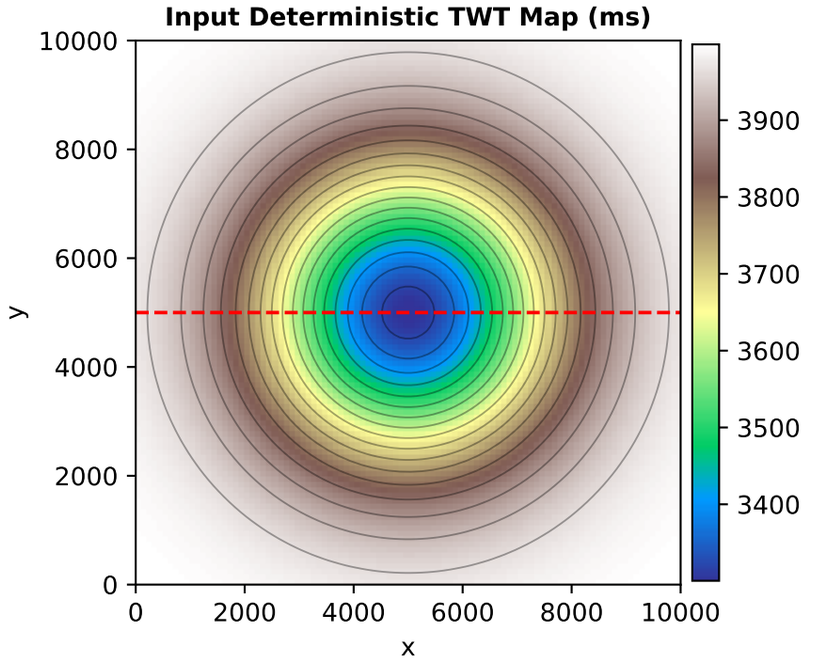
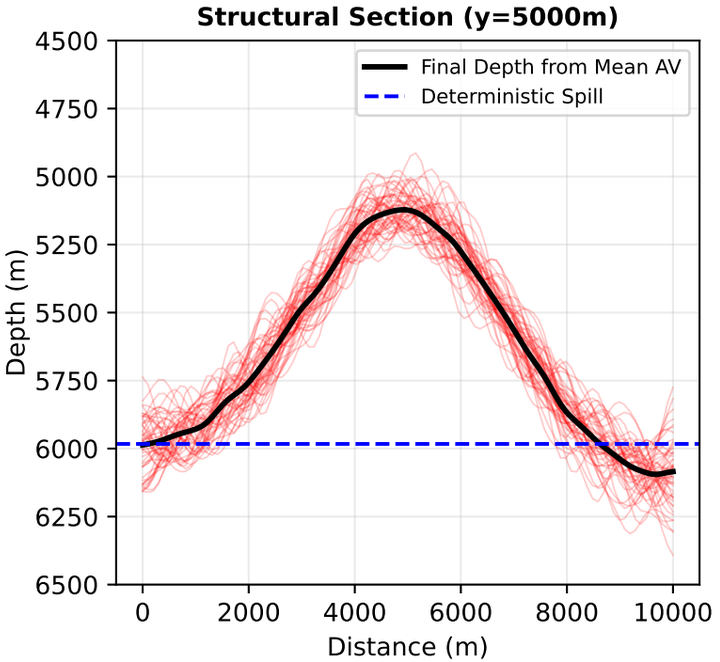
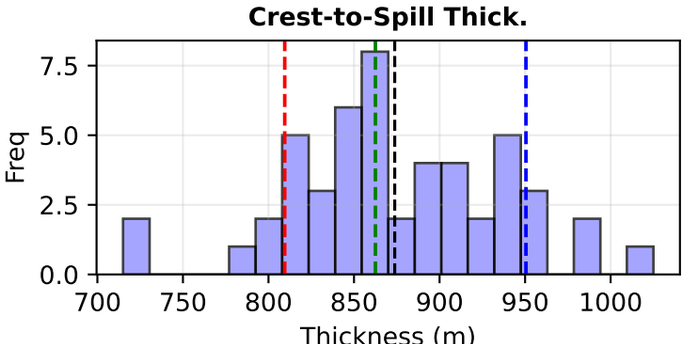
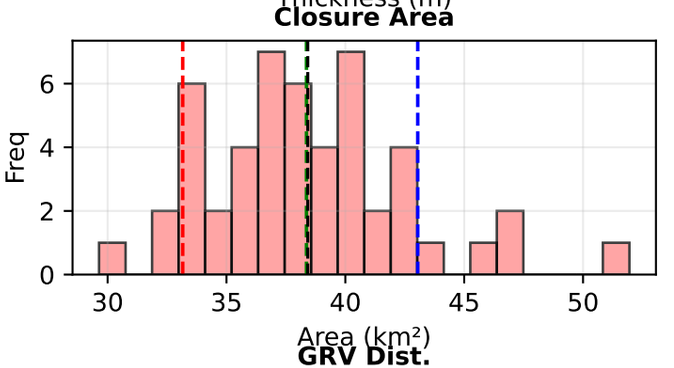
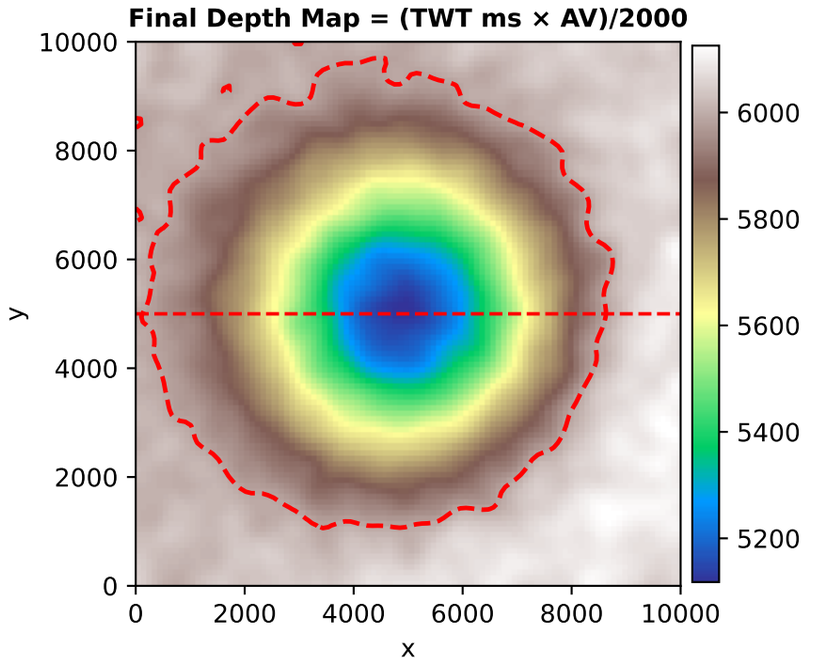
Structural Uncertainty Evaluation

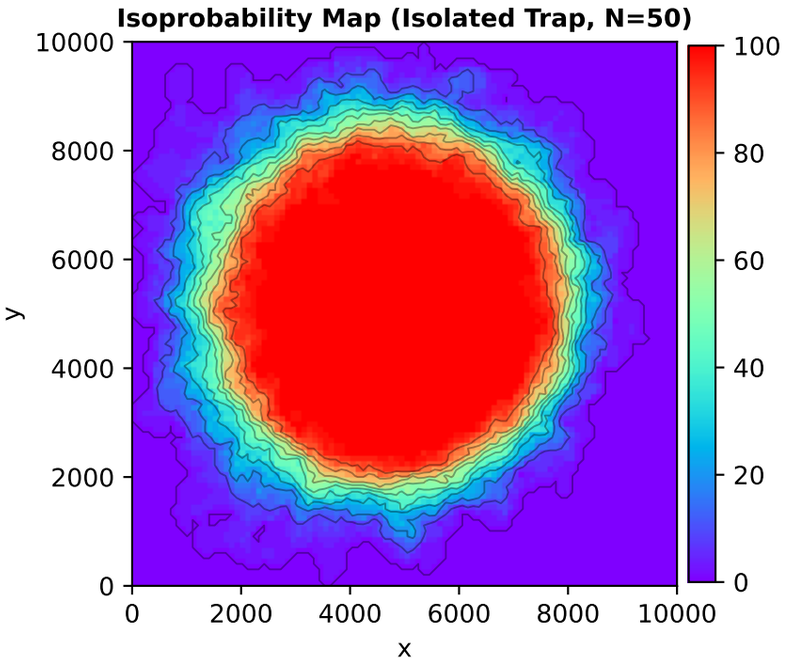


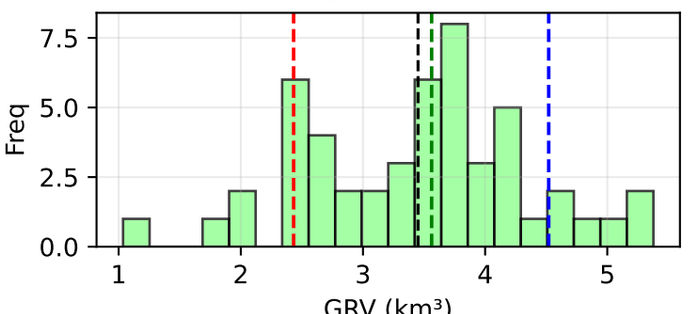


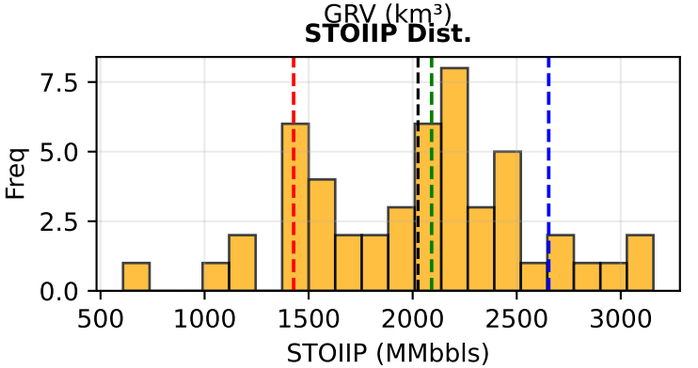












Structural Uncertainty Evaluation — Tables

Summary Statistics (P90 / P50 / P10 / Mean)

Metric	P90	P50	P10	Mean
Thickness (m)	809.5	862.5	950.5	873.8
Area (km²)	33.159	38.365	43.046	38.42
GRV (km³)	2.432	3.562	4.52	3.451
STOIIP (MMbbls)	1427.938	2091.079	2653.742	2025.843

Per-Realization Results (first 20 rows)

Realization	SpillDepth(m)	CrestDepth(m)	Thickness(m)	Area(km2)	GRV(km3)	STOIIP(MMbbls)
1.0	5897.604	5037.604	860.0	39.08	3.663	2150.1
2.0	5928.229	5063.229	865.0	43.82	2.521	1479.863
3.0	5910.622	5125.622	785.0	42.78	4.511	2647.94
4.0	5875.274	4985.274	890.0	36.61	4.145	2433.508
5.0	5878.285	5063.285	815.0	35.92	1.036	608.239
6.0	5888.103	4973.103	915.0	37.7	1.877	1101.962
7.0	5839.737	4989.737	850.0	32.2	2.857	1676.96
8.0	5881.518	4986.518	895.0	38.48	3.063	1797.985
9.0	5924.497	5019.497	905.0	42.96	3.769	2212.427
10.0	5844.037	4899.037	945.0	33.06	2.099	1232.462
11.0	5913.54	4933.54	980.0	39.67	4.393	2578.781
12.0	5899.873	5039.873	860.0	36.65	4.071	2389.875
13.0	5911.744	5101.744	810.0	40.23	3.701	2172.611
14.0	5884.682	5009.682	875.0	37.01	4.25	2494.846
15.0	5856.313	5031.313	825.0	32.91	3.447	2023.761
16.0	5884.043	5034.043	850.0	38.52	2.436	1430.16
17.0	5990.761	5040.761	950.0	51.95	5.144	3019.907
18.0	5857.378	5012.378	845.0	33.17	1.989	1167.908
19.0	5912.804	4977.804	935.0	40.44	4.609	2705.961
20.0	5886.852	4991.852	895.0	37.26	3.202	1879.842

Structural Uncertainty Evaluation — Parameters and Configuration

Input & Realizations
- Surface: Synthetic TWT Input
- Number of realizations: 50
- Velocity Std. Dev. (m/s): 43.0
- Smoothing sigma: 2.0
- Contour step (spill search, m): 5

Variogram
- Model type: Gaussian
- Range (m): 1500
- Sill: 1.0
- Nugget: 0.0

Volumetrics
- Thickness mean (m): 102
- Thickness std. dev. (m): 37
- N/G: 0.8
- Porosity: 0.2
- Water saturation (Sw): 0.3
- FVF: 1.2

Equations
- Depth(m) = TWT(ms) × AV(m/s) / 2000
- HIIP = (GRV × N/G × Φ × (1 - Sw)) / FVF