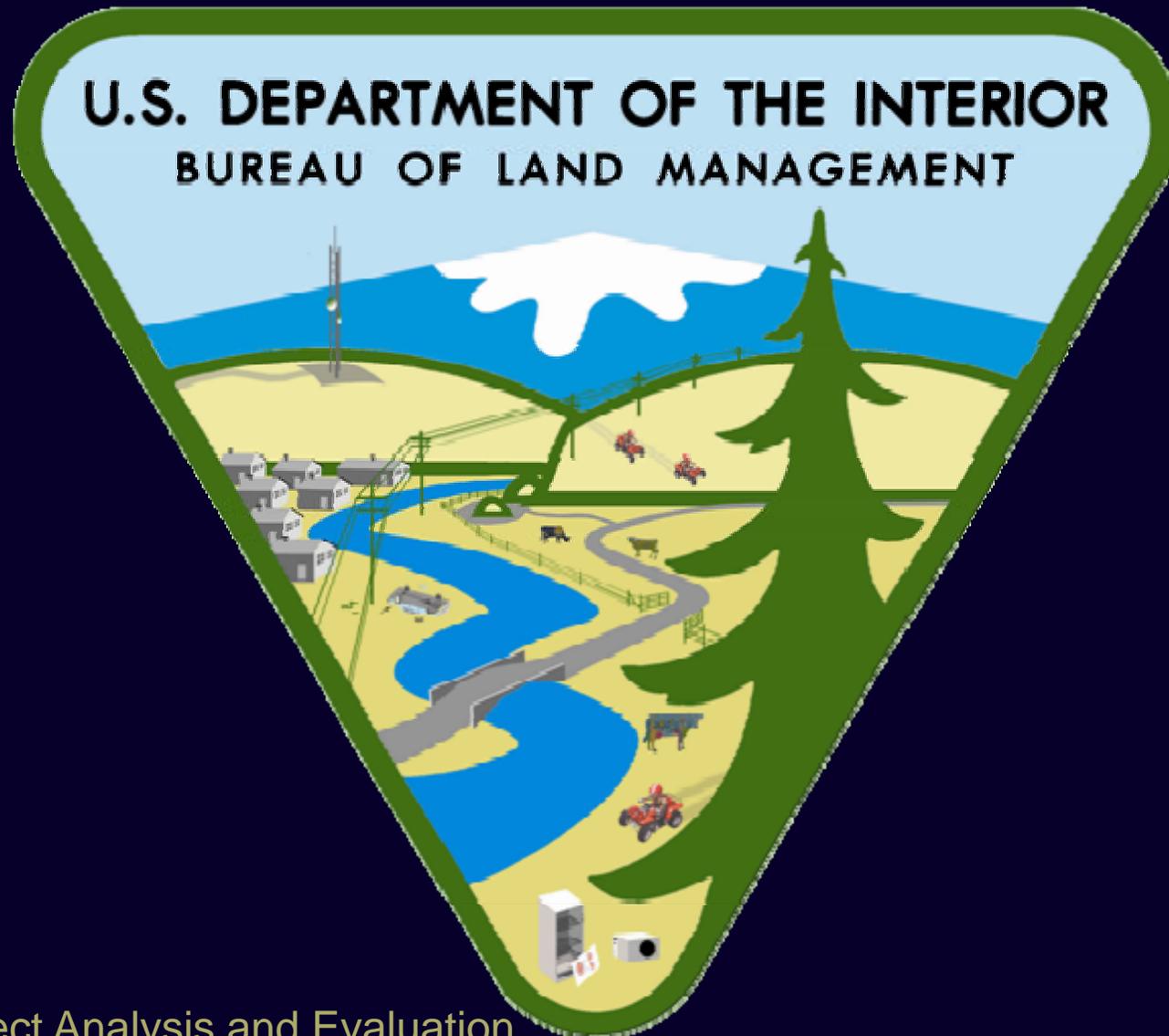


Project Analysis and Evaluation



Objective

Analyze a project proposal using the visual contrast rating system to determine the elements of a project that are inconsistent with VRM objectives and recommend measures to improve the visual quality of that project



A systematic process we use to identify, describe and analyze potential visual impacts of proposed projects and activities



Visual Contrast Rating

- Systematic process mandated by Bureau policy
- Helps identify where and how the greatest visual contrast occur in a project and how these can be mitigated
- Assists Bureau personnel not formally trained in the design arts to apply basic principles of design to resolve visual impacts

Basic Philosophy

The degree to which a development adversely affects the visual quality of a landscape is directly related to the amount of visual contrast between it and the existing landscape character



Visual Contrast Rating

The amount of contrast is measured by separating the landscape into major features:

(land/water, vegetation, structures)

then predicting the magnitude of contrast in each of the landscape character elements:

FORM – LINE – COLOR - TEXTURE

Analytical Format

Major Features				
Landscape Character Elements		Land/Water	Vegetation	Structures
	Form			
	Line			
	Color			
	Texture			

Handout – Contrast

Analytical Format

- Quickly reveals elements & features that cause the greatest visual impact
- A guide to methods to reduce the visual impact of a proposed project or activity
- Provides basis for design that reflects and responds to the setting

Visual Contrast Rating

- Not a pass – fail exercise. We want an “A” $\rightarrow \rightarrow$
- Every attempt is made to reduce visual impacts even if the proposed project meets VRM Management Objectives for the area



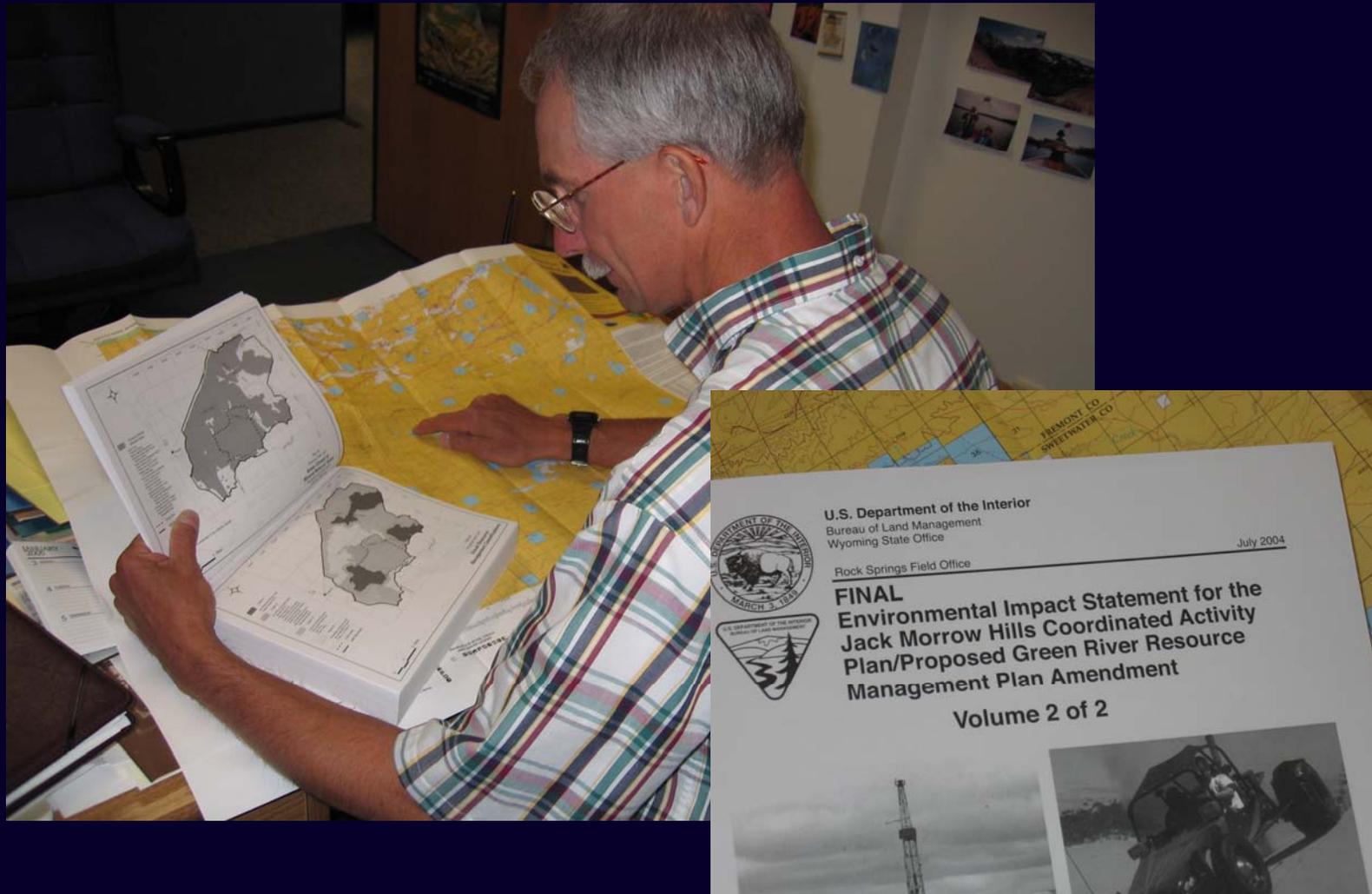
Steps - Contrast Rating Process

1. Obtain a complete project description
2. Identify VRM Objectives from RMP
3. Assess project visibility - Select Key Observation point(s)
4. Prepare visual representation/simulation
5. Complete Contrast Rating

Step 1 – Obtain Detailed Project Description

- Emphasize early contact with project proponent
- Coach proponent on project design
- Proposal must be comprehensive
 - Materials?
 - Scale?
 - Colors/Reflectivity?
 - Lights?
 - Temp structures/seasonal use?

Step 2 - Identify VRM Class From RMP



Step 3 – Assess Project Visibility

- Viewshed Analysis
- Section/Line of sight analysis
- Site and area reconnaissance

Key Observation Point – A critical viewpoint or place from which we analyze the visual impact of a Proposed Project



Typical Project KOPs

- Scenic Overlooks, Rivers & Roads
- Important Vantage Points
- Places from which a proposed project is seen by large numbers of viewers (representative) or critical viewers
- Views From Communities or Subdivisions
- Point where view of proposed project is most revealing (careful to avoid bias in analysis)

KOP Considerations

- RMP direction, IDT input
- Distance
- Angle of observation
- # of Viewers
- Length of time project is in view
- Relative project size
- Season of use
- Light conditions & other factors as appropriate

Rock Quarry – low angle



Rock Quarry – high angle



Rock Quarry - foreground



Rock Quarry - Background



Seasonal considerations



Step 4 – Prepare Visual Simulations

- Helps to understand the project
- Helps to understand the visual impact
- Great way to illustrate impacts in EA
- Seeing an image of the project is much more powerful than trying to imagine it
- Helps eliminate bias
- Allows all team members to see the project the same

Tools for Visual Simulations

- Take site photos and sketch in project
- Take photos of similar facility/project
- Line of sight/section view diagram
- Engineering drawings
- Wire frame or height/mass representations
- Photoshop or other photo-realistic tools

****First approach or tool may lead you to use another**

Penstock/pump station site



Quick paintshop line drawing



Built project



Color option/mitigation



Step 5 – Complete Contrast Rating

- See Bureau Manual Handbook H-8431-1 (Note the Illustrations and appendices)
 - Tips/techniques:
 - Use IDT and mentor in field
 - If possible, take a recon trip first to familiarize yourself with directions, setting and light conditions at different times of day
 - GPS and photograph the locations you conduct the analysis from
 - Cover elements on worksheet – can use different format or record observations on tape recorder

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date _____
 District _____
 Resource Area _____
 Activity (program) _____

SECTION A. PROJECT INFORMATION

1. Project Name	4. Location Township _____ Range _____ Section _____	5. Location Sketch
2. Key Observation Point		
3. VRM Class		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM			
LINE			
COLOR			
TEXTURE			

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM			
LINE			
COLOR			
TEXTURE			

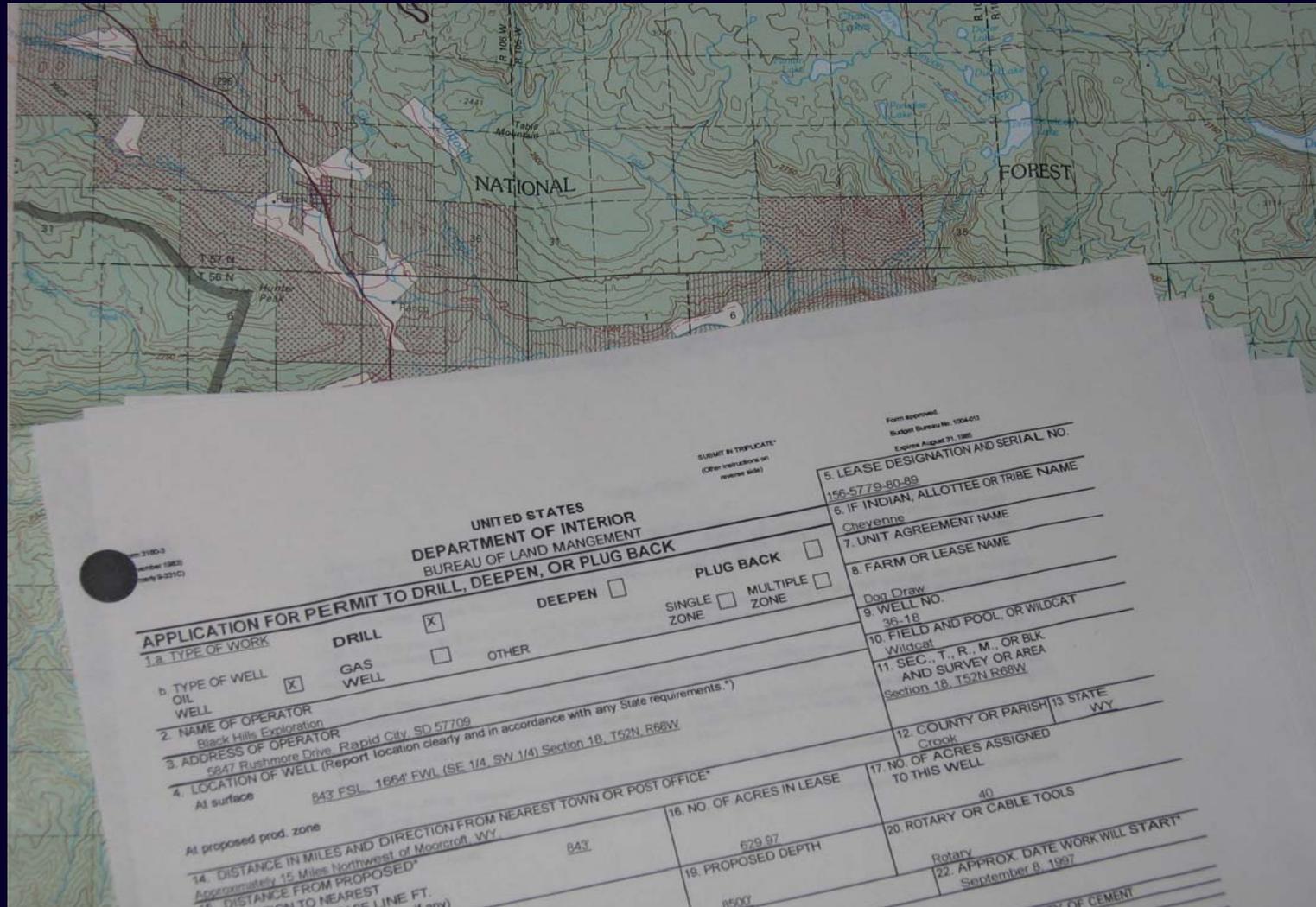
SECTION D. CONTRAST RATING SHORT TERM LONG TERM

1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
	LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)				
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	
													3. Additional mitigating measures recommended? <input type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)
													Evaluators' Names _____ Dates _____
ELEMENTS	Form												
	Line												
	Color												
	Texture												

Let's Walk Through an Example

- What is the first step in the process?

Obtain Complete Project Description



The image shows a topographic map of a forested area, likely a national forest, with a permit application form overlaid. The map features contour lines, a grid, and labels for 'NATIONAL FOREST' and 'Hunter Peak'. The form is titled 'APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK' and is issued by the 'UNITED STATES DEPARTMENT OF INTERIOR BUREAU OF LAND MANAGEMENT'. The form is filled out with the following information:

1. TYPE OF WORK
a. TYPE OF WORK: DRILL, DEEPEN, PLUG BACK
b. TYPE OF WELL: OIL WELL, GAS WELL, OTHER

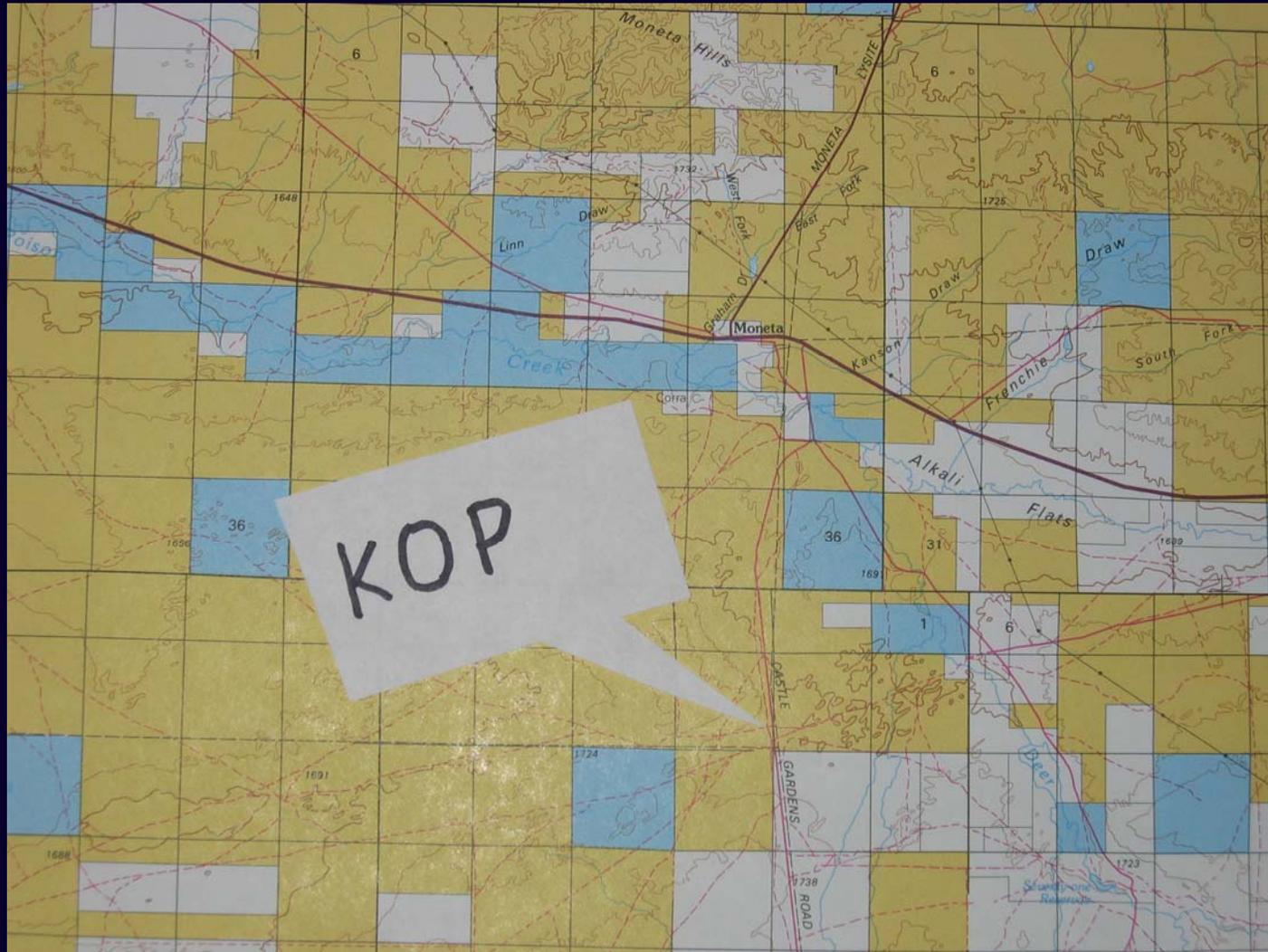
2. NAME OF OPERATOR: Black Hills Exploration
3. ADDRESS OF OPERATOR: 5847 Rushmore Drive, Rapid City, SD 57709
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.): At surface, 843 FSL, 1664 FWL (SE 1/4, SW 1/4) Section 18, T52N R68W

5. LEASE DESIGNATION AND SERIAL NO.: 156-5779-80-89
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Cheyenne
7. UNIT AGREEMENT NAME: Cheyenne
8. FARM OR LEASE NAME: Dog Draw
9. WELL NO.: 36-18
10. FIELD AND POOL, OR WILDCAT: Wildcat
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 18, T52N R68W
12. COUNTY OR PARISH: Crook
13. STATE WY.
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: At proposed prod. zone, 843, Approximately 15 Miles Northwest of Moorcroft, WY.
15. DISTANCE FROM PROPOSED* TO NEAREST SECTION TO NEAREST BASE LINE FT. (if any): 8500
16. NO. OF ACRES IN LEASE: 40
17. NO. OF ACRES ASSIGNED TO THIS WELL: 40
18. PROPOSED DEPTH: 629.97
19. ROTARY OR CABLE TOOLS: Rotary
20. APPROX. DATE WORK WILL START*: September 8, 1997

Review established VRM objectives



Select KOP(s)



Prepare Visual Simulation

- Photo of proposed project site



Simulation of Proposed Project



Complete Contrast Rating

- Section A of Form 8400-4

Form 8400-4 (September 1985)		UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT		Date: Feb 24, 2004
VISUAL CONTRAST RATING WORKSHEET				District: N/A
				Resource Area: Lander
				Activity: Oil & Gas
SECTION A. PROJECT INFORMATION				
1. Project Name: Well No 136	4. Location		5. Location Sketch	
2. Key Observation Point 29/91 Sec 21: SESE	Township <u>29N</u>			
3. VRM Class VRM Class IV	Range <u>91W</u>			
	Section <u>21</u>			

Section B of Contrast Rating Form

Characteristic Landscape Description

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION			
	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Gently rolling terrain, low hills	Low, continuous sagebrush cover, smooth, regular pattern	None noted in view toward the project from the KOP
LINE	Mostly horizontal undulating lines. A horizontal landscape	Weak horizontal lines created by changes in vegetative patterns	None noted in view toward the project from the KOP
COLOR	Light brown to buff where visible	Gray-green of sagebrush is dominant, mostly continuous	None noted in view toward the project from the KOP
TEX-TURE	Smooth, continuous	Medium to slightly coarse in immediate foreground to smooth/fine in middleground	None noted in view toward the project from the KOP

Section C of Contrast Rating Form

Proposed Activity Description

SECTION C. PROPOSED ACTIVITY DESCRIPTION			
	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Flat, leveled pad(s), curvilinear road(s), narrow, linear form	Veg removed from pad, road(s), reclaimed veg low, sparce	Cylindrical tanks, rectangular separator unit. A dominant visual element
LINE	Where seen, pad appears as a distinct horizontal line, same with roads	Sharper line(s) where veg removed	Structures have vertical alignment and are visible
COLOR	Light brown to buff-colored pad(s) & road surfaces.	Tan to light buff most of year, light green in spring.	Carlsbad Canyon contrasts with darker gray of sagebrush
TEX-TURE	Smooth texture on pad(s) & road(s)	Smooth where re-established (grasses) Sage may re-establish in 20 years	Smooth texture of facilities a dominant feature of project

Section D of Contrast Rating form

SECTION D. CONTRAST RATING														SHORT TERM	X	LONG TERM
ELEMENTS	1.Degree of Contrast	FEATURES												2. Does Project Design meet visual resource management objectives? Yes <u>X</u> No ____ (explain on reverse)		
		Land/Water Body				Vegetation				Structures						
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	3. Additional mitigating measures recommended. Yes <u>X</u> No ____ (explain on reverse)			
	Form			X				X			X			Evaluator's Names Date:		
	Line		X				X			X				Cimarron Chacon 7/16/04		
Color			X				X		X				Allysia Angus			
Texture			X				X		X							

Consider mitigation measures as you id contrast:

- What are strong elements in the project setting?
- What are strong elements in the project?
- What can you borrow from the setting?
- What can you change in the setting?
- What can you change in the project:
 - make it fit in setting (color, form, texture, scale...)
 - move it

Section D – Reverse Side of form

SECTION D. (Continued)

Comments from Item 2.

The line created by the clearing for the road and drill pad creates a contrast that will attract attention. The installation of storage tanks and the separator unit will introduce vertical-aligned forms that contrast with the characteristic landscape. The structures will have a smooth texture as opposed to the coarse texture of surrounding sagebrush. The facilities introduce vertical lines which will contrast with the predominately horizontal landscape. The color of the tanks as proposed will contrast with the darker color of the dominant sagebrush.

Contrast Rating form – Mitigating Measures

Additional Mitigating Measures (See item 3)

1. As per agreement with company representatives, relocate drill pad 250 feet northwest behind/between low stabilized sand dunes.
2. Relocate access road behind/between stabilized dunes
3. Use low profile tanks a maximum of 12 feet high rather than the standard 18 foot tanks
4. Paint facilities a color compatible with sagebrush, the dominant veg species in the area

Simulation of Project with Mitigation



Review of VRM Class Objectives

Class I

- Preserve the existing character of the landscape. Manage for natural ecological changes
- Change Allowed: Very Low
- Activities must not attract attention

Review of VRM Class Objectives

Class II

- Retain the existing character of the landscape
- Change allowed: Low
- Activities may be visible but should not attract attention of the casual observer

Review of VRM Class Objectives

- Class III
- Partially retain the existing character of the landscape
- Change allowed: Moderate
- Activities may attract attention but should not dominate the view of the casual observer

Review of VRM Class Objectives

Class IV

- Provide for management activities which require major modification of the existing character of the landscape
- Change allowed: High
- Activities may attract attention, may dominate the view, but are still mitigated