

-Marine Sedimentary Rock

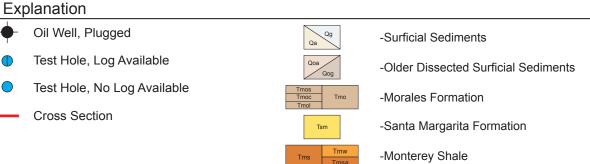


Figure 1 Site Map Ruby Star Ranch

Cleath-Harris Geologists



North Fork #5

age 1	nal with D	of 2			Well Co	tate of Cali mpleti		ort				I	Not Fill In
	Well Numb				No	e01907	0709						W W
	rk Began _				Ended 9/20					Latitude	-		Longitude
			a Barbara (92	County Public He Permit Date 8		tment			Links	4-1-1	APN/	TRS/Oth	ner
CITIM IV	uniber <u>or</u>	01000		ogic Log	10/10					Wall	Owner		
Ori	ntation	O Verti		rizontal An	gle Speci	ifv	02.52	North Forl	Cattle				
	Method Dire				ng Fluid Bent		1,000,000	Address F			IY, LLC		
	from Surf		10	Description							Cha	to CA	Zip 92693
Feet 0	to Fee		ock Sand	cribe material, grain	size, color, etc	-	City O	iii odaji O	арізпа				7ip <u>32033</u>
100	150	-	ock Sand				1	12.63.3	400	Well L	ocation	1	
150	220		andy Clay					Highwa			- 6		ioni Madean
220	240		rown Clay				City No	ew Cuyan	na o	0.5	Co	unty S	anta Barbara
240	280		andy Clay				Latitude	35 Dea	Min	35 Sec.	N Longitu	ude 1	19 50 39 M
280	300	_	ay Sand										Long.
300	340		andy Clay				APN Bo	ok	_ Pag	e		Paro	
340	360		andy Clay				Townsh	ip 11N	Rang	ge <u>28W</u>		Secti	on 26
360	370		ay						ion Sk		Library	III.	Activity
370	380	С	ay Sand				(Sketch	must be draw	North	after form is	orinted.)		ew Well
380	390	С	lay						Transit				lodification/Repair Deepen
390	400	C	ay and San	d									Other
400	440	C	ay, Brown									OD	estroy escribe procedures and materials
440	450	C	ay Sand					S	EE				lescribe procedures and materials inder "GEOLOGIC LOG"
150	460	C	lay					ATTA	CHED			-	Planned Uses
460	480	С	ay Sand										later Supply Domestic ☐ Public
480	490	-	and				West				150		Irrigation Industria
490	500			ough Hard Drillin	g		3				iii	100	athodic Protection
500	520		ay Sand				41					DOM: 5	ewatering
520	550	_	andy Clay				41				- 1	(M.E.) - 10	eat Exchange
550	560		ay Sand				41					17.50	jection
560	580		andy Clay				11					0.00	lonitoring emediation
580	610		and	2	-		-11					N.S.54/C	parging
610 620	620 640		lay (90%), S	sand (10%)			-		South				est Well
640	650	-	lay Sand	of Croy Clay			Illustrate qui	escribe distance	62 C J 200	roads buildings	Tences.		apor Extraction
650	660		andy Clay (of Grey Clay			Please be a	escribe distance nd allach a map ccurate and con	Use addition	al paper if nece	essary	00	ther
660	670	_	ay w/Sand	50/50)			Water	evel and	Yield	of Comp	oleted V	Vell	
670	680		andy Clay				Depth to	first wate	ART	ESIAN	V	_ (Fee	et below surface)
680	700		andy Clay and				Denth to	o Static evel AI				Maser	ared 10/20/2013
	epth of Bo		1100		Feet			ed Yield *		(GPI	Test	Type A	RTESIAN
			_					ngth 8.0					lown N/A (Feet)
Total L	eptn of Co	mpleted	Well 920		Feet		*May no	t be repre	sentative	e of a well	's long te	erm yie	ld.
				Casings							Annul	ar Ma	terial
Su	face to Feet	Borehole Diamete (Inches)	Type	Material	Wall Thickness (Inches)	Outside s Diameter (Inches)	Screen Type	Slot Size if Any (Inches)	St	th from urface to Feet	Fi	II	Description
)		24	Conductor	Mild Steel	1/4	18			0	20	Cement		6 Sack Slurry
720		13.5	Blank	Mild Steel	1/4	6 5/8	California	0.000	0	60	Cement	ale	6 Sack Slurry
720	920	13.5	Screen	Mild Steel	1/4	6 5/8	Louver	0.060	60 920	920	Filter Pa	CK	8 x 16 Cuyama Cuttings
		_		-	-	-		1	320	1,100	I nt	-	Outmigs
		Attachi	nente	TITLE				Certificat	ion Sta	tement		_	h
	Geologic L		nonto			4					race to a		knowledge and belief

☐ Other _

Attach additional information, if it exists,

☐ Soil/Water Chemical Analyses

C-57 Licensed Water Well Contractor

Signed

Templeton City

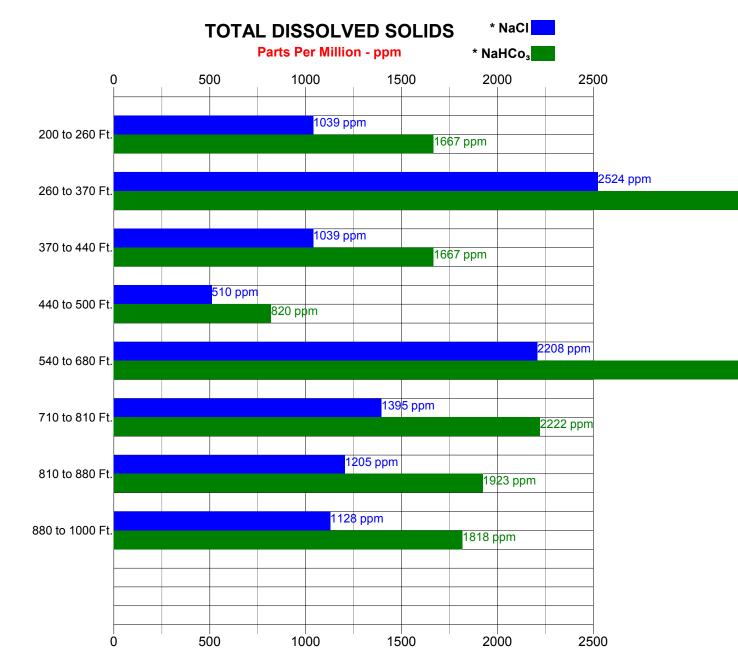
CA

927400

Date Signed C-57 License Number

11/8/2013

	Adobe Read nal with DI		ay be used to vie	w and complete		Sta	ate of Califo	ornia	E	te, save, a		a saved for R Use Onl		Not Fill In
Owner's V Date Wor	Well Numb	ber <u>N</u>			Work Ende	Refer No. ed <u>9/20</u>	to Instruction F e019070 /2013		rt	L		N		le Number W Longitude
	ımber <u>SR</u>				ate 8/13/1		Henc			-			RS/Oth	er
			Geo	logic Log							Well	Owner		
	ntation		F17.520	lorizontal	OAngle	Specif	,	Name N	North Fork	Cattle C	Compan	y, LLC		
-	from Sur		tary	Des	Drilling Flu	id Bento	onite mud	- Mailing /	Address P.	O. Box	9			
	to Fee		De	escribe material	cription I, grain size, o	color, etc		City Sa	n Juan Ca	pistranc	5	Sta	te CA	Zip <u>92693</u>
700	710		Sandy Clay	(50/50)							Well L	ocation	1	
710	720		Clay and Sa					Address	Highway	166				
720	740		Sand and C					City Ne	w Cuyama	а		Cou	unty Sa	anta Barbara
740	760		Super Fine	Sand				Latitude	35 0) 3	5_ N	Longitu	ide 11	9 50 39 w
760	890		Fine Sand					Datum	Dea		Sec.			lea. Min Sec. Long
890	970	-	Super Fine S	Sand										el
970 980	980		Fine Sand	Carra Clay					ip 11N					on 26
990	1,000		Fine Sand, S	some Clay				Tomasa		on Sket			000	Activity
1000	1,020	_	Super Fine	Sand				(Sketch r	must be drawn	by hand after		rinted.)		ew Well
1020	1,040	-	Super Fine		h Drill)			-		North				odification/Repair
1040	1,050	_	Sand	Jana (11049	ii Dini)			1						Deepen Other
1050	1,060	-	Sandy Clay					1					O De	estrov
1060	1,080	_	Sticky Clay,	Little Sand				1				1		escribe procedures and materials inder "GEOLOGIC LOG"
1080	1,090		Black-Dark					11						Planned Uses
1090	1,130		Dark Gray S					11						ater Supply
								West				East		Domestic ☐ Public Irrigation ☐ Industrial
								likustrate or de	escribe distance of	Jse additional of		fencès,	O Ca O De O He O Inj O Me O Re O Sp O Te O Va	athodic Protection ewatering eat Exchange jection onitoring emediation parging est Well apor Extraction ther
	1								evel and		f Comp	loted W		
200	epth of Bo		1100			Feet		Depth to Depth to Water Lo Estimate	first water	ARTE FESIA 15	ESIAN AN _(Feet) (GPM) Date	(Fee Measu Type _}	red 10/20/2013 ARTESIAN lown N/A (Feet)
Total De	apth of Co	imple	ted Well 920			_ Feet		*May no	t be represe	entative o	of a well's	s long te	rm yiel	d.
				Cas	ings							Annula	ar Mat	terial
Depth Surf Feet	face	Boreh Diame (Inche	eter Type	Mate		Wall hickness (Inches)	Outside Diameter (Inches)	Screen Type	Slot Size if Any (Inches)		from face to Feet	Fil	1	Description
				-										
		-												
										71	1			
										/ = = 1 <u>.</u>				
			chments						Certification					11.00
	Geophysic	struction	on Diagram og(s) mical Analyse:	s	Name <u>T</u> <u>P.O. Bo</u>	Person F ox 184	d, certify that Davis, Pa Firm or Corpora Address	acific Coas	st Well Dril	ling, Inc. pleton City		C	A 9	knowledge and belief 93465 Zip
	Other	ation M	th Colonia		Signed _	C-57 Lio	ensed Water W	Vell Contractor			11/8/20 Date Sign		27400	ense Number



TDS Classes

Class 1: Excellent to Good – Less than 700 ppm Class 2: Good to Injurious – 700 to 2000 ppm Class 3: Injurious to Poor – More than 2000 ppm

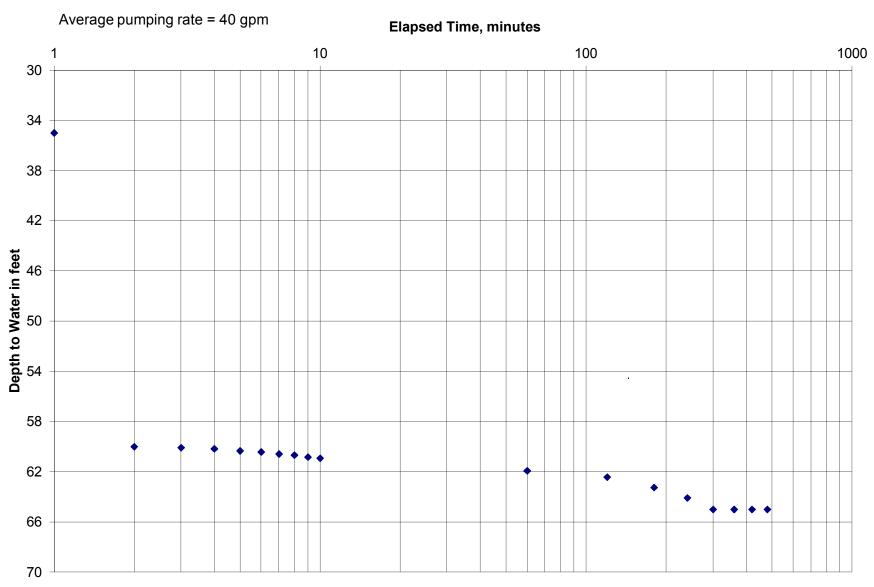
NaCl = Sodium Chloride

NaHCo₃ = Sodium Bicarbonate or Sodium Hydrogen Carbonate

Pumping Test (8-Hour) - North Fork #5 October 20, 2013

Artesian Flow

Perforated intervals: 720 to 920 feet



Pumping Test (8-hour), North Fork

			3 (//		
Day	Time	Elapsed Time	Depth to Water*	Drawdown	Recorded Pumping Rate
Mo./Day/Yr	hr:min	minutes	feet	feet	gallons per minute
10/20/13	10:00	0	0.0	0	15 (artesian flow)
	10:01	1	35.00	35.00	40
	10:02	2	60.00	60.00	
	10:03	3	60.08	60.08	
	10:04	4	60.17	60.33	
	10:05	5	60.33	60.42	
	10:06	6	60.42	60.58	
	10:07	7	60.58	60.67	
	10:08	8	60.67	60.83	
	10:09	9	60.83	60.92	
	10:10	10	60.92	61.92	
	11:00	60	61.92	61.92	
	12:00	120	62.42	62.42	
	13:00	180	63.25	63.25	
	14:00	240	64.08	64.08	
	15:00	300	65.00	65.00	
	16:00	360	65.00	65.00	
	17:00	420	65.00	65.00	
	18:00	480	65.00	65.00	
				Average GPM	40



PROJECT NAME:	NORTH FORK CATTL	E COMPANY (NEW CI	JYAMA)
WELL NAME/NO.	NF#5	TEST DATE:	10/20/2013
PUMP SETTING:	68'	PUMPING RATE:	40 GPM
WATER LEVEL MEA	SURED BY:	STATIC WATER:	ARTESIAN FLOW
AIR GUAGE	ELECTRIC METER	OTHER:	
PUMP TEST CONDU	CTED BY: JOHN McC	CALIP	
WATER SAMPLES C	OLLECTED:		
PARTIAL CHEM	I COLIFORN	OTHER: N/A	
	(CONSTANT TEST	
ELAPSED TIME (MINUTES)	DRAWDOWN (FEET)	G.P.M.	REMARKS
10:00 AM	N/A	15	Artesian Flow
10:01 AM	35'	40	Clear - Pumping
10:02 AM	60'	n.	
10:03 AM	60' 1"		n
10:04 AM	60'2"	n n	0
10:05 AM	60'4"	0	0
10:06 AM	60'5"	n n	0.1
10:07 AM	60'7"		0
10:08 AM	60'8"	n	n .
10:09 AM	60'10"	п	n.
10:10 AM	60'11"	и	0
11:00 AM	61'11"		1.0
12:00 AM	62'5"		0.
1:00 PM	63'3"		
2:00 AM	64'1"	u	
3:00 PM	65'0"		10
4:00 AM	u.	0	i i
5:00 PM	\u00e4	0	9.0
6:00 AM	n	n .	Ĥ.



October 29, 2013

Pacific Coast Well Drilling, Inc.

P. O. Box 184

Templeton, CA 93465

Lab ID : CC 1383851-001

Customer ID : 8-699

Sampled On : October 18, 2013 : JOhn McCalip Sampled By Received On: October 18, 2013

: Ag Water Matrix

Description: North Fork #5 Project : North Fork #5

General Irrigation Suitability Analysis

		Gene	rai irriş	gation Sui	tability A	marysis			
Test Description		Result				Graphical 1	Results Pre	sentation	
Cations	mg/L	Meq/L	% Meq	Lbs/AF	Good	Possible Problem	Moderate Problem	Increasing Problem	Severe Problem
Calcium	18	0.9	11	49	**				
Magnesium	1	0.082	1	3	**				
Potassium	2	0.051	1	5	**				
Sodium	168	7.3	88	460					
Anions									
Carbonate	< 10	0	0	0					
Bicarbonate	270	4.4	66	730	**				
Sulfate	98	2	31	270	**				
Chloride	6	0.17	3	16					
Nitrate	1.4	0.023	0	4					
Fluoride	0.3	0.016	0	0.8					
Minor Elements									
Boron	0.30			0.82					
Copper	< 0.01			0.00					
Iron	2.5			6.8					
Manganese	0.11			0.30					
Zinc	0.060			0.16					
TDS by Summation	565			1500					
Other									
pН	8.5			units					
E. C.	0.691			dS/m					
SAR	10.4								
Crop Suitability									
No Amendments	Poor								
With Amendments	Good								
Amendments									
Gypsum Requirement	1.3			Tons/AF					
Sulfuric Acid (98%)	15		(oz/1000Gal	Or 37 oz/	1000Gal of	urea Sulfui	ric Acid (15	5/49).
Leaching Requirement	5.2			%					

Good Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

** Used in various calculations; mg/L = Milligrams Per Liter (ppm) meq/L = Milliequivalents Per Liter



Corporate Offices & Laboratory

October 29, 2013 Lab ID : CC 1383851-001

Customer ID: 8-699

Pacific Coast Well Drilling, Inc.

Description: North Fork #5

Micro Irrigation System Plugging Hazard

Test Description	Re	sult	Graphi	cal Results Present	ation
Chemical			Slight	Moderate	Severe
Manganese	0.11	mg/L			
Iron	2.5	mg/L			
TDS by Summation	565	mg/L			
No Amendments					
рН	8.5	units			
Alkalinity (As CaCO3)	220	mg/L			
Total Hardness	49.0	mg/L			
With Amendments					
Alkalinity (As CaCO3)	44	mg/L			
Total Hardness	44	mg/L			
рН	5.4 - 6.7	units			

Good Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

Water Amendments Application Notes:

The Amendments recommended on the previous pages include:

Gypsum:

This should be applied at least once a year to the irrigated soil surface area. Gypsum can also be applied in smaller quantities in the irrigation water. Apply the smaller (bracketed) amount of gypsum when also applying the recommended amount of Sulfuric Acid and the larger amount when applying only Gypsum.

Sulfuric Acid:

These products should be applied as needed to prevent emitter plugging in micro irrigation systems and/or as a soil amendment to adjust soil pH to improve nutrient availability and to facilitate leaching of salts. Please exercise caution when using this material as excesses may be harmful to the system and/or the plants being irrigated. The reported Acid requirement is intended to remove approximately 80 % of the alkalinity. The final pH should range from 5.4 to 6.7. We recommend a field pH determination to confirm that the pH you designate is being achieved. This application is based upon the use of a 98% Sulfuric Acid product. The application of Urea Sulfuric Acid is based upon the use of a product that contains 15% Urea (1.89 lbs Nitrogen), 49% Sulfuric Acid and has a specific gravity of 1.52 at 68 °F.

Guidelines for the above interpretations are sourced from USDA & U.C. Cooperative Extension Service publications. Please contact us if you have any questions.

FRUIT GROWERS LABORATORY, INC.

Scott Bucy, Director of Ag. Services

SB1:KDM



Analytical Chemists

October 29, 2013

James Ontiveros 6525 Dominion Road

Santa Maria, CA 93451-9628

Lab ID : CC 1383855-001

Customer ID: 8-272

Sampled On : October 18, 2013 Sampled By : James Ontiveros

Received On : October 18, 2013

Matrix : Ag Water

Description : NF #5 Project :NF #5

General Irrigation Suitability Analysis

Test Description		Result				Graphical 1	Results Pre	sentation	
Cations	mg/L	Meq/L	% Meq	Lbs/AF	Good	Possible Problem	Moderate Problem	Increasing Problem	Severe Problem
Calcium	6	0.3	4	16	**				
Magnesium	< 1	0	0	0	**				
Potassium	1	0.026	0	3	**		العموا		
Sodium	163	7.1	96	440					
Anions									
Carbonate	< 10	0	0	0					
Bicarbonate	260	4.3	65	710	**				
Sulfate	100	2.1	32	270	**				
Chloride	6	0.17	3	16					
Nitrate	1.4	0.023	0	4					-
Fluoride	0.3	0.016	0	0.8					
Minor Elements									
Boron	0.20			0.54					
Copper	< 0.01			0.00					
Iron	1.2			3.3					
Manganese	0.030			0.082					
Zinc	< 0.02			0.00					
TDS by Summation	538			1500					
Other									
рН	8.6			units					
E. C.	0.695			dS/m					
SAR	18.3								
Crop Suitability									
No Amendments	Poor				Section 2				
With Amendments	Good								
Amendments									
Gypsum Requirement	1.3			Tons/AF	13/15				
Sulfuric Acid (98%)	15		(oz/1000Gal	Or 36 oz/	1000Gal of	urea Sulfu	ric Acid (15	(49).
Leaching Requirement	5.2			%					

Problem

Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

** Used in various calculations; mg/L = Milligrams Per Liter (ppm) meq/L = Milliequivalents Per Liter



October 29, 2013

James Ontiveros

Lab ID : CC 1383855-001

Customer ID : 8-272 Description : NF #5

Micro Irrigation System Plugging Hazard

Test Description	Res	sult	Graphi	ical Results Presenta	ation
Chemical			Slight	Moderate	Severe
Manganese	0.03	mg/L			
Iron	1.2	mg/L			100
TDS by Summation	538	mg/L			
No Amendments					
pH	8.6	units	HOUSE INC.		
Alkalinity (As CaCO3)	210	mg/L			
Total Hardness	15.0	mg/L			
With Amendments					
Alkalinity (As CaCO3)	42	mg/L			
Total Hardness	15.0	mg/L			
pH	5.4 - 6.7	units			

300d

Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations,

Water Amendments Application Notes:

The Amendments recommended on the previous pages include:

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Sulfuric Acid:

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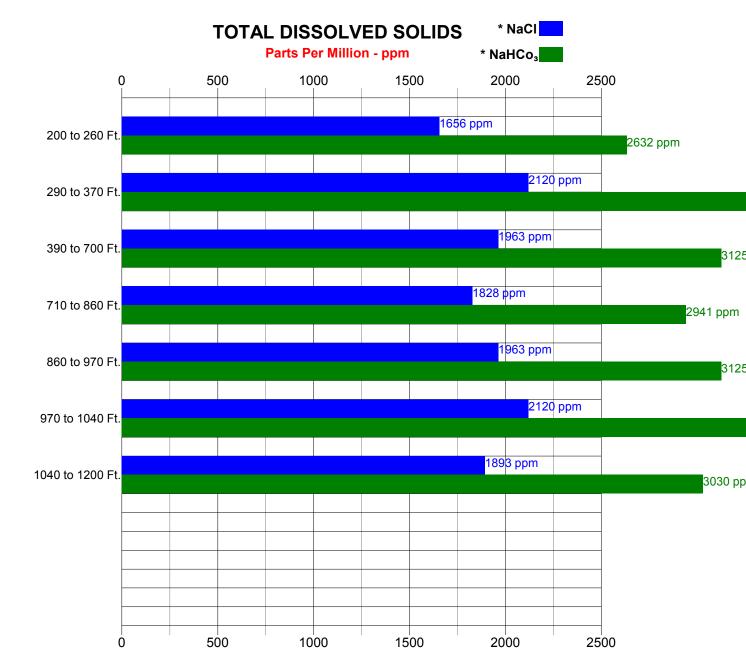
FRUIT GROWERS LABORATORY, INC.

Scott Bucy, Director of Ag. Services

SB1:KDM



North Fork #6



TDS Classes

Class 1: Excellent to Good – Less than 700 ppm Class 2: Good to Injurious – 700 to 2000 ppm Class 3: Injurious to Poor – More than 2000 ppm

NaCl = Sodium Chloride

NaHCo₃ = Sodium Bicarbonate or Sodium Hydrogen Carbonate



Highway 166 Well

WELL CASING VIDEO SURVEY

North Fork River Pasture

11011 Villa Monterey Dr. Bakersfield, CA. 93311 Phone: 888.908.5226 Fax: 661.505.6561 Web: www.boredata.com

Client:	Pacific Coast Well Drilling	Survey Date:	October 9, 2	2013	
Address:	P.O. Box 184	Invoice No.:	1190	Run: _	1
City:	Templeton, CA 93465	P.O.:		Van: _	BD-1
County:		Operator:	Craig Corbe	II	
Requested By:		Type Camera:	Aries BT960	0 Color Came	ra
Copy To:		Latitude:35.7	<mark>8921°</mark> Lo	ngitude: 119	.00911°
Reason For Survey:	General Inspection	Section:	_TWP:	Range:	
Location:					
Field:	C				

Location:									
Field:	Cuyama								
Other Information:									
CASING INF	ORMATION	DEPTHS (SideScan)	VIDEO OBSERVATIONS						
Wire Wrapped Screen	Well Depth	0.0 Ft	Recording starts, zeroed at top of casing 10 inches AGL						
200-500 Ft.	500 Ft.	31.6 Ft.	Sideview (SV) of joi	int					
		88.3 Ft.	Downview (DV) of s						
	S.W.L 90 Ft.	89.2 Ft. 100.0 Ft.	SV of static water le	ever (actual depth)					
	90 Ft.	150.0 Ft.	DV of casing						
		170.2 Ft.	SV of growth on cas	sina					
		200.0 Ft.	DV of casing with in						
		232.5 Ft.	SV of first visible wi	ire wrapped screen, heavily plugged					
		250.0 Ft.	DV of casing, poor	visibility due to cloudy water					
		_253.1 Ft	SV of nodule						
		256.9 Ft.	SV of nodule						
	16" O.D. Casing		Continues on follow	ving pages					
Zero Datum	0-474 Ft.								
Top Of Casing	Type: Steel								
Dia. Reference									
Measured									
Casing E Very Heavy, Incre									
RUN ONE 00' OCT 09 2013 INU 1190 BOREDATA INC.	UER PASTURE		0039 62	0088.3	0089.2				
232.5	00.0	250'	0150.0	0170.2 0170.2	256.9¹ 0256.9				
Notes:	A CONTRACTOR OF THE PARTY OF	A STATE OF	1.00	44 - Can Ann Ann Ann Ann	Page 1				

Notes: Page 1

WELLBORE SNAPSHOT(S)

Depth: 0 Feet



Depth: 31.6 Feet



Depth: 88.3 Feet



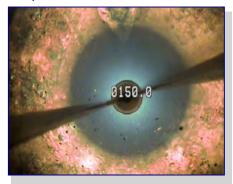
Depth: 89.2 Feet



Depth: 100 Feet



Depth: 150 Feet



Depth: 170.2 Feet



Depth: 200 Feet



Depth: 232.5 Feet



Depth: 250 Feet



Depth: 253.1 Feet



Depth: 256.9 Feet

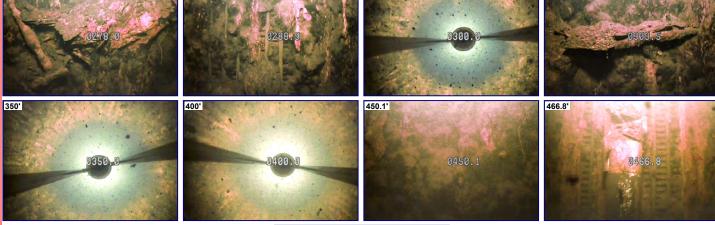


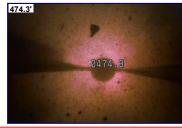
North Fork River Pasture

11011 Villa Monterey Dr. Bakersfield, CA. 93311 Phone: 888.908.5226 Fax: 661.505.6561 Web: www.boredata.com

Client:	Pacific Coast Well Drilling	Survey Date:	Octobe	er 9, 2013		
Address:	P.O. Box 184	Invoice No.:	1190		Run: _	1
City:	Templeton, CA 93465	P.O.:			Van: _	BD-1
County:		Operator:	Craig C	orbell		
Requested By:		Type Camera	Aries B	T9600 Colo	r Came	ra
Copy To:		Latitude: 3	5.78921°	Longitude	: 119.	00911°
Reason For Survey:	General Inspection	Section:	TWP:	Rar	ige:	
Location:						
Field:	Cuyama					
Other Information:						

CASING INFO	ORMATION	DEPTHS (SideScan)	VIDEO OBSERVATIONS					
Vire Wrapped Screen 200-500 Ft.	Well Depth 500 Ft. S.W.L 90 Ft.	278.0 Ft. 288.9 Ft. 300.0 Ft. 309.5 Ft. 350.0 Ft. 400.0 Ft. 450.1 Ft. 466.1 Ft. 474.3 Ft.	SV of nodule SV of nodule DV of heavily plugged screen SV of nodule DV of screen DV of screen SV of screen, visibility worsening SV of screen and PVC pipe in well DV of fill, bottom of survey.					
Zero Datum Top Of Casing	16" O.D. Casing 0-474 Ft. Type: Steel							
Dia. Reference Measured								
Casing E Very Heavy, Incre								
	asing W/Depth	88.9'	300'					





Notes: Page 3

WELLBORE SNAPSHOT(S)

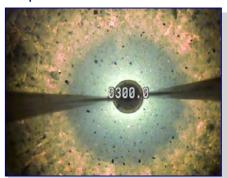
Depth: 278 Feet



Depth: 288.9 Feet



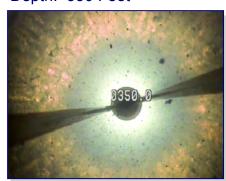
Depth: 300 Feet



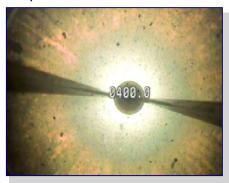
Depth: 309.5 Feet



Depth: 350 Feet



Depth: 400 Feet



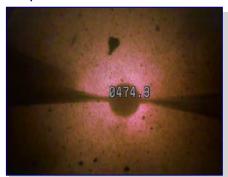
Depth: 450.1 Feet



Depth: 466.8 Feet



Depth: 474.3 Feet





Lab ID : SP 1307890-001 August 15, 2013 Customer ID : 2-23293

Kear Groundwater

Jordan Kear Sampled On : August 2, 2013 P.O. Box 2601 Sampled By : Jordan Kear : August 5, 2013 Received On Santa Barbara, CA 93120 : Ag Water Matrix

Description : Allural Well Project : North Fork Ranch

Grape Irrigation Suitability Analysis

Test Description		Result				Graphical I	Results Pres	sentation	
Cations	mg/L	Meq/L	% Meq	Lbs/AF	Good	Possible Problem	Moderate Problem	Increasing Problem	Severe Problem
Calcium	62	3.1	40	170	**				
Magnesium	30	2.5	32	82	**				
Potassium	2	0.051	1	5	**				
Sodium	48	2.1	27	130					
Anions									
Carbonate	< 10	0	0	0					
Bicarbonate	230	3.8	47	630	**				
Sulfate	148	3.1	38	400	**				
Chloride	31	0.87	11	84					
Nitrate	22.0	0.35	4	60					
Fluoride	0.2	0.011	0	0.5					
Minor Elements									
Boron	0.10			0.27					
Copper	< 0.01			0.00					
Iron	< 0.05			0.00					
Manganese	< 0.01			0.00					
Zinc	< 0.02			0.00					
TDS by Summation	573			1600					
Other									
pН	7.8			units					
E. C.	0.753			dS/m					
SAR	1.3								
Crop Suitability									
No Amendments	Fair								
With Amendments	Good								
Amendments									
Gypsum Requirement	0.04			Tons/AF					
Sulfuric Acid (98%)	13		(oz/1000Gal	Or 32 oz	/1000Gal of	urea Sulfui	ric Acid (15	5/49).
Leaching Requirement	4.9			%					

Good Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

** Used in various calculations; mg/L = Milligrams Per Liter (ppm) meq/L = Milliequivalents Per Liter



Corporate Offices & Laboratory

Kear Groundwater

Lab ID : SP 1307890-001

Customer ID : 2-23293 Description : Allural Well

Micro Irrigation System Plugging Hazard

Test Description	Result		Graph	Graphical Results Presentation		
Chemical			Slight	Moderate	Severe	
Manganese	< 0.01	mg/L				
Iron	< 0.05	mg/L				
TDS by Summation	573	mg/L				
No Amendments						
рН	7.8	units				
Alkalinity (As CaCO3)	190	mg/L				
Total Hardness	278	mg/L				
With Amendments						
Alkalinity (As CaCO3)	38	mg/L				
Total Hardness	38	mg/L				
рН	5.4 - 6.7	units				

Good Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

Water Amendments Application Notes:

The Amendments recommended on the previous pages include:

Gypsum:

This should be applied at least once a year to the irrigated soil surface area. Gypsum can also be applied in smaller quantities in the irrigation water. Apply the smaller (bracketed) amount of gypsum when also applying the recommended amount of Sulfuric Acid and the larger amount when applying only Gypsum.

Sulfuric Acid:

These products should be applied as needed to prevent emitter plugging in micro irrigation systems and/or as a soil amendment to adjust soil pH to improve nutrient availability and to facilitate leaching of salts. Please exercise caution when using this material as excesses may be harmful to the system and/or the plants being irrigated. The reported Acid requirement is intended to remove approximately 80 % of the alkalinity. The final pH should range from 5.4 to 6.7. We recommend a field pH determination to confirm that the pH you designate is being achieved. This application is based upon the use of a 98% Sulfuric Acid product. The application of Urea Sulfuric Acid is based upon the use of a product that contains 15% Urea (1.89 lbs Nitrogen), 49% Sulfuric Acid and has a specific gravity of 1.52 at 68 °F.

Guidelines for the above interpretations are sourced from USDA & U.C. Cooperative Extension Service publications. Please contact us if you have any questions.

FRUIT GROWERS LABORATORY, INC.

Scott Bucy, Director of Ag. Services

SB1:KDM



October 4, 2013

Cleath-Harris Geologists Attn: Spencer Harris

11545 Los Osos Valley Road, Suite C-3

San Luis Obispo, CA 93405

Description: Well 166

Project : Ruby Start Ranch Lab ID : CC 1383561-001

Customer ID : 8-514

Sampled On : September 24, 2013 Sampled By : David Williams : September 26, 2013 Received On

Matrix : Ag Water

General Irrigation Suitability Analysis

Test Description		Result				Graphical I	Results Pres	sentation	
Cations	mg/L	Meq/L	% Meq	Lbs/AF	Good	Possible Problem	Moderate Problem	Increasing Problem	Severe Problem
Calcium	62	3.1	41	170	**				
Magnesium	29	2.4	32	79	**				
Potassium	2	0.051	1	5	**				
Sodium	45	2	26	120					
Anions									
Carbonate	< 10	0	0	0					
Bicarbonate	190	3.1	42	520	**				
Sulfate	151	3.1	42	410	**				
Chloride	32	0.9	12	87					
Nitrate	20.2	0.33	4	55					
Fluoride	0.3	0.016	0	0.8					
Minor Elements									
Boron	0.20			0.54					
Copper	0.010			0.027					
Iron	0.13			0.35					
Manganese	< 0.01			0.00					
Zinc	< 0.02			0.00					
TDS by Summation	532			1400					
Other									
рН	7.9			units					
E. C.	0.764			dS/m					
SAR	1.2								
Crop Suitability									
No Amendments	Fair								
With Amendments	Good								
Amendments									
Gypsum Requirement	0.0			Tons/AF					
Sulfuric Acid (98%)	11		(oz/1000Gal	Or 27 oz	/1000Gal of	urea Sulfui	ric Acid (15	5/49).
Leaching Requirement	5.8			%					

Good Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

** Used in various calculations; mg/L = Milligrams Per Liter (ppm) meq/L = Milliequivalents Per Liter



Corporate Offices & Laboratory

October 4, 2013

Cleath-Harris Geologists

Lab ID : CC 1383561-001

Customer ID : 8-514 Description : Well 166

Micro Irrigation System Plugging Hazard

Test Description	Result		Graphi	Graphical Results Presentation	
Chemical			Slight	Moderate	Severe
Manganese	< 0.01	mg/L			
Iron	0.13	mg/L			
TDS by Summation	532	mg/L			
No Amendments					
рН	7.9	units			
Alkalinity (As CaCO3)	160	mg/L			
Total Hardness	274	mg/L			
With Amendments					
Alkalinity (As CaCO3)	32	mg/L			
Total Hardness	32	mg/L			
рН	5.4 - 6.7	units			

Good Problem

Note: Color coded bar graphs have been used to provide you with 'AT-A-GLANCE' interpretations.

Water Amendments Application Notes:

The Amendments recommended on the previous pages include:

Sulfuric Acid:

These products should be applied as needed to prevent emitter plugging in micro irrigation systems and/or as a soil amendment to adjust soil pH to improve nutrient availability and to facilitate leaching of salts. Please exercise caution when using this material as excesses may be harmful to the system and/or the plants being irrigated. The reported Acid requirement is intended to remove approximately 80 % of the alkalinity. The final pH should range from 5.4 to 6.7. We recommend a field pH determination to confirm that the pH you designate is being achieved. This application is based upon the use of a 98% Sulfuric Acid product. The application of Urea Sulfuric Acid is based upon the use of a product that contains 15% Urea (1.89 lbs Nitrogen), 49% Sulfuric Acid and has a specific gravity of 1.52 at 68 °F.

Guidelines for the above interpretations are sourced from USDA & U.C. Cooperative Extension Service publications. Please contact us if you have any questions.

FRUIT GROWERS LABORATORY, INC.

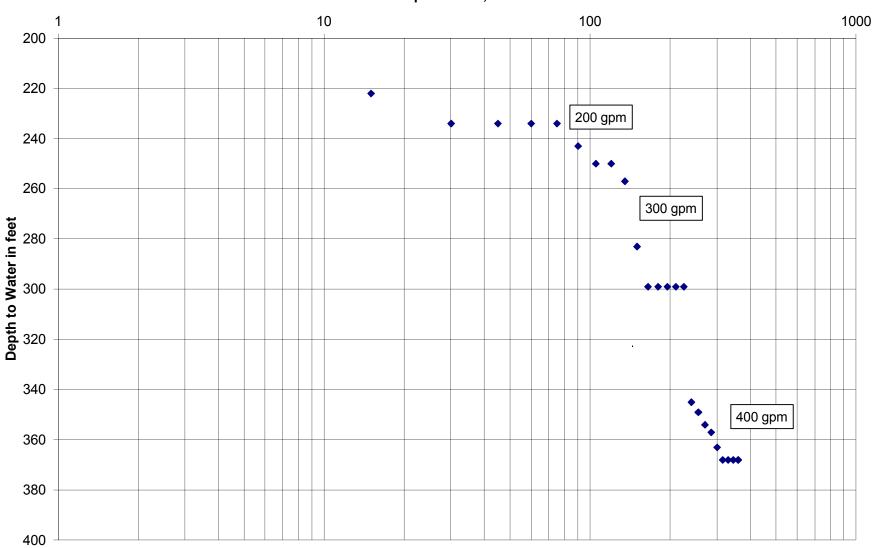
SB1:EHB

Scott Bucy, Director of Ag. Services

StepTest (6-hour) - Highway 166 Well November 4, 2013

Depth to Static Water Level: 92 feet

Elapsed Time, minutes

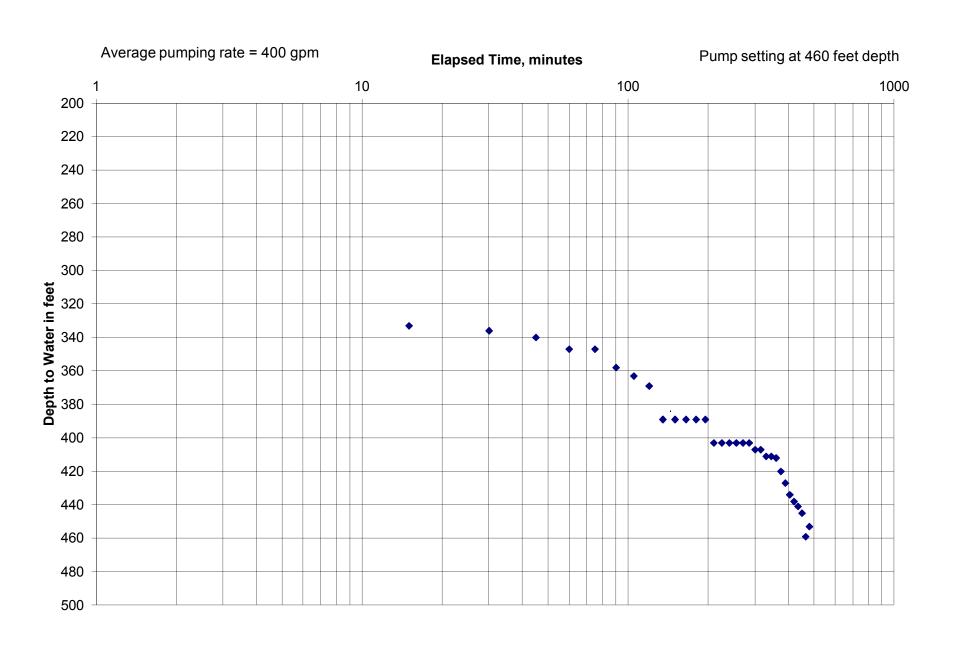


Pumping Test (Step Test), Highway 166 Wel

			oot (otop : oot); ::::9			
	Recorded Pumping Rate	Drawdown	Depth to Water*	Elapsed Time	Time	Day
	gallons per minute	feet	feet	minutes	hr:min	Mo./Day/Yr
1	Start	0	218.0	0	12:30	11/4/13
10000	200	4.0	222.0	15	12:45	
	200	16.0	234.0	30	13:00	
	200	16.0	234.0	45	13:15	
	200	16.0	234.0	60	13:30	
	200	16.0	234.0	75	13:45	
	200	25.0	243.0	90	14:00	
	200	32.0	250.0	105	14:15	
	200	32.0	250.0	120	14:30	
	300	39.0	257.0	135	14:45	
	300	65.0	283.0	150	15:00	
	300	81.0	299.0	165	15:15	
	300	81.0	299.0	180	15:30	
	300	81.0	299.0	195	15:45	
	300	81.0	299.0	210	16:00	
	300	81.0	299.0	225	16:15	
	400	127.0	345.0	240	16:30	
	400	131.0	349.0	255	16:45	
	400	136.0	354.0	270	17:00	
	400	139.0	357.0	285	17:15	
	400	145.0	363.0	300	17:30	
	400	150.0	368.0	315	17:45	
	400	150.0	368.0	330	18:00	
	400	150.0	368.0	345	18:15	
	400	150.0	368.0	360	18:30	

Pumping Test (8-Hour) - Highway 166 Well November 6, 2013

Depth to Static Water Level: 92 feet



Pumping Test (8-hour), Highway 166 Wel

Day	Time	•	g Test (8-hour), Hig		Pagerdad Dumning Pota
Day Mo./Day/Yr	hr:min	Elapsed Time minutes	Depth to Water* feet	Drawdown feet	Recorded Pumping Rate gallons per minute
11/6/13	10:00	0		0	Start
11/6/13		15	92.0		
	10:15	30	333.0	241.00	400
	10:30		336.0	244.00	
	10:45	45	340.0	248.00	
	11:00	60	347.0	255.00	
	11:15	75	347.0	266.00	
	11:30	90	358.0	271.00	
	11:45	105	363.0	277.00	
	12:00	120	369.0	297.00	
	12:15	135	389.0	297.00	
	12:30	150	389.0	297.00	
	12:45	165	389.0	297.00	
	13:00	180	389.0	297.00	
	13:15	195	389.0	297.00	
	13:30	210	403.0	311.00	
	13:45	225	403.0	311.00	
	14:00	240	403.0	311.00	
	14:15	255	403.0	311.00	
	14:30	270	403.0	311.00	
	14:45	285	403.0	311.00	
	15:00	300	407.0	315.00	
	15:15	315	407.0	315.00	
	15:30	330	411.0	319.00	
	15:45	345	411.0	319.00	
	16:00	360	412.0	320.00	
	16:15	375	420.0	328.00	
	16:30	390	427.0	335.00	
	16:45	405	434.0	342.00	
	17:00	420	438.0	346.00	
	17:15	435	441.0	349.00	
	17:30	450	445.0	353.00	
	17:45	465	459.0	367.00	
	18:00	480	453.0	361.00	
				Average GPM	400



Commence of the second	NORTH FORK CATT	# # # # # # # # # # # # # # # # # # #	
WELL NAME/NO.	EXISTING 166 WELL		, , , , ,
	0.000.00	PUMPING RATE:	400 GPN
WATER LEVEL MEAS		STATIC WATER:	92
X AIR GUAGE			PUMP SET @ 460 Fee
PUMP TEST CONDUC		ENTERIA	
WATER SAMPLES CO		s parasite	
PARTIAL CHEM	COLIFORI	M OTHER:	N/A
		8 HOUR TEST	
ELAPSED TIME (MINUTES)	DRAWDOWN (FEET)	G.P.M.	REMARKS
10:00 AM	330	400	Dirty - 1200 RPM
10:15 AM	333		Clear - 1220 RPM
10:30 AM	336	0	Clear - 1222 RPM
10:45 AM	340	n	u u
11:00 AM	347		Clear - 1230 RPM
11:15 AM	Time	n.	Clear - 1232 RPM
11:30 AM	358	ń.	Clear - 1240 RPM
11:45 AM	363	n n	Clear - 1245 RPM
12:00 PM	369		Clear - 1250 RPM
12:15 PM	389	n n	u .
12:30 PM		и	Clear - 1300 RPM
12:45 PM	ii ii	n-	U
1:00 PM		n	п
1:15 PM	in .		n ·
1:30 PM	403	n	Clear - 1400 RPM
1:45 PM	n .	n	W-
2:00 PM		n n	,0°
2:15 PM	.00	· ·	u u
2:30 PM	0.1	W 1	·
2:45 PM	10:	100	in -
3:00 PM	407	n	n e
3:15 PM	α	OI .	0
3:30 PM	411	11	n,
3:45 PM	10		и
4:00 PM	412	ii -	Ü.)



PROJECT NAME:	NORTH FORK CATTL	E COMPANY	NEW CUYAMA
WELL NAME/NO.	EXISTING 166 WELL	TEST DATE:	11/6/2013
		PUMPING RATE:	400 GPM
WATER LEVEL ME	WATER LEVEL MEASURED BY:		92
X AIR GUAGE	ELECTRIC METER	OTHER:	PUMP SET @ 460 Feet
PUMP TEST COND	UCTED BY: ANGEL RE	NTERIA	
WATER SAMPLES	COLLECTED:		
PARTIAL CHE	M COLIFORM	OTHER:	N/A
		8 HOUR TEST	
ELAPSED TIME	DRAWDOWN	CDM	Heimania.
(MINUTES)	(FEET)	G.P.M.	REMARKS
4:00 PM	412	400	Clear - 1410 RPM
4:15 PM	420	n	n
4:30 PM	427	u.	0
4:45 PM	434	Ti-	n i
5:00 PM	438	0	0
5:15 PM	441	0	н
5:30 PM	445	II .	Clear - 1450 RPM
5:45 PM	459		Cir.
6:00 PM	453	п	Ü,
			Recovery after 2 hours - 171



PROJECT NAME:	NORTH FORK CATTL	E COMPANY	NEW CUYAMA
WELL NAME/NO.	EXISTING 166 WELL	TEST DATE:	11/4/2013
		PUMPING RATE:	
WATER LEVEL MEAS	SURED BY:	STATIC WATER:	9:
X AIR GUAGE	ELECTRIC METER	OTHER:	
PUMP TEST CONDU	CTED BY: ANGEL RE	NTERIA	
WATER SAMPLES CO			
PARTIAL CHEM	COLIFORM	OTHER:	N/A
		STEP TEST	
ELAPSED TIME (MINUTES)	DRAWDOWN (FEET)	G.P.M.	REMARKS
12:30 PM	218	200	Clear
12:45 PM	222	1	T.
1:00 PM	234		n n
1:15 PM	n_		· ·
1:30 PM	n I		
1:45 PM	n		·
2:00 PM	243		OIL T
2:15 PM	250		- it's
2:30 PM	u		.0
2:45 PM	257	300	
3:00 PM	283		
3:15 PM	299		OH .
3:30 PM	0.		ų.
3:45 PM	0.		· ·
4:00 PM	11		n i
4:15 PM			, m
4:30 PM	345	400	ü
4:45 PM	349		ü
5:00 PM	354		u ·
5:15 PM	357		ń
5:30 PM	363		u -
5:45 PM	368		н -
6:00 PM	0		n -
6:15 PM			ü
6:30 PM	ii .		Recovery after 2 hours - 181



PROJECT NAME:	NORTH FORK CATTLE	E COMPANY	NEW CUYAMA
	EXISTING 166 WELL		11/4/2013
		PUMPING RATE:	1
WATER LEVEL MEAS	SURED BY:	STATIC WATER:	92
X AIR GUAGE	ELECTRIC METER	OTHER:	
	CTED BY: ANGEL REM		
WATER SAMPLES CO	OLLECTED: I COLIFORM	OTHER:	N/A
	R	ECOVERY DATA	
ELAPSED TIME	DRAWDOWN	1 1 1 1 1 1 1	
(MINUTES)	(FEET)	G.P.M.	REMARKS
8:00	460	500	Clear - 1350 RPM
8:15	70	100	W -
8:30	10	п	u ·
8:45		0	ů .
9:00	u .	a	0
9:15	11	ii .	M .
9:30	D.	и	ii .
9:45	Ü	n	i i i
10:00	, n	п	ú
10:15	· ·	п	n i
10:30			· · ·
			Recovery after 2 hours - 181



PROJECT NAME:	NORTH FORK CATT	LE COMPANY NEW	CUYAMA	
WELL NAME/NO.	EXISTING 166 WELL	TEST DATE:		11/1/2013
		PUMPING RATE:		
WATER LEVEL MEA	SURED BY:	STATIC WATER:		92
X AIR GUAGE	ELECTRIC METER	OTHER:		
PUMP TEST CONDU	ICTED BY: ANGEL RI	ENTERIA		
WATER SAMPLES C	COLLECTED:			
PARTIAL CHEM	M COLIFORN	OTHER: N/A		
	WELL DEVEL	OPMENT - SURGING &	PULLING	
ELAPSED TIME	DRAWDOWN		The seconds	
(MINUTES)	(FEET)	G.P.M.	REMARKS	
1:00 PM	187		Dirty - 1300 RPM	
1:15 PM	286		11	
1:30 PM	п		n	
1:45 PM	п		u ·	
2:00 PM	314		Clear - 1300 RPM	
2:15 PM	û		n n	
2:30 PM	ű _		n -	
2:45 PM	ű		m ,	
3:00 PM	ů.			
3:15 PM	û	1 - 1		
3:30 PM	-11		· ·	
3:45 PM				
4:00 PM	- 6			
4:15 PM	0		. 9	
4:30 PM			1.10	
4:45 PM	326		- 0	
5:00 PM	М			