



FIELD MEMO

GSP-FM-BF1-GSP001-094

PROJECT: Dzhubga – Lazarevskoye – Sochi (DLS) Pipeline

Vessel : GSP BIGFOOT 1

Date: 13th November 2010

Subject : Trenching Completion at Canyon Sakhe

GSP Trenching Scope of Work for Canyon Sakhe section has been completed today, 13th November between Kp 86.826 and Kp 93.715 for an overall length of 6.889 km.

Trenched depths measured by diving surveys are shown in Appendix 1.

Trench Cross Section is shown in Appendix 2.

Issued by

Mihai Nanu,
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Checked by

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Trenching Supervisor
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Eugeny Zaikin
LLC "SGM" Representative

Appendix 1 to GSP-FM-BF1-GSP001-094

Table 1 As-Trenched depths Canyon Sakhe Section

Section No	Kp	D ₁	PIPELINE OD	PIPELINE (ESTIMATED) FINAL COVER B=D ₁ -OD
		[m]		[m]
1.	93.237	2.20	0.662	1.538
2.	92.709	2.20		1.538
3.	92.213	2.20		1.538
4.	91.769	2.20		1.538
5.	91.191	2.20		1.538
6.	90.142	2.50		1.838
7.	89.132	2.20		1.538
8.	88.755	2.10		1.438
9.	86.826	2.20		1.538

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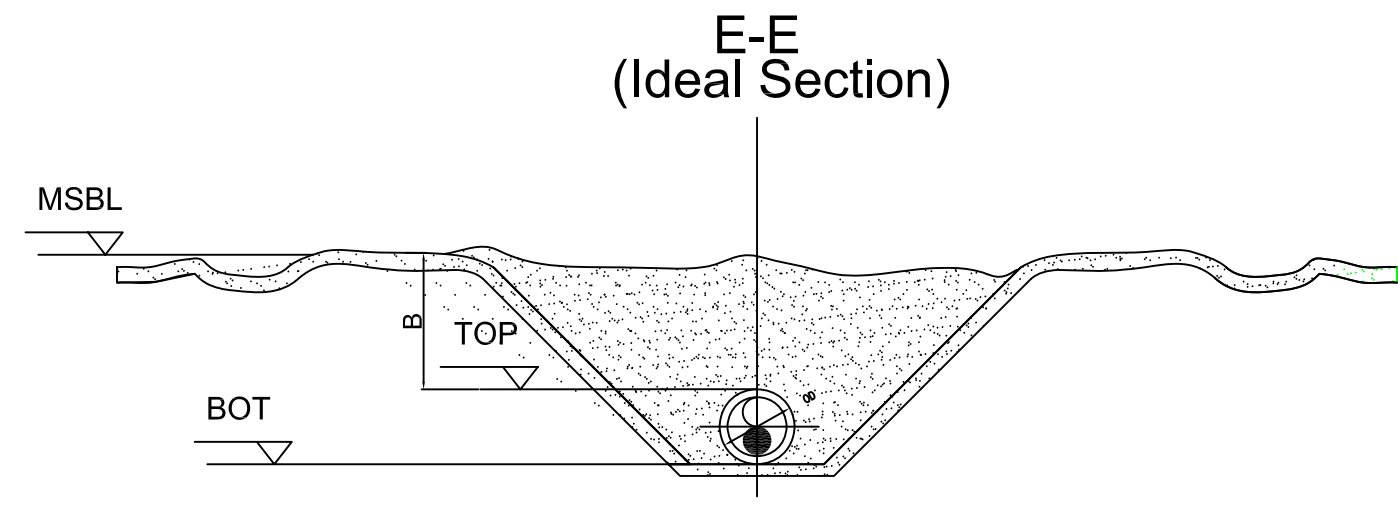
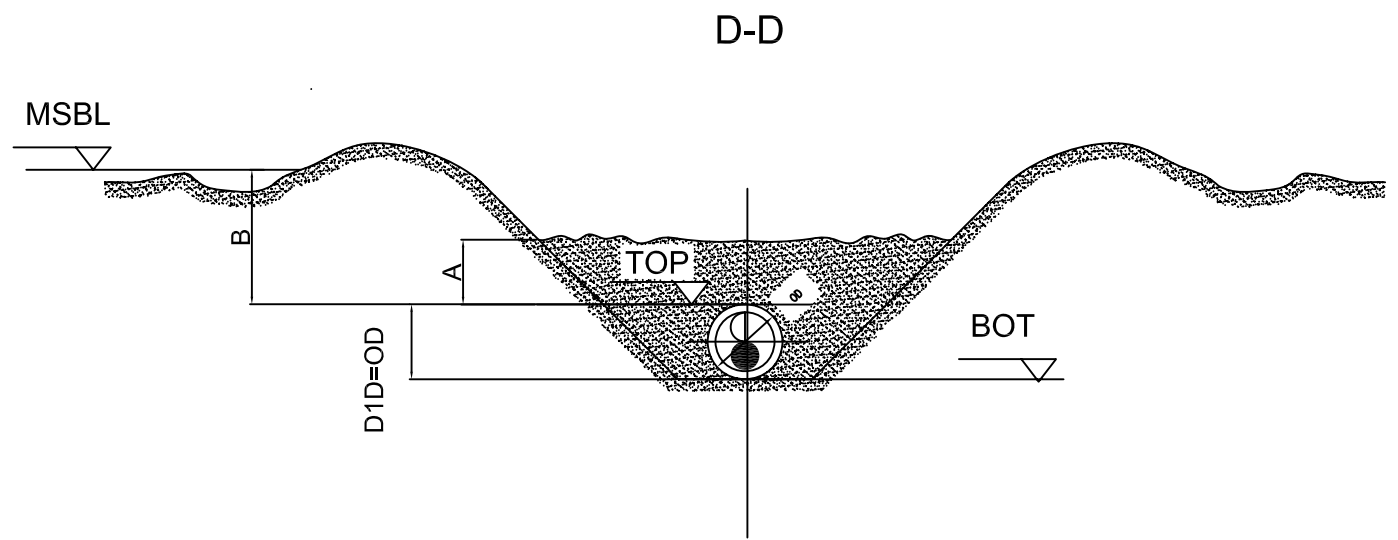
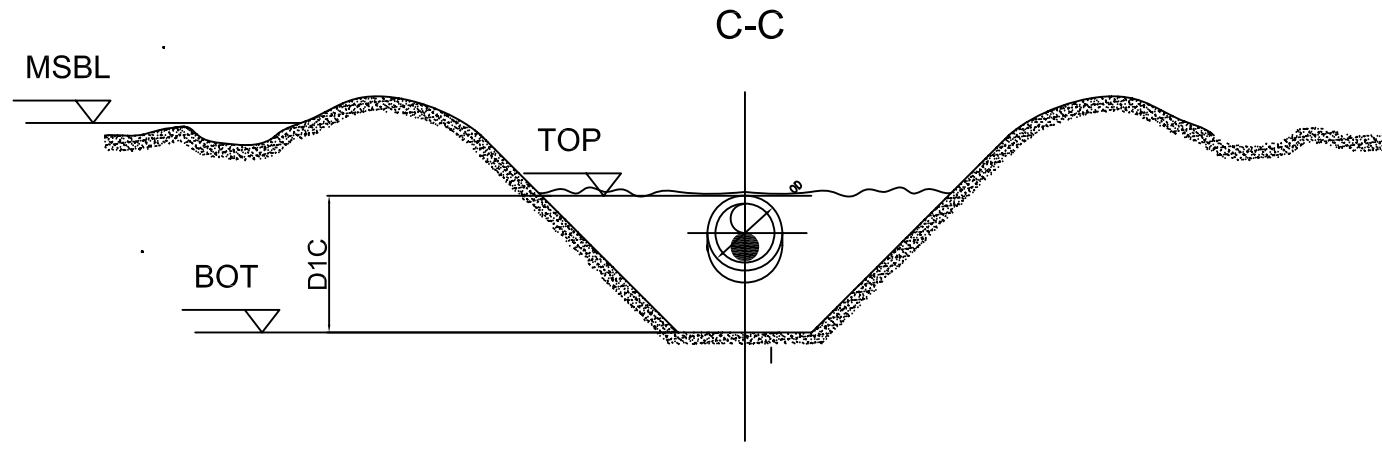
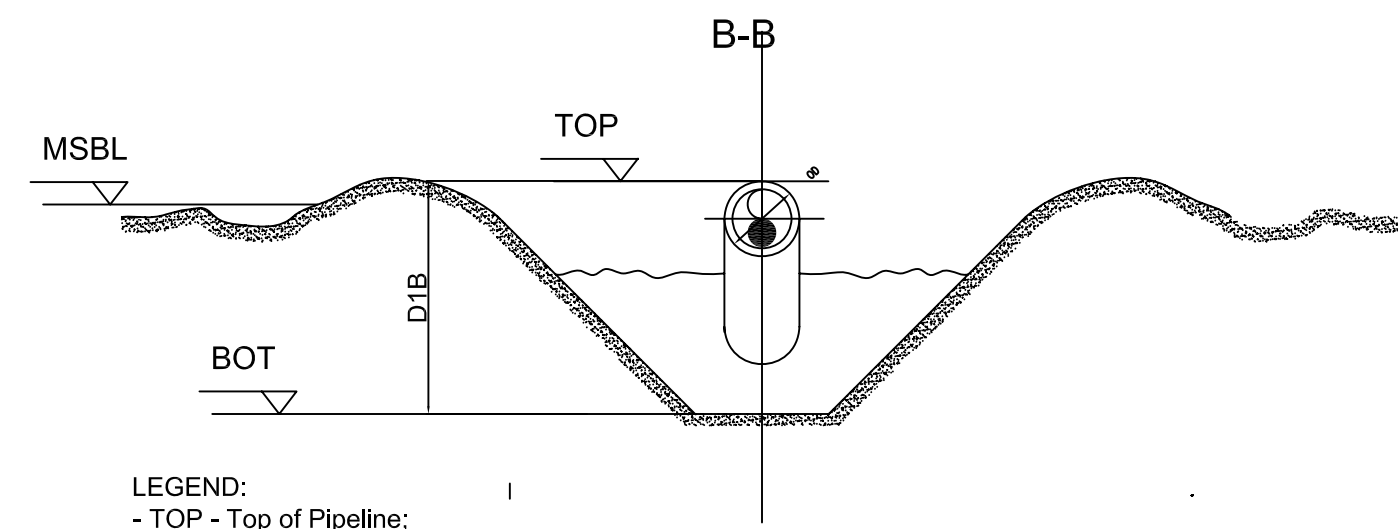
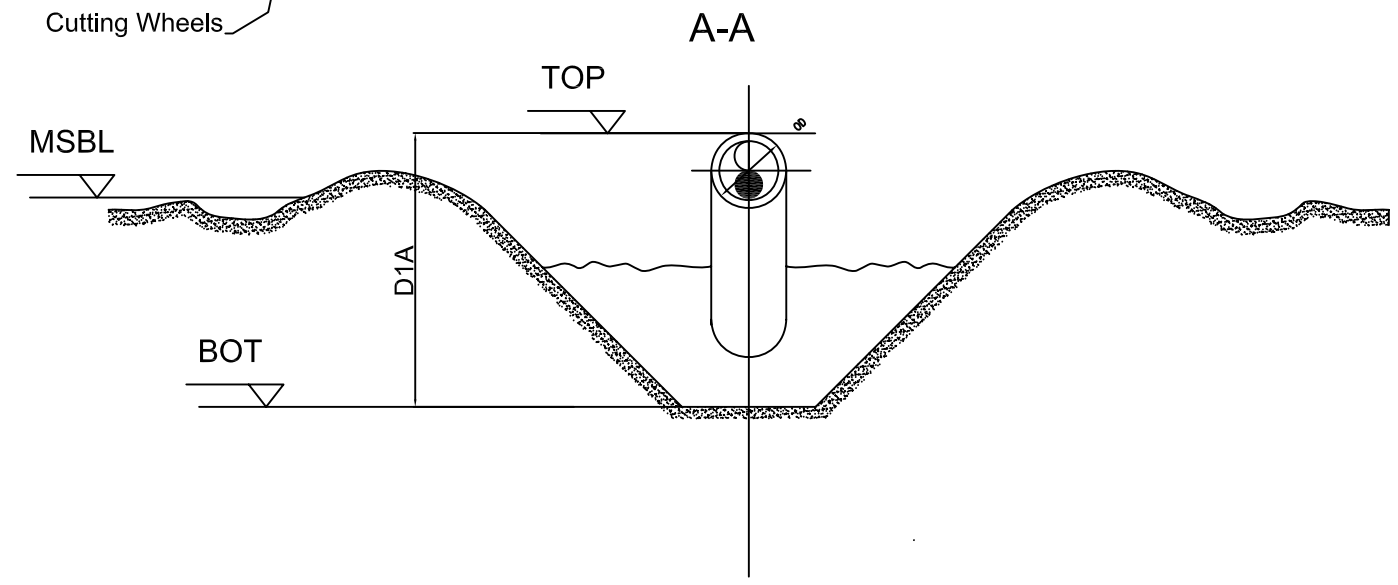
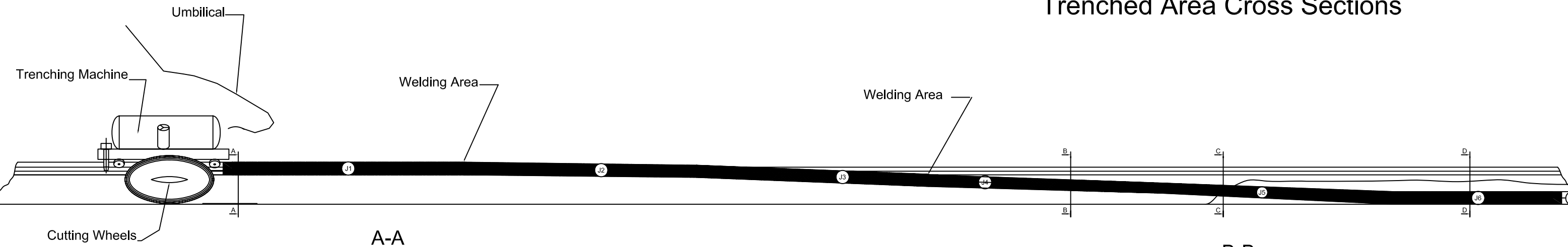
Stefano Merlo
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Trenched Area Cross Sections



- LEGEND:
- TOP - Top of Pipeline;
 - BOT - Bottom of Trench;
 - MSBL - Mean Sea Bed Level;
 - OD - Pipeline Outer Diameter (including concrete cover);
 - D1A - Distance measured by divers from TOP to BOT close behind the trenching machine;
 - D1B- Distance TOP to BOT in section B- 2 to 4 joints behind trenching machine-measured;
 - D1C- Distance TOP to BOT in section C- 3 to 5 joints behind trenching machine-measured;
 - D1D- Distance TOP to BOT starting in section C- 4 to 6 joints behind trenching machine - estimated;
 - D1A>D1B>D1C>D1D≈OD;
 - A- Pipeline cover soon after trenching - backfilling incomplete;
 - B - Pipeline Final Coverage - trench completely backfilled and pipeline at burial depth; Bmin=1m;
 - J1, J2, ... J5 -Joints number counted from behind trenching machine;