

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: DRILL REENTER		5. Lease Serial No.
1b. Type of Well: Oil Well Gas Well Other Single Zone Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator		7. If Unit or CA Agreement, Name and No.
3a. Address		8. Lease Name and Well No.
3b. Phone No. (include area code)		9. API Well No.
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		10. Field and Pool, or Exploratory
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease	12. County or Parish
17. Spacing Unit dedicated to this well	13. State	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

**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	Name (Printed/Typed)	Date
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Title

Approved by (Signature)	Name (Printed/Typed)	Date
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Title

Office

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

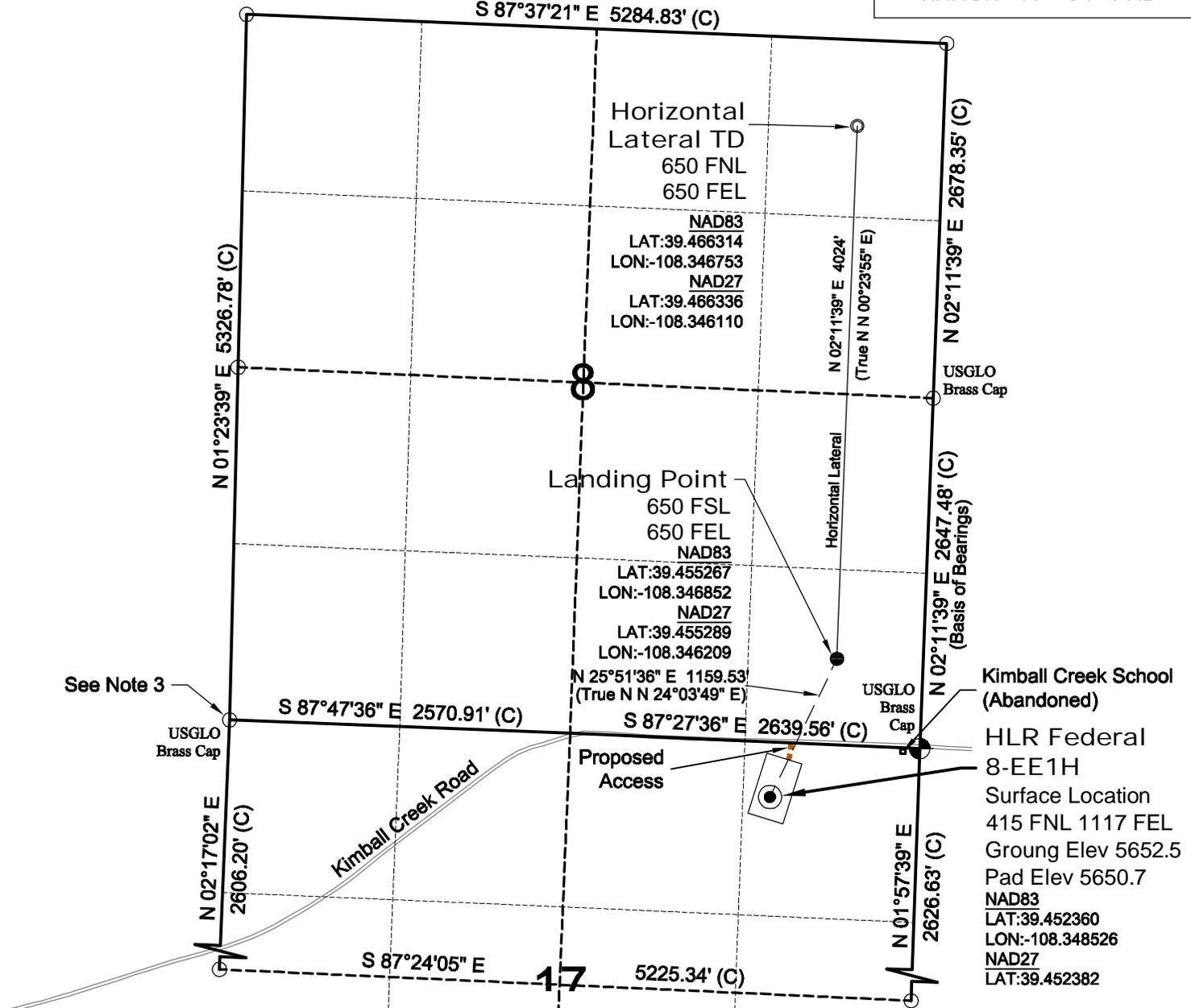
Conditions of approval, if any, are attached.

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.

\*(Instructions on page 2)

# WELL LOCATION MAP

**HIGH LONESOME RANCH 17-01 PAD**



## NOTES

- 1.) Horizontal and vertical datum, based on NGS control point "MCCARY" with an elevation of 5171.5.
- 2.) All directions, distances, and dimensions shown hereon are based on coordinates from the "Colorado coordinate system of 1983 central 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 land survey plats deposited in Garfield County & 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 10/16/10; Date of Drawing 12/2/10. REV 0  
PDOP Reading: 3.7 Instrument Operator: Dave Murrey

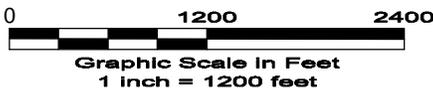
12/2/10

## 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.



North



**LAND SURVEYING AND MAPPING**  
LAFAYETTE - WINTER PARK  
Ph 303 666 0379 Fx 303 665 6320

**LARAMIE ENERGY II LLC**  
HLR FEDERAL 8-EE1H

SL NE1/4 NE1/4 SEC. 17 T7S R98W  
HL E1/2 E1/2 SEC. 8 T7S R98W  
6th PM GARFIELD COUNTY COLORADO

**Laramie Energy II, LLC**  
10-point Drilling Plan

Well No:	<b>HLR Fed. 08-EE1H</b>	Measured Depth:	<b>12563'</b>
Surface Location:	<b>NENE, Sec. 17 T7S R98W</b>	True Vertical Depth:	<b>7774'</b>
BH Location:	<b>NENE Sec. 08 T7S R98W</b>	Pad Identification:	<b>High Lonesome 17-01 Pad</b>
Lease No:	<b>COC 64401</b>	Reference:	
County:	<b>Garfield</b>		

**Drilling Program Summary**

Laramie II intends to drill a horizontal well in the Niobrara member of the Mancos shale in order to test production potential of the formation. In order to maximize the amount of information that can be gathered, LEII will drill a vertical 6 ½” “pilot” hole will be drilled below the intermediate casing to ~8000’ MD in the Niobrara which will allow for a full suite (Triple Combo, sonic, and possibly an imagery log) to be run to TD. Once the logs are run a determination of the optimal KOP will be made (~ 6857’). The “pilot” hole will be plugged back and whipstock cement plug will be set. Once the well is kicked off, an anticipated build rate of 6.5°/100’ will be maintained to the Landing Point of the Mid Niobrara (~7774’ TVD). The horizontal leg will then be drilled to TD (~12563 MD, 7774’ TD) with a Logging While Drilling GR tool to insure the horizontal leg stays within tolerances of the mid-Niobrara.

Depths are tentative at this time until the logs are run. However, the drilling, casing, and cementing program will not change significantly beyond what is submitted. Any significant changes will be submitted to the Authorized Officer for review prior to commencement.

**1 & 2 Estimated Tops of Geological Markers and Formations  
Expected to Contain Water, Oil and Gas and Other Minerals:**

<u>**Formation</u>	<u>TVD(ft.)</u>	<u>MD(ft.)</u>	<u>Comments</u>
Tertiary Wasatch	Surface	Surface	
*Mesa Verde/ Williams Fork	1729	1759	Saltwater, poss. Gas
Est. Top of Gas	2457	2457	Gas
Cameo	3870	3870	Gas with possible Saltwater zones
Rollins	4237	4237	Gas with possible Saltwater zones
Cozzette	4365	4365	Gas with possible Saltwater zones
Corcoran	4685	4685	Gas with possible Saltwater zones
Hot Marker	6103	6103	
Niobrara	7614	7524	Gas with possible Saltwater zones
TD Mid- Niobrara	12563	7774	

1 permitted water wells within 1 mile of the High Lonesome 17-01 pad. See “Well Vicinity Map” exhibit..

Any sources water and prospectively valuable minerals encountered during drilling will be recorded by depth and adequately protected. A sample will be taken of any water flows that are significant enough to be sampled, and furnished to the Grand Junction Field Office for analysis, if requested.

\* The top of the Mesa Verde Group and the Williams Fork Formation is interpreted to be one and the same.

**3. Pressure Control and Auxiliary Equipment**

After setting surface casing to the specified depth (section 5), 5,000-psi equipment will be used. Equipment will be installed per **Attachment A**. Test pressures will be as follows:

11” – 5,000-psi ram type BOP’s	5,000 psi
11” – 5,000-psi annular BOP’s	2,500 psi

Ancillary equipment and choke manifold 5,000 psi  
 Surface casing 1,500 psi

Pressure tests will be conducted after installation of equipment and prior to drilling out casing float equipment and every 30 days thereafter. A certified tester will perform pressure testing and charts will be made available from Laramie upon request.

BOP, choke manifold, and accumulator equipment installation will be consistent with 43 CFR Part 3164.1 Onshore Oil and Gas Order No. 2.

**Auxiliary equipment:**

- a) Manually operated kelly cocks.
- b) Full opening floor valves capable of fitting all drill-string connections will be kept on the floor in the open position.

**4 & 5. Casing and Cementing Program**

Hole Info		Setting Depth		Casing Information						
Hole	Size	MD	TVD	Size	Grade	Weight	Type	Collapse psi	Burst psi	Yield Klbs
Cond.	24	40'		20	0.25" Thick Wall					
Surf.	14 3/4	900	900	10 3/4"	K-55	40.5 lb	STC New	1580	3130	450
Int.	9 7/8	6303	6303	7 5/8"	N-80	29.7	LTC New	4790	6890	575
Prod.	6 1/2	12563	7774	4 1/2"	P-110	15.1	LTC New	14320	14420	406

Centralizer program for Intermediate casing designed to center 4 1/2" casing in hole from KOP to Landing point and prevent "sag" in horizontal leg.

Casing	Stage	Sx.	Yield	Cementing Program			~TOC
				Weight	Type		
Conductor					Redi-mix		
Surface	Lead	240	2.97	11.5 ppg	ECONOCM(Type 3, CL C) w/0.125#/sk Pol-E-Flake (cellophane)		
	Tail	200	1.1.49	14.2 ppg	SWIFTCEM(Type 3,CL C) w/ 0.125#/sk Polyflake +additives		Surface
Int. set to 200' below "Hot Marker"	Lead	595	2.75	11.8 ppg	ECONOCM (35/65/6 CL G) with 0.125 #/sk Pol-E-Flake		Surface
	Tail	200	1.49	15.6 ppg	HALCEM (Cl G) with 0.2% HR-5 (retarder) & 0.125 #/sx Pol-E-Flake		
Prod.		610	1.54	13.5	EXTENDACEM (Cl G, 50/50 Poz) with 0.5 % Halad-344(Low fluid loss), 0.4% Halad -413 (Low FluidLoss), 0.3% Eonolite (Light Weight Additive), 0.1% Versaset (thixotropic additive), 2% Bentonite (Light Weight Additive), 0.5% HR-5 (Retarder), 0.25 gal/bbl D-AIR 3000L (Defoamer)		5803

Area Fracture Gradient: estimated at 0.65 psi 1 foot

Surface Casing Full cement returns back to surface will be attempted, calculation for hole size and pipe size are used with a 50 to 100% excess volume. If full returns are not seen or fallback occurs, 1” injection of remedial cement down the backside will be performed and topped to surface.

Int. Casing 30% excess volume on open hole.

Prod. Casing 15% excess cement volume on open hole.

Conductor pipe and surface casing is cemented back to surface.

**6. Mud Program:**

<u>From (md)</u>	<u>To (md)</u>	<u>Mud Type</u>	<u>Weight ppg</u>	<u>Vis.</u>	<u>Water Loss</u>	<u>Chemicals</u>
0/0	900	LSND	8.4-9.0	35-50	10-14	
900	6303	LSND	8.8-9.5	40-50	6-8	Lignite
6303	TD	Gel/Chem	10.0-12.5	45-55	6-8	Shale Inhibitors
						Caustic for PH

Mud system will be low solids non-dispersed gel polymer system with WL of 6 to 8 from under surface, weight of 8.8 – 9.5 ppg and Vis of 40-55 will be maintained until more weight is needed then will be 8.5 – 12.6 ppg as needed. Mud weights based on similar wells drilled further east of this location. A balanced or slightly underbalanced system will be used to prevent minimize loss circulation and damage to the formation. Shale inhibitors will be added as needed to reduce swelling and caustic soda will be added as needed to maintain a PH of 9.5-10.0 to maintain optimum performance of all products and promote good wellbore integrity.

Sufficient mud materials to maintain mud properties, control lost circulation and to contain blowout will be available at the wellsite.

Mud reports will be kept on location at all times. No chrome constituent additives will be used in the mud system on Federal and Indian lands without prior BLM approval to ensure adequate protection of fresh water aquifers.

**7. Testing, Logging and Core Programs:**

Cores: None

DST's: As needed; none anticipated

Sampling: None

Surveys: Run every 100' on surface hole and on trips

Mud logger: one-man or computer unit with at least total gas and drill rate from base of surface casing to TD.

Logging Open-hole logs: An attempt will be made to obtain open-hole log from bottom of Surface Casing to bottom of Landing Point (start of horizontal leg) for the well. Logs will include Triple Combo, Sonic, and possibly an Imagery log from Landing Point TD to surface casing.

Logs will be submitted to the BLM in .LAS format along with Form 3160-4 "Well Completion and Recompletion Report".

Cased-hole logs: Cased-hole logging tools will be run in the case the well cannot be logged open-hole. Logs and intervals include a cased-hole pulsed neutron log from Landing Point TD to surface casing.

As Field Development progresses and knowledge of the reservoir increases, fewer open-hole logs will be run and replaced with cased hole.

## **8. Anticipated Pressures and Temperatures:**

No over pressured formation is anticipated. A BHT of 170-190 degrees F is expected. A BHP of 5055 psi is expected. Surface pressure assuming a partially evacuated hole with a 0.22 psi/ft. gradient will be 3345 psi.

Proper mud weight will be maintained to drill at a balanced or slightly under-balanced condition.

Notification will be made if planned drilling practices deviate from this.

## **9 & 10. Drilling Schedule**

Anticipated starting date: March 31, 2011  
Duration of operation: 20-30 days.

No location will be moved, no well will be plugged and no drilling or work-over equipment will be removed from a well to be placed in a suspended status without prior approval of the Authorized Officer. If operations are to be suspended, prior approval of the Authorized Officer will be obtained and notification given before resumption of operations.

The spud date will be reported orally to the Authorized Officer within a minimum of twenty-four (24) hours prior to spudding. Written notification in the form of a Sundry Notice (Form 3160-5) will be submitted to the Field Office within twenty-four (24) hours after spudding. If the spudding occurs on a weekend or holiday, the written report will be submitted on the following regular workday.

In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 9-329, "Monthly Report of Operations", starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report will be filed directly with the Office of Natural Resource Revenue (ONRR), Production Accounting Division, P. O. Box 17110, Denver, Colorado 80217.

Immediate Report: Spills, blowouts, fires, leaks, accidents or any other unusual occurrences shall be promptly reported to the Field Office in accordance with requirement of NTL-3A.

If a replacement rig is contemplated for completion operations, a Sundry Notice (Form 3160-5) to that effect will be filed for prior approval of the Authorized Officer and all conditions of this approved plan are applicable during all operations conducted with the replacement rig. In emergency situations, verbal approval to bring on a replacement rig will be obtained from the Authorized Officer.

Should the well be successfully completed for production, the Authorized Officer will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication not later than five (5) business days following the date the well is placed on production.

A first production conference will be scheduled within fifteen (15) days after receipt of the first production report. The BLM Field Office will coordinate the field conference.

No well abandonment operations will be commenced without prior approval of the Authorized Officer. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the Authorized Officer. A "Subsequent Report of Abandonment" (Form 3160-5) will be filed with the Field Office within thirty (30) days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Final abandonment notice will be completed to the satisfaction of the Authorized Officer or his representative, or the appropriate surface managing agency.

Approval to vent/flare gas during initial well evaluation will be obtained from the Field Office. The preliminary approval will not exceed 30 days or 50 MMCF gas. Approval to vent/flare beyond this initial test period will require Field Office approval pursuant to guidelines in NTL-4A.

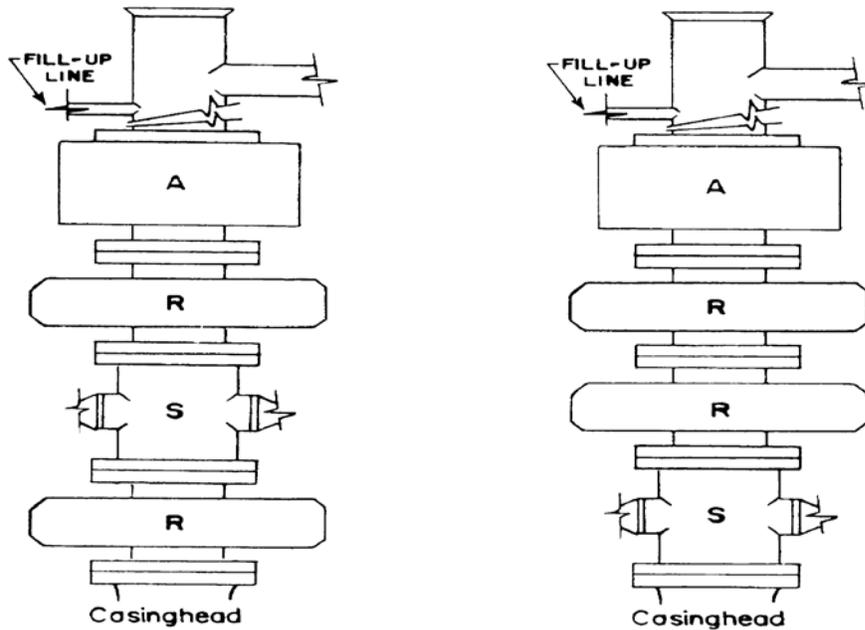
Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. The marker will be constructed after contouring. The top of the marker will be closed or capped and the following minimum information will be permanently placed on the marker with a plate, cap or beaded-on with a welding torch: "Well name", as applicable; "well number, location by quarter/quarter section, township and range"; and "lease number".

Laramie Energy II, LLC will be operating under its Colorado Bond # COB000206.

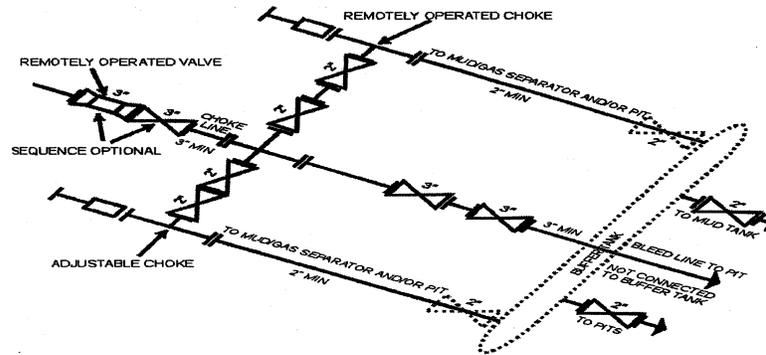


# Laramie Energy II, LLC

## Attachment A to Form 3160-3



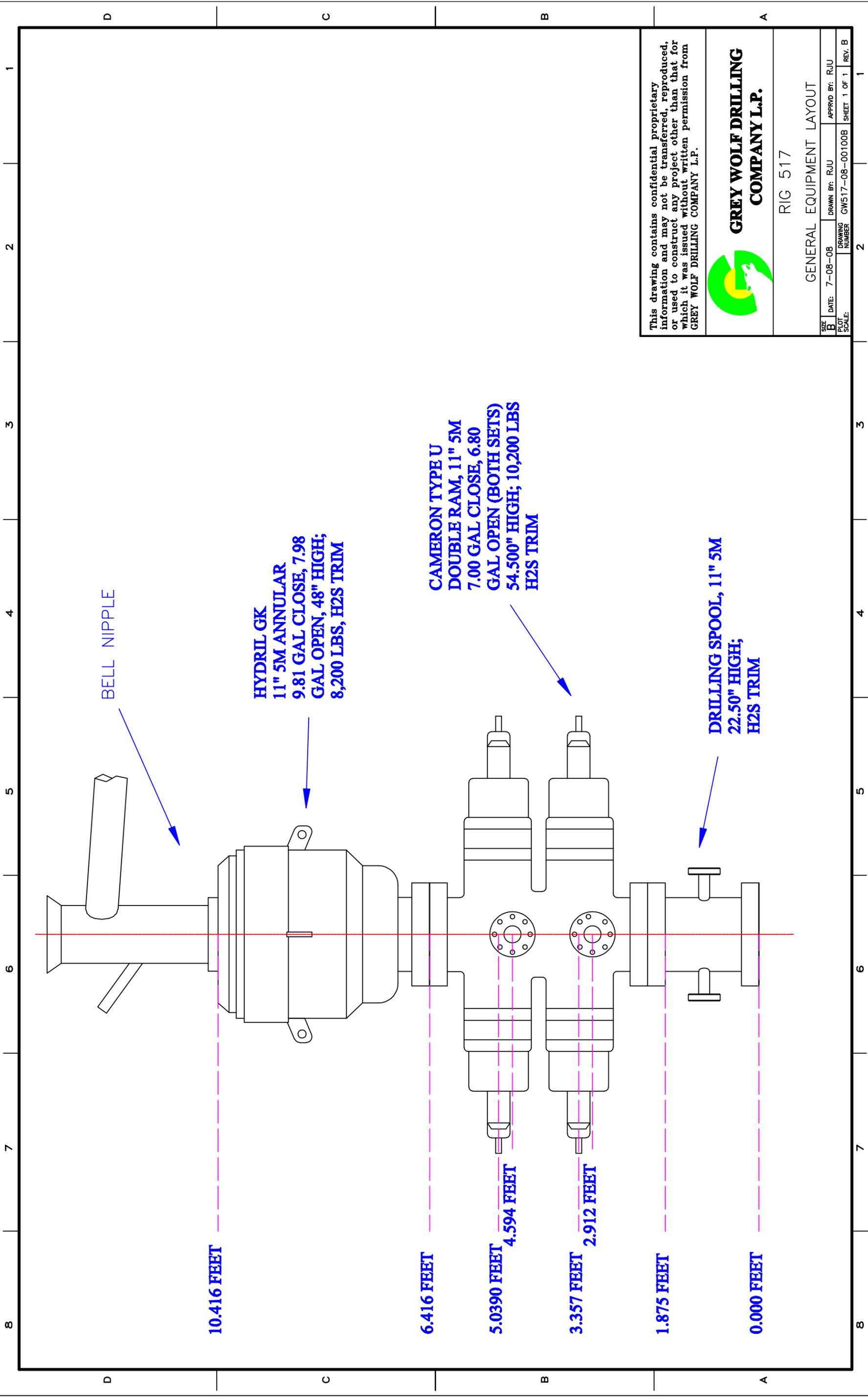
**FIGURE K1-2. Recommended IADC Class 3 (3000 psi WP) and 5 (5000 psi WP) stacks. Either RSRA (left) or SRRA (right) is acceptable and drilling spool is optional is side outlets on rams are utilized.**



**5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY**

Although not required for any of the choke manifold systems, buffer tanks are sometimes installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream to isolate a failure or malfunction without interrupting flow control. Though not shown on 2M, 3M, 10M, OR 15M drawings, it would also be applicable to those situations.

[54 FR 39528, Sept. 27, 1989]



This drawing contains confidential proprietary information and may not be transferred, reproduced, or used to construct any project other than that for which it was issued without written permission from GREY WOLF DRILLING COMPANY L.P.



**GREY WOLF DRILLING  
COMPANY L.P.**

RIG 517

GENERAL EQUIPMENT LAYOUT

SIZE <b>B</b>	DATE: 7-08-08	DRAWN BY: RJU	APPROV BY: RJU
PLOT SCALE:	DRAWING NUMBER: CW517-08-00100B	SHEET 1 OF 1	REV. B

### 13 Point Surface Use Plan

LARAMIE ENERGY II, LLC  
Garfield County, Colorado

#### **Lease COC-064401 High Lonesome Ranch (HLR) Fed. 08-EE1H**

Surface Location NENE Sec. 17, T07S, R98W 6<sup>th</sup> PM  
Bottom Hole Location: NENE Sec. 8, T07S, R98W 6<sup>th</sup> PM

#### **Overview**

Laramie Energy II, LLC (LEII) proposes to horizontally drill the High Lonesome Ranch Federal 08-EE1H well in to Federal Lease COC-064401 which LEII has acquired a farm-out agreement from Williams Production RMT, Co (Lessee of Record). The intent is to drill and complete the well to evaluate the potential of acreage in the area for possible Niobrara gas development. The well is to be drilled from a private surface location that LEII has reached an agreement with the landowner for Surface Use.

#### **1. Existing Roads (See exhibit “Access Road Map”)**

To access the proposed project area, travel west from the DeBeque, CO exit (exit 62) on Interstate-70. Drive past DeBeque on what is known as the Roan Creek Road (CR 204) for 10.9 miles to the intersection of the Kimball Creek Road (CR 202). Turn left on Kimball Creek Road and continue on for ~2.4 miles to the access to the proposed High Lonesome Ranch 17-1 pad. Bear left onto the pad.

#### **2. Planned Access Road (See section 2.1 of SUA Additional Landowner Requirements)**

~ 100’ new access road will be required to enter the pad site.

- A. 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) and BLM Handbook 9113 (Roads Manual).
- B. All new access roads will be designed and constructed by the crown and ditch method. The roads will have a 16 to 24 foot running surface with 4 feet on each side for borrow ditch. The road disturbed width will be determined by the topography. Construction will be accomplished to minimize any disturbance yet construct a travel way that is both safe and structurally sound. The travel way will be topped with an initial minimum gravel application of 6” of 3” minus gravel. Re-surfacing will be applied with the onset of road damage (displaced or rutted roadbed).
- C. LE II 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.
- D. 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. Landowner has requested all boulders of significant size are to be removed and stockpiled at edge of location for use in other areas of the property.

- E. Culverts will be installed at drainage crossings and will pass a 25-year or greater storm event. Laramie will submit an ACOE 404 permit under Laramie's nationwide bond for any crossings that are determined to be navigable waters. Best Management Practices as outlined in Laramie High Lonesome Ranch Project Stormwater Management Plan (Permit Application submitted to CDPHE) 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.
- F. LEII 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 and surface aggregate replacement.
  - 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. Laramie 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.
- G. All equipment and vehicles will be confined to the access roads, pads and areas as specified in the APD.

### **3. Location of Existing Wells**

There are no natural gas wells of any type within a one-mile radius of the proposed well. The 10-point Drilling Plan (Part 1 & 2) identifies 1 water well permitted within a one-mile radius of the proposed well.

### **4. Location of Tank Batteries, Production Facilities and Production Gathering and Service Lines** (See Section 1 of SUA for Additional Landowner Requirements).

#### **A. General**

- 1. Layout of the production facility has not yet been determined. A preliminary anticipated production layout is part of the permit. A final layout will be submitted to the GJFO when completed as required by Onshore Oil Gas Order No. 1 part VIII and in compliance with 43 CFR 3160's.
- 2. All permanent (onsite for six (6) months or longer) structures constructed or installed (including oil well pump jacks) will be painted a flat, non-reflective, earth-tone color to match the standard environmental colors or to the Land Owner's satisfaction. 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.

3. If a tank battery is constructed on this lease, a metal containment ring or dike of sufficient capacity to contain 110% of the storage capacity of the largest tank will surround it. All loading lines and valves will be placed inside the containment ring or dike surrounding the tank battery.
4. The production tankage for the Federal 24-09C will be designed solely dedicated to the Federal 24-09C well. No commingling of fluids will take place.
5. All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to.
6. All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the Authorized Officer.
7. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.
8. Gas meter runs for this well will be located within one hundred (100) feet of the wellhead. The gas flow line will be buried from the wellhead to the meter and downstream for the remainder of the pad. Meter runs will be housed and/or fenced.
9. The oil and gas measurement facilities will be installed on the well location. The gas meter 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 time for the initial meter calibration and all future meter-proving schedules. A copy of the meter calibration reports 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.
10. In order minimize the amount of vehicular traffic to and from the project site, remote telemetry equipment will be installed at each multi-well pad.

B. Production Facilities

1. See the "Production Layout" exhibit for a production facilities schematic. 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 surface owner. 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. Gas meter runs for each well will be located within one hundred (100) feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and downstream for the remainder of the pad. Meter runs will be housed and/or fenced.
7. 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.
8. To minimize the amount of vehicular traffic to and from the project site, remote telemetry equipment will be installed at each multi-well pad.

C. Gathering Line: (See Section 2.2 of SUA for Additional Landowner Requirements)

At this time, LEII is investigating routes out of the area for gas gathering. A mid-stream gather needs to be located as well as a tie-in point prior to planning a pipeline size and route from the HLR 17-1 Pad. Once the well is drilled and completed, LEII will determine the size of line needed and meet with the BLM to determine the best route out. If a mid-stream gatherer is contracted and LEII has a preliminary route chosen LEII may conduct biological and cultural surveys in 2011 to avoid missing survey windows.

1. All new lines installed will be fusion bonded welded steel. All lines will follow the new or existing road access routes in order to minimize disturbance as much as possible.
2. When possible, LEII's policy is to install gathering lines in the cut edge of the access road just above the borrow ditch or in the access road prior to the access road being contoured, final graded and graveled. By initially "pioneering" the road in to its disturbance area and then burying the pipe, Laramie can contour the cut and fill slopes over the lines and interim reclaim. By using this method Laramie reduces any other disturbance both visually and surface wise that might occur if the line is buried outside the road corridor. This procedure has worked successfully in other areas, including the White River National Forest and Helmer Gulch.
6. Lines will be buried to a depth up to 60 inches (below frost level) in the roadway and at road crossings. These are minimum depths and the pipe will be installed to a depth which can safely accommodate existing land and road uses. The access road disturbance will be used as part of or the entire disturbance for the pipeline and will be the working side of pipeline construction. Once the pipeline is in place, the road shoulder ditch will be shaped, and lined with gravel.
7. Open trenches will be maintained in a safe condition. As necessary to maintain safety, trenches adjacent to roads will be covered and/or warning barriers erected upon completion of daily construction or at anytime personnel are not present at the construction site.

8. Pipeline warning signs will be installed along the pipeline easements within ninety days of construction completion and prior to use of the pipeline for transportation of product. Pipeline warning signs will be installed at all road crossings. For safety purposes each sign will be visible from marker to marker, permanently marked with the right-of-way serial number and will clearly identify the underground location, owner and purpose (product) of the pipeline.
- 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 (Gran Junction 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 easements and any additional areas as specified in the 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 1 week 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.

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.

Water 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.

Estimated water usage for the drilling and completion of the well is ~3.0 acre-ft. ~65-70% (1.95- 2.10 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**

Surface and subsoil materials within the proposed construction areas were used. Additional gravel or pit lining material will be obtained from private sources.

## **7. Methods for Handling Waste Disposal**

(See Sections 1.8-1.10 of the SUA for Additional Landowner Requirements)

- A. The only pit proposed location is a cuttings pit. LEII's plan is to drill the well on the HLR 17-1 pad with a dewatering system with no need for a reserve pit. Drilling fluids are recycled and re-used with cuttings being de-watered and captured in a catch pan and removed to the cuttings pit.
- B. Produced water is recycled and used in Laramie's drilling operations after completion of a well.
- C. Produced fluids—liquid hydrocarbons produced during completion operations will be placed in test tanks on the location.
- D. A permanent 300-400 bbl steel tank will be installed next to the production facilities to contain any produced water (if not used for drilling or completion) for the duration of the well. The produced water will be disposed of at the Danish Flats Disposal Facility in Cisco, Utah or another state approved disposal facility.
  - Cuttings: These will be contained on location in the cuttings pit. Landowner has expressed interest in using drill cuttings in other locations of the Landowner's property. Prior to re-moving the cuttings for other uses, they will be tested and meet COGCC Rule 910 requirements.
  - Drilling fluids and chemicals: These are recycled through the dewatering system, treated and re-used.
  - 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.
  - Garbage and other waste materials: 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.
- E. Laramie II complies 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, directional driller; toilet facilities; and trash container(s).

## **9. Wellsite Layout**

The “Well Location Map” exhibit shows the surface location and bottom hole location. The “Pad Layout” exhibit is the site and topography map. Multiple wells are shown on the “Pad Layout” to satisfy the COGCC new Form 2A (Location Assessment) requirements to show all wells that might possibly be drilled off the location. The number of wells are for illustration purposes only and does not necessarily represent the actual development. The “Access Road Map” shows existing access route. The gathering line was laid in the shoulder of the access road. The “Lease Boundary” exhibit is self explanatory.

- A. The working surface of the well pad will be about 275 feet by 475 feet (2.6 acres). The total disturbed area for each pad is estimated to be 4.7 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 fences 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:
  - o Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
  - o 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.
  - o All wire shall be stretched using a stretching device before it is attached to the corner posts.
  - o 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’ when heights exceed 15 feet.

## **10. Plans for Restoration of the Surface (See Section 5 of SUA for Landowner Requirements)**

### **A. Interim Reclamation**

- 1. Immediately upon completion of drilling, the location and surrounding area will be cleared of all remaining debris, materials, trash and junk not required for production, and hauled to the nearest legal landfill.
- 2. The backfilling of the cuttings pit will be done in such a manner that the cuttings will be confined to the pit and not squeezed out and incorporated in the surface materials. There will be a minimum of three feet of cover (overburden) on the pit. When work is complete, the pit area will support the weight of heavy equipment without sinking. Landowner has expressed interest in using drill cuttings in other locations of the Landowner’s property. Prior to re-moving the cuttings for other uses, they will be tested and meet COGCC Rule 910 requirements.

3. Laramie Energy II or its contractor will notify the Bureau of Land Management, GJFO, (970) 244-3000, forty-eight (48) hours before starting reclamation work that involves earth-moving equipment and upon completion of restoration measures.
4. After completion activities, the operator will reduce the size of the well pad to the minimum surface area needed for production facilities, while providing for reshaping and stabilization of cut and fill slopes. Slopes will be re-contoured to minimize areas that exceed a 3:1 slope. Any areas exceeding the 3:1 slope criteria or high walls shall be reclaimed using enhanced stabilization and erosion prevention methods.
5. The stockpiled ground cover will be evenly distributed over the disturbed areas.
6. LEII requests the BLM to recommend a seed mix for this altitude which will be used on all new disturbed areas.

**B. After the Last Well on the Location is Abandoned, Laramie Will:**

Ensure the well site, roads or other disturbed areas will be restored to near their original condition. This procedure will include:

1. Ensuring re-vegetation of the disturbed areas to the specifications of the landowner or BLM at the time of abandonment.
2. All disturbed surfaces will be re-contoured to the approximate natural contours (“Final Abandonment” exhibit) and reseeded according to landowner or BLM recommendations. Reclamation of the well pad and access road will be performed as soon as practical after final abandonment and reseeded operations will be performed in the fall or spring following completion of reclamation operations. During reclamation of the site, fill material will be pushed into cuts and up over the back slope. Topsoil will be distributed evenly over the location and seeded according to the recommended seed mixture.
3. The access road and location will be re-contoured and ripped or disked prior to seeding. Prior to reclamation of the access road, the BLM or landowner will be consulted to determine any road portions that might remain.
4. All cut slopes from access roads and well pad construction will be reseeded within 48 hours after construction is completed.
5. Immediately upon abandonment of all the wells on the pad, all equipment will be removed from the location and surrounding area(s) will be cleared of all debris, materials, trash and junk that may have collected. Pipelines will be cut and abandoned at the location.
6. The recommended BLM seed mix will be used on all disturbed areas or as required by the private surface owner.
7. Those disturbed areas around locations that are being reclaimed may require fencing after seeding to keep wildlife and livestock out until the vegetation gets established. Where fencing is needed, LEII will consider the needs of the wildlife during the design of the fencing. The CDOW will be contacted for recommendations for appropriate fencing in each area. Once vegetation has been established, the fencing will be removed or reduced in size as required by the Authorized Officer.

**11. Surface Ownership:**

The surface location is on private lands and minerals owned by #13 Enterprises, LLC and #15 Enterprises, LLC whose address is 5466 County Road 202, DeBeques CO 81630.

## 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. A cultural resource inventory report is part of the environmental assessment process. A cultural survey was conducted by a 3<sup>rd</sup> party in July of 2009 for the pads and any new access.
- C. 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.
- D. Attached to this proposal is LEII's standard wildlife BMP's for Sensitive Wildlife Areas (SWA's). In addition, see Sec. 1.12 of the SUA for Landowner Timing Restrictions of September 1 to November 15 of each year for 1<sup>st</sup> trimester pregnancy of Elk (from landowner at site visit).
- E. LEII has incorporated the Glenwood Springs Energy Office (CRVFO) March 2007 "Noxious and Invasive Weed Management Plan for Oil and Gas Operators" into all LEII operations on Federal and Fee lands.
- F. 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 Silt 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.
- G. Stormwater Management will be managed under LE II's Stormwater Management Plan known as the "High Lonesome Ranch Project Area" under a General Permit issued by the CDPHE.
- H. Sediment will be trapped before it reaches lakes, wetlands/riparian areas, intermittent drainage channels, and streams. Army Corp. of Engineer 404 permits will be submitted for any drainages determined to be navigable waters.
- I. 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.

The dirt contractor will be provided with an approved copy of the surface use plan.

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

- A) Representative: Wayne P. Bankert (Consulting Engineer)  
Laramie Energy II, LLC

601 28 ¼ Road, Suite D  
Grand Junction, CO 81506  
(970) 683-5419 Office  
(970) 985-5383 Cell  
(970) 683-5594 Fax

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.

B) 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 Laramie Energy II, 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 Reg. & Env. Coordinator  
Laramie Energy II, LLC

Date: 1/06/2011