March 22, 2018 Reference No. 086232

Mr. Bradford Billings
Energy, Minerals, and Natural Resources Department
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Dear Mr. Billings:

Re: 2018 Work Plan
Bell Lake Compressor Station, AP-120
Lea County, New Mexico

GHD Services, Inc. (GHD), on behalf of Transwestern Pipeline Company, LLC (Transwestern) submits this work plan for the Transwestern, Bell Lake Compressor Station located in Lea County, New Mexico. The Bell Lake Compressor Station (Site) is located approximately 21 miles northwest of Jal, New Mexico. The legal description is Section 1, Township 24 South, Range 33 East in Lea County, New Mexico (Figure 1). The Site is regulated by the New Mexico Oil Conservation Division (NMOCD).

1. Project Understanding

The Bell Lake Gas Plant began operation in 1961. During past operations, natural gas pipeline liquid and process wastes were placed in three unlined impoundments located on the northeast quarter of the Site property. Wastes were also placed in one concrete lined impoundment located near the northwest corner of the property (Figure 2). Impacts to a shallow, unconfined, perched groundwater zone appear to have originated from the former unlined waste impoundments.

Site contaminates of concern (COCs) consist of benzene, chloride, and total dissolved solids (TDS). The New Mexico Water Quality Control Commission (NMWQCC) regulatory limits for the Site are:

Constituent	NMWQCC Regulatory Limit (micrograms per Liter [µg/L])
Benzene	10
Chloride	250
TDS	1,000

A soil vapor extraction (SVE) system with three SVE wells was installed in June 1996. The SVE system was expanded with four additional wells in 1997 and with six wells in 1999. Recovery of light, non-aqueous phase liquid (LNAPL) took place in SVE wells between 1998 and 2008.

SVE system monitoring results indicated that concentrations of volatile organic compounds content in extracted vapor declined from an initial concentration of 4,000 micrograms per liter (µg/L) in January 1998

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to a concentration of 140 µg/L in October 2012. As a result, operation of the SVE system was discontinued in October 2012.

GHD conducted a geophysical survey, confirmation soil sampling, and an aquifer pump test in 2014. The geophysical investigation indicated several potential areas of brine impact in the shallow subsurface. Analytical results for confirmation soil samples collected indicate that some total petroleum hydrocarbons (TPH) and chloride impacts exist in subsurface. Geophysical survey and soil sampling analytical data suggest that the majority of benzene, toluene, ethylbenzene, and xylene (BTEX) and chloride mass have migrated from soil to groundwater.

An aquifer pumping test, performed in December 2014, indicated that while pumping SVE-9 at a rate ranging from 0.18 gallons per minute (gpm) to 0.32 gpm, the water level ranged from approximately 96 to 97 feet below ground surface (bgs) within the well with a drawdown of 4 to 5 feet. This indicates that the limited yield prevents development of a cone of depression at distances represented by the observation wells. Evaluation of the pumping test data indicated an estimated average hydraulic conductivity of 0.76 feet/day. Based on this low conductivity, a groundwater pump and treat system would not appear to be effective. GHD attempted to perform a longer term pump test in 2016. However, pump failure occurred during the test and it was aborted.

During February 2017, GHD provided oversight of the installation of five additional groundwater monitoring wells that included MW-17, MW-18, MW-19, MW-20R, and MW-21.

GHD performed another pumping test from November 7 to November 9, 2017. The pump was operated in SVE-9 for approximately 56 hours at rates ranging from 0.17 to 0.30 gpm. Based on the data review by a GHD hydrologist, it appears that the pumping rate at the Site will not sustain 0.23 gpm. Based on the low pumping rate, a pump and treat system is not recommended.

Semi-annual groundwater monitoring has been performed by GHD each year since 2014.

2. Proposed Scope of Work

2018 Tasks:

Task 1: Project Preparation

GHD This task includes the preparation and submission of this work plan and other project preparation activities that occur after work plan approval and before field work mobilization. After receiving authorization to proceed from stakeholders, GHD will notify Transwestern a minimum of 48 hours prior to the commencement of field activities. Approval from the NMOCD will not be obtained for this work plan because the proposed scope of work has previously been approved by both agencies.

Task 2: Semi-annual Groundwater Monitoring

GHD will complete semi-annual groundwater monitoring events for 2018. The semiannual monitoring events have typically been performed in May and November. GHD proposes to sample the following monitoring wells: MW-2, MW-6, MW-7, MW-9, MW-12, MW-13 through 21, SVE-3, SVE-5, SVE-6, and the water supply well on-Site. A duplicate sample will also be collected from one select well for laboratory analysis. An oil/water interface probe will be used to measure groundwater depths and check for the presence of LNAPL in each of the monitoring wells. Before and after each use, the oil/water interface probe will be cleaned with an Alconox®/de-ionized water solution and rinsed with de-ionized water.

Monitoring wells will be purged and sampled using a dedicated, disposable polyethylene bailer or a low flow bladder pump. Field parameters including groundwater temperature, pH, TDS, conductivity, and oxidation/reduction potential (ORP) will be collected using an appropriate multi-parameter groundwater quality meter.

Following collection, groundwater samples will be labeled, placed on ice, and submitted to Hall Environmental Analysis Laboratory (HEAL) for laboratory analyses of chlorides by Environmental Protection Agency (EPA) Method 300.0, BTEX by EPA Method 8260, and TDS by EPA Method 2540C.

Purge water generated during the monitoring event will be placed in the on-Site tank and allowed to evaporate.

2018 Annual Report Preparation

GHD will prepare an annual report summarizing the semi-annual groundwater monitoring and assessment data collected during the 2018 calendar year. The annual report will include tabulated analytical and gauging data, groundwater gradient and isopleth maps for contaminants of concern from the semiannual events, details of monitoring well installation activities, and recommendations for future activities at the Site.

A draft final version of the Annual Report will be submitted to Transwestern for review. The final report will incorporate comments received from Transwestern on the draft final and it will be submitted to NMOCD as a final report following receipt of comments from Transwestern.

Site Closure Research and Discussions

Data from aquifer test previously performed on-Site will be used to pursue potential Site closure based on the lack of present or potential future use of the groundwater as a domestic or agricultural water supply as defined in Section 20.6.2.3101 NMAC. This task will consist of making a request for closure based on the Site data and the regulation. GHD anticipates discussions with the NMOCD and possibly additional documentation or data may be required. Site closure through this pathway is not guaranteed, however, a best effort will be made.

3. Schedule

GHD submits this work plan to the NMOCD for their review and files. Fieldwork will be scheduled pending Transwestern approval.

GHD appreciates the opportunity to submit this work plan to assist in the management, assessment, and closure of the Bell Lake Compressor Station project. Please feel free to contact either of us at 505-884-0672 if you have questions or comments.

Sincerely,

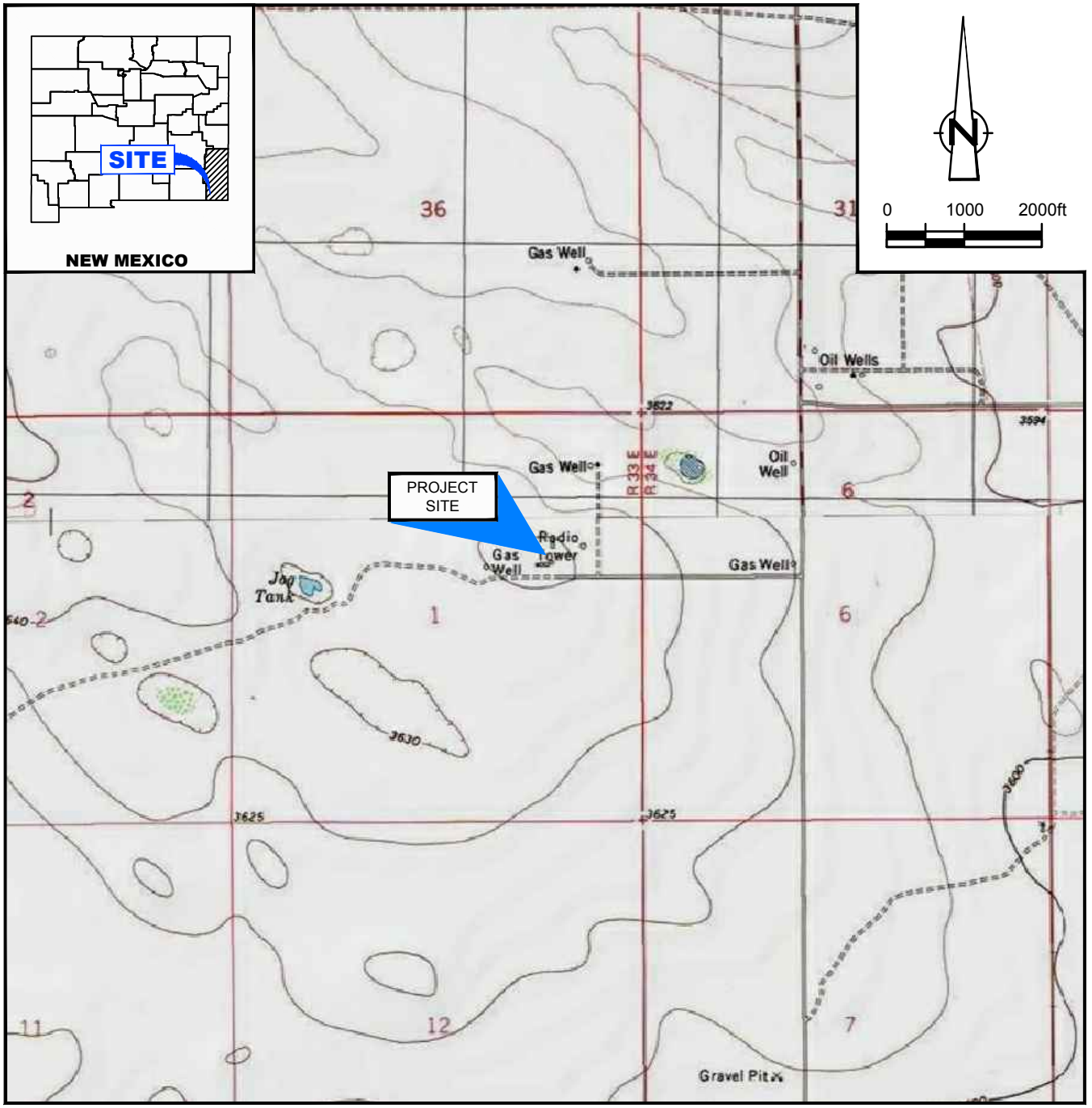
GHD

Alan Brandon
Senior Project Manager

Bernard Bockisch, PMP
Senior Project Manager

AB/md/1

Encl.



SOURCE: USGS 7.5 MINUTE QUAD
"BELL LAKE AND TIP TOP WELLS, NEW MEXICO"

LAT/LONG: 32.2487° NORTH, 103.5215° WEST
COORDINATE: NAD83 DATUM, U.S. FOOT
STATE PLANE ZONE - NEW MEXICO EAST

Figure 1

SITE LOCATION MAP
BELL LAKE PLANT
LEA COUNTY, NEW MEXICO
Transwestern Pipeline Company, LLC

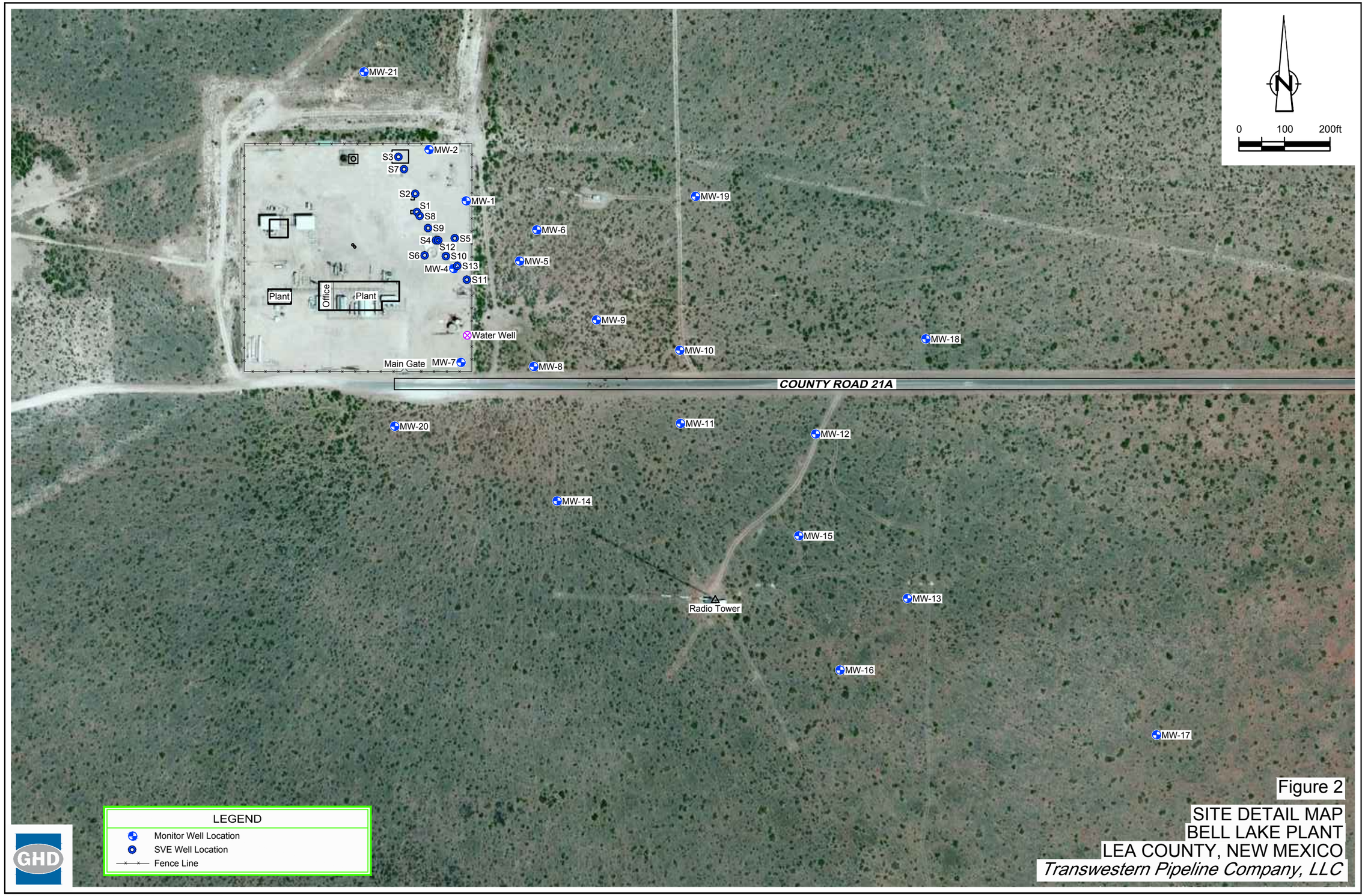


Figure 2

SITE DETAIL MAP
BELL LAKE PLANT
LEA COUNTY, NEW MEXICO
Transwestern Pipeline Company, LLC

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