District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W Grand Ave , Artesia, NM 88210
District III
1000 Rio Brazos Rd , Aztec, NM 87410
District IV
1220 S St Francis Dr , Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
July 21, 2008

For temporary pits, closed-loop sytems, and below-grade tanks, submit to the appropriate NMOCD District Office

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office

4890

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

Type of action
- [ ] Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
- [X] Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
- [ ] Modification to an existing permit
- [ ] Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances

1
Operator **Burlington Resources Oil & Gas Company, LP** OGRID#: **14538**
Address. **P.O. Box 4289, Farmington, NM 87499**
Facility or well name. **Crandell Com 501S**
API Number **30-045-34509** OCD Permit Number
U/L or Qtr/Qtr **H(SE/NE)** Section **35** Township **31N** Range **12W** County **San Juan**
Center of Proposed Design Latitude **36.8576** °N Longitude. **108.06156** °W NAD [ ] 1927 [X] 1983
Surface Owner [ ] Federal [ ] State [X] Private [ ] Tribal Trust or Indian Allotment

2
[X] **Pit:** Subsection F or G of 19 15 17 11 NMAC
Temporary [X] Drilling [ ] Workover
[ ] Permanent [ ] Emergency [ ] Cavitation [ ] P&A
[X] Lined [ ] Unlined Liner type Thickness **12** mil [X] LLDPE [ ] HDPE [ ] PVC [ ] Other
[X] String-Reinforced
Liner Seams [X] Welded [X] Factory [ ] Other Volume **4400** bbl Dimensions L **65'** x W **45'** x D **10'**

3
[ ] **Closed-loop System:** Subsection H of 19 15 17 11 NMAC
Type of Operation [ ] P&A [ ] Drilling a new well [ ] Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)
[ ] Drying Pad [ ] Above Ground Steel Tanks [ ] Haul-off Bins [ ] Other
[ ] Lined [ ] Unlined Liner type Thickness mil [ ] LLDPE [ ] HDPE [ ] PVD [ ] Other
Liner Seams [ ] Welded [ ] Factory [ ] Other

4
[ ] **Below-grade tank:** Subsection I of 19 15 17 11 NMAC
Volume bbl Type of fluid
Tank Construction material
[ ] Secondary containment with leak detection [ ] Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
[ ] Visible sidewalls and liner [ ] Visible sidewalls only [ ] Other
Liner Type Thickness mil [ ] HDPE [ ] PVC [ ] Other

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JAN 2010
OIL CONS. DIV. DIST 3

5
[ ] **Alternative Method:**
Submittal of an exception request is required Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval

35

6

Fencing: Subsection D of 19 15 17 11 NMAC *(Applies to permanent pit, temporary pits, and below-grade tanks)*

☐ Chain link, six feet in height, two strands of barbed wire at top *(Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)*

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☐ Alternate Please specify _____

7

Netting: Subsection E of 19 15 17 11 NMAC *(Applies to permanent pits and permanent open top tanks)*

☐ Screen ☐ Netting ☐ Other _____

☐ Monthly inspections *(If netting or screening is not physically feasible)*

8

Signs: Subsection C of 19 15 17 11 NMAC

☐ 12" X 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☒ Signed in compliance with 19 15 3 103 NMAC

9

Administrative Approvals and Exceptions:

Justifications and/or demonstrations of equivalency are required Please refer to 19 15 17 NMAC for guidance

Please check a box if one or more of the following is requested, if not leave blank:

☐ Administrative approval(s) Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for consideration of approval **(Fencing/BGT Liner)**

☐ Exception(s) Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval

10

Siting Criteria (regarding permitting) 19 15 17 10 NMAC

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau Office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. **Siting criteria does not apply to drying pads or above grade-tanks associated with a closed-loop system.**

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search, USGS, Data obtained from nearby wells	☐ Yes ☐ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map, Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. *(Applies to temporary, emergency, or cavitation pits and below-grade tanks)* - Visual inspection (certification) of the proposed site, Aerial photo, Satellite image	☐ Yes ☐ No ☐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. *(Applied to permanent pits)* - Visual inspection (certification) of the proposed site, Aerial photo, Satellite image	☐ Yes ☐ No ☐ NA
Within 500 horizonal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search, Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended - Written confirmation or verification from the municipality, Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map, Topographic map, Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design, NM Bureau of Geology & Mineral Resources, USGS, NM Geological Society, Topographic map	☐ Yes ☐ No
Within a 100-year floodplain - FEMA map	☐ Yes ☐ No

11

Temporary Pits, Emergency Pits and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19 15 17 9 NMAC

Instructions Each of the following items must be attached to the application Please indicate, by a check mark in the box, that the documents are attached

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19 15 17 9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19 15 17 9
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19 15 17 10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19 15 17 11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19 15 17 12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19 15 17 9 NMAC and 19 15 17 13 NMAC

☐ Previously Approved Design (attach copy of design) API _____ or Permit Number _____

12

Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19 15 17 9 NMAC

Instructions Each of the following items must be attached to the application Please indicate, by a check mark in the box, that the documents are attached

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19 15 17 9
- ☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19 15 17 10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19 15 17 11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19 15 17 12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19 15 17 9 NMAC and 19 15 17 13 NMAC

☐ Previously Approved Design (attach copy of design) API _____

☐ Previously Approved Operating and Maintenance Plan API _____

13

Permanent Pits Permit Application Checklist: Subsection B of 19 15 17 9 NMAC

Instructions Each of the following items must be attached to the application Please indicate, by a check mark in the box, that the documents are attached

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19 15 17 9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19 15 17 10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19 15 17 11 NMAC
- ☐ Dike Protection and Structural Integrity Design based upon the appropriate requirements of 19 15 17 11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19 15 17 11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19 15 17 11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plar
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19 15 17 12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19 15 17 11 NMAC
- ☐ Nuisance or Hazardous Odors, including H2S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19 15 17 9 NMAC and 19 15 17 13 NMAC

14

Proposed Closure: 19 15 17 13 NMAC

Instructions Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan

Type ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System ☐ Alternative

Proposed Closure Method

- ☐ Waste Excavation and Removal
- ☐ Waste Removal (Closed-loop systems only)
- ☐ On-site Closure Method (only for temporary pits and closed-loop systems)
  - ☐ In-place Burial ☐ On-site Trench Burial
- ☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15

Waste Excavation and Removal Closure Plan Checklist: (19 15 17 13 NMAC) ***Instructions Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached***

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19 15 17 13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19 15 17 13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings
- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19 15 17 13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19 15 17 13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19 15 17 13 NMAC

16

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only (19 15 17 13 D NMAC)

Instructions Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings Use attachment if more than two facilities are required

Disposal Facility Name _____ Disposal Facility Permit # _____

Disposal Facility Name _____ Disposal Facility Permit # _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please provide the information ☐ No

Required for impacted areas which will not be used for future service and operations

☐ Soil Backfill and Cover Design Specification - based upon the appropriate requirements of Subsection H of 19 15 17 13 NMAC

☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19 15 17 13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19 15 17 13 NMAC

17

Siting Criteria (Regarding on-site closure methods only: 19 15 17 10 NMAC

Instructions Each siting criteria requires a demonstration of compliance in the closure plan Recommendations of acceptable source material are provided below Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval Justifications and/or demonstrations of equivalency are required Please refer to 19 15 17 10 NMAC for guidance

Ground water is less than 50 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search, USGS Data obtained from nearby wells	☐ Yes ☐ No ☐ N/A
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search, USGS, Data obtained from nearby wells	☐ Yes ☐ No ☐ N/A
Ground water is more than 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search, USGS, Data obtained from nearby wells	☐ Yes ☐ No ☐ N/A
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark) - Topographic map, Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application - Visual inspection (certification) of the proposed site, Aerial photo, satellite image	☐ Yes ☐ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal fee of any other fresh water well or spring, in existence at the time of the initial application - NM Office of the State Engineer - iWATERS database, Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended - Written confirmation or verification from the municipality, Written approval obtained from the municipality	☐ Yes ☐ No
Within 500 feet of a wetland - US Fish and Wildlife Wetland Identification map, Topographic map, Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine - Written confiramtion or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area - Engineering measures incorporated into the design, NM Bureau of Geology & Mineral Resources, USGS, NM Geological Society, Topographic map	☐ Yes ☐ No
Within a 100-year floodplain - FEMA map	☐ Yes ☐ No

18

On-Site Closure Plan Checklist: (19 15 17 13 NMAC) ***Instructions: Each of the following items must bee attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.***

☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19 15 17 10 NMAC

☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19 15 17 13 NMAC

☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19 15 17 11 NMAC

☐ Construction/Design Plan of Temporary Pit (for in place burial of a drying pad) - based upon the appropriate requirements of 19 15 17 11 NMAC

☐ Protocols and Procedures - based upon the appropriate requirements of 19 15 17 13 NMAC

☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19 15 17 13 NMAC

☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19 15 17 13 NMAC

☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)

☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19 15 17 13 NMAC

☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19 15 17 13 NMAC

☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19 15 17 13 NMAC

19

Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief

Name (Print) _____ Title _____

Signature _____ Date _____

e-mail address _____ Telephone _____

20

OCD Approval: ☐ Permit Application (including closure plan) ☒ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: Jonathan D. Kelly **Approval Date:** 9/16/2011

Title: Compliance Officer **OCD Permit Number:** _____

21

Closure Report (required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC

Instructions Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report The closure report is required to be submitted to the division within 60 days of the completion of the closure activities Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed

☒ **Closure Completion Date:** October 28, 2008

22

Closure Method:

☐ Waste Excavation and Removal ☒ On-site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)

☐ If different from approved plan, please explain

23

Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only.

Instructions Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed Use attachment if more than two facilities were utilized

Disposal Facility Name _____ Disposal Facility Permit Number _____

Disposal Facility Name _____ Disposal Facility Permit Number _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and opeartions?

☐ Yes (If yes, please demonstrate complilane to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations

☐ Site Reclamation (Photo Documentation)

☐ Soil Backfilling and Cover Installatior

☐ Re-vegetation Application Rates and Seeding Technique

24

Closure Report Attachment Checklist: ***Instructions Each of the following items must be attached to the closure report Please indicate, by a check mark in the box, that the documents are attached.***

☒ Proof of Closure Notice (surface owner and division)

☒ Proof of Deed Notice (required for on-site closure)

☒ Plot Plan (for on-site closures and temporary pits)

☒ Confirmation Sampling Analytical Results (if applicable)

☐ Waste Material Sampling Analytical Results (if applicable)

☒ Disposal Facility Name and Permit Number

☒ Soil Backfilling and Cover Installatior

☒ Re-vegetation Application Rates and Seeding Technique

☒ Site Reclamation (Photo Documentation)

On-site Closure Location Latitude **36.85765** °N Longitude **108.061362** °W NAD ☐ 1927 ☒ 1983

25

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan

Name (Print) Crystal Tafoya Title Regulatory Technician

Signature Crystal Tafoya Date 1/19/2010

e-mail address crystal.tafoya@conocophillips.com Telephone 505-326-9837

Burlington Resources Oil Gas Company, LP
San Juan Basin
Closure Report

Lease Name: Crandell Com 501S
API No.: 30-045-34509

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure of the temporary pit referenced above. All proper documentation regarding closure activities is being included with the C-144. The temporary pit for this location was constructed and location drilled before June 16, 2008 (effective date for Rule 19.15 17) While closure of the temporary pit did fall within the rule some dates for submittals are after the rig release date.

- Details on Capping and Covering, where applicable. **(See report)**
- Plot Plan (Pit Diagram) **(Included as an attachment)**
- Inspection Reports **(Included as an attachment)**
- Sampling Results **(Included as an attachment)**
- C-105 **(Included as an attachment)**
- Copy of Deed Notice will be filed with County Clerk **(Not required on Federal, State, or Tribal land as stated by FAQ dated October 30, 2008)**

General Plan:

1. All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division–approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves.

   All recovered liquids were disposed of at Basin Disposal (Permit #NM-01-005) and any sludge or soil required to be removed to facilitate closure was hauled to Envirotech Land Farm (Permit #NM-01-011) and JFJ Landfarm % IEI (Permit #NM-01-0010B).

2. The preferred method of closure for all temporary pits will be on-site burial, assuming that all the criteria listed in sub-section (B) of 19 15 17.13 are met.

   The pit was closed using onsite burial.

3. The surface owner shall be notified of BR's closing of the temporary pit as per the approved closure plan using certified mail, return receipt requested.

   The closure process notification to the landowner was sent via certified mail. (See Attached)(Well located on Private Land, certified mail is not required for Federal Land per BLM/OCD MOU.)

4 Within 6 months of the Rig Off status occurring BR will ensure that temporary pits are closed, re-contoured, and reseeded.

   Provision 4 of the closure plan requirements were not met due to rig move off date as noted on C-105 which was prior to pit rule change. Burlington will ensure compliance with this rule in the future.

5. Notice of Closure will be given to the Aztec Division office between 72 hours and one week of closure via email, or verbally. The notification of closure will include the following:
   - i Operator's name
   - ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.

   Notification is attached.

6. Liner of temporary pit shall be removed above "mud level" after stabilization. Removal of liner will consist of manually or mechanically cutting liner at mud level and removing all remaining liner. Care will be taken to remove "All" of the liner i.e., edges of liner entrenched or buried. All excessive liner will be disposed of at a licensed disposal facility

Liner of temporary pit was removed above "mud level" after stabilization. Removal of the liner consisted of manually cutting liner at mud level and removing all remaining liner. Care was taken to remove "ALL" of the liner i.e., edges of liner entrenched or buried. All excessive liner was disposed of at a licensed disposal facility, (San Juan County Landfill).

7. Pit contents shall be mixed with non-waste containing, earthen material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed a safe and stable The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.

Burlington mixed the Pit contents with non-waste containing, earthen material in order to achieve the solidification process. The solidification process was accomplished by using a combination of natural drying and mechanically mixing. Pit contents were mixed with non-waste, earthen material to a consistency that is deemed as safe and stable. The mixing ratio consisted of approximately 3 parts clean soil to 1 part pit contents.

8. A five point composite sample will be taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the criteria are not met, all contents will be handled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15 17 13 i.e., Dig and haul.

A five point composite sample was taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.1 3(B)(1)(b). (Sample results attached).

Components	Tests Method	Limit (mg/Kg)	Results
Benzene	EPA SW-846 8021B or 8260B	0.2	ND ug/kg
BTEX	EPA SW-846 8021B or 8260B	50	ND ug/kG
TPH	EPA SW-846 418.1	2500	671mg/kg
GRO/DRO	EPA SW-846 8015M	500	284 mg/Kg
Chlorides	EPA 300.1	1000/500	960 mg/L

9. Upon completion of solidification and testing standards being passed, the pit area will be backfilled with compacted, non-waste containing, earthen material. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater. If standard testing fails BR will dig and haul all contents pursuant to 19.15 17 13 i a After doing such, confirmation sampling will be conducted to ensure a release has not occurred.

The pit material passed solidification and testing standards. The pit area was then backfilled with compacted, non-waste containing, earthen material. More than four feet of cover was achieved and the cover included one foot of suitable material to establish vegetation at the site.

10. During the stabilization process if the liner is ripped by equipment the Aztec OCD office will be notified within 48 hours and the liner will be repaired if possible. If the liner can not be repaired then all contents will be excavated and removed.

The integrity of the liner was not damaged in the pit closure process.

11. Dig and Haul Material will be transported to the Envirotech Land Farm located 16 miles south of Bloomfield on Angel Peak Road, CR 7175. Permit # NM010011

Dig and Haul was not required.

12 Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.

The pit area was re-contoured to match fit, shape, line, form and texture of the surrounding area. Re-shaping included drainage control, to prevent ponding and erosion. Natural drainages were unimpeded and water bars and/or silt traps were placed in areas where needed to prevent erosion on a large scale. Final re-contour has a uniform appearance with smooth surface, fitting the natural landscape.

13. Notification will be sent to OCD when the reclaimed area is seeded.

Provision 13 was accomplished through complying with State seeding requirements as allowed by the BLM/OCD MOU.

14. BR shall seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

Provision 14 was accomplished through complying with State seeding requirements as allowed by the BLM/OCD MOU.

15. The temporary pit will be located with a steel marker, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial upon the abandonment of all the wells on the pad. The marker will be flush with the ground to allow access of the active well pad and for safety concerns. The marker will include a threaded collar to be used for future abandonment. The top of the marker will contain a welded steel 12" square plate that indicates the onsite burial of the temporary pit. The plate will be easily removable and a four foot tall riser will be threaded into the top of the collar marker and welded around the base with the operator's information at the time of all wells on the pad are abandoned. The operator's information will include the following: Operator Name, Lease Name, Well Name and number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location

Provision 15 was accomplished by installing a steel marker in the temporary pit, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial. The marker is flush with the ground to allow access of the active well pad and for safety concerns. The top of the marker contains a welded steel 12" square plate that indicates the onsite burial of the temporary pit. The plate contains the following: Operator Name, Lease Name, Well Name and number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location.

The plate will be easily removable and a four foot tall riser will be threaded into the top of the collar marker and welded around the base with the following operator's information at the time of all wells on the pad are abandoned. The riser will be labeled: BR, Fee, CRANDELL COM 501S, UL-H, Sec. 35, T 31N, R 12W, API # 30-045-34509

ConocoPhillips Company
GRFS / PTRRC – San Juan Business Unit
Juanita Farrell
3401 East 30th Street
Farmington, NM 87402
Telephone: (505) 326-9597
Facsimile. (505) 324-6136

July 30, 2008

VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED
7110-6605-9590-0026-0371

Vernon H. Fairchild
618 West Cherry
Flagstaff, AZ 86001-4432

Subject: Crandell Com 501S
NE Section 35, T31N, R12W
San Juan County, New Mexico

Dear Landowner:

Pursuant to Paragraph 1 (b) of Subsection F of 19.15.17.13 NMAC, an operator shall provide the surface owner of the operator's proposal to close a temporary pit on-site in compliance with the on-site closure methods specified in the same Subsection of the NMAC. In compliance of this requirement, please consider this notification of ConocoPhillips' intent to close the temporary pit on the above referenced location.

If you have any questions, please contact Maxwell Blair @ (505)599-4021.

Sincerely,

Juanita Farrell

Juanita Farrell
Staff Associate, PTRRC

STATE OF NEW MEXICO §
§
COUNTY OF SAN JUAN §

RECORDATION NOTICE OF PIT BURIAL

In accordance with Section 19.15.17.13.F.1.f of the NMAC, operator hereby provides notice in the public record of an on-site burial of a temporary pit at the following location:

Well Name:	**Crandell Com 501S**
Latitude (*DDD° MM.MMM'*):	**36.85760°N NAD 83**
Longitude (*DDD° MM.MMM'*):	**108.06156°W**
Unit Letter(1/4, 1/4):	**H**
Section:	**35**
Township:	**31N**
Range:	**12W**
County:	**San Juan**
State:	**NM**

IN WITNESS WHEREOF, this Recordation Notice of Pit Burial has been executed on the date indicated below by the undersigned.

BURLINGTON RESOURCES OIL & GAS COMPANY LP,
By: BROG GP Inc., its sole General Partner

Mike L. Mankin,
Supervisor, PTRRC

STATE OF NEW MEXICO §
§
COUNTY OF SAN JUAN §

This instrument was acknowledged before me this 9th day of March, 2009, by Michael L. Mankin, of Burlington Resources Oil & Gas Company LP, By: BROG GP Inc., its sole General Partner, on behalf of said corporation.

My Commission Expires: 13 JAN 2010

Notary Public

RIO ARRIBA COUNTY CLERK
MOISES A MORALES JR
200903391
Book 532 Page 3391
1 of 1
06/03/2009 03:25:08 PM
BY SHIRLEYM

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease – 4 Copies
Fee Lease – 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
		BASIN FRUITLAND COAL

[4] Property Code	[5] Property Name	[6] Well Number
A727610	CRANDELL COM	501S

[7] OGRID No.	[8] Operator Name	[9] Elevation
	BURLINGTON RESOURCES OIL AND GAS COMPANY LP	5864'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	35	31N	12W		1920'	NORTH	770'	EAST	SAN JUAN

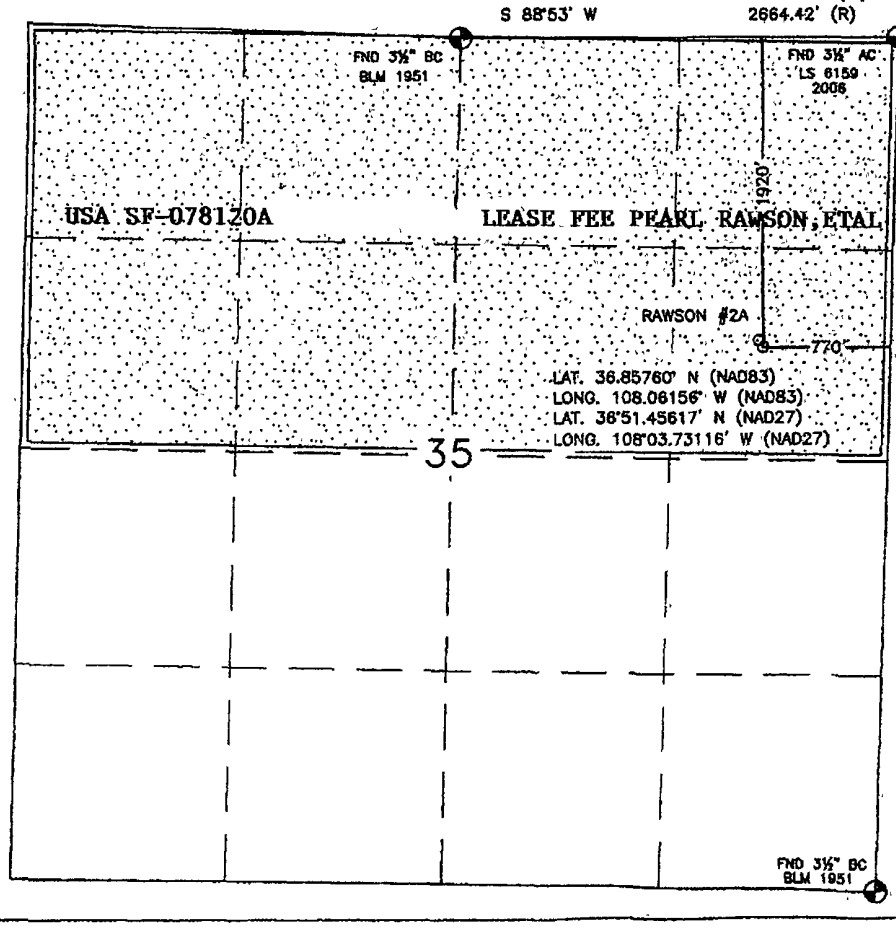
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320.00 Acres – (N/2)			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner or a compulsory pooling order heretofore entered by the division.

Signature Date

Printed Name

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

SEPTEMBER 20, 2007
Date of Survey

Signature and Seal of Professional Surveyor:

Dale R Russell

DAVID R. RUSSELL
NEW MEXICO
10201
REGISTERED PROFESSIONAL LAND SURVEYOR

DAVID RUSSELL
Certificate Number 10201

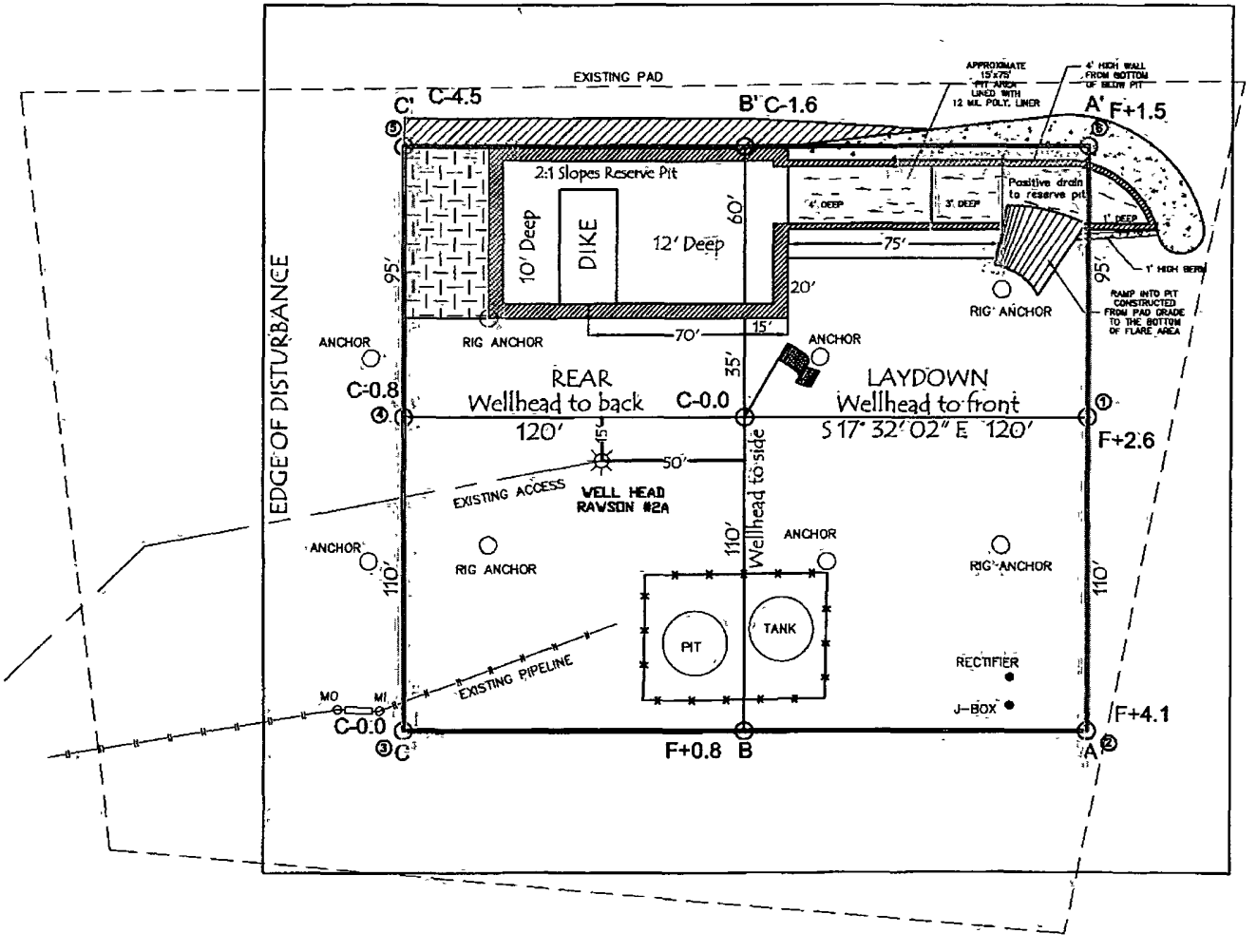
LATITUDE: 36.85760°N
LONGITUDE: 108.06156°W
DATUM: NAD 83

SLOPES TO BE CONSTRUCTED TO MATCH THE ORIGINAL CONTOURS AS CLOSE AS POSSIBLE.

BURLINGTON RESOURCES O&G CO LP

CRANDELL COM #501S
1920' FNL & 770' FEL
LOCATED IN THE SE/4 NE/4 OF SECTION 35,
T31N, R12W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO
GROUND ELEVATION: 5864', NAVD 88
FINISHED PAD ELEVATION: 5863.6', NAVD 88

30' 0 30' 60'
SCALE = 60'



305' x 340' = 2.38 ACRES OF DISTURBANCE
SCALE: 1" = 60'
JOB No.: COPC104
DATE: 09/27/07

NOTE:
RESERVE PIT DIKE: TO BE 8' ABOVE DEEP SIDE (OVERFLOW – 3' WIDE AND 1' ABOVE SHALLOW SIDE).
RUSSELL SURVEYING, INC. IS NOT LIABLE FOR UNDERGROUND UTILITIES OR PIPELINES.
CONTRACTOR SHOULD CALL ONE-CALL FOR LOCATION OF ANY MARKED OR UNMARKED, BURIED PIPELINES OR CABLES ON WELL PAD, IN CONSTRUCTION ZONE AND/OR ACCESS ROAD AT LEAST TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION.

Russell Surveying
1409 W. Aztec Blvd. #2
Aztec, New Mexico 87410
(505) 334-8637

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Crandell Com 501S	Date Reported:	08-29-08
Laboratory Number:	46893	Date Sampled:	08-22-08
Chain of Custody No:	5071	Date Received:	08-22-08
Sample Matrix:	Soil	Date Extracted:	08-27-08
Preservative:		Date Analyzed:	08-28-08
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**284**	**0.1**
Total Petroleum Hydrocarbons	**284**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Drilling Pit Sample.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505-632-0615 • Fax 505-632-1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Crandell Com 501S Background	Date Reported:	08-29-08
Laboratory Number:	46894	Date Sampled:	08-22-08
Chain of Custody No:	5071	Date Received:	08-22-08
Sample Matrix:	Soil	Date Extracted:	08-27-08
Preservative:		Date Analyzed:	08-28-08
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	**ND**	**0.2**
Diesel Range (C10 - C28)	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Drilling Pit Sample.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	08-28-08 QA/QC	Date Reported:	08-29-08
Laboratory Number:	46887	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-28-08
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	05-07-07	9.9225E+002	9.9264E+002	**0.04%**	**0 - 15%**
Diesel Range C10 - C28	05-07-07	1.0556E+003	1.0561E+003	**0.04%**	**0 - 15%**

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	**ND**	**0.2**
Diesel Range C10 - C28	**ND**	**0.1**
Total Petroleum Hydrocarbons	**ND**	**0.2**

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	**ND**	**ND**	**0.0%**	**0 - 30%**
Diesel Range C10 - C28	**10.5**	**10.2**	**2.9%**	**0 - 30%**

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	**ND**	**250**	**245**	**98.0%**	**75 - 125%**
Diesel Range C10 - C28	**10.5**	**250**	**254**	**97.3%**	**75 - 125%**

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **QA/QC for Samples 46887 - 46894 and 46943.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Crandell Com 501S	Date Reported:	08-29-08
Laboratory Number:	46893	Date Sampled:	08-22-08
Chain of Custody:	5071	Date Received:	08-22-08
Sample Matrix:	Soil	Date Analyzed:	08-28-08
Preservative:		Date Extracted:	08-27-08
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**ND**	**1.2**
o-Xylene	**ND**	**0.9**
Total BTEX	**ND**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**97.0 %**
	1,4-difluorobenzene	**97.0 %**
	Bromochlorobenzene	**97.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Drilling Pit Sample.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Crandell Com 501S Background	Date Reported:	08-29-08
Laboratory Number:	46894	Date Sampled:	08-22-08
Chain of Custody:	5071	Date Received:	08-22-08
Sample Matrix:	Soil	Date Analyzed:	08-28-08
Preservative:		Date Extracted:	08-27-08
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**ND**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**ND**	**1.2**
o-Xylene	**ND**	**0.9**
Total BTEX	**ND**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**99.0 %**
	1,4-difluorobenzene	**99.0 %**
	Bromochlorobenzene	**99.0 %**

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Drilling Pit Sample.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	08-28-BTEX QA/QC	Date Reported:	08-29-08
Laboratory Number:	46887	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	08-28-08
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	8.1477E+007	8.1641E+007	0.2%	ND	0.1
Toluene	6.1906E+007	6.2030E+007	0.2%	ND	0.1
Ethylbenzene	4.9766E+007	4.9866E+007	0.2%	ND	0.1
p,m-Xylene	1.0274E+008	1.0294E+008	0.2%	ND	0.1
o-Xylene	4.7617E+007	4.7712E+007	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range:	Detect. Limit
Benzene	1.6	1.3	18.8%	0 - 30%	0.9
Toluene	7.2	6.7	6.9%	0 - 30%	1.0
Ethylbenzene	4.4	4.3	2.3%	0 - 30%	1.0
p,m-Xylene	26.0	24.0	7.7%	0 - 30%	1.2
o-Xylene	7.7	7.5	2.6%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	1.6	50.0	51.2	99.2%	39 - 150
Toluene	7.2	50.0	55.2	96.5%	46 - 148
Ethylbenzene	4.4	50.0	51.4	94.5%	32 - 160
p,m-Xylene	26.0	100	120	95.2%	46 - 148
o-Xylene	7.7	50.0	52.7	91.3%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: **QA/QC for Samples 46887 - 46894 and 46943.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Crandell Com 501S	Date Reported:	09-03-08
Laboratory Number:	46893	Date Sampled:	08-22-08
Chain of Custody:	5071	Date Received:	08-22-08
Sample Matrix:	Soil	Date Analyzed:	09-02-08
Preservative:		Date Digested:	09-02-08
Condition:	Intact	Analysis Needed:	Total Metals

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)	TCLP Regulatory Level (mg/Kg)
Arsenic	**0.074**	**0.001**	**5.0**
Barium	**8.28**	**0.001**	**100**
Cadmium	**ND**	**0.001**	**1.0**
Chromium	**0.396**	**0.001**	**5.0**
Lead	**0.153**	**0.001**	**5.0**
Mercury	**ND**	**0.001**	**0.2**
Selenium	**ND**	**0.001**	**1.0**
Silver	**ND**	**0.001**	**5.0**

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils. SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emmision Spectroscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C *section 261.24, August 24, 1998.*

Comments: **Drilling Pit Sample.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Crandell Com 501S Background	Date Reported:	09-03-08
Laboratory Number:	46894	Date Sampled:	08-22-08
Chain of Custody:	5071	Date Received:	08-22-08
Sample Matrix:	Soil	Date Analyzed:	09-02-08
Preservative:		Date Digested:	09-02-08
Condition:	Intact	Analysis Needed:	Total Metals

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)	TCLP Regulatory Level (mg/Kg)
Arsenic	**0.074**	**0.001**	**5.0**
Barium	**8.28**	**0.001**	**100**
Cadmium	**ND**	**0.001**	**1.0**
Chromium	**0.396**	**0.001**	**5.0**
Lead	**0.153**	**0.001**	**5.0**
Mercury	**ND**	**0.001**	**0.2**
Selenium	**ND**	**0.001**	**1.0**
Silver	**ND**	**0.001**	**5.0**

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils. SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emmision Spectroscopy, SW-846, USEPA, December 1996.

Note: Regulatory Limits based on 40 CFR part 261 subpart C section 261.24, August 24, 1998.

Comments: **Drilling Pit Sample.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

TRACE METAL ANALYSIS
Quality Control / Quality Assurance Report

Client:	QA/QC	Project #:	QA/QC
Sample ID:	09-02 TM QA/AC	Date Reported:	09-03-08
Laboratory Number:	46887	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Analysis Requested:	Total RCRA Metals	Date Analyzed:	09-02-08
Condition:	N/A	Date Digested:	09-02-08

Blank & Duplicate Conc. (mg/Kg)	Instrument Blank (mg/Kg)	Method Blank	Detection Limit	Sample	Duplicate	% Diff.	Acceptance Range
Arsenic	ND	ND	0.001	0.114	0.111	2.7%	0% - 30%
Barium	ND	ND	0.001	24.0	23.8	0.8%	0% - 30%
Cadmium	ND	ND	0.001	0.001	0.001	8.3%	0% - 30%
Chromium	ND	ND	0.001	0.377	0.375	0.5%	0% - 30%
Lead	ND	ND	0.001	0.326	0.325	0.3%	0% - 30%
Mercury	ND	ND	0.001	ND	ND	0.0%	0% - 30%
Selenium	ND	ND	0.001	0.010	0.008	22.7%	0% - 30%
Silver	ND	ND	0.001	ND	ND	0.0%	0% - 30%

Spike Conc. (mg/Kg)	Spike Added	Sample	Spiked Sample	Percent Recovery	Acceptance Range
Arsenic	0.250	0.114	0.332	91.3%	80% - 120%
Barium	0.500	24.0	23	94.6%	80% - 120%
Cadmium	0.250	0.001	0.268	107%	80% - 120%
Chromium	0.500	0.377	0.827	94.3%	80% - 120%
Lead	0.500	0.326	0.809	98.0%	80% - 120%
Mercury	0.100	ND	0.091	90.5%	80% - 120%
Selenium	0.100	0.010	0.112	102%	80% - 120%
Silver	0.100	ND	0.097	96.9%	80% - 120%

ND - Parameter not detected at the stated detection limit.

References: Method 3050B, Acid Digestion of Sediments, Sludges and Soils. SW-846, USEPA, December 1996.

Method 6010B, Analysis of Metals by Inductively Coupled Plasma Atomic Emmision Spectorscopy, SW-846, USEPA, December 1996.

Comments: **QA/1QC for Samples 46887 - 46894 and 46928 - 46929.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Crandell Com 501S	Date Reported:	09-03-08
Laboratory Number:	46893	Date Sampled:	08-22-08
Chain of Custody:	5071	Date Received:	08-22-08
Sample Matrix:	Soil Extract	Date Extracted:	08-27-08
Preservative:		Date Analyzed:	08-28-08
Condition:	Intact		

Parameter	Analytical Result	Units		
pH	**6.93**	s.u.		
Conductivity @ 25° C	**3,450**	umhos/cm		
Total Dissolved Solids @ 180C	**2,330**	mg/L		
Total Dissolved Solids (Calc)	**1,900**	mg/L		
SAR	**6.1**	ratio		
Total Alkalinity as CaCO3	**94.0**	mg/L		
Total Hardness as CaCO3	**427**	mg/L		
Bicarbonate as HCO3	**94.0**	mg/L	1.54	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**0.500**	mg/L	0.01	meq/L
Nitrite Nitrogen	**0.131**	mg/L	0.00	meq/L
Chloride	**960**	mg/L	27.08	meq/L
Fluoride	**13.4**	mg/L	0.71	meq/L
Phosphate	**0.500**	mg/L	0.02	meq/L
Sulfate	**50.8**	mg/L	1.06	meq/L
Iron	**0.163**	mg/L	0.01	meq/L
Calcium	**154**	mg/L	7.68	meq/L
Magnesium	**10.3**	mg/L	0.85	meq/L
Potassium	**364**	mg/L	9.31	meq/L
Sodium	**289**	mg/L	12.57	meq/L
Cations			30.42	meq/L
Anions			30.41	meq/L
Cation/Anion Difference			**0.03%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Drilling Pit Sample.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

CATION / ANION ANALYSIS

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Crandell Com 501S Background	Date Reported:	09-03-08
Laboratory Number:	46894	Date Sampled:	08-22-08
Chain of Custody:	5071	Date Received:	08-22-08
Sample Matrix:	Soil Extract	Date Extracted:	08-27-08
Preservative:		Date Analyzed:	08-28-08
Condition:	Intact		

Parameter	Analytical Result	Units		
pH	**8.17**	s.u.		
Conductivity @ 25° C	**160**	umhos/cm		
Total Dissolved Solids @ 180C	**76.0**	mg/L		
Total Dissolved Solids (Calc)	**73.3**	mg/L		
SAR	**0.8**	ratio		
Total Alkalinity as CaCO3	**66.0**	mg/L		
Total Hardness as CaCO3	**35.4**	mg/L		
Bicarbonate as HCO3	**66.0**	mg/L	1.08	meq/L
Carbonate as CO3	**<0.1**	mg/L	0.00	meq/L
Hydroxide as OH	**<0.1**	mg/L	0.00	meq/L
Nitrate Nitrogen	**2.06**	mg/L	0.03	meq/L
Nitrite Nitrogen	**0.631**	mg/L	0.01	meq/L
Chloride	**0.803**	mg/L	0.02	meq/L
Fluoride	**1.31**	mg/L	0.07	meq/L
Phosphate	**0.411**	mg/L	0.01	meq/L
Sulfate	**2.30**	mg/L	0.05	meq/L
Iron	**3.83**	mg/L	0.14	meq/L
Calcium	**12.0**	mg/L	0.60	meq/L
Magnesium	**1.31**	mg/L	0.11	meq/L
Potassium	**1.19**	mg/L	0.03	meq/L
Sodium	**11.2**	mg/L	0.49	meq/L
Cations			1.36	meq/L
Anions			1.28	meq/L
Cation/Anion Difference			**6.28%**	

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Drilling Pit Sample.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel 505-632-0615 • Fax 505-632-1865

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Crandell Com 501S	Date Reported:	09-02-08
Laboratory Number:	46893	Date Sampled:	08-22-08
Chain of Custody No:	5071	Date Received:	08-22-08
Sample Matrix:	Soil	Date Extracted:	08-28-08
Preservative:		Date Analyzed:	08-28-08
Condition:	Intact	Analysis Needed:	TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**671**	**5.0**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Drilling Pit Sample.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Crandell Com 501S Background	Date Reported:	09-02-08
Laboratory Number:	46894	Date Sampled:	08-22-08
Chain of Custody No:	5071	Date Received:	08-22-08
Sample Matrix:	Soil	Date Extracted:	08-28-08
Preservative:		Date Analyzed:	08-28-08
Condition:	Intact	Analysis Needed:	TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**22.2**	**5.0**

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Drilling Pit Sample.**

Analyst

Review

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ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 418.1
TOTAL PETROLEUM HYROCARBONS
QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	QA/QC	Date Reported:	08-28-08
Laboratory Number:	08-28-TPH.QA/QC 46887	Date Sampled:	N/A
Sample Matrix:	Freon-113	Date Analyzed:	08-28-08
Preservative:	N/A	Date Extracted:	08-28-08
Condition:	N/A	Analysis Needed:	TPH

Calibration	I-Cal Date	C-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept Range
	08-22-08	08-28-08	1,680	1,610	4.2%	+/- 10%

Blank Conc. (mg/Kg)	Concentration	Detection Limit
TPH	ND	16.8

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
TPH	269	295	10.0%	+/- 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
TPH	269	2,000	2,080	91.7%	80 - 120%

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **QA/QC for Samples 46887 - 46894 and 46843.**

Analyst

Review

5796 U.S. Highway 64 • Farmington, NM 87401 • Tel. 505-632-0615 • Fax 505-632-1865

Submit To Appropriate District Office
Two Copies
District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd , Aztec, NM 87410
District IV
1220 S St Francis Dr , Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-105
July 17, 2008

1 WELL API NO.
30-045-34509

2 Type of Lease
☐ STATE ☒ FEE ☐ FED/INDIAN

3 State Oil & Gas Lease No

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

4 Reason for filing

☐ **COMPLETION REPORT** (Fill in boxes #1 through #31 for State and Fee wells only)

☒ **C-144 CLOSURE ATTACHMENT** (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33, attach this and the plat to the C-144 closure report in accordance with 19 15 17 13 K NMAC)

5 Lease Name or Unit Agreement Name
Crandell Com

6 Well Number
501S

7 Type of Completion
☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER

8 Name of Operator
Burlington Resources Oil Gas Company, LP

9 OGRID
14538

10 Address of Operator
PO Box 4298, Farmington, NM 87499

11 Pool name or Wildcat

12.Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:										
BH:										

13 Date Spudded	14 Date T D Reached	15 Date Rig Released	16 Date Completed (Ready to Produce)	17 Elevations (DF and RKB, RT, GR, etc)
		03/05/2008		

18 Total Measured Depth of Well	19 Plug Back Measured Depth	20 Was Directional Survey Made?	21 Type Electric and Other Logs Run

22 Producing Interval(s), of this completion - Top, Bottom, Name

23 **CASING RECORD** (Report all strings set in well)

CASING SIZE	WEIGHT LB /FT	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED

24 LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

25 TUBING RECORD

SIZE	DEPTH SET	PACKER SET

26 Perforation record (interval, size, and number)

27 ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED

28 **PRODUCTION**

Date First Production	Production Method *(Flowing, gas lift, pumping - Size and type pump)*	Well Status *(Prod or Shut-in)*

Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl	Gas - MCF	Water - Bbl	Gas - Oil Ratio

Flow Tubing Press	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl	Gas - MCF	Water - Bbl	Oil Gravity - API - *(Corr)*

29 Disposition of Gas *(Sold, used for fuel, vented, etc)*

30 Test Witnessed By

31 List Attachments

32 If a temporary pit was used at the well, attach a plat with the location of the temporary pit

33 If an on-site burial was used at the well, report the exact location of the on-site burial

Latitude **36.85765**°N Longitude **108.061362**°W NAD ☐1927 ☒1983

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature Crystal Tafoya Printed Name Crystal Tafoya Title: Regulatory Technician Date. 1/19/2010

E-mail Address crystal.tafoya@conocophillips com

ConocoPhillips

Pit Closure Form:

Date: 10/28/2008

Well Name: Crandell Com 501S

Footages: 1920 FNL 770 FEL Unit Letter: H

Section: 35, T-31-N, R-12-W, County: SJ State: NM

Contractor Closing Pit: Acc

Construction Inspector: Norman Faver Date: 12-4-2008

Inspector Signature: Norman Faver

Revised 7/10/09

Tafoya, Crystal

From: Silverman, Jason M

Sent: Thursday, October 23, 2008 10 53 AM

To: Brandon Powell@state nm.us, Mark Kelly, Robert Switzer, Sherrie Landon

Cc: 'acedragline@yahoo com', Faver Norm (faverconsulting@yahoo com), Busse, Dollie L, Becker, Joey W, Bonilla, Amanda , Bowker, Terry D, Chavez, Virgil E, Green, Cary J, GRP SJBU Production Leads, Kennedy, Jim R, Kramme, Jeff L, Larry Thacker, Lopez, Richard A; Loudermilk, Jerry L, Nelson, Terry J, O'Nan, Mike J , Peace, James T, Poulson, Mark E, PTRRC, Richards, Brian; Silverman, Jason M, Stamets, Stephan A, Work, James A

Subject: Clean Up Notice - Crandell Com 501S

Attachments: Crandell Com 501S PDF

Ace Services will move a tractor to the **Crandell Com 501S** on **Tuesday, October.28**, to start the reclamation process. Please contact Norm Faver (320-0670) if you have any questions or need additional information

Thanks!

Jason Silverman

Network #: 10200098

Operator: Burlington Resources

Legals: 1920' FNL, 770' FEL

Section 35, T31N, R12W

Unit Letter 'H' (SE/NE)

San Juan County, NM

Lat: 36.85760 N (NAD 83)

Long: 108.06156 W

Lease: Fee, Pearl Rawson, ET AL

API #: 30-045-34509

Surface/Minerals: Fee/ Fee

Jason M. Silverman
ConocoPhillips

1/16/2010

Construction Technician
Phone: (505) 326-9821
San Juan Basin Unit

ConocoPhillips

Reclamation Form:

Date: 12-4-2008

Well Name: Crandell Com 501S

Footages: 1920 FNL 770 FEL Unit Letter: H

Section: 35, T-31-N, R-12-W, County: SJ State: NM

Reclamation Contractor: Acc

Reclamation Date: 11-3-2008

Road Completion Date: 12-1-2008

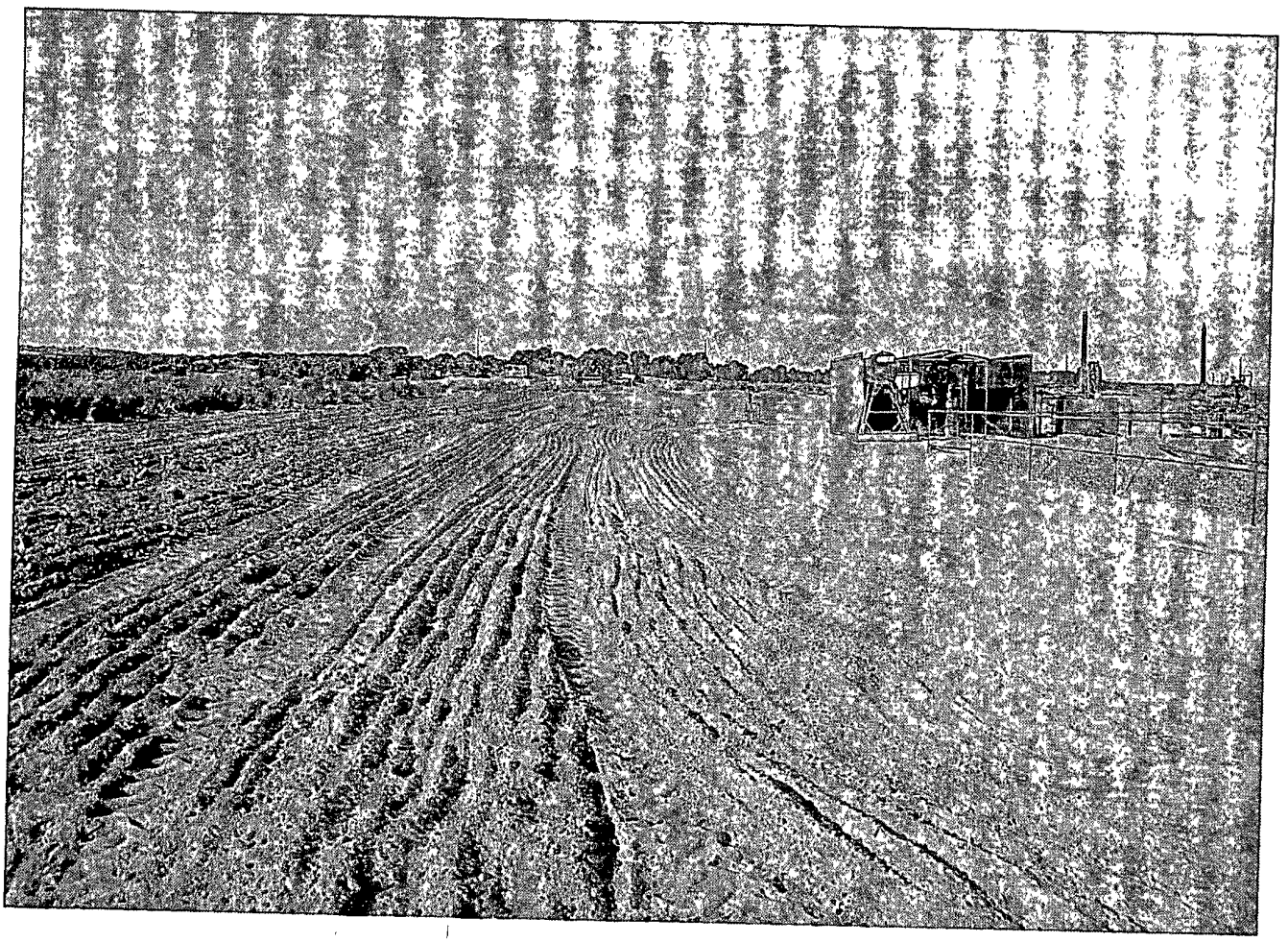
Seeding Date: 12-1-2008

Construction Inspector: Norman Faver Date: 12-4-2008

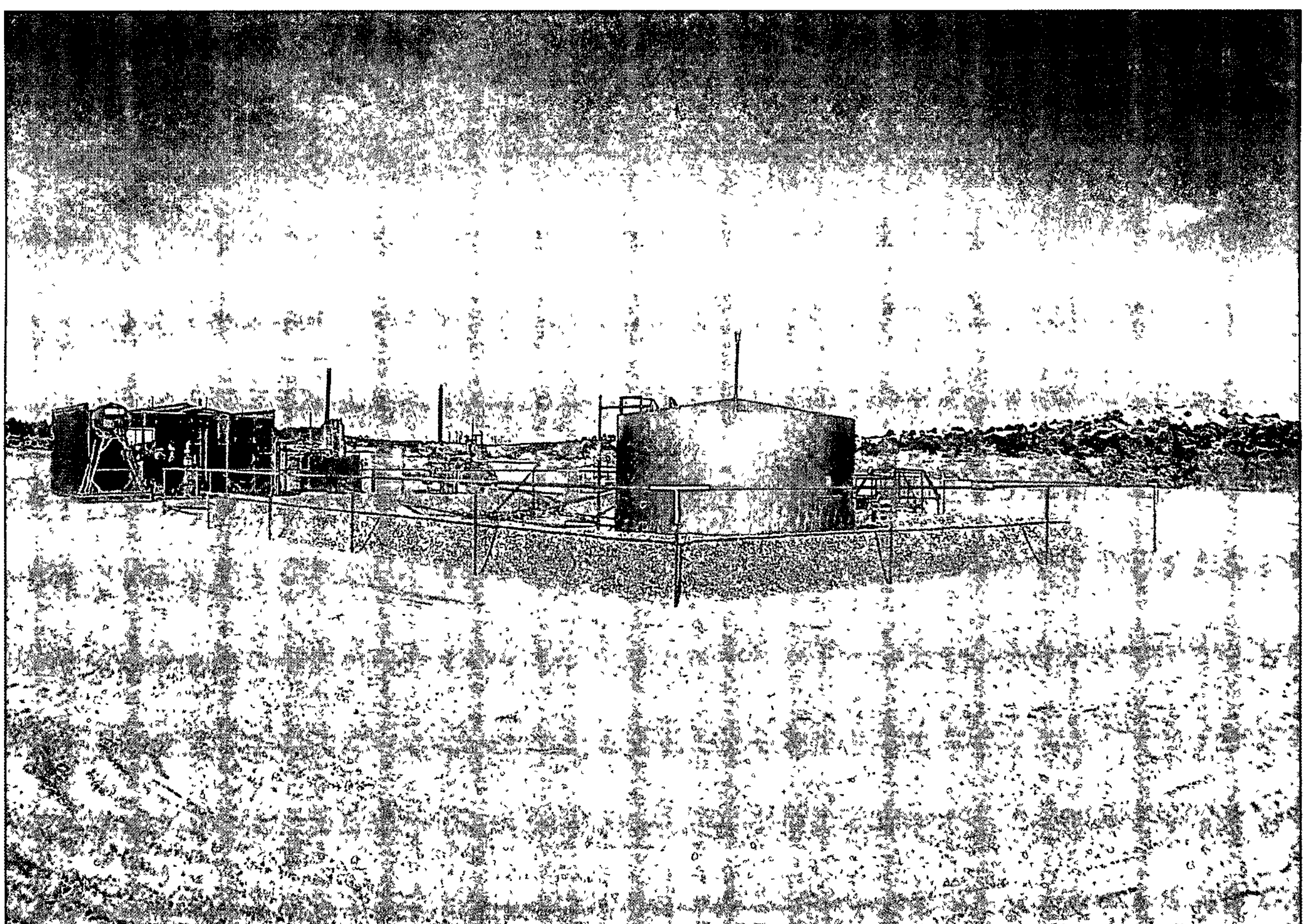
Inspector Signature: Norman Faver

Revised 7/16/08


BURLINGTON
ConocoPhillips RESOURCES
CRANDELL COM #501S
LATITUDE 36.85760° N(NAD83)
LONGITUDE 108.06156° W
UNIT H SEC 35 T31N R12W
1920' FNL 770' FEL
API # 30-045-34509
LEASE #PEARL RAWSON,ET AL ELEV.5864'GL
SAN JUAN COUNTY, NEW MEXICO
EMERGENCY NUMBER (505) 324-5170
2009/07/01



CRANDELL COM 501S
FEE BR S35,T31,R12
1920'FNL,770'FEL,H,SJ
FEE 30-045-



WELL PAD SAFETY AND ENVIRONMENTAL CHECK LIST

WELL NAME: Crandell Com #501S API#: 30-045-34509

DATE	INSPECTOR	SAFETY CHECK	LOCATION CHECK	PICTURES TAKEN	COMMENTS
1/30/08	Eric Smith	X	X	X	
2/12/08	Eric Smith	X	X	X	
2/29/08	Eric Smith	X	X	X	
4/08/08	J. McDonald	X	X	X	
4/23/08	Jared Chavez	X	X	X	Tear in blow pit, Key rig is moving off of location today / I.D. Griffith
5/29/08	Jared Chavez	X	X	X	Fence needs tightened, called MVCI
6/9/08	Jared Chavez	X	X	X	Pit and location in good condition
6/16/08	Jared Chavez				Key rig #15 is on location
6/23/08	Jared Chavez				Key Rig #15 is on location
7/3/08	Jared Chavez	X	X	X	Pit and location in good condition, Sierra Oilfield crew is on location
7/14/08	Jared Chavez	X	X	X	Fence needs tightened, called Crossfire
7/21/08	Jared Chavez	X	X	X	Pit and location in good condition
7/28/08	Jared Chavez	X	X	X	Pit and location in good condition
8/4/08	Jared Chavez	X	X	X	pit and location in good condition
8/11/08	Jared Chavez	X	X	X	Pit and location in good condition
8/18/08	Jared Chavez	X	X	X	Pit and location in good condition
8/21/08	Rodney Woody	X	X	X	Pit and location look good
8/29/08	Rodney Woody	X	X	X	Pit and location look good
9/11/08	Rodney Woody	X	X	X	Pit and location look good

10/3/08	Rodney Woody	X	X	X	Pit and location look good
10/9/08	Rodney Woody	X	X	X	Pit and location look good
10/28/08	N. Faver				Pit Closed
11/3/08	N. Faver				Reclamation of pit area