# 1R-474

## **PROPOSAL**

**DATE: JAN 2008** 

Table 1

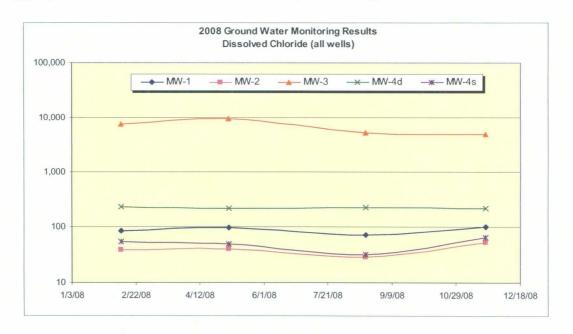
	ET Cove	er Monitori	ng Port	Backgroun	nd Cluster Mor	itoring Port
Vadose Zone	No. 1	No.2	No. 3	No. 1	No.2	No. 3
Measurement	West	Center	East	West	Center	East
Date	2.4-foot	5-foot	8-foot	13.9-foot	9.8-foot	6.5-foot
4/17/07	0	1	1	15	29	18
5/21/07	0	1	1	15	30	20
6/21/07	1	1	1	16	31	22
7/18/07	0	1	1	16	34	22
8/22/07	0	1	1	17	36	23
9/28/07	0	0	1	17	37	22
10/24/07	0	0	1	17	37	21
2/11/08	0	0	0	16	32	17
5/5/08	0	0	1	16	31	18
8/20/08	0	0	1	17	32	18
11/21/08	0	0	0		29	16

#### **Ground Water Flow Direction is Constant**

Plates 1A through 1D are ground water gradient maps prepared using the gauging data from each monitoring event. They indicate a generally consistent gradient direction to the southeast at approximately 0.005 to 0.007 ft/ft.

#### **Chloride and TDS Concentrations are Decreasing**

The results of the ground water monitoring performed to date are provided on Table 2. All of the 2008 laboratory reports and chain of custody documentations is provided in Attachment A. Graphs that depict the historic chloride and TDS levels are included in Attachment B. Plate 2 is a map that shows the chloride and TDS laboratory results from the 2008 monitoring and the following graphs summarize the last four quarterly monitoring events.





#### Recommendations

RT Hicks and Samson recommend ground water monitoring continue to be performed on a quarterly basis for at least one more year to verify the plume stability. An annual monitoring report will be provided in December of 2009.

Sincerely,

R.T. Hicks Consultants, Ltd.

ah 7. Littlysh

Dale T Littlejohn Project Manager

Copy:

Samson Resources, Scott Rose New Mexico State Land Office

RT Hicks Consultant Ltd

Table 2
Laboratory Results Summary - Groundwater Samples

MW-1         5/11/06         41           4,233.23         5/12/06         41           8/2/06         41           10/17/06         41	ater         Water           epth         Elevation           1.18         4,192.05           1.24         4,191.99           1.22         4,192.01           1.14         4,192.09           1.09         4,192.14           1.07         4,192.16	7.41 7.15 7.07	Cond. (uS/cm) 1.17 0.88 0.99	Chloride (mg/L)  131 115	TDS (mg/L)	% CI of TDS 16%
MW-1 5/11/06 41 4,233.23 5/12/06 41 8/2/06 41 10/17/06 41	1.18 4,192.05 1.24 4,191.99 1.22 4,192.01 1.14 4,192.09 1.09 4,192.14 1.07 4,192.16	7.41 7.15	1.17 0.88	 131	 838	
4,233.23 5/12/06 41 8/2/06 41 10/17/06 41	1.24     4,191.99       1.22     4,192.01       1.14     4,192.09       1.09     4,192.14       1.07     4,192.16	7.15	0.88	131		16%
8/2/06 41 10/17/06 41	1.22     4,192.01       1.14     4,192.09       1.09     4,192.14       1.07     4,192.16					16%
10/17/06 41	1.144,192.091.094,192.141.074,192.16	7.07	0.99	115	0.40	
	1.094,192.141.074,192.16				648	18%
12/12/06   41	1.07 4,192.16	ľ				
	•	1				
				97		
I I	1.32 4,191.91					
	1.25 4,191.98					
	1.37 4,191.86		0.985			
	1.39 4,191.84			83	620	13%
	1.36 4,191.87		1.025			
	1.13 4,192.10	7.41	0.82	89.6	674	13%
I I	0.99 4,192.24	7.96	0.79	83.8	630	13%
	1.02 4,192.21	7.52	0.74	76.5	632	12%
	1.05 4,192.18	7.50	0.80	102	650	16%
	0.96 4,192.27	7.26	0.86	88.0	672	13%
	0.94 4,192.29	7.62	0.94	122	606	20%
	1.00 4,192.23	7.75	0.93	117	710	16%
	1.01 4,192.22	7.60	1.00	84.7	1020	8%
	1.01 4,192.22					
	1.03 4,192.20	7.26	1.22	96.3	596	16%
•	1.10 4,192.13	7.19	0.96	72.3	568	13%
<b>—</b>	1.11 4,192.12	7.14	1.01	101	498	20%
.9	1.854,192.021.884,191.99	7.80 7.50	0.81	145	E20	8%
4	1.884,191.991.884,191.99	7.30	0.60 0.67	44.5 42.2	530 444	10%
	1.82 4,192.05	1.50	0.07	42.2	444	10 /8
	1.77 4,192.10					
	1.77 4,192.10 1.75 4,192.12			46.0		1
	1.93 4,191.94			40.0		
	1.88 4,191.99			[		
	1.97 4,191.90		0.924			
	2.03 4,191.84		0.02	45	510	9%
	1.99 4,191.88		0.663			
	1.81 4,192.06	7.93	0.65	41.5	436	10%
	1.73 4,192.14	8.31	0.63	38.6	452	9%
	1.73 4,192.14	7.72	0.57	39.7	516	8%
1 1	1.72 4,192.15	8.16	0.56	41.7	388	11%
	1.66 4,192.21	7.60	0.68	40.9	550	7%
9/28/07 4	1.65 4,192.22	7.82	0.66	74.4	452	16%
10/24/07 4	1.67 4,192.20	7.64	0.73	74.4	430	17%
2/11/08 4 <sup>-</sup>	1.68 4,192.19	7.56	0.78	39.8	744	5%
	1.68 4,192.19					ļ <b>I</b>
5/5/08 4	1.68 4,192.19	7.37	0.77	40.1	406	10%

RT Hicks Consultant Ltd

Table 2
Laboratory Results Summary - Groundwater Samples

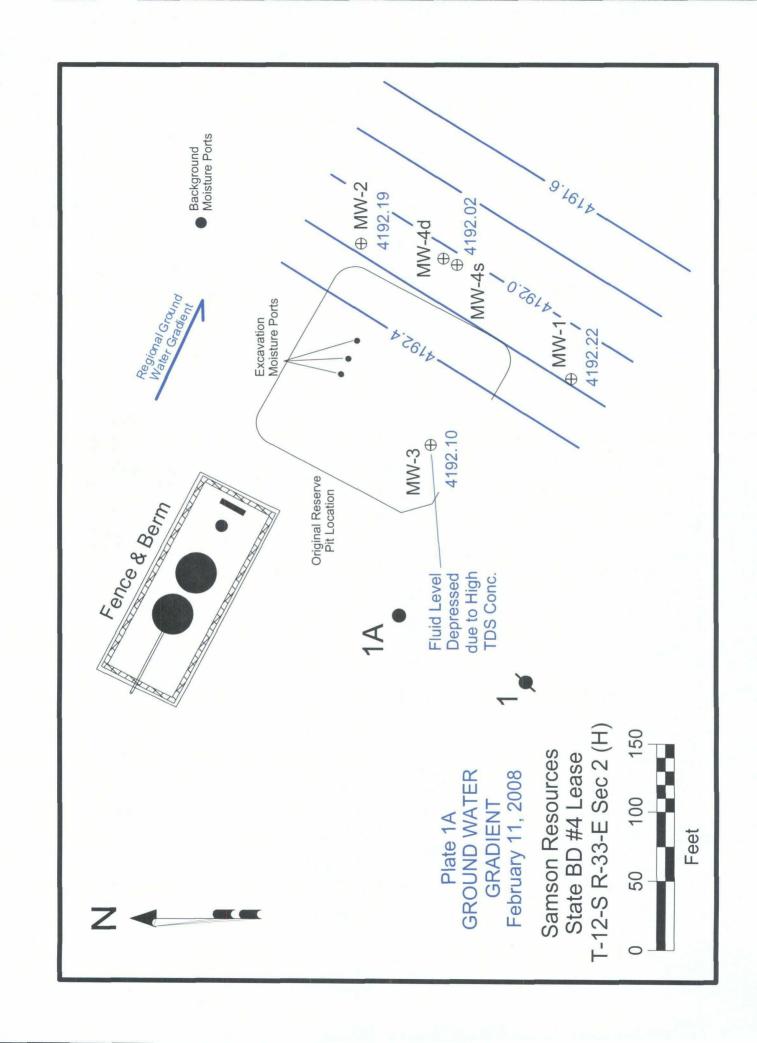
Monitor Well	Sample	Water	Water	рН	Cond.	Chloride	TDS	% CI
TOC Elev.	Date	Depth	Elevation	(unitless)	(uS/cm)	(mg/L)	(mg/L)	of TDS
MW-2 (con't)	8/20/08	41.75	4,192.12	7.51	0.71	28.7	440	7%
	11/21/08	41.78	4,192.09	7.40	0.77	53.2	388	14%
MW-3 (Deep)	12/18/06				0.87	2,000	3,700	54%
4,224.52	3/8/07			1	10.28	3,500	6,200	56%
	3/13/07	42.41	4,182.11		10.06			
MW-3 (RW)	12/12/06	32.81	4,191.71					
4,224.52	12/18/06	32.82	4,191.70			3,900	5,800	67%
	1/9/07	32.27	4,192.25					
	2/6/07	32.7	4,191.82					1
Pump On	2/6/07	44.47	4,180.05			2,500	4,400	57%
	2/16/07	44.45	4,180.07		8.71			
	3/8/07	40.12	4,184.40		10.31	3,400	6,200	55%
	3/13/07	42.41	4,182.11		10.27			
ļ	4/17/07	42	4,182.52	8.08	7.45	2,730	4,520	60%
Ì	5/21/07	41	4,183.52	8.20	8.67	3,340	6,430	52%
	6/21/07	42	4,182.52	7.78	10.24	4,750	7,960	60%
Pump Off	7/18/07	32.48	4,192.04	7.45	10.24	5,730	8,730	66%
	8/22/07	32.22	4,192.30					
	9/28/07	32.24	4,192.28					
	10/24/07	32.35	4,192.17					
	2/11/08	32.42	4,192.10					
	3/13/08	32.45	4,192.07			7,730	12,400	62%
	5/5/08	32.50	4,192.02	6.60	19.70	9,680	15,200	64%
	8/20/08	32.42	4,192.10	7.14	12.76	5,300	7,550	70%
	11/21/08	32.42	4,192.10	7.21	10.30	4,892	6,330	77%
MW-4(D)	1/9/07					100		
4,233.38	2/6/07	41.61	4,191.77					
	2/6/07	41.53	4,191.85					1
	2/16/07	41.64	4,191.74		0.95			
	3/8/07	41.65	4,191.73			52.0	550	9%
	3/13/07	41.63	4,191.75		0.78			
	4/17/07	41.42	4,191.96	7.87	0.70	45.7	562	8%
	5/21/07	41.32	4,192.06	8.33	0.69	44.8	458	10%
	6/21/07	41.33	4,192.05	7.72	0.61	42.4	610	7%
	7/18/07	41.34	4,192.04	7.93	0.62	48.2	508	9%
	8/22/07	41.26	4,192.12	7.53	0.74	50.4	494	10%
	9/28/07	41.24	4,192.14	7.79	0.75	79.8	474	17%
	10/24/07	41.29	4,192.09	7.94	0.87	95.7	690	14%
	2/11/08	41.30	4,192.08	7.42	1.31	231	764	30%
	3/13/08	41.32	4,192.06					
	5/5/08	41.32	4,192.06	7.26	1.22	217	804	27%
	8/20/08	41.39	4,191.99	7.33	1.16	225	736	31%
	11/21/08	41.41	4,191.97	7.22	1.25	213	682	31%

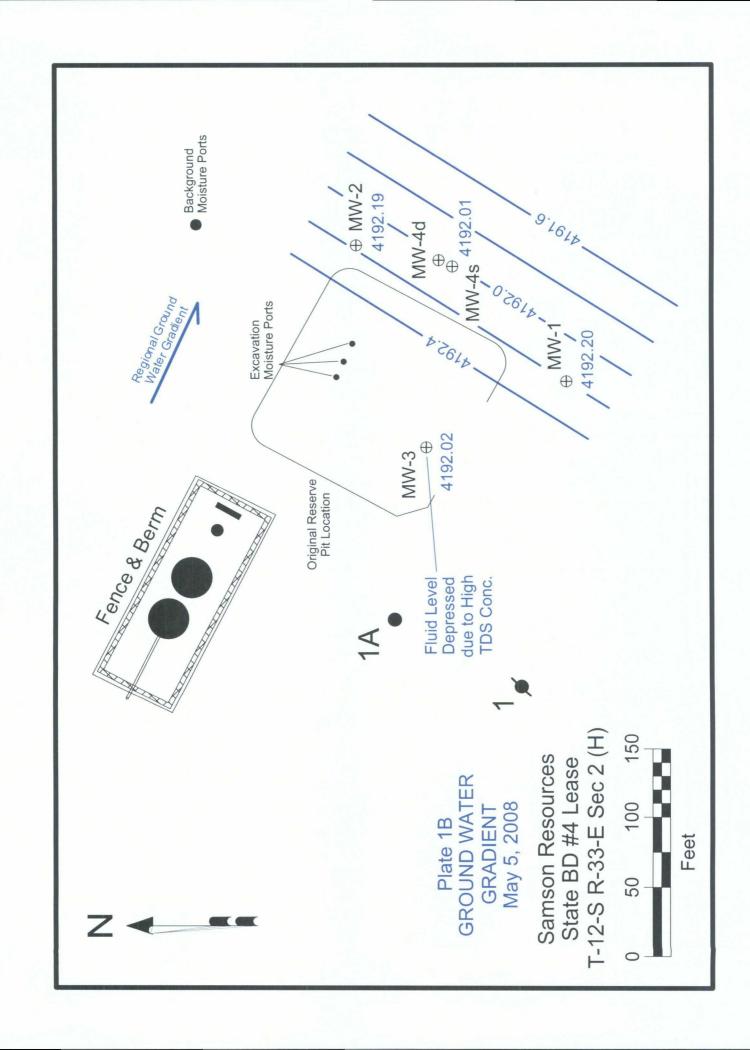
RT Hicks Consultant Ltd

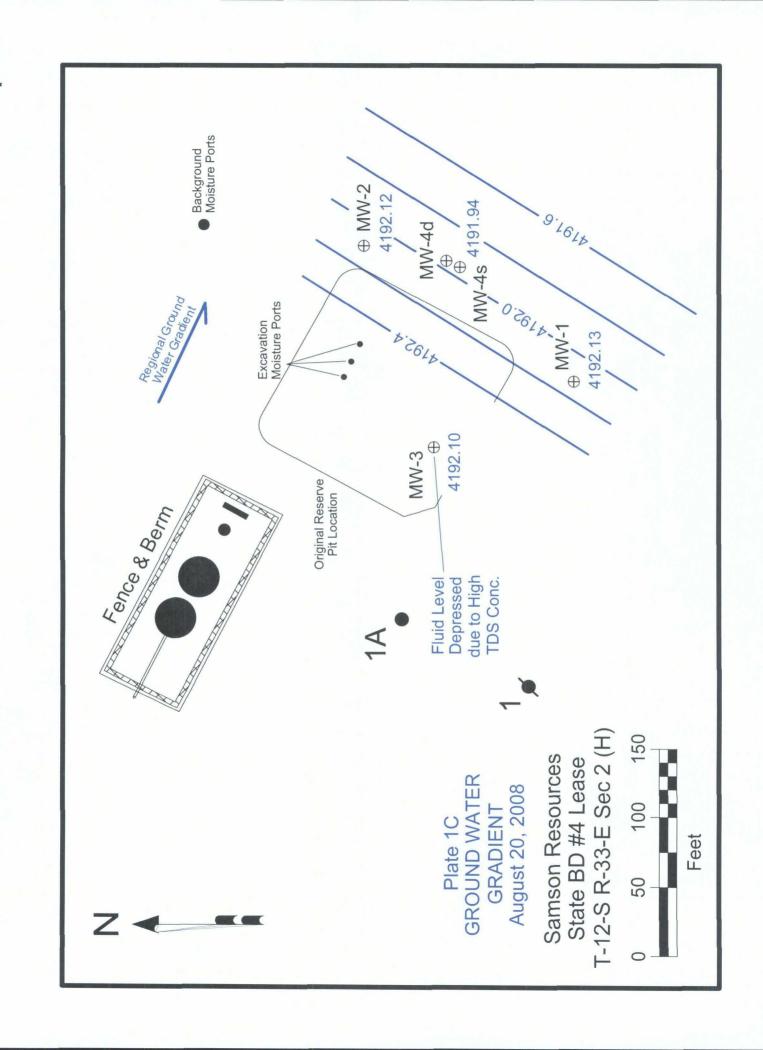
Table 2
Laboratory Results Summary - Groundwater Samples

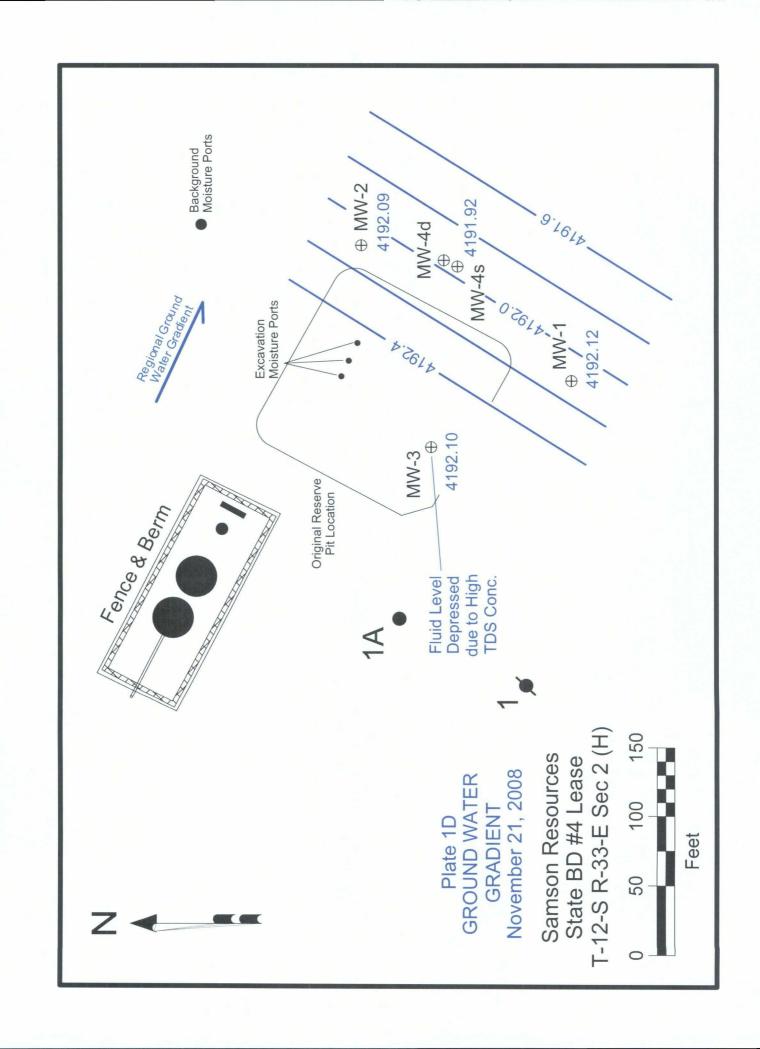
Monitor Well TOC Elev.	Sample Date	Water Depth	Water Elevation	pH (unitless)	Cond. (uS/cm)	Chloride (mg/L)	TDS (mg/L)	% CI of TDS
	1,010=	. •	11 6 -20 - 14	T		4.00		
MW-4(S)	1/9/07					180		
4,233.52	2/6/07	41.73	4,191.79					
	2/6/07	41.80	4,191.72					:
	2/16/07	41.84	4,191.68		0.98			
	3/8/07	41.85	4,191.67	1		120	680	18%
	3/13/07	41.82	4,191.70		0.99			
MW-4(S)	4/17/07	41.61	4,191.91	7.78	0.79	84.8	598	14%
(con't)	5/21/07	41.50	4,192.02	8.16	0.73	65.7	442	15%
	6/21/07	41.51	4,192.01	7.79	0.65	65.8	618	11%
	7/18/07	41.54	4,191.98	7.81	0.68	67.5	514	13%
	8/22/07	41.44	4,192.08	7.46	0.78	64.0	960	7%
	9/28/07	41.43	4,192.09	7.89	0.77	95.7	640	15%
	10/24/07	41.48	4,192.04	7.97	0.84	85.1	786	11%
	2/11/08	41.50	4,192.02	7.44	0.90	55.2	688	8%
	3/13/08	41.50	4,192.02					
	5/5/08	41.51	4,192.01	7.35	0.86	49.5	514	10%
	8/20/08	41.58	4,191.94	7.35	0.77	32.5	476	7%
	11/21/08	41.60	4,191.92	7.23	0.83	63.8	478	13%

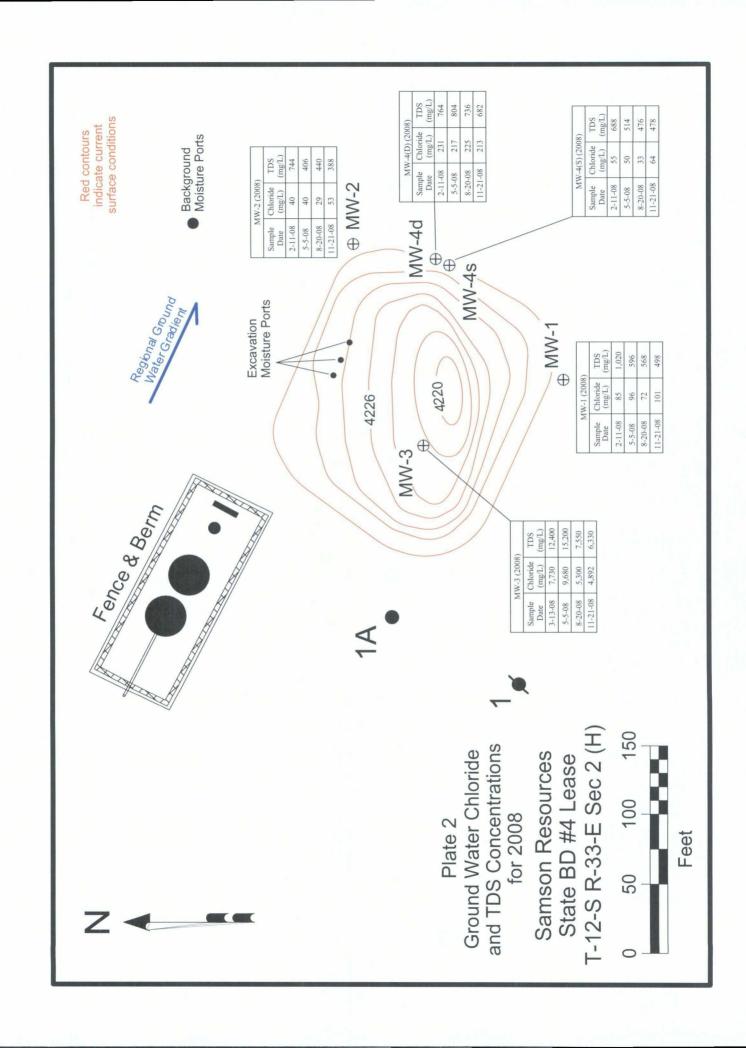
c:\Samson\State BD-4\BD #4 Project Data











#### ATTACHMENT A

**Laboratory Reports and Chain-of-Custody Documentation** 

#### **Analytical Report 297500**

for

#### RT Hicks Consultants Ltd. (Midland)

Project Manager: Dale Littlejohn

Samson State BD No.4 L-126-0208

19-FEB-08



#### 12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Norcross(Atlanta), GA E87429

South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America Midland - Corpus Christi - Atlanta





19-FEB-08

Project Manager: Dale Littlejohn RT Hicks Consultants Ltd. (Midland)

P.O. Box 7624

Midland, TX 79708

Reference: XENCO Report No: 297500

Samson State BD No.4 Project Address: Lea Co., NM

#### Dale Littlejohn:

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 297500. 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. 297500 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

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#### **Sample Cross Reference 297500**



#### RT Hicks Consultants Ltd. (Midland), Midland, TX

Samson State BD No.4

Sample 1d	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-I	W	Feb-11-08 11:35		297500-001
MW-2	W	Feb-11-08 10:10		297500-002
MW-4 (S)	W	Feb-11-08 10:57		297500-003
MW-4 (D)	W	Feb-11-08 10:40		297500-004



Contact: Dale Littlejohn

Project Id: L-126-0208

Project Location: Lea Co., NM

# Certificate of Analysis Summary 297500 RT Hicks Consultants Ltd. (Midland), Midland, TX

Project Name: Samson State BD No.4

Date Received in Lab: Tue Feb-12-08 09:52 am Report Date: 19-FEB-08

Project Manager: Brent Barron. II

					rroject Manager: Dicin Dallon, II	Brent Barron, 11
	Lab Id:	297500-001	297500-002	297500-003	297500-004	
Analysis Dogwood	Field Id:	MW-1	MW-2	MW-4 (S)	MW-4 (D)	
Anulysis Nequesieu	Depth:					
	Matrix:	WATER	WATER	WATER	WATER	
	Sampled:	Feb-11-08 11:35	Feb-11-08 10:10	Feb-11-08 10:57	Feb-11-08 10:40	
Inorganic Anions by EPA 300	Extracted:					
	Analyzed:	Feb-18-08 16:03	Feb-18-08 16:03	Feb-18-08 16:03	Feb-18-08 16:03	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Chloride		84.7 5.00	39.8 2.50	55.2 5.00	231 5.00	
Residue, Filterable (TDS) by EPA	Extracted:					
160.1	Analyzed:	Feb-12-08 16:00	Feb-12-08 16:00	Feb-12-08 16:00	Feb-12-08 16:00	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Total dissolved solids		1020 5.00	744 5.00	688 5.00	764 5.00	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report present the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data bereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron Odessa Laboratory Director

### 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 effect the recovery of the spike concentration. This condition could also effect 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 MQL(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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Fax 11381 Meadowglen Lane Suite L Houston, Tx 77082-2647 (281) 589-0692 (281) 589-0695 9701 Harry Hines Blvd , Dallas, TX 75220 (214) 902 0300 (214) 351-9139 5332 Blackberry Drive, Suite 104, San Antonio, TX 78238 (210) 509-3334 (210) 509-3335 2505 N. Falkenburg Rd., Tampa, FL 33619 (813) 620-2000 (813) 620-2033 5757 NW 158th St, Miami Lakes, FL 33014 (305) 823-8500 (305) 823-8555 6017 Financial Dr., Norcross, GA 30071 (770) 449-8800 (770) 449-5477



#### **Blank Spike Recovery**



Project Name: Samson State BD No.4

Work Order #: 297500 L-126-0208 Project ID:

Lab Batch #: 714975

Sample: 714975-1-BKS

Date Analyzed: 02/18/2008

**Date Prepared:** 02/18/2008

Matrix: Water Analyst: IRO

Reporting Units: mg/L Batch #: BLANK/BLANK SPIKE RECOVERY STUDY Blank Spike Blank Blank Control **Inorganic Anions by EPA 300** Result Added Spike Spike Limits Flags [B] Result %R %R [A] **Analytes** [C] [D] Chloride ND 5.00 8.83 177 85-115 Н

Blank Spike Recovery [D] = 100\*[C]/[B] All results are based on MDL and validated for QC purposes.



#### Form 3 - MS Recoveries

Project Name: Samson State BD No.4



Work Order #: 297500

Lab Batch #: 714975

**Project ID:** L-126-0208

**Date Analyzed:** 02/18/2008

**Date Prepared:** 02/18/2008

Analyst: IRO

QC- Sample ID: 297654-001 S

Batch #: Matrix: Water

Reporting Units: mg/L	MATI	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	[A]	[B]				
Chloride	274000	50000	240000	0	85-115	X



#### **Sample Duplicate Recovery**



Project Name: Samson State BD No.4

**Work Order #: 297500** 

**Lab Batch #:** 714975 **Date Analyzed:** 02/18/2008

**Project ID:** L-126-0208

**Date Prepared:** 02/18/2008

Analyst: IRO

QC- Sample ID: 297654-001 D

Batch #: 1 Matrix: Water

Reporting Units: mg/L	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
Inorganic Anions by EPA 300	Parent Sample Result [A]	Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Chloride	274000	270000	1	20	

Lab Batch #: 714634

**Date Analyzed:** 02/12/2008

**Date Prepared:** 02/12/2008

Analyst: RBA

**QC- Sample ID:** 297480-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L	SAMPLE A	SAMPLE	DUPLIC.	ATE REC	OVERY
2.00.000, 2.000.0000 (2.2.5) % 22.22.20002	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte		[2]			
Total dissolved solids	7300	7330	0	30	

w/ labels, seal on wolf CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Project Name: Samson State BD No. 4 Sample Containers Inlact?

Temperature Upon Receipt: 4,5
Laboratory Comments: M.R.O.N BTEX 8021B/5030 or BTEX 8260 Project Loc: Lea Co., NM Project #: L-126-0208 212-08 7:52 11 Roly AR / ESP / CEC # 0 nions (CI, SO4, CO3, HCO3) tilons (Ca. Mg. Na. K) Special instructions: Send Invoice to RT Hicks Consult. 901 Rio Grande Bivd. NW, Suite F-142, Albuquerque, NM 87104. Send results to Dale Littlejohn at the adress above. 9001 9001 WS108 1'81+:HdL Water Sout Sout Other (spe Date Date H<sub>2</sub>SO<sub>4</sub> Fax No: (432) 689-4578 (Fax) HCI HCI нио³ юв andrea Jerry No. of Containers 1057 1135 0 Time Sampled 30/11/2 Received by: = Date Sampled = Lel Trucker Environmental Lab of Texas 12600 West 1-20 East Phone: 412-563-1800 06858, Texas 79766 Fax: 432-563-1713 Time Company Name RT Hicks Consultants Ltd City/State/Zlp: Midland, Texas 79708 2/12/08 Date FIELD CODE Telephone No: (432) 528-3878 Project Manager: Dale Littlejohn Company Address: P.O. Box 7624 Coll. 7 Attice pour MW-4(S) MW-4(D) Sampler Signature: MW-2 MW-1 12600 West I-20 East Odessa, Texas 79765 797500 LAB# (lab use only) 20 d paysing 63 0 04

TAT bisbnst2

TAT HRUR

×××

#### Environmental Lab of Texas

	Variance/ Corrective Action Rep	on- Samp	e Log-III		
Client:	Rt Hicks				
ate/ Time:	212.08 9:52				
ab ID#:	297500				
nitials:	au				
	Sample Receipt	Chacklist			
	Campio Recorpt	•,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Client Initi	ials
1 Tempera	ture of container/ cooler?	(Yes)	No	4.5 °C	7
	container in good condition?	Yes	No		7
	Seals intact on shipping container/ cooler?	Yes	No	Not Present	$\neg$
	Seals intact on sample bottles/ container?	Yes	No	Not.Present	-
	Custody present?	(es)	No		
	nstructions complete of Chain of Custody?	Ves.	No		
	Custody signed when relinquished/ received?	Yes	No		
	Custody agrees with sample label(s)?	₹@s	No	ID written on Cont./ Lid	_
	r label(s) legible and intact?	Yes	No	Not Applicable	
	matrix/ properties agree with Chain of Custody?	Yes	No		
	ers supplied by ELOT?	Yes	No		_
	s in proper container/ bottle?	Yes	No	See Below	_
	s properly preserved?	Yes	No	See Below	
	bottles intact?	(es	No		
	ations documented on Chain of Custody?	Yes	No		_
	ers documented on Chain of Custody?	Yes	No		_
	nt sample amount for indicated test(s)?	Yes	No	See Below	
	ples received within sufficient hold time?	Yes	No	See Below	
	tract of sample(s)?	Yes	No	NOI Applicable	_
	amples have zero headspace?	Yes	No	Mot Applicable	
Contact: Regarding:	Variance Document Contacted by:	mentation	_	Date/ Time:	
Corrective Ad	ction Taken:				
Check all tha	at Apply: See attached e-mail/ fax Client understands and wou Cooling process had begun			•	

#### **Analytical Report 299610**

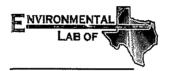
for

#### R.T. Hicks Consultants, LTD

Project Manager: Dale Littlejohn

Samson State BD No. 4 L-126-0308

20-MAR-08



#### 12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Norcross(Atlanta), GA E87429

South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America Midland - Corpus Christi - Atlanta





20-MAR-08

Project Manager: Dale Littlejohn R.T. Hicks Consultants, LTD

901 Rio Grande Blvd. NW, Suite F-142

Albuquerque, NM 87104

Reference: XENCO Report No: 299610

Samson State BD No. 4
Project Address: Lea Co., NM

#### Dale Littlejohn:

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 299610. 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. 299610 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

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#### **Sample Cross Reference 299610**



#### R.T. Hicks Consultants, LTD, Albuquerque, NM

Samson State BD No. 4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-3	W	Mar-13-08 09:25		299610-001



Project Id: L-126-0308

# Certificate of Analysis Summary 299610 R.T. Hicks Consultants, LTD, Albuquerque, NM

Project Name: Samson State BD No. 4

Contact: Date Littleichn		•	Date Received in Lab: Fri Mar-14-08 09:56 am	am
Designat Location: 1 as Co NM			Report Date: 20-MAR-08	
roject Location, Lea CO., ivivi			Project Manager: Brent Barron, II	
	Lab Id:	299610-001		
Acceptation Descripted	Field Id:	MW-3		
Analysis Nequesian	Depth:			
	Matrix:	WATER		
	Sampled:	Mar-13-08 09:25		
Anions by F.PA 300/300.1	Extracted:			
	Analyzed:	Mar-14-08 14:45		
	Units/RL:	mg/L RL		
Chloride		7730 100		
TDS by SM2540C	Extracted:			
	Analyzed:	Mar-14-08 16:00		
	Units/RL:	mg/L RL		
Total dissolved solids		12400 5.00		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report present the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

Brent Barron Odessa Laboratory Director

## 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 effect the recovery of the spike concentration. This condition could also effect 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 MQL(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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#### **Blank Spike Recovery**



Project Name: Samson State BD No. 4

Work Order #: 299610

Project ID:

L-126-0308

Lab Batch #: 717587

Sample: 717587-1-BKS

Matrix: Water

**Date Analyzed:** 03/14/2008

**Date Prepared:** 03/14/2008

Analyst: IRO

Reporting Units: mg/L

BLANK /BLANK SPIKE RECOVERY STUDY

Reporting Ontis. mg/L	Baten #:	DLANK/E	DLANK SEU	NE KEC	OVERT	ועטופ
Anions by EPA 300/300.1	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R [D]	%R	
Chloride	ND	10.0	9.52	95	85-115	



#### Form 3 - MS Recoveries

Project Name: Samson State BD No. 4



Work Order #: 299610

Lab Batch #: 717587

**Project ID:** L-126-0308

**Date Prepared:** 03/14/2008

**Date Analyzed:** 03/14/2008 QC- Sample ID: 299637-001 S

Analyst: IRO

Batch #:

Water Matrix:

Reporting Units: mg/L	MATE	RIX / MA	TRIX SPIKE	RECO	VERY STU	DY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						l
Chloride	82.1	100	193	111	85-115	

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



#### **Sample Duplicate Recovery**



Project Name: Samson State BD No. 4

Work Order #: 299610

Lab Batch #: 717587

**Date Prepared:** 03/14/2008

Analyst: IRO

**Project ID:** L-126-0308

**Date Analyzed:** 03/14/2008 **QC- Sample ID:** 299637-001 D

Batch #:

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

Reporting Cints. 111.52	Diameter /	DIMINIT DD	DOILIC	THE REC	OVER
Anions by EPA 300/300.1  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	82.1	84.4	3	20	

Lab Batch #: 717285

**Date Analyzed:** 03/14/2008

**Date Prepared:** 03/14/2008

Analyst: RBA

**QC- Sample ID:** 299611-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L	SAMPLE	SAMPLE	DUPLIC	ATE REC	OVERY
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Total dissolved solids	43900	48900	11	30	

Sample Containers Interform (v.) in Temperature Upon Receipt: - 2 . C. Laboratory Comments: CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST ebitos beviossiū listol Project Name: Samson State BD No. 4 M.A.O. cı 31EX 80218/5030 or BTEX 8260 Project Loc: Lea Co., NM Project #: L-126-0308 1 1 120 elals: As Ag Ba Cd Cr Pb Hg Se 2VB / E2b / CEC # 0 Salions (Ca. Mg. Na. K) 3-14-02 4:50 Special Instructions: Send Invoice to RT Hicks Consult. 901 Rio Grande Bivd. NW, Suite F-142. Albuquerque, NM 87104. Send results to Date Littlejohn at the adress above. Time Water Shedge Soll Other (specify): Date Fax No: (432) 689-4578 (Fax) 'os'H HORN нсі Ice andra Jan No. of Containers 0925 3/13/08 Received by: Date Sampled Sampler Signature: ( all http://www. Environmental Lab of Texas 1260 West 1.20 East Phone: 432-583-1800 Odessa, Texas 79766 Fax: 432-583-1713 Time Company Name RT Hicks Consultants Ltd City/State/Zip: Midland, Texas 79708 ) Date 3/14/08 Date FIELD CODE Telephone No: (432) 528-3878 Company Address: P.O. Box 7624 Project Manager: Dafe Littlejohn Reinquished by:

Cal. 7 Action.

Reinquished by: MW-3 24760 õ

Pre-Schedu TAT H2UR

#### **Environmental Lab of Texas**

Variance/ Corrective Action Report- Sample Log-In

lient: F.T. HICKS			
ate/ Time: 3-14-69 9.56			
16 10#: 25 MU/O			
<del></del>			
tials: (IL			
Sample Receipt	Checklist		
, Jampie Hotolpi			NOT PYOZ Polient Initial
Temperature of container/ cooler?	Yes	No	7.() °C
Shipping container in good condition?	Yes	No	
Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present )
Custody Seals intact on sample bottles/ container?	Yes	No	Not Present
Chain of Custody present?	Yes'	No	
Sample instructions complete of Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished/ received?	Yes'	No	
Chain of Custody agrees with sample label(s)?	Yes	No	JD Written on Cont./ bid
Container label(s) legible and intact?	Yes	No	Not Applicable
0 Sample matrix/ properties agree with Chain of Custody?	Yes	No	
1 Containers supplied by ELOT?	Yes	No	
2 Samples in proper container/ bottle?	Yes	No	See Below
3 Samples properly preserved?	Yes	No	See Below
4 Sample bottles intact?	Yes	No	
5 Preservations documented on Chain of Custody?	Y(es)	No	
6 Containers documented on Chain of Custody?	Yes	No	
17 Sufficient sample amount for indicated test(s)?	Yes	No	See Below
8 All samples received within sufficient hold time?	Yes	No	See Below
19 Subcontract of sample(s)?	Yes	No	Not Applicable
20 VOC samples have zero headspace?	Yes	No	Not Applicable
Ontact: Contacted by:	nentation	-	Date/ Time:
Corrective Action Taken:			
Check all that Analy			

Client understands and would like to proceed with analysis Cooling process had begun shortly after sampling event

#### **Analytical Report 303249**

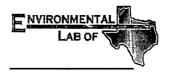
for

#### R.T. Hicks Consultants, LTD

Project Manager: Dale Littlejohn

Samson State BD No. 4 L-126-0508

09-MAY-08



12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675
Norcross(Atlanta), GA E87429

South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

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09-MAY-08

Project Manager: Dale Littlejohn R.T. Hicks Consultants, LTD 901 Rio Grande Blvd. NW, Suite F-142

Albuquerque, NM 87104

Reference: XENCO Report No: 303249

Samson State BD No. 4 Project Address: Lea Co., NM

#### Dale Littlejohn:

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 303249. 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. 303249 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

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#### **Sample Cross Reference 303249**



#### R.T. Hicks Consultants, LTD, Albuquerque, NM

Samson State BD No. 4

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
MW-1	W	May-05-08 18:40		303249-001
MW-2	W	May-05-08 17:45		303249-002
MW-3	W	May-05-08 18:52		303249-003
MW-4 (D)	W	May-05-08 18:08		303249-004
MW-4 (S)	W	May-05-08 18:20		303249-005



# Certificate of Analysis Summary 303249 R.T. Hicks Consultants, LTD, Albuquerque, NM

Project Name: Samson State BD No. 4

Contact: Dale Littlejohn

Project Id: L-126-0508

Project Location: Lea Co., NM

Date Received in Lab: Tue May-06-08 04:05 pm

Report Date: 09-MAY-08

Project Manager: Brent Barron, II

					Hoject Manager, Dient Danon, in	Jeill Dailoil, 11
	Lab Id:	303249-001	303249-002	303249-003	303249-004	303249-005
Analysis Donnostod	Field Id:	MW-1	MW-2	MW-3	MW-4 (D)	MW-4 (S)
naisanhais treducaten	Depth:					
	Matrix:	WATER	WATER	WATER	WATER	WATER
	Sampled:	May-05-08 18:40	May-05-08 17:45	May-05-08 18:52	May-05-08 18:08	May-05-08 18:20
Inorganic Anions by EPA 300	Extracted:					
	Analyzed:	May-07-08 11:33	May-07-08 11:33	May-07-08 11:33	May-07-08 11:33	May-07-08 11:33
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Chloride		96.3 5.00	40.1 5.00	9680 250	217 5.00	49.5 5.00
TDS by SM2540C	Extracted:					
	Analyzed:	May-07-08 16:40	May-07-08 16:40	May-07-08 16:40	May-07-08 16:40	May-07-08 16:40
·	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL
Total dissolved solids		596 5.00	406 5.00	15200 5.00	804 5.00	514 5.00

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout his analytical report reseaut he best, ludgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi Since 1990

Odessa Laboratory Director

# 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 effect the recovery of the spike concentration. This condition could also effect 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 MQL(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, Suite 104, San Antonio, TX 78238	(210) 509-3334	(210) 509-3335
2505 N. Falkenburg Rd., Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
6017 Financial Dr., Norcross, GA 30071	(770) 449-8800	(770) 449-5477



### **Blank Spike Recovery**



Project Name: Samson State BD No. 4

**Work Order #:** 303249

**Project ID:** 

L-126-0508

Lab Batch #: 722039

Sample: 722039-1-BKS

Matrix: Water

**Date Analyzed:** 05/07/2008

**Date Prepared:** 05/07/2008

Analyst: LATCOR

Reporting Units: mg/L	Batch #:	tch #: 1 BLANK/BLANK SPIKE RECOVER				STUDY
Inorganic Anions by EPA 300	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes		ID)	[C]	[D]	/0 K	
Chloride	ND	10.0	9.75	98	85-115	



### Form 3 - MS Recoveries

Project Name: Samson State BD No. 4



**Work Order #:** 303249

**Lab Batch #:** 722039

Project ID: L-126-0508

Date Analyzed: 05/07/2008

**Date Prepared:** 05/07/2008

1

Analyst: LATCOR

**QC- Sample ID:** 303249-001 S

Batch #:

Matrix: Water

Reporting Units: mg/L	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes	[ [[]	[4]	[			
Chloride	96.3	100	272	176	85-115	Х

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



### **Sample Duplicate Recovery**



Project Name: Samson State BD No. 4

Work Order #: 303249

Lab Batch #: 722039 Date Analyzed: 05/07/2008

**Project ID:** L-126-0508

05/07/2008 Date Prepared:

Analyst: LATCOR

QC- Sample ID: 303249-001 D

Batch #: Matrix: Water SAMPLE / SAMPLE DUPLICATE RECOVERY

Reporting Units: mg/L	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Inorganic Anions by EPA 300  Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	96.3	94.9	1	20	

Lab Batch #: 722069

**Date Analyzed: 05/07/2008** 

**Date Prepared:** 05/07/2008

Analyst: WRU

QC-Sample ID: 303249-001 D

Batch #:

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

reporting omes:g. =	BRANTEE BRINTEE BOTEICHTE RECOVERT						
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result	RPD	Control Limits %RPD	Flag		
Analyte		[B]			*		
Total dissolved solids	596	602	1	30			

TAT bisbnst2 × × bodo8-e19) TAT HRUF ×× CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST Special Instructions: Send Invoice to RT Hicks Consult, 901 Rio Grande Bivd, NW, Suite F-142, Albuquerque, NM 87104. Send results to Sample Containers Inflace? (X)
Temperature Upon Recept. 7. C)
Laboratory Comments: Project Name: Samson State BD No. M.A.O N 108 0928 X3TR >> 0602/B1S08 X3TR Project Loc: Lea Co., NM Project #: L-126-0508 SARY ESP / CTC PO #: alions (Ct. SO4, CO3, HCO3) 5/4/03 10:03 Time Hos edbus Date Fax No: (432) 689-4578 (Fax) \*oszн HORN нся HMO<sup>2</sup> andre for No. of Containers 5/3/08 1840 1745 1745 1808 1870 Time Sampled Received by: 1 1 Date Sampled al 1 hettlephin Date (€.05) Environmental Lab of Texas 1260 West 120 East Phone: 432-563-1460 Odessa, Texas 79765 Company Name RT Hicks Consultants Ltd City/State/Zip: Midland, Texas 79708 FIELD CODE Telephone No: (432) 528-3878 Company Address: P.O. Box 7624 Project Manager: Dale Littlejohn Relinquished by Attachethre Relinquished by MW-4(D) MW-4(S) Sampler Signature: MW-1 MW-2 MW-3 30324C 50 50 õ (lab use only) AB#

### **Environmental Lab of Texas**

	Variance/ Corrective Action	Report- Sampl	e Log-in
Client:	R.T. Hicks		
Date/ Time:	5.608 16.05		
Lab 1D # :	305249		
initials:	al		
	Sample Rece	ipt Checklist	
#1 Temper	ature of container/ cooler?	(es)	No
	container in good condition?	(es)	No
	Seals intact on shipping container/ cooler?	Yes	No
	Sonia intact on sample hottles/ container?	Yes	No

	, campio itacaipi			Client Initial
#1	Temperature of container/ cooler?	(es)	No	2.0 °C
	Shipping container in good condition?	(es)	No.	
	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)
#4	Custody Seals intact on sample bottles/ container?	Yes	No	(Not Present)
#5	Chain of Custody present?	Yes	No	
#6	Sample instructions complete of Chain of Custody?	(es	No	
#7	Chain of Custody signed when relinquished/ received?	₹es	No	
#8	Chain of Custody agrees with sample label(s)?	Yes	No	to written on Cont./ Lid
#9	Container label(s) legible and intact?	Yes	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<b>₹€</b>	No	
#11	Containers supplied by ELOT?	<b>(6)</b>	No	
#12		(%ea/	No	See Below
#13		Y@s'	No	See Below
#14		Yes	No	
#15		Yes	No	
#16	Containers documented on Chain of Custody?	Yes	No	
#17		Yes	No	See Below
#18		Yes	No	See Below
#19		Yes	No	Not Applicable
#20		Yes	No	(Not Applicable)

### **Variance Documentation**

Contact:	 Contacted by:	Date/ Time:
Corrective Action Taken		
Check all that Apply:	See attached e-mail/ fax Client understands and would like to proceed with analy Cooling process had begun shortly after sampling even	

### **Analytical Report 310636**

for

R.T. Hicks Consultants, LTD

Project Manager: Dale Littlejohn

Samson State BD No. 4 L-126-0808

25-AUG-08





12600 West I-20 East Odessa, Texas 79765

Texas certification numbers: Houston, TX T104704215 - Odessa/Midland, TX T104704215-08-TX

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

Norcross(Atlanta), GA E87429

South Carolina certification numbers: Norcross(Atlanta), GA 98015

North Carolina certification numbers: Norcross(Atlanta), GA 483

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Page 1 of 10





25-AUG-08

Project Manager: **Dale Little john R.T. Hicks Consultants, LTD**901 Rio Grande Blvd. NW, Suite F-142
Albuquerque, NM 87104

Reference: XENCO Report No: 310636

Samson State BD No. 4
Project Address: Lea Co., NM

### Dale Little john:

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 310636. 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. 310636 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.

Brent Barron, II

Respectful

Odessa Laboratory Manager

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### **Sample Cross Reference 310636**



### R.T. Hicks Consultants, LTD, Albuquerque, NM

Samson State BD No. 4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Aug-20-08 11:20		310636-001
MW-2	W	Aug-20-08 10:13		310636-002
MW-3	W	Aug-20-08 11:55		310636-003
MW-4 (D)	W	Aug-20-08 10:57		310636-004
MW-4 (S)	W	Aug-20-08 10:54		310636-005



Contact: Dale Littlejohn

Project Id: L-126-0808

Project Location: Lea Co., NM

# Certificate of Analysis Summary 310636 R.T. Hicks Consultants, LTD, Albuquerque, NM

Project Name: Samson State BD No. 4

Date Received in Lab: Wed Aug-20-08 03:50 pm

25-AUG-08	Brent Barron, II
Report Date:	Project Manager:

	Lah Id:	310636-001	310636-002	310636-003	310636-004	310636-005	
Analysis Dogwood	Field Id:	MW-1	MW-2	M W-3	MW-4 (D)	M W-4 (S)	
naican hay sissinuv	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	
	Sampled:	Aug-20-08 11:20	Aug-20-08 10:13	Aug-20-08 11:55	Aug-20-08 10:57	Aug-20-08 10:54	
Anjons by FPA 300/300.1	Extracted:						
	Analyzed:	Aug-21-08 10:10					
	Units/RL:	mg/L RL					
Chloride		72.3 5.00	28.7 5.00	5300 100	225 5.00	32.5 5.00	
TDS by SM2540C	Extracted:						
•	Analyzed:	Aug-21-08 16:25					
	Units/RL:	mg/L RL	3				
Total dissolved solids		568 5.00	440 5.00	7550 5.00	736 5.00	476 5.00	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report present the best, adjustment of XENCO Laboratories, SENCO Laboratories, assumes no responsibility and makes no warranty to the red use of the data kneby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Odessa Laboratory Director Brent Barron

## 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 effect the recovery of the spike concentration. This condition could also effect 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 MQL(PQL) and above the SQL(MDL).
- 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.
- \* Outside XENCO'S scope of NELAC Accreditation

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### **Blank Spike Recovery**



Project Name: Samson State BD No. 4

Work Order #: 310636 Project ID: L-126-0808

**Lab Batch #:** 731968 **Sample:** 731968-1-BKS

Matrix: Water

Date Analyzed:08/21/2008Date Prepared:08/21/2008Analyst:LATCOR

Reporting Units: mg/L	Batch #: 1	BLANK	/BLANK SI	PIKE RE	COVERY	STUDY
Anions by EPA 300/300.1	Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
Analytes	[A]	[B]	Result [C]	%R [D]	%R	
Chloride	ND	10.0	9.66	97	80-120	

Blank Spike Recovery [D] = 100\*[C]/[B]
All results are based on MDL and validated for QC purposes.



### Form 3 - MS Recoveries

Project Name: Samson State BD No. 4



**Work Order #:** 310636

Lab Batch #: 731968

**Project ID:** L-126-0808

**Date Analyzed:** 08/21/2008

**Date Prepared:** 08/21/2008

Analyst: LATCOR

**QC- Sample ID:** 310635-001 S

Batch #:

Matrix: Water

Reporting Units: mg/L	MA	TRIX / M	ATRIX SPIK	(E REC	OVERY ST	JDY
Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	470	200	717	124	80-120	Х

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



### **Sample Duplicate Recovery**



Project Name: Samson State BD No. 4

**Work Order #:** 310636

**Lab Batch #:** 731968 **Project ID:** L-126-0808

 Date Analyzed:
 08/21/2008
 Date Prepared:
 08/21/2008
 Analyst:
 LATCOR

 QC- Sample ID:
 310635-001 D
 Batch #:
 1
 Matrix:
 Water

SAMPLE / SAMPLE DUPLICATE RECOVERY Reporting Units: mg/L Anions by EPA 300/300.1 Sample Control **Parent** RPD Duplicate Limits Sample Flag Result %RPD Result Analyte [B] [A] Chloride 470 473 ļ 20

Lab Batch #: 731985

 Date Analyzed:
 08/21/2008
 Date Prepared:
 08/21/2008
 Analyst:
 WRU

 QC- Sample ID:
 310635-001 D
 Batch#:
 1
 Matrix:
 Water

SAMPLE / SAMPLE DUPLICATE RECOVERY Reporting Units: mg/L TDS by SM2540C Sample Control Parent Duplicate RPD Limits Sample Flag %RPD Result Result Analyte [B] [A] 1150 Total dissolved solids 1180 3 30

Environmental Lab of Texas 1260 West L20 East Phone. 432-583-1800 Odessa, 19x8s 19765 Fax: 432-583-1713

Project Manager: Dale Littlejohn

City/State/Zip: Midland, Texas 79708 Company Address: P.O. Box 7624

Company Name RT Hicks Consultants Ltd

al Thirewohn Telephone No: (432) 528-3878 Sampler Signature:

Project Name: Samson State BD No. 4 Project Loc: Lea Co., NM Project #: L-126-0808 PO #:

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Fax No: (432) 689-4578 (Fax)

etal Dissolved Solids × M A.O. 31EX 8021B/5030 or HTCX 8260 AIRIR. VR VB BY CO CO LD HB 24 2001 M2108 1814 HQT Soil Sludge
Sludge
Sludge 'OS<sup>‡</sup>H NROH 'ОИН No of Containers 1013 1155 1057 1120 1054 8/10/08 5 Date Sampled 5 1 FIELD CODE MW-4(D) MW-4(S) MW-2 MW-3 MW-1 LAB # 3106 % R 25 S б

TAT bisbnet2 × × ×

Special instructions: Send invoice to RT Hicks Corsult. 901 Rio Grande Blvd. NW. Suite F-142, Albuquerque, NM 87104; Send results to Sample Containers Interest in Send invoice to RT Hicks Corsult. 901 Rio Grande Blvd. NW. Suite F-142, Albuquerque, NM 87104; Send results temperature Upon Recept. 1 < 5 Dale Littlejohn at the adress above. Received by 9/2408 5.50 T(me Date Made by Autory

18-10-08 3:50 1-60014 WILLAMS

traka for-

Time

Date

Page 9 of 10

Environmental Lab of Texas Variance/ Corrective Action Report- Sample Log-In

Client:	P.T. Hicks
Date/ Time:	g. 20 08 3:50
Lab ID # :	316634
teitials:	al

### Sample Receipt Checklist

#1	Temperature of container/ cooler?	KES	No	1.5 °C
12	Shipping container in good condition?	(e)s	No	
<b>;</b> 3	Custody Seals intact on shipping container/ cooler?	Yes	No	MOT Present
<b>#</b> 4	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present
<b>#</b> 5	Chain of Custody present?	(SE)	No	
#6	Sample instructions complete of Chain of Custody?	\(\(\eartie{e}_{\text{g}}\)	No	
#7	Chain of Custody signed when relinquished/ received?	(es)	No	
#8	Chain of Custody agrees with sample label(s)?	(e)	No	ID written on Cont./ Lid
#9	Container label(s) legible and intact?	(es)	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No	
#11	Containers supplied by ELOT?	(e)	No	
#12	Samples in proper container/ bottle?	(e)	_ No	See Below
#13	Samples properly preserved?	Уeэ	No	See Below
#14	Sample bottles intact?	<b>(e)</b>	No	
#15	Preservations documented on Chain of Custody?	Yes	No	
#16	Containers documented on Chain of Custody?	(es	No	
#17	Sufficient sample amount for indicated test(s)?	(e)	No	See Below
#18	All samples received within sufficient hold time?	(Yes	No	See Below
#19	Subcontract of sample(s)?	Yes	No	Mot Applicable
#20	VOC samples have zero headspace?	Yes	No	Not Applicable

### Variance Documentation

Contact:		Contacted by:	Date/ Time:	
Regarding:				
Corrective Action Taken	:			
Check all that Apply:		See attached e-mail/ fax Client understands and would like Cooling process had begun shortly	•	

### **Analytical Report 318492**

for

### R.T. Hicks Consultants, LTD

Project Manager: Dale Littlejohn

Samson State BD No. 4 L-126-1108

26-NOV-08





### 12600 West I-20 East Odessa, Texas 79765

Texas certification numbers:
Houston, TX T104704215-08B - Odessa/Midland, TX T104704400-08

Florida certification numbers: Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675 Norcross(Atlanta), GA E87429

> South Carolina certification numbers: Norcross(Atlanta), GA 98015

> North Carolina certification numbers: Norcross(Atlanta), GA 483

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26-NOV-08

Project Manager: Dale Littlejohn
R.T. Hicks Consultants, LTD
On Pio Granda Plyd NW. Suita F

901 Rio Grande Blvd. NW, Suite F-142

Albuquerque, NM 87104

Reference: XENCO Report No: 318492

Samson State BD No. 4
Project Address: Lea Co., NM

### Dale Littlejohn:

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 318492. 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. 318492 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

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### **Sample Cross Reference 318492**



### R.T. Hicks Consultants, LTD, Albuquerque, NM

Samson State BD No. 4

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
MW-1	W	Nov-21-08 10:37		318492-001
MW-2	W	Nov-21-08 09:30		318492-002
MW-3	W	Nov-21-08 10:52		318492-003
MW-4 (D)	W	Nov-21-08 10:01		318492-004
MW-4 (S)	W	Nov-21-08 10:11		318492-005



Contact: Dale Littlejohn Project Location: Lea Co., NM

Project Id: L-126-1108

# Certificate of Analysis Summary 318492 R.T. Hicks Consultants, LTD, Albuquerque, NM

Project Name: Samson State BD No. 4

Date Received in Lab: Fri Nov-21-08 02:37 pm

Report Date: 26-NOV-08

Project Manager: Brent Barron, II

					1 Ofter Mallager. Dient Danon, II	Daniell, II	
	Lab Id:	318492-001	318492-002	318492-003	318492-004	318492-005	
Analysis Dogwood	Field Id:	MW-1	MW-2	MW-3	MW-4 (D)	MW-4 (S)	
naisanhay sistinut	Depth:						
	Matrix:	WATER	WATER	WATER	WATER	WATER	
·	Sampled:	Nov-21-08 10:37	Nov-21-08 09:30	Nov-21-08 10:52	Nov-21-08 10:01	Nov-21-08 10:11	
Chloride by SM4500-CI- B	Extracted:						
	Analyzed:	Nov-24-08 09:35	Nov-24-08 09:35	Nov-24-08 09:35	Nov-24-08 09:35	Nov-24-08 09:35	
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Chloride		101.3 5.000	53.18 5.000	4892 5.000	212.7 5.000	63.81 5.000	
TDS by SM2540C	Extracted:						
	Analyzed:	Nov-24-08 16:25	Nov-24-08 16:25	Nov-24-08 16:25	Nov-24-08 16:25	Nov-24-08 16:25	•
	Units/RL:	mg/L RL	mg/L RL	mg/L RL	mg/L RL	mg/L RL	
Total dissolved solids		498 5.00	388 5.00	6330 5.00	682 5.00	478 5.00	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout his analytical report research throughout his analytical report research throughout his analytical report research the update of XBNCO Laboratories assumes no responsibility and makes no warranty to the end use of the data bretchy presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Since 1990

Odessa Laboratory Director



### 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 effect the recovery of the spike concentration. This condition could also effect 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 MQL and above the SQL.
- 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.

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5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



### **Blank Spike Recovery**



Project Name: Samson State BD No. 4

Work Order #: 318492

Project ID:

L-126-1108

Lab Batch #: 741319

Sample: 741319-1-BKS

Matrix: Water

**Date Analyzed:** 11/24/2008

**Date Prepared:** 11/24/2008

Analyst: LATCOR

Reporting Units: mg/L	Batch #:	BLANK /	BLANK SPI	KE REC	COVERY	STUDY
Chloride by SM4500-CI- B	Blank Result [A]	Spike Added [B]	Blank Spike Result	Blank Spike %R	Control Limits %R	Flags
Analytes	[A]	101	[C]	[D]	/0K	
Chloride	ND	100.0	91.46	91	70-125	

Blank Spike Recovery [D] = 100\*[C]/[B]
All results are based on MDL and validated for QC purposes.



# Form 3 - MS / MSD Recoveries



Project Name: Samson State BD No. 4

Work Order #: 318492

Lab Batch ID: 741319

Date Analyzed: 11/24/2008 Reporting Units:

QC-Sample ID: 318492-004 S

Matrix: Water LATCOR Batch #:

Project ID: L-126-1108

A nalvet **Date Prenared:** 11/24/2008

41yzeu: 11/24/2000	Date Frepareu: 11/27/2008	77/17/11	000	AII	alyst:	Alialyst: LAICOR					
Units: mg/L		M	ATRIX SPIKE	MAT.	RIX SPI	<b>4ATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY</b>	TE REC	VERY S	TUDY		
Chloride by SM4500-CI- B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Spiked Sample   Spiked   Duplicate   Spiked Sample   Spiked Sample   Dup.	Spiked Dup. %R [G]	RPD	Control Limits %R	Control Limits %RPD	

Flag

25

70-125

0

102

1234

1000

102

1234

1000

212.7

Chloride

Matrix Spike Percent Recovery [D] = 100\*(C-A)/BRelative 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: Samson State BD No. 4

Work Order #: 318492

**Lab Batch #:** 741373

Project ID: L-126-1108

 Date Analyzed: 11/24/2008
 Date Prepared: 11/24/2008
 11/24/2008
 Analyst: WRU

 QC- Sample ID: 318487-001 D
 Batch #: 1
 Matrix: Water

Reporting Units: mg/L	SAMPLE /	SAMPLE	DUPLIC	ATE REC	OVERY
TDS by SM2540C	Parent Sample Result [A]	Duplicate Result	RPD	Control Limits %RPD	Flag
Analyte		[B]			
Total dissolved solids	1450	1410	3	30	

					Г	<u> </u>		2-919) TAT HZUR TAT bisbrist2		×	×		×				1.0 not Fresh				
CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST	4	}		1				Bronside ilos bevieseived Soli	×	×	×	士	×	1			ءُ ج				۶,
is re	Project Name: Samson State BD No.	١	- 1	İ	1			N.O.R.M.	×	<u>~</u>	*	*	×	-}-	-						5 6615
47.YS	В	-		- }	- I.			108		$\exists$		$\perp$		$\pm$			Sample Containers Intact? Temperature Upon Receipt:	á			
A.	tat	ω	Σ		Į,		81Ex 8260	Semivolatiles no 0003/81509 X3TR		4	4	4	-		<del> </del>		- Rek	THE ST			4
ANG	5	Project #: L-126-1108	Project Loc: Lea Co., NM			Analyze		29liteloV Relitekovif0e2		-	$\dashv$	$\dashv$		$\dashv$	╁	+	Sample Containers Intact? Temperature Upon Receip	Laboratory Comments:			with states in
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' REC	S	ادِ	림		ļ	TCLP:	(	SAR / ESP / CLC	_		4	4	$\downarrow$	_	-	$\vdash$	- Jampie	abora			3
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ıntal Lal	Project Manager: Dale Littlejohn	Company Name RT Hicks Consultants Ltd	Company Address: P.O. Box 7624	City/State/Zip: Midland, Texas 79708	Telephone No. (432) 528-3878			Ü	MAIAY 4	MAN 2	MAV-3	MW-4(D)	MW-4(S)				nd Invoice to RT	Date Littejoii at ing auress accor.	ATTEN M		
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Environmental Lab of Texas 1260 west 120 East Phone 432-863-1800 Obessa, 1948 79765 Fax: 432-863-1713	Project	Сощр	Сопрапу	Cità	Tetephone No: Sampler Signature:			218492	lab use oriny)	5 6	7 2	3	چ ج				Special instructions: Send Invoice to RT Hicks Consult 901 Rio Grande Blvd. NW. Suite F-142, Albuquerque, MM 87104,	Relinguebed by:		Relinquished by.	

### **Environmental Lab of Texas**

Variance/ Corrective Action Report- Sample Log-In

Dient:	R.T. Hicks	
Date/ Time:	11-21-08 14:37	
.ab ID # :	318492	
nitials: -	<u> </u>	
	Sample Receipt Checklist	

Dample Neceipt Onecknot						
	·			not HOLEN Client initials		
t1	Temperature of container/ cooler?	Yes)	No	-1.0 °C		
12	Shipping container in good condition?	<b>Y</b> (6)	No			
ŧ3	Custody Seals intact on shipping container/ cooler?	Yes	No	< Not Present		
14	Custody Seals intact on sample bottles/ container?	Yes	No	Not Present		
15	Chain of Custody present?	Yes)	No			
#6	Sample instructions complete of Chain of Custody?	Yes	No			
ŧ7	Chain of Custody signed when relinquished/ received?	YES	No			
#8	Chain of Custody agrees with sample label(s)?	Yes	No	ID written on Cont./ Lid		
<i>f</i> 9	Container label(s) legible and intact?	(Yes)	No	Not Applicable		
#10	Sample matrix/ properties agree with Chain of Custody?	Yes	No			
£11	Containers supplied by ELOT?	Yes	No			
<i>‡</i> 12	Samples in proper container/ bottle?	(es	No	See Below		
¥13	Samples properly preserved?	Yes	No	See Below		
¥14	Sample bottles intact?	Yes	No			
¥15	Preservations documented on Chain of Custody?	Yes	No			
¥16	Containers documented on Chain of Custody?	Yes	No			
¥17	Sufficient sample amount for indicated test(s)?	Y (98	No	See Below		
#18	All samples received within sufficient hold time?	Y es	No	See Below		
#15	Subcontract of sample(s)?	Yes	No	Not Applicable		
#20	VOC samples have zero headspace?	Yes	No	Mot Applicable		

### **Variance Documentation**

Contact:		Contacted by:	Date/ Time;		
egarding:					
Corrective Action Taken	:				
Check all that Apply:		See attached e-mail/ fax			
		Client understands and would like to proceed with Cooling process had begun shortly after sampling	•		

# **ATTACHMENT B**Historic Ground Water Quality Graphs

