Kansas Corporation Commission OIL & GAS CONSERVATION DIVISION

Form ACO-1 August 2013 Form must be Typed Form must be Signed All blanks must be Filled

#### **WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License #		API No. 15			
Name:		Spot Description:			
Address 1:		SecTwpS. R			
Address 2:		Feet from North / South Line of Section			
City: State: 2	Zip:+	Feet from _ East / _ West Line of Section			
Contact Person:		Footages Calculated from Nearest Outside Section Corner:			
Phone: ()		□NE □NW □SE □SW			
CONTRACTOR: License #		GPS Location: Lat:, Long:			
Name:		(e.g. xx.xxxxxx) (e.gxxx.xxxxxx)			
Wellsite Geologist:		Datum: NAD27 NAD83 WGS84			
Purchaser:		County:			
Designate Type of Completion:		Lease Name: Well #:			
New Well Re-Entry	Workover	Field Name:			
		Producing Formation:			
☐ Oil ☐ WSW ☐ SWD ☐ SIOW ☐ Gas ☐ D&A ☐ ENHR ☐ SIGW		Elevation: Ground: Kelly Bushing:  Total Vertical Depth: Plug Back Total Depth:			
					☐ OG ☐ GSW ☐ CM (Coal Bed Methane)
Cathodic Other (Core, Expl., etc.):		Multiple Stage Cementing Collar Used? Yes No			
If Workover/Re-entry: Old Well Info as follows:		If yes, show depth set: Feet			
Operator:		If Alternate II completion, cement circulated from:			
Well Name:		feet depth to:w/sx cmt.			
Original Comp. Date: Original					
Deepening Re-perf. Conv. to I	<u>.</u>	Drilling Fluid Management Plan			
	GSW Conv. to Producer	(Data must be collected from the Reserve Pit)			
	_	Chloride content:ppm Fluid volume:bbls			
		Dewatering method used:			
		Downtoning motion dood.			
		Location of fluid disposal if hauled offsite:			
		Operator Name:			
GSW Permit #:		Lease Name: License #:			
Canad Data as Data Data LTD	Completion Data and	Quarter Sec Twp S. R			
Spud Date or Date Reached TD Completion Date or Recompletion Date		County: Permit #:			

#### **AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

Confidentiality Requested:

Yes No

KCC Office Use ONLY	
Confidentiality Requested	
Date:	l
Confidential Release Date:	
Wireline Log Received	
Geologist Report Received	
UIC Distribution	
ALT I II III Approved by: Date:	

Operator Name:			Lease	Name:			Well #:	
Sec Twp	S. R	East West	County	y:				
open and closed, flow	now important tops of for ving and shut-in pressu o surface test, along w	res, whether shut-	in pressure read	ched static	level, hydrosta	tic pressures, I		
	g, Final Logs run to ob ed in LAS version 2.0 o				s must be ema	iled to kcc-wel	l-logs@kcc.ks.go	v. Digital electronic log
Drill Stem Tests Taker (Attach Additional		Yes n	Ю	_ Lo		on (Top), Depth		Sample
Samples Sent to Geo	logical Survey	Yes N	No	Name			Тор	Datum
Cores Taken Electric Log Run			lo lo					
List All E. Logs Run:								
			SING RECORD is set-conductor, s	New		ion etc		
5 (0)	Size Hole	Size Casing	Wei		Setting	Type of	# Sacks	Type and Percent
Purpose of String	Drilled	Set (In O.D.)	Lbs.		Depth	Cement	Used	Additives
		ADDITI	ONAL CEMENTI	ING / SQUE	EEZE RECORD	<u> </u>		
Purpose:	Depth Top Bottom	Type of Cemen	t # Sacks	s Used		Type an	d Percent Additives	
Perforate Protect Casing								
Plug Back TD Plug Off Zone								
Did you perform a hydrau	ulic fracturing treatment or	n this well?			Yes	No (If No,	skip questions 2 ar	nd 3)
	total base fluid of the hydra	=		_	Yes		skip question 3)	
Was the hydraulic fractur	ring treatment information	submitted to the che	mical disclosure re	egistry?	Yes	No (If No,	fill out Page Three	of the ACO-1)
Shots Per Foot		N RECORD - Bridg potage of Each Interv				cture, Shot, Cem mount and Kind of	ent Squeeze Recor Material Used)	d Depth
TUBING RECORD:	Size:	Set At:	Packer A	At:	Liner Run:	Yes	No	
Date of First, Resumed	Production, SWD or ENF	IR. Producin	g Method:	na $\Box$ c	as Lift C	Other (Explain)		
Estimated Production Per 24 Hours	Oil B	bls. Gas	Mcf	Water		bls.	Gas-Oil Ratio	Gravity
DISDOSITI	ON OF GAS:		METHOD OF	E COMPLET	ION:			ON INTERVAL:
Vented Solo		Open Hole	Perf.	Dually (		mmingled	FHODOGIIC	JIN IINTERVAL.
	bmit ACO-18.)	Other (Spec		(Submit AC		mit ACO-4)		

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Esplund Farms 3023 1-30H
Doc ID	1161320

### All Electric Logs Run

Resistivity		
Porosity		
MudLog		
Boresight		

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Esplund Farms 3023 1-30H
Doc ID	1161320

### Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
5	9240-9584	4180 bbls water, 108 bbls acid, 75M lbs sd, 4494 TLTR	
5	8710-9106	4172 bbls water, 108 bbls acid, 75M lbs sd, 8709 TLTR	
5	8220-8628	4164 bbls water, 108 bbls acid, 75M lbs sd, 13368 TLTR	
5	7860-8170	4266 bbls water, 108 bbls acid, 75M lbs sd, 17770 TLTR	
5	7402-7804	4151 bbls water, 108 bbls acid, 75M lbs sd, 22272 TLTR	
5	6968-7340	4144 bbls water, 108 bbls acid, 75M lbs sd, 26428 TLTR	
5	6530-6902	4138 bbls water, 108 bbls acid, 75M lbs sd, 34942 TLTR	
5	6108-6452	4131 bbls water, 108 bbls acid, 75M lbs sd, 34942 TLTR	
5	5634-6050	4124 bbls water, 108 bbls acid, 75M lbs sd, 39025 TLTR	

Form	ACO1 - Well Completion	
Operator	SandRidge Exploration and Production LLC	
Well Name	Esplund Farms 3023 1-30H	
Doc ID	1161320	

### Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Conductor	30	20	75	120	Pro Oilfield Services 8 sack grout	16	none
Surface	12.25	9.63	36	1006	Halliburton Extendac em and Swiftcem Systems	475	3% Calcium Chloride, .25 lbm Poly-E- Flake
Intermeida te	8.75	7	26	5816	Halliburton Econocem and Halcem Systems	300	.4% Halad(R)- 9, 2 lbm Kol-Seal, 2% Bentonite
Production	6.12	4.5	11.6	9700	Halliburton Econocem System	480	.4% Halad(R)- 9, 2 lbm Kol-Seal, 2% Bentonite

### **Summary of Changes**

Lease Name and Number: Esplund Farms 3023 1-30H

API/Permit #: 15-025-21552-01-00

Doc ID: 1161320

Correction Number: 1

Approved By: NAOMI JAMES

Field Name	Previous Value	New Value
Approved Date	03/12/2013	10/04/2013
Fluid Mngmt - Chloride Content	33000	10000
Fluid Mngmt - Fluid Volume	5040	420
Fluid Mngmt - Lease Name	Pit #1	Unknown
Fluid Mngmt - Operator Name	LoJo Disposal	Weinet Disposal LLC
Save Link	//kcc/detail/operatorE ditDetail.cfm?docID=11 05564	//kcc/detail/operatorE ditDetail.cfm?docID=11 61320



CONFIDENTIAL COMPLETION COMMISSION

CONFIDENTIAL COMPLETION FORM

1105564

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

# WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License #	API No. 15
Name:	Spot Description:
Address 1:	SecTwpS. R
Address 2:	Feet from North / South Line of Section
City: State: Zip: +	Feet from East / West Line of Section
Contact Person:	Footages Calculated from Nearest Outside Section Corner:
Phone: ()	□NE □NW □SE □SW
CONTRACTOR: License #	County:
Name:	Lease Name: Well #:
Wellsite Geologist:	Field Name:
Purchaser:	Producing Formation:
Designate Type of Completion:	Elevation: Ground: Kelly Bushing:
New Well Re-Entry Workover	Total Depth: Plug Back Total Depth:
□ Oil         □ WSW         □ SHOW           □ Gas         □ D&A         □ ENHR         □ SIGW           □ OG         □ GSW         □ Temp. Abd.           □ CM (Coal Bed Methane)         □ Cathodic         □ Other (Core, Expl., etc.):           □ If Workover/Re-entry: Old Well Info as follows:	Amount of Surface Pipe Set and Cemented at: Feet  Multiple Stage Cementing Collar Used?
Operator:	Drilling Child Management Plan
Well Name:	Drilling Fluid Management Plan (Data must be collected from the Reserve Pit)
Original Comp. Date: Original Total Depth:  Deepening Re-perf. Conv. to ENHR Conv. to SWD Conv. to GSW Plug Back: Plug Back Total Depth Commingled Permit #:  Dual Completion Permit #:  SWD Permit #:  ENHR Permit #:	Chloride content: ppm Fluid volume: bbls  Dewatering method used:  Location of fluid disposal if hauled offsite:  Operator Name:  Lease Name: License #:  Quarter Sec TwpS. R
GSW Permit #:	County: Permit #:
Spud Date or Date Reached TD Completion Date or Recompletion Date  Recompletion Date	

#### **AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

**Submitted Electronically** 

KCC Office Use ONLY
Letter of Confidentiality Received
Date:
Confidential Release Date:
☐ Wireline Log Received
Geologist Report Received
UIC Distribution
ALT I II Approved by: Date:

KOLAR Document ID: 1105564

#### Page Two

Operator Name: _				Lease Name:			Well #:	
Sec Twp.	S. R.	E	ast West	County:				
	flowing and shu	ut-in pressures, v	vhether shut-in pre	ssure reached st	atic level, hydrosta	tic pressures, bot		val tested, time tool erature, fluid recovery,
Final Radioactivity files must be subm						iled to kcc-well-lo	gs@kcc.ks.gov	v. Digital electronic log
Drill Stem Tests Ta			Yes No			on (Top), Depth ar		Sample
Samples Sent to 0	Geological Surv	/ey	Yes No	Na	me		Тор	Datum
Cores Taken Electric Log Run Geologist Report / List All E. Logs Ru	_		Yes No Yes No Yes No					
		B	CASING eport all strings set-c		New Used	ion, etc.		
Purpose of Strir		Hole illed	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
			ADDITIONAL	CEMENTING / SO	UEEZE RECORD			
Purpose:		epth T Bottom	ype of Cement	# Sacks Used		Type and F	Percent Additives	
Perforate Protect Casi Plug Back T								
Plug Off Zor								
Did you perform a     Does the volume     Was the hydraulic	of the total base f	fluid of the hydrauli		_	=	No (If No, sk	ip questions 2 an ip question 3) out Page Three	,
Date of first Product Injection:	tion/Injection or R	esumed Production	Producing Meth	nod:	Gas Lift 0	Other (Explain)		
Estimated Production Per 24 Hours	on	Oil Bbls.					Gas-Oil Ratio	Gravity
DISPOS	SITION OF GAS:		N	METHOD OF COMP	LETION:			DN INTERVAL: Bottom
	Sold Used	I on Lease	Open Hole			mmingled mit ACO-4)	Тор	BOROTT
,	,			B.11 B1				
Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid,	Fracture, Shot, Cer (Amount and Kind	menting Squeeze I of Material Used)	Record
TUBING RECORD:	: Size:	Set	Δ+-	Packer At:				
TODING RECORD:	. 3126.		n.	i donei Al.				

Form	ACO1 - Well Completion
Operator	SandRidge Exploration and Production LLC
Well Name	Esplund Farms 3023 1-30H
Doc ID	1105564

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Resistivity	
Porosity	
MudLog	
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Conservation Division Finney State Office Building 130 S. Market, Rm. 2078 Wichita, KS 67202-3802



Phone: 316-337-6200 Fax: 316-337-6211 http://kcc.ks.gov/

Sam Brownback, Governor

Mark Sievers, Chairman Thomas E. Wright, Commissioner Shari Feist Albrecht, Commissioner

December 21, 2012

Tiffany Golay SandRidge Exploration and Production LLC 123 ROBERT S. KERR AVE OKLAHOMA CITY, OK 73102-6406

Re: ACO1 API 15-025-21552-01-00 Esplund Farms 3023 1-30H NE/4 Sec.30-30S-23W Clark County, Kansas

#### **Dear Production Department:**

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully, Tiffany Golay

Well Name		Target Dire	ection	Slot	N/S	E/W	Hole Size	Calculation	n by	Date
Esplund Fa				Coordinate				Directions	N Co	2/27/13
Job Numb	er	Type of Su	irvey	Tie-in Point				Directiona	ar Co.	
0					M. Carl	T-1-1	0	Deales	ما المائين	Mallel
Meaured	Hole	Hole	Course	True Vertical	Vertical	N + / S -	Coordinate E + / W -	Dogleg Severity	Build Up °/100 ft	Walk/ °/100 ft
Depth 0	Angle 0	Direction 0	Length 0	Depth 0.00	Section 0.00	N+/5-	E + / VV -	,	TIE-IN PC	
275	1	154	275	274.99	1.73	-1.72	0.85	0.29		55.93
500	1	154	225	499.97	4.21	-4.19	2.06	0.29	-0.09	0.00
750	1	154	250	749.96	6.77	-6.73	3.31	0.04		0.00
1006	1	154	256	1,005.94	9.79	-9.74	4.79	0.04	0.04	0.00
1168	0	154	162	1,167.93	11.33	-11.26	5.54	0.25	-0.25	0.00
1625	0	334	457	1,624.92	12.04	-11.98	5.89	0.13	-0.04	39.39
2081	0	157	456	2,080.92	12.06	-11.99	5.86	0.09	0.00	-38.86
2538	1	298	457	2,537.92	11.85	-11.80	4.41	0.15	0.07	30.85
2994	0	295	456	2,993.91	10.57	-10.55	1.92	0.07	-0.07	-0.68
3450	0	250	456	3,449.91	10.64	-10.64	0.08	0.05	0.02	-9.87
3907	0	255	457	3,906.90	11.44	-11.47	-2.58	0.02	0.02	1.18
4363	0	350	456	4,362.89	10.66	-10.71	-4.33	0.11	-0.02	20.81
4424	2	168	61	4,423.88	11.55	-11.60	-4.14	3.77	2.79	-297.54
4454	4	172	30	4,453.84	12.97	-13.02	-3.91	5.04	5.00	13.33
4485	5	173	31	4,484.75	15.31	-15.35	-3.63	5.49	5.48	3.55
4515	7	177	30	4,514.59	18.46	-18.50	-3.37	5.80	5.67	11.67
4546	9	179	31	4,545.30	22.64	-22.68	-3.24	5.58	5.48	7.74
4576	10	181	30	4,574.90	27.54	-27.58	-3.26	5.40	5.33	5.33
4606	12	180	30	4,604.34	33.29	-33.33	-3.32	5.68	5.67	-1.67
4637	14	180	31	4,634.56	40.21	-40.25	-3.32	6.47	6.45	-2.26
4667	16	178	30	4,663.53	47.97	-48.01	-3.17	7.45	7.33	-5.00
4698	19	179	31	4,693.10	57.29	-57.33	-2.99	9.11	9.03	3.87
4728	21	181	30	4,721.27	67.60	-67.64	-3.00	8.14 4.85	8.00 4.84	4.33 0.97
4759	23	181	31 30	4,750.00	79.23	-79.27 -91.19	-3.18 -3.28	4.05	4.00	-3.33
4789	24	180	31	4,777.53 4,805.68	91.14	-104.16	-3.20	4.21	4.84	-2.26
4820 4850	26 27	179 178	30	4,832.55	117.46	-117.50	-2.91	6.18	6.00	-3.33
4881	30	178	31	4,859.79	132.25	-132.29	-2.57	7.82	7.74	2.26
4911	32	179	30	4,885.56	147.61	-147.64	-2.31	7.34	7.33	0.33
4941	34	179	30	4,910.78	163.86	-163.89	-2.09	6.01	6.00	0.67
4972	35	180	31	4,936.32	181.42	-181.45	-1.94	5.21	5.16	1.29
5002	38	180	30	4,960.47	199.22	-199.25	-1.87	7.34	7.33	0.67
5033	39	180	31	4,984.78	218.45	-218.49	-1.91			1.29
5063	41	180	30	5,007.76	237.73	-237.77	-1.98	5.35	5.33	-0.67
5094	43	180	31	5,030.85	258.41	-258.45	-1.97	6.79	6.77	-0.65
5124	45	179	30	5,052.39	279.29	-279.32	-1.81	8.16	8.00	-2.33
5155	48	179	31	5,073.73	301.77	-301.81	-1.37	7.87	7.74	-1.94
5185	50	178	30	5,093.55	324.29	-324.32	-0.72	6.46		-1.67
5216	51	178	31	5,113.37	348.11	-348.14	0.07	4.19		0.00
5246	51	178	30	5,132.25	371.42	-371.44	0.84	0.67	0.67	0.00
5276	51	178	30	5,151.13	394.73	-394.74	1.61	0.67	-0.67	0.00
5307	50	178	31	5,170.81	418.68	-418.68	2.49	2.18	-1.94	-1.29
5337	50	178	30	5,190.07	441.67	-441.66	3.45			-0.67
5367	49	177	30	5,209.57	464.44	-464.42	4.57	2.78	-2.33	-2.00
5398	49	177	31	5,229.89	487.84	-487.80	5.83	0.32	-0.32	0.00
5428	51	178	30	5,249.09	510.87	-510.83	6.79	8.77	8.00	4.67
5459	55	180	31	5,267.64	535.71	-535.66	7.17	12.63	11.94	5.16 1.67
5489	59	180	30	5,284.04	560.82	-560.77	7.11	11.75 11.30	11.67 11.29	0.65
5520	62	181	31	5,299.38	587.75	-587.71	6.87	9.34	9.33	-0.33
5550 5591	65 67	181	30	5,312.76 5,325.39	614.59 642.89	-614.55 -642.86	6.61 6.34	6.78	6.77	0.32
5581 5611	67	181	31	5,325.39	670.77	-670.75	6.02	9.34	9.33	0.32
5611 5642	70 74	181 180	30	5,336.44	700.18	-700.16	5.85	12.13	11.94	-2.26
5672	74 76	180	30	5,353.98	700.18	-700.18	5.87	9.67	9.67	-0.33
5702	76 79	180	30	5,360.30	758.47	-758.46	5.92	9.67	9.67	0.00
5733	82	179	31	5,365.36	789.06	-789.04	6.14	8.60	8.39	-1.94
5763	85	179	30	5,368.70	818.86	-818.84	6.55	11.35	11.33	-0.67
3.00	50			5,550.70	3.0.00	2.3.01	3,00			

Well Name		Target Dire	ection	Slot	N/S	E/W	Hole Size	Calculation	n by	Date
Esplund Fa				Coordinate				D: (:	1.0	2/27/13
Job Numbe	er	Type of Su	irvey	Tie-in Point				Directiona	al Co.	
0									r=	
Meaured	Hole	Hole	Course	True Vertical	Vertical		Coordinate		Build Up	
Depth	Angle	Direction	Length	Depth	Section	N+/S-	E+/W-	Severity	°/100 ft	°/100 ft
0	0	0	0	0.00	0.00	007.00	0.00		TIE-IN PC	
5782	87	179	19	5,369.96	837.82	-837.80	6.83	9.49	9.47	0.53
5871	90	179	89	5,372.60	926.78		8.15	2.70	2.70	-0.11
5903	90	180	32	5,372.85	958.77	-958.74	8.54	1.29	0.31	1.25
5934	90	180	31	5,373.07	989.77	-989.74	8.82	0.00	0.00	0.00
5966	90	179	32	5,373.32	1,021.77	-1,021.73	9.18	0.99	-0.31 0.00	-0.94
5997	90	179	31	5,373.59	1,052.77	-1,052.73	9.58	0.32		0.32
6029	90	179	32	5,373.87	1,084.77	-1,084.73	9.97 10.43	0.00 1.16	0.00 0.65	-0.97
6060	90	179	31 32	5,374.09	1,115.77	-1,115.72	10.43	0.70	0.85	0.62
6092 6123	90	179 179		5,374.23	1,147.77	-1,147.72	11.42	1.16	0.31	-0.65
6155	90 90	180	31	5,374.25 5,374.23	1,178.77 1,210.77	-1,178.71 -1,210.71	11.42	1.10	-0.31	1.87
6186	90	179	31	5,374.23	1,241.77	-1,241.71	12.14	1.82	1.29	-1.29
6218	90	179	32	5,374.12	1,273.77	-1,273.71	12.14	0.88	-0.63	0.63
6250	90	179	32	5,373.81	1,305.77	-1,305.70	12.33	0.88	0.31	0.00
6281	90	180	31	5,373.65	1,336.77	-1,336.70	13.00	2.26	0.00	2.26
6313	91	181	32	5,373.40	1,368.76		12.83	1.56	0.94	1.25
6344	91	181	31	5,373.40	1,399.75	-1,399.70	12.51	0.72	0.32	0.65
6376	91	181	32	5,372.63	1,431.74		12.06	0.70	0.31	0.63
6407	91	181	31	5,372.17	1,462.72	-1,462.68	11.47	1.33	0.32	1.29
6439	90	181	32	5,371.83	1,494.70	-1,494.68	10.88	2.44	-1.88	-1.56
6470	89	181	31	5,371.94	1,525.69	-1,525.67	10.37	3.37	-3.23	0.97
6502	89	181	32	5,372.36	1,557.67	-1,557.66	9.70	0.70	-0.31	0.63
6533	89	181	31	5,372.76	1,588.65	-1,588.65	9.16	1.96	0.32	-1.94
6565	89	180	32	5,373.18	1,620.65	-1,620.65	8.90	1.59	-0.31	-1.56
6596	89	181	31	5,373.62	1,651.64	-1,651.65	8.72	0.97	0.00	0.97
6628	90	179	32	5,373.98	1,683.63	-1,683.64	8.80	4.17	0.94	-4.06
6659	90	179	31	5,374.22	1,714.63	-1,714.64	9.39	1.96	0.32	-1.94
6691	90	178	32	5,374.39	1,746.63	-1,746.62	10.26	1.13	0.63	-0.94
6722	90	178	31	5,374.58	1,777.62	-1,777.61	11.21	1.02	-0.97	-0.32
6754	90	178	32	5,374.83	1,809.61	-1,809.59	12.38	1.90	0.31	-1.87
6785	90	178	31	5,375.05	1,840.59	-1,840.56	13.68	0.00	0.00	0.00
6816	89	178	31	5,375.32	1,871.58	-1,871.53	14.87	1.44	-0.65	1.29
6848	89	178	32	5,375.65	1,903.57	-1,903.51	16.07	0.94	0.00	-0.94
6879	90	178	31	5,375.90		-1,934.48	17.31	0.97	0.97	0.00
6911	90	178	32	5,376.09	1,966.54	-1,966.46	18.60	0.31	-0.31	0.00
6942	90	177	31	5,376.25	1,997.52	-1,997.43	19.97	1.74	0.65	-1.61
6974	90	177	32	5,376.31	2,029.50		21.59	0.88	0.63	-0.62
7005	90	177	31	5,376.20	2,060.47	-2,060.34	23.24	1.33	1.29	-0.32
7037	91	177	32	5,375.89	2,092.44	-2,092.29	24.97	0.94	0.94	0.00
7068	91	177	31	5,375.41	2,123.41		26.62	1.33	1.29	0.32
7100	92	177	32	5,374.60	2,155.38		28.21	2.38	2.19	0.94
7131	92	178	31	5,373.49		-2,186.15	29.56	2.07	1.61	1.29
7163	93	178	32	5,372.04	2,218.30	-2,218.09	30.68	2.65	1.88	1.88
7194	92	179	31	5,370.71	2,249.27	-2,249.06	31.33	4.34	-2.90	3.23
7226	91	180	32	5,370.01	2,281.26		31.44	5.63	-4.69	3.13
7257	90	180	31	5,369.77		-2,312.05	31.39	1.33	-0.32	-1.29
7289	90	180	32	5,369.60		-2,344.05	31.36	1.13	-0.63	0.94
7320	90	180	31	5,369.68		-2,375.05	31.33	2.46	-2.26	-0.97
7352	89	180	32	5,369.99		-2,407.04	31.47	0.99	-0.31	-0.94
7383	90	179	31	5,370.21	2,438.25	-2,438.04	31.77	1.61	1.29	-0.97
7415	90	179	32	5,370.35		-2,470.04	32.22	0.70	-0.31	-0.63
7446	90	179	31	5,370.43	2,501.25		32.73	1.02	0.97	-0.32
7478	90	179	32	5,370.40	2,533.25	-2,533.03	33.23	0.70	0.31	0.62
7509	89	179	31	5,370.70		-2,564.03	33.64	4.21	-4.19	0.32
7541	88	179	32	5,371.48	2,596.23	-2,596.01	34.03	1.25	-1.25	0.00
7572	89	179	31	5,372.32			34.41	0.32	0.32	0.00
7604	89	179	32	5,373.04	2,659.21	-2,658.99	34.85	1.40	1.25	-0.63

Meaured   Maje   Direction   True   Vertical   Section   N+7's   E+7'W-   Severity   V100 ft	Well Name		Target Dire	ection	Slot	N/S	E/W	Hole Size	Calculation	on by	Date
Meaures											2/27/13
Meaured   Hole   Deptitor   Dep		er	Type of Su	ırvey	Tie-in Point				Directiona	al Co.	
Depth   Angle   Direction   Length   Depth   Section   N + 1/S - E + 7 W - Severtly   9/100 ft   9/100   7/867   90   179   31   5.373.59   2.680.21   2.680.98   3.53.4   0.65   0.66   0.00   7/867   90   179   32   5.373.59   2.722.21   2.721.97   35.52   1.00   1.88   0.00   7/808   90   179   32   5.373.61   2.785.22   1.2721.97   35.62   1.00   1.88   0.00   7/730   91   179   31   5.573.40   2.785.21   2.762.97   36.30   1.16   0.97   0.05   7/730   91   179   31   5.573.40   2.785.20   2.815.60   37.21   0.48   0.32   0.52   0.22   0		Hala	Llolo	Course	True Vertical	Vertical	Total	Caardinata	Doglog	Duild Lla	Molle
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0											
7685         89         179         31         5,373,58         2,690,21         2,689,98         35,34         0,65         0,07           7687         90         179         31         5,373,92         2,722,21         2,721,97         35,82         1,90         1,88         0,97         -0,65           7730         91         179         31         5,373,81         2,785,27         2,782,97         36,30         1,16         0,97         -0,65           7761         91         179         31         5,373,81         2,781,21         2,782,97         36,30         1,16         0,97         -0,65           7761         91         179         31         5,373,81         2,816,20         2,281,56         372,1         -0,40         0,40         0,22         0,32           7806         89         178         46         5,373,82         2,911,20         2,910,95         38,38         1,59         1,02         -1,02           7996         89         178         46         5,370,83         2,911,10         2,910,95         38,38         1,59         1,02         -0,02           8045         178         48         48         5,370,03         3,0							14 1 7 3 -	L 1700-			
7667         90         179         32         5,373,92         2,722,21         2,721,97         35,882         1,90         1,88         0.37           7780         91         179         32         5,373,81         2,765,20         36,30         1,767         38,81         2,28         2,19         0.02           7781         91         179         31         5,373,81         2,765,20         2,764,97         38,81         2,28         2,19         0.02           7807         90         180         46         5,373,82         2,886,20         2,861,88         37,69         2,86         2,283         0.43           7806         89         178         46         5,374,82         2,971,20         2,910,58         38,38         1,59         -1,02         -1,22           7990         89         178         46         5,377,68         3,005,16         3,004,89         30,88         1,59         -1,02         -1,02           7996         89         178         49         5,377,88         3,001,14         3,008,88         42,17         1,11         1,10         0.02         2,000         -1,02         2,00         1,10         0.02         2,00 <td< td=""><td></td><td>(-)</td><td></td><td></td><td></td><td></td><td>-2,689.98</td><td>35.34</td><td></td><td></td><td></td></td<>		(-)					-2,689.98	35.34			
Teges											
7861 91 179 31 5,373,40 2,816,20 1,2815,96 37,21 0,46 0,32 0,32 0,32 7867 7807 90 180 46 5,373,28 2,862,20 -2,8619 37,69 2,86 -2,38 0,43 7856 89 1779 49 6,373,92 2,911,20 -2,910,95 38,38 1,59 -1,102 -1,122 7902 89 178 46 5,374,84 2,957,18 2,965,93 39,36 1,59 -1,02 -1,122 7906 89 178 46 5,376,02 3,005,16 3,004,89 40,84 0,47 -0,42 -0,21 7996 89 178 46 5,377,02 3,051,14 3,050,86 42,17 1,11 1,09 0,22 804 89 178 49 5,377,88 3,101,013 3,099,88 42,17 1,11 1,09 0,22 804 89 178 49 5,377,88 3,101,013 3,099,88 42,17 1,11 1,09 0,22 8091 90 179 46 5,376,83 3,146,11 3,145,80 45,07 2,24 1,09 1,106 1,106 1,107 1,107 1,108 1,108 1,109 1,10	7698	90		31							
7807         90         180         46         5,373,28         2,862,20         2,861,96         37,69         2,66         2,233         1,02         -1,03         -1,02         -1,12         -1,12         -1,12         -			179		5,373.81	2,785.20	-2,784.97		2.28		
7856 89 178 49 5.373.92 2.911.20 2.910.95 38.38 1.59 1.102 1.122 7.90.6 7.109 7.900 89 178 46 5.374.84 2.957.18 2.958.93 39.46 1.27 -0.65 1.109 7.900 89 178 46 5.376.02 3.005.16 3.004.89 40.84 0.47 -0.42 -0.21 7.906 89 178 46 5.377.02 3.051.14 3.050.86 42.17 1.111 1.10 9 0.25 8045 89 178 49 5.377.88 3.100.13 3.099.83 43.75 1.02 0.00 1.02 8091 90 179 46 5.376.02 3.100.13 3.099.83 43.75 1.02 0.00 1.02 8091 90 179 46 5.376.02 3.194.11 3.194.80 45.07 2.24 1.09 1.96 8139 92 180 48 5.376.02 3.194.11 3.193.79 45.76 4.61 4.37 1.46 8185 91 179 48 5.376.03 3.288.08 3.287.76 47.36 4.61 4.37 1.46 8185 91 179 48 5.376.03 3.288.08 3.237.76 4.75.6 4.61 4.37 1.46 8185 91 179 46 5.374.80 3.334.06 3.333.73 48.72 0.90 0.87 -0.22 8328 92 178 49 5.374.80 3.334.06 3.333.73 48.72 0.90 0.87 -0.22 8328 92 178 49 5.373.22 3.389.03 3.382.68 50.09 1.10 1.02 0.40 4.3 8422 93 178 49 5.373.22 3.389.03 3.382.68 50.09 1.10 1.02 0.43 0.43 8422 93 178 49 5.373.83 2.252.88 352.24 54.19 0.65 0.03 8488 93 178 49 5.363.83 2.3476.94 3.476.56 52.75 0.66 0.21 0.43 0.43 8428 93 178 49 5.364.63 3.571.80 3.571.39 55.86 1.02 0.82 0.65 0.03 8517 93 178 49 5.364.63 3.571.70 3.252.28 352.24 54.19 0.65 0.65 0.00 8517 93 178 49 5.364.63 3.571.70 3.571.39 55.86 1.02 0.82 0.651 8611 91 80 48 5.361.73 3.617.73 3.617.32 570.08 3.26 -1.90 0.55 0.00 8517 93 178 49 5.364.63 3.571.70 3.617.32 570.08 3.26 -1.90 0.55 0.00 8517 93 178 49 5.364.63 3.571.70 3.367.03 57.44 0.46 0.20 0.41 9.08 808 91 10 40 48 5.361.17 3.711.71 3.711.30 57.52 3.77 0.31 0.00 0.82 0.651 80 0.00 0.00 180 48 5.362.52 3.865.72 3.665.30 57.52 3.77 0.30 0.65 0.00 0.8580 91 10 40 48 5.362.53 3.864.70 3.865.29 57.56 1.09 0.07 0.07 0.05 8841 90 179 46 5.362.63 3.806.70 3.806.29 57.56 1.09 0.07 0.02 0.02 9004 91 179 46 5.362.63 3.806.70 3.806.29 57.56 1.09 0.07 0.02 0.02 9004 91 179 46 5.362.63 3.806.70 3.806.29 57.56 1.09 0.07 0.02 0.02 9004 91 179 46 5.362.63 3.806.70 3.806.29 57.56 1.09 0.07 0.02 0.02 9004 91 179 46 5.362.63 3.806.70 3.806.29 57.56 1.09 0.07 0.02 0.02 9004 91 179 46 5.362.69 3.806.70											
7902         89         178         46         5,374.84         2,957.81         2,956.93         39.46         1,27         0.65         -1,06           7996         89         178         48         5,376.02         3,005.16         3,005.88         40.84         0.47         -0.42         -0.21           8045         89         178         49         5,377.02         3,051.14         -3,050.88         42.17         1.11         1.09         0.22           8091         19         49         5,378.48         3,100.13         3,099.83         43.75         1.02         0.00         -1.02           8195         1179         46         5,378.48         3,146.11         -3,148.80         45.07         2.24         1.19         1.98           8185         1179         48         5,376.09         3,288.08         -3,287.76         47.56         0.93         0.83         -0.42           8233         91         179         48         5,374.88         3,333.03         -3,335.87         48.72         0.90         0.87         -0.22           8328         92         179         46         5,374.88         3,349.99         -3,286.26         50.97         1.02			577-7577								
7990         89         178         48         5.376.02         3.005.16         3.004.88         40.84         0.47         0.42         0.21           8945         89         178         46         5.377.08         3.001.01         3.050.66         42.17         1.111         1.09         0.02           8091         90         179         46         5.378.48         3.106.11         3.045.60         45.07         2.24         1.09         1.02           8139         92         180         48         5.376.02         3.194.11         3.193.79         45.76         4.61         4.37         1.46           8185         91         179         46         5.377.01         3.240.10         3.239.76         46.47         2.15         -1.52         -1.52           8279         92         179         46         5.374.89         3.334.06         3.3287.76         47.56         0.93         0.83         0.87         -0.22           8228         92         178         49         5.374.89         3.334.06         5.375.79         0.90         0.10         1.02         0.04           83/42         93         178         48         5.369.32         3.47											
899         89         178         46         5,377.02         3,051.14         3,050.98         42.17         1.11         1.09         0.02           8045         89         178         49         5,377.88         3,100.13         3,099.83         43.75         1.02         0.00         -1.02           8091         90         179         46         5,378.02         3,194.11         -3,193.97         46.07         2.24         1.09         1.96           8185         91         179         48         5,376.09         3,240.10         3,239.78         46.47         2.15         1.52         -1.52           8229         179         46         5,376.09         3,286.08         3,287.66         47.56         0.93         0.83         -0.42           8328         92         179         46         5,371.38         3,428.99         3,428.62         51.37         0.61         0.43         0.43           8422         3178         48         5,367.20         3,522.88         3,522.49         54.19         0.65         0.61         0.43           8422         3178         48         5,364.33         3,671.80         3,527.85         3.66         0.02											
8045   89   178   49											
8001 90 179 466 5,378.48 3,146.11 3,145.80 45.07 2.24 1.09 1.96 8139 92 180 48 5,378.02 3,194.11 3,193.79 45.78 4.61 4.37 1.46 8185 91 179 46 5,377.01 3,240.10 3,239.78 46.47 2.15 1.52 1.152 233 91 179 48 5,376.09 3,280.88 3,287.66 47.56 0.93 0.83 0.42 8279 92 179 46 5,374.89 3,334.66 3,333.73 48.72 0.90 0.87 0.22 8328 92 178 49 5,373.22 3,383.03 -3,382.68 50.09 1.10 1.02 0.41 8374 92 179 46 5,371.38 3,428.99 3,428.62 51.37 0.61 0.43 0.43 8422 93 178 48 5,369.32 3,476.94 3,476.56 52.75 0.66 0.21 0.63 8488 93 178 48 5,369.32 3,476.94 3,476.56 52.75 0.66 0.21 0.63 8488 93 178 49 5,364.63 3,671.80 -3,571.39 55.86 1.02 0.82 0.61 8611 91 180 48 5,361.47 3,665.72 3,665.30 57.05 3.26 1.96 2.61 8611 91 180 48 5,361.17 3,665.72 3,665.30 57.05 3.26 1.96 2.61 8611 91 180 48 5,361.17 3,365.72 13,665.30 57.05 3.26 1.96 2.61 8612 89 180 49 5,361.81 3,760.71 3,760.30 57.44 0.46 -0.20 -0.41 8752 90 180 46 5,362.43 3,617.74 -3,617.32 57.06 3.26 -1.96 2.61 86867 89 180 49 5,361.81 3,760.71 3,760.30 57.44 0.46 -0.20 -0.41 8752 90 180 46 5,362.23 3,800.70 -3,806.29 57.56 1.09 0.87 -0.65 8800 90 180 48 5,362.59 3,890.70 -3,806.29 57.56 1.09 0.87 -0.65 8800 90 180 48 5,362.59 3,890.70 -3,890.29 58.37 1.17 1.09 -0.43 8895 90 179 46 5,362.83 3,997.70 -3,895.28 59.70 0.31 0.22 -0.22 9899 91 179 48 5,362.83 3,995.70 -3,995.28 59.70 0.31 0.22 -0.22 9899 91 179 48 5,362.83 3,995.70 -3,995.28 59.70 0.31 0.22 -0.22 9899 91 179 48 5,362.83 3,995.70 -3,995.28 59.70 0.31 0.22 -0.22 9084 91 179 46 5,362.83 3,995.70 -3,995.28 59.70 0.31 0.22 -0.22 9084 91 179 46 5,362.84 4,489.99 4,498.99 4,408.90 0.66 0.65 0.65 0.60 0.00 9130 91 179 46 5,362.84 3,995.70 -3,995.28 59.70 0.31 0.22 -0.22 9084 91 179 46 5,363.64 4,764.73 4,763.83 53.39 0.00 0.00 0.00 0.00 0.00 0.00 0.00											
8139 92 180 48 5,378,02 3,194,11 3,193.79 45.78 4,61 4,37 14.66 8185 91 179 46 5,377,01 3,240.10 -3,239.78 46.47 2,15 -1,52 -1,52 8279 92 179 46 5,374,89 3,334,06 3,333.73 48.72 0,90 0.87 -0,22 8328 92 178 49 5,373,23 3,333,03 3,382,68 50,00 1,10 1,02 -0,41 83/74 92 179 46 5,371,38 3,428,99 -3,428,62 51,37 0,61 0,43 0,43 8422 93 178 48 5,369,32 3,476,84 -3,476,56 52.75 0,66 0,21 -0,63 8468 93 178 48 5,369,32 3,476,84 -3,476,56 52.75 0,66 0,21 -0,63 8468 93 178 46 5,367,30 3,522,88 3,522,49 54,19 0,65 0,65 0,00 8,517 93 178 49 5,364,63 3,671,80 3,571,39 55,86 1,02 0,82 -0,61 8657 89 180 46 5,361,17 3,665,72 -3,665,30 57,52 3,64 -3,33 1,46 8657 89 180 46 5,361,17 3,761,17 1-3,711,30 57,52 3,64 -3,33 1,46 8657 89 180 46 5,361,17 3,760,17 1-3,760,30 57,44 0,46 -0,20 -0,41 8762 90 180 46 5,362,43 3,760,17 3,760,17 0,576,32 3,61 1,09 0,87 0,88 0 190 180 48 5,362,28 3,806,70 3,806,29 57,86 1,09 0,87 0,88 6800 90 180 48 5,362,28 3,806,70 3,806,29 57,86 1,09 0,87 0,87 0,88 69 179 49 5,362,28 3,806,70 3,806,29 57,89 0,47 0,21 0,42 8896 90 179 49 5,362,28 3,896,70 3,349,28 59,00 0,29 0,20 0,20 8989 91 179 46 5,362,28 3,896,70 3,349,28 59,00 0,29 0,20 0,20 8935 91 179 46 5,362,28 3,896,70 3,349,28 59,00 0,29 0,20 0,20 8935 91 179 46 5,362,28 3,896,70 3,349,28 59,00 0,29 0,20 0,20 9,303 91 179 46 5,362,83 3,995,70 3,995,28 59,70 0,31 0,47 0,21 0,42 8989 91 179 46 5,362,83 3,995,70 3,995,28 59,70 0,31 0,22 0,22 0,22 8,998 91 179 46 5,362,83 3,995,70 3,995,28 59,70 0,31 0,30 0,22 0,22 0,22 8,998 91 179 46 5,363,84 4,763,84 4,783,84 5,380,84 1,784,84			V/ 100 1000								
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8233 91 179 48 5,376.09 3,288.08 3,287.76 47.56 0.93 0.83 -0.42 8279 92 179 46 5,374.89 3,334.06 -3,333.73 48.72 0.90 0.87 -0.22 8374 92 178 49 5,373.22 3,383.03 -3,382.68 50.09 1.10 1.00 -0.41 8374 92 179 46 5,371.38 3,428.99 3,428.62 51.37 0.61 0.43 0.43 0.43 8422 93 178 48 5,369.32 3,476.94 -3,476.56 52.75 0.66 0.21 -0.83 8488 93 178 48 5,369.32 3,476.94 -3,476.56 52.75 0.66 0.21 -0.83 8488 93 178 49 5,364.63 3,571.80 3,571.39 55.86 1.02 0.82 -0.61 8517 93 178 49 5,364.63 3,571.80 3,571.39 55.86 1.02 0.82 -0.61 8563 92 179 46 5,362.43 3,617.74 3,3617.32 57.06 3,26 -1.96 2.81 8611 91 180 48 5,361.17 3,665.72 -3,665.30 57.52 3.64 -3.33 1.46 8667 89 180 46 5,361.17 3,711.71 -3,711.30 57.52 3.77 -3.04 0.87 8766 89 180 49 5,361.81 3,760.71 3,760.30 57.44 0.46 -0.20 -0.41 8752 90 180 46 5,362.29 3,806.70 -3,806.29 57.56 1.09 0.87 -0.65 8800 90 180 48 5,362.59 3,864.70 -3,864.29 57.89 0.47 0.21 -0.42 8846 90 179 46 5,362.29 3,806.70 -3,806.29 57.56 1.09 0.87 -0.65 8844 90 179 46 5,362.29 3,806.70 -3,806.29 57.56 1.09 0.87 -0.65 8844 90 179 46 5,362.20 3,900.70 -3,804.29 57.89 0.47 0.22 -0.22 8941 90 179 48 5,362.50 3,949.70 -3,940.28 59.01 0.29 -0.20 -0.20 8941 90 179 46 5,362.38 3,995.70 -3,996.28 59.01 0.29 -0.20 -0.20 9035 91 179 46 5,362.38 3,995.70 -3,996.28 59.01 0.29 -0.20 -0.20 9035 91 179 46 5,362.39 3,995.29 59.00 3.34 0.20 -0.20 -0.20 9035 91 179 46 5,362.39 3,995.29 4,788.31 4,783.20 64.61 0.43 0.40 0.43 0.40 91 0.40 0.40 0.40 0.40 0.40 0.40 0.40 0.4											
8279 92 179 46 5,374.89 3,334.06 3,333.73 48.72 0.90 0.87 -0.22 8328 92 178 49 5,373.22 3,383.03 -3,382.68 50.09 1.10 1.02 -0.41 8422 93 178 48 5,339.32 3,476.94 3,476.66 52.75 0.66 0.21 -0.63 8422 93 178 48 5,369.32 3,476.94 3,476.66 52.75 0.66 0.21 -0.63 8468 93 178 49 5,364.63 3,571.80 -3,522.49 54.19 0.65 0.65 0.00 8517 93 178 49 5,364.63 3,571.80 -3,571.39 55.86 1.02 0.82 -0.61 8563 92 179 46 5,362.43 3,617.74 -3,617.32 57.06 3.26 1.96 2.61 180 48 5,361.71 3,761.71 -3,771.30 57.52 3.17 -3.04 0.87 8706 89 180 48 5,361.71 3,771.71 -3,771.30 57.52 3.17 -3.04 0.87 8706 89 180 48 5,361.71 3,771.71 -3,771.30 57.52 3.17 -3.04 0.87 8706 89 180 48 5,362.63 3,807.71 -3,760.30 57.44 0.46 -0.20 -0.41 8846 90 179 46 5,362.93 3,806.70 3,806.29 57.56 0.90 0.87 -0.65 8800 90 180 48 5,362.59 3,806.70 3,806.29 57.56 0.90 0.87 -0.65 8800 90 180 48 5,362.59 3,806.70 3,806.29 57.89 0.47 0.21 -0.42 8846 90 179 46 5,362.62 3,900.70 -3,900.29 58.37 1.17 1.09 -0.43 8895 90 179 49 5,362.65 3,394.70 3,945.28 59.01 0.29 -0.20 -0.20 9935 91 179 46 5,362.63 3,990.70 -3,995.28 59.70 0.31 0.22 -0.22 9084 91 179 46 5,362.63 3,990.70 -3,995.28 59.70 0.31 0.22 -0.22 9084 91 179 48 5,362.63 3,990.70 -3,995.28 59.70 0.31 0.22 -0.22 9084 91 179 48 5,362.64 4,043.70 4,043.27 60.45 0.45 0.65 0.62 0.20 9083 91 179 48 5,362.69 3,995.70 -3,995.28 59.70 0.31 0.22 -0.22 9084 91 179 48 5,362.69 1,484.67 1,484.22 6.67 0.49 0.43 0.62 0.00 9035 91 179 48 5,365.69 4,043.70 1,404.27 60.45 0.45 0.40 0.40 0.40 0.40 0.40 0.40											
8328         92         178         49         5,373.22         3,383.03         3,382.68         50.09         1.10         1.02         -0.41           8374         92         179         46         5,371.38         3,428.99         3,428.62         51.37         0.61         0.43         0.43           8488         93         178         46         5,367.20         3,522.88         3,522.49         54.19         0.65         0.60         0.21         -0.61           8563         92         179         46         5,364.63         3,571.80         3,571.39         55.86         1.02         0.62         -0.61           8611         91         180         48         5,361.17         3,665.72         3,665.30         57.62         3.64         -3.33         1.46           8657         89         180         49         5,361.17         3,711.71         3,711.71         3,711.71         3,711.73         3,712.73         3,714.74         3,665.70         3,70         3,04         0.87           8706         89         180         49         5,362.61         3,760.71         3,760.30         57.52         3.17         3,04         0.87           8706 <td></td>											
8374         92         179         46         5,371.38         3,428.99         -3,428.62         51.37         0.61         0.43         0.43           8422         93         178         48         5,369.32         3,476.94         -3,476.56         52.75         0.66         0.021         -0.63           8468         93         178         49         5,364.63         3,571.80         -3,571.39         55.86         1.02         0.82         -0.61           8563         92         179         46         5,362.43         3,671.70         -3,671.39         55.86         1.02         0.82         -0.61           8611         91         180         48         5,361.71         3,6671.39         55.86         1.02         0.82         -0.61           8611         91         180         46         5,362.43         3,6171.71         -3,711.30         57.52         3.17         -3.04         0.87           8706         89         180         46         5,362.61         3,760.71         -3,760.30         57.44         0.46         -0.20         -0.65           8800         90         180         48         5,362.28         3,806.70         -3,802.95											
84622         93         178         48         5,369.32         3,476.94         -3,476.56         52.75         0.66         0.21         -0.63           8468         93         178         49         5,362.80         3,522.88         3,522.49         54.19         0.65         0.05         0.061           8563         92         179         46         5,362.43         3,617.74         -3,617.32         57.06         3.26         -1.96         2.61           8611         91         180         48         5,361.17         3,617.74         -3,617.32         57.06         3.26         -1.96         2.61           8657         89         180         46         5,361.17         3,711.71         -3,760.30         57.52         3.64         -3.33         1.46           8670         89         180         49         5,361.81         3,760.71         3,760.30         57.44         0.46         0.20         -0.41           8752         90         180         48         5,362.29         3,806.70         -3,806.29         57.56         1.09         0.87         -0.65           8800         90         180         48         5,362.50         3,354.70											
8517         93         178         49         5,364.63         3,671.80         -3,571.39         55.86         1.02         0.82         -0.61           8563         92         179         46         5,362.43         3,617.74         -3,617.32         57.06         3.26         -1.96         2.61           8611         91         180         48         5,361.17         3,657.27         -3,663.00         57.52         3.17         -3.04         0.87           8706         89         180         46         5,361.81         3,760.71         -3,760.30         57.44         0.46         -0.20         -0.41           8752         90         180         46         5,362.28         3,854.70         -3,864.29         57.89         0.47         0.21         -0.42           8846         90         179         46         5,362.26         3,900.70         -3,902.29         58.37         1.17         1.09         -0.43           88941         90         179         46         5,362.83         3,995.70         -3,902.29         59.37         1.17         1.09         -0.43           8941         90         179         46         5,362.80         3,997.00			,	48							
8663         92         179         46         5,362.43         3,617.74         -3,617.32         57.06         3.26         -1.96         2.61           8611         91         180         48         5,361.17         3,665.70         57.52         3.64         -3.33         1.46           8657         89         180         46         5,361.81         3,760.71         -3,760.30         57.44         0.46         -0.20         -0.41           8752         90         180         48         5,362.29         3,806.70         -3,806.29         57.66         1.09         0.47         0.21         -0.42           8846         90         179         46         5,362.29         3,806.70         -3,806.29         57.89         0.47         0.21         -0.42           8846         90         179         46         5,362.62         3,900.70         -3,900.29         58.37         1.17         1.09         -0.43           8894         91         179         46         5,362.28         3,900.70         -3,949.28         59.01         0.29         -0.20         -0.20           8989         91         179         46         5,362.89         4,043.27	8468	93	178	46						0.65	
8611         91         180         48         5,361.17         3,665.72         -3,665.30         57.52         3.64         -3.33         1.46           8657         89         180         46         5,361.17         3,711.71         -3,711.30         57.52         3.17         -3.04         0.87           8752         90         180         46         5,362.29         3,806.70         -3,866.29         57.56         1.09         0.87         -0.65           8800         90         180         48         5,362.29         3,806.70         -3,864.29         57.56         1.09         0.87         -0.65           8846         90         179         46         5,362.58         3,554.70         -3,854.29         57.89         0.47         0.21         -0.42           8846         90         179         46         5,362.28         3,957.07         -3,990.29         58.37         1.17         1.09         -0.20           8941         90         179         46         5,362.38         3,995.70         -3,995.28         59.70         0.31         0.22         -0.22           8989         91         179         46         5,361.44         4,089.69		93	178	49	5,364.63	3,571.80		55.86	1.02	0.82	-0.61
8667         89         180         46         5,361.17         3,711.71         -3,711.30         57.52         3.17         -3.04         0.87           8706         89         180         49         5,361.81         3,760.71         -3,606.39         57.44         0.46         -0.20         -0.41           8800         90         180         48         5,362.28         3,806.70         -3,806.29         57.56         1.09         0.87         -0.65           8846         90         179         46         5,362.58         3,854.70         -3,862.29         57.59         0.47         0.21         -0.42           8846         90         179         46         5,362.50         3,990.70         -3,900.29         58.37         1.17         1.09         -0.43           8941         90         179         46         5,362.38         3,995.70         -3,995.28         59.70         0.31         0.22         -0.20           8989         91         179         46         5,362.08         4,043.70         -4,043.27         60.45         0.63         0.62         0.00           9035         91         179         46         5,369.29         4,184.22				46	5,362.43	3,617.74	-3,617.32		3.26		2.61
8706         89         180         49         5,361.81         3,760.71         -3,760.30         57.44         0.46         -0.20         -0.41           8752         90         180         46         5,362.29         3,806.70         -3,806.29         57.56         1.09         0.87         -0.65           8846         90         179         46         5,362.62         3,900.70         -3,900.29         58.37         1.17         1.09         -0.43           8895         90         179         49         5,362.50         3,949.70         -3,949.28         59.01         0.29         -0.20         -0.20           8941         90         179         48         5,362.28         3,995.70         -3,949.28         59.01         0.29         -0.20         -0.20           8989         91         179         48         5,362.08         3,995.70         -3,949.28         59.01         0.29         -0.20         -0.22           8988         91         179         48         5,361.44         4,089.69         -4,043.27         60.45         0.63         0.62         0.00           9035         91         179         46         5,356.94         4,232.20							-3,665.30			-3.33	
8752         90         180         46         5,362.29         3,806.70         -3,806.29         57.56         1.09         0.87         -0.65           8800         90         180         48         5,362.58         3,854.70         -3,854.29         57.89         0.47         0.21         -0.42           8846         90         179         46         5,362.62         3,900.70         -3,900.29         58.37         1.17         1.09         -0.43           8895         90         179         49         5,362.38         3,995.70         -3,905.28         59.01         0.29         -0.20         -0.20           8941         90         179         48         5,362.38         3,995.70         -3,995.28         59.70         0.31         0.22         -0.22           8989         91         179         48         5,362.08         4,043.70         -4,043.27         60.45         0.63         0.62         0.00           9035         91         179         46         5,369.38         3,995.70         -3,995.28         59.70         0.31         0.22         -0.22           9084         91         179         46         5,369.39         4,184.67											
8800         90         180         48         5,362,58         3,854,70         -3,854,29         57.89         0.47         0.21         -0,42           8846         90         179         46         5,362,62         3,900,70         -3,900,29         58.37         1.17         1.09         -0.43           8895         90         179         49         5,362,28         3,990,70         -3,949,28         59.01         0.29         -0.20         -0.20           8941         90         179         48         5,362,38         3,995,70         -3,949,28         59.01         0.29         -0.20         -0.20           8989         91         179         48         5,362,38         3,995,70         -3,995,28         59.07         0.31         0.22         -0.22           9035         91         179         46         5,361,44         4,089,69         -4,089,26         61.21         1.32         1.30         -0.22           9035         91         179         46         5,356,59         4,138,68         -4,138,24         61.98         0.58         0.41         0.41           9178         92         179         48         5,355,19         4,278,63											
8846         90         179         46         5,362,62         3,900,70         -3,900,29         58.37         1.17         1.09         -0.20         -0.20           8941         90         179         46         5,362,50         3,949,70         -3,949,28         59.70         0.31         0.22         -0.20           8989         91         179         46         5,362,08         4,043,70         -4,043,27         60.45         0.63         0.62         0.00           9035         91         179         46         5,361,44         4,089,69         -4,089,26         61.21         1.32         1.30         -0.22           9084         91         179         46         5,361,44         4,089,69         -4,089,26         61.21         1.32         1.30         -0.22           9178         92         179         46         5,359,29         4,184,67         -4,184,22         62.67         0.49         0.43         -0.22           9178         92         179         46         5,355,19         4,278,63         -4,278,17         64.18         0.69         0.65         -0.22           9273         91         180         49         5,355,18											
8895         90         179         49         5,362.50         3,949.70         -3,949.28         59.01         0.29         -0.20         -0.20           8941         90         179         46         5,362.38         3,995.70         -3,995.28         59.70         0.31         0.22         -0.22           8989         91         179         48         5,362.08         4,043.70         -4,043.27         60.45         0.63         0.62         0.00           9035         91         179         46         5,361.44         4,089.69         -4,089.26         61.21         1.32         1.30         -0.22           9084         91         179         49         5,360.41         4,138.68         -4,138.24         61.98         0.58         0.41         0.41           9130         92         179         46         5,355.92         4,184.67         -4,184.22         62.67         0.49         0.43         -0.22           9178         92         179         46         5,355.99         4,278.63         -4,278.17         64.18         0.69         0.65         -0.22           9273         91         180         49         5,355.18         4,278.17											
8941         90         179         46         5,362.38         3,995.70         -3,995.28         59.70         0.31         0.22         -0.22           8989         91         179         48         5,362.08         4,043.70         -4,043.27         60.45         0.63         0.62         0.00           9035         91         179         46         5,361.44         4,089.69         -4,089.26         61.21         1.32         1.30         -0.22           9084         91         179         49         5,360.41         4,138.68         -4,138.24         61.98         0.58         0.41         0.41           9130         92         179         46         5,359.29         4,184.67         -4,184.22         62.67         0.49         0.43         -0.22           9178         92         179         46         5,355.79         4,232.65         -4,232.20         63.42         0.21         0.21         0.00           9224         92         179         46         5,355.59         4,278.63         -4,278.17         64.18         0.69         0.65         -0.22           9273         91         180         49         5,353.09         4,275.41											
8989         91         179         48         5,362.08         4,043.70         -4,043.27         60.45         0.63         0.62         0.00           9035         91         179         46         5,361.44         4,089.69         -4,089.26         61.21         1.32         1.30         -0.22           9084         91         179         49         5,360.41         4,138.68         -4,138.24         61.98         0.58         0.41         0.41           9178         92         179         46         5,359.29         4,184.67         -4,184.22         62.67         0.49         0.43         -0.22           9178         92         179         46         5,359.29         4,226.65         -4,232.20         63.42         0.21         0.21         0.00           9224         92         179         46         5,355.59         4,278.63         -4,278.17         64.18         0.69         0.65         -0.22           9273         91         180         49         5,355.91         4,373.59         -4,373.13         64.61         0.43         0.43         0.00           9319         92         180         46         5,355.39         4,373.31			_								
9035 91 179 46 5,361.44 4,089.69 -4,089.26 61.21 1.32 1.30 -0.22 9084 91 179 49 5,360.41 4,138.68 -4,138.24 61.98 0.58 0.41 0.41 9130 92 179 46 5,359.29 4,184.67 -4,184.22 62.67 0.49 0.43 -0.22 9178 92 179 46 5,356.59 4,278.63 -4,278.17 64.18 0.69 0.65 -0.22 9273 91 180 49 5,355.18 4,327.61 -4,327.15 64.61 2.28 -1.02 2.04 9319 92 180 46 5,356.59 4,278.63 -4,278.17 64.18 0.69 0.65 -0.22 9273 91 181 48 5,353.09 4,421.57 -4,421.12 64.11 3.39 -2.29 2.50 9413 90 182 46 5,353.05 4,467.54 -4,467.11 62.98 2.14 -1.96 0.87 9462 89 182 49 5,355.52 4,516.49 -4,516.08 61.57 0.65 -0.61 0.20 9508 88 182 46 5,354.61 4,562.44 -4,562.05 60.99 2.90 -2.83 0.65 9556 88 182 48 5,356.28 4,610.36 -4,609.99 58.41 0.00 0.00 0.00 9602 88 182 46 5,354.61 4,562.44 -4,562.05 95.84 1 0.00 0.00 0.00 9602 88 182 46 5,354.61 4,562.44 -4,565.94 56.81 0.65 0.65 0.00 9602 88 182 46 5,354.61 4,562.44 -4,565.94 56.81 0.65 0.65 0.00 9602 88 182 46 5,354.61 4,562.44 -4,565.94 56.81 0.65 0.65 0.00 9602 88 182 46 5,354.61 4,562.44 -4,563.05 95.84 1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0			-								
9084 91 179 49 5,360.41 4,138.68 -4,138.24 61.98 0.58 0.41 0.41 9130 92 179 46 5,359.29 4,184.67 -4,184.22 62.67 0.49 0.43 -0.22 9178 92 179 48 5,357.99 4,232.65 -4,232.20 63.42 0.21 0.21 0.00 9224 92 179 46 5,356.59 4,278.63 -4,278.17 64.18 0.69 0.65 -0.22 9273 91 180 49 5,355.18 4,327.61 -4,327.15 64.61 2.28 -1.02 2.04 9319 92 180 46 5,353.97 4,373.59 -4,373.13 64.61 0.43 0.43 0.00 9367 91 181 48 5,353.09 4,421.57 -4,421.12 64.11 3.39 -2.29 2.50 9413 90 182 46 5,353.05 4,467.54 4,467.11 62.98 2.14 -1.96 0.87 9462 89 182 49 5,355.62 4,516.49 -4,516.08 61.57 0.65 -0.61 0.20 9508 88 182 46 5,354.61 4,562.44 -4,562.05 60.09 2.90 -2.83 0.65 9556 88 182 48 5,356.28 4,610.36 4,609.99 58.41 0.00 0.00 0.00 9602 88 182 46 5,357.77 4,656.28 -4,655.94 56.81 0.65 0.65 0.00 9602 88 182 45 5,359.18 4,701.21 -4,700.89 55.24 0.44 -0.44 0.00 9700 88 182 45 5,350.94 4,754.13 -4,753.83 53.39 0.00 0.00 0.00 0.00 0.00 0.00 0.00			-								
9130 92 179 46 5,359.29 4,184.67 -4,184.22 62.67 0.49 0.43 -0.22 9178 92 179 48 5,357.99 4,232.65 -4,232.20 63.42 0.21 0.21 0.00 9224 92 179 46 5,356.59 4,278.63 -4,278.17 64.18 0.69 0.65 -0.22 9273 91 180 49 5,355.18 4,327.61 -4,327.15 64.61 2.28 -1.02 2.04 9319 92 180 46 5,353.09 4,431.57 -4,373.13 64.61 0.43 0.43 0.00 9367 91 181 48 5,353.09 4,421.57 -4,421.12 64.11 3.39 -2.29 2.50 9413 90 182 46 5,353.05 4,467.54 -4,467.11 62.98 2.14 -1.96 0.87 9462 89 182 49 5,353.52 4,516.49 -4,516.08 61.57 0.65 -0.61 0.20 9508 88 182 46 5,354.61 4,562.44 -4,562.05 60.09 2.90 -2.83 0.65 9556 88 182 48 5,356.28 4,610.36 -4,609.99 58.41 0.00 0.00 0.00 9602 88 182 45 5,357.77 4,656.28 -4,655.94 56.81 0.65 0.65 0.00 9602 88 182 45 5,359.18 4,701.21 -4,700.89 55.24 0.44 -0.44 0.00 9700 88 182 45 5,359.18 4,701.21 -4,700.89 55.24 0.44 -0.44 0.00 9700 88 182 45 5,360.94 4,754.13 -4,753.83 53.39 0.00 0.00 0.00 0.00 0.00 0.00 0.00											
9178         92         179         48         5,357.99         4,232.65         -4,232.20         63.42         0.21         0.21         0.00           9224         92         179         46         5,356.59         4,278.63         -4,278.17         64.18         0.69         0.65         -0.22           9273         91         180         49         5,355.18         4,327.61         -4,327.15         64.61         2.28         -1.02         2.04           9319         92         180         46         5,353.09         4,373.59         -4,373.13         64.61         0.43         0.43         0.00           9367         91         181         48         5,353.09         4,421.57         -4,421.12         64.11         3.39         -2.29         2.50           9413         90         182         46         5,353.05         4,467.54         -4,467.11         62.98         2.14         -1.96         0.87           9462         89         182         46         5,353.52         4,516.49         -4,516.08         61.57         0.65         -0.61         0.20           9508         88         182         48         5,355.18         4,710.08			-								
9224         92         179         46         5,356.59         4,278.63         -4,278.17         64.18         0.69         0.65         -0.22           9273         91         180         49         5,355.18         4,327.61         -4,327.15         64.61         2.28         -1.02         2.04           9319         92         180         46         5,353.97         4,373.59         -4,373.13         64.61         0.43         0.43         0.00           9367         91         181         48         5,353.09         4,421.57         -4,421.12         64.11         3.39         -2.29         2.50           9413         90         182         46         5,353.05         4,467.54         -4,467.11         62.98         2.14         -1.96         0.87           9462         89         182         49         5,355.22         4,516.49         -4,516.08         61.57         0.65         -0.61         0.20           9508         88         182         46         5,356.28         4,610.36         -4,562.05         60.09         2.90         -2.83         0.65           9556         88         182         46         5,357.77         4,656.28			_								
9273         91         180         49         5,355.18         4,327.61         -4,327.15         64.61         2.28         -1.02         2.04           9319         92         180         46         5,353.97         4,373.59         -4,373.13         64.61         0.43         0.43         0.00           9367         91         181         48         5,353.09         4,421.57         -4,421.12         64.11         3.39         -2.29         2.50           9413         90         182         46         5,353.05         4,467.54         -4,467.11         62.98         2.14         -1.96         0.87           9462         89         182         49         5,353.52         4,516.49         -4,516.08         61.57         0.65         -0.61         0.20           9508         88         182         46         5,354.61         4,562.44         -4,562.05         60.09         2.90         -2.83         0.65           9556         88         182         48         5,356.28         4,610.36         -4,699.99         58.41         0.00         0.00         0.00           9602         88         182         45         5,357.77         4,656.28			-								
9319         92         180         46         5,353.97         4,373.59         -4,373.13         64.61         0.43         0.43         0.00           9367         91         181         48         5,353.09         4,421.57         -4,421.12         64.11         3.39         -2.29         2.50           9413         90         182         46         5,353.05         4,467.54         -4,467.11         62.98         2.14         -1.96         0.87           9462         89         182         49         5,353.52         4,516.49         -4,516.08         61.57         0.65         -0.61         0.20           9508         88         182         46         5,354.61         4,562.44         -4,562.05         60.09         2.90         -2.83         0.65           9556         88         182         48         5,356.28         4,610.36         -4,609.99         58.41         0.00         0.00         0.00           9602         88         182         45         5,359.18         4,701.21         -4,700.89         55.24         0.44         -0.44         0.00           9700         88         182         53         5,360.94         4,754.13	9273		-								
9413         90         182         46         5,353.05         4,467.54         -4,467.11         62.98         2.14         -1.96         0.87           9462         89         182         49         5,353.52         4,516.49         -4,516.08         61.57         0.65         -0.61         0.20           9508         88         182         46         5,354.61         4,562.44         -4,562.05         60.09         2.90         -2.83         0.65           9556         88         182         48         5,356.28         4,610.36         -4,609.99         58.41         0.00         0.00         0.00           9602         88         182         46         5,357.77         4,656.28         -4,655.94         56.81         0.65         0.65         0.00           9647         88         182         45         5,359.18         4,701.21         -4,700.89         55.24         0.44         -0.44         0.00           9700         88         182         53         5,360.94         4,754.13         -4,753.83         53.39         0.00         0.00         0.00         5,360.94         4,754.13         -4,753.83         53.39         0.00         0.00         5,	9319	92	180	46					0.43	0.43	0.00
9462         89         182         49         5,353.52         4,516.49         -4,516.08         61.57         0.65         -0.61         0.20           9508         88         182         46         5,354.61         4,562.44         -4,562.05         60.09         2.90         -2.83         0.65           9556         88         182         48         5,356.28         4,610.36         -4,609.99         58.41         0.00         0.00         0.00           9602         88         182         46         5,357.77         4,656.28         -4,655.94         56.81         0.65         0.65         0.00           9647         88         182         45         5,359.18         4,701.21         -4,700.89         55.24         0.44         -0.44         0.00           9700         88         182         53         5,360.94         4,754.13         -4,753.83         53.39         0.00         0	9367	91	181	48	5,353.09	4,421.57	-4,421.12	64.11	3.39	-2.29	2.50
9508         88         182         46         5,354.61         4,562.44         -4,562.05         60.09         2.90         -2.83         0.65           9556         88         182         48         5,356.28         4,610.36         -4,609.99         58.41         0.00         0.00         0.00           9602         88         182         46         5,357.77         4,656.28         -4,655.94         56.81         0.65         0.65         0.00           9647         88         182         45         5,359.18         4,701.21         -4,700.89         55.24         0.44         -0.44         0.00           9700         88         182         53         5,360.94         4,754.13         -4,753.83         53.39         0.00 <td></td>											
9556         88         182         48         5,356.28         4,610.36         -4,609.99         58.41         0.00         0.00         0.00           9602         88         182         46         5,357.77         4,656.28         -4,655.94         56.81         0.65         0.65         0.00           9647         88         182         45         5,359.18         4,701.21         -4,700.89         55.24         0.44         -0.44         0.00           9700         88         182         53         5,360.94         4,754.13         -4,753.83         53.39         0.00											
9602         88         182         46         5,357.77         4,656.28         -4,655.94         56.81         0.65         0.65         0.00           9647         88         182         45         5,359.18         4,701.21         -4,700.89         55.24         0.44         -0.44         0.00           9700         88         182         53         5,360.94         4,754.13         -4,753.83         53.39         0.00         0.00         0.00           0         0         0         5,360.94         4,754.13         -4,753.83         53.39         0.00         <			_								
9647         88         182         45         5,359.18         4,701.21         -4,700.89         55.24         0.44         -0.44         0.00           9700         88         182         53         5,360.94         4,754.13         -4,753.83         53.39         0.00         0.00         0.00           0         0         0         5,360.94         4,754.13         -4,753.83         53.39         0.00         0.00           0         0         0         5,360.94         4,754.13         -4,753.83         53.39         0.00         0											
9700         88         182         53         5,360.94         4,754.13         -4,753.83         53.39         0.00											
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39			-								
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39			_	53					0.00	0.00	0.00
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39											
0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39											
0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39			-								
0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39			-								
0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39			_								
0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     5,360.94     4,754.13     -4,753.83     53.39			_								
0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39			_								
0 0 5,360.94 4,754.13 -4,753.83 53.39			_								
0 0 0 5.360.94 4.754.13 -4.753.83 53.39	0	0	_								
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0	0	0		5,360.94	4,754.13	-4,753.83	53.39			

Meaured   Depth   Angle   Direction   Depth   Depth	
Meaured   Hole   Depth   Angle   Direction   Length   Depth   Depth   Section   N + / S - E + / W - Severity   °/100 ft   °/100 ft	13
Meaured Depth         Hole Angle         Hole Direction         Course Length         True Vertical Depth         Vertical Section         Total Coordinate N + / S - E + / W - Severity         Build Up %/100 ft         W //100 ft         %/100 ft	
Depth         Angle         Direction         Length         Depth         Section         N + / S -         E + / W -         Severity         °/100 ft         °/10	
Depth         Angle         Direction         Length         Depth         Section         N + / S -         E + / W -         Severity         °/100 ft         °/10	lk/
0         0         0         0.00         0.00          << TIE-IN POINT	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94	
0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39         0       0       0       5,360.94       4,754.13       -4,753.83       53.39	
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0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39	
0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39	
0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39	
0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39       0     0     0     5,360.94     4,754.13     -4,753.83     53.39	
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P.O. BOX 3660 HOUMA, LA 70361-3660

Customer: SAN400

BILL TO:

SANDRIDGE ENERGY

123 ROBERT S KERR AVENUE OKLAHOMA CITY, OK 73102-6406 PHONE: (405) 753-5500 FAX: ()

Division: Delivery Ticket: Delivery Date: 0701 3147

Office:

11/20/2012 12/1/1901

Ordered By:

Lease/Well:

ESPLUND FARMS 3023 1-30H

Rig Name/Number: LARIAT 41

AFE Number: Site Contact:

Start Date / Extended Min / Standby / **Add Day Unit Price** Description Qty **Line Total Stop Date Usage Charge** \$24,570.00 \$24,570.00 11/17/2012 ESPLUND FARMS 3023 1-30H \$24,570.00 \$0.00 11/17/2012 11/17/2012 \$0.00 \$0.00 \$0.00 120 DRILLED 30" CONDUCTOR HOLE 11/17/2012 \$0.00 11/17/2012 \$0.00 20" CONDUCTOR PIPE (.250 WALL) \$0.00 120 11/17/2012 11/17/2012 \$0.00 6'X6' CELLAR TINHORN WITH PROTECTIVE \$0.00 \$0.00 11/17/2012 RING 11/17/2012 DRILL & INSTALL 6'X6' CELLAR TINHORN \$0.00 \$0.00 \$0.00 11/17/2012 11/17/2012 DRILLED 20" MOUSE HOLE (PER FOOT) \$0.00 \$0.00 \$0.00 75 11/17/2012 11/17/2012 \$0.00 \$0.00 \$0.00 16" CONDUCTOR PIPE (.250 WALL) 75 11/17/2012 \$0.00 11/17/2012 \$0.00 \$0.00 MOBILIZATION OF EQUIPMENT & ROAD 11/17/2012 PERMITTING FEE 11/17/2012 \$0.00 WELDING SERVICES FOR PIPE & LIDS \$0.00 \$0.00 11/17/2012 11/17/2012 \$0.00 \$0.00 \$0.00 PROVIDED EQUIPMENT & LABOR FOR DIRT 11/17/2012 REMOVAL <u>\$0.00</u> \$0.00 \$0.00 11/17/2012 PROVIDED METAL LIDS (1 FOR 11/17/2012 CONDUCTOR & 2 FOR THE MOUSEHOLE PIPE) 11/17/2012 16 **CEMENT 10 SACK GROUT** \$0.00 \$0.00 \$0.00 11/17/2012 11/17/2012 \$0.00 \$0.00 \$0.00 8' HAY FEEDER 11/17/2012 \$0.00 \$0.00 \$0.00 11/17/2012 PROVIDED EQUIPMENT & LABOR TO 11/17/2012 ASSIST IN PUMPING CONCRETE

\$24,570.00

\$0.00

Sub Total:

Print Name	

\$24,570.00

## Cementing Job Summary

The Road to Excellence Starts with Safety Sold To #: 305021 Sales Order #: 900046305 **Ship To #**: 2966783 Quote #: Customer: SANDRIDGE ENERGY INC EBUSINESS Customer Rep: ????, Quincy Well Name: Esplund Farms 3023 Well #: 1-30H API/UWI #: 15-025-21552 City (SAP): MINNEOLA County/Parish: Clark State: Kansas Legal Description: Section 30 Township 30S Range 23W Rig/Platform Name/Num: 41 Contractor: Lariat Job Purpose: Cement Intermediate Casing Well Type: Development Well Job Type: Cement Intermediate Casing Sales Person: NGUYEN, VINH Srvc Supervisor: WOODS, CORY MBU ID Emp #: 420903 Job Personnel **HES Emp Name** Emp# **HES Emp Name** Emp# Exp Hrs Exp Hrs Emp# **HES Emp Name** Exp Hrs NASH, JONATHAN 21.5 524600 STEVENS, DAVID Ray TORRES, CLEMENTE 21.5 497094 21.5 344233 Clark WOODS, CORY C 21.5 420903 Equipment HES Unit # | Distance-1 way HES Unit# HES Unit # Distance-1 way Distance-1 way HES Unit# Distance-1 way Job Hours Date Operating On Location Date On Location Operating Date On Location Operating Hours Hours Hours Hours Hours Hours TOTAL Total is the sum of each column separately Job **Job Times Formation Name** Date Time Zone Time Formation Depth (MD) Top Bottom Called Out 03 - Dec - 2012 06:30 CST Form Type BHST On Location 03 - Dec - 2012 12:30 CST Job depth MD 1000. ft Job Depth TVD 04 - Dec - 2012 CST Job Started 08:04 Water Depth Wk Ht Above Floor Job Completed 04 - Dec - 2012 09:15 CST Perforation Depth (MD) From 04 - Dec - 2012 To Departed Loc 12:00 CST Well Data Description New / Max Size Weight ID Thread Grade Top MD **Bottom** Bottom Top Used pressure lbm/ft TVD in in ft MD TVD psig ft ft ft 12.25" Open Hole 12.25 80 1000. 9.625" Surface Unknow 9.625 8.921 36. LTC J-55 1000. Casing Preset Conductor Unknow 20. 19.124 94. 80. n Sales/Rental/3<sup>rd</sup> Party (HES) Description Qty uom Supplier Qty Depth PLUG, CMTG, TOP, 9 5/8, HWE, 8.16 MIN/9.06 MA EA **Tools and Accessories** Type Size Qtv Make Depth Type Size Qtv Make Depth Type Size Qty Make Guide Shoe Packer Top Plug 9.625 1 **HWE** Float Shoe Bridge Plug **Bottom Plug** Float Collar Retainer SSR plug set Insert Float Plug Container 9.625 QL Stage Tool Centralizers Miscellaneous Materials **Gelling Agt** Conc Surfactant Conc Acid Type Conc Qty Treatment Fld Conc Inhibitor Conc Sand Type Size Qty

		Fluid Data		
Stage/Plug #: 1				

Summit Version: 7.3.0045

# Cementing Job Summary

Fluid	Stage	Туре	T		Fluid Na	ame		Qty	Qty	Mixing	Yield	Mix Flui	d Rate	Tot	al Mix
#									uom	Density	ft3/sk	Gal/sk	bbl/min	Fluid	l Gal/sk
										lbm/gal					
1	Fresh W	ater		-				10	bbl	8.33	.0	.0	.0		
2	Lead Ce	ment	EX.	EXTENDACEM (TM) SYSTEM (452981)			325	sacks	12.4	2.11	11.57		1	1.57	
	3 %		CAI	LCIU	M CHLORIDE,	PELLET,	50 LB (1	01509387	·)				'		
	0.25 lbm	)	PO	LY-E	-FLAKE (1012	16940)			-						
11.571 Gal FRESH WATER															
3	Tail Cem	ent	sw	SWIFTCEM (TM) SYSTEM (452990)			90)	150	sacks	15.6	1.2	5.32			5.32
	2 % CALCIUM CHLORIDE, PELLET, 50 LB							01509387	)						
	0.125 lbn	n	-		-FLAKE (1012 <sup>-</sup>										
	5.319 Ga		-		WATER										
4	Displace		1					74.5	bbl	8.33	.0	.0	.0		
Ca	lculated		19.7%		Pressure	96	Car Very		881		olumes			- Bagana	ENTATE
	cement	74.		Shui	t In: Instant	,0	Lost Returns		NO	Cement Slurry		15/	154 Pad		
	Cement													ant.	
	radient	OOKI	HOL	15 M			Cement Returns			Actual Displacement Load and Breakdown					220 5
riac G	raulent			TO IVI	iin j	- Service	Spacer		10	Load and	Breakdo	wn	Total	aoi	238.5
0:		•						Rates							
Circul		9	_		Mixing	6		Displac	ement	5		Avg. د	lob	(	3
	ent Left Ir		Am	ount	42 ft Reas	son Shoe	Joint								
Frac F	Ring # 1 @	5	ID		Frac ring # 2 (	@ I	D	Frac Rin	g#3@	ID	F	rac Ring	#4@		D
Th	e Inforn	nation	Sta	ted	Herein Is C	orrect	Custon	ner Represe	entative S	Signature				1	,

## Cementing Job Summary

The Road to Excellence Starts with Safety Sales Order #: 900063735 Sold To #: 305021 **Ship To #**: 2966783 Quote #: Customer Rep: Solis, Lu Customer: SANDRIDGE ENERGY INC EBUSINESS Well Name: Esplund Farms 3023 Well #: 1-30H API/UWI #: 15-025-21552 County/Parish: Clark State: Kansas City (SAP): MINNEOLA Legal Description: Section 30 Township 30S Range 23W Contractor: LARIAT Rig/Platform Name/Num: 41 Job Purpose: Cement Intermediate Casing Well Type: Development Well Job Type: Cement Intermediate Casing Sales Person: NGUYEN, VINH Srvc Supervisor: AGUILERA, FABIAN MBU ID Emp #: 442123 Job Personnel **HES Emp Name HES Emp Name** Exp Hrs **HES Emp Name** Exp Hrs Emp# Emp# Exp Hrs Emp# AGUILERA, FABIAN 10.5 442123 HEIDT, JAMES 10.5 517102 JOHNSON, MATTHEW 10.5 525955 **Nicholas** Warren Equipment HES Unit # Distance-1 way Job Hours Date On Location Operating On Location Operating Date Date On Location Operating Hours Hours Hours Hours Hours Hours 12/11/2012 10.5 1.5 TOTAL Total is the sum of each column separately Job **Job Times Formation Name** Date Time Time Zone Formation Depth (MD) Top Bottom 11 - Dec - 2012 Called Out 07:00 CST 11 - Dec - 2012 Form Type BHST On Location 12:30 CST Job depth MD 5816. ft Job Depth TVD 5816. ft 11 - Dec - 2012 19:03 CST Job Started 11 - Dec - 2012 Water Depth Wk Ht Above Floor 20:22 CST 5. ft Job Completed Perforation Depth (MD) From CST To Departed Loc 11 - Dec - 2012 22:30 Well Data Description Thread New / Max Size ID Weight Grade Top MD **Bottom** Bottom Top Used TVD pressure in lbm/ft MD TVD in ft psig ft ft ft 8.75" Open Hole 8.75 1000 5800. 7" Intermediate Unknow 7. 6.276 26. LTC P-110 5800. Casing n 9.625" Surface Unknow 9.625 8.921 36. LTC J-55 1000. Casing n Sales/Rental/3<sup>rd</sup> Party (HES) Description Qty Qty uom Depth Supplier PLUG, CMTG, TOP, 7, HWE, 5.66 MIN/6.54 MAX CS EA **Tools and Accessories** Type Size Qty Make Depth Type Size Qty Make Depth Type Size Make Qty Guide Shoe Packer Top Plug Float Shoe Bridge Plug **Bottom Plug** Float Collar Retainer SSR plug set Plug Container Insert Float Stage Tool Centralizers Miscellaneous Materials **Gelling Agt** Conc Surfactant Conc Acid Type Qty Conc % Treatment Fld Conc Inhibitor Conc Sand Type Size Qty

Summit Version: 7.3.0045

Stage/Plug #: 1

Fluid Data

# Cementing Job Summary

Fluid	Stage 7	уре		Fluid	Name		Qty	Qty	Mixing	Yield	Mix Fluid	Rate	Total Mix
#								uom	Density Ibm/gal	ft3/sk	Gal/sk	bbl/min	Fluid Gal/sk
1	Rig Supp Gel Space					30.00	bbl	8.33	.0	.0	.0		
2	Lead Cen	nent	ECONO	ECONOCEM (TM) SYSTEM (452992				sacks	13.6	1.53	7.24		7.24
	0.4 %		HALAD(	R)-9, 50 LB (	(100001617)								
	2 lbm		KOL-SE	AL, 50 LB BA	AG (1000642	32)							
	2 %		BENTON	NITE, BULK	(100003682)								
	7.24 Gal		FRESH'	WATER									
3	Tail Ceme	ent	HALCEN	/I (TM) SYST	)	100.0	sacks	15.6	1.19	5.08		5.08	
	0.4 %			R)-9, 50 LB (		,	31 30 3 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3						
	2 lbm		KOL-SE	AL, 50 LB BA	AG (1000642	32)							
	5.076 Gal		FRESH										
4	Displacer	nent					219.00	bbl	8.33	.0	.0	.0	
Ca	alculated \		5	Pressu	res	Volumes							
	cement	219 E	1000	In: Instant		Lost Returns 0		0	Cement S		75 BB	75 BBL Pad	
	Cement	3129				Cemen	t Returns	0	Actual Di				ent
Frac G	radient		15 IV	lin		Spacer	S	30 BBL	Load and			Total J	
							ates					1000	
Circu	lating	5		Mixing	6		Displac	ement	6		Avg. Jo	b	5
Cem	ent Left In	Pipe	Amount		ason Shoe	Joint					7119100	,,,	
	Ring # 1 @		ID	Frac ring # 2		D	Frac Ring	a # 3 @	10	) F	rac Ring	# 4 @	ID

Summit Version: 7.3.0045

Tuesday, December 11, 2012 21:07:00

## Cementing Job Summary

The Road to Excellence Starts with Safety Sold To #: 305021 **Ship To #**: 2966783 Quote #: Sales Order #: 900079959 Customer: SANDRIDGE ENERGY INC EBUSINESS Customer Rep: ????, Quincy Well Name: Esplund Farms 3023 Well #: 1-30H API/UWI #: 15-025-21552 Field: City (SAP): MINNEOLA County/Parish: Clark State: Kansas Legal Description: Section 30 Township 30S Range 23W Contractor: LARIAT Rig/Platform Name/Num: 41 Job Purpose: Cement Production Liner Well Type: Development Well Job Type: Cement Production Liner Sales Person: NGUYEN, VINH Srvc Supervisor: RODRIGUEZ, EDGAR MBU ID Emp #: 442125 Job Personnel **HES Emp Name** Exp Hrs Emp# **HES Emp Name** Exp Hrs Emp# **HES Emp Name** Exp Hrs Emp# JOURNAGEN. 524224 498481 5.5 MENDOZA, VICTOR 5.5 442596 RAMIREZ, JORGE 5.5 **MICHAEL** RODRIGUEZ. 5.5 442125 **EDGAR Alejandro** Equipment HES Unit # Distance-1 way HES Unit # Distance-1 way HES Unit# Distance-1 way HES Unit # Distance-1 way Job Hours On Location Date Operating Date On Location Operating Date On Location Operating Hours Hours Hours Hours Hours Hours 12/18/2012 2 1 12/29/2012 3.5 2.5 TOTAL Total is the sum of each column separately Job **Job Times** Formation Name Date Time Time Zone Formation Depth (MD) Top Bottom Called Out 18 - Dec - 2012 14:30 CST Form Type BHST 18 - Dec - 2012 On Location 20:00 CST Job depth MD 9702. ft Job Depth TVD 9700. ft Job Started 18 - Dec - 2012 23:59 CST Water Depth Wk Ht Above Floor 7. ft 19 - Dec - 2012 Job Completed 01:28 CST Perforation Depth (MD) From To Departed Loc 19 - Dec - 2012 03:20 CST Well Data Description New / Max Weight Size ID Thread Grade Top MD **Bottom** Top **Bottom** Used pressure lbm/ft TVD in in MD TVD ft psig ft ft ft 6.125" Open Hole 6.125 5800. 9742 4.5" Production Unknow 4.5 11.6 LTC 4. N-80 5400. 9742. Liner n 7" Intermediate Unknow 7. 6.276 26 LTC P-110 5800. Casing n 4" Drill Pipe Unknow 4. 3.34 14. Unknown 5400. n **Tools and Accessories** Type Size Qtv Make Depth Type Size Qty Make Depth Type Size Qty Make Guide Shoe Packer Top Plug Float Shoe Bridge Plug **Bottom Plug** Float Collar Retainer SSR plug set Insert Float Plug Container Stage Tool Centralizers Miscellaneous Materials

		Fluid Data		T-, le
Stage/Plug #: 1				

Conc

Conc

Acid Type

Sand Type

Qty

Size

Conc

Qty

%

Surfactant

Inhibitor

Summit Version: 7.3.0045

Gelling Agt

Treatment Fld

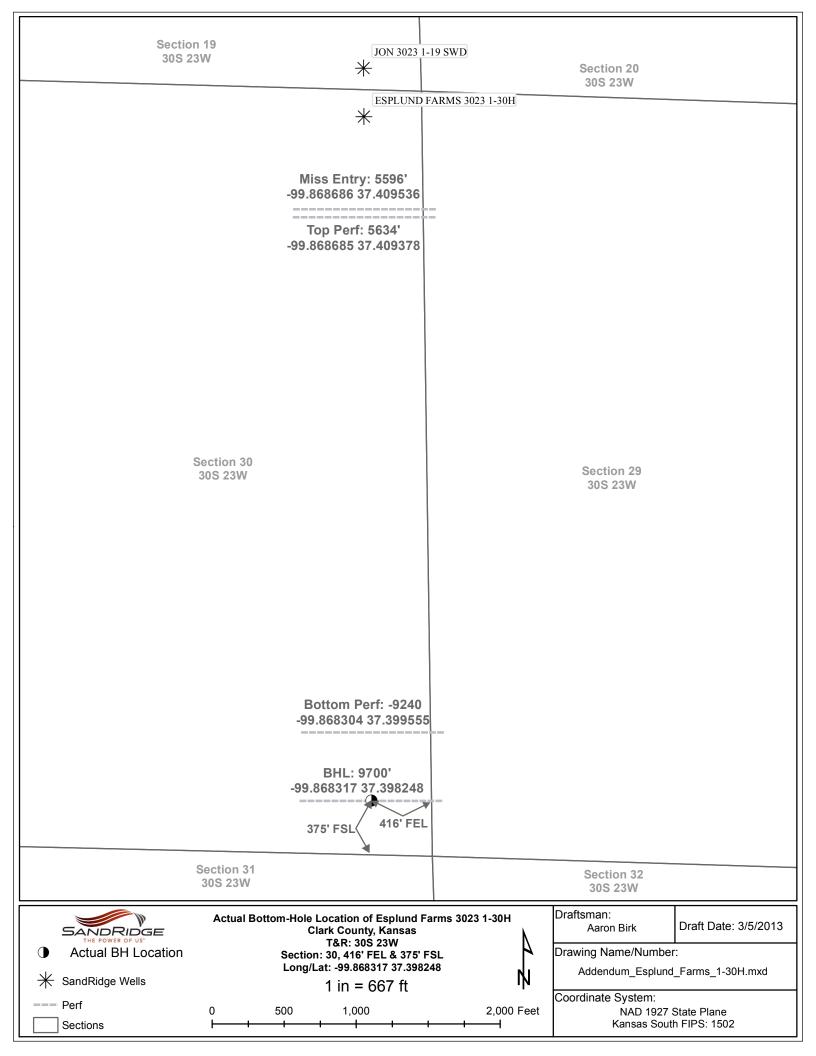
Conc

Conc

Wednesday, December 19, 2012 02:48:00

# Cementing Job Summary

Fluid	Stage 7	Гуре	ype Fluid Name					Qty	Qty	Mixing	Yield	M k	ix Fluid	Rate	То	tal M	ix
#									uom	Density	ft3/sl	( I	Gal/sk	bbl/min	Flui	d Ga	l/sk
										lbm/gal							
1	Rig Supp							30.00	bbl	8.5	.0		.0	.0			
	Gel Space						-										
2	Primary (	Cement	ECO	NOCEM (TM) S	YSTEM (4	529	92)	480.0	sacks	13.6	1.53		7.24			7.24	
	0.4 %		HALA	D(R)-9, 50 LB	(10000161	7)											
	2 lbm		KOL-	SEAL, BULK (1	00064233	)											
2 % BENTONITE, BULK (100003682)												b					
7.24 Gal FRESH WATER																	
3	Displace	nent						118.00	bbl	8.33	.0	T	.0	.0			
Calculated Values Pressures								Volume	s			15.20	elso.	les.			
Displa	cement	118	S	hut In: Instant		I	Lost Re	eturns		Cement			131	Pad			
Гор О	f Cement	3910	5	Min		(	Cemen	t Returns		Actual D	isplace	ment	118	Treatn	nent		
Frac G	radient		1:	5 Min			Spacer	S	30 Load and Breakdown			Total Jo		27	9		
							R	ates									
Circu	lating			Mixing				Displac	ement				Avg. Jo	b			
Cem	ent Left In	Pipe	Amou	int 86.65 ft R	eason Sh	ioe .	Joint						J				
Frac F	Ring # 1 @		ID	Frac ring #	2@	ID	)	Frac Rin	g # 3 @		D	Fra	c Ring	# 4 @		ID	
						-	Custom	er Represe									-
Th	ne Inform	ation	State	d Herein Is	Correct					J							



## Hydraulic Fracturing Fluid Product Component Information Disclosure

Fracture Date	1/20/2013	
State:	KS	
County:	Clark	
API Number:	15-025-21552	
Operator Name:		SandRidge Expl. & Prod., LLC
Well Name and Number:		Esplund Farms 3023 1-30H
Longitude:	-99.8683	
Latitude:	37.4112	
Long/Lat Projection:	NAD27	
Production Type:	Oil	
True Vertical Depth (TVD):	5,361	
Total Water Volume (gal)*:	1,641,445	

### Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
HCL 15, Slickwater	Schlumberge r	Corrosion Inhibitor, Friction Reducer, Scale Inhibitor, Biocide, Surfactant, Acid, Iron Control Agent, Diverting Agent, Propping Agent	Water (Including Mix Water Supplied by Client)*	-		94.86795%	
			Crystalline silica	14808-60-7	91.06482%	4.67349%	
			Hydrochloric acid	7647-01-0	7.78645%	0.39960%	
			Methanol	67-56-1	0.37981%	0.01949%	
			Distillates (petroleum), hydrotreated light	64742-47-8	0.26338%	0.01352%	
			Alcohol, C11 linear, ethoxylated	34398-01-1	0.25296%	0.01298%	
			Alcohol, C9-C11, Ethoxylated	68439-46-3	0.25296%	0.01298%	
			Ammonium chloride	12125-02-9	0.12228%	0.00628%	
			Glutaraldehyde	111-30-8	0.06408%	0.00329%	
			Sodium erythorbate	6381-77-7	0.05937%	0.00305%	
			Aliphatic acids	Proprietary	0.03142%	0.00161%	
			Aliphatic alcohols, ethoxylated #2	Proprietary	0.03142%	0.00161%	
			Alcohols, C12-C16, ethoxylated	68551-12-2	0.02916%	0.00150%	
			Alcohols, C10-C16, ethoxylated	68002-97-1	0.02916%	0.00150%	
			Alcohols, C12-C14, ethoxylated	68439-50-9	0.02916%	0.00150%	
			Trisodium ortho phosphate	7601-54-9	0.02601%	0.00133%	
			Ethane-1,2-diol	107-21-1	0.02601%	0.00133%	
			Alkyl(c12-16) dimethylbenzyl ammonium chloride	68424-85-1	0.01144%	0.00059%	
			Prop-2-yn-1-ol	107-19-7	0.01047%	0.00054%	
			Ethanol	64-17-5	0.00137%	0.00007%	
			Organic polymer	Proprietary	0.00062%	0.00003%	
			Aliphatic ester	Proprietary	0.00006%	< 0.00001%	

<sup>\*</sup> Total Water Volume sources may include fresh water, produced water, and/or recycled water

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

<sup>\*\*</sup> Information is based on the maximum potential for concentration and thus the total may be over 100%

#### Remarks

Tiffany Golay 02/27/013 09:17 am	TVD= 5,361'
Tiffany Golay 02/27/013 09:17 am	Conductor weight= 94 lbs/ft