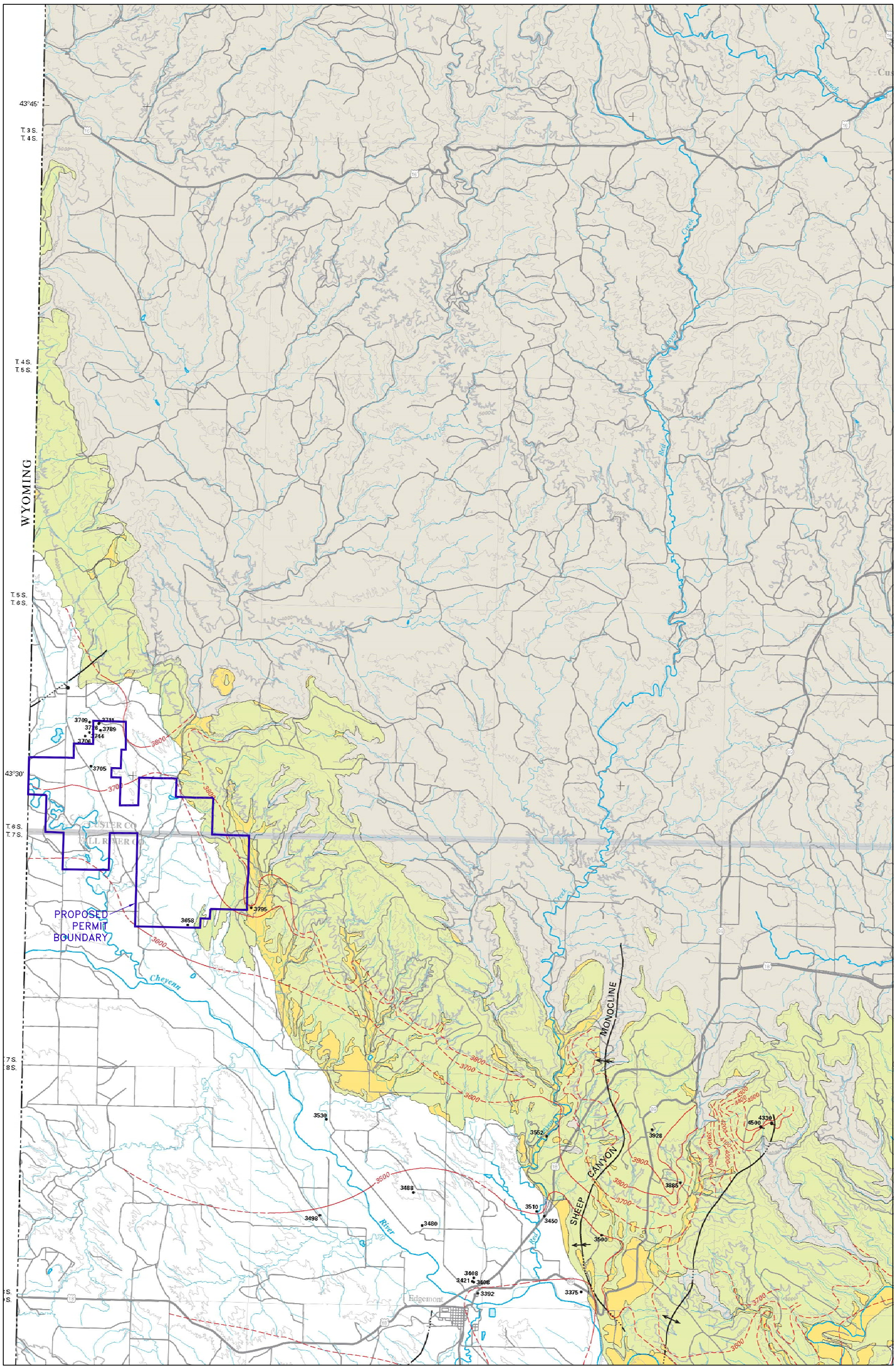
POWERTECH (USA) INC.

APPENDIX D

POTENTIOMETRIC SURFACES IN THE BLACK HILLS AREA



15,000 0 15,000 30,000 FEET

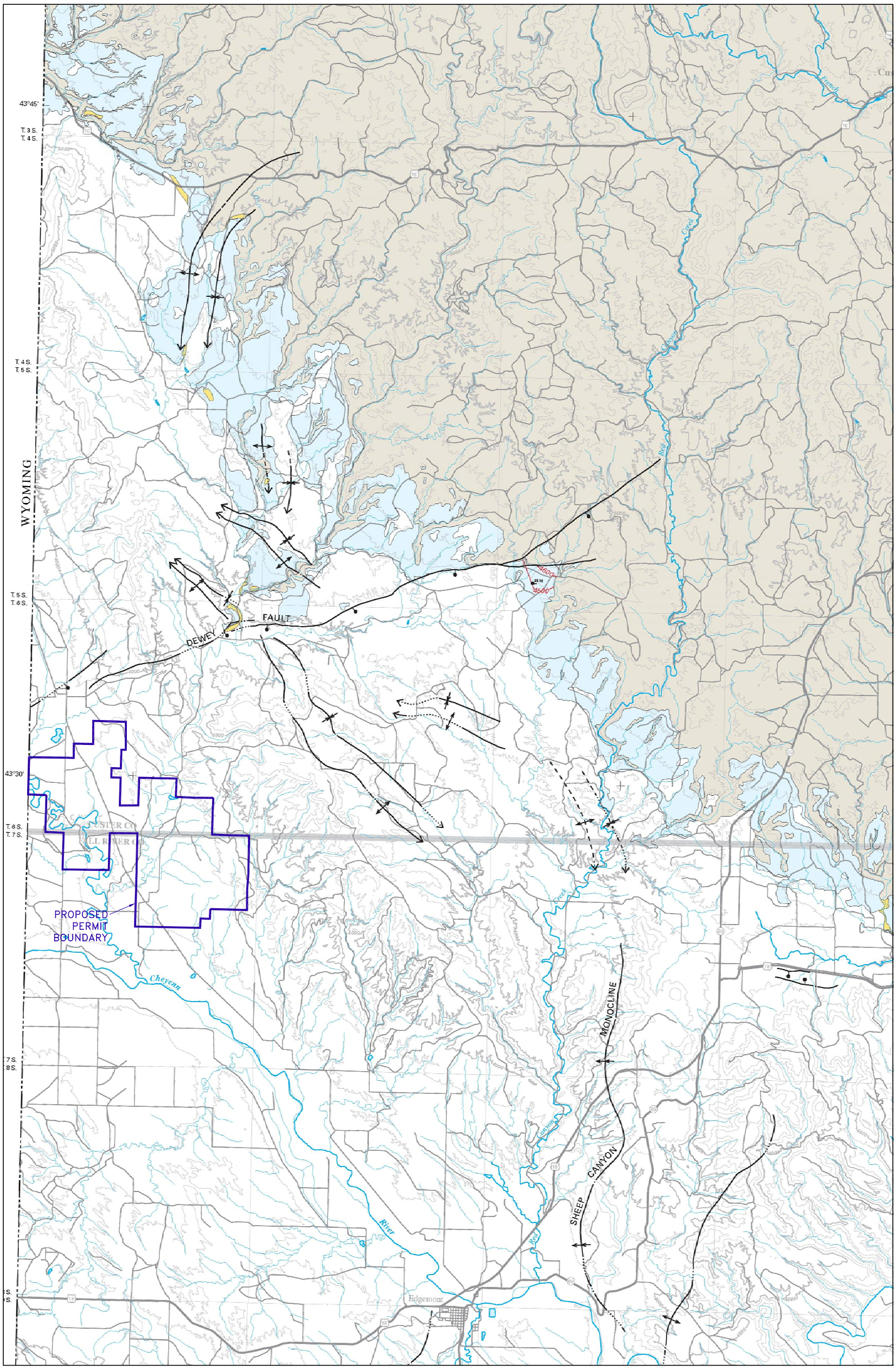
EXPLANATION

- **Outcrop of the Inyan Kara Group**
- **Inyan Kara Group present, but overlain directly by surficial deposits**
- **Inyan Kara Group absent**
- **Fault**—Dashed where approximated, dotted where concealed. Bar and ball on downthrown side
- **Anticline**—Showing trace of axial plane and direction of plunge. Dashed where approximated, dotted where concealed
- **Syncline**—Showing trace of axial plane and direction of plunge. Dashed where approximated, dotted where concealed
- **Monocline**—Showing trace of axial plane. Dashed where approximated, dotted where concealed
- **Dome** Symbol size approximately proportional to size of dome. Dome asymmetry indicated by arrow length
- 5000 **Potentiometric contour** Shows altitude at which water would have stood in tightly cased, nonpumping wells. Contour interval 100 feet. Dashed where inferred. Datum is sea level[1]
- 6539 **Well** Number is mean hydraulic head of the well, in feet above sea level. "R" indicates continuous recording wells
- 6075 **Spring originating from Inyan Kara aquifer**—Number is altitude of the spring, in feet above sea level

POTENTIOMETRIC SURFACE OF THE INYA KARA AQUIFER

POWERTECH (USA) INC.

DRAWN	L. Tafoya	PROJECT	Dewey–Burdock Project	DATE	13–Nov–2008
CHECKED	.	COORDS	.	PLOT DATE	13–Nov–2008
SCALE	NOT TO SCALE	FILENAME	PLATE_C–1.dwg	REF	.



15,000 0 15,000 30,000 FEET

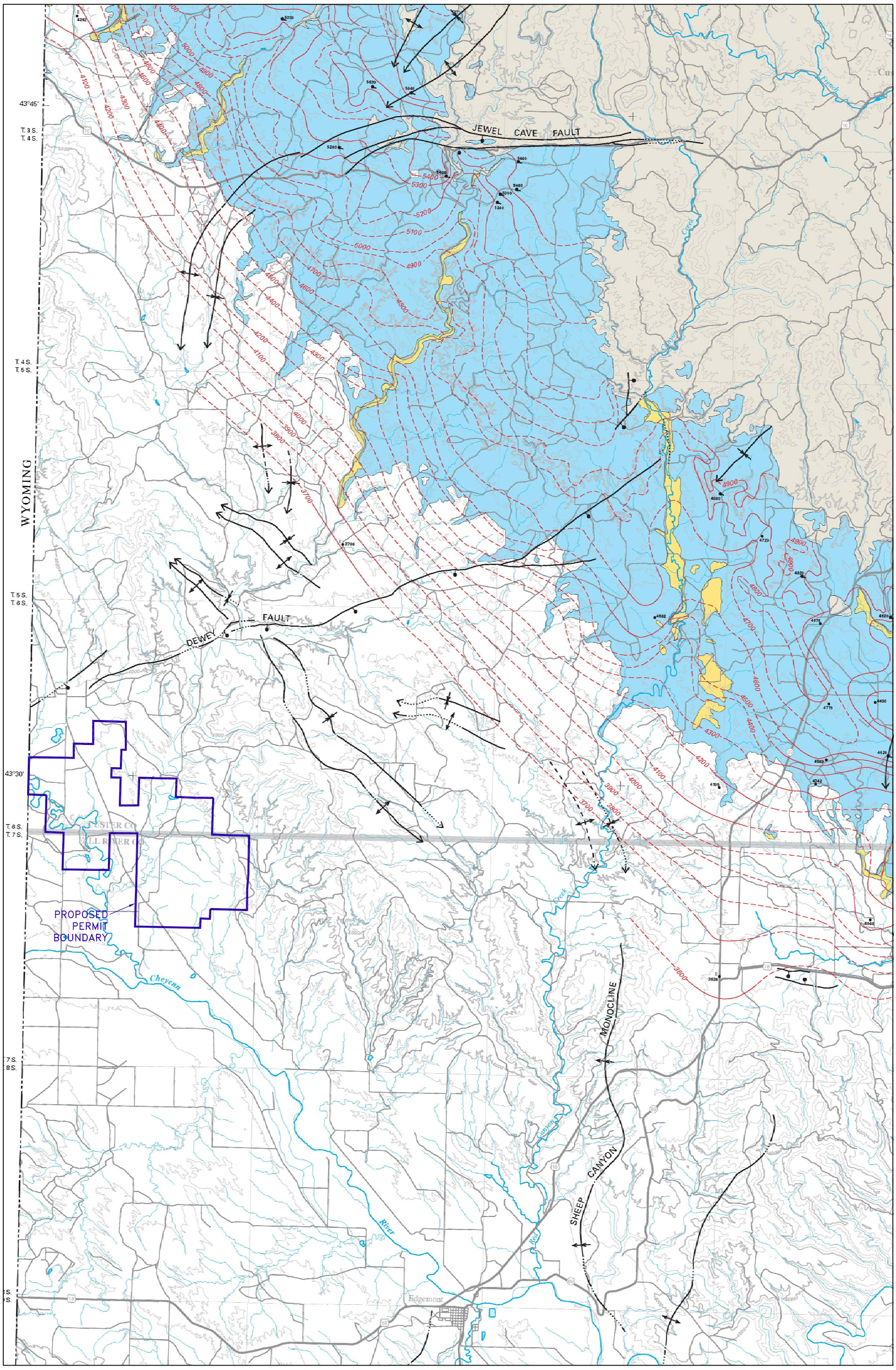
EXPLANATION

- **Outcrop of the Minnekahta Limestone**
- **Minnekahta Limestone present, but overlain directly by surficial deposits**
- **Minnekahta Limestone absent**
- **Fault**—Dashed where approximated, dotted where concealed. Bar and ball on downthrown side
- **Anticline**—Showing trace of axial plane and direction of plunge. Dashed where approximated, dotted where concealed
- **Syncline**—Showing trace of axial plane and direction of plunge. Dashed where approximated, dotted where concealed
- **Monocline**—Showing trace of axial plane. Dashed where approximated, dotted where concealed
- **Dome** Symbol size approximately proportional to size of dome. Dome asymmetry indicated by arrow length
- 3500 **Potentiometric contour** Shows altitude at which water would have stood in tightly cased, nonpumping wells. Contour interval 100 feet. Dashed where inferred. Datum is sea level[1]
- **Well** Number is mean hydraulic head of the well, in feet above sea level. "R" indicates continuous recording wells
- **Spring originating from Minnekahta aquifer**—Number is altitude of the spring, in feet above sea level

POTENTIOMETRIC SURFACE OF THE MINNEKAHTA AQUIFER

POWERTECH (USA) INC.

DRAWN	L. Tafoya	PROJECT	Dewey-Burdock Project	DATE	13-Nov-2008
CHECKED	.	COORDS	.	PLOT DATE	13-Nov-2008
SCALE	NOT TO SCALE	FILENAME	PLATE_C-2.dwg	REF	.



15,000 0 15,000 30,000 FEET

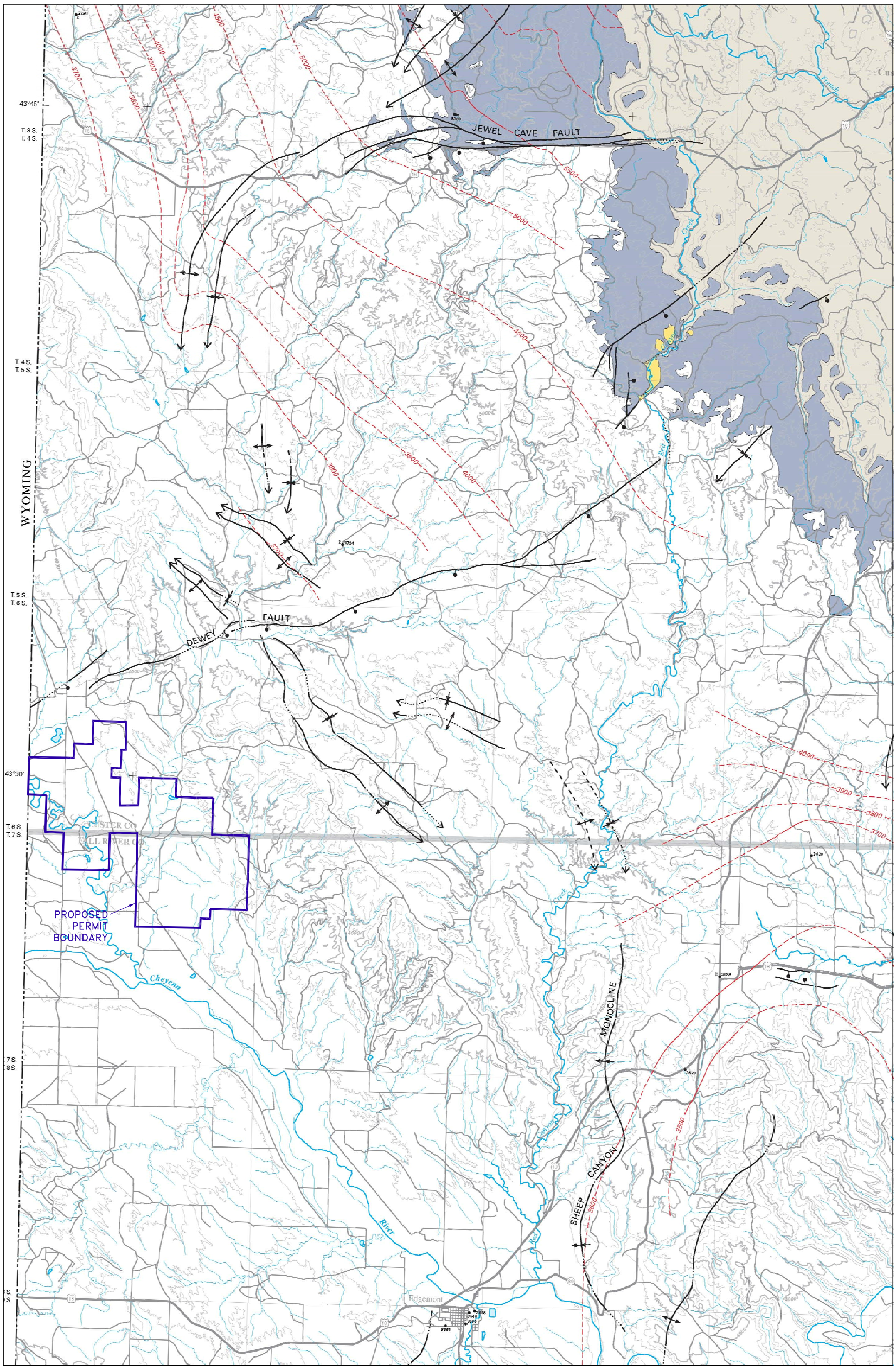
EXPLANATION

- **Outcrop of the Minnelusa Formation**
- **Minnelusa Formation present, but overlain directly by surficial deposits**
- **Minnelusa Formation absent**
- **Fault**—Dashed where approximated, dotted where concealed. Bar and ball on downthrown side
- **Anticline**—Showing trace of axial plane and direction of plunge. Dashed where approximated, dotted where concealed
- **Syncline**—Showing trace of axial plane and direction of plunge. Dashed where approximated, dotted where concealed
- **Monocline**—Showing trace of axial plane. Dashed where approximated, dotted where concealed
- **Dome**—Symbol size approximately proportional to size of dome. Dome asymmetry indicated by arrow length
- 3500 **Potentiometric contour**—Shows altitude at which water would have stood in tightly cased, nonpumping wells. Contour interval 100 feet. Dashed where inferred. Datum is sea level[1]
- **Well**—Number is mean hydraulic head of the well, in feet above sea level. "R" indicates continuous recording wells
- **Spring originating from Minnelusa aquifer**—Number is altitude of the spring, in feet above sea level

POTENTIOMETRIC SURFACE OF THE MINNELUSA AQUIFER

POWERTECH (USA) INC.

DRAWN	L. Tafoya	PROJECT	Dewey-Burdock Project	DATE	13-Nov-2008
CHECKED	.	COORDS	.	PLOT DATE	13-Nov-2008
SCALE	NOT TO SCALE	FILENAME	PLATE_C-3.dwg	REF	.



15,000 0 15,000 30,000 FEET

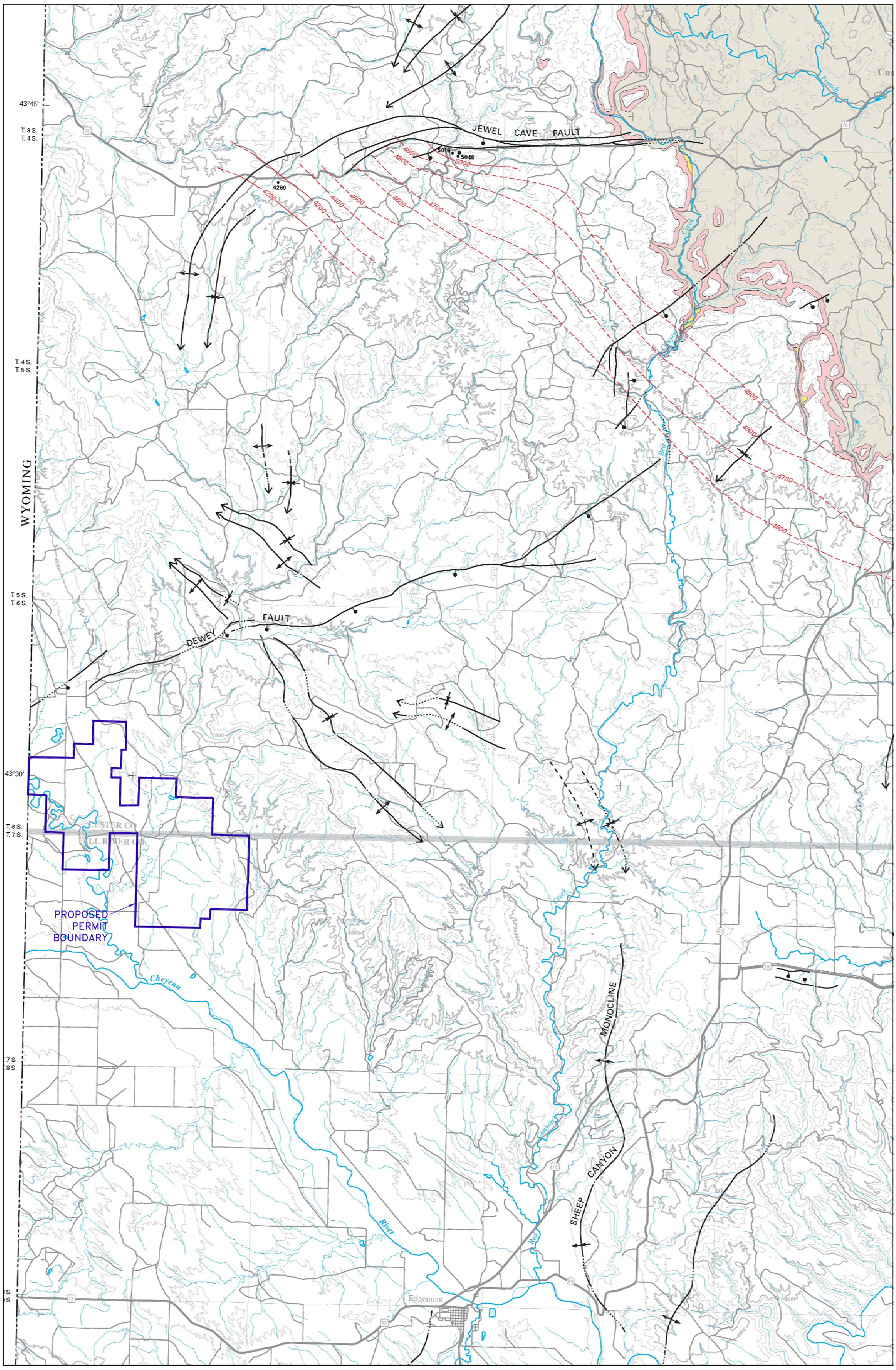
EXPLANATION

- **Outcrop of the Madison Limestone or Englewood Formation**
- **Madison Limestone or Englewood Formation present, but overlain directly by surficial deposits**
- **Madison Limestone or Englewood Formation absent**
- **Fault**—Dashed where approximated, dotted where concealed. Bar and ball on downthrown side
- **Anticline**—Showing trace of axial plane and direction of plunge. Dashed where approximated, dotted where concealed
- **Syncline**—Showing trace of axial plane and direction of plunge. Dashed where approximated, dotted where concealed
- **Monocline**—Showing trace of axial plane. Dashed where approximated, dotted where concealed
- **Dome** Symbol size approximately proportional to size of dome. Dome asymmetry indicated by arrow length
- 5000 **Potentiometric contour** Shows altitude at which water would have stood in tightly cased, nonpumping wells. Contour interval 100 or 500 feet where appropriate. Dashed where inferred. Datum is sea level[1]
- **Well** Number is mean hydraulic head of the well, in feet above sea level. "R" indicates continuous recording wells
- **Spring originating from Madison aquifer** Number is altitude of the spring, in feet above sea level

POTENTIOMETRIC SURFACE OF THE MADISON AQUIFER

POWERTECH (USA) INC.

DRAWN	L. Tafoya	PROJECT	Dewey–Burdock Project	DATE	13–Nov–2008
CHECKED	.	COORDS	.	PLOT DATE	13–Nov–2008
SCALE	NOT TO SCALE	FILENAME	PLATE_C–4.dwg	REF	.



15,000 0 15,000 30,000 FEET

EXPLANATION

- **Outcrop of the Deadwood Formation**
- **Deadwood Formation present, but overlain directly by surficial deposits**
- **Deadwood Formation absent**
- **Fault**—Dashed where approximated, dotted where concealed. Bar and ball on downthrown side
- **Anticline**—Showing trace of axial plane and direction of plunge. Dashed where approximated, dotted where concealed
- **Syncline**—Showing trace of axial plane and direction of plunge. Dashed where approximated, dotted where concealed
- **Monocline**—Showing trace of axial plane. Dashed where approximated, dotted where concealed
- **Dome** Symbol size approximately proportional to size of dome. Dome asymmetry indicated by arrow length
- 5000 **Potentiometric contour** Shows altitude at which water would have stood in tightly cased, nonpumping wells. Contour interval 100 feet. Dashed where inferred. Datum is sea level[1]
- 6539 **Well** Number is mean hydraulic head of the well, in feet above sea level. "R" indicates continuous recording wells
- 6075 **Spring originating from Deadwood aquifer**—Number is altitude of the spring, in feet above sea level

POTENTIOMETRIC SURFACE OF THE DEADWOOD AQUIFER

Powertech (USA) Inc.

DRAWN	L. Tafoya	PROJECT	Dewey-Burdock Project	DATE	13-Nov-2008
CHECKED	.	COORDS	.	PLOT DATE	13-Nov-2008
SCALE	NOT TO SCALE	FILENAME	PLATE_C-5.dwg	REF	.