

April 12, 2013

Chris Canfield
Environmental Protection Specialist
Colorado Oil and Gas Conservation Commission
707 Wapiti Court, Suite 204
Rifle, CO 81650

RE: Form 27 - Whiting Oil and Gas

Dear Mr. Canfield:

Please find the attached Form 27 and supporting documents, submitted on behalf of Whiting Oil & Gas, Operator Number 96155, for the closure of the following pits:

API	Well Number	Well Name	QtrQtr	Sec	TwN	Range	Meridian	Latitude	Longitude
05-103-11178	397-3K-K3	FEDERAL	NESW	3	3S	97W	6	39.81561	-108.2695
05-103-11312	C-32O-I1	BOIES	SWSE	32	2S	98W	6	39.828162	-108.414966
05-103-11211	397-3G-G1	FEDERAL	SWNE	3	3S	97W	6	39.82023	-108.2652
05-103-11021	C-27A-H3	BOIES	NENE	27	2S	98W	6	39.85175	-108.37279
05-103-11037	C-5F-E3	BOIES	SENW	5	3S	98W	6	39.8212	-108.4203
05-103-11219	C-24O-O1	BOIES	SWSE	24	2S	98W	6	39.856183	-108.338705
05-103-11064	C-28P-P3	BOIES	SESE	28	2S	98W	6	39.840473	-108.394358
05-103-11314	C-27K-G1	BOIES	NESW	27	2S	98W	6	39.846072	-108.381334
05-103-11414	B-30H-H3	BOIES	NESE	30	2S	97W	6	39.845842	-108.319537

These nine (9) Whiting Oil & Gas Corporation (Whiting) reserve pits located in the Piceance Basin were reclaimed during the summer of 2012. According to Whiting, the pits were constructed but not all were used. The lining materials were removed and the pits were backfilled; however, confirmation sampling from the bottom of the pits was not conducted. The attached work plan outlines the steps necessary for Whiting and its contractors to collect bottom of pit closure samples to properly close pits in compliance with current Colorado Oil & Gas Conservation Commission (COGCC) regulations (900 and 1000 series) and Colorado Department of Public Health and Environment (CDPHE) regulations (CDPHE Background Data Evaluation Method B).

Thank you in advance for your time in reviewing the attached document. If you have any specific questions, would like additional information, or would otherwise like to discuss the matter further, please contact myself or Will Lambert at 303-837-4238, at your convenience.

Thank you,



Jana Sanders
Regional Manager

JS:sb
Enclosures
Cc: File

State of Colorado
Oil and Gas Conservation Commission



#7933

FOR OGCC USE ONLY

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): Pit Closure

OGCC Operator Number: <u>96155</u>	Contact Name and Telephone: <u>William Lambert</u>
Name of Operator: <u>Whiting Oil and Gas Corporation</u>	No: <u>303-837-4238</u>
Address: <u>1700 Broadway, Suite 2300</u>	Fax: <u>720-644-3637</u>
City: <u>Denver</u> State: <u>CO</u> Zip: <u>80290-2300</u>	

API Number: <u>See attached</u>	County: <u>Rio Blanco #103</u>
Facility Name: _____	Facility Number: _____
Well Name: <u>See attached</u>	Well Number: <u>See attached</u>
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>See attached</u>	Latitude: <u>See attached</u> Longitude: <u>See attached</u>

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Unknown if impact exist

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.): Rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: See attached

Potential receptors (water wells within 1/4 mi, surface waters, etc.): See attached

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

Impacted Media (check):	Extent of Impact:	How Determined:
<input type="checkbox"/> Soils	_____	_____
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

REMEDATION WORKPLAN

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

Nine (9) Whiting Oil & Gas Corporation (Whiting) reserve pits located in the Piceance Basin were reclaimed during the summer of 2012. According to Whiting, the pits were constructed but not all were used. The lining materials were removed and the pits were backfilled; however, confirmation sampling from the bottom of the pits were not conducted. This guidance document outlines the steps necessary for Whiting and its contractors to collect bottom of pit closure samples to properly close pits in compliance with current Colorado Oil & Gas Conservation Commission (COGCC) regulations (900 and 1000 series) and Colorado Department of Public Health and Environment (CDPHE) regulations (CDPHE Background Data Evaluation Method B).

Describe how source is to be removed:

If it is determined through the described sampling process that the soils are impacted, a remediation plan will be developed.

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

It is unknown if impacts exist. Should it be determined through the described sampling process that the soils are impacted, a remediation plan will be developed.



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.):

It is not believed groundwater is impacted; however, if it is determined through the described sampling process that the groundwater is impacted, a remediation plan will be developed.

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.

If it is determined through the described sampling process that the groundwater is impacted, a remediation plan will be developed. Any remediation will be in accordance with applicable COGCC regulations.

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:

It is unknown at this time if additional investigation will be required.

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

If E&P waste is encountered, it will be disposed of in accordance with applicable local, State and Federal requirements.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 2013 Date Site Investigation Completed: To be determined Date Remediation Plan Submitted: _____
Remediation Start Date: To be determined Anticipated Completion Date: To be determined Actual Completion Date: To be determined

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

Print Name: _____ Signed: _____

Title: _____ Date: _____

OGCC Approved: _____ Title: _____ Date: _____



InterTech

March, 2013

PIT CLOSURE WORK PLAN



**Whiting Oil & Gas Corporation
1700 Broadway, Suite 2300
Denver, CO 80290**

Prepared By:



InterTech

**InterTech Environmental & Engineering, LLC
743 Horizon Court, Suite 110
Grand Junction, CO 81506**

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- B – COGCC - Sundry, Form 4

INTRODUCTION

Nine (9) Whiting Oil & Gas Corporation (Whiting) reserve pits located in the Piceance Basin were reclaimed during the summer of 2012. According to Whiting, the pits were constructed but not all were used. The lining materials were removed and the pits were backfilled; however, confirmation sampling from the bottom of the pits was not conducted. This guidance document outlines the steps necessary for Whiting and its contractors to collect bottom of pit closure samples to properly close pits in compliance with current Colorado Oil & Gas Conservation Commission (COGCC) regulations (900 and 1000 series) and Colorado Department of Public Health and Environment (CDPHE) regulations (CDPHE Background Data Evaluation Method B).

The following locations are associated with the proposed work plan:

API	Well Number	Well Name	QtrQtr	Sec	Twn	Rng	Meridian	Latitude	Longitude
05-103-11178	397-3K-K3	FEDERAL	NESW	3	3S	97W	6	39.81561	-108.2695
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05-103-11414	B-30H-H3	BOIES	NESE	30	2S	97W	6	39.845842	-108.319537

REGULATIONS AND DEFINITIONS

The COGCC regulations stipulate that pits not used exclusively for drilling operations, buried or partially buried produced water vessels, and emergency pits shall be closed in accordance with an approved Site Investigation and Remediation Work Plan, Form 27 (Appendix A). Drilling pits, as defined below, do not require submittal of a Form 27; however, one may be developed and presented at the request of the COGCC Director.

Definitions of the different types of pits associated with well installation and production, as defined by the COGCC Rules and Regulations 100 Series Definitions, are as follows:

Drilling Pits are defined as those pits used during drilling operations and initial completion of a well. Included are:

- **Ancillary pits:** Pits used to contain fluids during drilling operations and initial completion procedures, such as circulation pits and water storage pits.
- **Completion pits:** Pits used to contain fluids and solids produced during initial completion procedures, and not originally constructed for use in drilling operations.
- **Flowback pits:** Pits used to contain fluids and solids produced during initial completion procedures.
- **Reserve pits:** Pits used to store drilling fluids for use in drilling operations or to contain Exploration & Production (E&P) waste generated during drilling operations and initial completion procedures.

Production Pits are defined as those pits used after drilling operations and initial completion of a well, including pits at natural gas gathering, processing and storage facilities, which constitute:

- Skimming/settling pits: Pits used to provide retention time for settling of solids and separation of residual oil for the purposes of recovering the oil or fluid.
- Produced water pits: Pits used to temporarily store produced water prior to injection for enhanced recovery or disposal, off-site transport, or surface-water discharge.
- Percolation pits: Pits used to dispose of produced water by percolation and evaporation through the bottom or sides of the pits into surrounding soils.
- Evaporation pits: Pits used to contain produced waters which evaporate into the atmosphere by natural thermal forces.

Multi-Well Pits are defined as pits used for treatment, storage, recycling, reuse, or disposal of E&P wastes generated from more than one (1) well that do not constitute a centralized E&P waste management facility and that will be in use for no more than three (3) years.

Special Purpose Pits are defined as pits used in oil and gas operations, including pits at natural gas gathering, processing and storage facilities, which constitute:

- Blowdown pits: Pits used to collect material resulting from, including but not limited to, the emptying or depressurizing of wells, vessels, or gas gathering systems.
- Flare pits: Pits used exclusively for flaring gas.
- Emergency pits: Pits used to contain liquids during an initial phase of emergency response operations related to a spill/release or process upset conditions.
- Basic sediment/tank bottom pits: Pits used to temporarily store or treat the extraneous materials in crude oil which may settle to the bottoms of tanks or production vessels and which may contain residual oil.
- Workover pits: Pits used to contain liquids during the performance of remedial operations on a producing well in an effort to increase production.
- Plugging pits: Pits used for containment of fluids encountered during the plugging process.

Rules pertaining to pit closures are dependent upon type and location of the pit, the location's sensitivity (i.e., proximity to the Roan Plateau rim or other sensitive receptors), and surrounding land use. The procedures listed below should be followed to ensure that the closure procedures complies with applicable standards, procedures and limits set forth in the COGCC 900 and 1000 series Rules, digressively Table 910-1.

Table 1a - Table 910-1: COGCC Concentrations Levels¹

Contaminant of Concern	Concentrations
Organic Compounds in Soil	
TPH (total volatile and extractable petroleum hydrocarbons)	500 mg/kg
Benzene	0.17 mg/kg ²
Toluene	85 mg/kg ²
Ethylbenzene	100 mg/kg ²
Xylenes (total)	175 mg/kg ²
Acenaphthene	1,000 mg/kg ²
Anthracene	1,000 mg/kg ²
Benzo(A)anthracene	0.22 mg/kg ²

Benzo(B)fluoranthene	0.22 mg/kg ²
Benzo(K)fluoranthene	2.2 mg/kg ²
Benzo(A)pyrene	0.022 mg/kg ²
Chrysene	22 mg/kg ²
Dibenzo(A,H)anthracene	0.022 mg/kg ²
Fluoranthene	1,000 mg/kg ²
Fluorene	1,000 mg/kg ²
Indeno(1,2,3,C,D)pyrene	0.22 mg/kg ²
Napthalene	23 mg/kg ²
Pyrene	1,000 mg/kg ²
Organic Compounds in Ground Water	
Benzene	5 µg/l ³
Toluene	560 to 1,000 µg/l ³
Ethylbenzene	700 µg/l ³
Contaminant of Concern	Concentrations
Xylenes (Total)	1,400 to 10,000 µg/l ³
Inorganics in Soils	
Electrical Conductivity (EC)	<4 mmhos/cm or 2 x background
Sodium Adsorption Ratio (SAR)	<125
pH	6-9
Inorganics in Ground Water	
Total Dissolved Solids (TDS)	<1.25 x background ³
Chlorides	<1.25 x background ³
Sulfates	<1.25 x background ³
Metals in Soils	
Arsenic	0.39 mg/kg ²
Barium (LDNR True Total Barium)	15,000 mg/kg ²
Boron (Hot Water Soluble)	2 mg/l ³
Cadmium	70 mg/kg ^{3,6}
Chromium (III)	120,000 mg/kg ²
Chromium (VI)	23 mg/kg ^{2,6}
Copper	3,100 mg/kg ²
Lead (inorganic)	400 mg/kg ²
Mercury	23 mg/kg ²
Nickel (soluble salts)	1,600 mg/kg ^{2,6}
Selenium	390 mg/kg ^{2,6}
Silver	390 mg/kg ²
Zinc	23,000 mg/kg ^{2,6}
Liquid Hydrocarbons in Soils and Ground Water	
Liquid hydrocarbons including condensate and oil	Below detection level

COGCC recommends that the latest version of Environmental Protection Agency (EPA) SW 846 analytical methods be used where possible and that analyses of samples be performed by laboratories that maintain state or national accreditation programs.

1 Consideration shall be given to background levels in native soils and ground water.

2 Concentrations taken from CDPHE-HMWMD Table 1 Colorado Soil Evaluation Values (December 2007).

3 Concentrations taken from CDPHE-WQCC Regulation 41 - The Basic Standards for Ground Water.

4 For this range of standards, the first number in the range is a strictly health-based value, based on the Water Quality Control Commission's (WQCC's) established methodology for human health-based standards. The second number in the range is a Maximum Contaminant Level (MCL), established under the Federal Safe Drinking Water Act which has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. The WQCC intends that control requirements for this chemical be implemented to attain a level of ambient water quality that is at least equal to the first number in the range except as follows: 1) where ground water quality exceeds the first number in the range due to a release of contaminants that occurred prior to September 14, 2004 (regardless of the date of discovery or subsequent migration of such contaminants) clean-up levels for the entire contaminant plume shall be no more restrictive than the second number in the range or the ground water quality resulting from such release, whichever is more protective, and 2) whenever the WQCC has adopted alternative, site-specific standards for the chemical, the site-specific standards shall apply instead of these statewide standards.

5 Analysis by U.S. Department of Agriculture (USDA) Agricultural Handbook 60 method (20B) with soluble cations determined by method (2). Method (20B) = estimation of exchangeable sodium percentage and exchangeable potassium percentage from soluble

cations. Method (2) = saturated paste method (note: each analysis requires a unique sample of at least 500 grams). If soils are saturated, USDA Agricultural Handbook 60 with soluble cations determined by method (3A) saturation extraction method.

6 The table value for these inorganic constituents is taken from the CDPHE-HMWMD Table 1 Colorado Soil Evaluation Values (December 2007). However, because these values are high, it is possible that site-specific geochemical conditions may exist that could allow these constituents to migrate into ground water at levels exceeding ground water standards even though the concentrations are below the table values. Therefore, when these constituents are present as contaminants, a secondary evaluation of their leachability must be performed to ensure ground water protection.

CLOSURE OF NON-DRILLING PITS

Production, special purpose, and multi-well pits require the preparation, submittal, and approval of a Form 27 prior to initiation of site activities. In general, the process will consist of:

- Sample collection of surrounding soils and documentation of visual, field and analytical investigation with excavation of any impacted soil;
- Closure sampling and analysis;
- Identification and submission of any required notices or variances with supporting documentation; and
- Development and submittal of Closure Package to COGCC.

CLOSURE OF DRILLING PITS

Drilling pit closure does not require completion of a COGCC Form 27 prior to work startup. In general, the process will consist of:

- Sample collection of surrounding soils under the liner and documentation of visual, field and analytical investigation with excavation of any impacted soil;
- Potential use of the pit content material for backfill, if the material meets criteria set forth in Table 1 or is otherwise able to obtain approval for burial (i.e., Sundry Form 4, Appendix B); and
- Treatment or disposal of pit content material that fails to meet the Analytical List criteria.

If the Analytical List exceedances are limited to physical parameters (EC, SAR, pH) or arsenic, special approval issued by the COGCC will be pursued, via a Sundry Form 4, to allow Whiting to leave the materials in place below the root zone. Consideration will be given to background levels in native soils and, if applicable, groundwater. Background samples may be collected, analyzed for appropriate Table 910-1 constituents (Volatile Organic Compounds (VOCs), metals, physical parameters, and TPH), and the CDPHE Background Data Evaluation Method B may be used to determine appropriate clean-up concentrations for each site.

SAMPLING

A truck mounted CME 55 drill rig and hollow stem augers will be used to bore through the fill material to the bottom of the reclaimed pits. The bottom depth of each pit will be provided by Whiting to the drilling contractor. If the bottom depth is unknown, samples will be collected continuously until native material is present in the sampling device. The boreholes will be placed strategically to represent the profile of the pit subsoils. The Photoionization Detector (PID) readings will be used to guide activities. If PID readings are below 100 ppm, the area will be considered clean. For pits deemed clean, the three (3) aliquots will be combined to create one (1) composite sample. Samples will be collected with a two (2) foot split spoon and field screened using a PID.

If PID readings are above 100 ppm or visual screening indicates sub-soils have been impacted, the sample(s) will not be composited but submitted to the laboratory for analysis of Table 910-1 constituents. If analytical results indicate analytes in excess of standards, proper notification(s) to the COGCC will be made within 24-hours of the identification of the release. Remediation shall be performed in accordance with requirements specified in Rules 909 and 910. A Form 19 will be submitted to the COGCC within 10 days following identification of the release. In instances where the surface is not owned by Whiting, verbal notification to the surface owner will occur within 24-hours, per COGCC Rule 906.c.

All samples shall be labeled with unique sample identification, sampler's name, date collected, and the time of collection. Appropriate sample preservation procedures shall be followed. Samples shall be shipped to the laboratory following Chain-of-Custody protocols.

All pertinent site and sampling activity information will be recorded, in print, in a dedicated field notebook. Site conditions and sampling locations will be recorded on a site plan, plotted relative to a known reference point or located by means of a handheld Global Positioning System (GPS) device, and will be photographed. This will enable the sampler to return to the approximate sample locations in the event that additional investigation is warranted.

REMEDIATION

If soils are deemed to be impacted, the impacted area(s) will be excavated until PID readings indicate clean closure TPH levels have been achieved. Samples will be collected from the bottom of the excavation and submitted to ALS Laboratories.

Impacted soil will be treated according to Whiting authorized procedures which can include in-situ treatment, removal and land treatment onsite, removal for treatment at a centralized E&P waste management facility, removal and dilution with clean soil or disposal at a commercial solid waste disposal facility. Follow-up sampling for specific contaminants of concern will be conducted following treatment and prior to onsite reincorporation, if applicable. In some situations, the COGCC may approve a "variance" for certain constituents reported over allowable concentrations.

If excavation of the impacted subsoil leads to groundwater, a thorough investigation will be conducted to determine the nature and extent of potential contamination. An assessment will be made of any other potential receptors. An integral part of this assessment will include a review of contaminant transport pathways and implementation of measures needed to protect sensitive receptors (streams, ponds, wetlands, water wells, etc.).

Once all impacted soil is identified and removed, clean closure samples from the walls and bottom of the pit will be collected and sent under Chain of Custody to the laboratory for closure analysis. This process is described above. It is anticipated that the initial closure samples gathered from the pit will meet background concentrations.

DOCUMENTATION AND RECORDS MANAGEMENT

Whiting will perform an in depth investigation and comparative analysis of site conditions, field screen observations and results, and analytical data to determine if a location requires further remediation to conform to COGCC requirements. All data, files and electronic records (e.g. Form 27, Field Forms, photographs, etc.) compiled as part of the investigation will be

assembled throughout the closure process and forwarded to the COGCC along with analytical reports upon completion.

Strict adherence to Whiting's Health and Safety procedures will be enforced and daily "Tailgate" Health and Safety meetings will be mandatory for all personnel on site. A job safety analysis will be conducted to ensure a safe project.

REPORTING REQUIREMENTS

Upon confirmation of concentrations below COGCC regulations, the following will be prepared: a site report per Rule 909.b and a Form 27 for each individual facility summarizing the closure process and findings at each facility per COGCC rule 909.e.



InterTech



APPENDIX A

***Colorado Oil and Gas Conservation
Commission – Site Investigation and
Remediation Workplan, Form 27***

State of Colorado
Oil and Gas Conservation Commission



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

FOR OGCC USE ONLY

OGCC Employee:

Spill Complaint
 Inspection NOAV

Tracking No: _____

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.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

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

OGCC Operator Number: <u>96155</u>	Contact Name and Telephone: <u>William Lambert</u>
Name of Operator: <u>Whiting Oil and Gas Corporation</u>	No: <u>303-837-4238</u>
Address: <u>1700 Broadway, Suite 2300</u>	Fax: <u>720-644-3637</u>
City: <u>Denver</u> State: <u>CO</u> Zip: <u>80290-2300</u>	

API Number: <u>See attached</u>	County: <u>Rio Blanco #103</u>
Facility Name: _____	Facility Number: _____
Well Name: <u>See attached</u>	Well Number: <u>See attached</u>
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>See attached</u>	Latitude: <u>See attached</u> Longitude: <u>See attached</u>

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Unknown if impact exist

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.): Rangeland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: See attached

Potential receptors (water wells within 1/4 mi, surface waters, etc.): See attached

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

Impacted Media (check):	Extent of Impact:	How Determined:
<input type="checkbox"/> Soils	_____	_____
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface Water	_____	_____

REMEDIATION WORKPLAN

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

Nine (9) Whiting Oil & Gas Corporation (Whiting) reserve pits located in the Piceance Basin were reclaimed during the summer of 2012. According to Whiting, the pits were constructed but not all were used. The lining materials were removed and the pits were backfilled; however, confirmation sampling from the bottom of the pits were not conducted. This guidance document outlines the steps necessary for Whiting and its contractors to collect bottom of pit closure samples to properly close pits in compliance with current Colorado Oil & Gas Conservation Commission (COGCC) regulations (900 and 1000 series) and Colorado Department of Public Health and Environment (CDPHE) regulations (CDPHE Background Data Evaluation Method B).

Describe how source is to be removed:

If it is determined through the described sampling process that the soils are impacted, a remediation plan will be developed.

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

It is unknown if impacts exist. Should it be determined through the described sampling process that the soils are impacted, a remediation plan will be developed.



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

REMEDIATION WORKPLAN (Cont.)

OGCC Employee: _____

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

It is not believed groundwater is impacted; however, if it is determined through the described sampling process that the groundwater is impacted, a remediation plan will be developed.

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.

If it is determined through the described sampling process that the groundwater is impacted, a remediation plan will be developed. Any remediation will be in accordance with applicable COGCC regulations.

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:

It is unknown at this time if additional investigation will be required.

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

If E&P waste is encountered, it will be disposed of in accordance with applicable local, State and Federal requirements.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 2013 Date Site Investigation Completed: To be determined Date Remediation Plan Submitted: _____
Remediation Start Date: To be determined Anticipated Completion Date: To be determined Actual Completion Date: To be determined

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

Print Name: _____ Signed: _____

Title: _____ Date: _____

OGCC Approved: _____ Title: _____ Date: _____



InterTech



APPENDIX B

***Colorado Oil and Gas Conservation
Commission – Sundry, Form 4***



DE	ET	DC	ES

SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

1. OGCC Operator Number: _____	4. Contact Name _____	Complete the Attachment Checklist OP OGCC
2. Name of Operator: _____	Phone: _____	
3. Address: _____ City: _____ State: _____ Zip: _____	Fax: _____	
5. API Number 05- _____	OGCC Facility ID Number _____	Survey Plat _____
6. Well/Facility Name: _____	7. Well/Facility Number _____	Directional Survey _____
8. Location (QtrQtr, Sec, Twp, Rng, Meridian): _____		Surface Eqpmt Diagram _____
9. County: _____	10. Field Name: _____	Technical Info Page _____
11. Federal, Indian or State Lease Number: _____		Other _____

General Notice

<input type="checkbox"/> CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qtr is substantive and requires a new permit)													
Change of Surface Footage from Exterior Section Lines:	<table border="1"> <tr> <td></td> <td>FNU/FSL</td> <td>FEL/FWL</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>		FNU/FSL	FEL/FWL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
	FNU/FSL	FEL/FWL											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>											
Change of Surface Footage to Exterior Section Lines:	<input type="checkbox"/>												
Change of Bottomhole Footage from Exterior Section Lines:	<input type="checkbox"/>												
Change of Bottomhole Footage to Exterior Section Lines:	<input type="checkbox"/> attach directional survey												
Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer _____													
Latitude _____	Distance to nearest property line _____												
Longitude _____	Distance to nearest bldg, public rd, utility or RR _____												
Ground Elevation _____	Distance to nearest lease line _____												
	Is location in a High Density Area (rule 603b)? Yes/No <input type="checkbox"/>												
	Distance to nearest well same formation _____												
	Surface owner consultation date: _____												
GPS DATA:													
Date of Measurement _____	PDOP Reading _____ Instrument Operator's Name _____												
<input type="checkbox"/> CHANGE SPACING UNIT													
Formation _____	Formation Code _____ Spacing order number _____ Unit Acreage _____ Unit configuration _____												
<input type="checkbox"/> Remove from surface bond Signed surface use agreement attached													
<input type="checkbox"/> CHANGE OF OPERATOR (prior to drilling): Effective Date: _____ Plugging Bond: <input type="checkbox"/> Blanket <input type="checkbox"/> Individual													
<input type="checkbox"/> CHANGE WELL NAME _____ NUMBER _____ From: _____ To: _____ Effective Date: _____													
<input type="checkbox"/> ABANDONED LOCATION: Was location ever built? <input type="checkbox"/> Yes <input type="checkbox"/> No Is site ready for inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No Date Ready for Inspection: _____													
<input type="checkbox"/> NOTICE OF CONTINUED SHUT IN STATUS Date well shut in or temporarily abandoned: _____ Has Production Equipment been removed from site? <input type="checkbox"/> Yes <input type="checkbox"/> No MIT required if shut in longer than two years. Date of last MIT _____													
<input type="checkbox"/> SPUD DATE: _____													
<input type="checkbox"/> REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)													
<input type="checkbox"/> SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK *submit cbl and cement job summaries <table border="1"> <tr> <td>Method used</td> <td>Cementing tool setting/perf depth</td> <td>Cement volume</td> <td>Cement top</td> <td>Cement bottom</td> <td>Date</td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>		Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date						
Method used	Cementing tool setting/perf depth	Cement volume	Cement top	Cement bottom	Date								
<input type="checkbox"/> RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004. Final reclamation will commence on approximately _____ <input type="checkbox"/> Final reclamation is completed and site is ready for inspection.													

Technical Engineering/Environmental Notice

<input type="checkbox"/> Notice of Intent Approximate Start Date: _____	<input type="checkbox"/> Report of Work Done Date Work Completed: _____
Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)	
<input type="checkbox"/> Intent to Recomplete (submit form 2) <input type="checkbox"/> Change Drilling Plans <input type="checkbox"/> Gross Interval Changed? <input type="checkbox"/> Casing/Cementing Program Change	<input type="checkbox"/> Request to Vent or Flare <input type="checkbox"/> Repair Well <input type="checkbox"/> Rule 502 variance requested <input type="checkbox"/> Other: _____
<input type="checkbox"/> E&P Waste Disposal <input type="checkbox"/> Beneficial Reuse of E&P Waste <input type="checkbox"/> Status Update/Change of Remediation Plans for Spills and Releases	

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

Signed: _____ Date: _____ Email: _____
 Print Name: _____ Title: _____

COGCC Approved: _____ Title: _____ Date: _____

CONDITIONS OF APPROVAL, IF ANY:

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

- 1. OGCC Operator Number: _____ API Number: _____
- 2. Name of Operator: _____ OGCC Facility ID # _____
- 3. Well/Facility Name: _____ Well/Facility Number: _____
- 4. Location (QtrQtr, Sec, Twp, Rng, Meridian): _____

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. **DESCRIBE PROPOSED OR COMPLETED OPERATIONS**