



1089238

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Shell Gulf of Mexico Inc.
Well Name	Croft Farms 3407 30-2H
Doc ID	1089238

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
6	5870' - 6056'	12936 gals fluid, 80901# proppant	
6	6143' - 6157'		
6	6238' - 6565'	25662 gals fluid, 36400# proppant	
6	6650' - 7000'	11802 gals fluid, 41007# proppant	
6	7245' - 7637'	323 gals fluid, 50493# proppant	
6	7713' - 8027'	375 gals fluid, 63204# proppant	
6	8103' - 8417'	488 gals fluid, 46186# proppant	
6	8493' - 8807'	12768 gals fluid, 69961# proppant	
6	8878' - 9119'	10374 gals fluid, 67268# proppant	
6	9273' - 9587'	17718 gals fluid, 52327# proppant	

Form	ACO1 - Well Completion
Operator	Shell Gulf of Mexico Inc.
Well Name	Croft Farms 3407 30-2H
Doc ID	1089238

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	26	18	47.44	60	1/2 Portland Cmt	25	15% Fly Ash
Surface	12.25	9.625	36	800	Class C	500	See attached
Intermediate	8.75	7	23	5419	Class C	990	See attached
Liner	6.125	4.5	11.6	9830	H50:50:0	580	See attached

SHELL GULF OF MEXICO, INC. (34574)

Croft Farms 3407 - 30

PETE MARTIN DRILLING (34645) (SET THE CONDUCTOR)		
Call in DATE OF SPUD	2-H conductor 3/30/2012	2-H mouse Hole 3/30/2012
spud in date	3/31/2012	4/2/2012
T.D date	4/1/2012	4/3/2012
Size Hole Drilled	26" Diam	20"
Size Casing Set (in O.D)	18"	14"
conductor wall thickness	.250	.118
Weight Lbs./Ft.	47.44 ppf	27.76 ppf
Setting Depth	60'	77'
Type of Cement	Type 1\2 portland cement	Type 1\2 portland cement
Cubic yards of cement	5 cu yds	5 cu ysd
2500 PSI Grout Mix	Yes	yes
Type and Percent of Additives	15% Fly ash	15% Fly ash
Comments	0'-12'dirt 12'-60' hard clay hit a little water at 25'	0'-12'dirt 12'-60' hard clay hit a little water at 25'

CEMENT JOB REPORT



CUSTOMER SHELL WESTERN E & P INC			DATE 25-MAY-12		F.R. # 1001910865		SERV. SUPV. JUSTIN D STAMPER							
LEASE & WELL NAME CROFT FARMS 3407 #30-2H - API 1507721815000			LOCATION 30-34S-7W			COUNTY-PARISH-BLOCK Harper Kansas								
DISTRICT McAlester			DRILLING CONTRACTOR RIG #			TYPE OF JOB Surface								
SIZE & TYPE OF PLUGS		LIST-CSG-HARDWARE			MECHANICAL BARRIERS		MD	TVD	HANGER TYPES		MD	TVD		
9-5/8" Top Cem Plug, Nitrile cvr, Ph		Shoe PROVIDED BY CUSTOMER												
MATERIALS FURNISHED BY BJ				LAB REPORT NO.				PHYSICAL SLURRY PROPERTIES						
								SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
WATER									8.34			20		
C+2%CACL2+.25#CELLOFLKE				500				14.8	1.35	6.34	03:20	119.89	75.45	
Water								8.34				60		
Available Mix Water		500		Bbl.		Available Displ. Fluid		500		Bbl.		TOTAL	199.89	75.45
HOLE			TBG-CSG-D.P.						COLLAR DEPTHS					
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE		
12.25		825	8.921	9.625	36	CSG	819	819	J-55	819	780			
LAST CASING			PKR-CMT RET-BR PL-LINER			PERF. DEPTH		TOP CONN		WELL FLUID				
ID	OD	WGT	TYPE	MD	TVD	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.	
17.	18	84		60	60					9.625	8RD	WATER BASED ML	8.8	
DISPL. VOLUME		DISPL. FLUID		CAL. PSI		CAL. MAX PSI		OP. MAX		MAX TBG PSI		MAX CSG PSI		MIX WATER
VOLUME	UOM	TYPE	WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator				
60	BBLs	Water	8.34	268					2816	1000			FRAC TANK	
EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING: ARRIVE ON LOCATION, RIG UP, WAIT ON CASING														
PRESSURE/RATE DETAIL						EXPLANATION								
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>								
	PIPE	ANNULUS				TEST LINES 3300 PSI								
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>								
15:00						ARRIVE ON LOCATION								
22:30						SAFETY MEETING								
23:15	3300				WATER	TEST LINES, START WATER AHEAD								
23:20	110		4	14	WATER	FINISH WATER, START SLURRY								
23:53	100		3	120	SLURRY	FINISH SLURRY, DROP PLUG, START DISPLACMENT								
00:06	320		5	50	WATER	SLOW TO BUMP PLUG								
00:09	350		3	10	WATER	BUMP PLUG, PRESSURE TO 900 PSI								
00:10				.25		BLEED OFF RECIVED .25 BBLs BACK TO TRUCK								
						FLOAT HOLDING								
						RECIVED BBLs OF 54 CMT BACK TO SURFACE								
						THANK YOU FOR USING BHI								
						JUSTIN STAMPER AND CREW								
BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL. PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	SERVICE SUPERVISOR SIGNATURE:							
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	900	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	54	185	0	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N								

CEMENT JOB REPORT



CUSTOMER SHELL WESTERN E & P INC	DATE 27-JUN-12	F.R. # 1001918930	SERV. SUPV. JUAN D MAESTAS
LEASE & WELL NAME CROFT FARMS 3407 #30-2H - API 1507721815000	LOCATION 30-34S-7W		COUNTY-PARISH-BLOCK Harper Kansas
DISTRICT McAlester	DRILLING CONTRACTOR RIG #		TYPE OF JOB Intermediate

SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	MECHANICAL BARRIERS	MD	TVD	HANGER TYPES	MD	TVD
7" Top Cem Plug, Nitrile cvr, Phen	Float Shoe 7 - 8rd						
	Float Collar, Auto Fill, 7 - 8rd						

MATERIALS FURNISHED BY BJ	LAB REPORT NO.	PHYSICAL SLURRY PROPERTIES						
		SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
C50:50:2 +.01%bwoc static free +5% bwow sodium chl		200	14.2	1.32	5.66	03:45	46.91	26.94
Displacement			8.34				211.13	
SealBond Spacer 25 (w/ 45lb bag)			8.45				40	
C15:85:8 + .01%bwoc static free + 10% bwow sodium		790	12.4	2.45	13.51	05:00	344.26	254.16
Available Mix Water <u>1000</u> Bbl. Available Displ. Fluid <u>1000</u> Bbl.		TOTAL		642.31	281.10			

HOLE			TBG-CSG-D.P.							COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
8.75		5419	6.366	7	23	CSG	5419	4797				

LAST CASING						PKR-CMT RET-BR PL-LINER		PERF. DEPTH		TOP CONN		WELL FLUID	
ID	OD	WGT	TYPE	MD	TVD	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.
8.9	9.625	36		800	800			4600	4600				

DISPL. VOLUME		DISPL. FLUID		CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		MIX WATER
VOLUME	UOM	TYPE	WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator	
211.8	BBLS	Displacement	8.34	1500	0	0	0	0	6340	5072	RIG

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL						EXPLANATION	
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>	
	PIPE	ANNULUS				TEST LINES	5500 PSI
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>	
17:00	0	0	0	0	0	ARRIVED ON LOCATION	
17:05	0	0	0	0	0	HAZARD ASSESMENT WALKAROUND	
17:05	0	0	0	0	0	CIRCULATE	
20:01	0	0	0	0	0	HELD SAFTY MEETING WITH RIG CREW	
20:33	0	0	0	0	SPC	PUMP SEALBOND SPACER WITH RIG	
21:21	0	0	0	0	H2O	TEST PUMP AND LINES TO 5000 PSI	
21:24	400	0	3.5	20	H2O	PUMP FRESH WATER SPACER	
21:30	410	0	3.3	320	CMT	PUMP LEAD SLURRY AT 12.4 PPG	
23:18	130	0	2.6	46	CMT	PUMP TAIL SLURRY @ 14.2 PPG	
23:36	0	0	0	0	CMT	SHUT DOWN	
23:40	130	0	3.7	2	H2O	DROP TOP PLUG AND DISPLACE	
23:48	310	0	3.7	20	H2O	SEE LIFT PRESSURE	
00:06	880	0	3.7	90	H2O	CEMENT TO SURFACE	
00:27	1370	0	1.8	160	H2O	SLOW RATE	
00:56	2100	0	1.8	203	H2O	BUMP TOP PLUG TO 2580 PSI	
01:01	0	0	0	0	H2O	BLEED PRESSURE 1.7BBLS RTN FLOAT HELD	

CEMENT JOB REPORT



PRESSURE/RATE DETAIL						EXPLANATION	
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>	
	PIPE	ANNULUS				TEST LINES 5500 PSI	
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>	
BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL. PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	SERVICE SUPERVISOR SIGNATURE:
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	2100	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	113	577	0	Y <input checked="" type="checkbox"/> N	

CEMENT JOB REPORT



CUSTOMER SHELL WESTERN E & P INC			DATE 27-JUL-12			F.R.# 1001924229			SERV. SUPV. JUSTIN D STAMPER					
LEASE & WELL NAME CROFT FARMS 3407 #30-2H - API 1507721815000			LOCATION 30-34S-7W			COUNTY-PARISH-BLOCK Harper Kansas								
DISTRICT McAlester			DRILLING CONTRACTOR RIG #			TYPE OF JOB Liner								
SIZE & TYPE OF PLUGS		LIST-CSG-HARDWARE			MECHANICAL BARRIERS			MD	TVD	HANGER TYPES MD TVD				
		Shoe PROVIDED BY CUSTOMER												
MATERIALS FURNISHED BY BJ				LAB REPORT NO.				PHYSICAL SLURRY PROPERTIES						
								SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
SealBond Spacer 25 (w/ 45lb bag)								8.45			40			
H50:50:0 + .5%FL-52A+.15%R-3+3%Salt+.6%SMS+.5								580	14.3	1.24	5.54	04:42	128	76.25
DISPLACEMENT								8.34				123		
Available Mix Water		1000	Bbl.	Available Displ. Fluid		1000	Bbl.	TOTAL		291	76.25			
HOLE			TBG-CSG-D.P.						COLLAR DEPTHS					
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE		
6.125		9745	4	4.5	11.6	CSG	5349	9830	P-110	9830	9747			
			3.24	4	15.7	DP	4480		D					
LAST CASING			PKR-CMT RET-BR PL-LINER			PERF. DEPTH		TOP CONN		WELL FLUID				
ID	OD	WGT	TYPE	MD	TVD	BRAND & TYPE	DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.	
6.3	7	26		5025	5025					2	1502	WATER BASED ML	8.4	
DISPL. VOLUME		DISPL. FLUID		CAL. PSI		CAL. MAX PSI		OP. MAX		MAX TBG PSI		MAX CSG PSI		MIX WATER
VOLUME	UOM	TYPE		WGT.	BUMP PLUG	TO REV.		SQ. PSI	RATED	Operator	RATED	Operator		
130.3	BBLs	DISPLACEMENT		8.34	4800						8552	5000	Frac Tank	
EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING: ARRIVE ON LOCATION, RIG UP, WAIT ON RIG														
PRESSURE/RATE DETAIL						EXPLANATION								
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>								
	PIPE	ANNULUS				TEST LINES 6000 PSI								
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>								
03:00						ARRIVE ON LOCATION								
23:00						SAFETY MEETING								
00:13	6200				WATER	TEST LINES, START SLURRY, RIG PUMPED SPACER								
00:52	250		3	128	SLURRY	FINISH SLURRY, SHUT DOWN WASH PUMP AND LINES, START DISPLACEMENT								
01:06	180		5	30	WATER	SLOW TO SHEER PLUG								
01:09	900		3	40	WATER	SHEER WIPER PLUG								
01:39	500		3	122	WATER	BUMP PLUG, PRESSURE TO 4800 PSI								
01:45	0				WATER	BLEED OFF AND CHECK FLOATS, RECIVED 2 BBLs BACK TO TRUCK								
01:59	4500		.7	1	WATER	PRESSURE TEST LINER AND HOLD FOR 10 MINS								
02:13	0					BLEED OFF AND SWAPP OVER TO REVERSE OUT								
02:41	600		6	98	WATER	REVERSE OUT								
						THANK YOU FOR USING BHI								
						JUSTIN STAMPER AND CREW								
BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL. PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	SERVICE SUPERVISOR SIGNATURE:							
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	4800	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	0	389	0	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N								



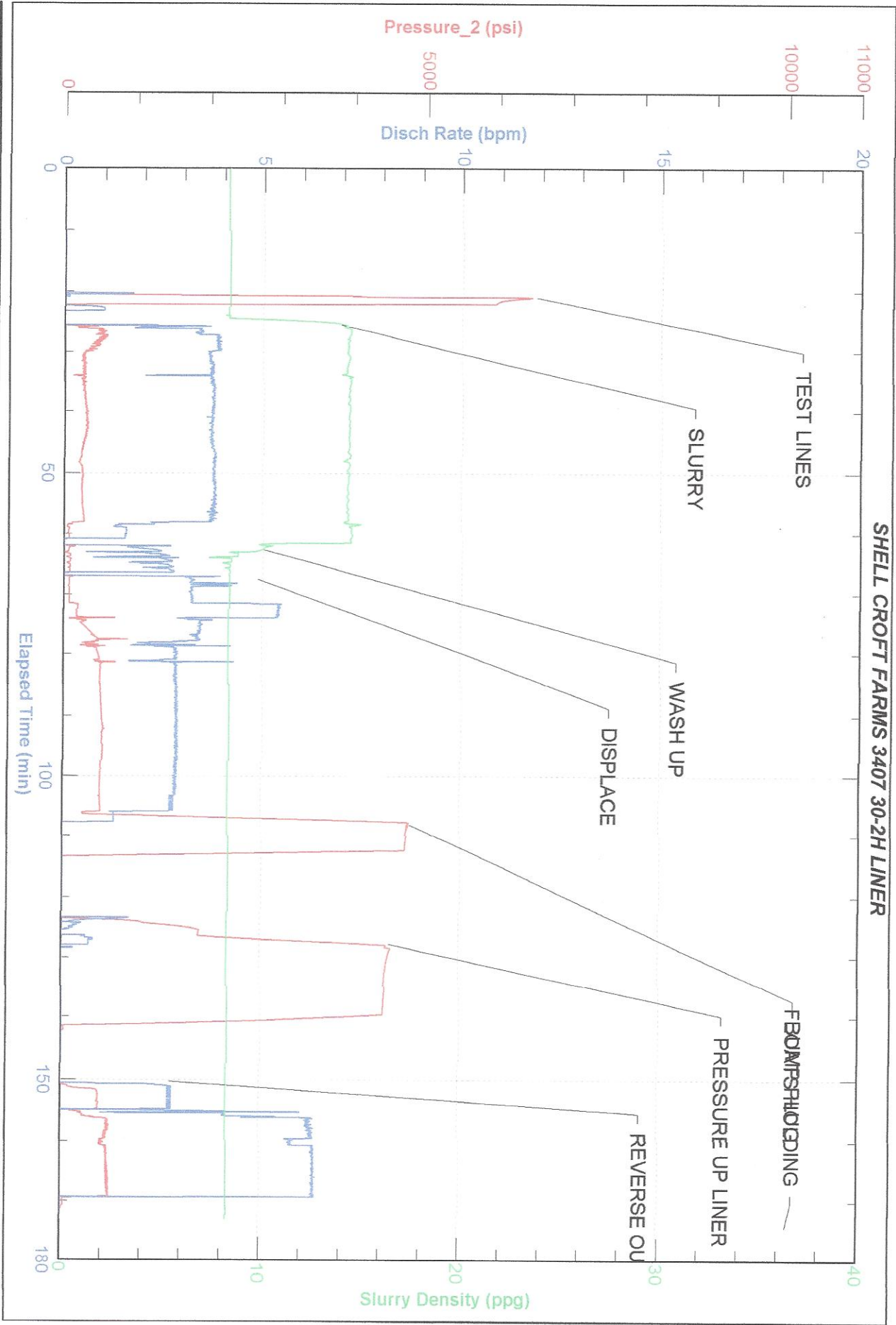
BJ Services JobMaster Program Version 3.50

Job Number: 1001924229

Customer: SHELL

Well Name: CROFT FARMS 3407 30-2H

SHELL CROFT FARMS 3407 30-2H LINER



Shell Exploration & Production Co. Inc.

Harper Co. KS (NAD-27)

Sec 30-T34S-R07W

Croft Farms 3407 #30-2H/ Job#9281847 / Nabors 774

Wellbore #1

Design: Wellbore #1

Sperry Drilling Services

Combo Report With Grid North & True North

23 July, 2012

Well Coordinates: 140,457.87 N, 2,109,812.34 E (37° 03' 06.49" N, 098° 07' 25.48" W)

Ground Level: 1,329.00 ft

Local Coordinate Origin:	Centered on Well Croft Farms 3407 #30-2H/ Job#9281847 / Nabors 774
Viewing Datum:	WELL @ 1350.68ft (Original Well Elev)
TVDs to System:	N
North Reference:	True
Unit System:	API-US-new

Version: 2003.21 Build: 43

HALLIBURTON

Design Report for Croft Farms 3407 #30-2H/ Job#9281847 / Nabors 774 - Wellbore #1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	True Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates (ft)		Map Coordinates (ft)		Dogleg Rate (°/100ft)	Vertical Section (ft)	Comments
						Northing	Easting	Northing	Easting			
0.00	0.00	359.77	0.00	1,350.68	0.00	0.00 N	0.00 E	140,457.87	2,109,812.34	0.00	0.00	
144.00	0.25	141.80	142.03	1,206.68	144.00	0.25 S	0.19 E	140,457.62	2,109,812.53	0.17	0.25	First MWD Survey
205.00	0.59	171.13	171.36	1,145.68	205.00	0.66 S	0.32 E	140,457.21	2,109,812.67	0.64	0.67	
236.00	1.60	169.52	169.75	1,114.69	235.99	1.25 S	0.42 E	140,456.62	2,109,812.77	3.26	1.25	
267.00	2.63	175.76	175.99	1,083.71	266.97	2.38 S	0.55 E	140,455.49	2,109,812.90	3.40	2.39	
297.00	4.00	182.08	182.31	1,053.76	296.92	4.11 S	0.56 E	140,453.76	2,109,812.91	4.72	4.12	
328.00	4.38	182.95	183.18	1,022.84	327.84	6.38 S	0.45 E	140,451.50	2,109,812.81	1.24	6.38	
420.00	4.63	173.21	173.44	931.13	419.55	13.57 S	0.68 E	140,444.30	2,109,813.07	0.87	13.58	
512.00	4.67	178.75	178.98	839.43	511.25	21.01 S	1.17 E	140,436.87	2,109,813.59	0.49	21.02	
604.00	4.43	178.52	178.75	747.72	602.96	28.30 S	1.31 E	140,429.57	2,109,813.77	0.26	28.32	
697.00	4.30	177.56	177.79	654.99	695.69	35.38 S	1.52 E	140,422.50	2,109,814.01	0.16	35.40	
757.00	4.08	175.89	176.12	595.15	755.53	39.76 S	1.76 E	140,418.12	2,109,814.26	0.42	39.78	
898.00	3.57	181.87	182.10	454.46	896.22	49.15 S	1.93 E	140,408.73	2,109,814.47	0.46	49.17	
990.00	2.75	181.76	181.99	362.60	988.08	54.22 S	1.75 E	140,403.66	2,109,814.31	0.89	54.24	
1,082.00	2.60	189.38	189.61	270.70	1,079.98	58.48 S	1.33 E	140,399.40	2,109,813.90	0.42	58.49	
1,267.00	2.14	190.52	190.75	85.86	1,264.82	66.01 S	0.02 W	140,391.86	2,109,812.59	0.25	66.00	
1,451.00	0.87	197.68	197.91	-98.07	1,448.75	70.71 S	1.09 W	140,387.15	2,109,811.54	0.70	70.69	
1,639.00	0.33	177.90	178.13	-286.06	1,636.74	72.61 S	1.51 W	140,385.25	2,109,811.12	0.30	72.58	
1,827.00	0.25	89.71	89.94	-474.06	1,824.74	73.15 S	1.08 W	140,384.71	2,109,811.55	0.22	73.13	
2,016.00	0.31	169.41	169.64	-663.06	2,013.74	73.66 S	0.58 W	140,384.21	2,109,812.06	0.19	73.64	
2,205.00	0.28	179.49	179.72	-852.05	2,202.73	74.62 S	0.48 W	140,383.25	2,109,812.16	0.03	74.61	
2,394.00	0.20	141.01	141.24	-1,041.05	2,391.73	75.34 S	0.27 W	140,382.53	2,109,812.37	0.09	75.33	
2,583.00	0.29	167.32	167.55	-1,230.05	2,580.73	76.06 S	0.04 E	140,381.81	2,109,812.68	0.08	76.06	
2,773.00	0.10	294.35	294.58	-1,420.05	2,770.73	76.46 S	0.01 W	140,381.41	2,109,812.64	0.19	76.46	
2,962.00	0.15	217.67	217.90	-1,609.05	2,959.73	76.59 S	0.31 W	140,381.28	2,109,812.34	0.08	76.58	
3,151.00	0.19	58.56	58.79	-1,798.05	3,148.73	76.62 S	0.20 W	140,381.25	2,109,812.45	0.18	76.61	
3,339.00	0.29	137.74	137.97	-1,986.05	3,336.73	76.82 S	0.39 E	140,381.06	2,109,813.04	0.17	76.81	
3,529.00	0.18	67.01	67.24	-2,176.05	3,526.73	77.06 S	0.98 E	140,380.82	2,109,813.64	0.15	77.06	
3,718.00	0.76	80.31	80.54	-2,365.04	3,715.72	76.74 S	2.49 E	140,381.14	2,109,815.14	0.31	76.77	
3,907.00	0.75	65.20	65.43	-2,554.02	3,904.70	76.02 S	4.86 E	140,381.87	2,109,817.50	0.11	76.08	
4,096.00	0.77	57.73	57.96	-2,743.01	4,093.69	74.83 S	7.06 E	140,383.07	2,109,819.70	0.05	74.92	
4,190.00	0.86	183.23	183.46	-2,837.00	4,187.68	75.20 S	7.55 E	140,382.70	2,109,820.19	1.54	75.30	
4,222.00	3.46	186.43	186.66	-2,868.98	4,219.66	76.40 S	7.42 E	140,381.50	2,109,820.07	8.13	76.50	
4,253.00	7.57	187.50	187.73	-2,899.83	4,250.51	79.35 S	7.04 E	140,378.55	2,109,819.70	13.26	79.45	
4,285.00	11.70	180.71	180.94	-2,931.37	4,282.05	84.69 S	6.70 E	140,373.21	2,109,819.39	13.36	84.77	
4,316.00	14.83	177.70	177.93	-2,961.54	4,312.22	91.79 S	6.80 E	140,366.10	2,109,819.51	10.34	91.88	
4,348.00	17.38	177.25	177.48	-2,992.28	4,342.96	100.66 S	7.15 E	140,357.24	2,109,819.90	7.98	100.76	

Design Report for Croft Farms 3407 #30-2H/ Job#9281847 / Nabors 774 - Wellbore #1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	True Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates (ft)		Map Coordinates (ft)		Dogleg Rate (°/100ft)	Vertical Section (ft)	Comments
						Northing	Easting	Northing	Easting			
4,380.00	19.42	178.32	178.55	-3,022.64	4,373.32	110.76 S	7.50 E	140,347.14	2,109,820.29	6.46	110.86	
4,411.00	21.60	179.62	179.85	-3,051.68	4,402.36	121.62 S	7.64 E	140,336.29	2,109,820.47	7.18	121.72	
4,443.00	23.68	178.75	178.98	-3,081.21	4,431.89	133.93 S	7.77 E	140,323.97	2,109,820.65	6.58	134.03	
4,474.00	25.94	177.72	177.95	-3,109.35	4,460.03	146.94 S	8.13 E	140,310.97	2,109,821.06	7.42	147.04	
4,506.00	29.03	177.27	177.50	-3,137.73	4,488.41	161.69 S	8.72 E	140,296.22	2,109,821.71	9.68	161.80	
4,538.00	32.32	178.19	178.42	-3,165.25	4,515.93	178.00 S	9.29 E	140,279.91	2,109,822.35	10.39	178.12	
4,569.00	35.80	178.61	178.84	-3,190.93	4,541.61	195.36 S	9.70 E	140,262.55	2,109,822.83	11.25	195.48	
4,601.00	38.43	178.89	179.12	-3,216.44	4,567.12	214.66 S	10.05 E	140,243.25	2,109,823.25	8.24	214.79	
4,633.00	41.30	179.56	179.79	-3,241.00	4,591.68	235.17 S	10.24 E	140,222.74	2,109,823.53	9.07	235.29	
4,664.00	44.36	180.01	180.24	-3,263.73	4,614.41	256.24 S	10.23 E	140,201.67	2,109,823.60	9.92	256.36	
4,696.00	48.39	180.52	180.75	-3,285.81	4,636.49	279.40 S	10.03 E	140,178.51	2,109,823.49	12.65	279.52	
4,727.00	52.34	180.57	180.80	-3,305.58	4,656.26	303.27 S	9.70 E	140,154.65	2,109,823.27	12.74	303.38	
4,759.00	56.01	180.79	181.02	-3,324.31	4,674.99	329.20 S	9.29 E	140,128.71	2,109,822.96	11.48	329.31	
4,790.00	59.00	181.28	181.51	-3,340.96	4,691.64	355.34 S	8.71 E	140,102.57	2,109,822.48	9.74	355.43	
4,807.99	60.75	181.12	181.36	-3,349.99	4,700.67	370.90 S	8.32 E	140,087.01	2,109,822.16	9.78	370.98	Cross section Line @4807.99' MD / 4700.67' TVD
4,822.00	62.12	181.01	181.24	-3,356.68	4,707.36	383.20 S	8.04 E	140,074.71	2,109,821.93	9.78	383.27	
4,853.00	64.65	179.97	180.20	-3,370.57	4,721.25	410.91 S	7.70 E	140,047.00	2,109,821.70	8.69	410.98	
4,885.00	68.15	178.67	178.90	-3,383.38	4,734.06	440.23 S	7.93 E	140,017.68	2,109,822.05	11.55	440.29	
4,916.00	72.12	177.62	177.85	-3,393.91	4,744.59	469.36 S	8.76 E	139,988.55	2,109,823.00	13.20	469.44	
4,948.00	75.27	177.78	178.01	-3,402.90	4,753.58	500.05 S	9.87 E	139,957.86	2,109,824.23	9.86	500.14	
4,979.00	77.82	178.13	178.36	-3,410.11	4,760.79	530.18 S	10.82 E	139,927.74	2,109,825.30	8.30	530.28	
5,011.00	80.84	177.46	177.69	-3,416.03	4,766.71	561.61 S	11.91 E	139,896.32	2,109,826.52	9.66	561.72	
5,042.00	83.68	176.64	176.87	-3,420.21	4,770.89	592.29 S	13.37 E	139,865.64	2,109,828.10	9.53	592.42	
5,105.00	87.90	176.42	176.65	-3,424.83	4,775.51	655.00 S	16.92 E	139,802.94	2,109,831.90	6.71	655.18	
5,137.00	88.80	176.88	177.11	-3,425.75	4,776.43	686.94 S	18.66 E	139,771.01	2,109,833.77	3.16	687.14	
5,151.08	89.05	176.90	177.13	-3,426.02	4,776.70	701.00 S	19.37 E	139,756.95	2,109,834.54	1.78	701.21	Cross 330' FNL @5151.08' MD/ 4776.70' TVD (330' FNL, 1320' FWL)
5,168.00	89.35	176.92	177.15	-3,426.25	4,776.93	717.90 S	20.21 E	139,740.06	2,109,835.45	1.78	718.12	
5,256.00	92.90	177.08	177.31	-3,424.53	4,775.21	805.76 S	24.46 E	139,652.21	2,109,840.05	4.04	806.04	
5,348.00	90.65	178.63	178.86	-3,421.68	4,772.36	897.66 S	27.53 E	139,560.33	2,109,843.50	2.97	897.97	
5,440.00	90.77	180.51	180.74	-3,420.54	4,771.22	989.65 S	27.86 E	139,468.34	2,109,844.19	2.05	989.95	
5,532.00	90.93	180.29	180.52	-3,419.17	4,769.85	1,081.63 S	26.84 E	139,376.36	2,109,843.55	0.30	1,081.91	
5,624.00	86.61	180.35	180.58	-3,421.15	4,771.83	1,173.59 S	25.96 E	139,284.40	2,109,843.04	4.70	1,173.84	
5,704.00	87.44	180.38	180.61	-3,425.30	4,775.98	1,253.47 S	25.13 E	139,204.51	2,109,842.53	1.04	1,253.71	
5,798.00	89.20	180.57	180.80	-3,428.05	4,778.73	1,347.42 S	23.98 E	139,110.56	2,109,841.75	1.88	1,347.63	
5,892.00	89.29	180.01	180.24	-3,429.29	4,779.97	1,441.41 S	23.12 E	139,016.57	2,109,841.28	0.60	1,441.59	
5,987.00	90.96	178.82	179.05	-3,429.08	4,779.76	1,536.40 S	23.71 E	138,921.58	2,109,842.25	2.16	1,536.58	

Design Report for Croft Farms 3407 #30-2H/ Job#9281847 / Nabors 774 - Wellbore #1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	True Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates Northing (ft)	Local Coordinates Easting (ft)	Map Coordinates Northing (ft)	Map Coordinates Easting (ft)	Dogleg Rate (°/100ft)	Vertical Section (ft)	Comments
6,082.00	88.37	178.72	178.95	-3,429.64	4,780.32	1,631.38 S	25.37 E	138,826.61	2,109,844.29	2.73	1,631.57	
6,176.00	89.38	178.15	178.38	-3,431.49	4,782.17	1,725.33 S	27.56 E	138,732.67	2,109,846.86	1.23	1,725.55	
6,270.00	88.28	177.13	177.36	-3,433.41	4,784.09	1,819.25 S	31.05 E	138,638.77	2,109,850.73	1.60	1,819.50	
6,365.00	90.65	178.50	178.73	-3,434.29	4,784.97	1,914.18 S	34.29 E	138,543.85	2,109,854.36	2.88	1,914.47	
6,460.00	89.20	179.39	179.62	-3,434.42	4,785.10	2,009.16 S	35.66 E	138,448.87	2,109,856.11	1.79	2,009.47	
6,554.00	88.71	179.95	180.18	-3,436.13	4,786.81	2,103.15 S	35.82 E	138,354.89	2,109,856.65	0.79	2,103.45	
6,649.00	88.89	179.99	180.22	-3,438.12	4,788.80	2,198.13 S	35.49 E	138,259.91	2,109,856.70	0.19	2,198.41	
6,743.00	90.25	179.53	179.76	-3,438.83	4,789.51	2,292.12 S	35.51 E	138,165.92	2,109,857.10	1.53	2,292.39	
6,838.00	91.88	179.28	179.51	-3,437.06	4,787.74	2,387.10 S	36.11 E	138,070.94	2,109,858.09	1.74	2,387.37	
6,932.00	92.62	180.41	180.64	-3,433.37	4,784.05	2,481.02 S	35.99 E	137,977.02	2,109,858.34	1.44	2,481.28	
7,027.00	89.11	180.25	180.48	-3,431.94	4,782.62	2,575.99 S	35.06 E	137,882.04	2,109,857.80	3.70	2,576.23	
7,121.00	86.73	179.03	179.26	-3,435.35	4,786.03	2,669.92 S	35.27 E	137,788.12	2,109,858.39	2.84	2,670.15	
7,216.00	89.17	177.93	178.16	-3,438.75	4,789.43	2,764.83 S	37.41 E	137,693.22	2,109,860.91	2.82	2,765.08	
7,310.00	86.70	178.09	178.32	-3,442.13	4,792.81	2,858.72 S	40.30 E	137,599.34	2,109,864.17	2.63	2,859.00	
7,404.00	88.06	177.19	177.42	-3,446.43	4,797.11	2,952.55 S	43.79 E	137,505.53	2,109,868.04	1.73	2,952.87	
7,498.00	88.34	177.58	177.81	-3,449.38	4,800.06	3,046.42 S	47.70 E	137,411.67	2,109,872.33	0.51	3,046.79	
7,593.00	90.83	178.35	178.58	-3,450.07	4,800.75	3,141.36 S	50.69 E	137,316.74	2,109,875.71	2.74	3,141.77	
7,688.00	89.08	179.46	179.69	-3,450.14	4,800.82	3,236.35 S	52.12 E	137,221.76	2,109,877.52	2.18	3,236.76	
7,782.00	88.61	179.02	179.25	-3,452.04	4,802.72	3,330.32 S	52.99 E	137,127.79	2,109,878.77	0.68	3,330.74	
7,877.00	89.26	178.24	178.47	-3,453.80	4,804.48	3,425.29 S	54.88 E	137,032.84	2,109,881.05	1.07	3,425.72	
7,971.00	90.31	177.88	178.11	-3,454.16	4,804.84	3,519.24 S	57.69 E	136,938.89	2,109,884.23	1.18	3,519.71	
8,066.00	91.08	177.76	177.99	-3,453.01	4,803.69	3,614.18 S	60.92 E	136,843.97	2,109,887.84	0.82	3,614.69	
8,160.00	90.80	179.84	180.07	-3,451.46	4,802.14	3,708.15 S	62.51 E	136,750.01	2,109,889.81	2.23	3,708.67	
8,255.00	90.34	180.43	180.66	-3,450.52	4,801.20	3,803.14 S	61.91 E	136,655.02	2,109,889.59	0.79	3,803.64	
8,349.00	89.54	180.79	181.02	-3,450.62	4,801.30	3,897.13 S	60.53 E	136,561.02	2,109,888.59	0.93	3,897.60	
8,444.00	88.61	180.45	180.68	-3,452.15	4,802.83	3,992.11 S	59.12 E	136,466.04	2,109,887.57	1.04	3,992.55	
8,475.00	89.07	180.79	181.02	-3,452.78	4,803.46	4,023.10 S	58.66 E	136,435.05	2,109,887.23	1.85	4,023.53	
8,507.00	88.86	180.79	181.02	-3,453.36	4,804.04	4,055.09 S	58.09 E	136,403.06	2,109,886.79	0.66	4,055.50	
8,538.00	88.98	180.85	181.08	-3,453.94	4,804.62	4,086.08 S	57.52 E	136,372.07	2,109,886.35	0.43	4,086.48	
8,570.00	89.32	180.30	180.53	-3,454.41	4,805.09	4,118.07 S	57.07 E	136,340.07	2,109,886.03	2.02	4,118.46	
8,601.00	88.86	179.34	179.57	-3,454.91	4,805.59	4,149.07 S	57.04 E	136,309.08	2,109,886.13	3.43	4,149.46	
8,633.00	88.98	179.25	179.48	-3,455.51	4,806.19	4,181.06 S	57.31 E	136,277.08	2,109,886.52	0.47	4,181.45	
8,664.00	89.29	179.69	179.92	-3,455.98	4,806.66	4,212.05 S	57.47 E	136,246.09	2,109,886.81	1.74	4,212.44	
8,696.00	89.94	179.44	179.67	-3,456.19	4,806.87	4,244.05 S	57.59 E	136,214.09	2,109,887.05	2.18	4,244.44	
8,728.00	89.91	179.08	179.31	-3,456.24	4,806.92	4,276.05 S	57.87 E	136,182.09	2,109,887.47	1.13	4,276.44	
8,759.00	89.35	178.74	178.97	-3,456.44	4,807.12	4,307.05 S	58.34 E	136,151.10	2,109,888.06	2.11	4,307.44	
8,791.00	88.95	178.39	178.62	-3,456.91	4,807.59	4,339.04 S	59.01 E	136,119.11	2,109,888.86	1.66	4,339.44	

Design Report for Croft Farms 3407 #30-2H/ Job#9281847 / Nabors 774 - Wellbore #1

Measured Depth (ft)	Inclination (°)	Grid Azimuth (°)	True Azimuth (°)	TVD below System (ft)	Vertical Depth (ft)	Local Coordinates Northing (ft)	Local Coordinates Easting (ft)	Map Coordinates Northing (ft)	Map Coordinates Easting (ft)	Dogleg Rate (°/100ft)	Vertical Section (ft)	Comments
8,822.00	89.14	178.53	178.76	-3,457.43	4,808.11	4,370.02 S	59.72 E	136,088.13	2,109,889.69	0.76	4,370.43	
8,854.00	89.29	178.92	179.15	-3,457.87	4,808.55	4,402.02 S	60.30 E	136,056.14	2,109,890.41	1.31	4,402.43	
8,885.00	89.51	179.18	179.41	-3,458.19	4,808.87	4,433.01 S	60.69 E	136,025.15	2,109,890.92	1.10	4,433.43	
8,917.00	89.23	177.96	178.19	-3,458.54	4,809.22	4,465.00 S	61.36 E	135,993.16	2,109,891.72	3.91	4,465.42	
8,948.00	89.26	179.37	179.60	-3,458.95	4,809.63	4,495.99 S	61.96 E	135,962.17	2,109,892.44	4.55	4,496.42	
8,980.00	89.04	179.40	179.63	-3,459.42	4,810.10	4,527.99 S	62.17 E	135,930.18	2,109,892.79	0.69	4,528.41	
9,011.00	89.07	179.03	179.26	-3,459.94	4,810.62	4,558.98 S	62.47 E	135,899.18	2,109,893.21	1.20	4,559.41	
9,043.00	89.26	179.07	179.30	-3,460.40	4,811.08	4,590.98 S	62.88 E	135,867.19	2,109,893.74	0.61	4,591.41	
9,074.00	89.01	179.14	179.37	-3,460.87	4,811.55	4,621.97 S	63.24 E	135,836.20	2,109,894.23	0.84	4,622.40	
9,106.00	89.02	178.60	178.83	-3,461.42	4,812.10	4,653.96 S	63.74 E	135,804.21	2,109,894.86	1.69	4,654.40	
9,137.00	88.45	179.64	179.87	-3,462.10	4,812.78	4,684.95 S	64.09 E	135,773.22	2,109,895.34	3.82	4,685.39	
9,169.00	88.49	178.70	178.93	-3,462.96	4,813.64	4,716.94 S	64.43 E	135,741.24	2,109,895.80	2.94	4,717.38	
9,200.00	88.15	178.45	178.68	-3,463.87	4,814.55	4,747.92 S	65.07 E	135,710.26	2,109,896.57	1.36	4,748.36	
9,232.00	89.32	178.12	178.35	-3,464.57	4,815.25	4,779.90 S	65.90 E	135,678.28	2,109,897.53	3.80	4,780.35	
9,263.00	90.15	178.31	178.54	-3,464.72	4,815.40	4,810.89 S	66.74 E	135,647.30	2,109,898.50	2.75	4,811.35	
9,295.00	89.94	178.79	179.02	-3,464.69	4,815.37	4,842.88 S	67.42 E	135,615.31	2,109,899.31	1.64	4,843.35	
9,326.00	90.09	178.69	178.92	-3,464.68	4,815.36	4,873.88 S	67.98 E	135,584.32	2,109,899.99	0.58	4,874.35	
9,358.00	90.65	178.75	178.98	-3,464.48	4,815.16	4,905.87 S	68.57 E	135,552.33	2,109,900.70	1.76	4,906.35	
9,389.00	90.99	178.81	179.04	-3,464.03	4,814.71	4,936.86 S	69.10 E	135,521.34	2,109,901.36	1.11	4,937.34	
9,421.00	90.46	178.28	178.51	-3,463.63	4,814.31	4,968.85 S	69.79 E	135,489.35	2,109,902.18	2.34	4,969.34	
9,452.00	90.19	178.54	178.77	-3,463.45	4,814.13	4,999.84 S	70.52 E	135,458.36	2,109,903.04	1.21	5,000.34	
9,484.00	89.57	178.20	178.43	-3,463.52	4,814.20	5,031.83 S	71.30 E	135,426.38	2,109,903.95	2.21	5,032.34	
9,578.00	86.85	177.17	177.40	-3,466.46	4,817.14	5,125.71 S	74.72 E	135,332.51	2,109,907.75	3.09	5,126.26	
9,673.00	87.04	176.20	176.43	-3,471.52	4,822.20	5,220.44 S	79.83 E	135,237.80	2,109,913.23	1.04	5,221.05	Last MWD Survey
9,745.00	87.04	176.20	176.43	-3,475.24	4,825.92	5,292.21 S	84.30 E	135,166.06	2,109,918.00	0.00	5,292.87	Projected to TD

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
144.00	144.00	-0.25	0.19	First MWD Survey
4,807.99	4,700.67	-370.90	8.32	Cross section Line @4807.99' MD / 4700.67' TVD
5,151.08	4,776.70	-701.00	19.37	Cross 330' FNL @5151.08' MD/ 4776.70' TVD (330' FNL, 1320' FWL)
9,673.00	4,822.20	-5,220.44	79.83	Last MWD Survey
9,745.00	4,825.92	-5,292.21	84.30	Projected to TD

Design Report for Croft Farms 3407 #30-2H/ Job#9281847 / Nabors 774 - Wellbore #1

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
User	No Target (Freehand)	179.16	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
144.00	9,745.00	MWD Surveys	MWD+SC

Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	()	()	()	()	()	()	()		
- Shape	()	()	()	()	()	()	()		

Directional Difficulty Index

Average Dogleg over Survey:	1.92 °/100ft	Maximum Dogleg over Survey:	13.36 °/100ft at 4,285.00 ft
Net Tortousity applicable to Plans:	0.85 °/100ft	Directional Difficulty Index:	6.303

Audit Info



North Reference Sheet for Sec 30-T34S-R07W - Croft Farms 3407 #30-2H/ Job#9281847 / Nabors 774 - Wellbore #1

All data is in Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.
 Vertical Depths are relative to WELL @ 1350.68ft (Original Well Elev). Northing and Easting are relative to Croft Farms 3407 #30-2H/ Job#9281847 / Nabors 774
 Coordinate System is US State Plane 1927 (Exact solution), Kansas South 1502 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866
 Projection method is Lambert Conformal Conic (2 parallel)
 Central Meridian is 98° 30' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:37° 16' 0.000 N°
 False Easting: 2,000,000.00ft, False Northing: 0.00ft, Scale Reduction: 1.00004917

Grid Coordinates of Well: 140,457.87 ft N, 2,109,812.34 ft E
 Geographical Coordinates of Well: 37° 03' 06.49" N, 098° 07' 25.48" W
 Grid Convergence at Surface is: 0.23°

Based upon Minimum Curvature type calculations, at a Measured Depth of 9,745.00ft
 the Bottom Hole Displacement is 5,292.88ft in the Direction of 179.09° (True).
 Magnetic Convergence at surface is: -4.53° (27 April 2012, , BGGM2011)

Magnetic Model: BG GM2011
 Date: 27-Apr-12
 Declination: 4.76°
 Inclination/Dip: 85.25°
 Field Strength: 51846

Grid North is 0.23° East of True North (Grid Convergence)
 Magnetic North is 4.76° East of True North (Magnetic Declination)
 Magnetic North is 4.53° East of Grid North (Magnetic Convergence)

To convert a True Direction to a Grid Direction, Subtract 0.23°
 To convert a Magnetic Direction to a True Direction, Add 4.76° East
 To convert a Magnetic Direction to a Grid Direction, Add 4.53°

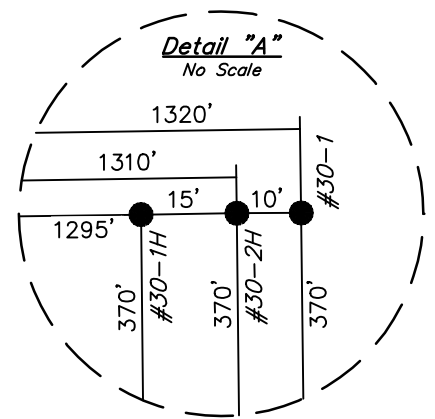
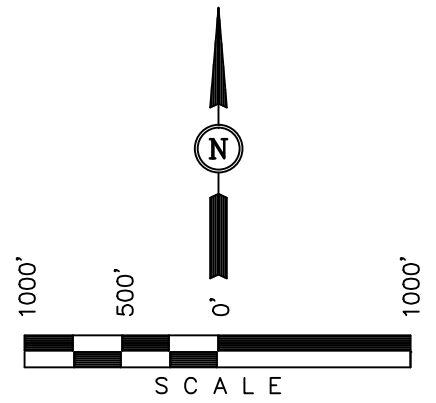
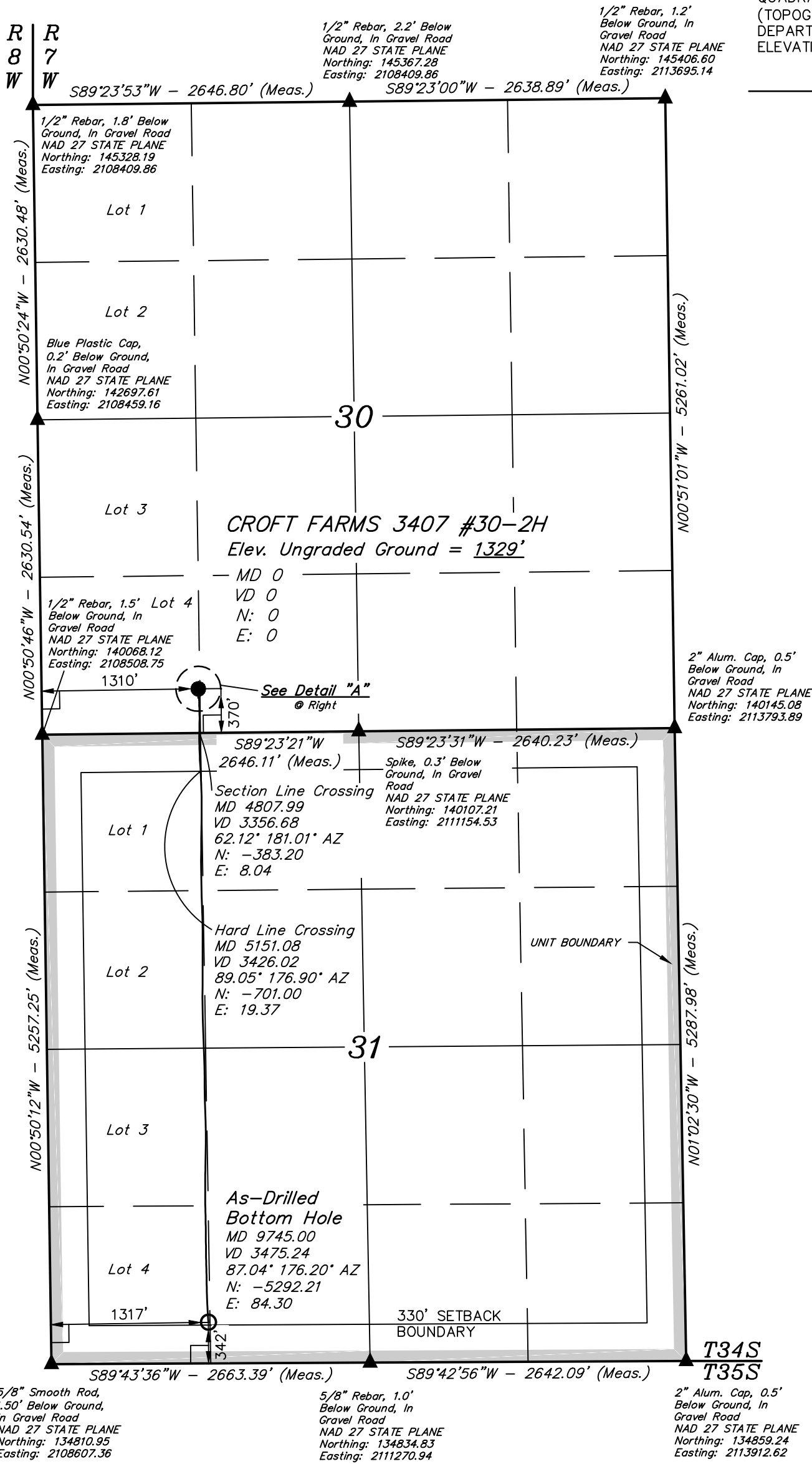
Well location, CROFT FARMS 3407 #30-2H, located as shown in Lot 4 of Section 30, T34S, R7W, 6th P.M., Harper County, Kansas.

BASIS OF ELEVATION

SPOT ELEVATION LOCATED AT THE NORTHEAST CORNER OF SECTION 22, T33S, R7W, 6th P.M. TAKEN FROM THE ANTHONY, QUADRANGLE, KANSAS, HARPER COUNTY, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 1348 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



LEGEND:

- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
 REGISTRATION NO. 1451
 STATE OF KANSAS

UINTAH ENGINEERING & LAND SURVEYING
 85 SOUTH 200 EAST - VERNAL, UTAH 84078
 (435) 789-1017

NAD 83 (#30-2H AS DRILLED BOTTOM HOLE) LATITUDE = 37°02'14.25" (37.037292) LONGITUDE = 98°07'25.67" (98.123797)	NAD 83 (#30-2H SURFACE LOCATION) LATITUDE = 37°03'06.58" (37.051828) LONGITUDE = 98°07'26.71" (98.124086)	SCALE 1" = 1000'	DATE SURVEYED: 07-23-12	DATE DRAWN: 11-02-12
NAD 27 (#30-2H AS DRILLED BOTTOM HOLE) LATITUDE = 37°02'14.16" (37.037267) LONGITUDE = 98°07'24.43" (98.123453)	NAD 27 (#30-2H SURFACE LOCATION) LATITUDE = 37°03'06.49" (37.051803) LONGITUDE = 98°07'25.48" (98.123744)	PARTY L.S. D.S. C.A.G.	REFERENCES G.L.O. PLAT	
STATE PLANE NAD 27 N: 135165.36 E: 2109918.38	STATE PLANE NAD 27 N: 140457.87 E: 2109812.34	WEATHER COLD	FILE SGOMI	

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/>

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

Sam Brownback, Governor

November 08, 2012

Damonica Pierson
Shell Gulf of Mexico Inc.
150 N DAIRY-ASHFORD (77079)
PO BOX 576 (77001-0576)
HOUSTON, TX 77001-0576

Re: ACO1
API 15-077-21815-01-00
Croft Farms 3407 30-2H
SW/4 Sec.30-34S-07W
Harper 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,
Damonica Pierson