April 8, 2024

Ms. Ashley Forbes, Deputy Director
Texas Commission on Environmental Quality
Attn: Underground Injection Control (UIC) Permits Section
Radioactive Materials Division
Mail Code: 233
12100 Park 35 Circle Building: F
Austin Texas 78753

RE: UR02880 –Renewal and Amendment Application

Dear Ms. Forbes,

URI, Inc. (URI), an enCore Energy Corporation subsidiary, is submitting the enclosed renewal and amendment application for Area Permit UR02880**.** This application has been prepared in accordance with Title 30 Texas Administrative Code (TAC) Chapters 305 and 331.

Pursuant to the application instructions, enclosed are the following:

- One original complete application and two full paper copies
- A flash drive with a copy of the cover letter, application, and plain-language summary in portable document format (PDF)
- Copy of the payment documentation

If you have any questions regarding this submittal, please do not hesitate to contact me at (361)-239-5449 or via email at pluthiger@encoreuranium.com.

Sincerely,

Peter Luthiger
Chief Operating Officer

xc: file

641 E. FM 1118, Kingsville, TX 78363
361.595.5731 info@encoreenergycorp.com www.encoreenergycorp.com

URI, Inc.
An enCore Energy Company

URI, Inc.
Rosita Project

Permit UR02880

Renewal Application

April 8, 2024

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Permit Number UR: **02880** (leave UR number blank for initial Area Permit application)

Texas Commission on Environmental Quality

Application for Area Permit to Conduct In-Situ Uranium Mining

I. General Information

A. Type of Application (check all that apply):

☐ Initial
☒ Renewal
☐ Major Amendment
☒ Minor Amendment
☐ Minor Modification
☐ Transfer
☐ Endorsement

B. Aquifer Exemption

☐ Application is made for initial designation of an exempted aquifer to include all portions of the production zone planned to contain in-situ uranium mining solutions.

☐ Application is pending Commission and EPA approval for initial designation of an exempted aquifer or amendment of an existing exempted aquifer to include all portions of the production zone planned to contain in-situ uranium mining solutions.

☒ Applicant plans to conduct in-situ uranium mining under an existing designated exempted aquifer. Mine name or site name associated with existing exempted aquifer: Rosita

☐ Application is made for amendment of an existing designated exempted aquifer for planned in-situ uranium mining. Mine name or site name associated with existing exempted aquifer: _____

Specification of existing or requested exempted aquifer:

Aquifer or Formation Name: Goliad

Depth feet above/below mean sea level: Refer to Figure VI-1 for specifics. Area A: 1,000 acres at 190' – 310' MSL, Area B: 70 acres at 190' – 310' MSL, Area C: 200 acres at 190' – 380' MSL

Area acres: ~ 1,270 acres. Figure VI-1 contains map depicting location of aquifer exemptions. Appendix X-1 contains approval letters for these aquifer exemptions from US Environmental Protection Agency.

C. Groundwater Conservation District (GCD) Information

GCD Name : DUVAL COUNTY GCD

Address: PO BOX 506

City, State and Zip: BENAVIDES, TX 78341

E-mail: DuvalGCD.GM@Gmail.com

Telephone Number: (361) 256-3589

Has the following information for an initial or expansion of Area Permit been provided to GCD in accordance with 30 TAC §331.223?

N/A as this application is not the initial or an expansion of Area Permit

1. Information regarding wells not recorded in the public record including but not limited to depth, completion method, completion interval, water quality information, lift method, and geophysical log in accordance with 30 TAC §331.223(a)(1).

   ☐ Yes ☐ No

2. A map with locations of all wells that are recorded in the public record and are inside the proposed permit area within one-quarter mile of the proposed permit area in accordance with 30 TAC §331.223(a)(2).

   ☐Yes ☐ No

3. Pre-mining water quality information collected from wells registered in accordance with 30 TAC §331.223(a)(3).

   ☐ Yes ☐ No

4. Amount of water produced each month from each registered well in accordance with 30 TAC §331.223(a)(4).

   ☐ Yes ☐ No

5. Record of strata in accordance with 30 TAC §331.223(a)(5).

   ☐ Yes ☐ No

D. Operator/Applicant (Individual, Corporation or Other Legal Entity Name)

Name: URI, Inc.

Address (Permanent Mailing Address): 101 N. Shoreline Drive, Suite 560

City, State and Zip: Corpus Christi, TX 78401

Telephone Number: 361-239-5449

Mine Name: Rosita

County: Duval

Mine Mailing Address (if available): _____

If the application is submitted on behalf of a corporation or other business organization with filing requirements, please identify the Charter Filing Number as recorded with the Office of the Secretary of State for Texas.

Charter Filing Number 7495706

If the application is submitted by a business organization that is required to designate and maintain a registered agent, the applicant must provide the name and address of the registered agent. Agent: CT CORPORATION SYSTEM

Address (Permanent Mailing Address): 1999 BRYAN ST., STE. 900

City, State and Zip: DALLAS, TX 75201

Telephone Number: 214-979-1172

E. Indicate the ownership status of the facility:

Private:

☒ Corporation
☐ Partnership
☐ Proprietorship
☐ Nonprofit organization

Public:

☐ Military
☐ State
☐ Regional
☐ County
☐ Municipal
☐ Federal
Other (specify):_____

F. List those persons or firms authorized to act for the applicant during the processing of the permit application. Indicate the capacity in which each person may represent the applicant (engineering, geology, legal, etc.). The person listed first will be the primary recipient of correspondence regarding this application. Include the complete mailing addresses, phone numbers and e-mail addresses.
Mr. Derrell Ezell
Manager, Permitting And Regulatory Affairs
Encore Energy Corp.
101 N. Shoreline Blvd, Ste. 560 Corpus Christi, TX 78401
361-239-5449
dezell@encoreuranium.com

Geology
Mr. Adrian Garcia, P.G.
Manager Wellfield Development
Encore Energy Corp.
101 N. Shoreline Blvd., Ste 560 Corpus Christi, TX, 78401

361-239-5449
agarcia@encoreuranium.com

Engineering
Mr. Dain McCoig P.E.
Director Technical Services
Encore Energy Corp.
101 N. Shoreline Blvd, Ste. 560 Corpus Christi, TX 78401
361-239-5449
dmccoig@encoreuranium.com

G. For new, renewal, and major amendment applications, specify the individual who will be responsible for causing notice to be published in the newspaper. Include the complete mailing address, telephone number, fax number and e-mail address.

Mr. Derrell Ezell
Manager, Permitting And Regulatory Affairs
Encore Energy Corp.
101 N. Shoreline Blvd, Ste. 560 Corpus Christi, TX 78401
(t) 361-239-5449
(f) 361-223-5086
dezell@encoreuranium.com

H. For amendment, modification, transfer or endorsement applications, briefly describe all requested changes to the permit and to the application contents and the reasons for the changes.

URI is requesting renewal of existing Area Permit UR02880 to allow for continued uranium production and subsequent restoration and well closure following production. This renewal includes a request to update the existing permit range table in order to include all pre-mining/baseline data from production zone wells which is required by 30 TAC §305.49(10). This request is discussed within Section XI. URI is also requesting a change to control parameters for detection of excursions in production and nonproduction wells. This improvement to excursion prevention is presented within Section VIII.

I. Applicant Compliance History

The TCEQ will utilize compliance history when making decisions regarding the issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit. Violations included in a criminal conviction are considered when evaluating and classifying the site's compliance history.

For the five years preceding the filing date of this application, please submit a complete listing of all criminal convictions (i.e., State or Federal) of the operator/applicant in which a violation of environmental law was an element of the crime. [30 TAC §60.2(d)(1)(E) and §60.2(d)(2)(F)] If there have been no such convictions then the application should state the following.

"In the five years preceding the filing of this application, the (operator/applicant) URI, Inc. has not been convicted of a State or Federal crime in which a violation of environmental law was an element of the crime."

J. TCEQ Core Data Form

The TCEQ requires that a Core Data Form[1] (Form 10400) be submitted with all new and renewal applications. Submit the form as Attachment "A". For all other applications, if a Regulated Entity Number (RN) and Customer Reference Number (CN) has been issued by the TCEQ and core data information has not changed, a Core Data Form is not required. For more information regarding the Core Data Form, call (512) 239-5175 or go to the Core Data Form Instructions[2] on the TCEQ website.

RN102380805

CN600604417

See Attachment A

K. Public Interest Demonstration

Section 27.051 of the Texas Water Code (TWC) stipulates certain conditions that must exist for the Commission to grant an application and issue a permit. For all new applications, permit renewals, and major and minor amendments, submit as "Attachment B" information addressing the following considerations:

See Attachment B

1. That the use or installation of the injection well is in the public interest. [TWC §27.051(a)(1)]
2. That no existing rights, including, but not limited to, mineral rights, will be impaired. [TWC §27.051(a)(2)]
3. That, with proper safeguards, both ground and surface fresh water can be adequately protected from pollution. [TWC §27.051(a)(3)]
4. That the applicant has made a satisfactory showing of financial responsibility if required by Section 27.073 of this code. [TWC §27.051(a)(4)]
5. That the compliance history of the applicant and related entities is acceptable. [TWC §27.051(d)(1)]
6. That there is no practical, economic, and feasible alternative to an injection well reasonably available. [TWC §27.051(d)(2)]

L. For applications for new permits, renewals, and major amendments, a copy of the administratively complete application must be made available at a public place in the county where the facility is located or proposed to be located for review and copying by the public. Identify the public place in the county (e.g., public library, county courthouse, city hall), including the address, where the application will be located. [30 TAC §39.405(g)].

DUVAL COUNTY COURTHOUSE, 400 E. GRAVIS, SAN DIEGO, TX 78384

[1] https://www.tceq.texas.gov/downloads/permitting/central-registry-docs/10400-core-data-form.docx
[2] https://www.tceq.texas.gov/downloads/permitting/central-registry-docs/10400-core-data-form-instructions.pdf

M. Facility Background Information [30 TAC §305.45(a)(7)]

Indicate (by listing the permit number(s) and governing agency(ies) in the columns below) all existing, pending, interim status, or permit-by-rule State and/or Federal permits, licenses or construction approvals which pertain to pollution control or industrial solid waste management, radioactive materials, or other activities conducted by your plant or at your location, or existing at a proposed plant or location. Complete each blank by entering the **permit number**, the **date of application**, or **none**.

Existing Permits

Relevant Program and/or Law	Permit Number or License	Government Agency*
Hazardous Waste Management Program under the Texas Solid Waste Disposal Act		
UIC Program under the Texas Injection Well Act (Class I, II, III, IV, V and VI Wells)	WDW-250 UR02880 UR02880PAA1 UR02880PAA2 UR02880PAA3 UR02880PAA4 UR02880PAA5	TCEQ
Texas Pollutant Discharge Elimination System Program under the Clean Water Act and Waste Discharge Program under the Texas Water Code, Chapter 26		
Prevention of Significant Deterioration Program under the Federal Clean Air Act (FCAA)		
Nonattainment Program under the FCAA		
National Emission Standards for Hazardous Air Pollutants preconstruction approval under the FCAA		
Ocean dumping permits under the Marine Protection Research and Sanctuaries Act		
Dredge or fill permits under the Federal Clean Water Act		
Licenses under the Texas Radiation Control Act	R03653 L06158	TCEQ DSHS
Subsurface Area Drip Dispersal System permits under Texas Water Code, Chapter 32		
Texas Solid Waste Disposal Act		
Texas Uranium Surface Mining and Reclamation Act		
Texas Surface Coal Mining and Reclamation Act		
Other relevant environmental permits/licenses	122	RRC

*Use the following acronyms for each agency as shown below:

TCEQ - Texas Commission on Environmental Quality
RRC - Railroad Commission of Texas
DSHS - Texas Department of State Health Services
TDA - Texas Department of Agriculture
EPA - U.S. Environmental Protection Agency
CORPS - U.S. Army Corps of Engineers

N. Location

1. Give a description of the location of the facility site with respect to known or easily identifiable landmarks. Detail the access routes from the nearest U.S. or State Highway to the facility.

   The Rosita Project is located about 11 miles northwest of San Diego, Texas and about 1 mile northeast of the intersection of State Highway 44 and FM 3196 off County Road 330 and County Road 333 in Duval County.

2. Is the facility located on Indian lands?

   ☐ Yes ☒ No

   If yes, do not complete this application. Contact EPA Region 6 for application and permitting requirements for injection wells located on Indian lands. [40 CFR §147.2205(a)]

3. Is the facility located within the Coastal Management Program boundary? Refer to Texas Coastal Management Boundary Map[3] for boundary.

   ☐ Yes ☒ No

   For questions regarding the Coastal Management Program, please call (800) 998-4456 (within Texas) or (512) 475-0773. [30 TAC §281.41]

4. Legal Description of Facility

   Submit as "Attachment C" a legal description(s) of the tract or tracts of land upon which the in-situ uranium mining operations referred to in this permit application occur or will occur. Although a legal description is required, a metes and bounds description is not necessary for urban sites with appropriate "lot" description(s).

   See Attachment C

5. Submit as "Attachment D" a drawn-to-scale topographic map of the facility and the tract or tracts of land upon which the mining operations occur or will occur as described in Attachment C and the area extending at least one mile beyond the tract boundaries. The map must be prepared by a licensed professional engineer or a registered surveyor. The scale should be adequate to depict the following features: [30 TAC §305.45(a)(6)(A), (C) & (E)]

   See Attachment D

[3]

a. the boundary of the tract or tracts of land upon which the in-situ mining operations occur or will occur as described in Attachment C; areal size of the tract or tracts of land in acres should be given;

b. if different, the approximate lease boundaries of the facility and within these boundaries, the location of all injection wells; each depicted area should be labeled to identify the well(s) and the well status (active, inactive, or proposed); areal size in acres should be given;

c. the proposed Area Permit and/or PAA boundaries, with acreage indicated. (The Area Permit boundary may be defined by the operator to coincide with or be within the lease ownership boundaries.);

d. the location of the proposed production and disposal facilities; and

e. all wells (water, oil, gas, disposal, etc.), springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant in the Area of Review, within one-quarter mile past the proposed Area Permit boundary, and the purpose for which each water well is used (e.g., domestic, livestock, agricultural, industrial, etc.).

O. Plain-Language Summary

See Attachment E

The TCEQ implemented new rule requirements in 30 TAC Chapter 39 that impact all permit applications subject to the Chapter 39 public notice requirements that are declared administratively complete after May 1, 2022. One of the new rules, 30 TAC §39.405(k), requires the applicant to provide a plain-language summary in English, and in an alternative language if required in accordance with 30 TAC §39.426. The plain-language summaries for all applications will be posted on the TCEQ website.

For new, renewal and major amendment permit applications submit, as “Attachment E”, a Plain-Language Summary of the application that is no more than two pages long. The summary should be entitled “Plain-Language Summary” and should be prepared in simple, concise, easy-to-understand terminology. The summary must include the following information. [30 TAC §39.405(k)]

1. the applicant/operator name;
2. the type of application;
3. the type of injectate;
4. the type of facility;
5. the facility name and location;
6. the function of the proposed plant or facility;
7. the expected output of the proposed plant or facility;
8. the expected pollutants that may be emitted or discharged by the proposed plant or facility which require an injection well permit; and
9. how the applicant will control those pollutants, so that the proposed plant will not have an adverse impact on human health or the environment.

If the applicant is required to provide notice in an alternative language in accordance with 30 TAC §39.426, provide a copy of the plain-language summary in English and in the alternative language.

In addition, provide a copy of the plain-language summaries in pdf clearly labeled on a flash drive.

P. Public Involvement Plan

PIP is Not Applicable

TCEQ's Public Participation Plan provides guidance for using preliminary screening and public involvement plans to ensure meaningful public outreach. Applicants who are applying for a new injection well permit are required to complete a Public Involvement Plan. A Public Involvement Plan is intended to provide an applicant and the agency with information to determine if additional public outreach is necessary or beneficial. Applicants may complete a Public Involvement Plan, even if not required, to learn about the communities in which their facilities are located or where their activities may have an impact.

Submit a Public Involvement Plan, as "Attachment F", using the Public Involvement Plan Form[4] (TCEQ-20960) and Instructions for Completing a Public Involvement Plan Form for Permit and Registration Applications[5] (TCEQ-20960).

For more information regarding Title VI compliance at TCEQ[6] or the Public Participation Plan[7] go on the TCEQ website.

[4] https://www.tceq.texas.gov/downloads/agency/decisions/hearings/environmental-equity/pip-form-tceq-20960.pdf

[5] https://www.tceq.texas.gov/downloads/agency/decisions/hearings/environmental-equity/instructions-for-pip-form-tceq-20960.pdf

[6] https://www.tceq.texas.gov/agency/decisions/participation/title-vi-compliance

[7] https://www.tceq.texas.gov/downloads/agency/decisions/participation/public-participation-plan-gi-607.pdf

Signature Page

I (Signatory Name) **Peter Luthiger (Title) Chief Operating Officer with (Company) URI, Inc.** certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature____________________ Date 8 Apr 24

See 30 TAC §305.44 for signatory authority.

To be Completed by the Applicant if Applicant Is a Corporation and the Responsible Corporate Officer Is Assigning or Delegating Signature Authority to a Manager in Accordance with 30 TA §305.44(a)(1)

I (Signatory Name) ____________________ (Title) ____________________ (Company) ____________________ hereby designate (Agent Name and/or Title) ________________ as my agent and hereby authorize said agent to sign any application, submit additional information as may be requested by the Commission, and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my agent in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Signature____________________ Date ____________________

(Note: Application Must Bear Signature and Seal of Notary Public)

SUBSCRIBED AND SWORN to before me by the said Peter Luthiger

on this 8th day, of the month of April year of 2024

My commission expires on the 28th day, month of September, year of 2025

Notary Public

Signature Page

I (Signatory Name) **Peter Luthiger (Title) Chief Operating Officer with (Company) URI, Inc.** certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature ______________________ Date 20 JUN 24

See 30 TAC §305.44 for signatory authority.

To be Completed by the Applicant if Applicant Is a Corporation and the Responsible Corporate Officer Is Assigning or Delegating Signature Authority to a Manager in Accordance with 30 TA §305.44(a)(1)

I (Signatory Name) ______________________ (Title) ______________________ (Company) ______________________ hereby designate (Agent Name and/or Title) ______________ as my agent and hereby authorize said agent to sign any application, submit additional information as may be requested by the Commission, and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my agent in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

Signature ______________________ Date ______________________

(Note: Application Must Bear Signature and Seal of Notary Public)

SUBSCRIBED AND SWORN to before me by the said Peter Luthiger

on this 20th day, ________ month of June year of 2024

My commission expires on the 28th day, month of September, year of 2025

HEATHER KEYLICH NOTARY PUBLIC STATE OF TEXAS ID 13336919-3 EXP. 09-28-2025

____
Notary Public

II. Information Required To Provide Notice

Submit as "Attachment F" a mailing list of landowners identified under Section II.A. and a mailing list of mineral owners identified under Section II.B. In accordance with 30 TAC §39.405(b), please also submit this mailing list electronically, in Microsoft Word. The electronic list must contain only the name, mailing address, city, state, and zip code with no reference to the lot number or lot location. The list should contain up to 30 names, addresses, etc. (10 per column) per page. Each name and address must be typed in the format that meets the United States Postal Service (USPS) requirements for machine readability. The letters in the name and address must be capitalized, contain no punctuation, and the two-character abbreviation must be used for the state. Contact the USPS for further instructions on formatting addresses for machine readability. The applicant may elect to submit pre-printed mailing labels of this mailing list with the application. If you wish to provide the list on printed labels, please use sheets of labels that have 30 labels to a page (10 labels per column). Please provide **four complete sets of labels** of the landowners and mineral rights owners list.

See Attachment F for Information Required To Provide Notice

A. Provide a complete mailing address for all persons who own the property on which the existing or proposed facility is or will be located, all persons who own tracts of land adjacent to the property on which the existing or proposed facility is or will be located and other nearby landowners who might consider themselves affected by the activities described in the application. Identify the tracts of land and landowners on a map and provide the general character of the areas adjacent to the facility, including public roads, towns and the nature of development of adjacent lands (e.g., residential, commercial, agricultural, recreational, industrial or undeveloped) on the map. The property boundary of the tract or tracts of land on which the existing or proposed facility is or will be located must be consistent with the legal description of the tract or tracts of land provided in Section I.N.5, Attachment C, of the application. (Refer to Figure 1, Example Application Map) [30 TAC §281.5(6), §305.45(a)(6)(B) & (D) and §39.651(c)(4)(A) & (B)]

B. Provide a complete mailing address for all persons who own mineral rights underlying the existing or proposed facility and underlying the tracts of land adjacent to the property on which the existing or proposed facility is or will be located as required by 30 TAC §39.651(c)(4)(C) & (D). Identify the mineral rights owners on the map provided above in Section II.A.

C. If the facility is located adjacent to navigable territorial waters of the state, or the State of Texas is an adjacent landowner and/or owner of mineral rights underlying the facility or underlying adjacent tracts, your application may affect lands dedicated to the permanent school fund. A determination whether lands dedicated to the permanent school fund will be affected by TCEQ formal action on the application will be made by the Texas General Land Office (TXGLO).

   In order for the TXGLO to make a determination, the TCEQ will provide notice to the TXGLO regarding the application. Provide the following information for inclusion in the notice to the TXGLO:

   1. state the location of the permanent school fund land, mineral rights, or waters of the state that may be affected; and

   2. describe any foreseeable impact or effect of the proposed permitted action on permanent school fund land.

   A formal action or ruling by the Commission on an application affecting permanent school fund land that is made without the notice required by §39.651(c)(3) is voidable by the School Land Board as to any permanent school fund lands affected by the action or ruling. [TWC §5.115(c) and (g)]

D. Provide the name and mailing address of the mayor and health authority of the municipality in whose territorial limits or extraterritorial jurisdiction the facility is or will be located, and also the county judge and the health authority of the county in which the facility is located [30 TAC §39.651(c)(5)].

The facility is not within any territorial limits or extraterritorial jurisdiction.

Mayor: N/A

Municipality Health Authority: N/A

County Judge:
Honorable Judge Arnoldo Cantu
400 E. Gravis St
PO Box 189
San Diego, TX 78384

County Health Authority:
Texas Department of State Health Services
Health Region 11
601 W Sesame Dr
Harlingen, TX 78550

E. Bilingual Notice Instructions. For new, renewal, and major amendment permit applications, public notice in an alternate language may be required. If an elementary school or middle school nearest to the facility offers a bilingual program, notice may be required to be published in an alternative language. The Texas Education Code, upon which the TCEQ alternative language notice requirements are based, requires a bilingual education program for an entire school district should the requisite alternative language speaking student population exist. However, there may not be any bilingual-speaking students at a particular school within a district which is required to offer the bilingual education program. For this reason, the requirement to publish notice in an alternative language is triggered if the nearest elementary or middle school, as part of a larger school district, is required to make a bilingual education program available to qualifying students and either the school has students enrolled at such a program on-site or has students who attend such a program at another location to satisfy the school's obligation to provide such a program. [30 TAC §39.426]

Bilingual notice confirmation for this application

1. Is the school district of the elementary or middle school nearest to the facility required by the Texas Education Code to have a bilingual program?

   ☐ Yes ☒ No

   If **no**, alternative language notice publication not required.

2. **If yes** to question 1, are students enrolled in a bilingual education program at either the elementary school or the middle school nearest to the facility?

   ☐ Yes ☐ No

   If yes to questions 1 and 2, alternative language publication is required; If **no** to question 2, then consider the next question.

3. **If yes** to question 1, are there students enrolled at either the elementary school or the middle school nearest to the facility who attend a bilingual education program at another location?

   ☐ Yes ☐ No

   If yes to questions 1 and 3, alternative language publication is required; If **no** to question 3, then consider the next question.

4. **If yes** to question 1, has the elementary school or the middle school nearest to the facility been granted an exception from this requirement, as available under 19 TAC §89.1207(a)?

   ☐ Yes ☐ No

   If yes to questions 1 and 4, alternative language publication is required; **if no** to question 4, alternative language notice publication not required.

5. Provide the alternative language for which the bilingual education program(s) is provided or which an exception has been approved? N/A

III. Financial Assurance

Submit as "Attachment G", a description of the manner in which compliance with the financial assurance requirements in 30 TAC Chapter 37, Subchapter Q and Subchapter T will be attained. [30 TAC §305.49(a)(3)]

See Attachment G for Financial Assurance Information

A. Financial Assurance Requirements [30 TAC §§331.142-144]

1. Financial Assurance for Well Closure

   The financial assurance requirements of 30 TAC Chapter 37, Subchapter Q, require an owner or operator to submit an originally signed financial assurance mechanism for well closure to the TCEQ Financial Assurance Unit at least 60 days prior to commencement of drilling operations. All financial assurance mechanisms shall be in effect before commencement of drilling operations. For converted wells and other previously constructed wells, financial assurance shall be provided at least 30 days prior to permit issuance and be in effect upon permit issuance. [§37.7021(c)]

   The owner or operator must secure and maintain financial assurance for plugging and abandonment of each Class III injection well, production well, recovery well, baseline well and monitoring well in the amount of the closure cost estimate in current dollars developed in accordance with 30 TAC §§331.109 and 331.143 using the mechanisms listed in 30 TAC §37.7021(b). For new wells, the cost estimate is included in the Production Area Authorization applications. For converted wells and other previously constructed wells, the cost estimate is included in Section V.E.2 of the Area Permit application.

2. Financial Assurance for Groundwater Restoration

   The financial assurance requirements of 30 TAC Chapter 37, Subchapter T, require an owner or operator to submit an originally signed financial assurance mechanism for groundwater restoration at least 60 days prior to the initial receipt, production or possession of radioactive substances or injection operations in a production area. [30 TAC §37.9040]

   The owner or operator must secure and maintain financial assurance for groundwater restoration in the amount of the groundwater restoration cost estimate in current dollars developed in accordance with 30 TAC §§331.109 and 331.143 and included in the Production Area Authorization applications using the mechanisms listed in 30 TAC §37.9050, with the exceptions of sections (g) and (h).

Section IV to XI.

Please Refer to the specific section within the application package for the following Sections

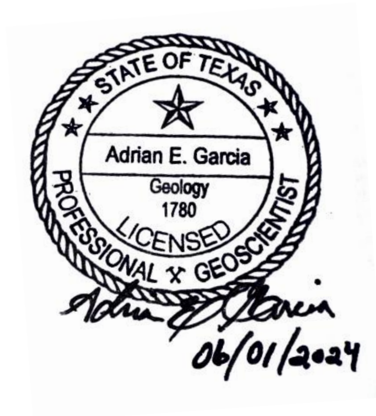
IV. **Geology and Hydrogeology**
V. **Well Construction and Facility Operation**
VI. **Initial Mine Plan**
VII. **Area Of Review**
VIII. **Excursion Prevention**
IX. **Restoration**
X. **Aquifer Exemption**
XI. **Permit Range Table**

II. Information Required to Provide Notice

Information required to provide notice is provided in Attachment F.

III. Financial Assurance

Financial Assurance information is provided in Attachment G.



URI, Inc.

Texas Geosciences Firm Registration No. 50665

This seal applies to Section IV of this application. This section is released for the purpose of review by the Texas Commission on Environmental Quality under the authority of Adrian E, Garcia, Texas P.G. 1780 on the date indicated on the seal. It is not to be used for construction or bidding purposes.

Revised June 2024

IV. Geology and Hydrogeology

A. Regional Geology and Hydrogeology

1. Regional Geology

The regional geology of Duval County is documented in the Texas Water Development Board Report #181; the salient information combined with general geological information from URI, Inc.'s initial application is restated in this Section. Duval County lies wholly within the Sand Plain Subprovince of the Texas Gulf Coastal Plain. The entire county is situated on the northeast flank of the southeastern plunging synclinal Rio Grande Embayment. Surficial geology consists of either late Tertiary, early Quaternary sediments deposited by the Rio Grande fluvio-deltaic system, or Holocene alluvial and aeolian deposits. Topography, structure and stratigraphy of Duval Country are discussed in greater detail below.

a. Topography

The topography of Duval County is typical of the south Texas Gulf Coastal Plain. Relief is generally 40 feet or less and surface gradients average less than 40 feet per mile. Drainage gradients (20 feet per mile plus) are somewhat higher than normal coastal plain. The drainage within Duval County is intermittent, which results in sediment clogged streams with gradients associated with semi-arid climates.

Because of this climate, extensive caliche development can be found throughout the county. Caliche forms a cap rock armor which supports distinctive northeast-southwest trending escarpments found in northwest Duval County.

Duval County lies between the Nueces River and Rio Grande drainage systems. Streams trend southwest and empty directly into the Texas Gulf. This feature combined with the low rainfall and high evaporation results in poorly defined drainage systems and in some cases, closed drainage basins.

b. Structure

Formations outcropping or underlying Duval County strike approximately N 25 E and dip to the southeast at 15 to 80 feet per mile (Figures IV-1, IV-2, IV-3, and IV-4). In localized areas dips may be reversed and/or increased to 180 feet per mile because of faulting or deformation proximal to salt dome development.

The county can be typed as a broad southeastern dipping monocline broken locally by one fault zone and an area of salt dome development. The fault zone trends northeast-to- southwest in the northwestern part of the county. Relief on the echelon down-to-the-coast faults is variable, but has sufficient closure for oil and gas entrapment. Local antithetic up-the-coast faults form bounding faults for horsts and grabens in the overall fault trend.

A second structural feature is the Palangana Salt Dome which is approximately six miles north of Benavides. Around the dome, structural attitude of sedimentary sequences are altered or reversed to the regional trend (Figures IV-2. IV-3, and IV-4). On the dome, the Oakville and Catahoula units are absent; the influence of the dome has impacted the Goliad sediments.

The Piedras Pintas Salt Dome is not as large, nor does it have as much impact on local structure as the Palangana Dome. Intrusion of the Piedras Pintas Dome has altered the Oakville and Catahoula units, but has not altered the Goliad sediments significantly.

c. Stratigraphy

1. Alluvium - Qal; Holocene

Alluvial sequences in Duval County are found in and adjacent to southeastward trending intermittent streams. Spatially these deposits vary from a few tens of feet to 1.5 miles across and extend downstream from the point of integrated channel development until the channel transects strata of sufficient integrity that broad flood plain development is precluded. This point may be anywhere from 1-50 stream miles from the upstream origin.

Alluvial units are the youngest deposits in Duval County. Floodplain deposits are composed of dark grey to dark brown calcareous silt and clay, quartz sand, organic matter, and some localized gravel units. Composition of floodplain sediments is determined by upland parent material.

2. Aeolian Sands - Qs; Holocene

In the southeastern and southern part of Duval County, sheet sand deposits form a thin surface mantle on underlying bedrock. Sheet sands are made up of reworked aeolian deposits. The iron stained quartz sands range in thickness from one to a few tens of feet.

3. Lissie Formation - Ql; Pleistocene

The Lissie Formation crops out along the east edge of Duval County (Figure

IV-1). The Lissie unconformably overlies the Goliad Sand and is unconformably overlain by the Beaumont Formation (Pleistocene). Although a full section of Lissie is not present, formation thickness in adjacent counties averages 200 feet.

The Lissie Formation consists of interspersed meanderbelt, levee, crevasse splay and tributary channel sequences. Depositional environment for the Lissie is lower meander belt/upper deltaic plain in the Rio Grande depositional system.

Sand and gravels within the Lissie are reddish orange or mottled red in oxidized outcrops and greenish blue in the subsurface. The sands are angular to subangular quartz grains, while the gravels are moderately rounded to well-rounded quartz, quartzite, chert and igneous extrusives. On outcrop, coarser clastics have moderate to extensive caliche cementation. Silts and clays in the Lissie display the same reddish orange coloration on oxidized outcrop and green to bluish grey in the subsurface.

4. **Goliad Sand - Tg; Pliocene**

The Goliad Sand forms a northeast to southwest outcrop belt in Duval County. This belt varies in width from less than 10 to more than 44 miles. Areal extent of the Goliad equals that of all other outcrops within the county (Figure IV-1). Goliad sediments range in thickness from zero at the up-dip limit to 600 feet in the subsurface.

Early depositional mode of Goliad sediments was fluvial-alluvial bedload. Slight upwarp in west Texas coupled with increased rainfall produced sediment choked drainageways which disgorged their loads in blanket fashion across the south Texas Coastal Plain. Basal Goliad sediments consist of bimodal sands and gravel conglomerates with poor bed form development and have little sedimentary structure. Middle and upper Goliad sediments are finer grained, have better sedimentary structure and bedform development, and have relict caliche cementation. This would indicate decreasing bedload energy, reduced source input, and a climatic change to an arid or semi-arid condition.

5. **Fleming Formation – Tf; Miocene**

Terrigenous clastic sedimentary unit composed of calcareous clay and medium to coarse, occasionally cross-bedded or chalky calcareous sands; gray to pink, red and light brown. Overall, functions as an aquiclude between the Goliad and Oakville, but far to the east, local internal sand units of the Fleming Formation define the most up-dip extent of the Mioceneaged water-bearing units in the Gulf Coast aquifer system in Texas.

6. Oakville Sandstone - To; Miocene

The Oakville Sandstone crops out in a "V" notched trend from north central to west central Duval County (Figure IV-1). Outcrop width varies from less than a mile to 10 miles with greatest areal extent along major streams which have eroded away the onlapping Goliad Sand. The Oakville unconformably overlies the Catahoula Tuff and is conformably overlain by the Fleming Formation. The Oakville thins at the up-dip limit and thickens to 500 to 600 feet in the subsurface (Figures IV-5, IV-6, IV-7).

Deposition of the Oakville Sandstone represents the transition between the volcano- tectonism exemplified by the Catahoula Tuff and the relative quiescence of the Fleming. This is exhibited by smaller grain size in the Oakville as compared to the Catahoula and the continuous fining upward directional sequence from the Oakville through the Fleming. The depositional environment for the Oakville can be characterized as moderate upwarp in the west producing relatively high transport energies which support bedload deposition in broad channel sequences of moderate depth. This fining upward sequences with lower flow regime features and blanket extent signify approachment to base level without significant climate change.

Oakville sediments are medium to fine grained subangular to subround quartz, chert and obsidian clastics which increase in roundness and decrease in size in vertical sequence. Bedforms are broad and sedimentary structures are poorly developed in the basal units. Upper units have well developed cross bedding, ripples and laminae. Isolated lenticular gravel beds are found in the Oakville. These gravels are medium to coarse quartz, quartzite, chert, fossil debris, and some volcanics with varying degrees of roundness. On the outcrop, Oakville sediments weather to buff or yellowish orange. In the subsurface coloration is controlled by post- depositional formation geochemistry. Oxidized sediments are yellow to reddish orange, while reduced sediments are bluish to greenish grey.

7. Catahoula Tuff - Tct; Miocene

The Catahoula Tuff forms the second largest outcrop belt in the county. Extending from north central to west central Duval County, the Catahoula outcrop width varies from 4 to 10 + miles. The Catahoula unconformably overlies the Frio Clay and Jackson Group and is in turn unconformably overlain by Oakville Sandstone and where the Oakville and Fleming are absent, by the onlapping Goliad Sand. Formation thickness varies from zero at the up-dip limit to 875 feet proximal to outcrop and eventually thickens to 1400 feet in the subsurface of eastern Duval County.

There are three depositional episodes evidenced in the Catahoula. Since sediments within the Catahoula indicate semi-arid to arid climates throughout, vertical differences in depositional events are a product of activity variation in the west Texas area. The thick basal Fant Tuff Member was deposited from bedload streams transporting eroded volcanic ash. Lack of significant coarse clastics and thickness of sequence indicate a period of massive ash accumulation with little surface upwarp to provide transport energy.

This sequence was broken when the Soledad Volcanic Conglomerate Member was deposited. Although volcanic activity did not cease, as evidenced by tuffaceous clays within the Soledad, increased clast size and broad definable channel sequences indicate greater transport energy, which is indicative of uplift in the source area. The Soledad conglomerate is characterized by sedimentary sequences deposited by sediment choked bedload streams with high sediment enhanced viscosities. The upper Chusa Tuff Member's deposition was a return to a bedload sequence of ash deposits with little or no tectonic activity supporting high transport energies.

The Fant Tuff Member is predominantly composed of white to off-white massively bedded tuff and tuffaceous clays. Isolated interstratified greenish brown claystones and greenish grey to reddish orange fine grain sands provide the only contrast to the tuff. The Soledad Volcanic Conglomerate Member is composed of interstratified tuffs, tuffaceous clay, friable fine sands and conglomerates.

The tuffs and tuffaceous clays are similar to those of the Fant Tuff Member. Soledad sands are fine to very fine grained quartz and chert. Larger sediments consist of angular, subangular and subrounded rhyolite, trachyte, trachyandesite clasts which range in size from pea gravel to boulder. These are either partially or totally suspended in a fine grain matrix. The Chusa Tuff is a massive to irregular bedded sequence of light grey to pink tuff and tuffaceous clay.

Outcrops of Frio Clay are confined to a north-south 1.5 to 4 mile wide band in northwestern Duval County (Figure IV-1). The Frio conformably overlies the Jackson Group and is unconformably overlain by the Catahoula Tuff or the onlapping Goliad Sand (Figure IV-6). Thickness in the subsurface ranges from 400 feet in northern Duval County to 800 feet+ in the southern part of the county.

Sediments in the Frio indicate fluviatile upper deltaic plain deposition with low transport energies. Sedimentation processes are similar to, if not the same as, those at work during Jackson deposition. Jackson and Frio sedimentary sequences differ only in the non-volcanic composition of the latter.

The Frio Clay is made up of light yellowish to brownish green clays interstratified with small discontinuous sand and silty sand units. The sands are composed of fine grained noncalcareous, slightly gypsiferous quartz grains.

2. Regional Hydrology

Since hydrologic properties are a function of geology, aquifers within Duval County will be discussed in the same sequence as utilized in the preceding Section.Goliad Sand Because of its large areal extent and shallow depth the Goliad Sand is the principal water supply aquifer in Duval County. Well yields range from 10 to 420 gpm with some wells yielding as much as 1,000 gpm. Hydraulic gradients in the Goliad range from less than 5'/mile to 30'/mile. Although no severe localized cones of depression have developed in the Goliad aquifer, overall water levels are declining by as much as 1 to 4 feet per annum because of extensive area wide use. Water quality in the Goliad ranges from less than 700 mg/1 TDS to 2,000 mg/1 TDS in the permit region.

a. Fleming Formation

The Fleming Formation is not known to yield water in Duval County.

b. Oakville Sandstone

Wells completed in the Oakville yield water at a rate of less than 50 gpm to 500 gpm with a TDS quality ranging from 1,000 to 1,500 mg/1 in Duval County. Because of limited development of the Oakville aquifer, valid regional hydraulic data is not available.

c. Catahoula Tuff

Primary yield from the Catahoula Tuff is from the Soledad Volcanic Member. Wells completed in the Catahoula yield from less than 50 gpm to 500 gpm. Hydraulic gradients range from less than 6' /mile to 50' /mile. The latter occurs where a major cone of depression has developed around two municipal water supply wells for the town of Freer. The cone is centered approximately halfway between Freer, Duval County and Hebbronville, Jim Hogg County. Water quality in the Catahoula is highly variable with TDS values ranging from 600 mg/1 greater than 4,000 mg/l.

d. Frio Clay

The Frio Clay is not known to yield water in Duval County.

e. Jackson Group

Sands in the Jackson generally yield less than 50 gpm with water quality ranging from 1,000 to 4,000 + mg/1 TDS.

B. Permit Area Geology and Hydrology

1. Permit Area Geology

The Pliocene Goliad Sand is found at the surface over the entire project area except within the valley of intermittent stream, where it is covered by Recent alluvial deposits. In addition, all subsurface units directly involved in the proposed mining operations are also within the Goliad Sand. These include the mining aquifer (A sand), upper and lower confining units (B clay and A clay respectively), and the first overlying aquifer (B sand).

The Goliad sands represent a transgressive sequence and appear to have been deposited in a mixed fluvial deltaic environment. A number of the sands coarsen upward in texture which is indicative of a delta front-stream mouth bar, while other sands fine upward in texture which characterizes joint bar deposition.

Operational drilling north of SH 44 has revealed one mineralized and water-bearing sand in the Goliad at an interval from approximately 150-260 feet. Illustrated on four log correlation plots (Figures IV-8, IV-9, IV-10, IV-11), the sand has arbitrarily been designated sand A, the zone of uranium production. The "A" sand is well developed on the Rosita properties. The unit has an average thickness on the order of 25 to 30 feet. This sand thickness varies from 55 to 10 feet thick.

Overlying the production sands in the northern areas is one additional Goliad sand horizon that has been arbitrarily designated the B sand. The sand is most often non-water bearing; however at times it does yield relatively fresh to slightly saline water. Between the B sand and production sand is a 10 to 30 foot continuous clay horizon. The main function of the clay confining unit is to ensure that mining fluids do not migrate vertically out of the production zone into adjacent units.

Drilling in the southern portion of the permit area has revealed two mineralized, water- bearing sands in the Goliad that are about150 feet thick at an interval from approximately 80-260 feet from surface (370-190 msl). These sands are illustrated on stratigraphic cross section E-E' (Figure IV-12) that was constructed from geophysical well-log data. The two mineralized horizons and confining units of the site are identified. The mineralized sands have been arbitrarily been designated the A sand and B sand and will be the zone of uranium production. No overlying water bearing sand is present in the south. A thick underlying clay aquitard separates the proposed exempted area from underlying aquifers.

The stratigraphically contiguous production sand unit at the Rosita properties consists mainly of fine to very fine-grained sandstones (70-90%) with inter-bedded clays, siltstones, and minor clay-pebble and lithic conglomerates. The sands commonly are massive, less often laminated, and only rarely cross-bedded. Typically they are loosely consolidated. However, the degree of induration is variable, and thin, hard, well-cemented zones occur throughout the area.

Historic petrographic work establishes that the sands are lithic arenites, consisting of quartz (28-52% of framework grains), feldspar (7-18%), and rock fragments of various kinds, including in decreasing order of abundance, carbonate rock fragments (7-26%), volcanic rock fragments (5-25%), chert (0-5%), and miscellaneous igneous and metamorphic rock fragments. The rocks contain a diverse assemblage of minor detrital constituents, the most important being titanomagnetite. Personnel have reported minor amounts of carbonaceous ("lignite") material in some cores.

Authigenic minerals in the Rosita sands include montmorillonite clay, carbonate cement, ferric iron oxides, iron sulfides (pyrite and marcasite), zeolites, and uranium minerals (uraninite and/or coffinite), and a uranium-titanium phase. Except for montmorillonite and carbonate cement, which are ubiquitous, the occurrence of the other authigenic minerals is directly related to the processes which formed the uranium deposits at Rosita.

Montmorillonite of a calcium-rich nature occurs as a coating on most framework grains, and also coats other authigenic minerals as well. Carbonate cement, entirely calcite, occurs in quantities ranging from 6 to 35% of the total rock volume. It occurs mainly as sparry overgrowths on carbonate rock fragments, and as pore-filling cement composed of elongate banded crystals and clusters of euhedral rhombohedrons. The cement and detrital carbonate fragments together constitute 12-48% by weight of the Goliad sands and average about 20% $CaCO_3$.

Pyrite, along with minor amounts of marcasite, is a minor constituent of reduced sands. It occurs as framboidal clusters of crystals and as single euhedral crystals. In oxidized sands, the pyrite is partially or completely converted to ferric iron hydroxides and oxides. Fine coatings of various iron oxides give the oxidized sands their distinctive yellow to red coloration. Uranium occurs in two main forms, presumably as the minerals uraninite (UO_2) and/or coffinite ($USiO_4$).

No faulting has been documented at the Rosita ISR site.

2. Permit Area Hydrology and Water Quality

Several production area pump tests have been conducted in the developed Rosita production areas concluding that: 1)All production zone monitor wells are in hydrologic communication with the production zone and would therefore detect leach solution if present and pressure response information during production; 2)Baseline wells are in hydrologic communication with the production zone and therefore represent present water conditions in the ore sand and will represent post restoration water conditions in the ore sand; and 3)The overlying sand, to the extent that it is present and saturated, is not in communication with the production zone.

Water quality analysis reports from all baseline and monitor sampled before mining activities began from Production Areas 1, 2, 3, and 5 are presented in Appendix IV-1.

Ground water quality at the Rosita Project can be described as marginal with TDS impacting the water quality with values ranging from 710 to 4,340 mg/l. The ground water is slightly saline with sodium being present as the predominant cation and chloride the predominant anion. Bicarbonate and sulfate are also abundantly present as anions. The average concentrations for the chloride and TDS parameters exceed EPA Secondary Drinking Water Regulations. Arsenic often exceeds EPA MCLs in wells sampled in the area.

In addition, as shown in the Table IV-1, the pre-mining data that has been obtained from Rosita wells in the ore trend demonstrates that radionuclide values severely limit the use of the water in the well field areas. Typical for ISR uranium sites, water from the portion of an aquifer containing uranium ore is not potable and must be exempted as an underground source of drinking water. The presence of uranium, and its radioactive decay products of radium and radon, cause that portion of the aquifer in which the uranium exists to exceed the maximum contaminant levels for such radionuclides allowable in public drinking water supplies, as set forth in the United States Environmental Protection

Agency's National Primary Drinking Water Regulations for public water systems.

ISL uranium recovery at the Rosita site is performed only in the exempted mineralized zone of the aquifer which is local, not regional, so the aquifer is not affected regionally. When considering the relevant aquifer uses at a uranium site such as the Rosita, the only reasonable use of the water in the exempted area is commercial uranium recovery. The UIC regulations require that ISL operations be designed to produce only from the mineralized sands in the exempted area. Well field patterns are engineered, well field operations are balanced, a *negative production bleed* is maintained and the ore zone is surrounded by horizontal and vertical monitor wells.

Moreover, production economics of ISL operations and UIC environmental criteria complement one another because both require that only the ore zone is leached, and the leach solution is constrained to the exempted area. The result is water quality is not impacted in USDWs beyond the exempted area into the ¼ mile AOR for the Rosita project. In other words, there is no impact to the regional aquifer that would affect other relevant aquifer uses. Pursuant to 30TAC331. 85 (a), new water wells within a ¼ mile area of review are inventoried each year and reported to TCEQ.

C. Permit Area Location

The project is located approximately 11 miles northwest of the City of San Diego, along the location of State Highway 44. Figure IV-13 depicts the location of the Rosita Project.

D. Permit Area Topography

The project lies in an area of relatively low relief. The topography and surface drainage system of the Rosita project are shown on Figure IV-14. The site is rolling with rounded high areas in the north and south separated by the east-west trending valley of the area's largest intermittent stream. Elevations range from about 550 ft above sea level to just over 400 ft above sea level where the central ephemeral stream crosses the east boundary line.

North of SH 44, runoff from the permit area flows eastward into San Diego Creek and then into San Fernando Creek near Alice. South of SH 44, runoff from the permit area flows south and then eastward into Tarancahaus Creek. All the drainage courses are ephemeral and these stream beds flow only during or shortly after moderate to severe precipitation events.

E. Water Supply Wells

Water supply wells within ¼ mile of the permit area boundary are depicted on Figure VII-1. Table VII-1 through VII-3 lists the known completion and other relevant information for these wells based on the Texas Water Development Board database.

F. Hydrologic Testing

Pump tests have been conducted for each production area at the Rosita ISR site. Each monitor well and selected production wells served as monitoring stations where water levels were measured by devices such as water level recorders, "E-Lines" or an engineer tape using the wetted tape procedure. A continuous barograph was kept during the test for interpretive purposes where barometric changes had significant influence on the test.

After aquifer recovery was indicated by the continuous water level recorders, static water levels were obtained in each observation well. This data was used to determine groundwater gradient and direction. In turn, piezometric gradient, formation porosity and subsequent pump test data were used to determine groundwater velocity.

After static water level measurements were obtained, the aquifer was stressed by pumping a pre-determined well. During this pumping time, water levels in observation wells were recorded using the previously described equipment.

After at least twenty-four hours after pumping, the test was shut in and the aquifer allowed to recover. During this recovery period the water level in the observation wells was monitored and recorded for use in recovery curve analysis.

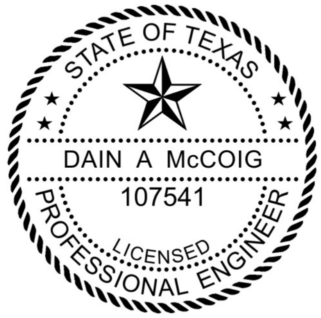
All data derived from the aquifer test was interpreted by utilization of the Thiess non-equilibrium drawdown analysis. Drawdown was plotted semi-logarithmically against r 2/t. The resulting curves were visually matched against the type curve. Once a match point was picked, u and W(u) were determined and from this transmissivity and storage coefficients were calculated. Drawdown, or lack thereof, was used in determining the adequacy of production zone monitor wells and the confining clays as aquicludes.

1. Project Test Results

Pump tests conducted at the Rosita site included all of the baseline and monitor wells for each production area authorization application. The pump test reports in their entirety are included in Appendix IV-2. As can be seen, all production zone monitor wells showed drawdown response to the pumping which was done.

This evidence confirmed the required objective that the monitor well ring and the monitor wells are hydrologically connected with the production well field and would detect leach solutions, if present.

Water level monitoring utilizing the non production zone wells provided confirmation that the aquitards are preventing any communication with the production zone thereby providing assurance that the production zone is isolated from overlying aquifers.



June 17, 2024

URI, Inc.

Engineering Firm Registration No. 23615

This seal applies to Section V of this application. This section is released for the purpose of review by the Texas Commission on Environmental Quality under the authority of Mr. Dain A. McCoig, PE Number 107541 on the date indicated on the seal. It is not to be used for construction or bidding purposes.

V. Well Construction and Facility Operation

All wells are constructed according to the requirements of 30 TAC § 331.82 so as to perform for the life expectancy of the well. All holes are rotary-drilled with water well-type drill rigs which were capable of circulating drilling fluids to the surface.

Several types of wells are installed at the Rosita project site to facilitate the ISR process. Injection wells are installed to allow the injection of the lixiviant. Production wells are installed to allow the recovery (pumping) of the pregnant lixiviant (production fluid). Wells installed within the production zone also determine baseline water quality conditions, as well as monitor wells around the outside of the production zone (monitor well ring) document the lateral control of the lixiviant. Production and injection wells are constructed to assure that the well annulus is sufficiently cemented to prevent communication from the production zone to overlying aquifers penetrated by the well.

In the well field, injection wells are arranged around production wells in patterns designed for optimum uranium recovery. The physical configuration of the mineralized ore zone, inferred from exploration geophysical logs, determined production and injection well depths and the intervals from which uranium was to be leached. Typically, well patterns used include, but are not be limited to, alternating single line drive, staggered line drive and five spot. Each well field area consists of groups of these patterns which are installed to correspond with the irregular geometry of the ore bodies as determined from geological interpretation.

The extensive network of ground water wells surrounds the production areas as specified in the rules at 30 TAC § 331.103. Production zone monitor wells are completed in the ore-bearing aquifer, encircling each well field at a distance of no more than 400 feet from the peripheral production or injection wells and at spacing of not more than 400 feet apart. The angle formed by lines drawn from any production well to the two nearest monitor wells must not be greater than 75 degrees. These wells are monitored for water level and sampled for water quality parameters on a regular basis to ensure that the injected lixiviant stays within the defined production zone.

A. Well Completion

1. Total Depth Criteria

All wells are drilled through the Goliad Sand which is the mineralized sand at the site. Typical hole depth is about 250 feet from the surface; but the depth can vary within the aquifer exemption interval.

2. Completion Interval Selection Criteria

Each hole is logged to determine the completion interval. Spontaneous potential, resistivity and gamma ray logs are obtained for all holes. This suite of logs is standard in the uranium industry. Where gamma logs indicate the presence of uranium mineralization, prompt fission neutron logging is conducted. In the event that washouts are indicated, caliper logs may have been called for to determine the cement quantities required for subsequent casing activities.

Once a hole is drilled and logged, it is determined if the location qualifies for commercial ISR activity and the hole is either cased and completed or plugged and abandoned.

3. Type Of Completion: Perforation, Open Hole, Screen, Etc.

There are two principal completion techniques utilized by URI at the Rosita site: under reamed or open hole casing completion and integral screen completion. The method of which completion was used is determined by such factors as the casing method used, depth of the well and the nature of the completion horizon. The integral screen completion is typically used for shallower wells with very long completion intervals and satisfactory vertical isolation. The cement basket is set in a confining shale above the completion interval and the screen suspended below the basket.

Open hole or under-reamed casing completion are both used to open wells with casing placed across the target interval. Open hole completion involves setting casing to the top of the target horizon and then re-entering the hole and drilling through the target. The under-reamed casing completion uses a mechanical down hole tool to cut away the casing, cement and the filter cake on the target's sand face.

After the target horizon is exposed, a screen is placed to hold back the formation sand. Both techniques are very effective ways to open the well to the completion horizon. These completions provide very good vertical isolation of the interval due to cement remaining above the opening to seal the annulus of the casing from leach solution migration.

The major disadvantage in under-reaming results from the limitations of the rotary rig and under-reaming tool. As the depths increase, the amount of weight resulting from the drill- string increases proportionally down hole on the blades of the cutter. URI has a great deal of experience using under-reamers in deep wells and with careful management of string weight and torque the under-reaming is completed without major problems.

4. Casing: Size, Type, Grade, Weight, Setting Depths

Casing of injection, production and monitor wells use PVC and are open hole completed, under reamed or screened. PVC casing is resistant to the oxidizing conditions that are inherent to uranium ISR. PVC casing can sustain collapse pressures of over 400 feet for 6-inch SDR 17 casing. PVC is used widely in the uranium ISR business for its relatively good strength, low cost, availability, and resistance to the oxidized environment inherent in the leaching solutions. Casing specifications for SDR PVC are listed in Table V.1.

5. Tubing/Packer (If Applicable)

Tubing and packers are not a component of URI's well design.

6. Cement

When considering the relative strength of casing materials with respect to operating conditions, one also needs to consider the additional strength provided by the cement sheath that exists in the annulus of the wellbore. Cement protects the casing by providing additional burst and collapse pressure resistance resulting from the relatively high compressive strength of the cement. This compressive strength increases the burst and collapse strength of the casing to approximately that of the cement. The physical properties of the cement to be used are as follows:

Type:	ASTM Class I, API Class A
Density:	13. 5 ppg
Additives:	2% bentonite gel
Compressive	2840 psig @ 80' F. & 72 hours
Strength:	3350 psig @ 1000 F. & 2 hours

(Source: Halliburton Cementing Tables)

7. Cementing Technique

Once the casing is run into a well, it is cemented from bottom to top. The cement consists of a slurry of Class A cement, approximately 2% bentonite gel and water, with a weight of approximately 13.5 ppg. The cement is then pumped through the casing and up the annular volume between the casing and borehole to the surface. The slurry volume is sufficient to fill the annular volume and a portion of the lower casing volume, and to provide enough excess volume to fill any potential washouts with returns to the surface.

After the entire slurry volume is pumped down the well, it is then displaced in the casing with water or a weighted fluid to a depth considered sufficient to ensure that enough cement remains in the casing to properly seal the annulus. The well is then sealed with the displacement fluid in the casing to prevent backflow and allowed to set for 48 hours to cure the cement.

8. Cementing Equipment

URI's cementing equipment in South Texas utilizes the "batch" process. A recirculating tank is utilized that is large enough to contain enough cement and water to complete the entire cementing process with one mix operation. Initially, water is circulated into the tank to a level which, by design, provides the required amount for the operation at hand. Two percent gel is then added with a hopper and jet mixer to the circulating water and mixed evenly. Cement is then added in a likewise fashion using either sack cement or cement provided by a bulk cement tank.

Over a period of 20 to 30 minutes, enough cement is added to the gel water to bring it up to the desired pounds per gallon weight. A scale designed for the purpose of providing cement weight is utilized several times, as needed, while the cement approaches its desired weight. Once mixed, a centrifugal pump contained on the cementer is used to displace the cement as needed.

9. Casing Centralizers

When the casing is run into the hole it includes centralizers with each being spaced about 75 feet along the total casing length.

10. Sketch Of Each Type Of Well Completion

Figures V-1 and V-2 illustrate wells using the integral screen and under-ream completion method respectively.

11. Drift Control Procedure

Drift control procedures are not necessary at the depth drilled at the Rosita site.

12. Installation Control (Completion Certification, Etc.)

The detailed construction record of every cased well completed at the Rosita ISR site is documented on a well completion report (Figure V-3) and well completion diagram (Figure V.4). These completion reports are maintained on site for TCEQ inspection.

13. **Development Procedure (Jetting, Acid, Etc.)**

All cased wells are developed by air jetting, cross jetting, pumping, etc. If necessary, wells are treated with hydrochloric acid (HCl) to break loose excess cement and then developed further. Wells are developed until their performance objective is met.

B. Mechanical Integrity

Subsequent to the well completion, certain cased-hole geophysical logs (single point, resistivity, gamma ray) may be used to survey the open interval and length of the casing. The open interval and possible casing leaks may be detected by the logs.

Consistent with the requirements of 30 TAC § 331.43, after the interval has been opened and cleaned and the well casing has been logged, a mechanical integrity test (MIT) is performed to further test the casing for possible leaks. An inflatable packer is run into the well to a depth directly above the open interval. The packer is inflated and the casing filled with water. In all cases the well is sealed, filled with water and pressured up with air to at least 125% of the maximum allowable wellhead injection pressure; in the case of the Rosita project 100 PSI.

After the test pressure is reached, the well is sealed to hold pressure and allowed to stand for 30 minutes. After 30 minutes, the well is passed if less than 10% of the starting pressure is lost over the course of the test. If the pressure loss is greater than 10% and the well fails the test, then action might be taken to locate and repair the leak and the MIT re-run. As required by 30 TAC § 331.4, the MIT must be passed before the well can be considered operational. Records of mechanical integrity testing of the well are compiled on the well pressure test report (Figure V-5).

C. Well Logs

Figure V-6 is an example of a well log from the PAA-5 production area at the Rosita site. Resistivity, spontaneous potential and gamma-ray information is shown on the log along with geological interpretation of the log indicating the lithology depicting the production zone, underlying and overlying aquitards and the overlying sand.

D. Production Facilities and Procedures

1. Written Description Of Production Procedures And Supporting Facilities

At the Rosita site, the lixiviant consists of native ground water to which gaseous oxygen and gaseous carbon dioxide and/or sodium bicarbonate have been added. After the lixiviant is injected into injection wells and recovered from production wells, it is pumped to the processing plant where the uranium is removed by passing the uranium rich lixiviant across ion exchange resin.
Loaded ion exchange resin is periodically trucked to a process facility for processing into yellowcake. Yellowcake is dried and then stored in drums for shipment to a purchaser at a UF_6 conversion or other nuclear fuel cycle facility.

a. Production Facilities

URI conducts uranium mineral extraction using columns containing IX resin, vessels to store various solutions, piping and pumps. The process pumps lixiviant from the well field through the columns and returns it to the well field injection circuit. The IX system is operated in a closed system under low but continuous pressure.

b. Lixiviant Injection/Recovery

Uranium, present in the host ore in a reduced insoluble form, is oxidized by the lixiviant solution injected into the ore zone. Once uranium is oxidized it complexes with bicarbonate anions in the groundwater and becomes mobile. ISR proceeds with the continuous recirculation of fortified groundwater leaching solution through the uranium ore from the injection to the production wells. Uranium in the ore reacts with the lixiviant to form a soluble uranyl dicarbonate complex.

$$2UO_2 + O_2 \rightarrow 2UO_3$$

$$UO_3 + 2NaHCO_3 \rightarrow NA_2UO_2(CO_3)_2 + H_2O$$

c. Lixiviant

The lixiviant, which is comprised of native ground water fortified with sodium bicarbonate and/or gaseous carbon dioxide and oxygen, is injected into injection wells. After passing through the ore zone the pregnant lixiviant is pumped from production wells to the processing facility where the uranium is extracted by ion exchange onto resin. The resulting uranium-depleted (barren) water is then refortified with an oxidant such as O_2 or H_2O_2 and re- injected into the well field to repeat the leaching cycle. The lixiviant typically consists of the parameter concentrations shown in Table V.2.

d. Production Well Circulation

Injection well and production well flow rates are monitored to assess operational conditions and mineral royalties. The flow rate of each production and injection well are determined by monitoring individual flow meters on each well. The pressure of the injection trunk line are determined daily on each well field manifold. The surface injection pressures do not exceed the maximum surface pressures posted at each manifold.

Each production well is operated at the maximum continuous flow rate achievable for that pattern area. The primary consideration in determining maximum continuous flow rate is to assure the well field is collectively balanced.

Generally, the overall injection flow rate into the well fields is less than the total extraction flow rate by an amount known as “process bleed”, resulting in a hydraulic pressure sink which causes native groundwater outside of the ore zone to migrate into the well field. This process bleed is used to help protect the monitor wells against lixiviant excursion and varies according to ore geometry, well pattern, and magnitude and direction of the natural groundwater velocity.

Since the process lixiviant is simply the natural groundwater recirculated continuously from the extraction wells through the surface IX facilities, into the injection wells, through the ore zone and back to the extraction wells, the system can never be over injected, even with no process bleed. Groundwater velocity studies for the Rosita ISR site indicate low natural groundwater velocities of 10 – 20 feet per year, which varies according to the natural hydraulic gradient, and is site specific.

As a result, the amount of process bleed used in any portion of well fields is also site specific, incorporating effects of actual ore geometry and overall well field pattern and operation. Since groundwater issues are strongly debated and process bleed is considered a consumptive use of groundwater, process bleed is minimized in all cases, yet must be sufficient to protect the monitor wells against excursion. The process bleed, or excess water production from the well field, taken after uranium recovery is the primary liquid waste stream from the well field.

e. Wellfield Instrumentation

Injection and production flow rates are monitored in order that injection can be balanced with production across the entire well field, with the injection flow smaller than the production flow by the amount of the bleed rate. This information is also used for assessing operational conditions and for determining mineral royalties.

Combinations of meters are used in the well field and the plant, with differing accuracies dependent on their use. Because hundreds of flow meters are in use at any particular time and, because no meter is 100% accurate, the overall summation of injection flows seldom ever exactly equals that of extraction. Yet, by the very nature of the closed ISR system, injection flow actually does exactly equal that of extraction, minus the bleed rate.

As a result, injection flows are prorated to that of extraction (or vice versa) after the bleed rate is subtracted. In addition, since ISR is a continuous operation across 24 hours a day for every day of the year, it is expected that some meters require repair and give faulty readings until problems are identified and corrected. A major portion of operational maintenance is spent in identifying and repairing faulty flow meters.

Thus, the procedure for determining final total flow rates varies from time to time. Again, it is important to note that total injection flow rates can never actually be higher than total extraction in ISR because of the closed system. Data records for these monitoring activities are maintained on-site.

f. Ion Exchange (IX)

The pregnant leaching solution containing the uranyl dicarbonate complex is received at the processing plant through a network of well field piping, collection headers and trunk pipelines, and is pumped through the ion exchange columns, operated in series in a down flow mode. The entire system is pressurized, precluding the elevation of gasses (including radon) in the process building and the environment. Uranium is exchanged on the reacting sites of the resin for a chloride ion (if the resin is in chloride form) according to the following reaction:

$$Na_2UO_2(CO_3)_2 + 2RCl \rightarrow R_2\ UO_2(CO_3)_2 + 2NaCl$$

where R is a reacting site of the ion exchange resin.

When the ion exchange resin in a column has captured uranium to its optimum loading capacity, uranium breakthrough occurs. That is, uranium concentration in the barren leach water exiting the IX column begins to rise. At this point, the column is taken out of the operating circuit and another column with fresh ion exchange resin is placed on-line.

After the uranium is removed by the ion exchange columns, the process bleed is removed from the lixiviant stream. The process bleed insures that more water is withdrawn than is injected, thereby keeping the lixiviant laterally within the production zone. After the bleed is removed from the lixiviant stream exiting the IX columns, the uranium-depleted (barren) water is refortified with requisite chemicals and piped back to the well fields for reinjection.

Sodium bicarbonate and/or gaseous carbon dioxide are added as needed to the lixiviant, while oxidant is dissolved into the barren water prior to injection into the injection wells. The entire injection, production, ion exchange, and reinjection process is effectively a closed system. This allows retention of residual carbon dioxide and oxygen during recirculation of the lixiviant.

g. Elution and Precipitation

Once loaded with complexed uranyl dicarbonate, resin is eluted. A brine, and soda ash solution is used to remove the uranium from the resin. The following chemical reaction occurs:

$$R_2UO_2\,(CO_3)_2 + 2NaCl + Na_2CO_3 \rightarrow Na_4UO_2\,(CO_3)_3 + 2RCl$$

In the first elution step, partially enriched eluant (from the second step of the previous elution) is sent through the fully loaded ion exchange bed to yield uranium-rich eluant, and may be stored separately in a tank. In the second step of the process, barren eluant is passed through the partially denuded resin bed to remove the majority of the residual uranium present on the resin. The resulting partially enriched eluant may be stored in a recycle tank, and used in the first step of the next elution cycle.

Uranium is then precipitated from the uranium rich eluant. Carbon dioxide gas (CO_2), generated during acidification of the uranium rich eluant with hydrochloric acid, is vented to the atmosphere. This breaks the carbonate complex from the uranium.

$$Na_4UO_2(CO_3)_3 + 6HCl \rightarrow UO_2Cl_2 + 4NaCl + 3CO_2 + 3H_2O$$

$$Na_2UO_2(CO_3)2 + 4HCl \rightarrow UO_2Cl_2 + 2NaCl + 2CO_2 + 2H_2O$$

Peroxide is then added to further oxidize the uranium, and cause uranium oxide crystals to form and precipitate according to the following reaction:

$$UO_2Cl_2 + H_2O_2 + xH_2O \rightarrow UO_4\ xH_2O + 2HCl$$

The crystalline uranyl peroxide slurry (UO_4 or yellowcake) may require pH adjustment. Once the precipitation process is completed, the yellowcake is dewatered using a filter press. Finally, the yellowcake is washed with a clean water to remove impurities such as sorbed chloride, and then dried. Water left over from the dewatering and drying is either reused in the elution circuit, or sent to the waste pond.

h. Remote Ion Exchange ("RIX")

URI utilizes RIX satellite plants at the Rosita Project. RIX's include ion exchange columns that contain ion exchange resin for recovering the uranium from the production wellfield stream. Once the resin is loaded with uranium, the resin is transferred out of the ion exchange columns into a trailer tanker, drained of free water and trucked to a central plant for removal of the captured uranium. The clean ion exchange resin that has been stripped of all uranium at the central plant is transferred back to the RIX in the same way.

Each RIX is a self-contained, stand-alone unit that recovers uranium in pressurized down flow ion exchange columns. A pressurized ion exchange system enables URI to keep both the uranium-rich and barren solution contained within a closed loop process that minimizes the potential of releasing any radon gases to the atmosphere. The entire unit is curbed to provide containment from spills or secondary containment from leakage.

i. Yellowcake Drying at the Central Plant

URI employs vacuum dryer technology in its yellowcake drying and packaging system at the central plant. With this vacuum dryer, the heating source is contained in a separate, isolated system so that no radioactive materials are entrained in the heating system or the exhaust it generates. The drying chamber containing yellowcake slurry is subjected to strong vacuum pressure. Moisture in the yellowcake is the only source of vapor remaining in the system. Any potential leak would result in outside air flowing into the drying chamber.

Emissions from the drying chamber are treated in two phases. First, all water vapor is drawn through a bag filter to remove yellowcake particulates with an efficiency exceeding 99 percent. Captured particulates are returned to the drying chamber. Second, using a condenser, all water vapor from the drying chamber is cooled and condensed. The vapor is then drawn through a water jacket and condensate, thereby capturing virtually all particulates escaping the bag filter. This technology results in zero emissions and requires no ventilation from the drying chamber to the atmosphere.

2. Material balance identifying all wastes and their disposition, source and volume

The Rosita facility includes a central plant and RIX satellite facilities. The lixiviant bleed during operations reaches a maximum of 35 gallons per minute. During restoration the reverse osmosis reject may reach up to 200 gallons per minute. Wastes quantities from the central plant are made up of surplus bleed or restoration water and do not add to the overall quantity stated above that requires disposal. In no case do the combined amounts of water from production and restoration exceed 200 gallons per minute. Bleed and restoration waste is transferred to a holding tank and injected directly into WDW250 which has a nominal capacity of 200 gpm. Additional capacity is maintained with the lined evaporation ponds available at the Rosita CPP.

3. Schedule For Completion Or Installation Of Facilities

Construction of the Rosita process facility is complete.

4. **Typical Composition Of Injected Leach Fluids And Any Other Fluids To Be Injected**

Table V.2 provides typical observed concentrations of the extraction well mine water quality from the Rosita Project.

5. **Detailed Construction Design Of All Ponds**

Two double lined ponds are present at the Rosita site. The earthwork has been completed for a third pond but it is not lined or used. These ponds have a freeboard dimension of approximately 120 feet square, slopes of approximately 3:1 and depth of 10 feet.

Standard provisions for the ponds include two impermeable synthetic membrane liners: an inner 30 mil Hypalon liner or equivalent, and an outer liner 36 mils thick made of Hypalon or equivalent (1 mil=0.001 inch). A space 4 to 5 inches thick between the two liners contains pea size gravel and a drainage network of open piping, forming an underdrain leak detection system. The (inner) liner is intended to provide secondary containment for any leakage that may occur.

6. **Runoff And Spill Control Description Supported With Plan And Cross Sectional Instructions**

All tanks are placed on a process pad. The process pad is made of concrete and provided with sumps, drains and at least a 6 inch high curb at the periphery. The pad is underlain by a synthetic liner that will capture potential leakage through cracks in the concrete. Thicker footers are provided where heavy processing equipment and vessels are located. The curbs are designed to confine and hold potential spills in the plant and potentially contaminated runoff from the processing equipment area. The pad curb and sump are adequate to contain the volume of the largest tank on the pad.

7. **Schedule Of Preventive Maintenance Inspection For Ponds, Pipelines, Etc.**

The ponds are inspected daily for leakage except for holidays and weekends. Fluid levels greater than six inches found in the leak detection system will be cause for immediate corrective action, including notification to TCEQ. Normal freeboard level is maintained at 8 feet. A minimum of one foot of freeboard may be maintained during emergency periods such as high rainfall, for a period not to exceed fourteen days. An easily readable freeboard gauge is installed and maintained in each pond.

All tanks, filters, transmission lines, injection pumps and monitoring equipment associated with the Rosita site will be inspected daily except during holidays and weekends. Monitor wells shall be inspected each time they are sampled.

8. Detailed Calculation And Tabulation Of The Volume Of Fluids To Be Handled By Storage And Disposal Facilities At Their Maximum And Comparative Capacity Of The Facilities Will Be Available

The Rosita facility includes a central plant and RIX satellite facilities. The lixiviant bleed during operations reaches a maximum of 10 gallons per minute (gpm) for each remote ion exchange (RIX) site. During restoration, the reverse osmosis reject from the RO unit may reach up to 33% of the RO feed, which equates to 165 gpm.

The characteristics of the waste stream are composed of six (6) individual streams generated from the in-situ recovery of uranium. The majority waste is composed of bleed and restoration fluids. The individual waste streams include the following:

1. Lixiviant bleed stream
2. Eluant bleed stream
3. Lab waste stream
4. Restoration wastewater and reverse osmosis brine stream
5. Plant wash water, filter press and resin transfer/wash stream
6. Other associated wastes such as ground water and rainfall contaminated by the above waste streams, authorized wastes, spills of the authorized wastes, wash waters and solutions used in cleaning and servicing injection well WDW-250 equipment.

The combined amounts of water from production and restoration that will be disposed of will not exceed 200 gallons per minute. Bleed and restoration waste is transferred to a holding tank and injected directly into WDW250, which is permitted to accept an average flow rate of 200 gpm. Evaporation ponds at the site provide additional storage capacity in the event of severe precipitation events and/or upset conditions. No credit is given for solar evaporation. Table V-3 provides a water balance for the term of the permit.

The values presented in Table V-3 represent the maximum volumes. However, based upon historical injected volumes during uranium production and/or groundwater restoration operations at the Rosita site, disposal volumes can range from 1 million to 75 million gallons per year. The disposal well annual injection volume is limited at 105 million gallons (i.e., 200 gpm).

This indicates that historical activities at the site resulted in only utilizing approximately 70% of the total available injection volume capacity. URI anticipates generating similar wastewater volumes as past activities. It is important to point out that this excess capacity of 30% does not include the additional capacity available in the double lined evaporation ponds.

9. Operating Data

a. Average And Maximum Daily Rate And Volume Of Fluid To Be Injected

The process facility at the Rosita site is designed at a nominal circulation rate of 3,500 gallons per minute.

b. Average And Maximum Injection Pressure

Maximum injection pressure is 0.4 psi/ft. At an average depth to ore of 250 feet, maximum injection pressure is 100 psi. Maximum injection pressure shall be clearly marked on all injection laterals.

c. Source Of The Injection Fluids

All injection fluid is on-site groundwater present within the Goliad Formation.

d. Analysis, As Needed, Of The Chemical, Physical And Radiological Characteristics Of The Injection Fluids

Table V.2 provides typical observed concentrations of the extraction well mine water quality from the Rosita Project.

10. Contingency Plans To Cope With All Shut-Ins Or Well Failures To Prevent The Migration Of Contaminating Fluids Into Fresh Water

The only factor which could threaten a continued process bleed is loss of power. Since natural groundwater flow near the well fields is on the order of only a few tens of feet per year, the flow outward from the well field during the period of short term power outage (2-3 days for example) would not be significant or measurable because of the exceedingly slow natural groundwater migration rate. Therefore, no contingency for power outage is contemplated.

E. Closure Plan - Provide A Description Of Closing Procedures To Be Taken To Restore Affected Surface Areas To Include Plugging Of Wells, Removal Or Adequate Cover Of Wastes, Removal Of Irretrievable Pumps, Etc.

All production and injection wells will be permanently plugged and abandoned upon completion of ground water restoration in a manner which prevents inter-formational transfer of fluids according to the requirements of 30 TAC § 331.86. Section V.H.4 of mine permit UR02880 contains specific plugging and abandonment methods to be utilized at the site. These requirements are summarized below:

1. A bentonite-cement mixture at approximately 9.40 lbs/gallon slurry weight and not less than 9.10 lbs/gallon shall be set from the bottom of the well to a level not greater than 5 feet below ground level;

2. A minimum two-foot cement top plug shall be set in the casing to seal the well near the surface; and

3. The well casing shall be cut off at a depth of at least three feet below ground level, and the Underground Injection Control Permits Section shall be notified to provide opportunity for inspection of the surface plug before backfilling the excavation with soil to natural grade.

URI intends to continue to utilize this TCEQ approved method and is proposing one minor addition to the approved P&A procedure summarized above. URI intends to cut of the casing at three feet from the surface or at the rock/caliche interface, whichever is encountered first.

VI. Initial Mine Plan

A. Mine Plan Map

Figure VI-1 contains a Mine Plan Map.

B. Mine Plan Schedule

Table VI-1 presents an estimated schedule for production and restoration of anticipated production areas.

VII. Area of Review

A. Tabulation Of Reasonably Available Data On All Wells Within The Area Of Review Which Penetrate The Injection Zone.

The Area of Review at the Rosita mine is ¼ mile as provided for in 30 TAC § 331.42(a)(4). Attachment D presents a topographic map of the Rosita permit area and Area of Review. This map includes wells that are available on the Texas Water Development Board (TWDB) database. Tables VII-1 through VII-3 provide reasonably available data from the TWDB database. The regional hydraulic gradient is to the southeast (i.e., down dip) towards the Gulf of Mexico.

B. Corrective Action To Be Taken Under 30 TAC 331. 44

Consistent with the rule at 30 TAC § 331.44, no corrective action is proposed.

VIII. Excursion Prevention

When production rate equals injection rate an in situ leach system is balanced. Ideally, no mine fluids would escape such a system. However, because factors such as groundwater flow, differential permeabilities, meter error, etc. exist, a balanced system may not provide adequate fluid control. To preclude any vertical/horizontal mine fluid migration, a bleed system is utilized. In a bleed system, the volume of water produced from the aquifer is greater than the volume injected into the aquifer. Thus, there is a net withdrawal of water from the aquifer which produces a hydraulic pressure sink in the aquifer in the production zone. Natural formation waters migrate from the surrounding permit area toward the production zone in response to this negative pressure anomaly in the production zone. This inflow of water precludes outflow of mine fluids.

Monitoring is performed to exceed the requirements of 30 TAC § 331.84 and 30 TAC § 331.105. Monitoring of the bleed stream and its effectiveness is made by one indirect and two direct techniques. First, at the point of bleed stream extraction, the volume is monitored by use of an inline flow meter. The totalizing flow meter is checked daily and the meter readings recorded and maintained on site. Secondly, indirect measurements of the excursion control effectiveness are made by sampling and analyzing water from production zone and nonproduction zone monitor wells.

Water quality samples are obtained from the monitor wells with air lifts or submersible pumps. To assure that water within the well casing has been adequately displaced and formation water is sampled, wells are pumped a certain amount of time, based on the particular well's performance. A minimum of one (l) casing volume of water is removed from the well prior to sampling. Prior to sampling, the electrical conductivity and pH are measured at periodic intervals and recorded on field data sheets to demonstrate that water quality conditions have stabilized and ensure that formation water is sampled.

Each monitor well water quality sample is analyzed for the established upper control limit (UCL) parameters within 48 hours of sampling at the on-site laboratory. These UCLs establish the criteria to determine whether an excursion is present in a specific production area authorization (PAA). Each PAA will have specific UCLs established based on the pre-mining/baseline water quality present in the location for the proposed PAA . All analyses are performed in accordance with accepted methods. Data obtained from this sampling program are reported to TCEQ on a quarterly frequency.

If one or more monitor wells have indicator parameter concentrations exceeding the UCL, then a second sample will be taken within 2 days of the initial sampling. Pursuant to 30 TAC § 331.105 & 106, if analysis of the second sample shows that the concentrations of the first set of analyses were the result of improper sampling, faulty analysis or similar phenomena, no further action will be taken. If the second analysis produces results substantiating the first one, the TCEQ will be notified by telephone within one working day and by written communication within two working days of confirmation.

Corrective actions, such as changes in pumping or injection rates, will be implemented as soon as possible. Corrective actions will continue until the excursion is mitigated. When excursion status is confirmed, corrective action will be required to return the water quality to below the applicable upper control limit. During corrective action, sample frequency will be increased to bi-weekly for the excursion indicator parameters until the excursion is concluded.

An excursion corrective action report will be submitted to the TCEQ two weeks after initial excursion confirmation. The report will include measures taken in the previous two weeks and planned corrective measures to be taken in the following month. Such reporting will continue until UCL reduction is achieved. An excursion is corrected when all control parameters have been reduced to below their upper control limit. After the excursion is corrected, normal operations will be resumed.

URI's current UCL parameters as contained within the Area Permit are conductivity, chloride and uranium.

Experience at other Texas in-situ operations (e.g., Alta Mesa) have demonstrated that the parameters that are most effective in identifying early indications of potential migration of mine water are conductivity and chloride. Historic excursion events have indicated that a similar increase in chloride and/or conductivity concentrations were observed while other UCL parameters did not show any indication of possible mine water migration. In each instance, other UCL parameter concentrations (i.e., alkalinity) failed to provide any indication of water quality changes, while chloride concentrations began trending upward providing the operator early warning prior to exceeding the limit.

As a result of these observations from historic cases, for the three most recently approved PAAs at the Alta Mesa facility, TCEQ appropriately established upper control limits for just conductivity and chloride, as these parameters have demonstrated that they provide the best early indication that a potential excursion event could occur. The justification to use just these constituents as UCLs are discussed below.

Conductivity

Specific conductance of a solution is geometrically proportional to the total dissolved solids (TDS) of that solution. During ISR operations, TDS concentrations within and immediately adjacent to the production area are greater than baseline TDS concentration of the surrounding production vicinity. Therefore, any abnormal increase in specific conductance would indicate the potential that mine water may have migrated away from the production area.

Chloride

The anion exchange species for the uranyl tricarbonate complexed anion is chloride, so as uranium is captured on the ion exchange resin, chloride ions are released into the recirculating mine water resulting in buildup of chloride concentrations in the production zone. These concentrations may exceed chloride baseline concentrations. Chloride is a very mobile species in groundwater making it favorable as a water quality indicator parameter from the standpoint that as chloride concentrations rise in monitor wells to levels at or above baseline concentrations would indicate the possibility of an excursion.

Proposed Change to UCL

URI believes that keeping uranium as an excursion parameter essentially results in just having chloride and conductivity as excursion parameters because uranium is easily attenuated in the groundwater system. NRC concurs with this and states within NUREG-1569 Standard Review Plan for In Situ Leach Uranium Extraction License Applications that, "uranium is not considered a good excursion indicator because, although it is mobilized by in situ leaching, it may be retarded by reducing conditions in the aquifer."

NRC further recommends that excursion indicator constituents should be parameters that are strong indicators of the in-situ leach process and that are not significantly attenuated by geochemical reactions in the aquifers. NRC also states that the chosen parameters should be easily analyzed to allow timely data reporting. Contrary to this NRC recommendation, uranium analyses involve the preparation and use of specialty reagents along with specialized instrumentation which, in turn, requires additional laboratory time and effort to perform uranium analyses as compared to conductivity and chloride analyses.

URI is requesting as part of this renewal application that TCEQ remove uranium as an excursion parameter and just assign UCLs for conductivity and chloride, as these parameters provide the best early indication of migrating mine water from the production zone.

URI requests that TCEQ modify Section V.E.1 of the existing Area Permit to remove uranium as an excursion parameter. URI requests that chloride and conductivity continue to be used for excursion monitoring as these parameters have demonstrated that they are the most effective indicators of a potential excursion as they provide rapid and reliable means to measure change in water quality and will provide the earliest warning of a potential excursion. The proposed modification to Section V.E.1 is provided below.

Section V.E.1

E. **Monitoring Parameter Upper Limits**

1. Chloride and conductivity shall be used as control parameters in monitoring for excursions of mining solutions from each production area. Upper limit concentrations which indicate the presence of an excursion shall be calculated for the production and non-production zones by adding 25% to the maximum chloride and conductivity values determined in the sampling of the production zone wells and non-production zone wells for each production area.

For the justifications described above, URI believes that this improvement to the Area Permit is appropriate as it will allow URI to focus sampling and analyses efforts on the key indicator parameters (i.e., conductivity and chloride) without spending time and resources performing analyses on parameters that are known to readily attenuate in the groundwater (i.e., uranium and alkalinity).

This change to the Area Permit will necessitate modifying the individual production area authorizations (PAA) associated with the Rosita Area Permit that have not completed restoration (i.e., PAA-3 and PAA-5). This will be necessary as uranium is listed as an excursion parameter in these individual PAA permits.

URI requests changes to Attachment B of UR02880-031 to remove uranium as an excursion parameter as follows:

ATTACHMENT B
CONTROL PARAMETER UPPER LIMITS TABLE

Control Parameter	Production Zone	Non Production Zone
Chloride, mg/l	1537.5	See permit provision IV. C.
Conductivity, µmhos/cm	6637.5	See permit provision IV. C.

URI requests a similar change to Attachment 5 of UR02880PAA5 to remove uranium as an excursion parameter for the same reasons given above.

ATTACHMENT 5
CONTROL PARAMETER UPPER LIMITS TABLE

Production Zone (“B” Sand)

Control Parameter	Upper Limit
Chloride, mg/l	1,425
Conductivity, umhos/cm	4,450

Non-Production Zone (1st Overlying “B” Sand)

Control Parameter	Upper Limit
Chloride, mg/l	878
Conductivity, umhos/cm	3,350

IX. Restoration

Once the economic recovery limit of a well field was reached, lixiviant injection stopped and the affected ground water was treated (restored) to return the quality of water to regulatory standards as specified in 30 TAC § 331.46 and 30 TAC § 331.107.

The injection water utilized by URI was natural ground water fortified with oxygen and was benign compared to the acidic or ammonia bicarbonate solutions that were used in earlier in-situ operations. Early injection water had the common trait of introducing foreign substances to the ground water during uranium recovery, which ultimately caused restoration difficulties.

The injection water for this project simply changed the oxidation state of the host rock and utilized natural ionic materials within the water as complexing agents. The pH remains neutral. The recovery process did not introduce new chemical species to the ground water system but did elevate certain species that are native to the host aquifer. Restoration is centered on reducing naturally occurring constituents in ground water which become elevated as a result of the mining process.

Naturally occurring radioactive materials which were elevated during the ISR process, especially uranium and its progeny, are the most significant parameter limiting pre-mining use of the water and are subjected to the closest scrutiny during restoration.

A. Description of restoration procedures

Restoration of the production zone is being achieved by reverse osmosis (RO) treatment. With the reverse osmosis techniques, injection and extraction operations continue at the facility. Produced water is processed through a RO unit which produces a nearly deionized fluid for reinjection. The injection solution passes through the pores of the aquifer formation and replaces the affected solutions which are pumped to the surface. The net effect is that the resulting interstitial ground water quality becomes consistent with, and in many cases better than, pre- mining quality. The primary benefit of RO treatment is that a large fraction of the total water extracted is purified and reinjected, resulting in less water consumption and less ground water drawdown in the area.

Up to 500 gallons per minute of groundwater is extracted from the mined zone. This water is then processed by RO treatment. Following RO treatment there are two grades of water, product or deionized water and reject or brine. The deionized water is reinjected into the mined zone at a rate of up to 335 gallons per minute which enhances restoration directly by sweeping the well fields. The brine is disposed of by deep well injection.

Osmosis is a natural process that occurs in all living cells. With an appropriate semi-permeable membrane as a barrier to solutions of differing concentrations, naturally occurring osmotic pressure forces pure water from the dilute solution to pass through the membrane and dilute the more concentrated solution. This process continues until equilibrium exists between the two solutions.

RO is a reversal of the natural osmotic process. By applying an opposite pressure greater than the naturally- occurring osmotic pressure on water containing dissolved solids, the majority of this water is passed through the membrane, resulting in the concentration of the original solution. The membrane rejects the passage of the majority of the dissolved solids while concurrently permitting the passage of water.

RO has been evolving since its inception during the mid-sixties. Originally, very high pressures were needed to produce water of sufficient quantity and quality which translated into exorbitant electrical costs. However, with the advent of thin film composite membranes, the required pressures needed to sustain commercial operations have been greatly reduced.

URI used the spiral wound polyamide thin film composite membranes or equivalent for the Rosita solution mining project. These membranes were selected primarily due to their inherent rejection characteristics for the full range of dissolved solids and low pressure operating requirements. Spiral wound membranes have a greater ability to flush particulates through to brine (i.e. non-fouling) unlike their predecessor, the hollow filament membranes, which were easily plugged by precipitates and other micron size debris.

B. Documentation of the effectiveness of the restoration procedure

The restoration of ground water at the Rosita ISR site has the benefit of a previously engineered array of injection and production wells that were initially installed in a configuration to maximize sweep efficiently throughout the uranium ore body, and maximize uranium recovery. The same engineering principals hold for maximum sweep efficiency during the restoration phase. In other words, ground water restoration is performed uniformly throughout the production zone and verified at individual sampling points. These engineering principles assure the restoration approach is sound.

As explained above, restoration of the production zone was achieved by RO treatment where the produced water processed through a RO unit produces a nearly deionized fluid for reinjection. This process proved to be effective on a commercial scale at two production areas at the Rosita site. Following the restoration and stability required in 30TAC331.107, URI submitted applications to the TCEQ dated November 22, 2010 and December 06, 2010 for amendment to the restoration tables of UR0288PAAl and UR02880PAA2.

Restoration to exact pre-mining average concentration on a parameter-by-parameter basis was found not to be feasible at the Rosita production areas. To the extent that water quality parameters could not be returned to the identical average pre-mining baseline levels, URI proposed a secondary goal that was to return water quality to protective levels provided for in 30TAC§331.107(g). In determining if groundwater had met the proposed secondary goal, URI's applications addressed:

- Uses for which the groundwater was suitable at baseline water quality levels.
- Actual existing use of groundwater in the area prior to and during mining.
- Potential future use of groundwater of baseline quality, and of proposed restoration quality.
- The effort made by the permittee to restore the groundwater to baseline.
- Technology available to restore groundwater for particular parameters.
- The ability of existing technology to restore groundwater to baseline quality in the area under consideration.
- The cost of further restoration efforts.
- The consumption of groundwater resources during further restoration.
- The harmful effects of levels of particular parameter.

Based on these criteria, URI demonstrated to TCEQ that leaving a parameter at the higher concentration would not threaten public health and safety, and that on a parameter-by-parameter basis, water use would not be significantly degraded. Restoration to the amended levels was approved on October 5, 2011.

C. Description of the procedure to be used to document and report restoration progress

Restoration rates are monitored through analysis of waters produced from the formation. Typically, a sample is taken weekly from the composite production line and analyzed for conductivity, chloride and uranium. When this data indicates that restoration is at or near completion, each original baseline well may be sampled and analyzed for the parameters Ca, Na, HCO_3,SO_4, Cl, Ec and U to further assess restoration success.

If the well field value for each chemical parameter is consistent with pre-existing conditions, restoration will be considered to be complete and the stability period begins. Stability will be determined by three sample sets taken at two-month intervals from the original baseline wells and analyzed for the parameters associated with the restoration table for the specified PAA permits.

D. Description of the fluid handling capacity

WDW-250 is permitted to accept an average flow rate of 200 gpm, with a maximum instantaneous injection rate 300 gallons per minute. The disposal well can facilitate a maximum nominal RO capacity of up to 500 gpm (i.e. 66 % product water; 33% brine).

The Rosita facility includes a central plant and RIX satellite facilities. The lixiviant bleed during operation of the PAA-3 and PAA-5 may reach a maximum of 20 gallons per minute. During restoration the reverse osmosis reject may reach up to 165 gallons per minute. Waste quantities from the central plant are made up of recycled bleed or restoration water and do not add to the overall quantity stated above requiring disposal. In no case do the combined amounts of water from production and restoration exceed 200 gallons per minute. The fluid balance for the Rosita site is presented in Table V-1.

Bleed and restoration waste is transferred to a holding tank and injected directly into WDW-250 which has a nominal capacity of 200 gpm. Evaporation ponds at the site can be used for management of wastewater.

X. Aquifer Exemption

The uranium-bearing mineralized portion of the Goliad aquifer in all developed and projected future production areas at the Rosita site have been exempted as required in 30 TAC § 331.13. Copies of the approval letters from the US Environmental Protection Agency are provided in Appendix X-1. A map depicting the aquifer exemptions is included in the Mine Plan Map (Figure VI-1).

XI. Permit Range Table

The passage of HB-1079 into law on June 14, 2013 elicited a series of changes relating to restoration and the development of a mine Permit Range Table. The law requires that from this point forward, all new, amended, or renewed permit must incorporate a table of pre-mining low and high values representing the range of groundwater quality within the permit boundary for each water quality parameter used to measure groundwater restoration in a commission-required restoration table.

The values in the permit range table must be established from pre-mining baseline wells and all available wells within the area of review, including those in the existing or proposed permit boundary and any existing or proposed production areas. Wells used for that purpose are limited to those that have documented completion depths and screened intervals that correspond to a uranium production zone aquifer identified within the permit boundary.

URI, Inc. prepared a Permit Range Table for the uranium production zone aquifer currently authorized within Mine Area Permit UR02880. This uranium production zone aquifer is a portion of the Goliad Sand.

This Permit Range Table was developed by utilizing the data associated with the production area and mine area baseline wells and perimeter monitor wells that were submitted with each of the production area authorizations and subsequently approved by TCEQ.

The dataset associated with the development of the Permit Range Table was expanded as a result of the recent approval of PAA-5 in September 2023. The production area wells (i.e., perimeter monitor wells and baseline wells) associated with the PAA-5 application are considered pre-mining water quality wells as no mining has occurred in this area.

As specified in 30 TAC 305.40.a.(10), the permit range table shall be established from analysis of independent and representative groundwater samples, collected prior to mining from all baseline wells required within the area of review associated with the existing or proposed permit and all available wells within the existing or proposed permit boundary, provided the well is completed within the production zone identified in the existing or proposed permit. The baseline wells and production zone wells associated with PAA-5 meet fall into this category, and therefore, as stated in the regulation, the permit range table shall be established using such data.

Provided in Appendix XI-1 are the summary tables depicting the Permit Range Table water quality dataset which is comprised of all the individual pre mining/baseline water quality dataset incorporated into each of the PAAs issued under Area Permit UR02880. These tables are identified within each PAA permit as Attachment 4 or Attachment 4A.

This data, which meets the criteria listed in 30 TAC 305.40.a.(10), was used to establish an updated Permit Range Table for Area Permit UR02880, which is presented in Appendix XI-2.

As part of this permit renewal application and to comply with 30 TAC 305.40.a.(10), URI requests that TCEQ approve this updated Permit Range Table for Area Permit UR202880.

ATTACHMENTS

ATTACHMENT A

CORE DATA FORM

TCEQ Use Only

TCEQ Core Data Form

For detailed instructions regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission *(If other is checked please describe in space provided.)*

☐ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.)*

☒ Renewal *(Core Data Form should be submitted with the renewal form)* ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number *(if issued)***
CN 600604417		RN 102380805

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy) 12/1/2022

☐ New Customer ☒ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* — *If new Customer, enter previous Customer below:*

URI, Inc.

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0007495706	17522021876	752202187	

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☐ 0-20 ☒ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☒ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:
641 E. FM 1118

City	Kingsville	State	TX	ZIP	78363	ZIP + 4	

16. Country Mailing Information *(if outside USA)*	**17. E-Mail Address** *(if applicable)*
	dacalderon@encoreuranium.com

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** *(if applicable)*
(361) 595-5731		(361) 595-0403

SECTION III: Regulated Entity Information

21. General Regulated Entity Information *(If 'New Regulated Entity" is selected below this form should be accompanied by a permit application)*
☐ New Regulated Entity ☐ Update to Regulated Entity Name ☒ Update to Regulated Entity Information

The Regulated Entity Name submitted may be updated in order to meet TCEQ Agency Data Standards (removal of organizational endings such as Inc, LP, or LLC).

22. Regulated Entity Name *(Enter name of the site where the regulated action is taking place.)*

Rosita Project

23. Street Address of the Regulated Entity: *(No PO Boxes)*								
	City		**State**		**ZIP**		**ZIP + 4**	
24. County								

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	about 11 miles NW of San Diego, TX, and about 1 mile NE of the intersection of SH 44 and FM 3196 in Duval County				
26. Nearest City				**State**	**Nearest ZIP Code**
San Diego				TX	78384
27. Latitude (N) In Decimal:			**28. Longitude (W) In Decimal:**		
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
27	49	12	98	24	28

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
1094		212291	331419

33. What is the Primary Business of this entity? *(Do not repeat the SIC or NAICS description.)*

Uranium mining and processing and groundwater restoration.

34. Mailing Address:	641 E. FM 1118							
	City	Kingsville	**State**	TX	**ZIP**	78363	**ZIP + 4**	
35. E-Mail Address:	dacalderon@encoreuranium.com							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(361) 595-5731		(361) 595-403

39. TCEQ Programs and ID Numbers Check all Programs and write in the permits/registration numbers that will be affected by the updates submitted on this form. See the Core Data Form instructions for additional guidance.

☐ Dam Safety	☐ Districts	☐ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☒ Other: UIC, RML

SECTION IV: Preparer Information

40. Name:	Peter Luthiger	**41. Title:**	Chief Operating Officer

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(361) 239-5449		(361) 239-5086	pluthiger@encoreuranium.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	URI, Inc.	**Job Title:**	Chief Operating Officer
Name *(In Print):*	Peter Luthiger	**Phone:**	(361) 239- **5449**
Signature:	peter luthiger	**Date:**	20 Jun 2024

ATTACHMENT B

PUBLIC INTEREST DEMONSTRATION

ATTACHMENT B

PUBLIC INTEREST DEMONSTRATION

Section 27.051 of the Texas Water Code (TWC) provide that “[t]he commission may grant an mine permit renewal application and may issue a permit if it finds:

1. **The use or installation of the injection well is in the public interest. [TWC 27.051(a)(1)]**

   URI, Inc. has been permitted since April 1987. Renewal of the mine area permit will provide ongoing employment and economic benefit to the county and surrounding areas for many years. The industry is necessary for sustaining nuclear power plant fuel demands here in Texas and the rest of the United States.

   Since there is currently no practical, economically feasible alternative to ISR in South Texas, prohibiting the use of injection wells to recover this resource will either shut down the industry in Texas or force the industry to turn to more costly and invasive methods of recovery. A negative regulatory climate could also force the industry to focus its recovery activities in other uranium-rich states. Neither of these scenarios is in the public’s best interest.

   According to the Department of Energy, the National Energy Policy recommends expanding the role of nuclear energy as a major component of the United States “energy picture”. Meanwhile, energy demand in the United States is expected to grow by almost 50% by 2030, according to the Energy Information Administration.

   Sufficient, reasonably priced energy is essential for economic development. Nuclear energy, and therefore recovery of uranium, is a vital part of Texas and the United States economic development.

   Public Health and Welfare has been addressed in current operations and in the proposed mine area permit renewal. URI, Inc. commenced operations at Rosita in 1989 and throughout its operating history, no significant impacts to the public health and the environment have occurred. Continued compliance with TCEQ rules and permit conditions and utilization of Standard Operating Procedures along with regular TCEQ inspection and review of the overall operations will assure that no significant impacts will occur as a result of operations in the proposed expanded permit area.

Ongoing radiological testing has shown no measureable impact at the project boundary and acceptable levels within the existing permit boundaries. Protective measures already successfully implemented for URI, Inc. employees will result in a high level of protection for the general public as well. Compliance with these standards has been demonstrated that worker exposure to radioactive materials is kept As Low As Reasonably Achievable (ALARA) through these key components:

1. Measurements with numerous instruments during operations;
2. Bioassays;
3. Unannounced inspections by the Radiation Safety Officer;
4. Annual audits of the Radiation Safety Program;
5. Utilization of Standard Operating Procedures;
6. Worker external radiation exposures monitored with dosimetry;
7. TCEQ inspections; and
8. Recordkeeping and other mechanisms

2. That no existing rights, including, but not limited to, mineral rights, will be impaired. [TWC 27.051(a)(2)]

Renewing the mine permit for the URI, Inc. Rosita facility will not impair any existing rights, including mineral rights. On the contrary, it will allow the mineral owners within the permit area to utilize and benefit from their mineral rights. In addition, permit renewal at the URI Rosita facility will not affect the operation of any existing exempt or permitted groundwater well inside or outside the existing permit area. Finally, all surface owners within the proposed expanded permit area are also mineral owners. Consequently, no surface property rights will be impaired by the project.

3. **That, with proper safeguards, both ground and surface fresh water can be adequately protected from pollution. [TWC 27.051(a)(3)]**

A large portion of Mine Permit and Production Area Authorization (PAA) applications are devoted to addressing the protection of groundwater quality. Specifically, hydrological testing to fully characterize the portions of the aquifer to be mined and the placement of monitoring wells both within and overlying the ore zones are described; the geology and the mine area – with particular emphasis on the confining clay layers and the attached cross-sections; well completion, construction, and mechanical integrity requirements are addressed in, along with measures to prevent and address excursions; reverse osmosis groundwater cleanup is utilized concurrent with mining operations and in each production area after mining is concluded; and finally, well plugging and abandonment and financial assurance to guarantee proper plugging and abandonment are discussed.

Exploration drilling and plugging activities are under the jurisdiction of the Texas Railroad Commission and compliance is assured through routine monthly inspections. All aspects of exploration, mining, production and restoration activities are subject to thorough review and approval by the TCEQ and Railroad Commission of Texas through permitting and licensing processes prior to the initiation of activities. All of these measures are designed to maintain the quality of any freshwater that exists in areas surrounding the ore sands.

4. **That the applicant has made a satisfactory showing of financial responsibility if required by section 27.073 of this code. [TWC 27.051(a)(4)]**

URI, Inc. currently has fully funded financial assurance for aquifer restoration and site reclamation for all Production Area Authorizations (PAAs) within the existing mine permit area. Prior to initiating injection operations in new TCEQ permitted PAAs, URI Inc. will fund the surety in compliance with 30 TAC §37.9030.

5. **That the compliance history of the applicant and related entities is acceptable. [TWC 27.051(d)(1)]**

The table below provides information specific to the compliance history associated with the permits/licenses issued by TCEQ that are currently held by URI, Inc. for the Rosita site.

TCEQ Compliance History Search

Compliance History - RN102380805

Regulated Entity Information

RN: RN102380805
Name: ROSITA PROJECT
Location: APPROX 11 MI NW OF SAN DIEGO OFF OF SH-44 IN DUVAL COUNTY TX
County: DUVAL
Region: REGION 16 - LAREDO

Compliance History by Customer

There are 2 customers associated to this site. The Customer's compliance history for the site is displayed below.

1-2 of 2 Records

CN ▲	Customer Name	Related Program IDs	Rating	Classification	Date Rated
CN600604417	URI INC	UICIHW UR02880PAA1 UICIHW UR02880PAA2 UICIHW UR02880PAA3 UICIHW UR02880PAA5 UICIHW WDW250 URANIUM R03653	0.36	SATISFACTORY	09/01/2023
CN601086952	WESTWATER RESOURCES INC	UICIHW UR02880	0.00	HIGH	09/01/2023

1-2 of 2 Records

Source: TCEQ website 4/3/2024

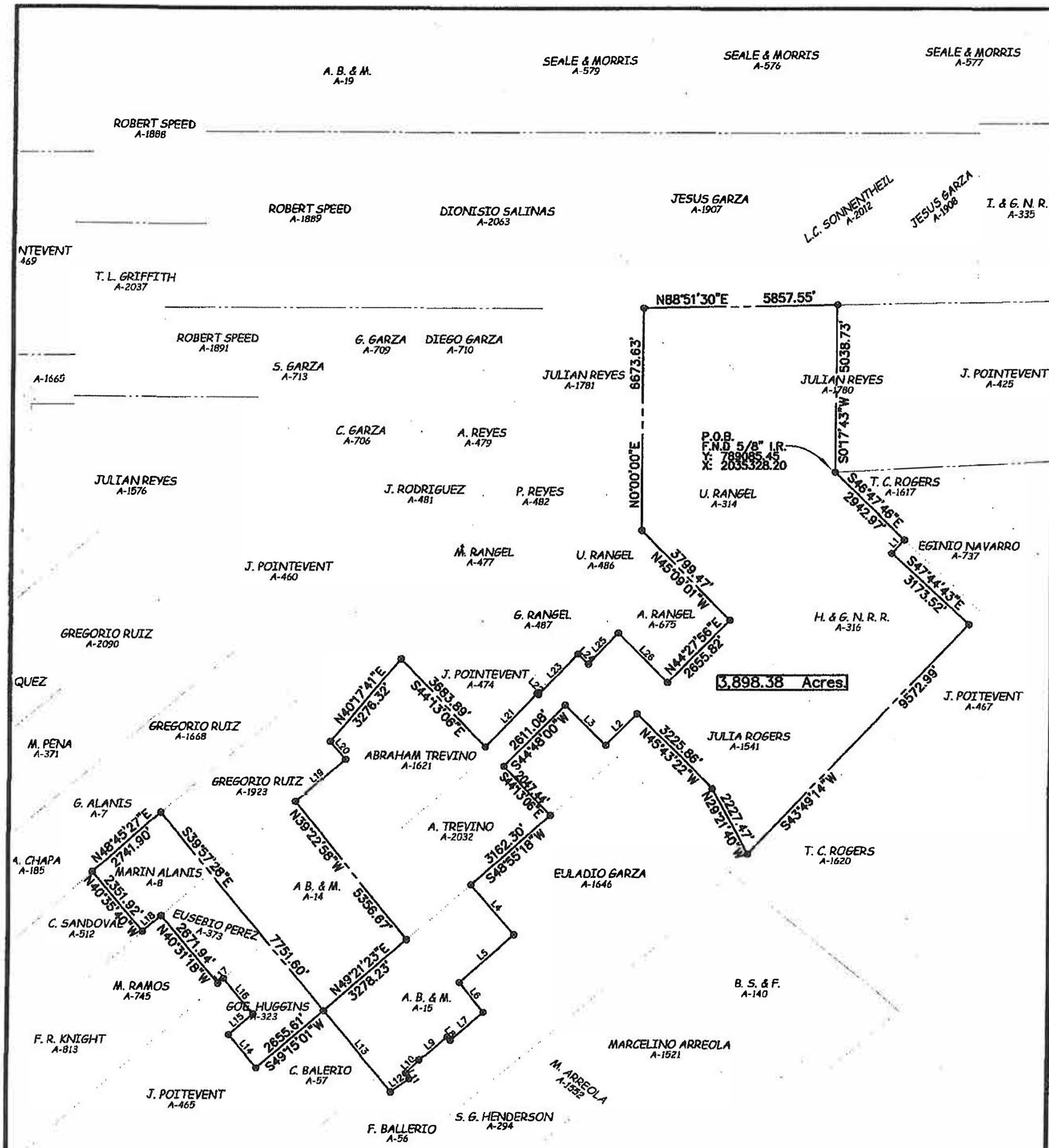
6. Whether there is no practical, economic, and feasible alternative to an injection well reasonably available. [TWC 27.051(d)(2)]

URI, Inc. has produced uranium since 1989 at this location utilizing injection wells under TCEQ uranium mining permit UR02880. This permit application is for renewing the existing mining permit so that this successful operation can be continued.

There are alternative methods for recovering uranium that do not involve the use of injection wells – e.g., underground and surface (open pit) mining – but these alternatives are not practical, economic, nor feasible in South Texas. For example, surface mining is not practical in many areas throughout South Texas because the vast majority of the ore deposits are not near the surface and the recovery cost is prohibitive in the current market; underground mining is not practical in South Texas for similar economic reasons. Both methods would entail dewatering the portions of the aquifer in which the ore is deposited. Similarly, both of these methods have significantly higher production costs than in situ recovery ("ISR") and therefore, the economics of the ore reserve must be commensurately higher to make these types of recovery feasible from an economic standpoint. As is true of other ISR projects, the nature of the deposits (ore grade, recoverable pounds and depth) at the URI, Inc. Rosita project do not lend themselves to recovery by costly surface or underground mining. In short, there is no recovery alternative that is economically feasible.

ATTACHMENT C

LEGAL DESCRIPTION



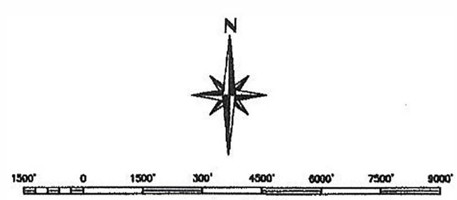
NUM	BEARING	DISTANCE
L1	S43°11'57"W	553.59'
L2	S44°35'16"W	1342.60'
L3	N45°29'26"W	1730.90'
L4	S41°07'27"E	1999.48'
L5	S49°01'10"W	2193.87'
L6	S39°46'34"E	1153.74'
L7	S49°11'26"W	1312.08'
L8	N41°05'49"W	137.16'
L9	S49°38'15"W	1091.86'
L10	S44°16'47"W	570.38'
L11	S29°48'53"E	193.76'
L12	S54°26'22"W	676.25'
L13	N39°56'53"W	3205.98'
L14	N40°35'40"W	1320.54'
L15	N49°22'35"E	971.86'
L16	N40°31'18"W	1394.85'
L17	S48°45'27"W	227.16'
L18	S48°45'27"W	749.93'
L19	N50°05'15"E	1959.28'
L20	N40°28'00"W	710.58'
L21	N43°56'19"E	2259.12'
L22	S44°20'37"E	51.79'
L23	N44°10'36"E	1694.89'
L24	S46°00'56"E	428.11'
L25	N43°59'29"E	1304.58'
L26	S45°09'01"E	2120.63'

PLAT OF:

URANIUM RESOURCES INC.

ROSITA PERMIT UNIT

Being a total of 3898.34 acre tract, being approximately 10 miles west-northwest from San Diego, Texas and being part of the original surveys THE JULIAN REYES SURVEY, ABSTRACT-1781, THE U. RANGEL SURVEY, ABSTRACT-314, THE JULINA REYES SURVEY, ABSTRACT-1781, THE H. & G. N. R. R. SURVEY, ABSTRACT-316, THE JULIAN ROGERS SURVEY, ABSTRACT-1541, THE J. POINTEVENT, ABSTRACT-474, THE ABRAHAM TREVINO SURVEY, ABSTRACT-1621, THE A. B. & M. SURVEY, ABSTRACT-14, THE A. B. & M. SURVEY, ABSTRACT-15, THE GEO HUGGIS SURVEY, ABSTRACT-323, THE F. BALLERIO SURVEY, ABSTRACT-56, THE EUSEBIO PEREZ SURVEY, ABSTRACT-373 and all of THE MARIAN ALANIS SURVEY, ABSTRACT-8 and THE A. TREVINO SURVEY, ABSTRACT-2032 and all being located in Duval County, Texas



SCALE: 1" = 3000' FEET

I HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS THE SUBJECT PERMIT LEASE LINE AS SURVEY ON THE GROUND.
THIS DAY OF DECEMBER 12, 2012.

STATE OF TEXAS REGISTERED VICTOR S. MEDINA 3419 PROFESSIONAL LAND SURVEYOR

VICTOR S. MEDINA
REGISTERED PROFESSIONAL LAND SURVEYOR
LICENSE NO. 3419

ALL BEARINGS AND COORDINATES REFER TO THE TEXAS STATE PLANE COORDINATE SYSTEM OF 1927, TEXAS SOUTH ZONE

TEXAS GEO TECH
LAND SURVEYING, INC
Subsidiary of Medina Consultants
6330 Saratoga Blvd. – Suite C
Corpus Christi, TX 78414
(361) 993-0808 Fax (361) 993-2955

Completion Date: 12/12/12	Checked by: VSM
Scale: 1" = 3000'	File Name: 121204
Drawn by: RC	Surveyed by: JN & DG

TexasGeoTech
LAND SURVEYING, INC.

3,898.34 ACRE
ROSITA PERMIT UNIT

Being a total of **3898.34** acre tract, being approximately 10 miles west-northwest from San Diego, Texas and being part of the original surveys **THE JULIAN REYES SURVEY, ABSTRACT-1781, THE U. RANGEL SURVEY, ABSTRACT-314, THE JULINA REYES SURVEY, ABSTRACT-1781, THE H. & G. N. R. R. SURVEY, ABSTRACT-316, THE JULIAN ROGERS SURVEY, ABSTRACT-1541, THE J. POINTEVENT, ABSTRACT-474, THE ABRAHAM TREVINO SURVEY, ABSTRACT-1621, THE A. B. & M. SURVEY, ABSTRACT-14, THE A. B. & M. SURVEY, ABSTRACT-15, THE GEO HUGGIS SURVEY, ABSTRACT-323, THE F. BALLERIO SURVEY, ABSTRACT-56, THE EUSEBIO PEREZ SURVEY,ABSTRACT-373** and all of **THE MARIAN ALANIS SURVEY, ABSTRACT-8** and **THE A. TREVINO SURVEY, ABSTRACT-2032** and all being located in Duval County, Texas, said **3898.34** acre tract being more fully described by metes and bounds as follows;

BEGINNING at a found 5/8inch iron rod, having a coordinate of Y: 789085.45 and X: 2035328.20, said 5/8inch iron rod being the common survey corner of said **JULIAN REYES SURVEY, ABSTRACT-1781,** said **THE U. RANGEL SURVEY, ABSTRACT-314** and **THE T.C. ROGERS SURVEY, ABSTRACT-1617**, said 5/8inch iron rod being a corner of this tract;

THENCE S 46° 47' 46" E, with the common survey line of said **JULIAN REYES SURVEY, ABSTRACT-1781,** said **THE H. & G. N. R. R., ABSTRACT-316** and the said **THE T.C. ROGERS SURVEY, ABSTRACT-1617** a distance of 2942.97 feet to a fence corner for the west survey line of **THE EGINIO NAVARRO SURVEY, ABSTRACT-737**, and being a corner of this tract;

THENCE S 43° 11' 57" W, a distance of 553.59 feet to a fence corner for an interior corner of this tract;

THENCE S 47° 44' 43" E, a distance of 3173.52 feet to a fence corner post found on the south survey line of said **THE H. & G. N. R. R., ABSTRACT-316** and being on the north survey line of THE J. POITEVENT SURVEY ABSTRACT-467, said fence corner post being the most easterly corner of this tract;

THENCE S 43° 49' 14" W, with the south survey line of said **THE H. & G. N. R. R., ABSTRACT-316** and the south survey line of said **JULIA ROGERS SURVEY, ABSTRACT-1541,** to a fence corner post found on the south survey line of said **JULIA ROGERS SURVEY, ABSTRACT-1541,** same being on the north survey line of **THE T.C. ROGERS SURVEY, ABSTRACT-1620,** a distance of 9572.99 feet to a fence corner post being a corner of this tract;

THENCE N 29° 21' 40" W, a distance of 2227.47 feet to a fence corner post for a corner of this tract;

THENCE N 45° 43' 22" W, a distance of 3225.86 feet to a fence corner post found on the north survey line of said **JULIA ROGERS SURVEY, ABSTRACT-1541,** and same being on the southeast survey line of said **THE J. POINTEVENT SURVEY, ABSTRACT-474,** said fence corner post being a corner of this tract;

THENCE S 44° 35' 16" W, with the common survey line of said **JULIA ROGERS SURVEY, ABSTRACT-1541** and the said **THE J. POINTEVENT SURVEY, ABSTRACT-474,** a distance of 1342.60 feet to a fence corner post for the west corner of said **JULIA ROGERS SURVEY, ABSTRACT-1541,** and being a corner of this tract;

THENCE N 45° 29' 26" W, a distance of 1730.90 feet to a found fence corner post for a corner of this tract;

THENCE S 44° 48' 00" W, a distance of 2611.08 feet to a fence corner post found for a corner of this tract;

THENCE S 44° 13' 06" E, a distance of 2047.44 feet to a fence corner post found on the north survey line of **THE EULADIO GARZA, ABSTRACT-1646,** same being on the south survey line of said **THE ABRAHAM TREVINO SURVEY, ABSTRACT-1621,** said fence corner being a corner of this tract;

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THENCE S 48° 55' 18" W, with the common survey line of said **THE ABRAHAM TREVINO SURVEY, ABSTRACT-1621** and the said **THE EULADIO GARZA, ABSTRACT-1646**, a distance of 3162.30 feet to a found 5/8inch iron rod and being the west survey corner of said **THE EULADIO GARZA, ABSTRACT-1646**, same being the north survey corner of said **THE A. B. & M., ABSTRACT-15** and being on the south survey line of said **A. TREVINO, ABSTRACT-2032**, said 5/8inch iron rod being a corner of this tract;

THENCE S 41° 07' 27" E, with the common survey line of said **THE EULADIO GARZA, ABSTRACT-1646** and **THE A. B. & M., ABSTRACT-15**, a distance of 1999.48 feet to a found 1/2inch iron rod for a corner of this tract;

THENCE S 49° 01' 10" W, a distance of 2193.87 feet to fence corner post for a corner of this tract;

THENCE S 39° 46' 34" E, a distance of 1153.74 feet to a fence corner post for a corner of this tract;

THENCE S 49° 11' 26" W, a distance of 1312.08 feet to a found 1/2inch iron rod for a corner of this tract;

THENCE N 41° 05' 49" W, a distance of 137.16 feet to a fence corner post for a corner of this tract;

THENCE S 49° 38' 15" W, a distance of 1091.86 feet to a fence corner post for a corner of this tract;

THENCE S 44° 16' 47" W, a distance of 570.38 feet to a found 5/8inch iron rod on the common survey line of said **A. B. & M., ABSTRACT-15** and said **THE F. BALLERIO SURVEY, ABSTRACT-56** and being a corner of this tract;

THENCE S 29° 48' 53" E, with the common survey line of said **A. B. & M., ABSTRACT-15** and said **THE F. BALLERIO SURVEY, ABSTRACT-56** a distance of 193.76 feet to a fence corner post for a corner of this tract;

THENCE S 54° 26' 22" W, a distance of 676.25 feet to a fence corner post for a corner of this tract;

THENCE N 39° 56' 53" W, a distance of 3205.98 feet to a fence corner post for the common corner of surveys **A. B. & M., ABSTRACT-15, THE C. BALERIO SURVEY, ABSTRACT-57, THE GOE HUGGINS SURVEY, ABSTRACT-323** and **THE A. B. & M., ABSTRACT-14**, said fence corner post being a corner of this tract;

THENCE S 49° 15' 01" W, with the common survey line between **THE C. BALERIO SURVEY, ABSTRACT-57** and **THE GOE HUGGINS SURVEY, ABSTRACT-323** a distance of 26.61 feet to a fence corner post for a point on the east survey line of **THE J. POITEVENT SURVEY, ABSTRACT-465**, and being a corner of this tract;

THENCE N 40° 35' 40" W, with the common survey line between **THE GOE HUGGINS SURVEY, ABSTRACT-323** and **THE J. POITEVENT SURVEY, ABSTRACT-465**, a distance of 1320.54 feet to a found 5/8inch iron rod for a corner of this tract;

THENCE N 49° 22' 35" E, a distance of 971.86 feet to a fence corner post for a corner of this tract;

THENCE N 40° 31' 18" W, a distance of 1394.85 feet to a fence corner post found on the common survey line of said **THE GOE HUGGINS SURVEY, ABSTRACT-323** and said **EUSEBIO PEREZ SURVEY, ABSTRACT-373** and being a corner of this tract;

THENCE S 48° 45' 27" W, with the common survey line of said **THE GOE HUGGINS SURVEY, ABSTRACT-323** and said **EUSEBIO PEREZ SURVEY, ABSTRACT-373**, a distance of 227.16 feet to a fence corner for a corner of this tract;

THENCE N 40° 31' 18 W, a distance of 2671.94 feet to a fence corner found on the common survey line of said **EUSEBIO PEREZ SURVEY, ABSTRACT-373** and said **MARIN ALANIZ SURVEY, ABSTRACT-8**, said fence corner being a corner of this tract;

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6330 SARATOGA BLVD. SUITE C – CORPUS CHRISTI, TEXAS 78414 – PHONE 361-993-0808 – FAX 361-993-2955

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THENCE S 48° 45' 27" W, with the common survey line of said **EUSEBIO PEREZ SURVEY, ABSTRACT-373** and said **MARIN ALANIZ SURVEY, ABSTRACT-8,** a distance of 749.93 feet to a fence corner post found for the common survey corner of said **EUSEBIO PEREZ SURVEY, ABSTRACT-373, MARIN ALANIZ SURVEY, ABSTRACT-8, THE M. RAMOS SURVEY, ABSTRACT-745** and **THE C. SANDOVAL SURVEY, ABSTRACT-512,** said fence corner post being the most westerly corner of this tract;

THENCE N 40° 35' 40" W, with the common survey line of said **MARIN ALANIZ SURVEY, ABSTRACT-8** and **THE G. ALANIZ SURVEY, ABSTRACT-7,** a distance of 2351.92 feet to a fence corner post for the common corner of said **MARIN ALANIZ SURVEY, ABSTRACT-8, THE G. ALANIZ SURVEY, ABSTRACT-7, THE C. SANDOVAL SURVEY** and **THE A. CHAPA SURVEY, ABSTRACT-185,** said fence corner post being a corner of this tract;

THENCE N 48° 45' 27" E, with the common survey line of said **MARIN ALANIZ SURVEY, ABSTRACT-8** and **THE G. ALANIZ SURVEY, ABSTRACT-7,** a distance of 2741.90 feet to a found 5/8inch iron rod on the common corner of surveys **MARIN ALANIZ SURVEY, ABSTRACT-8, THE G. ALANIZ SURVEY, ABSTRACT-7, THE GREGORIO RUIZ SURVEY, ABSTRACT-1668** and **THE GREGORIO RUIZ SURVEY, ABSTRACT-1923,** said 5/8inch iron rod being a corner of this tract;

THENCE S 39° 57' 28" E, with the common survey lines of said **MARIN ALANIZ SURVEY, ABSTRACT-8, THE GREGORIO RUIZ SURVEY, ABSTRACT-1923, EUSEBIO PEREZ SURVEY, ABSTRACT-373, THE GOE HUGGINS SURVEY, ABSTRACT-323,** and **THE A. B. & M. SURVEY, ABSTRACT-14,** a distance of 7751.60 feet to fence corner post for the common corner of said **A. B. & M. SURVEY, ABSTRACT-15, THE C. BALERIO SURVEY, ABSTRACT-57, THE GOE HUGGINS SURVEY, ABSTRACT-323** and **THE A. B. & M. SURVEY, ABSTRACT-14** and being a corner of this tract;

THENCE N 49° 21' 23" E, with the common survey line between **THE A. B. & M. SURVEY, ABSTRACT-14** and **THE A. B. & M. SURVEY, ABSTRACT-15,** a distance of 3278.23 feet to a fence corner post for a corner of this tract;
THENCE N 39° 22' 58" W, a distance of 5356.67 feet to a fence corner post found on the common survey line of said **THE A. B. & M. SURVEY, ABSTRACT-14** and **THE GREGORIO RUIZ SURVEY, ABSTRACT-1923,** said fence corner post being a corner of this tract;

THENCE N 50° 05' 15" E, with the common survey line between **THE A. B. & M. SURVEY, ABSTRACT-14** and **THE GREGORIO RUIZ SURVEY, ABSTRACT-1923,** a distance of 1959.28 feet to a found fence corner post and being the common survey line of said **THE A. B. & M. SURVEY, ABSTRACT-14, THE GREGORIO RUIZ SURVEY, ABSTRACT-1923** and said **THE ABRAHAM TREVINO SURVEY, ABSTRACT-1621,** said fence corner post being a corner of this tract;

THENCE N 40°28' 00" W, with the common survey line between said **THE ABRAHAM TREVINO SURVEY, ABSTRACT-1621** and **THE GREGORIO RUIZ SURVEY, ABSTRACT-1923,** a distance of 710.58 feet to a fence corner post found for a corner of this tract;

THENCE N 40° 17' 41" E, a distance of 3276.32 feet to a fence corner post found on the common survey line between said **THE ABRAHAM TREVINO SURVEY, ABSTRACT-1621** and **THE J. POINTEVENT, ABSTRACT-474,** and being a corner of this tract;

THENCE S 44° 13' 06 E, with the common survey line between said **THE ABRAHAM TREVINO SURVEY, ABSTRACT-1621** and **THE J. POINTEVENT, ABSTRACT-474,** a distance of 3683.89 feet to a fence corner post for a corner of this tract;

THENCE N 43° 56' 19" E, a distance of 2259.12 feet to a fence corner post found for a corner of this tract;

THENCE S 44° 20' 37" E, a distance of 51.79 feet to a fence corner post found for a corner of this tract;

THENCE N 44° 10' 36" E, a distance of 1694.89 feet to a fence corner post found for a corner of this tract;

THENCE S 46° 00' 56" E, a distance of 428.11 feet to a fence corner post found for a corner of this tract;

THENCE N 43° 59' 29" E, a distance of 1304.58 feet to a fence corner post found on the common survey line between **THE A. RANGEL SURVEY, ABSTRACT-675** and the said **THE J. POINTEVENT, ABSTRACT-474,** and being a corner of this tract;

THENCE S 45° 09' 01" E, with the common survey line of **THE A. RANGEL SURVEY, ABSTRACT-675** and the said **THE J. POINTEVENT, ABSTRACT-474**, a distance of 2120.63 feet to a fence corner post found for the common corner of said **THE A. RANGEL SURVEY, ABSTRACT-675, THE J. POINTEVENT, ABSTRACT-474** and **THE JULIA ROGERS SURVEY, ABSTRACT-1541** and being a corner of this tract;

THENCE N 44° 27' 56" E, with the common survey line between **THE A. RANGEL SURVEY, ABSTRACT-675,** and **THE JULIA ROGERS SURVEY, ABSTRACT-1541,** a distance of 2655.82 feet to a fence corner post and being the common survey corner of said **THE U. RANGEL SURVEY, ABSTRACT-314, THE H. & G. N. R. R. SURVEY, ABSTRACT-316, THE A. RANGEL SURVEY, ABSTRACT-675** and **THE JULIA ROGERS SURVEY, ABSTRACT-1541,** said fence corner post being a corner of this tract;

THENCE N 45° 09' 01" W, with the common survey line between **THE A. RANGEL SURVEY, ABSTRACT-675, THE U. RANGEL SURVEY, ABSTRACT-486,** and **THE U. RANGEL SURVEY, ABSTRACT-314,** a distance of 3799.47 feet to a point for a corner of this tract;

THENCE NORTH, a distance of 6673.63 feet to a point for a corner of this tract;

THENCE N 88° 51' 30" E, with the common survey line of **THE JESUS GARZA SURVEY, ABSTRACT-1907, L.C. SONNENTHEIL SURVEY, ABSTRACT-2012** and said **THE JULIA REYES SURVEY, ABSTRACT-1780,** a distance of 5857.55 feet to a fence corner post for a corner of this tract;

THENCE S 00° 17' 43" W a distance of 5038.73 feet to the **PLACE OF BEGINNING** and containing **3,898.38** acres of land, more or less.

All bearings and distances refer to the TEXAS STATE PLANE COORDINATE SYSTEM OF 1927, TEXAS SOUTH ZONE. This Field Notes Description constitutes a legal document, and, unless it appears in its entirety, in its original form, including preamble, seal and signature, surveyor assumes no responsibility or liability for its correctness. It is strongly recommended, for the continuity of future surveys, that this document be incorporated in all future conveyances, without any revisions or deletions.

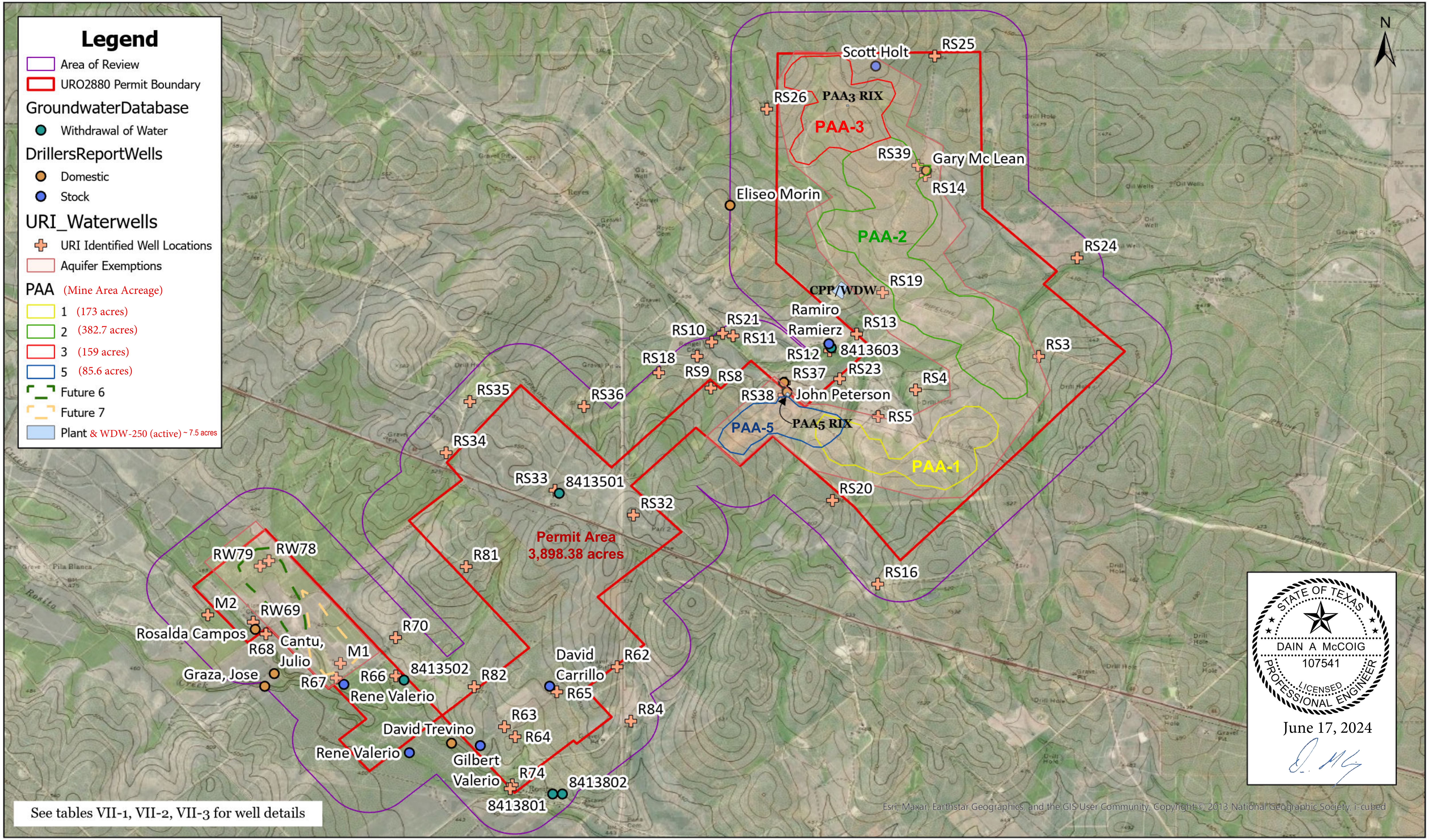
Victor S. Medina
Registered Professional Land Surveyor
License Number 3419

December 13, 2012
121206.doc

STATE OF TEXAS
REGISTERED
VICTOR S. MEDINA
3419
PROFESSIONAL
LAND SURVEYOR

ATTACHMENT D

TOPOGRAPHIC MAP - ROSITA SITE



0 0.25 0.5 1 1.5 2 Miles

Texas Engineering Firm No. 23615

ATTACHMENT D - Topographic Map of Rosita Site
April 2024

Revised June 2024

enCore energy

ATTACHMENT E

PLAIN LANGUAGE SUMMARY

Attachment E

Plain Language Summary

URI, Inc., a subsidiary of enCore Energy US Corporation, has submitted a renewal application for its existing Area Permit to conduct mining operations under the TCEQ Underground Injection Control Program. The mining operation produces a uranium product (also known as yellowcake) that is used for generation of electricity by nuclear power plants. The Rosita Project is located about 11 miles northwest of San Diego, Texas and about 1 mile northeast of the intersection of State Highway 44 and FM 3196 off County Road 330 and County Road 333 in Duval County.

The Area Permit establishes an area within the boundaries where the applicant will be able to perform in-situ mining and groundwater restoration operations. The facilities comprise of individually permitted wellfields (i.e., PAAs) where the naturally-occurring groundwater with added oxygen, carbon dioxide and/or baking soda is circulated through the orebody and pumped to an ion exchange facility where the recovered minerals are removed from the water prior to being recirculated back to the wellfield.

The facilities will comprise of a wellfield consisting of PVC cased water wells where the naturally-occurring groundwater with added oxygen, carbon dioxide and/or baking soda is circulated through the orebody and removed using the water wells and pumped to an ion exchange facility where the recovered minerals are removed from the water prior to the water being recirculated back to the wellfield for additional mineral recovery. The ion exchange system resin containing the recovered minerals will be transferred to a licensed facility for uranium removal and further processing of the uranium into the final product commonly known as "yellowcake."

Following completion of mining, the facility conducts groundwater restoration utilizing various restoration techniques including reverse osmosis treatment of groundwater. The restoration process will continue until groundwater quality is consistent with permit conditions.

Expected air emissions include fugitive dust and vehicle exhaust, possible oxygen and carbon dioxide and radon gas from the wellfields. There are no routine surface water-related discharges from the Project. Groundwater used during operation of the Project would be confined to the portions of the ore zone within the aquifer exemption boundary; therefore, no impacts to groundwater outside the aquifer exemption area are anticipated from normal operations.

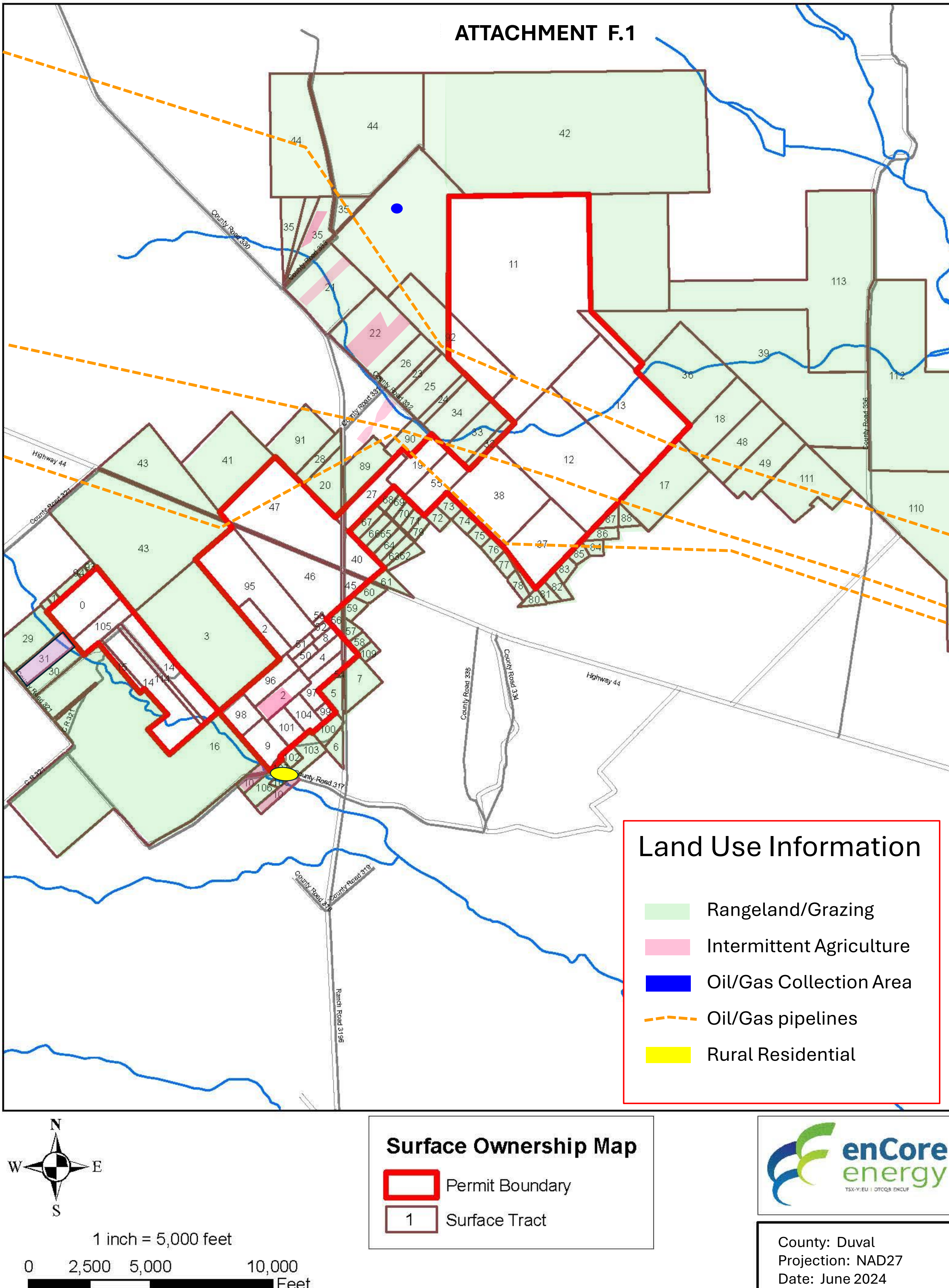
Liquid effluents associated with the Project are disposed of in TCEQ permitted waste disposal wells. Mine water is contained within wellfields by withdrawing more water than is injected. This is verified by measuring water quality in monitor wells installed around each wellfield two times per month. Pipeline pressures are monitored, and pumps will automatically shut down if the pressure suddenly increases or decreases. The ion exchange facility is curbed to contain any potential spills or leaks. Personnel performing uranium recovery activities are rigorously trained in the safe operation of the facility to minimize the potential for upset conditions to occur.

URI maintains a robust health physics and environmental monitoring program to ensure that the Project does not have an adverse impact on human health, the public or the environment. Records for each of these programs are maintained by URI and reported to TCEQ as necessary. During uranium recovery operations, the groundwater containing uranium and radon gas is kept in a pressurized system, such that radon gas is not released. During certain uranium processing steps, small amounts of radon gas may be released to the atmosphere. URI monitors radon concentrations during operations to ensure employee health and safety and to confirm any radon emissions are in compliance with TCEQ requirements.

ATTACHMENT F

INFORMATION REQUIRED TO PROVIDE NOTICE

Attachment F-1	Surface Ownership Map
Attachment F-2	Surface Ownership List
Attachment F-3	Mineral Ownership Map
Attachment F-4	Mineral Ownership Map
Attachment F-5	Mailing Labels - Surface Owners
Attachment F-6	Mailing Labels - Mineral Owners



Revised June 2024

ATTACHMENT F-2

URI Inc. -Rosita Site
Surface Ownership List

TRACT	SURFACE OWNER	ADDRESS	CITY	STATE	ZIP
0	SHAW, ADA M.	5839 QUERCUS GROVE RD	EDWARDSVILLE	IL	62025
1	PENA, DESIREE K & DESTINY K	4206 SCHANEN BLVD	CORPUS CHRISTI	TX	78413
2	CARRILLO, ALBERTO, IIII	4055 KILLARMET DRIVE	CORPUS CHRISTI	TX	78413
2	CARRILLO, DAVID L.	P.O. BOX 693	BENAVIDES	TX	78341
2	CARRILLO, CELIA P.	1124 JOSEPHINE DRIVE	ALICE	TX	78332
2	REYES, MARY	1004 ABBREGO TRAIL	FLORESVILLE	TX	78114
2	RAMIREZ, INEZ	705 N. HOUSTON AVE	HEBBRONVILLE	TX	78361
2	HERNANDEZ, DOLORES	P.O. BOX 2147	ALICE	TX	78332
2	KLAUS, ESTHER R.	2070 CANOVER CT.	SANTA ROSA	CA	95403
2	PENA, ALMA	801 AVENUE B	ALICE	TX	78332
2	MARTIN, VICKY	427 ALAMO CREEK CT., UNIT A	VACAVILLE	CA	95688
2	BOURQUE, ALICIA C.	1601 ROSE DRIVE	ALICE	TX	78332
2	CARRILLO, MELCHOR, III	1005 LEWIS STREET	ALICE	TX	78332
2	CARRILLO, ELEODOR	213 SEELING BLVD.	SAN ANTONIO	TX	78228
2	GUAJARDO, DOMINGO	7204 WAYFARER TRAIL	FT. WORTH	TX	76137
2	FERNANDEZ, ADAN	136 POST OAK STREET	ADMORE	OK	73401
2	MASSEY, SONIA	P.O. BOX 304	DRIPPING SPRINGS	TX	78260
2	SISBARRO, SYLVIA	8503 MAUAI DRIVE	AUSTIN	TX	78749
2	KALE, FABIAN	7685 NORTHCROSS DRIVE, UNIT #1126	AUSTIN	TX	78757
2	CHAPA, NORMA	P. O. BOX 365	PREMONT	TX	78375
2	LONGORIA, NORLIDA C.	P. O. BOX 1451	FREER	TX	78357
2	PALICIOS, RENE	2436 GEMBAK	SAN ANTONIO	TX	78232
3	PAWELEK, BEN DANIEL	151 CO RD 133	GEORGE WEST	TX	78022
3	SCHUENEMANN, JOSEPHINE	151 COUNTY ROAD 133	GEORGE WEST	TX	78022
4	DAVILA, DAVID JR	4221 WARWICK DRIVE	CORPUS CHRISTI	TX	78411
5	HOLSONBACK, JOHN F.	P O BOX 382	SAN DIEGO	TX	78384
6	BENAVIDES, EVANGELINA T.	807 N ALMOND	ALICE	TX	78332
7	BENAVIDES, EVANGELINA T.	807 N ALMOND	ALICE	TX	78332
8	ALANIZ, JESUS N.	4201 VIOLET #108	CORPUS CHRISTI	TX	78410
9	VALERIO, RUBEN	P O BOX 1045	SAN DIEGO	TX	78384
10	VALERIO, RUBEN	P O BOX 1045	SAN DIEGO	TX	78384
11	THOMAS & DOROTHY CREWS PARTNERS LTD.	2573 CO RD 170	ALICE	TX	78332

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ATTACHMENT F-2

URI Inc. -Rosita Site
Surface Ownership List

TRACT	SURFACE OWNER	ADDRESS	CITY	STATE	ZIP
12	CARDENAS, LAURA TOBIN	5903 SENECA DR	SAN ANTONIO	TX	78238
13	TEJEDA, MARISA H.	717 MARSHALL ST	SAN ANTONIO	TX	78212
14	VALERIO, RENE	110 S TREVINO	SAN DIEGO	TX	78384
15	CAMPOS, ROSALUA	PO BOX V	FREER	TX	78357
16	VAELL, ANN MARIE P.	P O BOX 159	SAN DIEGO	TX	78384
17	TEJEDA, MARISA H .	717 MARSHALL ST	SAN ANTONIO	TX	78212
18	ROGERS, PATRICK III	220 WEEPING WILLOW	CIBOLO	TX	78108
18	DIEFERT, CYNTHIA R.	1269 E VOLTARIE AVE	PHOENIX	AZ	85022
19	ZARATA, GLORIA	730 MESA RIDGE	SAN ANTONIO	TX	78258
20	RUBEN RANGEL	510 S. VICTORIA	SAN DIEGO	TX	78348
21	BARRERA, LEONEL C. JR	P O BOX 1483	FREER	TX	78357
22	TALAMANTES, ARMANDO H.	95 WAGNER ST	SAN ANTONIO	TX	78211
23	GALVAN, ROEL & DIANA L.	4502 CO RD 304	SAN DIEGO	TX	78384
24	LARA, CATALINA TOSCANO	1809 TALISMAN	CORPUS CHRISTI	TX	78416
25	BAKER, BURKE	13617 CACTUS CIRCLE	CORPUS CHRISTI	TX	78410
26	SALINAS, JORGE & THEA	PO BOX 999	FREER	TX	78357
27	GONZALEZ, MACEDONIO	P O BOX 509	SAN DIEGO	TX	78384
28	RANGEL RICARDO	P O BOX 174	SAN DIEGO	TX	78384
29	GARCIA, LAURO A.	112 S SIERRA WOODS DR	ROCKPORT	TX	78382
30	GARCIA, LAURO A.	112 S SIERRA WOODS DR	ROCKPORT	TX	78382
31	LOPEZ, RUFINO E. JR	P O BOX 781612	SAN ANTONIO	TX	78278
32	CONTRERAS, HOMERO	P O BOX 587	BEN BOLT	TX	78342
33	RAMIREZ, RAMIRO JR & ELODIA	3386 CR 332	SAN DIEGO	TX	78384
34	RAMIREZ, RAMIRO JR & ELODIA	3386 CR 332	SAN DIEGO	TX	78384
35	DELGADO, JOE FRANK &	30 CYPRESS BLVD APT 215	ROUND ROCK	TX	78665
36	DIEFERT, CYNTHIA R.	1269 E VOLTARIE AVE	PHOENIX	AZ	85022
37	GARCIA, GUADALUPE &	8225 BIG BEND DR	CORPUS CHRISTI	TX	78414
38	ROY ROGERS, ET AL	401 N REYNOLDS	ALICE	TX	78332
39	EILEEN PARR 2003 IRREVOCABLE TRUST C/O AMERICAN BANK TRUST DEPT.	P O BOX 6771	CORPUS CHRISTI	TX	78466
40	HINOJOSA, JESUS SR & MARIA D.	5014 HIGH MEADOW	CORPUS CHRISTI	TX	78413
41	TREVINO, DAVID	3016 HWY 44	SAN DIEGO	TX	78384

Revised June 2024

ATTACHMENT F-2

URI Inc. -Rosita Site
Surface Ownership List

TRACT	SURFACE OWNER	ADDRESS	CITY	STATE	ZIP
42	DETMER RANCH LTD.	3633 E INDIAN WELLS CT	QUEEEN CREEK	AZ	85142
43	THOMAS, WILLIAM W. TRUST	125 E MARIPOSA	SAN ANTONIO	TX	78212
44	RANGEL, RENE S.	P O BOX 44	SAN DIEGO	TX	78384
45	SANDERS, LONNIE & PATRICIA D.	P O BOX 1749	FREER	TX	78357
46	SANDERS, LONNIE & PATRICIA D.	P O BOX 1749	FREER	TX	78357
47	MERCADO, ANTONIO EDUARDO & NANCY LEAL	P O BOX 3154	MISSION	TX	78573
48	ROGERS, RICHARD	408 KINGWOOD	VICTORIA	TX	77901
49	ROGERS, THOMAS H.	7730 CREEK TRAIL	SAN ANTONIO	TX	78254
50	SEIBERT, LEONOR	1579 TREBEIN RD	XENIA	OH	45385
51	ALANIZ, ROMAN F. SR	508 S DR E E DUNLAP HWY	SAN DIEGO	TX	78384
52	GARCIA, ANGELINA	1579 TREBEIN RD	XENIA	OH	45385
53	GARCIA, ANGELINA	1579 TREBEIN RD	XENIA	OH	45385
54	URUTIA, ROSA M.	506 E KING ST	SAN DIEGO	TX	78384
55	TANGUMA, LORENZO	706 S LOUISIANA	SAN DIEGO	TX	78384
55	MALDONADO, ISAURO	303 FARM ST	ALICE	TX	78332
55	MALDONADO, JOSE EMILIO	P O BOX 501	FREER	TX	78357
56	ROLLING R SERVICES LLC	P O BOX 1112	FREER	TX	78357
57	GARRETSON, HERMELINDA & RAMON MARTINEZ JR	4510 LOS MARTINEZ DRIVE	LAREDO	TX	78041
58	CYPRESS VIEW INVESTMENTS LTD.	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
59	SCRIBNER, JACK JOSEPH & MARIA EVA	414 ST THOMAS	LAREDO	TX	78045
60	VILLARREAL, FRANCES G.	120 FOWLKES ST	SEALY	TX	77474
61	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
62	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
63	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
64	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
65	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
66	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
67	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
68	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
69	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
70	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
71	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028

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URI Inc. -Rosita Site
Surface Ownership List

TRACT	SURFACE OWNER	ADDRESS	CITY	STATE	ZIP
72	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
73	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
74	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
75	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
76	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
77	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
78	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
79	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
80	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
81	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
82	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
83	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
84	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
85	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
86	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
87	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
88	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
89	RUBEN RANGEL	510 S VICTORIA	SAN DIEGO	TX	78384
90	RODILFO SENDEJO	P O BOX 738	SAN DIEGO	TX	78384
91	SALINAS FAMILY TRUST	730 MESA RIDGE	SAN ANTONIO	TX	78258
92	URI, INC.	101 N. SHORELINE BLVD, STE 560	CORPUS CHRISTI	TX	78401
93	VERDON, CHARLES	600 HUISACHE STREET	ROBSTOWN	TX	78380
94	MONTOYA, MARIA, ET AL	1409 WINGHAVEN DRIVE	LIMA	OH	45805
94	PENA, GILBERTO	625 WEST AVE E	ROBSTOWN	TX	78380
94	RENDON, ROSARIO	144 S. FLORES	ROBSTOWN	TX	78380
94	BUENO, HERMELINDA	440 WEST AVENUE C	ROBSTOWN	TX	78380
94	GARCIA, GLORIA	1801 BOSQUEZ BOX 131	ROBSTOWN	TX	78380
94	PENA, DANIEL	801 REDONDO DRIVE	HOUSTON	TX	77015
94	PENA, ROEL	801 REDONDO DRIVE	HOUSTON	TX	77015
94	SANTOS, MARY ANN	179 CR 242	ORANGE GROVE	TX	78372
94	PENA, ROBERTO	247 E CR 239	ORANGE GROVE	TX	78372
95	RAMON, MANUAL S.	1305 LINCOLN STREET	ALICE	TX	78332

Revised June 2024

ATTACHMENT F-2

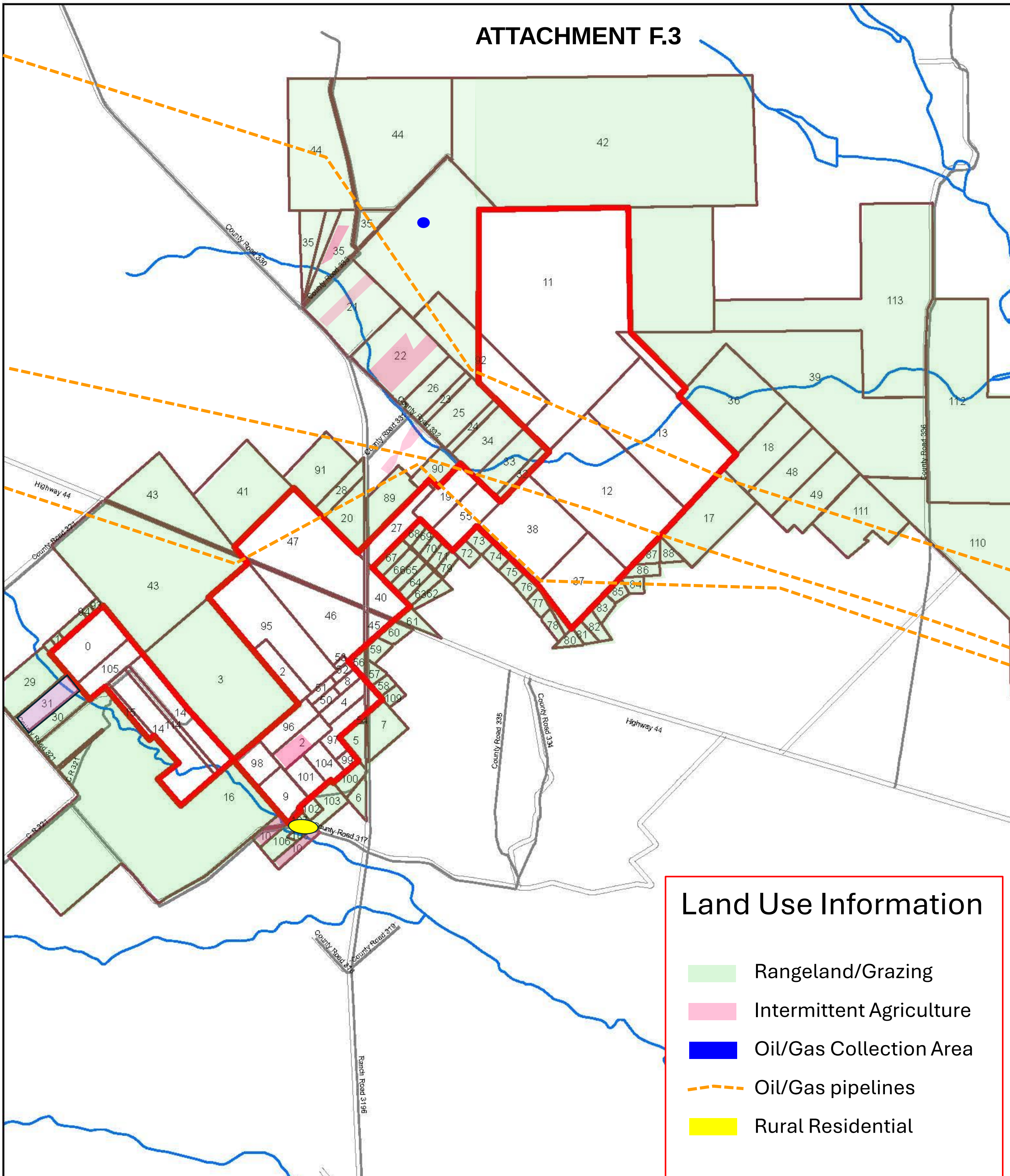
URI Inc. -Rosita Site
Surface Ownership List

TRACT	SURFACE OWNER	ADDRESS	CITY	STATE	ZIP
96	GARCIA, LORENZO	8615 PUERTO VIEJO	LAREDO	TX	78045
96	CHAPA, ADRIANNA BELINDA	7041 EDGEBROOK DR	CORPUS CHRISTI	TX	78413
96	CARDENAS, ABELARDO B.	300 ALCALDE	DALLAS	TX	75246
96	CARDENAS, ANDREW	14915 POYNESIAN	SAN ANTONIO	TX	78230
96	CARDENAS, ARMANDO	11300 WHISPER GLENN	SAN ANTONIO	TX	78230
96	ALANIZ, NATIVADAD	4725 SOUTH SHEA PARKWAY	CORPUS CHRISTI	TX	78413
96	SALINAS, FERNANDO	28590 BARN ROCK	HAYWOOD	CA	94542
96	SALINAS, ABELARDO	4717 COVENTRY LANE	CORPUS CHRISTI	TX	78411
96	HINOJOSA, MARGARITA	P. O. BOX 381	BENAVIDES	TX	78341
96	SALINAS, FIDELA C.	P.O. BOX 481	BENAVIDES	TX	78341
96	VALERIO, CARLOS G.	5229 MILLWOD	CORPUS CHRISTI	TX	78413
96	VALERIO, DAVID G.	4009 BRAY	CORPUS CHRISTI	TX	78413
96	VALERIO, FELIPE S.	233 VERA CRUZ	CORPUS CHRISTI	TX	78405
96	VALERIO, NORBERT	1818 CLIFF MAUS DRIVE	CORPUS CHRISTI	TX	78416
96	NINMAN, EVA	3020 TEAGUE ROAD	HOUSTON	TX	77080
96	KARAZE, JOSIFA G.	3600 JEANETTE, UNIT 1605	HOUSTON	TX	77063
96	NELSON, ESTELLA	5150 HIDALGO, UNIT 1101	HOUSTON	TX	77056
97	RAMOS, JOHN D	1626 WEST MANR DRIVE	CORPUS CHRISTI	TX	78412
97	RAMOS, ERICA	1211 E. PINE	PHARR	TX	78577
97	RAMOS, LUIS F, JR	3761 EAST CEDAR AVE	DENVER	CO	80209
98	VALERIE VALERIO	5360 ARBOLEDA LANE	CORPUS CHRISTI	TX	78417
99	THE EILA MUNIZ-VALERIO AND MARIO H VALERIO LIVING TRUST	1110 LILLIAN	ALICE	TX	78332
100	THE EILA MUNIZ-VALERIO AND MARIO H VALERIO LIVING TRUST	1110 LILLIAN	ALICE	TX	78332
101	SAENZ, ELODIA	P O BOX 822	SAN DIEGO	TX	78384
102	SAENZ, ELODIA	P O BOX 822	SAN DIEGO	TX	78384
103	VALERIO, MARIO	1110 LILLIAN	ALICE	TX	78332
104	SAENZ, ELODIA	P O BOX 822	SAN DIEGO	TX	78384
105	PENA, OSCAR, ET AL	721 HICKEY STREEY	ALICE	TX	78332
105	PENA, JAVIER	5433 S. HWY 281	ALICE	TX	78332
105	GARZA, HEBERTO, JR	1001 ISLE ROYALE WAY	AUSTIN	TX	78747
105	GARZA, ROSABEL	1001 ISLE ROYALE WAY	AUSTIN	TX	78747
105	GARZA, ADRIAN	P.O. BOX 225	SAN DIEGO	TX	78384

ATTACHMENT F-2

URI Inc. -Rosita Site
Surface Ownership List

TRACT	SURFACE OWNER	ADDRESS	CITY	STATE	ZIP
105	STANSEL, JESSE	10219 HAWAIIN FIELD	SAN ANTONIO	TX	78245
105	STANSEL, MARK J.	10219 HAWAIIN FIELD	SAN ANTONIO	TX	78245
105	STANSEL, MARK J.	18 PARK AVENUE, APT A	SOUTH WEYMOUTH	MA	02190
105	STANSEL, JEREMY M.	18 PARK AVENUE, APT A	SOUTH WEYMOUTH	MA	02190
105	NEMTH, ELIZABETH A.	550 KERNAN DRIVE	SAN ANTONIO	TX	78227
106	SAENZ, ELODIA	P O BOX 822	SAN DIEGO	TX	78384
107	SAENZ, ELODIA	P O BOX 822	SAN DIEGO	TX	78384
108	DUVAL COUNTY	P O BOX 189	SAN DIEGO	TX	78384
109	CYPRESS VIEW INVESTMENTS LTD.	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
110	JORDAN RANCHO MILAGRO	5120 WOODWAY, STE 9011	HOUSTON	TX	77056
110	IBARRA, ANTONIO & OFELIA	P O BOX 192	SAN DIEGO	TX	78384
112	JORDAN RANCHO MILAGRO	5120 WOODWAY, STE 9011	HOUSTON	TX	78384
113	PEREZ, LEOPOLDO G. FAMILY TRUST	6 SHEFFIELD PARK DRIVE	SAN ANTONIO	TX	78209
114	VALERIO, RODOLFO	4294 FM 3196	SAN DIEGO	TX	78209
114	RAMIREZ, ROSALINDA	P O BOX 1087	SAN DIEGO	TX	78209



N
W E
S

1 inch = 5,000 feet

0 2,500 5,000 10,000 Feet

Mineral Ownership Map

Permit Boundary

1 Mineral Tract

enCore energy

County: Duval
Projection: NAD27
Date: June 2024

Revised June 2024

ATTACHMENT F-4

URI Inc. -Rosita Site
Mineral Ownership List

TRACT	MINERAL OWNER	ADDRESS	CITY	STATE	ZIP
0	SHAW, ADA M.	5839 QUERCUS GROVE RD	EDWARDSVILLE	IL	62025
0	GARCIA, SARA	1710 HERNANDEZ ST	ALICE	TX	78332
0	ROBERT A. WELCH FOUNDATION	5555 SAN FELIPE ST, STE 1900	HOUSTON	TX	77056
0	SAM J LUCAS, III MANAGEMENT TRUST	123 SUNRISE DR	BOERNE	TX	78006
0	FEDERAL ROYALTY PARTNERS, LTD	2001 KIRBYDR, STE 1210	HOUSTON	TX	77056
0	CIMARRON TEXAS MINERALS, LTD	1700 POST OAK BLVD, STE 400	HOUSTON	TX	77056
1	PENA, DESIREE K & DESTINY K	4206 SCHANEN BLVD	CORPUS CHRISTI	TX	78413
2	CARRILLO, ALBERTO, IIII	4055 KILLARMET DRIVE	CORPUS CHRISTI	TX	78413
2	CARRILLO, DAVID L	P.O. BOX 693	BENAVIDES	TX	78341
2	CARRILLO, CELIA P	1124 JOSEPHINE DRIVE	ALICE	TX	78332
2	REYES, MARY	1004 ABBREGO TRAIL	FLORESVILLE	TX	78114
2	RAMIREZ, INEZ	705 N. HOUSTON AVE	HEBBRONVILLE	TX	78361
2	HERNANDEZ, DOLORES	P.O. BOX 2147	ALICE	TX	78332
2	KLAUS, ESTHER R	2070 CANOVER CT.	SANTA ROSA	CA	95403
2	PENA, ALMA	801 AVENUE B	ALICE	TX	78332
2	MARTIN, VICKY	427 ALAMO CREEK CT., UNIT A	VACAVILLE	CA	95688
2	BOURQUE, ALICIA C	1601 ROSE DRIVE	ALICE	TX	78332
2	CARRILLO, MELCHOR, III	1005 LEWIS STREET	ALICE	TX	78332
2	CARRILLO, ELEODOR	213 SEELING BLVD.	SAN ANTONIO	TX	78228
2	GUAJARDO, DOMINGO	7204 WAYFARER TRAIL	FT. WORTH	TX	76137
2	FERNANDEZ, ADAN	136 POST OAK STREET	ADMORE	OK	73401
2	MASSEY, SONIA	P.O. BOX 304	DRIPPING SPRINGS	TX	78260
2	SISBARRO, SYLVIA	8503 MAUAI DRIVE	AUSTIN	TX	78749
2	KALE, FABIAN	7685 NORTHCROSS DRIVE, UNIT #1126	AUSTIN	TX	78757
2	CHAPA, NORMA	P. O. BOX 365	PREMONT	TX	78375
2	LONGORIA, NORLIDA C.	P. O. BOX 1451	FREER	TX	78357
2	PALICIOS, RENE	2436 GEMBAK	SAN ANTONIO	TX	78232
2	JOHN H. BURRIS	P.O. BOX 243	ALICE	TX	78333
2	ANDRIANA GARCIA	179 HONEY BEE LANE	BROWNSVILLE	TX	78520
2	JOHN MCNEIL DIETZ	7913 149TH SE PL.	NEWCASTLE	WA	98059
3	PAWELEK, BEN DANIEL	151 CO RD 133	GEORGE WEST	TX	78022

ATTACHMENT F-4

URI Inc. -Rosita Site
Mineral Ownership List

TRACT	MINERAL OWNER	ADDRESS	CITY	STATE	ZIP
3	SCHUENEMANN, JOSEPHINE	151 COUNTY ROAD 133	GEORGE WEST	TX	78022
4	DAVILA, DAVID JR.	4221 WARWICK DRIVE	CORPUS CHRISTI	TX	78411
5	HOLSONBACK, JOHN F.	P O BOX 382	SAN DIEGO	TX	78384
5	SARA CABRERA	1653 CR 336	ALICE	TX	78332
5	TIBURCIO R. YBARRA	1673 CR 336	ALICE	TX	78332
5	DENNIS M. YBARRA	805 EAST 6TH STREET	ALICE	TX	78332
5	ADRIAN YBARRA	272 CR 170	ALICE	TX	78332
5	DAMIAN YBARRA	952 NORTH WRIGHT STREET	ALICE	TX	78332
5	DENISE T. HINOJOSA	P.O. BOX 179	KINGSVILLE	TX	78363
5	VICENTE MORIN	363 CR 201	ALICE	TX	78332
5	DIANA MORIN BROWN	P. O. BOX 1701	ALICE	TX	78333
5	NORA TREVINO	648 CR 120	ALICE	TX	78332
5	MELISSA R. RAMIREZ	1669 CR 336	ALICE	TX	78332
5	JUDY T. RIVADENEYRA	503 NUEVA STREET	ALICE	TX	78332
5	EVELYN MORIN GODDINESS	P. O. BOX 151	LINDALE	TX	75771
5	IRMA MORIN NAKSUTTI	2112 VISTA CT	CORINTH	TX	76210
5	HECTOR MORIN	4536 TIERRA DRIVE	DALLAS	TX	75211
5	ELYNA MONTANTES	315 WEST 3RD	STOCKTON	CA	95209
5	ROSA M. URUTIA	506 E. KING STREET	SAN DIEGO	TX	78384
6	BENAVIDES, EVANGELINA T.	807 N ALMOND	ALICE	TX	78332
7	BENAVIDES, EVANGELINA T.	807 N ALMOND	ALICE	TX	78332
7	GARCIA, ELSA	807 N ALMOND	ALICE	TX	78332
8	ALANIZ, JESUS N	4201 VIOLET #108	CORPUS CHRISTI	TX	78410
9	VALERIO, RUBEN	P O BOX 1045	SAN DIEGO	TX	78384
9	GARCIA, AMELIA	302 W. SAINT	SAN DIEGO	TX	78384
10	VALERIO, RUBEN	P O BOX 1045	SAN DIEGO	TX	78384
10	ZULEMA LICHTENBERGER	P. O. BOX 581	FREER	TX	78357
11	THOMAS & DOROTHY CREWS PARTNERS LTD.	2573 CO RD 170	ALICE	TX	78332
12	CARDENAS, LAURA TOBIN	5903 SENECA DR	SAN ANTONIO	TX	78238
13	TEJEDA, MARISA H.	717 MARSHALL ST	SAN ANTONIO	TX	78212
14	VALERIO, RENE	110 S TREVINO	SAN DIEGO	TX	78384
15	CAMPOS, ROSALUA	PO BOX V	FREER	TX	78357
16	VAELL, ANN MARIE P.	P O BOX 159	SAN DIEGO	TX	78384

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ATTACHMENT F-4

URI Inc. -Rosita Site
Mineral Ownership List

TRACT	MINERAL OWNER	ADDRESS	CITY	STATE	ZIP
17	TEJEDA, MARISA H .	717 MARSHALL ST	SAN ANTONIO	TX	78212
18	ROGERS, PATRICK III	220 WEEPING WILLOW	CIBOLO	TX	78108
18	DIEFERT, CYNTHIA R.	1269 E VOLTARIE AVE	PHOENIX	AZ	85022
19	ZARATA, GLORIA	730 MESA RIDGE	SAN ANTONIO	TX	78258
20	RUBEN RANGEL	510 S. VICTORIA	SAN DIEGO	TX	78348
21	BARRERA, LEONEL C. JR	P O BOX 1483	FREER	TX	78357
22	TALAMANTES, ARMANDO H.	95 WAGNER ST	SAN ANTONIO	TX	78211
23	GALVAN, ROEL & DIANA L.	4502 CO RD 304	SAN DIEGO	TX	78384
24	LARA, CATALINA TOSCANO	1809 TALISMAN	CORPUS CHRISTI	TX	78416
25	BAKER, BURKE	13617 CACTUS CIRCLE	CORPUS CHRISTI	TX	78410
26	SALINAS, JORGE & THEA	PO BOX 999	FREER	TX	78357
27	GONZALEZ, MACEDONIO	P O BOX 509	SAN DIEGO	TX	78384
28	RANGEL RICARDO	P O BOX 174	SAN DIEGO	TX	78384
29	GARCIA, LAURO A.	112 S SIERRA WOODS DR	ROCKPORT	TX	78382
30	GARCIA, LAURO A.	112 S SIERRA WOODS DR	ROCKPORT	TX	78382
31	LOPEZ, RUFINO E. JR	P O BOX 781612	SAN ANTONIO	TX	78278
32	CONTRERAS, HOMERO	P O BOX 587	BEN BOLT	TX	78342
33	RAMIREZ, RAMIRO JR & ELODIA	3386 CR 332	SAN DIEGO	TX	78384
34	RAMIREZ, RAMIRO JR & ELODIA	3386 CR 332	SAN DIEGO	TX	78384
35	DELGADO, JOE FRANK &	30 CYPRESS BLVD APT 215	ROUND ROCK	TX	78665
36	DIEFERT, CYNTHIA R	1269 E VOLTARIE AVE	PHOENIX	AZ	85022
37	GARCIA, GUADALUPE &	8225 BIG BEND DR	CORPUS CHRISTI	TX	78414
38	ROGERS, ROY ETAL	401 N REYNOLDS	ALICE	TX	78332
39	EILEEN PARR 2003 IRREVOCABLE TRUST C/O AMERICAN BANK TRUST DEPT.	P O BOX 6771	CORPUS CHRISTI	TX	78466
40	HINOJOSA, JESUS SR & MARIA D	5014 HIGH MEADOW	CORPUS CHRISTI	TX	78413
41	TREVINO, DAVID	3016 HWY 44	SAN DIEGO	TX	78384
42	DETMER RANCH LTD	3633 E INDIAN WELLS CT	QUEEEN CREEK	AZ	85142
43	THOMAS, WILLIAM W TRUST	125 E MARIPOSA	SAN ANTONIO	TX	78212
44	RANGEL, RENE S	P O BOX 44	SAN DIEGO	TX	78384
45	SANDERS, LONNIE & PATRICIA D	P O BOX 1749	FREER	TX	78357
46	SANDERS, LONNIE & PATRICIA D	P O BOX 1749	FREER	TX	78357
47	MERCADO, ANTONIO EDUARDO & NANCY LEAL	P O BOX 3154	MISSION	TX	78573

ATTACHMENT F-4

URI Inc. -Rosita Site
Mineral Ownership List

TRACT	MINERAL OWNER	ADDRESS	CITY	STATE	ZIP
48	ROGERS, RICHARD	408 KINGWOOD	VICTORIA	TX	77901
49	ROGERS, THOMAS H	7730 CREEK TRAIL	SAN ANTONIO	TX	78254
50	SEIBERT, LEONOR	1579 TREBEIN RD	XENIA	OH	45385
51	ALANIZ, ROMAN F SR	508 S DR E E DUNLAP HWY	SAN DIEGO	TX	78384
52	GARCIA, ANGELINA	1579 TREBEIN RD	XENIA	OH	45385
53	GARCIA, ANGELINA	1579 TREBEIN RD	XENIA	OH	45385
54	URUTIA, ROSA M	506 E KING ST	SAN DIEGO	TX	78384
55	TANGUMA, LORENZO	706 S LOUISIANA	SAN DIEGO	TX	78384
55	MALDONADO, ISAURO	303 FARM ST	ALICE	TX	78332
55	MALDONADO, JOSE EMILIO	P O BOX 501	FREER	TX	78357
56	ROLLING R SERVICES LLC	P O BOX 1112	FREER	TX	78357
57	GARRETSON, HERMELINDA & RAMON MARTINEZ JR	4510 LOS MARTINEZ DRIVE	LAREDO	TX	78041
58	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
59	SCRIBNER, JACK JOSEPH & MARIA EVA	414 ST THOMAS	LAREDO	TX	78045
60	VILLARREAL, FRANCES G	120 FOWLKES ST	SEALY	TX	77474
61	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
62	CYPRESS VIEW INVESTMENTS LTD	1001 WATER ST SUITE B 200	KERRVILLE	TX	78028
109	ELLIS, ARCHER	109 HIDDEN VALLEY AIRPARK	SHADY SHORES	TX	76208
58 61 to 88 and 109	ELLIS, ASTON	5748 CEDAR GROVE CIRCLE	PLANO	TX	75093
58 61 to 88 and 109	PARR, ANN	4214 MULLIGAN DR	CORPUS CHRISTI	TX	78413
58 61 to 88 and 109	CALHOUN, WILSON	2076 PASSARE	NEW BRAUNFELS	TX	78132
58 61 to 88 and 109	EILEEN PARR 2003 IRREVOCABLE TRUST C/O AMERICAN BANK TRUST DEPT.	P O BOX 6771	CORPUS CHRISTI	TX	78466
58 61 to 88 and 109	C L WRIGHT, III TRUST	610 STIRMAN ST	CORPUS CHRISTI	TX	78411
89	RUBEN RANGEL	510 S VICTORIA	SAN DIEGO	TX	78384
90	RODILFO SENDEJO	P O BOX 738	SAN DIEGO	TX	78384
91	SALINAS FAMILY TRUST	730 MESA RIDGE	SAN ANTONIO	TX	78258
92	URI, INC	101 N. SHORELINE BLVD, STE 560	CORPUS CHRISTI	TX	78401
93	VERDON, CHARLES	600 HUISACHE STREET	ROBSTOWN	TX	78380

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ATTACHMENT F-4

URI Inc. -Rosita Site
Mineral Ownership List

TRACT	MINERAL OWNER	ADDRESS	CITY	STATE	ZIP
94	MONTOYA, MARIA, ET AL	1409 WINGHAVEN DRIVE	LIMA	OH	45805
94	PENA, GILBERTO	625 WEST AVE E	ROBSTOWN	TX	78380
94	RENDON, ROSARIO	144 S. FLORES	ROBSTOWN	TX	78380
94	BUENO, HERMELINDA	440 WEST AVENUE C	ROBSTOWN	TX	78380
94	GARCIA, GLORIA	1801 BOSQUEZ BOX 131	ROBSTOWN	TX	78380
94	PENA, DANIEL	801 REDONDO DRIVE	HOUSTON	TX	77015
94	PENA, ROEL	801 REDONDO DRIVE	HOUSTON	TX	77015
94	SANTOS, MARY ANN	179 CR 242	ORANGE GROVE	TX	78372
94	PENA, ROBERTO	247 E CR 239	ORANGE GROVE	TX	78372
95	RAMON, MANUAL S	1305 LINCOLN STREET	ALICE	TX	78332
95	WILLIAM P. FRITZSIMMONS	P. O. BOX 620	SAN DIEGO	TX	78384
95	STANTON B. FRITZSIMMONS	P. O. BOX 620	SAN DIEGO	TX	78384
95	DONNA ELIZABETH BRIMHALL DENNARD	4990 AFTON OAKS DR.	COLLEGE STATION	TX	77845
95	DAVID A. BRIMHALL	4302 SPRING CREEK DR.	CORPUS CHRISTI	TX	78410
95	MARY ANNE DUNN BOSE	2929 TODD TRL	ROUND ROCK	TX	78665
95	MARJORIE ELLEN DUNN WILSON	134 CLEMENT DR.	AUSTIN	TX	78737
95	DEBORAH CATHERINE DUNN	4750 GRAND JUNCTION DRIVE, APT#18	CORPUS CHRISTI	TX	78415
95	ROBBIE ELIZABETH RYBAK	5617 LES PARRE	CORPUS CHRISTI	TX	78414
95	REV. FATHER ROBERT DRISCOLL DUNN JR.	1120 SOUTH 8TH STREET	KINGSVILLE	TX	78363
95	DAVID R. GARZA	2802 MORRISON ST. #404	HOUSTON	TX	77009
95	SCOTT SMITH	230 TC JESTER BLVD., #214	HOUSTON	TX	77007
95	SAM SMITH	403 WINDSOR DRIVE	FRIENDSWOOD	TX	77546
96	GARCIA, LORENZO	8615 PUERTO VIEJO	LAREDO	TX	78045
96	CHAPA, ADRIANNA BELINDA	7041 EDGEBROOK DR	CORPUS CHRISTI	TX	78413
96	CARDENAS, ABELARDO B	300 ALCALDE	DALLAS	TX	75246
96	CARDENAS, ANDREW	14915 POYNESIAN	SAN ANTONIO	TX	78230
96	CARDENAS, ARMANDO	11300 WHISPER GLENN	SAN ANTONIO	TX	78230
96	ALANIZ, NATIVADAD	4725 SOUTH SHEA PARKWAY	CORPUS CHRISTI	TX	78413
96	SALINAS, FERNANDO	28590 BARN ROCK	HAYWOOD	CA	94542
96	SALINAS, ABELARDO	4717 COVENTRY LANE	CORPUS CHRISTI	TX	78411
96	HINOJOSA, MARGARITA	P. O. BOX 381	BENAVIDES	TX	78341
96	SALINAS, FIDELA C	P.O. BOX 481	BENAVIDES	TX	78341
96	VALERIO, CARLOS G	5229 MILLWOD	CORPUS CHRISTI	TX	78413

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ATTACHMENT F-4

URI Inc. -Rosita Site
Mineral Ownership List

TRACT	MINERAL OWNER	ADDRESS	CITY	STATE	ZIP
96	VALERIO, DAVID G	4009 BRAY	CORPUS CHRISTI	TX	78413
96	VALERIO, FELIPE S	233 VERA CRUZ	CORPUS CHRISTI	TX	78405
96	VALERIO, NORBERT	1818 CLIFF MAUS DRIVE	CORPUS CHRISTI	TX	78416
96	NINMAN, EVA	3020 TEAGUE ROAD	HOUSTON	TX	77080
96	KARAZE, JOSIFA G	3600 JEANETTE, UNIT 1605	HOUSTON	TX	77063
96	NELSON, ESTELLA	5150 HIDALGO, UNIT 1101	HOUSTON	TX	77056
97	RAMOS, JOHN D	1626 WEST MANR DRIVE	CORPUS CHRISTI	TX	78412
97	RAMOS, ERICA	1211 E. PINE	PHARR	TX	78577
97	RAMOS, LUIS F, JR	3761 EAST CEDAR AVE	DENVER	CO	80209
98	VALERIE VALERIO	5360 ARBOLEDA LANE	CORPUS CHRISTI	TX	78417
98	ZULEMA CUELLAR MENDEZ TRUST	12431 WINDING BRANCH	SAN ANTONIO	TX	78230
98	MINERVA CUELLAR	49 VILLA JARDIN	SAN ANTONIO	TX	78230
98	JULIAN AYALA	14800 SAN PEDRO AVE # 120	SAN ANTONIO	TX	78232
98	GERARDO AYALA	14800 SAN PEDRO AVE # 120	SAN ANTONIO	TX	78232
98	MARIO GUILLERMO TORRES CUELLAR	14800 SAN PEDRO AVE # 120	SAN ANTONIO	TX	78232
98	GERMAN TORRES CUELLAR	14800 SAN PEDRO AVE # 120	SAN ANTONIO	TX	78232
98	NILDA TIJERINA CUELLAR DE GOMEZ	14800 SAN PEDRO AVE # 120	SAN ANTONIO	TX	78232
98	PEDRO G. TIJERINA CUELLAR	14800 SAN PEDRO AVE # 120	SAN ANTONIO	TX	78232
98	CONSUELO ANETTE CUELLAR LONGORIA	6701 NORTHGATE DR.	CORPUS CHRISTI	TX	78413
98	SONIA CUELLAR LASH	808 MICA LN	LEANDER	TX	78641
98	ADOLFO BENJAMIN CUELLAR JR.	4514 HAVERHILL LN.	CORPUS CHRISTI	TX	78411
98	RICARDO L. CUELLAR	31109 KNOTTY GROVE	BOERNE	TX	78015
98	CUELLAR MARTIAL DEDUCTION TRUST	P.O. BOX 3277	ALICE	TX	78333
98	KRISTINA VILLAREAL	5306 WOODGATE DR.	CORPUS CHRISTI	TX	78413
98	PATRICIA VILLAREAL	101 MOHEGAN DRIVE	ENTERPRISE	AL	36330
98	MARK VILLAREAL	31109 KNOTTY GROVE	BOERNE	TX	78015
98	RUMALDO NUNEZ	21188 ALMERIA	BUCKEYE	AZ	85396
99 and 100	THE EILA MUNIZ-VALERIO AND MARIO H VALERIO LIVING TRUST	1110 LILLIAN	ALICE	TX	78332
101	SAENZ, ELODIA	P O BOX 822	SAN DIEGO	TX	78384
101	GONZALEZ, GABRIEL, JR	907 ARIDALVA	SAN DIEGO	TX	78384
101	GONZALEZ, SANDRA DEE	907 ARIDALVA	SAN DIEGO	TX	78384
101	VALERIO, MARIO	1110 LILLIAN	ALICE	TX	78332
102	SAENZ, ELODIA	P O BOX 822	SAN DIEGO	TX	78384

Revised June 2024

ATTACHMENT F-4

URI Inc. -Rosita Site
Mineral Ownership List

TRACT	MINERAL OWNER	ADDRESS	CITY	STATE	ZIP
103	VALERIO, MARIO	1110 LILLIAN	ALICE	TX	78332
104	SAENZ, ELODIA	P O BOX 822	SAN DIEGO	TX	78384
105	PENA, OSCAR, ET AL	721 HICKEY STREEY	ALICE	TX	78332
105	PENA, JAVIER	5433 S. HWY 281	ALICE	TX	78332
105	GARZA, HEBERTO, JR	1001 ISLE ROYALE WAY	AUSTIN	TX	78747
105	GARZA, ROSABEL	1001 ISLE ROYALE WAY	AUSTIN	TX	78747
105	GARZA, ADRIAN	P.O. BOX 225	SAN DIEGO	TX	78384
105	STANSEL, JESSE	10219 HAWAIIN FIELD	SAN ANTONIO	TX	78245
105	STANSEL, MARK J.	10219 HAWAIIN FIELD	SAN ANTONIO	TX	78245
105	STANSEL, MARK J.	18 PARK AVENUE, APT A	SOUTH WEYMOUTH	MA	02190
105	STANSEL, JEREMY M.	18 PARK AVENUE, APT A	SOUTH WEYMOUTH	MA	02190
105	NEMTH, ELIZABETH A.	550 KERNAN DRIVE	SAN ANTONIO	TX	78227
105	ALNIZ, D'ALDO	4330 LAKE PONCHASTRAIN	CORPUS CHRISTI	TX	78413
105	EVAN, ADRIANA	513 HOUSE AVE	SANDIA	TX	78383
105	PEREZ, BEATRICE	6125 CHAPARRAL TRAIL	BEEVILLE	TX	78102
106 and 107	SAENZ, ELODIA	P O BOX 822	SAN DIEGO	TX	78384
108	DUVAL COUNTY	P O BOX 189	SAN DIEGO	TX	78384
110 and 112	JORDAN RANCHO MILAGRO	5120 WOODWAY, STE 9011	HOUSTON	TX	77056
110	IBARRA, ANTONIO & OFELIA	P O BOX 192	SAN DIEGO	TX	78384
113	PEREZ, LEOPOLDO G FAMILY TRUST	6 SHEFFIELD PARK DRIVE	SAN ANTONIO	TX	78209
114	VALERIO, RODOLFO	4294 FM 3196	SAN DIEGO	TX	78209
114	RAMIREZ, ROSALINDA	P O BOX 1087	SAN DIEGO	TX	78209

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ATTACHMENT F.5

Surface Owner Labels

SHAW, ADA M.
5839 QUERCUS GROVE RD
EDWARDSVILLE IL 62025

PENA, DESIREE K & DESTINY K
4206 SCHANEN BLVD
CORPUS CHRISTI TX 78413

BOURQUE, ALICIA C.
1601 ROSE DRIVE
ALICE TX 78332

CARRILLO, ALBERTO, IIII
4055 KILLARMET DRIVE
CORPUS CHRISTI TX 78413

CARRILLO, CELIA P.
1124 JOSEPHINE DRIVE
ALICE TX 78332

CARRILLO, DAVID L.
P.O. BOX 693
BENAVIDES TX 78341

CARRILLO, ELEODOR
213 SEELING BLVD.
SAN ANTONIO TX 78228

CARRILLO, MELCHOR, III
1005 LEWIS STREET
ALICE TX 78332

CHAPA, NORMA
P. O. BOX 365
PREMONT TX 78375

FERNANDEZ, ADAN
136 POST OAK STREET
ADMORE OK 73401

GUAJARDO, DOMINGO
7204 WAYFARER TRAIL
FT. WORTH TX 76137

HERNANDEZ, DOLORES
P.O. BOX 2147
ALICE TX 78332

KALE, FABIAN
7685 NORTHCROSS DRIVE, UNIT #1126
AUSTIN TX 78757

KLAUS, ESTHER R.
2070 CANOVER CT.
SANTA ROSA CA 95403

LONGORIA, NORLIDA C.
P. O. BOX 1451
FREER TX 78357

MARTIN, VICKY
427 ALAMO CREEK CT., UNIT A
VACAVILLE CA 95688

MASSEY, SONIA
P.O. BOX 304
DRIPPING SPRINGS TX 78260

PALICIOS, RENE
2436 GEMBAK
SAN ANTONIO TX 78232

PENA, ALMA
801 AVENUE B
ALICE TX 78332

RAMIREZ, INEZ
705 N. HOUSTON AVE
HEBBRONVILLE TX 78361

REYES, MARY
1004 ABBREGO TRAIL
FLORESVILLE TX 78114

SISBARRO, SYLVIA
8503 MAUAI DRIVE
AUSTIN TX 78749

PAWELEK, BEN DANIEL
151 CO RD 133
GEORGE WEST TX 78022

SCHUENEMANN, JOSEPHINE
151 COUNTY ROAD 133
GEORGE WEST TX 78022

DAVILA, DAVID JR
4221 WARWICK DRIVE
CORPUS CHRISTI TX 78411

HOLSONBACK, JOHN F.
P O BOX 382
SAN DIEGO TX 78384

BENAVIDES, EVANGELINA T.
807 N ALMOND
ALICE TX 78332

ALANIZ, JESUS N.
4201 VIOLET #108
CORPUS CHRISTI TX 78410

VALERIO, RUBEN
P O BOX 1045
SAN DIEGO TX 78384

THOMAS & DOROTHY CREWS PARTNERS LTD.
2573 CO RD 170
ALICE TX 78332

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CARDENAS, LAURA TOBIN
5903 SENECA DR
SAN ANTONIO TX 78238

VALERIO, RENE
110 S TREVINO
SAN DIEGO TX 78384

CAMPOS, ROSALUA
PO BOX V
FREER TX 78357

VAELL, ANN MARIE P.
P O BOX 159
SAN DIEGO TX 78384

TEJEDA, MARISA H.
717 MARSHALL ST
SAN ANTONIO TX 78212

DIEFERT, CYNTHIA R.
1269 E VOLTARIE AVE
PHOENIX AZ 85022

ROGERS, PATRICK III
220 WEEPING WILLOW
CIBOLO TX 78108

ZARATA, GLORIA
730 MESA RIDGE
SAN ANTONIO TX 78258

RUBEN RANGEL
510 S. VICTORIA
SAN DIEGO TX 78348

BARRERA, LEONEL C. JR
P O BOX 1483
FREER TX 78357

TALAMANTES, ARMANDO H.
95 WAGNER ST
SAN ANTONIO TX 78211

GALVAN, ROEL & DIANA L.
4502 CO RD 304
SAN DIEGO TX 78384

LARA, CATALINA TOSCANO
1809 TALISMAN
CORPUS CHRISTI TX 78416

BAKER, BURKE
13617 CACTUS CIRCLE
CORPUS CHRISTI TX 78410

SALINAS, JORGE & THEA
PO BOX 999
FREER TX 78357

GONZALEZ, MACEDONIO
P O BOX 509
SAN DIEGO TX 78384

RANGEL RICARDO
P O BOX 174
SAN DIEGO TX 78384

GARCIA, LAURO A.
112 S SIERRA WOODS DR
ROCKPORT TX 78382

LOPEZ, RUFINO E. JR
P O BOX 781612
SAN ANTONIO TX 78278

CONTRERAS, HOMERO
P O BOX 587
BEN BOLT TX 78342

RAMIREZ, RAMIRO JR & ELODIA
3386 CR 332
SAN DIEGO TX 78384

DELGADO, JOE FRANK &
30 CYPRESS BLVD APT 215
ROUND ROCK TX 78665

GARCIA, GUADALUPE &
8225 BIG BEND DR
CORPUS CHRISTI TX 78414

ROY ROGERS, ET AL
401 N REYNOLDS
ALICE TX 78332

EILEEN PARR 2003 IRREVOCABLE TRUST
C/O AMERICAN BANK TRUST DEPT.
P O BOX 6771
CORPUS CHRISTI TX 78466

HINOJOSA, JESUS SR & MARIA D.
5014 HIGH MEADOW
CORPUS CHRISTI TX 78413

TREVINO, DAVID
3016 HWY 44
SAN DIEGO TX 78384

DETMER RANCH LTD.
3633 E INDIAN WELLS CT
QUEEEN CREEK AZ 85142

THOMAS, WILLIAM W. TRUST
125 E MARIPOSA
SAN ANTONIO TX 78212

RANGEL, RENE S.
P O BOX 44
SAN DIEGO TX 78384

Revised July 2024

SANDERS, LONNIE & PATRICIA D.
P O BOX 1749
FREER TX 78357

MERCADO, ANTONIO EDUARDO & NANCY LEAL
P O BOX 3154
MISSION TX 78573

ROGERS, RICHARD
408 KINGWOOD
VICTORIA TX 77901

ROGERS, THOMAS H.
7730 CREEK TRAIL
SAN ANTONIO TX 78254

SEIBERT, LEONOR
1579 TREBEIN RD
XENIA OH 45385

ALANIZ, ROMAN F. SR
508 S DR E E DUNLAP HWY
SAN DIEGO TX 78384

GARCIA, ANGELINA
1579 TREBEIN RD
XENIA OH 45385

URUTIA, ROSA M.
506 E KING ST
SAN DIEGO TX 78384

MALDONADO, ISAURO
303 FARM ST
ALICE TX 78332

MALDONADO, JOSE EMILIO
P O BOX 501
FREER TX 78357

TANGUMA, LORENZO
706 S LOUISIANA
SAN DIEGO TX 78384

ROLLING R SERVICES LLC
P O BOX 1112
FREER TX 78357

GARRETSON, HERMELINDA & RAMON MARTINEZ JR
4510 LOS MARTINEZ DRIVE
LAREDO TX 78041

SCRIBNER, JACK JOSEPH & MARIA EVA
414 ST THOMAS
LAREDO TX 78045

VILLARREAL, FRANCES G.
120 FOWLKES ST
SEALY TX 77474

CYPRESS VIEW INVESTMENTS LTD
1001 WATER ST SUITE B 200
KERRVILLE TX 78028

RODILFO SENDEJO
P O BOX 738
SAN DIEGO TX 78384

SALINAS FAMILY TRUST
730 MESA RIDGE
SAN ANTONIO TX 78258

URI, INC.
101 N. SHORELINE BLVD, STE 560
CORPUS CHRISTI TX 78401

VERDON, CHARLES
600 HUISACHE STREET
ROBSTOWN TX 78380

BUENO, HERMELINDA
440 WEST AVENUE C
ROBSTOWN TX 78380

GARCIA, GLORIA
1801 BOSQUEZ BOX 131
ROBSTOWN TX 78380

MONTOYA, MARIA, ET AL
1409 WINGHAVEN DRIVE
LIMA OH 45805

PENA, DANIEL
801 REDONDO DRIVE
HOUSTON TX 77015

PENA, GILBERTO
625 WEST AVE E
ROBSTOWN TX 78380

PENA, ROBERTO
247 E CR 239
ORANGE GROVE TX 78372

PENA, ROEL
801 REDONDO DRIVE
HOUSTON TX 77015

RENDON, ROSARIO
144 S. FLORES
ROBSTOWN TX 78380

SANTOS, MARY ANN
179 CR 242
ORANGE GROVE TX 78372

RAMON, MANUAL S.
1305 LINCOLN STREET
ALICE TX 78332

ALANIZ, NATIVADAD
4725 SOUTH SHEA PARKWAY
CORPUS CHRISTI TX 78413

CARDENAS, ABELARDO B.
300 ALCALDE
DALLAS TX 75246

CARDENAS, ANDREW
14915 POYNESIAN
SAN ANTONIO TX 78230

CARDENAS, ARMANDO
11300 WHISPER GLENN
SAN ANTONIO TX 78230

CHAPA, ADRIANNA BELINDA
7041 EDGEBROOK DR
CORPUS CHRISTI TX 78413

GARCIA, LORENZO
8615 PUERTO VIEJO
LAREDO TX 78045

HINOJOSA, MARGARITA
P. O. BOX 381
BENAVIDES TX 78341

KARAZE, JOSIFA G.
3600 JEANETTE, UNIT 1605
HOUSTON TX 77063

NELSON, ESTELLA
5150 HIDALGO, UNIT 1101
HOUSTON TX 77056

NINMAN, EVA
3020 TEAGUE ROAD
HOUSTON TX 77080

SALINAS, ABELARDO
4717 COVENTRY LANE
CORPUS CHRISTI TX 78411

SALINAS, FERNANDO
28590 BARN ROCK
HAYWOOD CA 94542

SALINAS, FIDELA C.
P.O. BOX 481
BENAVIDES TX 78341

VALERIO, CARLOS G.
5229 MILLWOD
CORPUS CHRISTI TX 78413

VALERIO, DAVID G.
4009 BRAY
CORPUS CHRISTI TX 78413

VALERIO, FELIPE S.
233 VERA CRUZ
CORPUS CHRISTI TX 78405

VALERIO, NORBERT
1818 CLIFF MAUS DRIVE
CORPUS CHRISTI TX 78416

RAMOS, ERICA
1211 E. PINE
PHARR TX 78577

RAMOS, JOHN D
1626 WEST MANR DRIVE
CORPUS CHRISTI TX 78412

RAMOS, LUIS F, JR
3761 EAST CEDAR AVE
DENVER CO 80209

VALERIE VALERIO
5360 ARBOLEDA LANE
CORPUS CHRISTI TX 78417

THE EILA MUNIZ-VALERIO AND MARIO H VALERIO LIVING TRUST
1110 LILLIAN
ALICE TX 78332

VALERIO, MARIO
1110 LILLIAN
ALICE TX 78332

GARZA, ADRIAN
P.O. BOX 225
SAN DIEGO TX 78384

GARZA, HEBERTO, JR
1001 ISLE ROYALE WAY
AUSTIN TX 78747

GARZA, ROSABEL
1001 ISLE ROYALE WAY
AUSTIN TX 78747

NEMTH, ELIZABETH A.
550 KERNAN DRIVE
SAN ANTONIO TX 78227

PENA, JAVIER
5433 S. HWY 281
ALICE TX 78332

PENA, OSCAR, ET AL
721 HICKEY STREEY
ALICE TX 78332

STANSEL, JEREMY M.
18 PARK AVENUE, APT A
SOUTH WEYMOUTH MA 02190

STANSEL, JESSE
10219 HAWAIIN FIELD
SAN ANTONIO TX 78245

STANSEL, MARK J.
10219 HAWAIIN FIELD
SAN ANTONIO TX 78245

STANSEL, MARK J.
18 PARK AVENUE, APT A
SOUTH WEYMOUTH MA 02190

SAENZ, ELODIA
P O BOX 822
SAN DIEGO TX 78384

DUVAL COUNTY
P O BOX 189
SAN DIEGO TX 78384

IBARRA, ANTONIO & OFELIA
P O BOX 192
SAN DIEGO TX 78384

JORDAN RANCHO MILAGRO
5120 WOODWAY, STE 9011
HOUSTON TX 77056

PEREZ, LEOPOLDO G. FAMILY TRUST
6 SHEFFIELD PARK DRIVE
SAN ANTONIO TX 78209

RAMIREZ, ROSALINDA
P O BOX 1087
SAN DIEGO TX 78384

VALERIO, RODOLFO
4294 FM 3196
SAN DIEGO TX 78384

ATTACHMENT F.6

Mineral Owner Labels

CIMARRON TEXAS MINERALS, LTD
1700 POST OAK BLVD, STE 400
HOUSTON TX 77056

FEDERAL ROYALTY PARTNERS, LTD
2001 KIRBYDR, STE 1210
HOUSTON TX 77056

GARCIA, SARA
1710 HERNANDEZ ST
ALICE TX 78332

ROBERT A. WELCH FOUNDATION
5555 SAN FELIPE ST, STE 1900
HOUSTON TX 77056

SAM J LUCAS, III MANAGEMENT TRUST
123 SUNRISE DR
BOERNE TX 78006

SHAW, ADA M.
5839 QUERCUS GROVE RD
EDWARDSVILLE IL 62025

PENA, DESIREE K & DESTINY K
4206 SCHANEN BLVD
CORPUS CHRISTI TX 78413

ANDRIANA GARCIA
179 HONEY BEE LANE
BROWNSVILLE TX 78520

BOURQUE, ALICIA C
1601 ROSE DRIVE
ALICE TX 78332

CARRILLO, ALBERTO, IIII
4055 KILLARMET DRIVE
CORPUS CHRISTI TX 78413

CARRILLO, CELIA P
1124 JOSEPHINE DRIVE
ALICE TX 78332

CARRILLO, DAVID L
P.O. BOX 693
BENAVIDES TX 78341

CARRILLO, ELEODOR
213 SEELING BLVD.
SAN ANTONIO TX 78228

CARRILLO, MELCHOR, III
1005 LEWIS STREET
ALICE TX 78332

CHAPA, NORMA
P. O. BOX 365
PREMONT TX 78375

FERNANDEZ, ADAN
136 POST OAK STREET
ADMORE OK 73401

GUAJARDO, DOMINGO
7204 WAYFARER TRAIL
FT. WORTH TX 76137

HERNANDEZ, DOLORES
P.O. BOX 2147
ALICE TX 78332

JOHN H. BURRIS
P.O. BOX 243
ALICE TX 78333

JOHN MCNEIL DIETZ
7913 149TH SE PL.
NEWCASTLE WA 98059

KALE, FABIAN
7685 NORTHCROSS DRIVE, UNIT #1126
AUSTIN TX 78757

KLAUS, ESTHER R
2070 CANOVER CT.
SANTA ROSA CA 95403

LONGORIA, NORLIDA C.
P. O. BOX 1451
FREER TX 78357

MARTIN, VICKY
427 ALAMO CREEK CT., UNIT A
VACAVILLE CA 95688

MASSEY, SONIA
P.O. BOX 304
DRIPPING SPRINGS TX 78260

PALICIOS, RENE
2436 GEMBAK
SAN ANTONIO TX 78232

PENA, ALMA
801 AVENUE B
ALICE TX 78332

RAMIREZ, INEZ
705 N. HOUSTON AVE
HEBBRONVILLE TX 78361

REYES, MARY
1004 ABBREGO TRAIL
FLORESVILLE TX 78114

SISBARRO, SYLVIA
8503 MAUAI DRIVE
AUSTIN TX 78749

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PAWELEK, BEN DANIEL
151 CO RD 133
GEORGE WEST TX 78022

SCHUENEMANN, JOSEPHINE
151 COUNTY ROAD 133
GEORGE WEST TX 78022

DAVILA, DAVID JR.
4221 WARWICK DRIVE
CORPUS CHRISTI TX 78411

ADRIAN YBARRA
272 CR 170
ALICE TX 78332

DAMIAN YBARRA
952 NORTH WRIGHT STREET
ALICE TX 78332

DENISE T. HINOJOSA
P.O. BOX 179
KINGSVILLE TX 78363

DENNIS M. YBARRA
805 EAST 6TH STREET
ALICE TX 78332

DIANA MORIN BROWN
P. O. BOX 1701
ALICE TX 78333

ELYNA MONTANTES
315 WEST 3RD
STOCKTON CA 95209

EVELYN MORIN GODDINESS
P. O. BOX 151
LINDALE TX 75771

HECTOR MORIN
4536 TIERRA DRIVE
DALLAS TX 75211

HOLSONBACK, JOHN F.
P O BOX 382
SAN DIEGO TX 78384

IRMA MORIN NAKSUTTI
2112 VISTA CT
CORINTH TX 76210

JUDY T. RIVADENEYRA
503 NUEVA STREET
ALICE TX 78332

MELISSA R. RAMIREZ
1669 CR 336
ALICE TX 78332

NORA TREVINO
648 CR 120
ALICE TX 78332

ROSA M. URUTIA
506 E. KING STREET
SAN DIEGO TX 78384

SARA CABRERA
1653 CR 336
ALICE TX 78332

TIBURCIO R. YBARRA
1673 CR 336
ALICE TX 78332

VICENTE MORIN
363 CR 201
ALICE TX 78332

BENAVIDES, EVANGELINA T.
807 N ALMOND
ALICE TX 78332

GARCIA, ELSA
807 N ALMOND
ALICE TX 78332

ALANIZ, JESUS N
4201 VIOLET #108
CORPUS CHRISTI TX 78410

GARCIA, AMELIA
302 W. SAINT
SAN DIEGO TX 78384

VALERIO, RUBEN
P O BOX 1045
SAN DIEGO TX 78384

ZULEMA LICHTENBERGER
P. O. BOX 581
FREER TX 78357

THOMAS & DOROTHY CREWS PARTNERS LTD.
2573 CO RD 170
ALICE TX 78332

CARDENAS, LAURA TOBIN
5903 SENECA DR
SAN ANTONIO TX 78238

TEJEDA, MARISA H.
717 MARSHALL ST
SAN ANTONIO TX 78212

VALERIO, RENE
110 S TREVINO
SAN DIEGO TX 78384

Revised July 2024

CAMPOS, ROSALUA
PO BOX V
FREER TX 78357

DIEFERT, CYNTHIA R.
1269 E VOLTARIE AVE
PHOENIX AZ 85022

BARRERA, LEONEL C. JR
P O BOX 1483
FREER TX 78357

LARA, CATALINA TOSCANO
1809 TALISMAN
CORPUS CHRISTI TX 78416

GONZALEZ, MACEDONIO
P O BOX 509
SAN DIEGO TX 78384

LOPEZ, RUFINO E. JR
P O BOX 781612
SAN ANTONIO TX 78278

DELGADO, JOE FRANK &
30 CYPRESS BLVD APT 215
ROUND ROCK TX 78665

ROGERS, ROY ETAL
401 N REYNOLDS
ALICE TX 78332

DETMER RANCH LTD
3633 E INDIAN WELLS CT
QUEEEN CREEK AZ 85142

SANDERS, LONNIE & PATRICIA D
P O BOX 1749
FREER TX 78357

VAELL, ANN MARIE P.
P O BOX 159
SAN DIEGO TX 78384

ROGERS, PATRICK III
220 WEEPING WILLOW
CIBOLO TX 78108

TALAMANTES, ARMANDO H.
95 WAGNER ST
SAN ANTONIO TX 78211

BAKER, BURKE
13617 CACTUS CIRCLE
CORPUS CHRISTI TX 78410

RANGEL RICARDO
P O BOX 174
SAN DIEGO TX 78384

CONTRERAS, HOMERO
P O BOX 587
BEN BOLT TX 78342

DIEFERT, CYNTHIA R
1269 E VOLTARIE AVE
PHOENIX AZ 85022

HINOJOSA, JESUS SR & MARIA D
5014 HIGH MEADOW
CORPUS CHRISTI TX 78413

THOMAS, WILLIAM W TRUST
125 E MARIPOSA
SAN ANTONIO TX 78212

MERCADO, ANTONIO EDUARDO & NANCY LEAL
P O BOX 3154
MISSION TX 78573

TEJEDA, MARISA H .
717 MARSHALL ST
SAN ANTONIO TX 78212

ZARATA, GLORIA
730 MESA RIDGE
SAN ANTONIO TX 78258

GALVAN, ROEL & DIANA L.
4502 CO RD 304
SAN DIEGO TX 78384

SALINAS, JORGE & THEA
PO BOX 999
FREER TX 78357

GARCIA, LAURO A.
112 S SIERRA WOODS DR
ROCKPORT TX 78382

RAMIREZ, RAMIRO JR & ELODIA
3386 CR 332
SAN DIEGO TX 78384

GARCIA, GUADALUPE &
8225 BIG BEND DR
CORPUS CHRISTI TX 78414

TREVINO, DAVID
3016 HWY 44
SAN DIEGO TX 78384

RANGEL, RENE S
P O BOX 44
SAN DIEGO TX 78384

ROGERS, RICHARD
408 KINGWOOD
VICTORIA TX 77901

Revised July 2024

ROGERS, THOMAS H
7730 CREEK TRAIL
SAN ANTONIO TX 78254

SEIBERT, LEONOR
1579 TREBEIN RD
XENIA OH 45385

ALANIZ, ROMAN F SR
508 S DR E E DUNLAP HWY
SAN DIEGO TX 78384

GARCIA, ANGELINA
1579 TREBEIN RD
XENIA OH 45385

URUTIA, ROSA M
506 E KING ST
SAN DIEGO TX 78384

MALDONADO, ISAURO
303 FARM ST
ALICE TX 78332

MALDONADO, JOSE EMILIO
P O BOX 501
FREER TX 78357

TANGUMA, LORENZO
706 S LOUISIANA
SAN DIEGO TX 78384

ROLLING R SERVICES LLC
P O BOX 1112
FREER TX 78357

GARRETSON, HERMELINDA & RAMON MARTINEZ JR
4510 LOS MARTINEZ DRIVE
LAREDO TX 78041

CYPRESS VIEW INVESTMENTS LTD
1001 WATER ST SUITE B 200
KERRVILLE TX 78028

SCRIBNER, JACK JOSEPH & MARIA EVA
414 ST THOMAS
LAREDO TX 78045

VILLARREAL, FRANCES G
120 FOWLKES ST
SEALY TX 77474

RUBEN RANGEL
510 S VICTORIA
SAN DIEGO TX 78384

RODILFO SENDEJO
P O BOX 738
SAN DIEGO TX 78384

SALINAS FAMILY TRUST
730 MESA RIDGE
SAN ANTONIO TX 78258

URI, INC
101 N. SHORELINE BLVD, STE 560
CORPUS CHRISTI TX 78401

VERDON, CHARLES
600 HUISACHE STREET
ROBSTOWN TX 78380

BUENO, HERMELINDA
440 WEST AVENUE C
ROBSTOWN TX 78380

GARCIA, GLORIA
1801 BOSQUEZ BOX 131
ROBSTOWN TX 78380

MONTOYA, MARIA, ET AL
1409 WINGHAVEN DRIVE
LIMA OH 45805

PENA, DANIEL
801 REDONDO DRIVE
HOUSTON TX 77015

PENA, GILBERTO
625 WEST AVE E
ROBSTOWN TX 78380

PENA, ROBERTO
247 E CR 239
ORANGE GROVE TX 78372

PENA, ROEL
801 REDONDO DRIVE
HOUSTON TX 77015

RENDON, ROSARIO
144 S. FLORES
ROBSTOWN TX 78380

SANTOS, MARY ANN
179 CR 242
ORANGE GROVE TX 78372

DAVID A. BRIMHALL
4302 SPRING CREEK DR.
CORPUS CHRISTI TX 78410

DAVID R. GARZA
2802 MORRISON ST. #404
HOUSTON TX 77009

DEBORAH CATHERINE DUNN
4750 GRAND JUNCTION DRIVE, APT#18
CORPUS CHRISTI TX 78415

Revised July 2024

DONNA ELIZABETH BRIMHALL DENNARD
4990 AFTON OAKS DR.
COLLEGE STATION TX 77845

MARJORIE ELLEN DUNN WILSON
134 CLEMENT DR.
AUSTIN TX 78737

MARY ANNE DUNN BOSE
2929 TODD TRL
ROUND ROCK TX 78665

RAMON, MANUAL S
1305 LINCOLN STREET
ALICE TX 78332

REV. FATHER ROBERT DRISCOLL DUNN JR.
1120 SOUTH 8TH STREET
KINGSVILLE TX 78363

ROBBIE ELIZABETH RYBAK
5617 LES PARRE
CORPUS CHRISTI TX 78414

SAM SMITH
403 WINDSOR DRIVE
FRIENDSWOOD TX 77546

SCOTT SMITH
230 TC JESTER BLVD., #214
HOUSTON TX 77007

STANTON B. FRITZSIMMONS
P. O. BOX 620
SAN DIEGO TX 78384

WILLIAM P. FRITZSIMMONS
P. O. BOX 620
SAN DIEGO TX 78384

ALANIZ, NATIVADAD
4725 SOUTH SHEA PARKWAY
CORPUS CHRISTI TX 78413

CARDENAS, ABELARDO B
300 ALCALDE
DALLAS TX 75246

CARDENAS, ANDREW
14915 POYNESIAN
SAN ANTONIO TX 78230

CARDENAS, ARMANDO
11300 WHISPER GLENN
SAN ANTONIO TX 78230

CHAPA, ADRIANNA BELINDA
7041 EDGEBROOK DR
CORPUS CHRISTI TX 78413

GARCIA, LORENZO
8615 PUERTO VIEJO
LAREDO TX 78045

HINOJOSA, MARGARITA
P. O. BOX 381
BENAVIDES TX 78341

KARAZE, JOSIFA G
3600 JEANETTE, UNIT 1605
HOUSTON TX 77063

NELSON, ESTELLA
5150 HIDALGO, UNIT 1101
HOUSTON TX 77056

NINMAN, EVA
3020 TEAGUE ROAD
HOUSTON TX 77080

SALINAS, ABELARDO
4717 COVENTRY LANE
CORPUS CHRISTI TX 78411

SALINAS, FERNANDO
28590 BARN ROCK
HAYWOOD CA 94542

SALINAS, FIDELA C
P.O. BOX 481
BENAVIDES TX 78341

VALERIO, CARLOS G
5229 MILLWOD
CORPUS CHRISTI TX 78413

VALERIO, DAVID G
4009 BRAY
CORPUS CHRISTI TX 78413

VALERIO, FELIPE S
233 VERA CRUZ
CORPUS CHRISTI TX 78405

VALERIO, NORBERT
1818 CLIFF MAUS DRIVE
CORPUS CHRISTI TX 78416

RAMOS, ERICA
1211 E. PINE
PHARR TX 78577

RAMOS, JOHN D
1626 WEST MANR DRIVE
CORPUS CHRISTI TX 78412

RAMOS, LUIS F, JR
3761 EAST CEDAR AVE
DENVER CO 80209

ZULEMA CUELLAR MENDEZ TRUST
12431 WINDING BRANCH
SAN ANTONIO TX 78230

ADOLFO BENJAMIN CUELLAR JR.
4514 HAVERHILL LN.
CORPUS CHRISTI TX 78411

CONSUELO ANETTE CUELLAR LONGORIA
6701 NORTHGATE DR.
CORPUS CHRISTI TX 78413

CUELLAR MARTIAL DEDUCTION TRUST
P.O. BOX 3277
ALICE TX 78333

GERARDO AYALA
14800 SAN PEDRO AVE # 120
SAN ANTONIO TX 78232

GERMAN TORRES CUELLAR
14800 SAN PEDRO AVE # 120
SAN ANTONIO TX 78232

JULIAN AYALA
14800 SAN PEDRO AVE # 120
SAN ANTONIO TX 78232

KRISTINA VILLAREAL
5306 WOODGATE DR.
CORPUS CHRISTI TX 78413

MARIO GUILLERMO TORRES CUELLAR
14800 SAN PEDRO AVE # 120
SAN ANTONIO TX 78232

MARK VILLAREAL
31109 KNOTTY GROVE
BOERNE TX 78015

MINERVA CUELLAR
49 VILLA JARDIN
SAN ANTONIO TX 78230

NILDA TIJERINA CUELLAR DE GOMEZ
14800 SAN PEDRO AVE # 120
SAN ANTONIO TX 78232

PATRICIA VILLAREAL
101 MOHEGAN DRIVE
ENTERPRISE AL 36330

PEDRO G. TIJERINA CUELLAR
14800 SAN PEDRO AVE # 120
SAN ANTONIO TX 78232

RICARDO L. CUELLAR
31109 KNOTTY GROVE
BOERNE TX 78015

RUMALDO NUNEZ
21188 ALMERIA
BUCKEYE AZ 85396

SONIA CUELLAR LASH
808 MICA LN
LEANDER TX 78641

VALERIE VALERIO
5360 ARBOLEDA LANE
CORPUS CHRISTI TX 78417

GONZALEZ, GABRIEL, JR
907 ARIDALVA
SAN DIEGO TX 78384

GONZALEZ, SANDRA DEE
907 ARIDALVA
SAN DIEGO TX 78384

SAENZ, ELODIA
P O BOX 822
SAN DIEGO TX 78384

VALERIO, MARIO
1110 LILLIAN
ALICE TX 78332

ALNIZ, D'ALDO
4330 LAKE PONCHASTRAIN
CORPUS CHRISTI TX 78413

EVAN, ADRIANA
513 HOUSE AVE
SANDIA TX 78383

GARZA, ADRIAN
P.O. BOX 225
SAN DIEGO TX 78384

GARZA, HEBERTO, JR
1001 ISLE ROYALE WAY
AUSTIN TX 78747

GARZA, ROSABEL
1001 ISLE ROYALE WAY
AUSTIN TX 78747

NEMTH, ELIZABETH A.
550 KERNAN DRIVE
SAN ANTONIO TX 78227

PENA, JAVIER
5433 S. HWY 281
ALICE TX 78332

PENA, OSCAR, ET AL
721 HICKEY STREEY
ALICE TX 78332

Revised July 2024

PEREZ, BEATRICE
6125 CHAPARRAL TRAIL
BEEVILLE TX 78102

STANSEL, JEREMY M.
18 PARK AVENUE, APT A
SOUTH WEYMOUTH MA 02190

STANSEL, JESSE
10219 HAWAIIN FIELD
SAN ANTONIO TX 78245

STANSEL, MARK J.
10219 HAWAIIN FIELD
SAN ANTONIO TX 78245

STANSEL, MARK J.
18 PARK AVENUE, APT A
SOUTH WEYMOUTH MA 02190

DUVAL COUNTY
P O BOX 189
SAN DIEGO TX 78384

IBARRA, ANTONIO & OFELIA
P O BOX 192
SAN DIEGO TX 78384

PEREZ, LEOPOLDO G FAMILY TRUST
6 SHEFFIELD PARK DRIVE
SAN ANTONIO TX 78209

RAMIREZ, ROSALINDA
P O BOX 1087
SAN DIEGO TX 78209

VALERIO, RODOLFO
4294 FM 3196
SAN DIEGO TX 78209

JORDAN RANCHO MILAGRO
5120 WOODWAY, STE 9011
HOUSTON TX 77056

C L WRIGHT, III TRUST
610 STIRMAN ST
CORPUS CHRISTI TX 78411

CALHOUN, WILSON
2076 PASSARE
NEW BRAUNFELS TX 78132

EILEEN PARR 2003 IRREVOCABLE TRUST
C/O AMERICAN BANK TRUST DEPT.
P O BOX 6771
CORPUS CHRISTI TX 78466

ELLIS, ARCHER
109 HIDDEN VALLEY AIRPARK
SHADY SHORES TX 76208

ELLIS, ASTON
5748 CEDAR GROVE CIRCLE
PLANO TX 75093

PARR, ANN
4214 MULLIGAN DR
CORPUS CHRISTI TX 78413

THE EILA MUNIZ-VALERIO AND
MARIO H VALERIO LIVING TRUST
1110 LILLIAN
ALICE TX 78332

ATTACHMENT G

FINANCIAL ASSURANCE

III. Financial Assurance

URI maintains financial assurance for completion of groundwater restoration and Class III well plugging and abandonment associated with the Rosita facility. These cost estimates are reviewed as needed or at least annually to ensure TCEQ has adequate financial assurance available for site closure.

1. Well Closure

A detailed cost estimate along with the assumptions and methodologies for closure of the Class III wells is provided in Attachment G-1. This estimate of $168,108 is provided in 2022 dollars and assumes the closure activities will be conducted by a third party. This amount has been updated as needed to reflect any changes to the total including inflation adjustments which results in a current cost estimate of $187,430 for Class III well closure (Attachment G-2).

2. Groundwater Restoration

Groundwater restoration activities are addressed under the facility radioactive materials license R03653 and the financial assurance cost estimate for this restoration is captured within the financial assurance associated with License R03653.

URI's 2023 annual decommissioning cost estimate (DCE), which was submitted in October 2023 (Attachment G-3) was approved by TCEQ on November 7, 2023 (Attachment G-4). The approved estimate of $9,121,025 included the updated costs of $347,059 and $303,379 associated with groundwater restoration for PAA3 and PAA5, respectively. A copy of the updated bond to reflect the new cost total of $9,121,025 is provide in Attachment G-5.

Attachment G-1

Rosita UIC Plugging Cost Estimate

ROSITA PLUGGING AND ABANDONMENT ESTIMATE (April 2022)

		IN			FT	CU YD	CU YD	EACH WELL									
PAA	WELL TYPE	WELL CASING	ID Inches	QTY	AVERAGE DEPTH	HOLE VOLUME	Slurry REQ'D	SLURRY COST	BACKHOE	BACKHOE OPERATOR	ENG/ GEOL	PLUGGING OPERATORS	PLUGGING EQUIPMENT	Ancillary 2%	TOTAL PER HOLE	TOTAL PAA	WITH PROFIT
PAA3 Rosita	PRODUCTION	6	5.78	343	190	1.28	1.54	66.33	18.18	9.61	85.71	57.65	10.29	4.96	252.73	86,685	104,022
PAA3 Rosita	MONITOR	6	5.78	7	155	1.05	1.26	54.11	18.18	9.61	85.71	57.65	10.29	4.71	240.26	1,682	2,018
PAA3 Rosita	MONITOR	50/50	4.5	38	144	0.59	0.71	30.47	18.18	9.61	85.71	57.65	10.29	4.24	216.15	8,214	9,856
PAA3 Rosita	BASELINE	6	5.78	8	207	1.40	1.68	72.26	18.18	9.61	85.71	57.65	10.29	5.07	258.78	2,070	2,484
PAA3 TOTALS				396			577	24,866	7,200	3,805	33,943	22,830	4,073	1,934		98,651	118,381
PAA5 Rosita	PRODUCTION	6	5.78	115	260	1.75	2.11	90.77	18.18	9.61	85.71	57.65	10.29	5.44	277.65	31,930	38,316
PAA5 Rosita	MONITOR	5	4.85	28	260	1.24	1.48	63.91	18.18	9.61	85.71	57.65	10.29	4.91	250.26	7,007	8,409
PAA5 Rosita	OMWs	5	4.85	5	150	0.71	0.86	36.87	18.18	9.61	85.71	57.65	10.29	4.37	222.68	1,113	1,336
PAA5 Rosita	BASELINE	6	5.78	5	260	1.75	2.11	90.77	18.18	9.61	85.71	57.65	10.29	5.44	277.65	1,388	1,666
PAA5 TOTALS				153			298	12,866	2,782	1,470	13,114	8,821	1,574	813		41,439	49,727
ROSITA TOTALS				**549**			**875**	**37,732**	**9,982**	**5,275**	**47,057**	**31,650**	**5,647**	**2,747**		**140,090**	**168,108**

CEMENT SLURRY OVERAGE		120%
SLURRY MATERIAL COST PER 1 CUBIC YARD	$	43.11
HOLES FILLED PER DAY		7
PLUGGING OPERATORS		2
PLUGGING OPERATOR PER YEAR	$	42,036.80
ENGINEER/GEOLOGIST PER YEAR/ PE	$	125,000.00
BACKHOE OPERATOR PER YEAR	$	42,036.80
BACKHOE USE PER DAY	$	127.27
CONTRACTOR PROFIT		120%
PLUGGING EQUIPMENT MAINTENANCE/ MO	$	1,500.00

Notes –
-The Plugging and abandonment estimate includes the contractor profit of 20%.
-Cement slurry 20% overage is used to account for the shrinkage due to dehydration and also cement loss to the formation.
Mixture has been calculated using approved plugging mixture updated on 08-08-2014.
Backhoe operators and backhoe are only used for surface plugging and is only utilized 1/3 of the time.
Plugging operators and Engineer utilized 100% of time.
250 work days per year, 21 work days per month.
Personnel costs include burden costs of 20%.

Slurry Mixture

	Ratio by Weight	$1\ yd^3$	$1\ yd^3$	201.974 gallons
Cement	1	148.5 lbs		
Gel	1.19	176.715 lbs		
Water	10.55	1566.675 lbs		
		1891.89 lbs		
Density		**9.366998** lbs/gal		

Material Costs

Cement	$	12.19	per sack	94 lbs	$	0.13	$/lb.	$ 19.25	$\$/yd^3$
Gel	$	13.50	per sack	100 lbs	$	0.14	$/lb.	$ 23.86	$\$/yd^3$
Water	No cost - from existing supply wells				$	-	$/lb.	$ -	$\$/yd^3$
								$ 43.11	$\$/yd^3$

Attachment G-2

Performance Bond - UIC

GENERAL PURPOSE RIDER

To be attached to and form part of Bond Number N-7005279 effective 4/25/2022

issued by the Indemnity National Insurance Company

in the amount of 175,168.54 DOLLARS,

on behalf of URI, Inc.

as Principal and in favor of Texas Commission on Environmental Quality

as Obligee:

Now, Therefore, it is agreed that:

This rider will increase the bond amount as follows:

Current Bond Amount: $175,168.54
New Bond Amount: $187,430.00

Permit UR02880, Rosita Facility

It is further understood and agreed that all other terms and conditions of this bond shall remain unchanged.

This rider is to be effective the 24th day of January, 2024.

Signed, sealed and dated this 24th day of January, 2024.

URI, Inc. (Principal)

By: [signature]

Indemnity National Insurance Company (Surety)

By: [signature] Theresa Hintzman Attorney-in-Fact

Accepted By:

Texas Commission on Environmental Quality

Form F5340

Indemnity National Insurance Company
238 Bedford Way
Franklin, TN 37064

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS: that Indemnity National Insurance Company, a Mississippi corporation, (hereinafter the "Company"), does hereby constitute and appoint: Brook T. Smith, William R. Precious, Mark A. Guidry, Theresa Hintzman, Amy Smith, Susan Ritter, and Kelsy Hoagland of Acrisure, LLC dba Smith Manus to be its true and lawful Attorney-in-Fact, with full power and authority hereby conferred to sign, seal, and execute on its behalf surety bonds or undertakings and other documents of a similar nature issued in the course of its business up to a penal sum not to exceed Thirty Million and 00/100 Dollars*************** ($30,000,000.00) each, and to bind the Company thereby as fully and to the same extent as if the same were signed by the duly authorized officers of the Company.

This appointment is made under and executed pursuant to and by authority of the following Minutes of Special Actions Taken by Written Consent of the Board of Directors, which is now in full force and effect:

Authorization to Appoint Attorneys-in-Fact and the Use of Facsimile Signatures and Facsimile Seals for the Purpose of Issuing Bonds:

RESOLVED: That the president or any vice president may appoint attorneys-in-fact or agents with authority as defined or limited in the instrument evidencing the appointment in each case, for and on behalf of the Company to execute and deliver and affix the seal of the Company to bonds and related obligatory certificates and documents; and any one of said officers may remove any such attorney-in-fact or agent and revoke any power previously granted to such person, whether or not such officer appointed the attorney-in-fact or agent.

RESOLVED: That any bonds and related obligatory certificates and documents shall be valid and binding upon the Company,
(i) when signed by the president, or any vice president, and sealed with the Company seal; or
(ii) when duly executed and sealed with the Company seal by one or more attorneys-in-fact or agents pursuant to and within the limits of authority evidenced by the power of attorney issued by the Company to such person or persons a certified copy of which power of attorney must be attached thereto in order for such obligation to be binding upon the Company.

RESOLVED: That the signature of any authorized officer and the seal of the Company may be affixed to any power of attorney or certification thereof authorizing the execution and delivery of any bonds and related obligatory certificates and documents of the Company and such signature and seal then so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Company and the corporate seal of Indemnity National Insurance Company has been affixed thereto in Lexington, Kentucky this 6th day of November, 2017.

INDEMNITY NATIONAL INSURANCE COMPANY CORPORATE SEAL 1993 Mississippi

Indemnity National Insurance Company

By [signature]
Thomas F. Elkins, President

State of Kentucky
County of Fayette

On this 6th day of November, 2017, before me, a Notary Public, personally came Thomas F. Elkins, to me known, and acknowledged that he is President of Indemnity National Insurance Company; that he knows the seal of said corporation; and that he executed the above Power of Attorney and affixed the corporate seal of Indemnity National Insurance Company thereto with the authority and at the direction of said corporation.

DEBORAH A. MURPHY NOTARY PUBLIC STATE AT LARGE KY

By Deborah A. Murphy
Notary Public

My Commission Expires 09/26/2021

CERTIFICATE

I, James E. Hart, Secretary of Indemnity National Insurance Company, do hereby certify that the foregoing Power of Attorney is still in full force and effect, and further certify that the Minutes of Special Actions Taken by Written Consent of the Board of Directors are now in full force and effect.

IN TESTIMONY WHEREOF I have subscribed my name and affixed the seal of said Company. Dated this 24th day of January, 2024.

INDEMNITY NATIONAL INSURANCE COMPANY CORPORATE SEAL 1993 Mississippi

By [signature]
James E. Hart, Secretary

Attachment G-3

URI – 2023 Decommissioning Cost Estimate

URI, Inc.
A subsidiary of enCore Energy Corp.
TSX.V: EU: OTCQB: ENCUF

October 10, 2023

Dr. Yaneth Gamboa, Ph.D., Project Manager
Radioactive Materials Section
Radioactive Materials Division, MC 233
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

RE: Radioactive Material License R03653
Year 2023 Decommissioning Cost Estimate Adjustment

Dear Dr. Gamboa:

Please accept this letter as URI Inc. response to your letter dated August 31, 2023 requesting the annual decommissioning cost estimate at the sites authorized by Radioactive Materials License R03653.

Due to the decline in the price of uranium, in 2008 URI suspended plans for additional development at all licensed sites and advanced restoration at each location. In 2022, URI submitted a renewal application for the above referenced license. This renewal is currently awaiting final approval from TCEQ. In 2023, URI submitted a Class III production area authorization (PAA) application with the intention to resume production operations. That application was approved by TCEQ on September 8th, 2023, for the Rosita In Situ Uranium Mine.

With respect to decommissioning, URI has made significant progress in site closure at all sites over the past several years. As outlined in the following site descriptions, a number of decommissioning activities have been completed and approved by the TCEQ. URI intends to adjust the current approved DCE from 2022 with the latest inflation adjustment value.

Kingsville Dome Project
RN102380763

Full scale groundwater restoration was completed in production areas 1 and 2 at the Kingsville Dome site in 2011. We have obtained 3 rounds of initial stability sample sets from all baseline wells in production areas 1 and 2 in 2012.

On July 17, 2009, URI advised TCEQ that URI completed production activities in Production Area 3 (PAA3) and had returned to the restoration mode in PAA3. In January 2014, URI completed groundwater restoration in PAA3. On March 31, 2014, URI notified the TCEQ that groundwater restoration was complete in PAA3 as required by 30TAC§331.107. In April-May 2014, URI collected the first round of stability samples from PAA3. In December 2014-January 2015, URI collected the second round of stability samples from PAA3. Groundwater restoration as of September 30, 2023, based on percent complete, is broken out by well fields and production areas is shown in the table below.

KVD GW Restoration Status

PAA	Category	% Complete
1	WF-1	100%
1	WF-2	100%
1	WF-3	100%
2	WF-4	100%
1	WF-5	100%
2	WF-6	100%
2	WF-7	100%
2	WF-8	100%
3	WF-9	100%
3	WF-10	100%
2	WF-11/12	100%
3	WF-13	100%
3	WF-14	100%
3	WF-15A	100%
3	WF-16	100%
3	WF-17	100%

URI will continue monitoring the groundwater in all three production areas. The final stability sample will occur in PAA3 following resolution of issues regarding UIC permit renewal with Kleberg County. Upon resolution, URI will move forward to have TCEQ approve groundwater restoration with subsequent plugging and abandonment activities in these PAAs.

Rosita Project
RN102380805

Groundwater restoration was completed in PAA1 and PAA2 at the Rosita site by 2008. On October 21, 2008, notice was given to the TCEQ that restoration was complete in PAA1 and PAA2 and that the stability monitoring phase was to begin. URI then completed one year of groundwater restoration stability sampling in PAA 1 and PAA2 as required by 30TAC§331.107. On October 12, 2011 TCEQ approved the amended restoration tables for PAA 1 and PAA2 allowing for final closure of these production areas. Following an additional year of stabilization monitoring, TCEQ acknowledged completion of restoration for PAA2 on April 7, 2014. URI subsequently notified the TCEQ that plugging would begin on April 9, 2014.

On August 6, 2014, the TCEQ notified URI that stabilization in well field 1 in PAA1 was completed and on September 15, 2014 the remainder of PAA1 stabilization was deemed complete. URI notified TCEQ that plugging in PAA1 would begin on September 22, 2014. On January 9, URI requested an extension for plugging in PAA1 and PAA2, which was granted. URI requested an additional extension for plugging on May 28, 2015, which was also granted. Plugging in both PAA1 and PAA2 was completed on September 18, 2015. On October 16, 2015, URI submitted the Closure Report for PAA1 and PAA2 in accordance with 30TAC§331.46(n). URI submitted a revision to the plugging report on August 4, 2016. TCEQ acknowledged and accepted that plugging and abandonment in PAA1 and PAA2 were completed on August 1, 2017.

URI submitted a Soil Decommissioning Plan (SDP) to the TCEQ on November 1, 2017. URI responded to TCEQ comments on May 15, 2018. URI received a TNOD#1 and responded on September 7, 2018. TCEQ issued TNOD #2 on the SDP and URI responded to TCEQ in draft form on December 28, 2019. No changes were made to the draft and the official response was submitted on March 5, 2019. On June 13, 2019, URI received conditional approval of the SDP on June 13, 2019. Initial soil cleanup activities were completed in 2021. In 2022, it was determined that URI needed additional supplementary sampling in order to complete the Final Status Survey Report. That work is in progress and URI now expects the Final Status Survey report to be completed and submitted to TCEQ in the first half of 2024.

Production resumed at the Rosita facility in June 2008 with the startup of well field 8 in PAA3. However, due to falling uranium prices, production was suspended. URI is anticipating resuming production in PAA3 should market conditions improve or URI may declare mining is complete and proceed with groundwater restoration in PAA3.

PAA4 was never produced. On March 1, 2017, URI submitted a Notice of Plugging and Abandonment letter to the TCEQ. URI plugged all wells in PAA4. URI submitted a Closure Report for PAA4 to TCEQ on June 14, 2017 which was approved on October 6, 2017. On September 8th, 2023, URI received TCEQ approval for Class III production area authorization application for PAA5 and will resume production operations by the end of 2023.

Vasquez Project and Waste Disposal Well-185
RN102380821

On November 3, 2008, URI advised TCEQ that production activities at the Vasquez site have ceased and that both PAA1 and PAA2 initiated the restoration phase. Full scale groundwater restoration was completed in January 2013 in PAA1 and PAA2. On January 10, 2014, URI notified the TCEQ that groundwater restoration had been completed in PAA1 and PAA2 and that the company intended to begin stabilization.

TCEQ was notified on March 31, 2014 that the first round of stability samples would be taken on April 21, 2014. The second set of stability samples were collected in December 2014 and the third was obtained in May 2015.

On February 29, 2016 URI submitted an amendment to TCEQ in order to amend the restoration range table for the parameters of iron and manganese. This was deemed administratively complete on March 18, 2016. On April 12, 2016 a revision was submitted to the TCEQ in order to clarify technical questions. TCEQ approved the amendment application on November 3, 2016. On December 1, 2016, URI submitted a minor amendment to the restoration table, which was approved by TCEQ on February 13, 2017.

Three additional sets of stability samples were taken at a minimum of 30 days apart and the results were submitted to the TCEQ on October 9, 2017. On November 3, 2017, the TCEQ acknowledged that URI accomplished final restoration in PAA1 and PAA2. In December 2017, URI initiated plugging and abandonment activities both PAAs and was completed on July 23, 2018. TCEQ approved URI plugging activities on December 13, 2018.

Upon completion of plugging activities, URI began removing all equipment from the wellfields and satellite facilities in preparation of surface reclamation. URI submitted a new site decommissioning plan on August 8, 2019 and is currently awaiting approval by TCEQ.

URI plugged and abandoned the waste disposal well WDW185 in November 2020. The closure report for WDW185 was submitted on December 3, 2020, and revised on January 18, 2021. TCEQ approved closure of WDW185 on January 9, 2021. With this approval, URI is no longer required to maintain financial assurance associated with WDW185. TCEQ issued a permit revocation for Underground Injection Control Permit No. WDW185 on March 9, 2021.

Proposal for Adjustments or Revisions

As described above, groundwater restoration has been completed at the licensed sites. Plugging and abandoning has also been completed for the Rosita site in PAA1, PAA2 and PAA4 and at the Vasquez site in PAA1 and PAA2. As described above, URI initiated installation of Class III wells at the Rosita site in PAA5. Other decommissioning activities performed by URI included consolidation of materials for future disposal at a licensed disposal facility. However, these activities will not affect the proposed decommissioning cost estimate.

In 2023, URI increased the DCE financial assurance to include Rosita RIX3 decommissioning costs of $55,000. This increased the total DCE to $8,240,790 from $8,185,790. URI has applied the TCEQ inflation factor of 7.0% for 2023 to this amount. Due to the Class III production area authorization approval, URI will now also include the groundwater restoration inflated amount in the DCE for PAA5 in Rosita.

Year	Factor	DCE
2022	4.2%	$8,240,790
2023	7.0%	$9,121,025

URI requests approval of the 2023 Decommissioning Cost Estimate Adjustment for Radioactive Material License R03653 in the amount of **$9,121,025**

Sincerely,

Daniel Calderon
Manager, South Texas Operations

TCEQ Radioactive Material License R03653
Annual decommissioning cost estimate calculator

TCEQ Website Inflation Factors			Factor
Inflation increase 2010 factor		101.0%	1.0%
Inflation increase 2011/2012 factor		103.9%	3.9%
Inflation increase 2013 factor		101.5%	1.5%
~~Inflation increase 2014 factor (originally reported)~~		~~101.4%~~	~~1.4%~~
Inflation increase 2014 factor (revised)		101.5%	1.5%
Inflation increase 2015 factor		101.0%	1.0%
Inflation increase 2016 factor		101.3%	1.3%
Inflation increase 2017 factor	10/9/2018	101.8%	1.8%
Inflation increase 2018 factor		102.3%	2.3%
Inflation increase 2019 factor		101.7%	1.7%
Inflation increase 2020 factor		101.2%	1.2%
Inflation increase 2021 factor		104.2%	4.2%
Inflation increase 2022 factor		107.0%	7.0%

Uranium License No. R03653

	2023	2022	2021
Site/Location/Closure Type	**2022 Inflation Factor Required Amt.**	**2021 Inflation Factor Required Amt.**	**2020 Inflation Factor Required Amt.**
Kingsville Dome			
Facility Decommissioning			
Land Reclamation	$ 3,808,310	$ 3,559,168	$ 3,415,708
RIX 3	$ 36,564	$ 34,172	$ 32,795
GW Restoration (by Wellfield)	$ 1,956,756	$ 1,828,744	$ 1,755,033
W/F 6			
W/F 9			
W/F 10			
W/F 14			
W/F 15			
W/F 16			
W/F 17			
W/F 18			
Subtotal Kingsville Dome	$ 5,801,630	$ 5,422,084	$ 5,203,536
Rosita			
Facility Decommissioning			
Land Reclamation	$ 599,023	$ 559,835	$ 537,270
RIX N	$ 33,861	$ 31,646	$ 30,370
RIX 3	$ 58,850	$ 55,000	
GW Restoration (by Wellfield)			
W/F 8	$ 347,059	$ 324,354	$ 311,280
PAA5	$ 303,379		
Subtotal Rosita	$ 1,342,172	$ 970,835	$ 878,920
Vasquez			
Facility Decommissioning			
Land Reclamation	$ 353,411	$ 330,291	$ 316,978
GW Restoration (by Wellfield)	$ 1,623,811	$ 1,517,580	$ 1,456,411
W/F 1,2,3,4,5 & 6			
Subtotal Vasquez	$ 1,977,222	$ 1,847,871	$ 1,773,389
Grand Total	$ 9,121,025	$ 8,240,790	$ 7,855,845

(1) URI agrees and understands that these financial assurance mechanisms are for all closure type activities associated with the Kingsville Dome facility/project. This supersedes our letter dated 07/13/07 with respect to LC No. 3089053.
(2) URI agrees and understands that these financial assurance mechanisms are for all closure type activities associated with the Rosita facility project up to the amount specified in this Exhibit A..
(3) URI agrees and understands that these financial assurance mechanisms are for all closure type activities associated with the Vasquez facility/project up to the amount specified in this Exhibit A.

The term "closure" as used in the footnotes above includes, but is not limited to, decommissioning, reclamation and aquifer/groundwater restoration.

Attachment G-4

TCEQ Approval of URI 2023 DCE

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 7, 2023

Mr. Daniel Calderon
Kingsville Dome Plant Superintendent/Facility Engineer
URI, Inc.
641 E. FM 1118
Kingsville, Texas 78363

Re: Radioactive Material License (RML) No. R03653
Kingsville Dome, Rosita, and Vasquez Facilities
2023 Annual Decommissioning Cost Estimate (DCE)
IDA # 29129967

Dear Mr. Calderon:

Texas Commission on Environmental Quality (TCEQ) staff completed a review of the 2023 annual update of the DCE information received on October 13, 2023, for the Kingsville Dome, Rosita, and Vasquez Facilities authorized under RML No. R03653. Based on the previous year estimates, the current applicable inflation rate, plus $58,850 for decommissioning of the Rosita remote ion exchange unit number three (RIX3, approved in license amendment 25 issued November 2, 2023), and $303,379 for groundwater restoration in Production Area Five (PAA5, authorized under Area Permit UR02880 on September 8, 2023), the TCEQ finds the DCE of $9,121,025 for 2023 to be sufficient.

Please contact Mr. Mark Stoebner with the TCEQ's Financial Assurance Section to arrange for any adjustments in the level of funding in the financial assurance instrument provided. Mr. Stoebner may be reached at (512) 239-6150, or by e-mail at mark.stoebner@tceq.texas.gov. If you have questions regarding the cost estimate evaluation, please contact Ms. Yaneth Gamboa by e-mail at Yaneth.Gamboa@tceq.texas.gov or (361) 881-6995.

Sincerely,

Chance Goodin, Manager
Radioactive Materials Section
Radioactive Materials Division

CG/YG

Attachment G-5

Performance Bond – RML

GENERAL PURPOSE RIDER

To be attached to and form part of Bond Number N-7005293 effective 5/2/2022
issued by the Indemnity National Insurance Company
in the amount of 8,525,790.49 DOLLARS,
on behalf of URI, Inc.
as Principal and in favor of Texas Commission on Environmental Quality
as Obligee:

Now, Therefore, it is agreed that:

This rider will increase the bond amount as follows:

Current Bond Amount: $8,525,790.49
New Bond Amount: $9,121,025.00

Permit RO3653, Kingsville Dome, Rosita and Vasquez Facilities

It is further understood and agreed that all other terms and conditions of this bond shall remain unchanged.

This rider is to be effective the 24th day of January, 2024.

Signed, sealed and dated this 24th day of January, 2024.

URI, Inc. (Principal)

By: [signature]

Indemnity National Insurance Company (Surety)

By: Theresa Hintzman
Theresa Hintzman Attorney-in-Fact

Accepted By:

Texas Commission on Environmental Quality

Form F5340

Indemnity National Insurance Company
238 Bedford Way
Franklin, TN 37064

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS: that Indemnity National Insurance Company, a Mississippi corporation, (hereinafter the "Company"), does hereby constitute and appoint: Brook T. Smith, William R. Precious, Mark A. Guidry, Theresa Hintzman, Amy Smith, Susan Ritter, and Kelsy Hoagland of Acrisure, LLC dba Smith Manus to be its true and lawful Attorney-in-Fact, with full power and authority hereby conferred to sign, seal, and execute on its behalf surety bonds or undertakings and other documents of a similar nature issued in the course of its business up to a penal sum not to exceed Thirty Million and 00/100 Dollars**************** ($30,000,000.00) each, and to bind the Company thereby as fully and to the same extent as if the same were signed by the duly authorized officers of the Company.

This appointment is made under and executed pursuant to and by authority of the following Minutes of Special Actions Taken by Written Consent of the Board of Directors, which is now in full force and effect:

Authorization to Appoint Attorneys-in-Fact and the Use of Facsimile Signatures and Facsimile Seals for the Purpose of Issuing Bonds:

RESOLVED: That the president or any vice president may appoint attorneys-in-fact or agents with authority as defined or limited in the instrument evidencing the appointment in each case, for and on behalf of the Company to execute and deliver and affix the seal of the Company to bonds and related obligatory certificates and documents; and any one of said officers may remove any such attorney-in-fact or agent and revoke any power previously granted to such person, whether or not such officer appointed the attorney-in-fact or agent.

RESOLVED: That any bonds and related obligatory certificates and documents shall be valid and binding upon the Company,
(i) when signed by the president, or any vice president, and sealed with the Company seal; or
(ii) when duly executed and sealed with the Company seal by one or more attorneys-in-fact or agents pursuant to and within the limits of authority evidenced by the power of attorney issued by the Company to such person or persons a certified copy of which power of attorney must be attached thereto in order for such obligation to be binding upon the Company.

RESOLVED: That the signature of any authorized officer and the seal of the Company may be affixed to any power of attorney or certification thereof authorizing the execution and delivery of any bonds and related obligatory certificates and documents of the Company and such signature and seal then so used shall have the same force and effect as though manually affixed.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Company and the corporate seal of Indemnity National Insurance Company has been affixed thereto in Lexington, Kentucky this 6th day of November, 2017.

INDEMNITY NATIONAL INSURANCE COMPANY CORPORATE SEAL 1993 Mississippi

Indemnity National Insurance Company

By ______________________
Thomas F. Elkins, President

State of Kentucky
County of Fayette

On this 6th day of November, 2017, before me, a Notary Public, personally came Thomas F. Elkins, to me known, and acknowledged that he is President of Indemnity National Insurance Company; that he knows the seal of said corporation; and that he executed the above Power of Attorney and affixed the corporate seal of Indemnity National Insurance Company thereto with the authority and at the direction of said corporation.

DEBORAH A. MURPHY NOTARY PUBLIC STATE AT LARGE KY

By ______________________
Notary Public

My Commission Expires 09/26/2021

CERTIFICATE

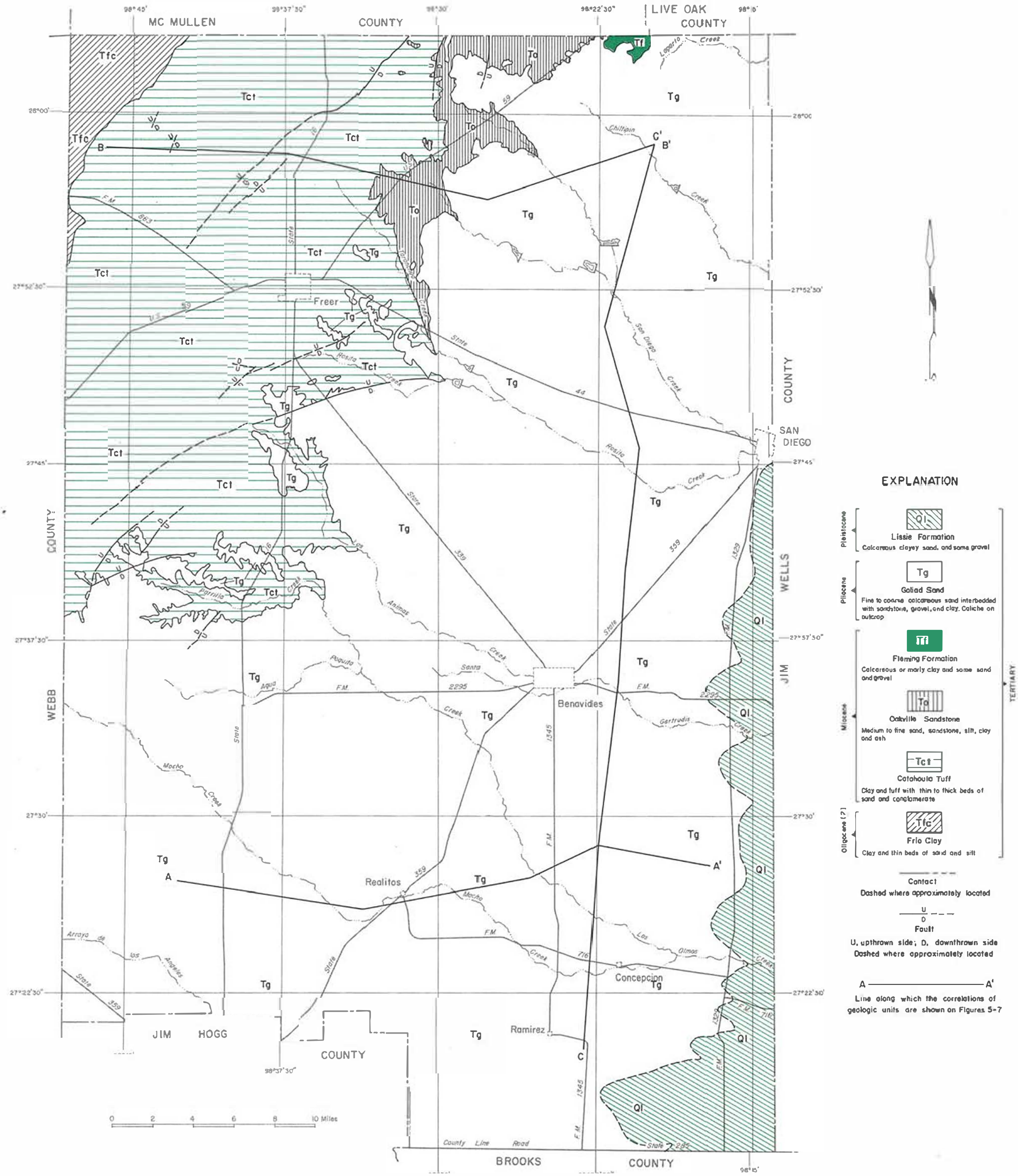
I, James E. Hart, Secretary of Indemnity National Insurance Company, do hereby certify that the foregoing Power of Attorney is still in full force and effect, and further certify that the Minutes of Special Actions Taken by Written Consent of the Board of Directors are now in full force and effect.

IN TESTIMONY WHEREOF I have subscribed my name and affixed the seal of said Company. Dated this 24th day of January, 2024

INDEMNITY NATIONAL INSURANCE COMPANY CORPORATE SEAL 1993 Mississippi

By ______________________
James E. Hart, Secretary

FIGURES

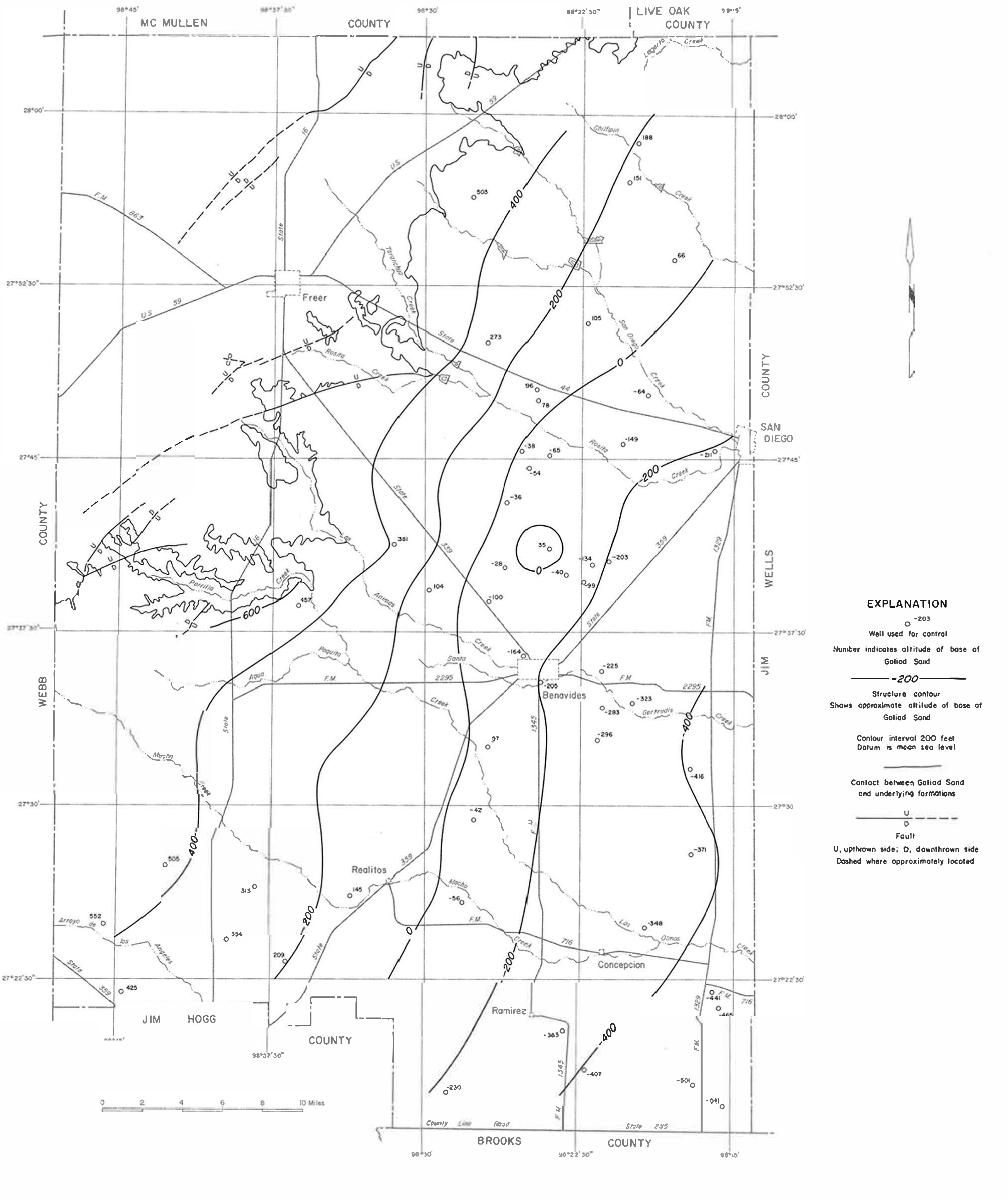


Geology

Figure IV-1

Base from U.S. Geological Survey topographic quadrangles and General Highway Map of the Texas Highway Department

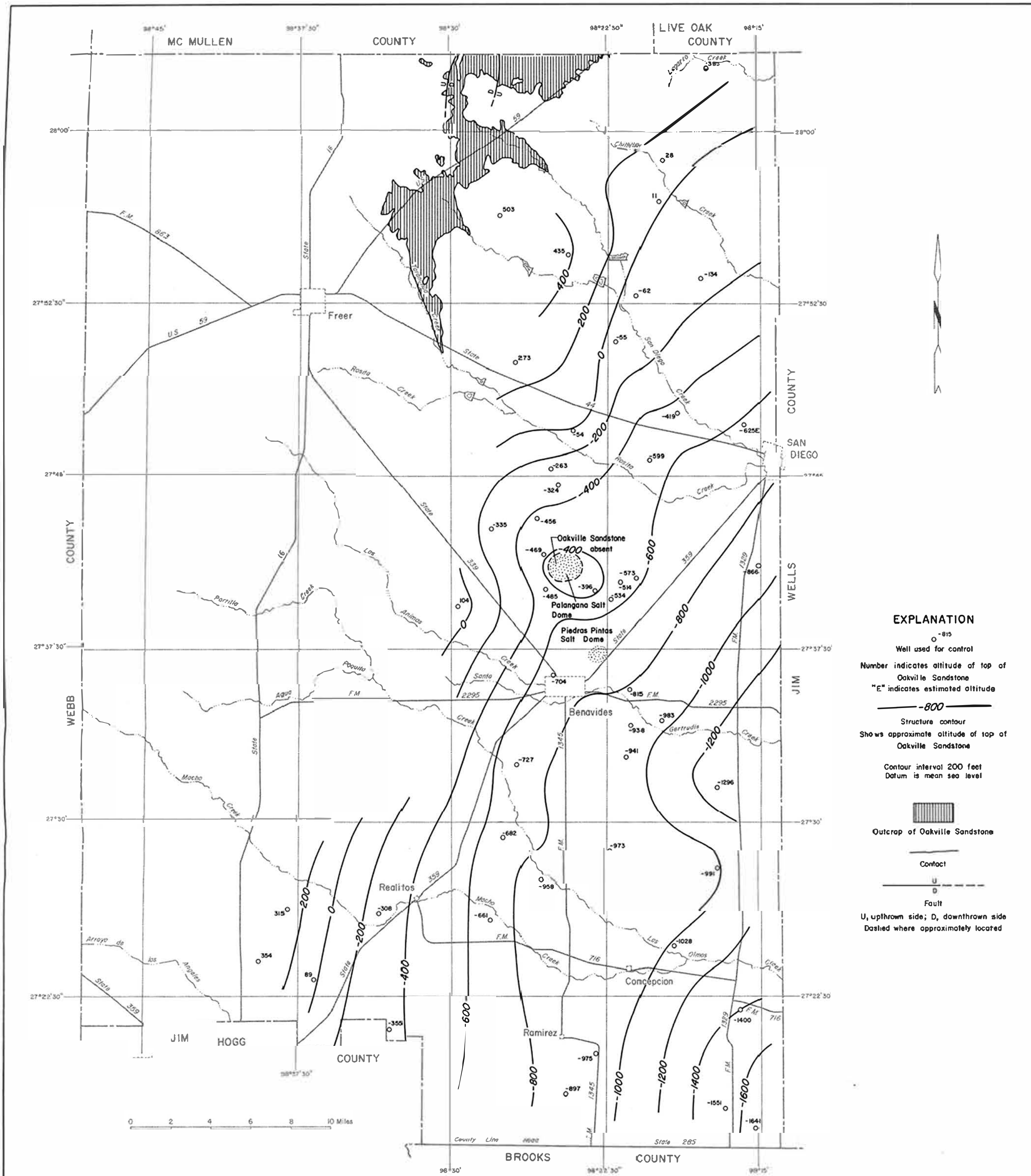
Geology of Catahoula Tuff, Oakville Sandstone, Fleming Formation, and Goliad Sand by D.H. Eargle, U.S. Geological Survey; geology of Frio Clay and Lissie Formation by Sayre (1937)



Base from U.S. Geological Survey topographic quadrangles and General Highway Map of the Texas Highway Department

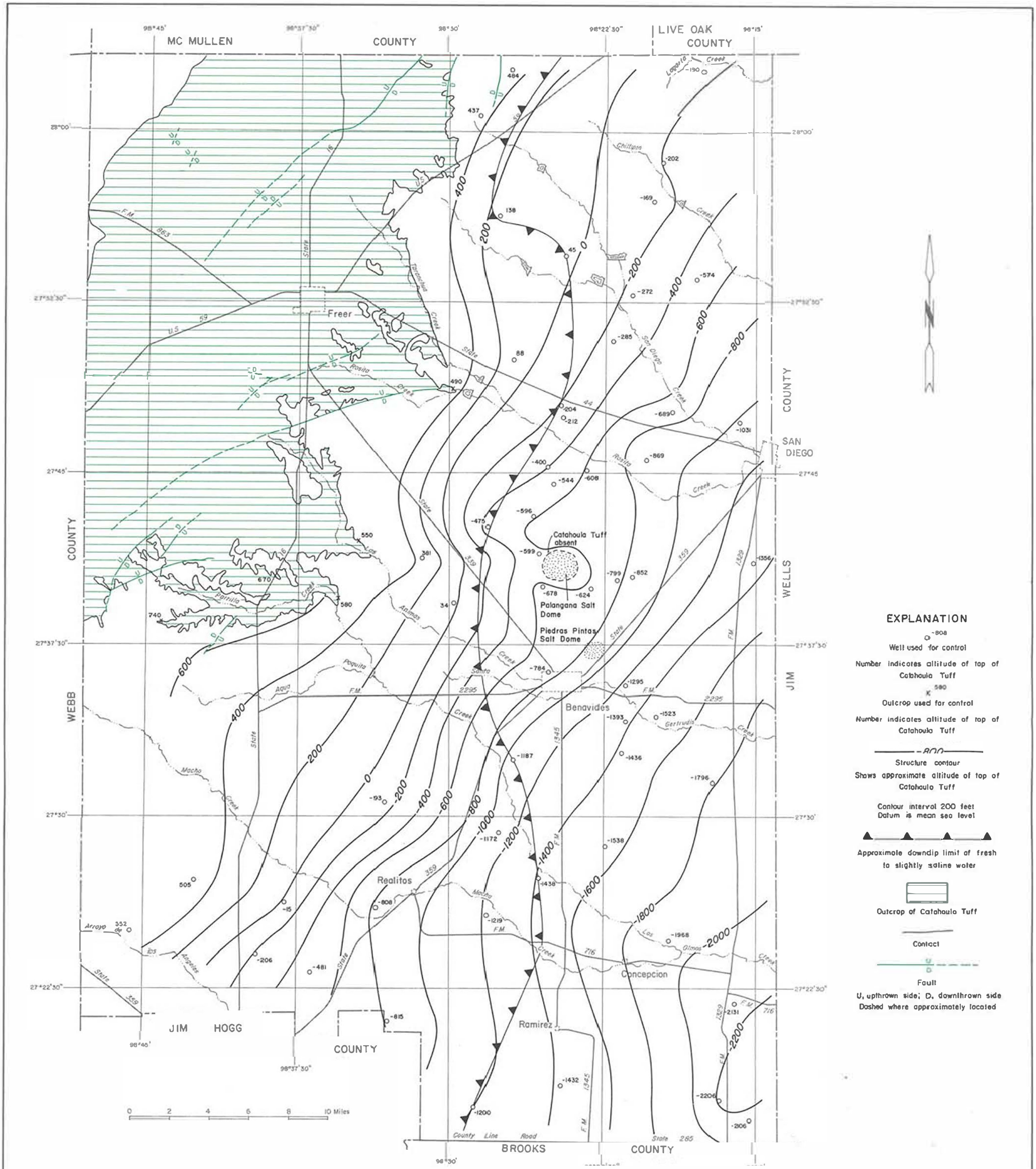
Approximate Altitude of the Base of the Goliad Sand

Figure IV-2



Approximate Altitude of the Top of the Oakville Sandstone

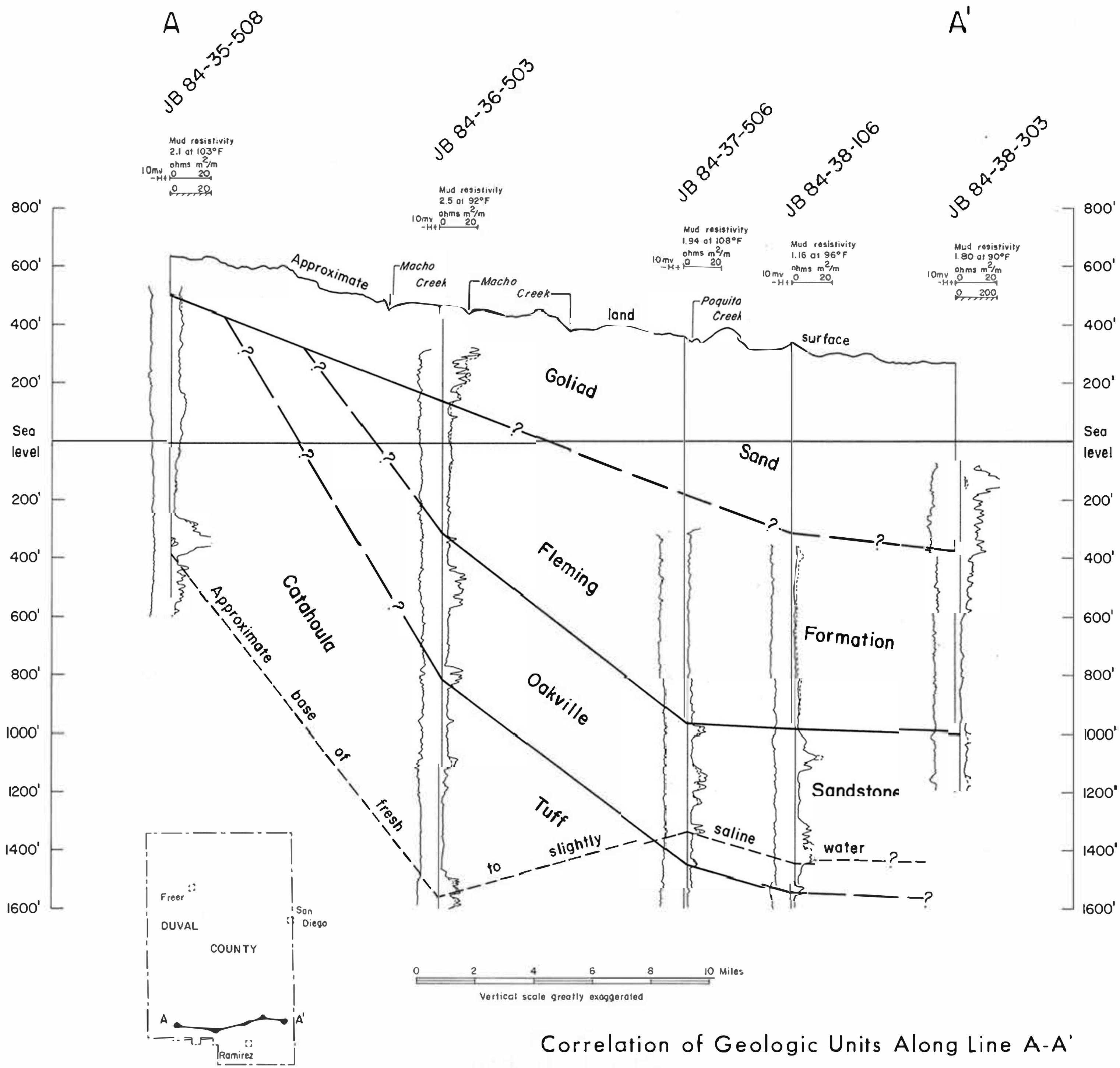
Figure IV-3



Approximate Altitude of the Top of the Catahoula Tuff

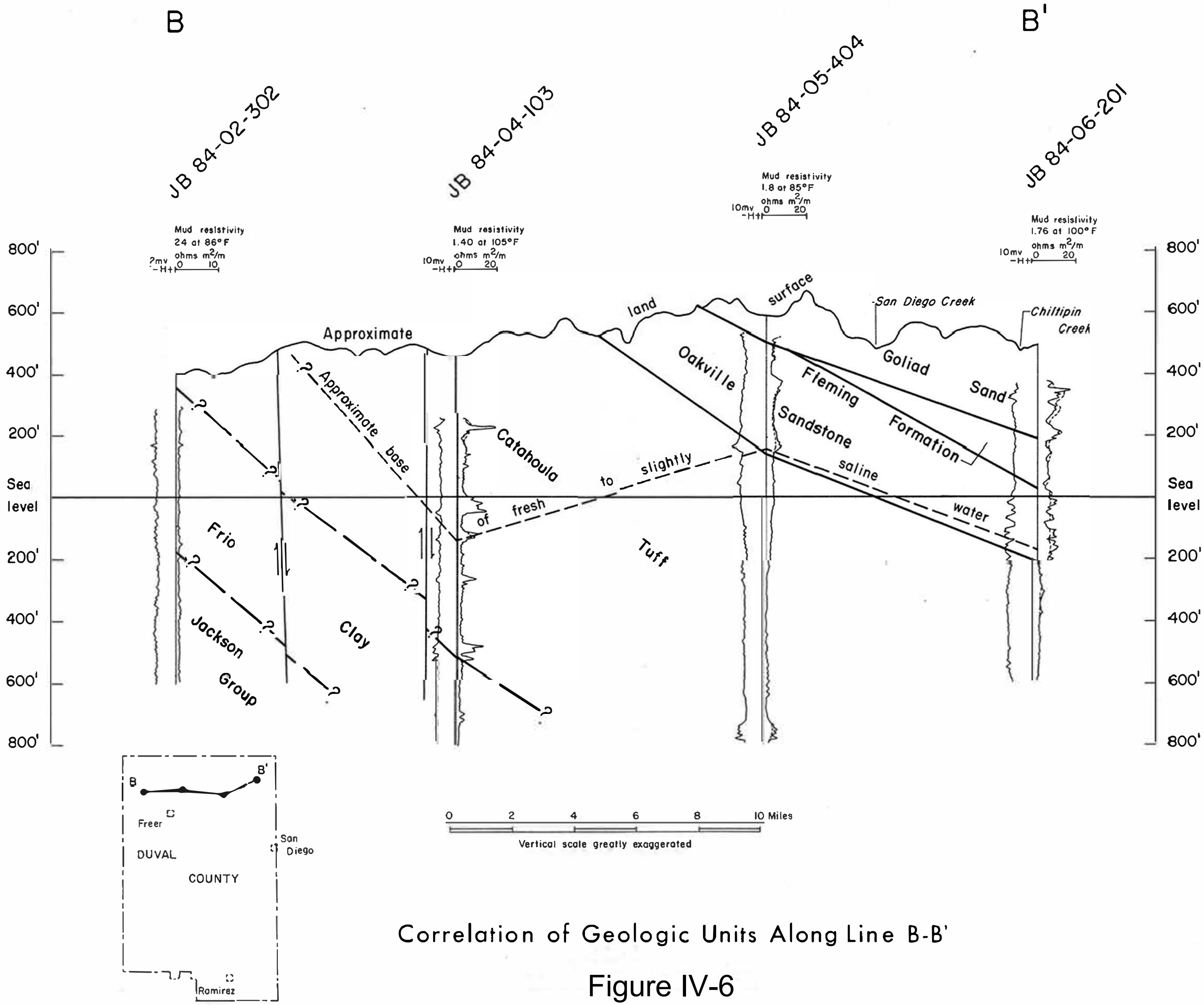
Figure IV-4

Base from U.S. Geological Survey topographic quadrangles and General Highway Map of the Texas Highway Department



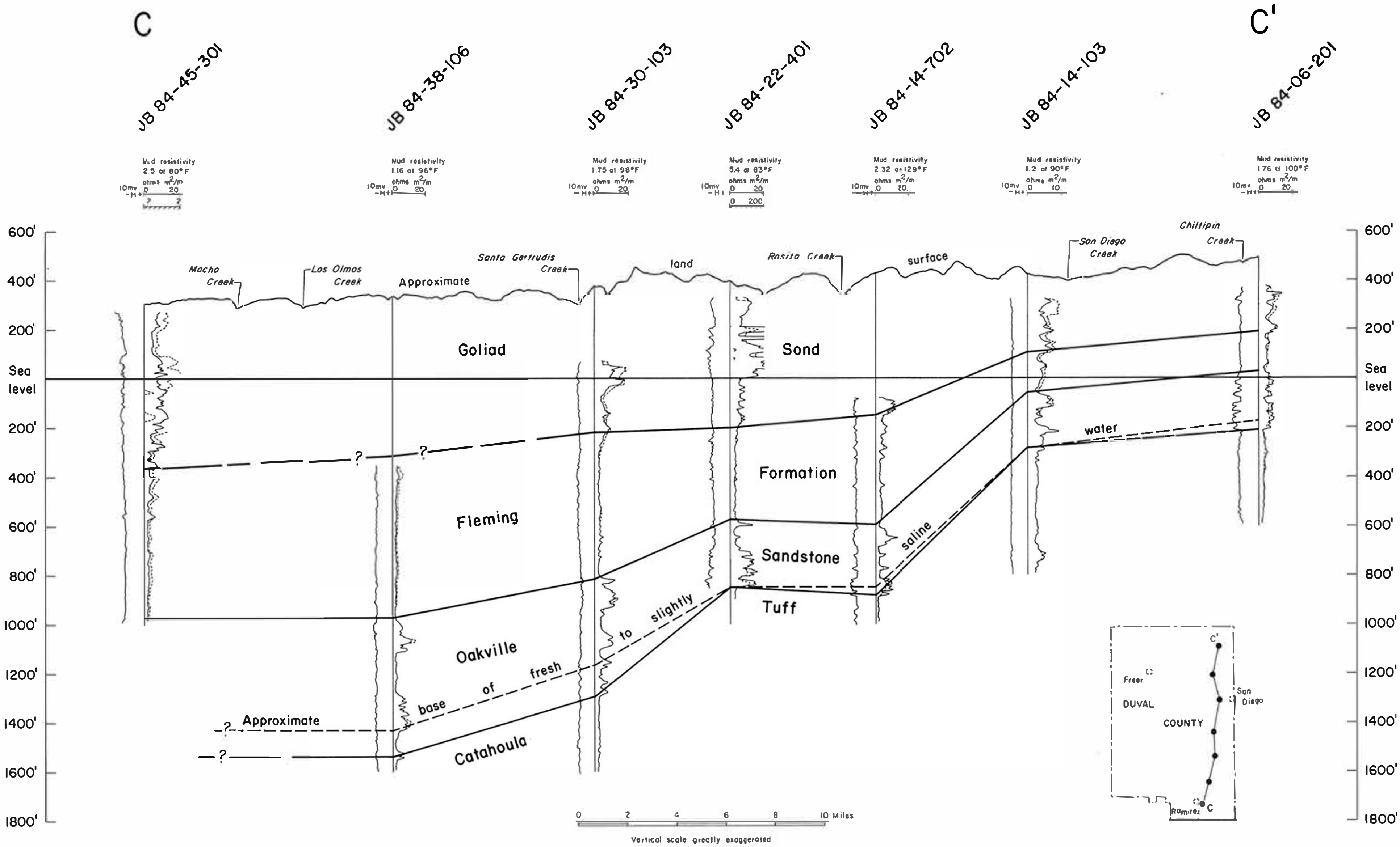
Correlation of Geologic Units Along Line A-A'

Figure IV-5



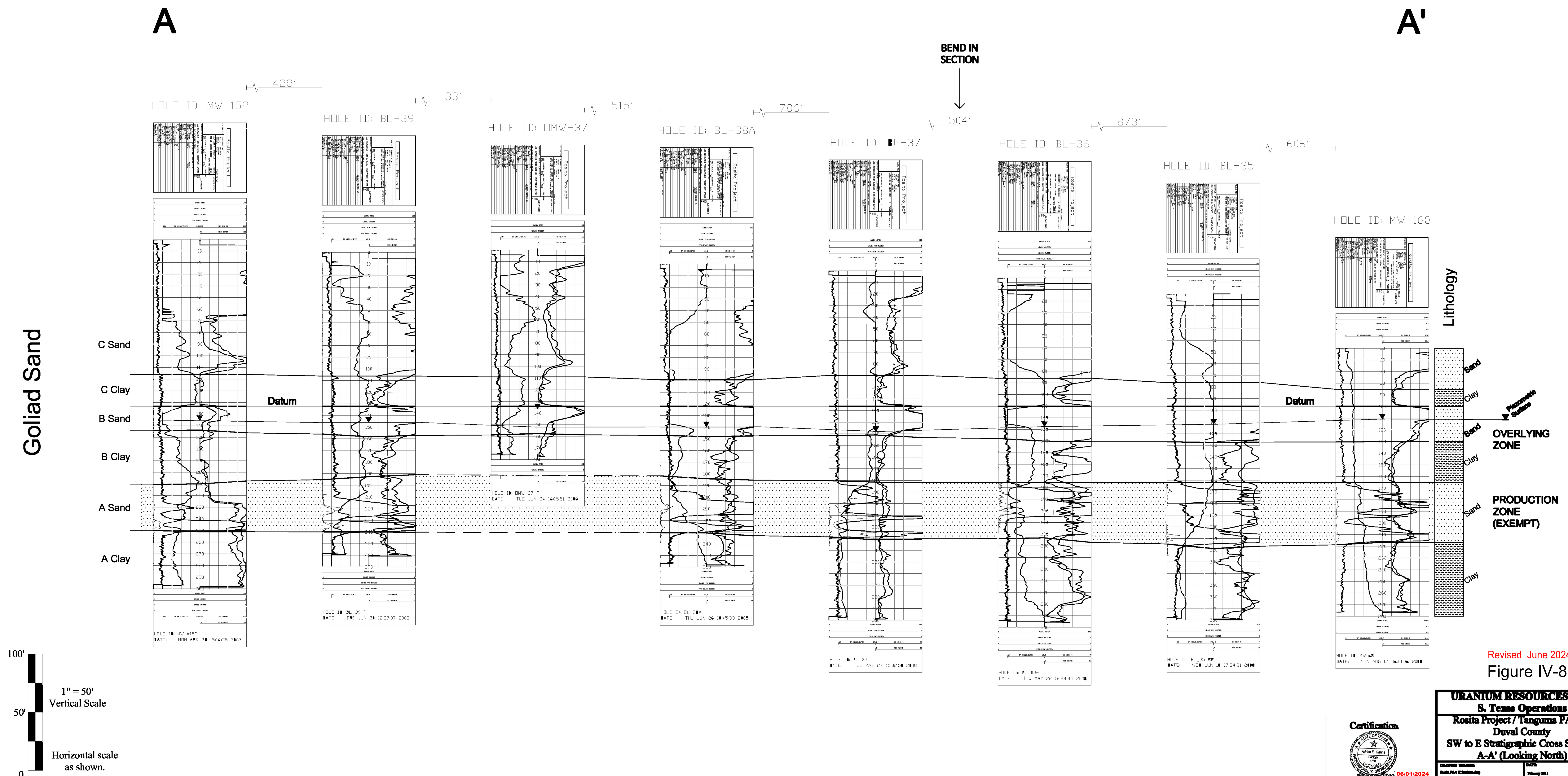
Correlation of Geologic Units Along Line B-B'

Figure IV-6



Correlation of Geologic Units Along Line C-C'

Figure IV-7



Revised June 2024

Figure IV-8

Certification

Adrian E. Garcia, PG
PG#1780
06/01/2024

Texas Professional Geociences Firm # 50665

URANIUM RESOURCES, INC.
S. Texas Operations
Rosita Project / Tanguma PAA- 4
Duval County
SW to E Stratigraphic Cross Section
A-A' (Looking North)

Revised June 2024

Figure IV-9

Texas Professional Geociences Firm # 50665

Certification

Adrian E. Garcia, PG
PG#1780
06/01/2024

URANIUM RESOURCES, INC.
S. Texas Operations
Rosita Project PAA 1
Duval County
W to E Stratigraphic Cross Section
B-B' (Looking North)

DRAWING NUMBER: Rosita PAA X Sections.dwg	DATE: August 2012
SCALE: VERTICAL 1" = 50' HORIZONTAL AS SHOWN	DRAWN BY: JBGershin & MWColeman P.G.

Revised June 2024

Figure IV-10

Texas Professional Geociences Firm # 50665

Certification

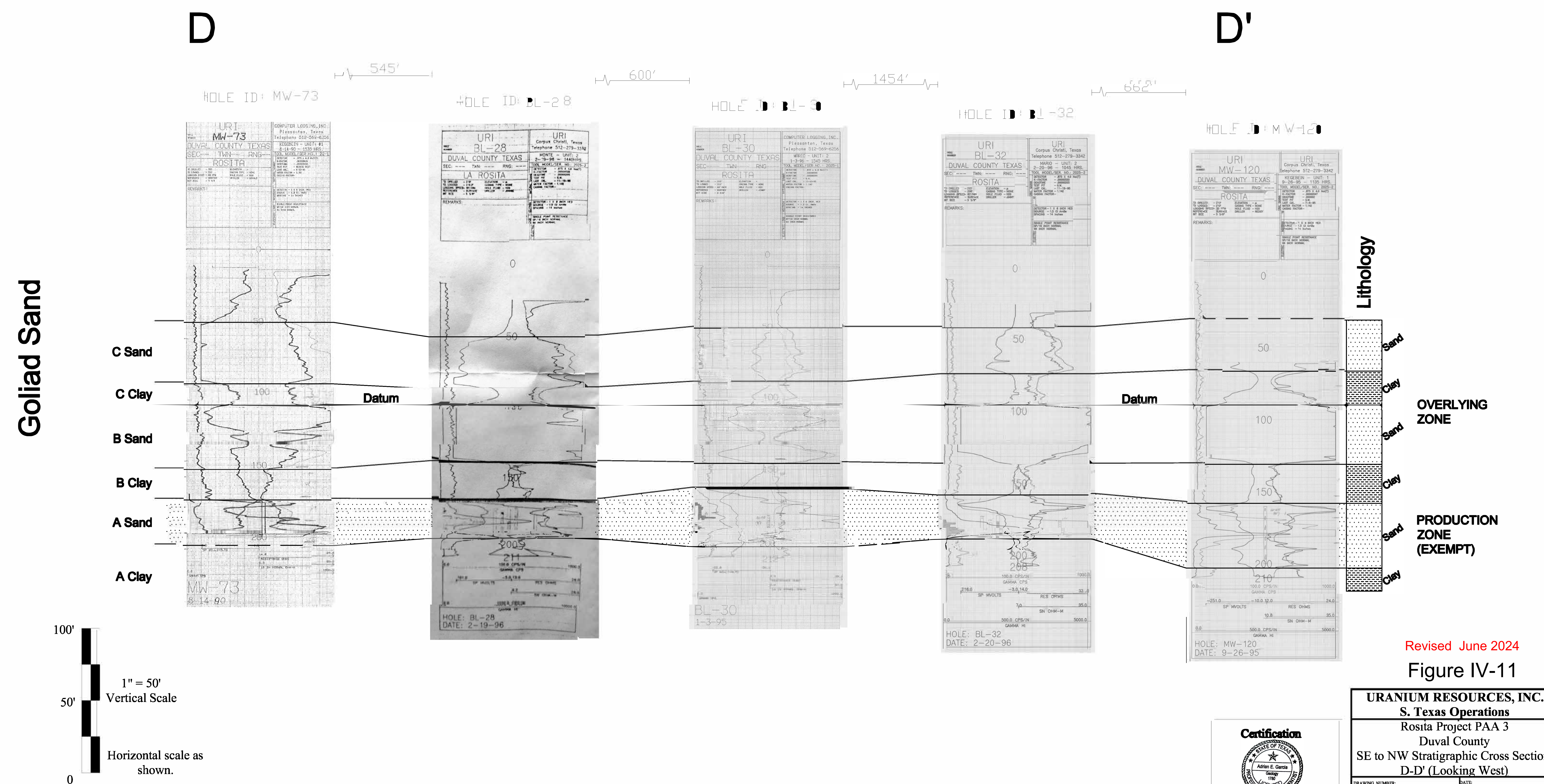
STATE OF TEXAS
Adrian E. Garcia
Geology
1780
LICENSED
PROFESSIONAL GEOSCIENTIST
06/01/2024

Adrian E. Garcia, PG
PG#2552

URANIUM RESOURCES, INC.
S. Texas Operations

Rosita Project PAA 2
Duval County
SE to NW Stratigraphic Cross Section
C-C' (Looking West)

DRAWING NUMBER: Rosita PAA X Sections.dwg	DATE: August 2012
SCALE: VERTICAL 1" = 50' HORIZONTAL AS SHOWN	DRAWN BY: JBGershin & MWColeman P.G.



Revised June 2024

Figure IV-11

Certification

Adrian E. Garcia, PG
PG1780
06/01/2024

Texas Professional Geociences Firm # 50665

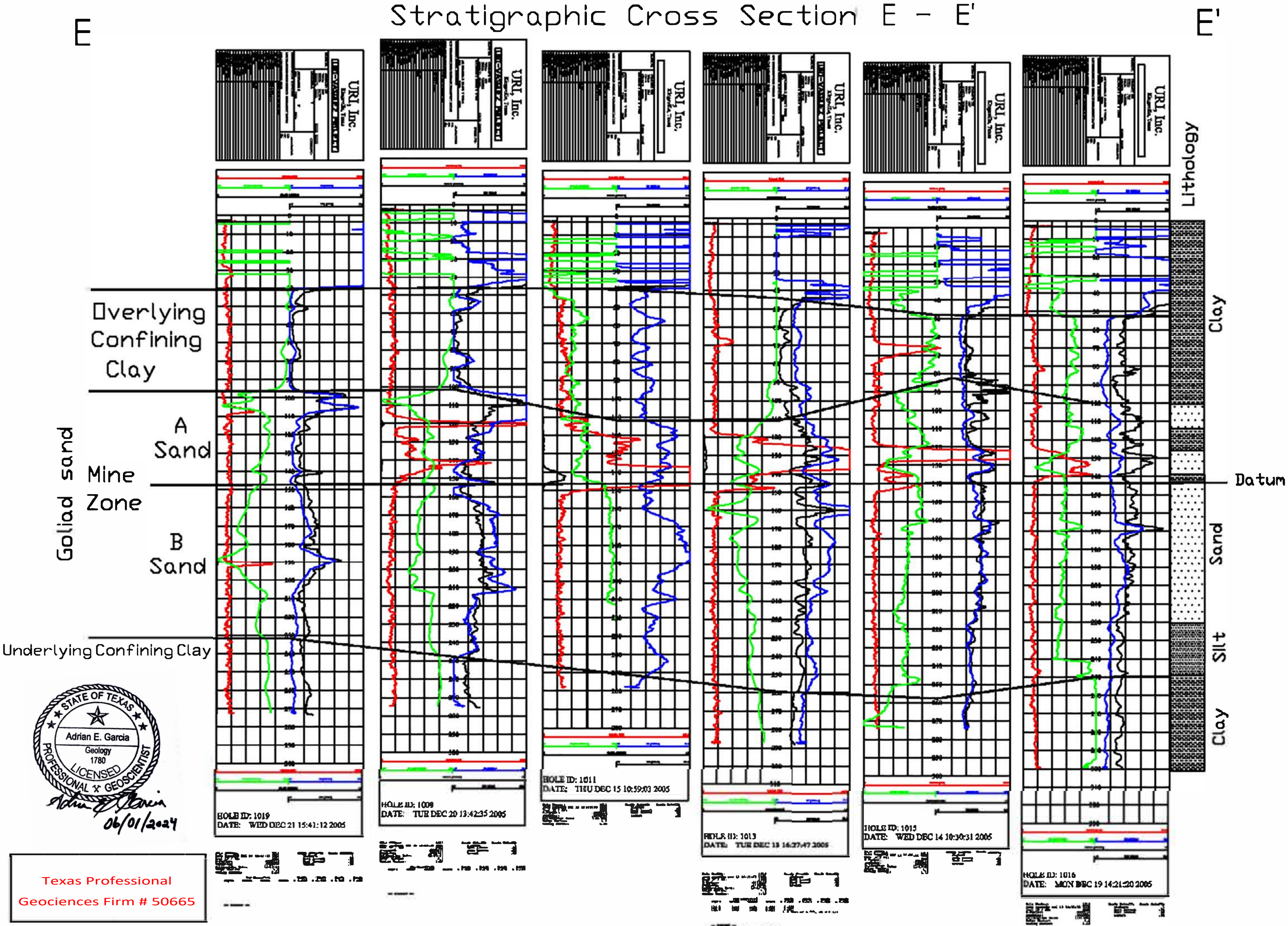
URANIUM RESOURCES, INC.
S. Texas Operations
Rosita Project PAA 3
Duval County
SE to NW Stratigraphic Cross Section
D-D' (Looking West)

DRAWING NUMBER: Rosita PAA X Sections.dwg	DATE: August 2012
SCALE: VERTICAL 1" = 50' HORIZONTAL AS SHOWN	DRAWN BY:

Figure IV-12

Rosita Project

Stratigraphic Cross Section E – E'



Texas Professional Geociences Firm # 50665

Revised June 2024

Figure IV-13

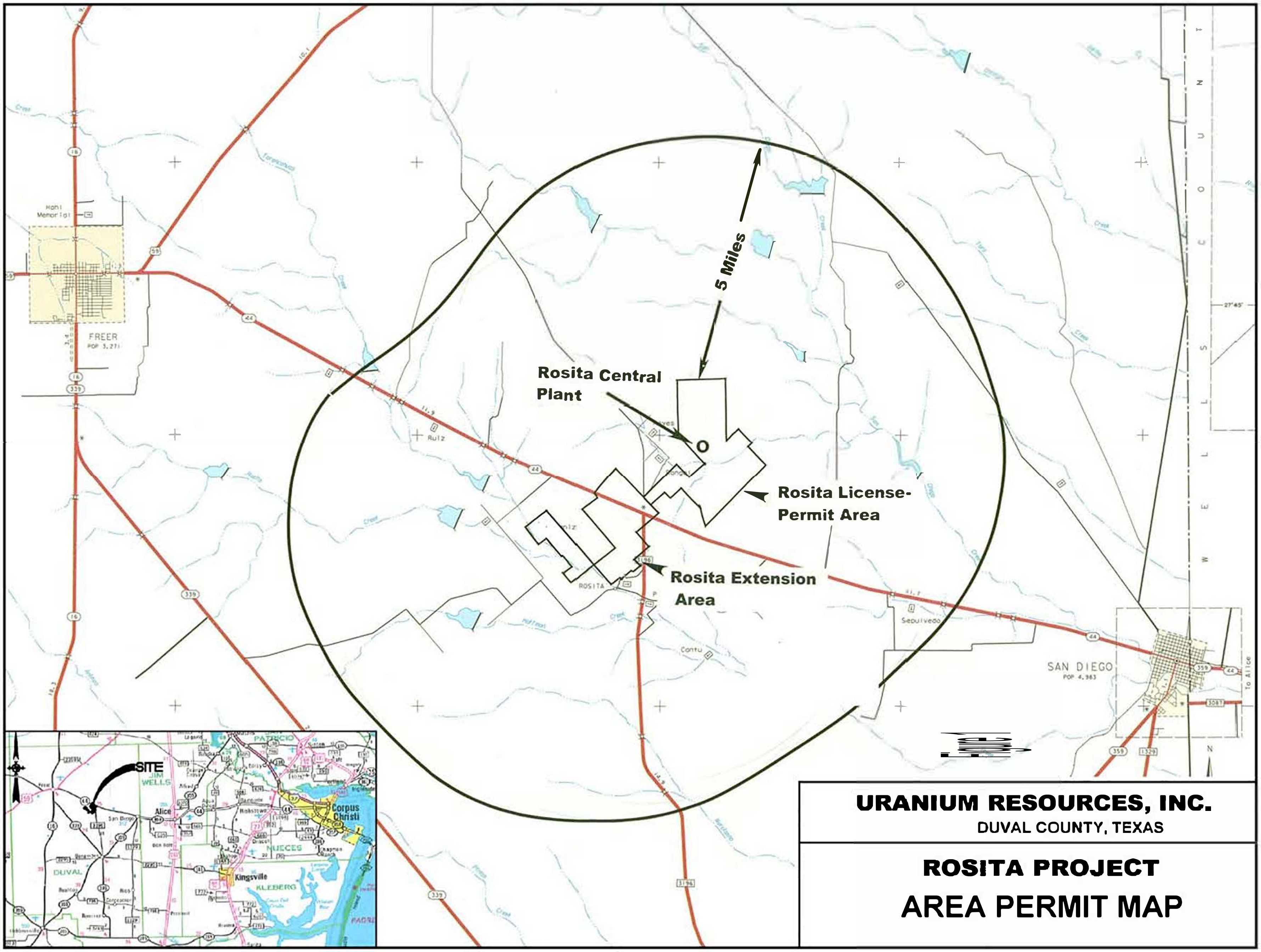
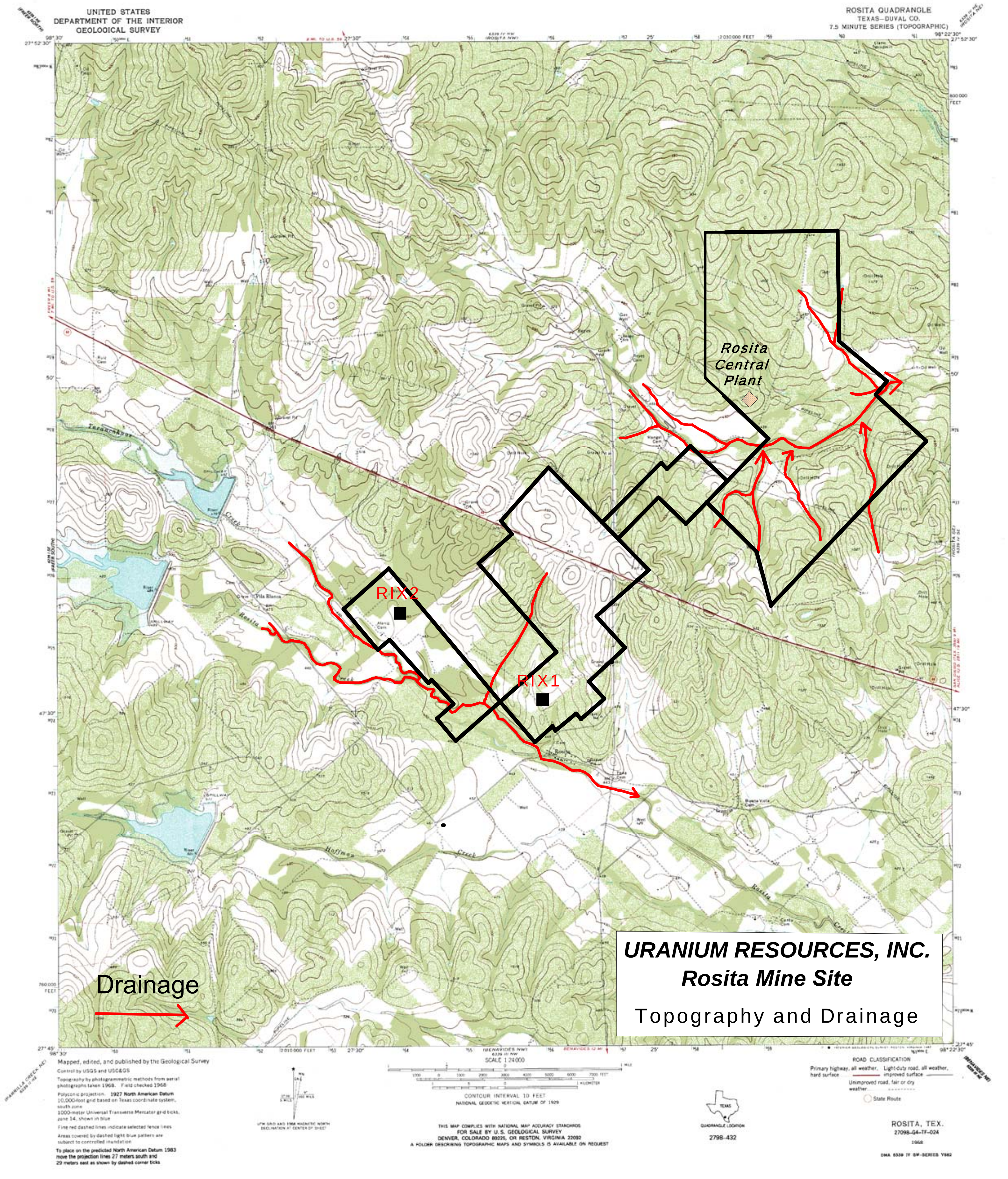
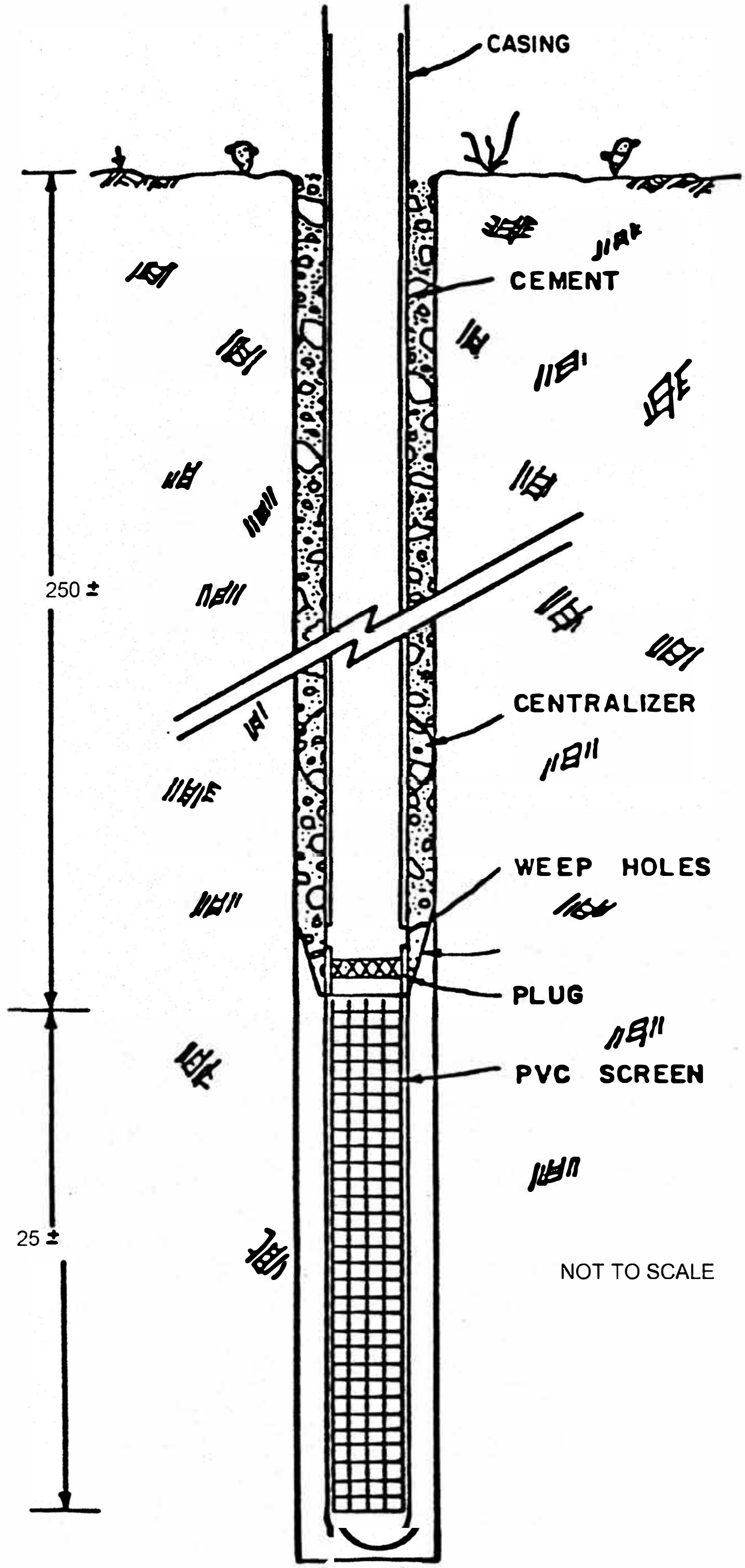

Rosita Central Plant
5 Miles
Rosita License-Permit Area
Rosita Extension Area
FREER
POP 3,271
SAN DIEGO
POP 4,983
ROSITA
Sepulvedo
Contu
Ruiz
SITE
JIM WELLS
DUVAL
NUECES
KLEBERG
Alice
Kingsville
Corpus Christi
URANIUM RESOURCES, INC.
DUVAL COUNTY, TEXAS
ROSITA PROJECT
AREA PERMIT MAP

Figure IV-14


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
ROSITA QUADRANGLE
TEXAS—DUVAL CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
Rosita
Central
Plant
RIX2
RIX1
URANIUM RESOURCES, INC.
Rosita Mine Site
Topography and Drainage
Drainage
SCALE 1:24000
CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
ROSITA, TEX.
1968



STATE OF TEXAS
DAIN A McCOIG
107541
LICENSED
PROFESSIONAL ENGINEER

June 17, 2024

Texas Engineering Firm No. 23615

Figure V.1
Typical Well Completion

Revised June 2024

DRAWING NOT TO SCALE

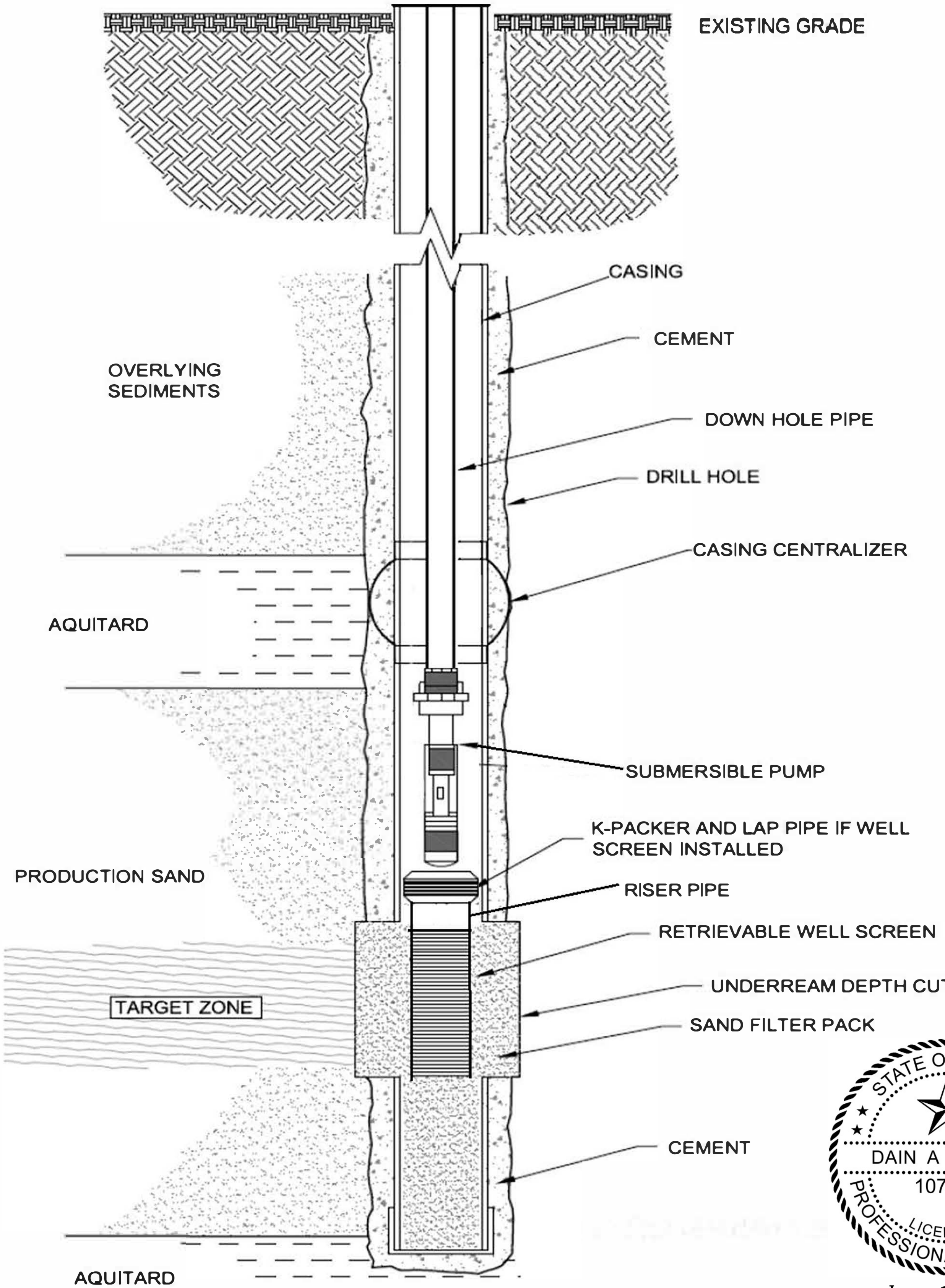


Figure V.2

Typical Under-ream Type Well Completion

STATE OF TEXAS
DAIN A McCOIG
107541
LICENSED
PROFESSIONAL ENGINEER

June 17, 2024

Texas Engineering Firm No. 23615

Revised June 2024

Figure V.3

URI, INC.
CASED WELL COMPLETION REPORT

WELL NUMBER: **MW-170**

X Coordinate 2,030,563.0 | **Y Coordinate** 781,463.0 | **Location:** **Tanguma**

******* *DRILLING DATA* *********

Date Drilled: **08-Jun-22** Drill Depth: **245** FT.
DRILLER & COMPANY: **Carrillo** Mud Additives: **MI POLY & GEL**
BIT SIZE: **7 7/8** INCHES

******* CASING DATA *********

CASING DATE: **09-Jun-22** COMPANY: **Carrillo**
CASING OD: **5.625** INCHES CENTRALIZERS @ 80 ft, 160 ft
CASING ID: **5.00** INCHES BIT SIZE: **7 7/8** INCHES
TYPE OF CASING: PVC/SDR-17 CASING SET AT : **190** FT.

******* *CEMENT DATA* *********

CEMENTER IN CHARGE & COMPANY: **Carrillo**
CEMENT TYPE: **TYPE 1** **CIRCULATED CEMENT WITH** 4 **BBLS RETURNS**
Sacks Gel: **0.9** Bbls mixing water Req. **5.4** Displacement Water Required (bbls) **3.6**
SACKS CEMENT: **23.9** (CALCULATED) CALCULATED EXCESS: **25.0** %
DENSITY: **13.3** SLURRY VOLUME: **7.5** bbls
Witness Signature/Date: 6-9-22 [signature]

******* *UNDERREAM DATA* *********

DRILLER & COMPANY: Mr Lou Carrillo Well Service
INTERVAL: 180 - 245
UNDERREAM BLADE SIZE: 5 5
COMMENTS:

******* *COMPLETION DATA* *********

DRILLER & COMPANY: Mr. Lou
TOP OF SCREEN 190 BOTTOM OF SCREEN 245 TOP OF PACKER ASSEMBLY @: 180
TYPE OF COMPLETION: PREPACK / GRAVELPACK IF GP, TYPE OF SAND USED 16/30 or 20/40
TYPE OF SCREEN USED: SLOTTED or WIREWRAPPED IF GP'd, NO. OF SACKS USED: _______

******* *LOGGING DATA* *********

LOGGING CONTRACTOR: URI, INC.
LOGS RUN: SP, GAMMA, SINGLE POINT RESISTIVITY, DUAL INDUCTION LOG, & PFN (where applicable)

******* *MECHANICAL INTEGRITY TEST* *********

TEST RUN BY: ____________ DATE TEST RUN: ____________
TIME BEGINNING OF TEST ____________ TIME END OF TEST ____________
INITIAL PRESSURE: _ PSIG INITIAL FLUID LEVEL: ____________ FT. & IN.
FINAL PRESSURE: _ PSIG FINAL FLUID LEVEL: ____________ FT. & IN.

I DO HEREBY STATE THAT I HAVE KNOWLEDGE OF THE FACTS HEREIN AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DATE: 6-13-22 SIGNATURE: [signature]

Figure V.4

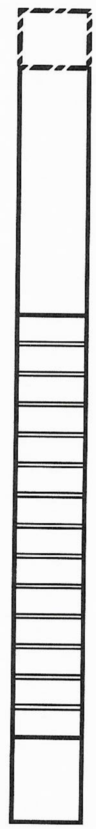
URI
Well Completion Diagram
Tanguma Project

Well No: **MW-170**

Date Well Completed: 2-28-22

Driler: MR Rod

Screening: (Circle one.) **New** / **Re-Screen**



Top of Screen Assm. 180 ft.

Packer Assm:
No. of Pack. 1

Nipple: (Circle one.) **Steel** / **PVC**

Riser Pipe: **Length** 10 ft.

SCREEN Top 190 ft.

Screen Size: **OD:** 3 in.

Screen Type: (Circle one.) **Saw Slot** / **Wire Wrap** 0.010 Slot:

Filter Material: (Circle one.) **Sock** / **Pre-pack** / **Gravel Pack** / **None**

SCREEN Bottom 245 ft.

SCREEN Length 55 ft

Tail Pipe: **Length** 0 ft.

Bottom Screen Assm. 245 ft.

Total Assm. Length 65 ft.

Screened Interval Under Reamed: (Circle one.) **YES** / **NO**

Cement Tag Depth: ft.

Comments:

Completed by:

Figure V.5

ROSITA CASED & COMPLETED WELL PRESSURE TEST

WELL NUMBER: MW 170 **DATE:** 9-22-22

CREW:
NAME(Print) Jose F. Briones **NAME(Print)** Jose F. Briones

PRESSURE TEST

BEGINNING

PRESSURE: 105 **TIME:** 10:30 Am

ENDING

PRESSURE: 103 **TIME:** 11:00 Am

ENDING WATER LEVEL: 7"

Maximum Pressure Drop: **Pass:** ✓ **Fail:** ______
(5% for 30 minute test or 10% for 60 minute test)

COMMENTS:

____

____

____

____

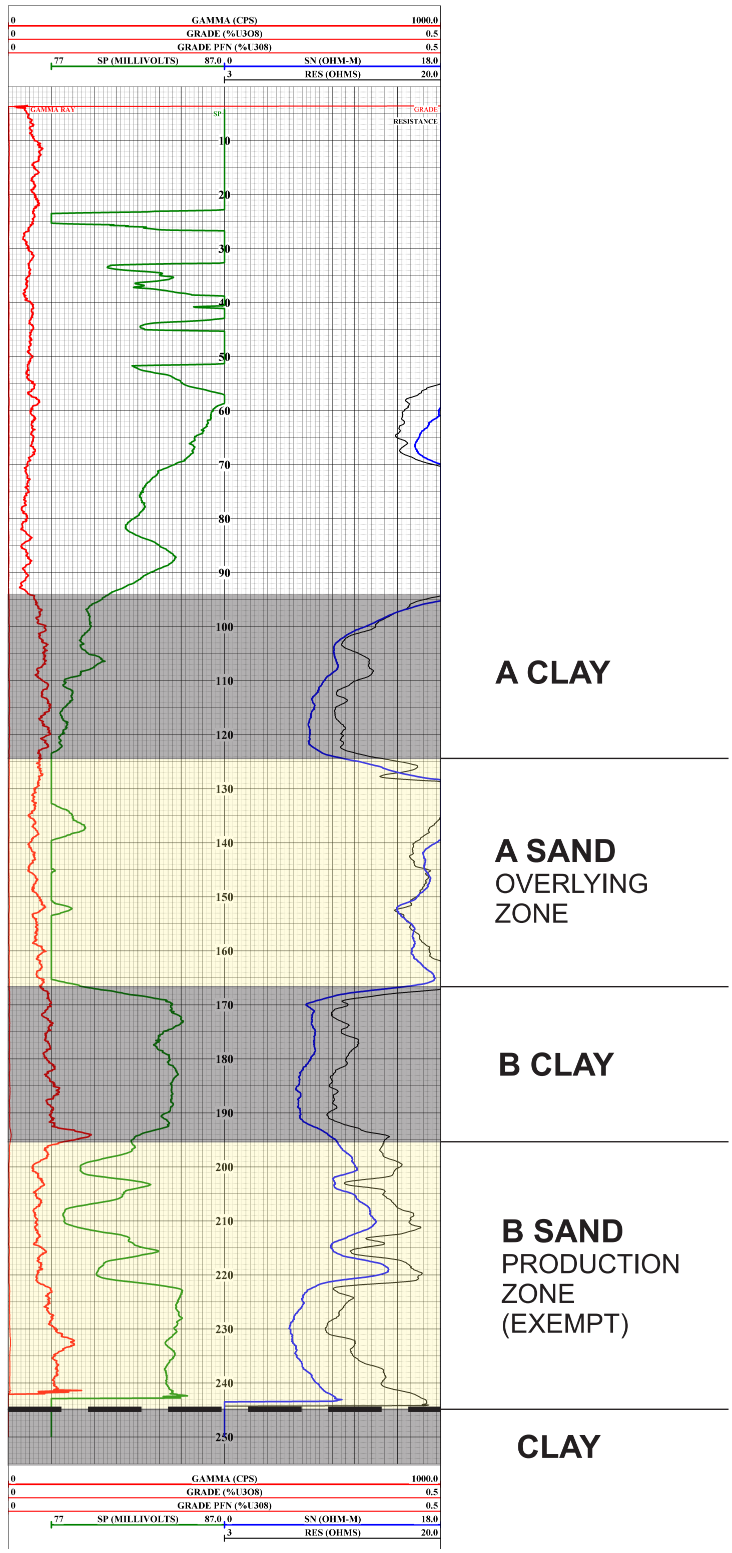
____

____

SIGNITURE: [signature]

Figure V.6

Typical Well Log Diagram

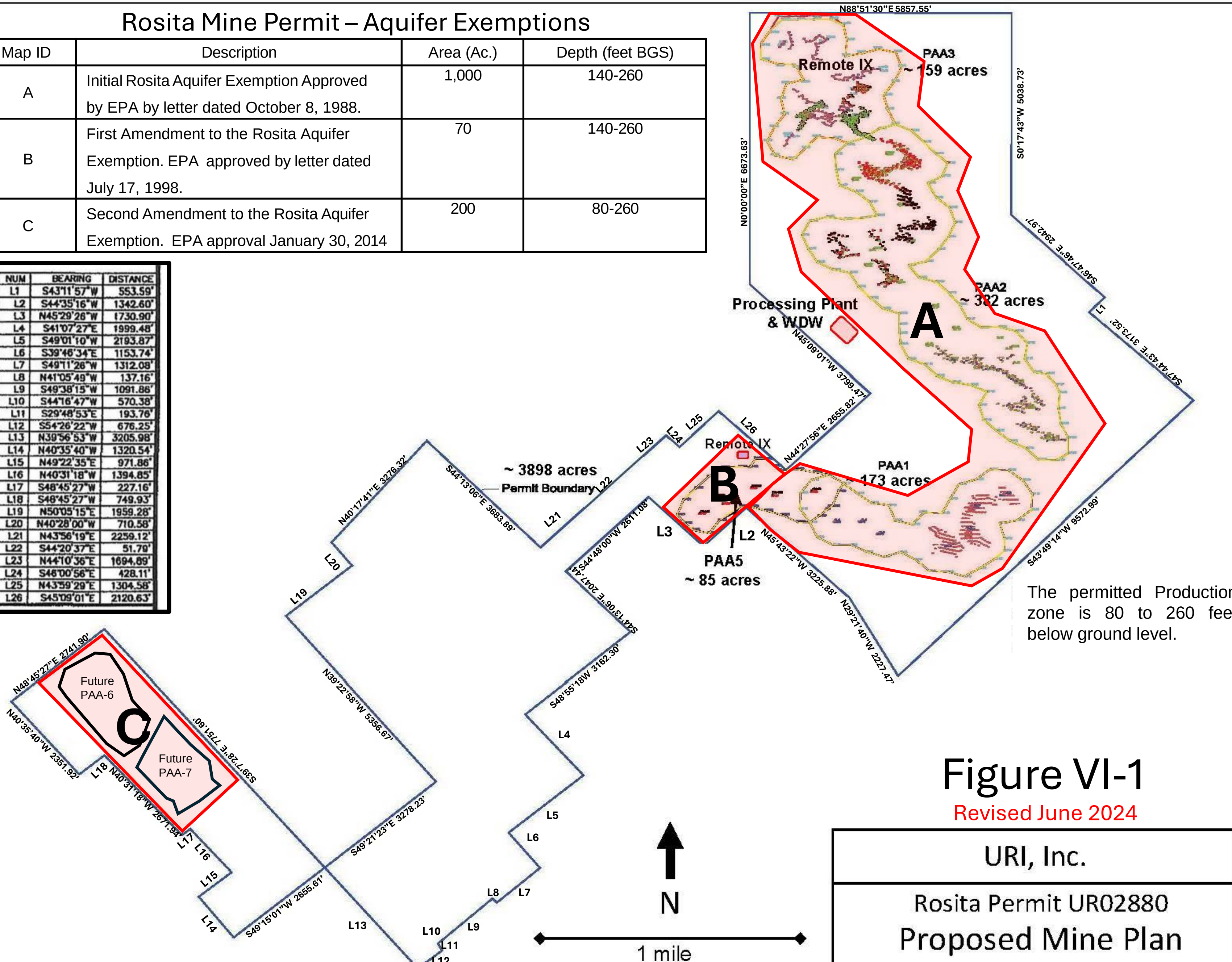


MW-170

Rosita Mine Permit – Aquifer Exemptions

Map ID	Description	Area (Ac.)	Depth (feet BGS)
A	Initial Rosita Aquifer Exemption Approved by EPA by letter dated October 8, 1988.	1,000	140-260
B	First Amendment to the Rosita Aquifer Exemption. EPA approved by letter dated July 17, 1998.	70	140-260
C	Second Amendment to the Rosita Aquifer Exemption. EPA approval January 30, 2014	200	80-260

NUM	BEARING	DISTANCE
L1	S43°11'57"W	553.59'
L2	S44°35'16"W	1342.60'
L3	N45°29'26"W	1730.90'
L4	S41°07'27"E	1999.48'
L5	S49°01'10"W	2193.87'
L6	S39°46'34"E	1153.74'
L7	S49°11'26"W	1312.08'
L8	N41°05'49"W	137.16'
L9	S49°38'15"W	1091.86'
L10	S44°16'47"W	570.38'
L11	S29°48'53"E	193.76'
L12	S54°26'22"W	676.25'
L13	N39°56'53"W	3205.98'
L14	N40°35'40"W	1320.54'
L15	N49°22'35"E	971.86'
L16	N40°31'18"W	1394.85'
L17	S48°45'27"W	227.16'
L18	S48°45'27"W	749.93'
L19	N50°05'15"E	1959.28'
L20	N40°28'00"W	710.58'
L21	N43°56'19"E	2259.12'
L22	S44°20'37"E	51.79'
L23	N44°10'36"E	1694.89'
L24	S46°00'56"E	428.11'
L25	N43°59'29"E	1304.58'
L26	S45°09'01"E	2120.63'



Texas State Coordinate System, 1927, Texas South Zone

Figure VI-1

Revised June 2024

URI, Inc.
Rosita Permit UR02880 Proposed Mine Plan

TABLES

Table IV-1

Rosita Ore Zone Baseline Radionuclide Concentrations

Production Area	Natural Uranium (ppb)		Radium-226 (pCi/l)	
	Average	High	Average	High
1	350	1,200	183	431
2	547	2,890	130.3	548
3	1,093	3,050	94.3	642
5	3,910	16,500	188.8	460
EPA MCL	30		5	

Notes:
ppb = parts per billion
pCi/l = picoCuries per liter
EPA MCL = U.S. Environmental Protection Agency Maximum Concentration Levels for drinking water

Table V.1

Well Casing Specifications

	5" PVC SCH 17	6" PVC SDR 17
O. D. (inches)	5. 563	6. 625
I. D. (inches)	4. 909	5. 845
Wall Thickness (inches)	0. 327	0. 390
Casing Weight (lbs. /foot)	3. 450	4. 890
Joint Length (feet)	21	21
Burst Strength (psig)	250	250
Collapse Strength (psig)	212	212
Material Specification	ASTM D-2241	ASTM D-2241
Test Temperature (OF)	73. 5	73. 5
Test Temperature (OF)	73. 5	73. 5
Resistance to Lixiviant	Yes	Yes

ASTM D-2241: ASTM F480 Specifications for PVC SDR rated pipe.

Table V.2

Typical Extraction Mine Water Quality (mg/l unless otherwise noted)

Calcium	100 - 500
Magnesium	10 - 50
Sodium	500 - 1600
Potassium	25 - 250
Carbonate	0 - 500
Bicarbonate	800 - 1500
Sulfate	100 - 1700
Chloride	250 - 1800
Silica	25 - 50
Total Dissolved Solids	1500 - 5500
Uranium	50 - 250
226-Radium	100 or greater pCi/l
Conductivity	2500 - 7500 uS/cm
pH	6 - 9 standard units

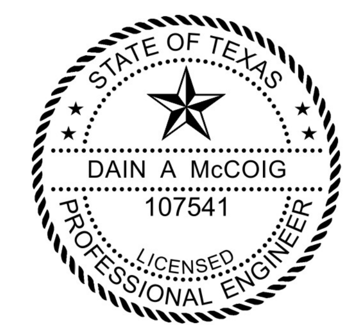
Table V-3

Rosita Site - Estimated Mine Plan Schedule - June 2024

Area	Item	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q	2025 3Q	2025 4Q	2026 1Q	2026 2Q	2026 3Q	2026 4Q	2027 1Q	2027 2Q	2027 3Q	2027 4Q	2028 1Q	2028 2Q	2028 3Q	2028 4Q	2029 1Q	2029 2Q	2029 3Q	2029 4Q
PA1	Production	Completed																											
	Groundwater Restoration	Completed																											
PA2	Production	Completed																											
	Groundwater Restoration	Completed																											
PA3	Production	10	10	10	10	10	10	10	10																				
	Groundwater Restoration									165	165	165	165	165	165	165													
PA5	Production				10	10	10	10	10	10	10	10	10	10	10	10													
	Groundwater Restoration																165	165	165	165	165	165	165	165					
PA6*	Production																10	10	10	10	10	10	10	10	10	10			
	Groundwater Restoration																										165	165	165
PA7*	Production																												
	Groundwater Restoration																												
	production bleed	10	10	10	20	20	20	20	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0	0	0
	restoration reject	0	0	0	0	0	0	0	0	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	0	0	165	165	165
	miscellaneous	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
	total	23	23	23	33	33	33	33	33	188	188	188	188	188	188	188	188	188	188	188	188	188	188	188	23	23	178	178	178
	available disposal capacity	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200
	% Limit	12	12	12	17	17	17	17	17	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	12	12	89	89	89
	OK?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Area	Item	2030 1Q	2030 2Q	2030 3Q	2030 4Q	2031 1Q	2031 2Q	2031 3Q	2031 4Q	2032 1Q	2032 2Q	2032 3Q	2032 4Q	2033 1Q	2033 2Q	2033 3Q	2033 4Q	2034 1Q	2034 2Q	2034 3Q	2034 4Q	2035 1Q	2035 2Q	2035 3Q	2035 4Q
PA1	Production																								
	Groundwater Restoration																								
PA2	Production																								
	Groundwater Restoration																								
PA3	Production																								
	Groundwater Restoration																								
PA5	Production																								
	Groundwater Restoration																								
PA6*	Production																								
	Groundwater Restoration	165	165	165	165	165																			
PA7*	Production						10	10	10	10	10	10	10	10	10										
	Groundwater Restoration															165	165	165	165	165	165	165	165		
	production bleed	0	0	0	0	0	10	10	10	10	10	10	10	10	10	0	0	0	0	0	0	0	0		
	restoration reject	165	165	165	165	165	0	0	0	0	0	0	0	0	0	165	165	165	165	165	165	165	165		
	miscellaneous	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13		
	total	178	178	178	178	178	23	23	23	23	23	23	23	23	23	178	178	178	178	178	178	178	178		
	available disposal capacity	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200		
	% Limit	89	89	89	89	89	12	12	12	12	12	12	12	12	12	89	89	89	89	89	89	89	89		
	OK?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		

Notes:
1 - Values in gallons per minute (gpm)
2 - Values assume maximum production levels during mining and restoration.
3 - Values do not incorporated excess capacity provided by lined evaporation ponds.
4 - Production bleed is 1% of total extraction volume. Each RIX rated at 1,000 gpm.
5 - Restoration reject volume will be 33% of total restoration flow.
6 - Miscellaneous streams include process waste water, lab wastewater, plant wash down wastewater, precipitation
7 - Water usage will continue following all restoration for use in performing final decommissioning activities.



June 17, 2024

Texas Engineering Firm No. 23615

Revised June 2024

Table VI.1

ESTIMATED SCHEDULE OF MINING AND GROUNDWATER RESTORATION

ESTIMATED SCHEDULE OF MINING AND GROUNDWATER RESTORATION		
PAA1	Production	COMPLETED
	Groundwater Restoration	COMPLETED
PAA2	Production	COMPLETED
	Groundwater Restoration	COMPLETED
PAA3	Production	Quarter 1, 1997 to Quarter 4, 2024
	Groundwater Restoration	Quarter 1, 2025 to Quarter 3, 2026
PAA5	Production	Quarter 4, 2023 to Quarter 3, 2026
	Groundwater Restoration	Quarter 2, 2025 to Quarter 3, 2026
PAA6*	Production	Quarter 4, 2026 to Quarter 1, 2029
	Groundwater Restoration	Quarter 2, 2029 to Quarter 1, 2031
PAA7*	Production	Quarter 2 , 2031 to Quarter 2, 2033
	Groundwater Restoration	Quarter 3, 2033 to Quarter 2, 2035

Notes
PA = Production Area
* = future PA

This Mine Plan represents an estimate for the timing of the event listed. The timing of these events is dependent on many factors beyond the control of the permittee including, but not limited to, the following:

1) timing of the approval of the permits required to mine ore bodies;
2) the ore bodies response to the lixiviant used for recovery;
3) the ultimate economic recovery of the uranium from each ore body;
4) the sequence of mining the various ore bodies;
5) the response of each ore body to the restoration techniques employed;
6) geopolitical actions/inactions impacting U.S. domestic uranium industry.

Table VII-1

Water Wells - Driller Report Records

Well Report	WellType	Proposed Use	County	Well Owner	Latitude	Longitude	Borehole Depth
81523	New Well	Domestic	Duval	John Peterson	27.821667	-98.408056	300
179549	New Well	Domestic	Duval	Gary Mc Lean	27.841111	-98.395834	420
342529	New Well	Domestic	Duval	Rosalda Campos	27.800834	-98.454723	505
378936	New Well	Stock	Duval	Scott Holt	27.850278	-98.400278	550
380641	New Well	Stock	Duval	David Carrillo	27.795834	-98.428889	200
601401	New Well	Stock	Duval	Gilbert Valerio	27.790623	-98.434975	360
637402	New Well	Stock	Duval	Rene Valerio	27.796	-98.446944	300
20463	New Well	Domestic	Duval	Lorenzo Tanguma	27.8225	-98.408334	320
36259	New Well	Domestic	Duval	David Trevino	27.790834	-98.4375	240
133541	New Well	Domestic	Duval	Cantu, Julio	27.796945	-98.453056	760
133566	New Well	Domestic	Duval	Graza, Jose	27.795834	-98.453889	760
332402	New Well	Domestic	Duval	Eliseo Morin	27.838056	-98.413056	300
513695	New Well	Stock	Duval	Ramiro Ramierz	27.8259	-98.404389	440
637359	New Well	Stock	Duval	Rene Valerio	27.79	-98.4412	200

Source - Texas Water Development Board database - April 2024

Note: Well names in RED may be duplications of wells on Tables VII-1 and VII-2 as well TDs are the same. Duplication may be due to accuracy of GPS coordinates
Possible duplications: R-65 & 380641, R66 & 8413502, RS33 & 8413501, RS37 & 20463, RS-38 & 81523, RS39 & 179549

Table VII-2

Water Wells - Texas Water Development Board Database

ID	Well Use	County	Owner	Aquifer	Latitude	Longitude	Well Depth	Elevation
8413501	Stock	Duval	Keith Cook	122CTHL - Catahoula Formation	27.812778	-98.428055	800	530
8413502	Stock	Duval	Jose A. Canales	122OKVL - Oakville Sandstone	27.796389	-98.441667	280	451
8413603	Domestic	Duval	Ramiro Ramirez	122CTHL - Catahoula Formation	27.825555	-98.404167	140	446
8413801	Domestic	Duval	Severo Rangle	121GOLD - Goliad Sand	27.786389	-98.428611	40	445
8413802	Domestic	Duval	Cecilio Valerio	121GOLD - Goliad Sand	27.786389	-98.427778	50	460

Source - Texas Water Development Board database - April 2024

Note: Well names in RED may be duplications of wells on Tables VII-1 and VII-2 as well TDs are the same. Duplication may be due to accuracy of GPS coordinates

Possible duplications: R-65 & 380641, R66 & 8413502, RS33 & 8413501, RS37 & 20463, RS-38 & 81523, RS39 & 179549

Table VII-3

Water Wells - URI

NAME	Pump Type	Well Type	County	Drill Date	Casing	Completion Date	TD
M1	*unknown*	Monitor	Duval	*unknown*	*unknown*	*unknown*	*unknown*
M2	*unknown*	Monitor	Duval	*unknown*	*unknown*	*unknown*	*unknown*
R62	Windmill	ABANDONED	Duval	*unknown*	*unknown*	*unknown*	*unknown*
R63	Submersible	Domestic	Duval	*unknown*	PVC	*unknown*	*unknown*
R64	Submersible	Domestic	Duval	*unknown*	STEEL	*unknown*	*unknown*
R65	Pump Jack	Livestock	Duval	*unknown*	*unknown*	*unknown*	200
R66	Windmill	Livestock	Duval	*unknown*	STEEL	*unknown*	280
R67	Pump Jack	ABANDONED	Duval	*unknown*	STEEL	*unknown*	*unknown*
R68	Submersible	Livestock/Domestic	Duval	*unknown*	PVC	*unknown*	*unknown*
R70	*unknown*	Livestock	Duval	*unknown*	*unknown*	*unknown*	*unknown*
R73	Electric Pump	Livestock/Domestic	Duval	*unknown*	*unknown*	*unknown*	*unknown*
R74	Pump Jack	ABANDONED	Duval	*unknown*	*unknown*	*unknown*	*unknown*
R81	Submersible	Livestock	Duval	*unknown*		*unknown*	*unknown*
R82	Submersible	Livestock	Duval	*unknown*	*unknown*	*unknown*	*unknown*
R84	Submersible	ABANDONED	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RS10	Windmill	ABANDONED	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RS11	Hand Pump	Not Used	Duval	*unknown*	STEEL	*unknown*	*unknown*
RS12	Windmill	Livestock/Domestic	Duval	*unknown*	STEEL	*unknown*	200
RS13	Windmill	ABANDONED	Duval	*unknown*	STEEL	*unknown*	*unknown*
RS14	Submersible	Livestock	Duval	*unknown*	STEEL	*unknown*	*unknown*
RS16	Not Used	ABANDONED	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RS18	Not Used	ABANDONED	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RS19	Submersible	Livestock	Duval	1/1/1975	STEEL	*unknown*	180
RS20	Submersible	Livestock	Duval	*unknown*	STEEL	*unknown*	*unknown*
RS21	Windmill	Livestock	Duval	1/1/1977	STEEL	*unknown*	*unknown*
RS23	*unknown*	*unknown*	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RS24	Not Used	ABANDONED	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RS25	Not Used	ABANDONED	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RS26	Submersible	Livestock	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RS3	Windmill	Livestock	Duval	*unknown*	STEEL	*unknown*	*unknown*
RS32	Submersible	Livestock	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RS33	Submersible	Livestock	Duval	*unknown*	*unknown*	*unknown*	800
RS34	Submersible	Domestic	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RS35	unknown	*unknown*	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RS36	Windmill	Livestock	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RS37	*unknown*	Domestic	Duval	4/7/2003	PVC	4/7/2003	320
RS38	*unknown*	Domestic	Duval	4/6/2004	PVC	4/8/2004	300
RS39	*unknown*	Domestic	Duval	4/18/2009	PVC	4/28/2009	420
RS4	Windmill	Livestock	Duval	*unknown*	STEEL	*unknown*	*unknown*
RS5	Windmill	Livestock	Duval	1/1/1978	STEEL	*unknown*	265
RS8	Windmill	Livestock	Duval	*unknown*	PVC	*unknown*	*unknown*
RS9	Windmill	ABANDONED	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RW69	*unknown*	*unknown*	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RW78	*unknown*	*unknown*	Duval	*unknown*	*unknown*	*unknown*	*unknown*
RW79	*unknown*	*unknown*	Duval	*unknown*	*unknown*	*unknown*	*unknown*

Source - Texas Water Development Board database - April 2024

Note: Well names in RED may be duplications of wells on Tables VII-1 and VII-2 as well TDs are the same. Duplication may be due to accuracy of GPS coordinates
Possible duplications: R-65 & 380641, R66 & 8413502, RS33 & 8413501, RS37 & 20463, RS-38 & 81523, RS39 & 179549

APPENDICIES

APPENDIX IV-1

Rosita Area Permit Production Area Authorizations

Water Quality Summary Tables

PAA-1

URI, Inc.
Production Area Authorization 1
under Area Permit No. URo2880

ATTACHMENT 4
BASELINE WATER QUALITY TABLE

TEXAS WATER COMMISSION

GROUND-WATER ANALYSIS REPORT SUMMARY
BASELINE WATER QUALITY—Solution Mining

Company: URI, Inc.
Mine Name: Rosita
Mine Area: #1
Date Summarized: 3/1/89

	PARAMETER	UNIT		NON PRODUCTION ZONE**			PRODUCTION ZONE						WELL I.D. BY AREA*		
							MINE AREA**			PRODUCTION AREA			NON PROD. ZONE	PROD. ZONE	
				Low	Average	High	Low	Average	High	Low	Average	High		Mine	Product.
1	Calcium	mg/l		55	87	169	116	155	205	118	155	189	OM1	MI-	BL1
2	Magnesium	mg/l		19	34	45	32	50	76	42	53	69	OM2	M37	BL2
3	Sodium	mg/l		226	377	684	353	422	502	366	393	421	OM3		BL3
4	Potassium	mg/l		12	26	53	17	26	42	17	23	29	OM4		BL4
5	Carbonate	mg/l		0	6	19	0	0	0	0	1	8	OM5		BL5
6	Bicarbonate	mg/l		188	246	310	10	178	278	121	204	254	OM6		BL6
7	Sulfate	mg/l		79	273	776	122	196	318	124	157	224	OM7		BL7
8	Chloride	mg/l		291	505	834	764	866	1037	705	826	981	OM8		BL8
9	Fluoride	mg/l		.73	.91	1.2	.53	.75	1.3	.60	.81	1.1			
10	Nitrate - N	mg/l		1.4	4.2	9.0	<.01	1.79	5.5	.01	.75	3.1			
11	Silica	mg/l		40	61	71	23	50	67	43	48	54			
12	pH	Std. unit		8.03	8.37	8.67	7.52	8.14	9.15	7.63	8.05	8.26			
13	TDS	mg/l		958	1558	2830	1590	1933	2310	1710	1844	1990			
14	Conductivity	µmhos		1630	2531	4420	2970	3388	3990	2950	3143	3520			
15	Alkalinity	Std. unit		154	211	254	26	147	228	99	169	208			
16	Arsenic	mg/l		.010	.019	.026	<.001	.009	.059	<.001	.004	.015			
17	Cadmium	mg/l		.0002	.0004	.0008	.0001	.0005	.0015	.0002	.0004	.0001			
18	Iron	mg/l		.04	.14	.34	2.01	.02	.04	.01	.105	.48			
19	Lead	mg/l		<.001	.001	.003	<.001	.001	.006	<.001	.002	.008			
20	Manganese	mg/l		.01	.04	.09	<.01	.06	.47	.02	.035	.09			
21	Mercury	mg/l		<.0001	.0001	.0001	<0001	.0001	.0001	<0001	.0003	.002			
22	Selenium	mg/l		<.001	.001	.003	<.001	.007	.039	<.001	.008	.43			
23	Ammonia	mg/l		.14	.5	1.1	.12	.38	1.1	.10	.25	.80			
24	Uranium	mg/l		.004	.017	.095	.003	.078	.609	.042	.35	1.20			
25	Molybdenum	mg/l		<.01	.01	.02	<.01	.03	.17	<.01	.05	.12			
26	Radium 226	pCi/l		.6	1.14	3.0	.4	17.1	19.2	52	183	431			

* LIST THE IDENTIFICATION NUMBERS OF WELLS USED TO OBTAIN THE LOW, AVERAGE AND HIGH VALUES. **MONITOR WELLS

PAA-2

ATTACHMENT 4
BASELINE WATER QUALITY TABLE

TEXAS WATER COMMISSION

GROUND-WATER ANALYSIS REPORT SUMMARY
BASELINE WATER QUALITY—Solution Mining

Company: URI, Inc.
Mine Name: Rosita
Mine Area: PAA 021
Date Summarized: June 6, 1991

	PARAMETER	UNIT		NON PRODUCTION ZONE**			PRODUCTION ZONE						WELL I.D. BY AREA*		
							MINE AREA**			PRODUCTION AREA			NON PROD. ZONE	PROD. ZONE	
				Low	Average	High	Low	Average	High	Low	Average	High		Mine	Product.
1	Calcium	mg/l		15	138.5	308	68	160	217	88	169.9	239	OMW-9	MW-38	BL-9
2	Magnesium	mg/l		3	41.5	88	23	62	88	21	60.5	83	OMW-10	Through	BL-10
3	Sodium	mg/l		182	321	577	286	420	638	335	420	594	OMW-11	MW-107	BL-11
4	Potassium	mg/l		17	22	37	17	24	65	17	27.9	39	OMW-12		BL-12
5	Carbonate	mg/l		0	0	0	0	0	1	0	0	0	OMW-15		BL-13
6	Bicarbonate	mg/l		156	227	277	27	216	279	88	205	260	OMW-16		BL-14
7	Sulfate	mg/l		81	203	501	62	241	476	170	248	533	OMW-17		BL-15
8	Chloride	mg/l		293	629	1347	663	857	1032	708	870	1015	OMW-18		BL-16
9	Fluoride	mg/l		.74	.99	1.30	.53	.77	1.4	.50	.73	.98	OMW-21		BL-17
10	Nitrate - N	mg/l		2.10	4.83	7.9	< .01	1.3	5.3	< .01	1.10	4.10	OMW-22		BL-18
11	Silica	mg/l		56	74	84	29	53	76	43	53	65	OMW-24		BL-19
12	pH	Std. unit		7.56	7.84	8.31	7.19	7.66	8.39	7.49	7.85	8.18			BL-20
13	TDS	mg/l		959	1634	2870	1430	2016	2600	1720	2045	2530			BL-21
14	Conductivity	μmhos		1620	2794	5010	2620	3462	4320	3000	3519	4090			BL-22
15	Alkalinity	Std. unit		128	186	227	24	177	229	72	168	213			BL-23
16	Arsenic	mg/l		.012	.038	.071	< .001	.008	.061	< .001	.014	.048			BL-24
17	Cadmium	mg/l		<.0001	.0002	.0008	<.0001	.0002	.0053	<.0001	.0002	.0007			BL-25
18	Iron	mg/l		.01	.01	.02	< .01	.02	.09	< .01	.01	.04			
19	Lead	mg/l		< .001	.001	.001	< .001	.001	.006	< .001	.001	.001			
20	Manganese	mg/l		< .01	.03	.08	< .01	.03	.14	< .01	.02	.03			
21	Mercury	mg/l		<.0001	.0001	.0001	<.0001	.0001	.0001	<.0001	.0001	.0001			
22	Selenium	mg/l		< .001	.001	.001	< .001	.003	.045	< .001	.006	.021			
23	Ammonia	mg/l		< .01	.02	.07	< .01	.03	.23	< .01	.08	.56			
24	Uranium	mg/l		.004	.007	.020	< .001	.07	.477	.012	.547	2.89			
25	Molybdenum	mg/l		< .01	.01	.01	< .01	.06	.64	< .01	.04	.13			
26	Radium 226	pCi/l		.3	1.0	3.3	0.5	16.1	186	3.9	130.3	548			

* LIST THE IDENTIFICATION NUMBERS OF WELLS USED TO OBTAIN THE LOW, AVERAGE AND HIGH VALUES. **MONITOR WELLS

PAA-3

ATTACHMENT G

BASELINE WATER QUALITY TABLE

GROUNDWATER ANALYSIS REPORT SUMMARY And BASELINE WATER QUALITY TABLE - In Situ Uranium Mining

Company: URI, Inc.
Mine Name: Rosita
Mine Area: PAA 3
Date Summarized: 6/6/96

	PARAMETERS	UNITS		NON PRODUCTION ZONE**			PRODUCTION ZONE: MINE AREA**			PRODUCTION ZONE: PRODUCTION AREA			WELL I.D. BY AREA*: NON PROD. ZONE	PROD. ZONE	
				Low	Avg.	High	Low	Avg.	High	Low	Avg.	High		Mine	Prod.
1.	Calcium	mg/l					50	153	430	46	104	230		MW-122	BL-34
2.	Magnesium	mg/l					9.8	46	103	12	30	65		MW-122	BL-34
3.	Sodium	mg/l					355	550	913	375	751	988		MW-120	BL-28
4.	Potassium	mg/l					18	25	55	20	34	50		MW-119	BL-33
5.	Carbonate	mg/l					0	0	5	0	2	10		MW-119	BL-32
6.	Bicarbonate	mg/l					116	231	428	54	161	275		MW-120	BL-29
7.	Sulfate	mg/l					104	364	1450	163	496	750		MW-122	BL-28
8.	Chloride	mg/l					504	840	1230	667	952	1090		MW-120	BL-32
[illegible]	Fluoride	mg/l					0.7	1.18	1.7	0.9	1.37	2		MW-126	BL-32
[illegible]	Nitrate - N	mg/l					<0.01	0.97	4.3	<0.01	0.64	2.4		MW-138	BL-34
11.	Silica	mg/l					20	36	66	23	35	54		MW-133	BL-34
12.															
13.	pH	std. units					7.29	7.89	8.4	7.75	8.19	8.65		MW-119	BL-32
14.	TDS	mg/l					1390	2183	3640	1610	2524	3060		MW-123	BL-28
15.	Conductivity	μmhos					2520	3637	5310	2840	4276	5100		MW-120	BL-28
16.	Alkalinity	std. units					95	189	351	52	134	225		MW-120	BL-29
17.															
18.	Arsenic	mg/l					0.001	0.025	0.147	0.004	0.068	0.27		MW-116	BL-32
19.	Barium	mg/l					0.05	0.09	0.24	0.05	0.07	0.1		MW-110	BL-34
21.	Cadmium	mg/l					<0.001	0.002	0.007	<0.001	0.002	0.007		MW-123	BL-32
22.	Chromium	mg/l					<0.01	<0.01	0.02	<0.01	<0.01	<0.01		MW-112	
23.	Copper	mg/l					<0.01	0.01	0.11	<0.01	<0.01	0.01		MW-120	BP-28
24.	Iron	mg/l					<0.01	0.13	3.4	0.01	0.03	0.08		MW-110	BL-29
25.	Lead	mg/l					<0.001	0.003	0.027	<0.001	<0.001	<0.001		MW-120	
26.	Manganese	mg/l					<0.01	0.04	1.6	<0.01	<0.01	0.02		MW-110	BL-29
27.	Mercury	mg/l					<0.0001	<0.0001	0.0004	<0.0001	<0.0001	<0.0001		MW-136	
28.	Nickel	mg/l					<0.01	<0.01	0.01	<0.01	<0.01	<0.01		MW-110	
29.	Selenium	mg/l					<0.001	0.034	0.27	<0.001	0.012	0.024		MW-122	BL-33
30.	Silver	mg/l					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
31.	Zinc	mg/l					<0.01	0.25	3.1	<0.01	0.03	0.16		MW-119	BL-29
32.															
33.	Ammonia	mg/l					<0.01	0.16	1.1	<0.01	0.04	0.16		MW-119	BL-33
[illegible]	Uranium	mg/l					0.004	0.125	0.725	0.136	0.586	1.53		MW-122	BL-28
[illegible]	Molybdenum	mg/l					<0.01	0.4	3	0.05	2.56	8.2		MW-117	BL-32
[illegible]	Vanadium	mg/l					<0.01	<0.01	0.05	<0.01	0.01	0.05		MW-133	BL-33
37.	Radium 226	pci/l					2.2	14.76	57	35	87.29	235		MW-120	BL-28

*LIST THE IDENTIFICATION NUMBERS OF WELLS USED TO OBTAIN THE LOW, AVERAGE AND HIGH VALUES.

**MONITOR WELLS

PAA-5

Permit No. UR02880PAA5

ATTACHMENT 4A
BASELINE WATER QUALITY TABLE
ROSITA GOLIAD SAND PRODUCTION ZONE

			PRODUCTION ZONE						WELL I.D. BY AREA*		
			Mine Area			Production Area			Non-Prod. Zone	Production Zone	
	Parameter	Unit	Low	Average	High	Low	Average	High		Mine	Production
1	Calcium	mg/l	115.0	144.5	193.0	141.0	153.8	164.0		MW-170**	BL-40B
2	Magnesium	mg/l	2.2	35.8	54.0	2.2	31.0	54.0		through	BL-41
3	Sodium	mg/l	295.0	367.3	472.0	315.0	331.6	347.0		MW-196**	BL-42
4	Potassium	mg/l	14.6	21.4	41.4	17.5	26.5	41.4		MW-197A**	BL-43C
5	Carbonate	mg/l	< 2	2.6	17.2	< 2	5.0	17.2		BL-40B	BL-44A
6	Bicarbonate	mg/l	< 2	135	215	< 2	84	185		BL-41	
7	Sulfate	mg/l	119	170	256	133	148	159		BL-42	
8	Chloride	mg/l	689	832	1,140	738	916	1,140		BL-43C	
9	Fluoride	mg/l	0.6	1.0	1.6	0.6	1.0	1.4		BL-44A	
10	Nitrate - N	mg/l	0.1	2.2	5.4	0.1	1.7	4.6			
11	Silica	mg/l	19.9	40.9	81.1	21.6	34.4	60.6			
12	pH	std. units	6.7	7.4	9.1	6.8	7.6	9.1			
13	TDS	mg/l	1,470	1,699	2,040	1,600	1,698	1,770			
14	Conductivity	μmhos	2,490	2,893	3,560	2,490	2,730	2,990			
15	Alkalinity	mg/l as CaO3	26	136	215	26	88	185			
16	Ammonia	mg/l	< 0.05	0.12	1.03	< 0.05	0.20	0.39			
17	Arsenic	mg/l	0.0033	0.0370	0.3570	0.0172	0.1058	0.3570			
18	Cadmium	mg/l	< 0.00005	0.00010	0.00028	< 0.00028	0.00023	0.00028			
19	Iron	mg/l	< 0.007	0.012	0.035	< 0.007	0.020	0.035			
20	Lead	mg/l	< 0.0005	0.0004	0.0050	< 0.0005	0.0012	0.0050			
21	Manganese	mg/l	< 0.002	0.013	0.045	< 0.002	0.012	0.022			
22	Mercury	mg/l	< 0.0002	0.0002	0.0007	< 0.0002	0.0003	0.0004			
23	Molybdenum	mg/l	0.002	0.518	6.820	0.004	2.376	6.820			
24	Selenium	mg/l	< 0.005	0.028	0.098	< 0.005	0.013	0.027			
25	Uranium	mg/l	0.002	0.69	16.50	0.002	3.91	16.50			
26	Radium-226	pCi/l	1.1	35.5	460.0	5.1	188.8	460.0			

* list the identification numbers of wells used to obtain the high and low values for each parameter

** monitor wells

Permit No. UR02880PAA5

ATTACHMENT 4B
BASELINE WATER QUALITY TABLE
ROSITA GOLIAD SAND (1ST OVERLYING) NONPRODUCTION ZONE

Parameter	**Low**	**Average**	**High**	**Well I.D. By Area***
Calcium	110.0	128.6	164.0	*OMW-40 to*
Magnesium	26.1	37.4	55.9	*OMW-44***
Sodium	228.0	263.2	284.0	
Potassium	14.4	24.4	49.1	
Carbonate	< 2	< 2	< 2	
Bicarbonate	71	170	277	
Sulfate	66	117	142	
Chloride	443	603	702	
Fluoride	0.7	0.7	0.8	
Nitrate - N	< 0.02	2.81	7.99	
Silica	38.1	55.6	69.1	
pH	6.9	7.1	7.2	
TDS	1,260	1,510	1,670	
Conductivity	2,010	2,316	2,680	
Alkalinity	71	170	277	
Ammonia	< 0.05	0.45	1.58	
Arsenic	0.0061	0.0199	0.0281	
Cadmium	< 0.00005	0.00021	0.00083	
Iron	< 0.007	0.0912	0.0928	
Lead	0.0002	0.0005	0.0016	
Manganese	0.002	0.245	0.662	
Mercury	< 0.0002	0.00025	0.00046	
Molybdenum	0.002	0.006	0.009	
Selenium	0.006	0.016	0.023	
Uranium	0.006	0.020	0.034	
Radium-226	0.05	2.27	7.50	

* list the identification numbers of wells used to obtain the high and low values for each parameter
** monitor wells

APPENDIX IV-2

Hydrologic Testing Summary Reports

PAA-1

PAA-2

PAA-3

PAA-5

PAA1

6. Hydrologic Test Results and Interpretation

The hydrological test began 10-6-88, with antecedent water level measurement. Pumping of well BL-2 began at 1530 hours on 10-11-88, and continued for 4140 minutes (2-7/8 days). Pumping of well BL-6 began at 1330 hours on 10-12-88, and continued for 2970 minutes (2-1/2 days). Following pumping recovery was measured for several days.

The purpose of the pump test was to determine the degree of hydrologic communication, if any, between the production zone and the overlying aquifer, and the degree of hydrologic communication between the production zone baseline wells and the surrounding monitor well ring.

Results of the pump test are shown on spread sheet and plots which follow this text. The spread sheet contains both corrected and raw data for the duration. Water level from all wells were corrected for barometric pressure affects (.89 feet H_2O 1 inch Hg) using barometric data from the Alice International Airport.

"Noise" was removed only from the OMW wells because drawdown in the production sand wells (MW + BL wells) was so great that small variations due to inaccurate readings does not affect results. Noise readings were any readings that for one erratic measurement were above or below the general trend of the test by .2 ft. or more.

By reviewing the OWW/BC graphs, it is apparent that there was no drawdown in the overlying zone whatsoever. Additionally, by observing the MW and BL graphs, it is apparent that all production zone monitor wells displayed drawdown.

Conclusions:

The test verified that vertical confinement is sufficient to prevent leach solutions from entering the overlying zone, and that the ring of monitor wells and baseline wells are in communication with the production wellfields and represent baseline conditions.

File: rosita_ptestC_10-88

Roy Rogers finished filling his troughs Wednesday evening using his water well. Shut in after that.

Pumped Well BL-2 from 1530 hours, 10-11-88 until 1230 hours, 10-14-88 (4140 minutes = 2 7/8 days). 18.9 gpm average.

Pumped Well BL-6 from 1330 hours, 10-12-88 until 1500 hours, 10-14-88 (1320 to 4290 minute = total of 2970 minutes on line or 2 1/16 days). 15.0 gpm average.

All steel tape measurements converted to E-Line fluid levels by subtracting 0.53 feet from steel tape numbers.

Well omw-2: Tape not placed properly on E-Line for first three readings. By working backwards, the calibration point (position of the plastic tape) is at '112.65-.62' [E-LINE reading for 10-8-88].

Start of Pumping --) 11-Oct-88 1530 hrs.

RAW DATA

Date -------	06-Oct-88	07-Oct-88	07-Oct-88	08-Oct-88	10-Oct-88	10-Oct-88	10-Oct-88	11-Oct-88	11-Oct-88	11-Oct-88	11-Oct-88	12-Oct-88	12-Oct-88	12-Oct-88	12-Oct-88	12-Oct-88	12-Oct-88	13-Oct-88
Generic Time	1515	1015	1400	1215	1000	1230	1530	830	1200	1730	2030	200	630	1015	1430	1830	2300	400
Del't (min)	-7215	-6075	-5850	-4515	-1770	-1620	-1440	-420	-210	120	300	630	900	1125	1380	1620	1890	2190
mw-1	-0.1	-0.13	-0.13		-0.03		-0.01	0.01	0	0.02	-0.03	-0.18	-0.06	-0.08	-0.16	-0.99	-1.62	-2.36
mw-2	-0.1	-0.11	-0.12		-0.02		-0.01	0	0	0.01	-0.06	-0.15	-0.1	-0.18	-0.27	-0.8	-1.4	-2.17
mw-3	-0.1	-0.12	-0.12		-0.02		-0.01	0.01	0	0.02	-0.03	-0.09	-0.1	-0.21	-0.31	-0.9	-1.68	-2.26
mw-4	-0.12	-0.14	-0.16		-0.04		-0.01	-0.01	0	0.03	-0.01	-0.09	-0.05	-0.32	-0.42	-0.81	-1.34	-1.94
mw-5	-0.14	-0.14	-0.17		-0.16		-0.01	0.01	0	0.02	0.04	-0.2	0.01	-0.49	-0.57	-0.88	-1.38	-1.74
mw-6	-0.18	-0.18	-0.21		-0.18		-0.08	-0.01	0	0.01	0.02	-0.2	-0.04	-0.51	-0.67	-0.82	-1.2	-1.61
mw-7	-0.38	-0.37	-0.66	-0.16	-0.18	-0.23	0.02	-0.01	0	0.01	-0.36	-0.22	-0.95	-1.06	-1.25	-1.51	-1.47	-1.83
mw-8	-0.11	-0.14	-0.13		-0.04		-0.05	-0.01	0	-0.08	0.26	-0.96	-1.29	-1.49	-1.64	1.57	-1.95	-2.98
mw-9	-0.2	-0.24	-0.2		0.14	-0.13	-0.1	-0.06	0	-0.44	0.53	-1.47	-2.1	-2.01	-2.73	-2.11	-2.33	-2.53
mw-10	-0.11				-0.01		0.04	0.03	0	-0.44	-1.36	-1.86	-2.31	-2.48	-2.71	-2.73	-3.1	-3.14
mw-11	-0.1	-0.13	-0.14		-0.03		-0.04	0.01	0	-0.67	-1.52	-1.92	-2.4	-2.59	-2.76	-2.79	-2.97	-3.29
mw-12	-0.06	-0.15	-0.11		0		-0.02	0.04	0	-0.91	-1.56	-1.92	-2.31	-2.47	-2.59	-2.4	-2.64	-2.97
mw-13	-0.13	-0.21	-0.13	-0.13	-0.03		0	0	0	-0.4	-0.86	-1.17	-1.44	-1.6	-1.67	-1.75	-1.69	-1.82
mw-14	-0.13	-0.24	-0.18	-0.13	-0.08		-0.06	-0.03	0	-0.06	-0.3	-0.58	-0.82	-0.95	-1	-1.09	-1.02	-1.16
mw-15	-0.12	-0.23	-0.05	-0.14	-0.09		-0.05	-0.03	0	-0.02	-0.24	-0.43	-0.64	-0.79	-0.83	-0.86	-0.87	-1.01
mw-16	-0.09	-0.22	-0.2	0.06	-0.06		0.14	0.17	0	0.17	-0.11	0	-0.4	-0.56	-0.68	-0.43	-0.7	-0.75
mw-17	-0.12	-0.21	-0.17	-0.06	-0.07		-0.01	-0.01	0	-0.06	-0.25	-0.55	-0.8	-0.96	-0.98	-1.04	-1.08	-1.37
mw-18	-0.16	-0.42	-0.38	-0.09	-0.25		-0.06	-0.25	0	-0.16	-0.62	-0.7	-1.26	-1.28	-1.37	-1.39	-1.35	-1.25
mw-19	-0.13			-0.07	-0.09		1.75	-0.03	0	0.02	-0.65	-3.09	-0.95	-1.15	-1.3	-1.05	-1.85	-1.55
mw-20	-0.29	-0.38	-0.37		-0.08	-0.25	0.01	0	0	0.06	0.05	-0.21	-0.37	-0.75	-0.84	-0.76	-0.95	-1.06
mw-21	-0.12	-0.57	-0.15	-0.15	-0.02		0.1	-0.25	0	-0.38	-0.27	0.32	-0.72	-1.3	-1.36	-1.22	-1.6	-1.82
mw-22	-0.21	-0.13	-0.28		0.2	-0.06	0.02	0.04	0	0.05	0	0.17	-0.04	-0.41	-0.58	-0.77	-1.43	-1.74
mw-23	-0.05	-0.11	-0.29		0		-0.1	-0.16	0	-0.02	-0.19	-0.08	-0.2	-0.33	-0.64	-1.23	-1.47	-2.32
mw-24	-0.15	-0.13	-0.1		-0.02		-0.02	0	0	-0.13	-0.07	-0.09	-0.15	-0.07	-0.38	-1.97	-2.93	-3.35
mw-25	-0.15	-0.15	-0.15		-0.01		-0.04	0	0	-0.01	-0.05	-0.21	-0.04	-0.11	-0.17	-0.67	-1.99	-2.51
mw-26	-0.1	-0.08	-0.1		-0.03		-0.01	0.01	0	0	0.08	0	0.02	-0.04	-0.16	-0.75	-1.19	-1.79
mw-27	-0.16	-0.11	-0.16		-0.01		0	0.07	0	0.02	0.01	0	0	-0.07	-0.06	-0.55	-1.02	-1.5
mw-28	-0.21	-0.18	-0.21		-0.04		-0.05	0	0	-0.01	0	0.03	0	-0.02	-0.07	-0.21	-0.5	-0.94
mw-29	-0.19	-0.19	-0.21		-0.06		-0.04	-0.01	0	0.03	0.05	0.03	0.05	0.01	-0.01	-0.19	-0.4	-1

mw-30	-0.29	-0.29	-0.29		-0.15		0	-0.05	0	-0.1	0.04	0.02	0.05	-0.18	0	-0.22	-0.68	-1.04
mw-31	-0.12	-0.07	-0.1		0.09	-0.03	-0.23	-0.01	0	0.04	0.07	-0.01	0.52	0.21	0.01	-0.28	0.28	-0.66
mw-32	-0.18	-0.13	-0.02	-0.48	-0.05	0.25	-0.02	0.02	0	0.04	-0.02	0.01	0.03	-0.01	-0.07	-0.68	-0.6	-1.09
mw-33	-0.09	-0.2	-0.3	-0.19	0.02		-0.16	0	0	-0.19	-0.06	-0.06	-0.21	-0.06	-0.29	-0.83	-1.17	-1.75
mw-34	-0.1	-0.14	-0.55	-0.6	-0.01		-0.04	0.02	0	-0.06	-0.13	-0.07	-0.06	-0.08	-0.14	-1.61	-2.28	-3
mw-35	-0.13	-0.54	-0.53	-0.63	-0.43	-0.1	-0.06	0.02	0	-0.01	-0.1	-0.04	-0.08	-0.1	-0.1	-1.24	-1.98	-2.53
mw-36	-0.12	-0.12	-0.09		0.38	0.39	-0.05	0	0	-0.05	-0.15	-0.13	0	-0.11	-0.16	-1.17	-1.88	-2.54
mw-37	-0.12	-0.12	-0.41	-0.48	-0.02	-0.06	-0.02	0	0	0.01	-0.01	-0.04	-0.04	-0.09	-0.08	-0.25	-0.67	-1.21
BL-1	0.01	-0.1	-0.08		0.04		0.11		0	-1.45	-2.23	0.06	-2.95	-2.69	-3.19	-1.98	-3.46	-3.68
BL-2		0.38	-0.1		0.29		-0.17	-0.09	0	-18.52	-17.49	-15.85	-24.2	-24.63	-24.68	-35.16	-34.26	-28.62
BL-3	-0.05	-0.08	-0.05		0.09		-0.19	0.03	0	-0.25	0.81	-1.25	-1.63	-1.79	-2.11	-1.83	-2.19	-2.15
BL-4	-0.23	0.04	-0.55	0.16	0.18	0.17	-0.03	0.23	0	0.14	-0.3	-0.63	-1.26	-1.48	-1.53	0.88	-1.62	-1.92
BL-5	-0.14	-0.12	-0.14		0.41	0.4	0	0.03	0	-0.07	-0.14	0.08	0.09	-0.22	-0.57	-2.46	-3.29	-3.95
BL-6	0.2	0.28	0.34		-0.01		-0.02	0.05	0	0.19					-41.43	-37.81	-41.32	-39.38
BL-7	-0.11	-0.11	-0.11		0		-0.02	0.01	0	0.19	-0.08	-0.02	-0.01	-0.05	-0.51	-2.75	-3.59	-3.88
BL-8	-0.33	-0.35	-0.37		-0.21		-0.1	-0.04	0	-0.06	-0.06	-0.03	-0.05	-0.04	-0.12	0.39	-0.54	-1.65
omw-1	0	-0.13	-0.02		-0.05		0.07	0	0	0.11	0.03	-0.06	-0.04	-0.08	0	0.04	-0.03	0.07
omw-2		-0.3	-0.2	-0.09	-0.16		0.03	0	0	0.07	-0.01	-0.01	-0.09	-0.11	-0.05	0.03	-0.12	-0.11
omw-3	-0.08	-0.19	-0.14		-0.08		-0.18	0.01	0	0.1	0.04	0.08	0.02	-0.07	-0.02	0	-0.06	-0.05
omw-4	-0.12	-0.19	-0.12		-0.06		0.03	0.01	0	0.13	0.13	0.17	0.06	-0.06	0.05	0.07	0	-0.01
omw-5	-0.19	-0.24	-0.25		-0.06		0.02	0.04	0	0.08	0.12	0.05	0.06	0	-0.04	0.02	-0.03	-0.06
omw-6	-0.22	-0.22	-0.22		-0.13		-0.04	0.02	0	0.03	0.06	0.08	0.02	-0.02	-0.04	0.03	0.08	0.03
omw-7	-0.34	-0.34	-0.34		-0.09		0.01	0.04	0	0.03	0.07	0.17	0.19	0.06	0.03	0.1	0.17	0.17
omw-8	-0.22	-0.22	-0.27		-0.02	-0.06	-0.03	0.01	0	0.08	0.09	0.04	0.06	0	-0.03	0.02	0.04	0.01
in/Hg	30.015	30.135	30.065	30.025	30.005	29.965	29.915	29.965	29.935	29.865	29.905	29.945	29.975	30.035	29.975	30.005	30.045	30.65
delta	0.08	0.2	0.13	0.09	0.07	0.03	-0.02	0.03	0	-0.07	-0.03	0.01	0.04	0.1	0.04	0.07	0.11	0.13
cor/ft/H20	0.07	0.17	0.12	0.08	0.06	0.03	-0.02	0.03	0	-0.06	-0.03	0.01	0.04	0.09	0.04	0.06	0.1	0.12

CORRECTED DATA

Date -------	06-Oct-88	07-Oct-88	07-Oct-88	08-Oct-88	10-Oct-88	10-Oct-88	10-Oct-88	11-Oct-88	11-Oct-88	11-Oct-88	11-Oct-88	12-Oct-88	12-Oct-88	12-Oct-88	12-Oct-88	12-Oct-88	12-Oct-88	13-Oct-88
Generic Time	1515	1015	1400	1215	1000	1230	1530	830	1200	1730	2030	200	630	1015	1430	1830	2300	400
Del't (min)	-7215	-6075	-5850	-4515	-1770	-1620	-1440	-420	-210	120	300	630	900	1125	1380	1620	1890	2190
mw-1	-0.03	0.04	-0.01		0.03		-0.03	0.04	0	-0.04	-0.06	-0.17	-0.02	0.01	-0.12	-0.93	-1.52	-2.24
mw-2	-0.03	0.06	0		0.04		-0.03	0.03	0	-0.05	-0.09	-0.14	-0.06	-0.09	-0.23	-0.74	-1.3	-2.05
mw-3	-0.03	0.05	0		0.04		-0.03	0.04	0	-0.04	-0.06	-0.08	-0.06	-0.12	-0.27	-0.84	-1.58	-2.14
mw-4	-0.05	0.03	-0.04		0.02		-0.03	0.02	0	-0.03	-0.04	-0.08	-0.01	-0.23	-0.38	-0.75	-1.24	-1.82
mw-5	-0.07	0.03	-0.05		-0.1		-0.03	0.04	0	-0.04	0.01	-0.19	0.05	-0.4	-0.53	-0.82	-1.28	-1.62
mw-6	-0.11	-0.01	-0.09		-0.12		-0.1	0.02	0	-0.05	-0.01	-0.19	0	-0.42	-0.63	-0.76	-1.1	-1.49
mw-7	-0.31	-0.2	-0.54	-0.08	-0.12	-0.2	0	0.02	0	-0.05	-0.39	-0.21	-0.91	-0.97	-1.21	-1.45	-1.37	-1.71
mw-8	-0.04	0.03	-0.01		0.02		-0.07	0.02	0	-0.14	0.23	-0.95	-1.25	-1.4	-1.6	1.63	-1.85	-2.86
mw-9	-0.13	-0.07	-0.08		0.2	-0.1	-0.12	-0.03	0	-0.5	0.5	-1.46	-2.06	-1.92	-2.69	-2.05	-2.23	-2.41
mw-10	-0.04				0.05		0.02	0.06	0	-0.5	-1.39	-1.85	-2.27	-2.39	-2.67	-2.67	-3	-3.02
mw-11	-0.03	0.04	-0.02		0.03		-0.06	0.04	0	-0.73	-1.55	-1.91	-2.36	-2.5	-2.72	-2.73	-2.87	-3.17
mw-12	0.01	0.02	0.01		0.06		-0.04	0.07	0	-0.97	-1.59	-1.91	-2.27	-2.38	-2.55	-2.34	-2.54	-2.85
mw-13	-0.06	-0.04	-0.01	-0.05	0.03		-0.02	0.03	0	-0.46	-0.89	-1.16	-1.4	-1.51	-1.63	-1.69	-1.59	-1.7
mw-14	-0.06	-0.07	-0.06	-0.05	-0.02		-0.08	0	0	-0.12	-0.33	-0.57	-0.78	-0.86	-0.96	-1.03	-0.92	-1.04
mw-15	-0.05	-0.06	0.07	-0.06	-0.03		-0.07	0	0	-0.08	-0.27	-0.42	-0.6	-0.7	-0.79	-0.8	-0.77	-0.89
mw-16	-0.02	-0.05	-0.08	0.14	0		0.12	0.2	0	0.11	-0.14	0.01	-0.36	-0.47	-0.64	-0.37	-0.6	-0.63
mw-17	-0.05	-0.04	-0.05	0.02	-0.01		-0.03	0.02	0	-0.12	-0.28	-0.54	-0.76	-0.87	-0.94	-0.98	-0.98	-1.25
mw-18	-0.09	-0.25	-0.26	-0.01	-0.19		-0.08	-0.22	0	-0.22	-0.65	-0.69	-1.22	-1.19	-1.33	-1.33	-1.25	-1.13
mw-19	-0.06			0.01	-0.03		1.73	0	0	-0.04	-0.68	-3.08	-0.91	-1.06	-1.26	-0.99	-1.75	-1.43
mw-20	-0.22	-0.21	-0.25		-0.02	-0.22	-0.01	0.03	0	0	0.02	-0.2	-0.33	-0.66	-0.8	-0.7	-0.85	-0.94
mw-21	-0.05	-0.4	-0.03	-0.07	0.04		0.08	-0.22	0	-0.44	-0.3	0.33	-0.68	-1.21	-1.32	-1.16	-1.5	-1.7
mw-22	-0.14	0.04	-0.16		0.26	-0.03	0	0.07	0	-0.01	-0.03	0.18	0	-0.32	-0.54	-0.71	-1.33	-1.62
mw-23	0.02	0.06	-0.17		0.06		-0.12	-0.13	0	-0.08	-0.22	-0.07	-0.16	-0.24	-0.6	-1.17	-1.37	-2.2
mw-24	-0.08	0.04	0.02		0.04		-0.04	0.03	0	-0.19	-0.1	-0.08	-0.11	0.02	-0.34	-1.91	-2.83	-3.23

mw-25	-0.08	0.02	-0.03		0.05		-0.06	0.03	0	-0.07	-0.08	-0.2	0	-0.02	-0.13	-0.61	-1.89	-2.39
mw-26	-0.03	0.09	0.02		0.03		-0.03	0.04	0	-0.06	0	0.01	0.06	0.05	-0.12	-0.69	-1.09	-1.67
mw-27	-0.09	0.06	-0.04		0.05		-0.02	0.1	0	-0.04	-0.02	0.01	0.04	0.02	-0.02	-0.49	-0.92	-1.38
mw-28	-0.14	-0.01	-0.09		0.02		-0.07	0.03	0	-0.07	-0.03	0.04	0.04	0.07	-0.03	-0.15	-0.4	-0.82
mw-29	-0.12	-0.02	-0.09		0		-0.06	0.02	0	-0.03	0.02	0.04	0.09	0.1	0.03	-0.13	-0.3	-0.88
mw-30	-0.22	-0.12	-0.17		-0.09		-0.02	-0.02	0	-0.16	0.01	0.03	0.09	-0.09	0.04	-0.16	-0.58	-0.92
mw-31	-0.05	0.1	0.02		0.15	0	-0.25	0.02	0	-0.02	0.04	0	0.56	0.3	0.05	-0.22	0.38	-0.54
mw-32	-0.11	0.04	0.1	-0.4	0.01	0.28	-0.04	0.05	0	-0.02	-0.05	0.02	0.07	0.08	-0.03	-0.62	-0.5	-0.97
mw-33	-0.02	-0.03	-0.18	-0.11	0.08		-0.18	0.03	0	-0.25	-0.09	-0.05	-0.17	0.03	-0.25	-0.77	-1.07	-1.63
mw-34	-0.03	0.03	-0.43	-0.52	0.05		-0.06	0.05	0	-0.12	-0.16	-0.06	-0.02	0.01	-0.1	-1.55	-2.18	-2.88
mw-35	-0.06	-0.37	-0.41	-0.55	-0.37	-0.07	-0.08	0.05	0	-0.07	-0.13	-0.03	-0.04	-0.01	-0.06	-1.18	-1.88	-2.41
mw-36	-0.05	0.05	0.03		0.44	0.42	-0.07	0.03	0	-0.11	-0.18	-0.12	0.04	-0.02	-0.12	-1.11	-1.78	-2.42
mw-37	-0.05	0.05	-0.29	-0.4	0.04	-0.03	-0.04	0.03	0	-0.05	-0.04	-0.03	0	0	-0.04	-0.19	-0.57	-1.09
BL-1	0.08	0.07	0.04		0.1		0.09		0	-1.51	-2.26		-2.91	-2.6	-3.15	-1.92	-3.36	-3.56
BL-2		0.55	0.02		0.35		-0.19	-0.06	0	-18.58	-17.52	-15.84	-24.16	-24.54	-24.64	-35.1	-34.16	-28.5
BL-3	0.02	0.09	0.07		0.15		-0.21	0.06	0	-0.31		-1.24	-1.59	-1.7	-2.07	-1.77	-2.09	-2.03
BL-4	-0.16	0.21	-0.43	0.24	0.24	0.2	-0.05	0.26	0	0.08	-0.33	-0.62	-1.22	-1.39	-1.49		-1.52	-1.8
BL-5	-0.07	0.05	-0.02				-0.02	0.06	0	-0.13	-0.17			-0.13	-0.53	-2.4	-3.19	-3.83
BL-6	0.27	0.45	0.46		0.05		-0.04	0.08	0	0.13					-41.39	-37.75	-41.22	-39.26
BL-7	-0.04	0.06	0.01		0.06		-0.04	0.04	0	0.13	-0.11	-0.01			-0.47	-2.69	-3.49	-3.76
BL-8	-0.26	-0.18	-0.25		-0.15		-0.12	-0.01	0	-0.12	-0.09	-0.02	-0.01	0.05	-0.08		-0.44	-1.53
omw-1	0.07	0.04	0.1		0.01		0.05	0.03	0	0.05	0	-0.05	0	0.01	0.04	0.1	0.07	0.19
omw-2		-0.13	-0.08	-0.01	-0.1		0.01	0.03	0	0.01	-0.04	0	-0.05	-0.02	-0.01	0.09	-0.02	0.01
omw-3	-0.01	-0.02	-0.02		-0.02		-0.2	0.04	0	0.04	0.01	0.09	0.06	0.02	0.02	0.06	0.04	0.07
omw-4	-0.05	-0.02	0		0		0.01	0.04	0	0.07	0.1	0.18	0.1	0.03	0.09	0.13	0.1	0.11
omw-5	-0.12	-0.07	-0.13		0		0	0.07	0	0.02	0.09	0.06	0.1	0.09	0	0.08	0.07	0.06
omw-6	-0.15	-0.05	-0.1		-0.07		-0.06	0.05	0	-0.03	0.03	0.09	0.06	0.07	0	0.09	0.18	0.15
omw-7	-0.27	-0.17	-0.22		-0.03		-0.01	0.07	0	-0.03	0.04	0.18	0.23	0.15	0.07	0.16	0.27	0.29
omw-8	-0.15	-0.05	-0.15		0.04	-0.03	-0.05	0.04	0	0.02	0.06	0.05	0.1	0.09	0.01	0.08	0.14	0.13

13-Oct-88	13-Oct-88	13-Oct-88	13-Oct-88	14-Oct-88	14-Oct-88	14-Oct-88	14-Oct-88	14-Oct-88	14-Oct-88	14-Oct-88	15-Oct-88	15-Oct-88	15-Oct-88	15-Oct-88
800	1145	1600	2030	100	500	845	1130	1530	1930	2230	300	800	1310	1310
2430	2655	2910	3180	3450	3690	3915	4080	4320	4560	4740	5010	5310	5620	5620
-3.01	-3.15	-3.4	-3.81	-3.85	-4.29	-4.14		-4.33	-3.78	-3.46	-2.81	-2.2	-1.93	-1.85
-2.62	-2.9	-3.15	-3.5	-3.62	-4.02	-3.91		-4.12	-3.73	-3.79	-3.38	-2.34	-2.09	-1.84
-2.65	-2.93	-3.18	-3.52	-3.63	-4.33	-3.9		-4.1	-3.7	-3.25	-3.01	-2.28	-2.02	-1.83
-2.34	-2.64	-2.86	-3.11	-3.26	-3.42	-3.54		-3.72	-3.44	-3.06	-2.71	-2.22	-1.96	-1.67
-2.38	-2.63	-2.85	-3.09	-3.38	-3.46	-3.47		-3.67	-3.53	-3.09	-2.81	-2.18	-1.91	-1.86
-2.09	-2.33	-2.56	-2.78	-3.03	-3.23	-3.16		-3.3	-3.42	-3.23	-2.62	-2.07	-1.83	-1.8
-2.32	-2.44	-2.6	-3.47	-3.1	-3.1	-3.18		-3.02	-3.11	-2.66	-2.38	-1.88	-1.49	-1.49
-2.58	-2.73	-2.86	-3.34	-3.7	-3.66	-3.35		-3.03	-3.09	-3.4	-2.23	-1.79	-1.51	-1.31
-2.99	-3.12	-3.22	-3.43	-3.66	-3.72	-3.95		-3.05	-2.83	-2.75	-1.76	-1.72	-1.13	-1.38
-3.42	-3.55	-3.62	-4.16	-4.62	-4.57	-4.08			-2.5	-3.23	-2.27	-1.69	-1.42	-1.36
-3.42	-3.54	-3.61	-3.9	-4.4	-4.33	-3.97		-2.73	-2.49	-2.5	-1.83	-1.59	-1.22	-1.14
-3.19	-3.25	-3.29	-3.39	-3.72	-3.8	-3.67		-2.14	-2.06	-1.72	-1.48	-1.2	-0.98	-0.84
-2.17	-2.25	-2.23	-2.5	-2.53	-2.67	-2.52		-1.73	-1.67	-1.55	-1.3	-0.98	-0.76	-0.89
-1.52	-1.53	-1.53	-1.73	-1.73	-1.7	-1.76		-1.41	-1.85	-1.62	-1.26	-0.93	-0.75	-0.84
-1.27	-1.31	-1.32	-1.55	-1.47	-1.55	-1.52		-1.36	-1.44	-1.23	-1.05	-0.94	-0.78	-0.7
-1.03	-1.07	-1.07	-1.34	-1.31	-1.6	-1.33		-1.1	-1.25	-1.42	-0.84	-0.94	-0.72	-0.81
-1.47	-1.55	-1.56	-1.93	-2.03	-1.76	-1.85		-1.5	-1.81	-2.06	-1.45	-1.08	-0.98	-1.06
-1.7	-1.8	-1.92	-2.22	-2.05	-2.28	-2.32		-2.08	-2.31	-1.84	-1.69	-1.36	-0.96	-6.47
-0.9	-1.79	-2.06	-2.1	-2.28	-3.17	-2.48		-2.04	-1.89	-1.8	-1.61	-1.44	-1.15	-1.18
-1.33	-1.57	-1.81	-1.38	-2.1	-1.92	-2.26		-1.92	-2	-1.86	-1.87	-1.32	-1.45	-1.48
-2.22	-2.39	-2.59	-2.78	-2.96	-3.12	-3.04		-2.93	-3.18	-2.96	-2.22	-1.82	-1.48	0.47
-2.54	-2.74	-2.94	-2.84	-3.15	-3.57	-3.56		-3.62	-2.92	-2.59	-2.01	-1.63	-1.23	-1.51
-2.95	-3.16	-3.16	-3.47	-3.74	-4.74	-3.95		-3.96	-3.73	-2.28	-2.8	-1.98	-1.64	-1.43
-3.79	-4.06	-4.73	-4.63	-4.95	-4.95	-4.96		-4.83	-4.23	-3.89	-2.32	-2.05	-2.05	-1.65
-4.01	-3.8	-3.95	-3.8	-4.04	-4.53	-4.55		-4.23	-3.4	-3.96	-2.36	-1.49	-1.62	-1.53
-2.18	-2.41	-2.57	-2.86	-2.92	-3.1	-3.05		-3.23	-2.91	-2.36	-2.07	-1.64	-1.42	-1.19
-1.92	-2.58	-2.73	-2.49	-2.83	-2.86	-3.25		-2.89	-2.79	-2.84	-2.17	-2.01	-1.35	-1.05
-1.31	-1.5	-1.68	-1.77	-2.14	-2.74	-2.19		-2.28	-2.51	-2.35	-2.03	-1.4	-1.25	-1.02
-1.26	-1.44	-1.59	-2	-2.07	-2.25	-2.14		-2.31	-2.67	-2.11	-1.69	-1.38	-1.18	-1.05

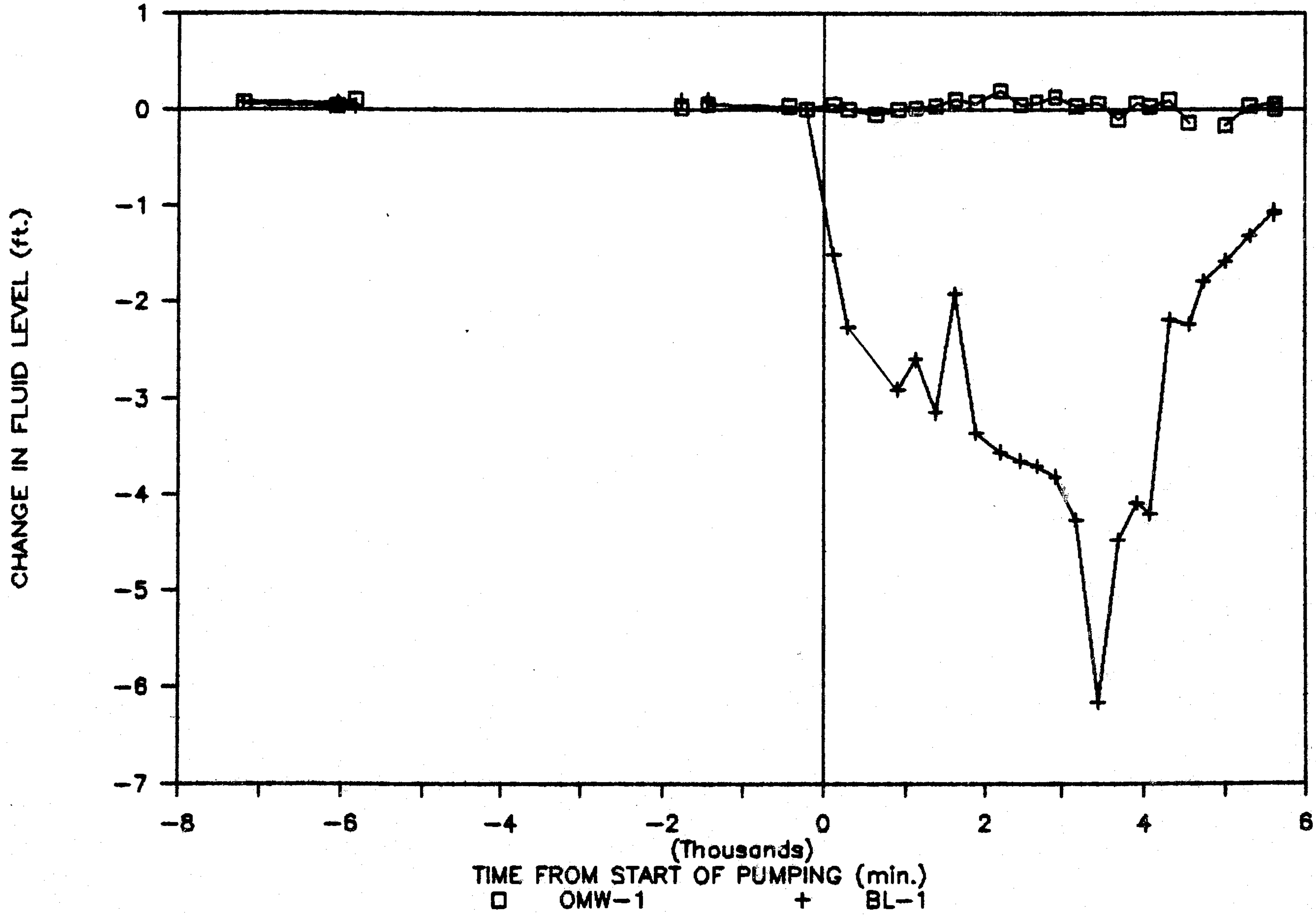
-1.42	-1.62	-1.96	-1.95	-1.03	-1.3	-1.41		-4.77	-3.85	-5.37	-4.24	-3.73	-3.58	-1.13
-1.5	-1.74	-1.94	-1.71	-1.89	-2.12	-2.46		-2.58	-2.24	-2.98	-1.57	-1.39	-0.88	-1
-1.53	-1.74	-1.89	-2.87	-2.31	-2.41	-3.39		-2.51	-3.65	-2.27	-1.85	-1.45	-1.26	-1.02
-2.53	-2.79	-3.03		-3.47	-3.5	-3.69		-3.83	-3.3	-2.78	-2.44	-2.18	-1.95	-1.21
-3.55	-3.84	-4.07	-4.63	-4.6	-4.75	-4.74		-4.93	-4.08	-3.64	-2.81	-2.08	-1.82	-1.42
-3.15	-3.85	-4.07	-3.97	-4.3	-4.56	-4.75		-4.93	-3.71	-3.45	-2.8	-2.13	-2.22	-1.61
-3.06	-3.77	-3.99	-4.02	-4.32	-4.4	-4.67		-4.45	-3.65	-3.62	-2.82	-2.16	-1.88	-1.56
-1.86	-2.22	-2.53	-3.02	-3.38	-3.7	-4.04		-3.99	-4.15	-4.66	-3.87	-3.09	-2.71	-2.34
-3.81	-3.88	-3.92	-4.41	-6.3	-4.56	-4.19	-4.27	-2.18	-2.23	-1.79	-1.53	-1.28	-0.99	-1.01
-26.52	-26.51	-26.55	-27.77	-27.41	-27.11	-25.8	-27.86		-6.8	-6.23	-3.45	-0.34		-0.97
-2.66	-2.81	-2.87	-3.09	-3.25	-3.31	-3.97	-3.52	-2.32	-4.24	-2.69	-1.76	-1.34	-1.14	-1.23
-2.21	-3.21	-2.79	-2.62	-2.95	-3.26	-2.94	-4.02	-2.89	-2.3	-2.55	-1.72	-1.42	-1.16	-1.32
-4.56	-4.81	-5.05	-5.41	-5.68	-5.75	-6.02	-5.89	-5.99	-4.33	-3.96	-2.97	-2.38	-2.05	-1.97
-39.74	-40.71	-40.94	-37.61	-37.34	-37.33	-41.5	-41.65	-6.38	-5.67	-7.46	-2.04	-1.95	-1.7	-1.7
-4.77	-4.93	-5.16	-5.49	-5.84	-5.79	-5.85	-5.9	-5.16	-3.75	-3.75	-2.41	-1.93	-1.66	-1.28
-2.16	-2.39	-2.59	-2.76	-3.12	-3.4	-3.19	-3.23	-3.27	-3.72	-2.87	-2.09	-1.81	-1.47	-1.3
-0.11	-0.1	0.03	-0.1	-0.08	-0.18	-0.04	-0.03	0.1	-0.13	-0.42	-0.12	0.08	0.12	0.07
-0.17	-0.14	-0.02	-0.14	-0.12	-0.43	-0.12	-0.07	0.07	-0.07	0.04	0.13	0.07	0.15	0.6
-0.12	-0.14	0	-0.1	-0.12	-0.07	-0.03	-0.03	0.07	-0.42	-0.04	0.05	0.12	0.15	0.26
-0.1	-0.11	-0.02	-0.04	-0.08	-0.28	0	-0.09	0.17	-0.48	-0.18	0.1	0.13	-0.52	0.31
-0.09	-0.14	-0.1	-0.43	-0.29	-0.1	-0.03	-0.07	-0.03	-0.07	-0.39	0	0.11	0.08	0.21
-0.13	-0.12	-0.06	-0.14	-0.2	-0.1	-0.02	-0.13	-0.02	-0.11	-0.16	-0.01	0.13	0.13	0.31
-0.01	-0.01	0.05	0.05	0.01	-0.01	0.05	0.09	0.19	0.01	0.05	0.2	0.26	0.22	-0.66
-0.05	-0.09	-0.02	0.05	-0.12	0.02	0.07	0.07	0.08	0.05	0.11	-0.01	0.13	0.11	0.28
30.115	30.125	30.045	30.095	30.095	30.025	30.055	30.005	29.925	29.925	29.935	29.875	29.895	29.855	29.855
0.18	0.19	0.11	0.16	0.16	0.09	0.12	0.07	-0.01	-0.01	0	-0.06	-0.04	-0.08	-0.08
0.16	0.17	0.1	0.14	0.14	0.08	0.1	0.06	-0.01	-0.01	0	-0.05	-0.04	-0.07	-0.07

13-Oct-88	13-Oct-88	13-Oct-88	13-Oct-88	14-Oct-88	14-Oct-88	14-Oct-88	14-Oct-88	14-Oct-88	14-Oct-88	14-Oct-88	15-Oct-88	15-Oct-88	15-Oct-88	15-Oct-88
800	1145	1600	2030	100	500	845	1130	1530	1930	2230	300	800	1310	1310
2430	2655	2910	3180	3450	3690	3915	4080	4320	4560	4740	5010	5310	5620	5620
-2.85	-2.98	-3.3	-3.67	-3.71	-4.21	-4.04		-4.34	-3.79	-3.46	-2.86	-2.24	-2	-1.92
-2.46	-2.73	-3.05	-3.36	-3.48	-3.94	-3.81		-4.13	-3.74	-3.79	-3.38	-2.38	-2.16	-1.91
-2.49	-2.76	-3.08	-3.38	-3.49	-4.25	-3.8		-4.11	-3.71	-3.25	-3.06	-2.32	-2.09	-1.9
-2.18	-2.47	-2.76	-2.97	-3.12	-3.34	-3.44		-3.73	-3.45	-3.06	-2.76	-2.26	-2.03	-1.74
-2.22	-2.46	-2.75	-2.95	-3.24	-3.38	-3.37		-3.68	-3.54	-3.09	-2.86	-2.22	-1.98	-1.98
-1.93	-2.16	-2.46	-2.64	-2.89	-3.15	-3.06		-3.31	-3.43	-3.23	-2.67	-2.11	-1.9	-1.87
-2.16	-2.27	-2.5	-3.33	-2.96	-3.02	-3.08		-3.03	-3.12	-2.66	-2.43	-1.92	-1.56	-1.56
-2.42	-2.56	-2.76	-3.2	-3.56	-3.58	-3.25		-3.04	-3.1	-3.4	-2.28	-1.83	-1.58	-1.38
-2.83	-2.95	-3.12	-3.29	-3.52	-3.64	-3.85		-3.06	-2.84	-2.75	-1.81	-1.76	-1.2	-1.45
-3.26	-3.38	-3.52	-4.02	-4.48	-4.49	-3.98			-2.51	-3.23	-2.32	-1.73	-1.49	-1.43
-3.26	-3.37	-3.51	-3.76	-4.26	-4.25	-3.87		-2.74	-2.5	-2.5	-1.88	-1.63	-1.29	-1.21
-3.03	-3.08	-3.19	-3.25	-3.58	-3.72	-3.57		-2.15	-2.07	-1.72	-1.53	-1.24	-1.05	-0.91
-2.01	-2.08	-2.13	-2.36	-2.39	-2.59	-2.42		-1.74	-1.68	-1.55	-1.35	-1.02	-0.83	-0.96
-1.36	-1.36	-1.43	-1.59	-1.59	-1.62	-1.66		-1.42	-1.86	-1.62	-1.31	-0.97	-0.82	-0.91
-1.11	-1.14	-1.22	-1.41	-1.33	-1.47	-1.42		-1.37	-1.45	-1.23	-1.1	-0.98	-0.85	-0.77
-0.87	-0.9	-0.97	-1.2	-1.17	-1.52	-1.23		-1.11	-1.26	-1.42	-0.89	-0.98	-0.79	-0.88
-1.31	-1.38	-1.46	-1.79	-1.89	-1.68	-1.75		-1.51	-1.82	-2.06	-1.5	-1.12	-1.05	-1.13
-1.54	-1.63	-1.82	-2.08	-1.91	-2.2	-2.22		-2.09	-2.32	-1.84	-1.74	-1.4	-1.03	-6.54
-0.74	-1.62	-1.96	-1.96	-2.14	-3.09	-2.38		-2.05	-1.9	-1.8	-1.66	-1.48	-1.22	-1.25
-1.17	-1.4	-1.71	-1.24	-1.96	-1.84	-2.16		-1.93	-2.01	-1.86	-1.92	-1.36	-1.52	-1.55
-2.06	-2.22	-2.49	-2.64	-2.82	-3.04	-2.94		-2.94	-3.19	-2.96	-2.27	-1.86	-1.55	0.4
-2.38	-2.57	-2.84	-2.7	-3.01	-3.49	-3.46		-3.63	-2.93	-2.59	-2.06	-1.67	-1.3	-1.58
-2.79	-2.99	-3.06	-3.33	-3.6	-4.66	-3.85		-3.97	-3.74	-2.28	-2.85	-2.02	-1.71	-1.5
-3.63	-3.89	-4.63	-4.49	-4.81	-4.87	-4.86		-4.84	-4.24	-3.89	-2.37	-2.09	-2.12	-1.72

-3.85	-3.63	-3.85	-3.66	-3.9	-4.45	-4.45		-4.24	-3.41	-3.96	-2.41	-1.53	-1.69	-1.6
-2.02	-2.24	-2.47	-2.72	-2.78	-3.02	-2.95		-3.24	-2.92	-2.36	-2.12	-1.68	-1.49	-1.26
-1.76	-2.41	-2.63	-2.35	-2.69	-2.78	-3.15		-2.9	-2.8	-2.84	-2.22	-2.05	-1.42	-1.12
-1.15	-1.33	-1.58	-1.63	-2	-2.66	-2.09		-2.29	-2.52	-2.35	-2.08	-1.44	-1.32	-1.09
-1.1	-1.27	-1.49	-1.86	-1.93	-2.17	-2.04		-2.32	-2.68	-2.11	-1.74	-1.42	-1.25	-1.12
-1.26	-1.45	-1.86	-1.81	-0.89	-1.22	-1.31		-4.78	-3.86	-5.37	-4.29	-3.77	-3.65	-1.2
-1.34	-1.57	-1.84	-1.57	-1.75	-2.04	-2.36		-2.59	-2.25	-2.98	-1.62	-1.43	-0.95	-1.07
-1.37	-1.57	-1.79	-2.73	-2.17	-2.33	-3.29		-2.52	-3.66	-2.27	-1.9	-1.49	-1.33	-1.09
-2.37	-2.62	-2.93		-3.33	-3.42	-3.59		-3.84	-3.31	-2.78	-2.49	-2.22	-2.02	-1.28
-3.39	-3.67	-3.97	-4.49	-4.46	-4.67	-4.64		-4.94	-4.09	-3.64	-2.86	-2.12	-1.89	-1.49
-2.99	-3.68	-3.97	-3.83	-4.16	-4.48	-4.65		-4.94	-3.72	-3.45	-2.85	-2.17	-2.29	-1.68
-2.9	-3.6	-3.89	-3.88	-4.18	-4.32	-4.57		-4.46	-3.66	-3.62	-2.87	-2.2	-1.95	-1.63
-1.7	-2.05	-2.43	-2.88	-3.24	-3.62	-3.94		-4	-4.16	-4.66	-3.92	-3.13	-2.78	-2.41
-3.65	-3.71	-3.82	-4.27	-6.16	-4.48	-4.09	-4.21	-2.19	-2.24	-1.79	-1.58	-1.32	-1.06	-1.08
-26.36	-26.34	-26.45	-27.63	-27.27	-27.03	-25.7	-27.8		-6.81	-6.23	-3.5	-0.38	-0.07	-1.04
-2.5	-2.64	-2.77	-2.95	-3.11	-3.23	-3.87	-3.46	-2.33		-2.69	-1.81	-1.38	-1.21	-1.3
-2.05	-3.04	-2.69	-2.48	-2.81	-3.18	-2.84	-3.96	-2.9	-2.31	-2.55	-1.77	-1.46	-1.23	-1.39
-4.4	-4.64	-4.95	-5.27	-5.54	-5.67	-5.92	-5.83	-6	-4.34	-3.96	-3.02	-2.42	-2.12	-2.04
-39.58	-40.54	-40.84	-37.47	-37.2	-37.25	-41.4	-41.59	-6.39	-5.68	-7.46	-2.09	-1.99	-1.77	-1.77
-4.61	-4.76	-5.06	-5.35	-5.7	-5.71	-5.75	-5.84	-5.17	-3.76	-3.75	-2.46	-1.97	-1.73	-1.35
-2	-2.22	-2.49	-2.62	-2.98	-3.32	-3.09	-3.17	-3.28	-3.73	-2.87	-2.14	-1.85	-1.54	-1.37
0.05	0.07	0.13	0.04	0.06	-0.1	0.06	0.03	0.09	-0.14		-0.17	0.04	0.05	0
-0.01	0.03	0.08	0	0.02	-0.35	-0.02	-0.01	0.06	-0.08	0.04	0.08	0.03	0.08	0.53
0.04	0.03	0.1	0.04	0.02	0.01	0.07	0.03	0.06		-0.04	0	0.08	0.08	0.19
0.06	0.06	0.08	0.1	0.06		0.1	-0.03	0.16		-0.18	0.05	0.09		0.24
0.07	0.03	0			-0.02	0.07	-0.01	-0.04	-0.08		-0.05	0.07	0.01	0.14
0.03	0.05	0.04	0	-0.06	-0.02	0.08	-0.07	-0.03	-0.12	-0.16	-0.06	0.09	0.06	0.24
0.15	0.16	0.15	0.19	0.15	0.07	0.15	0.15	0.18	0	0.05	0.15	0.22	0.15	
0.11	0.08	0.08	0.19	0.02	0.1	0.17	0.13	0.07	0.04	0.11	-0.06	0.09	0.04	0.21

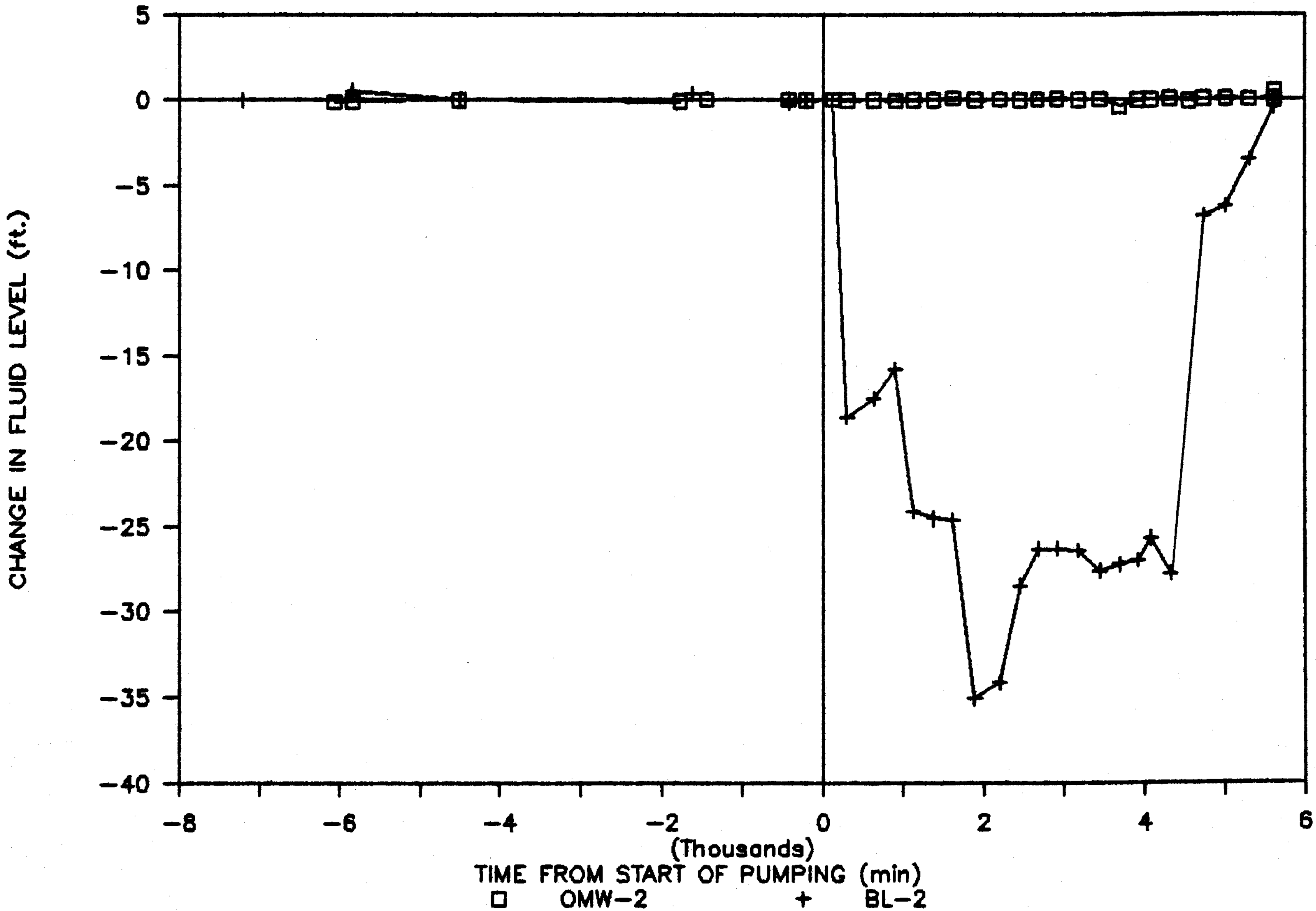
ROSITA PUMP TEST 10/88

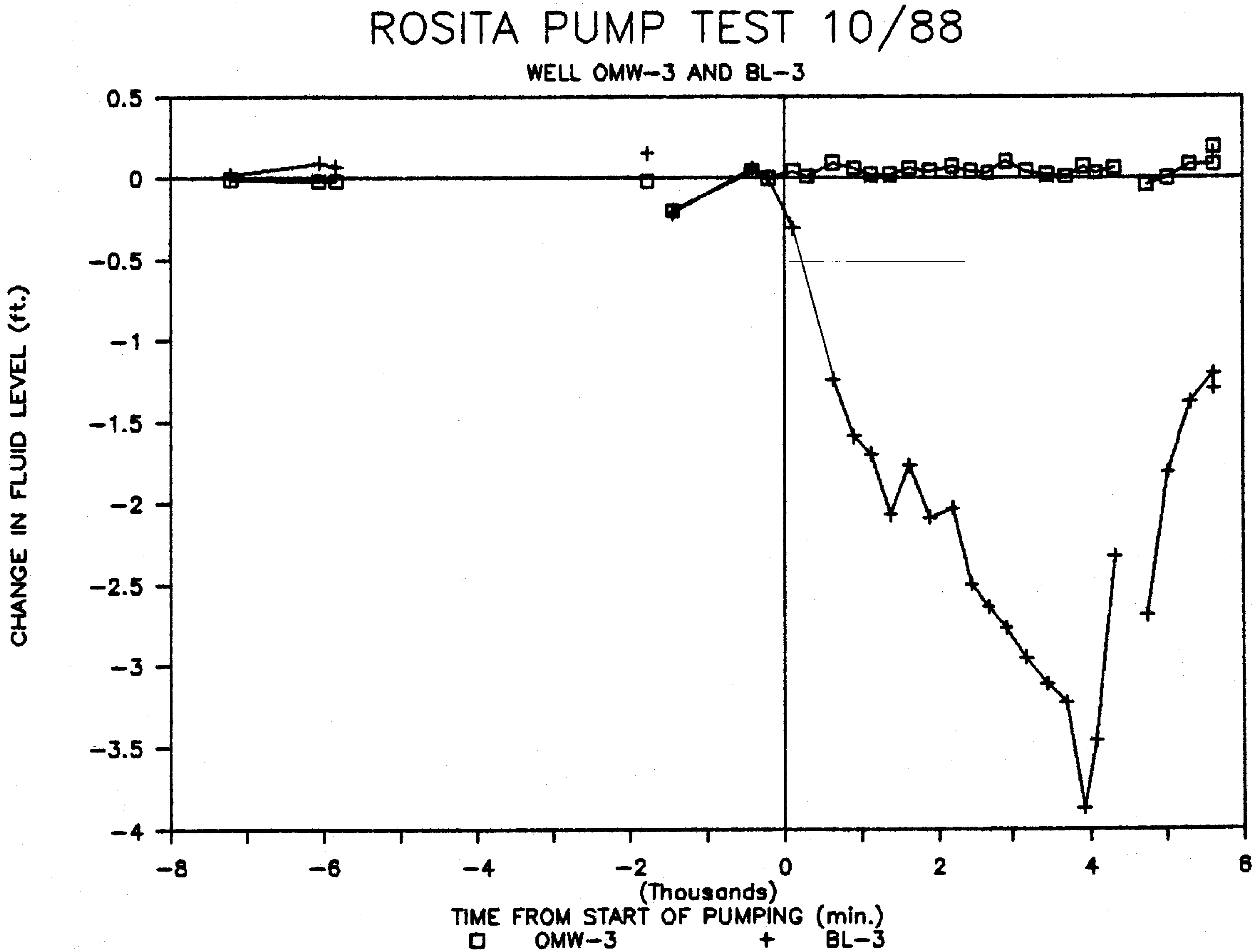
WELL OMW-1 AND BL-1



ROSITA PUMP TEST 10/88

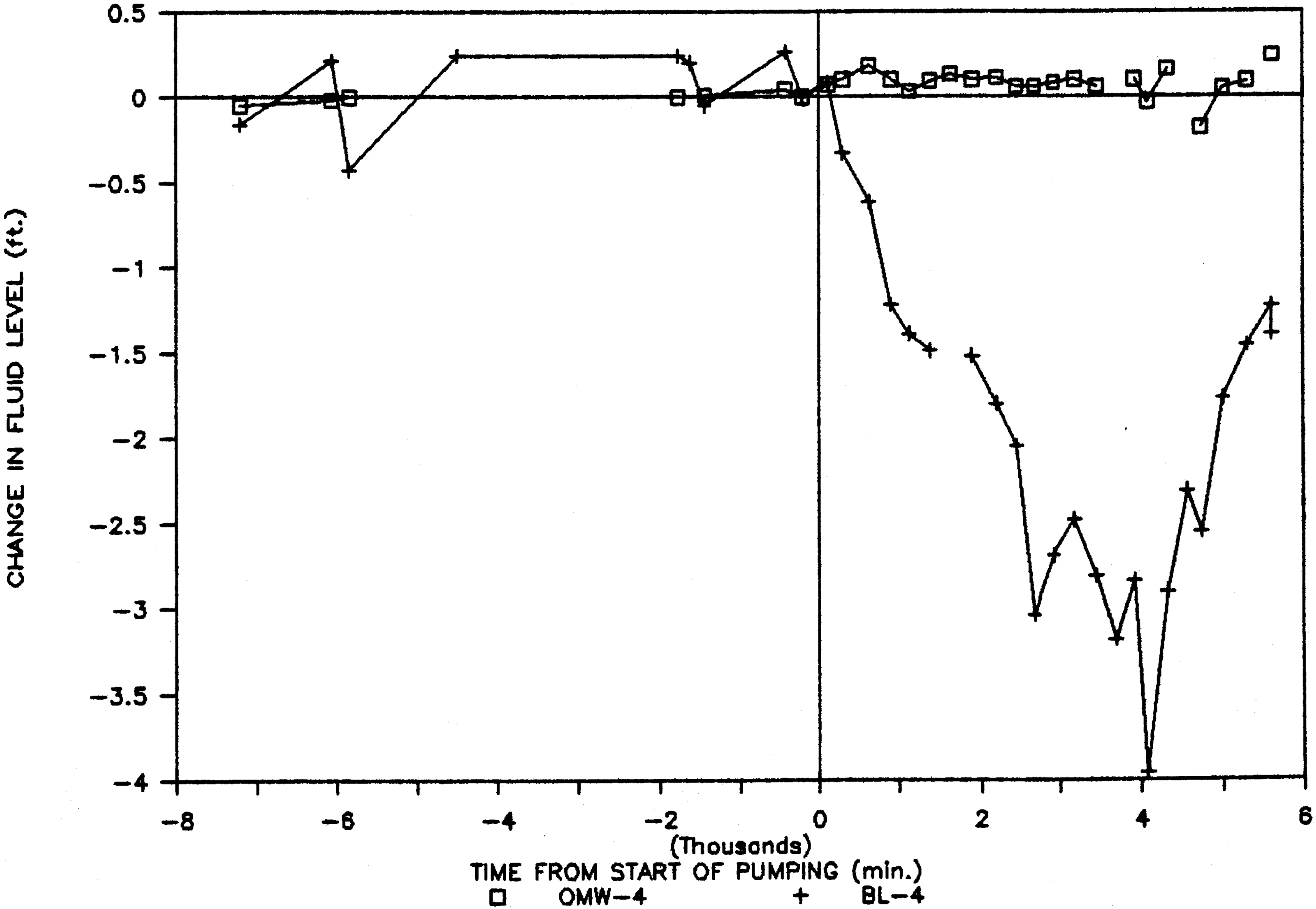
WELL OMW-2 AND BL-2

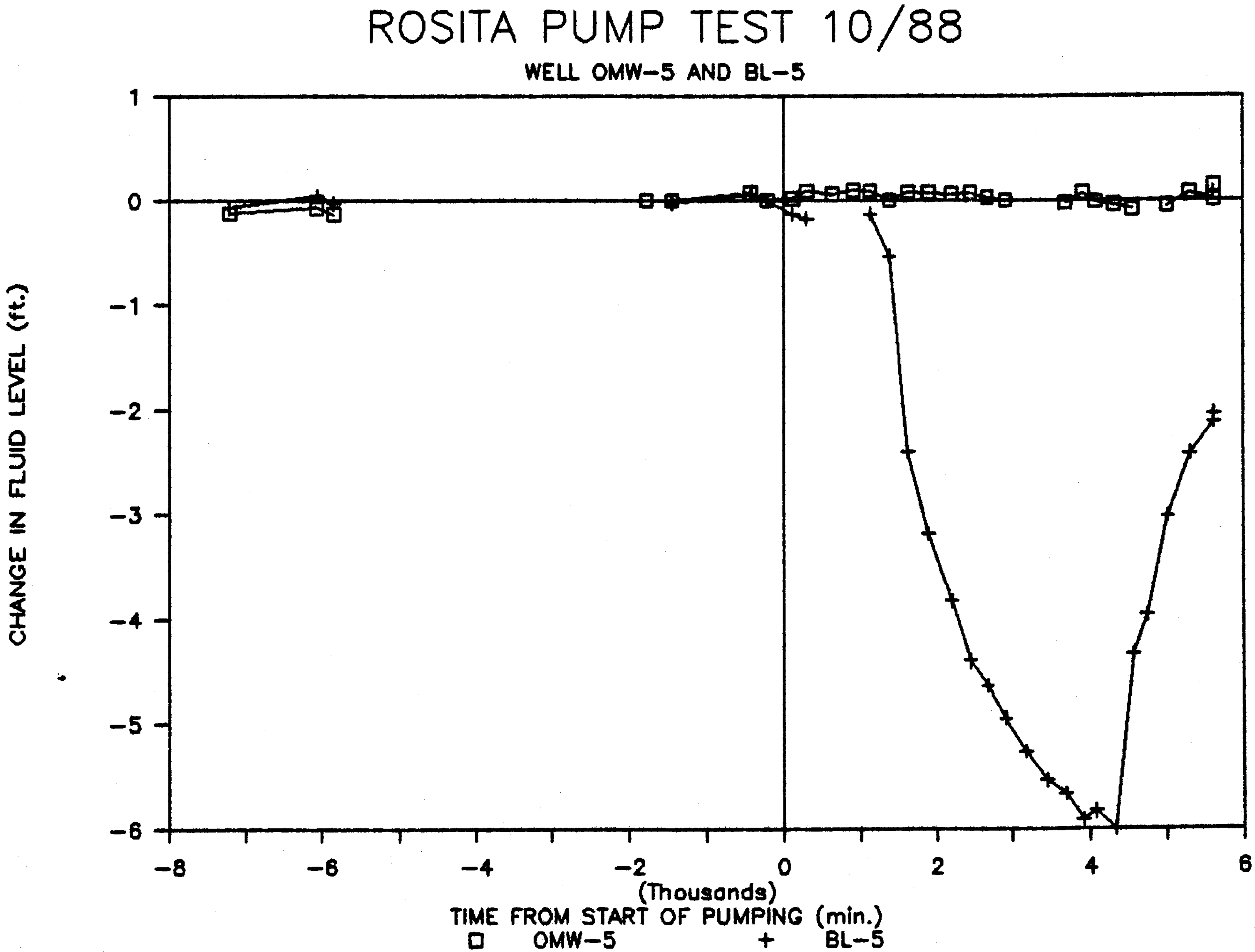



ROSITA PUMP TEST 10/88
WELL OMW-3 AND BL-3
CHANGE IN FLUID LEVEL (ft.)
0.5
0
-0.5
-1
-1.5
-2
-2.5
-3
-3.5
-4
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
OMW-3
BL-3

ROSITA PUMP TEST 10/88

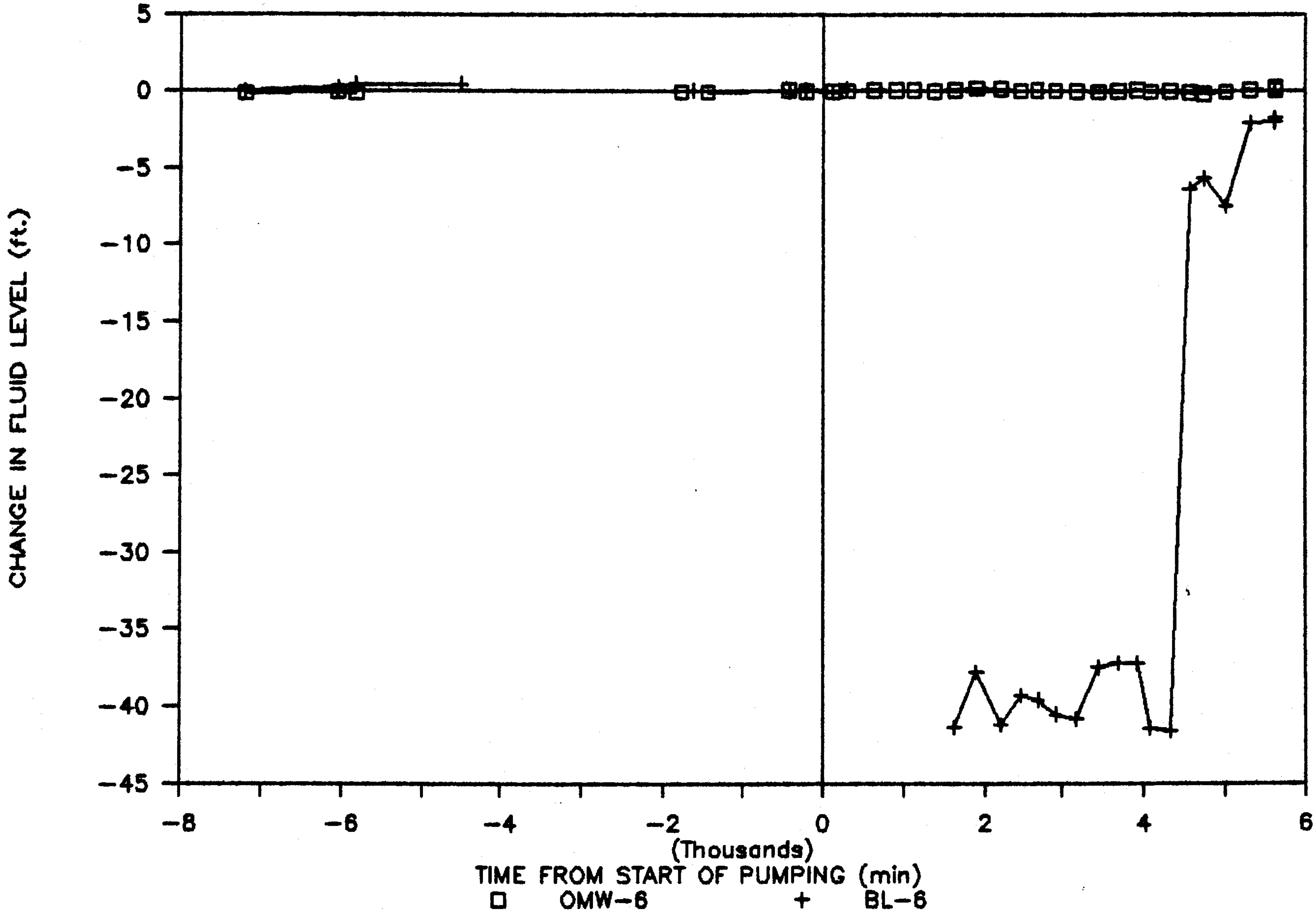
WELL OMW-4 AND BL-4

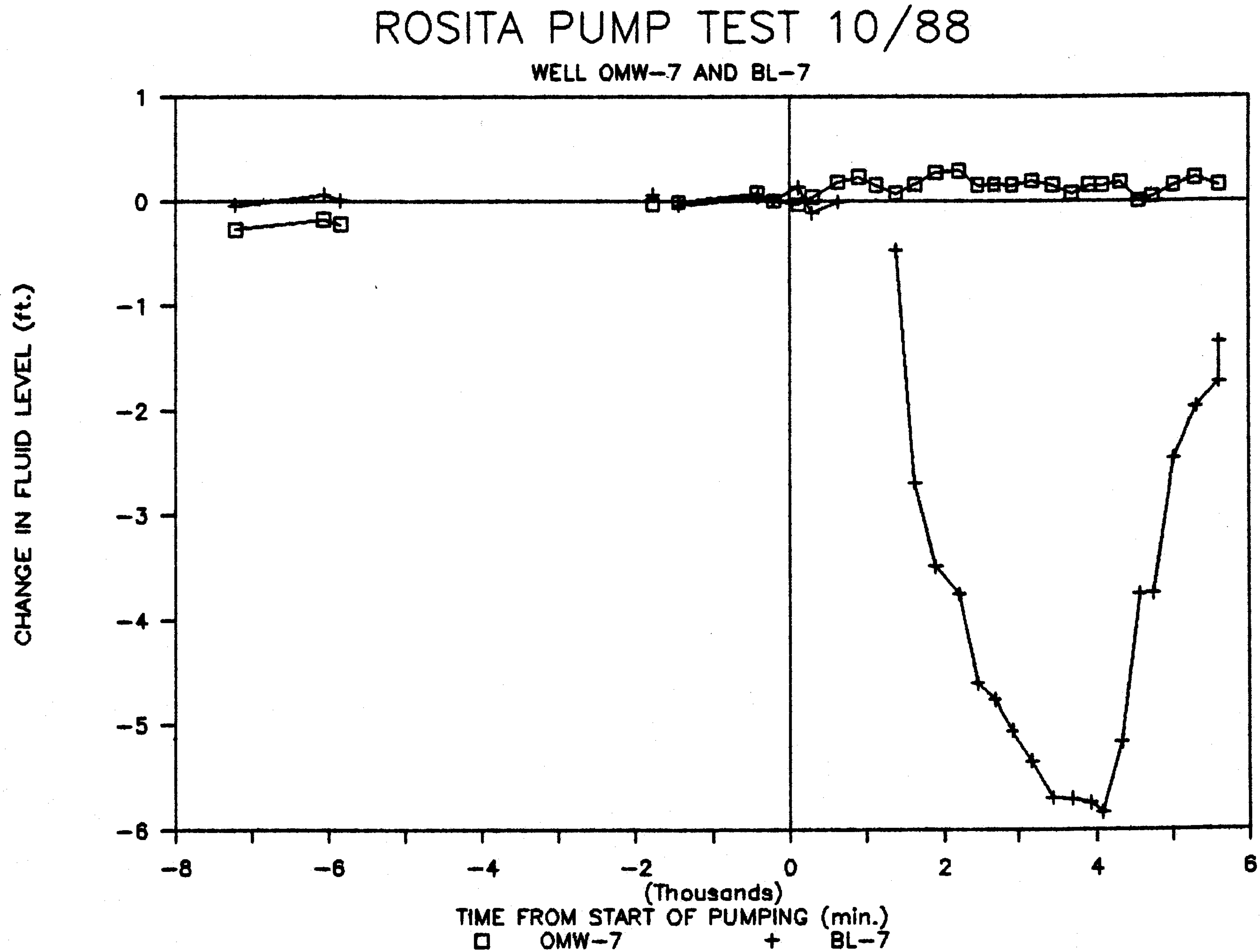



ROSITA PUMP TEST 10/88
WELL OMW-5 AND BL-5
CHANGE IN FLUID LEVEL (ft.)
1
0
-1
-2
-3
-4
-5
-6
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
□ OMW-5
+ BL-5

ROSITA PUMP TEST 10/88

WELL OMW-6 AND BL-6

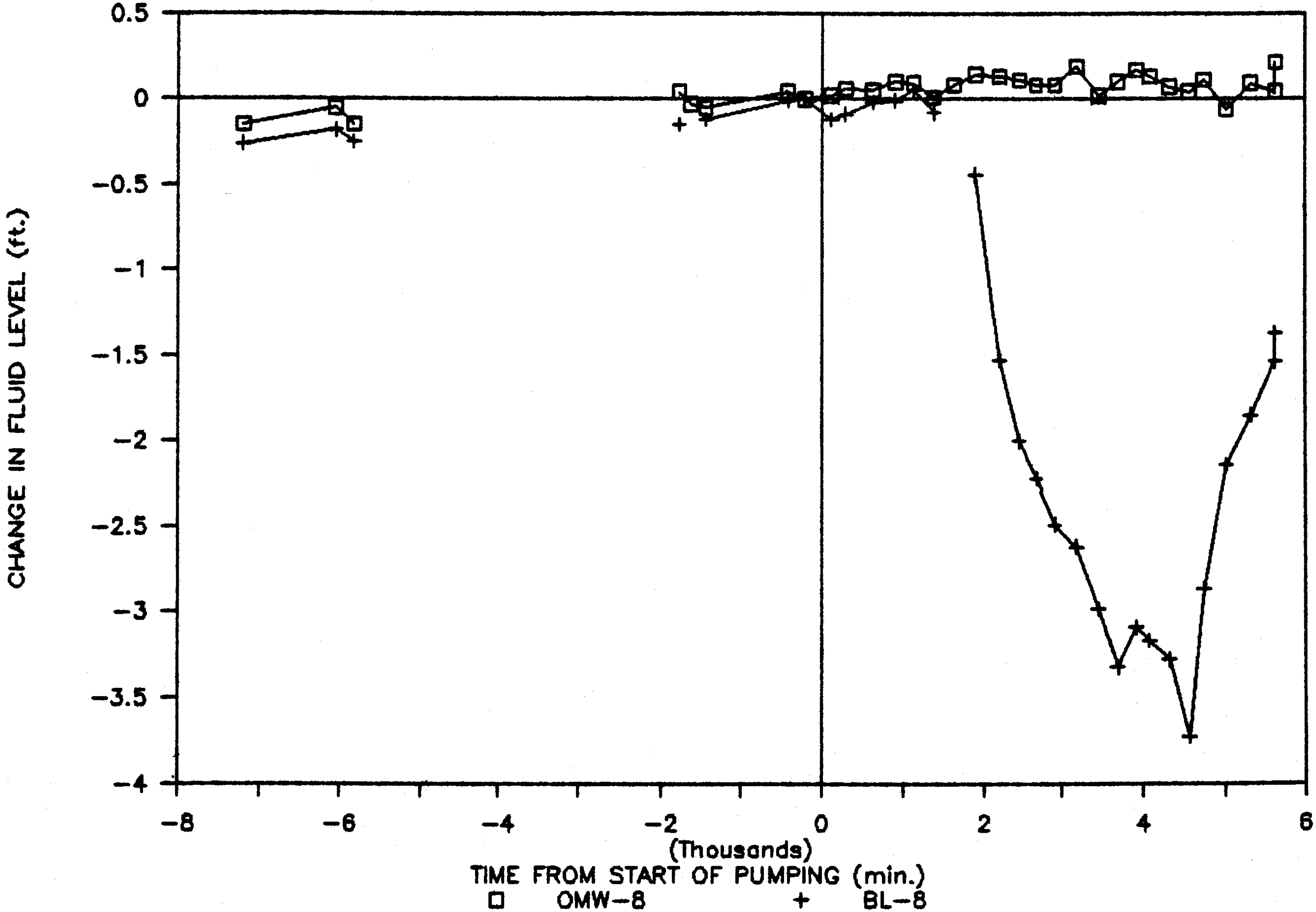




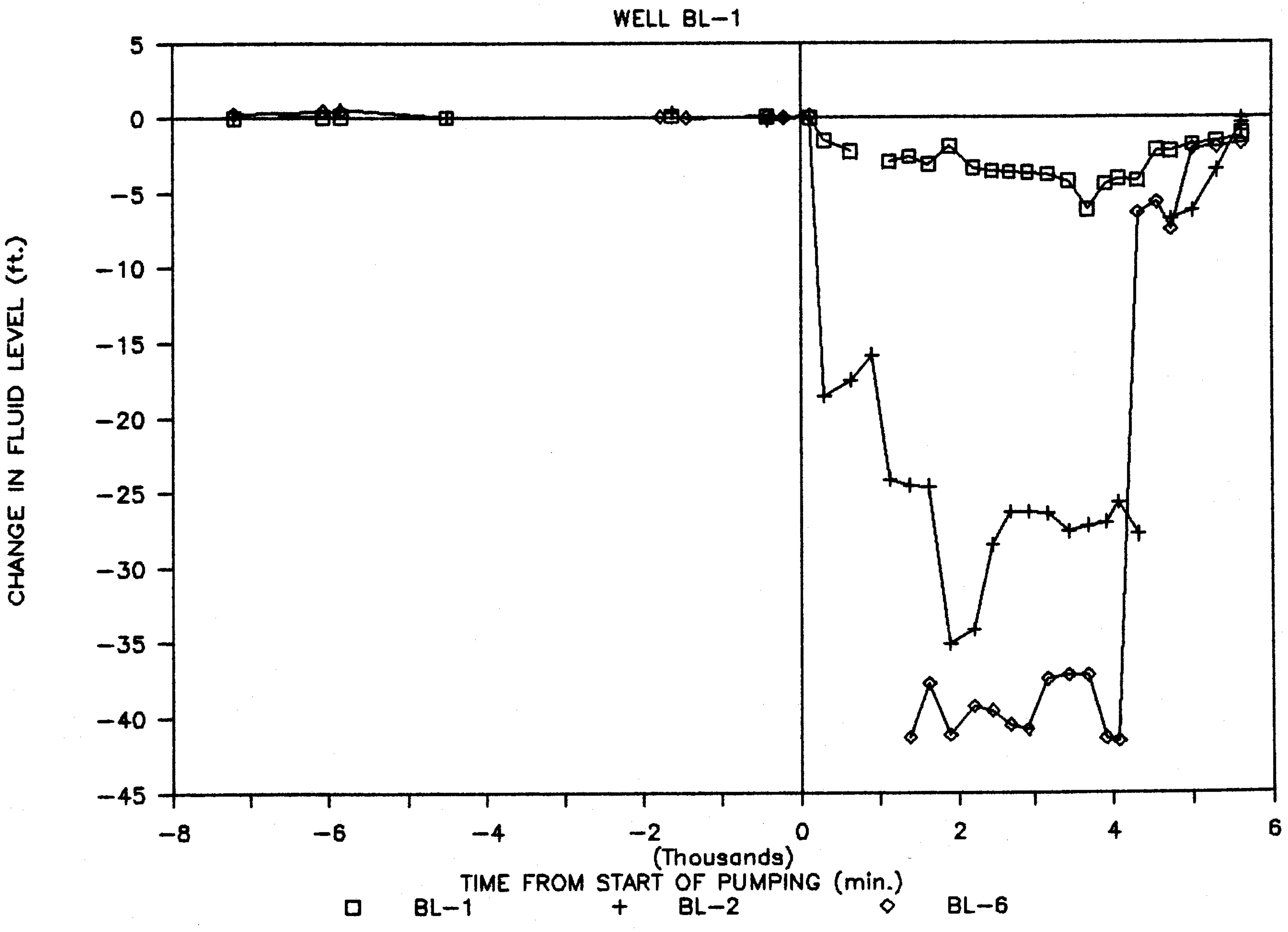
ROSITA PUMP TEST 10/88
WELL OMW-7 AND BL-7
CHANGE IN FLUID LEVEL (ft.)
1
0
-1
-2
-3
-4
-5
-6
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
□ OMW-7
+ BL-7

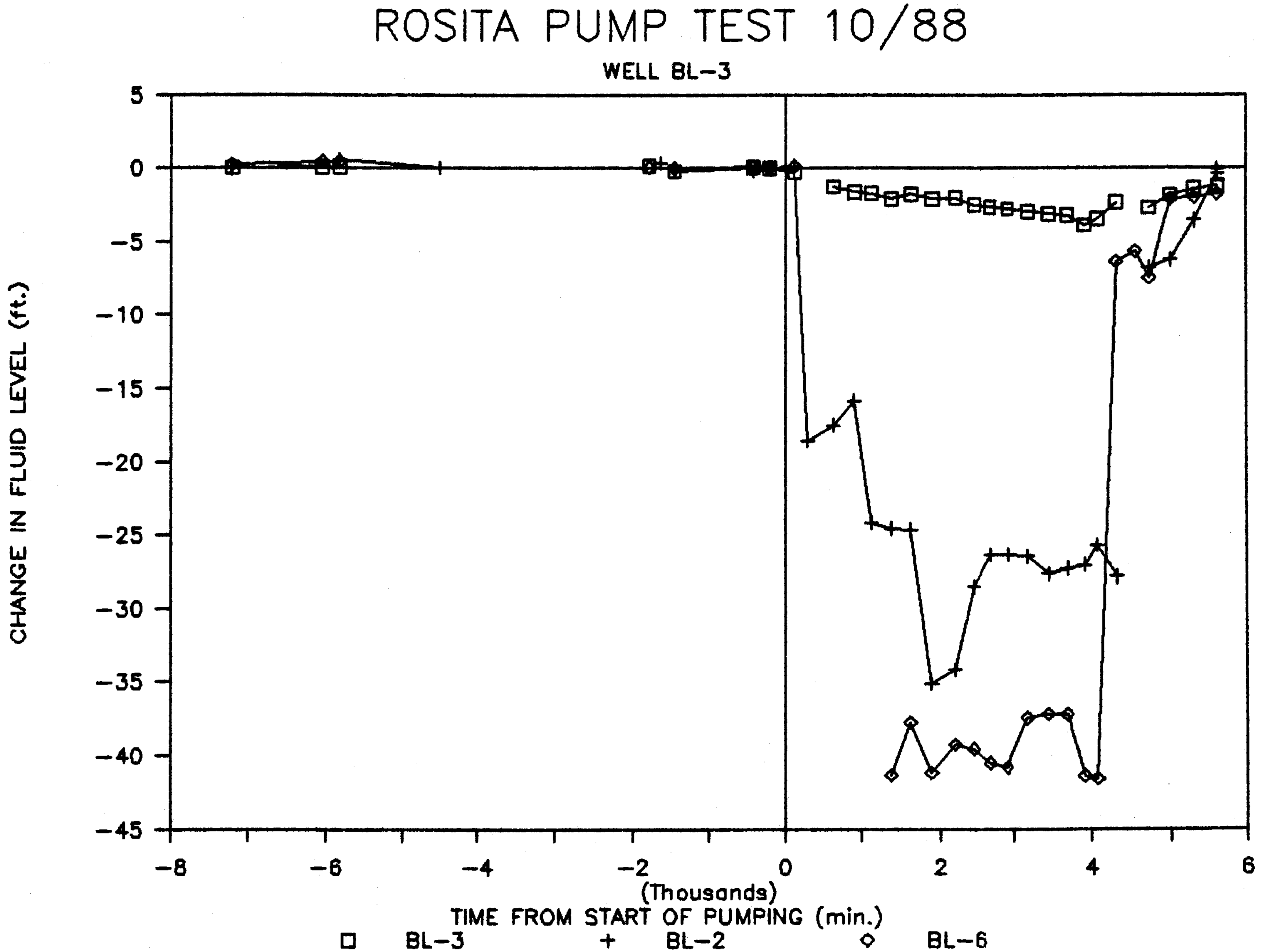
ROSITA PUMP TEST 10/88

WELL OMW-8 AND BL-8



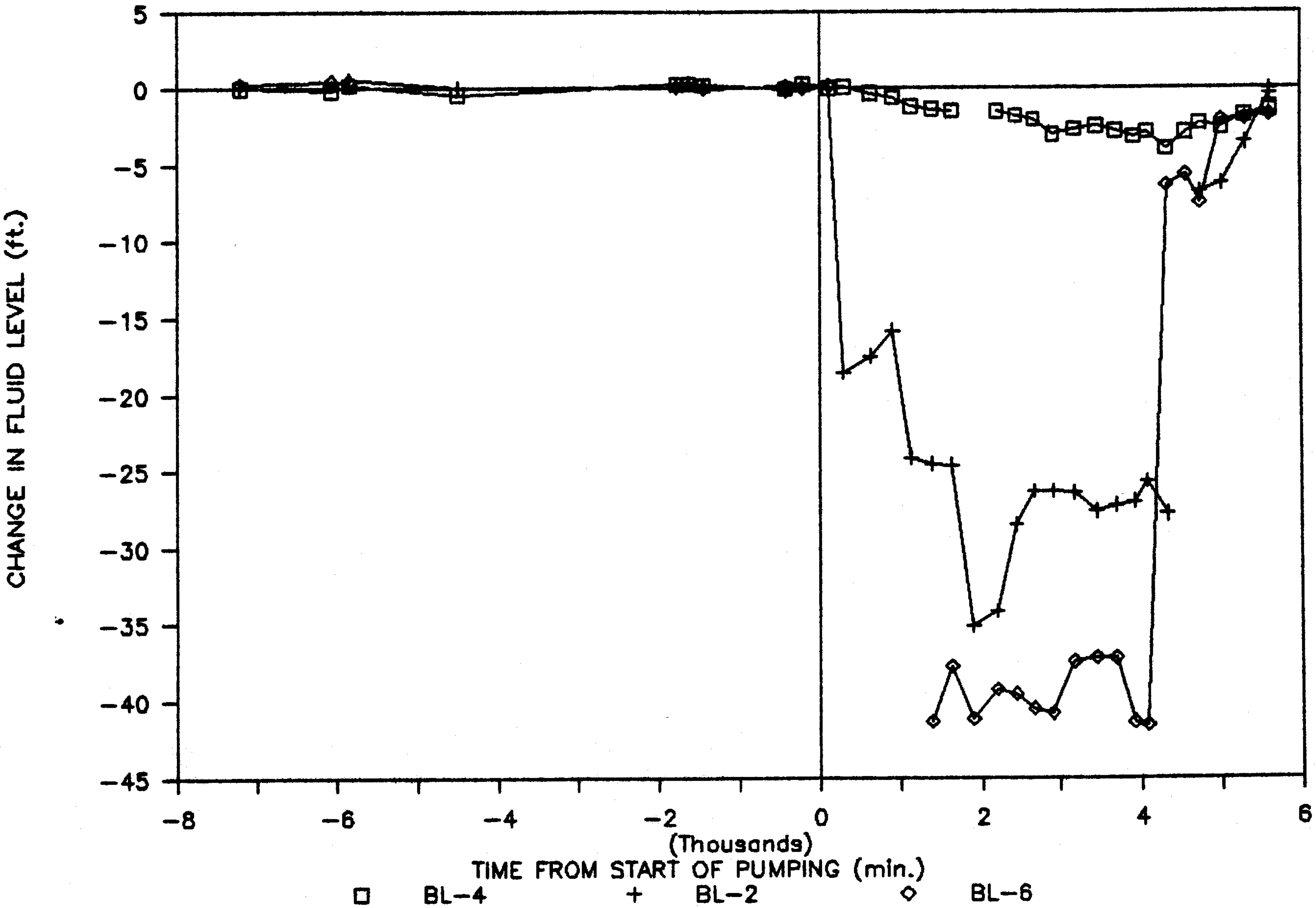
ROSITA PUMP TEST 10/88




ROSITA PUMP TEST 10/88
WELL BL-3
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
BL-3
BL-2
BL-6

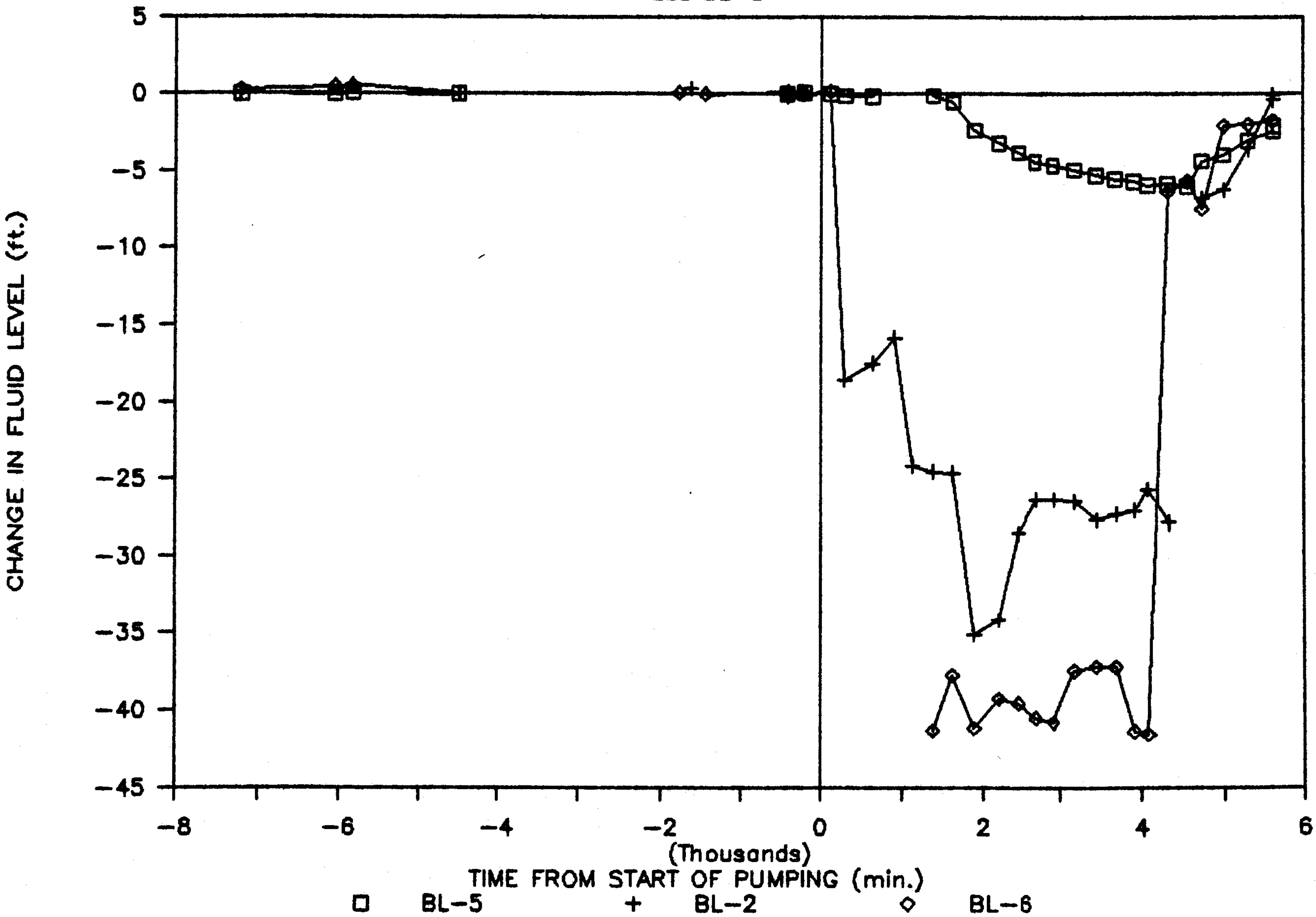
ROSITA PUMP TEST 10/88

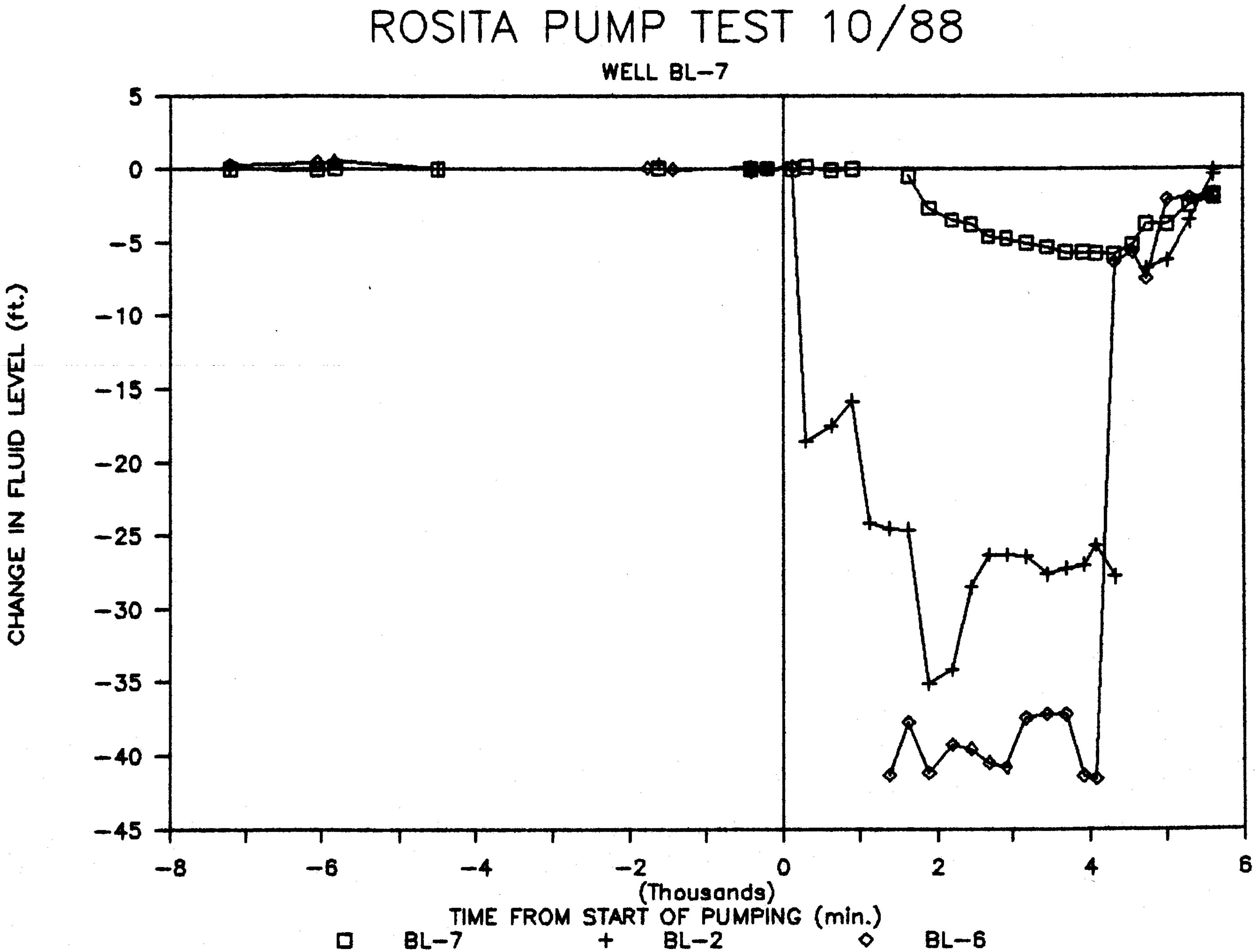
WELL BL-4



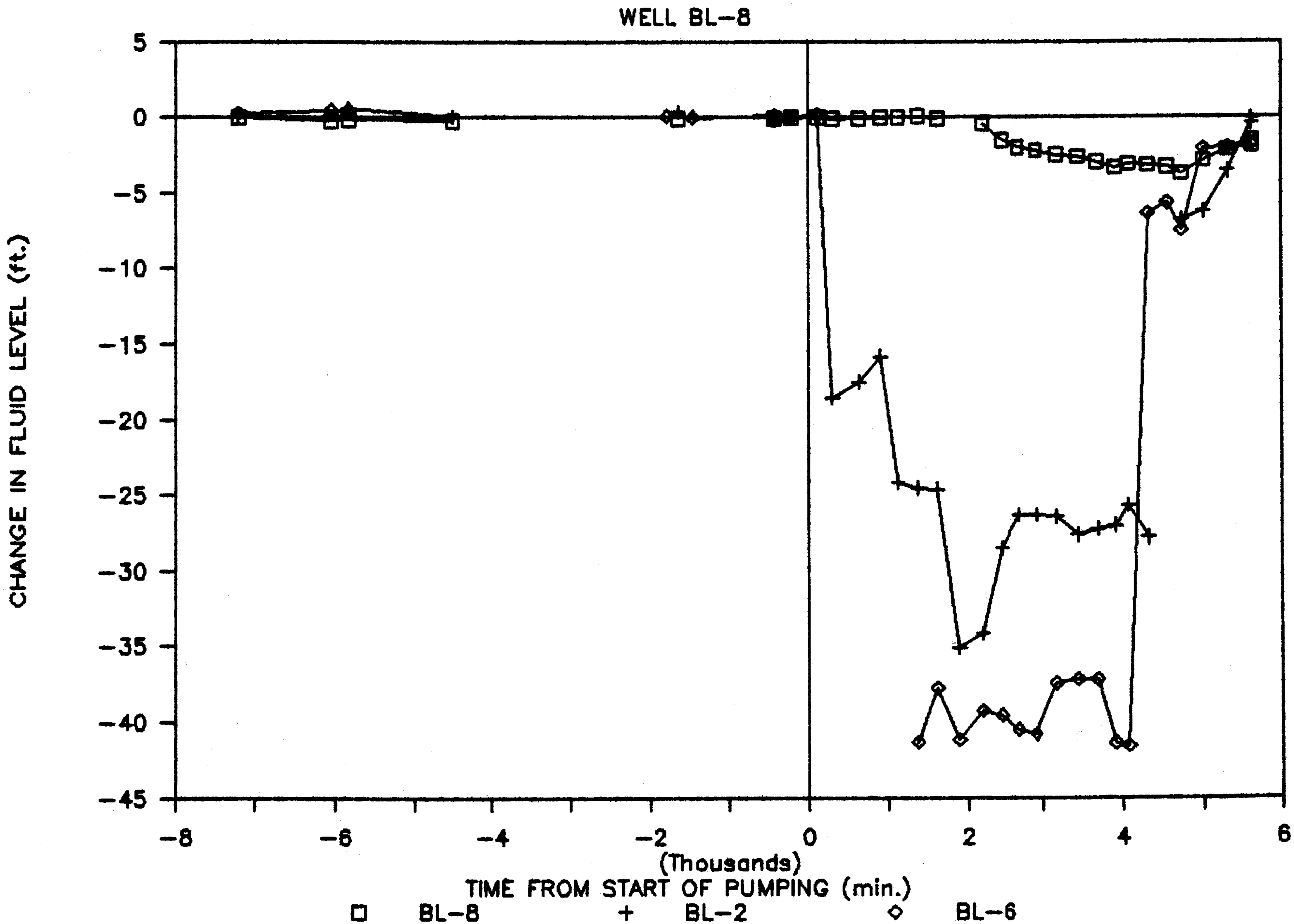
ROSITA PUMP TEST 10/88

WELL BL-5



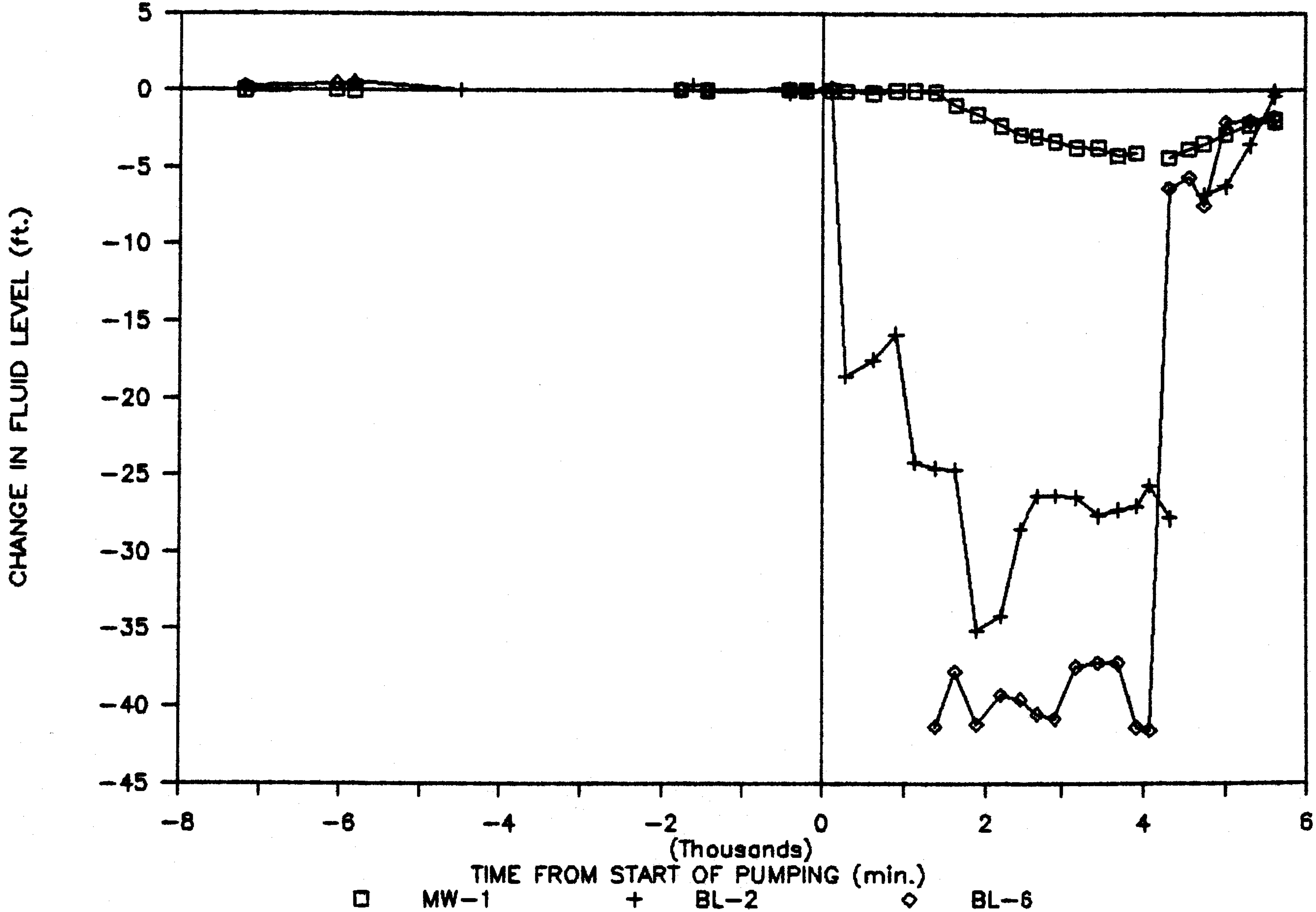

ROSITA PUMP TEST 10/88
WELL BL-7
CHANGE IN FLUID LEVEL (ft.)
5
0
−5
−10
−15
−20
−25
−30
−35
−40
−45
−8
−6
−4
−2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
BL-7
BL-2
BL-6

ROSITA PUMP TEST 10/88

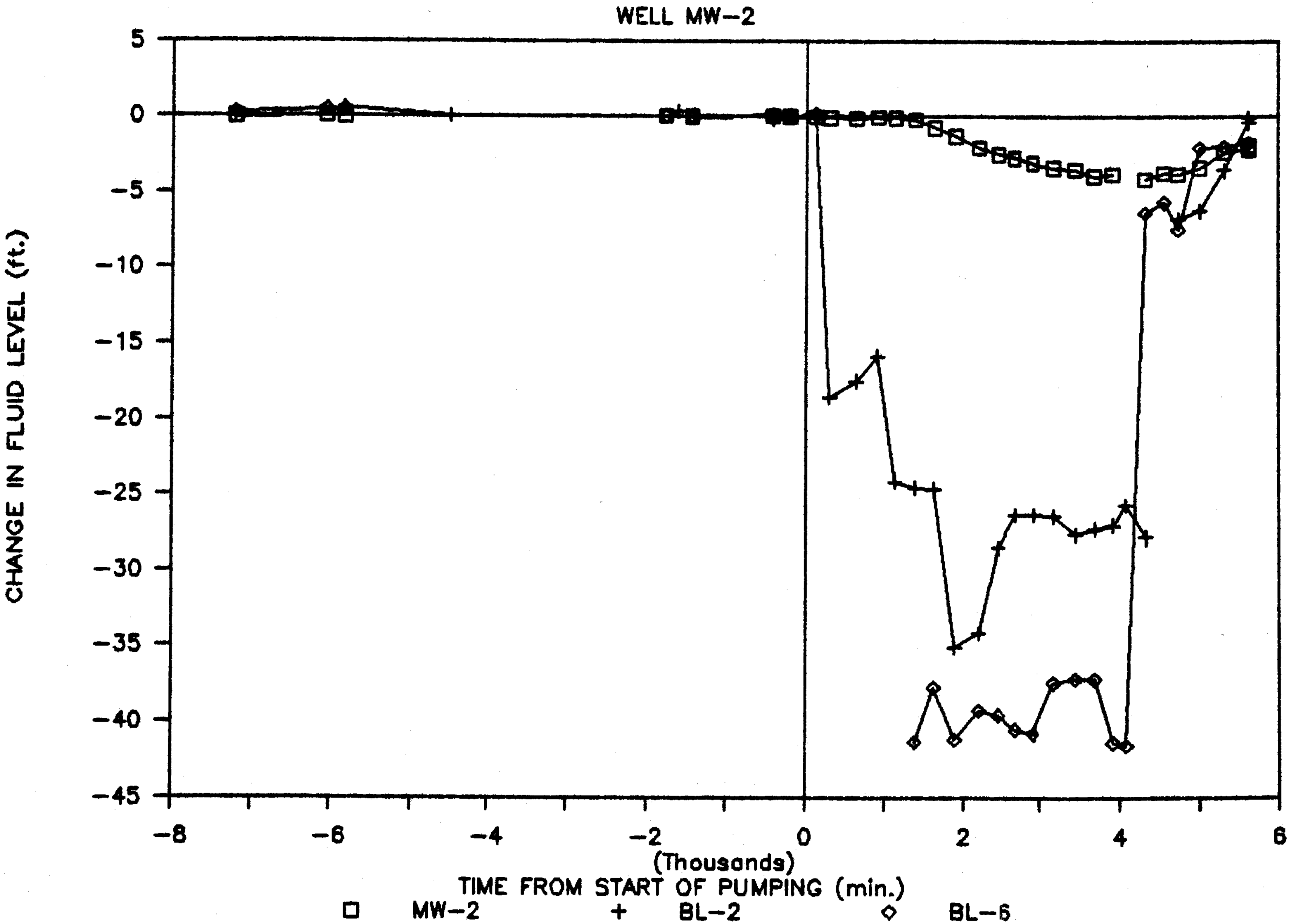


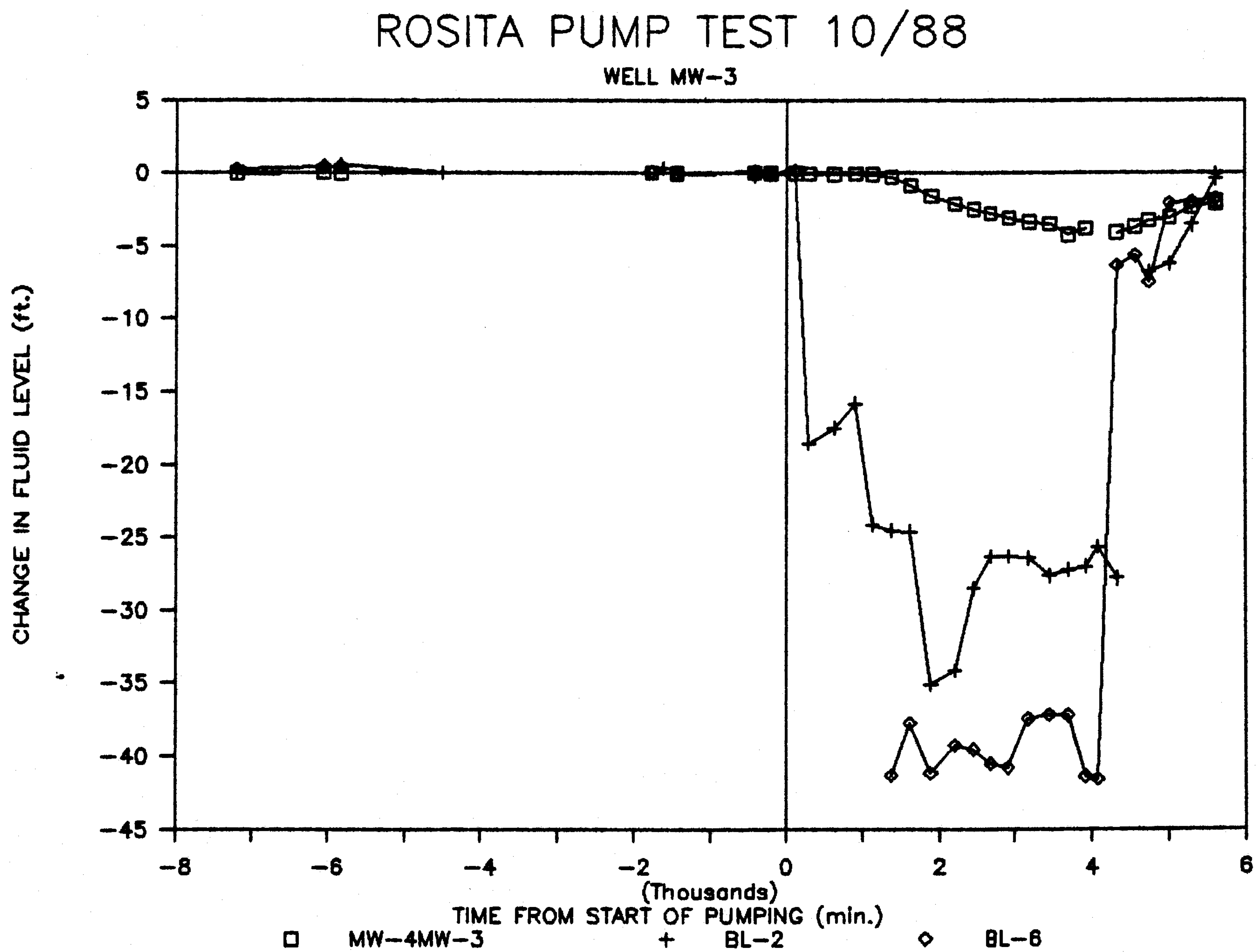
ROSITA PUMP TEST 10/88

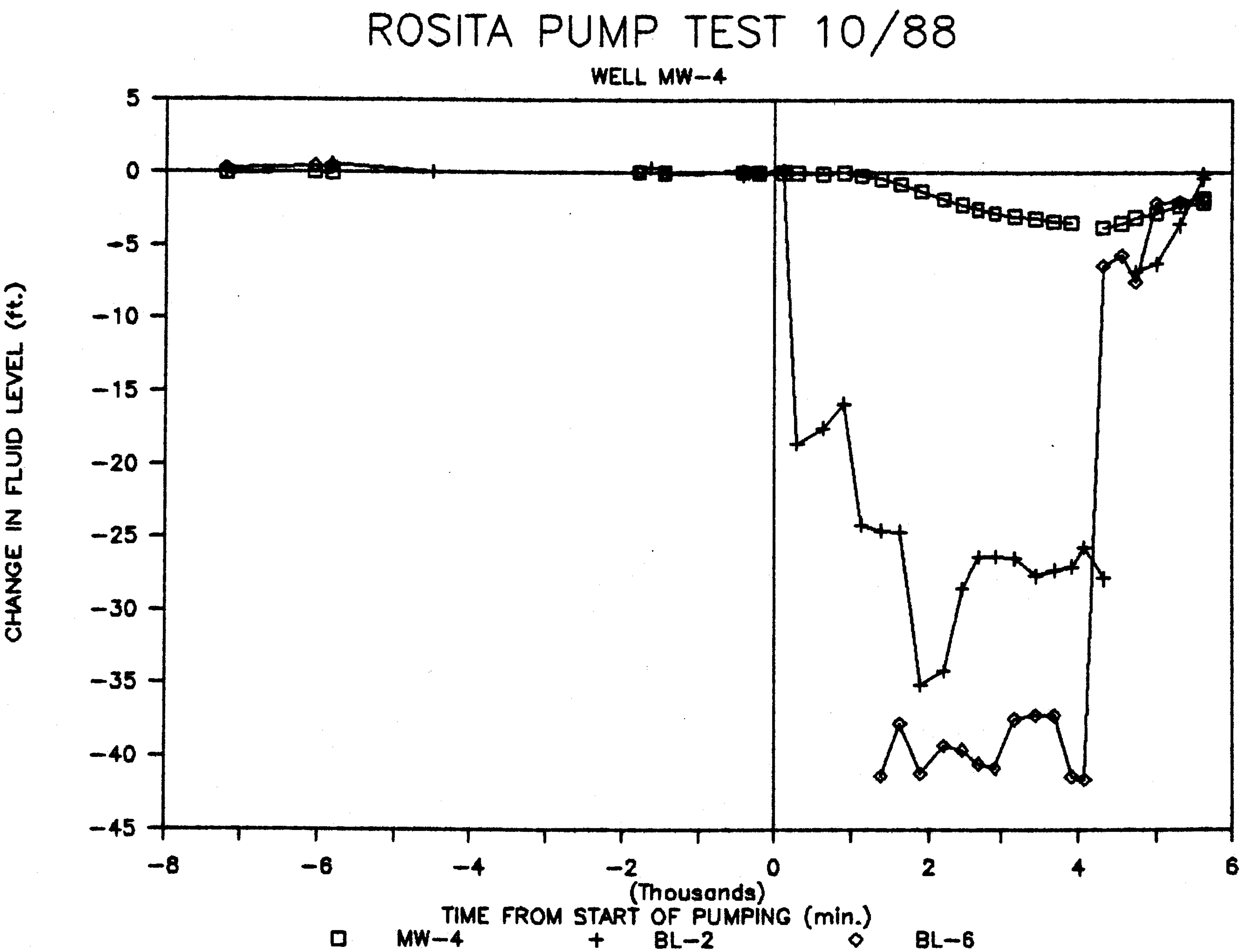
WELL MW-1



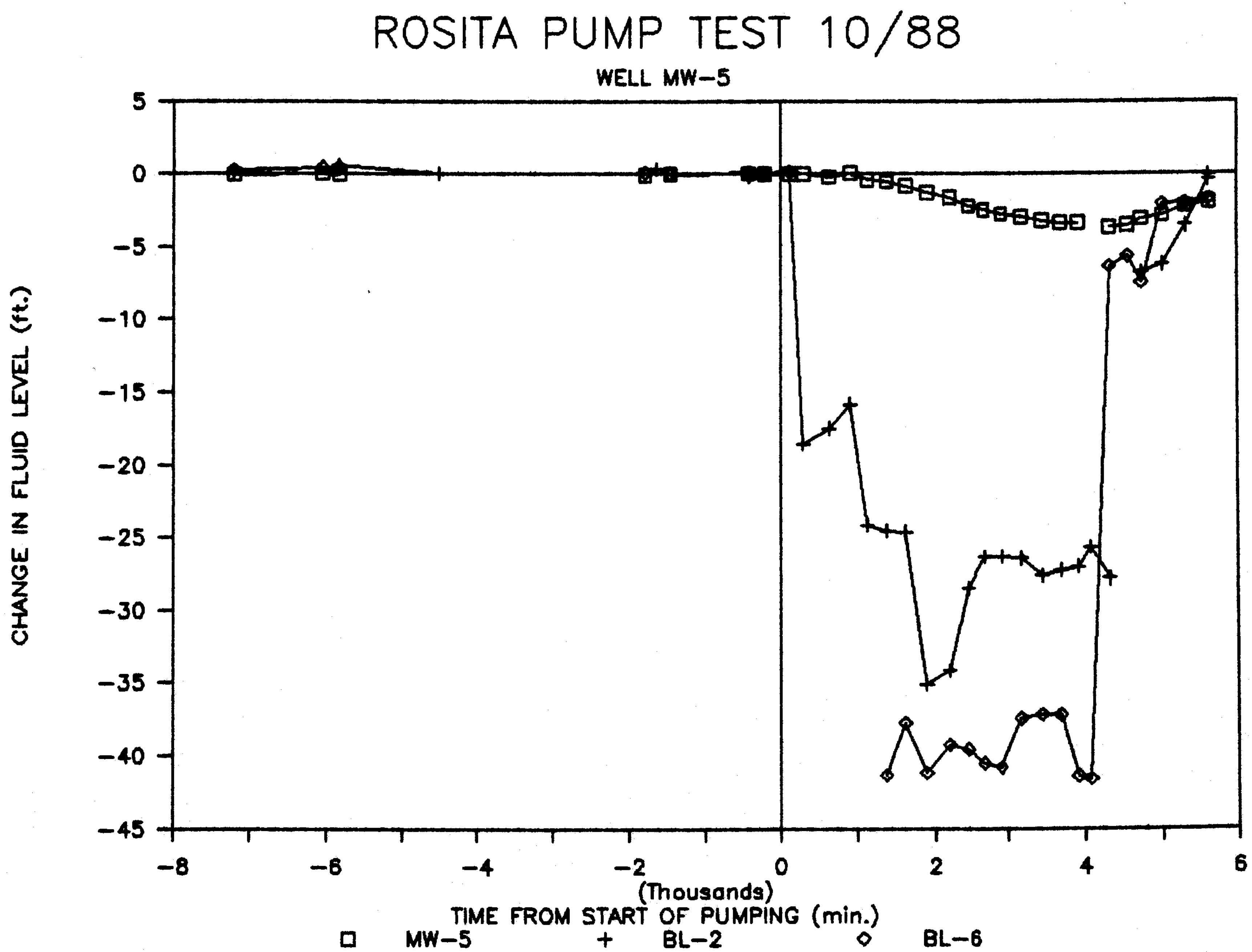
ROSITA PUMP TEST 10/88



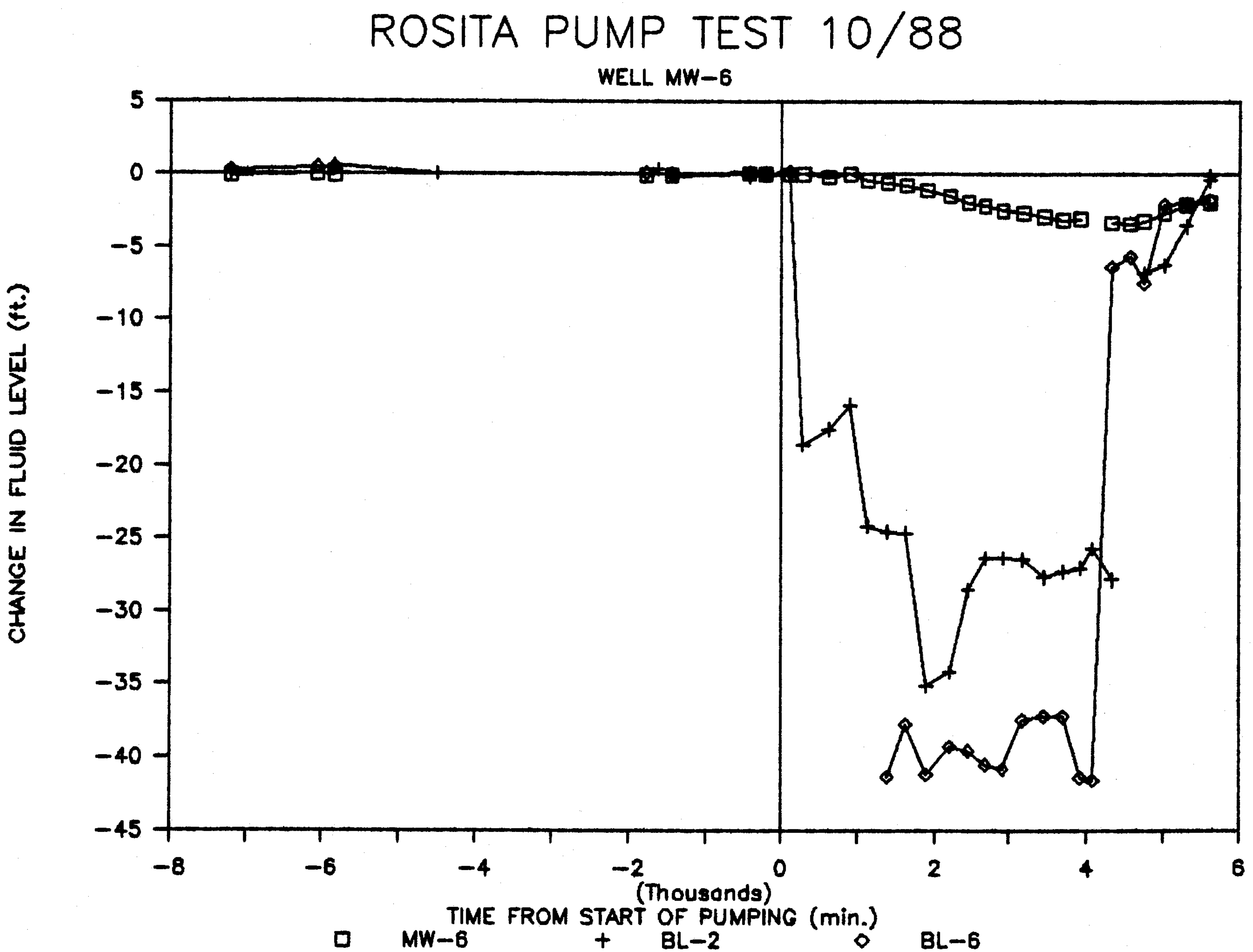

ROSITA PUMP TEST 10/88
WELL MW-3
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-4MW-3
BL-2
BL-6



ROSITA PUMP TEST 10/88
WELL MW-4
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-4
BL-2
BL-6



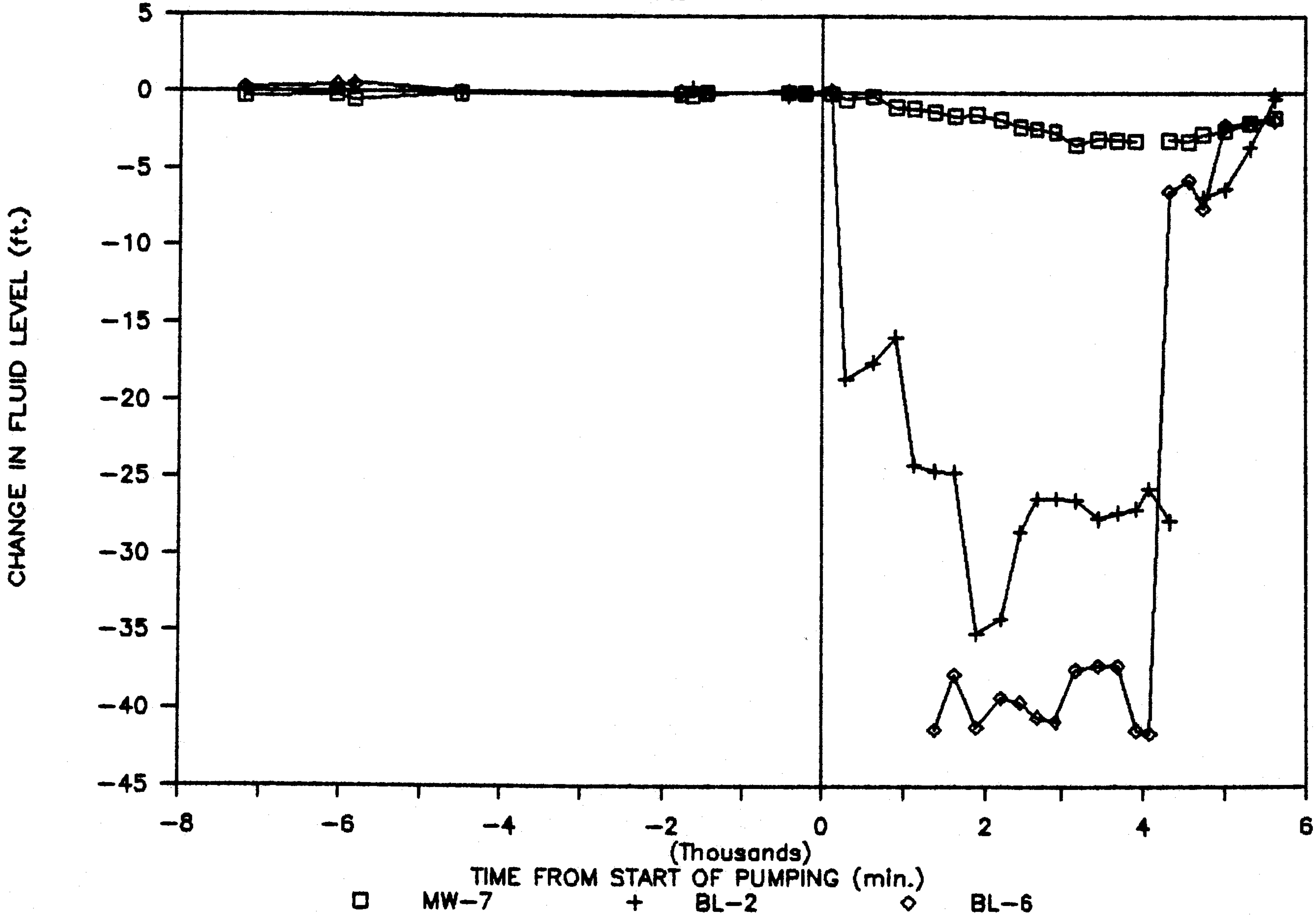
ROSITA PUMP TEST 10/88
WELL MW-5
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
□ MW-5
+ BL-2
◇ BL-6

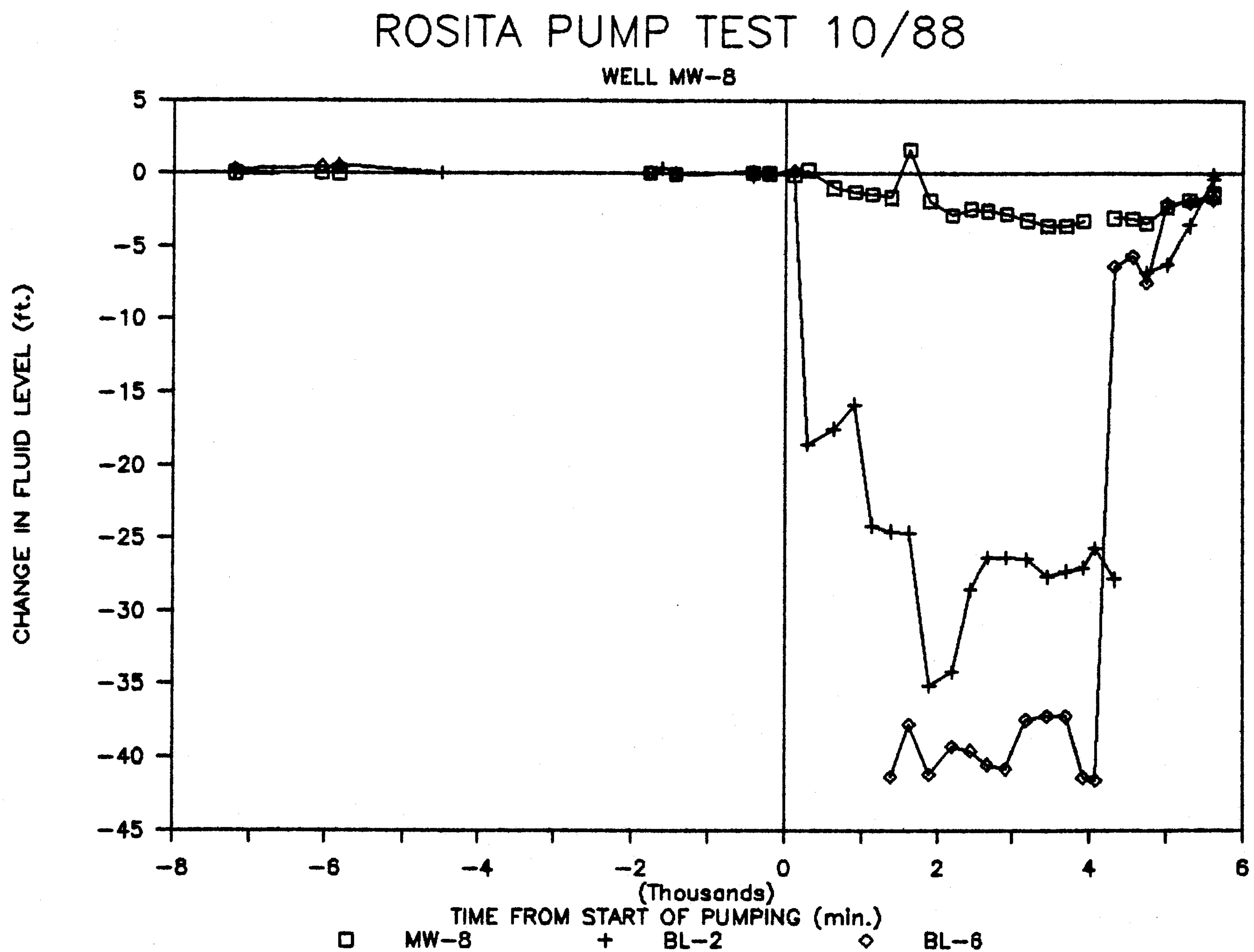


ROSITA PUMP TEST 10/88
WELL MW-6
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-6
BL-2
BL-6

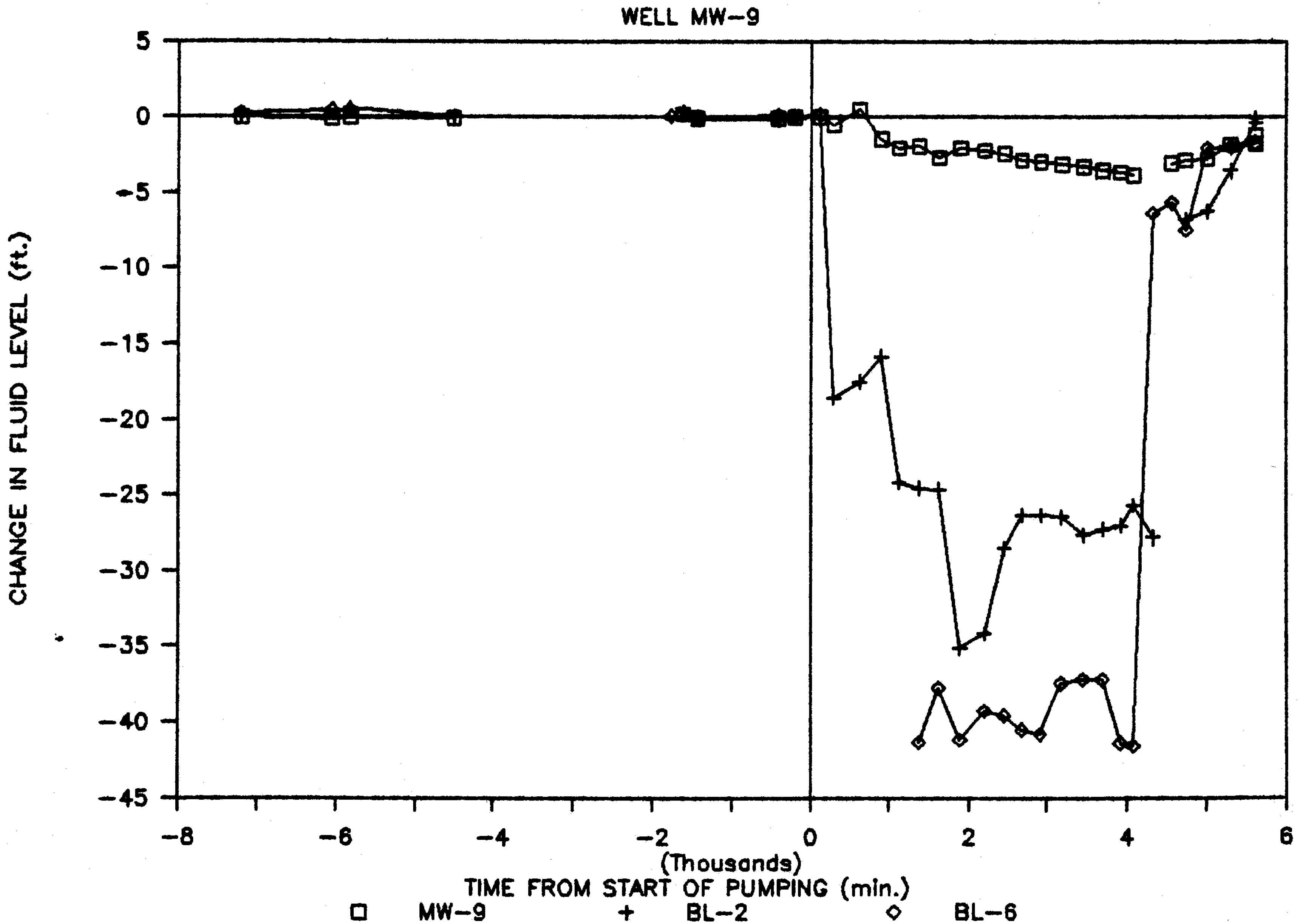
ROSITA PUMP TEST 10/88

WELL MW-7




ROSITA PUMP TEST 10/88
WELL MW-8
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-8
BL-2
BL-6

ROSITA PUMP TEST 10/88



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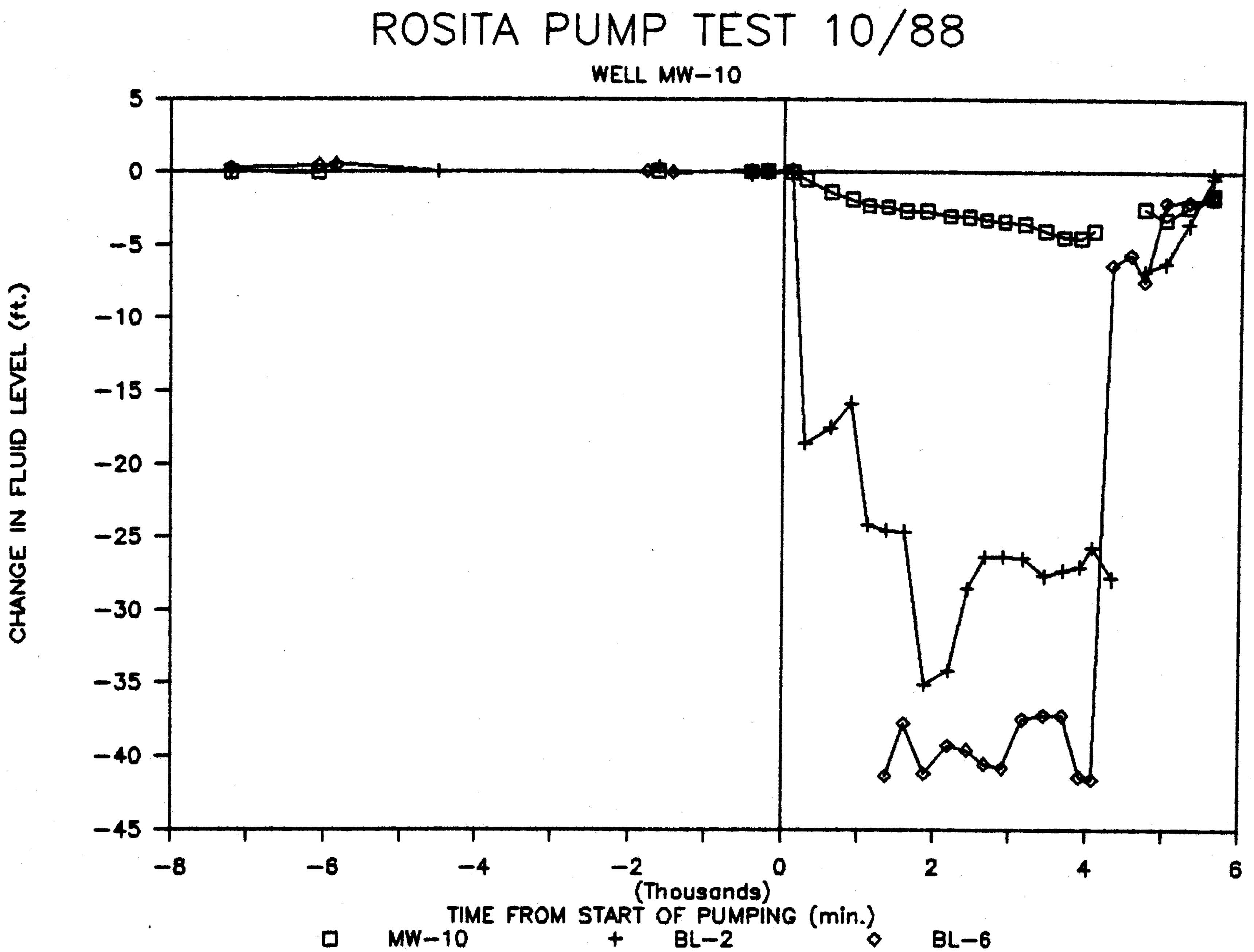
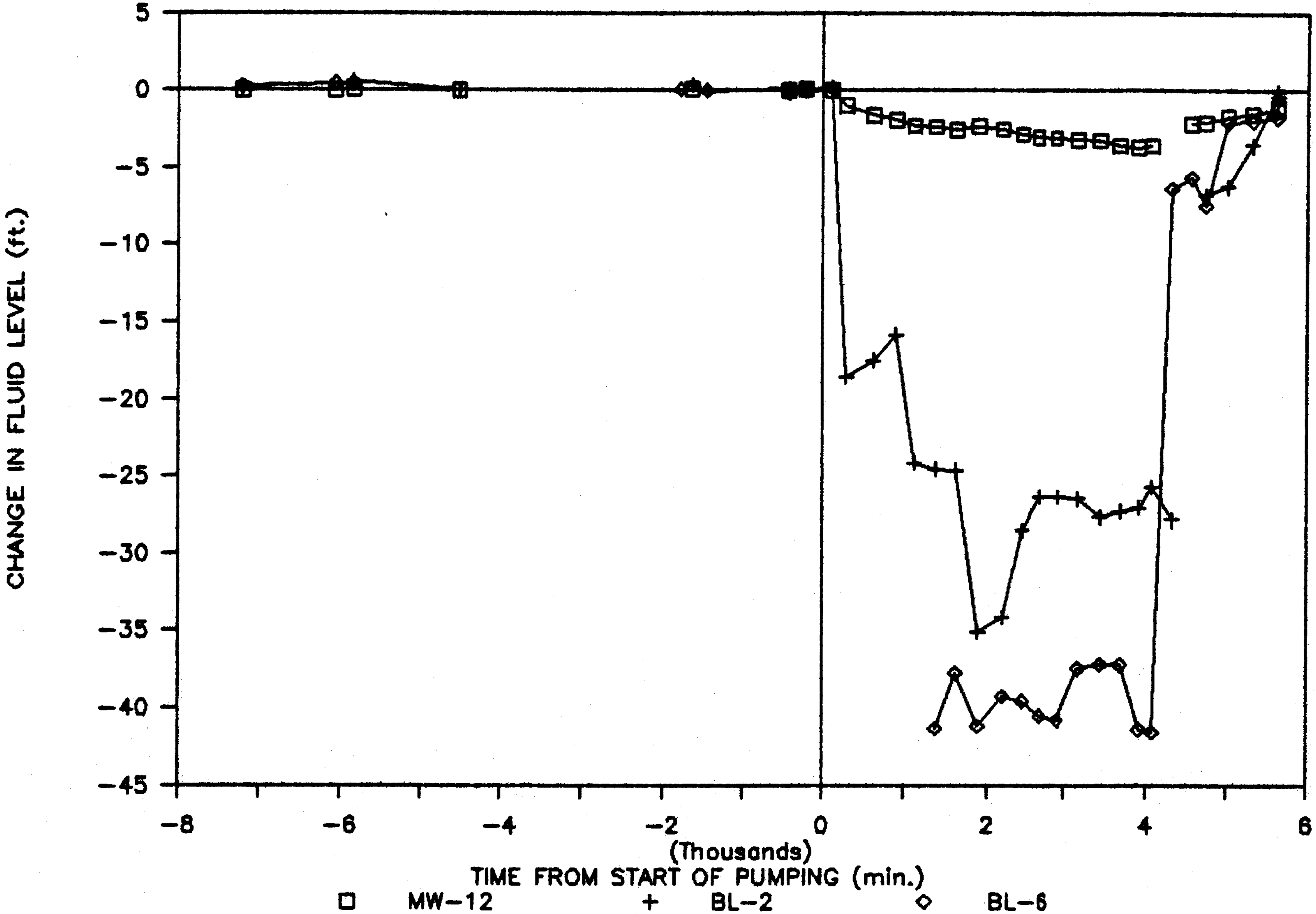
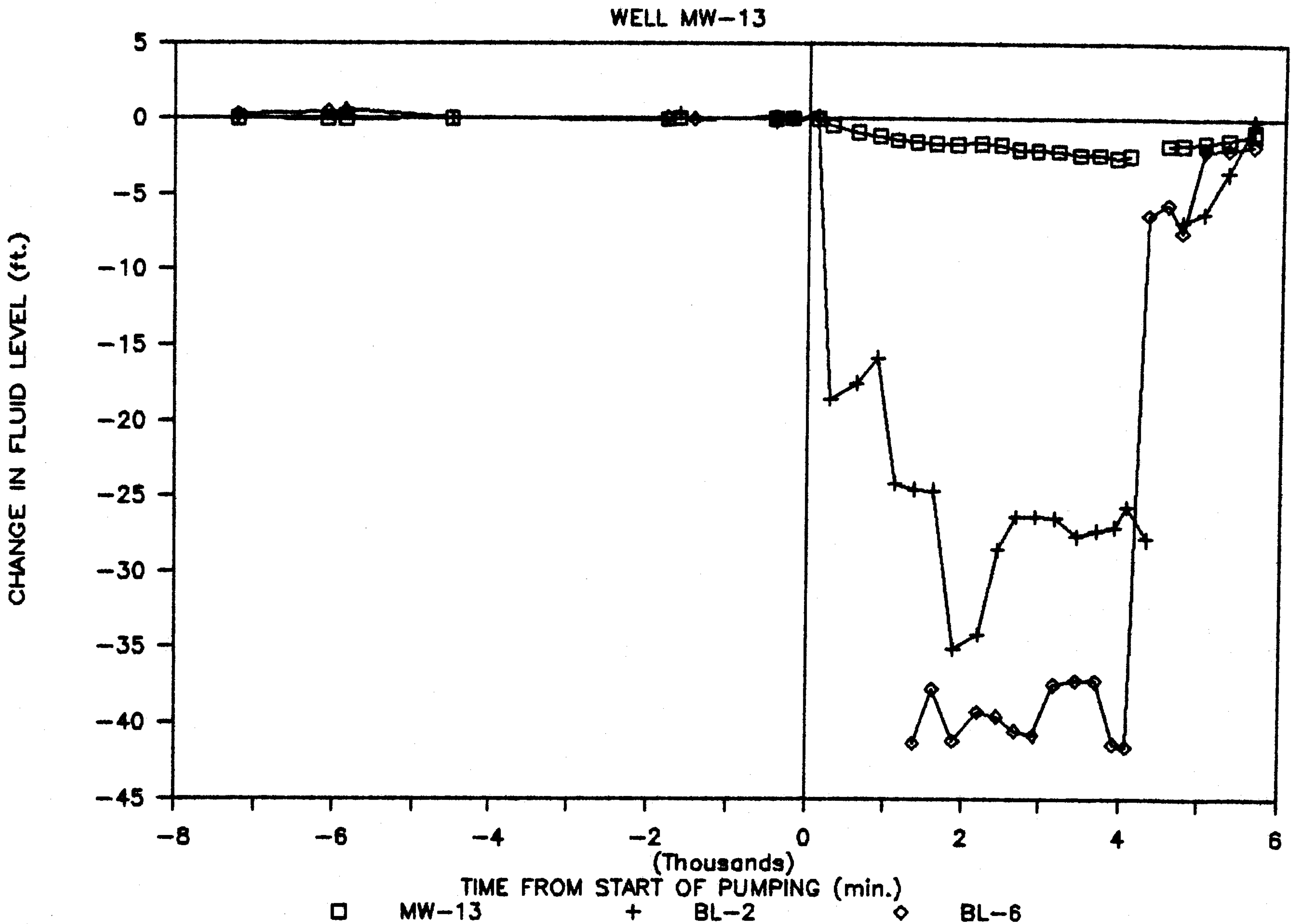


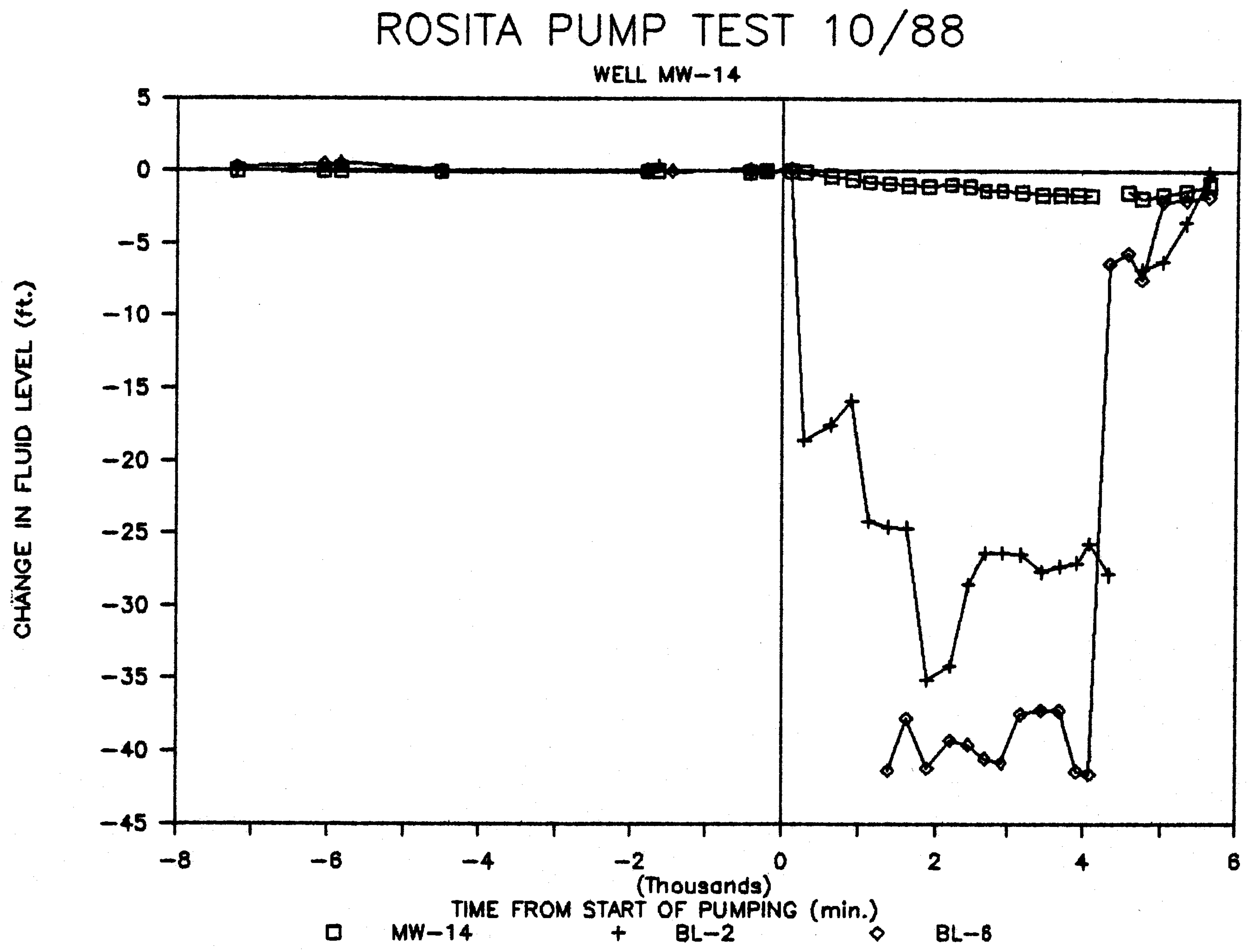
ROSITA PUMP TEST 10/88

WELL MW-12



ROSITA PUMP TEST 10/88

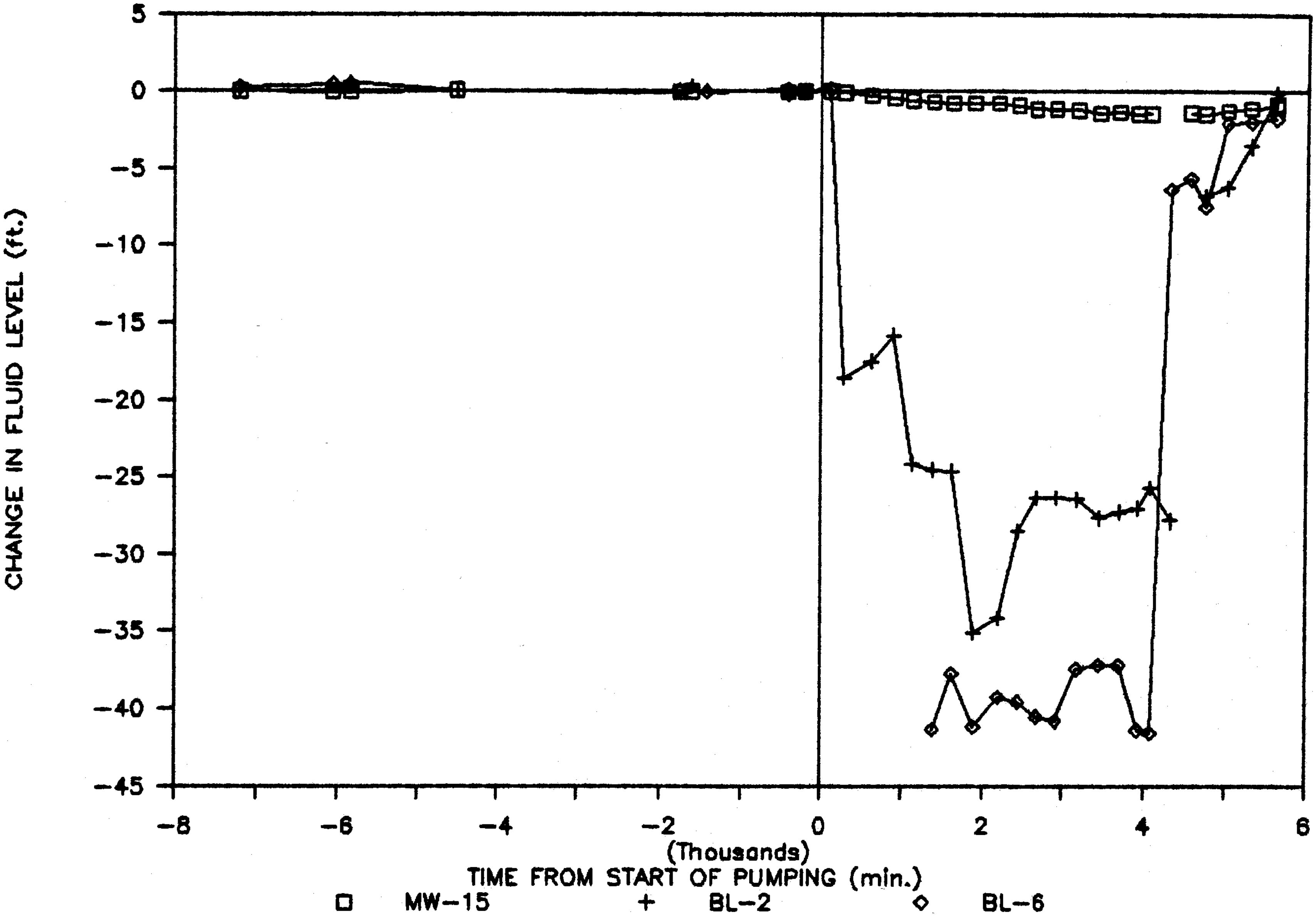


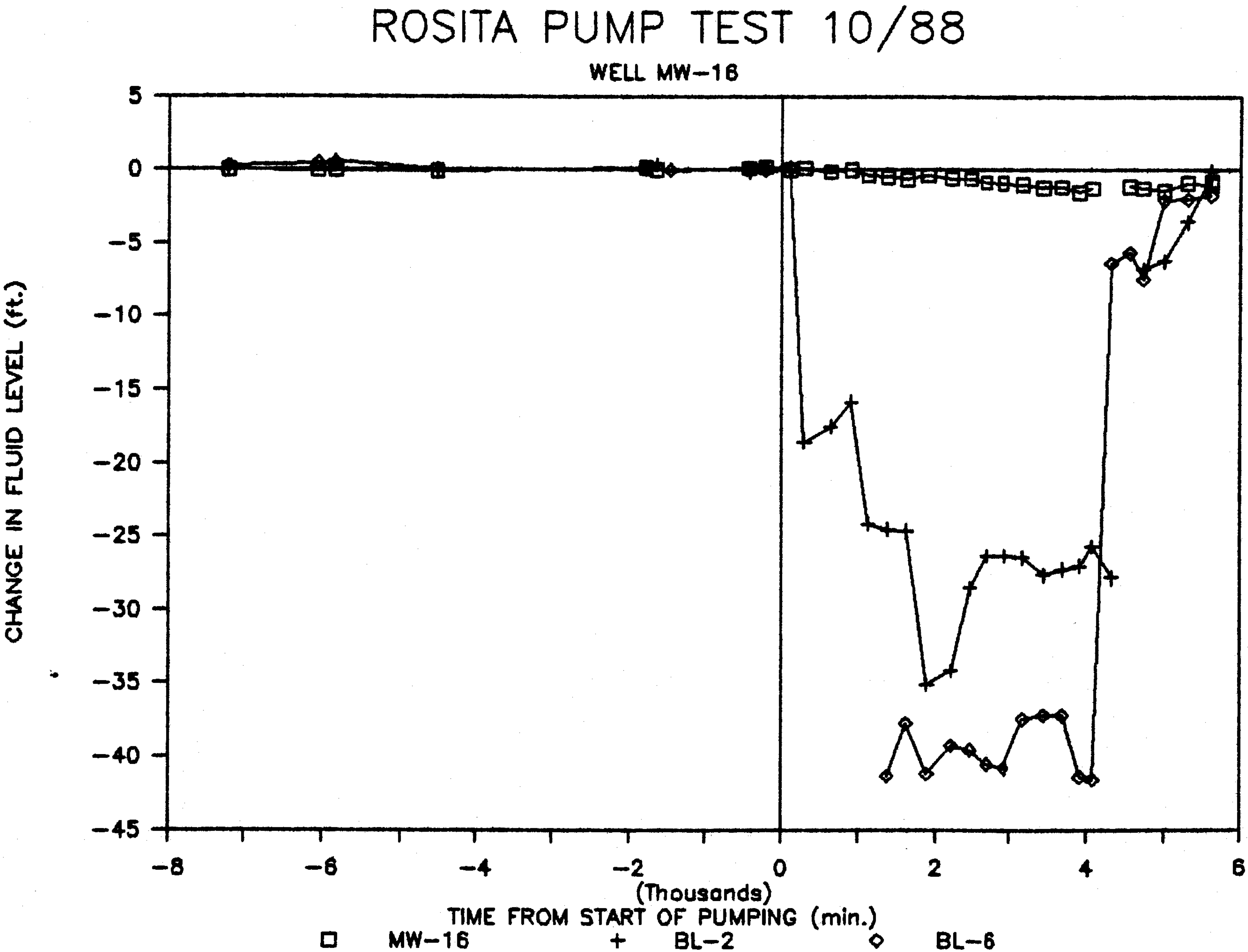


ROSITA PUMP TEST 10/88
WELL MW-14
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-14
BL-2
BL-6

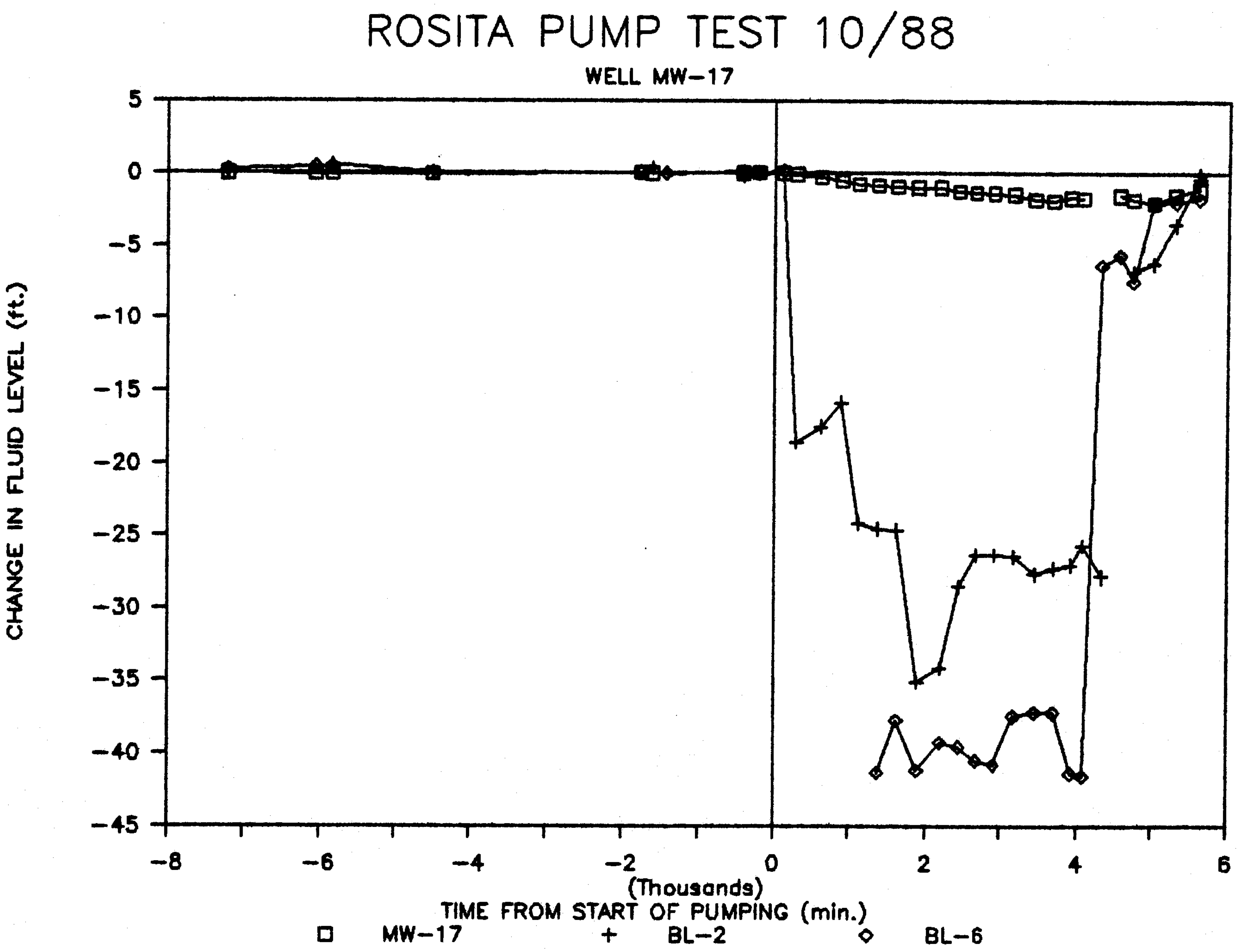
ROSITA PUMP TEST 10/88

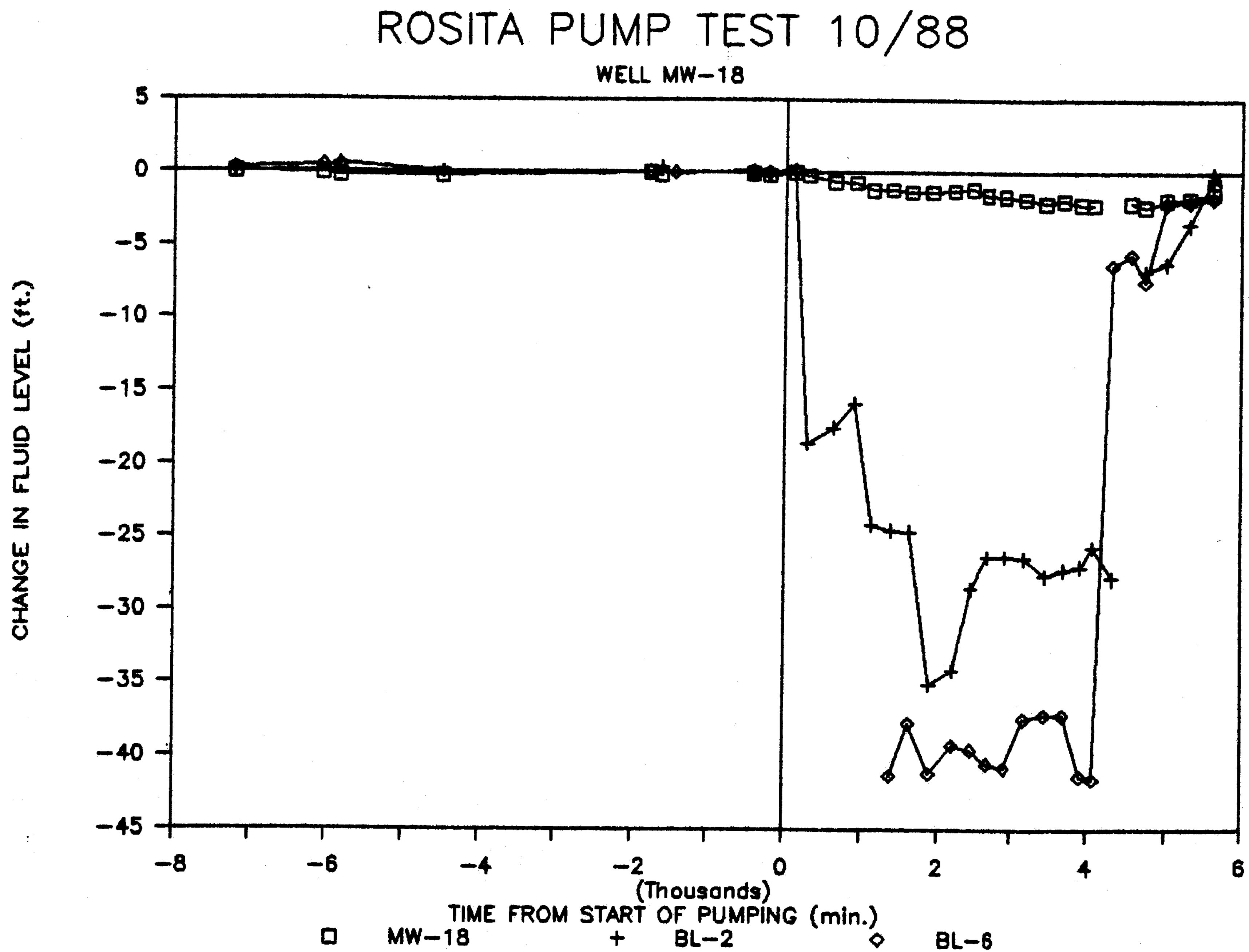
WELL MW–15





ROSITA PUMP TEST 10/88
WELL MW-16
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-16
BL-2
BL-6

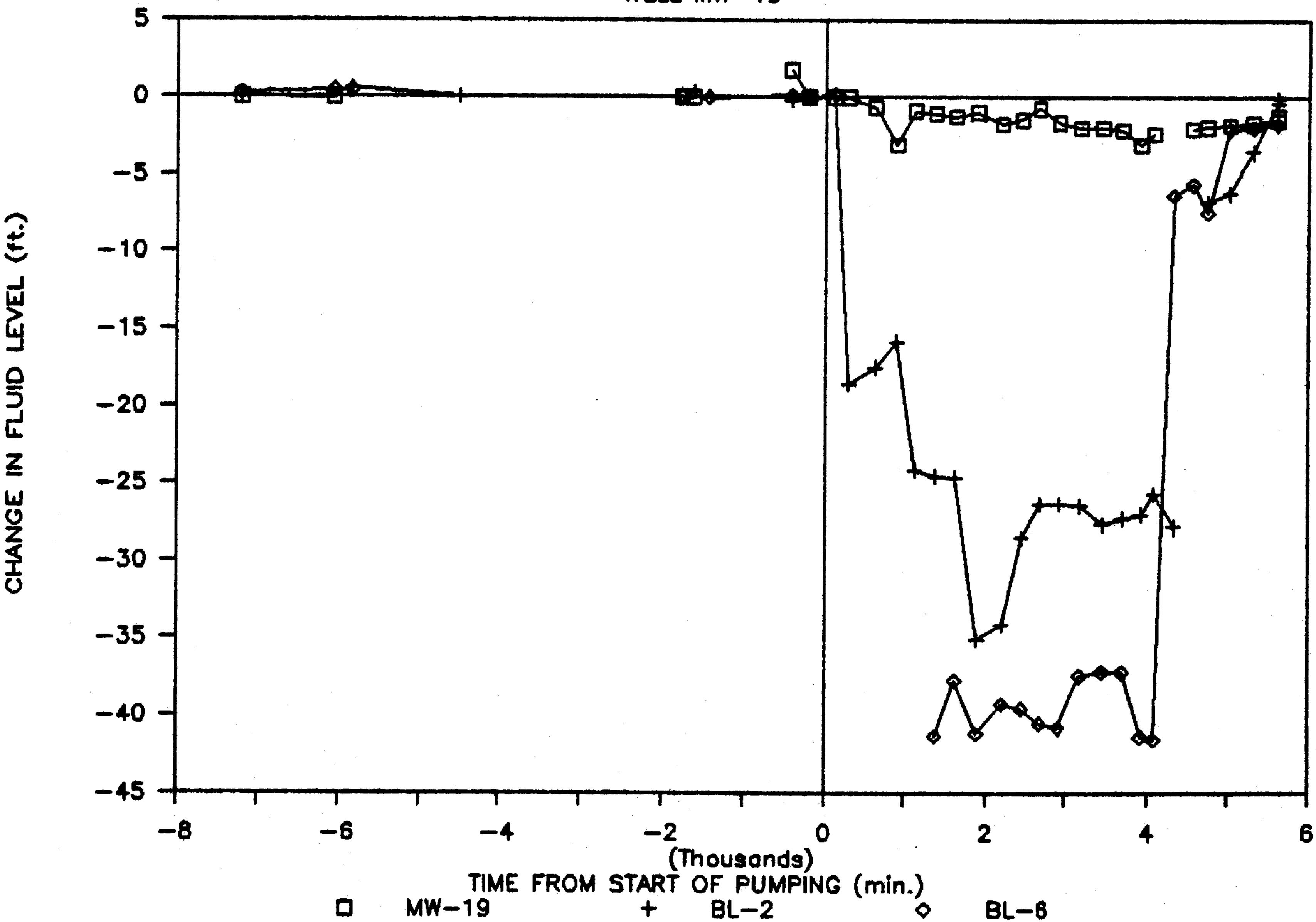

ROSITA PUMP TEST 10/88
WELL MW-17
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-17
BL-2
BL-6

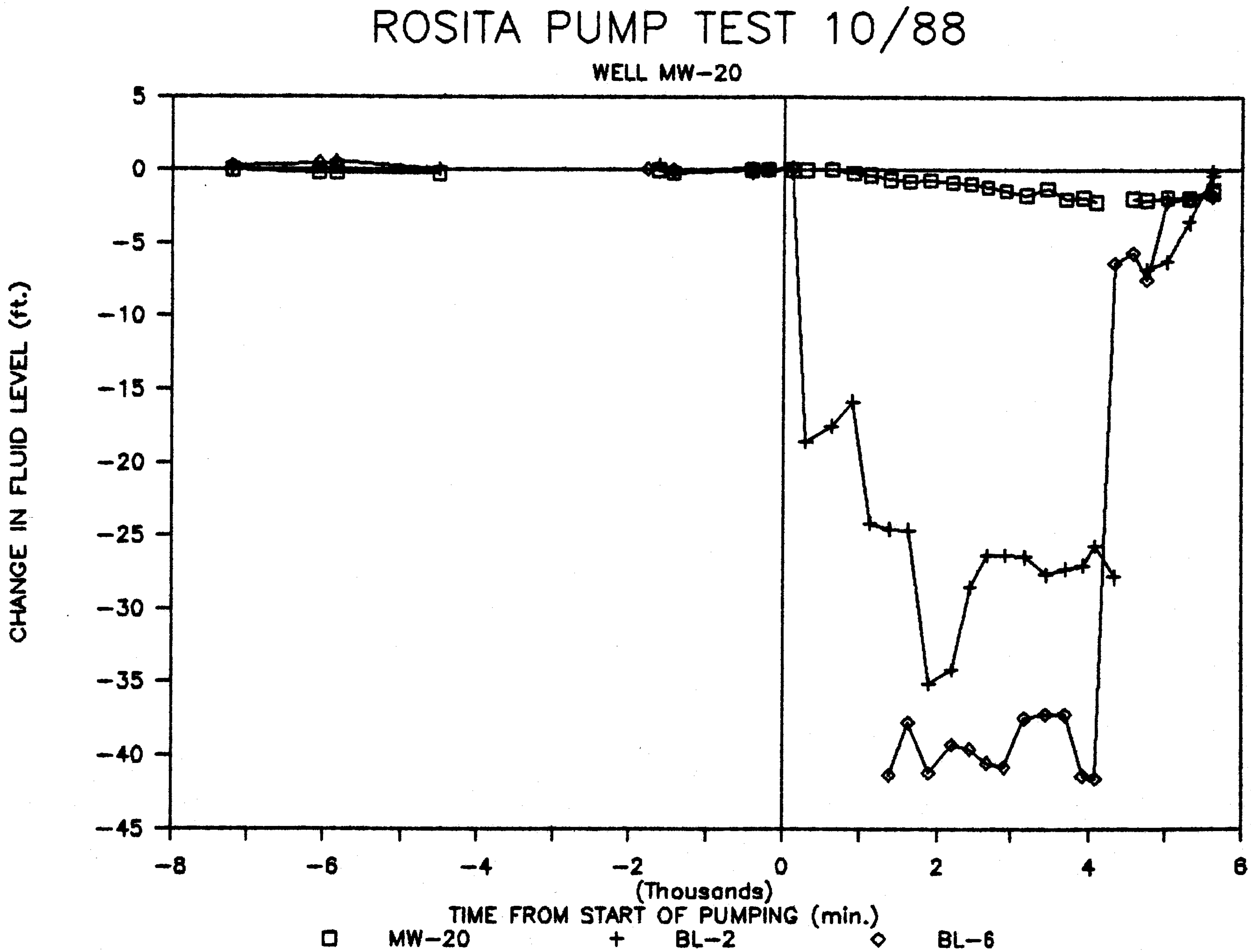


ROSITA PUMP TEST 10/88
WELL MW-18
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-18
BL-2
BL-6

ROSITA PUMP TEST 10/88

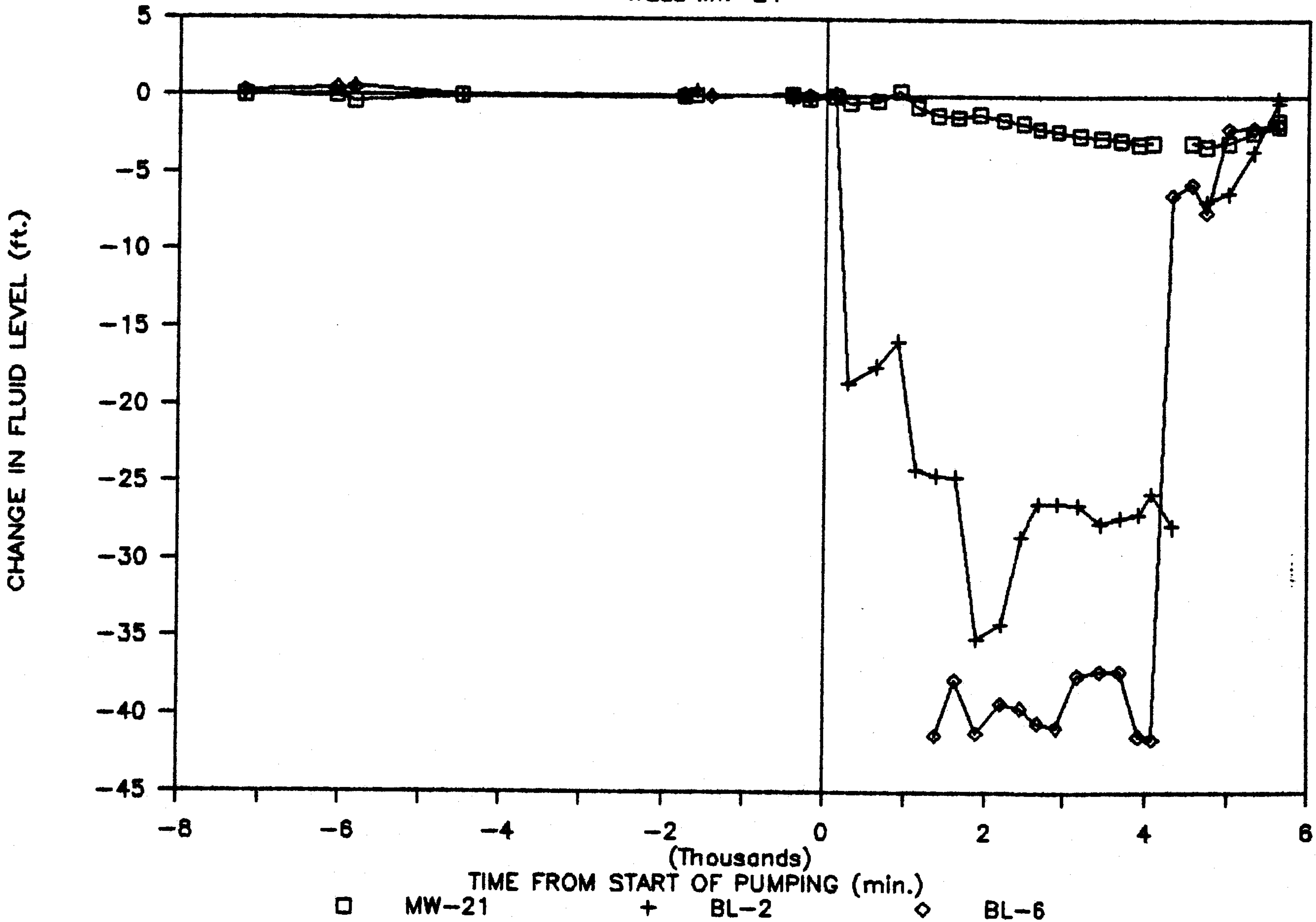
WELL MW-19

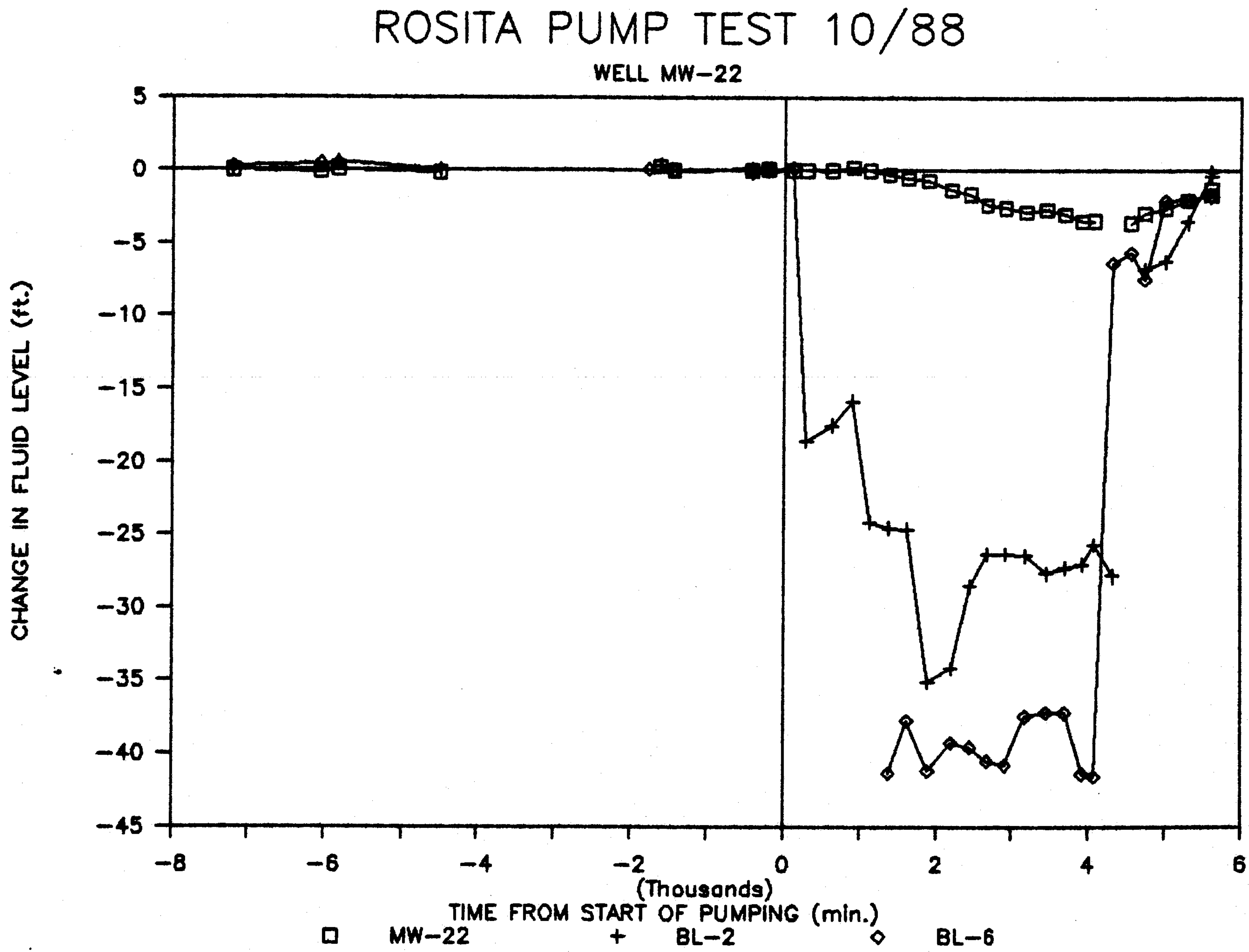



ROSITA PUMP TEST 10/88
WELL MW-20
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-20
BL-2
BL-6

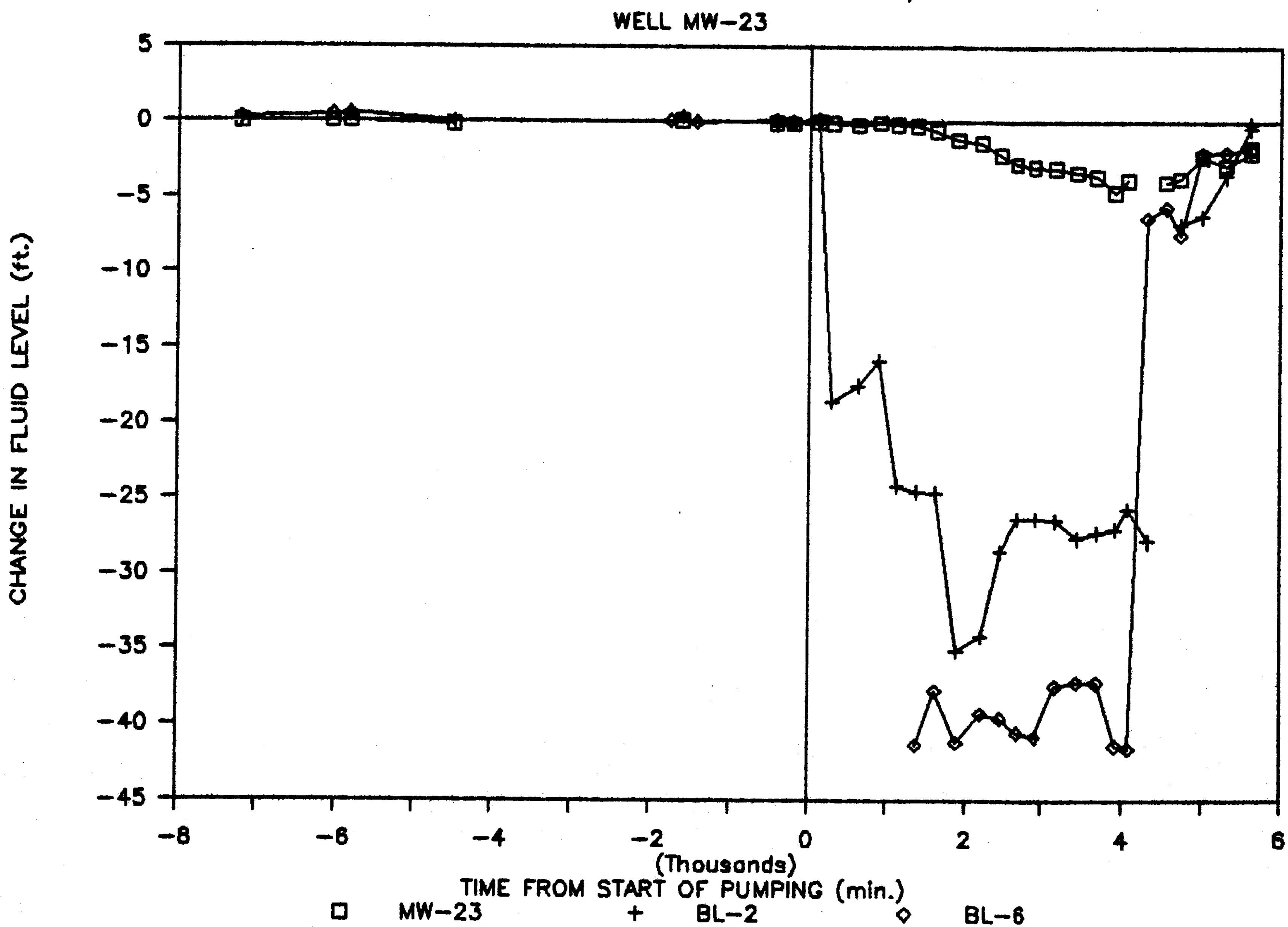
ROSITA PUMP TEST 10/88

WELL MW-21



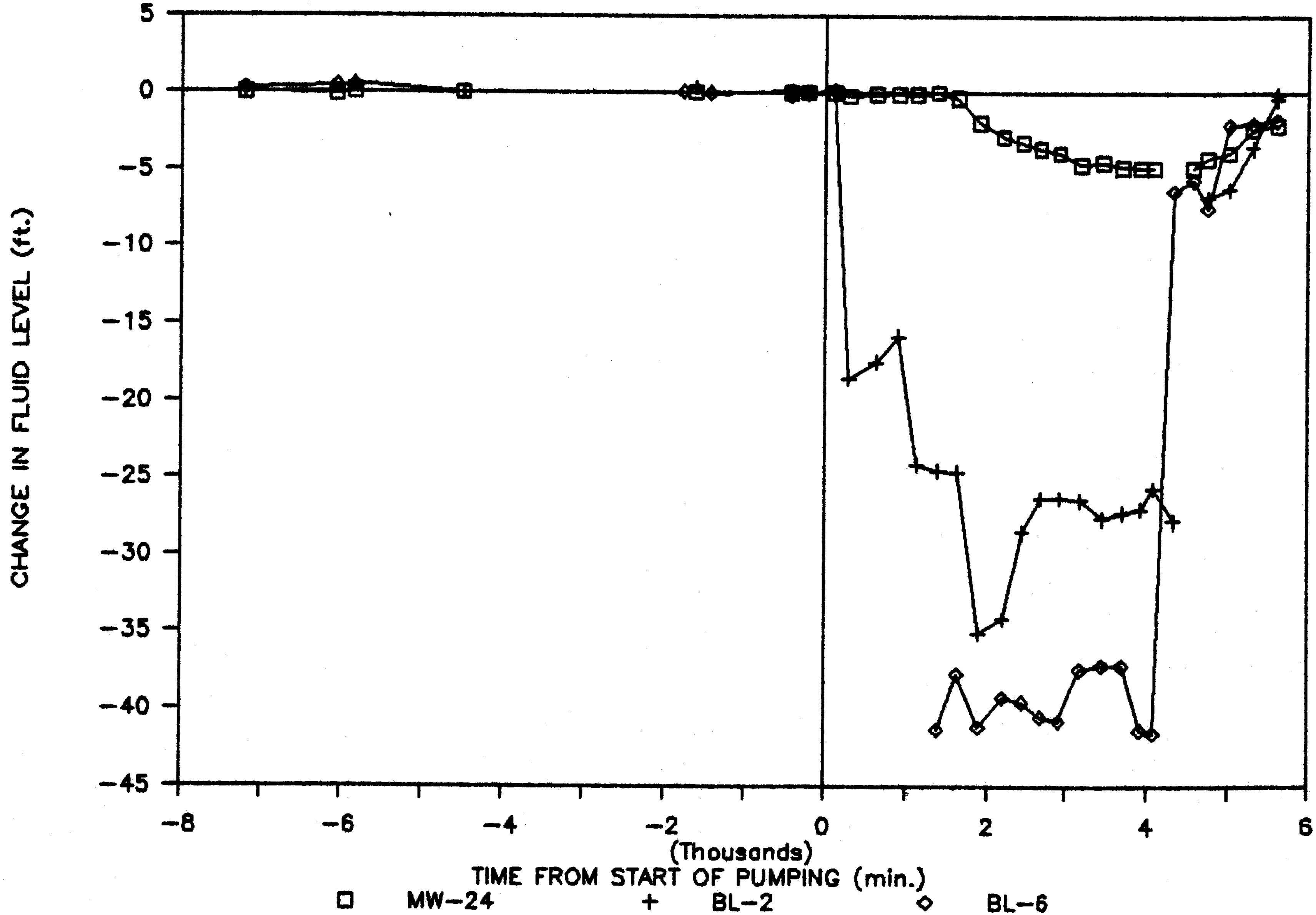

ROSITA PUMP TEST 10/88
WELL MW-22
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-22
BL-2
BL-6

ROSITA PUMP TEST 10/88



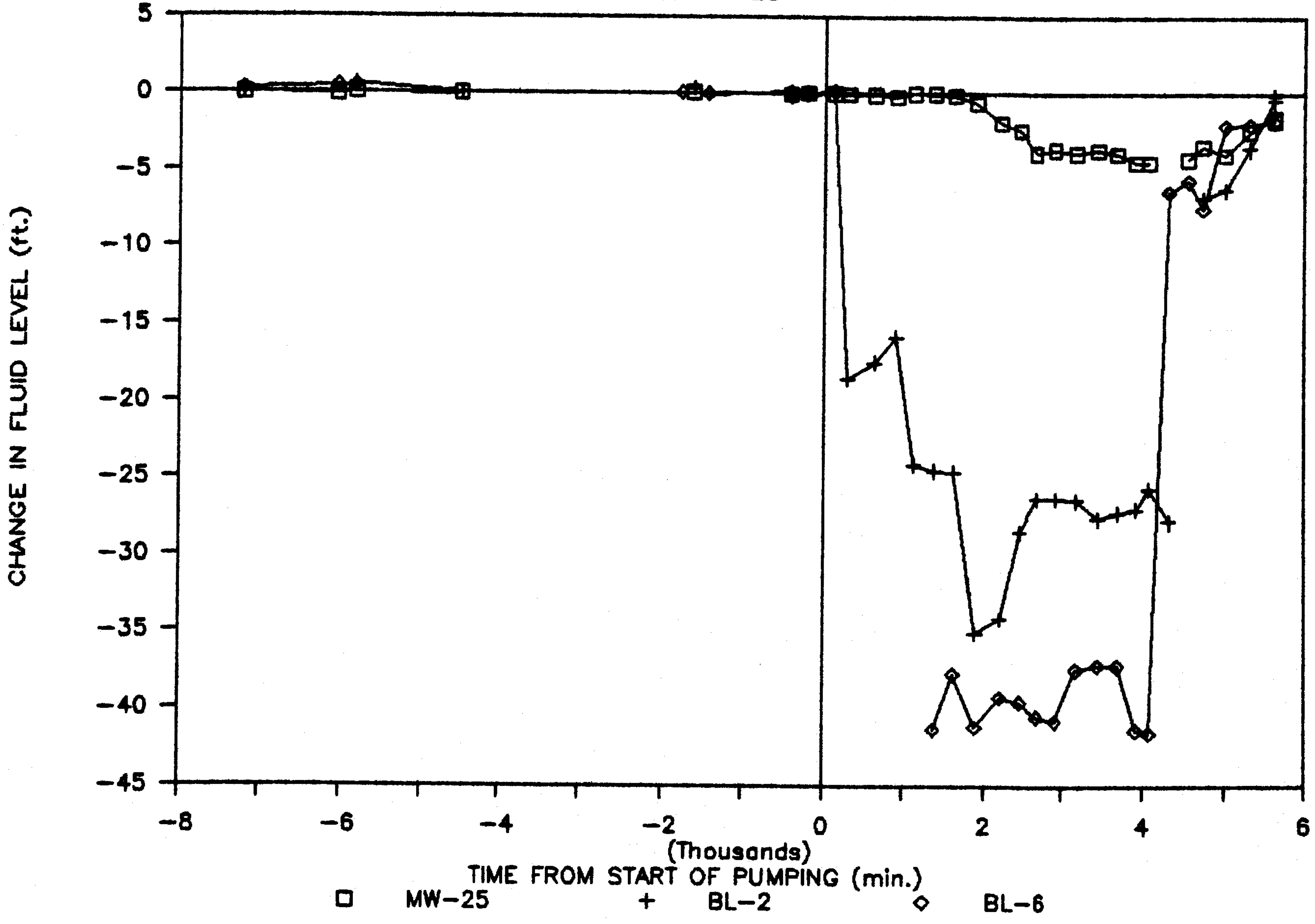
ROSITA PUMP TEST 10/88

WELL MW-24



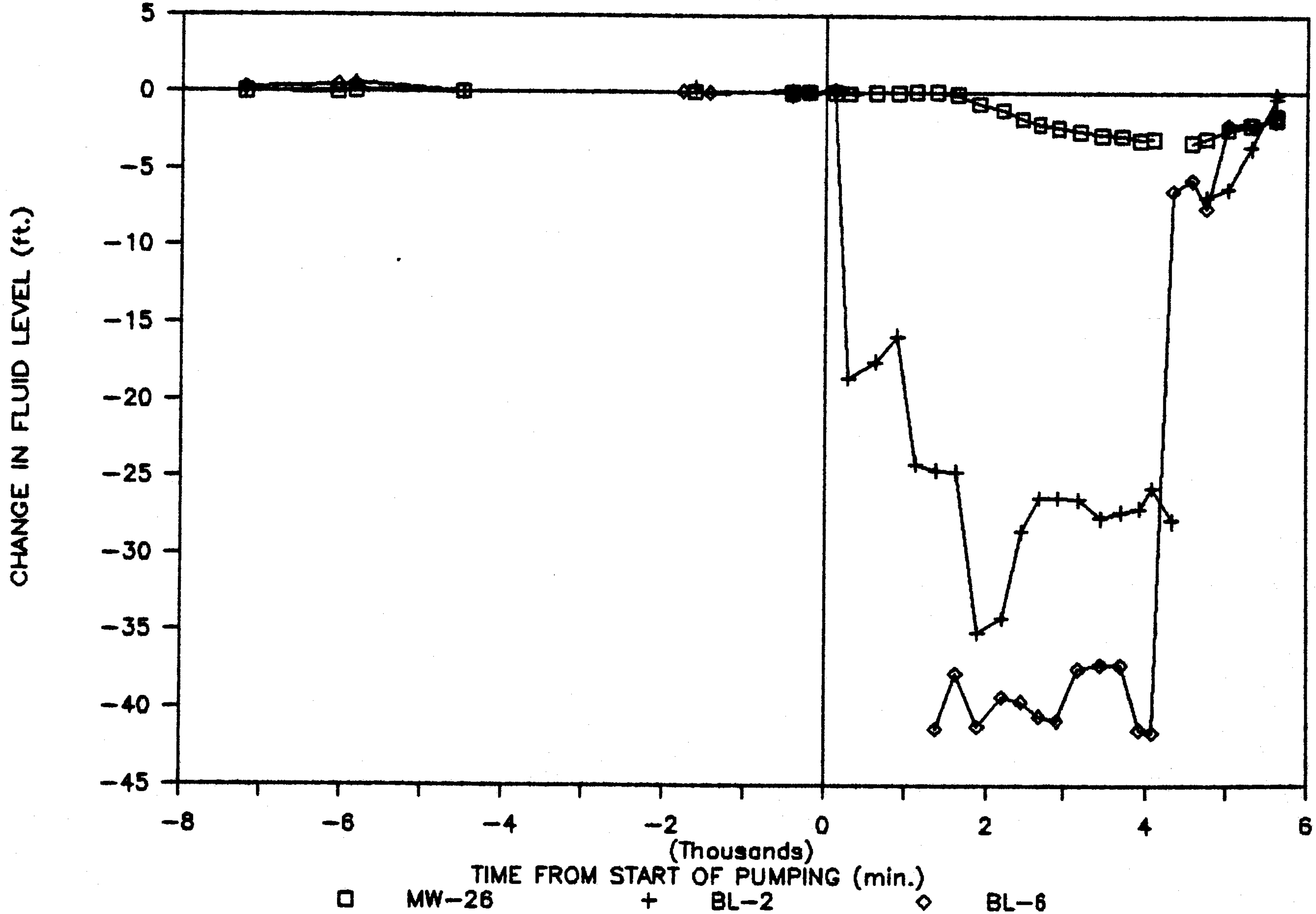
ROSITA PUMP TEST 10/88

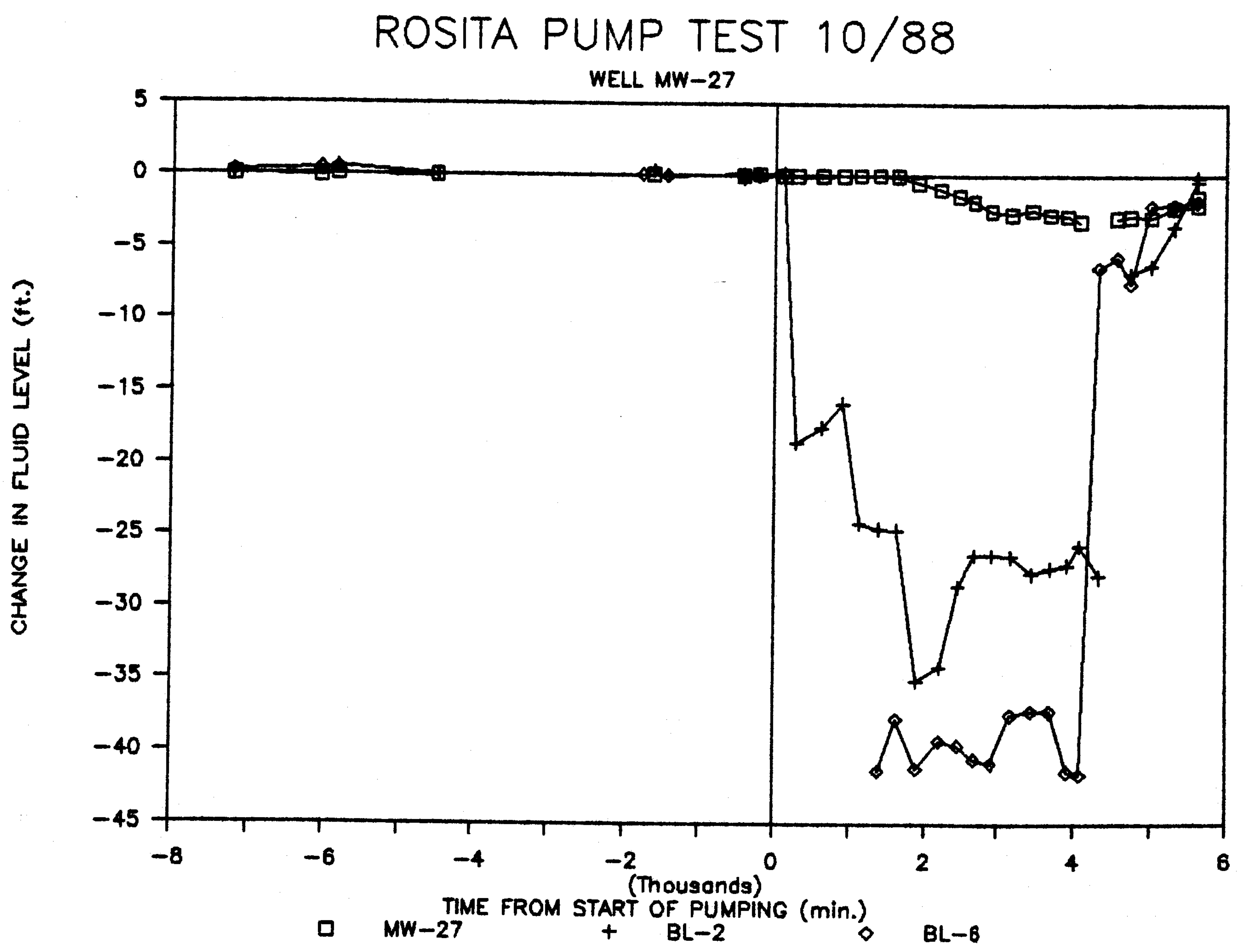
WELL MW-25



ROSITA PUMP TEST 10/88

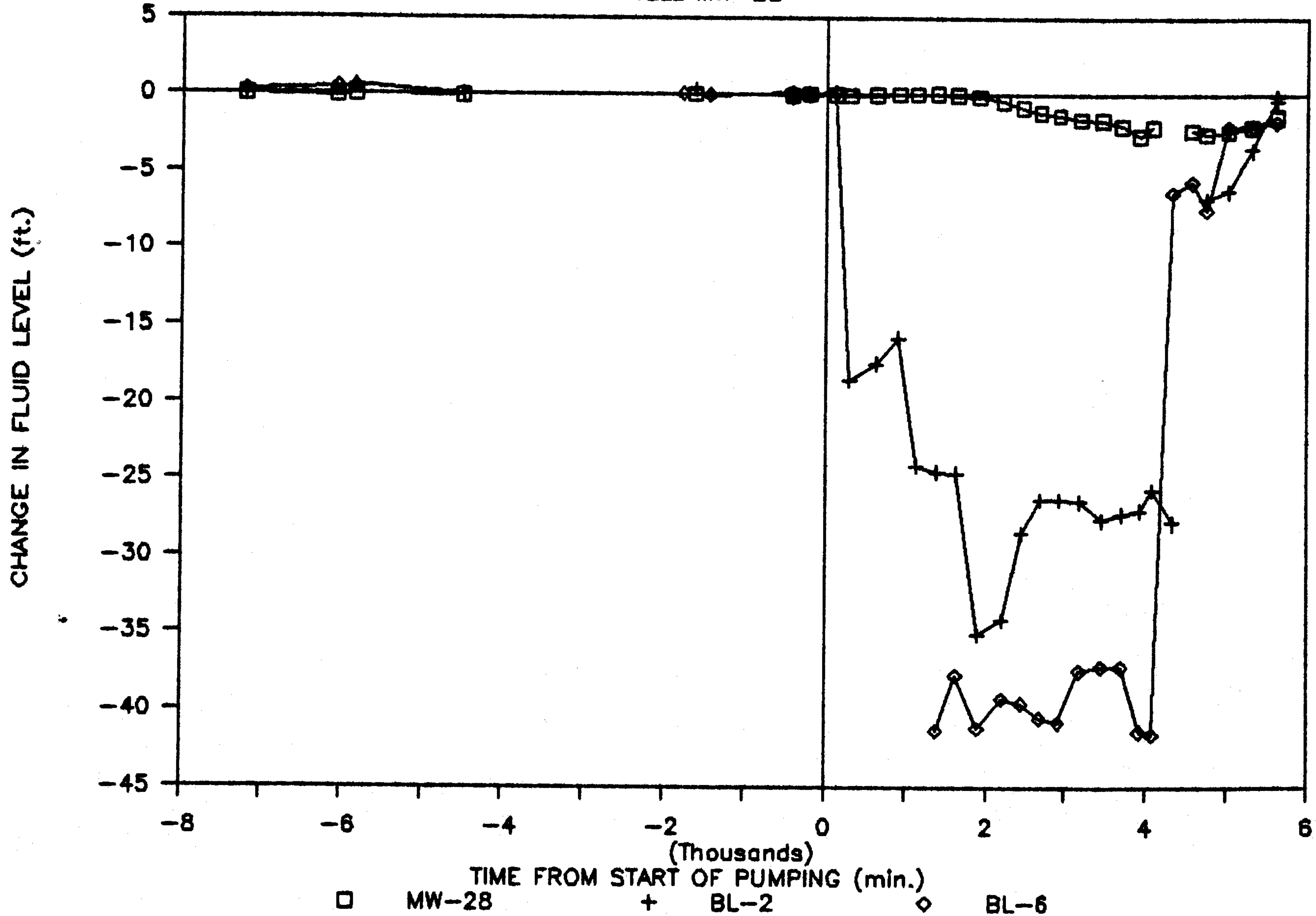
WELL MW-26

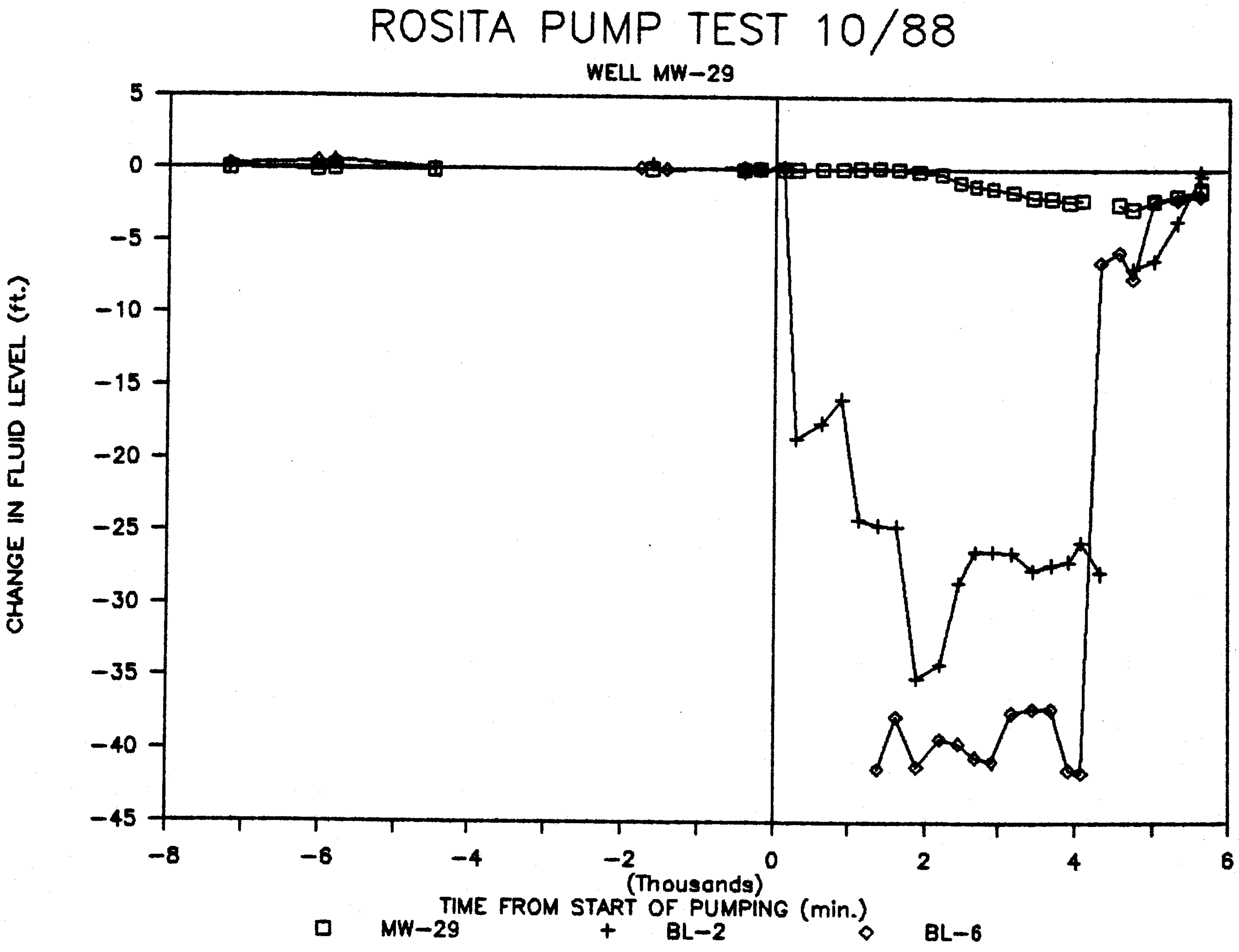



ROSITA PUMP TEST 10/88
WELL MW-27
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-27
BL-2
BL-6

ROSITA PUMP TEST 10/88

WELL MW-28

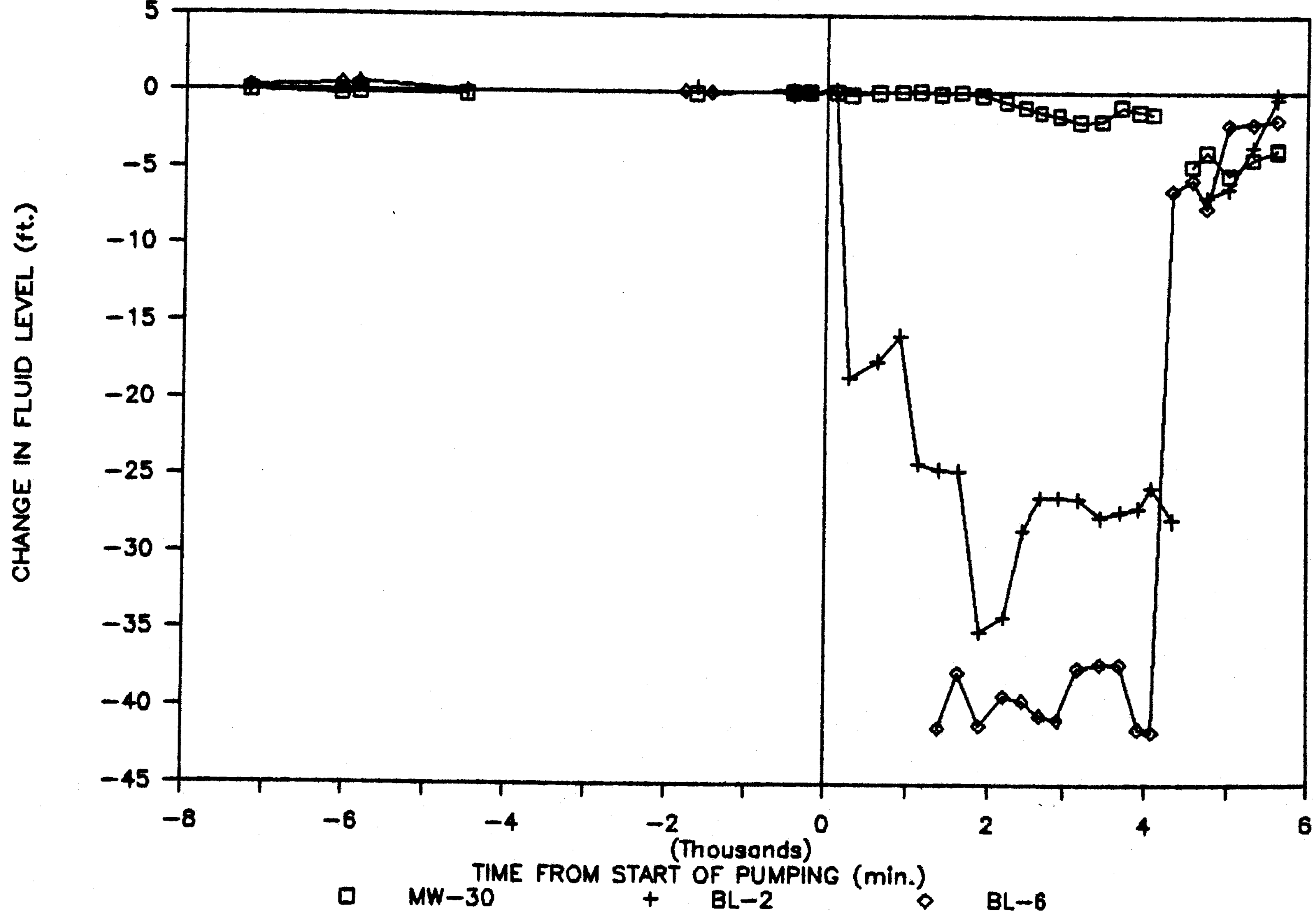




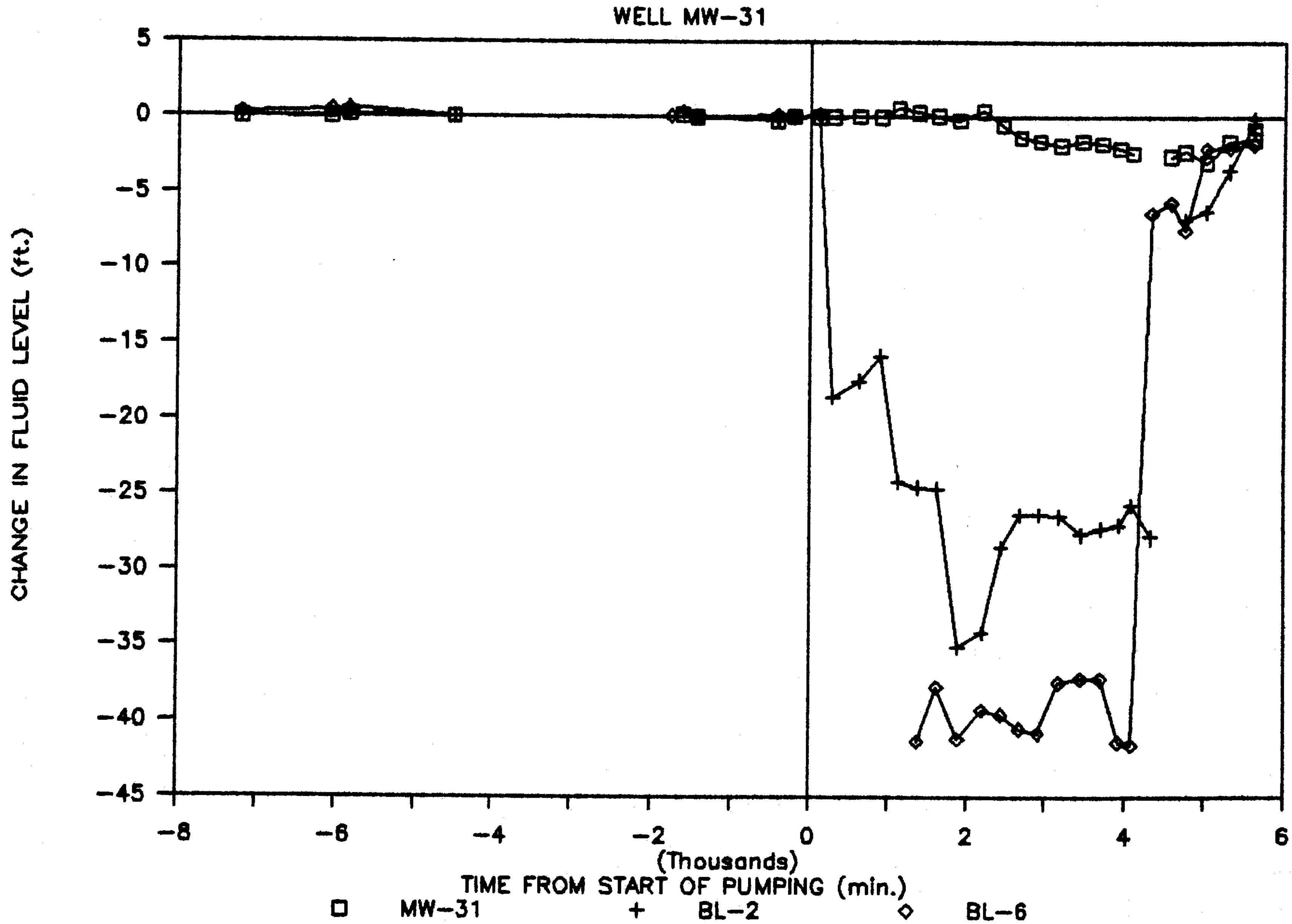
ROSITA PUMP TEST 10/88
WELL MW-29
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-29
BL-2
BL-6

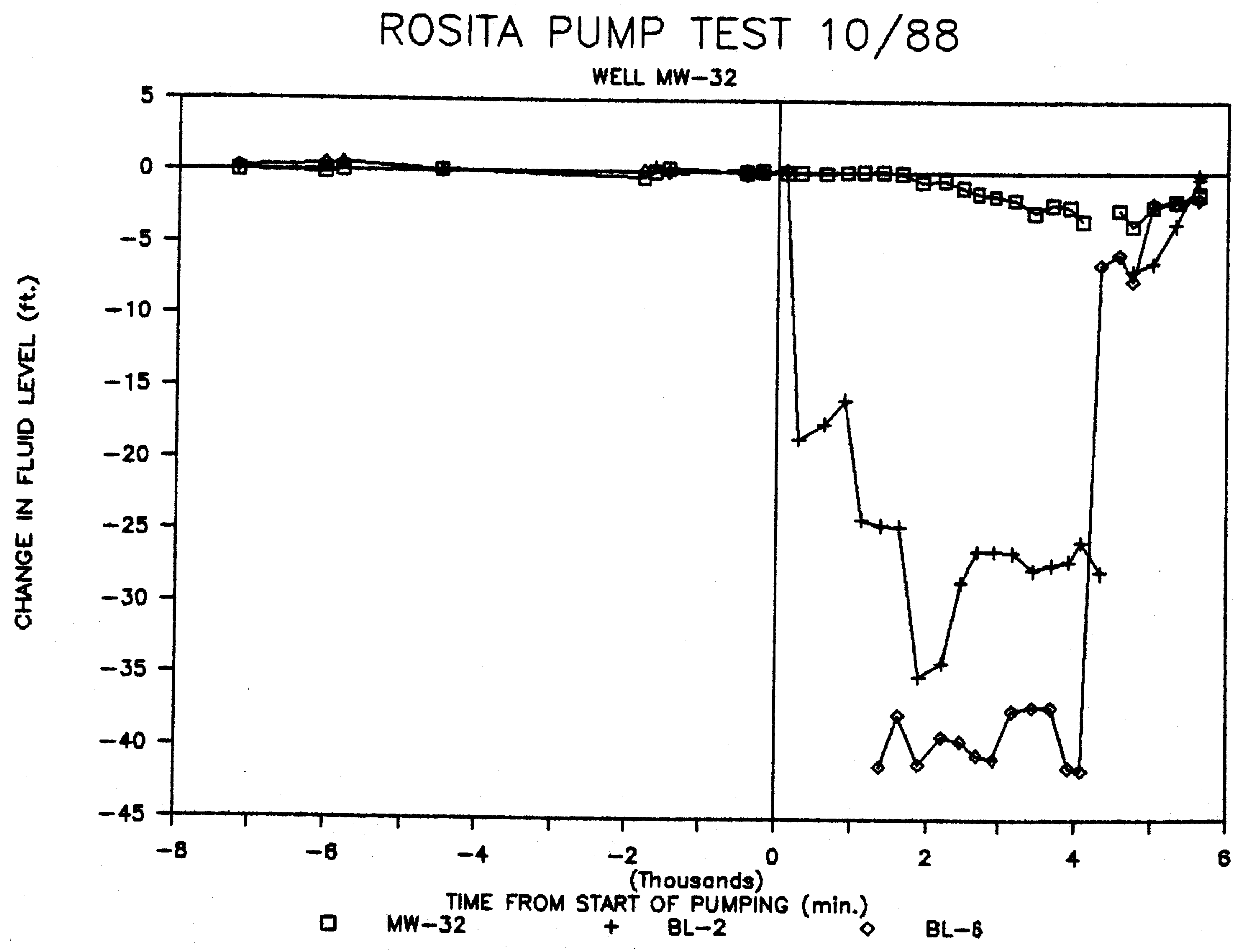
ROSITA PUMP TEST 10/88

WELL MW-30



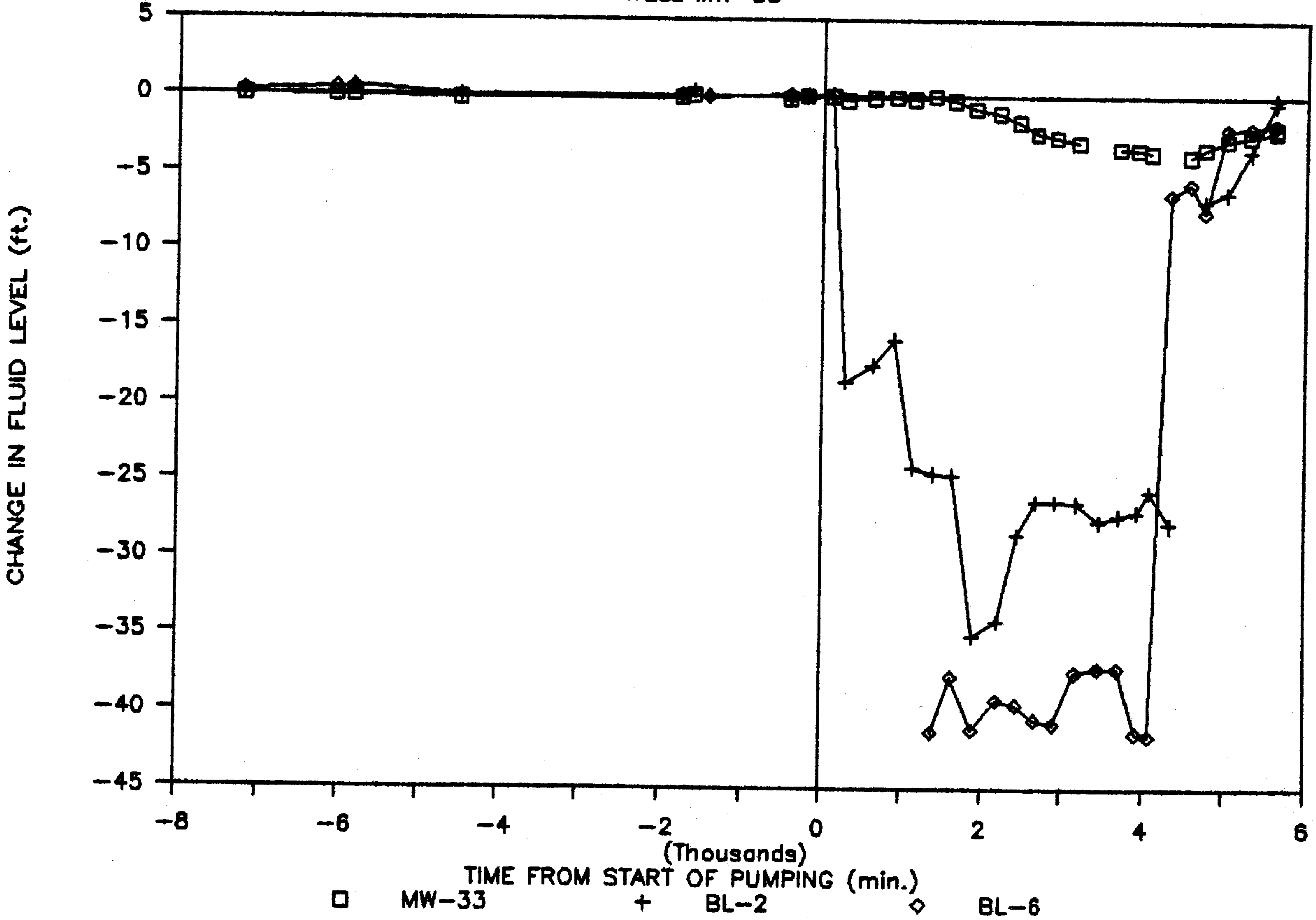
ROSITA PUMP TEST 10/88




ROSITA PUMP TEST 10/88
WELL MW-32
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-32
BL-2
BL-6

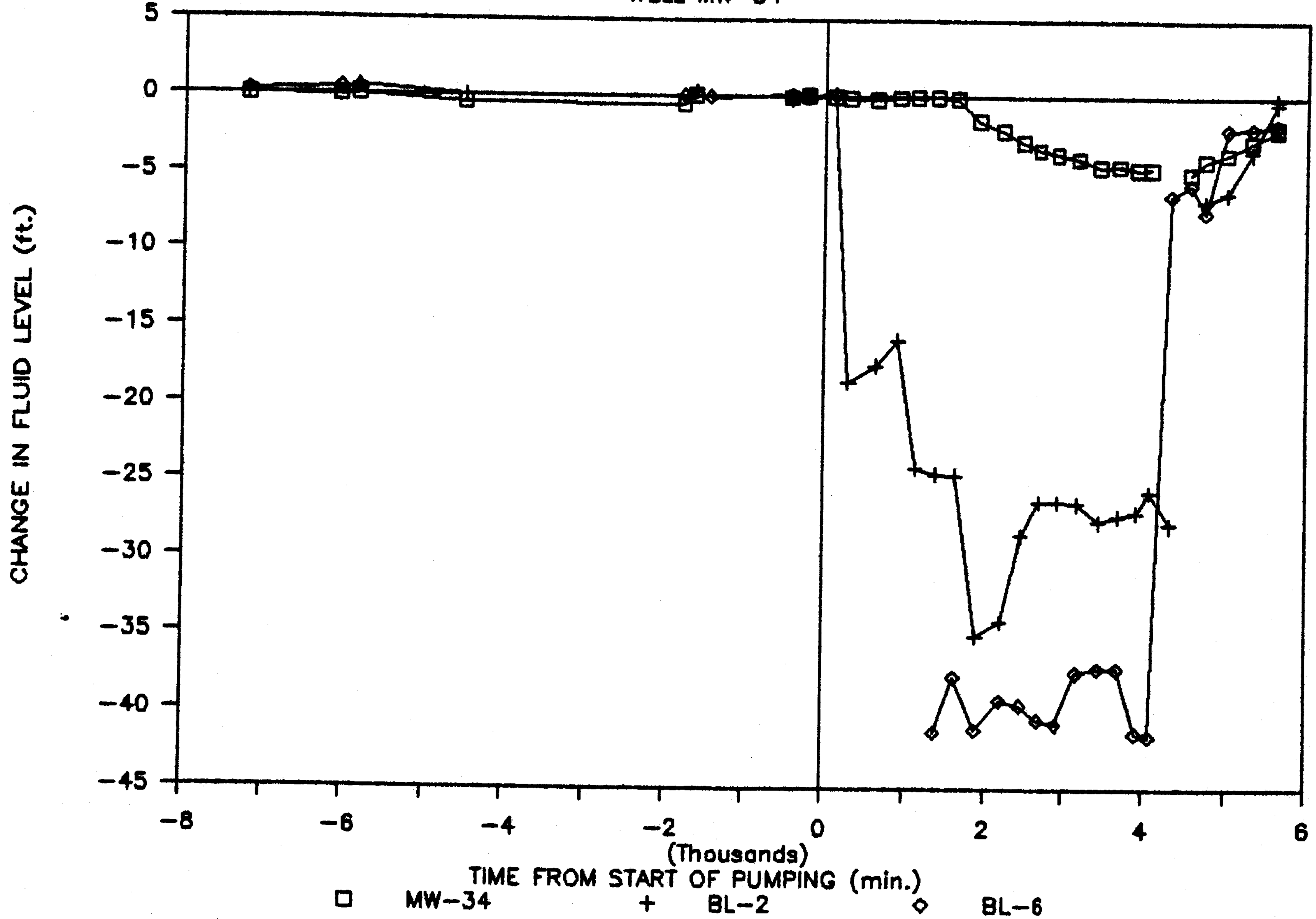
ROSITA PUMP TEST 10/88

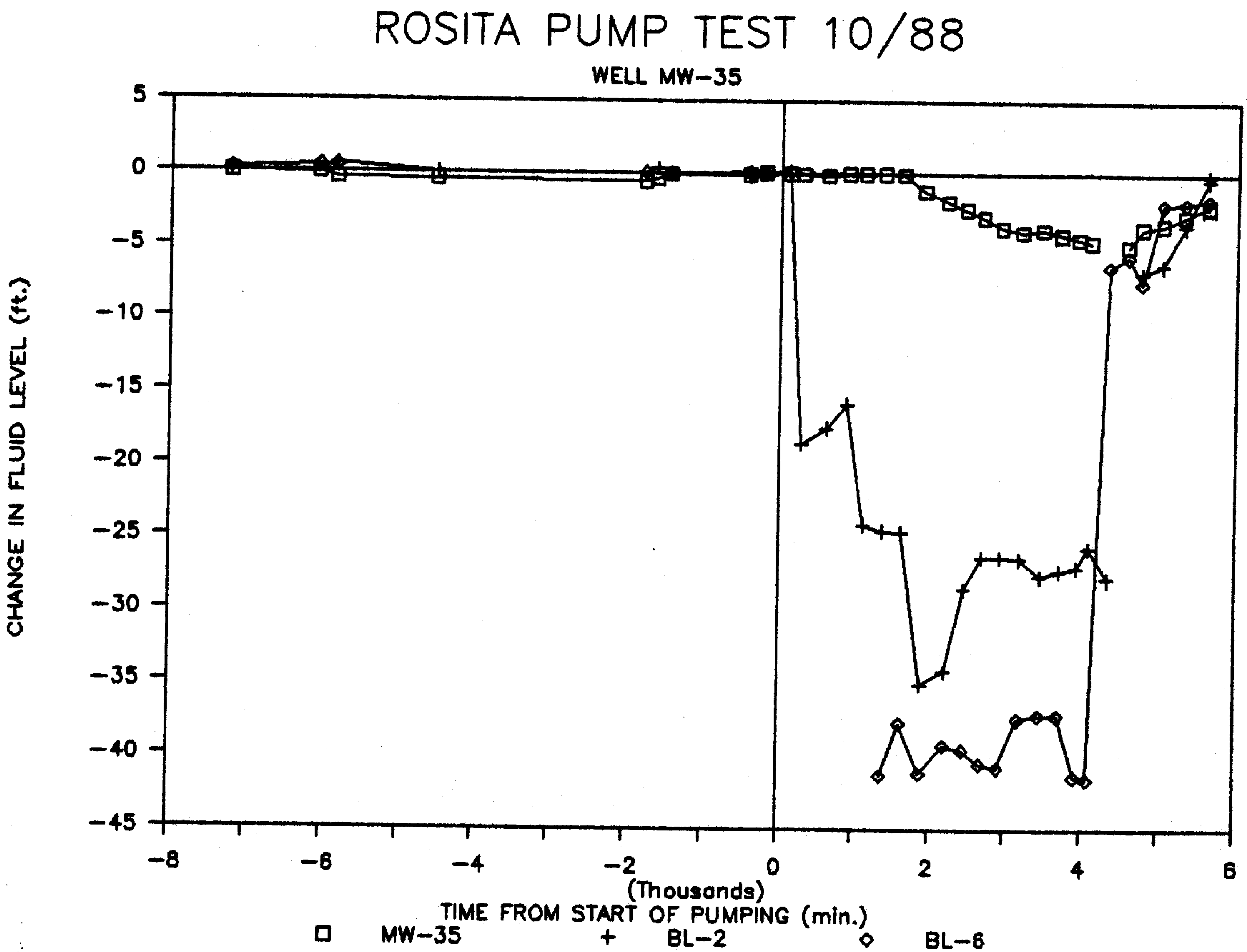
WELL MW-33

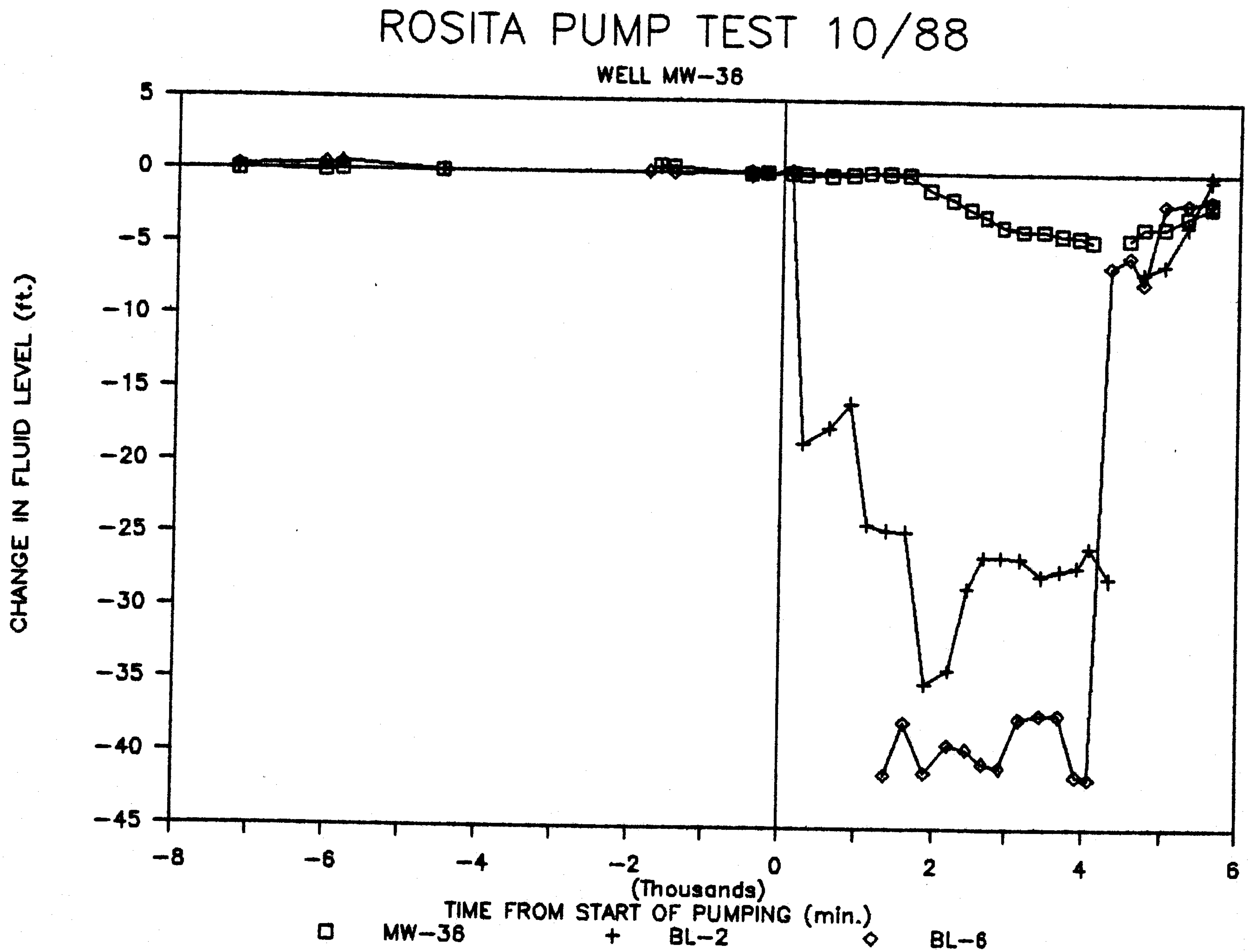


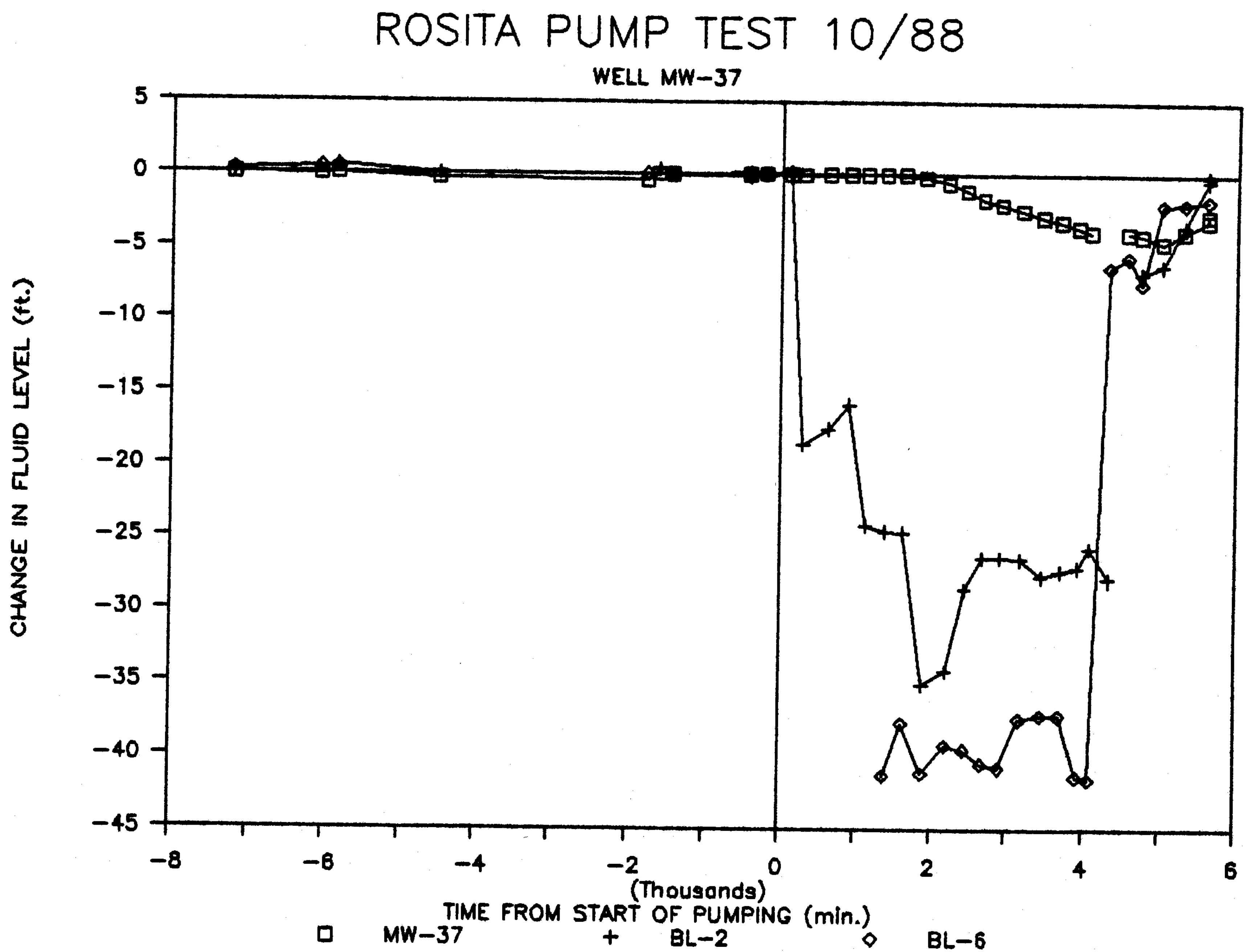
ROSITA PUMP TEST 10/88

WELL MW-34




ROSITA PUMP TEST 10/88
WELL MW-35
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-35
BL-2
BL-6


ROSITA PUMP TEST 10/88
WELL MW-36
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-36
BL-2
BL-6



ROSITA PUMP TEST 10/88
WELL MW-37
CHANGE IN FLUID LEVEL (ft.)
5
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-8
-6
-4
-2
0
2
4
6
(Thousands)
TIME FROM START OF PUMPING (min.)
MW-37
BL-2
BL-6

PAA2

URI, Inc.

Rosita Project

Production Area Authorization
#2

Hydrologic Tests

INTRODUCTION

Currently URI is operating its Rosita Project in-situ leach uranium mine located in northern Duval County. The operating mine is included within the first production area authorization, (PAA #1). As part of the mine plan, expansion of the mine area is required in order to maintain production levels considered economical for mining activities.

As part of the permitting process for the second expansion area, a hydrologic test is required to determine the amount of hydraulic connection existing within the mining sand. In addition, the test is used to determine whether there is any hydraulic connection between the mining sand and the adjacent aquifers. The test is performed using pumping wells within the mine area which are opened to the mining sand. When the wells are pumped, the aquifer containing the mining sand is drawn down resulting in like responses which are observed in the production zone monitor wells which encircle the mine area. The adjacent aquifers are also monitored for response during the pumping test.

The second production area contains 69 production zone monitor wells and 17 production zone baseline wells. The overlying aquifer is monitored with 17 monitor wells. There is no underlying aquifer within in the production area under consideration.

In addition, as part of the consideration of the second production area authorization application, a restoration demonstration must be performed within 18 months after the first production area is placed into production. The restoration demonstration area is currently located within the second production area. The location was chosen in order to isolate the pattern from the operating production area. This isolation is desired to ensure that any mining and restoration parameters which are to be observed are not affected by external influences from the producing mine.

While operating the restoration demonstration area, the adjacent production zone aquifer and the overlying aquifer monitor wells must be hydrologically tested prior to the initiation injection. A portion of the monitor wells considered within the second production area were to be used to monitor the small restoration demonstration area.

The hydrologic test was performed in three parts. The first area included the monitor wells adjacent to the restoration demonstration area. This area was performed first since the timing of the restoration demonstration required that the test be expedited prior to the completion of the monitor well ring.

The location of the restoration demonstration and the adjacent wells effectively broke the production area into three parts. The pump test was likewise broken into three parts. Each area is tied together with connecting monitor wells.

The purpose of this test is to demonstrate hydraulic communication within the production sand between the monitor well ring and the mining zone. This hydraulic communication is necessary to ensure that proper detection of pressure responses and leach solutions is possible for the control of the mining solutions. In addition, the test is also used to demonstrate the competence of the aquitard between the production zone aquifer and the overlying aquifer.

PUMP TEST PROCEDURES

Test Areas

The pump test was broken into three phases: 1.) The Restoration Demonstration area, 2.) The Southern Monitor Ring, (Flores/Cardenas Lease areas) and 3.) The Northern Monitor Well Ring, (Crews Lease area).

Phase One, PAA #2 Pump Test

Phase 1 consisted of the monitor wells in the adjacent vicinity of the restoration demonstration area. In addition to the production zone and overlying monitor wells, the five demonstration pattern wells were also included in the test.

Two wells were chosen for pumping wells based upon the ability to obtain higher flowrates and to fully communicate with the production sand. Two monitor wells, MW-53 and MW-89, were selected, because they fulfilled the criteria stated above and straddled the demonstration area. This configuration would maximize the response within the demonstration area and along all sides of the monitor well ring.

Each well was equipped with a Grundfos 40S30-9 3 hp submersible pump and motor. Both pumps were set at a depth of 120 feet and were equipped with a flexible tube for measuring fluid levels while pumping. In addition, each well was equipped with a Hersey MVR 50 water meter.

There were 22 wells monitored for response during the pump test. Three of these wells monitored responses in the overlying aquifer, and the remaining wells monitored the production sand.

There were two methods used for the measurement of the fluid level responses in the monitor wells: 1.) Stevens continuous water level recorder, and 2.) Powers Electrical sounder, (E-Line). The configuration of the fluid level recording equipment is listed as follows:

Stevens Recorder		Powers E-Line
MW-51	BL-18	OMW-15
MW-52	RS-520	OMW-16
MW-54	RS-525	OMW-17
MW-55	RS-526	OMW-18
MW-88		BL-16
MW-90		BL-17
MW-91		MW-92
MW-105		RS-524
BL-15		RS-523

Phase Two, PAA #2 Pump Test

This portion of the test included all of the monitor wells located to the southeast of the restoration demonstration area. Included in this test phase were six wells which were used in the first phase of the test.

Two of the baseline production zone wells located within the monitor ring were used as pumping wells. These two wells were chosen because they demonstrated higher flowrates and were located in the approximate center of the test area.

Each well was equipped with a Grundfos 40S30-9 3 hp submersible pump and motor. Both pumps were set at a depth of 120 feet and were equipped with a flexible tube for measuring fluid levels while pumping. In addition, each well was equipped with a Hersey MVR 50 water meter.

There were 41 wells monitored for response during the pump test. Eight of these wells monitored responses in the overlying aquifer. Six of the production zone observation wells consisted of the baseline wells, and the remaining observation wells were part of the monitor well ring.

There were three methods used for the measurement of the fluid level responses in the monitor wells: 1.) Stevens continuous water level recorder, and 2.) Powers Electrical sounder, (E-Line), 3.) Calibrated coaxial electrical sounder. (Quick E-Line). The configuration of the fluid level recording equipment is listed as follows:

Stevens Recorder	Powers E-Line	Quick E-Line	
MW-38	OMW-9	MW-39	MW-45
MW-41	OMW-11	MW-40	BL-12
MW-44	OMW-15	MW-42	OMW-12
MW-47	BL-9	MW-43	OMW-13
MW-50	BL-11 pump	MW-46	BL-14
MW-93	BL-13 pump	MW-48	OMW-14
MW-95		MW-92	BL-15
MW-97		MW-94	BL-16
BL-10		MW-96	OMW-16
OMW-10		MW-98	
MW-100		MW-99	
		MW-101	
		MW-102	
		MW-103	
		MW-104	
		MW-107	

Re-Test, Phase Two, PAA #2 Pump Test

During the pumping portion of the second phase of the Test, a few of the extreme wells within the test area failed to respond to the drawdown as expected. As a result, a re-test of those wells was initiated.

Three of the baseline production zone wells located within the monitor ring were used as pumping wells. These three wells were chosen because they demonstrated higher flowrates and were located in the approximate center of the test area.

Each well was equipped with a Grundfos 40S30-9 3 hp submersible pump and motor. All three pumps were set at a depth of 120 feet and were equipped with a flexible tube for measuring fluid levels while pumping. In addition, each well was equipped with a Hersey MVR 50 water meter.

There were 22 wells monitored for response during the pump test. Eight of these well monitored responses in the overlying aquifer. Six of the production zone observation wells consisted of the baseline wells, and the remaining observation wells were part of the monitor well ring.

There were three methods used for the measurement of the fluid level responses in the monitor wells: 1.) Stevens continuous water level recorder, and 2.) Powers Electrical sounder, (E-Line), 3.) Calibrated coaxial electrical sounder. (Quick E-Line). The configuration of the fluid level recording equipment is listed as follows:

Stevens Recorder	Powers E-Line	Quick E-Line	
MW-47	BL-12 pump	MW-45	BL-15
MW-50	BL-13 pump	MW-46	OMW-11
MW-92	BL-14 pump	MW-48	OMW-13
MW-95		MW-49	OMW-14
MW-97		MW-93	OMW-15
BL-11		MW-94	OMW-16
OMW-12		MW-96	
BL-16		MW-98	

Phase Three, PAA #2 Pump Test

This portion of the test included all of the monitor wells located to the northwest of the restoration demonstration area. Included in this test phase were four wells which were used in the first phase of the test.

Four of the baseline production zone wells located within the monitor ring were used as pumping wells. These four wells were chosen because they demonstrated higher flowrates and were located in the approximate center of the test area.

Each well was equipped with a Grundfos 40S30-9 3 hp submersible pump and motor. The pumps were set at a depth of approximately 120 feet and were equipped with a flexible tube for measuring fluid levels while pumping. In addition, each well was equipped with a Hersey MVR 50 water meter.

There were 47 wells monitored for response during the pump test. Eight of these well monitored responses in the overlying aquifer. Five of the production zone observation wells consisted of the baseline wells, and the remaining observation wells were part of the monitor well ring.

There were three methods used for the measurement of the fluid level responses in the monitor wells: 1.) Stevens continuous water level recorder, and 2.) Powers Electrical sounder, (E-Line), 3.) Calibrated coaxial electrical sounder. (Quick E-Line). The configuration of the fluid level recording equipment is listed as follows:

Stevens Recorder	Quick E-Line		Powers E-Line
MW-56	MW-55	MW-76	BL-19 pump
MW-61	MW-57	MW-77	BL-22 pump
MW-66	MW-58	MW-78	BL-23 pump
MW-72	MW-59	MW-79	BL-25 pump
MW-75	MW-60	MW-81	
MW-80	MW-62	MW-82	
MW-83	MW-63	MW-84	
MW-86	MW-64	MW-85	
	MW-65	MW-87	
	MW-67	MW-88	
	MW-68	OMW-18	
	MW-69	OMW-19	
	MW-70	OMW-20	
	MW-71	OMW-21	
	MW-73	OMW-22	
	MW-74	OMW-23	
	BL-18	OMW-24	
	BL-20	OMW-25	
	BL-21		
	BL-24		

Pump Test Procedures

Each test phase followed the same procedures for the recording of responses.

Antecedent fluid level were recorded for all of the monitor wells and the pumping wells for at least 24 hours prior to the initiation of the drawdown portion of the test. Recorders were checked every 2 hours for proper operation, and the E-Line fluid levels were measured every 2 hours. In addition, barometric pressure measurements were initiated during the antecedent period and continued throughout the test period for all phases.

The drawdown portion of the test was performed for 24 to 48 hours in duration. The duration of the drawdown portion was determined on the basis of the responses observed in the monitor wells while the test was being performed.

The fluid levels in the pumping wells were measured for both the drawdown and recovery phases of test. The fluid levels were measured every two hours along with the flowrate and the total gallons of water flowed.

TEST RESULTS

Phase One

The pumping wells were started at 11:07 A.M. on October 24, 1990. Both wells were operated at their maximum capacity. MW-53 flowed at a rate of 28 gallons per minute, and MW-89 flowed at a rate of 12 gallons per minute for a cumulative flow rate of 40 gallons per minute. After 24 hours, significant drawdown was observed in all of the monitor wells, and the pumps were shut down at 11:07 A.M. on October 25.

Throughout the pumping test, the production zone monitor wells responded to the pumping by drawing down as expected. During the recovery phase, the fluid levels indicated a response to the recovery. The recovery was significant in most of the wells, but the levels did not recover to antecedent levels. All of the recoveries did reach a stability point.

The overlying monitor wells were recovering slowly during the antecedent phase. This recovery continued during both the pumping and the recovery portion of the test. This lack of response indicated that there is no significant hydrological communication between the production zone and the overlying aquifer.

Table 1. URI Rosita Project

PAA #2 Pump Test

Test: Phase 1

Date: 10/23/90 Cumm. GPM 40 gpm

Pump Time: 1440 min.

Well #	Role	Start F.L.	Finish F.L.	Drawdown	Nearest Pump Well	Distance (Ft)
MW-51	OBS.	344.16	342.99	-1.070	MW-53	760
MW-52	OBS.	343.73	342.49	-1.240	MW-53	496
MW-105	OBS.	349.81	346.92	-2.840	MW-53	262
MW-53	PUMP	345.08	325.58	-19.500		N/A
MW-54	OBS.	345.66	343.01	-2.650	MW-53	377
MW-55	OBS.	337.87	336.59	-1.280	MW-53	747
MW-88	OBS.	344.55	342.91	-1.640	MW-89	380
MW-89	PUMP	343.19	324.78	-18.410		N/A
MW-90	OBS.	342.52	341.32	-1.200	MW-89	400
MW-91	OBS.	326.85	326.44	-0.410	MW-89	774
MW-92	OBS.	331.07	330.87	-0.200	MW-89	1159
BL-15	OBS.	328.95	328.67	-0.280	MW-89	1197
BL-16	OBS.	342.28	341.78	-0.500	MW-53	966
BL-17	OBS.	346.16	345.16	-1.000	MW-89	588
BL-18	OBS.	321.62	320.72	-0.900	MW-53	780
RS-520	OBS.	345.21	344.16	-1.050	MW-89	540
RS-523	OBS.	345.66	344.76	-0.900	MW-89	545
RS-524	OBS.	346.66	345.66	-1.000	MW-89	582
RS-525	OBS.	324.24	323.18	-1.060	MW-89	547
RS-526	OBS.	344.80	343.71	-1.090	MW-89	509
OMW-15	OBS.	327.57	327.57	0.000	MW-89	1234
OMW-16	OBS.	341.48	341.38	-0.100	MW-53	969
OMW-17	OBS.	345.86	345.86	0.000	MW-89	609
OMW-18	OBS.	343.96	344.06	0.100	MW-53	807

Phase Two

The pumping wells were started at 1:10 P.M. on December 11, 1990. Both wells were operated at their maximum capacities. BL-11 flowed at 11.5 gallons per minute, and BL-13 flowed at 10 gallons per minute for a cumulative flow rate of 21.5 gallons per minute. The anticipated pumping time was 24 hours.

After pumping for approximately 20 hours, based upon lower than expected flowrates and lack of significant drawdown in the periphery wells, the decision was made to extend the test 24 hours over the planned 24 hour drawdown phase. Unfortunately, shortly after the 24 hour mark at approximately 1:20 P.M. on December 12, 1990, the generator powering the pumps shut down due to fuel problems. Since there was no immediate backup, recovery readings were initiated for the next 24 hours.

Throughout the pumping test, the production zone monitor wells and baseline wells responded to the pumping by drawing down in fluid level as expected. There were five wells that did not respond to the drawdown at all: MW-49, MW-50, BL-14, BL-15, and BL-16. This lack of noticeable drawdown can be directed attributed to abbreviated pumping time.

The overlying monitor wells did not respond to the drawdown in the production zone. Two of the overlying monitor wells are located 30 feet from the nearest pumping wells and failed to drawdown, (See table 2). This lack of response indicates there is no significant hydraulic communication between the production zone and the overlying aquifer.

One of the goals of the test is to prove hydraulic communication between the production zone monitor and baseline wells. With five of the wells in this phase of the test failing to respond, the decision was made to re-test the portion of the monitor and baseline wells around and including the wells failing to respond to the drawdown in the first test.

Table 2.

PAA #2 Pump Test

Test: Phase 2

Date: 12/11/90 Cumm. GPM: 21.5 gpm

Pump Time 1460 min.

Well #	Role	Start F.L.	Finish F.L.	Corrected Drawdown	Nearest Pump Well	Distance (Ft)
MW-38	OBS.	316.25	316.01	-0.250	BL-11	2156
MW-39	OBS.	320.61	319.78	-0.830	BL-11	2025
MW-40	OBS.	322.87	321.47	-1.400	BL-11	1688
MW-41	OBS.	324.22	323.34	-0.880	BL-11	1502
MW-42	OBS.	325.65	323.66	-1.990	BL-11	1295
MW-43	OBS.	328.77	327.47	-1.300	BL-11	1192
MW-44	OBS.	332.44	331.01	-1.240	BL-13	932
MW-45	OBS.	333.29	329.51	-3.780	BL-13	617
MW-46	OBS.	333.29	332.17	-1.750	BL-13	468
MW-47	OBS.	335.86	334.76	-1.100	BL-13	705
MW-48	OBS.	337.67	337.27	-0.400	BL-13	999
MW-49	OBS.	338.51	338.66	0.100	BL-13	1202
MW-50	OBS.	340.68	340.98	0.300	BL-13	1608
MW-92	OBS.	337.15	336.28	-0.870	BL-13	1225
MW-93	OBS.	333.98	333.99	-0.190	BL-13	981
MW-94	OBS.	336.49	335.59	-0.900	BL-13	1085
MW-95	OBS.	338.17	337.68	-0.490	BL-13	1208
MW-96	OBS.	333.67	332.09	-1.580	BL-11	957
MW-97	OBS.	345.68	342.08	-3.600	BL-11	440
MW-98	OBS.	320.41	316.61	-3.800	BL-11	747
MW-99	OBS.	329.99	326.84	-3.150	BL-11	910
MW-107	OBS.	328.72	326.21	-2.510	BL-11	992
MW-100	OBS.	329.21	327.46	-2.080	BL-11	11174
MW-101	OBS.	326.94	325.34	-1.600	BL-11	1466
MW-102	OBS.	327.32	325.99	-1.330	BL-11	1844
MW-103	OBS.	325.26	324.31	-0.950	BL-11	1838
MW-104	OBS.	324.76	323.1	-0.660	BL-11	2149
BL-9	OBS.	323.17	322.09	-1.080	BL-11	1520
BL-10	OBS.	328.06	324.94	-3.120	BL-11	681
BL-11	PUMP	330.24	313.44	-16.800		N/A
BL-12	OBS.	334.46	333.96	-0.500	BL-13	858
BL-13	PUMP	334.71	317.92	-16.790		N/A
BL-14	OBS.	334.27	334.27	0.000	BL-13	673
BL-15	OBS.	338.46	338.46	0.000	BL-13	1133
BL-16	OBS.	339.43	339.76	0.330	BL-13	1300

Table 2.

PAA #2 Pump Test

Test: Phase 2
Date: 12/11/90 Cumm. GPM: 21.5 gpm
Pump Time 1460 min.

Well #	Role	Start F.L.	Finish F.L.	Drawdown	Nearest Pump Well	Distance (Ft)
OMW-9	OBS.	335.67	335.82	0.170	BL-11	1554
OMW-10	OBS.	336.69	336.75	0.060	BL-11	698
OMW-11	OBS.	336.98	337.15	0.170	BL-11	30
OMW-12	OBS.	337.12	337.02	-0.100	BL-13	828
OMW-13	OBS.	337.21	337.21	0.000	BL-13	30
OMW-14	OBS.	338.06	338.03	-0.030	BL-13	685
OMW-15	OBS.	No Fluid Level			BL-13	1123
OMW-16	OBS.	339.73	339.73	0.000	BL-13	1325

Phase 2 (Re-Test)

The pumping wells were started at 1:00 P.M. January 8, 1991. All three wells were operated at their maximum capacities. The flow rates were as follows: BL-12 at 30 gallons per minute, BL-13 at 13 gallons per minute, and BL-14 at 11 gallons per minute. The cumulative flow rate was 54 gallons per minute. The anticipated pumping time was 48 hours.

After pumping for 48 hours, response was observed in all of the production zone monitor and baseline wells. After the pumping was stopped, the wells responded by recovering to a stability level and would have continued to the antecedent levels if measurements would have continued for another 24 hours.

The overlying monitor wells did not respond to the drawdown in the production zone with one exception. OMW-14 indicated some degree of response during drawdown. OMW-14 dropped 0.662 feet in fluid level, but relative to BL-14 which is 30 feet away and which dropped 23.1 feet in fluid level, the drawdown is minimal.

Two production zone observation wells, MW-50 and BL-16, failed to drawdown as expected. The response in BL-16 was minimal, and the responses observed in MW-50 did not match the responses observed in the other observation wells. To confirm that these wells are communicating hydraulically in the production zone, a small-scale pumping test will be performed for these wells and the adjacent production zone observation wells. In addition, OMW-14 will be observed to confirm responses observed in this phase of the pumping test.

Table 3.

PAA #2 Pump Test

Test: Phase 2 Re-Test

Date: 01/09/91 Cumm. GPM: 54 gpm

Pump Time 2880 min.

Well #	Role	Start F.L.	Finish F.L.	Drawdown	Nearest Pump Well	Distance (Ft)
MW-45	OBS.	333.61	329.59	-4.020	BL-13	617
MW-46	OBS.	336.66	331.68	-2.980	BL-13	468
MW-47	OBS.	335.86	334.76	-0.970	BL-13	705
MW-48	OBS.	338.07	336.62	-1.450	BL-14	420
MW-49	OBS.	338.78	338.08	-0.700	BL-14	450
MW-50	OBS.	339.63	339.30	-0.330	BL-14	810
MW-92	OBS.	338.29	336.44	-1.850	BL-14	1052
MW-93	OBS.	338.18	333.70	-4.480	BL-12	805
MW-94	OBS.	337.06	329.22	-6.540	BL-12	500
MW-95	OBS.	335.80	327.28	-8.520	BL-12	400
MW-96	OBS.	334.63	325.29	-8.320	BL-12	385
MW-97	OBS.	345.82	336.92	-8.230	BL-11	395
MW-98	OBS.	331.77	326.05	-5.720	BL-11	410
BL-11	OBS.	331.94	327.76	-5.180	BL-13	910
BL-12	PUMP	329.75	285.46	-44.290		N/A
BL-13	PUMP	338.08	309.60	-28.480		N/A
BL-14	PUMP	337.47	314.35	-23.120		N/A
BL-15	OBS.	338.45	337.80	-0.550	BL-14	760
BL-16	OBS.	339.92	339.78	-0.140	BL-14	580
OMW-11	OBS.	337.34	337.30	-0.040	BL-13	910
OMW-12	OBS.	337.65	337.69	0.040	BL-12	30
OMW-13	OBS.	338.61	338.63	0.020	BL-13	30
OMW-14	OBS.	338.27	337.61	-0.660	BL-14	30
OMW-15	OBS.	327.83	327.88	0.000	BL-14	760
OMW-16	OBS.	339.81	339.83	0.020	BL-14	580

Phase Three

The pumping wells where started 11:00 A.M. December 20, 1990. All four wells were operated at their maximum flow capacities. The measured flow rates are as follows: BL-19 at 11 gallons per minute, BL-22 at 9 gallons per minute, BL-23 at 9.5 gallons per minute, and BL-25 at 6 gallons per minute. The cumulative flow rate was 35.5 gallons per minute. The anticipated pumping time was 48 hours.

After pumping for 48 hours, response was observed in all of the production zone monitor and baseline wells, and the pumps were shut down at 11:00 A.M. on December 22, 1990. After the cessation of pumping, the production wells failed to recover as expected. The wells which responded with the greatest drawdown immediately began to recover. After reaching a stability point, they began to indicate additional drawdown. In addition, the wells which were located further away from the pumping wells began to recover slightly and stabilize as observed in the previous test phases. After approximately 4 hours of recovery, these wells began to indicate drawdown. All of the wells indicated the same response, followed the same drawdown slope throughout the testing area.

The origin of this influence has not been determined. As an indication of drawdown in the production zone due to the pumping portion of the test, all of the production zone monitor and baseline wells did recover and stabilized immediately after the pumping was stopped. Indicating that the drawdown from the pumping wells did influence the responses observed on the observation wells.

The overlying monitor wells failed to indicate any response to the drawdown in the production zone.

Table 4

PAA #2 Pump Test

Test: Phase 3
Date: 12/17/90 Cumm. GPM: 35.5 gpm
Pump Time 2880 min.

Well #	Role	Start F.L.	Finish F.L.	Drawdown	Nearest Pump Well	Distance (Ft)
MW-55	OBS.	346.98	345.93	-1.050	BL-19	588
MW-56	OBS.	348.16	346.73	-1.430	BL-19	397
MW-57	OBS.	368.88	367.25	-1.630	BL-19	760
MW-58	OBS.	350.36	349.72	-0.640	BL-19	1071
MW-59	OBS.	352.10	351.80	-0.300	BL-19	1290
MW-60	OBS.	352.96	352.73	-0.230	BL-19	1584
MW-61	OBS.	354.36	354.10	-0.260	BL-19	1621
MW-62	OBS.	354.14	353.94	-0.200	BL-19	1462
MW-63	OBS.	359.94	352.68	-0.260	BL-23	1278
MW-64	OBS.	351.59	351.31	-0.280	BL-23	892
MW-65	OBS.	350.28	349.39	-0.890	BL-23	523
MW-66	OBS.	349.83	348.40	-1.430	BL-23	643
MW-67	OBS.	350.45	349.54	-0.910	BL-23	995
MW-68	OBS.	351.75	351.34	-0.410	BL-23	1636
MW-69	OBS.	352.39	352.10	-0.290	BL-25	1109
MW-70	OBS.	353.19	352.96	-0.230	BL-25	903
MW-71	OBS.	353.43	353.15	-0.280	BL-25	612
MW-72	OBS.	353.26	352.82	-0.440	BL-25	623
MW-73	OBS.	352.32	351.78	-0.540	BL-25	756
MW-74	OBS.	351.46	351.17	-0.300	BL-25	803
MW-75	OBS.	350.78	350.40	-0.380	BL-25	888
MW-76	OBS.	349.95	349.60	-0.350	BL-25	1110
MW-77	OBS.	349.14	348.77	-0.270	BL-25	1425
MW-78	OBS.	348.54	348.30	-0.240	BL-23	1226
MW-106	OBS.	347.43	347.17	-0.260	BL-23	846
MW-79	OBS.	347.84	347.62	-0.220	BL-23	857
MW-80	OBS.	348.19	347.80	-0.390	BL-23	1143
MW-81	OBS.	347.19	346.66	-0.530	BL-22	1157
MW-82	OBS.	345.99	345.84	-0.150	BL-22	914
MW-83	OBS.	344.89	344.50	-0.390	BL-22	881
MW-84	OBS.	342.58	341.94	-0.640	BL-22	707
MW-85	OBS.	340.16	338.05	-1.110	BL-22	651
MW-86	OBS.	345.26	343.65	-1.610	BL-22	597
MW-87	OBS.	345.97	344.07	-1.900	BL-22	608
MW-88	OBS.	344.96	344.04	-0.920	BL-22	939

Table 4

PAA #2 Pump Test

Test: Phase 3

Date: 12/17/90 Cumm. GPM: 35.5 gpm

Pump Time 2880 min.

Well #	Role	Start F.L.	Finish F.L.	Drawdown	Nearest Pump Well	Distance (Ft)
BL-18	OBS.	346.13	344.73	-1.400	BL-19	825
BL-19	PUMP	346.96	328.68	-18.280		N/A
BL-20	OBS.	350.28	349.50	-0.780	BL-19	490
BL-21	OBS.	348.00	345.10	-2.900	BL-19	711
BL-22	PUMP	345.43	333.88	-11.550		N/A
BL-23	PUMP	347.89	337.22	-10.670		N/A
BL-24	OBS.	352.00	351.59	-0.410	BL-25	994
BL-25	PUMP	349.11	344.40	-4.710		
OMW-18	OBS.	344.04	344.02	-0.020	BL-19	835
OMW-19	OBS.	349.28	349.26	-0.020	BL-19	30
OMW-20	OBS.	345.77	345.83	0.060	BL-19	480
OMW-21	OBS.	345.25	345.26	0.100	BL-19	701
OMW-22	OBS.	345.02	344.92	-0.100	BL-22	30
OMW-23	OBS.	346.71	346.67	-0.040	BL-23	30
OMW-24	OBS.	348.72	348.63	-0.090	BL-25	984
OMW-25	OBS.	361.96	362.08	0.120	BL-25	30

CONCLUSIONS

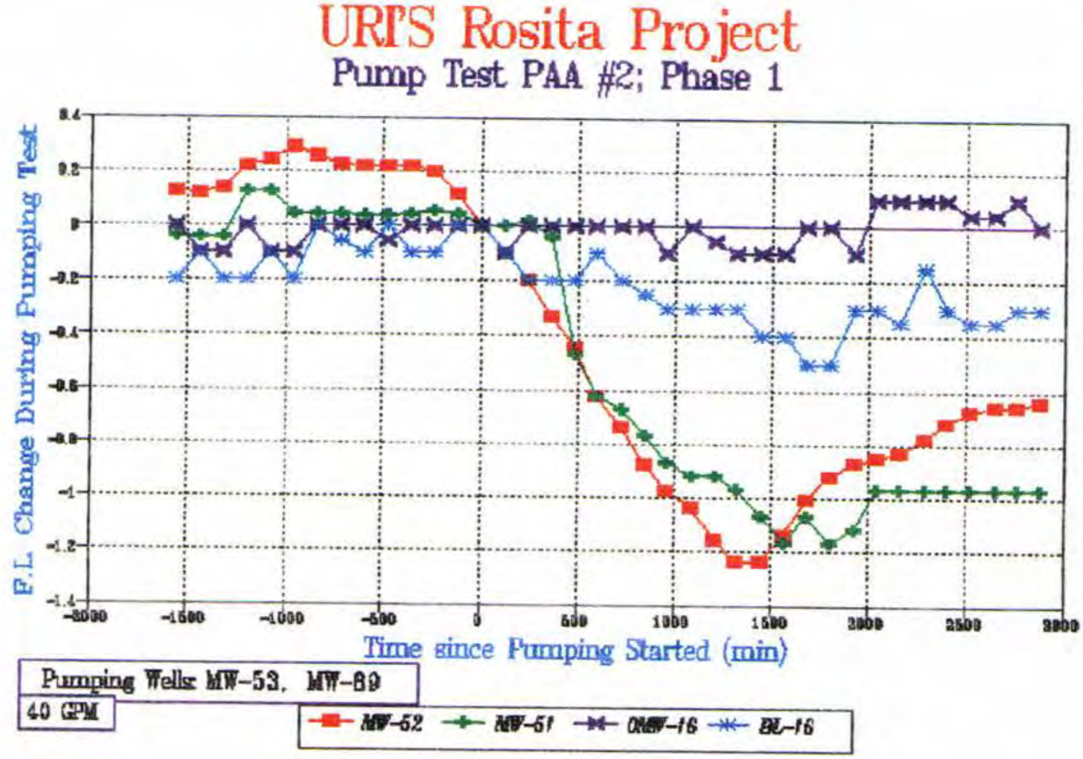
The outcome of the pump test may be concluded as follows:

1.) All of the production zone monitor wells, including the restoration demonstration area wells, are in hydrologic communication with the production zone. Therefore the monitor wells would detect leach solution if present and pressure response information within the production zone.

Two wells located in the northern portion of the phase 2 test area failed to respond satisfactorily. As a result, MW-50 and BL-16 will be re-tested to ensure that proper response is observed.

2.) The overlying aquifer is not in communication with the production zone based upon the lack of response observed during the course of the test. The failure of the overlying sand to respond to drawdown in the production zone indicates that the clay separating the two aquifers is competent enough to prevent the vertical migration of mining solutions.

The only exception was OMW-14 which indicated some minimal response to the drawdown in the production zone. As a result of this response, OMW-14 will be included in the re-test of the northern portion of the phase 2 test area.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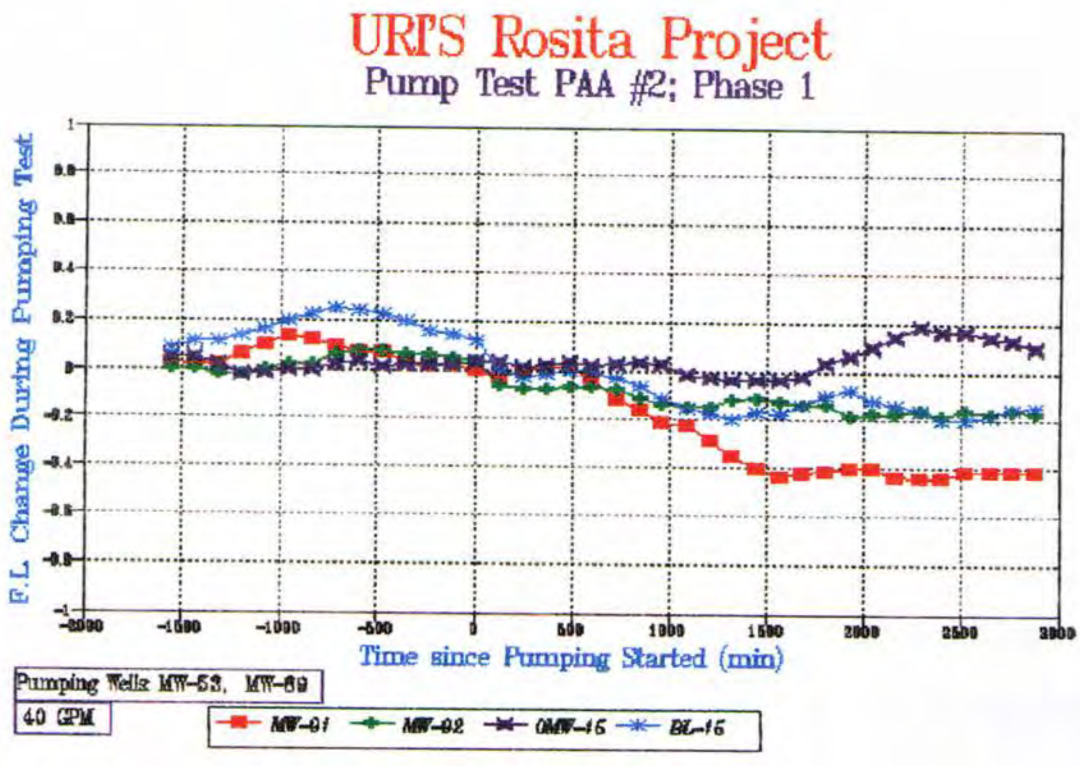
MW-52
MW-51
OMW-16
BL-16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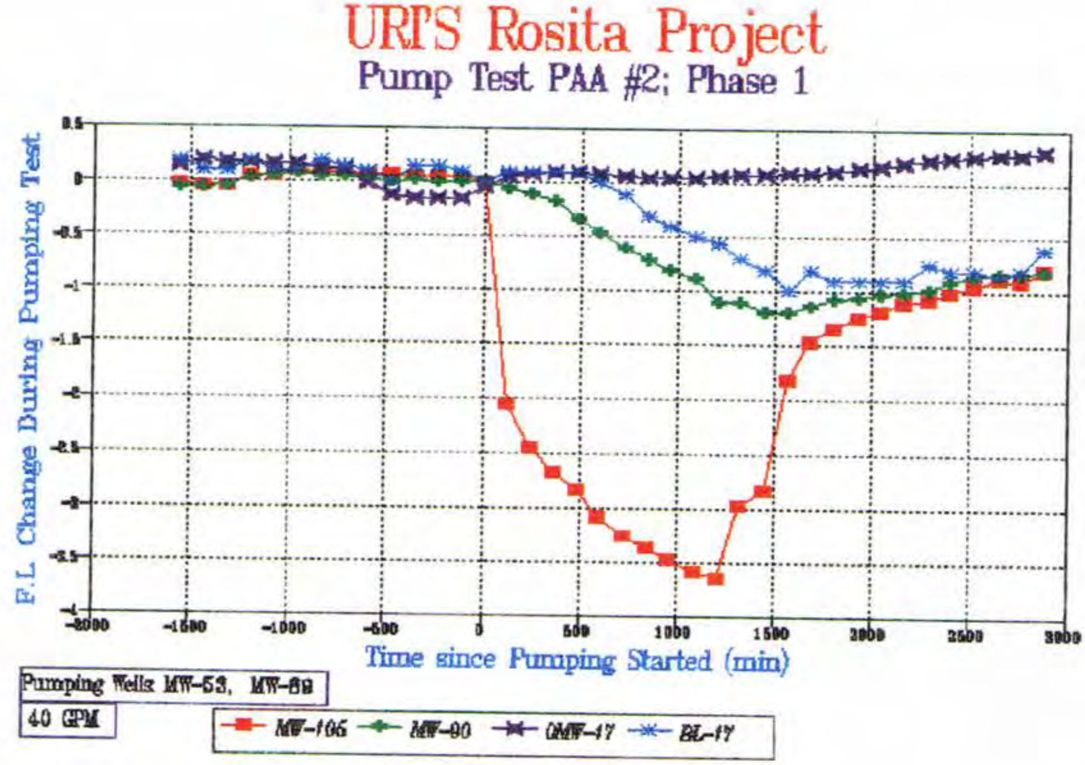
MW-92
OMW-15
BL-15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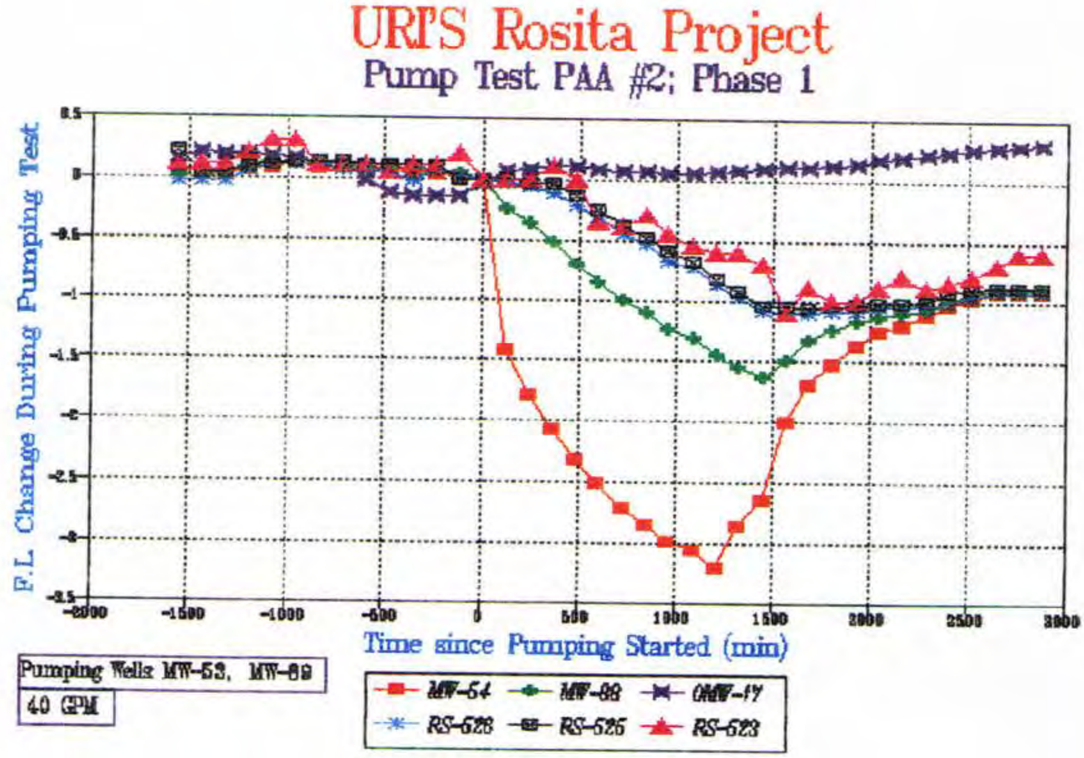
40 GPM
MW-106
MW-90
OMW-17
BL-17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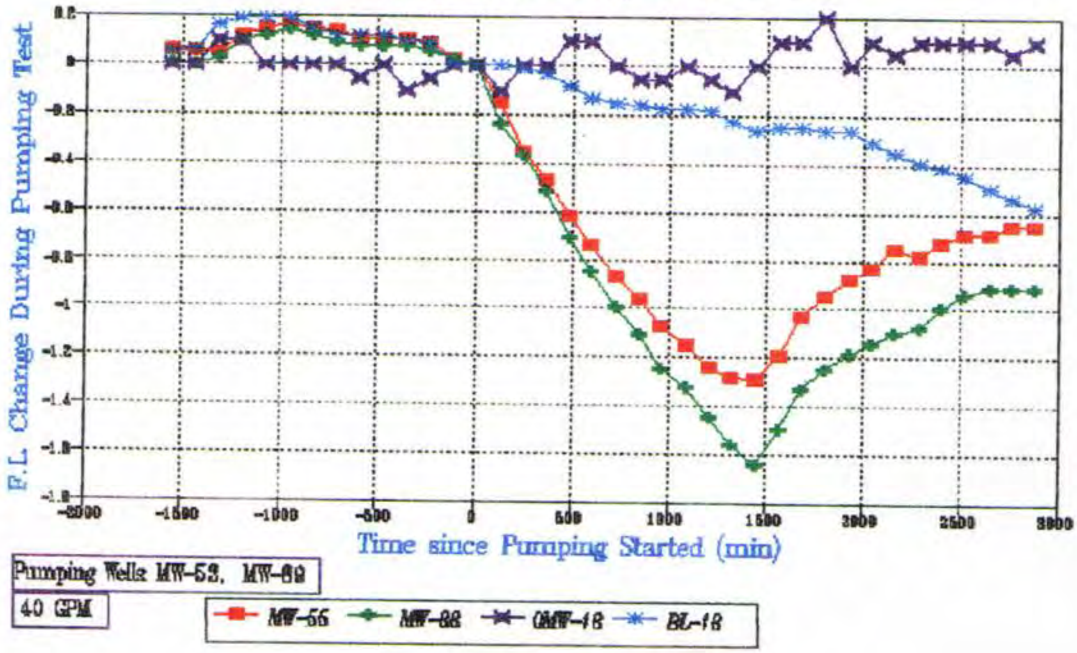
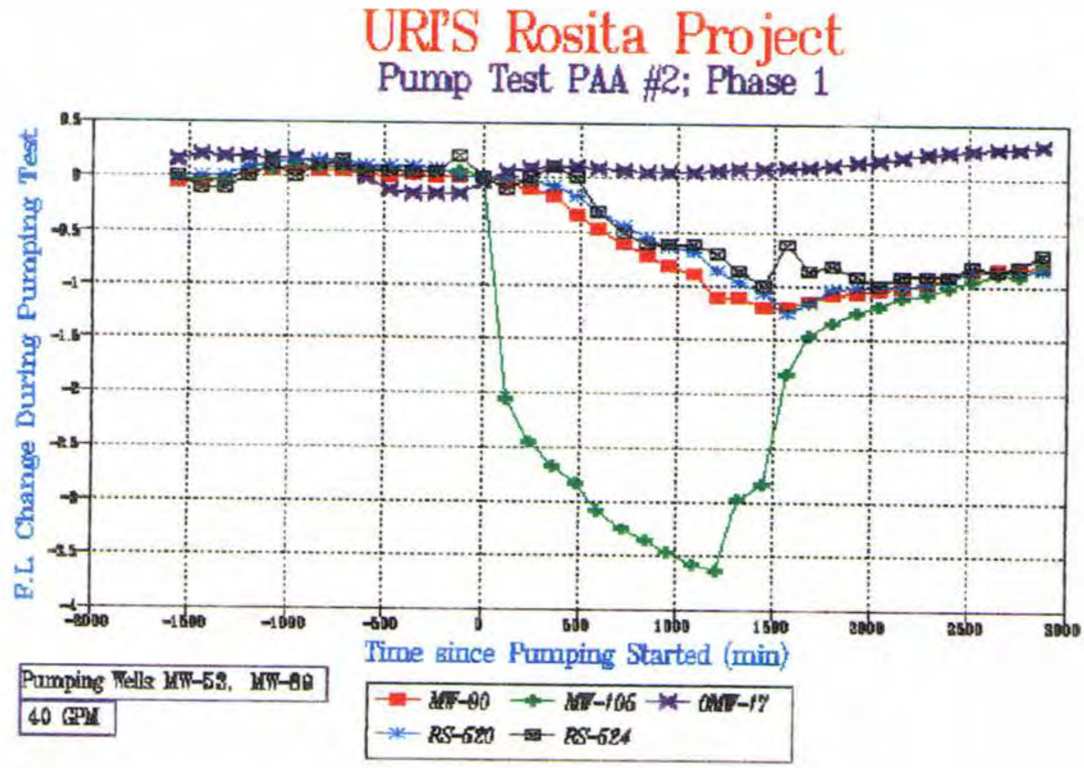
-3.5
-2000
-1500
-1000
-500
0
500
1000
1500
2000
2500
3000
Time since Pumping Started (min)
Pumping Wells MW-53, MW-89
40 GPM
MW-54
MW-88
OMW-17
RS-528
RS-525
RS-523

URI'S Rosita Project
Pump Test PAA #2; Phase 1

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Time since Pumping Started (min)
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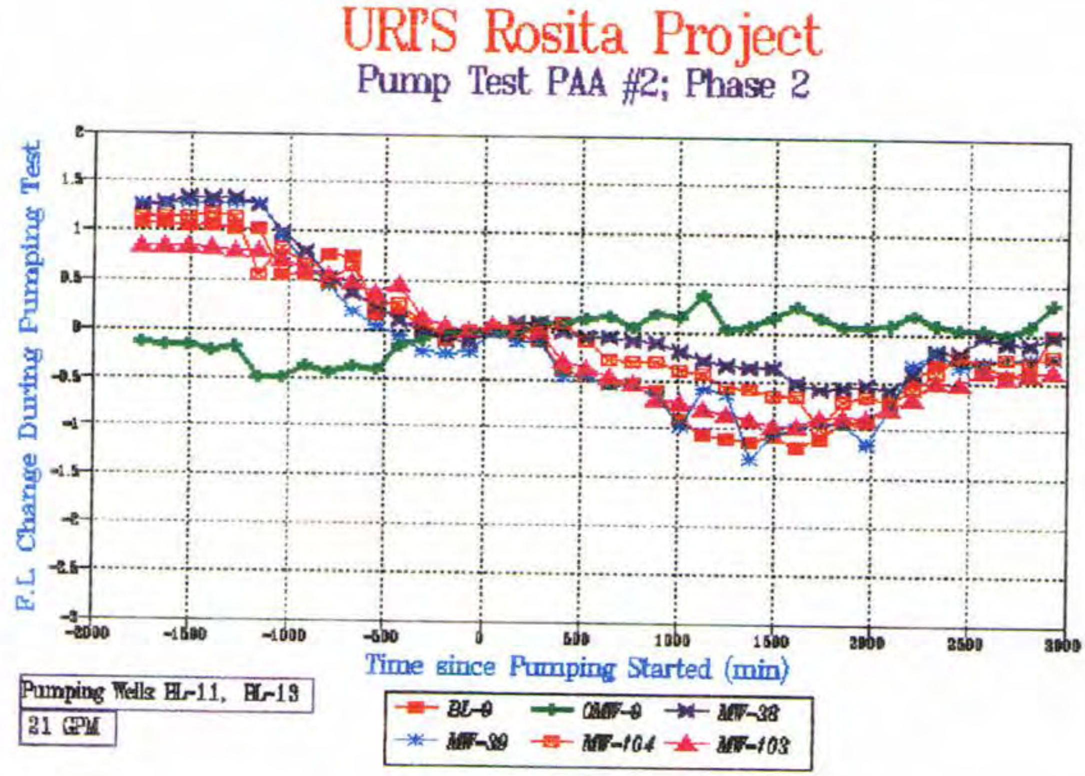
MW-90
MW-106
OMW-17
RS-520
RS-524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F.L. Change During Pumping Test
Time since Pumping Started (min)
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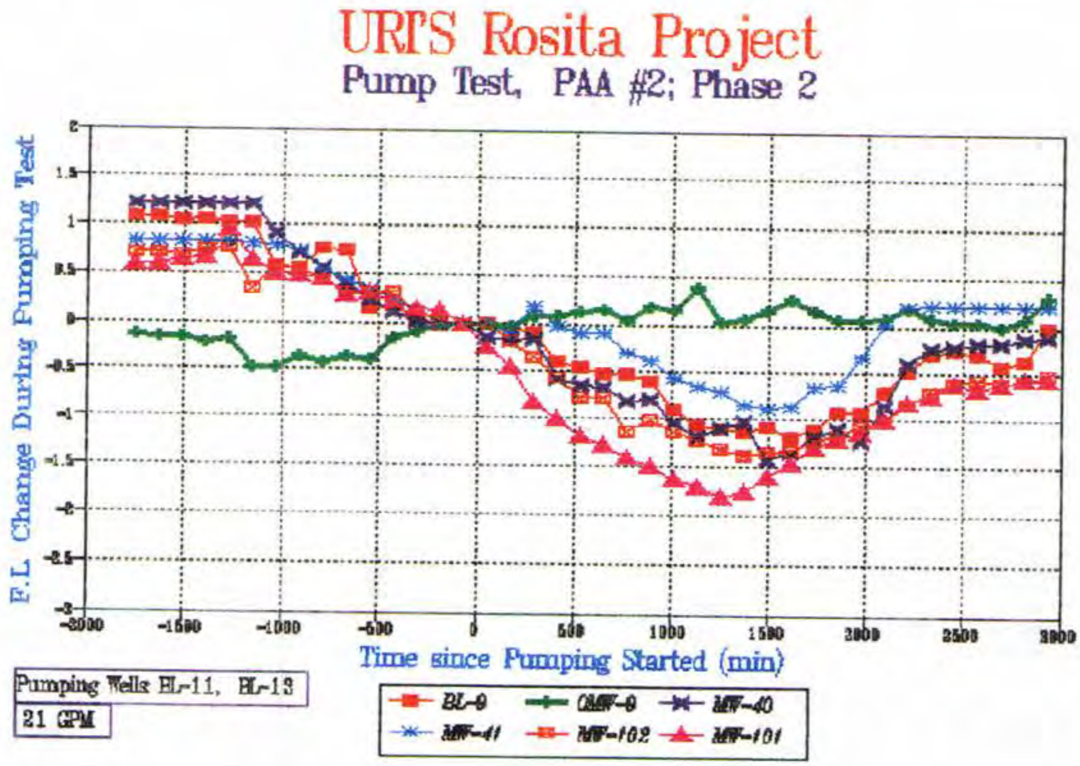
CMW-9
MW-38
MW-39
MW-104
MW-103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Pump Test, PAA #2; Phase 2
F.L. Change During Pumping Test
Time since Pumping Started (min)
Pumping Wells BL-11, BL-13
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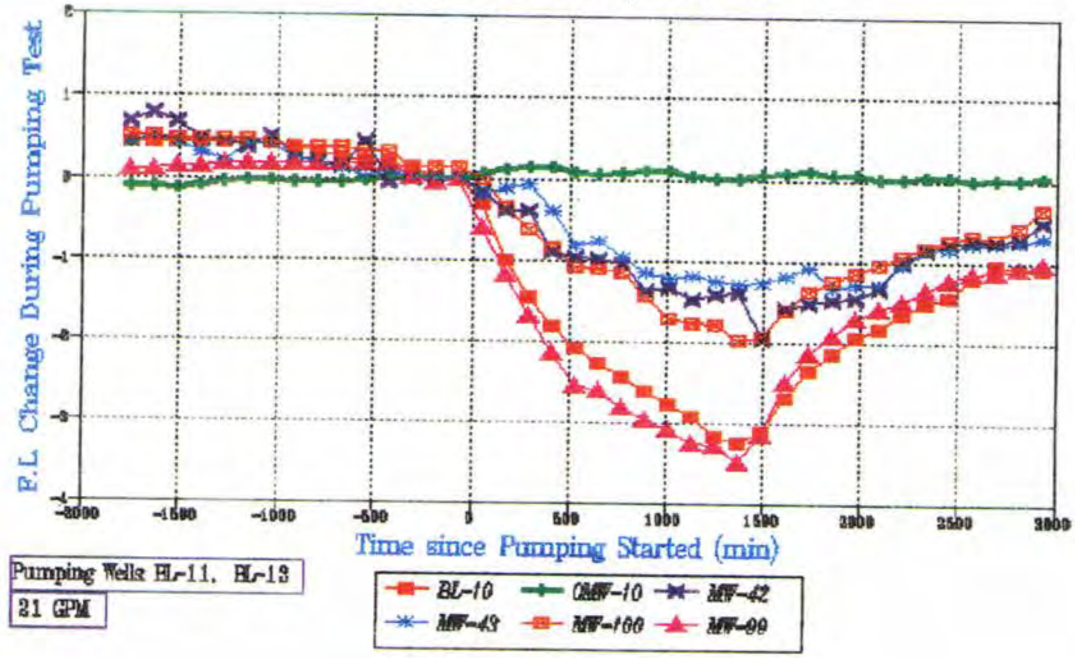
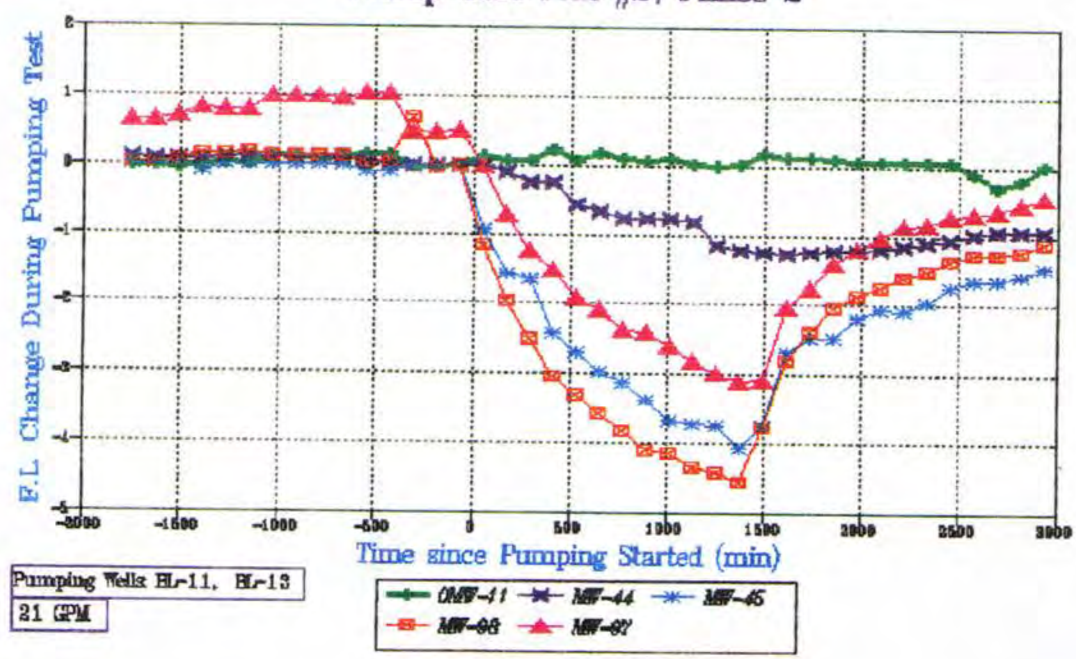
CMW-9
MW-40
MW-41
MW-102
MW-101

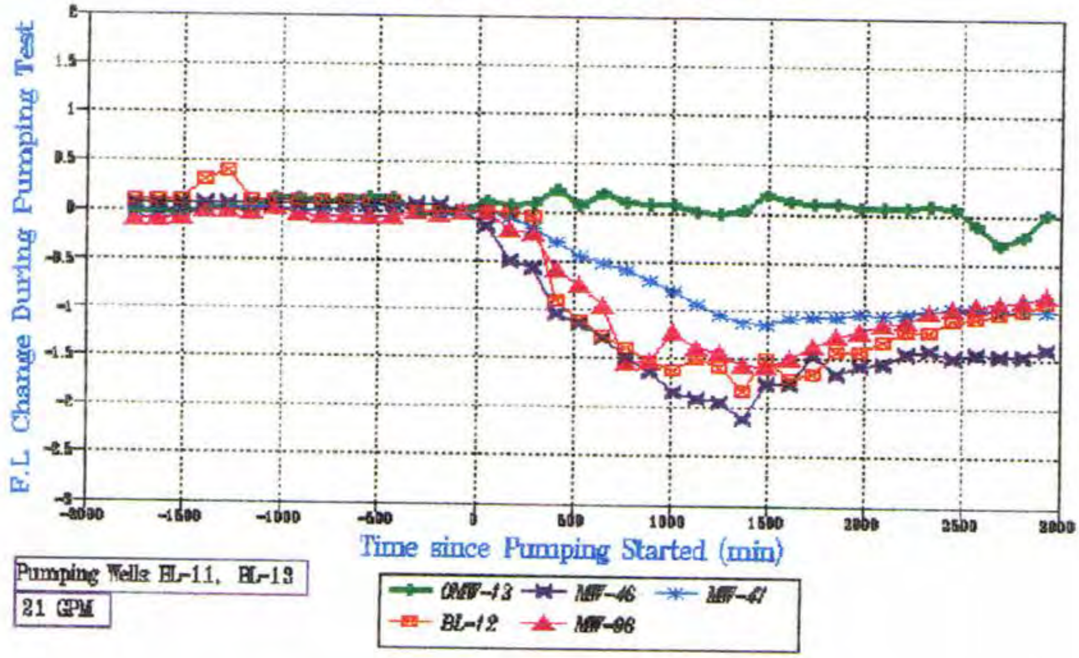
URI'S Rosita Project
Pump Test PAA #2; Phase 2



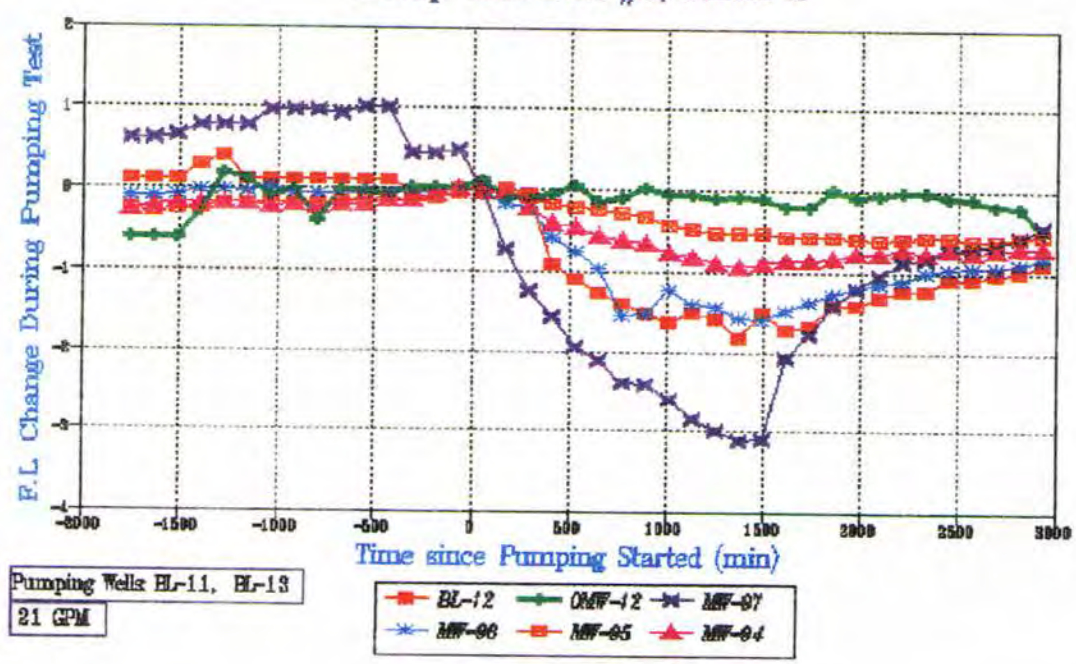
URI'S Rosita Project
Pump Test PAA #2; Phase 2



URI'S Rosita Project
Pump Test PAA #2; Phase 2

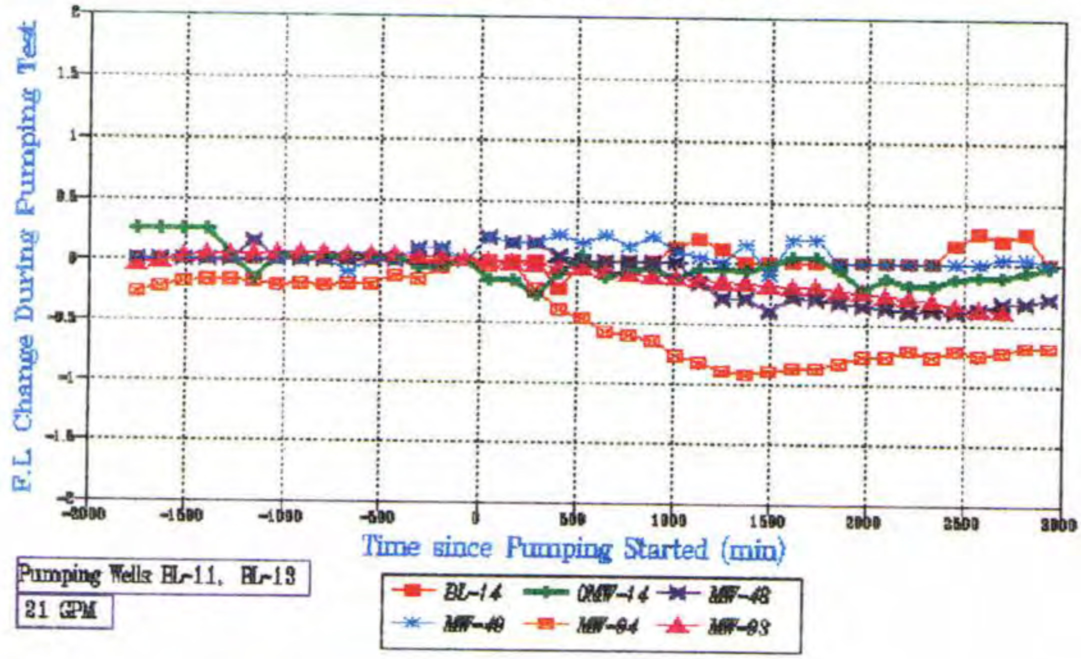


URI'S Rosita Project
Pump Test PAA #2; Phase 2



URI'S Rosita Project

Pump Test PAA #2; Phase 2



URI'S Rosita Project

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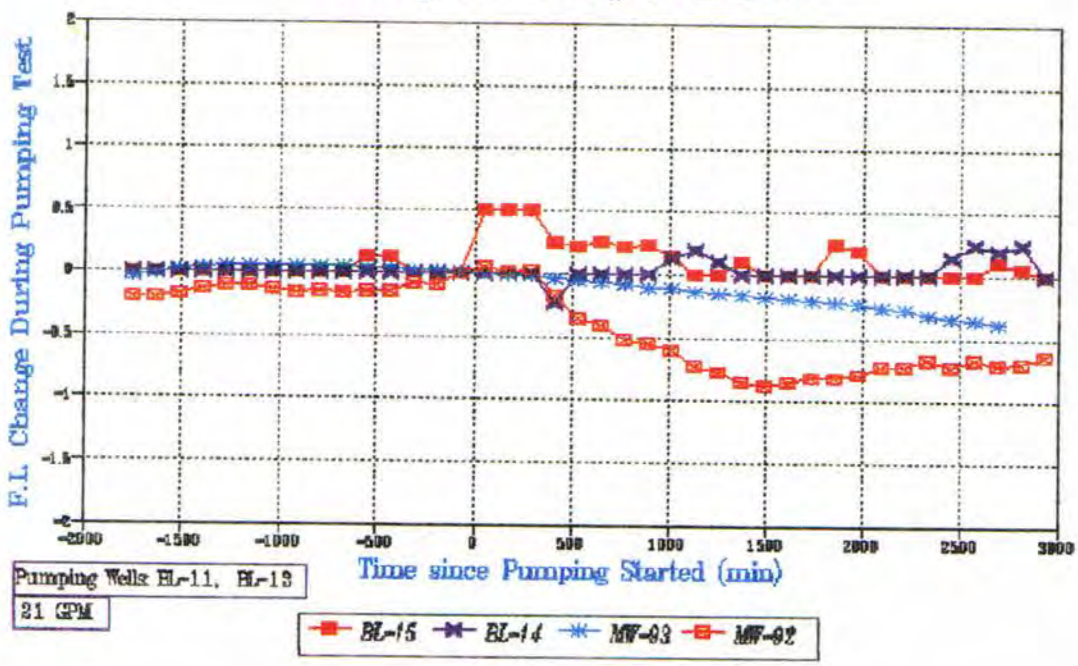

URFS Rosita Project

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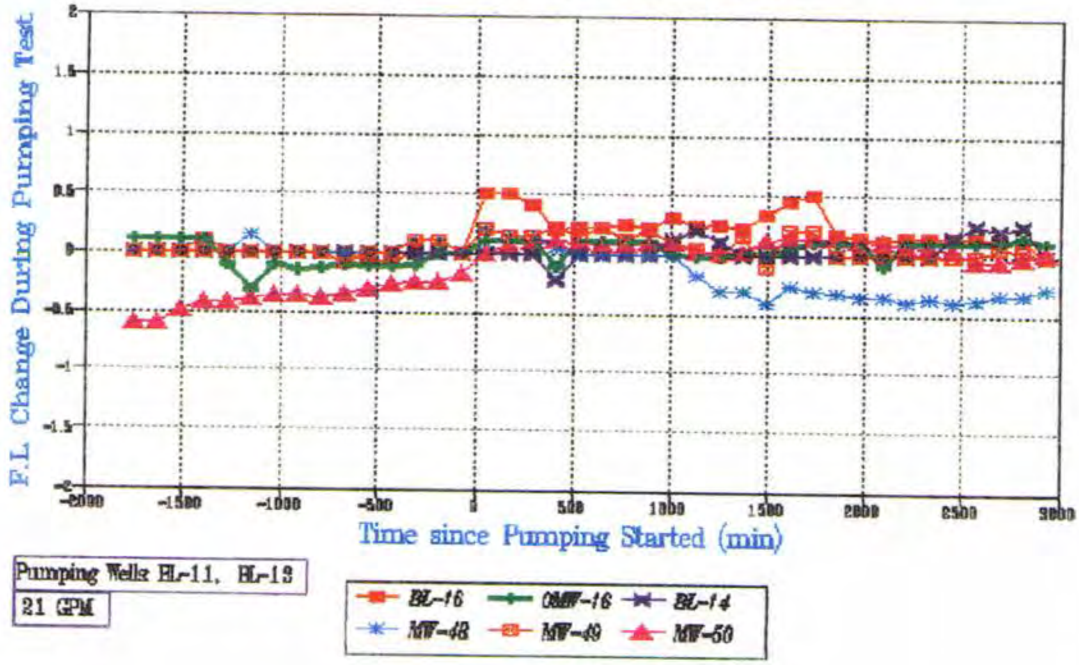
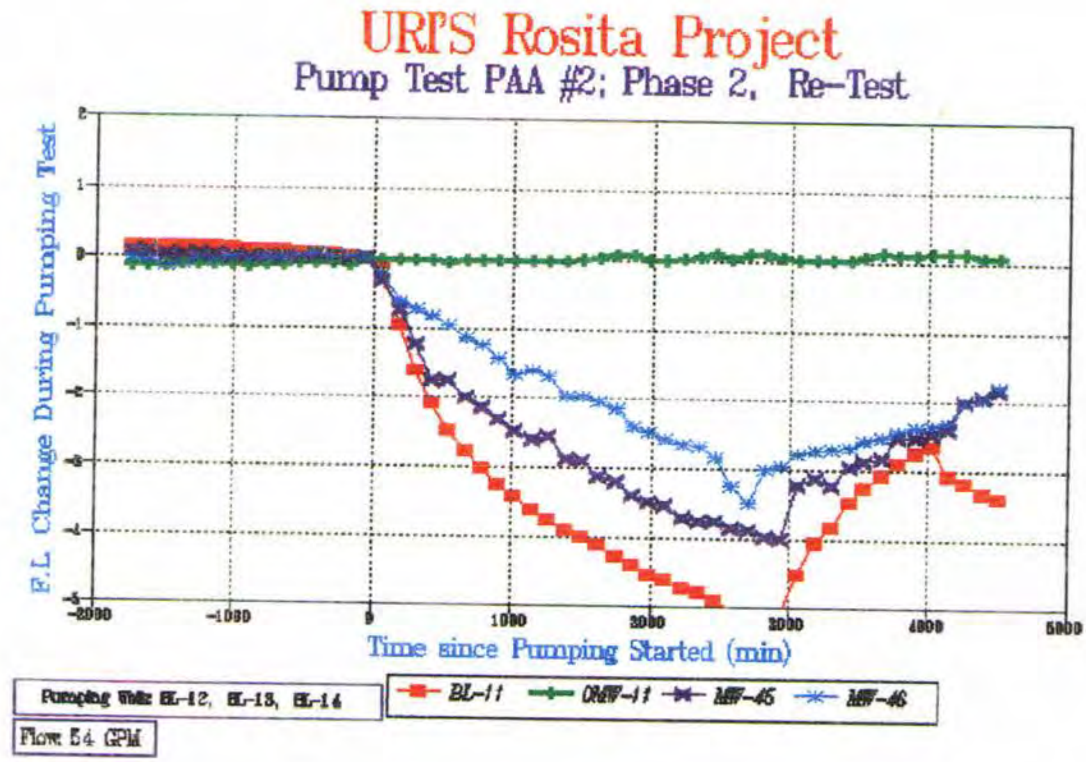
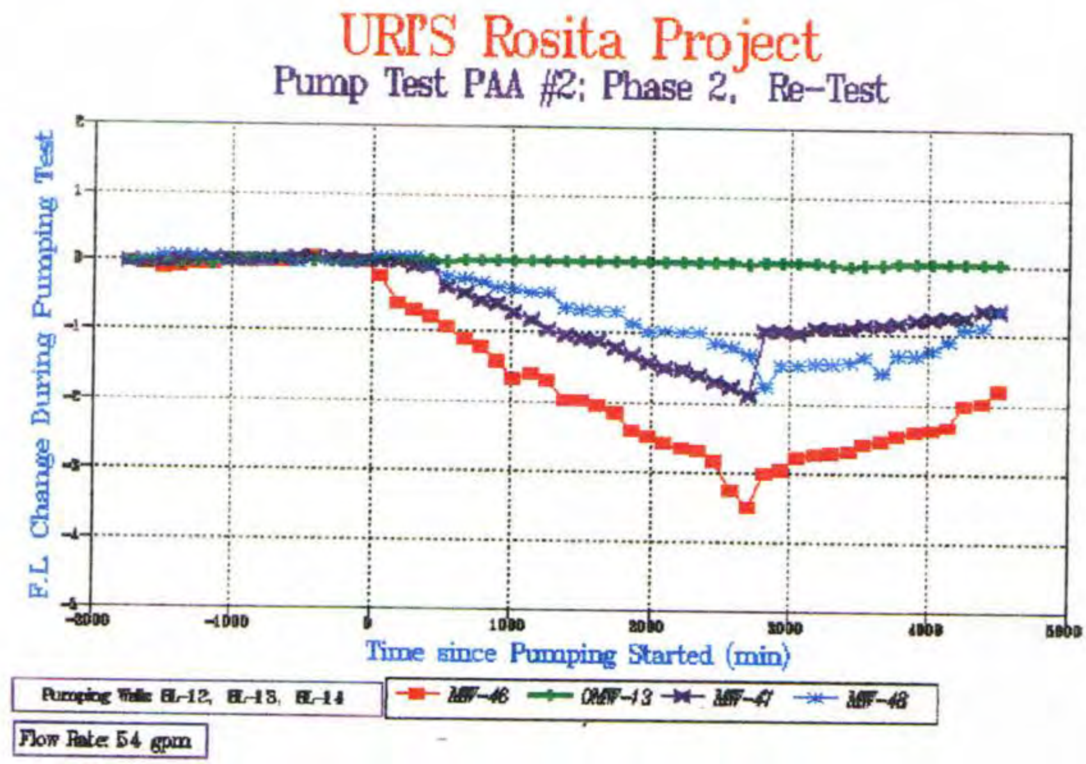



URI'S Rosita Project
Pump Test PAA #2; Phase 2, Re-Test
F.L. Change During Pumping Test
Time since Pumping Started (min)
Pumping Wells: BL-12, BL-13, BL-14
BL-11
OMW-11
MW-45
MW-46
Flow: 54 GPM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Pump Test PAA #2; Phase 2, Re-Test
F.L. Change During Pumping Test
Time since Pumping Started (min)
Pumping Wells: BL-12, BL-13, BL-14
MW-46
OMW-13
MW-47
MW-48
Flow Rate: 54 gpm

URI'S Rosita Project
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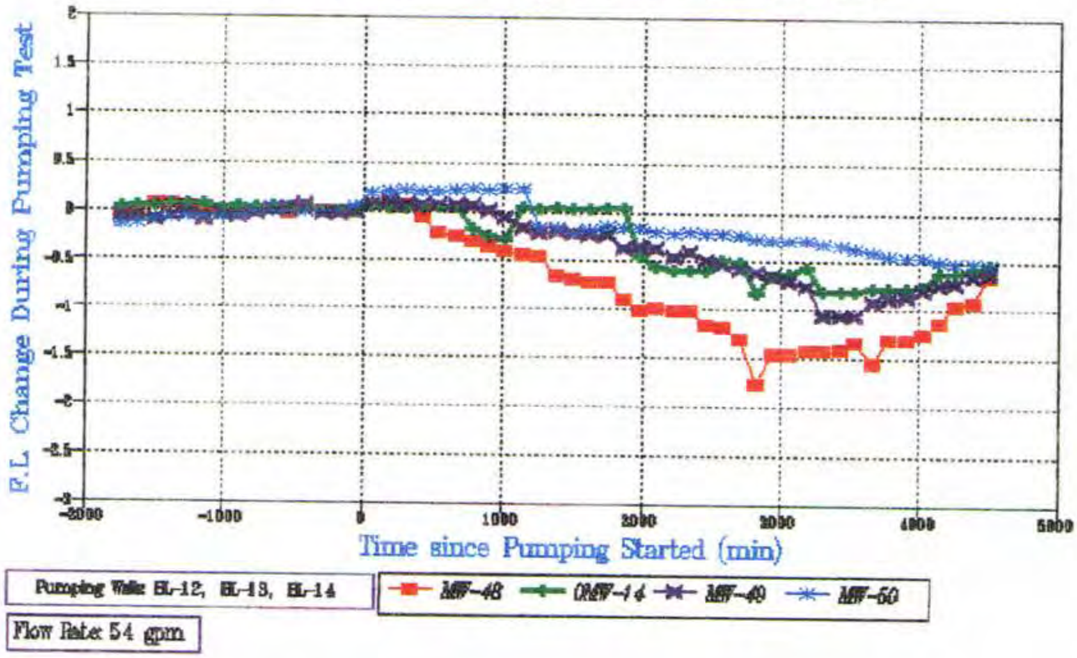

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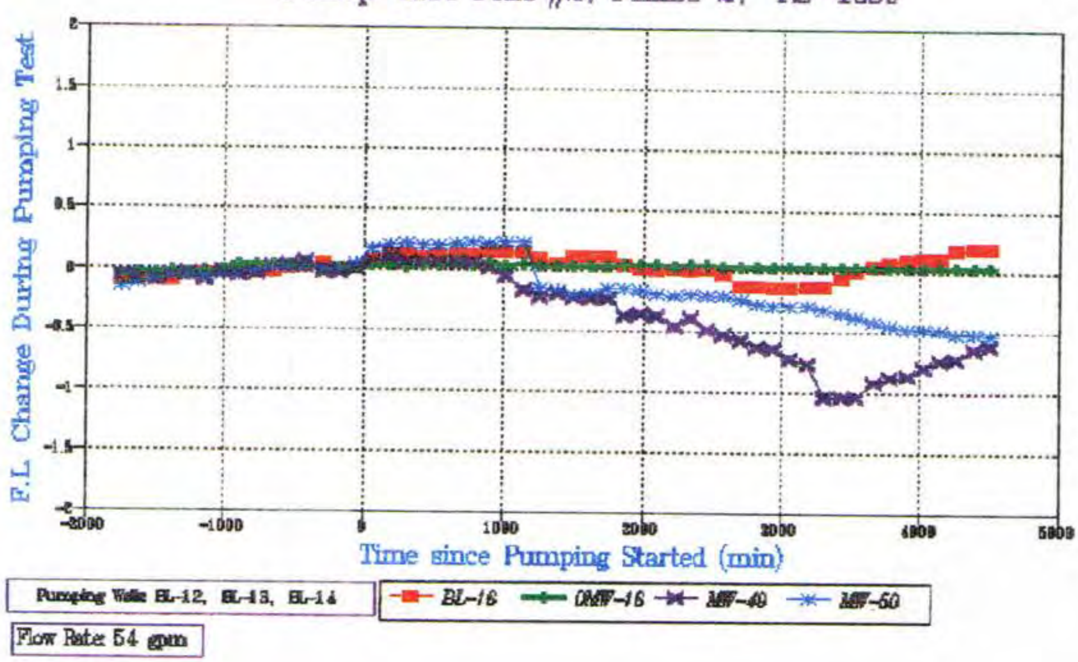

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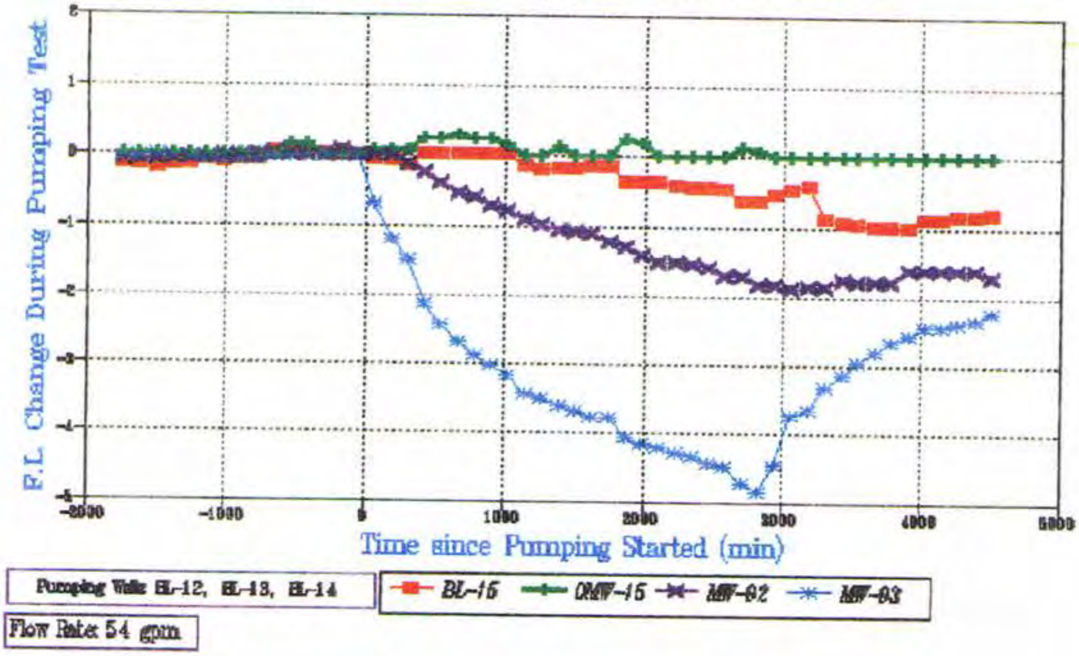

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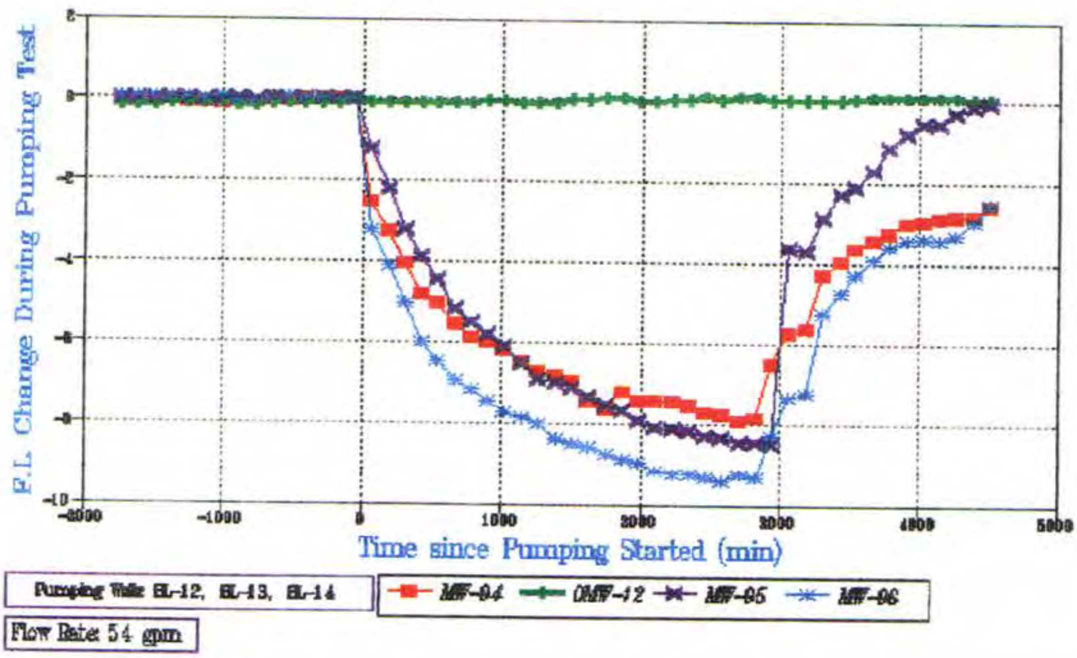
Pump Test PAA #2; Phase 2, Re-Test



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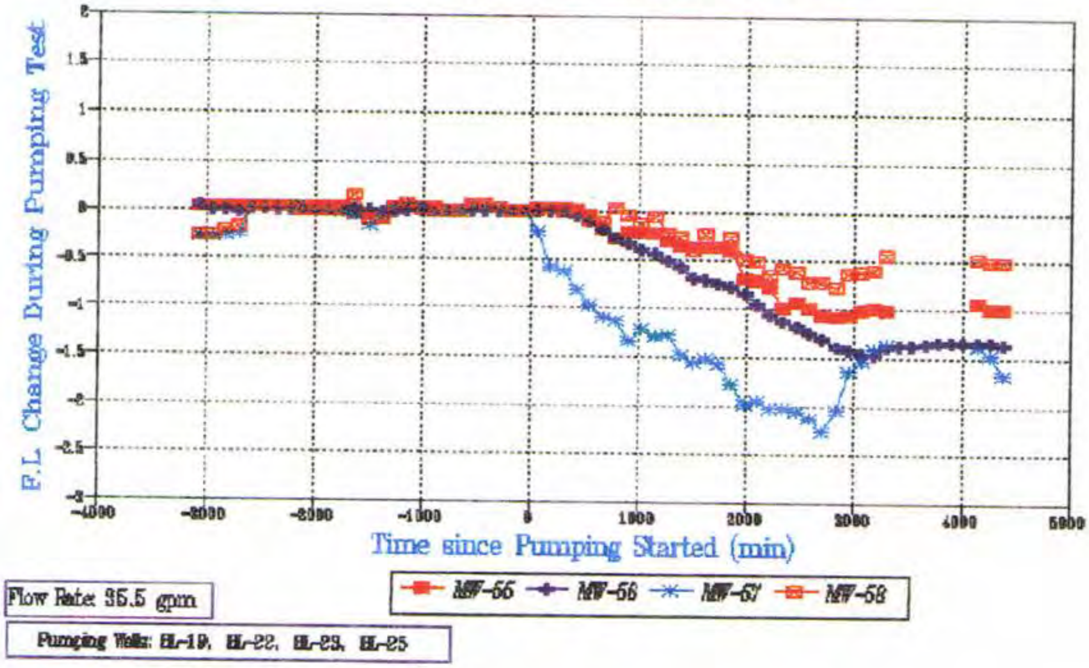

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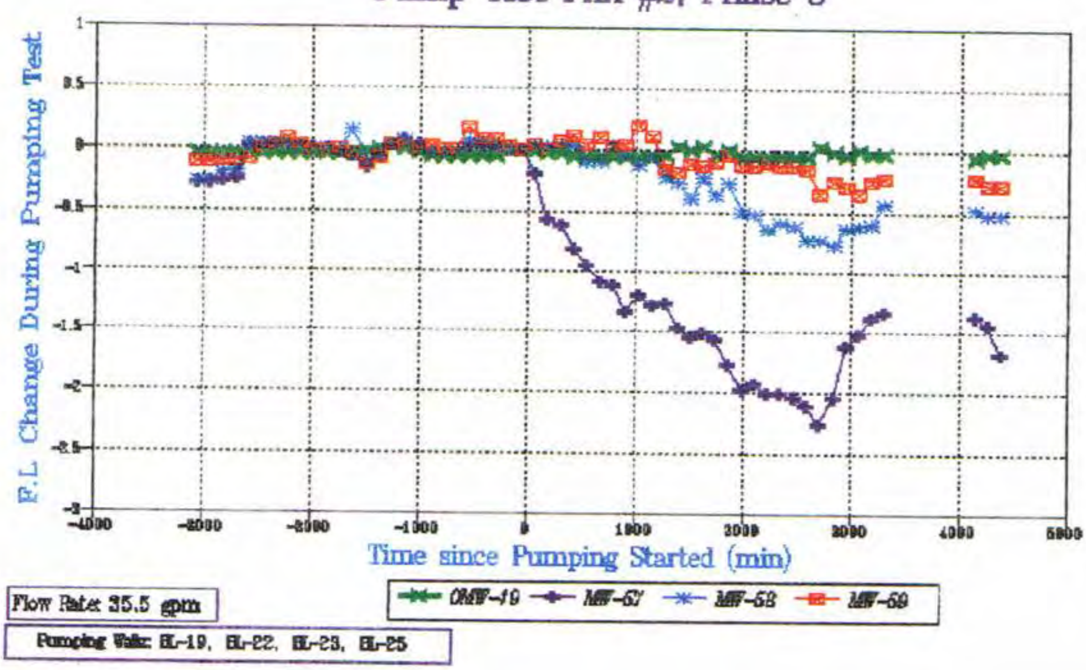

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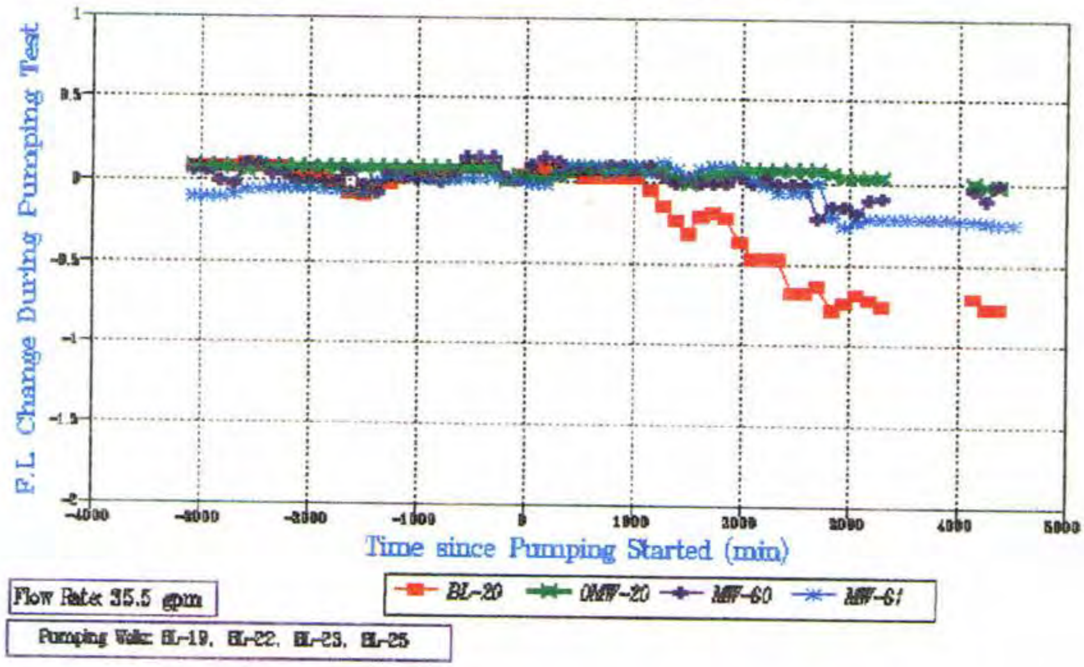

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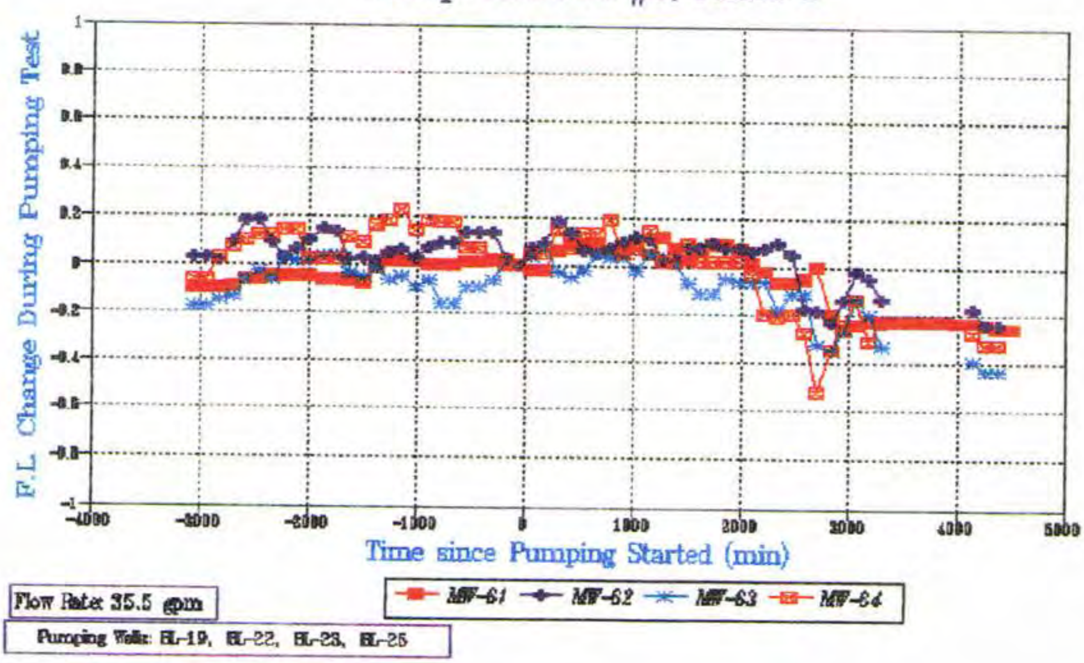

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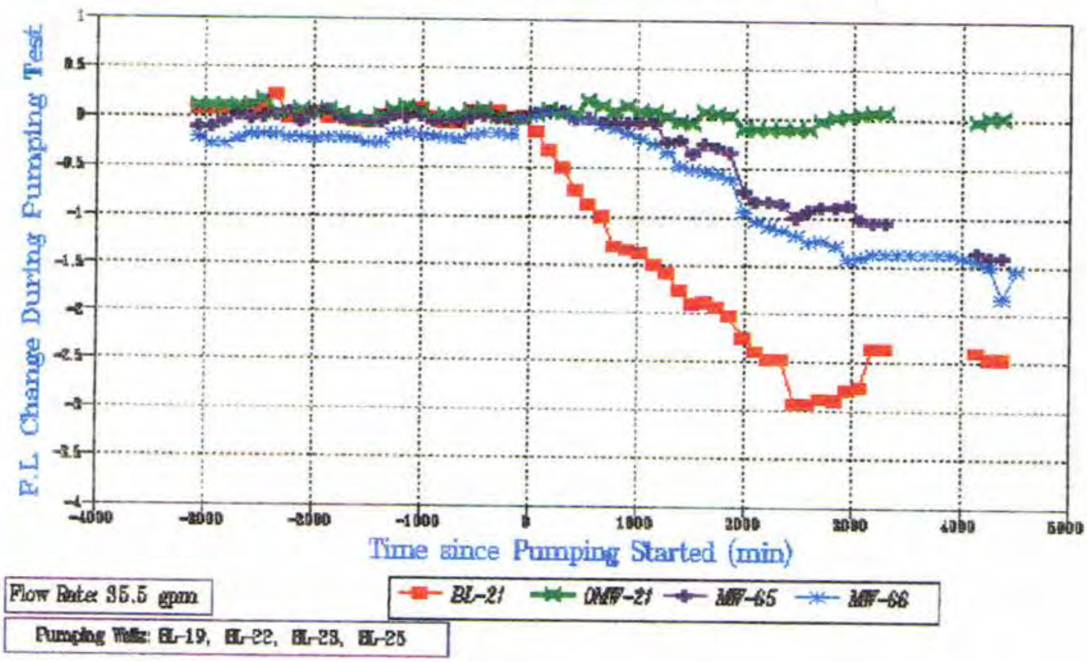

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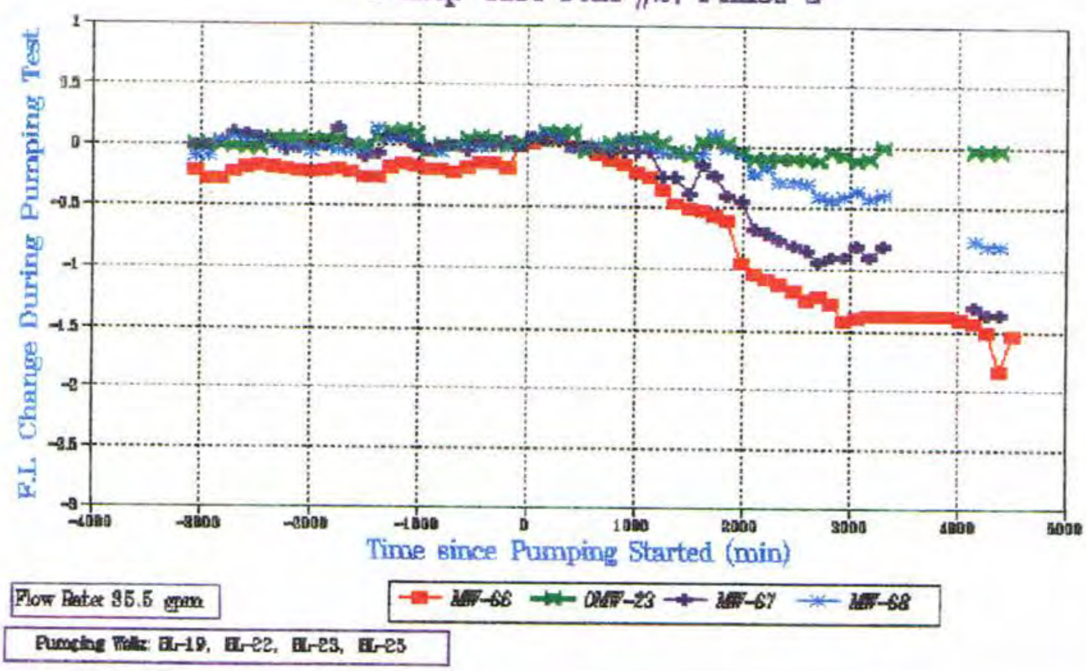
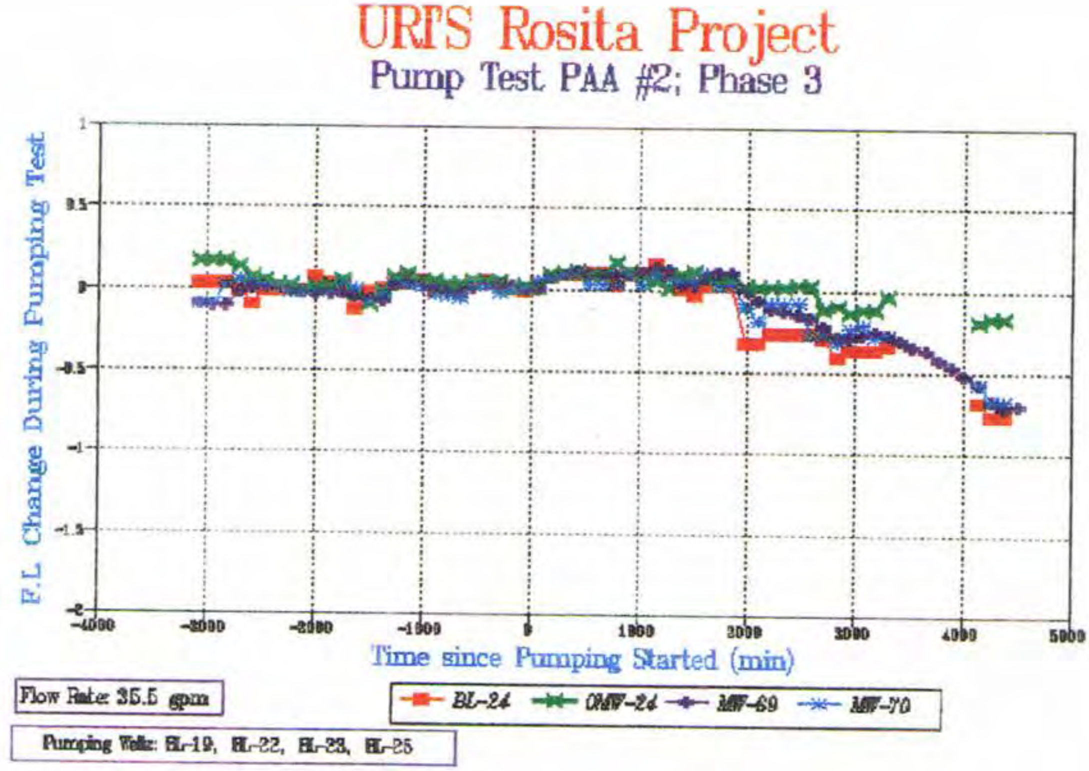
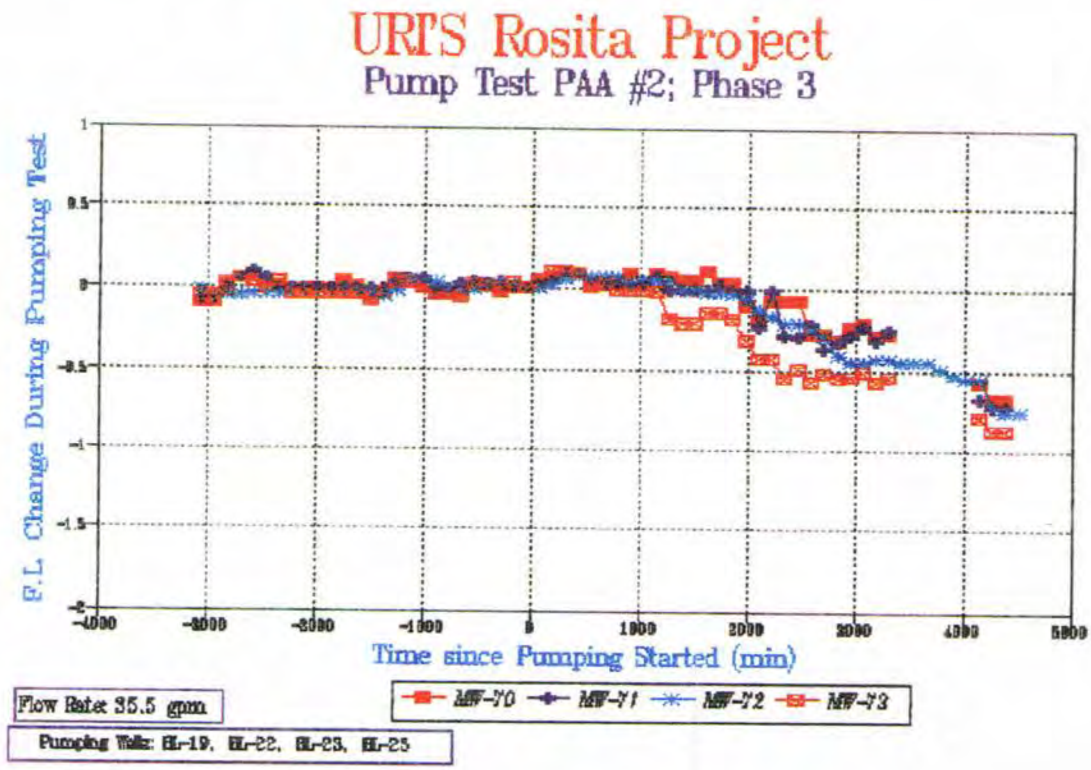
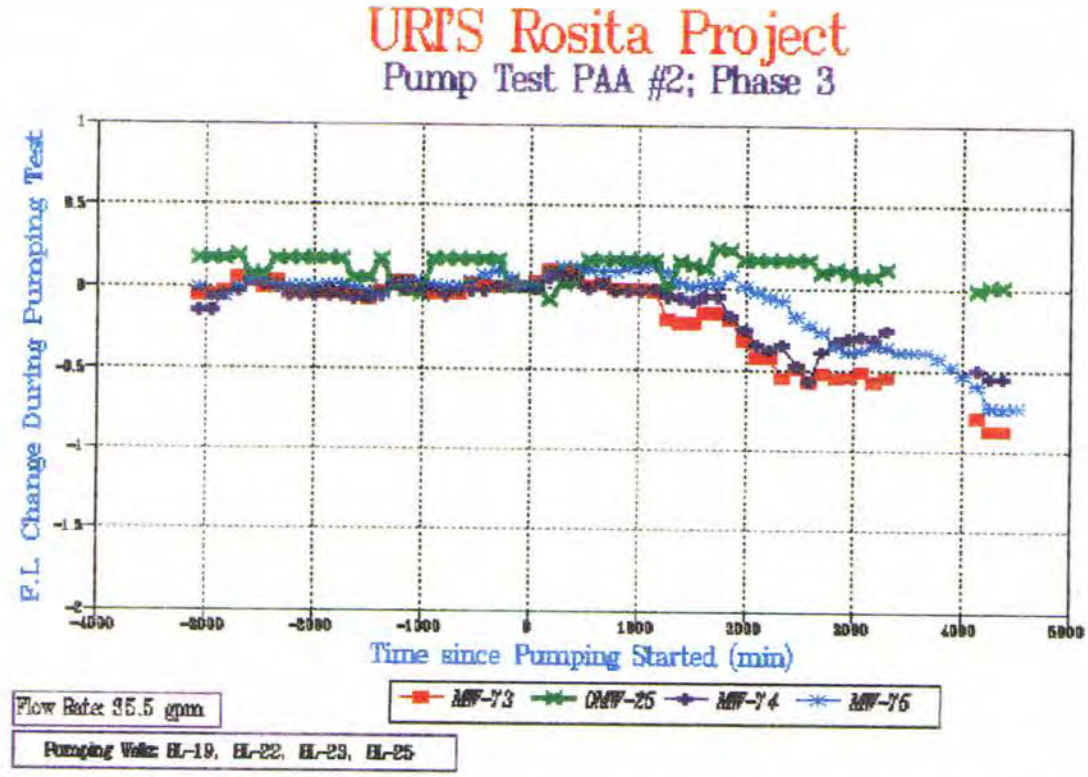
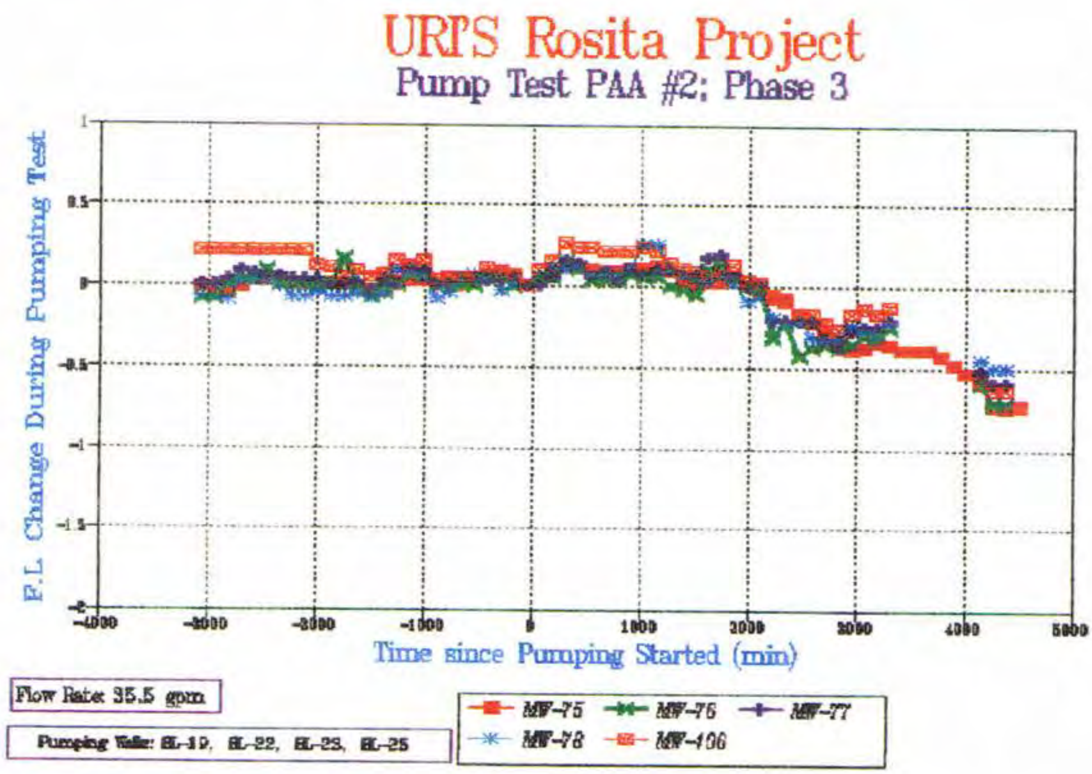
Pump Test PAA #2; Phase 3



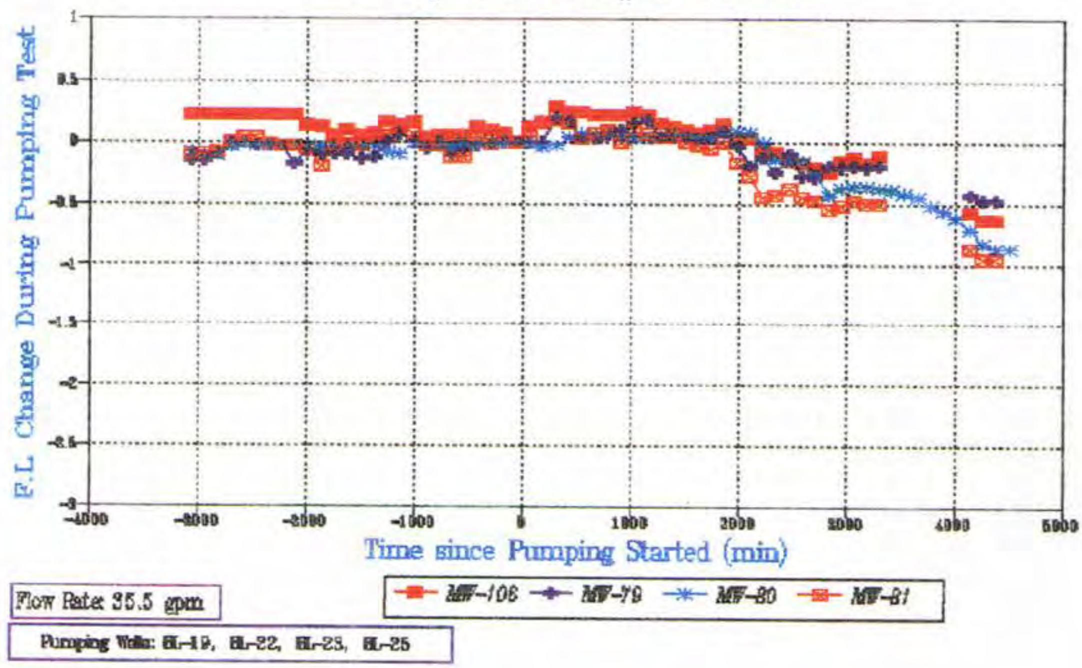

URFS Rosita Project
Pump Test PAA #2; Phase 3
F.L. Change During Pumping Test
1
0.5
0
-0.5
-1
-1.5
-2
-4000
-3000
-2000
-1000
0
1000
2000
3000
4000
5000
Time since Pumping Started (min)
Flow Rate: 35.5 gpm
BL-24
OMW-24
MW-69
MW-70
Pumping Wells: BL-19, BL-22, BL-23, BL-25


URFS Rosita Project
Pump Test PAA #2; Phase 3
F.L. Change During Pumping Test
1
0.5
0
-0.5
-1
-1.5
-2
-4000
-3000
-2000
-1000
0
1000
2000
3000
4000
5000
Time since Pumping Started (min)
Flow Rate: 35.5 gpm
MW-70
MW-71
MW-72
MW-73
Pumping Wells: BL-19, BL-22, BL-23, BL-25


URI'S Rosita Project
Pump Test PAA #2; Phase 3
F.L. Change During Pumping Test
Time since Pumping Started (min)
MW-73
OMW-25
MW-74
MW-76
Flow Rate: 35.5 gpm
Pumping Wells: BL-19, BL-22, BL-23, BL-25


URI'S Rosita Project
Pump Test PAA #2; Phase 3
F.L. Change During Pumping Test
Time since Pumping Started (min)
Flow Rate: 35.5 gpm
Pumping Wells: BL-19, BL-22, BL-23, BL-25
MW-75
MW-76
MW-77
MW-78
MW-106

URI'S Rosita Project
Pump Test PAA #2; Phase 3



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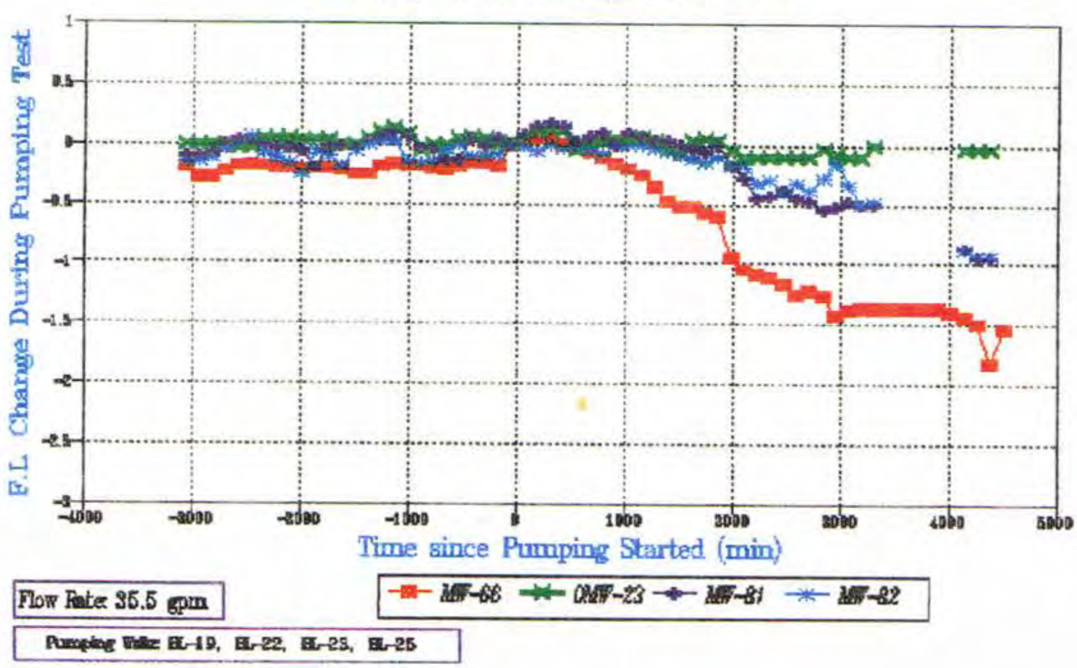
Pump Test PAA #2; Phase 3



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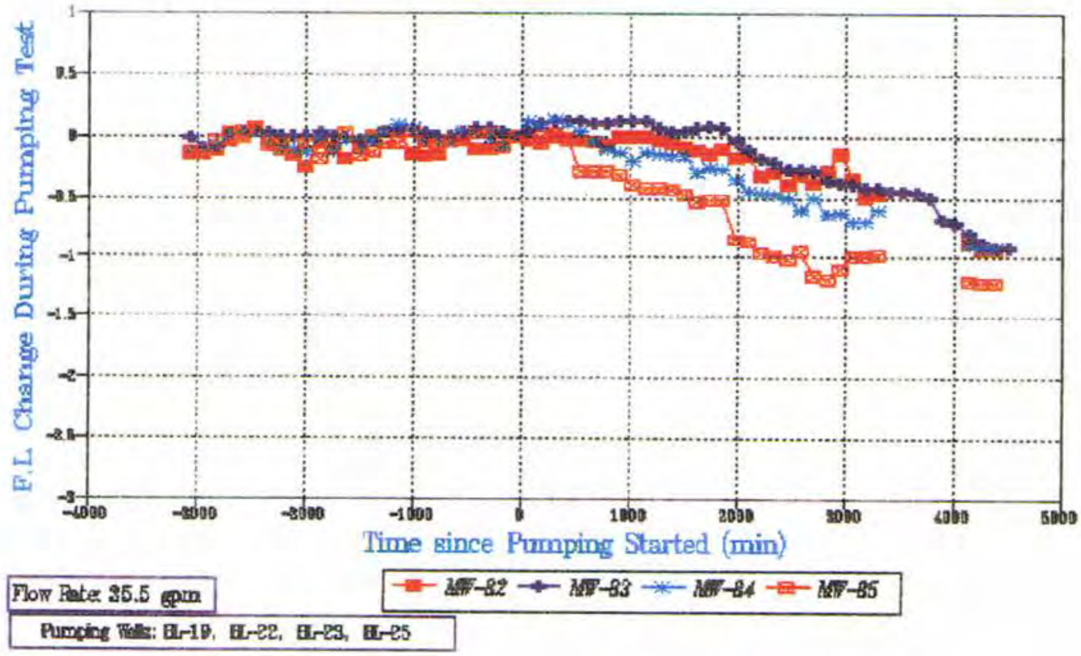
Pump Test PAA #2; Phase 3



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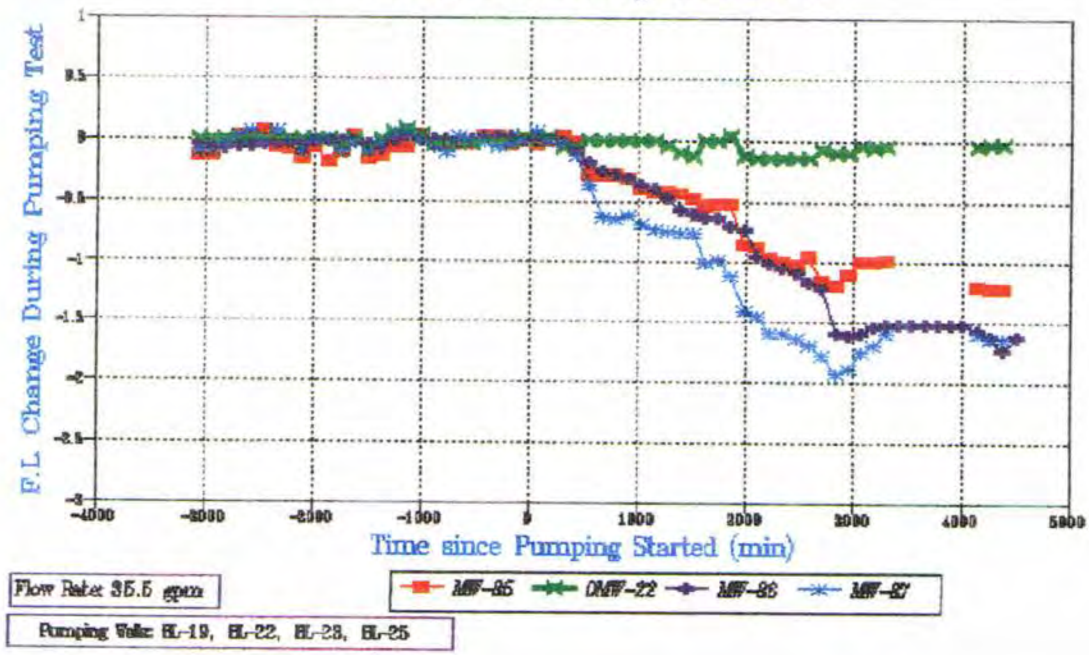

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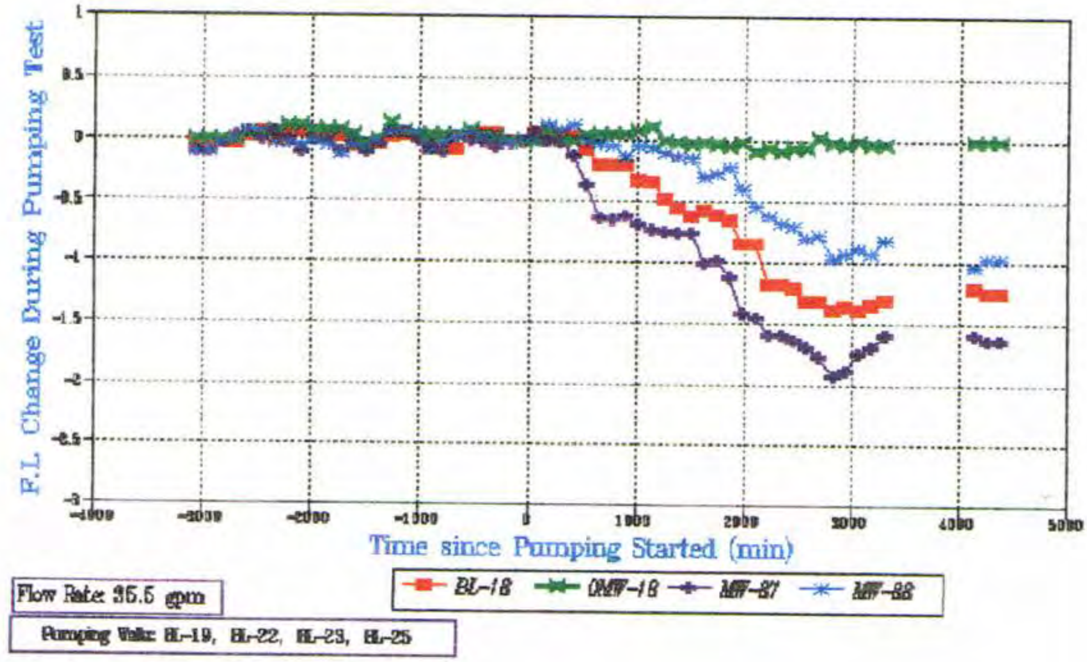

PAA3

INTRODUCTION

URI is currently operating its Rosita Project in-situ leach uranium mine. The mine is located in northern Duval County, Texas. The operating mine is included within two production area authorizations, PAA-1 and PAA-2. As part of the mine plan, expansion of the mine area is required in order to maintain production levels considered economical for mining activities.

As part of the permitting process for the proposed expansion area (PAA-3), a hydrologic test is required. The purpose of the test is to demonstrate that hydraulic communication exists throughout the production sand across the area included within the monitor well ring surrounding the proposed production area. This hydraulic communication is necessary to ensure that proper detection of pressure responses and leach solutions is possible for the control of the mining solutions. In addition, the test is also used to demonstrate the competence of the aquitard between the production zone and the overlying and underlying aquifers, if they exist. The test is performed using pumping wells within the mine area which are opened to the mining sand. When the wells are pumped, the aquifer containing the mining sand is drawn down resulting in a like response which are observed in the production zone monitor wells which encircle the mine area. The supra-adjacent and sub-adjacent aquifers (if present) are also monitored for response during the pumping test.

The proposed production area is enclosed by thirty-four (34) production zone monitor wells. Four (4) of the production area monitoring wells are also part of the PAA-2 monitor well ring. In addition to the monitor wells the third production area also contains seven (7) base line wells and seven (7) wells monitoring the aquifer overlying the mining sand aquifer. There is no underlying aquifer within the production area under consideration. Therefore, there are no underlying aquifer monitor wells.

The hydrologic test was conducted during the period of March 19, 1996 though March 24, 1996. Pumps were place in five (5) base line wells located within the proposed production area. The aggregate pumping rate though put the pumping phase of the test was 43.17 gallon per minute (gpm).

PUMP TEST PROCEDURES

Five of the baseline production zone wells located within the proposed production area monitor well ring were used as pumping wells. The wells were chosen to be used as pumping wells based on the ability to obtain higher flowrates and to allow for reasonable response times in the production zone monitor wells.

Each pumping well was equipped with a Grundfos 10S15-21 submersible pump with a 1.5 horsepower motor. The pumps were set at a depth of approximately 180 feet. Each well was equipped with a tube such that fluid levels could be obtained while pumping. Each pumping well was also equipped with a Hersey MVR 50 water meter.

There were 43 observation wells monitored for response during the pump test. Seven wells monitored the response in the overlying aquifer. Two of the production zone observation wells were baseline wells and 34 were the wells that made up the monitor well ring. The role of each well, distance from each observation well and the closest pumping well and initial and final pumping fluid levels are shown in Table 1.

Three methods were used to measure the fluid levels in the wells: 1). Stevens continuous level chart recorders; 2). Calibrated coaxial electrical sounder, (Quick E-Line) and 3). Roctest Water Level Indicator, Model CPR6. The configuration of the fluid level recording equipment is was as follows:

Table 1

Disposition of the Observation Equipment

STEVENS RECORDER		**QUICK E-LINE**		**ROCTEST W. L. I.**
MW-113	MW-71	MW-122	OMW-27	MW-73
MW-118	MW-74	MW-123	OMW-28	BL-29 (PUMP)
MW-129	MW-75	MW-124	0MW-29	BL-31 (PUMP)
MW-135	MW-110	MW-125	OMW-30	BL-32 (PUMP)
OMW-26	MW-111	MW-126	OMW-32	BL-33 (PUMP)
OMW-31	MW-112	MW-127	BL-29	BL-34 (PUMP)
	MW-114	MW-128	BL-30	
	MW-114	MW-130	BL-28	
	MW-115	MW-131	BL-30	
	MW-116	MW-132		
	MW-117	MW-133		
	MW-119	MW-134		
	MW-120	MW-136		
	MW-121	MW-137		

Fluid levels in all the wells were recorded for 13 to 24 hours prior to starting the pumps. Recorders were checked at least every 2 hours for proper operation. The E-Line fluid levels were measured at least every 2 hours. A recording barograph was operated throughout the test period.

The pumping test was scheduled to be operated for 48 hours. Based on prior experience in PAA #1 and PAA #2, 48 hours has been sufficient pumping time to observe a response in the production zone monitor wells. The final determination of the completion of the test was determined by observing the actual response in the peziometric levels in all of the monitor wells.

The fluid levels in the pumping wells were measured during both the drawdown and recovery phases of the test. The fluid levels were measured every hour. Flowrates and water meter totalizer readings were recorded on an hourly basis during the pumping portion of the test.

TEST RESULTS

The five pumping wells were started at noon (1200 hr.) on March 20, 1996. The pumps were operated at the maximum sustainable flow rate for each well. The average flow rate for each wall is: BL-29, 6.73 gallons per minute (gpm); BL-31, 13.54 gpm; BL-32, 6.45 gpm; BL-33, 5.59 gpm and BL-43, 10.86 gpm. The pumping wells were shut down at 1200 hours, May 22, 1996.

During the pumping test, the operating wellfields located near PAA #3 continued to operate. The effects of the wellfield is evident on the wells nearest and along the PAA #2 monitor well ring. The responses from the pump test was observed in both PAA #2 and PAA #3 production zone monitor wells. Drawdown response close to the producing wellfields was less pronounced because of the over riding affect of continuous production bleed of approximately 40 gpm. Also, the recovery response after the pump test was stopped is less distinct because it was suppressed by the continued affect of wellfield bleed.

Throughout the pumping test, the production zone monitor wells responded to the pumping wells and the wellfield activity by drawing down as expected. During the recovery phase, the expected fluid level recovery was observed in the wells furthest away from the wellfield. As the distance between the wellfield and a production zone monitor well was shortened, the fluid level recovery resulting from the termination of pumping was less evident. This lack of recovery response is due to the interference from the wellfield as stated above. In all cases, the fluid level responses in adjacent wells were parallel to each other.

Five of the seven wells monitoring the overlying aquifer were dry at the time of the test. One of the two overlying monitor wells (OMW-28), that had measured fluid levels showed no response to the pumping. The other overlying monitor well (OMW-29) indicated a slight response to the pumping. Since OMW-28 did not respond to nearby pumping, and prior pump tests have not discovered any vertical leakage into the overlying aquifer, it is reasonable to conclude that the observation in OMW-29 is unique. OMW-29 is located 20 feet away from the pumping well BL-31, and did not respond with as much drawdown as the production zone monitor wells located a significantly longer distance away from the pumping well. This response could be due to an improperly plugged exploration hole nearby. Prior to the start of injection, these holes will be plugged within the wellfield.

The results of the drawdown portion of the pumping test are tabulated on table one. Charts 1 through 9 present the fluid level responses versus time on a graphical basis.

Table 2

Pump Test , PAA #3

Date: 03/20/96
Pumping Time: 2880 minutes

Cumm. Flow: 43.2 GPM

Well Number	Role	Starting Fluid Level (ft. MSL)	Final Fluid Level (ft. MSL)	Drawdown (ft.)	Nearest Pumping Well	Distance to Well (ft.)
BL-28	OBS.	344.97	343.72	-1.25	BL-29	952.00
BL-29	PUMP	347.90	309.50	-38.40	NA	NA
BL-30	OBS.	348.16	346.51	-1.65	BL-31	774.00
BL-31	PUMP	346.67	310.11	-36.56	NA	NA
BL-32	PUMP	352.12	318.02	-34.10	NA	NA
BL-33	PUMP	355.60	318.60	-37.00	NA	NA
BL-34	PUMP	351.02	311.21	-39.81	NA	NA
MW-72	OBS.	336.60	336.05	-0.55	BL-29	1057.00
MW-73	OBS.	337.03	335.68	-1.35	BL-29	1223.00
MW-74	OBS.	340.11	338.92	-1.19	BL-29	1392.00
MW-75	OBS.	340.25	339.31	-0.94	BL-31	1393.00
MW-109	OBS.	343.52	342.54	-0.98	BL-31	1010.00
MW-110	OBS.	342.50	323.68	-0.82	BL-31	619.00
MW-111	OBS.	350.89	349.76	-1.13	BL-31	431.00
MW-112	OBS.	348.27	347.21	-1.06	BL-31	476.00
MW-113	OBS.	349.45	348.81	-0.64	BL-31	545.00
MW-114	OBS.	350.09	348.96	-1.13	BL-31	505.00
MW-115	OBS.	350.68	349.30	-1.38	BL-31	567.00
MW-116	OBS.	352.06	350.93	-1.13	BL-32	584.00
MW-117	OBS.	352.01	350.88	-1.13	BL-32	445.00
MW-118	OBS.	353.56	352.55	-1.01	BL-32	516.00
MW-119	OBS.	360.18	356.17	-4.01	BL-32	603.00
MW-120	OBS.	358.91	358.13	-0.78	BL-32	663.00
MW-121	OBS.	359.07	356.63	-2.44	BL-33	741.00
MW-122	OBS.	359.57	358.96	-0.61	BL-33	702.00
MW-123	OBS.	360.62	360.01	-0.61	BL-33	462.00
MW-124	OBS.	359.59	358.50	-1.09	BL-33	515.00

Well Number	Role	Starting Fluid Level (ft. MSL)	Final Fluid Level (ft. MSL)	Draw down (ft.)	Nearest Pumping Well	Distance to Well (ft.)
BL-33	PUMP	355.60	318.60	-37.00	NA	NA
MW-125	OBS.	359.90	358.91	-0.99	BL-33	541.00
MW-126	OBS.	353.60	352.59	-1.01	BL-33	519.00
MW-127	OBS.	354.91	353.85	-1.06	BL-33	578.00
MW-128	OBS.	354.01	352.85	-1.16	BL-29	810.00
MW-129	OBS.	354.37	353.53	-0.84	BL-29	974.00
MW-130	OBS.	353.50	352.24	-1.26	BL-29	918.00
MW-131	OBS.	353.49	351.16	-2.33	BL-34	540.00
MW-132	OBS.	363.86	361.63	-2.23	BL-34	450.00
MW-133	OBS.	353.96	352.36	-1.60	BL-34	594.00
MW-134	OBS.	356.20	354.65	-1.55	BL-34	642.00
MW-135	OBS.	351.17	348.21	-2.96	BL-34	605.00
MW-136	OBS.	347.84	346.08	-1.76	BL-34	443.00
MW-137	OBS.	345.76	344.28	-1.48	BL-34	550.00
MW-138	OBS.	346.19	344.51	-1.68	BL-29	811.00
OMW-26	OBS.	385.36	385.36	0.00	BL-29	924.00
OMW-27	OBS.	359.23	359.23	0.00	BL-29	20.00
OMW-28	OBS.	351.47	351.47	0.00	BL-31	761.00
OMW-29	OBS.	370.22	369.28	-0.94	BL-31	20.00
OMW-30	OBS.	434.13	432.16	-1.97	BL-32	20.00
OMW-31	OBS.	422.85	422.85	0.00	BL-33	19.00
OMW-32	OBS.	380.05	380.05	0.00	BL-34	21.00

CONCLUSIONS

The following conclusions are based on the results of the pump test run between March 19, 1996 and March 24, 1996 in the Rosita Project's proposed PAA #3 area.

1.) All of the production zone monitoring wells are in hydraulic communication with the production zone. Therefore the monitor wells will respond to pressure changes within the mining sand and leach solutions would be detectable if present.

2.) The overlying aquifer contained insufficient water throughout most of the area to test the integrity of the aquitard between the production zone aquifer and the overlying aquifer. One overlying monitor well (OMW- 28) did not respond to the pumping of the production zone aquifer and thus indicates that the aquitard, in the area of OMW-28 has sufficient integrity to prevent the vertical migration of mining solutions.

3.) Overlying monitor well, OMW-29 indicated minimal response to the pumping of the production zone. This well is in the area of at least one unplugged exploration hole as a result of earlier drilling other companies. All of those holes will be plugged prior to the start of injection, and the integrity of the overlying aquifer will be protected from vertical migration.

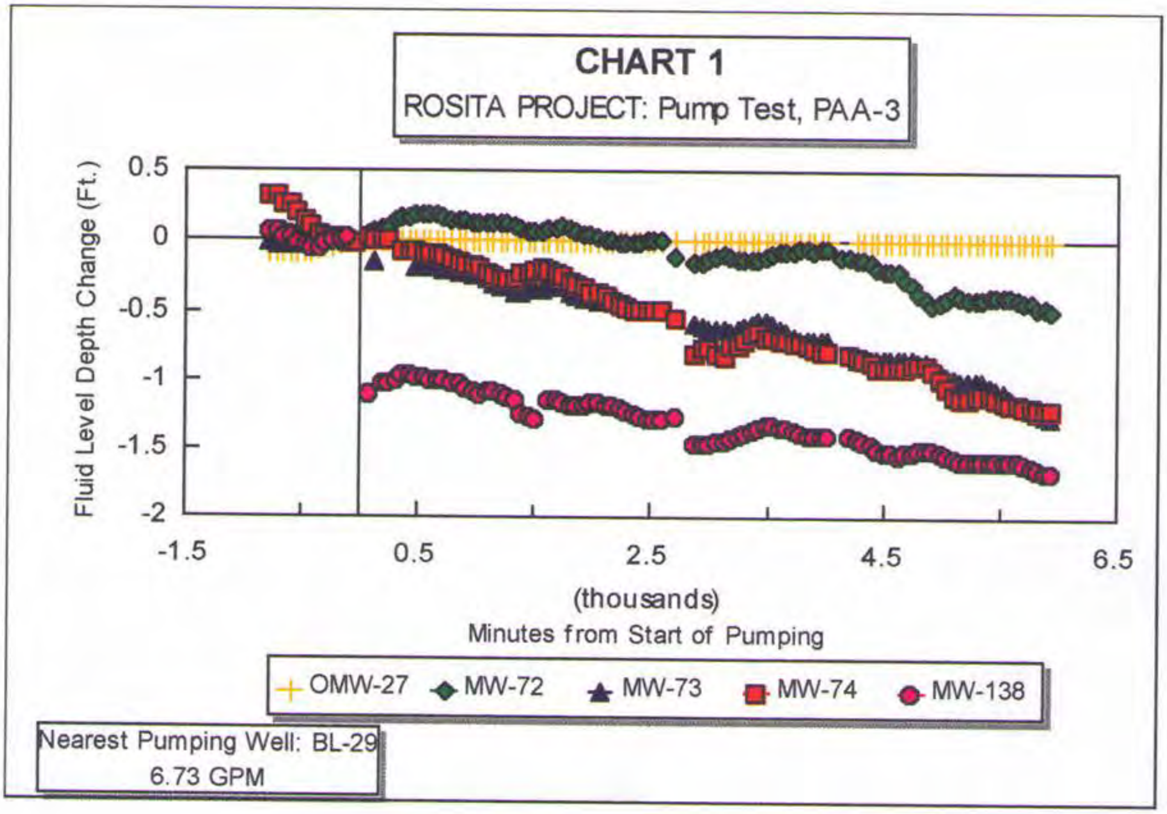
CHART 1
ROSITA PROJECT: Pump Test, PAA-3
Fluid Level Depth Change (Ft.)
0.5
0
-0.5
-1
-1.5
-2
-1.5
0.5
2.5
4.5
6.5
(thousands)
Minutes from Start of Pumping
OMW-27
MW-72
MW-73
MW-74
MW-138
Nearest Pumping Well: BL-29
6.73 GPM

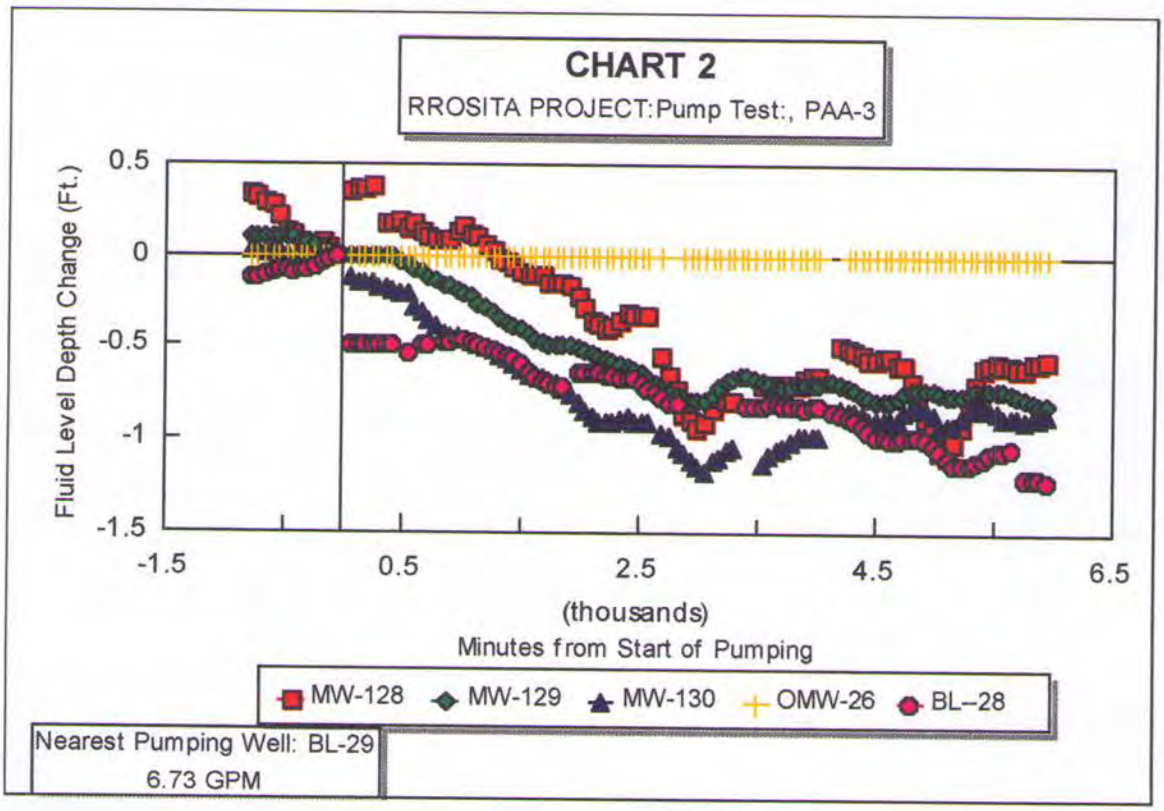
CHART 2
RROSITA PROJECT:Pump Test:, PAA-3
Fluid Level Depth Change (Ft.)
0.5
0
-0.5
-1
-1.5
-1.5
0.5
2.5
4.5
6.5
(thousands)
Minutes from Start of Pumping
MW-128
MW-129
MW-130
OMW-26
BL--28
Nearest Pumping Well: BL-29
6.73 GPM

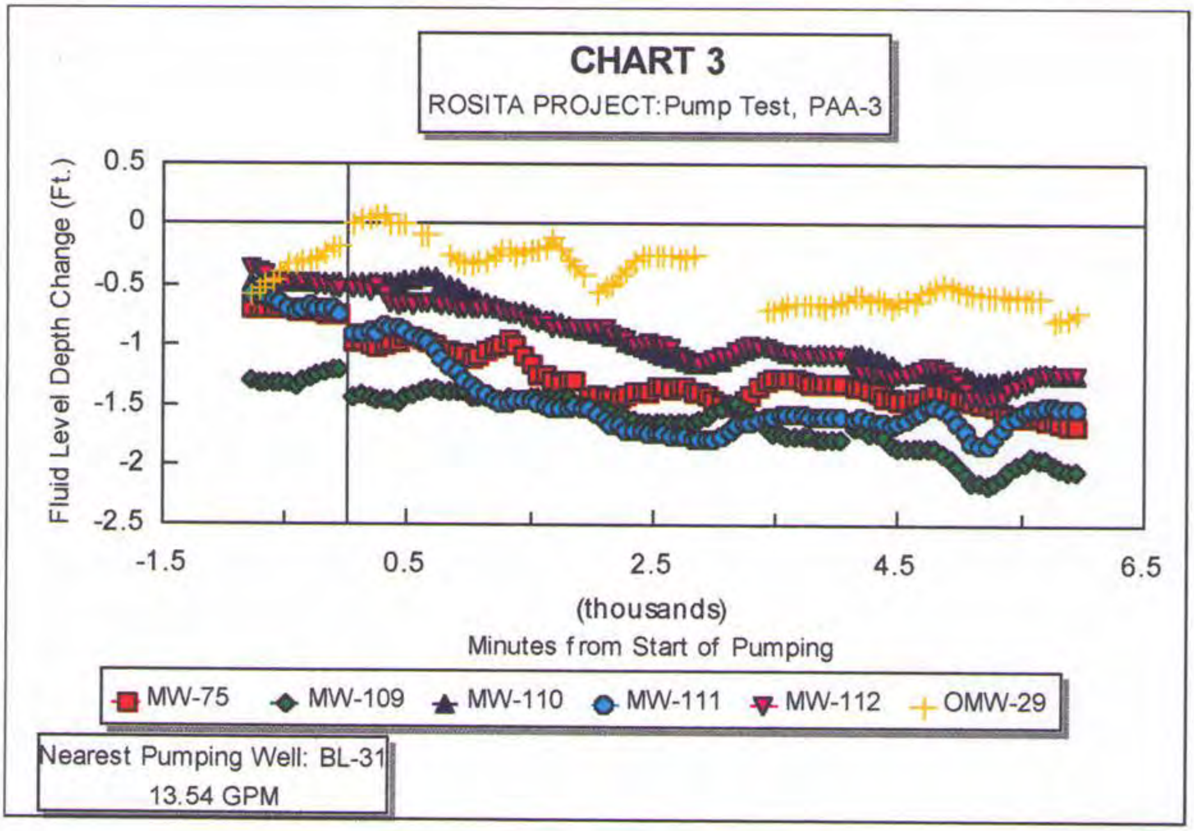

CHART 3
ROSITA PROJECT: Pump Test, PAA-3
Fluid Level Depth Change (Ft.)
0.5
0
-0.5
-1
-1.5
-2
-2.5
-1.5
0.5
2.5
4.5
6.5
(thousands)
Minutes from Start of Pumping
MW-75
MW-109
MW-110
MW-111
MW-112
OMW-29
Nearest Pumping Well: BL-31
13.54 GPM

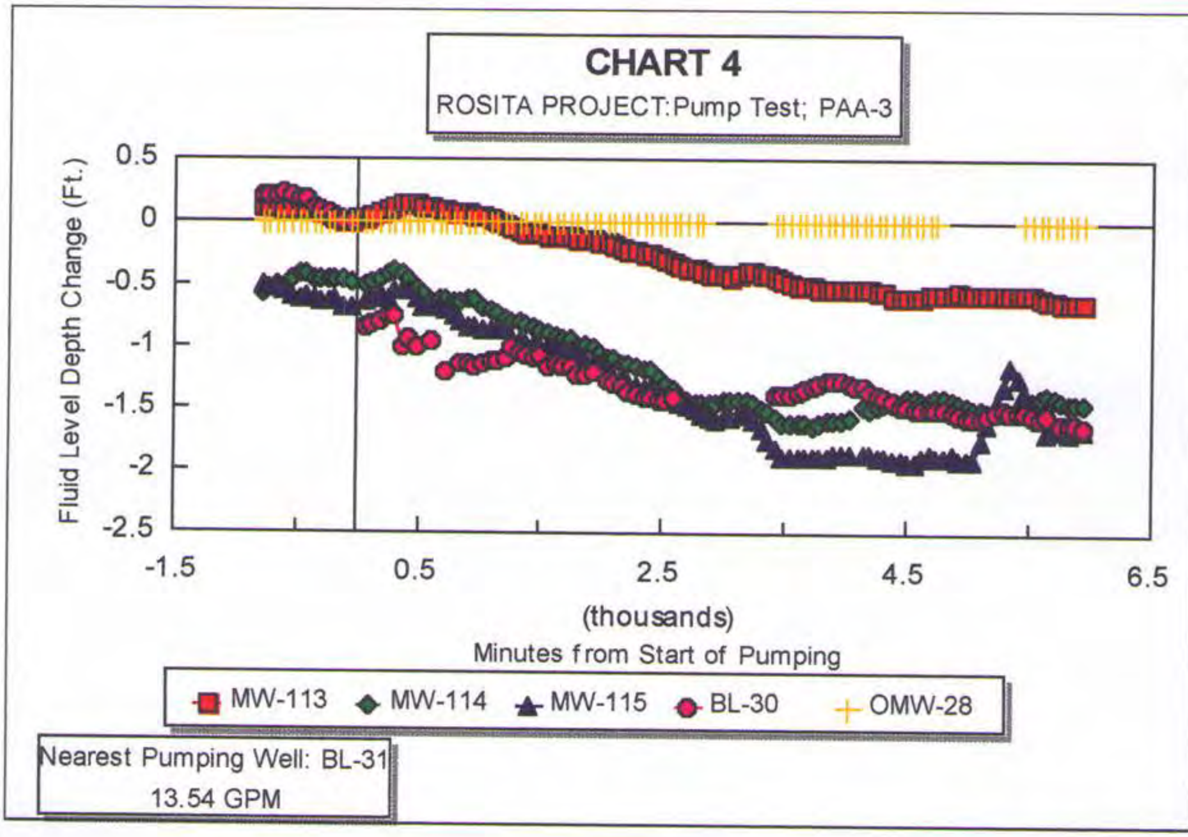

CHART 4
ROSITA PROJECT: Pump Test; PAA-3
Fluid Level Depth Change (Ft.)
0.5
0
-0.5
-1
-1.5
-2
-2.5
-1.5
0.5
2.5
4.5
6.5
(thousands)
Minutes from Start of Pumping
MW-113
MW-114
MW-115
BL-30
OMW-28
Nearest Pumping Well: BL-31
13.54 GPM

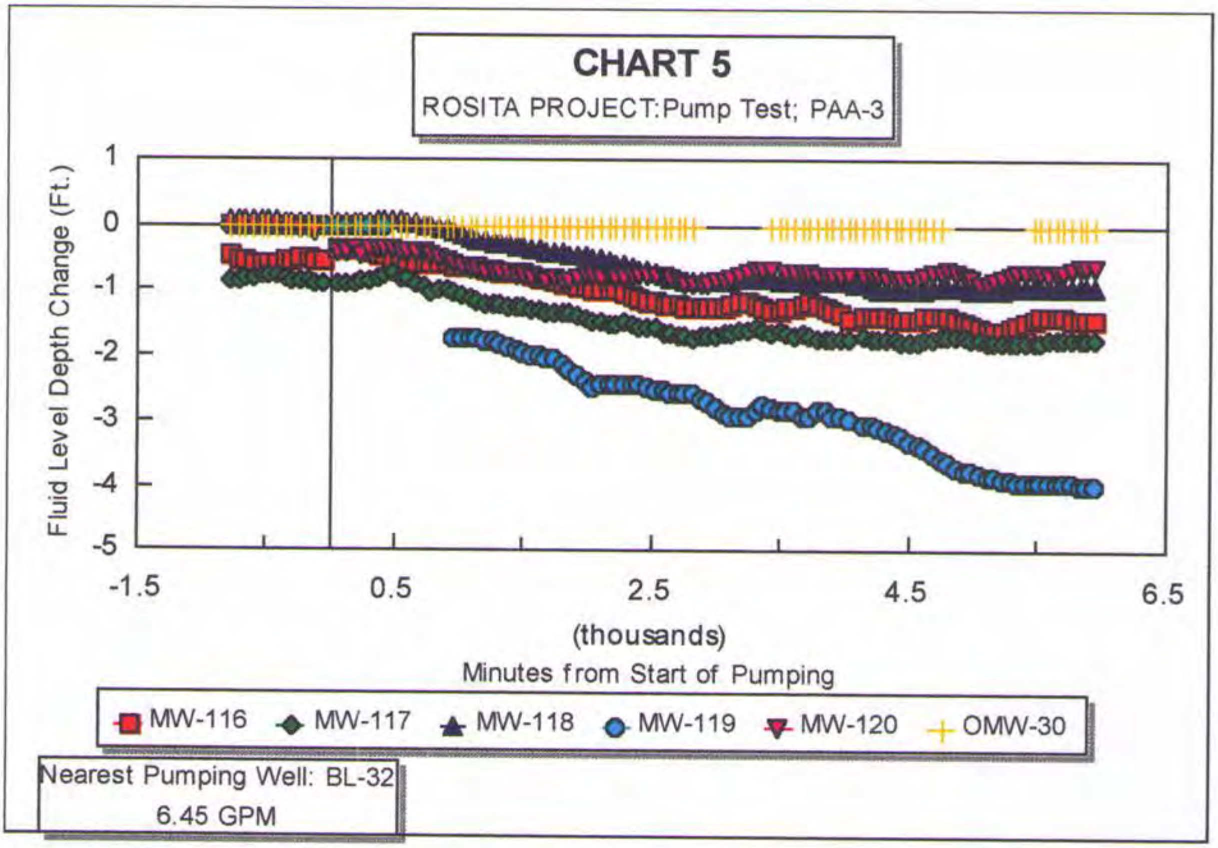
CHART 5
ROSITA PROJECT:Pump Test; PAA-3
Fluid Level Depth Change (Ft.)
1
0
-1
-2
-3
-4
-5
-1.5
0.5
2.5
4.5
6.5
(thousands)
Minutes from Start of Pumping
MW-116
MW-117
MW-118
MW-119
MW-120
OMW-30
Nearest Pumping Well: BL-32
6.45 GPM

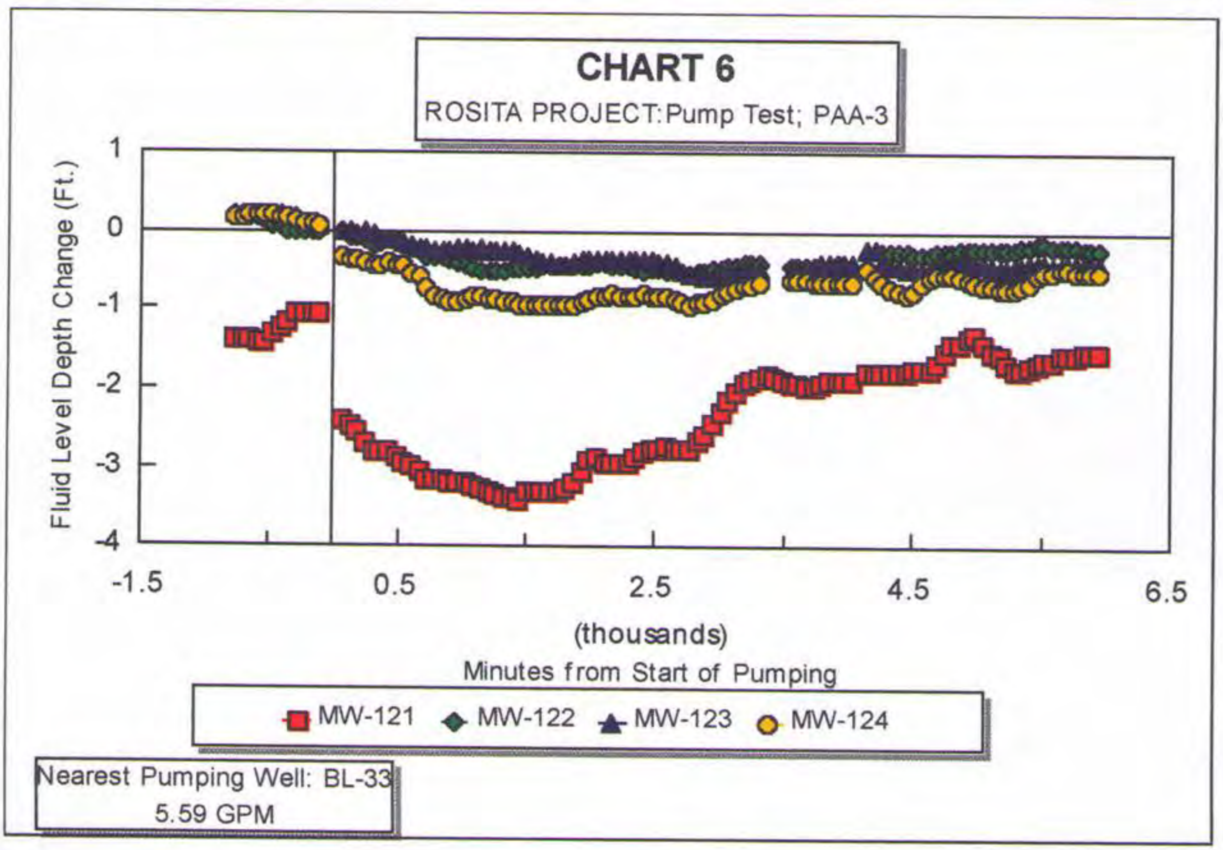
CHART 6
ROSITA PROJECT:Pump Test; PAA-3
Fluid Level Depth Change (Ft.)
1
0
-1
-2
-3
-4
-1.5
0.5
2.5
4.5
6.5
(thousands)
Minutes from Start of Pumping
MW-121
MW-122
MW-123
MW-124
Nearest Pumping Well: BL-33
5.59 GPM

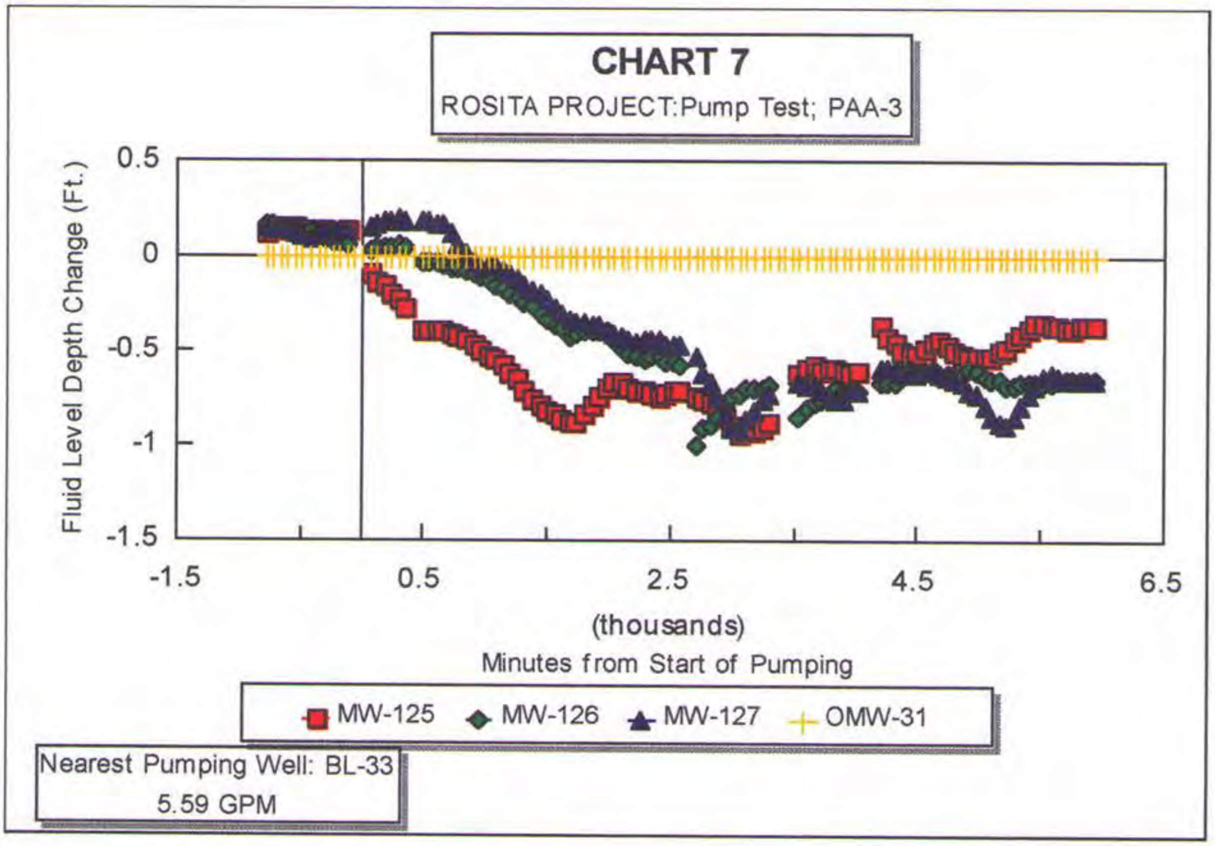

CHART 7
ROSITA PROJECT:Pump Test; PAA-3
Fluid Level Depth Change (Ft.)
0.5
0
-0.5
-1
-1.5
-1.5
0.5
2.5
4.5
6.5
(thousands)
Minutes from Start of Pumping
MW-125
MW-126
MW-127
OMW-31
Nearest Pumping Well: BL-33
5.59 GPM

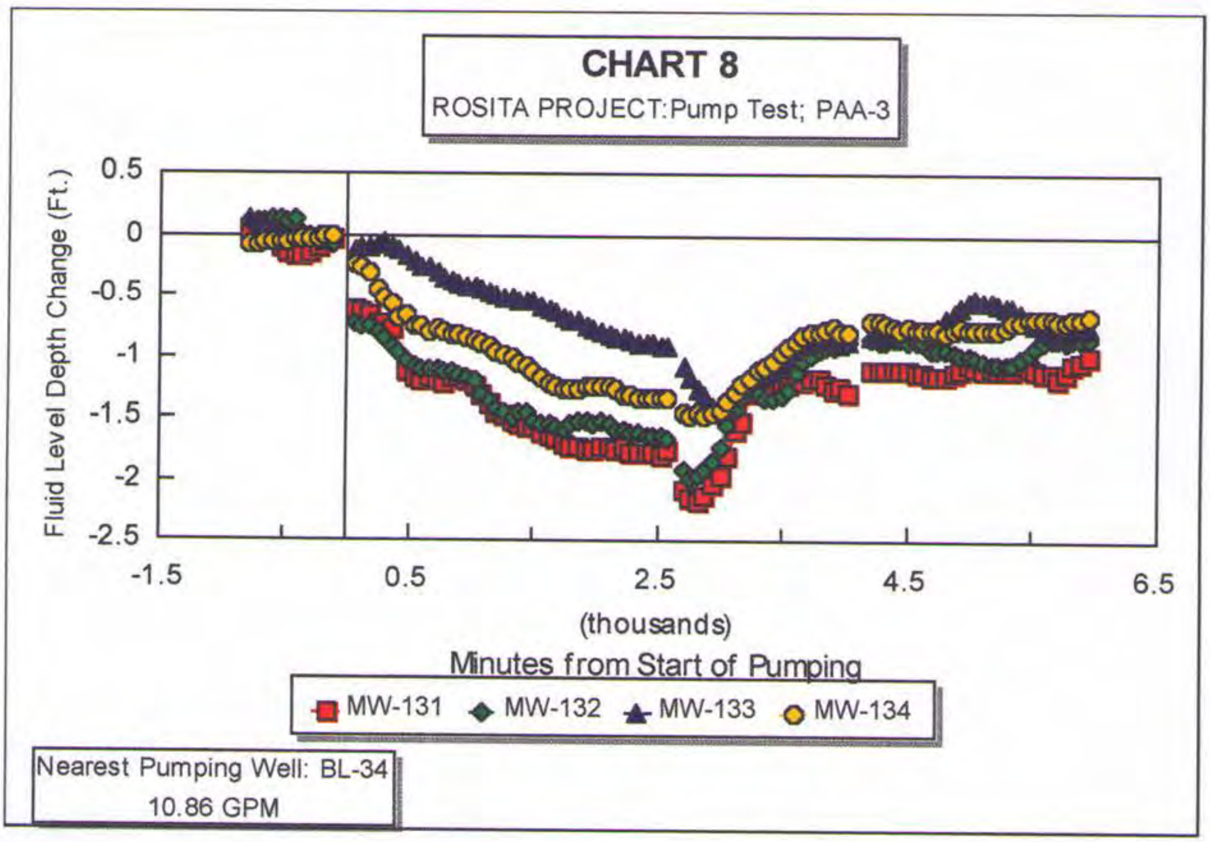

CHART 8
ROSITA PROJECT:Pump Test; PAA-3
Fluid Level Depth Change (Ft.)
0.5
0
-0.5
-1
-1.5
-2
-2.5
-1.5
0.5
2.5
4.5
6.5
(thousands)
Minutes from Start of Pumping
MW-131
MW-132
MW-133
MW-134
Nearest Pumping Well: BL-34
10.86 GPM

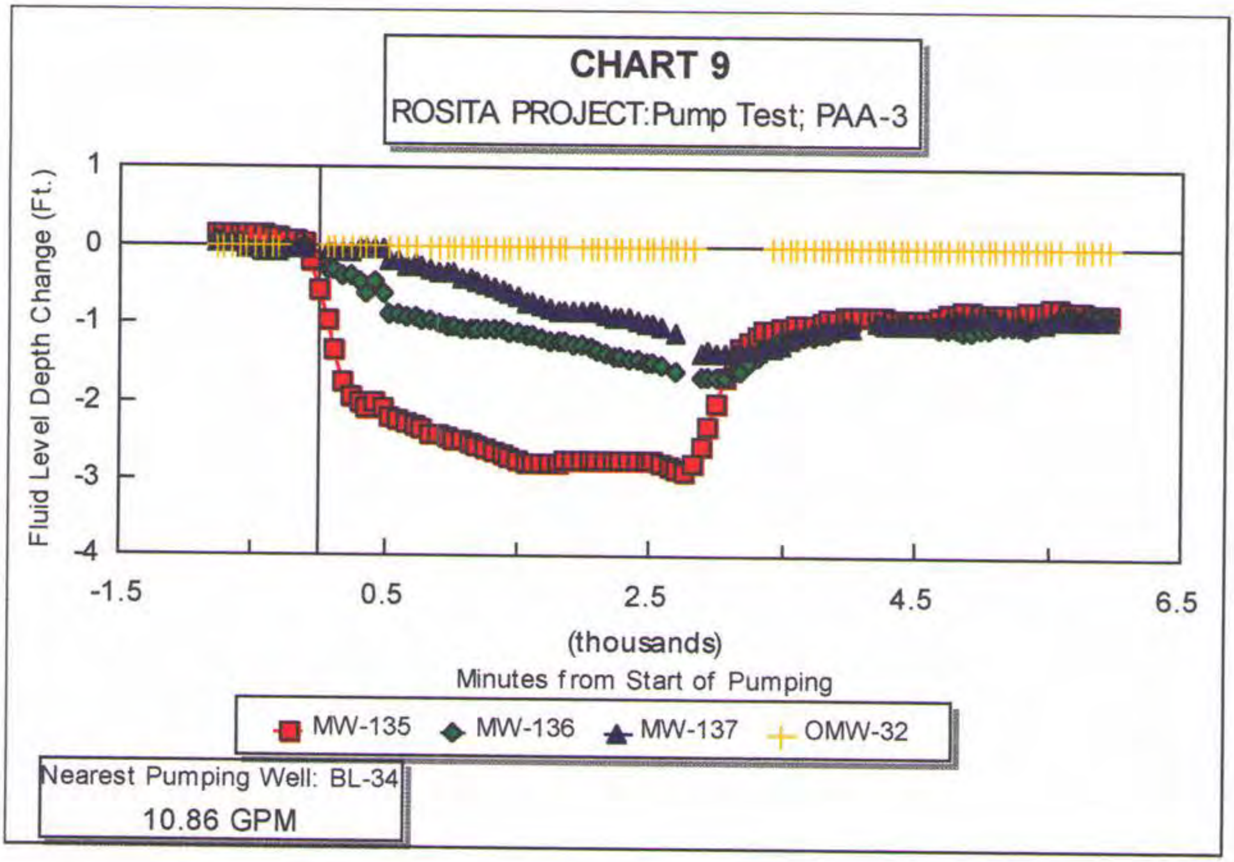

CHART 9
ROSITA PROJECT:Pump Test; PAA-3
Fluid Level Depth Change (Ft.)
1
0
-1
-2
-3
-4
-1.5
0.5
2.5
4.5
6.5
(thousands)
Minutes from Start of Pumping
MW-135
MW-136
MW-137
OMW-32
Nearest Pumping Well: BL-34
10.86 GPM

PAA-5

Pump Test Summary

ROSITA PROJECT
HYDROLOGIC TESTING REPORT
DUVAL COUNTY, TEXAS

Prepared for:

URI Inc.
Corpus Christi, Texas

Prepared by:

TERRA
DYNAMICS INC
ROUND ROCK, TEXAS

Project No. 22-164
November 2022

STATE OF TEXAS
Philip R. Grant
Geology
1338
LICENSED
PROFESSIONAL GEOSCIENTIST

Hydrologic Testing and Analyses

The goal of the URI Inc. (URI) Rosita Uranium Mine PAA5 hydrologic testing program was to determine the hydraulic properties of the Production Zone Aquifer, and to determine the degree, if any, of vertical hydraulic connection between the production zone and the overlying sand aquifer. The PAA5 testing program was also conducted to ascertain whether the monitor wells (MW wells) are completed in the appropriate aquifer units, and to demonstrate hydraulic communication between the perimeter monitor wells and the Production zone. Finally, the testing program was conducted to determine the presence of any hydraulic boundaries or recharge features.

1.0 Test Methodology and Procedures

1.1 Test Area Distribution

Given the proximity of the Rosita Uranium Mine wells, a single 5-well composite pump test was conducted using the wells BL-40B, BL-41, BL-42, BL-43C and BL-44A as pumping wells. The test area showing the pumping (BL), monitor (MW) and overlying (OMW) wells is presented in Figure 1.

1.2 Overview of Test Design

The pump testing program was conducted as one continuous field event consisting of a recording of background, drawdown and recovery data at the test area. Based on URI well development records, the wells in the PAA5 production area had not been pumped since installation of the wells in the second quarter of 2022, except for sampling.

Following the completion of drawdown and recovery data recording, all digital data recording equipment was removed from the wells. The on-site testing program was conducted during a 4-day period from October 26 through 29, 2022. A pump test chronology summarizing the test particulars is attached to this report.

1.3 Test Data Acquisition Equipment

Water level data acquisition was conducted using a combination of submersible digital pressure transducer equipment (In-Situ© LevelTrolls) and manual electric-line (e-line) measurements. The focus of the data acquisition plan was to obtain a continuous record of water levels from the production zone wells (MW wells) within the test area using the LevelTroll pressure transducers. The OMW wells completed in the overlying sand aquifer were measured manually with e-lines to record water levels during the testing events at frequencies sufficient to detect any potential drawdowns due to underlying pumping of the production sand zone.

The test design for PAA5 employed setting fifteen downhole pressure transducers (In-Situ© LevelTrolls) in more than half of the MW monitor wells on the test area. An additional surface-installed In-Situ© BaroTroll was activated to record barometric pressure data at the PAA5 site during the entire field event. The pressure transducer equipment was provided by In-Situ, Inc. and consisted of fifteen LevelTroll© transducers, each with an absolute pressure range of 0-30 psig (0-100 psig for MW-177, MW-184 and MW-197A) and an internal memory capacity of a minimum of 100,000 data points. The barometric pressure transducer equipment was also provided by In-Situ, Inc. and consisted of one Barotroll© transducer with an absolute pressure range of below sea level to 18,000 feet, and memory capability of up to 100,000 data points. The LevelTroll© transducers were vented to the surface through vented cables (thus providing gauge pressure (psig) values), and when submerged below water level in the monitor wells they accurately measured the change in water levels within the wells. The transducers were typically submerged to a depth of between 15-60 feet below water level to allow the recording of a maximum water level drawdown. If necessary due to any significant atmospheric pressure changes (weather fronts) during the time of a test, the recorded transducer values can be adjusted using the barometric data gathered from the BaroTroll to account for significant atmospheric changes. The use of vented transducers, however, precludes the need to correct for barometric changes except for extreme atmospheric change events.

A summary of wells that were monitored with pressure transducer and e-line equipment for the test area is included in Table 1, under the column titled “Measurement Method”. A total of 15 MW wells (MW-190, MW-188, MW-186, MW-184, MW-182, MW-180, MW-177, MW-176, MW-174, MW-173, MW-171, MW-197A, MW-196, MW-194, MW-192) were monitored with pressure transducer equipment in the PAA4 Test. In addition, the test area’s pumped wells were also monitored for water level changes by employing a e-line tape lowered into an access (tremie) tube strapped to the pump discharge pipe.

Water level data from the remaining wells in each test area (MW-189, MW-187, MW-185, MW-183, MW-181, MW-179, MW-178, MW-175, MW-172, MW-170, MW-195, MW-193, MW-191, OMW-40, OMW-41, OMW-42, OMW-43, OMW-44) were gathered using a 300-foot length e-line tape, in order to check for water level changes and any vertical communication from the production sand to the overlying layer in the pump test.

A discussion of the well construction details for the wells within PAA5, including casing size and construction materials, is included in the text of the Production Area Authorization application. These wells are constructed to meet all of the standards as required by the TCEQ.

1.4 Pumping Equipment

The five BL wells for the PAA5 test were pumped using electric submersible pumps. In each pumping well, the pump was set at a depth of approximately 200 to 230 feet below the top of casing level (BTOC). A 1-inch OD tremie (access) tube was also attached to the pump drop-pipe down to a level averaging 20 feet above the pump intake. This allowed for monitoring of the water level drawdown in the pumping well, to avoid pumping the water level down to the pump intake and causing the pump to fail.

At the test area, a 3 horsepower (HP) electric submersible pump was used in each respective pumping well. Electricity was supplied to the pump by a trailer-mounted 460-volt diesel generator. The pumping rates were monitored using an in-line flow meter, measured in gallons per minute, and checked regularly by field personnel. All pumping-related equipment was supplied by URI.

1.5 PAA5 Pump Test

The recording of background water level data at PAA5 Test was initiated on October 26, 2022. Pumping was started at 11:00 AM on October 27, 2022. Wells BL-40B, BL-41, BL-42, BL-43C and BL-44A were pumped for a duration of 24 hours, until being shut in at 11:00 AM on October 28, 2022. A total of approximately 41,711 gallons of water was produced from the BL-40B pumping well at an average totalized rate of 29.55 gallons per minute. A total of approximately 38,260 gallons of water was produced from the BL-41 pumping well at an average totalized rate of 27.77 gallons per minute. A total of approximately 45,217 gallons of water was produced from the BL-42 pumping well at an average totalized rate of 32.14 gallons per minute. A total of approximately 38,227 gallons of water was produced from the BL-43C pumping well at an average totalized rate of 27.00 gallons per minute. A total of approximately 32,434 gallons of water was produced from the BL-44A pumping well at an average totalized rate of 23.21 gallons per minute. Recovery data were recorded until 11:00 AM on October 29, 2022, for a total recovery time of 24 hours. Sufficient drawdown occurred in monitor (MW) wells over the period of 24 hours of pumping to demonstrate communication with the pumped (BL) wells, and the data gathered was sufficient for analysis of aquifer parameters.

All wells within PAA5 Test were monitored by either pressure transducers or e-line tape measurements. The following wells (see Figure 1) were monitored during this pump test: BL-40B, BL-41, BL-42, BL-43C and BL-44A (pumping wells); MW-170, MW-171 MW-172, MW-173, MW-174, MW-175, MW-176, MW-177, MW-178, MW-179, MW-180, MW-181, MW-182, MW-183, MW-184, MW-185, MW-186, MW-187, MW-188, MW-189, MW-190, MW-191, MW-192, MW-193, MW-194, MW-195, MW-196 and MW-197A (Monitor wells); OMW-40, OMW-41, OMW-42, OMW-43 and OMW-44 (Overlying wells).

2.0 Barometric Pressure Measurements

Barometric pressures were measured and digitally recorded during the entire field event encompassing the pump test at PAA5. Barometric pressure data was gathered using an In-Situ© BaroTroll pressure transducer located within PAA5. A graph of the barometric pressures and temperatures recorded during the pump testing events is included in Attachment 1 with the hydrographs of the monitored wells.

The atmospheric pressure data recorded during the pump testing indicated several minor fluctuations in well water levels due to barometric changes prior to and during the pump test events (average water level change typically less than 0.10 ft). Normal diurnal (twice daily) fluctuation of barometric pressure is evident from the data. One significant pressure front (a 0.30 psi atmospheric pressure oscillation) traversed the area during a half-day period (9 AM on 10/29 to 6 PM on 10/29), which spanned the recovery period of the test. During the pump test period, water level recoveries were slightly dampened as a result of the rising/falling barometric pressure. These water level effects of no more than 0.1 ft did not however interfere with the determination of aquifer communication or analysis, as the magnitude of drawdown/recovery due to aquifer pumping was more than a magnitude greater than the atmospheric effects. By using the vented LevelTroll transducers, (which compensate for minor atmospheric pressure changes) and with the relatively small changes that did occur, only minor dampening was evident. It was determined that the monitor wells' data did not require barometric corrections to be made to the transducer drawdown/recovery data prior to aquifer analysis, as all of those wells had sufficient drawdown to analyze aquifer parameters. The pump test drawdown values overwhelmed the minor fluctuations due to atmospheric changes present, and thus the analyses were not noticeably affected.

Barometric Correction Methodology

Although barometric pressure readings indicated that drawdown data did not require correction prior to aquifer parameter (Aqtesolv) analysis, the methodology for such corrections are included here. Any corrections necessary would have been performed according to guidelines as outlined by Kruseman and de Ridder (1990).

Fluctuations in barometric pressure result in a proportional change in the hydrostatic head for a reservoir. The magnitudes of the hydrostatic head changes are dependent upon the barometric efficiency of the reservoir and the specific gravity of the fluid in the reservoir. The barometric efficiency of a reservoir is defined as the ratio of the actual change in the reservoir water level multiplied by the specific gravity of the fluid and the change in barometric pressure. This relationship is expressed as:

$$BE = \rho g \; dh/dp$$

Where:

BE = Barometric Efficiency

ρg = Specific Gravity of the fluid in the reservoir

dh = Change in fluid level in the reservoir due to barometric pressure changes

dp = Change in barometric pressure expressed in units of hydraulic head

The barometric efficiency of the production zone sand was determined by comparing background aquifer pressure fluctuation data from several MW wells' transducers with barometer fluctuations during the same time period, after the pumping period of the pump testing. The water level changes observed in those MW wells were compared to the recorded barometric changes. The average barometric efficiency of the Production Sand in PAA5 was determined to be 0.15 (lowest possible is 0.0 and highest is 1.0). Over the PAA5 pump test period, the maximum barometric pressure change was 0.30 psi, resulting in a maximum water level change in the Production Sand of 0.1 feet (1.2 inches) when a barometric efficiency of 0.15 is applied. This change due to barometric pressure was greatly overshadowed by the water level changes in the aquifer due to the pump test episodes. An aquifer with a low barometric efficiency indicates a highly compressive formation. Conversely, a low barometric efficiency indicates an aquifer which has a high loading efficiency, meaning it has a high sensitivity to surface water loading effects such as rainfall events. A small rainfall event occurred during the PAA5 pump testing, but it did not affect the quality of the data collected.

Corrections to drawdown and recovery data affected by barometric pressure fluctuations are expressed as follows:

$s' = s + dh_p$ for falling atmospheric pressure and

$s' = s - dh_p$ for rising atmospheric pressure

Where:

s = measured drawdown

s' = adjusted drawdown

$dh_p = BE \times dp$ = change in drawdown due to barometric pressure fluctuations

Barometric pressure reading corrections are made by dividing the change in barometric pressure since the start of the test (in psi) by 0.433 psi/foot (pressure exerted by fresh water) and multiplying by the barometric efficiency, 0.15. The resulting head value is then added to the water level readings from each well. Since the barometric correction is relative to the barometric pressure at the beginning of the test, the equation does not need a sign change to reflect rising or falling barometric pressure. The sign is determined by the change from the starting value. The following equation expresses the correction for barometric pressure:

$$s'_t = s_t + (BE \times dp_t /0.433)$$

Where:

s'_t = corrected drawdown at time t in feet

s_t = measured drawdown at time t in feet

dp_t = change in barometric pressure, relative to the barometric pressure at the beginning of the test, at time t in psi

0.433 = pressure (psi) exerted by 1 foot of hydraulic head of fresh water (psi/foot)

A barometric correction was not applied to the PAA5 drawdown data, as noted previously, because barometric pressure effects on the aquifer were typically less than the maximum calculated 0.1 ft for the sand, whereas the minimum pump test drawdown values were typically between 1 to 2 orders of magnitude larger. The recorded drawdown values essentially reflect the reservoir fluid level changes due to pumping, and barometric pressure effects can be ignored in those wells for which aquifer analyses were generated. All drawdown responses noted were greater than would be due to atmospheric effects and reflect communication with the Production Zone.

3.0 Background Water Level Measurements

No recent significant pumping from the monitor wells in PAA5 had occurred since the wells were completed in the second quarter of 2022, prior to the recording of initial background measurements in October 2022 for the pump test program. Initial recording of water levels at each well typically began 24 hours prior to the pump test, and continued for 24-48 hours after the completion of pumping. Water levels remained relatively stable during the pre-pumping period in the test area.

4.0 Pumping Rates

Pumping was maintained at as constant a rate as possible during the drawdown portion of the test. The average pumping rate for BL-40B, BL-41, BL-42, BL-43C and BL-44A were 29.55 gpm, 27.77 gpm, 32.14 gpm, 27.00 gpm and 23.21 gpm, respectively. Each pumping rate was monitored and recorded every hour during the 24 hours pumping part of the test guaranteeing a stable flowrate without pumping down the water level to the pump intake, which would result in shut-off the pump. Over the pumping period of the test, the flowrate remained relatively stable in the pumping wells, except from BL-43C, which slowly decreased as its head level dropped. This rate decrease in BL-43C was determined to be insignificant to the analysis of the drawdown/recovery data.

5.0 Record of Water Level Changes

Records of the measured water level drawdown and recovery (residual drawdown) transducer data are provided with the Attachment 2 hydrologic analyses for the monitor (MW) wells which utilized transducers to collect data. The data are presented in order by well number. Hydrographs of the water level changes in each of these MW wells are provided in Attachment 1.

Tabulations of the measured water level drawdown and recovery (residual drawdown) e-line tape data are provided in Attachment 1 for the overlying Sand monitor wells (OMW). Hydrographs of the water level changes in the Production Zone wells are also provided in Attachment 1.

6.0 Hydrologic Communication Between Observation Wells and Pumped Wells in the Production Zone

Hydrologic communication between the monitor (MW) wells and the pumped baseline monitor (BL) wells in the Production Zone is confirmed if a measurable water level decrease is recorded in an observation well due to pumping in the Production Zone. The maximum drawdown values recorded in the PAA5 Test 1 is provided in Table 1.

The results of the pumping test demonstrate that there is hydrologic communication between the pumped Production Zone baseline (BL) wells and the perimeter monitor (MW) wells in the entire PAA5 production area. The cones of depression formed during the pump test in PAA5 is shown in Figure 2 (P AA5 Maximum Drawdown Map).

All MW wells in PAA5 Test had at least 1.9 feet of drawdown during the pump test.

7.0 Transmissivity and Storativity Calculations

For the pump tests in PAA5, the interactive computer program AQTESOLV (Duffield and Rumbaugh, 1991) was used to analyze the drawdown (or recovery if necessary) data and calculate the aquifer transmissivity, T, and storativity, S. The hydraulic conductivity, K, was then calculated by dividing the transmissivity by the sand net screened thickness, h, in the well (K = T/h). The Theis drawdown analysis method was used to determine hydraulic parameters within the AQTESOLV computer program, as it was determined to produce the lowest standard error using type curve matching.

AQTESOLV can be used to prepare automatic or manual (interactive) type curve matches to the aquifer test data. The drawdown data can be analyzed using several methods:

- the Theis (1935) method for unsteady flow in confined aquifers;
- the Cooper and Jacob (1946) method (modified Theis) for unsteady flow in confined aquifers;
- the Hantush and Jacob (1955) method for unsteady flow to a semi-confined aquifer with no aquitard storage; and
- the Hantush (1960) method for unsteady flow to a semi-confined aquifer with aquitard storage.

Several criteria were used to determine the most representative analysis. Automatic curve matches performed by the AQTESOLV program were verified by inspection. Visual (interactive) curve matches were performed if appropriate. The standard error in the iteration estimate of the transmissivity and the storativity was recorded for AQTESOLV runs where automatic curve matching was selected (the standard error was not available for cases where interactive curve matching was used). For a reliable analysis, the ratio of the standard error, SE, to the calculated storativity or transmissivity should preferably be 10% or less. Type curve matches were visually inspected. Barometric fluctuations are not significant in the drawdown curves analyzed, and did not affect the curve matching.

From the four analysis methods discussed above, the best match to the test data was chosen for each well. The transmissivity and storativity values determined to be most representative of the hydrogeologic conditions at each well in the PAA5 area with analyzable data are given in Table 2. The AQTESOLV analysis output files and graphs used to determine the transmissivity and storativity values are included in Attachment 2.

Hydraulic communication with the PAA5 testing wells was evident for the entire area, so the primary purpose of the pump test (a demonstration of communication between (MW) monitor wells and baseline (BL) monitor wells) has been made.

8.0 Hydrologic Communication Between Aquifers

The degree of hydraulic connection between the Production Zone and the overlying aquifer is discussed below. Criteria used to assess hydrologic communication include drawdown effects during pumping, the determination of confined versus semi-confined conditions, and pre-test hydraulic head elevations.

An analysis of the drawdown data indicates that there was no distinguishable hydrologic communication between the Production Zone and the overlying aquifer during the testing events. This is based on: 1) initial hydraulic head measurements; 2) no water level changes recorded in the overlying Sand wells; and 3) the confined aquifer conditions.

From the background water level data recorded during the pump testing period, the hydraulic head distribution in the Production Sand averages 332-345 feet above sea level across the PAA5 area, as shown in Figure 3 (E Sand Potentiometric Surface Map). From these data, it can be inferred that there is a potential for fluid movement downward from the first overlying aquifer to the Production Zone aquifer. However, the very presence of the hydraulic head difference indicates that the Production Zone and overlying Sand aquifer are hydraulically isolated (i.e., if the sands were interconnected, there would be no hydraulic head difference). The potentiometric surface map indicates that a very slight hydraulic gradient slope is present from west to southeast across PAA5.

The lack of hydrologic communication between the Production Zone and the overlying Sand aquifer is also demonstrated by the absence of drawdowns in the OMW Sand wells during the pump tests. Water level hydrographs from PAA5 for the OMW wells are included in Attachment 1. The recorded water level fluctuations in these sands are typically within the range of ± 0.1 to 0.2 feet. The fluctuations are erratic but do display a weak diurnal trend. The changes are related to responses to changes in barometric pressure, and not due to pumping from the production Sand.

In all of the MW monitoring wells from PAA5, the interpretations of the analyzable test data (Table 2) are consistent with a confined aquifer response. Any response from a monitoring well that could also fit a solution consistent with a semi-confined (leaky) aquifer model is likely a result of a well configuration where the screened portion of the production sand in that well is directly underlain or overlain by a semi-pervious layer still located within the production sand. However, no drawdown due to pumping was observed in the overlying Sand during the pump tests, Multilayer well responses consistent with this hypothesis are discussed by Streltsova (1988).

The confined aquifer model assumes that the completion interval is bounded above and below by an impervious boundary. In the case of the PAA5 Production Zone, the boundary is formed by a laterally continuous low permeability clay layers above and below the Production Sand (see PAA Report Cross-Sections). This indicates that fluids will be contained within the Production Zone sands and will not move vertically upward or downward through intervening strata during mining and restoration operations. The hydraulic head difference between the production Sand and the overlying Sand provides an additional measure of safety, as the local groundwater flow has a natural tendency to move downward.

9.0 Hydrologic Boundaries, Recharge Areas, and Aquifer Parameters

The pumping test data were analyzed to check for hydraulic boundaries (e.g., constant pressure or no flow boundaries). The local hydrogeology was also evaluated in relation to recharge areas.

9.1 Hydrologic Boundaries

The Aqtesolv semi-log plots of the drawdown from each aquifer test were analyzed to determine if the water level drawdown was influenced by the presence of hydrologic boundaries. Drawdown would be less than expected in the case of constant pressure boundaries, leakage through faults, or leakage through semi-pervious confining clays. Drawdown would be greater than the ideal in the presence of no flow boundaries, sand pinchouts, lateral changes in hydraulic conductivity, or sealing faults. A doubling or near doubling of the slope of the late time data on the semi-log plots is an indication of possible boundary effects.

A slope doubling possibly reflecting a no flow boundary was not observed on Aqtesolv semi-log plots from any of the wells in the PAA5 test areas. Two observation well locations from the same test are required to estimate the distance and direction of a boundary. The distance to the boundary is calculated from

$$r = (2.25Tt/S)^{1/2}$$

where r is the distance to a theoretical image well causing the no flow boundary and t is the time of intercept of two straight line portions drawn on the semi-log plots (Marsily, 1986). It is only possible to estimate that there is a boundary somewhere between the well and a certain distance away. With two or more wells from which boundary distances can be determined, it is possible to construct a geometrical map and determine the distance and direction of the boundary. The intersection of circles scribed from the calculated radii can be used to estimate the location of such an image well. From that construction and the drawdown records, a possible no flow (or low permeability) region can be identified. There were no indications of any no-flow boundaries within the PAA5 test areas.

9.2 Recharge Boundaries, Recharge Areas, and Aquifer Parameters

No recharge boundaries were identified through the pump test analyses. This conclusion was based on the lack of water level drawdown in the overlying aquifer, and on the hydrogeology of the Formation, which indicates that hydraulic heads are higher in the Sand overlying the targeted Sand Ore Zone. The presence of the head differential indicates that the production and overlying Sands are isolated from each other. No surface recharge features of the Aquifer are known to exist at the PAA5 production area

Hydraulic conductivity values within PAA5 range from 3.9 to 26.6 ft/day, but average 9.1 ft/day in the PAA5 test area. This aquifer parameter is probably the best indicator of Production Zone sand throughput for in-situ mining operations. The average transmissivity and storativity values of the production Sand over the entire PAA5 area are

537.9 ft.sq/day and 5.55E-4 respectively. The average hydraulic gradient in the Production Sand is 0.0038 [ft/ft] over the area of PAA5.

The hydraulic conductivity of the production Sand in PAA5 is about equal over the north side of the area, averaging 4-7 ft/day. It increases on the southwestern edge of the area, ranging between 13-26 ft/day. This trend appears to reflect an increase in conductivity due to higher permeability Sand strata in that localized area.

10.0 Hydrologic Testing References

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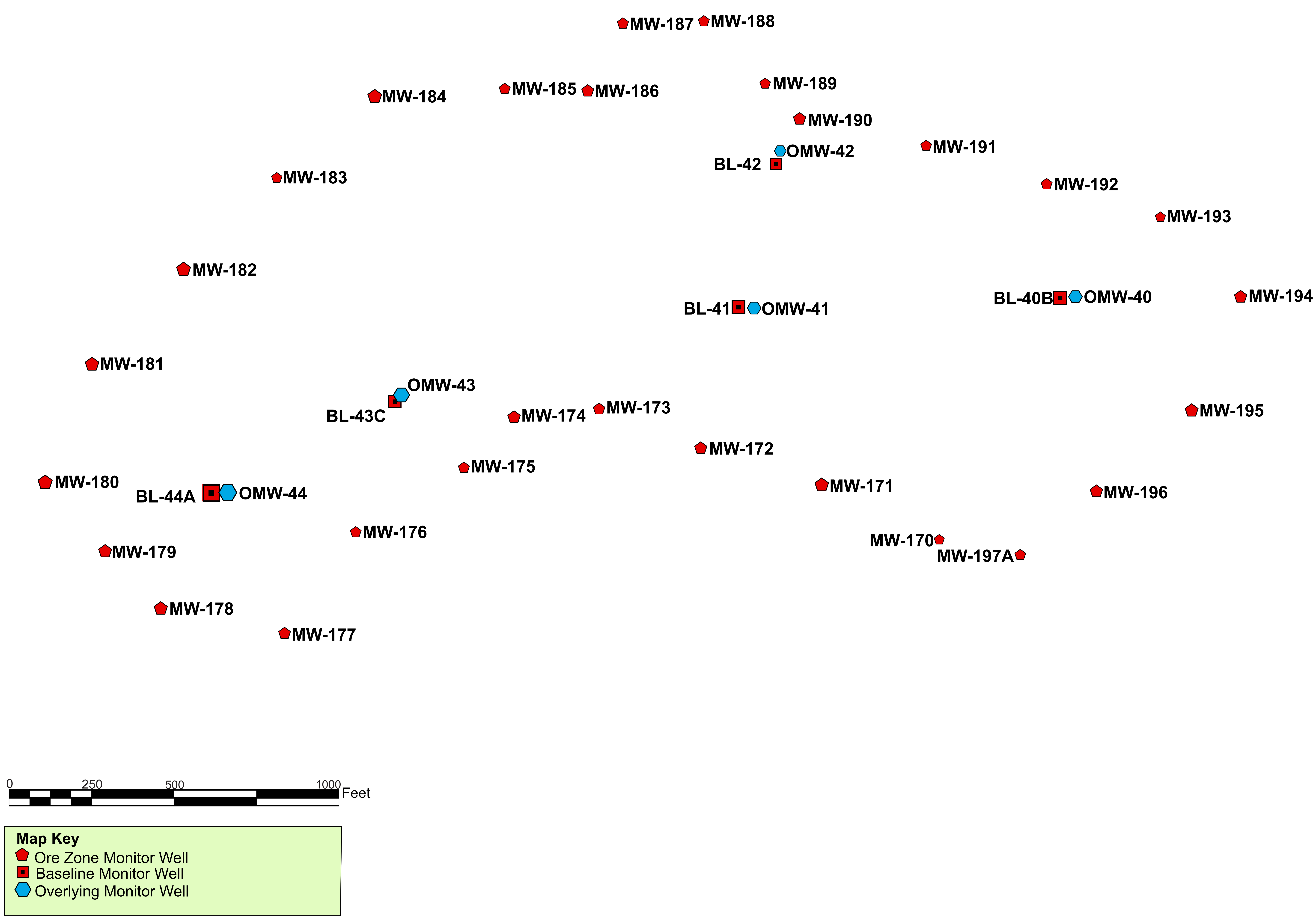


Date: 11/02/2022

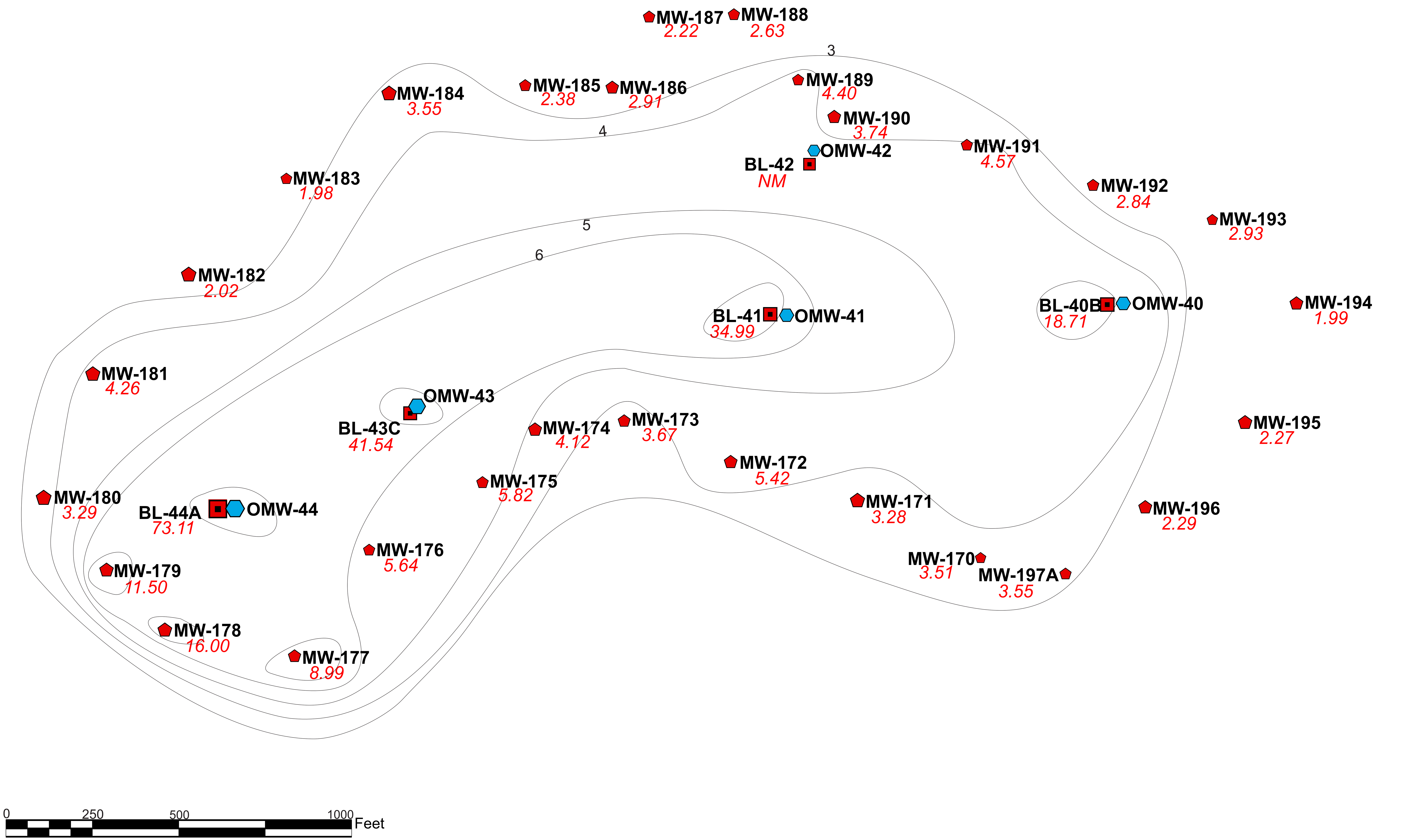
FIGURE 1

**PAA-5
TEST AREA
LOCATION MAP**

PREPARED FOR

**URI INC.
ROSITA URANIUM MINE
PROJECT
DUVAL COUNTY, TEXAS**

TERRA DYNAMICS INC



Map Key
- Ore Zone Monitor Well
- Baseline Monitor Well
- Overlying Monitor Well
- *16.00* Drawdown Measurement in feet
- Drawdown Surface in feet

Date: 11/02/2022

FIGURE 2

PAA-5
MAXIMUM DRAWDOWN
MAP

PREPARED FOR

URI INC
ROSITA URANIUM MINE
PROJECT
DUVAL COUNTY, TEXAS

TERRA DYNAMICS INC

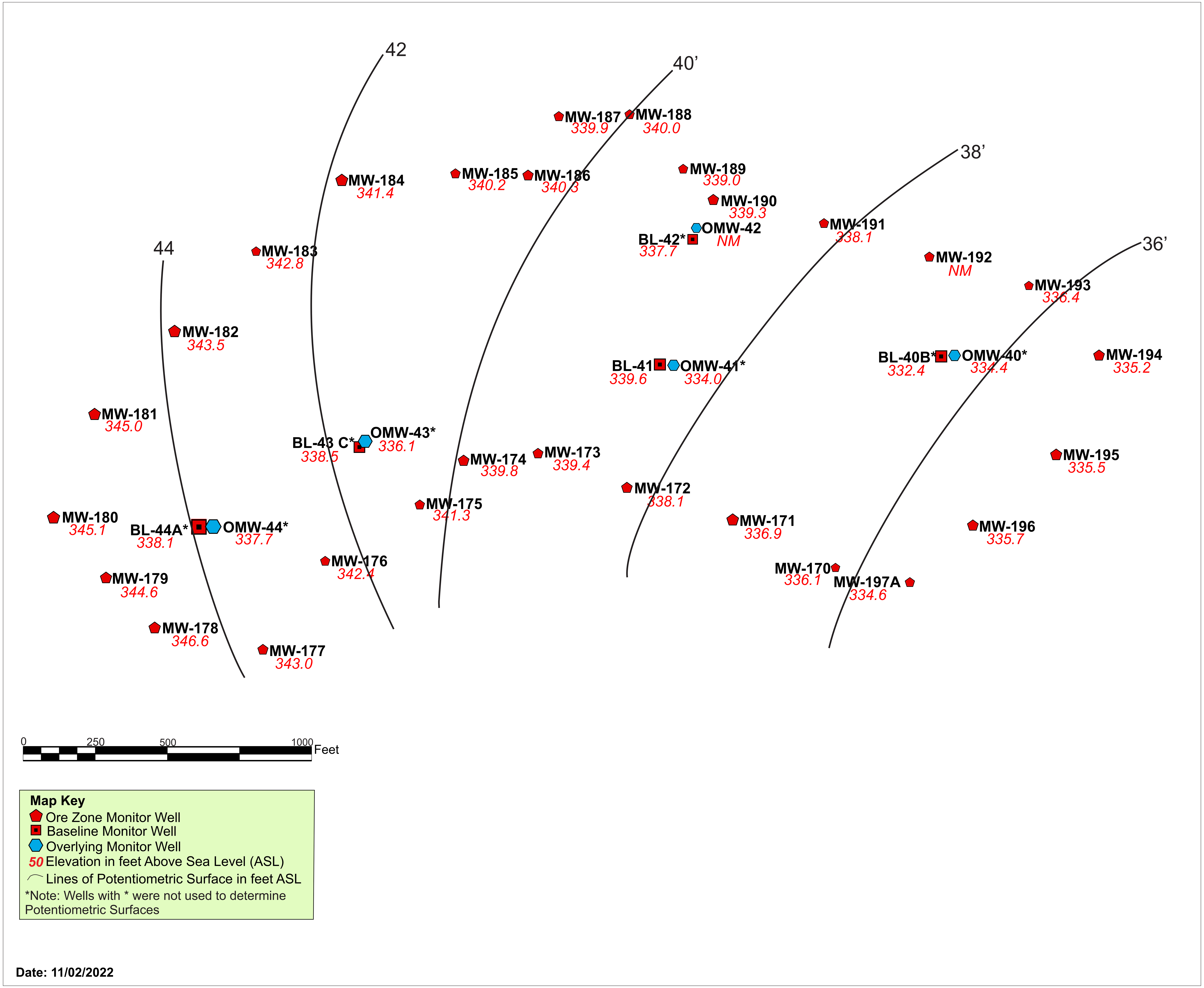


FIGURE 3

PAA-5
POTENTIOMETRIC
SURFACE MAP

PREPARED FOR

URI INC
ROSITA URANIUM MINE
PROJECT
DUVAL COUNTY, TEXAS

TERRA DYNAMICS INC

Table 1 -- Maximum Drawdown In Monitored Wells

PAA5

Well	Type	Measurement Method	Maximum Drawdown (feet)
MW-170	Monitor	E-Line	3.51
MW-171	Monitor	Transducer	5.57
MW-172	Monitor	E-Line	5.42
MW-173	Monitor	Transducer	5.41
MW-174	Monitor	Transducer	5.49
MW-175	Monitor	E-Line	5.82
MW-176	Monitor	Transducer	9.06
MW-177	Monitor	Transducer	8.93
MW-178	Monitor	E-Line	16.00
MW-179	Monitor	E-Line	9.50
MW-180	Monitor	Transducer	4.75
MW-181	Monitor	E-Line	4.35
MW-182	Monitor	Transducer	3.37
MW-183	Monitor	E-Line	1.98
MW-184	Monitor	Transducer	2.28
MW-185	Monitor	E-Line	2.38
MW-186	Monitor	Transducer	3.22
MW-187	Monitor	E-Line	2.22
MW-188	Monitor	Transducer	3.28
MW-189	Monitor	E-Line	4.40
MW-190	Monitor	Transducer	6.23
MW-191	Monitor	E-Line	4.57
MW-192	Monitor	Transducer	4.57
MW-193	Monitor	E-Line	2.93
MW-194	Monitor	Transducer	2.09
MW-195	Monitor	E-Line	2.27
MW-196	Monitor	Transducer	3.29
MW-197A	Monitor	Transducer	3.46
OMW-40	Overlying	E-Line	No drawdown
OMW-41	Overlying	E-Line	No drawdown
OMW-42	Overlying	E-Line	No drawdown
OMW-43	Overlying	E-Line	No drawdown
OMW-44	Overlying	E-Line	No drawdown
BL-40B	Pumper	E-Line	18.71 (Pumping well)
BL-41	Pumper	E-Line	34.99 (Pumping well)
BL-42	Pumper	E-Line	N/A
BL-43C	Pumper	E-Line	41.54 (Pumping well)
BL-44A	Pumper	E-Line	73.11 (Pumping well)

Table 2
Transmissivity and Storativity values Derived from AQTESOLV Analyses
PAA5

Well	Transmissivity (ft^2/day)	Net Screen Thickness (ft)	Hydraulic Conductivity (ft/day)	Storativity
MW-171	589.7	60	9.8	3.06E-04
MW-173	432.1	60	7.2	5.43E-04
MW-174	312.3	55	5.7	6.44E-04
MW-176	471.1	50	9.4	1.34E-04
MW-177	654.2	50	13.1	4.81E-05
MW-180	1327.9	50	26.6	5.17E-05
MW-182	914.7	65	14.1	3.00E-04
MW-184	445	65	6.8	7.36E-04
MW-186	330.8	65	5.1	8.52E-04
MW-188	472.9	80	5.9	8.22E-04
MW-190	400.1	65	6.2	1.11E-03
MW-192	391.0	80	4.9	7.43E-04
MW-194	309.4	80	3.9	1.14E-03
MW-196	444.1	60	7.4	5.09E-04
MW-197A	573.4	55	10.4	3.86E-04
		Averages	9.1	5.55E-04

PUMP TEST CHRONOLOGY

1. Tuesday October 25, 2022 (Site recognition)
   Arrived at mine in early PM. Drove around the area to locate the Rosita PAA5 wells for pump testing.

2. Wednesday October 26, 2022 (mobilized equipment to site)
   Measured all water levels for Rosita PAA5 pump test with e-line. Set LevelTrolls in wells MW-177, MW-184 and MW-197A.

3. Thursday October 27, 2022 (started pumping at Rosita PAA5 Test)
   Measured all water levels for Rosita PAA5 pump test with e-line (except MW-177, MW-184 and MW-197A). Started pumping BL-40B, BL-41, BL-42, BL-43C and BL-44A at 1100 hrs at a flowrate of 29.19 gpm, 27.48 gpm, 32.48 gpm, 34.13 gpm and 25.94 gpm, respectively, using a submersible pump. Started Barotroll recording. Set LevelTrolls in wells MW-190, MW-188, MW-186, MW-182, MW-180, MW-176, MW-174, MW-173, MW-171, MW-196, MW-194 and MW-192.

4. Friday October 28, 2022 (started recovery at Rosita PAA5 Test)
   Measured water levels in wells MW-189, MW-187, MW-185, MW-183, MW-181, MW-179, MW-178, MW-175, MW-172, MW-170, MW-195, MW-193, MW-191, OMW-40, OMW-41, OMW-42, OMW-43, OMW-44, BL-40B, BL-41, BL-43C and BL-44A with e-line. Checked pump rate in wells BL-40B, BL-41, BL-42, BL-43C and BL-44A (29.87 gpm, 27.42 gpm, 32.31 gpm, 23.96 gpm and 23.17 gpm, respectively). Stopped pumping wells BL-40B, BL-41, BL-42, BL-43C and BL-44A at 11:00 hrs with an average flowrate of 29.55 gpm, 27.77 gpm, 32.14 gpm, 27.00 gpm and 23.21 gpm, respectively. Checked transducers and e-lined wells during recovery.

5. Saturday October 29, 2022 (ended recovery at Rosita PAA5 Test and left site)
   Ended recovery at 1100 hrs. Downloaded transducers and removed them from wells; measured water levels in wells MW-189, MW-187, MW-185, MW-183, MW-181, MW-179, MW-178, MW-175, MW-172, MW-170, MW-195, MW-193, MW-191, OMW-40, OMW-41, OMW-42, OMW-43, OMW-44, BL-40B, BL-41, BL-43C and BL-44A with e-line. Loaded equipment and left site.

ATTACHMENT 1

PAA5 HYDROLOGIC DATA

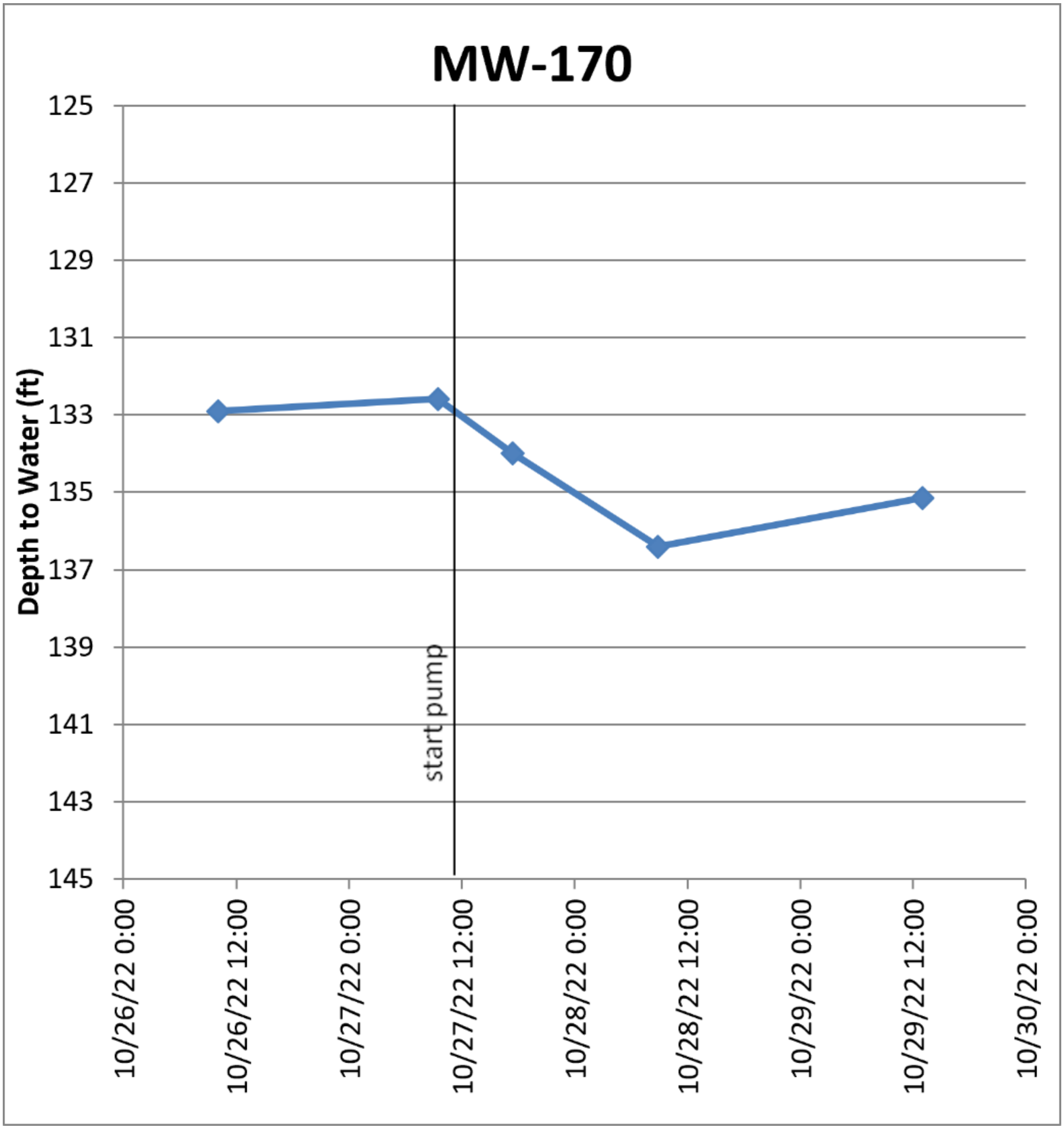
E-LINE DATA

WATER LEVELS AND DRAWDOWNS

Well Number	Date and Time	Depth to Water [ft]	Change in Level [ft]
MW-170	10/26/2022 10:05	132.9	0
	10/27/2022 9:27	132.59	0.31
	10/27/2022 17:23	133.99	-1.09
	10/28/2022 8:52	136.41	-3.51
	10/29/2022 13:00	135.15	-2.25
MW-172	10/26/2022 10:16	125.1	0
	10/27/2022 9:36	124.9	0.2
	10/27/2022 17:40	127.3	-2.2
	10/28/2022 8:56	130.52	-5.42
	10/29/2022 13:10	128.3	-3.2
MW-175	10/26/2022 9:19	138.7	0
	10/27/2022 8:35	138.62	0.08
	10/27/2022 16:20	140.81	-2.11
	10/28/2022 8:07	144.52	-5.82
	10/29/2022 13:30	142.4	-3.7
MW-178	10/26/2022 9:03	153.23	0
	10/27/2022 8:16	153.2	0.03
	10/27/2022 16:00	167.42	-14.19
	10/28/2022 8:02	169.23	-16
	10/29/2022 11:25	158.6	-5.37
MW-179	10/26/2022 8:58	153.82	0
	10/27/2022 7:58	153.74	0.08
	10/27/2022 15:45	161.6	-7.78
	10/28/2022 7:47	163.32	-9.5
	10/29/2022 11:22	155.71	-1.89
MW-181	10/26/2022 8:48	142.3	0
	10/27/2022 7:50	142.21	0.09
	10/27/2022 15:33	144.46	-2.16
	10/28/2022 7:42	146.65	-4.35
	10/29/2022 11:20	143.92	-1.62
MW-183	10/26/2022 8:41	126.91	0
	10/27/2022 7:45	126.77	0.14
	10/27/2022 15:20	127.42	-0.51
	10/28/2022 7:38	128.89	-1.98
	10/29/2022 11:17	128.73	-1.82

MW-185	10/26/2022 8:29	126.81	0
	10/27/2022 7:40	126.66	0.15
	10/27/2022 15:14	126.79	0.02
	10/28/2022 7:33	128.74	-1.93
	10/29/2022 11:15	129.19	-2.38
MW-187	10/26/2022 8:21	127.77	0
	10/27/2022 7:34	127.65	0.12
	10/27/2022 14:56	128.01	-0.24
	10/28/2022 7:29	129.99	-2.22
	10/29/2022 11:10	129.44	-1.67
MW-189	10/26/2022 8:12	131.5	0
	10/27/2022 7:28	131.37	0.13
	10/27/2022 14:41	131.74	-0.24
	10/28/2022 7:26	135.9	-4.4
	10/29/2022 11:00	133.99	-2.49
MW-191	10/26/2022 9:28	126.75	0
	10/27/2022 8:57	126.54	0.21
	10/27/2022 16:40	128.63	-1.88
	10/28/2022 8:27	131.32	-4.57
	10/29/2022 11:40	129.21	-2.46
MW-193	10/26/2022 9:35	113.8	0
	10/27/2022 9:04	113.61	0.19
	10/27/2022 16:50	114.65	-0.85
	10/28/2022 8:31	116.73	-2.93
	10/29/2022 11:50	115.87	-2.07
MW-195	10/26/2022 9:53	111.43	0
	10/27/2022 9:20	111.29	0.14
	10/27/2022 17:11	111.87	-0.44
	10/28/2022 8:47	113.7	-2.27
	10/29/2022 12:00	113.62	-2.19
OMW-40	10/26/2022 10:35	112.4	0
	10/27/2022 9:16	N/A	N/A
	10/27/2022 17:02	111.23	1.17
	10/28/2022 8:38	112.3	0.1
	10/29/2022 12:10	112.46	-0.06
OMW-41	10/26/2022 10:30	N/A	N/A
	10/27/2022 9:43	131.13	0
	10/27/2022 17:58	131.11	0.02
	10/28/2022 9:01	131.09	0.04
	10/29/2022 12:20	131.35	-0.22

OMW-42	10/26/2022 10:48	N/A	N/A
	10/27/2022 8:50	N/A	N/A
	10/27/2022 16:34	N/A	N/A
	10/28/2022 8:21	N/A	N/A
	10/29/2022 12:30	N/A	N/A
OMW-43	10/26/2022 11:00	143.48	0
	10/27/2022 8:28	143.34	0.14
	10/27/2022 16:13	143.35	0.13
	10/28/2022 8:11	143.33	0.15
	10/29/2022 12:40	143.51	-0.03
OMW-44	10/26/2022 11:10	152.64	0
	10/27/2022 8:10	N/A	N/A
	10/27/2022 15:50	N/A	N/A
	10/28/2022 7:52	152.34	0.3
	10/29/2022 12:50	152.51	0.13
BL-40B	10/26/2022 10:42	115.11	0
	10/27/2022 9:15	115	0.11
	10/27/2022 17:07	131.65	-16.54
	10/28/2022 8:42	133.82	-18.71
	10/29/2022 12:10	117.4	-2.29
BL-41	10/26/2022 10:28	127.32	0
	10/27/2022 9:47	129.49	-2.17
	10/27/2022 18:05	162.29	-34.97
	10/28/2022 9:06	162.31	-34.99
	10/29/2022 12:20	132.4	-5.08
BL-42	10/26/2022 10:53	136.96	0
	10/27/2022 8:50	N/A	N/A
	N/A	N/A	N/A
	N/A	N/A	N/A
	N/A	N/A	N/A
BL-43C	10/26/2022 11:04	141.77	0
	10/27/2022 8:31	141.47	0.3
	10/27/2022 16:17	183.16	-41.39
	10/28/2022 8:15	183.31	-41.54
	10/29/2022 12:40	145.09	-3.32
BL-44A	10/26/2022 11:18	152.83	0
	10/27/2022 8:06	152.45	0.38
	10/27/2022 15:55	223.5	-70.67
	10/28/2022 7:58	225.94	-73.11
	10/29/2022 12:50	155.18	-2.35



MW-170
Depth to Water (ft)
125
127
129
131
133
135
137
139
141
143
145
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
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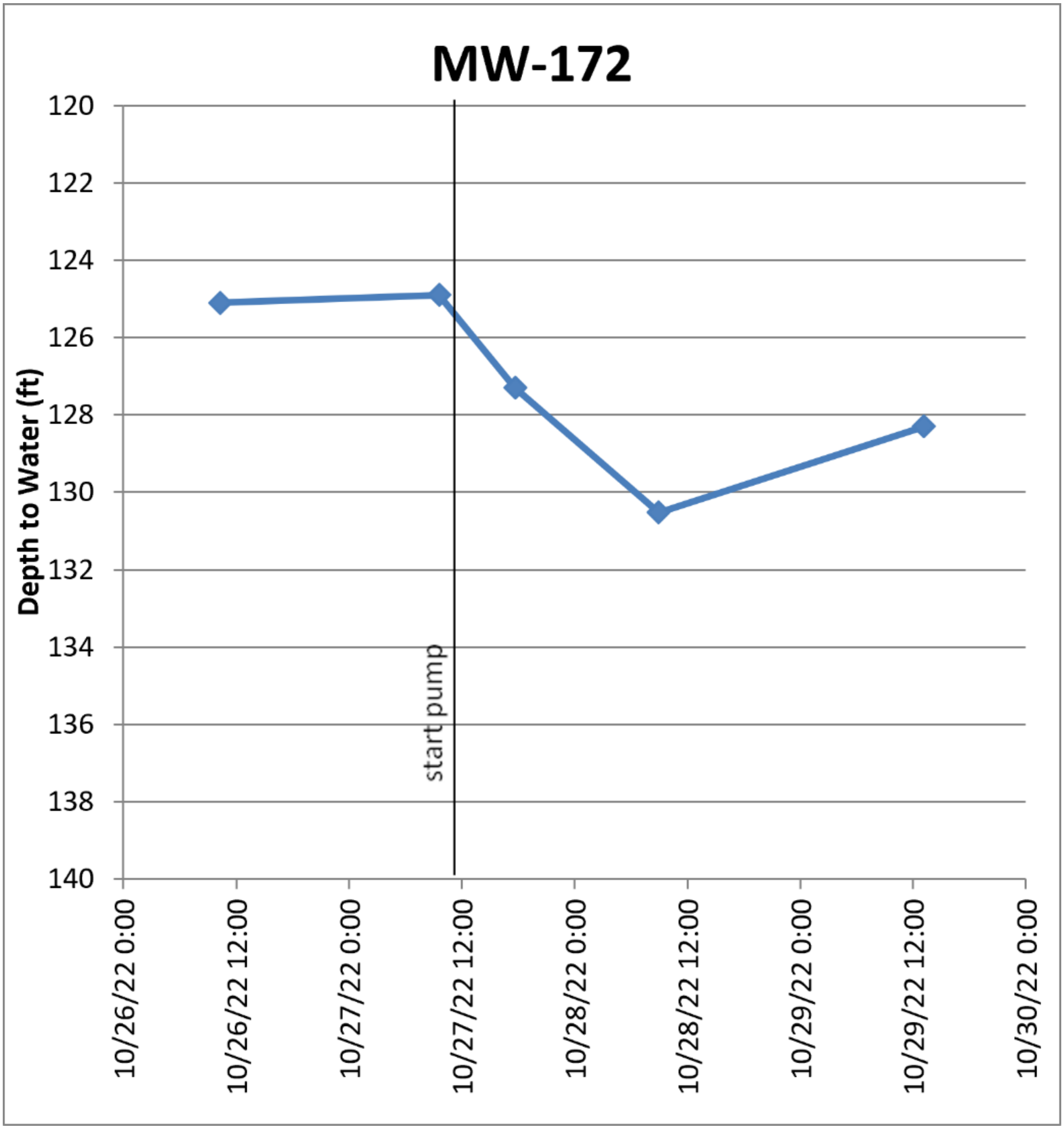
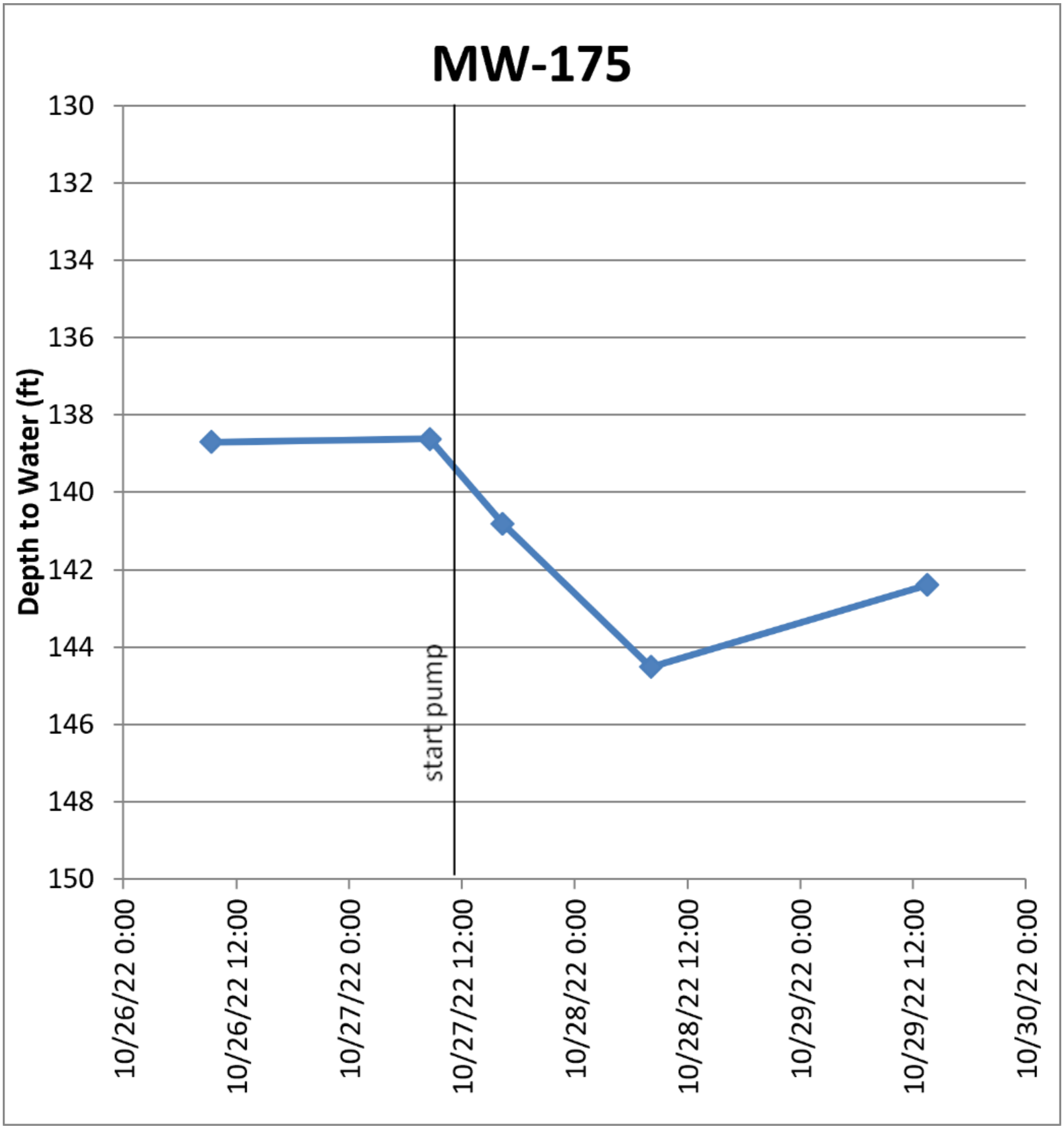
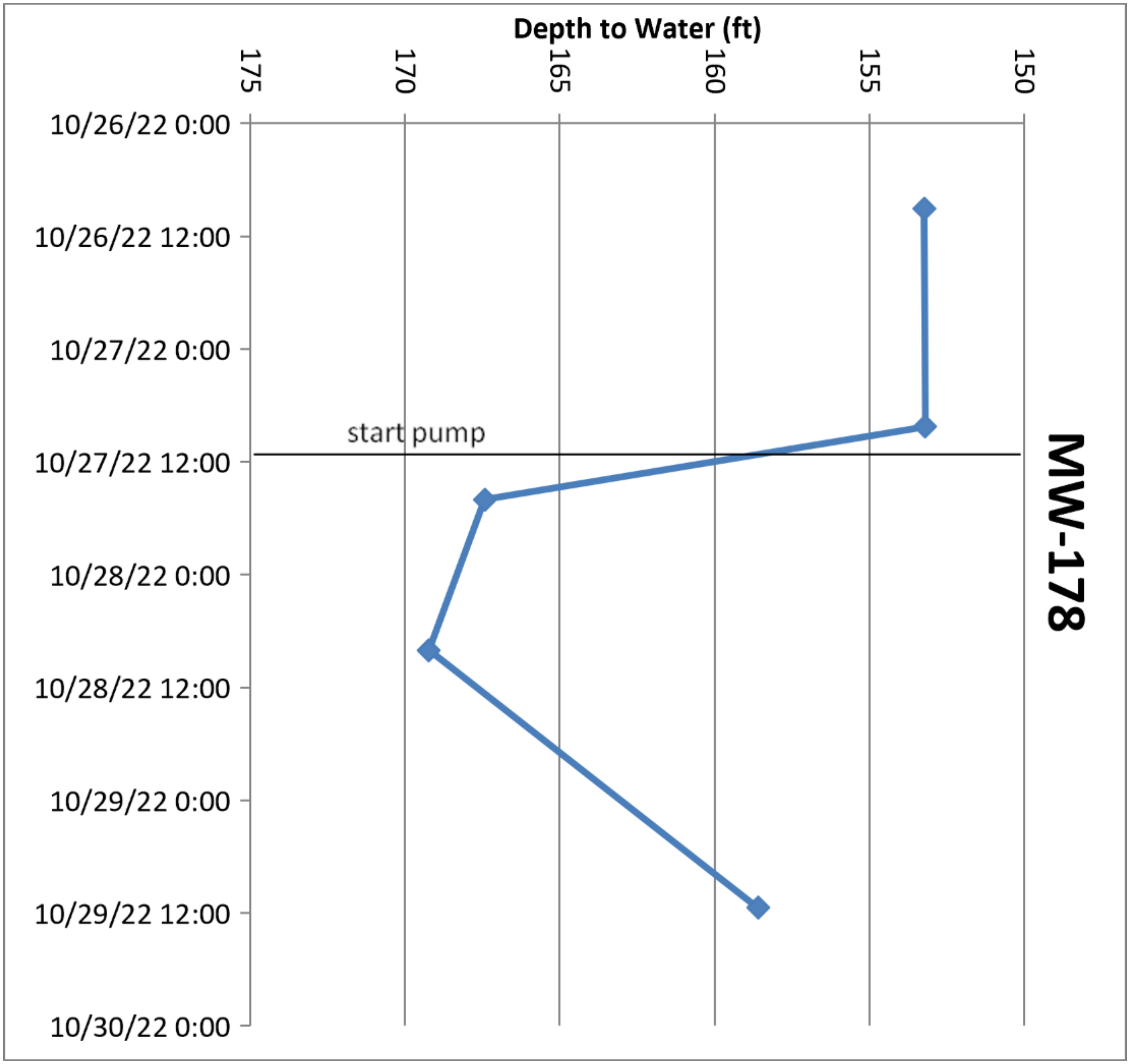
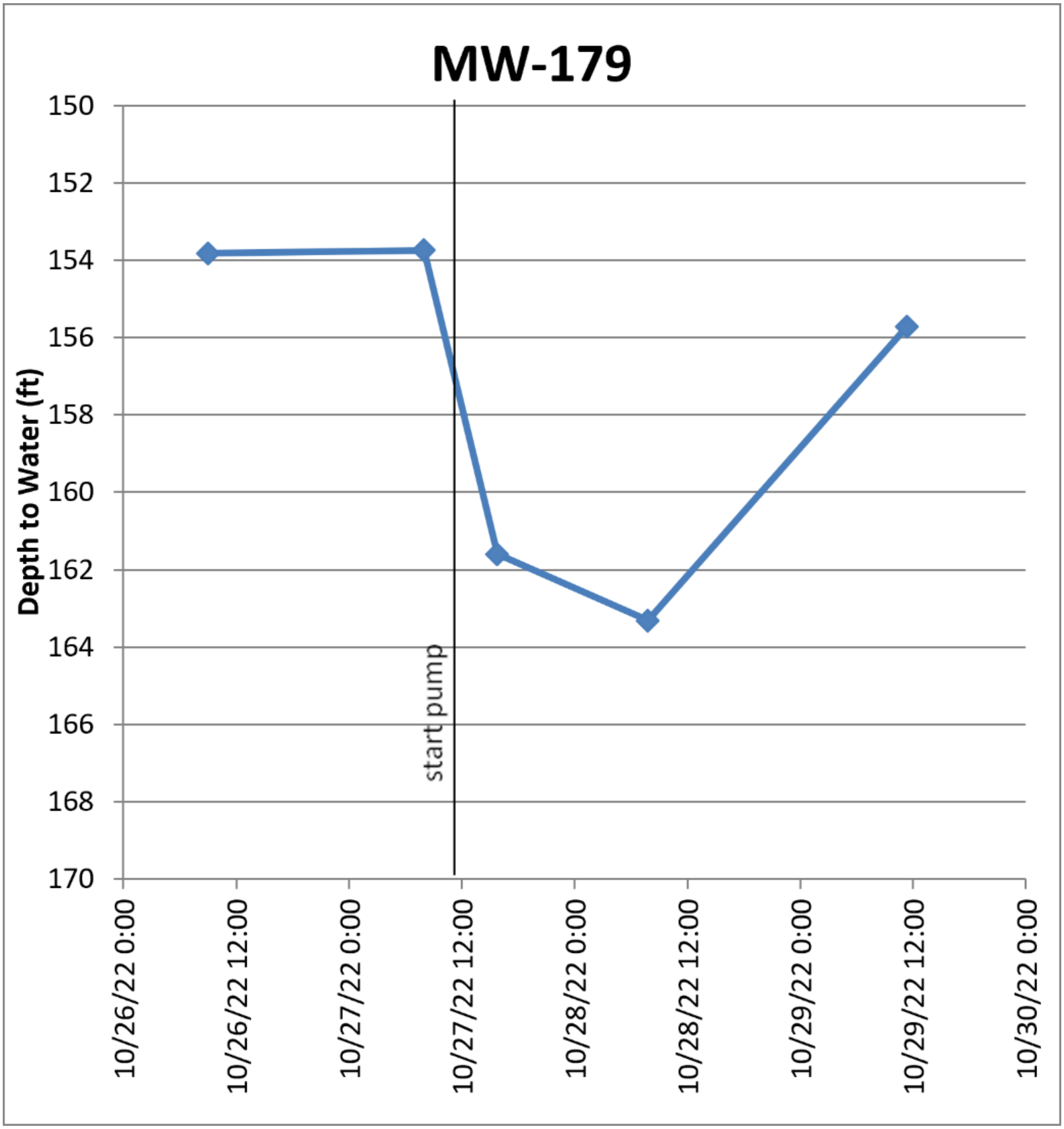
10/30/22 0:00

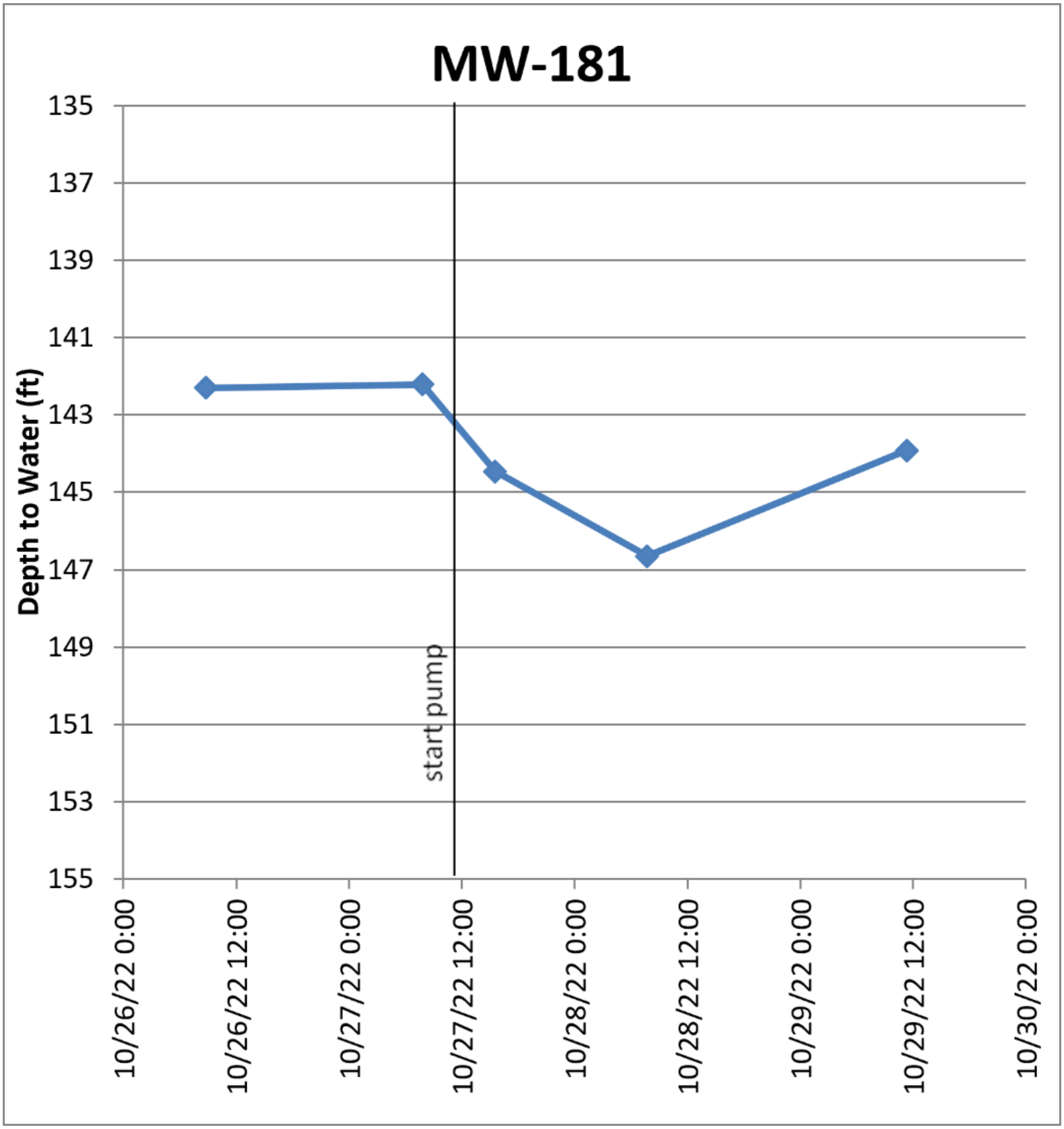

MW-172
Depth to Water (ft)
120
122
124
126
128
130
132
134
136
138
140
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00


MW-175
Depth to Water (ft)
130
132
134
136
138
140
142
144
146
148
150
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00

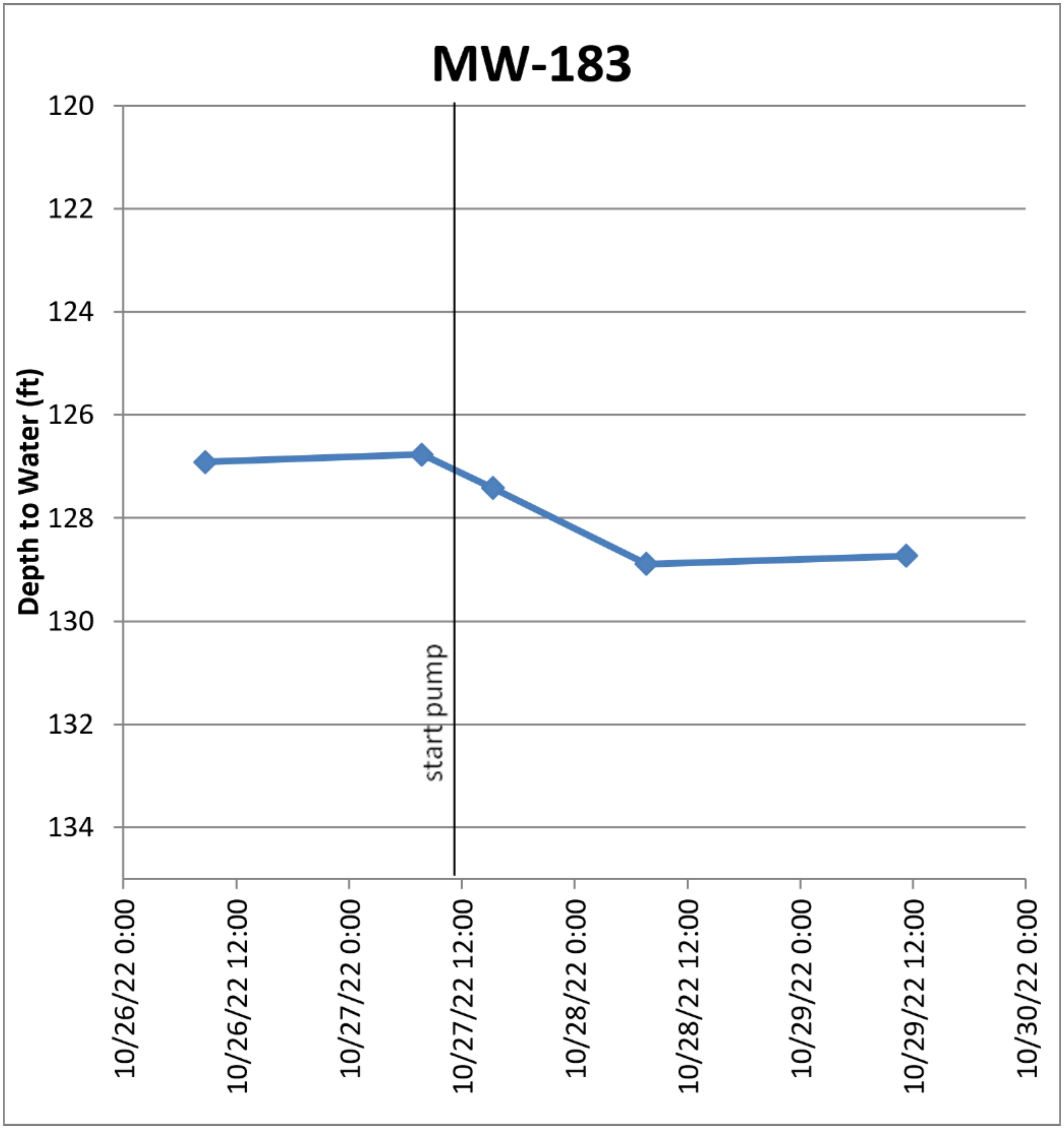


Depth to Water (ft)
175
170
165
160
155
150
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00
start pump
MW-178


MW-179
Depth to Water (ft)
150
152
154
156
158
160
162
164
166
168
170
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00



MW-181
Depth to Water (ft)
135
137
139
141
143
145
147
149
151
153
155
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00


MW-183
Depth to Water (ft)
120
122
124
126
128
130
132
134
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
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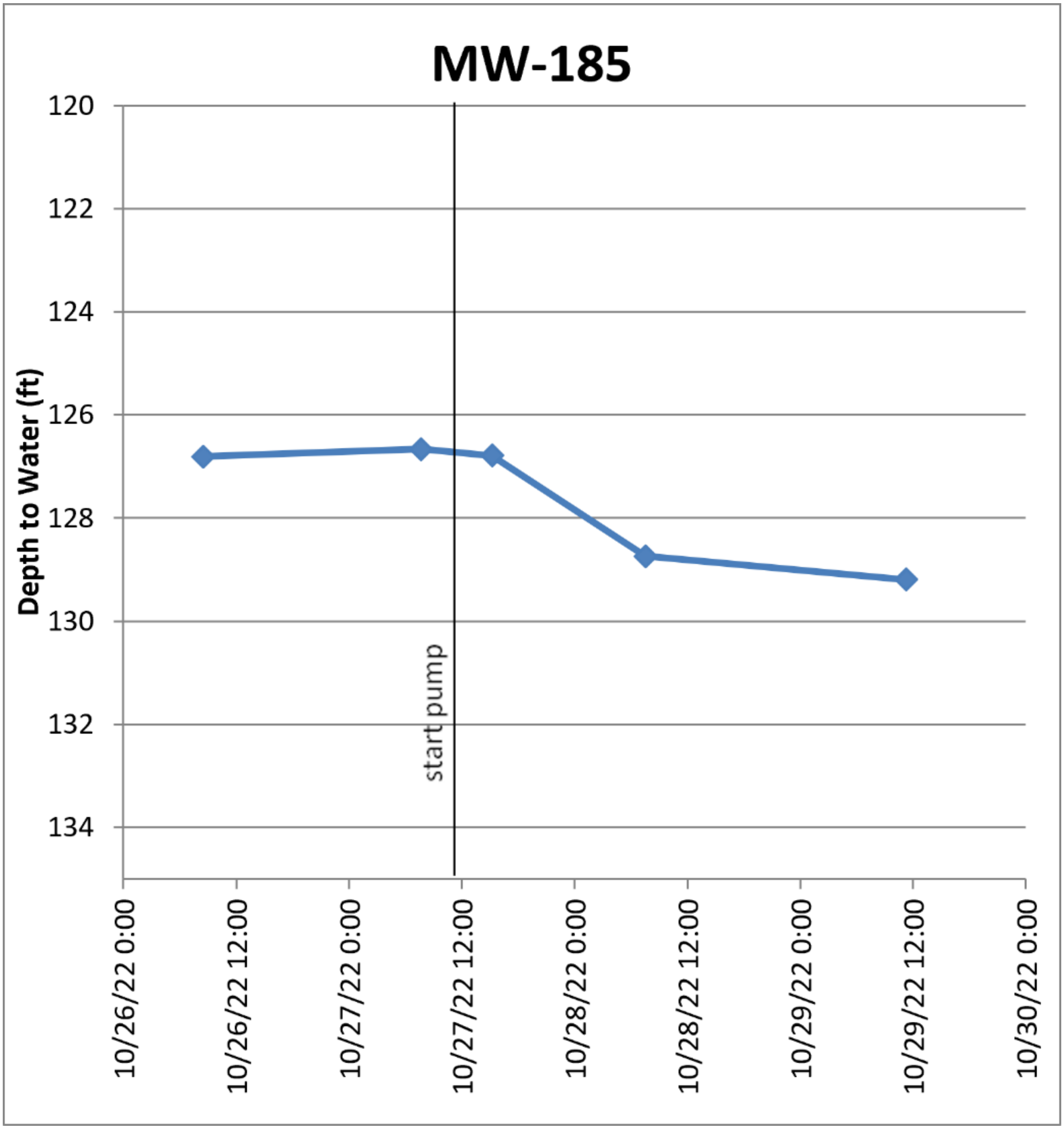
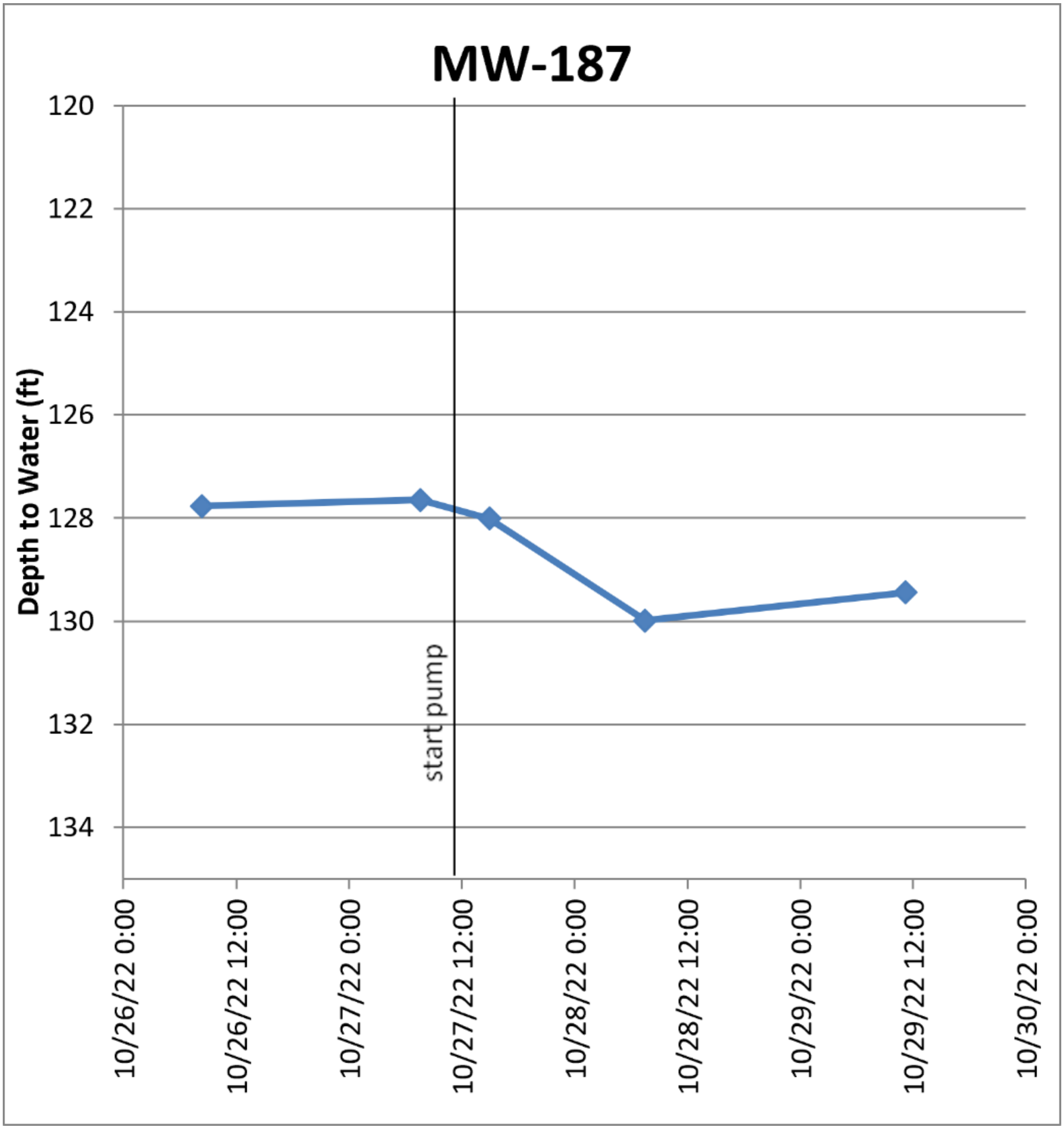
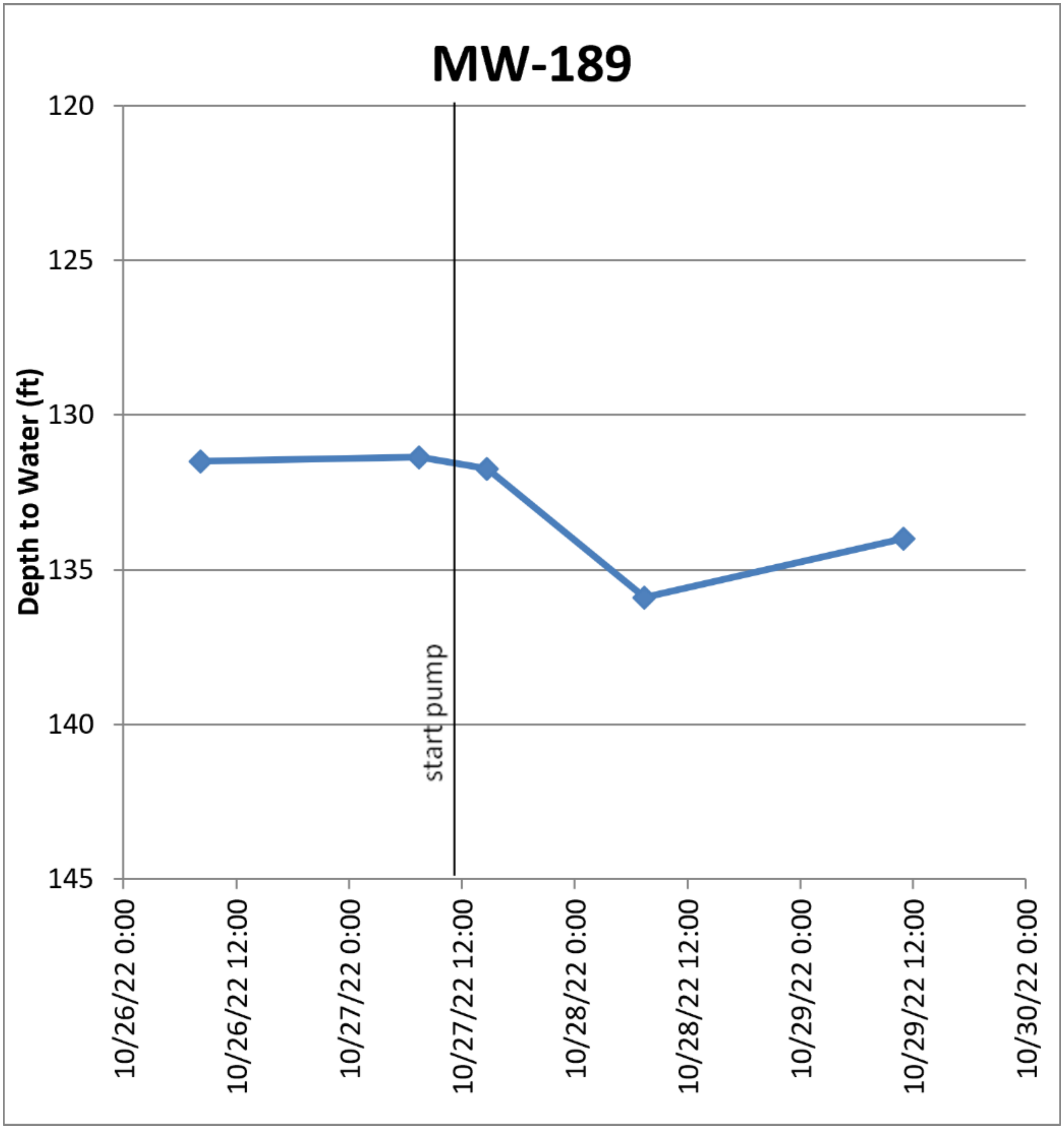
10/29/22 12:00
10/30/22 0:00



MW-185
Depth to Water (ft)
120
122
124
126
128
130
132
134
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00


MW-187
Depth to Water (ft)
120
122
124
126
128
130
132
134
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00


MW-189
Depth to Water (ft)
120
125
130
135
140
145
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
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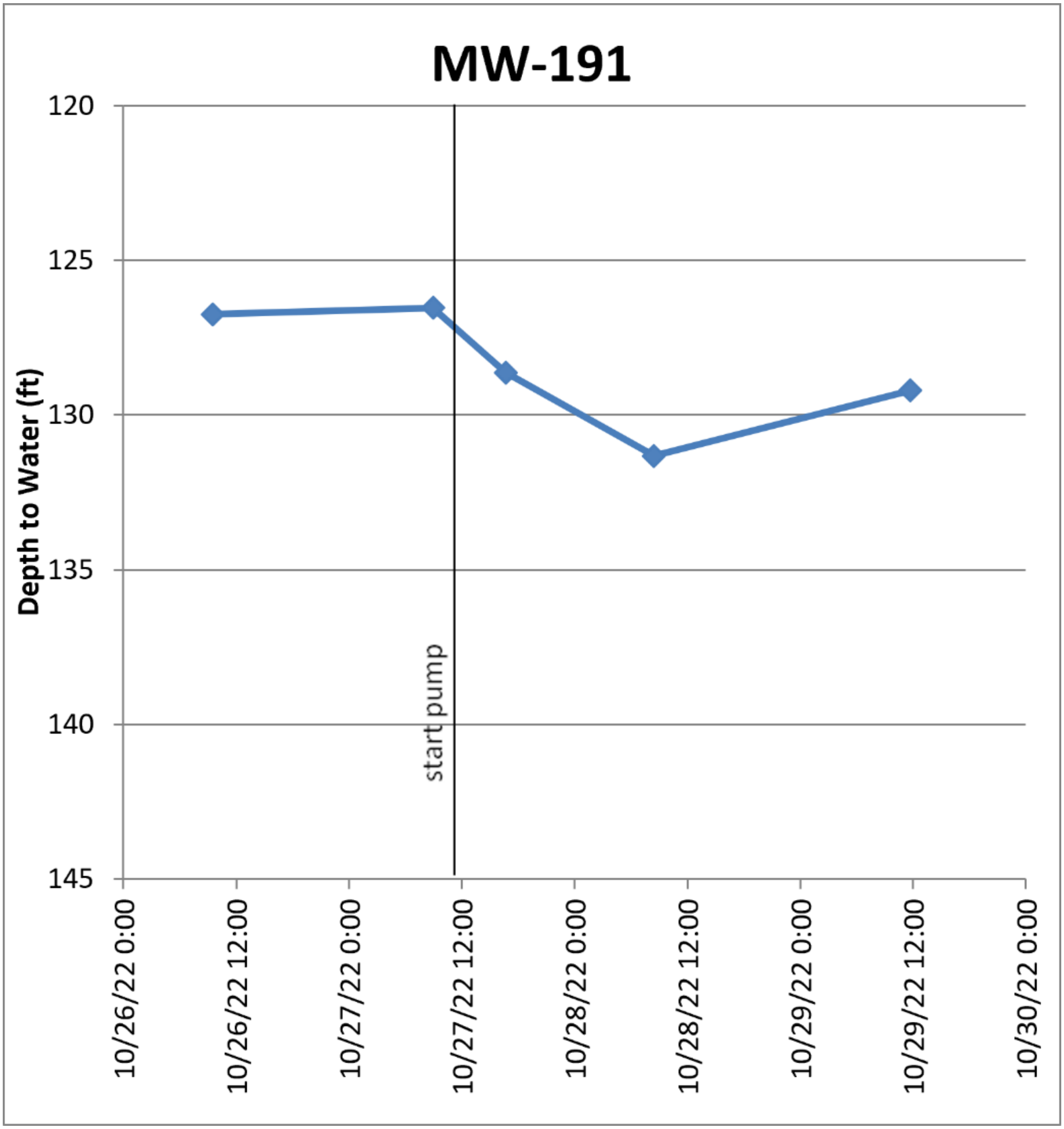
10/30/22 0:00


MW-191
Depth to Water (ft)
120
125
130
135
140
145
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
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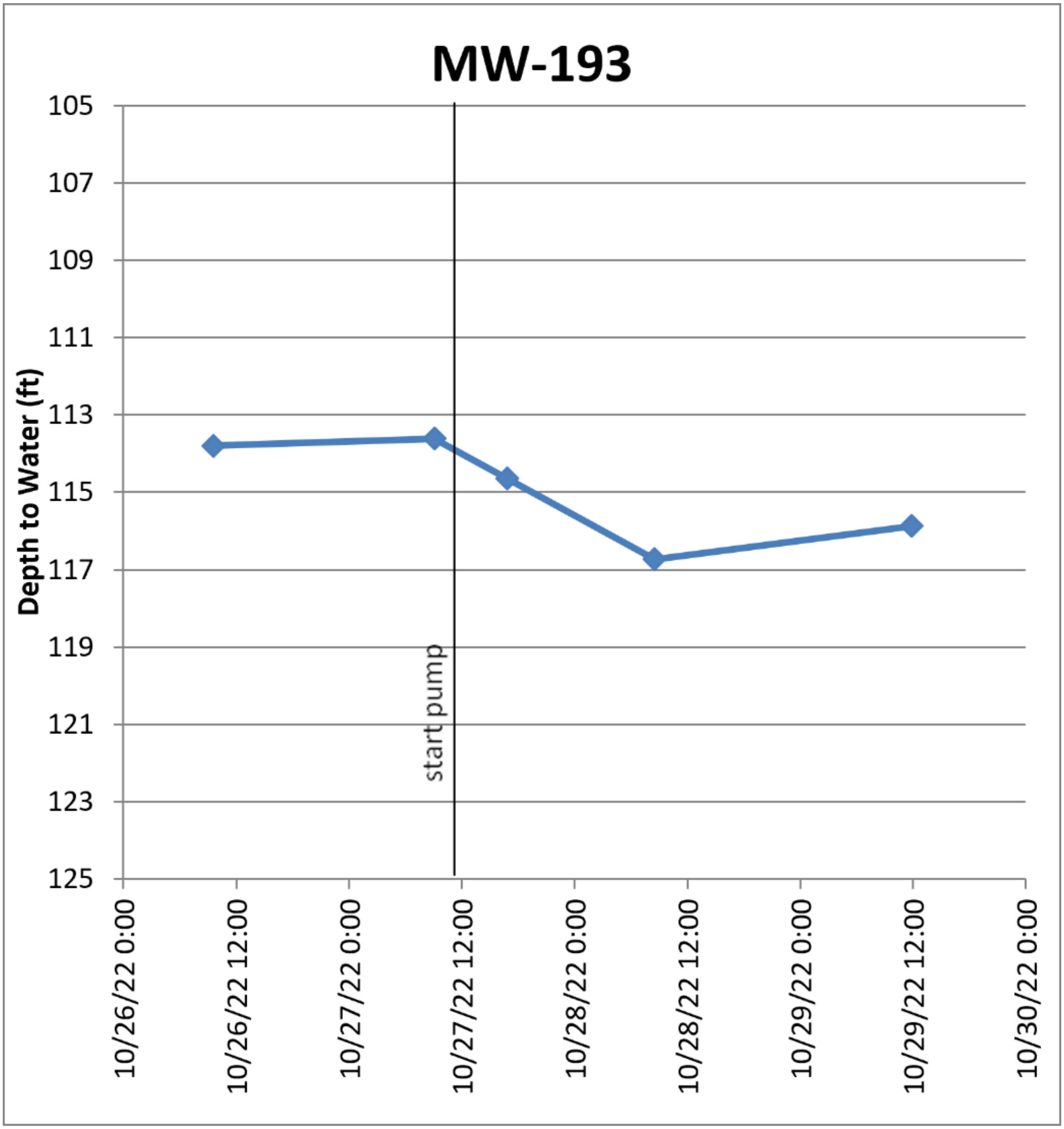
10/30/22 0:00


MW-193
Depth to Water (ft)
105
107
109
111
113
115
117
119
121
123
125
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
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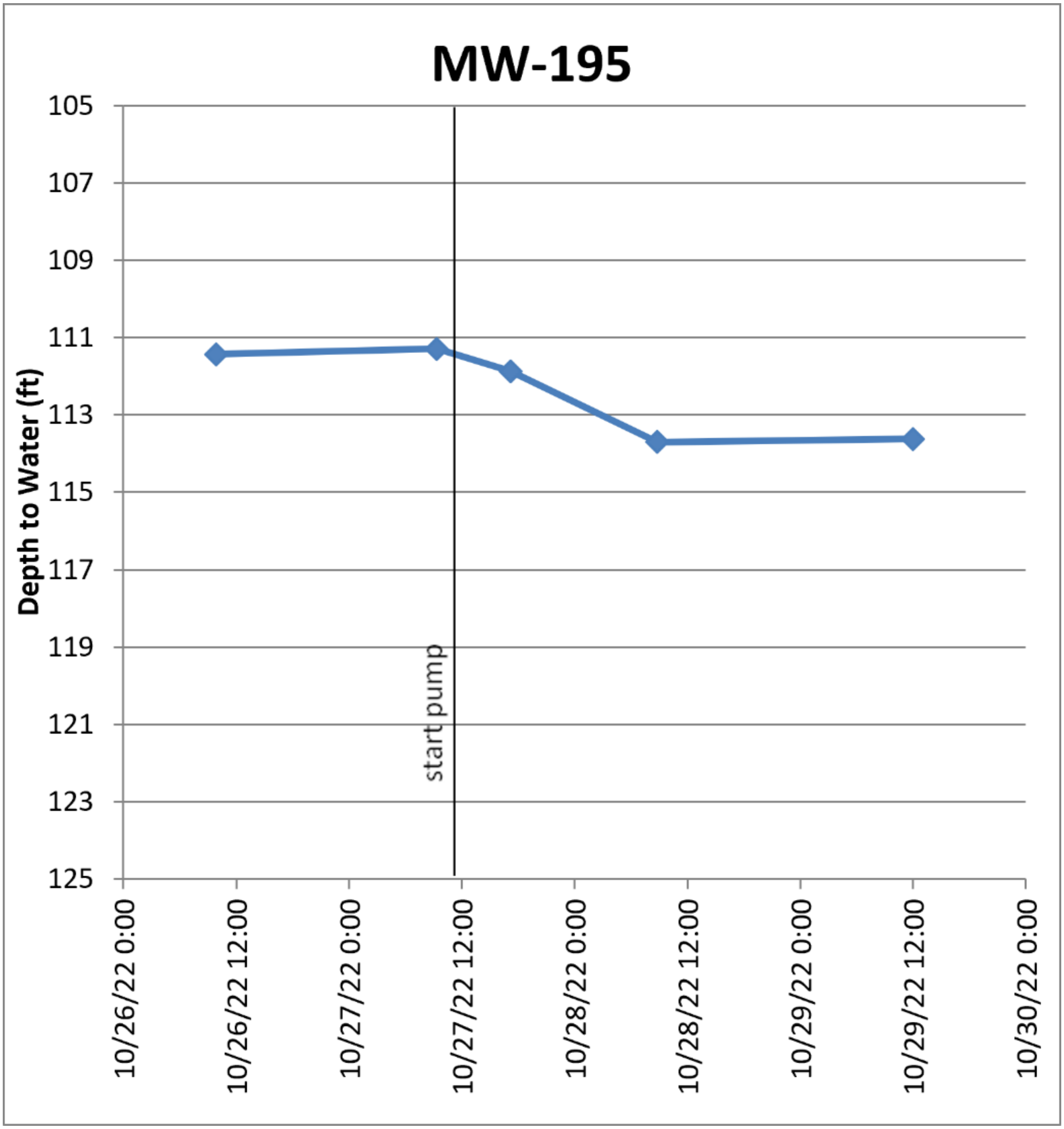
10/30/22 0:00



MW-195
Depth to Water (ft)
105
107
109
111
113
115
117
119
121
123
125
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
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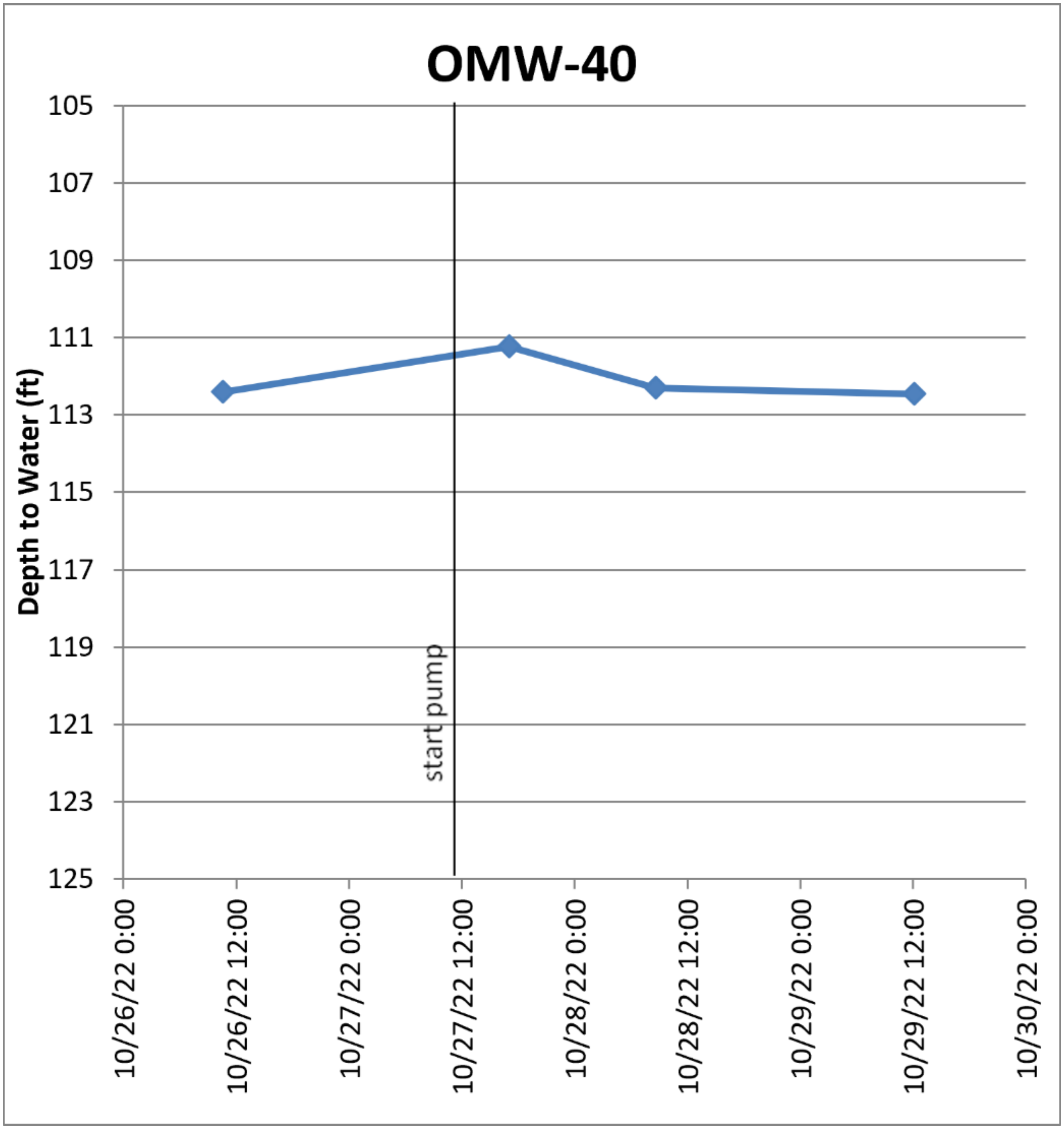
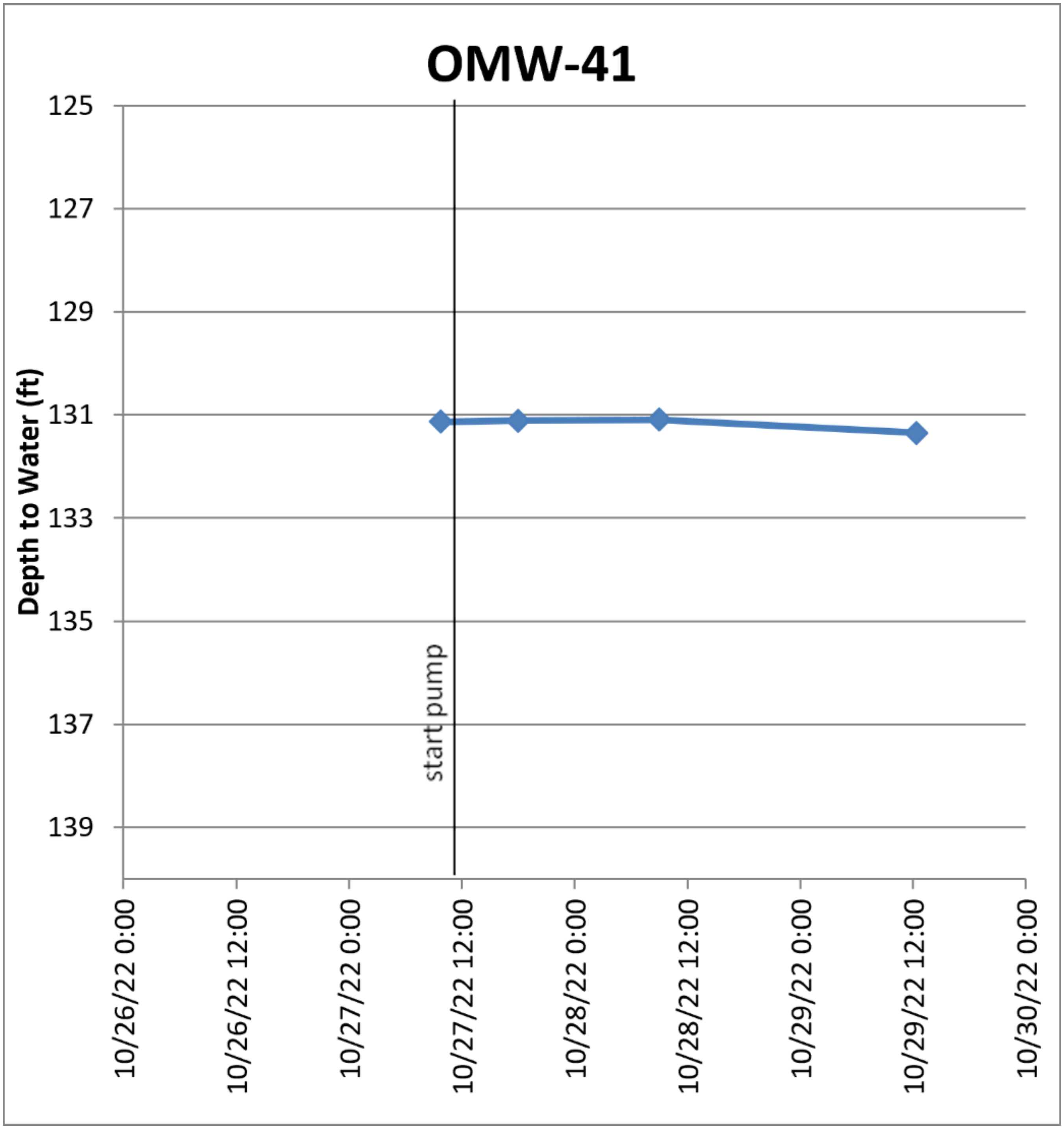
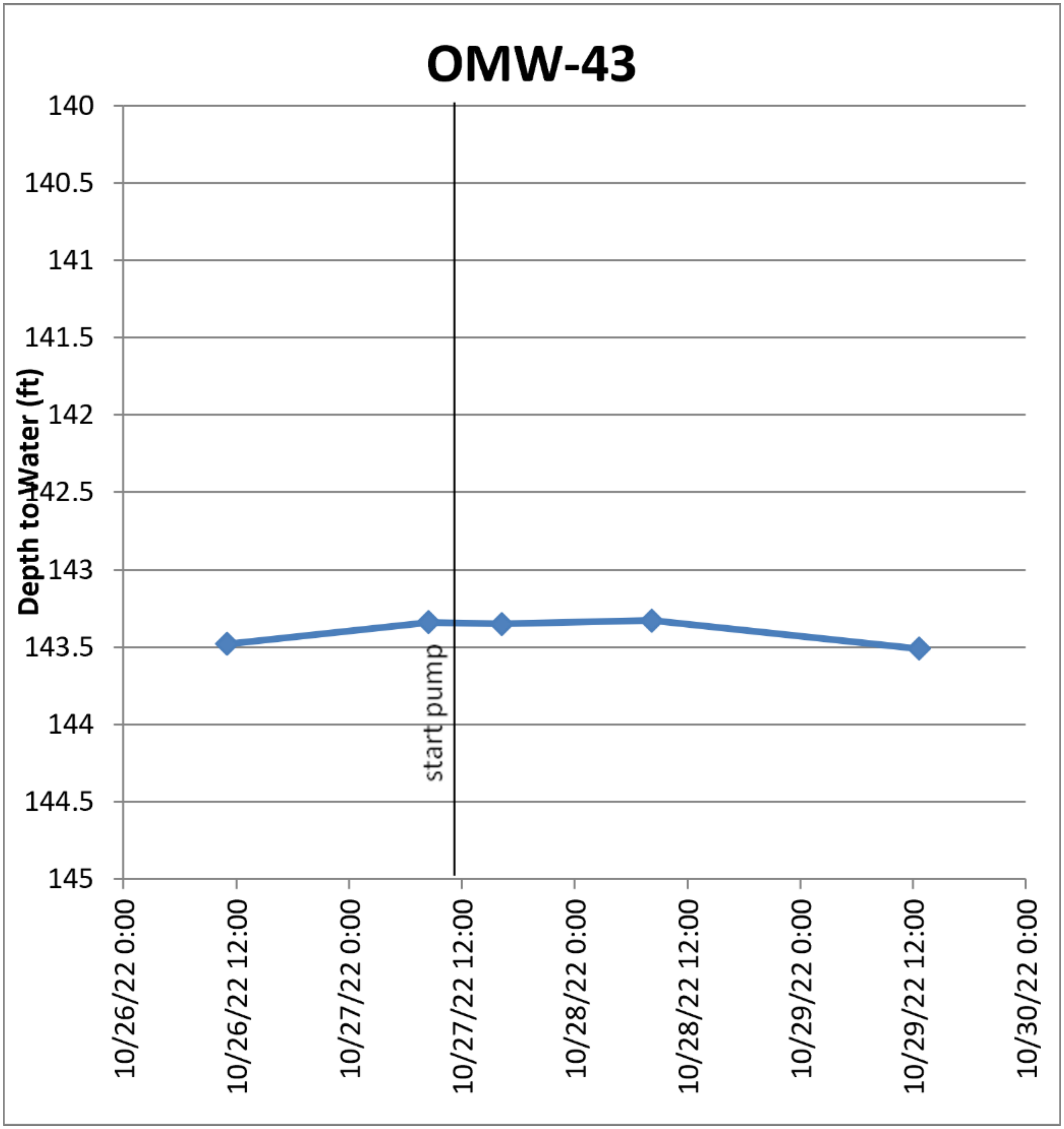
10/30/22 0:00



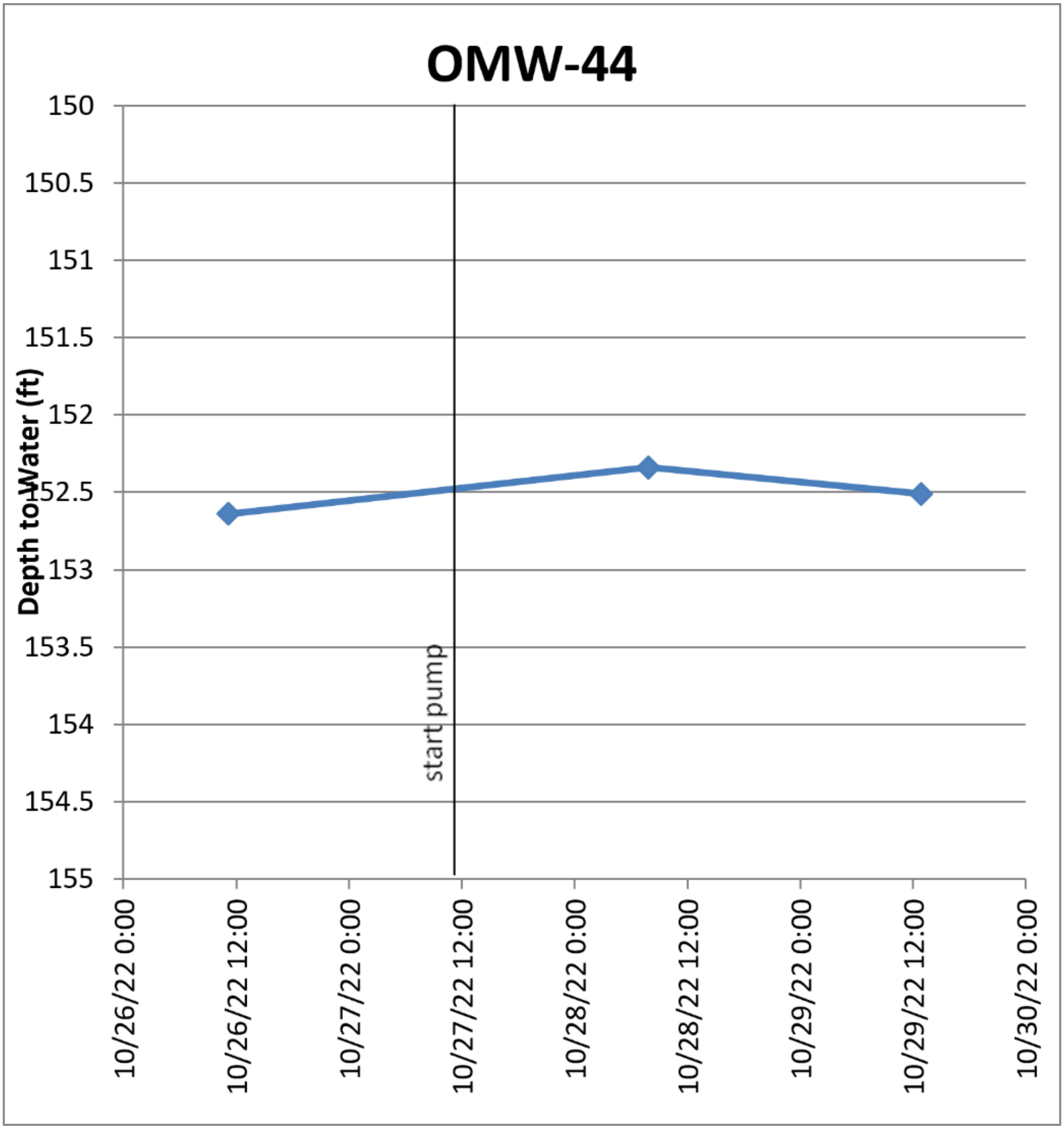
OMW-40
Depth to Water (ft)
105
107
109
111
113
115
117
119
121
123
125
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00

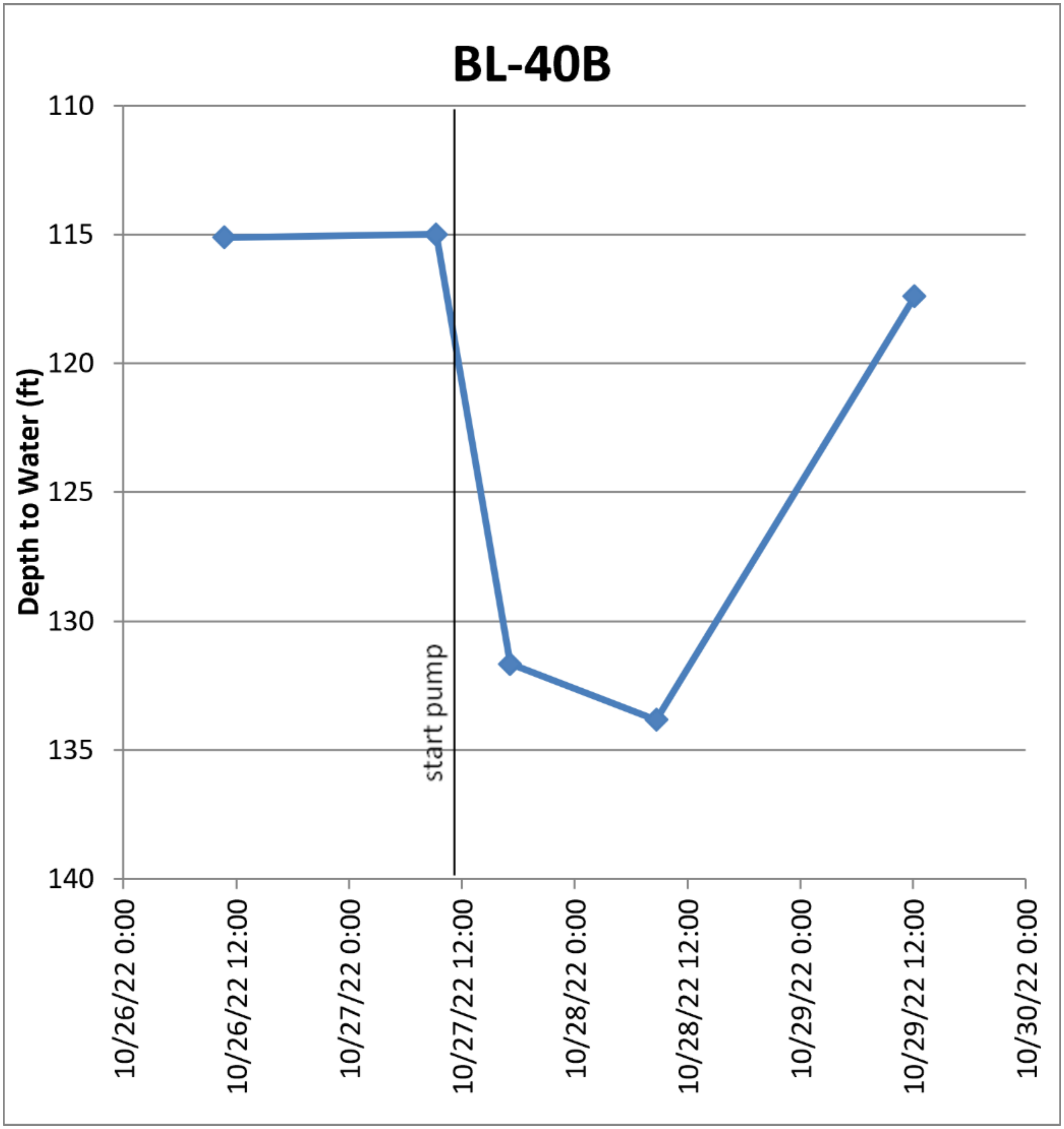


OMW-41
Depth to Water (ft)
125
127
129
131
133
135
137
139
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00

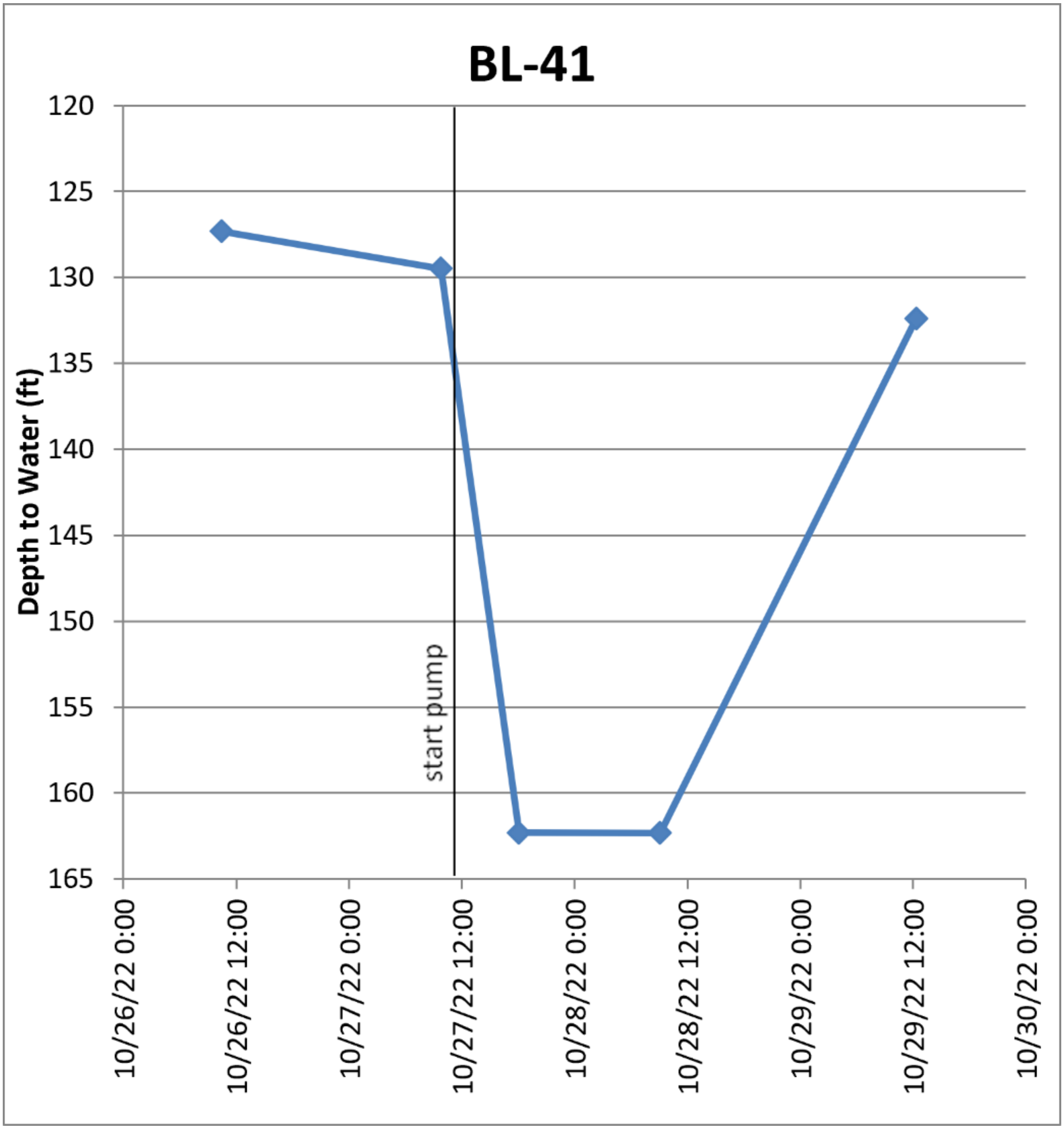


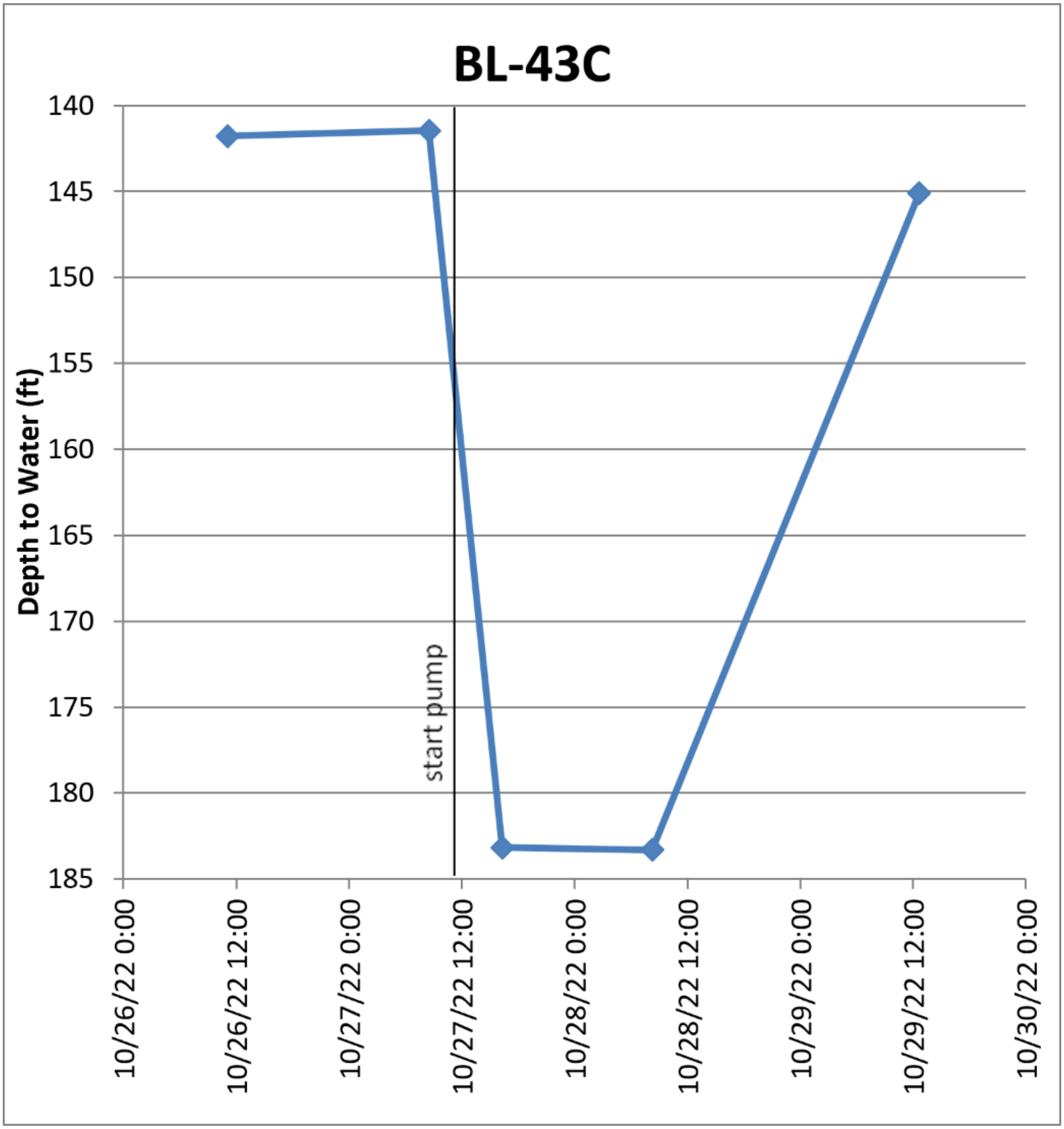
OMW-43
Depth to Water (ft)
140
140.5
141
141.5
142
142.5
143
143.5
144
144.5
145
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00


OMW-44
Depth to Water (ft)
150
150.5
151
151.5
152
152.5
153
153.5
154
154.5
155
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00

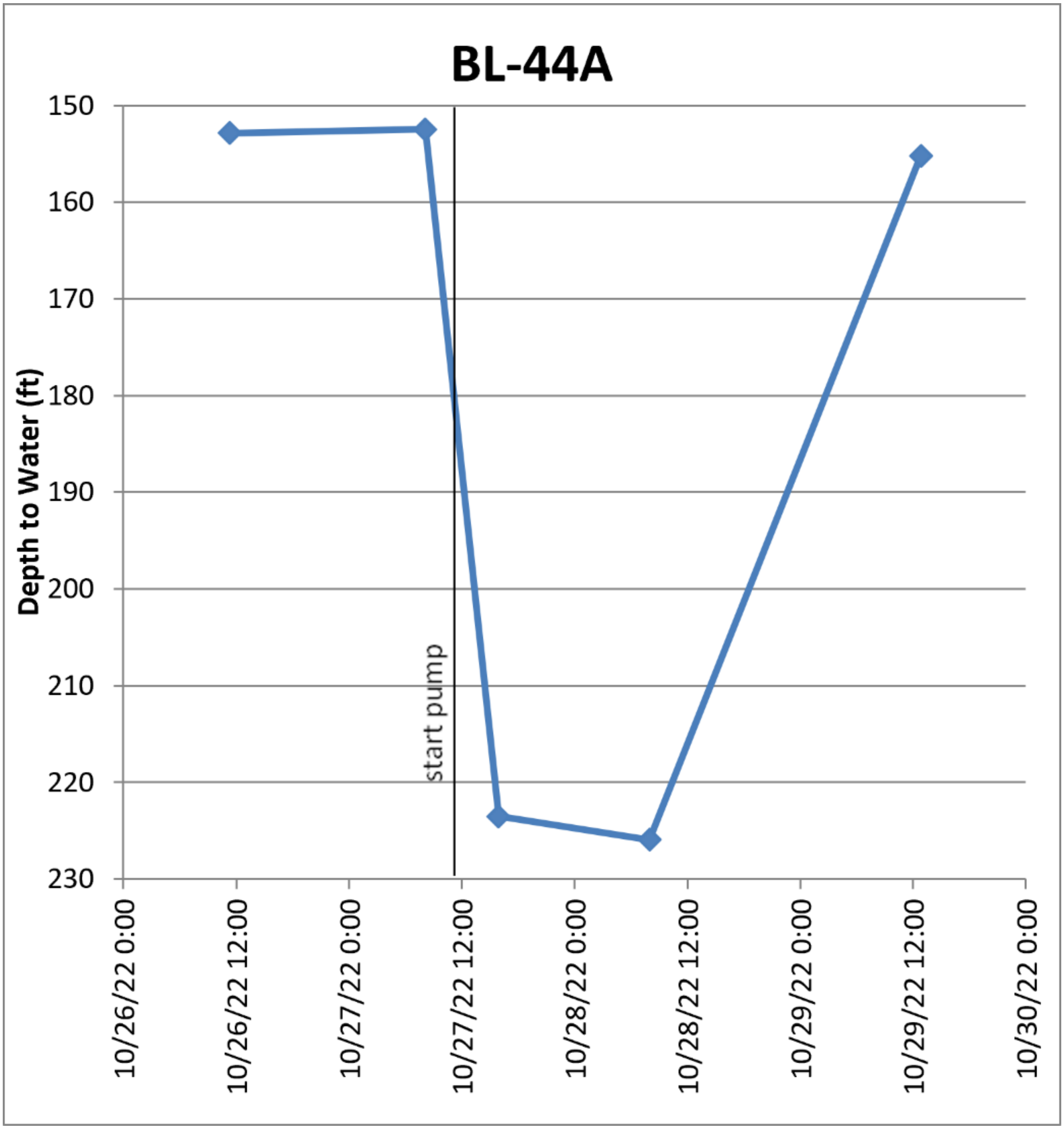


BL-40B
Depth to Water (ft)
110
115
120
125
130
135
140
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00


BL-41
Depth to Water (ft)
120
125
130
135
140
145
150
155
160
165
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00

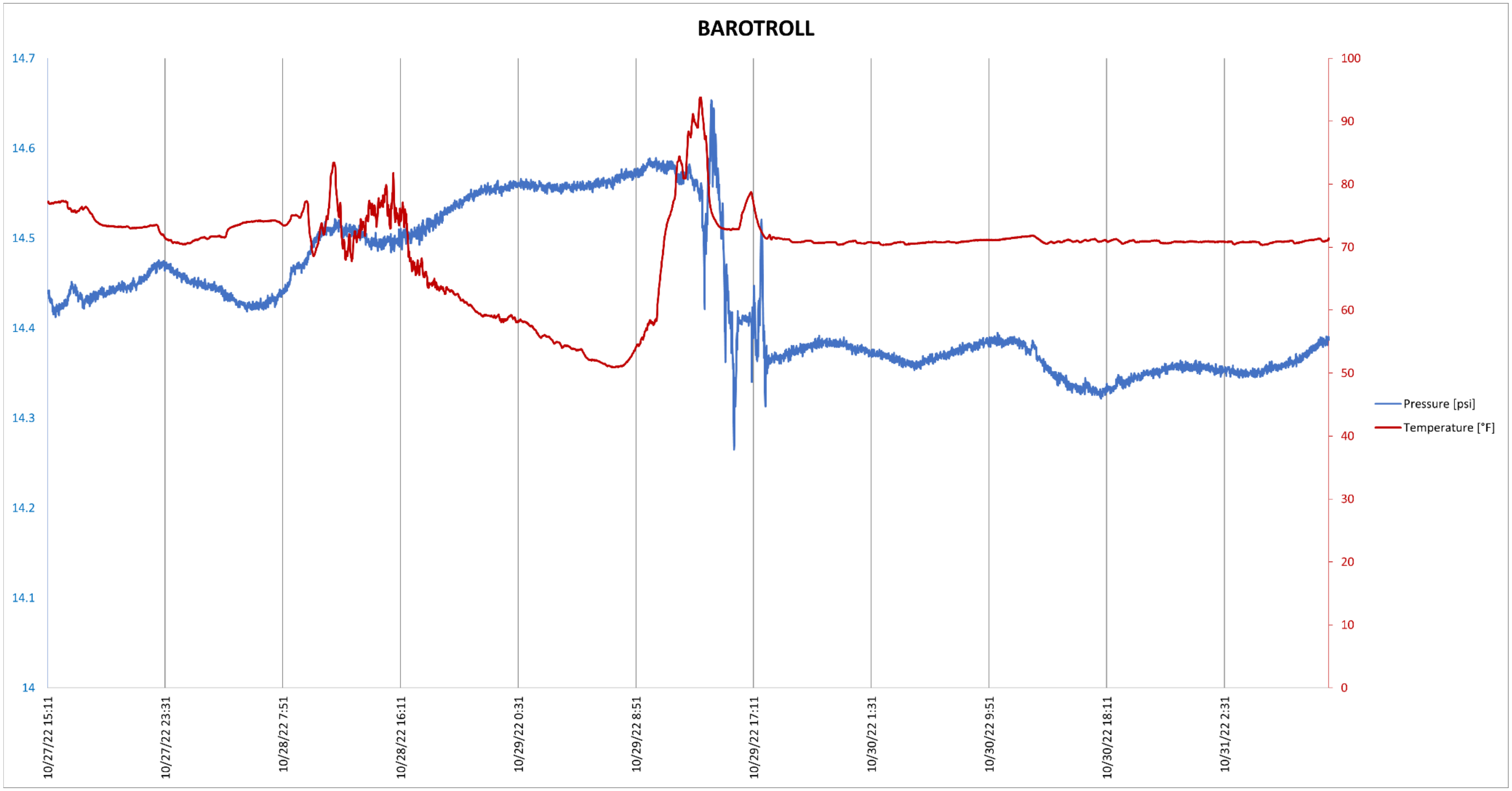


BL-43C
Depth to Water (ft)
140
145
150
155
160
165
170
175
180
185
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00

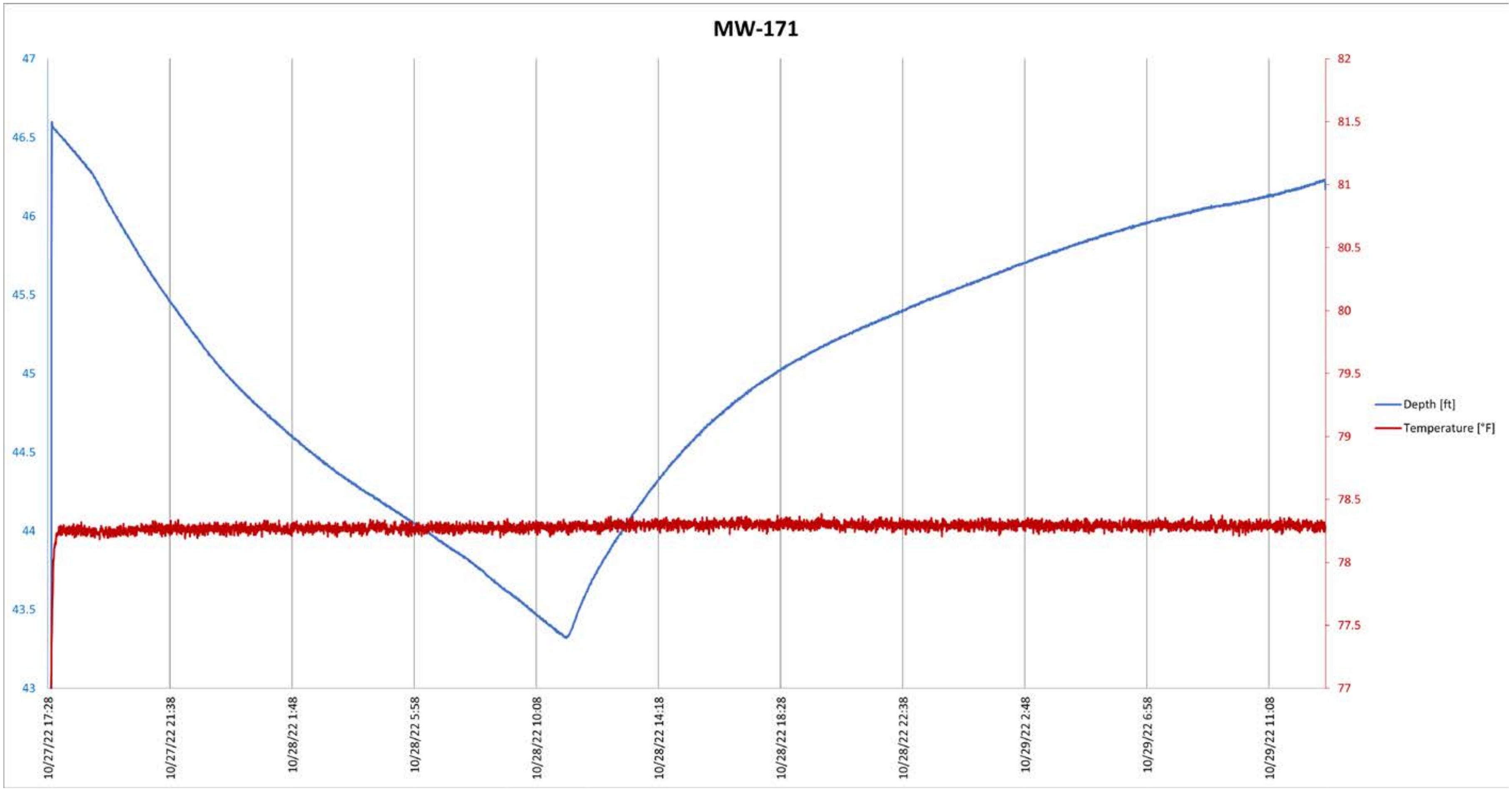

BL-44A
Depth to Water (ft)
150
160
170
180
190
200
210
220
230
start pump
10/26/22 0:00
10/26/22 12:00
10/27/22 0:00
10/27/22 12:00
10/28/22 0:00
10/28/22 12:00
10/29/22 0:00
10/29/22 12:00
10/30/22 0:00

PAA4 PUMP TESTS

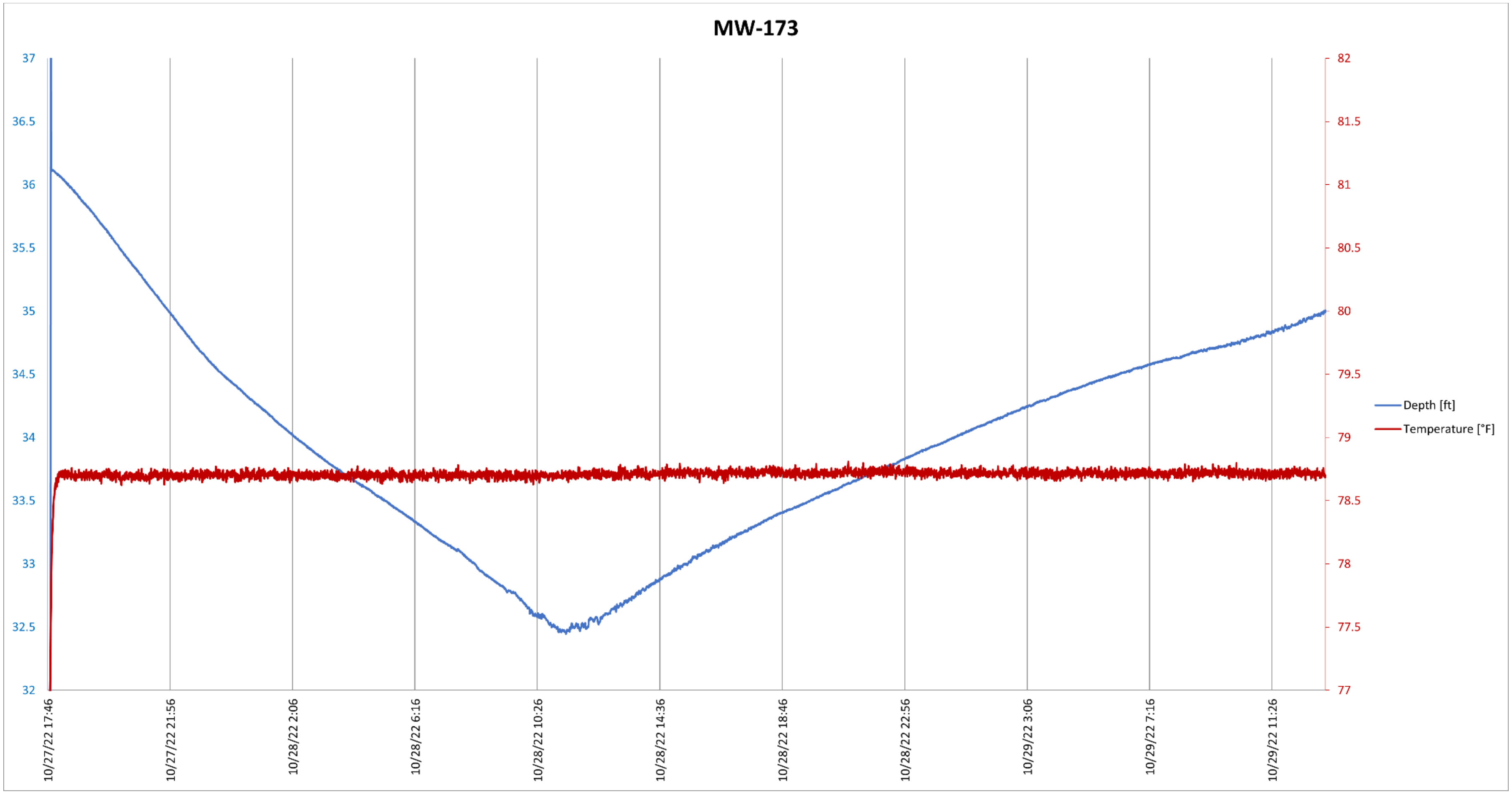
HYDROGRAPHS



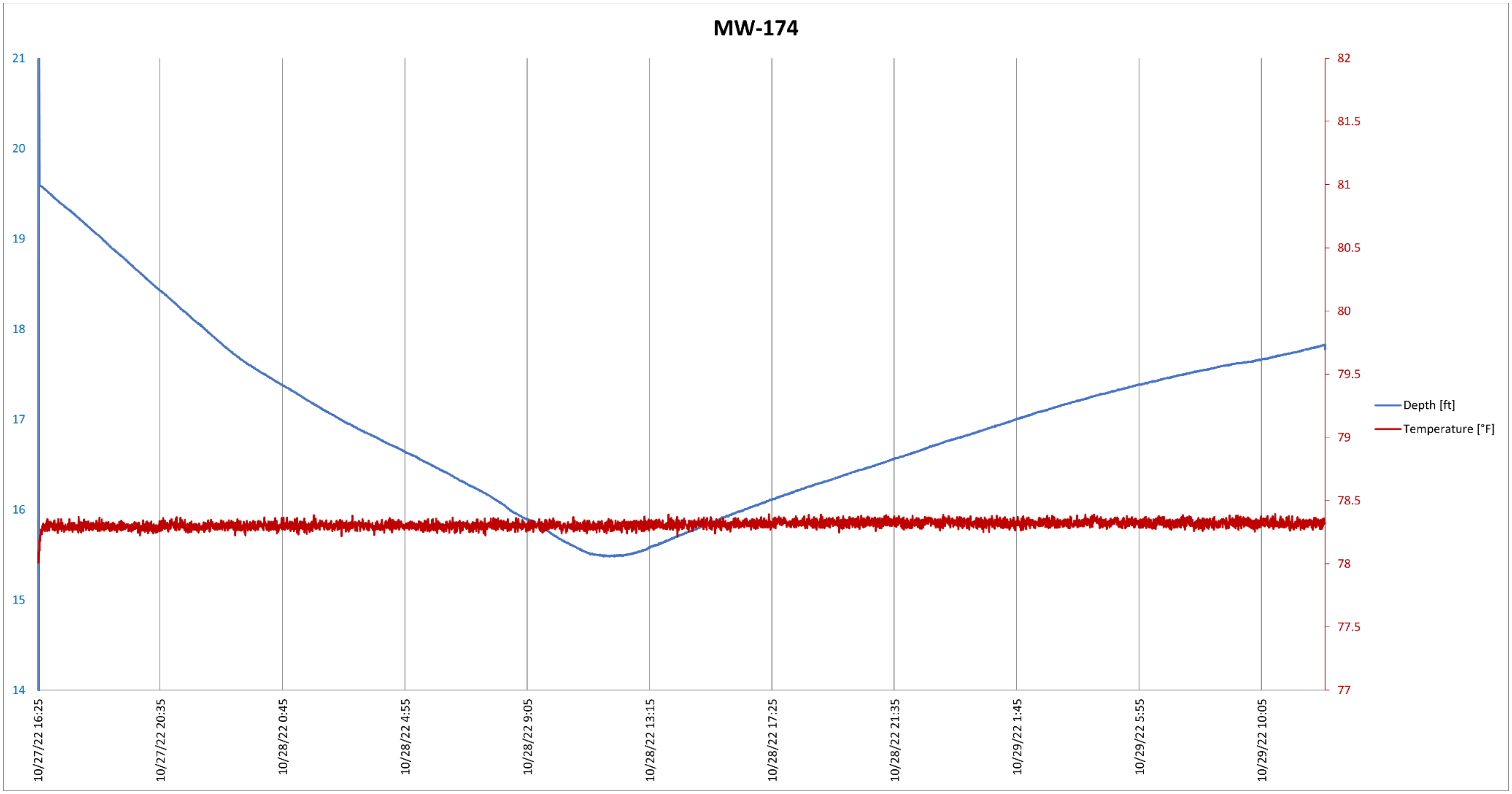
BAROTROLL
14.7
14.6
14.5
14.4
14.3
14.2
14.1
14
100
90
80
70
60
50
40
30
20
10
0
10/27/22 15:11
10/27/22 23:31
10/28/22 7:51
10/28/22 16:11
10/29/22 0:31
10/29/22 8:51
10/29/22 17:11
10/30/22 1:31
10/30/22 9:51
10/30/22 18:11
10/31/22 2:31
Pressure [psi]
Temperature [°F]



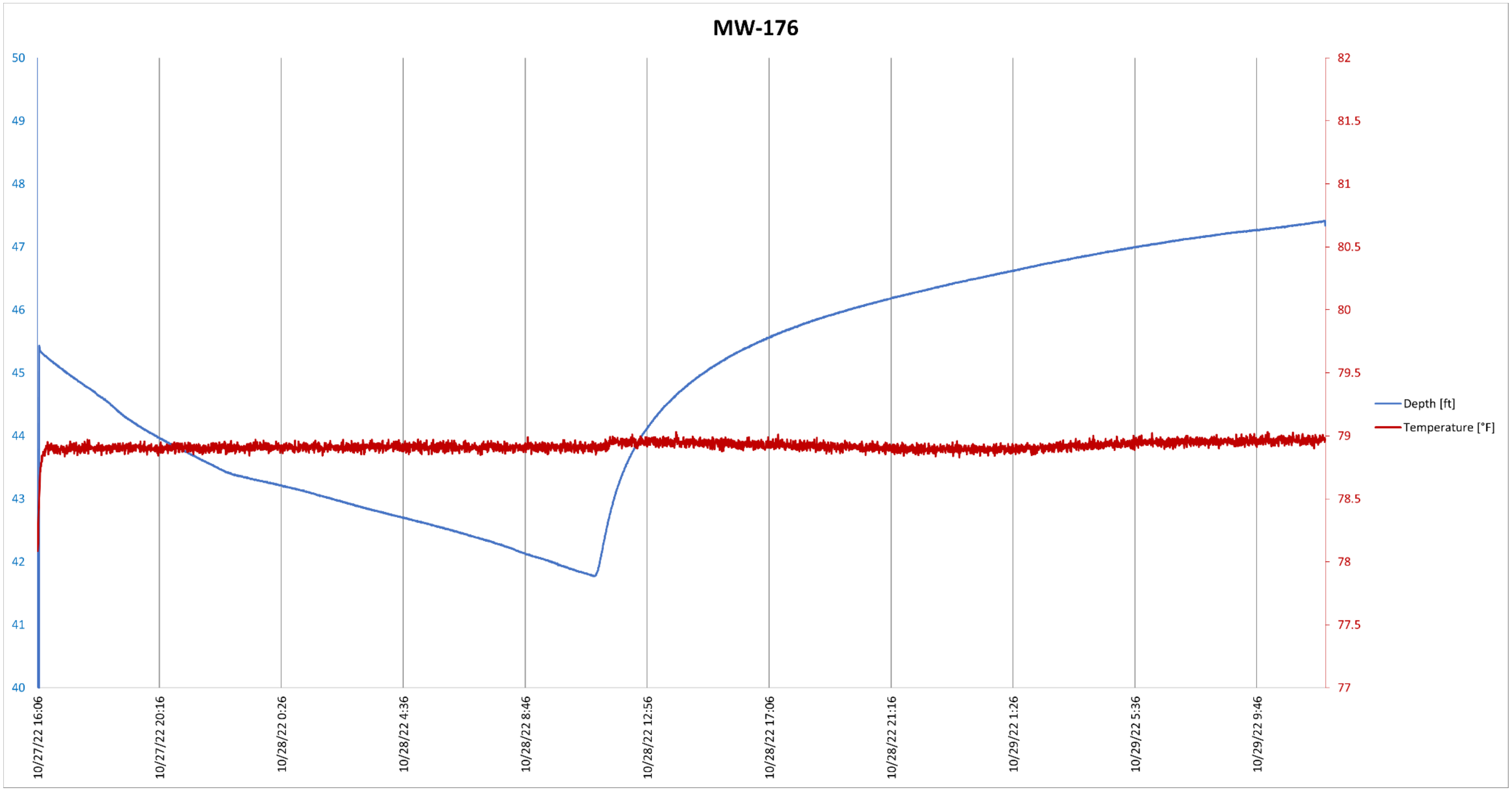
MW-171
47
46.5
46
45.5
45
44.5
44
43.5
43
82
81.5
81
80.5
80
79.5
79
78.5
78
77.5
77
10/27/22 17:28
10/27/22 21:38
10/28/22 1:48
10/28/22 5:58
10/28/22 10:08
10/28/22 14:18
10/28/22 18:28
10/28/22 22:38
10/29/22 2:48
10/29/22 6:58
10/29/22 11:08
Depth [ft]
Temperature [°F]



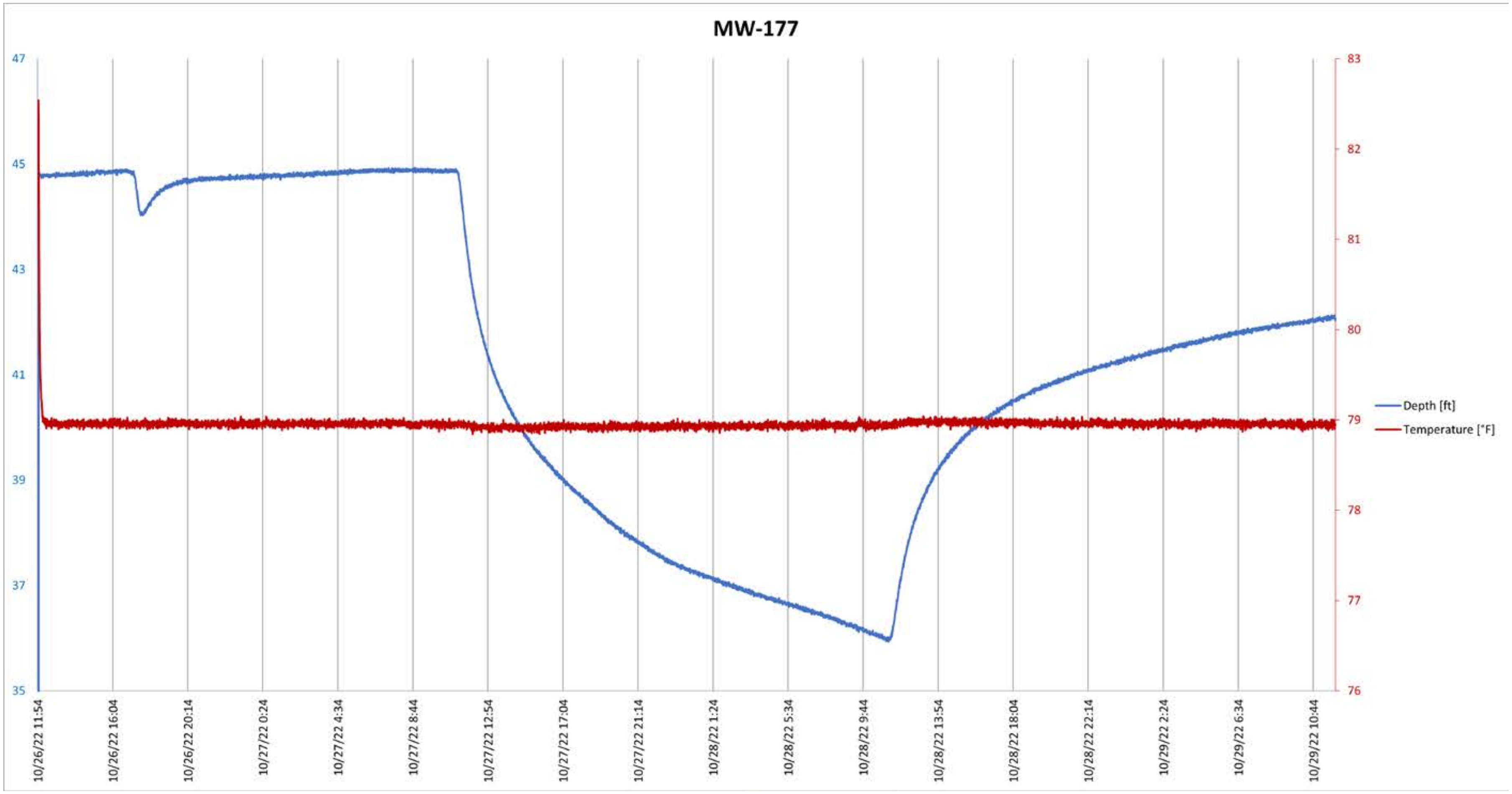
MW-173
37
36.5
36
35.5
35
34.5
34
33.5
33
32.5
32
82
81.5
81
80.5
80
79.5
79
78.5
78
77.5
77
10/27/22 17:46
10/27/22 21:56
10/28/22 2:06
10/28/22 6:16
10/28/22 10:26
10/28/22 14:36
10/28/22 18:46
10/28/22 22:56
10/29/22 3:06
10/29/22 7:16
10/29/22 11:26
Depth [ft]
Temperature [°F]

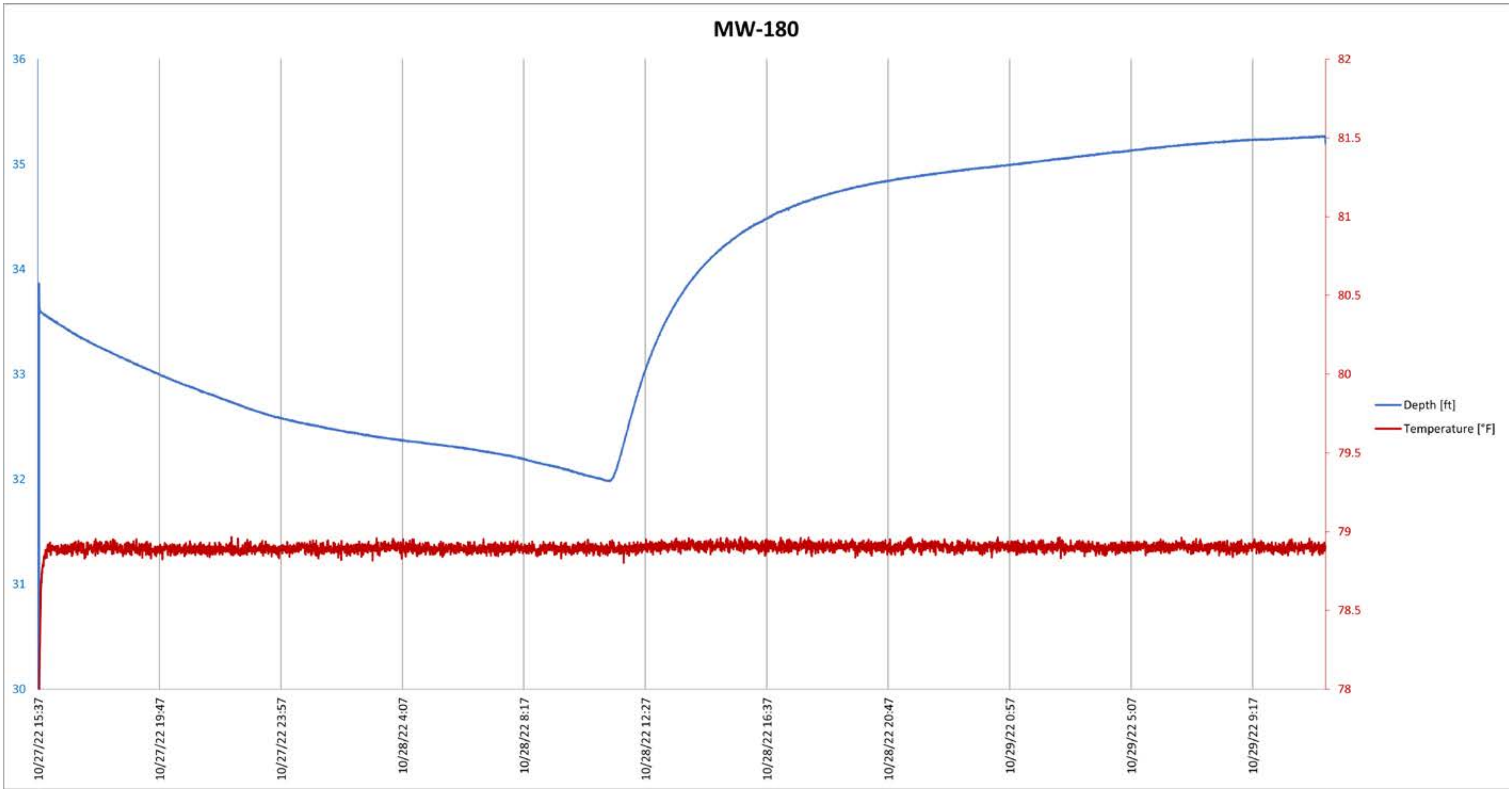


MW-174
21
20
19
18
17
16
15
14
82
81.5
81
80.5
80
79.5
79
78.5
78
77.5
77
Depth [ft]
Temperature [°F]
10/27/22 16:25
10/27/22 20:35
10/28/22 0:45
10/28/22 4:55
10/28/22 9:05
10/28/22 13:15
10/28/22 17:25
10/28/22 21:35
10/29/22 1:45
10/29/22 5:55
10/29/22 10:05

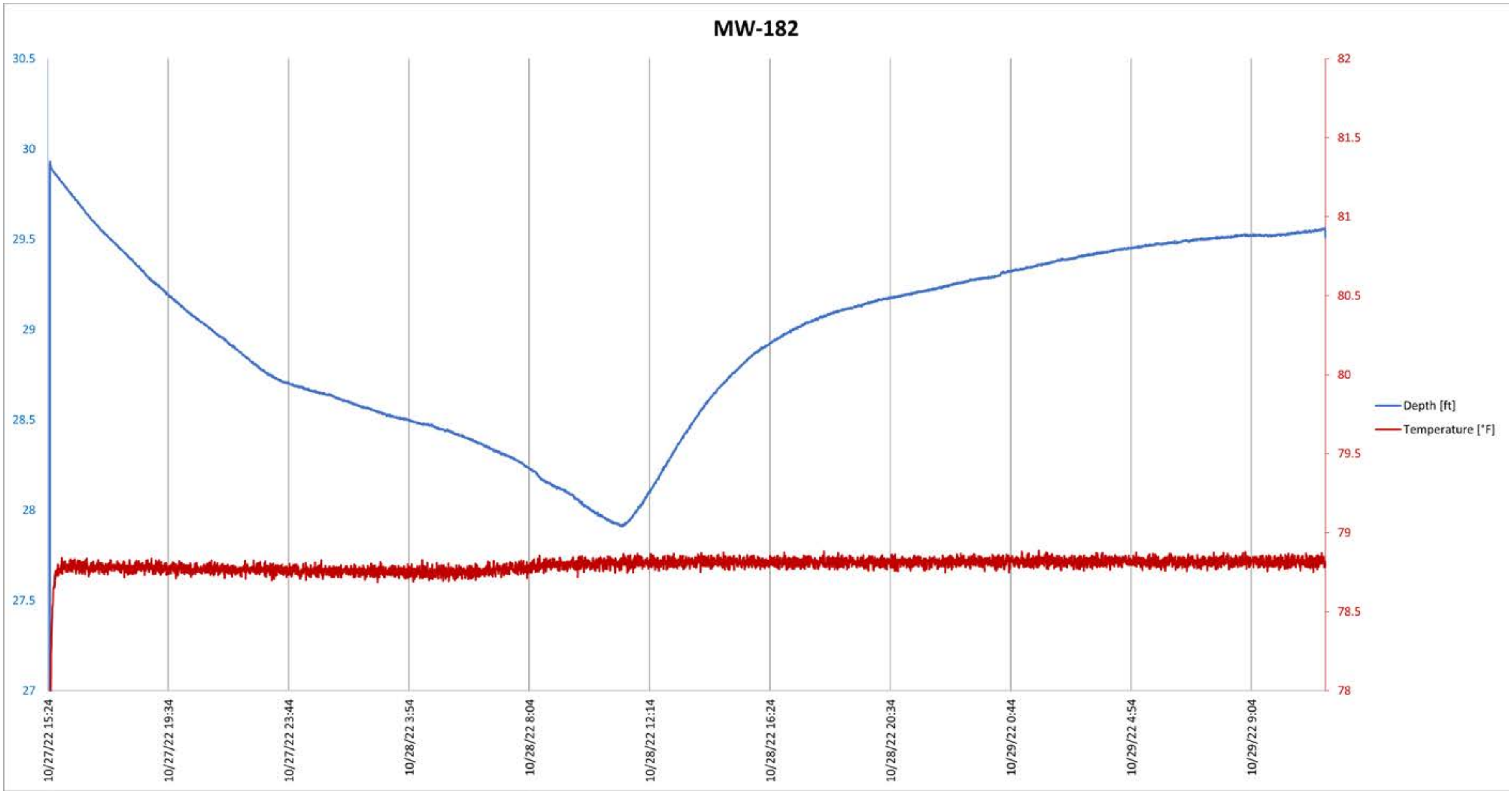


MW-176
50
49
48
47
46
45
44
43
42
41
40
82
81.5
81
80.5
80
79.5
79
78.5
78
77.5
77
Depth [ft]
Temperature [°F]
10/27/22 16:06
10/27/22 20:16
10/28/22 0:26
10/28/22 4:36
10/28/22 8:46
10/28/22 12:56
10/28/22 17:06
10/28/22 21:16
10/29/22 1:26
10/29/22 5:36
10/29/22 9:46

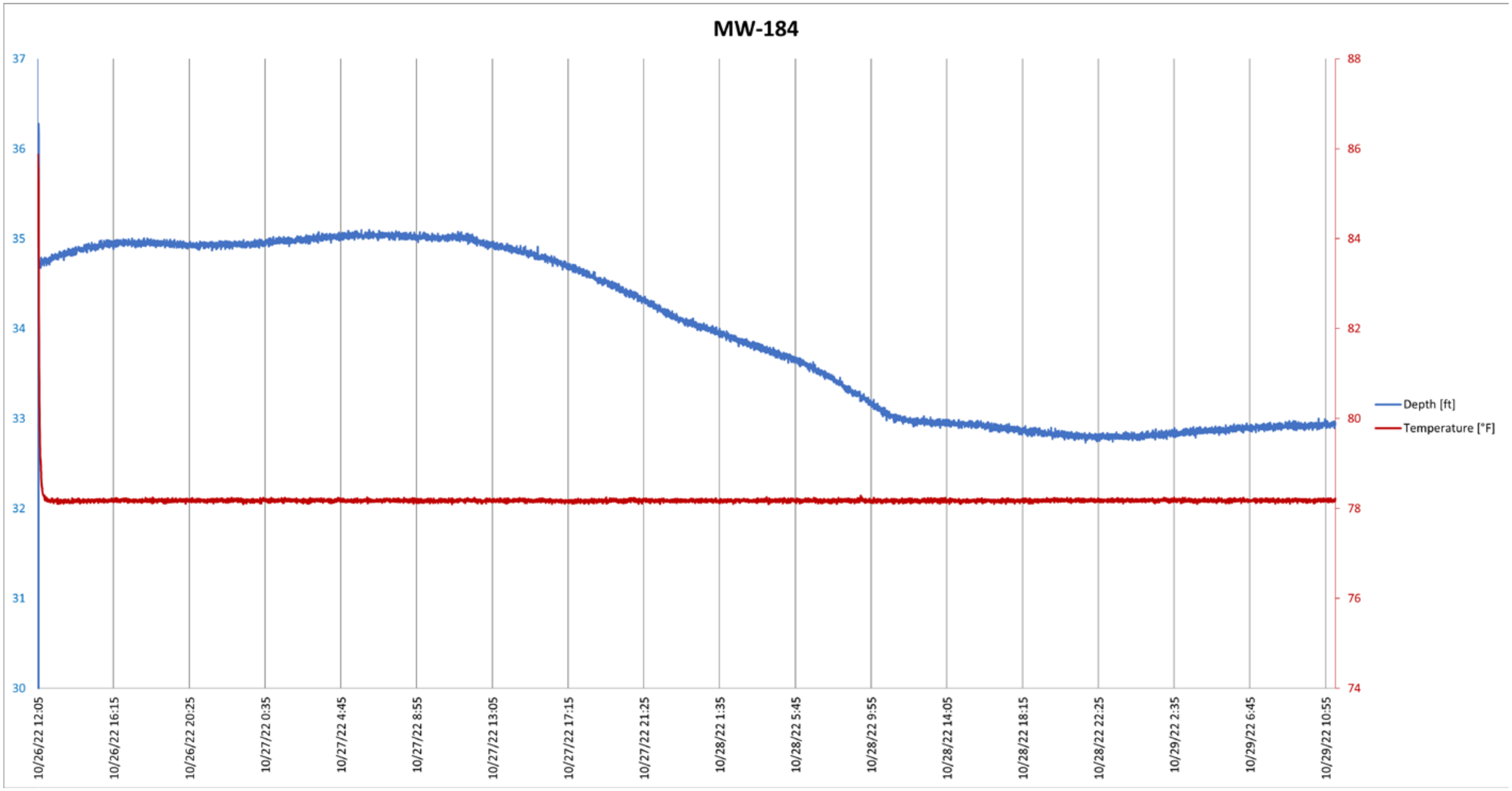

MW-177
47
45
43
41
39
37
35
83
82
81
80
79
78
77
76
10/26/22 11:54
10/26/22 16:04
10/26/22 20:14
10/27/22 0:24
10/27/22 4:34
10/27/22 8:44
10/27/22 12:54
10/27/22 17:04
10/27/22 21:14
10/28/22 1:24
10/28/22 5:34
10/28/22 9:44
10/28/22 13:54
10/28/22 18:04
10/28/22 22:14
10/29/22 2:24
10/29/22 6:34
10/29/22 10:44
Depth [ft]
Temperature [°F]

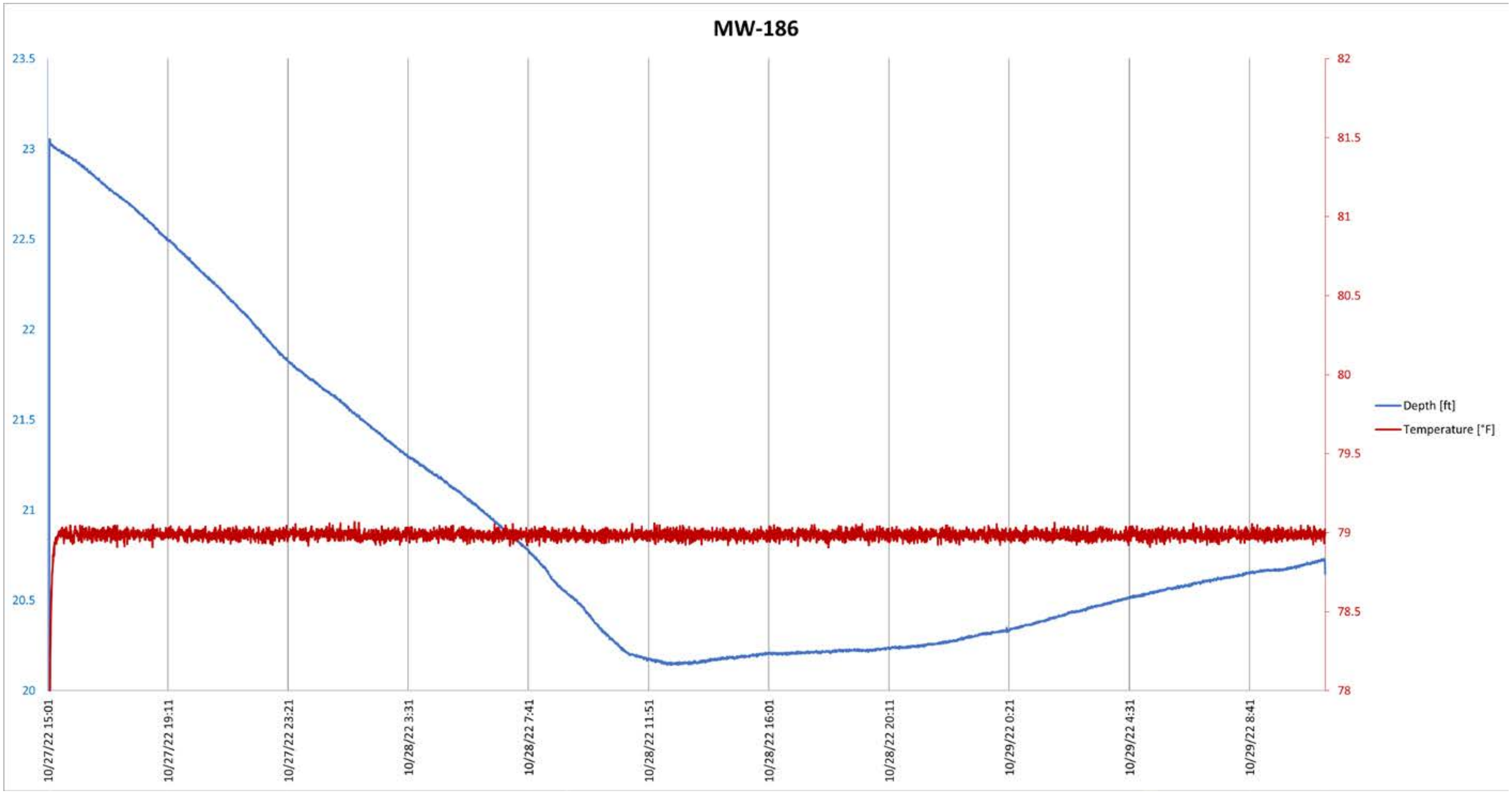


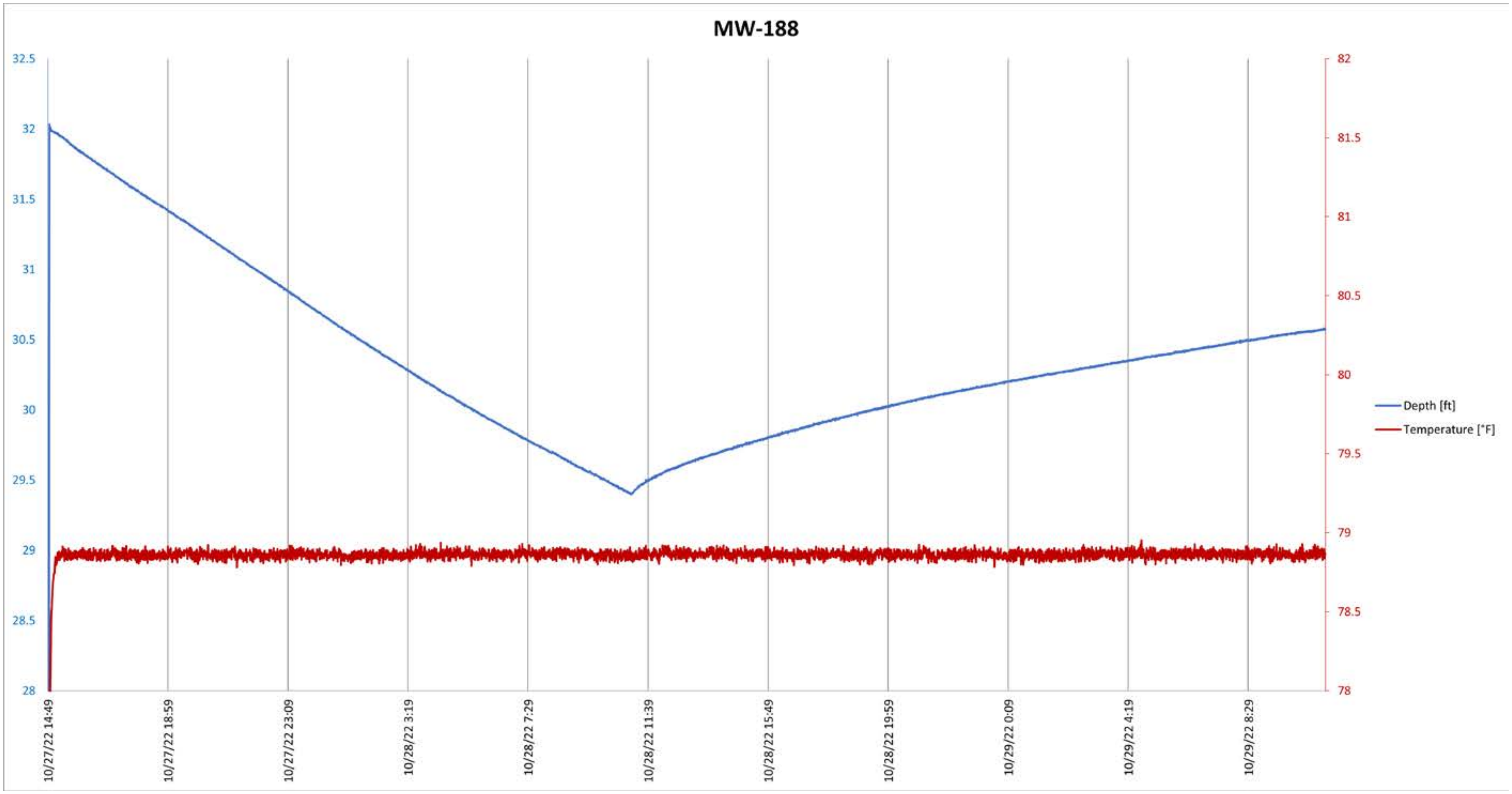
MW-180
36
35
34
33
32
31
30
82
81.5
81
80.5
80
79.5
79
78.5
78
10/27/22 15:37
10/27/22 19:47
10/27/22 23:57
10/28/22 4:07
10/28/22 8:17
10/28/22 12:27
10/28/22 16:37
10/28/22 20:47
10/29/22 0:57
10/29/22 5:07
10/29/22 9:17
Depth [ft]
Temperature [°F]

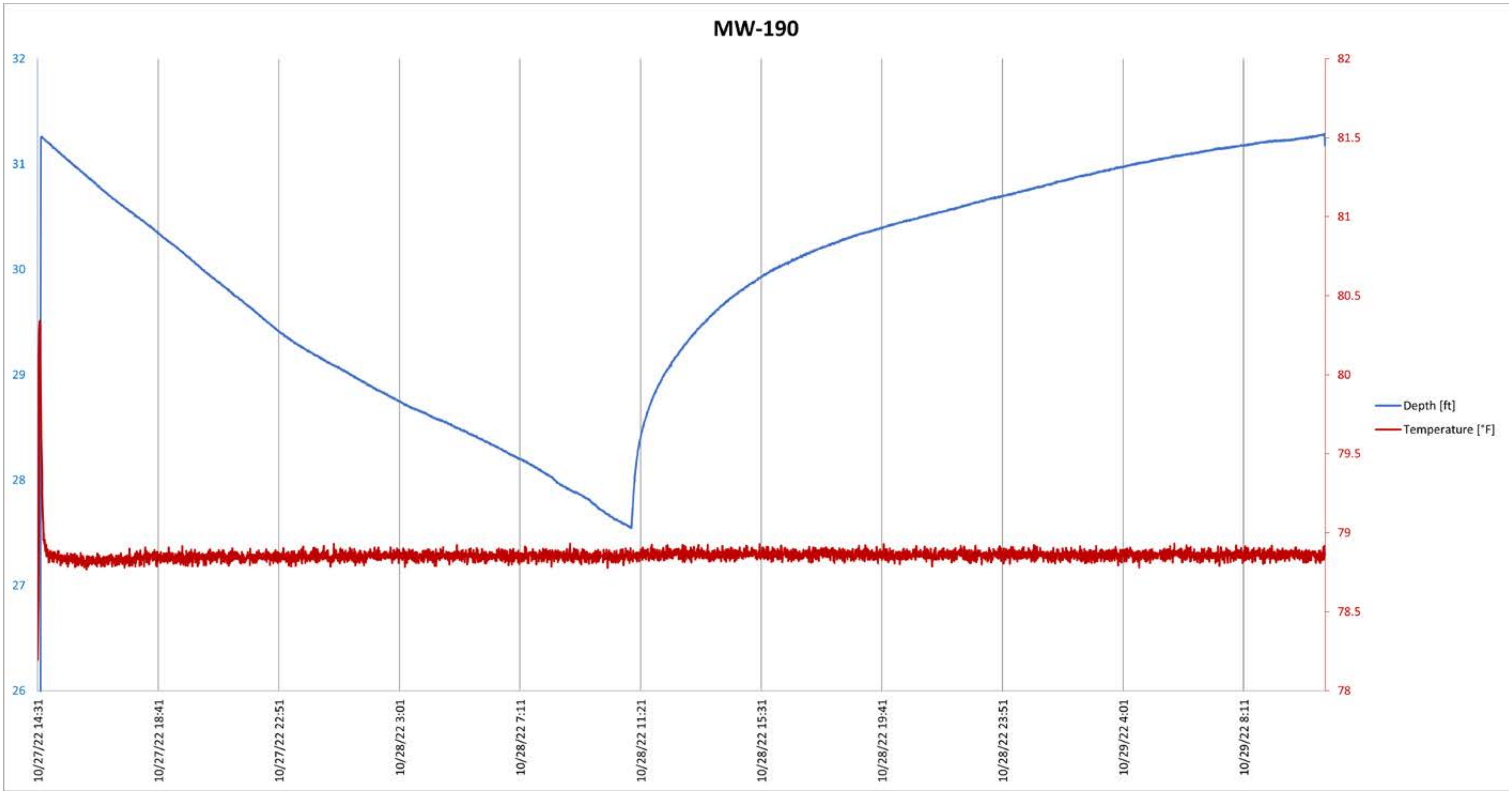


MW-182
30.5
30
29.5
29
28.5
28
27.5
27
82
81.5
81
80.5
80
79.5
79
78.5
78
Depth [ft]
Temperature [°F]
10/27/22 15:24
10/27/22 19:34
10/27/22 23:44
10/28/22 3:54
10/28/22 8:04
10/28/22 12:14
10/28/22 16:24
10/28/22 20:34
10/29/22 0:44
10/29/22 4:54
10/29/22 9:04

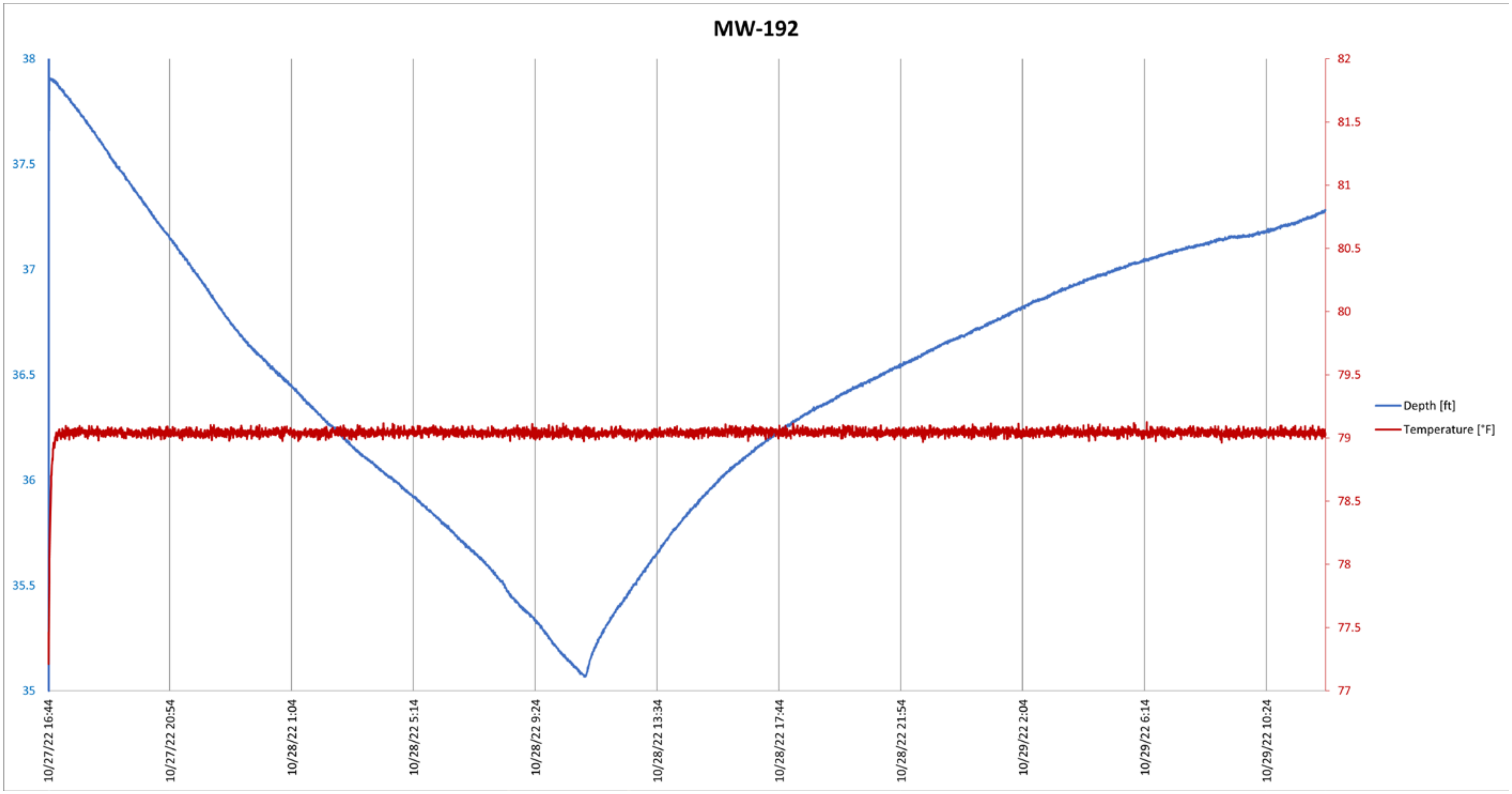

MW-184
37
36
35
34
33
32
31
30
88
86
84
82
80
78
76
74
Depth [ft]
Temperature [°F]
10/26/22 12:05
10/26/22 16:15
10/26/22 20:25
10/27/22 0:35
10/27/22 4:45
10/27/22 8:55
10/27/22 13:05
10/27/22 17:15
10/27/22 21:25
10/28/22 1:35
10/28/22 5:45
10/28/22 9:55
10/28/22 14:05
10/28/22 18:15
10/28/22 22:25
10/29/22 2:35
10/29/22 6:45
10/29/22 10:55

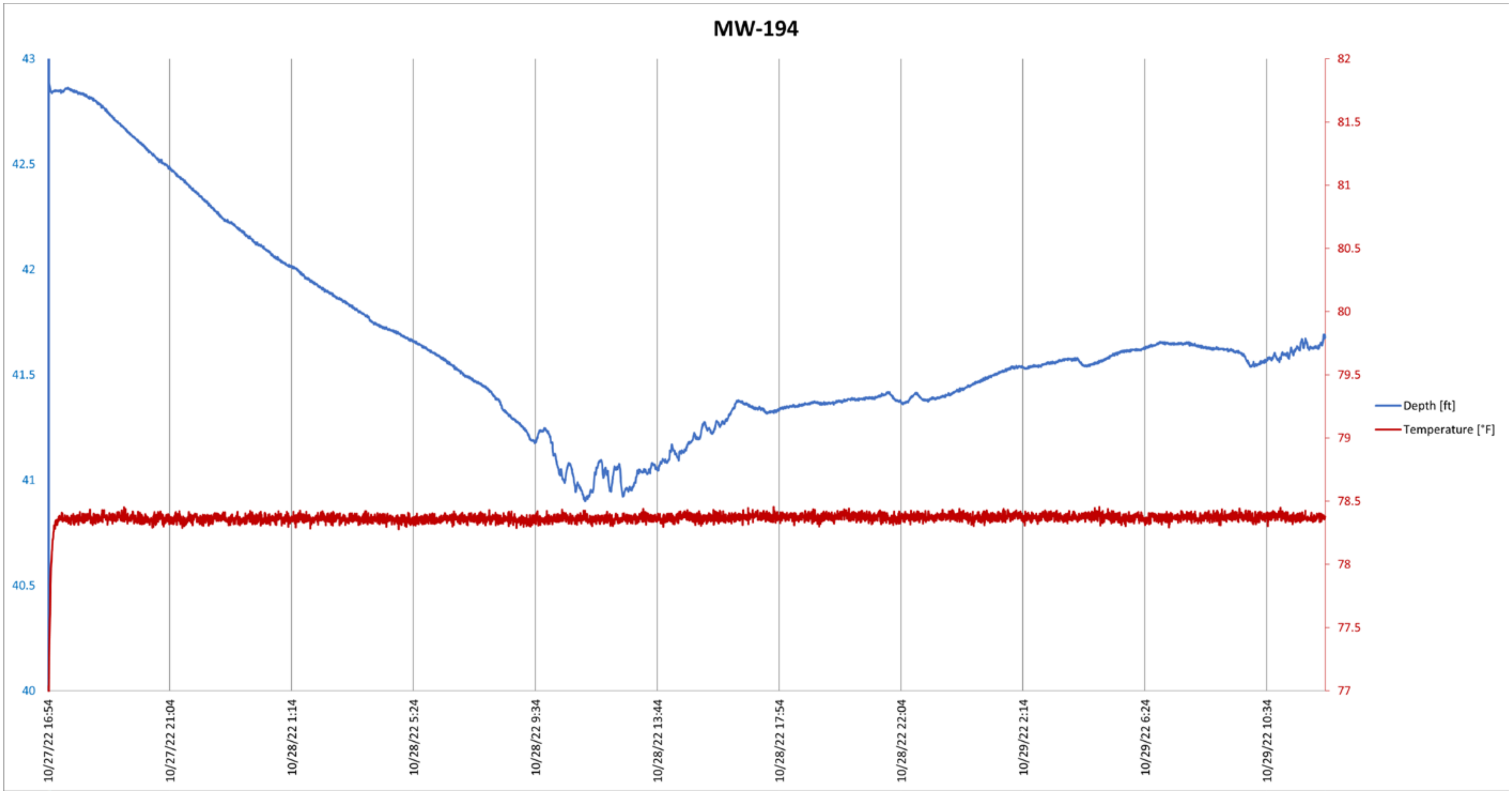

MW-186
23.5
23
22.5
22
21.5
21
20.5
20
82
81.5
81
80.5
80
79.5
79
78.5
78
Depth [ft]
Temperature [°F]
10/27/22 15:01
10/27/22 19:11
10/27/22 23:21
10/28/22 3:31
10/28/22 7:41
10/28/22 11:51
10/28/22 16:01
10/28/22 20:11
10/29/22 0:21
10/29/22 4:31
10/29/22 8:41


MW-188
32.5
32
31.5
31
30.5
30
29.5
29
28.5
28
82
81.5
81
80.5
80
79.5
79
78.5
78
Depth [ft]
Temperature [°F]
10/27/22 14:49
10/27/22 18:59
10/27/22 23:09
10/28/22 3:19
10/28/22 7:29
10/28/22 11:39
10/28/22 15:49
10/28/22 19:59
10/29/22 0:09
10/29/22 4:19
10/29/22 8:29

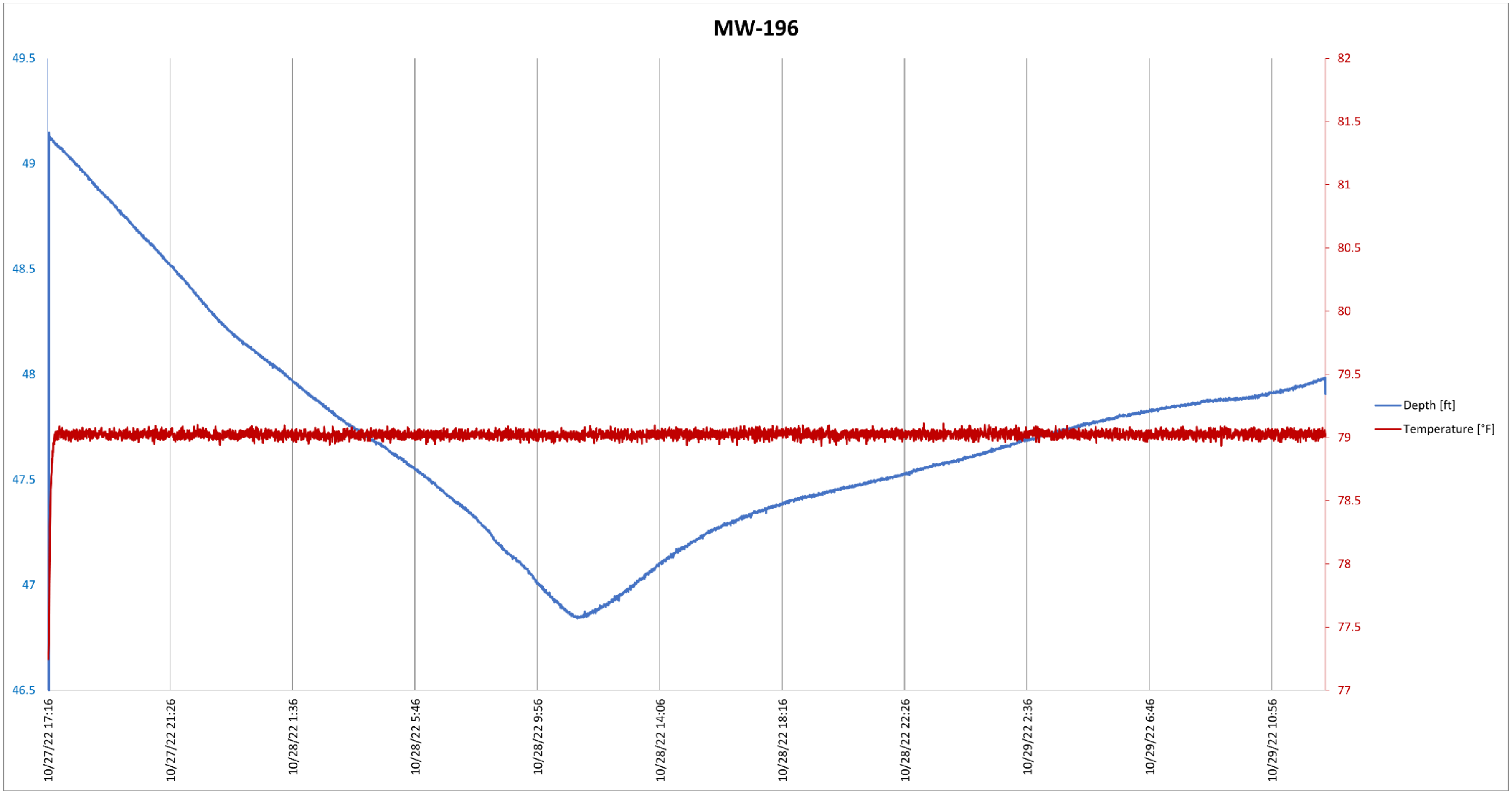


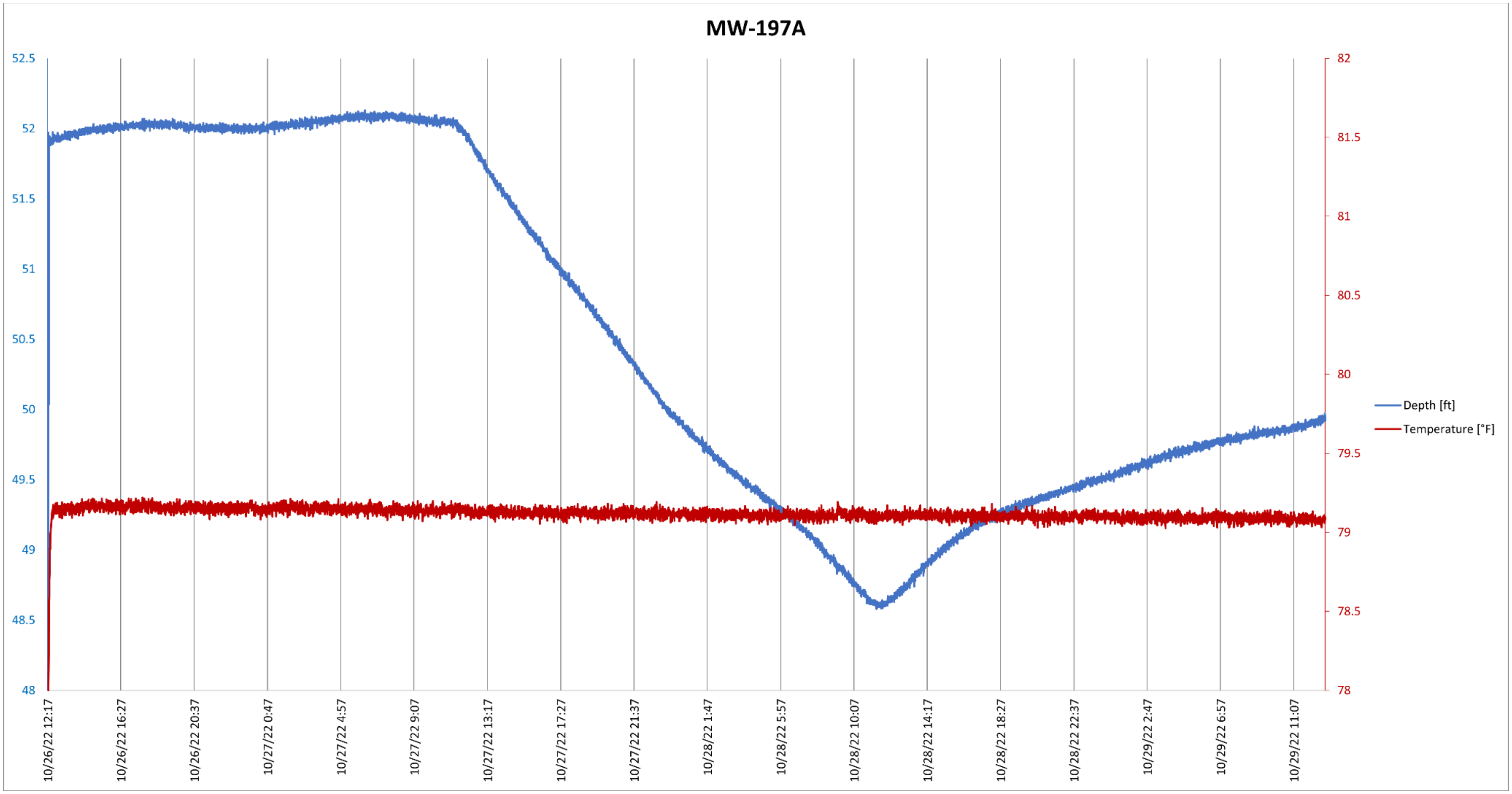
MW-190
32
31
30
29
28
27
26
82
81.5
81
80.5
80
79.5
79
78.5
78
Depth [ft]
Temperature [°F]
10/27/22 14:31
10/27/22 18:41
10/27/22 22:51
10/28/22 3:01
10/28/22 7:11
10/28/22 11:21
10/28/22 15:31
10/28/22 19:41
10/28/22 23:51
10/29/22 4:01
10/29/22 8:11


MW-192
38
37.5
37
36.5
36
35.5
35
82
81.5
81
80.5
80
79.5
79
78.5
78
77.5
77
10/27/22 16:44
10/27/22 20:54
10/28/22 1:04
10/28/22 5:14
10/28/22 9:24
10/28/22 13:34
10/28/22 17:44
10/28/22 21:54
10/29/22 2:04
10/29/22 6:14
10/29/22 10:24
Depth [ft]
Temperature [°F]



MW-194
43
42.5
42
41.5
41
40.5
40
82
81.5
81
80.5
80
79.5
79
78.5
78
77.5
77
Depth [ft]
Temperature [°F]
10/27/22 16:54
10/27/22 21:04
10/28/22 1:14
10/28/22 5:24
10/28/22 9:34
10/28/22 13:44
10/28/22 17:54
10/28/22 22:04
10/29/22 2:14
10/29/22 6:24
10/29/22 10:34


MW-196
49.5
49
48.5
48
47.5
47
46.5
82
81.5
81
80.5
80
79.5
79
78.5
78
77.5
77
10/27/22 17:16
10/27/22 21:26
10/28/22 1:36
10/28/22 5:46
10/28/22 9:56
10/28/22 14:06
10/28/22 18:16
10/28/22 22:26
10/29/22 2:36
10/29/22 6:46
10/29/22 10:56
Depth [ft]
Temperature [°F]



MW-197A
52.5
52
51.5
51
50.5
50
49.5
49
48.5
48
82
81.5
81
80.5
80
79.5
79
78.5
78
Depth [ft]
Temperature [°F]
10/26/22 12:17
10/26/22 16:27
10/26/22 20:37
10/27/22 0:47
10/27/22 4:57
10/27/22 9:07
10/27/22 13:17
10/27/22 17:27
10/27/22 21:37
10/28/22 1:47
10/28/22 5:57
10/28/22 10:07
10/28/22 14:17
10/28/22 18:27
10/28/22 22:37
10/29/22 2:47
10/29/22 6:57
10/29/22 11:07

APPENDIX X-1

EPA Aquifer Exemption Approval Letters

OCT 1 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202

October 4, 1988

REPLY TO: 6W-SU

EPA-7(OR)

Mr. Allen P. Beinke, Jr.
Executive Director
Texas Water Commission
P.O. Box 13097, Capitol Station
Austin, Texas 78711

RE: Aquifer Exemption Request, Uranium Resources, Inc., Rosita Site, Permit No. UR02880-001, Duval County

Dear Mr. Beinke:

I am pleased to inform you of the Environmental Protection Agency approval of your request to exempt a portion of the Goliad Formation from the Underground Injection Control program requirements that no fluid may be injected into an Underground Source of Drinking Water (USDW). This approval is based upon the criteria stipulated in 40 CFR 144.7(b), 145.32, and 146.4 containing regulations allowing an aquifer to be exempted if: (a) it is not currently used as a drinking water supply, and (b) it cannot be used as a drinking water source in the future because it is mineral producing or can be shown by a permit applicant to contain minerals that are expected to be commercially producible. This exemption approval will allow injection for in-situ uranium mining only. If injection for other purposes (e.g. hazardous waste disposal) is planned into this aquifer, additional approval will be needed.

The approved exempted portion of the aquifer underlies the Uranium Resources, Incorporated, Rosita Mine Site, in Duval County and is limited to the Lower Goliad Formation. A detailed description of the exempted portion of the aquifer remains in the exemption request and subsequent comment letters.

We also wanted to address three items discussed during the Texas Water Commission (TWC) hearings concerning the Rosita aquifer exemption. These items are, (1) unplugged exploration holes at the site, (2) proposed increase in the size of the aquifer exemption, and (3) an error stated in the public notice concerning the size of the area to be exempted.

Unplugged Exploration Holes

As indicated in our May 18, 1988, letter, we requested the TWC to address necessary corrective action for unplugged exploration holes in the area of review. The reply stated that a pump test must be conducted prior to the submittal of the application for a production area authorization. This will determine which boreholes must be plugged in order to prevent vertical migration. We find this approach acceptable, but request review of the pump test analysis when it becomes available to ensure non-endangerment to USDW's.

Proposed Increase in Exemption Area

We have determined the proposed increase in the exemption area does not increase the likelihood of endangerment to USDW's. The additional area requested remains within the original monitor well ring network.

Error in the Public Notice

We have concluded the initial TWC and EPA reviews were based on the 1,000 acre area, not on the 81 acres under pattern. The proposed exempted area was not changed or enlarged from the maps submitted and the 1,000 acre area is contained within the lease limits. All adjacent land owners were notified, and we have determined the TWC adequately met its public notice requirements.

If you have any questions concerning this approval, please contact me or have your staff contact Mike Hebert at (214) 655-7160. Thank you for your continued cooperation.

Sincerely yours,

Myron O. Knudson

Myron O. Knudson, P.E.
Director
Water Management Division (6W)

cc: Charles J. Greene, TWC
Dale Kohler, TWC

65

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

JUL 17 1998

Mr. Jeff Saitas
Executive Director
Texas Natural Resource Conservation Commission
P. O. Box 13087
Austin, Texas 78711-3087

Dear Mr. Saitas:

I am pleased to inform you EPA Region 6 has approved the Texas Natural Resource Conservation Commission's (TNRCC) revision request to exempt portions of two aquifers for the purposes of uranium mining. These exemptions are specific to:

1) that portion of the Oakville Sandstone Formation, underlying approximately 842 acres, at a depth of 150 to 210 feet subsurface, ten miles south-southeast of the City of Bruni in Duval County, Texas (a. k. a. the Vasquez Project); and

2) that portion of the Goliad Formation, underlying approximately 70 acres, at a depth of 140 to 260 feet subsurface, 11 miles northwest of the City of San Diego in Duval County, Texas (a. k. a. the Rosita Project).

The areal extent of the Vasquez and Rosita projects' exemptions are specifically defined in the Uranium Resources Incorporated (URI) applications as initially conveyed by TNRCC to Region 6 on September 17, 1997, and February 4, 1998, respectively. The Rosita Project is an extension to an exemption approved by Region 6 in October, 1988. Region 6 has approved these exemptions as non-substantial revisions to the TNRCC's Underground Injection Control program.

These approvals are based upon the criteria stipulated in Title 40 of the Code of Federal Regulations §146.4; wherein a portion of an aquifer may be exempted if: (a) that portion does not currently serve as a source of drinking water; and (b) it cannot now and will not, in the future, serve as a source of drinking water, because the aquifer is mineral producing or can be shown to contain minerals that are expected to be commercially producible. The record shows that these criteria have been met.

These exemptions apply only to the injection of fluids into those portions of the Oakville Sandstone and Goliad Formations as proposed in the applications. Injection of other fluids (e. g. hazardous wastes) or injection of fluids into other formations that qualify as underground sources of drinking water would require additional approval.

If you have any questions concerning this approval, please contact me or have your staff contact Larry Wright, Chief, Source Water Protection Branch at (214) 665-7150.

Sincerely yours,

Joan E. Brown

William B. Hathaway
Director
Water Quality Protection Division

cc: Ms. Alice Rogers
Texas Natural Resource Conservation Commission
Mr. John Santos
Texas Natural Resource Conservation Commission

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

JAN 30 2014

Richard A. Hyde, P.E.
Interim Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Dear Mr. Hyde:

I am pleased to inform you Region 6 finds TCEQ's application to exempt a portion of the Goliad Formation in Duval County, Texas, for the Rosita uranium mining project a non-substantial revision to its underground injection control program. As such, by authority delegated to our Regional Administrator and re-delegated to the Water Quality Protection Division, we approve the exemption under the criteria provided in Title 40 of the Code of Federal Regulations§146.4. Specifically, we find an aerial extent of approximately 200 acres (PAA5) for a portion of the of the Goliad Formation at a depth ranging from 80 to 260 feet below ground level in Duval County, Texas meet the criteria for exemption at:

- §146.4 (a): It does not currently serve as a source of drinking water; and
- §146.4 (b)(1): It cannot now and will not in the future serve as a source of drinking water because it has been demonstrated by permit application to contain minerals that, considering their quantity and location, are expected to be commercially producible.

There is no overlying aquifer above the mining zone in the approved aquifer exemption extension area. A thick underlying clay aquitard separates the exempted aquifer from underlying aquifers. The areal extent and horizontal boundaries of the exempted portion of the Goliad Formation are as described in TCEQ's May 20, 2010 aquifer exemption application (enclosed) and depicted in Attachment 1 to the Aquifer Exemption Boundary, Area of Review plat map (enclosed). This is the second extension of an original exemption that was approved by EPA in October 1988. The original exemption covered 1,000 acres and included Production Area Authorizations 1, 2, and 3 (PAA1, PAA2, and PAA3). The first extension was approved by EPA in July 1998. An additional 70 acres (PAA4) was added by the 1998 extension mentioned above.

This exemption applies only to well injection for purpose of mineral production as proposed in Uranium Resources Inc. (URI)'s Rosita Project permit application and permit provided by TCEQ in its Underground Injection Control program revision application. Injection into this exempted portion of the Goliad Formation for other purposes requires additional approval.

If you have any questions, please contact Mr. Philip Dellinger, Chief, Ground Water Section, at (214) 665-8324.

Sincerely,

William K. Honker
Director
Water Quality Protection Division

Enclosures

cc: Charles Maguire, TCEQ
Lorraine C. Council, TCEQ

RECORD OF COMMUNICATION	Phone Call	Conference	Date: 01/30/2014
	Discussion	Other FILE RECORD	Time:
TO FILE: Rosita Exemption – second extension Statement of Basis for Decision		FROM: R6 6WQ-SG, EPA Region 6	

Brief History

On May 20, 2010, the Texas Commission on Environmental Quality (TCEQ) submitted to EPA the Uranium Resources Inc.'s (URI) request for an aquifer exemption related to a proposed extension of the Rosita in-situ uranium mine site in Duval County, Texas. This is the second extension of an original exemption that was approved by EPA in October 1988. The first extension was approved by EPA in July 1998 (Attachment 1). The original exemption covered 1,000 acres and included three Production Area Authorizations (PAA1, 2, and 3). An additional 70 acres (PAA4) was added by the first 1998 extension. The current proposed extension covers approximately 200 acres (PAA5) of the Goliad Formation at a depth ranging from 80 to 260 feet below ground level in Duval County (Attachment 2).

EPA's initial review of the exemption approval request identified drinking water wells near the proposed extension. To alleviate concerns for those wells, EPA requested submission of ground water modeling data to show the exempted portion of the aquifer was not currently a drinking water source. As a result of further discussions and analysis, an alternative approach to address the wells near the proposed extension was used under the site circumstances. To address these wells, ground water flow direction information was needed. No site-specific detailed information was available to determine the direction of ground water flow at the site, thus EPA relied on a published map of the regional ground water gradient that indicated southeastward flow. To be conservative, EPA considered an expanded range of possible flow direction from due east to due south to identify nearby water wells of concern. As described below, this approach enabled corrective action ensuring that the extended exemption area does not currently serve as a source of drinking water.

EPA's Regulatory Criteria

EPA's relevant regulatory criteria for examining requests for mining related aquifer exemptions are found at 40 CFR Part 146.4.

- §146.4 (a): It does not currently serve as a source of drinking water; and
- §146.4 (b) (1): It cannot now and will not in the future serve as a source of drinking water because it has been demonstrated by permit application to contain minerals that, considering their quantity and location, are expected to be commercially producible.

A summary of how each of these criteria were met for the Rosita exemption follows.

Current Source Criterion

To confirm details provided in the application and perform a detailed assessment of area water wells in terms of their purpose, status, and their construction/completion, EPA staff collaborated with the Duval County Groundwater Conservation (DCGC), researched the Texas Water Development Board database and conducted two field trips to the site in July 2012 and in March 2013. These trips identified and confirmed 11 water wells inside or close to the ¼ mile area of review (AOR) (Attachment 3). Four of these are domestic drinking water wells (W14, W19, R88, and R87) that are outside the ¼ mile AOR. Nevertheless, they are either completed in formations that are vertically isolated from the exemption zone or not located down gradient of the exemption area. They are therefore precluded from capturing water from the exempted formations and are not considered wells of concern.

There was one domestic drinking water well (R68) thought to be in communication with and located right at the boundary of the proposed exemption extension. This well is located outside a house that has been vacant for 8 years, but remains plumbed to the storage tank that supplied water to the house. Therefore, EPA considered it a potential drinking water source. In response to EPA's letter dated April 18, 2013, URI drilled a new well to the Oakville Formation, replacing well R68. The new well is completed in a deeper aquifer that is vertically isolated (stratigraphically) from the exempted portion of the aquifer.

There are three livestock wells (R66, R67, and RW78) located inside and around the proposed exemption. Livestock wells have no bearing on the criteria for exemption, but EPA considered R67 a potential drinking water well because it was plumbed to a nearby vacant house. In response to EPA concerns, URI permanently disconnected the house's plumbing system from the well. EPA also found three abandoned wells (R70, RW79, and W22) located inside the proposed exemption area. These wells are abandoned and in poor condition. They are therefore not considered drinking water wells.

In addition to the 11 wells discussed above, EPA found one open hole (RW69) and one capped hole (M2) at the site. The surface conditions found at both well sites preclude any likelihood these wells would be used for drinking water purposes in the future. M2 is currently used by URI as a monitoring well.

URI submitted adequate information to show there are no faults or other subsurface obstructions that could change the local groundwater gradient from that of the background regional groundwater flow information. In addition, there is no overlying aquifer that is a USDW above the mining zone in the extended exemption area. A thick underlying clay aquitard separates the exempted aquifer from underlying aquifers.

Commercially Producible Criterion

URI has demonstrated through water sampling results, gamma ray logs provided in the application, and by materials submitted for acquiring a state permit for mining (Permit No. UR02880), that the requested portions of the Goliad Formation have commercially producible levels of uranium.

Public Participation

The Notice of Public Meeting on this aquifer exemption application was published on *The Freer Press* on August 14, 2008. TCEQ held a public meeting on September 18, 2008, in the City of Benavides, Texas. Questions regarding groundwater quality, surface contamination, extent of aquifer exemption, and public participation were raised at this meeting but all were resolved. There are no outstanding public concerns on this extension. The majority of data submitted to EPA in this application was available for public review in the State's process. However, during EPA's evaluation of the application, new information on ground water characteristics revealing wells of concern were produced. The wells of concern were then successfully addressed by the applicant, creating new information. In summary the information produced by these actions, following the State's public participation process, are not considered to be of significant public interest for this exemption

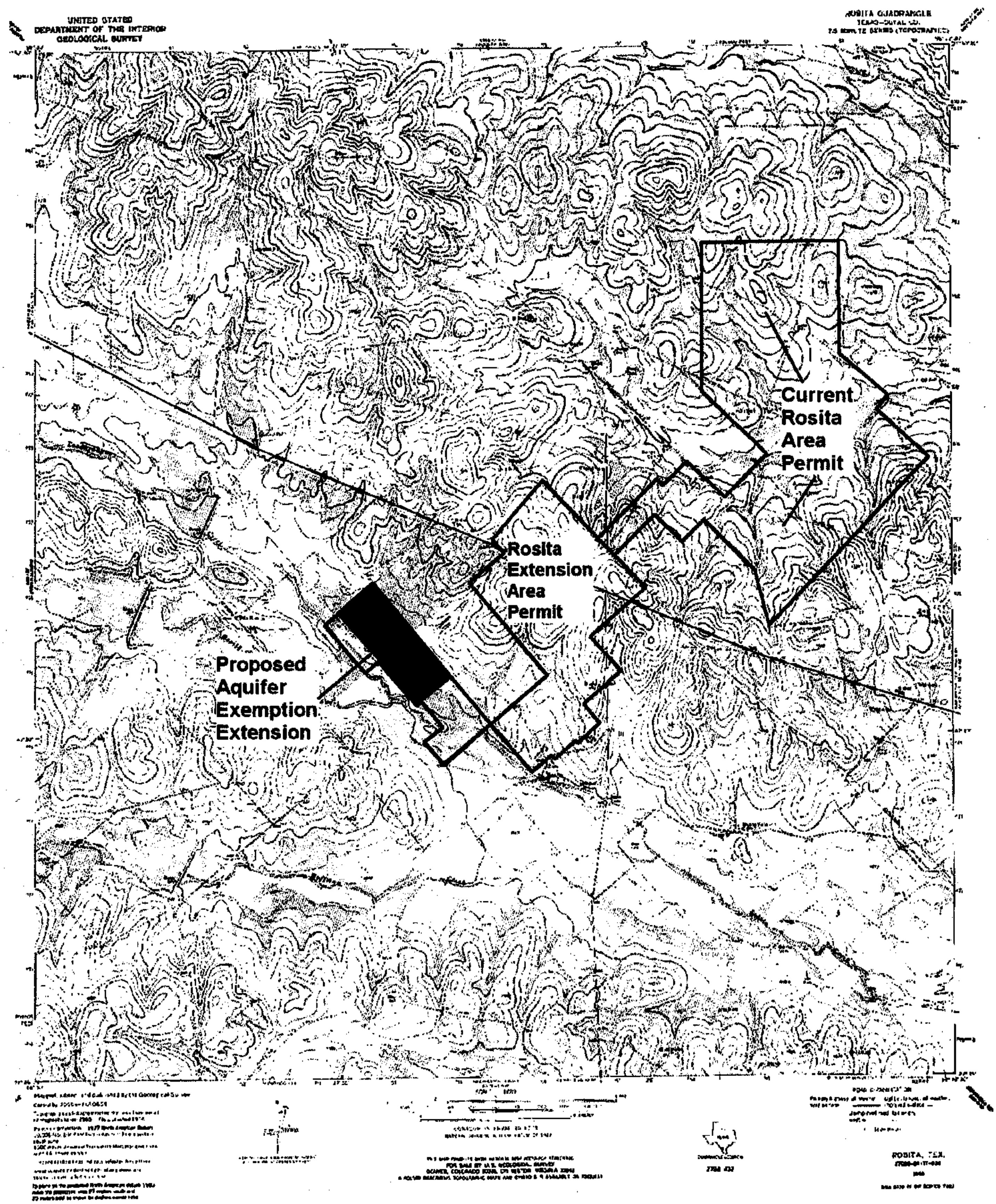
Non-substantial Determination

EPA Guidance 34 (*Guidance for Review and Approval of State Underground Injection Control (UIC) Programs and Revisions to Approved State Programs*) provides information for determining whether an aquifer exemption request is a substantial or non-substantial modification to the state's Underground Injection Control (UIC) program. Guidance 34 provides that an aquifer exemption may be a substantial revision if the aquifer contains water less than 3000 mg/l TDS and is 1) related to a Class I well or 2) not related to action on a permit, except in the case of enhanced recovery operations authorized by rule. The aquifer contains water less than 3000 TDS but fails to meet either of the stated sub-conditions. Therefore, the Rosita exemption was determined to be non-substantial.

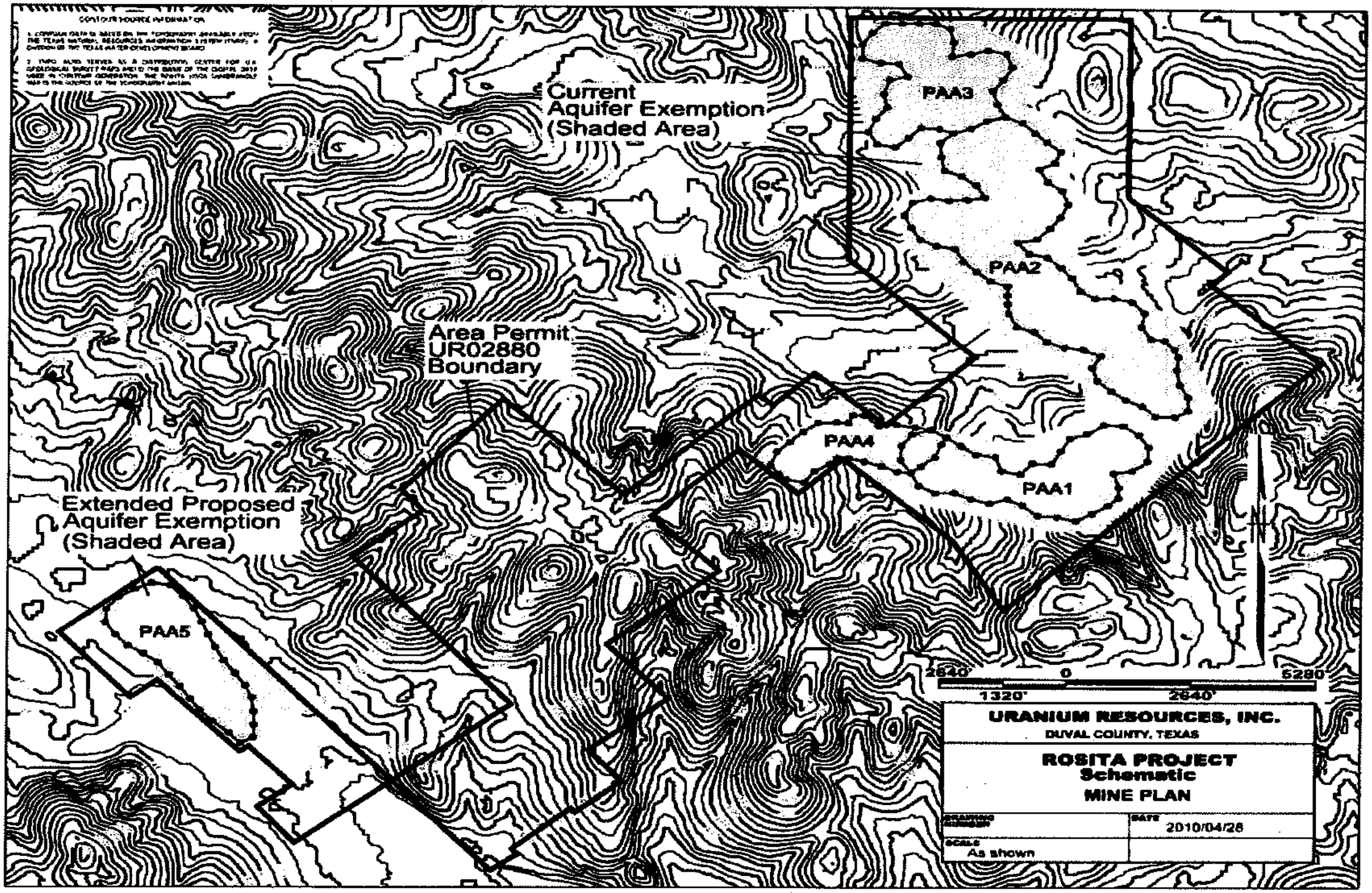
Summary

In summary, EPA concludes that the documentation in the application confirms that there are commercially producible uranium deposits in the extended aquifer exemption area and no drinking water wells producing from that area. The Rosita aquifer exemption extension therefore meets EPA's regulatory criteria for approval.

ATTACHMENT 1 – ROSITA AREA PERMIT AND PROPOSED AQUIFER EXEMPTION BOUNDARY

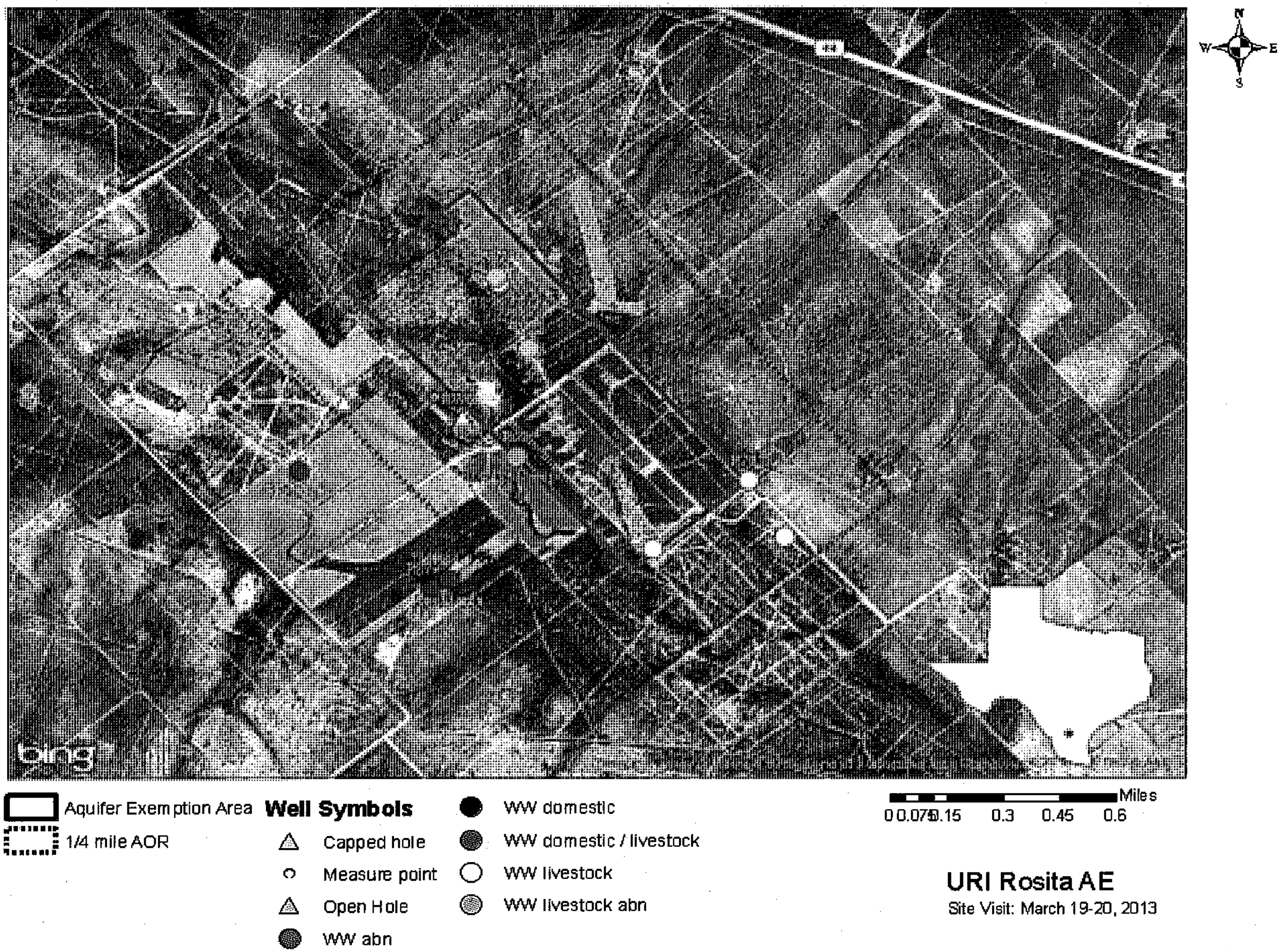


ATTACHMENT 2 – ROSITA CURRENT AND PROPOSED PRODUCTION AREA AUTHORIZATIONS



Reviewed 2/1/13
MSP

ATTACHMENT 3 – AQUIFER EXEMPTION BOUNDARY and AREA OF REVIEW



APPENDIX XI-1

Permit Range Table Dataset - 2024

Appendix XI-1

Restoration Range Table
Pre-Mining/Baseline Water Quality Dataset

		PAA-1					
		Mine Area **			Production Area		
PARAMETER	UNIT	Low	Average	High	Low	Average	High
CALCIUM	mg/l	116	155	205	118	155	189
MAGNESIUM	mg/l	32	50	76	42	53	69
SODIUM	mg/l	353	422	502	366	393	421
POTASSIUM	mg/l	17	26	42	17	23	29
CARBONATE	mg/l	0	0	0	0	1	8
BICARBONATE	mg/l	10	178	278	121	204	254
SULFATE	mg/l	122	196	318	124	157	224
CHLORIDE	mg/l	764	866	1037	705	826	981
NITRATE-N	mg/l	-0.01	1.79	5.5	0.01	0.75	3.1
FLUORIDE	mg/l	0.53	0.75	1.3	0.6	0.81	1.1
SILICA	mg/l	23	50	67	43	48	54
TDS	mg/l	1590	1933	2310	1710	1844	1990
CONDUCTIVITY	umhos/cm	2970	3388	3990	2950	3143	3520
ALKALINITY	mg/l	26	147	228	99	169	208
pH	Std. Units	7.52	8.14	9.15	7.63	8.05	8.26
ARSENIC	mg/l	-0.001	0.009	0.059	-0.001	0.004	0.015
CADMIUM	mg/l	0.0001	0.0005	0.0015	0.0002	0.0004	0.0001
IRON	mg/l	2.01	0.02	0.04	0.01	0.105	0.48
LEAD	mg/l	-0.001	0.001	0.006	-0.001	0.002	0.008
MANGANESE	mg/l	-0.01	0.06	0.47	0.02	0.035	0.09
MERCURY	mg/l	-0.0001	0.0001	0.0001	-0.0001	0.0003	0.002
MOLYBDENUM	mg/l	-0.01	0.03	0.17	-0.01	0.05	0.12
SELENIUM	mg/l	-0.001	0.007	0.039	-0.001	0.008	0.43
URANIUM	mg/l	0.003	0.078	0.609	0.042	0.35	1.2
AMMONIA-N	mg/l	0.12	0.38	1.1	0.1	0.25	0.8
RA-226	pCi/l	0.4	17.1	19.2	52	183	431

Note: Values above contained in Attachment 4 of PAA permit.

Appendix XI-1

Restoration Range Table
Pre-Mining/Baseline Water Quality Dataset

		PAA-2					
		Mine Area **			Production Area		
PARAMETER	UNIT	Low	Average	High	Low	Average	High
CALCIUM	mg/l	68	160	217	88	169.9	239
MAGNESIUM	mg/l	23	62	88	21	60.5	83
SODIUM	mg/l	286	420	638	335	420	594
POTASSIUM	mg/l	17	24	65	17	27.9	39
CARBONATE	mg/l	0	0	1	0	0	0
BICARBONATE	mg/l	27	216	279	88	205	260
SULFATE	mg/l	62	241	476	170	248	533
CHLORIDE	mg/l	663	857	1032	708	870	1015
NITRATE-N	mg/l	-0.01	1.3	5.3	-0.01	1.10	4.10
FLUORIDE	mg/l	0.53	0.77	1.4	0.50	0.73	0.98
SILICA	mg/l	29	53	76	43	53	65
TDS	mg/l	1430	2016	2600	1720	2045	2530
CONDUCTIVITY	umhos/cm	2620	3462	4320	3000	3519	4090
ALKALINITY	mg/l	24	177	229	72	168	213
pH	Std. Units	7.19	7.66	8.39	7.49	7.85	8.18
ARSENIC	mg/l	-0.001	0.008	0.061	-0.001	0.014	0.048
CADMIUM	mg/l	-0.0001	0.0002	0.0053	-0.0001	0.0002	0.0007
IRON	mg/l	-0.01	0.02	0.09	-0.01	0.01	0.04
LEAD	mg/l	-0.001	0.001	0.006	-0.001	0.001	0.001
MANGANESE	mg/l	-0.01	0.03	0.14	-0.01	0.02	0.03
MERCURY	mg/l	-0.0001	0.0001	0.0001	-0.0001	0.0001	0.0001
MOLYBDENUM	mg/l	-0.01	0.06	0.64	-0.01	0.04	0.13
SELENIUM	mg/l	-0.001	0.003	0.045	-0.001	0.006	0.021
URANIUM	mg/l	-0.001	0.07	0.477	0.012	0.547	2.89
AMMONIA-N	mg/l	-0.01	0.03	0.23	-0.01	0.08	0.56
RA-226	pCi/l	0.5	16.1	186	3.9	130.3	548

Note: Values above contained in Attachment 4 of PAA permit.

Appendix XI-1

Restoration Range Table

Pre-Mining/Baseline Water Quality Dataset

		PAA-3					
		Mine Area **			Production Area		
PARAMETER	UNIT	Low	Average	High	Low	Average	High
CALCIUM	mg/l	50	153	430	46	104	230
MAGNESIUM	mg/l	9.8	46	103	12	30	65
SODIUM	mg/l	355	550	913	375	751	988
POTASSIUM	mg/l	18	25	55	20	34	50
CARBONATE	mg/l	0	0	5	0	2	10
BICARBONATE	mg/l	116	231	428	54	161	275
SULFATE	mg/l	104	364	1450	163	496	750
CHLORIDE	mg/l	504	840	1230	667	952	1090
NITRATE-N	mg/l	-0.01	0.97	4.3	-0.01	0.64	2.4
FLUORIDE	mg/l	0.7	1.18	1.7	0.9	1.37	2
SILICA	mg/l	20	36	66	23	35	54
TDS	mg/l	1390	2183	3640	1610	2524	3060
CONDUCTIVITY	umhos/cm	2520	3637	5310	2840	4276	5100
ALKALINITY	mg/l	95	189	351	52	134	225
pH	Std. Units	7.29	7.89	8.4	7.75	8.19	8.65
ARSENIC	mg/l	0.001	0.025	0.147	0.004	0.068	0.27
CADMIUM	mg/l	-0.011	0.002	0.007	-0.001	0.002	0.007
IRON	mg/l	-0.01	0.13	3.4	0.01	0.03	0.08
LEAD	mg/l	-0.001	0.003	0.027	-0.001	-0.001	-0.001
MANGANESE	mg/l	-0.01	0.04	1.6	-0.01	-0.01	0.02
MERCURY	mg/l	-0.0001	-0.0001	0.0004	-0.0001	-0.0001	-0.0001
MOLYBDENUM	mg/l	-0.01	0.4	3	0.05	2.56	8.2
SELENIUM	mg/l	-0.001	0.034	0.27	-0.001	0.012	0.024
URANIUM	mg/l	0.004	0.125	0.725	0.136	0.586	1.53
AMMONIA-N	mg/l	-0.01	0.16	1.1	-0.01	0.04	0.16
RA-226	pCi/l	2.2	14.76	57	35	87.29	235

Note: Values above contained in Attachment 4 of PAA permit.

Appendix XI-1

Restoration Range Table
Pre-Mining/Baseline Water Quality Dataset

		PAA-4					
		MINE AREA**			PRODUCTION AREA		
PARAMETER	UNIT	Low	Average	High	Low	Average	High
CALCIUM	mg/l	50	116	179	28.4	98	123
MAGNESIUM	mg/l	1	32	60	3.12	21	35
SODIUM	mg/l	315	443	570	480	525	670
POTASSIUM	mg/l	17	32	58	30.1	36	42
CARBONATE	mg/l	0	3	22	0	13	60
BICARBONATE	mg/l	12	155	229	28	101	233
SULFATE	mg/l	94	176	234	165	195	217
CHLORIDE	mg/l	457	777	870	810	841	885
NITRATE-N	mg/l	0.01	1.85	4.00	0.00	0.32	1.16
FLUORIDE	mg/l	0.50	1.76	13.80	0.89	1.61	3.68
SILICA	mg/l	20	39	67	22	32	42
TDS	mg/l	1050	1789	2130	1790	1898	1950
CONDUCTIVITY	umhos/cm	1690	2825	3240	2860	2964	3120
ALKALINITY	mg/l	32	154	483	26	104	191
pH	Std. Units	7.42	8.30	11.07	7.59	8.64	9.72
ARSENIC	mg/l	0.001	0.034	0.320	0.010	0.113	0.317
CADMIUM	mg/l	0.0001	0.0038	0.0050	0.0050	0.0000	0.0050
IRON	mg/l	0.01	0.03	0.04	0.03	0.03	0.04
LEAD	mg/l	0.000	0.013	0.120	0.012	0.000	0.012
MANGANESE	mg/l	0.01	0.02	0.10	0.01	0.01	0.03
MERCURY	mg/l	0.0001	0.0001	0.0002	0.0001	0.0000	0.0001
MOLYBDENUM	mg/l	0.01	0.12	1.16	0.10	0.00	0.59
SELENIUM	mg/l	0.001	0.036	0.175	0.000	0.056	0.173
URANIUM	mg/l	0.001	0.040	0.162	0.025	0.151	0.342
AMMONIA-N	mg/l	0.01	0.19	2.92	0.00	0.12	0.20
RA-226	pCi/l	0.20	9.69	75.0	5.6	46.5	86.0

Note: Values above contained in Attachment 4 of PAA permit.

Appendix XI-1

Restoration Range Table
Pre-Mining/Baseline Water Quality Dataset

		PAA-5					
		Mine Area **			Production Area		
PARAMETER	UNIT	Low	Average	High	Low	Average	High
CALCIUM	mg/l	115	144	193	141	154	164
MAGNESIUM	mg/l	2	36	54	2	31	54
SODIUM	mg/l	295	367	472	315	332	347
POTASSIUM	mg/l	15	21	41	18	26	41
CARBONATE	mg/l	2	3	17	2	5	17
BICARBONATE	mg/l	2	135	215	2	84	185
SULFATE	mg/l	119	170	256	133	148	159
CHLORIDE	mg/l	689	832	1,140	738	916	1,140
NITRATE-N	mg/l	0.13	2.19	5.35	0.13	1.72	4.59
FLUORIDE	mg/l	0.60	0.95	1.58	0.60	0.99	1.38
SILICA	mg/l	20	41	81	22	34	61
TDS	mg/l	1,470	1,699	2,040	1,600	1,698	1,770
CONDUCTIVITY	umhos/cm	2,490	2,893	3,560	2,490	2,730	2,990
ALKALINITY	mg/l	26	136	215	26	88	185
pH	Std. Units	6.70	7.45	9.10	6.80	7.64	9.10
ARSENIC	mg/l	0.0033	0.0370	0.3570	0.0172	0.1058	0.3570
CADMIUM	mg/l	0.0001	0.0001	0.0003	0.0001	0.0002	0.0003
IRON	mg/l	0.0070	0.0124	0.0350	0.0070	0.0196	0.0350
LEAD	mg/l	0.0001	0.0004	0.0050	0.0001	0.0012	0.0050
MANGANESE	mg/l	0.0012	0.0126	0.0448	0.0020	0.0124	0.0215
MERCURY	mg/l	0.0002	0.0002	0.0007	0.0002	0.0003	0.0004
MOLYBDENUM	mg/l	0.0021	0.5181	6.8200	0.0045	2.3759	6.8200
SELENIUM	mg/l	0.0001	0.0277	0.0977	0.0025	0.0130	0.0266
URANIUM	mg/l	0.0016	0.6907	16.5000	0.0016	3.9057	16.5000
AMMONIA-N	mg/l	0.0500	0.1155	1.0300	0.0500	0.1968	0.3910
RA-226	pCi/l	1.1	35.5	460.0	5.1	188.8	460.0

Note: Values above contained in Attachment 4 of PAA permit.

APPENDIX XI-2

Proposed Permit Range Table - 2024

APPENDIX XI-2

UR02880
Permit Range Table

PARAMETER	UNIT	Low Value	High Value
CALCIUM	mg/l	28.4	430
MAGNESIUM	mg/l	0.66	103
SODIUM	mg/l	286	988
POTASSIUM	mg/l	14.6	65
CARBONATE	mg/l	0	60
BICARBONATE	mg/l	2	428
SULFATE	mg/l	62	1450
CHLORIDE	mg/l	457	1230
NITRATE-N	mg/l	-0.01	5.5
FLUORIDE	mg/l	0.5	13.8
SILICA	mg/l	19.7	81.1
TDS	mg/l	1050	3640
CONDUCTIVITY	umhos/cm	1690	5310
ALKALINITY	mg/l	24	483
pH	Std. Units	6.7	11.07
ARSENIC	mg/l	-0.001	0.357
CADMIUM	mg/l	-0.011	0.007
IRON	mg/l	-0.01	3.4
LEAD	mg/l	-0.001	0.12
MANGANESE	mg/l	-0.01	1.6
MERCURY	mg/l	-0.0001	0.002
MOLYBDENUM	mg/l	-0.01	8.2
SELENIUM	mg/l	-0.001	0.43
URANIUM	mg/l	-0.001	16.5
AMMONIA-N	mg/l	-0.01	2.92
RA-226	pCi/l	0.2	548