

**PLANNING AND DEVELOPMENT MEMORANDUM**  
**#11-20**

October 27, 2011

**TO:** Honorable Joyce Downing and City Council Members

**FROM:** William Simmons, City Manager *WAS*  
Corey Hoffmann, City Attorney  
David Willett, Public Works Director  
Travis Reynolds, Senior Planner *TRR*

**SUBJECT:** CR-103 - Permitted Use Permit (P-1-11) Kerr-McGee Oil and Gas Operations,  
Section 36

**BACKGROUND INFORMATION**

Attached to this memorandum is a proposed resolution, which, if approved, would allow for the drilling of 18 natural gas wells and associated infrastructure under the newly adopted Article 56 of the Zoning Ordinance, Oil and Gas Regulation. Staff presented the application to the Planning Commission for their consideration at a public hearing on August 16, 2011. A copy of the staff report and exhibits are attached for reference purposes (Attachment A).

**PROCEDURE**

In accordance with Article 56 of Chapter 11, the City Council is the approval body for Permitted Use Permits relating to Oil and Gas Regulation. On August 16, 2011, the Planning Commission considered the request for approval of a Permitted Use Permit for the subject site. The Planning Commission unanimously recommended approval of the Permitted Use Permit based on the staff report and five findings of fact:

1. The applicant has submitted the appropriate information to the staff's satisfaction.
2. There is a need for the proposed use.
3. The proposal is compatible with the surrounding area.
4. The proposal has little effect on the immediate use and future development of the area.
5. The proposal does not affect the health, safety, and welfare of the inhabitants of the area and the City of Northglenn.

The Planning Commission also recommended the following conditions for the permit. The applicant raised no objections to the conditions.

1. Applicant and City staff should exhaust all alternative locations for the tank battery infrastructure within the guidelines of the City's Ordinance and the setback requirements of the Colorado Oil and Gas Conservation Commission (COGCC).
2. Applicant and City staff should have a final mutually agreed upon draft of the Surface Users Agreement (SUA) prepared for Council approval prior to the public hearing on the Permitted Use Permit.

3. The Permitted Use Permit shall only be valid in conjunction with a valid permit from the COGCC, an approved SUA and any required permits from the City of Northglenn or the North Metro Fire Rescue District.
4. The site shall be operated in conformance with all requirements of the City's Chief Building Official and the Fire Safety Engineer of the North Metro Fire Rescue District and Article 11-56 of zoning ordinance of the City of Northglenn. Including but not limited to annual inspection of the facilities.

In the interim, between initial staff report and this memo, the applicant has satisfied items #1 and #2 above to the staff's satisfaction.

**POTENTIAL OBJECTIONS:**

No objections from the public were heard at the Planning Commission meeting.

**STAFF REFERENCE:**

If Council members have any comments or questions they may contact Travis Reynolds, [treynolds@northglenn.org](mailto:treynolds@northglenn.org) or at 303-450-8836.

**ATTACHMENTS**

Attachment A – Planning Commission staff report and attachments

**Case No. P-1-11**

Applicant: Kerr-McGee Oil & Gas Onshore  
Location: T-1-N R-68-W Section 36: South/2  
Ordinance: 11-56-(1-19)

## **STAFF REPORT AND RECOMMENDATION**

### **REQUEST:**

As applicant, Kerr-McGee Oil & Gas Onshore LP requests Planning Commission recommendation of approval to the City Council of a Permitted Use Permit to drill eighteen (18), subsurface oil and gas wells in the southern half of Section 36. The proposed wells will be drilled from one pad site. (Attachment A)

### **PROPOSAL:**

As stated, the applicant is requesting a Permitted Use Permit to drill eighteen (18) oil and gas wells within the southern half of Section 36. In pursuit of extraction of minerals below the surface, the applicant will initialize a drilling phase for each well that will last for five (5) to eight (8) days, continuously 24 hours a day. Wellheads for each of the wells will be clustered in an approximate location as depicted on the site map. From the wellhead location, a directional bore will access the sub-surface minerals. Upon completion of the drilling of each of the wells, the extracted minerals will be transferred to a “tank battery” facility, via underground flowlines, where physical separation of the various extracted minerals will occur. This tank battery is in an alternative location from the centralized wellhead cluster. (ATTACHMENT A)

### **SURROUNDING LAND USES:**

The entirety of Section 36 is zoned Agricultural. A large portion of the section is used for the Northglenn Wastewater Treatment Facility (northwest corner and portions of the southwest corner). The North Metro Fire Rescue District maintains their regional training facility and a fire station on the north end of the section. The remainder of the section is considered vacant land, is under agricultural production, or is sparsely populated.

### **CASE ANALYSIS:**

The City of Northglenn passed an ordinance in 2010 to regulate Oil and Gas operations on properties within the municipal limits of the City. The intent of the regulations was to “facilitate the development of oil and gas resources within the City while mitigating potential land use conflicts between such development and existing, as well as planned, land uses”. The ordinance is not intended to supersede or preempt any regulations of the Colorado Oil and Gas Conservation Commission (COGCC) and is intended to be an exercise of land use authority.

Staff review of the proposal and submitted information indicates that the required information was submitted in the appropriate format.

The location of the infrastructure for these extraction activities is largely in compliance with the Comprehensive Plan that calls for Commercial, Light Industrial, and Industrial uses in Section 36. The Comprehensive Plan is silent on issues of oil and gas drilling.

The applicant has submitted all of the appropriate information in the context of the requirements of Article 56. In the case where additional negotiated documents (surface use agreement) or permits administered by outside agencies are required, the applicant has provided verification that efforts to obtain such documents are underway.

The site plan depicts the proposed location of the wellheads for the eighteen (18) gas wells. Additionally, it depicts the proposed location of the tank battery along Weld County Road 2 / 168th Street. Drilling, operation, and maintenance vehicles will access the site along Weld County Road 2 at the existing Wastewater treatment facility access drive. The road will be improved by the applicant to accommodate vehicles for the drilling phase and ongoing operations. The applicant will also provide their required level of access control via a security gate while leaving the existing access to the Wastewater treatment facility, separate and intact.

Staff is suggesting that all possible location alternatives for the tank battery be explored prior to final placement. The current location is adjacent to Weld County Road 2 and may impede the areas future viability for Commercial development as depicted in the Comprehensive Plan. An alternative site parallel to the access drive would be preferable. These discussions are ongoing and we will be finalized prior to the final hearing at the City Council.

The Public Works Department of the City has reviewed the application and materials and have endorsed the location of proposed infrastructure. The infrastructure will not conflict with future expansion plans for the wastewater treatment facility.

Floodplain requirements are not applicable as there is no designated floodplain in Section 36.

The narrative indicates that at the pre-drilling phase, environmental specialists will assess the site and surrounding area for applicable wildlife impact largely regulated by state and federal laws.

The North Metro Fire Rescue District and the Northglenn Police Department have reviewed the Emergency Response and Fire Protection Plan. Both agencies are satisfied with the plan.

The City Attorney has prescribed a process that will include the addition of a City Right of Way Permit that is required for any construction activities that occur on City property. The right of way permit will administer such items as City indemnification during construction and operation of the oil and gas facilities, reclamation of the City property to its original condition outside of the construction area, and appropriate construction techniques during the initial construction phase. A land disturbance permit may also be administered by staff prior to initial construction.

## **APPROVAL CRITERIA:**

Section 11-56-6 (a)(9)(a) prescribes the criteria for review by the Planning Commission. They are as follows:

- (1) The requirements of Subsections 11-56-5(a) and (b) are met.
- (2) The site plan for the well site complies with the requirements of Section 11-56-5(c)(1).
- (3) The requirements of Paragraph 11-56-5(c)(2) are met.
- (4) The written narrative complies with the requirements of Paragraph 11-56-5(c)(3).
- (5) When applicable, the application complies with the provisions for geologic hazards, floodplains or floodways provided in Section 11-56-17.
- (6) When applicable, the application complies with the provisions for wildlife mitigation procedures provided in Section 11-56-18.

### **COMMISSION OPTIONS:**

The Commission's options in this case are as follows:

1. Recommend approval of the Permitted Use Permit, with or without conditions or stipulations;
2. Recommend denial of the request for reasons stated; or
3. Table the recommendation for further consideration.

### **STAFF RECOMMENDATION:**

Staff recommends a favorable recommendation to the City Council based on the following findings of fact and with the suggested conditions/stipulations outlined below.

### **RECOMMENDED FINDINGS OF FACT:**

1. The applicant has submitted the the appropriate information to the staff's satisfaction
2. There is a need for the proposed use.
3. The proposal is compatible with the surrounding area.
4. The proposal has little effect on the immediate use and future development of the area.
5. The proposal does not affect the health, safety, and welfare of the inhabitants of the area and the City of Northglenn.

### **RECOMMENDED CONDITIONS FOR CITY COUNCIL COSIDERATION:**

1. Applicant and City staff should exhaust all alternative locations for the tank battery infrastructure within the guidelines of the City's Ordinance and the setback requirements of the COGCC.

2. Applicant and City staff should have a final mutually agreed upon draft of the SUA prepared for Council approval prior to the public hearing on the Permitted Use Permit.
3. The Permitted Use Permit shall only be valid in conjunction with a valid permit from the COGCC, an approved SUA and any required permits from the City of Northglenn or the North Metro Fire Rescue District.
4. The site shall be operated in conformance with all requirements of the City's Chief Building Official and the Fire Safety Engineer of the North Metro Fire Rescue District and Article 11-56 of zoning ordinance of the City of Northglenn. Including but not limited to annual inspection of the facilities.

RESPECTFULLY SUBMITTED:



---

Travis Reynolds,  
Senior Planner

***WHAT'S NEXT: If offered, a recommendation will be forwarded to the City Council for a hearing on the permit at a future date.***

Additional Attachments:  
Written Narrative  
Plan Drawings 1-4

# ATTACHMENT A




Operator

Kerr-McGee Oil and Gas Onshore LP  
 1099 18<sup>th</sup> Street, Suite 1800  
 Denver, Colorado 80202  
 (720) 929-6000



— Access Road

 <b>KerrMcGee Oil &amp; Gas Onshore LP</b>		
<b>Northglenn State Wells Fire Plan Map S 1/2 Sec.36-T1N-R68W-City of Northglenn Weld County, Colorado</b>		
<b>Author :</b> Teddy Riamphant	<b>Created :</b> 05/23/2011	<b>Printed :</b> 23 May, 2011
<b>Project :</b> RM-DJ Basin Land	<b>Scale :</b> 1" = 800'	<b>File :</b> susr/northglenn state fire plan.gmp

Northglenn State Oil & Gas Wells  
City of Northglenn  
Proposed Drilling of Oil & Gas Wells

Proposed Wells

Northglenn State 9-36, Northglenn State 10-36,  
Northglenn State 11-36, Northglenn State 12-36,  
Northglenn State 13-36, Northglenn State 14-36,  
Northglenn State 15-36, Northglenn State 16-36,  
Northglenn State 19-36, Northglenn State 22-36,  
Northglenn State 23-36, Northglenn State 24-36  
Northglenn State 32-36, Northglenn State 33-36,  
Northglenn State 36-36, Northglenn State 37-36,  
Northglenn State 39-36, and Northglenn State 40-36

Township 1 North, Range 68 West, 6th P.M.

Section 36: S/2

Weld County, Colorado

Applicant:

Kerr-McGee Oil & Gas OnShore LP

An Anadarko company

1099 18<sup>th</sup> Street

Denver, Colorado 80202





**June 2, 2011**

---

## TABLE OF CONTENTS

1.	Narrative	1-1
	1.1 Description of Intended Use	1-1
	1.2 Site Improvements	1-1
	1.3 Characteristics of Installation	1-1
	1.4 Characteristics of Drilling and Completion Operations	1-1
	1.5 Characteristics of Maintenance	1-2
	1.6 Disposal Methods Statement	1-2
	1.7 Statement Regarding Motors, Pumps, Etc. To Be Used	1-2
	1.8 Relative Plans	1-2
2.	Operator Information	2-5
	2.1 Operator Identification	2-5
	2.2 Surface Owner Name	2-5
	2.3 Adjacent Surface Owners	2-5
	2.4 Subdivisions	2-6
3.	Title Document	3-2
	3.1 Evidence of Leasehold Ownership	3-2
	3.2 Oil, Gas and Mineral Lease	3-3
4.	COGCC Permits	4-3
	4.1. Notice of Operations Letter	4-1
5.	Operating Plan	5-1
	5.1 Drilling Phase	5-1
	5.2 Drainage and Erosion Control Plan	5-1
	5.3 Water Sources for Drilling Activities	5-2
	5.4 Completion Phase	5-2
	5.5 Production Phase	5-2
	5.6 Weed Control	5-3
	5.7 Plugging and Abandonment Phase	5-3
6.	Graphics	6-1
	6.1 Typical Drilling Rig	6-1
	6.2 Typical Wellhead	6-3
	6.3 Typical Quad Separator and Meter House	6-5
	6.4 Tanks	6-7
	6.5 Typical Flow Diagram	6-9
7.	Emergency Response & Fire Protection Plan	7-1
	7.1 Emergency Response & Fire Protection Plan	7-1
	7.1.1 Scope	7-1
	7.1.2 Regulatory Requirements	7-1
	7.1.3 Location of Wells	7-1
	7.1.4 Emergency Response	7-1
	7.1.5 Emergency Response Contact List	7-2
	7.1.6 Spill/Release Response	7-3
	7.1.7 Safety and Fire Prevention Guidelines	7-3
	7.1.8 Material Safety Data Sheets (MSDS)	7-5

---

## Narrative

# 1. Narrative

## 1.1 DESCRIPTION OF INTENDED USE

Kerr-McGee Oil & Gas OnShore LP (KMG), an Anadarko company, intends utilize an existing oil and gas operations area to drill eighteen (18) oil and gas wells. The proposed wells will be drilled from one pad site. The wells will be known as the well names listed in Section 1.2 table. For simplicity, the wells in this application will be referred to as “the wells.” The desired outcome of this application is to permit the wells to all formations. The purpose of the wells is to produce hydrocarbons from underlying formations known to have commercial potential for the production of such substances.

## 1.2 SITE IMPROVEMENTS

KMG shall construct two operations areas for the purpose of drilling the wells to sufficient depths and to adequately test all formations.

Well Name	Well Name
Northglenn State 9-36	Northglenn State 10-36
Northglenn State 11-36	Northglenn State 12-36
Northglenn State 13-36	Northglenn State 14-36
Northglenn State 15-36	Northglenn State 16-36
Northglenn State 19-36	Northglenn State 22-36
Northglenn State 23-36	Northglenn State 24-36
Northglenn State 32-36	Northglenn State 33-36
Northglenn State 36-36	Northglenn State 37-36
Northglenn State 39-36	Northglenn State 40-36

An Aerial Site Plan is included with this packet for further use and review.

After the wells have been drilled to their total depths and completed as wells capable of production, KMG will reclaim the drill site. The reclamation will be in accordance with the applicable rules and regulations of the Colorado Oil and Gas Conservation Commission (COGCC).

If the wells are completed as producers, the well head locations will encompass a fenced and gated area. The fences will be constructed of acceptable material to KMG and the City of Northglenn’s requirements. Underground flow lines will be laid to connect these wells to the production facilities to be located in the S/2 of Section 36, Township 1 North, Range 68 West, 6th P.M.

## 1.3 CHARACTERISTICS OF INSTALLATION

These wells will have a wellhead assembly installed on site as well as production facilities including but not limited to tank batteries, separators, meter houses and emissions control devises. Pumping units may be installed should pressure within the wells necessitate their use.

## 1.4 CHARACTERISTICS OF DRILLING AND COMPLETION OPERATIONS

KMG management will utilize authorized employees and professional contractors to conduct the drilling and completion operations on site. The actual drilling phase is approximately five (5) to eight (8) days per well, under normal circumstances. Drilling will be continuous, 24 hours a day, for this five to eight day period. Completion operations will be performed on each well following the drilling phase. The production facilities will be installed and the wells put on-line. The surface will be re-graded to its prior condition as nearly as practicable. The entire process from building location to reclamation will take approximately 180-240 days.

## **1.5 CHARACTERISTICS OF MAINTENANCE**

A lease operator will inspect the wells on a regular basis under normal conditions and as required by any special circumstances under the supervision of the KMG Area Manager.

## **1.6 DISPOSAL METHODS STATEMENT**

- Drilling mud will be spread on lands outside of the city limits in a manner approved by the COGCC.
- A commercial size trash bin for removing debris will be located on site. This bin will be for use by all parties affiliated with the operation.
- Human waste will be properly handled by portable sanitary facilities located on site. KMG contracts sanitary services that will provide and maintain the self-contained sanitary facilities throughout the oil and gas operation.
- Produced water will be disposed of off site as approved by the COGCC.

## **1.7 STATEMENT REGARDING MOTORS, PUMPS, ETC. TO BE USED**

These well locations will have wellheads installed on site. Pumping units may be installed should pressure within the wells necessitate their use.

## **1.8 RELATIVE PLANS**

- Noise: KMG will meet all applicable noise requirements set forth by COGCC regulations during operations. Exhaust from all engines, motors and related equipment, shall be vented in a direction away from occupied buildings where practical.
- Vibration: KMG will meet all applicable vibration requirements set forth by COGCC regulations during operations. There is not any unusual vibration anticipated from the proposed operation.
- Air and Water Quality: KMG will meet all applicable air and water quality requirements set forth by COGCC regulations during operations. KMG will comply with the Colorado Department of Public Health and Environment regulations by filing an Air Pollution Emissions Notice (A.P.E.N.), along with any other additional required application data. If production volumes exceed required thresholds, KMG will install emissions control devices as warranted to obtain required reductions of ozone precursors. The COGCC sets forth specific requirements for casing depth in order to protect ground water sources. Produced water will be hauled away and properly disposed of in accordance with COGCC regulations.
- Odor: KMG will meet all applicable odor requirements set forth by COGCC regulations during operations. There is not any noxious, prolonged or unusually high amounts of odor expected from the proposed operation.
- Visual Impacts: KMG will meet all applicable visual impact requirements set forth by COGCC regulations during operations. The permanent facilities will be painted in accordance with COGCC regulations and in a manner to harmoniously blend with the surrounding environment. The site will be reclaimed to as near the original grades as practicable.
- Environmental Impacts: A representative of or for KMG's Environmental Group will perform a site inspection to clear the location for environmental issues (including wildlife and wetlands) prior to site construction activities. KMG will comply with all applicable wildlife and wetland regulatory requirements. Impacts to regulated wildlife species and jurisdictional wetlands are not expected.

- 
- Waste: Please refer to section above, 1.6 – Disposal Methods Statement.
  - Public Safety: The completed wellsites will be surrounded with a 6' chain-link fence and gate with adequate lock. KMG personnel will monitor the wellsites regularly upon completion of the wells. Authorized representatives and/or KMG personnel shall be on-site during drilling and completion operations. A complete Emergency Response Plan has been prepared and reviewed by the local Fire Authority. A copy of this Plan is included with this application (See Emergency Response and Fire Protection Plan).
  - Access Roads: KMG will utilize the existing lease access road from 168<sup>th</sup> Street. The road will be properly engineered with a width of 20' feet and an aggregate base course surface of 6" inches. The aggregate base will be compacted to a minimum density of 95% of the maximum density. Access will be properly graded and culverts shall be utilized where necessary.

## **Operator Information**

## **2. Operator Information**

### **2.1 OPERATOR IDENTIFICATION**

Kerr-McGee Oil & Gas OnShore LP  
(An Anadarko company)  
1099 18<sup>th</sup> Street  
Denver, Colorado 80202  
Tel: (720) 929-6000  
Fax: (720) 929-7297  
Contact: Matthew Miller

Kerr-McGee Oil & Gas OnShore LP (KMG), an Anadarko company, is a fully insured and bonded oil and gas operator, organized as a Delaware Limited Partnership and authorized to do business in the State of Colorado as Kerr-McGee Oil & Gas OnShore LP. All insurance and bonds held by KMG meet the requirements as set forth in the rules and regulations as adopted by the Colorado Oil and Gas Conservation Commission.

### **2.2 SURFACE OWNER NAME**

Dorothy M. Jacobucci Limited Partnership  
c/o Jerry Starling – City of Northglenn  
PO Box 330061  
Northglenn, CO 80233-8061  
Weld County Assessor's Parcel No: 146736300026

### **2.3 ADJACENT SURFACE OWNERS**

Within 300' of the proposed well heads:



<b>Name</b>	<b>Address</b>	<b>City</b>	<b>State</b>	<b>Zip</b>	<b>Parcel #</b>
Colorado Boulevard Industrial Ltd, c/o Colo Steel Inc	4836 Van Gordon	Wheat Ridge	CO	80033	146736100031
Jacobucci Dorothy M Limited Partnership	5895 CR 2	Brighton	CO	80601	146736000027
Jacor Broadcasting of Colorado Inc	4270 Byrd Dr	Loveland	CO	80538	146931200002
Northglenn Capital Leasing Corp	11701 Community Center Dr, PO Box 330061	Northglenn	CO	80233	146736200028
City of Northglenn Attn: Dept of Public Works	11701 Community Center Dr	Northglenn	CO	80233	146736300029
City of Northglenn	11701 Community Center Dr	Northglenn	CO	80233	146736000018
Panenergy Field Services Inc, Attn: Property Tax Dept	5718 Westheimer, Ste 1900	Houston	TX	77057	146931000002
Regional Transportation District	1600 Blake Street	Denver	CO	80202	146736100032
Sack Family Limited Partnership LLLP	5100 E 168th Ave	Thornton	CO	80602	146931300030
City of Thornton	9500 Civic Center Dr	Thornton	CO	80229	146931000012
Weld County	915 10 St	Greeley	CO	80631	146931200001
Weld County	915 10 St	Greeley	CO	80631	146931300029

## **2.4 SUBDIVISIONS**

There are no subdivisions located within 300' of the proposed well heads.

## **Title Document**

### **3. Title Document**

#### **3.1 EVIDENCE OF LEASEHOLD OWNERSHIP**

Through Leasehold acquisitions, Kerr-McGee Oil & Gas OnShore LP (KMG), an Anadarko company, obtained the rights to explore and drill for, as well as produce, oil and gas under the Oil and Gas Lease described below. A copy of the Oil and Gas Lease is attached hereto.

#### **LEASE 1**

Lessor: State of Colorado  
Lessee: Pan American Petroleum Corporation  
Date: November 9, 1970  
Lands: Township 1 North, Range 68 West, 6<sup>th</sup> P.M.  
Section 36: All  
Weld County, Colorado  
Recorded: Book 639, Reception No. 1560543

**3.2 OIL, GAS AND MINERAL LEASE**

4.50B

9

2691560543

00039

JAN-15-71

BOOK

639

Recorded at 8 35 A M JAN 15 1971

Rec. No. 1560543 Ann Spomer, Recorder

3-1

Form 236-2 (Rev. 8/27/69)

# COLORADO OIL AND GAS LEASE ASSIGNMENT LEASE No. OG 70/8571

Full Assignment from Lease No. 70/8535-S

Assignor: Uel Bumpers

THIS LEASE AGREEMENT, Dated this 9th day of November, A.D. 1970, made and entered into by and between the STATE OF COLORADO, acting by and through the STATE BOARD OF LAND COMMISSIONERS, party of the first part and hereinafter called the "lessor", and PAN AMERICAN PETROLEUM CORPORATION, Security Life Building, Denver, Colorado 80202 party of the second part, hereinafter called the "lessee":

ASSIGNED

### WITNESSETH

THAT WHEREAS, There has been filed in the office of the lessor a request for an assignment lease covering acreage formerly included in Colorado Oil and Gas Lease No. 70/8535-S, and

WHEREAS, All of the regulations relative to issuance of assignment leases have been complied with and said assignment has been allowed by the State Board of Land Commissioners:

THEREFORE, For and in consideration of the premises, as well as the payment of rentals hereinafter provided for, and of the covenants and agreements hereinafter contained, on the part of the lessee to be paid, kept and performed, the said lessor has granted and demised, leased and let, and by these presents does grant, demise, lease and let exclusively unto the said lessee for the sole and only purpose of exploration, development and production of oil and gas, or either of them, thereon and therefrom with the right to own all oil and gas so produced and saved therefrom and not reserved as royalty by the lessor under the terms of this lease, together with rights of way, easements and servitudes for pipe lines, telephone and telegraph lines, tanks and fixtures for producing and caring for such products, and housing and boarding employees, and any and all rights and privileges necessary for the economical operation of said land for oil and gas, with right to the use of all otherwise unappropriated water from said lands, but not from lessor's water wells or reservoirs, and with the right of removing either during or within six (6) months after the term hereof, all and any improvements placed or erected on the premises by the lessee, including the right to pull all casing, subject, however, to the conditions hereinafter set out, the following described land situated in the county of Weld, State of Colorado, and more particularly described as follows:

DESCRIPTION OF LAND	SECTION	TOWNSHIP	RANGE
All	36	1-North	68-West

Surface Patents: NE 1/4: #4081; NW 1/4: #4744; SW 1/4: #3474; SE 1/4: #3523

Land Fund: School containing 640.00 acres, more or less.

TO HAVE AND TO HOLD Said land, and all the rights and privileges granted hereunder, to and unto the lessee to date of October 21, 1975, and so long thereafter as oil and gas, or either of them, is produced in paying quantities from said land or the lessee is diligently engaged in bona fide drilling or reworking operations on said land. Drilling or reworking operations shall be deemed to be diligently performed if there is no delay or cessation thereof for a greater period than thirty (30) consecutive days unless an extension in writing is granted by lessor. Provided that such drilling or reworking operations are commenced during the term of this lease or any extension thereof or while this lease is in force by reason of production of oil and gas or either of them, or that such reworking is commenced immediately upon cessation of production for the purpose of re-establishing the same, and provided further that such production is commenced during the term of this lease or any extension thereof, or while this lease is in force by reason of such drilling or reworking operations or other production.

In consideration of the premises, the parties covenant and agree as follows:

1. During the term of this lease, lessee shall pay to lessor an annual rental of \$ 320.00, computed at the rate of \$ 0.50 per acre or fraction thereof of the lands covered hereby. In the event that this lease is extended for an additional term as provided in Paragraph 14 hereof, lessee shall during said extended period pay to the lessor an annual rental at double the rate above specified for the lands covered hereby. Extension of the term of this lease solely by discovery and production of oil or gas as in the preceding paragraph provided, shall not operate to increase the rentals payable under this paragraph; that is to say, the rental in effect at the time of discovery and production shall not be increased by reason of extension of the term of this lease by reason only of such production, but annual rentals in such amount shall be paid during the remaining life of this lease. The rentals as above provided shall be paid annually in advance on or before each October 21.

2. Except for oil and gas used on the leased premises for development and production or that unavoidably lost, the lessee shall pay the lessor as royalty, in addition to the rentals provided in this lease, the following:

(a) On oil, one-eighth of the oil produced and saved from the leased premises.

At the option of the lessor, lessor may take its royalty oil in kind, in which event lessee shall deliver such royalty oil to lessor on the leased premises, free of cost or deduction, into the pipe lines or storage tanks designated by lessor, but lessee shall not in such case be required to provide free tankage for any such oil for a longer period than one month after the same is run into the tanks.

601314

CO-003640-000

When paid in cash, the royalty shall be calculated upon the reasonable market value of the oil at the well which shall not be deemed to be less than the price actually paid or agreed to be paid to the lessee at the well by the purchaser thereof; and in no event shall the royalties be based upon a market value at the well less than the posted price in the field for such oil, or in the absence of a posted price in the field for such oil, upon a market value at the well less than the prevailing price received by other producers in the field for oil of like grade and gravity at the time such oil is run into pipelines or storage tanks.

- (b) On gas, including casinghead gas or other gaseous substance, one-eighth of the reasonable market value at the well or of the price received by lessee at the well, whichever is greater, of all gas produced from the leased premises and sold or utilized by lessee. Where gas is sold under a contract that has been approved by lessor, the reasonable market value of such gas for determining the royalties payable hereunder shall be the price at which such gas is sold under such contract; provided, however, that no approval by lessor of the terms of any such agreement shall operate to make lessor a party thereto or obligate it in any way except as herein provided, and lessee agrees to save lessor harmless from any such obligation.

- (c) All costs of marketing the oil and/or gas produced shall be borne by the lessee and such costs shall not directly or indirectly reduce the royalty payments to the lessor.

3. Lessee agrees to make a monthly production report of the production on the leased premises covering the preceding month, which report shall be filed with lessor on or before the last day of each month, and shall be accompanied by full settlement for all royalties due the lessor for such preceding month under this lease; lessee further agrees to keep and to have in possession, books and records showing the production and disposition of all oil and gas produced from the leased premises and to permit the lessor or its agents, at all reasonable hours, to examine the same. Royalties due under this lease shall be calculated on actual tankage measurements, unless the same are shown to be incorrect, or a more accurate means of measurement is provided.

4. The lessee may at any time, by paying to the State of Colorado, acting by its State Board of Land Commissioners, all amounts then due as provided herein, surrender and cancel this lease insofar as the same covers all or any portion of the lands herein leased and be relieved from further obligations or liability hereunder with respect to the lands so surrendered; provided that no partial surrender or cancellation of this lease shall be for less than contiguous tracts of approximately forty (40) acres or Governmental lot corresponding to a quarter-quarter section; provided further that this surrender clause and the option herein reserved to the lessee shall cease and become absolutely inoperative immediately and concurrently with the institution of any suit in any court of law by the lessee, lessor, or any assignee of either, to enforce this lease or any of its terms express or implied, but in no case shall surrender be effective until lessee shall have made full provision for conservation of the minerals and protection of the surface rights of the leased premises.

5. All payments due hereunder shall be made on or before the day such payment is due, and this lease shall not be in effect until lessor has received for the initial rental, the cash or cash proceeds of any checks therefor regardless of the date of this lease. Nothing in this paragraph shall be construed to extend the expiration of the primary term hereof beyond five (5) years from the date hereof.

6. The lessee, with the written consent of the lessor, shall have the right to assign this lease as to the entire leasehold interest of such lessee in all or part of the lands covered hereby, not less, however, than contiguous tracts of approximately forty (40) acres or Governmental lot corresponding to a quarter-quarter section for any partial assignment, and for approval of such assignment the lessor may make an assignment charge in the amount set forth in the current regulations issued by the Board. No assignment of undivided interests or retention or reservation of overriding royalties will be recognized or approved by lessor; and the effect, if any, of any such assignments or reservations will be strictly and only as between the parties thereto, and outside the terms of this lease, and no dispute between parties to any such assignment or reservation shall operate to relieve the lessee from performance of any terms or conditions hereof or to postpone the time therefor. Lessor will and shall at all times be entitled to look solely to the lessee or his assignee shown on its books as being the sole owner hereof, and for the sending of all notices required by this lease and for the performance of all terms and conditions hereof. If any assignment of a portion of the lands covered hereby shall be approved, a new lease shall be issued to the assignee covering the assigned lands, containing the same terms and conditions as this lease, and limited as to term as this lease is limited, and the assignor shall be released and discharged from all further obligations and liabilities, and shall be held to have released all rights and benefits thereafter accruing with respect to the assigned land, as if the same had never been a part of the subject matter of this lease. Although not binding on the State Board of Land Commissioners as heretofore stated, all instruments of every kind and nature whatsoever affecting this lease should be filed in the records of the Mineral Department of the State Land Board.

7.

- (a) Lessee agrees to reasonably protect the leased premises from drainage by offset wells located on adjoining lands not owned by lessor, when such drainage is not reasonably compensated for by counter-drainage. It shall be presumed, for the purpose of this lease, that the production of oil and gas from offset wells results in drainage from the leased premises, unless lessee demonstrates to lessor's satisfaction by engineering, geological, or other data, that production from such offset well does not result in such drainage, or that the drilling of a well or wells on leased premises would not accomplish the purposes of protecting the deposits under leased premises. The Board's decision as to the existence of such drainage shall be final, and lessee shall comply with the Board's order thereon or, in lieu thereof, surrender this lease as to any such undeveloped acreage as designated by the Board.

- (b) Upon discovery of oil and gas on the leased lands, lessee shall with reasonable diligence proceed to develop said premises at a rate and to an extent commensurate with the economic development of the field in which the leased lands lie.

- (c) The terms and conditions of this Paragraph 7 and of this lease shall be performed and exercised subject to all laws, regulations, orders, local ordinances or resolutions applicable to and binding upon the administration of grant lands owned by the State of Colorado.

- (d) In the event lessor permits any of the lands herein leased to be included within a unitization agreement, the terms of this lease and the operation of this Paragraph 7 shall be deemed to be modified to conform to such unitization agreement. When only a portion of the lands under this lease is committed to a unit, the lessor may segregate the lands and issue a separate lease for each portion and the terms of the lease on that portion included in the unit shall be deemed to be modified to conform to such unit agreement.

8. Lessee shall, subject to applicable laws, regulations and orders binding upon the administration of State lands, operate and produce all wells upon the leased premises so long as the same are capable of producing in paying quantities, and shall operate the same so as to produce at a rate commensurate with the rate of production of wells on adjoining lands within the same field and within the limits of good engineering practice, except for such times as there exist neither market nor storage therefor, and except for such limitations on or suspensions of production as may be approved in writing by lessor. If lessee shall complete a well on the leased lands productive of gas only and lessee is unable to produce such gas due to lack of suitable market therefor, lessor may grant lessee suspension of his obligations to produce hereunder until a suitable market for such gas can be found and during any such suspension period, it shall be deemed that gas is being produced hereunder in paying quantities.

3-3

9. The lessee agrees to notify the lessor of the location of each well before commencing drilling thereon. No exploration, drilling or production operation, including permanent installations, shall be within 200 feet of any building or other improvements, including water well or reservoir, without the written permission of the owner of said improvements. Lessee shall keep a correct log of each well drilled hereunder, showing by name or description the formations passed through, the depth at which each formation was reached, the number of feet of each size casing set in each well, where set, and the total depth of each well drilled. Lessee, within thirty (30) days after the completion or abandonment of any well drilled hereunder, shall file in the office of the State Board of Land Commissioners, at Denver, Colorado, a complete and correct log of such well, together with a copy of the electric log and the radioactivity log of the well when such logs, or either of them, are run, and also a copy of all drill stem test results, core records and analyses, record of perforations and initial production tests, if any. If any of the information required by this paragraph is contained in reports required to be filed with the Oil and Gas Conservation Commission of Colorado, the requirements of this paragraph for such information will be satisfied by the filing, with the Oil and Gas Conservation Commission, of copies of such reports as is required by Paragraph 15 hereof.

10. Lessee shall be liable and agrees to pay for all damages to the surface of the land, livestock, growing crops, water wells, reservoirs, or improvements caused by lessee's operations on said lands. It is agreed and understood that no operations shall be commenced on the lands hereinabove described unless and until the lessee or his assignee shall have filed a good and sufficient bond with the lessor in an amount to be fixed by lessor, to secure the payment for such damage to the surface of the land, livestock, growing crops, water or improvements as may be caused by lessee or his assignee's operations of said lands and also compliance with all the provisions, conditions, covenants and obligations of this lease and the statutes of the State of Colorado, and rules and regulations thereto appertaining. When requested by lessor, lessee shall bury pipe lines below plow depth. Lessee shall set and cement sufficient surface casing to protect the fresh water wells of the area.

11. The lessee shall not remove any machinery or fixtures placed on said premises, other than drilling equipment, nor draw the casing from any well unless and until all payments and obligations currently due the lessor under the terms of this agreement shall have been paid or satisfied.

12. Should lessee discover any valuable products other than oil, gas, gasoline, casinghead gas or other hydrocarbons on or within the leased premises, lessee shall within seven (7) days report such discovery to lessor, and lessee shall have no right thereto because of such discovery; provided, that the terms — oil, gas, or gasoline — shall not be deemed to include any substance over which the United States Government assumes exclusive control.

13. If lessee shall initiate or establish any water right for the leased premises, the point of surface diversion or ground water withdrawal of which is on the leased premises, such right shall, if the surface rights of said premises are owned by lessor, become property of lessor, without cost, at the termination of the lease.

14. Upon failure or default of the lessee, or any assignee, to comply with any of the provisions or covenants hereof, the lessor is hereby authorized to cancel this lease and such cancellation shall extend to and include all rights hereunder as to the whole of the tract so claimed, or possessed, by the lessee or assignee so defaulting, but shall not extend to nor affect the rights of any lessee or approved assignee claiming lands segregated by assignment from this lease; provided, that in the event of any such default or failure to comply with any of the terms and conditions hereof, lessor shall, before any such cancellation shall be made, send by certified mail to the lessee or assignee so defaulting, to the postoffice address of said lessee or assignee, as shown by the records of lessor, a notice of intention to cancel for such default, specifying the same, and if within thirty (30) days from the date of mailing said notice, the said lessee or assignee shall have paid all rents or royalties in default, and shall have begun in good faith to correct such other default as may have been specified, and shall thereafter diligently prosecute the correction of such default, there shall not be a cancellation therefor. If such default is not corrected, or correction thereof is not begun in good faith as hereinabove required, within thirty (30) days after the mailing of such notice, this lease will terminate and be cancelled by operation of this paragraph without further action by lessor, or further notice to lessee.

15. If the lessee shall have failed to make a discovery of oil and gas or either of them in paying quantities during the term hereof, or during drilling operations commenced during the term hereof, the lessee may make written application to lessor to extend this lease for an additional term of five years as to all of the lands covered hereby (excluding any lands theretofore surrendered as in Paragraph 4 provided, or assigned as in Paragraph 6 provided) and the making of such extension shall be at the option of lessor. In no instance will this lease be permitted to exist nor be extended beyond the term of the base lease from which it was issued except by special order of the Board.

16. Lessee will comply with all statutory requirements, and all rules and regulations of the Oil and Gas Conservation Commission of Colorado applicable to the administration of State owned lands, or to the development and production of oil and gas thereon, and will furnish to the Oil and Gas Conservation Commission extra copies of all reports of any kind or nature that are required by said laws, rules and regulations to be furnished to the said Oil and Gas Conservation Commission of Colorado.

17. "Paying quantities" as used herein shall mean and refer to quantities of oil and gas or of either of them sufficient to pay for the current cost of producing same.

18. If lessor owns a lesser interest in the oil and gas deposits of the above described land than the entire and undivided fee simple estate, then the royalties and rentals herein provided shall be paid the lessor only in the proportion which its interest bears to the whole and undivided fee.

19. The benefits and obligations of this lease shall inure to and be binding upon the heirs, legal representatives, successors or assigns of the lessee; but no sub-lease or assignment hereof, or of any interest herein, shall be binding upon lessor until the same has been approved by it as provided for in Paragraph 6 hereof.

IN WITNESS WHEREOF, The party of the first part has hereunto signed and caused its name to be signed by the STATE BOARD OF LAND COMMISSIONERS, with the seal of the office affixed, and the lessee has signed this agreement, the day and year first above written.

Recommended:

*[Signature]*

Mineral Director

STATE BOARD OF LAND COMMISSIONERS

By *[Signature]*  
President

By *[Signature]*  
Registrar

By *[Signature]*  
Engineer

LESSEE

PAN AMERICAN PETROLEUM CORPORATION

By: *[Signature]*  
Its Attorney-in-Fact



1560543

STATE OF COLORADO  
OIL AND GAS LEASE

ASSIGNMENT LEASE NO. OG \_\_\_\_\_

70/8571-S

When recorded return to:  
PAN AMERICAN PETROLEUM CORP.  
SECURITY LIFE BUILDING  
DENVER, COLORADO 80202

STATE OF COLORADO }  
COUNTY OF WELD } ss

I HEREBY CERTIFY THAT THIS INSTRUMENT  
WAS FILED FOR RECORD IN MY OFFICE AT  
8:35 O'CLOCK A.M. JAN 15 1971  
AND IS DULY RECORDED IN BOOK NO. 639  
PAGE \_\_\_\_\_

*Ann Spencer*  
RECORDER

By *Wesley P. Keenan*  
DEPUTY

*4 Spence*

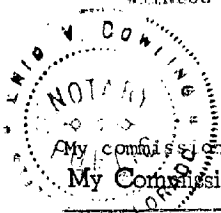
COLORADO

STATE OF COLORADO )  
                                  : SS.  
COUNTY OF DENVER )

The foregoing instrument was acknowledged before me this 17th day of November  
19 70, by T. S. YANCEY, Attorney in Fact for PAN AMERICAN PETROLEUM  
CORPORATION.

WITNESS my hand and official seal.

*Ernie V. Hawling*  
Notary Public



My commission expires:  
My Commission expires June 3, 1974

---

## COGCC Permits

#### **4. COGCC Permits**

Approved permits will be provided to the City of Northglenn upon receipt from the Colorado Oil and Gas Conservation Commission. Upon submittal of Approved permits to the City, Kerr-McGee will also provide associated well location plats. Kerr-McGee anticipates submittal to the state third quarter 2011.



May 18, 2011

CERTIFIED MAIL

City of Northglenn  
11701 Community Center DR  
Northglenn, CO 80233

Re: Notice of Intent to Conduct Surface Operations (Facilities)  
SEE ATTACHED.

Township 1N, Range 68W, Section 36  
Weld County, Colorado

Dear Ladies & Gentlemen:

The Colorado Oil and Gas Conservation Commission ("COGCC") has adopted guidelines and procedures regarding oil and gas activities affecting the surface. These rules stipulate that an affected surface owner must be given advance notice in writing by an operator at least thirty (30) days prior to drilling an oil and gas well.

Kerr-McGee Oil and Gas OnShore LP ("KMG") intends to begin operations to drill the above captioned oil and gas well(s) upon approval of title, receipt of permits from the COGCC prior to June 30, 2012. As the surface owner, it is your responsibility to notify the tenant farmer, if applicable, of this proposed operation.

A site diagram of the proposed location of the well and any associated roads and production facilities is enclosed. Should you have any questions and/or concerns, please contact me at (303) 655-4350 or my cell at (970) 590-6249.

Very truly yours,  
**KERR-McGEE OIL AND GAS ONSHORE LP**

A handwritten signature in blue ink that reads 'David Bell'.

David Bell  
Landman

I/we waive the 30 day notice referenced above and approve of the operations commencing upon KMG's receipt of the drilling permit.

---

:cl  
Enclosure

NORTHGLENN STATE 39-36  
NORTHGLENN STATE 10-36  
NORTHGLENN STATE 12-36  
NORTHGLENN STATE 22-36  
NORTHGLENN STATE 37-36  
NORTHGLENN STATE 16-36  
NORTHGLENN STATE 23-36  
NORTHGLENN STATE 40-36  
NORTHGLENN STATE 24-36

NORTHGLENN STATE 9-36  
NORTHGLENN STATE 11-36  
NORTHGLENN STATE 15-36  
NORTHGLENN STATE 32-36  
NORTHGLENN STATE 13-36  
NORTHGLENN STATE 19-36  
NORTHGLENN STATE 33-36  
NORTHGLENN STATE 14-36  
NORTHGLENN STATE 36-36

## **Operating Plan**

## **5. Operating Plan**

### **5.1 DRILLING PHASE**

The drilling operation occurs over an approximate eight day period. Actual drilling time takes about five days. Site preparation and rig movement account for the other three days. Initially the subject land is surveyed and a well location is staked in accordance with Colorado Oil and Gas Conservation Commission (COGCC) regulations. From this point forward, twenty-four (24) hour operations of dirt work equipment begin preparing the location. This includes digging of the first reserve pit and leveling the surface where the drilling rig will be located. After the location has been prepared, the drilling rig is then moved in and drilling operations are initiated. The actual drilling proceeds at a constant rate unless an over pressured zone is encountered. This is detected by a pit volume increase. Based on pressure readings and volume increases, the pressure influx is worked out of the hole. This is accomplished by gradually circulating the hole with heavier hydrostatic column of fluid. Any uncontrolled pressure influx is eliminated with the use of a high pressure blowout preventer on top of the surface casing. The heavier fluid contains the pressure and allows drilling to continue. The overpressured zone will be duly noted and based on several determinations and will be handled according to regulatory guidelines.

Prior to encountering the objective zone, the well is prepared for openhole logging. This requires the drilling fluid to maintain certain qualities which include water loss, mud cake, pH control, and particle contamination. These qualities are maintained until total depth is reached. At total depth, the drill string is removed and logging operations take place. The log response provides a means of estimating the well's productive potential.

If the well is deemed viable, casing is run in the hole and cemented (alternatively, the well is plugged according to COGCC regulations). The casing, constructed of steel pipe, is designed to specific criteria to provide an integral conduit for transporting hydrocarbons to the surface. The design criterion includes internal and external pressure yield and tensional and torsional loading. The casing string is designed so all points are equal in strength for its place in the string. The casing strength is further enhanced by the cementing process. Cement is placed in the space between the casing and the wall of the hole. The cement anchors the casing, provides increased burst resistance, and contains the fracturing and produced fluids. The cement is also designed to special criteria. These include volume requirements, curing times, and compressive strength. The cement is then allowed to cure and concurrently the rig is moved off location. At this point the drilling phase is complete.

### **5.2 DRAINAGE AND EROSION CONTROL PLAN**

Changes in the current drainage patterns are not anticipated. The well site will be monitored during the drilling and completion phases for any problems with drainage or erosion. Necessary measures will be taken to correct any problems. Once the drilling and completion phases are complete, the drill site will be restored to its original grade and vegetation planted as required by regulations and surface use agreements.

The drilling company will construct a small ditch about 4"x4" around the rig equipment to the reserve pit. Any minor fluid spills will be diverted to the reserve pit where they will be contained and removed.

The anticipated capacity increase of the separator and the tank battery should not cause any significant changes to the drainage and erosion patterns of the site.

### **5.3 WATER SOURCES FOR DRILLING ACTIVITIES**

Water for use in drilling operations will be secured from a contractor or from an owner of water in the immediate area of the drill site. Water use will be subject to a mutually acceptable agreement between KMG and the water owner. Water will not be acquired by drilling a water well on the leased lands.

### **5.4 COMPLETION PHASE**

The completion operations are initiated based on the curing time of the cement. Maximum strength of the cement is obtained in a curing time of approximately seventy-two (72) hours. The cement top and quality is verified by a cement bond log. This log is subject to review by the Colorado Oil and Gas Conservation Commission to assure compliance. The well is then perforated based on open-hole log analysis. Perforating the well is accomplished by lowering a cylindrical barrel into the well. At a specified depth, the barrel electrically fires (perpendicular to the pipe) jet shots that pierce the steel casing and cement that penetrate the formation. This operation takes approximately one day.

Based on the perforations, a formation fracturing is designed. The fracturing is a means of hydraulically cracking the formation and placing propping agents to maintain the crack in an open position. This provides void spaces for the hydrocarbons to drain. This operation requires a number of high pressure truck mounted pumps. The operation requires one day to rig up and pump the job. The well is then shut-in overnight. The following day, the well is flowed back to large portable tanks. This flowback can vary from one to ten days depending on the well's response. Based on flowback results, an idea of the wells potential may be estimated. Concurrent with this operation, the production equipment site is being constructed.

When a well is completed for production, all disturbed areas no longer needed will be restored and re-vegetated as soon as practicable. All segregated soil horizons removed from crop lands shall be replaced to their original relative positions and contour, and shall be tilled adequately to re-establish a proper seedbed. The area shall be treated if necessary and practicable to prevent invasion of undesirable species and noxious weeds, and to control erosion. Any perennial forage crops that were present before disturbance shall be re-established. All segregated soil horizons removed from non-crop lands shall be replaced to their original relative positions. The segregated soil horizons will contour as near as practicable to achieve erosion control and long-term stability, and shall be tilled adequately in order to establish a proper seedbed. The disturbed area then shall be re-seeded in the first favorable season.

### **5.5 PRODUCTION PHASE**

The production phase actually overlaps the completion phase. Once the production string is cemented, dirt work is initiated on the production equipment site. After the frac fleet has cleared location, the well is connected to a production facility. This production facility, or tank battery, consists of approximately eight (8) oil/water tanks, two quad separators, a meter house, two emission control devices (ECD), and a vapor recover unit (VRU) per pad. The tank battery will be connected to the wells by pressure tested flowline buried approximately three feet deep. At this point, the gas purchaser is preparing to connect the gas sales meter loop. The production facility installation is completed by installing a 3' berm around the production tank(s) and a 1' berm around the separator. The berm will be constructed around tanks in the absence of remote impounding. Both methods shall enclose an area with sufficient volume to contain the entire contents of the largest tank in the enclosure. The berm will be inspected at regular intervals and maintained in good condition. When a berm is provided around tanks, no potential ignition sources shall be installed inside that area.



The lease operator then begins his daily monitoring of the well. His daily reports consist of tank measurements, gas sales estimates, and pressure reading. This information is compiled monthly and filed with the COGCC.

At some point in the well's life, tubing may be run in the well with the possible addition of a plunger lift or pumping unit. This will extend the well's producing life and maximize reserves.

## **5.6 WEED CONTROL**

All locations, including wells and surface production facilities, will be kept free of weeds; rubbish, and other waste material. During drilling, production, and reclamation operations, all disturbed areas shall be kept reasonably free of noxious weeds and undesirable species. When a well is completed for production, all disturbed areas no longer needed will be restored and revegetated as soon as practicable. The area shall be treated, if necessary and practicable, to prevent invasion of undesirable species and noxious weeds. In early spring a contractor applies a liquid, annual pre-emergent herbicide, inside the production facility and well site fence. Any weeds that come up after this will be sprayed with a 2-4-D type weed-killer. Any weeds that escape these treatments will be cut mechanically with a mower or line trimmer in mid to late summer. The access roads will be mowed with a rotary mower in mid to late summer where necessary.

## **5.7 PLUGGING AND ABANDONMENT PHASE**

Plugging and abandonment is the cementing of a well and removal of its associated production facilities. This also includes the removal or abandonment in-place of its flowline and the remediation and reclamation of the well site.

Upon the plugging and abandonment of a well, all pits, mouse and rat holes as well as cellars will be backfilled. All debris, abandoned gathering line risers, and flowline risers, and surface equipment will be removed, and the location will be graded and re-contoured. Within ninety (90) days after a well is plugged and abandoned, the well site shall be cleared of all non-essential equipment, trash, and debris. All access roads to plugged and abandoned wells and associated production facilities shall be closed, graded and re-contoured. Culverts and any other obstructions that were part of the access road(s) shall be removed. Well locations, access roads and associated facilities shall be reclaimed. As applicable, compaction alleviation, restoration, and revegetation of well sites and access roads shall be performed. All reclamation work will be completed within three (3) months on crop land and twelve (12) months on non-crop land after plugging a well.

Production and special purpose pit closure. After any remaining exploration and production waste is removed or treated, all such pits will be backfilled to return the soils to their original relative positions. If subsidence occurs over closed pit locations, additional topsoil will be added to the depression and the land shall be re-leveled as close to its original contour as practicable.

Successful Final Reclamation of the well sites and access roads will be considered completed when:

1. Reclamation of crop land has been performed and over two growing seasons has indicated no significant un-restored subsidence.
2. Reclamation of non-crop land has been performed and the total cover of live perennial vegetation, excluding noxious weeds, provides sufficient soils erosion control. The total cover of live perennial vegetation of adjacent or nearby undisturbed land, not including overstory or tree canopy cover, having similar soils, slope and aspect of the reclaimed area.
3. Disturbances resulting from flow line installations shall be adequately reclaimed when the disturbed area is reasonably capable of supporting the pre-disturbance land use.

---

## Graphics

## 6. Graphics

### 6.1 TYPICAL DRILLING RIG



6.2 TYPICAL WELLHEAD



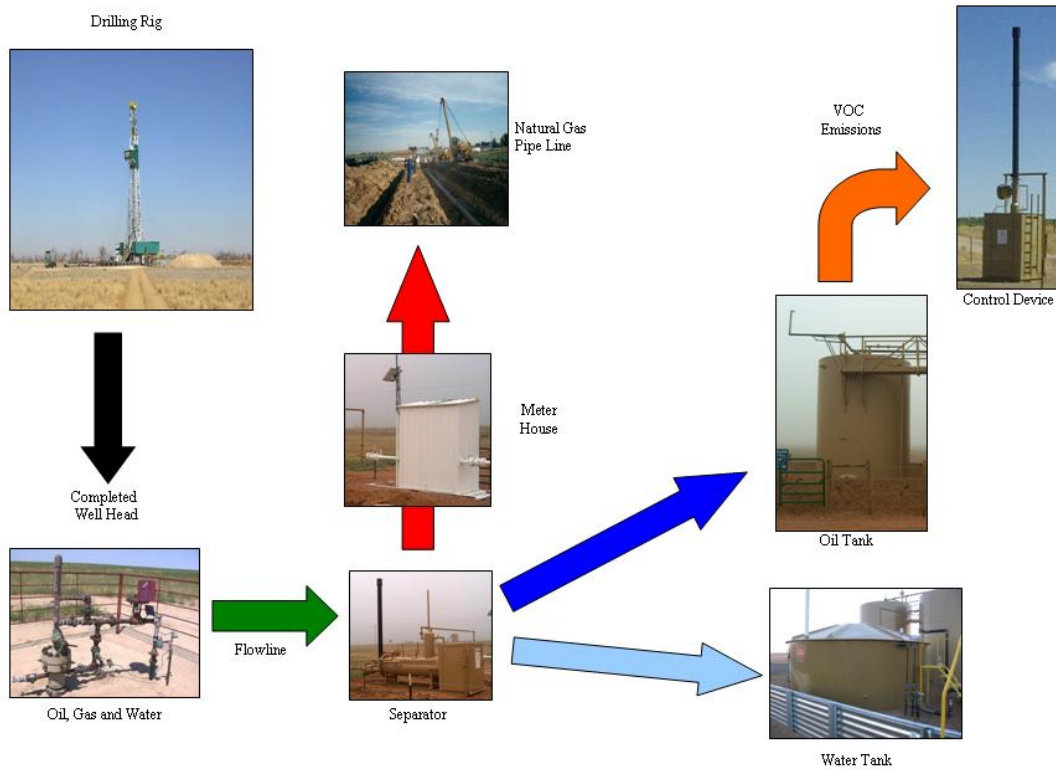
**6.3 TYPICAL QUAD SEPARATOR AND METER HOUSE**



6.4 TANKS



### 6.5 TYPICAL FLOW DIAGRAM



---

# Emergency Response & Fire Protection Plan



## 7. Emergency Response & Fire Protection Plan

### 7.1 EMERGENCY RESPONSE & FIRE PROTECTION PLAN

#### 7.1.1 Scope

Kerr-McGee Oil & Gas OnShore LP (KMG), an Anadarko company, has prepared this Emergency Response and Fire Protection Plan (the Plan). The Plan has been put together to address potential emergency response issues associated with the drilling, completion, and production of an oil and gas well.

#### 7.1.2 Regulatory Requirements

The Plan has been prepared to comply with the land use regulations of the City of Northglenn. Incorporated in the Plan are the best management practices and safety, health, fire prevention, and environmental requirements outlined in the rules of the Colorado Oil and Gas Conservation Commission (COGCC).

#### 7.1.3 Location of Wells

Ten (10) of the well sites will be located east of the existing HSR Northglenn State 13-36 well in the S/2 of Section 36, Township 1 North, Range 68 West. The well names, locations, and directions necessary for access by emergency responders are presented below.

Well Names	Location	Directions
Northglenn State 9, 10 11, 12, 13, 14, 15, 16, 19, 22, 23, 24, 32, 33, 36, 37, 39, and 40-36	T1N-R68W-Sec 36: SE/4	FROM THE INTERSECTION OF: 168 <sup>th</sup> Street and Colorado Blvd proceed west on 168 <sup>th</sup> Street to the Lease Access Road. Turn right on Lease Access Road and head north to the well heads or east to the production facilities.

#### 7.1.4 Emergency Response

All drilling, completion, and production activities will be performed by KMG and its contractors. This process will be carried out in a manner that is protective of public health, safety, welfare, and the environment, to minimize the potential need for emergency response activities. In the event of fire, injury, spill or release of hazardous materials, or any other incident requiring an emergency response, the following contacts will be made:

### 7.1.5 Emergency Response Contact List

Incident	Contact	Phone Number	Comments
<b>Fire, explosion, serious injury</b>	North Metro Fire Rescue District	911 or (303) 452-9910	
	Northglenn Police Department	911 or (303) 450-8897	
	COGCC	(303) 894-2100	
<b>Fire, explosion, associated with loss of well control</b>	North Metro Fire Rescue District	911 or (303) 452-9910	
	Northglenn Police Department	911 or (303) 450-8897	
	COGCC	(303) 894-2100	
	Wild Well Control, Inc.	(281) 353-5481	Commercial well control contractor.
<b>Spill or release</b>	COGCC	(303) 894-2100	Reporting required for spills of crude oil, produced water, or E&P waste exceeding 5 bbl or all spills that impact surface or ground water.
	North Metro Fire Rescue District	911 or (303) 452-9910	Reporting required for spills impacting surface water or for reportable quantity spills of CERCLA hazardous substances.
	Colorado Department of Public Health and Environment	(800) 886-7689	Reporting required for spills impacting surface water or for reportable quantity spills of CERCLA hazardous substances.
	US EPA	(800) 227-8917	Reporting required for spills impacting surface water or for reportable quantity spills of CERCLA hazardous substances.
	National Response Center	(800) 424-8802	Reporting required for spills impacting surface water or for reportable quantity spills of CERCLA hazardous substances.
<b>KMG and Contractor Contacts</b>	Tommy Thompson, General Manager, Drilling	(720) 929-6724 o (303) 681-6011 m	Drilling and completion operations.
	David Dalton, Drilling/Completion Foreman	(970) 330-0614 o (970) 590-6245 m	Drilling and completion operations.
	Keith Kilcrease, Production Supervisor	(970) 506-5926 o (970) 590-6280- m	Drilling, completion, and production operations.
	Tim Spencer, Safety Analyst	(970) 506-5925 o (970) 590-6252 m	Drilling, completion, and production operations.
	Paul Schneider, Staff EHS & Regulatory Analyst	(720) 929-6726 o (303) 868-6665 m	Drilling, completion, and production operations.
	Cindy Haeefe, Area Manager	(970) 506-5925 o (970) 590-6280 m	Drilling, completion, and production operations.
	Joe Freeman, S&H Manager	(720) 929-6534 o (303) 710-9988 m	Drilling, completion, and production operations.

Emergency response personnel will have unrestricted access to all KMG wells and production facilities.

### **7.1.6 Spill/Release Response**

All KMG and contractor activities will be operated in a manner that prevents spills and releases of crude oil, natural gas, produced water, and other wastes to the environment and will comply with federal and state spill response/reporting requirements. KMG employs a formal spill response and reporting guidelines for responding to and reporting spills. All KMG field employees are provided with annual spill response training. In addition, all tank batteries comply with federal Spill Prevention Control and Countermeasure (SPCC) requirements.

If a spill or release were to occur, field personnel are instructed to:

- Assess immediate danger or threat to health, safety, and welfare and contact emergency responders, if appropriate;
- Locate and stop the source of the spill, if safe to do so;
- Report the spill to the field supervisor or area manager and arrange for additional response support, including contact support;
- Take whatever steps are necessary to prevent the spill from impacting surface water, public health, safety, and welfare; and,
- Report to the spill to a KMG Environmental representative, who will coordinate follow-up spill clean-up and environmental assessment activities and who will report the incident to appropriate authorities.

### **7.1.7 Safety and Fire Prevention Guidelines**

KMG and its contractors will employ best management practices during the drilling and production of its wells and facilities and will comply with appropriate COGCC rules concerning safety and fire.

- Employees will be familiar with the COGCC rules and regulations concerning safety and fire prevention as they apply to their specific job duties;
- All facilities will be visited daily by KMG field personnel. Unsafe or potentially unsafe conditions will be reported immediately to the field supervisor, Area Manager, or Safety representative;
- Accidents that result in significant injury or property damage will be reported to the COGCC within 24 hours;
- KMG and its contractors will cooperate fully with local and state emergency responders;
- Vehicles not involved in drilling, production, or well servicing operations will be kept at least 100' feet from the well bore, or a distance equal to the height of the drilling derrick, whichever is greater;
- Appropriate weed abatement measures will be taken prior to and during drilling, workover, and production operations to minimize fire danger;
- The drilling rig shall be positioned a distance of 150' feet or one and one-half times the height of the rig derrick, whichever is greater, from any occupied building, public road, major above ground utility line, or railroad;
- During well drilling and well servicing operations, a safety valve with connections suitable for use with each size and type of tool joint or coupling being used will be present on the rig floor;

- The drilling rig substructure, derrick, or mast will be designed and operated to prevent the accumulation of static charge;
- Prior to well servicing operations, the well's pressure will be checked and appropriate steps taken to remove pressure or operate safely under pressure before beginning servicing operations;
- Appropriate blowout prevention equipment (BOPs) will be utilized during well drilling, completion, workover, or servicing activities, as required by COGCC Rule 317, and in accordance with American Petroleum Institute (API) RP 53: Recommended Practices for Blowout Prevention Equipment Systems, as amended;
- BOP equipment will be inspected daily and a preventer operating test shall be performed on each round trip (not to exceed more than once per 24 hour period). Notes of the tests shall be made on the daily report;
- All fittings, valves, and unions connected to the BOP, well casing, casinghead, drill pipe, or tubing will have a working pressure rating suitable for the maximum anticipated surface pressure and will be maintained in good working order;
- The BOP will contain pipe rams to enable closure of the pipe being used and the choke lines and kill lines will be anchored or secured;
- All rig employees shall have an adequate understanding to operate the BOP system;
- The drilling contractor will place a sign or marker at 168<sup>th</sup> Street and the lease access road that will include emergency contact telephone numbers;
- The street numbers used to access the rig and appropriate emergency response numbers will be posted on the drilling rig;
- All wells and tank batteries will be kept free of weeds, debris, surplus equipment, and surplus vehicles;
- Above ground storage tanks (ASTs) for storage of crude oil and hydrocarbon condensate will be constructed of materials compatible with the materials stored in accordance with appropriate API and Underwriters Laboratories, Inc, standards;
- ASTs will be located at least two tank diameters or 350' feet , whichever is smaller, from property boundaries;
- ASTs will be located at least one-sixth the sum of their diameters apart;
- ASTs will be located at least 350' feet from residences, normally occupied buildings, or well defined normally occupied outside areas;
- Earthen berms or a metal firewall sufficient to contain the contents of the largest AST will be constructed and maintained at each tank battery, and no ignition source will be located within the berm/firewall;
- ASTs will be located at least 75' feet from the wellhead, any fired vessel, or other ignition source;
- Hatches on all ASTs will be kept closed when not in use;
- All fired vessels will be located at least 75' feet from the wellhead;
- Production facilities will be fenced to prevent access from the public. KMG will comply with the IFC 2006 Fire Codes that require additional labeling of the tanks and storage areas. The required information will be either placards on the storage tanks and containers, or

signage at the facility. The information will contain the following language: “FLAMMABLE-KEEP FIRE AND FLAME AWAY”. Tanks shall bear the additional marking: “KEEP 50' FEET FROM BUILDINGS;”

- Location signs will be posted and maintained identifying the wells, KMG as the operator, emergency contact telephone numbers, and directions to the facility;
- All valves, pipes, and fittings will be securely fastened and inspected at regular intervals to ensure they are maintained in good working order;
- Smoking will be prohibited in the vicinity of any fire hazard and signs will be posted to state “No Smoking or Open Flame”;
- No source of ignition will be permitted within the “No Smoking” area unless it is determined by the Safety Department safe to do so;
- Adequate fire extinguishers will be carried in every field vehicle, plainly labeled as to their type and method of operation, and field personnel will be trained in their use; and,
- Fire protection equipment will be inspected regularly and maintained in good working order, in accordance with NFPA 10 requirements.

#### **7.1.8 Material Safety Data Sheets (MSDS)**

Material Safety Data Sheets (MSDS) for hazardous materials used during the drilling, completion, and production processes are available upon request. This includes crude oil and hydrocarbon condensate stored in the ASTs. Please contact Joe Freeman, Health & Safety Manager at 720-929-6534 for copies of the MSDS.

---

## Attachment 1 - Well Locations and Access Map



Operator

Kerr-McGee Oil and Gas Onshore LP  
 1099 18<sup>th</sup> Street, Suite 1800  
 Denver, Colorado 80202  
 (720) 929-6000



— Access Road

<b>KerrMcGee Oil &amp; Gas Onshore LP</b>		
<b>Northglenn State Wells Fire Plan Map S 1/2 Sec.36-T1N-R68W-City of Northglenn Weld County, Colorado</b>		
<b>Author :</b> Teddy Riamphant	<b>Created :</b> 05/23/2011	<b>Printed :</b> 23 May, 2011
<b>Project :</b> RM-DJ Basin Land	<b>Scale :</b> 1" = 800'	<b>File :</b> susr/northglenn state fire plan.gmp

---

## Maps/Site Diagrams



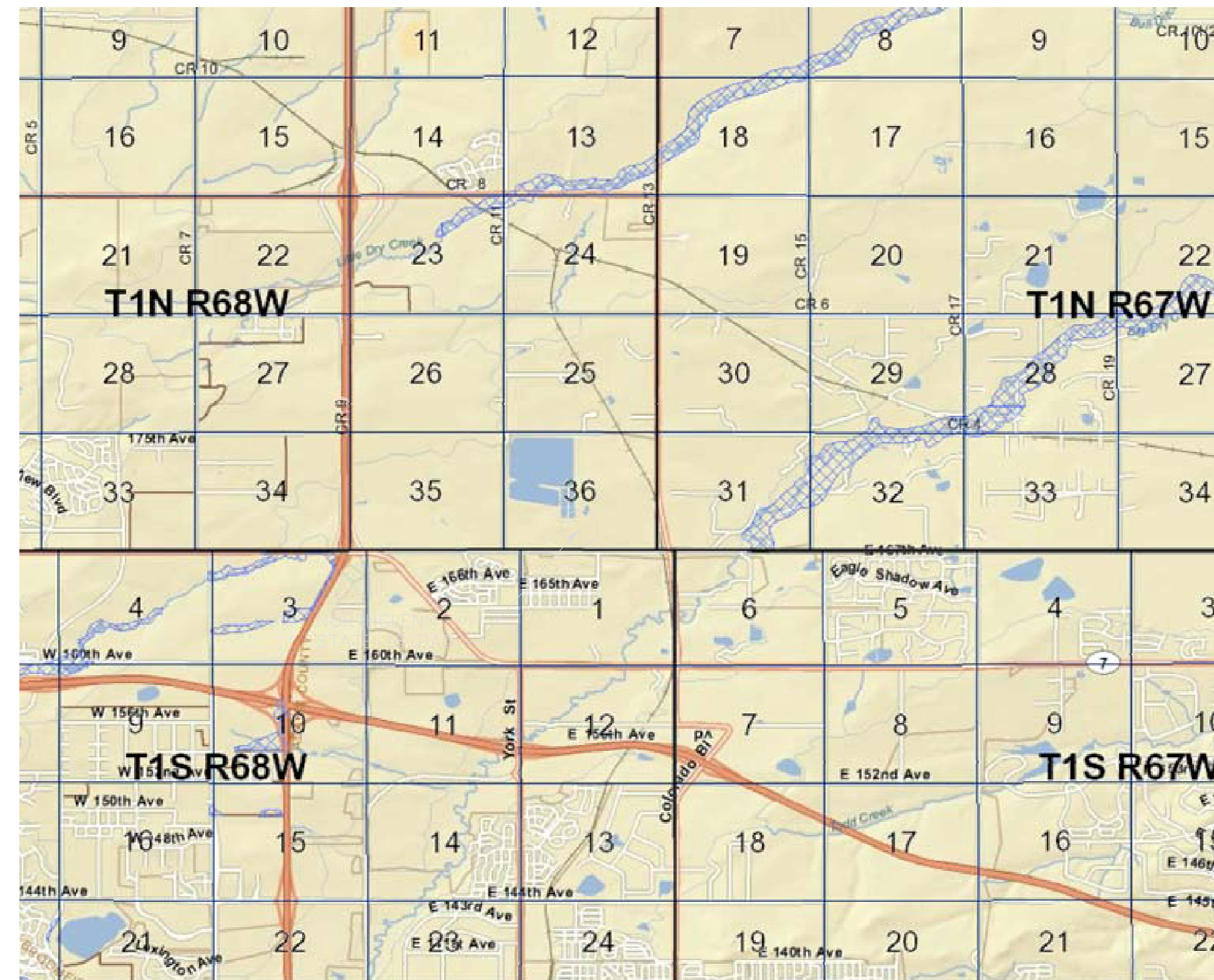
NORTHGLENN STATE WELLS 10-36, 11-36, 24-36, 22-36, 40-36, 32-36, 9-36, 12-36, 39-36, 19-36  
 16-36, 23-36, 37-36, 33-36, 13-36, 15-36, 14-36, 36-36  
 LOCATED IN SECTION 36, TOWNSHIP 1 NORTH, RANGE 68 WEST, 6TH P.M.,  
 CITY OF NORTHGLENN, WELD COUNTY, COLORADO

**GENERAL NOTES:**

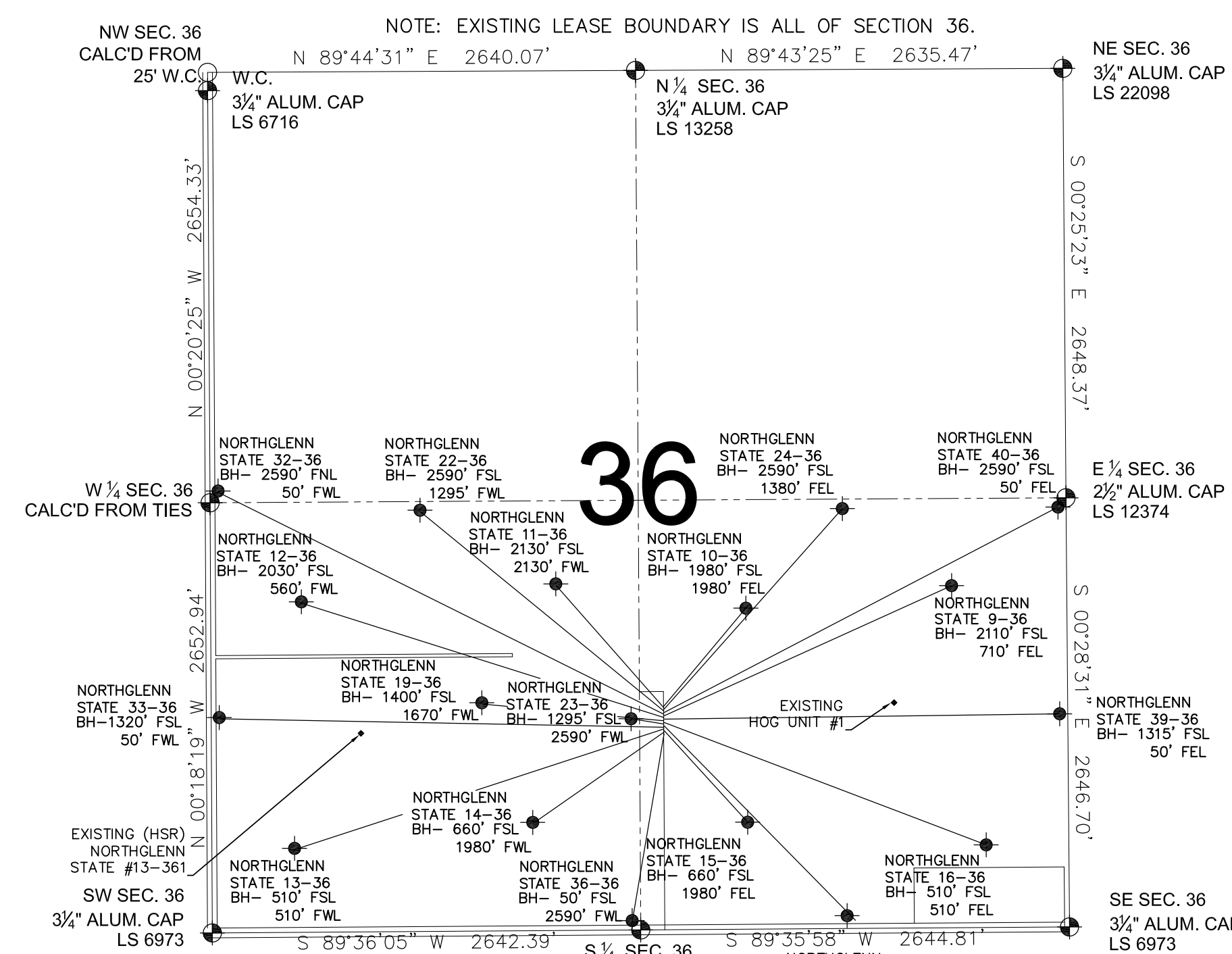
- ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY, OR EASEMENT SHALL CONFORM TO THE CITY OF NORTHGLENN CONSTRUCTION SPECIFICATIONS AND DESIGN STANDARDS.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS PRIOR TO COMMENCEMENT OF ANY WORK ON THE PROJECT. CALL UTILITY NOTIFICATION CENTER OF COLORADO AT 1-800-922-1967 FOR UTILITY LOCATES AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE OWNER/DEVELOPER, AND THE CITY, OF ANY PROBLEMS IN CONFORMING TO THE ACCEPTED PLANS FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO ITS CONSTRUCTION.
- IT IS THE RESPONSIBILITY OF THE DEVELOPER DURING CONSTRUCTION ACTIVITIES TO RESOLVE CONSTRUCTING PROBLEMS DUE TO CHANGED CONDITIONS, OR DESIGN ERRORS ENCOUNTERED BY THE CITY. THE MODIFICATIONS PROPOSED BY THE DEVELOPER, TO THE ACCEPTED PLANS, INVOLVE SIGNIFICANT CHANGES TO THE CHARACTER OF THE WORK, OR TO THE FUTURE CONTINUOUS PUBLIC OR PRIVATE IMPROVEMENTS, THE DEVELOPER SHALL BE RESPONSIBLE FOR RESUBMITTING THE REVISED PLANS TO THE CITY OF NORTHGLENN FOR ACCEPTANCE PRIOR TO ANY FURTHER CONSTRUCTION RELATED TO THAT PORTION OF THE PROJECT. ANY IMPROVEMENTS NOT CONSTRUCTED IN ACCORDANCE WITH THE ACCEPTED PLANS, OR THE ACCEPTED REVISED PLANS, SHALL BE REMOVED AND RECONSTRUCTED, ACCORDING TO THE APPROVED PLAN.
- THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS AT AND ADJACENT TO THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE PERFORMANCE OF THE WORK. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE CITY TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR THE CONSTRUCTION SITE.
- THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAG PERSONS, OR OTHER DEVICES NECESSARY TO PROVIDE FOR PUBLIC SAFETY IN ACCORDANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND THE CITY OF NORTHGLENN SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTIONS OF ALL SURVEY MONUMENTS; ANY MONUMENT THAT MUST BE DESTROYED FOR CONSTRUCTION SHALL BE REPLACED. THE CONTRACTOR SHALL ENGAGE THE SERVICES OF A PROFESSIONAL LICENSED SURVEYOR (PLS) PRIOR TO DISTURBING ANY MONUMENTS.
- TANKS, FACILITIES AND STEEL BERM RING SHALL BE PAINTED THE CITY'S APPROVED PAINT COLOR, DUTCH BOY NORTHERN CLIMB.
- 18" MINIMUM DIAMETER CULVERTS SHALL BE UTILIZED TO FACILITATE SURFACE DRAINAGE UNDER ACCESS ROADS AS NECESSARY.
- ALL DESIGNATED DRILLING AREAS (DDA) ARE DERIVED FROM THE AREAS DEFENDED IN THE SURFACE USE AGREEMENT FOR THE DRILLING AND PRODUCTION FACILITIES RELATED TO THE PROPOSED WELLS.
- PRIOR TO COMMENCEMENT OF ANY SITE WORK, KERR-MCGEE ONSHORE LP OR THEIR DESIGNEE SHALL OBTAIN AN EXCAVATION PERMIT AND A GRADING AND DRAINAGE PERMIT FROM THE CITY OF NORTHGLENN PUBLIC WORKS DEPARTMENT.
- THE GENERAL APPEARANCE OF THE KERR-MCGEE SITE AND FACILITY MAINTENANCE SHALL BE MANAGED AS PER CITY AND STATE REQUIREMENTS FOR OIL AND GAS OPERATIONS. THE OPERATOR SHALL ROUTINELY REPAINT THE TANKS AND FACILITIES TO ELIMINATE RUST AND SPILL SPOTS ON THE TANKS AND FACILITIES.
- ABANDONED FLOWLINES SHALL BE REMOVED AT THE CITY'S DISCRETION.
- SHROUDING OF LIGHTS SHALL BE PROVIDED TO THE MAXIMUM EXTENT PRACTICABLE.
- TEMPORARY BERMING SHALL BE UTILIZED FOR SOUND CONTROL TO MAXIMUM EXTENT PRACTICABLE.
- AFTER COMPLETION OF PHASE 6.4 OF THE OPERATION PLAN, KERR-MCGEE SHALL REPLACE AND REPAIR ALL SIDEWALKS AND STREET SURFACES DAMAGED DURING ANY PHASE OF DRILLING OPERATIONS.
- WELL SITE FENCING SHALL COMPLY WITH UNIFIED DEVELOPMENT CODE SECTION 3.2(d)(3).
- THE DRILL RIG SHALL BE LIGHTED PER FAA PART 77 AND FAA REVIEW COMMENTS.
- AFTER INSTALLATION OF THE VRU, KMG SHALL SUBMIT A NOISE STUDY TO THE CITY, DEMONSTRATING THAT THE VRU CONFORMS WITH THE COGCC NOISE STANDARDS.
- KERR-MCGEE SHALL REMOVE THE TEMPORARY ACCESS DRIVE AND RESTORE IT TO NATIVE GRASS AFTER THE PERMANENT ACCESS DRIVE IS INSTALLED.

**EROSION CONTROL NOTES:**

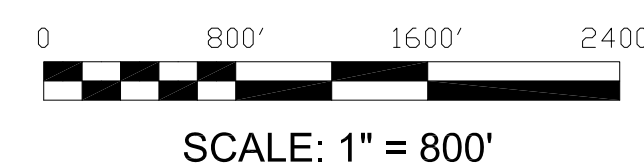
- EROSION CONTROL MEASURES MUST BE IN PLACE PRIOR TO ANY LAND DISTURBING ACTIVITY COMMENCES.
- ALL PUBLIC AND PRIVATE PAVED ROADS SHALL BE CLEARED OF DEBRIS AS NEEDED EACH DAY AND AFTER EACH RAIN EVENT DURING CONSTRUCTION ACTIVITIES AND UNTIL THE SITE HAS BEEN STABILIZED TO PREVENT EROSION AND MUD TRACKING FROM VEHICLES.
- SILT FENCE SHALL BE PLACED AS SHOWN ON THE SITE PLAN OR AS DIRECTED BY CITY INSPECTOR.
- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL MEASURES AND SHALL BE RESPONSIBLE FOR ANY AND ALL FINES ASSOCIATED WITH THE DISCHARGE OF SEDIMENTS, EROSION, OR POLLUTANTS LEAVING THE SITE AS A RESULT OF CONSTRUCTION ACTIVITY.
- NO SOIL STOCKPILE SHALL EXCEED 10 FEET IN HEIGHT. ALL SOIL STOCKPILES SHALL BE PROTECTED FROM SEDIMENT TRANSPORT BY SURFACE ROUGHENING, WATERING, AND PERIMETER SILT FENCING. ANY SOIL STOCKPILES REMAINING AFTER THREE MONTHS FROM THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES SHALL BE SEEDED WITH A TEMPORARY COVER CROP OR REMOVED FROM THE SITE.
- ONCE FINAL GRADING IS COMPLETE, ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RIPPED BY A GRADER IN CORN FURROW FASHION OR SEEDED. THE FURROWS SHALL BE PERPENDICULAR TO THE GRADE OF THE LAND. IT IS THE RESPONSIBILITY OF THE DEVELOPER/OWNER TO MAINTAIN THIS EROSION CONTROL MEASURE FOR THE DURATION OF THE 2 YEAR WARRANTY PERIOD.
- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES THAT WILL REMAIN AS OUT LOTS, OPEN SPACE, DETENTION PONDS, FOREBAYS, OR TRAILS SHALL RECEIVE 4 INCHES OF TOP SOIL AND SHALL BE SEEDED. SOIL PREPARATION, FERTILIZER, COMPOST, SEEDING, AND MULCHING WILL BE REQUIRED.
- GRASS SEED SHALL BE PLANTED WITH A GRASS SEED DRILL (NOT A GRAIN DRILL) AT A DEPTH OF 1/2" TO 3/4". BROADCAST SEEDING OF GRASS SEED IS NOT ACCEPTABLE. STRAW MULCH SHALL BE SPREAD AND CRIMPED INTO THE SOIL AT A RATE OF 4,000 LBS/ACRE. HYDROSEEDING AND HYDROMULCHING IS ACCEPTABLE IN LIEU OF DRILL SEEDING AND CRIMPING OF MULCH STRAW, ONLY IN AREAS THAT ARE INACCESSIBLE TO LANDSCAPING EQUIPMENT, AND MUST BE APPROVED BY THE CITY OF NORTHGLENN PRIOR TO USE.
- KERR-MCGEE IS RESPONSIBLE FOR HIRING A CONTRACTOR TO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES ONCE CONSTRUCTION IS COMPLETE AND ALL OPEN SPACE AREAS, OUTLOTS, DETENTION PONDS, FOREBAYS, AND TRAIL CORRIDORS ARE STABILIZED WITH AT LEAST 80 PERCENT GROWTH OF SEED GROUND COVER.



VICINITY MAP N.T.S.



KEY MAP



**SPECIAL REVIEW USE SITE PLAN APPROVAL CERTIFICATE**

THIS SPECIAL REVIEW USE SITE PLAN HAS BEEN REVIEWED AND FOUND TO BE COMPLETE AND IN ACCORDANCE WITH APPLICABLE CITY OF NORTHGLENN RELATIONS.

PLANNING COMMISSION - CHAIRMAN \_\_\_\_\_ DATE \_\_\_\_\_

BOARD OF TRUSTEES - MAYOR \_\_\_\_\_ DATE \_\_\_\_\_

THE UNDERSIGNED AS THE OWNER OR OWNER'S REPRESENTATIVE OF THE LANDS DESCRIBED HEREIN, HEREBY AGREES ON BEHALF OF HIMSELF/HERSELF, THEIR HEIRS, SUCCESSORS, AND ASSIGNS TO DEVELOP AND MAINTAIN THE PROPERTY DESCRIBED HEREON IN ACCORDANCE WITH THIS APPROVED SPECIAL REVIEW USE SITE PLAN AND IN COMPLIANCE WITH THE CITY OF NORTHGLENN MUNICIPAL CODE.

OWNER SIGNATURE \_\_\_\_\_ OWNER PRINTED NAME \_\_\_\_\_

ACKNOWLEDGED BEFORE ME THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_

BY \_\_\_\_\_ AS \_\_\_\_\_

WITNESS MY HAND AND OFFICIAL SEAL

NOTARY PUBLIC \_\_\_\_\_ (SEAL)

MY COMMISSION EXPIRES \_\_\_\_\_

**CONTACTS**

- PROPERTY OWNER: CITY OF NORTHGLENN  
 11701 COMMUNITY CENTER DR.  
 NORTHGLENN, CO 80233
- PROPERTY OPERATOR: KERR-MCGEE OIL & GAS ONSHORE LP  
 AN ANADARKO COMPANY  
 1099 18TH STREET  
 DENVER, CO 80202  
 (720) 929-6000
- MOUNTAIN VIEW FIRE PROTECTION DISTRICT (303) 772-0710  
 OR 911
- COLORADO OIL & GAS CONSERVATION COMMISSION (303) 894-2100
- ENVIRONMENTAL PROTECTION AGENCY (800) 227-8917

**SHEET INDEX**

- COVER SHEET
- OVERALL SITE PLAN
- PAD PLAN
- PAD DETAILS

**COVER SHEET**

1099 18TH STREET  
 DENVER, CO 80202

KERR-MCGEE OIL & GAS ONSHORE LP  
 AN ANADARKO COMPANY

SITE NAME: NORTHGLENN STATE U.S.R.  
 SURFACE LOCATION: CITY OF NORTHGLENN, WELD COUNTY, COLORADO  
 SEC. 36, T1N, R68W

FIELD DATE: 10-08-10  
 DRAWING DATE: 10-13-10

PREPARED BY: PFS Petroleum Field Services, LLC  
 1801 W. 13th Ave.  
 Denver, CO 80204

NO. DATE: 1 03-04-11  
 2 05-04-11

REVISION DESCRIPTION  
 1 UPDATING TANK BATTERY LAYOUT  
 2 NEW WELL AND TANK BATTERY LOCATIONS

NAME: TJN  
 TJN

NO. DATE: 1 03-04-11  
 2 05-04-11

REVISION DESCRIPTION  
 1 UPDATING TANK BATTERY LAYOUT  
 2 NEW WELL AND TANK BATTERY LOCATIONS

NAME: TJN  
 TJN

NO. DATE: 1 03-04-11  
 2 05-04-11

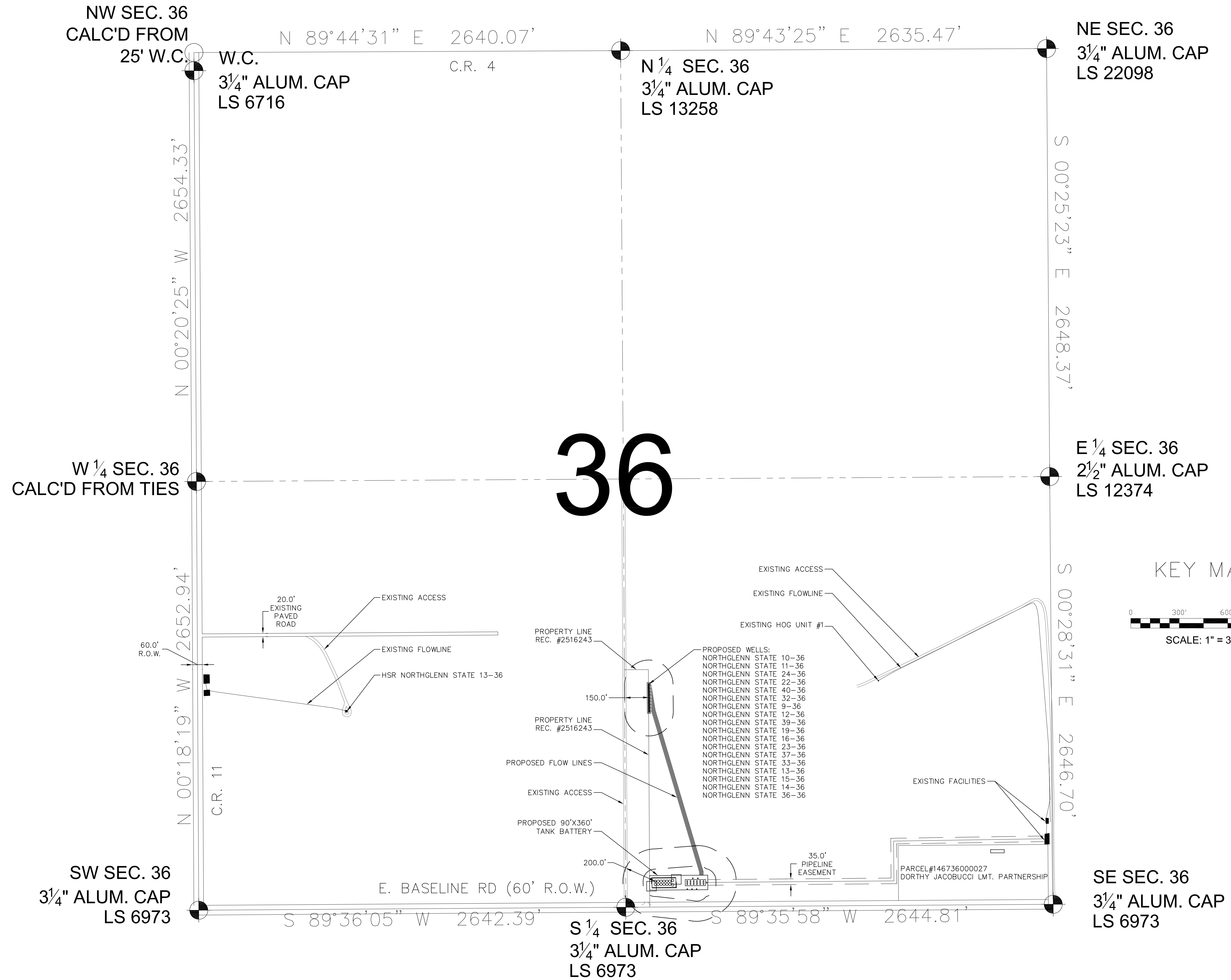
REVISION DESCRIPTION  
 1 UPDATING TANK BATTERY LAYOUT  
 2 NEW WELL AND TANK BATTERY LOCATIONS

NAME: TJN  
 TJN

NO. DATE: 1 03-04-11  
 2 05-04-11

REVISION DESCRIPTION  
 1 UPDATING TANK BATTERY LAYOUT  
 2 NEW WELL AND TANK BATTERY LOCATIONS

NORTHGLENN STATE WELLS 10-36, 11-36, 24-36, 22-36, 40-36, 32-36, 9-36, 12-36, 39-36, 19-36  
 16-36, 23-36, 37-36, 33-36, 13-36, 15-36, 14-36, 36-36  
 LOCATED IN SECTION 36, TOWNSHIP 1 NORTH, RANGE 68 WEST, 6TH P.M.,  
 CITY OF NORTHGLENN, WELD COUNTY, COLORADO



OVERALL SITE PLAN

NO.	DATE	REVISION DESCRIPTION	NAME	TJN
1	03-04-11	UPDATING TANK BATTERY LAYOUT	TJN	TJN
2	05-04-11	NEW WELL AND TANK BATTERY LOCATIONS	TJN	TJN

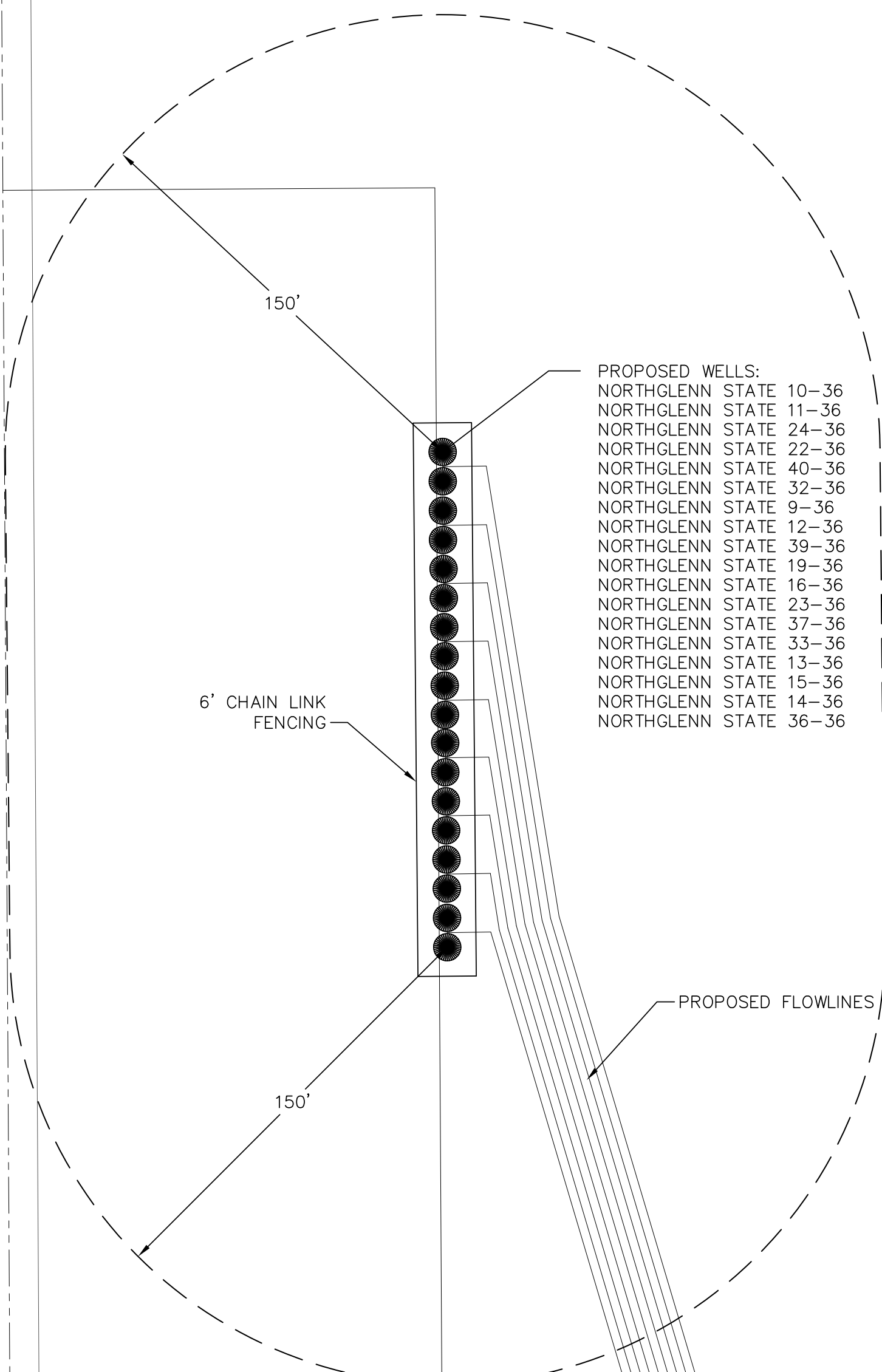
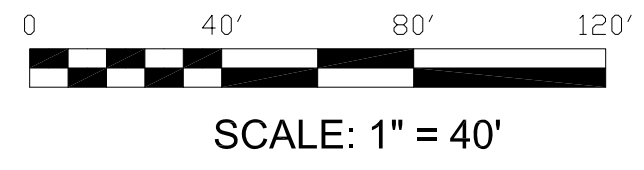
PREPARED BY: **PFS**  
 Petroleum Field Services, LLC  
 1801 W. 13th Ave.  
 Denver, CO 80204

KERR-McGEE OIL & GAS ONSHORE LP  
 an ANADARKO COMPANY  
 SITE NAME: NORTHGLENN STATE U.S.R.  
 SURFACE LOCATION: CITY OF NORTHGLENN, WELD COUNTY, COLORADO  
 SEC. 36, T1N, R68W

FIELD DATE: 10-08-10  
 DRAWING DATE: 10-13-10  
 BY: TJN

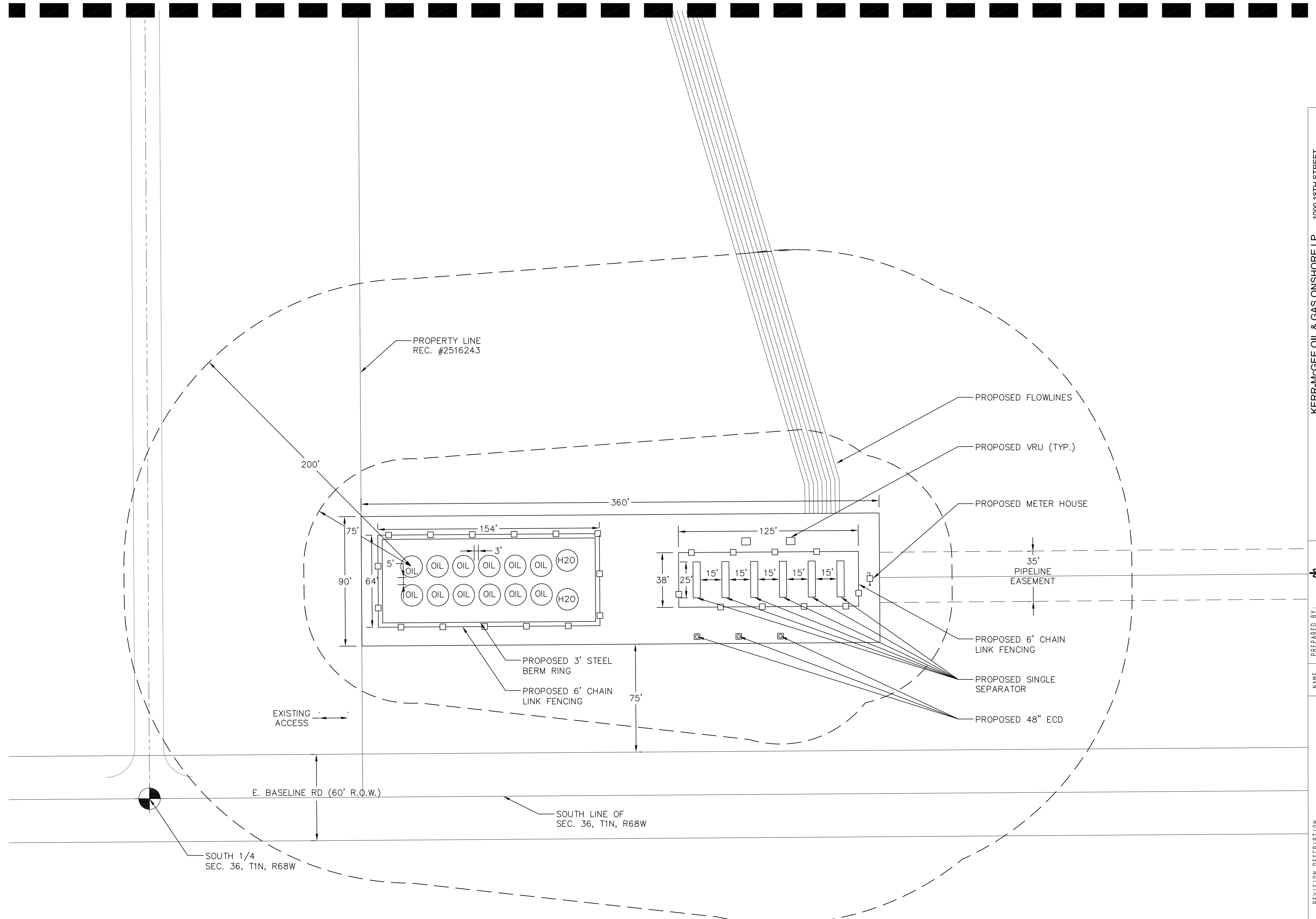
1099 18TH STREET  
 DENVER, CO 80202  
 SHEET 2 OF 4

NORTHGLENN STATE WELLS 10-36, 11-36, 24-36, 22-36, 40-36, 32-36, 9-36, 12-36, 39-36, 19-36  
 16-36, 23-36, 37-36, 33-36, 13-36, 15-36, 14-36, 36-36  
 LOCATED IN SECTION 36, TOWNSHIP 1 NORTH, RANGE 68 WEST, 6TH P.M.,  
 CITY OF NORTHGLENN, WELD COUNTY, COLORADO



- PROPOSED WELLS:
- NORTHGLENN STATE 10-36
  - NORTHGLENN STATE 11-36
  - NORTHGLENN STATE 24-36
  - NORTHGLENN STATE 22-36
  - NORTHGLENN STATE 40-36
  - NORTHGLENN STATE 32-36
  - NORTHGLENN STATE 9-36
  - NORTHGLENN STATE 12-36
  - NORTHGLENN STATE 39-36
  - NORTHGLENN STATE 19-36
  - NORTHGLENN STATE 16-36
  - NORTHGLENN STATE 23-36
  - NORTHGLENN STATE 37-36
  - NORTHGLENN STATE 33-36
  - NORTHGLENN STATE 13-36
  - NORTHGLENN STATE 15-36
  - NORTHGLENN STATE 14-36
  - NORTHGLENN STATE 36-36

MATCHLINE



MATCHLINE

PAD PLAN

KERR-McGEE OIL & GAS ONSHORE LP  
 an ANADARKO COMPANY  
 1099 18TH STREET  
 DENVER, CO 80202

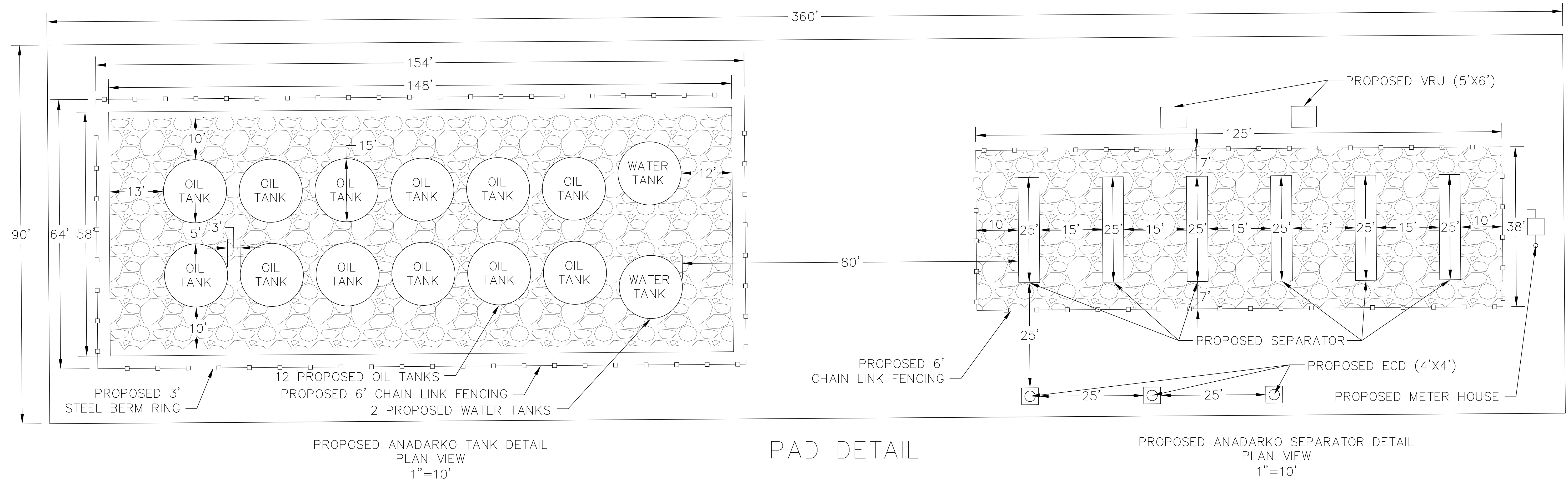
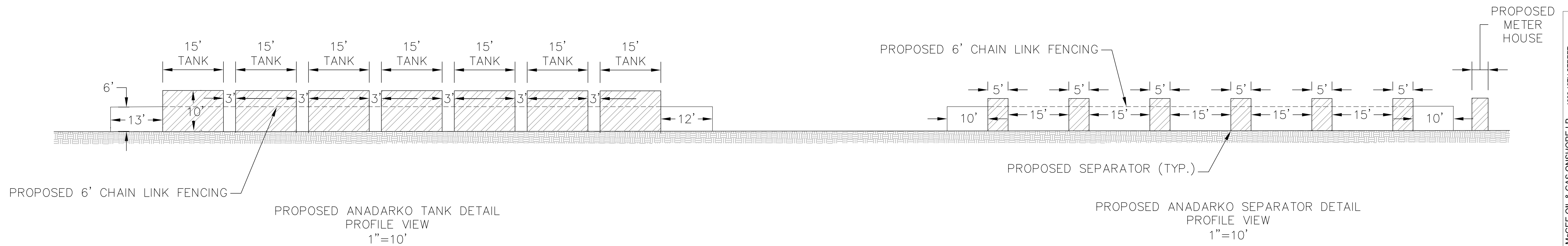
FIELD DATE: 10-08-10  
 DRAWING DATE: 10-13-10  
 SITE NAME: NORTHGLENN STATE U.S.R.  
 SURFACE LOCATION: CITY OF NORTHGLENN, WELD COUNTY, COLORADO  
 SEC. 36, T1N, R68W

PREPARED BY: PFS  
 Petroleum Field Services, LLC  
 1801 W. 13th Ave.  
 Denver, CO 80204

NO.	DATE	REVISION DESCRIPTION	NAME	TJN
1	03-04-11	UPDATING TANK BATTERY LAYOUT	TJN	TJN
2	05-04-11	NEW WELL AND TANK BATTERY LOCATIONS		

SHEET 3 OF 4

NORTHGLENN STATE WELLS 10-36, 11-36, 24-36, 22-36, 40-36, 32-36, 9-36, 12-36, 39-36, 19-36  
 16-36, 23-36, 37-36, 33-36, 13-36, 15-36, 14-36, 36-36  
 LOCATED IN SECTION 36, TOWNSHIP 1 NORTH, RANGE 68 WEST, 6TH P.M.,  
 CITY OF NORTHGLENN, WELD COUNTY, COLORADO



PAD DETAILS

KERR-MCGEE OIL & GAS ONSHORE LP  
 an ANADARKO COMPANY  
 1099 18TH STREET  
 DENVER, CO 80202

FIELD DATE:  
 10-08-10

DRAWING DATE:  
 10-13-10

SITE NAME:  
 NORTHGLENN STATE U.S.R.

SURFACE LOCATION:  
 CITY OF NORTHGLENN, WELD COUNTY, COLORADO  
 SEC. 36, T1N, R68W

BY:  
 TJN

SHEET 4 OF 4

PREPARED BY:  
 PFS  
 Petroleum Field Services, LLC  
 1801 W. 13th Ave.  
 Denver, CO 80204

NO.	DATE	REVISION DESCRIPTION	NAME	TJN
1	03-04-11	UPDATING TANK BATTERY LAYOUT	TJN	
2	05-04-11	NEW WELL AND TANK BATTERY LOCATIONS	TJN	

SPONSORED BY: MAYOR DOWNING

COUNCILMAN'S RESOLUTION

RESOLUTION NO.

No. CR-103  
Series of 2011

\_\_\_\_\_  
Series of 2011

A RESOLUTION CONDITIONALLY APPROVING A PERMITTED USE PERMIT FOR KERR-MCGEE OIL AND GAS OPERATIONS ON CITY OF NORTHGLENN OWNED PROPERTY IN SECTION 36 OF WELD COUNTY

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF NORTHGLENN, COLORADO, THAT:

Section 1. Pursuant to Article 56 of Chapter 11 of the City of Northglenn Municipal Code, the City Council of the City of Northglenn hereby makes the following findings of facts regarding the application by Kerr-McGee Oil and Gas Operations for a Permitted Use Permit for the drilling of eighteen (18) natural gas wells and associated infrastructure on City-owned property in Section 36, Weld County, Colorado:

- A. The applicant has submitted the information required by Section 11-56-5, subsections (a) and (b) of the Northglenn Municipal Code;
- B. The site plan submitted for the well sites complies with Section 11-56-5(c)(1) of the Northglenn Municipal Code;
- C. The applicant has submitted the information required by Section 11-56-5(c)(2) of the Northglenn Municipal Code;
- D. The applicant has submitted the information required by Section 11-56-5(c)(3) of the Northglenn Municipal Code;
- E. The applicant has submitted information indicating compliance with Section 11-56-18 of the Northglenn Municipal Code; and
- F. The application complies with criteria applicable to all permitted use permits as follows:
  - i. There is a need for the proposed use;
  - ii. The proposal is compatible with the surrounding area;
  - iii. The proposal has little effect on the immediate use and future development of the area; and
  - iv. The proposal does not affect the health, safety, and welfare of the inhabitants of the area and the City of Northglenn.

Section 2. Based on the findings set forth above, the City Council of the City of Northglenn approved the Permitted Use Permit upon satisfaction of the following conditions:

- A. The Permitted Use Permit shall only be valid in conjunction with a valid permit from the COGCC, an approved Surface Use Agreement and any required permits, including a City of Northglenn right-of-way use permit, from the City of Northglenn or the North Metro Fire Rescue District; and
- B. The site shall be operated in conformance with all requirements of the City's Chief Building Official, the Fire Safety Engineer of the North Metro Fire Rescue District and Article 56 of Chapter 11 of the City of Northglenn Municipal Code.

DATED at Northglenn, Colorado, this \_\_\_\_ day of \_\_\_\_\_, 2011.

\_\_\_\_\_  
JOYCE DOWNING  
Mayor

ATTEST:

\_\_\_\_\_  
JOHANNA SMALL, CMC  
City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
COREY Y. HOFFMANN  
City Attorney