DSI ExConTec

EXPANDED CONVEYOR TECHNOLOGY

LOS FILOS PROJECT DESCRIPTION

Goldcorp's Los Filos Gold Mine, near Mezcala, Guerrero, Mexico, is a heap leach operation. The ore is trucked from the mountain top open pit mine to the crushing plant where it is reduced to 50mm (2") minus. From the crushing plant the ore is hauled down the hill, to the valley where it is stacked on engineered pads for leaching by a cyanide solution. The gold is then precipitated from the solution at the recovery plant.

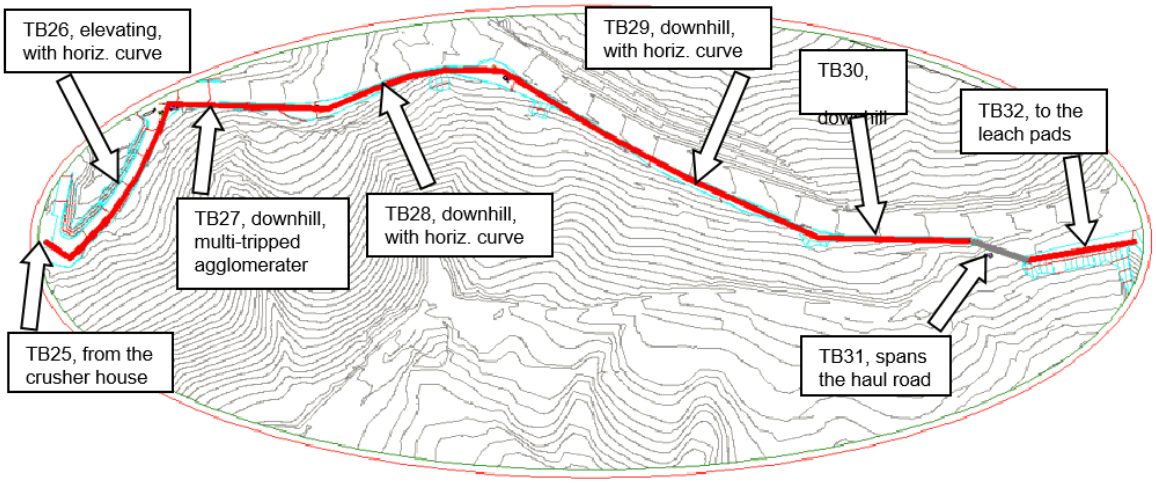
A previous short-lived system conveyed the ore from the crushing plant to the leach pads via a glory hole ore pass and an underground conveyor, through the hill. Geological instability ultimately collapsed the ore pass, putting the transport system out of service only four months into its operation. Against this background, Dos Santos International was first contracted to supply a downhill Sandwich Belt high angle conveyor to carry the ore over the same hill to the same destination. However, continued concerns with geological stability ultimately led Goldcorp to abandon the hill side as the haulage path.

Finally, a conventional overland conveyor system was developed to follow the already developed truck haulage ramps. The Dos Santos International proposal was chosen and DSI was awarded the engineering and supply contract. The Dos Santos International proposal included two important commitments solely for the customer's benefit:

- DSI would maximize use of the conveying equipment and structure, already at the mine, from the collapsed and abandoned through the hill conveying system.
- The awarded ten-flight system appeared to be a candidate for further rationalization and cost reduction, using horizontal curves to amalgamate successive conveyor flights. The DSI proposal included an amalgamation study as the first order of business.

Both commitments were fulfilled reaping cost savings to the customer.

LOS FILOS OVERLAND CONVEYOR SYSTEM



Conveying on the Edge: The multi-flight overland system follows the haul road on the edge of a steep drop-off

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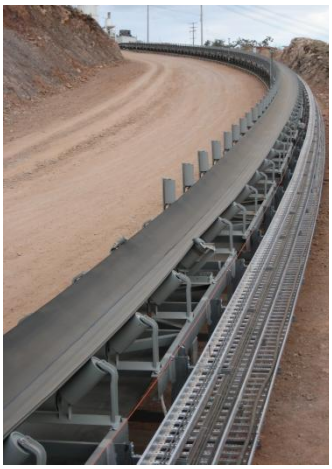
OVERLAND CONVEYOR SYSTEM, LOS FILOS GOLD MINE, MEZCALA, GUERRERO MEXICO								
Description	TB25	TB26 Elev. W/ horiz. curve	TB27 Downhill Agglomerator w/ 5 int. trips	TB28 Downhill w/ horiz. Curve	TB29 Downhill w/horiz. Curve	TB30 Down hill	TB 31 Down hill	TB 32 Down hill
Material	Gold Ore							
Design Rate	1043 t/h (1150 STPH)							
Belt Width	914mm (36”)		1219mm (48”)		914mm (36”)			
Belt Speed	2.3m/s (445FPM)		1.2m/s (244FPM)		2.3m/s (445FPM)			
Lift (-Drop)	5.5 m	26.5 m	(-20.9) m	(-24.6) m	(-43.7) m	(-14.30) m	(-9.8) m	(-4.1) m
Length	41.2 m	248 m	213 m	243 m	476 m	201 m	84.5 m	148 m
R-Horiz Curve		400 m		300 m	1000 m			
Qty Int Trips			5					
Drive Power	44.7 kW	149 kW	44.7 KW Regen	74.6 kW Regen	149 kW Regen	44.7 kW Regen	44.7 kW Regen	44.7 kW Regen
Brake Tension			17.9 kN	34.5 kN	63.7 kN	21.4 kN	13.3 kN	8.3 kN

The DSI expertise, including the DSI *ExConTec* complete analysis software, proved particularly advantageous. It facilitated the use of horizontal curves to simplify the system, reducing both capital and operating and maintenance costs. Additionally, the third conveyor flight, TB27 is especially engineered to accomplish the agglomeration by mixing through five intermediate tripped transfers. The enroute agglomeration, conceived by Goldcorp, results in substantial savings by eliminating the need for the additional agglomerating drum.

The overland conveying path is predominantly downhill. While this presents the normal controlled starting and stopping problems, it also presents great savings opportunities. The downhill flights are decisively regenerative. The drive motors, now generators, feed power back into the grid that powers the other mine equipment. These carefully engineered conveyors are equipped with variable frequency drives to ensure operation at maximum efficiency.

Looking up the Overland path: From TB25 to TB 26 looking up

Looking down the overland path: From the tail of TB27, the agglomerating conveyor



Looking up TB26

Looking up TB28