

11, 13, 14, 15, 16, 17, 21, and 22, T5N, R86W. Survey results are presented in the Confidential Appendix, in Exhibit 6L.

WCR Development and Mining (PR14-10, PR15-11, MR15-289, MR23-324) – Most of the Wolf Creek Reserve mining area underlies areas previously undermined by TC's historic and ongoing mining operations in the Wadge Coal Seam in the Eastern and Northern Mining Districts. Baseline studies related to potential surface effects for these previously mined areas were completed and are included in the PAP. The proposed WCR development and mining activities will result in mining and potential surface subsidence effects which extend beyond the eastern limits of the previously surveyed and mined areas. TC has contracted with Metcalf Archaeological Consultants, Inc. to complete intensive Class III cultural resources surveys for any areas subject to potential surface subsidence effects, which have not already been surveyed. Generally, these surveys covered limited additional areas in Sections 10, 12, 13, and 14, T5N, R86W. The surveys resulted in identification of two new sites and one previously recorded site which could potentially be affected by mining-related subsidence. Metcalf Archaeological Consultants, Inc. reviewed the subsidence evaluations and profiles for the areas associated with the identified sites, and provided a letter concluding that based on the very limited projected changes in ground elevation and gradient, the potential to impact any buried cultural materials would be negligible. Review by both the CDRMS and SHPO resulted in concurrence with this conclusion. Survey results are presented in the Confidential Appendix, in Exhibit 6L.

13LT Outby Utility Borehole (MR15-291, MR292) - TC contracted with Metcalf Archaeological Consultants, Inc. to complete intensive Class III cultural resources surveys of the proposed 13LT Outby Utility Borehole. The surveys covered lands located in Section 20, T5N, R86W. Due to adverse ground conditions, the cultural resource survey for the 13LT Outby Utility Borehole was conducted as an auger survey under study plans reviewed and approved by the SHPO. The approved study plan involved augering to a depth of approximately 1.0m on a 15m grid for the pad area, and on two parallel lines spaced 15m apart along the access corridor. This effectively resulted in a 30m wide inventory area for the access, and a 135m x 135m inventory area for the pad disturbance. The field archaeology crew looked for staining and artifacts during the augering, screened the excavated material, and prepare detailed field notes on stratigraphy, soil character, and any artifacts found. The 13LT Outby Borehole Study Plan is presented in the Confidential Appendix, in Exhibit 6T. The field work did not identify any cultural resources and resulted in a finding of no adverse effect, based on the preliminary survey report. Both the preliminary and final survey reports are provided for reference in Exhibit 6T.

9-East Utility Borehole Installation (MR16-296) – In conjunction with permitting for the Wolf Creek Reserve development and mining (PR15-11) Metcalf Archaeological Consultants, Inc. completed intensive Class III cultural resources surveys for any areas subject to potential surface subsidence effects, which have not already been surveyed, as well as any related areas of additional surface disturbance, including utility boreholes. Generally, these surveys covered limited additional areas in Sections 10, 11, 12, 13, and 14, T5N, R86W. The proposed utility borehole pad areas (Options 1-2) and roads would not impact any identified cultural resource sites. Survey results are presented in the Confidential Appendix, in Exhibit 6L.

RULE 2.04.5 - GENERAL DESCRIPTION OF HYDROLOGY AND GEOLOGY

Each application shall contain a description and map, prepared in accordance with 2.10, of the geology, surface and ground water systems, including water quality and quantity, of all lands within the proposed permit area, the adjacent area, and the general area. The description shall include information on the characteristics of all surface and ground waters within the general area, and any water which will flow into or receive discharges of water from the general area. The description shall be prepared according to 2.04.5 and 2.04.7, and conform to the following:

(a) Information on surface and groundwater systems including water quality, water quantity, and geology related to the hydrology of areas outside the permit area and within the general area shall be provided by the Division, to the extent that this data is available from an appropriate Federal or State agency.

(b) If this information is not available from those agencies, the applicant may gather and submit this information to the Division as part of the permit application.