



Stantec Consulting Services Inc.
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Des Moines, Iowa 50322
Phone: (515) 253-0830
Fax: (515) 253-9592

NV

VIA ELECTRONIC SUBMITTAL

April 11, 2022

Mr. Nelson Velez, Environmental Specialist - Advanced
New Mexico Oil Conservation Division
Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Work Plan for Light Non-Aqueous Phase Liquid Recovery Activities
Lateral L-40 Line Drip
New Mexico Oil Conservation Division Incident Number nAUTOfAB000335

Mr. Velez:

On behalf of El Paso CGP Company, LLC (EPCGPC), Stantec Consulting Services Inc. (Stantec) has prepared this Work Plan to complete enhanced light non-aqueous phase liquid (LNAPL) recovery activities utilizing mobile dual phase extraction (MDPE) methods at the above-referenced site (Site). Measurable LNAPL has been found in monitoring well MW-5 over the past year. The site geology (weathered sandstone) and results of past soil vapor extraction testing indicate MDPE methods would be effective to enhance the recovery of hydrocarbons at the Site. The Site is located on United States Forest Service-controlled land (Figure 1). A Site Plan map depicting the location of monitoring well MW-5 and other features is included as Figure 2. Stantec will retain the services of AcuVac Remediation (AcuVac) to mobilize and provide equipment and personnel to perform two MDPE events at the Site, planned for June, and August or September 2022. All equipment is portable and will not be left at the Site following each event.

MDPE is a process combining soil vapor extraction (SVE) with groundwater depression to maximize mass removal of LNAPL as both liquid and vapor phase hydrocarbons. AcuVac uses a submersible pump to simultaneously remove dissolved-phase contaminated groundwater, induce a hydraulic gradient toward the extraction well, and to create the groundwater depression, exposing the capillary fringe or smear zone to SVE. Recovered liquids will be transferred to a portable storage tank. Recovered vapors will be used as fuel and burned in the MDPE internal combustion engine (ICE), resulting in near complete combustion of the vapors. The power generated by the ICE is used to create the induced vacuum for SVE. Figure 3, attached, depicts the typical MDPE setup used for this process.



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Reference: Work Plan for Light Non-Aqueous Phase Liquid Recovery Activities

Each MDPE event will be completed from monitoring well MW-5 over an 8-hour period. Stantec field staff will be on site to oversee daily site activities, complete health and safety monitoring, and assist with data collection. During each MDPE event, groundwater, and liquid and vapor hydrocarbon recovery rates will be measured, and groundwater depression and the radius of influence will be estimated. AcuVac will provide staff to oversee MDPE efforts, including adjusting equipment to optimize hydrocarbon recovery rates and monitoring liquid recovery. The equipment and portable storage tank will be removed upon completion of each event, and no equipment or materials will be left at the Site.

Vapor and/or air monitoring for total volatile organic compounds, oxygen, carbon monoxide, carbon dioxide, and hydrogen sulfide will be performed to evaluate the effectiveness of the MDPE events and for the health and safety of field staff. To evaluate mass removal rates, a vapor sample will be collected during the MDPE events at the extraction wellhead via Summa canister. To evaluate ICE combustion efficiency, additional Summa samples will be collected from the stack (post-ICE) to compare against wellhead Summa sample results collected from the extraction wellhead. The Summa canisters will be submitted to Eurofins Environment Testing Southeast, LLC for analysis of benzene, toluene, ethylbenzene, and xylenes (BTEX) using Method TO-3, and Total Petroleum Hydrocarbons (TPH) using Method TO-15.

Recovered liquids will be containerized in a portable tank, which will be removed from the Site following completion of each event. The water will be transported to Basin Disposal, Inc. for treatment and disposal. Following each MDPE event, Stantec will complete a metering report documenting the amount of liquids removed, pursuant to the New Mexico Office of the State Engineer (NMOSE) requirements. Pursuant to previous discussions with the New Mexico Environmental Department, an air permit is not required for MDPE activities.

Data collected from regular quarterly groundwater gauging and semi-annual groundwater sampling events at the Site will be used to evaluate the effectiveness of the MDPE events, and whether additional events should be conducted. The data and results for each MDPE event will be summarized in the annual groundwater monitoring report for the Site. The report will include a narrative of the activities completed, a tabulated summary of the data collected, estimated hydrocarbon recovery rates and totals, laboratory analytical reports, waste disposal documentation, and other pertinent information.



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Reference: Work Plan for Light Non-Aqueous Phase Liquid Recovery Activities

Please feel free to contact Joseph Wiley, Project Manager for EPCGP, at (713) 420-3475, or me if you have any questions or require additional information.

Sincerely,

Stantec Consulting Services Inc.

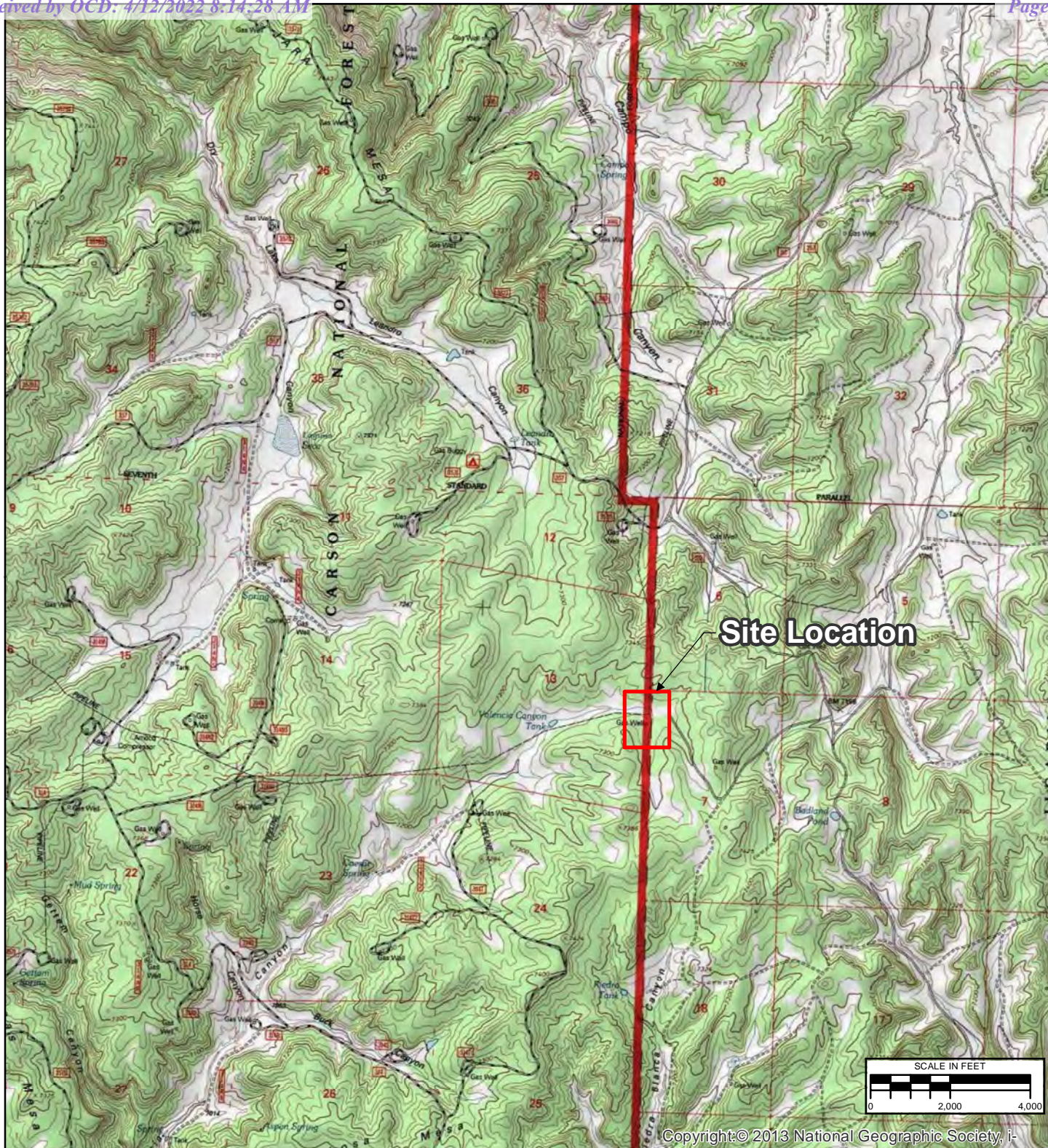


Stephen Varsa, P.G.
Senior Hydrogeologist
Phone: (515) 251-1020
steve.varsa@stantec.com

cc: Joseph Wiley, EPCGP
J.J. Miller, United States Forest Service


Figures



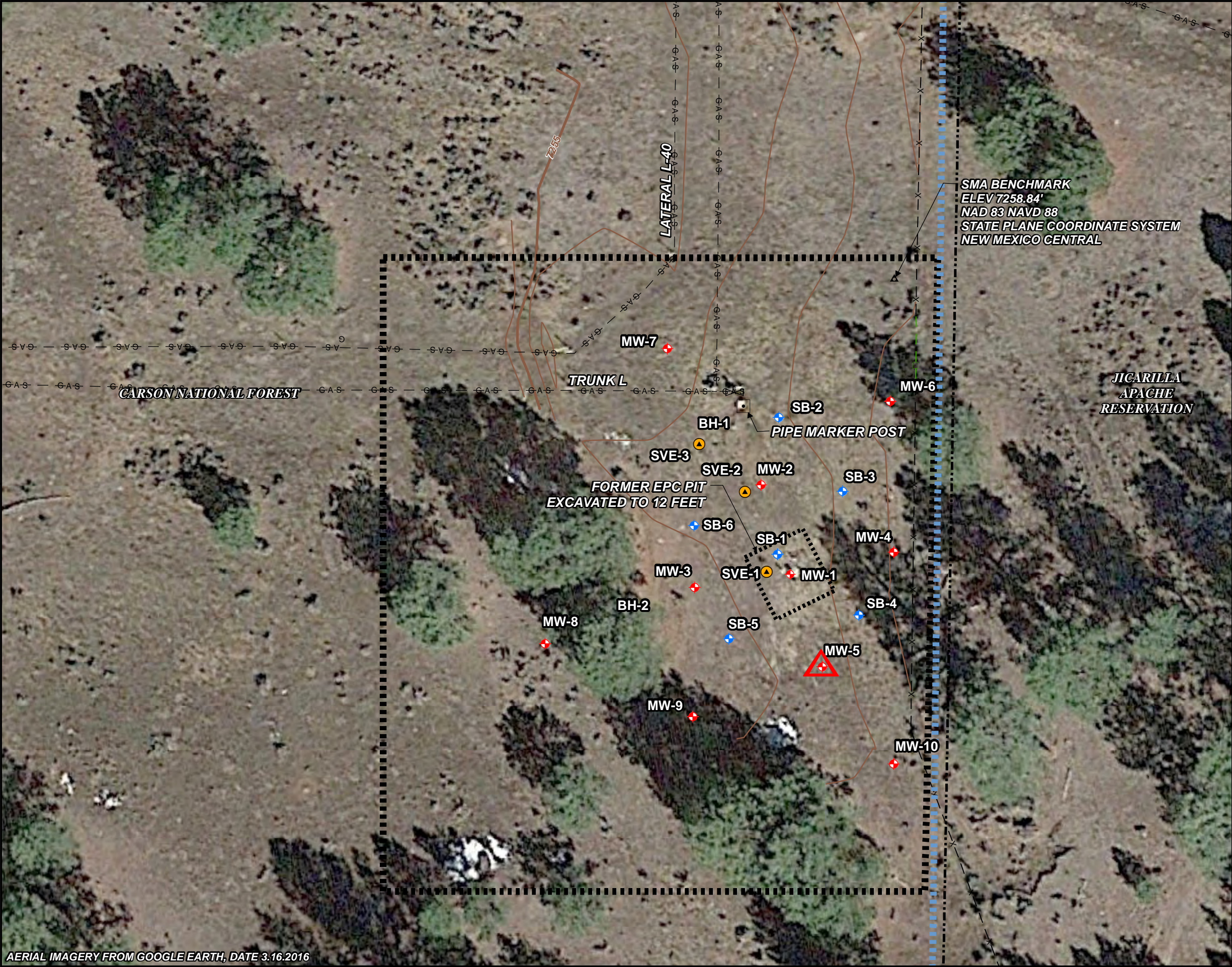


National Geographic, Esri,
Garmin, HERE, UNEP-
WCMC, USGS, NASA,

| REVISION | DATE | DESIGN BY | DRAWN BY | REVIEWED BY |
|----------|------------|-----------|----------|-------------|
| | 2022-03-22 | SAH | SAH | SAH |

| | | |
|---------------|---|---|
| TITLE | |  |
| SITE LOCATION | | |
| PROJECT | LAT L-40 SAN JUAN RIVER BASIN RIO ARriba COUNTY, NEW MEXICO | FIGURE 1 |

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AERIAL IMAGERY FROM GOOGLE EARTH, DATE 3.16.2016

LEGEND:

- APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- NATURAL GAS LINE
- FENCE
- GATE
- FORMER PIT
- MONITORING WELL
- MONITORING WELL WITH MEASURABLE LNAPL
- SOIL BORING
- BOREHOLE (2000)
- SOIL VAPOR EXTRACTION WELL
- SMA BENCHMARK
- GAS LINE VALVE
- CARSON NATIONAL FOREST AND JICARILLA APACHE NATION LAND BOUNDARY
- FOREST SERVICE JIC25 PERMIT BOUNDARY (4.3 ACRES - EXPANDED PERMIT AREA)
- CARSON NATIONAL FOREST ACCESS BOUNDARY

NOTES:
LNAPL = LIGHT NON-AQUEOUS PHASE LIQUID

SCALE IN FEET

| REVISION | DATE | DESIGN BY | DRAWN BY | REVIEWED BY |
|----------|------------|-----------|----------|-------------|
| | 2022-07-22 | SAH | SAH | SRV |

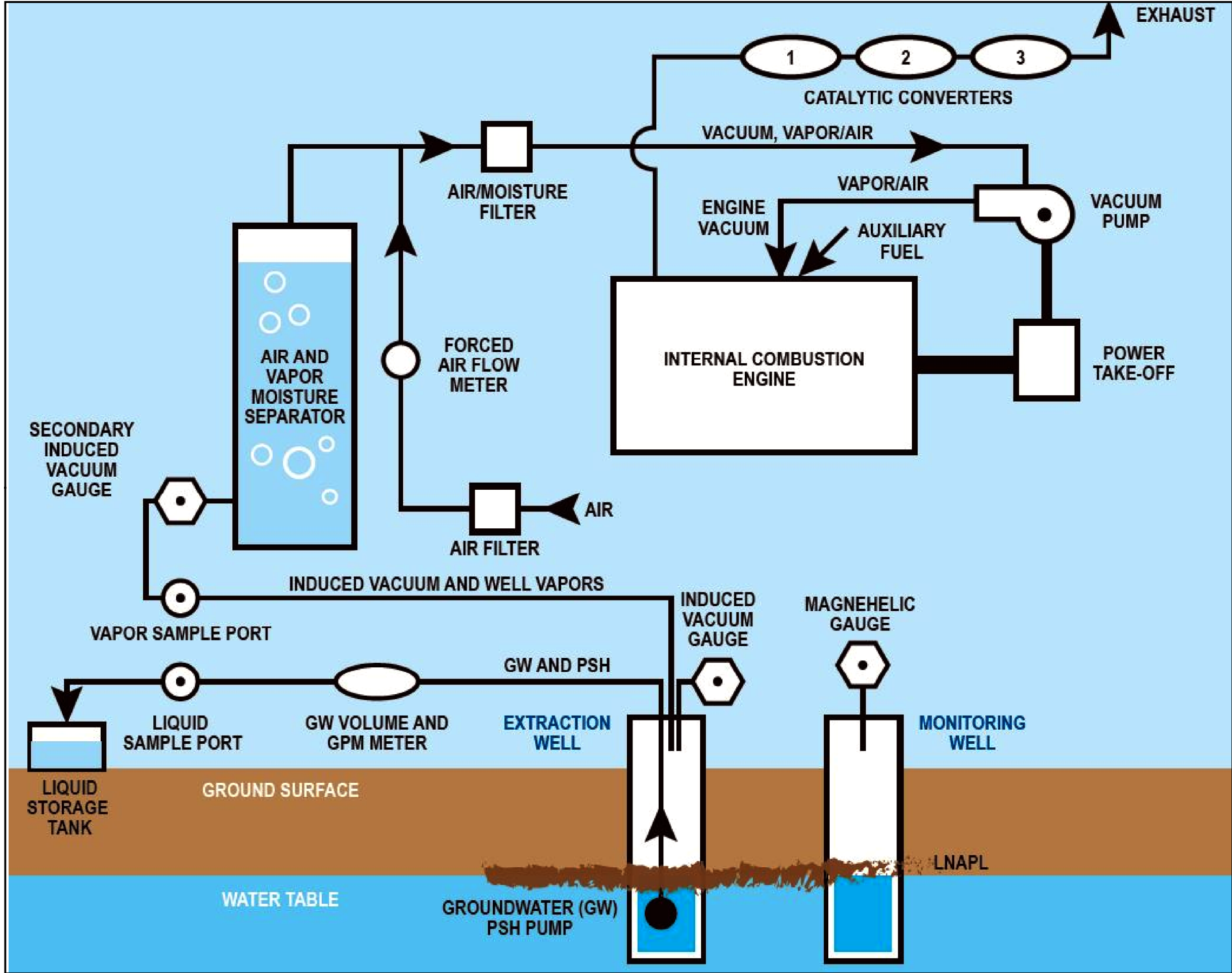
TITLE:
SITE PLAN

PROJECT:
*LAT L-40
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO*

Stantec

Figure No.:
2

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LEGEND:

MDPE = MOBILE DUAL-PHASE EXTRACTION

| REVISION | DATE | DESIGN BY | DRAWN BY | REVIEWED BY |
|----------|------------|-----------|----------|-------------|
| | 2022-03-31 | SAH | SAH | SRV |

TITLE:
TYPICAL MDPE SETUP

PROJECT: **LAT L-40
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO**



Figure No.:
3

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 97665

CONDITIONS

| | |
|---|--|
| Operator: El Paso Natural Gas Company, L.L.C 1001 Louisiana Street Houston, TX 77002 | OGRID: 7046 |
| | Action Number: 97665 |
| | Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT) |

CONDITIONS

| Created By | Condition | Condition Date |
|------------|---|----------------|
| nvelez | Accepted for the record. See app ID 113012 for most updated status. | 3/1/2023 |