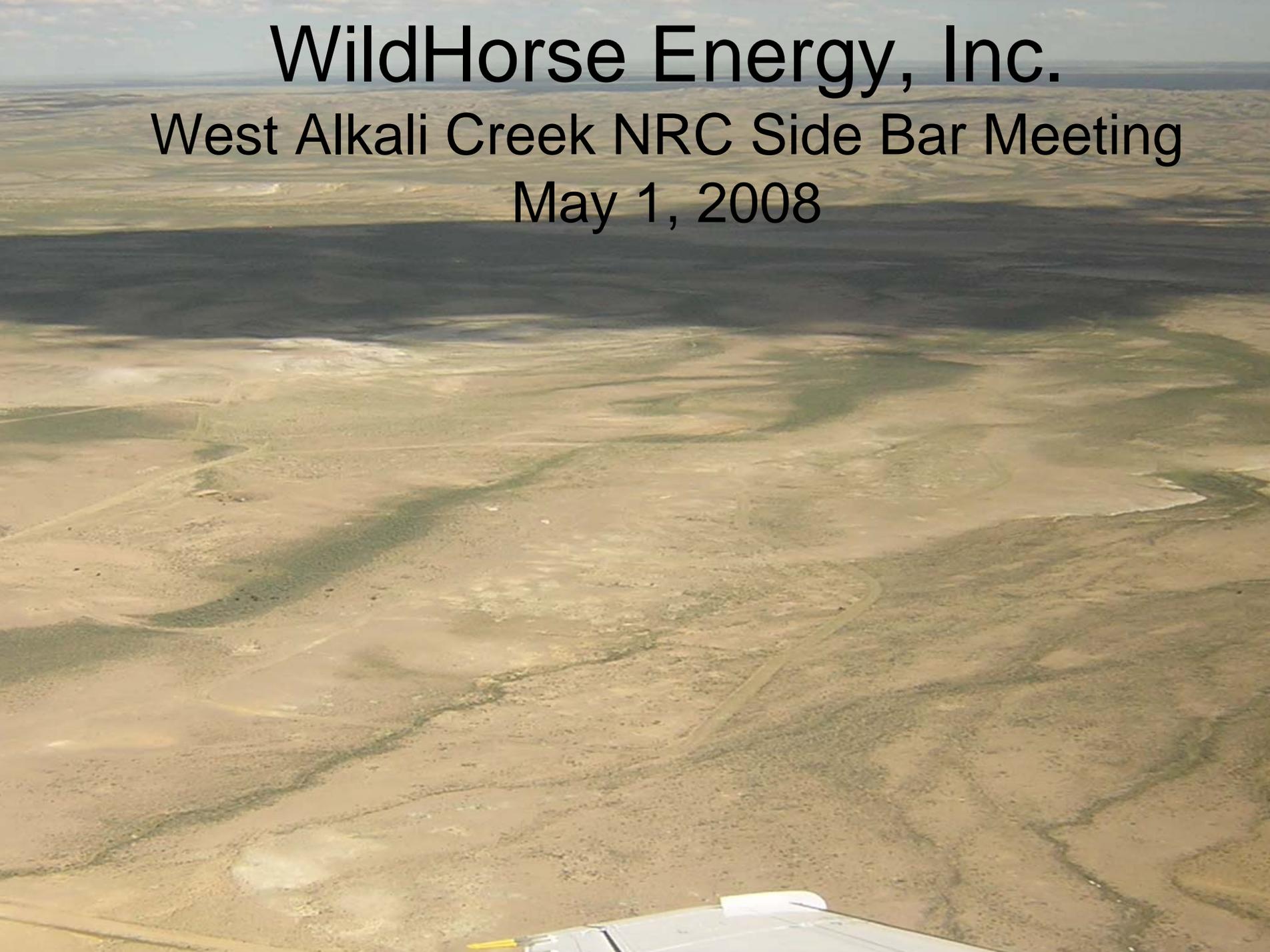


# WildHorse Energy, Inc.

West Alkali Creek NRC Side Bar Meeting

May 1, 2008



# Agenda

## West Alkali Project

- **Introductions**
- **Site History (WildHorse)**
- **Project Permitting, Planning, Schedule (WildHorse)**
- **Source Material License Application Preparation (NRC)**
- **Discussion**
- **Summary**
- **Public Comments/Questions**

# WildHorse Energy

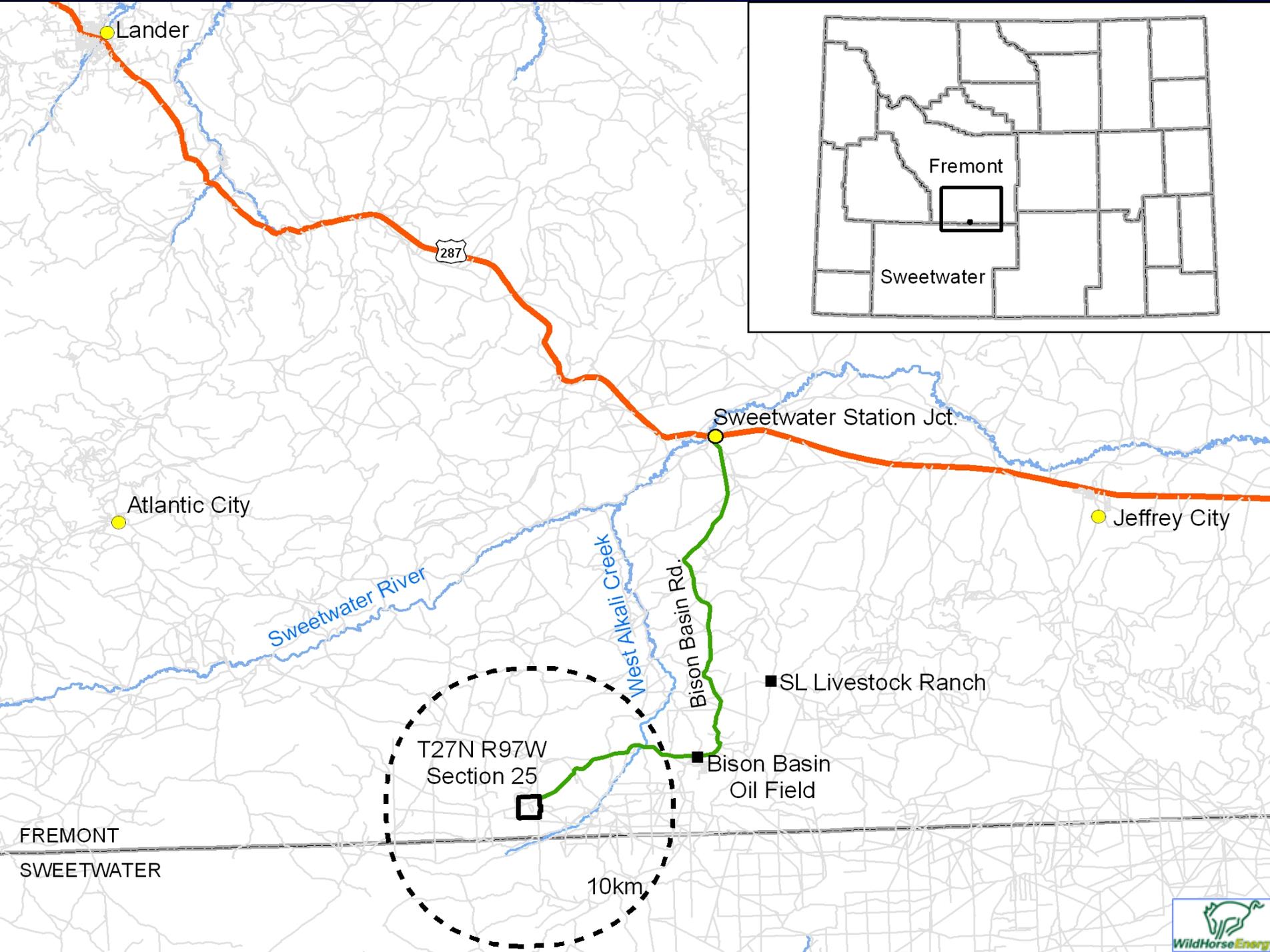
- Global Uranium Company, Perth
- US Operations
  - Casper, WY
  - Denver, CO
- Primary Focus is on Development of Historical Uranium Properties
  - West Alkali (formerly Bison Basin)
  - Sweetwater Properties
- Web Site: [www.wildhorse.com.au](http://www.wildhorse.com.au)

# WildHorse Projects



# Wyoming





Lander

287

Fremont

Sweetwater

Atlantic City

Sweetwater Station Jct.

Jeffrey City

Sweetwater River

West Alkali Creek

Bison Basin Rd.

SL Livestock Ranch

T27N R97W  
Section 25

Bison Basin  
Oil Field

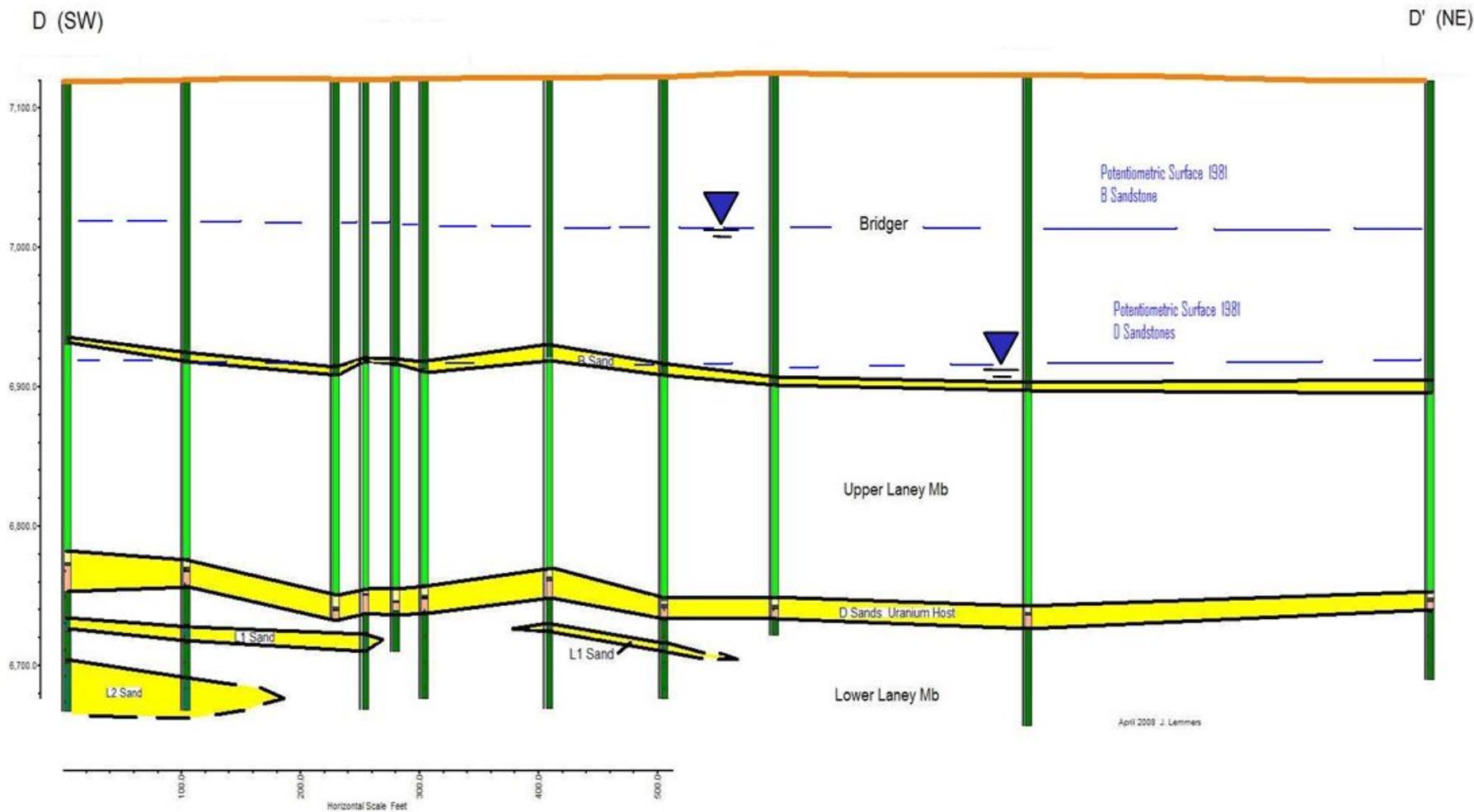
FREMONT  
SWEETWATER

10km



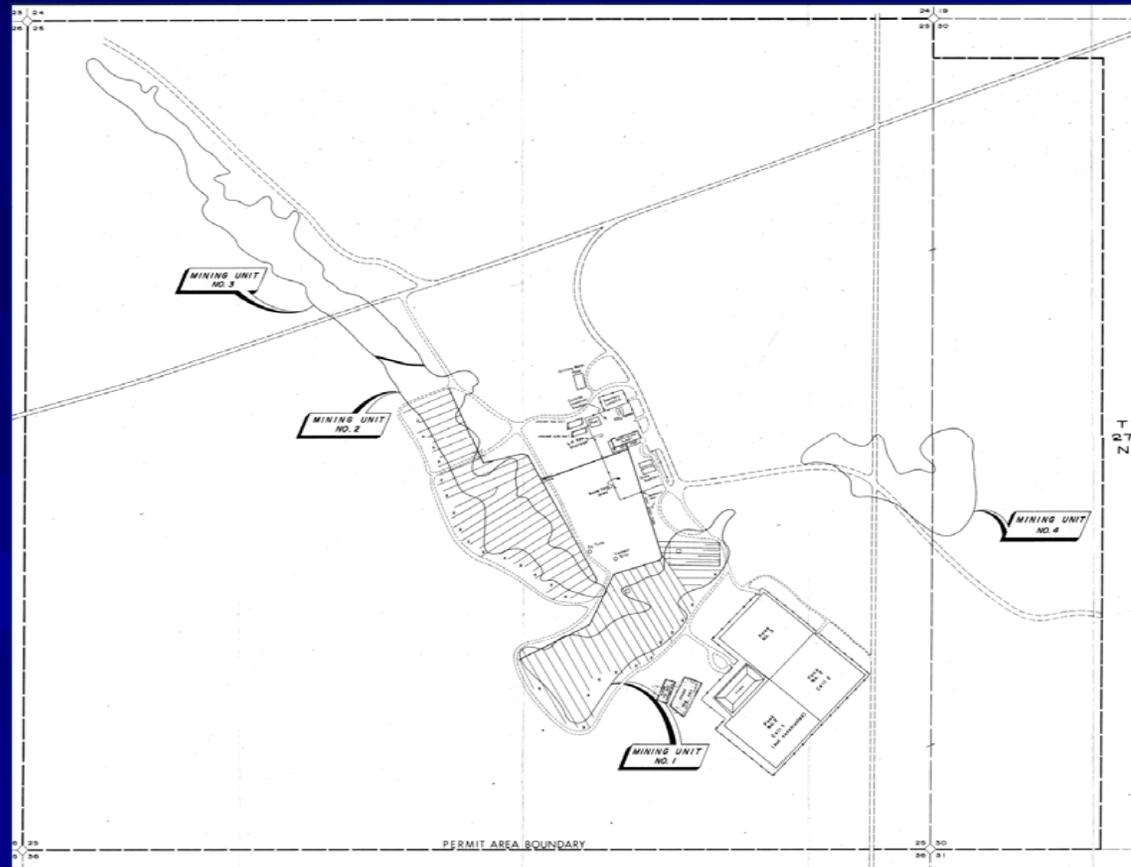
# Stratigraphy

## Generalized Stratigraphy



# Historical ISR Mining - Timeline

- 1977: OPI drills 146 holes to 400'.
- 1978: 1-acre R & D ISR permits issued by NRC and WDEQ.
- 1979: ~2000 lbs uranium produced; wellfield restored
- 1980-1981: NRC and WDEQ commercial permits issued
- 1981-1982: ~70,000 lbs  $U_3O_8$  produced from Mine Unit 1.



# Former Bison Basin Processing Area



# Historical ISR Mining - Timeline

- 1982-1985: Uranium price declines, mine on standby status.
- 1985: OPI declares bankruptcy and forfeits bond.
- 1986-1987: third-party groundwater restoration complete.
- 1988: Stability period successfully concluded with water returned to class-of-use standards.



# Current Activities at West Alkali

- Baseline studies to support upcoming permitting effort.
- NRC Source Material License, WDEQ Permit to Mine, and other permit applications for:
  - ISR uranium mining
  - On-site uranium processing
  - Shipping dry yellowcake

# Baseline Surveys

- Gather data to support NRC Source Material License, WDEQ Permit to Mine, and other permit applications.
- Physical, chemical, biological, social
- Analytical chemistry by Energy Labs
- Initiated May 2007
- Projected Completion June 2009

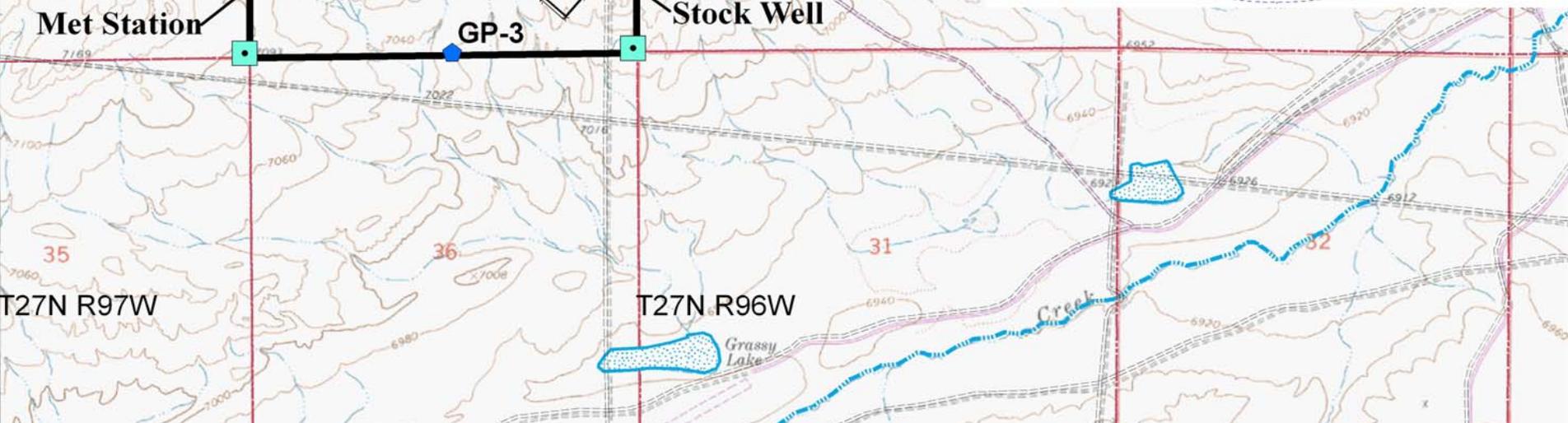
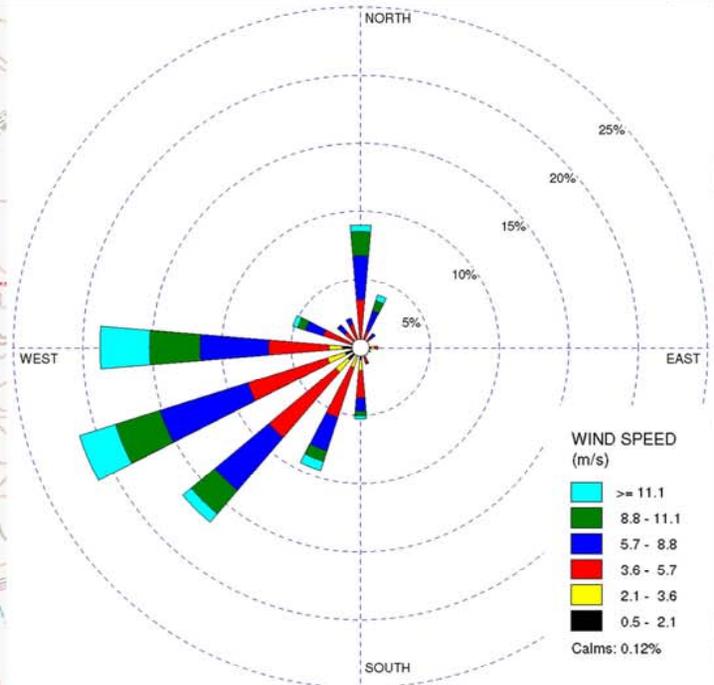
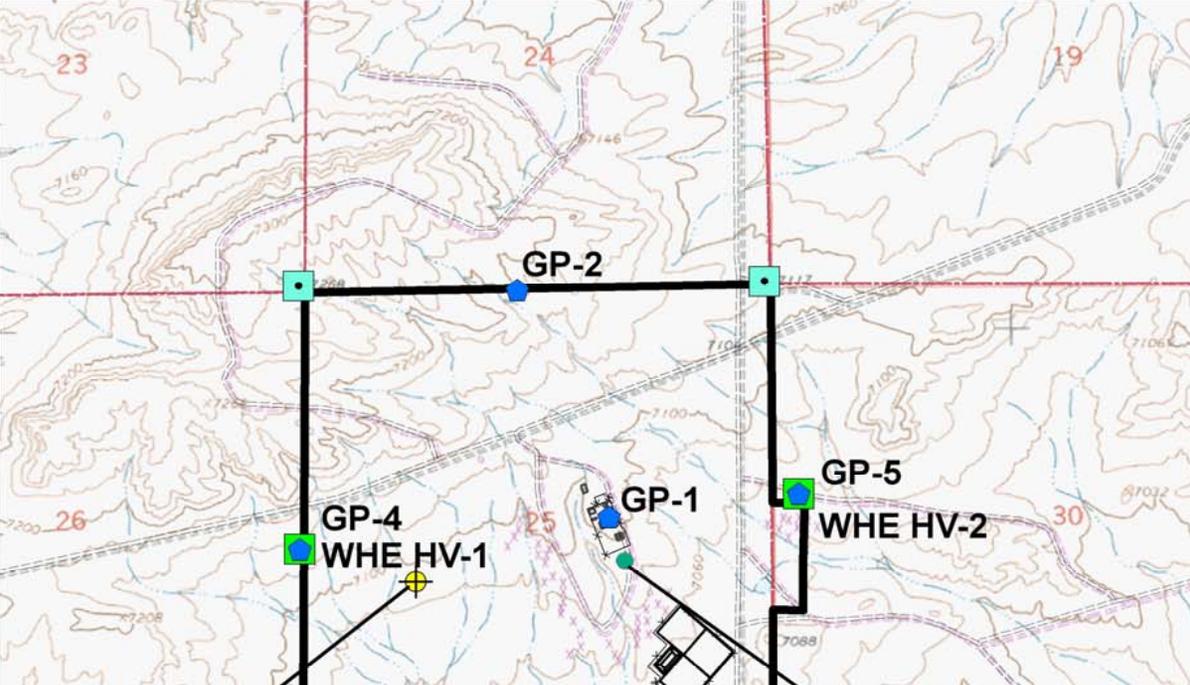
# Meteorology

- Temperature,  $\Delta T$
- Humidity
- Precipitation
- Wind speed and direction
- Net radiation
- Soil temperature
- Continuous operation

# Hi-vol air samplers

- 25-30 L/min
- Continuous operation
- Establish baseline conditions
  - Upwind and downwind site boundaries





-  Proposed Gamma Passive Samplers
-  Proposed Mini Vol Locations
-  Proposed Hi Vol Locations



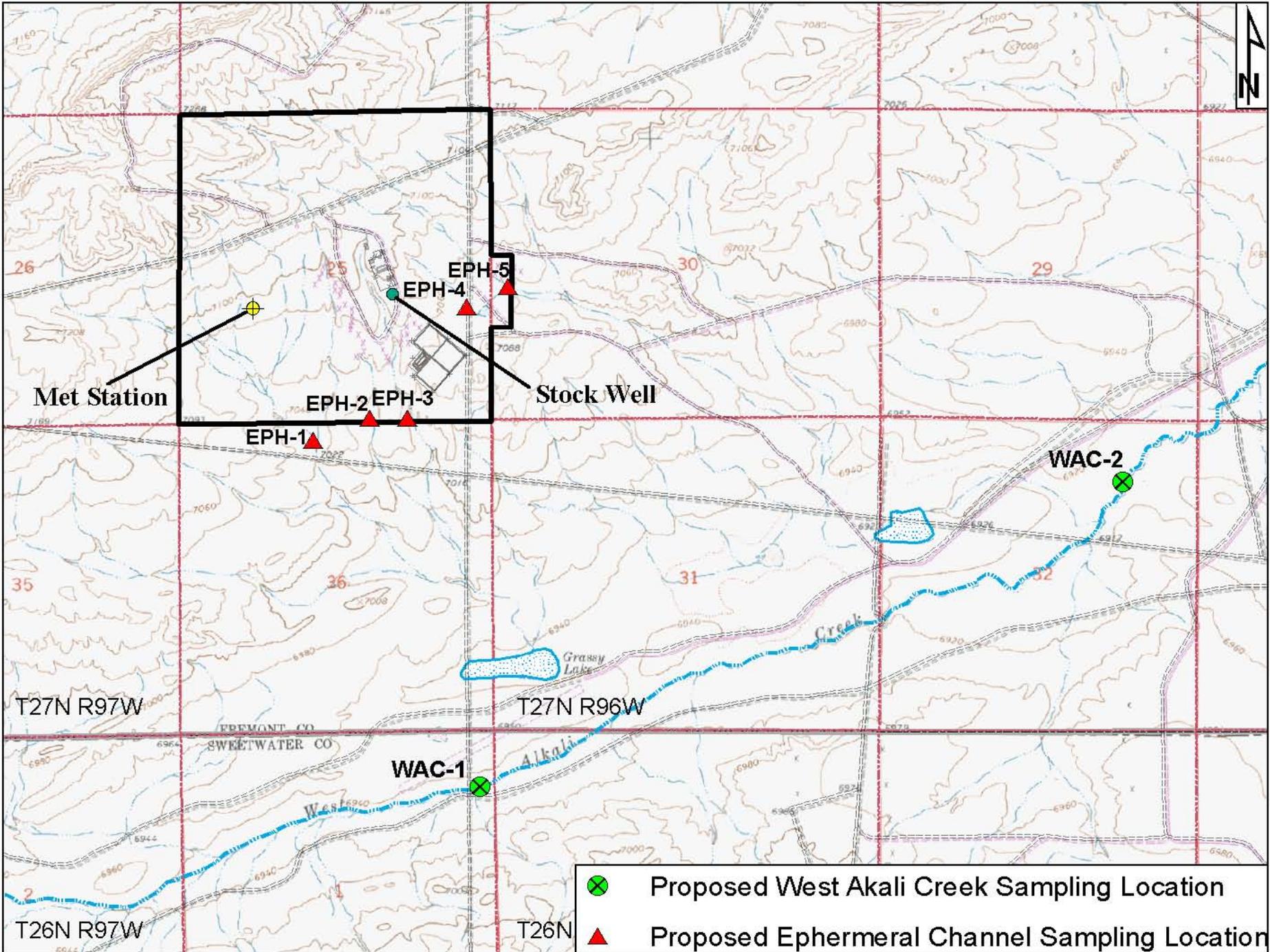
# Additional Radiology

- High-density gamma scan (~100% coverage)
- Tissue and vegetation bio-assays
- Radon flux
- Soil and sediment radiology
- Surface and groundwater radiology



# Surface Water

- Five Automatic Surface Water Samplers Installed
- Upstream and downstream locations (West Alkali Creek)
- Grassy Lake playa
- Section 25 playa

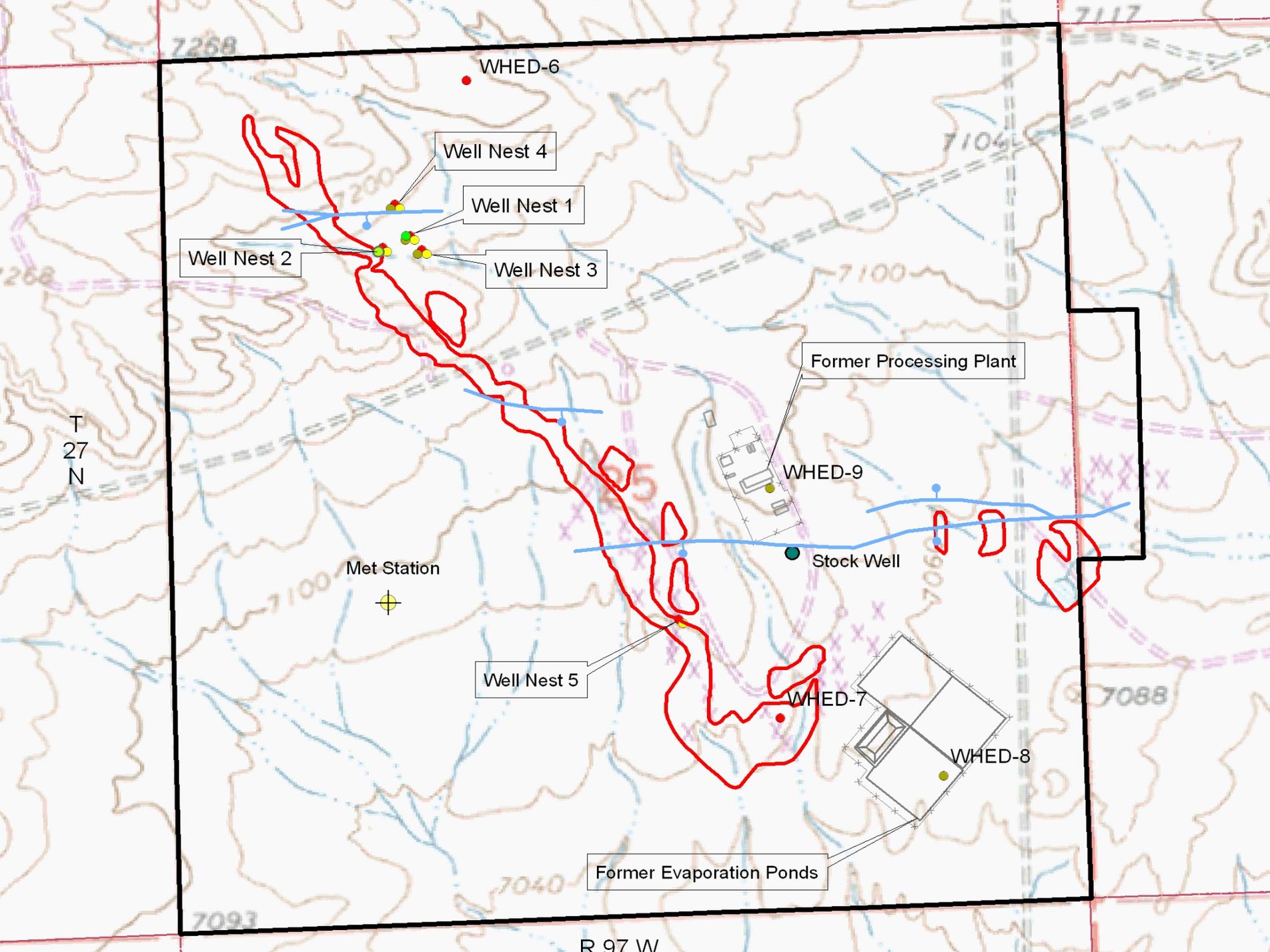


-  Proposed West Akali Creek Sampling Location
-  Proposed Ephemeral Channel Sampling Location

# Groundwater

- 16 new monitoring wells installed
- 4 new monitoring wells planned
- Working with WDEQ and plan to add several other monitoring wells

12/14/2007



WHED-6

Well Nest 4

Well Nest 1

Well Nest 2

Well Nest 3

Former Processing Plant

WHED-9

Stock Well

Met Station

Well Nest 5

WHED-7

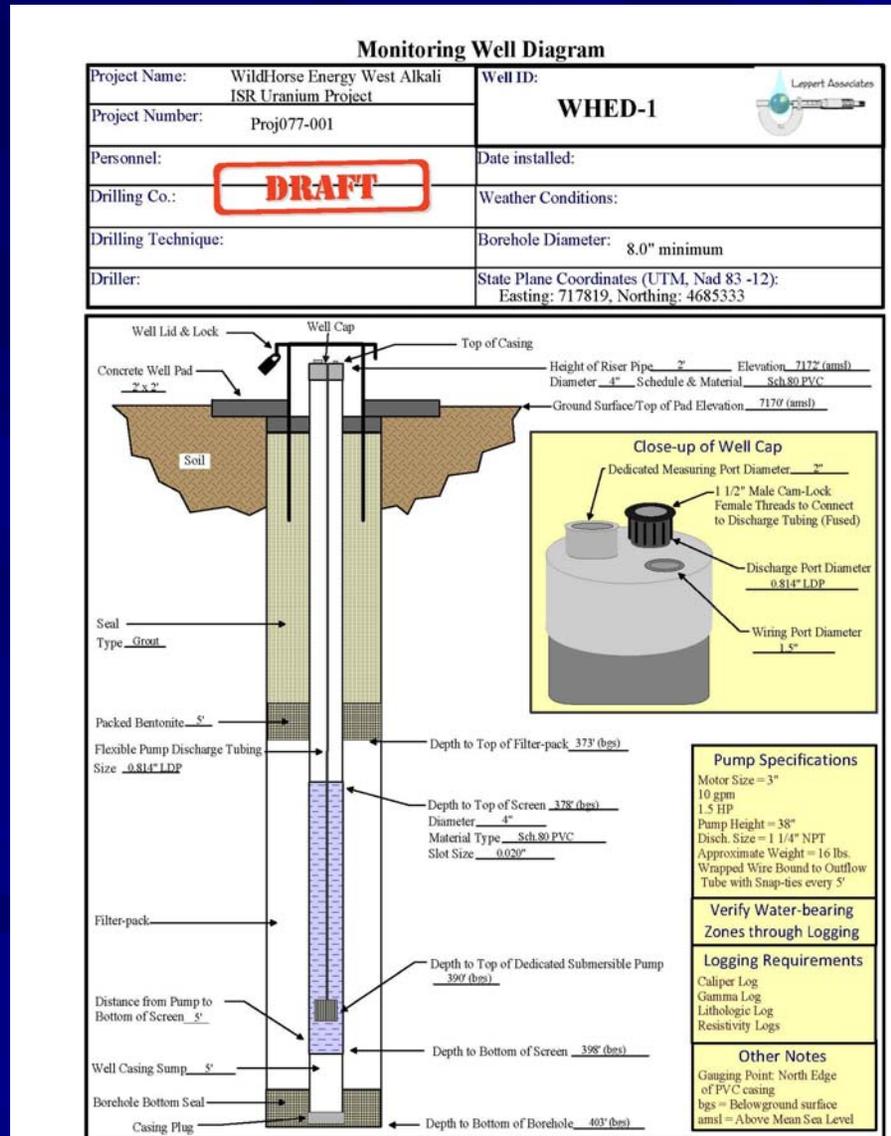
WHED-8

Former Evaporation Ponds

T  
27  
N

R 97 W

# Typical Monitoring Well Construction





# Groundwater Hydrology

- **Develop a Detailed Hydrogeologic Conceptual Model Based Upon Site Data**
  - **Hydrostratigraphy**
  - **Hydraulic Properties of the Water-Bearing Units**
  - **Hydrologic Setting (local hydrologic cycle)**
  - **Groundwater Quality**
- **Construct a Very Finely Discretized, Calibrated, 3-Dimensional Groundwater Flow and Constituent Transport Modeling System**
  - **Assist in the Design of the Groundwater Monitoring Network**
  - **Assist in the Design of the Lixiviant Delivery and Recovery System**
  - **Assist in Groundwater Restoration After Cessation of ISR Operations**



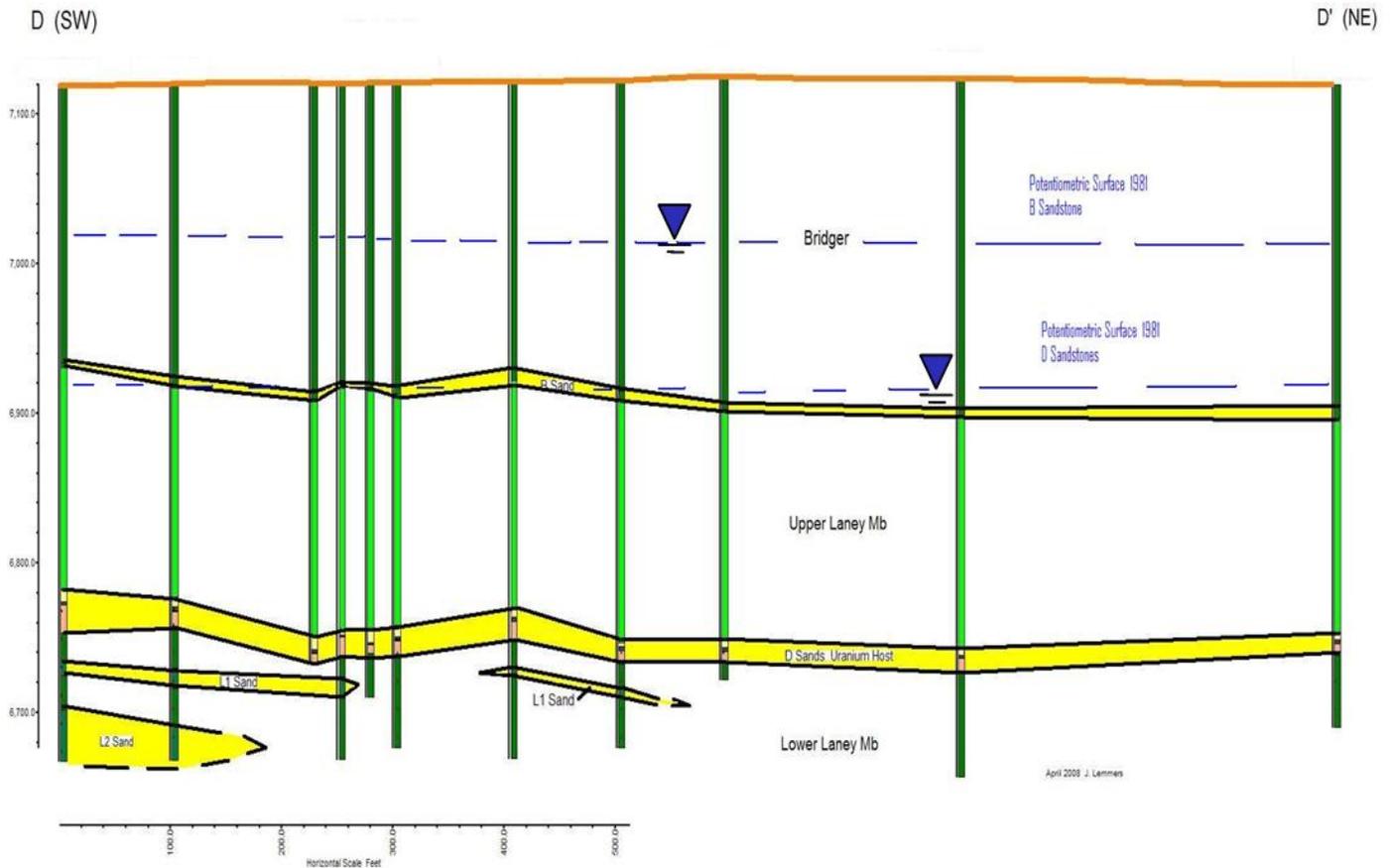
# Hydrostratigraphy

- Large number of borings geologic & geophysical logs used to define the 3-dimensional Hydrostratigraphy

- Four water-bearing units designated in the shallow subsurface

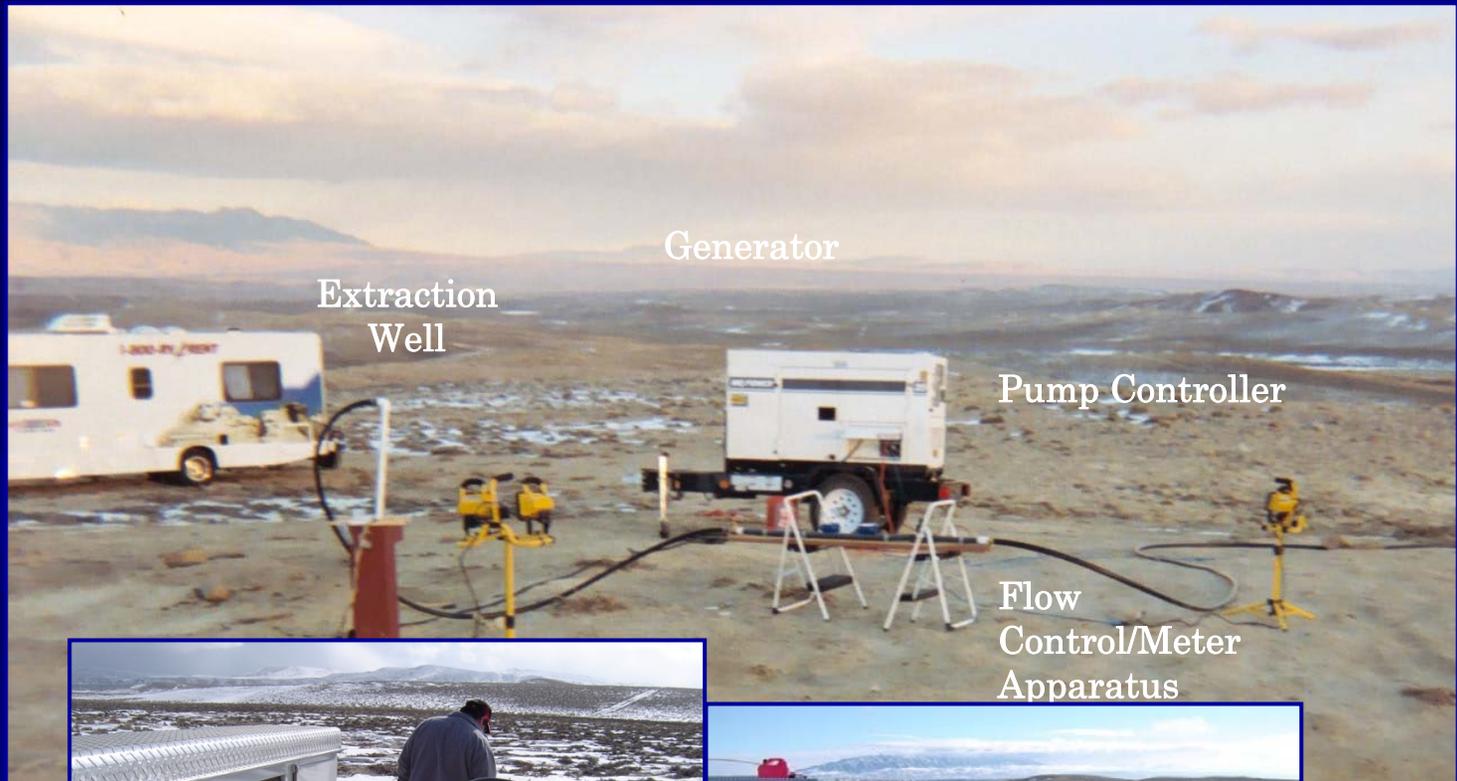
- Water Table
- “B” Unit
- “D” Unit
- Lower Laney

## Generalized Stratigraphy



# Hydraulic Testing

- Rigorous Hydraulic Stress Testing
- Data for Hydraulic Property Estimation for use in the Quantitative Model
- Horizontal Hydraulic Conductivity
- Vertical Hydraulic Conductivity
- Storability
- Hydraulic Boundaries



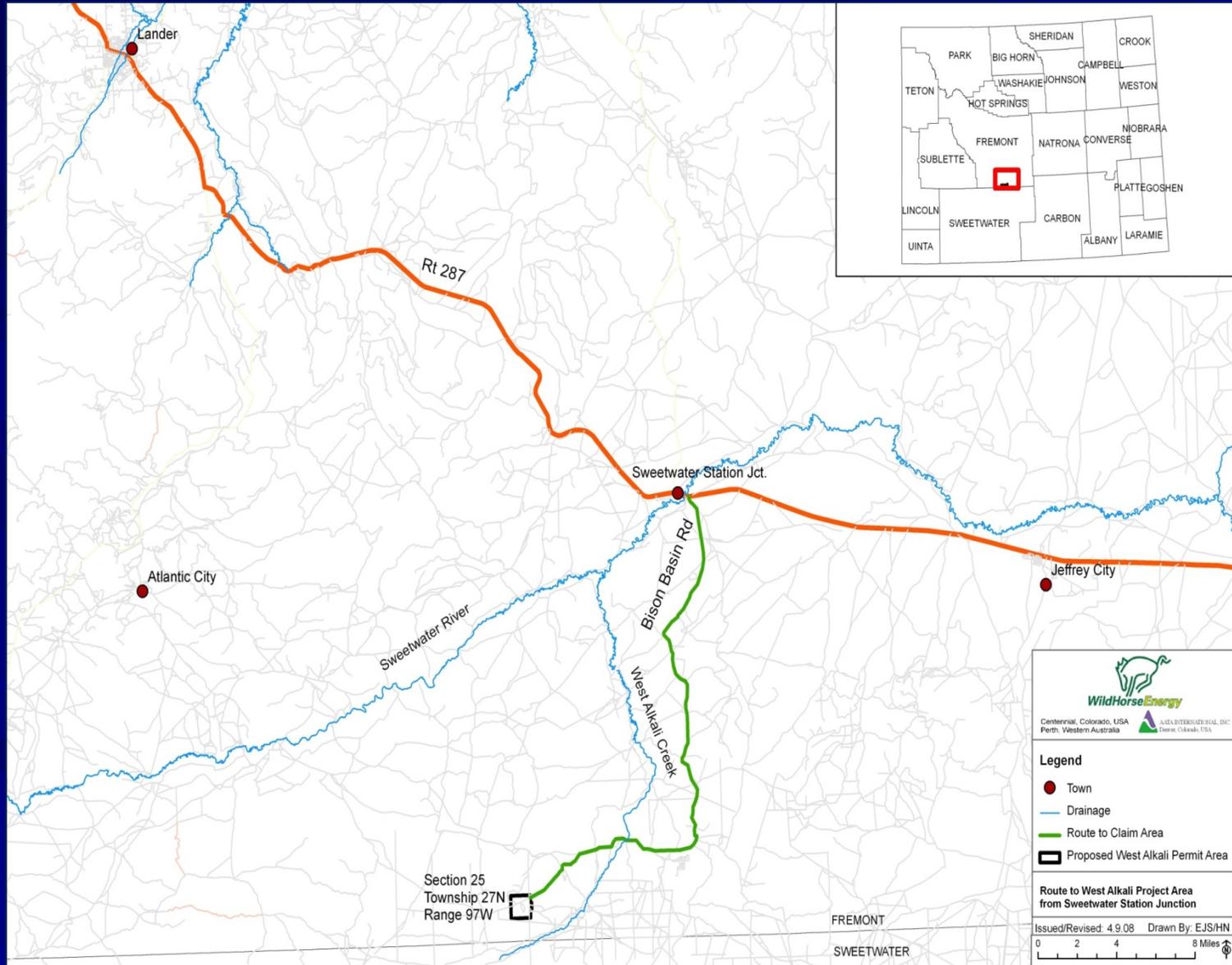
# Hydrologic Setting

- Sweetwater River – perennial creek, approx. 7 miles north (79.8 ft<sup>3</sup>/sec flow rate April-September; Wyoming, Hydrologic Unit 10180006)

- West Alkali Creek – intermittent creek, ½ mile south

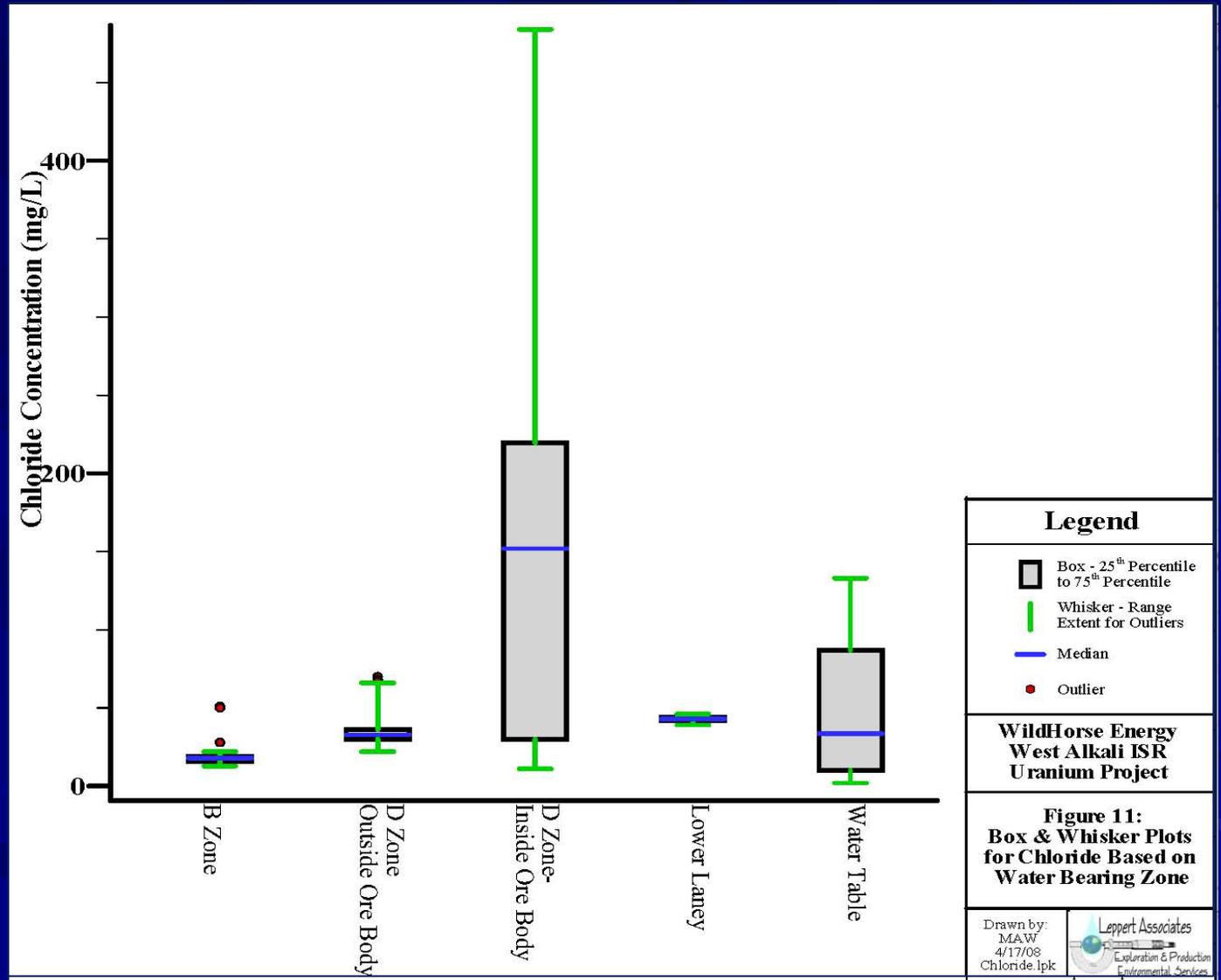
- WildHorse has constructed a meteorological station on Section 25

- Quantitative Model Boundary Conditions



# Groundwater Quality

- Establish Baseline Groundwater Quality Monitoring Well Network
- Develop a Thorough Understanding of Hydrogeochemistry of the Targeted Water-Bearing Zones
- Potentially Utilize PHREEQ Hydrogeochemical Model Which can be Coupled to Groundwater Flow Model



# Additional Surveys

## ■ Wildlife

- Sage grouse (completed)
- Raptors (in progress)
- Pygmy rabbits (completed)
- Mountain plover
- Nesting birds
- Prairie dog mapping (completed)
- Black-footed ferret

## ■ Vegetation characterization

## ■ Soil characterization

## ■ Cultural resources/Archeology (completed)

## ■ Socio-Economic

# Tentative Schedule

- Baseline studies completed 2<sup>nd</sup> Quarter 2009
- Submit NRC Permit Application late 2009 – early 2010

# Thanks for your attention!

- WildHorse Energy
- AATA International, Inc.
- Leppert & Associates