

October 4, 2007

**MBAA District Rocky Mountain
Fall 2007 Technical Out-of-Towner
Press Release**

District Rocky Mountain Meets in Colorado Springs, Colorado

Members and guests of the MBAA's District Rocky Mountain met in Colorado Springs, Colorado in late September for their annual technical out-of-towner. The first night's welcoming event was held at the Bristol Brewing Company. The group was fortunate to be there during the introductory celebration for Bristol's seasonal "Winter Warlock" Oatmeal Stout. Microbiologist, Keith Andrews, and Brewmaster, Joe Hull, led the group on an informative tour of the brewery. The group was accorded the privilege of sampling many of Bristol's fine beers, including the award winning "Laughing Lab" Scottish Ale directly from bright beer tanks. Mike Bristol, owner and founder, presented a brief history of his company which started in 1994 and sells over 7,000 barrels per year.

The following day's technical meeting convened at the Phantom Canyon Brewery. The technical portion of the meeting featured Mr. Grady Hull, Assistant Brewmaster, New Belgium Brewing Company and Emeritus Professor, Jim Mattoon, Ph.D., Center for Biotechnology and Bioinformatics. Mr. Hull's presentation, *Olive Oil Addition to Yeast as an Alternative to Wort Aeration*, reported on full-scale production tests conducted to study this unique yeast treatment. The study was undertaken to evaluate what effect the elimination of oxygen, normally added into the wort to foster yeast growth and health, has on long-term flavor stability. Olive oil was chosen, as its unsaturated oleic acid is very similar in structure to the linoleic acid that yeast uses to produce the needed nutrients glycogen and trehalose. The tested addition rate of olive oil was 1 mg/25 x 10⁹ cells. The tests showed that beer of normal quality can be

produced using this method. Organoleptically the test beers were judged to have a slightly higher ester and fusel profile, significantly less DMS and improved freshness after forced aging. Overall, the tests proved that the process of wort oxygenation could be replaced with the addition of olive oil to one's yeast!

Professor Mattoon's talk, *Yeast Biochemistry, Biology and Biotechnology*, started with a review of the beginnings of modern biochemistry, which had its roots in the study of brewers' yeast. He followed this with an in-depth description of how yeast has been an important tool in determining the role of vitamins in living cells. These studies also revealed that enzymes in yeast are similar to those in animal tissue. This led to the realization that all living things have a similar biochemistry and that yeast and human cells share numerous characteristics. Prof. Mattoon also spoke on how genetic engineering of yeast has led to improved production methods in the pharmaceutical industry. His story on an effort to cross-breed (genetic engineer) starch fermenting capability into brewers' yeast to improve light-beer-production highlighted the difficulties one encounters when trying to introduce a new characteristic into yeast.

Both talks stimulated a great deal of discussion and technical interchange among the group and speakers. It is this type of exchange of ideas and knowledge between brewers and suppliers to the industry that makes the District's technical events relevant to and practical for the membership. Following the talks, the group was given a behind-the-scenes look at the Phantom Canyon's Brew Pub operation. The enterprise was started by Wynkoop founder, John Hickenlooper, in 1994. The 13-barrel system produces 12 beers for on-premise draft sales. Total yearly output is 1700 barrels. The District thanks Andy Bradley, Head Brewer, for the tour and his generosity in providing us with many full glass samples of his fine beers.

Following the technical presentations and Phantom Canyon tour, the membership reassembled with their family members for a barbeque lunch at

Garden of the Gods Campground. Entertainment Chairman Steve Woodward, Manager, Fort Collins Feed, organized the afternoon event and expertly prepared the meal and all its fixings. The afternoon was filled with friendship, horseshoes, conversation, and sampling of special beers from Anheuser-Busch, Inc., New Belgium Brewing Co., and O'Dell Brewing Co. That evening the group headed into historic Colorado City for a district sponsored dinner and further sampling of Colorado's excellent beers.

Steve Presley
Publicity Chairman & Past President
MBAA District Rocky Mountain

Accompanying photos:

Phantom Cellars.jpg: Andy Bradley, Mark Clefe, Darwin Davidson, Mark Fischer, Doug Odell and Gary Dick in the Phantom Canyon release cellars.

Phantom Group.jpg: District Rocky Mountain members outside the Phantom Canyon Brew Pub in Colorado Springs, CO

Speakers.jpg: Grady Hull, New Belgium Brewing Co., President Doug Odell, Odell Brewing Co., Professor Jim Mattoon, Center for Biotechnology and Bioinformatics, and Technical Chairman, Finn Knudsen, Beverage Consult International, Inc.

Bristol Brewhouse.jpg: District members viewing the Bristol Brewing Company's brewhouse operation in Colorado Springs, CO