

**CAMECO RESOURCES
CROW BUTTE OPERATION**



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July 20, 2015

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

ATTN: Document Control Desk, Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Source Materials License SUA-1534
Docket No. 40-8943
SM6-28 and SM8-28 Monitor Well Excursion - 60 Day Report

Dear Document Control Desk:

On May 21, 2015 during routine biweekly water sampling of Cameco Resources, Crow Butte Operation (CBO) shallow monitor wells SM6-23, SM6-28 and SM8-28 exceeded the excursion control parameters. The multiple parameter upper control limits (MCL) for alkalinity and conductivity were exceeded for SM6-23 and SM6-28. The single parameter upper control limit (SCL) for conductivity was exceeded for SM8-28. As required by License Condition 11.2 of Source Material License SUA-1534, a second sample was collected from each well within 48 hours and analyzed for the three excursion indicator parameters. The results of the second samples also exceeded the excursion control parameters as described above. CBO notified Mr. Ron Burrows of the excursion by phone at 9:20 a.m. on May 22, 2015 as required in License Conditions 11.5 and 11.6.

Mine Unit 6 was placed into restoration on October 28, 2010 and has been in groundwater sweep and IX treatment since that time. As required by CBO's NDEQ Class III UIC Permit, the shallow monitor wells are located at a minimum density of one per four acres. Due to the proximity of SM6-28 to Mine Unit 8 (map attached), CBO has ceased all mining and restoration activities within the four acres surrounding SM6-28 and all mining activities surrounding SM8-28 as required by License Condition 11.5. SM6-23 went off excursion status on July 9, 2015.

CBO continues to over pump these wells to help lower the water levels in this area.

Graphs are attached for the three excursion indicator parameters and water levels that cover the period from December 31, 2014 to July 13, 2015.

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CBO still believes that the apparent excursions are due to increased groundwater levels caused by the significant amount of precipitation at the facility during April, May and June. This conclusion is supported by the following indications:

1. The water level in each well has increased steadily throughout the spring, all three wells are located in an area of high groundwater near the springs that form the source of English Creek, and groundwater quality in this area is under the influence of surface water.
2. While the excursion indicators in each well has increased significantly, the levels still do not approach the levels found in mining solution.
3. Twelve other shallow monitor wells located in Mine Units 6, 8 and 10 have also shown increases in water levels and one or more of the indicator parameters. Historical operating data indicates that the excursion parameters are affected by high water levels in the shallow monitor wells located along English Creek.
4. In June 2010, these same three wells were put on excursion status due to the same circumstances. Once the area dried up and the groundwater table subsided, these wells went off excursion status.

In accordance with License Condition 11.5, CBO has increased the sampling frequency for SM6-28, and SM8-28 to weekly until three consecutive weekly samples are below the exceeded excursion control parameters. Also, per the requirements of License Condition 11.12, CBO will continue to test weekly for natural uranium. CBO will continue weekly sampling for an additional three weeks after this goal has been achieved as required by CBO's NDEQ Class III UIC Permit requirements. If the wells have not exceeded the excursion control parameters after these samples, they will be returned to normal status.

If you have any questions or require any further information, please do not hesitate to call me at (308) 665-2215 ext. 114.

Sincerely,
CAMECO RESOURCES
CROW BUTTE OPERATION

Larry Teahon
SHEQ Manager

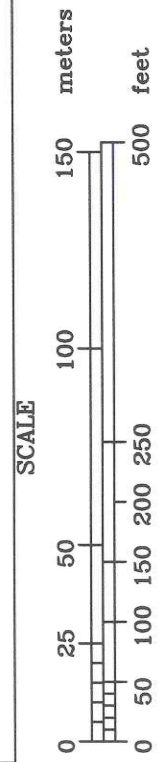
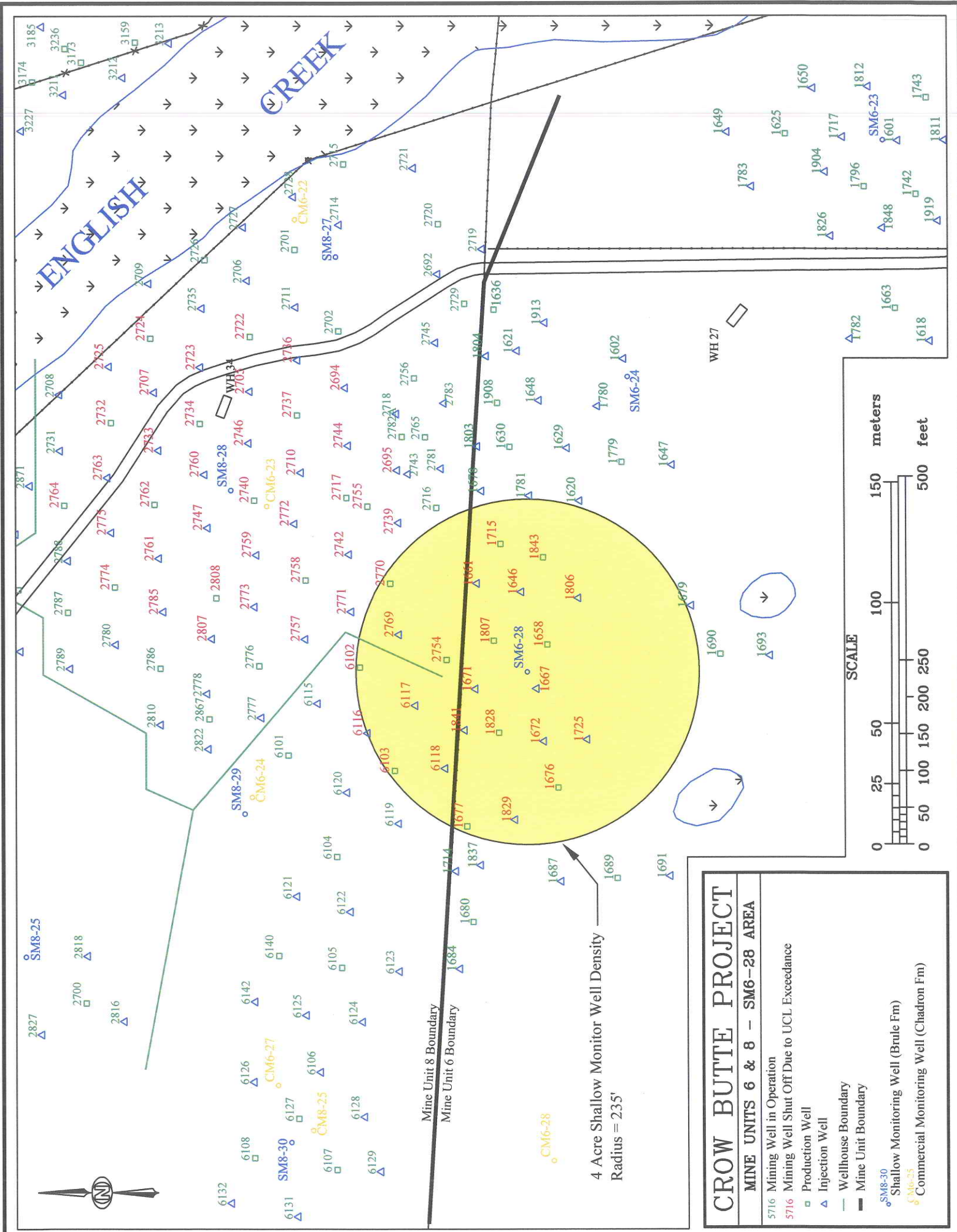
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Enclosures: As Stated

cc: Mr. Ronald Burrows – Project Manager
CBO - File
ec: CR - Casper



CROW BUTTE PROJECT

MINE UNITS 6 & 8 - SM6-28 AREA

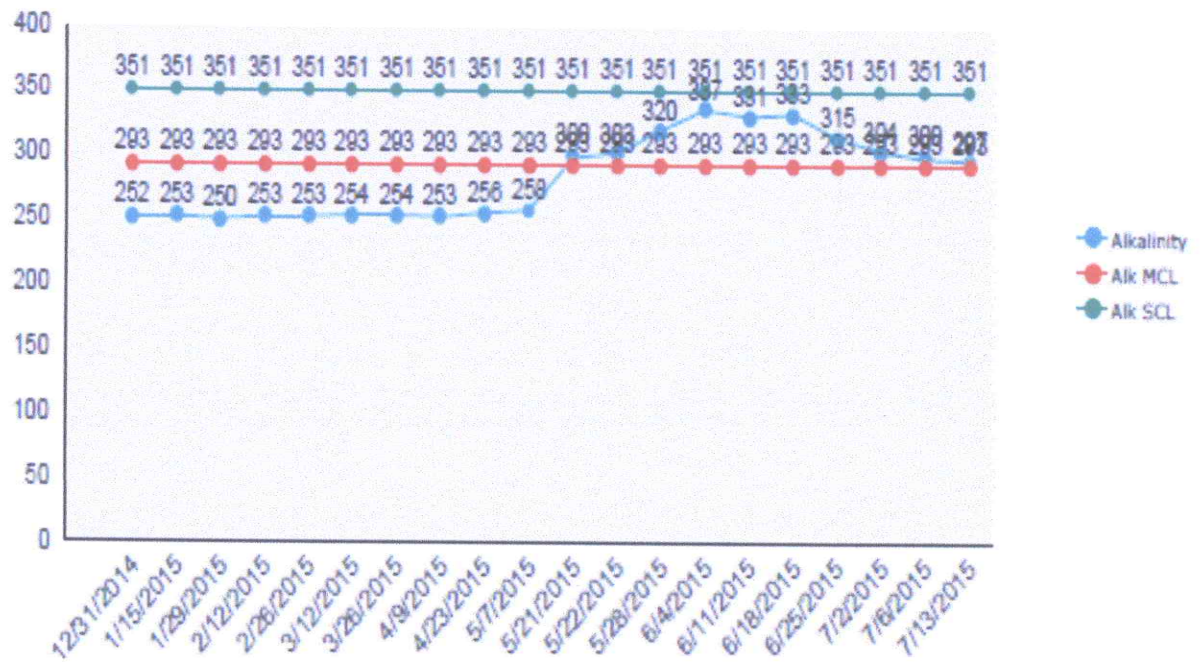
- 5716 Mining Well in Operation
- 5716 Mining Well Shut Off Due to UCL Exceedance
- Production Well
- Injection Well
- Wellhouse Boundary
- Mine Unit Boundary
- SM8-30 Shallow Monitoring Well (Brule Fm)
- CM6-25 Commercial Monitoring Well (Chadron Fm)

4 Acre Shallow Monitor Well Density
Radius = 235'

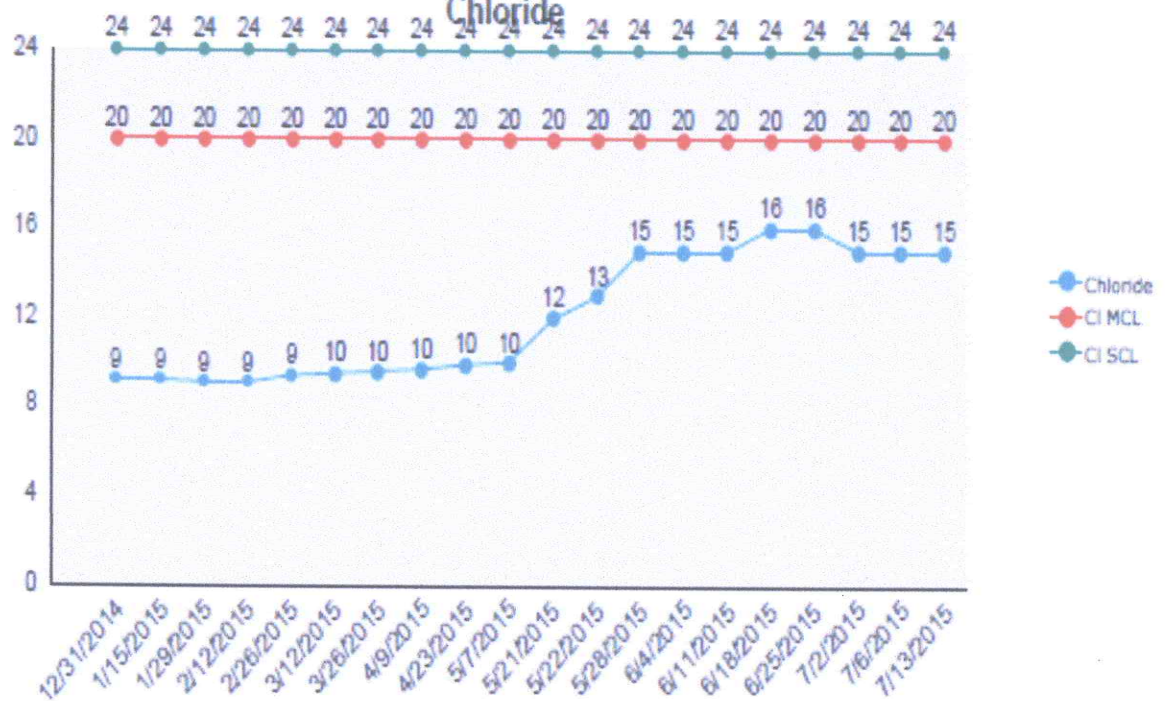
Mine Unit 8 Boundary
Mine Unit 6 Boundary

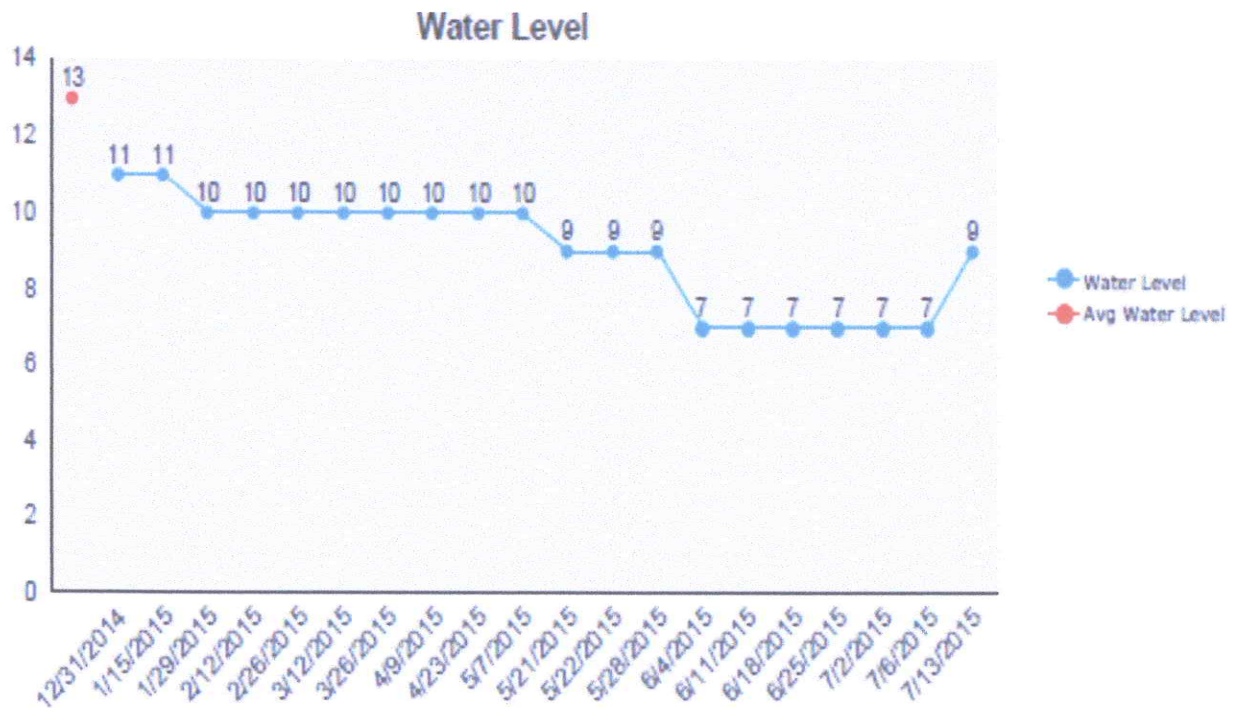
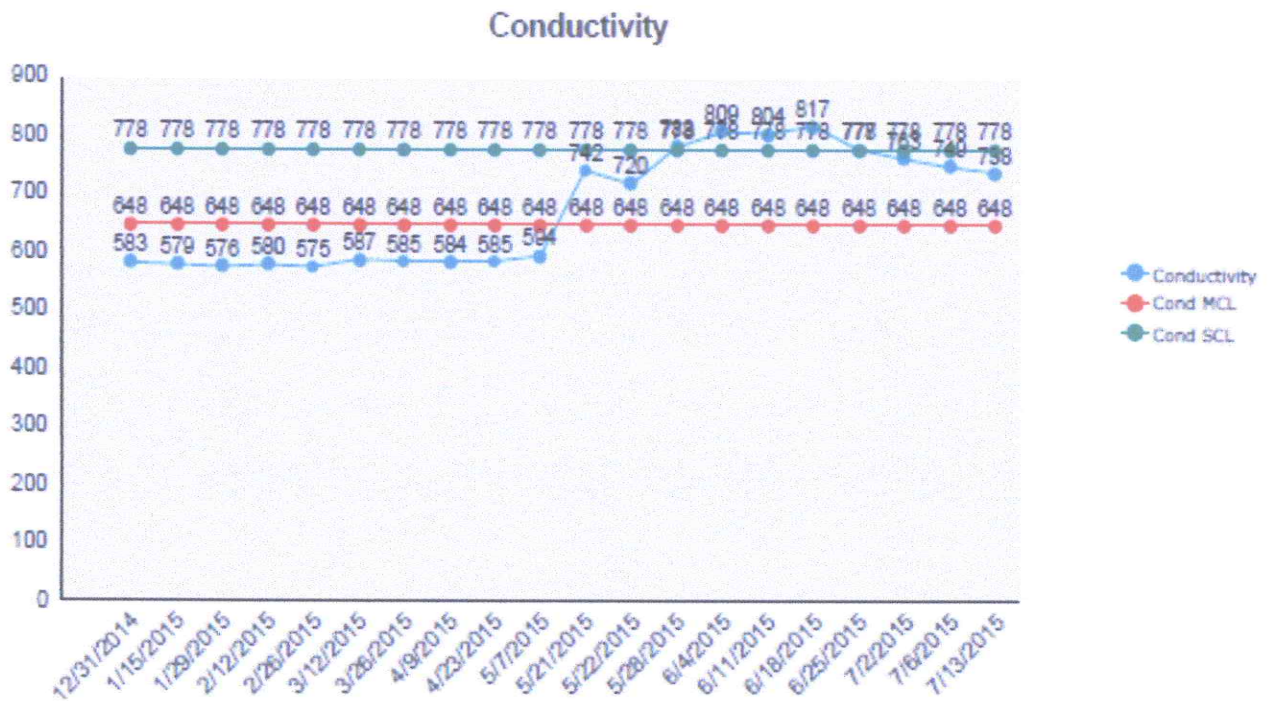
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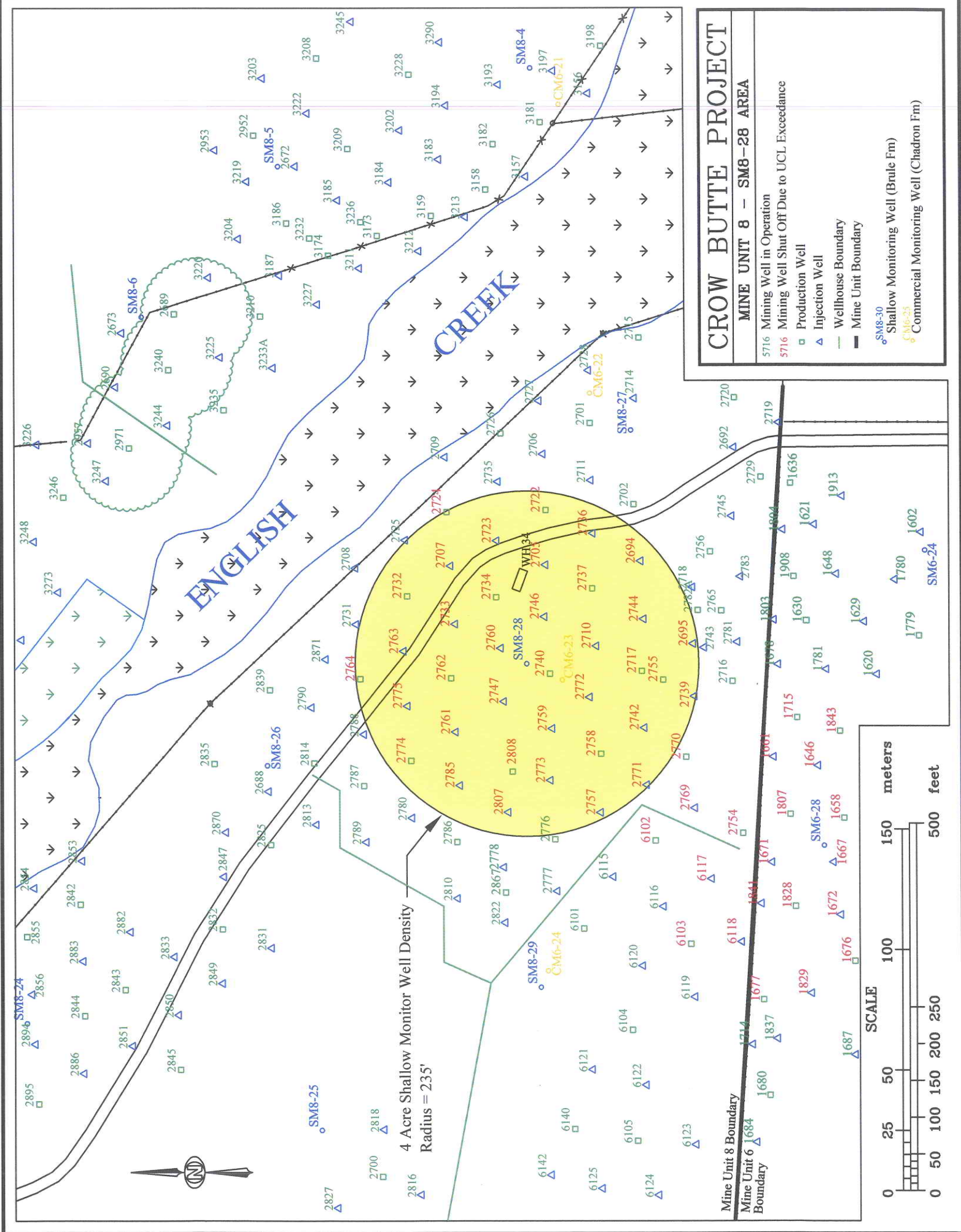
Alkalinity



Chloride

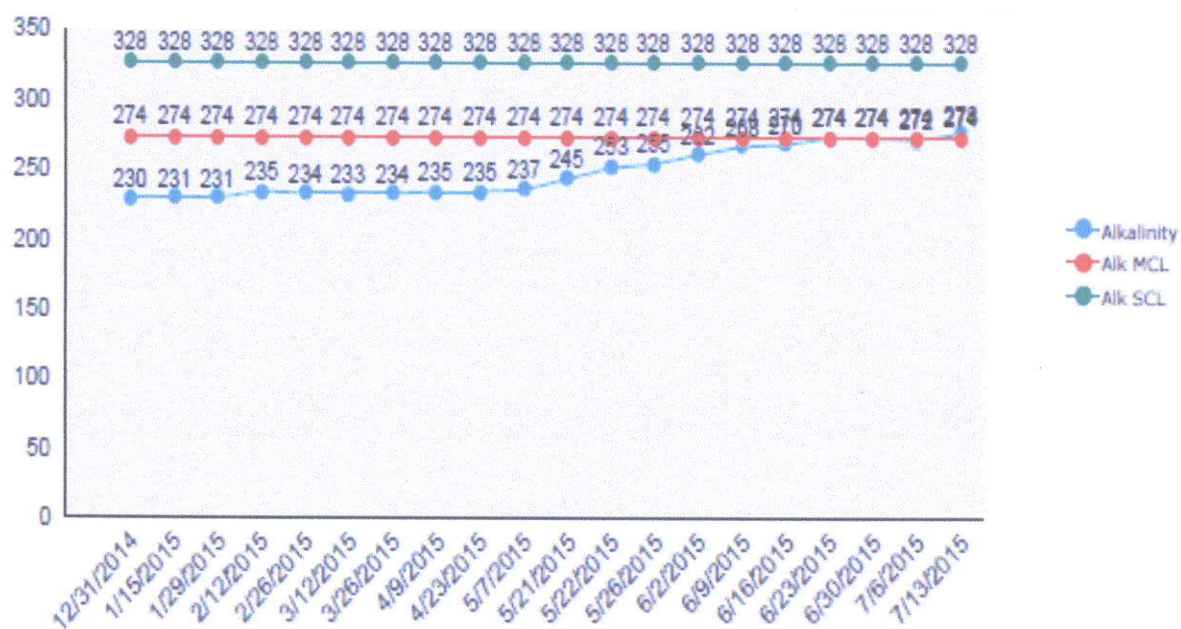






SM08-028

Alkalinity



Chloride

