



January 19, 2017

Mike Dinkel, REM, CSEM  
Kerr-McGee Oil & Gas Onshore LP  
1099 18th Street, Suite 1800  
Denver, Colorado 80202

**RE: Colorado Oil & Gas Conservation Commission (COGCC)  
Form 4 (Interim Reclamation Completion Notice)  
BADDING 20-26SX (419768)  
Kerr-McGee Oil & Gas Onshore LP (Operator: 47120)**

Dear Mr. Dinkel:

Apex Companies, LLC (Apex) is pleased to present this letter to Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) documenting the results of a vegetation assessment that demonstrates successful completion of interim reclamation efforts per COGCC Rule 1003 on the above referenced location in Weld County, Colorado. Attached is a topographic location map, which identifies the referenced location.

Based on communications with Kerr-McGee personnel and subsequent site visits, Apex inspectors confirmed that the unused portions of the reduced production footprint have been stabilized and seeded with Dryland Pasture/ Sandy Soil Mix. This seed mixture was applied at 20 pounds pure live seed (pls) per acre, and is composed of Tetraploid Perennial Ryegrass (9.84%), Smooth Brome, Lincoln (9.33%), Sandberg Bluegrass (7.5%), Intermediate Wheatgrass (7.5%), Sand Dropseed (7.5%), Indian Ricegrass (7.5%), Green Needlegrass (7.5%), Sideoats Grama (7.5%), Intermediate Wheatgrass, Oahe (7.38%), Dahurian Wildrye (7.22%), Orchardgrass, Paiute (7.145%), Pubescent Wheatgrass Luna (6.675%), Switchgrass (5.00%) and Inert-Other (2.41%).

On June 16, 2016, modified step-point vegetation surveys were conducted on the reclaimed portion of the well pad, and on adjacent reference areas. Foliar and basal cover, along with non-vegetated, and noxious weed occurrences were documented; 100 survey points were recorded within the reclaimed disturbance and 100 survey points were recorded within the reference area. Noxious weeds listed by the Colorado Department of Agriculture were excluded from the vegetative coverage calculation.

Survey results indicate the reclaimed area has a foliar vegetative cover that is 118.67% of the reference area. Vegetation survey results are provided in the attached survey summary tables and data sheets. Based on the results of the survey, interim reclamation as defined by COGCC Rule 1003.e (2) has been achieved. Photographs required by COGCC Rule 1003.e (3) are also attached along with a diagram illustrating vegetation survey efforts.

Apex appreciates the opportunity to provide environmental consulting services to Kerr-McGee with this project. Should you have any questions or require additional information, please don't hesitate to contact me.

Sincerely,  
**Apex Companies, LLC**

A handwritten signature in black ink, appearing to read 'Chris Hines', written over a horizontal line.

Chris Hines  
Project Manager  
970-261-1127  
[chris.hines@apexcos.com](mailto:chris.hines@apexcos.com)

Attachments:

1. Vegetation Survey (Summary of Field Data)
2. Vegetation Survey Site Map
3. Topographic Location Map
4. Vegetation Survey (Photos)
5. Vegetation Survey (Field Data Tables)



## Vegetation Survey (Summary of Field Data)

<b>Client</b>	Kerr-McGee Oil & Gas Onshore LP
<b>COGCC Location Name (ID)</b>	BADDING 20-26SX (419768)
<b>Assessment Date</b>	6/16/2016
<b>Inspector Name - Title</b>	Jennie Schoedel - Environmental Scientist
<b>Data Processor Name - Title</b>	Jennie Schoedel - Environmental Scientist

Based on the survey methodology, the Foliar Cover % in each survey area is calculated by summing the total number of foliar occurrences, minus noxious weeds, and dividing by the total occurrences in the transect. For this location:

<b>Reclaim Area (Foliar Cover)</b>	<b>Reference Area (Foliar Cover)</b>
$(35 + 1 + 1) / 152 =$ <b>24.34%</b>	$(21 + 4 + 7) / 156 =$ <b>20.51%</b>

The Percent of Reference (%) used to evaluate each reclaim area for compliance with COGCC Rule 1003.e(2) for determining interim reclamation success, is calculated by dividing the Foliar Cover % in the Reclaim Area by the Foliar Cover % in the Reference Area. For this location:

<b>Percent of Reference (Reclaim % / Reference %)</b>
$24.34\% / 20.51\% =$ <b>118.67%</b>

### Reclaim Area Vegetation

Foliar Cover	24.34%
Basal Cover	9.21%
Non Vegetated	50.66%
Noxious Weeds	15.79%
<b>QA Total</b> <i>(must equal 100)</i>	<b>100.00%</b>
Grass (Foliar)	35
Forb (Foliar)	1
Shrubs (Foliar)	1
Noxious Weed (Foliar)	17
Grass (Basal)	14
Forb (Basal)	0
Shrubs (Basal)	0
Noxious Weed (Basal)	7
Bare Ground	46
Litter	31
Rock	0
<b>Total Occurrences</b>	<b>152</b>

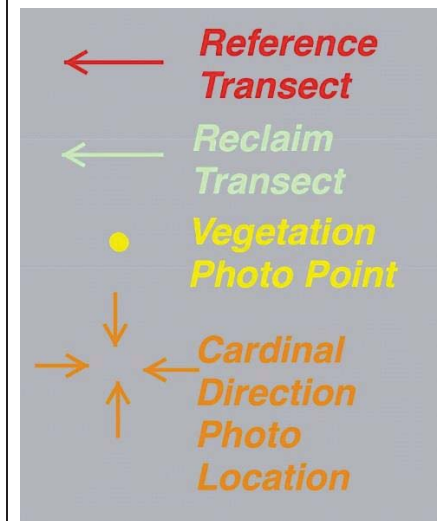
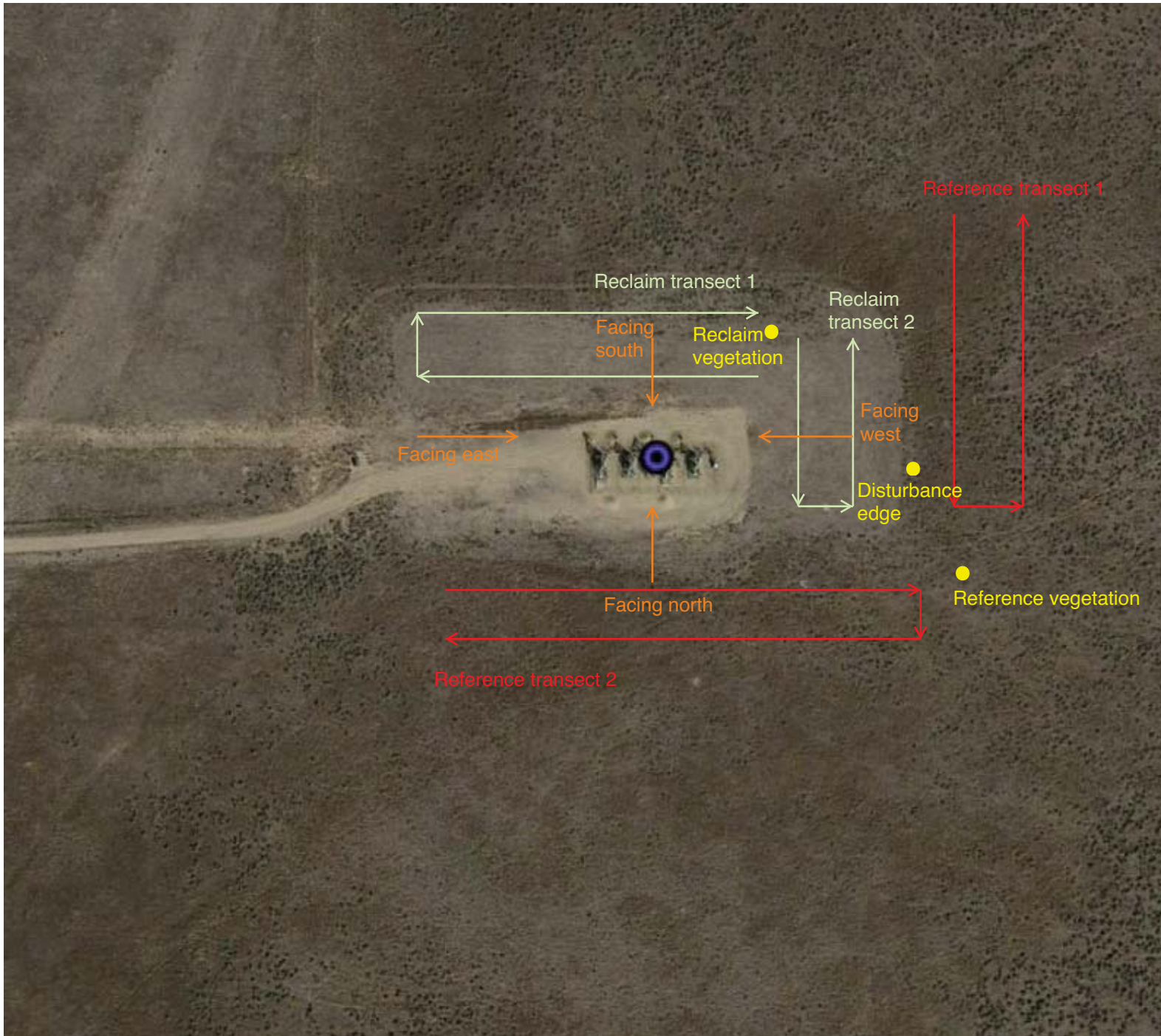
### Reference Area Vegetation

Foliar Cover	20.51%
Basal Cover	4.49%
Non Vegetated	52.56%
Noxious Weeds	22.44%
<b>QA Total</b> <i>(must equal 100)</i>	<b>100.00%</b>
Grass (Foliar)	21
Forb (Foliar)	4
Shrubs (Foliar)	7
Noxious Weed (Foliar)	25
Grass (Basal)	5
Forb (Basal)	1
Shrubs (Basal)	1
Noxious Weed (Basal)	10
Bare Ground	6
Litter	76
Rock	0
<b>Total Occurrences</b>	<b>156</b>

## Vegetation Survey Site Map

BADDING 20-26SX

(419768)



Legal Description: NWSE, Sec 26, T2N-  
R66W

County: Weld

Land Use: Rangeland

Reference Area Cover: 20.15%

Reclamation Cover: 24.34%

Cover Ratio

(Reclaim/Reference): 118.67%

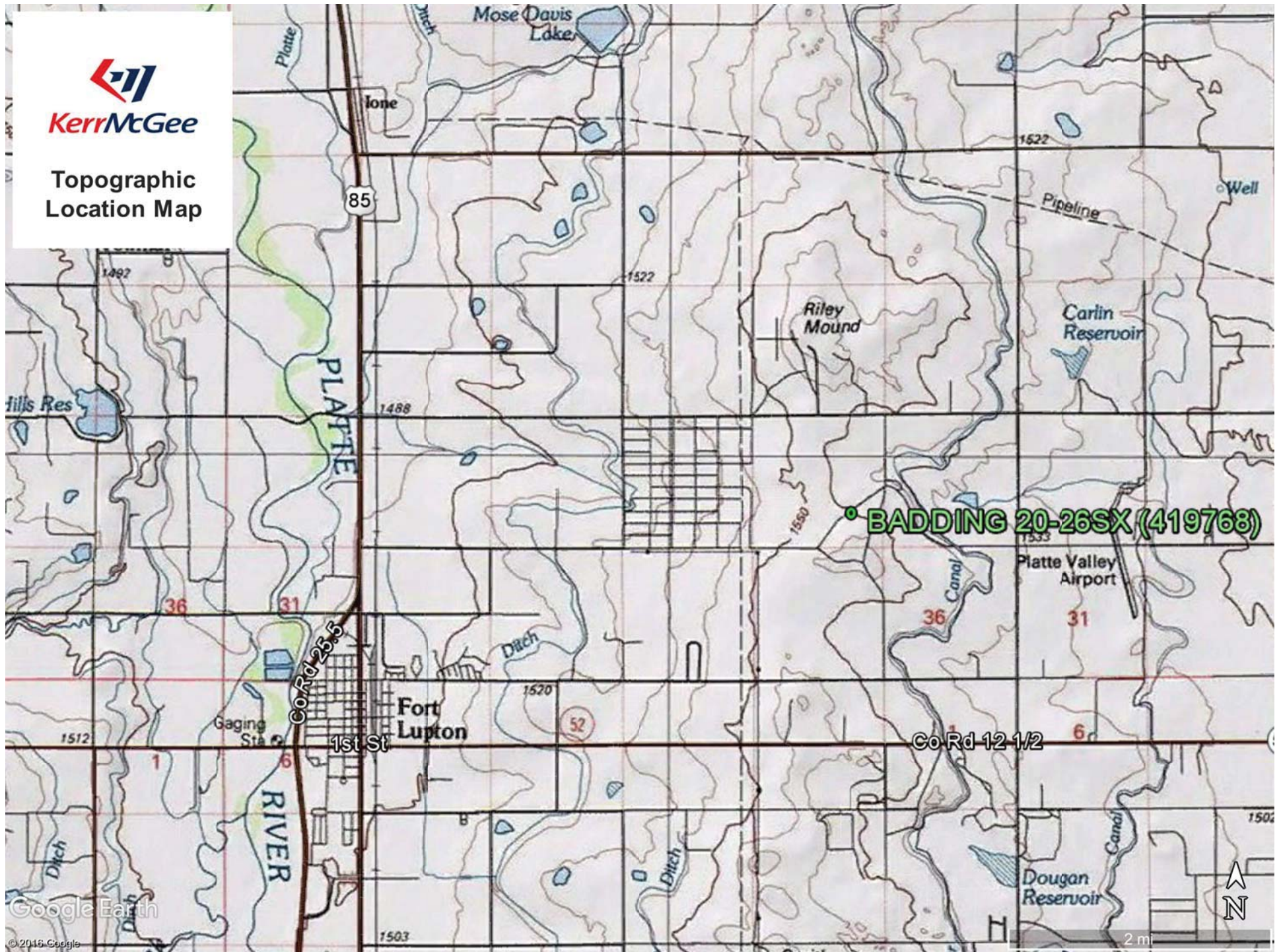
Inspector: J. Schoedel

Assessment Date: 06/16/2016





# Topographic Location Map





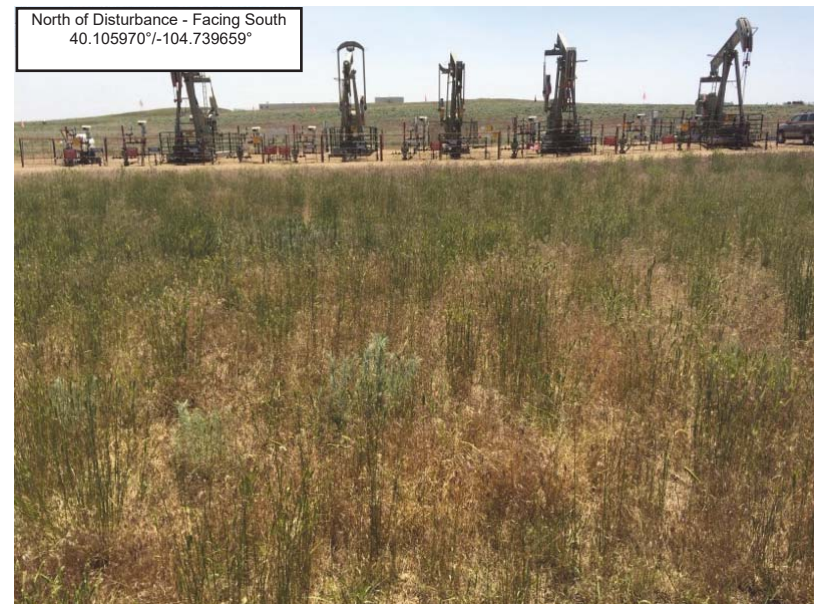
Edge of Disturbance - Facing North  
40.105562°/-104.738645°





**Kerr-McGee Oil & Gas Onshore LP**  
**Form 4 (Interim Reclamation Completion Notice)**  
**BADDING 20-26SX (419768)**

Vegetation Assessment  
Completed (06/16/2016)





Reclaim Area Vegetation Photo Point  
40.105946°/-104.739229°





Reclaim Transect 1 - Facing West  
40.105845°/-104.739187°



Reclaim Transect 2 - Facing South  
40.106004°/-104.739043°





Reference Area Vegetation Photo Point  
40.105307°/-104.738498°





Reference Transect 1 - Facing South  
40.106388°/-104.738462°



Reference Transect 2 - Facing East  
40.105245°/-104.740321°





**VEGETATION MONITORING FORM: Kerr-McGee Oil & Gas Onshore LP**

COGCC Location Name (ID): BADDING 20-26SX (419768)

CO #: COP0223

Date of Assessment: 06/16/2016

Transect ID: Reclaim Transect 1

Length of Transect (ft.): 500

Transect Type:



Reclamation



Reference

Inspector(s) (Name and Title): Jennie Schoedel - Environmental Scientist

Weather at Time of Inspection: Clear, low 90s

Method: Step Point

Point	Foliar		Basal		Non-Vegetative
	Type	Species	Type	Species	
1	-		-		Bare Ground
2	Noxious Weed	Bromus tectorum	-		Litter
3	-		-		Litter
4	Noxious Weed	Bromus tectorum	-		Litter
5	Noxious Weed	Bromus tectorum	B-Noxious Weed	Bromus tectorum	-
6	-		-		Bare Ground
7	-		-		Bare Ground
8	-		-		Bare Ground
9	-		-		Bare Ground
10	Grass	Other spp. 1	-		Litter
11	-		-		Bare Ground
12	Grass	Other spp. 1	B-Grass	Other spp. 1	-
13	-		-		Litter
14	-		-		Bare Ground
15	Grass	Other spp. 1	B-Grass	Other spp. 1	-
16	Grass	Other spp. 1	B-Grass	Other spp. 1	-
17	-		-		Bare Ground
18	Grass	Other spp. 1	-		Bare Ground
19	-		-		Litter
20	-		-		Litter
21	Grass	Other spp. 1	-		Litter
22	Noxious Weed	Bromus tectorum	-		Bare Ground
23	Noxious Weed	Bromus tectorum	-		Litter
24	-		-		Bare Ground
25	Grass	Other spp. 1	B-Grass	Other spp. 1	-
26	Noxious Weed	Bromus tectorum	-		Bare Ground
27	-		-		Bare Ground
28	Grass	Other spp. 1	-		Bare Ground
29	-		-		Litter



Point	Foliar		Basal		Non-Vegetative
	Type	Species	Type	Species	
30	Grass	Other spp. 1	B-Grass	Other spp. 1	-
31	Grass	Other spp. 1	-		Litter
32	Noxious Weed	Bromus tectorum	-		Bare Ground
33	-		-		Bare Ground
34	Grass	Other spp. 1	-		Litter
35	-		-		Bare Ground
36	-		-		Bare Ground
37	Grass	Other spp. 1	B-Grass	Other spp. 1	-
38	-		-		Litter
39	-		-		Bare Ground
40	Grass	Other spp. 1	-		Bare Ground
41	-		-		Bare Ground
42	-		-		Bare Ground
43	Grass	Pascopyrum smithii (Agropyron)	-		Bare Ground
44	-		-		Litter
45	Grass	Other spp. 1	-		Litter
46	Grass	Other spp. 1	B-Grass	Other spp. 1	-
47	Grass	Other spp. 1	-		Litter
48	-		-		Bare Ground
49	-		-		Bare Ground
50	Grass	Pascopyrum smithii (Agropyron)	B-Noxious Weed	Bromus tectorum	-

#### Photo Requirements

Representative photo looking down the length of each transect; including reference area.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Photo facing each cardinal direction (N, E, S, W) from edge of disturbance looking to well heads.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Representative photo down edge of disturbance.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Photo that documents the total cover of live perennial vegetation for the reference area.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Photo that documents the total cover of live perennial vegetation of the disturbed area.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO

#### General Notes: Grass other species 1 crested wheat grass

List any newly identified species not present in drop-down lists.

#### INSPECTION CERTIFICATION

I certify that this document and all attachments were prepared by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of termination.

Inspector (Name)

Jennie Schoedel - Environmental Scientist



Date: 06/16/2016



**VEGETATION MONITORING FORM: Kerr-McGee Oil & Gas Onshore LP**

COGCC Location Name (ID): BADDING 20-26SX (419768)

CO #: COP0223

Date of Assessment: 06/16/2016

Transect ID: Reclaim Transect 2

Length of Transect (ft.): 400

Transect Type:



Reclamation



Reference

Inspector(s) (Name and Title): Jennie Schoedel - Environmental Scientist

Weather at Time of Inspection: Clear, low 90s

Method: Step Point

Point	Foliar		Basal		Non-Vegetative
	Type	Species	Type	Species	
1	-		-		Litter
2	Grass	Pascopyrum smithii (Agropyron)	-		Litter
3	-		-		Bare Ground
4	Grass	Other spp. 1	B-Noxious Weed	Bromus tectorum	-
5	-		-		Bare Ground
6	Noxious Weed	Bromus tectorum	-		Bare Ground
7	-		-		Rock
8	Grass	Other spp. 1	B-Grass	Other spp. 1	-
9	Noxious Weed	Bromus tectorum	-		Bare Ground
10	-		-		Bare Ground
11	Noxious Weed	Bromus tectorum	-		Bare Ground
12	Noxious Weed	Bromus tectorum	-		Litter
13	Noxious Weed	Bromus tectorum	B-Noxious Weed	Bromus tectorum	-
14	Grass	Other spp. 1	B-Grass	Other spp. 1	-
15	Forb	Tragopogon porrifoliu	-		Bare Ground
16	-		-		Bare Ground
17	Grass	Other spp. 1	-		Litter
18	Grass	Pascopyrum smithii (Agropyron)	-		Litter
19	Grass	Pascopyrum smithii (Agropyron)	-		Litter
20	-		-		Litter
21	Grass	Pascopyrum smithii (Agropyron)	B-Noxious Weed	Bromus tectorum	-
22	-		-		Bare Ground
23	Noxious Weed	Bromus tectorum	B-Noxious Weed	Bromus tectorum	-
24	-		-		Bare Ground
25	-		-		Bare Ground
26	-		-		Bare Ground
27	Grass	Other spp. 1	-		Bare Ground
28	Grass	Other spp. 1	B-Grass	Other spp. 1	-
29	Noxious Weed	Bromus tectorum	B-Grass	Other spp. 1	-



Point	Foliar		Basal		Non-Vegetative
	Type	Species	Type	Species	
30	-		-		Bare Ground
31	-		-		Bare Ground
32	Grass	Other spp. 1	-		Litter
33	-		-		Bare Ground
34	Grass	Pascopyrum smithii (Agropyron)	-		Litter
35	-		-		Bare Ground
36	-		-		Bare Ground
37	Grass	Other spp. 1	B-Grass	Other spp. 1	-
38	Noxious Weed	Bromus tectorum	-		Bare Ground
39	Grass	Pascopyrum smithii (Agropyron)	-		Rock
40	Noxious Weed	Bromus tectorum	-		Bare Ground
41	-		-		Litter
42	-		-		Litter
43	Shrub	Artemisia filifolia	B-Noxious Weed	Bromus tectorum	-
44	Grass	Pascopyrum smithii (Agropyron)	B-Grass	Pascopyrum smithii (Agropyron)	-
45	-		-		Litter
46	Grass	Other spp. 1	-		Litter
47	-		-		Litter
48	Noxious Weed	Bromus tectorum	-		Bare Ground
49	-		-		Litter
50	Grass	Other spp. 1	B-Grass	Other spp. 1	-

#### Photo Requirements

Representative photo looking down the length of each transect; including reference area.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Photo facing each cardinal direction (N, E, S, W) from edge of disturbance looking to well heads.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Representative photo down edge of disturbance.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Photo that documents the total cover of live perennial vegetation for the reference area.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Photo that documents the total cover of live perennial vegetation of the disturbed area.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO

**General Notes:** Grass other species 1 crested wheat grass.

List any newly  
identified species  
not present in drop-  
down lists.

#### INSPECTION CERTIFICATION

I certify that this document and all attachments were prepared by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of termination.

Inspector (Name)

Jennie Schoedel - Environmental Scientist



Date: 06/16/2016

**VEGETATION MONITORING FORM: Kerr-McGee Oil & Gas Onshore LP**

COGCC Location Name (ID): BADDING 20-26SX (419768)

CO #: COP0223

Date of Assessment: 06/16/2016

Transect ID: Reference Transect 1

Length of Transect (ft.): 500

Transect Type:

☐ Reclamation

☒ Reference

Inspector(s) (Name and Title): Jennie Schoedel - Environmental Scientist

Weather at Time of Inspection: Clear, low 90s

Method: Step Point

Point	Foliar		Basal		Non-Vegetative
	Type	Species	Type	Species	
1	-		-		Litter
2	Noxious Weed	Bromus tectorum	-		Litter
3	-		-		Litter
4	-		-		Bare Ground
5	-		-		Litter
6	Noxious Weed	Bromus tectorum	B-Noxious Weed	Bromus tectorum	-
7	Shrub	Artemisia filifolia	-		Litter
8	Grass	Pascopyrum smithii (Agropyron)	-		Litter
9	Noxious Weed	Bromus tectorum	-		Litter
10	Noxious Weed	Bromus tectorum	-		Litter
11	Shrub	Artemisia filifolia	B-Noxious Weed	Bromus tectorum	-
12	-		-		Litter
13	-		-		Litter
14	Noxious Weed	Bromus tectorum	-		Litter
15	Grass	Hesperostipa comata	-		Litter
16	Noxious Weed	Bromus tectorum	-		Litter
17	Grass	Hesperostipa comata	B-Noxious Weed	Bromus tectorum	-
18	-		-		Litter
19	Grass	Hesperostipa comata	B-Grass	Hesperostipa comata	-
20	-		-		Litter
21	Grass	Hesperostipa comata	-		Litter
22	Grass	Hesperostipa comata	-		Litter
23	Noxious Weed	Bromus tectorum	B-Noxious Weed	Bromus tectorum	-
24	Noxious Weed	Bromus tectorum	-		Litter
25	-		-		Litter
26	Noxious Weed	Bromus tectorum	-		Litter
27	Grass	Pascopyrum smithii (Agropyron)	B-Grass	Pascopyrum smithii (Agropyron)	-
28	-		-		Litter
29	Grass	Hesperostipa comata	-		Litter



Point	Foliar		Basal		Non-Vegetative
	Type	Species	Type	Species	
30	Noxious Weed	Bromus tectorum	-		Litter
31	Shrub	Artemisia filifolia	B-Shrub	Artemisia cana	-
32	Noxious Weed	Bromus tectorum	-		Litter
33	Grass	Hesperostipa comata	-		Litter
34	-		-		Litter
35	-		-		Litter
36	Noxious Weed	Bromus tectorum	-		Litter
37	Noxious Weed	Bromus tectorum	-		Litter
38	-		-		Bare Ground
39	Noxious Weed	Bromus tectorum	-		Litter
40	-		-		Bare Ground
41	-		-		Litter
42	-		-		Litter
43	Shrub	Artemisia filifolia	-		Litter
44	-		-		Litter
45	Grass	Hesperostipa comata	-		Litter
46	Noxious Weed	Bromus tectorum	-		Litter
47	Noxious Weed	Bromus tectorum	-		Litter
48	Grass	Pascopyrum smithii (Agropyron)	B-Noxious Weed	Bromus tectorum	-
49	-		-		Litter
50	Grass	Pascopyrum smithii (Agropyron)	-		Litter

#### Photo Requirements

Representative photo looking down the length of each transect; including reference area.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Photo facing each cardinal direction (N, E, S, W) from edge of disturbance looking to well heads.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Representative photo down edge of disturbance.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Photo that documents the total cover of live perennial vegetation for the reference area.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Photo that documents the total cover of live perennial vegetation of the disturbed area.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO

#### General Notes:

List any newly identified species not present in drop-down lists.

#### INSPECTION CERTIFICATION

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Jennie Schoedel - Environmental Scientist



Date: 06/16/2016

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COGCC Location Name (ID): BADDING 20-26SX (419768)

CO #: COP0223

Date of Assessment: 06/16/2016

Transect ID: Reference Transect 2

Length of Transect (ft.): 500

Transect Type:

☐ Reclamation

☒ Reference

Inspector(s) (Name and Title): Jennie Schoedel - Environmental Scientist

Weather at Time of Inspection: Clear, low 90s

Method: Step Point

Point	Foliar		Basal		Non-Vegetative
	Type	Species	Type	Species	
1	-		-		Litter
2	-		-		Litter
3	Noxious Weed	Bromus tectorum	-		Litter
4	Grass	Pascopyrum smithii (Agropyron)	B-Grass	Pascopyrum smithii (Agropyron)	-
5	-		-		Litter
6	Forb	Plantago patagonica	-		Litter
7	Noxious Weed	Bromus tectorum	B-Noxious Weed	Bromus tectorum	-
8	-		-		Litter
9	Shrub	Artemisia filifolia	B-Noxious Weed	Bromus tectorum	-
10	-		-		Litter
11	-		-		Litter
12	Grass	Hesperostipa comata	B-Grass	Hesperostipa comata	-
13	-		-		Litter
14	-		-		Litter
15	Noxious Weed	Bromus tectorum	-		Bare Ground
16	Grass	Hesperostipa comata	B-Noxious Weed	Bromus tectorum	-
17	-		-		Litter
18	Grass	Pascopyrum smithii (Agropyron)	-		Litter
19	-		-		Litter
20	Forb	Plantago patagonica	-		Litter
21	-		-		Litter
22	Grass	Hesperostipa comata	-		Litter
23	Noxious Weed	Bromus tectorum	B-Noxious Weed	Bromus tectorum	-
24	-		-		Litter
25	Shrub	Artemisia cana	-		Litter
26	-		-		Litter
27	Noxious Weed	Bromus tectorum	-		Litter
28	Forb	Other spp. 1	-		Litter
29	-		-		Litter



Point	Foliar		Basal		Non-Vegetative
	Type	Species	Type	Species	
30	Grass	Hesperostipa comata	-		Litter
31	Grass	Hesperostipa comata	B-Noxious Weed	Bromus tectorum	-
32	-		-		Litter
33	-		-		Litter
34	Grass	Pascopyrum smithii (Agropyron)	B-Grass	Pascopyrum smithii (Agropyron)	-
35	-		-		Litter
36	-		-		Litter
37	Noxious Weed	Bromus tectorum	-		Bare Ground
38	-		-		Litter
39	Noxious Weed	Bromus tectorum	-		Litter
40	Shrub	Artemisia cana	-		Litter
41	-		-		Litter
42	Forb	Other spp. 1	B-Forb	Other spp. 1	-
43	-		-		Litter
44	Grass	Pascopyrum smithii (Agropyron)	-		Litter
45	-		-		Litter
46	-		-		Bare Ground
47	Noxious Weed	Bromus tectorum	-		Litter
48	-		-		Litter
49	Noxious Weed	Bromus tectorum	-		-
50	-		-		Litter

#### Photo Requirements

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Photo facing each cardinal direction (N, E, S, W) from edge of disturbance looking to well heads.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
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Photo that documents the total cover of live perennial vegetation for the reference area.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
Photo that documents the total cover of live perennial vegetation of the disturbed area.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO

#### General Notes: Forb other species 1 scarlet globe mallow

List any newly identified species not present in drop-down lists.

#### INSPECTION CERTIFICATION

I certify that this document and all attachments were prepared by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of termination.

Inspector (Name)

Jennie Schoedel - Environmental Scientist



Date: 06/16/2016