WORK PLAN

Wexpro Company

Exploration and Production Pits Delineation Work Plan

Powder Wash Gas Field, Moffat County, Colorado

Submitted to:

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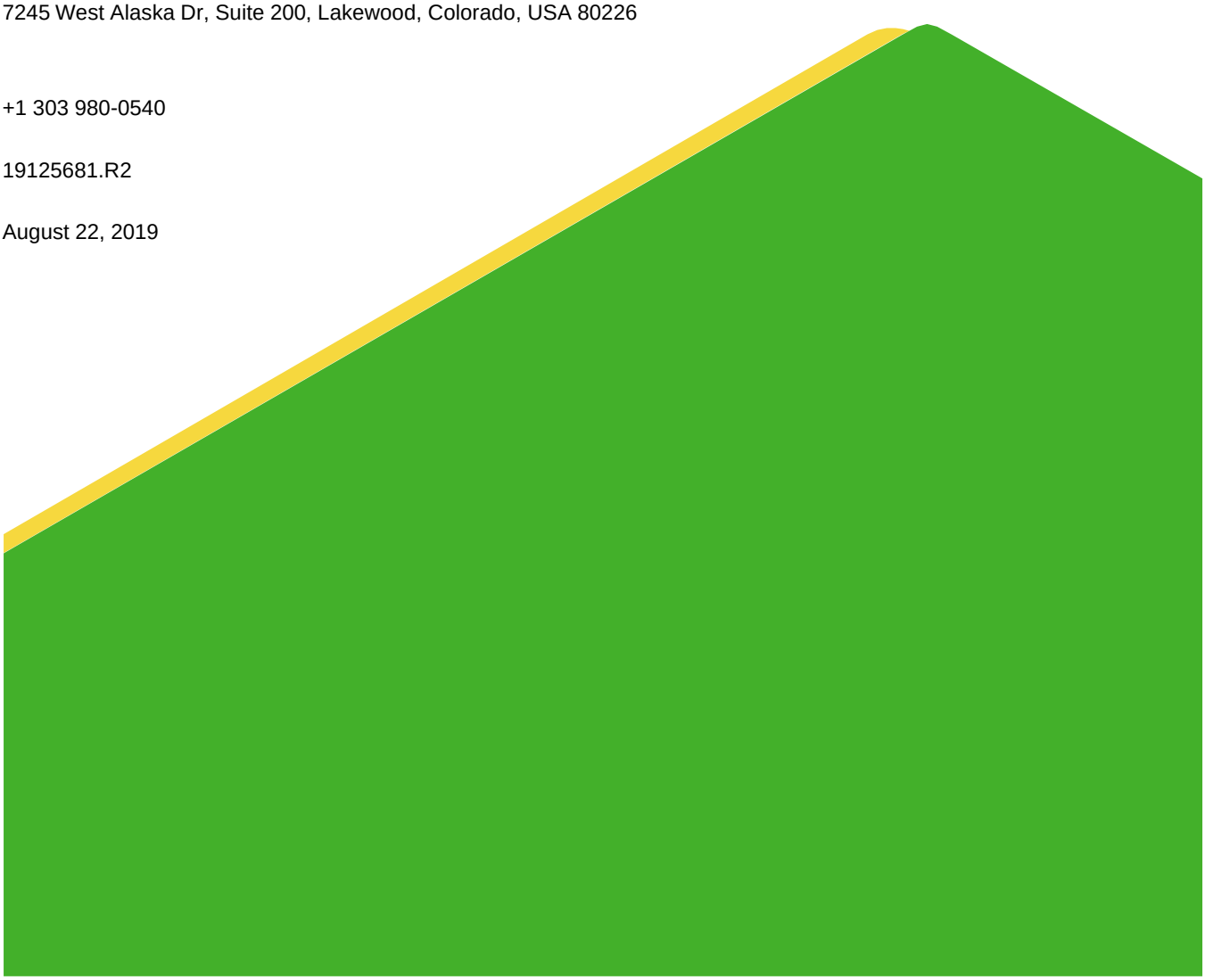

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1.0 INTRODUCTION

Wexpro Company (Wexpro) has requested that Golder Associates Inc. (Golder) conduct an environmental investigation of potential soil impacts existing at 18 former exploration and production (E&P) pits in the Powder Wash Gas Field in Moffat County, Colorado. The 18 pits are located within a five-mile radius of 40.946683°, -108.301703° (the Sites). Wexpro has requested that Golder perform a subsurface investigation to delineate potential salt and petroleum contamination in and around each former pit.

Limited information exists about the extent of the former E&P pits. This Work Plan has been developed to characterize conditions and delineate the potential impacts at the Sites. This Work Plan defines the protocol for field work related to the environmental investigation, which will include soil borehole drilling, environmental field screening, soil and groundwater (if encountered) sample collection, and other field work as needed.

1.1 Health and Safety

Field work will be conducted under a project-specific health and safety program developed by Golder. The health and safety program and requirements will be outlined in documentation including, at a minimum , field vehicle inspection forms, Work Method Statements (WMS), Job Safety and Environment Analysis (JSEA) forms completed prior to the start of each day's work, and Journey Management Plans for each person visiting a site and/or performing field work. Hard copies of the health and safety documentation will be readily available on-site during field work and will identify potential hazards, personal protective equipment (PPE), and communication protocols to ensure a safe work environment.

All field staff will be outfitted with the following PPE:

- Hard hat;
- Hearing protection during drilling activities;
- Safety glasses with side shield;
- Flame retardant clothing;
- Safety toed boots; and
- Gloves as appropriate for the task being performed.

The drilling subcontractor will submit a Colorado One-Call utility location request via the Utility Notification Center of Colorado (UNCC) before the start of work. No field work will be performed until utility location has been completed and confirmed. Golder will coordinate with Wexpro to ensure private utilities and other known subsurface features, such as drilling reserve pits, not marked as part of the One-Call request are located and marked accordingly. If UNCC requires that the proposed borehole locations be marked prior to performing the utility locate, it is assumed that the marking will be performed by Wexpro. Additionally, Golder will coordinate with Wexpro to ensure the site investigation activities are conducted within facility lease boundaries.

1.2 Background

Golder understands that Wexpro is working to delineate the nature and extent of potential petroleum and/or salt contamination in and around 18 E&P pits in the Powder Wash Gas Field. Pits will be investigated at the following well sites:

- BW Musser 11
- BW Musser 16
- BW Musser 18
- Carl Allen 6 (2 pits)
- Carl Allen 7
- Carl Allen 9
- Carl Allen 11
- Carl Allen 16
- Carl Allen 20
- HW Stewart 1 (2 pits)
- Jack's Draw 2
- Jack's Draw 3
- JC Donnell 5
- JC Donnell 9
- JC Donnell 10
- Mountain Fuel Supply 20-1

These pits may have been used as produced water or blowdown pits and have been previously abandoned and backfilled with clean fill material. The actual dimensions of the pits are not well documented. Wexpro has provided Golder with general location information for each pit including approximate coordinates of each pit, data from the last sample collected from the interior of each pit, and the Colorado oil and Gas Conservation Commission (COGCC) facility number for each pit.

1.3 Statement of Objectives for Pit Delineation

This E&P Pit Delineation Work Plan will be implemented to gain a better understanding of the nature and extent of petroleum and salt contamination in and around each of the 18 pits that will be investigated. The objectives of the pit delineation work include:

- Advancing up to five boreholes at each of 18 former E&P pits, for a total of 90 boreholes. Boreholes will be advanced to a maximum depth of 20 feet below ground surface (ft bgs) using a Geoprobe model 7822 direct-push drill rig;
- Field screening of subsurface soils using a photoionization detector (PID) and electrical conductivity (EC) meter;
- Soil and groundwater (if encountered) sample collection for laboratory analysis;
- Reporting of findings including field methods, field screening (PID and EC) results, and analytical laboratory results; and
- Observations made of the soil returned from each borehole location. Significant observations may include petroleum staining, petroleum odor, or occurrence of salt precipitates.

2.0 FIELD PROCEDURES

The following sections describe the procedures that will be used to complete the pit delineation including drilling procedures, field screening procedures, sample collection procedures, decontamination procedures, and waste management procedures.

2.1 Drilling Procedures

Drilling will be performed by Henderson Drilling (Henderson) of Casper, WY under contract to Golder with the use of a Geoprobe model 7822 direct-push drill rig. The Geoprobe 7822 will advance a 1.965-inch inside diameter core barrel capable of collecting a continuous core in 5-foot increments. Soil cores will be retrieved in disposable polyvinyl chloride (PVC) sample liners. Five boreholes will be completed at each pit location, not to exceed 20 ft deep each. Boreholes may be completed at depths less than 20 ft bgs if refusal is met before reaching this depth. The borehole locations will be based on the location of utilities, topography, access constraints, ongoing operations, or other conditions encountered in the field. Boreholes will be identified with naming convention “Px-Bx”. The “P” represents pit numbers 1 through 18 and the B represents the borehole number at each pit, 1 through 5. The pit number 1 through 18 will be correlated to each pit name or facility number in a sample identification table that will be included in the report.

Each borehole location will be logged in the field with a handheld GPS with approximately +/- 1 meter (m) lateral accuracy and +/- 2m vertical accuracy. It is assumed that four boreholes will be advanced around the perimeter of each pit or other “clean” location and that one borehole will be advanced inside each pit. When practical, boreholes will be backfilled with cuttings, taking care to place suspected impacted material at the same depth from which it was retrieved. Bentonite chips will be available to backfill the boreholes in the event that backfilling with cuttings is not feasible. Soil lithology will be classified and boreholes will be logged during the drilling effort in general accordance with the Unified Soil Classification System (USCS).

2.2 Field Screening Procedures

Soil cores will be field screened for volatile organic compounds (VOCs) using a PID and specific conductance using an EC meter. Meters will be calibrated at the start of each working day, when significant changes in weather occur, and if erroneous readings are suspected. Screening will be performed in 2-foot intervals and when significant changes in the soil profile occur. Observations pertaining to moisture, appearance, visual indicators of chemical impact, PID readings, EC readings, and other pertinent information will be recorded on soil borehole logs.

2.3 Sampling and Analysis Procedures

At each of the four perimeter borehole locations, one soil sample will be collected for laboratory analysis. At each interior borehole location two samples will be collected for laboratory analysis. This sampling program will result in six soils samples being collected from each pit if all five planned boreholes are completed. Soil samples will be collected directly from the soil core with gloved hands, or with a clean stainless-steel scoop/trowel and gloved hands, placed directly into laboratory provided containers, and immediately stored on ice. Nitrile or latex gloves will be used for sample collection and will be changed between samples. The soil sample selection depth/interval will be based on the following criteria:

- Perimeter Boreholes: One soil sample will be collected from each perimeter sampling location from soils indicating the highest PID reading, or in the absence of elevated PID readings, the highest EC reading;
- Interior Boreholes: Two samples will be collected from each interior sampling location;

- One soil sample will be collected from the interval indicating the highest PID reading, or in the absence of elevated PID readings, the highest EC reading; and
- One sample will be collected from below the base of the pit, from an interval expected to be clear of contamination, not to exceed a depth of 20 ft bgs.

If no elevated PID or EC readings are recorded, soil samples for analytical testing will be determined based on professional judgement, historical information, and conditions observed.

It is currently expected that 108 soil samples will be collected (six samples per pit). No quality control samples will be collected. Golder understands that Wexpro has sufficient data characterizing background soil conditions in the Powder Wash Gas Field, and no additional background samples will be required.

Samples will be named as follows:

- Soil Samples: pit number – borehole number – depth (e.g.: P1-B1-2'); and
- Groundwater Samples (if applicable) – pit number – borehole number – GW – depth (e.g.:P1-B1-GW-20')

The soil samples will be analyzed for the following constituents:

- TPH-DRO (method 8015M);
- TPH-GRO (method 8015M);
- BTEX (method 8260);
- Electrical conductivity (specific conductance) (method 9050A);
- SAR (USDA Handbook 60);
- Chloride (method 9056A); and
- Sulfate (method 9056A);

Groundwater sampling will be performed if groundwater is encountered before the terminal depth of 20 ft bgs at any of the borehole locations. Groundwater samples will be submitted for analytical laboratory analysis of constituents identified in Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1.

Analytical samples will be stored on ice immediately after collection and will be transported to the analytical laboratory under chain-of-custody procedures.

Golder will contract with Pace National Center for Testing and Innovation (Pace), a State of Colorado certified environmental laboratory located in Mt. Juliet, TN (certification number TN100003) to perform the analytical laboratory analysis.

2.4 Decontamination Procedures

Decontamination will be performed on all non-dedicated, reusable drilling and sampling equipment. Decontamination will include a wash with an environmental detergent solution (Alconox or similar) followed by a double rinse with distilled water. It is expected that decontamination will be required on downhole drilling equipment that is in direct contact with subsurface soil and reusable soil sampling equipment (e.g. stainless steel scoop). Decontamination will occur within a dedicated decontamination containment system.

2.5 Waste Management Procedures

Investigation derived waste (IDW) generated during drilling and sampling will be containerized in either Wexpro-provided containers, 55-gallon steel drums, 5-gallon buckets, or other rigid container with a lid for appropriate characterization and disposal by Wexpro. Expected IDW includes, but is not limited to, decontamination wash water, drill cuttings, soil cores, soil core liners, and groundwater.

3.0 REPORTING

Upon receipt of final laboratory results, Golder will prepare a brief report for each Site (i.e. pit) summarizing the subsurface investigation field methods, sample results, and laboratory data quality. The report(s) will include:

- Brief narrative describing the drilling and sampling methods, field screening procedures and results, decontamination procedures, problems and resolutions (if applicable), deviations from the Work Plan, and results of the data quality review;
- Applicable photos from each Site/borehole;
- Map(s) showing drilling and sampling locations;
- Table(s) comparing field and laboratory results to applicable COGCC Table 910-1 Concentration Levels. Wexpro has requested chlorides and sulfates in soil analyses. The COGCC does not provide Concentration Levels for these constituents in Table 910-1. As such, the results for these constituents will be summarized, but not compared to COGCC Concentration Levels; and
- Final laboratory report(s).

4.0 SCHEDULE

It is currently expected that drilling can be scheduled within four to six weeks of COGCC approval of this Work Plan. Draft report(s) will be provided to Wexpro within 30 days of receipt of the final laboratory results and final reports will be submitted to Wexpro within two weeks of receiving Wexpro comments on the draft report submittal(s).

Signature Page

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MKS/JLY/cc

https://golderassociates.sharepoint.com/sites/111388/project files/6 deliverables/reports/3_r_2/19125681-0001--1-wp-2-exploration and production pit delineationr2.docx

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