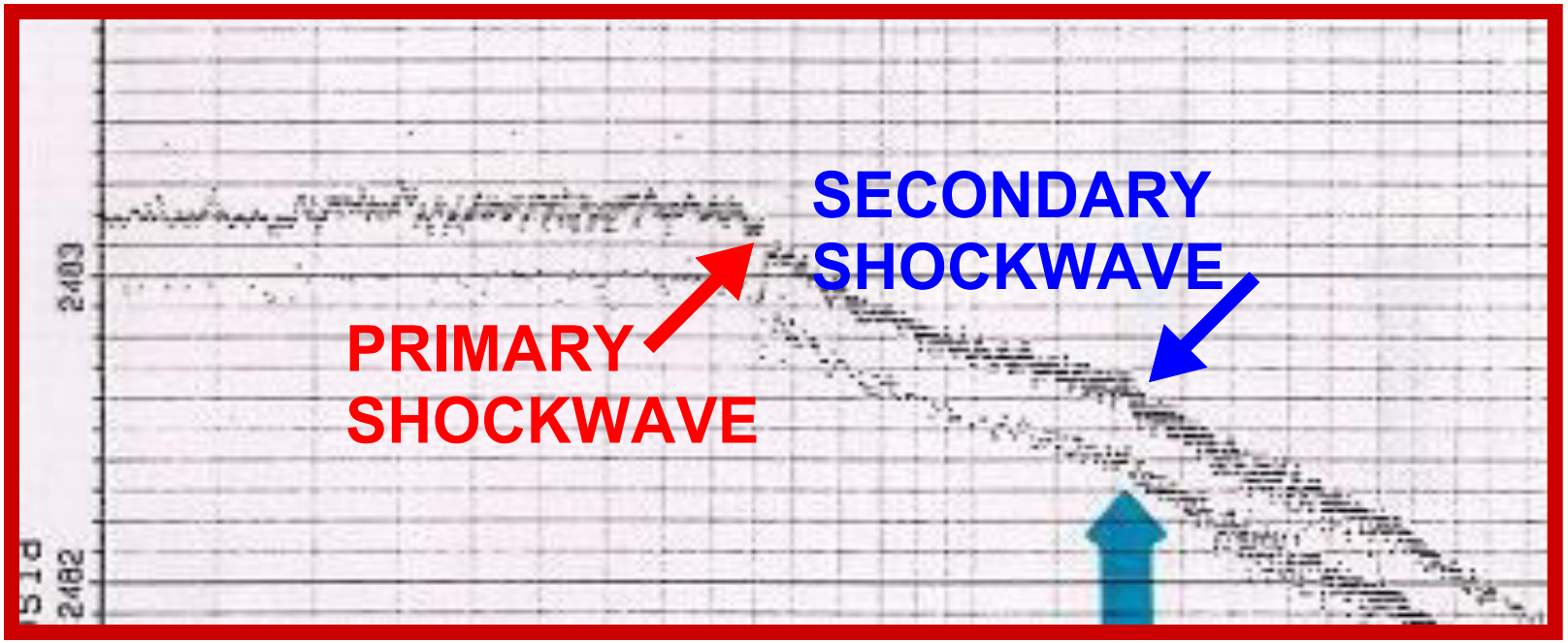
WaveX® Works!

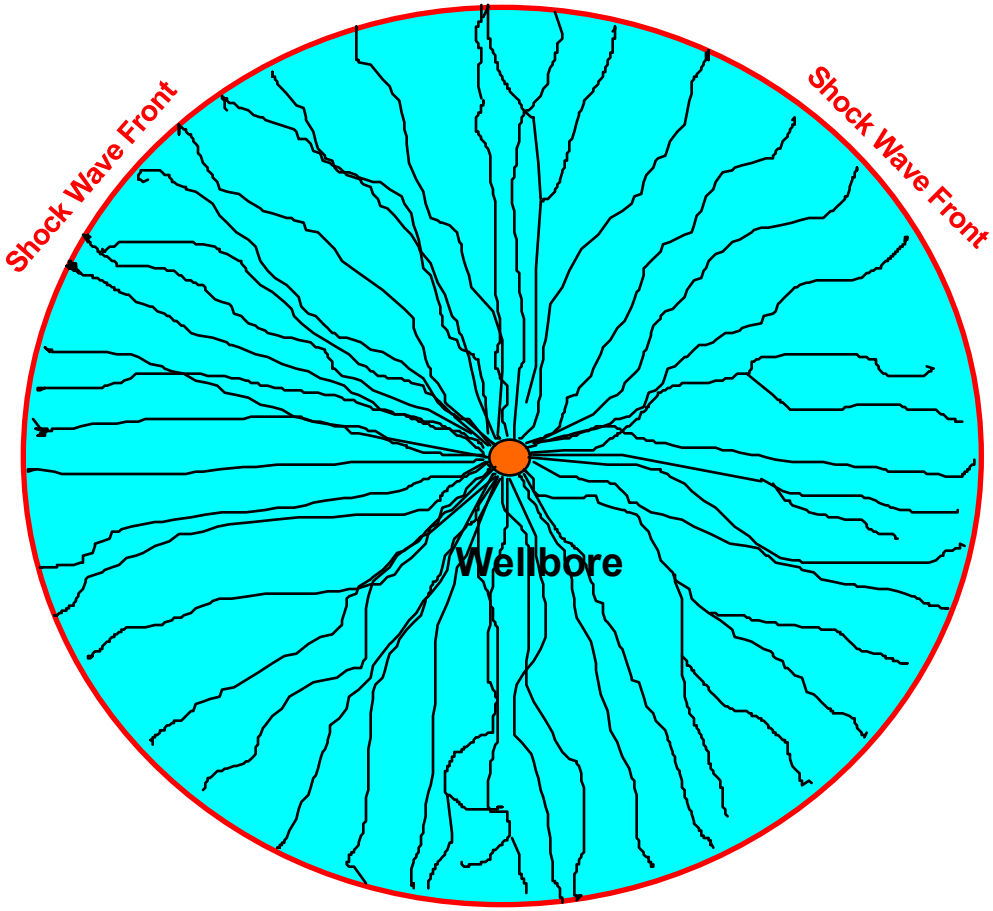
A Picture is Worth a Thousand Words.

Fred L. Goldsberry, 2003

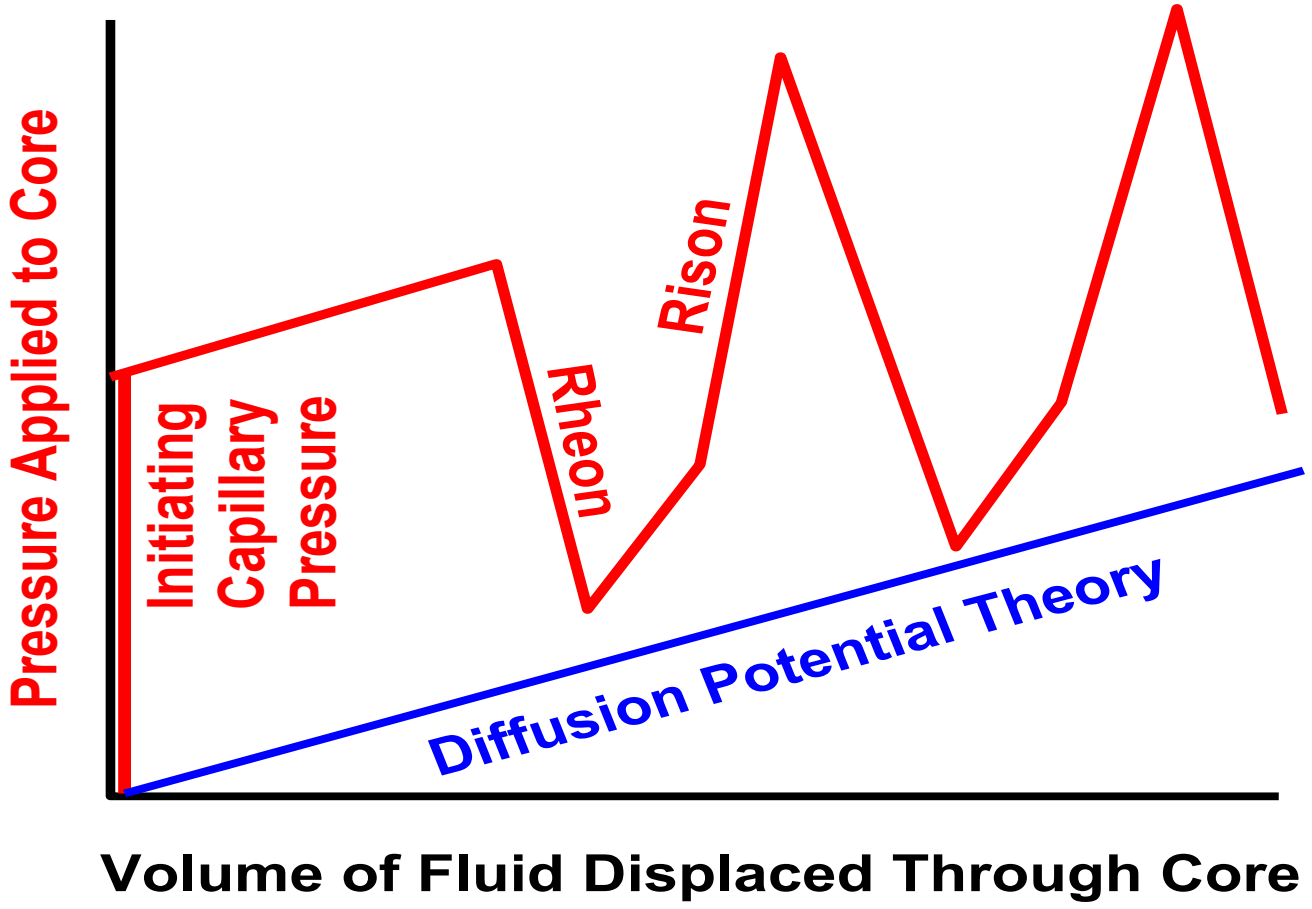
A Bounding Shockwave Exists at the Radius of Investigation. When it Hits a Limit, It Reproduces. You heard this From WaveX® First!



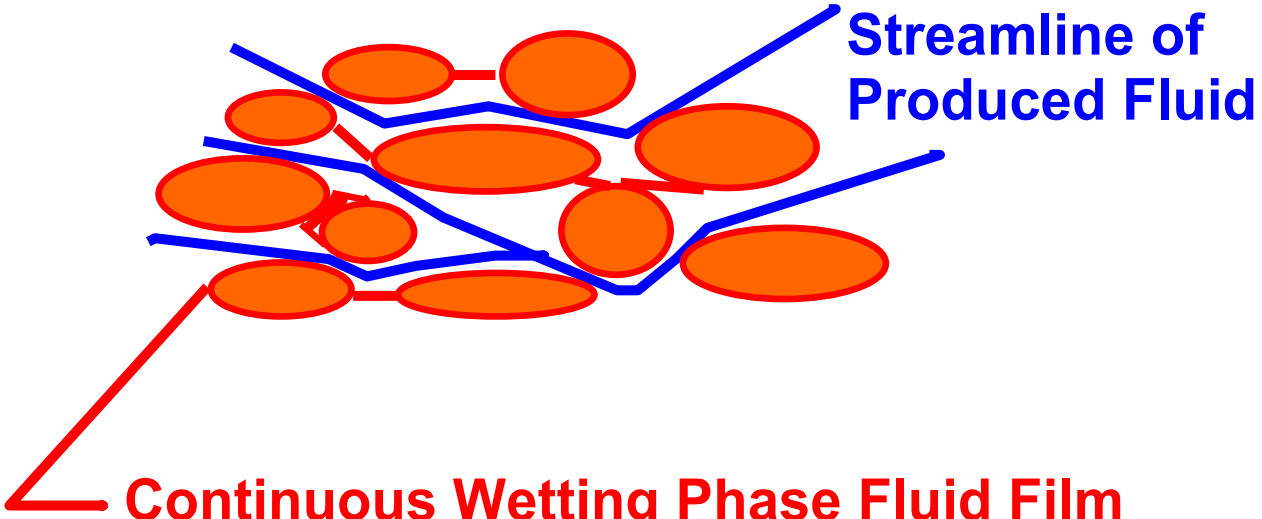
The Cone of Influence is Composed of Clusters of Growing Capillaries



Flow Through a Core as Observed in the Laboratory

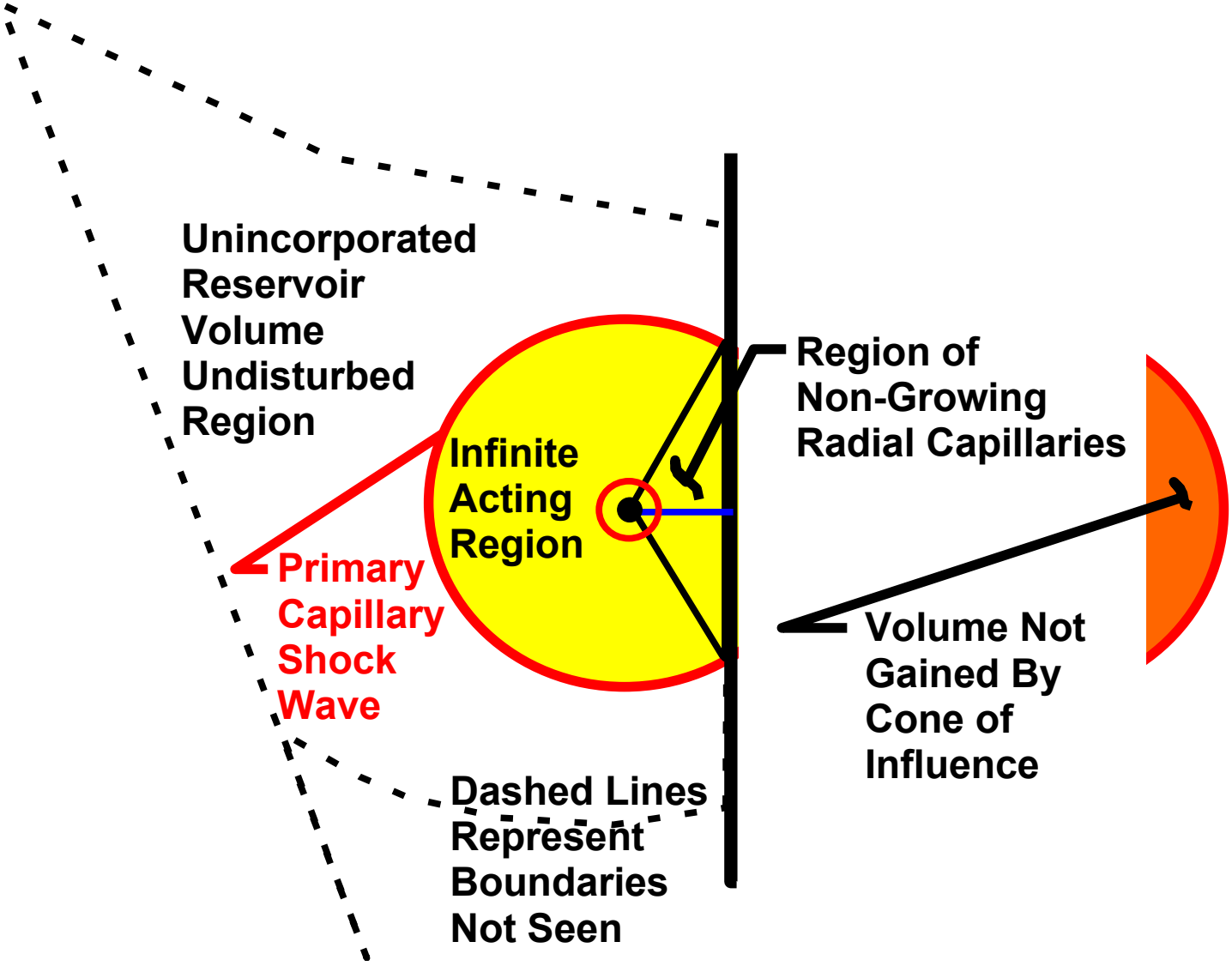


Capillary Paths Stabilize as Entry Pressure Is Overcome

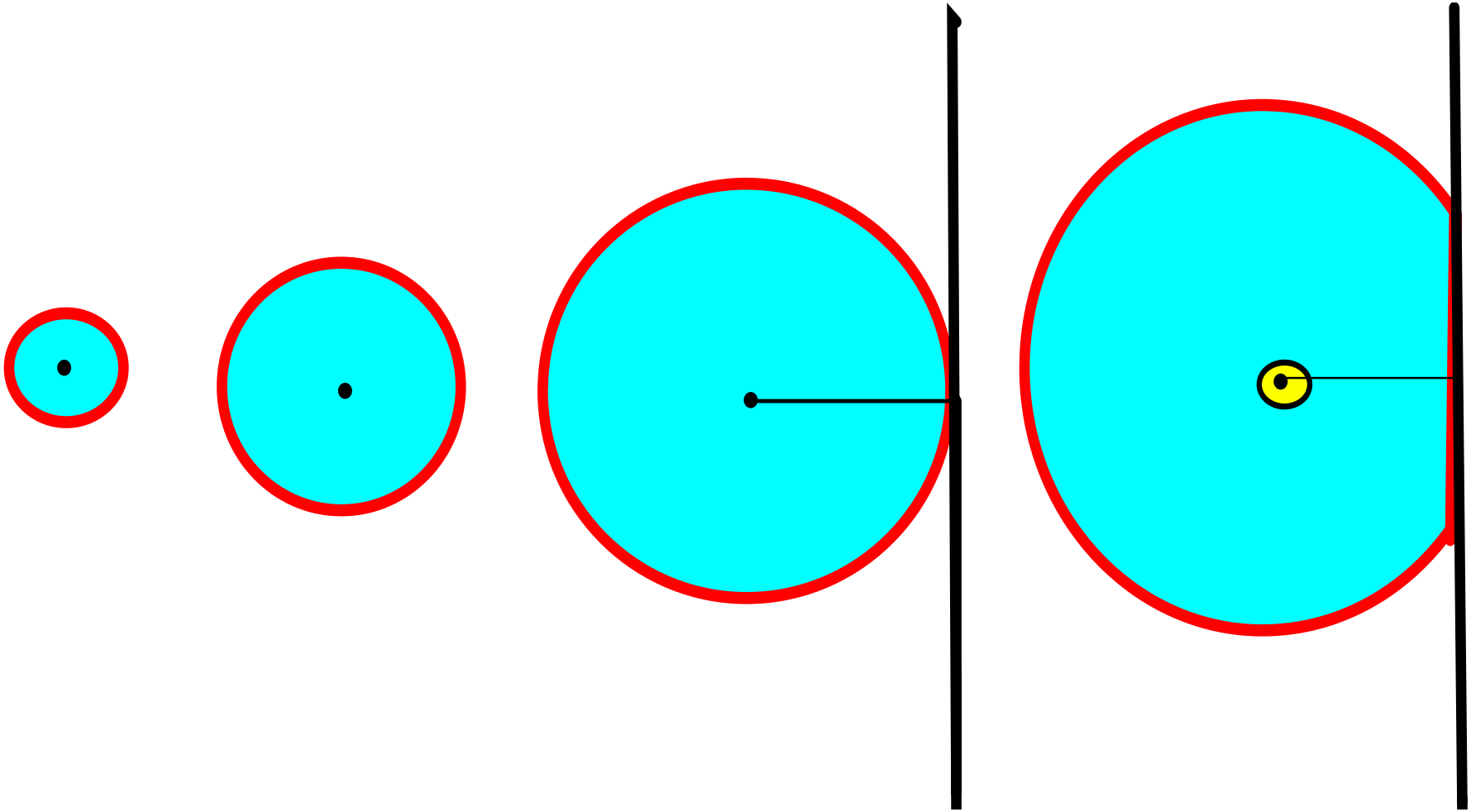


To Break the Fluid Film in Order
to Allow a Change in Flow Path,
Requires a Finite
Initiating Differential Pressure
Across any Pore Throat.

WAVEX® Model

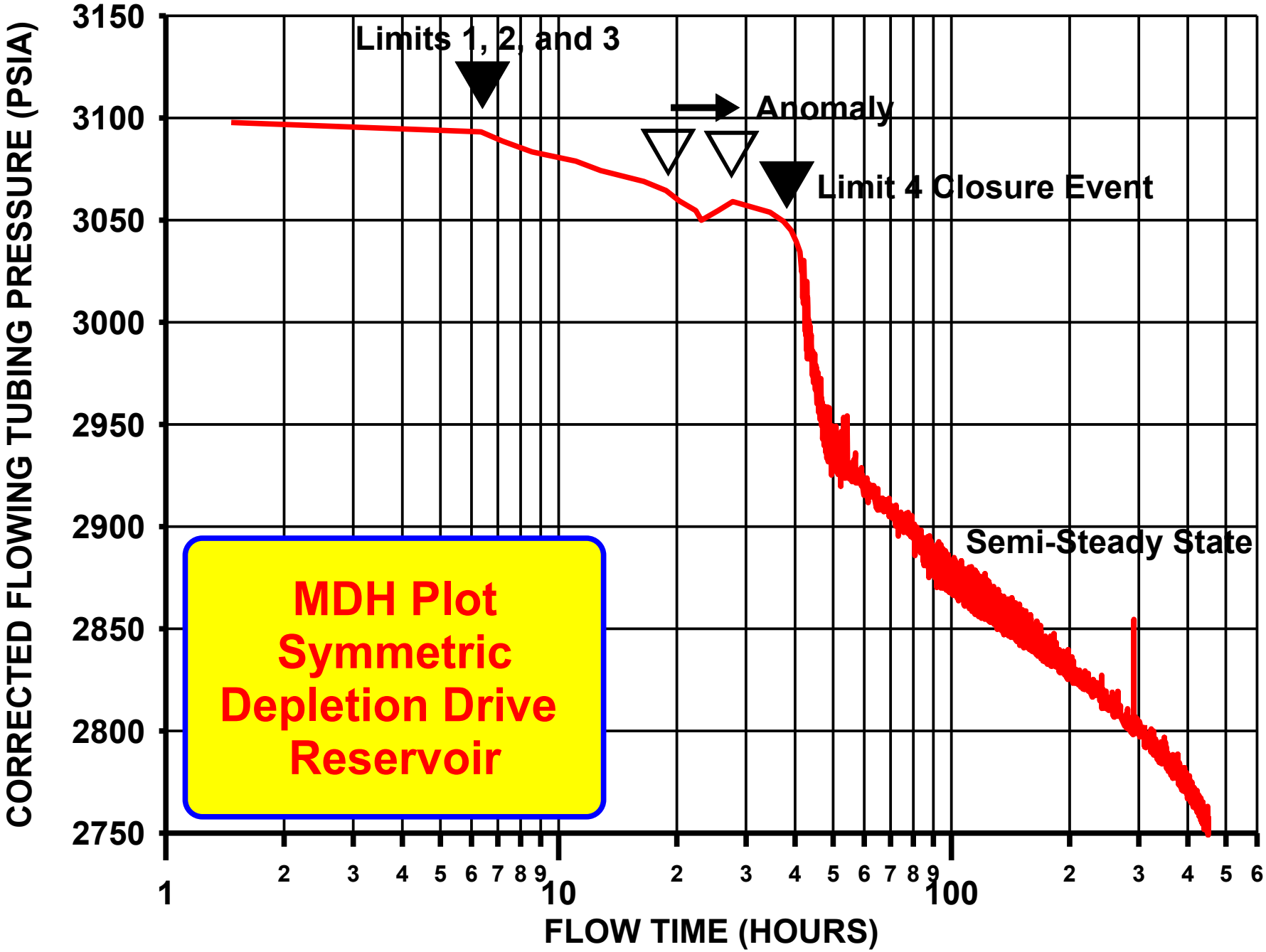

Unincorporated
Reservoir
Volume
Undisturbed
Region
Infinite
Acting
Region
Region of
Non-Growing
Radial Capillaries
Primary
Capillary
Shock
Wave
Volume Not
Gained By
Cone of
Influence
Dashed Lines
Represent
Boundaries
Not Seen

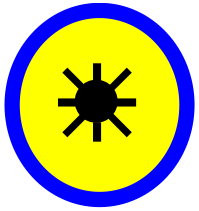
Growth Process for a Cone of Influence

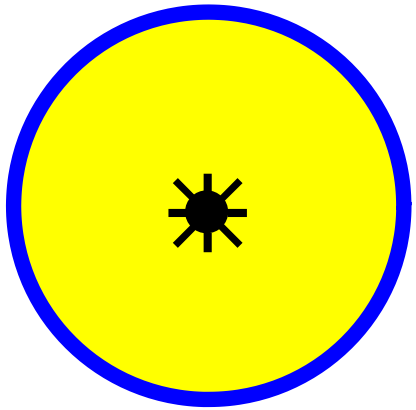


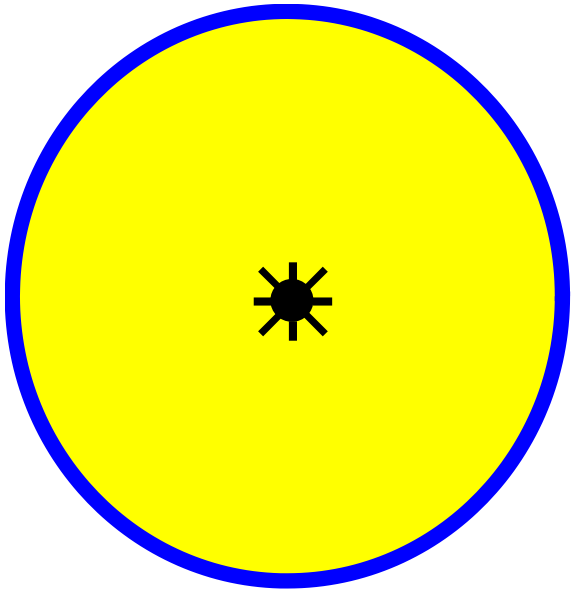
Blind Mapping Can Be Done from Pressure Data

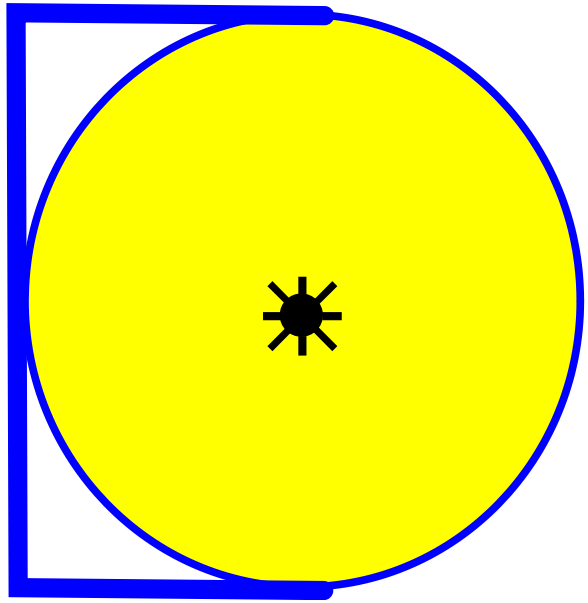
All Pressure Data has Singular Behavior. Each Slope Shift Means an New Limit has Been Encountered.

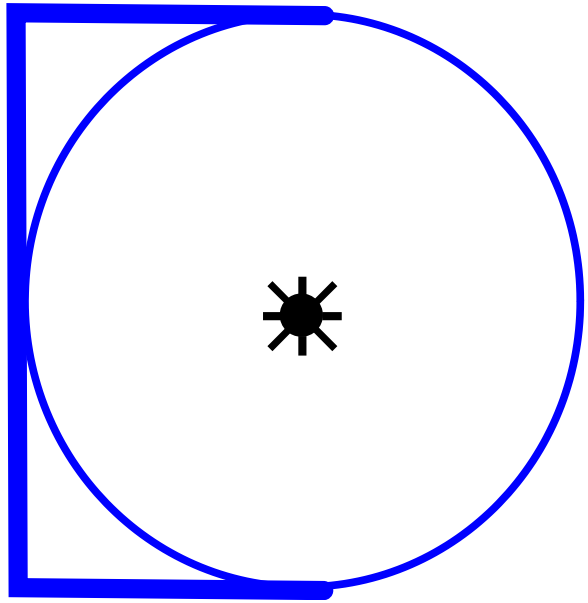

Limits 1, 2, and 3
Anomaly
Limit 4 Closure Event
Semi-Steady State
MDH Plot
Symmetric
Depletion Drive
Reservoir
CORRECTED FLOWING TUBING PRESSURE (PSIA)
3150
3100
3050
3000
2950
2900
2850
2800
2750
1
2 3 4 5 6 7 8 9
10
2 3 4 5 6 7 8 9
100
2 3 4 5 6
FLOW TIME (HOURS)

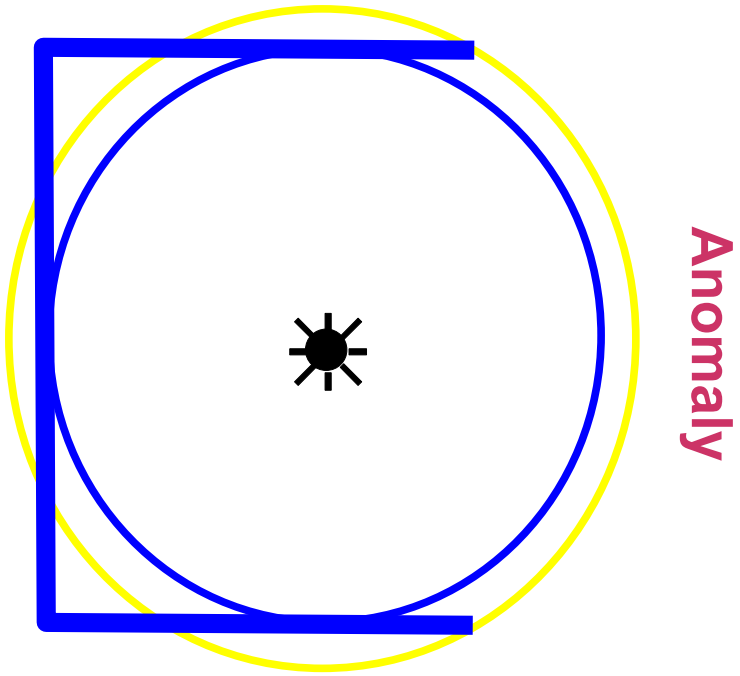


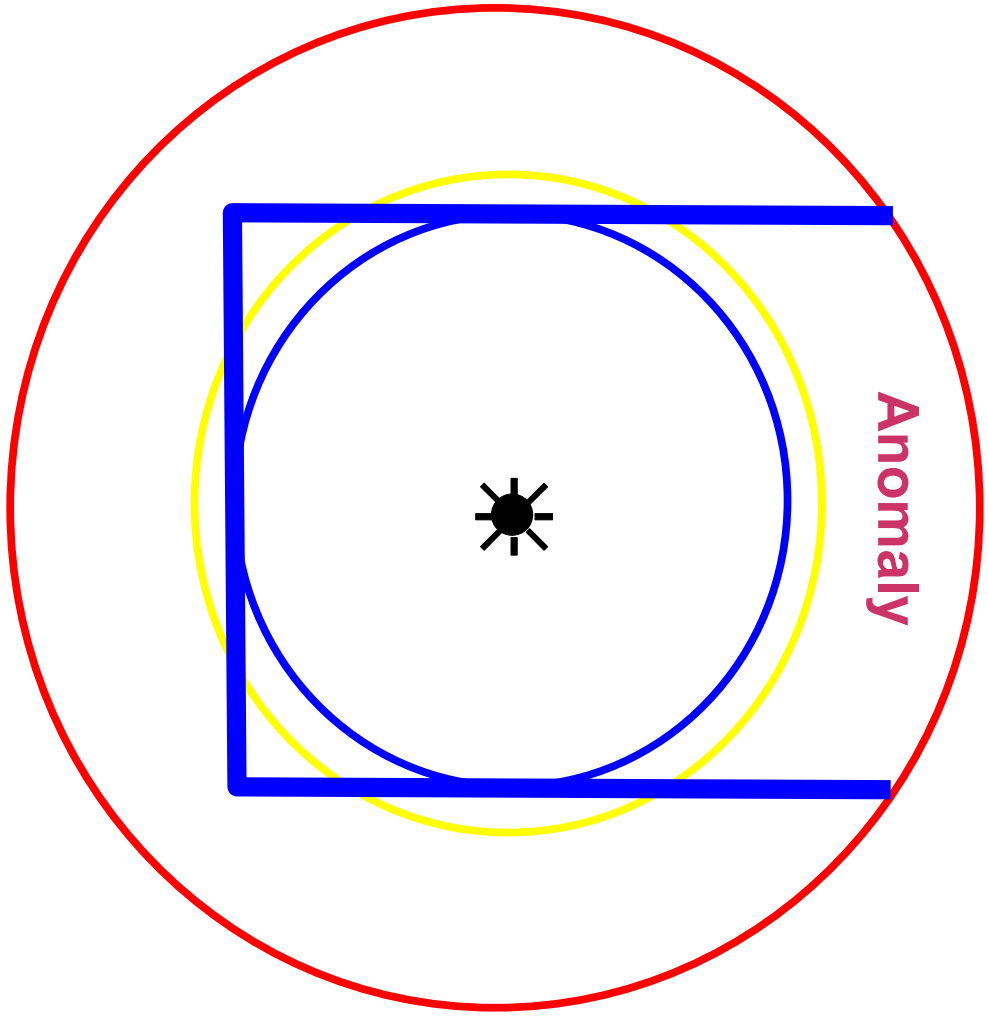









Anomaly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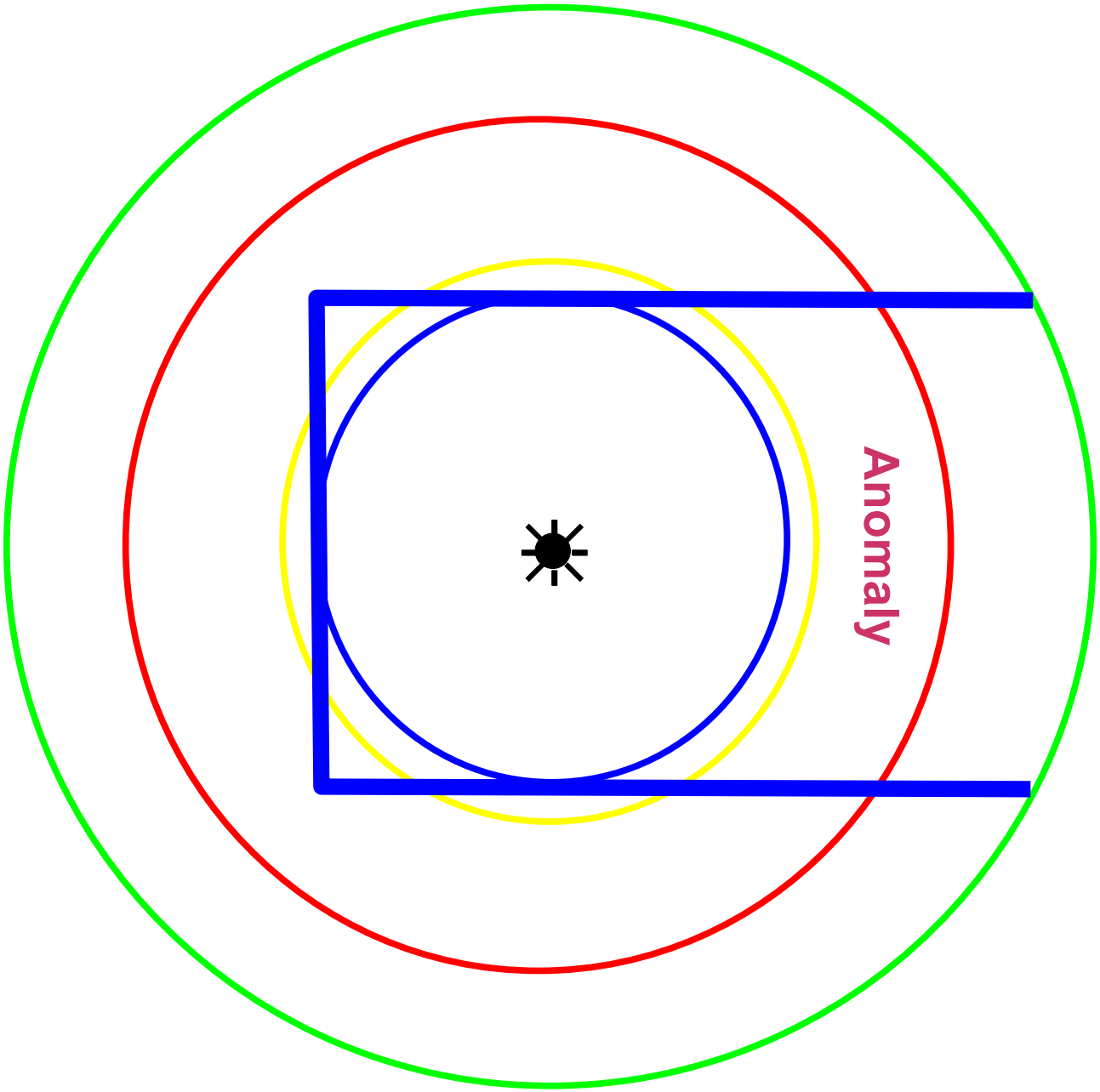
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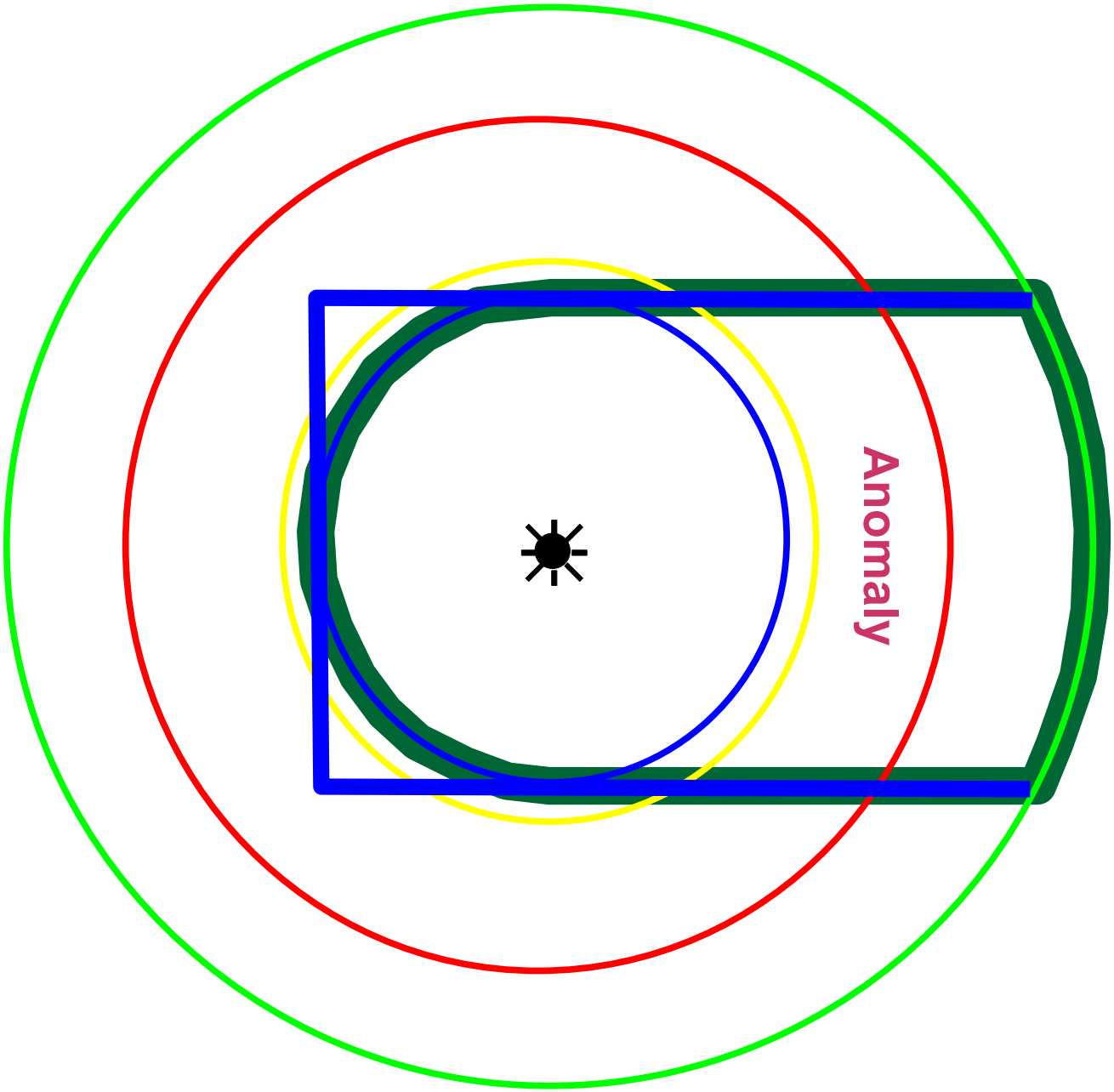
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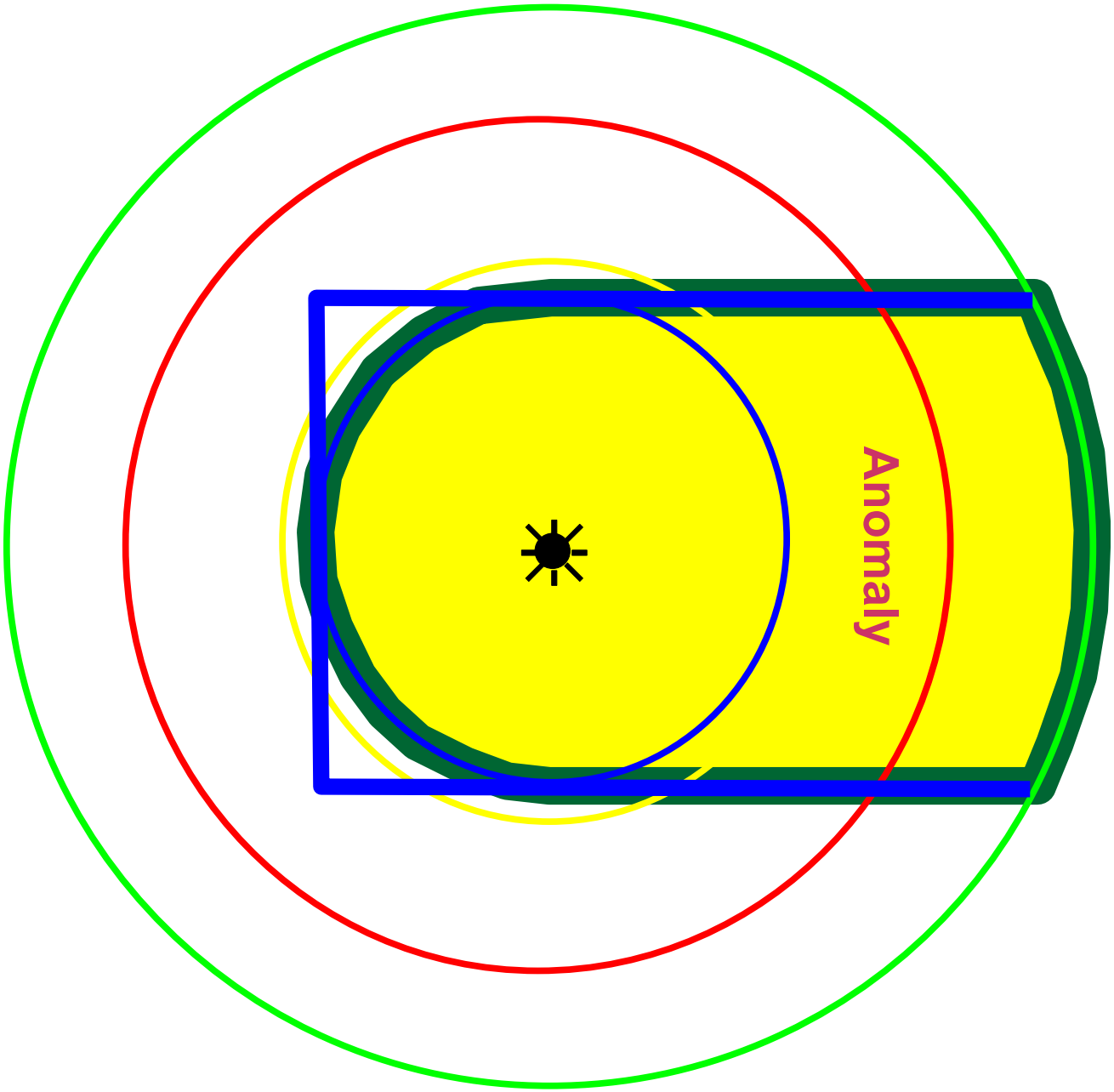
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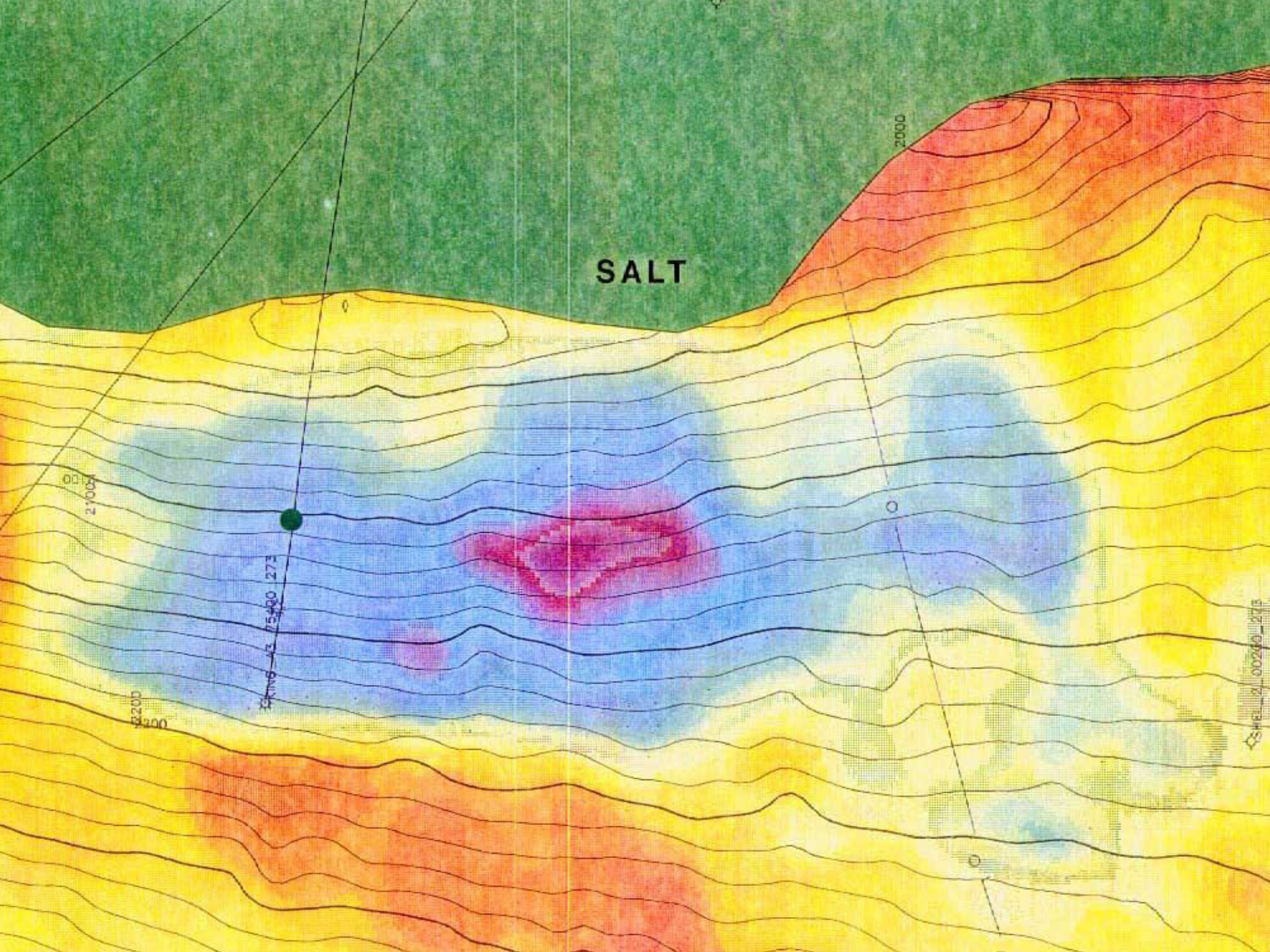
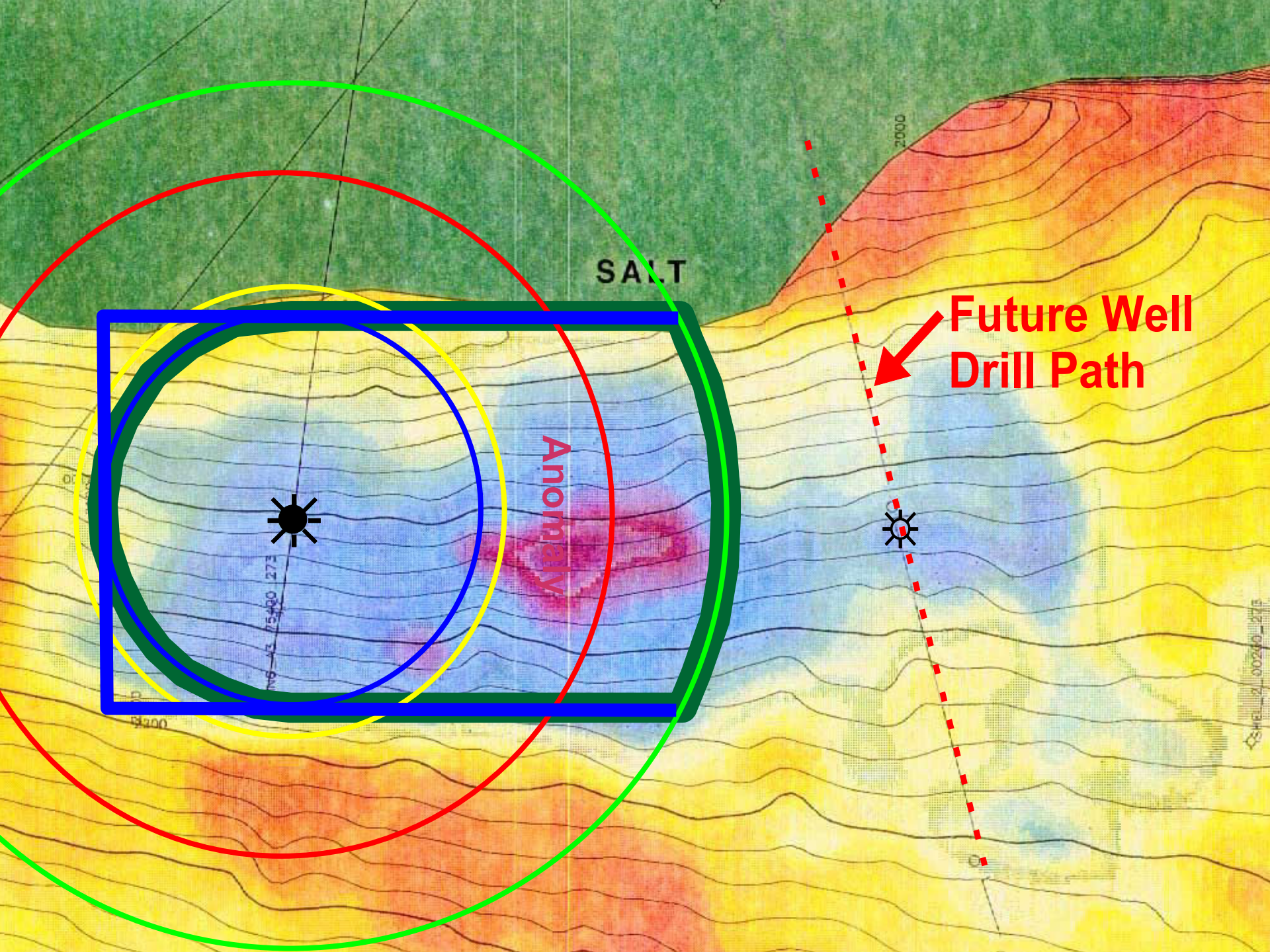

SALT
2000
2100
2200
2300


SALT
Anomaly
Future Well
Drill Path