



Drilltech Services (USA) INC

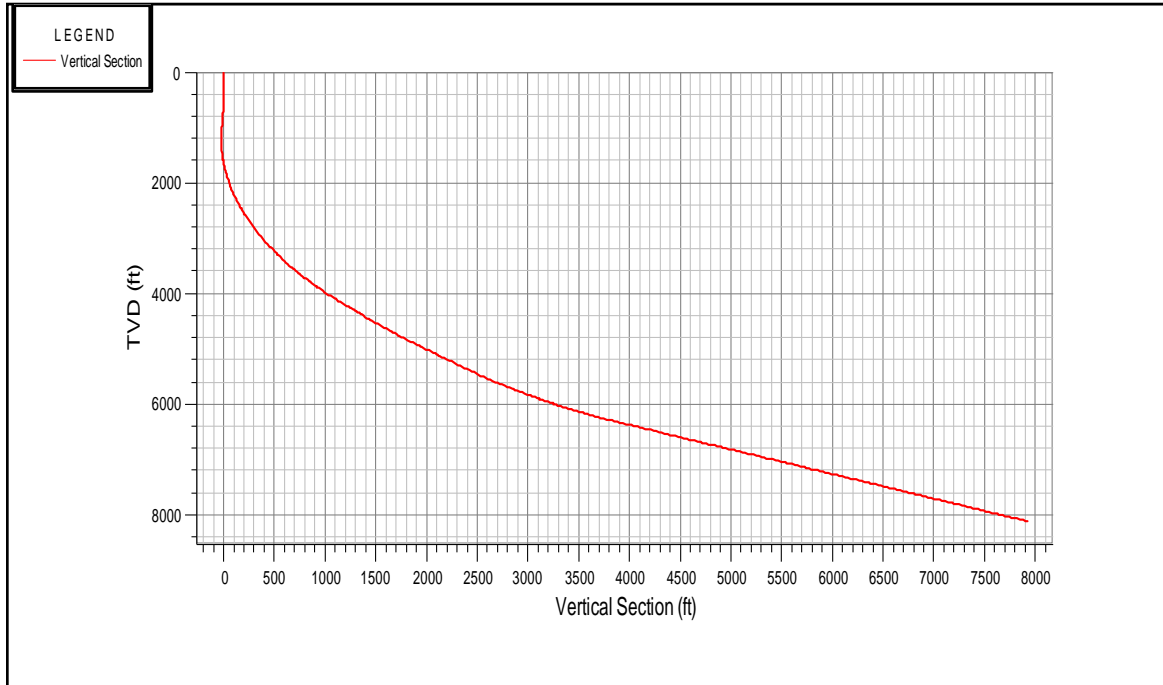
T&D ANALYSIS FOR WELL
ALICE WEST 8



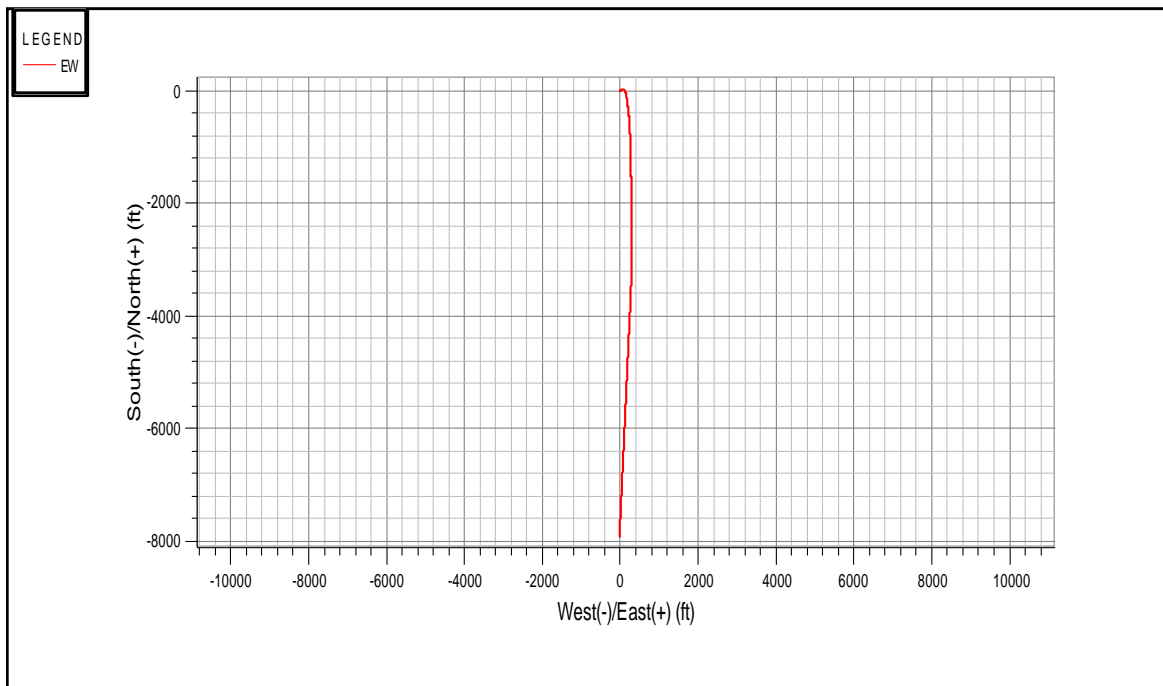
Andes Petroleum Ecuador LTD

ALICE WEST 8

9-5/8" Casing - 8-1/2" Open Hole



Plot 1 : Vertical Section (from Azimuth 180.15 deg)

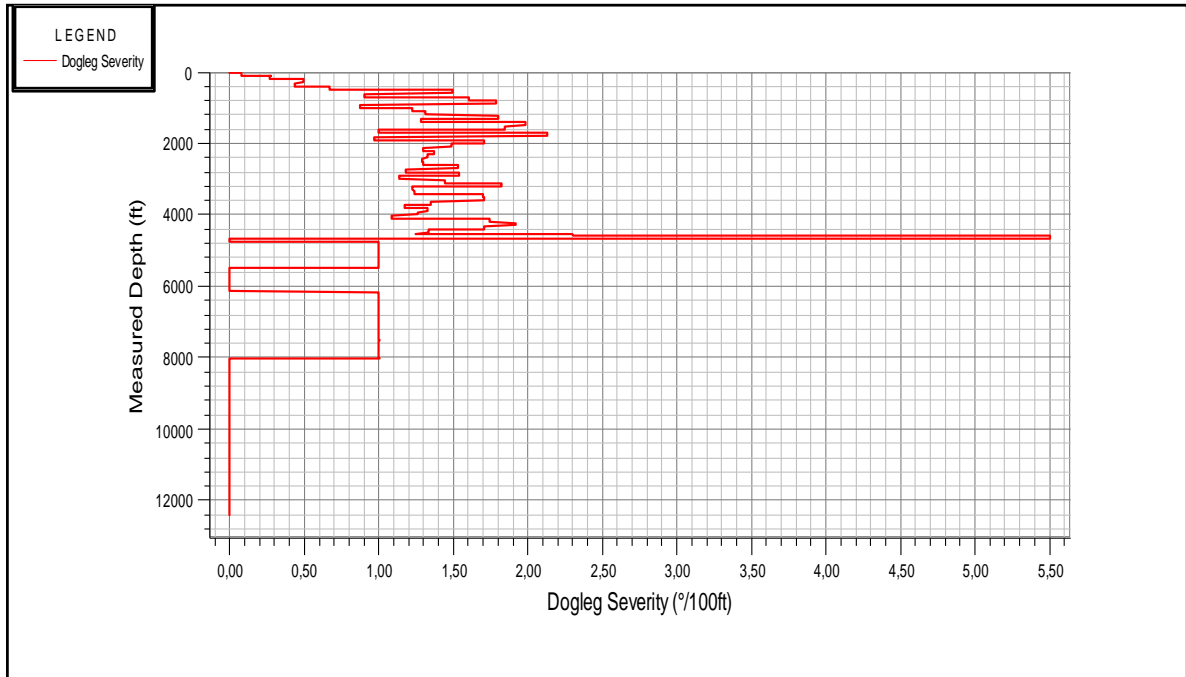


Plot 2 : Plan View

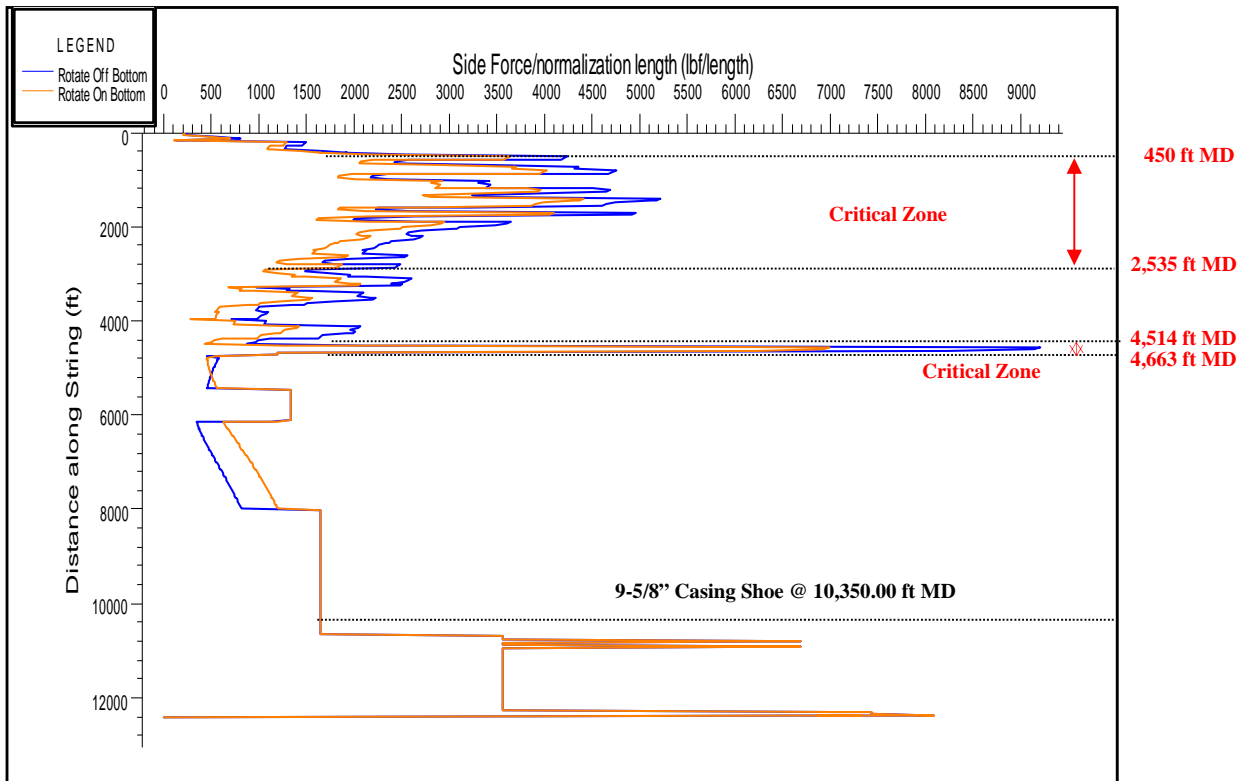
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Plot 3 : Dogleg Severity

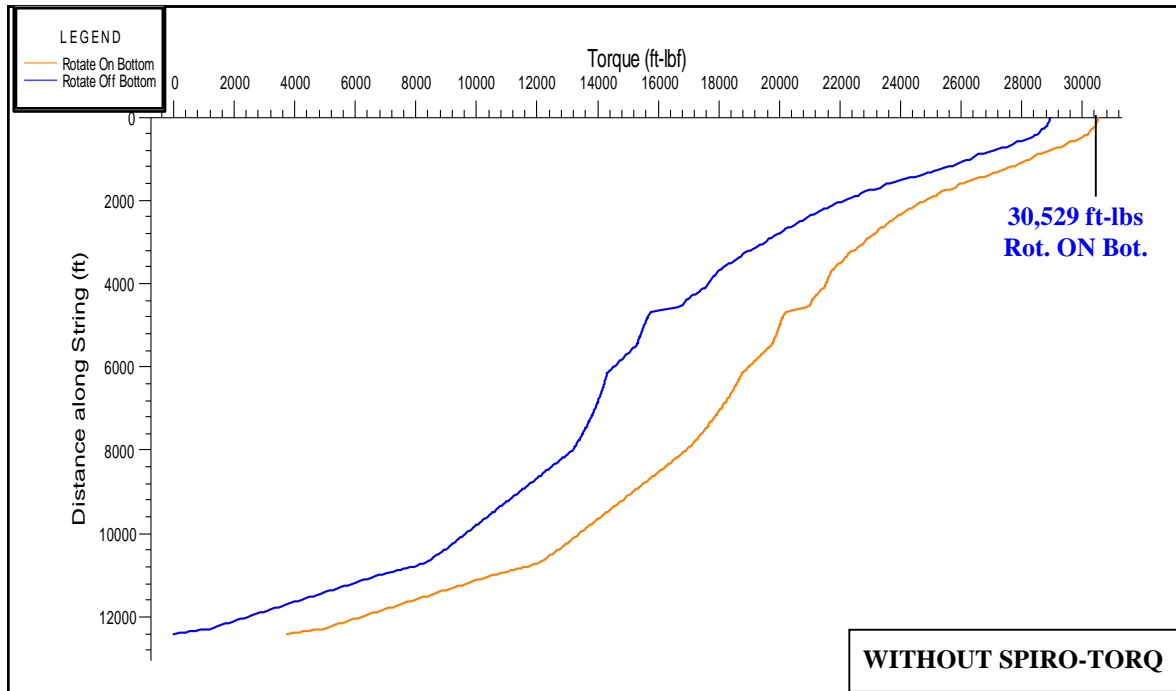


Plot 4 : Sidelading at Section TD – 12,413 ft MD (normalised to one stand length – 93ft)

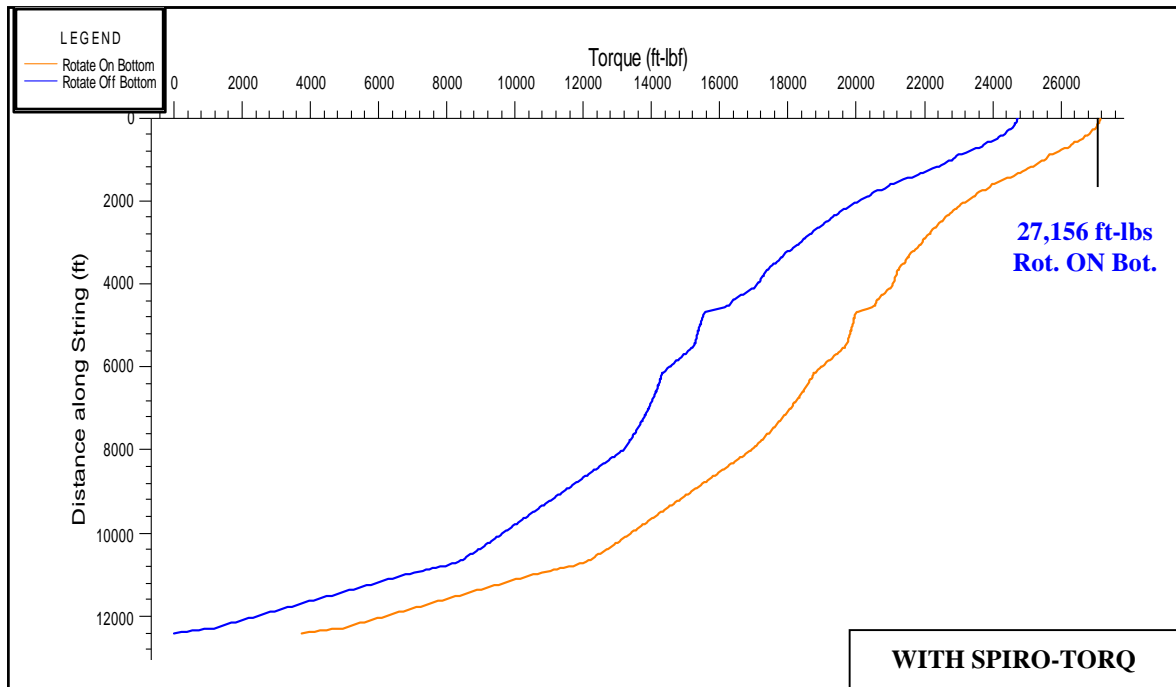
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Plot 5 : Torque Distribution at Section TD – 12,413 ft MD (COF C/H 0.38, O/H 0.42)

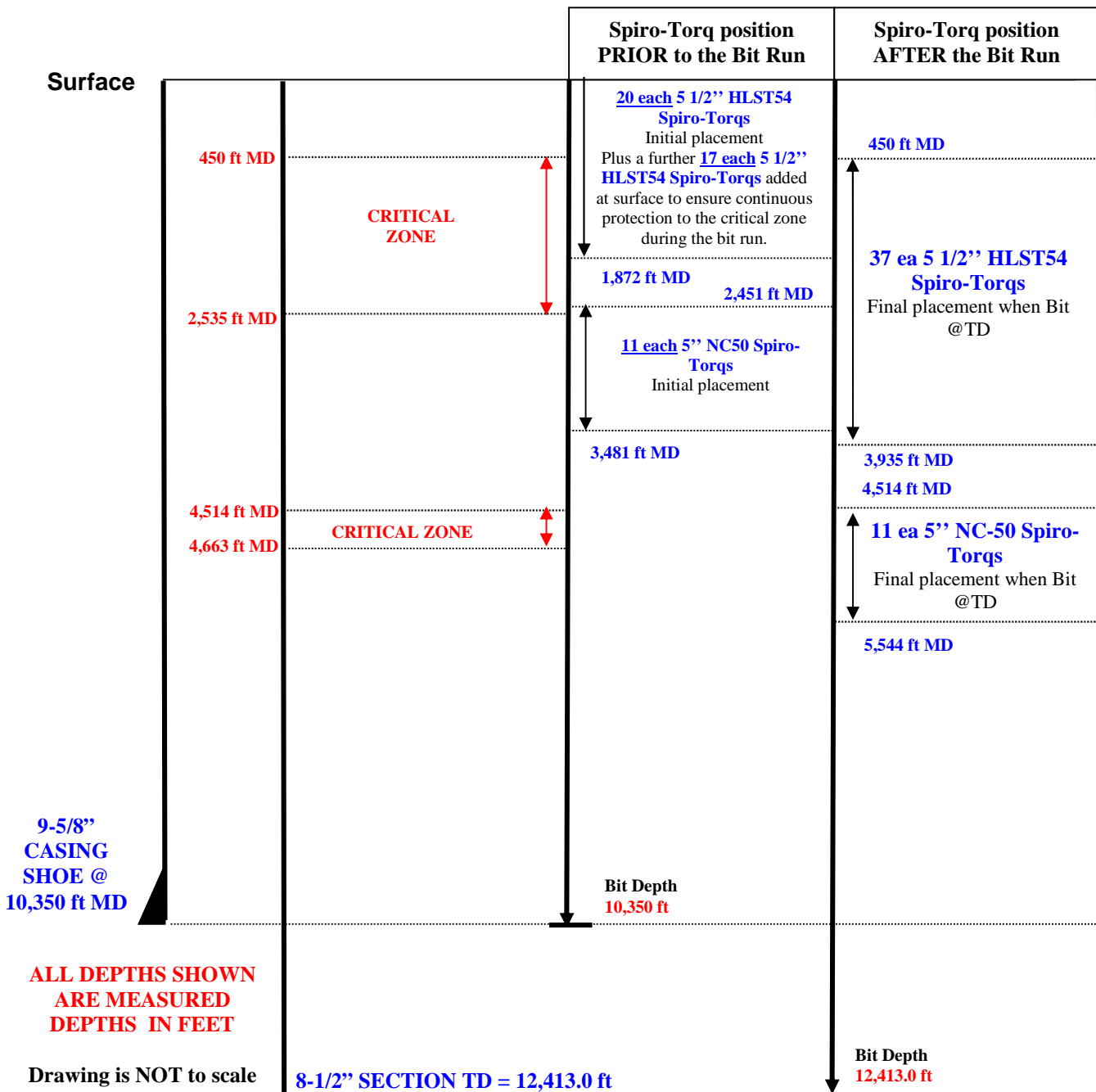


Plot 6 : Torque Distribution at Section TD – 12,413 ft MD (COF C/H 0.38, O/H 0.42)

Preliminary Spiro-Torq® Placement Schematic

[Assumes One Bit Run to TD – 2,063 ft / Bit Run]

[Spiro-Torqs are placed at one tool every stand (93ft) of Drillpipe unless otherwise stated]



TOTAL SPIRO-TORQ REQUIREMENT
38 EACH 5 1/2" HLST54 NRST SPIRO-TORQS
11 EACH 5" NC50 NRST SPIRO-TORQS