Analytical Report 429429

for

Southwest Royalties

Project Manager: Luis Gonzalez

Shole A and B Battery

20-OCT-11

Collected By: Client

Celebrating 20 Years of commitment to excellence in Environmental Testing Services

12600 West I-20 East Odessa, Texas 79765

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Final 1.000

REVISED
11/10/11

20-OCT-11

Project Manager: **Luis Gonzalez**
Southwest Royalties
6 Desta Dr Suite 1100
Midland, TX 79705

Reference: XENCO Report No: **429429**
Shole A and B Battery
Project Address: Shole A and B Battery

Luis Gonzalez:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 429429. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 429429 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Sample Cross Reference 429429

Southwest Royalties, Midland, TX

Shole A and B Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Stockpile 1-2A	S	10-12-11 13:33		429429-001
S-4	S	10-12-11 14:55		429429-002
S-3	S	10-12-11 14:40		429429-003
S-1	S	10-12-11 14:20		429429-004
Stockpile 1-1A	S	10-12-11 13:20		429429-005
S-2	S	10-12-11 14:30		429429-006
Spill-5-A	S	10-12-11 13:55		429429-007
Stockpile 2-2B	S	10-12-11 13:45		429429-008
Stockpile 2-1A	S	10-12-11 13:40		429429-009
Stockpile 2-3C	S	10-12-11 13:50		429429-010

CASE NARRATIVE

XENCO Laboratories

Client Name: Southwest Royalties
Project Name: Shole A and B Battery

Project ID:
Work Order Number: 429429

Report Date: 20-OCT-11
Date Received: 10/13/2011

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Analytical non nonformances and comments:

Batch: LBA-872539 TPH By SW8015 Mod
SW8015MOD_NM

Batch 872539, 1-Chlorooctane recovered below QC limits Data not confirmed by re-analysis.
Samples affected are: 612809-1-BLK.

Certificate of Analysis Summary 429429

Southwest Royalties, Midland, TX

Project Name: Shole A and B Battery

Project Id:

Contact: Luis Gonzalez

Project Location: Shole A and B Battery

Date Received in Lab: Thu Oct-13-11 08:06 am

Report Date: 20-OCT-11

Project Manager: Brent Barron II

Analysis Requested													
	Lab Id:	429429-001		429429-002		429429-003		429429-004		429429-005		429429-006	
	Field Id:	Stockpile 1-2A		S-4		S-3		S-1		Stockpile 1-1A		S-2	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-12-11 13:33		Oct-12-11 14:55		Oct-12-11 14:40		Oct-12-11 14:20		Oct-12-11 13:20		Oct-12-11 14:30	
Anions by E300	***Extracted:***												
	Analyzed:	Oct-13-11 18:03		Oct-13-11 18:03		Oct-13-11 18:03		Oct-13-11 18:03		Oct-13-11 18:03		Oct-13-11 18:03	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1410	17.7	150	4.20	37.6	4.20	600	4.21	8.66	4.20	364	8.41
Percent Moisture	***Extracted:***												
	Analyzed:	Oct-13-11 12:45		Oct-13-11 12:45		Oct-13-11 12:45		Oct-13-11 12:45		Oct-13-11 12:45		Oct-13-11 12:45	
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL	%	RL
Percent Moisture		4.97	1.00	ND	1.00	ND	1.00	ND	1.00	ND	1.00	ND	1.00
TPH By SW8015 Mod	***Extracted:***	Oct-13-11 14:10		Oct-13-11 14:10		Oct-13-11 14:10		Oct-13-11 14:10		Oct-13-11 14:10		Oct-13-11 14:10	
	Analyzed:	Oct-15-11 23:40		Oct-16-11 00:06		Oct-16-11 00:32		Oct-16-11 00:58		Oct-16-11 01:24		Oct-16-11 01:50	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
C6-C12 Gasoline Range Hydrocarbons		ND	15.7	ND	75.0	ND	74.9	ND	75.0	ND	15.0	ND	75.1
C12-C28 Diesel Range Hydrocarbons		224	15.7	1170	75.0	1940	74.9	2410	75.0	104	15.0	1640	75.1
C28-C35 Oil Range Hydrocarbons		116	15.7	302	75.0	445	74.9	633	75.0	47.3	15.0	278	75.1
Total TPH		340	15.7	1470	75.0	2390	74.9	3040	75.0	151	15.0	1920	75.1

Brent Barron II
Odessa Laboratory Manager

Certificate of Analysis Summary 429429

Southwest Royalties, Midland, TX

Project Name: Shole A and B Battery

Project Id:

Contact: Luis Gonzalez

Project Location: Shole A and B Battery

Date Received in Lab: Thu Oct-13-11 08:06 am

Report Date: 20-OCT-11

Project Manager: Brent Barron II

Analysis Requested													
	Lab Id:	429429-007		429429-008		429429-009		429429-010					
	Field Id:	Spill-5-A		Stockpile 2-2B		Stockpile 2-1A		Stockpile 2-3C					
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Oct-12-11 13:55		Oct-12-11 13:45		Oct-12-11 13:40		Oct-12-11 13:50					
Anions by E300	*Extracted:*												
	Analyzed:	Oct-14-11 10:47		Oct-13-11 18:03		Oct-13-11 18:03		Oct-13-11 18:03					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		14000	182	5950	100	3310	42.2	95.1	4.59				
Percent Moisture	*Extracted:*												
	Analyzed:	Oct-13-11 12:45		Oct-13-11 12:45		Oct-13-11 12:45		Oct-13-11 13:00					
	Units/RL:	%	RL	%	RL	%	RL	%	RL				
Percent Moisture		7.62	1.00	16.1	1.00	ND	1.00	8.47	1.00				
TPH By SW8015 Mod	*Extracted:*	Oct-13-11 14:10		Oct-13-11 14:10		Oct-13-11 14:10		Oct-13-11 14:10					
	Analyzed:	Oct-16-11 02:15		Oct-16-11 02:40		Oct-16-11 03:07		Oct-16-11 03:33					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	16.2	ND	17.9	ND	75.3	92.1	16.4				
C12-C28 Diesel Range Hydrocarbons		17.5	16.2	ND	17.9	1240	75.3	798	16.4				
C28-C35 Oil Range Hydrocarbons		ND	16.2	ND	17.9	196	75.3	79.0	16.4				
Total TPH		17.5	16.2	ND	17.9	1440	75.3	969	16.4				

Brent Barron II
Odessa Laboratory Manager

XENCO Laboratories

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantiation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ Outside XENCO's scope of NELAC Accreditation.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Shole A and B Battery

Work Orders : 429429,

Project ID:

Lab Batch #: 872539 **Sample:** 429429-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/15/11 23:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	99.7	92	70-135	
o-Terphenyl	57.2	49.9	115	70-135	

Lab Batch #: 872539 **Sample:** 429429-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/16/11 00:06

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.3	100	77	70-135	
o-Terphenyl	47.7	50.0	95	70-135	

Lab Batch #: 872539 **Sample:** 429429-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/16/11 00:32

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	71.4	99.8	72	70-135	
o-Terphenyl	42.0	49.9	84	70-135	

Lab Batch #: 872539 **Sample:** 429429-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/16/11 00:58

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.2	99.8	86	70-135	
o-Terphenyl	51.4	49.9	103	70-135	

Lab Batch #: 872539 **Sample:** 429429-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/16/11 01:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.4	99.9	73	70-135	
o-Terphenyl	41.1	50.0	82	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Shole A and B Battery

Work Orders : 429429,

Project ID:

Lab Batch #: 872539 **Sample:** 429429-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/16/11 01:50

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	74.5	100	75	70-135	
o-Terphenyl	44.5	50.0	89	70-135	

Lab Batch #: 872539 **Sample:** 429429-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/16/11 02:15

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.2	99.9	87	70-135	
o-Terphenyl	57.7	50.0	115	70-135	

Lab Batch #: 872539 **Sample:** 429429-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/16/11 02:40

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.8	100	89	70-135	
o-Terphenyl	58.1	50.0	116	70-135	

Lab Batch #: 872539 **Sample:** 429429-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/16/11 03:07

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.6	100	83	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 872539 **Sample:** 429429-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/16/11 03:33

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.1	100	88	70-135	
o-Terphenyl	55.8	50.0	112	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

Form 2 - Surrogate Recoveries

Project Name: Shole A and B Battery

Work Orders : 429429,

Project ID:

Lab Batch #: 872539 **Sample:** 612809-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/15/11 18:16

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	67.2	99.5	68	70-135	*
o-Terphenyl	42.9	49.8	86	70-135	

Lab Batch #: 872539 **Sample:** 612809-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/15/11 17:28

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	73.8	99.8	74	70-135	
o-Terphenyl	38.1	49.9	76	70-135	

Lab Batch #: 872539 **Sample:** 612809-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/15/11 17:52

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.6	100	76	70-135	
o-Terphenyl	39.7	50.2	79	70-135	

Lab Batch #: 872539 **Sample:** 429429-008 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/16/11 03:57

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.7	101	91	70-135	
o-Terphenyl	44.5	50.3	88	70-135	

Lab Batch #: 872539 **Sample:** 429429-008 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/16/11 04:24

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.4	100	96	70-135	
o-Terphenyl	48.6	50.1	97	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

XENCO Laboratories

BS / BSD Recoveries

Project Name: Shole A and B Battery

Work Order #: 429429 **Project ID:**

Analyst: BRB **Date Prepared:** 10/13/2011 **Date Analyzed:** 10/13/2011

Lab Batch ID: 872301 **Sample:** 872301-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.840	20.0	22.1	111	20.0	22.1	111	0	75-125	20	

Analyst: BRB **Date Prepared:** 10/14/2011 **Date Analyzed:** 10/14/2011

Lab Batch ID: 872317 **Sample:** 872317-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Anions by E300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.840	20.0	21.6	108	20.0	21.5	108	0	75-125	20	

Analyst: BBH **Date Prepared:** 10/13/2011 **Date Analyzed:** 10/15/2011

Lab Batch ID: 872539 **Sample:** 612809-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	998	707	71	1000	704	70	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	998	800	80	1000	758	76	5	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

XENCO Laboratories

Form 3 - MS Recoveries

Project Name: Shole A and B Battery

Work Order #: 429429

Lab Batch #: 872301 **Project ID:**

Date Analyzed: 10/13/2011 **Date Prepared:** 10/13/2011 **Analyst:** BRB

QC- Sample ID: 429429-005 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Inorganic Anions by EPA 300 **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**%R [D]**	**Control Limits %R**	**Flag**
Chloride	8.66	100	107	98	75-125	

Lab Batch #: 872301

Date Analyzed: 10/13/2011 **Date Prepared:** 10/13/2011 **Analyst:** BRB

QC- Sample ID: 429439-001 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Inorganic Anions by EPA 300 **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**%R [D]**	**Control Limits %R**	**Flag**
Chloride	36.7	110	149	102	75-125	

Lab Batch #: 872317

Date Analyzed: 10/14/2011 **Date Prepared:** 10/14/2011 **Analyst:** BRB

QC- Sample ID: 429429-007 S **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Inorganic Anions by EPA 300 **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**%R [D]**	**Control Limits %R**	**Flag**
Chloride	14000	4330	18600	106	75-125	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Final 1.000

XENCO Laboratories

Form 3 - MS / MSD Recoveries

Project Name: Shole A and B Battery

Work Order # : 429429 **Project ID:**

Lab Batch ID: 872539 **QC- Sample ID:** 429429-008 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/16/2011 **Date Prepared:** 10/13/2011 **Analyst:** BBH

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH By SW8015 Mod **Analytes**	**Parent Sample Result [A]**	**Spike Added [B]**	**Spiked Sample Result [C]**	**Spiked Sample %R [D]**	**Spike Added [E]**	**Duplicate Spiked Sample Result [F]**	**Spiked Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
C6-C12 Gasoline Range Hydrocarbons	<18.0	1200	961	80	1190	1010	85	5	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<18.0	1200	1090	91	1190	1210	102	10	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Shole A and B Battery

Work Order #: 429429

Lab Batch #: 872301 **Project ID:**
Date Analyzed: 10/13/2011 18:03 **Date Prepared:** 10/13/2011 **Analyst:** BRB
QC- Sample ID: 429439-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	36.7	35.2	4	20	

Lab Batch #: 872317
Date Analyzed: 10/14/2011 10:47 **Date Prepared:** 10/14/2011 **Analyst:** BRB
QC- Sample ID: 429429-007 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: mg/kg

Anions by E300 Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	14000	14100	1	20	

Lab Batch #: 872302
Date Analyzed: 10/13/2011 12:45 **Date Prepared:** 10/13/2011 **Analyst:** BRB
QC- Sample ID: 429439-001 D **Batch #:** 1 **Matrix:** Soil
Reporting Units: %

Percent Moisture Analyte	SAMPLE / SAMPLE DUPLICATE RECOVERY				
	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	9.06	9.03	0	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

429429

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	Southwest Royalties	BILL TO	
Project Manager:	Luis Gonzalez	P.O. #:	
Address:	6-Desta Drive 2100	Company:	
City:	Midland State: TX Zip: 79705	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	Shale AGB Battery	State: Zip:	
Project Location:	Shale AGB Battery	Phone #:	
Sampler Name:	Eric Garcia Republic Mid-Stream	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	TPH	Chlorides
-001	Stockpile 1-2A												10:12	1:55	X	X
-002	S-4												10:12	2:55		
-003	S-3													2:40		
-004	S-1													2:20		
-005	Stockpile 1-1A													1:20		
-006	S-2													2:30		
-007	Spill - 5-A													1:55		
-008	Stockpile 2-2B													1:45		
-009	Stockpile 2-1A													1:40		
-010	Stock Pile 2-3C													1:50 pm		

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date:	Received By:	
	Time:		
Relinquished By:	Date: 10/13/11	Received By:	
	Time: 8:06		
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool: Yes / No; Intact: Yes / No	CHECKED BY: (Initials)	3C BH

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

XENCO Laboratories	XENCO Laboratories Atlanta, Boca Raton, Corpus Christi, Dallas Houston, Miami, Odessa, Philadelphia Phoenix, San Antonio, Tampa	Document Title: Sample Receipt Checklist Document No.: SYS-SRC Revision/Date: No. 01, 5/27/2010 Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Southwest Royalties

Date/Time: 10/13/11 806 am

Lab ID #: 429429

Initials: KB

Sample Receipt Checklist

1. Samples on ice?	Blue	~~Water~~	No	
2. Shipping container in good condition?	~~Yes~~	No	None	
3. Custody seals intact on shipping container (cooler) and bottles?	~~Yes~~	No	N/A	
4. Chain of Custody present?	~~Yes~~	No		
5. Sample instructions complete on chain of custody?	~~Yes~~	No		
6. Any missing / extra samples?	Yes	~~No~~		
7. Chain of custody signed when relinquished / received?	~~Yes~~	No		
8. Chain of custody agrees with sample label(s)?	~~Yes~~	No		
9. Container labels legible and intact?	~~Yes~~	No		
10. Sample matrix / properties agree with chain of custody?	~~Yes~~	No		
11. Samples in proper container / bottle?	~~Yes~~	No		
12. Samples properly preserved?	~~Yes~~	No	N/A	
13. Sample container intact?	~~Yes~~	No		
14. Sufficient sample amount for indicated test(s)?	~~Yes~~	No		
15. All samples received within sufficient hold time?	~~Yes~~	No		
16. Subcontract of sample(s)?	~~Yes~~	No	N/A	
17. VOC sample have zero head space?	~~Yes~~	No	N/A	

18. Cooler 1 No.		Cooler 2 No.		Cooler 3 No.		Cooler 4 No.		Cooler 5 No.	
lbs	3 °C	lbs	°C	lbs	°C	lbs	°C	lbs	°C

Nonconformance Documentation

Contact:_____ Contacted by:_____ Date/Time:_____

Regarding: _____

_____

Corrective Action Taken: _____

_____

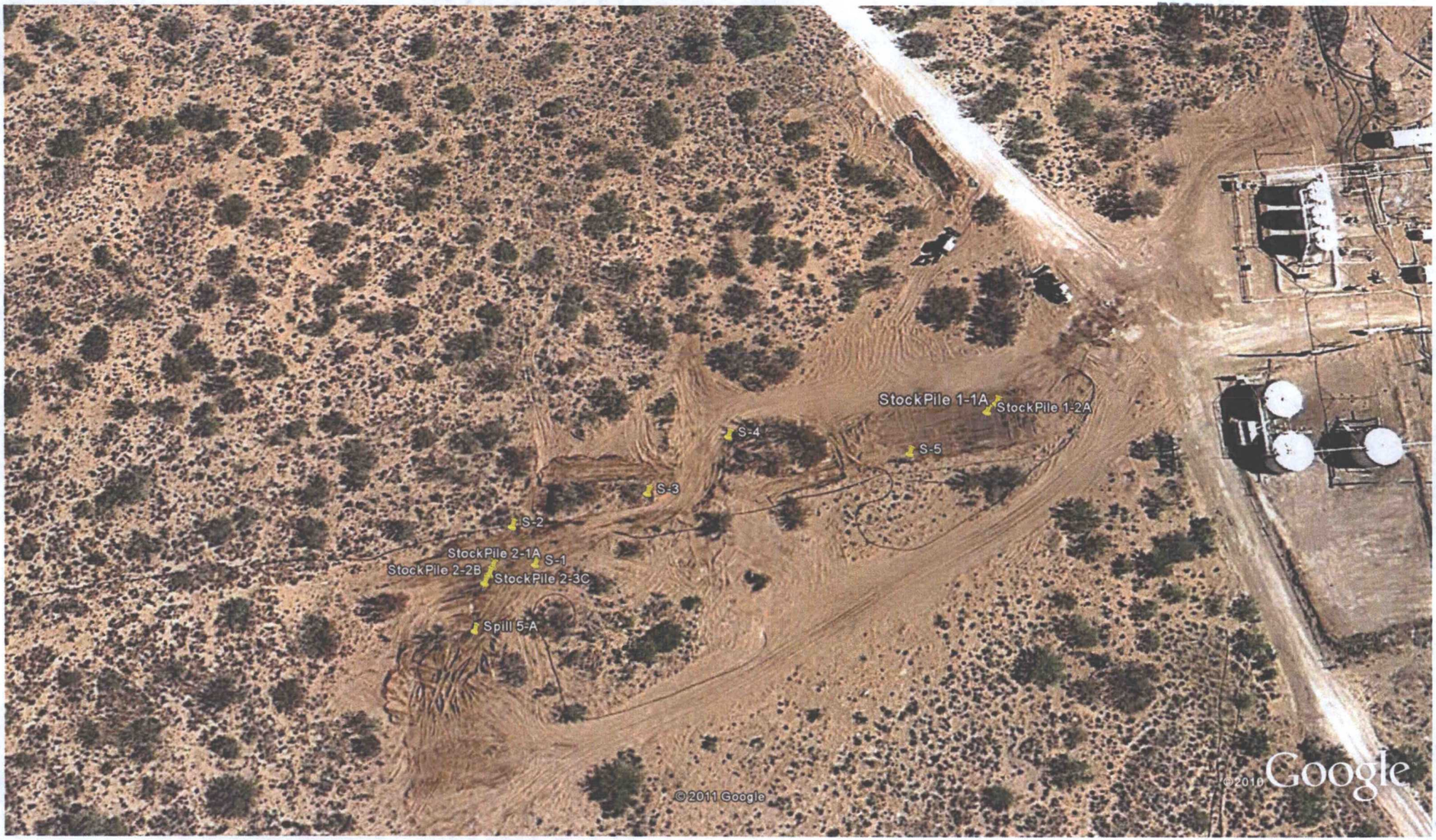
_____

_____

Check all that apply:
- ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
- ☐ Initial and Backup Temperature confirm out of temperature conditions
- ☐ Client understands and would like to proceed with analysis

HOBBS OCD

NOV 0 1 2011



L. Gonzales

HOBBS OCD

NOV 0 1 2011

RECEIVED

DOOM LAND FARM, L.L.C.
BOX 1271
JAL, N.M. 88252
575-395-3537 903-715-8491
903-715-0471

INVOICE #1352

DATE: 9-23-11
E.I.N.# 80 050 1930
PERMIT #NM-01-0033

SOLD TO: SOUTHWEST ROYALTIES
6 DESTA DR. STE. 1100
MIDLAND, TX 79705

DESCRIPTION	CYDS IN	$/CYD	$AMOUNT
Generator name: SOUTHWEST ROYALTIES Company Rep. L. GONZALEZ Originating Site: SHOAL BATTERIES A&B SEC. 25 TWN. 25S R36E lea co. n.m. Trucking:REPUBLIC Cell #8	516 cyd	$14.00/cyd	$ 7224.00
Disposal-cyds-RCRA Exempt Materials		N.M. SALES TAX (5.5%)	$ 397.32
Payment due 35 days from billing date		TOTAL AMOUNT DUE:	$ 7621.32

$1/Cyd discount in effect. Future cyd at $14.00/cyd for 9 months from billing date.
Thank you for your business.

94223 C-L. Gonzales

HOBBS OCD

NOV 0 1 2011

RECEIVED

DOOM LAND FARM, L.L.C.
BOX 1271
JAL, N.M. 88252
575-395-3537 903-715-8491
903-715-0471

INVOICE #1287

DATE: 5-27-11

PERMIT #NM-01-0033

SOLD TO: SOUTHWEST ROYALTIES
6 DESTA DR. STE. 1100
MIDLAND, TX 79705

DESCRIPTION	CYDS IN	$/CYD	$ AMOUNT
Generator name: SOUTHWEST ROYALTIES Originating site: SHOALS BATTERY A&B sec. 25 twn.25s range 36 lea co. n.m. Trucking: PANTHER Company rep: E. LUJAN Cell" 6	1434 cyds	$16.00/ cyd	$ 22944.00
Disposal-cyds-RCRA Exempt materials		N.M. SALES TAX (5.5%)	$ 1261.92
payment due 35 days from billing date		TOTAL AMOUNT DUE:	$ 24205.92

Thank you for your business. All additional cyd at $14/cyd through 12-31-11

6-6-11

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