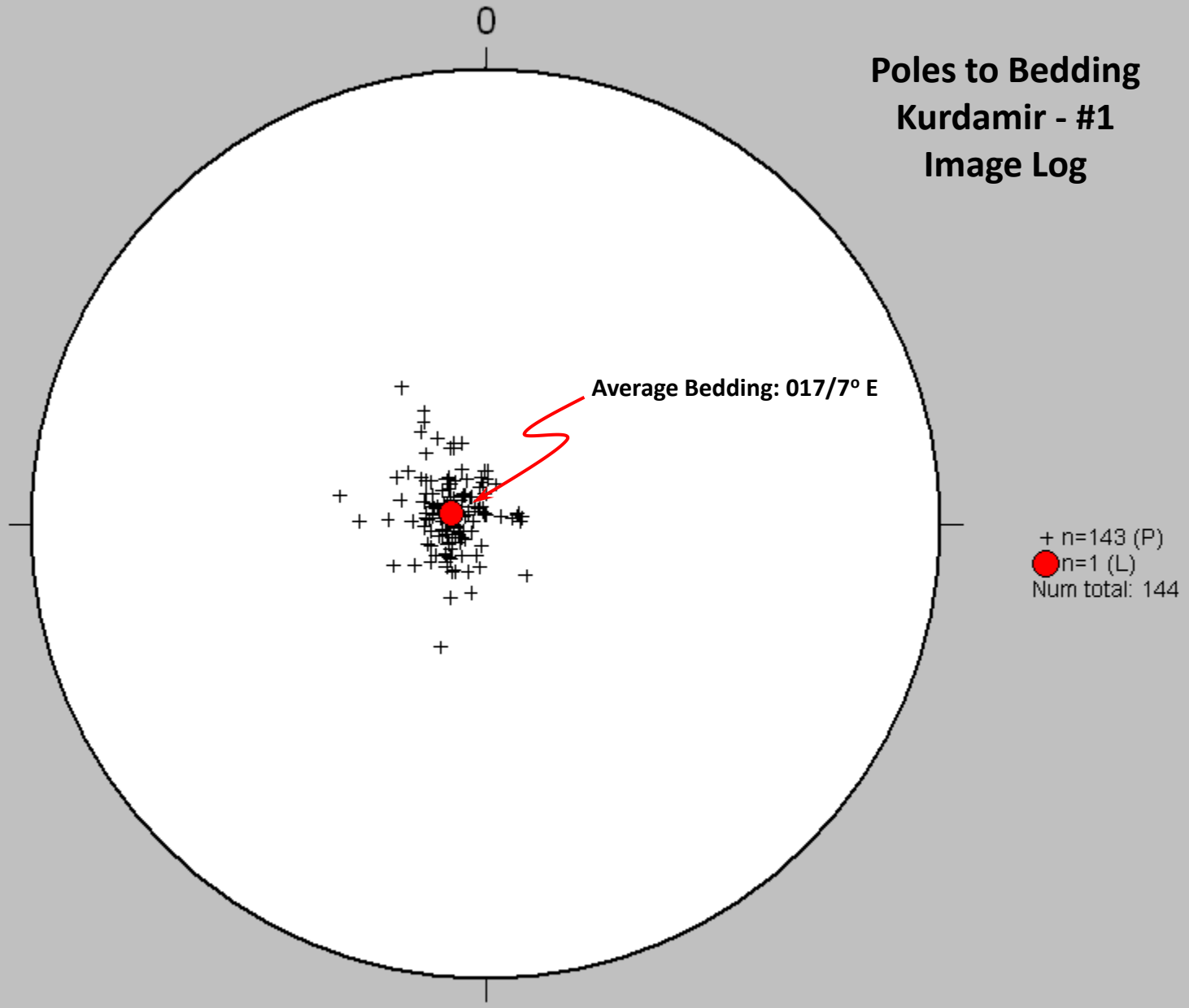
Kurdamir #1

Fracture Analysis

Summary

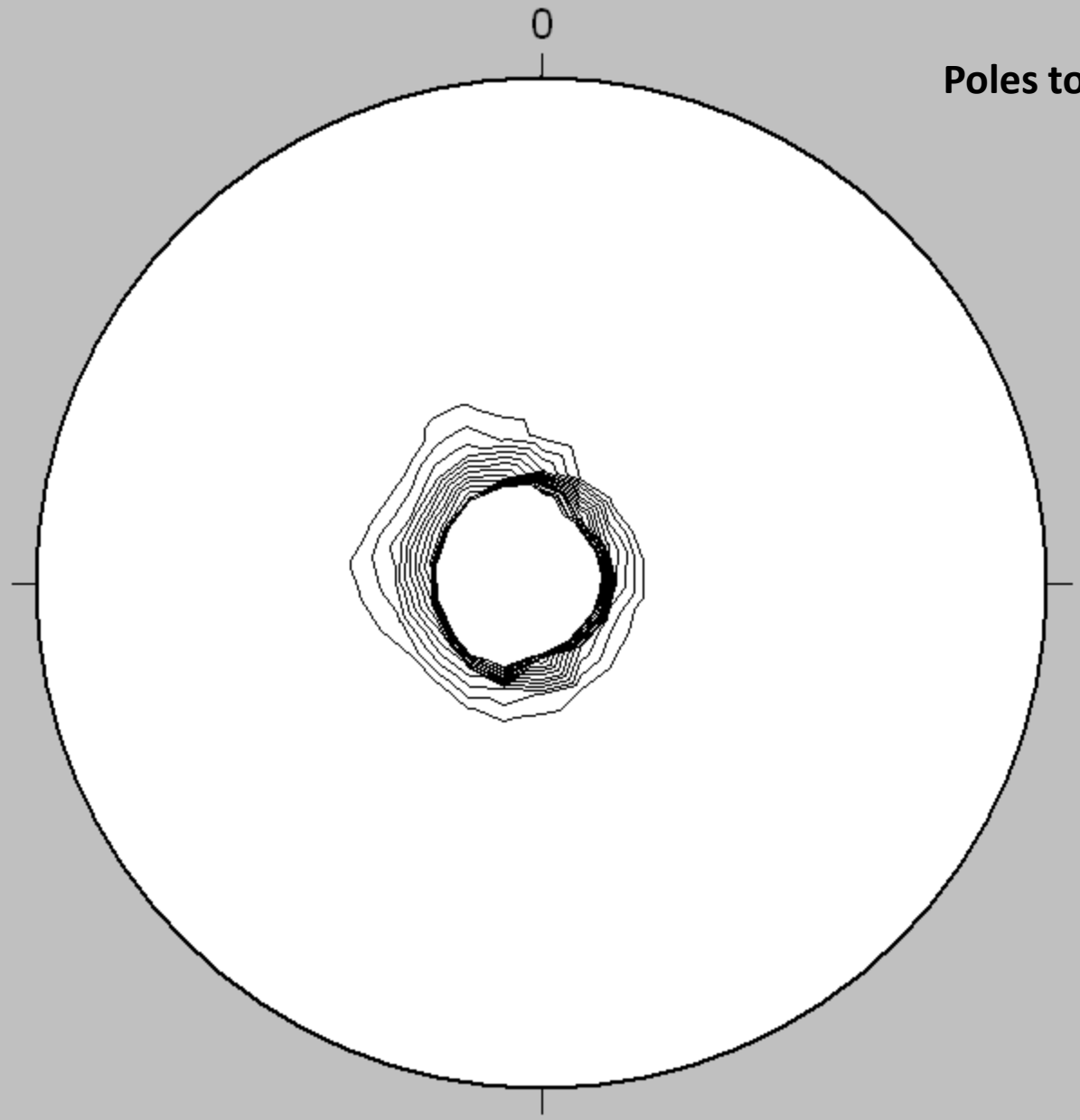
- **Average bedding dip to the east (hinge is to the west)**
- **Fracture distribution is in two swarms**
- **Upper swarm has broad distribution of orientations**
- **Lower swarm has larger fracture intensity**
- **Vertical well is not ideal orientation to intersect maximum number of fractures**



Poles to Bedding
Kurdamir - #1
Image Log

Equal area projection, lower hemisphere

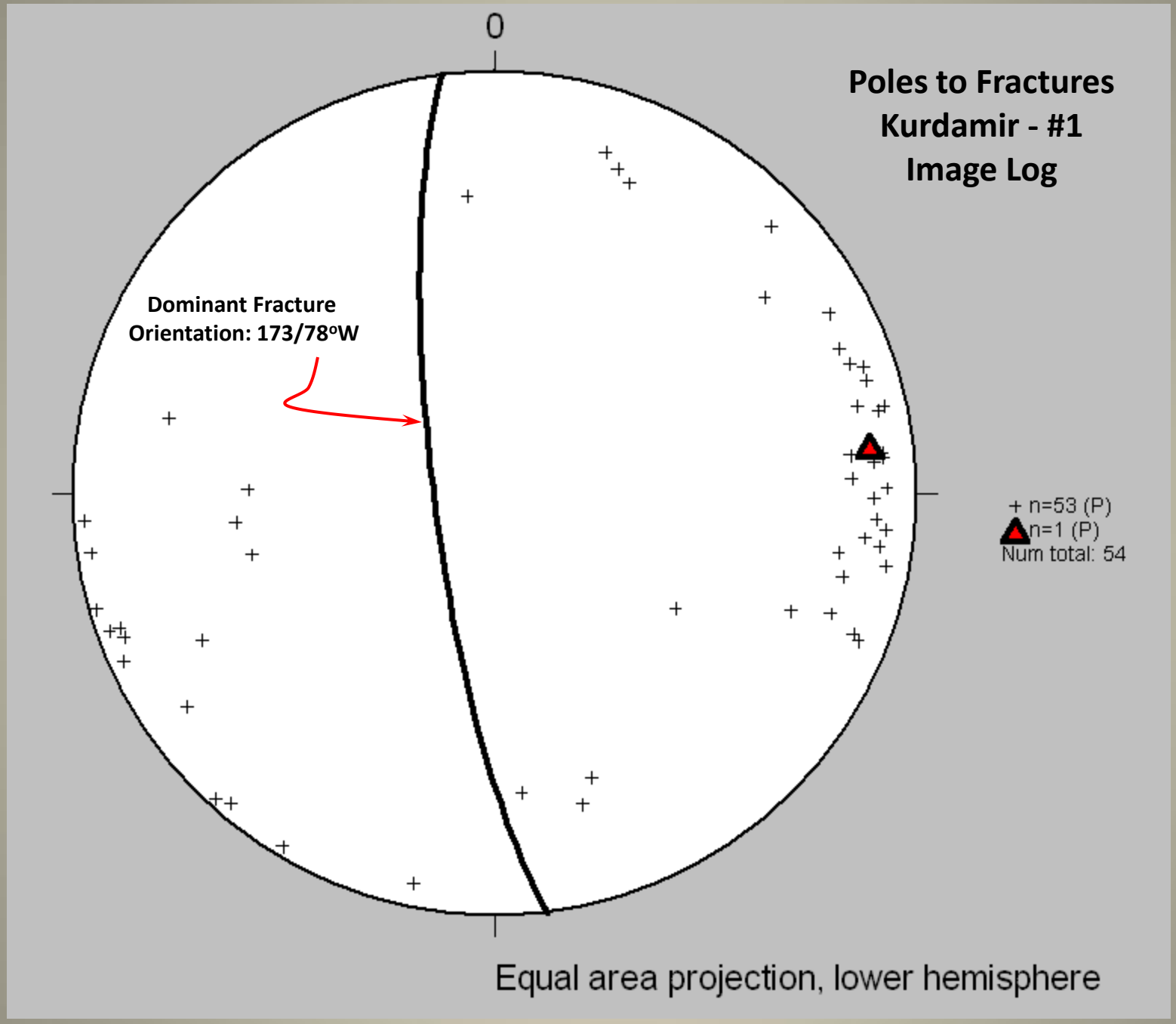
Poles to Bedding – Density Plot
Kurdamir - #1
Image Log



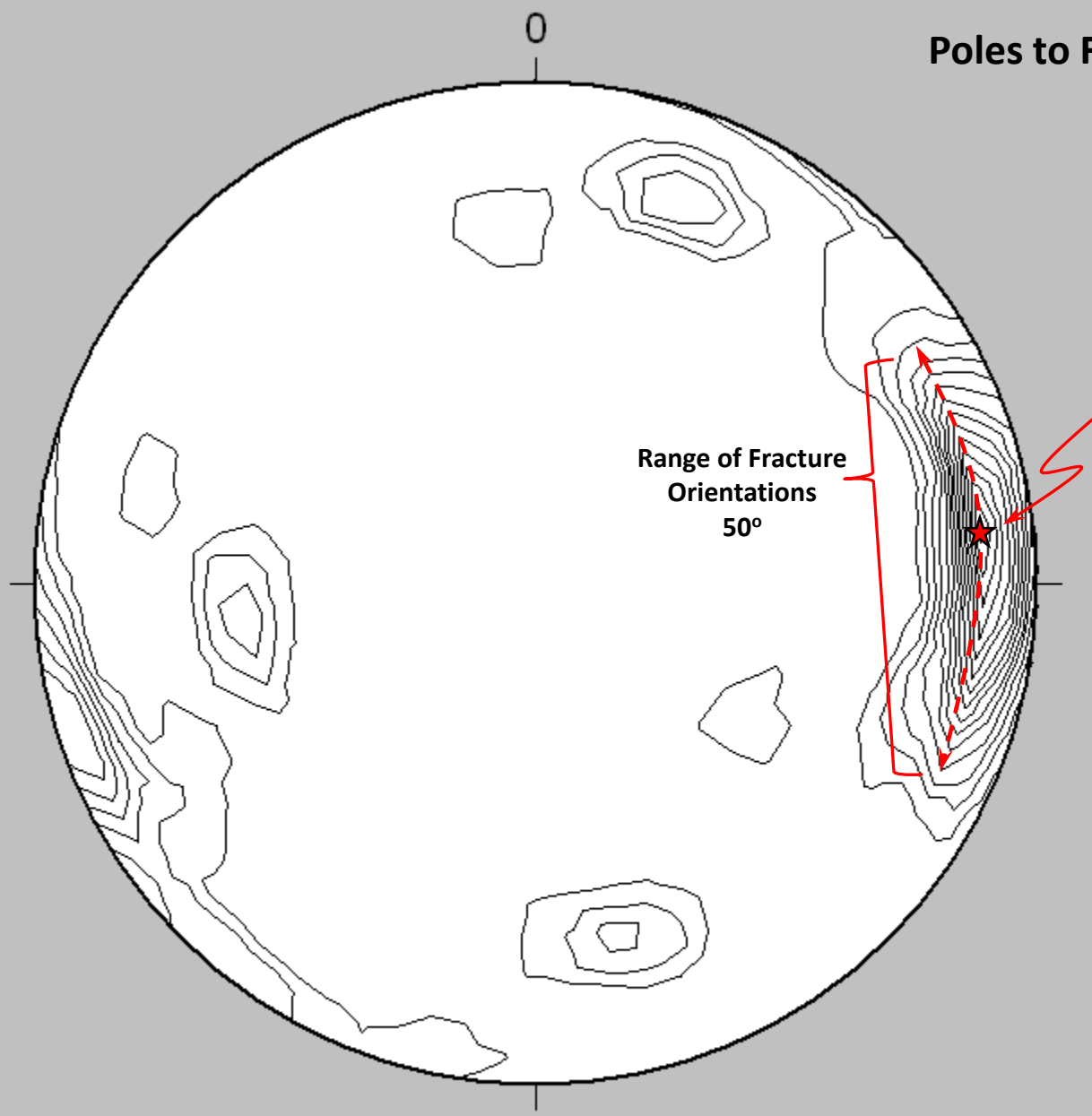
n=143
max. dens.=66.26 (at 0/ 90)
min. dens.=0.00
Contours at:
0.00,1.00,2.00,3.00,
4.00,5.00,6.00,7.00,
8.00,9.00,10.00,11.00,
12.00,13.00,14.00,15.00,

(Multiples of random distribution)

Equal area projection, lower hemisphere


Poles to Fractures
Kurdamir - #1
Image Log
0
Dominant Fracture
Orientation: 173/78°W
+ n=53 (P)
n=1 (P)
Num total: 54
Equal area projection, lower hemisphere

Poles to Fractures – Density Plot
Kurdamir - #1
Image Log

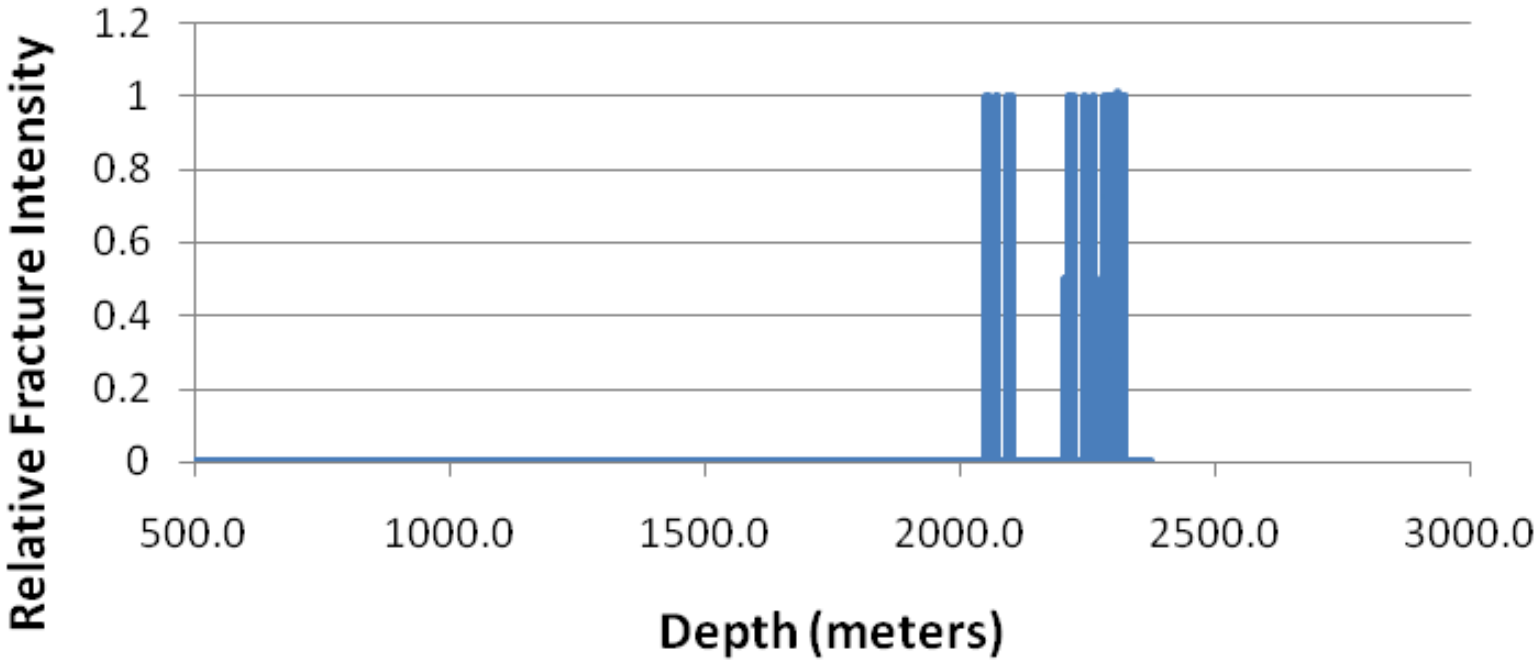


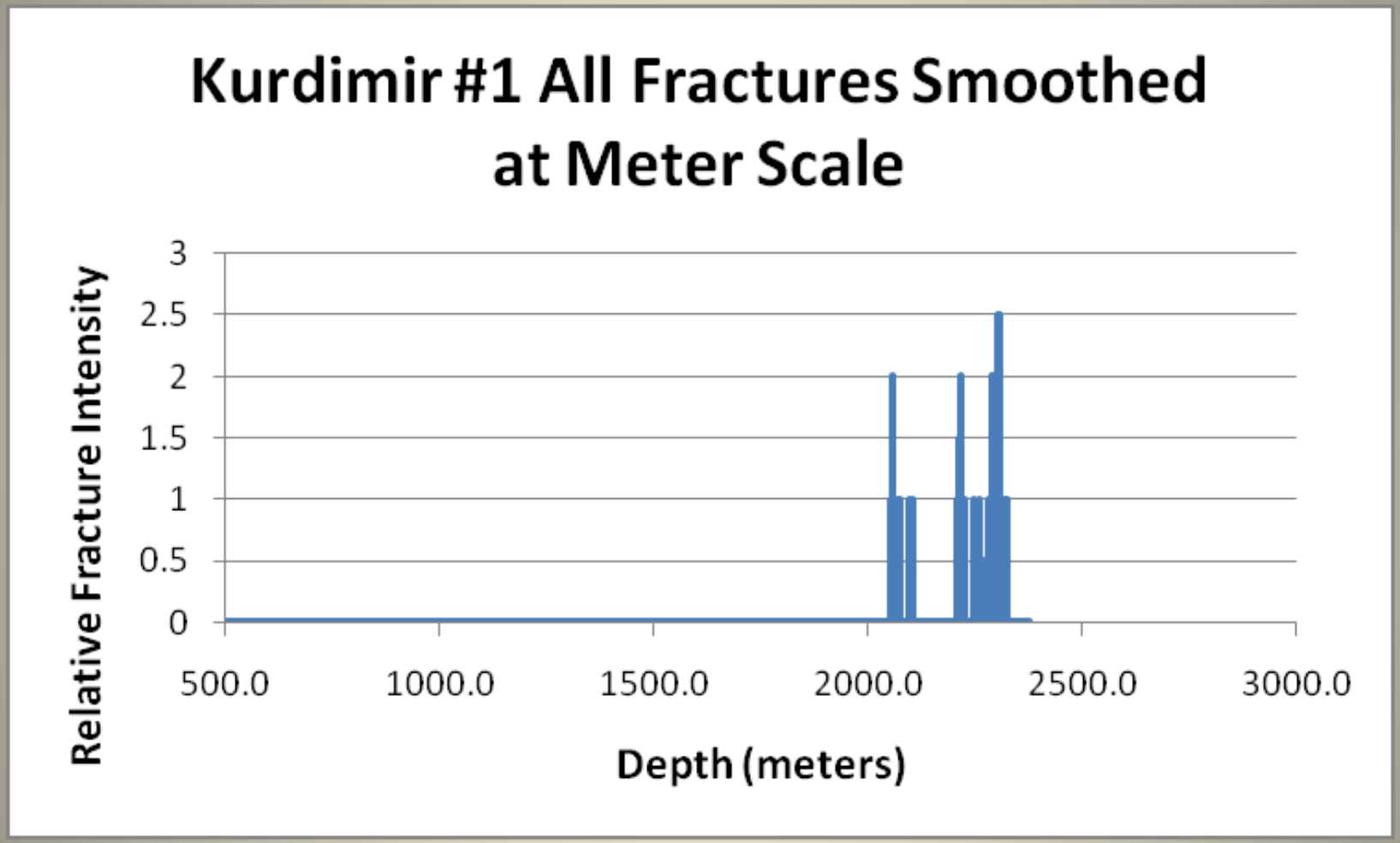
n=54
max. dens.=15.32 (at 83/ 12)
min. dens.=0.00
Contours at:
0.00,1.00,2.00,3.00,
4.00,5.00,6.00,7.00,
8.00,9.00,10.00,11.00,
12.00,13.00,14.00,15.00,

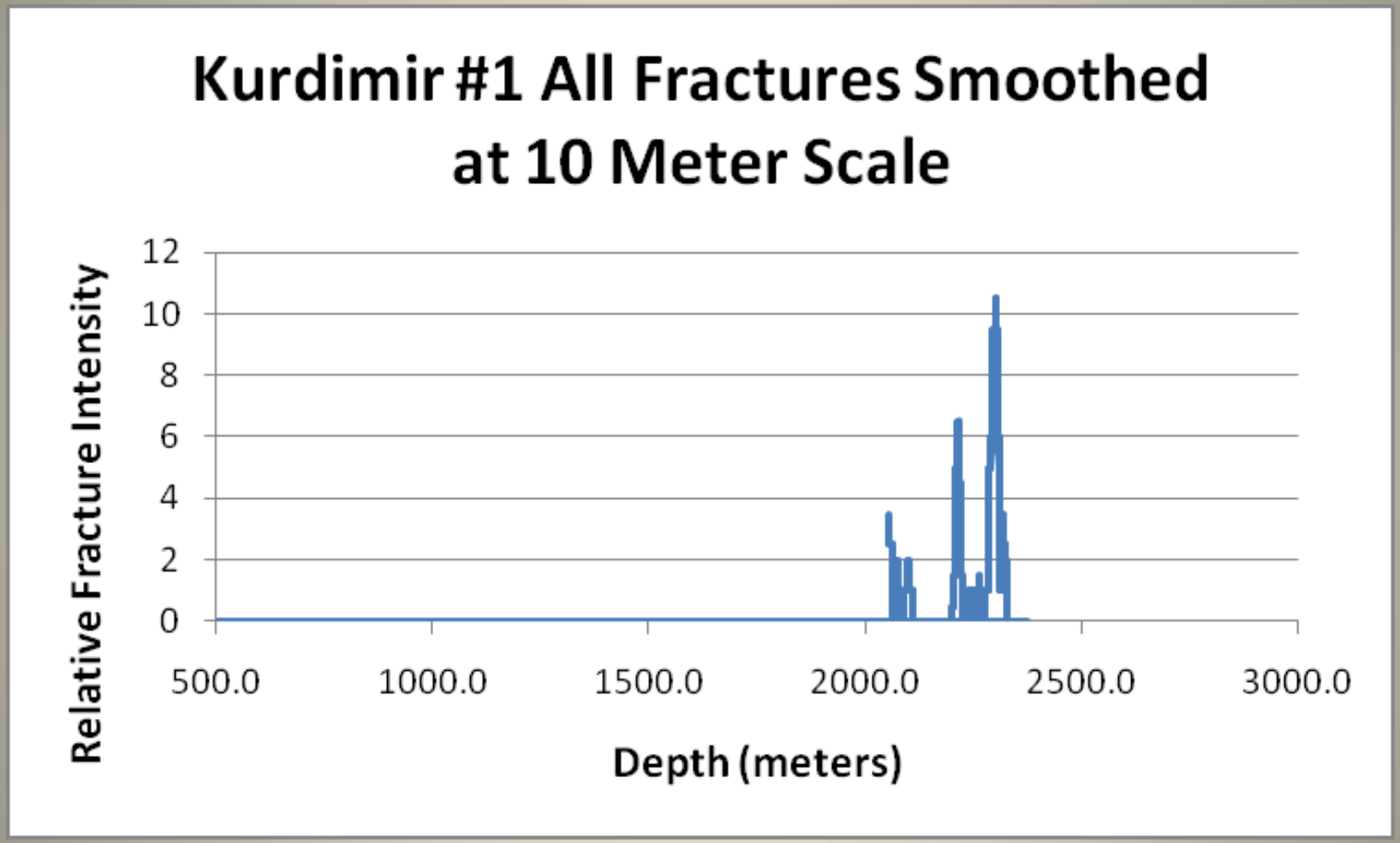
(Multiples of random distribution)

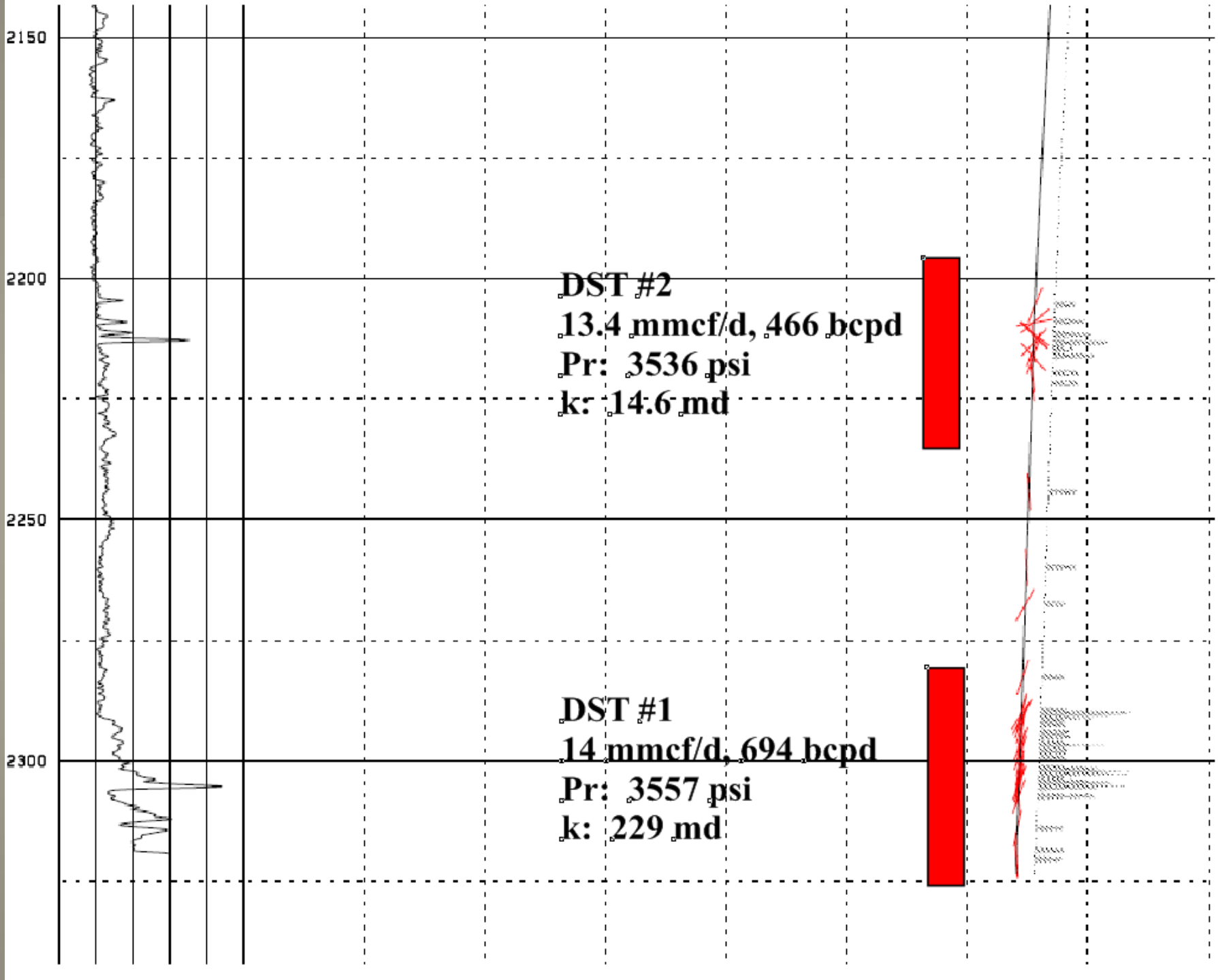
Equal area projection, lower hemisphere

Kurdimir #1 All Fractures Smoothed at Decimeter Scale

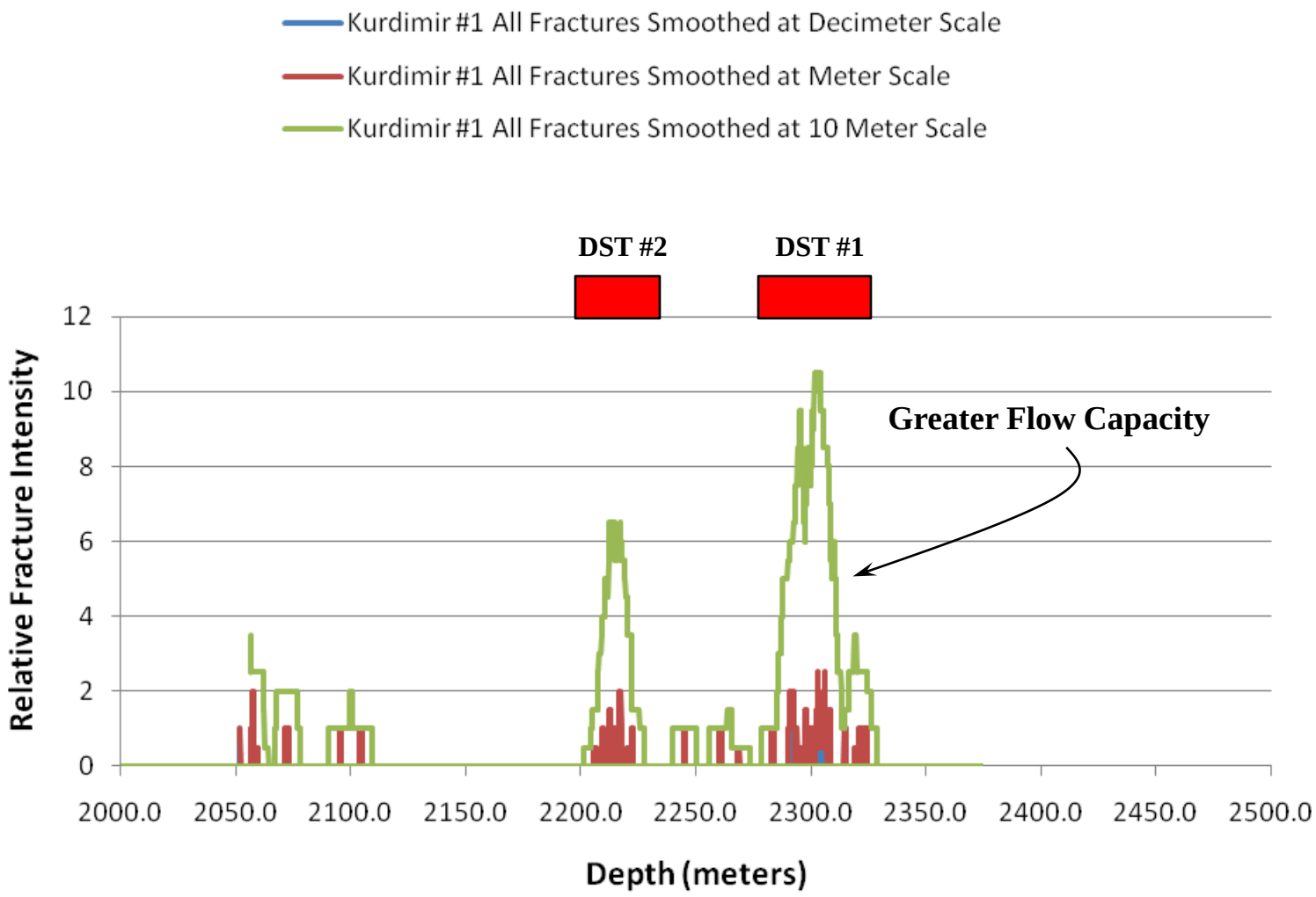



Kurdimir #1 All Fractures Smoothed at Meter Scale
Relative Fracture Intensity
3
2.5
2
1.5
1
0.5
0
500.0
1000.0
1500.0
2000.0
2500.0
3000.0
Depth (meters)

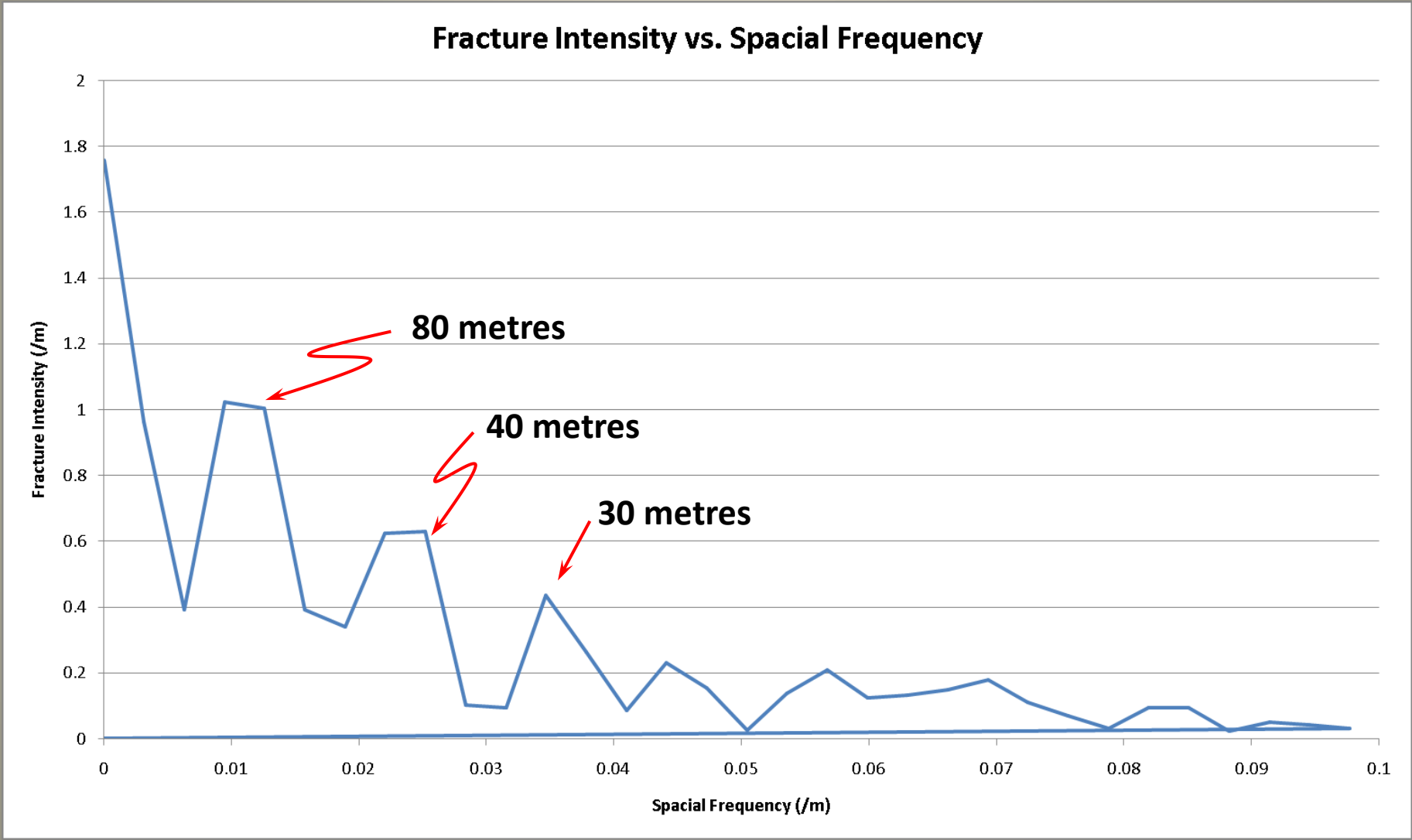

Kurdimir #1 All Fractures Smoothed at 10 Meter Scale
Relative Fracture Intensity
12
10
8
6
4
2
0
500.0
1000.0
1500.0
2000.0
2500.0
3000.0
Depth (meters)

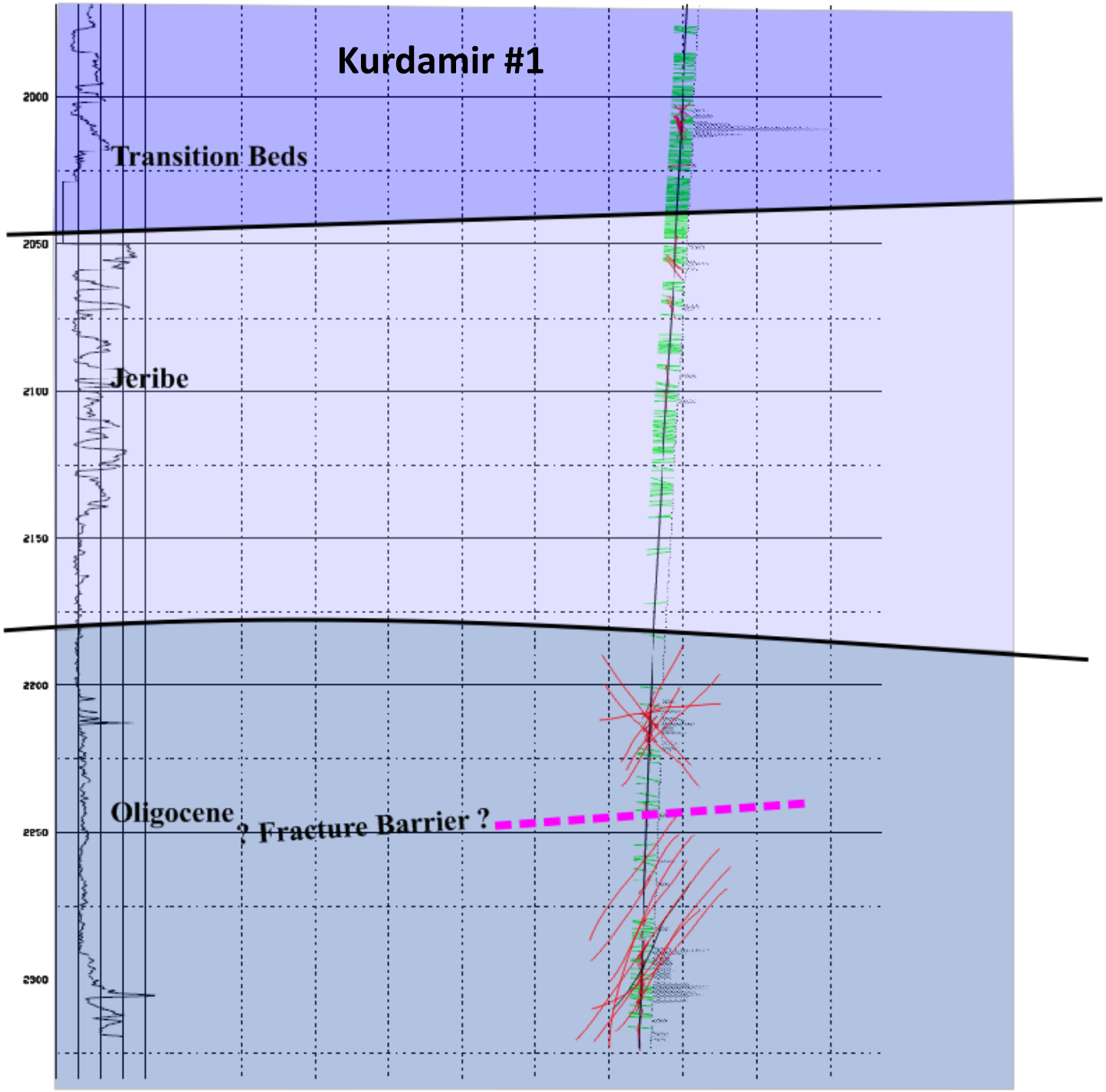

2150
2200
2250
2300
DST #2
13.4 mmcf/d, 466 bcpd
Pr: 3536 psi
k: 14.6 md
DST #1
14 mmcf/d, 694 bcpd
Pr: 3557 psi
k: 229 md

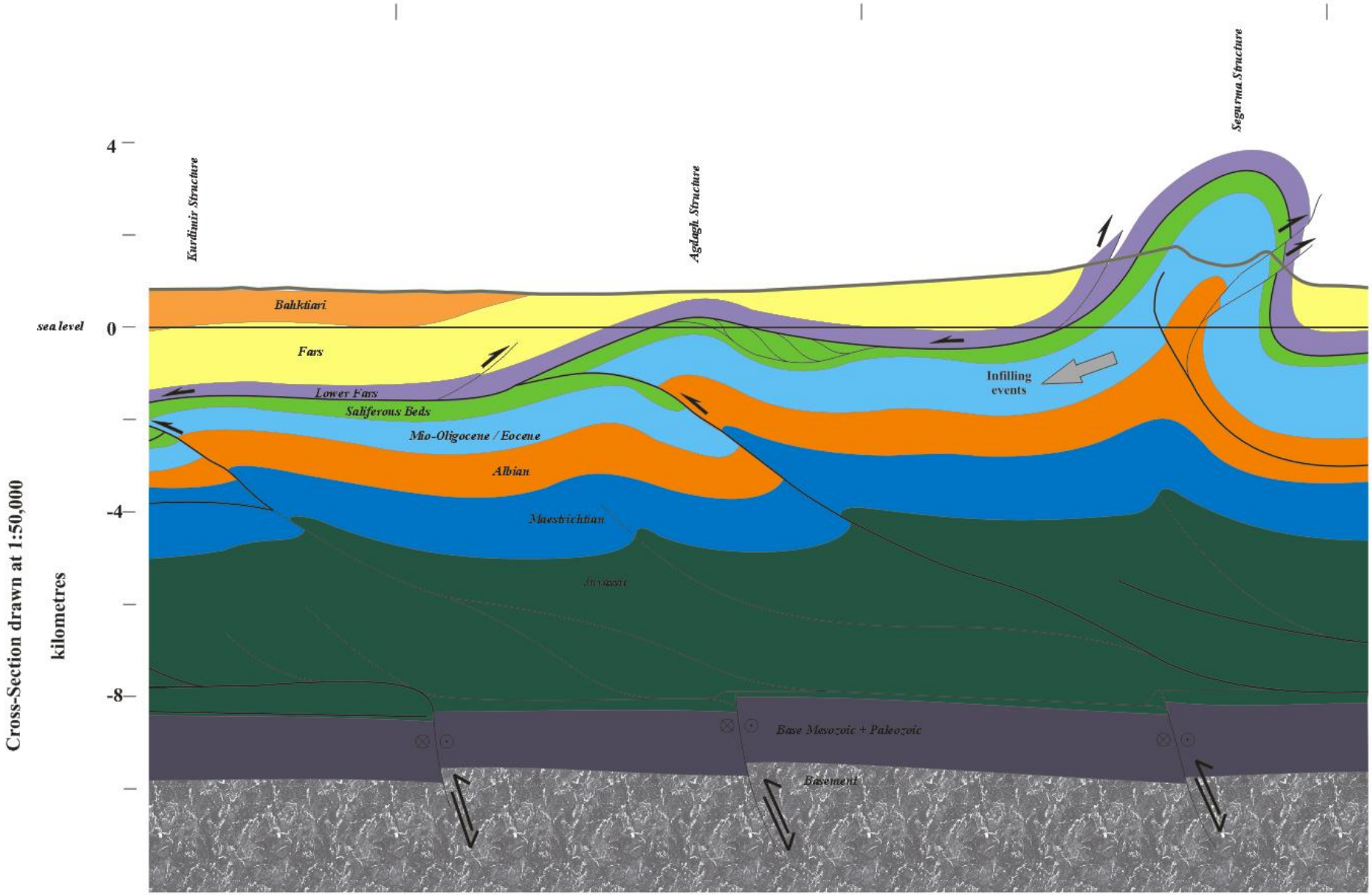
All Fractures Smoothed - Compilation



Kurdamir #1


Fracture Intensity vs. Spacial Frequency
Fracture Intensity (/m)
Spacial Frequency (/m)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.1
80 metres
40 metres
30 metres


Kurdamir #1
2000
Transition Beds
2050
Jeribe
2100
2150
2200
Oligocene
? Fracture Barrier ?
2250
2300


Cross-Section drawn at 1:50,000
kilometres
4
0
-4
-8
sea level
Kurdimir Structure
Agilegh Structure
Segurma Structure
Bakktiari
Fars
Lower Fars
Saliferous Beds
Mio-Oligocene / Eocene
Albian
Maestrichtian
Jurassic
Infilling events
Base Mesozoic + Paleozoic
Basement