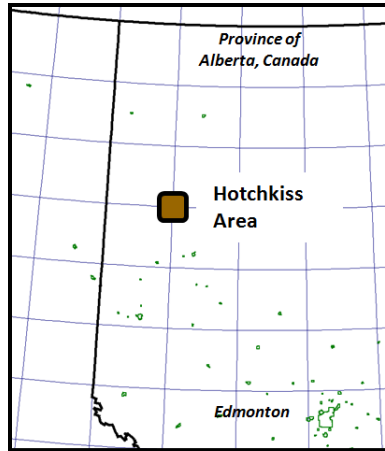
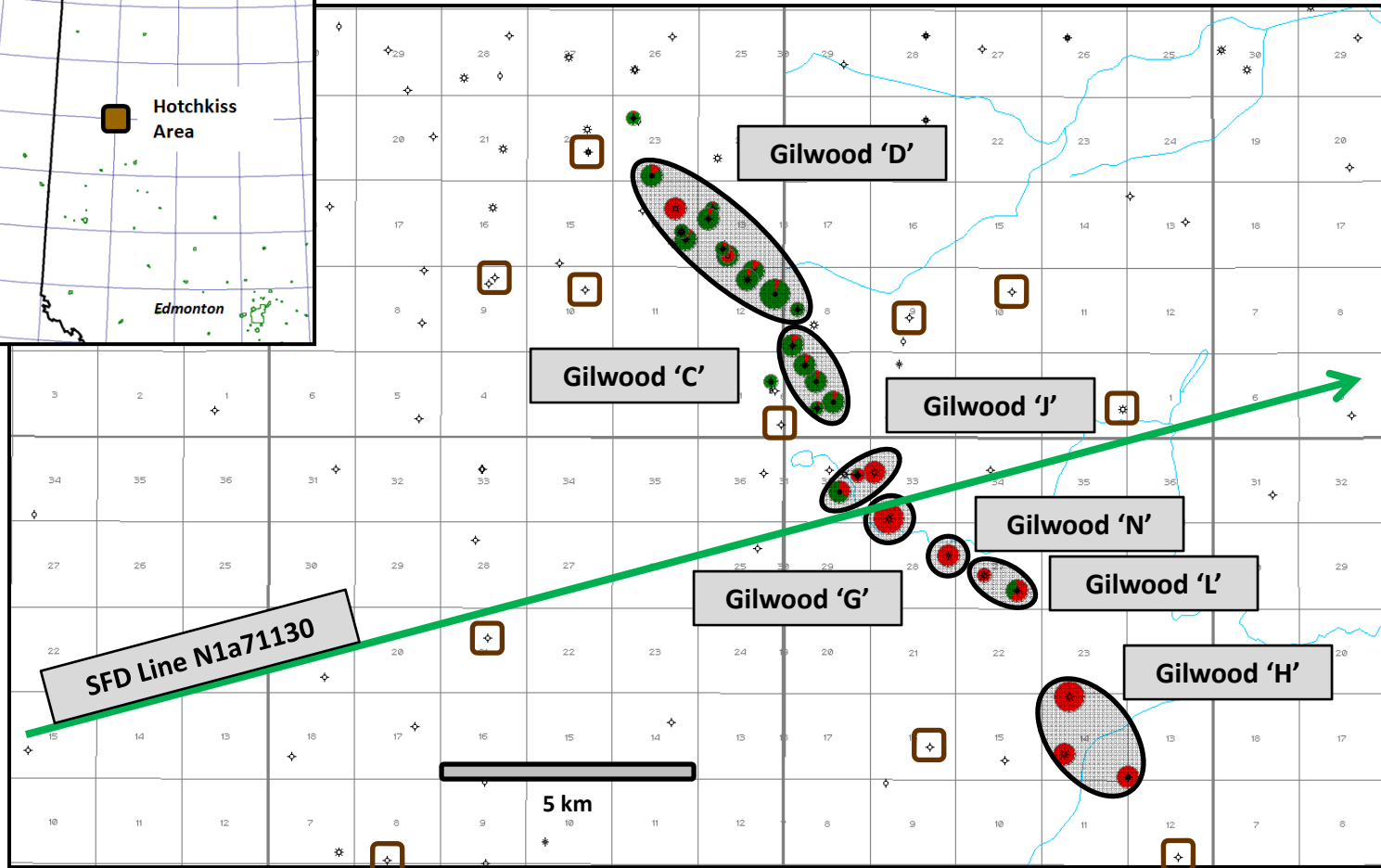



## SFD Case Example: Hotchkiss Field, Western Canada



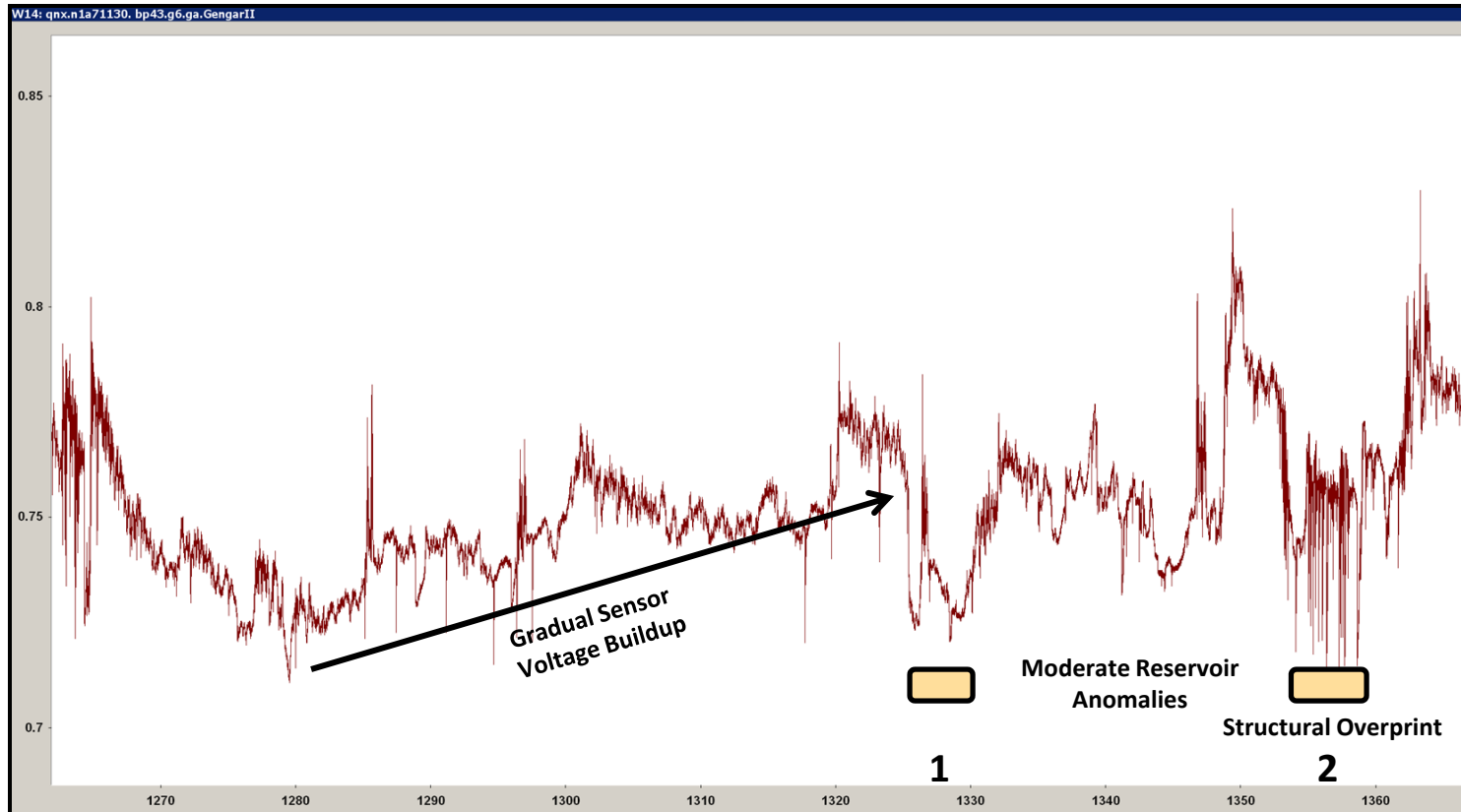
The Hotchkiss Field consists of a series of en echelon basement-cored structural traps: Narrow horsts and small rotated blocks, with Devonian (Gilwood) sands draped over these structures.



 Deep well control: dry holes

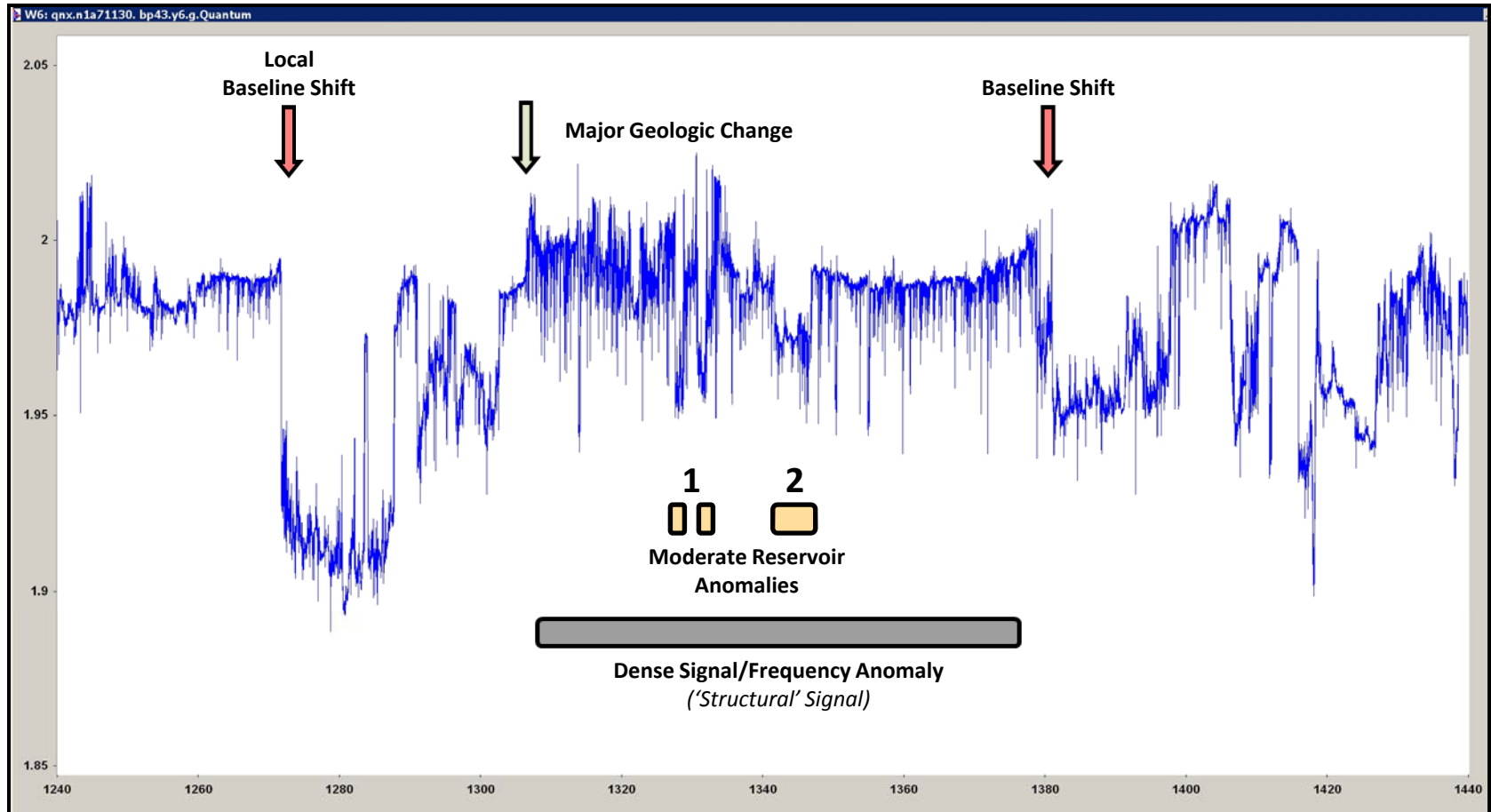
*SFD Case Example  
Western Canada*

**Hotchkiss Field**



**SFD signal display along line N1a71130: 1260 - 1370 seconds; sensor 'G2'.**

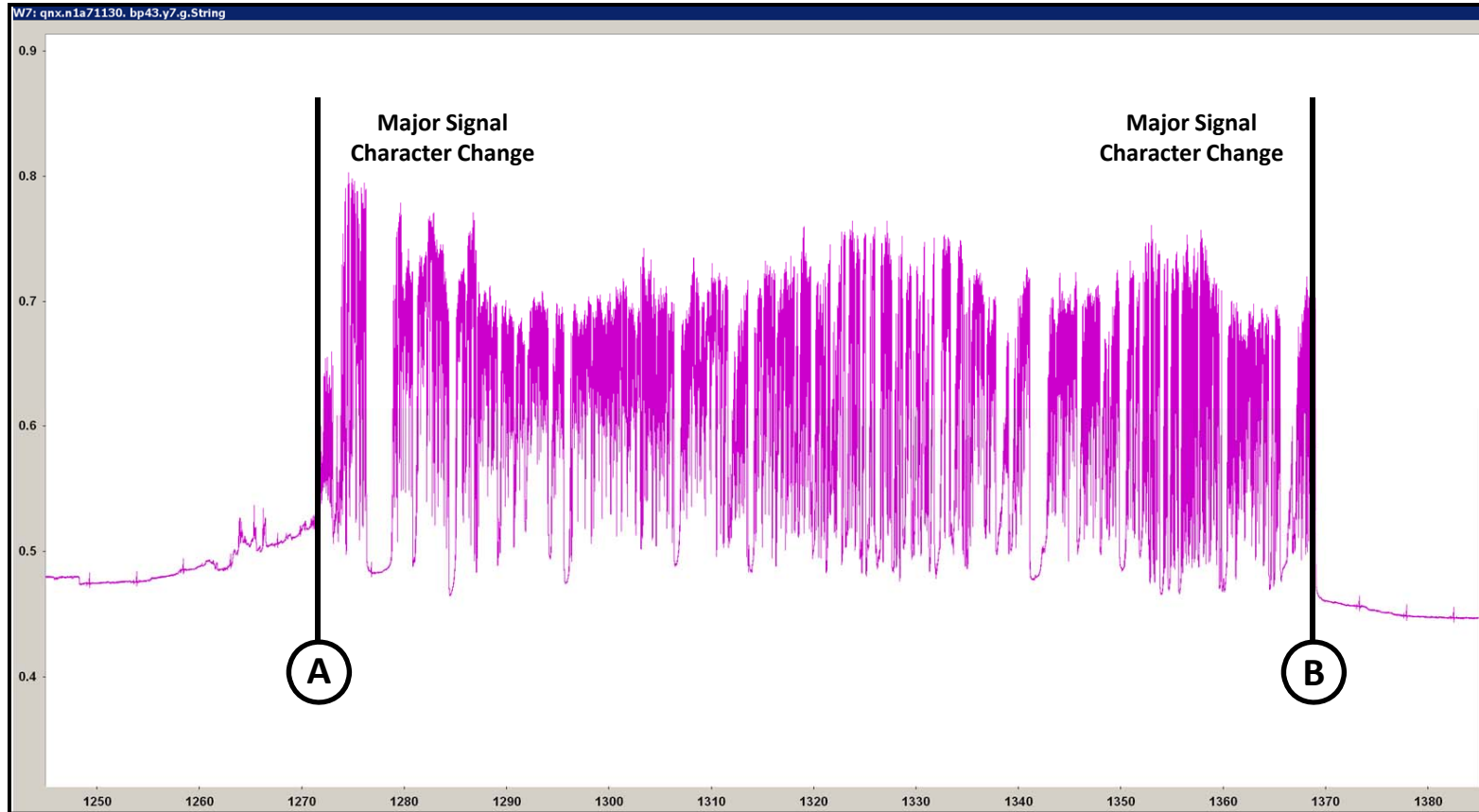
SFD Case Example  
Western Canada  
Hotchkiss Field



SFD signal display along line N1a71130: 1240 - 1440 seconds; sensor 'Q'.

*SFD Case Example  
Western Canada*

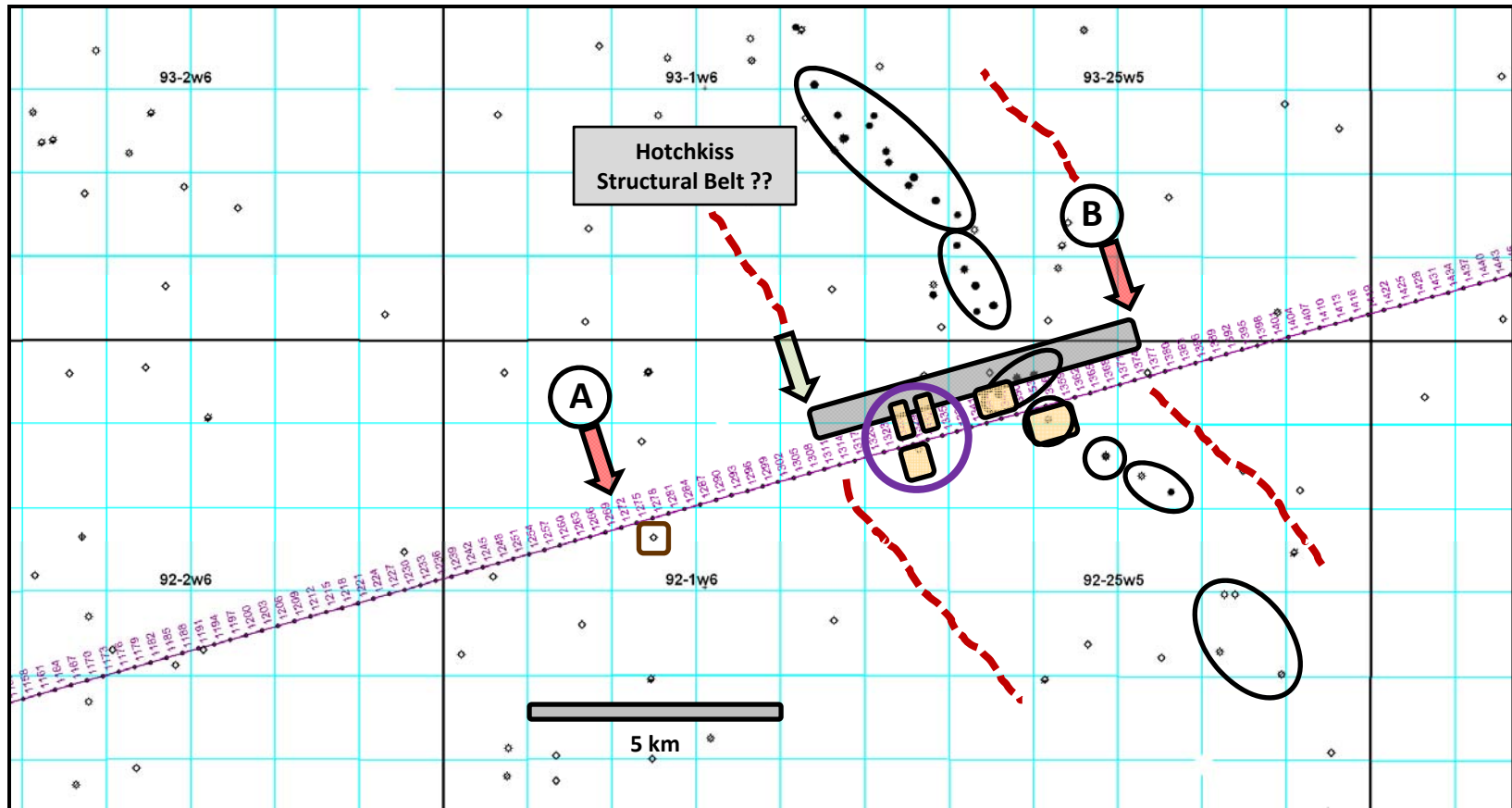
**Hotchkiss Field**



**SFD signal display along line N1a71130: 1245 - 1385 seconds; sensor 'S'.**

SFD Case Example  
Western Canada  
Hotchkiss Field

## Location of Principal SFD Anomalies Detected Along Line N1a71130 From Sensors 'G2', 'Q' & 'S'.



Note: The correlation of SFD signal response to actual geologic features represents an informed technical opinion as prepared by the NXT interpretation team. These interpretations, while believed reasonable, are non-unique. Other correlations and interpretations are possible.

*SFD Case Example  
Western Canada*

## **Hotchkiss Field**

### Key Observations

#### Sensor 'G2'

- ✓ Correctly identifies and accurately positions a moderate reservoir anomaly with structural overprint at '2', corresponding to the Hotchkiss 'G' pool.

#### Sensor 'Q'

- ✓ Correctly identifies and accurately positions a moderate reservoir anomaly at '2', corresponding to the west edge of the Hotchkiss 'J' pool.
- ✓ Detects a dense signal/frequency anomaly approximately 7 km long lapping across the Hotchkiss Field; Could possibly represent the '*Hotchkiss Structural Belt*'.
- ✓ Detects a local baseline shift approximately 10 km west of the Hotchkiss Field; Coincides geographically with a deeper well test – likely drilled on a basement feature on seismic.

#### Sensor 'S'

- ✓ Displays a high frequency signal anomaly approximately 12 km long from points 'A' to 'B'; Anomaly does not readily correlate to known geology, however its extent matches major baseline shifts from sensor 'Q'.

#### Sensor 'G2' and 'Q'

- ✓ Both detect a moderate reservoir anomaly at '1' (*purple circle*), which remains undrilled; Could represent an untested (*potentially productive*) Gilwood pool.

*SFD Case Example*  
*Western Canada*  
**Hotchkiss Field**

## Summary

- **The Hotchkiss survey proves useful in demonstrating the capability of the SFD system to detect and position smaller geologic features.**
  - **In certain suitable (*geologic/geographic*)<sup>1,2</sup> settings, the SFD system may resolve reservoir and structural targets which are as small as ½ by ½ kilometer in areal extent, with a spatial accuracy exceeding 0.25 km.**
  - **On any given survey, each of the SFD sensors will respond with a unique signal character and spatial accuracy. Although specific sensor anomalies are not identical, or do not overlay perfectly - In aggregate the sensor array provides excellent self-corroboration of stress anomalies.**
1. *The Hotchkiss region is characterized by a relatively simple structural regime. In highly complex and variably stressed geologic settings, the SFD signal may become 'confused', thereby preventing accurate detection of smaller anomalies.*
  2. *In order to detect these smaller anomalies, the SFD survey flight lines must directly cross or closely 'sideswipe' the subsurface features.*