



## **AGENDA**

Planning and Zoning Commission Regular Meeting  
Tuesday, August 25<sup>th</sup>, 2015  
Regular Meeting **6:00**  
Evans Community Complex – 1100 37<sup>th</sup> Street  
City Council Chambers

Planning and Zoning packets are prepared several days prior to the meetings. This information is reviewed and studied by the Commission, eliminating lengthy discussions to gain basic understanding. Timely action and/or short discussion on agenda items do not reflect lack of thought or analysis. An informational packet is available for public inspection on the website at [www.evanscolorado.gov](http://www.evanscolorado.gov)

## **REGULAR MEETING**

1) **CALL TO ORDER**

2) **ROLL CALL:**

Chairman: Robert S. Phillips, III  
Vice-Chairman: Deborah Linn  
Commissioners: Laura Speer  
Julie Lowe  
Billy Castillo

3) **APPROVAL OF MINUTES:** Minutes of July 28, 2015 Work Session

4) **APPROVAL OF THE AGENDA**

5) **AGENDA ITEMS:**

A. **PUBLIC HEARING** – Synergy Evans Wells Use by Special Review(Oil and Gas Site Development)

6) **AUDIENCE PARTICIPATION:** This portion of the Agenda is provided to allow members of the audience to provide comments to the Planning Commission on items that were not considered on the current Agenda)

7) **STAFF UPDATE**

A. City Council Items Update  
B. Community Development Project List

8) **GENERAL DISCUSSION**

9) **ADJOURNMENT**



## MINUTES

Planning and Zoning Commission Regular Meeting  
Tuesday, June 23, 2015  
Regular Meeting 6:40pm  
Evans Community Complex – 1100 37<sup>th</sup> Street  
City Council Chambers

Planning and Zoning packets are prepared several days prior to the meetings. This information is reviewed and studied by the Commission, eliminating lengthy discussions to gain basic understanding. Timely action and/or short discussion on agenda items do not reflect lack of thought or analysis. An informational packet is available for public inspection on the website at [www.evanscolorado.gov](http://www.evanscolorado.gov)

## REGULAR MEETING

- 1) **CALL TO ORDER by Robert S. Phillips, III at 6:43pm**
- 2) **ROLL CALL**

Chairman: Vacant  
Vice-Chairman: Robert S. Phillips, III  
Commissioners: Deborah Linn  
Julie Lowe  
Laura Speer

- 3) **APPROVAL OF MINUTES**

Point of clarification of the minutes, the May 26<sup>th</sup>, meeting was a work session; no official minutes were recorded.

- 4) **APPROVAL OF THE AGENDA**

Laura Speer made the motion to approve the agenda, seconded by Julie. VC Phillips asked for discussion. All approved,

- 5) **AGENDA ITEMS:**

A. Selection of Officers of the Planning Commission

Nomination by Julie Lowe to nominate Laura Speer.  
Deborah Linn nominates herself.  
Laura would like to decline the nomination for Chairman.  
Richard Phillips would like to nominate himself for Chairman.

Close of nominations. Deborah Linn and Richard Phillips are nominated for the open Chairman position. Laura Speer opened the floor for deliberation from the candidates and their asked to hear their experience. Deborah Linn was part of the Planning and Zoning in Oregon. Richard Phillips has been a part of this board for 8 years and is the current Vice Chairman.

Discussion lead by Laura Speer; she asked Deborah Linn if she would be willing to take the Vice Chairman position, Deborah agreed that would be acceptable. Motion by Laura Speer to accept Richard Phillips III as the new Chairman of the Planning Commission and Deborah Linn as the Vice Chairman, seconded by Julie Lowe. All in favor state Ay, any opposed state Nay. Motion carried.

**6) AUDIENCE PARTICIPATION**

No audience participation

**7) STAFF UPDATE**

A. City Council Item Update

Sean went over the major projects that are in the Development Review Process.

- 1) ARB
- 2) Synergy – the third filing of Tuscany III
- 3) Kum & Go – Sheryl Trent is the planner for this project
- 4) Rush Trucking
- 5) Subdivision out by the middle school – 1300 homes proposed

B. Community Development Project List

**8) GENERAL DISCUSSION**

**9) ADJOURNMENT at 7:06pm**



**PLANNING COMMISSION – AUGUST 25<sup>TH</sup>, 2015**

**AGENDA ITEM:** Synergy Evans Wells Oil and Gas Use by Special Review (USR)

**PREPARED BY:** Sean Wheeler, City Planner

**ACTION:** Review for recommendation to City Council

**REVIEWED BY:** Dawn Anderson, Public Works Director

**CITY COUNCIL DATE:** September 1, 2015

<b>SITE INFORMATION</b>	
<b>Location:</b>	The site is located on the south side of 37 <sup>th</sup> Street and west of 35 <sup>th</sup> Avenue, in the area known as the Tuscany 3 <sup>rd</sup> Filing. (See attached Vicinity Map)
<b>Applicant:</b>	Synergy Resources Corporation
<b>Existing Land Use:</b>	Unimproved
<b>Proposed Land Use:</b>	Oil and Gas Facilities: 30 wellheads and related tank batteries, VOC towers, landscaping and other site improvements required for access, etc.
<b>Surrounding Land Uses:</b>	<b>North</b> Unimproved
	<b>South</b> Unimproved
	<b>East</b> Unimproved
	<b>West</b> Unimproved / Residential (Arrowhead Subdivision) Weld County
<b>Existing Zoning:</b>	R-1 Residential
<b>Proposed Zoning:</b>	R-1 Residential
<b>Surrounding Zoning:</b>	<b>North</b> R-1 Residential
	<b>South</b> R-1 Residential
	<b>East</b> Weld County
	<b>West</b> Weld County
<b>Future Land Use Designation:</b>	R-1 Residential

## PROJECT DESCRIPTION

The applicant seeks Special Review approval to install oil and gas facilities on undeveloped land south of 37<sup>th</sup> Street and west of 35<sup>th</sup> Avenue. The use requires approximately 24-acres out of a total of 91-acres owned by Synergy Resources. The project will include the installation of 30 horizontal wells along with associated tank batteries, VOC burners, etc. related to extraction uses. Synergy will cap other existing wells in the area as part of their operation. The site is centrally located in an un-platted area zoned R-1 (Residential) under the Tuscany Subdivision annexation. Synergy has worked with Evans Staff to resolve issues raised related to the compatibility of an industrial facility within a residential zone. The attached application materials include a detailed project description along with the draft site plan showing the locations of the wells and tank batteries, landscaping, etc.

## OIL & GAS EXPLORATION AND DEVELOPMENT (Chapter 16.28, Evans Municipal Code)

**1. Analysis / Issues:** The Municipal Code classifies certain types of development as requiring Use by Special Review approval. Chapter 16.28 provides the standards for Oil & Gas uses and identifies them as one of these types of development. Special Review consideration allows for an assessment of potential impacts on other land uses, transportation systems, public facilities, etc. Meetings with the applicant have proven successful and productive in resolving concerns raised during the preliminary review.

**A. Battery & Wellhead Placement / Setbacks (Municipal Code Chapter 16.28.060):** The proposed use is consolidated in a central area of the property with the wellheads to the north and tank batteries placed farther south and down slope. Last year the City adopted new setback standards for these uses and Synergy has indicated they can comply with the new requirements. Chapter 16.28.060 provides the setback requirements for new facilities with a three hundred-foot minimum distance between new oil and gas facilities and wellheads and building units, or a three hundred-foot setback from property lines, whichever is greater. Staff has not received any verbal or written objections to approval of the request at the writing of this report from surrounding property owners.

**B. Bonding / Insurance:** The Municipal Code requires oil and gas operators to provide bonding in the amount of \$100,000 per well head to fund clean-up operations with site related accidents. The Code offers an alternative for coverage under a “blanket bond” as described in Subsection 16.28.090. Operators must also carry insurance and provide a copy of their policy in the amount of one million dollars (\$1,000,000.00) to cover the applicant and the City against all claims made for damages. Synergy has indicated it will provide for bonding and insurance. Staff does not anticipate any compliance issues.

**C. Compatibility:** The site is zoned primarily R-1 (Residential) with a small section of the property in the R-2 zone. Along the western boundary are other areas zoned for R-2, R-3 and C-3 (Commercial) uses. The property is part of the 3<sup>rd</sup> filing of the Tuscany Subdivision, which the City annexed in 2000 and zoned for these uses. Staff’s initial assessment was that an industrial use placed in a residential zone could significantly impact future residential and commercial development. This project can address the compatibility question by providing significant landscaping and other improvements through conditions of approval. Such conditions can also exceed the minimum standards described in the Municipal Code, if a higher standard is deemed necessary to off-set negative impacts. A condition of approval for landscaping is included with the below recommendations.

**D. 2010 Comprehensive Plan:** Related to the above compatibility issue are the requirements of the 2010 Comprehensive Plan. The Plan supports development that provides for economic growth, but it also addresses the need for creating quality residential areas. In subsequent meetings with Synergy, they have made commitments to provide improvements that benefit surrounding properties.

These could help prompt further development under the residential and commercial zoning in the larger area. Along with landscaping, Synergy has agreed to improve access internal to the site, and to provide funds to off-set impacts to the greater street network along haul routes. In addition, the City has asked Synergy to dedicate and extend the trail network on an undeveloped area of their site, which is adjacent to residential uses. Staff's assessment is that the proposed development can address the compatibility concerns.

**E. Economic Impacts:** An assessment of the potential economic issues from the proposed use made by the Evans Economic Development Director are attached for consideration. Her report presents both the positive and negative issues to consider, which may prompt recommendations for conditions of approval in addition to those already recommended. Synergy has the report and can address specific concerns in their discussions with the Planning Commission and City Council during the public hearings.

**F. Engineering:** The City Engineer and Ditesco (Engineering Consultant) have reviewed the information provided by Synergy. Written reports are attached for reference, and the City Engineer will be available during the public hearing to address specific technical questions that may arise. Specific engineering issues include the following items.

1) **Drainage:** Given the size of the site and the nature of the proposed use once constructed, Staff does not anticipate any significant impacts to drainage issues as a result of this development.

2) **Access / Right-of-Way Dedications:** Synergy initially proposed to access the property directly off the south side of 37<sup>th</sup> Street. Staff opposed this plan because of the impacts to existing traffic and infrastructure on 37<sup>th</sup> Street. In working with Synergy, they have agreed to acquire access to the east to connect to an existing ROW dedication onto 35<sup>th</sup> Avenue. Road improvements must be designed to accommodate construction traffic, production company truck traffic and emergency vehicles to a standard satisfactory to the City Engineer. In addition, Synergy has agreed to dedicate 120-feet of ROW on the north side of their site. This dedication will provide for the eventual extension of an arterial street network through the site. This will benefit the property east of the site that is considering annexation and development for residential uses.

3) **Haul Route / Traffic Impacts:** Staff met with Synergy to discuss the potential haul routes and impacts to City streets along with road improvements to support the use. Once traffic is directed onto 35<sup>th</sup> Avenue, heavy truck traffic will move to the south to 49<sup>th</sup> Street, and from there to the east or west. Public Works Staff is working with the applicant to address impacts to Evans streets from this haul route in terms of needed road improvements. These are required in order to support the use, including the costs to improve the City streets. Collateral necessary to guarantee the improvements are included as a condition of approval for this use as recommended below.

**G. Fire District:** The Evans Fire Protection District requires the applicant to meet the standards established in the International Fire Code and those in Chapter 16.28. The Fire District requires the use of fire rated sound absorption materials. They note the design documents provided reference the 2006 IFC and that the City Council has adopted the 2012 version of the IFC. The applicant must contact the fire district to discuss the disparity between the codes with the developer if they are granted approval for the Special Review.

**H. Landscape Screening (Chapter 19.47 Municipal Code):** This chapter of the City Code provides the standards for landscaping required with Oil and Gas facilities. The below assessment is based on the initial landscaping proposed, and Staff anticipates having an updated landscape plan for the public hearing that may address the concerns referenced below by the City's Parks and Grounds Superintendent. At the writing of this report, he notes the following items.

**1) Tree Count:** The plan to install 36 trees does not meet the standard for providing at least 6 trees for each Oil & Gas facility under the City Code. There are gaps in the proposed tree groupings that could be filled in with other species, such as pinion and juniper groups. Staff has asked the applicant for a revised plan.

**2) Fencing:** Staff recommends the use of solid fencing for screening purposes, with pickets on alternate sides of the rail to allow wind passage. A 6-foot fence on a berm (3+ feet in height) provides an immediate screen while the trees/shrubs mature. On the north, east and west sides of the site, a solid fence would be useful for screening if placed north of the well heads. This would be located in perimeter areas, as the code requires chain link fencing with barbed wire in Chapter 16.28.150 (I.) around the facilities themselves. For that reason, the entire site is not anticipated to be surrounded with the solid fencing, rather it should be placed in conjunction with the landscape areas to fill in open views or enhance landscaping over all.

**3) Irrigation:** Non-potable irrigation is required per the code. A redesign of the irrigation systems at other sites where wells are to be capped and abandoned is also required. This will fill in the gaps in the current irrigation system allowed by the City to provide for access drives, etc. at these sites. With the wells being removed, landscaping can be placed in these areas as required by a reclamation plan, and the new landscaping will require irrigation. Chapter 16.28.120 (Well Site Restoration) details the requirements for Site restorations. It specifically notes that this shall include leveling and reseeded all on-site roads, access roads and areas disturbed by well activity. To assure site revegetation, the City may require special treatment, such as temporary irrigation, windbreaks, soil treatments, the addition of topsoil and protective groundcover and erosion control measures. In areas where the permanent irrigation system is in place, a modification to this system is not considered a significant issue but will help to ensure the establishment of new landscaping.

**4) Power Line:** Plantings around the power lines are subject to the utility company standards for safety reasons. The well heads are significantly shorter than the tank batteries. On the north, east and west end of the well head sites and this should guide plant selection. Staff has advised Synergy to also consult with the utility provider for options as well.

**5) Collateral:** Collateral is required for the cost of all landscape improvements by code at 120% of the cost estimate. Given the time of year, Staff supports delaying the landscape installation till next spring, subject to inspection and approval by the city. This also allows for construction of the roads, surface improvements, etc. as well.

## **I. Site Plan:**

Synergy has advised Staff that they want to increase the number of proposed wellheads from the initial request for 22 wells to a total of 30. Synergy provided updated site plans and associated documents for the public hearing to reflect the increased number of facilities that were considered in the writing of this report.

## **SUMMARY**

Synergy has worked with City Staff in various ways to address the concerns raised during the initial review. The project met with a delay because of the zoning determination made in December. However, in the interim Synergy revised plans to address City concerns and requirements. Based on compliance with the above recommendations, Staff's assessment is the project can meet the requirements of Chapter 16.28 of the Evans Municipal Code.

## **SECTION 19.44.020B (REVIEW CRITERIA)**

For reference, the Review Criteria for Use by Special Review are found in Section 19.44.020B of the Municipal Code. The individual review criterion are shown below in italics, with Staff's assessment immediately following each:

- 1.** *The proposed use is found to be unlikely to harm the health, safety, or welfare of the City or its residents.* Based on the information provided by the applicant, Staff's assessment is that the use can meet this requirement.
  - 2.** *The proposed use would benefit the City in terms of employment, tax revenue or other similar effects, as compared to the absence of the proposed use.* Based on the information provided by the applicant, Staff's assessment is that the use can meet this requirement.
  - 3.** *The proposed use shall be consistent with the Evans Comprehensive Plan and shall be compatible with the surrounding area.* Based on the information provided by the applicant and compliance with the recommended conditions of approval, Staff's assessment is that the use can meet this requirement.
  - 4.** *The location, size, design and operating characteristics of the proposed use shall be compatible with the existing and proposed future land uses within the general area in which the proposed use is to be located, and will not create significant noise, traffic or other conditions or situations that may be objectionable or detrimental to other permitted uses in the vicinity. Reasonable conditions may be placed on uses by special review to protect the public health, safety and welfare by mitigating impacts.* The recommended conditions of approval address concerns raised during this review. Staff's assessment is that the use can meet this requirement, if the applicant agrees to the conditions of approval as recommended.
  - 5.** *The site shall be physically suitable for the type and intensity of the proposed land use.* This criterion speaks to the compatibility issue, which is addressed under the recommended conditions of approval below.
  - 6.** *The proposed land use shall not adversely affect traffic flow and parking in the neighborhood.* There are no anticipated conflicts with this standard, if the applicant agrees to (and complies with) the conditions of approval recommended by the City Engineer to address the impacts under this criterion.
  - 7.** *The location of other approved uses by special review in the neighborhood shall be determined, in order to avoid an over-concentration of such uses.* Other facilities exist in the area of this site and approval of the request will result in the closing of several wells. The request is also subject to review by the State for compliance with regulations. With the closing of other wells and satisfaction of State requirements, the request satisfies this criterion.
  - 8. and 9.** (Not applicable)
  - 10.** *Oil and gas facilities shall only be installed, erected, and/or constructed in accordance with Chapter 16.28, Oil and Gas Exploration and Development. Landscaping plans must be presented with the application and must be approved by City Council at the Use by Special Review hearing. Such plans must show the proposed types and locations of all natural plantings, ground coverings and screening, including the size and number of trees.* The applicant has agreed to provide landscaping for this use based on the requirements of the Municipal Code, and the request satisfies this criterion.
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## **STAFF RECOMMENDATION**

Should the Planning Commission determine that a recommendation to support approval is appropriate, Staff recommends including the following Conditions be included with the motion.

## **CONDITIONS OF APPROVAL**

1. All representations of the applicant are considered conditions of approval unless modified by the City.
2. The applicant shall comply with all requirements of the City Engineer related to road and other infrastructure improvements including the submittal of construction plans and details; an opinion of costs; a schedule of improvements and all other elements determined appropriate by the City Engineer.
3. The applicant shall provide sufficient collateral in the form of a Letter of Credit for all engineering improvements required by the Municipal Code, and shall construct all approved on (and off-site) road improvements under the direction of the City Engineer, prior to the release of collateral. The Letters of Credit shall meet the requirements of the Evans Municipal Code.
4. The applicant shall obtain an access easement between their property to a point east of their site being a dedicated section of City right-of-way for access onto 35<sup>th</sup> Avenue.
5. The applicant shall obtain access and grading permits as required by the City Engineer for development of the site.
6. No access is granted onto 37<sup>th</sup> Street for the use. All heavy production or construction truck traffic shall use haul routes east to 35<sup>th</sup> Avenue and south to 49<sup>th</sup> Street. No heavy production or construction truck traffic is allowed to transit north of the site.
7. The applicant shall submit an amended plat for the site and dedicate 120-feet of public right-of-way along the north end from the east to the west property lines. The exact location of the right-of-way to be approved with an amended plat application.
8. Within 30 days of approval by the City Council, the applicant shall provide a landscape plan in compliance with the Evans Municipal Code. Approval of the landscape plan shall require provision of collateral in the form of a Letter of Credit as required by the Evans Municipal Code in an amount determined by the City. Landscaping shall be installed as soon as possible in 2016 and include an appropriate irrigation system using a non-potable source for water, unless an extension is granted by the Director of Public works or a designated representative.
9. Landscape improvements shall include modifications to all sites where wells are being capped, to ensure the reclaimed areas receive irrigation sufficient for the landscaping to establish and remain healthy.
10. The applicant shall cap all wells described for closure in the case file and notify the City when this is done. The capping of wells shall include removal of access roads and an irrigation system for landscaping as required in Condition 9.
11. The applicant shall provide evidence of bonding and insurance in compliance with the Evans Municipal Code.



12. The applicant shall pay the cost of the public hearing notice and mailing as required by Chapter 19.64 of the Evans Municipal Code.
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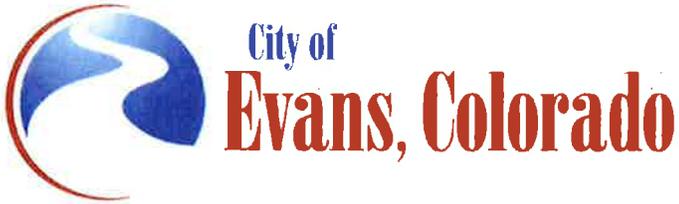
**DRAFT MOTIONS:**

“I recommend supporting a motion of approval by the City Council for the Use by Special Review request for the Synergy Resources, with conditions of approval 1- 12, as found in the staff report or modified by the Planning commission.”

“I recommend supporting a motion of denial by the City Council for the Use by Special Review request for the Synergy Resources.”

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**Attachments:** Project Description / Application Materials; Economic Impact Report; City Engineering Report; Vicinity Map; Zoning Map; Pubic Works Letter



April 27, 2015

Economic Development Department  
1100 37<sup>th</sup> Street  
Evans, Colorado 80620

Sean Wheeler  
City Planner  
City of Evans  
1100 37<sup>th</sup> Street  
Evans, Colorado, 80620

Dear Mr. Wheeler;

The Economic Development Department is submitting these comments for following project:

Project Name: SRC Evans 22 Wells  
Acres: 91  
Zoning: R-1,R-2,R-3, C-3

Property Location: South of 37<sup>th</sup> Street, west of 35<sup>th</sup> Street (just west of Cave Creek

Brief Description of Project:

Baseline Corporation, on behalf of Synergy Resources Corporation, has submitted a Use by Special Review (USR) permit for a proposed Oil and Gas production facility in Evans, Colorado. The USR application, if approved, will permit the drilling of 22 new horizontal wells and their associated production equipment.

The following information was submitted by Synergy:

Increase in Property Tax in Year 1: [**~\$171,400**]  
Increase in Property Tax over 10 Years: [**~2,084,341**]  
Sales Tax in Year 1: [**N/A**]  
Sales Tax over 10 years: [**N/A**]  
Jobs Created: [**100+**] Full Time: [**2**] Part Time: [**100+**]  
Average Annual Salary or Hourly Rate: [**\$75,000+**]  
Benefits Provided to Employees?  Yes No  
If Yes, what type of benefits?

Health Care – [Yes]

Retirement – [Yes]

Other – [Yes (Varies between service companies)]

## **Economic Development Impacts and Concerns**

Synergy has correctly pointed out in their attached impact narrative that any change in the use of the land will have an effect on the city's services and tax base through a variety of sources. They have listed positive impacts of property tax and employment. However, staff believes a significant negative impact will be felt by the already developed residential properties to the south, west, and east, and the as yet undeveloped commercial property to the north.

As with any form of development, when an oil and gas operation enters an area, there will be inevitable tradeoffs between long- and short-term costs or benefits and conservation and economic development priorities. It is beyond the ability of a company alone to fully address or prevent secondary impacts or make decisions about how to balance those trade-offs in order to achieve the most sustainable development possible for the area. Therefore the City Council has this special review process to consider the overall impact to the community and how Synergy can address those impacts most important to Evans.

A few key points;

- 1) There will be positive property tax revenues (in the form of production and equipment – not land value) that will be recognized as a part of this development.
- 2) The state uses a different formula every year to determine severance tax, so there is no validity to the assumption that the City of Evans will automatically receive higher state revenues as a result of this development.
- 3) The value of the oil production depends on prices, so that will vary as well.
- 4) Staff is currently attempting to verify employment data submitted by Synergy
- 5) The impact statement does not take into account several potentially negative impacts:
  - a. Residential home value
  - b. New residential development in the area
  - c. The critical commercial construction at 35<sup>th</sup> and 37<sup>th</sup>
  - d. The impacts on roads and streets that will be ongoing

Usually, impacts from energy drilling are direct (those easily seen or measured) and indirect (longer lasting, not as obvious). All of the benefits listed by Synergy are direct benefits, and there are likely some other direct benefits that are less easy to measure, such as increased business at local restaurants during the drilling cycle.

The indirect benefits not mentioned in the Synergy report usually impact the community in a more negative way for many years to come, just like any other land use decision. This built environment of 22 new wells on land that is zoned residentially will last 30 –

50 years. The homeowners who have purchased in that area, knowing the land next to them was zoned residentially, have made an investment in their homes that will be affected by this decision. People and residential developers considering an investment in the area will take the Synergy infrastructure into consideration – likely choosing not to buy or build in the area.

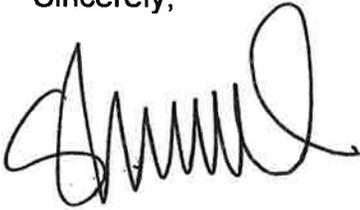
### **Potential Offsets to Negative Secondary Impacts**

There are ways to mitigate the negative impacts on residential neighborhoods. They can include, but are not limited to:

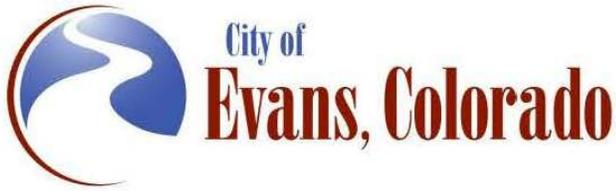
- 1) Significant screening with masonry walls
- 2) Landscaping the property
- 3) Building additional public roads and sidewalks to benefit the residents, both on site and off site
- 4) Adding to residential and commercial amenities such as trail construction

This staff report is provided as information only. Please let us know if you have any questions or concerns, and thank you for allowing us to express our opinion.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sheryl Trent', with a large, stylized initial 'S' and 'T'.

Sheryl Trent  
Economic Development Director  
Executive Director, Evans Redevelopment Agency



**Community Development**  
1100 37<sup>th</sup> Street  
Evans, CO 80620-2036  
Planning Department: 970-475-1112  
Fax: 970-330-3472  
[www.evanscolorado.gov](http://www.evanscolorado.gov)

## MEMORANDUM

**DATE:** July 22, 2015

**TO:** Synergy Resources Corporation  
Baseline Engineering

**FROM:** Keith Meyer, P.E. – Consultant  
Ryan Wordekemper, – Consultant

**C.c.** Dawn Anderson – City Engineer  
Fred Starr, Public Works Director  
Sean Wheeler – City Planner

**RE:** **SRC Evans Wells Use by Special Review, 2<sup>nd</sup> Review**

The City of Evans Community Development Department has reviewed this *Use by Special Review* request. Comments made during this phase of the review process may not be all-inclusive, as other concerns or issues may arise during the remaining application process. The issues raised in this report must be addressed before staff can schedule the request for a public hearing.

### COMMENTS

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The applicant is proposing an Oil and Gas production facility (approximately 24 acres in size) on a 91 acre Lot that is currently zoned R-1 (Single-Family Residential), R-2 (Two-Family Residential), R-3 (Multi-Family Residential), and C-3 (Commercial High Intensity).

The applicant submitted a *Use by Special Review Application, Updated USR Narrative, Well Map Exhibits, Updated USR Site Plan Set, Screening Plan, Economic Impact Form and Report, Traffic Impact Assessment, Drainage Memo, Property Deed, Site Photographs, and an Updated List of Property Owners – 500' from wellheads.*

#### **Site Plan:**

S1 - The applicant shall provide a public access easement for the fire department to ensure appropriate access and turn-around room is provided.

S2 - The applicant shall provide locations of all proposed signs and lights. A complete sign permit, including specifications for the signs and lights, including type, height and general conformance to the code.

S3 - The applicant shall provide sight distance triangles for each proposed access point to the public street per chapter 15.58.

S5 - The applicant shall show dedication to Prairie view lane right of way through a prevised plat or other means.

S6 – The City of Evans Transportation Plan states a threshold of 200 vehicles per day should be set for the capacity of a gravel or unimproved roadway. If a development's impacts would force traffic volumes above this threshold, the developer would have to pave the road. According to the traffic study provided daily traffic counts will be over 200 for the first 10 months.

**Drainage Report:**

D1 - The applicant shall ensure water quality and their intent to meet 2 year return interval water quality standards.

**General:**

G1 - Please note that all reports and construction plans completed by a Colorado Registered Professional Engineer must be signed and wet stamped prior to final acceptance.

G2 - The applicant shall provide certificate blocks for signatures of owner, engineer, surveyor and City approval, as applicable on all plans.

G3 - The applicant shall provide a general notes and construction notes page in the plan set that references all applicable standards and care for construction in the City of Evans.

G4 - The applicant shall include all applicable Details and reference them with respect to the plans.

Dawn: for the offsite road impacts: Would we require an escrow value for these repairs as they develop? We can't find anywhere in the code where this is allowed.

**RECOMMENDATION:**

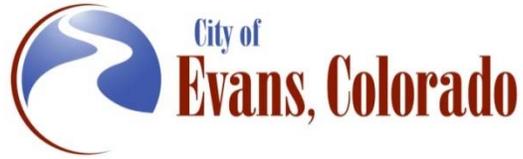
The City of Evans Community Development Department is not providing a formal recommendation of acceptance or denial of this Use by Special Review submittal as many of the required items are missing or unclear to make a distinct recommendation.

The applicant shall address the comments listed above at the specific step of the review process stated. The review process will continue only when all appropriate elements have been submitted. Any issues of concern must be resolved with the City of Evans Community Development Department prior to recording any plat or start of construction

# VICINITY MAP



(A detailed Vicinity Map prepared on a USGS 7.5 minute series base is provided with the attached site plan.)



## **SRC Evans Wells**

Operations, Environmental Safety, and Emergency Response Plan

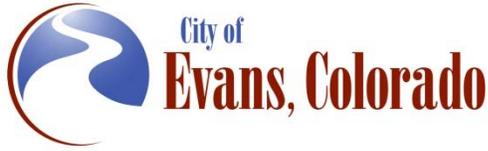
Use by Special Review Permit Application  
Proposed Drilling of 30 Oil & Gas Wells

Located in Section 26  
Township 5 North, Range 66 West, 6th P.M.  
City of Evans, Weld County



**Synergy Resources Corporation**  
**20203 Highway 60**  
**Platteville, CO 80651**

Initial Submittal: October 8, 2014  
Second Submittal: May 8, 2015  
Third Submittal: July 31, 2015



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City of Evans Use by Special Review Permit Application

SRC Evans Wells

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## VICINITY MAP



(A detailed Vicinity Map prepared on a USGS 7.5 minute series base is provided with the attached site plan.

Part of the NE  $\frac{1}{4}$  of the Section 26,  
Township 5 North, Range 66 West of the 6<sup>th</sup> P.M.  
City of Evans, County of Weld, Colorado

Parcels 095926400017 & 095926300001

## **SECTION 1: OVERVIEW OF USE BY SPECIAL REVIEW REQUIREMENTS**

### **Description of Intended Use**

This Use by Special Review Permit (USR) application for oil and gas wells is referred to as the SRC Evans Wells application and is from Synergy Resources Corporation. The application seeks to permit the drilling of 30 horizontal wells on property located in Evans, Colorado along with the installation of related equipment. The proposed wells will produce oil condensate and gas from underlying formations known to have potential for such substances. This application includes a full description of the drilling, completion, production and maintenance processes related to the proposed horizontal wells.

This narrative has been revised in order to provide more information in accordance with comments received from the City of Evans since the first submittal. The initial submittal of this USR application was on October 8, 2014.

### **Familiarity COGCC Regulations**

Synergy Resources Corporation is very familiar with the Colorado Oil and Gas Conservation Commission (COGCC) rules and regulations as well as the City of Evans regulations as they relate to Oil and Gas exploration and development (Chapter 16.28 and Chapter 19.44 of the City of Evans Municipal Code). Synergy is aware of the drilling, operation maintenance, and abandonment procedures established by the COGCC and the City of Evans.

### **Familiarity with Chapter 19.44 of the City of Evans Municipal Code Criteria for Use by Special Review**

According to section 19.44.020.B a Use by Special Review application shall provide a written explanation for the following questions and criteria.

#### **(1) The proposed use is found to be unlikely to harm the health, safety or welfare of the City or its residents.**

It is permitted under state law that Synergy and other oil and gas operators are permitted to extract their mineral properties to help provide energy and resources for the State of Colorado and its residents. With that said, Synergy has worked hard to locate property that would provide the smallest amount of impact to the community as possible. The subject property is located in the very southern portion of the City of Evans and provides adequate space to allow Synergy to locate several wells in one location. The site is also large enough to mitigate most visual and audible impacts associated with oil and gas production.

In addition the proposed wells will force other producing wells in the general area to cease operation for the following reasons:

- The proposed Evans 30 wells are horizontal wells. In many instances when horizontal wells are located near vertical wells, the vertical wells may be unable to continue production to eliminate the chance of multiple drilling paths coming in contact with one another.
- The proposed site is surrounded by many pre-existing vertical wells that are still in production. If the proposed site is approved, these wells may be forced to cease production.
- It is often the case that pre-existing vertical wells are not able to reopen upon completion of new horizontal wells.
- Synergy is currently negotiating a trade with Noble Energy Inc., the operator of several vertical wells located near the proposed production site. Synergy will become the operator of these wells and will be required to plug and abandon these wells in order to drill and complete the proposed horizontals.

Maps have been included in the appendixes that identify existing vertical wells in the area that may be affected by the proposed site. If these wells are indeed plugged and abandoned, there will be a reduction in truck traffic in the City of Evans related to these oil and gas production sites. Also, additional property will be opened to development that was otherwise unavailable due to COGCC safety regulations and setbacks. We estimate that approximately 276 acres of additional land will become developable.

**(2) The proposed use would benefit the City in terms of employment, tax revenue or other similar efforts, as compared to the absence of the proposed use.**

The subject property has largely been unutilized for a number of years. The proposed facility would increase the oil and gas industry's presence in City of Evans and increase the percentage of State allocated funds that are awarded to local communities each year. The City of Evans will also gain monetarily from individuals who are employed by service companies that Synergy plans to utilize for contract work on the proposed site.

**(3) The proposed use shall be consistent with the Comprehensive Plan and shall be compatible with the surrounding area.**

One of the strategic priorities of the City of Evans Comprehensive Plan is *Economic Development*. It is also identified in the *Purpose of the Comprehensive Plan* to promote economic development within the City of Evans. As mentioned above, Synergy is required to send 1% of the sales from each well pad to the State of Colorado. The State then returns a certain percentage back to the City. The proposed production facility not only will provide revenue to the City of Evans in the form of severance taxes but it will also provide an opportunity to employ local service companies that Synergy can utilize on a contractual basis. This will promote positive economic growth in the City of Evans.

The site is currently surrounded by agricultural uses to the north, west, and east. There are also residential properties that are located to the south and west of the subject property; however these parcels are separated from the proposed site by the Ashcroft Draw. Ashcroft Draw is dense with vegetation including large trees and shrubs that help

screen the site from residential uses to the south. It should also be mentioned that oil and gas production facilities exist to the immediate north and east of the proposed site. Therefore the Evans 30 Wells production site should be considered a compatible use.

**(4) The location, size, design and operation characteristics of the proposed use shall be compatible with the existing and proposed future land uses within the general area in which the proposed use is to be located and will not create significant noise, traffic or other conditions or situations that may be objectionable or detrimental to other permitted uses in the vicinity. Reasonable conditions may be placed on uses by special uses by special review to protect the public health, safety and welfare by mitigating impacts.**

The proposed site is currently located on a property that is owned by Synergy Resources Corporation with very few improvements. The general area surrounding the property provides a mixture of uses including residential but also agricultural and industrial uses to the south and southeast. Due to the size of the subject property, and the location of the production pad within the site, enough buffer space is available to mitigate potential nuisances that maybe associated with oil and gas production.

In addition, Ashcroft Draw contains a mature tree canopy along its banks that provides adequate screening to protect properties located to the southeast. The production site is separated by a half-mile on average from residential areas to the west, north, and east and a quarter-mile or more on the south. The amount of distance between this site and these areas will produce minimal amounts of visual impact. However, Synergy is proposing additional screening in the form of berms and trees to mitigate any potential visual concerns around the tank batteries. Please see the attached site plan and screening plan for more information.

To reduce the presence of vehicle traffic along municipal roads, Synergy will make it a priority to select a haul route that provides as little impact to the community as possible. Please refer to the Traffic Impact Assessment for a depiction of the proposed haul routes.

**(5) The site shall be suitable for the type and intensity of the proposed land use.**

The proposed site is approximately 24 acres in size. The property as a whole measures approximately 91 acres in total size. Therefore only roughly 26% of the site will be disturbed for the proposed use of 30 wells. Therefore the production site is not considered to be an over intensive use of the property. As mentioned above, approximately a half mile separates the site from neighboring residential uses.

**(6) The proposed land use shall not adversely affect traffic flow and parking in the neighborhood.**

As stated, Synergy Resources has worked with the City of Evans to determine a traffic route that will have smallest impact possible on the local community. Please refer to the Traffic Impact Assessment. No vehicles will be parked off of the subject site.

**(7) The location of other approved uses by special review in the neighborhood shall be determined, in order to avoid an over-concentration of such uses.**

We were unable to determine a resource that provides the location of approved Use by Special Review applications in the vicinity of the proposed site. If the City can identify a resource available to determine neighboring approved Use by Special Review uses, then we will be happy to provide that information to you.

**(8) Mini-storage units**

Not applicable for the proposed application.

**(9) Car wash facilities**

Not applicable for the proposed application.

**(10) Oil and Gas Facilities.** Oil and gas facilities shall only be installed, erected and/or constructed in accordance with Chapter 16.28, Oil and Gas Exploration and Development. Landscaping plans must be presented with the application and must be approved by City Council at the use by special review hearing. Such plans must show the proposed types and locations of all natural plantings, ground coverings and screening, including the size and number of trees.

The following requirements are required as part of a Use by Special Review Permit for oil and gas production facilities.

**Familiarity with Chapter 16.28 of the City of Evans Municipal Code Oil and Exploration and Development**

Chapter 16.28.070 of the Evans Municipal Code provides submittal requirements for a use by special review application in regards to oil and gas exploration. According to Chapter 16.29.070, the applicant shall provide the following information:

**(A) Request for approval for use by special review under the form and procedures of the zoning code. The request shall include a full description of the intended use, site improvements and characteristics of installation, operation, maintenance, site restoration and abandonment.**

This information is provided in the following sections below.

**(B) Evidence of leasehold, resource ownership or owner's authorization.**

Please find the deed for the property in the appendix of this application.

**(C) The name and address of each owner of an interest of record in the oil and gas leases under which such a well is to be drilled, operated, maintained or abandoned.**

**Operator and Surface Owner Information**

Synergy Resources Corporation  
20203 Hwy 60  
Platteville, CO 80651

**(D) The name and address of the person or firm in charge of the operation and maintenance of such well.**

Please see contact information provided in bullet C.

**(E) The name and address of the person or firm in charge of the work to be done under such permit.**

Please see contact information provided in bullet C.

**(F) A true and accurate listing of the names and addresses of the owners of all real estate situated within five hundred (500) feet of the proposed well, accessory equipment and structure site, according to county assessor records current at the time of application.**

Please find the attached list titled: *Property Owners 500 feet from Well Head*, obtained on May 7, 2015.

**(G) Notice of the public hearing for the use by special review shall be given in accordance with Chapter 19.64 of this Code.**

Noted. All regulations in regards to notification prior to the hearing will be followed.

**(H) Evidence of satisfaction of the bond requirement (see Sections 16.28.080 and 16.28.090 of this Chapter).**

Synergy is fully committed to fulfilling the expectation from the City of Evans on the matter indicated above. Synergy will work with the Community Development Department to ensure that the regulations identified in Sections 16.28.080 or 090 of the Evans Code are satisfied.

**(I) Evidence of satisfaction of the insurance requirement.**

As indicated above, Synergy will work with the Community Development Department to ensure that all regulations in regards to section 16.28.080 are satisfied. Synergy has the required insurance.

**(J) Site or master plan for intended use (see Section 16.28.120 of this Chapter). The number of copies to be submitted shall be as specified by the planning director.**

Please find the attached Site Plan for your review. The Site Plan has been prepared with reference to Section 16.28.110 of the Evans Code.

**(K) Conceptual restoration plan (see Section 16.28.130 of this Chapter).**

Please reference the *Plugging and Abandonment Phase* subsection under *Section 3: Operating Plan* as well as *Well Site Restoration* subsection under *Section 4: Environmental and Safety Plan*. The restoration plan for the site has been prepared with reference to Section 16.28.130 of the Evans Code and COGCC Series 1000 Rules.

**(L) Specification and graphic representation of the equipment to be used and the improvements to be made. Specific attention shall be given to the intended measures of noise mitigation and ensuring the public safety.**

Please reference *Section 2: Site Description* below for a visual representation of equipment to be used on site.

**(M) Certificate that the owners of the leasehold interest and the persons in charge of the drilling, operation maintenance or abandonment of such well are familiar with the ordinances of the City and will abide by the provisions thereof.**

Synergy has permitted wells near the City of Evans prior to this submittal. The company operates out of Platteville and is familiar with the ordinances of both Evans and other regional communities.

**(N) Waste and storage plan (see Section 16.28.140 of this Chapter).**

Please reference Section 4 titled, "Environmental and Safety Plan" for more information regarding Synergy's waste disposal methods.

## **SECTION 2: DESCRIPTION OF SITE**

### **Site**

The surface land upon which the well pads are situated is owned by Synergy Resources Corporation. Access to the site will be provided through a proposed 120' access easement extending from Prairie View Dr. through the property directly to the east of the subject property (parcel no. 095926100056). Additional loop roads will be constructed around the two separate tank batteries and three well pads. The operations and USR permit area is approximately 24 acres.

The City of Evans 2004 Transportation Plan depicts a new four-lane wide arterial roadway extending west from the intersection of 35<sup>th</sup> Avenue and Prairie View Drive. This is shown on Figure 20 – "Master Streets Plan." Synergy is proposing to dedicate a strip of land 120 feet wide on the northern side of the property future Evans right-of-way purposes.

### **Equipment to Be Used for Drilling**

Synergy Resources has access to several different drilling rigs that are 120 to 150 feet tall which can be used to drill the wells. Depending on the scheduling and availability of rigs, one of the rigs will be scheduled by Synergy Resources for this site. Earthwork equipment will be used, in advance of the drilling rig being placed on the property, to prepare the site for commencement of drilling. In addition, typical trucks and earth moving equipment will be onsite to create the new access road to the drilling pads and tank battery areas. The drilling operations for these 30 horizontal wells will be in three separate locations and utilize up to three different rigs to complete the drilling process. Two separate tank battery areas will be constructed with the typical layout of tanks. The separators and ECD burners will also be separated into three distinct areas. The separators receive oil, gas, and water materials and separate them and divert them to the appropriate tank or line. Compressors may be located onsite to facilitate the production of gas from the well to the underground pipeline. These will be electrically driven to mitigate emissions and noise. Following are pictures of a typical looking wellhead, VOC burner, tank, and separator, etc.



Typical Drilling Rig



Typical VOC burner used in production facility



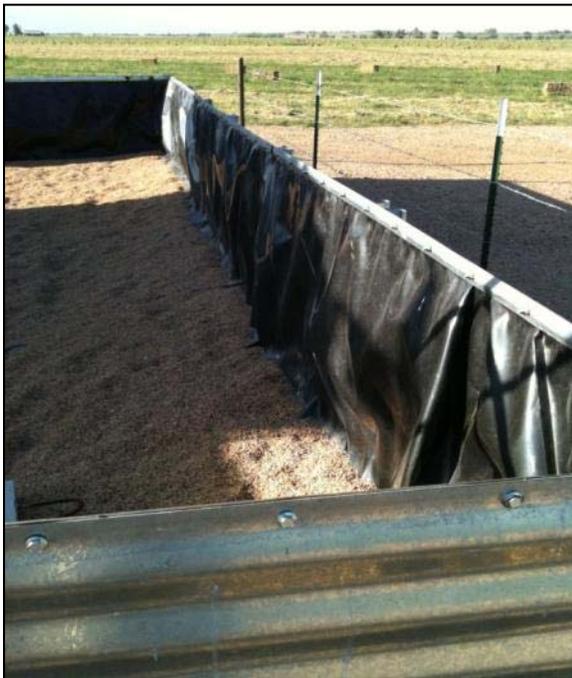
Typical VOC burner and meter used at a production facility



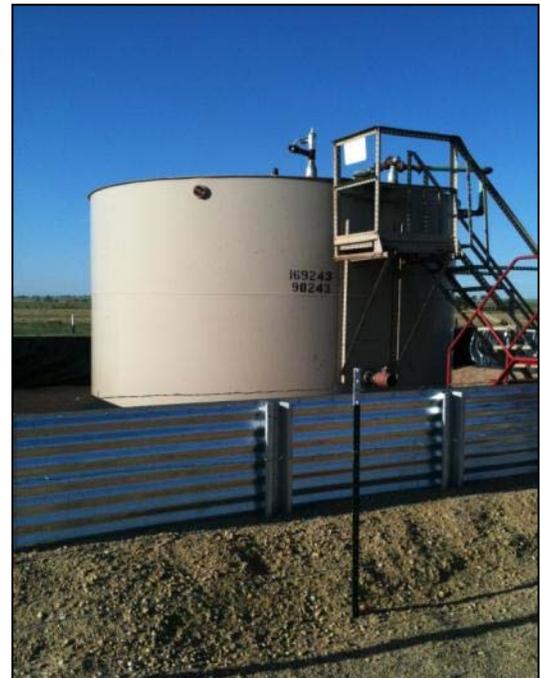
Typical Tanks



Typical well head



Typical Containment Berm and Liner (inside)



Typical Containment Berm and Liner (outside)



Typical Noise Mitigation Wall

## **SECTION 3: OPERATING PLAN**

All phases of operations including drilling, completion, production, abandonment and reclamation are designed to adhere to the Rules and Regulations of the Colorado Oil and Gas Conservation Commission ("COGCC"), especially COGCC 300 Series (Drilling); 600 Series (Safety); 800 Series (Aesthetics & Noise Control); 900 Series (Environmental); 1000 Series (Reclamation).

### **Preparation & Drilling Phase**

The drilling phase consists of surveying, permitting, building location and actual drilling. There is a Drilling Prognosis for pertinent information including approximate depth of formation tops, mud program, logging program, casing program and company contacts specific to these wells.

The initial activity at the proposed site involves surveying the well locations. The area needed for the initial drilling operation on each of the three pads will be approximately 540 feet by 400 feet. The proposed wells are horizontal wells. Survey plats were prepared along with the necessary permits and submitted to the COGCC and local regulatory agencies for approval.

Synergy shall be responsible for building the temporary level dry drill pad to accommodate drilling operations. After required approvals are received, dirt work equipment begins preparing the drilling location. Private road access to the drilling site and the production equipment pad are the first part of the preparation to the site. Private access is already available on site, however any modifications made to the access road will follow City and State code requirements. This access road is required to comply with Fire Department and City Engineering standards for heavy equipment and emergency response vehicles as well as preventing dust and mud issues. The access road will be improved with six inches of roadbase. Site preparation also includes leveling the rig site. Site preparation for the Evans Wells will take approximately seven (7) days including the installation of cellars and conductors.

The rig is moved in and rigged up and 24-hour drilling operations are initiated. Under normal conditions, the thirty wells should require a total of three hundred (300) to six hundred (600) days to drill. However, this figure assumes only one rig on the site at a time.

When drilling has reached approximately 600 feet (200 feet below the base of the Fox Hills) or the depth required by the COGCC, 9 5/8" casing will be run and cemented from this depth to surface. This depth is determined from subsurface ground water maps prepared by the State Engineer in order to protect all fresh water aquifers and is approved by the COGCC. Once cement has sufficiently cured (eight to twelve hours), drilling operations will resume.

To allow the wellbore path to turn horizontally, a "curve" section is built where the angle of the drill bit increases as the wellbore approaches the target interval. When the curve is built and lined up with the target interval (hydrocarbon bearing formation or zone), the wellbore is cased with 7" casing and cemented in order to protect wellbore integrity. The casing is designed with certain specifications to provide a means of completing the well and producing hydrocarbons to

the surface. The cementing operation is designed for cement volume, curing times, and compressive strength. Cement is placed in the annular area between the casing and hole to provide containment and isolation of potentially productive formations.

Drilling then continues out of the bottom of the 7" casing with a smaller bit and continues horizontally for 4000 to 6000 feet, depending on the permitted length of the horizontal lateral. When the planned total depth is reached, the drilling crew runs 4.5" casing to the total depth point. This casing is then cemented in the well from total depth back to approximately 1000 feet above the 7" casing point. After each well has been drilled and cased to total depth, the drilling rig is moved to the next well location in order until all wells are drilled.

### **Completion Phase**

The completion phase is initiated after sufficient curing time of the cement (minimum of three (3) to four (4) days). The zone(s) to be completed in the wells will be the Codell and Niobrara formations depending upon the evaluation and testing results of each zone in each individual well. The first step is to run a cement bond log to verify cement placement and quality. This log is submitted to the COGCC for review. The casing is pressure tested to assure integrity up to the maximum potential pressure during the completion and production phases. The interval of potential hydrocarbon production is then perforated. Perforating the well is accomplished by lowering the perforating device by wireline into the well. At a specified interval jet shots are discharged which pierce the steel casing and cement and penetrate the formation. The logging and perforating operation takes approximately one (1) day for each well. The next step in the completion phase is hydraulic stimulation. This is a means of hydraulically cracking the formation and placing propping agents (sand) in the cracks to create a channel of high flow capacity between the formation and the wellbore. The size of the stimulation job is determined by the quality of the production interval. In preparation, one (1) to two (2) days prior to the operation, approximately ten (10) horizontal 500-barrel tanks are set on location and filled with 2%KCL water. The operation requires a number of truck mounted pumps and other miscellaneous portable equipment. This operation requires one (1) day rigging up, pumping and rigging down for each well. Temporary water storage tanks are removed from location following the completion of hydraulic stimulation.

Immediately following the operation, the well is flowed back for seven (7) to fourteen (14) days. In preparation for the flow back, two (2) days prior to the operations, two (2) empty 500-barrel tanks are temporarily moved on location. During this period of time relatively large volumes of water and hydrocarbons flow and/or are swabbed (with a service unit) from the well into the 500-barrel empty tanks. These fluids are either sold or disposed of offsite at a COGCC approved facility. This operation will require additional truck traffic to transport these fluids off location. Tubing is run inside the casing to improve the production efficiency as soon as the well performance indicates it is necessary (several days to several months after hydraulic stimulation). This normally requires a service unit, water truck and a flowback tank. The operation of running tubing usually takes from one (1) to three (3) days per well.

## **Production Phase**

New production facilities will be constructed in accordance with COGCC Rules and Regulations as illustrated on the Site Plan. It will be constructed in accordance with COGCC Rules and Regulations as illustrated on the Site Plan. The facility will consist of 56 new welded steel oil storage tanks and 16 water tanks (aka. as the "tank battery'). As mentioned, this equipment will be separated into two areas. Separators will be located near each tank battery (30 total) as well as the required flare stacks/VOC Burners (14 emission control devices, 8 vapor recovery units). Please see the attached site plan for more information regarding the proposed equipment and their layout.

A flowline buried approximately four (4) feet deep will be routed from the wellheads to the separators in compliance with COGCC regulations and the International Mechanical Code as amended. The flowline from the well is constructed with 2" inside diameter (I.D.) A new gas sales line will be installed from the meter skid to an existing pipeline. Per COGCC regulations and specifications, berms with containment liners are constructed around the tanks and separators. The wellhead, the tank battery and separators will be painted the typical beige/tan color to blend into the landscape. Chain link fencing six (6) feet in height will be installed around all of the tank battery, separator equipment, and well heads. An additional three (3) strands of barbed wire sloping outward at approximately a 45-degree angle for 18 inches from the top of the fence will also be installed in conformance with Section 16.28.160.I of the City of Evans Code.

Once construction of the flowline is completed, the pumper then begins daily monitoring of the well. Daily reports consist of tank measurements, gas sales estimates, and pressure readings. Production information is filed monthly with the COGCC. When the oil in the production tank reaches a certain level, it is sold and trucked away by an oil purchaser. Gas will be transported through an existing pipeline. The gas sales meter will be periodically maintained by the gas purchaser or Synergy personnel. Water will be produced into a tank and hauled to a COGCC approved facility; thus, no produced fluids will be disposed of onsite. The production phase of the well will continue until it is no longer economical to produce. Based upon current market conditions and existing technology, the anticipated average life of a well in the area is between 25 and 30 years.

An appropriate sign(s) will be installed indicating that Synergy Resources Corporation is the operator of the wells and warn of safety hazards.

## **Water Resources for Drilling Activities**

All water used as a source is "fresh" water. The optimum water source during drilling operations will be determined by Synergy prior to drilling the wells. However water is intended to be provided via a pipeline that will run from a water depot located near the South Platte River. This water as mentioned will be used during completion, re-completion or production operations. Piping in water greatly reduces the number of trucks that will visit the site.

### **Plugging and Abandonment Phase**

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

If a well is determined to be nonproductive after obtaining open-hole logs during the drilling phase, it will be plugged. This normally includes several cement plugs in the open hole section and a cement plug at the surface. Surface casing would be cut off below ground level at a depth approved by COGCC and a steel plate welded on the top of the casing. The proposed operation is approved by the COGCC prior to execution.

If a completed well's production rates have declined to a level where it is no longer profitable to operate the well, the well will be plugged and abandoned. A proposed procedure will be submitted to the COGCC for approval. This procedure typically includes the setting of a cast iron bridge plug above the producing interval. This is covered with two sacks of cement. Several other cement plugs may be set at designated intervals up the hole. A portion of the production casing may be cut off and pulled from the well. The casing is cut off below ground level at a depth approved by COGCC and a steel plate is welded on the top of the casing. Once plugging of the wellbore is complete, the final site reclamation will be done.

## **SECTION 4: ENVIRONMENTAL AND SAFETY PLAN**

### **Noise Control**

Any operations involving the use of a drilling rig, workover rig, or hydraulic stimulation and any equipment used in the drilling, completion, or production of a well are subject to and will comply with the noise regulations of the COGCC Rules and Regulations, Rule 802, and state law and regulations concerning noise abatement (Title 25, Article 12, C.R.S.). Under COGCC Rule 802.b, oil and gas activities are subject to maximum permissible noise levels based on the type of land use of the surrounding area. As a standard, Synergy will utilize a temporary sound wall during the drilling and completions phases of the production pad. The exact physical location of the wall will be determined once a sound survey has been analyzed and completed. The sound walls are fire proof and constructed of acoustical-absorbing material.

### **Air and Water Quality**

All drilling, well completion and production activities will be in compliance with the EPA's Clean Air Act and the Colorado Air Quality Control Program, Title 25, Article 7, C.R.S. This production location has been evaluated by Synergy representatives with regard to the requirements set forth in Article 7. This team has determined that emissions are below necessary limits for a permit due to the innovative design of this facility.

The Denver Julesburg Basin, or D-J Basin, has been one of Colorado's most prolific petroleum provinces. The D-J Basin lies in the north part of Colorado along the Front Range and extends north from Monument, Colorado approximately to Scottsbluff, Nebraska. The western boundary is defined by the foothills, with the eastern boundary extending to the Kansas-Colorado line. The majority of the production is confined to a fairway extending northeast from Denver, to Kimball, Nebraska. The COGCC sets forth specific requirements for casing depth in order to protect ground water sources.

The Fox Hills Sands of the Late Cretaceous age are important fresh water aquifers in the western D-J Basin of Colorado. In addition, there are discontinuous sands of secondary importance immediately below the Fox Hills that is referred to as the transition zone sands. These units as a group occur from the surface to a depth of approximately 500 feet in the north part of the Basin and from the surface to a depth of approximately 1000 feet in the south portion of the Basin.

In order to ensure the protection of our fresh water resources, Synergy will set all 9-5/8" steel surface casing to a depth of at least 50 feet beneath the base of the Fox Hills Sands as required by Order A-13 of the Colorado Oil and Gas Commission with cementing from bottom to surface. Surface casing setting depth is determined from subsurface ground water maps prepared by the State Engineer and supplemented by the latest data available from offsetting wells. The Colorado Oil and Gas Commission (COGCC) review all drilling permits for adequate surface casing setting depths and subsequent cementing programs.

### **Odor**

All requirements applicable in the COGCC regulations related to Odor will be adhered to by Synergy Resources Corporation. No noxious, prolonged or unusually high amounts of odor are expected from the proposed drilling of the well.

### **Visual Impacts**

All oil and gas operations facilities or structures such as separators shall be painted a color to match the existing landscape. Synergy will not utilize intense, bright, or fluorescent colors.

During the drilling phase a sound wall will be utilized to reduce noise and visual nuisances. Finally, a screening plan has been included with this submittal that has strategically located trees and berms around the facility to obstruct views from neighboring properties. The wellheads will not be visible since they are low to the ground and the grading will obscure them.

Visible flares and flaring is limited to the drilling operations. Once production has commenced there will be no illumination issues or visible flares present.

### **Wildlife**

All requirements set forth on the COGCC regulations related to wildlife will be adhered to by Synergy. No impact to wildlife is expected at any of the wellhead locations.

### **Weed Control**

All locations, including wells and the surface production facility, will be kept free of weeds including noxious 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 as practicable. When a well is completed for production, all disturbed areas no longer needed will be restored and re-vegetated as soon as practicable. Synergy will drag the access roads and the production site as needed with a “drag” designed to remove weeds. Weed that cannot be controlled with this method will be sprayed as needed with a systemic herbicide. Any additional weed control required to maintain the site free of weeds will be implemented if the standard plan is not sufficient.

Synergy Resources Corporation annually contracts with a registered weed control service to prevent the reoccurrence of noxious or excessive weed growth (COGCC Rule 1003f).

### **Waste Disposal/Sanitation**

A trash bin will be located on site to accumulate waste by the personnel drilling the wells.

Portable sanitary facilities, which comply with Section 602(9) of the Colorado Oil and Gas Commission regulations, will be provided and maintained on the location of all wells to be drilled under this application during the drilling and completion phases of the operation. The premises shall be kept in a clean and sanitary manner, free from rubbish, to the satisfaction of Evans’ requirements. Because no personnel are on the location for an extended period of time,

no City services or sanitary services of any kind will be required or provided after the well begins to produce. Synergy personnel visit the site each weekday, and will be responsible for picking up and disposing of any debris.

To the maximum extent possible, no oil and gas produced shall be permitted to escape from the confines of the well. Any leakage of gas or oil from a producing wellhead is not a standard practice will be urgently addressed. As indicated above and displayed in Section 1 of this document, all containment areas are lined with non-combustible material to prevent oil from leaking into the soil below.

All regulations as outlined in Section 16.28.130 of the Evans Code will be strictly enforced.

### **Well Site Restoration**

Well site restoration begins with plugging and abandonment. Plugging and abandonment is the cementing of a well, the removal of its associated production facilities, the removal or abandonment in-place of its flowline, and the remediation and reclamation of the entire well site.

All tanks, equipment, lines and extra material used to enhance the access road will be removed from the entire well site. Once all the equipment has been removed all earth that may have been sterilized will be removed from the site and replaced with the appropriate or common type of topsoil for this site and seeded with the natural plant and grasses for the area. All site reclamation will be in conformance with Section 16.28.120 of the City of Evans Code as well as the COGCC regulations (Series 1000 Reclamation Regulations).

## **SECTION 5: EMERGENCY RESPONSE AND FIRE PROTECTION PLAN**

FIRE AND EMERGENCY RESPONSE PLAN AND NOTIFICATION LIST FOR:

### **SRC Evans Wells**

Synergy Resources Corporation emergency operations are designed to comply with the following sections of the 2006 International Fire Code, Drilling Operation:

Section 3406.3 Well Drilling and Operating	Section 3406.3.2 Waste Control
Section 3406.3.1 Location	Section 3406.3.3 Sumps
Section 3406.3.1.1 Storage Tanks and Sources of Ignition	Section 3406.3.4 Prevention of blowouts
Section 3406.3.1.2 Streets and railways	Section 3406.3.6 Soundproofing
Section 3406.3.1.3 Buildings	Section 3406.3.7 Signs
	Section 3406.3.8 Field loading racks

All access roads leading to and those in the drilling/storage area will be designed and maintained to support fire apparatus. A turnaround will be constructed as necessary to accommodate fire apparatus. In addition to the above-referenced rules and regulations, Synergy is also subject to COGCC Rule 6064 pertaining to Fire Prevention and Protection. Synergy has support personnel in the field or on call at all times to provide technical assistance in fire prevention and elimination.

**1. General Information:** The purpose of the Emergency Response Plan is to provide procedures to cover emergency conditions which may arise during the development of oil and gas resources as well as issues that may arise after completion of the well. The procedures contain the policies applicable to facility emergencies. The following information can be vital during emergencies. It may be used by outside agencies as well as company employees and contract labor to help secure a speedy recovery from an emergency situation:

#### **Name and Address:**

Synergy Resources Corporation  
20203 Highway 60  
Platteville, Colorado 80651  
(970) 737-1073

Evans Fire District  
1100 37<sup>th</sup> Street  
Evans, CO 80620  
(970) 475-1117

#### **Type of Facility:**

Oil and Gas Wells

Location and Access:

Part of the northeast quarter of Section 26, Township 5 North, Range 66 West of the 6<sup>th</sup> P.M. City of Evans, County of Weld, Colorado. Access to the location is as follows: All of the proposed wells will be accessed using a proposed 120' access easement extending from Prairie View Dr. through the property directly to the east of the subject property (parcel no. 095926100056).

The access road leading up to the tank battery will be 25 feet in width and constructed of an aggregate base course all-weather surface a minimum of six (6) inches thick which meets the requirements for Class 6 Aggregate Base Course as specified by CDOT. The road will enter the site from the east. It will then access the production areas in a circular configuration. The access road is graded to provide simple drainage from the roadway.

Equipment Inspections:

All surface equipment is visually inspected on a regular basis for leakage, malfunction of seals etc. Inspections are made by Synergy personnel and reported to the Platteville office.

Drainage:

Drainage from the bermed area is controlled by Synergy personnel. Any fluids that may result inside the bermed areas will be moved by tank truck to a permitted disposal facility for proper disposal.

Spill Containment:

Facility berms (approximately 1 foot in height) are constructed to enclose an area with sufficient volume to contain 150% of the entire contents of the largest tank in the enclosure.

Security:

All proper warning signs and equipment guards will be installed.

**2. Training:** Synergy personnel are properly instructed in the operation and maintenance of equipment to prevent discharges of oil condensate and applicable pollution control laws, rules, and regulations.

**3. Emergency Contact List:** The following is a list of Synergy personnel and emergency organizations that may be contacted in the event an emergency occurs at the wellheads.

**a. Synergy Resources.**

All facility emergencies are reported immediately to the appropriate person by the Synergy Resources Corporation dispatcher or answering service both of which can be reached 24 hours a day at (970) 737-1144. All facility emergencies shall be reported immediately to the appropriate Supervisor by the Supervisor On-Call. Further contact information will be provided upon permit approval.

**b. City and County Agencies:**

Type of Emergency

Evans Fire District  
911 or (970) 475-1117

Contact as emergencies dictate

Evans Police Department  
911 or (970) 339-2441

Fires & spills not contained within the facility or other emergencies.

Weld County Sheriff's Department  
911 or (970) 356-4000

Fires and spills not contained within the facility or other emergencies.

All Emergencies Call 911

**c. State Agencies:**

Colorado Oil and Gas Conservation Commission  
(303) 894-2100

As needed

Colorado Dept. of Public Health and Environment  
(303) 692-2000

As needed

**d. Federal Agencies:**

Environmental Protection Agency  
  
Region VIII  
Emergency Response Number:  
(214) 749-3840 (24 hours)

Inland spills into water when U.S.C.G cannot be reached

Signs will be posted in conformance with the COGCC General Rule 210 (b) showing some or all of the names and numbers above.

**4. Emergency Response Procedures:**

The District Production Manager has responsibility for implementing the Emergency Response Plan. The implementation of the plan will depend on the type of emergency.

The Emergency Response Plan for a wellhead or tank battery emergency shall be as follows:

- a. Immediately after a facility emergency has been reported to the District Production Manager, he will investigate the location to determine the extent of the emergency and any potential hazard to the public.
- b. If necessary, rescue injured and render first aid.

- c. Evacuate the area of all non-company personnel.
- d. Follow Synergy Spill/Emergency Reporting Guidelines.
- e. Close all load and fill lines on storage tanks.
- f. Place all electrical breakers in the off position.
- g. Obtain whatever assistance is needed from local Police, Sheriff Department and/or Fire Department.
- h. The District Production Manager will notify the Synergy office personnel of any emergency which might result in news media coverage.
- i. Required notifications and reports to City, State and Federal agencies shall be handled as applicable by Synergy personnel.

**5. Contingency Procedures / (SPCC) Plans:** A Spill Prevention Control and Countermeasure (SPCC) Plan is maintained at the Synergy Platteville office. This plan should be referred to if a major product spill occurs.

**6. Release of Information:** Release of information is the responsibility of the Synergy Platteville office.

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Report Prepared by:



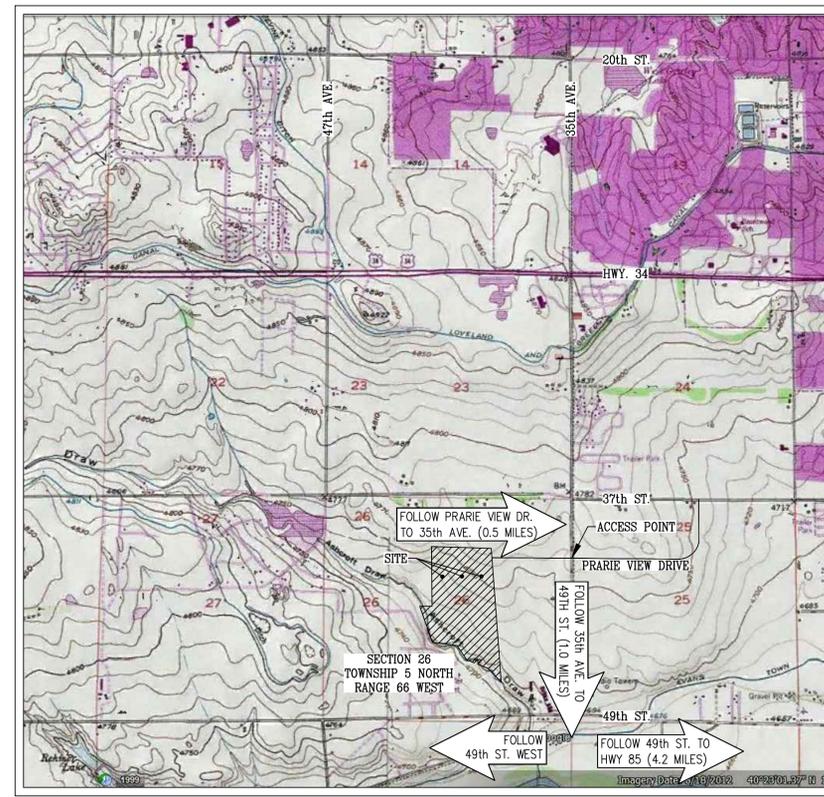
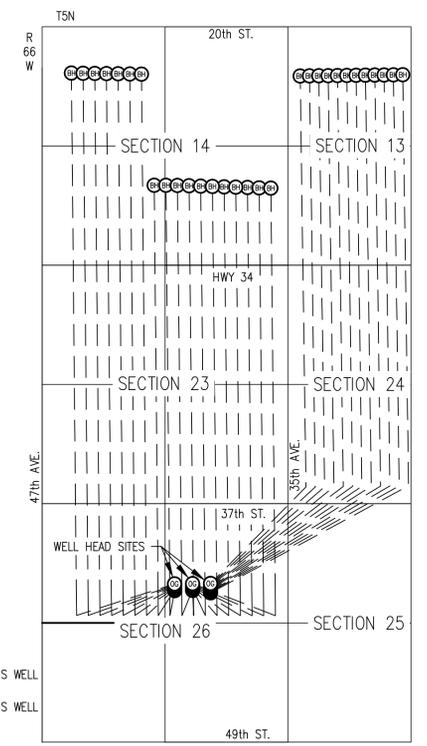
*Golden Office*  
1950 Ford Street  
Golden, CO 80401

303-202-5010 or 303-940-9966

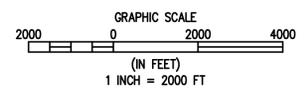
[www.baselinecorp.com](http://www.baselinecorp.com)

# SYNERGY RESOURCES EVANS WELLS MASTER SITE PLAN

AN OIL AND GAS PRODUCTION FACILITY  
 LOCATED IN SECTION 26, TOWNSHIP 5 NORTH, RANGE 66 WEST, 6TH P.M.  
 CITY OF EVANS, COUNTY OF WELD, STATE OF COLORADO  
 SHEET 1 OF 10



VICINITY MAP / TRANSPORTATION & HAUL ROUTE PLAN



**TRANSPORTATION NOTES:**

1. ROUTES SHOWN DEPICT DRILLING PHASE ROUTES FOR ALL WELL HEADS.
2. ROUTES TO BE FOLLOWED AS SHOWN AFTER DRILLING FOR PRODUCTION PHASE TRAFFIC.

**PROPERTY DESCRIPTION:**

OWNER: SYNERGY RESOURCES CORPORATION  
 WELD COUNTY PARCEL NO. 095926400017 AND PARCEL 095926300001  
 LAND USE: CROPLAND  
 ZONING: R-1 (SINGLE-FAMILY RESIDENTIAL)  
 R-2 (TWO-FAMILY RESIDENTIAL)  
 PART OF THE WEST HALF OF THE EAST HALF OF SECTION 26, TOWNSHIP 5 NORTH,  
 RANGE 66 WEST OF THE 6TH P.M.  
 RECEPTION NUMBER 3978190

**CONTACTS**

- APPLICANT** SYNERGY RESOURCES CORPORATION  
 20203 HIGHWAY 60  
 PLATTEVILLE, CO 80651  
 CRAIG RASMUSON  
 (970) 737-1073
- PROPERTY OWNERS** SYNERGY RESOURCES CORPORATION  
 20203 HIGHWAY 60  
 PLATTEVILLE, CO 80651  
 CRAIG RASMUSON  
 (970) 737-1073
- CITY OF EVANS PLANNING AND ZONING** SEAN WHEELER  
 1100 37th ST.  
 EVANS, CO 80620  
 (970) 475-1170
- WELD COUNTY SHERIFFS DEPARTMENT** JOHN COOKE  
 WELD COUNTY SHERIFF  
 (970) 356-4000 OR 911
- EVANS FIRE DEPARTMENT** WARREN D. JONES  
 FIRE CHIEF  
 (970) 475-1117 OR 911
- EVANS POLICE DEPT.** (970) 339-2411 OR 911
- COLORADO OIL & GAS CONSERVATION COMMISSION** (303) 894-2100
- ENVIRONMENTAL PROTECTION AGENCY REGION VIII** (303) 293-1788  
 (800) 277-8914
- VACUUM TRUCK SERVICES** (970) 356-4487
- BACKHOE SERVICE** (970) 737-1073
- SPILL CLEANUP SERVICES** (970) 737-1073

**SHEET INDEX**

- C1 - COVER / TRANSPORTATION PLAN
  - C2 - OVERALL SITE PLAN
  - C3 - PRODUCTION / WELLHEAD SITE LOCATION DETAIL
  - C8 - DETAILS
  - C9 - DETAILS
  - C4 - DRILLING PHASE GRADING PLAN
  - C5 - FINAL GRADING PLAN
  - C6 - DRILLING PHASE EROSION CONTROL PLAN
  - C7 - FINAL EROSION CONTROL PLAN
  - S1 - SCREENING PLAN
- NOTE: SHEETS C4-C7 AND SHEET S1 WITH BE PROVIDED IN A FUTURE SUBMITTAL

**LEGEND:**

**BASELINE**  
 Engineering - Planning - Surveying  
 1850 FORD STREET • GOLDEN, COLORADO 80407  
 P. 303.940.8966 • F. 303.940.8969 • www.baselinecorp.com

DESIGNED BY	DATE
RAB	5/8/15
DRAWN BY	DATE
SMB	8/6/15
CHECKED BY	DATE
RAB	

**SYNERGY RESOURCES CORPORATION**  
 WELD COUNTY  
 EVANS WELLS MASTER SITE PLAN - USR  
 PART OF EAST HALF OF SECTION 26, TOWNSHIP 5N, RANGE 66W, 6TH P.M.  
 COVER / TRANSPORTATION PLAN

DIG SAFELY  
 BEFORE YOU DIG CALL:  
**1-800-922-1987**  
 UTILITY NOTIFICATION  
 CENTER OF COLORADO



REVISION DESCRIPTION	DATE
REVISED LAYOUT	5/8/15
REVISED LAYOUT	8/6/15

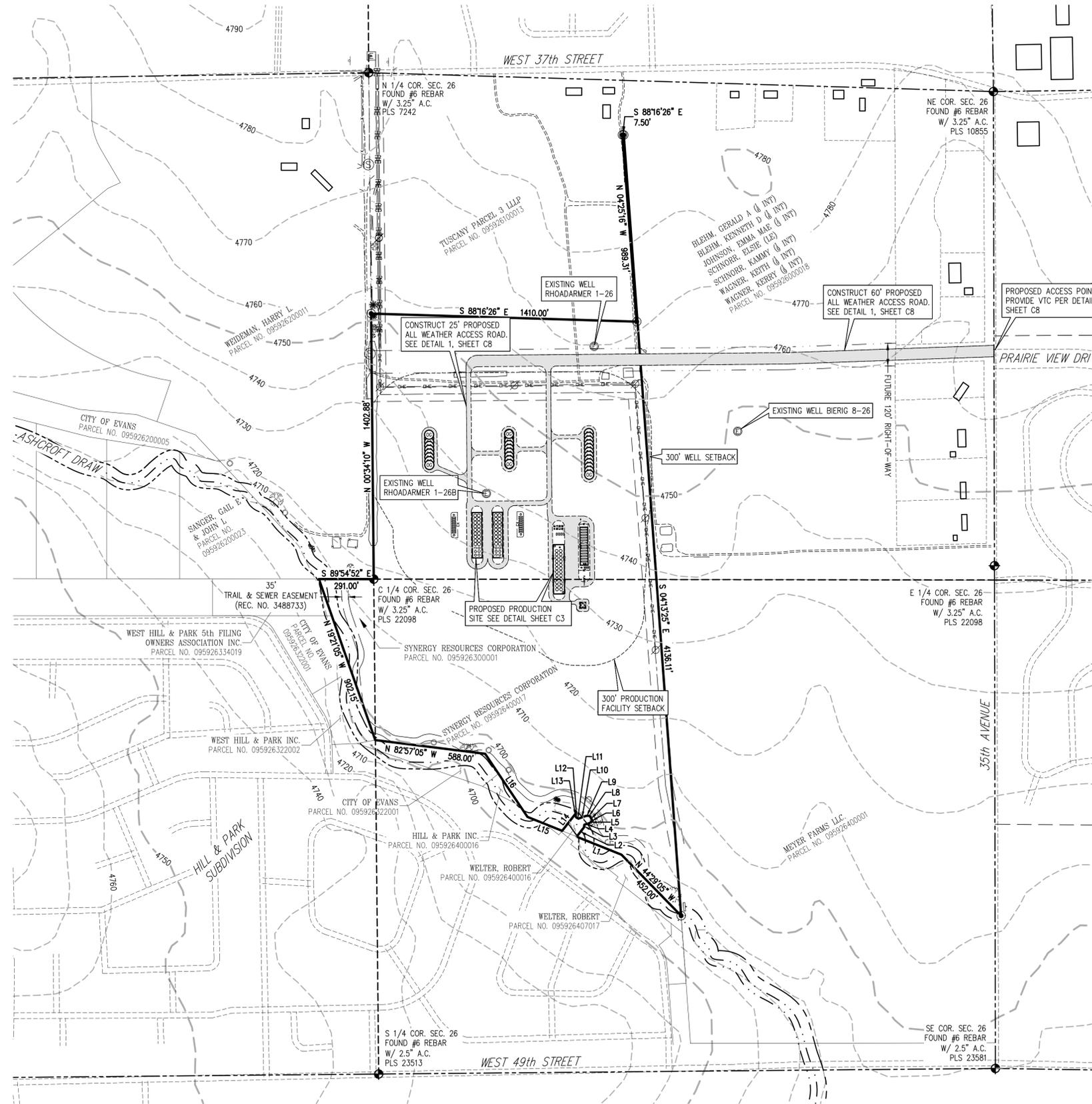
FOR AND ON BEHALF OF	DATE
BASELINE CORPORATION	10/7/14
DRAWING SIZE	24" X 36"
SURVEY FIRM	SURVEY DATE
BEC	6/4/14
JOB NO.	C0252
DRAWING NAME	
252 - SRC EVANS - USR.dwg	
SHEET	1 OF 10

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# SYNERGY RESOURCES EVANS WELLS MASTER SITE PLAN

USE BY SPECIAL REVIEW SITE PLAN  
SHEET 2 OF 10

LINE #	LENGTH	BEARING
L1	255.88'	N 68°11'05" W
L2	62.93'	N 38°02'07" E
L3	13.96'	N 08°17'10" E
L4	27.18'	N 73°06'48" E
L5	16.40'	N 57°30'25" E
L6	6.58'	N 16°53'53" E
L7	24.88'	N 29°17'36" W
L8	10.30'	N 75°23'59" W
L9	12.43'	S 83°46'38" W
L10	41.23'	S 70°14'17" W
L11	5.65'	N 65°25'05" W
L12	8.76'	N 57°19'16" W
L13	16.93'	N 19°34'46" W
L14	111.03'	S 38°02'07" W
L15	197.79'	N 68°11'05" W
L16	402.00'	N 33°57'05" W



### CONTOUR NOTES:

- 10' CONTOUR LINES SHOWN HEREIN WERE DIGITIZED FROM PUBLISHED USGS QUAD SHEETS AND AS SUCH ARE APPROXIMATE AND SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES.
- FOR SURVEY CONTROL AND DATUM INFORMATION, CONTACT BASELINE CORP.

### SETBACK NOTES:

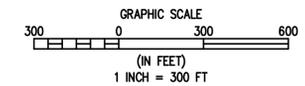
- SETBACKS AS SHOWN FOLLOW CITY OF EVANS LAND USE CODE (SECTION 16.28.060) AS FOLLOWS:
- 20' SETBACK: UTILITY EASEMENTS (SETBACK NOT SHOWN FOR CLARITY)
  - 75' SETBACK: ALL FACILITIES TO STREET R.O.W.
  - 150' SETBACK: WELL HEADS TO BUILDINGS
  - 300' SETBACK: TANK BATTERY TO BUILDINGS AND WELL HEAD TO PLACES OF ASSEMBLY

### SYMBOL LEGEND

- ALLOT MONUMENT
- FOUND NO. 4 REBAR W/ 1" RED PLASTIC CAP MARKED "PLS 38106"
- POWER POLE
- PROPOSED OIL & GAS SURFACE HOLE
- PROPOSED OIL & GAS BOTTOM HOLE
- EXISTING PRODUCTION WELL
- EXISTING/PROPOSED ACCESS POINT
- VEHICLE TRACKING CONTROL PAD (SEE DETAIL 2, SHEET C4)

### LINETYPE LEGEND

- MINOR CONTOUR (10')
- MAJOR CONTOUR (50')
- EDGE OF GRAVEL ROAD
- EDGE OF PAVED ROAD
- APPROX. LOCATION OF OVERHEAD POWER
- APPROX. LOCATION OF OVERHEAD UTILITIES
- SETBACK AS DESCRIBED
- PROPERTY LINE
- FENCE
- SECTION LINE
- APPROX. ADJACENT PROPERTY LINES
- FUTURE RIGHT-OF-WAY



1  
C2/C2 OVERALL SITE PLAN



DESIGNED BY	DATE	PREPARED BY	REVISION DESCRIPTION
RAB	5/8/15	SMB	REVISED LAYOUT
SMB	8/6/15	AK	REVISED LAYOUT

SYNERGY RESOURCES CORPORATION  
WELD COUNTY  
EVANS WELLS MASTER SITE PLAN - USR  
PART OF EAST HALF OF SECTION 26, TOWNSHIP 5N, RANGE 66W, 6th P.M.  
OVERALL SITE PLAN

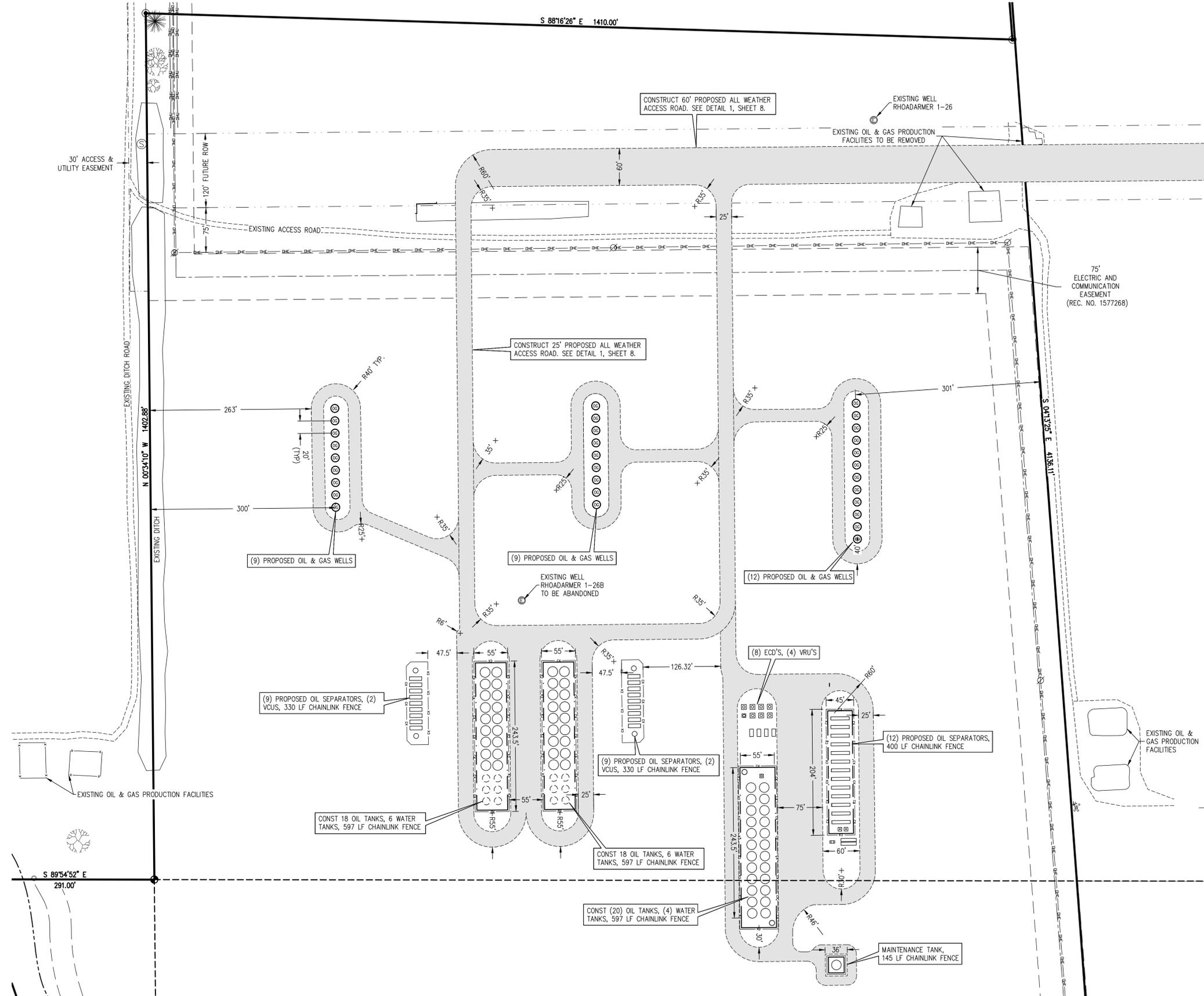
FOR AND ON BEHALF OF BASELINE CORPORATION
INITIAL SUBMITTAL 10/7/14
DRAWING SIZE 24" X 36"
SURVEY FIRM SURVEY DATE 6/4/14
JOB NO. C0252
DRAWING NAME 252 - SRC EVANS - USR.dwg
SHEET 2 OF 10

C2

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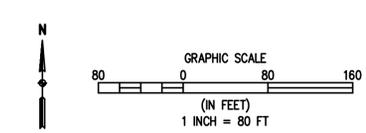
# SYNERGY RESOURCES EVANS WELLS MASTER SITE PLAN

USE BY SPECIAL REVIEW SITE PLAN  
SHEET 3 OF 10



- SYMBOL LEGEND**
- ⊙ PROPOSED OIL & GAS WELL
  - ⊕ EXISTING OIL & GAS WELL
  - ⊗ WOOD POST
  - ▭ PROPOSED ACCESS ROAD (SEE DETAIL 4 SHEET C8)
- LINETYPE LEGEND**
- - - - - EDGE OF GRAVEL ROAD
  - PROPERTY LINE
  - - - - - SECTION LINE
  - - - - - EASEMENT
  - - - - - EXISTING OVERHEAD POWER TRANSMISSION LINE
  - - - - - EXISTING OVERHEAD UTILITY LINE
  - - - - - FUTURE RIGHT-OF-WAY

1  
C2/C3 PRODUCTION / WELLHEAD SITE LOCATION DETAIL



**BASELINE**  
Engineering · Planning · Surveying

1950 FORD STREET • GOLDEN, COLORADO 80401  
P. 303.940.9966 • F. 303.940.9965 • www.baselinecorp.com

DESIGNED BY: R.A.B.  
DRAWN BY: S.M.B.  
CHECKED BY: R.A.B.

REVISION DESCRIPTION

REVISION	DESCRIPTION	DATE	PREPARED BY
1	REVISED LAYOUT	5/8/15	S.M.B.
2	REVISED LAYOUT	8/6/15	A.K.

SYNERGY RESOURCES CORPORATION  
WELD COUNTY

EVANS WELLS MASTER SITE PLAN – USR  
PART OF EAST HALF OF SECTION 26, TOWNSHIP 5N, RANGE 66W, 6th P.M.  
PRODUCTION / WELLHEAD SITE LOCATION DETAIL

CITY OF EVANS

PREPARED UNDER THE DIRECT SUPERVISION OF

FOR AND ON BEHALF OF  
BASELINE CORPORATION

INITIAL SUBMITTAL 10/7/14  
DRAWING SIZE 24" X 36"  
SURVEY FIRM SURVEY DATE  
BEC 6/4/14  
JOB NO. C0252  
DRAWING NAME  
252 - SRC EVANS - USR.dwg  
SHEET 3 OF 10

C3

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# SYNERGY RESOURCES EVANS WELLS MASTER SITE PLAN

USE BY SPECIAL REVIEW SITE PLAN  
SHEET 8 OF 10

DESIGNED BY	RAB
DATE	5/8/15
PREPARED BY	SMB
REVISION DESCRIPTION	
REVISED LAYOUT	AK
REVISED LAYOUT	8/6/15
DRAWN BY	SMB
CHECKED BY	RAB

**SYNERGY RESOURCES CORPORATION**  
CITY OF EVANS  
WELD COUNTY  
EVANS WELLS MASTER SITE PLAN - USR  
PART OF EAST HALF OF SECTION 26, TOWNSHIP 5N, RANGE 66W, 6th P.M.  
DETAILS

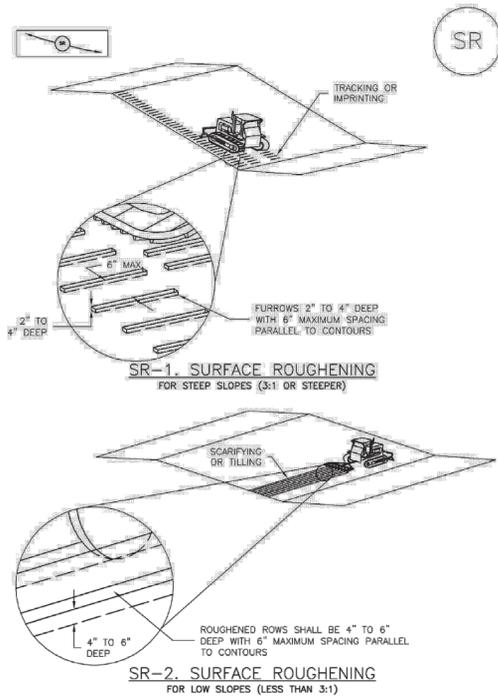
FOR AND ON BEHALF OF	BASELINE CORPORATION
INITIAL SUBMITTAL	10/7/14
DRAWING SIZE	24" X 36"
SURVEY FIRM	SURVEY DATE
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DRAWING NAME	252 - SRC EVANS - USR.dwg
SHEET	8 OF 10

## Surface Roughening (SR)

EC-1

EC-1

## Surface Roughening (SR)



### SURFACE ROUGHENING INSTALLATION NOTES

- SEE PLAN VIEW FOR:
  - LOCATION(S) OF SURFACE ROUGHENING.
- SURFACE ROUGHENING SHALL BE PROVIDED PROMPTLY AFTER COMPLETION OF FINISHED GRADING (FOR AREAS NOT RECEIVING TOPSOIL) OR PRIOR TO TOPSOIL PLACEMENT OR ANY FORECASTED RAIN EVENT.
- AREAS WHERE BUILDING FOUNDATIONS, PAVEMENT, OR SOD WILL BE PLACED WITHOUT DELAY IN THE CONSTRUCTION SEQUENCE, SURFACE ROUGHENING IS NOT REQUIRED.
- DISTURBED SURFACES SHALL BE ROUGHENED USING RIPPING OR TILLING EQUIPMENT ON THE CONTOUR OR TRACKING UP AND DOWN A SLOPE USING EQUIPMENT TREADS.
- A FARMING DISK SHALL NOT BE USED FOR SURFACE ROUGHENING.

### SURFACE ROUGHENING MAINTENANCE NOTES

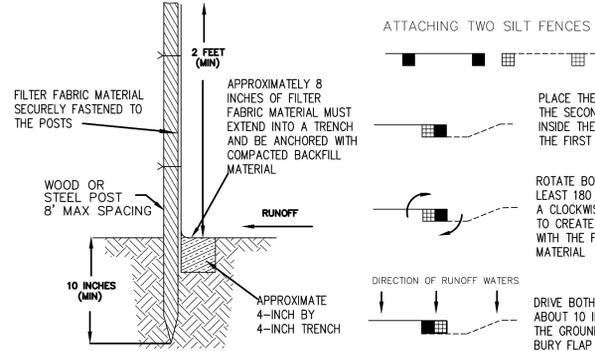
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACE UPON DISCOVERY OF THE FAILURE.
- VEHICLES AND EQUIPMENT SHALL NOT BE DRIVEN OVER AREAS THAT HAVE BEEN SURFACE ROUGHENED.
- IN NON-TURF GRASS FINISHED AREAS, SEEDING AND MULCHING SHALL TAKE PLACE DIRECTLY OVER SURFACE ROUGHENED AREAS WITHOUT FIRST SMOOTHING OUT THE SURFACE.
- IN AREAS NOT SEEDED AND MULCHED AFTER SURFACE ROUGHENING, SURFACES SHALL BE RE-ROUGHENED AS NECESSARY TO MAINTAIN GROOVE DEPTH AND SMOOTH OVER RILL EROSION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

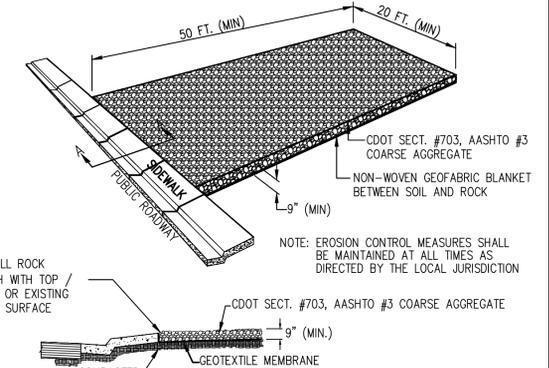
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDPCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SR-3

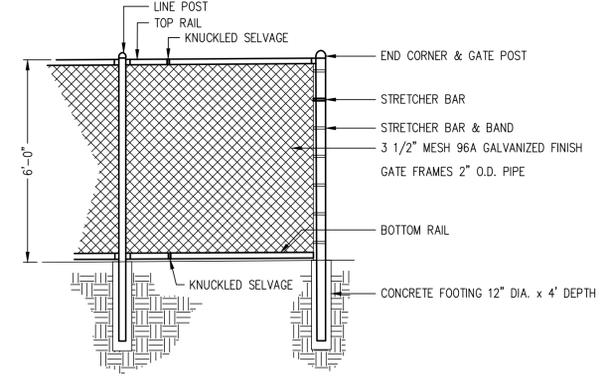
SR-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010



**3 SILT FENCE NOT TO SCALE**

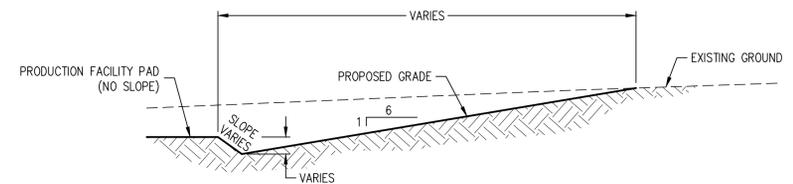


**2 CONSTRUCTION STAGING PAD (VTC) NOT TO SCALE**

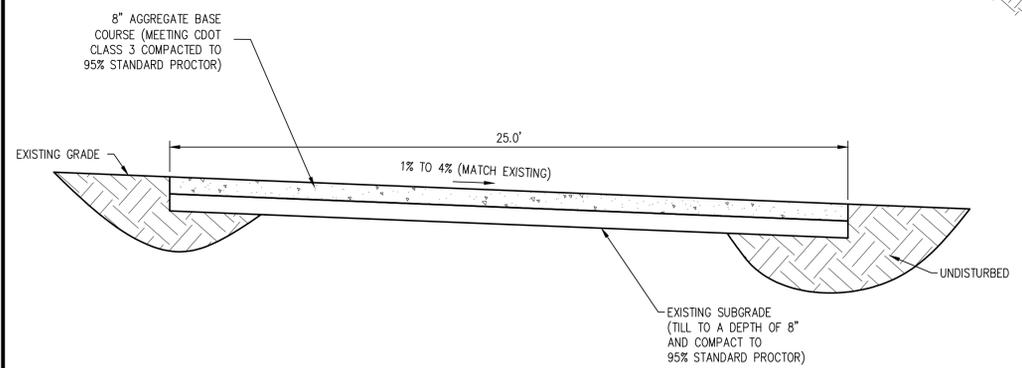


**7 CHAIN LINK FENCE DETAIL NOT TO SCALE**

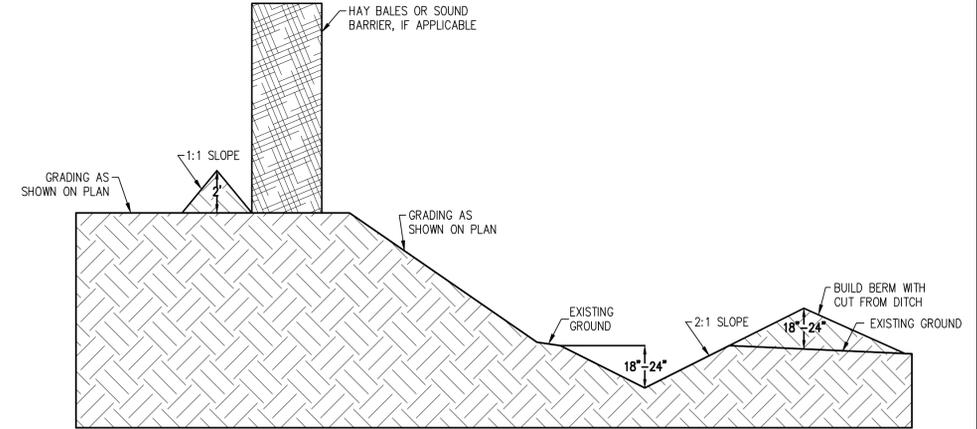
NOTE: EACH CHAIN LINK FENCE GATE MUST BE EQUIPPED WITH A "KNOX BOX" OR APPROVED EQUIVALENT FOR EMERGENCY ACCESS



**5 TYPICAL DIVERSION DITCH CROSS SECTION (PRODUCTION FACILITY) NOT TO SCALE**



**1 ALL WEATHER ROAD CROSS SECTION NOT TO SCALE**

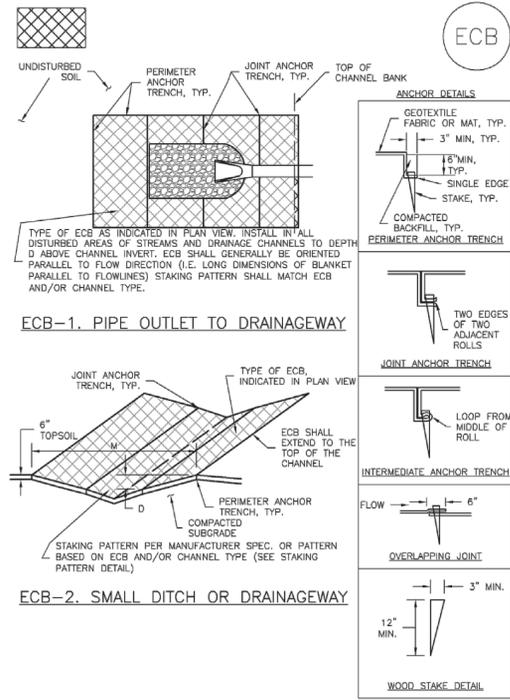


**4 DITCH & BERM SYSTEM NOT TO SCALE**

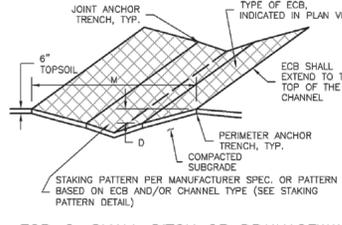
# SYNERGY RESOURCES EVANS WELLS MASTER SITE PLAN

USE BY SPECIAL REVIEW SITE PLAN  
SHEET 9 OF 10

## EC-6 Rolled Erosion Control Products (RECP)

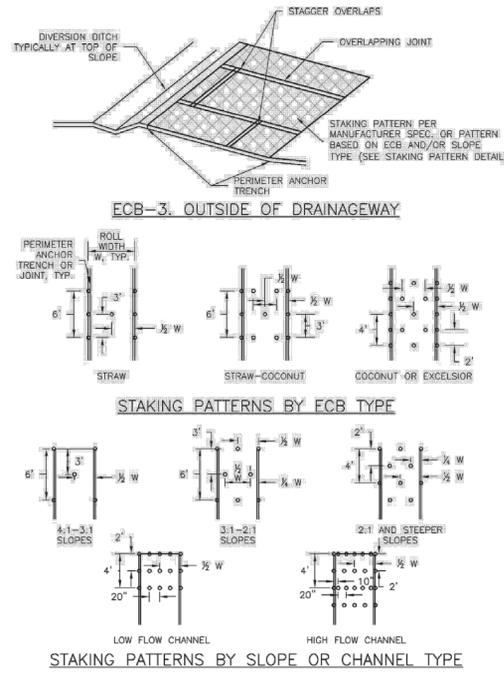


ECB-1. PIPE OUTLET TO DRAINAGEWAY



ECB-2. SMALL DITCH OR DRAINAGEWAY

## EC-6 Rolled Erosion Control Products (RECP)



ECB-3. OUTSIDE OF DRAINAGEWAY

STAKING PATTERNS BY ECB TYPE

STAKING PATTERNS BY SLOPE OR CHANNEL TYPE

## EC-6 Rolled Erosion Control Products (RECP)

- EROSION CONTROL BLANKET INSTALLATION NOTES**
- SEE PLAN VIEW FOR:
    - LOCATION OF ECB.
    - TYPE OF ECB (STRAW, STRAW-COCONUT, COCONUT, OR EXCELSIOR).
    - AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.
  - 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.
  - IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
  - PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
  - JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.
  - INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE-HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.
  - OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.
  - MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB-1.
  - ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBs SHALL BE RESEEDED AND MULCHED.
  - DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

## RECP-8 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

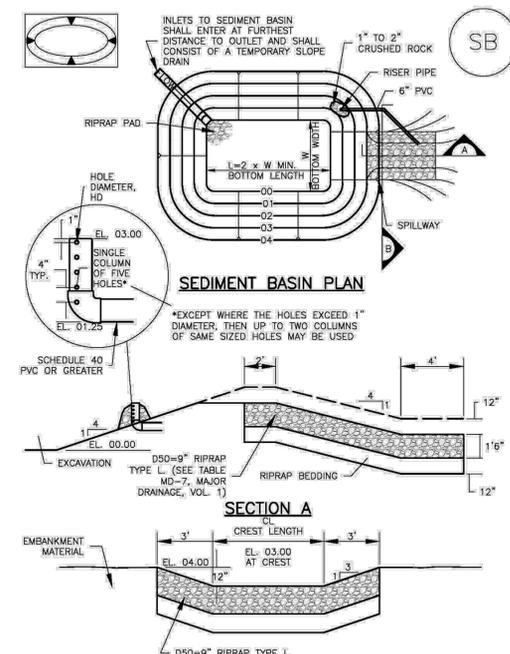
## EC-6 Rolled Erosion Control Products (RECP)

- EROSION CONTROL BLANKET MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  - ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.
  - ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

## RECP-9 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

## RECP-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

## Sediment Basin (SB) SC-7



## SB-5 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

## SC-7 Sediment Basin (SB)

TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 1/2	2	3/4
2	21	3	1 1/16
3	28	5	3/4
4	33 1/2	6	7/8
5	38 1/2	8	2 1/2
6	43	9	2 1/2
7	47 1/2	11	2 1/2
8	51	12	2 1/2
9	55	13	3/4
10	58 1/2	15	1 1/8
11	61	16	3/4
12	64	18	1
13	67 1/2	19	1 1/8
14	70 1/2	21	1 1/8
15	73 1/2	22	1 3/8

## SB-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

## Sediment Basin (SB) SC-7

- SEDIMENT BASIN MAINTENANCE NOTES**
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  - FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  - WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  - SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E. TWO FEET BELOW THE SPILLWAY CREST).
  - SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
  - WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

## SB-7 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

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DESIGNED BY: R.A.B. DATE: 5/8/15  
DRAWN BY: S.M.B. DATE: 8/6/15  
CHECKED BY: R.A.B.

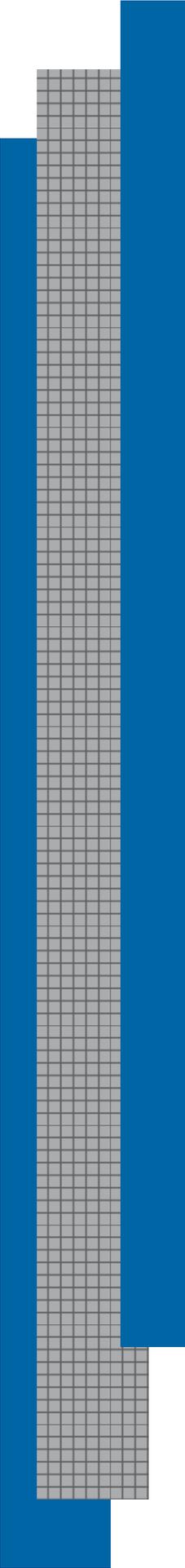
REVISION DESCRIPTION  
REVISED LAYOUT  
REVISED LAYOUT

SYNERGY RESOURCES CORPORATION  
WELD COUNTY  
EVANS WELLS MASTER SITE PLAN - USR  
PART OF EAST HALF OF SECTION 26, TOWNSHIP 5N, RANGE 66W, 6th P.M.  
CITY OF EVANS  
PREPARED UNDER THE DIRECT SUPERVISION OF

FOR AND ON BEHALF OF  
BASELINE CORPORATION  
INITIAL SUBMITTAL 10/7/14  
DRAWING SIZE 24" X 36"  
SURVEY FIRM SURVEY DATE  
BEC 6/4/14  
JOB NO. C0252  
DRAWING NAME  
252 - SRC EVANS - USR.dwg  
SHEET 9 OF 10

C9

M:\Well Projects-Planning\252 - SRC EVANS Wells USR\Drawings\252 - SRC EVANS - USR.dwg, 8/7/2015 3:08:39 PM, Jacob Harris



# SYNERGY EVANS 30 WELLS ECONOMIC IMPACT REPORT

CITY OF EVANS

NOVEMBER 3, 2014  
REVISED: AUGUST 5, 2015

Report prepared by:



## INTRODUCTION

Baseline Corporation, on behalf of Synergy Resources Corporation, has applied for a Use by Special Review (USR) permit for a proposed Oil and Gas production facility in Evans, Colorado. The USR application, if approved, will permit the drilling of 30 new horizontal wells and their associated production equipment. The surface land upon which the well pads will be situated is owned by Synergy Resources Corporation. The approximate disturbed area for the proposed site totals 24 acres and the property as a whole measures approximately 91 acres in total size. The property is currently zoned R-1 (Single-Family Residential) and R-2 (Two-Family Residential).

This Economic Impact Report is submitted in fulfillment of Evans' requirements for USR applications.

### **Property location:**

Part of the NE ¼ of Section 26,  
Township 5 North, Range 66 West of the 6th P.M.  
City of Evans, County of Weld, Colorado

Parcels: 095926400017 & 095926300001 (Weld County)

### **Vicinity Map:**



## **ECONOMIC IMPACT**

The purpose of this Economic Impact Report is to portray the approximate fiscal effects to the City of Evans based on the approval of the 30 wells. Any change in the use of the land will have an effect on the city's services and tax base through a variety of sources. The subject property has largely been underutilized for a number of years, and the proposed facility would increase the percentage of State allocated funds that are awarded to local communities each year (severance tax). The City of Evans will also gain monetarily from ad valorem taxes that are applied to both the production of each well head as well as the value of equipment on site, which come in the form of property taxes. Finally, the community will also benefit from individuals who are employed by service companies that Synergy plans to utilize for contract work on the proposed site. Below you will find a summary of all estimated economic benefits to the City of Evans.

The research and findings are as follows:

### **Job creation summary:**

- Jobs Created: **100+**
  - Full Time: **2**
  - Part Time: **100+**
- Average Annual Salary: **\$75,000+/year**
- Benefits Provided to Employees? – **Yes**
  - Health Care – **Yes**
  - Retirement – **Yes**
  - Other – **Yes (Varies between service companies)**

### **Property tax (Ad valorem taxation on production and equipment):**

- Increase in property tax in year 1: ~ **\$233,608**
- Increase in property tax over 10 years: ~ **\$2,840,957**

Property taxation for Oil and Gas production facilities is collected both for the total production on each well as well as on the value of all production equipment on site. The Ad Valorem taxes are assessed at 87.5% for each well's production value and 29% for the total value of the equipment.

To assess the value of the O&G equipment proposed for the site, Baseline referenced the Colorado Department of Local Affairs ARL (Assessor's Reference Library) Volume 5. This document provides different values for each piece of equipment based on type and condition. Using this document, the total value of all equipment on the site was determined. The total equipment value was then multiplied by the assessment value of 29%, per State Statute and Weld County Assessor practice. The current City of Evans Mill Levy value (3.536) was used to determine an estimated amount that will be paid to the City of Evans.

For the oil production assessment, Baseline referenced a newly installed horizontal well pad containing five horizontal wells and its related value of oil production. The production value for each well is determined by multiplying the total amount of annual production by the sale price and subtracting typical shipping expenses. Each of the 30 new wells was assigned an annual production value of approximately \$2.5 million based on the average production value for other Synergy wells in the area. The typical total production value was then multiplied by the assessment value of 87.5%, per State

Statute and Weld County Assessor practice. The current City of Evans Mill Levy value (3.536) was used to determine an estimated amount that will be paid to the City of Evans.

These figures were combined, along with the current assessment values for the surface parcels, to generate an estimated amount of revenue that will be paid to the City of Evans. The following figures show all parcel, equipment, and oil production values that are proposed (Figure 1). Also included is a projection of the potential revenue to the City of Evans over a period of ten years, calculated with a 2% inflation rate for land and oil production (Figure 2). No increase or decrease was calculated for the O&G equipment. The mill levy is assumed to stay constant.

In total, the City of Evans may see approximately \$2,840,957 in increased property tax revenue over ten years after production starts should the 30 Wells be approved and constructed.

**State of Colorado Severance Taxation:**

The State of Colorado on an annual basis collects Severance Taxes from various industries including oil and gas production. Half of the State Severance Tax Trust Fund remains with the State and half is deposited in the Local Government Severance Tax Fund. The revenue in the local portion is returned to local governments impacted by oil, gas, and mineral production to help them provide needed services.

The dilemma which exists for states that significantly rely on oil and gas tax revenue is that fluctuations in price and production volumes create windfall revenues in some years and poor production volumes create revenue shortfalls in other years.

It is beyond the scope of this report to determine the total Oil and Gas Severance Taxes that the City of Evans provides to the state on a yearly basis. It would also be difficult to determine how much specific revenue the City of Evans can expect in return as the amount of total State revenue fluctuates on an annual basis.

**Statement of Estimation**

The numbers portrayed in this report are not and cannot be exact values, but rather are estimated amounts based upon a limited amount of information and projected oil and gas production. Some values were obtained directly from the Weld County Assessor records. Additionally, there are a number of outside factors that are unpredictable and can affect these values.

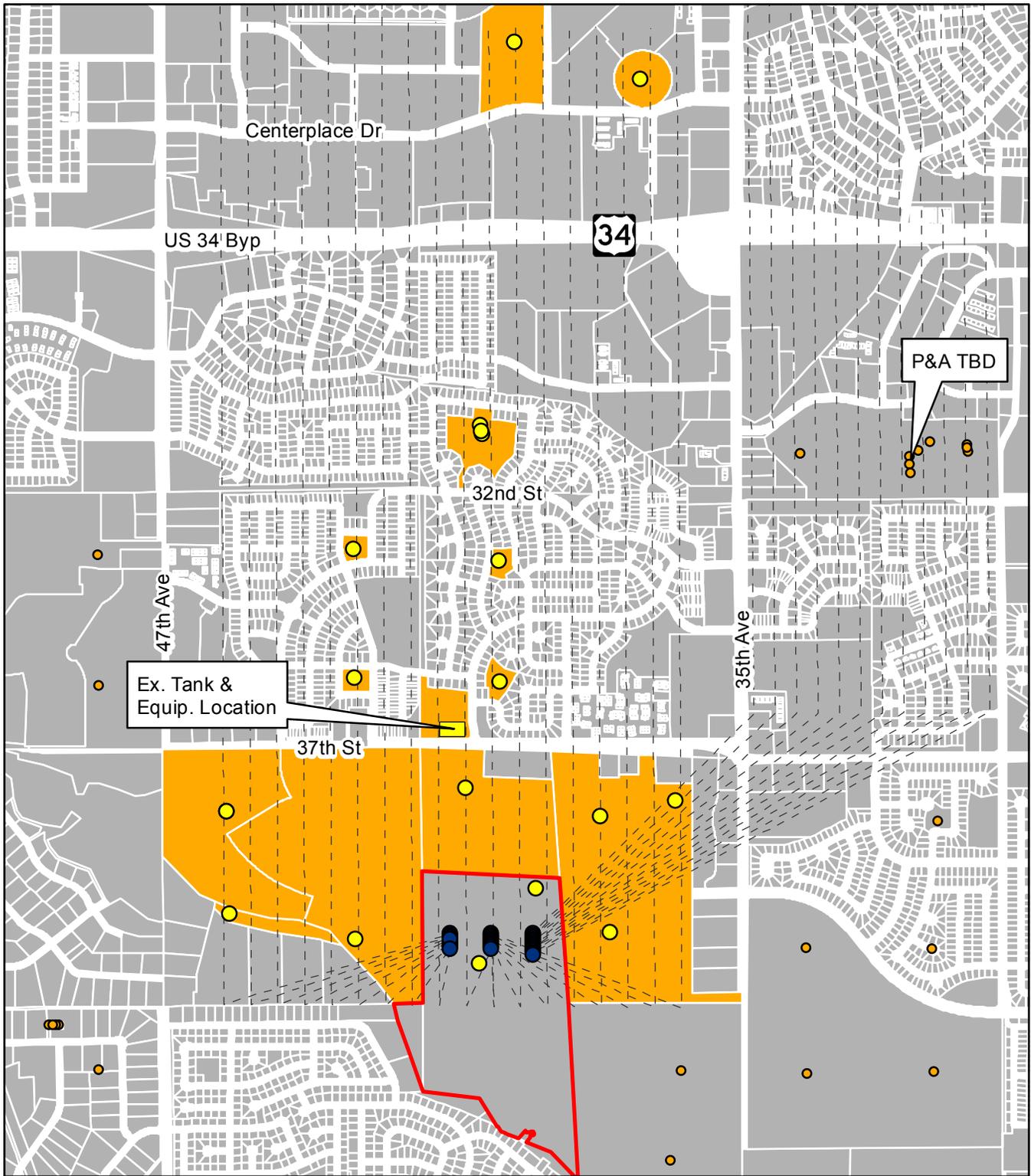
**FIGURES**

**Figure 1:**

<b>Proposed Parcel, Equipment, and Production Values (Year 1)</b>						
Description	Amount	Value per unit	Actual value	Assessed %	Assessed Value	Revenue to Evans
<b>Parcels:</b>						
Parcel R6780123	1	n/a	\$52,539	29%	\$15,240	\$54
Parcel R2637186	1	n/a	\$2,265	29%	\$660	\$2
<b>Equipment: (Very good condition)</b>						
Threaded Wellheads	30	\$7,883	\$236,490	29%	\$68,582	\$243
Separators (48"x12')	30	\$17,342	\$520,260	29%	\$150,875	\$533
Vapor flare system (VRU)	8	\$11,980	\$95,840	29%	\$27,794	\$98
Oil Tanks (400 Barrel)	56	\$8,852	\$495,712	29%	\$143,756	\$508
Water Tanks (210 Barrel)	16	\$5,724	\$91,584	29%	\$26,559	\$94
Gas Meter Run with House	3	\$8,308	\$24,924	29%	\$7,228	\$26
<b>Oil production: (see sheet "Well Production Totals")</b>						
Oil Production	30	\$2,500,000	\$ 75,000,000	87.5%	\$65,625,000	\$232,050
<i>Unit value information used from CO Dept. of Local Affairs - ARL Volume 5</i>			<b>TOTAL:</b>		<b>\$66,065,695</b>	<b>\$233,608</b>
<b>Existing Taxable Wells/Equipment On Site (to be abandoned)</b>						
Description	API	Account Number	Actual value	Assessed Value	Revenue Lost	
RHOADARMER 1-26 (production)	05-123-11729	O2686386	\$48,270	87.5%	\$42,240	\$149
RHOADARMER 1-26 (equipment)	05-123-11729	E0009620	\$8,252	29%	\$2,390	\$8
RHOADARMER 1-26B (production)	05-123-24888	O4193408	\$153,272	87.5%	\$134,120	\$474
RHOADARMER 1-26B (equipment)	05-123-24888	E4193408	\$11,706	29%	\$3,390	\$12
<i>Information used from Weld County Property Information Portal</i>			<b>TOTAL:</b>		<b>\$182,140</b>	<b>\$644</b>
						<b>Evans Mill Levy</b>
						3.536

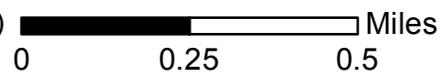
This figure represents all parcel, equipment, and oil production values for the first year of production from the Evans 30 Wells. Included is an estimated amount of revenue to be paid to the City of Evans, as well as the revenue that will be lost from the existing wells that are currently on site and will be abandoned.





- Synergy Resources Corp. Evans Site
- Proposed Synergy Evans Wells
- Potentially Plugged & Abandoned Well
- Producing Well
- Potentially Reclaimable Parcels (~276 acres)
- Proposed Synergy Horiz. Well Bores

Data source: Colorado Oil & Gas Conservation Commission, Weld County



## SRC Evans Wells

### Existing Wells to be Plugged & Abandoned

API	Well Name	City	Weld Co Parcel #	Surface Owner
05-123-11188	GILBERT 1	GREELEY	95914400005	GATE WAY PLACE PHASE II LTD
05-123-11666	GILBERT 2	GREELEY	95914419001	SYNERGY RESOURCES CORPORATION
05-123-11716	WIEDEMAN J26-3	EVANS	95926200012	TUSCANY PARCEL 3 LLLP
05-123-11726	WIEDEMAN J26-4	EVANS	95926200012	TUSCANY PARCEL 3 LLLP
05-123-11729	RHOADARMER 1-26	EVANS	95926400017	SYNERGY RESOURCES CORPORATION
05-123-12735	BIERIG 1-26	UNINC WELD	95926100056	WESTERN EQUIPMENT & TRUCK INC, BLEHM GERALD A, BLEHM MICHAEL J
05-123-13266	WIEDEMAN J26-6	EVANS	95926200011	WIEDEMAN HARRY L
05-123-14787	WIEDEMAN 4	EVANS	95926200005	EVANS CITY OF
05-123-15604	WIEDEMAN J23-11	EVANS	95923060001	TUSCANY LLC
05-123-15605	WIEDEMAN J23-14	EVANS	95923042001	TUSCANY LLC
05-123-15607	MANTEL J23-10	EVANS	95923003018	ASHCROFT HEIGHTS HOMEOWNERS ASSOCIATION
05-123-15608	MANTEL J 23-15	EVANS	95923032048	ASHCROFT HEIGHTS HOMEOWNERS ASSOCIATION
05-123-16612	RHOADARMER 2-26	EVANS	95926100013	TUSCANY PARCEL 3 LLLP
05-123-17835	UPRC 23-7H6	EVANS	95923023007	ASHCROFT HEIGHTS HOMEOWNERS ASSOCIATION
05-123-18627	UPV 23-2H6	EVANS	95923023007	ASHCROFT HEIGHTS HOMEOWNERS ASSOCIATION
05-123-18628	UPV 23-8H6	EVANS	95923023007	ASHCROFT HEIGHTS HOMEOWNERS ASSOCIATION
05-123-24888	RHOADARMER 1-26B	EVANS	95926400017	SYNERGY RESOURCES CORPORATION
05-123-24918	BIERIG 1-26B	UNINC WELD	95926100056	WESTERN EQUIPMENT & TRUCK INC, BLEHM GERALD A, BLEHM MICHAEL J
05-123-25622	BIERIG 8-26	UNINC WELD	95926100056	WESTERN EQUIPMENT & TRUCK INC, BLEHM GERALD A, BLEHM MICHAEL J
N/A	Prod Facility at 37th Street & Stampede Dr.	EVANS	95923031006	ASHCROFT HEIGHTS HOMEOWNERS ASSOCIATION

\*All wells and facilities will be plugged and abandoned and removed in conformance with local and state regulations.

# TRAFFIC IMPACT ASSESSMENT

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**To:** City of Evans  
**CC:** Baseline Project File – 252 Evans Wells USR  
**From:** Baseline Planning – Vince Harris, AICP  
**Date:** August 7, 2015  
**Re:** Synergy Resources Corporation – Evans Wells Preliminary Traffic Impact Assessment

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## OVERVIEW

This traffic impact assessment is prepared to accompany the Use by Special Review permit application for the Synergy “SRC Evans Wells” oil and gas production facility in Evans, Colorado. The application for the proposed facility is submitted by Baseline Corporation on behalf of Synergy Resources Corporation. The proposed facility is located in Section 26, Township 5 North, Range 66 West of the 6<sup>th</sup> P.M.

The proposed site will house approximately 30 wells and their associated production equipment. The site will not utilize the typical water trucks required for fresh water delivery but will instead pipe the water to the site from a water depot located along the Platte River. This process will help to reduce the amount of traffic compared to typical oil and gas production facilities.

Most of the traffic associated with oil and gas facilities is present during the initial construction, drilling, and completions phases of their operation (~12 to 18 months). Once the facility is in operation only a small amount of traffic is required on a daily basis for the remainder of the production cycle (approximately 25-30 years). One of the largest producers of truck traffic during the initial phases is the delivery of fresh water to the site. However since a pipeline is proposed to bring water to the site, the normal fresh water truck requirements are not applicable. To demonstrate the traffic associated with the SRC Evans Wells we have provided an overview of the long term traffic below. In addition a description of the proposed haul route has also been included.

## BACKGROUND

### Traffic access and route:

The site will be accessed from 35<sup>th</sup> Avenue, at the intersection of Prairie View Dr. and 35<sup>th</sup> Avenue. A private access drive will be constructed through the parcel directly to the east of the subject site (Parcel 095926100056 Weld County) and connect to an existing road on the north side of the property. Synergy has requested that an easement measuring no less than 120 feet in width be provided by the ownership of the parcel to the east.

The proposed route to be utilized will enter Evans from the southwest. Traffic will travel north along Two Rivers Parkway until it reaches the intersection of Two Rivers Parkway and WCR 378. Traffic will then travel east and eventually turn north onto 65<sup>th</sup> Avenue. It will then travel north on 65<sup>th</sup> Avenue until it reaches the intersection of 49<sup>th</sup> Street. Traffic will then travel approximately two and a half (2.5) miles east on 49<sup>th</sup> Street

and turn north on 35<sup>th</sup> Street to travel an additional 0.7 miles to the private access road. Please see the attached Haul Route Map for more information.

**Operational Equipment:**

The new production facility consists of 30 production 3-phase separators, six (8) vapor recovery units, 16 water tanks, and 56 oil tanks. This equipment is planned to be constructed upon approval of a Use by Special Review permit. The information below assesses current traffic generation associated with the site operations.

**TRIP GENERATION**

Operational Traffic:

The following table summarizes the anticipated traffic generation numbers per day on the proposed site. Traffic numbers are separated based on the operational phase with which they are associated. Each operational phase has a different duration period: Drilling approximately six (6) months, Completion four (4) months, and production approximately 25 years. As you will see there is a larger amount of traffic associated with the first year of the activity and a significant reduction in traffic during the lifespan of the site.

**Typical Traffic Activity for 30 wells (water delivered via pipeline)**

<b>(Peak Daily One-way Trips)</b>					
<b>Drilling Phase (6 mo.)</b>		<b>Completion Phase (4 mo.)</b>		<b>Production Phase (25 yrs.)</b>	
<b>Semi-Trucks</b>	<b>Pick-ups</b>	<b>Semi-Trucks</b>	<b>Pick-ups</b>	<b>Semi-Trucks</b>	<b>Pick-ups</b>
<b>60</b>	<b>50</b>	<b>200</b>	<b>70</b>	<b>12</b>	<b>1</b>

As indicated on the table above, the daily total number of trips of the proposed facility is significantly lower from that of a typical oil and gas production facility. It should be noted that the Completions Phase normally experiences the highest amount of traffic and is the phase typically associated with traffic improvement requests. The number of trips per day during this phase is relatively higher but as indicated water will be piped to the site for the phase (hydraulic fracturing). This significantly reduces the number of trips during this phase. We anticipate that the reduced number of trucks utilizing Evans roads will not trigger traffic improvements.

**ALTERNATIVE ROUTES**

Several criteria were analyzed to determine the best possible haul route for moving equipment and materials in and out of the proposed facility. The proposed haul route (described above) offers the second most direct path to the subject site, utilizes hard-surface roads, and proposes the most reduced amount of time that truck deliveries will come within close proximity to developed areas.

The proposed alternative route offers the most direct route but is currently too damaged due to recent floods to be utilized for the proposed facility. However should the road be restored and the City of Evans approves, the following haul route will be utilized for truck traffic.

The alternative route will originate from Highway 85. Trucks and other vehicles will travel north on Highway 85 and turn onto 42<sup>nd</sup> Street and travel west to Industrial Parkway. Traffic will then continue south on Industrial Parkway until it curves west and merges with 49<sup>th</sup> Street. It will then travel west on 49<sup>th</sup> Street until it reaches the intersection of 35<sup>th</sup> Avenue. Traffic will then travel approximately 0.7 miles north and then head west on the private access road mentioned above.

### **TRIP DISTRIBUTION**

It is anticipated that 100% of all hauling trips in and out of the proposed site will utilize the primary access route indicated above. However, should the City of Evans determine that they would prefer vehicles to utilize alternative routes, or a different distribution of the proposed vehicles, Synergy Resources Corporation is willing to work with the City to fulfill their desires.

### **INTERSECTIONS WITH LIMITED TURNING MOVEMENT AND POTENTIAL MITIGATION**

No areas were identified along the proposed haul route that will have a turning radius that cannot accommodate the proposed equipment. All intersections were identified to have turning radius's that are greater than 45'.

Synergy will monitor all intersections for potential tracking of debris and dirt onto the road.

If Synergy determines that vehicles will have problems making a right-hand turns on the route to and from the site, flaggers and warning signs will be used during rig-up and rig-down during the drilling and completions phases.

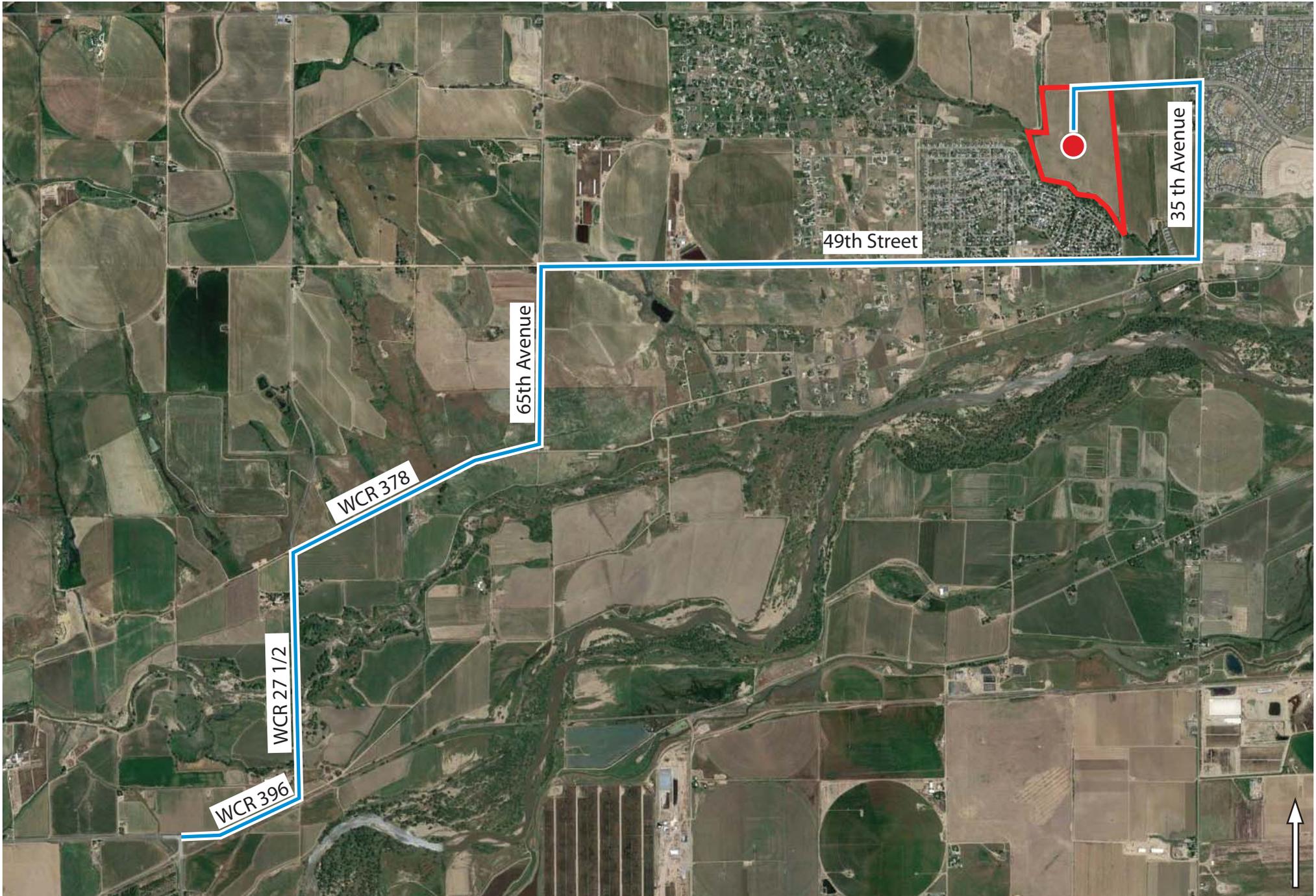
### **MITIGATION OF MUD TRACKING ON ROADWAYS**

Synergy Resources Corporation will be responsible for the daily inspection of 35<sup>th</sup> Avenue, within ¼ mile of the access point, to ensure that any potential tracking of debris and dirt will be cleaned at the end of each day. These cleaners will make periodic visits to the haul route and more frequent visits if necessary based on mud and debris.

### **CONCLUSION**

Synergy will continue to work with the City of Evans to ensure that all trucks and equipment will be properly mitigated to have minimal effects on local roads and the community. Please feel free to contact us if you have any additional questions or concerns.

# SRC EVANS WELLS HAUL ROUTE



# SRC EVANS WELLS HAUL ROUTE (ALTERNATIVE)

