

Overview of the World's Longest Producing Lithium Brine Facility Silver Peak NV August 24, 2020

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Silver Peak, Nevada

Mark Mummert; Lithium Chief Operating Officer
Albemarle Corporation
Charlotte, North Carolina



Scott Thibodeaux

Operations Manager

Lithium Site

Silver Peak, NV



Silver Peak

- I am Scott Thibodeaux, the Operations Manager for our Silver Peak lithium site.
- I am a native Nevadan having grown up in Tonopah. Testifying here today in front of my state legislators is a real thrill not only for me, but also for my family.
- While our headquarters is in Charlotte, NC, we are proud to tell you we own the only operating, lithium mine in the United States located in Silver Peak.
- Our operations began in the 1960s. We have 65 employees and 10 contractors at the Silver Peak site. The average fully loaded compensation package is about \$94,000 a year.
- We thank you for the opportunity to speak to you today.

Albemarle Background

- Global specialty chemicals company with leading positions in lithium, bromine and refining catalysts.
- Albemarle has approximately 5,400 employees and serves customers in over 100 countries across our product portfolio.
- World's largest lithium mining and processing company for the global battery market.
- Owns the only operating lithium mine in the United States located in Silver Peak.

Mark Mummert

Lithium Chief Operating Officer
Albemarle Corporation
Charlotte, NC



Albemarle's Lithium Retrieval and Production: Overview

- Lithium is extracted from an underground brine resource through a series of wells in Silver Peak
 - Solar evaporation then concentrates the lithium
 - Other minerals (potassium & sodium) precipitate out of the brine
- Evaporation system is segmented into numerous ponds which allow for continuous extraction & concentration
 - 1st pond = lowest concentration brine
 - Last pond = adequate lithium concentrations for processing
- The process is continuous as the brine moves through the stages of evaporation. From the time one batch of brine goes from well to processing, it takes 18 months. After processing, the lithium is transported to several customers, some being battery manufacturers
 - Batteries for electric vehicles, consumer products, & defense materials

Commitment to Silver Peak

- Albemarle is committed to extracting lithium brine in a socially and environmentally safe way.
- Albemarle also manages an extensive, highly recognized migratory bird protection program.
- Albemarle is committed to wells that prevent over-extraction of lithium to maintain the brine quality for years to come.
- We are committed to protecting our senior water rights.
- We will continue to invest in geological surveys to better understand the underlying aquifer and its ability to produce more lithium.
- We will continue to invest in our employees to continue our standard of lithium production.

Workforce Development Training and Future Needs

- Goal: Provide young Nevadans with job opportunities within their own state
 - Collaborate with universities and colleges to find young, qualified employees
- Challenges:
 - Silver Peak is located in rural Nevada; its size and lack of local amenities can be a hurdle
 - Competition from other industries
- Required skill sets for Silver Peak: electrical engineers, chemical process engineers, chemical operators, journeyman electricians, qualified geologists and hydro geologists.
 - Goal: Fill these positions at Silver Peak rather than rely on third party consultants or employees from Chilean site
 - Albemarle provides all the safety training and other training to supplement what they learn in school.
- Community development is workforce development
 - Albemarle Foundation

Albemarle Foundation: Commitment to Community

- In 2016, the Albemarle Foundation contributed \$100,000 to the Renown clinic (now the Central Nevada Regional Care clinic) in Tonopah. The money went toward the purchase of equipment that diagnoses patients and relays that information to hospitals in the state.
- Since 2016, the Foundation has contributed close to \$100,000 to:
 - Silver Peak elementary school
 - Silver Peak fire department.
 - Bishop Elementary School
 - Together Foundation
 - Esmeralda County School District
 - Little League Baseball
 - Radio Goldfield Broadcasting
 - Silver Stage Elementary
 - Tonopah Historic Mining Park Foundation
 - Tonopah High School
 - Beta Sigma Phi Charitable Foundation
 - Esmeralda County School District
 - Hughson Christian School
 - Minden Elementary School
 - Tonopah High school
 - Tonopah Volunteer Fire Department.
- For 2020, final decisions on distribution have not been made but the Foundation will again provide valuable funding for the communities of Silver Peak and Tonopah.