

June 26, 2019

Mr. Andrew Clark  
State Historical Society of North Dakota  
Archaeology and Historic Preservation Division  
612 East Boulevard Ave  
Bismarck, ND 58505

Re: ONEOK Rockies Midstream, L.L.C.  
Bear Creek Gas Plant Expansion Project  
Archaeological Resources Class III (additional identification and NRHP evaluation) Letter Report  
NDSHPO Reference No. 19-0255

Dear Mr. Clark:

As you are aware, ONEOK Rockies Midstream, L.L.C. (ONEOK) proposes to expand their existing Bear Creek Gas Processing Plant located in Dunn County, North Dakota. This letter report provides an overview of the proposed Project and a summary of recent cultural resource survey work conducted within proposed Project boundary.

Project Description/Overview:

ONEOK owns and operates its Bear Creek Natural Gas Processing Plant (Facility) located in the northeast ¼ of Section 28, Township 146 North, Range 95 West approximately 5 miles north of Killdeer, Dunn County, North Dakota. The Facility originally began construction in May 2015 and began operating in August 2016. The Facility has a nominal name-plate processing capacity of 175 million standard cubic feet/day (MMscfd) of natural gas.

In response to increasing demand for natural gas processing capacity in the area, ONEOK is proposing an expansion of the existing Facility to achieve a total facility capacity of 375 MMscfd of natural gas. ONEOK's proposed Bear Creek II Project (Project) will involve an additional processing train to be located directly south of this existing processing train footprint within a 76-acre parcel previously certificated by the North Dakota Public Service Commission (NDPSC).

Construction of the Project would involve the disturbance of approximately 14 acres and will include the installation of underground piping, above ground piping, above ground gas processing equipment, a reconfiguration of an existing stormwater retention pond, and the addition of two stormwater retention ponds within the previously disturbed facility. The new processing train systems shall be located within the existing NDPSC certificated site boundary of the Plant.

ONEOK will begin construction of the Project upon receipt of all necessary authorizations. ONEOK anticipates that construction activities will be initiated on or before August 1, 2019 and that the new infrastructure will be in service in Q2 2021.

Summary of Previous Cultural Resources Work and Discussions with SHPO

On April 4, 2019, ONEOK and Merjent, Inc. (Merjent) met with North Dakota State Historic Preservation Office (SHPO) staff to present an overview of the Project and to discuss necessary fieldwork. On April 25, 2019, we submitted a Work Plan to complete Class III identification field work for the Project. The Work Plan was deemed acceptable by SHPO the same day.

On behalf of ONEOK, Merjent conducted Class III identification and recording between May 13 – 18, 2019 within the survey area (Survey Area) depicted in the original Work Plan. This survey included 212 auger probes and pedestrian survey within the existing Project boundary certificated by the NDPSC, as well as pedestrian survey of the Survey Area within and beyond the NDPSC boundary (see Figure 1). The May 13 – 18 survey effort resulted in sixteen positive auger probes (n = 7.55 percent) and thirteen surface finds resulting in the identification of a new site 32DU2405, a 5.19-acre expansion of existing site 32DU2216, and isolated find BCE-KJM-IF1 (see Photograph 1 and Figure 1).

**<<Photo redacted to  
protect locational information>>**

**Photograph 1: Site 32DU2405 Overview. View facing northeast.**

Based on the results of the May mobilization, a revised Work Plan was submitted to SHPO on June 7, 2019. The June Work Plan provided protocols and proposed locations for three 1 x 1-meter test units within the portion of Site 32DU2405 within the Project boundary. Merjent also proposed additional augering to help further define the southern extent of Site 32DU2405. The Work Plan was deemed acceptable via email on June 7, 2018.

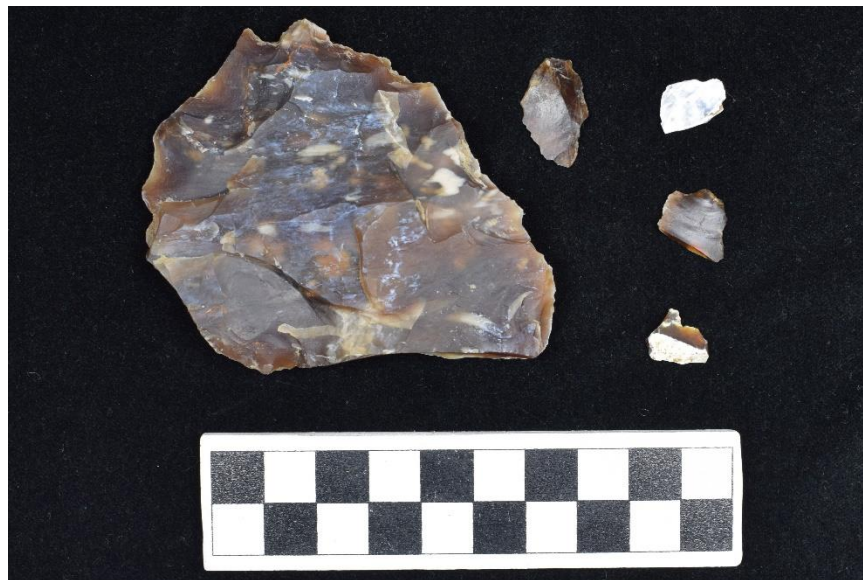
Merjent conducted additional Class III identification and a National Register of Historic Places (NRHP) evaluation of site 32DU2405 between June 10 – 13, 2019 as depicted in the June 7, 2019 Work Plan. The additional Class III identification (augering) was conducted outside of the proposed construction location to fully delineate site 32DU2405 within the ONEOK property boundary. The evaluation of 32DU2405 was conducted within the Project boundary to understand artifact distribution and subsurface integrity at that specific location.

Merjent excavated 125 auger probes to the south and east of the 32DU2405 site boundary as defined during the May 2019 fieldwork. A single, two-person gas powered auger with a 10-inch bit was placed through a just-oversized opening cut into the bottom of a galvanized metal bucket to contain soils from each probe. Soils recovered from auger probes were screened through ¼ inch hardware cloth mesh. In cases where soils were

too compact or impenetrable rocks were encountered, attempts to complete the probe were performed manually with a shovel. Auger probes generally extended to depths between 40 and 50 centimeters below ground surface (cmbs) with a maximum depth of 72 cmbs. Seven auger probes were positive for cultural material (n = 5.6 percent). These positive auger probes expanded the site boundary by 2.06 acres. Artifacts recovered include one biface (Photograph 2), one bifacial core (Photograph 3), and 12 pieces of lithic debitage (Photograph 3).



**Photograph 2: Artifacts from Auger Probe A2. Biface and lithic debitage.**



**Photograph 3: Artifacts from Auger Probe DD2. Bifacial core and example lithic debitage.**

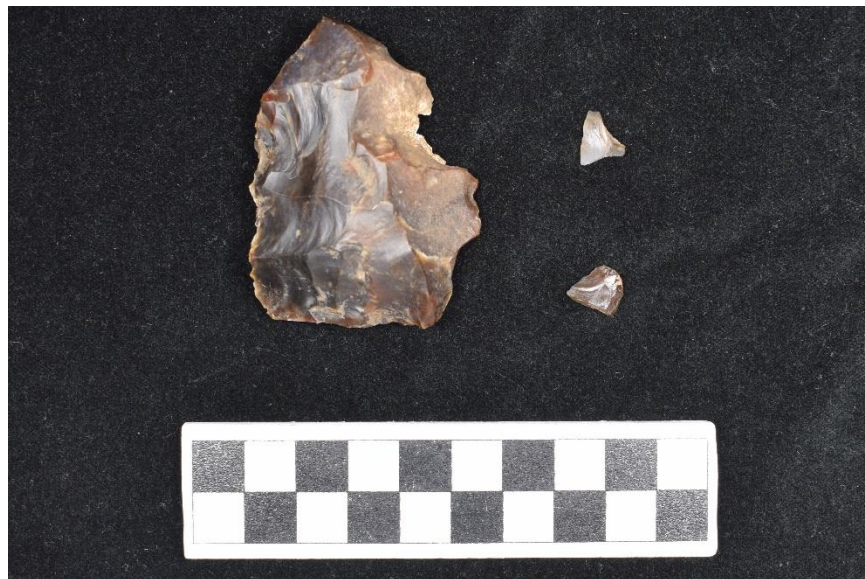
Merjent intended the evaluation effort to address Criterion D and included the excavation of three 1 × 1-meter test units adjacent to positive auger probes observed in May 2019 (see Figure 1). Each unit was excavated in 10-centimeter levels and screened through 1/4-inch hardware cloth mesh. Criteria used to determine NRHP

eligibility included the examination of intact subsurface cultural deposits with evidence of any of the following: lithic reduction strategies similar to those identified during the data recovery of site 32DU2216, a diverse artifact assemblage, a notable high artifact density, and cultural stratigraphy.

Two excavation units (XU1 and XU3) were positive for cultural material. XU1 contained three flakes within the plow zone, within a depth between 0 and 10 cmbs. XU3 contained seven artifacts; six of which were recovered from the plow zone (between 0 and 30 cmbs) and one flake was recovered between 50 and 60 cmbs. Of the six recovered from the plow zone, four were flakes and two were bifacial cores (see Photographs 4 and 5). No artifacts were recovered from XU2.



**Photograph 4: Artifacts from XU3, Level 2. Bifacial core and lithic debitage.**



**Photograph 5: Artifacts from XU3, Level 3. Bifacial core and lithic debitage.**

XU1 and XU2 were placed 18 meters apart on the level terrace. Soil profiles for these excavation units were similar and consisted of a 20 to 30-centimeter-thick sandy loam plow zone underlain by a sandy loam B horizon which transitioned to a sandy clay loam C horizon between 45 and 50 cmbs (Photographs 6 and 7). The C horizon in XU1 contained an ice wedge geological feature defined in the field by Merjent soil specialist Nick Haus. The C horizon in XU2 contained a natural concentration of unmodified nodules of Knife River Flint.



**Photograph 6: North wall profile of XU1. Note the ice wedge in bottom left corner.**



**Photograph 7: South wall profile of XU2. Note the natural KRF nodules within the C Horizon.**

XU3 was placed on a gentle slope on the edge of a narrow drainage. The soil profile for this excavation unit consisted of a 20 to 30-centimeter-thick fine sandy loam plow zone underlain by a fine sandy loam B horizon which transitioned into a fine sand C horizon at approximately 60 cmbs (Photograph 8).



**Photograph 8: East wall profile of XU3.**

#### Conclusions/Recommendations

Test excavations at Site 32DU2405 revealed a sparse concentration of Knife River Flint artifacts primarily associated with the plow zone, namely in the upper 30 centimeters. The artifact assemblage was not diverse and consisted of only lithic debitage and early stage bifaces. Overall, this portion of the site within the Project boundary had a low artifact density and only one piece of lithic debitage, likely out of context, was recovered below the plow zone.

The lack of intact cultural stratigraphy, lack of a diverse artifact assemblage, and low artifact density suggest that the portion of Site 32DU2405 within the Project boundary would not contribute information important to our understanding of history should future evaluations at the site in other areas indicate that the site would be eligible for inclusion on the NRHP under Criterion D. However, the site as a whole remains unevaluated for inclusion on the NRHP.

In addition, as displayed on Figure 1, ONEOK has designed the Project to avoid the revised site boundary of Site 32DU2216. As such, no impacts to this site will occur as a result of the Project.

#### Next Steps and Request for Concurrence

With this submittal, Merjent is providing site form updates for 32DU2405 and 32DU2216, as well as a new site form for field site BCE-KJM-IF1. ONEOK has directed Merjent to prepare a final technical report, which will be submitted in Summer 2019. The final technical report will adhere to SHPO guidelines and be accompanied by GIS-generated maps illustrating our findings.

With this letter report, Merjent respectfully asks for concurrence with our recommendation that Site 32DU2405 remains unevaluated but the portion within the Project boundary would not contribute to an eligible recommendation. We also request comment on our recommendation that the Project will have no effect on Site 32DU2216.

We look forward to continued dialogue with your office on this Project. If you have any questions, please contact me at (612) 834-3074 or [mjmadson@merjent.com](mailto:mjmadson@merjent.com) or ONEOK Project Manager Andrew Hackler at (918) 561-5373 or [Andrew.Hackler@oneok.com](mailto:Andrew.Hackler@oneok.com).

Sincerely,



Michael Madson, M.S., RPA  
Senior Environmental Analyst  
Merjent, Inc.

cc: Susan Quinnell, SHPO  
Michael Madson, Merjent (Principal Investigator)  
Kevin Mieras, Merjent (Lead Field Archaeologist)  
Andrew Hackler and Deborah Perry, ONEOK

Enclosures: Figure 1: Bear Creek Expansion Project and Class III Results  
32DU2216 Site Form  
32DU2405 Site Form  
BCE-KJM-IF1 Site Form