



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.)

RECEIVED
9/19/2011

1. OGCC Operator Number: 96155	4. Contact Name Gary Lawson	Complete the Attachment Checklist OP OGCC
2. Name of Operator: Whiting Petroleum Corporation	Phone: 970-878-4096	
3. Address: 2500 County Road 26 City: Rifle State: CO Zip: 81641	Fax: 311852	
5. API Number 05-103-10836	OGCC Facility ID Number	Survey Plat
6. Well/Facility Name: BOIES	7. Well/Facility Number #B-19N-N3	Directional Survey
8. Location (Qtr/Qt, Sec, Twp, Rng, Meridian): SESW Section 19 T2S R97W 6 P.M.		Surface Eqmnt Diagram
9. County: Rio Blanco - # 103	10. Field Name: Sulphur Creek - #80090	Technical Info Page
11. Federal, Indian or State Lease Number: N/A		Other

General Notice

CHANGE OF LOCATION: Attach New Survey Plat (a change of surface qtr/qr is substantive and requires a new permit)

Change of Surface Footage from Exterior Section Lines:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change of Surface Footage to Exterior Section Lines:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change of Bottomhole Footage from Exterior Section Lines:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Change of Bottomhole Footage to Exterior Section Lines:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Bottomhole location Qtr/Qt, Sec, Twp, Rng, Mer
Latitude _____ Distance to nearest property line _____ Distance to nearest bldg, public rd, utility or RR _____
Longitude _____ Distance to nearest lease line _____ Is location in a High Density Area (rule 603b)? Yes/No _____
Ground Elevation _____ Distance to nearest well same formation _____ Surface owner consultation date: _____

GPS DATA:
Date of Measurement _____ PDOP Reading _____ Instrument Operator's Name _____

CHANGE SPACING UNIT
Formation _____ Formation Code _____ Spacing order number _____ Unit Acreage _____ Unit configuration _____

Remove from surface bond
Signed surface use agreement attached

CHANGE OF OPERATOR (prior to drilling):
Effective Date: _____
Plugging Bond: Blanket Individual

CHANGE WELL NAME NUMBER
From: _____
To: _____
Effective Date: _____

ABANDONED LOCATION:
Was location ever built? Yes No
Is site ready for inspection? Yes No
Date Ready for Inspection: _____

NOTICE OF CONTINUED SHUT IN STATUS
Date well shut in or temporarily abandoned: _____
Has Production Equipment been removed from site? Yes No
MIT required if shut in longer than two years. Date of last MIT _____

SPUD DATE: _____ REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)

SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK *submit cbl and cement job summaries
Method used _____ Cementing tool setting/perf depth _____ Cement volume _____ Cement top _____ Cement bottom _____ Date _____

RECLAMATION: Attach technical page describing final reclamation procedures per Rule 1004.
Final reclamation will commence on approximately _____ Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

Notice of Intent Approximate Start Date: _____ 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"/> Request to Vent or Flare	<input type="checkbox"/> E&P Waste Disposal
<input type="checkbox"/> Change Drilling Plans	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Beneficial Reuse of E&P Waste
<input type="checkbox"/> Gross Interval Changed?	<input type="checkbox"/> Rule 502 variance requested	<input type="checkbox"/> Status Update/Change of Remediation Plans for Spills and Releases
<input type="checkbox"/> Casing/Cementing Program Change	<input checked="" type="checkbox"/> Other: Background	

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

Signed: Gary Lawson Date: 9/16/11 Email: gary.lawson@whiting.com
Print Name: Gary Lawson, P.E. Title: EH&S Coordinator

COGCC Approved: Chris Canfield Title: FOR Date: 09/30/2011
CONDITIONS OF APPROVAL, IF ANY: Chris Canfield

Note: Background samples should be collected near the pit & pad (BOIES B-19N-N3). Background samples presented are more representative of nearby pits.

TECHNICAL INFORMATION PAGE



FOR OGCC USE ONLY

1. OGCC Operator Number: 96155 API Number: 05-103-10836

2. Name of Operator: Whiting Petroleum Corporation OGCC Facility ID #

3. Well/Facility Name: BOIES Well/Facility Number: #B-19N-N3

4. Location (QtrQtr, Sec, Twp, Rng, Meridian): SESW Section 19 T2S R97W 6 P.M.

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

This COGCC Form 4 is being submitted as a request to meet the background concentration levels for arsenic at the BOIES #B-19N-N3 well pad for closure of the pit at the specified facility in accordance with footnote 1 to the COGCC Table 910-1. The Sundry Notice request corresponds to the pit closure.

The request is based on the analytical results presented below.

One (1) composite grab sample was collected from within the pit footprint to ascertain the arsenic concentration at the facility. This sample location is shown on the attached map.

SO_B_19N_PIT_COMPOSITE - 9 mg/kg

Three (3) grab samples were collected from locations within Black Sulphur Creek and adjacent to the BOIES #B-19N-N3 well pad to ascertain the native arsenic concentration in the vicinity of the facility. These samples were collected from the near surface (0-12 inches below ground surface) locations shown on the attached map. The three grab samples were designated as follows:

- SO_Boies_Background_Sect_3_2
- SO_Boies_Background_Sect_3_3
- SO_Boies_Background_Sect_3_4

The reported arsenic concentrations for these samples were as follows:

- SO_Boies_Background_Sect_3_2 - 6 mg/kg
- SO_Boies_Background_Sect_3_3 - 6 mg/kg
- SO_Boies_Background_Sect_3_4 - 8 mg/kg

Max Background value = 8 mg/kg

Average arsenic concentration - 7.0 mg/kg

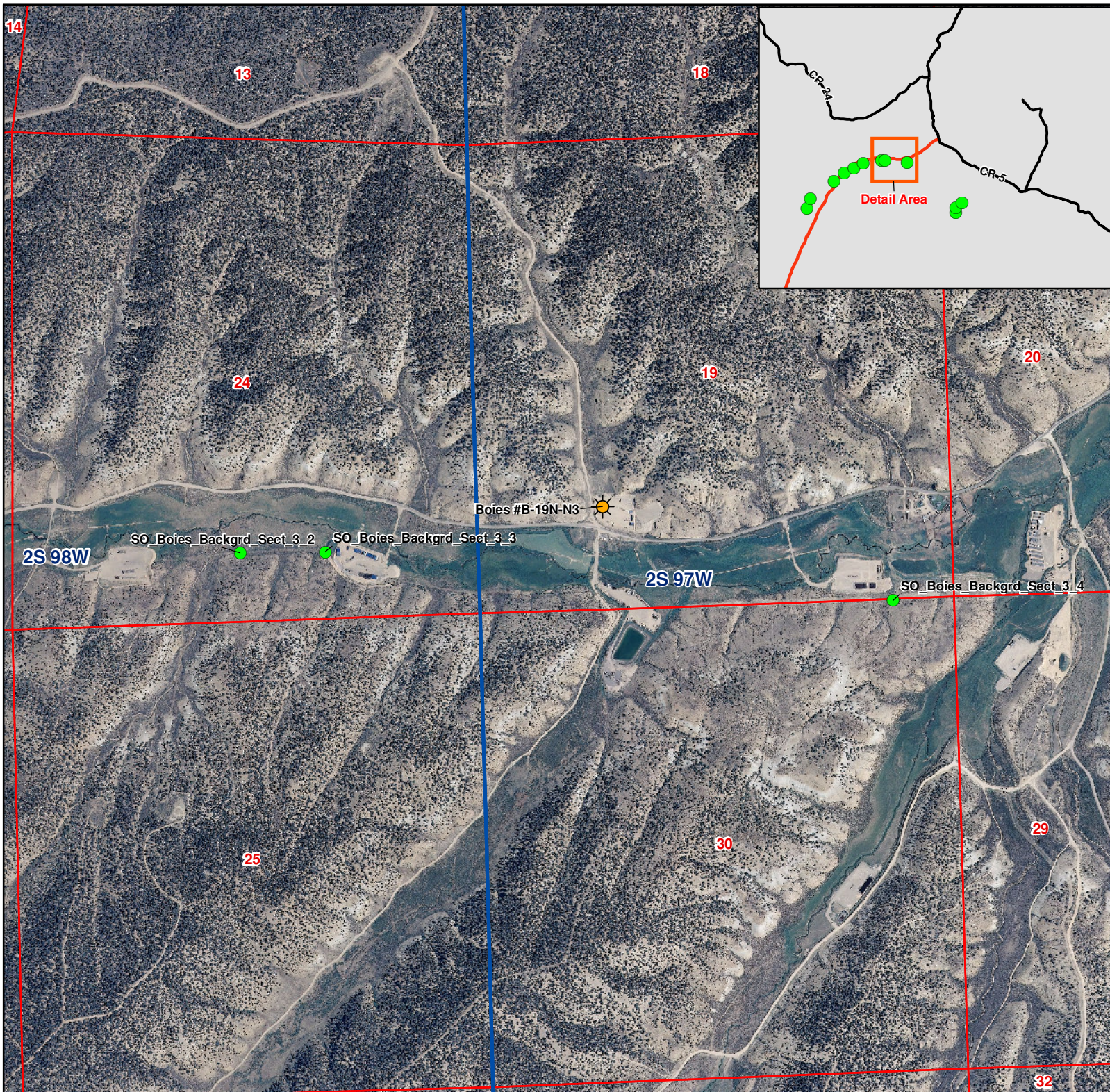
Whiting Petroleum Corporation has attached a map showing the sample locations with respect to the Boies #B-19N-N3 well and copies of the laboratory reports.

Whiting Petroleum Corporation is requesting this approval in order to proceed with closure and reclamation of the pit located on the Boies #B-19N-N3 well pad.

Allowable Arsenic concentration:

Max Background + 10%

$$8 \text{ mg/kg} + 0.8 = 8.8 \text{ mg/kg} \approx 9 \text{ mg/kg}$$



Whiting Petroleum Corporation

Figure 1
Boies #B-19N-N3
Sampling Locations

September 12, 2011

Explanation:

- Sample Location
- Whiting Well



0 0.1 0.2
 Miles

1:18,000





LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Whiting Petroleum Corporation
Site Name: WOG_Boies_B_19N
Project: Soil_Sampling
Client Sample ID: SO_B_19N_PIT_Composite
Location:
Samp FRQ/Type: SP
Lab ID: G11070296-001

Report Date: 07/22/11
Collection Date: 07/12/11 14:10
Date Received: 07/13/11
Sampled By: Cody Lofland
Matrix: Soil
Tracking Number: 191976

Analyses	Result	Units	RL	Qualifier	Method	Analysis Date / By
METALS, TRUE TOTAL						
Barium	480	mg/l	10		SW6010B	07/20/11 18:17 / eli-b
PETROLEUM HYDROCARBONS-VOLATILE						
Gasoline Range Organics (GRO)	2.6	mg/kg	2.0		SW8015B	07/15/11 10:07 / eli-b
Total Purgeable Hydrocarbons	28	mg/kg	2.0		SW8015B	07/15/11 10:07 / eli-b
Surr: Trifluorotoluene	87.0	%REC	70-130		SW8015B	07/15/11 10:07 / eli-b
- Note 1: Gasoline Range Organics(GRO) are defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.						
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.						
PETROLEUM HYDROCARBONS-SEMI-VOLATILE						
Diesel Range Organics (DRO)	164	mg/kg	10		SW8015B	07/18/11 11:36 / eli-b
Total Extractable Hydrocarbons	185	mg/kg	10		SW8015B	07/18/11 11:36 / eli-b
Surr: o-Terphenyl	107	%REC	50-150		SW8015B	07/18/11 11:36 / eli-b
- Note 1: Diesel Range Organics are defined as all hydrocarbons eluting between C10 and C28.						
- Note 2: Total Extractable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.						
VOLATILE ORGANIC COMPOUNDS						
Benzene	ND	mg/kg	0.20		SW8260B	07/15/11 19:29 / eli-b
Ethylbenzene	ND	mg/kg	0.20		SW8260B	07/15/11 19:29 / eli-b
Toluene	ND	mg/kg	0.20		SW8260B	07/15/11 19:29 / eli-b
m+p-Xylenes	ND	mg/kg	0.20		SW8260B	07/15/11 19:29 / eli-b
o-Xylene	ND	mg/kg	0.20		SW8260B	07/15/11 19:29 / eli-b
Xylenes, T total	ND	mg/kg	0.20		SW8260B	07/15/11 19:29 / eli-b
Surr: Dibromofluoromethane	100	%REC	70-132		SW8260B	07/15/11 19:29 / eli-b
Surr: 1,2-Dichloroethane-d4	82.0	%REC	60-136		SW8260B	07/15/11 19:29 / eli-b
Surr: Toluene-d8	107	%REC	75-138		SW8260B	07/15/11 19:29 / eli-b
Surr: p-Bromofluorobenzene	94.0	%REC	78-160		SW8260B	07/15/11 19:29 / eli-b
SEMI-VOLATILE ORGANIC COMPOUNDS						
Acenaphthene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Anthracene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Benzo(a)anthracene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Benzo(a)pyrene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Benzo(b)fluoranthene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Benzo(k)fluoranthene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Chrysene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Dibenzo(a,h)anthracene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Fluoranthene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Fluorene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Naphthalene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Pyrene	ND	mg/kg	0.33		SW8270C	07/19/11 20:56 / eli-b
Surr: 2-Fluorobiphenyl	79.0	%REC	67-102		SW8270C	07/19/11 20:56 / eli-b

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Whiting Petroleum Corporation
Site Name: WOG_Boies_B_19N
Project: Soil_Sampling
Client Sample ID: SO_B_19N_PIT_Composite
Location:
Samp FRQ/Type: SP
Lab ID: G11070296-001

Report Date: 07/22/11
Collection Date: 07/12/11 14:10
Date Received: 07/13/11
Sampled By: Cody Lofland
Matrix: Soil
Tracking Number: 191976

Analyses	Result	Units	RL	Qualifier	Method	Analysis Date / By
SEMI-VOLATILE ORGANIC COMPOUNDS						
Surr: Nitrobenzene-d5	70.0	%REC	62-95		SW8270C	07/19/11 20:56 / eli-b
Surr: Terphenyl-d14	80.0	%REC	65-121		SW8270C	07/19/11 20:56 / eli-b
SATURATED PASTE						
Conductivity, sat. paste	11.6	mmhos/cm	0.05	D	ASAM10-3	07/15/11 07:19 / eli-h
pH, sat. paste	8.1	s.u.	0.1		ASAM10-3.2	07/15/11 06:59 / eli-h
Calcium, sat. paste	27.1	meq/L	0.05		SW6010B	07/18/11 14:41 / eli-h
Magnesium, sat. paste	10.1	meq/L	0.08		SW6010B	07/18/11 14:41 / eli-h
Sodium, sat. paste	78.3	meq/L	0.04		SW6010B	07/18/11 14:41 / eli-h
Sodium Adsorption Ratio (SAR)	18.2	unitless	0.1		USDA20b	07/19/11 13:48 / eli-h
METALS, TOTAL						
Arsenic	9	mg/kg	5		SW6020	07/15/11 21:44 / eli-b
Cadmium	ND	mg/kg	1		SW6020	07/15/11 21:44 / eli-b
Chromium	21	mg/kg	5		SW6020	07/15/11 21:44 / eli-b
Copper	16	mg/kg	5		SW6020	07/15/11 21:44 / eli-b
Lead	14	mg/kg	5		SW6020	07/15/11 21:44 / eli-b
Mercury	ND	mg/kg	1		SW7471A	07/15/11 14:47 / eli-b
Nickel	20	mg/kg	5		SW6020	07/15/11 21:44 / eli-b
Selenium	ND	mg/kg	5		SW6020	07/15/11 21:44 / eli-b
Silver	ND	mg/kg	5		SW6020	07/15/11 21:44 / eli-b
Zinc	55	mg/kg	5		SW6020	07/15/11 21:44 / eli-b
METALS, WATER EXTRACTABLE						
Boron	1.4	mg/kg	0.10		SW6020	07/21/11 12:40 / eli-h

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Whiting Petroleum Corporation
Site Name: Boies_Ranch
Project: Soil_Sampling
Client Sample ID SO_Boies_Background_Sect_3_2
Location:
Samp FRQ/Type: SP
Lab ID: G11070820-007

Report Date: 08/06/11
Collection Date: 07/27/11 12:15
Date Received: 07/28/11
Sampled By: Scott Gustin
Matrix: Soil
Tracking Number: 192844

Analyses	Result	Units	RL	Qualifier	Method	Analysis Date / By
PETROLEUM HYDROCARBONS-VOLATILE						
Gasoline Range Organics (GRO)	ND	mg/kg	2.0		SW8015B	08/01/11 18:01 / eli-b
Total Purgeable Hydrocarbons	3.3	mg/kg	2.0		SW8015B	08/01/11 18:01 / eli-b
Surr: Trifluorotoluene	82.0	%REC	70-130		SW8015B	08/01/11 18:01 / eli-b
- Note 1: Gasoline Range Organics(GRO) are defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.						
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.						
PETROLEUM HYDROCARBONS-SEMI-VOLATILE						
Diesel Range Organics (DRO)	ND	mg/kg	10		SW8015B	08/02/11 22:39 / eli-b
Total Extractable Hydrocarbons	50	mg/kg	10		SW8015B	08/02/11 22:39 / eli-b
Surr: o-Terphenyl	103	%REC	50-150		SW8015B	08/02/11 22:39 / eli-b
- Note 1: Diesel Range Organics are defined as all hydrocarbons eluting between C10 and C28.						
- Note 2: Total Extractable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.						
VOLATILE ORGANIC COMPOUNDS						
Benzene	ND	mg/kg	0.20		SW8260B	07/29/11 23:57 / eli-b
Ethylbenzene	ND	mg/kg	0.20		SW8260B	07/29/11 23:57 / eli-b
Toluene	ND	mg/kg	0.20		SW8260B	07/29/11 23:57 / eli-b
m+p-Xylenes	ND	mg/kg	0.20		SW8260B	07/29/11 23:57 / eli-b
o-Xylene	ND	mg/kg	0.20		SW8260B	07/29/11 23:57 / eli-b
Xylenes, T total	ND	mg/kg	0.20		SW8260B	07/29/11 23:57 / eli-b
Surr: Dibromofluoromethane	111	%REC	70-132		SW8260B	07/29/11 23:57 / eli-b
Surr: 1,2-Dichloroethane-d4	98.0	%REC	60-136		SW8260B	07/29/11 23:57 / eli-b
Surr: Toluene-d8	114	%REC	75-138		SW8260B	07/29/11 23:57 / eli-b
Surr: p-Bromofluorobenzene	124	%REC	78-160		SW8260B	07/29/11 23:57 / eli-b
SATURATED PASTE						
Conductivity, sat. paste	0.82	mmhos/cm	0.05	D	ASAM10-3	08/02/11 09:48 / eli-h
pH, sat. paste	7.8	s.u.	0.1		ASAM10-3.2	08/02/11 07:55 / eli-h
Calcium, sat. paste	5.94	meq/L	0.05		SW6010B	08/03/11 13:24 / eli-h
Magnesium, sat. paste	1.57	meq/L	0.08		SW6010B	08/03/11 13:24 / eli-h
Sodium, sat. paste	2.30	meq/L	0.04		SW6010B	08/03/11 13:24 / eli-h
Sodium Adsorption Ratio (SAR)	1.2	unitless	0.1		USDA20b	08/03/11 10:49 / eli-h
METALS, TOTAL						
Arsenic	6	mg/kg	5		SW6010B	08/03/11 13:06 / eli-h
Barium	354	mg/kg	5		SW6010B	08/02/11 14:59 / eli-h
Cadmium	ND	mg/kg	1		SW6010B	08/02/11 14:59 / eli-h
Chromium	29	mg/kg	5		SW6010B	08/02/11 14:59 / eli-h
Copper	14	mg/kg	5		SW6010B	08/02/11 14:59 / eli-h
Lead	14	mg/kg	5		SW6010B	08/03/11 13:06 / eli-h
Mercury	ND	mg/kg	0.5		SW7471A	08/02/11 10:18 / eli-h
Nickel	16	mg/kg	5		SW6010B	08/02/11 14:59 / eli-h
Selenium	ND	mg/kg	5		SW6010B	08/02/11 14:59 / eli-h

Report Definitions: RL - Analyte reporting limit.
 QCL - Quality control limit.
 D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
 ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Whiting Petroleum Corporation
Site Name: Boies_Ranch
Project: Soil_Sampling
Client Sample ID: SO_Boies_Background_Sect_3_2
Location:
Samp FRQ/Type: SP
Lab ID: G11070820-007

Report Date: 08/06/11
Collection Date: 07/27/11 12:15
Date Received: 07/28/11
Sampled By: Scott Gustin
Matrix: Soil
Tracking Number: 192844

Analyses	Result	Units	RL	Qualifier	Method	Analysis Date / By
METALS, TOTAL						
Silver	ND	mg/kg	5		SW6010B	08/03/11 15:55 / eli-h
Zinc	46	mg/kg	5		SW6010B	08/02/11 14:59 / eli-h

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Whiting Petroleum Corporation
Site Name: Boies_Ranch
Project: Soil_Sampling
Client Sample ID SO_Boies_Background_Sect_3_3
Location:
Samp FRQ/Type: SP
Lab ID: G11070820-008

Report Date: 08/06/11
Collection Date: 07/27/11 13:00
Date Received: 07/28/11
Sampled By: Scott Gustin
Matrix: Soil
Tracking Number: 192845

Analyses	Result	Units	RL	Qualifier	Method	Analysis Date / By
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PETROLEUM HYDROCARBONS-VOLATILE

Gasoline Range Organics (GRO)	ND	mg/kg	2.0		SW8015B	08/02/11 02:15 / eli-b
Total Purgeable Hydrocarbons	ND	mg/kg	2.0		SW8015B	08/02/11 02:15 / eli-b
Surr: Trifluorotoluene	82.0	%REC	70-130		SW8015B	08/02/11 02:15 / eli-b

- Note 1: Gasoline Range Organics(GRO) are defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.

PETROLEUM HYDROCARBONS-SEMI-VOLATILE

Diesel Range Organics (DRO)	ND	mg/kg	10		SW8015B	08/02/11 09:44 / eli-b
Total Extractable Hydrocarbons	20	mg/kg	10		SW8015B	08/02/11 09:44 / eli-b
Surr: o-Terphenyl	103	%REC	50-150		SW8015B	08/02/11 09:44 / eli-b

- Note 1: Diesel Range Organics are defined as all hydrocarbons eluting between C10 and C28.
- Note 2: Total Extractable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.

VOLATILE ORGANIC COMPOUNDS

Benzene	ND	mg/kg	0.20		SW8260B	07/30/11 00:23 / eli-b
Ethylbenzene	ND	mg/kg	0.20		SW8260B	07/30/11 00:23 / eli-b
Toluene	ND	mg/kg	0.20		SW8260B	07/30/11 00:23 / eli-b
m+p-Xylenes	ND	mg/kg	0.20		SW8260B	07/30/11 00:23 / eli-b
o-Xylene	ND	mg/kg	0.20		SW8260B	07/30/11 00:23 / eli-b
Xylenes, T total	ND	mg/kg	0.20		SW8260B	07/30/11 00:23 / eli-b
Surr: Dibromofluoromethane	91.0	%REC	70-132		SW8260B	07/30/11 00:23 / eli-b
Surr: 1,2-Dichloroethane-d4	76.0	%REC	60-136		SW8260B	07/30/11 00:23 / eli-b
Surr: Toluene-d8	100	%REC	75-138		SW8260B	07/30/11 00:23 / eli-b
Surr: p-Bromofluorobenzene	109	%REC	78-160		SW8260B	07/30/11 00:23 / eli-b

SATURATED PASTE

Conductivity, sat. paste	0.49	mmhos/cm	0.05	D	ASAM10-3	08/02/11 09:48 / eli-h
pH, sat. paste	7.9	s.u.	0.1		ASAM10-3.2	08/02/11 07:55 / eli-h
Calcium, sat. paste	1.73	meq/L	0.05		SW6010B	08/03/11 13:27 / eli-h
Magnesium, sat. paste	0.83	meq/L	0.08		SW6010B	08/03/11 13:27 / eli-h
Sodium, sat. paste	2.74	meq/L	0.04		SW6010B	08/03/11 13:27 / eli-h
Sodium Adsorption Ratio (SAR)	2.4	unitless	0.1		USDA20b	08/03/11 10:49 / eli-h

METALS, TOTAL

Arsenic	6	mg/kg	5		SW6010B	08/03/11 13:10 / eli-h
Barium	305	mg/kg	5		SW6010B	08/02/11 15:02 / eli-h
Cadmium	ND	mg/kg	1		SW6010B	08/02/11 15:02 / eli-h
Chromium	33	mg/kg	5		SW6010B	08/02/11 15:02 / eli-h
Copper	17	mg/kg	5		SW6010B	08/02/11 15:02 / eli-h
Lead	12	mg/kg	5		SW6010B	08/03/11 13:10 / eli-h
Mercury	ND	mg/kg	0.5		SW7471A	08/02/11 10:21 / eli-h
Nickel	18	mg/kg	5		SW6010B	08/02/11 15:02 / eli-h
Selenium	ND	mg/kg	5		SW6010B	08/02/11 15:02 / eli-h

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
D - RL increased due to sample matrix.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Whiting Petroleum Corporation
Site Name: Boies_Ranch
Project: Soil_Sampling
Client Sample ID SO_Boies_Background_Sect_3_3
Location:
Samp FRQ/Type: SP
Lab ID: G11070820-008

Report Date: 08/06/11
Collection Date: 07/27/11 13:00
Date Received: 07/28/11
Sampled By: Scott Gustin
Matrix: Soil
Tracking Number: 192845

Analyses	Result	Units	RL	Qualifier	Method	Analysis Date / By
METALS, TOTAL						
Silver	ND	mg/kg	5		SW6010B	08/03/11 15:58 / eli-h
Zinc	54	mg/kg	5		SW6010B	08/02/11 15:02 / eli-h

Report Definitions: RL - Analyte reporting limit.
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LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Whiting Petroleum Corporation
Site Name: Boies_Ranch
Project: Soil_Sampling
Client Sample ID SO_Boies_Background_Sect_3_4
Location:
Samp FRQ/Type: SP
Lab ID: G11070820-009

Report Date: 08/06/11
Collection Date: 07/27/11 13:20
Date Received: 07/28/11
Sampled By: Scott Gustin
Matrix: Soil
Tracking Number: 192846

Analyses	Result	Units	RL	Qualifier	Method	Analysis Date / By
PETROLEUM HYDROCARBONS-VOLATILE						
Gasoline Range Organics (GRO)	ND	mg/kg	2.0		SW8015B	08/02/11 03:25 / eli-b
Total Purgeable Hydrocarbons	18	mg/kg	2.0		SW8015B	08/02/11 03:25 / eli-b
Surr: Trifluorotoluene	96.0	%REC	70-130		SW8015B	08/02/11 03:25 / eli-b
- Note 1: Gasoline Range Organics(GRO) are defined as all hydrocarbons eluting between 2-Methylpentane and 1,2,4-Trimethylbenzene.						
- Note 2: Total Purgeable Hydrocarbons are defined as the total hydrocarbon responses regardless of elution time.						
PETROLEUM HYDROCARBONS-SEMI-VOLATILE						
Diesel Range Organics (DRO)	21	mg/kg	10		SW8015B	08/02/11 10:35 / eli-b
Total Extractable Hydrocarbons	52	mg/kg	10		SW8015B	08/02/11 10:35 / eli-b
Surr: o-Terphenyl	94.0	%REC	50-150		SW8015B	08/02/11 10:35 / eli-b
- Note 1: Diesel Range Organics are defined as all hydrocarbons eluting between C10 and C28.						
- Note 2: Total Extractable Hydrocarbons are defined as the total hydrocarbon response regardless of elution time.						
VOLATILE ORGANIC COMPOUNDS						
Benzene	ND	mg/kg	0.20		SW8260B	07/30/11 00:50 / eli-b
Ethylbenzene	ND	mg/kg	0.20		SW8260B	07/30/11 00:50 / eli-b
Toluene	ND	mg/kg	0.20		SW8260B	07/30/11 00:50 / eli-b
m+p-Xylenes	ND	mg/kg	0.20		SW8260B	07/30/11 00:50 / eli-b
o-Xylene	ND	mg/kg	0.20		SW8260B	07/30/11 00:50 / eli-b
Xylenes, T total	ND	mg/kg	0.20		SW8260B	07/30/11 00:50 / eli-b
Surr: Dibromofluoromethane	92.0	%REC	70-132		SW8260B	07/30/11 00:50 / eli-b
Surr: 1,2-Dichloroethane-d4	81.0	%REC	60-136		SW8260B	07/30/11 00:50 / eli-b
Surr: Toluene-d8	95.0	%REC	75-138		SW8260B	07/30/11 00:50 / eli-b
Surr: p-Bromofluorobenzene	106	%REC	78-160		SW8260B	07/30/11 00:50 / eli-b
SATURATED PASTE						
Conductivity, sat. paste	0.38	mmhos/cm	0.05	D	ASAM10-3	08/02/11 09:49 / eli-h
pH, sat. paste	7.8	s.u.	0.1		ASAM10-3.2	08/02/11 07:56 / eli-h
Calcium, sat. paste	2.67	meq/L	0.05		SW6010B	08/03/11 13:31 / eli-h
Magnesium, sat. paste	0.84	meq/L	0.08		SW6010B	08/03/11 13:31 / eli-h
Sodium, sat. paste	0.70	meq/L	0.04		SW6010B	08/03/11 13:31 / eli-h
Sodium Adsorption Ratio (SAR)	0.5	unitless	0.1		USDA20b	08/03/11 10:49 / eli-h
METALS, TOTAL						
Arsenic	8	mg/kg	5		SW6010B	08/02/11 15:13 / eli-h
Barium	245	mg/kg	5		SW6010B	08/02/11 15:13 / eli-h
Cadmium	ND	mg/kg	1		SW6010B	08/02/11 15:13 / eli-h
Chromium	28	mg/kg	5		SW6010B	08/02/11 15:13 / eli-h
Copper	14	mg/kg	5		SW6010B	08/02/11 15:13 / eli-h
Lead	11	mg/kg	5		SW6010B	08/03/11 13:15 / eli-h
Mercury	ND	mg/kg	0.5		SW7471A	08/02/11 10:23 / eli-h
Nickel	16	mg/kg	5		SW6010B	08/02/11 15:13 / eli-h
Selenium	ND	mg/kg	5		SW6010B	08/02/11 15:13 / eli-h

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LABORATORY ANALYTICAL REPORT

Prepared by Gillette, WY Branch

Client: Whiting Petroleum Corporation
Site Name: Boies_Ranch
Project: Soil_Sampling
Client Sample ID SO_Boies_Background_Sect_3_4
Location:
Samp FRQ/Type: SP
Lab ID: G11070820-009

Report Date: 08/06/11
Collection Date: 07/27/11 13:20
Date Received: 07/28/11
Sampled By: Scott Gustin
Matrix: Soil
Tracking Number: 192846

Analyses	Result	Units	RL	Qualifier	Method	Analysis Date / By
METALS, TOTAL						
Silver	ND	mg/kg	5		SW6010B	08/03/11 16:01 / eli-h
Zinc	47	mg/kg	5		SW6010B	08/02/11 15:13 / eli-h

Report Definitions: RL - Analyte reporting limit.
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