

Work Plan Cimarex Energy Company: Pintail 23 Federal Com #008H (Revision 2) |30-015-38657|2RP-4006|

April 12, 2017

Prepared By:

TALON/LPE 408 W. Texas Avenue Artesia, New Mexico 88210

Prepared For:

Cimarex Energy Company

Ms. Christine Alderman **Cimarex Energy Company** 600 N. Marienfeld Ste. 600 Midland, TX 79701

Subject:

Soil Assessment and Remediation Work Plan

Cimarex Energy Co.

Pintail 23 Fed Com #008H |30-015-38657|2RP-4006|

Dear Ms. Alderman,

Cimarex Energy Company (Cimarex) has contracted Talon/LPE (Talon) to perform soil sampling and remediation services at the above referenced location. The results of our soil assessment and proposed remediation activities consist of the following.

Site Information

The Cimarex Pintail 23 Fed Com #8H is located approximately twenty-five (25) miles south of Carlsbad, New Mexico. The legal location for this facility is Unit Letter M, Section 23, Township 25S South and Range 26 East in Eddy County, New Mexico. More specifically the latitude and longitude are 32.1087494 North and -104.2693253 West. A site plan is presented in Appendix I.

According to the soil survey provided by the United States Department of Agriculture Natural Resources Conservation Service, the soil in this area is made up of the Reagan-Gypsum land complex with 0 to 3 percent slopes. Drainage courses in this area are normally dry.

Ground Water and Site Ranking

According to the New Mexico Office of the State Engineer database, the ground water in this area is approximately 35-feet below ground surface (BGS). The referenced ground water data is presented in Appendix II. Therefore the ranking for this site is a **20** based on the following:

Depth to ground water <50'
Wellhead Protection Area >1000'
Distance to surface water body >1000'

Based upon the site ranking of **20**, NMOCD Recommended Remedial Action Levels (RRAL's) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 100 mg/kg for TPH and the recommended guideline for Total Chlorides is 1,000 mg/kg.

Incident Description and Initial Remedial Actions

On November 20, 2016 a 2-inch threaded fitting on a water line failed due to corrosion. This resulted in a release of approximately 50bbls of produced water. Approximately 2bbls of produced water were recovered. The fluid from this release impacted the pasture east of the location measuring approximately 280-feet by 120-feet. On December 2, 2016, Talon mobilized personnel to the site to perform an initial site assessment and to collect soil samples within the impacted area. The soil samples were analyzed TPH, BTEX, total chlorides, and detailed salinity. The analytical results from the soil analysis are summarized in the table below.

Laboratory Results

See Appendix IV for complete report of laboratory results.

Sample ID	Depth ft	BTEX mg/kg	TPH mg/kg	Chloride mg/kg	рН	EC mmhos/cm	Sodium meq/L	Potassium meq/L	Calcium meq/L	Magnesium meq/L	SAR
S-1	0	<0.300	<10.0	11,627	7.2	100.5	928.49	16.33	167.26	17.86	96.51
S-1	1			10,635	7.2	73.6	13109.00	373.00	4224.00	165.00	53.86
S-1	2		-	3,899	7.2	39.3	64.01	0.57	34.05	23.50	11.94
S-1	3			1,063	7.5	7	16.51	0.30	47.13	4.76	3.24
S-1	4	-		2,410	7.4	18.3	50.34	0.41	131.15	11.09	5.97
S-1	5			1,489	7.6	12.47	44.45	0.36	74.68	5.72	7.14
S-1	6			921	7.7	4.67	8.55	0.30	39.94	3.34	1.84
S-1	7			128*	7.8	2.86	6.16	0.72	31.29	1.78	1.52
S-2	0	<0.300	<10.0	5,246	7	62.8	471.31	5.11	159.55	8.14	51.47
S-2	1			141	7.4	4.88	13.70	0.39	37.93	1.36	3.09
S-2	2	-		64*						-	
S-3	0	<0.300	<10.00	4,537	7.1	47.7	391.09	3.18	178.71	5.32	40.77
S-3	1			212	7.6	5.16	14.34	0.42	38.89	1.51	3.19
S-3	2			128*	7.6	4.4	13.46	0.36	33.46	1.13	3.24
S-4	0	<0.300	<10.00	8,720	7.2	86.7	734.56	13.13	205.89	10.49	70.62
S-4	1			5,246	7.3	33.1	166.12	1.54	190.31	6.58	16.74
S-4	2			141	7.9	3.39	7.61	0.34	30.56	1.25	1.91
S-4	3			144*	7.9	2.7	4.50	0.32	29.66	1.38	1.14
S-5	0	<0.300	<10.00	5,884	7.4	40.4	348.43	3.50	176.69	5.33	36.52
S-5	1			921	7.8	6.23	30.01	0.73	32.44	1.73	7.26
S-5	2		-	141	7.8	2.86	6.08	0.37	30.09	0.86	1.55
S-5	3			80*	8	2.8	5.96	0.36	22.91	3.38	1.65

⁽⁻⁻⁾ Analyte Not Tested

^(*) Laboratory Chloride Confirmation

Proposed Remedial Actions

- The impacted area in the vicinity of sample location S-1 will be excavated to a depth of 6-feet BGS.
- The impacted area in the vicinity of sample locations S-2, S-3, and S-5 will be excavated to a depth of 1-foot BGS.
- The impacted area in the vicinity of sample location S-4 will be excavated to a depth of 2-feet BGS.
- All of the excavated soil will be treated with gypsum (CASO4) in order to replace sodium on the soil cation exchange complex. The soil will then be put into a leaching basin (described below) at a thickness of 2-feet. The soil will be flushed with fresh water to remove the chloride and sodium. The leachate generated from this process will be recovered and transported to an SWD for disposal.
- The location will be downsized per BLM interim reclamation guidelines. Prior to downsizing, surface samples will be taken from the proposed downsize area and analyzed for total chlorides to insure that the total chloride concentration is below NMOCD RRAL's.
- Should the laboratory chloride analysis indicate that the soil within the proposed downsize area is suitable, the caliche will be utilized to backfill the bottom of the excavation within the remediation area.
- The remaining sidewalls of the excavated area will be sloped in order to allow for safe ingress/egress of personnel, livestock and wildlife.
- Quarterly sampling of the soil within the leaching basin will be carried out. Samples will be taken from 3 locations longitudinally across the leaching basin at depths of 1 and 2 feet below soil surface. The soil samples will be analyzed for detailed salinity and total chlorides.
- Once laboratory results indicate that the soil has been remediated in accordance with NMOCD and BLM guidelines, the soil will be used to complete the backfill of the excavated area, contoured to match the surrounding terrain, and seeded with BLM #1 seed mixture.

Leak Detection Construction

Due to the shallow groundwater in the vicinity of this site NMOCD has requested that leak detection system be installed beneath the leaching basin. Based on site conditions it is our determination that the most practicable and reliable leak detection system will consist of the following design. A basin will be constructed utilizing earthen berms. A 20-mil poly liner will be installed to encapsulate the basin and 0.5-feet of gravel will be installed in the bottom of the basin to allow any potential fluid to flow downgradient to a collection point. Perforated PVC pipe will be installed at the collection point. The collection point will be inspected for the presence of water during the quarterly sampling events. Should water be detected, NMOCD and BLM will be notified.

Leaching Basin Construction

The soil leaching basin will be constructed north of the impacted area and east of the tank battery. The basin will be constructed with earthen berms and lined with a 40-mil poly liner (padded with felt). Once the liner is installed a gravel bed with 4-inch perforated drainage pipes will be placed within the lined berms. The gravel and drainage pipes will extend to a sump constructed at the down gradient end of the leaching basin. The sump will be contained with a 20-mil poly liner and welded to the liner on the leaching basin. A layer of geotextile will be placed over the gravel bed in order to prevent soil particles from filling the pore spaces in the gravel, while simultaneously allowing for movement of water into the gravel bed. Once the water enters the gravel bed it will flow down gradient into the sump for recovery.

Should you have any questions or if further information is required, please do not hesitate to contact our office at (575)-746-8768

Respectfully submitted,

TALON/LPE

Sheldon L. Hitchcock

Project Manager

David J. Adkins District Manager

Attachments

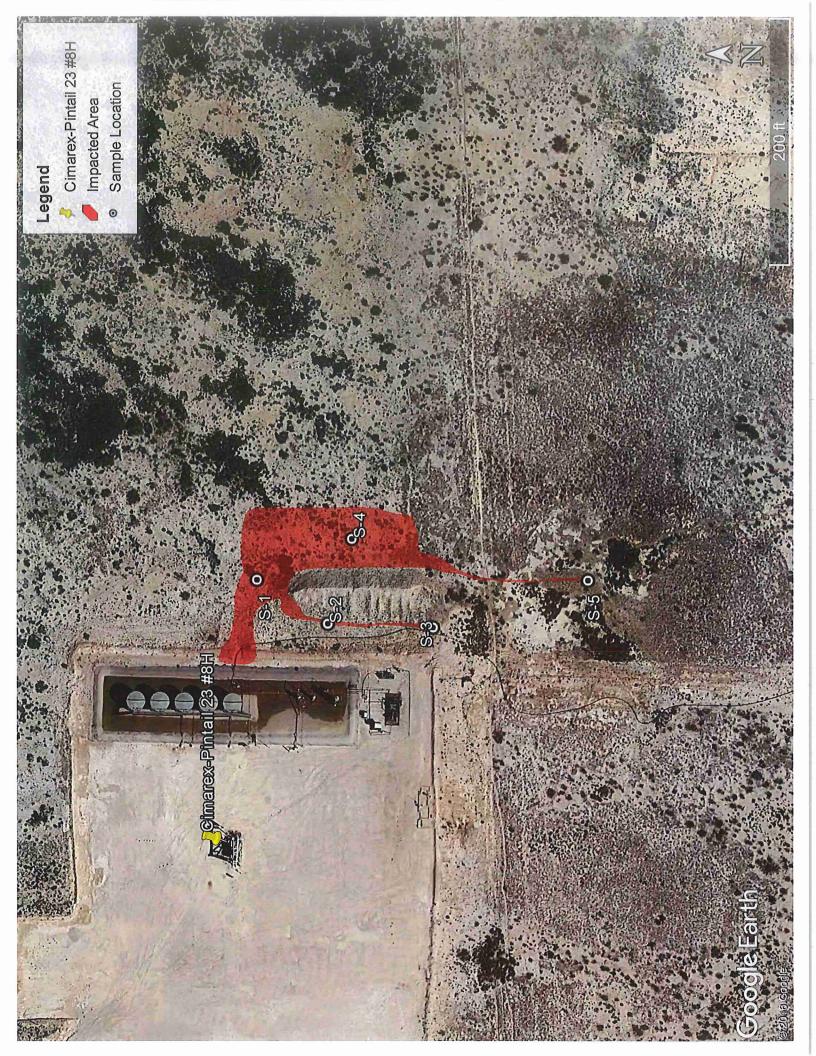
Appendix I Site Plan

Appendix II Groundwater Data

Appendix III Initial C-141

Appendix IV Laboratory Results

APPENDIX I SITE PLAN



APPENDIX II GROUNDWATER DATA



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned,

C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

	/								
	POD								
	Sub-	QQ	2					Depth Depth V	Nater
POD Number	Code basin Co	unty 64 16	4 Sec Tws	Rng	Х	Υ	Distance	Well Water C	olumn
C 03655 POD3	CUB E	D 1 4	4 22 25\$	26E	568458	3553019	465		
C 02220	CUB E	ED 3 1	2 26 25S	26E	569598	3552352*	862	35	

Average Depth to Water:

Minimum Depth:

Maximum Depth:

Record Count: 2

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 568890

Northing (Y): 3552845

Radius: 1000

APPENDIX III INITIAL C-141

NM OIL CONSERVATION ARTESIA DISTRICT

District 1
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Astesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IY
1220 S. St. Francis Dr., Santa Fc, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

NUV 2 1 2016

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Submit 1 Copy to appropriate District Office in accordance with 19,15.29 NMAC.

RECEIVE

Santa Fe, NM 87505 Release Notification and Corrective Action DAB 1632841 U30 **OPERATOR** Initial Report Final Report Name of Company Cimarex Energy Contact Christine Alderman Address 600 N Marienfeld Ste 600 Midland TX Telephone No. 432-853-7059 Facility Name Pintail 23 #8H Facility Type production Surface Owner Mineral Owner API No. 30-015-38657 LOCATION OF RELEASE Unit Letter North/South Line Enst/West Line Section Range Feet from the Township Feet from the County M 21 258 26E 250 800 Eddy Latitude_32.10874_Longitude -104.26932 NATURE OF RELEASE Type of Release Produced water Volume of Release 50 bbls Volume Recovered 2 bbls Source of Release piping Date and Hour of Occurrence Date and Hour of Discovery 11/20/2016 11/20/2016 Was Immediate Notice Given? If YES, To Whom? ☑ Yes ☐ No ☐ Not Required Shelly Tucker/Heather Patterson/Mike Bratcher By Whom? Christine Alderman Date and Hour Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ☒ No NM OIL CONSERVATION ARTESIA DISTRICT If a Watercourse was Impacted, Describe Fully. NOV 2 1 2016 Describe Cause of Problem and Remedial Action Taken. RECEIVED A 2" threaded fitting corroded and failed. Describe Area Affected and Cleanup Action Taken. The affected area was pasture area and was approximately 2' wide by 25' long. We will delineate and submit a work plan to remediate. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCI) marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION hriotine Alderman Signature: Approved by Environmental Specialist: Printed Name: Christine Alderman

Approval Date:

Conditions of Approval:

* Attach Additional Sheets If Necessary

E-mail Address: calderman@cimarex.com

Phone: 432-853-7059

Title: ESH Supervisor

Date: 11/21/2016

2RP-4006

Expiration Date: N

Attached 1

APPENDIX IV LABORATORY RESULTS



Outside TX County

Laboratory Number: 472168 Customer Sample ID: S-1 0

Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone)

979-845-5958 (FAX) Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016 Printed on: 12/21/2016 Area Represented: not provided

Crop Gr	own: IMPROVED	AND F	IYBRID BEI	RMUDA	GRAS	S, GF	RAZINO	3			
Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
рН	7.8	(5.8)		Mod. All	(aline		E MONTH OF	5.55			
Conductivity	6,450	(-)	umho/cm	V. High			(CL*		Fe	rtilizer Recommended
Nitrate-N	0	(-)	ppm**								55 lbs N/acre
Phosphorus	13	(50)	ppm			Ш		1	İ		50 lbs P2O5/acre
Potassium	396	(125)	ppm				HIIIIIII	ķiiiinnii	1		0 lbs K20/acre
Calcium	17,808	(180)	ppm		111111111111		humin	ķımını	ķμ		0 lbs Ca/acre
Magnesium	200	(50)	ppm					İ IIII			0 lbs Mg/acre
Sulfur	5,410	(13)	ppm		minni) 111111111	финин	immuni.		0 lbs S/acre
Sodium	9,748	(-)	ppm				juuniu	İ IIIIIIII	(III)IIIII)		
Iron								1			
Zinc								L			
Manganese								i			
Copper								1			
Boron			•					Į į			
Limestone Require	ement				情情情			A Harri		11 10 30	0.00 tons 100ECCE/acre
				Detaile	ed Sali	nity T	est (S	aturate	d Paste	e Extrac	t)
7-7-1-1-1				pΗ	1				7.	2	
				Co	onduct	ivity			100.5	0 mmhos	/cm
				Sc	dium				2133	7 ppm	928.486 meq/L
	and the subject of			Po	tassiu	ım			. 63	B ppm	16.328 meq/L
				Ca	alcium				335	2 ppm	167.258 meq/L
				Ma	agnesi	um .			21	7 ppm	17,861 meq/L
				SA	AR .				96.5	1	
	法定证券的		309 (B)	- S	iP .				- 82.1	7	

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water. Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Laboratory Number: 472169 Customer Sample ID: S-1 1 Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone)

979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016
Printed on: 12/21/2016
Area Represented: not provided

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS, GRAZING

Analysis	Results	CL*	Units	ExLow	VLow	•	Mod	High	VHlgh	Excess.	
рН	7.6	(5.8)		Mod. All	caline			Office to			
Conductivity	6,360	(~)	umho/cm	V. High			(CL*		F	ertilizer Recommended
Nitrate-N	0	(-)	ppm**	1333							55 lbs N/acre
Phosphorus	14	(50)	ppm	1111111111		ļIII		i I			50 lbs P2O5/acre
Potassium	300	(125)	ppm	11111111111							0 lbs K20/acre
Calcium	17,185	(180)	ppm			ļmumi		ijanami	ļu		0 lbs Calacre
Magnesium	190	(50)	ppm			İMBANIN		İ IIII		ĺ	0 lbs Mg/acre
Sulfur	1,648	(13)	ppm	11111111111		(111111111	111111111	humu		į	0 lbs S/acre
Sodium	8,413	(-)	ppm		IIIIIIIIIII	(mmmm		PHHHHH		ĺ	
Iron								1		l	
Zinc	2. 化基础	W 4-3-5			7.			1		1	
Manganese								Í			
Copper					* 11 + 646	类产		1			
Boron]				! !		İ	
Limestone Requireme	int				Y. Li		1. 35.			1.11	0.00 tons 100ECCE/acre
:											
			300, 744	Detaile	ed Sal	inity T	est (S	aturate	d Paste	e Extra	ct) - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
6-2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-			ani farancia misana a maria	p⊦		e relevises de salve este		na versiam zez	7.3	market and demonstra	ny ang ay sa yang pagunga di dingga paga dibang kalaban di sa di baha ka
				Cc	onduc	tivity			73.6	0 mmho	
				So	dium	milektora er entre	ing to the second		1310	9 ppm	570.431 meq/L
				表現を行い 関心を影響	otassii	"我们在这个人				3 ppm	9.552 meg/L
		·		Ca	ılcium	alienana anno 11			422	4 ppm	210.772 meq/L
				Ma	agnes	lum			16	5 ppm	13,524 meq/L
				SA					53.8	3	
			processor and the	SS	P.				70.9	2	

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Laboratory Number: 472170 Customer Sample ID: S-1 2 Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478

979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016

Printed on: 12/21/2016
Area Represented: not provided

Crop Grown:	IMPROVED	AND HYBRID	BERMUDA	GRASS,	GRAZING

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHlgh	Excess.	
рН	7.7	(5.8)		Mod, Alk	aline		1000				
Conductivity	4,710	(-)	umho/cm	V. High			CL			Fert	ilizer Recommended
Nitrate-N	0	(-)	ppm**					4		1	55 lbs N/acre
Phosphorus	12	(50)	ppm	mmmi		1					50 lbs P2O5/acre
Potassium	163	(125)	ppm	limimi		J11111111111		11	2		0 lbs K20/acre
Calcium	21,931	(180)	ppm			1111111111			ĮI		0 lbs Ca/acre
Magnesium	325	(50)	ppm		HIIIIIII						0 lbs Mg/acre
Sulfur	597	(13)	ppm	minimi	1000001	1111111111			111111111111		0 lbs S/acre
Sodium	1,068	(-)	ppm	mmud				l	·		
Iron			,								
Zinc		1984 A 1									
Manganese											
Copper		1.		1 1994						ľ	
Boron											
Limestone Requirem	nent .									0	.00 tons 100ECCE/acre
										و را درهو ها و راز رسی د و دو درد.	
				Detaile	ed Sali	nity T	est (Sa	turate	d Past	e Extract)	
			- /	p⊦			ALLES OF BANK CO.	t transfer the transfer	7.		er til var sta til formatti fran komenium sometti saktore saktali kilokkontillandi.
				∰ Cc	onduct	ivity			39.3	0 mmhos/c	in the control of the property of the control of th
				Sc	dium	and then	75.75 T 44 , 247	and the second second	147	2 ppm	64,049 meq/L
				Pc	tasslu	im				2 ppm	0.569 meq/L
				Ca	lcium	and the same of the same of	, popular i i i i i i i i i i i i i i i i i i i	er waren, araw	68	2 ppm	34.053 meq/L
				i Ma	ignesi	um			28	6 ppm	23,496 meq/L
					\R		Name of the last o	a man in water a second	11.9	market at at at at a to a sum of	
		rei sa		\$ 85	P				52.4	3	

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Laboratory Number: 472171 Customer Sample ID: S-1 3 Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016 Printed on: 12/21/2016

Area Represented: not provided

Crop Grown: 1	IMPROVED	AND	HYBRID BEI	RMUDA	GRAS	S, GF	RAZING	}			
Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHlgh	Excess.	
рН	7.9	(5.8)		Mod. Al	kaline	464 1445	10,000,000	r 14			
Conductivity	2,010	(-)	umho/cm	High			C	L•		F€	ertilizer Recommended
Nitrate-N	0	(-)	ppm**		ya da						55 lbs N/acre
Phosphorus	5	(50)	ppm	HILLIAN				! }			60 lbs P2O5/acre
Potassium	129	(125)	ppm	11111111111		IIIIIIIII		,			0 lbs K20/acre
Calcium	36,367	(180)	ppm) IIIII IIII		<u>(ji</u>		0 lbs Ca/acre
Magnesium	225	(50)	ppm					ŽIIII			0 lbs Mg/acre
Sulfur	758	(13)	ppm	1111111111		111111111)1111111111	himmi	ļman	į	0 lbs S/acre
Sodium	329	(-)	ppm	mmmi							
Iron								l I			
Zinc		Marie 1			Tag Sil	数 ² A] 			
Manganese					e .			i			
Copper	And the second										
Boron	** . ** . ** .	2	JON B. A. SA		s'		5120				
Limestone Requirement				1 60							0.00 tons 100ECCE/acre
			Walter State Committee	enos someto en	Takkin takao	and the second second	禁力 ほんきはいりゃ	i dostanije vojeka še		er en en en en en en en	
				Marketine and the water and the	- SETT STORMS SEE	nity T	est (Sa	iturate	Same and the same of the	e Extrac	
				pł	きょうてい ウィンカー	leasterna de se	ಆಗಿದ್ದಿಗೆ ಮೊದಲಿಕ	-	7.	en ette state en ert	
			2 2 2 2 2 1 1		onduci	tivity			CARL CONTRACTOR	0 mmho:	to come the or an end of this case of the contract of the cont
				The transfer of the Section 2	odium	SOFTE MEDICAL	e an each of some a	Dearn 1974		9 ppm	16.505 meq/L
		, , , , , , , , , , , , , , , , , , ,		FELDER PROPERTY.	otassii	uligated by Bayland and a				2 ppm	0,303 meq/L
		24500000000		marin or over the second	alcium	Arresta care la	BOWNER, GAN	sejii Payteena	. 在 我 好 我 我 我 我 我 我 我 我 我	5 ppm	47.134 meq/L
				A CANADA	agnes	lum				8 ppm	4.763 meg/L
					٩R	nikaziket dian	there are the	e de la company	3.2	Management of the state of the state of	
				- S	3P.				24.0	2	

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Laboratory Number: 472172 Customer Sample ID: S-1 4 Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016
Printed on: 12/21/2016
Area Represented: not provided

Crop Grown:	IMPROVED	AND H	IARKIN REI	KIVIUDA	GRAS	5, GR	AZING
.	Results	CL*	Units	ExLow	VLow	Low	Mod

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Éxcess.	
рН	7.9	(5.8)		Mod. All	aline		TO ST	September 1		2,000	
Conductivity	3,300	(-)	umho/cm	V. High			Cl	.•		Fe	ertilizer Recommended
Nitrate-N	0	(-)	ppm**			WALES					55 lbs N/acre
Phosphorus	8	(50)	ppm		1111111) }			55 lbs P2O5/acre
Potassium	65	(125)	ppm				100	· ·			55 lbs K20/acre
Calcium	31,150	(180)	ppm			¥			ļu		0 lbs Ca/acre
Magnesium	187	(50)	ppm					IIIII			0 lbs Mg/acre
Sulfur	5,027	(13)	ppm	11111111111	11111111111			HIIIIIIII		Ĺ	0 lbs S/acre
Sodium	654	(-)	ppm		11111111111)				
Iron								l !			
Zinc								l I			
Manganese											
Copper						Sec.	34.5			Ĭ .	
Boron											
Limestone Requirem	nent						4.26				0.00 tons 100ECCE/acre
					Liveria e Nei Otto			· · · · · · · · · · · · · · · · · · ·			
187				Detaile	ed Sali	nity T	est (Sa	iturate	d Past	e Extra	at)
				p⊦		Marin ton on on		nesa modernie da	7.	The supposed the second	eriteran patikalisassa et projekti kan kan kan kan kan kan kan kan kan kan
		,		THE CASE SHOW AND STREET	onduct	tivity			· · · · · · · · · · · · · · · · · · ·	0 mmho	to contract the contract of th
· · · · · · · · · · · · · · · · · · ·		·		and the second second second	dium	productions are a gra-	TOTAL DESIGNATION	barrers recovers o		7 ppm	50.335 meq/L
				Section Comments of the Comments	tassiu	NAMES AND ADDRESS OF TAXABLE PARTY.				6 ppm	0.411 meg/L
				ಕಾರ್ಯಕರ್ ಅವರಿಗಳು	lcium	er van en de de de van de		STORE STEEL TOWN	ATTACHMENTS AND	8 ppm	131.147 meq/L
		11. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		a Ma	ignesi	um			13	5 ppm	11.087 meg/L
					۱R	d responsible a manage			5.9	at area company	in ner a programme transfer og kom store et Skrenderston et Staten og en vik fall et skrende skriftetet et skr
	2. (Exp(42)			SS 💮	3P				26.0	8	

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Laboratory Number: 472173 Customer Sample ID: S-1 5

Artesia, NM 88210

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU College Station, TX 77843-2478 979-845-4816 (phone)

Soil Analysis Report

979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016
Printed on: 12/21/2016
Area Represented: not provided

Crop Grow	n: IMPROVED	AND HYBRI	D BERMUDA	GRASS	, GRAZING	;		
Analysis	Results	CL* Ur	nits ExLow	VLow I	.ow Mod	High VHigh	n Excess,	,
рН	8.1	(5.8)	- Mod. Al	lkaline	nara nagrawani wa W. A.			
Conductivity	2,230	(-) umh	o/cm High		C	<u>.</u>	Ferti	lizer Recommended
Nitrate-N	0	(-) pr	m**					55 lbs N/acre
Phosphorus	7	(50) pp	om	1111		-		55 lbs P2O5/acre
Potassium	37	(125) pr	om IIIIIIIII					80 lbs K20/acre
Calcium	28,799				uminjamanu			0 lbs Ca/acre
Magnesium	135	(50) pr	om IIIIIIIII			iii		0 lbs Mg/acre
Sulfur	5,242	(13) pr	om IIIIIIIII		((((()))	finninganani	ΠĘ	0 lbs S/acre
Sodium	770	(-) pr	om IIIIIIIII					**
Iron							·	
Zinc			4일 경기 기가 있다.					
Manganese								
Copper			i i i fing i i i gatel	F1000				•
Boron			l					
Limestone Requirem	ient	行成基礎的					0.	00 tons 100ECCE/acre
				minutes and the same	ty Test (Sa	turated Pas	and a second a second and a second and a second and a second and a second and a second and a second and a second and a second and a second a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second and a second	
		the Survey	pl	utt of encountyment professor, and a			7.6 ∵⊃⊹∾-≻,•≈	ALGUMETE ENGINEEM STORES
	Service A		Contraction of the second of t	onductiv	ity	tion that a could be read if a track the could	47 mmhos/cr	さいない いっていだいだいだい シャント キュンド 出口的ななない マンドは おおだけ かいかん お
			CONTRACTOR CONTRACTOR	odium		SECURE AND AND AND AND AND AND AND AND AND AND	21 ppm	44.446 meq/L
			And the second s	otassium		Appriliation of the problem	14 ppm	0.355 meg/L
Salaray and a salaray salaray salaray salaray salaray salaray salaray salaray salaray salaray salaray salaray			a critica e acrossa e construir de la construi	alcium		CONTRACTOR STATE OF STATE	37 ppm	71.684 meq/L
			The state of the s	agneslur	n	Activities to the control of the con	70 ppm	5.716 meg/L [*]
				AR	s serenski krijeva		14	
	andyte of		S:	SP		36.	37	

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.



Outside TX County

Laboratory Number: 472174 Customer Sample ID: S-1 6

2478 TAMU

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences

College Station, TX 77843-2478 979-845-4816 (phone)

Soil Analysis Report

979-845-5958 (FAX) Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016 Printed on: 12/21/2016 Area Represented: not provided

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS, GRAZING

Analysis .	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHlgh	Excess.	
рН	8.2	(5.8)		Mod. Alk	aline	1 1 1 1 1 1 1 1 1 1 1					
Conductivity	1,580	(-)	umho/cm	High			c	Ļ•		Ferti	lizer Recommended
Nitrate-N	0	(-)	ppm**			, A, W.			İ		55 lbs N/acre
Phosphorus	.6	(50)	ppm		Ш			l I			60 lbs P2O5/acre
Potassium	30	(125)	ppm		IIII			۰۱			90 lbs K20/acre
Calcium	30,974	(180)	ppm						ļii		0 lbs Ca/acre
Magnesium	128	(50)	ppm					j II			0 lbs Mg/acre
Sulfur	5,234	(13)	ppm	1111111111)miiiiiiii	ļmm	ķiiiiiiiiiii	4	0 lbs S/acre
Sodium	153	(-)	ppm		HIIIIIIII	111					
Iron		,,						l I			
Zinc		*						l i			
Manganese								į			
Copper			*					! !		į	
Boron	•						l	! [ļ		
Limestone Requirem	nent					M. Gall			·	0	.00 tons 100ECCE/acre
			4				lein Nitur		12.742.45	ngilingulangga	
			anyura ba	PRESIDENCE OF THE PARTY AND	Color of St. School St. II	inity i	est (S	aturate		e Extract)	
	S. S. F. S. S. S. S.	a vara ve		p⊦					7.	<i>r</i> 7 mmhos/c	
				per de la company de la constitución de la constitu	onduct	LIVILY		obelek.	国际 的现在分词 化化二氯甲基	GO TO SERVE SANDERS OF THE SERVE	8.554 meq/L
				enger ou refu a cita par	dium			áseteté		7 ppm	and the company of th
	。 第二章中国2007年			SEE Justin School School School	tasslı	China and discount				2 ppm	0,298 meq/L
				error and and and	ılcium	to State Company in		esettses	material and a pro-	0 ppm	39.935 meq/L
	(i) Visit (i) (ii) (ii) (ii) (ii) (ii) (ii) (ii			Week of Children and Children	agnesi	ium 🎚			delice in subschilled and united	1 ppm	3,340 meq/L
					\R	retten entime		isa menga	1.8		
		96.2		SS .	iP				16.4	1118 A 164	

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Condüctivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water. Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.



Outside TX County

Laboratory Number: 472175 Customer Sample ID: S-1 7 Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016
Printed on: 12/21/2016
Area Represented: not provided

Analysis		Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	·	
рН		8.1	(5.8)		Mod. All	caline			=: <u>(</u>				773 743
Conductivity		1,430	(-)	umho/cm	Moderat			Cl			F	ertilizer Recommende	ed
Nitrate-N		0	(-)	ppm**		Margy.	.000	\$ N				55 lbs N/acre	18
Phosphorus		4	(50)	ppm	ļumu ļ							60 lbs P2O5/acre	
Potassium		46	(125)	ppm	minini	HIIIIIIII						75 lbs K20/acre	
Calcium		32,453	(180)	ppm		11(111111111111111111111111111111111111				II		0 lbs Ca/acre	
Magnesium		112	(50)	ppm					111			0 lbs Mg/acre	
Sulfur		5,053	(13)	ppm) mananak		Ĺ	0 lbs S/acre	
Sodium	* .	82	(-)	ppm		IIIIIII							
Iron													
Zinc						. 4 M							ŧ
Manganese							. 150 50	, .					
Copper								7			,		
Boron								1					
Limestone Re	quirement										-	0.00 tons 100ECCE/ac	cre
							nedite-travers	automa-ross	made da de como	i — Nico Pitoropo		na na matana na mangana kalaban sa kalaban na kalaban na kalaban na kalaban na kalaban na kalaban na kalaban n	
					Detaile	ed Sali	nity Te	est (Sa	ıturate	d Past	e Extra	ct)	
					рŀ	-	-dd 607 mag107 16 75	no anima na a	a de despresa de mento	7.	8	er old a village groupte graph of the entering a could be seed to leave	-the case
					₹ Cα	onduct	ivity			2.8	6 mmho	s/cm	

D	etalled Salinity Test (Sat	turated Paste Extract)	
	pН	7.8	
	Conductivity	2.86 mmhos/cm	The state of the s
	Sodium	142 ppm	6.164 meq/L
	Potassium	11 ppm	0.272 meq/L
	Calcium	627 ppm	31.292 meq/L
	Magnesium	22 ppm	1.783 meg/L
	SAR	1.52	
	SSP	15.60	

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water. Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.



Outside TX County

Laboratory Number: 472176 Customer Sample ID: S-2 0 Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016
Printed on: 12/21/2016
Area Represented: not provided

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS, GRAZING

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHlgh	Excess.			
рН	7.5	(5.8)		Slightly /	Alkaline	And Andrews							
Conductivity	6,190	(-)	umho/cm	V. High			С	Ļ•		Feri	tilizer Recor	nmende	ed
Nitrate-N	0	(-)	ppm**		7-25				•	1	55 lbs N/acı	е	2 11 15 pm
Phosphorus	16	(50)	ppm		munni	!!!!!		! 			45 lbs P2O5	/acre	
Potassium	288	(125)	ppm								0 lbs K20/a	acre	, ₄ 2
Calcium	18,367	(180)	ppm		mmi	HHHHHH		MINIM	(II		0 lbs Ca/a	сге	
Magnesium	139	(50)	ppm		[[[[[[]]]]]			111			0 lbs Mg/a	сге	
Sulfur	6,112	(13)	ppm		minimi	1111111111	HIHIM	1111111111			0 lbs S/acr	е	
Sodium	6,440	(-)	ppm		innuni	1111111111		1111111111	munn				
Iron								[]					
Zinc] 					
Manganese					İ			į					
Copper							1.5						
Boron					1			! [
Limestone Requirem	nent			Jan 1				3		(0.00 tons 100	ECCE/ac	re
								Sa Marandel and America		Daniel participate and a second	an an anna ann an Aire an Aire an Aire an	om e vilnot av i 1910, ilija	A AUST NESSES
				Detaile	ed Sali	nity T	est (Sa	iturate	d Paste	e Extract)			
				pΗ		erric richtenè	- AD COLUMN	ma 4.1 conservinted	7.0		one was allered a street by the state	o estamble sistem	
	v v v			Early and remaindred	nduct	lvity			ようえい マースをおうないしょう デル	0 mmhos <i>l</i> d	Contact to the Contact that we will be		
					dium	e mo como su neto nest	reclastrum à revotet.	= ab- as to too		1 ppm	47	′1.314 n	erest turnstaken
				Transfer to the second of the	tasslu	m			T1 - C D C D T0 - T0 - T0 - C	O ppm 🕜		5.110 n	Suren Se Suffree Se
				te in a mount of the contract of	lcium	- Project market and a	ua karaurtu biri:	dayers timett		7 ppm	18	9.552 n	
				# 7.0 vil - years 7 m25	ignesi	um 🗐			The second second second	9 ppm' 🤚		8.141 n	neq/L
				SA		sa senson 'arref	radioente const		51.4	CONTRACTOR AND ADDRESS OF THE ADDRES	: upre ocumentables. Post para	no Pela de Tribatos	- aris auchiens
				i ss	iP.				73:1	7			

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Laboratory Number: 472177 Customer Sample ID: S-2 1 Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016
Printed on: 12/21/2016
Area Represented: not provided

Crop Grown:	: IMPROVED	AND F	IYBRID BEI	RMUDA	GRAS	S, GF	RAZING	કે					
Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHlgh	Excess.			
рН	7.9	(5.8)	PROPERTY OF	Mod. All	kaline	APANA.						E 1. W F	
Conductivity	2,050	(-)	umho/cm	High			C	L*		Fer	tilizer Re	commen	ided
Nitrate-N	2	(-)	ppm**	1					ł		55 lbs N	/acre	
Phosphorus	11	(50)	ppm		111111111111111111111111111111111111111	1		i 1			50 lbs P	2O5/acre	
Potassium	228	(125)	ppm								0 lbs K	20/асге	
Calcium	16,092	(180)	ppm		111111111111				ļII		0 lbs C	a/acre	
Magnesium	125	(50)	ppm					J II	1		0 lbs N	lg/acre	
Sulfur	2,026	(13)	ppm			00000		¢mmm	ļumumu		0 lbs S	/acre	
Sodium	375	(-)	ppm					ĺ				:	
Iron								l l					
Zinc		A NAME OF STREET						I I		*.			
Manganese			- 1					i					
Copper				세 발발									
Boron] }					
Limestone Requireme	nt							14. A	1	(0.00 tons	100ECCE	/acre
						de serra mande esta das			~ - * : b.c. : 2.2.7.50 F	and the state of the state of the state of	entropy diposity days.	and the second second second second	ant Philipping (And agent
				Detail	ed Sali	inity T	est (Sa	iturate	d Paste	e Extract			
				pł		an e residence de la	en a anerica se	wasan men sebatah s	7.4		ಂದರ್ಶವಾದ ಶಿಕ್ಷಣವರ್ಷವಾಗಿ	overstill speciality ye.	mrun philippina
				C	onduct	livity			and the state of the second	3 mmhos/	cm 🔭 🚎		
				So	odium	ensemble resource	ushina ha etit e a s	TRANSCORP (1.4.0	31	5 ppm			7 meq/L
				P	otassiu	ım				5 ppm			eq/L
				C	alcium	**	The Property of Carefull		电电流 数 广播医计划网络特别) ppm		Common or served production to	1 meq/L
				g M	lagnesi	ium				7 ppm		1.362	2 meq/L
				S	AR				3.0	9		ann vorte in this seek.	and our stonds and

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.

SSP 25.66



Outside TX County

Laboratory Number: 472178 Customer Sample ID: S-3 0

er Sample ID: S-3 0

Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016
Printed on: 12/21/2016
Area Represented: not provided

Crop Grown:	IMPROVED	AND F	IYBRID BEI	RMUDA	GRAS	SS, GR	AZING	j			
Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
рН	7.9	(5.8)	a transferran	Mod. Al	kaline	Walion Co.	er-Clayer				
Conductivity	5,270	(-)	umho/cm	V. High			Cl	.•		Fer	tilizer Recommended
Nitrate-N	1	(-)	ppm**							İ	55 lbs N/acre
Phosphorus	22	(50)	ppm	1111111111	1111111111	ļunumi		l 			35 lbs P2O5/acre
Potassium	230	(125)	ppm								0 lbs K20/acre
Calcium	18,063	(180)	ppm	*					JI.		0 lbs Ca/acre
Magnesium	134	(50)	ppm	- 12 C / 2 C	1 2 2 3 4 5 5 5 5 6 6 6 7		THE PARTY OF THE P				0 lbs Mg/acre
Sulfur	6,000	(13)	ppm								0 lbs S/acre
Sodium	4,211	(-)	ppm						uu -		
Iron	* . *	* 11 41 50	North Company of the		*** * ****		- · · · · ·				
Zinc		en (18. jest)			19.1			!			· · ·
Manganese			ra tana ara		,						
Copper			W. A.					4.			
Boron	1.0	55.76.8	Sec. Makasis is	1,,,,,,,	N. P. S. L.	Associates					ili sa sa sa sa sa sa sa sa sa sa sa sa sa
Limestone Requiremen	<u>1t </u>	1.7244		July six six	1974		<u> </u>	4,		(0.00 tons 100ECCE/acre
partition of the second second second second second second second second second second second second second se							er grown	Balentina.	grapa <u>li</u> sticzniczn	eszonala anak	2000年度至2008年度18.18.18.18.18.18.18.18.18.18.18.18.18.1
				est - duit du No	and the second	inity i e	est (Sa	turate	and the second of the second	Extract	
		ings est	V 10 - 20 - 24 / 2 - 24	p⊦ •	Francisco Sant Cabring	AND PASSE	NORTH ST		7.* ביופרייי		
				The control of the control of	onduci	tivity			C114-2149-C24-220	0 mmhos/e	・ pig A call 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2
					dium		i en	OTTORY		7 ppm	391.094 meq/L
		1		Carlotte Control Control	otassii	feetile and attended to the work	\$75.P			4 ppm	3.183 meg/L
			Sec. of	The second control of the	ılcium	and the second second		reneral de la companya de la company	a thair ar harmon	i ppm	178.707 meq/L
			English (St.)	Annual Tax Berman Chicate med	agnesi	uIII		THE PARTY		5 ppm	5:316 meq/L
					\R SP				40.7 67.6	management of a series of contract	
								经 的现在分词	and the o	4. 10 10 10 10 10 10 10 10 10 10 10 10 10	

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Laboratory Number: 472179 Customer Sample ID: S-3 1

Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone)

979-845-5958 (FAX)

VHlgh

Visit our website: http://soiltesting.tamu.edu

0.00 tons 100ECCE/acre

Sample received on: 12/13/2016 Printed on: 12/21/2016 Area Represented: not provided

Crop Gro	wn: IMPROVED	AND H	IYBRID BEI	RMUDA	GRAS	S, GR	AZING
Analysis	1100011	CL*	Units	ExLow	VLow	Low	Mod
рН	7.8	(5.8)		Mod. All	caline		
Conductivity	2,140	(-)	umho/cm	High			CL*
Nitrate-N	2	(-)	ppm**				5.47 F
Dhaanhamia	40	(EO)		humani			į i

lhii	7.0	(0.0)		MOU. AIK	aiiii					•	
Conductivity	2,140	(-)	umho/cm	High			C	·		Fertilizer Re	commended
Nitrate-N	2	(-)	ppm**							55 lbs N	/acre
Phosphorus	12	(50)	ppm					! !		50 lbs P	2O5/acre
Potassium	246	(125)	ppm			1111111111)	(111111111)	11111 °		0 lbs K	20/acre
Calcium .	15,240	(180)	ppm						JI .	0 lbs C	
Magnesium	148	(50)	ppm					111		0 lbs M	g/acre
Sulfur	2,336	(13)	ppm	111111111111111111111111111111111111111		11111111111			11111111111	0 lbs S	acre
Sodium	422	(-)	ppm		1111111111	minini					50
Iròn								l 			
Zinc				A. A. A. A. A. A. A. A. A. A. A. A. A. A		深源					
Manganese							į				
Copper		. 1947				18.7	· ' i	'. 			
Boron											

Det	alled Salinity Test (Saturated F	Paste Extract)	
	рН	7.6	
	Conductivity	5.16 mmhos/cm	
	Sodium	329 ppm	14.335 meq/L
	Potassium	16 ppm	0.418 meq/L
	Calcium	779 ppm	38.890 meq/L
	Magnesium	18 ppm	1.512 meg/L
	SAR	3.19	
	SSP	25.99	
	Stanta NI Carra I Carta to take		

^{*}CL≕Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm≕mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water. Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Laboratory Number: 472180 Customer Sample ID: S-3 2

Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478

979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016
Printed on: 12/21/2016
Area Represented: not provided

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS, GRAZING

Crop Grown:		ANDI	INDKID BE	KINIODA	GKAS	oo, ur	WILLIAM	9			
Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	Ḥigh	VHigh	Excess	
рН	8.1	(5.8)		Mod. All	kaline		Tentandi jin				
Conductivity	1,520	(-)	umho/cm	Moderat	e			CL*		F	ertilizer Recommended
Nitrate-N	0	(-)	ppm**							İ	55 lbs N/acre
Phosphorus	7	(50)	ppm	mmm	11111			1			55 lbs P2O5/acre
Potassium	45	(125)	ppm	1111111111	HIIIIII						75 lbs K20/acre
Calcium	20,117	(180)	ppm		11111111111	ļmum	ijiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii	ķmmm	III		0 lbs Ca/acre
Magnesium	58	(50)	ppm					ģ			0 lbs Mg/acre
Sulfur	6,142	(13)	ppm	1111111111	11111111111	(11111111	ı)minmi	dunnu	I ÉULUNUUU	Ė	0 lbs S/acre
Sodium	171	(-)	ppm		IXIIIIIIIII	(III					· · · · · · · · · · · · · · · · · · ·
Iron								ì			
Zinc					1012	(5.1.5)		1			
Manganese								1			
Copper					芸術は	3.4		!			
Boron					, .,			i			e ues e
Limestone Requiremen	t				न्युक्ति ह	11 11 11				· · · · · · · · · · · · · · · · · · ·	0.00 tons 100ECCE/acre
					e car rece	14 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19 19	nadaga e da tan		nebrene e e romane e e e	VEASCO SERVICE	
						inity T	est (S	aturat	ed Past		ict)
				pl			se Desertana	7.6547794F45	7 .		
				HEREOGRAPH CONTRACTOR CONTRACTOR	onduc	Action with the second			no profite and a first facilities	0 mmh	ರ್ಷ-೧೯೬೬ ಕ್ಷೇ. ೧೯೮೨ - ೧೯೯೮ ೧೯೯೮ ರಲ್ಲಿ ಸಲ್ಲಿಸಲ್ ಸ್ಟ್ ಸರಿವಿಕ್ಕರ್ಗಾಗಿ ನೀಡಿ ಅಭಿವರ್ಥ ಅಭಿವರ್ಥ ಮುಂದಿ ಅಭಿವರ್ಣ ಕರ್ಮಾರ್ ಅ
	= 7 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	and the second		THE PARTY OF THE P	odium	and the second second	ánysadekeest	arentana		9 ppm	13.459 meq/L
				DOMESTIC OF STREET	otassii	· 中国一种"一种" 化二甲基甲			Contract to the second	4 ppm	0:362 meg/L
		and the second second		pere mark to bus more distance	alcium	Se of compression		asuroteur	and the second section is a second section of	1 ppm	33.459 meq/L
				Market Transaction over Contract	agnes	ium				4 ppm	1.129 meq/L
					٩R	relegions		historia de la compansión de la compansión de la compansión de la compansión de la compansión de la compansión	3.2		
				S:	SP.				27.8	U.E.	

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre,



Outside TX County

Laboratory Number: 472181 Customer Sample ID: S-4 0 Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016
Printed on: 12/21/2016
Area Represented: not provided

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS, GRAZING

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.		
рН	7.7	(5.8)		Mod. All	caline							
Conductivity	6,250	(-)	umho/cm	V. High			Cl			Ferti	lizer Recom	mended
Nitrate-N	0	(-)	ppm**								55 lbs N/acre	
Phosphorus	29	(50)	ppm		mmmi	1111111111		1		·	25 lbs P2O5/8	icre
⊃otassium	453	(125)	ppm								0 lbs K20/ac	ге
Calcium	10,009	(180)	ppm						ļĪ		0 lbs Ca/acre)
Vlagnesium	195	(50)	ppm			1111111111					0 lbs Mg/acr	е
Sulfur	893	(13)	ppm	1111111111	mmmi				1111111111111		0 lbs S/acre	
Sodium	8,505	(-)	ppm									
ron			and some of									
Zinc				1 1			1					
Vlanganese							l					
Copper			Maj H		tilly day		i		` .			
Boron												***
Limestone Requiren	nent									0.	00 tons 100E	CCE/acre
					to the second second	ST ALVENO DES	n de anticolor	46000000000000000000000000000000000000	ens retaine	Star (*toetun medar vita	is udmiching andrag	era are to-re file to constru
			建模的 为2	man to a contract the form	Court Thursday and Au	nity Te	est (Sa	turate	and the said of the	Extract)		
M (a signar and a signar and a signar				p۲	سيالدون وروماروم	1880 PARTIN	AMERICA AMERICA	Recover (1905)	7.2	The transfer of the same	er der Effekklik krope Effektivate	Miller of the Ville Color
		la de la com	$z_{i} = \lambda \log (-z_{i})$	22 · · · · · · · · · · · · · · · · · ·	onduct	ivity			erfactors, term etcourse to) mmhos/cr	to deliver a reserve of the state of the state of the first of the state of the sta	e s
				and the second of the second of the second	dium		ad Fig. State (1904)	entera neces	16880			. 556 meq/L
				and the same of th	tassiu	m 🙏				3 ppm	No. 4. No. of the state of the	. 13 1 meq/L
				and the second restriction	ılcium	(Spanistical)	au Authra ann an s	essa de como	AD SHARESHARE 2015	3 ppm	and a series of the series of	.893 meq/L
				PO 5 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	ignesi	um 🐨			the state of the state of the state of	3 ppm	10	.485 ∍meq/L
				SA			nemi teksőkekeke	deservation of the	70.62		er oo oo aaraa aa aa ka aaraa ka sabara ka	TOTAL STATE OF THE CONTRACT OF THE
		2007.4		· SS	iP.				76.19			

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Laboratory Number: 472182 Customer Sample ID: S-4 1

Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS, GRAZING

Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478

979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016
Printed on: 12/21/2016
Area Represented: not provided

Crop Grown:	IMPROVED	AND H	IYBRID BEI	RMUDA	GRAS	SS, GF	RAZIN	G			
Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
рН	7.8	(5.8)		Mod. Al	kaline	and the latest	esign to begin the				
Conductivity	4,600	(-)	umho/cm	V. High			,	CL.*		Fe	ertilizer Recommended
Nitrate-N	0	(-)	ppm**								55 lbs N/acre
Phosphorus	13	(50)	ppm	[]]][]]]		[1		1			50 lbs P2O5/acre
Potassium	239	(125)	ppm	\$21 Specificant & 2		and the second section of	S & Committee Services	1 2 2			0 lbs K20/acre
Calcium	16,225	(180)	ppm		A 100 M 411 MA	Course with an hour		Mandalli	(II		0 lbs Ca/acre
Magnesium	169	(50)	ppm			 End State Countries 	A PARTY STATE	2 - 10 - 1			0 lbs Mg/acre
Sulfur	472	(13)	ppm	and an experience of the	For the second of the second	T		A STATE OF THE STA	İmmini		0 lbs S/acre
Sodium	2,809	(-)	ppm			(111111111	HIIIIIIII	i)iiiiiiiii	į i		
Iron				İ.				i			
Zinc					•] 			
Manganese								1			
Copper								i			
Boron					l., .,	! , ,		ŧ,			e e e e e e e e e e e e e e e e e e e
Limestone Requirement								<u></u>			0.00 tons 100ECCE/acre
					TOTAL SECTION STORES	OT 6 B. M. T. WOOL	n a de entre para	Shakto senter	trire no en en en estado.	as est to et. Amore, or hit to	a com un to horo fico protoco de la companione, qual finalizat en en combinable (5).
		1.2% L				inity T	est (S	aturate	ed Paste		of)
		ere en la ciona a		pl	ararakan rawa san k	ne el-cresch	A ASTARAGE F	an complete and the	7.3	ಜಾನಾನ್ ಕಪ್ರತಿಕಾಗ ಮ	
				The second section of the second	onduc	and the second of the second) mmho	to person out the property of the person of
		e o o na na isana		and the second and the	odium	STREET STREET	nsiavare aksek	en en en en en en en en en en en en en e	ままならば、一のかでのかかり	7 ppm	166.117 meq/L
	i hu i			THE SECOND CONTRACTORS	otassiu	alon to Armen the military) ppm	1.541 meq/L
				and the second second	alcium	en and the end of the first	nakanan c	rehero dez	いけいのようなものをおかける	4 ppm	190.312 meq/L
			in the factor of the second	Tank the feet of each bear	agnes	ium) ppm	6.576 meq/L
					AR	483245/SETV	e Noosaraa	4450000000	16.7	Commence Services of Services	
				S:	SP				45.5		· 正是是不是在10万元的。

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Laboratory Number: 472183 Customer Sample ID: S-4 2 Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016
Printed on: 12/21/2016
Area Represented: not provided

	Grown: IMPROVED	AND HYBRID E	BERMUDA GRAS	S, GRAZING			
Analysis	Results	CL* Units	ExLow VLow	Low Mod	High VHigh	Excess,	
рН	8.1	(5.8) -	Mod. Alkaline				1 2 2
Conductivity	1,560	(-) umho/cr	n High	CL	•	Fertilize	r Recommended
Nitrate-N	0	(-) ppm**			l	55	lbs N/acre
Phosphorus	5	(50) ppm	1111111111			60	lbs P2O5/acre
Potassium	51	(125) ppm				70	lbs K20/acre
Calcium	27,898	(180) ppm			11111111111	0	lbs Ca/acre
Magnesium	86	(50) ppm		dimininiminini	y l	0	lbs Mg/acre
Sulfur	5,899	(13) ppm					lbs S/acre
Sodium	181	(-) ppm		The same of the same of the same			
Iron		()			-		
Zinc	1. 14. 1. 1. April 19.			1 mg 2 mg			
Manganese							٠
Copper	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1			1934 A. H. J.	1		1.
Boron		*****			İ		
Limestone Req	uirement	(SAMANAHERES)		Mario Vido	judejw iz	0.00	tons 100ECCE/acre
		J. S. S. J. J.Y.	Detailed Sali	nity Test (Sa	turated Paste 7.9		
	Very and the second	S. C. Standard	pH				
			Conduct	ivity		mmhos/cm	H 0.10
		a provincia de la compansión de la compa	Sodium	deles de adeques.		ppm	7.612 meq/l
			Potasslu	amountained in the second and Trimes and a second		ppm	0.341 meq/l
			Calcium	CONTRACTOR AND ADMINISTRATION OF A	erate filler was a mission of suprement with the	? ppm	30.560 meq/l
			Magnesi	um		i ppm 💛	1.245 meq/l
			SAR	eller av till fra som en grædet lingen ska den starre til som	1.91		not al fich obsociations and about the files.
e day (2005) day day			SSP		19.15	特别是2018年	

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Sodium lron

Laboratory Number: 472184 Customer Sample ID: S-43 Crop Grown: IMPROVED AND HYBRID BERMUDA GRASS, GRAZING Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016 Printed on: 12/21/2016 Area Represented: not provided

1.14

12.55

17 ppm

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHlgh	Excess,
рН	8.1	(5.8)		Mod. Alk	aline	ANÇE U	The same			
Conductivity	1,550	(-)	umho/cm	High			CI	•		Fertilizer Recommended
Nitrate-N	0	(-)	ppm**							55 lbs N/acre
Phosphorus	6	(50)	ppm							60 lbs P2O5/acre
Potassium	44	(125)	ppm		1111111				-	75 lbs K20/acre
Calcium	28,274	(180)	ppm		mini		minni	(())))))))	Į.	0 lbs Ca/acre
Magnesium	93	(50)	ppm				munit	li. j		0 lbs Mg/acre
Sulfur	5,819	(13)	ppm		mmiij	minni)	HIHIII			0 lbs S/acre

Zinc	or of Alberta							
Manganese	•			i :				
Copper								
Boron								
Limestone Requireme	ent A. A.					0	.00 tons 100ECCI	E/acre
		Detailed	Salinity T	est (Satu	irated Past	Extract)		
		þН			7.	9	Part 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
		Conc	ductivity		2.7	0 mmhos/c	m	
		Sodi	um		10	3 ppm	4.49	9 meq/L
		Pota	ssium		1	2 ppm	0.31	9 meq/L
		Calci	ium			4 ppm	**	7 meq/L

Magnesium

*CL≕Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm≕mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water. Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.

SAR

SSP

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.

New online fertilizer calculators have been placed on the laboratory's website to determine appropriate fertilizers to purchase and determine their application rates. http://soiltesting.tamu.edu/webpages/calculator.html

1.376 meq/L



Outside TX County

Laboratory Number: 472185 Customer Sample ID: S-5 0

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478

Soil Analysis Report

979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016

Printed on: 12/21/2016 Area Represented: not provided

Crop Grown:	IMPROVED	AND F	iybrid bei	RMUDA	GRASS	i, GR	AZING
i	Results	CL*	Units	Extow	Viou	Low	Mod

Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess,	
рН	7.9	(5.8)		Mod. All	kaline	THE PARTY	inginaya				
Conductivity	4,530	(-)	umho/cm	V. High			С	L.		Fer	tilizer Recommended
Nitrate-N	1	(-)	ppm**				Jan 1				55 lbs N/acre
Phosphorus	27	(50)	ppm		11111111111	(rinnni))	1			30 lbs P2O5/acre
Potassium	295	(125)	ppm	mumi	1111111111			ģillii'	1		0 lbs K20/acre
Calcium	7,534	(180)	ppm	1111111111	11111111111			MINIMINI	(ii		0 lbs Ca/acre
Magnesium	130	(50)	ppm	HIHHHH	11111111111			ģii	ľ		0 lbs Mg/acre
Sulfur	1,234	(13)	ppm	1111111111	11111111111			himmi	(manana)		0 lbs S/acre
Sodium	3,897	(-)	ppm		11111111111				İII		
Iron		, ,	2 2 1 1 1					j I			
Zinc				(Table)		13434	#	I			A Transfer of the State of the
Manganese		•	15.					ĺ	Į		•
Copper		可控制等					1] 			
Boron					•			l I			
Limestone Requirement									•	· (0.00 tons 100ECCE/acre
	resident			Detaile	ed Sali	nity To	est (Sa	ıturate	d Paste	Extract	
				рŀ	20.00	esembek -4-44	1 1000000000000000000000000000000000000	-date A (1925) 2 (4-)	7.		 보니스 전 1, Lund 전 1 44년 2 2020년 전략 전략 전략 제품 200년 변경 변화 1 2 2 2 2 2 2
				Co	onduct	ivity			46,4	0 mmhos/	cm .
				Sc	dium		and references of	erino apre 1911	and the second of the	7 ppm	348.427 meq/L
			1 (1) (1) (1) (1) (1) (1) (1) (1	Po	otassiu	ım			ACCUSATION TO SERVICE	7 ppm	3.502 meg/L
				Market Control of the	alcium	to control of the second of the	- A LONG TO SERVED	amorgia Ruguria		1 ppm	176.694 meg/L
		25		a la concentration	agnesi	CONTRACTOR			SERVED FOR THE	5 ppm	5,327 meg/L
Carrier (Contract Con				Bed to contract months of the com-	۱R	energy appear (FIR)		Parkers (\$150 page)	36.5	an interior of the contract of	enter en en en en en en en en en en en en en
	di a a a a a a a a a a a a a a a a a a a	Sec. 25			SP.	San San			65.2		

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water. Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Laboratory Number: 472186 Customer Sample ID: S-5 1 Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478 979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016 Printed on: 12/21/2016

Area Represented: not provided

Crop Grown	n: IMPROVED	AND I	YBRID BE	RIVIUDA	GRAS	SS, GF	AZINO	}			
Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHigh	Excess.	
рН	8.3	(5.8)		Mod. Al	kaline	er prepri	F-9-71 (17)				
Conductivity	1,780	(-)	umho/cm	Hìgh			c	L•		Fertilize	r Recommended
Nitrate-N	. ¹⁰ Å.:	(-)	ppm**		March.	198,0				55	lbs N/acre
Phosphorus	9	(50)	ppm	minnin	111111111			ì I		55	lbs P2O5/acre
Potassium	59	(125)	ppm			(iiiiiii)		•		60	lbs K20/acre
Calcium	32,480	(180)	ppm	1111111111	1111111111	ļumun			ļI .	0	lbs Ca/acre
Magnesium	134	(50)	ppm		1111111111			411		0	lbs Mg/acre
Sulfur	5,519	(13)	ppm	1111111111	1111111111	(1111111111)111111111	1111111111	11(1)111(1		lbs S/acre
Sodium	524		ppm)				
Iron								İ			
Zinc			100 T					j			
Manganese				į				i			
Copper			er Artine		·	1 20 2					
Boron											*
Limestone Requireme	ent 🦠				Maring (0.00	tons 100ECCE/acre
		1		Detail	ed Sali	inity T	est (Sa	iturate	d Paste	Extract)	
				pł	1				7.8	3	and the second second second second second
			N	Co	onduct	tivity			6.2	3 mmhos/cm	
				Sc	odium				69) ppm	30.005 meq/L
				Po	otassiu	ım 🚁			28	B ppm	0.726 meg/L
				Ca	alcium				650) ppm	32.438 meq/L
				M	agnesi	um			2	I∍ppm	1.730 meg/L
				S	٩R				7.20		The second secon
				} S	SP .				46.23	3	

*CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.



Outside TX County

Laboratory Number: 472187 Customer Sample ID: S-5 2

Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478

979-845-4816 (phone) 979-845-5958 (FAX)

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016

Printed on: 12/21/2016
Area Represented: not provided

Crop Grown: IN		AND H	YBRID BE	RMUDA	GRAS	SS, GR	AZING	i				
Analysis	Results	CL*	Units	ExLow	VLow	Low	Mod	High	VHlgh	Excess.		
рН	8.2	(5.8)		Mod. All	(aline			A 1 2 1 1 1				
Conductivity	1,420	(-)	umho/cm	Moderat	e		CI	•		F	ertilizer Recommende	ed
Nitrate-N	1	(-)	ppm**							ļ	55 lbs N/acre	, A.B.
Phosphorus	4	(50)	ppm	1111111				 			60 lbs P2O5/acre	
Potassium	10	(125)	ppm				基金领	ę			105 lbs K20/acre	
Calcium	18,208	(180)	ppm			ļaamii			ļii 💮		0 lbs Ca/acre	
Magnesium	68	(50)	ppm					l			0 lbs Mg/acre	
Sulfur	7,037	(13)	ppm			(1111111111) 1111111111	inneri		É	0 lbs S/acre	
Sodium	61	(-)	ppm		III							
Iron												
Zinc		1954 5			i yezi		1					
Manganese												
Copper							i			1		
Boron			na a a a a a a			ļ _.	1					
Limestone Requirement					349 S S	1					0.00 tons 100ECCE/ac	re
					entaletterstation	and and a major and		entutions ou	ate or new suc	ten e ta anund	Difference of the control of the con	⊢⊟ಗು ನಡಿಕಾಗಿ∻ಿಂದ
		21.04 				nity T	est (Sa	turate	many and a second contract of the	e Extra	ct)	
	and the second			p⊦		eren en en en en en en en en en en en en e		\$5500 CON	7.5			7.04395/ 1- 54
		$r_{H} \stackrel{G}{\circ} r_{X}$			onduct	ivity			education in Charles 1	6 mmho	Decided the court of a refer to be 70 of the State Personal and the	
		dresses same			dium			anterna.		0 ppm	6.084 m	
			Tep led 1	ವಾರ್ ಬರ್ಗಿಸ್ ಪಾರ್ಪಾಚಿಸಿತ್ತು	tassiu	Description of the Party of the				4 ppm	0.365 m	
				and the second	ılcium		(1599.TSL-7-11	NATIONAL PORTON		3 ppm	30.090 m	
				man occur-no mento	ignesi	um				O ppm	0.856 m	ieq/L
	Kera akaras	Salard Salard		S <i>A</i>			SKSWS1988u	esas de l'Al	1.5			
*CI = Critical level in the point w				e SS	片层		NASA N		16.2			

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water.

Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.



Outside TX County

Laboratory Number: 472188 Customer Sample ID: S-5.3

Soil Analysis Report

Soil, Water and Forage Testing Laboratory Department of Soil and Crop Sciences 2478 TAMU

College Station, TX 77843-2478

979-845-4816 (phone) 979-845-5958 (FAX)

18.29

Visit our website: http://soiltesting.tamu.edu

Sample received on: 12/13/2016 Printed on: 12/21/2016

Area Represented: not provided

Potassium 14 ppm 0.361 Calcium 459 ppm 22.906	Customer Sample ID: S-													
Detailed Salinity Test (Saturated Paste Extract) Phosphorus Phos					RMUDA	i GRAS	3S, GR	LAZING						
Conductivity		Results	CL*	Units	ExLow	VLow	Low	Mod	Hìgh	VHlgh	Excess.			
Nitrate-N	рН	8.3	(5.8)		Mod. Al	kaline								
Phosphorus	Conductivity	1,510	(-)	umho/cm	Modera	.te		CL	•		Fert	ilizer Recon	nmended	
Phosphorus	Nitrate-N	1	(-)	ppm**				1 / 15 [4]		į	į	55 lbs N/acr	e	
Calcium	Phosphorus	4		ppm	101101			1				60 lbs P2O5	/acre	
Magnesium 324 (50) ppm	Potassium	15	(125)	ppm	MIMMI	. Sign		300			1	105 lbs K20/a	icre	:
Sulfur 6,730 (13) ppm	Calcium	16,303	(180)	ppm			1	juumių	IIIIIIIII	II		0 lbs Ca/ac	ere	
Sulfur 6,730 (13) ppm	Magnesium	324	(50)	ppm							İ	0 lbs Mg/ac	cre	
Iron Zinc Manganese Copper Boron		6,730	(13)		1111111111	ļaman		humini	IIIIIIIIII	(11)111111111	The state of the s			
Zinc	Sodium	44	(-)	ppm	11111111	1	1			ĺ				
Manganese Copper Boron 0.00 tons 100ECCE/s Limestone Requirement Detailed Salinity Test (Saturated Paste Extract) pH 8.0 Conductivity 2.80 mmhos/cm Sodium 137 ppm 5.964 Potassium 14 ppm 0.361 Calcium 459 ppm 22.906 Magnesium 41 ppm 3.378	E							1			i i			
Copper Boron Limestone Requirement Detailed Salinity Test (Saturated Paste Extract) pH 8.0 Conductivity Sodium 137 ppm 5.964 Potassium Calcium 459 ppm 22.906 Magnesium 41 ppm 3.3378	Zinc							1			į			
Boron	Manganese			•		į					•			
Detailed Salinity Test (Saturated Paste Extract) pH 8.0	Copper		- 4					1		ĺ	ļ			
Detailed Salinity Test (Saturated Paste Extract) pH	the second secon													
pH 8.0 Conductivity 2.80 mmhos/cm Sodium 137 ppm 5.964 Potassium 14 ppm 0.361 Calcium 459 ppm 22.906 Magnesium 41 ppm 3.378	Limestone Requirement	<u> </u>	1 / 11	基础的企				<u> </u>	. 15	·	0	.00 tons 100I	ECCE/acre	
pH 8.0 Conductivity 2.80 mmhos/cm Sodium 137 ppm 5.964 Potassium 14 ppm 0.361 Calcium 459 ppm 22.906 Magnesium 41 ppm 3.378														
Conductivity 2.80 mmhos/cm	e i sedrujuju Pajis sedinju sedinju sedi		istorio del Maria del Carro del Carr		Detail	ed Sall	inity T	est (Sa	turate	d Paste	Extract)			
Sodium 137 ppm 5.964					pl	Н	· · · · · · · · · · · · · · · · · · ·	No.						
Potassium 14 ppm 0.361 Calcium 459 ppm 22.906 Magnesium 41 ppm 3.378				reter for	C	onduct	tivity			 et # user-skilled Declarity 	tokula i Norden der er in in in	A contraction for every property		
Calcium 459 ppm 22.906 Magnesium 41 ppm 3.378					terminal and the second of the second of	and the second second second	AND DESCRIPTION AND	120 5 120 1441		137	7 ppm		5.964 med	
Magnesium 41 ppm 3.378					∄ : P∢	otassiu	ım	经验证				从4.8年產業	0.361 med	ą/L ,
					Ca	alcium				459) ppm	2	2.906 med	q/L
SAR 1.65					M	agnesi	ium			4	l ppm		3.378 med	4/L
				· · · · · · · · · · · · · · · · · · ·	S/	AR				1.68	5			

^{*}CL=Critical level is the point which no additional nutrient (excluding nitrate-N, sodium and conductivity) is recommended. **ppm=mg/kg

Conductivity: Salinity levels are becoming elevated, monitor levels or remove salts with 10-15 inches of clean leach water. Nitrogen: Apply an additional 70 lbs/A of nitrogen for each subsequent heavy graze down.

SSP

Potassium: Split apply potassium fertilizer if recommendation is for more than 75 lbs K2O per acre.



December 15, 2016

SHELDON HITCHCOCK

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: PINTAIL 23 FED #8

Enclosed are the results of analyses for samples received by the laboratory on 12/08/16 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab accredited certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

Celey D. Keine

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager



TALON LPE SHELDON HITCHCOCK 408 W. TEXAS AVE. ARTESIA NM, 88210 Fax To: (575) 745-8905

Received:

12/08/2016

Reported:

12/15/2016

Project Name:

PINTAIL 23 FED #8

Project Number:

701162.078.01

Project Location:

M-23-25S-26E

Sampling Date:

12/02/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S-1 0' (H602747-01)

BTEX 8021B	mg/	mg/kg Analyzed By: MS				×=====================================			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2016	ND	1.96	97.8	2.00	10.2	
Toluene*	<0.050	0.050	12/13/2016	ND	2.00	100	2.00	10.6	
Ethylbenzene*	<0.050	0.050	12/13/2016	ND	1.95	97.7	2.00	10.5	
Total Xylenes*	<0.150	0.150	12/13/2016	ND	5.99	99.8	6.00	11.0	
Total BTEX	<0.300	0.300	12/13/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	119 9	6 73.6-140	0						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2016	ND	190	95.0	200	1.17	
DRO >C10-C28	<10.0	10.0	12/09/2016	ND	204	102	200	0.506	
Surrogate: 1-Chlorooctane	75.6	% 35-147							
Surrogate: 1-Chlorooctadecane	65.8	% 28-171							

Sample ID: S-1 7' (H602747-02)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	12/13/2016	ND	400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Uablity and Damages. Cardinal's fiability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed wisved unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be lable for incidental or consequential damages, including, whithout limitation, business interruptions, floss of use, or loss of profits incoursed by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples Identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene





TALON LPE SHELDON HITCHCOCK 408 W. TEXAS AVE. ARTESIA NM, 88210 Fax To: (575) 745-8905

Received:

12/08/2016

Reported:

12/15/2016

Project Name: Project Number: PINTAIL 23 FED #8 701162.078.01

Project Location:

M-23-25S-26E

Sampling Date:

12/02/2016

Sampling Type:

Soil

Sampling Condition: Sample Received By: Cool & Intact

Jodi Henson

Sample ID: S-2 0' (H602747-03)

BTEX 8021B	mg,	'kg	Analyze	d By: MS		· · · · · · · · · · · · · · · · · · ·			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2016	ND	1.96	97.8	2.00	10.2	
Toluene*	<0.050	0.050	12/13/2016	ND	2.00	100	2.00	10.6	
Ethylbenzene*	<0.050	0.050	12/13/2016	ND	1.95	97.7	2.00	10.5	
Total Xylenes*	<0.150	0.150	12/13/2016	ND	5.99	99.8	6.00	11.0	
Total BTEX	<0.300	0.300	12/13/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIE	119 9	% 73.6-140)						
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2016	ND	190	95.0	200	1.17	
DRO >C10-C28	<10.0	10.0	12/09/2016	ND	204	102	200	0.506	
Surrogate: 1-Chlorooctane	67.3	% 35-147							
Surrogate: 1-Chlorooctadecane	63.5	% 28-171							

Sample ID: S-2 2' (H602747-04)

Chloride, SM4500CI-B	mg/kg		mg/kg Analyzed By: AC		mg/kg Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Chloride	64.0	16.0	12/13/2016	ND	400	100	400	3.92			

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's Bability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for 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 thirty (30) days after completion of the applicable service. In no event shall Cardinal be lable for incidental dramages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by dient, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such dalm is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keene



TALON LPE
SHELDON HITCHCOCK
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received:

12/08/2016

Reported:

12/15/2016

Project Name:

PINTAIL 23 FED #8

Project Number: Project Location:

701162.078.01 M-23-25S-26E Sampling Date:

12/02/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S-3 0' (H602747-05)

BTEX 8021B	mg/	'kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2016	ND	1.96	97.8	2.00	10.2	
Toluene*	<0.050	0.050	12/13/2016	ND	2.00	100	2.00	10.6	
Ethylbenzene*	<0.050	0,050	12/13/2016	ND	1.95	97.7	2.00	10.5	
Total Xylenes*	<0.150	0.150	12/13/2016	ND	5.99	99.8	6.00	11.0	
Total BTEX	<0.300	0.300	12/13/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	118 9	% 73.6-14	0						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2016	ND	190	95.0	200	1.17	
DRO >C10-C28	<10.0	10.0	12/09/2016	ND	204	102	200	0.506	
Surrogate: 1-Chlorooctane	73.0 9	% 35-147							
Surrogate: 1-Chlorooctadecane	73.1 9	% 28-171							

Sample ID: S-3 2' (H602747-06)

Chloride, SM4500CI-B	00CI-B mg/kg		Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	12/13/2016	ND	400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived uriess made in writing and received by Cardinal within thirty (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, foss of use, or loss of profits incurred by client, its subsidiaries, fallilates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey & Keene



TALON LPE SHELDON HITCHCOCK 408 W. TEXAS AVE. ARTESIA NM, 88210

Fax To:

(575) 745-8905

Received:

12/08/2016

Reported:

12/15/2016

Project Name: Project Number: Project Location: PINTAIL 23 FED #8 701162.078.01

M-23-25S-26E

Sampling Date:

12/02/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S-4 0' (H602747-07)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2016	ND	1.96	97.8	2.00	10.2	
Toluene*	<0.050	0.050	12/13/2016	ND	2.00	100	2.00	10.6	
Ethylbenzene*	<0.050	0.050	12/13/2016	ND	1.95	97.7	2.00	10.5	
Total Xylenes*	<0.150	0.150	12/13/2016	ND	5.99	99.8	6.00	11.0	
Total BTEX	<0.300	0.300	12/13/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIL	119 %	6 73.6-140)						***************************************
TPH 8015M	mg/l	kg	Analyze	d By: MS		- Colores - Unico			
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2016	ND	190	95.0	200	1.17	
DRO >C10-C28	<10.0	10.0	12/09/2016	ND	204	102	200	0.506	
Surrogate: 1-Chlorooctane	68.8 9	6 35-147		, , , , , , , , , , , , , , , , , , , ,				11 11 11 11 11	***************************************
Surrogate: 1-Chlorooctadecane	68.8 %	6 28-171							

Sample ID: S-4 3' (H602747-08)

Chloride, SM4500CI-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	12/13/2016	ND	400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived uriess made in writing and received by Cardinal within thirty (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 dient, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim Is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey & Keene



TALON LPE SHELDON HITCHCOCK 408 W. TEXAS AVE. ARTESIA NM, 88210 Fax To: (575) 745-8905

Received:

12/08/2016

Reported:

12/15/2016

Project Name:

PINTAIL 23 FED #8

Project Number: Project Location:

701162.078.01 M-23-25S-26E Sampling Date:

12/02/2016

Sampling Type:

Soil

Sampling Condition:

Cool & Intact

Sample Received By:

Jodi Henson

Sample ID: S-5 0' (H602747-09)

BTEX 8021B	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/13/2016	ND	1.96	97.8	2.00	10.2	
Toluene*	<0.050	0.050	12/13/2016	ND	2.00	100	2.00	10.6	
Ethylbenzene*	<0.050	0.050	12/13/2016	ND	1.95	97.7	2.00	10.5	
Total Xylenes*	<0.150	0.150	12/13/2016	ND	5.99	99.8	6.00	11.0	
Total BTEX	<0.300	0.300	12/13/2016	ND					
Surrogate: 4-Bromofluorobenzene (PIE	118 9	% 73.6-140)						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/09/2016	ND	190	95.0	200	1.17	
DRO >C10-C28	<10.0	10.0	12/09/2016	ND	204	102	200	0.506	
Surrogate: 1-Chlorooctane	69.8	% 35-147							
Surrogate: 1-Chlorooctadecane	65.4	% 28-171							

Sample ID: S-5 3' (H602747-10)

Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	12/13/2016	ND	400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

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 client for analyses. All claims, including those for negligence and any other cause whistoever shall be deemed waved urless made in writing and received by Cardinal within uttrity (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 incoursed by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey & Keene



Notes and Definitions

QR-03 The RPD value for the sample duplicate or MS/MSD was outside if QC acceptance limits due to matrix interference. QC batch

accepted based on LCS and/or LCSD recovery and/or RPD values.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC

batch were accepted based on percent recoveries and completeness of QC data.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below.

*** Insufficient time to reach temperature.

- Chloride by SM4500Cl-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Uability and Damages. Cardinal's Bablity and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by deardinal within thirty (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, foss of use, or loss of profits incinvered by dient, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keine



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

П					
Company Name: alon/LPE		And the second of the second o	and physical control and and and and and and and and and and	ANALYSIS REQUEST	
Project Manager: Sheldon Hitchcock		P.O. #:			
Address: 408 W. Texas Ave.		Company: Cimarex			
city: Artesia state: NM	Zip: 88210	Attn: Christine Alderman			
-746-8768 F		Address:			
Project #: 701162.078.01 Project Owner: Cimarex		City:			
3 Fed #8		State: Zip:			
Project Location: M-23-25S-26E		Phone #:			
Sampler Name: Sheldon Hitchcock		Fax#:			
FOR LAB USE ONLY	MATRIX	PRESERV SAMPLING	-5		
	ERS ATER				
Lab I.D. Sample I.D.	UDGE		TPH BTE) Chlo		
	- # V S C	11/2/61	フィのアーノー		
25-17		71/2/	1 03/3		
2	<u> </u>	12/16	31,06 / /		
	911	2/16	50,		
5 5-30	6 1 1 9	1 / 12/2/63	(20 1 1 1 d)		
6 5-3 2	611	1/ 12/2/16 3	138		
55-40°	611	1 12/21/6 4	// 8		
\$ 5-43'	G ()	1 142/6 4	7		
9 5-50	1.0	1 12/2/K 4	(30///		
2-5 0		1 12/7/16/3	30 /		
PLEASE RVI E: Labery and Useriages. Curcurus separy and centre scrussor intend you any seem a analyses. All claims including those for negligence and any other cause whichoever shall be deemed we service. In no event shall Cardinal be liable for incidental or consequential damages, including without fire	wed und	o trinesy for any casim areasy whetere based in contact or on, where on earning to one amount past by the coem, or are event shall be deemed valved unless made in writing and nearbod by Castifical within 30 days after completion of the applicable ages, including without finitation, business interruptions, loss of use, or loss of profits incurred by dient, its subsidiaries,	pletion of the applicable to subsidiaries.		
Relinquished By: Relinquished By:	Received By:	Ph	Phone Result:	No Add'l Phone #: No Add'l Fax #:	
OO; WILL	S.	TENSON - RE		- 1	-
	Received By:				
Time:					
Delivered By: (Circle One)	Sample Condition Cool Intact	on CHECKED BY:			
		1/2			
	Same and Same all and and and and and and and and and and	111 303 7330			