



February 13, 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)
REI 27-5 (323477)
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 28, 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 80.98% 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'.

Chris Hines
Project Manager
970-261-1127
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)

Client	Kerr-McGee Oil & Gas Onshore LP
COGCC Location Name (ID)	REI 27-5 (323477)
Assessment Date	6/28/2016
Inspector Name - Title	Jennie Schoedel - Environmental Scientist
Data Processor Name - Title	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:

Reclaim Area (Foliar Cover)	Reference Area (Foliar Cover)
$(26 + 0 + 0) / 155 =$ 16.77%	$(26 + 4 + 5) / 169 =$ 20.71%

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:

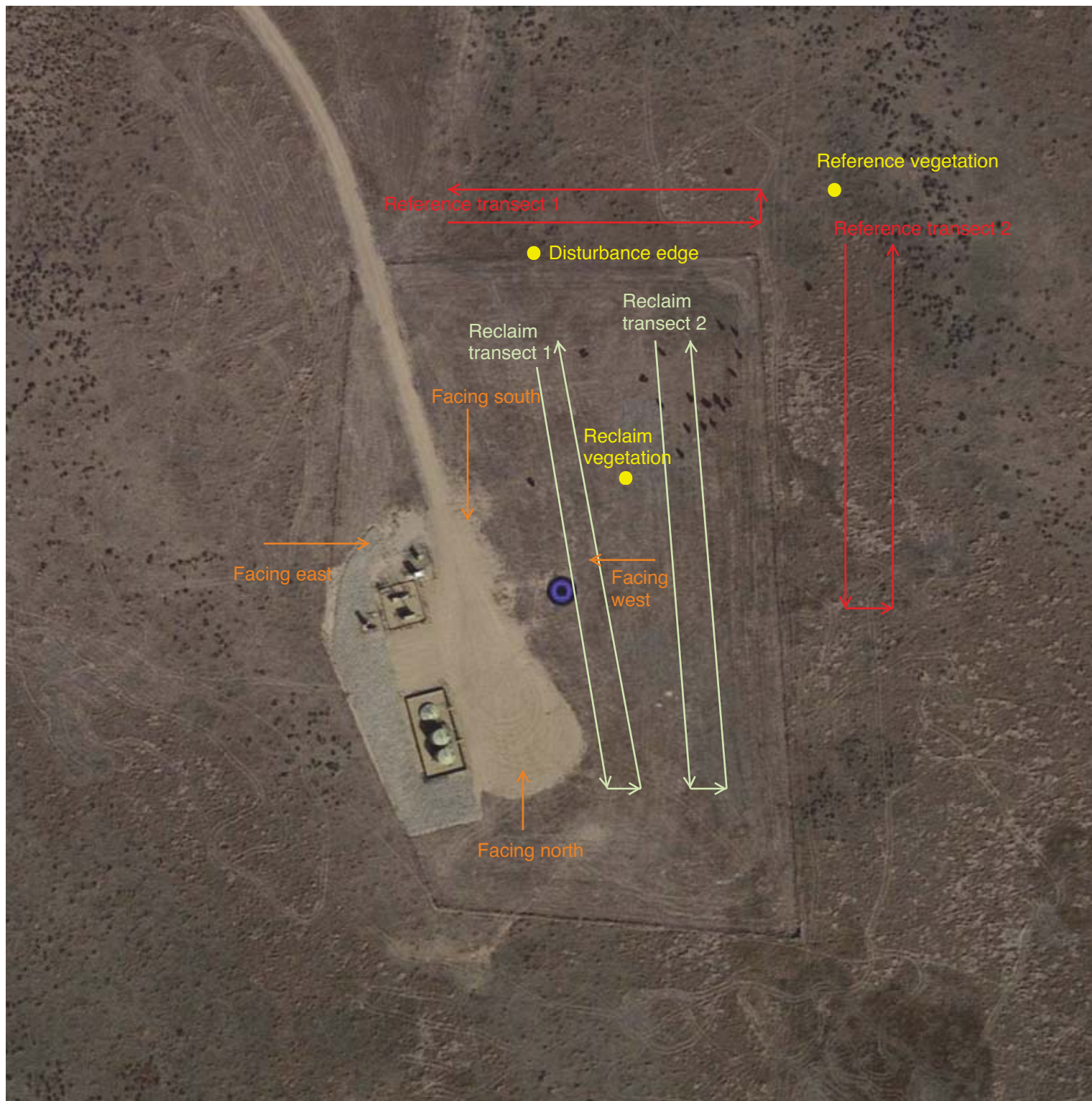
Percent of Reference (Reclaim % / Reference %)
$16.77\% / 20.71\% =$ 80.98%

Reclaim Area Vegetation

Foliar Cover	16.77%
Basal Cover	0.65%
Non Vegetated	61.29%
Noxious Weeds	21.29%
QA Total (must equal 100)	100.00%
Grass (Foliar)	26
Forb (Foliar)	0
Shrubs (Foliar)	0
Noxious Weed (Foliar)	29
Grass (Basal)	1
Forb (Basal)	0
Shrubs (Basal)	0
Noxious Weed (Basal)	4
Bare Ground	5
Litter	89
Rock	1
Total Occurrences	155

Reference Area Vegetation

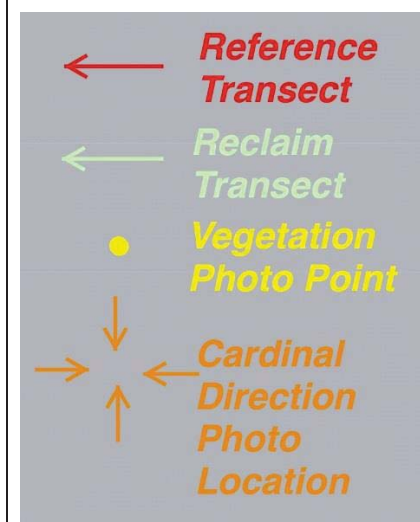
Foliar Cover	20.71%
Basal Cover	7.10%
Non Vegetated	47.93%
Noxious Weeds	24.26%
QA Total (must equal 100)	100.00%
Grass (Foliar)	26
Forb (Foliar)	4
Shrubs (Foliar)	5
Noxious Weed (Foliar)	34
Grass (Basal)	11
Forb (Basal)	0
Shrubs (Basal)	1
Noxious Weed (Basal)	7
Bare Ground	4
Litter	77
Rock	0
Total Occurrences	169



Vegetation Survey Site Map

REI 27-5

(323477)



Legal Description: SENE Sec 5,
T3N-R 65W

County: Weld

Land Use: Rangeland

Reference Area Cover: 20.71%

Reclamation Cover: 16.77%

Cover Ratio

(Reclaim/Reference): 80.98%

Inspector: J. Schoedel

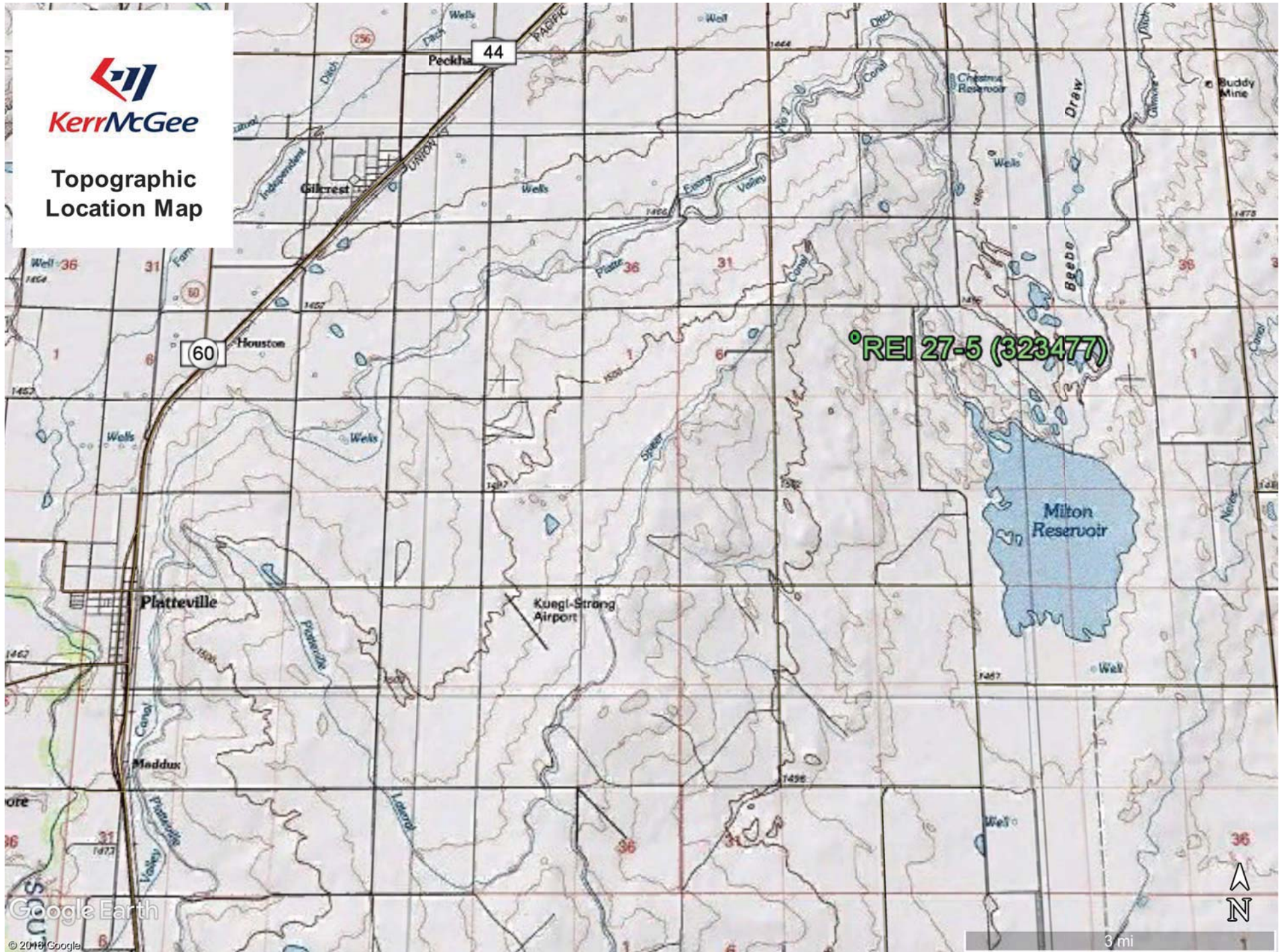
Assessment Date: 06/28/2016





KerrMcGee

**Topographic
Location Map**



Google Earth

© 2019 Google

Edge of Disturbance - Facing East
40.257080°/-104.680042°



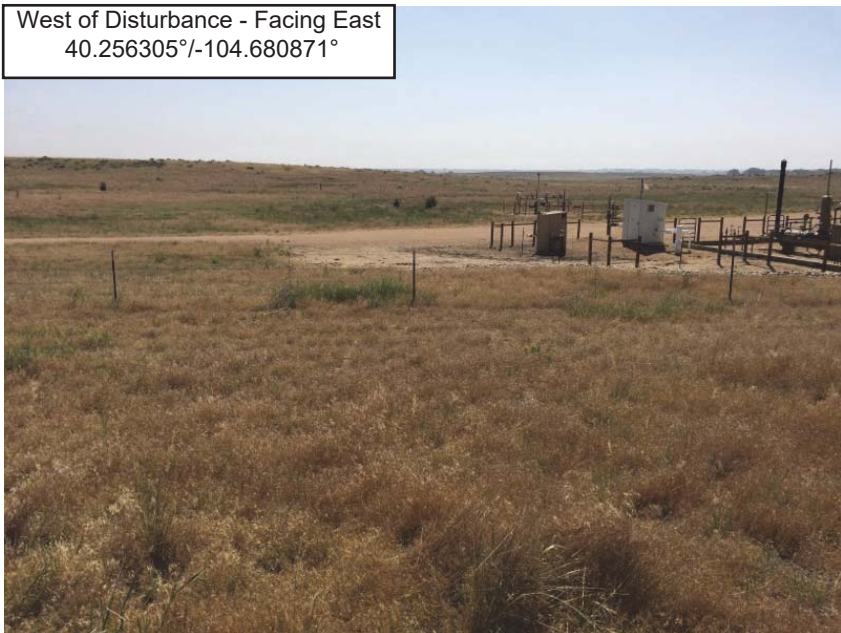
South of Disturbance - Facing North
40.255636°/-104.679932°



North of Disturbance - Facing South
40.256745°/-104.680098°



West of Disturbance - Facing East
40.256305°/-104.680871°



East of Disturbance - Facing West
40.256352°/-104.679528°



Reclaim Area Vegetation Photo Point
40.256603°/-104.679608°



Reclaim Transect 1 - Facing South
40.256804°/-104.680030°



Reclaim Transect 2 - Facing South
40.256808°/-104.679551°



Reference Area Vegetation Photo Point
40.257332°/-104.678923°



Reference Transect 1 - Facing East
40.257231°/-104.680101°



Reference Transect 2 - Facing South
40.257137°/-104.678955°



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

COGCC Location Name (ID): REI 27-5 (323477)

CO #: COP0080

Date of Assessment: 06/28/2016

Transect ID: Reclaim Transect 1

Length of Transect (ft.): 600

Transect Type:



Reclamation



Reference

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

Weather at Time of Inspection: Partly Cloudy, 90s

Method: Step Point

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

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

List any newly identified species not present in drop-down lists. Site has been used for livestock grazing

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: 06/28/2016

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

COGCC Location Name (ID): REI 27-5 (323477)

CO #: COP0080

Date of Assessment: 06/28/2016

Transect ID: Reclaim Transect 2

Length of Transect (ft.): 600

Transect Type:



Reclamation



Reference

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

Weather at Time of Inspection: Partly Cloudy, 90s

Method: Step Point

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

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

Site has been used for livestock grazing
List any newly
identified species
not present in drop-
down lists.

INSPECTION CERTIFICATION

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Inspector (Name)

Jennie Schoedel - Environmental Scientist



Date: 06/28/2016

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

COGCC Location Name (ID): REI 27-5 (323477)

CO #: COP0080

Date of Assessment: 06/28/2016

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: Partly Cloudy, 90s

Method: Step Point

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

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

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

INSPECTION CERTIFICATION

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Inspector (Name)

Jennie Schoedel - Environmental Scientist



Date: 06/28/2016

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

COGCC Location Name (ID): REI 27-5 (323477)

CO #: COP0080

Date of Assessment: 06/28/2016

Transect ID: Reference Transect 2

Length of Transect (ft.): 600

Transect Type:

☐ Reclamation

☒ Reference

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

Weather at Time of Inspection: Partly Cloudy, 90s

Method: Step Point

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

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

Photo Requirements

Representative photo looking down the length of each transect; including reference area.	<input checked="" type="checkbox"/>	YES	<input type="checkbox"/> NO
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List any newly identified species not present in drop-down lists.

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Inspector (Name)

Jennie Schoedel - Environmental Scientist



Date: 06/28/2016