Laramie Energy 2021 Cascade Creek Oil and Gas Development Plan

Fluid Leak Detection Plan
Rule 304.c.(13)

Laramie Energy, LLC
760 Horizon Drive, Suite 101
Grand Junction, CO 81506

1. Introduction

The following plan addresses the applicable requirements for Rule 304.c.(13) Leak Detection Plan under 300 Series of the Colorado Oil and Gas Conservation Commission's (COGCC) rules as required for a Location Assessment permit application. The Cascade Creek Leak Detection Plan and Operating Procedures (CC LPD) covers locations included in the proposed Laramie Energy, LLC (Laramie) (Operator # 10433) Oil and Gas Development Plan (OGDP).

In an effort to minimize impacts, the Best Management Practices (BMP's) and standard operating procedures (SOPs) are stated for drilling and operations within the Piceance Basin.

a. Overview of Oil and Gas Development Plan

Laramie is proposing an Oil and Gas Development Plan in Garfield County, Colorado. The proposed OGDP, titled *2021 Cascade Creek OGDP*, hereby referred to as the OGDP, involves the construction and development of three well site locations and one cuttings management facility. The CC LPD was developed as part of Laramie's OGDP. The OGDP includes 3 well site locations (**Vicinity Maps – Appendix A**):

- **CC 0697-15-08** - Well Site - (Section 15, Township 6 South, Range 97 West)
- **CC 0610-21-41** - Well Site - (Section 10, Township 6 South, Range 97 West)
- **CC 0603-23-32** - Well Site - (Section 3, Township 6 South, Range 97 West)

b. Cascade Creek 0697-15-08 Well Site

Laramie is pursuing a Form 2A for an Oil and Gas -Location Assessment permit in Garfield County, Colorado for the development of the CC 0697-15-08 well site. The proposed site will be a new location developed on private property, owned by Laramie. The proposed well site will have 18 wells drilled, utilizing a closed-loop drilling system. Only water-based bentonite drilling fluids, not oil-based fluids, will be utilized for the 18 wells.

Surface Ownership Information – CC 0697-15-08

Surface	Surface Owner	Parcel Number	Surface Owner Address
Fee	Laramie Energy, LLC Operator # 10433	216921400026	**Field Office** 760 Horizon Drive, Suite 101 Grand Junction, CO 81506 **Corporate Office** 1001 Seventeenth Street, Ste 1900 Denver, CO 80202

The parcel is located 12.2 miles north of De Beque, Colorado. The site is located approximately 14 miles northeast of De Beque, Colorado and 21.8 miles northeast by access route. The site is located approximately 9.6 miles from the nearest public road, County Road 213.

Legal Description: SENE of Section 15, Township 6 South, Range 97 West, 6th P.M.
Location Coordinates: Latitude: 39.526319°; Longitude: -108.198886°
Elevation: 8514 feet

The CC 0697-15-08 will initially generate 7.6 acres of new short-term disturbance (**Layout Drawing – Appendix B.1.**); however, the site will be reduced by approximately 5.8 acres at the time of interim reclamation (**Facility Layout Drawing – Appendix C.1.**). The long-term disturbance associated with this pad will be 1.8 acres. Interim reclamation will begin after all wells are drilled and completed as planned with production facilities installed at the pad. Interim reclamation activities will take approximately 5 days to complete. During interim reclamation, the cut and fill slopes will be reshaped and contoured leaving approximately 1.80 acres of working area.

Disturbance Acreage for Well Site – CC 0697-15-08

Well Site	Disturbance in Acres
Proposed Area of Disturbance	7.6
Working Pad Surface	3.2
Area to be Interim Reclaimed	5.8
Production Pad Surface (Long-Term Disturbance after Interim Reclamation)	1.8

Operations will be conducted in the following stages at the CC 0697-15-08: initial grading activities, drill rig mobilization, drilling, completions and flowback, production, interim reclamation, and final grading/reclamation of the site. Phases may occur simultaneously at the site. Inspection activities will occur during the lifespan of the site. Pre-production operations are estimated to last 230 days, depending on equipment availability, weather and various other conditions, this schedule may change.

Proposed Timeframes Per Operational Stage and Activity – CC 0697-15-08

Stage	Time Interval (Days)
Initial Grading and Construction Activities	30
Drill Rig Mobilization	4
Drilling	110
Completions and Flowback Staging and Demobilization	20
Completions; Flowback	66
Production	*
Interim Reclamation	5
Inspections	*
Final Reclamation	*

* Stage does not have specific time interval for operations

c. Cascade Creek 0610-21-41 Well Site

Laramie is pursuing a Form 2A for an Oil and Gas -Location Assessment permit in Garfield

County, Colorado for the development of the CC 0610-21-41. The Form 2A is requesting an amendment to an existing COGCC location, Location # 383264. The site will be located on private property, owned by Couey Family LLLP and will be operated by Laramie. Laramie is proposing to drill 23 wells utilizing a closed-loop drilling system at the existing location. Only water-based bentonite drilling fluids, not oil-based fluids, will be utilized for the 23 wells.

Surface Ownership Information – CC 0610-21-41

Surface	Surface Owner	Parcel Number	Surface Owner Address
Fee	Couey Family, LLLP	216910100020	6275 County Road 315, Silt, CO 81652

The parcel is located 12.2 miles north of De Beque, Colorado. The site is located approximately 14 miles northeast of De Beque, Colorado and 23 miles northeast by access route. The site is located approximately 10.8 miles from the nearest public road, County Road 213.

Legal Description: NENW of Section 10, Township 6 South, Range 97 West, 6th P.M.
Location Coordinates: Latitude: 39.544325°; Longitude: -108.207010°
Elevation 8600 feet.

Laramie does not anticipate that additional grading will be required prior to drilling (**Layout Drawings – Appendix B.2.**). After drilling activities, approximately 5.3 acres will be reclaimed, reducing the well site to 1.7 acres (**Facility Layout Drawing – Appendix C.2.**). The long-term disturbance associated with this pad will be 1.7 acres. Interim reclamation will begin after all wells are drilled and completed as planned with production facilities installed at the pad. Interim reclamation activities will take approximately 5 days to complete. During interim reclamation, the cut and fill slopes will be reshaped and contoured leaving approximately 1.7 acres of working area.

Disturbance Acreage for Well Site – CC 0610-21-41

Well Site	Disturbance in Acres
Existing Disturbance	7.0
Proposed Disturbance to be Constructed	0
Working Pad Surface	3.3
Total Area of Disturbance (Existing)	7.0
Area to be Interim Reclaimed	5.3
Production Pad (Long-Term Disturbance after Interim Reclamation)	1.7

Operations will be conducted in the following stages: drill rig mobilization, drilling, completions and flowback, production, interim reclamation, and final grading/reclamation of the site. Phases may occur simultaneously at the site. Inspection activities will occur during the lifespan of the site. Pre-production operations are estimated to last 249 days, depending on equipment availability, weather and various other conditions, this schedule may change.

Proposed Timeframes Per Operational Stage and Activity – CC 0610-21-41

Stage	Time Interval (Days)
Drill Rig Mobilization	4
Drilling	137
Completions and Flowback Staging and Demobilization	20
Completions; Flowback	88
Production	*
Interim Reclamation	5
Inspections*	*
Final Reclamation	*

* Stage does not have specific time interval for operations

d. Cascade Creek 0603-23-32 Well Site

Laramie is pursuing a Form 2A for an Oil and Gas Location Assessment permit in Garfield County, Colorado for the development of the Cascade Creek 0603-23-32 well site. The CC 0603-23-32 is a previously constructed well pad (Location # 335647). Currently, two producing wells and associated production equipment are installed within the existing well pad. Laramie is proposed to expand the Oil and Gas Location and site-specific access road to accommodate drilling and completions activities. The site is located on private property. Laramie is proposing 24 wells to be drilled at the location. The CC 0603-23-32 will utilize a closed-loop drilling system. Only water-based bentonite drilling fluids, not oil-based fluids, will be utilized for the 24 wells.

Surface Ownership Information – CC 0603-23-32

Surface	Surface Owner	Parcel Number	Surface Owner Address
Fee	Couey Family, LLLP	216902200030	6275 County Road 315, Silt, CO 81652

Laramie's access road entrance is located 12.2 miles north of De Beque, Colorado. The site is located approximately 14 miles northeast of De Beque, Colorado and 23.5 miles northeast by access route. The site is located approximately 11.3 miles from the nearest public road, County Road 213.

Legal Description: NESW of Section 3, Township 6 South, Range 97 West, 6th P.M.
Location Coordinates: Latitude: 39.548853°; Longitude: -108.209991°
Elevation: 8610 feet

Total surface area of previous disturbance at the subject location is estimated at 2.8 acres. The existing location will be expanded and graded to 6.7 acres (**Layout Drawings – Appendix B.3**.). The CC 0603-23-32 will initially generate 6.7 acres of new short-term disturbance; however, the site will be reduced by 3.5 acres at the time of interim reclamation (**Facility Layout Drawing – Appendix C.3.**). The long-term disturbance associated with this pad will be 3.2 acres. Interim reclamation will begin after all wells are drilled and completed as planned with production facilities installed at the pad. Interim reclamation activities will take approximately 5 days to complete. During interim

reclamation, the cut and fill slopes will be reshaped and contoured leaving approximately 3.2 acres of working area.

Existing and Proposed Acreage Disturbance – CC 0603-23-32

Location Name	Acres of Existing Disturbance	Acres of New Disturbance	Acres of Working Surface after Interim Reclamation
CC 0603-23-32	2.8	3.9	3.2
CC 0603-23-32 Adjoining Pipeline	0.74 (within the above stated 2.8 acres)	0.82	0

Disturbance Acreage for Well Site (not including proposed pipeline)- CC 0603-23-32

Well Site	Disturbance in Acres
Existing Disturbance	2.8
Proposed Disturbance to be Constructed	3.9
Working Pad Surface	4.2
Total Area of Disturbance	6.7
Area to be Interim Reclaimed	3.5
Production Pad Surface (Long-Term Disturbance after Interim Reclamation)	3.2

Operations will be conducted in the following phases at the CC 0603-23-32: initial grading activities to expand existing pad and access road, drill rig mobilization, drilling, completions and flowback, production, interim reclamation, inspections, and final grading/reclamation of the site. Phases may occur simultaneously at the site. Inspection activities will occur during the lifespan of the site. Pre-production operations are estimated to last 277 days, depending on equipment availability, weather and various other conditions, this schedule may change.

Proposed Timeframes Per Operational Stage and Activity – CC 0603-23-32

Stage	Time Interval (Days)
Initial Grading and Construction	21
Drill Rig Mobilization	4
Drilling	144
Completions and Flowback Staging and De-mobilization	20
Completions; Flowback	88
Production	*
Interim Reclamation	5
Inspections	*
Final Reclamation	*

*Stage does not have specific time interval for operations

e. Associated Plans

The following plans are associated with flowline management, notification, safety, and incidence response.

- Laramie Energy 2021 Cascade Creek Emergency Response Plan
- Spill Prevention Control and Countermeasure Plan: Western Colorado Facilities
- Cascade Creek Stormwater Management Plan
- Laramie Energy Flowline Management Plan

2. Drilling and Completion Fluids

Preliminary pre-production equipment proposed for the three well sites are detailed in Layout Drawings (**Appendix B**). Equipment for each operational phase (drilling, completions, and flowback) is preliminary and subject to change due to equipment availability and scheduling.

Fluids and Circulating System

- (4) 400bbl upright tanks for freshwater storage
- Mud pits – (6-8) cylindrical tanks with spherical bottoms totaling 400-600bbls active volume during drilling operations.
- Trip tanks – (2) 40bbl trip tanks used during tripping or slug operations
- Pre-mix tank – (1) 200bbl pre-mix tank for drilling fluid
- Mud shack – (2) skids to store all mud products
- Rig diesel tank – (1) 240bbl diesel tank
- Air package diesel tank – (1) 190bbl diesel tank
- Mud pumps – (2) Gardener Denver PZ11 1600HP Triplex pumps
- Generators – (3) Cat 3516 powered KATO 1205KW generators

Drilling facilities (pre-production) typically operate in accordance with the controls specified in facility specific SPCC Plan provided by the drilling and completions operators.

3. Produced Fluids

Preliminary production equipment proposed for the three well sites are detailed in Layout Drawings (**Appendix C**). Production equipment will include tanks, flowlines, and pipelines.

Proposed Tanks Per Location

Proposed Well Site	Oil Tanks			Produced Water Tanks			Gunbarrel Tanks		
	# of Tanks	Vol. Per Tank (bbls)	Total Vol. (bbls)	# of Tanks	Vol. Per tank (bbls)	Total Vol. (bbls)	# of Tanks	Vol. Per tank (bbls)	Total Vol. (bbls)
0697-15-08	2	400	800	4	400	1600	2	400	800
0610-21-41	2	400	800	4	400	1600	2	400	800
0603-23-32	2	400	800	4	400	1600	2	400	800

Tanks that will be installed at the three proposed well sites will have a capacity of 400 barrels each and will be located more than 3 feet apart in accordance with COGCC Rule **608.a.(2).A** . Installed tanks will be connected to combustors and will not be vented.

Laramie will label all tanks on the subject sites to comply with Rule 605.h. and Rule 608.a.(12).

Tank will be installed within secondary containments at the three sites. The containment will consist of a spray-in liner, which is more durable and has a longer lifespan than poly-liner. The spray-in liner will minimize potential spill incidents and impacts. Spray-in liner specifications are detailed in **Appendix D**.

The three well sites will include several types of lines within the site perimeter to accommodate associated well site activities. All flowlines will be buried 4 feet below the surface. Flowlines are indicated in the Facility Layout Drawing (**Appendix C**). The material used for each flowline is compatible to transfer the substance under a variety of conditions. Crude oil transfer lines will not be installed within the perimeter of any of the locations proposed in the 2021 Cascade Creek OGDP.

Flowlines will consist of 2-inch steel pipe. Each well hole will have a flowline that is connected to a separator within the site perimeter. Flowlines will start at the each of the eighteen wellheads and connect to the separators.

The produced water/condensate dumplines from the separators to the tanks will consist of 2-, 3-, or 4-inch steel above ground transitioning to an underground Flexpipe/Flexsteel. The below ground Flexpipe/Flexsteel and will be either 3-inch or 4-inch (determination will be made during the drilling phase). Laramie will record the diameter size upon installation.

Sales Lines will consist of 2-inch steel above ground tying into an 8-inch header below ground followed by an 8-inch steel pipe below ground. Water gathering pipe will consist of a 4-inch or 6-inch Flexpipe and will connect to Laramie's Cascade Creek water gathering pipe system.

4. Monitoring, Inspection, and Schedules

All inspections are performed by qualified inspectors who are knowledgeable of facility operations, the equipment type and its associated components, and the characteristics of the material being stored, transferred, or processed. Laramie's Pad Inspection Checklist is provided in **Appendix E** and Laramie's "Periodic Facility Monitoring Procedures" are provided in **Appendix F.**

a. AVO (Audio Visual, Odor)

Laramie will conduct AVO (Audio Visual, Odor) inspections daily in accordance it Rule 609.d. *Audio Visual Olfactory Inspections*. AVO inspection is conducted by Laramie operations personnel on a daily basis.

1. **Audio**- Listen for any gas leaks or any noise out of the ordinary
2. **Visual**

a. Visual signs of a gas leak (bubbling, staining, or leaking around components.
b. Tanks- visual signs of seeping or leaking on tanks. Check for fluids in containment. Check valving to insure closed tight an no seeping or leaking.
c. Wells and wellheads- check for visual signs of gas leaking from tree and around base of well.
d. Location overall- Inspect location for wet spots not associated with natural conditions (rain, snow, run-off, etc.). Check for staining and odor during work on site.
e. Travel between sites inspect flowline corridors for any bubbling, leaking, staining or wet spots not associated with natural conditions (rain, snow, run-off, etc.).

3. **Odor**- Check for odors not normally associated with site.

Pre-Production Equipment

- A pre-spud inspection will be performed prior to drilling a new well. All hoses, connections, tanks, pumps, and other fluid circulating equipment will be checked to ensure it is properly installed and will not leak prior to utilization. Any equipment that has failed or will leak will in service will be removed from service and replaced.
- All fluid circulating equipment will be visually inspected both day and night shift to ensure it is properly connected and there are no leaks.
- Laramie Energy requires all contractors on-site to have and adequately perform their own spill prevention measures for their equipment.

Production Equipment Subject to AVO Inspection and FLIR Camera Inspection:

- Water Bath Heat Exchanger
- Production separators
- Gunbarrel, water, and condensate tanks
- Combustor knock out separator
- Combustor
- Generator (if required)
- Flow meters
- Water and condensate pumps
- Above grade pipe, valves, fittings

b. Dedicated Continuous Monitoring

Tanks will be equipped with a dedicated continuous monitoring through a SCADA platform at the three locations for remote monitoring, alerting, and shut-in capabilities. Laramie's SCADA system, which provides real-time fluid level data, will allow for continuous monitoring of tank volumes.

c. Spill Prevention Control and Countermeasure Plan

Laramie's *Western Colorado Spill Prevention Plan* (prepared in accordance with 40 CFR Part 112) will be utilized after production activities have commenced at the proposed well sites. Laramie performs a minimum of three types of inspections for all Spill Prevention Control and Countermeasure Plan (SPCC) regulated facilities: Annual Inspections, COGCC Inspections and Periodic Observations. Laramie's SPCC inspection procedures are detailed in **Appendix F.**

d. Stormwater Compliance Inspections

The Cascade Creek Stormwater Management Plan identifies operating procedures that comply with the requirements set forth by Colorado Department of Public Health and Environment (CDPHE) and Water Quality Control Division for controlling stormwater discharges associated with construction activity. Installation, maintenance, and inspection of stormwater BMPs minimize the potential for erosion, sedimentation or the discharge or pollutants. Stormwater BMPs, including a bermed site perimeter, are indicated in the Layout Drawings (**Appendix B &C**).

To maintain compliance, in areas of active construction, or areas that will resume construction, inspections must be made once every 14 days or more frequently if necessary to ensure BMPs are in place and functioning properly.

BMP inspection intervals may be reduced to once a month and post-storm inspections are no longer required if the following conditions exist: all ground disturbance construction activities are completed, all activities identified in the SWMP for final restoration are completed (seeding not required), and/or SWMP has been amended to indicate areas under reduced inspection intervals.

Routine 14-day, monthly, and post-storm inspections are not required for those areas where construction activities are temporarily halted, snow cover exists over the entire site for an extended period, and melting conditions are not present.

5. Testing, and Maintenance

Laramie will conduct ongoing maintenance and testing procedures to minimize leaks or spills. If any significant upgrades are made to the subject well sites, including flowlines and/or tank battery containments, a Form 27 Site Investigation plan will be submitted for approval prior to upgrades.

a. Flowlines and Pipelines

Existing pipelines and newly installed pipelines are tested and maintained in accordance with established Laramie protocols including the Laramie mechanical integrity program. The management practices implemented include the utilization of established standards for the selection and installation of pipelines. Management practices also include procedures for the routine monitoring, testing and maintenance of pipelines as well as their valves, flanges, and associated devices. To aid in ensuring employee safety and

environmental protection, all maintenance and testing activities are performed by personnel who are knowledgeable in facility operations and the specific operation of the equipment being maintained.

Laramie performs pressure and integrity testing of all new construction production piping and pipeline facilities prior to being placed into active service Initial pressure tests will be conducted for flowlines installed at the proposed sites. Laramie will comply with applicable rules and standards stated in the 1104 rules as detailed in the *Laramie Energy Flowline Management Plan*. Flowlines and pipelines are designed, inspected, and tested to the applicable ASME and API standards to include ASME B31.4, ASME B31.8, ASME B31.3, and API 15S.

Flowlines will be integrity-tested per the 1100 series of the COGCC Rules. After the installation of flowlines at the three proposed well sites, Laramie will conduct pressure testing to determine integrity prior to use. A Field Operations Notice Form 42 notifying COGCC of the testing will be submitted prior to testing. Laramie will notify COGCC results of flowline testing, as stated in COGCC Rule 1104.a.(1). Laramie will conduct tests in a manner to ensure that precautions are taken to protect employees and public. Laramie conducts triennial pressure tests in accordance with Rules 1104.e and 1104.f. Laramie will perform an annual function test per COGCC Rule 1103.a.(1).A. on isolation values installed at the CC 0697-15-08, CC 0610-21-4, and CC 0603-23-32. Laramie will repair or replace isolation valves that are not fully operable.

b. Tanks

Laramie will test the integrity of the proposed tanks with dye and black light to determine any seepage not visible to the naked eye exists. This will allow Laramie to perform pre-emptive repairs or replacement.

6. Procedures

In the event a leak is detected, personnel must follow procedures in the Laramie's *Western Colorado Spill Prevention Plan* and the Emergency Response Plan. If a leak is detected, personnel must immediately notify their supervisor and/or personnel will notify the appropriate contact as indicated on the Notification Chart in **Appendix H**.

If during inspections a leak or spill is observed or suspected, Laramie EHS department will assess potential leaks and spills and determine appropriate procedure depending on the scenario of the leak and/or spill. The Spill Report Form is provided in **Appendix I**. In the event of a leaking tank, Laramie will isolate tank and transfer fluids to other tanks. The subject tank will be taken out of service until cause is determined and repairs or replacement is completed. If a flowline is suspected of leaking, the line will be taken out of service and drained as much as possible. Laramie will determine cause and extent of the leak. The flowline will remain out of service until repairs are made and line is tested to operating pressure.

7. Record Keeping

In accordance with Rule 1102.m. *Record Keeping*, Laramie will retain records at the field office located in Grand Junction. Flowline transfer line size, route, materials, maximum anticipated operating pressure, pressure or other integrity test results, inspections, repairs, integrity management documentation, applicable technical standard(s) used, design, installation, cover for subsurface flowlines transfer lines, top soil management and reclamation, marking, maintenance and corrosion control, until Laramie submits abandonment information pursuant to Rule 1105.f. Physical and/or electric records will be kept in proprietary, with a minimum of 5 years. Documents and records may be available to COGCC upon request.

8. Site-Specific Fluid Leak Detection BMPs

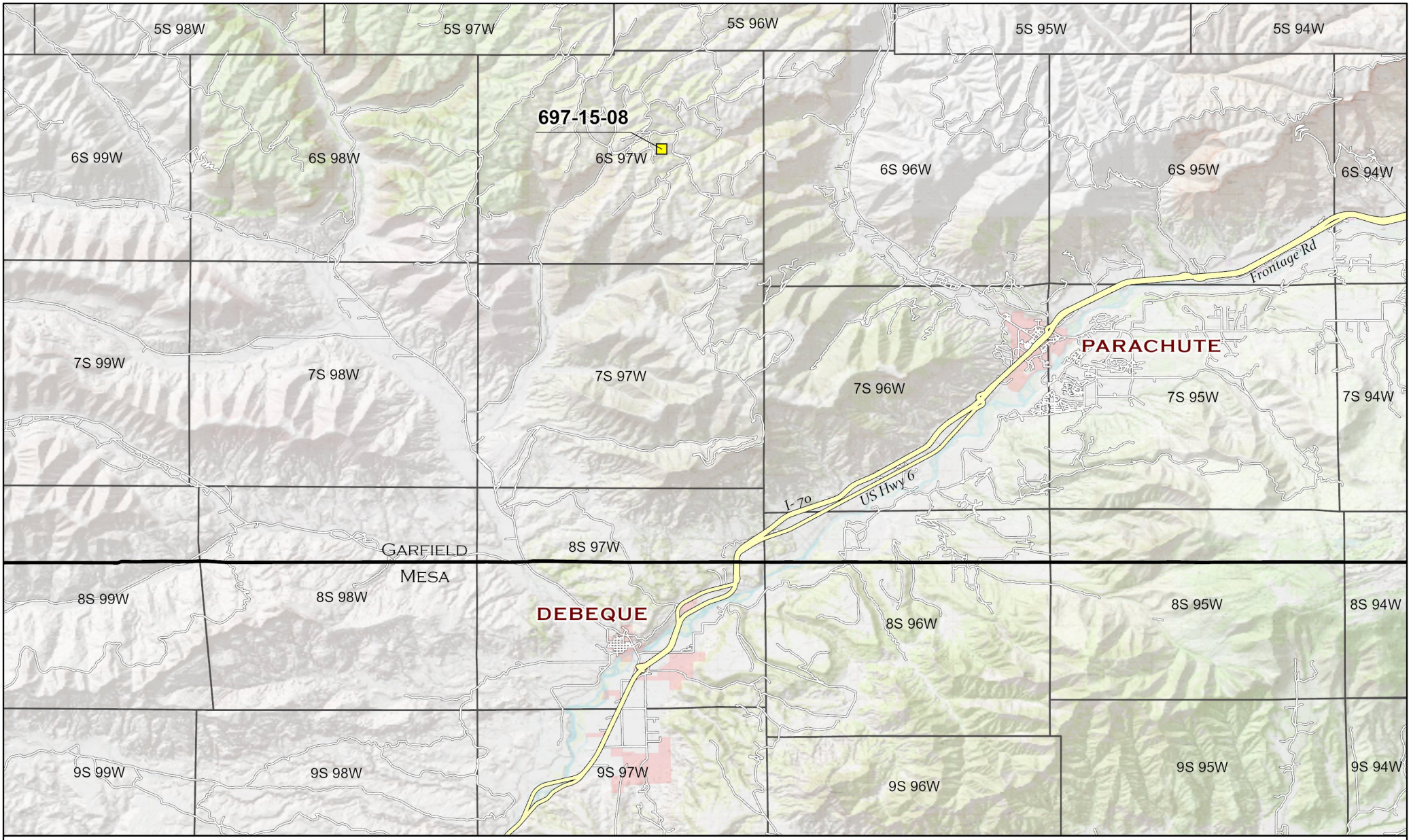
The following fluid leak detection BMPs are applicable to all three well sites stated in this plan.

- Flowlines will be integrity-tested per the 1100 Series rules.
- Laramie spill response procedures will be adhered to for any spills or releases. All spills will be managed in accordance with the COGCC 900 Series rules
- Laramie will conduct daily AVO inspections during operations at the three well site locations.
- A berm will be installed around the perimeter of the pad.
- Drilling mud will be fresh water bentonitic based.
- Drilling fluid products will be stored on location off the ground and in containment sheltered from the weather.
- Fuel storage tank will have secondary containment underneath fuel pump, fittings, and hose connections.
- Drill cutting storage will be stockpiled on the edge of location against the cut slope of a pad (if available) segregated from all topsoil and vegetation. Appropriate storm water drainage will be in place and the cuttings storage area will have a berm at the base to prevent any storm water run-off from exiting the pad or spreading to the rest of the pad outside of the designated area.
- Closed loop solids control system will be utilized with no reserve pits.

List of Appendices	
Appendix A	Vicinity Maps
Appendix B	Pre-Production Layout Drawings
Appendix C	Facility (Production) Layout Drawings
Appendix D	Spray Liner Specifications
Appendix E	Pad Inspection Checklist
Appendix F	Periodic Facility Monitoring Procedures
Appendix G	SPCC Inspection Procedures
Appendix H	Notification Chart
Appendix I	Spill Report Form

Appendix A

Vicinity Maps



LEGEND

- Site Location

0 3.5 7 mi

1 inch = 3.5 mi

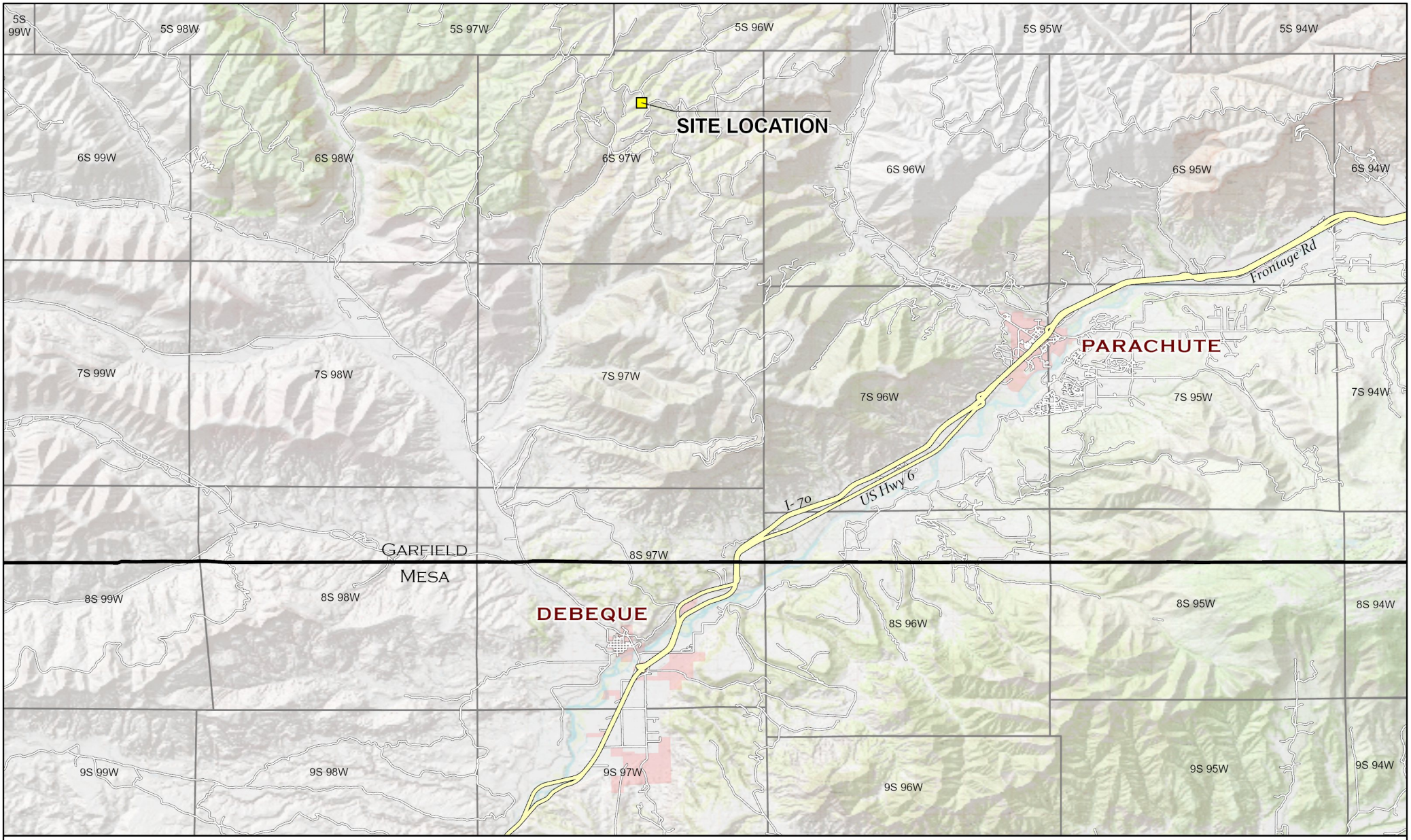
N W E S

Project No:	021-036
Map By:	NDB
Date:	4/13/2021

Vicinity Map
Cascade Creek 697-15-08 Pad
Laramie Energy
SENE, Section 15, T6S R97W, 6th P.M.
Garfield County, Colorado

ENTRADA CONSULTING GROUP
330 Grand Avenue, Unit C
Grand Junction, CO 81501
970-549-1015

Figure
1



LEGEND

- Site Location

0 3.5 7 mi

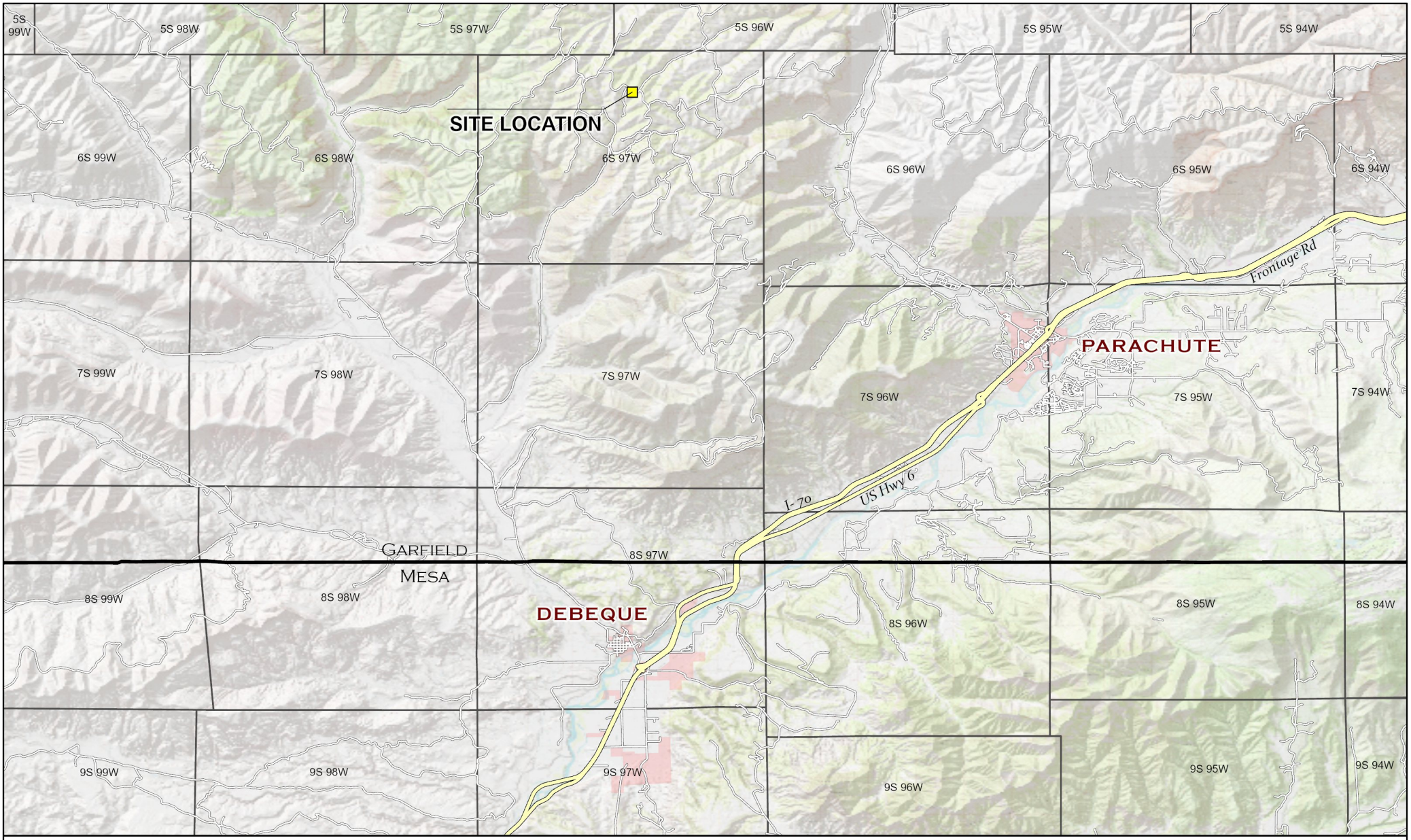
1 inch = 3.5 mi

Project No:	021-037
Map By:	NDB
Date:	4/12/2021

Vicinity Map
Cascade Creek 610-21-41 Pad
Laramie Energy
NENW, Section 10, T6S R97W, 6th P.M.
Garfield County, Colorado

ENTRADA CONSULTING GROUP
330 Grand Avenue, Unit C
Grand Junction, CO 81501
970-549-1015

Figure
1



LEGEND

- Site Location

0 3.5 7 mi

1 inch = 3.5 mi

Project No:	021-038
Map By:	NDB
Date:	4/12/2021

Vicinity Map
Cascade Creek 603-23-32 Pad
Laramie Energy
NESW, Section 3, T6S R97W, 6th P.M.
Garfield County, Colorado

ENTRADA CONSULTING GROUP
330 Grand Avenue, Unit C
Grand Junction, CO 81501
970-549-1015

Figure
1

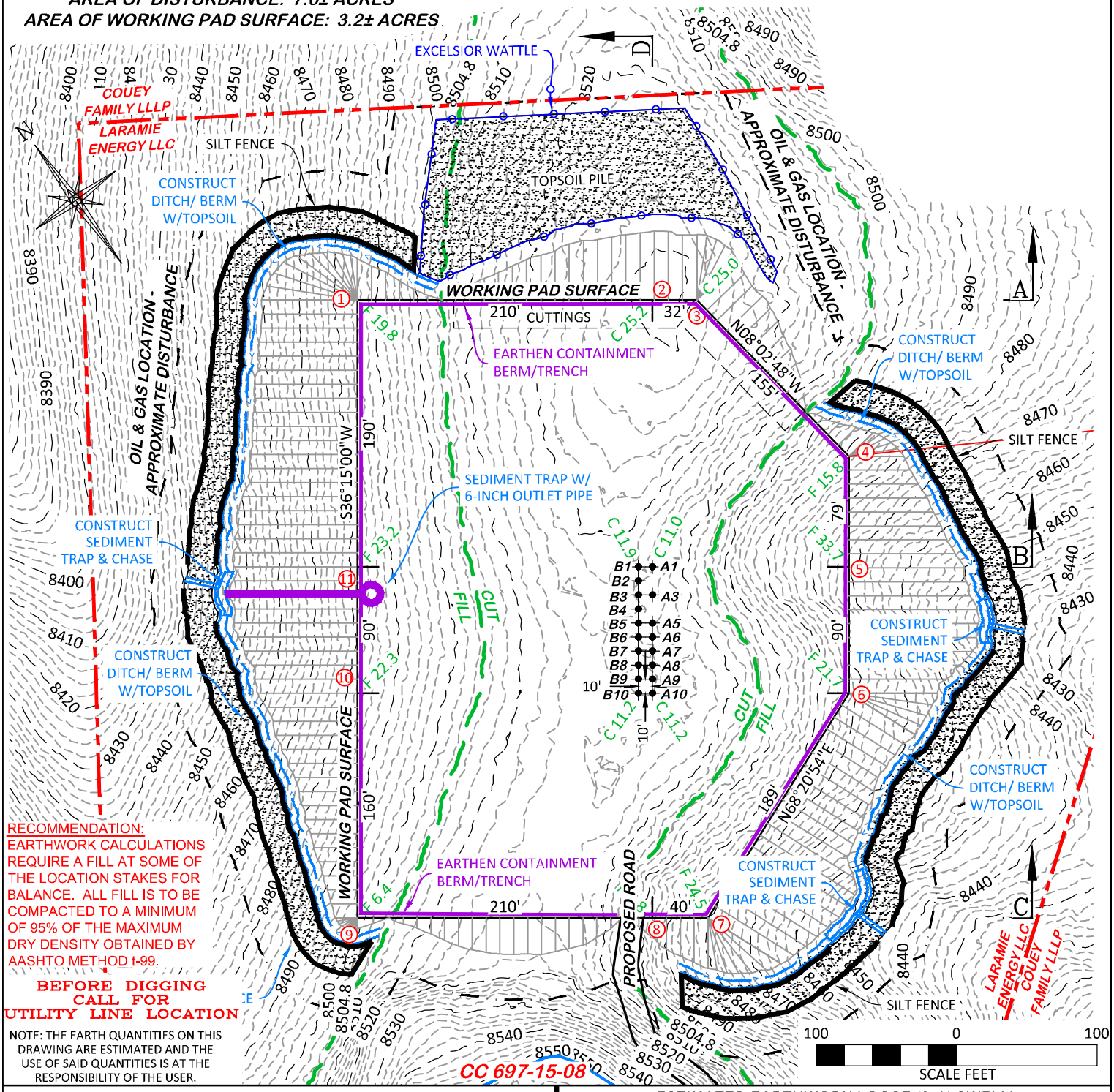
Appendix B

Pre-Production Layout Drawings
(Drilling, Completions, and Flowback)

- **Appendix B.1.** CC 0697-15-08
- **Appendix B.2.** CC 0610-21-41
- **Appendix B.3.** CC 0603-23-32

- **Appendix B.1.** CC 0697-15-08

UNGRADED ELEVATION: 8515.8'
FINAL ELEVATION: 8504.8'
AREA OF DISTURBANCE: 7.6± ACRES
AREA OF WORKING PAD SURFACE: 3.2± ACRES



RECOMMENDATION:
EARTHWORK CALCULATIONS REQUIRE A FILL AT SOME OF THE LOCATION STAKES FOR BALANCE. ALL FILL IS TO BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY OBTAINED BY AASHTO METHOD t-99.

BEFORE DIGGING CALL FOR UTILITY LINE LOCATION

NOTE: THE EARTH QUANTITIES ON THIS DRAWING ARE ESTIMATED AND THE USE OF SAID QUANTITIES IS AT THE RESPONSIBILITY OF THE USER.

CC 697-15-08

ESTIMATED EARTHWORK BANK

ITEM	TOPSOIL	CUT	FILL	EXCESS
PAD	7,869 BCY	37,178 BCY	45,151 BCY	(15,842) BCY
PIT		NONE		NONE
TOTALS	7,869 BCY	37,178 BCY	45,151 BCY	(15,842) BCY

ESTIMATED EARTHWORK LOOSE (25% SWELL)

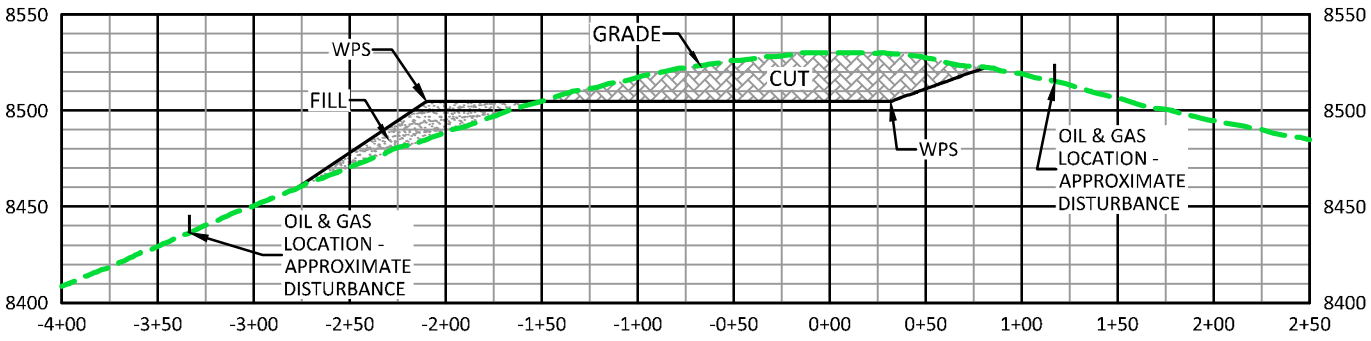
ITEM	TOPSOIL	CUT	FILL	EXCESS
PAD	7,869 BCY	46,473 LCY	45,151 LCY	(6,547) LCY
PIT		NONE		NONE
TOTALS	7,869 BCY	46,473 LCY	45,151 LCY	(6,547) LCY

DRG GRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

LAYOUT DRAWING 1 OF 7

DRAWN: 12/8/2020 - DEH	SCALE: 1" = 100'
REVISED: 10/4/2021 - DEH	DRG JOB No. 22026
COGCC RULE REVISIONS	304b(7)Bi CONST

CONSTRUCTION LAYOUT DRAWING
ESTIMATED EARTHWORK
LARAMIE ENERGY, LLC.
CC 697-15-08
SENE, SECTION 15, T. 6 S., R. 97 W., 6th P.M., GARFIELD COUNTY, COLORADO



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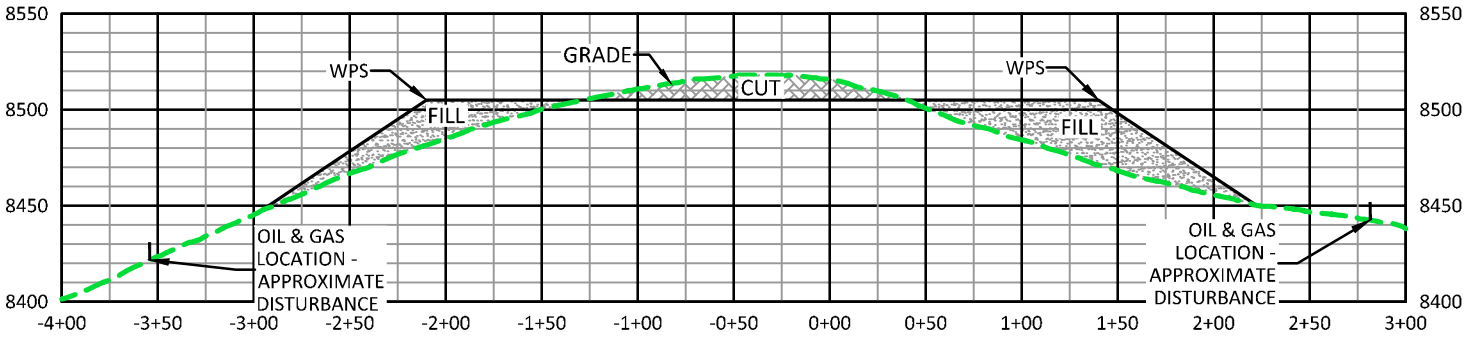

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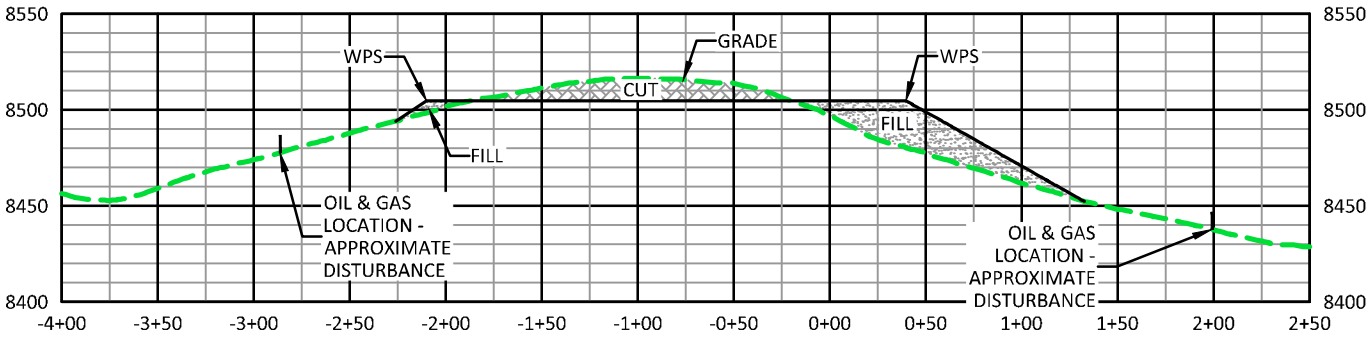

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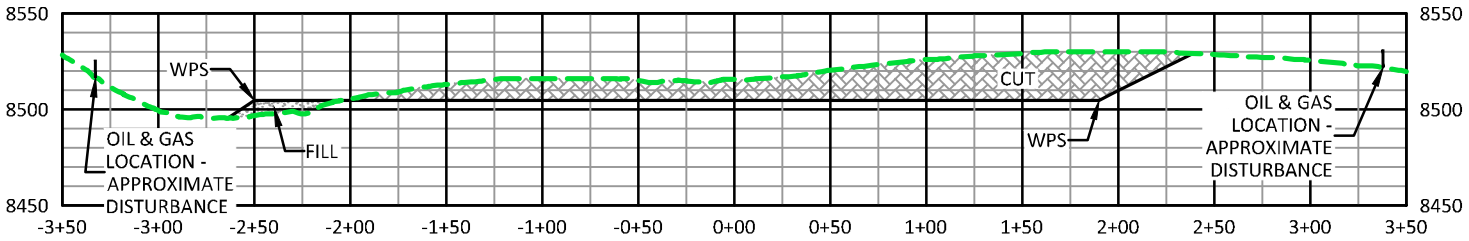


D

CUT SLOPES 2:1
FILL SLOPES 1.5:1

RECOMMENDATION:
EARTHWORK CALCULATIONS REQUIRE A FILL AT SOME OF THE LOCATION STAKES FOR BALANCE. ALL FILL IS TO BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY OBTAINED BY AASHTO METHOD t-99.

CC 697-15-08

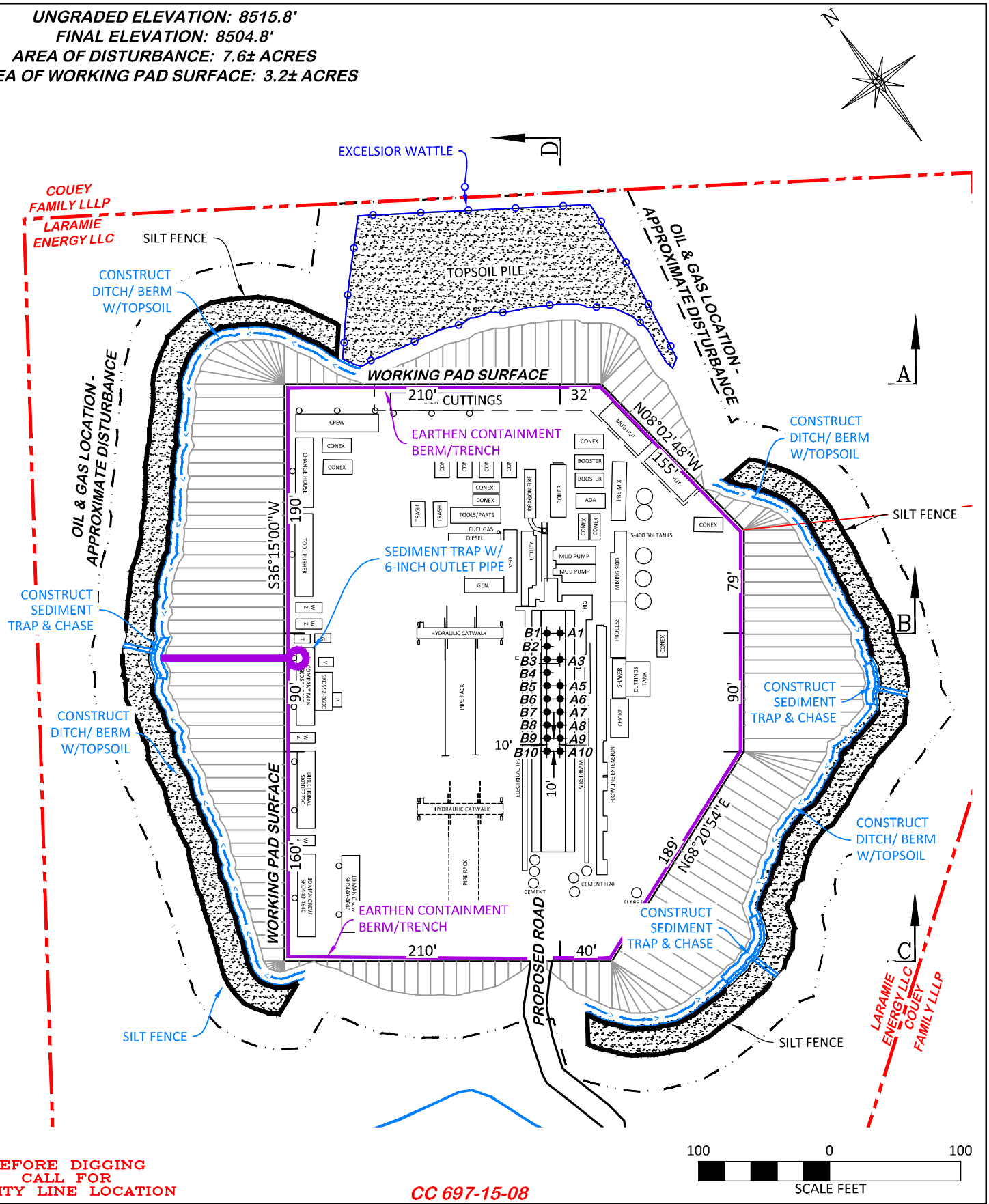
DRG GRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 12/8/2020 - DEH	SCALE: H - 1" = 80' V - 1" = 80'
REVISED: 10/4/2021 - DEH	DRG JOB No. 22026
COGCC RULE REVISIONS	304b(7)Bi XSEC

LAYOUT DRAWING 2 OF 7

CONSTRUCTION LAYOUT DRAWING
CROSS SECTIONS
LARAMIE ENERGY, LLC.
CC 697-15-08
SENE, SECTION 15, T. 6 S., R. 97 W., 6th P.M.,
GARFIELD COUNTY, COLORADO

UNGRADED ELEVATION: 8515.8'
FINAL ELEVATION: 8504.8'
AREA OF DISTURBANCE: 7.6± ACRES
AREA OF WORKING PAD SURFACE: 3.2± ACRES



100 0 100
SCALE FEET

BEFORE DIGGING CALL FOR UTILITY LINE LOCATION

CC 697-15-08

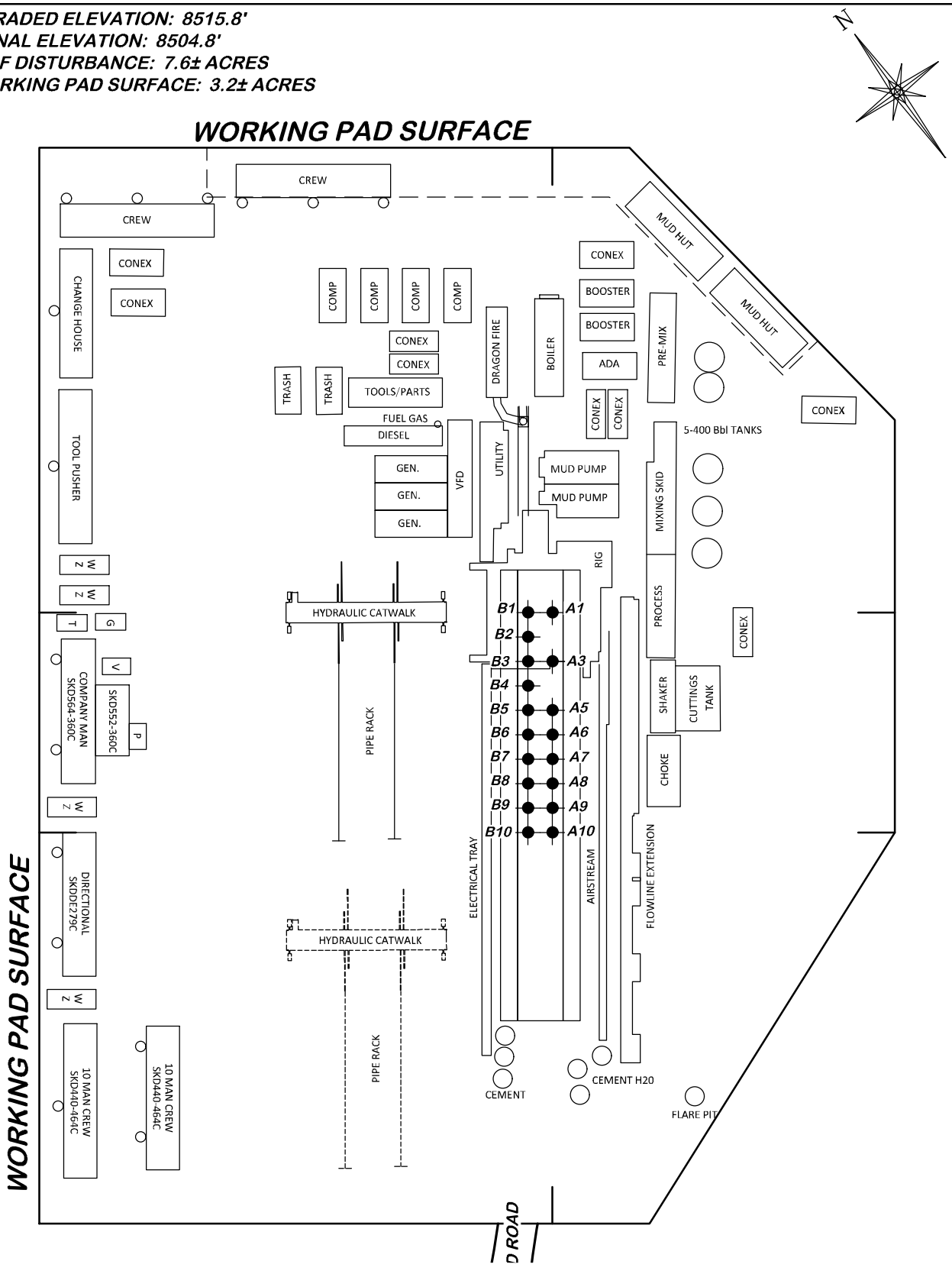
DRG GRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 12/8/2020 - DEH	SCALE: 1" = 100'
REVISED: 10/4/2021 - DEH	DRG JOB No. 22026
COGCC RULE REVISIONS	304B(7)BII RIG

LAYOUT DRAWING 3 OF 7

PRELIMINARY RIG LAYOUT
LARAMIE ENERGY, LLC.
CC 697-15-08
SENE, SECTION 15, T. 6 S., R. 97 W., 6th P.M., GARFIELD COUNTY, COLORADO

UNGRADED ELEVATION: 8515.8'
FINAL ELEVATION: 8504.8'
AREA OF DISTURBANCE: 7.6± ACRES
AREA OF WORKING PAD SURFACE: 3.2± ACRES



60 0 60
SCALE FEET

BEFORE DIGGING
CALL FOR
UTILITY LINE LOCATION

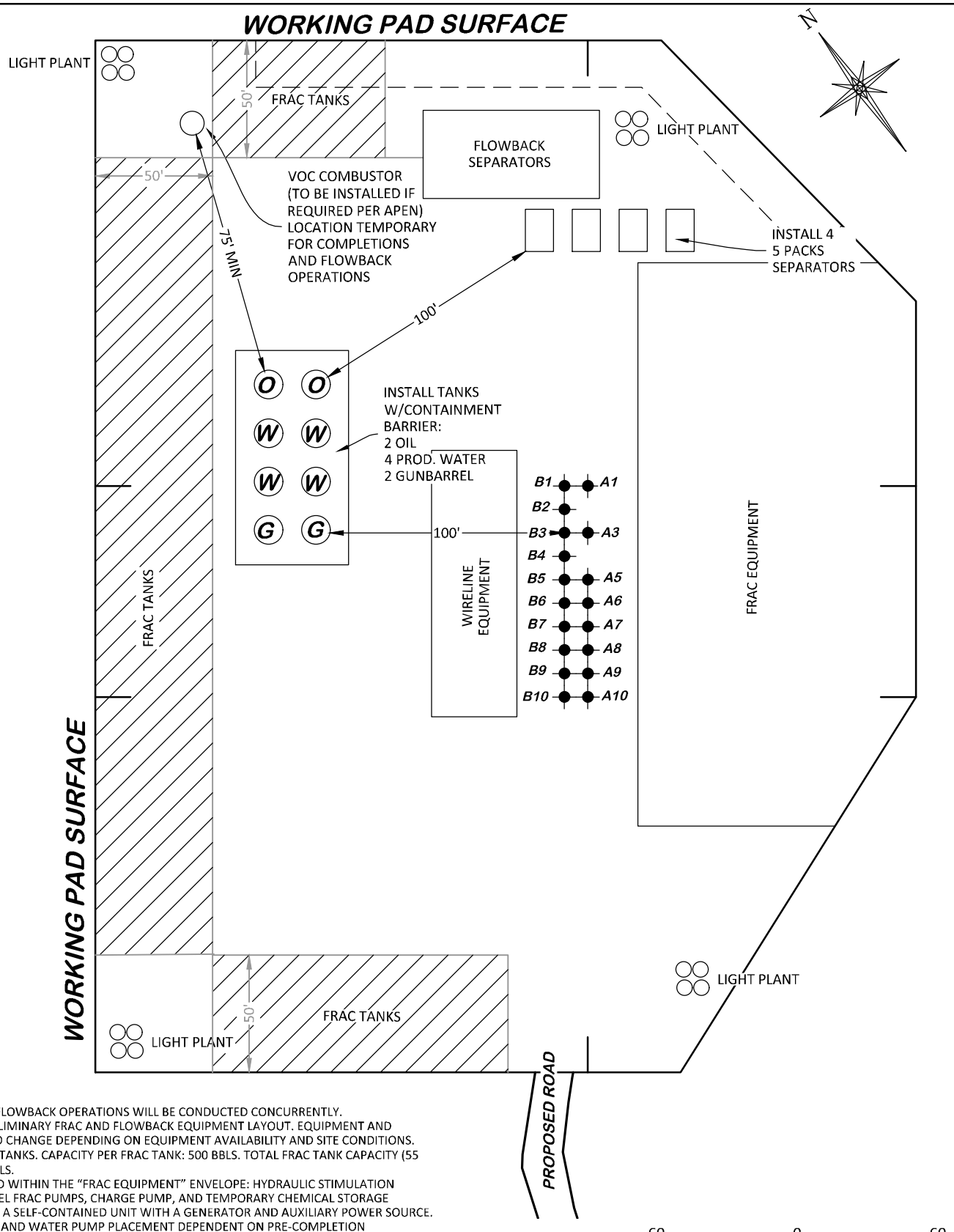
CC 697-15-08

GRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

LAYOUT DRAWING 4 OF 7

RIG DETAIL
LARAMIE ENERGY, LLC.
CC 697-15-08
SENE, SECTION 15, T. 6 S., R. 97 W., 6th P.M., GARFIELD COUNTY, COLORADO

DRAWN: 12/8/2020 - DEH	SCALE: 1" = 60'
REVISED: 10/4/2021 - DEH	DRG JOB No. 22026
COGCC RULE REVISIONS	304B(7)BII RIG DET



NOTES:
1. COMPLETIONS AND FLOWBACK OPERATIONS WILL BE CONDUCTED CONCURRENTLY.
2. EXHIBIT DEPICTS PRELIMINARY FRAC AND FLOWBACK EQUIPMENT LAYOUT. EQUIPMENT AND LAYOUT ARE SUBJECT TO CHANGE DEPENDING ON EQUIPMENT AVAILABILITY AND SITE CONDITIONS.
3. FIFTY-FIVE (55) FRAC TANKS. CAPACITY PER FRAC TANK: 500 BBLS. TOTAL FRAC TANK CAPACITY (55 FRAC TANKS): 27,500 BBLS.
4. EQUIPMENT LOCATED WITHIN THE "FRAC EQUIPMENT" ENVELOPE: HYDRAULIC STIMULATION CONTROL TRAILER, DIESEL FRAC PUMPS, CHARGE PUMP, AND TEMPORARY CHEMICAL STORAGE
5. EACH LIGHT PLANT IS A SELF-CONTAINED UNIT WITH A GENERATOR AND AUXILIARY POWER SOURCE.
6. ACTUAL WATER LINE AND WATER PUMP PLACEMENT DEPENDENT ON PRE-COMPLETION ALIGNMENT OF FRAC TANKS.
7. OPERATOR WILL UTILIZE HEAT PUMPS FOR WINTER OPERATIONS BASED ON LOCATION SPACING.
8. FLOWBACK SUPPORT TRAILER IS LOCATED WITHIN "FLOWBACK SEPARATORS" ENVELOPE.
9. PLEASE REFER TO THE CONSTRUCTION LAYOUT DRAWING FOR STORMWATER CONTROL MEASURES.

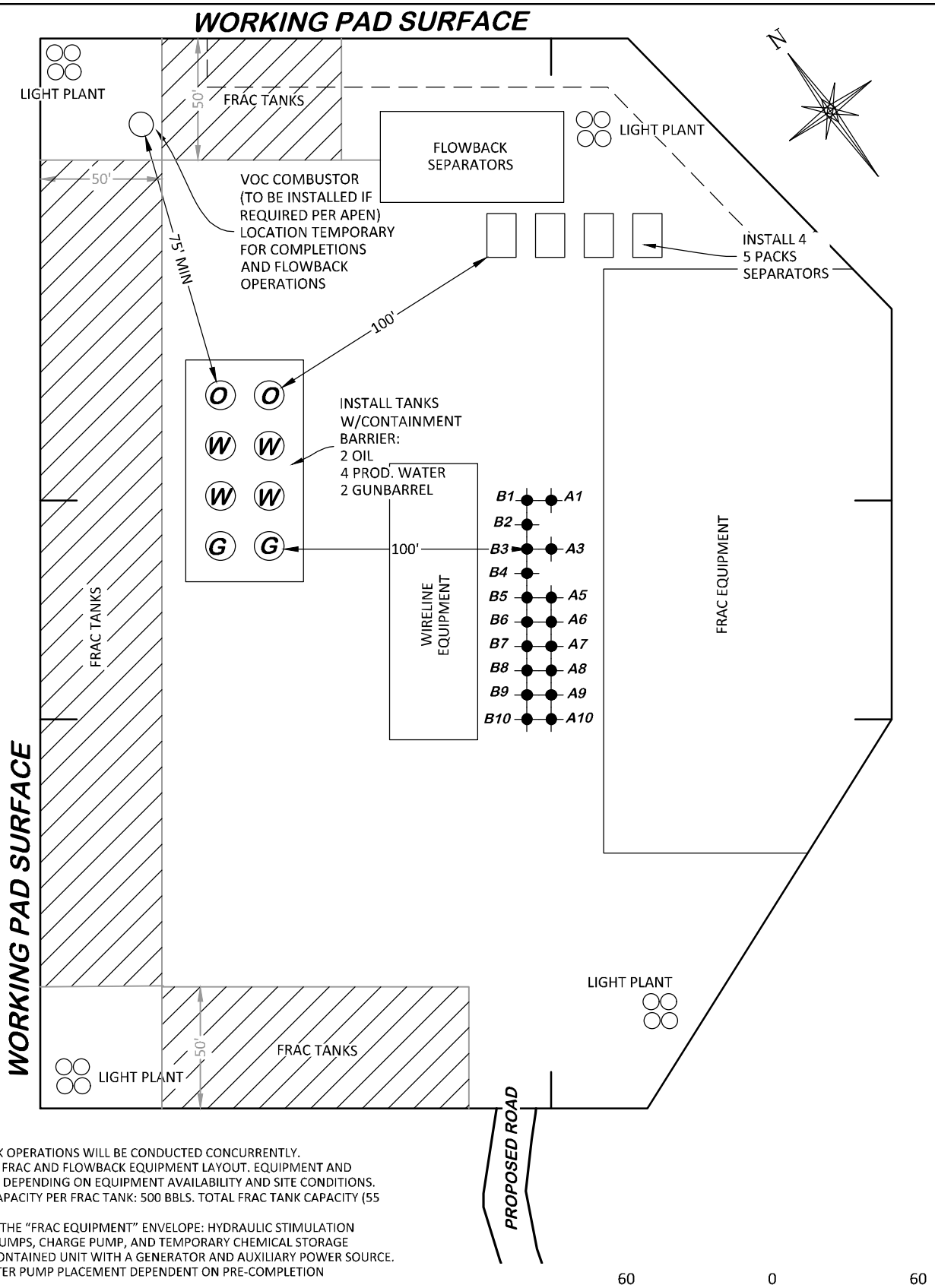
CC 697-15-08

DRG RIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 7/28/2021 - DEH	SCALE: 1" = 60'
REVISED: 10/12/2021 - DEH	DRG JOB No. 22026
COGCC RULE REVISIONS	304b(7)Biii COMP

LAYOUT DRAWING 5 OF 7

PRELIMINARY WELL COMPLETIONS AND STIMULATION LAYOUT
LARAMIE ENERGY, LLC.
CC 697-15-08
SENE, SECTION 15, T. 6 S., R. 97 W., 6th P.M., GARFIELD COUNTY, COLORADO



NOTES:
1. COMPLETIONS AND FLOWBACK OPERATIONS WILL BE CONDUCTED CONCURRENTLY.
2. EXHIBIT DEPICTS PRELIMINARY FRAC AND FLOWBACK EQUIPMENT LAYOUT. EQUIPMENT AND LAYOUT ARE SUBJECT TO CHANGE DEPENDING ON EQUIPMENT AVAILABILITY AND SITE CONDITIONS.
3. FIFTY-FIVE (55) FRAC TANKS. CAPACITY PER FRAC TANK: 500 BBLS. TOTAL FRAC TANK CAPACITY (55 FRAC TANKS): 27,500 BBLS.
4. EQUIPMENT LOCATED WITHIN THE "FRAC EQUIPMENT" ENVELOPE: HYDRAULIC STIMULATION CONTROL TRAILER, DIESEL FRAC PUMPS, CHARGE PUMP, AND TEMPORARY CHEMICAL STORAGE
5. EACH LIGHT PLANT IS A SELF-CONTAINED UNIT WITH A GENERATOR AND AUXILIARY POWER SOURCE.
6. ACTUAL WATER LINE AND WATER PUMP PLACEMENT DEPENDENT ON PRE-COMPLETION ALIGNMENT OF FRAC TANKS.
7. OPERATOR WILL UTILIZE HEAT PUMPS FOR WINTER OPERATIONS BASED ON LOCATION SPACING.
8. FLOWBACK SUPPORT TRAILER IS LOCATED WITHIN "FLOWBACK SEPARATORS" ENVELOPE.
9. PLEASE REFER TO THE CONSTRUCTION LAYOUT DRAWING FOR STORMWATER CONTROL MEASURES.

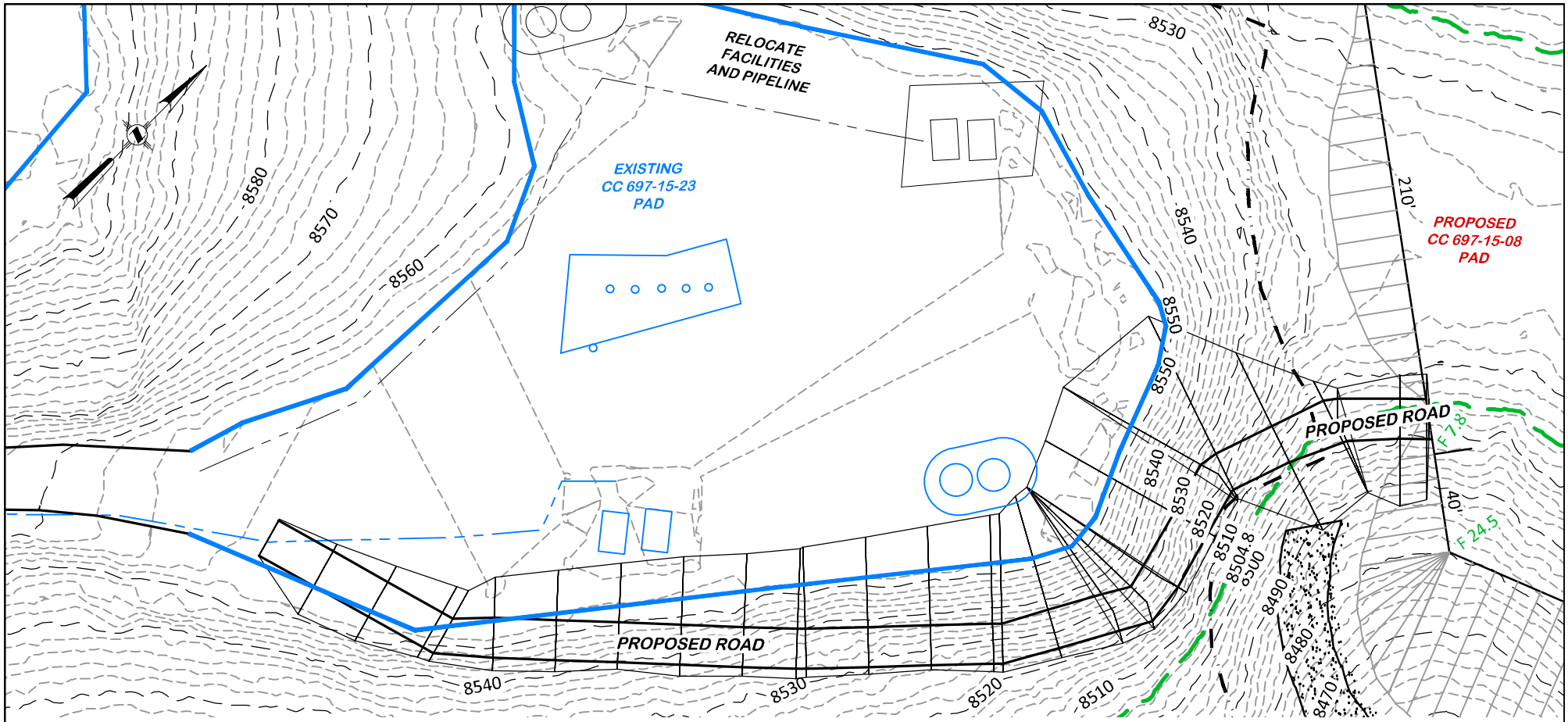
CC 697-15-08

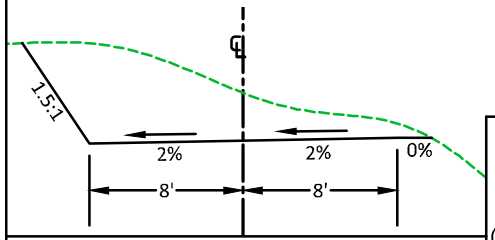
DRG GRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

DRAWN: 7/28/2021 - DEH	SCALE: 1" = 60'
REVISED: 10/12/2021 - DEH	DRG JOB No. 22026
COGCC RULE REVISIONS	304b(7)Biv FLOWBACK

LAYOUT DRAWING 6 OF 7

FLOWBACK EQUIPMENT LAYOUT
LARAMIE ENERGY, LLC.
CC 697-15-08
SENE, SECTION 15, T. 6 S., R. 97 W., 6th P.M., GARFIELD COUNTY, COLORADO





CC 697-15-08

ESTIMATED EARTHWORK		
CUT	FILL	EXCESS
6,949 CY	193 CY	6,756 CY

DRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

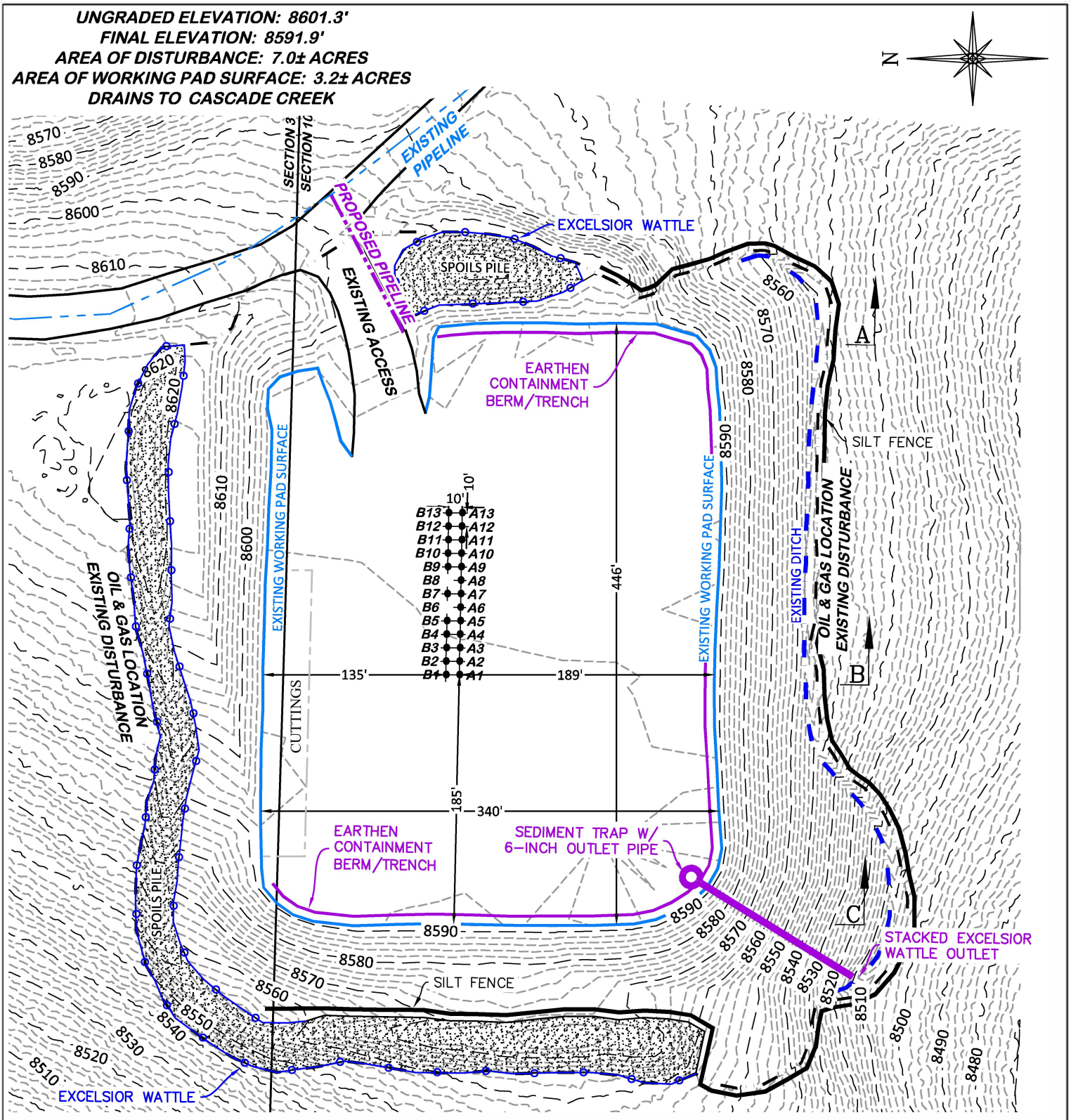
DRAWN: 12/8/2020 - DEH	SCALE: H - 1" = 60' V - 1" = 60'
REVISED: 10/4/2021 - DEH	DRG JOB No. 22026
COGCC RULE REVISIONS	304B(7)F ROAD PP

ACCESS PLAN AND PROFILE

LARAMIE ENERGY, LLC.
CC 697-15-08
SENE, SECTION 15, T. 6 S., R. 97 W., 6th P.M.,
GARFIELD COUNTY, COLORADO

- **Appendix B.2.** CC 0610-21-41

UNGRADED ELEVATION: 8601.3'
FINAL ELEVATION: 8591.9'
AREA OF DISTURBANCE: 7.0± ACRES
AREA OF WORKING PAD SURFACE: 3.2± ACRES
DRAINS TO CASCADE CREEK



BEFORE DIGGING CALL FOR UTILITY LINE LOCATION

NOTE: THE EARTH QUANTITIES ON THIS DRAWING ARE ESTIMATED AND THE USE OF SAID QUANTITIES IS AT THE RESPONSIBILITY OF THE USER.

100 0 100
SCALE FEET

CC 610-21-41

LAYOUT DRAWING 1 OF 8

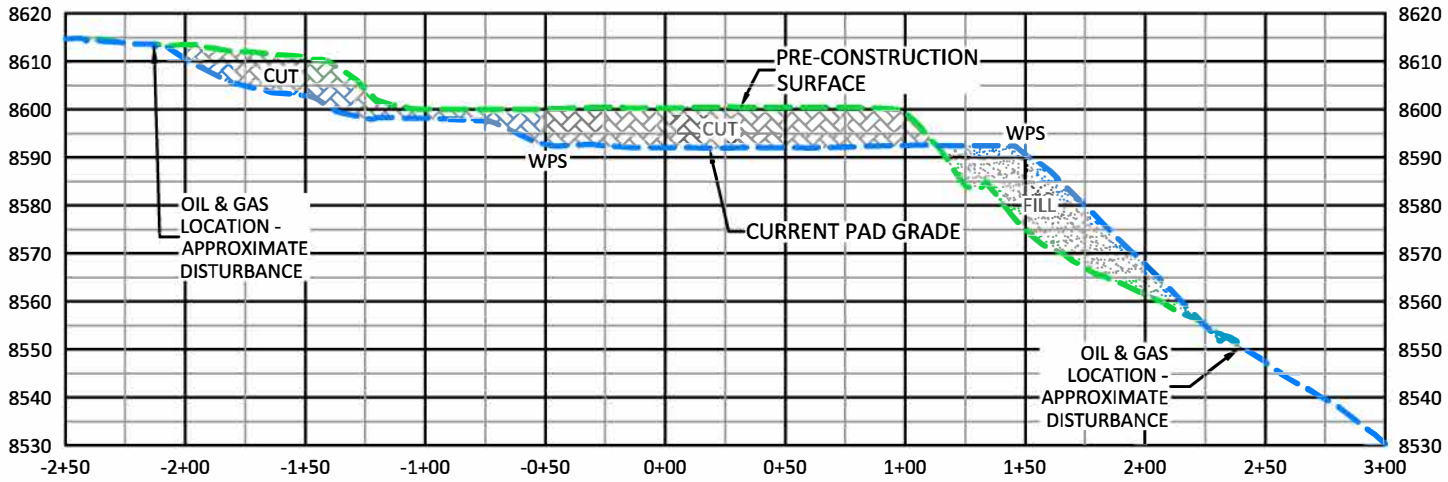
CONSTRUCTION LAYOUT DRAWING
ESTIMATED EARTHWORK
LARAMIE ENERGY, LLC
CC 610-21-41
NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M.,
GARFIELD COUNTY, COLORADO

EXISTING LOCATION, NO ESTIMATED EARTHWORK

ITEM	CUT	FILL	TOPSOIL	EXCESS
PAD	NONE	NONE	NONE	NONE
PIT	NONE			NONE
TOTALS	NONE	NONE	NONE	NONE

DRG GRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

DRAWN: 10/30/20201 - DEH	SCALE: 1" = 100'
REVISED: N/A	DRG JOB No. 21293
	304B(7)BI CONST



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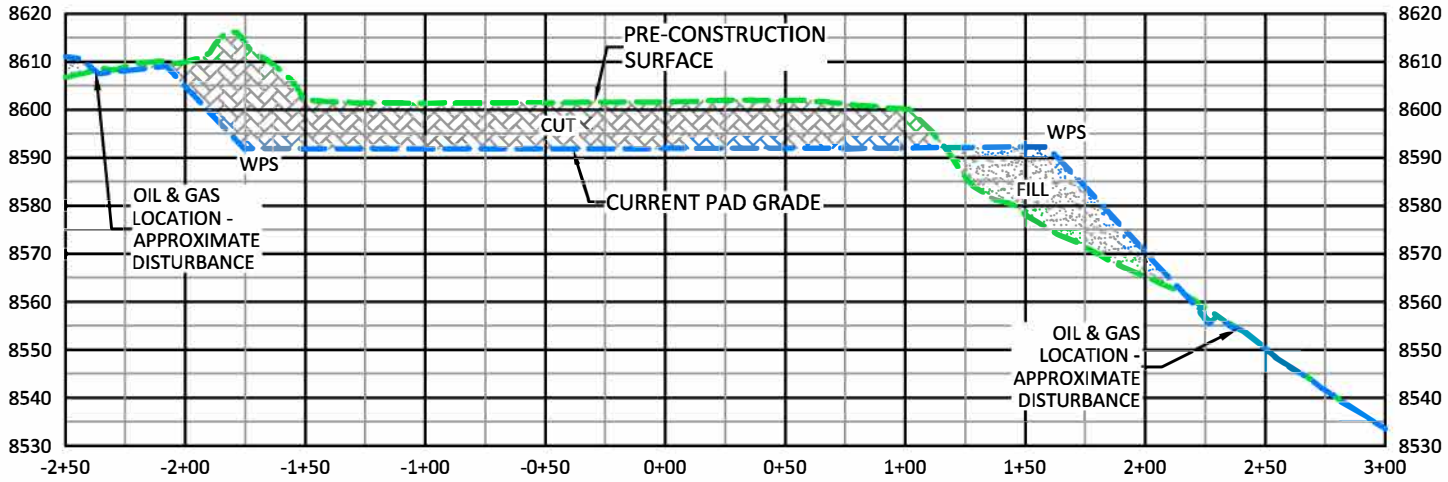

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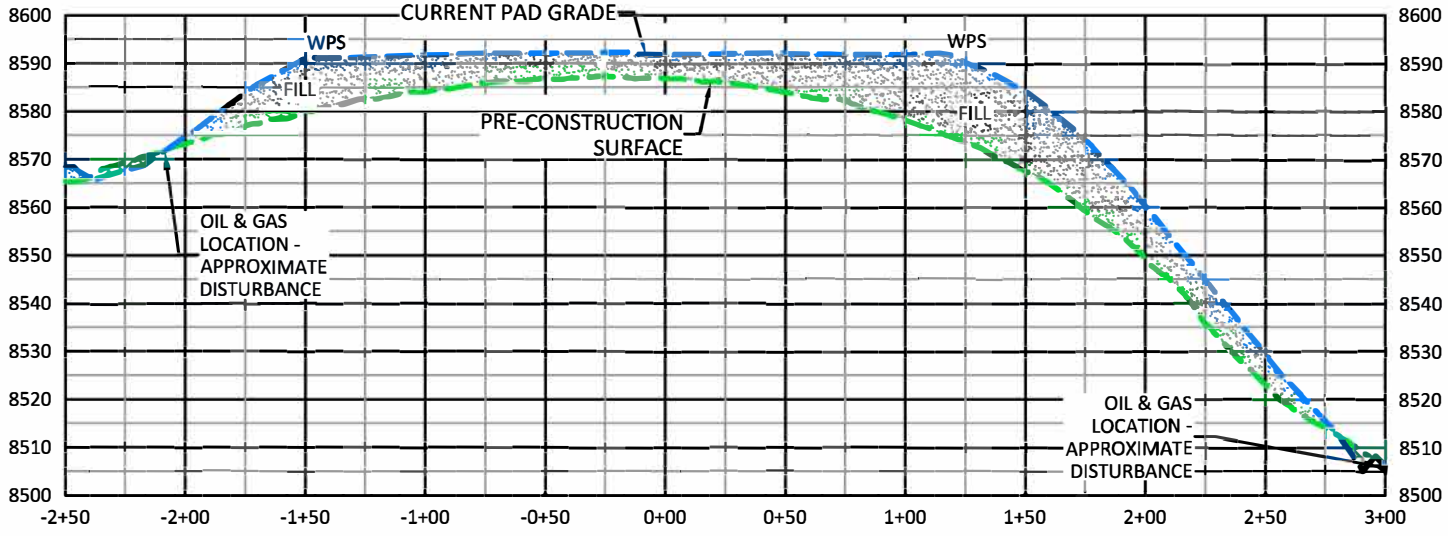


C

CC 610-21-41

DRG GRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

DRAWN: 10/30/20201 - DEH	SCALE: H- 1"=80' V- 1"=40'
REVISED: N/A	DRG JOB No. 21293
	304B(7)BI XSEC

LAYOUT DRAWING 2 OF 8

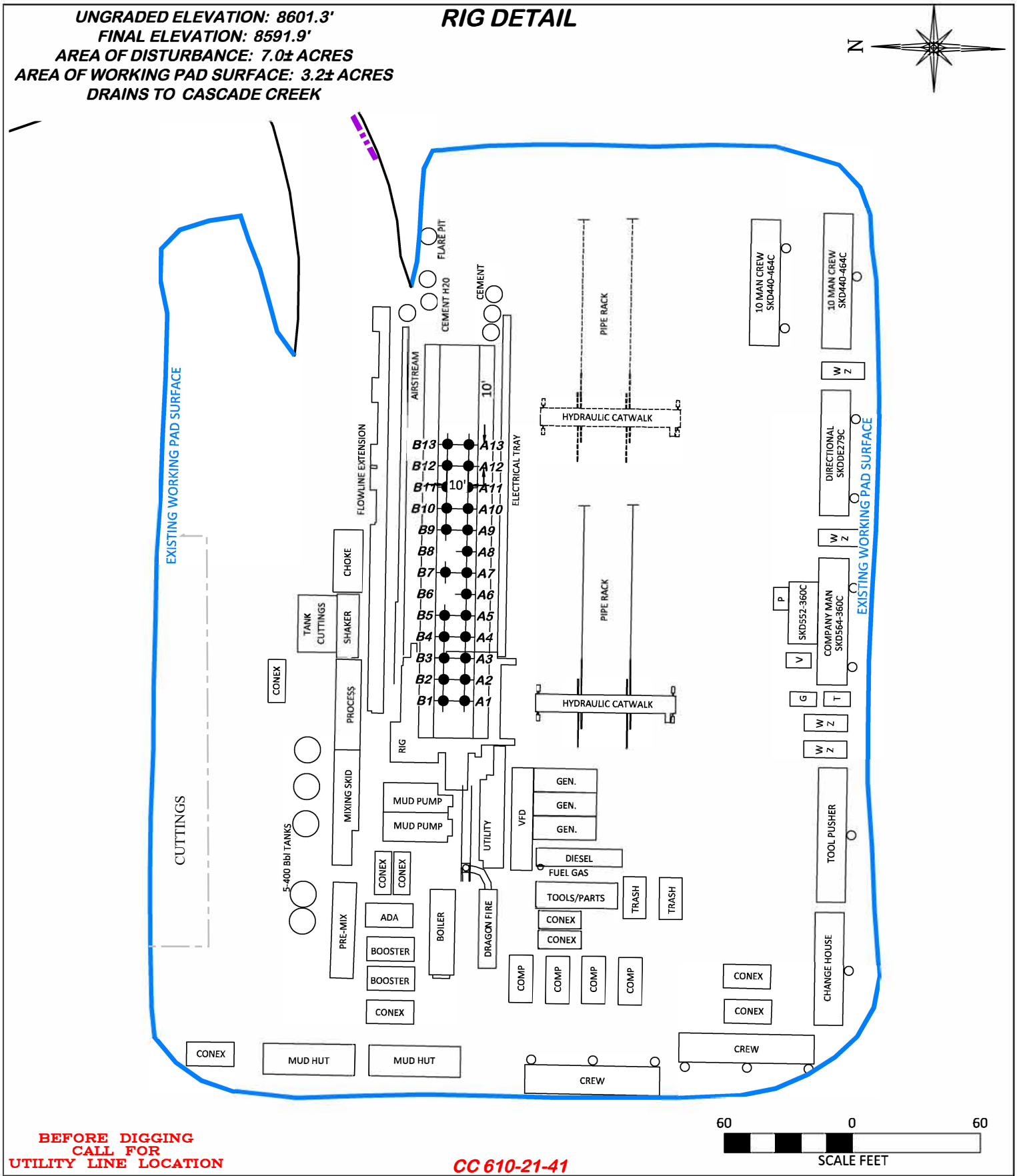
CONSTRUCTION LAYOUT DRAWING
CROSS SECTIONS
LARAMIE ENERGY, LLC

CC 610-21-41

NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M., GARFIELD COUNTY, COLORADO

UNGRADED ELEVATION: 8601.3'
FINAL ELEVATION: 8591.9'
AREA OF DISTURBANCE: 7.0± ACRES
AREA OF WORKING PAD SURFACE: 3.2± ACRES
DRAINS TO CASCADE CREEK

RIG DETAIL



BEFORE DIGGING
CALL FOR
UTILITY LINE LOCATION

CC 610-21-41

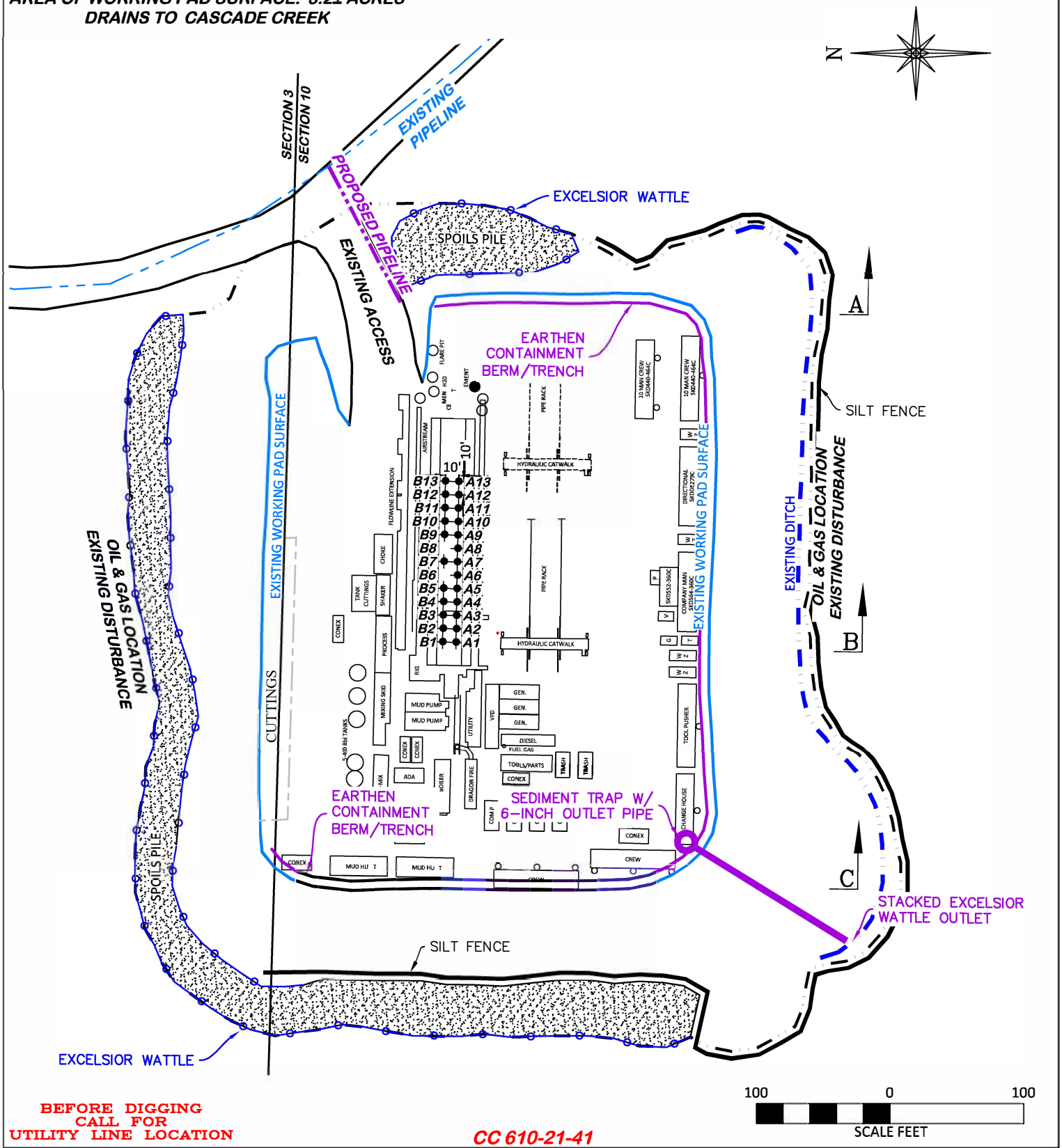
LAYOUT DRAWING 3 OF 8

DRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

DRAWN: 10/30/20201 - DEH	SCALE: 1" = 60'
REVISED: N/A	DRG JOB No. 21293
	304B(7)BII RIG DET

RIG DETAIL
LARAMIE ENERGY, LLC
CC 610-21-41
NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M., GARFIELD COUNTY, COLORADO

UNGRADED ELEVATION: 8601.3'
FINAL ELEVATION: 8591.9'
AREA OF DISTURBANCE: 7.0± ACRES
AREA OF WORKING PAD SURFACE: 3.2± ACRES
DRAINS TO CASCADE CREEK



BEFORE DIGGING
CALL FOR
UTILITY LINE LOCATION

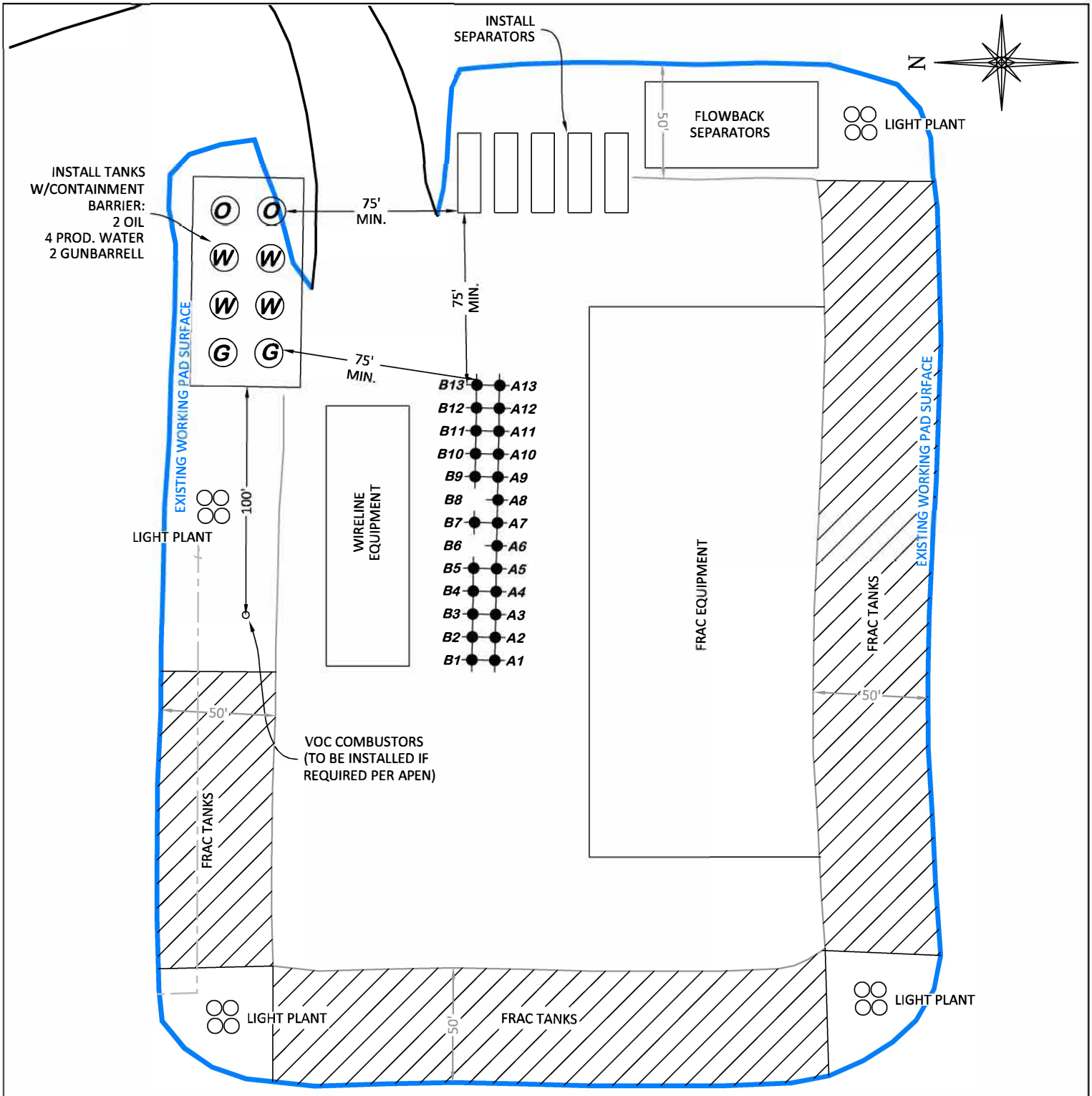
CC 610-21-41

DRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 10/30/20201 - DEH	SCALE: 1" = 100'
REVISED: N/A	DRG JOB No. 21293
	304B(7)BII RIG

LAYOUT DRAWING 4 OF 8

PRELIMINARY RIG LAYOUT
LARAMIE ENERGY, LLC
CC 610-21-41
NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M., GARFIELD COUNTY, COLORADO



NOTES:

1. COMPLETIONS AND FLOWBACK OPERATIONS WILL BE CONDUCTED CONCURRENTLY.
2. EXHIBIT DEPICTS PRELIMINARY FRAC AND FLOWBACK EQUIPMENT LAYOUT. EQUIPMENT AND LAYOUT ARE SUBJECT TO CHANGE DEPENDING ON EQUIPMENT AVAILABILITY AND SITE CONDITIONS.
3. FIFTY-FIVE (55) FRAC TANKS. CAPACITY PER FRAC TANK: 500 BBLS. TOTAL FRAC TANK CAPACITY (55 FRAC TANKS): 27,500 BBLS.
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7. OPERATOR WILL UTILIZE HEAT PUMPS FOR WINTER OPERATIONS BASED ON LOCATION SPACING.
8. FLOWBACK SUPPORT TRAILER IS LOCATED WITHIN "FLOWBACK SEPARATORS" ENVELOPE.
9. PLEASE REFER TO THE CONSTRUCTION LAYOUT DRAWING FOR STORMWATER CONTROL MEASURES.

60 0 60
SCALE FEET

CC 610-21-41

DRG GRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

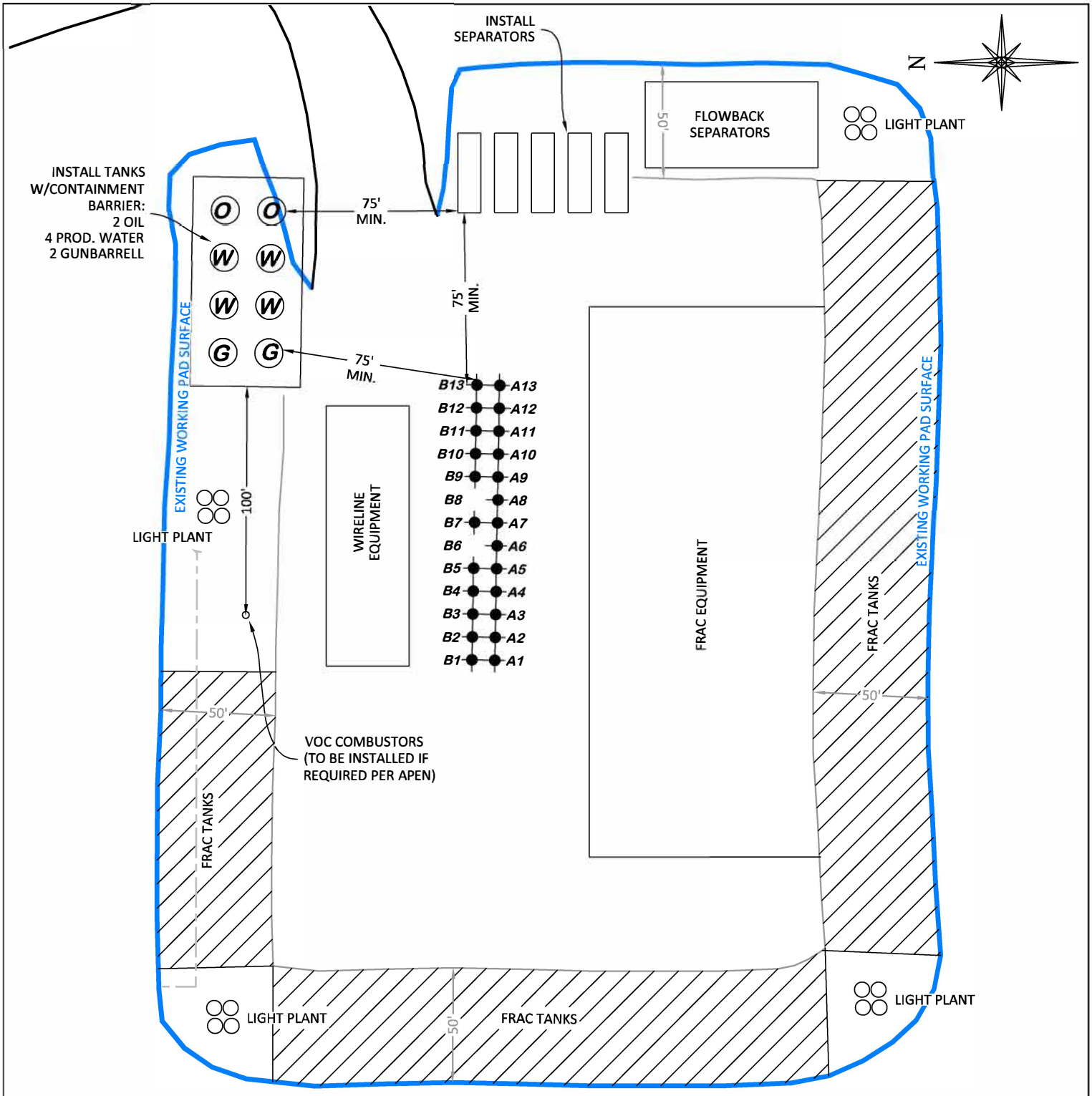
DRAWN: 10/30/20201 - DEH	SCALE: 1" = 60'
REVISED: N/A	DRG JOB No. 21293
	LIGHTING

LAYOUT DRAWING 5 OF 8

PRELIMINARY WELL COMPLETIONS AND STIMULATION LAYOUT
LARAMIE ENERGY, LLC

CC 610-21-41

NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M., GARFIELD COUNTY, COLORADO



NOTES:

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60 0 60
SCALE FEET

CC 610-21-41

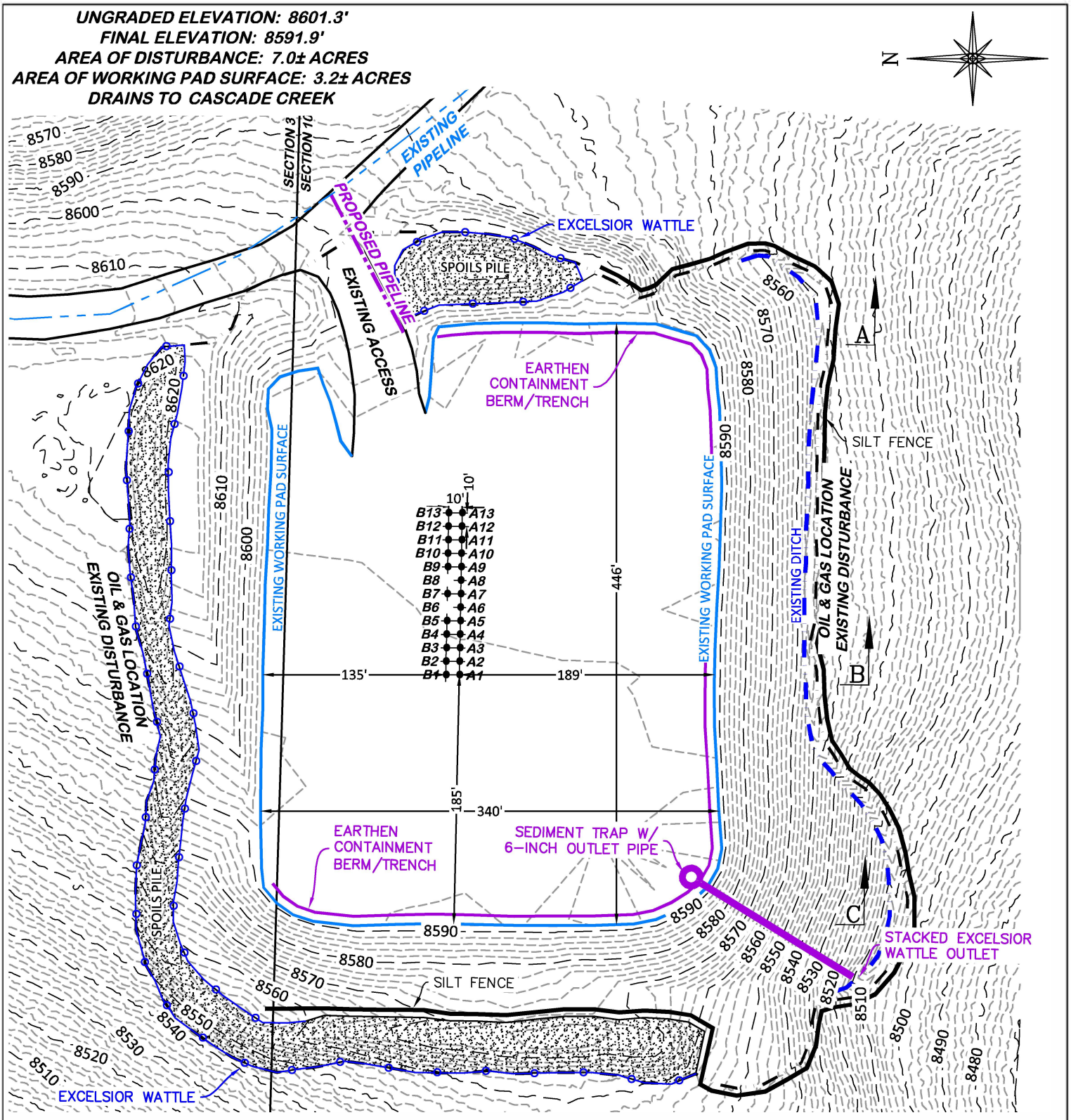
DRG GRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

LAYOUT DRAWING 6 OF 8

DRAWN: 10/30/20201 - DEH	SCALE: 1" = 60'
REVISED: N/A	DRG JOB No. 21293
	LIGHTING

FLOWBACK EQUIPMENT LAYOUT
LARAMIE ENERGY, LLC
CC 610-21-41
NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M., GARFIELD COUNTY, COLORADO

UNGRADED ELEVATION: 8601.3'
FINAL ELEVATION: 8591.9'
AREA OF DISTURBANCE: 7.0± ACRES
AREA OF WORKING PAD SURFACE: 3.2± ACRES
DRAINS TO CASCADE CREEK



BEFORE DIGGING CALL FOR UTILITY LINE LOCATION

NOTE: THE EARTH QUANTITIES ON THIS DRAWING ARE ESTIMATED AND THE USE OF SAID QUANTITIES IS AT THE RESPONSIBILITY OF THE USER.

100 0 100
SCALE FEET

CC 610-21-41

LAYOUT DRAWING 1 OF 8

CONSTRUCTION LAYOUT DRAWING
ESTIMATED EARTHWORK
LARAMIE ENERGY, LLC

CC 610-21-41

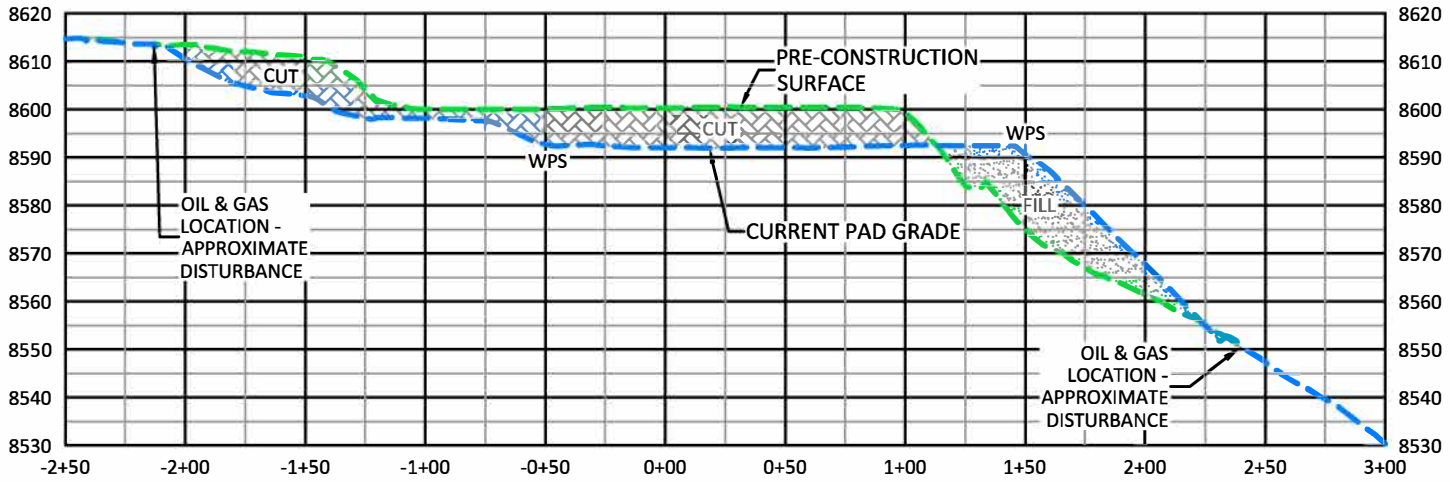
NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M.,
GARFIELD COUNTY, COLORADO

EXISTING LOCATION, NO ESTIMATED EARTHWORK

ITEM	CUT	FILL	TOPSOIL	EXCESS
PAD	NONE	NONE	NONE	NONE
PIT	NONE			NONE
TOTALS	NONE	NONE	NONE	NONE

DRG GRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

DRAWN: 10/30/20201 - DEH	SCALE: 1" = 100'
REVISED: N/A	DRG JOB No. 21293
	304B(7)BI CONST



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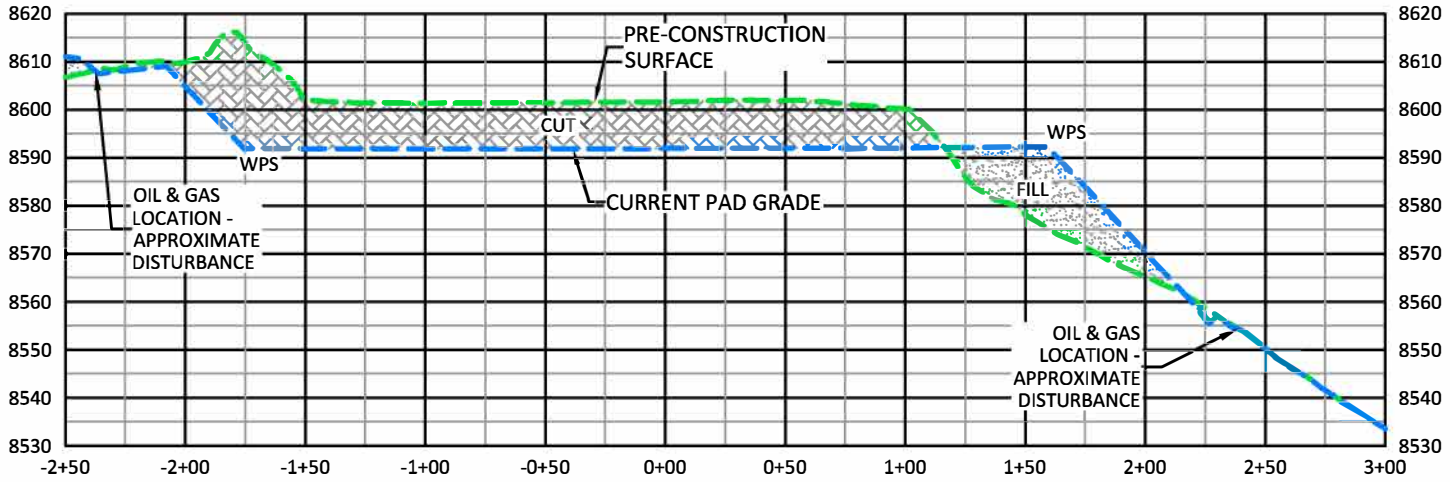

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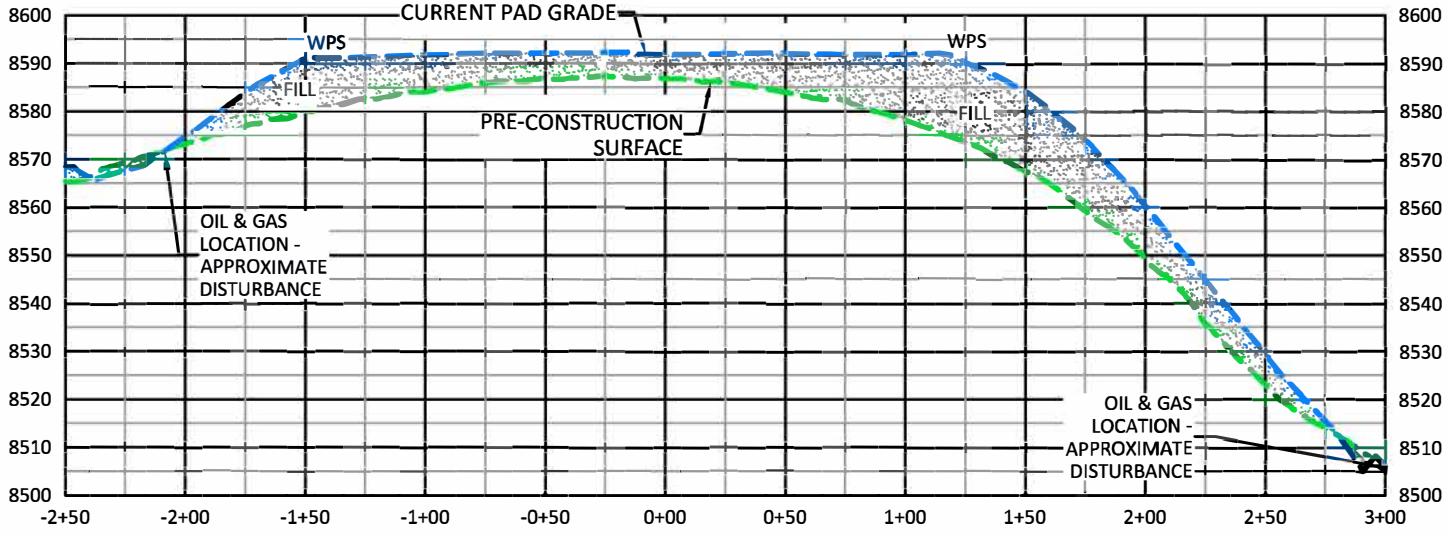


C

CC 610-21-41

DRG GRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

DRAWN: 10/30/20201 - DEH	SCALE: H- 1"=80' V- 1"=40'
REVISED: N/A	DRG JOB No. 21293
	304B(7)BI XSEC

LAYOUT DRAWING 2 OF 8

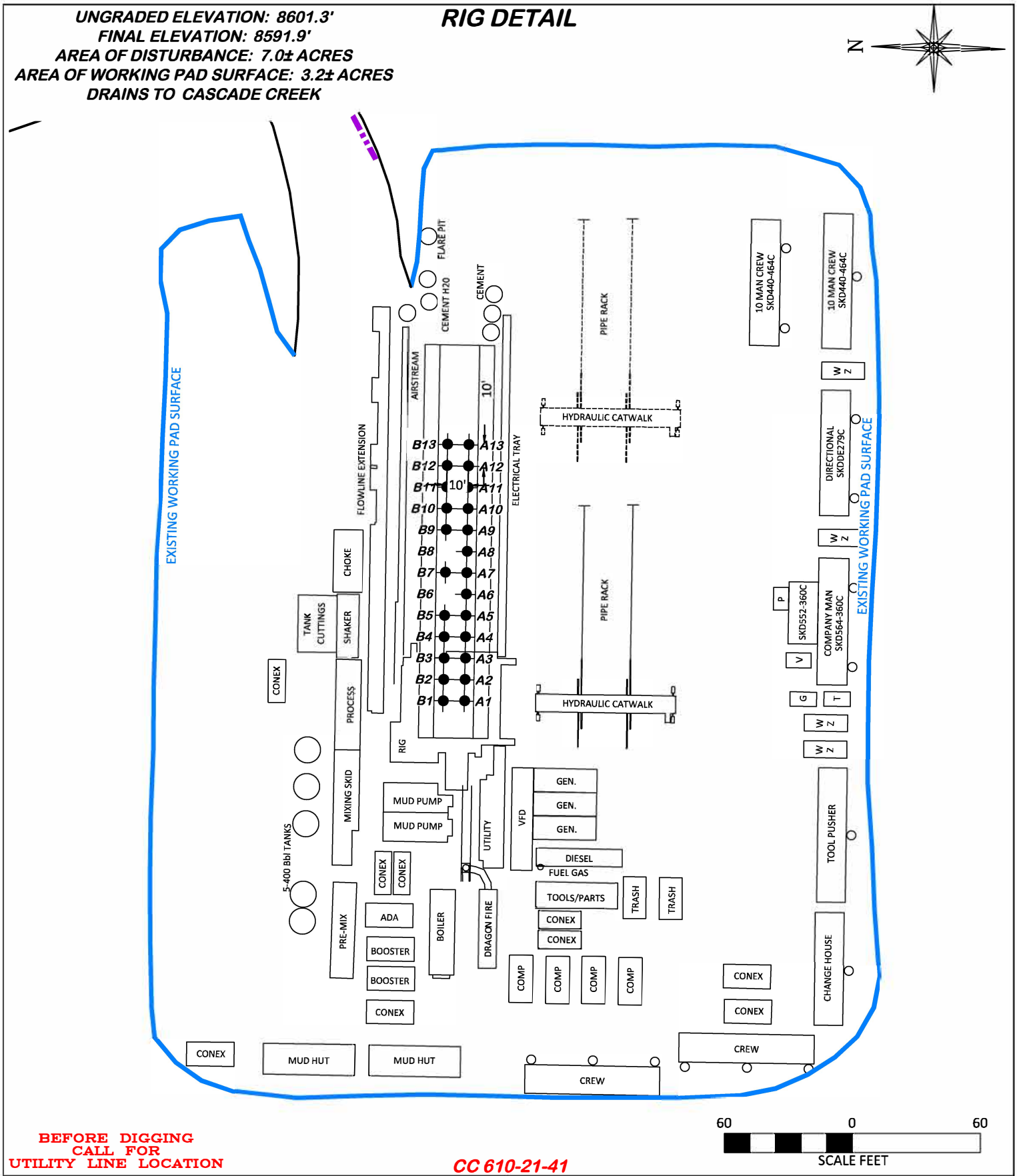
CONSTRUCTION LAYOUT DRAWING
CROSS SECTIONS
LARAMIE ENERGY, LLC

CC 610-21-41

NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M., GARFIELD COUNTY, COLORADO

UNGRADED ELEVATION: 8601.3'
FINAL ELEVATION: 8591.9'
AREA OF DISTURBANCE: 7.0± ACRES
AREA OF WORKING PAD SURFACE: 3.2± ACRES
DRAINS TO CASCADE CREEK

RIG DETAIL



BEFORE DIGGING
CALL FOR
UTILITY LINE LOCATION

60 0 60
SCALE FEET

CC 610-21-41

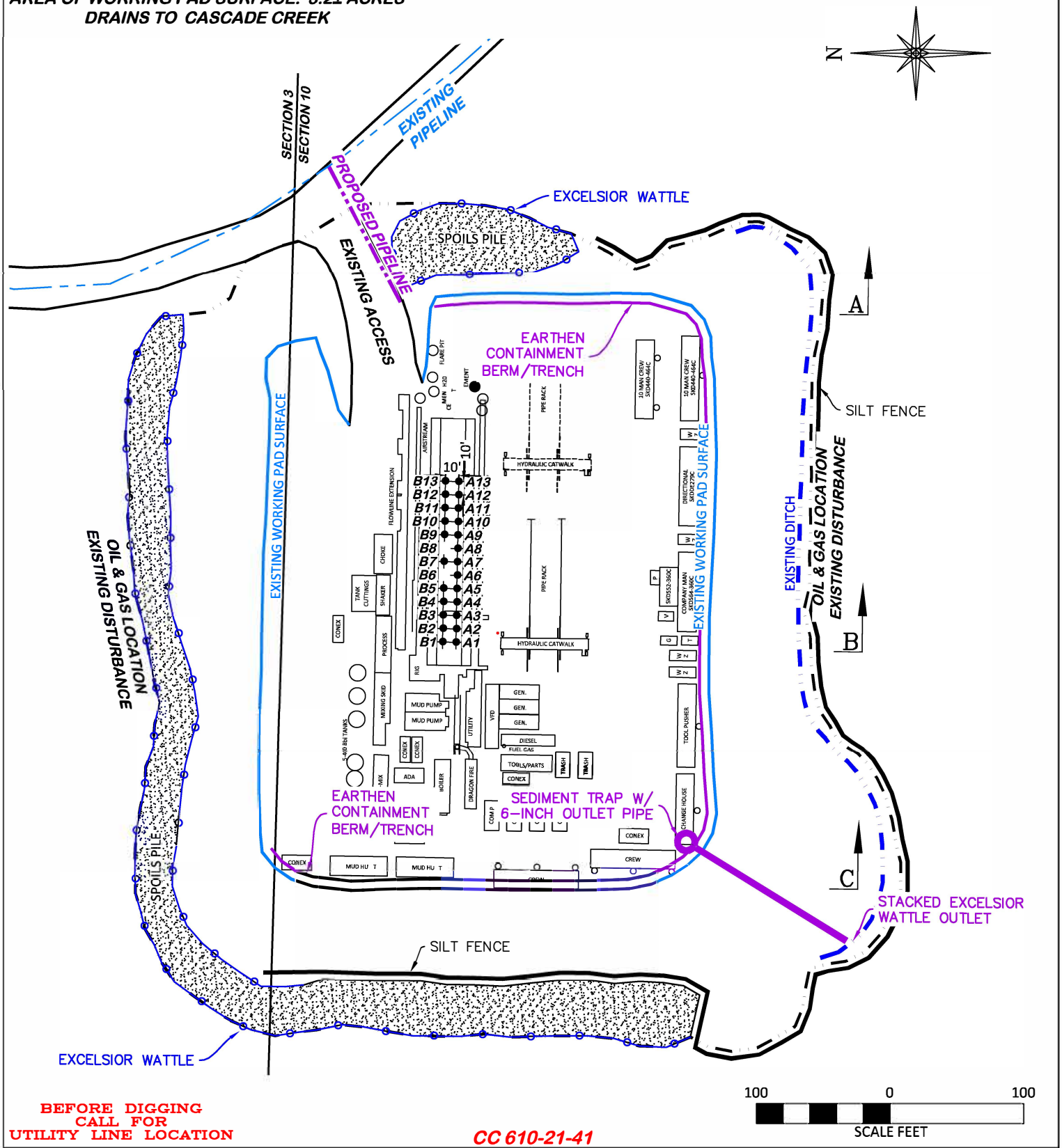
LAYOUT DRAWING 3 OF 8

DRG GRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

DRAWN: 10/30/20201 - DEH	SCALE: 1" = 60'
REVISED: N/A	DRG JOB No. 21293
	304B(7)BII RIG DET

RIG DETAIL
LARAMIE ENERGY, LLC
CC 610-21-41
NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M., GARFIELD COUNTY, COLORADO

UNGRADED ELEVATION: 8601.3'
FINAL ELEVATION: 8591.9'
AREA OF DISTURBANCE: 7.0± ACRES
AREA OF WORKING PAD SURFACE: 3.2± ACRES
DRAINS TO CASCADE CREEK



BEFORE DIGGING
CALL FOR
UTILITY LINE LOCATION

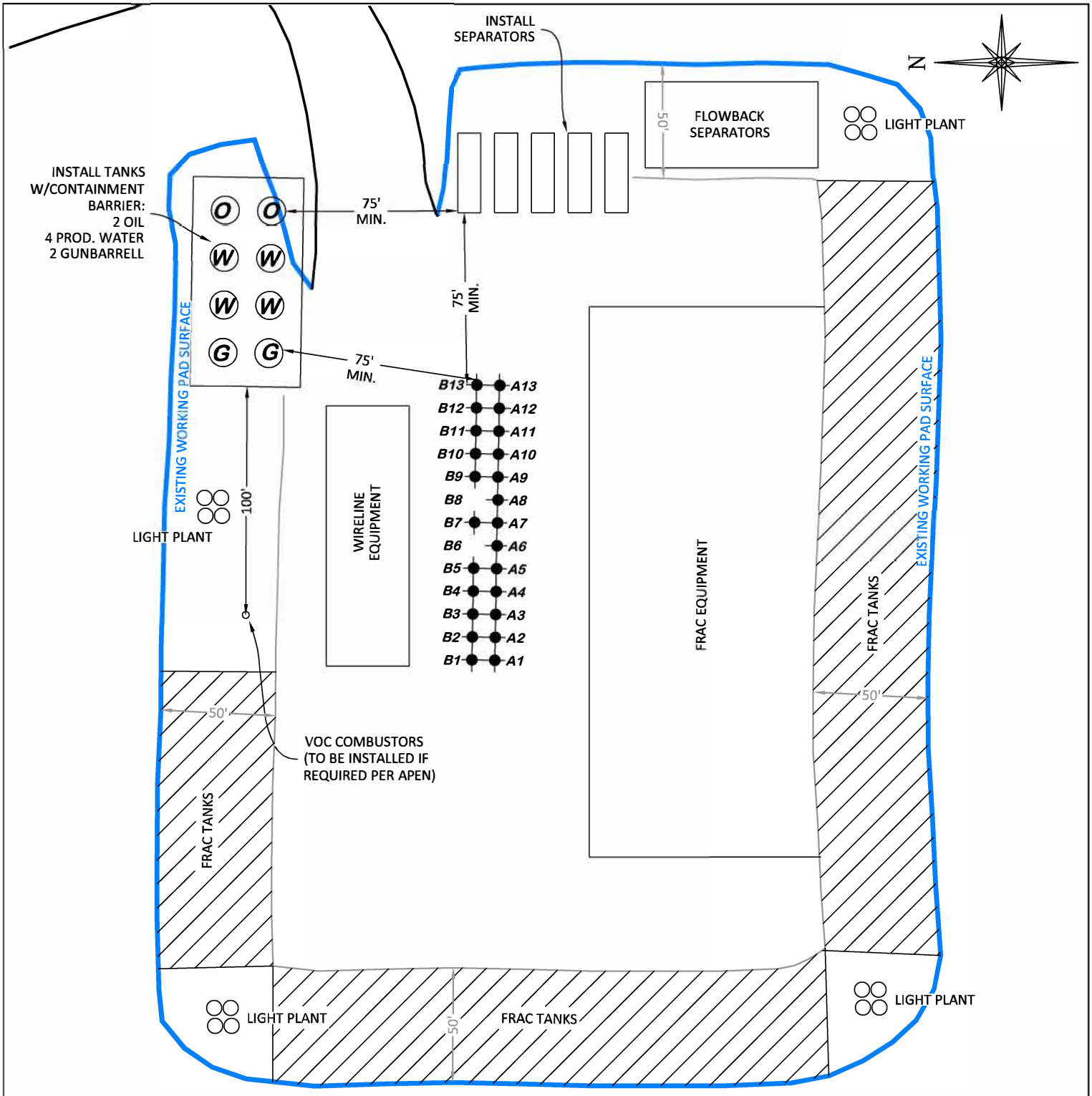
CC 610-21-41

DRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 10/30/20201 - DEH	SCALE: 1" = 100'
REVISED: N/A	DRG JOB No. 21293
	304B(7)BII RIG

LAYOUT DRAWING 4 OF 8

PRELIMINARY RIG LAYOUT
LARAMIE ENERGY, LLC
CC 610-21-41
NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M., GARFIELD COUNTY, COLORADO



NOTES:

1. COMPLETIONS AND FLOWBACK OPERATIONS WILL BE CONDUCTED CONCURRENTLY.
2. EXHIBIT DEPICTS PRELIMINARY FRAC AND FLOWBACK EQUIPMENT LAYOUT. EQUIPMENT AND LAYOUT ARE SUBJECT TO CHANGE DEPENDING ON EQUIPMENT AVAILABILITY AND SITE CONDITIONS.
3. FIFTY-FIVE (55) FRAC TANKS. CAPACITY PER FRAC TANK: 500 BBLS. TOTAL FRAC TANK CAPACITY (55 FRAC TANKS): 27,500 BBLS.
4. EQUIPMENT LOCATED WITHIN THE "FRAC EQUIPMENT" ENVELOPE: HYDRAULIC STIMULATION CONTROL TRAILER, DIESEL FRAC PUMPS, CHARGE PUMP, AND TEMPORARY CHEMICAL STORAGE
5. EACH LIGHT PLANT IS A SELF-CONTAINED UNIT WITH A GENERATOR AND AUXILIARY POWER SOURCE.
6. ACTUAL WATER LINE AND WATER PUMP PLACEMENT DEPENDENT ON PRE-COMPLETION ALIGNMENT OF FRAC TANKS.
7. OPERATOR WILL UTILIZE HEAT PUMPS FOR WINTER OPERATIONS BASED ON LOCATION SPACING.
8. FLOWBACK SUPPORT TRAILER IS LOCATED WITHIN "FLOWBACK SEPARATORS" ENVELOPE.
9. PLEASE REFER TO THE CONSTRUCTION LAYOUT DRAWING FOR STORMWATER CONTROL MEASURES.

60 0 60
SCALE FEET

CC 610-21-41

DRG GRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

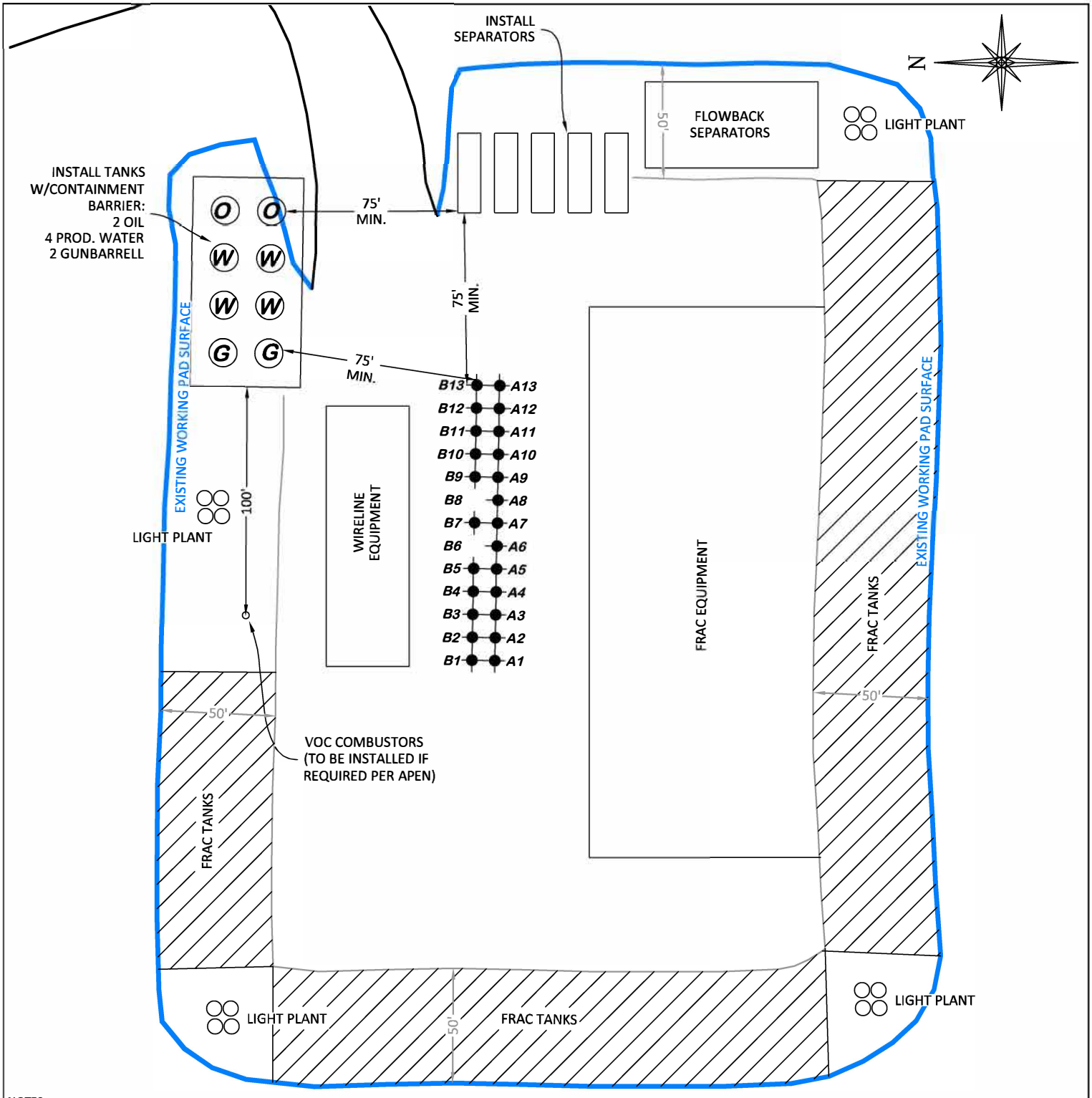
DRAWN: 10/30/20201 - DEH	SCALE: 1" = 60'
REVISED: N/A	DRG JOB No. 21293
	LIGHTING

LAYOUT DRAWING 5 OF 8

PRELIMINARY WELL COMPLETIONS AND STIMULATION LAYOUT
LARAMIE ENERGY, LLC

CC 610-21-41

NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M., GARFIELD COUNTY, COLORADO



NOTES:

1. COMPLETIONS AND FLOWBACK OPERATIONS WILL BE CONDUCTED CONCURRENTLY.
2. EXHIBIT DEPICTS PRELIMINARY FRAC AND FLOWBACK EQUIPMENT LAYOUT. EQUIPMENT AND LAYOUT ARE SUBJECT TO CHANGE DEPENDING ON EQUIPMENT AVAILABILITY AND SITE CONDITIONS.
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8. FLOWBACK SUPPORT TRAILER IS LOCATED WITHIN "FLOWBACK SEPARATORS" ENVELOPE.
9. PLEASE REFER TO THE CONSTRUCTION LAYOUT DRAWING FOR STORMWATER CONTROL MEASURES.

60 0 60
SCALE FEET

CC 610-21-41

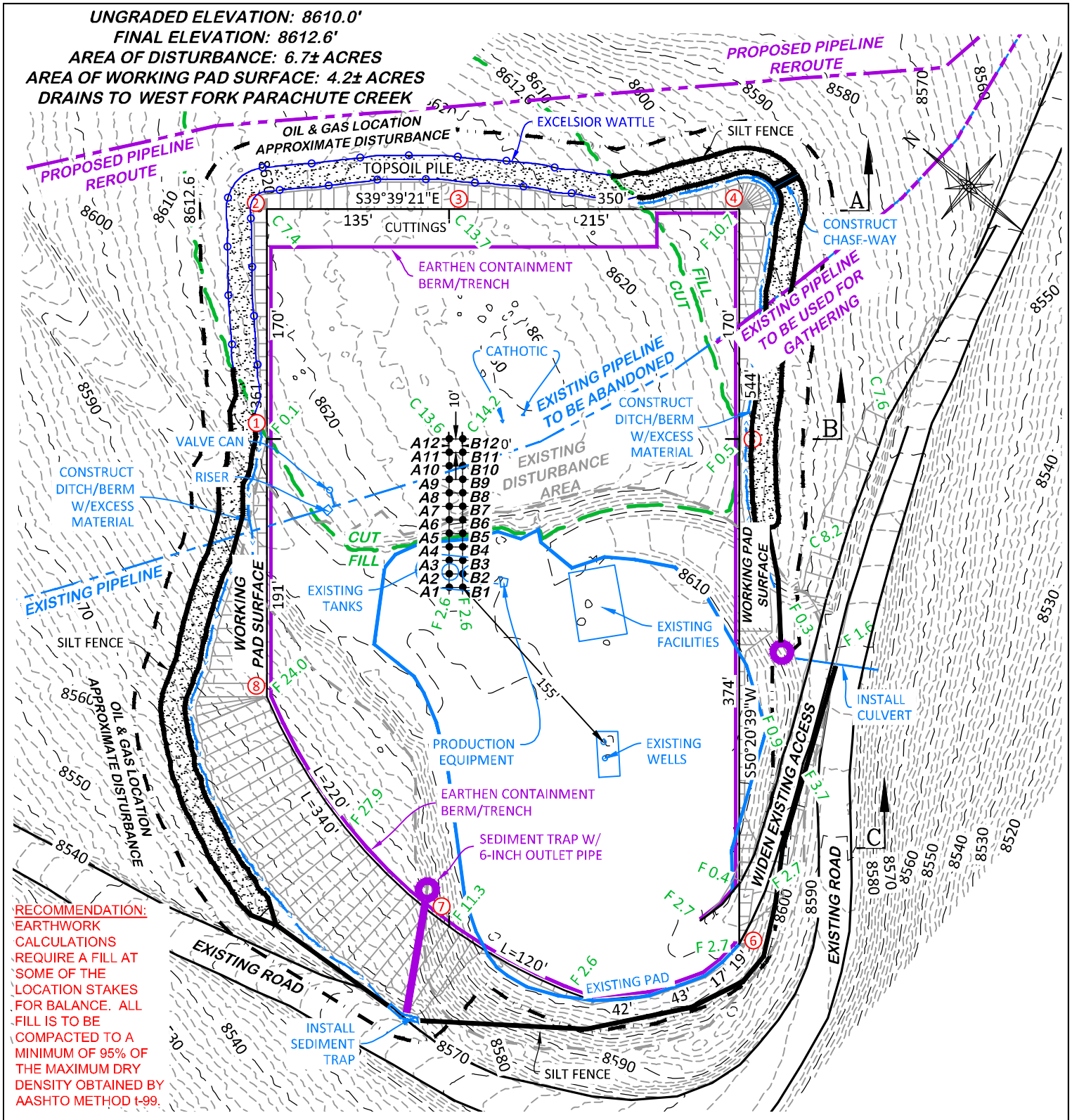
DRG GRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 10/30/20201 - DEH	SCALE: 1" = 60'
REVISED: N/A	DRG JOB No. 21293
	LIGHTING

LAYOUT DRAWING 6 OF 8

FLOWBACK EQUIPMENT LAYOUT
LARAMIE ENERGY, LLC
CC 610-21-41
NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M., GARFIELD COUNTY, COLORADO

- **Appendix B.3.** CC 0603-23-32



LAYOUT DRAWING 1 OF 7

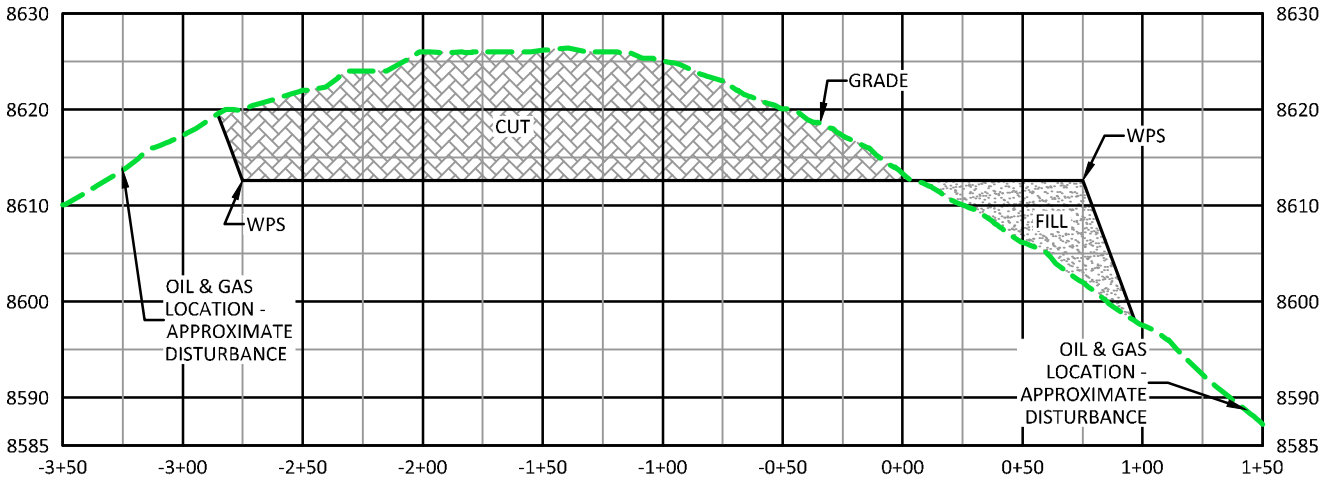
LARAMIE ENERGY, LLC.
CC 603-23-32 PAD
NESW, SECTION 3, T. 6 S., R. 97 W., 6th P.M., GARFIELD COUNTY, COLORADO

DRG GRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

ESTIMATED EARTHWORK

ITEM	CUT	FILL	TOPSOIL	EXCESS
PAD	31,467 CY	28,831 CY	2,154 CY	482 CY
PIT	NONE			NONE
TOTALS	31,467 CY	28,831 CY	2,154 CY	482 CY

DRAWN: 6/21/2017 - TCM	SCALE: 1" = 100'
REVISED: N/A	DRG JOB No. 21294
	304b(7)Bi CONST



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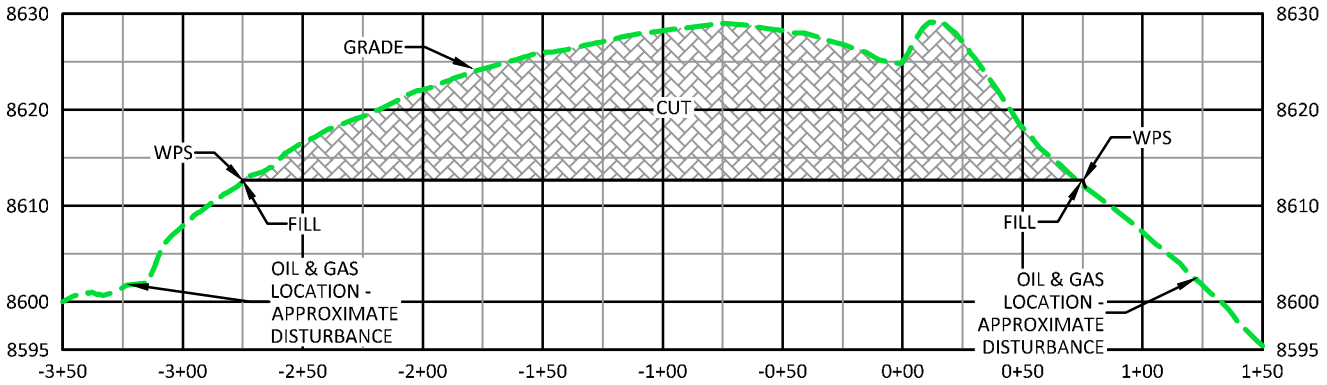
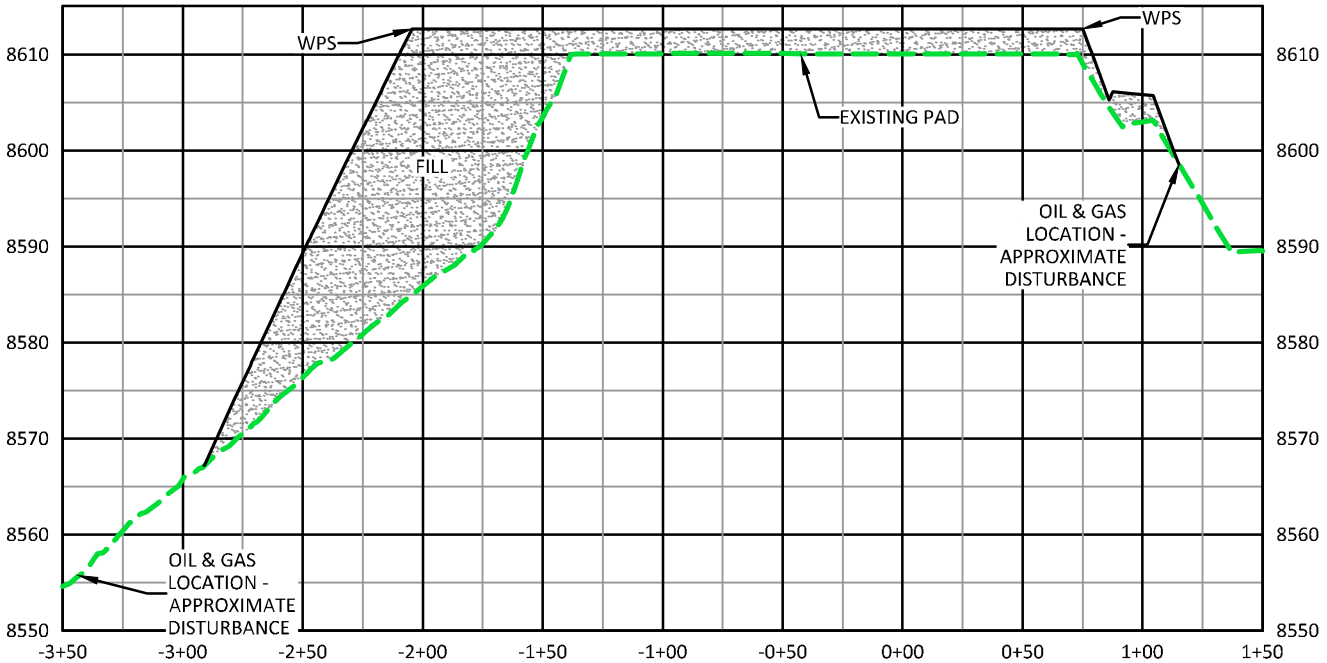


B



C

CUT SLOPES 1.5:1
FILL SLOPES 1.5:1

CC 603-23-32 PAD

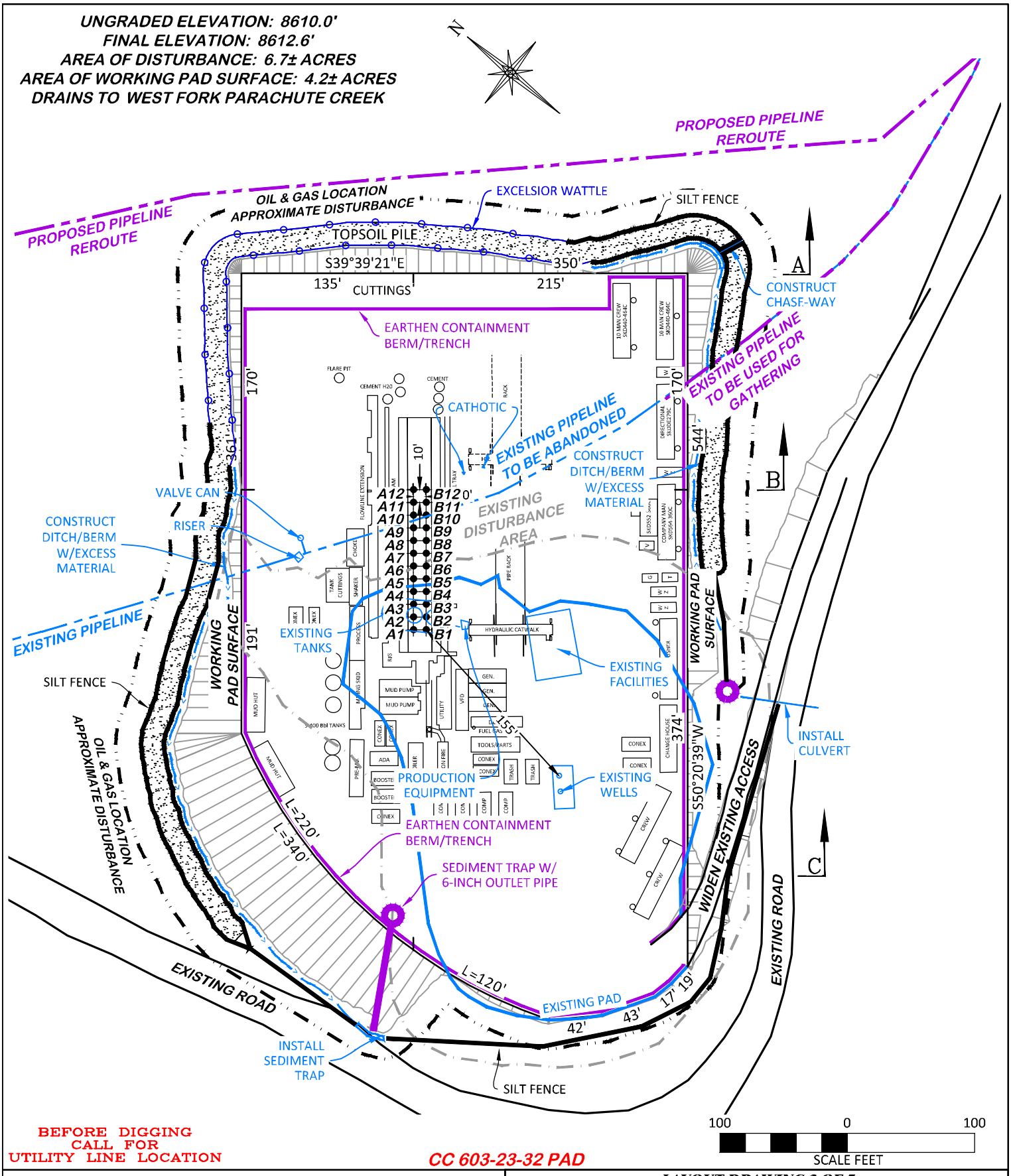
RECOMMENDATION:
EARTHWORK CALCULATIONS REQUIRE A FILL AT SOME OF THE LOCATION STAKES FOR BALANCE. ALL FILL IS TO BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY OBTAINED BY AASHTO METHOD t-99.

DRG RIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 6/21/2017 - TCM	SCALE: H-1" = 80' V- 1" = 20'
REVISED: N/A	DRG JOB No. 21294
	304b(7)Bi XSEC

LAYOUT DRAWING 2 OF 7

LARAMIE ENERGY, LLC.
CC 603-23-32 PAD
NESW, SECTION 3, T. 6 S., R. 97 W., 6th P.M.,
GARFIELD COUNTY, COLORADO



BEFORE DIGGING
CALL FOR
UTILITY LINE LOCATION

CC 603-23-32 PAD

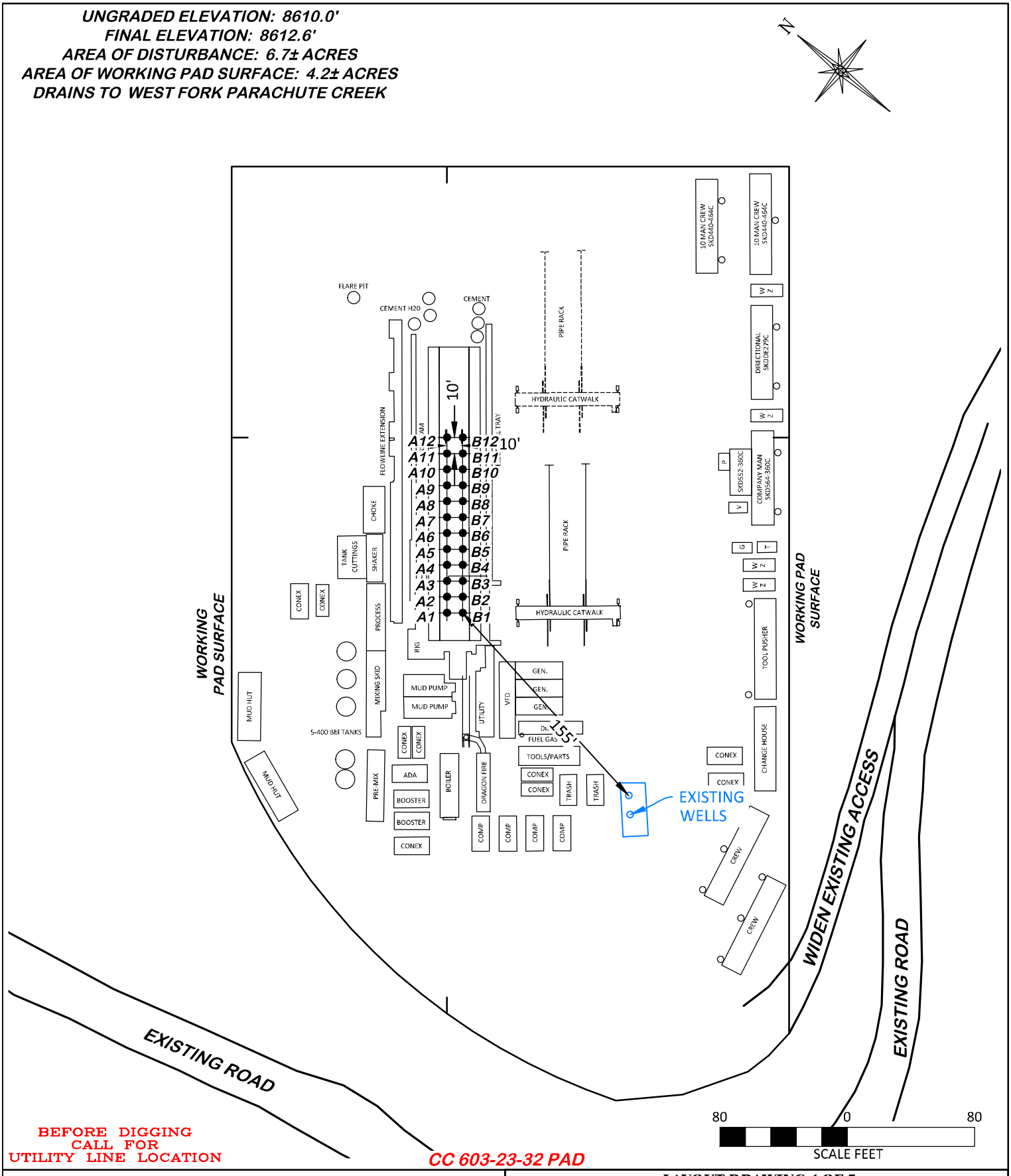
DRG RIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 6/21/2017 - TCM	SCALE: 1" = 100'
REVISED: N/A	DRG JOB No. 21294
	304b(7)Bii RIG

LAYOUT DRAWING 3 OF 7

PRELIMINARY RIG LAYOUT
LARAMIE ENERGY, LLC.
CC 603-23-32 PAD
NESW, SECTION 3, T. 6 S., R. 97 W., 6th P.M., GARFIELD COUNTY, COLORADO

UNGRADED ELEVATION: 8610.0'
FINAL ELEVATION: 8612.6'
AREA OF DISTURBANCE: 6.7± ACRES
AREA OF WORKING PAD SURFACE: 4.2± ACRES
DRAINS TO WEST FORK PARACHUTE CREEK



BEFORE DIGGING
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UTILITY LINE LOCATION

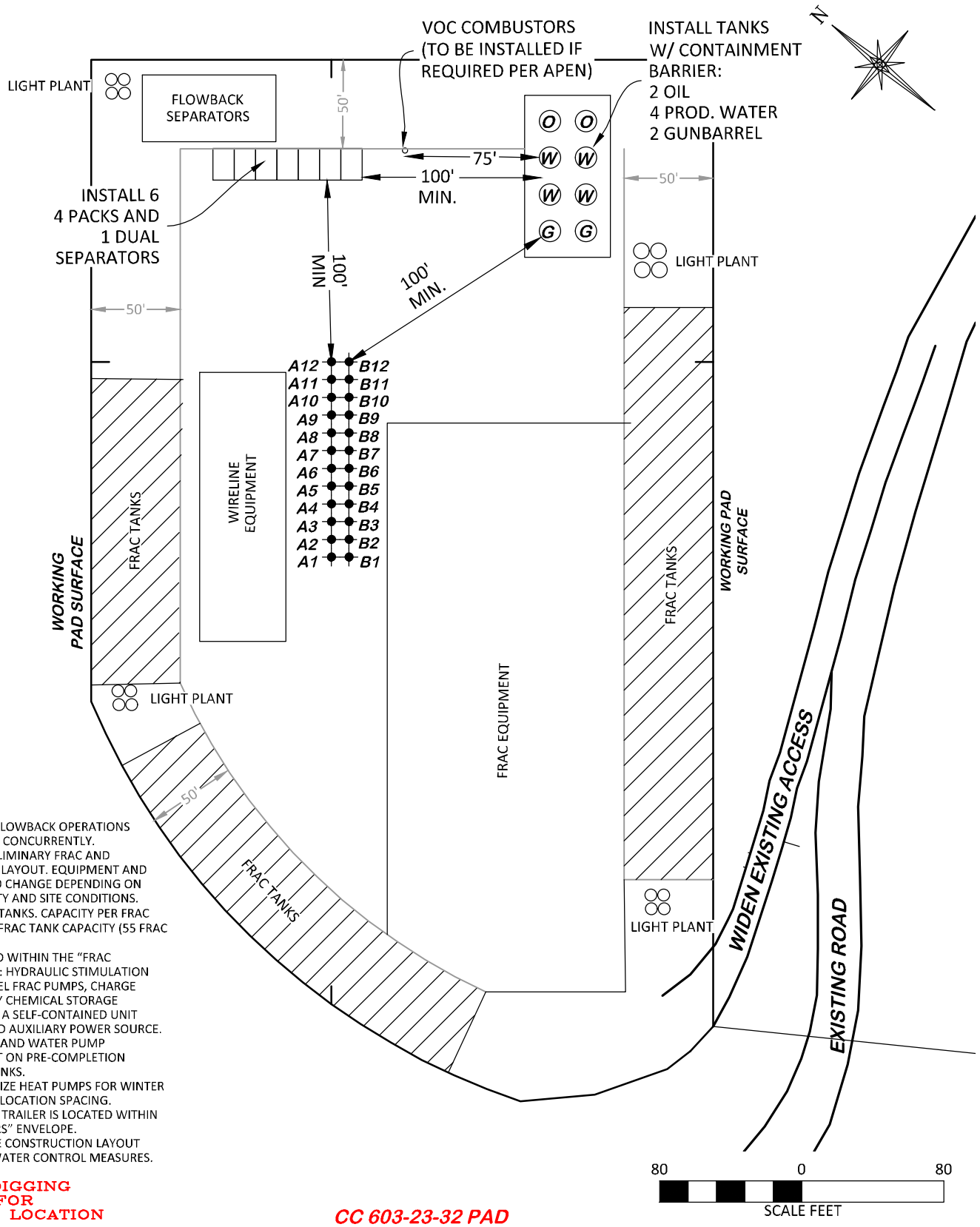
CC 603-23-32 PAD

DRG GRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 6/21/2017 - TCM	SCALE: 1" = 80'
REVISED: N/A	DRG JOB No. 21294
	304b(7)Bii RIG2 DET

LAYOUT DRAWING 4 OF 7

RIG DETAIL
LARAMIE ENERGY, LLC.
CC 603-23-32 PAD
NESW, SECTION 3, T. 6 S., R. 97 W., 6th P.M., GARFIELD COUNTY, COLORADO



NOTES:
1. COMPLETIONS AND FLOWBACK OPERATIONS
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10. PLEASE REFER TO THE CONSTRUCTION LAYOUT DRAWING FOR STORMWATER CONTROL MEASURES.

BEFORE DIGGING
CALL FOR
UTILITY LINE LOCATION

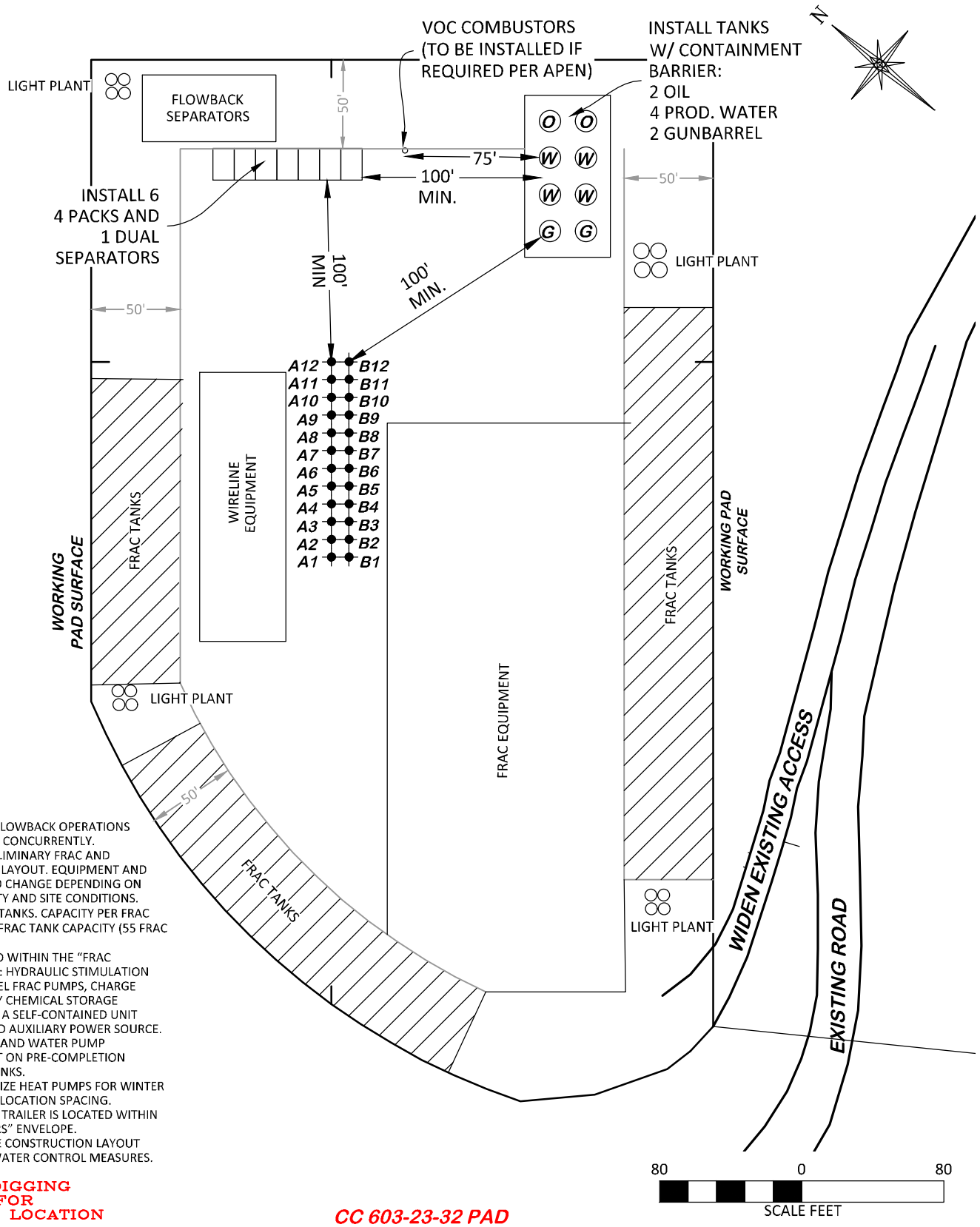
CC 603-23-32 PAD

DRG RIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 6/21/2017 - TCM	SCALE: 1" = 60'
REVISED: N/A	DRG JOB No. 21294
	304b(7)Biii COMP

LAYOUT DRAWING 5 OF 7

PRELIMINARY WELL COMPLETIONS AND STIMULATION LAYOUT
LARAMIE ENERGY, LLC.
CC 603-23-32 PAD
NESW, SECTION 3, T. 6 S., R. 97 W., 6th P.M., GARFIELD COUNTY, COLORADO



NOTES:
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BEFORE DIGGING
CALL FOR
UTILITY LINE LOCATION

CC 603-23-32 PAD

DRG GRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 6/21/2017 - TCM	SCALE: 1" = 60'
REVISED: N/A	DRG JOB No. 21294
	304b(7)Biv FLOWBACK

LAYOUT DRAWING 6 OF 7

FLOWBACK EQUIPMENT LAYOUT
LARAMIE ENERGY, LLC.
CC 603-23-32 PAD
NESW, SECTION 3, T. 6 S., R. 97 W., 6th P.M., GARFIELD COUNTY, COLORADO

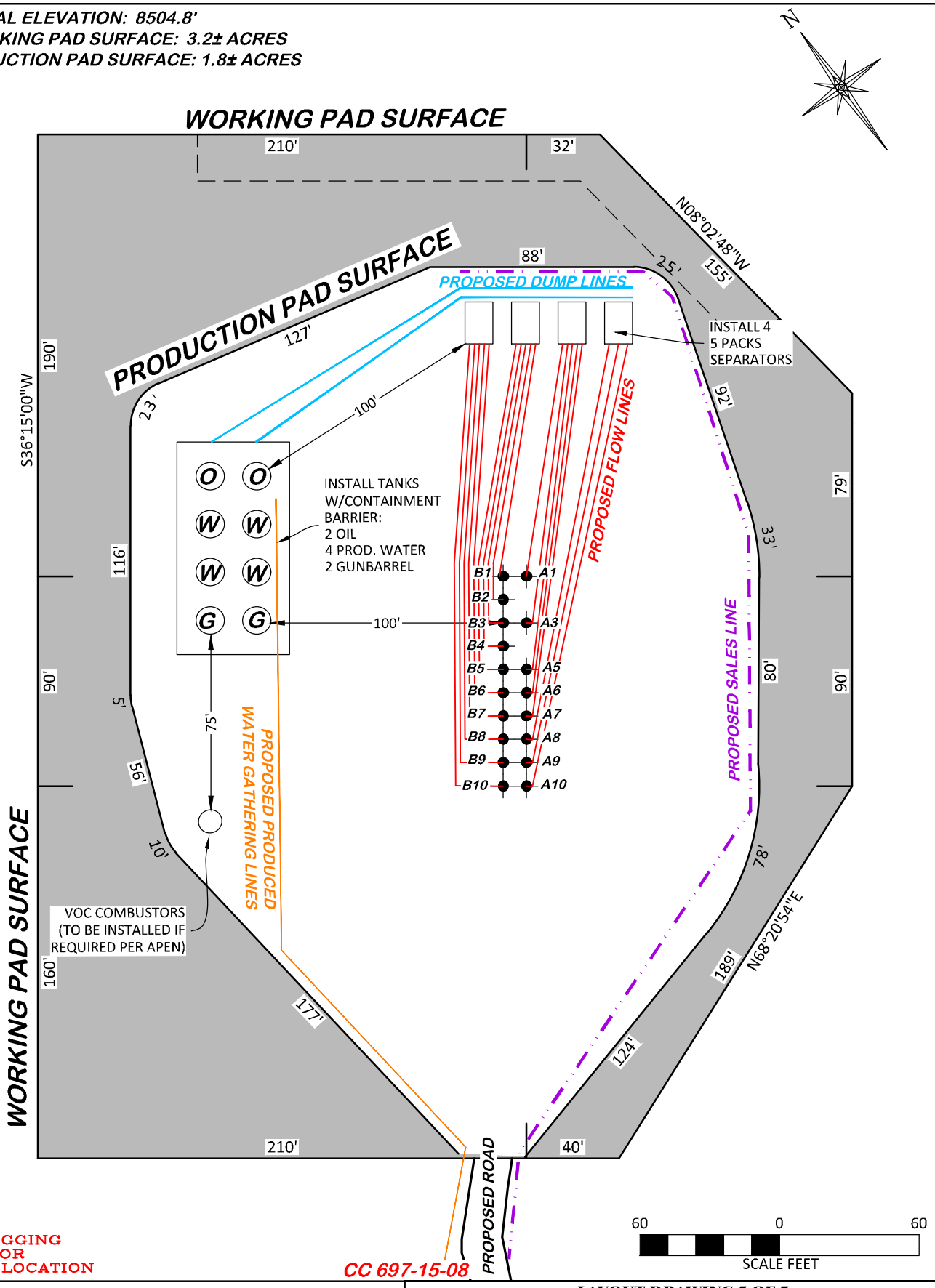
Appendix C

Facility Layout Drawing

- **Appendix C.1.** CC 0697-15-08
- **Appendix C.2.** CC 0610-21-41
- **Appendix C.3.** CC 0603-23-32

- **Appendix C.1.** CC 0697-15-08

FINAL ELEVATION: 8504.8'
AREA OF WORKING PAD SURFACE: 3.2± ACRES
AREA OF PRODUCTION PAD SURFACE: 1.8± ACRES



BEFORE DIGGING
CALL FOR
UTILITY LINE LOCATION

CC 697-15-08

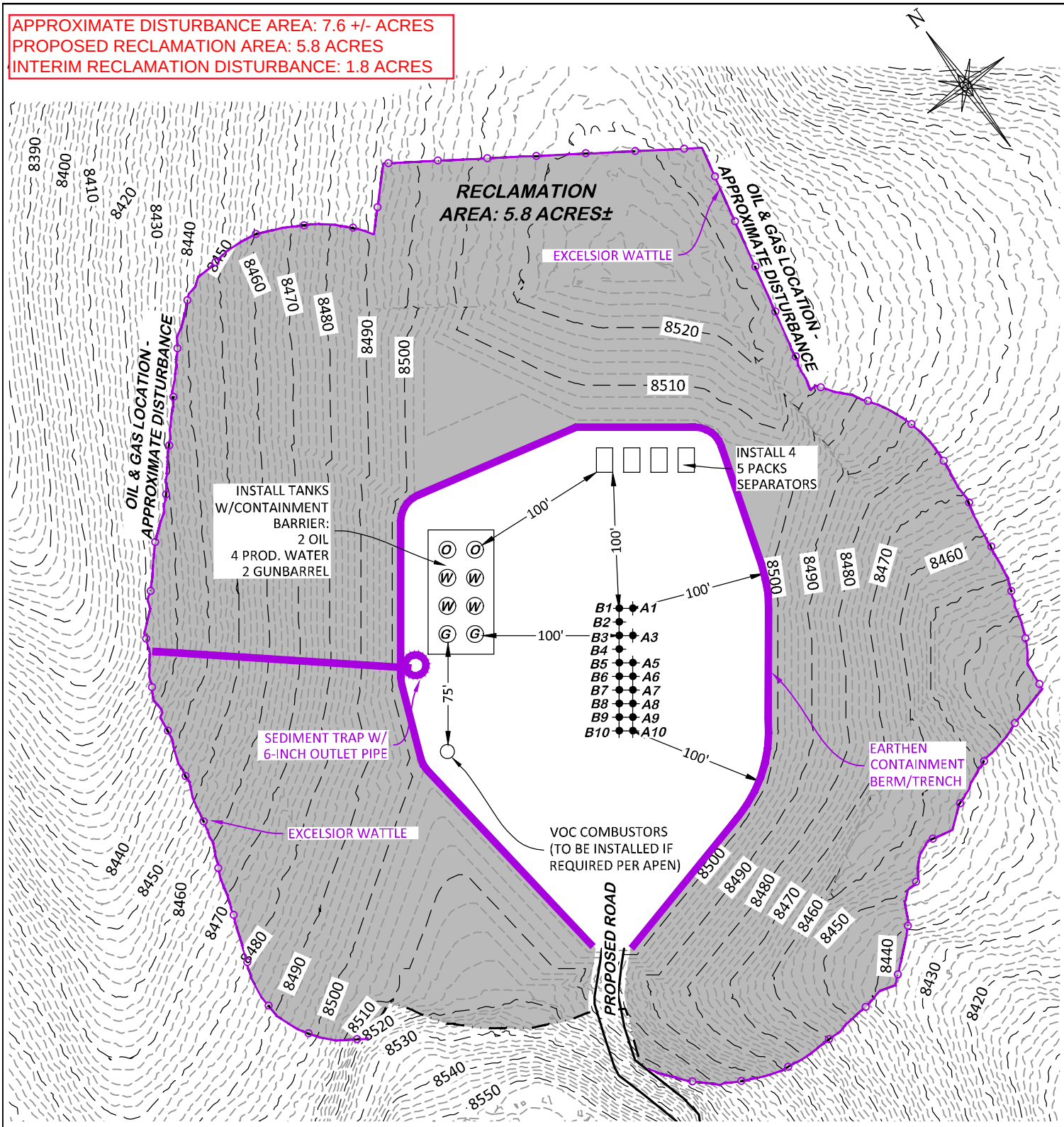
DRG GRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 4/30/2021 - DEH	SCALE: 1" = 50'
REVISED: 10/4/2021 - DEH	DRG JOB No. 22026
COGCC RULE REVISIONS	304B(7)BV FACILITY

LAYOUT DRAWING 7 OF 7

PRELIMINARY FACILITY LAYOUT
LARAMIE ENERGY, LLC.
CC 697-15-08
SENE, SECTION 15, T. 6 S., R. 97 W., 6th P.M.,
GARFIELD COUNTY, COLORADO

APPROXIMATE DISTURBANCE AREA: 7.6 +/- ACRES
PROPOSED RECLAMATION AREA: 5.8 ACRES
INTERIM RECLAMATION DISTURBANCE: 1.8 ACRES



BEFORE DIGGING
CALL FOR
UTILITY LINE LOCATION

CC 697-15-08

100 0 100
SCALE FEET

DRG GRIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

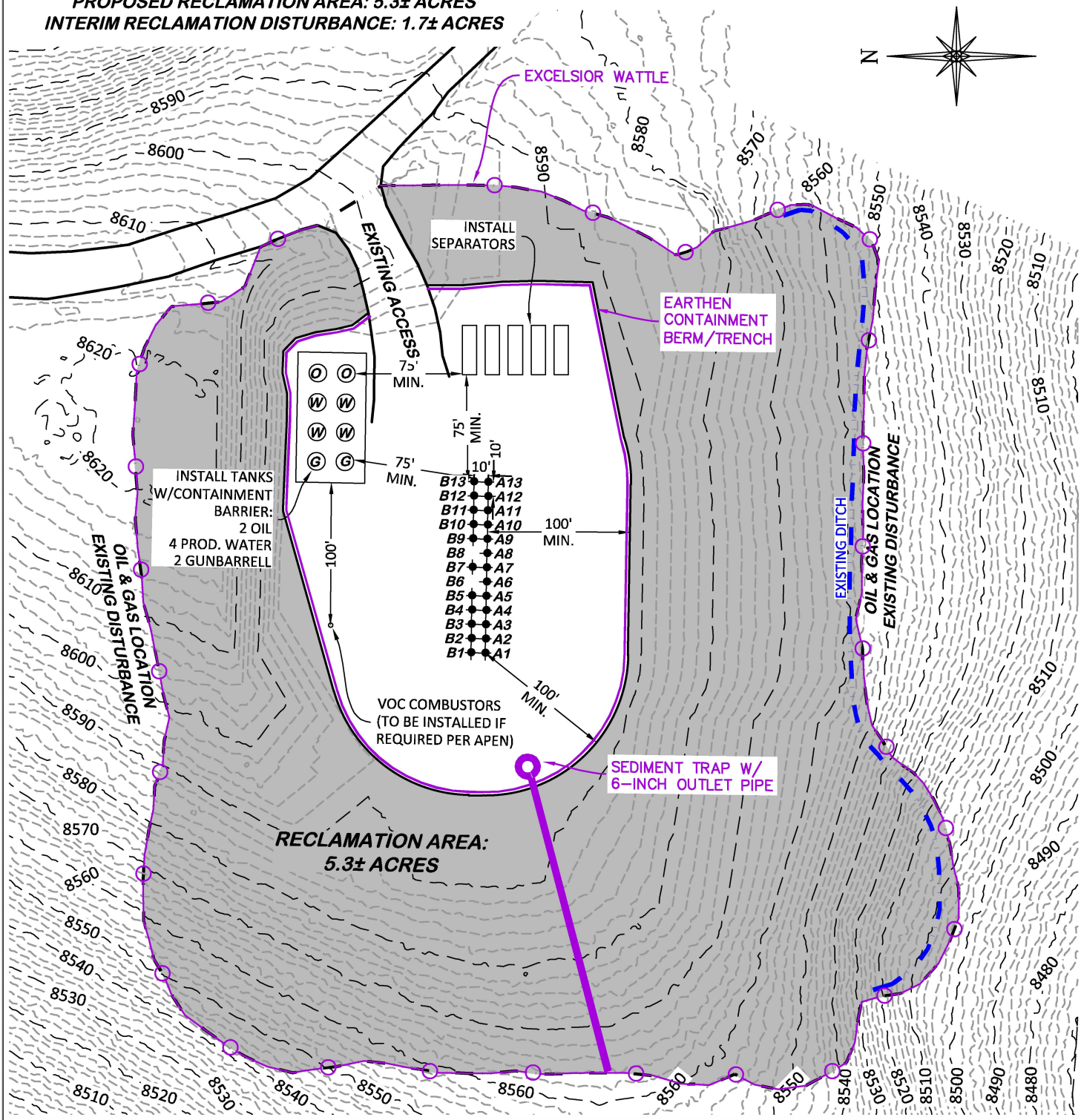
DRAWN: 12/8/2020 - DEH	SCALE: 1" = 100'
REVISED: 10/4/2021 - DEH	DRG JOB No. 22026
COGCC RULE REVISIONS	304C(16) RECLAMATION

INTERIM RECLAMATION PLAN

PROPOSED INTERIM RECLAMATION
LARAMIE ENERGY, LLC.
CC 697-15-08
SENE, SECTION 15, T. 6 S., R. 97 W., 6th P.M.,
GARFIELD COUNTY, COLORADO

- **Appendix C.2.** CC 0610-21-41

AREA OF DISTURBANCE: 7.0± ACRES
AREA OF WORKING PAD SURFACE: 3.2± ACRES
PROPOSED RECLAMATION AREA: 5.3± ACRES
INTERIM RECLAMATION DISTURBANCE: 1.7± ACRES



100 0 100
SCALE FEET

BEFORE DIGGING CALL FOR UTILITY LINE LOCATION

CC 610-21-41

LAYOUT DRAWING 7 OF 8

DRG GRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

DRAWN: 10/30/20201 - DEH	SCALE: 1" = 100'
REVISED: N/A	DRG JOB No. 21293
	304C(16) RECLAMATION

INTERIM RECLAMATION PLAN PRELIMINARY FACILITY LAYOUT PROPOSED INTERIM RECLAMATION LARAMIE ENERGY, LLC CC610-21-41 NENW,SECTION 10, T.6S.,R.97W, 6thP.M., GARFIELD COUNTY, COLORADO

UNGRADED ELEVATION: 8601.3'
FINAL ELEVATION: 8591.9'
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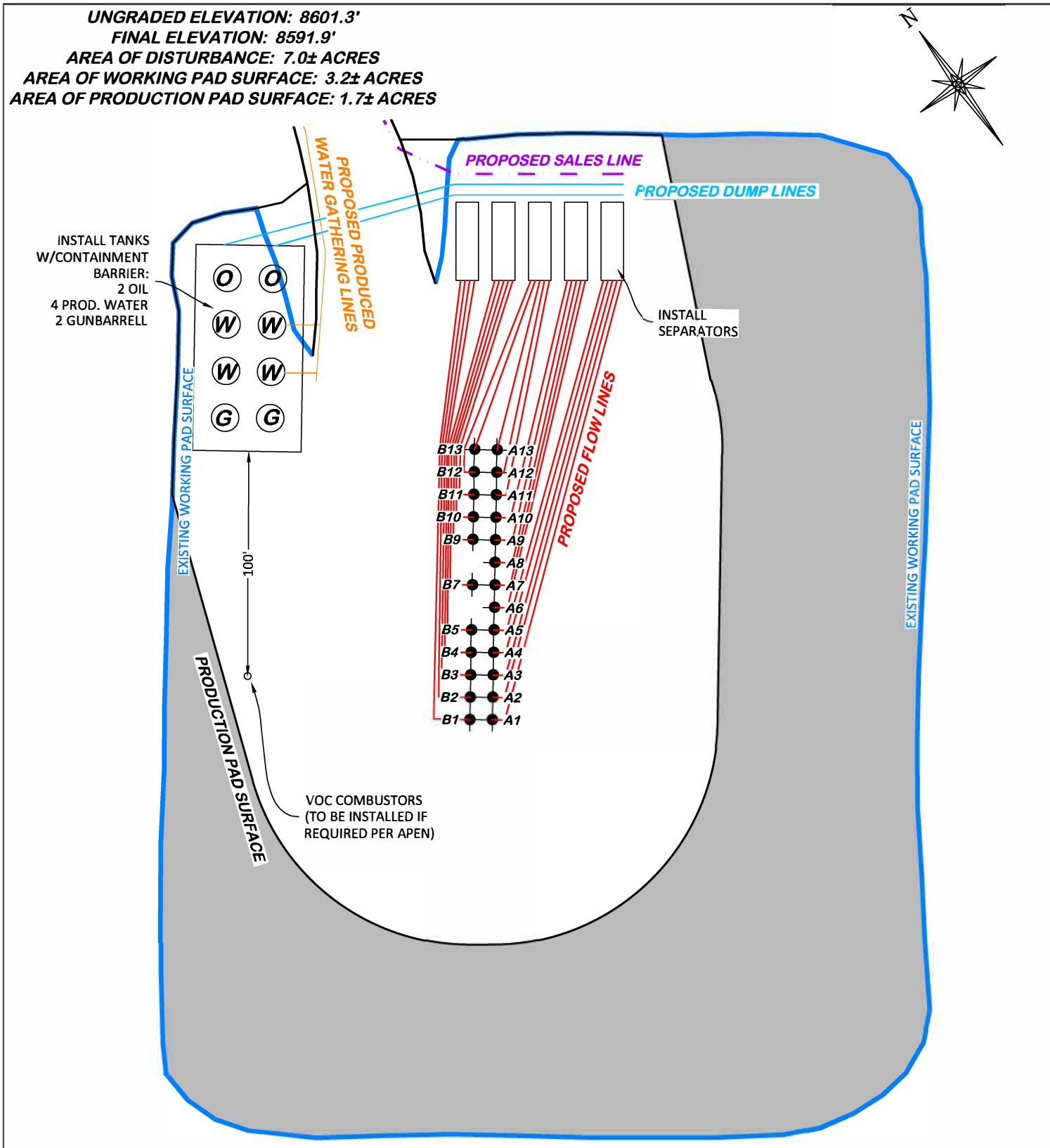
AREA OF WORKING PAD SURFACE: 3.2± ACRES
AREA OF PRODUCTION PAD SURFACE: 1.7± ACRES



60 0 60
SCALE FEET

BEFORE DIGGING CALL FOR UTILITY LINE LOCATION

CC 610-21-41

DRG GRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

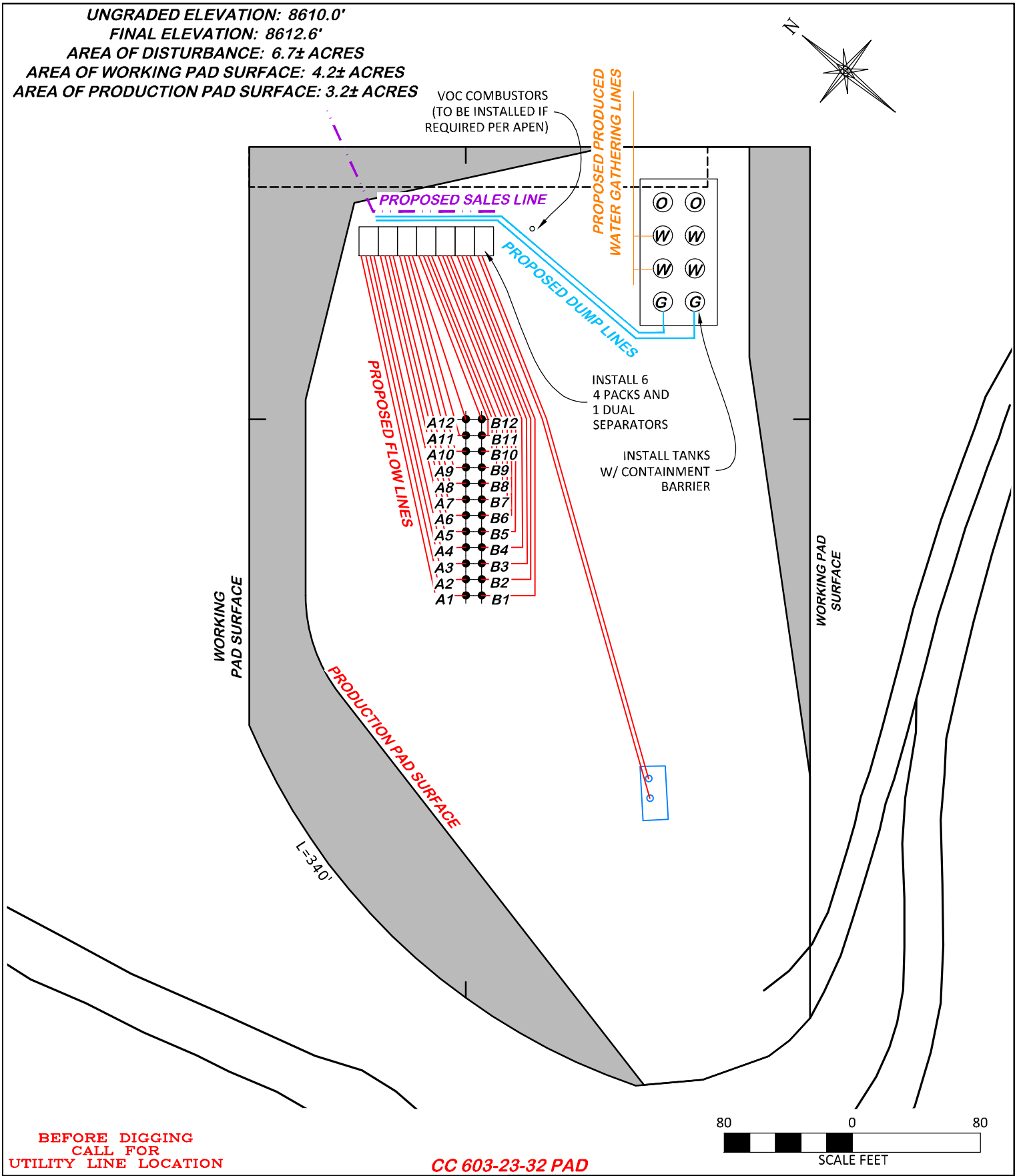
LAYOUT DRAWING 8 OF 8

PRELIMINARY FACILITY LAYOUT
LARAMIE ENERGY, LLC
CC 610-21-41
NENW, SECTION 10, T. 6 S., R. 97 W, 6th P.M., GARFIELD COUNTY, COLORADO

DRAWN: 10/30/20201 - DEH	SCALE: 1" = 60'
REVISED: N/A	DRG JOB No. 21293
	304b(7)Bv FACILITY

- **Appendix C.3.** CC 0603-23-32

UNGRADED ELEVATION: 8610.0'
FINAL ELEVATION: 8612.6'
AREA OF DISTURBANCE: 6.7± ACRES
AREA OF WORKING PAD SURFACE: 4.2± ACRES
AREA OF PRODUCTION PAD SURFACE: 3.2± ACRES



BEFORE DIGGING
CALL FOR
UTILITY LINE LOCATION

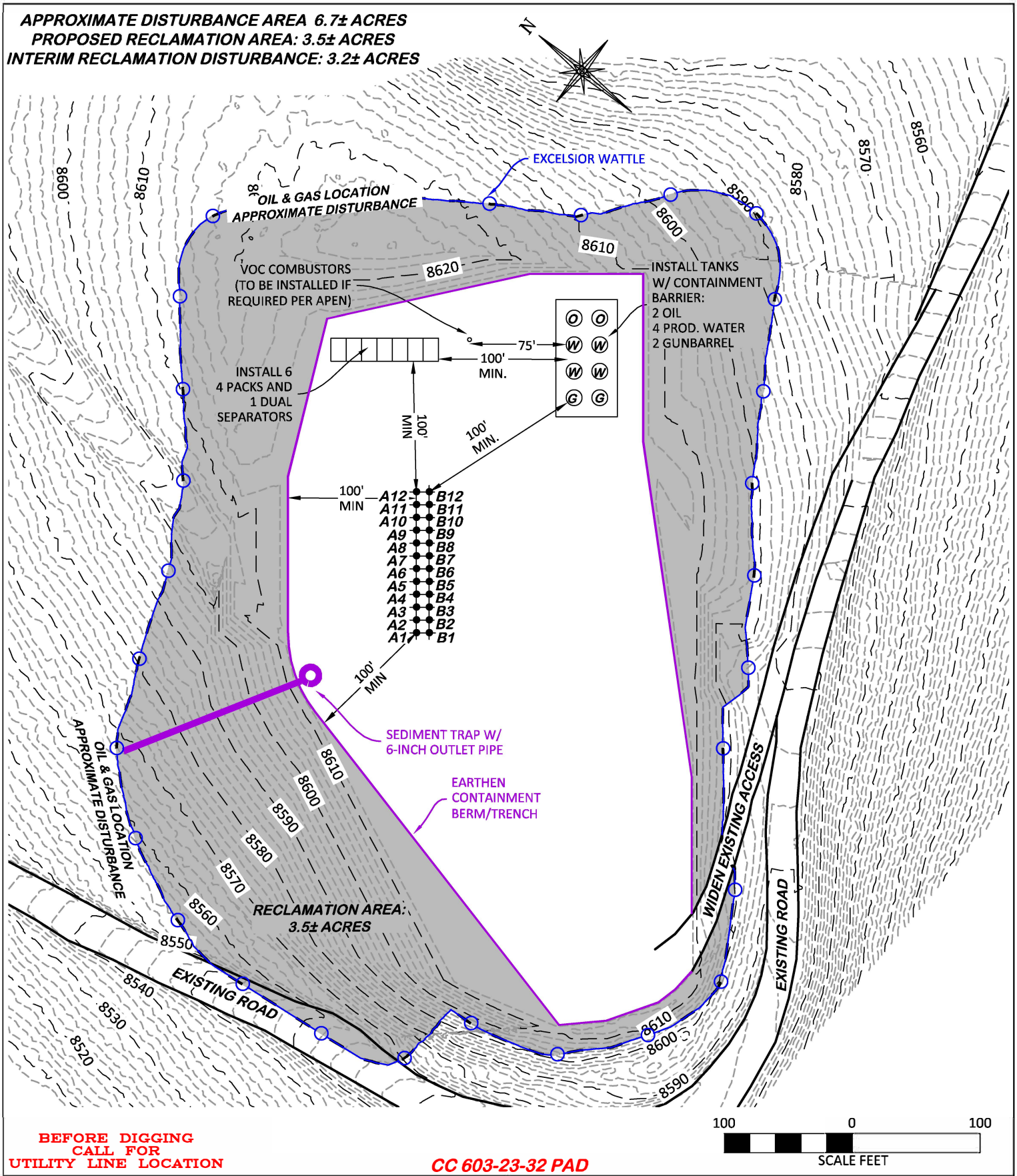
CC 603-23-32 PAD

DRG RIFFIN & ASSOCIATES, INC.
(307) 362-5028
1414 ELK ST., ROCK SPRINGS, WY 82901

DRAWN: 6/21/2017 - TCM	SCALE: 1" = 80'
REVISED: N/A	DRG JOB No. 21294
	304b(7)Bv FACILITY

LAYOUT DRAWING 7 OF 7

PRELIMINARY FACILITY LAYOUT
LARAMIE ENERGY, LLC.
CC 603-23-32 PAD
NESW, SECTION 3, T. 6 S., R. 97 W., 6th P.M.,
GARFIELD COUNTY, COLORADO



BEFORE DIGGING
CALL FOR
UTILITY LINE LOCATION

CC 603-23-32 PAD

FACILITY LAYOUT DRAWING - INTERIM RECLAMATION PLAN

DRG GRIFFIN & ASSOCIATES, INC.
1414 ELK ST., ROCK SPRINGS, WY 82901
(307) 362-5028

DRAWN: 6/21/2017 - TCM	SCALE: 1" = 100'
REVISED: N/A	DRG JOB No. 21294
	304c(16) RECLAMATION

PROPOSED INTERIM RECLAMATION LARAMIE ENERGY, LLC.
CC 603-23-32 PAD
NESW, SECTION 3, T. 6 S., R. 97 W., 6th P.M., GARFIELD COUNTY, COLORADO

Appendix D

Spray Liner Specifications

VersaFlex™
686 S. Adams St.
Kansas City, KS 666105
(913)321-9000

VF 280

Elastomeric Polyurea

Technical Data Sheet

Selection & Specification Data

Description

VF 280 is a fast set, rapid curing, elastomeric pure polyurea developed for applications such as geotextile lining membranes. VF 280 may also be applied to concrete and steel substrates. VF 280 is a volatile free, odorless system applied with 1:1 mix ratio with plural component spray equipment. VF 280 may be applied at varying thicknesses in a single application using a multi-pass spray technique.

Ideal for Applications in:

- Waterproofing membranes
- Geotextile coatings
- Secondary containment
- Flexible membranes

Features:

- 100% Solid, Zero VOC's
- Extremely low curing stress shrinkage
- Seamless, monolithic, waterproofing membrane
- Rapid cure, for fast return to service

Color & Stability (Limitations)

Standard colors are Tan, Shale Green, and Black, other colors are available upon request. Note: Custom colors are not returnable, custom color options can be viewed at www.versaflex.com. The A-side (Iso) color could vary from clear to amber.

Limitations

VF 280 is an aromatic polyurea and discoloration from exposure to ultraviolet light may occur, however the physical properties are unaffected. VF 280 should not be used for direct contact with extremely high or low pH levels. When applying to geotextile fabric, the installer must ensure a method for properly anchoring the geotextile fabric to the host surface.

Theoretical square feet per gallon

Theoretical coverage is 1604 square feet per gallon at 1 mil DFT. Actual surface coverage will depend on substrate porosity and roughness, and application technique.

Typical Physical Properties – (Tested after 24 hour post cure at 225°F)

Description	Test	Result
Solids		100 %
Mix Ratio		1 : 1
VOC		ZERO
Hardness, Shore A	ASTM D2240	85
Hardness, Shore D	ASTM D2240	35
Elongation	ASTM D638	456%
Tensile Strength	ASTM D638	3289 psi
Tensile Modulus	ASTM D638	100% Modulus: 974 200% Modulus: 1,393 300% Modulus: 1,904
Tear Strength	ASTM D624	497 lb./in.
Gel Time	ASTM D1640	10 - 18 seconds
Tack Free	ASTM D1640	~ 30-45 seconds

The value ranges stated in this Technical Data Sheet are based on system processing under controlled laboratory conditions. Equipment configuration and/or field application conditions may produce variances in the final system values.

VF 280

Elastomeric Polyurea

Technical Data Sheet

Substrate and Surface Preparation

Surface Preparation

Prior to coating, the substrate must be prepared in a manner that provides a uniform, clean, sound, neutralized surface suitable for the specified coating. The substrate must be free of all contaminants, such as oil, grease, rust, scale, or deposits. In general, coating performance is proportional to the degree of surface preparation.

Concrete

Reference SSPC SP-13/NACE No. 6 Surface Preparation of Concrete. Surfaces must be sound and contaminant-free with a surface profile equivalent to a minimum CSP3 to CSP5 in accordance with ICRI Technical Guideline No. 310.2R-2013. This can generally be achieved by abrasive blasting, shot blasting, high-pressure water cleaning, water jetting, or a combination of methods.

Steel (Atmospheric/Non-Immersion Service)

Visible deposits of oil, grease, or other contaminants shall be removed according to SSPC-SP 1 followed by SSPC SP-6/NACE No. 3 Commercial Blast Cleaning, resulting in a sharp angular anchor profile of 2.5-4.0 mils.

Primers

Concrete & other porous substrates

Surface Primer: VersaFlex VF 15 (6 to 10 wet mils): Two-component primer. Maximum recoat window: 24 hours, after which a light recoat is required (2 to 4 wet mils).

VersaFlex VF 20 (6 to 10 wet mils): Two-component primer. Maximum recoat window: 72 hours, after which a light recoat is required (2 to 4 wet mils).

Mixing Instructions

Components & Mix Ratio:

Mix ratio is 1:1 by volume

Mixing:

B-Side component must be mixed prior to use. See Material Processing & Handling Information for further details.

Thinning:

DO NOT THIN.

Pre-warming:

A and B components should be warmed to a minimum of 70°F prior to mixing.

Material Processing

Application Process: High pressure heated equipment with impingement gun

Recommended Material Processing

A-Side Primary Heat	160°F
B- Side Primary Heat	160°F
Hose Heat	160°F
Dynamic Pressure	1,800-2,000 psi
Dynamic Pressure Differential	200 psi

Recommended Proportioning Equipment

Graco	Reactor E-XP2
	Reactor H-XP2
	Reactor H-XP3

Recommended Spray Gun Configurations

Graco	Fusion AP	AR/AF 2929
		AR/AF 3737
		AR/AF 4242
Graco	Fusion MP	MR/MF 3535
		MR/MF 4747
Graco	Probler P2	00 - 02

Note: Contact VersaFlex for questions regarding other approved application equipment.

Appendix E

Pad Inspection Checklist

LARAMIE - PAD INSPECTION CHECKLIST

revised 06/30/21

Facility Name: **Date :** _____

Inspector: _____

Items	Yes	No	N/A	Comments
Production Units				
Equipment is free of signs of leakage, damage, or deterioration? (SPCC)				
There are no accumulations of oil in drip pans? (SPCC)				
Soil contamination - There are no signs of leakage on the surrounding ground? (SPCC)				
Well-Heads, Piping & Appurtenances				
There is no swelling, cracking, deterioration, discoloration, rust, or corrosion visible on any piping or appurtenances? (SPCC)				
There are no pipelines improperly supported or unprotected in an area where damage is likely to occur? (SPCC)				
Soil contamination -There is no evidence of leaks around the wellhead or gathering lines? (SPCC)				
Tank Battery				
There are no signs of corrosion evident (paint chipping, discoloration, pitting, cracking, rust)? (SPCC)				
The tank, valves, or fittings do not show signs of leakage? (SPCC)				
Thief or other hatches closed (SPCC)				
Thief hatch or other hatches not leaking				
Tank level indicators installed (added 2-11)				
Are tank heaters installed (added 2-11)				
Labeling - Tanks labeled with contents (SPCC)				
There is no evidence of tank overflow (SPCC)				
If present, VCU knockout drum labeled				
There are no issues with the foundation or supports evident (cracks, gap between the tank and foundation/support)? (SPCC)				
Bottom equalization lines present are maintained in the closed position (SPCC)				
Process water/condensate tanks are equipped with high level indicators? (SPCC)				
Secondary Containment Structures				
There are no spilled/leaked oil or oil stains visible within the containment? (SPCC)				
There are no oil stains visible outside of secondary containment? (SPCC)				
There is no standing water/snow present within secondary containment? (SPCC)				
- If "No" above, there is no sheen present on any standing water? (SPCC)				Arrange for proper disposal.
There is no trash or materials present within the secondary containment? (SPCC)				
Containment drains do not show signs of leakage and are they closed/plugged? (SPCC)				

LARAMIE - PAD INSPECTION CHECKLIST

revised 06/30/21

Items	Yes	No	N/A	Comments
There are no evident secondary containment integrity concerns (weeds or burrows in earthen berm, soil erosion, holes or gaps in metal sheets, tears in liner, cracks in concrete or earthen berm, etc.)? (SPCC)				
Blow downs (search the perimeter of the pad as well)				
Hearing protection labels				
All blow down vents have rain caps (added 2-11)				

LARAMIE - PAD INSPECTION CHECKLIST

revised 06/30/21

Items	Yes	No	N/A	Comments
Waste Management				
There is no waste on site that needs hauling off?				
Temporary Equipment Onsite				
Specify Type of Equipment/Use				
Is equipment properly labeled?				
Is equipment in good working order?				
Out-Of-Service Equipment Onsite				
Out-of-Service equipment is labeled and/or tagged				
SWD				
Soil contamination - There are no signs of leakage on the surrounding ground? (SPCC)				
Secondary containment for all tanks (SPCC)				Condition:
There is no standing water/snow present within secondary containment? (SPCC)				
- If "No" above, there is no sheen present on any standing water? (SPCC)				Arrange for proper disposal.
There is no evidence of tank overflow				
Thief hatches closed				
Thief Hatches not leaking				
Pits/Ponds				
Specify Pit type:				
There is no indications that the liner has or may be expected to fail (visible leaks, bubbling or cracks in liner, etc.)? (SPCC)				Condition:
No hydrocarbon sheen present (SPCC)				
- If 'present', contact Ops immediately				
Is there a 2 foot freeboard? (added 2-11) (SPCC)				
SPCC Inspection Items:				
Is the information on the SPCC Facility Diagram correct? (SPCC)				If no, sketch corrections on diagram and return to Laramie Regulatory Department.
Is the information on the SPCC Overview Sheet correct?				If no, note corrections on Overview Sheet and return to Laramie Regulatory Department
Other Comments:				
Inspector Signature: _____				

Appendix F

Periodic Facility Monitoring Procedures

Laramie Periodic Facility Monitoring Procedure	
Approved By:	Approval Date:

1.0 PURPOSE & SCOPE

All facilities operating within the Laramie Cascade Creek, Collbran and De Beque Operational Areas of Colorado must be visually monitored in accordance with the requirements of this procedure on a periodic basis no less frequent than 30 days apart. Laramie's Production Technicians shall use this procedure each time they visit a facility. In the event that a deficiency or issue requiring significant corrective action is observed, the Production Technician will report the deficiency to Laramie's ACTS Department. The ACTS Technician will issue a work order to authorize corrective action. The ACTS Technician will also review the deficiency to determine if the deficiency requires tracking under Laramie's Spill Prevention, Control and Countermeasure (SPCC) Plan. If the deficiency does apply to Laramie's SPCC monitoring procedures, then a Facility Corrective Action Tracking Form will be completed.

This procedure provides requirements for conducting periodic visual monitoring of all facilities managed under Laramie's Cascade Creek, Collbran and De Beque Operational Areas and guidance for completing the Facility Corrective Action Tracking Form. Included in the periodic monitoring are any existing or new facility containers, equipment, or infrastructure associated with oil and gas production. Once in operation, all facilities shall be inspected per this procedure.

2.0 TRAINING

Production and 7ACTS Technicians must receive training on this procedure and have participated in on-site training prior to performing periodic monitoring observations. Personnel performing periodic monitoring should also be familiar with the facility, Laramie's SPCC Plan, and applicable Federal and State SPCC rules and regulations. Personnel performing this monitoring must have a good understanding of the overall objectives of the periodic facility monitoring procedures. All Production Technicians should also have a basic understanding of equipment operation so that potential problems can be easily identified. The ACTS Technicians shall have a clear understanding of how to complete the Facility Corrective Action Tracking Form. Training shall be scheduled and provided by Laramie's Regulatory Department with support from the Operations Department.

3.0 MATERIALS AND EQUIPMENT

Production Technicians shall have the following materials available to them when performing periodic monitoring:

- Laramie Corrective Action Tracking Form
- A copy of this procedure

Periodic monitoring may be conducted daily, weekly, or other frequency, but not less than monthly, according to the Production Technician's periodic schedule associated with the facility. This general procedure shall be followed during periodic monitoring.

1) **Observe the condition of tanks, separators, wellheads, piping, portable containers and other equipment at the facility**
    a. Evidence of leaks on tanks, portable containers, seams, pipes, valves, fittings, connections or other equipment?
    b. NFPA labels damaged or absent?
    c. Evidence of improperly secured loading/unloading connections?
    d. Evidence of new or temporary tanks or other portable equipment and/or containers? If yes, refer to the Facility Change Guidance Document to determine if Laramie Regulatory needs to be notified of a facility change.
2) **Observe the condition of secondary containment structures**
    a. Evidence of damage to containment structure walls or foundation?
    b. Evidence of tank product within secondary containment?
    c. Evidence of precipitation (rainwater/snowmelt) of a quantity that may compromise secondary containment capacity.
    d. Evidence of trash/debris/out of place equipment within the containment?
3) **Check for the presence of spills and releases**
    a. Evidence of spills or releases outside of secondary containment?
    b. Evidence of spills or releases from loading/unloading areas?
    c. Evidence of spills or releases from portable containers?

If significant deviations to this procedure are determined to be necessary, the changes must be approved by Laramie management prior to implementation of the proposed deviation.

4.0 IMPLEMENTING THE FACILITY CORRECTIVE ACTION TRACKING FORM

This form is not intended to record a release or other unauthorized discharge of fluids. In accordance with Laramie's policies, a release shall be reported to the Laramie HES department and an Exhibit A form shall be completed.

1) If no deficiencies or issues are observed during periodic monitoring, completion of this form is not required.
2) If Observations indicate the need for corrective actions that can be performed immediately and onsite with minor repairs, then make those repairs and do not complete the form.
    a. Examples of minor repairs that can be made onsite and do not require completion of the form include, but are not limited to: (1) removal of trash or equipment improperly stored inside of secondary containment, (2) tightening connections and moving valves to the appropriate operational position, (3) replacing missing bolts on containments or other equipment, (4) removing small,

improperly stored portable or temporary storage containers, (5) replacing or correcting NFPA or other ID labels, including signs, and (6) closing thief hatches.

3) If observations indicate the need for corrective actions that cannot be completed immediately onsite, then the Production Technician will contact the ACTS Department to generate a work order. The ACTS Technician will also assess the deficiency and if appropriate, complete the Facility Corrective Action Tracking Form.
4) The completed ACTS work order will track the work to completion. The ACTS Technician will only generate Facility Corrective Action Tracking Form when the deficiency is SPCC related. SPCC related deficiencies include, but are not limited to secondary containment repairs, equipment failure repairs, and removal of fluids from the secondary containment units. Once the work is completed, the ACTS Technician will close both the work order and the tracking form.
5) The Regulatory Department will be consulted on any deficiency that triggers a Facility Corrective Action Tracking Form.

5.0 REVIEW AND CLOSURE OF COMPLETED FACILITY CORRECTIVE ACTION TRACKING FORMS

1) The Regulatory Department will review all completed Facility Corrective Action Tracking Forms. The Regulatory Department may request additional corrective action to the Operations Department.
2) The Operations Department will determine if the additional corrective actions are appropriate and implement as necessary.
3) Any additional corrective action will be provided to the ACTS technician to issue a new work order. The ACTS technician will use the original tracking form to track the new work order issued and close the tracking form then the additional corrective action has been completed.
4) The Regulatory department will review the SPCC plan to determine if the corrective action plan has altered the appurtenant information. Changes will be made as necessary.
5) Documentation of the ACTS work order and closure will be provided to the Regulatory Department for filing.

6.0 RECORDKEEPING

1) Records of completed Facility Corrective Action Tracking Forms and ACTS work orders are to be kept on file for a minimum of 3 years at the Laramie Grand Junction Office.
2) Training records are to be maintained in the same manner.

Appendix G

SPCC Inspection Procedures

Laramie SPCC Inspection Procedure	
Approved By:	Approval Date:

1.0 PURPOSE & SCOPE

All facilities operating within the Cascade Creek, Collbran and De Beque Operational Areas must be visually inspected for SPCC compliance and documented in accordance with the requirements of this procedure on an annual basis. This also includes any existing, modified, or new facility meeting the definition of a Spill Prevention Control and Countermeasures (SPCC) facility. This document provides procedures for conducting annual SPCC facility inspections. The inspections do not include equipment testing and are not intended as a substitute for the regularly scheduled monitoring of equipment by field personnel. It is anticipated that Laramie's Production Tech will serve as the inspectors.

2.0 TRAINING

Inspectors shall receive training on this procedure. Inspectors should also be familiar with the SPCC Plan and applicable Federal and State SPCC rules and regulations. Inspectors must have a good understanding of the overall objectives for performing the inspections. All inspectors should also have a basic understanding of equipment operation so that potential problems can be easily identified. Training shall be scheduled and provided by Laramie's Regulatory Department. Inspectors can request on-site training prior to performing annual facility inspections.

3.0 MATERIALS AND EQUIPMENT

The following SPCC inspection form and documents are necessary to complete annual facility inspections. This section should be used as a checklist for those personnel entering the field to conduct annual facility inspections.

- ☐ Laramie Piceance SPCC Inspection Form (Appendix B.1 of this SPCC Plan)
- ☐ Laramie Piceance SPCC Inspection Procedure (this document)
- ☐ Current Facility Diagram (FD)
- ☐ Current Facility Overview sheet (FOS)
- ☐ Measuring device (optional)
- ☐ Laptop computer (optional)
- ☐ Logbook (optional)
- ☐ Digital camera
- ☐ Personal Protective Equipment (PPE)
- ☐ Permit to Work Form (if required)

4.0 PERFORMING THE SPCC FACILITY INSPECTION

The following general procedure should be followed during the annual SPCC facility inspection. If significant deviations are determined to be necessary, the changes must be approved by Laramie management prior to implementation of the proposed deviation. The SPCC Inspection Form is divided into 6 sections (7 sections for facilities with pits or SWDs). The following procedure should be followed to complete each section of the checklist.

1. General Site Inspection. This section covers site drainage systems, non-production process equipment, temporary containment, lube-oil systems, and system alarm and shut-offs. Review each item and mark yes, no, or N/A as appropriate.
    a. 'Yes' indicates that the item is in place and properly operating.
    b. 'No' indicates that the item is in place but is either not properly operating, has leaked or requires corrective action to ensure continued operational integrity. Provide corrective action recommendations, for any item marked 'no', in the Required Corrective Actions section at the bottom of the inspection sheet.
    c. 'N/A' indicates that the item is not present at the facility or is not in service.
    d. Review the Facility Overview Sheet and Facility Diagram to make sure that all existing facility drainage systems, lube-oil systems, chemical storage, and temporary containers are reflected on them.
    e. Use the remainder of the sheet to document additional issues that need addressed.

2. Flowlines. This section covers flowline leaks, corrosion, pressure gauges and clamp-type repairs. Review each item and mark yes, no, or N/A as appropriate.
    a. 'Yes' indicates that the item is in place and properly operating.
    b. 'No' indicates that the item is in place but is either not properly operating, has leaked or requires corrective action to ensure continued operational integrity. Provide corrective action recommendations, for any item marked 'no', in the Required Corrective Actions section at the bottom of the inspection sheet.
    c. 'N/A' indicates that the item is not present at the facility or is not in service.
    d. Review the Facility Diagram to make sure that all flowlines, above or below-ground, are reflected there. If not, document the discrepancy on the bottom of the inspection sheet or directly on the FOS or Diagram.
    e. Use the remainder of the sheet to document additional issues not covered by the inspection checklist.

3. Process Equipment. This section covers all process equipment and related valves and flowlines. Review each item and mark yes, no, or N/A as appropriate.

a. ‘Yes’ indicates that the item is in place and properly operating.
b. ‘No’ indicates that the item is in place but is either not properly operating, has leaked or requires corrective action to ensure continued operational integrity. Provide corrective action recommendations, for any item marked ‘no’, in the Required Corrective Actions section at the bottom of the inspection sheet.
c. ‘N/A’ indicates that the item is not present at the facility or is not in service.
d. Review the Facility Overview Sheet and Facility Diagram to make sure that all existing process equipment and flowlines are reflected on them.
e. Use the remainder of the sheet to document additional issues that need addressed.

4. Tanks/Tank Battery (non-SWD). This section covers bulk storage containers, secondary containment, and all associated drains, vents and flowlines. Review each item and mark yes, no, or N/A as appropriate.
    a. ‘Yes’ indicates that the item is in place and properly operating.
    b. ‘No’ indicates that the item is in place but is either not properly operating or requires corrective action to ensure continued operational integrity. Provide corrective action recommendations for any item marked ‘no’ in the comments column.
    c. ‘N/A’ indicates that the item is not present or not in service.
    d. Review the Facility Overview Sheet and Facility Diagram to make sure that all existing bulk storage containers, secondary containment, and all associated drains, vents and flowlines are reflected on them.
    e. Use the remainder of the sheet to document additional issues that need addressed.

5. Pits/Ponds (If pertinent). This section covers produced water storage pits or ponds, as well as any associated liners and housekeeping. Review each item and mark yes, no, or N/A as appropriate.
    a. ‘Yes’ indicates that the item is in place and properly operating.
    b. ‘No’ indicates that the item is in place but is either not properly operating or requires corrective action to ensure continued operational integrity. Provide corrective action recommendations for any item marked ‘no’ in the comments column.
    c. ‘N/A’ indicates that the item is not present or not in service.
    d. Review the Facility Overview Sheet and Facility Diagram to make sure that any pits or ponds and any associated piping are reflected on them.
    e. Use the remainder of the sheet to document additional issues that need addressed.

6. Salt Water Disposal SWD (If pertinent). This section covers facilities where salt water is disposed of into permitted SWD wells. Review each item and mark yes, no, or N/A as appropriate.
    a. 'Yes' indicates that the item is in place and properly operating.
    b. 'No' indicates that the item is in place but is either not properly operating or requires corrective action to ensure continued operational integrity. Provide corrective action recommendations for any item marked 'no' in the comments column.
    c. 'N/A' indicates that the item is not present or not in service.
    d. Review the Facility Overview Sheet and Facility Diagram to make sure that any SWD well, associated piping and containment are reflected on them.
    e. Use the remainder of the sheet to document additional issues that need addressed.

7. Site Diagram/Facility Overview Sheet review. Verify that Facility Diagram and Facility Overview Sheet correctly reflect current site operations. If there are discrepancies, make notations on the attached copies.

8. Completing the report. After the facility inspection is complete, complete the Certification section by signing the inspection report. Attach the SPCC Inspection Form to the updated Facility Overview Sheet, and Facility Diagram. Return this package to the Regulatory Department.

5.0 REPORTING AND REVIEW

The steps outlined in this section must be performed following completion of the annual SPCC visual facility inspection to ensure that the discrepancies noted during the inspection are adequately communicated, reviewed, and addressed. All facility inspections must be reviewed prior to finalization.

1. Laramie's Production Techs/Inspectors shall provide the original SPCC Inspection Form to the Regulatory department.
2. The Regulatory department will review the inspection checklist and arrange to meet with the Production Techs/Inspectors to clarify any comments generated or questions raised as a result of the inspection(s), and to help identify appropriate corrective actions. Corrective actions should be completed as soon as possible, but no later than 6 months from the time of the inspection. Once all corrective actions have been completed, the inspection form will be signed by either the production tech, their supervisor or SPCC coordinator in the regulatory department.
3. Following review and discussions draft corrective actions shall be identified for the FD and FOS.

4. Corrections shall be made and those that require a review by a P.E. shall be submitted for review and/or approval.
5. Following review and approval by the P.E., update and/or amend the SPCC Plan as directed by the P.E.
6. Provide a copy of the updated/amended SPCC Plan to the field offices.
7. Retain documentation of all of the above in the appropriate file on the Grand Junction server.

6.0 RECORDKEEPING

Records of these inspections, including record of reviews, approvals, and subsequent SPCC Plan updates are to be kept on file for a minimum of 3 years at the Laramie Grand Junction Office. All completed inspection forms must be signed by the inspector or inspector's supervisor. Training records are to be maintained in the same manner.

Appendix H

Notification Chart

Emergency Notification Chart

First Responder: contact emergency services as necessary 911. Direct Dispatch numbers are listed below.

****Verbal contact MUST be made or move to next person in line. Voicemail, email or text are not acceptable for emergency notification****

Operations & Facilities

NORTH

Eric Lane
North Prod Mgr
C 970-640-9172
O 970-812-5313

SOUTH

Milt Johnson
South Prod Mgr
C 970-230-1011
O 970-263-3665

Completions

John Grubich
Completions Mgr
C 970-589-9496
O 970-812-5312

Drilling

Aaron Duncan
Drilling Manager
C 406-498-4526
O 303-339-4913

Chris Clark
VP-Field Operations
C 970-462-8375
O 970-263-3607

Wayne Bankert
Regulatory & Env Manager
C 970-985-5383
O 970-812-5310

For spills, environmental, wildlife

Laura Lancaster
Health & Safety Coordinator
C 970-644-1259
O 970-263-3627

For injury, fire, vehicle, damage

Mesa County Dispatch (Debeque/Collbran)	970-242-1234
Garfield County Dispatch (Rifle)	970-625-8095
Rio Blanco County Dispatch (Buckhorn Draw/Piceance)	970-878-9625
St. Mary's Careflight	970-332-4923
Poison Control Hotline	800-222-1222
Chemtrec	800-424-9300

LARAMIE ENERGY

Appendix I

Spill Report Form

Laramie Energy Spill Report Form

Event Reported By:				Company:	
Event Reported to:					
Date of Spill					
Time of Spill		AM	PM		
Weather Conditions					
County:	Garfield	Mesa	Other:		
Location Description :	Pad Name		Pipeline Vicinity		Other:
Extent of Spill (Circle one or more)	Confined to Secondary Containment	Additional Info		Confined to Bermed Surface of Pad	Additional Info
	Outside Secondary Containment			Outside Bermed Surface of Pad	

Discharge to Water Body or Wetland	Yes	No			
Type of Fluid/Material Spilled					
Estimated Volume of Spill (BBLs or Gallons)	BBLs		Gallons		
Estimated Volume of Fluid/Material Recovered	BBLs		Gallons		
Method of Recovery					
Additional Actions Taken Toward Containment/Recovery:					
Disposal (Y/N)	Yes	No			
Detailed Description of Event (include additional pages as necessary)					
Cause of Event					
Photographic Record Complete	Sent to:				
Signiture				Date	