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VIA ELECTRONIC SUBMITTAL

August 19, 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
Johnston Federal #4
New Mexico Oil Conservation Division Incident Number nAUTOfAB000305

Mr. Velez:

On behalf of El Paso CGP Company, LLC (EPCGPC), Stantec Consulting Services Inc. (Stantec) has prepared this Work Plan to conduct enhanced light non-aqueous phase liquid (LNAPL) recovery activities utilizing a skimmer system at the above-referenced site (Site). Measurable LNAPL has been found in monitoring well MW-22, located on the eastern edge of the Site over the past year. Manual LNAPL recovery from well MW-22 indicates active recovery of LNAPL from this location would be effective to enhance the recovery of hydrocarbons at the Site. EPCGP's intention is to evaluate the effectiveness of the LNAPL skimmer at this location as they await permitting approvals to deploy this LNAPL system at another site.

The recovery of LNAPL using a skimmer system is being conducted at the same time as preparations are being made to complete the installation of an air sparge (AS) and soil vapor extraction (SVE) system. As documented in previous Site annual reports, a total of 22 AS wells and 16 SVE wells have been installed, and conveyance piping from these wells to the remediation system compound is in place. Additional SVE wells are also planned in the vicinity of monitoring well MW-22 to remediation hydrocarbons. Work plans for the additional SVE wells and AS/SVE remediation system equipment installation and start-up will be submitted separately. At this time, EPCGP continues to negotiate an agreement with Hilcorp to provide the energy necessary to operate the AS/SVE system. AS/SVE system installation activities are to move forward once an agreement has been reached.

The Site is located in rural San Juan County (Figure 1). The site is situated on an active production site operated by Hilcorp Energy and located on private property. A Site Plan

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

map depicting the location of monitoring well MW-22, existing AS/SVE system infrastructure, and other features is included as Figure 2.

A Geotech Solar Sipper LNAPL skimmer and pump will be deployed in monitoring well MW-22 to enhance LNAPL recovery from this location. The skimmer system is capable of removing LNAPL accumulation to a *de minimis* thickness using an oleophilic/hydrophobic screened intake that travels across a set interval. The skimmer is operated by an in-well pump connected to small air compressor and regulated by a controller. The recovered LNAPL will be stored in a 55-gallon drum equipped with a high-level shutoff and shutoff indicator light. Specifications of the Solar Sipper system are presented in Attachment A. The New Mexico Office of the State Engineer as confirmed a pollution control permit is not required to operate the system as no water is recovered.

The system will be housed in a 20-foot by 8-foot by 8-foot-tall steel CONEX container, which will have a hole in the floor so it may be placed over MW-22 to secure the pump, controller, drum, and associated spill pallet. The system will be powered by a solar panel mounted on top of the CONEX box, with a battery backup located inside the unit. Solar-powered roof fans and passive vents will provide ventilation inside the CONEX, and the atmosphere inside the CONEX will be monitored for explosive vapors prior to entering. The layout of the system and CONEX box is presented as Figure 3. The bollards around MW-22 will be removed prior to placement of the CONEX box, and vegetation immediately around MW-22 will be removed and gravel put in place to provide a working base.

The system will be remotely monitored by a security camera system, and regular inspections, collection of accumulated LNAPL data, and maintenance of the system will be performed by a local contractor. When the 55-gallon drum is at least half-full, the skimmer system will be shut-down, and the filled drum swapped with an empty drum, and the skimmer system restarted. Stantec will inspect also inspect the skimmer system on a quarterly basis and gauge the amount of product in MW-22. The recovered LNAPL will be transported from the Site for disposal at the Envirotech, Inc., landfarm located south of Bloomfield, New Mexico.

Data collected from regular O&M visits and quarterly well gauging activities at the Site will be used to evaluate the effectiveness of the LNAPL skimmer system. The MW-22 well gauging and LNAPL recovery data 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 LNAPL recovery rates and totals, waste disposal documentation, and other pertinent information.

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

Installation and start-up of the LNAPL skimmer is planned for August 2022. EPCGP will notify NMOCD at least 48 hours prior to the delivery and startup of the system.

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.

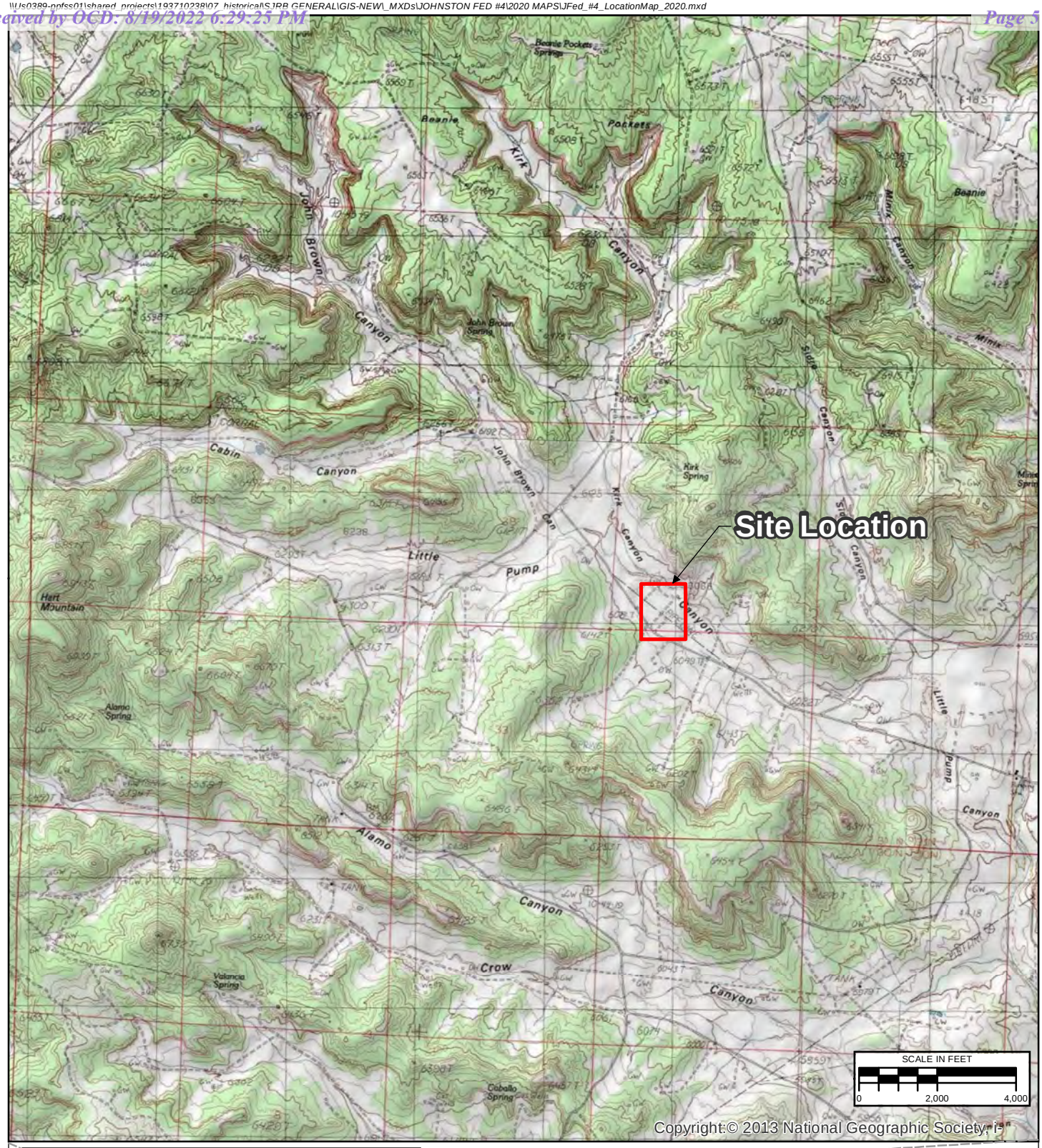
Sincerely,

Stantec Consulting Services Inc.

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

cc: Joseph Wiley, EPCGP

FIGURES



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REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2/16/2021	SAH	SAH	SRV

TITLE
SITE LOCATION

Stantec

PROJECT
JOHNSTON FED #4
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

FIGURE
1

\\Us0389-ppfss01\shared_projects\193710238\07_historical\SJRB GENERAL\GIS-NEW_MXDs\JOHNSTON FED #4\2020 MAPS\JFed_#4_SITEMAP_2020-07.mxd


BLM PROPERTY
SEXTON PROPERTY
AREA OF FORMER PIT OR EXCAVATION
FORMER EPC PIT EXCAVATED TO 10 FEET
HILCORP WATER
HILCORP GAS
ENTERPRISE
MW-4
MW-23
MW-19
AS-4
AS-3
MW-6
AS-7
MW-18
SVE-2
TW-1
AS-6
SVE-4
SVE-8
MW-7
SVE-1
MW-1
MW-3
AS-13
AS-9
AS-17
MW-9
AS-5
SVE-3
MW-2
SVE-7
AS-22
MW-20
AS-12
MW-17
AS-8
AS-16
SVE-6
AS-21
AS-11
MW-8
TW-2
MW-10
MW-16
AS-20
SVE-5
MW-11
CONEX
AS-10
AS-15
TMW-5
AS-19
MW-15
MW-13
AS-14
AS-18
MW-21
BRUSH CLEARANCE AREA
MW-12
MW-14
Conoco Phillips MW-1
Conoco Phillips MW-4
Conoco Phillips MW-3
PROPERTY BOUNDARY TURNS EAST 60 FEET SOUTH
AERIAL IMAGERY FROM GOOGLE EARTH; DATED 4/6/2019.

LEGEND:

- 6070 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- GAS LINE
- WATER LINE
- FENCE
- UNDERGROUND ELECTRIC
- PROPERTY BOUNDARY
- ABANDONED MONITORING WELL
- CONOCO PHILLIPS MONITORING WELL
- MONITORING WELL
- AIR SPARGE WELL
- SOIL VAPOR EXTRACTION WELL
- SMA BENCHMARK
- SURVEY POST
- FENCE
- GATE

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SCALE IN FEET

0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2/23/2021	SAH	SAH	SRV

TITLE:

SITE PLAN

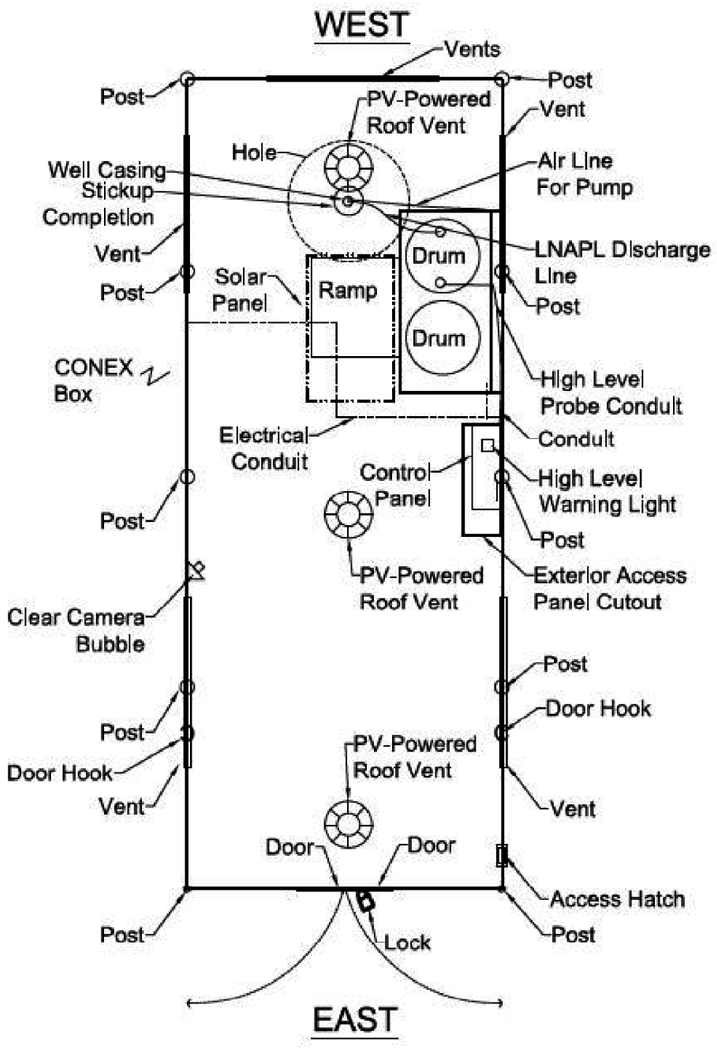
PROJECT:

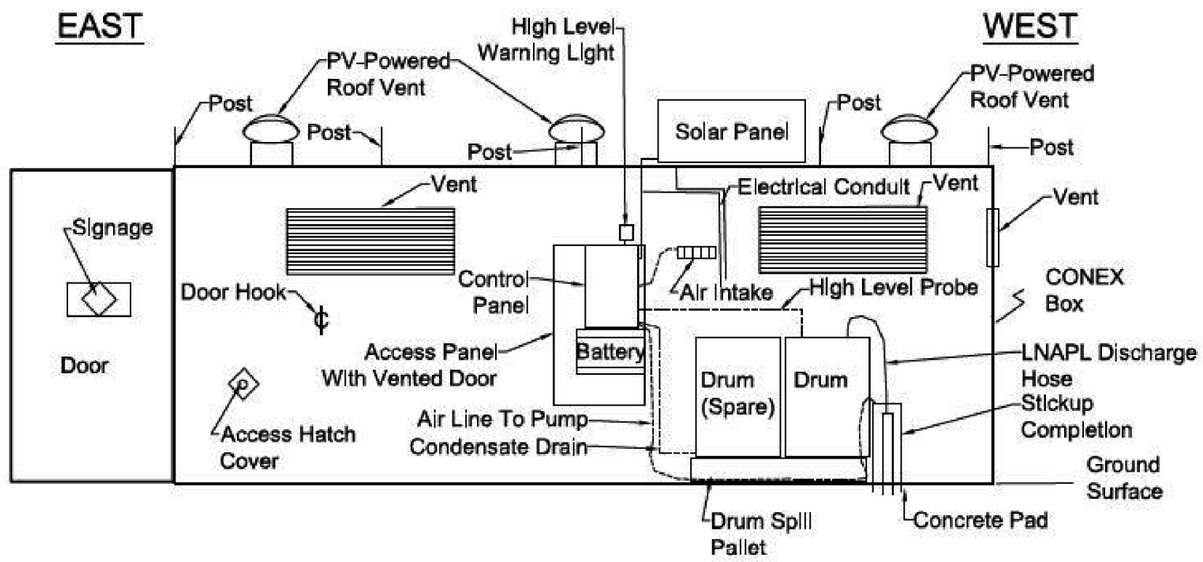
JOHNSTON FED #4
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

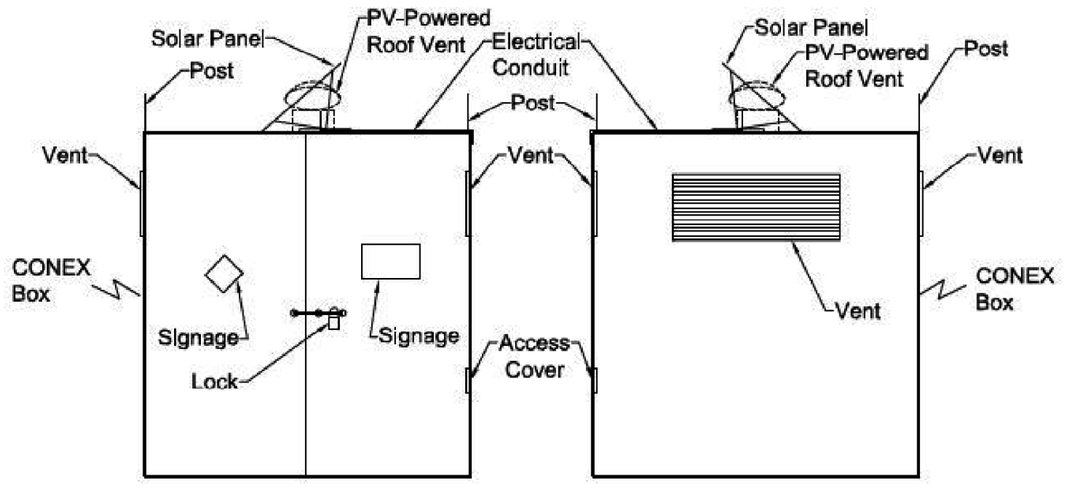
Stantec

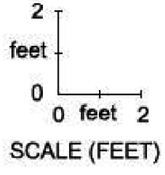
Figure No.: 2

\\Corp.ads\data\Virtual_Workspace\workgroup\1937\Active\193700102\03_data\gis_cad\gis\GIS-NEW_MXDs\BLANCO NORTH FLARE PIT\2022\Figure_1_System_Building_Layout_alt.mxd









REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2022-05-18	SAH	SAH	SRV

TITLE:
LNAPL SKIMMER LAYOUT

PROJECT:
JOHNSTON FEDERAL #4** PIT **SITE
***SAN JUAN COUNTY**, NEW MEXICO*

Stantec

Figure No.:
3

ATTACHMENT A

geotech

Hydrocarbon Recovery System

Geotech Single & Multi-Well Solar Sipper

The Geotech Solar Sipper is a solar powered remediation system, designed for remote applications where electrical power is either not available or not economically feasible. This uniquely flexible system can be configured for up to eight wells. The compact, easy to install features make this unit efficient to move and implement multiple wells.

The Solar Sipper uses a unique downwell pump to recover hydrocarbons through a floating oleophilic/hydrophobic intake filter. Once the pump canister is filled via the vacuum cycle, the pump reverses, pressurizes the system and pumps the recovered fluid to the surface and into a storage vessel.

The Geotech Solar Sipper can effectively extract fluids from depths to 180 feet below ground surface and recover viscous hydrocarbons such as 90 weight oil when our heavy oil skimmer is utilized.

EASE OF DEPLOYMENT

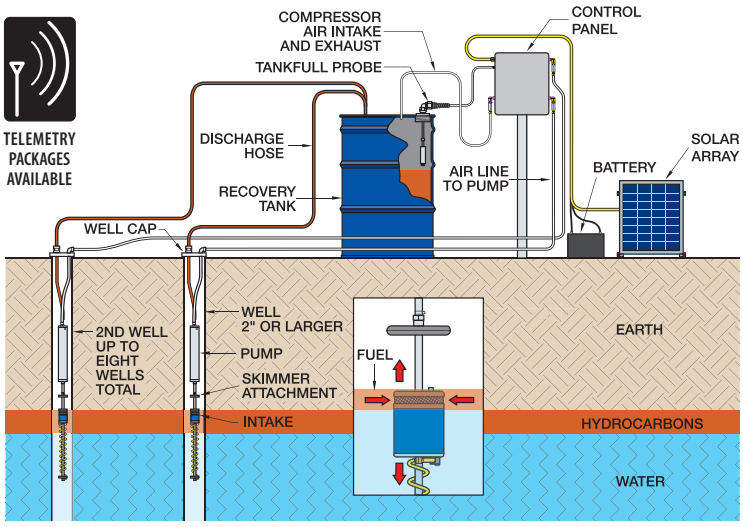
The Solar Sipper can reduce overall project costs and dramatically improve deployment:

- Available in single or multi-well configurations
- Reduces the time and cost for a power line to be run to a site.
- Eliminates the need for electricians to do install work and permitting.
- The simple and safe low voltage system can be installed without special training or licensing and requires minimal experience.
- No trenching or transformer equipment is required.
- Relocating equipment to follow a plume or to adjust to new site characterization information is fast and easy.

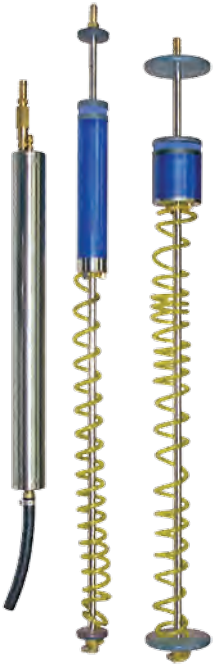
OPERATION

The Geotech Solar Sipper recovers floating hydrocarbons (LNAPL) from wells using a solar powered pressure/vacuum pump. The standard Skimmer features a unique product intake assembly that incorporates both a density float and an oleophilic/hydrophobic filter that differentiates between floating hydrocarbons and water. The skimmer floats just above the oil/water interface to collect and remove hydrocarbons from the well into an optional above ground storage tank.

The Geotech Solar Sipper is also available for recovery of sinking product (DNAPL) from wells when using a fixed intake.



Control Panel and Pressure/Vacuum Pump
(eight-well controller shown)



Downwell Pump

2" Skimmer with Optional Protective Screen

2" and 4" Skimmers

CALL GEOTECH TODAY **(800) 833-7958**

Geotech Environmental Equipment, Inc.
2650 East 40th Avenue • Denver, Colorado 80205
(303) 320-4764 • FAX (303) 322-7242
email: sales@geotechenv.com • website: www.geotechenv.com

solar_sipper.qxp 04/20/20

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Hydrocarbon Recovery System

Geotech Single & Multi-Well Solar Sipper

DESIGN YOUR RECOVERY SYSTEM

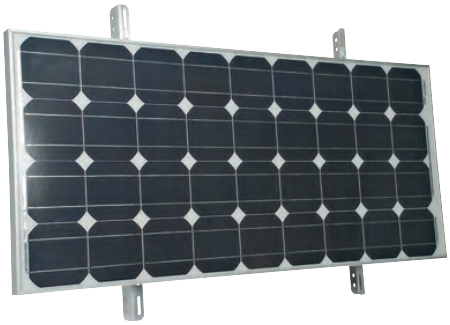
Step 1: Control Panel

- ✔ Choose from 1 to 8 wells
  - NEMA 3R Enclosure
  - Tankfull Shut-Off Switch (¾" or 2" NPT bung-fitting)
  - Microprocessor Controlled 2-Line LCD Display with four scroll buttons
  - On/Off Switch
  - Pressure/Vacuum Pump
  - Pressure/Vacuum Gauge

Step 2: Solar Accessories

- ✔ 100 watt solar panel(s) with adjustable mounting frame
- ✔ AGM Solar Batteries 104 AH, 12 Volt

AC powered versions are available



Step 3: Downwell Equipment

- ✔ Downwell Pump(s)
  - Standard
  - With Conductivity Sensor
- ✔ Skimmer(s)
  - 2" or 4" Skimmer with 100 or 60 Mesh Intake
  - 2" or 4" Protective Screen
  - 4" Skimmer with Extended Travel
  - 4" Heavy Oil Skimmer
  - 4" High Temperature/Heavy Oil Skimmer
  - 2" DNAPL Intake

Other Options:

- ✔ 2" or 4" Slip Fit Well Cap(s)
- ✔ Choose Length: Air and Discharge Tubing
- ✔ 55 Gallon Steel Product Drum(s)
- ✔ Tank Manifold: 2 to 8 Wells
- ✔ Dual-Wall Containment Product Recovery Tank(s)
- ✔ Lockable Weatherproof Enclosure
- ✔ Trailer for Mounting Mobile System
- ✔ SitePro with SiteView Telemetry

3-Well Solar Sipper on trailer with dual containment tank

Solar Sipper installation with bovine protection

Solar Sipper installation mounted on hazmat enclosure

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Hydrocarbon Recovery System

Geotech Single & Multi-Well Solar Sipper

SPECIFICATIONS

Applications:	2" (50 mm) or larger recovery wells
Recovery Rate:	.2 gallons (76 ml) per cycle
Maximum Operating Depth:	180 feet (55 meters)
Power Requirements:	12-15 Volts DC input @ up to 14.5 Amps 90 ~240 Watts continuous
Maximum Pressure:	100 PSIG (7 bar)
Maximum Vacuum:	20" Hg @ MSL (50 mm Hg)
Oil/Water Separation:	Oleophilic/hydrophobic mesh screen
Controller:	
Operating Temperature	32° to 104°F (0° to 40°C)
Storage Temperature Range	-20° to 150°F (-29° to 66°C)
Humidity	90% non-condensing (max)
Size	10" D x 18" T x 16" W (25.4 cm D x 45.7 cm T x 40.6 cm W)
Approximate Weight	34 lbs. (15.4 kg) single channel 49 lbs. (22. 2 kg) eight channel
Rating	NEMA 3R
Optional Solar Panel w/Frame:	
Rated Power	100 Watts (standard unit)
Operating Voltage	17.4 Volts DC
Maximum Voltage	21.5 Volts DC
Operating Amperage	4.88 Amps (standard unit)
Maximum Amperage	5.8 Amps
Size	43.31" x 28.15" x 3.15" (110 cm x 71.5 cm x 8 cm)
Approximate Weight	19.62 lbs. (8.90 kg)
Solar Panel Mounting System:	
Module Tilt Range	15 to 65 degrees
Pole Size	2" (5 cm), 4" (10 cm), and 6" (15 cm)
Module Orientation	Landscape/Portrait
Maximum Wind Speed	125 mph (200 kph)
Wind Exposure	Category B & C
Materials	5052-H32 Aluminum, Powder Coated Steel, Stainless Steel Fasteners

Optional Downwell Pump:		
Size	23.5" L x 1.75" OD (59.7 cm L x 4.4 cm OD)	
Weight	4.5 lbs. (2.04 kg)	
Materials	303 and 304 Stainless Steel, Flexible Rubber Tubing, PVC, Brass	
Optional Skimmer Assemblies:	**2" Model**	**4" Model**
Effective Travel Range	12" (30.5 cm)	24" (61 cm)
Size	35.5" L x 1.75" OD (90.2 cm L x 4.4 cm OD)	35.5" L x 3.75" OD (90.2 cm L x 9.5 cm OD)
Weight	1.75 lbs. (.79 kg)	2.25 lbs. (1.02 kg)
Operating Temperature	32° to 104°F (0° to 40°C)	
Storage Temperature	-20° to 150°F (-29° to 66°C)	
Materials	304 Stainless Steel, Polyethylene, PVC, Polypropylene, Brass	
Optional Tubing:		
Air	.17" ID x .25" OD (4.3 mm ID x 6 mm OD)	
Discharge	.375" ID x .5" OD (9.5 mm ID x 12.7 mm OD)	

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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 136087

CONDITIONS

Operator:	OGRID:
El Paso Natural Gas Company, L.L.C 1001 Louisiana Street Houston, TX 77002	7046
	Action Number: 136087
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
nvelez	Accepted for the record. Please see App ID 201686 for most updated status.	5/17/2023