

# NEXT MEETING: Wed. Jan 17, 2018

## "SCALING BACK ON SCALE - ELIMINATING PRODUCTION LOSSES FROM MILL WATER UPSETS"

SME Henry Krumb Lecturer

PRESENTER: (AI) Douglas Steiner,  
KGHM Robinson Nevada Mining Company, Ruth, NV

RSVP to one of the following no later than January 15, 2018. Provide Full Name, Company/Title

Marianne Springer	Chairman	(702) 373-4872 (cell)	<a href="mailto:mspringer@carollo.com">mspringer@carollo.com</a> ,
Tim Myers	Treasurer	(813) 230-2557 (cell)	<a href="mailto:purewatermaker2@hotmail.com">purewatermaker2@hotmail.com</a>

Dinner is \$30.00 for members and \$20.00 for students

Time:	6:00 pm	Social Hour (sponsorship available!)
	6:45 pm	Dinner
	7:30 pm	Presentation

LOCATION OF MEETING: MARIE CALLENDER'S @ 8175 W. SAHARA AVE., LAS VEGAS



### Abstract:

In most copper mines and concentrators, mill water is continuously recovered and reused, with fresh water added to make up for losses. When mixed, these water chemistries can lead to severe scaling, especially in pipes, tanks and pumps on the mill water supply side, reducing flows and causing significant production losses.

**Abstract, continued**

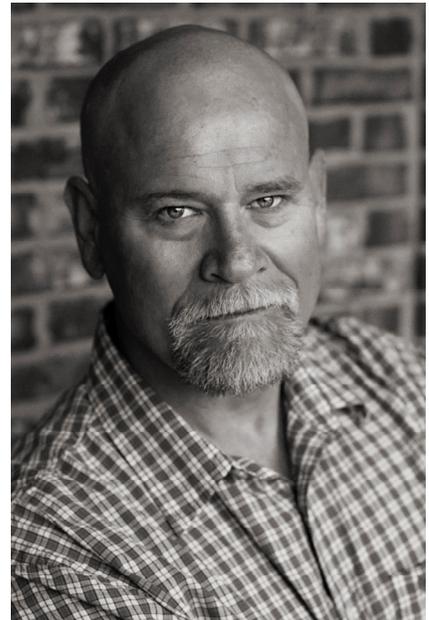
At KGHM Robinson Nevada Mining Company, increases in the fresh water addition ratios resulted in severe scaling problems and premature pump failures thereby jeopardizing plant production. What initially appeared to be a few isolated scaling events eventually unfolded into a recurring pattern of water supply-related production losses with increasing severity. Through completion of detailed root cause analysis, chemistry modeling, laboratory work, in-plant testing and system engineering, the mechanisms of scaling were identified and addressed.

Advancements in fresh water addition practices and antiscalant application methods resulted in a stepwise reduction of the mill water scaling. Cost savings and production benefits were significant to the plant's financial metrics.

**Biography:**

**Douglas (Al) Steiner**

Al is a Metallurgical Engineer at KGHM's Robinson Mine in Ruth, Nevada. He oversees projects ranging from plant upgrades, to lab analysis, HSE, and lean manufacturing. He joined the Robinson Mine in 2013 after receiving a Bachelor of Chemistry degree from Montana Tech. He has presented at numerous research conferences and comes to mining after 12 years in the Marine Corps and 10 years in the construction industry.



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**Henry Krumb Lecture Series**

SME helps bring outstanding speakers to the Local Sections through the Henry Krumb Lecture Series. The program is offered to SME sections to enhance their appreciation and understanding of important new methods and technologies. Lecturers are selected from the professionals who present technical papers at the SME Annual Conference & Expo (ACE). The Krumb Lecture Series is administered by SME and is partially funded by a grant from the Seeley W. Mudd Memorial Fund.