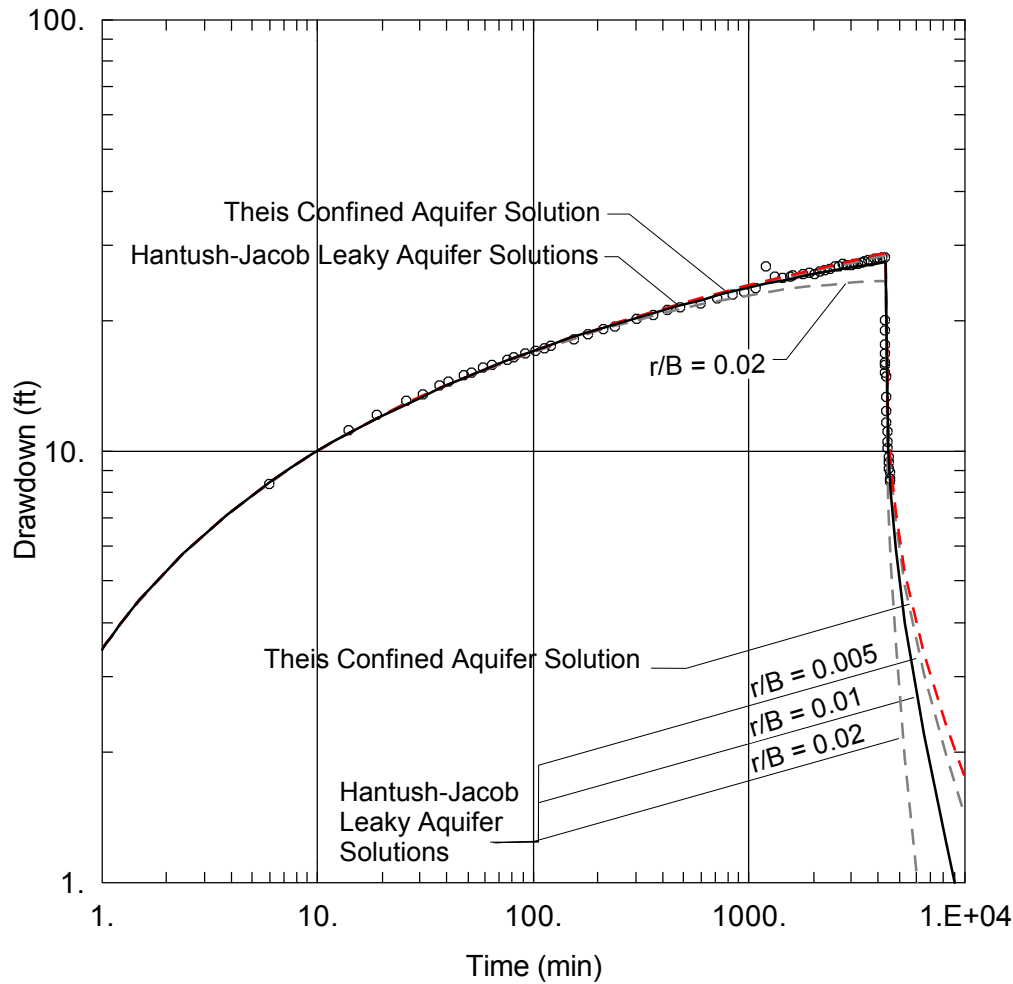


Response to Pumping and Fitted Type Curve



Leaky Aquifer Solution and Model Parameters

Transmissivity (T) = 3590 ft²/day

Storage Coefficient (S) = 1.5 x 10⁻³

Leakage (r/B) ≤ 0.01

B (Leakage Factor) = (Tb'/K')^{1/2} = 39ft/0.01 = 3900 ft

b' = thickness of semi-confining zone(s)

K' = vertical hydraulic conductivity of semi-confining zone(s)

r = distance between pumping and observation wells

Horizontal Conductivity

K = (T/b) = 3590 ft²/day / 600 ft = 6 ft/day or 9 ft/day for b = 400ft

Vertical Conductivity Derivation:

$r/B \leq 0.01 = r / (Tb'/K')^{1/2}$

$Tb'/K' = (r/0.01)^2$

$K' = Tb' / (r/0.01)^2 = (3590 \text{ ft}^2/\text{day})(30 \text{ ft}) / (39/0.01)^2 = 0.007 \text{ ft/day for } b'=30\text{ft}$



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ANALYSIS OF SC-18AA RESPONSE TO MAY 1991 MAIN STREET WELL AQUIFER TEST SOQUEL CREEK WATER DISTRICT

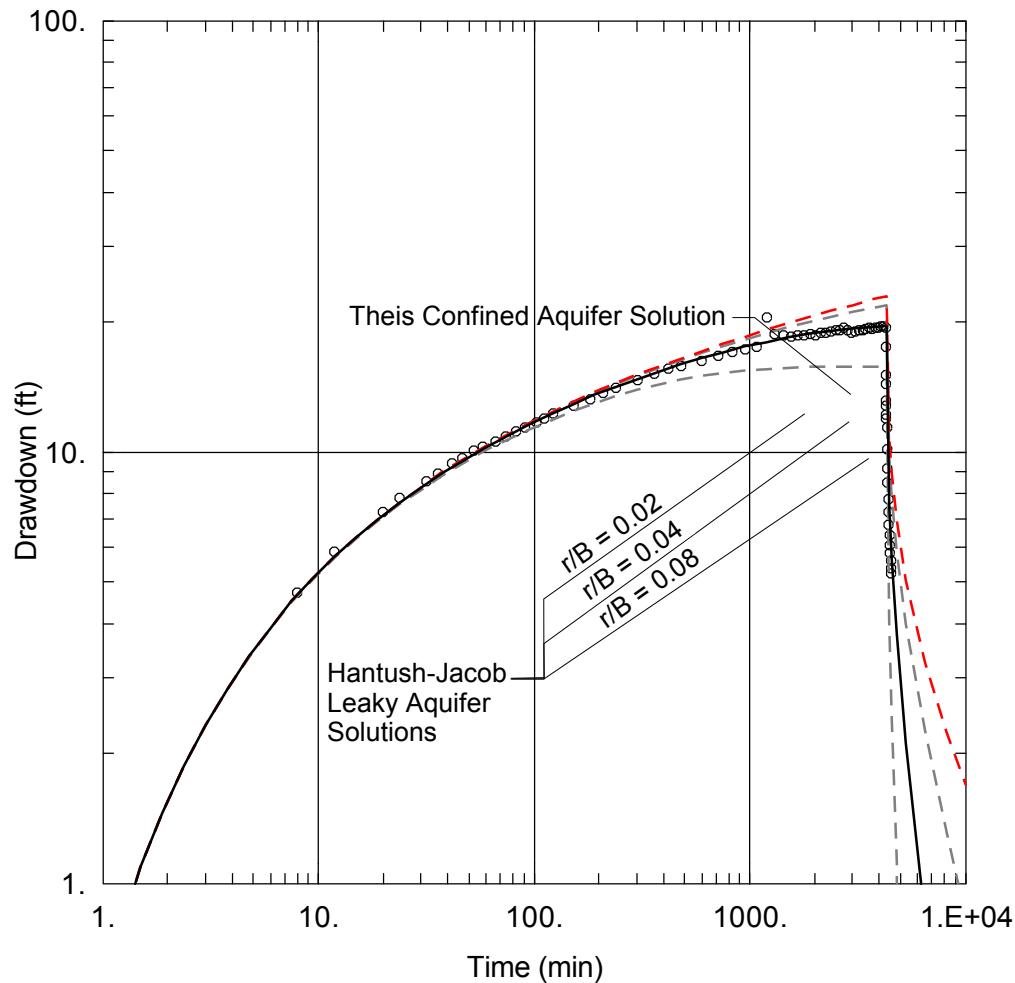
SSP-864

Project No.

3-2

Figure

Response to Pumping and Fitted Type Curve



Leaky Aquifer Solution and Model Parameters

Transmissivity (T) = 3730 ft²/day

Storage Coefficient (S) = 7.3×10^{-3}

Leakage (r/B) ≤ 0.04

B (Leakage Factor) = $(Tb'/K')^{1/2} = 39\text{ft}/0.04 = 975 \text{ ft}$

b' = thickness of semi-confining zone(s)

K' = vertical hydraulic conductivity of semi-confining zone(s)

r = distance between pumping and observation wells

Horizontal Conductivity

$K = (T/b) = 3730 \text{ ft}^2/\text{day} / 600 \text{ ft} = 6.2 \text{ ft/day}$

Vertical Conductivity Derivation:

$r/B \leq 0.04 = r/(Tb'/K')^{1/2}$

$Tb'/K' = (r/0.04)^2$

$K' = Tb'/(r/0.04)^2 = (3730 \text{ ft}^2/\text{day})(20 \text{ ft})/(39/0.04)^2 = 0.08 \text{ ft/day for } b' = 20\text{ft}$
 $= 0.8 \text{ for } b' = 200\text{ft}$



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ANALYSIS OF SC-18A RESPONSE TO MAY 1991 MAIN STREET WELL AQUIFER TEST SOQUEL CREEK WATER DISTRICT

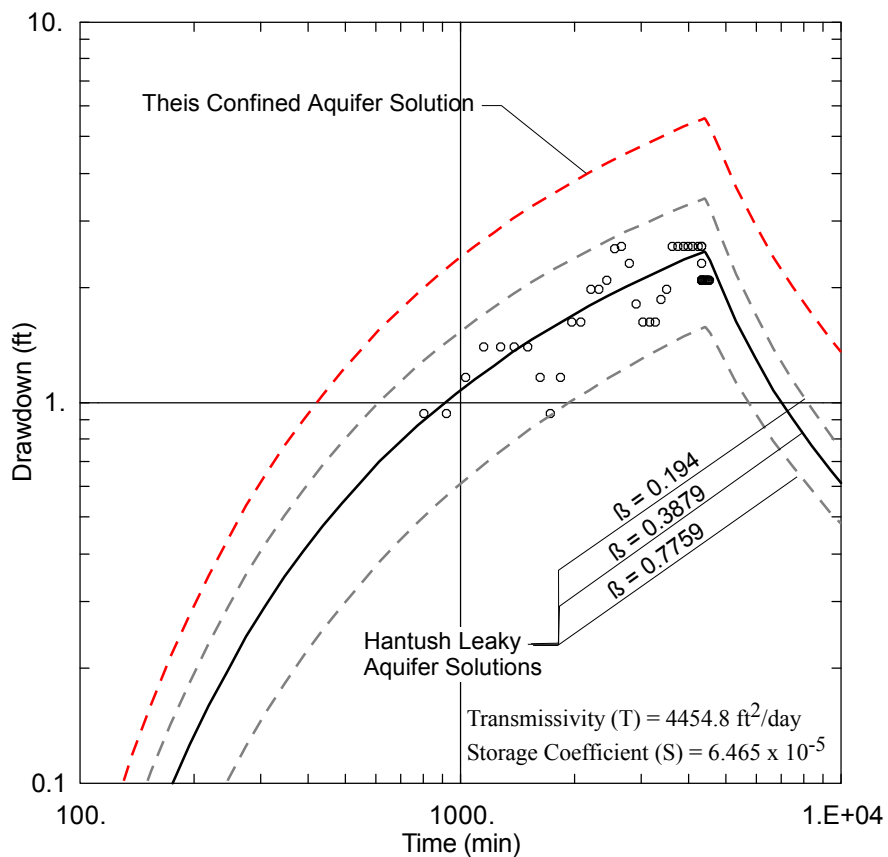
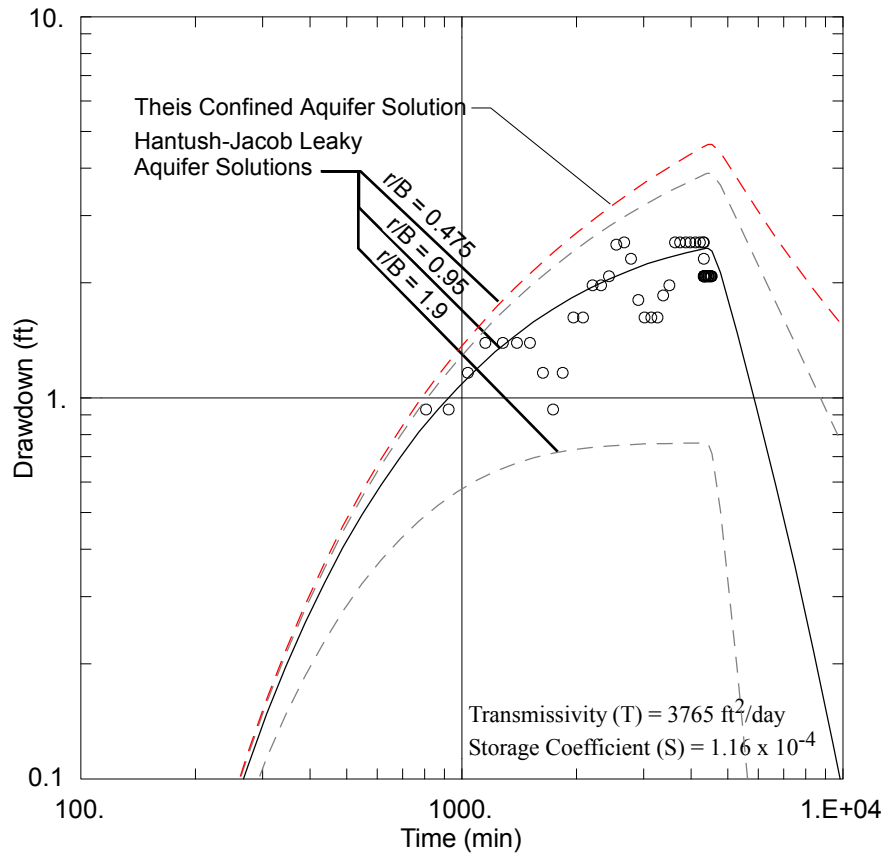
SSP-864

Project No.

3-3

Figure

Response to Pumping and Fitted Type Curve



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ANALYSIS OF SC-10AA RESPONSE TO MAY 1991 MAIN STREET WELL AQUIFER TEST
SOQUEL CREEK WATER DISTRICT

SSP-864

Project No.

3-4

Figure

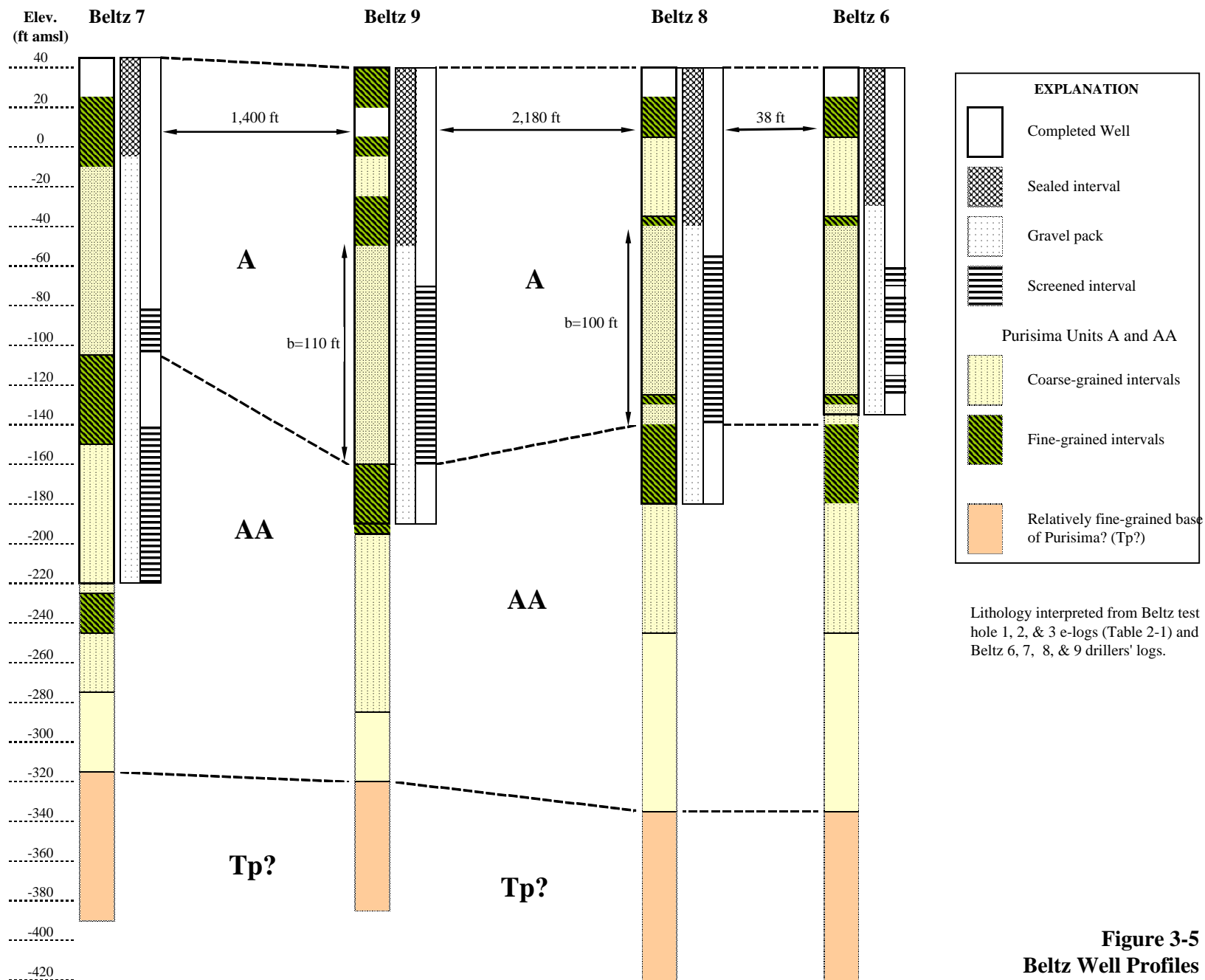
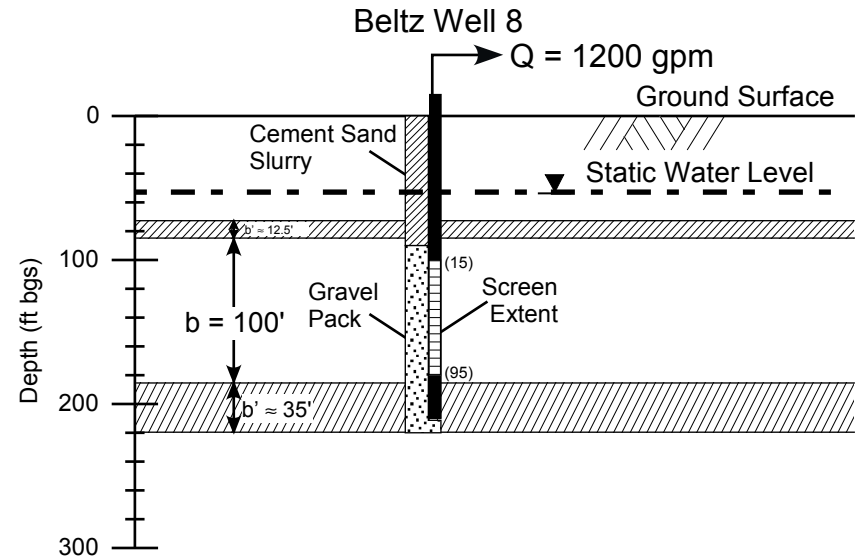
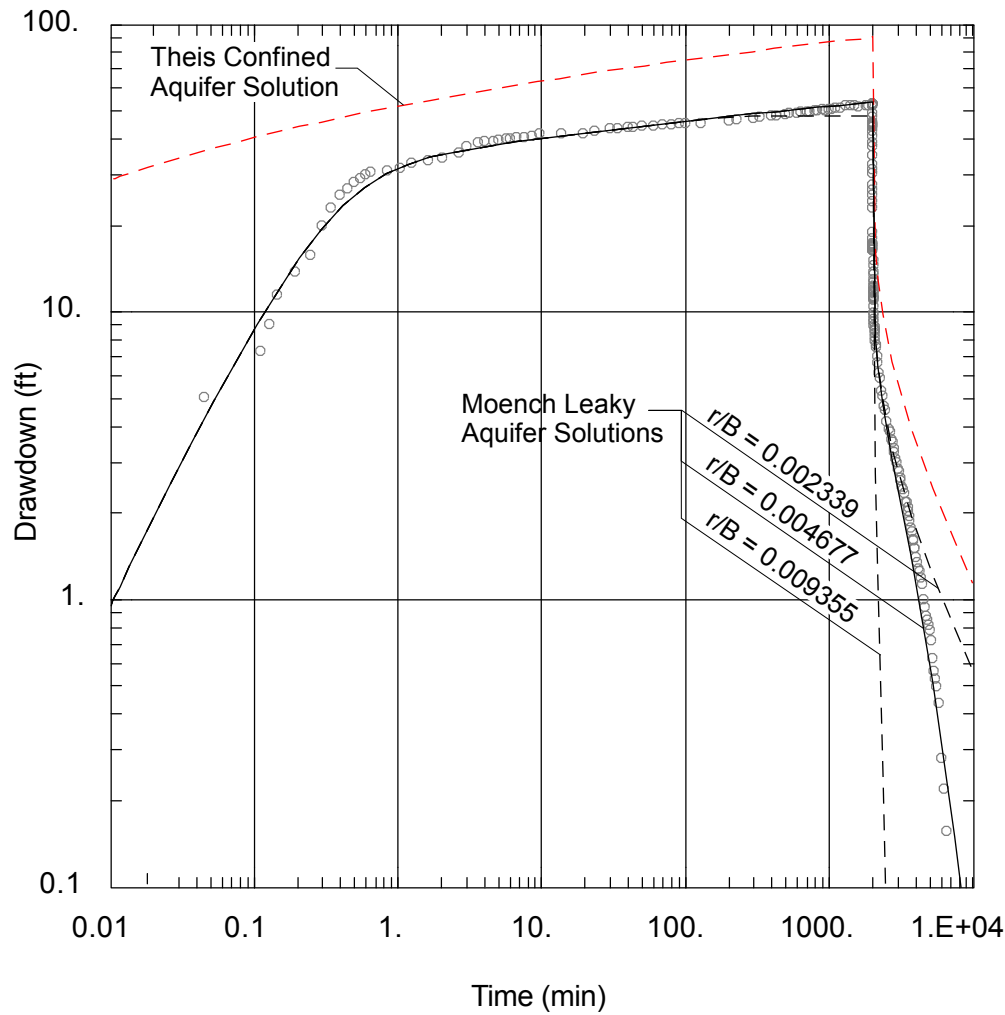


Figure 3-5
Beltz Well Profiles

Response to Pumping and Fitted Type Curve



Leaky Aquifer Solution and Model Parameters

Transmissivity (T) = 3650 ft²/day

Storage Coefficient (S) = 1.86 x 10⁻⁴

Leakage (r/B) = 4.677 x 10⁻³

B (Leakage Factor) = (Tb'/K')^{1/2} = 1.0 ft/4.677 x 10⁻³ = 214 ft

b' = thickness of semi-confining zone(s)

K' = vertical hydraulic conductivity of semi-confining zone(s)

r = distance between pumping and observation wells

Horizontal Conductivity

K = (T/b) = 3650 ft²/day / 100 ft = 36.5 ft/day

Vertical Conductivity Derivation:

$r/B = 4.677 \times 10^{-3} = r / (Tb'/K')^{1/2}$

$Tb'/K' = (r/4.677 \times 10^{-3})^2$

$K' = Tb' / (r/4.677 \times 10^{-3})^2 = (3650 \text{ ft}^2/\text{day})(12.5 \text{ ft}) / (1.0 \text{ ft}/4.677 \times 10^{-3})^2$
 = 0.998 ft/day for b' = 12.5 ft
 = 3.79 ft/day for b' = 47.5 ft



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ANALYSIS OF BELTZ 8 RESPONSE TO FEBRUARY 1998 BELTZ 8 AQUIFER TEST SOQUEL CREEK WATER DISTRICT

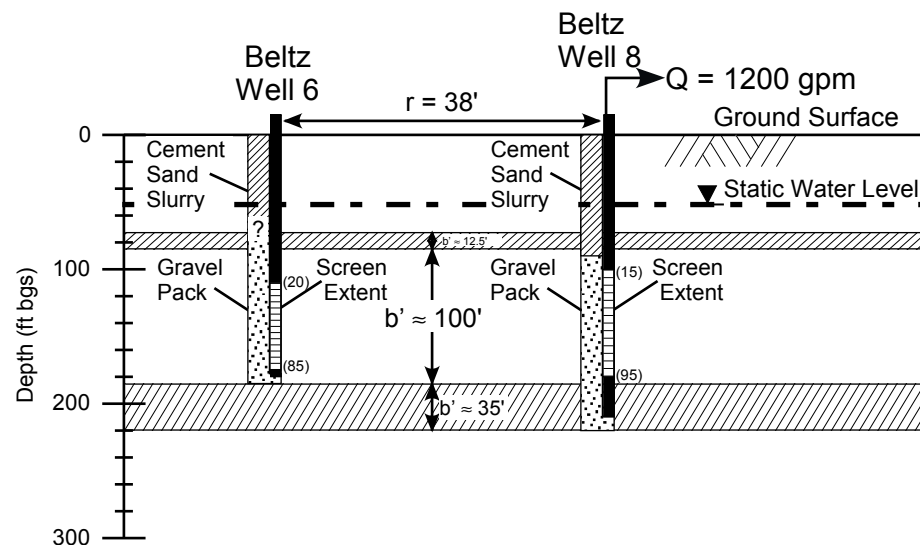
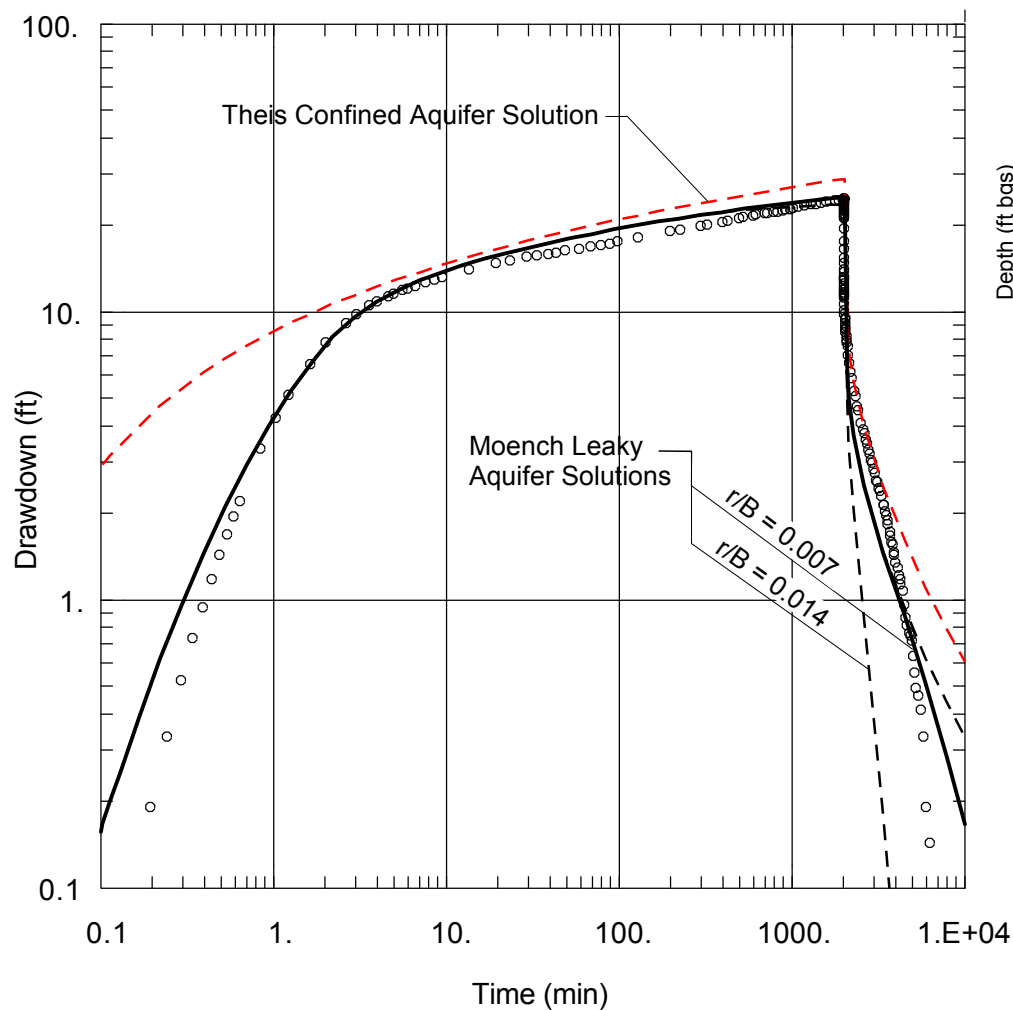
SSP-864

Project No.

3-6

Figure

Response to Pumping and Fitted Type Curve



Leaky Aquifer Solution and Model Parameters

Transmissivity (T) = $6824 \text{ ft}^2/\text{day}$

Storage Coefficient (S) = 3.2×10^{-4}

Leakage (r/B) = 0.007

B (Leakage Factor) = $(Tb'/K')^{1/2} = 38\text{ft}/0.007 = 5428 \text{ ft}$

b' = thickness of semi-confining zone(s)

K' = vertical hydraulic conductivity of semi-confining zone(s)

r = distance between pumping and observation wells

Horizontal Conductivity

$K = (T/b) = 6824 \text{ ft}^2/\text{day} / 100 \text{ ft} = 68 \text{ ft/day}$

Vertical Conductivity Derivation:

$r/B = 0.007 = r/(Tb'/K')^{1/2}$

$Tb'/K' = (r/0.007)^2$

$K' = Tb'/(r/0.007)^2 = (6824 \text{ ft}^2/\text{day})(12.5 \text{ ft})/(38/0.007)^2$

= 0.003 ft/day for $b' = 12.5 \text{ ft}$

= 0.01 ft/day for $b' = 47.5 \text{ ft}$



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ANALYSIS OF BELTZ 6 RESPONSE TO FEBRUARY 1998 BELTZ 8 AQUIFER TEST SOQUEL CREEK WATER DISTRICT

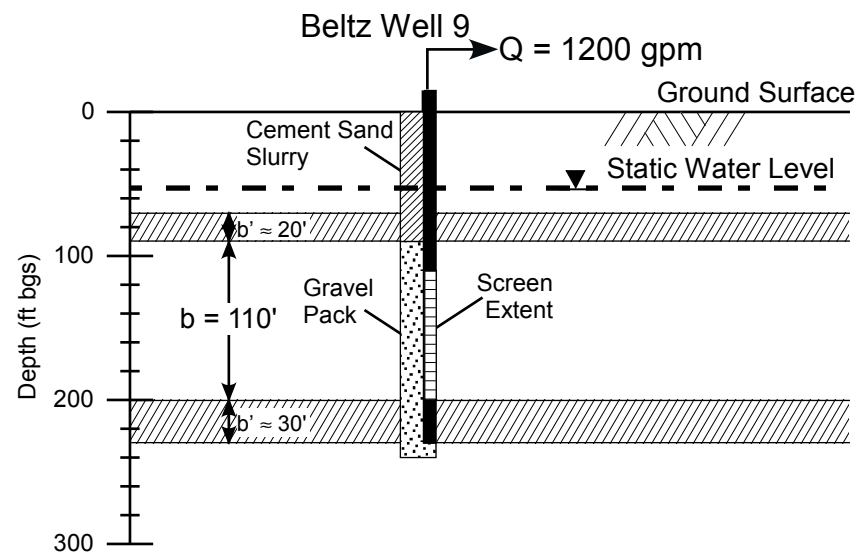
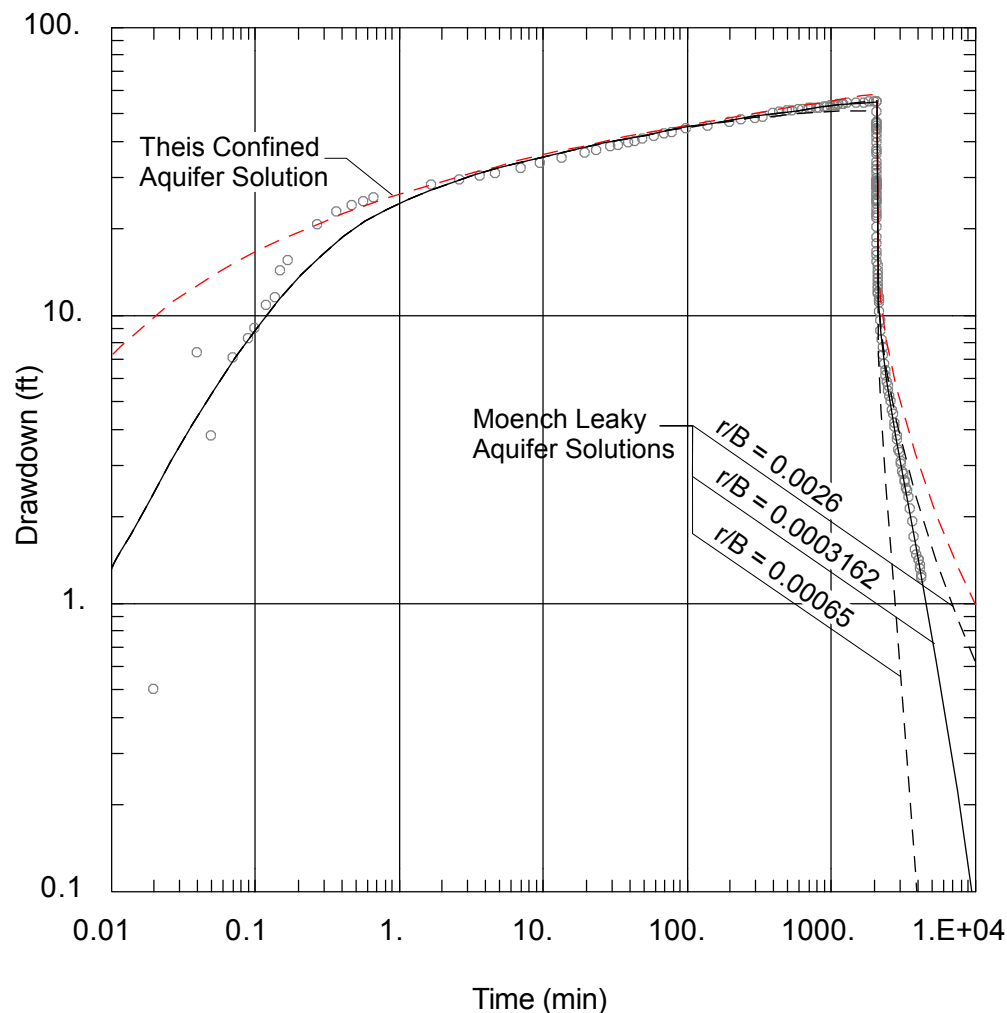
SSP-864

Project No.

3-7

Figure

Response to Pumping and Fitted Type Curve



Leaky Aquifer Solution and Model Parameters

Transmissivity (T) = 4341 ft²/day

Storage Coefficient (S) = 0.01381

Leakage (r/B) = 0.0013

B (Leakage Factor) = $(Tb'/K')^{1/2} = 1.0 \text{ ft}/0.0013 = 769 \text{ ft}$

b' = thickness of semi-confining zone(s)

K' = vertical hydraulic conductivity of semi-confining zone(s)

r = distance between pumping and observation wells

Horizontal Conductivity

$K = (T/b) = 4341 \text{ ft}^2/\text{day} / 110 \text{ ft} = 39.5 \text{ ft/day}$

Vertical Conductivity Derivation:

$r/B = 0.0013 = r / (Tb'/K')^{1/2}$

$Tb'/K' = (r/0.0013)^2$

$K' = Tb' / (r/0.0013)^2 = (4341 \text{ ft}^2/\text{day})(20 \text{ ft}) / (1.0 \text{ ft}/0.0013)^2$

= 0.15 ft/day for b' = 20 ft

= 0.37 ft/day for b' = 50 ft



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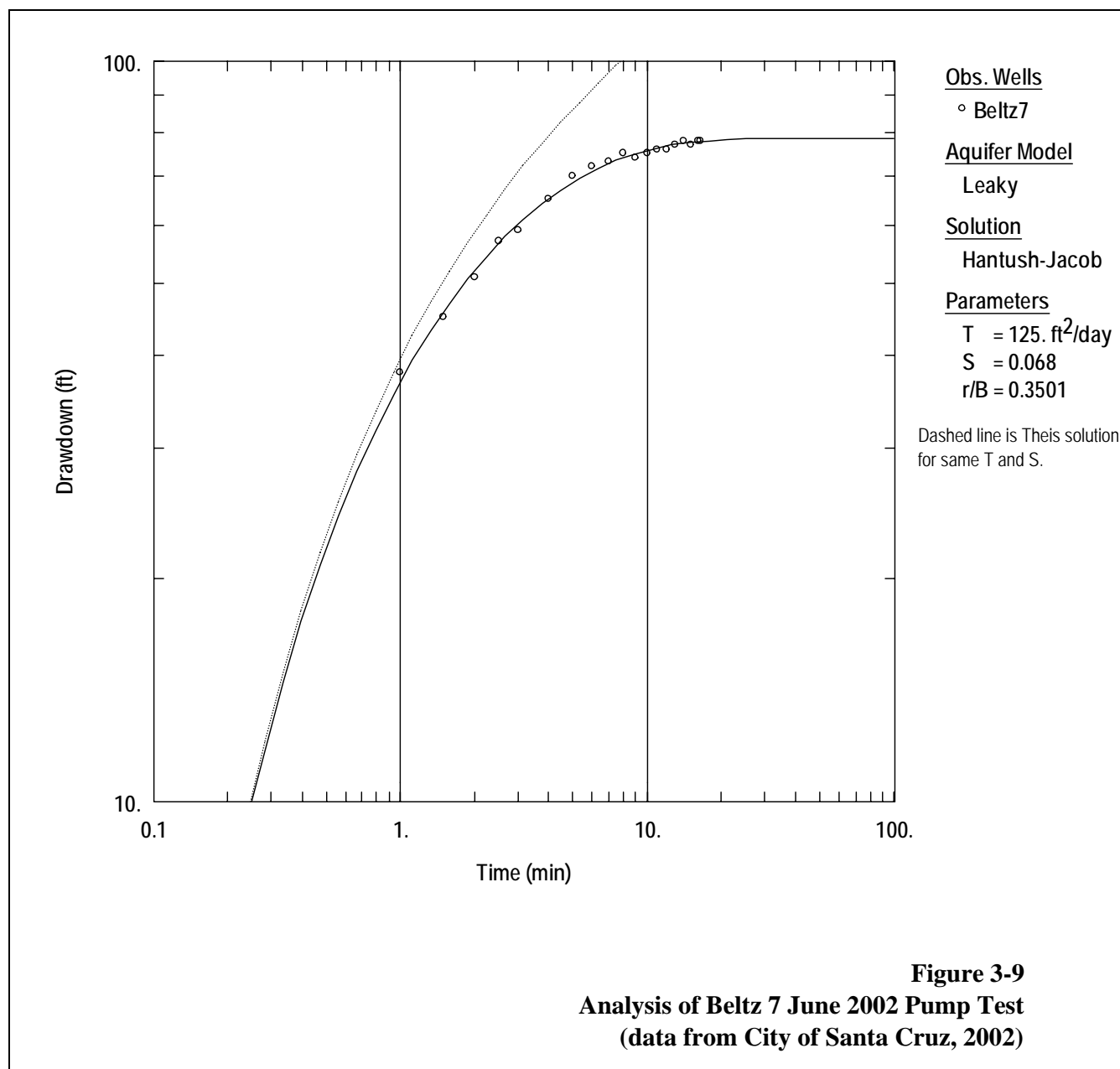
ANALYSIS OF BELTZ 9 RESPONSE TO MARCH 1998 BELTZ 9 AQUIFER TEST SOQUEL CREEK WATER DISTRICT

SSP-864

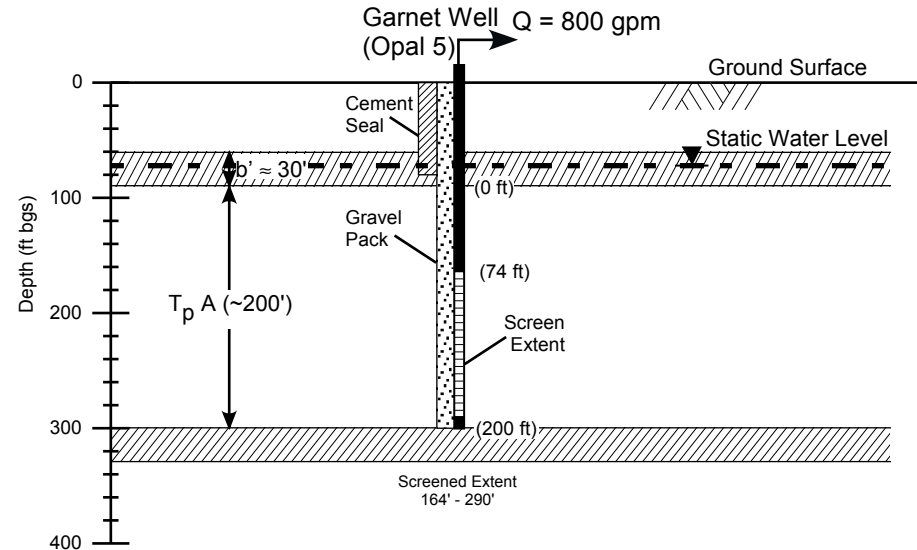
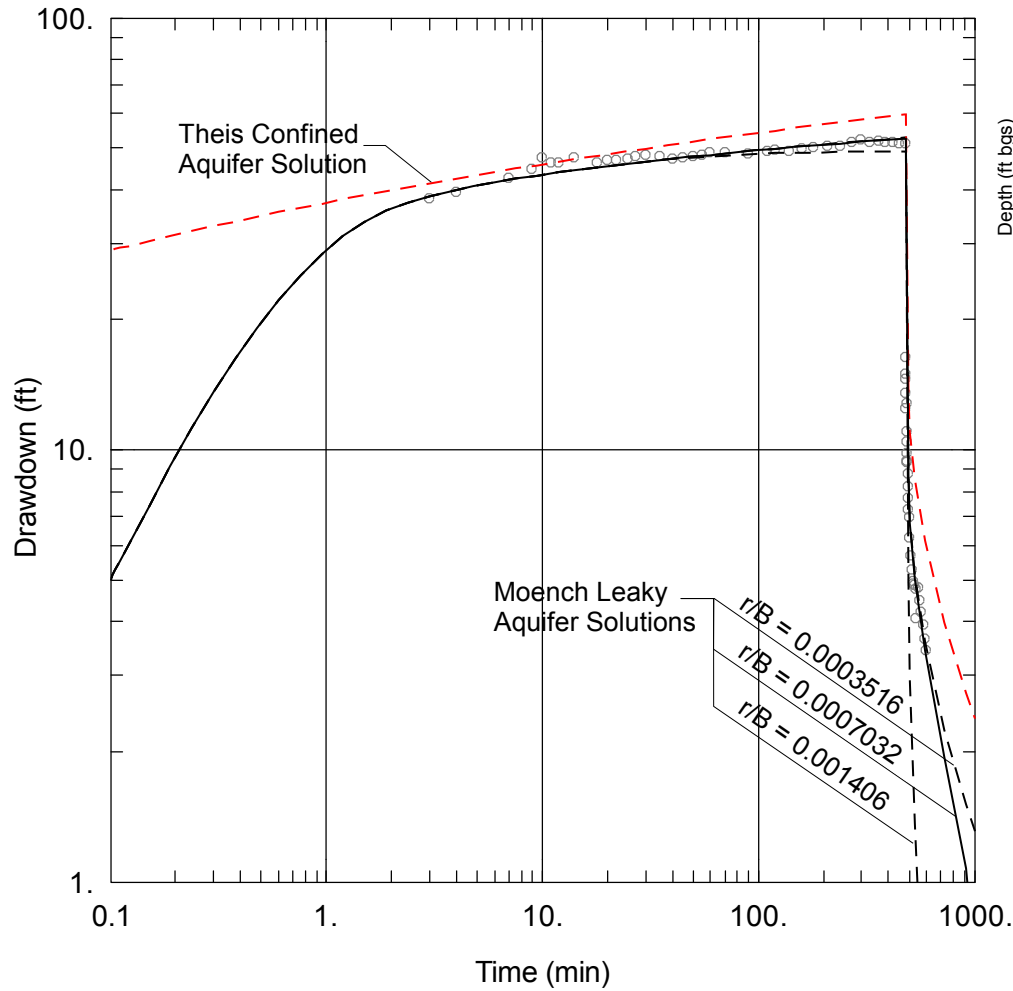
Project No.

3-8

Figure



Response to Pumping and Fitted Type Curve



Leaky Aquifer Solution and Model Parameters

Transmissivity (T) = 3349.8 ft²/day

Storage Coefficient (S) = 1.922 x 10⁻⁴

Leakage (r/B) = 7.032 x 10⁻⁴

B (Leakage Factor) = (Tb'/K')^{1/2} = 1.0 ft/7.032 x 10⁻⁴ = 1422 ft

b' = thickness of semi-confining zone(s)

K' = vertical hydraulic conductivity of semi-confining zone(s)

r = distance between pumping and observation wells

Horizontal Conductivity

K = (T/b) = 3349.8 ft²/day / 200 ft = 16.7 ft/day

Vertical Conductivity Derivation:

$r/B = 7.032 \times 10^{-4} = r / (Tb'/K')^{1/2}$

$Tb'/K' = (r/7.032 \times 10^{-4})^2$

$K' = Tb' / (r/7.032 \times 10^{-4})^2 = (3349.8 \text{ ft}^2/\text{day})(30 \text{ ft}) / (1.0 \text{ ft}/7.032 \times 10^{-4})^2$
 = 0.50 ft/day for b' = 30 ft
 = 0.10 ft/day for b' = 60 ft



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ANALYSIS OF GARNET WELL RESPONSE TO JULY 1995 GARNET WELL AQUIFER TEST SOQUEL CREEK WATER DISTRICT

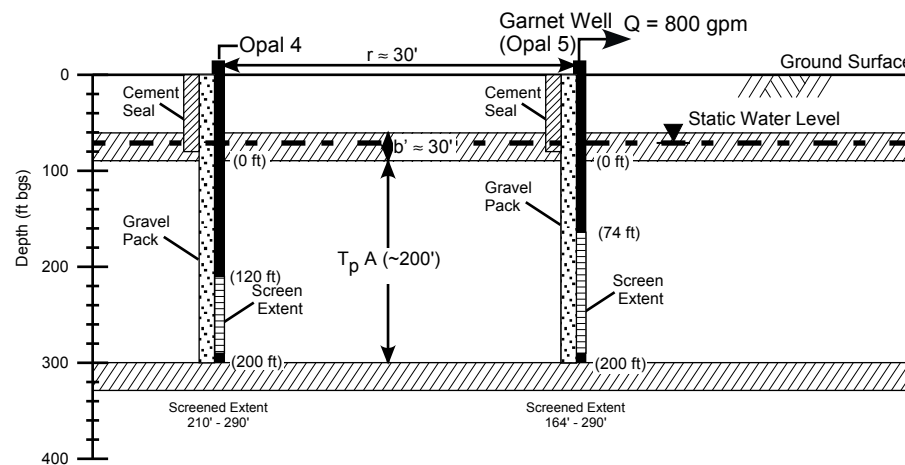
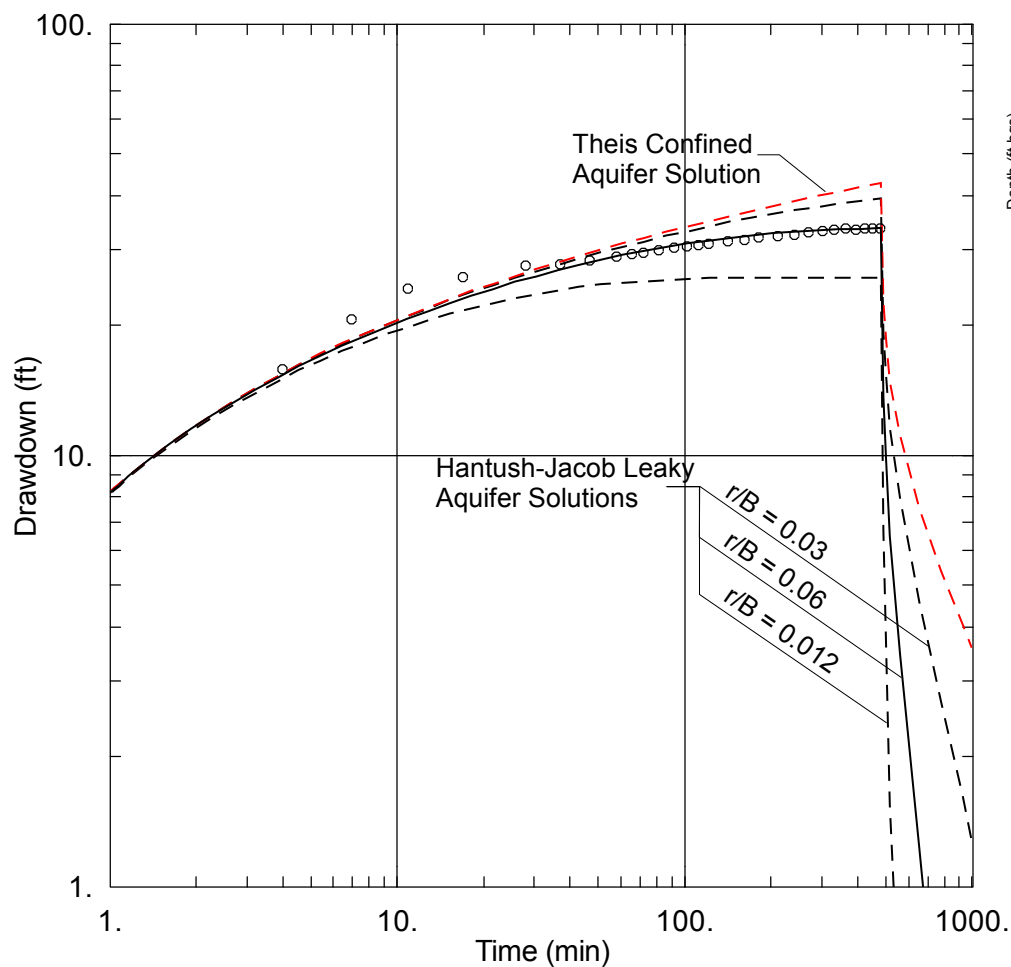
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Project No.

3-10

Figure

Response to Pumping and Fitted Type Curve



Leaky Aquifer Solution and Model Parameters

Transmissivity (T) = 3392.8 ft²/day

Storage Coefficient (S) = 1.638 x 10⁻³

Leakage (r/B) = 0.06

B (Leakage Factor) = (Tb'/K')^{1/2} = 30 ft/0.06 = 500 ft

b' = thickness of semi-confining zone(s)

K' = vertical hydraulic conductivity of semi-confining zone(s)

r = distance between pumping and observation wells

Horizontal Conductivity

K = (T/b) = 3392.8 ft²/day / 200 ft = 17.0 ft/day

Vertical Conductivity Derivation:

r/B = 0.06 = r/(Tb'/K')^{1/2}

Tb'/K' = (r/0.06)²

K' = Tb'/(r/0.06)² = (3392.8 ft²/day)(30 ft)/(30 ft/0.06)²

= 0.41 ft/day for b' = 30 ft

= 0.81 ft/day for b' = 60 ft



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ANALYSIS OF OPAL 4 RESPONSE TO JULY 1995 GARNET WELL AQUIFER TEST SOQUEL CREEK WATER DISTRICT

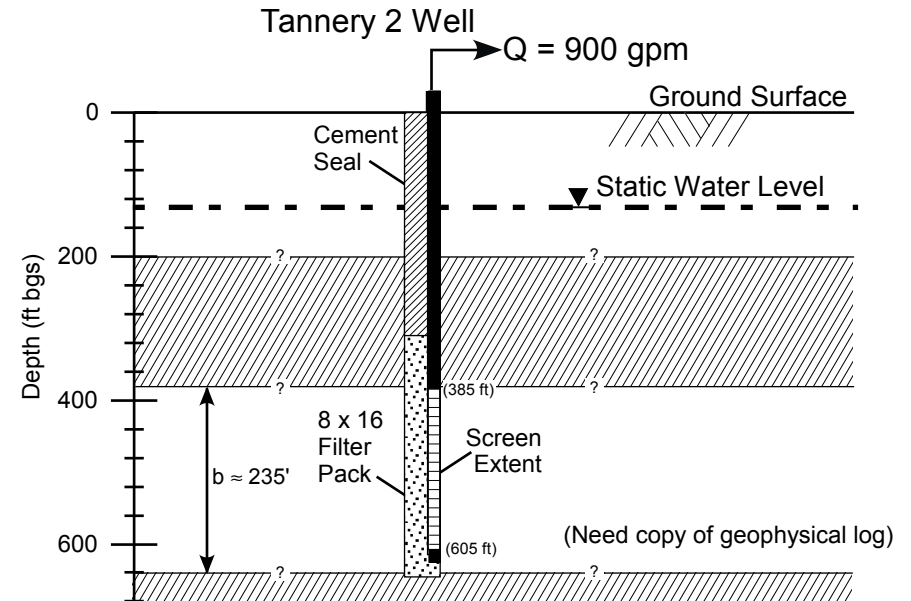
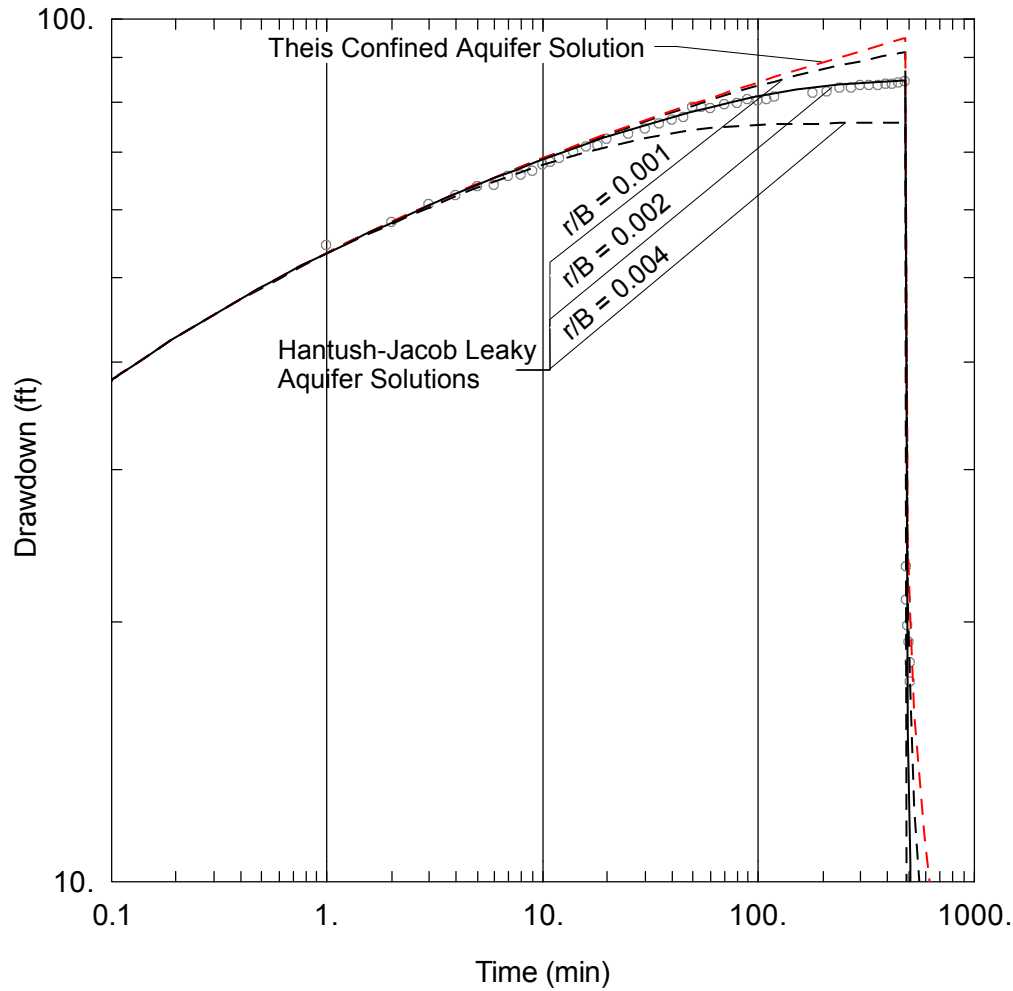
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Figure

Response to Pumping and Fitted Type Curve



Leaky Aquifer Solution and Model Parameters

Transmissivity (T) = 2056.8 ft²/day

Storage Coefficient (S) = 5.52 x 10⁻⁴

Leakage (r/B) = 0.002

B (Leakage Factor) = (Tb'/K')^{1/2} = 1.0 ft/0.002 = 500 ft

b' = thickness of semi-confining zone(s)

K' = vertical hydraulic conductivity of semi-confining zone(s)

r = distance between pumping and observation wells

Horizontal Conductivity

K = (T/b) = 2056.8 ft²/day / 235 ft = 8.75 ft/day

Vertical Conductivity Derivation:

$r/B = 0.002 = r / (Tb'/K')^{1/2}$

$Tb'/K' = (r/0.002)^2$

$K' = Tb' / (r/0.002)^2 = (3349.8 \text{ ft}^2/\text{day})(b' \text{ ft}) / (1.0 \text{ ft}/0.002)^2$

= 0.67 ft/day for b' = 50 ft

= 2.7 ft/day for b' = 200 ft



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ANALYSIS OF TANNERY 2 RESPONSE TO JULY 2001 TANNERY 2 PUMP TEST SOQUEL CREEK WATER DISTRICT

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Project No.

3-12

Figure

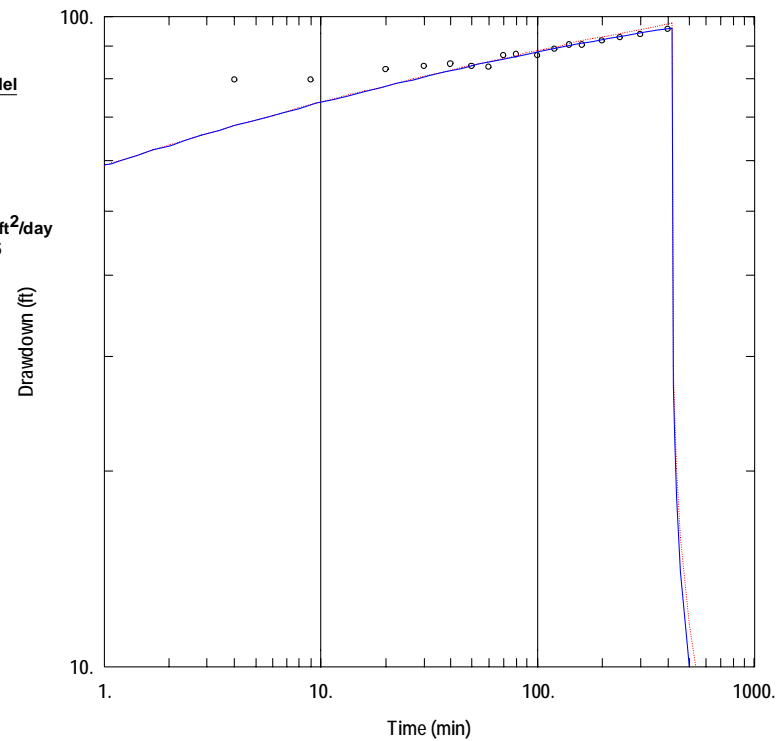
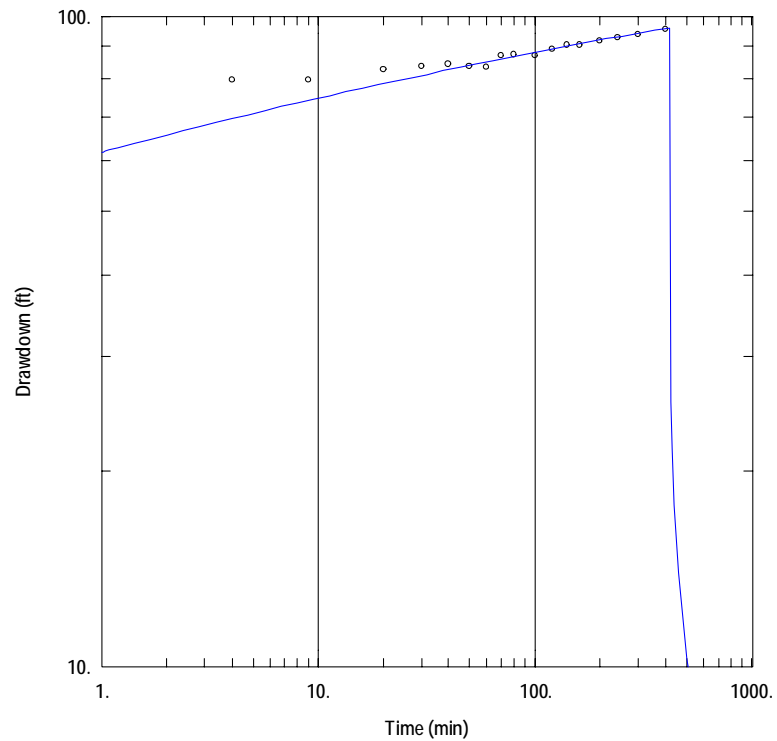


Figure 3-13
Analysis of May 1983 Estates Well Pump Test

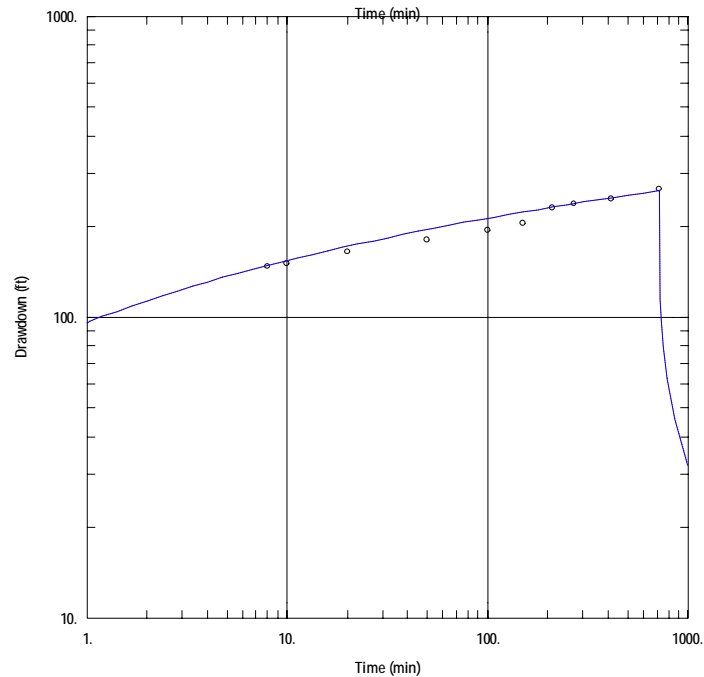
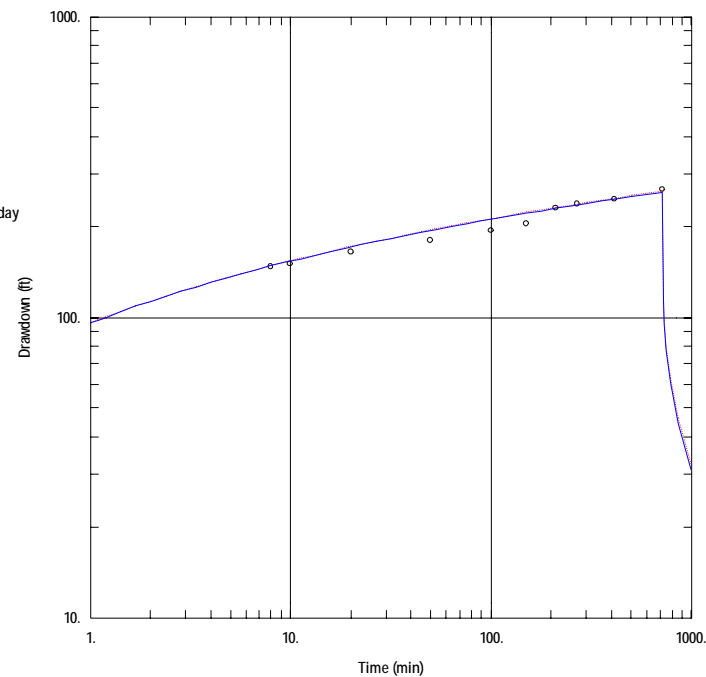
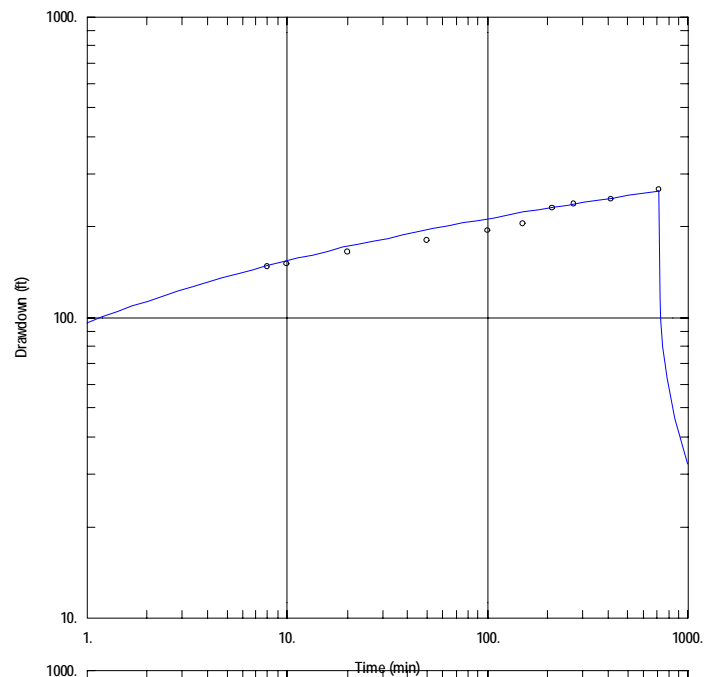


Figure 3-14
Analysis of May 1984
Madeline Well Pump Test

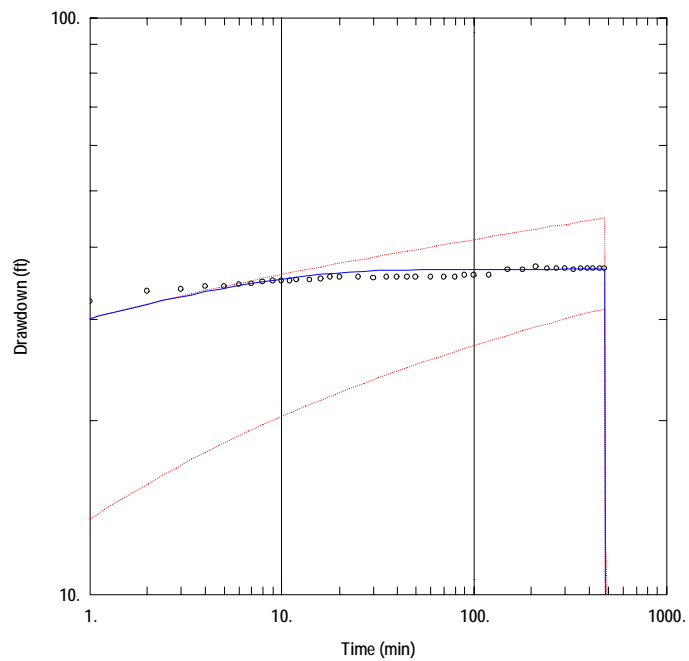
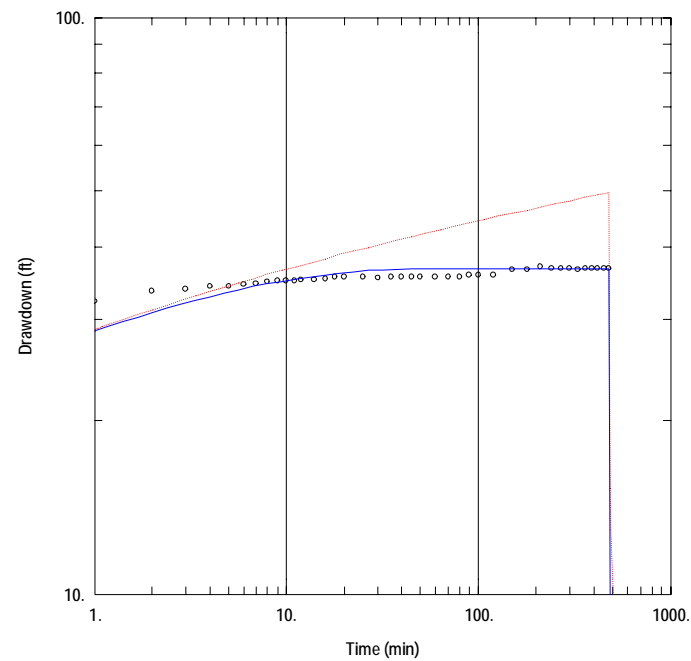
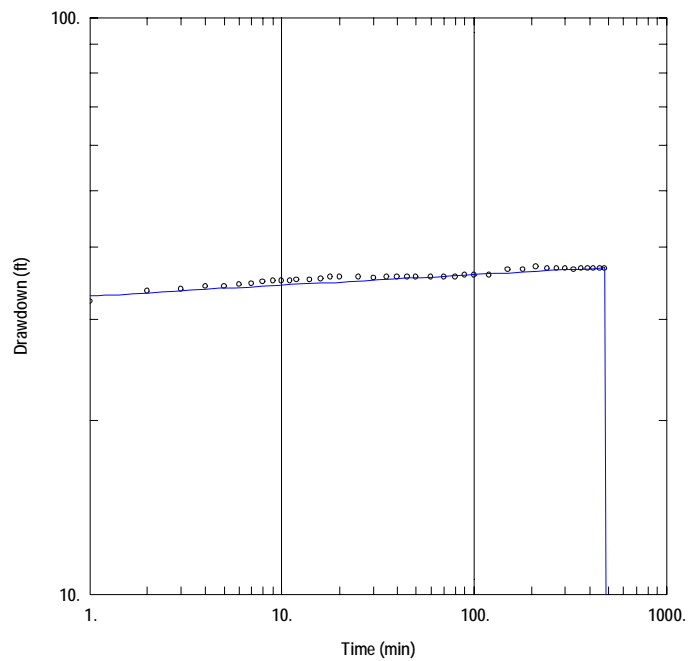


Figure 3-15
Analysis of May 1991
San Andreas Well Pump Test