

# Case Study

## VICTUS™ Light Spiral For String Lockup Prevention

### APPLICATION

RIH 5-1/2" Production String in  
a long horizontal well

### TECHNOLOGY

VICTUS™ Light Spiral  
Low Friction Composite Centralizers

### LOCATION

Middle East,  
Unconventional Well

### CUSTOMER CHALLENGE

Deploy 5-1/2" production string to 15700ft (~7460ft deviated to horizontal section) in highly deviated well with up to 6° DLS. Overcome the challenge of a simulated lockup depth due to insufficient load to drive the string to TD.

### CUSTOMER VALUE

Overcome simulated lockup of the string and successfully deploy the 5-1/2" production string by reducing drag forces and increasing the hookloads utilizing solid composite centralizers - VICTUS™ Light Spiral (1/joint) in open hole (9857ft).

VICTUS™ Light Spiral

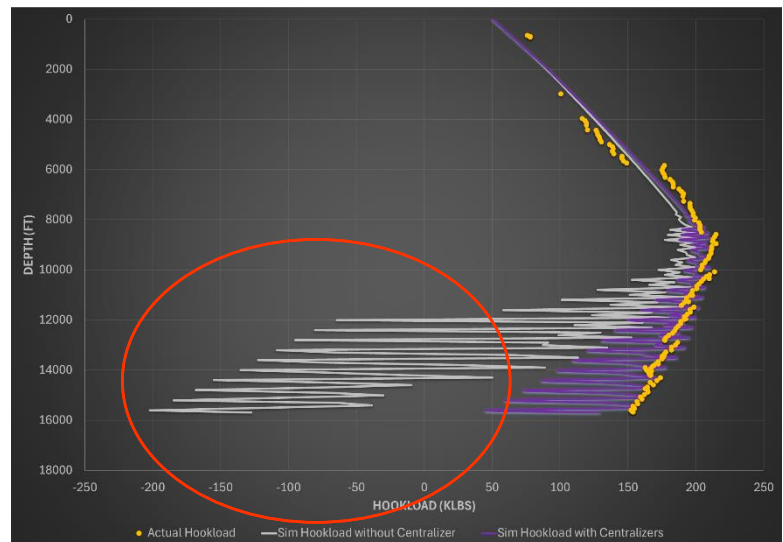


### ANALYSIS

Scenario	Lockup	Hookload at TD (klbs)
Without Centralizers	LOCKUP!	-127.40
With Centralizers	NO LOCKUP	128.80
Actual	NO LOCKUP	153.54

\*Note: CH FF – 0.25; OH FF – 0.3

A comparison between the simulation results: (1) Without centralizers (orange), (2) With centralizers at 30% drag reduction; versus the (3) Actual hookload data (blue), shows that the low friction composite centralizers aided in eliminating the lockup depth by providing enough hookload to drive the string to the target depth.



### CUSTOMER VALUE

The VICTUS Light Spiral low friction composite centralizers significantly increased the hookload and reduced drag; thereby making it possible to run the string to bottom. Additionally, it can be observed that the centralizers provided ~30% drag reduction while string is RIH.