Paleorunoff Estimates from Lake-level History of Tulare Lake
Lake-level can be predicted with hydrologic balance model based principally on runoff.
So, runoff can be reconstructed using lake-level.
Al Co St KC Dudley Ridge Kings River channel

0 5 mi
0 10 km
N

Tulare Lake Bed
Clovis Sites Sand Ridge Dudley Ridge

Kettleman Hills I-5 Kern River channel

prevailing winds

lake clays and silts sand spits undifferentiated Quaternary alluvium Tertiary marine sediments

(after Page, 1986)
Al Co St
Kings River
120° channel

prevailing winds

Kettleman Hills

Kern River channel

Tulare Lake Bed

Clovis Sites

Dudley Ridge

Sand Ridge

Lake clays and silts
Sand spits
Undifferentiated Quaternary alluvium
Tertiary marine sediments

(after Page, 1986)
Rambla Highstand Shoreline of Tulare Lake

Kettleman Hills

KC

Tulare Lake Bottom

Dudley Ridge sand spit

0 2 km

0 2 mi

N
Tulare Lake Highstand Shoreline

S20E  Kettleman Hills  N20W
Al
Co
St
KC
Dudley Ridge
Kings River
channel
120˚

N

0
0
5 mi
10 km

120˚ channel

Kettleman Hills
I-5

Kern River channel

Tulare Lake Bed

Tule River

36˚

sand spits

lake clays and silts

undifferentiated Quaternary alluvium

Tertiary marine sediments

Clovis Sites

depocenter

core

Tr E&F

DWR Test Pit #3

Tr 1-5

after Page (1986)
Shoreline Trench Stratigraphy

Shoreline Trench Stratigraphy

deep lake clays/silts
2.5
height above trench bottom (m)

2.0
1.5
doing's upward

1.0
depth lake clays/silts

0.5
Anodontabearing sand

0.0
C-14 age Control: Shoreline Trenches

- 7250 ± 35
- 6190 ± 40
- 5900 ± 35
- 820 ± 40
- 100 ± 50; 180 ± 50
Kirby et al. (in press)
Close-up view of authigenic pyrite crystals in shale showing dissolution textures (grain mount). SEM backscattered-electron image. Well 23H, depth = 550 ft.
WDS spectrum of pyrite in framboidal spherule showing distinct La peak for arsenic. Depth = 690 ft.
## Electron-microprobe analysis of pyrites

Pyrites contain up to 0.37% of Arsenic

<table>
<thead>
<tr>
<th>SAMPLE DESCRIPTION</th>
<th>Wt%</th>
<th>Wt%</th>
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<tr>
<td></td>
<td>S</td>
<td>Fe</td>
<td>As</td>
<td>Al</td>
<td>Si</td>
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Electron-microprobe analysis of pyrites

Pyrites contain up to 0.37% of Arsenic
Acknowledgements

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