



City of Garden Ridge

"A way of life, not just a place to live"

QUARRY COMMISSION REGULAR MEETING MONDAY, JULY 9, 2018, 6:00 P.M.

The Garden Ridge City Quarry Commission will meet in a regular session on Monday, July 9, 2018 at 6:00 p.m. in the City Council Chambers, 9400 Municipal Parkway, Garden Ridge, Texas. This is an open meeting, open to the public, subject to the Open Meetings Law of the State of Texas, and as required by law, notice is hereby posted on or before July 6, 2018 before 5:00 p.m., providing time, place, date and agenda thereof. The meeting facility is wheelchair accessible and accessible parking spaces are provided. Requests for accommodations or interpretative services must be made to the City Secretary 48 hours prior to this meeting.

1. Call to Order :
2. Roll Call:
3. Pledge of Allegiance
4. Citizens Comment Period – limited to 30 minutes total

Rules for Citizens' Participation:

The Quarry Commission welcomes citizen participation and comments at all Quarry Commission Meetings. The Quarry Commission offers citizens the opportunity to address them by signing up to speak prior to the meeting. If you speak, you follow these guidelines:

- a) Respect and courtesy:
 - i. Direct your comments to the entire Quarry Commission, not to an individual member, nor to the audience.
 - ii. Show the Quarry Commission the same respect that you would like to be shown.
 - iii. End your speaking at the time allotted below.
- b) Speaking:
 - i. First citizen comment period
 - a. You are required to sign up to speak.
 - b. You are limited to one 3 minute period.
 - ii. Business item period
 - a. You are required to sign up to speak.
 - b. You are limited to one 3 minute period.
 - iii. Second citizen comment period
 - a. You are not required to sign up.
 - b. You are limited to one 2 minute period.
 - iv. State your name and address before your comments begin.
 - v. You are only allowed to speak once per topic, unless also speaking during a posted Public Hearing.

*NOTE: The Texas Open Meetings Act permits a member of the public or a member of the governmental body to raise a subject that has not been included in the notice for the meeting. However, any discussion of the subject **must be limited** to a proposal to place the subject on the agenda for a future*

meeting and any response to a question posed to the Commission is limited to either a statement of specific factual information or a recitation of existing policy. TEX. GOV'T CODE § 551.042.

5. **Business Items:**

The Commission may discuss, consider/or take possible action on the following items:

- a) Approvals
 - i. Approvals of Minutes for May 14, 2018, Quarry Commission Regular Meeting.
- b) Recommendations
 - i. Request from Orica USA, Inc. for a Partial Exemption Permit to conduct blasting activities at the Hanson Quarry for the period of October 1, 2018-September 30, 2019.
 - a. Review request and make recommendation to the City Council.
- c) Discussions/Reports/Reviews
 - i. Review and discussion on the monthly Hanson Quarry blasting analysis data reported by Vibratex. Discussion with Hanson Servtex and Blasting contractors, on recent quarry operations, including any unusual blasts that occurred during reported month/s and/or current month.
 - ii. Review individual citizen blast report/s, follow up on citizen blast report/s and/or assign Quarry Commission member contact with citizen/s, as necessary.
 - iii. Discussion on number of, placement and location of monitors and other matters related to monitoring of blasts by Vibratex and notification to residents of monitor placements. Discuss placement of roving monitor which is currently at the Stewart residence.
- d) Updates
 - i. City Council June 6, 2018 and July 5, 2018, Regular Meeting.
- e) Future Agenda Items.
 - i. Commissioners input for items on upcoming agendas
 - ii. Update on future education/training sessions and Grapevine articles.
 - iii. Announcement of next Regular Meeting -Monday, September 10, 2018, at 6:00 p.m. at City Hall.
- f) Education/Training – limited to 20 minutes
 - i. Question and answer session with Vibra Tech, Hanson and the public.

6. Citizen's Participation: - limited to 20 minutes total
See "Rules for Citizen's Participation" under Item 4.

7. Adjournment

AGENDA NOTICES:

Decorum Required:

Any disruptive behavior, including shouting or derogatory statements or comments may be ruled out of order by the Presiding Officer. Continuation of this type of behavior could result in a request by the Presiding Officer that the individual leave the meeting, and if refused, an order of removal.

Action by Commission Authorized:

The City Quarry Commission may vote or act upon any item within this Agenda. The Commission reserves the right to adjourn into closed session at any time during the course of this meeting to discuss any of the matters listed below, as authorized by Title 5, Chapter 55, of the Texas Government Code.

Executive Sessions Authorized:

This agenda has been reviewed and approved by the City's legal counsel and the presence of any subject in any Executive Session portion of the agenda constitutes a written interpretation of Texas Government Code Chapter 551 by legal counsel for the governmental body and constitutes an opinion by the attorney that the items discussed therein may be legally discussed in the closed portion of the meeting considering available opinions of a court of record and opinions of the Texas Attorney General known to the attorney. This provision has been added to this agenda with the intent to meet all elements necessary to satisfy Texas Government Code Chapter 551.144(c) and the meeting is conducted by all participants in reliance on this opinion.

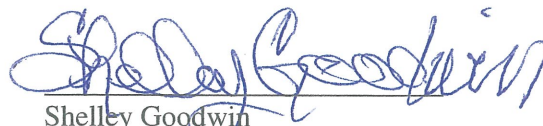
Attendance By Other Elected or Appointed Officials:

It is anticipated that members of the other city boards, commissions and/or committees may attend the meeting in numbers that may constitute a quorum of the other city boards, commissions and/or committees. Notice is hereby given that the meeting, to the extent required by law, is also noticed as a meeting of the City Council, other boards, commissions and/or committees of the City, whose members may be in attendance. The members of the boards, commissions and/or committees may participate in discussions on the same items listed on the agenda, which occur at the meeting, but no action will be taken by such in attendance unless such item and action are specifically provided for on an agenda for that board, commission or committee subject to the Texas Open Meetings Act.



Shelley Goodwin
City Secretary

This is to certify that I, Shelley Goodwin, posted this Agenda at 9:10 am on July 3, 2018 on the bulletin board located at the entrance to the Garden Ridge City Hall, 9400 Municipal Parkway, Garden Ridge, Texas.



Shelley Goodwin
City Secretary



City of Garden Ridge

"A way of life, not just a place to live"

**MINUTES
REGULAR MEETING
GARDEN RIDGE QUARRY COMMISSION MEETING
Monday, May 14, 2018 at 6:00 p.m.**

Members Present:

Chairman Mike Shands
Vice Chairman Wayne Mudge
Commissioner Jerry Barucky
Commissioner Johnell Holly
Commissioner Mark DuBois
Commissioner Albert Haddad

Member Absent:

Commissioner Richard Holloway
Bryan Lantzy, Councilmember (Ex-officio member)

City Staff Present:

Nancy Cain, City Administrator
Lori Claus, Administrative Liaison

1. Call to Order :

With a quorum of the Quarry Commission Members present, Mike Shands, Chair, called the regular meeting of the Garden Ridge Quarry Commission to order at 6:00 p.m. on Monday, May 14, 2018, in the City Council Chambers of the Garden Ridge City Hall, 9400 Municipal Parkway, Garden Ridge, Texas 78266.

2. Pledge of Allegiance

Mike Shands, Chair, led the pledge of allegiance.

3. Citizens Comments – Limited to 30 minutes

No one wished to speak.

4. Business Items:

The Quarry Commission may discuss, consider, and /or take possible action for possible recommendation to the City Council for the following items:

a) Approvals

i. Approvals of Minutes for March 12, 2018, Quarry Commission Regular Meeting.

Motion: A motion was made by Vice Chair Mudge, seconded by Commissioner Holly, to approve the March 12, 2018 Regular Quarry Commission Meeting Minutes. The Quarry Commission voted five (5) for, none (0) opposed. The motion carried unanimously.

ii. Set date, time, and location for next Regular Meeting (Monday, July 9, 2018).

The Quarry Commission did not discuss this item.

b) Discussions/Reports

i. Review and discussion on the monthly Hanson Quarry blasting analysis data reported by Vibratex. Discussion with Hanson Servtex and Blasting contractors, on recent quarry operations, including any unusual blasts that occurred during reported month/s and/or current month.

Geoffrey Rigsby, Vibra-Tech, presented and discussed the March blast analysis. He stated that fifteen (15) blasts occurred during the month of March and none of the blasts exceeded the limits of Ordinance 34. The highest ppv readings occurred on March 15, 2018, in South Wall 3D, with 0.183 ppv and air overpressure of 107.0 dB, recorded at the Warden residence. The strongest air blasts occurred on March 1, 2018, in Lower 6 North, with an overpressure of 116.0 dB recorded at the Warden residence. He also discussed the timing and shots.

Mr. Rigsby then presented and discussed the April blast analysis. He stated that nineteen (19) blasts occurred during the month of April and none of the blasts exceeded the limits of Ordinance 34. The highest ppv readings occurred on April 16, 2018, in 3F North, with 0.148 ppv, with air overpressure of 104 dB, recorded at the Warden residence. The strongest air blast occurred on April 2, 2018, in South Wall G, with an overpressure of 117.0 dB recorded at the Warden residence. He also discussed the timing and shots. The Commission noted that the April 20, 2018 blast had an overpressure reading of 118.0 dB and Mr. Rigsby concurred.

ii. Review individual citizen blast report/s, follow up on citizen blast report/s and/or assign Quarry Commission member contact with citizen/s, as necessary.

Geoffrey Rigsby, Vibra-Tech, discussed the citizen blast reports received for the months of March and April. He stated that blast reports from the area of Regency Run will continue as blasting at the South Wall continues. Mr. Rigsby stated that a claim was submitted for damage to Mr. Dauer's property caused by the April 13, 2018 blast. Mr. Rigsby could not explain the report submitted by Ms. Rodriguez for April 19, 2018, as the quarry did not blast that day. He also addressed the blast report submitted by Ms. Lowrimore for the shot of May 1, 2018. Mr. Rigsby reported the shot readings were unremarkable and perhaps Ms. Lowrimore was feeling the effects of the lingering frequency of the blast.

The Commission thanked Orica for its efforts to minimize blast effects throughout March and April.

Shawn Stiegel, Orica reported that they are currently blasting more frequently but with smaller shots to keep production up and minimize effects.

The Commission suggested Orica continue in this manner in the future.

iii. Discussion on number of, placement and location of monitors and other matters related to monitoring of blasts by Vibratex and notification to residents of monitor placements. Discuss placement of roving monitor which is currently at the Stewart residence (5/14/18 to 6/13/18).

No requests were made for the roving monitor. The monitor will stay at the Stewart residence.

iv. Update on future education/training sessions and Grapevine articles.

The Commission requested a “question and answer” open forum for the next meeting rather than a specific training session. They also discussed Hanson’s future Open House.

Commissioner Barucky agreed to continue to write the Quarry Commission articles for the Grapevine.

v. Discussion of Quarry Commission binder and documents distributed for inclusion in binder (updated contact information and U.S. Department of Interior Report of Investigations).

The U.S. Department of Interior Report of Investigations and Commissioner’s updated contact information were provided to the Commissioners to add to their binders.

Mike Shands, Chair, reminded the Commissioners to attend at least two City Council meetings a year and to make sure to complete the required training for service on the Commission.

vi. City Council April 4, 2018 and May 2, 2018, Regular Meeting Updates/Report.

Nancy Cain, City Administrator, reported that there were no Quarry Commission recommendations brought forward to the City Council for consideration.

vii. Discussion on Future Agenda Items.

The Quarry Commission did not add any future agenda items.

5. Citizen’s Participation - Limited to 20 minutes

No one wished to speak.

6. Adjournment:

There being no further business, the Monday, May 14, 2018 Garden Ridge Quarry Commission regular session was adjourned at 6:25 p.m. Mike Shands, Chair.

Mike Shands
Quarry Commission Chair

ATTEST

Shelley Goodwin
City Secretary

**SIGN IN TO SPEAK AT THE MAY 14, 2018
QUARRY COMMISSION REGULAR MEETING**

Rules for Citizen's Participation:

The Quarry Commission welcomes citizen participation and comments at all of their Meetings. As a courtesy to your fellow citizens and out of respect to our appointed/elected officials, we must request that if you wish to speak, that you follow these guidelines.

- a. Direct your comments to the entire Commission, not to an individual member nor to the audience.
- b. Show the Commission the same respect and courtesy that you expect to be shown to you.
- c. Limit remarks to three (3) minutes.

Disclaimer:

Any disruptive behavior, including shouting or derogatory statements or comments, will be ruled out of order by the Presiding Officer. Continuation of this type of behavior could result in a request by the Presiding Officer that the individual leave the meeting, and if refused, an order of removal.

NAME

ADDRESS

SUBJECT

1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____



Orica USA Inc.
33101 East Quincy Avenue
Watkins, Colorado 80137
Tel: 303-268-5220
Fax: 303-458-3610
Craig.patterson@orica.com

June 25, 2018

City of Garden Ridge, Texas

Attn: City Administrator
9400 Municipal Parkway
Garden Ridge, Texas 78266

**RE: ORICA USA INC.'S REQUEST FOR PARTIAL EXEMPTION PERMIT TO CONDUCT
BLASTING PURSUANT TO ORDINANCE 34-082012 OF CITY OF GARDEN RIDGE, TEXAS**

Dear Nancy Cain:

Orica USA Inc. submits this letter for consideration of a Partial Exemption Permit to conduct blasting as defined in City of Garden Ridge, Texas Ordinance 34-082012.

As required by Ordinance 34-082012, the letter includes:

1) The name of the designee.

Orica USA Inc.

2) The name of the designee's representative for purposes of the application (if the designee is not a natural person).

Danny Craig Patterson (Territory Manager) Orica USA, Southwest Region

3) Copies of any state or federal licenses and permits authorizing the Requestor to possess and use explosives.

Refer to Appendix 1.0

- Orica USA Employee Authorized Signature List
- ATF Notice of Clearance For individuals transporting, shipping, receiving, or possessing explosives materials
- Orica USA (18 U.S.C. Chapter 40, Explosives License / Permit)
- Blaster's Permits

7) The period of time the anticipated use shall continue.

Orica USA Inc. anticipates continuing to perform blasting services at the Lehigh Hanson - Servtex Quarry through the permit timeline (i.e. October 1, 2018 through September 30, 2019).

8) Any supplemental information requested and deemed pertinent by the City Administrator.

Not applicable at this time

9) Any supplemental information the designee deems pertinent prior to City Council consideration.

Proof of Insurance

- Refer Appendix 4.0 for the Certificate of Liability Insurance

(Note: Orica issues Certificates of Liability Insurance annually on September 25.

A new Certificate will be issued to the City of Garden Ridge on September 30, 2018)

The current certificate is active until September 30, 2018.

Monitoring

- A third party selected by the Regulatory Authority shall perform the primary seismic monitoring.
- Orica will utilize the Site Law Model, a software modeling program to predict a blast's PPV. The Site Law Model determines the minimum instantaneous charge weight for each shot prior to loading.
- Ground vibration shall not exceed the frequency based PPV limit of 70% of the USBMZ – curve as recorded by any monitor designated by the Regulatory Authority.

Weather

- Orica will monitor all weather patterns and conditions prior to loading each shot. The blaster will communicate with quarry management and discuss any weather conditions that may adversely affect the ground vibration and air blast reading or the outcome of a blast, prior to loading a shot.

Guidelines

- Orica may modify the above guidelines based on the past history and knowledge gained over time from the previous blast fired at Lehigh Hanson – Servtex Quarry. Analysis of ground vibration and air blast data collected from past seismic monitoring at the Lehigh Hanson Servtex Quarry will provide a basis in the modification of guidelines.
- Orica will conduct its blasting practices within the guidelines set forth by Federal, State and Local Governing Agencies while maintaining strict adherence to Orica blasting policies and procedures.

Also, included in this letter are the attachments identified below:

- 1) Identifying all real property where the activity of Blasting shall be conducted by street address (if any) and legal description. Any property not listed will not be included in any permit, if authorized. If multiple properties are to be considered, and some are not within the City limits, but is within the City's extra-territorial jurisdictional limits, please include each property in the list but designate the property with the comment: "ET J Property".
- Refer to Appendix 2.0 for the current Lehigh Hanson – Servtex Quarry

2) If you are not the owner of the real property, a letter from the Owner executed before a notary, that they are the owner of the property and authorize blasting activities on the property.

Letter from the Owner

- Refer to appendix 3.0 for the letter of blasting authorization from Hanson

3) Documentation and facts demonstrating that the Requestor's Blasting operation is going to be conducted in a manner that minimizes its related adverse impact on property value, other land use development, the economy, employment, property taxes and the public and communities who live and work adjacent to such land use. Please specifically list all steps taken, such as distance limitations related to adjacent properties, use of berms and any dust and noise remediation efforts, etc.

- The attached is being provided for the permit
- Lehigh Hanson Servtex will maintain the required distance off of the property line.
- Use of water trucks to water haul road to minimize dust.
- Built the berm between the quarry and Trophy Oaks for noise and dust control
- Monitor weather conditions to plan shots days and timing of when the shot is initiated.
- Attachment B — to Ordinance 34-082012

4) Documents and facts demonstrating efforts by designee to protect and mitigate the perceived negative adverse effects such activity has on real property values, public safety, health & welfare interests, including the quality of life within the City, neighboring properties and the public.

Refer to Attachment B — to Ordinance 34-082012

- Orica will continue to safely conduct blasting operations as it has in the past year, All efforts will be made to conduct all blast in a safe manner while meeting the strict guidelines of the Garden Ridge City Ordinance 34-082012

5) Payment of the appropriate application fee, including any related City fees for monitoring blasting for each permitted Partial Exemption Permit site.

If you require any additional information or have any comments or questions to this letter, please do not hesitate to contact me at the phone, e-mail or address set forth above.

Thank you for your time, and we look forward to working with the City of Garden Ridge on this matter.

Sincerely,

Craig Patterson

Danny Craig Patterson
Orica USA, Inc.
Territory Manager
US Mining Services
Southwest Region

In accordance with the provisions of Title XI, Organized Crime Control Act of 1970, and the regulations issued thereunder (27 CFR Part 555), you may engage in the activity specified in this license or permit within the limitations of Chapter 40, Title 18, United States Code and the regulations issued thereunder, until the expiration date shown. **THIS LICENSE IS NOT TRANSFERABLE UNDER 27 CFR 555.53.** See "WARNINGS" and "NOTICES" on reverse.

Direct ATF
Correspondence To
ATF - Chief, FELC
244 Needy Road
Martinsburg, WV 25405-9431

License/Permit
Number
5-TX-091-20-8L-12375

Chief, Federal Explosives Licensing Center (FELC)

Expiration
Date
November 1, 2018

Name
ORICA USA INC

Premises Address (Changes? Notify the FELC at least 10 days before the move.)

5844 FM 482
NEW BRAUNFELS, TX 78132

Type of License or Permit

20-MANUFACTURER OF EXPLOSIVES

Purchasing Certification Statement

The licensee or permittee named above shall use a copy of this license or permit to assist a transferor of explosives to verify the identity and the licensed status of the licensee or permittee as provided by 27 CFR Part 555. The signature on each copy must be an original signature. A faxed, scanned or e-mailed copy of the license or permit with a signature intended to be an original signature is acceptable. The signature must be that of the Federal Explosives Licensee (FEL) or a responsible person of the FEL. I certify that this is a true copy of a license or permit issued to the licensee or permittee named above to engage in the business or operations specified above under "Type of License or Permit."

Mailing Address (Changes? Notify the FELC of any changes.)

ORICA USA INC
33101 EAST QUINCY AVE ATTN: OLIVER RAMIREZ
WATKINS, CO 80137

Byron Lossett
License/Permittee Responsible Person Signature
Byron Lossett

South West Region District Lead

Position/Title

12/01/2015

Printed Name

Date

Previous Edition, if Obsolete: (FELC Form 5400-140-5400 (15 Pages) is obsolete. Use the current edition.)

ATF Form 5400-140-5400 (15 Pages)
Revised October 2011

Federal Explosives License (FEL) Customer Service Information

Federal Explosives Licensing Center (FELC)
244 Needy Road
Martinsburg, WV 25405-9431

Toll-free Telephone Number: (877) 283-3352
Fax Number: (304) 616-4401
E-mail: FELC@atf.gov

ATF Homepage: www.atf.gov

Change of Address (27 CFR 555.54(a)(1)). Licensees or permittees may during the term of their current license or permit remove their business or operations to a new location at which they intend regularly to carry on such business or operations. The licensee or permittee is required to give notification of the new location of the business or operations not less than 10 days prior to such removal with the Chief, Federal Explosives Licensing Center. The license or permit will be valid for the remainder of the term of the original license or permit. (The Chief, FELC, shall, if the licensee or permittee is not qualified, refer the request for amended license or permit to the Director of Industry Operations for denial in accordance with § 555.54.)

Right of Succession (27 CFR 555.59). (a) Certain persons other than the licensee or permittee may secure the right to carry on the same explosive materials business or operations at the same address shown on, and for the remainder of the term of, a current license or permit. Such persons are: (1) The surviving spouse or child, or executor, administrator, or other legal representative of a deceased licensee or permittee; and (2) A receiver or trustee in bankruptcy, or an assignee for benefit of creditors. (b) In order to secure the right provided by this section, the person or persons continuing the business or operations shall furnish the license or permit for that business or operations for endorsement of such succession to the Chief, FELC, within 30 days from the date on which the successor begins to carry on the business or operations.

Cut Here X

(Continued on reverse side)

Federal Explosives License/Permit (FEL) Information Card	
License/Permit Name: ORICA USA INC	
Business Name:	
License/Permit Number: 5-TX-091-20-8L-12375	
License/Permit Type: 20-MANUFACTURER OF EXPLOSIVES	
Expiration:	November 1, 2018
Please Note: Not Valid for the Sale or Other Disposition of Explosives.	

P E R M I T



CITY OF SAN ANTONIO FIRE PREVENTION DIVISION

1901 SOUTH ALAMO STREET
SAN ANTONIO, TEXAS 78204
(210) 207-8410 FAX: (210) 207-7949



PERMIT NO.	PERMIT TYPE	BUSINESS/ORGANIZATION	APPLICATION DATE	ISSUED DATE	EXPIRATION DATE
921953	EXPLOSIVES		08/10/2017	09/07/2011	8/10/2018
PERMIT HOLDER INFORMATION: ROBERT DARRAGH 137 SYDNEYS WAY BUDA					
ADDITIONAL PERMIT INFORMATION: BLASTERS PERMIT ROBERT HART DARRAGH JR ORICA					
BY VIRTUE OF THE PROVISIONS OF THE ADOPTED 2012 INTERNATIONAL FIRE CODE AND THE ORDINANCES CODIFIED IN THE CITY CODE OF SAN ANTONIO, TEXAS, THE ABOVE NAMED APPLICANT, AT THE ABOVE NAMED LOCATION, IS HEREBY GRANTED THIS PERMIT FOR: EXPLOSIVES BLASTER THIS PERMIT MUST BE KEPT POSTED ON THE PREMISES AT ALL TIMES AND IS ISSUED AND ACCEPTED ON CONDITION THAT ALL REGULATIONS NOW ADOPTED, OR MAY HEREAFTER BE ADOPTED, SHALL BE COMPLIED WITH. THIS PERMIT IS SUBJECT TO REVOCATION FOR ANY APPLICABLE FIRE CODE VIOLATION(S) AND DOES NOT TAKE THE PLACE OF ANY LICENSE REQUIRED BY LAW AND IS NOT TRANSFERABLE. THIS EXPLOSIVES BLASTER PERMIT IS UNASSIGNABLE AND NON-TRANSFERABLE AND NO PERSON SHALL OPERATE UNDER, OR HAVE THE BENEFIT OF, ANOTHER PERSON'S PERMIT.					

APPROVED BY: Jeff Garcia 283 DATE: 8/16/2017

PERMIT CONTRACTOR'S
COPY



CITY OF SAN ANTONIO
FIRE PREVENTION DIVISION

1901 SOUTH ALAMO STREET
SAN ANTONIO, TEXAS 78204
(210) 207-8410 FAX: (210) 207-7949

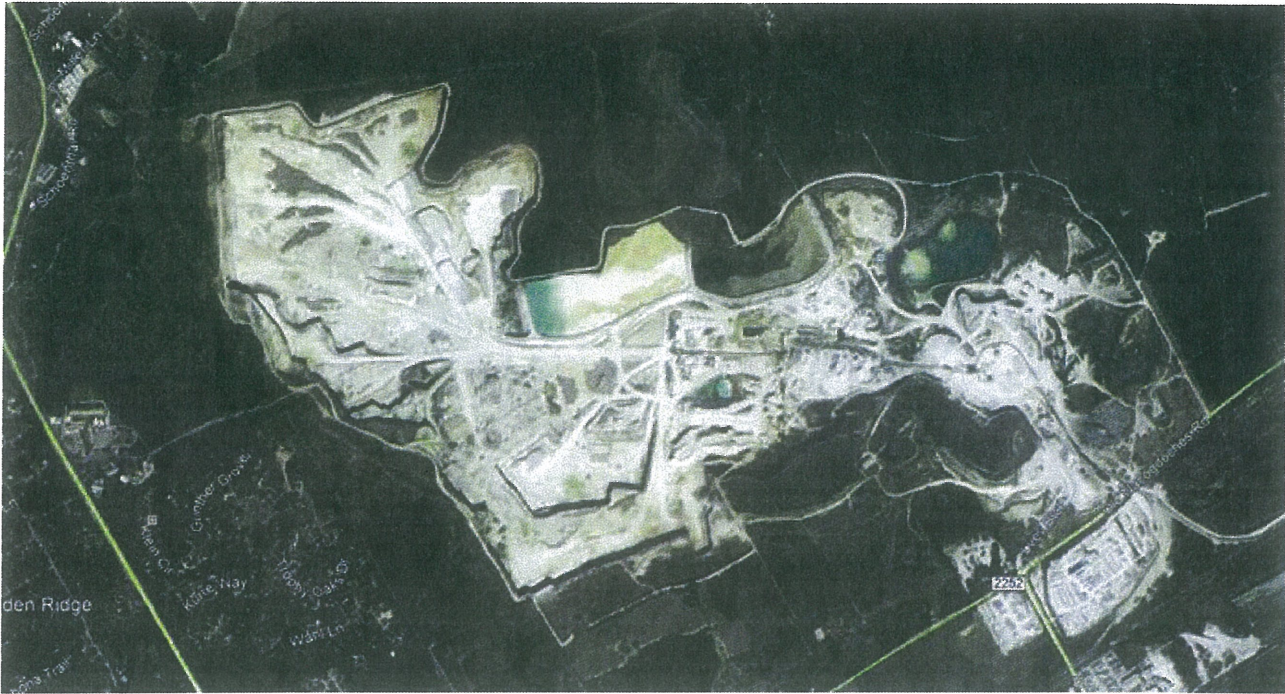


PERMIT NO.	PERMIT TYPE	BUSINESS/ORGANIZATION	APPLICATION DATE	ISSUED DATE	EXPIRATION DATE
929525	EXPLOSIVES		05/21/2018	06/06/2018	06/15/2019
PERMIT HOLDER INFORMATION: JEREMY LEMMONS 1232 EAST V DR CANYON LAKE (830)481-7046 x					
ADDITIONAL PERMIT INFORMATION:					
BY VIRTUE OF THE PROVISIONS OF THE ADOPTED 2015 INTERNATIONAL FIRE CODE AND THE ORDINANCES CODIFIED IN THE CITY CODE OF SAN ANTONIO, TEXAS, THE ABOVE NAMED APPLICANT, AT THE ABOVE NAMED LOCATION, IS HEREBY GRANTED THIS PERMIT FOR: EXPLOSIVES BLASTER THIS PERMIT MUST BE KEPT POSTED ON THE PREMISES AT ALL TIMES AND IS ISSUED AND ACCEPTED ON CONDITION THAT ALL REGULATIONS NOW ADOPTED, OR MAY HEREAFTER BE ADOPTED, SHALL BE COMPLIED WITH. THIS PERMIT IS SUBJECT TO REVOCATION FOR ANY APPLICABLE FIRE CODE VIOLATION(S) AND DOES NOT TAKE THE PLACE OF ANY LICENSE REQUIRED BY LAW AND IS NOT TRANSFERABLE. THIS EXPLOSIVES BLASTER PERMIT IS UNASSIGNABLE AND NON-TRANSFERABLE AND NO PERSON SHALL OPERATE UNDER, OR HAVE THE BENEFIT OF, ANOTHER PERSON'S PERMIT.					

APPROVED BY: GAZZA 283 DATE: 6/18/2018

Appendix 2.0

Quarry Map as of 06/05/2018



Appendix 3.0

Lehigh Hanson
HEIDELBERGCEMENT Group

Hanson Aggregates
Servtex Quarry

June 19, 2018

Nancy Cain
City Administrator
City of Garden Ridge
9500 Municipal Parkway
Garden Ridge, Texas, 78266-2600

RE: Orica's Application for a Partial Exemption Permit for Blasting in October 2018 through September 2019.

Nancy,

We have asked Orica to pursue obtaining a Partial Exemption Permit for Blasting within the City Limits of Garden Ridge per Ordinance 34 for the fiscal year of 2019. We will assist with any necessary documentation for the permit. If there is any questions or concerns, please contact me directly at Hal.Halamuda@LehighHanson.com or my office phone (210) 658-7461.

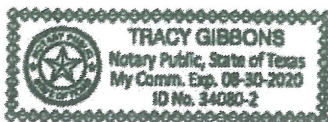
Best Regards



Hal Halamuda

CC: Craig Patterson, Orica Explosives, Donnie Ruddick, Orica Explosives

Sworn to and subscribed before me by Hal Halamuda, on this the 21st day of June, 2018.



Tracy Gibbons
Notary Public in and for
The State of Texas
My Commission expires: 8-30-2020

Appendix 4.0

ACORD		CERTIFICATE OF LIABILITY INSURANCE		DATE (MM/DD/YYYY) 09/11/2017															
THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER. IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).																			
PRODUCER Aon Risk Insurance Services West, Inc. Denver CO Office 1900 16th Street, Suite 1000 Denver CO 80202 USA			CONTACT NAME: PHONE (A/C, No. Ext.): (303) 758-7688 FAX (A/C, No.): (303) 758-9458 E-MAIL ADDRESS:																
INSURED Orica USA Inc 33101 E Quincy Avenue Watkins CO 80137 USA			INSURER(S) AFFORDING COVERAGE <table border="1"> <thead> <tr> <th>INSURER</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A: Zurich American Ins Co</td> <td>16535</td> </tr> <tr> <td>INSURER B: American Home Assurance Co.</td> <td>19380</td> </tr> <tr> <td>INSURER C:</td> <td></td> </tr> <tr> <td>INSURER D:</td> <td></td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </tbody> </table>			INSURER	NAIC #	INSURER A: Zurich American Ins Co	16535	INSURER B: American Home Assurance Co.	19380	INSURER C:		INSURER D:		INSURER E:		INSURER F:	
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INSURER E:																			
INSURER F:																			
COVERAGES CERTIFICATE NUMBER: 570068284492 REVISION NUMBER:																			
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. Limits shown are as requested																			
INSR LTR	TYPE OF INSURANCE	ADDN INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS												
A	☒ COMMERCIAL GENERAL LIABILITY ☒ CLAIMS-MADE ☐ OCCUR GENERAL AGGREGATE LIMIT APPLIES PER: ☒ POLICY ☐ PROL ☐ LOC OTHER:			GLC379285310	09/30/2017	09/30/2018	EACH OCCURRENCE \$5,000,000 DAMAGE TO RENTED PREMISES (Per occurrence) \$100,000 MED EXP (Any one person) \$5,000 PERSONAL & ADV INJURY \$5,000,000 GENERAL AGGREGATE \$5,000,000 PRODUCTS - COMPOPAGE \$5,000,000												
A	AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY ☒ MCS-90			BAP 3792838-10	09/30/2017	09/30/2018	COMBINED SINGLE LIMIT (Per accident) \$5,000,000 BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)												
	UMBRELLA LIAB ☐ OCCUR EXCESS LIAB ☐ CLAIMS-MADE DED ☐ RETENTION						EACH OCCURRENCE AGGREGATE												
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	14220468	09/30/2017	09/30/2018	☒ PER STATUTE E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE-BA EMPLOYEE \$1,000,000 E.L. DISEASE-POLICY LIMIT \$1,000,000												
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) Lehigh Hanson, Inc. is included as Additional Insured in accordance with the policy provisions of the General Liability and Automobile policies where required under written contract or agreement. General Liability policy evidenced herein is Primary and Non-Contributory to other insurance available to an Additional Insured, but only in accordance with the policy's provisions. A Waiver of Subrogation is granted in favor of Lehigh Hanson, Inc. in accordance with the policy provisions, by written contract.																			
CERTIFICATE HOLDER Lehigh Hanson, Inc. 300 E. John Carpenter Freeway Irving TX 75062 USA				CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE Aon Risk Insurance Services West, Inc.															

Holder Identifier :

Certificate No : 570068284492

ATTACHMENT B

TO ORDINANCE 34-082012

City of Garden Ridge, Texas

Request for Partial Exemption Permit to Conduct Blasting

Instruction Sheet

To be considered for a Partial Exemption Permit to conduct Blasting as defined in City of Garden Ridge, Texas Ordinance 34, please prepare a letter addressed to the attention of the City Administrator for the City of Garden Ridge, Texas, 9400 Municipal Parkway, Garden Ridge, Texas 78266.

In the letter, please include:

- 1) The name of the designee;
- 2) The name of the designee's representative for purposes of the application (if the designee is not a natural person);
- 3) Copies of any state or federal licenses and permits authorizing the Requestor to possess and use explosives.
- 4) Complete contact information, including name, address, phone number, facsimile number and e-mail address for the City's use in processing the application. The contact information provided shall be used for all communications in connection with the processing of the application and the operation;
- 5) A full description of the designee's legal and factual relationship to the property(ies) upon which the Blasting shall be conducted;
- 6) A detailed description of the operation to be conducted;
- 7) The period of time the anticipated use shall continue;
- 8) Any supplemental information requested and deemed pertinent by the City Administrator;
- 9) Any supplemental information the designee deems pertinent prior to City Council consideration;

Also, include with your letter, the attachments identified below:

- 1) Identifying all real property where the activity of Blasting shall be conducted by street address (if any) and legal description. Any property not listed will not be included in any permit, if authorized. If multiple properties are to be considered, and some are not within the City limits, but is within the City's extra-territorial jurisdictional limits, please include each property in the list but designate the property with the comment: "ETJ Property".
- 2) A plan view drawing completed under seal by a licensed professional surveyor or civil engineer to appropriate scale, showing all properties listed for inclusion into the Partial Exemption Permit for Blasting.
- 3) If you are not the owner of the real property, a letter from the Owner executed before a notary, that they are the owner of the property and authorize blasting activities on the property.
- 4) Documentation and facts demonstrating that the Requestor's Blasting operation is going to be conducted in a manner that minimizes its related adverse impact on property value, other land use development, the economy, employment, property taxes and the public and communities who live and work adjacent to such land use. Please specifically list all steps taken, such as distance limitations related to adjacent properties, use of berms and any dust and noise remediation efforts, etc.
- 5) Documents and facts demonstrating efforts by designee to protect and mitigate the perceived negative adverse affects such activity has on real property values, public safety, health & welfare interests, including the quality of life within the City, neighboring properties and the public.
- 6) Payment of the appropriate application fee, including any related City fees for monitoring blasting for each permitted Partial Exemption Permit site.

All applications for Partial Exemption Permits to conduct Blasting activities shall be submitted for review at the next regularly scheduled Quarry Commission meeting if received 14 days prior to the date of the meeting. The Commission shall determine whether the request is complete. If incomplete, the City shall inform the designee what aspects of the application are insufficient and will provide the designee seven (7) business days to supplement and/or modify the application to permit it to be placed for City Council consideration as a completed application.

If the application meets all criteria provided by the ordinance as determined by the Commission, or by subsequent supplementation as provided in the determination of the Chair of the Commission, the permit request shall be scheduled for City Council action as provided below for complete applications. Any application considered incomplete shall not be considered for approval by City Council. Any application that remains incomplete for a period of more than 60 days shall be considered withdrawn.

If the request is found complete, the City Administrator shall place the matter on the next regular City Council meeting agenda for action (but may include it on an agenda for a specially called meeting at her discretion). If the City Council approves the permit, the City Administrator shall issue a Partial Exemption Permit to the Requestor, which is not transferable or assignable and is revocable if the permit holder is found to repeatedly violate the blasting regulations under the ordinance or fail to pay any related fees.



VibraTechinc.com

June 4, 2018

Mr. Mike Shands
Garden Ridge Quarry Commission
9400 Municipal Parkway
Garden Ridge, Texas 78266

4818 E. Ben White Blvd.
Suite 202
Austin, TX 78741

Phone 512.442.6464
Fax 512.442.6552

Dear Mr. Shands,

Enclosed is the analysis for the blasting conducted during the month of May 2018 at the Hanson Aggregates Quarry in Garden Ridge, Texas. Please place this information in your 2018 Blast Data Management Book.

At the request of the Garden Ridge Quarry Commission, Vibra-Tech, Inc. personnel used seismographs each day of blasting at various locations.

The attached report contains the original seismograph records obtained from the blasting along with a comparison of the recorded vibrations to the latest recommended U.S. Bureau of Mines (USBM) Variable Particle Velocity vs. Frequency Limits Report of Investigations (RI)-8507 (Nov. 1980).

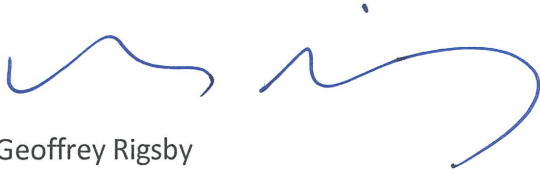
The recorded ground vibrations **satisfy** the Variable Particle Velocity vs. Frequency Limits recommended by the USBM RI-8507 (Nov. 1980), and the levels set forth in Garden Ridge City Ordinance 34.

The recorded air-borne effects **satisfy** the recommended levels set forth in the USBM RI-8485 (Nov. 1980), and the levels set forth in Garden Ridge City Ordinance 34.

If there are any additional questions, please contact the Quarry Commission, Mike Shands at (210) 257-0868, or attend the Quarry Commission meeting held every other month (odd months) at 6:00 PM.

Respectfully submitted,

VIBRA-TECH, INC.



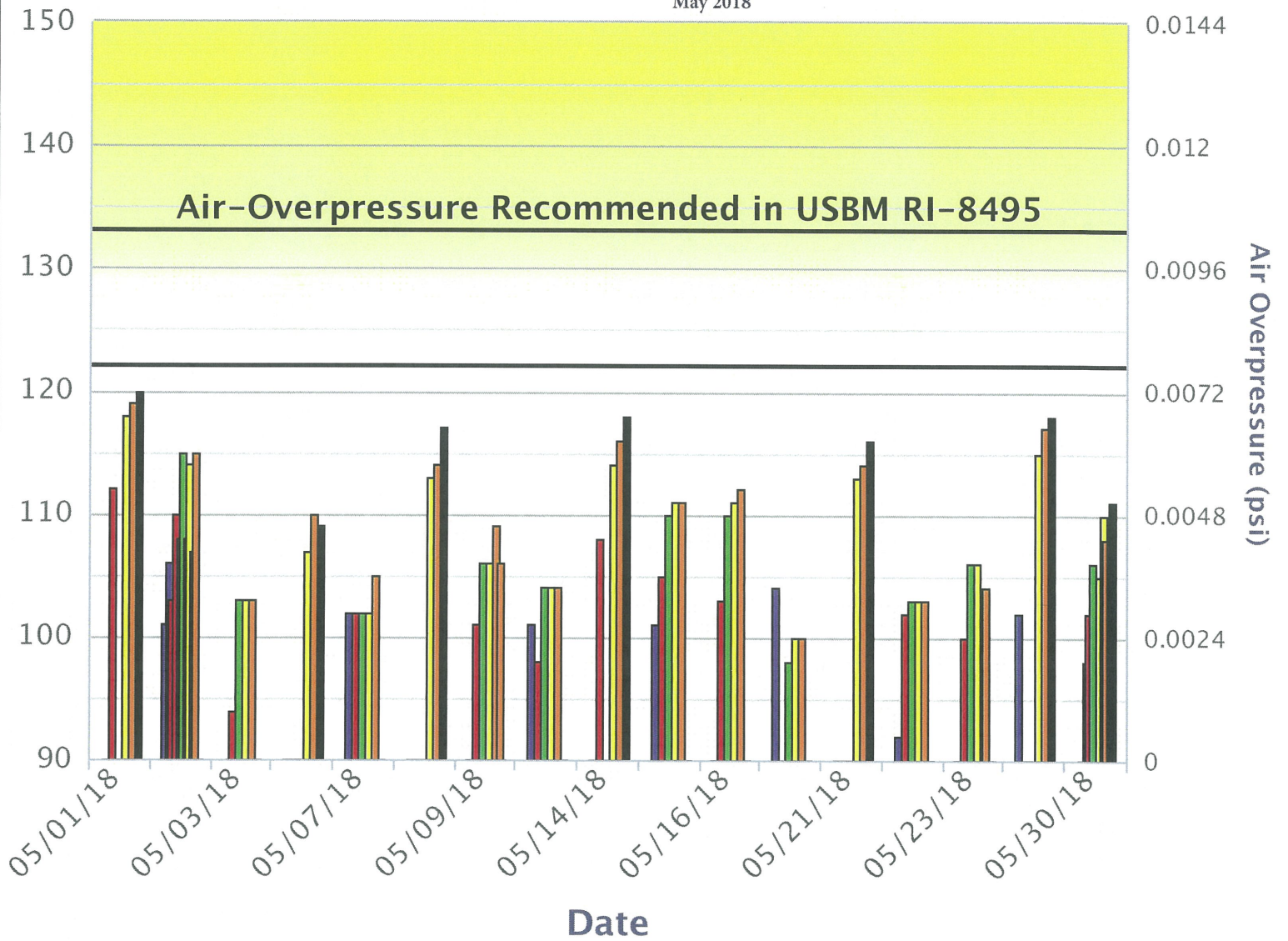
Geoffrey Rigsby
Regional Manager

cc: Hal Halamuda, Hanson – Servtex



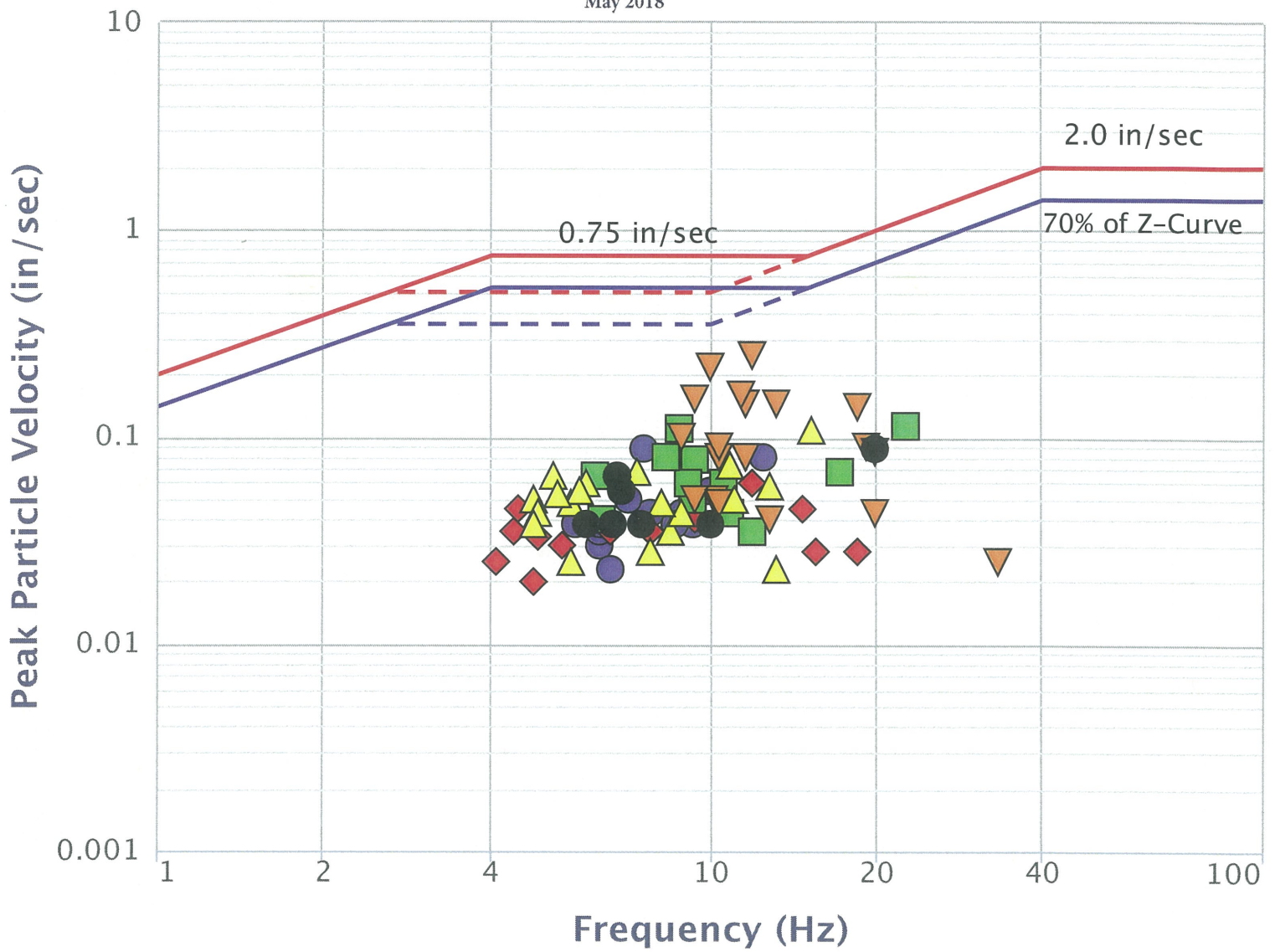
Garden Ridge Quarry Commission
Garden Ridge, Texas
AO Graph
May 2018

Air-Overpressure Recommended in USBM RI-8495



Michels Residence City Property Line Warden Property Line Johnson Residence
Warden Residence Holly Residence

Garden Ridge Quarry Commission
Garden Ridge, Texas
USBM Graph
May 2018



GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
MAY 2018

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
05/01/18	05/01/2018 Base Pit S. Wall B	N 29° 38' 14.5" W 098° 16' 57.4"	PARTLY CLOUDY 82° SE 8	13:50	0.035	4.4	112.0	876	799.00	5,050	City Property Line
05/01/18	05/01/2018 Base Pit S. Wall B	N 29° 38' 14.5" W 098° 16' 57.4"	PARTLY CLOUDY 82° SE 8	13:50	0.088	20.0	120.0	876	799.00	2,551	Holly - 9916 Trophy Oaks
05/01/18	05/01/2018 Base Pit S. Wall B	N 29° 38' 14.5" W 098° 16' 57.4"	PARTLY CLOUDY 82° SE 8	13:50	0.050	4.8	118.0	876	799.00	4,030	Johnson Residence
05/01/18	05/01/2018 Base Pit S. Wall B	N 29° 38' 14.5" W 098° 16' 57.4"	PARTLY CLOUDY 82° SE 8	13:50	NT	NT	NT	876	799.00	8,175	Michels - 9118 Tuscan Hills
05/01/18	05/01/2018 Base Pit S. Wall B	N 29° 38' 14.5" W 098° 16' 57.4"	PARTLY CLOUDY 82° SE 8	13:50	0.090	19.2	119.0	876	799.00	3,850	Warden - 21375 Gunther Grove
05/02/18	05/02/2018 Lower 6 North East	N 29° 38' 58.0" W 098° 17' 3.5"	PARTLY CLOUDY 82° SE 10	16:12	0.020	4.8	110.0	1196	599.00	5,710	City Property Line
05/02/18	05/02/2018 Lower 6 North East	N 29° 38' 58.0" W 098° 17' 3.5"	PARTLY CLOUDY 82° SE 10	16:12	0.035	8.5	114.0	1196	599.00	4,953	Johnson Residence
05/02/18	05/02/2018 Lower 6 North East	N 29° 38' 58.0" W 098° 17' 3.5"	PARTLY CLOUDY 82° SE 10	16:12	0.038	9.3	106.0	1196	599.00	6,709	Michels - 9118 Tuscan Hills
05/02/18	05/02/2018 Lower 6 North East	N 29° 38' 58.0" W 098° 17' 3.5"	PARTLY CLOUDY 82° SE 10	16:12	0.080	11.6	115.0	1196	599.00	4,787	Warden - 21375 Gunther Grove
05/02/18	05/02/2018 Lower 6 North East	N 29° 38' 58.0" W 098° 17' 3.5"	PARTLY CLOUDY 82° SE 10	16:12	0.040	6.4	115.0	1196	599.00	4,565	Warden Property Line
05/02/18	05/02/2018 3E	N 29° 38' 52.6" W 098° 17' 44.7"	PARTLY CLOUDY 82° SE 10	16:22	0.028	18.5	103.0	684	142.00	3,145	City Property Line
05/02/18	05/02/2018 3E	N 29° 38' 52.6" W 098° 17' 44.7"	PARTLY CLOUDY 82° SE 10	16:22	0.050	11.1	108.0	684	142.00	3,053	Johnson Residence
05/02/18	05/02/2018 3E	N 29° 38' 52.6" W 098° 17' 44.7"	PARTLY CLOUDY 82° SE 10	16:22	0.043	8.9	101.0	684	142.00	3,056	Michels - 9118 Tuscan Hills
05/02/18	05/02/2018 3E	N 29° 38' 52.6" W 098° 17' 44.7"	PARTLY CLOUDY 82° SE 10	16:22	0.145	13.2	107.0	684	142.00	3,028	Warden - 21375 Gunther Grove
05/02/18	05/02/2018 3E	N 29° 38' 52.6" W 098° 17' 44.7"	PARTLY CLOUDY 82° SE 10	16:22	0.068	17.2	108.0	684	142.00	2,833	Warden Property Line

T = No Trigger, <0.020ips.
T = No Trigger, <122dB

GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
MAY 2018

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
05/03/18	05/03/2018 Lower 6 West Wall C	N 29° 38' 53.8" W 098° 17' 12.4"	MOSTLY CLOUDY 78° S 9	12:24	0.033	4.9	94.0	909	563.00	4,835	City Property Line
05/03/18	05/03/2018 Lower 6 West Wall C	N 29° 38' 53.8" W 098° 17' 12.4"	MOSTLY CLOUDY 78° S 9	12:24	0.065	5.2	103.0	909	563.00	4,114	Johnson Residence
05/03/18	05/03/2018 Lower 6 West Wall C	N 29° 38' 53.8" W 098° 17' 12.4"	MOSTLY CLOUDY 78° S 9	12:24	0.030	6.3	90.0	909	563.00	5,903	Michels - 9118 Tuscan Hills
05/03/18	05/03/2018 Lower 6 West Wall C	N 29° 38' 53.8" W 098° 17' 12.4"	MOSTLY CLOUDY 78° S 9	12:24	0.100	8.9	103.0	909	563.00	3,956	Warden - 21375 Gunther Grove
05/03/18	05/03/2018 Lower 6 West Wall C	N 29° 38' 53.8" W 098° 17' 12.4"	MOSTLY CLOUDY 78° S 9	12:24	0.065	6.2	103.0	909	563.00	3,729	Warden Property Line
05/04/18	05/04/2018 S. Wall C	N 29° 38' 9.4" W 098° 16' 42.7"	RAINY 75° S 7	9:29	NT	NT	NT	624	887.00	6,419	City Property Line
05/04/18	05/04/2018 S. Wall C	N 29° 38' 9.4" W 098° 16' 42.7"	RAINY 75° S 7	9:29	0.038	10.0	109.0	624	887.00	3,888	Holly - 9916 Trophy Oaks
05/04/18	05/04/2018 S. Wall C	N 29° 38' 9.4" W 098° 16' 42.7"	RAINY 75° S 7	9:29	0.023	13.2	107.0	624	887.00	5,408	Johnson Residence
05/04/18	05/04/2018 S. Wall C	N 29° 38' 9.4" W 098° 16' 42.7"	RAINY 75° S 7	9:29	NT	NT	NT	624	887.00	9,562	Michels - 9118 Tuscan Hills
05/04/18	05/04/2018 S. Wall C	N 29° 38' 9.4" W 098° 16' 42.7"	RAINY 75° S 7	9:29	0.040	12.8	110.0	624	887.00	5,232	Warden - 21375 Gunther Grove
05/07/18	05/07/2018 3D	N 29° 38' 50.4" W 098° 17' 44.4"	PARTLY CLOUDY 80° S 6	16:05	0.045	14.7	102.0	572	223.00	2,938	City Property Line
05/07/18	05/07/2018 3D	N 29° 38' 50.4" W 098° 17' 44.4"	PARTLY CLOUDY 80° S 6	16:05	0.073	10.9	102.0	572	223.00	2,829	Johnson Residence
05/07/18	05/07/2018 3D	N 29° 38' 50.4" W 098° 17' 44.4"	PARTLY CLOUDY 80° S 6	16:05	0.055	10.0	102.0	572	223.00	3,088	Michels - 9118 Tuscan Hills
05/07/18	05/07/2018 3D	N 29° 38' 50.4" W 098° 17' 44.4"	PARTLY CLOUDY 80° S 6	16:05	0.140	18.5	105.0	572	223.00	2,804	Warden - 21375 Gunther Grove
05/07/18	05/07/2018 3D	N 29° 38' 50.4" W 098° 17' 44.4"	PARTLY CLOUDY 80° S 6	16:05	0.113	22.7	102.0	572	223.00	2,609	Warden Property Line

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GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
MAY 2018

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
05/08/18	05/08/2018 S. Wall D	N 29° 38' 9.7" W 098° 16' 44.2"	* 78° S 8	14:41	NT	NT	NT	792	857.00	6,283	City Property Line
05/08/18	05/08/2018 S. Wall D	N 29° 38' 9.7" W 098° 16' 44.2"	* 78° S 8	14:41	0.038	6.7	117.0	792	857.00	3,753	Holly - 9916 Trophy Oaks
05/08/18	05/08/2018 S. Wall D	N 29° 38' 9.7" W 098° 16' 44.2"	* 78° S 8	14:41	0.025	5.6	113.0	792	857.00	5,273	Johnson Residence
05/08/18	05/08/2018 S. Wall D	N 29° 38' 9.7" W 098° 16' 44.2"	* 78° S 8	14:41	NT	NT	NT	792	857.00	9,431	Michels - 9118 Tuscan Hills
05/08/18	05/08/2018 S. Wall D	N 29° 38' 9.7" W 098° 16' 44.2"	* 78° S 8	14:41	0.043	20.0	114.0	792	857.00	5,096	Warden - 21375 Gunther Grove
05/09/18	05/09/2018 Lower 6 West Wall B	N 29° 38' 49.4" W 098° 17' 11.6"	PARTLY CLOUDY 80° S 9	12:15	0.035	7.8	101.0	892	543.00	4,614	City Property Line
05/09/18	05/09/2018 Lower 6 West Wall B	N 29° 38' 49.4" W 098° 17' 11.6"	PARTLY CLOUDY 80° S 9	12:15	0.060	6.0	106.0	892	543.00	3,830	Johnson Residence
05/09/18	05/09/2018 Lower 6 West Wall B	N 29° 38' 49.4" W 098° 17' 11.6"	PARTLY CLOUDY 80° S 9	12:15	0.035	6.3	86.0	892	543.00	5,978	Michels - 9118 Tuscan Hills
05/09/18	05/09/2018 Lower 6 West Wall B	N 29° 38' 49.4" W 098° 17' 11.6"	PARTLY CLOUDY 80° S 9	12:15	0.153	9.4	106.0	892	543.00	3,662	Warden - 21375 Gunther Grove
05/09/18	05/09/2018 Lower 6 West Wall B	N 29° 38' 49.4" W 098° 17' 11.6"	PARTLY CLOUDY 80° S 9	12:15	0.078	9.4	106.0	892	543.00	3,442	Warden Property Line
05/09/18	05/09/2018 Upper S. Wall I	N 29° 38' 3.9" W 098° 16' 59.5"	PARTLY CLOUDY 80° S 9	16:09	NT	NT	NT	692	48.00	5,159	City Property Line
05/09/18	05/09/2018 Upper S. Wall I	N 29° 38' 3.9" W 098° 16' 59.5"	PARTLY CLOUDY 80° S 9	16:09	NT	NT	NT	692	48.00	2,622	Holly - 9916 Trophy Oaks
05/09/18	05/09/2018 Upper S. Wall I	N 29° 38' 3.9" W 098° 16' 59.5"	PARTLY CLOUDY 80° S 9	16:09	NT	NT	NT	692	48.00	4,210	Johnson Residence
05/09/18	05/09/2018 Upper S. Wall I	N 29° 38' 3.9" W 098° 16' 59.5"	PARTLY CLOUDY 80° S 9	16:09	NT	NT	NT	692	48.00	8,578	Michels - 9118 Tuscan Hills
05/09/18	05/09/2018 Upper S. Wall I	N 29° 38' 3.9" W 098° 16' 59.5"	PARTLY CLOUDY 80° S 9	16:09	0.025	33.3	109.0	692	48.00	4,058	Warden - 21375 Gunther Grove

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= Information not provided

GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
MAY 2018

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
05/11/18	05/11/2018 3C	N 29° 38' 43.0" W 098° 17' 44.7"	PARTLY CLOUDY 80° S 12	12:20	0.060	11.9	98.0	916	211.00	2,220	City Property Line
05/11/18	05/11/2018 3C	N 29° 38' 43.0" W 098° 17' 44.7"	PARTLY CLOUDY 80° S 12	12:20	0.108	15.2	104.0	916	211.00	2,084	Johnson Residence
05/11/18	05/11/2018 3C	N 29° 38' 43.0" W 098° 17' 44.7"	PARTLY CLOUDY 80° S 12	12:20	0.088	7.6	101.0	916	211.00	3,198	Michels - 9118 Tuscan Hills
05/11/18	05/11/2018 3C	N 29° 38' 43.0" W 098° 17' 44.7"	PARTLY CLOUDY 80° S 12	12:20	0.248	11.9	104.0	916	211.00	2,069	Warden - 21375 Gunther Grove
05/11/18	05/11/2018 3C	N 29° 38' 43.0" W 098° 17' 44.7"	PARTLY CLOUDY 80° S 12	12:20	0.110	8.8	104.0	916	211.00	1,884	Warden Property Line
05/14/18	05/14/2018 Base Pit S. Wall A	N 29° 38' 14.2" W 098° 16' 57.7"	SUNNY 80° S 8	12:15	0.025	4.1	108.0	654	752.00	5,029	City Property Line
05/14/18	05/14/2018 Base Pit S. Wall A	N 29° 38' 14.2" W 098° 16' 57.7"	SUNNY 80° S 8	12:15	0.055	6.9	118.0	654	752.00	2,526	Holly - 9916 Trophy Oaks
05/14/18	05/14/2018 Base Pit S. Wall A	N 29° 38' 14.2" W 098° 16' 57.7"	SUNNY 80° S 8	12:15	0.043	4.9	114.0	654	752.00	4,011	Johnson Residence
05/14/18	05/14/2018 Base Pit S. Wall A	N 29° 38' 14.2" W 098° 16' 57.7"	SUNNY 80° S 8	12:15	NT	NT	NT	654	752.00	8,166	Michels - 9118 Tuscan Hills
05/14/18	05/14/2018 Base Pit S. Wall A	N 29° 38' 14.2" W 098° 16' 57.7"	SUNNY 80° S 8	12:15	0.055	6.8	116.0	654	752.00	3,831	Warden - 21375 Gunther Grove
05/15/18	05/15/2018 Lower 6 North	N 29° 38' 58.0" W 098° 17' 4.9"	SUNNY 80° S 8	14:11	0.035	6.6	105.0	1130	625.00	5,615	City Property Line
05/15/18	05/15/2018 Lower 6 North	N 29° 38' 58.0" W 098° 17' 4.9"	SUNNY 80° S 8	14:11	0.058	12.8	111.0	1130	625.00	4,869	Johnson Residence
05/15/18	05/15/2018 Lower 6 North	N 29° 38' 58.0" W 098° 17' 4.9"	SUNNY 80° S 8	14:11	0.038	6.3	101.0	1130	625.00	6,587	Michels - 9118 Tuscan Hills
05/15/18	05/15/2018 Lower 6 North	N 29° 38' 58.0" W 098° 17' 4.9"	SUNNY 80° S 8	14:11	0.080	10.4	111.0	1130	625.00	4,705	Warden - 21375 Gunther Grove
05/15/18	05/15/2018 Lower 6 North	N 29° 38' 58.0" W 098° 17' 4.9"	SUNNY 80° S 8	14:11	0.043	10.9	110.0	1130	625.00	4,481	Warden Property Line

IT = No Trigger, <0.020ips.

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GARDEN RIDGE QUARRY COMMISSION
HANSON - SERVTEX QUARRY
GARDEN RIDGE, TEXAS
MAY 2018

DATE	SHOT # LOCATION	SHOT LOCATION GPS READING	WEATHER	TIME	PPV (in/sec)	FREQ (Hz)	AIR (dB)	SHOT DURATION (MS)	MAX LBS/ DELAY	DISTANCE FROM BLAST	SEISMOGRAPH LOCATION
05/16/18	05/16/2018 3D	N 29° 38' 48.2" W 098° 17' 44.8"	SUNNY 90° S 9	14:22	0.040	9.4	103.0	904	234.00	2,714	City Property Line
05/16/18	05/16/2018 3D	N 29° 38' 48.2" W 098° 17' 44.8"	SUNNY 90° S 9	14:22	0.068	7.4	111.0	904	234.00	2,609	Johnson Residence
05/16/18	05/16/2018 3D	N 29° 38' 48.2" W 098° 17' 44.8"	SUNNY 90° S 9	14:22	0.038	5.7	86.0	904	234.00	3,075	Michels - 9118 Tuscan Hills
05/16/18	05/16/2018 3D	N 29° 38' 48.2" W 098° 17' 44.8"	SUNNY 90° S 9	14:22	0.145	11.6	112.0	904	234.00	2,588	Warden - 21375 Gunther Grove
05/16/18	05/16/2018 3D	N 29° 38' 48.2" W 098° 17' 44.8"	SUNNY 90° S 9	14:22	0.060	10.6	110.0	904	234.00	7,398	Warden Property Line
05/18/18	05/18/2018 3F	N 29° 38' 52.1" W 098° 17' 44.9"	* 90° S 10	12:52	NT	NT	NT	996	131.00	3,091	City Property Line
05/18/18	05/18/2018 3F	N 29° 38' 52.1" W 098° 17' 44.9"	* 90° S 10	12:52	0.028	7.8	100.0	996	131.00	3,004	Johnson Residence
05/18/18	05/18/2018 3F	N 29° 38' 52.1" W 098° 17' 44.9"	* 90° S 10	12:52	0.038	8.6	104.0	996	131.00	3,038	Michels - 9118 Tuscan Hills
05/18/18	05/18/2018 3F	N 29° 38' 52.1" W 098° 17' 44.9"	* 90° S 10	12:52	0.050	10.2	100.0	996	131.00	2,980	Warden - 21375 Gunther Grove
05/18/18	05/18/2018 3F	N 29° 38' 52.1" W 098° 17' 44.9"	* 90° S 10	12:52	0.035	11.9	98.0	996	131.00	2,787	Warden Property Line
05/21/18	05/21/2018 S. Wall E	N 29° 38' 8.8" W 098° 16' 46.6"	PARTLY CLOUDY 90° S 6	12:39	NT	NT	NT	824	980.00	6,097	City Property Line
05/21/18	05/21/2018 S. Wall E	N 29° 38' 8.8" W 098° 16' 46.6"	PARTLY CLOUDY 90° S 6	12:39	0.038	6.0	116.0	824	980.00	3,559	Holly - 9916 Trophy Oaks
05/21/18	05/21/2018 S. Wall E	N 29° 38' 8.8" W 098° 16' 46.6"	PARTLY CLOUDY 90° S 6	12:39	0.048	5.6	113.0	824	980.00	5,092	Johnson Residence
05/21/18	05/21/2018 S. Wall E	N 29° 38' 8.8" W 098° 16' 46.6"	PARTLY CLOUDY 90° S 6	12:39	NT	NT	NT	824	980.00	9,286	Michels - 9118 Tuscan Hills
05/21/18	05/21/2018 S. Wall E	N 29° 38' 8.8" W 098° 16' 46.6"	PARTLY CLOUDY 90° S 6	12:39	0.050	9.4	114.0	824	980.00	4,919	Warden - 21375 Gunther Grove

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05/22/18	05/22/2018 3G	N 29° 38' 54.3" W 098° 17' 45.1"	SUNNY 89° S 6	12:12	0.028	15.6	102.0	1256	156.00	3,303	City Property Line
05/22/18	05/22/2018 3G	N 29° 38' 54.3" W 098° 17' 45.1"	SUNNY 89° S 6	12:12	0.043	8.9	103.0	1256	156.00	3,277	Johnson Residence
05/22/18	05/22/2018 3G	N 29° 38' 54.3" W 098° 17' 45.1"	SUNNY 89° S 6	12:12	0.080	12.5	92.0	1256	156.00	3,028	Michels - 9118 Tuscan Hills
05/22/18	05/22/2018 3G	N 29° 38' 54.3" W 098° 17' 45.1"	SUNNY 89° S 6	12:12	0.160	11.4	103.0	1256	156.00	3,703	Warden - 21375 Gunther Grove
05/22/18	05/22/2018 3G	N 29° 38' 54.3" W 098° 17' 45.1"	SUNNY 89° S 6	12:12	0.050	9.3	103.0	1256	156.00	3,009	Warden Property Line
05/23/18	05/23/2018 Lower 6 West Wall C	N 29° 38' 50.4" W 098° 17' 11.8"	* 85° S 6	11:42	0.030	5.4	100.0	1075	562.00	4,660	City Property Line
05/23/18	05/23/2018 Lower 6 West Wall C	N 29° 38' 50.4" W 098° 17' 11.8"	* 85° S 6	11:42	0.055	5.8	106.0	1075	562.00	3,891	Johnson Residence
05/23/18	05/23/2018 Lower 6 West Wall C	N 29° 38' 50.4" W 098° 17' 11.8"	* 85° S 6	11:42	0.043	7.8	89.0	1075	562.00	5,957	Michels - 9118 Tuscan Hills
05/23/18	05/23/2018 Lower 6 West Wall C	N 29° 38' 50.4" W 098° 17' 11.8"	* 85° S 6	11:42	0.090	10.4	104.0	1075	562.00	3,725	Warden - 21375 Gunther Grove
05/23/18	05/23/2018 Lower 6 West Wall C	N 29° 38' 50.4" W 098° 17' 11.8"	* 85° S 6	11:42	0.060	9.1	106.0	1075	562.00	3,503	Warden Property Line
05/29/18	05/29/2018 S. Wall F	N 29° 38' 8.1" W 098° 16' 49.3"	SUNNY 87° S 9	11:35	NT	NT	NT	693	940.00	5,883	City Property Line
05/29/18	05/29/2018 S. Wall F	N 29° 38' 8.1" W 098° 16' 49.3"	SUNNY 87° S 9	11:35	0.038	7.5	118.0	693	940.00	3,340	Holly - 9916 Trophy Oaks
05/29/18	05/29/2018 S. Wall F	N 29° 38' 8.1" W 098° 16' 49.3"	SUNNY 87° S 9	11:35	0.038	4.8	115.0	693	940.00	4,885	Johnson Residence
05/29/18	05/29/2018 S. Wall F	N 29° 38' 8.1" W 098° 16' 49.3"	SUNNY 87° S 9	11:35	0.023	6.6	102.0	693	940.00	9,112	Michels - 9118 Tuscan Hills
05/29/18	05/29/2018 S. Wall F	N 29° 38' 8.1" W 098° 16' 49.3"	SUNNY 87° S 9	11:35	0.048	10.4	117.0	693	940.00	4,714	Warden - 21375 Gunther Grove

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05/30/18	05/30/2018 Base Pit S. Wall D	N 29° 38' 18.1" W 098° 16' 49.8"	PARTLY CLOUDY 90° S 9	13:06	0.045	4.5	102.0	832	612.00	5,671	City Property Line
05/30/18	05/30/2018 Base Pit S. Wall D	N 29° 38' 18.1" W 098° 16' 49.8"	PARTLY CLOUDY 90° S 9	13:06	0.065	6.8	111.0	832	612.00	3,235	Holly - 9916 Trophy Oaks
05/30/18	05/30/2018 Base Pit S. Wall D	N 29° 38' 18.1" W 098° 16' 49.8"	PARTLY CLOUDY 90° S 9	13:06	0.053	5.3	110.0	832	612.00	4,638	Johnson Residence
05/30/18	05/30/2018 Base Pit S. Wall D	N 29° 38' 18.1" W 098° 16' 49.8"	PARTLY CLOUDY 90° S 9	13:06	NT	NT	NT	832	612.00	8,619	Michels - 9118 Tuscan Hills
05/30/18	05/30/2018 Base Pit S. Wall D	N 29° 38' 18.1" W 098° 16' 49.8"	PARTLY CLOUDY 90° S 9	13:06	0.085	20.0	110.0	832	612.00	4,449	Warden - 21375 Gunther Grove
05/30/18	05/30/2018 Lower 6 West Wall B	N 29° 38' 47.3" W 098° 17' 10.8"	PARTLY CLOUDY 90° S 9	13:10	0.030	5.4	98.0	876	534.00	4,550	City Property Line
05/30/18	05/30/2018 Lower 6 West Wall B	N 29° 38' 47.3" W 098° 17' 10.8"	PARTLY CLOUDY 90° S 9	13:10	0.048	8.2	105.0	876	534.00	3,734	Johnson Residence
05/30/18	05/30/2018 Lower 6 West Wall B	N 29° 38' 47.3" W 098° 17' 10.8"	PARTLY CLOUDY 90° S 9	13:10	0.050	7.1	90.0	876	534.00	6,063	Michels - 9118 Tuscan Hills
05/30/18	05/30/2018 Lower 6 West Wall B	N 29° 38' 47.3" W 098° 17' 10.8"	PARTLY CLOUDY 90° S 9	13:10	0.218	10.0	108.0	876	534.00	3,561	Warden - 21375 Gunther Grove
05/30/18	05/30/2018 Lower 6 West Wall B	N 29° 38' 47.3" W 098° 17' 10.8"	PARTLY CLOUDY 90° S 9	13:10	0.080	8.3	106.0	876	534.00	3,345	Warden Property Line

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