



Tools that Think!

Natural Gas

Oil

Geothermal

Cybercoil's Advantage

- Positively identifies the lateral window and junctions to help optimize drilling techniques
- Ensure laterals are open and contributing to production
- Capable of placing stimulation chemicals in each open leg to help improve production
- Leg isolation techniques could be applied
- For time efficiency the tool kicks off, via E-coil, in any direction
- A single run in the hole to navigate all the open laterals in a well

Cybercoil – Multilateral Well Intervention Service

Cybercoil combines downhole electric motor and state-of-the-art sensor technologies to directly enter well laterals.

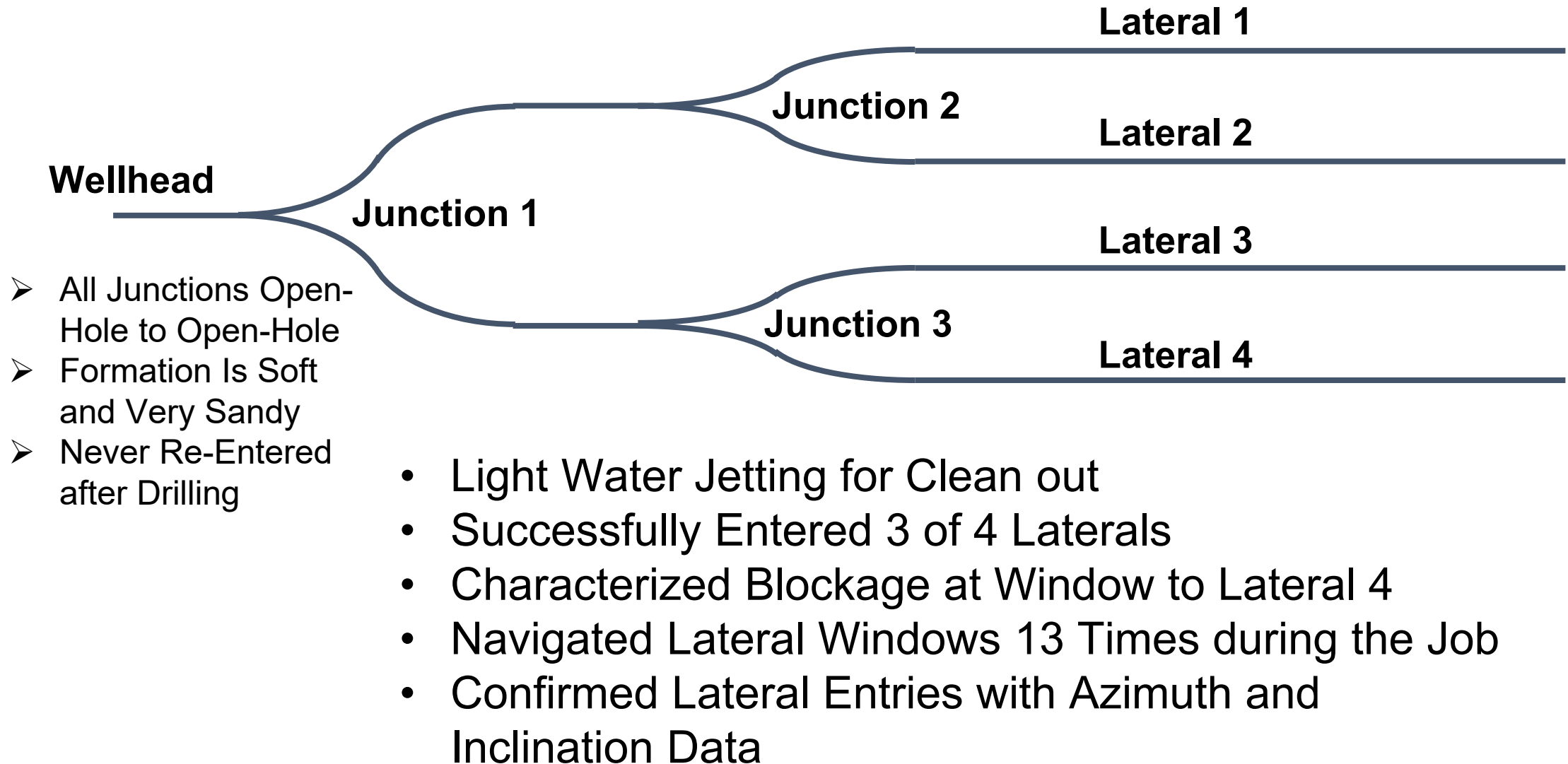


Intelligent Technology Enables Confident Lateral Re-Entry



- Positively Identifies the Lateral Window
- Positions the Kickoff Joint in the Lateral Window
- Automatically Adjusts Kickoff Plane for Tool Orientation
- Maintains Outer Lateral Wall Contact as Tool Is Advanced
- Realtime Comparison with Reference Azimuth, Inclination and Gamma Data

Cybercoil Case Study Building on Its Early Success



Cybercoil Unlocks Multilateral Intervention

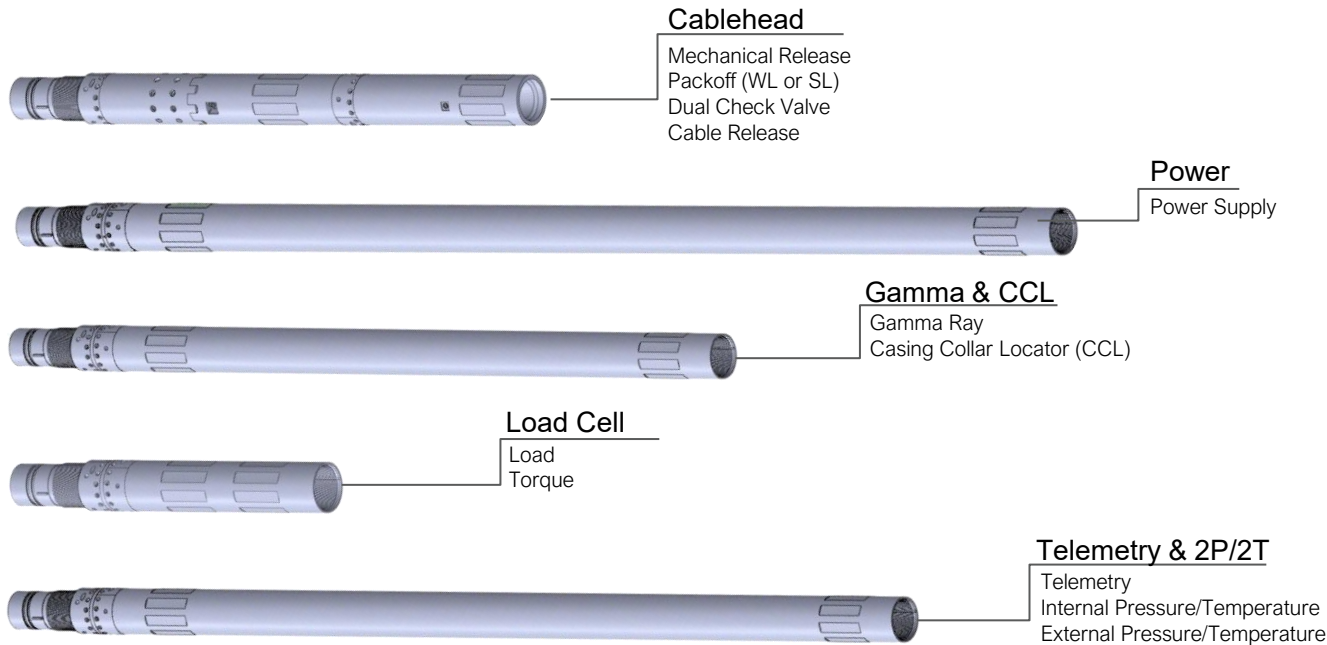
- Light Cleaning of Laterals to Help Improve Production
- Cleaning of Lateral Windows to Allow Lateral Access
- Capable of Placing Stimulation Chemicals to Improve Production
- Nitrogen Cleanout Compatible to Remove Well Debris
- Supports the Use of 3rd Party Washing Systems (SpinCat™)

Additional Termination Subs in Development

- Packer Setting Termination
 - Shutoff Applications in Laterals
- Plug Setting/Retrieving Termination
 - Retrievable Plug Applications in Laterals

Cybercoil – Tools

Base Tool



Tool Subs shown are 2 7/8"

Sensors

- Internal Pressure/Temperature
- External Pressure/Temperature
- Board Temperature
- Gamma Ray & CCL
- Tension, Compression, & Torque
- Azimuth
- Inclination
- Vibration
- Open-hole Detection
- Casing Window Detection
- Depth Encoder
- 2-Way Communications

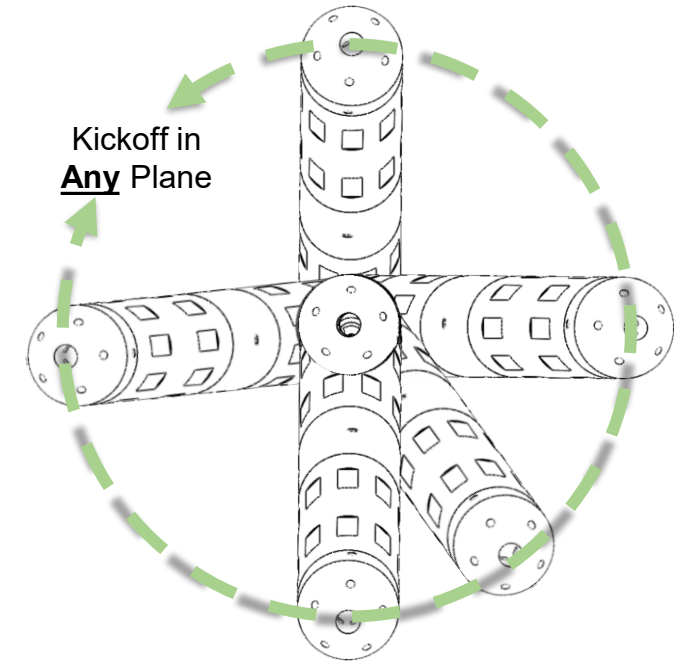
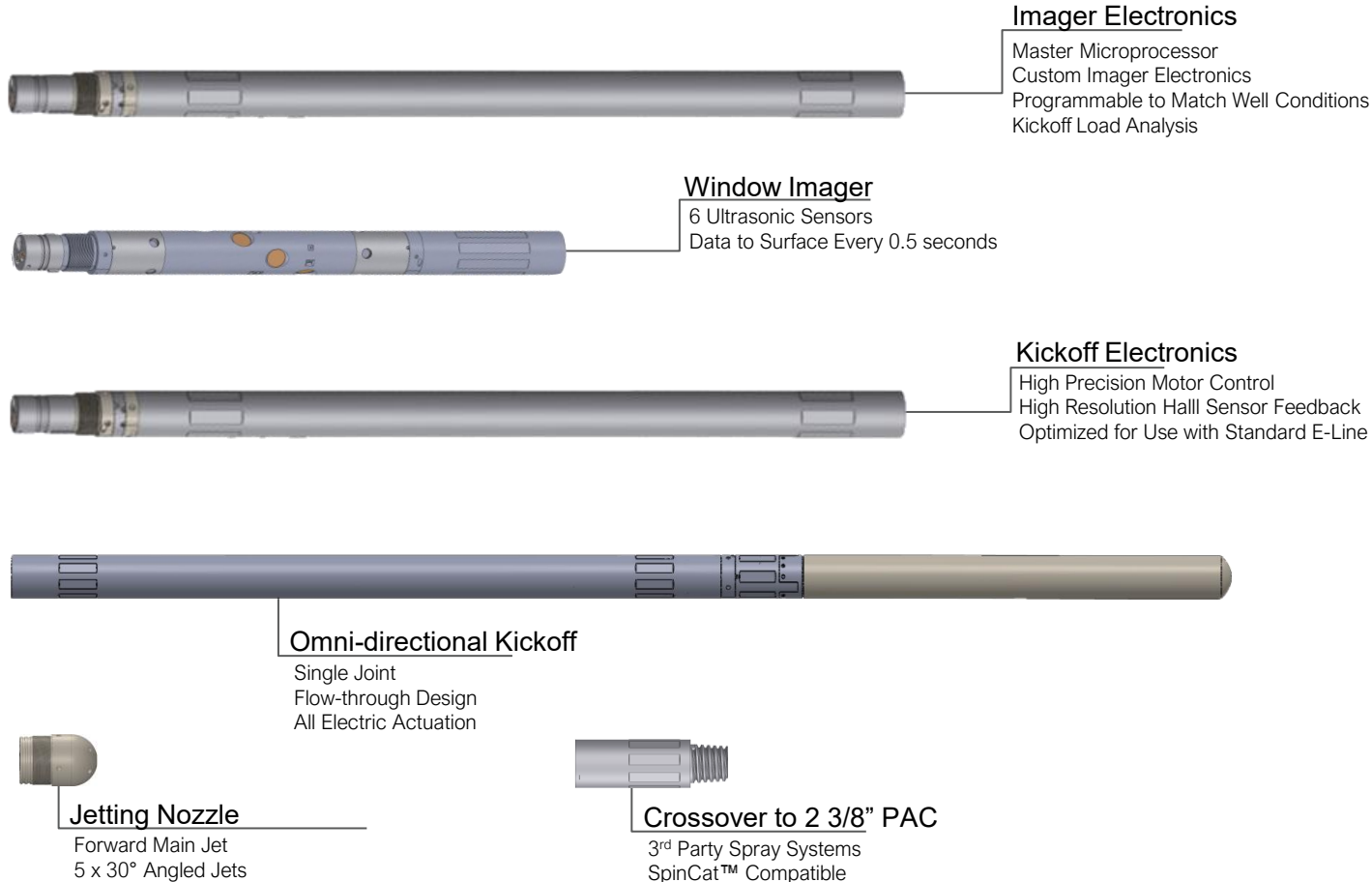
Specifications

Available Sizes	2 7/8"
Cable Head Connection	2 3/8" PAC
Temperature Rating	350°F
Pressure Rating	10,000 psi
Tensile Strength	100,000 lbf
Maximum Torque	2400 ft-lb
Maximum Pump Rate	8.3 bpm*
Ball Drop	3/4"
Communications	FO/Electrical
Lower Crossover	2 3/8" PAC



Cybercoil – Tools

MLT Tool

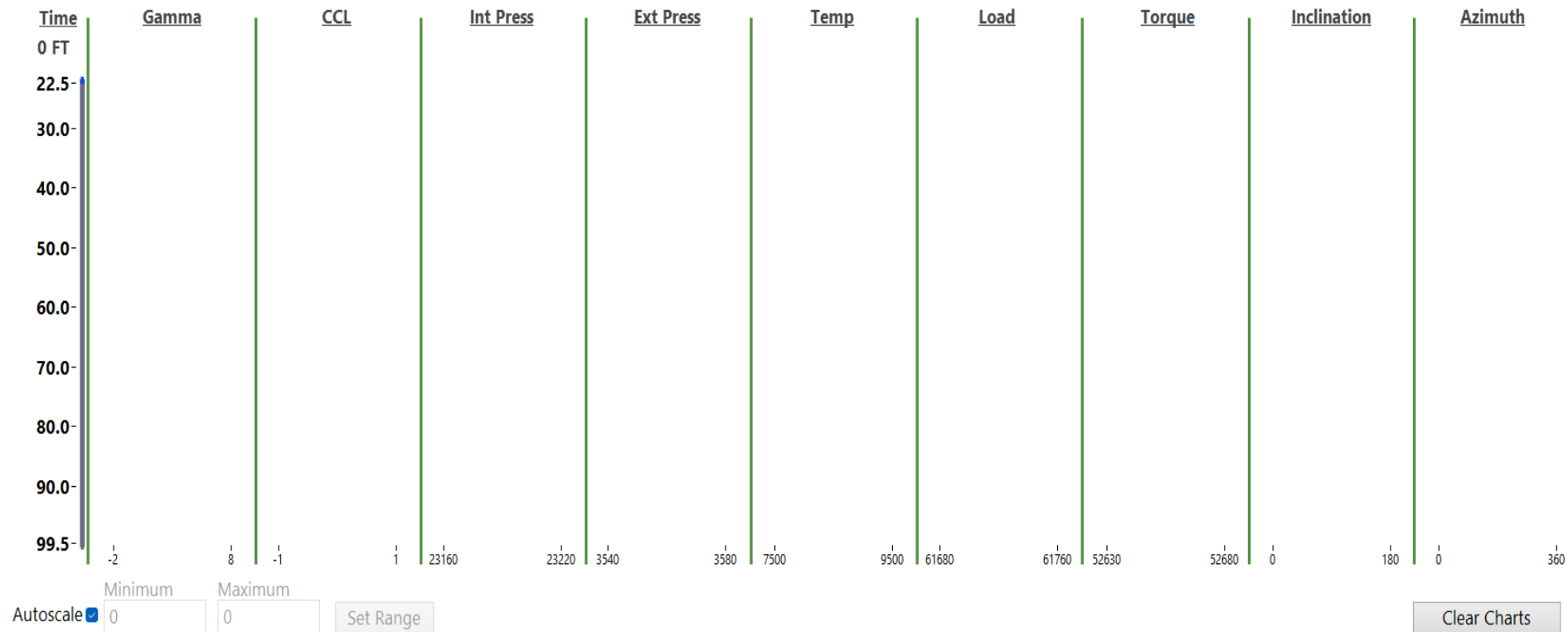


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Real Time Data – Additional Screens

Real Time Logs



Real Time Data – Additional Screens

Real Time Raw Data

Scaled Decimal Data	Unscaled Decimal Data	Hexadecimal Data	Send Commands
CCL			
0	0	0	0
4G Data			
MCUTemp C	Line Voltage	GR rate	Msg Counter
0	0	0	0
PB400 Data			
Load	Torque	Temperature_1	Temperature_2
0	0	0	0
Accelerometer_1_X	Accelerometer_1_Y	Accelerometer_1_Z	Accelerometer_2_X
0	0	0	0
Magnetometer_X	Magnetometer_Y	Magnetometer_Z	Strain_Gauge_1
0	0	0	0
Ultrasonic_1	Ultrasonic_2	Ultrasonic_3	Ultrasonic_4
0	0	0	0
Motor_1_Position	Motor_1_Target_Position	Motor_1_Speed	Motor_1_Target_Speed
0	0	0	0
Motor_2_Position	Motor_2_Target_Position	Motor_2_Speed	Motor_2_Target_Speed
0	0	0	0
Motor_3_Position	Motor_3_Target_Position	Motor_3_Speed	Motor_3_Target_Speed
0	0	0	0
48V_Power_Supply_Temperature	48V_Power_Supply_Input_Voltage	48V_Power_Supply_Output_Voltage	48V_Power_Supply_Output_Current
0	0	0	0

How Cybercoil Can Help

Plugged new drills

Producing wells encountering production drops

Bull heading- start chemical placement

Gather data on underperforming wells

Cybercoil provides valuable information and well intervention in multilateral wells.

Thank You!



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