

## INTRODUCTION / BACKGROUND

Sunnyside Gold Corporation (SGC) was formed and acquired the Sunnyside Mine in 1985 and mined it from 1986 until 1991 using modern techniques and under the modern era of environmental regulation. SGC closed the Mine in accordance with the law, its permits and a court-approved Consent Decree with Colorado that was supported by the Animas River Stakeholders Group and EPA, and has spent more than \$30 million on successful reclamation and remediation. Two recent Reports by Steven Lange, Executive Project Manager at Knight Piésold, examine water quality in the Animas River. This summary of these Reports has been prepared for the **Animas River Community Forum**.

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Mr. Lange brings over 40 years of experience related to investigation, evaluation, and remediation of mining and industrial sites throughout the world. He has conducted baseline environmental studies, geochemical evaluations, ARD assessments, and geochemical modeling for feasibility, operational, closure, and remedial investigation studies at mine sites in the USA, Canada, Europe, South America and the Philippines. Mr. Lange has been studying and evaluating mineral deposits in the San Juan Mountains of Colorado since 1976.

Mr. Lange has several publications on site investigation and modeling and has a B.S. in geology and an MS in geochemistry from Kansas State University. Knight Piésold is a global consulting firm with offices in North and South America, Europe, Africa, Australia, and Asia.

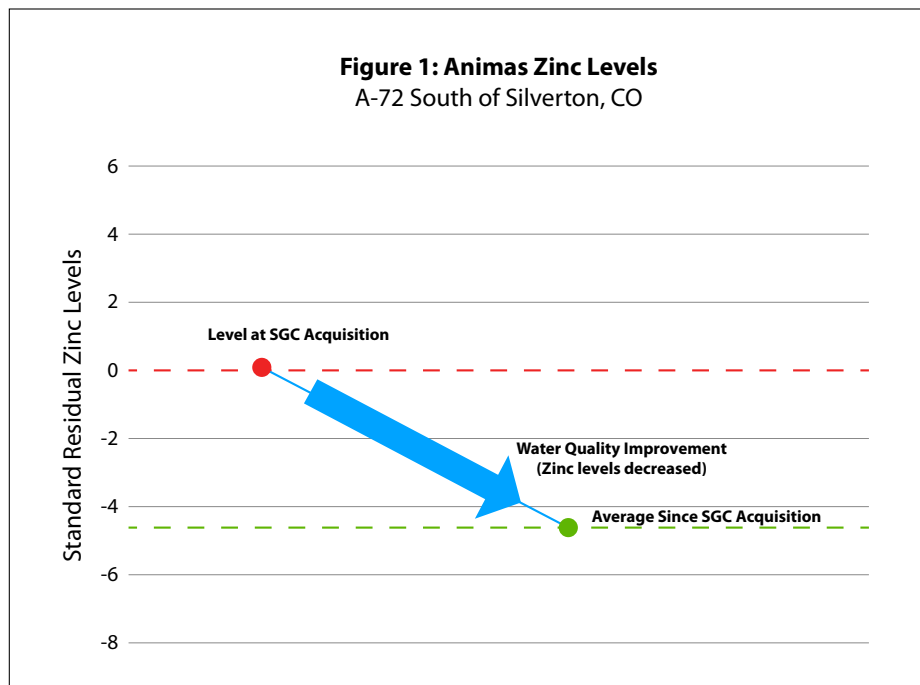
## ANIMAS RIVER WATER QUALITY 1985 – PRESENT QUANTIFICATION OF THE POSITIVE EFFECTS OF SGC'S MINING AND RECLAMATION

Steven Lange, Knight Piésold

This Report "examines and quantifies the positive effects of SGC's actions on water quality in the Animas." The Report concludes that:

*Water quality in the Animas River immediately downstream from Silverton, Colorado has dramatically improved since SGC acquired the Sunnyside Mine in 1985, and SGC's activities played an important role in this improvement. The positive effect on water quality resulting from both SGC's mining operations and SGC's subsequent remediation/reclamation activities is conclusively and quantitatively demonstrated by decades of reliable water quality sampling.*

FIGURE 1 (RIGHT) ILLUSTRATES THE REPORT'S CONCLUSION.



# EVALUATING THE EFFECTIVENESS OF SUNNYSIDE GOLD CORPORATION'S RECLAMATION

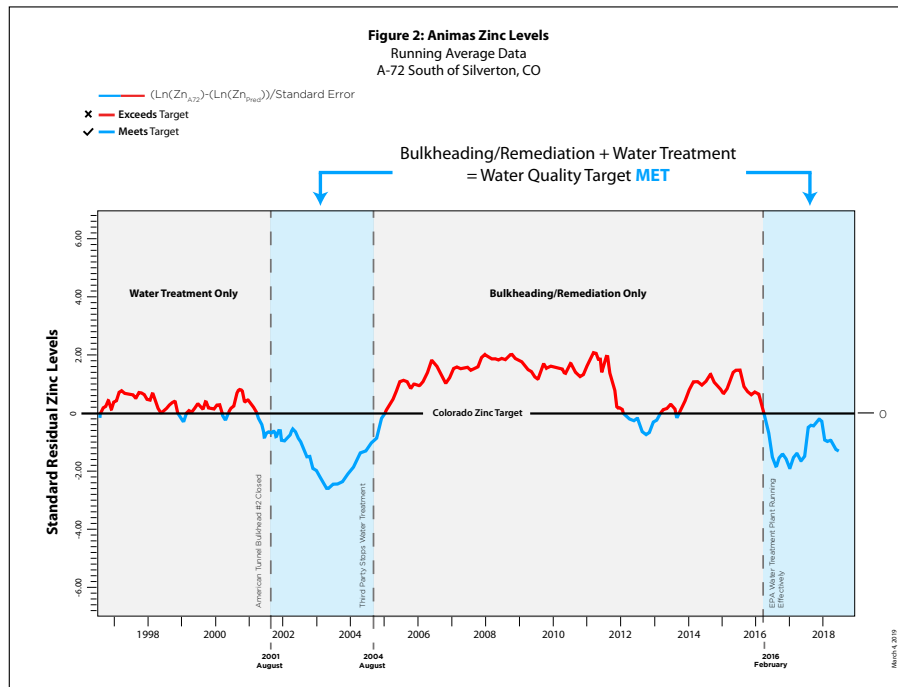
Steven Lange, Knight Piésold

Presented at the 13th International Conference on Mine Closure in Perth, Australia

This Report "evaluates the ongoing success of SGC's activities by analyzing 22 years of publically available water samples collected at the United States Geological Survey (USGS) gaging station A-72 on the Animas River just downstream from Silverton in accordance with the methodology developed by the Colorado Department of Public Health and Environment (CDPHE)." The Report concludes that:

*The analysis of zinc loading using CDPHE's methodology at A-72 from 1996 through the present conclusively demonstrates that SGC's Bulkheading and Remediation was successful and improved water quality by substantially reducing acid rock drainage and metals loading in the Animas River and its tributaries. Whenever both aspects of CDPHE's Plan were in place, both prior to and after the Gold King Blowout, CDPHE's Target was met. Each aspect of CDPHE's Plan, (1) SGC's Bulkheading and Remediation and (2) the operation of a water treatment plant at Gladstone, played a key role in the Target being achieved and the improvement of water quality. Although the Gold King Blowout significantly altered the existing groundwater flow regime, CDPHE's Target is being met today, as a combined result of SGC's Bulkheading and Remediation and EPA operating its treatment plant at a fraction of capacity.*

FIGURE 2 (RIGHT) ILLUSTRATES THE REPORT'S CONCLUSION.



## CONCLUSION

The Reports determine that "The positive effect on water quality resulting from both SGC's mining operations and SGC's subsequent remediation/reclamation activities is conclusively and quantitatively demonstrated by decades of reliable water quality sampling."

The full Reports, and other information about SGC's reclamation, are available at [www.SGCReclamation.com](http://www.SGCReclamation.com).