

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0136  
Expires July 31, 2010

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		<b>CONFIDENTIAL</b>		5. Lease Serial No. COC63329
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		2. Name of Operator LARAMIE ENERGY II, LLC		6. If Indian, Allottee or Tribe Name
3a. Address 1512 LARIMER STREET SUITE 1000 DENVER, CO 80202		3b. Phone No. (include area code) Ph: 970-812-5310 Fx: 970-683-5594		7. If Unit or CA Agreement, Name and No. FG DEEP COC-75153
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SESW 83FSL 1913FWL 40.121280 N Lat, 108.605230 W Lon At proposed prod. zone NENE 100FNL 677FEL 40.135160 N Lat, 108.596280 W Lon		9. API Well No.		8. Lease Name and Well No. FLETCHER GULCH FED 22-14-22-01H
14. Distance in miles and direction from nearest town or post office* 12 MILES WEST TO RANGELY CO		12. County or Parish RIO BLANCO		10. Field and Pool, or Exploratory FLETCHER GULCH
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 3.03 MILES/PROPERTY 83' LEASE 2.5 MILES/UNIT 1600'		16. No. of Acres in Lease 1600'		11. Sec., T., R., M., or Blk. and Survey or Area Sec 22 T2N R100W Mer 6PM
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 1ST WELL ON LEASE		19. Proposed Depth 11948 MD 6468 TVD		12. County or Parish RIO BLANCO
21. Elevations (Show whether DF, KB, RT, GL, etc.) 6055 GL		22. Approximate date work will start 10/12/2012		13. State CO
				17. Spacing Unit dedicated to this well
				20. BLM/BIA Bond No. on file COB000206
				23. Estimated duration 45 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- |   |  |
|---|--|
| 1. Well plat certified by a registered surveyor.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification  |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature (Electronic Submission)	Name (Printed/Typed) WAYNE P BANKERT Ph: 970-812-5310	Date 05/17/2012
Title SNR. REG. & ENV. COORDINATOR		
Approved by (Signature)	Name (Printed/Typed)	Date
Title	Office	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #138352 verified by the BLM Well Information System  
For LARAMIE ENERGY II, LLC, sent to the Meeker

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

**Additional Operator Remarks:**

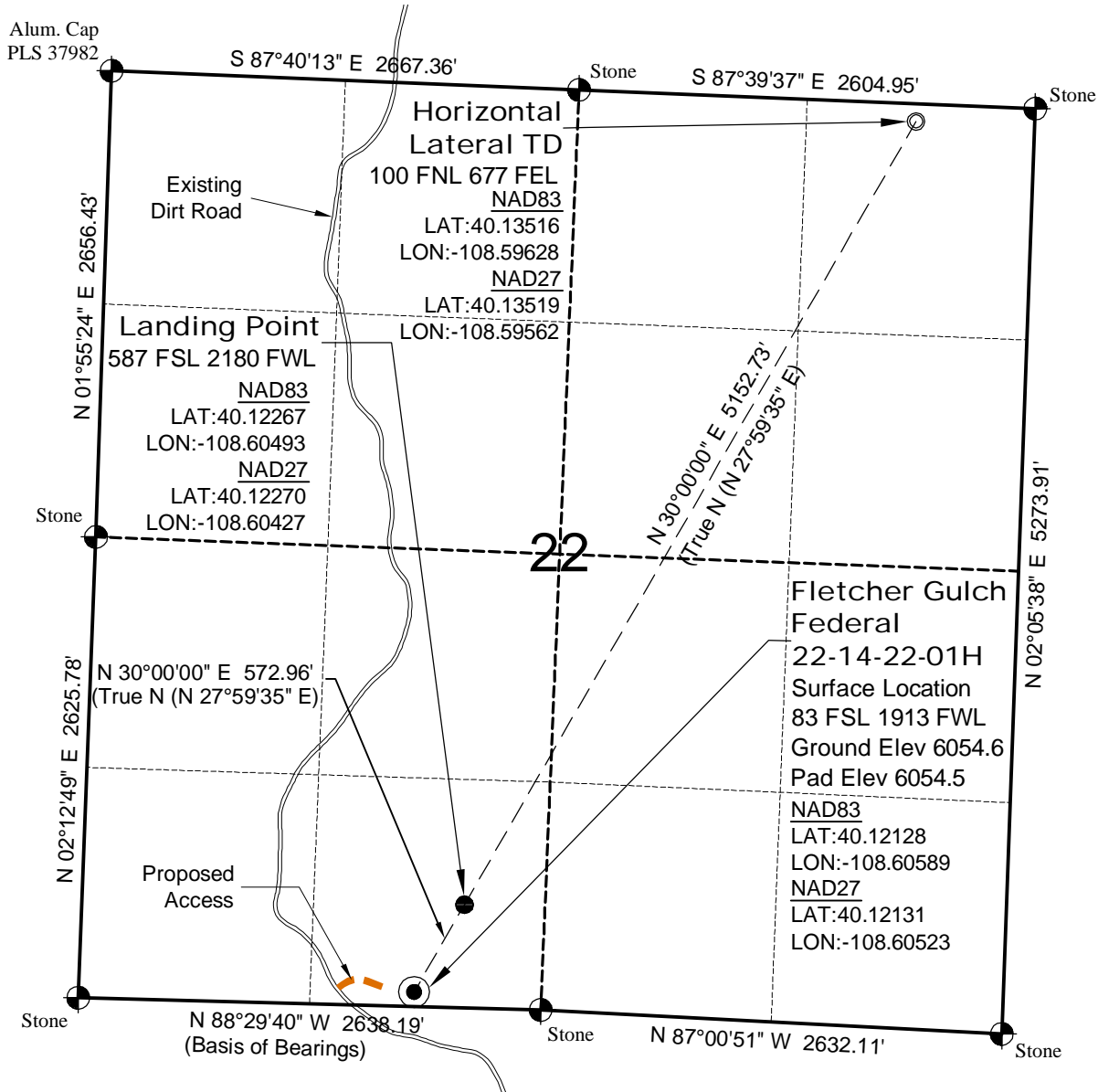
Fletcher Gulch Deep Unit Well.

Well to be drilled to a Pilot Hole TD of 8613' To allow for logging of the well. Once the logs are evaluated, the Pilot Hole will be plugged back to a depth of \*\*+/- 5895' and Kicked off for a Lateral in the Niobrara Tow Creek.

\*\*Actual Kick Off and Lateral will be adjusted once the Logs the evaluated.  
Verbal approval from BLM followed by filing of form 3160-5 will be obtained if KOP and TD changes substantially from original proposal.

# WELL LOCATION MAP

FLETCHER GULCH FEDERAL  
22-14 PAD

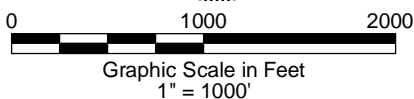


## NOTES

- 1.) Horizontal and vertical datum, based on NGS E 151-Reset.
  - 2.) All directions, distances, and dimensions shown hereon are based on coordinates from the "Colorado coordinate system of 1983 north zone" (article 52 of title 38, C.R.S.).
  - 3.) All section line dimensions shown hereon are based on field measurements of existing monuments and/or physical evidence found in the field unless otherwise indicated. Refer to BLM Survey.
  - 4.) Physical features shown hereon are for graphical representation only.
  - 5.) See Form 2A for visible improvements within 400' of wellhead.
  - 6.) Distances to nearest section lines are measured perpendicularly.
  - 7.) This is not a land survey nor land survey plat.
  - 8.) Date of Survey 11/3/11; Date of Drawing 3/7/12. REV 0
- PDOP Reading: 2.1 Instrument Operator: Dave Murrey

## SURVEYOR'S STATEMENT

The undersigned hereby states that the well location shown hereon was staked on the ground based on existing monumentation and/or physical evidence found in the field and is correct to the best of my knowledge, information and belief.

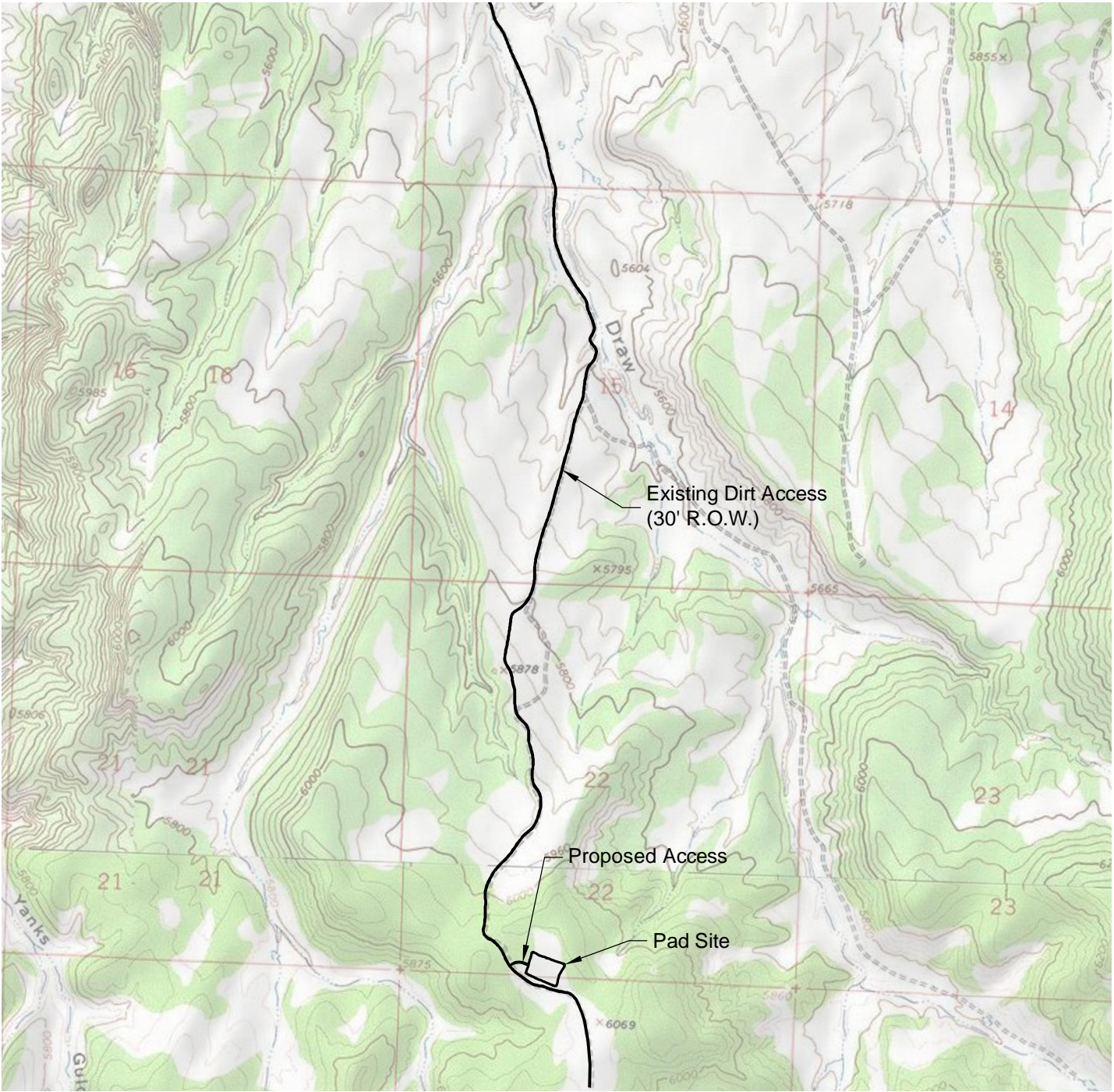


**GEO SURV**  
LAND SURVEYING AND MAPPING  
520 STACY COURT SUITE "B"  
LAFAYETTE, CO. 80026  
Ph 303 666 0379 Fx 303 665 6320

**LARAMIE ENERGY II LLC**  
FLETCHER GULCH FEDERAL 22-14-22-01H  
SL SE1/4 SW1/4 SECTION 22 T2N R100W  
HL NE1/4 NE1/4 SECTION 22 T2N R100W  
6th PM RIO BLANCO COUNTY COLORADO

# ACCESS ROAD MAP

FLETCHER GULCH FEDERAL  
22-14 PAD



North



Graphic Scale in Feet  
1" = 2000'

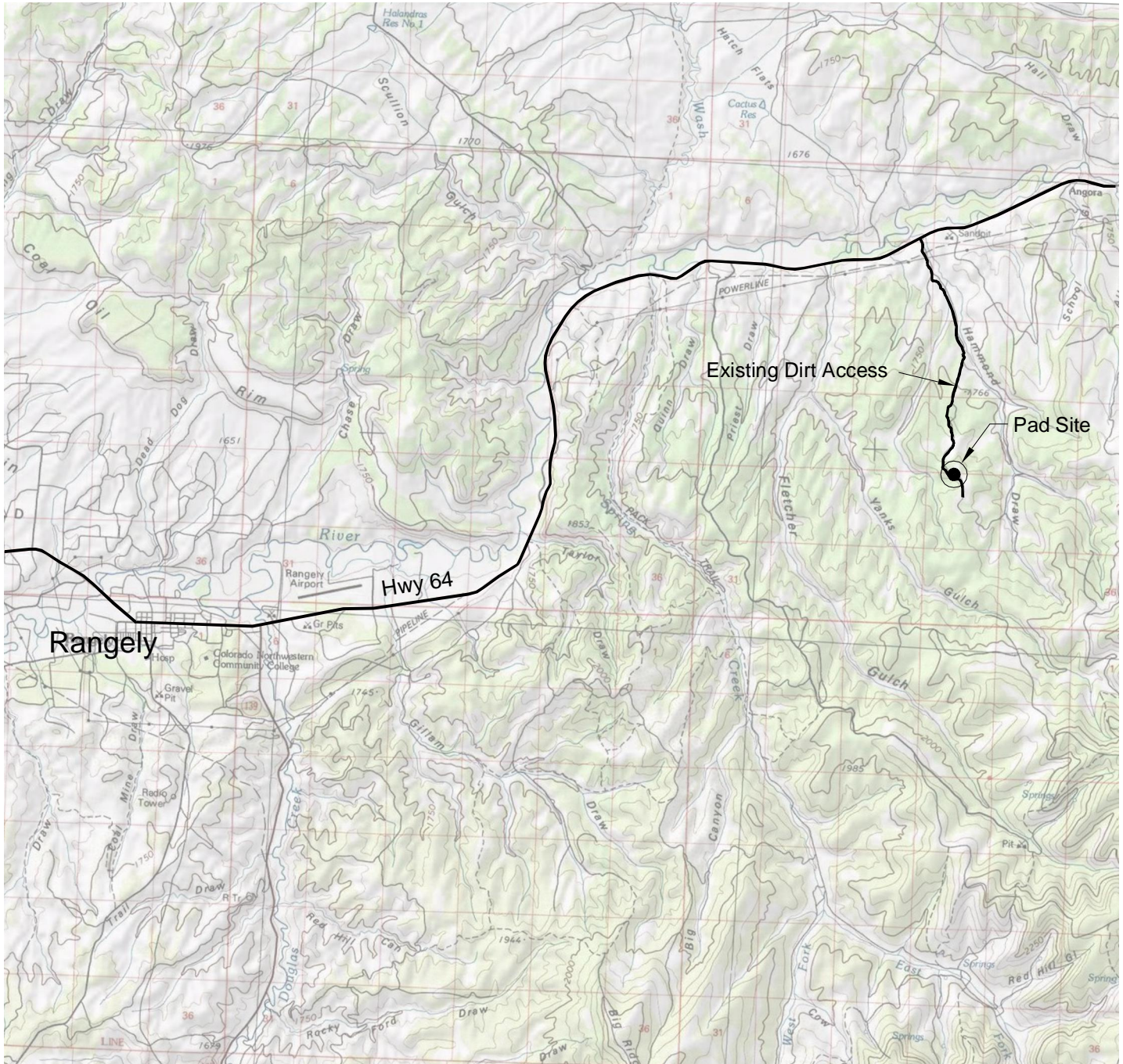
  
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**LARAMIE ENERGY II LLC**  
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**SL SE1/4 SW1/4 SECTION 22 T2N R100W**  
**HL NE1/4 NE1/4 SECTION 22 T2N R100W**  
**6th PM RIO BLANCO COUNTY COLORADO**



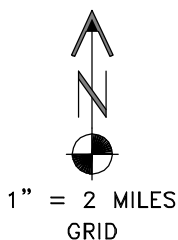
# VICINITY MAP

**FLETCHER GULCH FEDERAL  
22-14 PAD**



## DRIVING DIRECTIONS:

MP 0.0 - Rangely; Intersection of Highway 64 & Highway 139; East on Highway 64  
 MP 12.0 - Right on existing road; south along existing road  
 MP 15.4 - Left on access to Fletcher Gulch Federal 22-14 Pad  
 MP 15.5 - Fletcher Gulch Federal 22-14 Pad



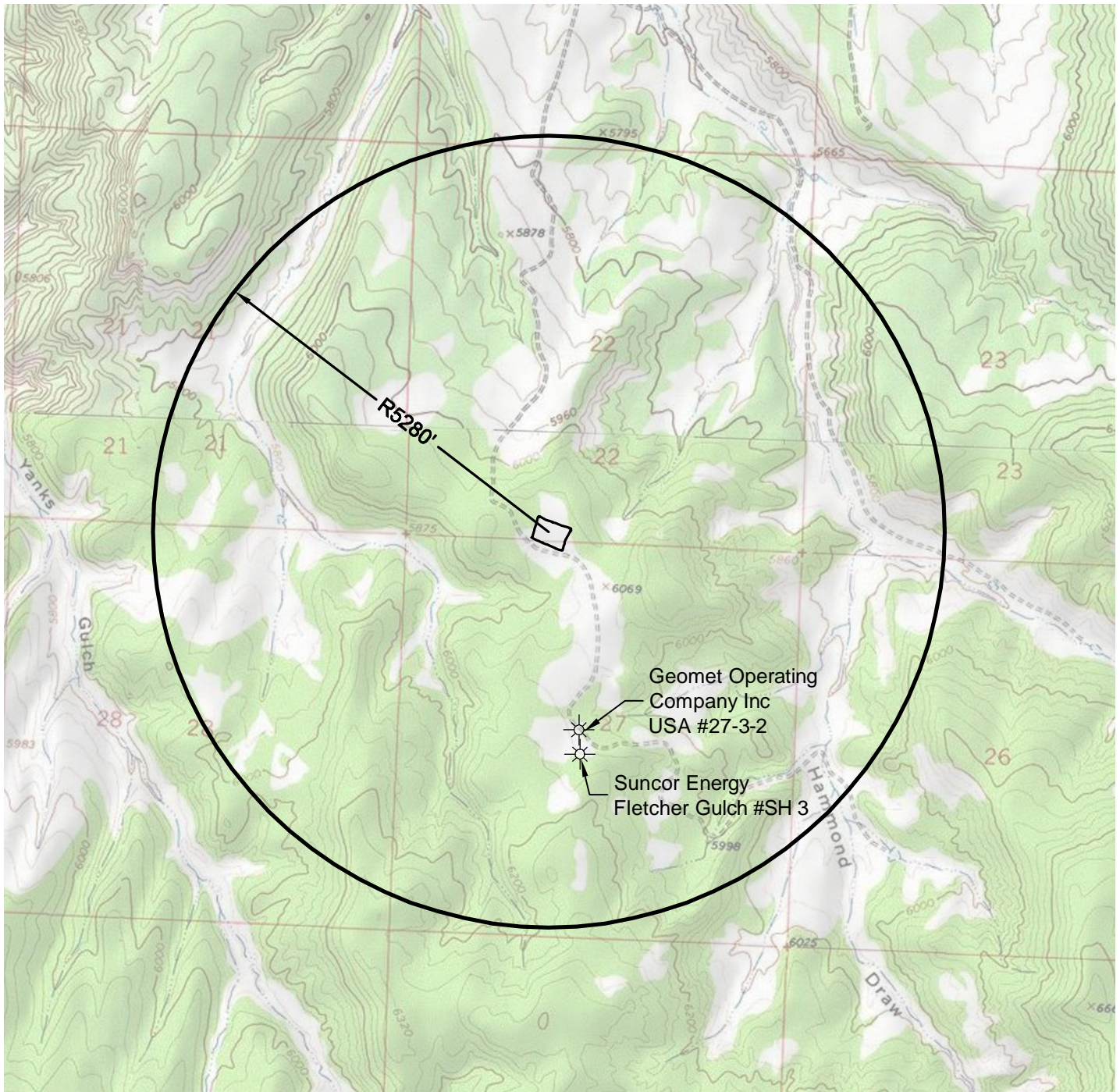
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 SL SE1/4 SW1/4 SECTION 22 T2N R100W  
 HL NE1/4 NE1/4 SECTION 22 T2N R100W  
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# WELL VICINITY MAP

FLETCHER GULCH FEDERAL  
22-14 PAD



North

0 2000 4000

Graphic Scale in Feet  
1" = 2000'



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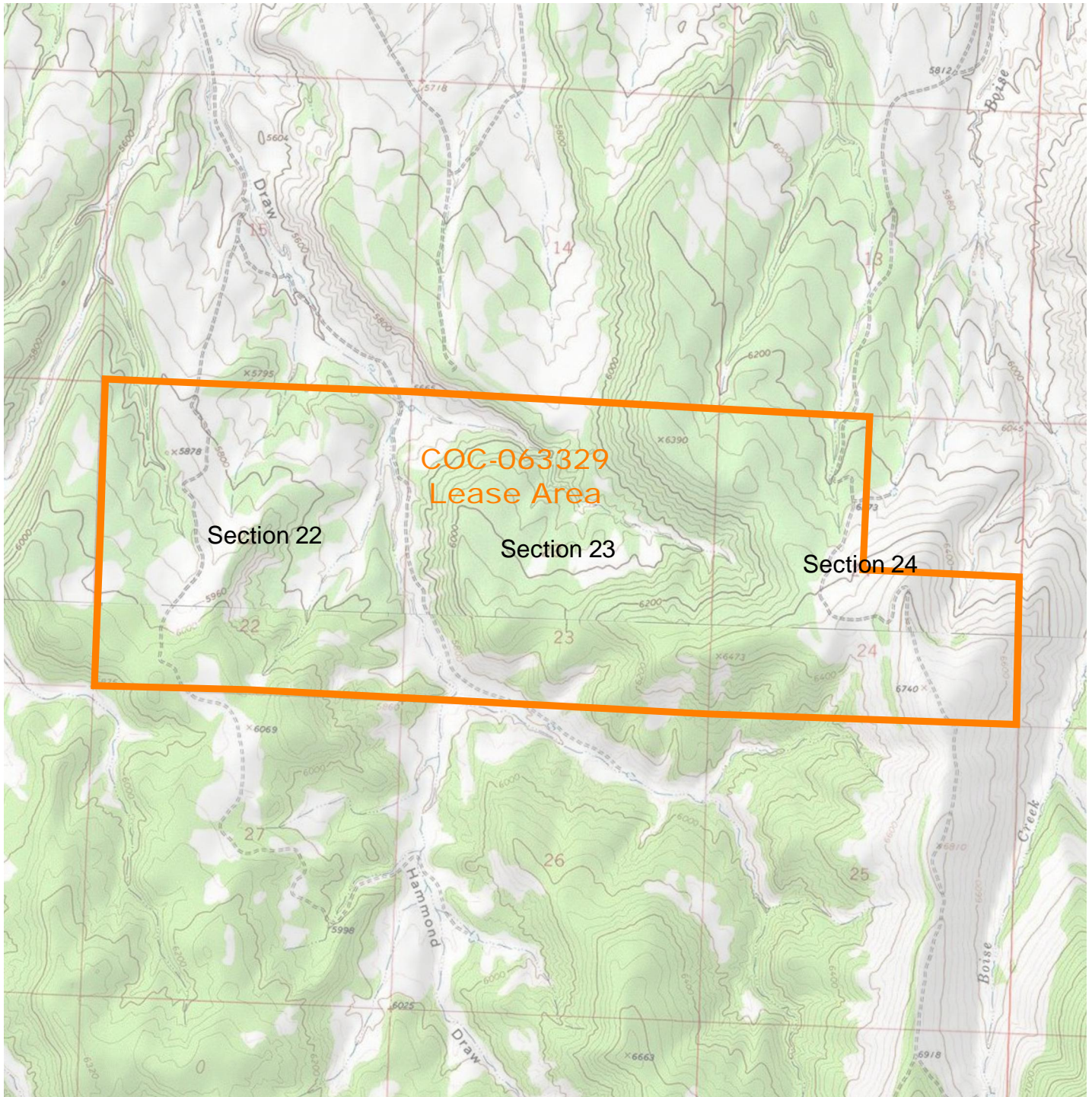
**LARAMIE ENERGY II LLC**  
**FLETCHER GULCH FEDERAL 22-14-22-01H**

**SL SE1/4 SW1/4 SECTION 22 T2N R100W**  
**HL NE1/4 NE1/4 SECTION 22 T2N R100W**  
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# LEASE AREA

FLETCHER GULCH FEDERAL  
22-14 PAD

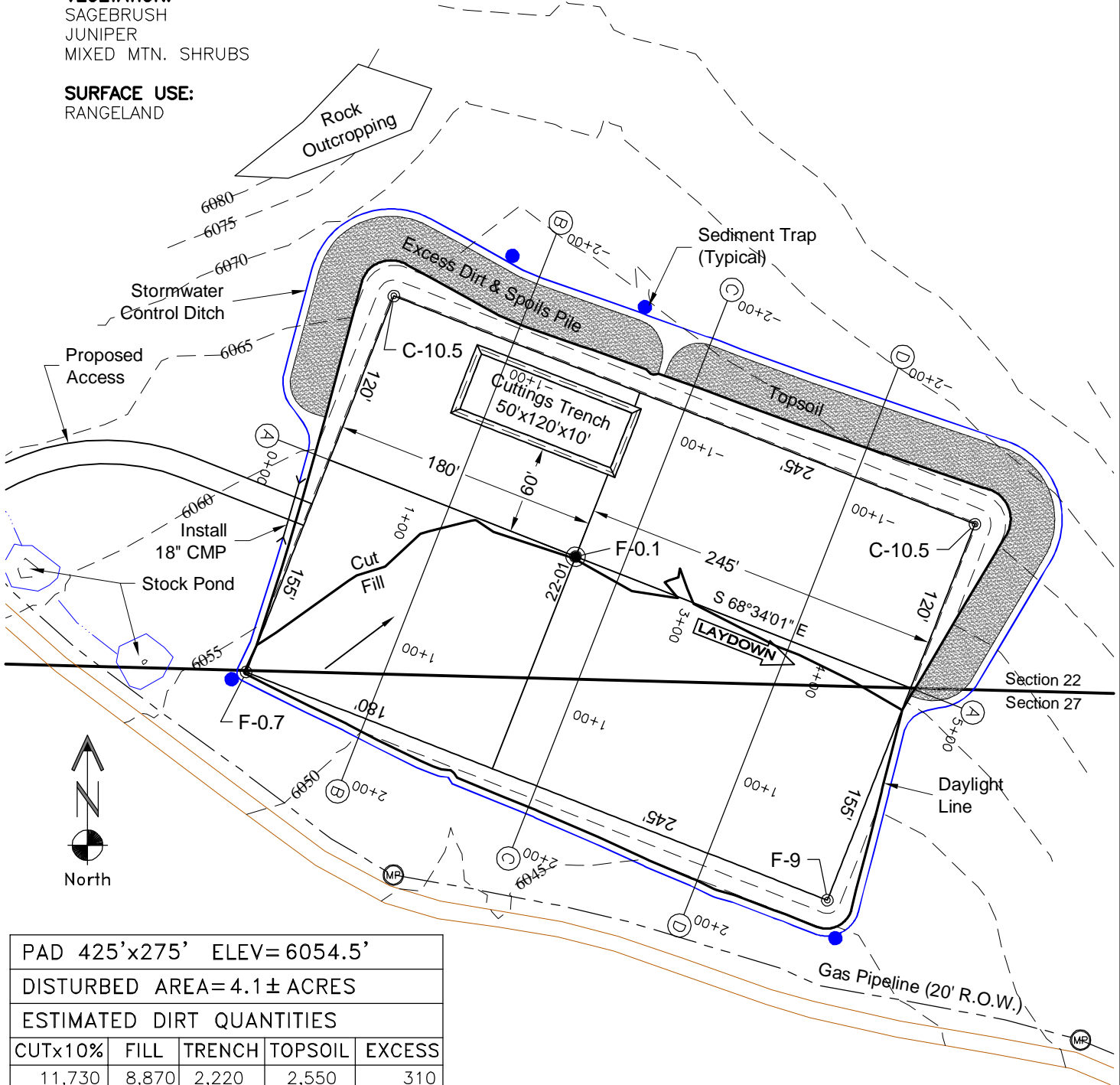


# PAD LAYOUT

FLETCHER GULCH FEDERAL  
22-14 PAD

**VEGETATION:**  
SAGEBRUSH  
JUNIPER  
MIXED MTN. SHRUBS

**SURFACE USE:**  
RANGELAND



PAD 425'x275' ELEV=6054.5'

DISTURBED AREA=4.1± ACRES

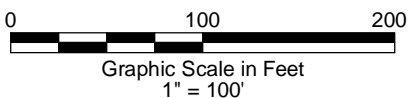
ESTIMATED DIRT QUANTITIES

CUTx10%	FILL	TRENCH	TOPSOIL	EXCESS
11,730	8,870	2,220	2,550	310

NOTE: VOLUMES IN CUBIC YARDS. TOPSOIL INCLUDED IN VOLUMES AT A DEPTH OF 6". TRENCH NOT INCLUDED IN TOTAL EXCESS.

## NOTES:

- 1) 10% ALLOWANCE IS MADE FOR SOIL EXPANSION.
- 2) MINIMIZE TOPSOIL REMOVAL TO ORGANIC LAYER.



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SL SE1/4 SW1/4 SECTION 22 T2N R100W  
HL NE1/4 NE1/4 SECTION 22 T2N R100W  
6th PM RIO BLANCO COUNTY COLORADO

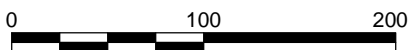


# EXISTING CONTOURS

FLETCHER GULCH FEDERAL  
22-14 PAD



North



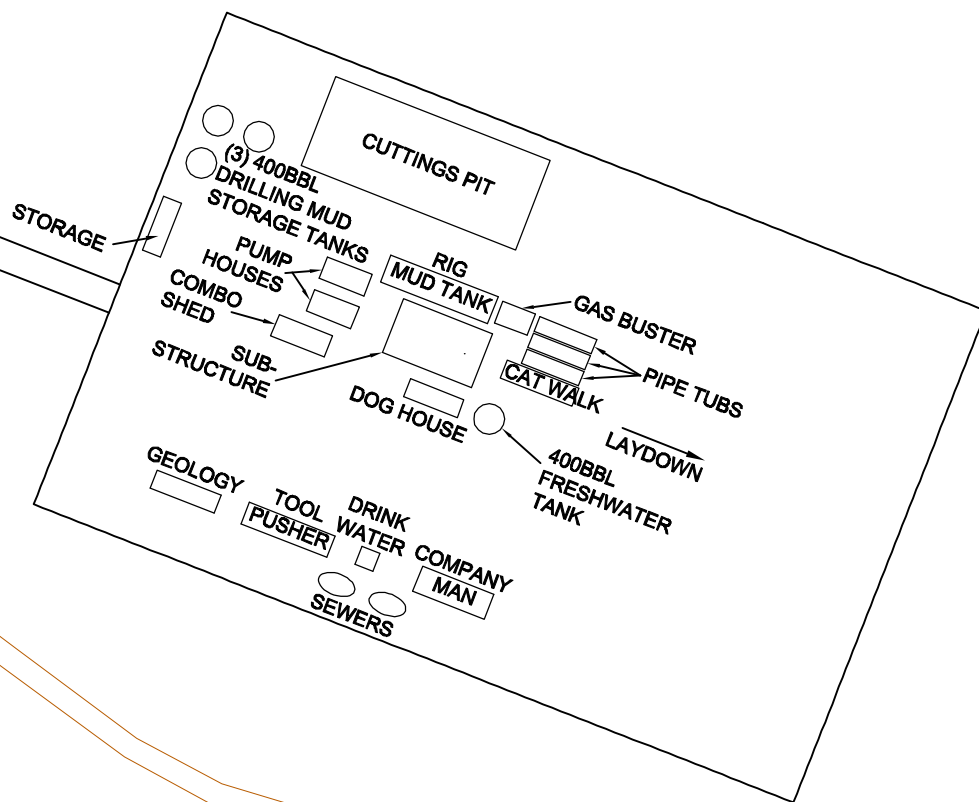
Graphic Scale in Feet  
1" = 100'

  
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**HL NE1/4 NE1/4 SECTION 22 T2N R100W**  
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# TYPICAL RIG LAYOUT

FLETCHER GULCH FEDERAL  
22-14 PAD



North

0 100 200

Graphic Scale in Feet  
1" = 100'



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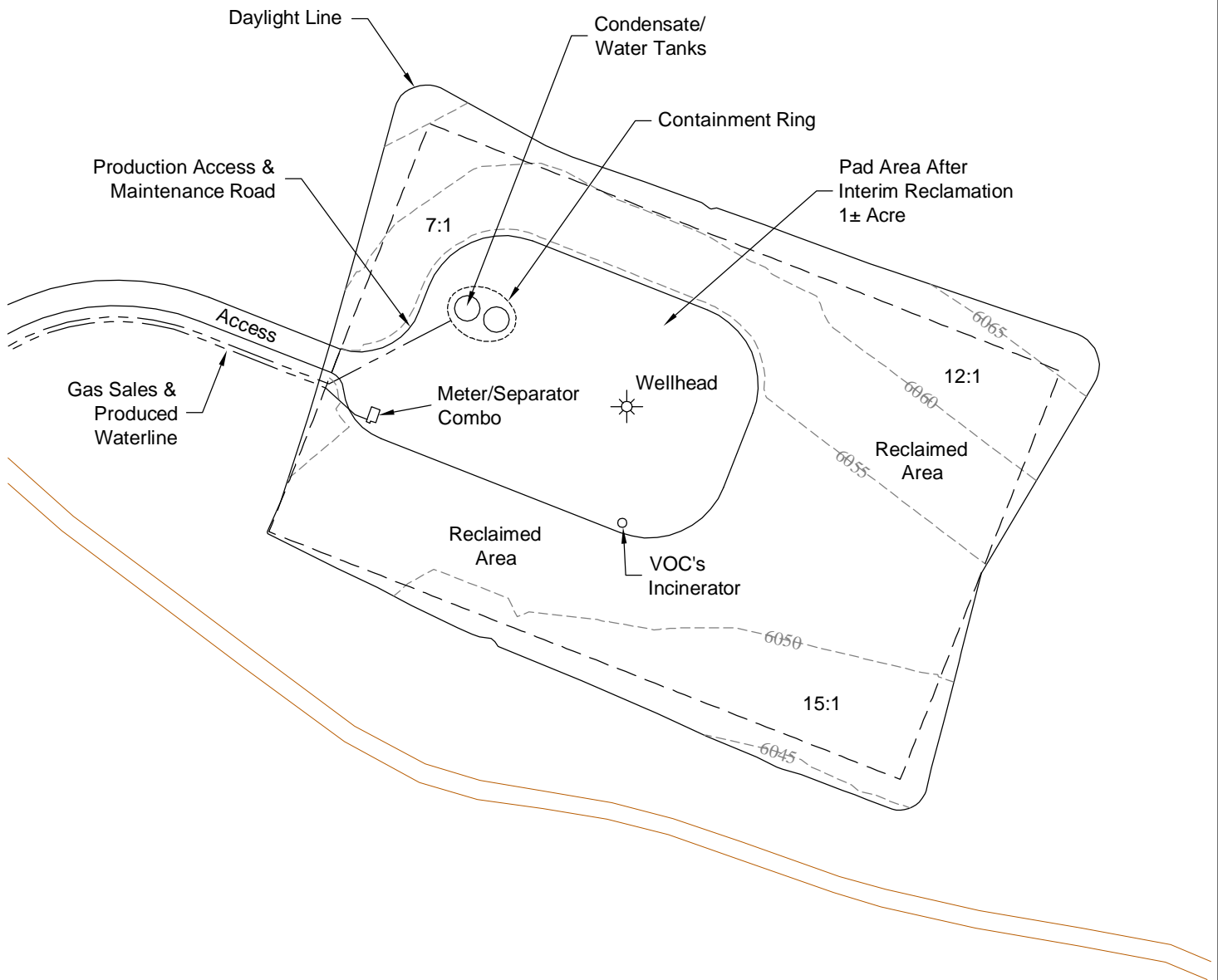
**LARAMIE ENERGY II LLC**  
FLETCHER GULCH FEDERAL 22-14-22-01H

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6th PM RIO BLANCO COUNTY COLORADO

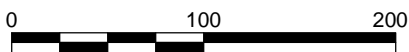


# PRODUCTION SCHEMATIC

FLETCHER GULCH FEDERAL  
22-14 PAD



North



Graphic Scale in Feet  
1" = 100'

**GEO SURV**

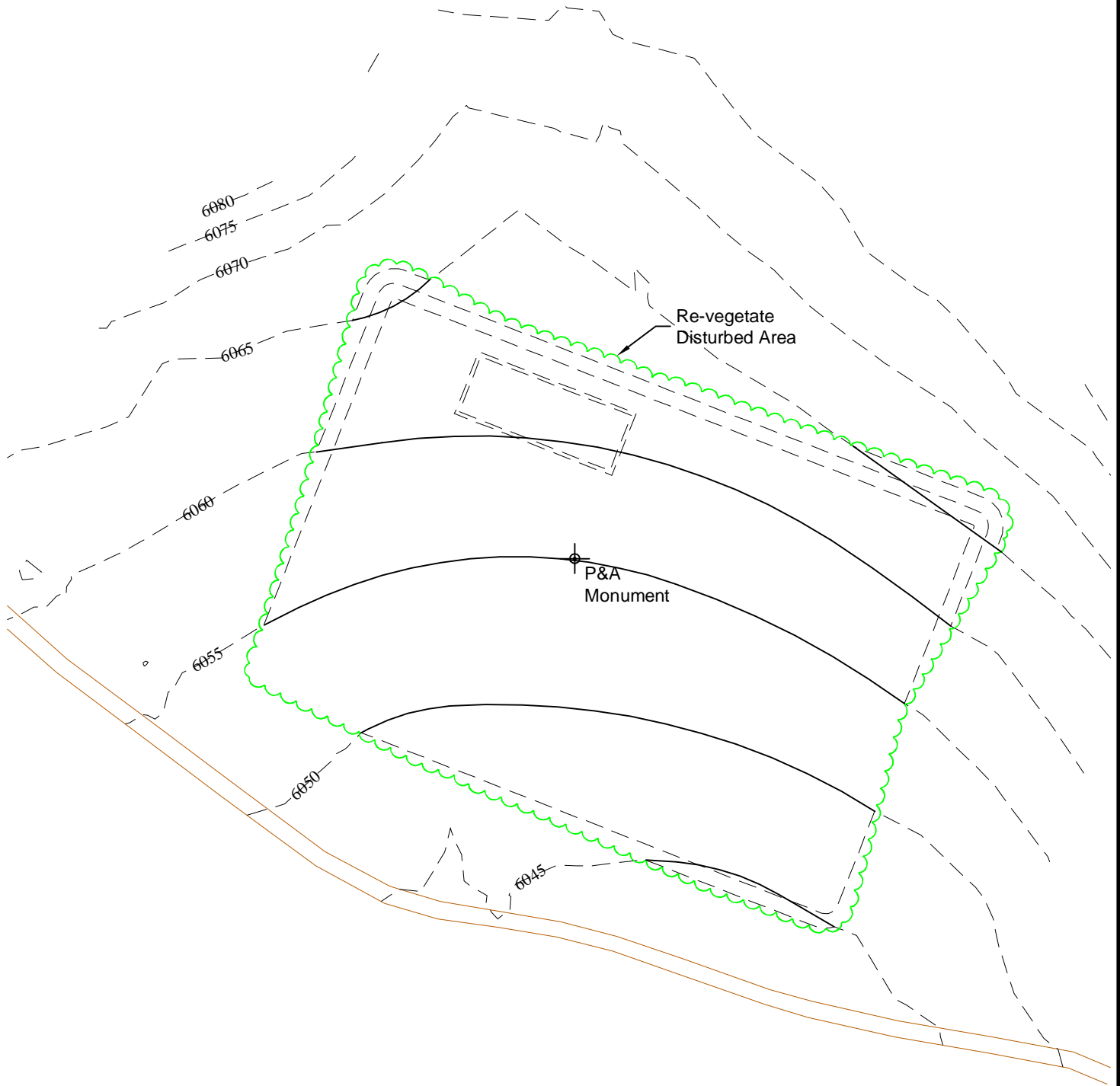
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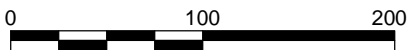
SL SE1/4 SW1/4 SECTION 22 T2N R100W  
HL NE1/4 NE1/4 SECTION 22 T2N R100W  
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# FINAL ABANDONMENT

FLETCHER GULCH FEDERAL  
22-14 PAD



North



Graphic Scale in Feet  
1" = 100'



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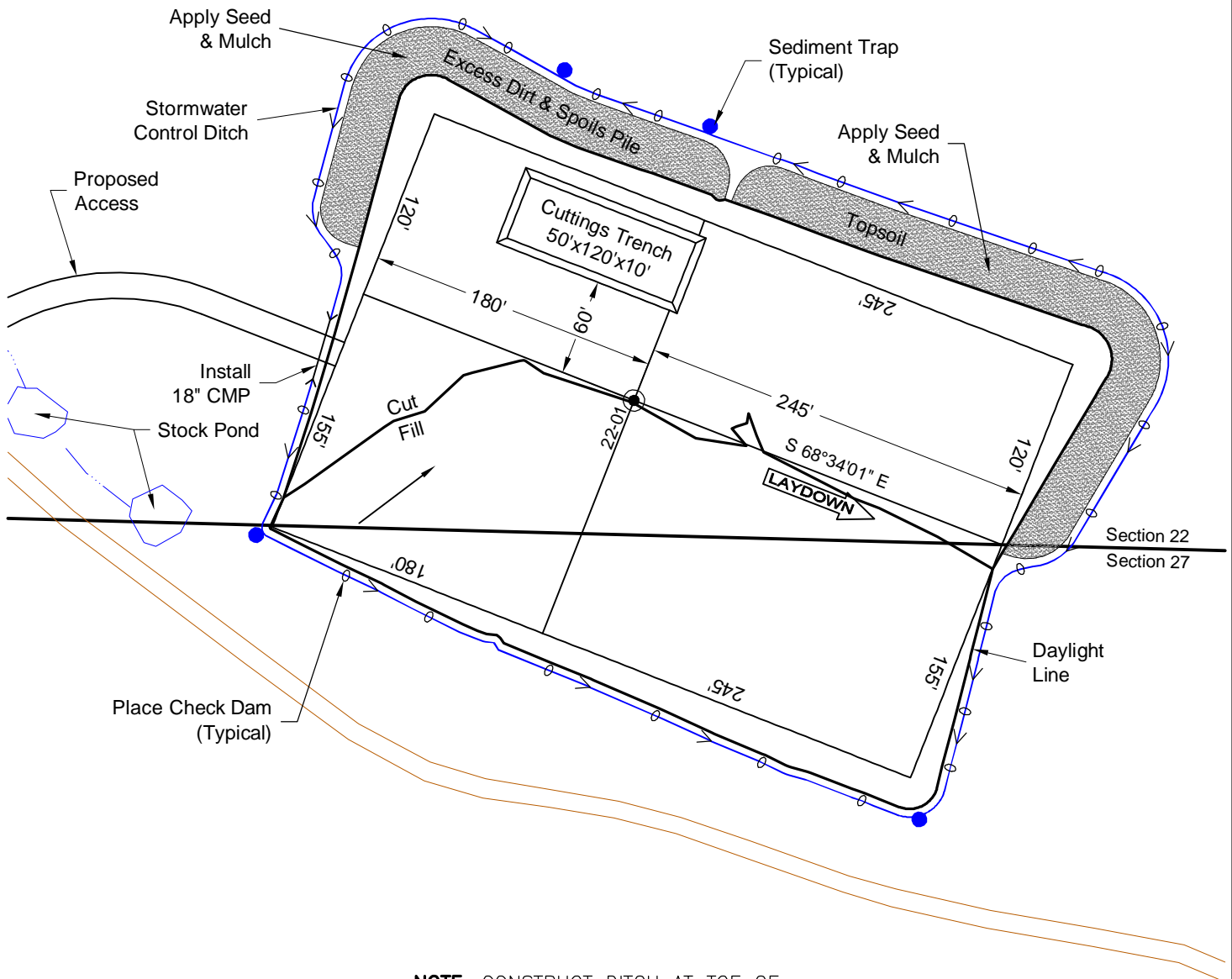
**LARAMIE ENERGY II LLC**  
**FLETCHER GULCH FEDERAL 22-14-22-01H**

**SL SE1/4 SW1/4 SECTION 22 T2N R100W**  
**HL NE1/4 NE1/4 SECTION 22 T2N R100W**  
**6th PM RIO BLANCO COUNTY COLORADO**



# STORMWATER BMP

FLETCHER GULCH FEDERAL  
22-14 PAD



**NOTE:** CONSTRUCT DITCH AT TOE OF SLOPE. NO DITCH WILL BE NECESSARY IF ROCK IS ENCOUNTERED.



North

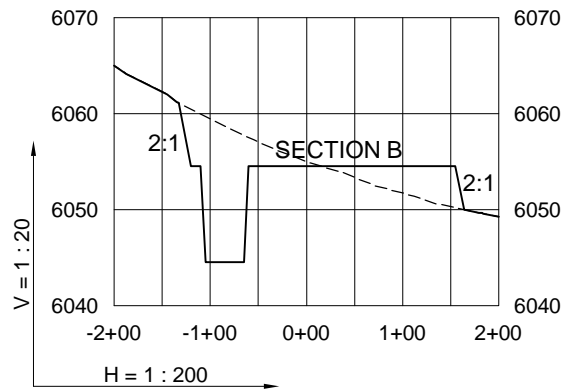
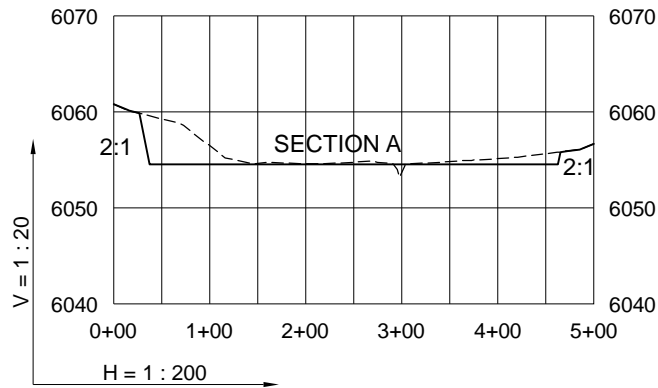
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Graphic Scale in Feet  
1" = 100'

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SL SE1/4 SW1/4 SECTION 22 T2N R100W  
HL NE1/4 NE1/4 SECTION 22 T2N R100W  
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# CROSS SECTIONS A & B

FLETCHER GULCH FEDERAL  
22-14 PAD



----- Existing Ground  
———— Proposed Grade



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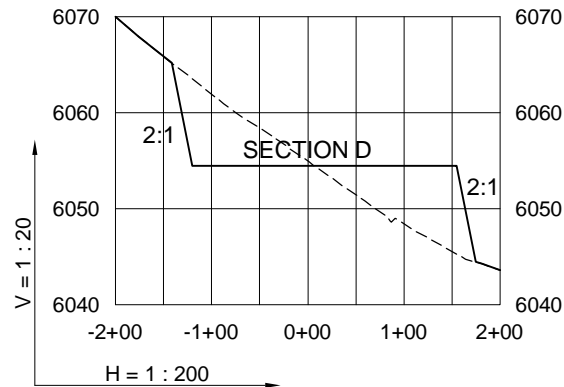
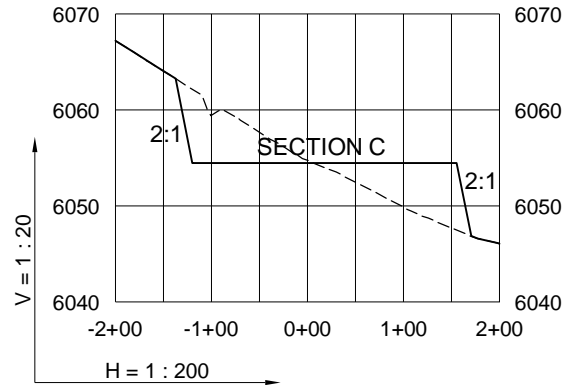
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SL SE1/4 SW1/4 SECTION 22 T2N R100W  
HL NE1/4 NE1/4 SECTION 22 T2N R100W  
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# CROSS SECTIONS C & D

FLETCHER GULCH FEDERAL  
22-14 PAD



----- Existing Ground  
————— Proposed Grade

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**LARAMIE ENERGY II LLC**  
FLETCHER GULCH FEDERAL 22-14-22-01H

SL SE1/4 SW1/4 SECTION 22 T2N R100W  
HL NE1/4 NE1/4 SECTION 22 T2N R100W  
6th PM RIO BLANCO COUNTY COLORADO

## **LARAMIE ENERGY II, LLc**

### **13- Point Surface Use Plan**

<u>Well</u>	<u>Qtrqtr</u>	<u>Sec.</u>	<u>Twn.</u>	<u>Rng.</u>	<u>PM</u>	<u>Lease</u>	<u>Unit</u>
FG Fed 22-14-22-01H	Lot 12	4	1 N	100 W	6 <sup>th</sup>	COC-63322	COC-75153X

Rio Blanco County, CO

### **References**

On-site with BLM 3/28/2012

CO-110-2010-0043EA

ROD 6-1-2011

And

CO-110-2009-0180-EA

ROD 12-8-2009

## **13 Point Surface Use Plan**

### **LARAMIE ENERGY II, LLC**

#### **Fletcher Gulch Fed. 22-14-22-01H**

Lease No. COC-63329  
Unit: FG (Deep) COC-75153X  
Rio Blanco County, Colorado

#### **Proposal;**

Laramie Energy II, LLC (LEII), is proposing to drill and complete the above referenced exploratory natural gas well to comply with Section 9 (Drilling to Discovery) of the Fletcher Gulch (Deep) Exploratory Unit Agreement which states in part...“Until the discovery of unitized substances capable of being produced in paying quantities, the Unit Operator shall continue drilling one well at a time, allowing not more than 6 months between the completion of one well and the commencement of drilling operations for the next well, until a well capable of producing unitized substances in paying quantities is completed to the satisfaction of the AO...”

#### **1. Existing Roads:**

For Access Roads and proposed Access Road refer to the Vicinity Map.

- A. To access the well location , travel east from Rangely, CO, along State Highway 64 approximately 12.0 miles (west from Meeker approximately 46 miles) to the intersection of the Hammond Draw Road). Travel south on Hammond Draw road approximately 1.8 miles to a fork in the road. Take the right fork and continue on for approximately 1.60 miles to the proposed location entry.

#### **2. Planned Access Roads Common:**

No new access road is planned at this time other than the entry to the location. The existing road will need to be upgraded by Laramie II. Upgrading will be possible curve widening, graveling and drainage work for stormwater management. If any additional work is required on the access, the following (sections B-H) will be implemented.

In addition to the following construction parameters, E-mail correspondence from the WRFO on May 15, 2012 included the following observations. Most of these recommendations are already addressed in the road portion of this surface use plan.

- Keep all current waterbars, they have a good design and should be maintained during the rig move and other operations that result in heavy truck traffic.
- All installed culverts should be at least 18-inches in diameter. No size is given for the culverts on the large drainages on sheet 1. Use large culverts (at least 24-inch) at these tight crossings to reduce fill and to keep these culverts from plugging.
- The BLM preferred travelway for resource and local roads is 14 feet with turnouts. The operator needs to include turn-outs that are intervisible in the design. These turnouts should



be identified in the surface use plan. (Gold Book, pages 25 and 26, Onshore order 1).  
Turnouts must be at most 1,000 feet apart according to the Gold Book.

- If the operator cannot avoid using the road when the road base is saturated, they should plan for gravel or other surfacing for the road section before the rocky section identified on sheet 2 (Gold Book, page 25). I think given the amount of rock and a change in soils, the rest of the road should be ok with spot graveling.
- Plan to add water bars or culverts in road sections as a maintenance action in locations where the borrow ditches are down-cutting to provide cross drainage. There are a few short steep sections that could use additional drainage, although most of the segments are adequate. Therefore, this should be identified but left for a future management action to see how the improvements will perform.

- A. **Summary of New Access Road (Entry)** FG Fed. 22-14-22-01H
- |   |  |
|---|--|
| 1. Approximate length                   | 300 ft   |
| 2. Requested construction width         | 50 ft  |
| 3. Road width                           | 16 ft  |
| 4. Maximum grade                        | 8 %  |
| 5. Crown design                         | Yes  |
| 6. Turnouts                             | None   |
| 7. Drainage and Ditch                   | Yes  |
| 8. On-site and Off-site erosion control | Refer to Attachment No. 1- <b>Site Specific Stormwater Management Plan.</b>  |
| 9. Revegetation of disturbed areas      | Refer to Attachment No. 2- <b>Site Specific Reclamation Plan</b>             |
| 10. Location and size of culverts       | 1-18" CMP Refer to "Pad Layout" and "Stormwater BMP's" Exhibits for location |
| 11. Fence cuts and gates                | None   |
| 12. Major cuts and fills                | None   |
- B. Any new road construction will conform to recommended standards outlined in The Oil and Gas Gold Book-**Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development** (BLM and USFS, 2006).
- C. All new access roads will be designed and constructed by the crown and ditch method with a maximum of 8-10 percent grade. The roads will have a 16 foot travel surface with 4 feet on each side for borrow ditch. The road disturbed width will be determined by the topography but not greater than 50'. Construction will be accomplished to minimize any disturbance yet construct a travel way that is both safe and structurally sound. Entries to the well pad will be 100 feet wide to allow for 40 foot turning radius both left and right entering and exiting the location. Once the entry and road is completed, the disturbed area will be reclaimed back to the 16 feet travel width and 4feet shoulders for borrow and stormwater ditch management. Total long term disturbance will be 24 feet.
- D. LEII's policy is to implement the use of the existing vegetation and topography to minimize the visual and surface disturbance impacts to the environment. Any vegetation that will require removal will be stored and be redistributed over the cut and fill slopes after re-seeding. Some of the vegetation debris will be placed at the toe of the fill slopes to be used for stormwater

management. Any pinyon trees removed during construction will be chipped and used for mulch, or will be cut and removed from the area.

- E. The topsoil will be stripped to minimum depth of 6 inches. Or lacking top soil, the top 6 inches of soil will be stripped and stockpiled separate from other spoils to ensure soil horizons are not blended and the fertility of the topsoil layer is not compromised. Under no circumstances, will the topsoil be used for construction purposes.
- F. Culverts will be installed at drainage crossings and will pass a 25-year or greater storm event. LEII will submit an ACOE 404 permit for any crossings that are determined to be navigable waters. Best Management Practices will be implemented at each drainage crossing and for the entire length of the road where deemed necessary to comply with State of Colorado Stormwater requirements.
- G. LEII a will be responsible for continuous inspection and maintenance of the access road. LEII will conform to a schedule of preventive maintenance, which at a minimum, provides for the following corrective measures on as needed basis. (Problem areas will be corrected as needed.)
  - 1. Road surface grading.
  - 2. Relief ditch, culvert cleaning and cattle guard cleaning and sign maintenance.
  - 3. Erosion control measures for cut and fill slopes and all other disturbed areas.
  - 4. Road and slope stabilization measures as required. The road will be maintained to the standards required for the construction of the road until final abandonment and rehabilitation takes place.
  - 5. Stormwater BMP maintenance.
  - 6. Dust abatement will be applied as needed or if requested by the BLM. Level and type of abatement (watering, application of various dust suppression agents, surfacing) will depend on the conditions. LEII will incorporate sufficient dust abatement to prevent any heavy plumes of dust from construction or road use.
  - 7. Weed Control. Weed monitoring and reclamation measures will be continued on an annual basis, or more frequently, if necessary, throughout the life of the project.
- H. All equipment and vehicles will be confined to the access roads, pads and areas specified in the site specific APD's. The proposed new access and footages are included in Table 1.

### 3. Location of Existing Wells:

The "Well Vicinity Map" illustrates the location of individual well sites in various states of activity within a one-mile radius relative to each location as identified by the Colorado Oil and Gas Conservation (COGCC) website database. As of May 07, 2012, there are 2 abandoned gas wells within one-mile of the proposed FG Fed. 22-14-22-01H.

As of May 07, 2012, the State of Colorado water well database identifies no permitted water wells within a one-mile radius of the proposed well location.

Table 1. Proposed Well Pads, Roads						
Well Pad	Lease	Legal Description T2N, R100W	Surface	Short Term Acres	Long Term Acres	Remarks
FG Fed. 22-14-22-01H	COC-63329	SESW Sec.22	BLM	4.1	1.0	Includes New

							Access
<b>Subtotal</b>			<b>BLM</b>	<b>4.1</b>	<b>1.0</b>		
<b>Well Pad</b>	<b>Gas Line miles ft.</b>		<b>Legal Description T2N, R100W</b>				
FG Fed. 22-14-22-01H	0.06	300	SESW Sec. 22	BLM	0	0	Buried in Access Road Disturbance
<b>Sub-Total</b>	<b>0.06</b>	<b>300</b>			<b>0</b>	<b>0</b>	Part of Road Disturbance
<b>TOTAL</b>				<b>BLM</b>	<b>8.8</b>	<b>2.1</b>	<b>76 % Interim</b>

**4. Location of Existing and/or Proposed Production Facilities and Production Gathering and Service Lines:**

A. Existing Production Facilities and Gathering Lines

As part of its Fletcher Gulch “Shallow” Unit, Genesis has installed production facilities, buried “poly” water and gas gathering lines, and a Compressor Facility in Lot 10, Sec. 3, Twn. 1N Rng. 100 W, 6<sup>th</sup> PM in the area of the proposed well locations. The facility is Operated by Ceritas

B. Production Facilities

1. See “Production Schematic” for the proposed facility layout. All permanent (onsite for six (6) months or longer) structures constructed or installed will be painted a flat, non-reflective, earth tone color to match the standard environmental colors or colors requested by the WRFO. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded. Production facilities will be placed to allow maximum reshaping of cuts and fills.
2. If a tank battery is constructed, a metal containment ring of sufficient capacity to contain 1 ½ times the storage capacity of the largest tank will surround it. All load lines and valves will be placed inside the metal containment ring surrounding the tank battery. Guards will be installed around the well head(s) for protection of wild life and livestock.
3. All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to.
4. All off-lease storage, off-lease measurement or commingling on-lease or off-lease will have prior written approval from the Authorized Officer.
5. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3164.1 Onshore Oil and Gas Orders No. 3 (Site Security).
6. The oil and gas measurement facilities will be installed on the well locations. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three (3) months on new meter installations and at least quarterly thereafter. The Authorized Officer will be provided with a date and times for the initial meter calibration and all future meter proving schedules. A copy of the meter



calibration report will be submitted to the Field Office. All meter measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

7. To minimize the amount of vehicular traffic to and from the project site, remote telemetry equipment will be installed at each well location.

C. Gathering Lines

As this well is strictly an exploratory well, Laramie II prefers to limit as much new disturbance as possible until the project becomes viable. This includes using existing roads and any existing pipelines already in place but not in service.

Immediately paralleling the access road are two buried gas lines. The lines were installed as part of Genesis Gas and Oil Fletcher Gulch shallow Unit. One line is currently in service and is the sales(or discharge) line from the existing compressor facility in Lot 10 Section 3, Twn 1N, Rng. 100W. The second line is a future “gathering” line that is currently not in service. Laramie II intends to temporarily use this line to move the gas from the well to the compressor facility for treatment and compression.

By tying in to this line, approximately 17,300 feet of pipeline ROW will not be required to test the well. At a 50’ disturbance width this saves approximately 19.8 acres of disturbance.

Once the well proves capable of production LEII will present a proposal for a buried gathering system for the well and future development.

- D. LEII will protect all survey monuments, witness corners, reference monuments and bearing trees in the affected areas against disturbance during construction, operations, maintenance and termination of the facilities authorized herein.

LEII will immediately notify the Authorized Officer (White River Field Office) in the event that any corners, monuments or markers are disturbed or are anticipated to be disturbed. If any monuments, corner or accessories are destroyed, obliterated or damaged during construction, operation or maintenance, LEII will secure the services of a Registered Land Surveyor to restore the disturbed monuments, corner or accessories, at the same location, using surveying procedures found in the Manual of Surveying Instructions for the Survey of public Lands of the United States, latest edition. LEII will ensure the Registered Land Surveyor properly records the survey in compliance with Colorado Revised Statutes 38-53-101 through 38-53-112 (1973) and LEII will send a copy to the Authorized Officer.

- E. During drilling and subsequent operations, all equipment and vehicles will be confined to the access road right- of-way and any additional areas as specified in the approved Application for Permit to Drill.
- F. Topsoil will be stripped to a minimum depth of 6”. Topsoil storage will be no deeper (higher) than the minimum height needed for storage without creating a large feature. If topsoil is less than 6”, then the top 6” of surface material will be stripped and piled as described. The topsoil piles will be seeded within 48 hours of completed pad construction.
- G. The cut and fill slopes will be protected against riling and erosion with measures such as water bars, lateral furrows, or other measures approved by the Authorized Officer. Weed free straw

bales or a fabric silt fence will be used at the toe of the fill slopes with brush/slash incorporated below the fence.

H. LEII or its successors will be responsible for road maintenance for the life of the project.

## **5. Location and Type of Water Supply:**

Water for the well will be trucked or pumped from approved sources. In addition, LE II is working with Genesis to use the water produced from the Fletcher Gulch CBM wells for drilling and completion operations. The remainder of the water needed will be purchased from a private entity from their water well or private individuals with water rights on the Colorado River. The Colorado Division of Water Resources requires the owner to meter the volume pumped and augment all diversions with industrial contracts with the Bureau of Reclamation.

LEII has a Recovery Agreement with the U.S. Fish and Wildlife and is covered by the BLM's Programmatic Biological Opinion for water depletion. A copy of this agreement is part of this submittal.

Estimated water usage for the drilling and completion of one horizontal well is 10.0 acre-ft. Approximately 65% -70 % (6.5 – 7.0 acre-ft.) of the water is recovered during completion operations and is recycled and used in other drilling and completions of other wells operated by LEII.

## **6. Source of Construction Materials:**

No construction materials are needed for drilling operations. Surface and subsoil(native) materials within the proposed construction areas will be used. Gravel for the access roads, facilities site and well pad will be obtained from private sources at the time of construction. The surface disturbance for the new access roads, facilities, and well pads are on Bureau of Land Management Lands (BLM).

## **7. Methods of Handling Waste Disposal:**

- A. All unattended pits, will be fenced (stock tight) while drilling with three (3) sides fenced. Once drilling is completed the fourth side of the pit will be fenced. When it has been determined to backfill the cuttings pit, the pit will be reclaimed.
- B. LEII proposes to use a de-watering system in its drilling operations. The system uses a series of centrifuges to remove the cuttings from the drilling fluid and returns the fluid to tanks while the cuttings (~250 cubic yards per well) are disposed of in a cuttings pit on location. By using this method eliminates the need for a separate reserve pit. The system has proved successful in drilling operations within the Piceance Basin. The cuttings pits will be constructed to the size anticipated for the depth of the well to be drilled each. If time allows, the pit will be reclaimed prior to the end of the drilling season to eliminate any wildlife concerns.
- C. Produced waste water and drilling fluids including salts and chemicals will be contained in tanks and will be trucked to a State Approve disposal facility (RNI disposal in Rangely) after completion of the well. After completion of all drilling and completion operations, the cuttings pit will be reclaimed.
- D. Produced Water Management  
General:

Completion Phase: All “frac” flowback water will be contained in temporary tanks during completion operations and re-cycled and re-used or trucked offsite to approved commercial disposal facilities.

Production Phase: Permanent 400 bbl steel tanks, will be installed on the well pad to store produced water and condensate. These tanks will be onsite for the life of the wells. Produced water contained in the storage tanks will be trucked to offsite disposal facilities.

The Anticipated Disposal Site for the project is:

RNI (Dalbo) Evaporation Facility – Rangely, CO

Condensate will be measured and sold in compliance with Onshore Oil and Gas Order No. 4 (Measurement of Oil) and Oil and Gas Order No.3(Site Security).

- E. All drilling fluids and chemicals will be contained in tanks through the de-watering system.
- F. Sewage: Chemical toilets or an enclosed sewer system will be used. Contents will be disposed of at an approved disposal facility. No bore holes will be used for disposal of waste materials. Human waste will be contained and will be disposed of at an approved sanitary landfill.
- G. Garbage and other waste materials: Garbage will be managed to avoid conflict with wildlife, including black bears. All garbage and trash will be stored in a totally enclosed trash container and removed and deposited in an approved sanitary landfill within one week following termination of drilling operations. No garbage or trash will be disposed of in the cuttings pit. The wellsite and access road will be kept free of trash and debris at all times.
- H. LEII will comply with those standards set forth by CERCLA and RICRA for the disposal of hazardous waste materials from oil and gas development. Also, hazardous substances specifically listed by the EPA as a hazardous waste or demonstrating a characteristic of a hazardous waste will not be used in drilling, testing, or completion operations.

## **8. Ancillary Facilities:**

There are no ancillary facilities planned beyond the standard drilling operations equipment at this time.

Standard Drilling Operation Equipment on location includes: Drilling rig with associated equipment; living facilities for company representative, tool pusher, mud logger, toilet facilities; and trash container(s).

## **9. Wellsite Layout:**

The surface location was surveyed and oriented to accommodate the topography of the project area as well as to minimize the surface disturbance.

The following applies:

- A. The working surface of the well pad will be about 275 feet by 425 feet (2.79 acres including the access). The total disturbed area for the pad and new access is estimated to be 4.1 acres and includes cut and fill slopes, soil stockpile, and surface water diversions/BMPs.



- B. The topsoil will be stripped to minimum depth of 6 inches. Or lacking top soil, the top 6" of soil will be stripped and stockpiled separate from other spoils to ensure soil horizons are not blended and the fertility of the topsoil layer is not compromised. Under no circumstances, will the topsoil be used for construction purposes.
- C. Fill slopes will be armored with excavated rock and/or slash vegetation as well as having silt containment installed to reduce the velocity of rain drops and subsequent erosion along the toe of the well pad fill slope. Also, if needed, aspen matting will be lain down to allow for erosion mitigation as well as enhancing reestablishment of vegetation.
- E. Prior to commencement of drilling operations, the cuttings pit will be fenced on three (3) sides using three strands of barbed wire according to the following minimum standards:
  1. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
  2. Standard steel, wood, or pipe posts shall be used between the corner braces. The maximum distance between any two (2) posts shall be no greater than sixteen (16) feet.
  3. All wire shall be stretched using a stretching device before it is attached to the corner posts.
  4. The fourth side of the cuttings pit will be fenced immediately upon removal of the drilling rig and the fencing will be maintained until the pit is backfilled.
- F. Cut slopes, associated with pad construction, will be left rough to provide a seed catchment surface, and may require 'step cutting' if heights exceed 15 feet.

## **Well Site Specifics**

### **1. FG Federal 22-14 Pad**

Surface vegetation on the FG Fed. 22-14 pad is predominantly sagebrush intermingled with juniper trees and mixed mountain shrubs. The Natural Resource Conservation Service identifies the soil properties at the pad location and surrounding area as "Yamac Loam" (NRCS Map Unit 104).

Access to the location will require 300' of new construction. The road will have a graveled 16' travel width stormwater ditches on each side to manage run-off.

Initial disturbance area of the pad will be 4.1 acres with an interim reclamation area of 1.0 acres once the well is drilled and completed. See attached "Production Schematic"

Stormwater BMP's will include but is not limited to stormwater control ditch around the pad as well as along the new access to manage sediment and stormwater run-off.

1. Pad length.....425 ft.
2. Pad width..... 275 ft.
3. Cuttings pit depth.....10 ft.
4. Maximum cut.....10.8 ft. (NW corner)
5. Maximum fill.....8.8 ft. (SE corner)
6. Location of excess material\*..... 2530 yd<sup>3</sup> Windrow NW Edge of Pad)
7. Location of topsoil material\*\*.....Windrow NE and SE Edge of Pad
8. Access Road location.....NE edge of pad (East of CL)
9. Pad and stockpile disturbance.....3.80 acres
10. Total disturbance (pad, access road, and material stockpile).....4.1 acres

11. Total material stockpiles.....	0.60 acres
12. Access road disturbance.....	0.30 acre
13. Estimated dirtwork quantities	
Total cut material.....	11,730 yd <sup>3</sup>
Total fill material.....	8,870 yd <sup>3</sup>
Topsoil.....	2,550 yd <sup>3</sup>
Cuttings Trench.....	2,220 yd <sup>3</sup>
Total Excess Material = Cut-TS-Fill+Trench=	2530 yd <sup>3</sup>

- \* Excess material may change based on amount of topsoil removed. Spoils will be separated and stockpiled independent of topsoil.
- \*\* Volume of topsoil may change do to depth of removal.

## 10. Plans for Restoration of the Surface:

See Attachment II for Interim and Final Reclamation of the site.

## 11. Surface and Mineral Ownership:

The new location entry and surface location is entirely on Bureau of Land Management lands managed by the White River Field Office of the BLM. The mineral estate is also entirely Federal including lease COC-63329.

The existing access road from Highway 64 is entirely on BLM lands managed by the WRFO.

## 12. Other Information:

- A. Once the well is drilled and completed LEII's will prepare a Spill Prevention Control and Countermeasures (SPCC) plan for the site. Normally, these plans are not completed until the production facilities are in place and producing.
- B. Attached to this proposal is LEII's standard wildlife BMP's for Sensitive Wildlife Areas (SWA's).
- C. LEII has incorporated the Glenwood Springs Energy Office (CRVFO) March 2007 "Noxious and Invasive Weed Management Plan for Oil and Gas Operators" (attached) into all LEII operations on Federal and Fee lands.
- D. LEII is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts or fossils. LEII will immediately bring to the attention of the Authorized Officer (BLM White River Field Office) any and all antiquities or other objects of historic or scientific interest including, but not limited to, historic or prehistoric ruins, artifacts, or fossils discovered as a result of operations under this permit. LEII will immediately suspend all activities in the area of the object and will leave such discoveries intact until told to proceed by the Authorized Officer. Notice to proceed will be based upon evaluation of the cultural significance of the object.
- E. LEII implements Best Management Practices (BMP's) to minimize or eliminate the nature and degree of specific impacts which may occur from oil and gas exploration and development. These could include but are not limited to:

1. Erosion Control- seeding, mulching, fertilizing, and netting.
  2. Slope Stabilization - buttresses, retaining structures, rip-rap, etc.
  3. Velocity Control - slope drains, spreaders, energy dissipaters, check dams, drop structures, and diversion berms.
  4. Sediment Control - straw bales, filter fence, inlet protection, siltation berms, traps, and basins.
  5. Sediment Basins - will be maintained on a regular basis.
- F. Sediment will be trapped before it reaches lakes, wetlands/riparian areas, intermittent drainage channels, and streams.
- G. Army Corp. of Engineer 404 permits will be submitted for any drainages determined to be navigable waters.
- H. Miscellaneous Information.
1. There will be no deviation from the proposed drilling and/or workover program without prior approval from the Authorized Officer. Safe drilling and operating practices will be observed.
  2. Sundry Notice and Report on Wells (Form 3160-5) will be filed for approval for all changes or plans and other operations in accordance with 43 CFR 3164.
  3. The dirt contractor will be provided with an approved copy of the surface use plan.



### 13. Lessee's or Operator's Representative and Certification:

Operator Representative: Wayne P. Bankert (Senior Reg. and Env. Coordinator)  
Laramie Energy II, LLc  
601 28 ¼ Rd Suite D  
Grand Junction, CO 81506  
O: 970-812-5310  
M: 970-985-5383  
[wbankert@laramie-energy.com](mailto:wbankert@laramie-energy.com)

Operator: Laramie Energy II, LLc  
1512 Larimer Street, Suite 1000  
Denver, CO 80202  
O: 303-339-4400

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations and Onshore Oil and Gas Orders. The operator is fully responsible for the actions of its subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.







#### Representative Certification:

I hereby certify that I, or persons under my direct supervision, inspected the proposed drill sites and access routes that fall within the constraints of this document; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge and belief, true and correct; and that the work associated with the operations proposed herein will be performed by LEII, LLC and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

By: \_\_\_\_\_  
Wayne P. Bankert  
Senior Regulatory and Environmental Coordinator

Date: \_\_\_\_\_

## LOCATION PHOTOS

<b>Fletcher Gulch Federal 22-14 Pad</b> <b>SE1/4 SW1/4 Sec 22 T2N R100W</b> <b>Lat: 40.12128 Long: -108.60589</b>	<b>LARAMIE ENERGY II LLC</b> <b>Rio Blanco County, CO</b> <b>Date of Pictures: 11/3/2011</b>
	
<b>PAD NORTH</b>	<b>PAD EAST</b>
	
<b>PAD SOUTH</b>	<b>PAD WEST</b>
	
<b>ACCESS</b>	<b>ACCESS</b>



**GEOSURV Inc.** 520 Stacy CT Suite B Lafayette CO 80026 ph 303 666 0379 fx 303 665 6320

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