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# RECLAMATION MONITORING REPORT

ALOHA MULA #3  
LINCOLN COUNTY, COLORADO

OCTOBER 2016

Prepared for:

WIEPKING-FULLERTON ENERGY, L.L.C.  
Englewood, Colorado



# **RECLAMATION MONITORING REPORT**

**ALOHA MULA #3  
LINCOLN COUNTY, COLORADO**

**OCTOBER 2016**

**Prepared for:**

**WIEPKING-FULLERTON ENERGY, L.L.C.  
4600 South Downing Street  
Englewood, Colorado 80113**

**Prepared by:**

**LT ENVIRONMENTAL, INC.  
4600 West 60<sup>th</sup> Avenue  
Arvada, Colorado 80003  
(303) 433-9788**



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## 1.0 INTRODUCTION

LT Environmental, Inc. (LTE) has been retained by Wiepking-Fullerton Energy, L.L.C. (Wiepking-Fullerton) to provide this Reclamation Monitoring Report for the Aloha Mula #3 (Site) located in Lincoln County, Colorado. The purpose of this Reclamation Monitoring Report is to achieve compliance with the approved Colorado Oil and Gas Conservation Commission (COGCC) Form 27 (Document No.: 2099825, Remediation No.: 9530) Conditions of Approval (COA) by providing details regarding the reclamation work completed and conducting reclamation monitoring of the vegetation on the Site.



## 2.0 CONDITIONS OF APPROVAL

Per COGCC Form 27 (Document No.:2099825), the requirements as stated in the COA to obtain compliance include the following.

1. Submit an annual report documenting reclamation work completed and the status of vegetation no later than October 31st of each year to include the following information:

Total volume of any amendments or fertilizer applied and the application rate per acre;

Seed mixture and application rate;

Site photographs depicting the work completed including erosion controls and seeding;

Site photographs depicting the condition of the vegetation during the growing season;

Copies of the scheduled bi-annual monitoring inspection forms referenced in Section 2.6.5 of the Form 27 Attachment; and

Future plans for additional amendments and seeding as needed based on success of the seeding completed in Spring 2016.

2. Comply with COGCC Rule 1002.f. *Stormwater Management* throughout the duration of the project.

Conduct and document stormwater inspections after any storm event that results in runoff; and

Verify that stormwater controls are properly maintained or replaced as needed throughout the duration of the project.

3. Control noxious weeds throughout the reclamation process. Weed control measures will be conducted in compliance with the Colorado Noxious Weed Act C.R.S. §35-5.5-115.
4. If the location is currently used for cattle grazing or will be used during the project, the operator is required to install fencing as needed to protect the reclamation area from damage until vegetation can be established.
5. All required work to complete the planned reclamation will be conducted no later than May 31, 2016.
6. The reclamation project will meet closure criteria when all affected areas have a uniform vegetative cover that reflects pre-disturbance area forbs, shrubs, and grasses with total percent plant cover of at least eighty percent (80%) of pre-disturbance levels, excluding noxious weeds.
7. The operator will obtain written approval from the Land Owner accepting final reclamation prior to closure of this project. The written approval will be submitted with the final closure request after closure criteria has been satisfied and all stormwater management controls have been removed.
8. COGCC staff will conduct a final inspection to verify that the closure criteria have been satisfied after receiving the closure request.



### **3.0 RECLAMATION WORK COMPLETED**

#### **3.1 RECLAMATION METHODS**

Reclamation activities were completed by Halde Sand & Gravel, Inc. on March 8, 2016, per the approved Remediation and Reclamation Workplan which was submitted with the COGCC Form 27 referenced in Section 1 of this report.

##### **3.1.1 Soil Compact Alleviation**

Soil compaction was alleviated as required by COGCC Rule 1003.c. via cross-ripping techniques to a depth of 18 inches below ground surface (bgs) utilizing a bulldozer.

##### **3.1.2 Seeding and Fertilizer Amendments**

After soil compaction alleviation activities were completed, the top soil was disked using a tractor to prepare the seed bed. The water-based bentonitic drilling fluids and/or associated cuttings were incorporated into native soil during the compaction alleviation and seed bed preparation activities. The Natural Resource Conservation Service (NRCS)-recommended seed mix was applied at the suggested rate of 40 seeds per square foot at a depth of one-quarter to three-quarters of an inch bgs utilizing a tractor equipped with drill seeding equipment. Additionally, an all-terrain vehicle was used to spread potash fertilizer, at a rate of 50 pounds per acre over the seeded area as a soil amendment

##### **3.1.3 Erosion Control, Site Security, and Stormwater Inspections**

After the Site was drill seeded, straw mulch was then spread across the Site at a rate of approximately 2,000-4,000 pounds per acre and crimped into the soil to assist in stabilization from potential erosion and a barbed wire fence was constructed around the area to prevent livestock grazing.

Stormwater inspections were conducted per COGCC Rule 1002.f. to evaluate structural best management practices (BMPs) implemented at the Site and to document repairs made.

Appendix A includes the invoices of the work completed, the seed mix used, and a photographic log of the Site. Completed stormwater inspection forms are attached as Appendix B.

##### **3.1.4 Weed Control**

Halde Sand and Gravel, Inc. mowed the Site as a weed control method on July 19, 2016, as recommended by the regional NRCS office. Chemical weed control was not recommended during the first growing season after planting. Invoices for the mowing operations are included as Appendix A.

## 4.0 RECLAMATION MONITORING

Scheduled bi-annual reclamation monitoring was conducted on May 20, 2016, and September 9, 2016. Reclamation monitoring included collecting qualitative and quantitative data for the Site.

### 4.1 MONITORING METHODS

#### 4.1.1 Qualitative Data

Qualitative data included the visual observations of general site conditions and photographic documentation conducted during reclamation monitoring events.

##### 4.1.1.1 General Site Conditions

Qualitative inspections evaluate the erosion potential, the overall plant community vigor and diversity, and the general conditions of the Site, such as disturbances present or any other notable conditions needing corrections. Plant species on- and off-site were identified.

##### 4.1.1.2 Photographic Documentation

Photographic documentation provides a visual qualitative method for monitoring vegetation changes. Photographs of the groundcover were collected facing the four cardinal directions representing vegetation conditions on and off of the Site. The photographs provide information for the Site regarding wildlife habitat, rangeland quality, and plant population conditions. Features like weed invasion, disturbances, plant height, and plant vigor can also be identified in the photographs.

#### 4.1.2 Quantitative Data

Quantitative data were collected using the line-point intercept method at locations that were determined to be representative of the plant communities present at the time of the reclamation inspection. For the first reclamation monitoring event, the standard 100 point line-point intercept method was reduced because visual observation indicated far less than 80% vegetative density as plants had only recently started germinating. Data were recorded at 20-foot intervals over each 100-foot transect and recorded species, plant litter, rock, and bare ground densities. For the second reclamation monitoring event of the year, data were recorded using the line-point intercept method at 1-foot intervals over each 100-foot transect. The transect locations on and off of the Site were selected based on the applicable NRCS Ecological Site Description (ESD).

### 4.2 MONITORING RESULTS

Qualitative and quantitative data were collected on May 20, 2016, and on September 9, 2016. The site-specific reclamation inspection forms are presented as Appendix C and include the inspection summaries and photographs.

During the monitoring event on May 20, 2016, just two months after the March reclamation seeding event, the onsite vegetative cover was observed to be less than 80 percent (%) of the

referenced offsite vegetation. During the monitoring event on September 9, 2016, the vegetative covers at the Site was still observed to be less than 80%, but had filled in slightly relative to the previous May 2016 monitoring event.



## **5.0 PLANS FOR CONTINUED OR ADDITIONAL ACTION ITEMS**

### **5.1 WEED CONTROL**

Weed control will be continued with additional mowing operations prior to seed set in the subsequent growing seasons, as needed. Chemical controls may be utilized after the first growing season.

### **5.2 RECLAMATION MONITORING AND STORMWATER INSPECTIONS**

Bi-annual monitoring of the vegetation will occur until the vegetation cover is 80% of the pre-disturbance or reference area and all reclamation objectives have been met. Post-construction stormwater inspections will be conducted pursuant to COGCC Rule 1002.f, and corrective actions related to vegetation as well as stormwater compliance will be implemented, as needed.

### **5.3 LAND OWNER ACCEPTANCE**

When final reclamation of the area has been completed, a letter of acceptance regarding final reclamation will be provided to the land owner prior to closure of the project. The written approval shall be submitted with the final closure request.

### **5.4 FINAL CLOSURE REQUEST**

A final closure request will be submitted with the required documentation. COGCC staff will then perform a final inspection to verify that the closure criteria have been satisfied.

## FIGURES

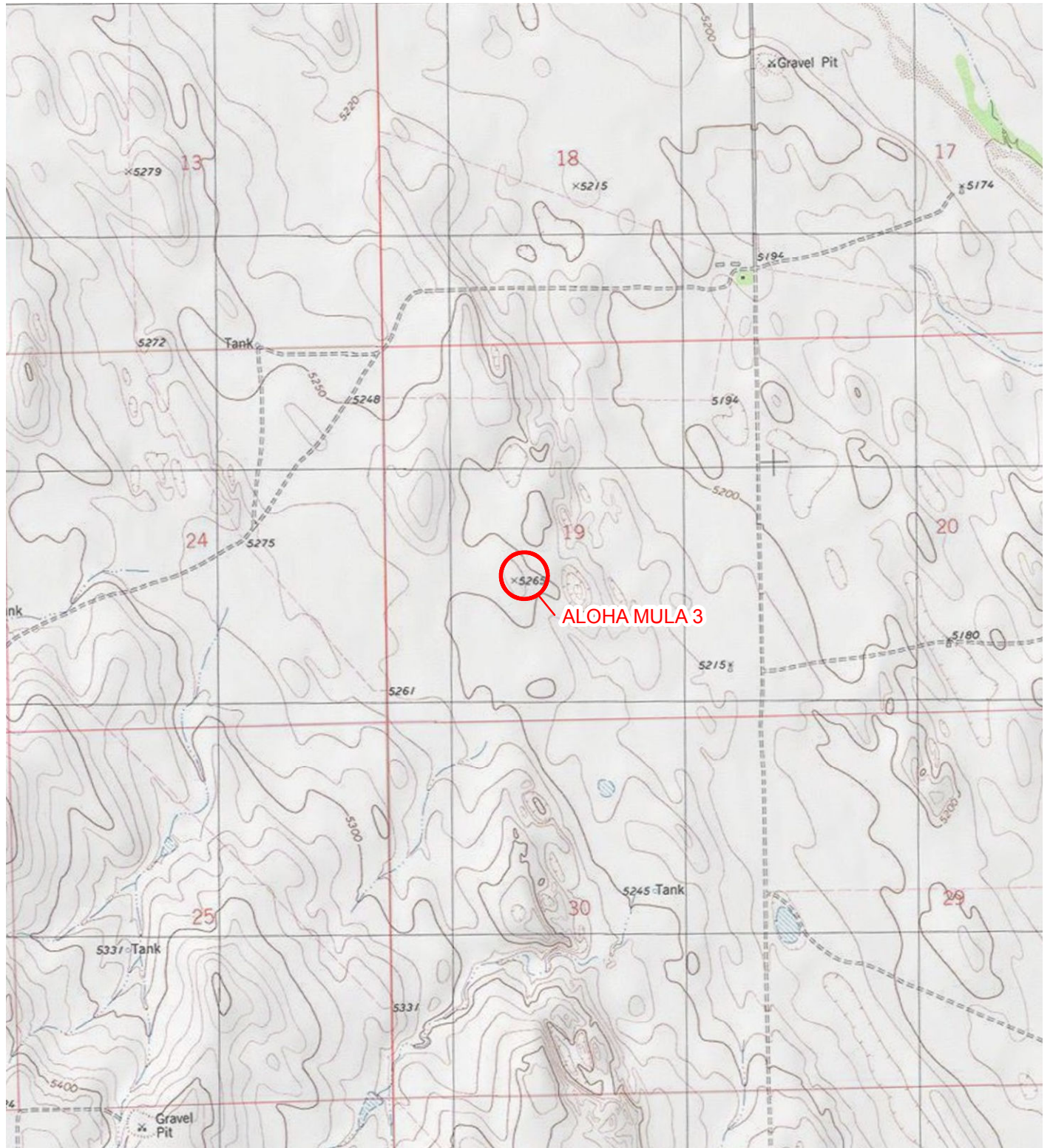
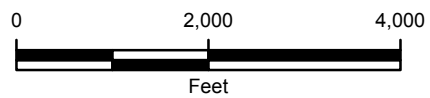


IMAGE COURTESY OF ESRI/USGS

**LEGEND**

○ SITE LOCATION



**FIGURE 1**  
**SITE LOCATION MAP**  
**ALOHA MULA 3**  
**NESW SEC 19 T10S R55W**  
**LINCOLN COUNTY, COLORADO**  
**WIEPKING-FULLERTON ENERGY, L.L.C.**



**APPENDIX A**  
**RECLAMATION WORK INVOICES**



Halde Sand & Gravel Inc.

46321 US Hwy 24  
 Burlington, CO 80807

# Invoice

Invoice Date	Invoice #
3/29/2016	52450

Bill To
Wiepking-Fullerton Energy, LLC c/o Linda Boone 8762 East 29th Place Denver, CO 80238

Lease Name
#3 Aloha

Terms
Net 30

Qty	Item	Description	Rate	Serviced	Ticket #	Amount
1	Dozer W Oper	Dozer-Ripped deep and cross ripped; Tractor-Disk for seed bed, seed grass, spread straw, crimped in; 4-wheeler-- spread pot ash fertilizer and build fence	1,500.00	3/8/2016		1,500.00

Thank you for your business.

<b>Subtotal</b>	\$1,500.00
<b>Sales Tax (0.0%)</b>	\$0.00
<b>Total</b>	\$1,500.00

Phone #	Fax #	E-mail
719-346-0352	719-346-8945	haldesand@centurytel.net

**Halde Sand & Gravel, Inc.**  
46321 Hwy 24 • Burlington, CO 80807

COMPANY: Wieskung      DATE: 3/5/16      JOB NO. \_\_\_\_\_  
LEASE NAME: #3 Alona      JOB LOCATION: \_\_\_\_\_

QUANTITY	DESCRIPTION
1	Dozer - Ripped deep + cross ripped Tractor - disk for seed bed, seed grass, spread straw, crimped in 4-wheeler - spread pot ash fertilizer and build fence

Original

Thank You

**ALOHA MULA #3 2 ACRE MIX  
LOT # : G-160272**

Mixture/Variety :	Purity %	Germ%	Origin:
NEEDLE & THREAD, VNS	19.99	86	CO
SAND BLUESTEM, CHET	13.09	97	KS
INDIAN RICEGRASS, PALOMA	12.69	87	WY
PRAIRIE SANDREED, GOSHEN	10.90	92	MT
SWITCHGRASS, SUNBURST	09.52	95	SD
YELLOW INDIANGRASS, CHEYENNE	08.23	94	KS
BLUE GRAMA, NATIVE	06.35	96	KS
PURPLE PRAIRIE CLOVER, VNS	06.33	97	WA
SAND DROPSEED, VNS	03.07	88	KS

**Crop: 0.60% Inert: 9.16% Weeds: 0.08% Net Wt. 14.0#**

Noxious Weeds: NONE FOUND

Tested: DEC 2015

**CUSTOM MIX FOR HALDE SAND AND GRAVEL  
EACH 14 LB BAG COVERS APPROX. 2 ACRES**

Sharp Bros. Seed Co. Greeley, CO 80631 (970) 356-4710

**Halde Sand & Gravel, Inc.**

46321 Hwy 24 • Burlington, CO 80807

COMPANY: Wierking Fellows DATE: 7-19-16 JOB NO. \_\_\_\_\_

LEASE NAME: Great Plains Field

JOB LOCATION: Mowed Jitted sig. L.S.

QUANTITY	DESCRIPTION
1	Aloha # 3 9:15 - 9:43
2	Ferristal # 5 9:49 - 10:10 21-30
3	Ferristal 10:10 - 10:26 22-30
4	Aloha # 16 10:30 - 10:57 <del>Aloha # 2</del>
5	Bigwampum # 10 11:03 - 12 noon
6	MAHALO # 2 1:45 - 2:15
7	Kerry # 2 2:15 - 2:55
8	Aloha # 6 3 - 3:33
9	NAPALI # 4 3:33 - 4:15
10	Bubba STATE # 3 4:16 - 4:46
	Tractor & Mower - <i>Sh</i>

*Sh*  
90  
#720

Original

Thank You



Photographs Taken: 03/22/2016

Aloha Mula 3 – Reclamation Work Completed


**Photographic Log**

**APPENDIX B**  
**STORMWATER MANAGEMENT INSPECTION RECORDS**



# Stormwater Management Plan Compliance Inspection Form

SiteID/Name: COG-06387 / Aloha Mula 3 COGCC  
 Location: Sec 19 T10S R55W

Inspection Date: 3/28/2016  
 Inspector: Drew Stormo  
 Signature: 

Inspection Type: 14-day/72 hour Storm Event  
 Land Use: Pasture/Grassland/Range  
 SiteType: Jetted Location

InspectorTitle: Staff Biologist

Phase: Interim

Receiving Body of water/Distance/Direction: Big Sandy Creek 9,585' NE

Prior Veg Cover (%): 70% Current Weather: Sunny 39

Stormwater Runoff Risk: Low

In the past 24 hours, has there been overland runoff due to a storm event that caused sediment movement? No

## Best Management Practice (BMP) Checklist

BMP TYPE					
BMP	In Use Y/N	Req'd Y/N	Required Action or Maintenance	Location	Done
Mulching	Yes	Yes			
Seeding	Yes	Yes			

### GENERAL CONDITIONS

General	Y/N/NA	Comments
Have repairs/additional BMP issues been addressed since last inspection?	NA	
Are there signs of sediment leaving the site?	No	
Are there signs of offsite tracking at access point?	No	
Are surface waters being impacted by site runoff?	No	
Have simple repairs been made today at this site by the Inspector?	No	
Pad Area Observations	Y/N/NA	Comments
Are tanks and/or drums present?	No	
Are tanks and/or drums placed in secondary containment areas?	NA	
Is pad area stabilized road base material?	No	
Is access road graveled (offsite soil tracking control)?	No	
Vegetation Checklist (Erosion Reduction Control)	Y/N/NA	Comments
Has the site achieved 70% or prior vegetation coverage for stabilization?	No	Little to no growth
Is the pad area reseeded?	Yes	
Are there signs of vegetation regrowth?	Yes	very minimal growth
Is reseeded needed?	No	

Comments: Site has little to no growth, noxious weeds and fence to keep cattle are compliant per COGCC stipulations. Krimped straw is somewhat patchy in some small spots


### Compliance Status:

If checked Yes, this site is in compliance with the Permit and had no incidents requiring corrective action at the time of the inspection.

Yes  No

### Certification

All required corrective actions have been completed, and this site is in compliance with the permit to the best of the signer's knowledge and belief.

Certifier Signature: 


Date: 3/28/2016

Certified by: Drew Stormo

Certifier Title: Staff Biologist

# Stormwater Management Plan Compliance Inspection Form

SiteID/Name: COG-06387 / Aloha Mula 3 COGCC  
 Location: Sec 19 T10S R55W

Inspection Date: 4/12/2016  
 Inspector: Drew Stormo  
 Signature: 

Inspection Type: 14-day/72 hour Storm Event  
 Land Use: Pasture/Grassland/Range  
 SiteType: Jetted Location

InspectorTitle: Staff Scientist

Phase: Interim

Receiving Body of water/Distance/Direction: Big Sandy Creek 9,585' NE

Prior Veg Cover (%): 70% Current Weather: 49 degrees sunny

Stormwater Runoff Risk: Low

In the past 24 hours, has there been overland runoff due to a storm event that caused sediment movement? No

## Best Management Practice (BMP) Checklist

BMP TYPE					
BMP	In Use Y/N	Req'd Y/N	Required Action or Maintenance	Location	Done
Mulching	Yes	Yes			
Seeding	Yes	Yes			

GENERAL CONDITIONS		
General	Y/N/NA	Comments
Have repairs/additional BMP issues been addressed since last inspection?	NA	
Are there signs of sediment leaving the site?	No	
Are there signs of offsite tracking at access point?	No	
Are surface waters being impacted by site runoff?	No	
Have simple repairs been made today at this site by the Inspector?	No	
Pad Area Observations	Y/N/NA	Comments
Are tanks and/or drums present?	No	
Are tanks and/or drums placed in secondary containment areas?	NA	
Is pad area stabilized road base material?	No	
Is access road graveled (offsite soil tracking control)?	No	
Vegetation Checklist (Erosion Reduction Control)	Y/N/NA	Comments
Has the site achieved 70% or prior vegetation coverage for stabilization?	No	
Is the pad area reseeded?	Yes	
Are there signs of vegetation regrowth?	Yes	small amounts of grass sprouted
Is reseeded needed?	No	

Comments: Small amounts of grass have begun to sprout. Monitor weeds. Fence and weeds compliant with COGCC stipulations

### Compliance Status:

If checked Yes, this site is in compliance with the Permit and had no incidents requiring corrective action at the time of the inspection.

Yes  No

### Certification

All required corrective actions have been completed, and this site is in compliance with the permit to the best of the signer's knowledge and belief.

Certifier Signature: 


Date: 4/12/2016

Certified by: Drew Stormo

Certifier Title: Staff Scientist

# Stormwater Management Plan Compliance Inspection Form

SiteID/Name: COG-06387 / Aloha Mula 3 COGCC  
 Location: Sec 19 T10S R55W

Inspection Date: 4/21/2016  
 Inspector: Drew Stormo  
 Signature: 

Inspection Type: 14-day/72 hour Storm Event  
 Land Use: Pasture/Grassland/Range  
 SiteType: Jetted Location

InspectorTitle: Staff Scientist

Phase: Interim

Receiving Body of water/Distance/Direction: Big Sandy Creek 9,585' NE

Prior Veg Cover (%): 70% Current Weather: 54 Sunny

Stormwater Runoff Risk: Low

In the past 24 hours, has there been overland runoff due to a storm event that caused sediment movement? No

## Best Management Practice (BMP) Checklist

BMP TYPE					
BMP	In Use Y/N	Req'd Y/N	Required Action or Maintenance	Location	Done
Mulching	Yes	Yes			
Seeding	Yes	Yes			

### GENERAL CONDITIONS

General	Y/N/NA	Comments
Have repairs/additional BMP issues been addressed since last inspection?	NA	
Are there signs of sediment leaving the site?	No	
Are there signs of offsite tracking at access point?	No	
Are surface waters being impacted by site runoff?	No	
Have simple repairs been made today at this site by the Inspector?	No	
Pad Area Observations	Y/N/NA	Comments
Are tanks and/or drums present?	No	
Are tanks and/or drums placed in secondary containment areas?	NA	
Is pad area stabilized road base material?	No	
Is access road graveled (offsite soil tracking control)?	No	
Vegetation Checklist (Erosion Reduction Control)	Y/N/NA	Comments
Has the site achieved 70% or prior vegetation coverage for stabilization?	No	
Is the pad area reseeded?	Yes	
Are there signs of vegetation regrowth?	Yes	small amounts of grass sprouted
Is reseeded needed?	No	

Comments: No activity. Small amounts of grass have begun to sprout. Monitor weeds. Fence and weeds compliant with COGCC stipulations. Storm event ended 4/18/16


### Compliance Status:

If checked Yes, this site is in compliance with the Permit and had no incidents requiring corrective action at the time of the inspection.

Yes  No

### Certification

All required corrective actions have been completed, and this site is in compliance with the permit to the best of the signer's knowledge and belief.

Certifier Signature: 


Date: 4/21/2016

Certified by: Drew Stormo

Certifier Title: Staff Scientist

# Stormwater Management Plan Compliance Inspection Form

SiteID/Name: COG-06387 / Aloha Mula 3 COGCC  
 Location: Sec 19 T10S R55W

Inspection Date: 5/3/2016  
 Inspector: Drew Stormo  
 Signature: 

Inspection Type: COGCC COA Storm Event  
 Land Use: Pasture/Grassland/Range  
 SiteType: Jetted Location

InspectorTitle: Staff Scientist

Phase: Interim

Receiving Body of water/Distance/Direction: Big Sandy Creek 9,585' NE

Prior Veg Cover (%): 70% Current Weather: 55F, windy

Stormwater Runoff Risk: Low

In the past 24 hours, has there been overland runoff due to a storm event that caused sediment movement? No

## Best Management Practice (BMP) Checklist

BMP TYPE					
BMP	In Use Y/N	Req'd Y/N	Required Action or Maintenance	Location	Done
Mulching	Yes	Yes			
Seeding	Yes	Yes			

### GENERAL CONDITIONS

General	Y/N/NA	Comments
Have repairs/additional BMP issues been addressed since last inspection?	NA	
Are there signs of sediment leaving the site?	No	
Are there signs of offsite tracking at access point?	No	
Are surface waters being impacted by site runoff?	No	
Have simple repairs been made today at this site by the Inspector?	No	
Pad Area Observations	Y/N/NA	Comments
Are tanks and/or drums present?	No	
Are tanks and/or drums placed in secondary containment areas?	NA	
Is pad area stabilized road base material?	No	
Is access road graveled (offsite soil tracking control)?	No	
Vegetation Checklist (Erosion Reduction Control)	Y/N/NA	Comments
Has the site achieved 70% or prior vegetation coverage for stabilization?	No	
Is the pad area reseeded?	Yes	
Are there signs of vegetation regrowth?	Yes	
Is reseeded needed?	No	

Comments: **Growth beginning to fill in. Monitor weeds. Fence and weeds compliant with COGCC stipulations. Storm event 4/29/16-5/1/16 with total precipitation 1.40".**


### Compliance Status:

If checked Yes, this site is in compliance with the Permit and had no incidents requiring corrective action at the time of the inspection.

Yes  No

### Certification

All required corrective actions have been completed, and this site is in compliance with the permit to the best of the signer's knowledge and belief.

Certifier Signature: 


Date: 5/3/2016

Certified by: Drew Stormo

Certifier Title: Staff Scientist

# Stormwater Management Plan Compliance Inspection Form

SiteID/Name: COG-06387 / Aloha Mula 3 COGCC  
 Location: Sec 19 T10S R55W

Inspection Date: 5/20/2016  
 Inspector: Drew Stormo  
 Signature: 

Inspection Type: COGCC COA SemiAnnual  
 Land Use: Pasture/Grassland/Range  
 SiteType: Jetted Location

InspectorTitle: Staff Scientist

Phase: Interim

Receiving Body of water/Distance/Direction: Big Sandy Creek 9,585' NE

Prior Veg Cover (%): 70% Current Weather: 60F, sunny

Stormwater Runoff Risk: Low

In the past 24 hours, has there been overland runoff due to a storm event that caused sediment movement? No

## Best Management Practice (BMP) Checklist

BMP TYPE					
BMP	In Use Y/N	Req'd Y/N	Required Action or Maintenance	Location	Done
Mulching	Yes	Yes			
Seeding	Yes	Yes			

### GENERAL CONDITIONS

General	Y/N/NA	Comments
Have repairs/additional BMP issues been addressed since last inspection?	NA	
Are there signs of sediment leaving the site?	No	
Are there signs of offsite tracking at access point?	No	
Are surface waters being impacted by site runoff?	No	
Have simple repairs been made today at this site by the Inspector?	No	
Pad Area Observations	Y/N/NA	Comments
Are tanks and/or drums present?	No	
Are tanks and/or drums placed in secondary containment areas?	NA	
Is pad area stabilized road base material?	No	
Is access road graveled (offsite soil tracking control)?	No	
Vegetation Checklist (Erosion Reduction Control)	Y/N/NA	Comments
Has the site achieved 70% or prior vegetation coverage for stabilization?	No	
Is the pad area reseeded?	Yes	
Are there signs of vegetation regrowth?	Yes	
Is reseeded needed?	No	

Comments: Growth continuing to fill in. Monitor weeds. Vegetation is around 15% cover. Fence and weeds compliant with COGCC stipulations. 72hr storm event inspection

### Compliance Status:

If checked Yes, this site is in compliance with the Permit and had no incidents requiring corrective action at the time of the inspection.

Yes  No

### Certification

All required corrective actions have been completed, and this site is in compliance with the permit to the best of the signer's knowledge and belief.

Certifier Signature: 

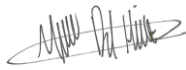
Date: 5/20/2016

Certified by: Drew Stormo

Certifier Title: Staff Scientist

# Stormwater Management Plan Compliance Inspection Form

SiteID/Name: COG-06387 / Aloha Mula 3 COGCC  
 Location: Sec 19 T10S R55W

Inspection Date: 6/1/2016  
 Inspector: Marcus Del Hierro  
 Signature:   
 InspectorTitle: Staff Engineer Intern

Inspection Type: COGCC COA Storm Event  
 Land Use: Pasture/Grassland/Range  
 SiteType: Jetted Location  
 Phase: Interim

Receiving Body of water/Distance/Direction: Big Sandy Creek 9,585' NE

Prior Veg Cover (%): 70% Current Weather: 70's, cloudy.

Stormwater Runoff Risk: Low

In the past 24 hours, has there been overland runoff due to a storm event that caused sediment movement? No

## Best Management Practice (BMP) Checklist

BMP TYPE					
BMP	In Use Y/N	Req'd Y/N	Required Action or Maintenance	Location	Done
Mulching	Yes	Yes			
Seeding	Yes	Yes			

### GENERAL CONDITIONS

General	Y/N/NA	Comments
Have repairs/additional BMP issues been addressed since last inspection?	NA	
Are there signs of sediment leaving the site?	No	
Are there signs of offsite tracking at access point?	No	
Are surface waters being impacted by site runoff?	No	
Have simple repairs been made today at this site by the Inspector?	No	
Pad Area Observations	Y/N/NA	Comments
Are tanks and/or drums present?	No	
Are tanks and/or drums placed in secondary containment areas?	NA	
Is pad area stabilized road base material?	No	
Is access road graveled (offsite soil tracking control)?	No	
Vegetation Checklist (Erosion Reduction Control)	Y/N/NA	Comments
Has the site achieved 70% or prior vegetation coverage for stabilization?	No	
Is the pad area reseeded?	Yes	
Are there signs of vegetation regrowth?	Yes	
Is reseeded needed?	No	

Comments: Growth continuing to fill in. Monitor weeds. Vegetation is around 15% cover. Fence and weeds compliant with COGCC stipulations. COGCC storm event inspection

### Compliance Status:

If checked Yes, this site is in compliance with the Permit and had no incidents requiring corrective action at the time of the inspection.

Yes  No

### Certification

All required corrective actions have been completed, and this site is in compliance with the permit to the best of the signer's knowledge and belief.

Certifier Signature: 


Date: 6/1/2016

Certified by: Marcus Del Hierro

Certifier Title: Staff Engineer Intern

# Stormwater Management Plan Compliance Inspection Form

SiteID/Name: COG-06387 / Aloha Mula 3 COGCC  
 Location: Sec 19 T10S R55W

Inspection Date: 7/6/2016  
 Inspector: Drew Stormo  
 Signature: 

Inspection Type: COGCC COA Storm Event  
 Land Use: Pasture/Grassland/Range  
 SiteType: Jetted Location

InspectorTitle: Staff Scientist

Phase: Interim

Receiving Body of water/Distance/Direction: Big Sandy Creek 9,585' NE

Prior Veg Cover (%): 70% Current Weather: 83F, sunny.

Stormwater Runoff Risk: Low

In the past 24 hours, has there been overland runoff due to a storm event that caused sediment movement? No

## Best Management Practice (BMP) Checklist

BMP TYPE					
BMP	In Use Y/N	Req'd Y/N	Required Action or Maintenance	Location	Done
Mulching	Yes	Yes			
Seeding	Yes	Yes			

### GENERAL CONDITIONS

General	Y/N/NA	Comments
Have repairs/additional BMP issues been addressed since last inspection?	NA	
Are there signs of sediment leaving the site?	No	
Are there signs of offsite tracking at access point?	No	
Are surface waters being impacted by site runoff?	No	
Have simple repairs been made today at this site by the Inspector?	No	
Pad Area Observations	Y/N/NA	Comments
Are tanks and/or drums present?	No	
Are tanks and/or drums placed in secondary containment areas?	NA	
Is pad area stabilized road base material?	No	
Is access road graveled (offsite soil tracking control)?	No	
Vegetation Checklist (Erosion Reduction Control)	Y/N/NA	Comments
Has the site achieved 70% or prior vegetation coverage for stabilization?	No	
Is the pad area reseeded?	Yes	
Are there signs of vegetation regrowth?	Yes	
Is reseeded needed?	No	

Comments: Vegetation roughly 70% dominated by sunflowers. Monitor weeds. 72hr storm event with total precipitation of .89".

### Compliance Status:

If checked Yes, this site is in compliance with the Permit and had no incidents requiring corrective action at the time of the inspection.

Yes  No

### Certification

All required corrective actions have been completed, and this site is in compliance with the permit to the best of the signer's knowledge and belief.

Certifier Signature: 


Date: 7/6/2016

Certified by: Drew Stormo

Certifier Title: Staff Scientist

# Stormwater Management Plan Compliance Inspection Form

SiteID/Name: COG-06387 / Aloha Mula 3 COGCC  
 Location: Sec 19 T10S R55W

Inspection Date: 8/1/2016  
 Inspector: Drew Stormo  
 Signature: 

Inspection Type: COGCC COA Storm Event  
 Land Use: Pasture/Grassland/Range  
 SiteType: Jetted Location

InspectorTitle: Staff Scientist

Phase: Interim

Receiving Body of water/Distance/Direction: Big Sandy Creek 9,585' NE

Prior Veg Cover (%): 70% Current Weather: 86F, sunny.

Stormwater Runoff Risk: Low

In the past 24 hours, has there been overland runoff due to a storm event that caused sediment movement? No

## Best Management Practice (BMP) Checklist

BMP TYPE					
BMP	In Use Y/N	Req'd Y/N	Required Action or Maintenance	Location	Done
Mulching	Yes	Yes			
Seeding	Yes	Yes			

### GENERAL CONDITIONS

General	Y/N/NA	Comments
Have repairs/additional BMP issues been addressed since last inspection?	NA	
Are there signs of sediment leaving the site?	No	
Are there signs of offsite tracking at access point?	No	
Are surface waters being impacted by site runoff?	No	
Have simple repairs been made today at this site by the Inspector?	No	
Pad Area Observations	Y/N/NA	Comments
Are tanks and/or drums present?	No	
Are tanks and/or drums placed in secondary containment areas?	NA	
Is pad area stabilized road base material?	No	
Is access road graveled (offsite soil tracking control)?	No	
Vegetation Checklist (Erosion Reduction Control)	Y/N/NA	Comments
Has the site achieved 70% or prior vegetation coverage for stabilization?	No	
Is the pad area reseeded?	Yes	
Are there signs of vegetation regrowth?	Yes	
Is reseeded needed?	No	

Comments: Vegetation around 55% cover, site was recently mowed. 72hr storm event with total precipitation of .50".


### Compliance Status:

If checked Yes, this site is in compliance with the Permit and had no incidents requiring corrective action at the time of the inspection.

Yes  No

### Certification

All required corrective actions have been completed, and this site is in compliance with the permit to the best of the signer's knowledge and belief.

Certifier Signature: 


Date: 8/1/2016

Certified by: Drew Stormo

Certifier Title: Staff Scientist

# Stormwater Management Plan Compliance Inspection Form

SiteID/Name: COG-06387 / Aloha Mula 3 COGCC  
 Location: Sec 19 T10S R55W

Inspection Date: 9/9/2016  
 Inspector: Jillian Sanders  
 Signature: 

Inspection Type: COGCC COA SemiAnnual  
 Land Use: Pasture/Grassland/Range  
 SiteType: Jetted Location

InspectorTitle: Staff Scientist

Phase: Interim

Receiving Body of water/Distance/Direction: Big Sandy Creek 9,585' NE

Prior Veg Cover (%): 70% Current Weather: Sunny 80s

Stormwater Runoff Risk: Low

In the past 24 hours, has there been overland runoff due to a storm event that caused sediment movement? No

## Best Management Practice (BMP) Checklist

BMP TYPE					
BMP	In Use Y/N	Req'd Y/N	Required Action or Maintenance	Location	Done
Mulching	Yes	Yes			
Seeding	Yes	Yes			

### GENERAL CONDITIONS

General	Y/N/NA	Comments
Have repairs/additional BMP issues been addressed since last inspection?	NA	
Are there signs of sediment leaving the site?	No	
Are there signs of offsite tracking at access point?	No	
Are surface waters being impacted by site runoff?	No	
Have simple repairs been made today at this site by the Inspector?	No	
Pad Area Observations	Y/N/NA	Comments
Are tanks and/or drums present?	No	
Are tanks and/or drums placed in secondary containment areas?	NA	
Is pad area stabilized road base material?	No	
Is access road graveled (offsite soil tracking control)?	No	
Vegetation Checklist (Erosion Reduction Control)	Y/N/NA	Comments
Has the site achieved 70% or prior vegetation coverage for stabilization?	No	
Is the pad area reseeded?	Yes	
Are there signs of vegetation regrowth?	Yes	
Is reseeding needed?	No	

Comments: Conducted 2nd semi-annual line-point intercept measurement for vegetation growth. Site is showing signs of improvement. Rain on 8/31, no signs of erosion.

### Compliance Status:

If checked Yes, this site is in compliance with the Permit and had no incidents requiring corrective action at the time of the inspection.

Yes  No

### Certification

All required corrective actions have been completed, and this site is in compliance with the permit to the best of the signer's knowledge and belief.

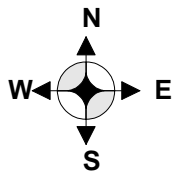
Certifier Signature: 

Date: 9/9/2016

Certified by: Jillian Sanders

Certifier Title: Staff Scientist

<b>WELL NAME:</b>	Aloha Mula 3			<b>API#:</b>	05-073-06387	
	<b>QTR/QTR:</b>	NESW	<b>SEC:</b>	19	<b>TWN:</b>	10S
					<b>RNG:</b>	55W
<b>LAT/LONG:</b>	39.16235/-103.5963					
<b>DIRECTIONS:</b>						
HWY 40 & CR 26 S 3.2, W.6, N .3 INTO						
<b>MUNICIPALITY:</b>						
UNINCORPORATED						
<b>PRE-CONSTRUCTION VEGETATION DESCRIPTION AND COVERAGE PERCENT:</b>						
Rangeland 70 %						
<b>TOPOGRAPHY:</b>						
1-12% slopes						
<b>TOTAL DISTURBED AREA (sqft):</b>						
120,000 sq ft						
<b>SOIL TYPE"</b>						
Valent-Bijou complex						
<b>NEAREST RECEIVING WATERS</b>						
<b>NAME</b>	Big Sandy Creek					
<b>DIRECTION</b>	Northeast					
<b>DISTANCE</b>	9,585 Feet					
<b>NON-STORMWATER DISCHARGE</b>						
<b>NAME</b>						
<b>DIRECTION</b>						
<b>DISTANCE</b>						
<b>POTENTIAL DRAINAGE AREA</b>						
<b>NAME</b>						
<b>DIRECTION</b>						
<b>DISTANCE</b>						
<b>MAP GENERATED BY</b>				LT ENVIRONMENTAL		
<b>SITE CONSTRUCTION COMPANY</b>				HALDE CONSTRUCTION		
<b>LANDMAN REPRESENTATIVE</b>				KERRY HALDE		
<b>COMMENTS</b>						



Lease/Name: Aloha Mula 3

Land Use: Grazeland

Runoff Risk: Low

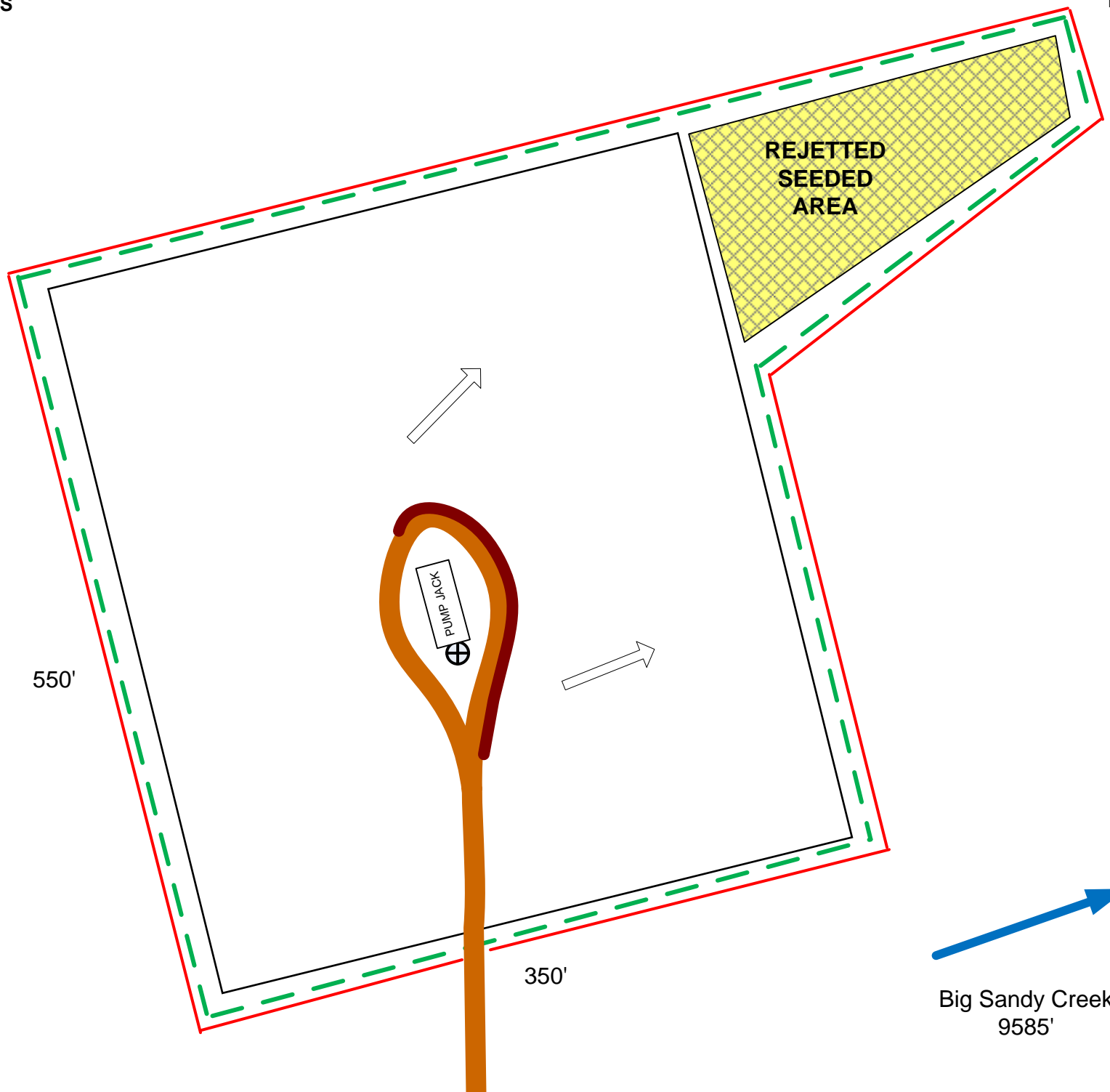
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Lat/Long: 39.16235/-103.5963

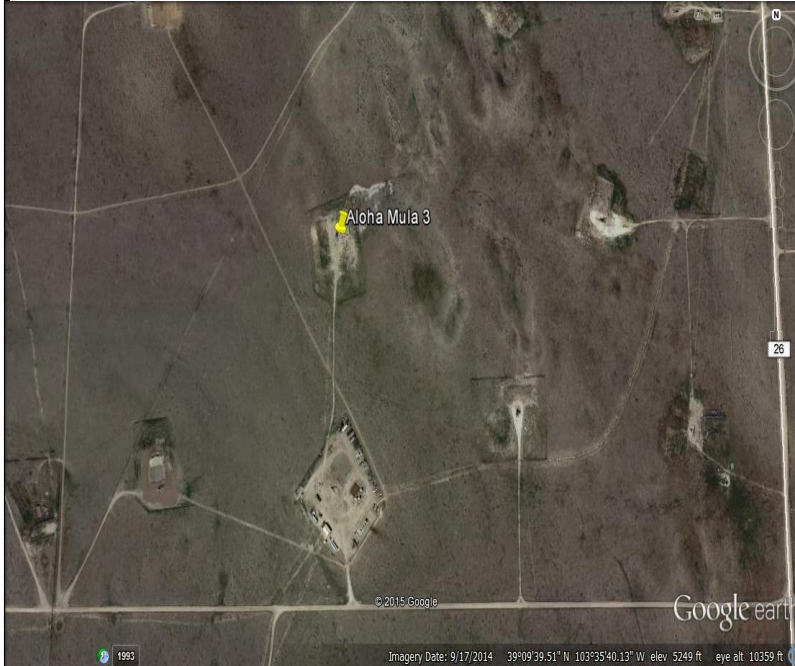
County: Lincoln

Permittee:  
Wiepking-Fullerton  
Energy, LLC

Inspection Date:  
3/28/16



Satellite Map: Courtesy of Google Earth 2015



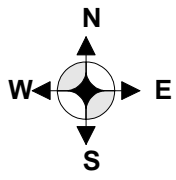
**LEGEND**

Construction Boundary	Wellhead	Ditch
Disturbance Boundary	Rig	Ditch & Berm
Cut/Fill Line	Stock Pile	Erosion Control Blanket
Chemical Storage	Rolloff Frac Tank	Filter Berm
Port-o-let	Frac Trailer	Hydro-mulch
Roadbased Surface	Equipment Storage	Mulching
Surface Water	Trailer	Ripping
Paved Road	Surface Flow	Riprap
Unpaved Road	Vehicle Tracking Control	Sediment Trap
Meter House	Cattleguard	Seeding
Flare	Dumpster	Silt Fence
AST	Berm	Sound Barrier
Water Sump	Check Dam	Straw Bale
Separator	Culvert	Soil Roughening
		Wattle

Topographic Map: Courtesy of Google Earth 2015



- 1) Construction site boundaries include all ground surface disturbances and approximately 10-15 feet beyond perimeter BMPs. Boundaries are subject to change at any time for pad expansion, maintenance and addition of BMP structures, or new access roads.
- 2) Surrounding conditions include rangeland with pre-disturbance vegetation density approximately 70%
- 3) Receiving Body of Water:  
Big Sandy Creek approximately 9585' Northeast
- 4) Pad will be graded and seeded, if necessary, to as close to pre-existing conditions as practicable once construction is completed.
- 5) Pad dimensions are approximate.

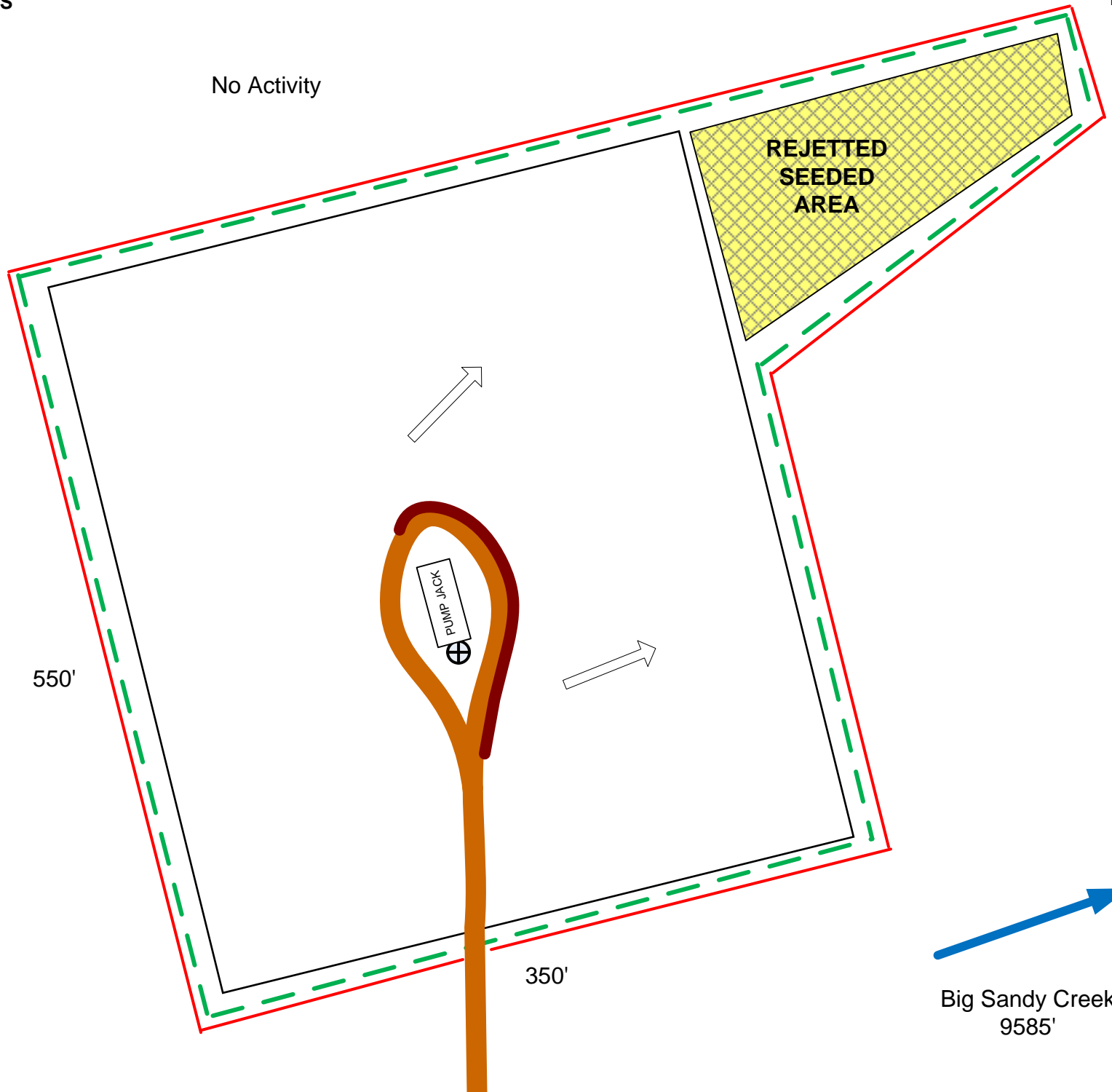


Lease/Name: Aloha Mula 3  
 Land Use: Grazeland  
 Runoff Risk: Low

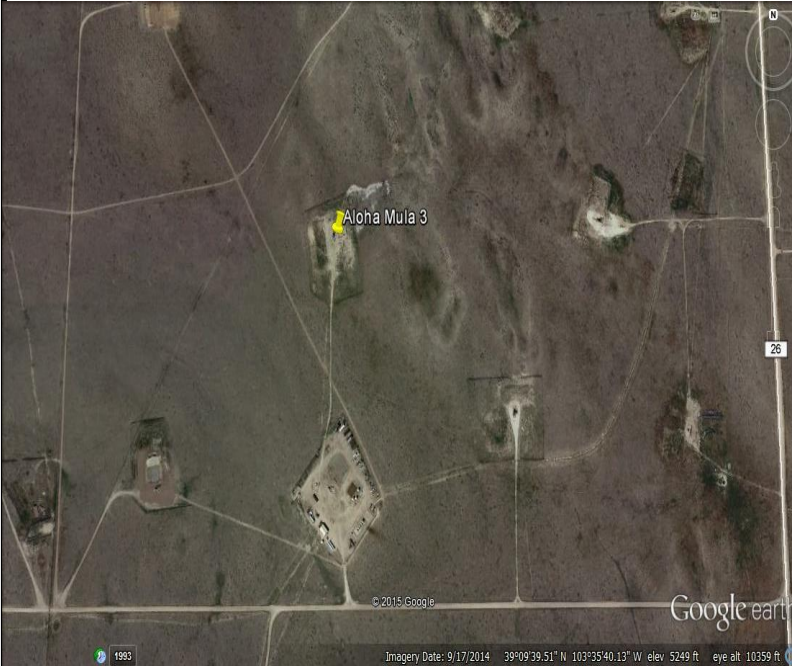
API: 073-06387 TWN: 10S RING: 55W SEC: 19  
 Lat/Long: 39.16235/-103.5963  
 County: Lincoln

Permittee:  
 Wiepking-Fullerton  
 Energy, LLC

Inspection Date:  
 4/12/16



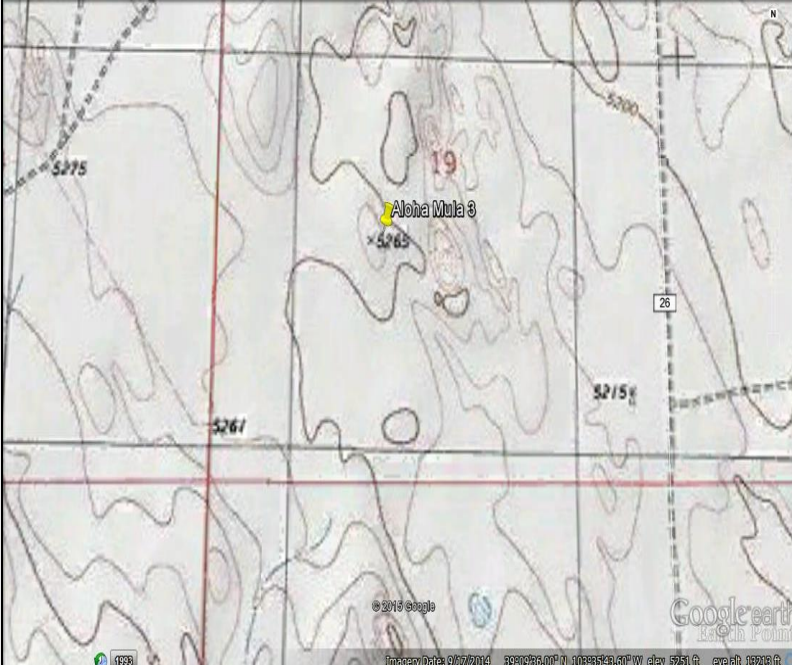
Satellite Map: Courtesy of Google Earth 2015



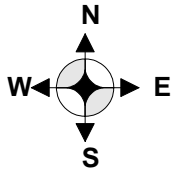
**LEGEND**

Construction Boundary	Wellhead	Ditch
Disturbance Boundary	Rig	Ditch & Berm
Cut/Fill Line	Stock Pile	Erosion Control Blanket
Chemical Storage	Rolloff Frac Tank	Filter Berm
Port-o-let	Frac Trailer	Hydro-mulch
Roadbased Surface	Equipment Storage	Mulching
Surface Water	Trailer	Ripping
Paved Road	Surface Flow	Riprap
Unpaved Road	Vehicle Tracking Control	Sediment Trap
Meter House	Cattleguard	Seeding
Flare	Dumpster	Silt Fence
AST	Berm	Sound Barrier
Water Sump	Check Dam	Straw Bale
Separator	Culvert	Soil Roughening
		Wattle

Topographic Map: Courtesy of Google Earth 2015



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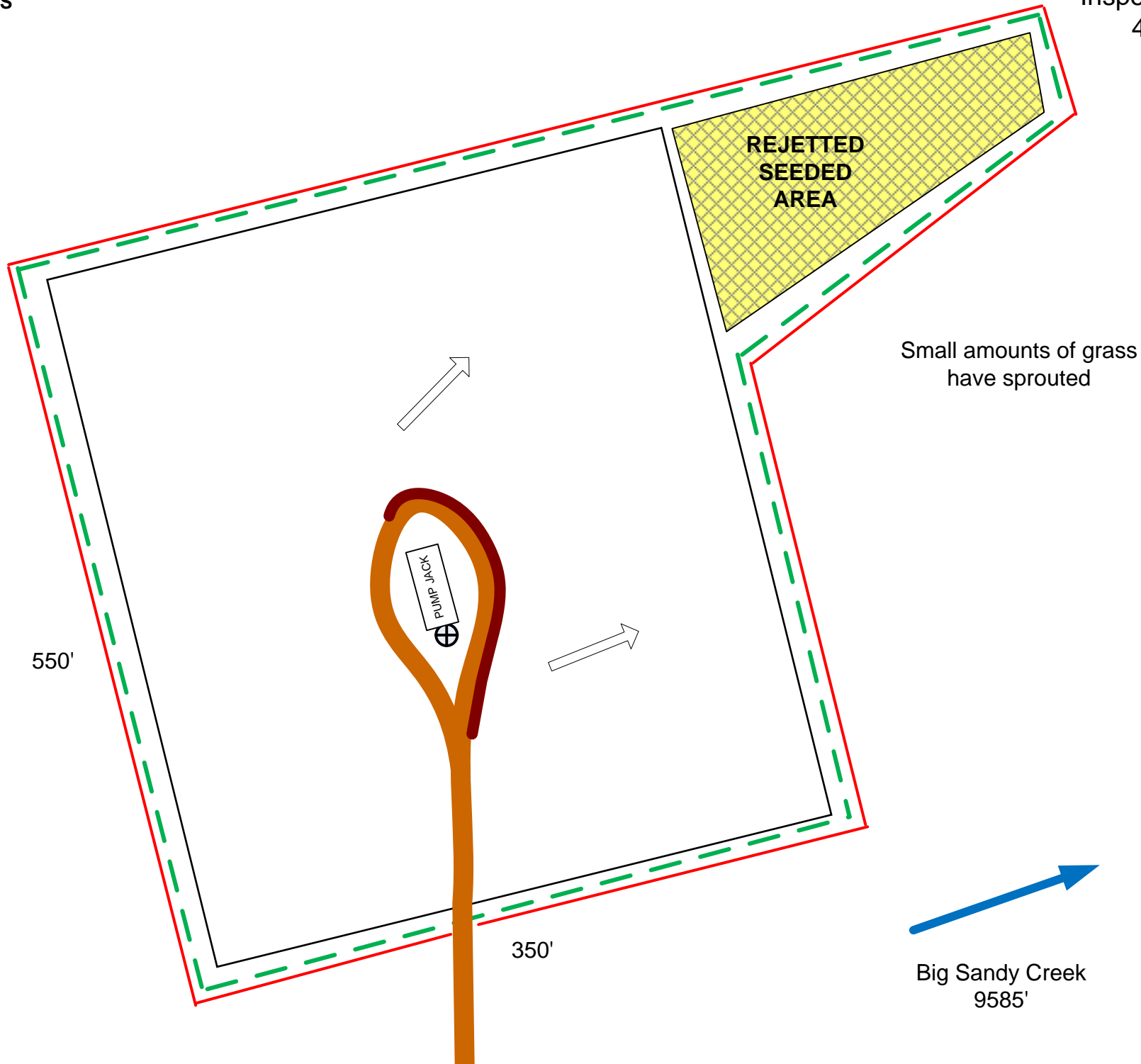


Lease/Name: Aloha Mula 3  
 Land Use: Grazeland  
 Runoff Risk: Low

API: 073-06387 TWN: 10S RNG: 55W SEC: 19  
 Lat/Long: 39.16235/-103.5963  
 County: Lincoln

Permittee:  
 Wiepking-Fullerton  
 Energy, LLC

Inspection Date:  
 4/21/16



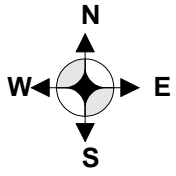
**LEGEND**

Construction Boundary	Pad Surface Boundary	Ditch
Disturbance Boundary	Wellhead	Ditch & Berm
Cut/Fill Line	Rig	Erosion Control Blanket
Chemical Storage	Stock Pile	Filter Berm
Port-o-let	Rolloff Frac Tank	Hydro-mulch
Roadbased Surface	Frac Trailer	Mulching
Surface Water	Equipment Storage	Ripping
Paved Road	Trailer	Riprap
Unpaved Road	Surface Flow	Sediment Trap
Meter House	Vehicle Tracking Control	Seeding
Flare	Cattleguard	Silt Fence
AST	Dumpster	Sound Barrier
Water Sump	Berm	Straw Bale
Separator	Check Dam	Soil Roughening
	Culvert	Wattle

Topographic Map: Courtesy of Google Earth 2015



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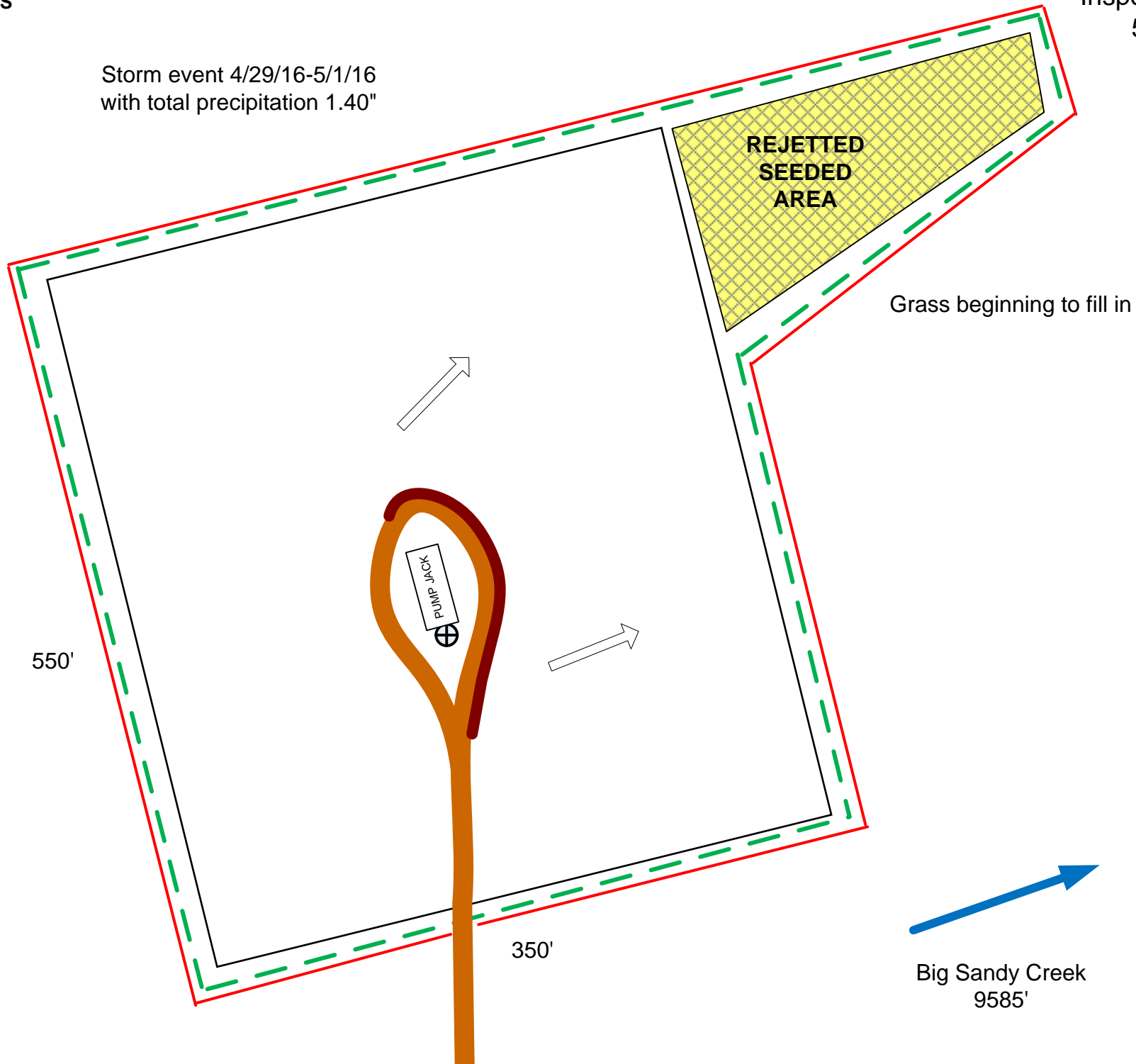
Lease/Name: Aloha Mula 3  
 Land Use: Grazeland  
 Runoff Risk: Low

API: 073-06387 TWN: 10S RNG: 55W SEC: 19  
 Lat/Long: 39.16235/-103.5963  
 County: Lincoln

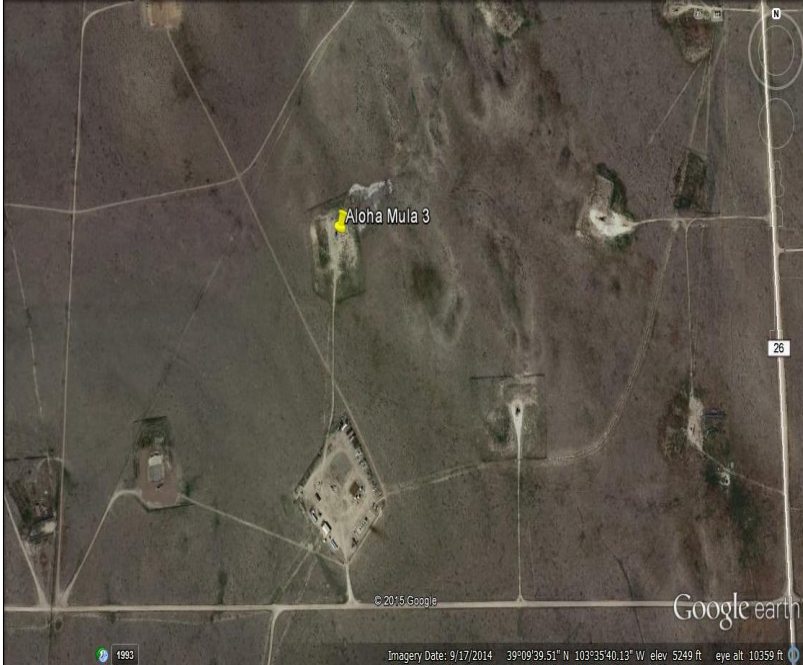
Permittee:  
 Wiepking-Fullerton  
 Energy, LLC

Inspection Date:  
 5/03/16

Storm event 4/29/16-5/1/16  
 with total precipitation 1.40"



Satellite Map: Courtesy of Google Earth 2015



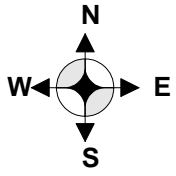
**LEGEND**

Construction Boundary	Pad Surface Boundary	Ditch
Disturbance Boundary	Wellhead	Ditch & Berm
Cut/Fill Line	Rig	Erosion Control Blanket
Chemical Storage	Stock Pile	Filter Berm
Port-o-let	Rolloff Frac Tank	Hydro-mulch
Roadbased Surface	Frac Trailer	Mulching
Surface Water	Equipment Storage	Ripping
Paved Road	Trailer	Riprap
Unpaved Road	Surface Flow	Sediment Trap
Meter House	Vehicle Tracking Control	Seeding
Flare	Cattleguard	Silt Fence
AST	Dumpster	Sound Barrier
Water Sump	Berm	Straw Bale
Separator	Check Dam	Soil Roughening
	Culvert	Wattle

Topographic Map: Courtesy of Google Earth 2015



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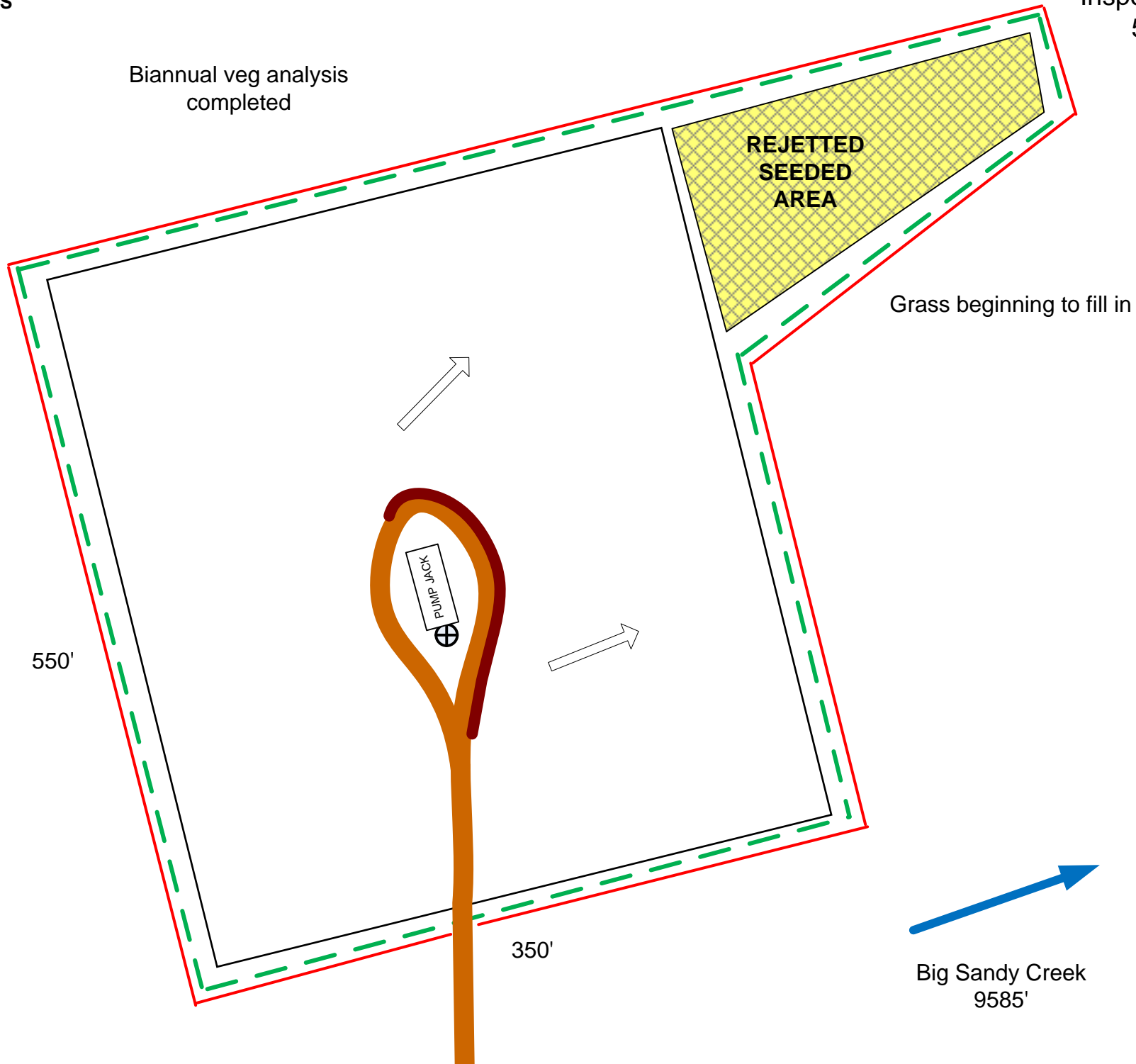
Lease/Name: Aloha Mula 3  
 Land Use: Grazeland  
 Runoff Risk: Low

API: 073-06387 TWN: 10S RNG: 55W SEC: 19  
 Lat/Long: 39.16235/-103.5963  
 County: Lincoln

Permittee:  
 Wiepking-Fullerton  
 Energy, LLC

Inspection Date:  
 5/20/16

Biannual veg analysis  
 completed



Satellite Map: Courtesy of Google Earth 2015



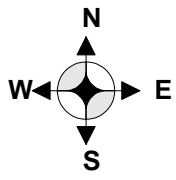
**LEGEND**

Construction Boundary	Pad Surface Boundary	Ditch
Disturbance Boundary	Wellhead	Ditch & Berm
Cut/Fill Line	Rig	Erosion Control Blanket
Chemical Storage	Stock Pile	Filter Berm
Port-o-let	Rolloff Frac Tank	Hydro-mulch
Roadbased Surface	Frac Trailer	Mulching
Surface Water	Equipment Storage	Ripping
Paved Road	Trailer	Riprap
Unpaved Road	Surface Flow	Sediment Trap
Meter House	Vehicle Tracking Control	Seeding
Flare	Cattleguard	Silt Fence
AST	Dumpster	Sound Barrier
Water Sump	Berm	Straw Bale
Separator	Check Dam	Soil Roughening
	Culvert	Wattle

Topographic Map: Courtesy of Google Earth 2015



- 1) Construction site boundaries include all ground surface disturbances and approximately 10-15 feet beyond perimeter BMPs. Boundaries are subject to change at any time for pad expansion, maintenance and addition of BMP structures, or new access roads.
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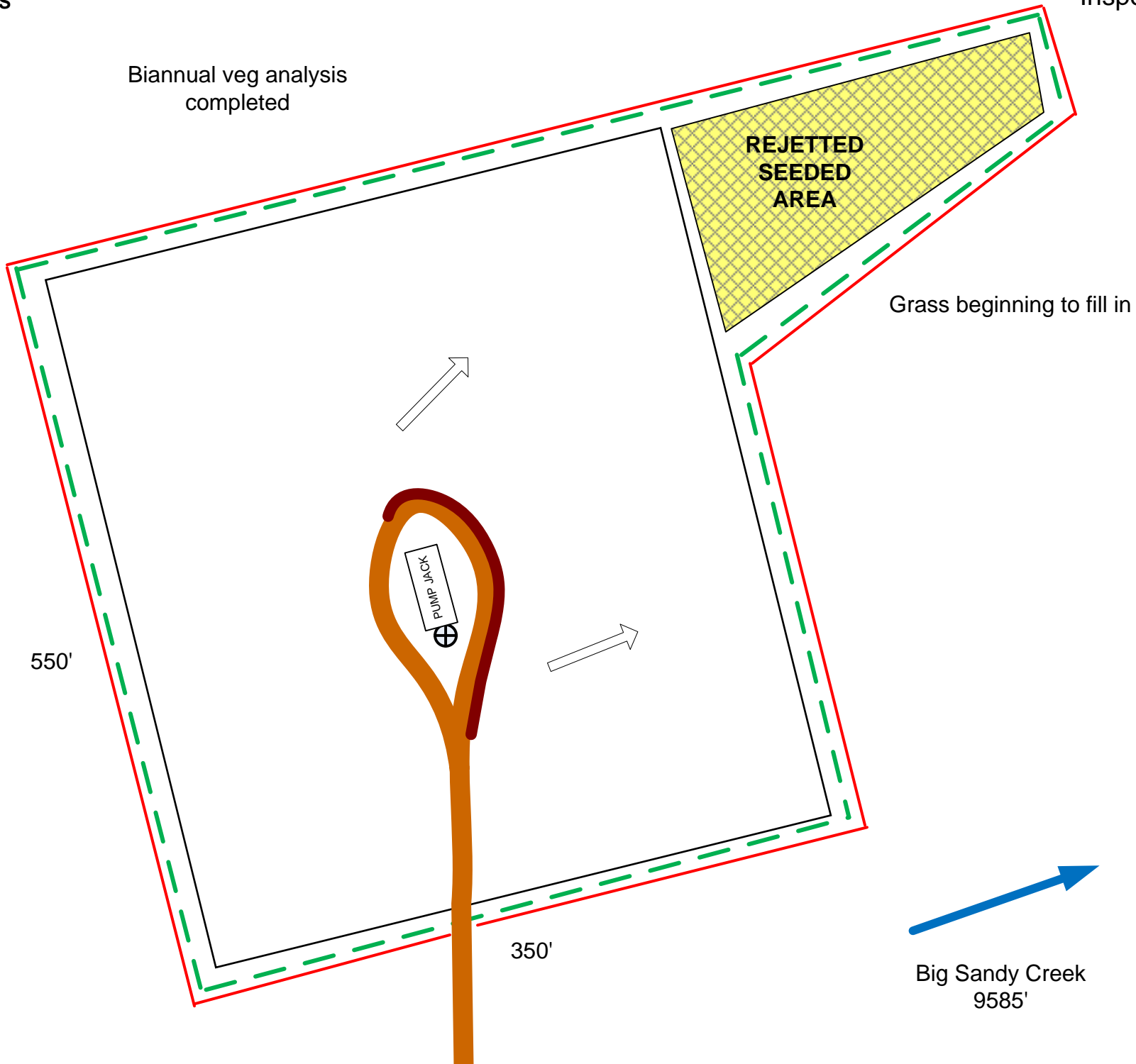
Lease/Name: Aloha Mula 3  
 Land Use: Grazeland  
 Runoff Risk: Low

API: 073-06387 TWN: 10S RING: 55W SEC: 19  
 Lat/Long: 39.16235/-103.5963  
 County: Lincoln

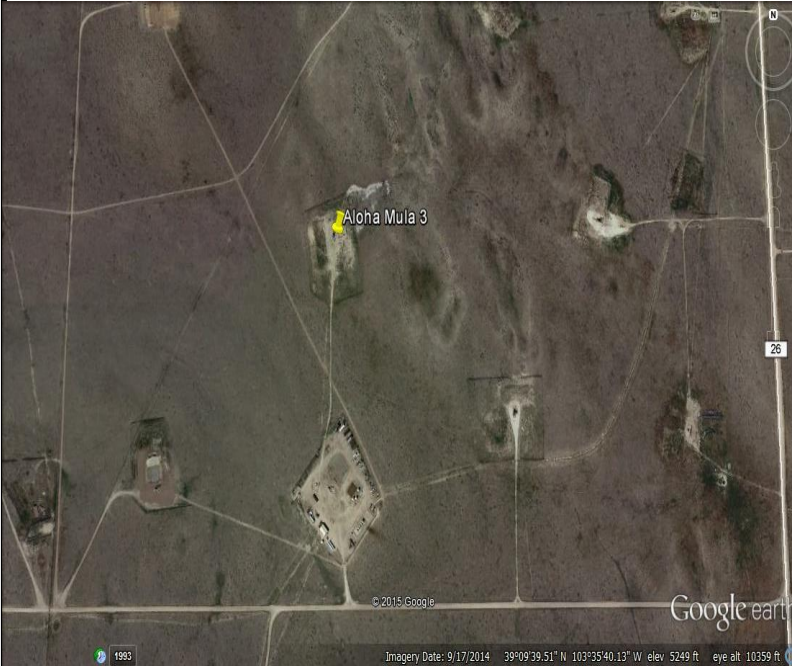
Permittee:  
 Wiepking-Fullerton  
 Energy, LLC

Inspection Date:  
 6/1/16

Biannual veg analysis  
 completed



Satellite Map: Courtesy of Google Earth 2015



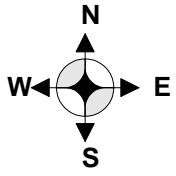
**LEGEND**

Construction Boundary	Pad Surface Boundary	Ditch
Disturbance Boundary	Wellhead	Ditch & Berm
Cut/Fill Line	Rig	Erosion Control Blanket
Chemical Storage	Stock Pile	Filter Berm
Port-o-let	Rolloff Frac Tank	Hydro-mulch
Roadbased Surface	Frac Trailer	Mulching
Surface Water	Equipment Storage	Ripping
Paved Road	Trailer	Riprap
Unpaved Road	Surface Flow	Sediment Trap
Meter House	Vehicle Tracking Control	Seeding
Flare	Cattleguard	Silt Fence
AST	Dumpster	Sound Barrier
Water Sump	Berm	Straw Bale
Separator	Check Dam	Soil Roughening
	Culvert	Wattle

Topographic Map: Courtesy of Google Earth 2015



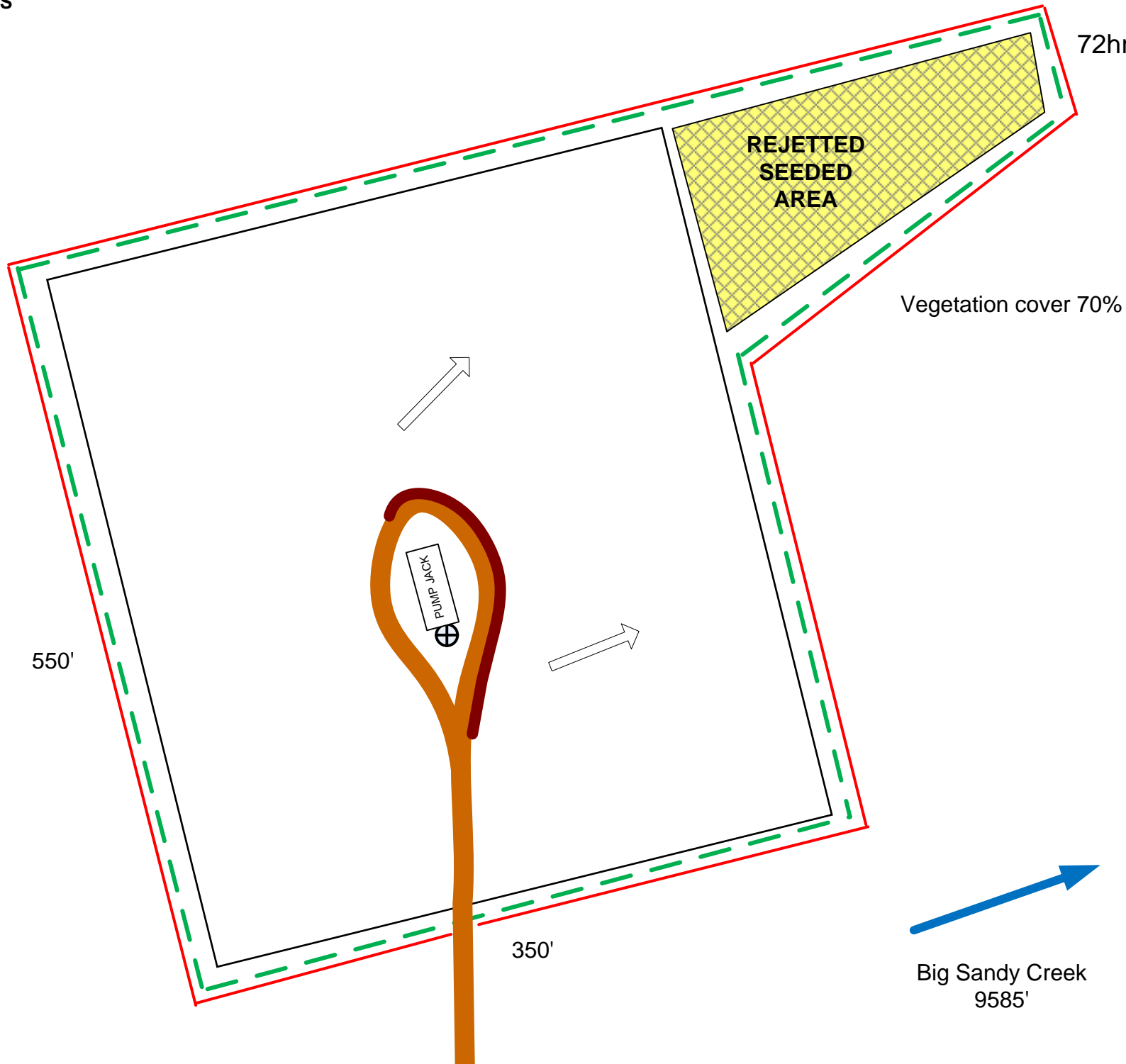
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Lease/Name: Aloha Mula 3  
 Land Use: Grazeland  
 Runoff Risk: Low

API: 073-06387 TWN: 10S RNG: 55W SEC: 19  
 Lat/Long: 39.16235/-103.5963  
 County: Lincoln

Permittee:  
 Wiepking-Fullerton  
 Energy, LLC  
 Inspection Date:  
 7/6/16  
 72hr storm event



Satellite Map: Courtesy of Google Earth 2015



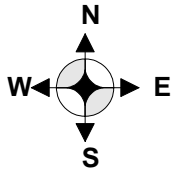
**LEGEND**

Construction Boundary	Pad Surface Boundary	Ditch
Disturbance Boundary	Wellhead	Ditch & Berm
Cut/Fill Line	Rig	ECB Erosion Control Blanket
Chemical Storage	Stock Pile	Filter Berm
Port-o-let	Rolloff Frac Tank	Hydro-mulch
Roadbased Surface	Frac Trailer	Mulching
Surface Water	Equipment Storage	Ripping
Paved Road	Trailer	Riprap
Unpaved Road	Surface Flow	Sediment Trap
Meter House	Vehicle Tracking Control	Seeding
Flare	Cattleguard	Silt Fence
AST	Dumpster	Sound Barrier
Water Sump	Berm	Straw Bale
Separator	Check Dam	Soil Roughening
	Culvert	Wattle

Topographic Map: Courtesy of Google Earth 2015



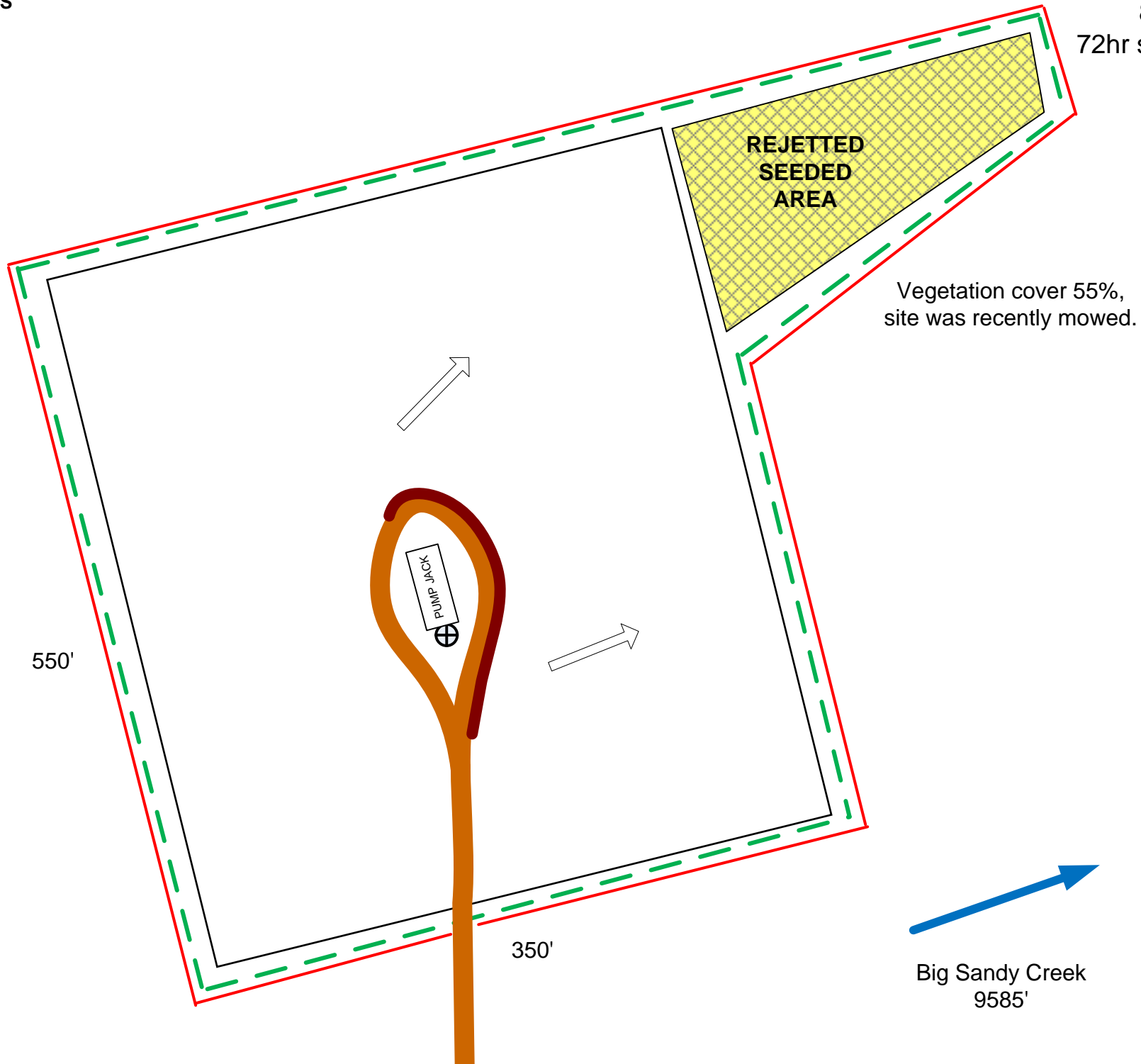
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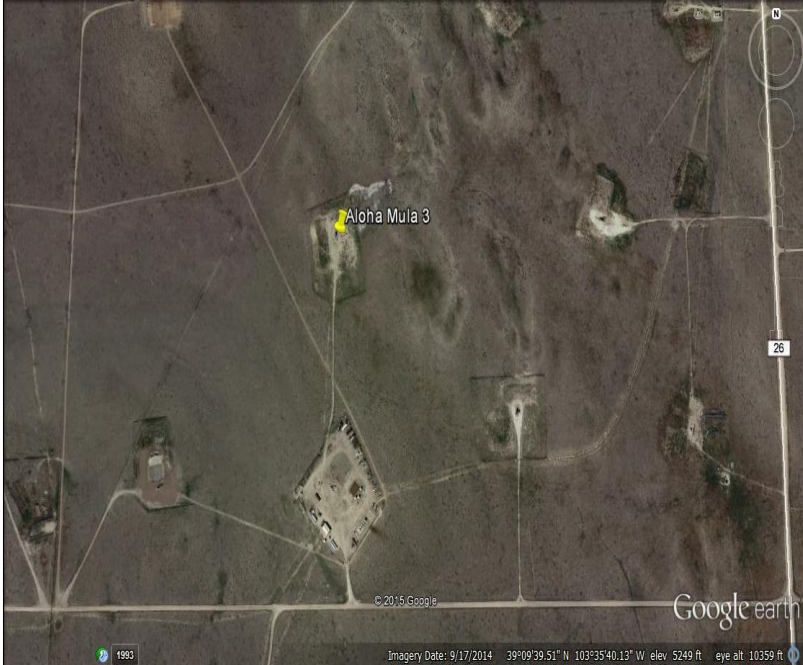
Lease/Name: Aloha Mula 3  
 Land Use: Grazeland  
 Runoff Risk: Low

API: 073-06387 TWN: 10S RNG: 55W SEC: 19  
 Lat/Long: 39.16235/-103.5963  
 County: Lincoln

Permittee:  
 Wiepking-Fullerton  
 Energy, LLC  
 Inspection Date:  
 8/1/16  
 72hr storm event



Satellite Map: Courtesy of Google Earth 2015



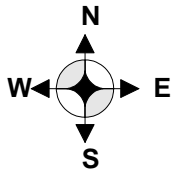
**LEGEND**

Construction Boundary	Pad Surface Boundary	Ditch
Disturbance Boundary	Wellhead	Ditch & Berm
Cut/Fill Line	Rig	Erosion Control Blanket
Chemical Storage	Stock Pile	Filter Berm
Port-o-let	Rolloff Frac Tank	Hydro-mulch
Roadbased Surface	Frac Trailer	Mulching
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Paved Road	Trailer	Riprap
Unpaved Road	Surface Flow	Sediment Trap
Meter House	Vehicle Tracking Control	Seeding
Flare	Cattleguard	Silt Fence
AST	Dumpster	Sound Barrier
Water Sump	Berm	Straw Bale
Separator	Check Dam	Soil Roughening
	Culvert	Wattle

Topographic Map: Courtesy of Google Earth 2015



- 1) Construction site boundaries include all ground surface disturbances and approximately 10-15 feet beyond perimeter BMPs. Boundaries are subject to change at any time for pad expansion, maintenance and addition of BMP structures, or new access roads.
- 2) Surrounding conditions include rangeland with pre-disturbance vegetation density approximately 70%
- 3) Receiving Body of Water:  
Big Sandy Creek approximately 9585' Northeast
- 4) Pad will be graded and seeded, if necessary, to as close to pre-existing conditions as practicable once construction is completed.
- 5) Pad dimensions are approximate.

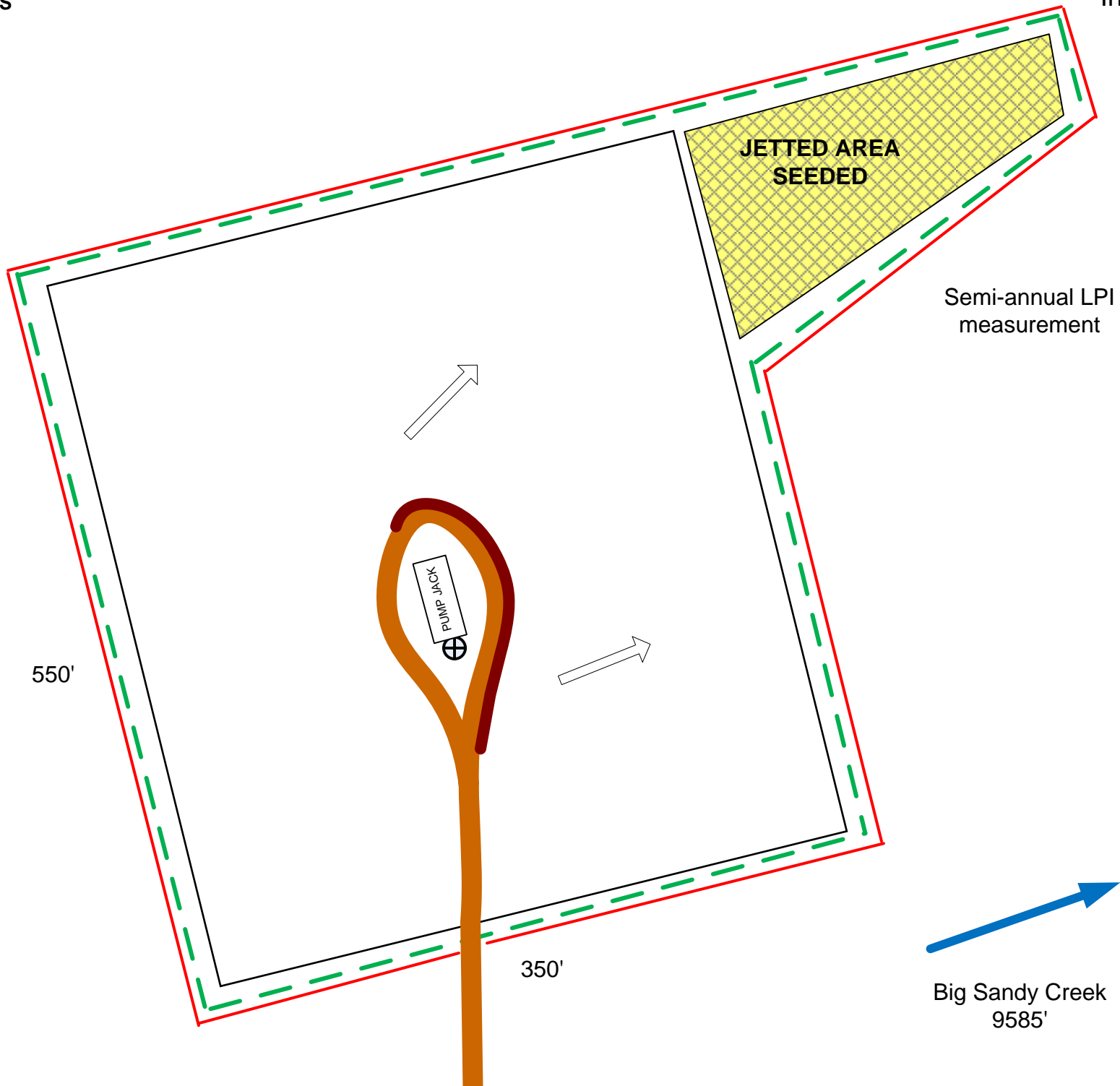


Lease/Name: Aloha Mula 3  
 Land Use: Grazeland  
 Runoff Risk: Low

API: 073-06387 TWN: 10S RNG: 55W SEC: 19  
 Lat/Long: 39.16235/-103.5963  
 County: Lincoln

Permittee:  
 Wiepking-Fullerton  
 Energy, LLC

Inspection Date:  
 9/9/16



Satellite Map: Courtesy of Google Earth 2015



**LEGEND**

Construction Boundary	Pad Surface Boundary	Ditch
Disturbance Boundary	Wellhead	Ditch & Berm
Cut/Fill Line	Rig	Erosion Control Blanket
Chemical Storage	Stock Pile	Filter Berm
Port-o-let	Rolloff Frac Tank	Hydro-mulch
Roadbased Surface	Frac Trailer	Mulching
Surface Water	Equipment Storage	Ripping
Paved Road	Trailer	Riprap
Unpaved Road	Surface Flow	Sediment Trap
Meter House	Vehicle Tracking Control	Seeding
Flare	Cattleguard	Silt Fence
AST	Dumpster	Sound Barrier
Water Sump	Berm	Straw Bale
Separator	Check Dam	Soil Roughening
	Culvert	Wattle

Topographic Map: Courtesy of Google Earth 2015



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**APPENDIX C**  
**RECLAMATION MONITORING REPORT**







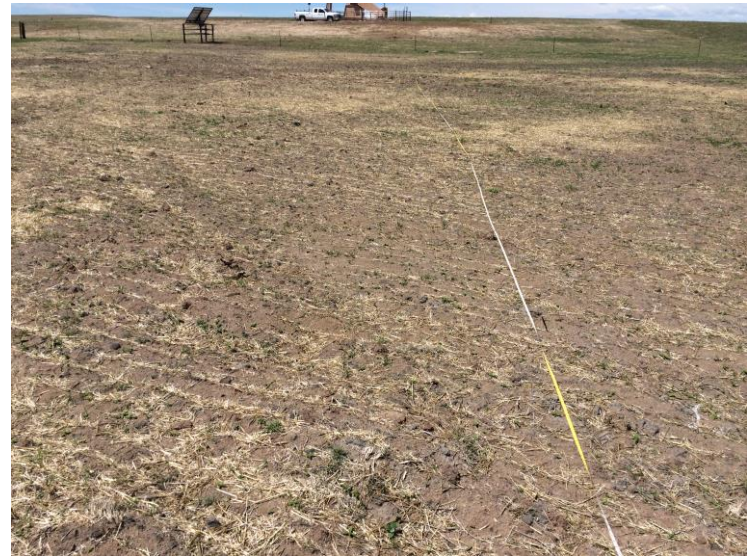
Facing North



Facing East



Facing South



Facing West

Photographs Taken: 05/20/2016

Aloha Mula 3 – Reclamation Monitoring

**Photographic Log**

Location: Aloha Mula 3

API: 05-073-06387

Status: Interim

Location: Lincoln County, Colorado

Monitoring Date: 09/09/2016

**Qualitative Analysis**

Access Road in Use	Y
Road recontoured properly	NA
Site recontoured properly	Y
Road base removed	Y
Equipment on site	Y
Trash or debris on site	N
Vehicle disturbances	N
Wildlife disturbances	N
Grazing disturbances	N
Reclamation area Fenced	Y
Subsidence	N
Seed germination	Y
Desirable plants vigorous	Y
Uniform growth	N

**General Comments**

Noxious weeds observed onsite: None  
 Species observed onsite: AMPS, BAPR5, CHAMA15, CELO3, HECO26, HELIA3, PGB1  
 Overall good, needs time for grasses to fill in

**Recommendations**

Keep fence closed and continue weed control

**Quantitative Analysis**

Onsite	
Species	%
<i>Ambrosia psilostachya</i>	27
Unknown Perennial Bunch Grass	16
<i>Helianthus L.</i>	5
<i>Hesperostipa comata</i>	1
<i>Cenchrus longispinus</i>	1
<i>Chamaesyce sp.</i>	<1
<i>Yucca glauca</i>	<1
<i>Bassia prostrata</i>	<1
Total Canopy Cover	50
Non-Weed Canopy Cover*	23
Non-Weed Basal Cover	4

Offsite	
Species	%
<i>Bouteloua gracilis</i>	25
Unknown Perennial Rizome Grass	19
<i>Andropogon hallii</i>	10
<i>Heterotheca Cass.</i>	10
<i>Yucca glauca</i>	6
<i>Artemisia filifolia</i>	5
<i>Hesperostipa comata</i>	4
<i>Aristida purpurea</i>	3
<i>Conyza canadensis</i>	<1
Total Canopy Cover	82
Non-Weed Canopy Cover*	82
Non-Weed Basal Cover	11

**Quantitative Results**

Ratio of % Non-weedy Canopy Cover Onsite to % Non-weedy Canopy Cover Offsite = 28%  
 Ratio of % Non-weedy Basal Cover Onsite to % Non-weedy Basal Cover Offsite = 36%

\*Noxious weeds are designated species determined by the Colorado Noxious Weed Act. Other undesirable species are commonly known as weeds in the region.



Facing North



Facing East



Facing South



Facing West

Photographs Taken: 09/09/2016

Aloha Mula 3 – Reclamation Monitoring

**Photographic Log**