

Mr. Steen's Direct Line: (512) 322-5811
Email: jsteen@lglawfirm.com

August 4, 2026

Mr. David Bailey, General Manager
Mid-East Texas Groundwater Conservation District
101 West Main, Suite B-22
Madisonville, Texas 77864

Re: Mitsui E&P USA LLC's Drilling and Operating Permit Applications for MEP
Pate Frac Pond Water Wells #3 and #4

Dear Mr. Bailey,

Please find enclosed a drilling and operating permit application filed on behalf of Mitsui E&P USA LLC ("Mitsui"). In line with our prior conversations, Mitsui is submitting applications to drill and permit two new wells on its MEP Pate property. These two new wells will be in addition to the two wells previously permitted on this property in Permit No. FR-2025-002, which authorizes Mitsui to produce a total of 435.78 acre-feet annually. Once aggregated with the existing permit, the proposed annual production between all four wells will be 1,4051.04 acre-feet. The purpose of the water produced from these wells is to supply water to Mitsui's in-district hydraulic fracturing operations in Freestone County. Mitsui requests that the production proposed in this permit application be aggregated with its existing Permit No. FR-2025-002 upon issuance.

Mitsui has appreciated the opportunity to work with you and your team when developing its application materials. We believe these applications and the corresponding exhibits contain all the necessary information and materials to make the determination that these applications are administratively complete. The Mitsui team would greatly appreciate your prompt review of the application materials to ensure administrative completeness and, if complete, allow for these applications to be publicly noticed and put before the District's Board of Directors at its August 2026 meeting, or in the alternative, be issued beforehand in accordance with your authority under District Rule 14.4(A)(4).

In the meantime, should you have any questions or concerns regarding these applications, please do not hesitate to contact me at (512) 322-5811 or by email at jsteen@lglawfirm.com.

Sincerely,

A handwritten signature in blue ink, appearing to read 'J.C. Steen', with a stylized flourish at the end.

Jacobs C.S. Steen
Attorney for Mitsui E&P USA LLC

cc: Mr. Gregory M. Ellis, General Counsel
Mid-East Texas Groundwater Conservation District

Ms. Katie LaRue, Director of Land
Mr. Keith Nosich, Vice President of Engineering & Operations
Mr. Chris Sparks, Field Operations
Mitsui E&P USA LLC

Mr. Michael A. Gershon *of the firm*

MID-EAST TEXAS GROUNDWATER CONSERVATION DISTRICT
101 WEST MAIN, SUITE B22
P. O. BOX 477
MADISONVILLE, TX 77864

936-348-3212
fax 936-348-3512

WATER WELL DRILLING/OPERATING PERMIT APPLICATION

Please complete all questions. Please print or type information or place an "x" in the appropriate space.

Drill X Equip X Complete or Alter X

Owner Mitsui E&P USA LLC Phone (713) 960-0023

Address 1300 Post Oak Blvd #1800, Houston, Texas 77056

Operator Mitsui E&P USA LLC

Address 1300 Post Oak Blvd #1800, Houston, Texas 77056

Engineer _____ Phone _____

Address _____

Driller _____ Phone _____

Address _____ License# _____

Location: County Freestone 911 address of well site (attach map) 761 FM 1848, Buffalo, Texas 75831

Well Location: Latitude 31° 30' 42" N Longitude 96° 03' 05" W

Well is located 776 feet from the S (N,S,E,W) property line, and 1990 feet from the E (N,S,E,W) property line.

Proposed water use: Public Water Supply _____ Industrial/Commercial _____ Irrigation _____ Poultry _____ Other (specify) X (Frac Supply)

Describe make and model of flow meter to be installed and attach a drawing showing the installation design of the meter. **See Enclosures**

Proposed depth: 500 ft. Aquifer(s) where well is screened (if known) Carrizo Aquifer Date drilling is to begin Est.

September 1, 2026 Casing diameter (inside): 8 in. Proposed Screened interval: 325 - 450 (ft.) Proposed

casing depth: 325 ft. Proposed pump size (hp) 40 Proposed initial maximum production rate, open flow (gallons/minute) 490 gal/min.

A Hydrogeologic Assessment Report is required for any well or well field equipped to produce at more than 250 GPM **See**

Enclosures

Number of contiguous acres owned or covered by production rights used to establish production limits for this well 483.68.

Requested annual production volume (gallons) 165,411,417.5

Information to support annual production amount requested:

No. of connections subject to this well N/A (If connected to another well in system, please describe below): _____

No. of Poultry Houses serviced by this well, if applicable N/A . (Use would be for watering birds and cool cells).

No. of acres which will be irrigated by this water well (estimate as accurately as possible if not known) N/A acres.

Additional information you feel would be helpful in the Boards determination of the quantity of water you have requested above. You may add additional pages or information to help your case.

This well has yet to be drilled or equipped. This is one of two new proposed wells on Mitsui's MEP Pate property. There are two existing wells on the property previously permitted for a total combined production volume of 435.78 acre-feet under METGCD Permit No. FR-2025-002. The two new proposed wells (MEP Pate Well #3 and Well #4), in addition to the two existing wells on the property, will be used to continually fill a frac pond in support of oil and gas fracking operations in Freestone County.

Once aggregated with the two existing wells under Permit No. FR-2025-002, the four wells would have a combined annual production limit of 1,451.04 acre feet, which stays below the District's maximum production limit specified in District Rule 6.3(c). The water produced from these wells will be used in-District and will not be transported outside of the jurisdictional boundaries of the District. This well is properly spaced in accordance with the District's rules from both the property boundaries as well as the other wells on the property. Mitsui will comply with well plugging and capping guidelines set forth in the District's rules and will report well closures to the District. Mitsui plans to operate these wells for no more than 20 years.

Total acreage subject to Operating Permit (This would be total area of contiguous acreage where the well will be producing water. If this is a PWS well, please provide map of CCN or enter territory in terms of acreage where water is provided):

483.68 Acres (Total contiguous acreage subject to production under this proposed permit)

If the place of use of the groundwater is outside of the district's boundaries, please indicate here with an "X": _____. The District boundaries are the political boundaries for Freestone, Leon, and Madison counties.

Attach copy of tax receipt for this tract or evidence of rights to produce from non-owned land. For municipal and other public water supply systems, state the total service area. Attach CCN or map of service area or utility boundaries. **See Enclosures.**

Please read carefully and provide the following:

Attach a site map showing location of well on the tract and the names, addresses and phone numbers of all adjacent landowners. Attach a list of the owners of all registered wells located within 1,500 feet of the proposed well. Approval of a drilling permit authorizes applicant to complete the described well within 180 days. This drilling permit will expire 180 days after date of approval by the Board of Director's. **See Enclosures.**

I agree that this well will be drilled as specified above and that I will furnish the District a driller's log, and mechanical log made and an application for an operating permit within 60 days following completion of this well. I agree not to produce from this well without a valid operating permit issued by the District. I agree to abide by the rules of the District and all lawfully issued orders of the District. All the information contained in the application is true and correct to the best of my knowledge. This application, when approved, shall remain in effect for one year following date of approval.

Signature of Applicant

Keith J. Nosich

Date July 30, 2026

Printed Name:

Keith J Nosich

Please include a Check or Money Order in the amount of \$100.00 with each application submitted.

State of Texas

County of Harris

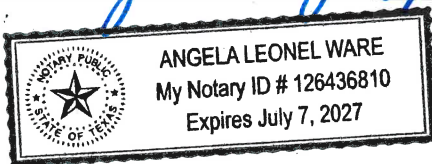
This document was acknowledged before me on

July 30, 2026

by

Keith Nosich

VP-Engineering & Operations



Angela Leonel Ware
Notary Public's Signature

(Personalized Seal)

Permit application approved: _____

MID-EAST TEXAS GROUNDWATER CONSERVATION DISTRICT

By: _____

Date: _____

Mitsui MEP Pate Water Well #3 Drilling and Operating Permit Application Exhibits

- Exhibit A: Memorandum of Groundwater Lease
- Exhibit B: Property and Water Well Plat
- Exhibit C: Technical Memorandum and Drawdown Maps
- Exhibit D: Names and Address of all Contiguous Landowners
- Exhibit E: Proposed Public Notice
- Exhibit F: Flow Meter Design

Exhibit A

Memorandum of Water Well and Groundwater Lease Agreement

MEMORANDUM OF WATER WELL AND GROUNDWATER LEASE AGREEMENT

STATE OF TEXAS }
 }
COUNTY OF FREESTONE } **KNOW ALL MEN BY THESE PRESENTS:**

WHEREAS, a Water Well and Groundwater Lease Agreement (the "Agreement") dated February 20, 2025, was entered into by and between **The Richmond A. Pate Revocable Living Trust**, 761 FM 1848, Buffalo, Texas 75831 ("Grantor"), and **Mitsui E&P USA LLC**, 1300 Post Oak Blvd, Suite 1800, Houston, Texas 77056 ("Grantee"), covering lands described on "EXHIBIT A" attached hereto:

SEE ATTACHED "EXHIBIT A".

WHEREAS, the Agreement grants unto Grantee certain rights to utilize groundwater from the Land and to drill water wells thereon; and

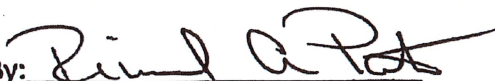
WHEREAS, in lieu of recording the Agreement, Grantor and Grantee have agreed to record this memorandum of same;

NOW THEREFORE, notice is hereby given that Grantor and Grantee have executed the Agreement, and Grantor does hereby grant unto Grantee all rights specified in the Agreement, for the purposes and consideration stated therein.

EXECUTED this 26th day of June, 2025, but effective February 20, 2025.

GRANTOR:

The Richmond A. Pate Revocable Living Trust

By: 
Richmond A. Pate, Trustee

GRANTEE:

Mitsui E&P USA LLC

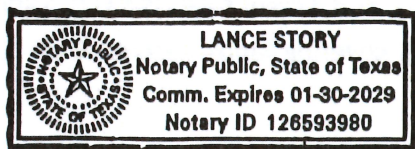
By: 
Katie LaRue, Director-Land

ACKNOWLEDGMENTS

STATE OF TEXAS }
COUNTY OF LEON }

This instrument was acknowledged before me, the undersigned authority, on June 26th, 2025, by Richmond A. Pate, Trustee of the Richmond A. Pate Revocable Living Trust, on behalf of such trust.

(seal)

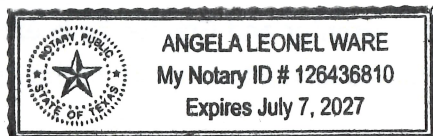



Notary Public, State of Texas

STATE OF TEXAS }
COUNTY OF HARRIS }

June 26 This instrument was acknowledged before me, the undersigned authority, on June 26, 2025, by Katie LaRue, Director-Land of Mitsui E&P USA LLC, a limited liability company, on behalf of said company.

(seal)



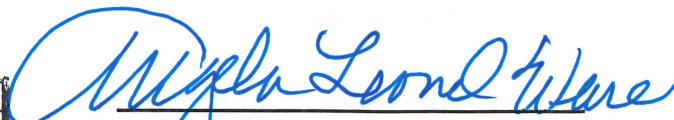

Notary Public, State of Texas

EXHIBIT "A"

ATTACHED TO AND MADE A PART OF THAT CERTAIN WATER WELL AND GROUNDWATER LEASE AGREEMENT DATED 2-20-25, BY AND BETWEEN Richmond A. Pate Revocable Living Trust, AS SURFACE OWNER, AND Mitsui E&P USA, LLC, a Delaware limited liability company, AS OPERATOR.

The Agreement Lands are comprised of the following two tracts of real property:

Being 116.20 acres of land, more or less, out of the M Hunt A-308 Survey, Freestone County, Texas, being the same land described in that certain General Warranty Deed dated 06-04-2015, from Richmond Pate, as Grantor, to Richmond A Pate Revocable Living Trust as Grantee, recorded in Volume 1659, Page 328 of the Deed Records of Freestone County, Texas; and

Being 19.15 acres of land, more or less, out of the JF Timmons A-622 Survey, Freestone County, Texas, being the same land described in that certain General Warranty Deed dated 06-04-2015, from Richmond Pate, as Grantor, to Richmond A Pate Revocable Living Trust as Grantee, recorded in Volume 1659, Page 328 of the Deed Records of Freestone County, Texas.

Being 76.37 acres of land, more or less, out of the JF Timmons A-622 Survey, Freestone County, Texas, being the same land described in that certain General Warranty Deed dated 7-31-2008, from Stephen V Pate, as Grantor, to Richmond Pate as Grantee, recorded in Volume 1457, Page 793 of the Deed Records of Freestone County, Texas

Being 78.78 acres of land, more or less, out of the WC Kelly A-359 Survey, Freestone County, Texas, being the same land described in that certain General Warranty Deed dated 7-3-2008, from Stephen Pate, as Grantor, to Richmond Pate as Grantee, recorded in Volume 1457, Page 800 of the Deed Records of Freestone County, Texas.

Being 139.77 acres of land, more or less, out of the WC Kelly A-359 Survey, Freestone County, Texas, being the same land described in that certain General Warranty Deed dated 7-31-2008, from Stephen Pate Trust, as Grantor, to Richmond Pate as Grantee, recorded in Volume 1457, Page 800 of the Deed Records of Freestone County, Texas.

Being 50 acres of land, more or less, out of the Dottie Branch Survey, Lots 20-24 Freestone County, Texas, being the same land described in that certain General Warranty Deed dated 7-31-2008, from Pate Children's Trust, as Grantor, to Richmond Pate as Grantee, recorded in Volume 1457, Page 796 of the Deed Records of Freestone County, Texas.

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OF THE FOLLOWING INFORMATION FROM THIS INSTRUMENT BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

**AMENDED AND CORRECTED WATER WELL AND GROUNDWATER LEASE
AGREEMENT & MEMORANDUM**

STATE OF TEXAS	§	
	§	KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF FREESTONE	§	

WHEREAS, a Water Well and Groundwater Lease Agreement (the "Agreement") dated February 20, 2025, was entered into by and between the Richmond A. Pate Revocable Living Trust, ("Surface Owner" or "Grantor") and Mitsui E&P USA LLC ("Operator" or "Grantee"), being memorialized of record in Freestone County, Texas by a Memorandum of Water Well and Groundwater Lease Agreement in instrument Number 2503279, of the Official Records of Freestone County, Texas (hereinafter referred to as the "Memorandum"), and

WHEREAS, the Agreement Lands described in the Agreement and Memorandum were incomplete, and

WHEREAS, Surface Owner and Operator desire to correct and amend the Agreement and Memorandum with the correct and complete Agreement Lands, more fully described in the attached Exhibit "A".

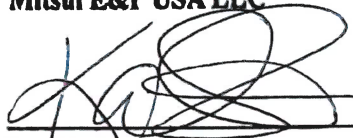
NOW THEREFORE, for adequate consideration and the mutual agreement, benefits and obligations, provided for in the Water Well and Groundwater Lease Agreement, and for the purpose of making the Agreement and Memorandum definite and certain in respect to the intended Agreement Lands covered by the Agreement, the undersigned do hereby acknowledge that the Agreement and Memorandum are amended by replacing Exhibit 'A' of the Agreement and Memorandum with the Exhibit "A" attached hereto. In all other respects the Agreement and Memorandum remain unchanged. Surface Owner agrees that the Agreement is valid and in full force and effect and does hereby grant unto Grantee all rights specified in the Agreement, for the purposes and consideration stated therein.

EXECUTED THIS 3rd day of August, 2026, but effective February 20, 2025.

SURFACE OWNER/GRANTOR:
Richmond A. Pate Revocable Living Trust


Richmond A. Pate, Trustee

OPERATOR/GRANTEE:
Mitsui E&P USA LLC


By: Kathryn LaRue
Title: Director-Land

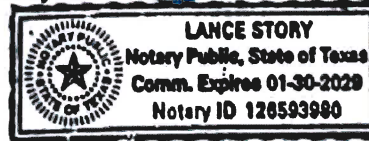
STATE OF TEXAS §

COUNTY OF Leon §

On this 3rd day of August, 2026, before me personally appeared Richmond A. Pate, to me known, who being by me duly sworn did acknowledge that he executed this instrument as his own free act and deed in the capacity of Trustee of the Richmond A. Pate Revocable Living Trust.

My Commission Expires:
1-30-2029


Notary Public, State of Texas

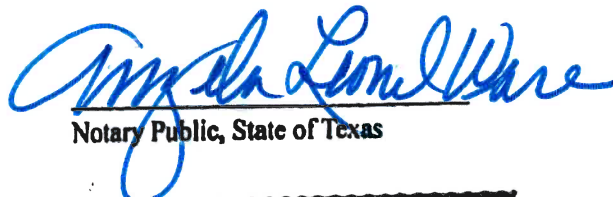


STATE OF TEXAS §
COUNTY OF HARRIS §

On this 4th day of August, 2026, before me personally appeared Kathryn LaRue to me known, who being by me duly sworn did say that she is the Director-Land of Mitsui E&P USA LLC.

My Commission Expires:

07-07-2027


Notary Public, State of Texas

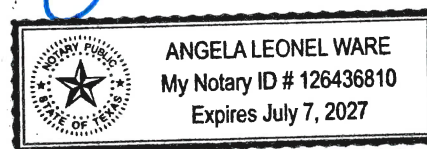


EXHIBIT "A"

ATTACHED TO AND MADE A PART OF THAT CERTAIN *AMENDED AND CORRECTED WATER WELL AND GROUNDWATER LEASE AGREEMENT & MEMORANDUM*, EXECUTED 8-3-26, BY AND BETWEEN Richmond A. Pate Revocable Living Trust, AS SURFACE OWNER/GRANTOR, AND Mitsui E&P USA LLC, a Delaware limited liability company, AS OPERATOR/GRANTEE.

The Agreement Lands are comprised of the following tracts of real property:

Being 116.20 acres of land, more or less, out of the M Hunt A-308 Survey, Freestone County, Texas, being the same land described in that certain General Warranty Deed dated 06-04-2015, from Richmond Pate, as Grantor, to Richmond A Pate Revocable Living Trust as Grantee, recorded in Volume 1659, Page 328 of the Deed Records of Freestone County, Texas; and

Being 19.15 acres of land, more or less, out of the JF Timmons A-622 Survey, Freestone County, Texas, being the same land described in that certain General Warranty Deed dated 06-04-2015, from Richmond Pate, as Grantor, to Richmond A Pate Revocable Living Trust as Grantee, recorded in Volume 1659, Page 328 of the Deed Records of Freestone County, Texas; and

Being 76.37 acres of land, more or less, out of the JF Timmons A-622 Survey, Freestone County, Texas, being the same land described in that certain General Warranty Deed dated 7-31-2008, from Stephen V Pate, as Grantor, to Richmond Pate as Grantee, recorded in Volume 1457, Page 793 of the Deed Records of Freestone County, Texas; and

Being 78.78 acres of land, more or less, out of the WC Kelly A-359 Survey, Freestone County, Texas, being the same land described in that certain General Warranty Deed dated 7-3-2008, from Stephen Pate, as Grantor, to Richmond Pate as Grantee, recorded in Volume 1457, Page 800 of the Deed Records of Freestone County, Texas; and

Being 139.77 acres of land, more or less, out of the WC Kelly A-359 Survey, Freestone County, Texas, being the same land described in that certain General Warranty Deed dated 7-31-2008, from Stephen Pate Trust, as Grantor, to Richmond Pate as Grantee, recorded in Volume 1457, Page 800 of the Deed Records of Freestone County, Texas; and

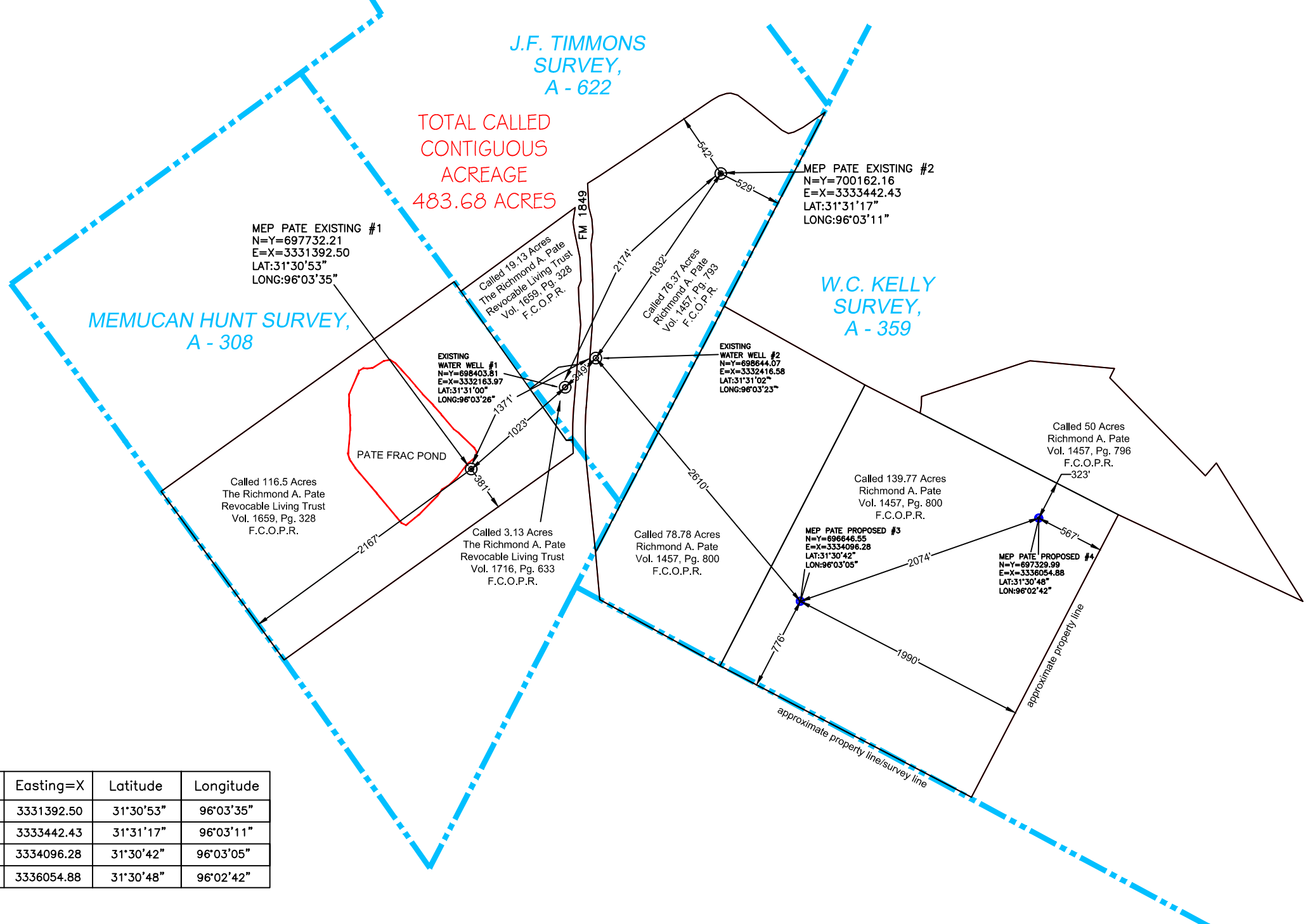
Being 50 acres of land, more or less, out of the Dottie Branch Survey, Lots 20-24 Freestone County, Texas, being the same land described in that certain General Warranty Deed dated 7-31-2008, from Pate Children's Trust, as Grantor, to Richmond Pate as Grantee, recorded in Volume 1457, Page 796 of the Deed Records of Freestone County, Texas; and

Being 3.13 acres of land, more or less, out of the JF Timmons A-622, Freestone County Texas, being the same land described in that certain General Warranty Deed dated 5-2-2017, from William and Beverly Cummings, as Grantor and Richmond A Pate Revocable Living Trust, as Grantee, recorded in Volume 1716, Page 633 of the Deed Records of Freestone County, Texas.

Exhibit B
Property and Water Well Plat

EXHIBIT "A"

FREESTONE COUNTY, TEXAS



Point	Elevation	Northing=Y	Easting=X	Latitude	Longitude
MEP PATE #1	325'	697732.21	3331392.50	31°30'53"	96°03'35"
MEP PATE #2	352'	700162.16	3333442.43	31°31'17"	96°03'11"
MEP PATE #3	295'	696646.55	3334096.28	31°30'42"	96°03'05"
MEP PATE #4	295'	697329.99	3336054.88	31°30'48"	96°02'42"

DRAWN	CML	DATE 5/11/26
CHECKED	MCG	AFE:
APP'D	MCG	GGS:
SCALE	1"=200'	
REV#	DATE	DESC.

PREPARED FOR

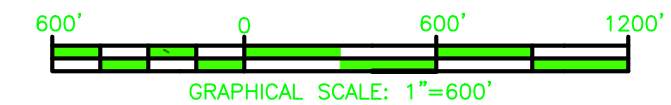
MITSUI E&P
USA LLC



4901 E End Blvd South,
Marshall, Tx 75672
www.bowman.com
903.471.8391
TBPELS Firm No. 10120600
LA Firm No. 846

EXHIBIT SHOWING DIMENSIONS TO PROPOSED PATE FRAC POND AND WATER WELLS ON THE PATE PROPERTY FREESTONE COUNTY, TEXAS			
CLIENT PROJECT NAME MITSUI PATE FRAC POND			
JOB NO.	381364	SHEET	REV.
DWG. NO.	381364_MITSUI_WATERWELL_EXHIBIT	1 OF 1	0

NOTES
1) COORDINATES, BEARINGS, AREAS, AND DISTANCES SHOWN ARE GRID BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE (4203), NAD 27
2) ALL TITLE RESEARCH PERFORMED BY MITSUI E&P USA LLC



PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS FINAL SURVEY DOCUMENT

Exhibit C
Technical Memorandum and Drawdown Maps

July 28, 2026

Mr. Keith Nosich
Vice President
Mitsui E&P USA, LLC
1300 Post Oak Boulevard, Suite 1800
Houston, Texas 77056

Re: Mid-East Texas Groundwater Conservation District — Hydrogeologic Report
Proposed Water Well #3 & #4, MEP Pate Property
Freestone County, Texas

Dear Mr. Nosich,

On behalf of Mitsui E&P USA, LLC (MEP), R. W. Harden & Associates, Inc. (RWH&A) submits this hydrogeologic report in support of a drilling and operating permit request for the proposed new frac supply wells, Well #3 and Well #4 located within the jurisdiction of the Mid-East Texas Groundwater Conservation District (METGCD or District) in Freestone County, Texas. Currently, MEP operates two existing production wells on the same contiguous acreage, Well #1 and Well #2 permitted by the METGCD under operating permit #FR-2025-002 with an aggregate annual production amount of 142,000,000 gallons or 435.78 acre-feet.

MEP is requesting to drill, construct, and operate two additional wells (Well #3 and Well #4) to increase their annual production from the property by 1,015.26 acre-feet. The total requested aggregated well field production capacity is 1,451.04 acre-feet per year (ac-ft/yr), which is within the production limits established under METGCD's Rule 6.3.C. Table 1 summarizes MEP's Groundwater Production Rights from all four wells including the requested total aggregated annual production capacity from the property and individual well yields in gallons per minute (gpm).

Table 1. Groundwater Production Rights and Production Capacity; 4 Wells – Pate Property

<i>Parameter</i>	<i>Acreage and Production Capacity</i>
METGCD Acreage Allocation (ac-ft/yr/acre)	3.0
Number of Contiguous Acres	483.68
Aggregated Annual Permit Allocation (ac-ft/yr)	1,451.04
Annual Permit Production (gallons)	472,822,835
Number of Wells in Permit	4
Long-Term Permit Rate per Well (gpm)	225
Peak Short-Term Production Rate per Well (gpm)	490

RWH&A understands that per the current District Rules (effective January 29, 2026), an application requesting to drill and operate new wells with a proposed aggregated production capacity of 250 gpm or more, the applicant is required to submit a hydrogeologic report detailing the projected effect of

the proposed withdrawal on other groundwater users in the District and on the target aquifer on a regional scale. Therefore, in accordance with the District Rules and as presented within the Outline of Requirements for Hydrogeologic Assessment Reports (updated September 15, 2025), RWH&A provides this hydrogeologic report formatted to address each specific requirement by the METGCD. For clarity, within this report, the italicized bullets and text are cited from the Outline of Requirements for Hydrogeologic Assessment Reports (2025) and are subsequently followed by RWH&A's responses.

For this work, RWH&A evaluated information pertaining to the geologic structure, lithologic composition, and aquifer productivity from the Carrizo-Wilcox Group aquifer within and surrounding the MEP Pate Property. Specifically, this data included reviews of geologic and hydrogeologic data from published and unpublished groundwater and geologic maps and reports, well completion records, geophysical logs, water level data, and well testing records. RWH&A evaluated data distributed by the Texas Water Development Board (TWDB), the University of Texas Bureau of Economic Geology (BEG), the Railroad Commission of Texas (RRC), the Texas Commission on Environmental Quality (TCEQ), the District, MEP, and RWH&A in-house files. Using the information compiled, RWH&A generated estimates of the structure and hydraulic characteristics of the target aquifer in the study area that was applied to proprietary, CAD-based flow modeling software. The results generated by the model were used to estimate potential short- and long-term impacts as a result of the requested production from the property.

It is important to note that all modeling and simulated drawdown presented herein reflect the full aggregated annual production of 1,451.04 acre-feet, which includes the 435.78 acre-feet current permit plus the requested 1,015.26 acre-feet increase. Because of this setup, actual drawdown from the new requested production alone will be less than what is illustrated in this report. Additionally, it is our understanding that MEP plans to utilize groundwater from these four wells over a 20-year horizon. While METGCD rules require simulating drawdown impacts across a 50-year period, actual production is unlikely to span that entire duration.

The following section presents the hydrogeologic evaluation conducted by RWH&A in accordance with METGCD's requirements for the proposed permit request.

A) Basic Information

The Report should present the following information:

- 1) *A map or maps showing*
 - a. *The location of the well relative to the District boundaries and the county boundaries within the District,*
 - b. *The location of the applicant's property boundaries, and*

Figure 1 illustrates the location of MEP's existing Well #1 and Well #2 and the proposed Well #3 and Well #4 relative to the District boundaries and the county boundaries within the District, and the location of the applicant's property boundaries.

- c. *The locations of any off-site wells completed in the target aquifer within the AOI. Clearly distinguish wells permitted by the District from wells that are exempt. The AOI is based on the limits of the drawdown cone created by the proposed well and is defined in more detail below.*

On July 7, 2026, RWH&A obtained a list of current registered exempt and permitted wells from Mr. David Bailey, General Manager of the METGCD. Figure 1 illustrates all METGCD-reported registered exempt or permitted off-site wells that are within the project Area of Influence (AOI). Wells that were reported as “plugged” are not presented in Figure 1.

RWH&A identified the AOI as 2.5 miles from the project wells. Based on RWH&A’s review of geophysical log data, driller’s reports, and well completion records, the target aquifer for MEP’s existing and proposed wells is the Carrizo aquifer. RWH&A evaluated the reported completion intervals of off-site wells within the AOI and identified five wells that are likely completed in the target aquifer:

- **Exempt Rig Supply Wells:** METGCD Well IDs 187667, 189471, and 686447
- **Permitted Commercial/Industrial Well:** METGCD Well ID 684836 (listed as a “rig supply well” on the State of Texas driller’s report)
- **Exempt Domestic Use Well:** METGCD Well ID 95815

2) *Information on the proposed well(s), including*

- a. *Latitude and longitude in decimal degrees (WGS84/EPSSG:4326 preferred). If another format or system is used (e.g., GAM, State Plane, UTM), provide the spatial reference details (system/projection, datum, units, zone, and EPSG code if known),*
- b. *Proposed total depth and screened interval (in feet),*

Table 2 summarizes MEP’s existing and proposed well information, including latitude and longitude in decimal degrees (NAD27), reported and proposed total depth and screen interval in feet below ground level (bgl), and the target aquifer.

Table 2. MEP’s Proposed and Existing Wells on Pate Property

MEP Well ID	METGCD Well ID	Latitude (NAD27)	Longitude (NAD27)	Total Depth (feet bgl)	Screen Interval (feet bgl)	Target Aquifer
Well #1	707615	31.5147	-96.0597	510	350 - 450	Carrizo
Well #2	707597	31.5213	-96.0531	530	390 - 470	Carrizo
Well #3	Proposed	31.5117	-96.0514	500	325 - 450	Carrizo
Well #4	Proposed	31.5133	-96.0450	500	380 - 470	Carrizo

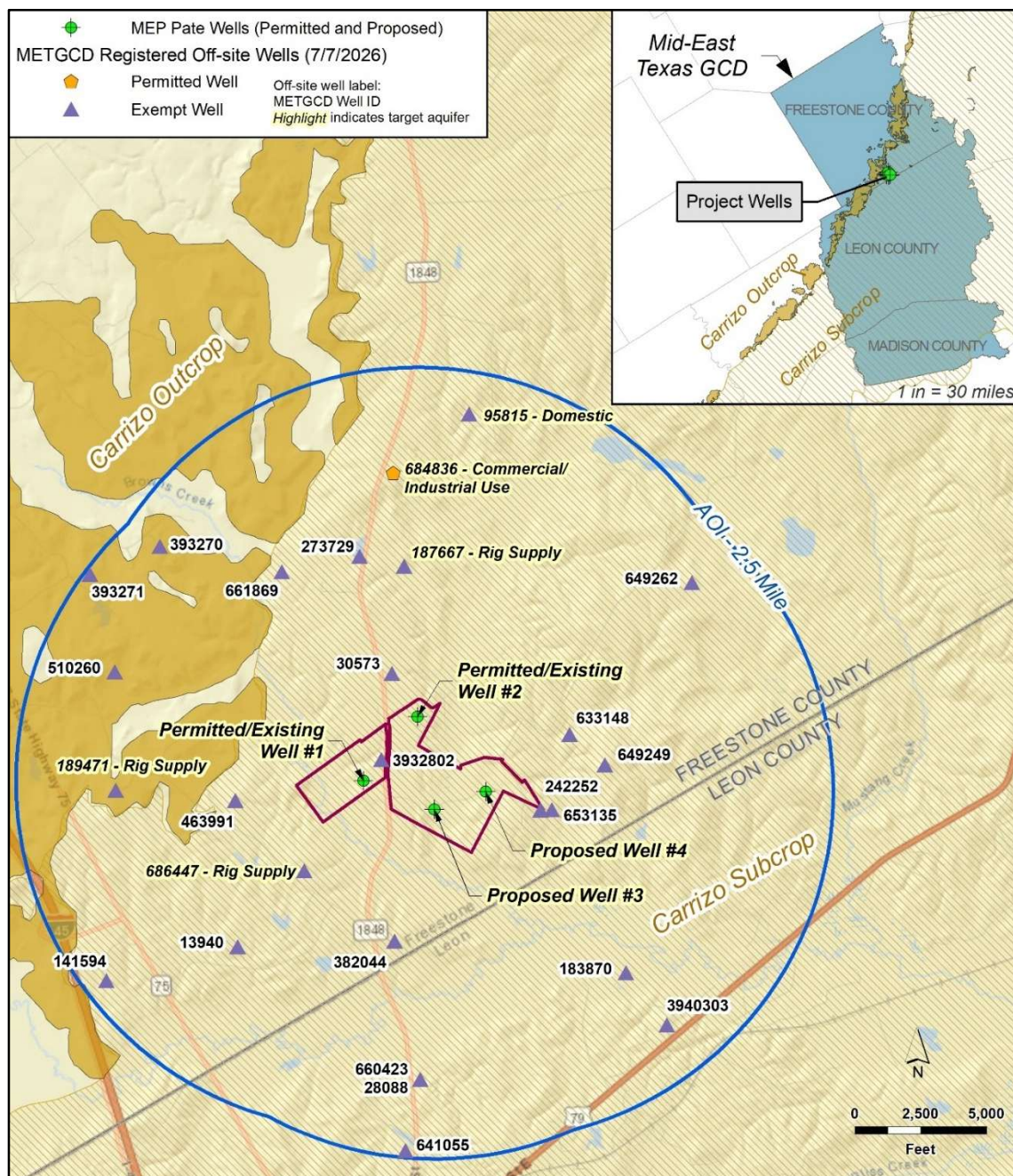
- c. *Proposed target aquifer,*

As mentioned, the proposed target aquifer is the Carrizo Sand Formation of the Carrizo-Wilcox Group aquifer. As shown in Figure 1, the Carrizo outcrops in a northeast-to-southwest trending band

approximately one mile northwest of the property and dips below ground at a rate of approximately 40 to 60 feet per mile towards the southeast.

Based on review of nearby geophysical log data and driller's reports, RWH&A estimates that the Carrizo Sand Formation beneath the property (although varying depending on land surface elevation) lies between approximately 320 feet to 500 feet bgl with an average estimated net sand thickness of 120 feet. The formation is laterally continuous and can be correlated through several logs within and surrounding the MEP Pate Property.

Figure 1. MEP Pate Property and Well Site Layout, Freestone County, Texas



- d. *Maximum requested annual production rate in millions of gallons and in acre-feet,*
- e. *Maximum requested short-term pumping rate in gallons per minute and in acre-feet per year (if greater than the requested annual production rate), and*
- f. *If the maximum requested pumping rate in the proposed well (i.e., the “short-term” pumping rate) is greater than the permitted maximum annual production rate, include the number of days that the well can be pumped constantly at the maximum short-term rate before the maximum annual production rate is exceeded.*

Table 3 presents the maximum requested annual production rate in millions of gallons and in acre-feet, the maximum requested short-term pumping rate in gallons per minute, and the maximum requested pumping rate in the existing and proposed wells (i.e., the “short-term” pumping rate) with the number of days that the wells can be pumped constantly at the maximum short-term rate before the maximum annual production rate is exceeded. RWH&A discussed these proposed rates and the calculated duration of 168 days with METGCD’s consulting hydrogeologist, Mr. Ryan Harmon. On July 15, 2026, Mr. Harmon provided a response of review and approval of the calculated duration for modeling purposes as discussed in more detail below.

Table 3. MEP’s Maximum Requested Annual Production Rate and Duration

MEP Well ID	Annual Pumping Rate (Gallons)	Annual Pumping Rate (Acre-Feet)	Average Annual Long- Term Pumping Rate (gpm)	Maximum Short-Term Pumping Rate (gpm)	Duration (Days)
Well #1	472,822,835	1,451.04	225	490	168
Well #2			225	490	168
Well #3			225	490	168
Well #4			225	490	168

B) Local Drawdown Estimates

Local drawdowns should be estimated using an analytical solution, such as the Theis equation, that calculates transient drawdowns in an aquifer that result from the pumping well(s). Assumptions concerning aquifer parameters (e.g., transmissivity and storativity) for the calculations should be clearly presented in the report. Drawdowns should be calculated at various distances from the production well(s) such that the distance from the well(s) with negligible drawdowns (i.e., less than 0.1 ft) is identified. For an application with a requested maximum short-term rate that is higher than the requested maximum annual production rate, the following sets of drawdown calculations should be presented:

- 1) *A set of short-term drawdowns with continuous pumping at the maximum short-term rate for 1 day, 30 days, and the total number of days before the maximum annual production rate is exceeded, as described in item 2-f above.*
- 2) *A set of long-term drawdowns with continuous pumping at the maximum annual production rate for 1 year, 20 years, and 50 years.*

Local drawdowns were estimated from the Theis non-equilibrium solution as a result of pumping the requested permitted rates from MEP's proposed and existing wells and the target aquifer. Site-specific hydraulic parameters were estimated from recent static water level and specific capacity data provided by MEP for Well #1 and Well #2 on May 14, 2026.

Table 4. Site Target Aquifer Model Parameters

Model Parameter	Well #1	Well #2	Proposed Well #3	Proposed Well #4
Static Water Level (feet bgl)	28	55	25	80
Artesian Pressure (feet)	297	335	300	300
Transmissivity (gal/day/feet)	19,760	23,170	20,000	20,000
Storage Coefficient	10 ⁻⁴	10 ⁻⁴	10 ⁻⁴	10 ⁻⁴

The depth to static water levels within the two existing wells are shown in Table 4 along with aquifer parameter assumptions used in modeling. As shown, the static water levels are under artesian pressure and rise approximately 300 feet above the top of the aquifer. Therefore, an aquifer storage coefficient of 10⁻⁴ was applied to the model for purposes of simulating confined aquifer conditions, which is consistent with the regional groundwater availability model input values for the Carrizo aquifer in the confined section of the aquifer. Aquifer transmissivity was estimated from time-drawdown data provided by MEP and the results are consistent with regional and local hydraulic estimates for the Carrizo aquifer. Simulated drawdown at multiple radial distances from the existing and proposed wells as a result of the requested permitted amount of groundwater production from MEP's wells are presented in Figure 2 and Figure 3. Figure 2 presents the simulated drawdown with continuous pumping at the maximum short-term rates for 1 day, 30 days, and 168 days, which is the total number of days before the maximum annual production rate is exceeded, as described in item 2-f above, for each of the four MEP production wells. Figure 3 presents the long-term drawdowns with continuous pumping at the maximum annual production rate of 1 year, 20 years, and 50 years for each of the four MEP production wells.

C) Area of Influence (AOI) Determination

The AOI is defined as the radius from the proposed well(s) to the point in the aquifer where the drawdown after 50 years of pumping continuously at the maximum annual production rate is equal to 25 feet, or a radius of 2.5 miles, whichever is greater. This is determined using the calculations described in item 2 above. All known wells (both exempt and nonexempt) within the district that fall within the AOI need to be identified and tabulated, and the drawdowns at each well given the pumping and time conditions as described in Section B above should be calculated.

Based on the analytical results, the 25-foot drawdown contour after 50 years of pumping continuously at the maximum annual aggregated production rate is approximately 2.3 miles from the well field. Therefore, the AOI was established as the greater distance of 2.5-mile radius around the well field.

All known reported wells (both exempt and nonexempt) within the District that are completed in the target Carrizo aquifer and fall within the AOI are tabulated in Table 5 along with the model-simulated drawdowns at each well given the pump and time conditions as described in Section B.

Figure 2. Short-Term MEP Pate Property Model Results

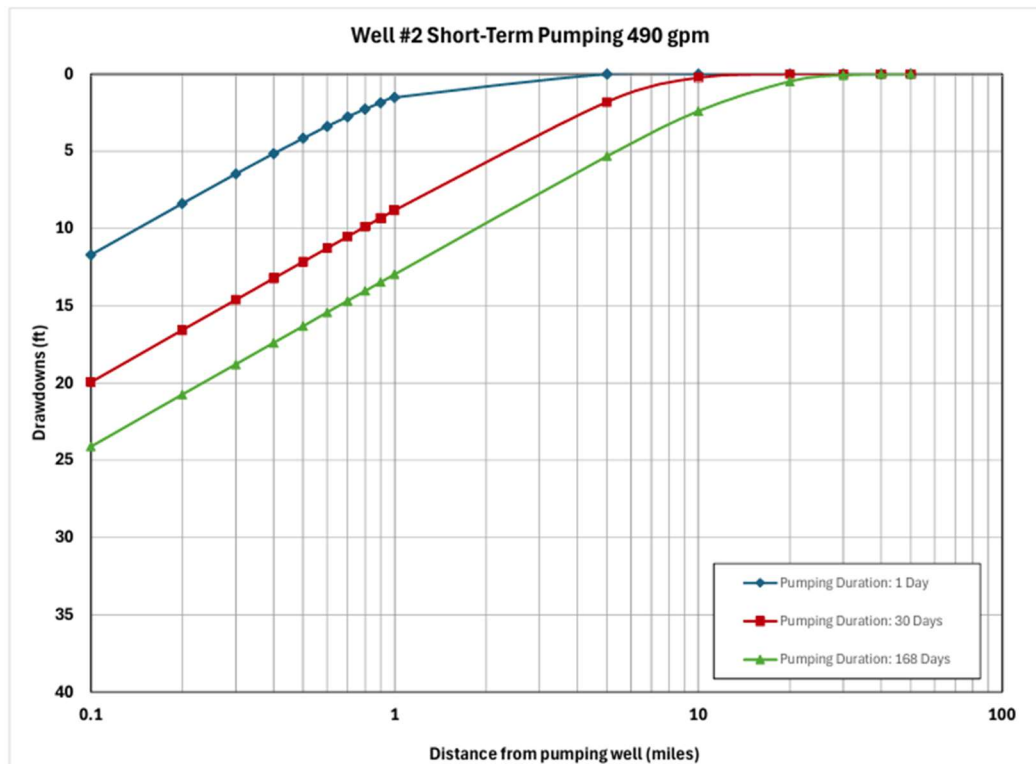
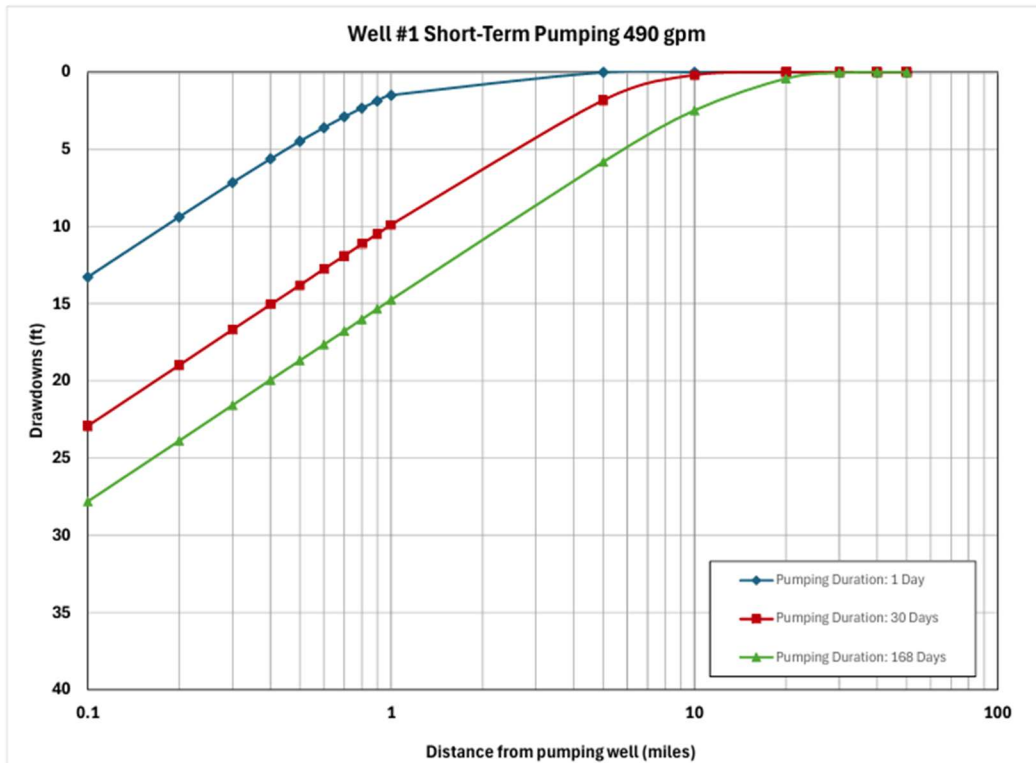


Figure 2. continued, Short-Term MEP Pate Property Model Results

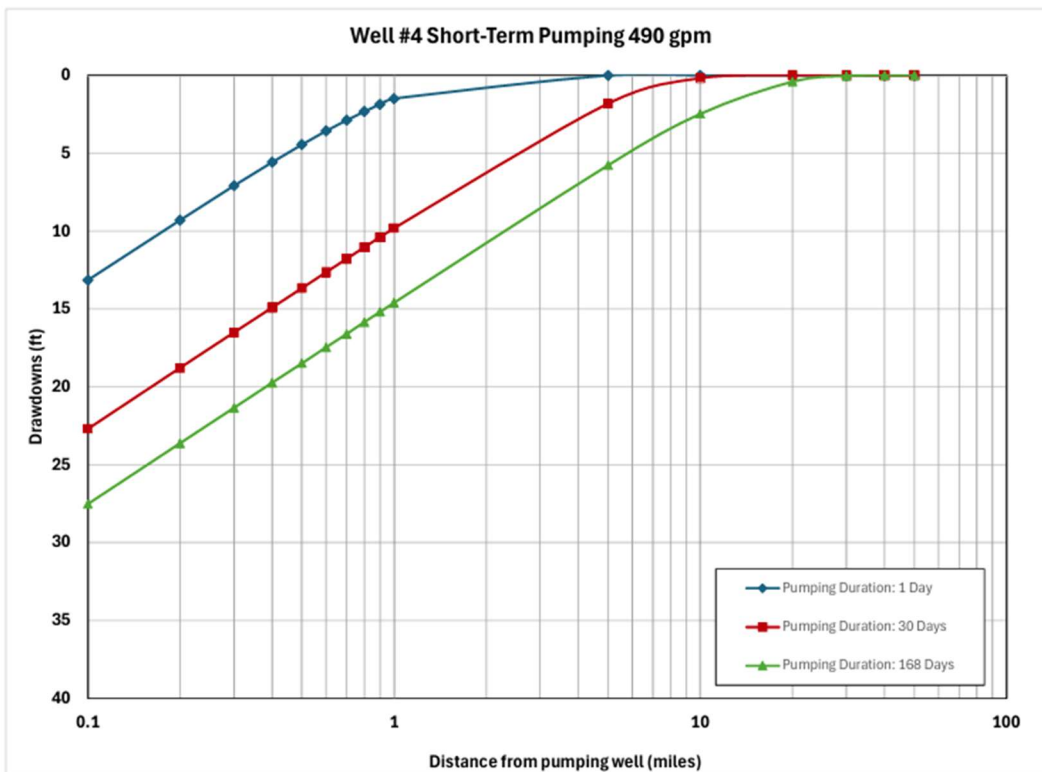
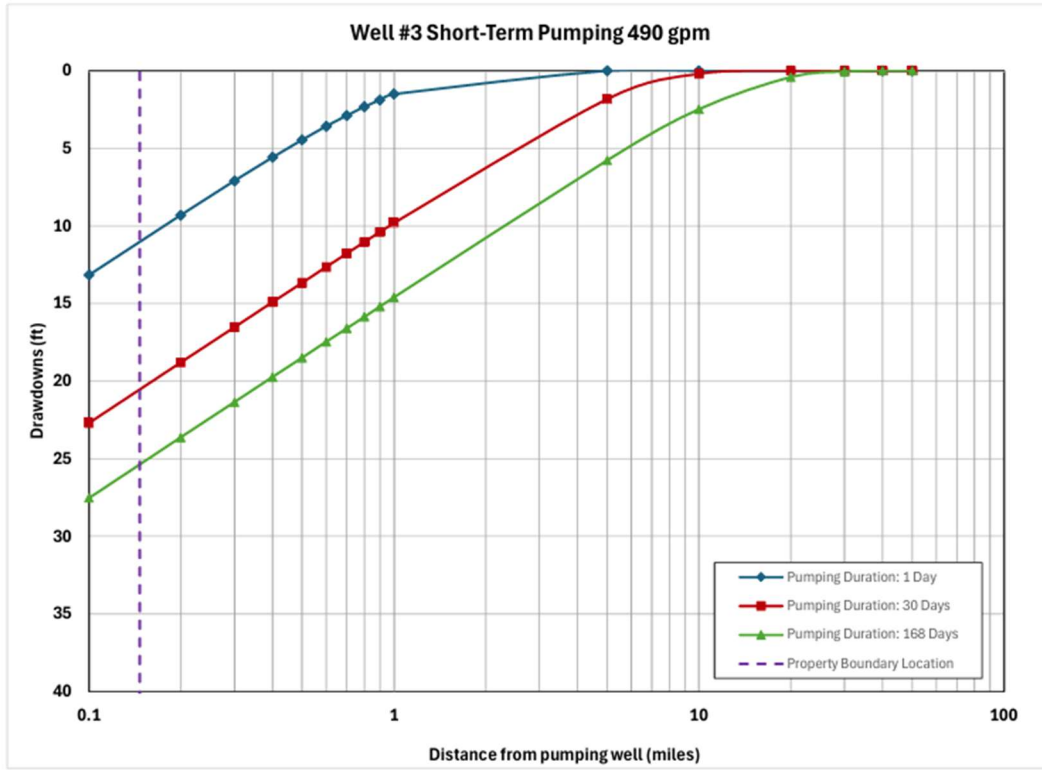


Figure 3. Long-Term MEP Pate Property Model Results

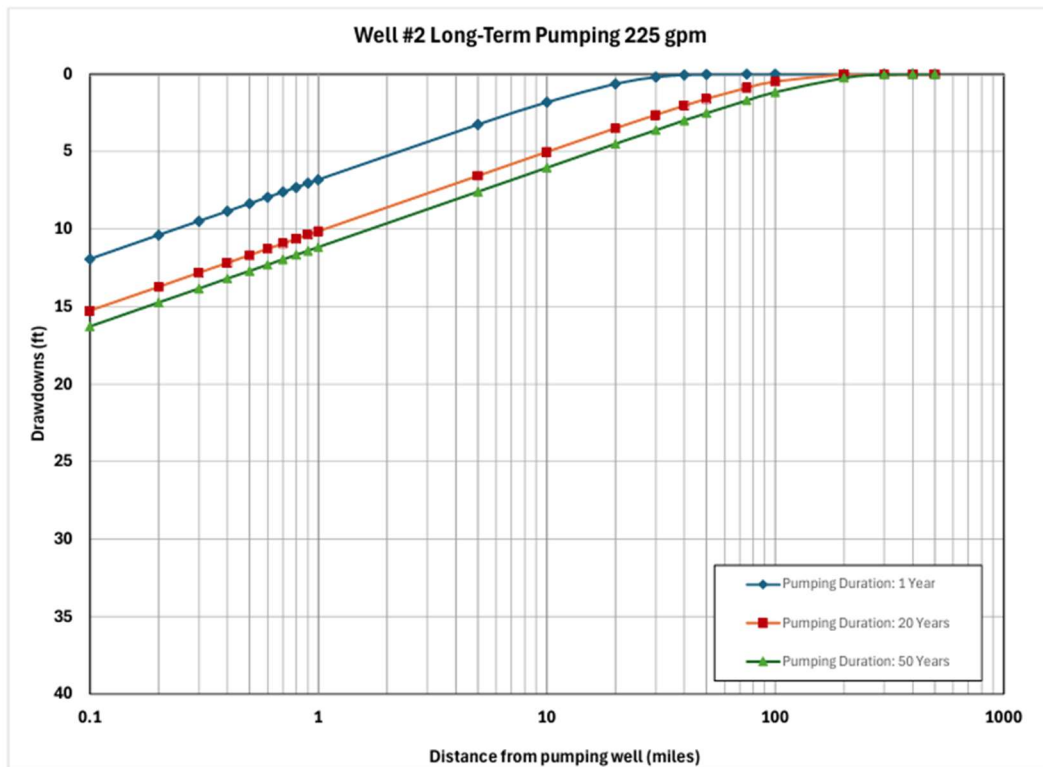
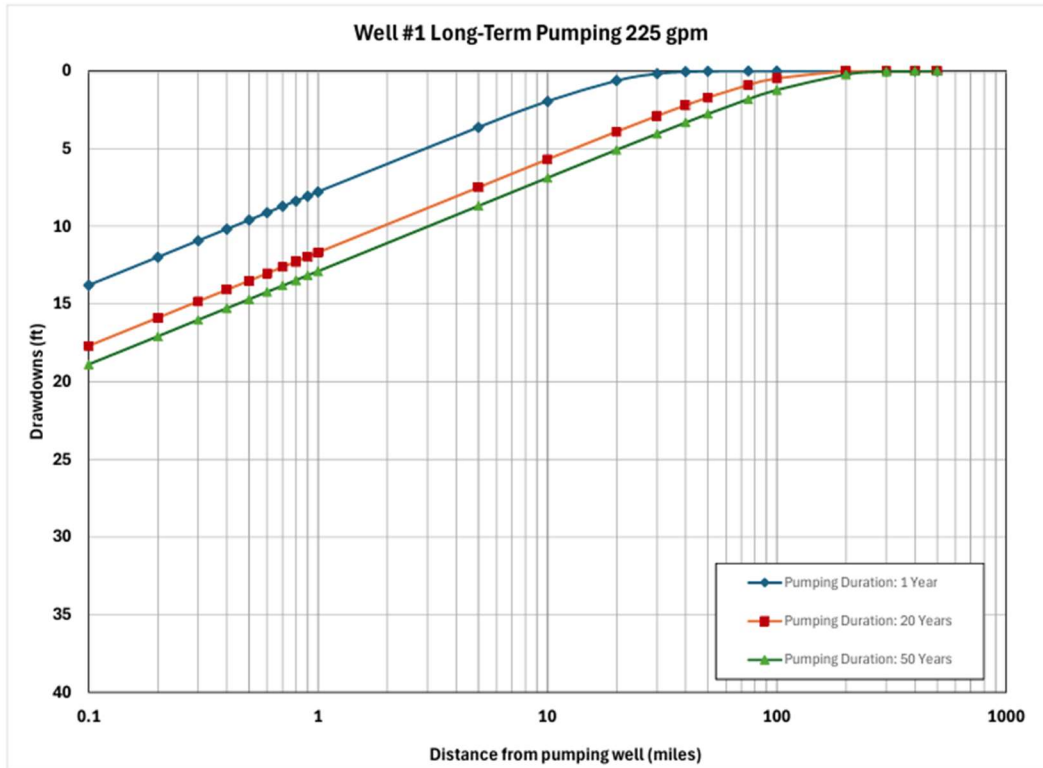


Figure 3, continued. Long-Term MEP Pate Property Model Results

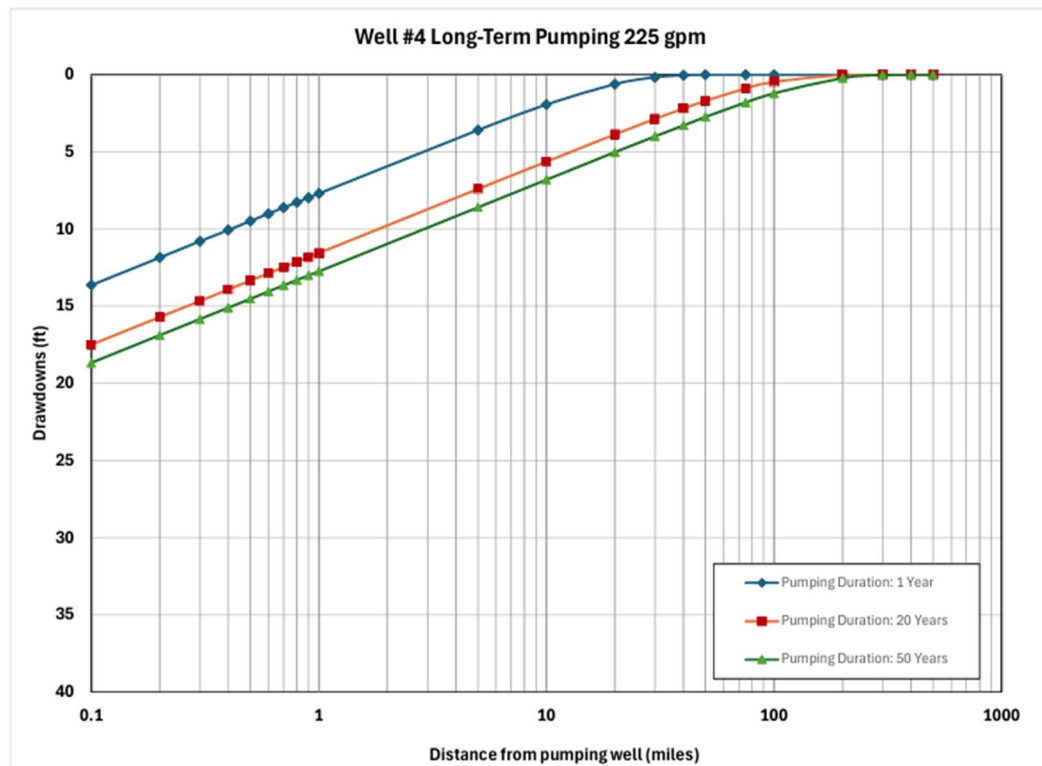
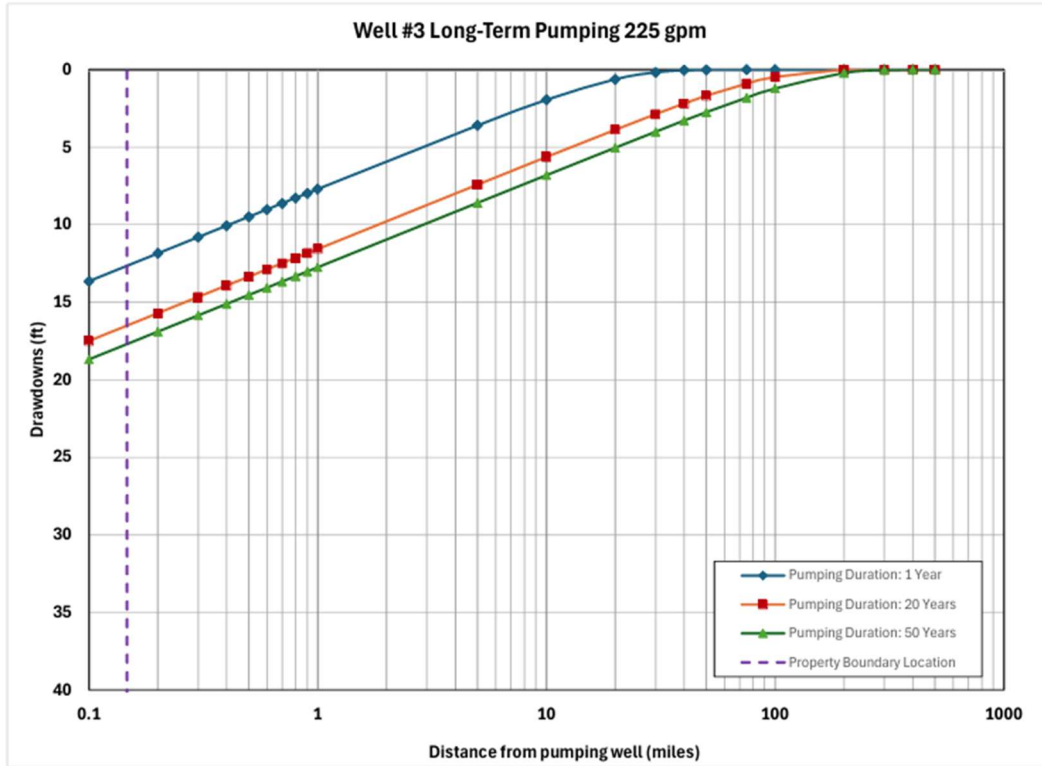


Table 5. Simulated Drawdowns (in Feet) at MEP's and Off-Site Wells within the AOI

METGCD / MEP Well ID	Well Owner	METGCD Permit Amount (MG/yr)	Estimated/Simulated Model Drawdown (Feet)					
			490 gpm, 1 day	490 gpm, 30 days	490 gpm, 168 days	472 MG/yr, 1 year	472 MG/yr, 20 years	472 MG/yr, 50 years
Well #1	MEP	472.8	58	94	113	53	68	72
Well #2	MEP		51	84	102	48	62	66
Proposed Well #3	MEP		61	97	116	54	69	73
Proposed Well #4	MEP		59	94	113	52	67	72
686447	MEP (rig supply)	Exempt	5	37	56	24	37	42
189471	Unit Petroleum (rig supply)	Exempt	0.4	22	41	23	40	46
187667	Anadarko (rig supply)	Exempt	2	30	49	21	35	39
684836	Richie Pate (rig supply, industrial, commercial)	Non-exempt	0.4	23	41	19	36	41
95815	Mike Jones (domestic)	Exempt	0.1	19	37	17	37	43

D) Regional (District-wide) Drawdown Estimates

Applicants requesting a new production permit, or an amendment to their current permit that would result in an increase in their maximum annual production rate, are required to also present an estimate of regional impact of the proposed production. Regional drawdowns should be estimated using the appropriate groundwater availability model (GAM) for the target aquifer. Applicants should evaluate the proposed well assuming constant pumping from the well from the beginning of the following calendar year throughout the remainder of the current planning period.

The Groundwater Availability Model (GAM) (Version 3.02, 2020) for the Central Portion of the Sparta, Queen City, and Carrizo-Wilcox Aquifer was used to predict regional (District-wide) drawdown as a result of the requested permitted amount plus existing permitted production from MEP's existing and proposed wells pumping from the target Carrizo aquifer (Layer 7).

RWH&A incorporated MEP's existing two wells and proposed two new wells into the model well file within Layer 7 (the Carrizo). RWH&A assigned the aggregated pumping rate of 1,451.04 acre-feet per year and assumed constant pumping from the beginning of stress period 17 through stress period 70, which correlates to model predicted year 2027 through predicted year 2080, which is the end of the METGCD's current planning period.

Each GAM includes estimates of the current production within the aquifers in the district. The applicant should use the GAM to calculate the incremental and total average drawdowns throughout

the district associated with pumping from the proposed well(s). “Incremental” drawdowns are defined as the drawdowns associated with the proposed well(s) only, and are calculated by running the model with and without the new well(s) and then subtracting the model-calculated drawdowns without the well(s) from those with the well(s).

For the Sparta Aquifer, the Queen City Aquifer, the Carrizo Aquifer, and the Wilcox Group formations (also known as the Hooper, Simsboro, and Calvert Bluff Aquifers), the appropriate GAM is the Groundwater Availability Model for the Central Portion of the Sparta, Queen City, and Carrizo-Wilcox Aquifers with the District’s permit evaluation well files. For the formations in the Yegua-Jackson Aquifer system, the Yegua-Jackson GAM is the appropriate model. Information on the two models can be found at the following links:

- https://www.twdb.texas.gov/groundwater/models/gam/czwx_c/czwx_c.asp

A predictive version of the two models will be provided by the District’s hydrogeologist upon request.

On July 7, 2026, RWH&A obtained the District’s model files used for the regional drawdown evaluations, and the model files associated with the predicted scenario (S-19) extended through year 2080. Specifically, Mr. Harmon provided the GAM model files with **RunS-19.wel** documenting stress periods 1 through stress period 70 that correspond to year 2011 through model-predict year 2080.

Specific details for each GAM are presented below:

Carrizo-Wilcox Aquifer (central portion) GAM

All drawdowns should be calculated from stress period 1 (model date 1/1/2020) in the GAM to the end of stress period 60 (model date 1/1/2080).

RWH&A calculated drawdowns from the model files obtained from the District, which included stress period 1 (model date 1/1/2011) in the GAM to the end of stress period 70 (model date 1/1/2080). Although the Outline of Requirements for Hydrogeologic Assessment Reports (updated September 15, 2025) specifies calculated drawdown through stress period 60, because the model files have been extended, stress period 70 is the correct target date of 1/1/2080.

Model simulations should be run by adding the proposed well(s) to the appropriate model layer in two separate well files:

METGCD_CCW_2020-Permit.wel; which represents current total exempt use, the current total permitted groundwater within the district, and estimates of current actual use from non-exempt wells

RWH&A used the model file provided by the district’s hydrogeologist, which was RunS-19.wel and added MEP’s proposed and existing pumping (aggregated total of 1,451.04 acre-feet per year) into model Layer 7, which represents the Carrizo aquifer layer starting in stress period 17 (1/1/2027) and held constant through the end of the model run, which is stress period 70 (1/1/2080).

Total and incremental average drawdowns by county and for the entire district should be calculated using the provided well file and presented in the report. The results from the simulation should be used to develop a map showing contours of the incremental drawdowns in the aquifer resulting from pumping in the proposed well at the end of model stress period 60 (1/1/2080). Instructions for preparing the map and a summary table of drawdown results are presented below in Section 4.E.

Total and incremental average drawdowns by county and for the entire district were calculated using the provided well file and are presented in Table 6. The results from the simulation were used to develop a map (Figure 4) showing contours of the incremental drawdowns in the aquifer resulting from pumping from the existing and proposed MEP's wells at the end of the model stress period 70 (1/1/2080).

Table 6. GAM-calculated maximum and average drawdowns in Feet in the Carrizo aquifer (Layer 7) associated with continuous pumping of the proposed well at the maximum requested annual rate (472 million gallons) from 2027 through 2080

Model Scenario		METGCD	Freestone County	Leon County	Madison County
Total Drawdown without Proposed Pumping	Max.	427.2	389.6	427.2	265.8
	Avg.	30.9	12.7	28.5	42.5
Total Drawdown with Proposed Pumping	Max.	427.2	389.6	427.2	265.8
	Avg.	30.9	12.7	28.5	42.5
Incremental Drawdown from Proposed Pumping	Max.	<0.01	<0.01	<0.01	<0.01
	Avg.	<0.01	<0.01	<0.01	<0.01

E) Presentation of Results

The calculated drawdowns described in Section B should be presented in a set of graphs. If the distance to the nearest property boundary is greater than 500 feet, the graphs should also include an indication of the location of the nearest property boundary relative to the proposed well(s).

The calculated drawdowns described in Section B are presented in a set of graphs illustrated in Figures 2 (short-term) and Figure 3 (long-term) predicted drawdown. The distance to the nearest property boundary is greater than 500 feet at Well #3, therefore, the graph for Well #3 also includes an indication of the location of the nearest property boundary relative to the proposed well site, which is approximately 775 feet.

Figure 2 illustrates the short-term maximum drawdown simulated near the well field is an artesian pressure decline of approximately 115 feet after 168 days of continuous pumping at the maximum rate of 490 gpm at each well site. The long-term maximum drawdown (or, artesian pressure decline) simulated near the well field is approximately 50 feet after 50-years of continuous production at the annual permitted rate. The results of these modeled impacts indicate that the aquifer beneath the well field will continue to be fully saturated with artesian pressures rising nearly 200 feet, or more above the top of the aquifer over the next 50 years. **It is important to note that these analytical drawdown predictions are conservative in that they do not account for aquifer recharge and assume continuous pumping in extreme drought conditions (i.e., no precipitation) for a 50-year period.**

Similarly, as previously mentioned, it is our understanding that MEP's production from the Pate well field is anticipated to occur only over the next 20 years. Therefore, actual drawdown as a result of the requested permitted production from MEP's four wells will be less than presented herein.

The AOI as described in Section C, and all known wells within the AOI, should be presented on a map. All wells should be numbered and keyed to a table that contains the well owner's name, the maximum amount in their district permit (or indication if the well is exempt), and all the calculated drawdowns per well as requested in Section C above.

Figure 1 illustrates the locations of all METGCD-reported wells within the AOI. The off-site wells within the AOI are numbered using the METGCD's numbering system (Well ID). The wells completed in the target Carrizo aquifer are highlighted in the map and listed in Table 5, which documents the well owner's name, indication if the well is exempt/permitted, and the model-simulated drawdowns per well as requested in Section C above.

As presented within Table 5, after pumping from the aggregated well field at the current permitted amount plus the requested permitted amount, the Theis-model-predicted simulated drawdown at the off-site wells ranges from less than 5 feet after 1 day to nearly 50 feet after 50 years of continuous pumping. However, it is important to note that these simulations and drawdowns assume no precipitation occurs and continuous production over a 50-year period maintains, which is unlikely to occur and as understood that MEP's planned production will only occur over the next 20 years. Therefore, the actual impacts as a result of the requested production will be much less than what is presented herein.

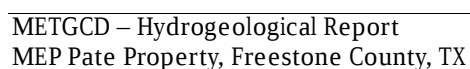
The average and maximum drawdowns determined by the GAM simulations should be tabulated and presented in a table. The incremental drawdowns map described in Section D should be at a scale that shows the borders of the county in which the proposed well is located and the extent of the 1-foot incremental drawdown contour.

The district- and county-wide average and maximum GAM-predicted drawdowns incorporating regional baseline pumping plus the proposed aggregated pumping from 2027 through 2080 are presented in Table 6. Because the baseline well file includes extensive regional production beginning in 2011, the addition of MEP's localized production results in negligible impact to the regional water level changes over the 53-year planning horizon. Therefore, the GAM-predicted impacts on a regional scale as a result of the total aggregated pumping from MEP's wells are negligible.

Figure 4 is the incremental drawdown map as described in Section D and presented at a scale of 1-inch equals 5 miles and shows the extent of the Carrizo Sand outcrop, the border of the county in which the existing and proposed MEP wells are located, and the extent of the 1-foot incremental drawdown contour (in feet) at stress period 70, which is equivalent to model predict year 2080.

Figure 4 illustrates the regional aquifer response to an aggregated permitted production of 1,451.01 ac-ft/yr from the MEP Pate well field, with pumping simulated continuously from 2027 through 2080. This simulates drawdown through the current METGCD Desired Future Condition (DFC) planning cycle.

Figure 4. GAM-Predicted Incremental Drawdown Map through 2080



Conclusions

In summary, MEP is requesting to increase their permitted aggregated production by 1,015.26 ac-ft/yr to a combined total of 1,451.04 ac-ft/yr from four wells on their property in Freestone County, Texas. RWH&A performed a hydrogeologic study to evaluate the local and regional impacts based on the hydrogeologic conditions within the target Carrizo aquifer as a result of the requested permitted production.

As documented herein, the Carrizo aquifer is highly transmissive and is completely full of groundwater beneath the well field area with artesian pressure water levels rising more than 300 feet above the top of the aquifer. The analytical Theis model-simulated impacts, as a result of the requested production, conservatively estimates a maximum drawdown of nearly 50 feet of artesian pressure decline within the AOI after 50 years of continuous pumping and with the assumption that no recharge occurs (i.e., persistent drought over a 50-year period).

The regional groundwater model (GAM) predicts that after pumping the aggregated amount of 1,451.04 acre-feet for 53 years, the aquifer will remain fully saturated beneath the well field area. Artesian pressure water levels are projected to remain more than 200 feet above the top of the aquifer with the maximum local predicted drawdown of just over 20 feet beneath the well field area. The GAM-predicted simulated drawdown as a result of the requested aggregated production reveals that the regional average drawdown within Layer 7 of the Carrizo aquifer across Freestone, Leon, and Madison counties and across METGCD are negligible demonstrating compliance with the current predicted average drawdown under the current Desired Future Condition (DFC) and Modeled Available Groundwater (MAG) scenario.

We appreciate the opportunity to provide you with this Hydrogeologic Report. If you have any questions, please contact us.



Sincerely,

A handwritten signature in blue ink, appearing to read "Elizabeth Ferry".

Elizabeth Ferry, P.G.
R. W. Harden & Associates, Inc.

The seal appearing on this document was authorized by Elizabeth Ferry, P.G. 11011 on July 28, 2026. RWH&A, TBPG Firm No. 50033.

Cc: Jake Steen, Attorney, Lloyd Gosselink Rochelle & Townsend, P.C.
Davie Minyard, MEP
David Bailey, General Manager, METGCD

Exhibit D

Landowners Contiguous to the Mitsui Pate Property

Landowners Contiguous to the Mitsui Pate Property

Geraldine Baker	770 FM 1848 Buffalo, Tx 75831
Teresa Russell	341 County Road 402 Buffalo, Tx 75831
Sheree and Charles Wood	674 FM 1848 Buffalo, Tx 75831
Ronnie Robinson	639 FM 1848 Buffalo, Tx 75831
Gloria Ruiz Life Estate	Po Box 23 Buffalo, Tx 75831
RP Interests LLC	100A Commercial Circle Ste A 207 Conroe, Tx 77304
Harry LeBlanc	PO Box 465 Buffalo, Tx
Anthony Talbot	PO Box 103 Buffalo, Tx 75831
James Kapchinski	PO Box 15 Buffalo, TX 75831
Johnny Peters	4210 Waterwood Dr. Baytown, Tx 77521
Troy Simpson	PO Box 2512 Grants OR 97528
James T Adams	PO Box 2046 Willis, Tx 77378
Bradley Rowan	PO Box 1341 Buffalo, Tx 75831
Kevin Pate	15568 FM 1848 Buffalo, Tx 75831
Gail Pate	3637 Meadow Lake Lane Houston, TX 77027

Exhibit E

Notice of Receipt of Application for Water Well Operating Permit

**NOTICE OF RECEIPT OF APPLICATION
FOR WATER WELL OPERATING PERMIT**

Mitsui E&P USA, LLC (“Mitsui”), 1300 Post Oak Blvd #1800, Houston, Texas 77056, filed an application on August 4, 2026, with the Mid-East Texas Groundwater Conservation District (the “District”) to obtain a water well operating permit.

The location of this well will be on 483.68^{+/-} contiguous acres leased to Mitsui (the “Property”). The Property is located at 761 FM 1848, Buffalo, Texas 75831, where the well is more specifically identified as follows:

Lat 31° 30’ 42” N, Long 096° 03’ 05” W; 776 feet from the S Property line and 1,990 feet from the E Property line.

The proposed well will be capable of producing 490 gallons per minute. There are two existing wells on the property previously permitted with the District for a total combined production volume of 435.78 acre-feet. This new well would be one of two new wells on the Property, and once aggregated with Mitsui’s two existing wells, the four wells in total would collectively be permitted to produce no more than 1,451.04 acre-feet annually from the Carrizo Aquifer. Mitsui seeks to use water produced from this proposed well to supply water for in-District hydraulic fracturing operations in Freestone County for not more than 20 years.

An affected person may contest the application by filing a written notice of intent to protest or a written request for a contested case hearing on the application with the District office within 10 calendar days of the date of this notice. The written notice of intent to protest or request for a contested case hearing must be filed with the General Manager of the District: David Bailey, General Manager, Mid-East Texas Groundwater Conservation District, P.O. Box 477, Madisonville, Texas 77864. The District’s Board or General Manager may proceed to decide the application if no timely written protest is filed.

Further information about the permit application or the permitting process may be obtained by contacting David Bailey, General Manager, Mid-East Texas Groundwater Conservation District, P.O. Box 477, Madisonville, Texas 77864, or by calling (936) 348-3212.

Exhibit F
Flow Meter Design

MEP utilizes a DLJ Mechanical Meter, Model DN100 and a NUFLO MC3-WP Turbine Meter on each of the Frac Water Wells. The NUFLO MC3-WP Meter is connected electronically to a ABB XRC Totalizer. The Turbine meter is read electronically through the field Scada System.

A picture of the installation is attached.

