcl
Tb
Salt (Tmcl)
Thl
?
⊕⊖
No vertical exaggeration

Thin surficial units not shown in cross sections.

Suggested Citation:
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Nevada Bureau of Mines and Geology
Mackay School of Earth Sciences and Engineering
College of Science
University of Nevada, Reno

This map was compiled from previous mapping by Bohannon (1983), Beard et al. (2007), Felger and Beard (2010) and from mapping conducted in 2006–2011. Supported by the AAPG Foundation Grants-in-Aid program, the Nevada Petroleum Society, and the UNLV Geoscience Department.

DRAFT
Preliminary geologic map
Has not undergone office or field review
Will be revised before publication

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