



December 21, 2015

Mr. Paul Schwarz  
Anadarko Petroleum Corporation  
1099 18th Street, Suite 1800  
Denver, Colorado 80202

**RE: Form 4 (Interim Reclamation Completion Notice)  
Elliott 32N-18HZ (Location: 330312)  
Kerr McGee Oil & Gas Onshore LP (Operator: 47120)**

Dear Mr. Schwarz:

Apex Companies, LLC (Apex) is pleased to present this letter to Anadarko Petroleum Corporation (Anadarko) and Kerr McGee Oil & Gas Onshore LP documenting the results of a vegetation assessment that demonstrates successful completion of interim reclamation efforts on the Elliott 32N-18HZ (330312) location in Weld County, Colorado.

Based on communications with Anadarko personnel and subsequent site visits, Apex inspectors confirmed that the unused portions of the reduced production footprint have been stabilized and seeded with Anadarko Dryland Pasture Mix. This seed mixture consists of Tetraploid Perennial Ryegrass (19.68%), Smooth Brome, Lincoln (18.66%), Intermediate Wheatgrass, Oahe (14.76%), Dahurian Wildrye (14.44%), Orchardgrass, Paiute (14.29%), and Pubescent Wheatgrass Luna (13.35%).

On July 20, 2015, modified step-point vegetation surveys were conducted on the reclaimed portion of the well pad, and on adjacent undisturbed 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 undisturbed reference area. All noxious weeds as defined 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 106.36% of the undisturbed reference area. Vegetation survey results are provided in the attached vegetation 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 Rule 1003.e (3) are also attached.

Apex appreciates the opportunity to provide environmental consulting services to Anadarko 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 Findings)
2. Site Diagram
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 LLC
<b>COGCC Location Name (ID)</b>	Elliot 32N-18HZ (330312)
<b>Assessment Date</b>	7/20/2015
<b>Inspector Name - Title</b>	Jenny Schoedel- Environmental Technician
<b>Data Processor Name - Title</b>	Tyler Dooley- 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>
$(34 + 22 + 0) / 156 =$ <b>35.90%</b>	$(40 + 14 + 0) / 160 =$ <b>33.75%</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>
$35.90\% / 33.75\% =$ <b>106.36%</b>

### Reclaim Area Vegetation

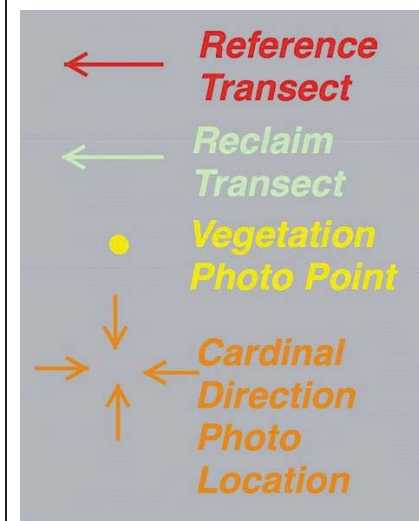
Foliar Cover	35.90%
Basal Cover	16.03%
Non Vegetated	46.79%
Noxious Weeds	1.28%
<b>QA Total</b> <i>(must equal 100)</i>	<b>100.00%</b>
Grass (Foliar)	34
Forb (Foliar)	22
Shrubs (Foliar)	0
Noxious Weed (Foliar)	2
Grass (Basal)	18
Forb (Basal)	7
Shrubs (Basal)	0
Noxious Weed (Basal)	0
Bare Ground	70
Litter	3
Rock	0
<b>Total Occurrences</b>	<b>156</b>

### Reference Area Vegetation

Foliar Cover	33.75%
Basal Cover	7.50%
Non Vegetated	52.50%
Noxious Weeds	6.25%
<b>QA Total</b> <i>(must equal 100)</i>	<b>100.00%</b>
Grass (Foliar)	40
Forb (Foliar)	14
Shrubs (Foliar)	0
Noxious Weed (Foliar)	6
Grass (Basal)	10
Forb (Basal)	2
Shrubs (Basal)	0
Noxious Weed (Basal)	4
Bare Ground	64
Litter	20
Rock	0
<b>Total Occurrences</b>	<b>160</b>

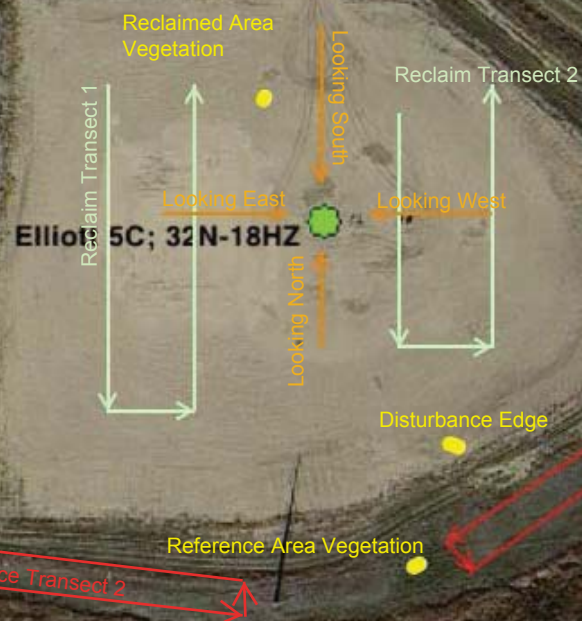
## Vegetation Survey Site Map

Elliott 32N-18HZ  
(330312)



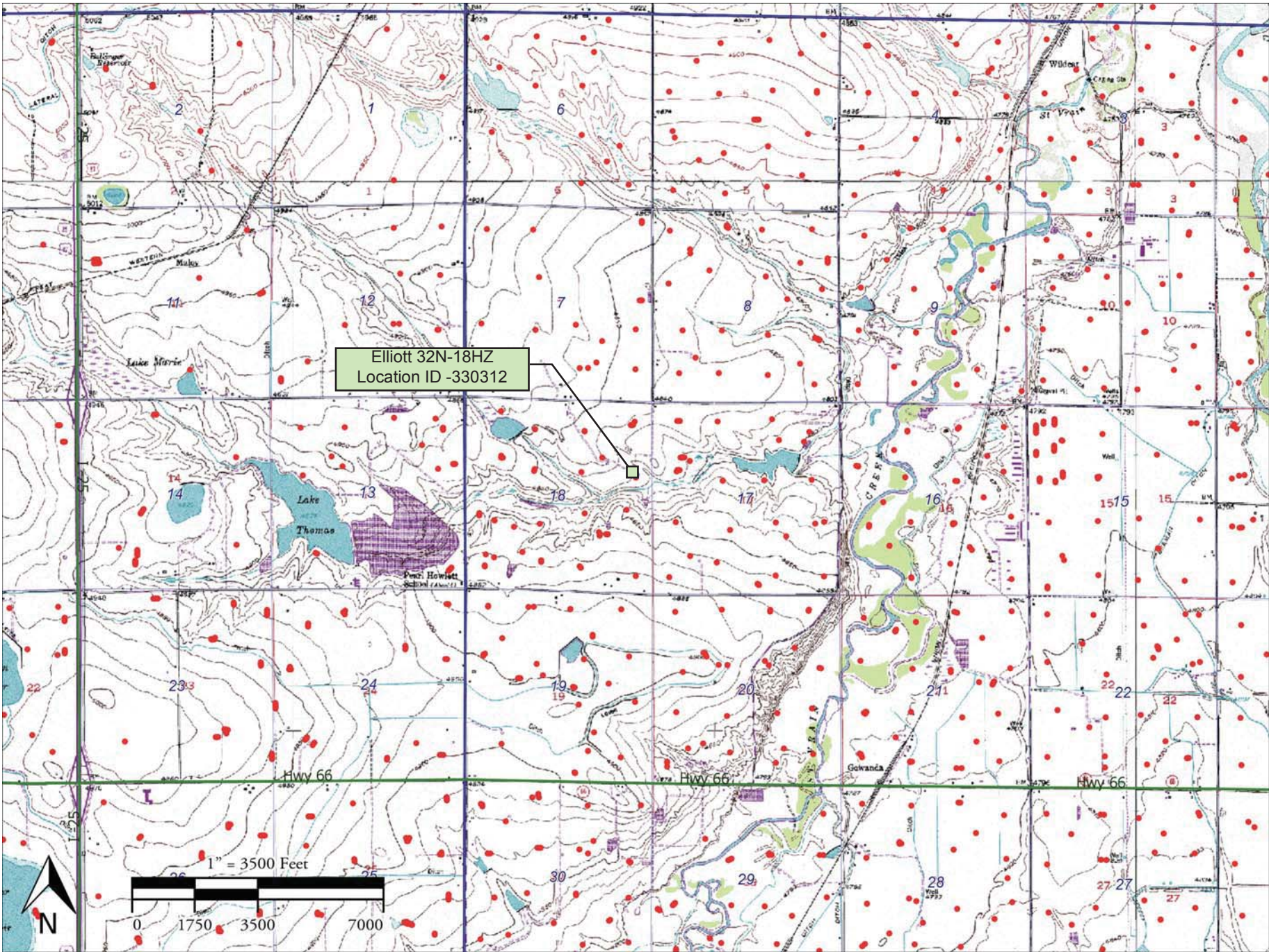
Legal Description: SENE, Sec 18,  
T3N-R67W  
 County: Weld  
 Land Use: Rangeland  
 Reference Area Cover: 33.75%  
 Reclamation Cover: 35.90%  
 Cover Ratio  
 (Reclaim/Reference): 106.36%

Inspector: Jenny Schoedel  
 Assessment Date: July 20, 2015





## Elliott 32N-18HZ (330312) Topographic Location Map





Edge of Disturbance on Southeast Side of  
Pad Looking East  
40.226969° / -104.924692°





**Kerr McGee Oil & Gas Onshore LP**  
**Form 4 (Interim Reclamation Completion Notice)**  
**Elliott 32N-18HZ (330312)**

Vegetation Assessment  
Completed - July 20, 2015



South of Disturbance  
Looking North  
40.227412°/-104.924933°



North of Disturbance  
Looking South  
40.227685°/-104.924934°



West of Disturbance  
Looking East  
40.227584°/-104.925176°



East of Disturbance  
Looking West  
40.227592°/-104.924576°





Reclaim Area Vegetation  
40.227826°/-104.925199°









Reference Area Vegetation  
40.226788° / -104.924757°





Reference Transect 1  
Looking Southwest  
40.227339°/-104.923713°



Reference Transect 2  
Looking Southeast  
40.226826°/-104.926170°





**VEGETATION MONITORING FORM - Kerr McGee Oil & Gas Onshore LLC**

COGCC Location Name (ID): Elliot 32N-18HZ (330312)

CO # COP0246

Date of Assessment - 07/20/2015

Transect ID - Reclaim Transect 1

Length of Transect (ft.) - 500

Transect Type



Reclamation



Reference

Inspector(s) (Name and Title) - Jenny Schoedel - Environmental Technician

Weather at Time of Inspection - Partly cloudy, 75

Method - Step Point

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



Point	Foliar		Basal		Non-Vegetative
	Type	Species	Type	Species	
30	Grass	Other spp. 1	B-Grass	Dactylis glomerata	-
31	Forb	Other spp. 2	-		Bare Ground
32	-		-		Bare Ground
33	-		-		Bare Ground
34	-		-		Bare Ground
35	-		-		Bare Ground
36	Grass	Other spp. 1	-		Bare Ground
37	Grass	Other spp. 1	B-Grass	Dactylis glomerata	-
38	Forb	Other spp. 1	B-Forb	Other spp. 1	-
39	-		-		Bare Ground
40	-		-		Bare Ground
41	Grass	Dactylis glomerata	-		Bare Ground
42	Forb	Other spp. 1	B-Forb	Other spp. 1	-
43	-		-		Bare Ground
44	Forb	Other spp. 1	-		Bare Ground
45	Grass	Dactylis glomerata	B-Grass	Dactylis glomerata	-
46	-		-		Bare Ground
47	-		-		-
48	Grass	Dactylis glomerata	-		Bare Ground
49	-		-		-
50	Noxious Weed	Other spp. 1	-		Bare Ground

#### 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 the center looking past 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 of the undisturbed 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 kochia, forb other species 2 alfalfa

#### 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)

- Jenny Schoedel - Environmental Technician



Date: 07/20/2015



**VEGETATION MONITORING FORM - Kerr McGee Oil & Gas Onshore LLC**

COGCC Location Name (ID): Elliot 32N-18HZ (330312)

CO # COP0246

Date of Assessment - 07/20/2015

Transect ID - Reclaim Transect 2

Length of Transect (ft.) - 500

Transect Type



Reclamation



Reference

Inspector(s) (Name and Title) - Jenny Schoedel - Environmental Technician

Weather at Time of Inspection - Partly cloudy,75

Method - Step Point

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



Point	Foliar		Basal		Non-Vegetative
	Type	Species	Type	Species	
30	Forb	Other spp. 1	B-Forb	Other spp. 1	-
31	Forb	Other spp. 1	B-Grass	Dactylis glomerata	-
32	Grass	Dactylis glomerata	-		Bare Ground
33	Grass	Dactylis glomerata	-		Bare Ground
34	Grass	Dactylis glomerata	B-Grass	Dactylis glomerata	-
35	-		-		Bare Ground
36	Grass	Dactylis glomerata	B-Grass	Dactylis glomerata	-
37	Grass	Dactylis glomerata	-		Bare Ground
38	-		-		Bare Ground
39	Grass	Dactylis glomerata	-		Bare Ground
40	Grass	Dactylis glomerata	-		Bare Ground
41	-		-		Bare Ground
42	-		-		Bare Ground
43	Grass	Dactylis glomerata	-		Bare Ground
44	-		-		Bare Ground
45	-		-		Bare Ground
46	Grass	Dactylis glomerata	-		Bare Ground
47	Grass	Other spp. 1	B-Grass	Other spp. 1	-
48	-		-		Bare Ground
49	Forb	Other spp. 2	B-Forb	Other spp. 2	-
50	-		-		Bare Ground

#### 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 the center looking past 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 of the undisturbed 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 kochia, forb other species 2 alfalfa

#### 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)

- Jenny Schoedel - Environmental Technician



Date: 07/20/2015



**VEGETATION MONITORING FORM - Kerr McGee Oil & Gas Onshore LLC**

COGCC Location Name (ID): Elliot 32N-18HZ (330312)

CO # COP0246

Date of Assessment - 07/20/2015

Transect ID - Reference Transect 1

Length of Transect (ft.) - 500

Transect Type

☐ Reclamation

☒ Reference

Inspector(s) (Name and Title) - Jenny Schoedel - Environmental Technician

Weather at Time of Inspection - Partly cloudy,75

Method - Step Point

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



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

#### 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 the center looking past 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 of the undisturbed 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:** Area of reference to the east is dominated by thistle.

Forb other species 1 kochia

Noxious weed other species 1 field bindweed

#### 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)

- Jenny Schoedel - Environmental Technician

*JS*

Date: 07/20/2015



**VEGETATION MONITORING FORM - Kerr McGee Oil & Gas Onshore LLC**

COGCC Location Name (ID): Elliot 32N-18HZ (330312)

CO # COP0246

Date of Assessment - 07/20/2015

Transect ID - Reference Transect 2

Length of Transect (ft.) - 500

Transect Type

☐ Reclamation

☒ Reference

Inspector(s) (Name and Title) - Jenny Schoedel - Environmental Technician

Weather at Time of Inspection - Partly cloudy,75

Method - Step Point

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



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

#### 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 the center looking past 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 of the undisturbed 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:** Area of reference to the east is dominated by  
thistle. Forb other species 1 kochia scoparia  
Noxious weed other species 1 field bindweed

#### 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)

- Jenny Schoedel - Environmental Technician

*JS*

Date: 07/20/2015