

State of Colorado
Oil and Gas Conservation Commission



FOR OGCC USE ONLY
REM 5132
Facility ID 327499
Document 2526179

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

OGCC Employee:
 Spill Complaint
 Inspection NOAV
Tracking No:

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): _____

OGCC Operator Number: <u>10433</u>	Contact Name and Telephone: <u>Lorne C Prescott</u>
Name of Operator: <u>Laramie Energy, LLC</u>	No: <u>970-812-5311</u>
Address: <u>760 Horizon Drive, #101</u>	Fax: _____
City: <u>Grand Junction</u> State: <u>Co</u> Zip: <u>81506</u>	
API Number: <u>05-077-08402</u> County: <u>Mesa</u>	
Facility Name: <u>Colorado Land #1</u> Facility Number: <u>311745</u>	
Well Name: <u>Colorado Land</u> Well Number: <u>#1</u>	
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SWNW 17 10S 94W 6 PM</u> Latitude: <u>39.19219</u> Longitude: <u>107.91111</u>	

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Suspected Produced water/condensate from 1992 spill

Site Conditions: Is location within a sensitive area (according to Rule 901e)? Y N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Irrigated and Rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Cumulic Haploborolis, 1-3% slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Surface waters ~139' west to Grove Creek

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>Soils extent is approximately 300'x100'x15'</u>	<u>Excavations, sampling, and extrapolation</u>
<input type="checkbox"/> Vegetation	_____	_____
<input checked="" type="checkbox"/> Groundwater	<u>Groundwater extent is approximately 300'x100'x15'</u>	<u>Excavations, sampling, and extrapolation</u>
<input type="checkbox"/> Surface Water	<u>Extent limited to 300' of creek</u>	<u>Visual and water sampling</u>

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

The identification of spill and proposed remediation has been previously documented via doc #s 2607960, 2231951, 2221291, 400870439 and Remediation # 5132

Describe how source is to be removed:

As per a site visit with C. Lujan of COGCC, the extent of the contamination will be determined via soils removal and analysis. Please see the attached work plan for additional details.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, inand treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

Based on recent examination of the soil and water sampling data, Laramie believes excavation and soil testing should be limited to the area(s) adjacent to the separators. Additional text and details are attached to this submittal.

FORM
27
Rev 6/99

State of Colorado
Oil and Gas Conservation Commission
1120 Lincoln Street, Suite 801, Denver, Colorado 80203
(303)894-2100 Fax: (303)894-2109



Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

Page 2
REMEDIATION WORKPLAN (Cont.)

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Laramie will continue with the existing (quarterly) groundwater monitoring schedule, at the previously identified sample points and use the same analytical methodologies. Results will be provided to the COGCC via Form 4 submittals.

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

See attached Work Plan and diagrams.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? Y N If yes, describe:

Soils will be excavated to determine the extent of the contamination. See attached Work Plan and diagrams.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

Contaminated soils will be remediated via land farming onsite according to the COGCC Table 910-1 thresholds. When analysis of the remediated soils indicates they are below 910-1 criteria, the material will be used to backfill the excavated area.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: Approx 11/21/11 Date Site Investigation Completed: 4/25/16 Date Remediation Plan Submitted: 5/3/16
Remediation Start Date: 5/15/16 Anticipated Completion Date: 7/15/16 Actual Completion Date: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Lorne C. Prescott Signed: [Signature]
Title: Regulatory and Enviro Compliance Date: 5/3/16

OGCC Approved: _____ Title: _____ Date: _____

See attached Conditions of Approval

Laramie Energy, LLC

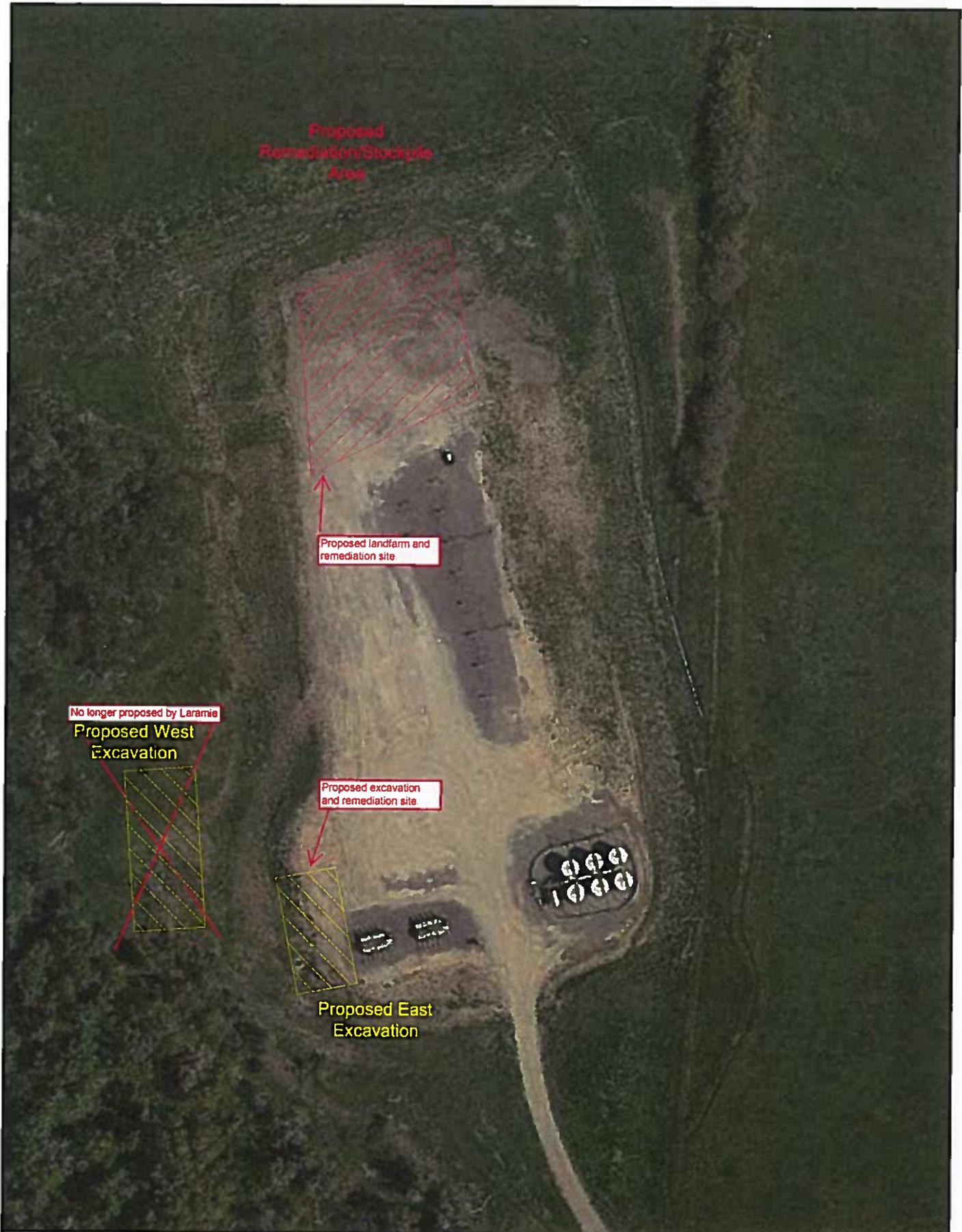
Proposed Remediation Work Plan for Location ID 334537, Colorado #1

As part of Laramie Energy, LLC's (Laramie) acquisition of the Oxy properties in the Piceance Basin, Laramie has assessed the status of remediation at Location ID 334537 (at well location LL&C 17-3A, and referred to Colorado #1). The original NOAV was #200262741 addressed via remediation document #5132 and document 2607960.

Laramie's review of the available written materials and analytical data and determined the approach outlined in the remediation documents was too broad in scope and did not concentrate on the root cause of the contamination. These plans recommended excavation of soils at two locations, one immediately southwest of the existing separators and a second location further southwest closer to Grove Creek. The data appears to support the assertion that the contaminated area is immediately to the southwest of the separators. Onsite visit with COGCC affirms this is the appropriate starting point for excavation/soil removal. Laramie believes excavation and soil testing should be limited to the area(s) adjacent to the separators. (See attached drawing)

Based upon available sampling data, the location is flagged and Laramie intends to excavate the area to confirm the extent of contamination and land farm those soils with TPH concentrations greater than 500 ppm on site during the excavation Laramie staff will use the "petro flag" analysis kit to assess the hydrocarbon contaminants in the soils. Testing of the excavated soils will occur regularly throughout the excavation process. The final boundaries for the full excavation will be dependent upon this ongoing petro flag assessment. Any excavated soils with a "petro flag" TPH reading of 500 ppm or greater will have samples collected and sent off for analysis in accordance with 910 rules to allow for a baseline for the land farming process. The excavate soils will be moved to the north east of the existing pad disturbance and remediated. Land farm remediation will consist of typical best management practices (BMPs) including benching and spreading soils and the addition of amendments to reduce hydrocarbon levels. Soils below the threshold noted above will be deemed clean and will be stockpiled on location prior to placing them back into the excavated hole. When analysis of the remediated soils indicates hydrocarbon levels are below the COGCC table 910-1 thresholds the soils will be used to backfill the excavated hole or spread out on location depending on the volume excavated.

Regular water sampling, analysis and submittals to the COGCC will continue as per the details in previous Form 27 and Form 4 submittals. Laramie anticipates future water sampling results will confirm that the proposed excavation succeeded in removing the hydrocarbon contamination.



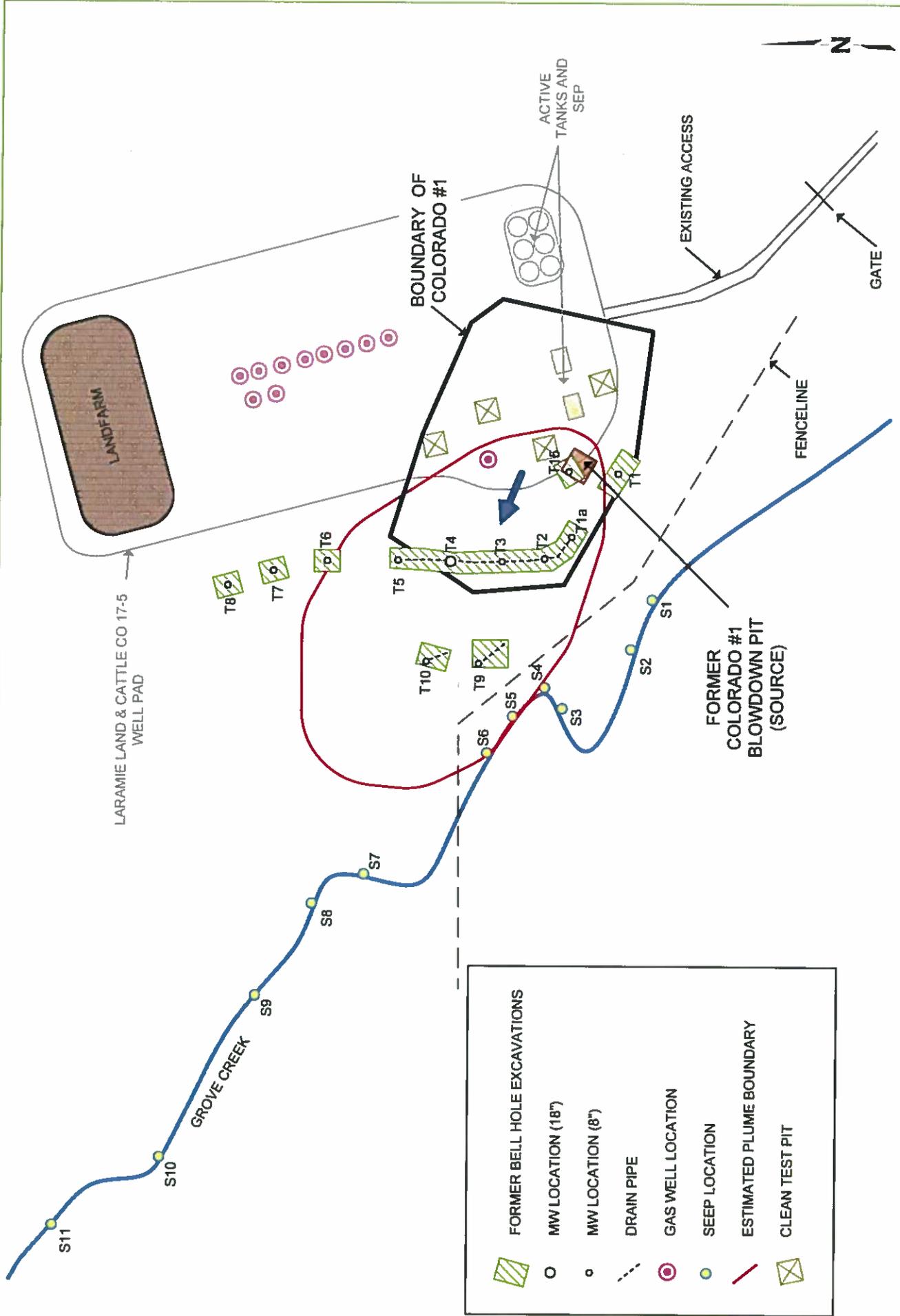
PROJECT: 013-3268
 DRAWN BY: RAS
 DATE: 07/07/20015

Proposed Remediation Areas
 July 2015
 OXY YT RANCH 17-5
 MESA COUNTY, COLORADO

OLSSON
 ASSOCIATES
 760 Horizon Drive, Suite 102
 Grand Junction, CO 81508
 TEL 970.263.7800
 FAX 970.263.7458

FIGURE
 1

DWG: F:\Projects\013-3268\50w figure 1.dwg



- FORMER BELL HOLE EXCAVATIONS
- MW LOCATION (18")
- MW LOCATION (8")
- DRAIN PIPE
- GAS WELL LOCATION
- SEEP LOCATION
- ESTIMATED PLUME BOUNDARY
- CLEAN TEST PIT

PROJECT NO: 011-1708	826 21½ Road	Figure
DRAWN BY: KLK	Grand Junction, CO 81505	1
DATE: 09/15/2011	TEL 970.263.7800	
	FAX 970.263.7456	
OLSSON ASSOCIATES		
COLORADO #1 REMEDIATION SITE DIAGRAM		
OXY USA INC.		
SW ¼ NW¼ SECTION 17 T10S R94W		
MESA COUNTY, CO		

COLORADO LAND #1

FORM 27 CONDITIONS OF APPROVAL

- 1) Provide baseline analytical results of E&P waste to be land farmed. Composite representative samples will suffice.
- 2) Land farm cell pad surface will be compacted to minimize permeability. Consideration should be given to use a liner or to bring some clayey soil, if soil surface is too permeable (even after compaction). Water table is fairly shallow in the area and care shall be taken to avoid groundwater contamination.
- 3) Land farmed material will be spread in lifts no thicker than 18 inches, and bermed with compacted soil.
- 4) Material will be watered frequently to keep soil moist and tilled regularly to improve aeration.
- 5) Material will be sampled periodically (representative composite samples taken every 30 to 45 days) and results will be reported to COGCC via e-form 04.
- 6) Ensure landowner written authorization.
- 7) Notify COGCC 72 hours in advance prior to starting land farm construction.