

Entek GRB LLC
Butter Lake Federal 32-10
2,482' FSL 1,738' FEL (NW/4 SE/4)
Sec. 32 T12N R88W
Routt County, Colorado
Federal Mineral Lease: COC59666

SURFACE USE PLAN OF OPERATIONS

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) documents. This NOS process included an onsite meeting between the BLM and New Frontier Energy, Inc. (New Frontier), at which time the specific concerns of both the BLM and New Frontier were discussed. The APD applicant, Entek GRB LLC (Entek), agrees to abide by all specific concerns of the BLM representatives voiced at the New Frontier onsite meeting which are addressed herein.

* Specific stipulations arising from the onsite meeting are shown as starred.

WELL LOCATION AND INTRODUCTION:

The wellsite was originally staked at 2,482' FSL 1,738' FEL (NW/4 SE/4) of Sec. 32 T12N R88W on September 17, 2009, by Choice Engineering Services (Choice), surveyor, on a site that was geologically and topographically acceptable. The location is in the Focus Ranch Federal Unit, identified by Serial Register No. COC63212X.

A Notice of Staking (NOS) was submitted to the BLM in Craig on October 10, 2009, for this location by New Frontier Energy, Inc. (New Frontier). An onsite meeting was held between the BLM and New Frontier. Requirements were discussed at the onsite meeting.

DIRECTIONS TO LOCATION: (From Baggs, Wyoming)

Beginning in the town of Baggs, Wyoming, travel easterly on State Highway 70 for ±16.4 miles to Moffat County Road 129 (CR 129). Turn right on Moffat CR 129 and travel southeasterly for ±1.9 miles to an existing access road. Turn right on existing access road and travel ±0.7 miles to a fork in the road. Veer left and continue traveling southeasterly then northeasterly for ±3.5 miles to the proposed staked access road for the Butter Lake Federal 32-10 location. Turn left on the proposed staked access road and travel ±327 (0.1 mi) to the proposed staked location.

1) EXISTING ROADS

- A) The well is an exploratory well.
- B) Existing roads within 1.00 mile consists of a gravel resource road, to within 0.1 miles, which will provide access to the proposed location.
- C) Plans for improvement and/or maintenance of existing roads are to maintain in as good or better conditions than at present.

2) PLANNED ACCESS ROADS

±327' (0.1 miles) – Total new construction, Sec. 32 – BLM, on-lease

- A) Running surface width to be approximately 14' – 16', total disturbed width to be no more than 50'. Plans for improvement and/or maintenance of existing roads are to maintain in as good or better conditions than at present. A regular maintenance plan will include, but not be limited to blading, ditching, and surfacing.
- B) Borrow ditches to be backsloped 3:1 or shallower. Weather permitting, the access road will be mowed and the borrow ditch material will be pulled over the top of the mowed area.
- C) Maximum grades will not exceed BLM standards.
- D) Two (2) 18" x 30' culverts will be installed prior to commencement of drilling operations, as shown on Sheet No. 6. Drainage to consist of wing ditches between the existing road and the wellsite to be installed prior to commencing drilling operations. The borrow ditches along the proposed access road will be re-seeded if the well is completed as a producer. The re-seeding of the borrow ditches will reduce the area utilized by this location.
- E) Surfacing material, if necessary, to consist of native material from borrow ditches, topsoil will be buried in road crown.
- F) No major road cuts are necessary.
- G) Fence cuts, gates and cattleguards will not be required.
- H) Road construction on public lands shall meet the minimum standards listed in BLM Manual Section 9113 and shall be constructed under the direction a qualified construction supervisor(s). The qualified construction supervisor shall be an engineer, company superintendent or other representative who is competent and knowledgeable in oilfield road and drillsite construction, and able to speak for the operator. The dirt contractor, or drilling/completion foremen whose primary expertise is not in construction, do not qualify as construction supervisors.
- * I) The access road will follow the existing two-track trail and come in from the east.

3) LOCATION OF EXISTING WELLS

Within a 2-mile radius:

Proposed	NONE
Drilling	NONE
Abandoned	SEE TABLE 1
Disposal/Injection	NONE
Shut-In	NONE
Producing	NONE

LOCATION OF EXISTING PRODUCING FACILITIES OPERATED BY ENTEK GRB LLC.

Within a 2-mile radius: NONE

The nearby well data has been taken from the Colorado Oil and Gas Conservation Commission (COGCC) website on March 5, 2010.

4) NEW PRODUCTION FACILITIES PROPOSED

- A) BLM will be contacted prior to construction of production facilities. A Sundry Notice (SN) will be filed if requested by BLM.
- B) Dimension of Proposed Facility of the pad is 250' x 250'. = 62,500 ft², for drilling operations. Total disturbance will be ±1.81 acres.

- C) Traveled portion of production site will be gravel surfaced upon completion of production facility installation and prior to production. Site preparation for production will be done with standard excavation equipment using native materials. Additional surface material will be obtained from commercial sources or an approved borrow area. Construction and maintenance will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment. If such equipment creates ruts in excess of four (4) inches deep, the soil will be deemed too wet.
- D) Production equipment will be painted light reflective colors to limit evaporation and waste of liquid hydrocarbons. All above ground permanent structure's paint color will be specified by the BLM. To reduce the view of production facilities from visibility corridors and private residences, facilities will not be placed in visually exposed locations (such as ridgelines and hilltops). The tallest structure will be no greater than 20' in height.
- E) Production facilities may vary according to actual reservoir discovered and will be engineered upon completion of well tests. Production facilities will be clustered and placed away from cut/fill slopes to allow the maximum re-contouring of cut/fill slopes.
- F) If well is a producer, all production facilities will be authorized by SN.
- G) No facilities will be constructed off location.
- H) Pursuant to Onshore Order No. 7 (OSO #7), this is a request for authorization for reserve pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by BLM and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method will be submitted along with any necessary water analyses, in compliance with OSO #7 as soon as possible, but no later than 45 days after the date of first production. Any method of disposal, which has not been approved prior to the end of the authorized 90-day period, will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by BLM.

5) LOCATION OF WATER SUPPLY

- A) Produced water will be transported by truck from the C F & I Corp. location within the Coal Bed Methane play located in the Slater Dome Field. The location is 893' FSL 2,304' FWL (SE/4 SW/4) in Sec. 13 T12N R89W, Moffat County, Colorado. An alternate source will be trucked water from the Little Snake River under existing permits or other available commercial sources under existing permits. If a closer water source is identified and deemed usable, Entek will notify the Authorized Officer (AO) with the necessary information.
- B) Anticipated water use is as follows:
 - Mud drilling water requirements are anticipated to be approximately 1,100 bbls (46,200 gallon [US, liquid] = 0.1417891 acre foot [US survey]).
 - Road watering will be done only if dry conditions dictate, and would utilize approximately 900 bbls (37,800 gallons or 0.11 acre feet).

6) SOURCE OF CONSTRUCTION MATERIALS

- A) Construction materials will consist of native materials from borrow ditches and location areas.
- B) Surfacing materials will be obtained from available permitted sources, if needed, and consist of pit gravel.

7) WASTE DISPOSAL

- A) Drill cuttings will be buried in reserve pit when dry.
- B) Drilling fluid will be evaporated and then buried in the reserve pit when dry.
- C) Completion fluids will be flowed to the reserve pit and allowed to evaporate.
- D) Reserve pit layout is illustrated on Sheet Nos. 2 and 3.
- E) Reserve pit will be lined with a synthetic liner 12 mil or thicker. The reserve pit liner shall be made of any manmade synthetic material of sufficient size and qualities to sustain a hydraulic conductivity no greater than 1×10^{-7} cm/sec after installation and which is sufficiently reinforced to withstand normal wear and tear associated with the installation and pit use thereof. The liner shall be chemically compatible with all substances that may be put into the pit.
- F) Reserve pit will be fenced on three sides during drilling operations, and on fourth side at time of rig release. Pit will remain fenced until backfilled.
- G) Flare pit for air drilling will (if used) be located minimum 100' from wellbore.
- H) Produced fluid will be contained in test tanks during completion and testing.
- I) Sewage disposal facilities will be in accordance with State and Local Regulations. Sewage may not be buried on location or put in a borehole. Colorado Department of Environmental Quality (CDEQ) Regulations prevent this unless a CDEQ Permit is obtained.
- J) Garbage and other waste - burnable waste will be contained in a portable trash cage which will be totally enclosed with small mesh wire. Cage and contents will be transported to and trash dumped at a CDEQ approved Sanitary Landfill upon completion of operations.
- K) Trash will be picked up if scattered and contained in trash cage as soon as practical after rig is moved off.
- L) Upon release of the drilling rig, rathole and mousehole will be filled. Debris and equipment not required for production will be removed.

8) ANCILLARY FACILITIES

No ancillary facilities will be necessary.

9) WELLSITE LAYOUT (See Sheet Nos. 2, 3 and 4)

- A) See attached drillsite plat and cut/fill diagram.
- B) Roads and well production equipment, such as tanks, treaters, separators, vents, electrical boxes, and equipment associated with pipeline operation, will be placed on location so as to permit maximum interim reclamation of disturbed areas. If equipment is found to interfere with the proper interim reclamation of disturbed areas, the equipment may be moved so proper re-contouring and revegetation can occur.
- * C) Approximately 6" of topsoil will be removed prior to location construction from the reserve pit area and/or any other disturbed areas. Topsoil will be stockpiled adjacent to the wellsite within the maximum disturbed area shown on the wellsite plat. The top soil pile will be on the uphill side.
- D) Topsoil and spoils pile will be clearly separated as shown on Sheet No. 2.
- E) Erosion control measures will be applied pursuant to Entek's General Permit to Discharge Stormwater under the Colorado Pollutant Discharge Elimination System and accompanying Stormwater Management Plan.

10) PIPELINES AND FLOWLINES

A separate ROW application for the pipeline route will be submitted separately.

11) SURFACE RESTORATION (General)

- A) Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment. If such equipment creates ruts in excess of four (4) inches deep, the soil will be deemed too wet.
- B) Earthwork for interim and final reclamation must be completed within six (6) months of well completion or plugging (weather permitting).
- C) In areas that will not be drill-seeded, the seed mix will be broadcast-seeded at twice the application rate shown and covered 0.25 to 0.5 inches deep with a harrow or drag bar or will be broadcast-seeded into imprints, such as fresh dozer cleat marks.
- D) No seeding will occur from May 15 to September 15. Fall seeding is preferred and will be conducted after September 15 and prior to ground freezing. Spring seeding will be conducted after the frost leaves the ground and no later than May 15.
- E) Annual or noxious weeds shall be controlled on all disturbed areas as directed by the Field Office Manager. An intensive weed monitoring and control program will be implemented beginning the first growing season after interim and final reclamation. Noxious weeds that have been identified during monitoring will be promptly treated and controlled. A Pesticide Use Proposal (PUP) will be submitted to the BLM for approval prior to the use of herbicides. All reclamation equipment will be cleaned prior to use to reduce the potential for introduction of noxious weeds or other undesirable non-native species. The operator will coordinate all weed and insect control measures with state and/or local management agencies.
- F) Reclaimed areas will be monitored annually. Actions will be taken to ensure that reclamation standards are met as quickly as reasonably practical.
- G) Reclamation monitoring will be documented in a reclamation report and submitted to the AO. The report will document compliance with all aspects of the reclamation objectives and standards, identify whether the reclamation objectives and standards are likely to be achieved in the near future without additional actions, and identify actions that have been or will be taken to meet the objectives and standards. The report will also include acreage figures for: Initial Disturbed Acres; Successful Interim Reclaimed Acres; Successful Final Reclaimed Acres. Reports will not be submitted for sites approved by the AO in writing as having met interim or final reclamation standards. Any time 30% or more of a reclaimed area is re-disturbed, monitoring will be reinitiated.
- H) The AO will be informed when reclamation has been completed, is successful, and the site is ready for final inspection.

INTERIM RESTORATION (Production)

- A) Rehabilitation of unneeded, previously disturbed areas will consist of backfilling and contouring the reserve pit area, back sloping and contouring all cut/fill slopes. These areas will be re-seeded.
- B) Wellpad size will be reduced to minimum size necessary to conduct safe operations. Cuts/fills will be reduced to 3:1 or shallower.
- C) Reserve pits will be closed and backfilled as soon as the pit contents are dry enough to do so, or no later than the end of the next full summer following rig release, whichever comes first, to allow sufficient time for the pit contents to dry. Reserve pits remaining

- open after this period will require written authorization of the AO. Immediately upon well completion, any hydrocarbons or trash in the reserve and flare pits will be removed. Pits will be allowed to dry, be pumped dry, or solidified in-situ prior to backfilling.
- D) Following completion activities, pit liners will be removed or removed to the solids level and disposed of at an approved landfill, or treated to prevent their reemergence to the surface and interference with long-term successful revegetation. If it was necessary to line the pit with a synthetic liner, the pit will not be trenched (cut) or filled (squeezed) while containing fluids. When dry, the pit will be backfilled with a minimum of five (5) feet of soil material. In relatively flat areas, the pit area will be slightly mounded to allow for settling and to promote surface drainage away from the backfilled pit.
- E) The portions of the cleared well site not needed for operational and safety purposes will be re-contoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Sufficient level area will remain for setup of a workover rig and to park equipment. In some cases, rig anchors may need to be pulled and reset after re-contouring to allow for maximum interim reclamation.
- F) Topsoil will be evenly re-spread and aggressively re-vegetated over the entire disturbed area not needed for all-weather operations including road cuts/fills and to within a few feet of the production facilities, unless an all-weather, surfaced, access route or small “teardrop” turnaround is needed on the wellpad.
- G) Initial seedbed preparation will consist of backfilling, leveling, and ripping all compacted areas. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding. Seeding will be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by BLM (shown below) to meet reclamation standards will be used. The seed mix will be used on all disturbed surfaces including pipelines and road cut/fill slopes.
- H) To help mitigate the contrast of re-contoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, debris, and rock over re-contoured cut and fill slopes.
- I) An anticipated seed mixture for this location is:
- 2#/acre PLS – Thickspike wheatgrass
 - 2#/acre PLS – Western wheatgrass
 - 2#/acre PLS – Indian ricegrass
 - 1#/acre PLS – Sandberg bluegrass
 - 1#/acre PLS – Annual ryegrass
 - 8#/acre PLS – TOTAL
- J) Reclamation will be considered successful if the following criteria are met:
- 70 percent of pre-disturbance cover
 - 90 percent dominate species*
 - Erosion features equal to or less than surrounding area
- *The vegetation will consist of species included in the seed mix and/or occurring in the surrounding natural vegetation.

FINAL RESTORATION (P & A – Removal of equipment)

- A) Flowlines on location will be removed before site reclamation and all flowlines between the wellsite and production facilities will remain in place and will be filled with water.
- B) If necessary to ensure timely revegetation, the pad will be fenced to BLM standards to exclude livestock grazing for the first two growing seasons or until seeded species become

- firmly established, whichever comes later. Fencing will meet standards found on page 18 of the Gold Book, 4th Edition, or will be fenced with operational electric fencing.
- C) Revegetation will be accomplished by planting mixed grasses as specified below. Revegetation is recommended for road area as well as around production site.
- D) An anticipated seed mixture for this location is:
- 2#/acre PLS – Thickspike wheatgrass
 - 2#/acre PLS – Western wheatgrass
 - 2#/acre PLS – Indian ricegrass
 - ½ #/acre PLS – Gardner saltbrush
 - ½ #/acre PLS – Scarlet globemallow
 - 1#/acre PLS – Sandberg bluegrass
 - 1#/acre PLS – Annual ryegrass
 - 9#/acre PLS – TOTAL
- E) Initial seedbed preparation will consist of backfilling, leveling, and ripping all compacted areas. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding. Seeding will be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by BLM (shown above) to meet reclamation standards will be used. The seed mix will be used on all disturbed surfaces including pipelines and road cut/fill slopes.
- F) Distribute topsoil, if any remains, evenly over the location, and seed according to the above seed mixture. If needed the access road and location shall be ripped or disked prior to seeding. Perennial vegetation must be established. Additional work shall be required in case of seeding failures, etc.
- G) All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be re-contoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Re-salvaged topsoil will be spread evenly over the entire disturbed site to ensure successful revegetation. To help mitigate the contrast of re-contoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, woody debris, and large rocks over re-contoured cut/fill slopes.

12) GENERAL INFORMATION

- A) Project area is located along the Little Snake Drainage Basin.
- B) Topographic and geologic features – moderate relief area, well drained, silt deposition, surrounded by rolling uplands with moderately eroded drainages.
- C) Soil characteristics – clay/loam.
- D) Flora consists of: Black sagebrush, Big sagebrush, Western wheatgrass, Bluegrass, Phlox, Pricklypear, Indian ricegrass.
- E) Fauna – assume: antelope, mule deer, elk, coyotes, rabbits, raptors, and rodents.
- F) Concurrent surface use - grazing and hunting.
- G) Mineral Lessor - Bureau of Land Management
Little Snake Field Office
1455 Emerson Street
Craig, CO 81625-1129 Phone: 970-826-5000

- H) Surface Owner
Drillsite/Access - Bureau of Land Management
Little Snake Field Office
1455 Emerson Street
Craig, CO 81625-1129 Phone: 970-826-5000
- I) Proximity of water, occupied dwellings or other features: un-named pond - ±640' (0.1 miles) to the south of the location.
- J) Archaeological, cultural and historical information will be contained in a report and will be submitted to BLM under separate cover when complete.
- K) If any fossils are discovered during construction, the operator shall cease construction immediately and notify the AO so as to determine the significance of the discovery.
- L) A Class III (100% pedestrian) cultural resource inventory shall be completed prior to disturbance by a qualified professional archaeologist in the following areas: Well location. A report of the inventory will be submitted and approved by the BLM with stipulations as appropriate in order to comply with EO 11593 and Section 106 of the National Historic Preservation Act of 1966. See Section "General Information – K" above.
- M) The operator 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. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the AO. The AO will inform the operator as to the work needed to determine the following:
- Whether the materials appear eligible for the National Register of Historic Places;
 - The mitigation measures the operator will likely have to undertake before the site can be used (assuming in site preservation is not necessary); and,
 - A timeframe for the AO to complete an expedited review to acquire the State Historic Preservation Officer's concurrence that the findings of the AO are correct and that mitigation is appropriate.
- N) Entek maintains a file, per 29 CFR 1910.1200(g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances which are used during the course of construction, drilling, completion, and production operations for this project. Hazardous materials (substances) which may be transported across these lands may include drilling mud and cementing products which are primarily inhalation hazards, fuels (flammable and/or combustible), materials that may be necessary for well completion/stimulation activities such as flammable or combustible substances and acids/gels (corrosives). The opportunity for Superfund Amendments and Reauthorization Act (SARA) listed Extremely Hazardous Substances (EHS) at the site is generally limited to proprietary treating chemicals. All hazardous substances, EHS, and commercial preparations will be handled in an appropriate manner to minimize the potential for leaks or spills to the environment.

Entek GRB LLC
Butter Lake Federal 32-10
2,482' FSL 1,738' FEL (NW/4 SE/4)
Sec. 32 T12N R88W
Routt County, Colorado
Surface: Fee
Federal Mineral Lease: COC59666

APPLICATION FOR PERMIT TO DRILL
OPERATOR CERTIFICATION

LESSEE'S OR OPERATOR'S REPRESENTATIVE:

Operator

Corporate / Field Office

Dave Christian / Michael Verm
Entek GRB LLC
5120 Woodway Drive, Suite 5004
Houston, TX 77056
Phone: 713-490-1030

Permit Agent

Banko Petroleum Management, Inc.
385 Inverness Parkway, Suite 420
Englewood, Colorado 80112-5849
Phone: 303-820-4480
Fax: 303-820-4124

+ David Banko – Consulting Petro Engineer
david@banko1.com
Keith Dana – Range Mgmt. Consultant
Cell: 307-389-8227
krlcdana@fascination.com

+ For any questions or comments regarding this permit.

OPERATOR CERTIFICATION:

I hereby certify that Entek GRB LLC and its contractors and sub-contractors are responsible for the operations conducted under this application subject to the terms and conditions of the mineral lease. Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Entek GRB LLC under their nationwide bond, BLM Bond No. B005280.

I hereby certify that I, or someone under my direct supervision, have inspected the drillsite and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

March 26, 2010



David F. Banko
Permit Agent for Entek GRB LLC.

TABLE 1
Butter Lake Federal 21-10
 (NW/4SE/4) Sec. 32 T12N R88W
 Routt County, Colorado
 Wells in a 2-Mile Radius

WELL DESCRIPTION	LOCATION	WELL INFORMATION			
05-107-06229, FOCUS RANCH UNIT FEDERAL NEW FRONTIER ENERGY INC	SE NW 3 11N -88W (6)	Sidetrack	TD	Formation	Status
			8800		DA
05-107-06200, FEDERAL 6-11-88 1 PHILLIPS PETROLEUM CO	NW NW 6 11N -88W (6)	Sidetrack	TD	Formation	Status
					AL

Map Unit Description

Routt Area, Colorado, Parts of Rio Blanco and Routt Counties

185 Impass-Gourley complex, 3 to 25 percent slopes

Setting

Elevation: 6600 to 8900 feet
Mean annual precipitation: 18 to 26 inches
Mean annual air temperature: 37 to 41 degrees F
Frost-free period: 40 to 70 days

Composition

Impass and similar soils: 75 percent
Gourley and similar soils: 15 percent

Description of Impass

Setting

Landform: Hills
Down-slope shape: Linear
Across-slope shape: Concave, convex
Parent material: Colluvium derived from sandstone and shale and/or slope alluvium derived from sandstone and shale

Properties and Qualities

Slope: 3 to 25 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 15 percent
Gypsum maximum: 2 percent
Available water capacity: High (about 9.5 inches)

Interpretive Groups

Land capability classification (irrigated): 6c
Land capability (non irrigated): 6c
Ecological site: Claypan (R048AY296CO)

Typical Profile

0 to 4 inches: clay
4 to 12 inches: clay
12 to 26 inches: clay
26 to 60 inches: clay

Description of Gourley

Setting

Landform: Hills
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Colluvium derived from sandstone and shale and/or slope alluvium derived from sandstone and shale

Properties and Qualities

Slope: 3 to 25 percent
Surface area covered with stones and boulders: 10.0 percent
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low or moderately high (0.06 to 0.20 in/hr)
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate maximum: 15 percent
Gypsum maximum: 2 percent
Available water capacity: Moderate (about 8.4 inches)

Interpretive Groups

Land capability classification (irrigated): 6c
Land capability (non irrigated): 6c
Ecological site: Deep Clay Loam (R048AY247CO)

Typical Profile

0 to 11 inches: clay

Map Unit Description

Routt Area, Colorado, Parts of Rio Blanco and Routt Counties

11 to 26 inches: clay
26 to 52 inches: clay
52 to 60 inches: flaggy clay

Rangeland Productivity and Plant Composition

Routt Area, Colorado, Parts of Rio Blanco and Routt Counties

Map symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/Ac	Lb/Ac	Lb/Ac	Pct	
185: Impass	Claypan	---	---	---	---	
Gourtey	Deep Clay Loam	---	---	---	---	

This report shows only the major soils in each map unit. Others may exist.