Analytical Report 435521

for

Southwest Royalties

Project Manager: Luis Gonzalez

Sholes A & B Battery

HOBBS OCD

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02-FEB-12

Collected By: Client

XENCO Laboratories

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Heath Ybarra
Env. Specialist
NMOCD-HOBBS
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Project Manager: **Luis Gonzalez**
Southwest Royalties
6 Desta Dr Suite 1100
Midland, TX 79705

Reference: XENCO Report No: **435521**
Sholes A & B Battery
Project Address:

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 435521. 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. 435521 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 435521

Southwest Royalties, Midland, TX

Sholes A & B Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
A & B 1-4	S	01-18-12 12:00		435521-001
A & B 2	S	01-18-12 11:50		435521-002
A & B 3	S	01-18-12 12:10		435521-003

CASE NARRATIVE

XENCO Laboratories

Client Name: Southwest Royalties
Project Name: Sholes A & B Battery

Project ID:
Work Order Number: 435521

Report Date: 02-FEB-12
Date Received: 01/24/2012

Sample receipt non conformances and comments:
None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 435521

Southwest Royalties, Midland, TX

Project Name: Sholes A & B Battery

Project Id:
Contact: Luis Gonzalez
Project Location:

Date Received in Lab: Tue Jan-24-12 09:05 am
Report Date: 02-FEB-12
Project Manager: Brent Barron II

Analysis Requested									
	Lab Id:	435521-001		435521-002		435521-003			
	Field Id:	A & B 1-4		A & B 2		A & B 3			
	Depth:								
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Jan-18-12 12:00		Jan-18-12 11:50		Jan-18-12 12:10			
Anions by E300	*Extracted:*								
	Analyzed:	Jan-31-12 13:07		Jan-31-12 13:07		Jan-31-12 13:07			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		198	9.58	39.3	4.28	1890	22.0		
Percent Moisture	*Extracted:*								
	Analyzed:	Jan-24-12 09:45		Jan-24-12 09:45		Jan-24-12 09:45			
	Units/RL:	%	RL	%	RL	%	RL		
Percent Moisture		12.3	1.00	1.81	1.00	4.66	1.00		
TPH by Texas1005	*Extracted:*	Jan-26-12 13:35		Jan-26-12 13:35		Jan-26-12 13:35			
	Analyzed:	Jan-28-12 10:18		Jan-28-12 10:43		Jan-28-12 11:09			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
C6-C12 Gasoline Range Hydrocarbons		ND	28.6	ND	25.3	ND	26.2		
C12-C28 Diesel Range Hydrocarbons		61.6	28.6	550	25.3	102	26.2		
C28-C35 Oil Range Hydrocarbons		ND	28.6	82.7	25.3	ND	26.2		
Total TPH 1005		61.6	28.6	633	25.3	102	26.2		

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.

* Surrogate recovered outside laboratory control limit.

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. ^ NELAC or State program does not offer Accreditation at this time.

Form 2 - Surrogate Recoveries

Project Name: Sholes A & B Battery

Work Orders : 435521,

Project ID:

Lab Batch #: 880133 **Sample:** 435521-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/28/12 10:18

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.5	100	87	70-135	
o-Terphenyl	44.2	50.1	88	70-130	

Lab Batch #: 880133 **Sample:** 435521-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/28/12 10:43

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.4	99.5	82	70-135	
o-Terphenyl	39.7	49.8	80	70-130	

Lab Batch #: 880133 **Sample:** 435521-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/28/12 11:09

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	60.2	50.1	120	70-130	

Lab Batch #: 880133 **Sample:** 617186-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/28/12 09:02

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.7	100	99	70-135	
o-Terphenyl	51.5	50.0	103	70-130	

Lab Batch #: 880133 **Sample:** 617186-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/28/12 08:13

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.8	100	94	70-135	
o-Terphenyl	39.1	50.0	78	70-130	

* 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.

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Form 2 - Surrogate Recoveries

Project Name: Sholes A & B Battery

Work Orders : 435521,

Project ID:

Lab Batch #: 880133 **Sample:** 617186-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 01/28/12 08:38

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	46.8	50.0	94	70-130	

Lab Batch #: 880133 **Sample:** 435520-006 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/28/12 19:05

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.6	103	70-135	
o-Terphenyl	46.2	49.8	93	70-130	

Lab Batch #: 880133 **Sample:** 435520-006 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 01/28/12 19:30

TPH by Texas1005 Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	99.5	98	70-135	
o-Terphenyl	41.6	49.8	84	70-130	

* 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.

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BS / BSD Recoveries

Project Name: Sholes A & B Battery

Work Order #: 435521 **Project ID:**

Analyst: BRB **Date Prepared:** 01/31/2012 **Date Analyzed:** 01/31/2012

Lab Batch ID: 880191 **Sample:** 880191-1-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	21.1	106	20.0	20.5	103	3	75-125	20	

Analyst: ASA **Date Prepared:** 01/26/2012 **Date Analyzed:** 01/28/2012

Lab Batch ID: 880133 **Sample:** 617186-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by Texas1005 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	<25.0	1000	820	82	1000	843	84	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<25.0	1000	783	78	1000	916	92	16	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

Form 3 - MS Recoveries

Project Name: Sholes A & B Battery

Work Order #: 435521
Lab Batch #: 880191
Project ID:
Date Analyzed: 01/31/2012
Date Prepared: 01/31/2012
Analyst: BRB
QC- Sample ID: 435521-001 S
Batch #: 1
Matrix: Soil
Reporting Units: mg/kg

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	198	228	451	111	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

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Form 3 - MS / MSD Recoveries

Project Name: Sholes A & B Battery

Work Order # : 435521 **Project ID:**

Lab Batch ID: 880133 **QC- Sample ID:** 435520-006 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 01/28/2012 **Date Prepared:** 01/26/2012 **Analyst:** ASA

Reporting Units: mg/kg

	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
TPH by Texas1005 **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	<29.2	1170	1000	85	1170	931	80	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<29.2	1170	1130	97	1170	982	84	14	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

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Sample Duplicate Recovery

Project Name: Sholes A & B Battery

Work Order #: 435521

Lab Batch #: 880191 **Project ID:**

Date Analyzed: 01/31/2012 13:07 **Date Prepared:** 01/31/2012 **Analyst:** BRB

QC- Sample ID: 435521-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Anions by E300 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	198	199	1	20	

Lab Batch #: 879728

Date Analyzed: 01/24/2012 08:45 **Date Prepared:** 01/24/2012 **Analyst:** BRB

QC- Sample ID: 435520-001 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Percent Moisture Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	14.7	15.3	4	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