

**BEFORE THE BOARD OF OIL, GAS, AND MINING  
DEPARTMENT OF NATURAL RESOURCES  
STATE OF UTAH**

**SECRETARY, BOARD OF  
OIL, GAS & MINING**

IN THE MATTER OF THE REQUEST FOR AGENCY ACTION OF HEAVY SWEET OIL, LLC AND AC OIL, LLC FOR AN ORDER PURSUANT TO UTAH ADM. CODE R. 649-5-1 APPROVING ENHANCED OIL RECOVERY INCLUDING FOUR CLASS II INJECTION WELLS FOR IN SITU PRODUCTION OF OIL FROM SANDS FROM THE RIMROCK AND ASPHALT RIDGE DEPOSITS WITHIN 40-ACRE UNITS, TOWNSHIP 4 SOUTH, RANGE 20 EAST, SECTIONS 22 AND 23, UINTAH COUNTY, UTAH

REQUEST FOR AGENCY ACTION

Docket No. 2022-024

Cause No. 471-02

Heavy Sweet Oil, LLC (“HSO”) and AC Oil, LLC (“AC Oil”) acting by and through its attorneys, Snell & Wilmer, L.L.P., hereby request approval of the Utah Board of Oil, Gas and Mining (“Board”) of pilot-scale enhanced oil recovery from heavy oil sands in Uintah County, Utah pursuant to Utah Admin. Code R649-5-1(1) and 649-5-2, including approval of four Class II injection wells for in situ production of oil sands from the Rimrock and Asphalt Ridge formations to be located according to the default well-siting rule on 40-acre drilling "units" within Township 4 South, Range 20 East, Sections 22 and 23.

1. Heavy Sweet Oil, LLC is a Utah limited liability company authorized to do business in Utah. Its address is 26702 Cedardale Pines Drive, Katy, Texas.
2. AC Oil, LLC is a Utah limited liability company authorized to do business in Utah. Its address is Nine Exchange Place, Ste 600, Salt Lake City, Utah 84111.
3. Operator proposes to conduct a pilot enhanced oil recovery project on the following lands located in Uintah County, Utah:

SW1/4 NW1/4 Section 22, T4S, R20E, SLM

SW1/4 NE1/4 Section 22, T4S, R20E, SLM

SE1/4 NE1/4 Section 22, T4S, R20E, SLM

NW1/4 SE1/4 Section 23, T4S, R20E, SLM

comprising 160 acres, more or less ("Subject Lands"). A plat showing the proposed well locations is attached hereto as Exhibit A.

4. Applicant HSO will be the Operator of wells located in Section 22 pursuant to a June, 2019 Master Services Agreement with Valkor Energy Holdings, LLC. Applicant AC Oil will be the Operator of the proposed well in Section 23. ("Operator").
5. All mineral rights to the subject minerals within Section 22 including oil shale and tar sands, plus oil, gas and hydrocarbons within the Subject Lands are owned by the Utah State Institutional and Trust Lands Administration ("SITLA"). Oil sands within Section 22 are leased from SITLA by Valkor Energy Holdings, LLC and operated by HSO.
6. SITLA is also the surface owner of the proposed drilling locations in Section 22.
7. Tar Sands Holdings II, LLC is the owner of surface and tar-sands mineral rights in the NW1/4SE1/4 of Section 23.
8. Rights to mine tar sands from the target formations are held by AC Oil, LLC pursuant to an oil and mineral lease dated November 5, 2021.
9. Hoodoo Mining & Production Company, LLC appears to hold the record title and working interests in SITLA Lease ML90019-OBA covering oil and natural gas (but not tar sands) in all the Subject Lands.
10. The Operator sent a true and correct copy of this Request for Agency Action to all operators or owners and surface owners within a one-half mile radius of the proposed project via certified mail, return receipt requested. A Certificate of Service is attached hereto.
11. Operator proposes to recover oil from heavy oil sands in the Rimrock and Asphalt Ridge Formations by injection of steam to increase the mobility of viscous hydrocarbons bound in the sand formation.

- a. In Phase I of the proposed project, Operator will drill four wells at legal locations within a 400-foot square window centered in each of the 40-acre quarter-quarter sections identified above.
- b. Each Phase I well will be completed for both underground injection of steam and oil production.
- c. Wells will be drilled through the Uintah Formation with completions in the bituminous sand zones.
- d. The wells will be connected via an injection network to the central facility where a boiler will create steam. The steam will be conveyed to the well head via the network and injected into the bituminous zones to lower the oil viscosity and allow the extraction of the bitumen from the tar sand deposit.
- e. Operator plans to cycle steam injection and oil pumping in each well, injecting steam until bitumen is fluid, and then pumping the liquid bitumen to the surface.
- f. In Phase II of the project, the Operator plans to drill 6 offsetting injection wells on 2.5-acre spacing surrounding the Phase I well in a hexagonal pattern. The central well would then be used solely as a production well.<sup>1</sup>

- 12. Wells will be drilled to a depth of 750 – 2500 feet, depending on surface topography.
- 13. Wells will be drilled through the Duchesne River Formation and completed in the Rimrock and Asphalt Ridge members of the Uinta (Mesaverde) Formation ("Target Formations"). Exhibit B.
- 14. The Target Formations dip generally to the WNW within the project area.
- 15. Because the bitumen is not fluid under in-situ conditions, the Target Formations do not constitute a "pool" in the traditional sense, and the resource is not capable of migration

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<sup>1</sup> The Operator does not seek Phase II approval at this time.

from one well to another, nor is it capable of being recovered by relying on reservoir pressure. A representative well log of the Target Formations is provided in Exhibit C.

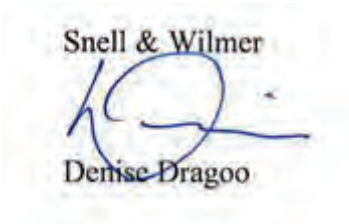
15. No water-bearing strata exist between the surface and the Target Formations within the Project Area.
16. The nearest water wells are approximately 2.5 miles east of the project area and are completed in alluvium at a depth of roughly 300 feet. Exhibit D.
17. The Target Formations do not contain water.

#### RELIEF REQUESTED

Therefore, Applicants HSO and AC Oil respectfully request that the Utah Board of Oil, Gas and Mining (the “Board”) set this matter for the Board’s regularly scheduled hearing on October 26, 2022 in Salt Lake City, Utah;

- i) that notice of such hearing be given as provided by law; and
- ii) that based upon sufficient evidence produced at hearing to approve the application, that the Board enter an order approving the application of HSO and AC Oil to operate the proposed enhanced recovery project in the Target Formations on the Subject Lands; and permit applicants to locate and drill the subject Class II injection wells for in situ production of oil sands from the Rimrock and Asphalt Ridge formations with each well to be drilled per the standard spacing provisions of Utah Adm R. 649-3-2 with no more than one vertical well located within a 400-foot square area within a 40-acre tract; and
- iii) that the Board enter such findings and orders in connection with this Request as it deems necessary; and providing for such other and further relief as may be just and equitable under the circumstances.

Respectfully submitted this 12<sup>th</sup> day of September, 2022.



CERTIFICATE OF SERVICE

I hereby certify that on the 12<sup>th</sup> day of September, 2022, I e-mailed or mailed, via certified mail, return receipt requested, a true and correct copy of the foregoing REQUEST FOR AGENCY ACTION to the following:

John Baza  
Director, Utah Division of Oil, Gas and Mining  
1594 W. North Temple, Ste 1210  
Salt Lake City, Utah 841116  
[johnbaza@utah.gov](mailto:johnbaza@utah.gov)

Julie Ann Carter  
Docket Secretary  
Utah Board of Oil, Gas and Mining  
1594 W. North Temple, Ste 1210  
Salt Lake City, Utah 841116  
[juliecarter@utah.gov](mailto:juliecarter@utah.gov)

TMC Capital, LLC  
15315 W. Magnolia BLVD, Suite 120  
Sherman Oaks, CA 91402

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Utah Office of the Attorney General  
Natural Resources Division  
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Salt Lake City, UT 84116  
[eharris@agutah.gov](mailto:eharris@agutah.gov)

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Utah Office of the Attorney General  
Natural Resources Division  
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Salt Lake City, UT 84116  
[mbegley@agutah.gov](mailto:mbegley@agutah.gov)

Tar Sands Holdings II, LLC  
6440 S. Wasatch Blvd, Suite 105  
Salt Lake City, Utah 84121  
[BAAndrewsen@hollandhart.com](mailto:BAAndrewsen@hollandhart.com)

Utah School & Trust Lands Administration  
675 East 500 South, Ste. 500  
Salt Lake City, Utah 84102  
Attn: Director Michelle McConkie  
[meastmconkie@utah.gov](mailto:meastmconkie@utah.gov)

New Day Energy Development, LLC  
9930 Sejo Lily Drive  
Sandy, UT 84094

Valkor Energy Holdings, LLC  
21732 Provincial Blvd., Ste 160  
Katy, TX 77450  
[steven.byle@valkor.com](mailto:steven.byle@valkor.com)

Hoodoo Mining & Production Company, LLC  
55 Waugh Drive, Ste 550  
Houston, TX 7707

U.S. Bureau of Land Management  
Vernal Field Office – Attn Oil & Gas  
170 South 500 East  
Vernal, Utah 84078  
[utvnmail@blm.gov](mailto:utvnmail@blm.gov)

# **EXHIBIT A**

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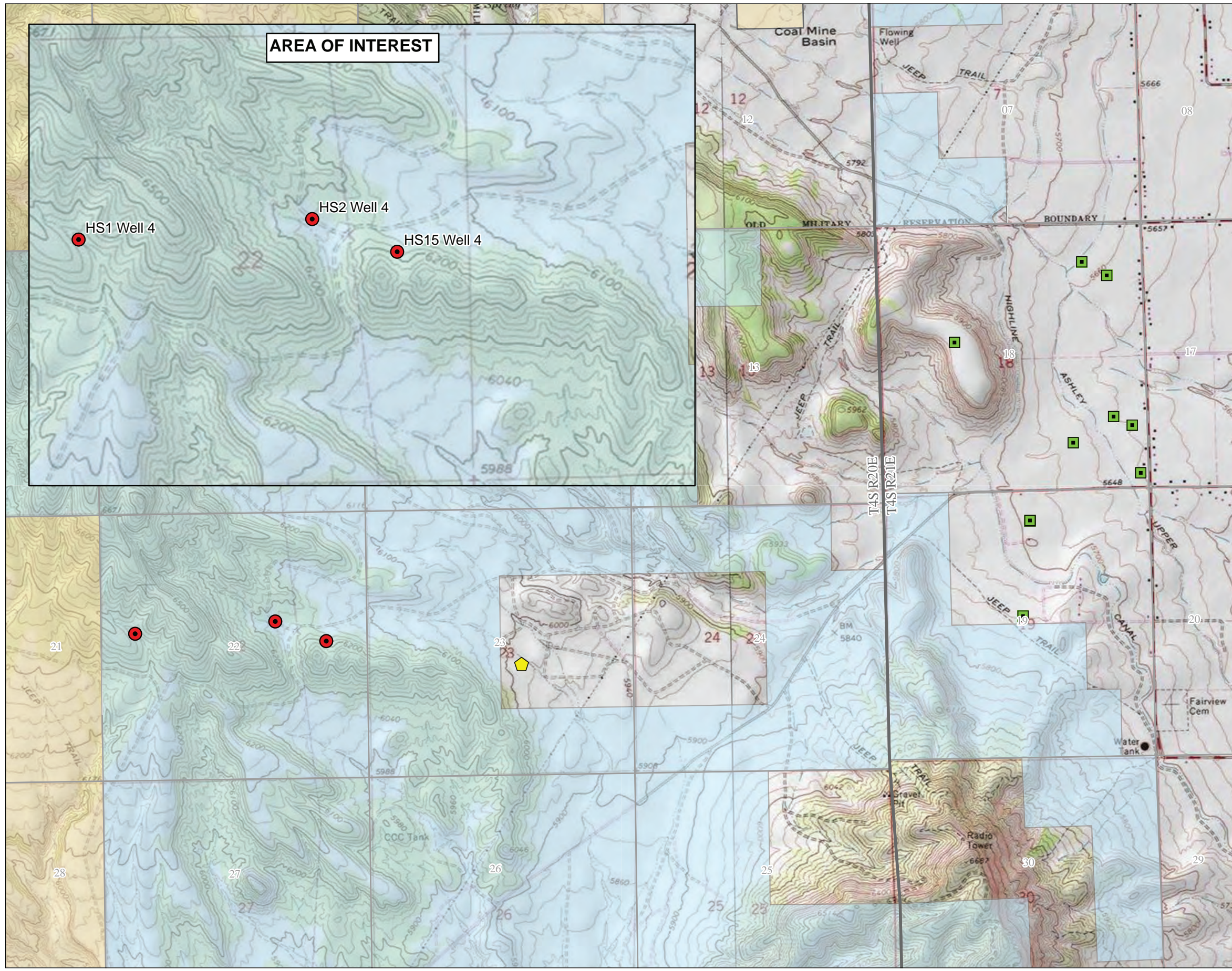


Figure No.

1

Title  
**HSO Locations**

Client/Project  
Greenfield  
Heavy Sweet Oil 20372700

Project Location  
T4S, R20-21E  
Uintah County, UT Prepared by JT on 2022-09-12  
TR by TS on 2022-09-12  
IR by XXX on 2022-09-12



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Legend

- HSO UIC Well
- AC Oil UIC Well
- Nearby Well
- Township/Range
- Section
- Bureau of Land Management
- Private
- State Trust Lands

Notes  
1. Coordinate System: NAD 1983 UTM Zone 12N  
2. Data Sources: Greenfield3. Background: Esri USA Topo Maps



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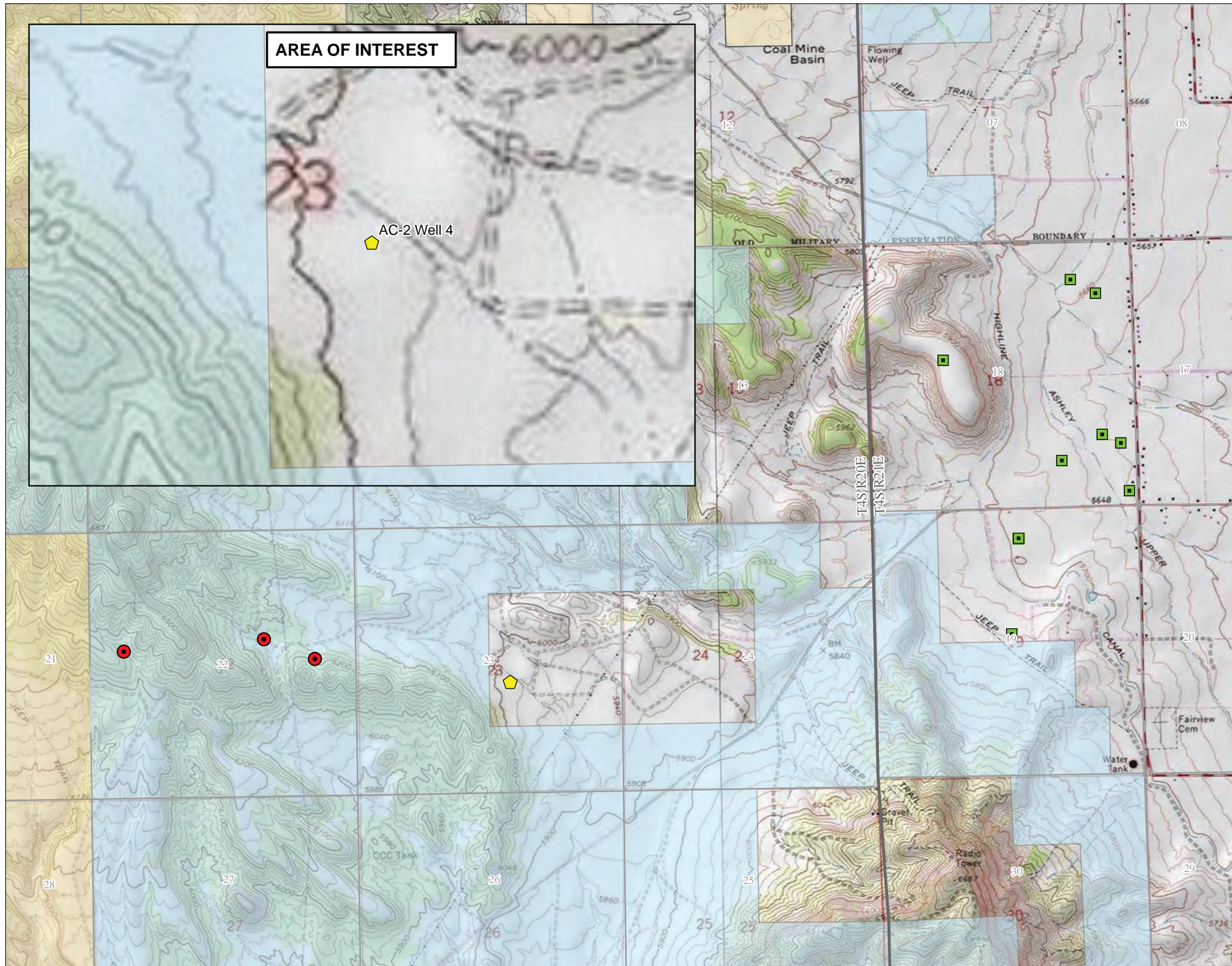


Figure No. 3

### AC Oil Locations

Client/Project: Greenfield Heavy Sweet Oil 20372700

Project Location: T4S, R20-21E Uintah County, UT  
 Prepared by JT on 2022-09-12  
 TR by TS on 2022-09-12  
 IR by XXX on 2022-09-12



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 (At original document size of 11x17)  
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#### Legend

- HSO Location
- ▮ AC Oil Location
- Nearby Well
- Township/Range
- Section
- Bureau of Land Management
- Private
- State Trust Lands

**Notes**  
 1. Coordinate System: NAD 1983 UTM Zone 12N  
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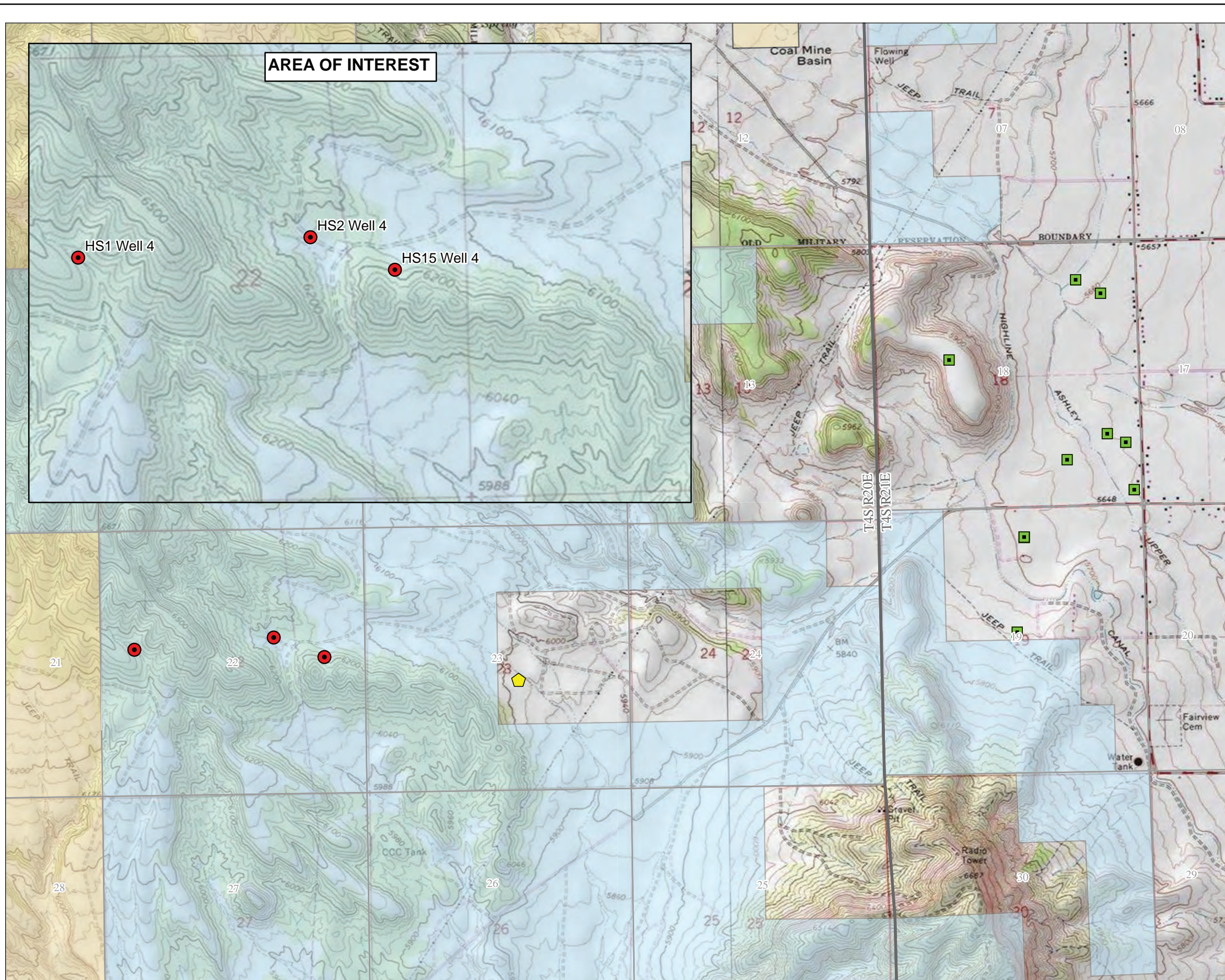


Figure No.

1

Title  
**HSO Locations**

Client/Project  
Greenfield  
Heavy Sweet Oil 20372700

Project Location  
T4S, R20-21E  
Uintah County, UT  
Prepared by JT on 2022-09-12  
TR by TS on 2022-09-12  
IR by XXX on 2022-09-12



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Legend

- HSO UIC Well
- AC Oil UIC Well
- Nearby Well
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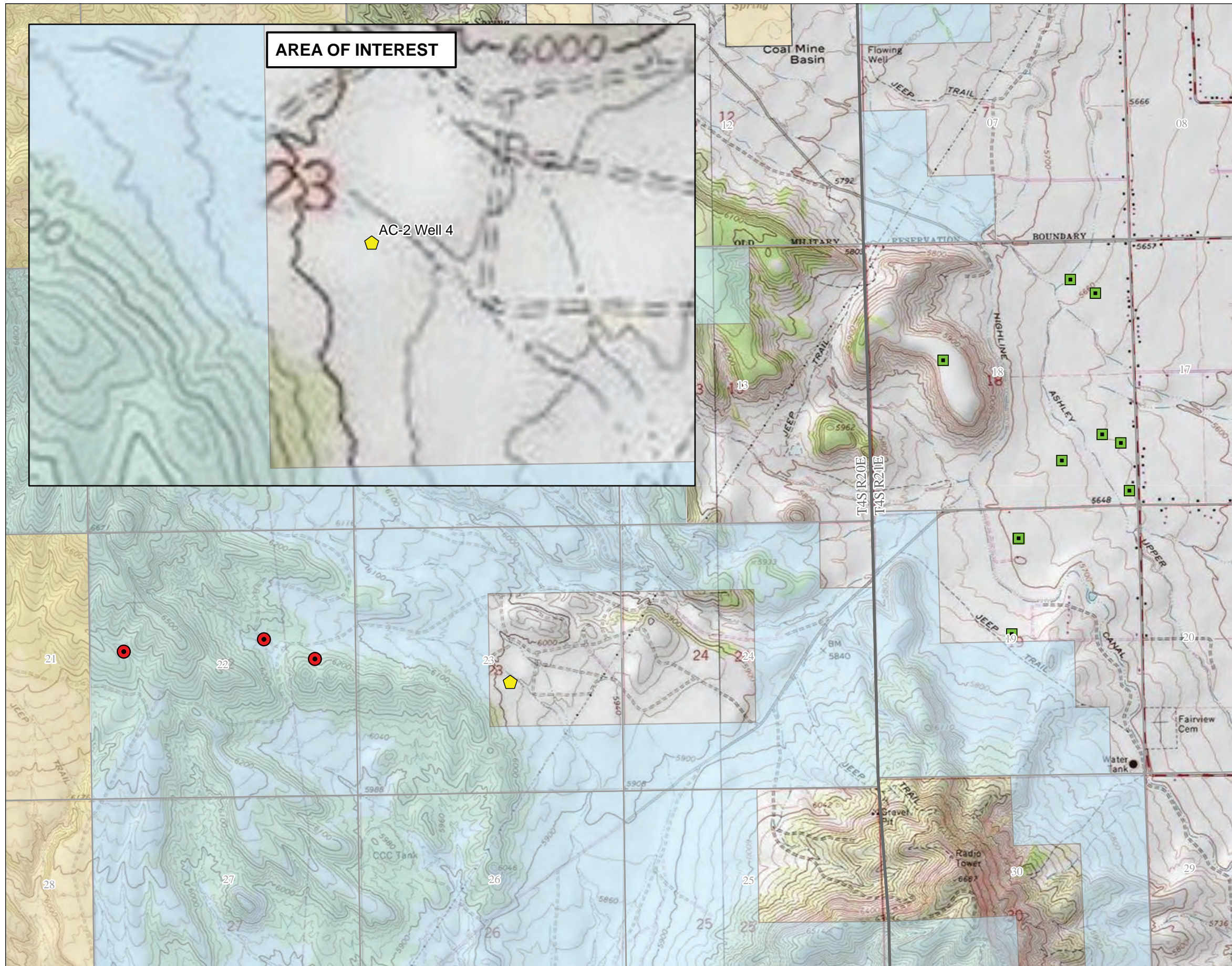


Figure No.

3

Title  
**AC Oil Locations**

Client/Project  
Greenfield  
Heavy Sweet Oil 20372700

Project Location  
T4S, R20-21E  
Uintah County, UT  
Prepared by JT on 2022-09-12  
TR by TS on 2022-09-12  
IR by XXX on 2022-09-12



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Legend

- HSO Location
- ⬠ AC Oil Location
- Nearby Well
- Township/Range
- Section
- Bureau of Land Management
- Private
- State Trust Lands

Notes  
1. Coordinate System: NAD 1983 UTM Zone 12N  
2. Data Sources: Greenfield3. Background: Esri USA Topo Maps



# **EXHIBIT B**

**UNDERGROUND INJECTION CONTROL (UIC) PERMIT APPLICATION**

Fresh Water Aquifers & Underground Sources of Drinking water (USDW)

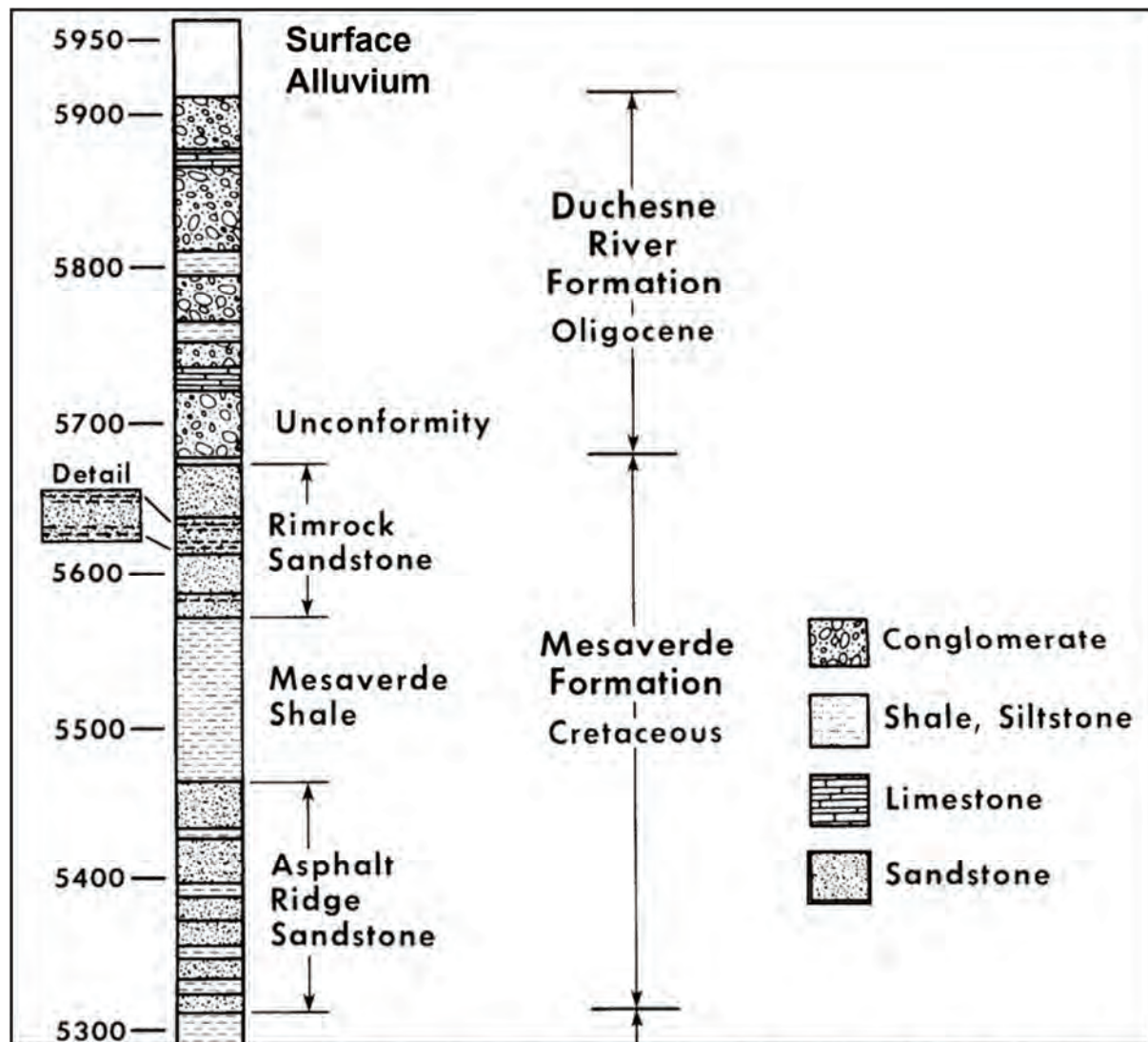


Figure 1. Generalized stratigraphic section at the LETC Field Site, D Tract, Uintah County Utah (from Marchant and Westhoff, 1985)



# **EXHIBIT C**

**UNDERGROUND INJECTION CONTROL (UIC) PERMIT APPLICATION**

Fresh Water Aquifers & Underground Sources of Drinking water (USDW)

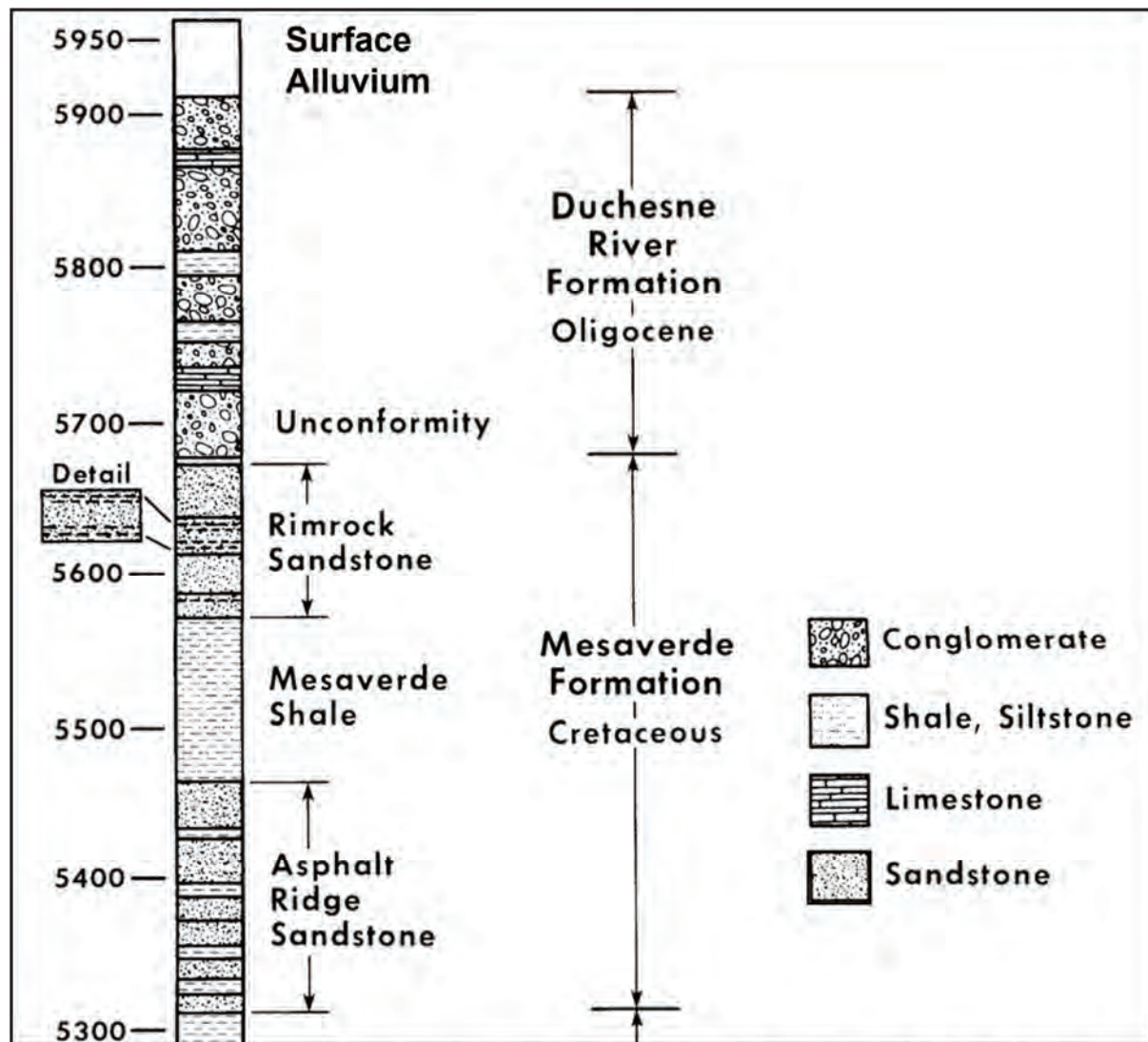


Figure 1. Generalized stratigraphic section at the LETC Field Site, D Tract, Uintah County Utah (from Marchant and Westhoff, 1985)

