



City of Colleyville

Agenda Briefing

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File Number: O-10-1779

File Number: O-10-1779 **File Type:** Ordinance **Status:** First Reading

Version: 1 **Agenda Date:** 11/03/2010 **Controlling Body:** City Council

Requester: Community Development Department **Agenda No.:** 6a **Final Action:**

File Name: Approval of a request for a Special Use Permit for a gas well site on 13.24 acres on Lot 1, Block 1, of the Park Place Estates Addition and Tract 1D, Abstract 295 in the W.E. Crooks Survey located at 7404 and 7504 Pleasant Run Road, Case ZC10-022

Attachments: Location and Zoning Map • Notification List • Letters of Opposition • Transportation Route Notification List • Information from Applicant Regarding Letters of Support • Statement of Planning Objectives • Landscaping Plan • Erosion Control Plan • Grading Plan • Site Plan A • Site Plan B • Utility Plan • Distance Separation Waivers • Tree Removal Letter • TCC Emission Control Plan • Potential Pipeline Route • Ordinance O-10-1779

History of Legislative File

Version:	Date:	Acting Body:	Action Text:
1	10/11/2010	Planning and Zoning Commission	
1	11/03/2010	City Council	

Title

Approval of a request for a Special Use Permit for a gas well site on 13.24 acres on Lot 1, Block 1, of the Park Place Estates Addition and Tract 1D, Abstract 295 in the W.E. Crooks Survey located at 7404 and 7504 Pleasant Run Road, Case ZC10-022

Explanation

First Reading and Public Hearing

Titan Operating, LLC has submitted an application for a Special Use Permit (SUP) for a gas well drilling and production site on 13.2 acres located at 7404 and 7504 Pleasant Run Road. As part of the request, the applicant proposes to establish a well drilling and production site, along with a fresh water fracturing pond. Initial drilling activities are proposed to begin in January 2011.

This agenda item is to consider the SUP request only. Permitting the individual gas wells at this site is a separate process that will require separate permits approved by staff. The permitting process for the individual gas wells requires the gas operator to demonstrate compliance with the technical details, safety issues and other regulations as indicated in Chapter 3.1-Oil and Gas Drilling and Production of the Land Development Code.

A separate pipeline plan will be submitted by a pipeline company for additional approval by

the City Council prior to construction of any pipelines.

Amendments to Chapter 3.1-Oil and Gas Well Drilling and Production. Proposed amendments to Chapter 3.1 were presented to the City Council on September 21, 2010. Staff was directed to bring the amendments forward for consideration at a future City Council meeting date. It is anticipated that the amendments will be adopted before the request by the applicant is considered by the City Council. Given that the current request was submitted prior to the anticipated adoption of the new regulations, the applicant is vested under the current provisions of Chapter 3.1. However, given the Special Use Permit requirements for approval of any drilling and production operations, staff has placed language in the proposed ordinance requiring the applicant to abide by the proposed, updated provisions. The proposed updates are attached to this briefing.

Existing Conditions. The subject property is owned by the Trinity Christian Center and is currently zoned AG-Agricultural. The portion of the property that would contain the proposed pad site and fresh water pond is not platted while the remainder of the property is platted. The only building on the subject property is a 1,200 square foot barn.

Review of Gas Well Drilling Operations. Typical gas well drilling and production involves several operations with the main actions being drilling, fracturing, pipeline connections, and production. Multiple wells can also be drilled from a single pad site. Individual wells can be drilled within 7.5 feet of each other and can access areas 360 degrees from the well site, much like spokes on a wheel.

- Drilling operations include the initial vertical penetration of approximately 8,900 feet into the Barnett Shale and horizontal drilling up to 6,000 feet, which allows subsurface properties more than a mile from the well head to be reached. Drilling typically lasts 30 days and involves 24-hour drilling operations. However, site development, which includes the erection of major drilling towers, installation of sound reducing devices, drilling and other activities, may only occur between 7:00 a.m. and 7:00 p.m., Monday through Friday, and 9:00 a.m. to 5:00 p.m. on Saturday.

- Fracturing operations involve pumping massive amounts of pressurized water and sand into the wellhead to stimulate fractures deep in the shale and allow the gas to escape. These operations typically last a few days and may involve flaring to make the gas ready for production.

- Gas pipelines are required to be constructed to transport the gas to market; these pipelines must be built directly to the gas well site and connected and distributed to major markets.

- Production is the final process whereby the gas exits the well, enters the pipeline and is transported to an endpoint. Properly screened and buffered sites should cause little notice of production activities. Production does, however, require weekly maintenance and trucking operations to remove water waste from onsite storage tanks.

Drilling Site Plan. The site plan indicates a two acre pad site where drilling and production will occur.

As indicated on the site plan, the pad site and all operations are surrounded by a six-foot security fence. The site's access road off of Pleasant Run Road will be a 25 foot wide, concrete driveway. The gate will be located 85 feet from Pleasant Run Road. The pad site will be paved with crushed limestone during operations.

The proposed updates to Chapter 3.1 require a minimum eight (8) foot screening fence be installed around the pad site during drilling activities.

The pad site will contain adequate space for emergency vehicles to turn around in the event of an emergency.

The site will also contain construction trailers, pipe racks, pipe storage, crew housing and the drilling apparatus, which may be up to 160 feet tall. All equipment will be removed from the site upon completion of drilling activities.

The applicant states that the mechanical operations of the rig will utilize electric power rather than diesel power. However, the electric operation will require two large diesel generators in order to provide adequate electricity. The generators will be contained in structures that are equipped with several layers of noise buffering.

The applicant proposes to drill up to 14 wells over a five to seven year period. Staff recommends that there be no more than a three year window allowed for all drilling to occur. If, at the completion of the five year period, the applicant wishes to drill additional wells, the proposed SUP would be required to be amended.

These provisions are contained within the proposed updates to Chapter 3.1, which are adopted by reference in the proposed ordinance.

Completion (Fracturing) Operations. All fracturing operations will be performed on the drill site and completely contained within the pad site. The applicant proposes that all water to be utilized for the fracturing operations will come from the City's water supply and will be paid for by the applicant. However, the applicant also requests to have the option to drill a freshwater well in the event that City water is not available. The well would be drilled to an approximate depth of 4,000 feet. Each gas well is proposed to use approximately 420,000 gallons of fresh water during the drilling phase and 4.2 million gallons of water during the fracturing phase. The applicant will not be permitted to impact the City water system such that it lowers water pressure below 35 pounds per square inch (PSI). Therefore, in order have adequate pressure when needed, the applicant proposes to install a 1.4 acre fresh water pond to be used as a storage vehicle, thereby ensuring an adequate water supply is available at all times. The approximate water volume of the proposed tank will be 5 million gallons of water.

The applicant will be required to upgrade the existing six inch water service line that serves the property to an eight inch water line. In lieu of installation, funds equaling the cost of installation may be placed into escrow for future installation. This provision has been added to the proposed ordinance.

Pipelines. The site plan indicates a pipeline easement running north from the drilling site, then south across the subject property to the adjacent property.

No pipeline permit has been submitted. A separate pipeline plan will be submitted by a pipeline company for additional approval by the City Council prior to construction of any pipelines.

A copy, provided by Energy Transfer, of the potential pipeline route that would service the proposed pad site is attached. However, this is strictly for informational purposes.

The pipeline route and pipeline specifications cannot be considered as part of the consideration of this SUP request.

Production/Operation Site Plan. The production site includes the two acre site to be surrounded by an eight-foot masonry screening wall. The site will contain up to 14 water storage tanks, each 16 feet in diameter and eight feet in height. In addition to the tanks, there will be a meter run and a horizontal separator, all surrounded by an impervious liner.

The final production site may be operational for up to 30 years.

Noise Mitigation. The applicant intends to abide by the minimum requirements of Chapter 3.1 with regard to noise mitigation. Chapter 3.1 requires that noise levels not exceed 65 decibels (dB) for drilling operations, 85 dB for fracturing operations and 55 dB for production operations. All measurements are taken at 300 feet in all directions from the drilling and production site.

Staff recommends that the applicant be required to abide by the amended noise provisions of Chapter 3.1, which require the operator to be responsible for establishing and reporting to the City the pre-drilling ambient noise level prior to the issuance of a well permit. Once the drilling is complete, the operator is required to establish a new ambient noise level prior to the installation of any new noise generating equipment. In order meet the noise standards, acoustical blankets and sound walls may be required.

Landscaping, Screening and Tree Preservation. The applicant will be required to mitigate for all trees removed or damage on the site.

The applicant intends to leave as many existing trees as possible in place to provide natural screening from the site.

During the first phase of drilling operations an eight (8) foot screening fence must be installed around the entire pad site.

Upon completion of the first phase of drilling, prior to production of any wells, the applicant will construct an eight foot masonry fence around the entire pad site. The fence will remain in place until production ceases.

These provisions are contained within the proposed updates to Chapter 3.1, which are adopted by reference in the proposed ordinance.

Buffering. The proposed updates to Chapter 3.1 require that no structure intended for human occupancy shall be constructed within 300 feet of an existing gas well head, tank battery or other gas well equipment unless approved by the City Council.

This provision would apply to any future development around the wellheads, if approved.

Signs and Lighting. As required by Chapter 3.1, the applicant intends to install a sign at the entrance to identify the site. The sign will contain contact numbers for the gas well operator and emergency services.

The applicant intends to direct all lighting inward toward the well site. Lighting will be required to be placed so as not to disturb adjacent properties. This provision has been added to the proposed ordinance.

Access and Transportation. The applicant states that during drilling operations there will be 35 truckloads over a three-day period between the hours of 7:00 a.m. and 7:00 p.m. with an average of 1.5 trucks per hour for both move-in and move-out activities. Otherwise, there will be personal vehicles, for 10 workers, entering and leaving the site on a daily basis.

During the fracturing (completion) process, there will be 20 truckloads per day over an 11 day period between the hours of 7:00 a.m. and 7:00 p.m., with an average of 1.5 trucks per hour.

During the production phase, there will be 0.5 trucks per day, per well - or seven trucks per day for 14 wells.

The proposed truck route for the well site will run as follows: To the well site - south on SH26 to Tinker Road, then west on Tinker Road to Pleasant Run Road, then north on Pleasant Run Road to the well site. The route from the well site will duplicate the route to the site, in reverse. Staff agrees that the proposed route will provide the least impact to the City's street infrastructure and neighborhoods and is also the safest route for large trucks given the turning radii for each street intersection.

Street improvements are under design at the intersection of John McCain and Pleasant Run Road. Proposed intersection construction will not impede initial drilling operations given a late Spring 2011 projected start date. Additionally, any proposed intersection design will be able to handle the large trucks required for drilling and production operations. If any tractor-trailer trucks should need to access the site during intersection construction, appropriate arrangements will be made in order to facilitate access.

As required by Chapter 3.1, a road remediation fee shall be paid to the City of Colleyville for all projected road damages as determined by the public works director.

These provisions have been added to the proposed ordinance.

Environmental Impacts.

-Air Quality

Both the Environmental Protection Agency and the Texas Commission on Environmental Quality have determined that, in some cases, volatile organic compounds such as methane and benzene have been emitted at natural gas well drilling sites. Both agencies are currently reviewing their rules and regulations as they relate to natural resource extraction and are expected to propose changes sometime in 2011.

The well site must meet all federal, state and city air quality standards. The proposed amendments to Chapter 3.1 prohibit the venting of any gas into the air.

The applicant has submitted an emissions control plan that details provisions intended to mitigate airborne emissions.

However, given the continued relative uncertainty about airborne emissions of volatile organic compounds from natural gas wells, and in order to ensure compliance with all state and federal air quality standards, an independent, third-party, air-quality inspection company shall perform periodic air quality inspections, including measurements of airborne volatile organic compounds, at the site area prior to drilling activities and during all phases of drilling and production operations. The determination of measurement points, compounds to be measured, the frequency of inspections, threshold limits, as well as baseline measurements of pre-drilling, ambient air quality will be performed by the inspection company to be chosen by the City of Colleyville and reimbursed by the gas well operator. At a minimum, in the event that a measurement exceeds an established threshold, the appropriate state and/or federal air quality enforcement agency shall be notified of the measurement within 24 hours of the observation.

- *Seismic Activity*

With regard to seismic activity, the applicant states that there is no seismic activity anticipated. There has been unprecedented seismic activity within the Barnett Shale in the past three years. A recent study performed by Southern Methodist University discovered a correlation between some seismic events and a saltwater injection well. Injection wells are used to pump used drilling fluids back underground for disposal. According to the study, the seismic events do not appear to be directly connected to the drilling, hydraulic fracturing or gas production in the Barnett Shale. There are no injection wells proposed as part of this SUP.

- *Groundwater protection and site run-off*

The applicant has provided an erosion control and grading plan that has been accepted by the Engineering Department. The applicant intends to install erosion-control fencing and check dams to prevent soil erosion and silt contamination of Big Bear Creek. The applicant also states they will install spill berms and containment rings surrounding all drilling and production equipment.

The proposed amendments to Chapter 3.1 contain a new section on comprehensive groundwater protection standards. These include concrete casing of all wells where they penetrate fresh water strata formations in order to protect groundwater supplies. The

applicant has agreed to these provisions. A minimum three foot earthen containment berm is required to be installed around the entire perimeter of the pad site as well. Given the size of the pad site, the berm could contain up to 1.9 million gallons of liquid in the event of a spill or blowback. No pollutants of any kind are permitted to enter local watersheds.

-Other

Regarding the fresh water pond, the applicant proposes to stock the pond with fish in order to mitigate any possible mosquito breeding.

The applicant proposes to address dust issues through the use of dust control agents such as soil cement or crushed concrete whenever necessary.

Site Inspections. Staff recommends that all required site and equipment inspections be performed by a certified, professional third-party inspection company approved by the City and paid for by the applicant.

Waiver Requests. The applicant is requesting several waivers to the separation requirements from a residence. Chapter 3.1 requires a minimum separation of 1,000 between a gas well and a residence. Based on the location of the proposed well heads, there are four single family homes within 1,000 feet. The breakdown of the location and distance from homes is as follows:

- 7612 Pleasant Run Road: 653 feet from closest well head
- 7408 Pleasant Run Road: 689 feet from closest well head
- 7404 Pleasant Run Road: 515 feet from closest well head
- 7401 Pleasant Run Road: 911 feet from closest well head

The property owners of all of the homes listed above have submitted signed and notarized affidavits waiving their objections to the wellheads being within 1,000 feet of the homes located on their properties. Copies of these affidavits are attached to the briefing.

The distance separation waivers requested by the applicant may only be approved by the City Council. These waiver requests have **not** been added to the proposed ordinance.

Surrounding Properties. The surrounding properties consist of residential and agricultural uses. The properties to the west are zoned AG-Agricultural and PUDR-Planning Unit Development Residential and are vacant and contain single family residences. Properties to the north are zoned AG-Agricultural and contain a single family residence. The properties to the east are zoned AG-Agricultural and contain agricultural uses and a single family residence. The properties to the south are zoned AG-Agricultural and contain single family residences.

Public Notification. Staff mailed notices to three adjacent property owners regarding this request. All property owners adjacent to the proposed transportation route were notified as well. Notice was published in the *Fort Worth Star-Telegram* as required by state law and the Land Development Code. Staff has received 304 letters of support that were the same letters of support for the previous Titan SUP requests. A summary of those letters is

attached to this briefing. Three letters of opposition have been received regarding this request.

Planning and Zoning Commission Recommendations. The Planning and Zoning Commission recommended approval of this request at the October 11, 2010 meeting by a vote of 6-0 subject to the following conditions:

- That the proposed amendments to Chapter 3.1-Oil and Gas Well Drilling be adopted as part of the proposed SUP ordinance,
- The applicant be given five years from the date of approval to drill all wells proposed as part of the SUP request.
- Any equipment or well leaks be reported to the administrative officer immediately and posted on the City's website within 24 hours.
- The Fire Marshal be provided, by the operator, with any equipment necessary in order to determine equipment leakage; either airborne or waterborne.

These conditions have been added to the proposed ordinance.

Summary of Staff Recommendations.

As stated above, staff has written the proposed ordinance such that it adopts the proposed amendments to Chapter 3.1 by reference. The recommendations below only relate to provisions not contained in the proposed Chapter 3.1 amendments.

- (1) The gas well operator may drill up to 14 wells as part of this SUP.
- (2) The applicant shall be required to upgrade the existing six-inch water service line that serves the property to an eight inch water line or, in lieu of installation, place funds into escrow for future installation.
- (3) In order to ensure compliance with all state and federal air quality standards an independent, third-party air quality inspection company shall perform periodic air-quality inspections, including measurements of airborne volatile organic compounds, at the site area prior to any drilling activities and during all phases of drilling and production operations. The determination of measurement points, compounds to be measured, the frequency of inspections, threshold limits, as well as baseline measurements of pre-drilling ambient air quality shall be performed by the inspection company. The company shall be chosen and contracted by the City of Colleyville. The gas well operator shall reimburse the City of Colleyville for said contracted services upon receipt of invoice from the City of Colleyville. At a minimum, in the event that a measurement exceeds an established threshold, the appropriate state and/or federal air-quality enforcement agency shall be notified of the measurement within 24 hours of the observation.
- (4) All fresh water ponds shall require City approved mosquito mitigation methods.

(5) All site lighting shall illuminate onto the site and shall not directly illuminate onto any surrounding properties or onto the property owner's residence. Drilling rig lighting shall not be a nuisance and shall illuminate at the minimum level of lighting allowed by the State of Texas for drilling rigs.

Financial Impact

There is no financial impact to the City.

Recommended Actions

The City Council has the following options regarding action on this item:

1. Approve the request as submitted (with listed conditions in the proposed ordinance);
2. Approve the request with additional condition(s);
3. Table the agenda item to a specific date with clarification of intent and purpose;
4. Deny the request.

Notification List

OWNER NAME	OWNER ADDR	OWNER CITY	OWNER STATE	OWNER ZIP	SITUS ADDR
Quenichet, Oburn B	7612 Pleasant Run Rd	Colleyville	TX	76034	007612 Pleasant Run Rd
Quenichet, John W	7612 Pleasant Run Rd	Colleyville	TX	76034	007612 Pleasant Run Rd
Trinity Christian Center Inc	2442 Michelle Dr	Tustin	CA	92780	007409 Pleasant Run Rd
Quenichet, Oburn	7612 Pleasant Run Rd	Colleyville	TX	76034	007612 Pleasant Run Rd
Trinity Chris Ctr Santa Ana	2442 Michelle Dr	Tustin	CA	92780	007504 Pleasant Run Rd
Trinity Chris Ctr Santa Ana	2442 Michelle Dr	Tustin	CA	92780	007404 Pleasant Run Rd
Hightower, Sydney Mary Tr	3945 Fm 273	Bonham	TX	75418	000304 John McCain Rd
Hightower, Sydney Mary Tr	3945 Fm 273	Bonham	TX	75418	000304 John McCain Rd
Trinity Christian Center	2442 Michelle Dr	Tustin	CA	92780	007400 Pleasant Run Rd
Trinity Chris Ctr Santa Ana	2442 Michelle Dr	Tustin	CA	92780	007408 Pleasant Run Rd
Trinity Christian Center	2442 Michelle Dr	Tustin	CA	92780	007400 Pleasant Run Rd
Trinity Christian Center Inc	2442 Michelle Dr	Tustin	CA	92780	007401 Pleasant Run Rd
Trinity Chris Ctr Santa Ana	2442 Michelle Dr	Tustin	CA	92780	007408 Pleasant Run Rd
Trinity Christian Center	2442 Michelle Dr	Tustin	CA	92780	007408 Pleasant Run Rd
Trinity Chris Center Inc	2442 Michelle Dr	Tustin	CA	92780	007404 Pleasant Run Rd
Trinity Christian Center	2442 Michelle Dr	Tustin	CA	92780	007100 Pleasant Run Rd
Chris Hammack	111 W. Fourth St. Suite 300	Ft. Worth	TX	76102	applicant

Public hearing notices were mailed on Wednesday, Sept. 29, 2010 by Amy Shelley

Letters of Opposition

Amy Shelley

Subject: FW:

From: Becky Davis

Sent: Thursday, September 30, 2010 9:34 PM

To: Ron Ruthven

Subject:

I have just read the article in the Colleyville Courier and am incensed that we are considering a permit to allow Titan Operating to drill gas wells in Colleyville. What are you thinking??? This will absolutely compromise the quality of life in this area. You can pay for many different surveys, but look at the actual history of what has already happened in areas south west of Fort Worth that have had the drilling for a couple of years. They are experiencing earth tremors, polluted water and runoff from from the drilling process, not to mention the air quality issues. There have been so many negatives from people who currently reside in areas that have experienced this drilling, why would the city of Colleyville entertain creating such a hazardous environment? Have you gone to see what these wells look like when they begin drilling? The site fee of \$15,000 and the drilling fee of \$10,000 are mentioned in the articles as if they are some grand amount of money. This is a joke compared to the millions of dollars this company would make. The money that the city or any of us as individuals would receive would be nothing compared to what we will lose in the long run.

Becky Davis
4107 Paddington Lane
Colleyville

Amy Shelley

Subject: FW: Titan gas well - 7504 Pleasant Run

From: kim walton

Sent: Wednesday, October 13, 2010 9:41 PM

To: David Kelly; Jon Ayers; cwallins@colleyville.com; Stan Hall; Tom Hart; Mike Taylor; Michael Muhm; Ron Ruthven

Subject: Titan gas well - 7504 Pleasant Run

I attended the recent P&Z mtg rgding Titans request for the right to drill at this location. while this was not the 1st mtg on this permit i hv to say they seemed to hv had a good idea they would approve it. it was obvious enough that by 9pm i was about 90% sure of the outcome which didnt end until midnite. I even made a comment to a gentlemen next to me. And i can honestly say I do not know these men nor hv I ever attended a mtg. Something is very wrong there. I ask that you truly listen to the citizens that choose to attend these mtgs. There are some very legitimate concerns when drilling in urban areas and it did not appear real concern was shown. One was the release of benzene. To Titans credit a list of chemicals used during fracking was shown. But the issue of whether or not benzene is used, in any capacity, was never addressed by either party. Please fully look at the issues in their entirety before agreeing to the drilling permit as it is not a temporary change but very long term and a more permanent change that we all hv to live with. Kim Walton

Amy Shelley

Subject: FW: China stakes claim to Texas Oil and Gas

From: Linda

Sent: Tuesday, October 12, 2010 2:23 PM

To: David Kelly; Jon Ayers; Carol Wollin; Michael Muhm; Stan Hall; Tom Hart; Mike Taylor; Ron Ruthven

Subject: China stakes claim to Texas Oil and Gas

Dear Mayor Kelley and City Council Members,

As a native Texan and long-time resident and homeowner in North Texas, I was extremely dismayed to learn that developer Titan prevailed at the Colleyville P & Z meeting last night. Not only did Colleyville P & Z *not* 'hear' the health and environmental concerns presented by Titan's opposition, Colleyville's positive stance on Titan's natural gas drilling plans may be short sighted to say the least. If the natural gas industry wants us to believe U.S. home-based drilling is the answer to our energy independence, think again. Please read the recent Texas news article below.

California was smart enough to say no to China but at least one Texas operator is selling out its interests to China. Will Titan be next? What has greed done to our Texas communities and ultimately our nation's well being?

Please, exercise wisdom and caution when it comes time to vote on Titan's permit request. PLEASE do NOT let Titan or other natural gas developers ruin Colleyville like they have other cities in the metroplex. Because of natural gas drilling, I am selling my beautiful home and acre, moving instead to where the air is clean, solar and wind power is more readily available. Please don't give more North Texas residents reason to do the same.

Thank you,
Linda Yarbrough
Phone: 817-274-4188
Email:

http://www.mysanantonio.com/business/local/China_stakes_claim_to_S_Texas_oil_gas_104753969.html

China stakes claim to S. Texas oil, gas

By Monica Hatcher - Houston Chronicle
Web Posted: 10/12/2010 12:48 AM CDT

HOUSTON — State-owned Chinese energy giant CNOOC is buying a multibillion-dollar stake in 600,000 acres of South Texas oil and gas fields, potentially testing the political waters for further expansion into U.S. energy reserves.

With the announcement Monday that it would pay up to \$2.2 billion for a one-third stake in Chesapeake Energy assets, CNOOC lays claim to a share of properties that eventually could produce up to half a million barrels a day of oil equivalent.

It also might pick up some American know-how about tapping the hard-to-get deposits trapped in dense shale rock formations, analysts said.

As part of the deal, the largest purchase of an interest in U.S. energy assets by a Chinese company, CNOOC has agreed to pay about \$1.1 billion for a chunk of Chesapeake's assets in the Eagle Ford, a broad oil and gas formation that runs largely from southwest of San Antonio to the Mexican border.

CNOOC also will provide up to \$1.1 billion more to cover drilling costs.

The deal represents China's second try at making a big move into the U.S. oil and gas market, following a failed bid five years ago to buy California-based Unocal Corp.

Intense political opposition over energy security concerns derailed that \$18.4 billion deal. But analysts expect few political or regulatory hurdles to the CNOOC-Chesapeake deal.

"The climate is much more hospitable now," said Juli MacDonald-Wimbush, a partner with Marstel-Day, an energy and environmental security consulting company in Fredericksburg, Va.

Amid low natural gas prices and a largely difficult drilling climate, she said highly liquid Chinese companies will find willing partners among onshore oil and gas companies hurting for capital to drill.

Transportation Notification List

OWNER NAME	OWNER ADDR	OWNER CITY	OWNER CITY	OWNER ZIP	SITUS ADDR
Trinity Christian Center Inc	2442 Michelle Dr	Tustin	CA	92780	007401 Pleasant Run Rd
Trinity Christian Center	2442 Michelle Dr	Tustin	CA	92780	007408 Pleasant Run Rd
Trinity Chris Center Inc	2442 Michelle Dr	Tustin	CA	92780	007404 Pleasant Run Rd
Trinity Chris Ctr Santa Ana	2442 Michelle Dr	Tustin	CA	92780	007304 Pleasant Run Rd
Trinity Chris Ctr Santa Ana	PO Box A	Santa Ana	CA	92711	007302 Pleasant Run Rd
Trinity Chris Ctr Santa Ana	2442 Michelle Dr	Tustin	CA	92780	007300 Pleasant Run Rd
Harrison, Cynthia	800 John McCain Rd	Colleyville	TX	76034	000800 John McCain Rd
Morris, Stephen	7201 Pleasant Run Rd	Colleyville	TX	76034	007201 Pleasant Run Rd
Trinity Ch Center Of Santa Ana	2442 Michelle Dr	Tustin	CA	92780	007200 Pleasant Run Rd
Miller, Douglas L Etux Cynthia	7112 Pleasant Run Rd	Colleyville	TX	76034	007112 Pleasant Run Rd
Kitchens, Michael Etux Patrici	7101 Pleasant Run Rd	Colleyville	TX	76034	007101 Pleasant Run Rd
Federal Home Loan Mtg Corp	5000 Plano Pkwy	Carrollton	TX	75010	000600 John McCain Rd
Gentry, Carol Ann	7000 Pleasant Run Rd	Colleyville	TX	76034	007000 Pleasant Run Rd
Wiser, Michael J	6916 Pleasant Run Rd	Colleyville	TX	76034	006916 Pleasant Run Rd
McKeown, Kenneth F Etux Lynne	6909 Pleasant Run Rd	Colleyville	TX	76034	006909 Pleasant Run Rd
Meadows, Timothy P Etux Becky	6901 Pleasant Run Rd	Colleyville	TX	76034	006901 Pleasant Run Rd
Pool, Robert A	6905 Pleasant Run Rd	Colleyville	TX	76034	006905 Pleasant Run Rd
Abeyta, Michael Etux Shirley	6908 Pleasant Run Rd	Colleyville	TX	76034	006908 Pleasant Run Rd
Brown, Howard H	PO Box 396	Colleyville	TX	76034	006900 Pleasant Run Rd
Quinn, Thomas F Jr	6817 Pleasant Run Rd	Colleyville	TX	76034	006817 Pleasant Run Rd
Spurlock, Joe II Etux Cheri L	6816 Pleasant Run Rd	Colleyville	TX	76034	006816 Pleasant Run Rd
Havard, Steven Etux Athenna	6813 Pleasant Run Rd	Colleyville	TX	76034	006813 Pleasant Run Rd
Gade, Michael J Etux Regina C	6808 Pleasant Run Rd	Colleyville	TX	76034	006808 Pleasant Run Rd
Myers, Louis J	700 Fegans Path	Colleyville	TX	76034	000700 Fegans Path
McCormack, Bobby Jack	6802 Pleasant Run Rd	Colleyville	TX	76034	006802 Pleasant Run Rd
Hall, Trent E Etux Laquita	701 Fegans Path	Colleyville	TX	76034	000701 Fegans Path
Roybal, Robert E	PO Box 893	Colleyville	TX	76034	006800 Pleasant Run Rd
Scott, David A Etux Jennifer	6704 Pleasant Run Rd	Colleyville	TX	76034	006704 Pleasant Run Rd
Crown Of Life Lutheran Church	6605 Pleasant Run Rd	Colleyville	TX	76034	006605 Pleasant Run Rd
Ledbetter, Harold C & Sheryll	6700 Pleasant Run Rd	Colleyville	TX	76034	006700 Pleasant Run Rd
Burkham, Mike V	PO Box 913	Colleyville	TX	76034	006604 Pleasant Run Rd
Cameron, Mark J	6600 Pleasant Run Rd	Colleyville	TX	76034	006600 Pleasant Run Rd
Campbell, John Kenyan	6508 Pleasant Run Rd	Colleyville	TX	76034	006508 Pleasant Run Rd
Good Shepherd Catholic Ch	800 W Loop 820 S	Fort Worth	TX	76108	001000 Tinker Rd
Williky, Gary S Etux Nancy A	1312 Tinker Rd	Colleyville	TX	76034	001312 Tinker Rd
Dotti, Michael W Etux Nancy E	1310 Tinker Rd	Colleyville	TX	76034	001310 Tinker Rd
Stricklin, Reagan Etux Jennife	6504 Pleasant Run Rd	Colleyville	TX	76034	006504 Pleasant Run Rd
Gonzales, Eliel W	6500 Pleasant Run Rd	Colleyville	TX	76034	006500 Pleasant Run Rd
Oncor Electric Delivery Co Llc	PO Box 219071	Dallas	TX	75221	006413 Pleasant Run Rd
Dagnan-Bargy, Jennifer Etvir T	6401 Cutter Ridge Ct	Colleyville	TX	76034	006401 Cutter Ridge Ct
Alcantara, Felix P & Amy E	6403 Cutter Ridge Ct	Colleyville	TX	76034	006403 Cutter Ridge Ct
Dolan, Thomas D Etux Edna	6317 Pleasant Run Rd	Colleyville	TX	76034	006317 Pleasant Run Rd
McKinney, Stacy	1600 Village Dr Apt 1321	Euless	TX	76039	006409 Pleasant Run Rd
Powell, Ted B Etux Elda Laura	6400 Cutter Ridge Ct	Colleyville	TX	76034	006400 Cutter Ridge Ct
Dolan, Thomas D Etux Edna	6317 Pleasant Run Rd	Colleyville	TX	76034	006317 Pleasant Run Rd
Xaris Investments Ltd	1310 Tinker Rd	Colleyville	TX	76034	001304 Tinker Rd
Cnc Custom Homes Inc	4801 Behrens Ct	Colleyville	TX	76034	006405 Pleasant Run Rd
Lam, Conner	1280 Post Oak Trl	Southlake	TX	76092	006312 Colleyville Blvd
Miller, Sandra G	6313 Pleasant Run Rd	Colleyville	TX	76034	006313 Pleasant Run Rd
Dolan, Thomas D Etux Edna	6317 Pleasant Run Rd	Colleyville	TX	76034	006317 Pleasant Run Rd
Jenkins, Gary D Etux Barbara	1212 Tinker Rd	Colleyville	TX	76034	001212 Tinker Rd
Jones, Robert C & Elisa	1204 Tinker Rd	Colleyville	TX	76034	001204 Tinker Rd
Davis, Gary D Etux Mary Ann	6400 Pleasant Run Rd	Colleyville	TX	76034	006400 Pleasant Run Rd
Baier, Dale E Etux Maryanna	1410 Tinker Rd	Colleyville	TX	76034	001400 Tinker Rd
Davis, Ullin D Etux Patricia	6316 Pleasant Run Rd	Colleyville	TX	76034	006316 Pleasant Run Rd
Ostman, Neal Etux Janis N	1104 Tinker Rd	Colleyville	TX	76034	001104 Tinker Rd

Dotti, Michael & Nancy E	1310 Tinker Rd	Colleyville	TX	76034	001308 Tinker Rd
Turpentine, George A	1100 Tinker Rd	Colleyville	TX	76034	001100 Tinker Rd
Flowers, Keith	1012 Tinker Rd	Colleyville	TX	76034	001012 Tinker Rd
Usrey, Gerald L	1008 Tinker Rd	Colleyville	TX	76034	001008 Tinker Rd
Baier, Dale E	1410 Tinker Rd	Colleyville	TX	76034	001410 Tinker Rd
Miller, Judith A	PO Box 879	Colleyville	TX	76034	001412 Tinker Rd
Spann, Teresa G & Delmer Spann	6301 Kingston	Colleyville	TX	76034	006301 Kingston Dr
Wood, Rosy Martinez	6300 Kingston	Colleyville	TX	76034	006300 Kingston Dr
Jennings, Jeff L & N J Jacobi	6301 Ponderosa Ln	Colleyville	TX	76034	006301 Ponderosa Ln
Good Shepherd Catholic Ch	800 W Loop 820 S	Fort Worth	TX	76108	000908 Tinker Rd
Good Shepherd Catholic Ch	800 W Loop 820 S	Fort Worth	TX	76108	000904 Tinker Rd
Good Shepherd Catholic Ch	800 W Loop 820 S	Fort Worth	TX	76108	000900 Tinker Rd
Bufe, Martha	1509 Tinker Rd	Colleyville	TX	76034	001509 Tinker Rd
Lewis, Mary Belinda	7004 Rosebrook	Colleyville	TX	76034	001201 Tinker Rd
Pecan Tinker Lp	901 John McCain Rd	Colleyville	TX	76034	006226 Colleyville Blvd
Bolton, Jonathon Etux Carol	105 Williamsburg Ct	Colleyville	TX	76034	001109 Tinker Rd
Cannedy, Jack D Etux Sue	1313 Tinker Rd	Colleyville	TX	76034	001313 Tinker Rd
Roach, John F Etux Debra G	1315 Tinker Rd	Colleyville	TX	76034	001315 Tinker Rd
Forbes, Warren Dale	1317 Tinker Rd	Colleyville	TX	76034	001317 Tinker Rd
Richards, Leslie E Jr Etux B L	1401 Tinker Rd	Colleyville	TX	76034	001401 Tinker Rd
De Berard, Lawrence L & Linda	6210 Ponderosa St	Colleyville	TX	76034	006210 Ponderosa St
Fairlamb, Richard C Etux S	6209 Ponderosa St	Colleyville	TX	76034	006209 Ponderosa Ln
Payne, Janice L	6033 Deborah Ln	Watauga	TX	76148	001105 Tinker Rd
Nunn, Kenneth E Jr	1101 Tinker Rd	Colleyville	TX	76034	001101 Tinker Rd
Vigil, Stephen L Etux Theresa	1011 Tinker Rd	Colleyville	TX	76034	001011 Tinker Rd
Agler, Wesley & Teresa	1009 Tinker Rd	Colleyville	TX	76034	001009 Tinker Rd
Stromberg, William M	223 NE Loop 820 Ste 101	Hurst	TX	76053	001005 Tinker Rd
Decavitte, Dean Etux Michelle	420 Stockton Dr	Southlake	TX	76092	000911 Tinker Rd
Rice, Robert R Etux Carolyn K	1305 Tinker Rd	Colleyville	TX	76034	001305 Tinker Rd
Goodale, Steven E Etux Lynette	1209 Tinker Rd	Colleyville	TX	76034	001209 Tinker Rd
Finkley, William Etux Elizabeth	1213 Tinker Rd	Colleyville	TX	76034	001213 Tinker Rd
Gorena, Sandi J Etux Carlos Jr	909 Tinker Rd	Colleyville	TX	76034	000909 Tinker Rd
Vencill, Robert Etux Shirley	6215 Pleasant Run Rd	Colleyville	TX	76034	006215 Pleasant Run Rd
Kralich, Jeff Etux Sue	1309 Tinker Rd	Colleyville	TX	76034	001309 Tinker Rd
Parker, Glen D Etux Lily	6213 Pleasant Run Rd	Colleyville	TX	76034	006213 Pleasant Run Rd
Chris Hammack	111 W. Fourth St. Suite 300	Ft. Worth	TX	76102	applicant

Public hearing notices were mailed on Wed. Sept. 29, 2010 by Amy Shelley.

Information from Applicant Regarding Letters of Support



TITAN OPERATING, LLC

September 28, 2010

Amy Shelley
Planning and Zoning Assistant
City of Colleyville
100 Main Street
Colleyville, TX 76034

Dear Ms. Shelley:

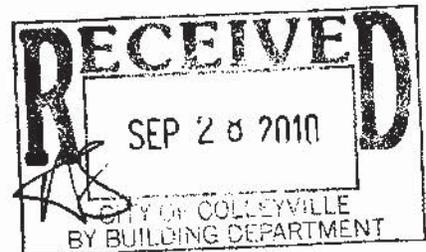
I am respectfully submitting these letters of support for Titan Operating TCC SUP – ZC10-022 – 7504 Pleasant Run Road. As you are aware, these are the original letters of support for Titan Operating's Quenichet drill site that has now been moved to Trinity Christian Center property at 7504 Pleasant Run Road.

Let me know if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "C Hammack".

Chris Hammack
Vice President Operations
Titan Operating, LLC



Summary of Letters of Support

	NAME	ADDRESS	STREET NAME	CITY	IN 200 NOTIFICATION AREA
1	Bryant Marbleall ?	?	?	?	?
2	Robert Wittman	?	?	Colleyville	No
3	Charles Lamb	203	Adams Ct.	Colleyville	No
4	Michael Brown	508	Bandit Tr.	Colleyville	No
5	Bill Goodman	513	Bandit Tr.	Colleyville	No
6	Wayne & Kim Putlak	205	Bandit Trl.	Colleyville	No
7	William LeGrand	300	Bandit Trl.	Colleyville	No
8	Sandra LeGrand	300	Bandit Trl.	Colleyville	No
9	Wayne Beaman	501	Belmont Dr.	Colleyville	No
10	Wayne & Joy Beaman	501	Belmont Dr.	Colleyville	No
11	Joel & Gayle Maxwell	5701	Bent Tree Court	Colleyville	No
12	Brad Meyer	5703	Bent Tree Ct	Colleyville	No
13	Michael & Elizabeth Love	5700	Bent Tree Ct.	Colleyville	No
14	Jackie Lane	5702	Bent Tree Ct.	Colleyville	No
15	Gay Bearden	6000	Bettinger	Colleyville	No
16	Harold Cline	6316	Bettinger	Colleyville	No
17	Earl & Lucille Region	5805	Bettinger Dr.	Colleyville	No
18	Eddie & JoAnne Livingston	6108	Bettinger Dr.	Colleyville	No
19	Keri Davis	6201	Bettinger Dr.	Colleyville	No
20	Paul Copenhaver (Trustee)	6300	Bettinger Dr.	Colleyville	No
21	Doris Gray	6309	Bettinger Dr.	Colleyville	No
22	Jo Etta & Michael Feaster	500	Beverly Dr.	Colleyville	No
23	Tim Edwards	608	Beverly Dr.	Colleyville	No
24	Marion & Mildred Jenkins	609	Beverly Dr.	Colleyville	No
25	Claire Lopez	701	Beverly Dr.	Colleyville	No
26	Helen Lear/Nancy Migl-POA	5901	Bransford	Colleyville	No
27	B. Darrell & Barbara Gotcher	5816	Bransford Rd.	Colleyville	No
28	Phillip & Rachel Serra	6500	Caldwell Hughes Rd.	Colleyville	No
29	Maisen Baron Group	7113	Cedar Ct.	Colleyville	No
30	Kenneth Love	7200	Cedar Ct.	Colleyville	No
31	Rick Campbell	7205	Cedar Ct.	Colleyville	No
32	Richard Mullins	7208	Cedar Ct.	Colleyville	No
33	Clyde Nelson Van Nox	7300	Cedar Ct.	Colleyville	No
34	Patrick Quinn	7304	Cedar Ct.	Colleyville	No
35	Diana Quinn	73004	Cedar Ct.	Colleyville	No
36	Blake Stowes	7308	Cedar Ct.	Colleyville	No
37	Joe Acoveno	7309	Cedar Ct.	Colleyville	No
38	Charles Sledge	7317	Cedar Ct.	Colleyville	No
39	Mark & Laura Castrillon	6403	Champion Way	Colleyville	No
40	Mark & Kelli Gannon	6500	Champion Way	Colleyville	No
41	Joseph & Susan Kella	6504	Champion Way	Colleyville	No
42	Jonathan & Jennifer Leding	501	Chisolm Ct.	Colleyville	No
43	Chloe Teafatiller	508	Chisolm Ct.	Colleyville	No
44	Linda Clem	504	Chisolm Ct.	Colleyville	No
45	Patricia Alvarado	500	Colleyville Terrace	Colleyville	No
46	Eugene & Dolores Bergfeld	600	Colleyville Terrace	Colleyville	No
47	James Storm	601	Colleyville Terrace	Colleyville	No
48	David Dickey	605	Colleyville Terrace	Colleyville	No
49	Richard & anita Rotenberry	700	Colleyville Terrace	Colleyville	No
50	Richard Wrisley	704	Colleyville Terrace	Colleyville	No
51	Tommy Davis	708	Colleyville Terrace	Colleyville	No
52	Tommy Davis	708	Colleyville Terrace	Colleyville	No
53	Jeffrey & Aliza Miller	801	Colleyville Terrace	Colleyville	No
54	Patricia Robinson	804	Colleyville Terrace	Colleyville	No
55	Linda Calloway	812	Colleyville Terrace	Colleyville	No

56	Steve Denney	106	Colonial Square	Colleyville	No
57	Daniel Micka	309	Covington Way West	Colleyville	No
58	Philip White	6803	Curtis Rd.	Colleyville	No
59	Jiangping & Li Peng	6708	David Ln.	Colleyville	No
60	Michael & Barbara Barrett	6317	Derby Dr.	Colleyville	No
61	William & Linda Charters	6321	Derby Dr.	Colleyville	No
62	Will Fergos	6204	Equistrian Ct.	Colleyville	No
63	David Dixon	601	Frontier Ct	Colleyville	No
64	Carolyn Mithcell	508	Frontier Ct.	Colleyville	No
65	David & Mary Livingstone	600	Frontier Ct.	Colleyville	No
66	Alfred Maddox	5700	Grand Oak Ct	Colleyville	No
67	Kathy Watkins	5704	Grand Oak Ct	Colleyville	No
68	David & Tracy Robertson	5701	Grand Oak Ct.	Colleyville	No
69	David Vincent	5702	Grand Oak Ct.	Colleyville	No
70	Frank & Judy Hall	5705	Grand Oak Ct.	Colleyville	No
71	David Adams	200	Hancock Ct.	Colleyville	No
72	Dana Allen	1405	Hardage	Colleyville	No
73	James & Anne Terry	1103	Hardage Cr.	Colleyville	No
74	Charles McDaniel	1101	Hardage Ct.	Colleyville	No
75	J. Daniel & Becky Smith	1102	Hardage Ln	Colleyville	No
76	Maria Ewing	1104	Hardage Ln	Colleyville	No
77	Tommy & Vickie Jordan	900	Hardage Ln	Colleyville	No
78	Gary & Melinda Wright	1006	Hardage Ln.	Colleyville	No
79	Cindy & Jimmy Stovall	1106	Hardage Ln.	Colleyville	No
80	Dennis Jones	1205	Hardage Ln.	Colleyville	No
81	J. Earl Morse	1207	Hardage Ln.	Colleyville	No
82	Steve & Ronda Polansky	6713	Herbert Rd.	Colleyville	No
83	Tim & Carol Dacy	6500	Horseshoe Bend	Colleyville	No
84	C.L. & Ruth Madden	6112	Hunter Lane	Colleyville	No
85	Thomas Panno	6114	Hunter Ln	Colleyville	No
86	Todd & Lisa Pipes	6117	Hunter Ln.	Colleyville	No
87	Jerry & Carolyn Allen	5917	Hunter Ln.	Colleyville	No
88	Brad & Bev Young	6100	Hunter Ln.	Colleyville	No
89	Christine Combes	6106	Hunter Ln.	Colleyville	No
90	Margaret Yoes	6113	Hunter Ln.	Colleyville	No
91	Robert McGregor	6115	Hunter Ln.	Colleyville	No
92	Robert McGregor	6115	Hunter Ln.	Colleyville	No
93	Dennis & Karen Trimble	6803	India Ct.	Colleyville	No
94	Michael Murphy	7606	Jefferson Cr.	Colleyville	No
95	Sharon & Ronald Mayfield	7700	Jefferson Cr.	Colleyville	Yes
96	Kenji Nishikawa	8005	Jefferson Cr.	Colleyville	No
97	Vance Solis	7200	Jo Will	Colleyville	No
98	Jimmy & Jan Isbell	7204	Jo Will	Colleyville	No
99	Terry & Martha Walker	7109	Jo Will St.	Colleyville	No
100	Barbara Maples	7112	Jo Will St.	Colleyville	No
101	Vincent & Mitzi Divino	7113	Jo Will St.	Colleyville	No
102	Randall Miller	7400	Jo Will St.	Colleyville	No
103	Randall Miller	7400	Jo Will St.	Colleyville	No
104	Gregg Hart	1901	John McCain	Colleyville	No
105	Matthew Jamieson	7207	John McCain Rd	Colleyville	No
106	Niniah Jamieson	7207	John McCain Rd	Colleyville	No
107	Ben & Roxanne Jones	104	John McCain Rd.	Colleyville	No
108	Dale & Roxanne Holt	116	John McCain Rd.	Colleyville	No
109	Opal McBroom	512	John McCain Rd.	Colleyville	No
110	James Draper, Jr.	7300	John McCain Rd.	Colleyville	No
111	Ann Epperson	7308	John McCain Rd.	Colleyville	No
112	Larry Epperson	7316	John McCain Rd.	Colleyville	No
113	Sean Bryan	7506	John McCain Rd.	Colleyville	No

114	Dale Miller	6405	Kentucky Ct	Colleyville	No
115	Rhonda Crocher & Kenneth Young	6500	Kingston	Colleyville	No
116	Joe & Kay Hanzelka	6508	Kingston	Colleyville	No
117	Ed & Cynthia Bittick	6405	Kingston Dr.	Colleyville	No
118	Tom Shears	6504	Kingston Dr.	Colleyville	No
119	John & Diane Pce	6004	L D Lockett Rd	Colleyville	No
120	Kathy Pirkle	807	Laurel Oaks Ln.	Colleyville	No
121	kathy Scovic	809	Laurel Oaks Ln.	Colleyville	No
122	Jimmy Labrecque	6212	LD Lockett	Colleyville	No
123	Don Dixon	6012	Ld Lockett Rd	Colleyville	No
124	Rachel Whittlesey & Scott Burnett	6208	LD Lockett Rd	Colleyville	No
125	Lonnie & Nancy Williams	7609	Leesburg Dr.	Colleyville	No
126	Lou Anne King Jensen	7802	Leesburg Dr.	Colleyville	No
127	James & Edi Gray	505	Leta Ln.	Colleyville	No
128	Eric & Susan Hulet	608	Leta Ln.	Colleyville	No
129	Eldon & Barbara Surley	617	Leta Ln.	Colleyville	No
130	Wesley Bailey	1504	McCain Ln.	Colleyville	No
131	Mark & Mary Watson	111	McDonwell School Rd.	Colleyville	No
132	Donald Dunn	6915	Meade Dr	Colleyville	No
133	Brandon & Julie Brake	6005	Milan Ct.	Colleyville	No
134	Justin & Laura Johnson	6012	Milan Ct.	Colleyville	No
135	Michael & Jennifer Azbell	7207	Monticello Pkwy.	Colleyville	No
136	Tom Loesing	7503	Monticello Pkwy.	Colleyville	No
137	Randy & Becky Petree	7605	Monticello Pkwy.	Colleyville	No
138	Tuong-Khanh Vu	8105	Montpelier Way	Colleyville	No
139	Miles & Sandra Davis	7510	Mount Vernon	Colleyville	No
140	George Scott	7502	Mount Vernon Dr.	Colleyville	No
141	Larry Lewis	209	Oaklawn Dr.	Colleyville	No
142	Ralph LaRovere	306	Oaklawn Dr.	Colleyville	No
143	John Terhoeve	1204	Opal Court	Colleyville	No
144	John Terhoeve	1204	Opal Court	Colleyville	No
145	John Terhoeve	1204	Opal Court	Colleyville	No
146	Paul & Tammy Lightfoot	1204	Opal Court	Colleyville	No
147	Todd Boysen	1205	Opal Ct.	Colleyville	No
148	Michael & Melissa Gonzales	7412	Overland Tr.	Colleyville	No
149	Beverly Schroeder	7204	Overland Trl.	Colleyville	No
150	Wesley R. & Carol Eaves	7409	Overland Trl.	Colleyville	No
151	Jack Bowling	6100	Park Ct	Colleyville	No
152	Christopher & Heather Derganc	1013	Pauls Path	Colleyville	No
153	Lori Bowden	7205	Pebble Hill Dr.	Colleyville	No
154	Orlando Alamzi	6805	Peters Path	Colleyville	No
155	John Allen	6813	Peters Path	Colleyville	No
156	James Gribshaw Jr.	6905	Peters Path	Colleyville	No
157	Scott Brodows	6913	Peters Path	Colleyville	No
158	Gregory & Susan Oltman	7001	Peters Path	Colleyville	No
159	Brian Bezdek	7101	Peters Path	Colleyville	No
160	Richard & Debra McLaughlin	7108	Peters Path	Colleyville	No
161	Peter & Geraldine Fedynich	7109	Peters Path	Colleyville	No
162	Mona Coulter	6105	Pleasant Run	Colleyville	No
163	Jon Reilman	5702	Pleasant Run Rd	Colleyville	No
164	Tod & Deborah Chaszewski	5707	Pleasant Run Rd	Colleyville	No
165	Larry Stewart	5912	Pleasant Run Rd	Colleyville	No
166	Eddie Stowe	6014	Pleasant Run Rd	Colleyville	No
167	Frankie Ann Stowe	6212	Pleasant Run Rd	Colleyville	No
168	Joe & Cheri Spurlock II	6816	Pleasant Run Rd	Colleyville	No
169	Kenneth McKeown	6909	Pleasant Run Rd	Colleyville	No
170	Lynne McKeown	6909	Pleasant Run Rd	Colleyville	No
171	Stephen & Renee Morris	7201	Pleasant Run Rd	Colleyville	No

172	Stephen & Brooke Moose	7204	Pleasant Run Rd	Colleyville	No
173	James & Constance Hampton	5804	Pleasant Run Rd.	Colleyville	No
174	James & Constance Hampton	5804	Pleasant Run Rd.	Colleyville	No
175	Scott & Mary Willis	6114	Pleasant Run Rd.	Colleyville	No
176	Michael Burkham	6604	Pleasant Run Rd.	Colleyville	No
177	David & Jennifer Scott	6704	Pleasant Run Rd.	Colleyville	No
178	Robert Pool	6905	Pleasant Run Rd.	Colleyville	No
179	Michael Abeyta	6908	Pleasant Run Rd.	Colleyville	No
180	Linda McCrary	408	Polo Ct.	Colleyville	No
181	Steve & Mary Ann Mansell	320	Polo Tr.	Colleyville	No
182	Ben Wasson	304	Polo Trl.	Colleyville	No
183	Lynn Putnam	315	Polo Trl.	Colleyville	No
184	Gary McPherson	316	Polo Trl.	Colleyville	No
185	John Keany	203	Polo Trl.	Colleyville	No
186	Dan & Vikkie Chaney	5904	Ponderosa	Colleyville	No
187	Kevin Gavlak	5712	Ponderosa Ct.	Colleyville	No
188	James & Kerry Kniese	6512	Ponderosa Ln	Colleyville	No
189	Jonathan Lee	6412	Ponderosa Ln.	Colleyville	No
190	Charles Smith	6417	Ponderosa Ln.	Colleyville	No
191	Mike & Becky Wells	5602	Ponderosa St.	Colleyville	No
192	Jefferey Billups	5704	Ponderosa St.	Colleyville	No
193	Danny Rich	5706	Ponderosa St.	Colleyville	No
194	Jimmie Vaughan	5812	Ponderosa St.	Colleyville	No
195	Kenneth & Martha Mauch	5903	Ponderosa St.	Colleyville	No
196	Daniel & Tresa redmond	5905	Ponderosa St.	Colleyville	No
197	Misty Parshall	5912	Ponderosa St.	Colleyville	No
198	Gary Touchstone	6208	Ponderosa St.	Colleyville	No
199	Arnolodo & Susan Easterly	604	Potomac Place	Southlake	No
200	Alfredo & Cinde Perales	209	Raintree Ct.	Colleyville	No
201	Jeff & Fredda Hall	504	Remington Ct.	Colleyville	No
202	Vicky Gardner	511	Remington Ct.	Colleyville	No
203	Danna Ward	500	Remington Pkwy.	Colleyville	No
204	Ron Magnuson	6304	Remington Pkwy.	Colleyville	No
205	Tracy Evatt	200	Rochelle Ct.	Colleyville	No
206	Dan Moody	6901	Rockingham Ct.	Colleyville	No
207	Tom Trautman	500	Sagebrush St.	Colleyville	No
208	Kenneth Fraser	501	Sagebrush St.	Colleyville	No
209	Darrel Keith Baldwin	508	Sagebrush St.	Colleyville	No
210	Edward Fietel	509	Sagebrush St.	Colleyville	No
211	Evelyn L. McLain	512	Sagebrush St.	Colleyville	No
212	Craig Toby	6624	Sapphire Cr.	Colleyville	No
213	Bryan & Caren Jones	6722	Sapphire Cr.	Colleyville	No
214	Randy Beeman	6705	Sapphire Cr. N	Colleyville	No
215	Phillip Agboje	6729	Sapphire Cr. N	Colleyville	No
216	Gerri Musso	6701	Sapphire Cr. N.	Colleyville	No
217	James & Paige Richey	6713	Sapphire Cr. N.	Colleyville	No
218	James & Paige Richey	6713	Sapphire Cr. N.	Colleyville	No
219	Vincent Smar	6714	Sapphire Cr. N.	Colleyville	No
220	Hanping Lu	6721	Sapphire Cr. N.	Colleyville	No
221	Casey & Tanya Tierney	6725	Sapphire Cr. N.	Colleyville	No
222	Glenn Griggs	6600	Sapphire Cr. S.	Colleyville	No
223	Michael Flores	6604	Sapphire Cr. S.	Colleyville	No
224	Suresh K Manyam	6609	Sapphire Cr. S.	Colleyville	No
225	Whitney Stark	6615	Sapphire Cr. S.	Colleyville	No
226	Sidney & Lucy Xue	6620	Sapphire Cr. S.	Colleyville	No
227	Bill & Beverly Lothrop	609	Shelton Dr.	Colleyville	No
228	Billy & Dinah Stephens	612	Shelton Dr.	Colleyville	No
229	Ronnie & Donna Walker	804	Shelton Dr.	Colleyville	No

230	Tom & Julie Braun	809	Shelton Dr.	Colleyville	No
231	Billy Hugon	609	Shetland	Colleyville	No
232	Pamela Skotak & Hilton Marques	608	Shetland Dr.	Colleyville	No
233	Zubin Khubchanduri	612	Shetland Dr.	Colleyville	No
234	Zubin Khubchanduri	612	Shetland Dr.	Colleyville	No
235	Johnnie Crisp	613	Suellen Cr.	Colleyville	No
236	Terry & Debbie Bouton	611	Terrace Ln.	Colleyville	No
237	Jeffrey Embrey	6301	Theresa Ln.	Colleyville	No
238	Walter Deetz & Sandy Shepherd	7603	Tillman Hill	Colleyville	No
239	Louis & Elizabeth Miller	7802	Tillman Hill Ct.	Colleyville	No
240	Richard & Helen Mayse	7501	Tillman Hill Rd.	Colleyville	No
241	Michael & Marsha Bratz	7503	Tillman Hill Rd.	Colleyville	No
242	Gerald Usrey	1008	Tinker Rd.	Colleyville	No
243	Wesley Agler Jr.	1009	Tinker Rd.	Colleyville	No
244	Gary & Barbara Jenkins	1212	Tinker Rd.	Colleyville	No
245	Alan & Jul Kamen	7212	Tumbleweed Ct.	Colleyville	No
246	Clara Ruth Grant	7213	Tumbleweed Ct.	Colleyville	No
247	Tom Smith	1217	Tuscany Dr.	Colleyville	No
248	Tom & Janet Smith	1217	Tuscany Dr.	Colleyville	No
249	Scott & Janet Uszynski	6005	Valentino Ct.	Colleyville	No
250	Judy Helms	306	Van Oaks	Colleyville	No
251	Cristy & Wallace Leavelle	208	Van Oaks Dr.	Colleyville	No
252	Phillip & Karla Millman	7109	Vanguard Ct.	Colleyville	No
253	Todd & Sharon McNitt	7200	Vanguard Ct.	Colleyville	No
254	Gene Lukacsy	7201	Vanguard Ct.	Colleyville	No
255	Arthur Bennet	7208	Vanguard Ct.	Colleyville	No
256	Reginald DeKoven	7301	Vanguard Ct.	Colleyville	No
257	J. Walt Mills	404	Vintage Ct.	Colleyville	No
258	Robert Braun	206	W LD Lockett Rd.	Colleyville	No
259	Brenda Loynachan	201	W Van Oaks Dr.	Colleyville	No
260	James & Marla Tatum	301	W. Charlottesville Ave.	Colleyville	No
261	Michael & Carol Burke	309	W. Charlottesville Ave.	Colleyville	No
262	Richard & Janet Cunningham	311	W. Covington Way	Colleyville	No
263	Henry Wells	413	W. McDonwell School Rd	Colleyville	No
264	Mickey Harris	109	W. McDonwell School Rd.	Colleyville	No
265	Carter & Yvonne Hatton	307	W. McDonwell School Rd.	Colleyville	No
266	Norman Arkoos	501	W. McDonwell School Rd.	Colleyville	No
267	Ronald Mason	805	W. Murphy	Colleyville	No
268	Gregory S. Simpson	209	W. Van Oaks Dr.	Colleyville	No
269	Bradford H. Bowen	508	Wagonwheel	Colleyville	No
270	Larry Austin	500	Wagonwheel Ct.	Colleyville	No
271	Nancy Shepherd	500	Wagonwheel Ct.	Colleyville	No
272	George Lord	501	Wagonwheel Ct.	Colleyville	No
273	Christine Mudge	505	Wagonwheel Ct.	Colleyville	No
274	John Christensen	7213	Walden Ct.	Colleyville	No
275	Denise Salcido	7117	Waldon Ct	Colleyville	No
276	George & Kay Standridge	7200	Waldon Ct	Colleyville	No
277	Mike Harvison	7208	Waldon Ct	Colleyville	No
278	Jason Taylor	7209	Waldon Ct	Colleyville	No
279	Neil & Melinda Both	7101	Waldon Ct.	Colleyville	No
280	Marco Coppola	7105	Waldon Ct.	Colleyville	No
281	Clarence & Joy Lee	7109	Waldon Ct.	Colleyville	No
282	Trent Bauer	7113	Waldon Ct.	Colleyville	No
283	Steven & Donna Hawkins	7201	Waldon Ct.	Colleyville	No
284	Dee Ann Naler	6101	Waller Ln.	Colleyville	No
285	Jeffrey S Moschel	6209	Westcoat Dr	Colleyville	No
286	Jonathan & Carleen Stout	6101	Westcoat Dr.	Colleyville	No
287	Charles Dominy & Mary Brewer	6208	Westcoat Dr.	Colleyville	No

288	James & Lynne Dossey	6211	Westcoat Dr.	Colleyville	No
289	Charles & Linda Simmons	6303	Westcoat Dr.	Colleyville	No
290	Carleen Hofmann	6400	Westcoat Dr.	Colleyville	No
291	Bobby Fitzgerald	201	White Dr	Colleyville	No
292	Marilyn S. Fitzgerald	308	White Dr	Colleyville	No
293	Jeremy Blythe	204	White Dr.	Colleyville	No
294	James Braswell	106	Williamsburg Ct.	Colleyville	No
295	GW Addy	7217	Windswept	Colleyville	No
296	Brian Estridge & Rebecca Ringer	7209	Windswept Tr.	Colleyville	No
297	Alice mathew	7401	Windswept Tr.	Colleyville	No
298	Donal DeGroot	7420	Windswept Tr.	Colleyville	No
299	Gary Hazlewood	7600	Windswept Tr.	Colleyville	No
300	Tai Wai David Chen	7205	Windswept Trl.	Colleyville	No
301	Cal Fletcher	7208	Windswept Trl.	Colleyville	No
302	Gale & Julie Barron	7303	Windswept Trl.	Colleyville	No
303	James & Patricia Burleson	7304	Windswept Trl.	Colleyville	No
304	Wayne & Bev Harper	1219	Wyndham Hill Ln.	Southlake	No

STATEMENT OF PLANNING OBJECTIVES

TITAN OPERATING, LLC TCC SUP

PLANNING OBJECTIVE

The purpose of this SUP is to establish a well site, a frac pond, and access road for the drilling, completion, and operating of multiple gas wells within the areas designated by the SUP Site Plan.

WELL SITE LOCATION

The well site location for the Titan TCC wells is identified on the SUP Site Plan. Titan will drill multiple horizontal wells from the proposed well site to develop approximately 1300 acres of Titan leases. The proposed gas development will focus on the Barnett Shale, encountered at subsurface depths at approximately 8,900 feet.

VEHICULAR ACCESS TO THE WELL SITE LOCATION

Vehicular access to the well site will be from SH 26, west on Tinker, north on Pleasant Run Road, to the well site entrance.

The drive approach from Pleasant Run Road will be constructed of concrete. At the entry, a double gate will be recessed into the property to accommodate truck movements from the roadway onto the lease road. Fire access will be provided and the road will be maintained in accordance with all local, state and federal requirements.

DEVELOPMENT PHASING

Titan Operating anticipates the initial construction on the TCC pad site to begin January, 2011. After construction of the pad site Titan anticipates the drilling of 3 wells; each of which will take approximately 30 days. After the initial test Titan anticipates drilling a total of approximately 14 wells off the site over the next 5 to 7 years. All producing wells will be plugged at the end of their economic life. All plugging will be in accordance with applicable Texas Railroad Commission regulations.

ACCESSORY STRUCTURES

Accessory uses for the proposed gas development will include well heads, storage tanks, separation facilities, and other uses necessary and customary to gas development.

During drilling operations, all equipment will be secured by a chain link fence with a secured entrance gate. A reflective sign will be posted at the drill site and operations site identifying the entrance to the site and include the well names and numbers, name of the operator, emergency 911 number, and the telephone numbers for 24 hour emergency contacts.

No refining, except for gas dehydrating and physical phase separation will take place on this site. Temporary diesel fuel tanks, generators, construction trailers, steel mud pits, pipe racks, and drilling rig will be located within the drilling pad site. The drilling rig and associated drilling

equipment shall be removed from the well site as soon as practical after completion of the well or drilling activities.

WATER CONSUMPTION

Once well permits have been obtained from the Texas Railroad Commission and the road and drill site are constructed, drilling can commence. The drilling of each well will require approximately 420,000 gallons of water over a three (3) week period.

Once a well has been drilled and determined to have the potential for commercial production, the completion process will begin. In order for the Barnett Shale to be commercially productive it must be fracture stimulated. This involves pumping a large amount of water at high pressure into the formation to create a fracture in the rock. A small amount of sand is mixed with the water to hold the fracture open once the procedure is complete. This permits the gas to flow more easily from the rock into the well bore. Each fracture stimulation requires approximately 4.2 million gallons of water. Once the water is in place, the actual stimulation process will take approximately eight (8) hours.

Water for the drilling, as well as the fracture stimulation, will come from a proposed frac pond of approximately 1.4 acres to be constructed by the operator, with water purchased from the City or well water. The water stored in this pond will service multiple wells.

WASTE CONTROL

Water and drilling mud utilized during the drilling of the wells will be initially stored in closed-loop drilling fluid systems located on the pad site. Ultimately, the water and drilling mud will be removed by truck and disposed of in accordance with the requirements of the Texas Railroad Commission.

Produced water from gas production will be stored in 250 – barrel (bbl) tanks within the well site location. The tanks will be located within a secondary containment ring with a non-permeable berm or liner capable of holding one and one-half (1-1/2) times the capacity of the largest tank. Drip pots will be located at pump out connections to contain the liquids from the storage tank. The tanks will also be equipped with a sensing device that will shut off the well should the tank become full. The contents of the tank will be emptied by a commercial operator and disposed of in accordance with the requirements of the Texas Railroad Commission.

FIRE PROTECTION

All fire suppression and prevention equipment required by an applicable federal state or local law will be provided and maintained by the Operator.

All contractors will have portable fire extinguishers at the drill site and fire extinguishers will be located at various locations at the drill site.

The tank battery facility will be equipped with a remote foam line utilizing a two and one-half (2.5) inch National Standard Hose Thread female inlet connection in locations approved by the Fire Department.

A lightning arrestor system will be installed according to the most current edition of the National Electrical Code.

At any gate enclosure, the City Fire Marshal will be provided a knox box with a key for emergency access.

DRAINAGE

Well-heads, meters, storage tanks, separation facilities, or other post drilling and completion permanent above ground facilities will be located on a drill site that is graded in such a manner to be elevated above the 100-year floodplain. Erosion control shall comply with the erosion control plan approved by the City.

ENVIRONMENTAL

The proposed gas development will be in compliance with all state and federal environmental regulations and will not adversely affect the floodplain, drainage patterns, or water quality.

Damage to public thoroughfares adjacent to this lease area directly caused by the proposed gas development will be restored to city standards, as applicable, as each well is completed. Any damage that poses a safety hazard will be repaired immediately. Any substantial accumulations of dirt, dust, or other debris deposited on public thoroughfares by gas development will be removed. Dust, if significant, will be suppressed by using water or other dust suppressants.

Drilling and production operations shall be conducted in a manner to minimize noise levels. Noise from drilling, completion and rework operations are limited in time from a few days to a few weeks. Noise from drilling activities will not exceed sixty five (65) decibels at any point three hundred (300) feet from the boundary of the drill site. Noise from fracturing operations will not exceed eighty five (85) decibels at any point three hundred (300) feet from the boundary of the drill site. Noise from the operation site will not exceed fifty five (55) decibels beyond the boundaries shown on the associated site plan.

Lighting will be shielded and directional toward the well site so that it will not disturb, be a nuisance, or safety hazard to adjacent properties, residential areas, or public thoroughfares.

SCREENING

Per City ordinance, the equipment on the operation site will be screened from public view by a combination of screening shrubs that will be installed completely around the well site and the required screen fence. Irrigation will be installed as necessary. All plant material will be kept in an attractive state and in good condition.

DEVELOPMENT SCHEDULE

Titan Operating anticipates the initial construction on the TCC pad site to begin the 4th quarter of 2010. After construction of the pad site Titan anticipates the drilling of 2 to 4 wells; each of which will take approximately 30 days. After the initial test Titan anticipates drilling a total of approximately 14 wells off the site over the next 5 to 7 years.

ECONOMIC DEVELOPMENT INFORMATION

Titan Operating has spent approximately \$108,300,000 in lease bonus dollars in the City of Colleyville to date. Titan has also donated approximately \$300,000 to local charities. Titan estimates that a typical well drilled off the pad site will generate approximately \$230,000 per well in ad valorem taxes for the city over a 15 year period.

TCC PAD SITE

CITY OF COLLEVILLE, TEXAS



111 W. 4TH ST. SUITE 300
FORT WORTH, TEXAS 76102
PHONE: 817-496-8000

PELOTON LAND SOLUTIONS

515 W. HICKORY DRIVE
SUITE 100
KELLER, TX 75244
PHONE: 817-662-3150

PROPERTY OWNER/GENERAL OWNER:

TRINITY CHRISTIAN CENTER
OF SANTA ANNA INC.
2542 WACHOLE DR. #600
TUSTIN, CALIFORNIA 92780

DATE PLOTTED	08/01/2016
DATE PLOTTED BY	ADAM
DATE	AUGUST 23, 2016
REV	
DATE	
REV	
DATE	
REV	



GRAPHIC SCALE

LEGEND

- SUP BOUNDARY
- PROTECTED TREE TO BE PRESERVED
- PROTECTED TREE
- EXISTING TREE CANOPY
- SCREEN FENCE

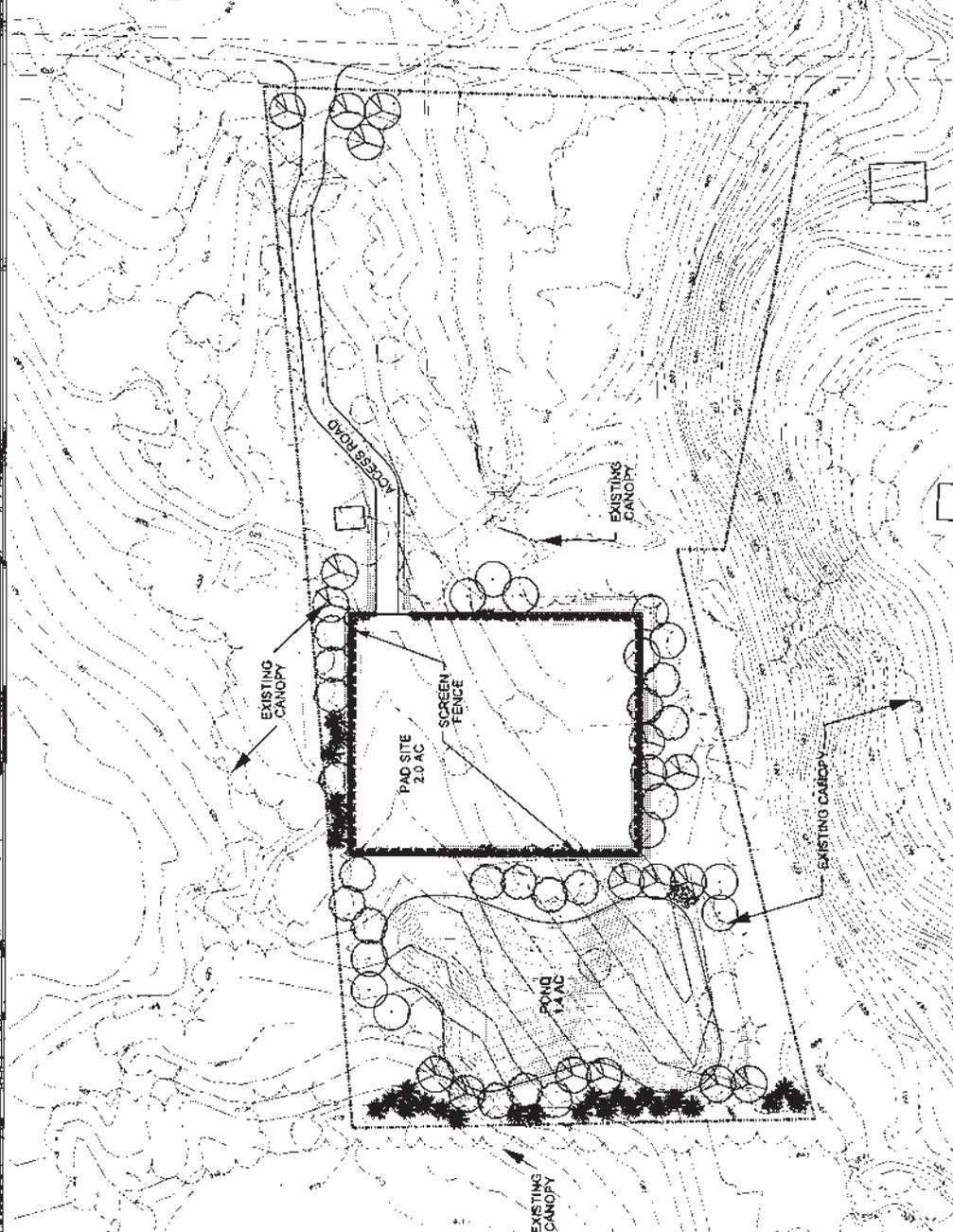
SHEET CONTENT

SUP LANDSCAPE PLAN

1374 ACRES OF THE THE
AGRICULTURAL CENTER
AGRICULTURAL CENTER
TARRANT COUNTY, TEXAS
JULY 2016
ZONING CHANGE FROM AG TO
SUP AND PRODUCTION

SHEET NO. 6 OF 7

LANDSCAPE PLAN NOTES:
1. VERIFY EXISTING TREE HEIGHTS AND SPECIES BEFORE CONSTRUCTION.
2. VERIFY EXISTING TREE CANOPY BEFORE CONSTRUCTION.



PLANT SCHEDULE

SYMBOL	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COND.	REMARKS
○	100	WAX MYRTLE	WAX MYRTLE	3" IN HEIGHT	2 GAL.	SPECIMEN QUALITY
○	100	LEUCATELANTA	FORTIN HOLLY	3" IN HEIGHT	5 GAL.	SPECIMEN QUALITY
○	27	QUERCUS VITIFOLIA	EASTERN RED CEDAR	3.0-5" CALIPER	B & B	SPECIMEN QUALITY
○	18	QUERCUS VITIFOLIA	SOUTHERN WHITE OAK	3.0-5" CALIPER	B & B	SPECIMEN QUALITY
○	17	QUERCUS BUNIAEA	TOURNEFORT OAK	3.0-5" CALIPER	B & B	SPECIMEN QUALITY
○	13	QUERCUS DUMOSA	DEARBORN OAK	3.0-5" CALIPER	B & B	SPECIMEN QUALITY

TCC PAD SITE

CITY OF COLLEVILLE, TEXAS



115 W. 4TH ST. SUITE 200
FORT WORTH, TEXAS 76102
PHONE 817-498-3000

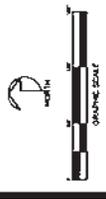
PELOTON LAND SOLUTIONS

5515 WINDSOR DRIVE
SUITE 100
MCKEEN, TX 75244
PHONE 817-462-3350

PROPERTY DIVISION/REGULAR OWNER

TRINITY CHRISTIAN CENTER
OF SANTA ANNA, INC.
2442 WACHLE DRIVE
TUSCALOOSA, ALABAMA 35160

PROJECT NO.	10170001
FILE DATE	04/06/10 (2/10/10) (10/10/10)
DESIGNED BY	BO
DRAWN BY	AM
DATE	08/11/10
REV	AUGUST 20, 2010
REV	REVISION 22/2/10



LEGEND

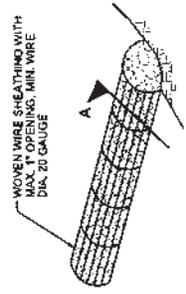
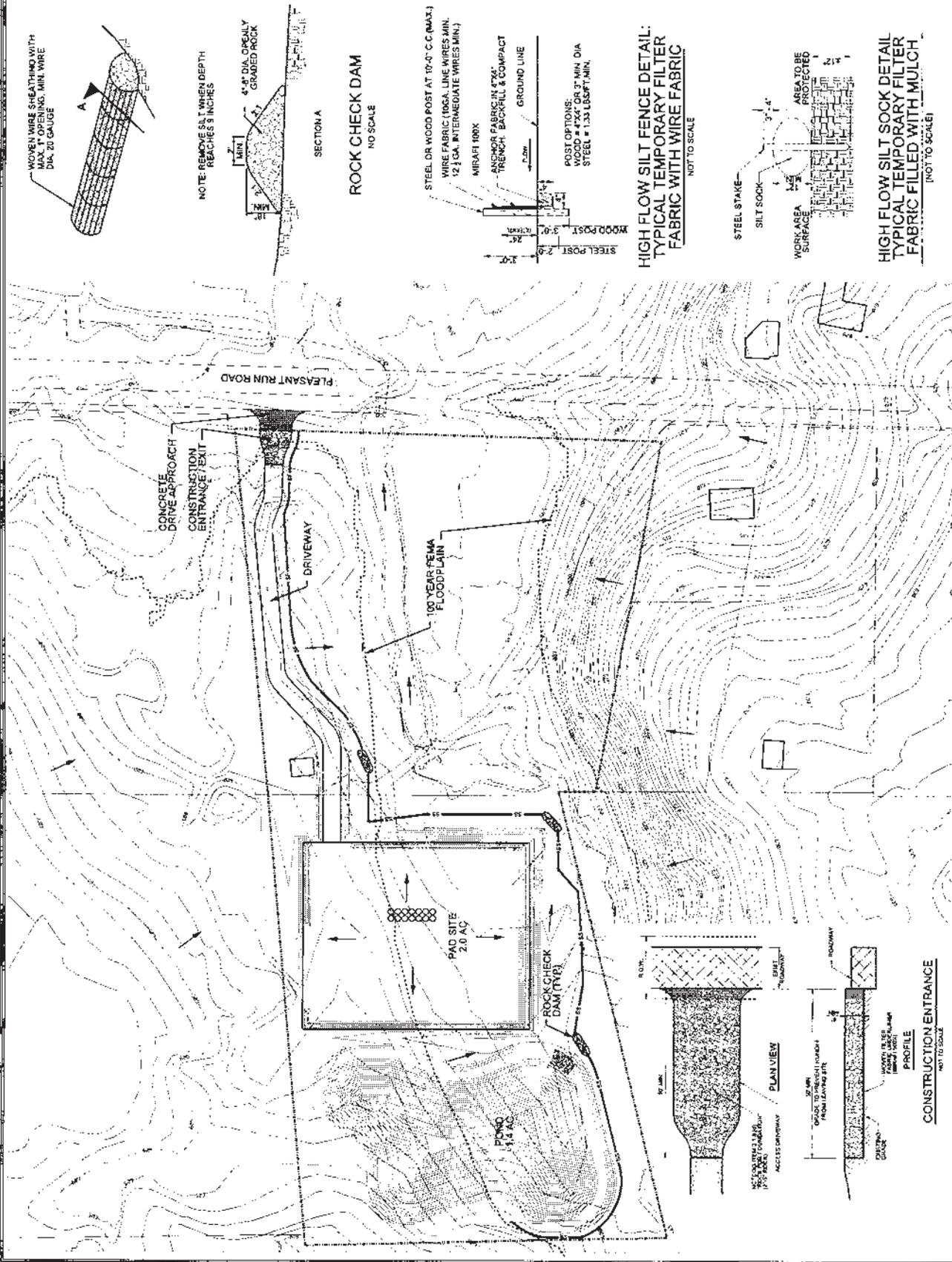
	S/P BOUNDARY
	CONSTRUCTION ENTRANCE
	ROCK CHECK DAM
	SURFACE (VIEW FROM)
	FRAME/POLES (FOR SLOPE)
	SILT FENCE
	SILENT CONTROL

SUP EROSION CONTROL PLAN

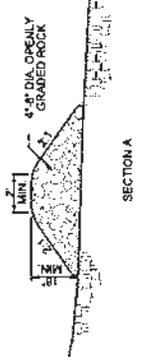
11515 GERRARD STREET
AGRESTA, TEXAS 75001
TARRANT COUNTY, TEXAS
JULY 2010

ZONING CHANGE FROM AG TO SUP AND PAD PRODUCTION

SHEET NO. 5 OF 7



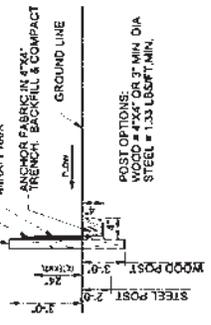
NOTE: REMOVE SILT WHEN DEPTH REACHES 3 INCHES



ROCK CHECK DAM

NO SCALE

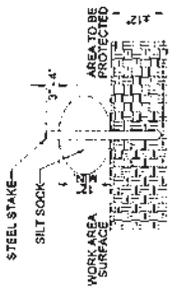
STEEL OR WOOD POST AT 10'-0" C.C. (MAX.)
WIRE FABRIC (100% LINE WIRES MIN. 12 GA. INTERMEDIATE WIRES MIN.)
MIRAFIX 100X
ANCHOR FABRIC IN 4" TRENCH, BACKFILL & COMPACT



HIGH FLOW SILT FENCE DETAIL

TYPICAL TEMPORARY FILTER FABRIC WITH WIRE FABRIC

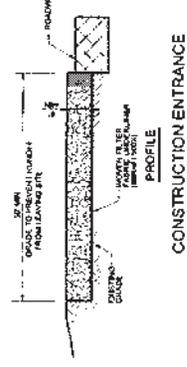
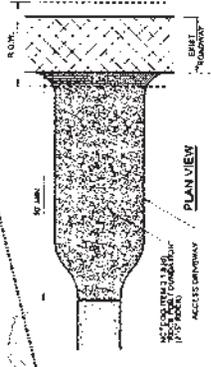
NOT TO SCALE



HIGH FLOW SILT SOCK DETAIL

TYPICAL TEMPORARY FILTER FABRIC FILLED WITH MULCH

NOT TO SCALE



CONSTRUCTION ENTRANCE

NOT TO SCALE

TCC PAD SITE

CITY OF COLLEVILLE, TEXAS



111 W. 4TH ST. SUITE 300
FORT WORTH, TEXAS 76102
PHONE: 817-498-0000

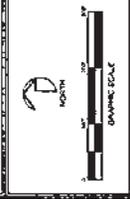
PELTON LAND SOLUTIONS

5151 USSELER DRIVE
SUITE 181
KELLER, TX 75284
PHONE: 817-662-3300

PROPERTY OWNER/COMMERCIAL OWNER:

TRINITY CHRISTIAN CENTER
OF SANTA ANNA, INC.
1000 W. 10TH ST. SUITE 100
LUSTON, CALIFORNIA 92550

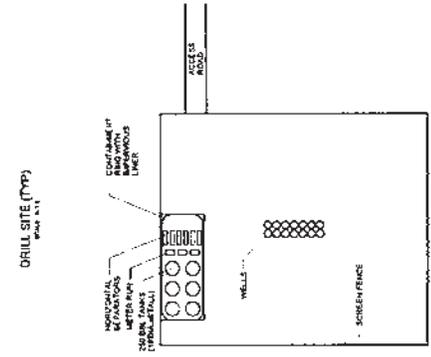
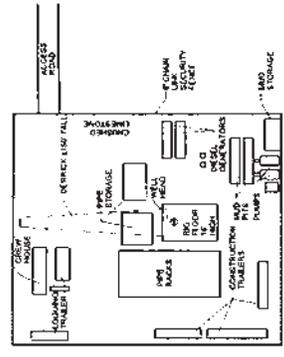
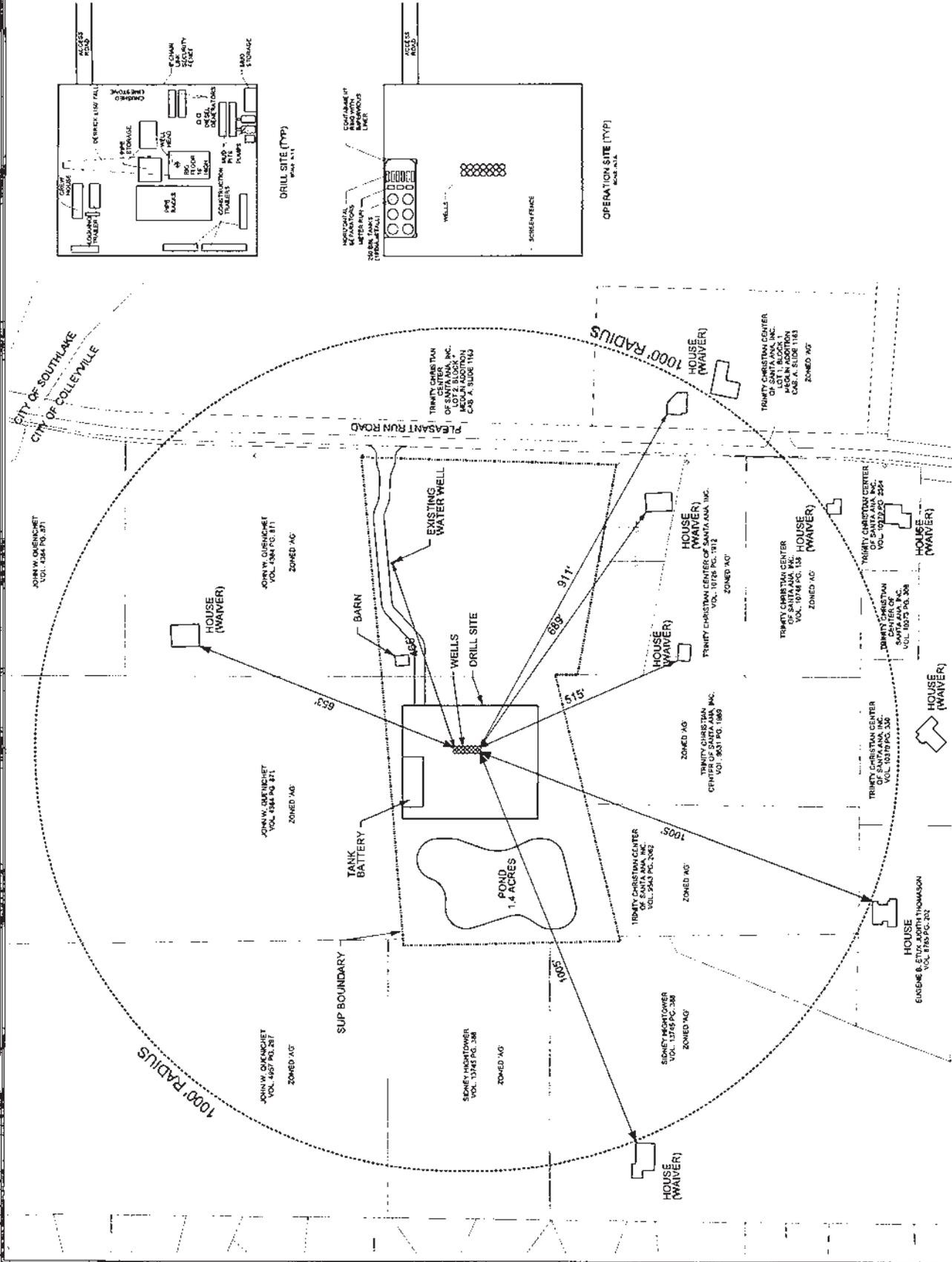
PROJECT NO.	10-11-11
DATE	01/26/11
DESIGNED BY	AKH
CHECKED BY	AKH
DATE	AUGUST 22, 2010
REV.	



SUP SITE PLAN 'A'

13.24 ACRES OUT AS THE
ADJACENT BLOCKS SURVEY BY
ASST. ENGINEER NUMBER 104,
TARRANT COUNTY, TEXAS
JULY 2010
ZONING CHANGE FROM AG-1 TO
AG-2 AND PRODUCTION

SHEET NO. 2 OF 7



TCC PAD SITE

CITY OF COLLEVILLE, TEXAS



111 W. 4TH ST, SUITE 300
FORT WORTH, TEXAS 76102
PHONE: 817-696-9000

PELOTON

LANG SOLUTIONS
5751 WASSER DRIVE
SHELLEY, TX 76244
PHONE: 817-692-3350

PROPERTY OWNER/GENERAL OWNER:

TRINITY CHRISTIAN CENTER
OF SANTA ANNA, INC.
10000 W. WINDY LAKE
TRUST, CALIFORNIA 92790

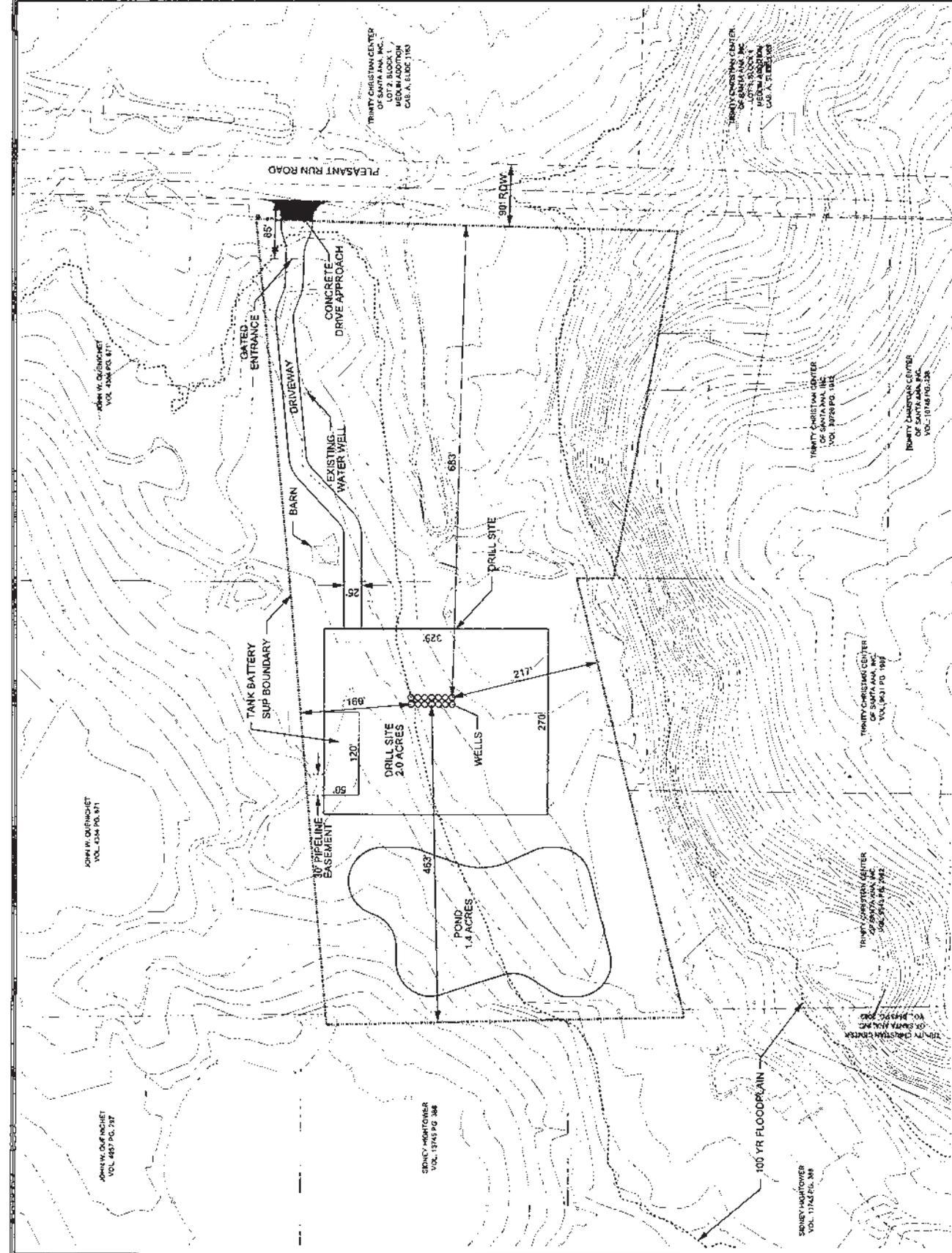
PROJECT NO.	NO. 2016-01
FILE DATE	04/28/16
DATE	AUGUST 22, 2015
BY	DAVID L. BROWN
FOR	DAVID L. BROWN
SCALE	AS SHOWN



SUP SITE PLAN 'B'

10241 ACRES OUT OF THE
WATER COURSE SURVEY
APARTS NUMBER 795
TARRANT COUNTY, TEXAS
JULY 2010
ZONING CHANGE FROM 'AG' TO
'SUD' AND REZONING
AND PARCEL DIVISION

SHEET NO. 3 OF 7



TCC PAD SITE

CITY OF COLLEEVILLE, TEXAS



111 W. 47th ST., SUITE 300
FORT WORTH, TEXAS 76102
PHONE: 817-498-3000

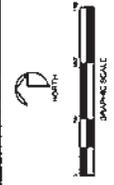
PELOTON

LAND SOLUTIONS
575 HARDEE DRIVE
SUITE 103
KELLER, TX 76244
PHONE: 817-562-3350

PROPERTY OWNER/INSTITUTIONAL OWNER

TERRETT CHRISTIAN CENTER
OF SANTA ANA, INC.
1845 S. GILBERT AVE.
TUSTIN, CALIFORNIA 92780

PROJECT NO.	104710118	DATE	10/11/18
FILE DATE	01/08/19	DESIGNED BY	BOB
DESIGNED BY	BOB	DATE	JULY 18, 2018
REVISED BY	AM	DATE	AUGUST 20, 2018
REVISED BY		DATE	
REVISED BY		DATE	

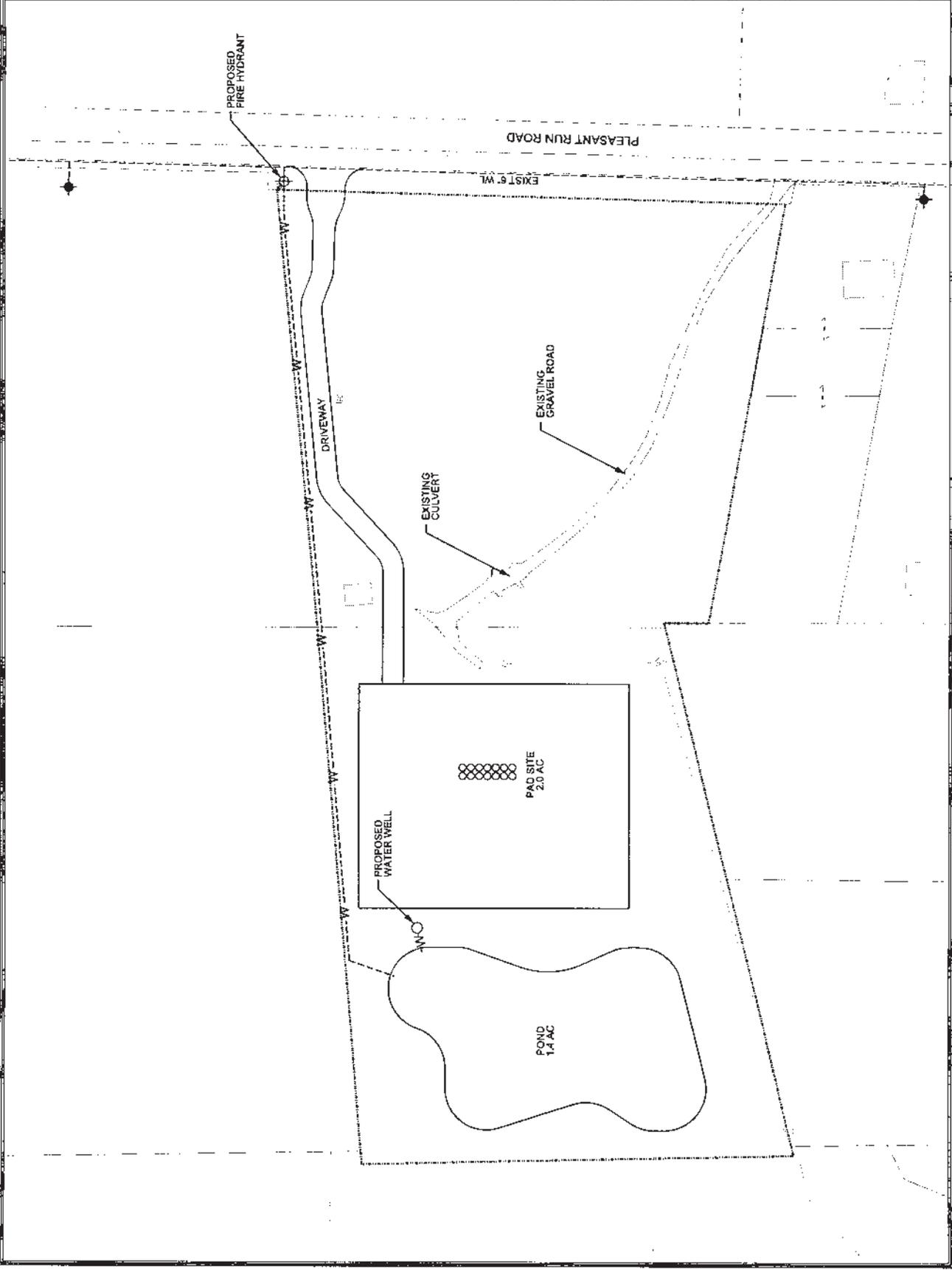


LEGEND	
---	EXISTING 6" WATERLINE
-W-	PROPOSED WATER LINE ROUTE
◆	EXISTING FIRE HYDRANT
⊕	PROPOSED FIRE HYDRANT
○	PROPOSED WATER WELL

SUP UTILITY PLAN

13.241 ACRES OUT OF THE
1/4 E. CORNER SURVEY
AGENCY NUMBER 18
TARRANT COUNTY, TEXAS
JULY 2018
ZONING CHANGE FROM AG TO
SU1 AND PRODUCTION

SHEET NO. 7 OF 7



Waiver Request

STATE OF TEXAS

*

*

COUNTY OF TARRANT

*

WAIVER OF CITY OF COLLEYVILLE 1,000' DRILLING OFFSET RESTRICTION

This is to give written notice that the undersigned does hereby waive any objection to TITAN OPERATING, LLC, being granted a permit to conduct drilling operations less than 1,000 feet from the boundaries of the property of the undersigned, described as 23.746 acres in the William E. Crooks Survey, A-295, Tarrant County, Texas and being the same land described in that Warranty Deed from Sydney Marv Hightower, Independent Executrix of the Estate of Robert C. Hightower Deceased, to Svdney Marv Hightower, Trustee of the Robert Hightower Testamentary Trust recorded as Instrument No. D199084668 of the Official Deed Records of Tarrant County, and the undersigned docs hereby request that the City of Colleyville grant TITAN OPERATING, LLC a variance to the 1,000 feet offset restriction and a permit to TITAN OPERATING, LLC to drill the well presently being sought to be drilled by TITAN OPERATING, LLC, and any other well sought to be drilled by TITAN OPERATING, LLC in order that the minerals of the undersigned may be properly developed in accordance with the presently existing oil and gas lease executed by the undersigned in favor of TITAN OPERATING, LLC. This action is taken to ratify Paragraph 9 of the Oil and Gas Lease between the parties hereto and expressly state the desires of the undersigned in accordance with Paragraph 20 of said lease.

Sydney Marv Hightower
SYDNEY MARY HIGHTOWER,
TRUSTEE OF THE ROBERT
HIGHTOWER TESTAMENTARY TRUST

STATE OF TEXAS

*

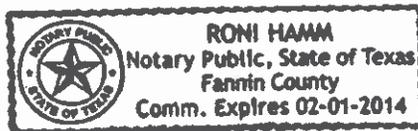
*

COUNTY OF TARRANT

*

This instrument was acknowledged before me by Sydney Marv Hightower, Trustee of the Robert Hightower Testamentary Trust on this 27 day of May, 2010.

Roni Hamm
Notary Public, State of Texas



STATE OF TEXAS

*

COUNTY OF TARRANT

*

*

**WAIVER OF CITY OF COLLEYVILLE
1,000' DRILLING OFFSET RESTRICTION**

This is to give written notice that the undersigned does hereby waive any objection to TITAN OPERATING, LLC, being granted a permit to conduct drilling operations less than 1,000 feet from the boundaries of the property of the undersigned, described as 54.06 ACRES described in 4 tracts as shown on the attached Exhibit "A", and the undersigned does hereby request that the City of Colleyville grant TITAN OPERATING, LLC a variance to the 1,000 feet offset restriction and a permit to TITAN OPERATING, LLC to drill the well presently being sought to be drilled by TITAN OPERATING, LLC, and any other well sought to be drilled by TITAN OPERATING, LLC in order that the minerals of the undersigned may be properly developed in accordance with the presently existing oil and gas lease executed by the undersigned in favor of TITAN OPERATING, LLC. This action is taken to expressly state the desires of the undersigned in accordance with Paragraph 20 of the Oil and Gas Lease between the parties hereto.

Oburn Quenichet
OBURN QUENICHET
Individually and as Independent Executrix
of the Estate of John Wesley Quenichet

STATE OF TEXAS

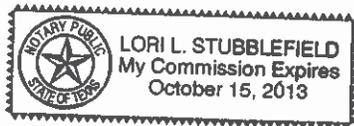
*

COUNTY OF TARRANT

*

*

This instrument was acknowledged before me by Oburn Quenichet, Individually and as Independent Executrix of the Estate of John Wesley Quenichet on this 25 day of May, 2010.



Lori L. Stubblefield
Notary Public, State of Texas

STATE OF TEXAS

*
*
*

COUNTY OF TARRANT

**WAIVER OF CITY OF COLLEYVILLE
1,000' DRILLING OFFSET RESTRICTION**

This is to give written notice that the undersigned does hereby waive any objection to TITAN OPERATING, LLC, being granted a permit to conduct drilling operations less than 1,000 feet from the boundaries of the property of the undersigned, described in the Oil and Gas Leases, which are identified on Exhibit "A" attached hereto, and the undersigned does hereby request that the City of Colleyville grant TITAN OPERATING, LLC a variance to the 1,000 feet offset restriction and a permit to TITAN OPERATING, LLC to drill the well presently being sought to be drilled by TITAN OPERATING, LLC, and any other well sought to be drilled by TITAN OPERATING, LLC in order that the minerals of the undersigned may be properly developed in accordance with the presently existing oil and gas lease executed by the undersigned in favor of TITAN OPERATING, LLC. This action is taken to ratify Paragraph 9 of the Oil and Gas Lease between the parties hereto and expressly state the desires of the undersigned in accordance with Paragraph 20 of the Oil and Gas Lease between the parties hereto.

Trinity Christian Center of Santa Ana Inc.

By: [Signature]
Name: J.B. Casoria
Title: Assistant Secretary
Date: 11 JUNE, 2010

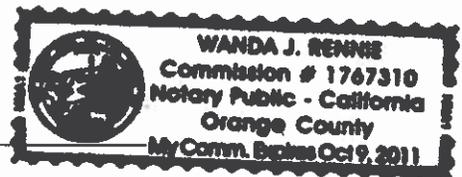
State of California)
County of Orange)

On June 11, 2010 before me WANDA J RENNIE, Notary Public,
personally appeared J B CASORIA,
who proved to me on the basis of satisfactory evidence to be the person(☉) whose name(☉)
is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~
executed the same in his/~~her/their~~ authorized capacity(ies), and that by his/~~her/their~~
signature(☉) on the instrument the person(☉), or the entity upon behalf of which the
person(☉) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that
the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature: Wanda Rennie



Mr. Chris Hamilton, AWB
Environmental Scientist
Peloton Land Solutions
5751 Kroger Drive
Keller, Texas 76244

July 16, 2010

City of Colleyville
Code Enforcement Department
100 Main Street
Colleyville, Texas 76034

RE: Titan– TCC Well Pad Site Tree Removal

To Whom It May Concern,

This letter pertains to the proposed tree removal by Titan Operating, LLC (Titan) for the construction of the proposed TCC well pad site, frac pond, and access road that is located approximately 2,000 feet northwest of the intersection of John McCain Road and Pleasant Run Road.

Per Chapter 5 (Tree Preservation) of the City of Colleyville Land Development Code a total of 15 protected trees with a total diameter of 275 inches are required to be removed (**Attachment A**). A good faith effort has been made by Titan to avoid as many protected trees as possible but due to site constraints, the trees listed in **Table 1** could not be avoided. **Table 1** includes the unique tree identification number, common name, scientific name, and diameter at best height (DBH) of each tree to be removed.

Table 1: Information for Trees to be Removed

Identification Number	Common Name	Scientific Name	DBH
384	American Elm	<i>Ulmus americana</i>	18
393	Cedar Elm	<i>Ulmus crassifolia</i>	14
396	Cedar Elm	<i>Ulmus crassifolia</i>	24
400	Pecan	<i>Carya illinoensis</i>	23
575	Pecan	<i>Carya illinoensis</i>	23
576	Pecan	<i>Carya illinoensis</i>	22
577	Eastern Red Cedar	<i>Juniperus virginiana</i>	16
578	Post Oak	<i>Quercus stellata</i>	12
579	Blackjack Oak	<i>Quercus marilandica</i>	6
580	Post Oak	<i>Quercus stellata</i>	13
581	Post Oak	<i>Quercus stellata</i>	12
582	Post Oak	<i>Quercus stellata</i>	15

583	Post Oak	<i>Quercus stellata</i>	14
592	Pecan	<i>Carya illinoensis</i>	31
593	Pecan	<i>Carya illinoensis</i>	32
Total Diameter Inches Removed			275

Titan is proposing to mitigate for the loss of the 275 diameter inches by planting replacement trees with a total of 225 diameter inches around the well pad site and frac pond per the landscape plan included in **Attachment B**. The replacement trees will be a minimum of three inches in diameter measured one foot above the soil line and a minimum of eight feet in height when planted.

Table 2 lists the trees to be planted around the limits of the proposed pad and frac pond including common name, scientific name, diameter and quantity.

Table 2: Information for Trees to be Planted

Common Name	Scientific Name	Size	Quantity	Total
Eastern Red Cedar	<i>Juniperus virginiana</i>	3 inch caliper	27	81
Southern Live Oak	<i>Quercus virginiana</i>	3 inch caliper	18	54
Texas Red Oak	<i>Quercus buckleyi</i>	3 inch caliper	17	51
Cedar Elm	<i>Ulmus crassifolia</i>	3 inch caliper	13	39
Total Diameter Inches Planted				225

All trees to be removed from the construction site will be flagged with bright colored vinyl tape wrapped around the main trunk at a height of at least four feet such that the tape is visible to workers. Additionally, protected trees directly adjacent to the area of construction will be protected from infringement by the installation of protective fencing between the outer limits of the critical root zone of the tree and the construction area. Protective fencing (four feet in height) will be supported at maximum interval of ten feet by appropriate staking. The protective fencing will be installed prior to commencement of construction and will remain in place until construction of the pad site has been completed.

In a case where a low hanging limb may be broken during the course of construction, the obtrusive limb may be cut. Limb cutting will follow the requirements outlined in Section 5.10 of Chapter 5 of the City of Colleyville Land Development Code. Furthermore, any improvements within the Critical Root Zone of a protected tree will also adhere to Section 5. 10 of the City of Colleyville Land Development Code.

Please let me know if you have questions or if you need additional information to complete your review. Feel free to contact me at the numbers below or via e-mail at chris.hamilton@pelotonland.com.

Sincerely,



Chris Hamilton, AWB
Peloton Land Solutions
Office: 817.562.3350 x232
Cell: 817.880.5045

Attachment A

Tree Removal Exhibit

**TCC
PAD SITE**
CITY OF COLLEYVILLE
TARRANT COUNTY, TEXAS

APPLICANT/OPERATOR:



111 W. Fourth Street, Suite 300
Fort Worth, Texas 76102
Phone 817-588-8300
Fax 817-498-8430

PLANNER:

**PELOTON LAND
SOLUTIONS**

5751 KROGER DRIVE, SUITE 185
KELLER, TX 76244
PHONE: 817-562-3350

LEGAL DESCRIPTION:

7504 PLEASANT RUN ROAD, L. 1 &
WILLIAM E. CROOKS SURVEY A. 285 TR. 1D
PROPERTY OWNER:
TRINITY CHRISTIAN CENTER SANTA ANA
2442 MICHELLE DRIVE
TUSTIN, CA 92780-7015

PROJECT NO. 10-TTND016-TBN

FILE PATH

DRAWN BY

REVIEWED BY

DATE

REV



0 50 100 Feet

1 inch = 100 feet

11" x 17"

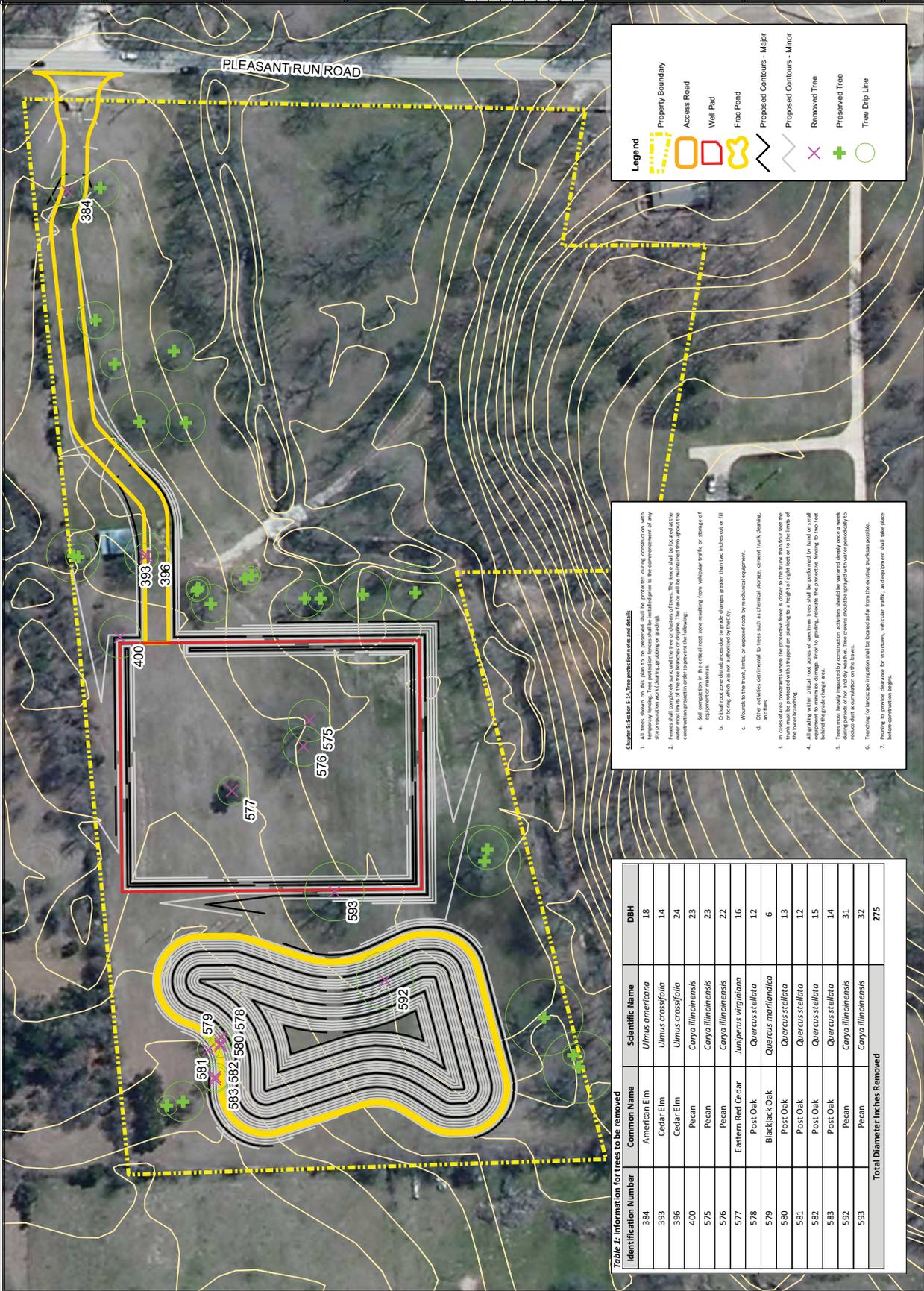
GRAPHIC SCALE

SHEET CONTENT:

**TREE
REMOVAL
EXHIBIT**

DATE: JULY 2010

SHEET NO. 1 OF 1



Legend

- Property Boundary
- Access Road
- Well Pad
- Fire Pond
- Proposed Contours - Major
- Proposed Contours - Minor
- Removed Tree
- Preserved Tree
- Tree Dip Line

Chapter 5.16.005-5.16.010 Tree Protection Zones and Details

- All trees within the site to be removed shall be protected during construction with temporary fencing. Tree protection fences shall be installed prior to the commencement of any site preparation work (clearing, grubbing or grading).
- Fences shall completely surround the tree or clusters of trees. The fence shall be located at the critical root zone distance from the trunk. The critical root zone shall be maintained throughout the construction project in order to prevent the following:
 - Soil compaction in the critical root zone resulting from vehicular traffic or usage of equipment or materials.
 - Critical root zone disturbances due to grade changes greater than two inches cut or fill or boring which was not authorized by the City.
 - Work on the trunk, limbs, or exposed roots by mechanical equipment.
 - Other activities detrimental to trees such as chemical storage, solvent tank cleaning, antifiles.
- In cases of area constraints where the protective fence is closer to the trunk than four feet the fence must be placed with a suspension planing to a height of eight feet or to the limits of the tree canopy.
- All parking, vehicle and equipment areas shall be constructed by hand or road equipment to minimize damage. Prior to grading, mowing, the protective fencing to two feet behind the grade change area.
- Trees most heavily impacted by construction activities should be watered deeply once a week during construction. The trees should be watered with water periodically to reduce salt accumulation on the bark.
- Trimming for landscape integration shall be located as far from the existing bark as possible.
- Timing to provide clearance for structures, vehicular traffic, and equipment shall take place before construction begins.

Table 1: Information for trees to be removed

Identification Number	Common Name	Scientific Name	DBH
384	American Elm	<i>Ulmus americana</i>	18
393	Cedar Elm	<i>Ulmus crassifolia</i>	14
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580	Post Oak	<i>Quercus stellata</i>	13
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582	Post Oak	<i>Quercus stellata</i>	15
583	Post Oak	<i>Quercus stellata</i>	14
592	Pecan	<i>Carya illinoensis</i>	31
593	Pecan	<i>Carya illinoensis</i>	32
Total Diameter Inches Removed			275

Attachment B

Landscape Plan

TCC PAD SITE

CITY OF COLLEYSVILLE, TEXAS



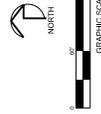
111 W. 4TH ST. SUITE 900
FORT WORTH, TEXAS 76102
PHONE: 817-498-8000

PELTON LAND SOLUTIONS
5751 KROGER DRIVE
SUITE 185
FLEETWOOD, TEXAS 76114
PHONE: 817-492-6550

PROPERTY OWNER/MINERAL OWNER:

TRINITY CHRISTIAN CENTER
OF SANTA ANA INC.
422 MICHELE DRIVE
LUSTIN, CALIF. 92554

PROJECT NO. 1617116
DATE: 06/20/2016
DRAWN BY: BCD
REVIEWED BY: AMH
DATE: JULY 16, 2010
REV:



LEGEND

- SUP BOUNDARY
- ⊕ PROTECTED TREE TO BE PRESERVED
- ⊕ PROTECTED TREE EXISTING TREE CANOPY
- SCREEN FENCE

SHEET CONTENT

SUP LANDSCAPE PLAN

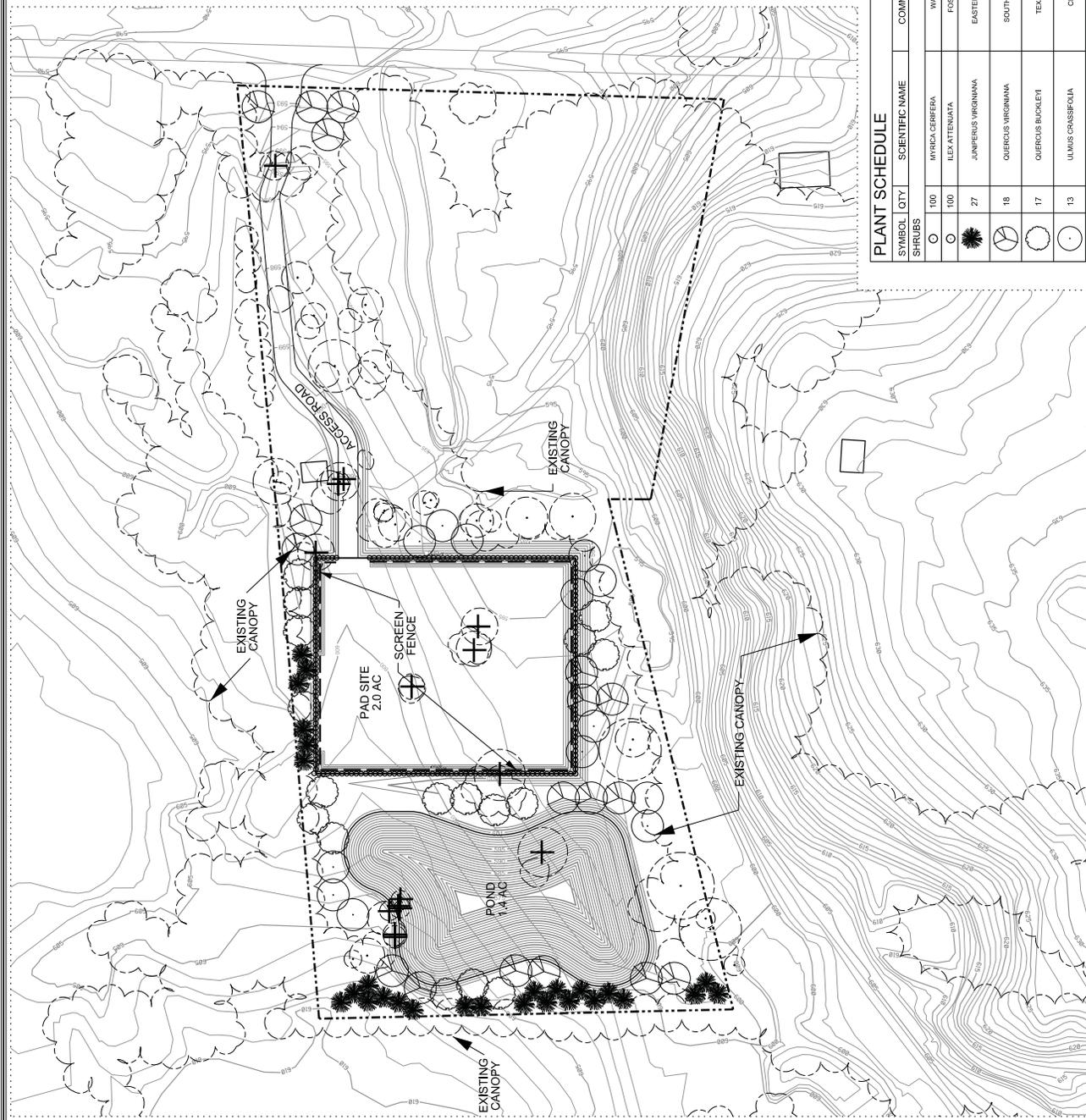
13.24 ACRES OUT OF THE 15.46 ACRES SUBDIVISION AS STRAC NUMBER 258, TARRANT COUNTY, TEXAS, JULY 2010

ZONING CHANGE FROM AG TO SUP GAS WELL DRILLING AND PRODUCTION

SHEET NO. 6 OF 7

- LANDSCAPE PLAN NOTES:
1. SURVUS, MINIMUM HEIGHT OF 3' AT THE TIME OF PLANTING WITH A POTENTIAL HEIGHT OF 5' PLANTED ON CENTER.
 2. TOTAL NUMBER OF SHRUBS TO BE PLANTED: 200
 3. TOTAL NUMBER OF SHRUBS TO BE PLANTED: 200

- LANDSCAPE NOTES:
1. CONTRACTOR SHALL NOTIFY THE OWNERS REPRESENTATIVE OF ANY PLANTING DELAYS, FAILURE TO OBTAIN NECESSARY PERMITS, OR ANY OTHER ISSUES THAT MAY AFFECT THE SCHEDULE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 2. FINAL LOCATION OF PLANT MATERIAL IS SUBJECT FOR THE CONTRACTOR'S REVIEW AND APPROVAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 3. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 4. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 5. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 6. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 7. SHRUBS SHALL BE PLANTED AT THE MINIMUM SPACING AND MAINTAINED THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 8. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 9. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 10. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 11. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 12. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 13. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 14. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 15. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 16. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 17. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 18. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 19. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
 20. ALL PLANT MATERIAL SHALL BE MAINTAINED IN A HEALTHY AND VIGOROUS STATE THROUGHOUT THE ENTIRE PROJECT PERIOD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.



PLANT SCHEDULE

SYMBOL	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	COND.	REMARKS
○	100	MYRTIA CERIFERA	WAX MYRTLE	3" IN HEIGHT	5 GAL.	SPECIMEN QUALITY
○	100	ILEX ATTENUATA	FOSTER HOLLY	3" IN HEIGHT	5 GAL.	SPECIMEN QUALITY
⊕	27	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	3-3.5" CALIPER	B & B	SPECIMEN QUALITY
⊕	18	QUERCUS VIRGINIANA	SOUTHERN LIVE OAK	3-3.5" CALIPER	B & B	SPECIMEN QUALITY
⊕	17	QUERCUS BUCKLEYI	TEXAS RED OAK	3-3.5" CALIPER	B & B	SPECIMEN QUALITY
⊕	13	ULMUS CRASSIFOLIA	CEDAR ELM	3-3.5" CALIPER	B & B	SPECIMEN QUALITY

BREITLING CONSULTING, LLC
IN COOPERATION WITH PELOTON LAND SOLUTIONS, LLLP

EMISSION REDUCTION / CONTROL PLAN

**TCC WELL PAD
COLLEYVILLE, TARRANT COUNTY, TEXAS**

PREPARED FOR:



**TITAN OPERATING, LLC.
111 W. 4TH STREET, SUITE 300
FORT WORTH, TEXAS 76102-3951**

9/29/2010

Facility

Trinity Christian Center (TCC) Well Pad
Colleyville, Tarrant County, Texas

Operator

Titan Operating, LLC. (Titan)
111 W. 4th Street, Suite 300
Fort Worth, Texas 76102-3951

Well #1-H - 3H
Latitude: 32.916991
Longitude: -97.160009

Production Phase Equipment - assuming 3 wells

- 6 Produced Water Tanks-250 bbl capacity
- 1 Mobile Frac Tank-500 bbl capacity
- 3 Horizontal Separators

1.0 Best Management Practices

Emissions sources at the TCC Well Pad include the equipment listed in *Section 1.0* as well as fugitive components. The following Best Management Practices (BMPs) will be implemented in order to minimize emissions to a level that is technically feasible and economically reasonable. Every practical effort will be made to monitor equipment for leaks, implement reliable pollution prevention work practices, and reduce emissions.

Operations

- Operate all equipment with the potential to emit air contaminants at least 50 feet from the nearest property line or the nearest receptor (whichever is closer), excluding any valve that is used for isolation and or safety purposes.
- Each open-ended valve or line will be equipped with a cap, blind flange, plug, or a second valve to seal the line so that no leakage of emissions occurs unless otherwise required to maintain safe operations in a vessel or pipeline.
- Tank hatches, not designed to be completely sealed, will remain closed (but not completely sealed in order to maintain safe design functionality) except for sampling or planned maintenance activities.
- The site will be visited daily by operations personnel who will conduct visual equipment checks.
- The site will be equipped with a remotely monitored alarm system that will automatically shutdown key equipment if significant leaks or operational problems occur.
- All equipment with the potential to emit air contaminants will be maintained in good working order and operated properly.
- All seals and gaskets will be installed, checked, and properly maintained to prevent leaking.

Maintenance

- A program to replace, repair, and/or maintain equipment to keep them in good working order will be established and maintained, including: (1) manufacturer's specifications and recommended programs applicable to equipment performance and effect on emissions; (2) cleaning and inspection of all equipment; and (3) replacement and repair of equipment on schedules which prevent equipment failures and maintain performance.
- During planned downtime of any capture, recovery, or control device, gas streams will be redirected to another control or recovery device.
- Every reasonable effort will be made to repair a leaking component. Initial action will be to isolate the leaking component and conduct the repair within 48 hours. If the leaking component cannot be isolated or the repair cannot be made within 48 hours, then the well will be shut in until repairs can be made. If the repair of a component would require a unit shutdown, which would create more emissions than the repair would eliminate, the repair will be delayed until the next planned shutdown.
- To the extent that good engineering practices will permit, new and reworked valves and piping connections will be located in a place that is reasonably accessible for leak checking during well operations.

Voluntary Leak Detection and Repair (LDAR) Program

- All fugitive components will be inspected by audio, visual, and olfactory (AVO) observation, at intervals not exceeding 15 months, but at least once each calendar year. Such inspections will also include monitoring for leaking components using either (1) the EPA Test Method 21 using a portable analyzer set at 10,000 ppmv leak detection limit or (2) the Alternative Work Practice for monitoring equipment for leaks found in 40 CFR §60.18(g)-(i) using an optical gas imaging instrument with a detection sensitivity level of no greater than 60 grams per hour.
- Damaged or leaking valves, connectors, pumps, compressors, and agitator seals found to be emitting VOCs in excess of 10,000 ppmv as determined using a portable analyzer, found by AVO inspection to be leaking (e.g., dripping process fluids), or found leaking using the AWP will be tagged and replaced or repaired.

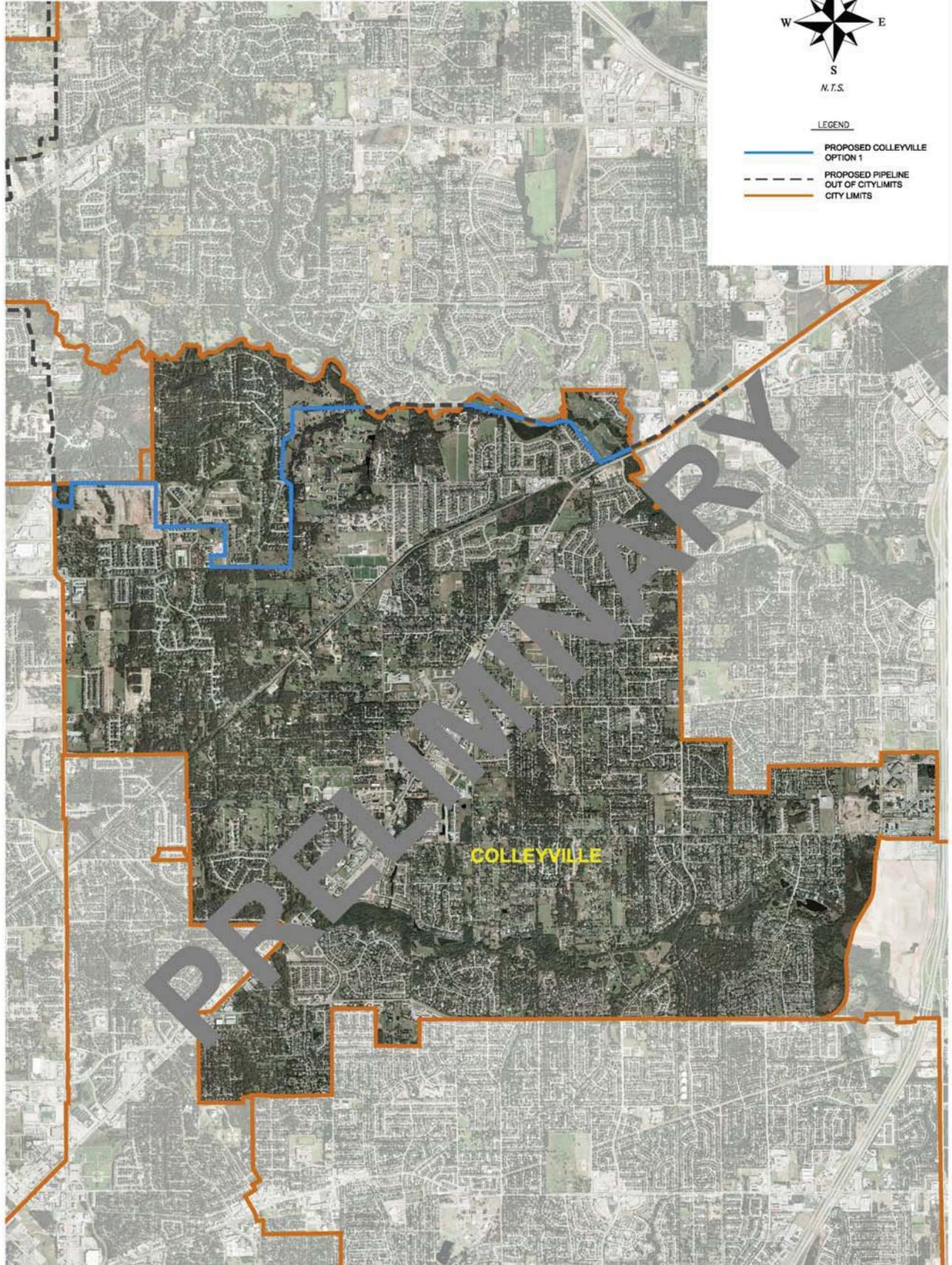
Potential Pipeline Route

PROPOSED COLLEYVILLE OPTION 1 PIPELINE ROUTE



LEGEND

- PROPOSED COLLEYVILLE OPTION 1
- PROPOSED PIPELINE OUT OF CITY LIMITS
- CITY LIMITS



ORDINANCE O-10-1779

AN ORDINANCE OF THE CITY OF COLLEYVILLE, TEXAS, AMENDING THE COMPREHENSIVE ZONING ORDINANCE OF THE CITY OF COLLEYVILLE, TEXAS, AS HERETOFORE AMENDED; BY AMENDING THE OFFICIAL ZONING MAP BY AUTHORIZING A SPECIAL USE PERMIT FOR A GAS WELL ON 13.2 ACRES LOCATED IN THE WILLIAM E. CROOKS SURVEY, ABSTRACT NUMBER 295 AND LOT 1, BLOCK 1, PARK PLACE ESTATES; PROVIDING A SAVINGS CLAUSE; PROVIDING FOR INJUNCTIVE RELIEF; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY OF FINE NOT TO EXCEED THE SUM OF TWO THOUSAND DOLLARS (\$2,000.00) FOR EACH OFFENSE; AND PROVIDING AN EFFECTIVE DATE

WHEREAS, the City of Colleyville has received an application for a Special Use Permit under Case No. ZC10-022; and

WHEREAS, the City of Colleyville deems it necessary, for the purpose of promoting the health, safety, morals, or general welfare of the City to enact a new zoning ordinance; and

WHEREAS, the City Council has appointed a Planning and Zoning Commission to recommend the boundaries of the various original zoning districts and appropriate regulations be enforced therein and to recommend a new zoning ordinance; and

WHEREAS, the Planning and Zoning Commission has divided the City into districts and has prepared regulations pertaining to such districts in accordance with a comprehensive plan, designed to lessen congestion in the streets; to secure safety from fire, panic, and other dangers; to promote health, general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to facilitate the adequate provision of transportation, water, sewerage, schools, parks and other public requirements; and

WHEREAS, the Planning and Zoning Commission, has given reasonable consideration to, among other things, the character of the districts and their peculiar suitability for particular uses, with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout the City; and

WHEREAS, the Planning and Zoning Commission of the City of Colleyville and the City of Colleyville City Council, in compliance with the Charter of the City of Colleyville, and State Law with reference to changes to zoning classifications under the Zoning Ordinance Regulations and Zoning Map, having given the requisite notices by publication and otherwise, and after holding due hearings and affording a full and fair hearing to all the property owners generally, and to the persons interested and situated in

the affected area and in the vicinity thereof, the governing body of the City of Colleyville is of the opinion that said change in zoning should be made.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF COLLEYVILLE, TEXAS:

- Sec. 1. THAT all the foregoing premises and findings are found to be true and correct and are incorporated into the body of this ordinance as if copied in their entirety.
- Sec. 2. THAT the Comprehensive Zoning Ordinance of the City of Colleyville, Texas, be, and the same is hereby amended by amending the official zoning map by authorizing a Special Use Permit for a Gas Well on 13.2 acres located in the William E. Crooks Survey, Abstract Number 295 and the Lot 1, Block 1, Park Place Estates, shown on Exhibit "A" and described in Exhibit "B".
- Sec. 3. THAT the above described tract of land shown on Exhibit "A" and described in Exhibit "B" shall be used only in the manner and for the purposes provided by the Comprehensive Zoning Ordinance of the City of Colleyville as heretofore amended and as amended herein.
- Sec. 4. THAT the above described tract of lands shall be subject to the following conditions:

1. General

- a. This Special Use Permit (SUP) shall be for a gas well to include drilling and production as described in Exhibit "C".
- b. The gas well authorized by this SUP shall meet all requirements of the Land Development Code except where amended herein. Additionally, the gas well shall meet all related regulatory requirements of the State of Texas and the Federal Government.
- c. Effective on the approval date of this ordinance, all provisions of Chapter 3.1-Oil and Gas Well Drilling and Production in the Land Development Code as they exist on said date are hereby adopted by reference through the passage of this ordinance.
- d. All wells approved by this ordinance shall be drilled no later than five years from the date of approval of this ordinance.

2. Site Plan

- a. The layout of all equipment, tanks and access roads shall be consistent with the site plans labeled as Exhibits "D" and "E".
- b. The well drilling and production site shall contain no more than 2 acres as shown on Exhibits "D" and "E".

3. Drilling Activities

- a. The primary drilling apparatus shall not exceed 160 feet in height.
- c. A 1.4 acre fresh water pit shall be installed during the drilling process and shall be stocked with fish in order to mitigate for any mosquito breeding.
- d. Prior to the commencement of drilling activities, the existing six (6) inch water line that services the property shall be upgraded to a minimum eight (8) inch water line. In lieu of installation, funds equaling the cost of installation may be placed into escrow with the City for future installation.
- e. Any equipment or well leaks shall be reported to the administrative officer immediately and shall be posted on the City's website within 24 hours.
- f. The Fire Marshal shall be provided with any equipment necessary in order to determine equipment leakage; either airborne or waterborne.

4. Production

- a. The production pad shall contain no more than 14 water storage tanks. The tanks shall be no larger than 16 feet in diameter and eight (8) feet in height. The production site shall generally be laid out per Exhibits "D" and "E".

5. Access and Transportation

- a. The truck transportation route for all trucks over one-ton that will access this site be as follows : Southbound State Highway 26 to Tinker Road, thence west on Tinker Road to Pleasant Run Road, thence north on Pleasant Run Road to the site entrance. The route exiting the site shall follow the route to the site in reverse.
- b. During drilling operations there shall be no more than 35 truckloads over a three-day period between the hours of 7:00 a.m. and 7:00 p.m. with an

average of 1.5 trucks per hour for both move-in and move-out.

Otherwise, there shall be no more than ten personal vehicles entering and leaving the site for 10 workers on a daily basis.

- c. During the fracturing (completion) process, there shall be no more than 20 truckloads per day over a maximum 11-day period between the hours of 7:00 a.m. and 7:00 p.m. with an average of 1.5 trucks per hour.
- d. During the production phase, there shall be no more than 0.5 trucks per day per well.
- e. The access road to the well site shall be composed of an all-weather, 25 foot wide, concrete surface. There shall be adequate space provided for emergency vehicles to turnaround on the pad site at all times. The turnaround dimensions shall meet the minimum requirements of the Land Development Code.
- f. The gate for the site shall be composed of decorative wrought iron and shall be located 85 feet back from Pleasant Run Road. At a minimum the gate shall meet the minimum requirements for gates in Chapter 14-Engineering Design of the Land Development Code.

6. Landscaping

- a. All landscaping shall be installed as shown and described in the attached Exhibit "F" and as required in Chapter 3.1 of the Land Development Code prior to the commencement of any well production.

7. Lighting

- a. All site lighting shall illuminate onto the site and shall not directly illuminate onto any surrounding properties or onto the property owner's residence. Drilling rig lighting shall not be a nuisance and shall illuminate at the minimum level of lighting allowed by the State of Texas for drilling rigs.

8. Environmental Impact

- a. All erosion control shall, at a minimum, meet the erosion control plan attached as Exhibit "G". Additionally, all stormwater run-off from the pad site shall contain no pollutants. There shall, at a minimum, be spill berms and containment rings surrounding all drilling and production equipment in order to mitigate point-source pollution from all surrounding watersheds.

- b. At a minimum, airborne emissions of pollutants shall be mitigated per the emission control plan described in Exhibit "H".
 - c. In order to insure compliance with all state and federal air quality standards an independent, third-party air quality inspection company shall perform periodic air-quality inspections, including measurements of airborne volatile organic compounds, at the site area prior to drilling operation and during all phases of drilling and production operations. The determination of measurement points, compounds to be measured, the frequency of inspections, threshold limits, as well as baseline measurements of pre-drilling ambient air quality shall be performed by the inspection company. The company shall be chosen and contracted by the City of Colleyville. The gas well operator shall reimburse the City of Colleyville for said contracted services upon receipt of invoice from the City of Colleyville. At a minimum, in the event that a measurement exceeds an established threshold, the appropriate state and/or federal air-quality enforcement agency shall be notified of the measurement within 24 hours of the observation.
 - d. There shall be no mud or dirt laid upon any City street as a result of the activity authorized by this SUP. Any mud or dirt created shall be removed by the operator from streets immediately.
- Sec. 5. THAT any person, firm or corporation violating any of the provisions or terms of this ordinance shall be subject to the same penalty as provided for in the Comprehensive Zoning Ordinance of the City of Colleyville, and upon conviction shall be punishable by a fine not to exceed the sum of Two Thousand Dollars (\$2,000.00) for each offense.
- Sec. 6. THAT if any section, paragraph, subdivision, clause, phrase or provision of this ordinance shall be judged invalid or unconstitutional, the same shall not affect the validity of this ordinance as a whole or any portion thereof other than that portion so decided to be invalid or unconstitutional.
- Sec. 7. THAT in addition to and accumulative of all other penalties, the City shall have the right to seek injunctive relief for any and all violations of this ordinance.
- Sec. 8. THAT it has been found that there has been a change in conditions in the above described property, it is now necessary that it be given the above zoning classification in order to permit its proper development and in order to protect the public interest, comfort and general welfare, and requires that this ordinance shall take effect immediately from and after its passage.

AND IT IS SO ORDERED.

The first reading and public hearing being conducted on the _____ day of _____ 2010.

The second reading and public hearing being conducted on the _____ day of _____ 2010.

ATTEST:

CITY OF COLLEYVILLE

Cynthia Singleton, TRMC, CMC
City Secretary Mayor

David Kelly

APPROVED AS TO FORM AND LEGALITY:

Matthew C. G. Boyle
City Attorney

Exhibit A - Zoning and Location Map

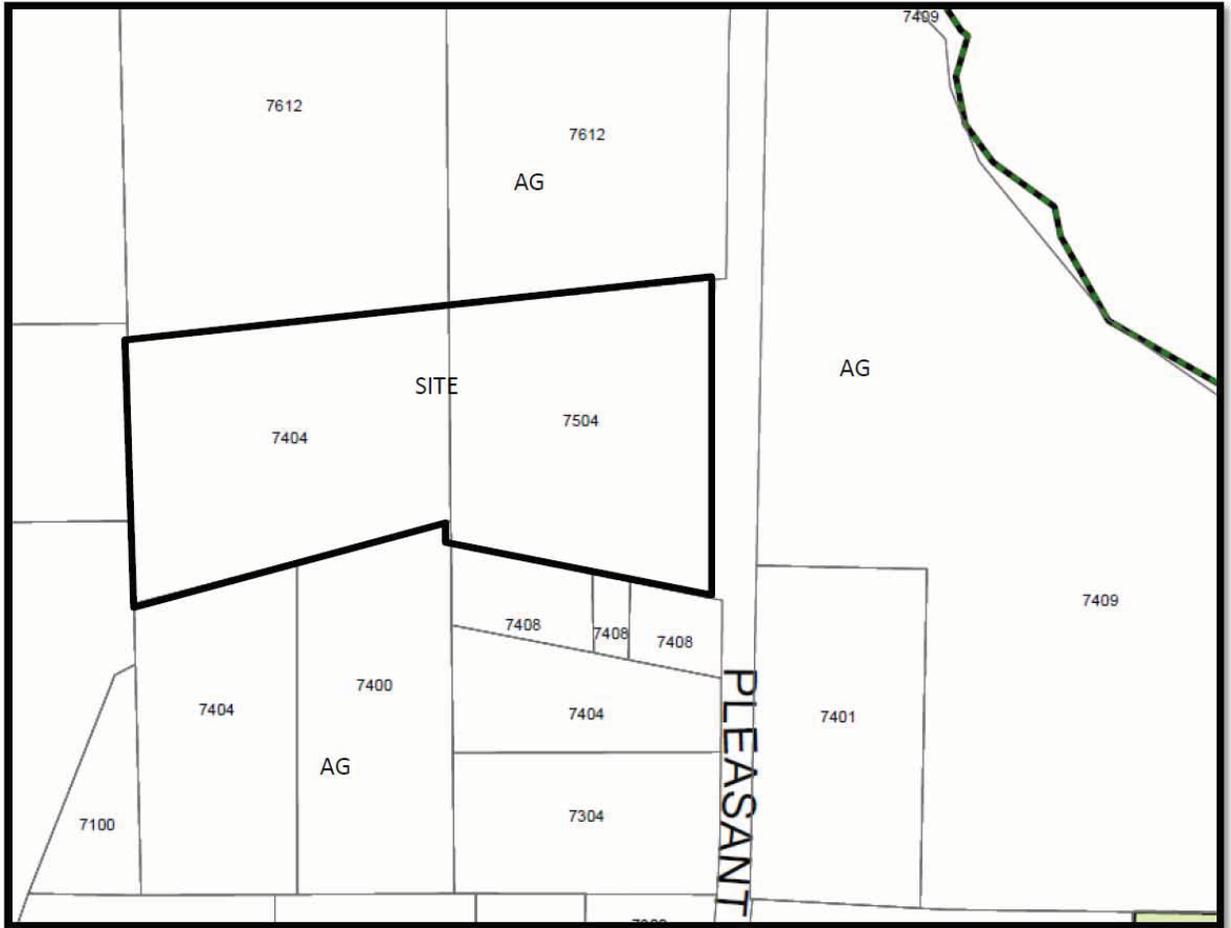


Exhibit B – Legal Description

TRACT 1

BEING all of Lot 1, Block 1, Park Place Estates, as recorded in Volume 388-176, Page 14, Plat Records, Tarrant County, Texas and being 275,081 square feet, or 6.315 acres of land more or less.

TRACT 2

BEING a tract of land situated in the W.E. Crooks Survey, Abstract Number 295, Tarrant County, Texas, and being a portion of that certain tract of land described by deed to Trinity Christian Center of Santa Ana, Inc., as recorded in Volume 9325, Page 1004, County Records, Tarrant County, Texas, and being more particularly described by the metes and bounds as follows:

BEGINNING at a 3/8 inch iron rod found at the northwest corner of said Trinity Christian Center Tract;

THENCE N 84 deg. 38 min. 58 sec. E, 651.64 feet;

THENCE S 00 deg. 43 min. 21 sec. E, 416.52 feet;

THENCE S 75 deg. 43 min. 33 sec. W, 657.74 feet;

THENCE N 01 deg. 50 min. 17 sec. W, 518.16 feet to the **POINT OF BEGINNING**, and containing 301,676 square feet, or 6.926 acres of land more or less.

Total Area= Tract 1 and 2: 13.241 Acres of land more or less.

Exhibit C – Statement of Planning Objectives

STATEMENT OF PLANNING OBJECTIVES

TITAN OPERATING, LLC TCC SUP

PLANNING OBJECTIVE

The purpose of this SUP is to establish a well site, a frac pond, and access road for the drilling, completion, and operating of multiple gas wells within the areas designated by the SUP Site Plan.

WELL SITE LOCATION

The well site location for the Titan TCC wells is identified on the SUP Site Plan. Titan will drill multiple horizontal wells from the proposed well site to develop approximately 1300 acres of Titan leases. The proposed gas development will focus on the Barnett Shale, encountered at subsurface depths at approximately 8,900 feet.

VEHICULAR ACCESS TO THE WELL SITE LOCATION

Vehicular access to the well site will be from SH 26, west on Tinker, north on Pleasant Run Road, to the well site entrance.

The drive approach from Pleasant Run Road will be constructed of concrete. At the entry, a double gate will be recessed into the property to accommodate truck movements from the roadway onto the lease road. Fire access will be provided and the road will be maintained in accordance with all local, state and federal requirements.

DEVELOPMENT PHASING

Titan Operating anticipates the initial construction on the TCC pad site to begin January, 2011. After construction of the pad site Titan anticipates the drilling of 3 wells; each of which will take approximately 30 days. After the initial test Titan anticipates drilling a total of approximately 14 wells off the site over the next 5 to 7 years. All producing wells will be plugged at the end of their economic life. All plugging will be in accordance with applicable Texas Railroad Commission regulations.

ACCESSORY STRUCTURES

Accessory uses for the proposed gas development will include well heads, storage tanks, separation facilities, and other uses necessary and customary to gas development.

During drilling operations, all equipment will be secured by a chain link fence with a secured entrance gate. A reflective sign will be posted at the drill site and operations site identifying the entrance to the site and include the well names and numbers, name of the operator, emergency 911 number, and the telephone numbers for 24 hour emergency contacts.

No refining, except for gas dehydrating and physical phase separation will take place on this site. Temporary diesel fuel tanks, generators, construction trailers, steel mud pits, pipe racks, and drilling rig will be located within the drilling pad site. The drilling rig and associated drilling

Exhibit C – Statement of Planning Objectives (Cont.)

equipment shall be removed from the well site as soon as practical after completion of the well or drilling activities.

WATER CONSUMPTION

Once well permits have been obtained from the Texas Railroad Commission and the road and drill site are constructed, drilling can commence. The drilling of each well will require approximately 420,000 gallons of water over a three (3) week period.

Once a well has been drilled and determined to have the potential for commercial production, the completion process will begin. In order for the Barnett Shale to be commercially productive it must be fracture stimulated. This involves pumping a large amount of water at high pressure into the formation to create a fracture in the rock. A small amount of sand is mixed with the water to hold the fracture open once the procedure is complete. This permits the gas to flow more easily from the rock into the well bore. Each fracture stimulation requires approximately 4.2 million gallons of water. Once the water is in place, the actual stimulation process will take approximately eight (8) hours.

Water for the drilling, as well as the fracture stimulation, will come from a proposed frac pond of approximately 1.4 acres to be constructed by the operator, with water purchased from the City or well water. The water stored in this pond will service multiple wells.

WASTE CONTROL

Water and drilling mud utilized during the drilling of the wells will be initially stored in closed-loop drilling fluid systems located on the pad site. Ultimately, the water and drilling mud will be removed by truck and disposed of in accordance with the requirements of the Texas Railroad Commission.

Produced water from gas production will be stored in 250 – barrel (bbl) tanks within the well site location. The tanks will be located within a secondary containment ring with a non-permeable berm or liner capable of holding one and one-half (1-1/2) times the capacity of the largest tank. Drip pots will be located at pump out connections to contain the liquids from the storage tank. The tanks will also be equipped with a sensing device that will shut off the well should the tank become full. The contents of the tank will be emptied by a commercial operator and disposed of in accordance with the requirements of the Texas Railroad Commission.

FIRE PROTECTION

All fire suppression and prevention equipment required by an applicable federal state or local law will be provided and maintained by the Operator.

All contractors will have portable fire extinguishers at the drill site and fire extinguishers will be located at various locations at the drill site.

The tank battery facility will be equipped with a remote foam line utilizing a two and one-half (2.5) inch National Standard Hose Thread female inlet connection in locations approved by the Fire Department.

A lightning arrestor system will be installed according to the most current edition of the National Electrical Code.

At any gate enclosure, the City Fire Marshal will be provided a knox box with a key for emergency access.

Exhibit C – Statement of Planning Objectives (Cont.)

DRAINAGE

Well-heads, meters, storage tanks, separation facilities, or other post drilling and completion permanent above ground facilities will be located on a drill site that is graded in such a manner to be elevated above the 100-year floodplain. Erosion control shall comply with the erosion control plan approved by the City.

ENVIRONMENTAL

The proposed gas development will be in compliance with all state and federal environmental regulations and will not adversely affect the floodplain, drainage patterns, or water quality.

Damage to public thoroughfares adjacent to this lease area directly caused by the proposed gas development will be restored to city standards, as applicable, as each well is completed. Any damage that poses a safety hazard will be repaired immediately. Any substantial accumulations of dirt, dust, or other debris deposited on public thoroughfares by gas development will be removed. Dust, if significant, will be suppressed by using water or other dust suppressants.

Drilling and production operations shall be conducted in a manner to minimize noise levels. Noise from drilling, completion and rework operations are limited in time from a few days to a few weeks. Noise from drilling activities will not exceed sixty five (65) decibels at any point three hundred (300) feet from the boundary of the drill site. Noise from fracturing operations will not exceed eighty five (85) decibels at any point three hundred (300) feet from the boundary of the drill site. Noise from the operation site will not exceed fifty five (55) decibels beyond the boundaries shown on the associated site plan.

Lighting will be shielded and directional toward the well site so that it will not disturb, be a nuisance, or safety hazard to adjacent properties, residential areas, or public thoroughfares.

SCREENING

Per City ordinance, the equipment on the operation site will be screened from public view by a combination of screening shrubs that will be installed completely around the well site and the required screen fence. Irrigation will be installed as necessary. All plant material will be kept in an attractive state and in good condition.

Exhibit C – Statement of Planning Objectives (Cont.)

DEVELOPMENT SCHEDULE

Titan Operating anticipates the initial construction on the TCC pad site to begin the 4th quarter of 2010. After construction of the pad site Titan anticipates the drilling of 2 to 4 wells; each of which will take approximately 30 days. After the initial test Titan anticipates drilling a total of approximately 14 wells off the site over the next 5 to 7 years.

ECONOMIC DEVELOPMENT INFORMATION

Titan Operating has spent approximately \$108,300,000 in lease bonus dollars in the City of Colleyville to date. Titan has also donated approximately \$300,000 to local charities. Titan estimates that a typical well drilled off the pad site will generate approximately \$230,000 per well in ad valorem taxes for the city over a 15 year period.

Exhibit F – Landscape Plan

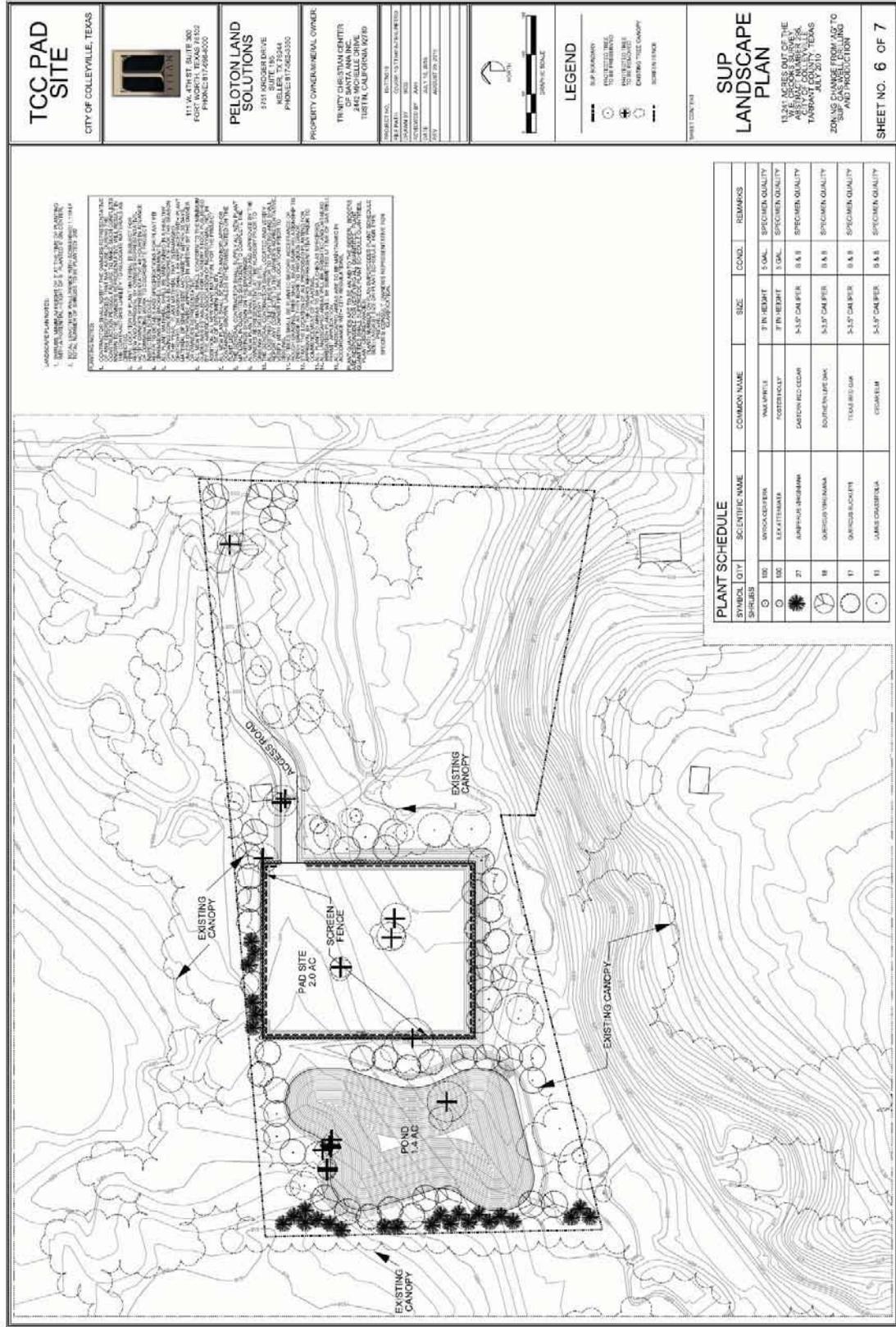


Exhibit G – Grading and Erosion Control Plan

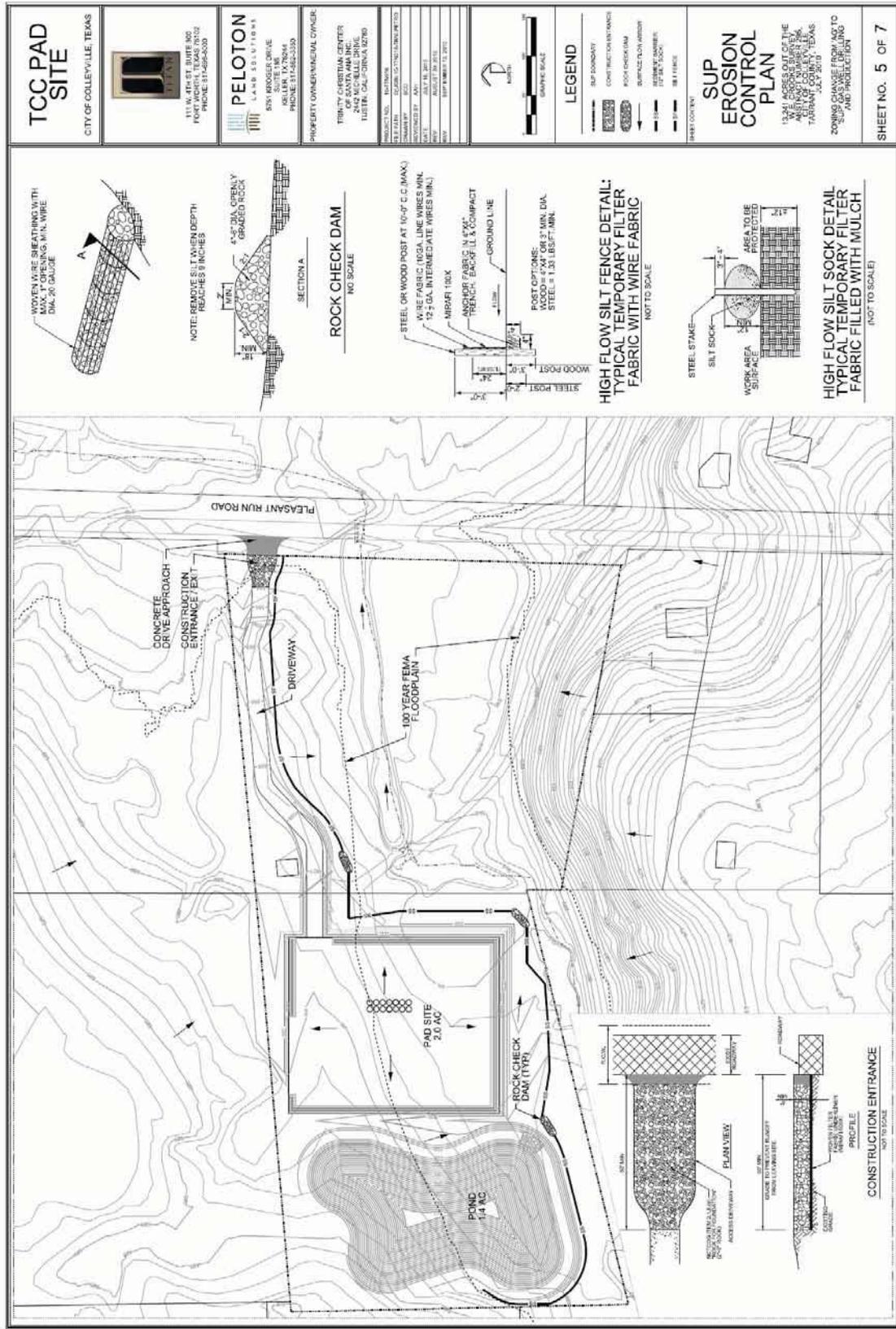


Exhibit H – Emission Control Plan

BREITLING CONSULTING, LLC
IN COOPERATION WITH PELOTON LAND SOLUTIONS, LLLP

EMISSION REDUCTION / CONTROL PLAN

**TCC WELL PAD
COLLEYVILLE, TARRANT COUNTY, TEXAS**

PREPARED FOR:



**TITAN OPERATING, LLC.
111 W. 4TH STREET, SUITE 300
FORT WORTH, TEXAS 76102-3951**

9/29/2010

Exhibit H – Emission Control Plan (Cont.)

Facility

Trinity Christian Center (TCC) Well Pad
Colleyville, Tarrant County, Texas

Operator

Titan Operating, LLC. (Titan)
111 W. 4th Street, Suite 300
Fort Worth, Texas 76102-3951

Well #1-H - 3H
Latitude: 32.916991
Longitude: -97.160009

Production Phase Equipment - assuming 3 wells

6 Produced Water Tanks-250 bbl capacity

1 Mobile Frac Tank-500 bbl capacity

3 Horizontal Separators

1.0 Best Management Practices

Emissions sources at the TCC Well Pad include the equipment listed in *Section 1.0* as well as fugitive components. The following Best Management Practices (BMPs) will be implemented in order to minimize emissions to a level that is technically feasible and economically reasonable. Every practical effort will be made to monitor equipment for leaks, implement reliable pollution prevention work practices, and reduce emissions.

Operations

- Operate all equipment with the potential to emit air contaminants at least 50 feet from the nearest property line or the nearest receptor (whichever is closer), excluding any valve that is used for isolation and or safety purposes.
- Each open-ended valve or line will be equipped with a cap, blind flange, plug, or a second valve to seal the line so that no leakage of emissions occurs unless otherwise required to maintain safe operations in a vessel or pipeline.
- Tank hatches, not designed to be completely sealed, will remain closed (but not completely sealed in order to maintain safe design functionality) except for sampling or planned maintenance activities.
- The site will be visited daily by operations personnel who will conduct visual equipment checks.
- The site will be equipped with a remotely monitored alarm system that will automatically shutdown key equipment if significant leaks or operational problems occur.
- All equipment with the potential to emit air contaminants will be maintained in good working order and operated properly.
- All seals and gaskets will be installed, checked, and properly maintained to prevent leaking.

Maintenance

Exhibit H – Emission Control Plan (Cont.)

- A program to replace, repair, and/or maintain equipment to keep them in good working order will be established and maintained, including: (1) manufacturer's specifications and recommended programs applicable to equipment performance and effect on emissions; (2) cleaning and inspection of all equipment; and (3) replacement and repair of equipment on schedules which prevent equipment failures and maintain performance.
- During planned downtime of any capture, recovery, or control device, gas streams will be redirected to another control or recovery device.
- Every reasonable effort will be made to repair a leaking component. Initial action will be to isolate the leaking component and conduct the repair within 48 hours. If the leaking component cannot be isolated or the repair cannot be made within 48 hours, then the well will be shut in until repairs can be made. If the repair of a component would require a unit shutdown, which would create more emissions than the repair would eliminate, the repair will be delayed until the next planned shutdown.
- To the extent that good engineering practices will permit, new and reworked valves and piping connections will be located in a place that is reasonably accessible for leak checking during well operations.

Voluntary Leak Detection and Repair (LDAR) Program

- All fugitive components will be inspected by audio, visual, and olfactory (AVO) observation, at intervals not exceeding 15 months, but at least once each calendar year. Such inspections will also include monitoring for leaking components using either (1) the EPA Test Method 21 using a portable analyzer set at 10,000 ppmv leak detection limit or (2) the Alternative Work Practice for monitoring equipment for leaks found in 40 CFR §60.18(g)-(i) using an optical gas imaging instrument with a detection sensitivity level of no greater than 60 grams per hour.
- Damaged or leaking valves, connectors, pumps, compressors, and agitator seals found to be emitting VOCs in excess of 10,000 ppmv as determined using a portable analyzer, found by AVO inspection to be leaking (e.g., dripping process fluids), or found leaking using the AWP will be tagged and replaced or repaired.