TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 13, 2006

Mr. Jack Dean
Bluegreen Southwest
PO Box 896
Wimberly, Texas 78676

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Havenwood at Hunter's Crossing; Located on the northwest side of FM 1102, approximately 1.3 miles north of the intersection of FM 1102 and Hoffman Lane; Comal County, Texas
TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer; Edwards Aquifer Protection Program ID No. 2408.00, Investigation No. 432792, Regulated Entity No. 432792

Dear Mr. Dean:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the WPAP application for the referenced project submitted to the San Antonio Regional Office by Pro-Tech Engineering Group, Inc. on behalf of Bluegreen Southwest One, L.P. on September 7, 2005. Final review of the WPAP submittal was completed after additional material was received on January 24, 2006, January 26, 2006, and January 30, 2006. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer protection plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed project will have an area of approximately 974.31 acres. It will include 665 single family residential lots. Each lot will be a minimum of 1.01 acres. The impervious cover will be 117.43 acres (12.0 percent). According to a letter dated, August 19, 2005, signed by Thomas H. Hornseth, P.E., with Comal County, the site in the development is acceptable for the use of on-site sewage facilities. Approximately 818.5 acres will be located on the Recharge Zone and approximately 155.5 acres will be located on the Transition Zone.

PERMANENT POLLUTION ABATEMENT MEASURES

Since this single-family residential project will not have more than 20 percent impervious cover, an exemption from permanent BMPs is approved. The applicant requested a waiver of the requirement for other permanent BMPs because the site will have less than 20 percent impervious cover. Based upon the TCEQ's review of the proposed activities, the geologic assessment, and the site conditions, the required waiver is hereby granted.

GEOLOGY

According to the geologic assessment included with the application, there are ten geologic features, and eight manmade features located on the project site. All features were assessed as not sensitive. The San Antonio Regional Office did not conduct a site investigation.

SPECIAL CONDITIONS

If the impervious cover ever increases above 20 percent or the land use changes, the exemption for the whole site may no longer apply and the property owner must notify the Sam Antonio Regional Office of these changes.

Intentional discharges of sediment laden stormwater during construction are not allowed. If dewatering of excavated areas becomes necessary, the discharge will be filtered through appropriately selected temporary best management practices. These may include vegetative filter strips, sediment traps, rock berms, silt fence rings, etc.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

Prior to Commencement of Construction:

2. Within 60 days of receiving written approval of an Edwards Aquifer protection plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.

3. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.

4. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of

appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

5. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.

6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

7. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

<u>During Construction:</u>

8. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

9. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

10. One well exists on the site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

11. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

12. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

13. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

<u>After Completion of Construction:</u>

14. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

17. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4024.

Sincerely,

Glenn Shankle
Executive Director
Texas Commission on Environmental Quality

GS/JKM/eg

Enclosures: Deed Recordation Affidavit, TCEQ-0625
Change in Responsibility for Maintenance on Permanent BMPs, TCEQ-10263

cc: Mr. Kelly Kilber, P.E., Pro-Tech Engineering Group
Mr. Michael Short, City of New Braunfels
Mr. Tom Hornseth, Comal County
Mr. Robert J. Potts, Edwards Aquifer Authority
TCEQ Central Records

240800

100 E. San Antonio St. Suite 100
San Marcos, TX 78666-5568

512 / 353-3335
FAX 512 / 396-0224

PRO-TECH
ENGINEERING
GROUP
INCORPORATED

February 16, 2006

Texas Commission on Environmental Quality
Region 13 – San Antonio
14250 Judson Road
San Antonio, TX 78233-4480

Attn: John Mauser

Re: Havenwood at Hunters Crossing
Comal County, Texas
Water Pollution Abatement Plan
Regulated Entity No. 432792

Mr. Mauser,

Please let this letter serve as written notification of intent to commence construction of the above referenced project. Construction at this project will commence on February 21, 2006. The road contractor for the project is Harris Road Company. The contact person is Scott Harris. He can be reached at (512)847-5327.

In addition, I have enclosed with this letter the "Deed Recordation Affidavit" of the approval letter.

Thank you for your assistance and if you have any questions, please call.

Respectfully,
PRO-TECH ENGINEERING GROUP, INC.

Richard McDaniel

EO#14764
TCEQ 021606.doc
Enclosure

Doc# 20060605440

Deed Recordation Affidavit
Edwards Aquifer Protection Plan

THE STATE OF TEXAS 2006 FEB 17 PM 12:47

County of COMAL §

BEFORE ME, the undersigned authority, on this day personally appeared **JACK DEAN** who, being duly sworn by me, deposes and says:

(1) That my name is JACK DEAN and that I am the Vice-President of Bluegreen Southwest and that Bluegreen Southwest is the owner of the real property described below.

(2) That said real property is subject to an EDWARDS AQUIFER PROTECTION PLAN which was required under the 30 Texas Administrative Code (TAC) Chapter 213.

(3) That the EDWARDS AQUIFER PROTECTION PLAN for said real property was approved by the Texas Commission on Environmental Quality (TCEQ) on February 13, 2006.

A copy of the letter of approval from the TCEQ is attached to this affidavit as Exhibit A and is incorporated herein by reference.

(4) The said real property is located in Comal County, Texas, and the legal description of the property is as follows: **Havenwood at Hunters Crossing**

BLUEGREEN SOUTHWEST ONE, L.P.
a Delaware Limited Partnership,
By BLUEGREEN SOUTHWEST LAND, INC
A Delaware Corporation, General Partner

BY: _____
Jack H Dean, Vice President

SWORN AND SUBSCRIBED TO before me, on this 14 day of February, 2006

NOTARY PUBLIC

RICHARD MCDANIEL
NOTARY PUBLIC
State of Texas
Comm. Exp. 10-04-2009

THE STATE OF TEXAS §

County of COMAL §

BEFORE ME, the undersigned authority, on this day personally appeared JACK H DEAN known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 16 day of February, 2006.

NOTARY PUBLIC

Typed or Printed Name of Notary

MY COMMISSION EXPIRES:

RICHARD MCDANIEL
NOTARY PUBLIC
State of Texas
Comm. Exp. 10-04-2009

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4024.

Sincerely,

Bobby D. Caldwell

for Glenn Shankle
Executive Director
Texas Commission on Environmental Quality

GS/JKM/eg

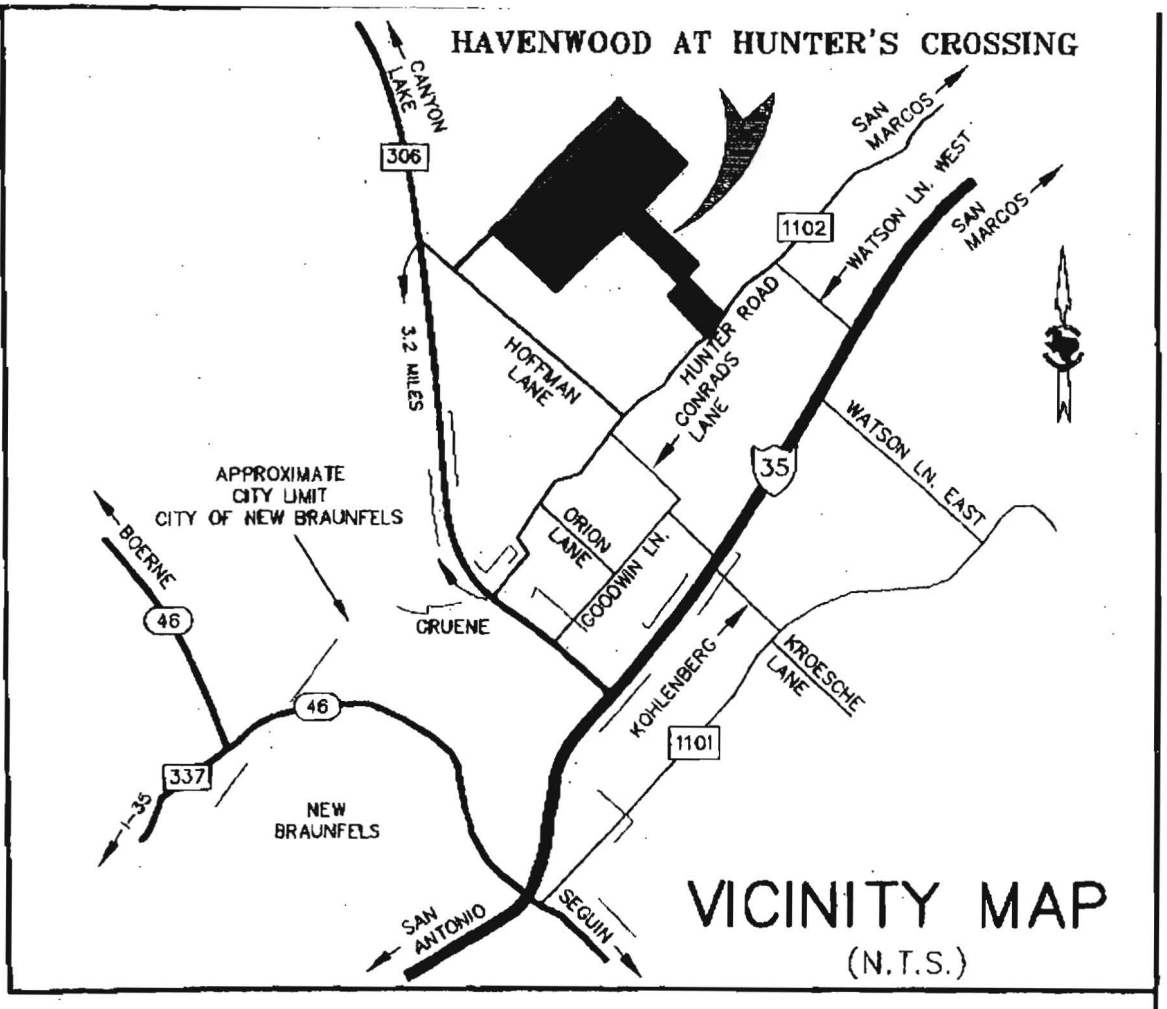
Enclosures: Deed Recordation Affidavit, TCEQ-0625
Change in Responsibility for Maintenance on Permanent BMPs, TCEQ-10263

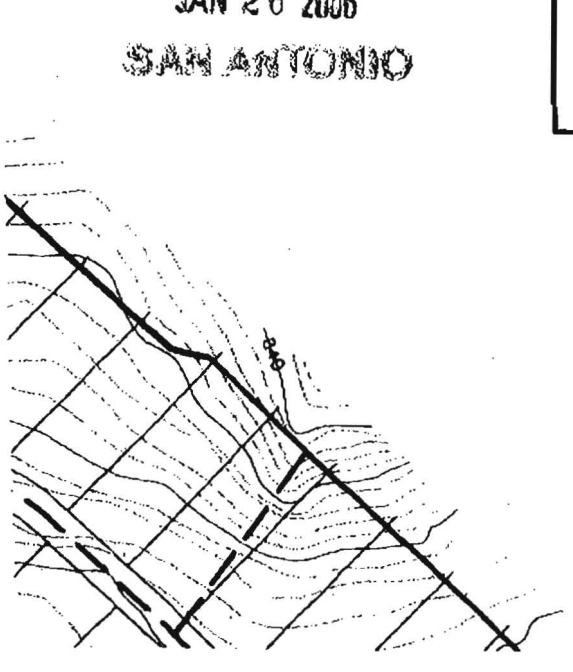
cc: Mr. Kelly Kilber, P.E., Pro-Tech Engineering Group
Mr. Michael Short, City of New Braunfels
Mr. Tom Hornseth, Comal County
Mr. Robert J. Potts, Edwards Aquifer Authority
TCEQ Central Records

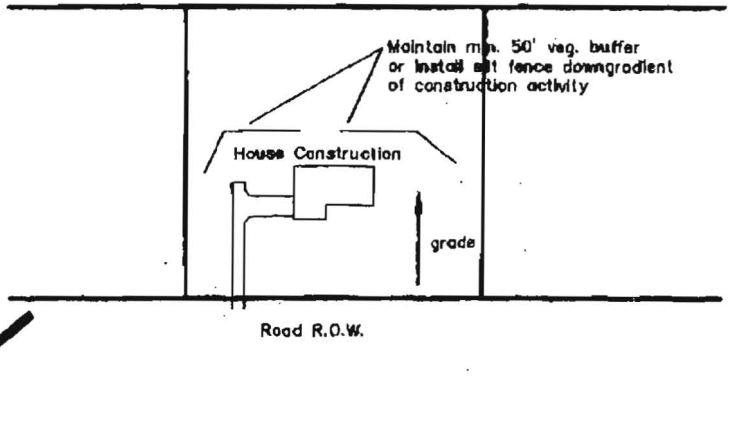
)D AT
ROSSING
'Y, TEXAS

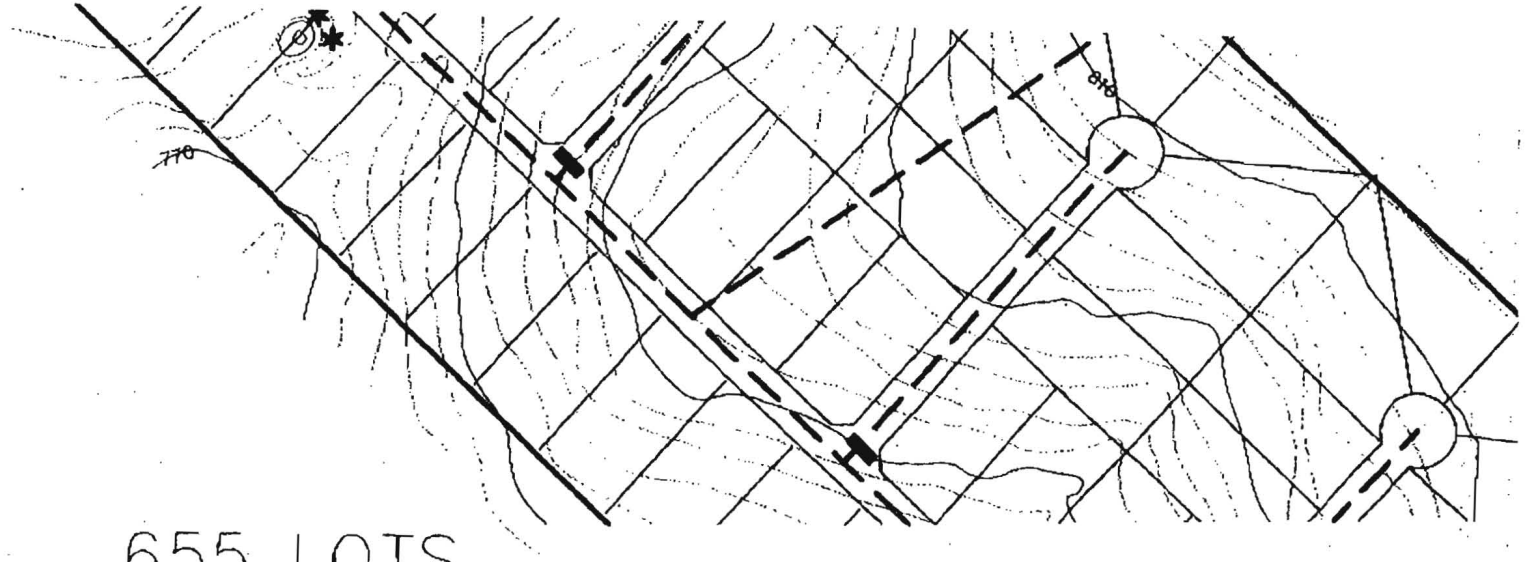
ctices to be Installed and
with the TCEQ publication
ird's Aquifer Rules: Technical Guidance
ctices" published in June 1999.

a minimum of 50' in width
ent to all areas disturbed by construction
ere construction prevents the buffer strip
ned shall have silt fence installed to replace







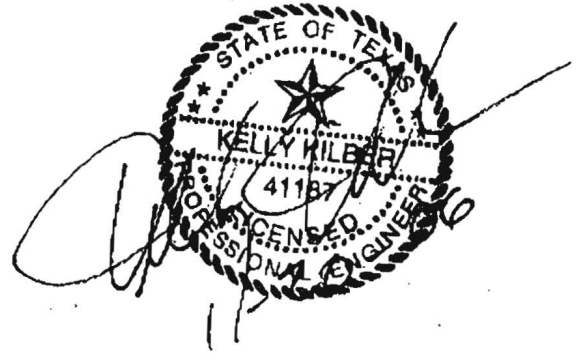


655 LOTS
68,800 LF ROADS
EDWARDS AQUIFER
RECHARGE/TRANSITION ZONES
NEW BRAUNFELS ETJ/COMAL COUNTY

Developer:
thwest One, L.P., a
ed Partnership, authorized
s in the State of Texas,
its General Partner
thwest Land, Inc. a
oration.

xas 78676
83

rveyor:
jineering Group, Inc.
ntonio St. Suite 100
Texas 78666
535
engr.com



REVISED JANUARY 20, 2006
JULY 29, 2005

PRO·TECH
ENGINEERING
GROUP
INCORPORATED
100 E. San Antonio St., Suite 100
San Marcos, TX. 78666
(512) 353-3335

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 13, 2006

Mr. Jack Dean
Bluegreen Southwest
PO Box 896
Wimberly, Texas 78676

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CENTRAL RECORDS MC 212 SUBEDAQ | HAVENWOOD AT HU ERS CROSSING | COMAL

EDWARDS AQUIFER DATA ENTRY SHEET

RECDT: 9/7/2005

GENERAL INFORMATION: NEW RECORD | Edit | PRINT

Region: 13 | Received Date: 9/7/2005 | Edwards ID: 05090702 | SA#: 2408.00 | Plan Type: PAP

REGULATED ENTITY/SITE/PROJECT INFORMATION | SIC#: 1521 | NAICS: 236115

RN # RN104754759 | Reg Ent: HAVENWOOD AT HUNTERS CROSSING

Address: | City: | ST: | Zip: | Zip Ext:

Loc: 1.3 ML N OF HOFFMAN LANE ON NW SIDE OF FM 1102

Phone: 5128475463 | County: COMAL | Latitude: 29-47-45 | Longitude: 98-20-07

CUSTOMER/OWNER INFORMATION | Type: OR | CN # CN600675268

Name: BLUEGREEN SOUTHWEST ONE LP | Address: PO BOX 896

City: WIMBERLEY | ST: TX | Zip: 78676 | Zip Ext: 0896 | Phone: 5128475463

OWNER/APPLICANT INFORMATION

Type: OR | Name: DEAN, JACK | Address: PO BOX 896

City: WIMBERLEY | ST: TX | Zip: 78676 | Zip Ext: 0896 | Phone: 5128475463

COMMENT:

PLAN INFORMATION

Edwards ID	SA #	FEE REC	Fee Amount	Project Area	FT Sewer	# Tanks	PST REG #	TYPE OF PERM BMP	AGENT	PHONE NUMBER	FAX NUMBER
05090702	2408.00	9/7/2005	$5,000.00	974.00				N/A	PRO TECH	5123533335	5123960224
05090702	2408.01	2/2/2007	$0.00	0.00					PRO TECH	5123533335	5123960224
05090702	2408.02	3/23/2007	$0.00						MEDINA	2106944545	2106944577

LETTER INFORMATION

Edwards ID	SA #	Plan Type	Distribution Date	Investigator	SAI	CCEDS Inv #	Letter Type	Date of Letter	Response Due	Response Received
05090702	2408.00	PAP	9/7/2005	JMAUSER		432792	APP	2/13/2006		
05090702	2408.01	CAVE	2/2/2007	CFRITZ		539189	CCL	2/12/2007		
05090702	2408.02	TECH	3/23/2007	JMAUSER		556865	TA	4/13/2007		

COMPLIANCE

EDW ID #	SA #	AKA	Deed Record	Const Notice	30 Day Testing	5 Year Testing	PBMP CERT	Excavate Cert
05090702	2408.00		2/16/2006	2/21/2006				

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 13, 2007

Mr. Jack Dean
Bluegreen Southwest
PO Box 896
Wimberly, Texas 78676

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Havenwood at Hunter's Crossing; Located on the northwest side of FM 1102, approximately 1.3 miles north of the intersection of FM 1102 and Hoffman Lane; Comal County, Texas
TYPE OF PLAN: Request for information about filling on-site borrow pits; 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer; Edwards Aquifer Protection Program File No. 2408.02, Investigation No. 556865, Regulated Entity No. RN105155824

Dear Mr. Dean:

On March 23, 2007, your representative, Mr. Doug McGookey, requested information about filling existing borrow pits located on the referenced project site. As presented, the pits are proposed to be filled with soil and rock excavated from elsewhere on the property.

The Texas Commission on Environmental Quality has no objection to filling the borrow pits with clean soil and rock excavated from the site. If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4024.

Sincerely,

Thomas G. Haberle
Water Section Manager
Texas Commission on Environmental Quality

TGH/JKM/eg

Enclosures: Change in Responsibility for Maintenance on Permanent BMPs-Form TCEQ-10263
Deed Recordation Affidavit, TCEQ-0625

cc: Mr. Doug McGookey, PG, Medina Consulting Company
Mr. Thomas Hornseth, PE, Comal County Engineer's Office
Mr. Robert J. Potts, Edwards Aquifer Authority
TCEQ Central Records, MC 212

** Transmit Conf. Report **

P. 1 Apr 16 2007 7:17

Fax/Phone Number	Mode	Start	Time	Page	Result	Note
96944577	NORMAL	16, 7:17	0'25"	2	# 0 K	

TCEQ

Protecting Texas by Reducing and Preventing Pollution

FAX TRANSMITTAL

DATE: NUMBER OF PAGES *(including this cover sheet)*:

TO:
Name
Organization: Medina Consulting Company 210/694-4545
FAX Number: 210/694-4577

FROM: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Name: Elaine G
Division/Region: San Antonio Region 13
Telephone Number: 210/490-3096
FAX Number: 210/545-4329

NOTES

240802

Doug M~

TX COMM ON ENV QTY :2105454329

** Transmit Conf. Report **

P.1

Apr 16 2007 7:22

Fax/Phone Number	Mode	Start	Time	Page	Result	Note
918306082009	NORMAL	16, 7:22	1'05"	2	* O K	

TCEQ

Protecting Texas by Reducing and Preventing Pollution

FAX TRANSMITTAL

DATE: _____ NUMBER OF PAGES *(including this cover sheet)*: ☐

TO: Name _____

Organization **Comal County Engineer's Office**

FAX Number **830/608-2009**

FROM: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Name **Elaine**

Division/Region **San Antonio Region 13**

Telephone Number **210/490-3096**

FAX Number **210/545-4329**

NOTES:

2408.02

Texas Commission on Environmental Quality
Investigation Report
BLUEGREEN SOUTHWEST ONE LP
CN600675268

HAVENWOOD AT HUNTERS CROSSING
RN104754759

Investigation # 556865 **Incident #**

Investigator: JOHN MAUSER **Site Classification** RESIDENTIAL

Conducted: 03/26/2007 -- 04/12/2007 **NAIC Code:** 236115 **SIC Code:** 1521

Program(s): EDWARDS AQUIFER

Investigation Type : Site Assessment File Review **Location :** 1.3 ML N OF HOFFMAN LANE ON NW SIDE OF FM 1102

Additional ID(s) : 13-05090702

Address: ; , **Activity Type :** REGION 13 - SAN ANTONIO
EAPPNGCLAR - EAPP Non-Grant Clarification Investigation

Principal(s) :

Role	Name
RESPONDENT	BLUEGREEN SOUTHWEST ONE LP

Contact(s) :

Role	Title	Name	Phone	
Regulated Entity Contact	VICE PRESIDENT/GEOLOGIST	DOUGLAS MCGOOKEY PG	Work	(210) 694-4545
Regulated Entity Mail Contact	VICE PRESIDENT	MR JACK DEAN	Work	(512) 847-5483

Other Staff Member(s) :

Role	Name
QA Reviewer	LYNN BUMGUARDNER
Supervisor	THOMAS HABERLE

Associated Check List

Checklist Name	Unit Name

Investigation Comments :

This investigation was conducted to evaluate a request, received on 3/23/07, to fill existing on-site borrow pits with soil and rock excavated from the site. These pits were identified in the original Geologic Assessment as man-made features MM-6 and MM-7, and assessed as not sensitive.

The investigtor concludes that clean soil and rock from the site placed in the borrow pits do not appear to pose a threat to groundwater quality, and recommends approval of this activity.

No Violations Associated to this Investigation

Signed _____ Date 4-12-07
Environmental Investigator

Signed _____ Date 04/13/07
Supervisor

Attachments: (in order of final report submittal)

___Enforcement Action Request (EAR)

✓ Letter to Facility (specify type) : ACCEPTANCE

Investigation Report

___Sample Analysis Results

___Manifests

___NOR

___Maps, Plans, Sketches

___Photographs

✓ Correspondence from the facility

___Other (specify) :

EMAIL + LOCATION MAP

John Mauser - RE: FW: Havenwood Borrow Pits

From: "Doug McGookey" <dmcgookey@medinacci.com>
To: "'John Mauser'" <JMAUSER@tceq.state.tx.us>
Date: 4/12/2007 1:14 PM
Subject: RE: FW: Havenwood Borrow Pits

Thanks!

Doug

From: John Mauser [mailto:JMAUSER@tceq.state.tx.us]
Sent: Thursday, April 12, 2007 1:06 PM
To: Doug McGookey
Subject: Re: FW: Havenwood Borrow Pits

Doug,

I'm preparing a letter to send to the applicant. You will be copied on it.

J.

>>> "Doug McGookey" <dmcgookey@medinacci.com> 4/12/2007 10:19 AM >>>

John,

Pro-Tech is asking if they can go ahead and fill these pits - can they go ahead or continue to wait?

Thanks!
Doug

Doug McGookey, PG
Vice President/Geologist
Medina Consulting Company
6391 De Zavala, Suite 113A
San Antonio, Texas 78249
☎*Office Phone (210) 694-4545*
☎*Mobile Phone (210) 872-5204*
☎*Fax (210) 694-4577*
e-mail: dmcgookey@medinacci.com

From: Doug McGookey [mailto:dmcgookey@medinacci.com]
Sent: Tuesday, March 27, 2007 10:59 AM
To: 'John Mauser'
Cc: 'Lynn Bumguardner'; 'Jason Sturm'; Melissa Gonzales (mgonzales@medinacci.com); Tobin Martin (tmartin@medinacci.com)
Subject: RE: Havenwood Borrow Pits

John,

Thanks for the prompt response.

Attached is a figure showing the location of the borrow pits on the property. Pro-Tech proposes to fill the pits with soil and rock excavated from elsewhere on the property.

The following is from Jason Sturm of Pro-Tech:

We would like to fill in the borrow/caliche pits labeled MM6 and MM7 in the Havenwood at Hunter□s Crossing□s WPAP. The material used to fill the pits is excavated from a detention pond located on the property. The material will be rock and excavated top soil.

Please let me know if you need anything else - and thanks.

Doug

Doug McGookey, PG
Vice President/Geologist
Medina Consulting Company
6391 De Zavala, Suite 113A
San Antonio, Texas 78249
☎*Office Phone (210) 694-4545*
☎*Mobile Phone (210) 872-5204*
☎*Fax (210) 694-4577*
e-mail: dmcgookey@medinacci.com

From: John Mauser [mailto:JMAUSER@tceq.state.tx.us]
Sent: Monday, March 26, 2007 7:14 AM
To: Doug McGookey
Cc: Lynn Bumguardner
Subject: Re: Havenwood Borrow Pits

Doug,

Identify the borrow pits on the site plan, and describe what material you will be filling them with. Send it in and we'll look at it.

J.

>>> "Doug McGookey" <dmcgookey@medinacci.com> 3/23/2007 10:06 AM >>>
Hi Lynn,

Had a quick question - I did a geologic assessment on a project north of New Braunfels that had man-made borrow pits on it. They were shallow pits up to about 5 feet deep and 20 to 30 feet in diameter where they had excavated limestone to cover nearyby ranch roads. They want to fill them in, and apparently they didn't specifically state they planned to do so in the WPAP. They were not scored as environmentally sensitive.

Can they go ahead and fill them in, or do they need to check with your office first?

Thanks for any guidance.

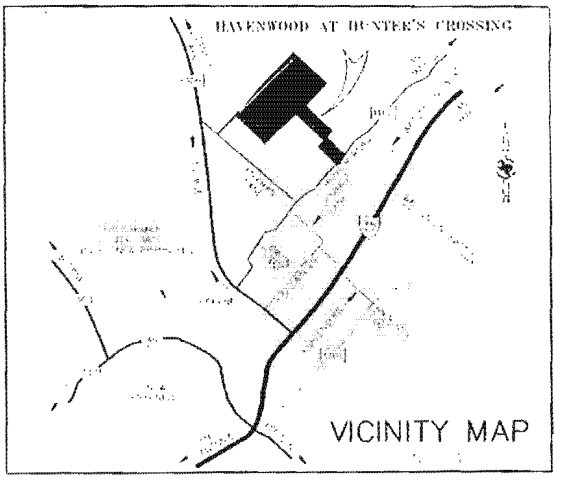
Doug

Doug McGookey, PG
Vice President/Geologist

Medina Consulting Company
6391 De Zavala, Suite 113A
San Antonio, Texas 78249
☎*Office Phone (210) 694-4545*
☎*Mobile Phone (210) 872-5204*
☎*Fax (210) 694-4577*
e-mail: dmcgookey@medinacci.com

HAVENWOOD AT HUNTER'S CROSSING
COMAL COUNTY, TEXAS

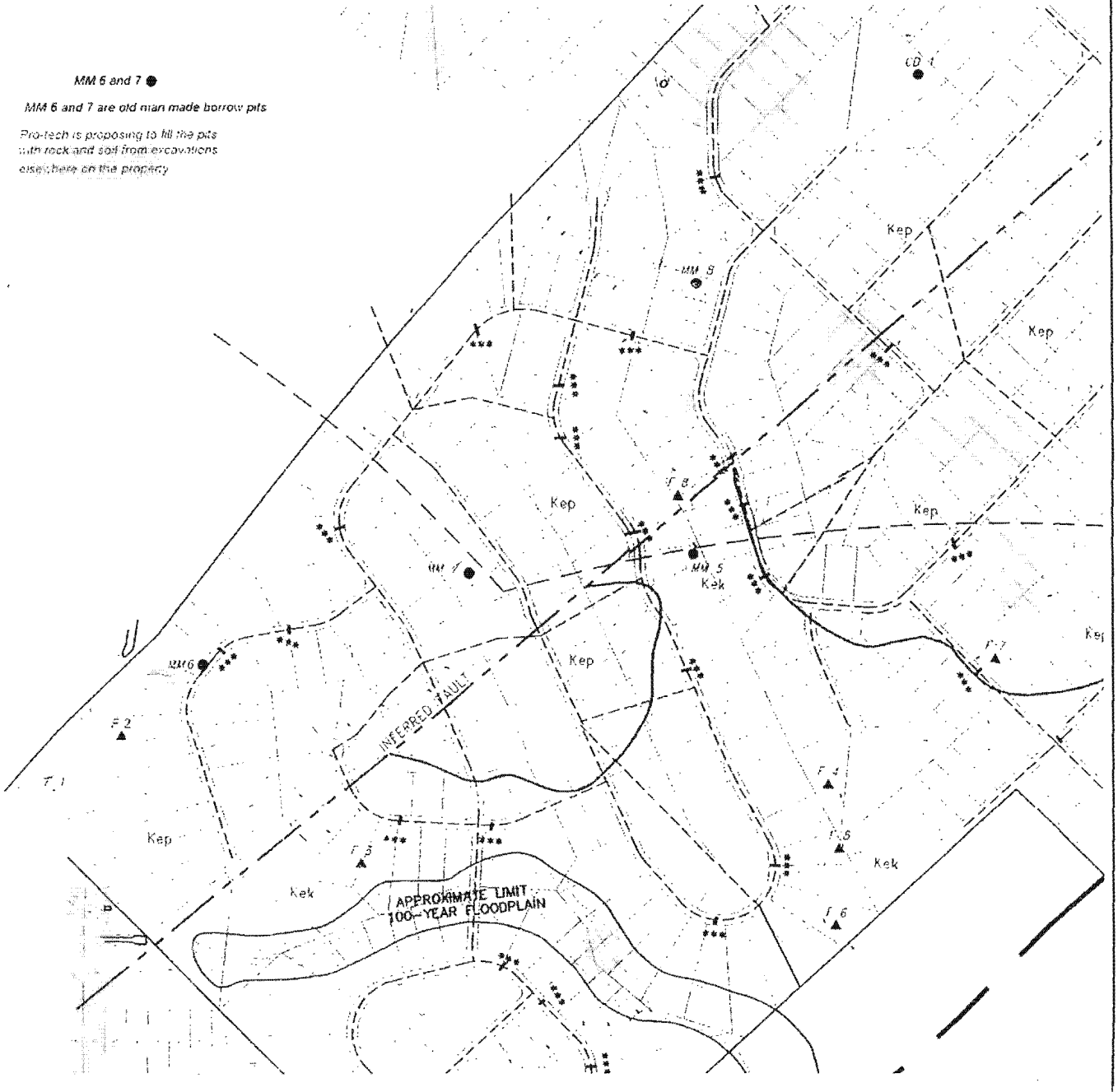
WPAP Figure Detail



MM 6 and 7 ●

MM 6 and 7 are old man made borrow pits

Pro-tech is proposing to fill the pits with rock and soil from excavations elsewhere on the property



100 E. San Antonio St. Suite 100
San Marcos, TX 78666-5568

2408.0C

512 / 353-3335
FAX 512 / 396-0224

ENGINEERING GROUP
INCORPORATED

February 16, 2006

Texas Commission on Environmental Quality
Region 13 – San Antonio
14250 Judson Road
San Antonio, TX 78233-4480

Attn: John Mauser

Re: Havenwood at Hunters Crossing
Comal County, Texas
Water Pollution Abatement Plan
Regulated Entity No. 432792

Mr. Mauser,

Please let this letter serve as written notification of intent to commence construction of the above referenced project. Construction at this project will commence on February 21, 2006. The road contractor for the project is Harris Road Company. The contact person is Scott Harris. He can be reached at (512)847-5327.

In addition, I have enclosed with this letter the "Deed Recordation Affidavit" of the approval letter.

Thank you for your assistance and if you have any questions, please call.

Respectfully,
PRO-TECH ENGINEERING GROUP, INC.

Richard McDaniel

EO#14764
TCEQ 021606.doc
Enclosure

Doc# 20060605440

"RECEIVED" TCEQ
SAN ANTONIO REGION

Deed Recordation Affidavit
Edwards Aquifer Protection Plan

THE STATE OF TEXAS 2006 FEB 17 PM 12:47

County of COMAL §

BEFORE ME, the undersigned authority, on this day personally appeared **JACK DEAN** who, being duly sworn by me, deposes and says:

(1) That my name is JACK DEAN and that I am the Vice-President of Bluegreen Southwest and that Bluegreen Southwest is the owner of the real property described below.

(2) That said real property is subject to an EDWARDS AQUIFER PROTECTION PLAN which was required under the 30 Texas Administrative Code (TAC) Chapter 213.

(3) That the EDWARDS AQUIFER PROTECTION PLAN for said real property was approved by the Texas Commission on Environmental Quality (TCEQ) on February 13, 2006.

A copy of the letter of approval from the TCEQ is attached to this affidavit as Exhibit A and is incorporated herein by reference.

(4) The said real property is located in Comal County, Texas, and the legal description of the property is as follows: **Havenwood at Hunters Crossing**

BLUEGREEN SOUTHWEST ONE, L.P.
a Delaware Limited Partnership,
By BLUEGREEN SOUTHWEST LAND, INC
A Delaware Corporation, General Partner

BY: _____
Jack H Dean, Vice President

SWORN AND SUBSCRIBED TO before me, on this 14 day of February, 2006

NOTARY PUBLIC _____

RICHARD MCDANIEL
NOTARY PUBLIC
State of Texas
Comm. Exp. 10-04-2009

THE STATE OF TEXAS §

County of COMAL §

BEFORE ME, the undersigned authority, on this day personally appeared JACK H DEAN known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 14th day of February, 2006.

_____
NOTARY PUBLIC

Typed or Printed Name of Notary

MY COMMISSION EXPIRES:

RICHARD MCDANIEL
NOTARY PUBLIC
State of Texas
Comm. Exp. 10-04-2009

00 - 8042

HAVENWOOD AT HUNTERS CROSSING
PAP
BEXAR

(AC yrs)

EA WATER

EDWARDS AQUIFER DATA ENTRY SHEET | CENTRAL REC MC 212 | S | HAVENWOOD AT HUNTER ROSSING COMAL

GENERAL INFORMATION: Locate Existing Record | INSERT NEW RECORD | Edit | RECDT: 9/7/2005

Region: 13 | Received Date: 9/7/2005 | Edwards ID: 05090702 | SA#: 2408.00

Plan Type: PAP | Residential or Commercial: RESIDENTIAL | SIC#: 1521 | PRINT

REGULATED ENTITY/SITE/PROJECT INFORMATION

RN # RN104754759 | Reg Ent: HAVENWOOD AT HUNTERS CROSSING

Address: | City: | ST: | Zip: | Zip Ext:

Loc: 1.3 ML N OF HOFFMAN LANE ON NW SIDE OF FM 1102

Phone: 5128475463 | County: COMAL | Latitude: | Longitude:

CUSTOMER/OWNER INFORMATION Type: OR | CN # CN600675268

Name: BLUEGREEN SOUTHWEST ONE LP | Address: PO BOX 896

City: WIMBERLEY | ST: TX | Zip: 78676 | Zip Ext: 0896 | Phone: 5128475463

OWNER/APPLICANT INFORMATION

Type: OR | Name: DEAN, JACK | Address: PO BOX 896

City: WIMBERLEY | ST: TX | Zip: 78676 | Zip Ext: 0896 | Phone: 5128475463

COMMENT:

PLAN INFORMATION

SA #	Fee Rec	Fee Amount	Project Area	FT Sewer Lines	No. Tanks	PST REG #	Type Perm BMP	Agent	Phone #	Fax #
2,408.00	9/7/2005	$5,000.00	974.00				N/A	PRO TECH	5123533335	5123960224

LETTER INFORMATION

EDW ID	SA #	Plan Type	Distribution Date	Investigator	SAI	CCEDS Inv #	LETTER TYPE	DATE OF LETTER	RESPONSE DUE	RESPONSE RECEIVED
05090702	2408.00	PAP	9/7/2005	JMAUSER		432792	APP	2/13/2006		

COMPLIANCE

EDW ID #	SA #	AKA	DEED RECORD	CONST NOTICE	30 DAY TESTING	5 YEAR TESTING	PBMP CERT	EXCAVATE CERT

PERMANENT POLLUTION ABATEMENT MEASURES

Since this single-family residential project will not have more than 20 percent impervious cover, an exemption from permanent BMPs is approved. The applicant requested a waiver of the requirement for other permanent BMPs because the site will have less than 20 percent impervious cover. Based upon the TCEQ's review of the proposed activities, the geologic assessment, and the site conditions, the required waiver is hereby granted.

GEOLOGY

According to the geologic assessment included with the application, there are ten geologic features, and eight manmade features located on the project site. All features were assessed as not sensitive. The San Antonio Regional Office did not conduct a site investigation.

SPECIAL CONDITIONS

If the impervious cover ever increases above 20 percent or the land use changes, the exemption for the whole site may no longer apply and the property owner must notify the Sam Antonio Regional Office of these changes.

Intentional discharges of sediment laden stormwater during construction are not allowed. If dewatering of excavated areas becomes necessary, the discharge will be filtered through appropriately selected temporary best management practices. These may include vegetative filter strips, sediment traps, rock berms, silt fence rings, etc.

STANDARD CONDITIONS

1. Pursuant to Chapter 7 Subchapter C of the Texas Water Code, any violations of the requirements in 30 TAC Chapter 213 may result in administrative penalties.

Prior to Commencement of Construction:

2. Within 60 days of receiving written approval of an Edwards Aquifer protection plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved WPAP is enclosed.

3. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved WPAP and this notice of approval shall be maintained at the project location until all regulated activities are completed.

4. Modification to the activities described in the referenced WPAP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of

appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

5. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the date on which the regulated activity will commence, the name of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person. The executive director will use the notification to determine if the approved plan is eligible for an extension.

6. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved WPAP, must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

7. All borings with depths greater than or equal to 20 feet must be plugged with non-shrink grout from the bottom of the hole to within three (3) feet of the surface. The remainder of the hole must be backfilled with cuttings from the boring. All borings less than 20 feet must be backfilled with cuttings from the boring. All borings must be backfilled or plugged within four (4) days of completion of the drilling operation. Voids may be filled with gravel.

During Construction:

8. During the course of regulated activities related to this project, the applicant or agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.

9. If any sensitive feature (caves, solution cavities, sink holes, etc.) is discovered during construction, all regulated activities near the feature must be suspended immediately. The applicant or his agent must immediately notify the Regional Office of the discovery of the feature. Regulated activities near the feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the feature and the aquifer from potentially adverse impacts to water quality. The plan must be sealed, signed, and dated by a Texas Licensed Professional Engineer.

10. One well exists on the site. All water wells, including injection, dewatering, and monitoring wells must be in compliance with the requirements of the Texas Department of Licensing and Regulation under Title 16 TAC Chapter 76 (relating to Water Well Drillers and Pump Installers) and all other locally applicable rules, as appropriate.

11. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

12. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

13. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

14. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. The regulated entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Edwards Aquifer protection plan. If the new owner intends to commence any new regulated activity on the site, a new Edwards Aquifer protection plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new regulated activity by the executive director is required prior to commencement of the new regulated activity.

17. An Edwards Aquifer protection plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Edwards Aquifer protection plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4024.

Sincerely,

Bobby D. Caldwell

for

Glenn Shankle
Executive Director
Texas Commission on Environmental Quality

GS/JKM/eg

Enclosures: Deed Recordation Affidavit, TCEQ-0625
Change in Responsibility for Maintenance on Permanent BMPs, TCEQ-10263

cc: Mr. Kelly Kilber, P.E., Pro-Tech Engineering Group
Mr. Michael Short, City of New Braunfels
Mr. Tom Hornseth, Comal County
Mr. Robert J. Potts, Edwards Aquifer Authority
TCEQ Central Records

PREPARED IN COOPERATION WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
The preparation of this report was financed through grants from the State of Texas through the Texas Commission on Environmental Quality.

BLUEGREEN SOUTHWEST ONE LP
CN600675268

HAVENWOOD AT HUNTERS CROSSING
RN104754759

Investigation # 432792 **Incident #**

Investigator: JOHN MAUSER **Site Classification** RESIDENTIAL

Conducted: 09/07/2005 -- 01/30/2006 **SIC Code:** 1521

Program(s): EDWARDS AQUIFER

Investigation Type : Site Assessment File Review **Location :** 1.3 ML N OF HOFFMAN LANE ON NW SIDE OF FM 1102

Additional ID(s) : 13-05090702

Address: ; , **Activity Type:** REGION 13 - SAN ANTONIO
EAPPGRTPR - EAPP Grant Plan Review

Principal(s) :

Role	Name
RESPONDENT	BLUEGREEN SOUTHWEST ONE LP

Contact(s) :

Role	Title	Name	Phone	
Regulated Entity Contact		MR RICHARD MCDANIEL	Work	(512) 353-3335
Regulated Entity Mail Contact	VICE PRESIDENT	MR JACK DEAN	Work	(512) 847-5483
Regulated Entity Contact		KELLY KILBER PE	Fax	(512) 396-0224
			Work	(512) 353-3335

Other Staff Member(s) :

Role	Name
QA Reviewer	BOBBY CALDWELL
Supervisor	BOBBY CALDWELL
Investigator	ELAINE GROSENHEIDER

Associated Check List

Checklist Name	Unit Name

Investigation Comments :

This investigation was conducted to review the referenced application (EAPP 2408.00).

No Violations Associated to this Investigation

Signed _____ Environmental Investigator Date 1-30-06

Signed _____ Supervisor Date 02/10/2006

Attachments: (in order of final report submittal)

___Enforcement Action Request (EAR)

__✓__Letter to Facility (specify type) : Approval

Investigation Report

___Sample Analysis Results

___Manifests

___NOR

___Maps, Plans, Sketches

___Photographs

__✓__Correspondence from the facility

__✓__Other (specify) :

RAP Application

** Transmit Conf. Report **

P.1 Feb 14 2006 7:51

Fax/Phone Number	Mode	Start	Time	Page	Result	Note
915123960224	NORMAL	14, 7:51	2'33"	8	* O K	

TCEQ

Protecting Texas by Reducing and Preventing Pollution

FAX TRANSMITTAL

DATE: _____ NUMBER OF PAGES *(including this cover sheet)*: ☐

TO: Name _____

Organization PRO TECH

FAX Number 512/306-0224

FROM: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Name Elaine G.

Division/Region San Antonio Region 13

Telephone Number 210/490-3096

FAX Number 210/545-4329

NOTES:

** Transmit Conf. Report **

P.1

Feb 14 2006 7:55

Fax/Phone Number	Mode	Start	Time	Page	Result	Note
918306082009	NORMAL	14, 7:55	3'25"	8	* O K	

TCEQ

Protecting Texas by Reducing and Preventing Pollution

FAX TRANSMITTAL

DATE: _____ NUMBER OF PAGES *(including this cover sheet)*: [ ]

TO
Name _____
Organization Comal County Engineer's Office
FAX Number 830/608-2009

FROM: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Name Elaine
Division/Region San Antonio Region 13
Telephone Number 210/490-3096
FAX Number 210/545-4329

NOTES:

PRO-TECH
ENGINEERING
GROUP
INCORPORATED

100 E. SAN ANTONIO ST. SUITE 100 SAN MARCOS, TX 78666

FAX

TO:	John Mauser
COMPANY:	TCEQ
DATE:	1-30-06
EO#	
NUMBER OF PAGES INCLUDING COVER SHEET	3
PHONE:	
FAX PHONE:	(210) 545-4329

FROM:

____KELLY	____MARLA
_X_RICHARD	____PETE
____JON	____CARMELITA
____RANDY	____JASON

E-MAIL: _____@pro-techengr.com

PHONE: 512-353-3335
FAX: 512-396-0224

REMARKS

Urgent ☐ For your review ☐ Reply ASAP ☐ Please comment

RE: Havenwood
Total 974 Acres
Transition Zone - 155.5± Acres
Recharge Zone - 818.5± Acres

Agent Authorization Form
For Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

I JACK DEAN
Print Name

VICE PRESIDENT

Title - Owner/President/Other

of BLUEGREEN SOUTHWEST

Corporation/Partnership/Entity Name

Have authorized KELLY KILBER, P.E.

Print Name of Agent/Engineer

Of PRO-TECH ENGINEERING GROUP, INC

Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For applicants who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

Applicant's Signature Date

THE STATE OF TEXAS §

County of HAYS §

BEFORE ME, the undersigned authority, on this day personally appeared JACK DEAN known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 30 day of August, 2005.

RICHARD MCDANIEL
NOTARY PUBLIC STATE OF TEXAS
COMMISSION EXPIRES:
AUGUST 17, 2006

NOTARY PUBLIC

Typed or Printed Name of Notary

MY COMMISSION EXPIRES:

PRO-TECH
ENGINEERING
GROUP
INCORPORATED

100 E. San Antonio St. Suite 100
San Marcos, TX 78666

512 / 353-3335
FAX 512 / 396-0224

TCEQ-R13
JAN 30 2006
SAN ANTONIO

SUBJECT: Havenwood at Hunter's Crossing
Comal County, Texas

DATE: 1-27-06
EO: 14764

TO: TCEQ
14250 Judson Road
San Antonio, TX 78233

ATTN: John Mauser

(X) Enclosures
( ) No Enclosures
If enclosures are not as noted please inform us.

WE TRANSMIT:
( ) Herewith ( ) Under separate cover via _____
( ) In accordance with your request _____

FOR YOUR:
(X) Approval ( ) Distribution to parties ( ) Information
( ) Review & Comment ( ) Record
( ) Use ( ) _____

COPIES	DESCRIPTION
3	Site Plan
3	Geological Map

MESSAGE: _____

COPIES TO: (with enclosures) ( ) ( ) ( )

BY: Richard McDaniel

100 E. San Antonio St. Suite 100
San Marcos, TX 78666-5568

512 / 353-3335
FAX 512 / 396-0224

PRO-TECH
ENGINEERING
GROUP
INCORPORATED

TCEQ-R13
JAN 26 2006
SAN ANTONIO

January 24, 2006

TCEQ
14250 Judson Road
San Antonio, Tx 78233

Attn: John Mauser

Re: Havenwood at Hunters Crossing
Comal County, Texas

Mr. Mauser:
In accordance with your fax transmittal dated January 9, 2006. We address the following;

1. Enclosed Response letter to EAA.
2. Additional information from the Geologist on the water well.
3. Revised site plan geologic map at the same scale.
4. The topographic anomaly is a closed depression, geologist assessment enclosed.
5. Rock berm detail with wire sheathing enclosed.
6. Geologic Assessment Tables and Geologic Map with seal and signature enclosed.
7. additional information on CD1 enclosed.
8. We have removed the cul de sac street near CD1, see site plan.

Thank you for your assistance and if you have any questions please call.

Respectfully,
PRO-TECH ENGINEERING GROUP, INC.

Richard McDaniel

XC: Bluegreen Southwest
EO# 14764
Mauser ltr.

TCEQ
Protecting Texas by Reducing and Preventing Pollution

FAX TRANSMITTAL

DATE: 1/9/06 NUMBER OF PAGES *(including this cover sheet)*: 2

TO:
Name: **Richard McDaniel, PE**
Organization: **Pro-Tech Engineers**
FAX Number: **512/396-0224**

FROM: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Name: **John Mauser**
Division/Region: **Field Operations Division, Region 13 (San Antonio)**
Telephone Number: **210/403-4024**
FAX Number: **210/545-4329**

NOTES:
Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Havenwood at Hunter's Crossing; Located on the northwest side of FM 1102, approximately 1.3 miles north of the intersection of FM 1102 and Hoffman Lane; Comal County, Texas
TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer; Edwards Aquifer Protection Program ID No. 2408.00, Investigation No. 432792, Regulated Entity No. 432792

The application received from you on 9/7/05, has been determined to be administratively incomplete and/or technically inadequate. For our review to continue, please provide the information listed below. If this information is not received by 1/23/06, or is incomplete or inadequate, the application may be denied. If you have any questions, please call John Mauser at 210/403-4024.

1. Response to EAA letter – proposed protection for on-site water well.
2. The Geologic Assessment assesses the on-site water well as not sensitive due to a low relative infiltration rate. The TCEQ argues that a well has a high relative infiltration rate. Additional explanation should be provided, or the GA should be revised.
3. Site plan: 1) add scale on site plan (Geologic Map must be at the same scale as the site plan), and 2) label contour lines.
4. Describe the topographic anomoly located approximately 1,100' NNW of feature MM-8, and provide an assessment by the project geologist, if necessary.
5. Show detail of wire sheathing on rock berm, as described in the Inspection & Maintenance Guidelines for Rock Berms.
6. PG seal on Geologic Assessment Tables, and Geologic Map (seal & signature)
7. If CD-1 is not a sensitive feature, has a low infiltration rate, and does retain water, describe

placement of OSSFs for each lot in compliance with any drainage requirements from the City of New Braunfels, and/or Comal County, for the lots within or partially within the closed contours defining CD-1.

8. With drainage conveyed from the proposed road to CD-1, CD-1 may be considered an "improved sinkhole" subject to 30 TAC 331.10 (Form 10338). For additional information, you should contact the TCEQ's Industrial and Hazardous Waste Permits Section MC130, PO Box 13087, Austin, Texas 78711-3087, 512/239-6075.

100 E. San Antonio St. Suite 100
San Marcos, TX 78666-5568

512 / 353-3335
FAX 512 / 396-0224

PRO-TECH ENGINEERING GROUP
INCORPORATED

January 20, 2006

Edwards Aquifer Authority
1615 N. St. Mary's Street
San Antonio, Tx 78233

Attn: Robert J Potts

Re: Havenwood at Hunters Crossing
Comal County, Texas

Mr. Potts:

The existing water well (MM-8) located on the referenced project, will be plugged to all applicable state regulations. Also a permit will be requested from the Edwards Aquifer Authority be fore this work is performed. The well is enclosed and has been there for a number of years. It is currently being used for livestock purposes, but was originally installed for domestic use. We have not been able to locate any information on the well, but I would guess that this water well does not comply with state regulations. The proposed development will be served by a state approved water company. The existing water well will not be needed by this project.

I hope this information has answered any questions you may have had and if you have any concerns please call.

Respectfully,
PRO-TECH ENGINEERING GROUP, INC.

Richard McDaniel

XC: Bluegreen Southwest
John Mauser
EO# 14764
edwards ltr.

Geologic Assessment
For Regulated Activities
on The Edwards Aquifer Recharge/transition Zones
and Relating to 30 TAC §213.5(b)(3), Effective June 1, 1999

REGULATED ENTITY NAME: **Bluegreen Southwest**

TYPE OF PROJECT: X WPAP __ AST __ SCS __ UST

LOCATION OF PROJECT: X Recharge Zone __ Transition Zone __ Contributing Zone within the Transition Zone

PROJECT INFORMATION

1. X Geologic or manmade features are described and evaluated using the attached **GEOLOGIC ASSESSMENT TABLE**.

2. Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (*Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A*, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

Soil Units, Infiltration Characteristics & Thickness		
Soil Name	Group*	Thickness (feet)
Crawford	**C**	**0-2**
Rumple - Crawford	**C**	**0-4**

* Soil Group Definitions (Abbreviated)

A. Soils having a high infiltration rate when thoroughly wetted.

B. Soils having a moderate infiltration rate when thoroughly wetted.

C. Soils having a slow infiltration rate when thoroughly wetted.

D. Soils having a very slow infiltration rate when thoroughly wetted.

3. X A **STRATIGRAPHIC COLUMN** is attached at the end of this form that shows formations, members, and thicknesses. The outcropping unit should be at the top of the stratigraphic column.

4. X A **NARRATIVE DESCRIPTION OF SITE SPECIFIC GEOLOGY** is attached at the end of this form. The description must include a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure, and karst characteristics of the site.

5. X Appropriate **SITE GEOLOGIC MAP(S)** are attached:

The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1" : 400'

Applicant's Site Plan Scale 1" = **300** '
Site Geologic Map Scale 1" = **300** '
Site Soils Map Scale (if more than 1 soil type) 1" = **None** '

6. Method of collecting positional data:
X Global Positioning System (GPS) technology.

__ Other method(s).

7. x The project site is shown and labeled on the Site Geologic Map.

8. x Surface geologic units are shown and labeled on the Site Geologic Map.

9. x Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

   x Geologic or manmade features were not discovered on the project site during the field investigation.

10. x The Recharge Zone boundary is shown and labeled, if appropriate.

11. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.):

   __ There are ____(#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
      __ The wells are not in use and have been properly abandoned.
      __ The wells are not in use and will be properly abandoned.
      __ The wells are in use and comply with 16 TAC §76.

   x There are no wells or test holes of any kind known to exist on the project site.

ADMINISTRATIVE INFORMATION

12. x One (1) original and three (3) copies of the completed assessment has been provided.

Date(s) Geologic Assessment was performed: **May 28 through April 7, 2005**
Date(s)

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC 213.

Douglas McGookey, PG
Print Name of Geologist

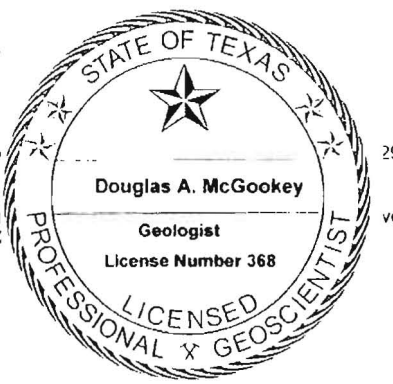
(210) 694-4545
Telephone

(210) 694-4577
Fax

Signature of Geologist

June 28, 2005
Date

Representing: **Medina Consulting Company, Inc.**
(Name of Company)



If you have questions on how to fill out this form or about the Edwards Aquifer Prote 2929 (Austin) or 210/403-4024 (San Antonio).

Individuals are entitled to request and review their personal information that the ag ve any errors in their information corrected. To review such information, contact us at 512/239-3

Site: *Hunter Quarry Property*
Location: *Approximately 974 Acres East of Hoffman Lane and North of Hunter Road*
Comal County, Texas

Soil Description:

The Hunter Quarry property is located on two main soil types with one small area in a third soil type according to the *Soil Survey of Hays and Comal Counties, Texas.* The predominant soil types are Rumple-Comfort association, undulating and Comfort-Rock outcrop complex, undulating. A small area of Brackett-Rock outcrop-Comfort complex is also present. These soils are described in more detail below. A map showing the distribution of the soils is attached.

(RUD) Rumple-Comfort association, undulating: This association consists of shallow and moderately deep soils on uplands in the Edwards Plateau Land Resource Area. Slopes are plane or convex and range from 1 to 8 percent. The areas are irregular in shape and range form 50 to several thousand acres in size.

Rumple soil makes up about 60 percent of the association, Comfort soil makes up 20 percent, and other soils, mainly Tarpley soils, make up 20 percent. The Rumple soil is on broad ridgetops and side slopes. It is mainly gently sloping. The Comfort soil is mainly in the more sloping areas near drainageways and near outcrops of rock. In places, there are narrow ledges of limestone. The mapped areas of this association are much larger and more variable than areas of the other map units in the survey area. Mapping has been controlled well enough; however, for the anticipated use of the soils.

Typically, the surface layer of the Rumple soil is dark reddish brown very cherty clay loam about 10 inches thick. Rounded chert and limestone cobble and gravel cover about 20 percent of the surface. The subsoil to a depth of 14 inches is dark reddish brown very cherty clay, and to a depth of 28 inches it is dark reddish brown extremely stony clay that is about 78 percent by volume limestone fragments. The underlying material is indurated fractured limestone. The soil is mildly alkaline and non calcareous throughout. The texture of the surface layer ranges to very cherty loam and cherty clay.

Typically, the surface layer of the Comfort soil is dark brown, neutral, extremely stony clay about 7 inches thick. The subsoil to a depth of 12 inches is dark reddish brown, mildly alkaline, extremely stony clay. The underlying material is indurated fractured limestone. The soil is noncalcareous throughout.

The soils in this association are well drained. Surface runoff is medium. However, runoff from large areas is much slower than from local areas because some of the water enters cavers, sinks, rock crevices, and streambeds. Permeability is moderately slow in

the Rumple soil and slow in the Comfort soil. The available water capacity is very low. The rooting zone is shallow in Comfort soil and moderately deep in Rumple Soil. Water erosion is a moderate hazard.

These soils are used as rangeland and as habitat for wildlife. They are not suited to cultivated crops or pasture. Cobble and stones on the surface and within the soil, the limited rooting zone, and the very low available water capacity are severe limitations.

(CrD) Comfort – Rock outcrop complex, undulating: This complex consists of shallow, clayey soils and Rock outcrop on side slopes and on hilltops and ridgetops on uplands in the Edwards Plateau Land Resource Area. Slopes are convex. The areas are irregular in shape and range from 25 to 1,000 acres in size.

Comfort extremely stony clay makes up 49 to 95 percent of the complex, but on the average it makes up 70 percent. Rock outcrop and area of soil less than 4 inches deep make up 5 to 36 percent, but the average is 15 percent. Rumple, Purves, Eckrant, and Real soils make up less than 5 to 30 percent, but the average is 15 percent. The area of Rock outcrop are long, narrow horizontal bands on hill slopes and along small drains. The Comfort soil is between the banks of Rock outcrop. The soils and Rock outcrop are in areas so small or so intricately mixed that is was not practical to map them separately at the scale used.

Typically, the surface layer of the Comfort soil is dark brown extremely stony soil about 6 inches thick. Cobble and stones as much as 4 feet across cover about 45 percent of the surface. The subsoil extends to a depth of 13 inches. It is dark reddish brown extremely stony clay. The underlying material is indurated fractured limestone. The soil is mildly alkaline and noncalcareous throughout.

The Comfort soil is well drained. Surface runoff is slow to medium. Permeability is slow, and the available water capacity is very low. The rooting zone is shallow. Water erosion is a slight hazard.

Typically, rock outcrop is dolomitic limestone that is barren of soil except in narrow fractures in the rock. In some areas the rock is flat and has as much as 3 inches of soil material on the surface. The soils in this complex are used as rangeland and as habitat for wildlife.

(BtD) – Brackett-Rock outcrop-Comfort complex, undulating: This complex consists of shallow, loamy and clayey soil and rock outcrop on uplands in the Edwards Plateau Land Resource Area. Slopes are convex and range from 1 to 8 percent. The mapped areas consist of either a single low hill in oval areas or a series of low hills in irregularly shaped areas. Many areas have a benched appearance because along the hill slopes

because of the horizontal bands of rock outcrop. The Brackett and Comfort soils are between the bands of rock outcrop.

The Brackett soil makes up about 30 to 650 percent of the complex, but on the average it makes up 50 percent. Rock outcrop make up 10 to 45 percent, but the average is 20 percent. The Comfort soil and similar soils make up 10 to 20 percent, but the average is 15 percent. Typically, the surface layer of the Brackett soil is grayish brown gravelly clay loam bout 6 inches thick. The subsoil extends to a depth of 17 inches. It is very pale brown and pale yellow gravelly clay loam. The underlying material is weakly cemented limestone interbedded with thin layers of indurated limestone. The soil is moderately alkaline and calcareous throughout.

Typical Soil Profiles are shown below.

Table 1.
Rumple Series Soil Profile

0 to 10 inches	**Clay loam:** Very cherty, dark, reddish brown, moist, moderate fine subangular blocky structure; hard, friable, common fine roots, angular chert fragments mostly 0.5 to 1 inches across, noncalcareous, mildly alkaline, clear smooth boundary.
10 to 14 inches	**Very cherty clay:** dark reddish brown, moist, moderate very fine subangular blocky structure, hard, friable, common fine roots, patch clay films on peds, noncalcareous, mildly alkaline, abrupt irregular boundary.
14 to 28 inches	**Stony clay:** dark reddish brown, extremely stony, moist, few fine roots, clayey material in vertical and horizontal fractures and solution cavities, 75 percent limestone cobbles and stones and chert pebbles and cobbles, noncalcareous, mildly alkaline, abrupt wavy boundary.
28 to 36 inches	**Coarsely fractured indurated limestone:** dark reddish brown clay in crevices.

After *Soil Survey of Comal and Hays Counties, Texas.*

Table 2.
Comfort Series Soil Profile

0 to 6 inches	**Extremely stony clay:** dark brown, moist, moderate medium blocky structure parting to moderate fine blocky structure parting to moderately fine blocky, very hard, very firm, many fine roots, about 45 percent by volume cobbles and stones as much as 4 feet across on the surface and in the soil; noncalcareous, mildly alkaline, clear smooth boundary.
6 to 13 inches	**Extremely stony clay**: dark reddish brown, moist, moderate very fine blocky structure parting to moderate fine blocky, very hard, very firm, common fine roots, about 70 percent by volume stones as much as 4 feet across, noncalcareous, mildly alkaline, abrupt irregular boundary.
13 to 20 inches	**Indurated dolomitic limestone:** soil material in the narrow fractures

After *Soil Survey of Comal and Hays Counties, Texas.*

General Geology

The attached figures show both geology of the area from *Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Outcrop, Comal County, Texas, USGS Water Resources Investigations Report 94-4117.*

The site lies within the outcrop area of the Grainstone Member of the Kainer Formation (which represents the uppermost Kainer Formation Member) and the Regional Dense Member and the Leached and Collapsed Members of the Person Formation (lowermost Person Formation). The characteristics of these formations are described below.

Kainer Formation, grainstone member: The grainstone member overlies the Kirschberg evaporate member and is the uppermost member of the Kainer Formation. The grainstone member is about 50 feet thick and primarily is dense, tightly cemented *miliolid* grainstone; however, patches of mudstone to wackestone are scattered throughout. Chert nodules exist in this member, but are rare. Locally, *Toucasias* are common near the top of the member. *Chondradonta*, a distinctive, thick-shelled pelecypod, is in approximately the same stratigraphic interval as the *Toucasias*, but is not common.

Person Formation, regional dense member: The regional dense member is the lowermost member of the Person Formation, consisting of dense, argillaceous mudstone. The grainstone member of the Kainer Formation and the regional dense member of the Person Formation combined is a distinctive mapping horizon of the Edwards Group outcrop on the San Marcos platform.

/

Person Formation, leached and collapsed members, undivided: The leached and collapsed members, undivided overlie the regional dense member and were mapped as one because they could not be distinguished as separate members. These members consist of variably burrowed mudstone to grainstone and intervals of crystalline limestone; chert lenses are common as well. The collapsed zones common in this member probably were caused by the collapse of overlying limestone into the voids created by early dissolution of the thin evaporate layers and lenses. The lower part of the cyclic and marine members, undivided, were difficult to distinguish from the upper part of the leached and collapsed members, undivided, because of their similar lithology.

Site Specific Geology

Joe Moulder and Douglas McGookey, PG performed site visits to the subject property to complete the reconnaissance of the property according to the guidelines provided in the instructions to geologists for completion of the geologic assessment.

Our observations indicate that much of the property is undulating land covered with 1 to 3 feet of soil, grass and stands of trees. Limestone outcrops are common, and the soil typically contains limestone rubble as described in the soil descriptions. Much of the soil is covered with grass and native vegetation that obscured the soil and rock surface. Where the soil and rock have been scrapped or eroded from the surface, the underlying limestone is typically massive. Fractures, where present, do not exhibit openings that would allow water to flow easily into the subsurface as they are generally underlain by massive limestone. A small quarry or borrow pit is present in the western corner of the large tract that shows a good vertical outcrop of the limestone. It shows a surface soil profile, underlying eroded and broken limestone rubble, and then beneath the rubble a massive, dense limestone. Our observations indicate that this profile is typical of most of the property, regardless of the underlying formations and members.

In ravines and some of the low lying drainages fractured limestone rocks were observed. In some areas large boulders that have fractured and broken away from outcropping limestone are present. Some fractures had significant openings that likely allow water to filter into the underlying rocks. We suspect that most of these areas are underlain by massive limestone as observed elsewhere on the property. However, the potential for underlying sinkholes, faults, or caves cannot be ruled out.

A total of eight (8) geologic features and eight (8) manmade features were discovered on the property. All are individually described below:

Geologic Feature F1: Feature F1 is a linear zone of fractured limestone. The feature occurs in the bed of a tributary of Alligator Creek near the western most corner of the property. The fractures, where visible, are overlying massive limestone indicating low

infiltration and lateral downstream movement of water. The exposed feature is approximately 300 feet long by 20 feet wide.

Geologic Feature F2: Feature F2 is a tabular zone of fractured limestone. The feature occurs in the bed of Alligator Creek just east of feature F1. The fractures are shallow (<6") and are underlain by massive limestone indicating low infiltration and lateral downstream movement of water. The exposed feature is approximately 50 feet long by 60 feet wide.

Geologic Feature F3: Feature F3 is a linear zone of fractured limestone with a fairly steep fall toward Alligator Creek to the south. The feature occurs in the bed of a tributary of Alligator Creek east of features F1 & F2. The fractures are <1 foot deep and are underlain by massive limestone indicating low infiltration and lateral movement of water downstream. The exposed feature is approximately 60 feet long by 40 feet wide.

Geologic Feature F4: Feature F4 is a zone of fractured limestone located in a tributary of Alligator Creek. The feature is approximately 20 feet wide by 50 feet long and occurs near the southeast property line. The fractures are 6 to 8 inches deep and are generally filled in with organic matter. Massive limestone underlies the fractured limestone directing water movement laterally downstream.

Geologic Feature F5: Feature F5 is a zone of fractured limestone located in the same tributary of Alligator Creek as feature F4. The feature is approximately 100 feet wide by 100 feet long and occurs near the southeast property line. The fractures are 6 to 8 inches deep and are generally filled in with organic matter. Massive limestone underlies the fractured limestone directing water movement laterally downstream.

Geologic Feature F6: Feature F6 is a zone of fractured limestone located in a tributary of Alligator Creek. The feature is approximately 50 feet wide by 200 feet long and occurs on the southeast property line. The fractures are 6 to 12 inches deep and are generally filled in with organic matter although some have no fill material at all. Massive limestone underlies the fractured limestone directing water movement laterally downstream and off the property.

Geologic Feature F7: Feature F7 is a zone of fractured limestone located in a tributary of Alligator Creek. The feature is approximately 80 feet wide by 300 feet long and occurs near the northeast corner of the property. The fractures are 4 to 10 inches deep and are generally filled in with organic matter. Massive limestone underlies the fractured limestone directing water movement laterally downstream.

Geologic Feature F8: Feature F8 is a zone of fractured limestone located in a tributary of Alligator Creek. The feature is approximately 40 feet wide by 250 feet long and occurs near the center of the property. The fractures are 6 to 8 inches deep and are generally

filled in with organic matter. Massive limestone underlies the fractured limestone directing water movement laterally downstream.

Manmade Feature MM1: This feature is a stock tank excavated in the ground. It measures about 120 feet in diameter and is less than 8 feet in depth. Reddish brown mud lines the banks and covers the bottom. At present the tank appears mostly full.

Manmade Feature MM2: This feature is a small stock tank located on a hillside. The tank measures about 30 feet in diameter and is less than 5 feet in depth. There is organic debris on the bottom and the tank is dry.

Manmade Feature MM3: This feature is a stock tank located on a hillside near MM2. The tank measures about 30 feet in diameter and is less than 5 feet in depth. There is organic debris in the bottom and the tank is dry.

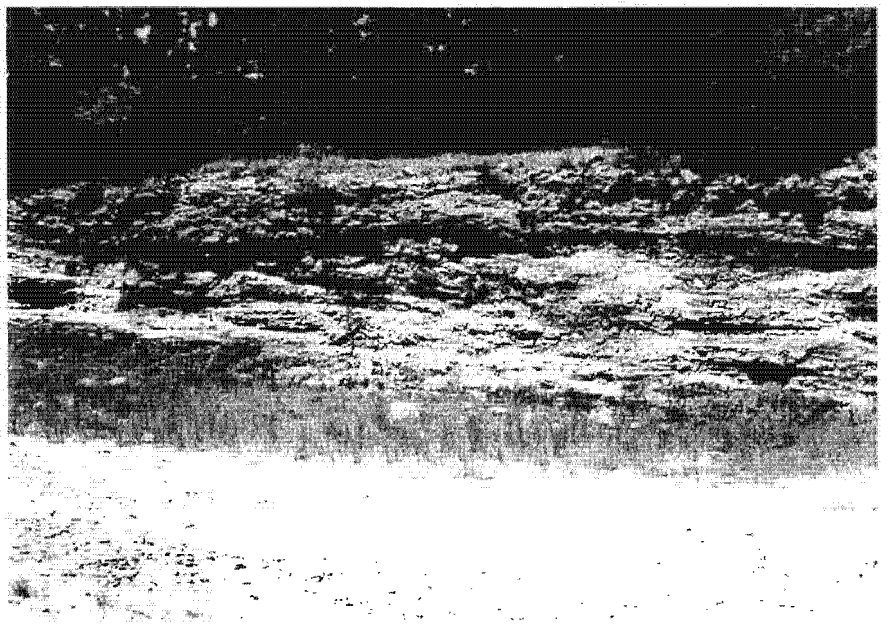
Manmade Feature MM4: This feature is a stock tank located on a hillside near MM2 and MM3. The tank measures 50 feet by 30 feet and is less than 6 feet depth. There is organic debris on the bottom and the tank is dry.

Manmade Feature MM5: This feature is a stock tank located in a draw near the center of the property. The tank measures 60 feet by 100 feet and is less than 10 feet in depth. There is a thick layer of organic debris on the bottom and the tank is dry.

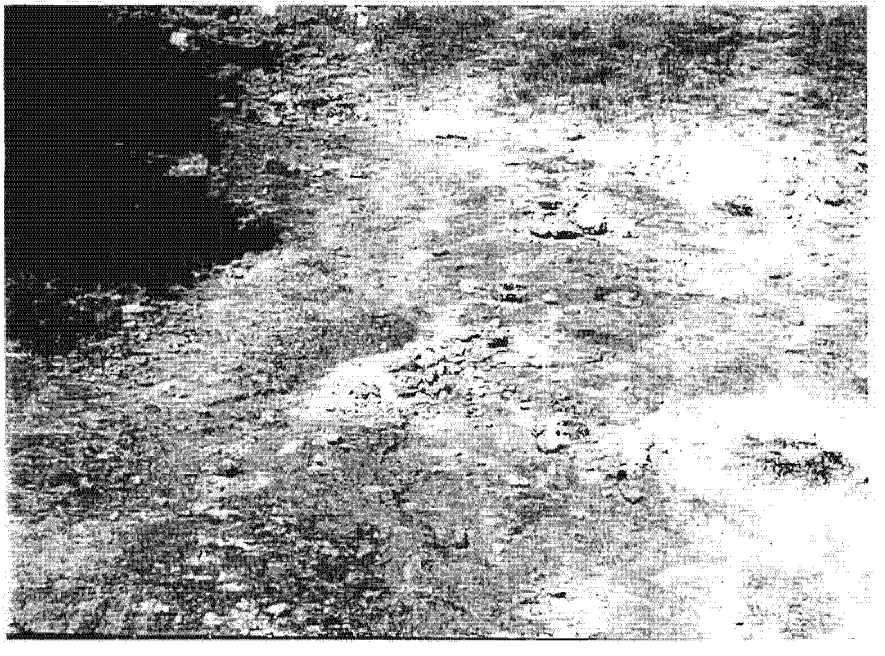
Manmade Feature MM6: This feature is an old borrow pit or caliche pit located along the northwest property line. The pit measures 30 feet by 200 feet and exhibits about 8 feet of bedrock relief. The floor of the pit is massive and contains very little organic debris. This pit illustrates the general near surface geology on the property by revealing the fractured bed on the surface and the more massive bed below.

Manmade Feature MM7: This feature is another caliche pit, which is located east of MM6 on a hillside. The pit measures 20 feet by 250 feet and is 18 inches in depth. The floor of the pit is massive and contains very little organic debris.

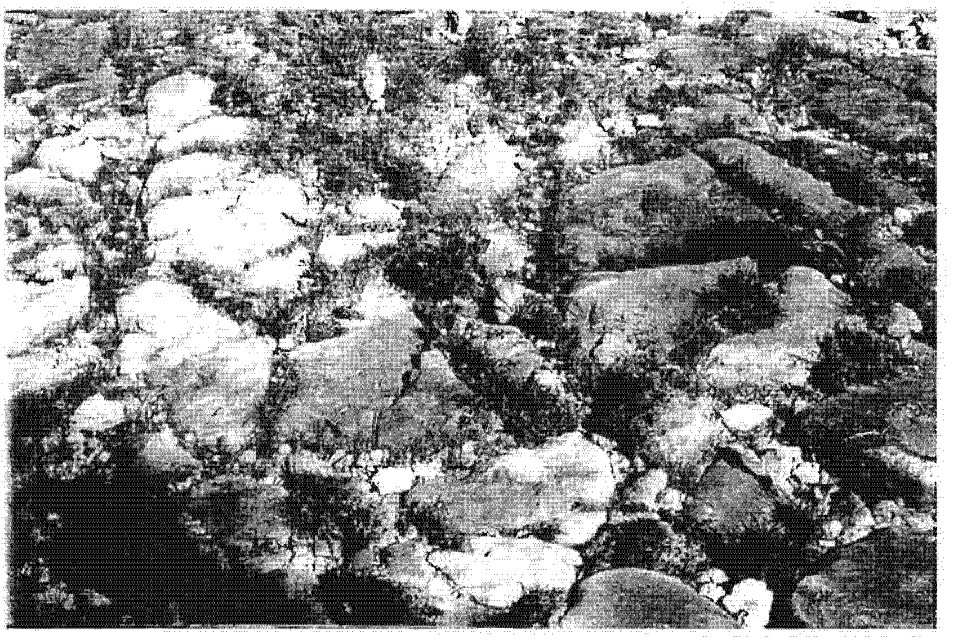
Manmade Feature MM8: This feature is a working water well located behind the old farm house. The casing appears to be 6 inches in diameter and the depth is unknown. The well is covered by an enclosure and cannot receive any run off.



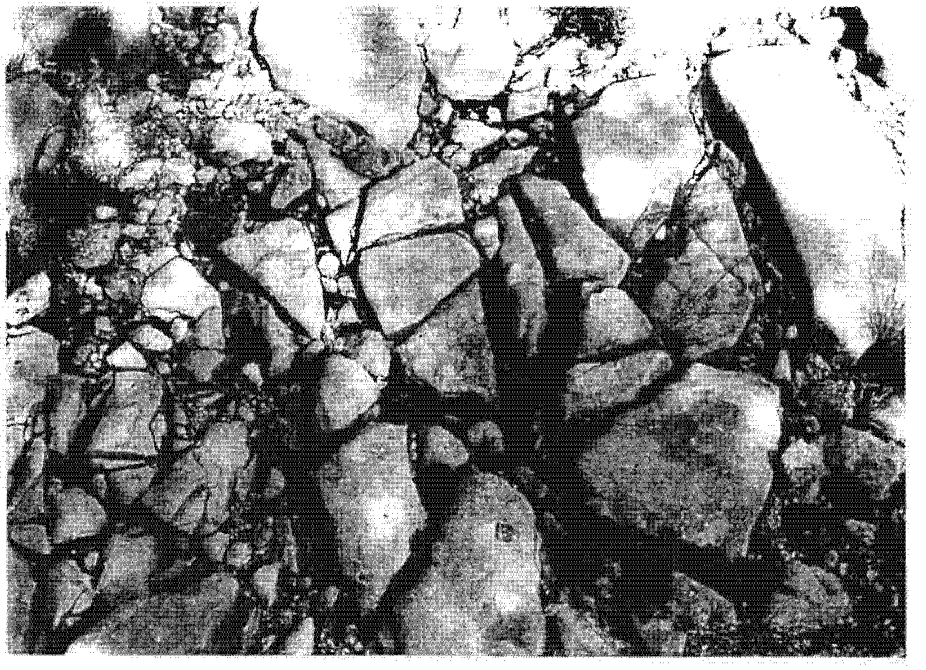
Photograph 1. Feature MM7, showing fractured limestone over massive limestone.



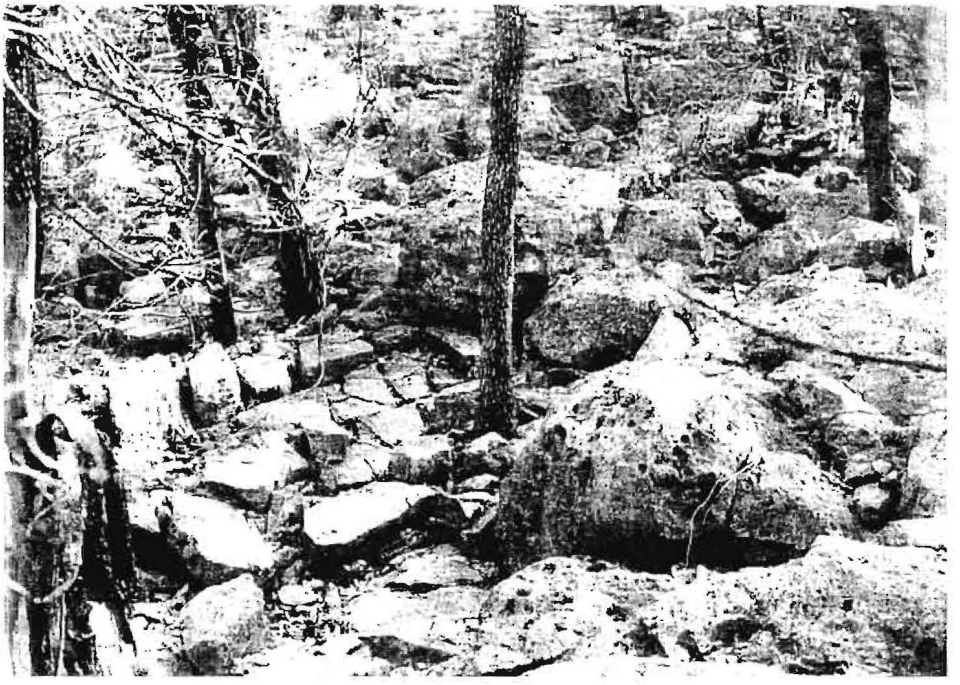
Photograph 2: Typical outcrop of massive limestone on subject property.



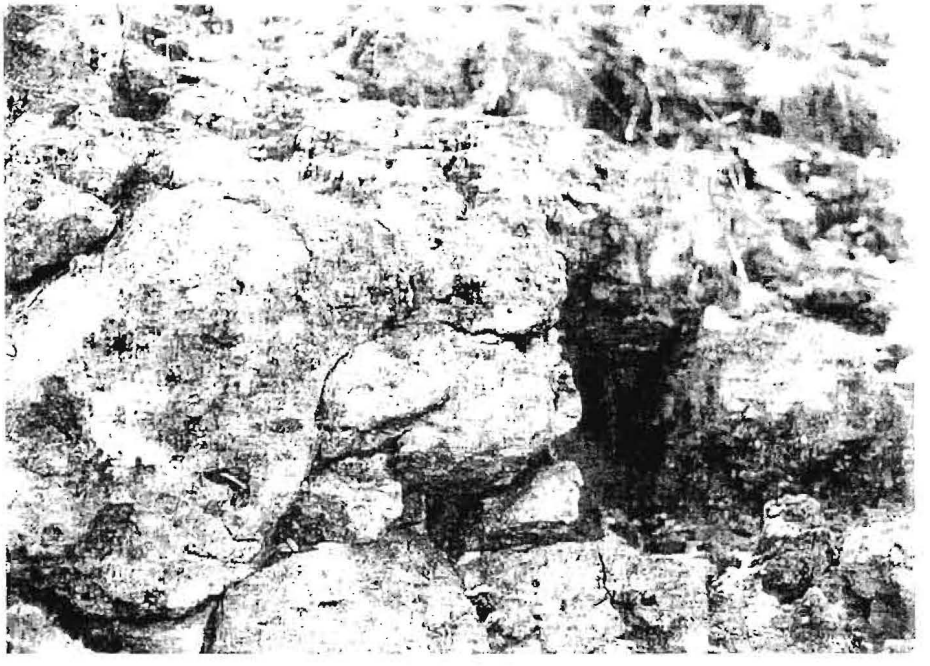
Photograph 3. Feature F2 showing typical fractured rock outcrop in streambed drainage.



Photograph 4: Feature F4 showing typical fractured rock with gravel and organic infilling.



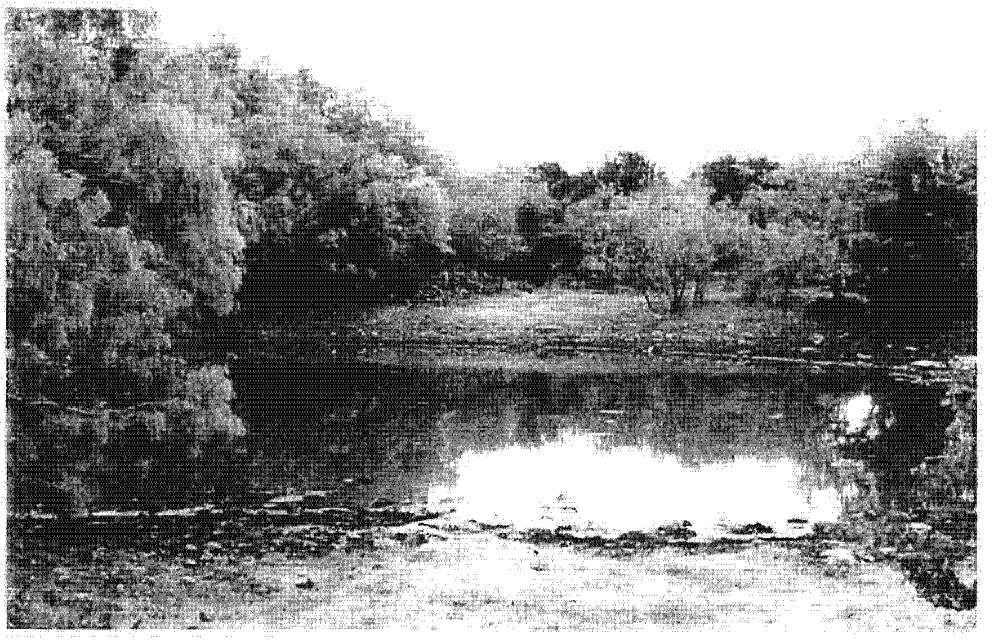
Photograph 5: Feature F1 showing typical fractured rock and boulders in the streambed.



Photograph 6: Feature F3 showing typical outcrop on side of drainage.

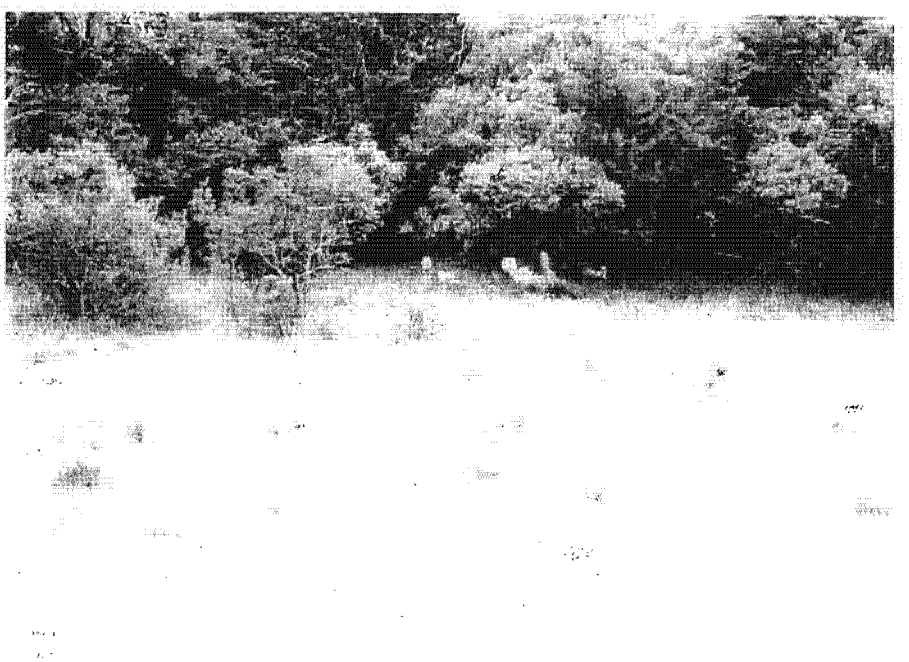
Photograph 7: Feature F7 showing typical fractured rock with organic infilling.

Photograph 8: Feature F6 showing typical fractured rock with organic infilling and tree growth.



Photograph 9: Feature MM1 stock tank with reddish-brown clay bottom holding water.

Photograph 10: Typical bottomland on adjoining transition zone tract.

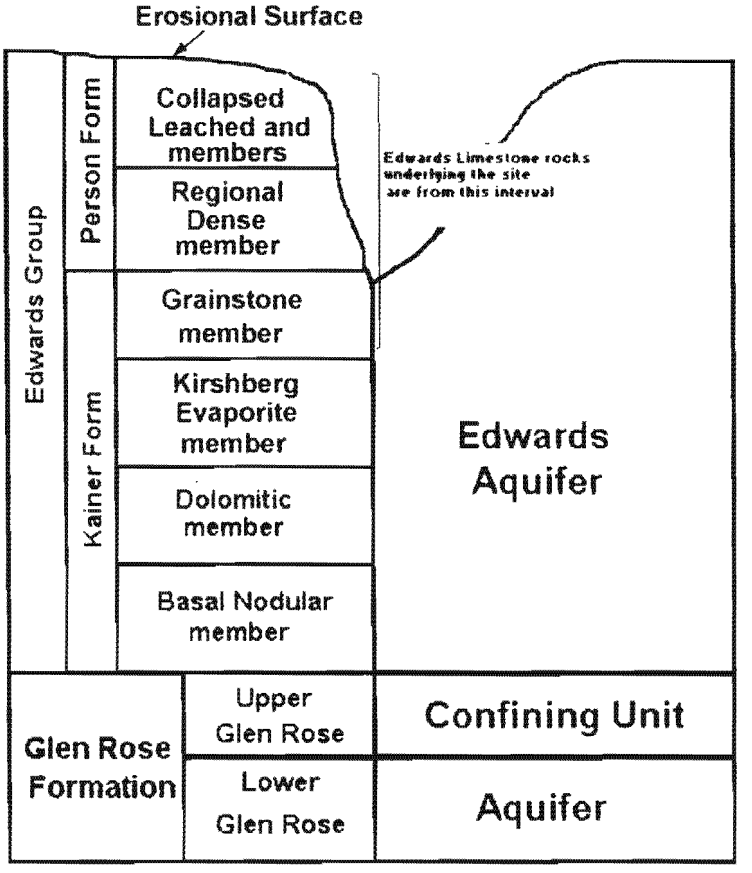


Photograph 11: Typical grass covered open area on recharge zone tract of subject property.

Geologic Column:

Limestone at the surface and shallow subsurface is likely from the grainstone member of the Kainer Formation and the regional dense member and collapsed and leached members of the Person Formation as shown on the geologic Column (Table 3).

Table 3. Geologic Column



GEOLOGIC ASSESSMENT TABLE — PROJECT NAME: 974 Acre Tract - FM 1102 - Comal County (Hunter Quarry)

LOCATION			FEATURE CHARACTERISTICS											EVALUATION			PHYSICAL SETTING		
1A	1B *	1C *	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11	12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DIP	DENSITY (NUMBER)	FRACTURE (FEET)	TYPE	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	≥40	<1.6	≥1.6	
F1	29.47.35.77	98.05.10.04	FRZ	30	Kep	300'	20'	<1'	NA	0	1		N,O	5	35	X			X	Streambed
F2	29.47.40.98	98.05.8.62	FRZ	30	Kep	50'	40'	<1'	NA	0	1		N,O	5	38	X			X	Streambed
F3	29.47.36.26	98.04.50.32	FRZ	30	Kep	60'	40'	<18"	NA	0	1		N,O	8	38	X			X	Streambed
F4	29.47.50.27	98.04.5.96	FRZ	30	Kep	50'	20'	<1'	NA	0	1 to 2		N,O	8	38	X			X	Streambed
F5	29.47.48.17	98.04.4.28	FRZ	30	Kep	100'	100'	<1'	NA	0	1		N,O	6	36	X			X	Streambed
F6	29.47.31.17	98.04.23.29	FRZ	30	Kek	200'	50'	<1'	NA	0	1		N,O	6	36	X			X	Streambed
F7	29.47.56.04	98.04.4.46	FRZ	30	Kep	300'	80'	<1'	NA	0	1 to 2		N,O	5	35	X			X	Streambed
F8	29.47.54.86	98.04.33.97	FRZ	30	Kep	40'	250'	<1'	NA	0	<1		N,O	7	37	X			X	Streambed

* DATUM.

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12 TOPOGRAPHY

Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

I have read, I understood, and I have followed the Texas Natural Resource Conservation Commission's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field. My signature certifies that I am qualified as a geologist as defined by 30 TAC 213.

STATE OF TEXAS
Douglas A. McGookey
Geologist
License Number 368
LICENSED PROFESSIONAL GEOSCIENTIST

Date: April 15, 2005

Sheet 1 of 2

TNRCC-0585-Table (Rev. 5-1-02)

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: 974 Acre Tract - FM 1102 - Comal County (Hunter Quarry)

LOCATION			FEATURE CHARACTERISTICS											EVALUATION		PHYSICAL SETTING		
1A	1B *	1C *	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DIP	CAVE PASSAGE	MAPPABLE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		1G						<40	>40	<1.6	>1.5	
MM1	29 48,14.44	98,05 51 88	MB	30	Kek	120'	120'	<8'	NA				F,O	5	35	X			X	hilltop
MM2	29 48.3 77	98.03 56 29	MB	30	Kek	30'	30'	<5'	NA				O	5	35	X			X	hillside
MM3	29 48.5 14	98.04 3 11	MB	30	Kek	30'	30'	<5'	NA				O	5	35	X			X	hillside
MM4	29.48,1.54	98.04 2.54	MB	30	Kek	50'	30'	<6'	NA				O	5	35	X			X	hillside
MM5	29.47 51 90	98 04 32 51	MB	30	Kek	100'	60'	<10'	NA				O	5	35	X			X	hillside
MM6	29.47,45 31	98,05,5 79	MB	30	Kek	200'	30'	<8'	NA				N	5	35	X		X		hillside
MM7	29.47,50 17	98.04,47 46	MB	30	Kek	250'	20'	18"	NA				N	5	35	X		X		hillside
MM8	29.48 6.87	98,04.32 81	MB	30	Kek	6"	6"	>200'	NA				N	5	35	X		X		hillside

* DATUM

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown sand gravel
O	Loose or soft mud or soil organics leaves sticks dark colors
F	Fines, compacted clay-rich sediment soil profile, gray or red colors
V	Vegetation Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

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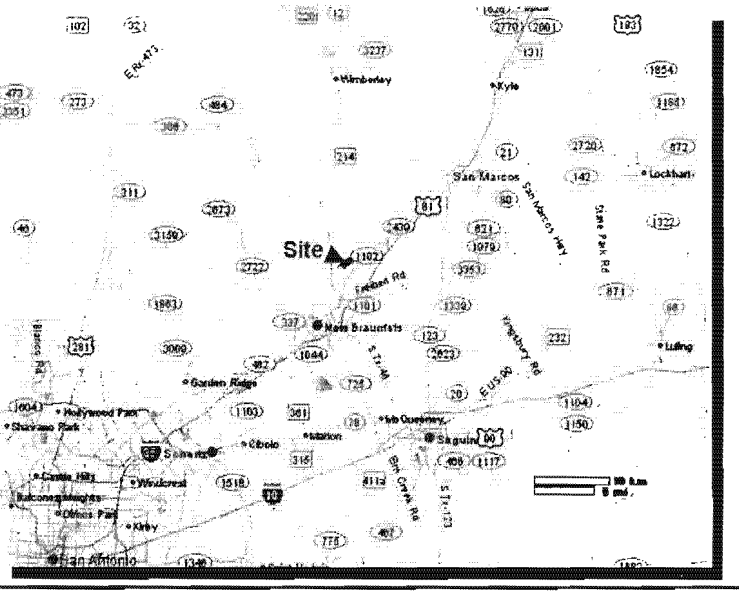
My signature certifies that I am qualified as a geologist as defined in 30 TAC 213

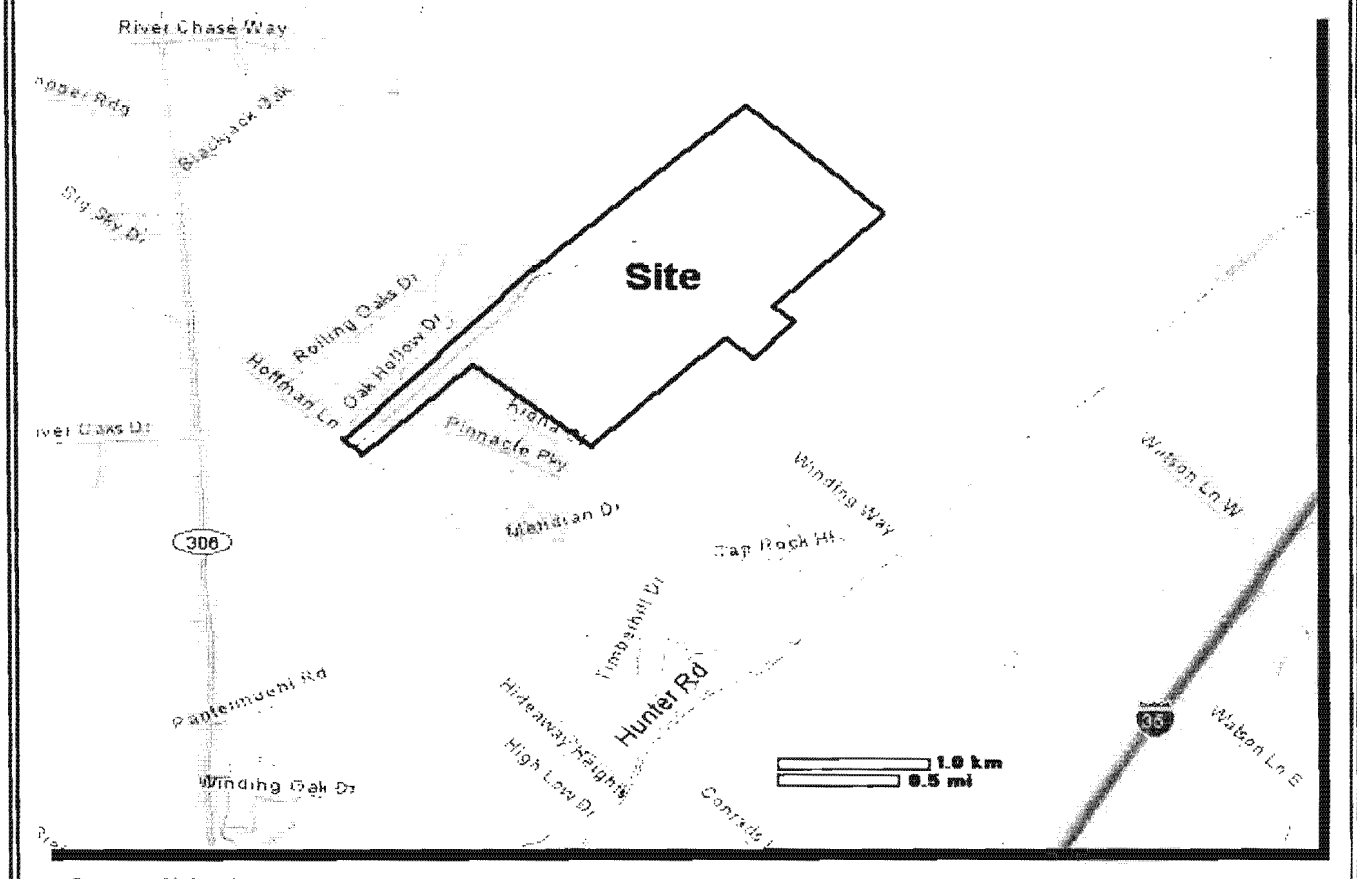
STATE OF TEXAS
Douglas A. McGookey
Geologist
License Number 368
LICENSED PROFESSIONAL GEOSCIENTIST

Date Apnl 15 2005

Sheet 2 of 2

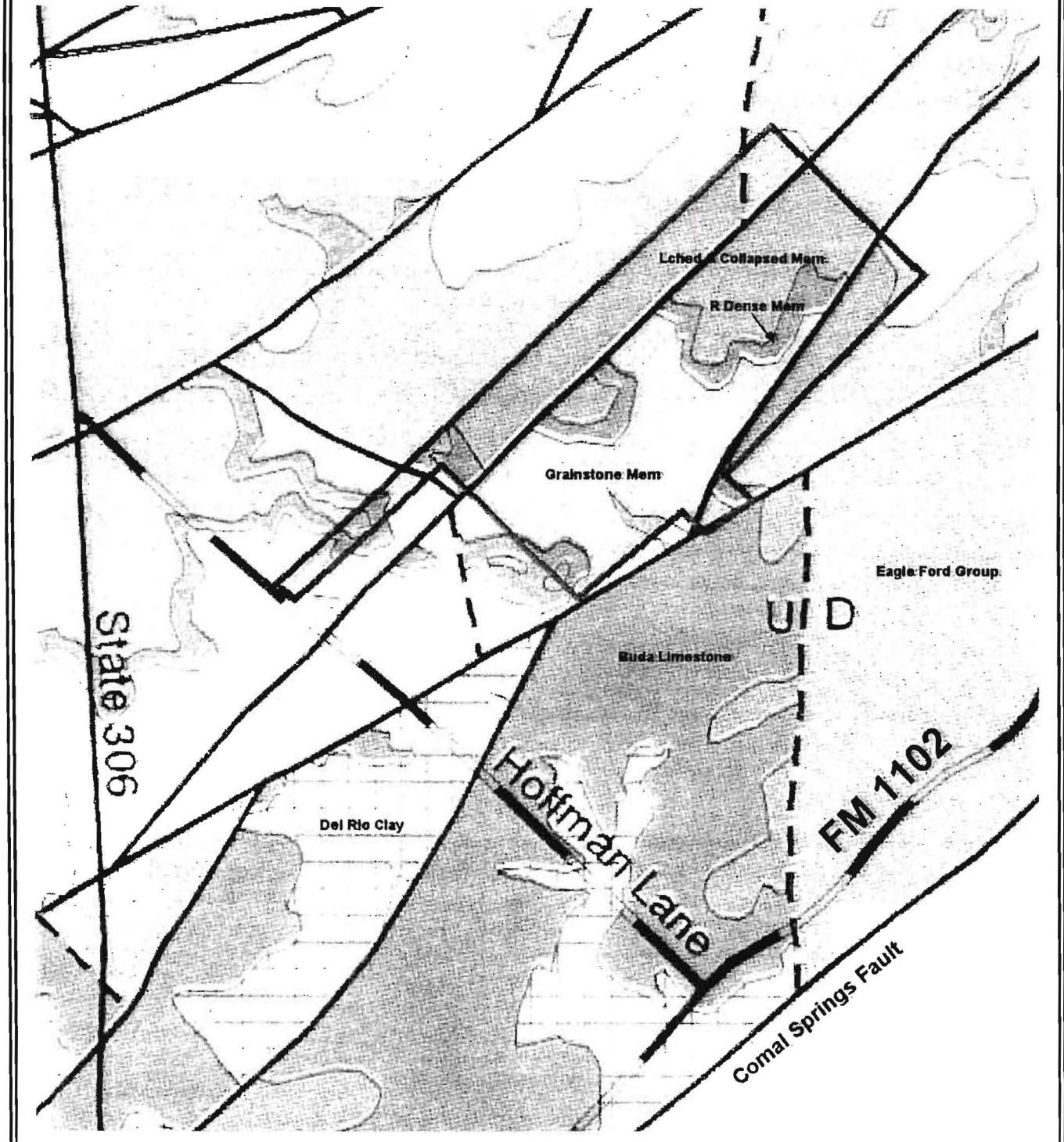
TNRCC-0585-Table (Rev. 5-1-02)





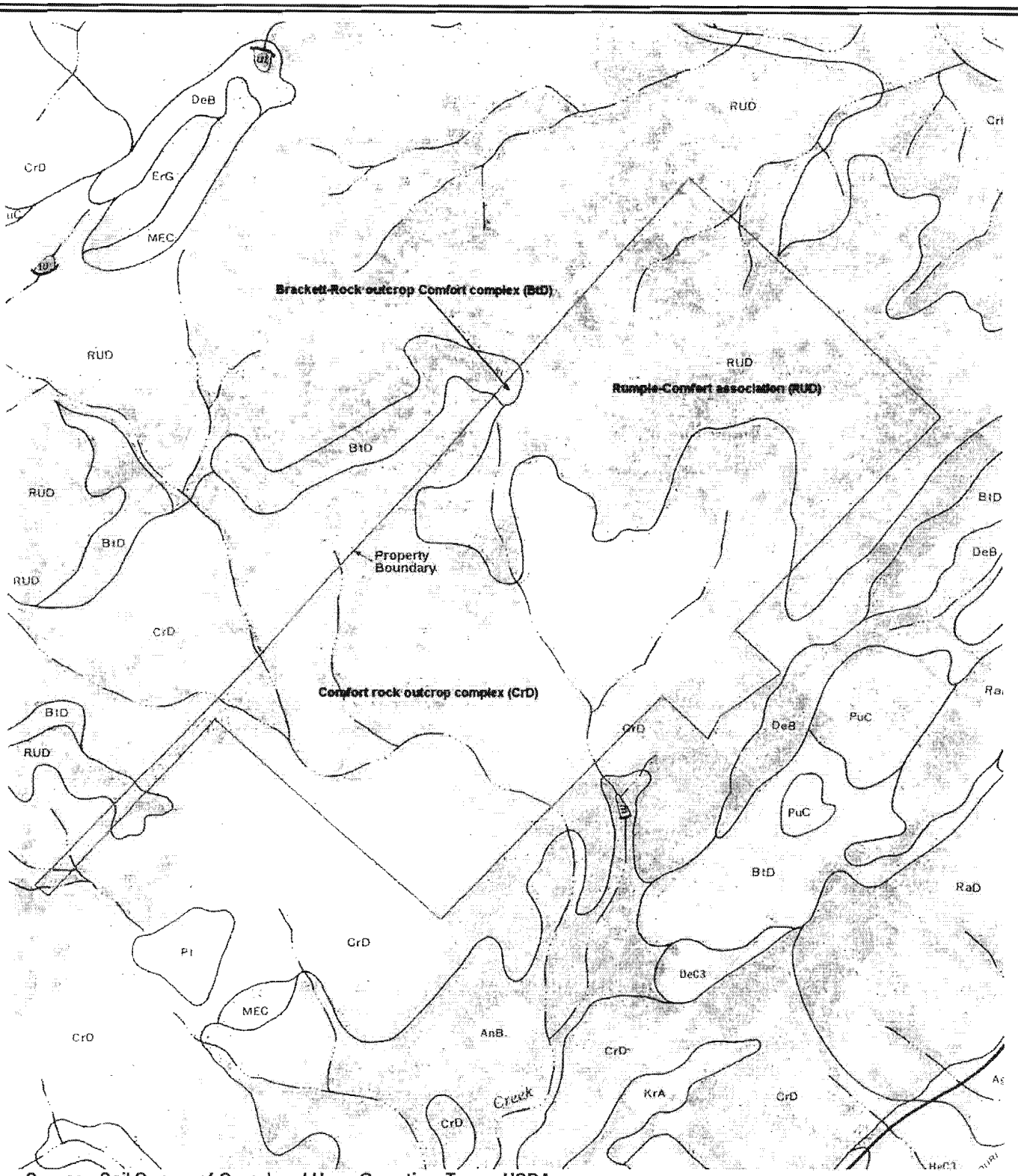
Source: Yahoo!

Medina Consulting Company	Drawn by: DM Scale: As Shown Date: April 2005	N	Site Location Map Recharge Zone - Hunter Quarry Property Comal County, Texas



Source: *Map Showing Hydrologic Subdivisions of the Edwards Aquifer Outcrop, Comal County, Texas*

Medina Consulting Company	Drawn by: DM Scale: None Date: April 2005	N	Geologic Map Quarry Property Comal County, Texas



Source: Soil Survey of Comal and Hays Counties, Texas, USDA

Medina Consulting Company	Drawn by: DM Scale: As Shown Date: April 2005	N	Soil Distribution Map Recharge Zone - Hunter Quarry Property Comal County, Texas

Geologic Feature CD1: This feature was discovered in the topographic contours after completion of the mapping. The feature is a closed depression about 600 feet by 600 feet by about 6 feet deep. It lies near the top of a hill. In the center of the depression is a small muddy area that is heavily used by cattle. The feature is filled with dried mud. The feature lies near a hilltop, so the only catchment area is the closed depression. The filling of the center of the depression with dried mud indicates downward migration is limited and water ponds in the depression following rain. It apparently catches perched water after a rainstorm as indicated by the heavy use by cattle when still wet. Photographs of the depression are shown below.

Photo 1. View of the closed depression. The center of the depression is a muddy area heavily used by cattle after a rain.

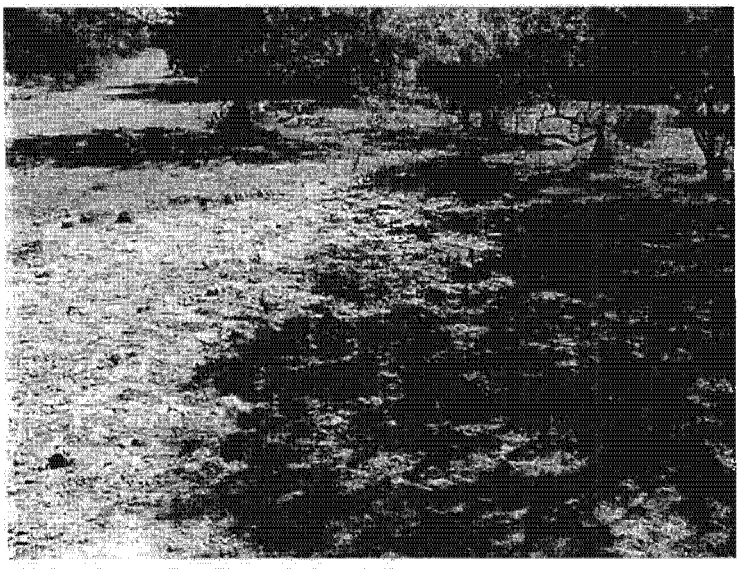


Photo 2. The closed deperssion is filled with clay that evidently holds perched surface water after rain.

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME:

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	≥40	<1.6	≥1.6	
CD 1	29 48' 18 18"	98 4' 16 38"	CD	5	Kep	600	600	6	NA	0	NA	NA	O	6	11	x			x	Hilltop

* DATUM:

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

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My signature certifies that I am qualified as a geologist as defined by 30 TAC 213

STATE OF TEXAS
Douglas A. McGookey
Geologist
License Number 368
PROFESSIONAL LICENSED GEOSCIENTIST

Date August 22, 2005

Sheet 3 of 3

TNRCC 0585 Table (Rev. 5-1-02)

Geologic Feature CD2: This is a second feature apparent in the topographic contours after completion of the mapping. The feature is a closed depression about 100 feet by 100 feet by about 10 feet deep in the deepest part, which is the middle. It is a circular, shallow bowl-shaped feature. In the center of the depression is a small muddy area that is heavily used by cattle. The feature is filled with dried mud. The filling of the center of the depression with dried mud indicates downward migration is limited and water ponds in the depression following rain. It apparently catches perched water after a rainstorm as indicated by the heavy use by cattle when still wet. Photographs of the depression are shown below.

Photo 1. View of the second closed depression. The center of the depression is a muddy area heavily used by cattle after a rain.

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: Havenwood at Hunters Crossing

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
CD2	29 48' 18.06"	98 4' 34.79	CD	5	Kep	100	100	10	NA	0	NA	NA	O	6	11	x		x		Hillside

* DATUM:

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
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STATE OF TEXAS
Douglas A. McGookey
Geologist
License Number 368
LICENSED PROFESSIONAL GEOSCIENTIST

Date January 25, 2006

Sheet 1 of 1

TCEQ-0585-Table (Rev. 10-01-04)

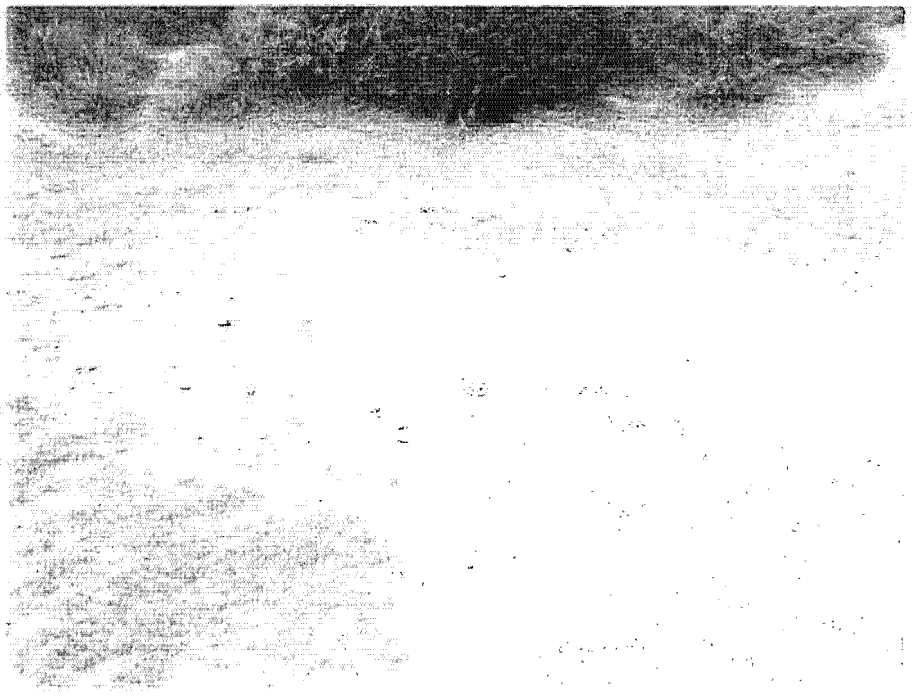
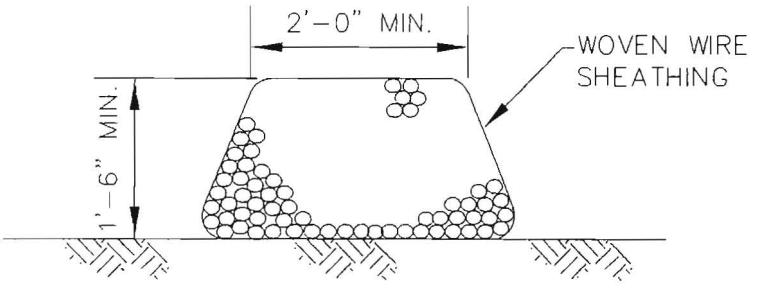
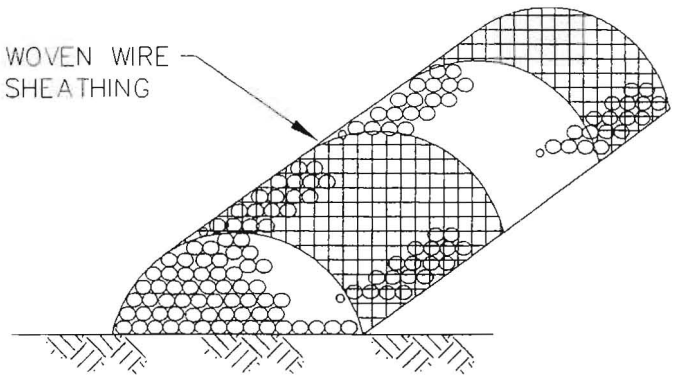


Photo 2. The closed deperssion is filled with clay that evidently holds perched surface water after rain.



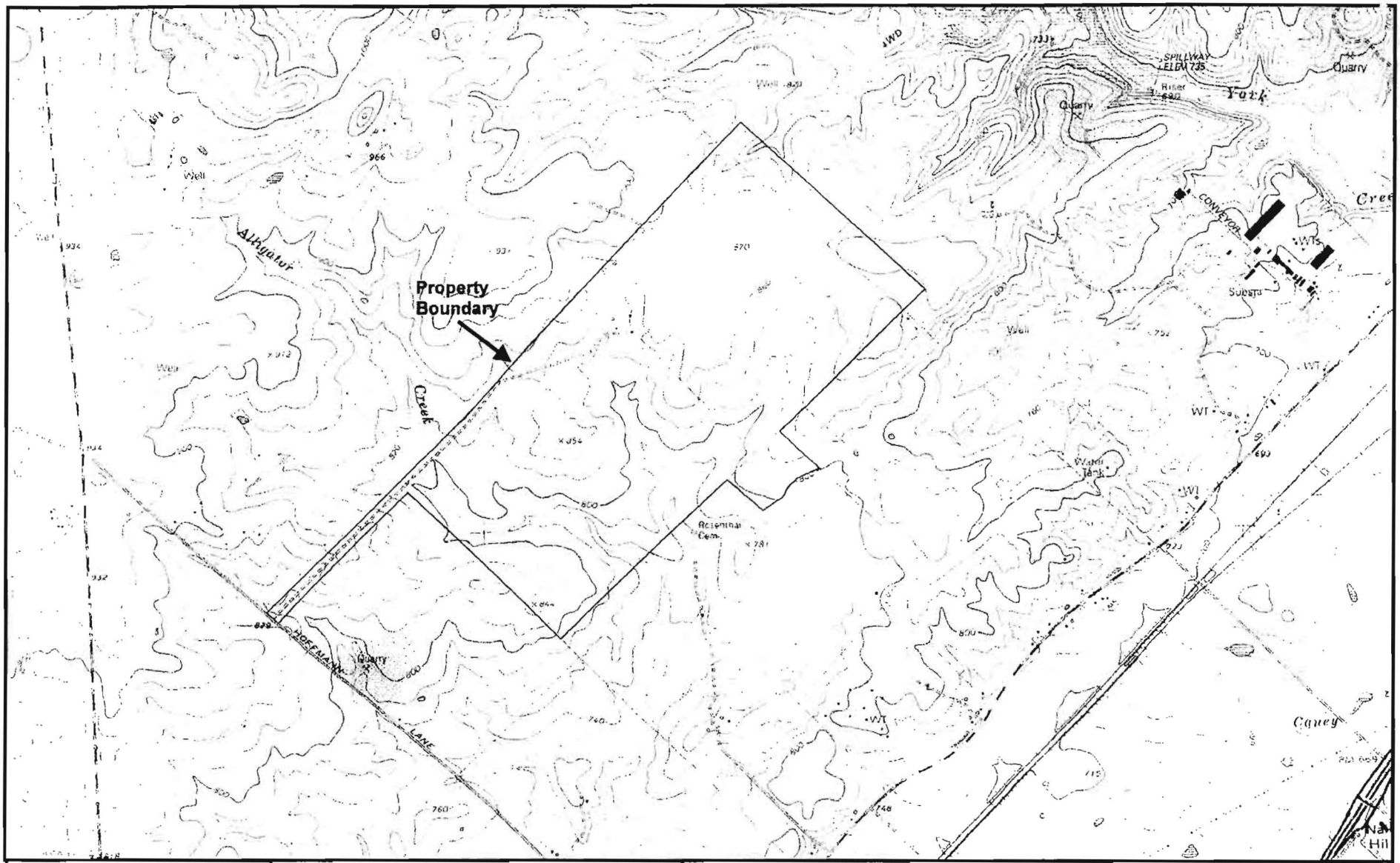


GENERAL NOTES

1. USE ONLY OPEN GRADED ROCK 3–5 INCHES DIAMETER.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1 INCH OPENINGS AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE – WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED. DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH OF ONE–THIRD THE HEIGHT OF THE BERM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SI AND IN SUCH A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE SERVICE ROCK BERMS, SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 6 INCHES..
6. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

ROCK BERM

N.T.S.

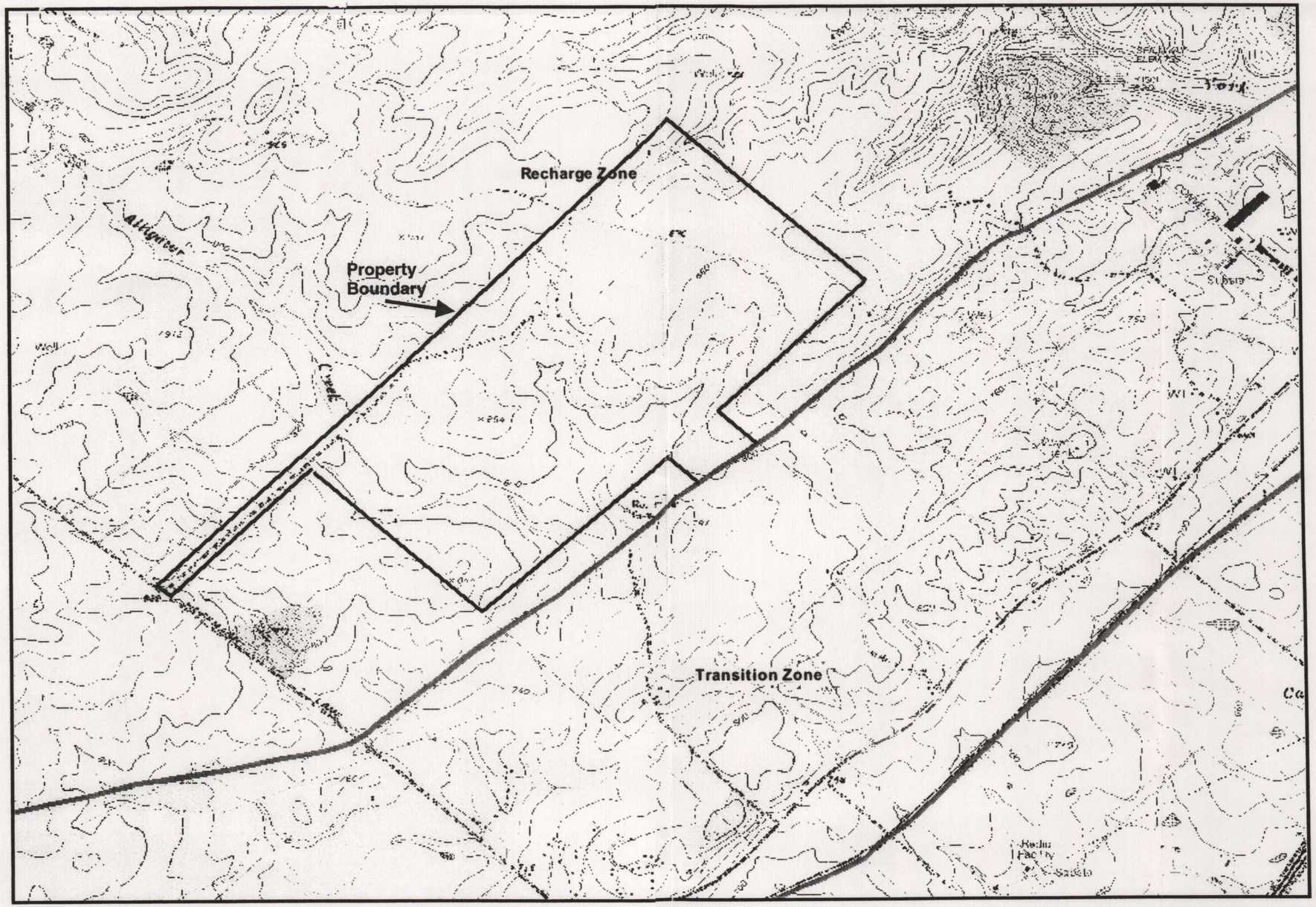


Medina Consulting Company	DM Source: Texas Natural Resource Infromation System April 6, 2005	USGS Topographic Map Hunter Quarry Property Comal County, Texas

Medina Consulting Company

DM
Source: Texas Natural Resource Infromation System
April 6, 2005

1995 Aerial Photograph
Hunter Quarry Property
Comal County, Texas



Medina Consulting Company	DM Source: Obtained April 6, 2005 from TCEQ Website April 2005	**TCEQ Recharge Zone Map** **Hunter Quarry Property** **Comal County, Texas**

100 E. San Antonio St. Suite 100
San Marcos, TX 78666-5568

512 / 353-3335
FAX 512 / 396-0224

PRO-TECH
ENGINEERING
GROUP
INCORPORATED

January 24, 2006

TCEQ
14250 Judson Road
San Antonio, Tx 78233

Attn: John Mauser

Re. Havenwood at Hunters Crossing
Comal County, Texas

Mr. Mauser:

I apologize for not responding in a timely manner to your request for additional information as stated in your fax transmittal dated January 9, 2006. We have needed an additional visit to the site and have not been able to do so until today. We propose to have the information you requested delivered to your office Thursday afternoon, the 26th.

Thank you for your assistance and if you have any questions please call.

Respectfully,
PRO-TECH ENGINEERING GROUP, INC.

Richard McDaniel

XC: Bluegreen Southwest

EO# 14764
Mauser ltr.

EDWARDS AQUIFER
AUTHORITY

6.10-2.7-164

October 7, 2005

Mr. Richard Garcia
Texas Commission on Environmental Quality
14250 Judson Rd
San Antonio, TX 78233-4480

Dear Mr. Garcia:

The purpose of this letter is to provide comments on the 30 TEX. ADMIN. CODE (TAC) ch. 213 application submitted for Havenwood at Hunter's Crossing. Specifically, this letter is to address the water well within the development boundaries.

Edwards Aquifer Authority (Authority) staff has reviewed the Water Pollution Abatement Plan (WPAP) application that was received by the Texas Commission on Environmental Quality (TCEQ) on September 7, 2005. The proposed development is for a 974.31-acre single-family residential subdivision in Comal County. The proposed development includes single family homes with associated infrastructure.

In the WPAP application, the developer's agent, Pro-Tech Engineering Group, states there is one well on the property that is not in use and will be properly abandoned. In the Geologic Assessment, the geologist, Douglas McGookey, P.G., indicates that there are no water wells on site but does include one in the Geologic Assessment Table, labeling it MM-8. Mr. McGookey states the well is "a working water well" but does not indicate if is complies with 16 TAC §76 (current state rules regarding well construction standards) or if it will be properly abandoned. Authority staff recommends Pro-Tech Engineering Group provide supplemental information regarding the status, condition, and planned disposition of the well.

Authority staff also advises that if a well on the property is to be plugged, a permit from the Authority will be required prior to plugging the well. In addition, if a water well is to remain in use, the well may require an Edwards Aquifer withdrawal permit issued by the Authority. The Authority has promulgated rules regarding wells, well drilling, and well plugging. These rules may be obtained at http://www.edwardsaquifer.org.

1615 N. St. Mary's Street San Antonio, Texas 78215-1415 (210) 222-2204 (800) 292-1047
www.edwardsaquifer.org

If you have any questions regarding the Authority's well construction and well plugging rules, please call Mr. Jeff Robinson, Program Coordinator, at (210) 477-5145. If you have other questions regarding the comments presented above, please call Ms. Robin Tremallo, P.G., Environmental Coordinator, at (210) 477-5141.

Sincerely,

Robert J. Potts
General Manager

RJP:RLT/ev

cc: Mr. Jack Dean, Bluegreen Southwest
Mr. Kelly Kilber, Pro-Tech Engineering Group
Mr. Kirk Nixon, San Antonio Water System

TCEQ
Protecting Texas by Reducing and Preventing Pollution

FAX TRANSMITTAL

DATE: 1/9/06 NUMBER OF PAGES *(including this cover sheet)*: 2

TO:
Name: **Richard McDaniel, PE**
Organization: **Pro-Tech Engineers**
FAX Number: **512/396-0224**

FROM: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Name: JM **John Mauser**
Division/Region: **Field Operations Division, Region 13 (San Antonio)**
Telephone Number: **210/403-4024**
FAX Number: **210/545-4329**

NOTES:
Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Havenwood at Hunter's Crossing; Located on the northwest side of FM 1102, approximately 1.3 miles north of the intersection of FM 1102 and Hoffman Lane; Comal County, Texas
TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer; Edwards Aquifer Protection Program ID No. 2408.00, Investigation No. 432792, Regulated Entity No. 432792

The application received from you on 9/7/05, has been determined to be administratively incomplete and/or technically inadequate. For our review to continue, please provide the information listed below. If this information is not received by 1/23/06, or is incomplete or inadequate, the application may be denied. If you have any questions, please call John Mauser at 210/403-4024.

1. Response to EAA letter – proposed protection for on-site water well.
2. The Geologic Assessment assesses the on-site water well as not sensitive due to a low relative infiltration rate. The TCEQ argues that a well has a high relative infiltration rate. Additional explanation should be provided, or the GA should be revised.
3. Site plan: 1) add scale on site plan (Geologic Map must be at the same scale as the site plan), and 2) label contour lines.
4. Describe the topographic anomoly located approximately 1,100' NNW of feature MM-8, and provide an assessment by the project geologist, if necessary.
5. Show detail of wire sheathing on rock berm, as described in the Inspection & Maintenance Guidelines for Rock Berms.
6. PG seal on Geologic Assessment Tables, and Geologic Map (seal & signature)
7. If CD-1 is not a sensitive feature, has a low infiltration rate, and does retain water, describe

placement of OSSFs for each lot in compliance with any drainage requirements from the City of New Braunfels, and/or Comal County, for the lots within or partially within the closed contours defining CD-1.

8. With drainage conveyed from the proposed road to CD-1, CD-1 may be considered an "improved sinkhole" subject to 30 TAC 331.10 (Form 10338). For additional information, you should contact the TCEQ's Industrial and Hazardous Waste Permits Section MC130, PO Box 13087, Austin, Texas 78711-3087, 512/239-6075.

TX COMM ON ENV QTY I .2105454329

** Transmit Conf. Report **

P.1 Jan 9 2006 14:57

Fax/Phone Number	Mode	Start	Time	Page	Result	Note
915123960224	NORMAL	9,14:57	0'46"	2	* O K	

TCEQ
Protecting Texas by Reducing and Preventing Pollution

FAX TRANSMITTAL

DATE: 1/9/06 NUMBER OF PAGES *(including this cover sheet)*: 2

TO: Name **Richard McDaniel, PE**
Organization **Pro-Tech Engineers**
FAX Number **512/396-0224**

FROM: TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Name JM **John Mauser**
Division/Region **Field Operations Division, Region 13 (San Antonio)**
Telephone Number **210/403-4024**
FAX Number **210/545-4329**

NOTES:
Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Havenwood at Hunter's Crossing; Located on the northwest side of FM 1102, approximately 1.3 miles north of the intersection of FM 1102 and Hoffman Lane; Comal County, Texas
TYPE OF PLAN: Request for Approval of a Water Pollution Abatement Plan (WPAP); 30 Texas Administrative Code (TAC) Chapter 213 Edwards Aquifer; Edwards Aquifer Protection Program ID No. 2408.00, Investigation No. 432792, Regulated Entity No. 432792

The application received from you on 9/7/05, has been determined to be administratively incomplete and/or technically inadequate. For our review to continue, please provide the information listed below. If this information is not received by 1/23/06, or is incomplete or inadequate, the application may be denied. If you have any questions, please call John Mauser at 210/403-4024

1. Response to EAA letter – proposed protection for on-site water well.
2. The Geologic Assessment assesses the on-site water well as not sensitive due to a low relative infiltration rate. The TCEQ argues that a well has a high relative infiltration rate. Additional explanation should be provided, or the GA should be revised.
3. Site plan: 1) add scale on site plan (Geologic Map must be at the same scale as the site plan), and 2) label contour lines

Date Stamp Here "EQ"
RECEIVED TCEQ
SAN ANTONIO
REGION

EAPP SUBMITTAL CHECK IN SHEET

2005 SEP -7 PM 1:32

2408.00

PROJECT NAME: Havenwood at Hunter's Crossing

REGION: 13 BOBBY WILL ASSIGN TO

COUNTY: Bexar ~~Comal~~ Medina Uvalde Kinney DATE RECEIVED 09/07/05

CN (if known) RN (if known)

SA File # (if Mod)

Core Date Form Adequate (Y) N N/A SIC

Date Administratively Complete: 09/07/05 By: JWD JKM LMB WRN (AMH)

PROJECT TYPE	PLAN TYPE	FEE'S $5,000
✓ NEW	✓ WPA - Water Pollution Abatement	ACRES 974
MOD - Modification	SCS - Sewage Collection System	SCS LF
EXC - Exception	AST	# TANKS
XTEN -Extension	UST	
Tech, RFI, Other	C ZONE	
Cave		

432792

PBMP: Basin Mixed Residential ✓

Veg S-C Commercial

Aqualogic None ✓

NOTES:

432792

CEQ Core Data For...

TCEQ Use Only

If you have questions on how to fill out this form or about our Central Registry, please contact us at 512-239-5175.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512-239-3282.

SECTION I: General Information

1. Reason for Submission *Example: new wastewater permit; IHW registration; change in customer information; etc.*

subdivision

2. Attachments				Describe Any Attachments: *(ex: Title V Application, Waste Transporter Application, etc.)*
	YES	x	NO	

3. Customer Reference Number-*if issued*				4. Regulated Entity Reference Number-*if issued*		
CN		*(9 digits)*		RN		*(9 digits)*

SECTION II: Customer Information

5. Customer Role *(Proposed or Actual)* -- As It Relates to the Regulated Entity Listed on This Form

Please check one of the following:		Owner		Operator	x	Owner and Operator
	Occupational Licensee		Volunteer Cleanup Applicant			Other
TCEQ Use Only		**Superfund**		**PST**		**Respondent**

6. General Customer Information

x	New Customer		Change to Customer Information
	Change in Regulated Entity Ownership		No Change *

***If "No Change" and Section I is complete, skip to Section III - Regulated Entity Information.**

7. Type of Customer:					
	Individual		Sole Proprietorship - D.B.A.		
x	Partnership		Corporation		Federal Government
	State Government		County Government		City Government
	Other Government		Other:		

8. Customer Name *(If an individual, please print last name first)*	*If new name, enter previous name:*
Bluegreen Southwest One, LP.	

9. Mailing Address:	PO Box 896			
	City	State	ZIP	ZIP + 4
	Wimberley	Texas	78676	

10. Country Mailing Information *if outside USA*	11. E-Mail Address *if applicable*

12. Telephone Number	13. Extension or Code	14. Fax Number *if applicable*
(512)847-5483		(512)847-9414

15. Federal Tax ID *(9 digits)*	16. State Franchise Tax ID Number *if applicable*	17. DUNS Number *if applicable* *(9 digits)*
65-0796380		

18. Number of Employees										19. Independently Owned and Operated?			
	0-20	x	21-100		101-250		251-500		501 and higher	x	Yes		No

SECTION III: Regulated Entity Information

20. General Regulated Entity Information

x	New Regulated Entity		Change to Regulated Entity Information		No Change*

*If "No Change" and Section I is complete, skip to Section IV - Preparer Information.

21. Regulated Entity Name *(If an individual, please print last name first)*				
Havenwood at Hunter's Crossing				
22. Street Address (No PO Boxes)	FM 1102			
	City	State	ZIP	ZIP + 4
	New Braunfels	Texas	78070	
23. Mailing Address	PO BOX 896			
	City	State	ZIP	ZIP + 4
	Wimberley	Tx	78676	
24. E-Mail Address:				

25. Telephone Number	**26. Extension or Code**	**27. Fax Number** *if applicable*
(512)847-5483		(512)847-9414

28. Primary SIC Code (4 digits)	**29. Secondary SIC Code** (4 digits)	**30. Primary NAICS Code** (5 or 6 digits)	**31. Secondary NAICS Code** (5 or 6 digits)
1611			

32. What is the Primary Business of this entity? (Please do not repeat the SIC or NAICS description)
Land development

Questions 33 - 37 address geographic location. Please refer to the instructions for applicability.

33. County	Comal County

34. Description of Physical Location
FM 1102

35. Nearest City	**State**	**Nearest Zip**
New Braunfels	Texas	78070

36. Latitude (N)			*37. Longitude (W)*		
Degrees	***Minutes***	***Seconds***	***Degrees***	***Minutes***	***Seconds***
29	47	45	98	20	7

38. TCEQ Programs In Which This Regulated Entity Participates *Not all programs have been listed. Please add to this list as needed. If you don't know or are unsure, please mark "Unknown".* If you know a permit or registration # for this entity, please write it below the program."

	Animal Feeding Operation		Petroleum Storage Tank		Water Rights
	Title V - Air		Wastewater Permit	x	EAPP
	Industrial & Hazardous Waste		Water Districts		
	Municipal Solid Waste		Water Utilities		Unknown
	New Source Review - Air		Licensing - TYPE(s)		

Section IV: Preparer Information		
39. Name Richard McDaniel		**40. Title** Engineer Tech
41. Telephone Number (512)353-3335	**42. Extension or Code**	**43. Fax Number** *if applicable* (512)396-0224
44. E-mail Address: jeff@pro-techengr.com		

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

WATER POLLUTION ABATEMENT PLAN (WPAP)

HAVENWOOD AT HUNTER'S CROSSING
COMAL COUNTY, TEXAS

PRO·TECH
ENGINEERING
GROUP
INCORPORATED

100 E. San Antonio St., Suite 100
San Marcos, Tx 78666
512-353-3335
512-396-0224 (Fax)

Texas Commission on Environmental Quality
Edwards Aquifer Protection Plan
Application Fee Form

NAME OF PROPOSED REGULATED ENTITY: **HAVENWOOD AT HUNTER'S CROSSING**
REGULATED ENTITY LOCATION: **COMAL COUNTY, TEXAS**
NAME OF CUSTOMER: **BLUEGREEN SOUTHWEST**

CONTACT PERSON: **JACK DEAN, VICE PESIDENT** PHONE: 512-847-5483
(Please Print)

Customer Reference Number (if issued): CN _____ (nine digits)
Regulated Entity Reference Number (if issued): RN _____ (nine digits)

"RECEIVED TCEQ" SAN ANTONIO REGION 2005 SEP -7 PM 1:52

AUSTIN REGIONAL OFFICE (3373)
☐ Hays
☐ Travis
☐ Williamson

SAN ANTONIO REGIONAL OFFICE (3362)
☐ Bexar
☒ Comal
☐ Kinney
☐ Medina
☐ Uvalde

APPLICATION FEES MUST BE PAID BY CHECK, CERTIFIED CHECK, OR MONEY ORDER, PAYABLE TO THE Texas Commission on Environmental Quality. YOUR CANCELED CHECK WILL SERVE AS YOUR RECEIPT. **THIS FORM MUST BE SUBMITTED WITH YOUR FEE PAYMENT**. THIS PAYMENT IS BEING SUBMITTED TO (CHECK ONE):

☑ **SAN ANTONIO REGIONAL OFFICE**
☐ **Mailed to TCEQ:**
TCEQ - Cashier
Revenues Section
Mail Code 214
P.O. Box 13088
Austin, TX 78711-3088

☐ **AUSTIN REGIONAL OFFICE**
☐ **Overnight Delivery to TCEQ:**
TCEQ - Cashier
12100 Park 35 Circle
Building A, 3rd Floor
Austin, TX 78753
512/239-0347

Type of Plan	Size	Fee Due
Water Pollution Abatement, One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement, Multiple Single Family Residential and Parks	974 Acres	$ 5,000.00
Water Pollution Abatement, Non-residential	Acres	$
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

_____
Signature Date

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

General Information Form
For Regulated Activities on the
Edwards Aquifer Recharge and Transition Zones
and Relating to 30 TAC §213.4(b) & §213.5(b)(2)(A), (B)
Effective June 1, 1999

REGULATED ENTITY NAME: **HAVENWOOD AT HUNTER'S CROSSING**
STREAM BASIN: York Creek, Alligator Creek
COUNTY: Comal
EDWARDS AQUIFER: x RECHARGE ZONE
__ TRANSITION ZONE

PLAN TYPE: X WPAP __ AST __ EXCEPTION
__ SCS __ UST __ MODIFICATION

CUSTOMER INFORMATION

1. Customer (Applicant):

Contact Person: JACK DEAN
Entity: BLUEGREEN SOUTHWEST
Mailing Address: P O BOX 896
City, State: WIMBERLEY, TEXAS Zip: 78676
Telephone: 512-847-5483 FAX: 847-9414

Agent/Representative (If any):

Contact Person: KELLY KILBER
Entity: PRO-TECH ENGINEERING GROUP

Mailing Address: 100 E. SAN ANTONIO

City, State: SAN MARCOS, TEXAS Zip: 78666
Telephone: 512-353-3335 FAX: 512-396-0224

2. __ This project is inside the city limits of _____.
X This project is outside the city limits but inside the ETJ (extra-territorial jurisdiction) of NEW BRAUNFELS.
__ This project is not located within any city's limits or ETJ.

3. The location of the project site is described below. The description provides sufficient detail and clarity so that the TCEQ's Regional staff can easily locate the project and site boundaries for a field investigation.
ON THE NORTHWEST SIDE OF FM 1102, 1.3 MILES NORTH OF THE INTERSECTION OF FM 1102 AND HOFFMAN LANE

4. X **ATTACHMENT A - ROAD MAP**. A road map showing directions to and the location of the project site is attached at the end of this form.

5. X **ATTACHMENT B - USGS / EDWARDS RECHARGE ZONE MAP.** A copy of the official 7 ½ minute USGS Quadrangle Map (Scale: 1" = 2000') of the Edwards Recharge Zone is attached behind this sheet. The map(s) should clearly show:

   X Project site.
   X USGS Quadrangle Name(s).
   X Boundaries of the Recharge Zone (and Transition Zone, if applicable).
   X Drainage path from the project to the boundary of the Recharge Zone.

6. X Sufficient survey staking is provided on the project to allow TCEQ regional staff to locate the boundaries and alignment of the regulated activities and the geologic or manmade features noted in the Geologic Assessment. **The TCEQ must be able to inspect the project site or the application will be returned.**

7. X **ATTACHMENT C - PROJECT DESCRIPTION.** Attached at the end of this form is a detailed narrative description of the proposed project.

8. Existing project site conditions are noted below:
   ___ Existing commercial site
   ___ Existing industrial site
   ___ Existing residential site
   ___ Existing paved and/or unpaved roads
   ___ Undeveloped (Cleared)
   X Undeveloped (Undisturbed/Uncleared)
   ___ Other:

PROHIBITED ACTIVITIES

9. X I am aware that the following activities are prohibited on the **Recharge Zone** and are not proposed for this project:

   (1) waste disposal wells regulated under 30 TAC Chapter 331 of this title (relating to Underground Injection Control);
   (2) new feedlot/concentrated animal feeding operations, as defined in 30 TAC §213.3;
   (3) land disposal of Class I wastes, as defined in 30 TAC §335.1;
   (4) the use of sewage holding tanks as parts of organized collection systems; and
   (5) new municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41(b), (c), and (d) of this title (relating to Types of Municipal Solid Waste Facilities).

10. X I am aware that the following activities are prohibited on the **Transition Zone** and are not proposed for this project:

   (1) waste disposal wells regulated under 30 TAC Chapter 331 (relating to Underground Injection Control);
   (2) land disposal of Class I wastes, as defined in 30 TAC §335.1; and
   (3) new municipal solid waste landfill facilities required to meet and comply with Type I standards which are defined in §330.41 (b), (c), and (d) of this title.

ADMINISTRATIVE INFORMATION

11. The fee for the plan(s) is based on:

X For a Water Pollution Abatement Plan and Modifications, the total acreage of the site where regulated activities will occur.

__ For an Organized Sewage Collection System Plans and Modifications, the total linear footage of all collection system lines.

__ For a UST Facility Plan or an AST Facility Plan, the total number of tanks or piping systems.

__ A Contributing Zone Plan.

__ A request for an exception to any substantive portion of the regulations related to the protection of water quality.

__ A request for an extension to a previously approved plan.

12. Application fees are due and payable at the time the application is filed. If the correct fee is not submitted, the TCEQ is not required to consider the application until the correct fee is submitted. Both the fee and the Edwards Aquifer Fee Form have been sent to the Commission's:

__ TCEQ cashier

__ Austin Regional Office (for projects in Hays, Travis, and Williamson Counties)

X San Antonio Regional Office (for projects in Bexar, Comal, Kinney, Medina, and Uvalde Counties)

13. X Submit one (1) original and three (3) copies of the completed application to the appropriate regional office for distribution by the TCEQ to the local municipality or county, groundwater conservation districts, and the TCEQ's Central Office.

14. X No person shall commence any regulated activity until the Edwards Aquifer Protection Plan(s) for the activity has been filed with and approved by the executive director.

__ No person shall commence any regulated activity until the Contributing Zone Plan for the activity has been filed with the executive director.

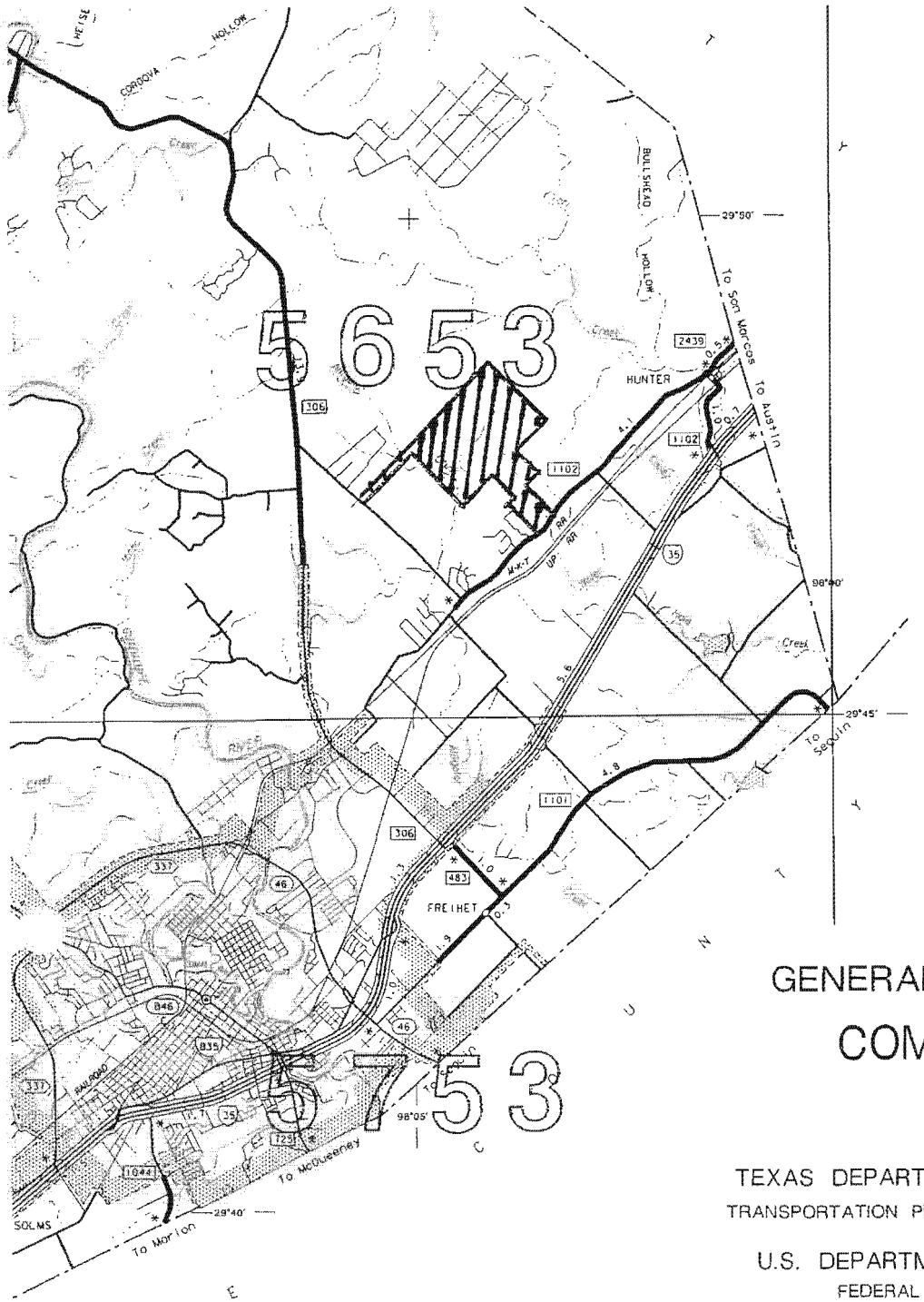
To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **GENERAL INFORMATION FORM** is hereby submitted for TCEQ review. The application was prepared by:

Print Name of ~~Customer~~/Agent
KELLY KILBER

Signature of ~~Customer~~/Agent — Date: 8/31/05

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.



GENERAL HIGHWAY MAP

COMAL COUNTY

TEXAS

PREPARED BY THE

TEXAS DEPARTMENT OF TRANSPORTATION

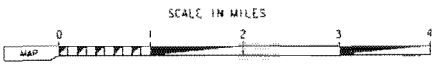
TRANSPORTATION PLANNING AND PROGRAMMING DIVISION

IN COOPERATION WITH THE

U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

SCALE IN MILES



1988

1990 CENSUS FIGURES

HIGHWAYS REVISED TO JULY 1, 1993

NOTICE

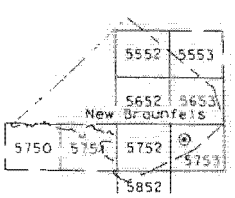
This map has been prepared for internal use within the Texas Department of Transportation. Accuracy is limited to the validity of available data as of dates shown.

TRAVEL INFORMATION

Dial 1-800-452-9292 for travel assistance from a professional Texas travel counselor, including routing in Texas, emergency road condition information, and other travel services, or to register a comment or complaint about department operations.

Copies of this map are available for public use at nominal cost from the Texas Department of Transportation 125 E. 11th Street Attn: Division of Finance, Funds Mgt Austin, Texas 78701-2483

LAMBERT CONFORMAL CONIC PROJECTION NORTH AMERICAN DATUM
CONTROL: U.S. COAST AND GEODETIC SURVEY AND U.S. GEOLOGICAL SURVEY



KEY TO SUPPLEMENTARY SHEETS

KEY TO COUNTIES

Sheet 1 of 1 Base Sheet and 5 Supplementary Sheets

TRANSITION ZONE

HUNTER, TEX.
N2945–W9800/7.5

1964
PHOTOREVISED 1973
AMS 6343 I SE–SERIES V882

PROJECT DESCRIPTION:

Havenwood at Hunter's Crossing is a proposed 665 Lot single family residential subdivision located approximately 7 miles north of the city of New Braunfels off of FM 1102. The project consists of 794 acres of land located in Comal County, Texas and is located within the City of New Braunfels Extra Territorial Jurisdiction.

This Development is located on the eastern edge of the Edwards Plateau. Alligator Creek runs through the property in a southwest direction. The southeast portion of the property is located in the transition zone. This property is currently open/unused land, past uses have been for ranching and grazing purposes.

The development will consist of approximately 665 single-family residential lots, , with a minimum lot size of one 1.01 acre. 68,800 feet of asphalt roadway will be constructed. Crystal Clear Water Company will supply water for the development. Wastewater will be treated and disposed of by private septic systems constructed in accordance with the TCEQ and Comal County Health Department's rules and regulations. Drainage will be by sheet flow and open ditches.

Geologic Assessment
For Regulated Activities
on The Edwards Aquifer Recharge/transition Zones
and Relating to 30 TAC §213.5(b)(3), Effective June 1, 1999

REGULATED ENTITY NAME: **Bluegreen Southwest**

TYPE OF PROJECT: X WPAP __ AST __ SCS __ UST

LOCATION OF PROJECT: X Recharge Zone __ Transition Zone __ Contributing Zone within the Transition Zone

PROJECT INFORMATION

1. X Geologic or manmade features are described and evaluated using the attached **GEOLOGIC ASSESSMENT TABLE**.

2. Soil cover on the project site is summarized in the table below and uses the SCS Hydrologic Soil Groups* (*Urban Hydrology for Small Watersheds, Technical Release No. 55, Appendix A*, Soil Conservation Service, 1986). If there is more than one soil type on the project site, show each soil type on the site Geologic Map or a separate soils map.

Soil Units, Infiltration Characteristics & Thickness		
Soil Name	Group*	Thickness (feet)
Crawford	**C**	**0-2**
Rumple - Crawford	**C**	**0-4**

* Soil Group Definitions (Abbreviated)

A. Soils having a high infiltration rate when thoroughly wetted.

B. Soils having a moderate infiltration rate when thoroughly wetted.

C. Soils having a slow infiltration rate when thoroughly wetted.

D. Soils having a very slow infiltration rate when thoroughly wetted.

3. X A **STRATIGRAPHIC COLUMN** is attached at the end of this form that shows formations, members, and thicknesses. The outcropping unit should be at the top of the stratigraphic column.

4. X A **NARRATIVE DESCRIPTION OF SITE SPECIFIC GEOLOGY** is attached at the end of this form. The description must include a discussion of the potential for fluid movement to the Edwards Aquifer, stratigraphy, structure, and karst characteristics of the site.

5. X Appropriate **SITE GEOLOGIC MAP(S)** are attached:

The Site Geologic Map must be the same scale as the applicant's Site Plan. The minimum scale is 1" : 400'

Applicant's Site Plan Scale 1" = **300** '
Site Geologic Map Scale 1" = **300** '
Site Soils Map Scale (if more than 1 soil type) 1" = **None** '

6. X Method of collecting positional data:
Global Positioning System (GPS) technology.

__ Other method(s).

7. x The project site is shown and labeled on the Site Geologic Map.

8. x Surface geologic units are shown and labeled on the Site Geologic Map.

9. x Geologic or manmade features were discovered on the project site during the field investigation. They are shown and labeled on the Site Geologic Map and are described in the attached Geologic Assessment Table.

   x Geologic or manmade features were not discovered on the project site during the field investigation.

10. x The Recharge Zone boundary is shown and labeled, if appropriate.

11. All known wells (test holes, water, oil, unplugged, capped and/or abandoned, etc.):

   __ There are ____(#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply.)
      __ The wells are not in use and have been properly abandoned.
      __ The wells are not in use and will be properly abandoned.
      __ The wells are in use and comply with 16 TAC §76.

   x There are no wells or test holes of any kind known to exist on the project site.

ADMINISTRATIVE INFORMATION

12. x One (1) original and three (3) copies of the completed assessment has been provided.

Date(s) Geologic Assessment was performed: **May 28 through April 7, 2005**
Date(s)

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. My signature certifies that I am qualified as a geologist as defined by 30 TAC 213.

Douglas McGookey, PG
Print Name of Geologist

(210) 694-4545
Telephone

(210) 694-4577
Fax

Signature of Geologist

June 28, 2005
Date

Representing: **Medina Consulting Company, Inc.**
(Name of Company)

If you have questions on how to fill out this form or about the Edwards Aquifer Prote 2929 (Austin) or 210/403-4024 (San Antonio).

Individuals are entitled to request and review their personal information that the ag ve any errors in their information corrected. To review such information, contact us at 512/239-3

Site: ***Hunter Quarry Property***
Location: ***Approximately 974 Acres East of Hoffman Lane and North of Hunter Road***
Comal County, Texas

Soil Description:

The Hunter Quarry property is located on two main soil types with one small area in a third soil type according to the *Soil Survey of Hays and Comal Counties, Texas.* The predominant soil types are Rumple-Comfort association, undulating and Comfort-Rock outcrop complex, undulating. A small area of Brackett-Rock outcrop-Comfort complex is also present. These soils are described in more detail below. A map showing the distribution of the soils is attached.

(RUD) Rumple-Comfort association, undulating: This association consists of shallow and moderately deep soils on uplands in the Edwards Plateau Land Resource Area. Slopes are plane or convex and range from 1 to 8 percent. The areas are irregular in shape and range form 50 to several thousand acres in size.

Rumple soil makes up about 60 percent of the association, Comfort soil makes up 20 percent, and other soils, mainly Tarpley soils, make up 20 percent. The Rumple soil is on broad ridgetops and side slopes. It is mainly gently sloping. The Comfort soil is mainly in the more sloping areas near drainageways and near outcrops of rock. In places, there are narrow ledges of limestone. The mapped areas of this association are much larger and more variable than areas of the other map units in the survey area. Mapping has been controlled well enough; however, for the anticipated use of the soils.

Typically, the surface layer of the Rumple soil is dark reddish brown very cherty clay loam about 10 inches thick. Rounded chert and limestone cobble and gravel cover about 20 percent of the surface. The subsoil to a depth of 14 inches is dark reddish brown very cherty clay, and to a depth of 28 inches it is dark reddish brown extremely stony clay that is about 78 percent by volume limestone fragments. The underlying material is indurated fractured limestone. The soil is mildly alkaline and non calcareous throughout. The texture of the surface layer ranges to very cherty loam and cherty clay.

Typically, the surface layer of the Comfort soil is dark brown, neutral, extremely stony clay about 7 inches thick. The subsoil to a depth of 12 inches is dark reddish brown, mildly alkaline, extremely stony clay. The underlying material is indurated fractured limestone. The soil is noncalcareous throughout.

The soils in this association are well drained. Surface runoff is medium. However, runoff from large areas is much slower than from local areas because some of the water enters cavers, sinks, rock crevices, and streambeds. Permeability is moderately slow in

the Rumple soil and slow in the Comfort soil. The available water capacity is very low. The rooting zone is shallow in Comfort soil and moderately deep in Rumple Soil. Water erosion is a moderate hazard.

These soils are used as rangeland and as habitat for wildlife. They are not suited to cultivated crops or pasture. Cobble and stones on the surface and within the soil, the limited rooting zone, and the very low available water capacity are severe limitations.

(CrD) Comfort – Rock outcrop complex, undulating: This complex consists of shallow, clayey soils and Rock outcrop on side slopes and on hilltops and ridgetops on uplands in the Edwards Plateau Land Resource Area. Slopes are convex. The areas are irregular in shape and range from 25 to 1,000 acres in size.

Comfort extremely stony clay makes up 49 to 95 percent of the complex, but on the average it makes up 70 percent. Rock outcrop and area of soil less than 4 inches deep make up 5 to 36 percent, but the average is 15 percent. Rumple, Purves, Eckrant, and Real soils make up less than 5 to 30 percent, but the average is 15 percent. The area of Rock outcrop are long, narrow horizontal bands on hill slopes and along small drains. The Comfort soil is between the banks of Rock outcrop. The soils and Rock outcrop are in areas so small or so intricately mixed that is was not practical to map them separately at the scale used.

Typically, the surface layer of the Comfort soil is dark brown extremely stony soil about 6 inches thick. Cobble and stones as much as 4 feet across cover about 45 percent of the surface. The subsoil extends to a depth of 13 inches. It is dark reddish brown extremely stony clay. The underlying material is indurated fractured limestone. The soil is mildly alkaline and noncalcareous throughout.

The Comfort soil is well drained. Surface runoff is slow to medium. Permeability is slow, and the available water capacity is very low. The rooting zone is shallow. Water erosion is a slight hazard.

Typically, rock outcrop is dolomitic limestone that is barren of soil except in narrow fractures in the rock. In some areas the rock is flat and has as much as 3 inches of soil material on the surface. The soils in this complex are used as rangeland and as habitat for wildlife.

(BtD) – Brackett-Rock outcrop-Comfort complex, undulating: This complex consists of shallow, loamy and clayey soil and rock outcrop on uplands in the Edwards Plateau Land Resource Area. Slopes are convex and range from 1 to 8 percent. The mapped areas consist of either a single low hill in oval areas or a series of low hills in irregularly shaped areas. Many areas have a benched appearance because along the hill slopes

because of the horizontal bands of rock outcrop. The Brackett and Comfort soils are between the bands of rock outcrop.

The Brackett soil makes up about 30 to 650 percent of the complex, but on the average it makes up 50 percent. Rock outcrop make up 10 to 45 percent, but the average is 20 percent. The Comfort soil and similar soils make up 10 to 20 percent, but the average is 15 percent. Typically, the surface layer of the Brackett soil is grayish brown gravelly clay loam bout 6 inches thick. The subsoil extends to a depth of 17 inches. It is very pale brown and pale yellow gravelly clay loam. The underlying material is weakly cemented limestone interbedded with thin layers of indurated limestone. The soil is moderately alkaline and calcareous throughout.

Typical Soil Profiles are shown below.

Table 1.
Rumple Series Soil Profile

0 to 10 inches	**Clay loam:** Very cherty, dark, reddish brown, moist, moderate fine subangular blocky structure; hard, friable, common fine roots, angular chert fragments mostly 0.5 to 1 inches across, noncalcareous, mildly alkaline, clear smooth boundary.
10 to 14 inches	**Very cherty clay**: dark reddish brown, moist, moderate very fine subangular blocky structure, hard, friable, common fine roots, patch clay films on peds, noncalcareous, mildly alkaline, abrupt irregular boundary.
14 to 28 inches	**Stony clay:** dark reddish brown, extremely stony, moist, few fine roots, clayey material in vertical and horizontal fractures and solution cavities, 75 percent limestone cobbles and stones and chert pebbles and cobbles, noncalcareous, mildly alkaline, abrupt wavy boundary.
28 to 36 inches	**Coarsely fractured indurated limestone:** dark reddish brown clay in crevices.

After *Soil Survey of Comal and Hays Counties, Texas.*

Table 2.
Comfort Series Soil Profile

0 to 6 inches	**Extremely stony clay:** dark brown, moist, moderate medium blocky structure parting to moderate fine blocky structure parting to moderately fine blocky, very hard, very firm, many fine roots, about 45 percent by volume cobbles and stones as much as 4 feet across on the surface and in the soil; noncalcareous, mildly alkaline, clear smooth boundary.
6 to 13 inches	**Extremely stony clay**: dark reddish brown, moist, moderate very fine blocky structure parting to moderate fine blocky, very hard, very firm, common fine roots, about 70 percent by volume stones as much as 4 feet across, noncalcareous, mildly alkaline, abrupt irregular boundary.
13 to 20 inches	**Indurated dolomitic limestone:** soil material in the narrow fractures

After *Soil Survey of Comal and Hays Counties, Texas.*

General Geology

The attached figures show both geology of the area from *Geologic Framework and Hydrogeologic Characteristics of the Edwards Aquifer Outcrop, Comal County, Texas, USGS Water Resources Investigations Report 94-4117.*

The site lies within the outcrop area of the Grainstone Member of the Kainer Formation (which represents the uppermost Kainer Formation Member) and the Regional Dense Member and the Leached and Collapsed Members of the Person Formation (lowermost Person Formation). The characteristics of these formations are described below.

Kainer Formation, grainstone member: The grainstone member overlies the Kirschberg evaporate member and is the uppermost member of the Kainer Formation. The grainstone member is about 50 feet thick and primarily is dense, tightly cemented *miliolid* grainstone; however, patches of mudstone to wackestone are scattered throughout. Chert nodules exist in this member, but are rare. Locally, *Toucasias* are common near the top of the member. *Chondradonta*, a distinctive, thick-shelled pelecypod, is in approximately the same stratigraphic interval as the *Toucasias*, but is not common.

Person Formation, regional dense member: The regional dense member is the lowermost member of the Person Formation, consisting of dense, argillaceous mudstone. The grainstone member of the Kainer Formation and the regional dense member of the Person Formation combined is a distinctive mapping horizon of the Edwards Group outcrop on the San Marcos platform.

Person Formation, leached and collapsed members, undivided: The leached and collapsed members, undivided overlie the regional dense member and were mapped as one because they could not be distinguished as separate members. These members consist of variably burrowed mudstone to grainstone and intervals of crystalline limestone; chert lenses are common as well. The collapsed zones common in this member probably were caused by the collapse of overlying limestone into the voids created by early dissolution of the thin evaporate layers and lenses. The lower part of the cyclic and marine members, undivided, were difficult to distinguish from the upper part of the leached and collapsed members, undivided, because of their similar lithology.

Site Specific Geology

Joe Moulder and Douglas McGookey, PG performed site visits to the subject property to complete the reconnaissance of the property according to the guidelines provided in the instructions to geologists for completion of the geologic assessment.

Our observations indicate that much of the property is undulating land covered with 1 to 3 feet of soil, grass and stands of trees. Limestone outcrops are common, and the soil typically contains limestone rubble as described in the soil descriptions. Much of the soil is covered with grass and native vegetation that obscured the soil and rock surface. Where the soil and rock have been scrapped or eroded from the surface, the underlying limestone is typically massive. Fractures, where present, do not exhibit openings that would allow water to flow easily into the subsurface as they are generally underlain by massive limestone. A small quarry or borrow pit is present in the western corner of the large tract that shows a good vertical outcrop of the limestone. It shows a surface soil profile, underlying eroded and broken limestone rubble, and then beneath the rubble a massive, dense limestone. Our observations indicate that this profile is typical of most of the property, regardless of the underlying formations and members.

In ravines and some of the low lying drainages fractured limestone rocks were observed. In some areas large boulders that have fractured and broken away from outcropping limestone are present. Some fractures had significant openings that likely allow water to filter into the underlying rocks. We suspect that most of these areas are underlain by massive limestone as observed elsewhere on the property. However, the potential for underlying sinkholes, faults, or caves cannot be ruled out.

A total of eight (8) geologic features and eight (8) manmade features were discovered on the property. All are individually described below:

Geologic Feature F1: Feature F1 is a linear zone of fractured limestone. The feature occurs in the bed of a tributary of Alligator Creek near the western most corner of the property. The fractures, where visible, are overlying massive limestone indicating low

infiltration and lateral downstream movement of water. The exposed feature is approximately 300 feet long by 20 feet wide.

Geologic Feature F2: Feature F2 is a tabular zone of fractured limestone. The feature occurs in the bed of Alligator Creek just east of feature F1. The fractures are shallow (<6") and are underlain by massive limestone indicating low infiltration and lateral downstream movement of water. The exposed feature is approximately 50 feet long by 60 feet wide.

Geologic Feature F3: Feature F3 is a linear zone of fractured limestone with a fairly steep fall toward Alligator Creek to the south. The feature occurs in the bed of a tributary of Alligator Creek east of features F1 & F2. The fractures are <1 foot deep and are underlain by massive limestone indicating low infiltration and lateral movement of water downstream. The exposed feature is approximately 60 feet long by 40 feet wide.

Geologic Feature F4: Feature F4 is a zone of fractured limestone located in a tributary of Alligator Creek. The feature is approximately 20 feet wide by 50 feet long and occurs near the southeast property line. The fractures are 6 to 8 inches deep and are generally filled in with organic matter. Massive limestone underlies the fractured limestone directing water movement laterally downstream.

Geologic Feature F5: Feature F5 is a zone of fractured limestone located in the same tributary of Alligator Creek as feature F4. The feature is approximately 100 feet wide by 100 feet long and occurs near the southeast property line. The fractures are 6 to 8 inches deep and are generally filled in with organic matter. Massive limestone underlies the fractured limestone directing water movement laterally downstream.

Geologic Feature F6: Feature F6 is a zone of fractured limestone located in a tributary of Alligator Creek. The feature is approximately 50 feet wide by 200 feet long and occurs on the southeast property line. The fractures are 6 to 12 inches deep and are generally filled in with organic matter although some have no fill material at all. Massive limestone underlies the fractured limestone directing water movement laterally downstream and off the property.

Geologic Feature F7: Feature F7 is a zone of fractured limestone located in a tributary of Alligator Creek. The feature is approximately 80 feet wide by 300 feet long and occurs near the northeast corner of the property. The fractures are 4 to 10 inches deep and are generally filled in with organic matter. Massive limestone underlies the fractured limestone directing water movement laterally downstream.

Geologic Feature F8: Feature F8 is a zone of fractured limestone located in a tributary of Alligator Creek. The feature is approximately 40 feet wide by 250 feet long and occurs near the center of the property. The fractures are 6 to 8 inches deep and are generally

filled in with organic matter. Massive limestone underlies the fractured limestone directing water movement laterally downstream.

Manmade Feature MM1: This feature is a stock tank excavated in the ground. It measures about 120 feet in diameter and is less than 8 feet in depth. Reddish brown mud lines the banks and covers the bottom. At present the tank appears mostly full.

Manmade Feature MM2: This feature is a small stock tank located on a hillside. The tank measures about 30 feet in diameter and is less than 5 feet in depth. There is organic debris on the bottom and the tank is dry.

Manmade Feature MM3: This feature is a stock tank located on a hillside near MM2. The tank measures about 30 feet in diameter and is less than 5 feet in depth. There is organic debris in the bottom and the tank is dry.

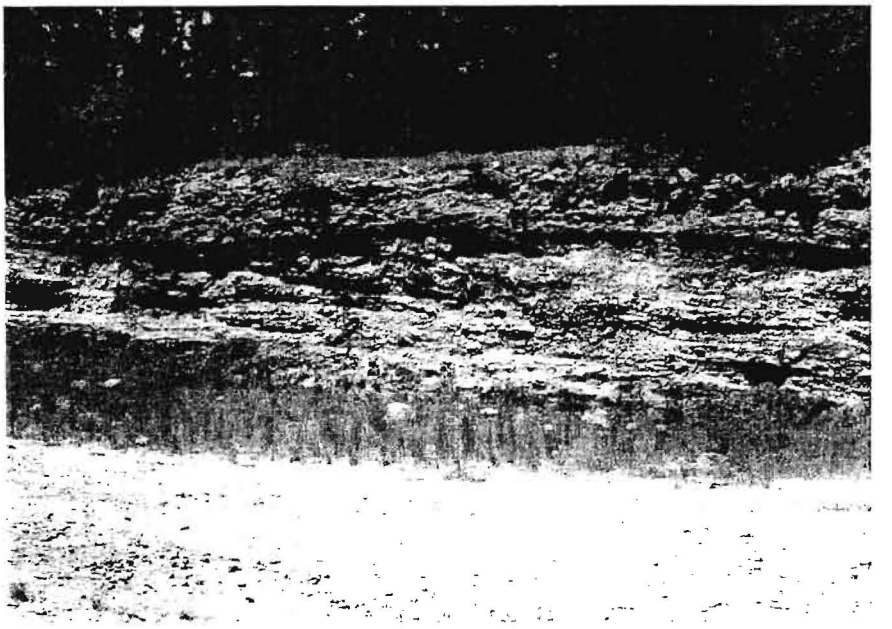
Manmade Feature MM4: This feature is a stock tank located on a hillside near MM2 and MM3. The tank measures 50 feet by 30 feet and is less than 6 feet depth. There is organic debris on the bottom and the tank is dry.

Manmade Feature MM5: This feature is a stock tank located in a draw near the center of the property. The tank measures 60 feet by 100 feet and is less than 10 feet in depth. There is a thick layer of organic debris on the bottom and the tank is dry.

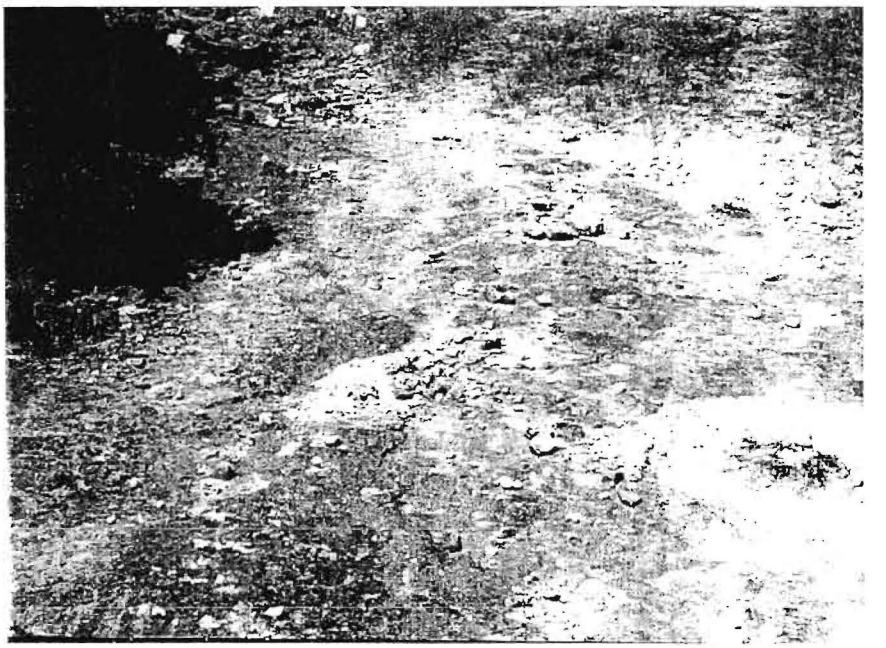
Manmade Feature MM6: This feature is an old borrow pit or caliche pit located along the northwest property line. The pit measures 30 feet by 200 feet and exhibits about 8 feet of bedrock relief. The floor of the pit is massive and contains very little organic debris. This pit illustrates the general near surface geology on the property by revealing the fractured bed on the surface and the more massive bed below.

Manmade Feature MM7: This feature is another caliche pit, which is located east of MM6 on a hillside. The pit measures 20 feet by 250 feet and is 18 inches in depth. The floor of the pit is massive and contains very little organic debris.

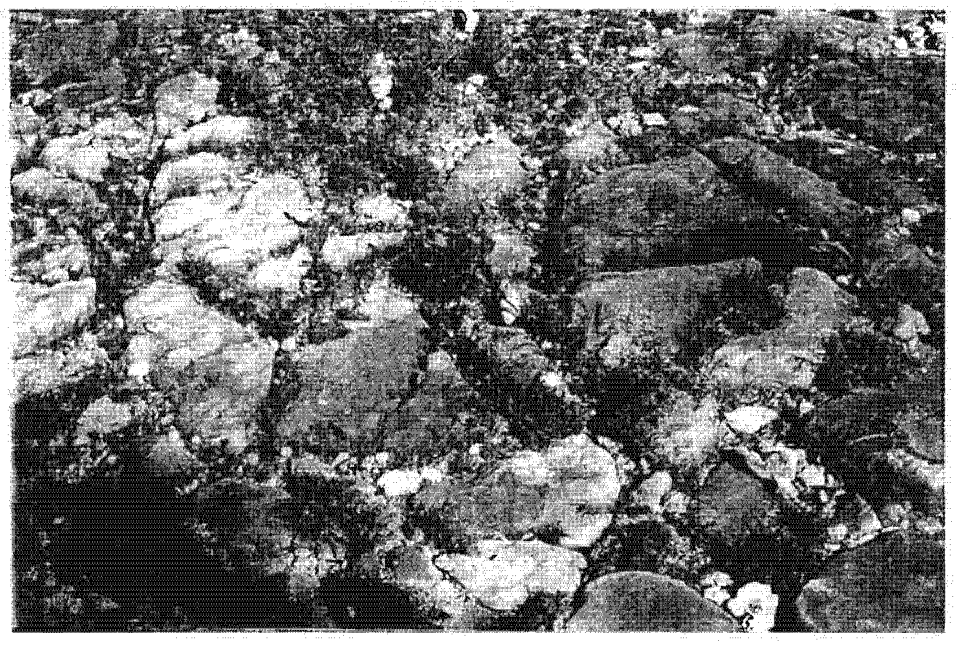
Manmade Feature MM8: This feature is a working water well located behind the old farm house. The casing appears to be 6 inches in diameter and the depth is unknown. The well is covered by an enclosure and cannot receive any run off.



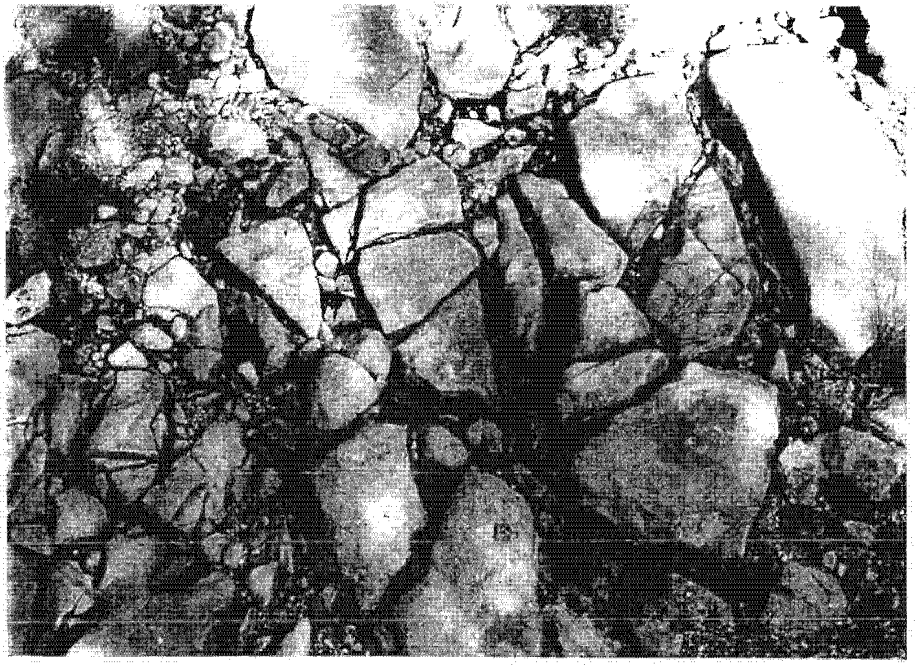
Photograph 1. Feature MM7, showing fractured limestone over massive limestone.



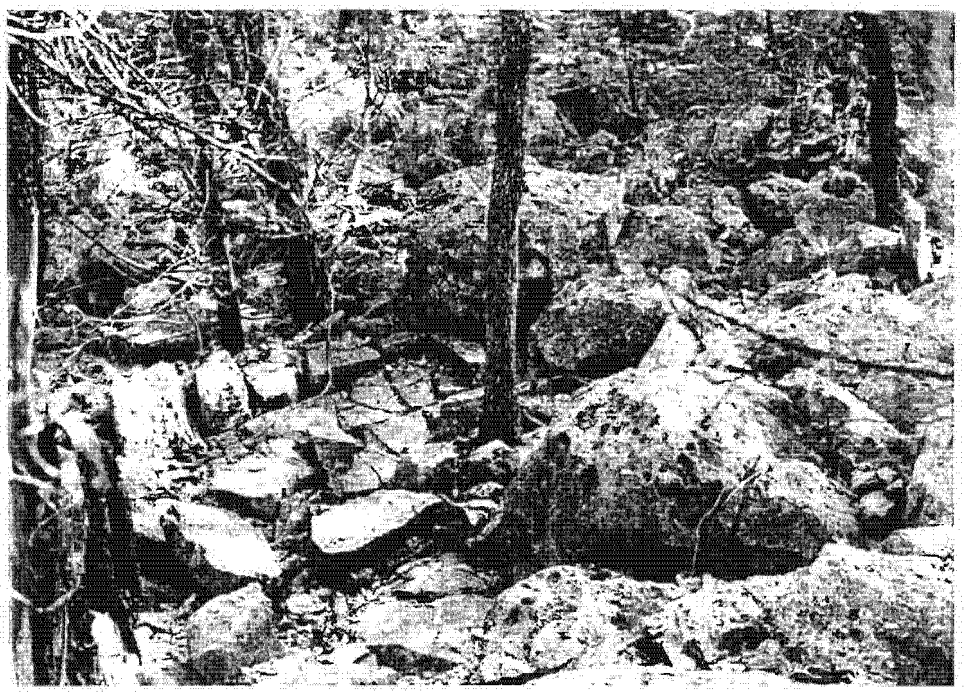
Photograph 2: Typical outcrop of massive limestone on subject property.



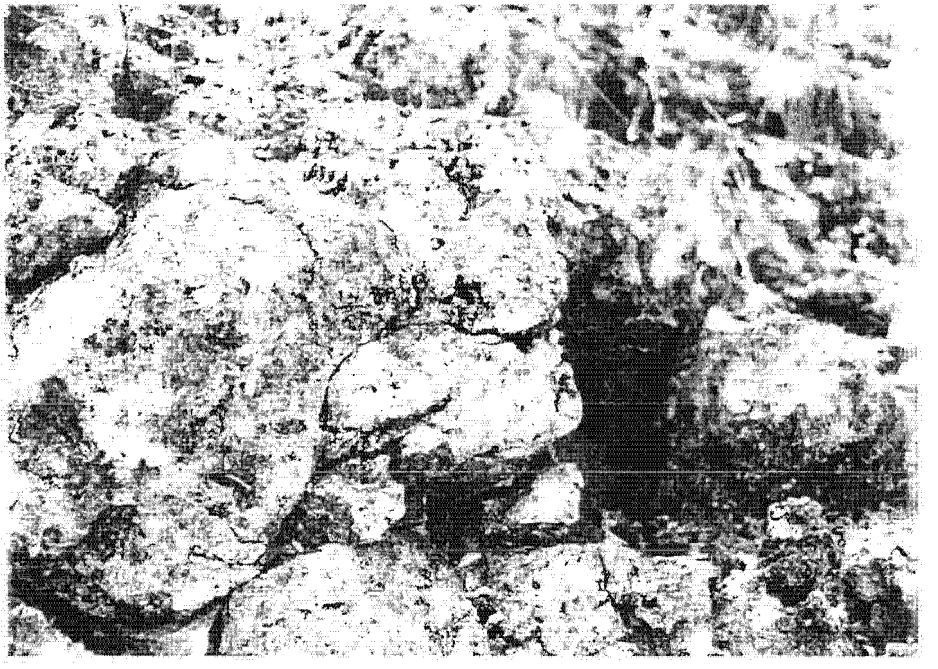
Photograph 3. Feature F2 showing typical fractured rock outcrop in streambed drainage.



Photograph 4: Feature F4 showing typical fractured rock with gravel and organic infilling.



Photograph 5: Feature F1 showing typical fractured rock and boulders in the streambed.



Photograph 6: Feature F3 showing typical outcrop on side of drainage.

Photograph 7: Feature F7 showing typical fractured rock with organic infilling.

Photograph 8: Feature F6 showing typical fractured rock with organic infilling and tree growth.

Photograph 9: Feature MM1 stock tank with reddish-brown clay bottom holding water.

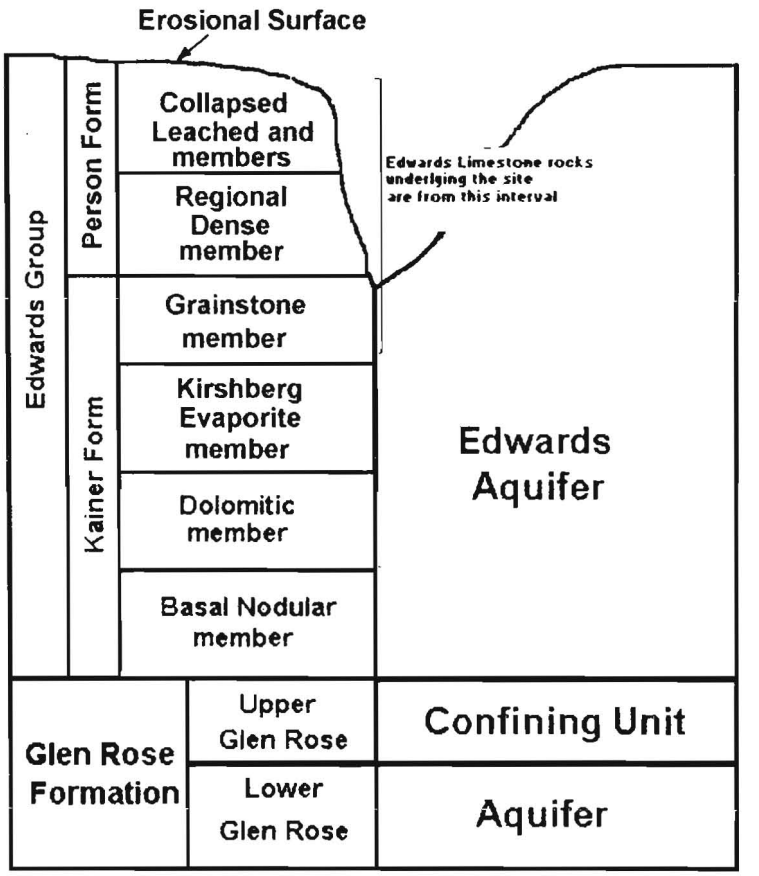
Photograph 10: Typical bottomland on adjoining transition zone tract.

Photograph 11: Typical grass covered open area on recharge zone tract of subject property.

Geologic Column:

Limestone at the surface and shallow subsurface is likely from the grainstone member of the Kainer Formation and the regional dense member and collapsed and leached members of the Person Formation as shown on the geologic Column (Table 3).

Table 3. Geologic Column



GEOLOGIC ASSESSMENT TABLE — PROJECT NAME:

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C *	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DIP	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	≥40	<1.6	≥1.6	
CD 1	29 48' 18.18"	98 4' 16.38"	CD	5	Kep	600	600	6	NA	0	NA	NA	O	6	11	x			x	Hilltop

* DATUM: _____

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
N	None, exposed bedrock
C	Coarse - cobbles, breakdown, sand, gravel
O	Loose or soft mud or soil, organics, leaves, sticks, dark colors
F	Fines, compacted clay-rich sediment, soil profile, gray or red colors
V	Vegetation. Give details in narrative description
FS	Flowstone, cements, cave deposits
X	Other materials

12 TOPOGRAPHY
Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

I have read, I understood, and I have followed the Texas Natural Resource Conservation Commission's Instructions to Geologists. The information presented here complies with that document and is a true representation of the conditions observed in the field.

My signature certifies that I am qualified as a geologist as defined by 30 TAC 213

Date August 22, 2005

Sheet 3 of 3

TNRCC 0585 Table (Rev. 5-1-02)

GEOLOGIC ASSESSMENT TABLE — PROJECT NAME: 974 Acre Tract - FM 1102 - Comal County (Hunter Quarry)

LOCATION			FEATURE CHARACTERISTICS											EVALUATION			PHYSICAL SETTING		
1A	1B *	1C*	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DIP	DENSITY (NO./FT.)	APERTURE (FEET)	AREA	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
F1	29.47.35.77	98.05.10.04	FRZ	30	Kep	300'	20'	<1'	NA	0	1		N,O	5	35	X			X	Streambed
F2	29.47.40.88	98.05.8.62	FRZ	30	Kep	50'	40'	<1'	NA	0	1		N,O	5	38	X			X	Streambed
F3	29.47.36.26	98.04.50.32	FRZ	30	Kep	60'	40'	<18"	NA	0	1		N,O	8	38	X			X	Streambed
F4	29.47.50.27	98.04.5.99	FRZ	30	Kep	50'	20'	<1'	NA	0	1 to 2		N,O	8	38	X			X	Streambed
F5	29.47.48.17	98.04.4.28	FRZ	30	Kep	100'	100'	<1'	NA	0	1		N,O	6	36	X			X	Streambed
F6	29.47.31.17	98.04.23.29	FRZ	30	Kek	200'	50'	<1'	NA	0	1		N,O	6	36	X			X	Streambed
F7	29.47.56.04	98.04.4.46	FRZ	30	Kep	300'	80'	<1'	NA	0	1 to 2		N,O	5	35	X			X	Streambed
F8	29.47.54.86	98.04.33.97	FRZ	30	Kep	40'	250'	<1'	NA	0	<1		N,O	7	37	X			X	Streambed

* DATUM

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
SH	Sinkhole	20
CD	Non-karst closed depression	5
Z	Zone, clustered or aligned features	30

8A INFILLING	
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Cliff, Hilltop, Hillside, Drainage, Floodplain, Streambed

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Date: April 15, 2005

Sheet 1 of 2

TNRCC-0585-Table (Rev. 5-1-02)

GEOLOGIC ASSESSMENT TABLE

PROJECT NAME: 974 Acre Tract - FM 1102 - Comal County (Hunter Quarry)

LOCATION			FEATURE CHARACTERISTICS												EVALUATION			PHYSICAL SETTING		
1A	1B *	1C *	2A	2B	3	4			5	5A	6	7	8A	8B	9	10		11		12
FEATURE ID	LATITUDE	LONGITUDE	FEATURE TYPE	POINTS	FORMATION	DIMENSIONS (FEET)			TREND (DEGREES)	DOM	DENSITY (NO/FT)	APERTURE (FEET)	INFILL	RELATIVE INFILTRATION RATE	TOTAL	SENSITIVITY		CATCHMENT AREA (ACRES)		TOPOGRAPHY
						X	Y	Z		10						<40	>40	<1.6	>1.6	
MM1	29,48,14 44	98,05,51.68	MB	30	Kek	120'	120'	<8'	NA				F,O	5	35	X			X	hilltop
MM2	29,48,3 77	98,03 56 29	MB	30	Kek	30'	30'	<5'	NA				O	5	35	X			X	hillside
MM3	29,48,5 14	98,04,3 11	MB	30	Kek	30'	30'	<5'	NA				O	5	35	X			X	hillside
MM4	29,48,1.54	98,04,2.54	MB	30	Kek	50'	30'	<6'	NA				O	5	35	X			X	hillside
MM5	29,47 51 50	98,04,32 51	MB	30	Kek	100'	60'	<10'	NA				O	5	35	X			X	hillside
MM6	29,47,45 31	98 05 5 79	MB	30	Kek	200'	30'	<8'	NA				N	5	35	X		X		hillside
MM7	29,47,50.17	98,04 47 46	MB	30	Kek	250'	20'	18"	NA				N	5	35	X		X		hillside
MM8	29,48,6.87	98 04,32 81	MB	30	Kek	6"	6"	>200'	NA				N	5	35	X		X		hillside

* DATUM:

2A TYPE	TYPE	2B POINTS
C	Cave	30
SC	Solution cavity	20
SF	Solution-enlarged fracture(s)	20
F	Fault	20
O	Other natural bedrock features	5
MB	Manmade feature in bedrock	30
SW	Swallow hole	30
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8A INFILLING	
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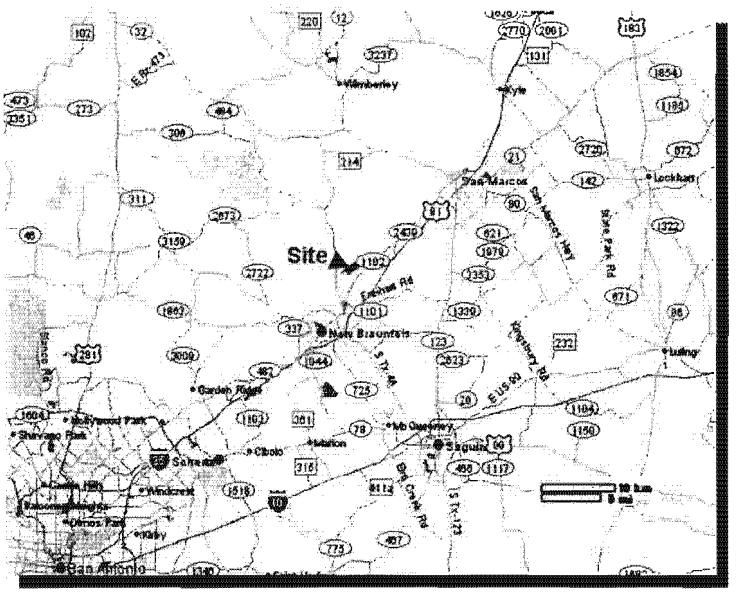
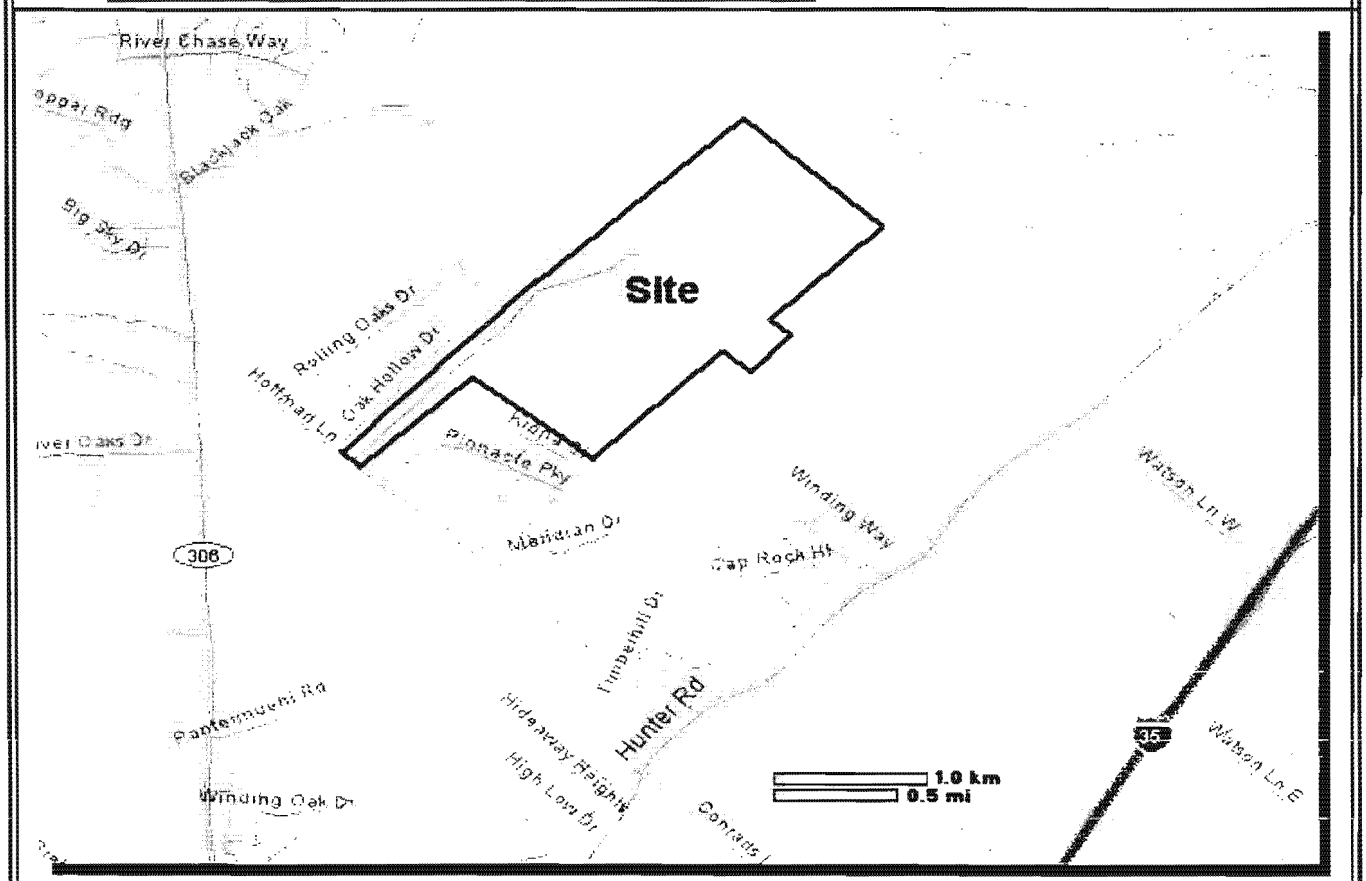
Date: April 15, 2005

Sheet 2 of 2

TNRCC-0585-Table (Rev. 5-1-02)

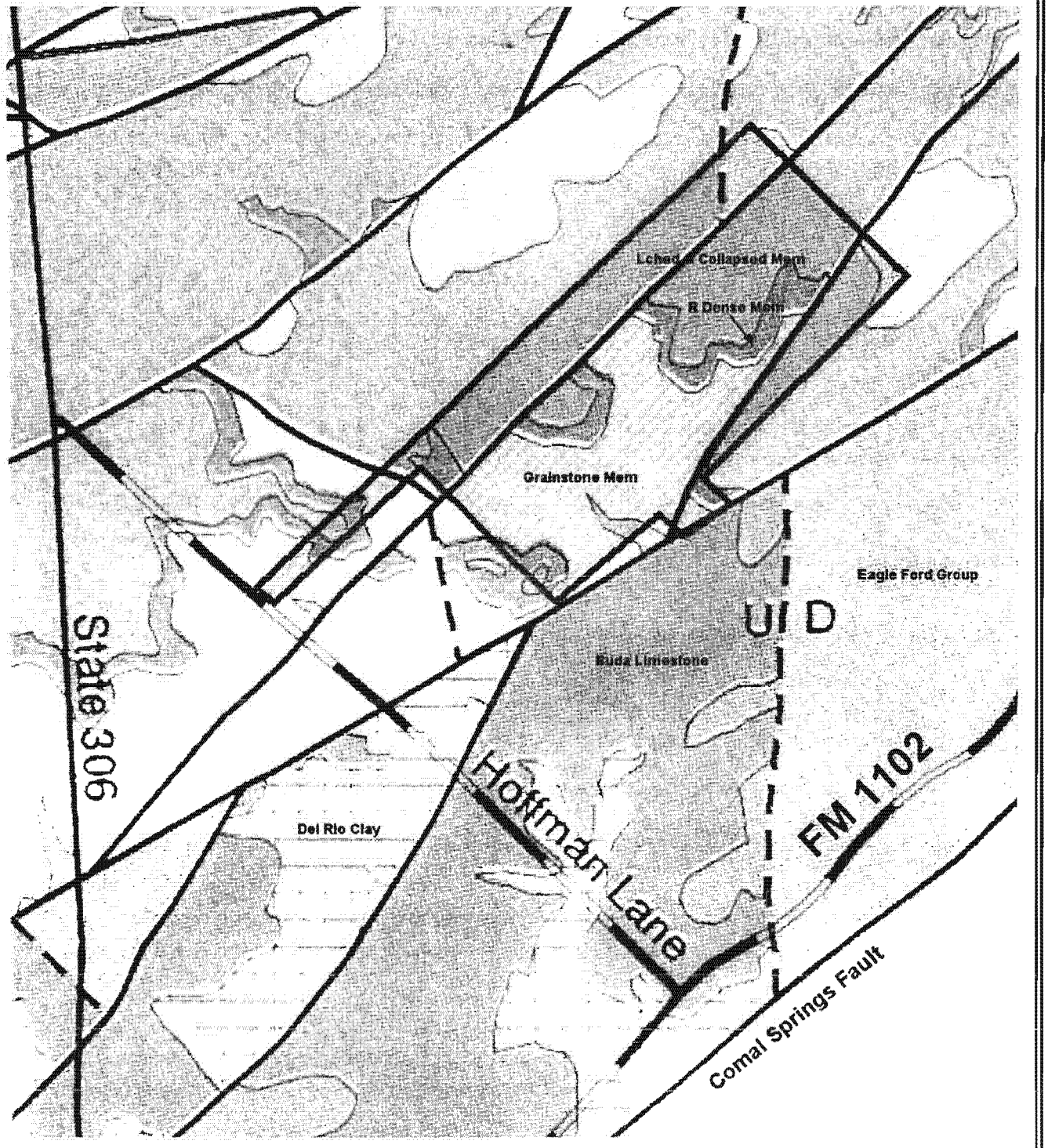


Area Map



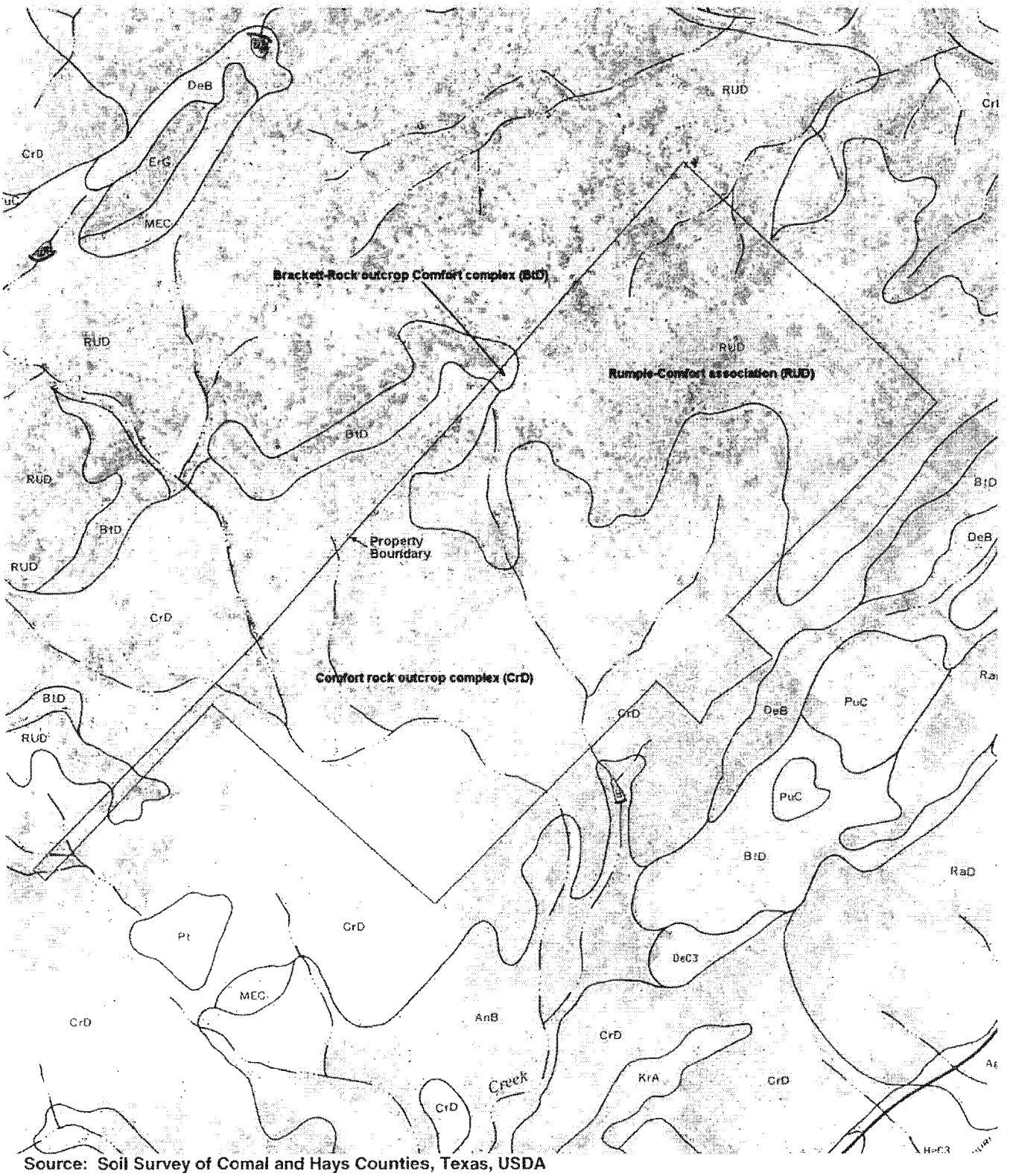
Source: Yahool

Medina Consulting Company	Drawn by: DM Scale: As Shown Date: April 2005	N	Site Location Map Recharge Zone - Hunter Quarry Property Comal County, Texas



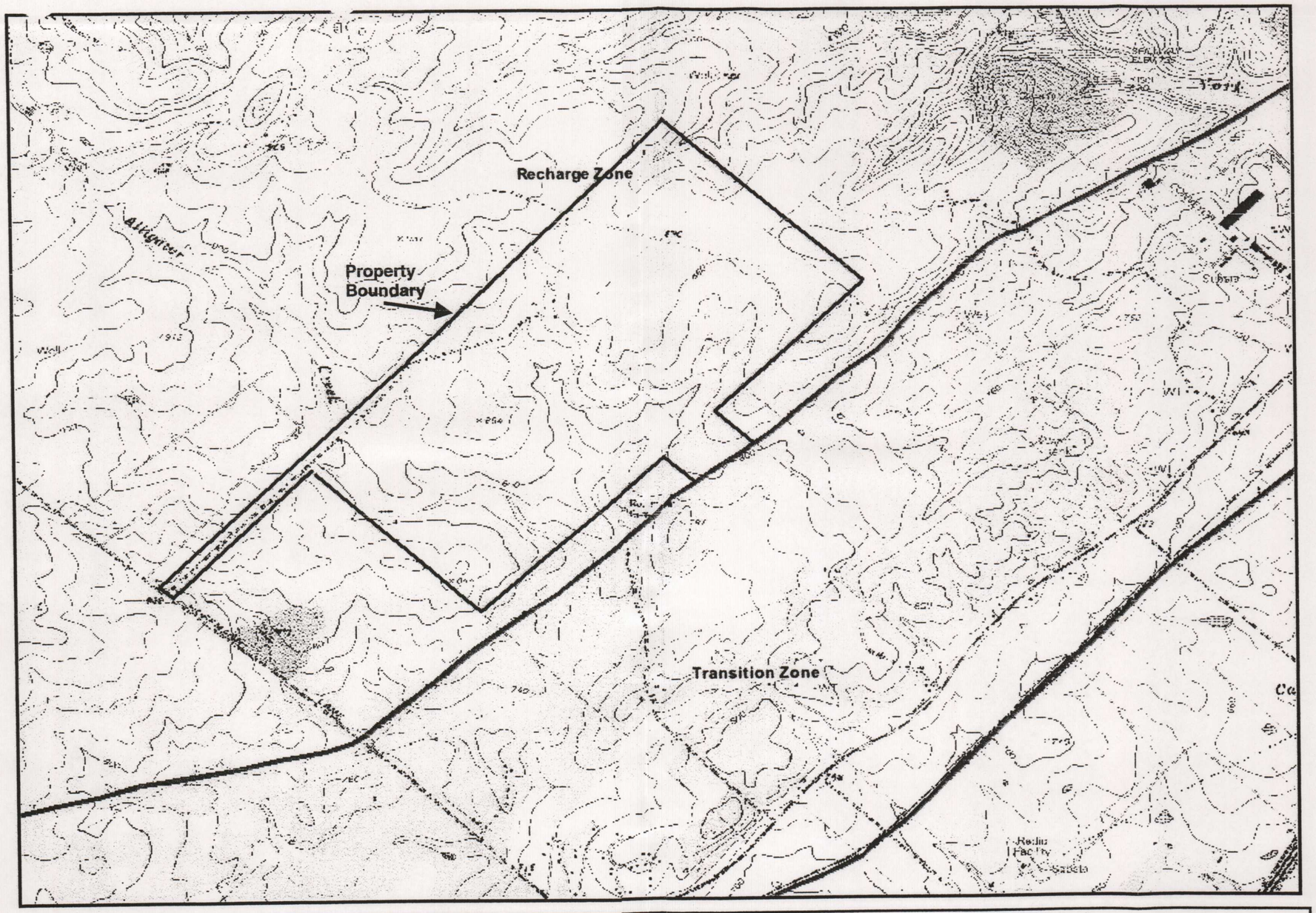
Source: *Map Showing Hydrologic Subdivisions of the Edwards Aquifer Outcrop, Comal County, Texas*

Medina Consulting Company	Drawn by: DM Scale: None Date: April 2005	N	Geologic Map Quarry Property Comal County, Texas



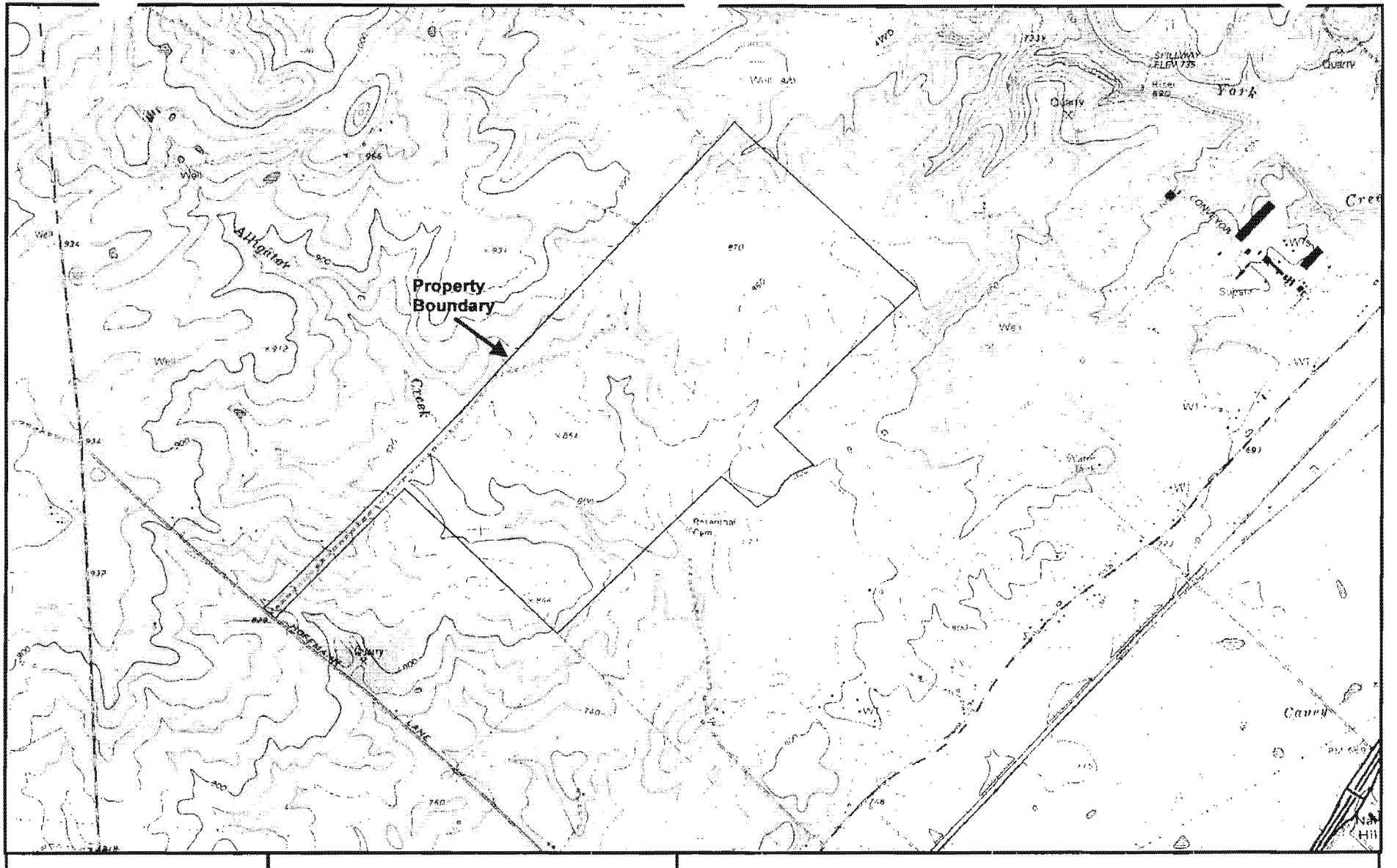
Source: Soil Survey of Comal and Hays Counties, Texas, USDA

Medina Consulting Company	Drawn by: DM Scale: As Shown Date: April 2005	N	Soil Distribution Map Recharge Zone - Hunter Quarry Property Comal County, Texas



Medina Consulting Company	DM Source: Obtained April 6, 2005 from TCEQ Website April 2005	**TCEQ Recharge Zone Map** **Hunter Quarry Property** **Comal County, Texas**

Medina Consulting Company	DM Source: Texas Natural Resource Infromation System April 6, 2005	1995 Aerial Photograph Hunter Quarry Property Comal County, Texas



Medina Consulting Company

DM
Source: Texas Natural Resource Infromation System
April 6, 2005

USGS Topographic Map
Hunter Quarry Property
Comal County, Texas

Geologic Feature CD1: This feature was discovered in the topographic contours after completion of the mapping. The feature is a closed depression about 600 feet by 600 feet by about 6 feet deep. It lies near the top of a hill. In the center of the depression is a small muddy area that is heavily used by cattle. The feature is filled with dried mud. The feature lies near a hilltop, so the only catchment area is the closed depression. The filling of the center of the depression with dried mud indicates downward migration is limited and water ponds in the depression following rain. It apparently catches perched water after a rainstorm as indicated by the heavy use by cattle when still wet. Photographs of the depression are shown below.

Photo 1. View of the closed depression. The center of the depression is a muddy area heavily used by cattle after a rain.

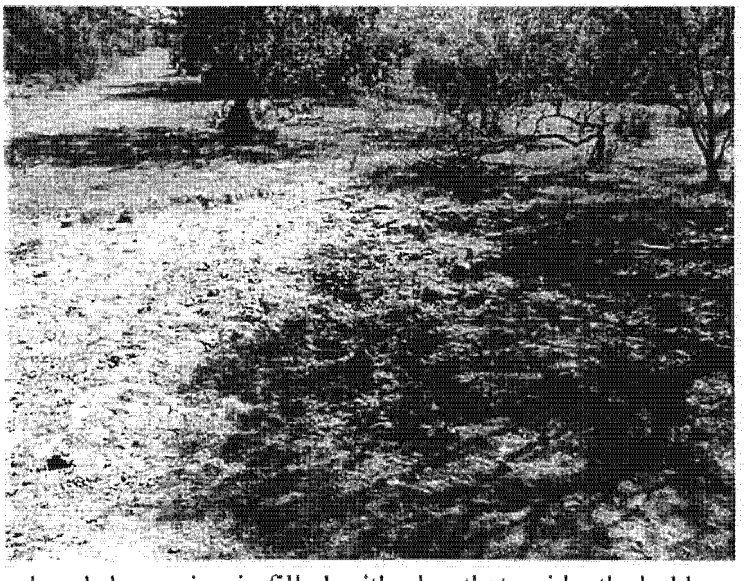


Photo 2. The closed deperssion is filled with clay that evidently holds perched surface water after rain.

Water Pollution Abatement Plan Application
for Regulated Activities
on the Edwards Aquifer Recharge Zone
and Relating to 30 TAC §213.5(b), Effective June 1, 1999

REGULATED ENTITY NAME: **HAVENWOOD AT HUNTER'S CROSSING**

REGULATED ENTITY INFORMATION

1. The type of project is:
   655 Residential: # of Lots:
   ___ Residential: # of Living Unit Equivalents:
   ___ Commercial
   ___ Industrial
   ___ Other:

2. Total site acreage (size of property): 974.31 AC

3. Projected population: 1834

4. The amount and type of impervious cover expected after construction are shown below:

Impervious Cover of Proposed Project	Sq. Ft.	Sq. Ft./Acre	Acres
Structures/Rooftops	2,292,500	÷ 43,560 =	52.62
Parking	1,310,000	÷ 43,560 =	30.07
Other paved surfaces	1,513,600	÷ 43,560 =	34.74
Total Impervious Cover		÷ 43,560 =	117.43
Total Impervious Cover ÷ Total Acreage x 100 =			12 %

5. X **ATTACHMENT A - Factors Affecting Water Quality.** A description of any factors that could affect surface water and groundwater quality is provided at the end of this form.

6. X Only inert materials as defined by 30 TAC§330.2 will be used as fill material.

FOR ROAD PROJECTS ONLY
Complete questions 7-12 if this application is exclusively for a road project.

7. Type of project:
   ___ TXDOT road project.
   ___ County road or roads built to county specifications.
   ___ City thoroughfare or roads to be dedicated to a municipality.
   ___ Street or road providing access to private driveways.
8. Type of pavement or road surface to be used:

   ___ Concrete

__ Asphaltic concrete pavement
__ Other:

9. Length of Right of Way (R.O.W.): _____ feet.
Width of R.O.W.: _____ feet.
L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.

10. Length of pavement area: _____ feet.
Width of pavement area: _____ feet.
L x W = _____ Ft^2 ÷ 43,560 Ft^2/Acre = _____ acres.
Pavement area _____ acres ÷ R.O.W. area _____ acres x 100 = ____% impervious cover.

11. __ A rest stop will be included in this project.
__ A rest stop will **not** be included in this project.

12. __ Maintenance and repair of existing roadways that do not require approval from the TCEQ Executive Director. Modifications to existing roadways such as widening roads/adding shoulders totaling more than one-half (1/2) the width of one (1) existing lane require prior approval from the TCEQ.

STORMWATER TO BE GENERATED BY THE PROPOSED PROJECT

13. **ATTACHMENT B - Volume and Character of Stormwater.** A description of the volume and character (quality) of the stormwater runoff which is expected to occur from the proposed project is provided at the end of this form. The estimates of stormwater runoff quality and quantity should be based on area and type of impervious cover. Include the runoff coefficient of the site for both pre-construction and post-construction conditions.

WASTEWATER TO BE GENERATED BY THE PROPOSED PROJECT

14. The character and volume of wastewater is shown below:
__ % Domestic **266,000** gallons/day
__ % Industrial _____ gallons/day
__ % Commingled _____ gallons/day

TOTAL **266,000** gallons/day

15. Wastewater will be disposed of by:
X **On-Site** Sewage Facility (OSSF/Septic Tank):
ATTACHMENT C - Suitability Letter from Authorized Agent. An on-site sewage facility will be used to treat and dispose of the wastewater. The appropriate licensing authority's (authorized agent) written approval is provided at the end of this form. It states that the land is suitable for the use of an on-site sewage facility or identifies areas that are not suitable.
__ Each lot in this project/development is at least one (1) acre (43,560 square feet) in size. The system will be designed by a licensed professional engineer or registered sanitarian and installed by a licensed installer in compliance with 30 TAC Chapter 285.

__ Sewage Collection System (Sewer Lines):
__ Private service laterals from the wastewater generating facilities will be connected

to an existing SCS.

__ Private service laterals from the wastewater generating facilities will be connected to a proposed SCS.

__ The SCS was previously submitted on _____.

__ The SCS was submitted with this application.

__ The SCS will be submitted at a later date. The owner is aware that the SCS may not be installed prior to executive director approval.

The sewage collection system will convey the wastewater to the (name) Treatment Plant. The treatment facility is :

__ existing.

__ proposed.

16. X All private service laterals will be inspected as required in 30 TAC §213.5.

SITE PLAN REQUIREMENTS

Items 17 through 27 must be included on the Site Plan.

17. The Site Plan must have a minimum scale of 1" = 400'.
Site Plan Scale: 1" = **400** '.

18. 100-year floodplain boundaries

X Some part(s) of the project site is located within the 100-year floodplain. The floodplain is shown and labeled.

__ No part of the project site is located within the 100-year floodplain.

The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s):

19. __ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Show lots, recreation centers, buildings, roads, etc.

X The layout of the development is shown with existing contours. Finished topographic contours will not differ from the existing topographic configuration and are not shown.

20. All known wells (oil, water, unplugged, capped and/or abandoned, test holes, etc.):

X There are 1 (#) wells present on the project site and the locations are shown and labeled. (Check all of the following that apply)

__ The wells are not in use and have been properly abandoned.

X The wells are not in use and will be properly abandoned.

__ The wells are in use and comply with 30 TAC §238.

__ There are no wells or test holes of any kind known to exist on the project site.

21. Geologic or manmade features which are on the site:

__ All **sensitive and possibly sensitive** geologic or manmade features identified in the Geologic Assessment are shown and labeled.

X No **sensitive and possibly sensitive** geologic or manmade features were identified in the Geologic Assessment.

__ **ATTACHMENT D - Exception to the Required Geologic Assessment.** An exception to

the Geologic Assessment requirement is requested and explained in ATTACHMENT D provided at the end of this form. Geologic or manmade features were found and are shown and labeled.

__ **ATTACHMENT D - Exception to the Required Geologic Assessment.** An exception to the Geologic Assessment requirement is requested and explained in ATTACHMENT D provided at the end of this form. No geologic or manmade features were found.

22. X The drainage patterns and approximate slopes anticipated after major grading activities.

23. X Areas of soil disturbance and areas which will not be disturbed.

24. X Locations of major structural and nonstructural controls. These are the temporary and permanent best management practices.

25. X Locations where soil stabilization practices are expected to occur.

26. X Surface waters (including wetlands).

27. __ Locations where stormwater discharges to surface water or sensitive features.
X There will be no discharges to surface water or sensitive features.

ADMINISTRATIVE INFORMATION

28. X One (1) original and three (3) copies of the completed application have been provided.

29. X Any modification of this WPAP will require TCEQ executive director approval, prior to construction, and may require submission of a revised application, with appropriate fees.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **WATER POLLUTION ABATEMENT PLAN APPLICATION FORM** is hereby submitted for TCEQ review and executive director approval. The form was prepared by:

KELLY KILBER
Print Name of ~~Customer~~/Agent

Kelly Kilber
Signature of ~~Customer~~/Agent

9/31/05
Date

ATTACHMENT A

The major factor that affects surface water and groundwater quality will be from construction Equipment on site with the potential for leakage and soil disturbance from construction activities.

ATTACHMENT B

Volume and Character of Stormwater

The project is located in two drainage basins, (1) York Creek, (2) Alligator Creek. Pre-development Q25 with a C value of 0.45 is approximately 16 cfs. Post development with a C value of 0.50 is approximately 1850 cfs. Due to low impervious cover and low density of the development, the character of the runoff will be similar to post development conditions.

Comal County

OFFICE OF COMAL COUNTY ENGINEER

August 19, 2005

Mr. Richard McDaniel
Pro-Tech Engineering Group, Agent
Bluegreen Southwest One, L.P.
100 E. San Antonio St., Suite 100
San Marcos, Texas 78666

Re: Proposed subdivision of MARTIN MARIETTA RANCH, within Comal County, Texas

Dear Property Owner:

We have completed the field inspection of the referenced for the recommendation for private sewage facilities and have found the property to be approved with the conditions that individual septic systems permits shall be required for the lots within this subdivision.

Please be advised that these individual permits will be required to meet 30 TAC 285.40, subchapter E (copy attached). Please specifically reference the one acre minimum lot size and 150 foot distance requirement to recharge features.

Should you have any questions, please feel free to contact us.

Sincerely,

Thomas H. Hornseth, P.E.
Comal County Engineer

195 David Jonas Drive • New Braunfels, Texas 78130 • (830) 608-2090 FAX (830) 608-2009

SUBCHAPTER E : SPECIAL REQUIREMENTS FOR OSSFS LOCATED IN THE EDWARDS AQUIFER RECHARGE ZONE §285.40

§285.40. OSSFs on the Recharge Zone of the Edwards Aquifer.

(a) Applicability. In addition to the requirements given in this chapter, the following additional provisions apply to the Edwards Aquifer recharge zone as defined in §285.2 of this title (relating to Definitions) and is not intended to be applied to any other areas in the State of Texas.

(b) Additional application requirements for new OSSFs.

(1) All planning and design materials shall be submitted by a professional engineer or sanitarian registered in Texas.

(2) Site evaluation to be conducted by a certified site evaluator possessing a valid certificate.

(c) Conditions for obtaining a permit to construct. In order to obtain a permit to construct in the Edwards Aquifer recharge zone, the following conditions must be met.

(1) Minimum lot sizes. Each lot or tract of land on the recharge zone on which OSSFs are to be located must have an area of at least one acre (43,560 square feet) per single family dwelling.

(2) Minimum separation distances from recharge features. The following separation distances shall be maintained from recharge features found during a site evaluation or in accordance with a geologic assessment performed in accordance with Chapter 213 of this title (relating to Edwards Aquifer). No sewage treatment tank or holding tank may be located within 50 feet of a recharge feature. No soil absorption system may be located within 150 feet of a recharge feature.

(3) No OSSF may be installed closer than 75 feet from the banks of the Nueces, Dry Frio, Frio, or Sabinal Rivers downstream from the northern Uvalde county line to the recharge zone.

(d) Existing OSSFs. OSSFs licensed by, or registered with, the appropriate permitting authority at the time of adoption of this section shall remain licensed or registered under the terms and conditions of the current license or registration. Any relicensing shall be performed in accordance with §285.3 of this title (relating to Applicability). An OSSF installed on the recharge zone prior to April 11, 1977, in either Uvalde or Kinney Counties is not required to be permitted or licensed, provided the OSSF is not causing pollution, is not a threat to the public health, or is not a nuisance, and has not been substantially modified.

(e) Exceptions for certain lots. Lots platted and recorded with the county in its official plat record, deed, or tax records of the following counties prior to the dates for the counties indicated in this

subsection, are exempted from the one-acre minimum lot size requirement, pursuant to the conditions of subsection (f) of this section.

(1) Kinney, Uvalde, Medina, Bexar, and Comal Counties--March 26, 1974;

(2) Hays County--June 21, 1984;

(3) Travis County--November 21, 1983; and

(4) Williamson County--May 21, 1985.

(f) Notice. Any person, or his agents or assignees, desiring to construct a residential development with two or more lots in which OSSFs will be utilized in whole or in part on the recharge zone and desiring to sell, lease, or rent the lots therein, must inform in writing each prospective purchaser, lessee, or renter of the following.

(1) Each lot within the regulated development is subject to the terms and conditions of this section.

(2) A permit to construct shall be required before an OSSF can be constructed in the subdivision.

(3) A license to operate shall be required for the operation of an OSSF.

(4) Whether or not an application for a water pollution abatement plan as defined in Chapter 213 of this title (relating to Edwards Aquifer), has been made, and whether or not it has been approved, and whether any restrictions or conditions have been placed on that approval.

Temporary Stormwater Section
for Regulated Activities
on the Edwards Aquifer Recharge Zone
and Relating to 30 TAC §213.5(b)(4)(A), (B), (D)(I) and (G); Effective June 1, 1999

REGULATED ENTITY NAME: **HAVENWOOD AT HUNTER'S CROSSING**

POTENTIAL SOURCES OF CONTAMINATION

Examples: Fuel storage and use, chemical storage and use, use of asphaltic products, construction vehicles tracking onto public roads, and existing solid waste.

1. Fuels for construction equipment and hazardous substances which will be used during construction:

   ___ Aboveground storage tanks with a cumulative storage capacity of less that 250 gallons will be stored on the site for less than one (1) year.

   X Aboveground storage tanks with a cumulative storage capacity between 250 gallons and 499 gallons will be stored on the site for less than one (1) year.

   ___ Aboveground storage tanks with a cumulative storage capacity of 500 gallons or more will be stored on the site. An **Aboveground Storage Tank Facility Plan** application must be submitted to the appropriate regional office of the TCEQ prior to moving the tanks onto the project.

   ___ Fuels and hazardous substances will not be stored on-site.

2. X **ATTACHMENT A - Spill Response Actions**. A description of the measures to be taken to contain any spill of hydrocarbons or hazardous substances isprovided at the end of this form.

3. X Temporary aboveground storage tank systems of 250 gallons or more cumulative storage capacity must be located a minimum horizontal distance of 150 feet from any domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

4. X **ATTACHMENT B - Potential Sources of Contamination.** Describe in an attachment at the end of this form any other activities or processes which may bea potential source of contamination.

   ___ The are no other potential sources of contamination.

SEQUENCE OF CONSTRUCTION

5. X **ATTACHMENT C - Sequence of Major Activities.** A description of the sequence of major activities which will disturb soils for major portions of the site (grubbing, excavation, grading, utilities, and infrastructure installation) is provided at the end of this form. For each activity described, an estimate of the total area of the site to be disturbed by each activity is given.

6. X Name the receiving water(s) at or near the site which will be disturbed or which will receive discharges from disturbed areas of the project:

TEMPORARY BEST MANAGEMENT PRACTICES (TBMPs)

Erosion control examples: tree protection, interceptor swales, level spreaders, outlet stabilization, blankets or matting, mulch, and sod. Sediment control examples: stabilized construction exit, silt fence, filter dikes, rock berms, buffer strips, sediment traps, and sediment basins. Please refer to the Technical Guidance Manual for guidelines and specifications. **All structural BMPs must be shown on the site plan.**

7. X **ATTACHMENT D - Temporary Best Management Practices and Measures.** A description of the TBMPs and measures that will be used during and after construction are provided at the end of this form. For each activity listed in the sequence of construction, include appropriate control measures and the general timing (or sequence) during the construction process that the measures will be implemented.

   X TBMPs and measures will prevent pollution of surface water, groundwater, and stormwater. The construction-phase BMPs for erosion and sediment controls have been designed to retain sediment on site to the extent practicable. The following information has been provided in the attachment at the end of this form

   a. A description of how BMPs and measures will prevent pollution of surface water, groundwater or stormwater that originates upgradient from the site and flows across the site.

   b. A description of how BMPs and measures will prevent pollution of surface water or groundwater that originates on-site or flows off site, including pollution caused by contaminated stormwater runoff from the site.

   c. A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.

   d. A description of how, to the maximum extent practicable, BMPs and measures will maintain flow to naturally-occurring sensitive features identified in either the geologic assessment, TCEQ inspections, or during excavation, blasting, or construction.

8. The temporary sealing of a naturally-occurring sensitive feature which accepts recharge to the Edwards Aquifer as a temporary pollution abatement measure during active construction should be avoided.

   — **ATTACHMENT E - Request to Temporarily Seal a Feature.** A request to temporarily seal a feature is provided at the end of this form. The request includes justification as to why no reasonable and practicable alternative exists for each feature.

   X There will be no temporary sealing of naturally-occurring sensitive features on the site.

9. X **ATTACHMENT F - Structural Practices.** Describe the structural practices that will be used to divert flows away from exposed soils, to store flows, or to otherwise limit runoff discharge of pollutants from exposed areas of the site. Placement of structural practices in floodplains has been avoided.

10. X **ATTACHMENT G - Drainage Area Map.** A drainage area map is provided at the end of this form to support the following requirements.

___ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.

___ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a smaller sediment basin and/or sediment trap(s) will be used.

___ For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin or other equivalent controls are not attainable, but other TBMPs and measures will be used in combination to protect down slope and side slope boundaries of the construction area.

_X_ There are no areas greater than 10 acres within a common drainage area that will be disturbed at one time. A smaller sediment basin and/or sediment trap(s) will be used in combination with other erosion and sediment controls within each disturbed drainage area.

11. _X_ **ATTACHMENT H - Temporary Sediment Pond(s) Plans and Calculations.** Temporary sediment pond or basin construction plans and design calculations for a proposed temporary BMP or measure has been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information must be signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed temporary BMPs and measures are provided as at the end of this form.

12. _X_ **ATTACHMENT I - Inspection and Maintenance for BMPs.** A plan for the inspection of temporary BMPs and measures and for their timely maintenance, repair, and, if necessary, retrofit is provided at the end of this form. A description of documentation procedures and recordkeeping practices is included in the plan.

13. _X_ All control measures must be properly selected, installed, and maintained in accordance with the manufacturers specifications and good engineering practices. If periodic inspections by the applicant or the executive director, or other information indicates a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations.

14. _X_ If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

15. _X_ Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake will be provided that can indicate when the sediment occupies 50% of the basin volume.

16. _X_ Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

SOIL STABILIZATION PRACTICES

Examples: establishment of temporary vegetation, establishment of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, or preservation of mature vegetation.

17. X **ATTACHMENT J - Schedule of Interim and Permanent Soil Stabilization Practices.** A schedule of the interim and permanent soil stabilization practices for the site is attached at the end of this form.

18. X Records must be kept at the site of the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

19. X Stabilization practices must be initiated as soon as practicable where construction activities have temporarily or permanently ceased.

ADMINISTRATIVE INFORMATION

20. X All structural controls will be inspected and maintained according to the submitted and approved operation and maintenance plan for the project.

21. X If any geologic or manmade features, such as caves, faults, sinkholes, etc., are discovered, all regulated activities near the feature will be immediately suspended. The appropriate TCEQ Regional Office shall be immediately notified. Regulated activities must cease and not continue until the TCEQ has reviewed and approved the methods proposed to protect the aquifer from any adverse impacts.

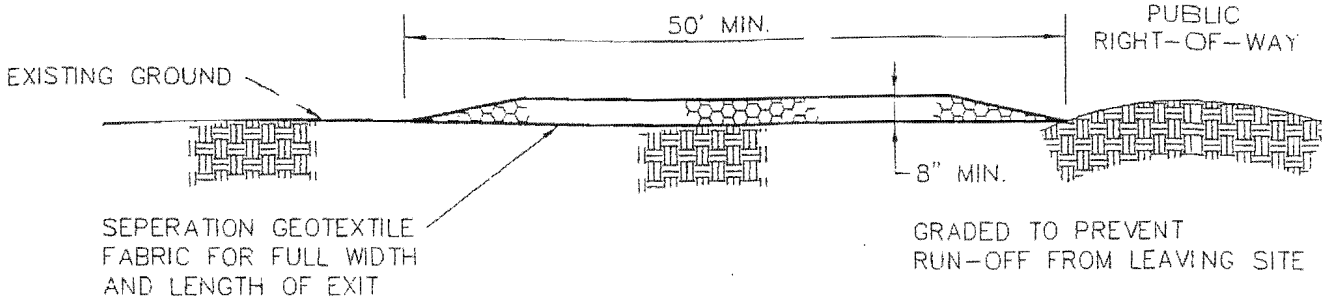
22. X Silt fences, diversion berms, and other temporary erosion and sediment controls will be constructed and maintained as appropriate to prevent pollutants from entering sensitive features discovered during construction.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **TEMPORARY STORMWATER SECTION** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

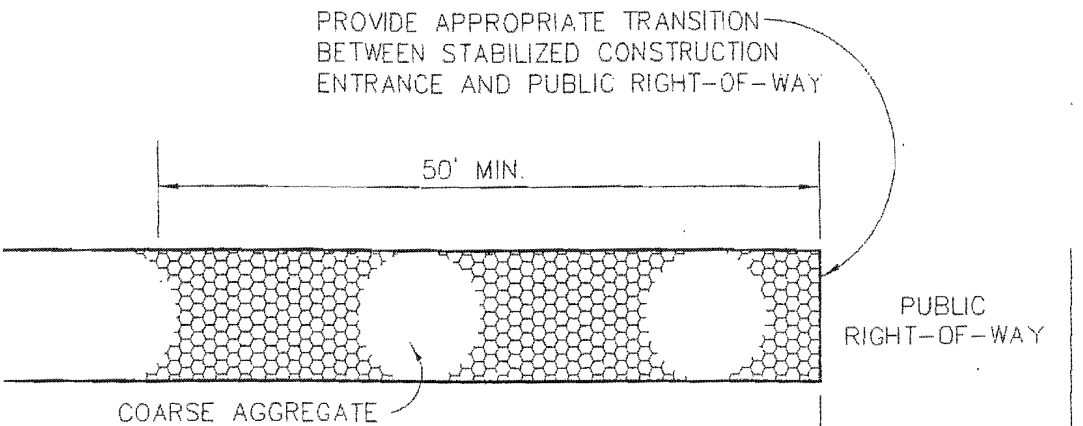
KELLY KILBER
Print Name of ~~Customer~~/Agent

Signature of ~~Customer~~/Agent

8/31/05
Date



PROFILE



PLAN VIEW

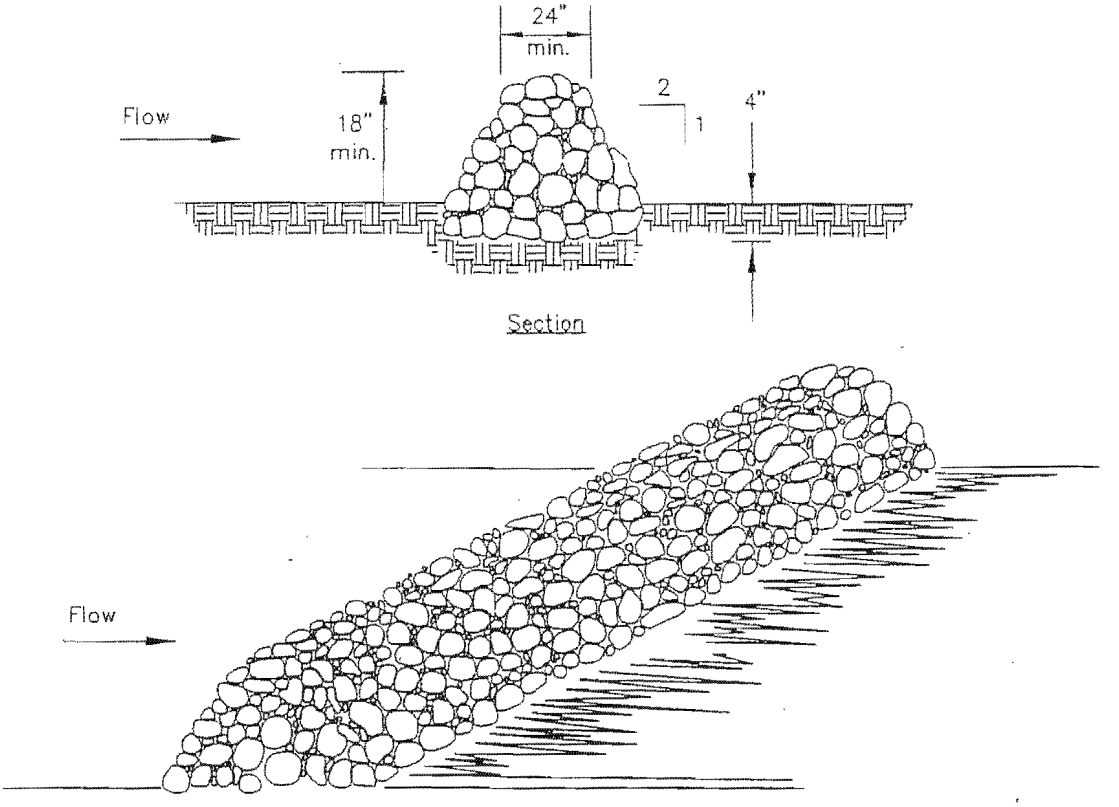
GENERAL NOTES:

1. Length shall be shown on the construction drawings, but not less than 50 feet.
2. Thickness shall be not less than 8 inches.
3. Width shall be not less than full width of all points of ingress or egress.
4. Stabilization for all areas shall have the same aggregate thickness and width requirements as the stabilized construction exit, unless otherwise shown on the construction drawings.
5. Stabilized area may be widened or legthened to accomodate a truck washing area, when shown on the construction drawing. An outlet sediment trap must be provided for the truck washing area.

STABILIZED CONSTRUCTION ENTRANC

N.T.S.

ROCK BERM
(not to scale)



GENERAL NOTES

1. Use only open-graded rock, with most of the fines removed.
2. Stone shall be crushed and, unless otherwise specified, shall be at least 3 inches in diameter and less than 1 cubic foot in volume.
3. The rock berm shall be embedded into the soil a minimum of 4 inches.
4. The rock berm shall be inspected after each rain, and the stone shall be replaced when the structure ceases to function as intended, due to silt accumulation among the rocks, washout, construction traffic damage, etc.
5. When silt reaches a depth equal to one-third the height of the berm or one foot, whichever is less, the silt will be removed and disposed of in an approved site and in such a manner as to not create a siltation problem.
6. When the site is completely stabilized, the berm will be removed and disposed of in an approved manner.

ATTACHMENT A
Spill Response Actions

An earthen berm will be built immediately downgradient of any spill. Then all material will be removed from the site and disposed of in an approved manner.

ATTACHMENT B

The major factor that affects surface water and groundwater quality will be from construction Equipment on site with the potential for leakage and soil disturbance from construction activities.

ATTACHMENT C

CONSTRUCTION CONTROLS:

The major construction activities to take place at the project site consist of the construction of approximately 68,800 linear feet of asphalt road and the installation of water distribution lines. FM 1102 will be used as the construction entrance. Rock Berms and silt fences for sediment traps will be constructed where shown on Drainage Map. All disturbed areas not covered with impervious material will be renegotiated with Rye-Bermuda grass mix immediately after completion of the grading. These areas will be prepared, seeded and watered by approved methods. Drainage Map shows guidelines for the restoration of grassed areas.

The following is an approximate chronological listing of the construction Activities and the Temporary Erosion Controls to be utilized during each activity.

CONSTRUCTION ACTIVITY	TEMPORARY EROSION CONTROL
Clearing and grubbing street right-of-way, rough grading of roads	Install rock berms, and silt fences and stabilized construction entrances.
Installation of water distribution system	No additional erosion controls necessary
Installation of drainage structures	No additional erosion controls necessary
Installation of base material	No additional erosion controls necessary
Installation of asphalt pavement	Seed disturbed areas immediately upon completion
Completion of construction	Remove sediment traps only after seed has established permanent growth.

All these construction activities will take place in the road row, approximately 95 acres.

ATTACHMENT H

There are no temporary sediment ponds planned for this project.

ATTACHMENT I

INSPECTIONS AND MAINTENANCE FOR BMPS

a. Each Contractor will designate a qualified person or persons to perform the following inspections:

   1. Disturbed areas and areas used for storage of materials that are exposed to precipitation will be inspected for evidence of, or the potential for, pollutants entering the drainage system.

   2. Erosion and sediment control measures identified in the plan will be observed to ensure that they are operating correctly.

   3. Where discharge locations or points are accessible, they will be inspected to ascertain when the erosion control measures are effective in preventing significant impacts to receiving waters.

   4. Locations where vehicles enter or exit the site will be inspected for evidence of offsite sediment tracking. The inspection will be conducted by the responsible person at least once every seven calendar days and within 24 hours after the end of a storm of 0.5 inch or greater.

      After a portion of the site is finally stabilized, inspection will be conducted at least once every month until construction activities have been completed.

b. Based on the results of the inspection, the site description and control measures will be revised by the Engineer as appropriate, but in no case later than seven calendar days following the inspection. Any modifications shall be implemented within seven days of the inspection.

c. A report prepared by the contractor summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the erosion controls, and actions taken in accordance with item" b" above will be made. The report will be signed and a copy of the report must be submitted to the Engineer within 2 days after the inspection.

Copies of the forms and certifications to be used for the Inspection and Maintenance report are included.

INSPECTION AND MAINTENANCE GUILDELINES FOR SILT FENCES

1. Inspect all fencing weekly, and after any rainfall.

2. Remove sediment when buildup reaches 6 inches, or install a second line of fencing parallel to the old fence.

3. Replace any torn fabric or install a second line of fencing parallel to the torn section.

4. Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.

INSPECTION AND MAINTENANCE GUIDELINES FOR ROCK BERMS

1. Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made.

2. Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt of in an approved manner.

3. Repair any loose wire sheathing.

4. The berm should be reshaped as needed during inspection.

5. The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.

6. The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

INSPECTION REPORT

PROJECT NAME: HAVENWOOD AT HUNTER'S CROSSING

REPORT NO._____ _ DATE:_____ PROJECT FILE NO:_____

INSPECTOR:_____ TITLE_____

REASON FOR INSPECTION (CHECK ONE)Bi Weekly_____ or ½" Rain_____

DATE OF LAST RAINFALL_____AMOUNT_____

SITE CONDITIONS:

EROSION AND SEDIMENTATION CONTROLS	IN CONFORMANCE	EFFECTIVE
Construction Entrance	YES/NO/NA	YES/NO
Sediment Traps	YES/NO/NA	YES/NO
Inlet Protection	YES/NO/NA	YES/NO
Stabilization	YES/NO/NA	YES/NO
Silt Fence	YES/NO/NA	YES/NO
Straw/Hay Bales	YES/NO/NA	YES/NO
Vegetative Buffer Strips	YES/NO/NA	YES/NO
Rock Berms	YES/NO/NA	YES/NO

VIOLATIONS NOTED:

_____

_____

RECOMMENDED REMEDIAL ACTIONS:

_____

_____

COMMENTS:

_____

_____

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision with a system designed to assure that qualified personnel property gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

INSPECTOR:_____ **DATE:**_____

COPY_____

EROSION AND SEDIMENT CONTROLS:

All natural drainage channels and swells will be left in their natural state so that the flow will not erode the receiving downstream reach and will also act as a sediment trap. There will be no installation of devices to divert flow, store flow or limit runoff.

Temporary erosion and sediment controls will consist of rock berms and silt fences installed downslope of construction activities at all drainage courses.

Permanent erosion and sediment controls will consist of seeding and/or hydromulching areas all areas disturbed during construction.

OTHER CONTROLS:

The prevention of pollutants from entering the storm water system includes the requirement that no no-storm water solid materials, including building material wastes, shall be discharged at the site. Daily cleaning is required to keep the site free from accumulation of waste material and rubbish. All waste materials must be disposed of daily in onsite containers. These containers shall be removed from the site periodically and disposed of at a legal disposal area away from the site. All collection and disposal methods shall be in strict compliance with local codes.

The final permit requires offsite vehicle tracking of sediments and the generation of dust be minimized. To minimize the tracking of sediments by offsite vehicle hauling of materials, TXDOT maintains FM1102 adjacent to the site will be used as the main delivery route. This paved roadway can be easily cleaned by a front end loader or motor grader to prevent sediment from entering the storm water ditches located on both sides of the road. The pavement surface should be cleaned as necessary but not less than once a day. By using the asphalt roadway for a delivery route, sediments can be controlled onsite by the previously discussed sediment control procedures. Also stabilized construction entrances shall be installed at the entrance to the site.

Efforts shall be made at all times to prevent the unnecessary accumulation of dust. Earth surfaces subject to dusting shall be kept moist with water.

Permanent Stormwater Section
for Regulated Activities
on the Edwards Aquifer Recharge Zone
and Relating to 30 TAC §213.5(b)(4)(C), (D)(li), (E), and (5), Effective June 1, 1999

REGULATED ENTITY NAME: **HAVENWOOD AT HUNTER'S CROSSING**

Permanent best management practices (BMPs) and measures that will be used during and after construction is completed.

1. X Permanent BMPs and measures must be implemented to control the discharge of pollution from regulated activities after the completion of construction.

2. X These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

   __ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.
   __ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is provided below

3. X Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

4. X Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

   X This site will be used for low density single-family residential development and has 20% or less impervious cover.
   __ This site will be used for low density single-family residential development but has more than 20% impervious cover.
   __ This site will not be used for low density single-family residential development.

5. X The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be

recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

X **ATTACHMENT A - 20% or Less Impervious Cover Waiver.** This site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is found at the end of this form.

__ This site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.

__ This site will not be used for multi-family residential developments, schools, or small business sites.

6. **ATTACHMENT B- BMPs for Upgradient Stormwater.**

X A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is identified as **ATTACHMENT B** at the end of this form.

__ If no surface water, groundwater or stormwater originates upgradient from the site and flows across the site, an explanation is provided as **ATTACHMENT B** at the end of this form.

__ If permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, an explanation is provided as **ATTACHMENT B** at the end of this form .

7. **ATTACHMENT C- BMPs for On-site Stormwater.**

X A description of the BMPs and measures that will be used to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff from the site is identified as **ATTACHMENT C** at the end of this form.

__ If permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, an explanation is provided as **ATTACHMENT C** at the end of this form.

8. X **ATTACHMENT D- BMPs for Surface Streams.** A description of the BMPs and measures that prevent pollutants from entering surface streams, sensitive features, or the aquifer is provided at the end of this form. Each feature identified in the Geologic Assessment as "sensitive" or "possibly sensitive" has been addressed.

9. X The applicant understands that to the extent practicable, BMPs and measures must maintain flow to naturally occurring sensitive features identified in either the geologic assessment, executive director review, or during excavation, blasting, or construction.

__ The permanent sealing of or diversion of flow from a naturally-occurring "sensitive" or "possibly sensitive" feature that accepts recharge to the Edwards Aquifer as a permanent pollution abatement measure has not been proposed for any naturally-

occurring "sensitive" or "possibly sensitive" features on this site.

__ **ATTACHMENT E - Request to Seal Features.** A request to seal a naturally-occurring "sensitive" or "possibly sensitive" feature, that includes a justification as to why no reasonable and practicable alternative exists, is found at the end of this form. A request and justification has been provided for each feature.

10. X **ATTACHMENT F - Construction Plans.** Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer. All construction plans and design information have been signed, sealed, and dated by the Texas Licensed Professional Engineer. Construction plans for the proposed permanent BMPs and measures are provided at the end of this form. Design Calculations, TCEQ Construction Notes, all man-made or naturally occurring geologic features, all proposed structural measures, and appropriate details must be shown on the construction plans.

11. X **ATTACHMENT G - Inspection, Maintenance, Repair and Retrofit Plan.** A plan for the inspection, maintenance, repair, and, if necessary, retrofit of the permanent BMPs and measures is provided at the end of this form. The plan has been prepared and certified by the engineer designing the permanent BMPs and measures. The plan has been signed by the owner or responsible party. The plan includes procedures for documenting inspections, maintenance, repairs, and, if necessary, retrofits as well as a discussion of record keeping procedures.

12. X The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

__ Pilot-scale field testing (including water quality monitoring) may be required for BMPs that are not contained in technical guidance recognized by or prepared by the executive director.

__ **ATTACHMENT H - Pilot-Scale Field Testing Plan.** A plan for pilot-scale field testing is provided at the end of this form.

13. X ATTACHMENT I -**Measures for Minimizing Surface Stream Contamination.** A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is provided at the end of this form. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity which increase erosion that results in water quality degradation.

Responsibility for maintenance of permanent BMPs and measures after construction is complete.

14. X The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

15. X A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

To the best of my knowledge, the responses to this form accurately reflect all information requested concerning the proposed regulated activities and methods to protect the Edwards Aquifer. This **PERMANENT STORMWATER SECTION** is hereby submitted for TCEQ review and executive director approval. The application was prepared by:

Print Name of ~~Customer~~/Agent
KELLY KILBER

Signature of ~~Customer~~/Agent

8/31/05
Date

ATTACHMENT A

20% or Less Impervious Cover Waiver

We request a waiver to permanent BMPs due to the fact that there will be less than 20% impervious cover. This development is a low density single family residential subdivision.

ATTACHMENT C

This site has less than 20% impervious cover and no permanent BMPs will be constructed. All drainage courses will be left in there natural state. No diversion of Stormwater runoff or new channelization will take place.

ATTACHMENT D

No features on this site have been identified in the Geological Assessment as "sensitive" or "possibly sensitive. Permanent vegetation down gradient of the building and parking lot will be used as pollution abatement measures.

ATTACHMENT I

All new drainage structures to have concrete rip-rap headwalls and disturbed areas to be revegetate to minimize erosion that could result in water quality degradation.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES

1. Written construction notification must be given to the appropriate TCEQ regional office no later than 48 hours prior to commencement of the regulated activity. Information must include the date on which the regulated activity will commence, the name of the approved plan for the regulated activity, and the name of the prime contractor and the name and telephone number of the contact person.

2. All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.

3. If any sensitive feature is discovered during construction, all regulated activities near the sensitive feature mut be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. The regulated activities near the sensitive feature may not proceed until the TCEQ has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality.

4. No temporary aboveground hydrocarbon and hazardous substance storage tank system is installed within 150 feet of a domestic, industrial, irrigation, or public water supply well, or other sensitive feature.

5. Prior to commencement of construction, all temporary erosion and sedimentation (E&S) control measures must be properly selected, installed, and maintained in accordance with the manufacturers specifications and good engineering practices. Controls specified in the temporary storm water section of the approved Edwards Aquifer Protection Plan are required during construction. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. The controls must remain in place until disturbed areas are revegetated and the areas have become permanently stabilized.

6. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).

7. Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake must be provided that can indicate when the sediment occupies 50% of the basin volume.

8. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

9. All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.

10. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.

11. The following records shall be maintained and made available to the TCEQ upon request: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease on a portion of the site; and the dates when stabilization measures are initiated.

12. The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:

A. any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;

B. any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;

C. any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office
1921 Cedar Bend, Suite 150
Austin, Texas 78758-5336
Phone (512) 339-2929
Fax (512) 339-3795

San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233-44802
Phone (210) 490-3096
Fax (210) 545-4329

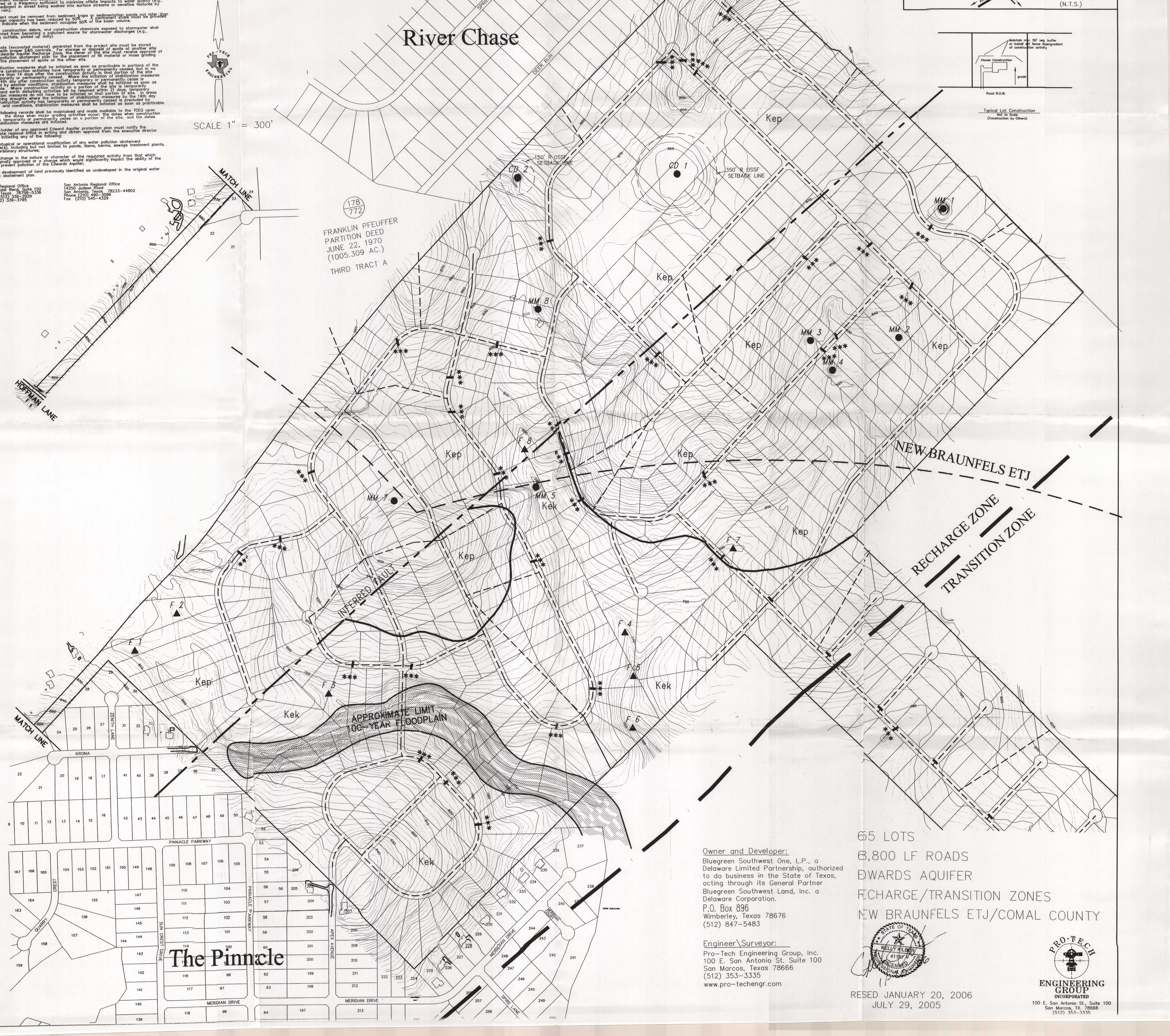
HAVENWOOD AT HUNTER'S CROSSING COMAL COUNTY, TEXAS

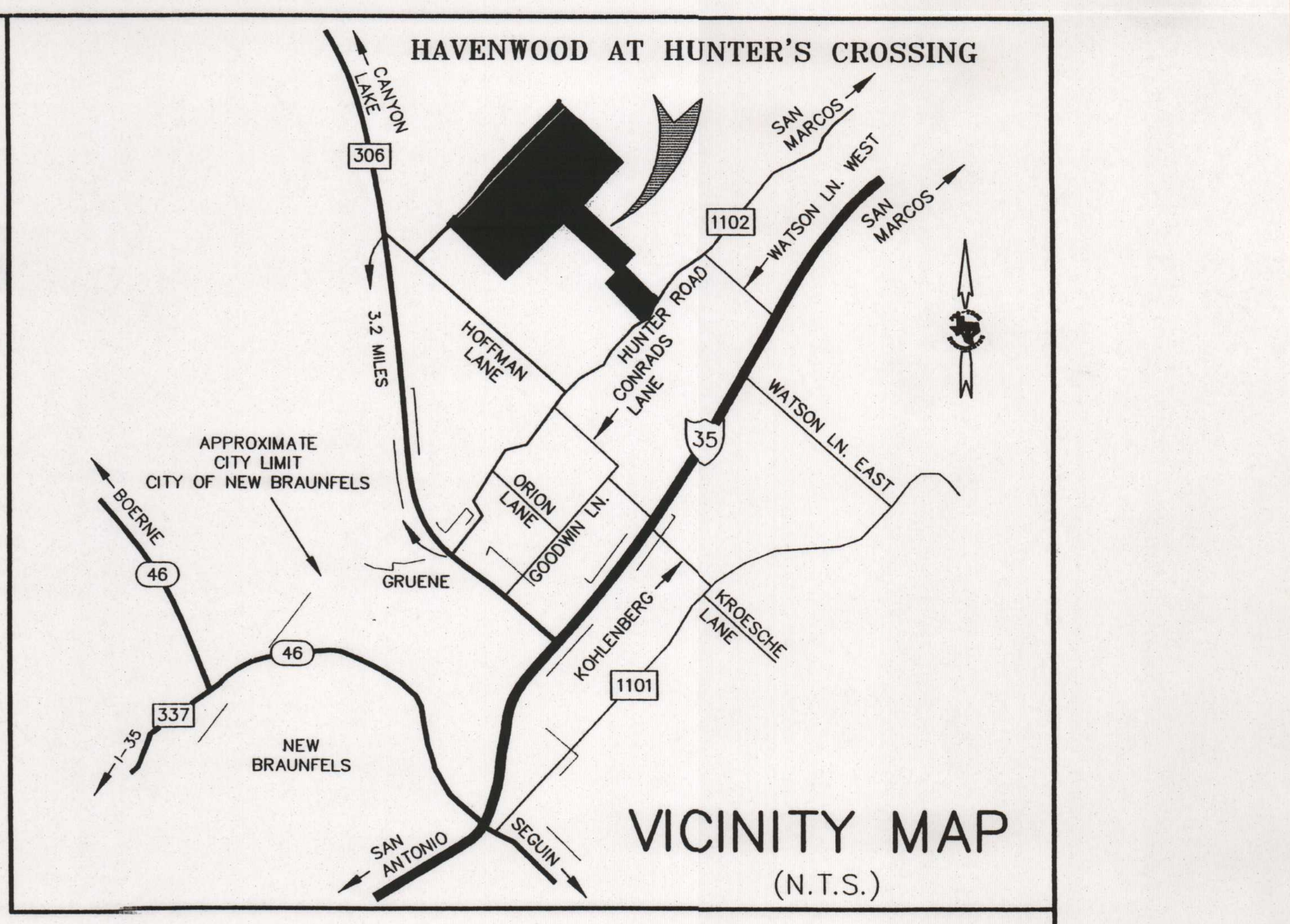
General Notes:

All Best Management Practices to be installed and maintained in accordance with the TCEQ publication "Complying with the Edward's Aquifer Rules: Technical Guidance on Best Management Practices" published in June 1999.

A vegetative buffer strip a minimum of 50' in width shall be maintained adjacent to all areas disturbed by construction activities. Any areas where construction prevents the buffer strip width from being maintained shall have silt fence installed to replace the vegetative buffer.

TCEQ-R13
JAN 26 2006
SAN ANTONIO





Typical Lot Construction
Not to Scale
(Construction by Others)

Owner and Developer:
Bluegreen Southwest One, L.P., a Delaware Limited Partnership, authorized to do business in the State of Texas, acting through its General Partner Bluegreen Southwest Land, Inc. a Delaware Corporation.
P.O. Box 896
Wimberley, Texas 78676
(512) 847-5483

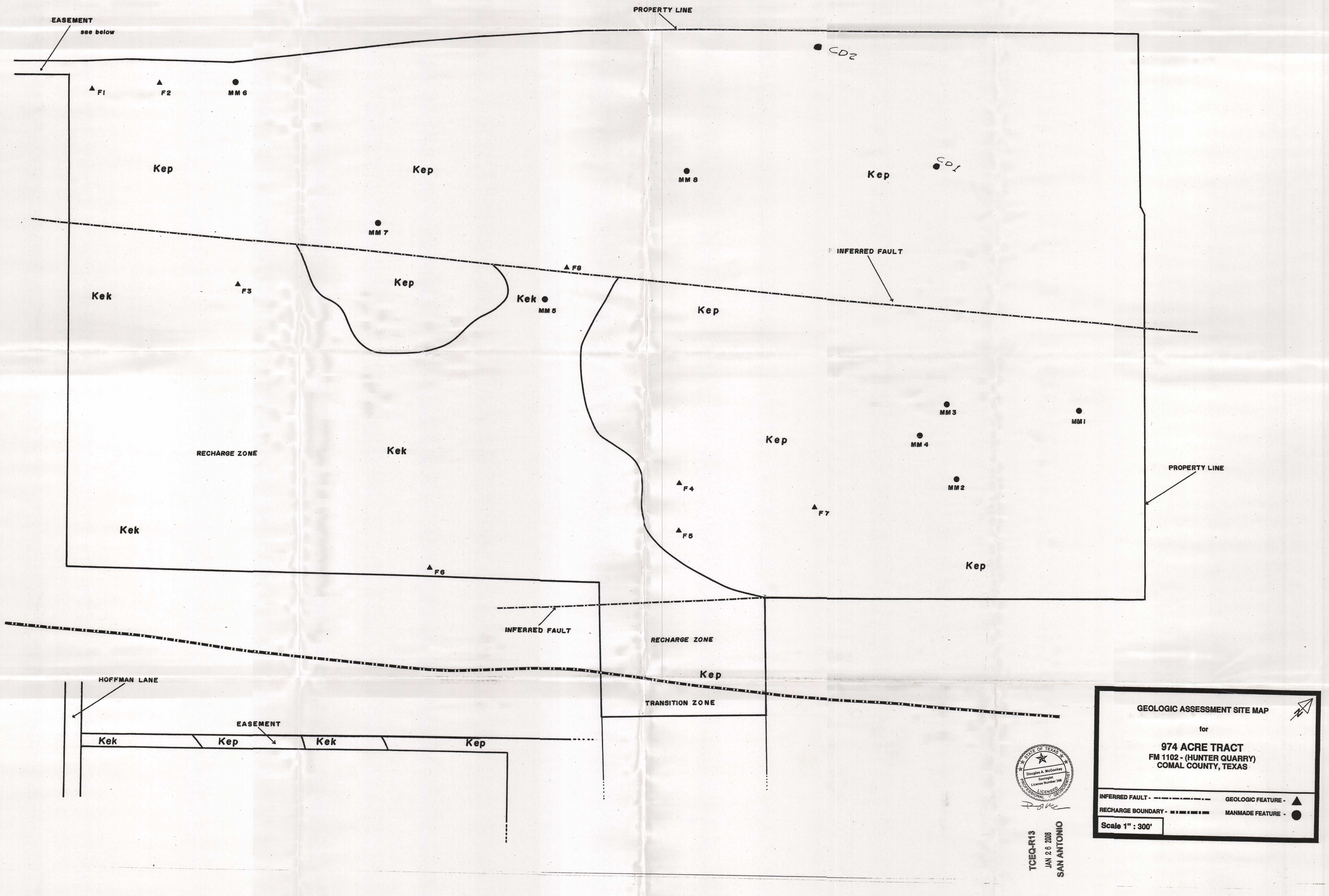
Engineer\Surveyor:
Pro-Tech Engineering Group, Inc.
100 E. San Antonio St. Suite 100
San Marcos, Texas 78666
(512) 353-3335
www.pro-techengr.com

65 LOTS
6,800 LF ROADS
DWARDS AQUIFER
ECHARGE/TRANSITION ZONES
EW BRAUNFELS ETJ/COMAL COUNTY

STATE OF TEXAS
KELLY KILBER
41187
LICENSED
PROFESSIONAL ENGINEER

RESED JANUARY 20, 2006
JULY 29, 2005

PRO-TECH
ENGINEERING GROUP INCORPORATED
100 E. San Antonio St., Suite 100
San Marcos, TX. 78666
(512) 353-3335


PROPERTY LINE
EASEMENT
see below
CD2
F1
F2
MM 6
Kep
Kep
MM 8
Kep
CD1
MM 7
INFERRED FAULT
F8
Kep
Kek
F3
Kek
MM 5
Kep
MM 3
MM 1
Kep
MM 4
RECHARGE ZONE
Kek
PROPERTY LINE
F4
MM 2
F7
F5
Kek
Kep
F6
INFERRED FAULT
RECHARGE ZONE
Kep
HOFFMAN LANE
TRANSITION ZONE
EASEMENT
Kek
Kep
Kek
Kep
GEOLOGIC ASSESSMENT SITE MAP
for
974 ACRE TRACT
FM 1102 - (HUNTER QUARRY)
COMAL COUNTY, TEXAS
INFERRED FAULT -
RECHARGE BOUNDARY -
GEOLOGIC FEATURE -
MANMADE FEATURE -
Scale 1" : 300'
STATE OF TEXAS
Douglas A. McGookey
Geologist
License Number 368
LICENSED
PROFESSIONAL GEOSCIENTIST
TCEQ-R13
JAN 26 2006
SAN ANTONIO

Notification Of Discharge From Construction Activity

TO: Comal County

In accordance with Texas Commission on Environmental Quality's TXR#150000 this notice is to inform you that will be discharging Storm Water at the location listed below:

OPERATOR / COMPANY: TKG Holdings, LLC

CONTACT: Robert Turner

PHONE NUMBER: 210-632-1118

LOCATION: Havenwood at Hunters Crossing

A NOI / permit to discharge has been filed in accordance with TXR#150000 with the TCEQ and is attached to this notice.

Please direct all questions regarding this matter to:

PES Storm Water Consultants, Inc.
www.paragonenvironmental.com

Kathy Henley
Office: 512-527-0048
Fax: 512-527-0061
Direct: 512-554-8681
kathy@paragonenvironmental.com

Texas Commission on Environmental Quality

Construction Notice of Intent

Site Information (Regulated Entity)

What is the name of the site to be authorized?	Havenwood
Does the site have a physical address?	Yes
Physical Address	
Number and Street	872 HAVEN PT
City	NEW BRAUNFELS
State	TX
ZIP	78132
County	COMAL
Latitude (N) (##.######)	29.796565
Longitude (W) (-###.######)	-98.077999
Primary SIC Code	1521
Secondary SIC Code	
Primary NAICS Code	
Secondary NAICS Code	
Regulated Entity Site Information	
What is the Regulated Entity's Number (RN)?	
What is the name of the Regulated Entity (RE)?	Havenwood
Does the RE site have a physical address?	Yes
Physical Address	
Number and Street	872 HAVEN PT
City	NEW BRAUNFELS
State	TX
ZIP	78132
County	COMAL
Latitude (N) (##.######)	29.796565
Longitude (W) (-###.######)	-98.077999
What is the primary business of this entity?	

Customer (Applicant) Information

How is this applicant associated with this site?	Operator
What is the applicant's Customer Number (CN)?	
Type of Customer	Corporation
Full legal name of the applicant:	
Legal Name	TKG Holdings, LLC
Texas SOS Filing Number	0801650061

Federal Tax ID	320388833
State Franchise Tax ID	32048943271
DUNS Number	
Number of Employees	0-20
Independently Owned and Operated?	Yes
I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas.	Yes
Responsible Authority Contact	
Organization Name	TKG Holdings, LLC
Prefix	
First	Robert
Middle	
Last	Turner
Suffix	
Title	Managing Partner
Responsible Authority Mailing Address	
Enter new address or copy one from list:	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	533 E COURT ST
Routing (such as Mail Code, Dept., or Attn:)	
City	SEGUIN
State	TX
ZIP	78155
Phone (###-###-####)	2106321118
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	

Application Contact

Person TCEQ should contact for questions about this application:	
Same as another contact?	TKG Holdings, LLC
Organization Name	TKG Holdings, LLC
Prefix	
First	Robert
Middle	
Last	Turner
Suffix	

Title	Managing Partner
Enter new address or copy one from list:	
Mailing Address	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	533 E COURT ST
Routing (such as Mail Code, Dept., or Attn:)	
City	SEGUIN
State	TX
ZIP	78155
Phone (###-###-####)	2106321118
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	

CNOI General Characteristics

1) Is the project located on Indian Country Lands?	No
2) Is your construction activity associated with a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources?	No
3) What is the Primary Standard Industrial Classification (SIC) Code that best describes the construction activity being conducted at the site?	1521
4) If applicable, what is the Secondary SIC Code(s)?	
5) Is the project site part of a larger common plan of development or sale?	Yes
6) What is the total number of acres disturbed?	2
7) What is the name of the first water body(s) to receive the stormwater runoff or potential runoff from the site?	Guadalupe River
8) What is the segment number(s) of the classified water body(s) that the discharge will eventually reach?	1804
9) Is the discharge into an MS4?	Yes
9.1. What is the name of the MS4 Operator?	New Braunfels
10) Are any of the surface water bodies receiving discharges from the construction site on the latest EPA-approved CWA 303(d) List of impaired waters?	No
11) Is the discharge or potential discharge within the Recharge Zone, Contributing zone, or	Yes

Contributing zone within the Transition zone of the Edwards Aquifer, as defined in 30 TAC Chapter 213?	
11.1. I certify that a copy of the TCEQ approved Plan required by the Edwards Aquifer Rule (30 TAC Chapter 213) is either included or referenced in the Stormwater Pollution Prevention Plan.	Yes
12) I certify that a stormwater pollution prevention plan has been developed, will be implemented prior to construction, and to the best of my knowledge and belief is compliant with any applicable local sediment and erosion control plans, as required in the general permit TXR150000. Note: For multiple operators who operate under a shared SWP3, the confirmation of an operator may be limited to its obligations under the SWP3 provided all obligations are confirmed by at least one operator.	Yes
13) I certify that I have obtained a copy and understand the terms and conditions of the Construction General Permit (TXR150000).	Yes
14) I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed.	Yes

Certification

I certify that I am authorized under 30 Texas Administrative Code Subchapter 305.44 to sign this document and can provide documentation in proof of such authorization upon request.

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

1. I am Robert Turner, the owner of the STEERS account ER055351.
2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcement of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Construction Notice of Intent.
9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEQ.

OPERATOR Signature: Robert Turner OPERATOR

Account Number:	ER055351
Signature IP Address:	173.174.44.96
Signature Date:	2018-01-09
Signature Hash:	D4539AE5C6776F9B3BE22721AF6AAAEC27B90A540AE7450762FE56BE77FAE980
Form Hash Code at time of Signature:	02AC879B90C860B1335EB04169A31C6E7D082C2E2962332F1ADD70C46F9EF83C

Fee Payment

Transaction by:	The application fee payment transaction was made by ER055351/Robert Turner
Paid by:	The application fee was paid by KATHY HENLEY
Fee Amount:	$225.00
Paid Date:	The application fee was paid on 2018-01-09
Transaction/Voucher number:	The transaction number is 582EA000282184 and the voucher number is 347895

Fee Payment

Transaction by:	The application fee payment transaction was made by ER055351/Robert Turner
Paid by:	The application fee was paid by KATHY HENLEY
Fee Amount:	$225.00
Paid Date:	The application fee was paid on 2018-01-09
Transaction/Voucher number:	The transaction number is 582EA000282184 and the voucher number is 347895

Submission

Reference Number:	The application reference number is 199326
Submitted by:	The application was submitted by ER055351/Robert Turner
Submitted Timestamp:	The application was submitted on 2018-01-09 at 12:12:34 CST
Submitted From:	The application was submitted from IP address 173.174.44.96
Confirmation Number:	The confirmation number is 178204
Steers Version:	The STEERS version is 6.15

Additional Information

Application Creator: This account was created by Robert Turner