# Resource and Geological Modeling Overview

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# Strata Energy Integrated Modeling Strategy

## 3D Geologic Model

- Gemcom Software - proven mining industry modeling software
- Industry-standard technologies integrate with IT infrastructure
- Database of over 5000 drill holes modeled (2000 within Ross Permit Area) > 10,000 interpreted data points
- Integration of historic data and rapid acquisition and interpretation of new data

## Resource Model

Confinement of Uranium mineralization demonstrated

Demonstrated absence of structural discontinuities

## Hydrologic Model

Well defined confining surfaces

Accurate structure contours

Strata Energy has developed an integrated geologic modeling solution that provides:

- Data Accuracy → robust model and reliable results
- Efficiency → rapid updates to the model

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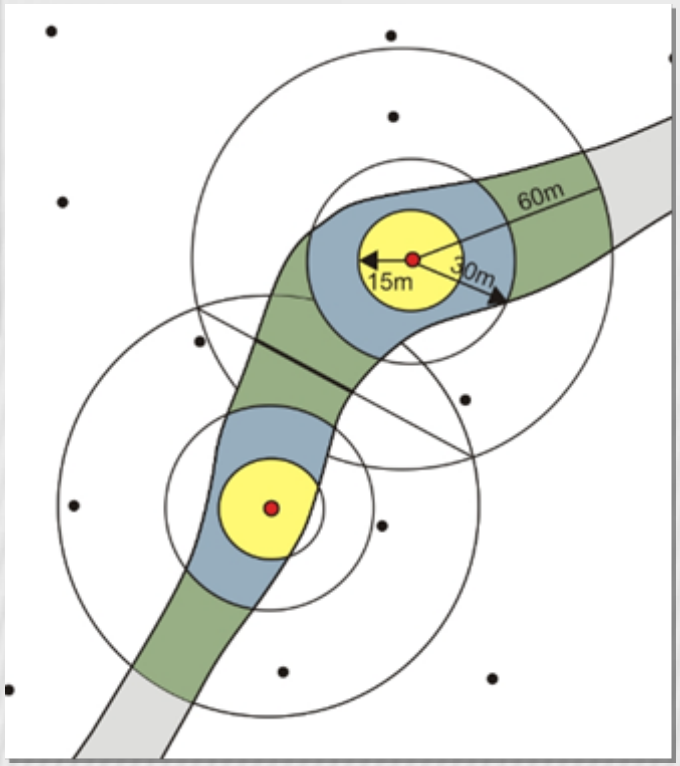
# Ross Permit Area – JORC Resource August 2010

| Ross Permit Area* | Tonnes | Grade (ppm $U_3O_8$) | $U_3O_8$ (lbs) | Thickness (ft) | GT |
|---|---|---|---|---|---|
| Measured | 1,980,618 | 503 | 2,195,283 | 9.0 | 0.45 |
| Indicated | 2,403,208 | 476 | 2,523,628 | 8.8 | 0.42 |
| Inferred | 688,141 | 477 | 724,107 | 8.9 | 0.42 |
| Total | 5,071,967 | 487 | 5,443,018 | 8.9 | 0.43 |




Calculation method:

GT – constrained polygonal

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# Resource Estimation

Resource Estimates for In Situ Leach Uranium Projects and Reporting Under the JORC Code ( Australasian Joint Ore Reserves Committee)

Estimating and reporting Uranium mineral resources for ISR Projects

Additional factors, which are required for the Competent Person to be confident that there are "reasonable prospects for eventual economic extraction", include:

- permeability of the mineralized horizon;
- hydrological confinement of the mineralized horizon; and
- amenability of the uranium minerals to dissolution by alkaline solutions.

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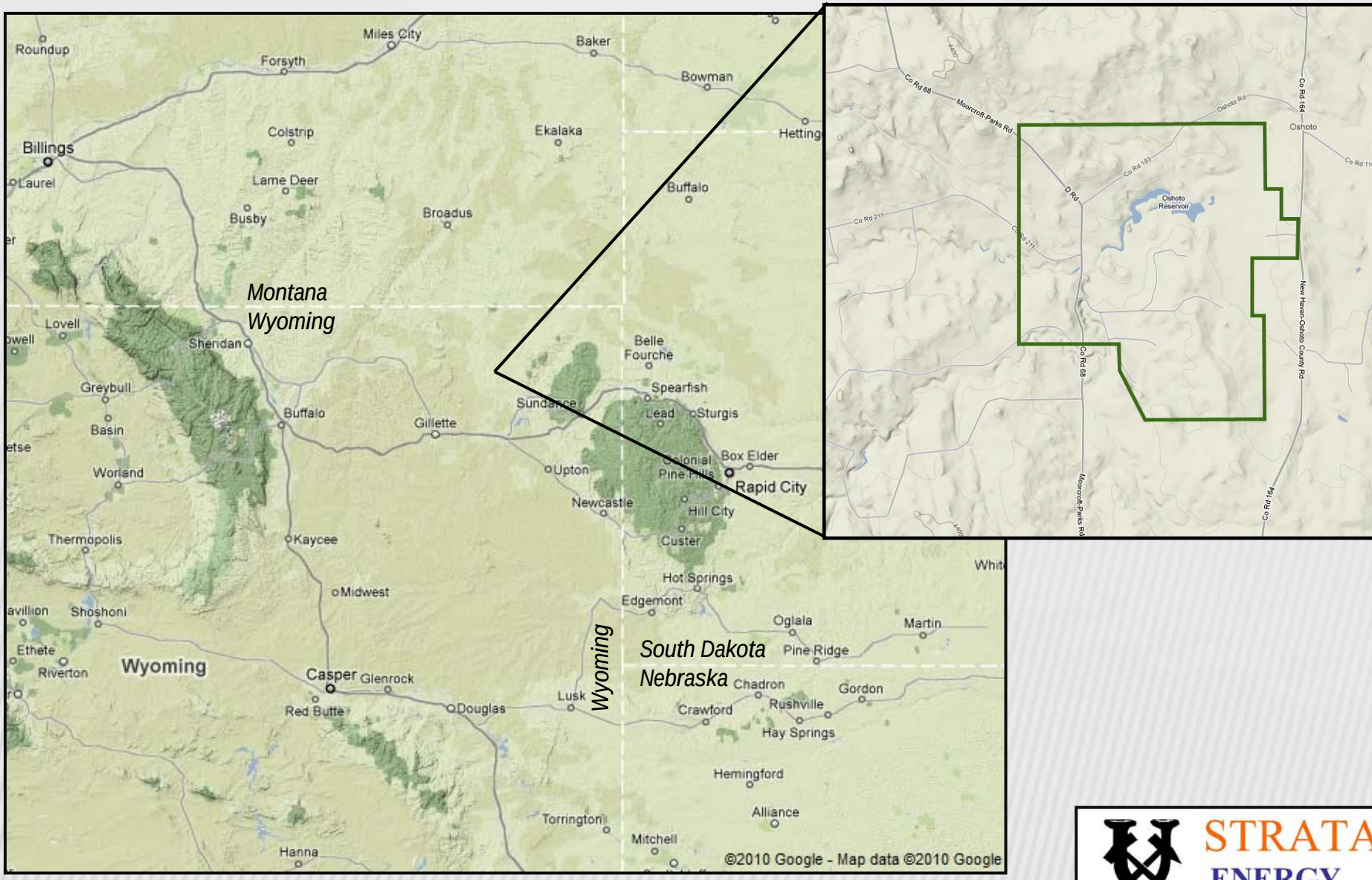
# Area of Reference for Lance Project Area

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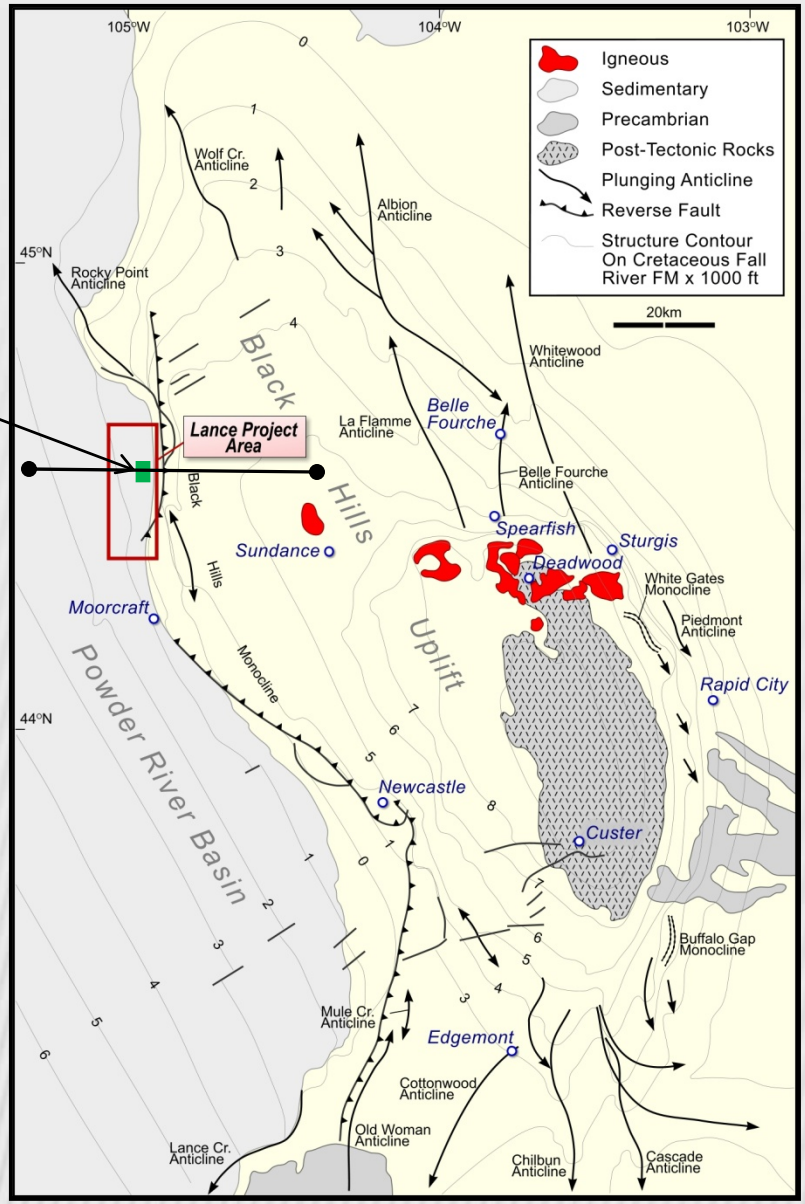
# Tectonic Map of Black Hills Uplift

*Ross Permit Area*

*Regional Cross-Section*

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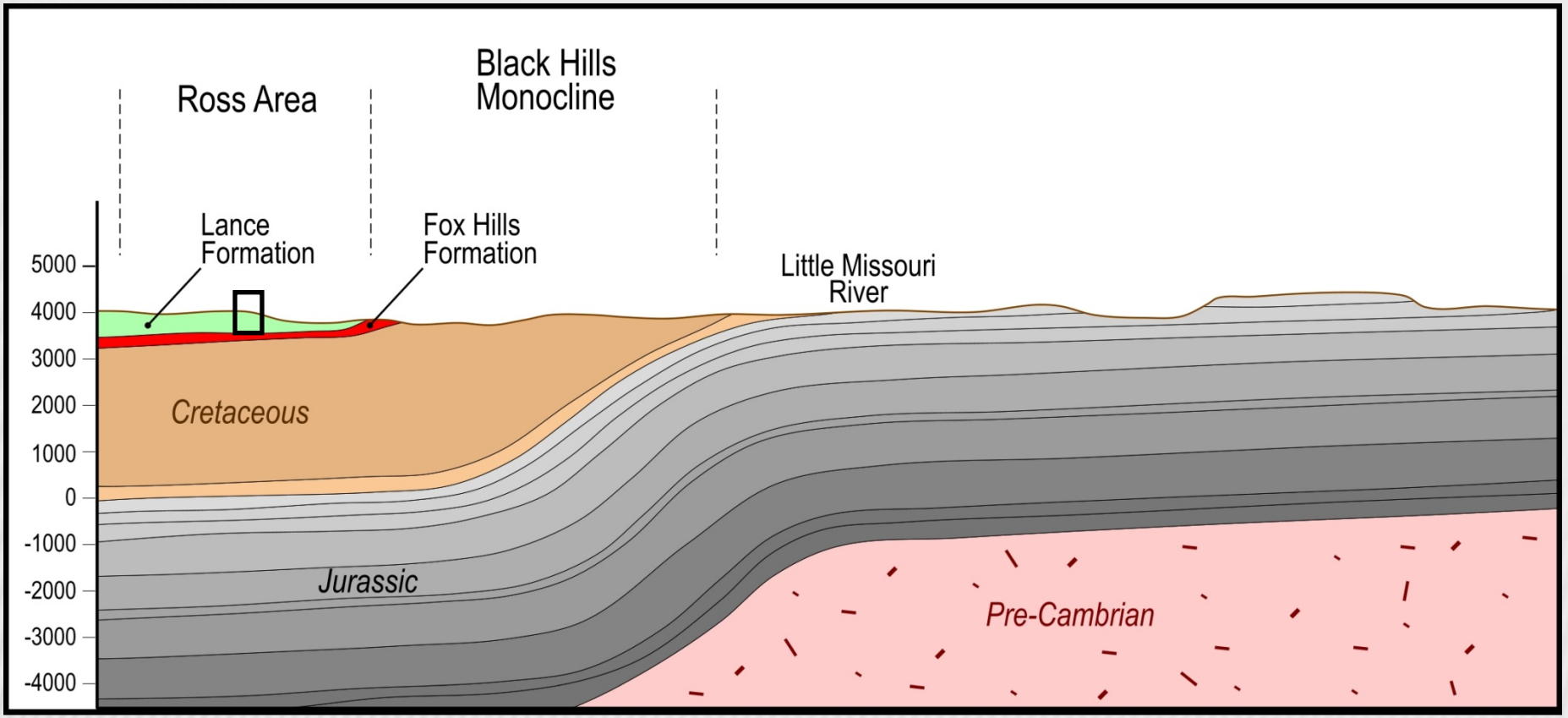
# Cross-Sectional view of Regional Geology

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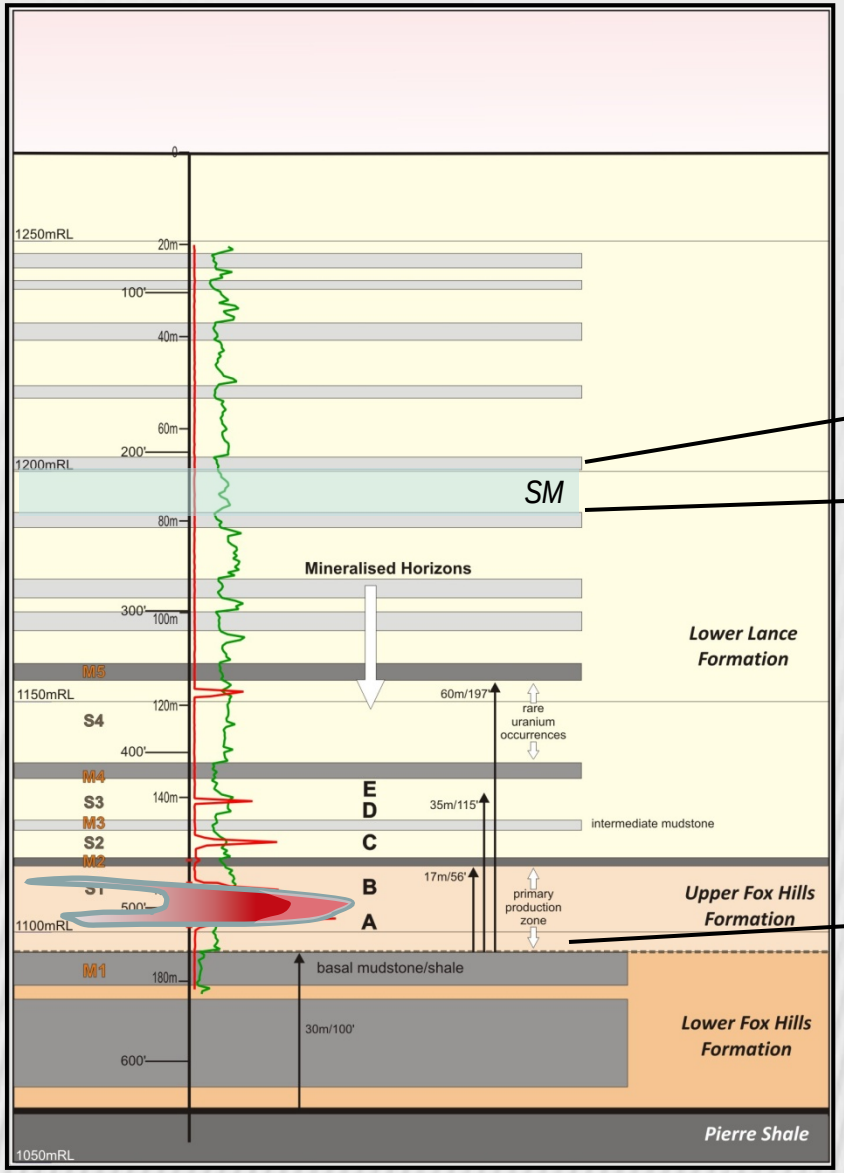
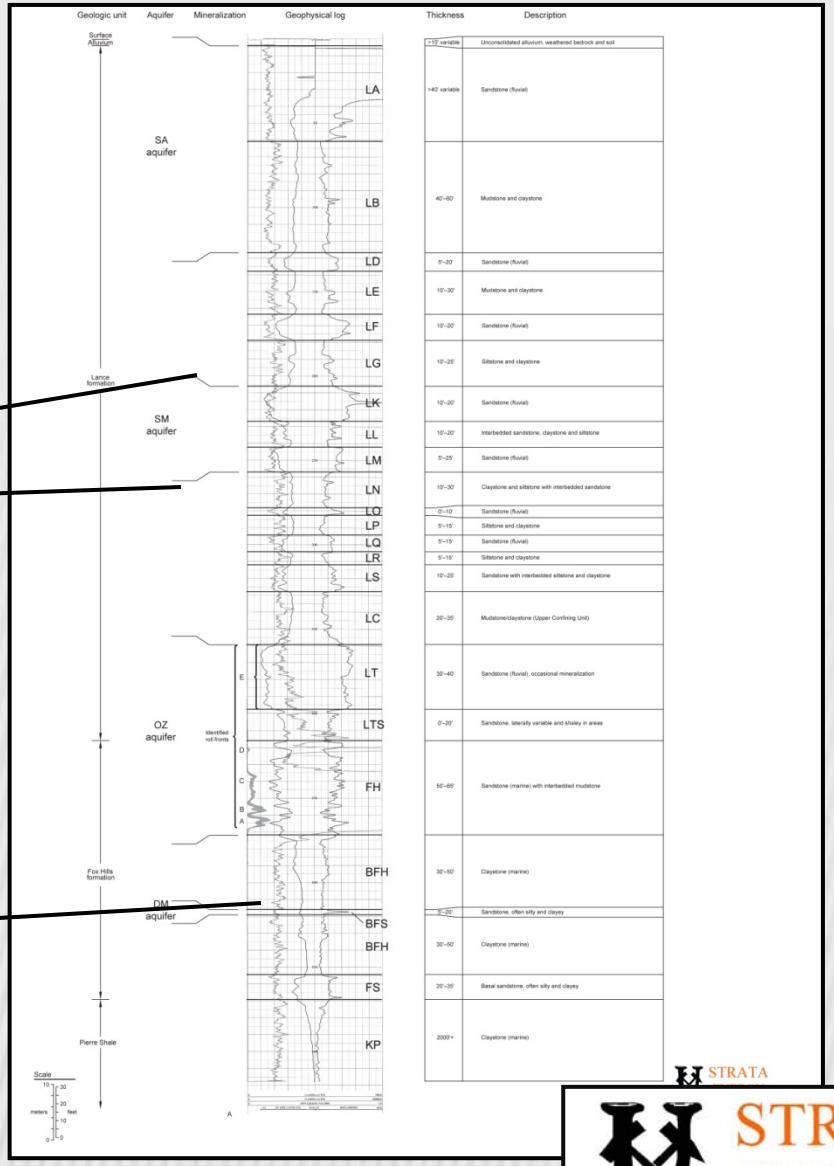
# Geologic Type Section

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# Modeling Method and Procedure

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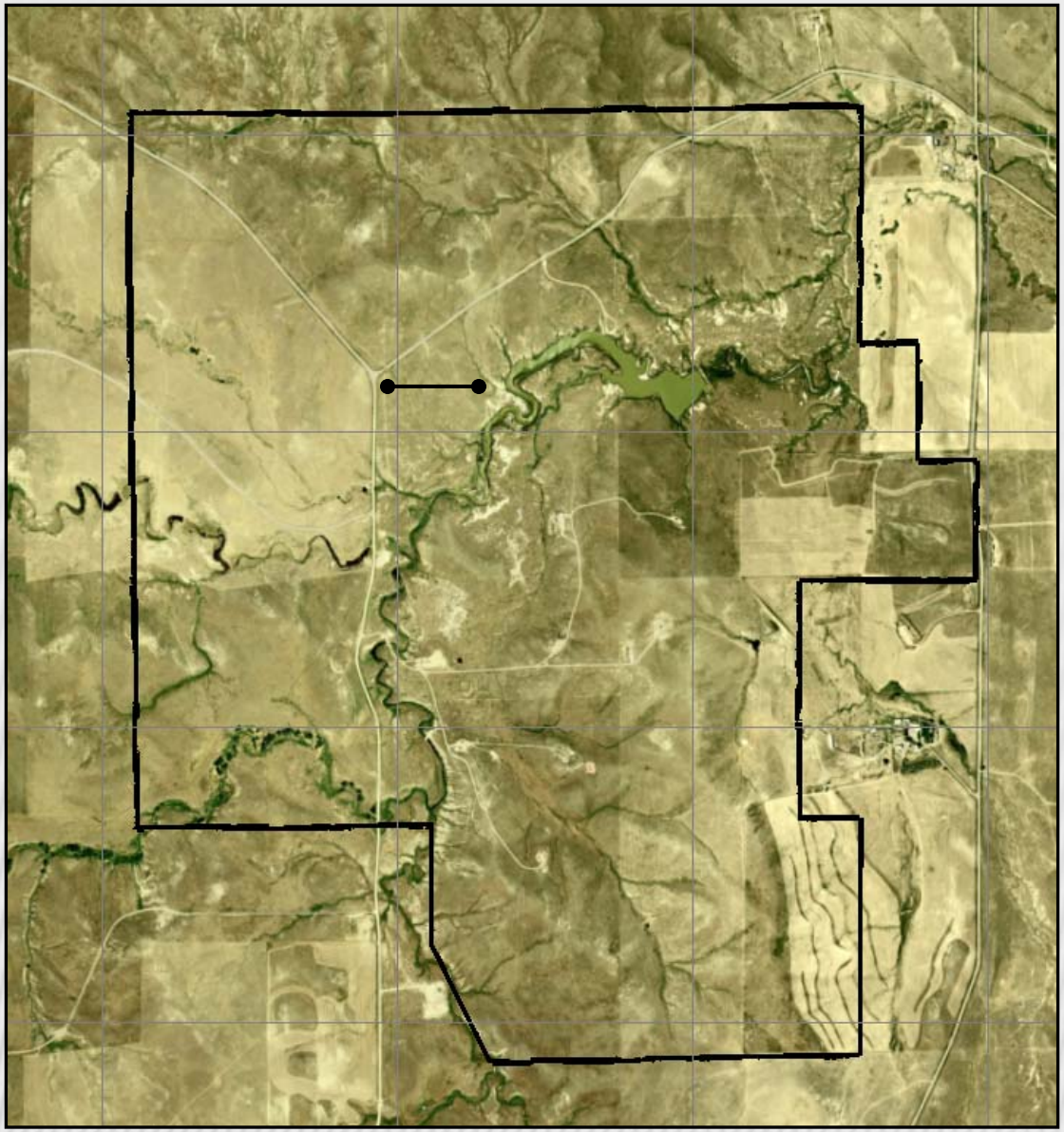
# Starting reference for 3D model



Plan view 3D, Permit boundary area illustrated by green line

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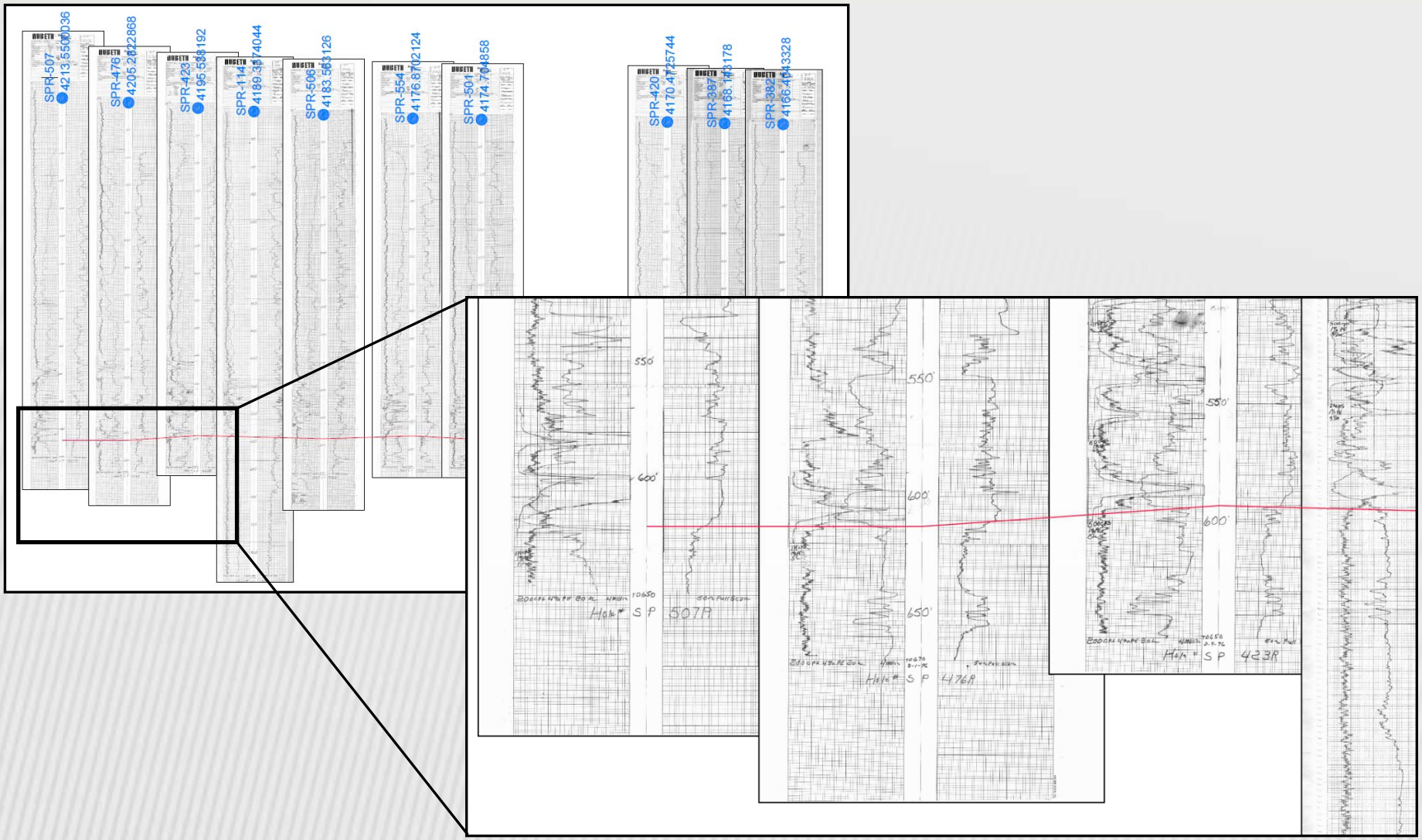
# Analog Method of Interpretation

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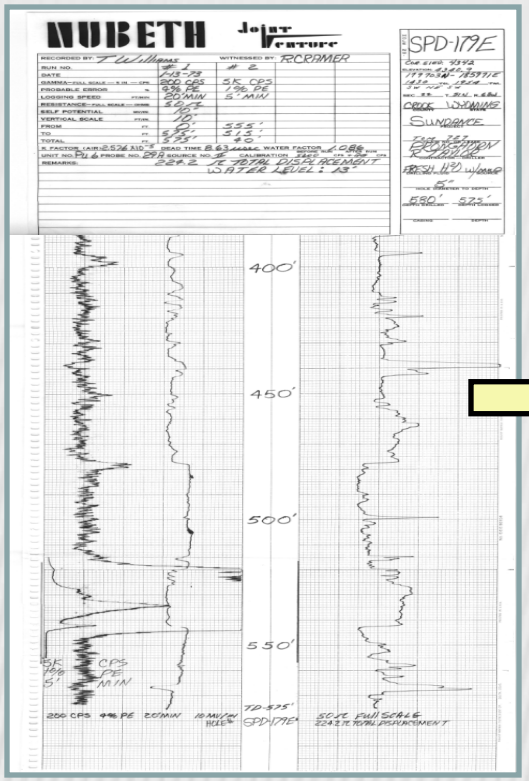
# Acquisition / Digitizing of NuBeth Database

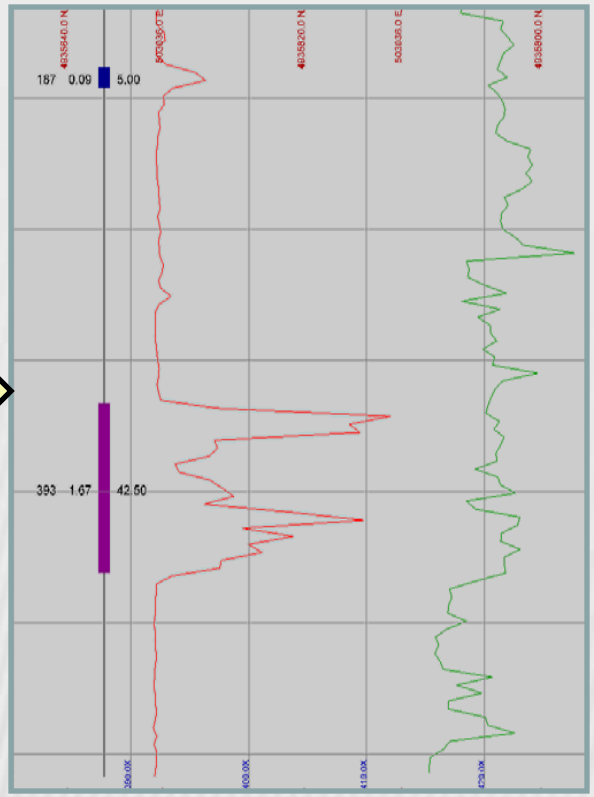
## Analog Hard Copy




## Text / CSV File

```
#
~Curve Information Block
#MNEM.UNIT       API CODE      Curve Description
#----------   -------------   ------------------
 DEPT.FT                  :   Depth in Feet
 GAMMA.CPS                :
 SP   .MV       01 010 01 01:   Spontaneous Potential
 RES .OHMM                :
#
~Parameter Information Block
#MNEM.UNIT            Value                 Description
#----------   -------------------   ------------------
 Deadtime.Sec              8.63:    Dead Time
 KFactor.           0.00002576:    K Factor
 WaterFactor.            1.086:    Water Factor
 RUN .                     ONE:    Run Number
 PDAT.                       :     Permanent Datum
 EPD .FT                0.0000:    Elevation Of Perm. Datum
 WSTA.                       LOC:
 E   .FT                0.0000:    E (Stretch Coefficient Of The Cable)
 TD  .FT              580.0000:    Total Depth
#
~Other Information Block
<DescLogPlotStart>   NEURALOG PLOT DEFINITION
PLOTDEFVERSION: 3
LASFILE: N:\MIS\ter-10-19-2009 rush project-disc1-SPD-E-series\las\SPD179E.las
DEPTHSCALE: 240.000000
RESOLUTION: 200
DEPTHLABELFREQ: 100.000000
HEAVYGRIDFREQ: 100.000000
MEDIUMGRIDFREQ: 50.000000
LIGHTGRIDFREQ: 10.000000
#
#   TRACK 1
#
STARTTRACK:
 LEFTX: 0.500000 inch
 RIGHTX: 5.500000 inch
 SCALETYPE: Linear
 NUMCHARTDIVISIONS: 10
CURVE: GAMMA 0.000000   200.000000 (0,0,255)      Solid            2     Y
BACKUP: 0.000000   5000.000000 (0,0,255)      Solid            2
CURVE: SP     -50.000000 0.000000   (0,131,131)    Dot              2     N
ENDTRACK:
#
#   TRACK 2
#
STARTTRACK:
 LEFTX: 6.000000 inch
 RIGHTX: 11.000000 inch
 SCALETYPE: Linear
 NUMCHARTDIVISIONS: 10
CURVE: RES    0.000000   50.000000  (255,0,255)    Solid            2     N
ENDTRACK:
<DescLogPlotEnd>
~A DEPTH      GAMMA              SP                 RES
       0.000 47.12411705      -999.25000000     -0.12664640
       0.500 40.26236125      -999.25000000     -0.12664640
       1.000 43.48810998      -999.25000000     -0.12664640
       1.500 53.25828397      -999.25000000     -0.12664457
       2.000 43.73301052      -999.25000000     -0.12567943
       2.500 41.73184575      -999.25000000     -0.12270909
       3.000 27.15042706      -999.25000000     -0.11972404
       3.500 36.97357536      -999.25000000     -0.11674017
       4.000 37.00796385      -999.25000000     -0.11375629
       4.500 41.43240960      -999.25000000     -0.11077241
       5.000 40.30665332      -999.25000000     -0.10778853
       5.500 29.20818618      -999.25000000     -0.10480466
```

## Digital

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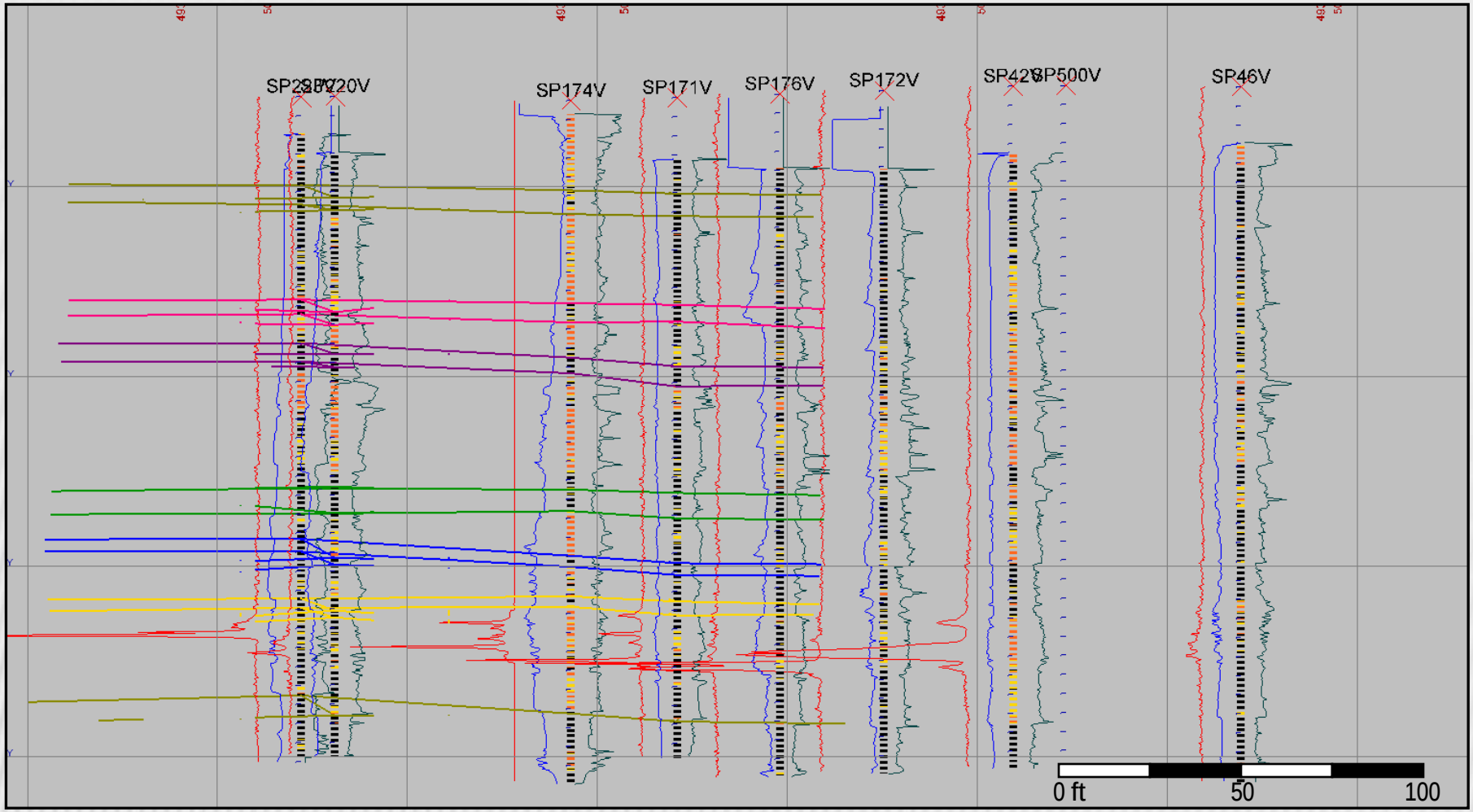
# 2 Dimensional View of Geologic Interpretation




Example of detailed baseline well installation surfaces.

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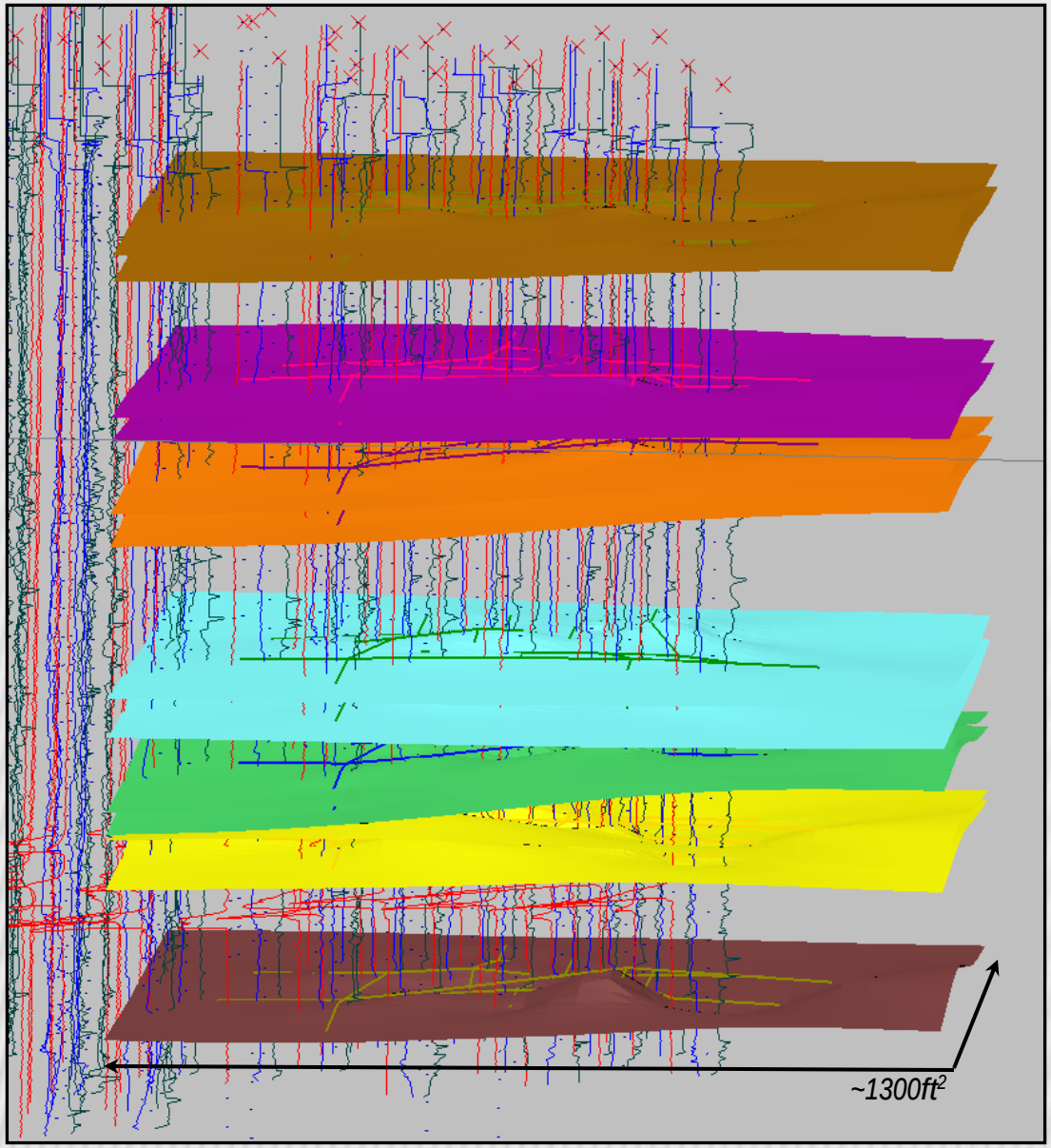
# Individual Monitor Well Cluster Surface Interpretation




Individual monitor well cluster shown with 3x vertical exaggeration.

The surfaces are defined by the digitized polylines that are visible on each surface.

Each polyline is a geologist interpretation of the subsurface drill hole data

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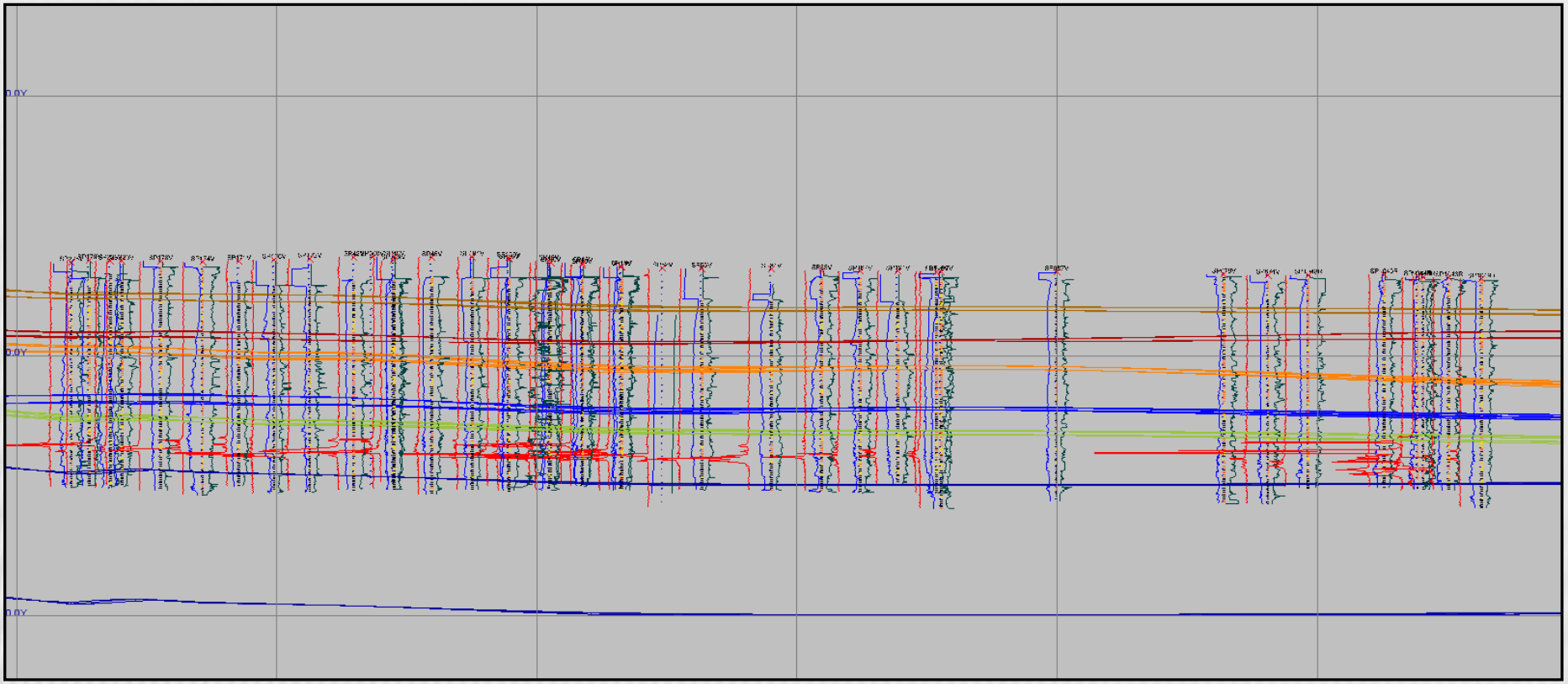
# Wide 2D View of Interpreted Area



View of surfaces generated over a broad area. The gamma curve in red is very distinguishable and lies within the sandstones just above the thick basal shale and the upper confining shales.

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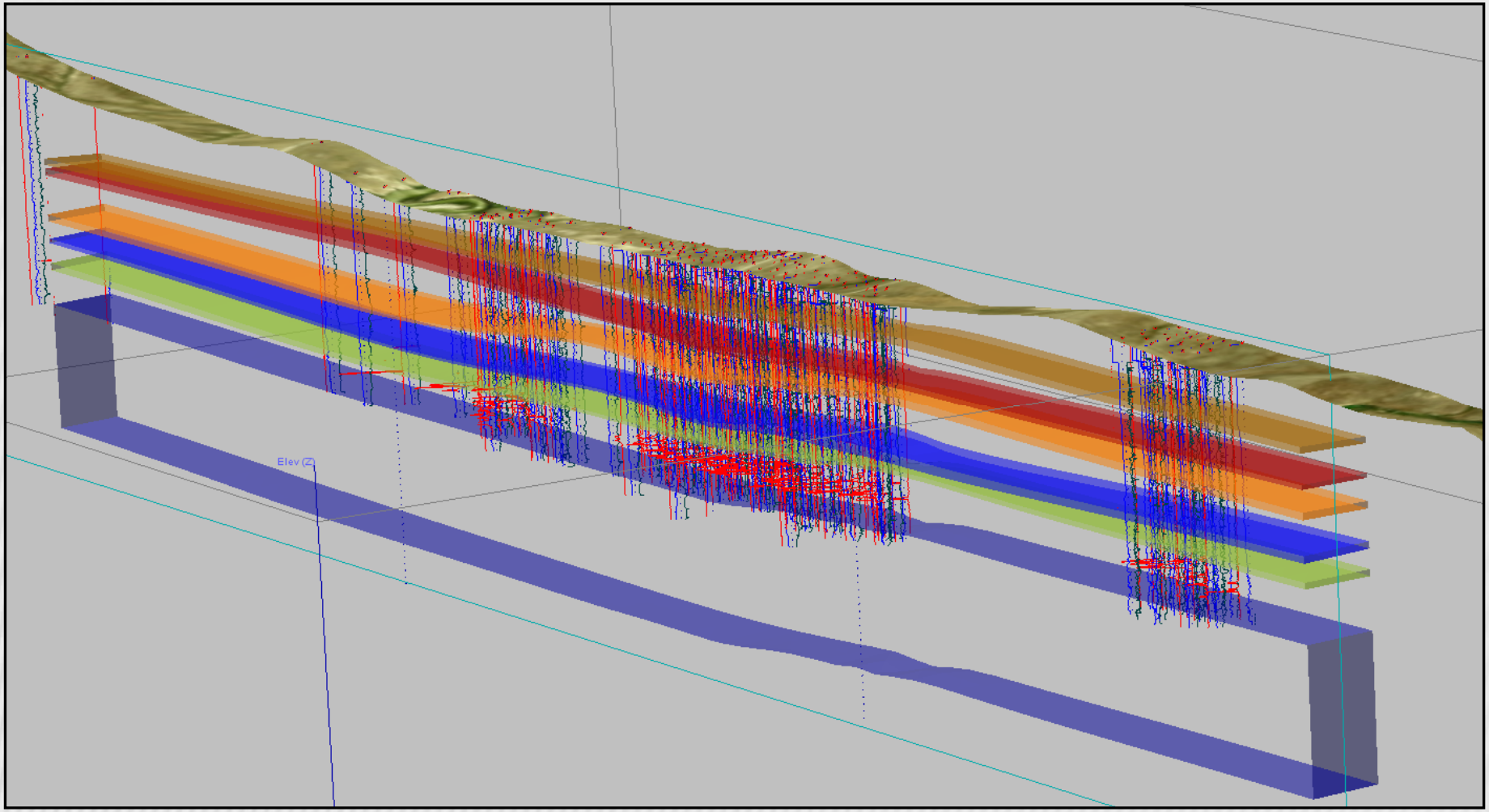
# Oblique 100 meter Slice of Drill Hole Data




3D view of vertical cross section projected 100 meters deep. The ability to portray data in 3D enables the geologists to readily examine subsurface data and make informed decisions concerning project drilling and development.

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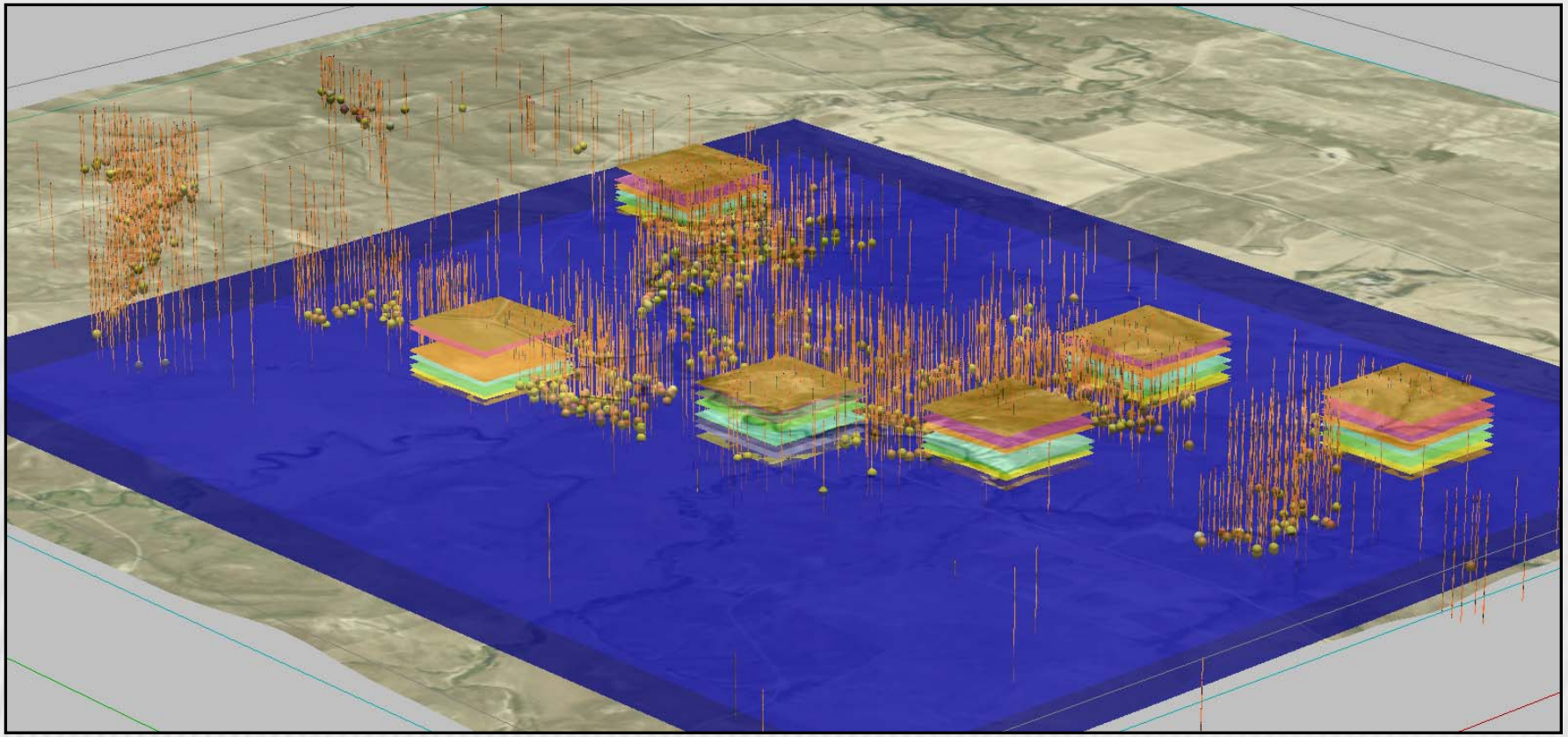
# Lance Uranium Project Geologic Modeling



Utilizing GEMCOM software to produce a 3D subsurface Geologic model

- Central database incorporates historic and current drilling data
- Collaborative geologic and resource data guides development program
- 3 Dimensional control of key geologic surfaces validated against known drill hole data points

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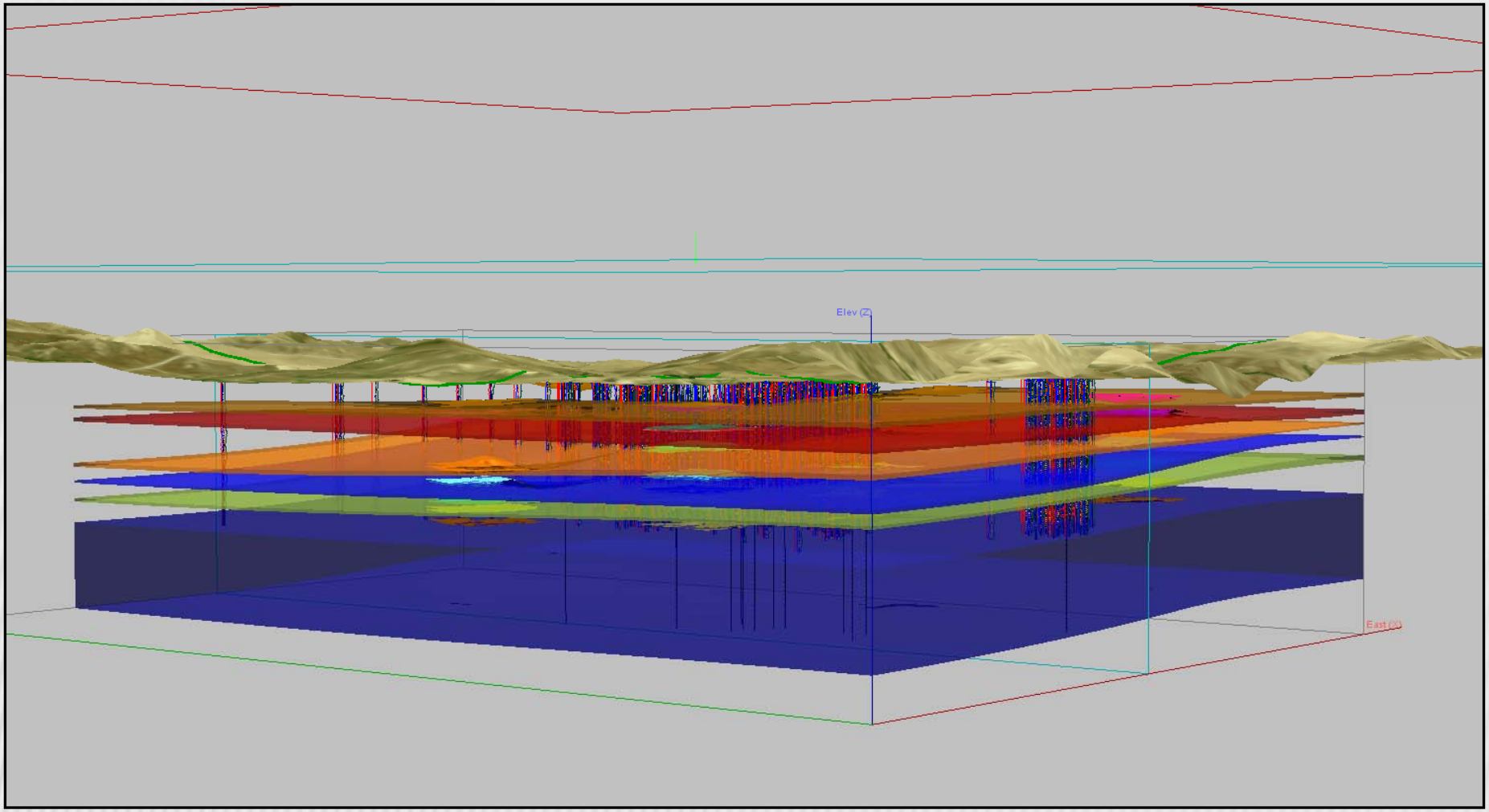
# Oblique View of Project Area



Shown with 3x vertical exaggeration, this block model illustrates the key confining surfaceswithin the area

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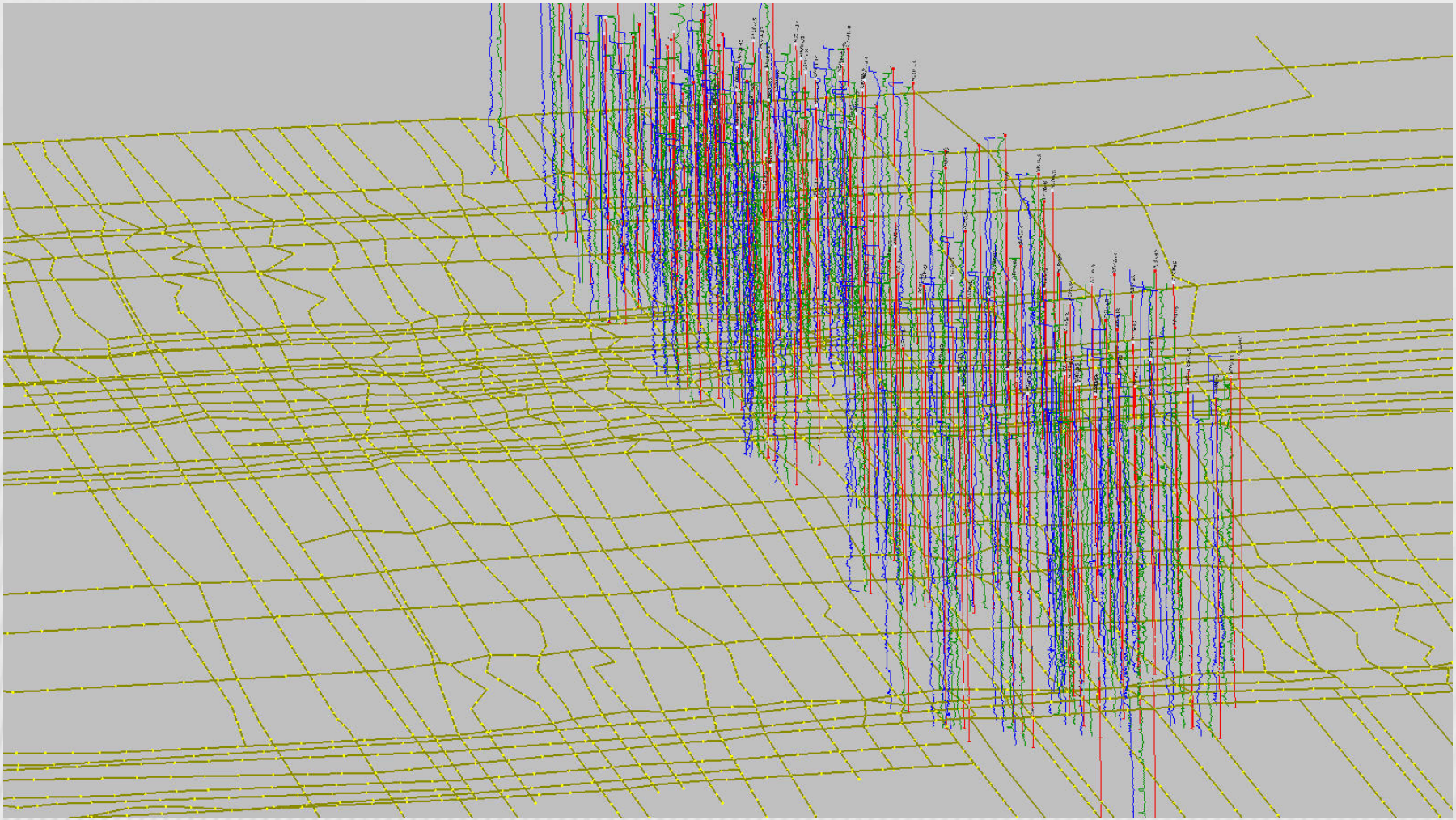
# Construction of Basal Shale Surface



*E-W, N-S  Sectional Interpretation*

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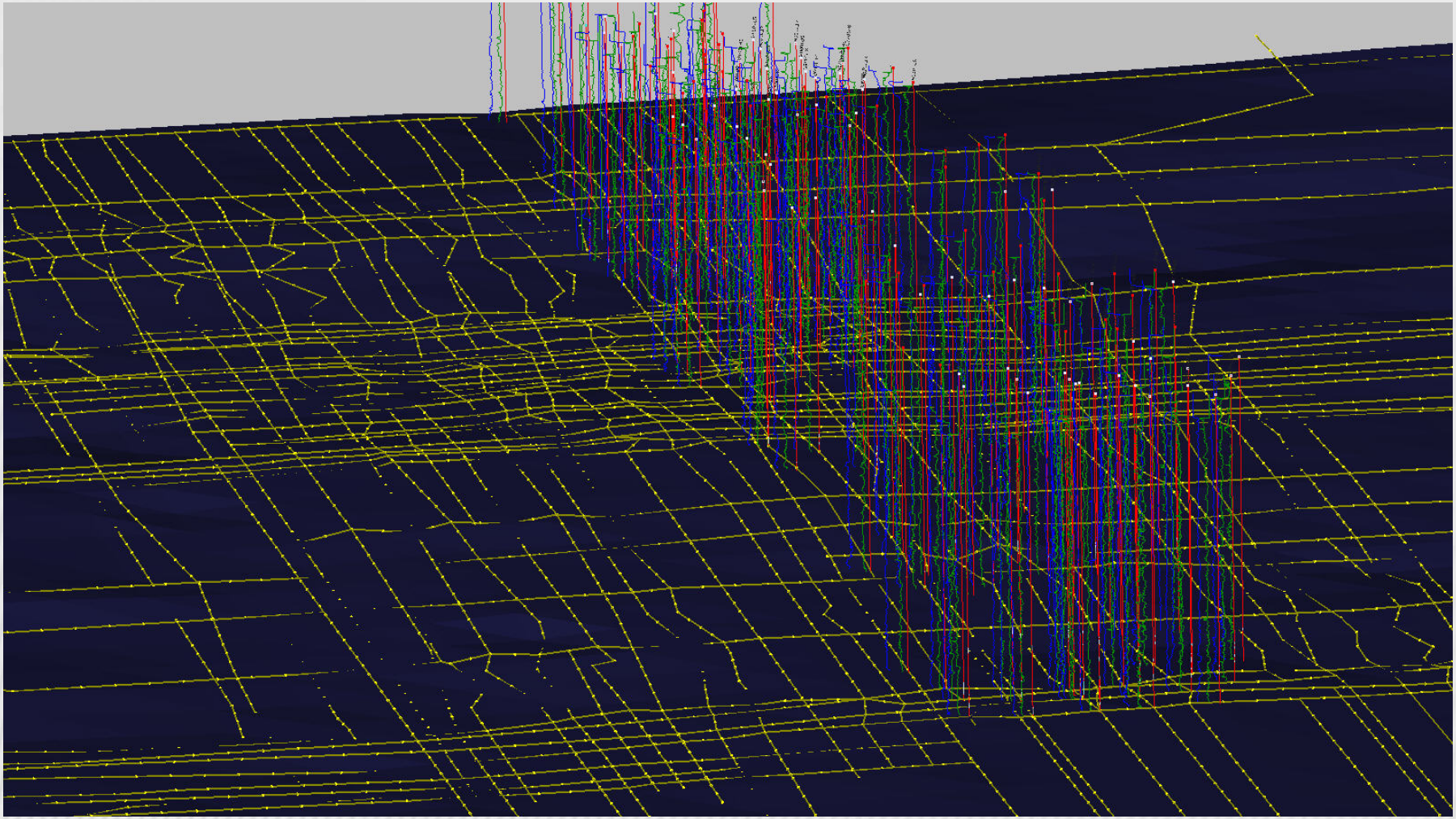
# Construction of Basal Shale Surface



*Surface generation*

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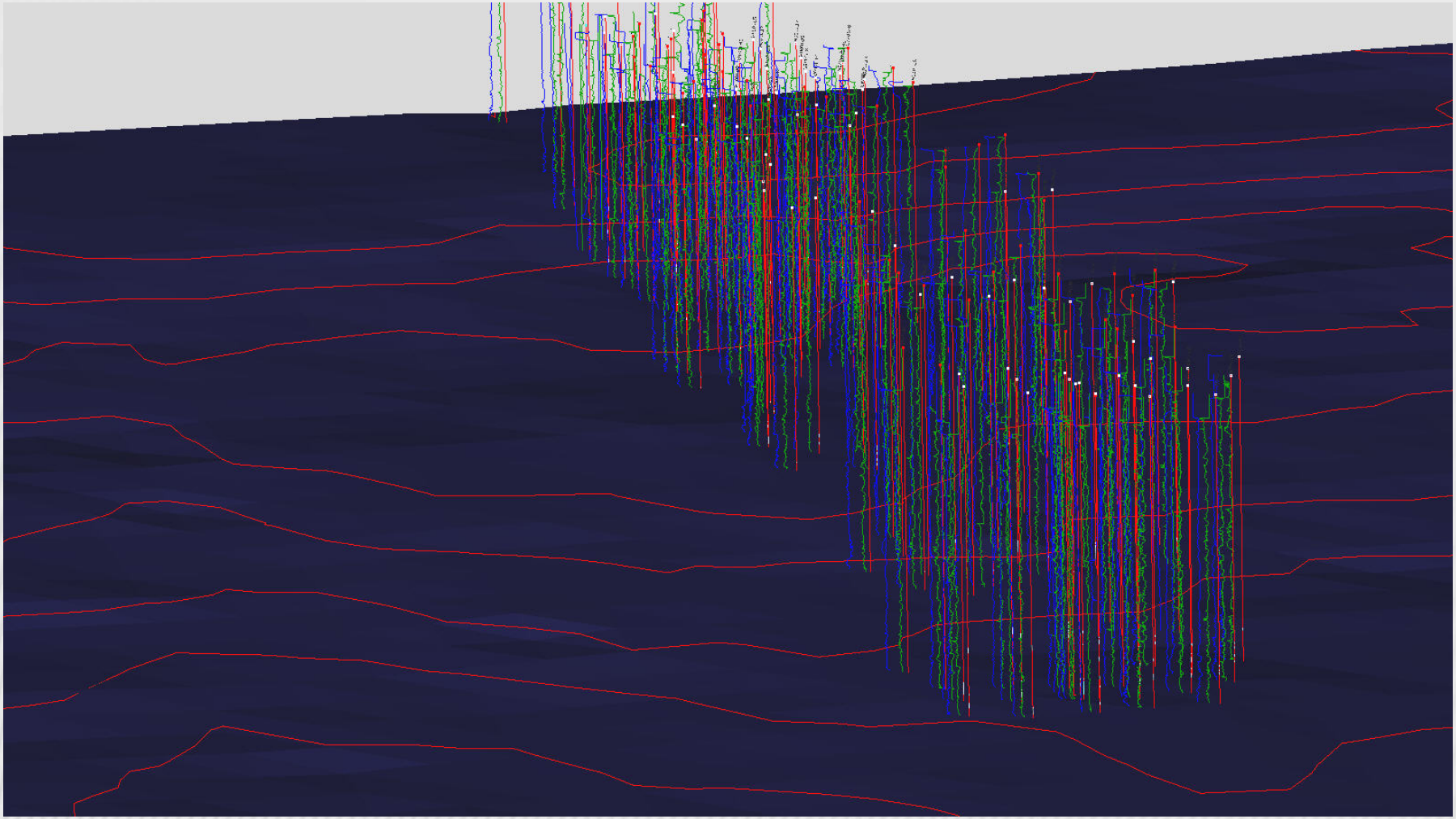
# Construction of Basal Shale Surface



*Surface Structure Contour*

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