



Confidentiality Requested:

Yes  No

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

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- 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:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

*(Data must be collected from the Reserve Pit)*

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

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

**KCC Office Use ONLY**

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1114847

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](mailto: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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  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: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Shell Gulf of Mexico Inc.
Well Name	Croft Farms 3407 27-2H
Doc ID	1114847

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
6	5515 - 5844	103488 gals fluid; 32608# proppant	
6	5940 - 6186	110250 gals fluid; 40491# proppant	
6	6279 - 6566	106554 gals fluid; 42368# proppant	
6	6659 - 6902	114282 gals fluid; 39753# proppant	
6	7016 - 7326	138222 gals fluid; 40403# proppant	
6	7419 - 7690	110460 gals fluid; 37988# proppant	
6	7799 - 7991	117558 gals fluid; 38626# proppant	
6	8179 - 8466	139524 gals fluid; 39098# proppant	

Form	ACO1 - Well Completion
Operator	Shell Gulf of Mexico Inc.
Well Name	Croft Farms 3407 27-2H
Doc ID	1114847

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	47.76	60	1/2 Portland Cmt	42	15% Fly Ash
Surface	12.25	9.625	36	490	Class C	325	See attached
Intermediate	8.75	7	23	5194	Class C	275	See attached
Liner	6.125	4.5	11.6	8597	Class H	295	See attached

## SHELL GULF OF MEXICO, INC. (34574)

## Croft 3407 27-2H

**PETE MARTIN DRILLING (34645)**  
**(SET THE CONDUCTOR)**

2-H conductor

2-H mouse Hole

Call in DATE OF SPUD

spud in date

11/2/2012

11/3/2012

T.D date

11/3/2012

11/4/2012

Size Hole Drilled

26"

20"

Size Casing Set (in O.D )

18"

14"

conductor wall thickness

250

188

Weight Lbs./Ft.

47.76

27.76

Setting Depth

60'

77"

Type of Cement

Type 1/2 portland cement

Type 1/2 portland cement

Cubic yards of cement

7cy

7cy

2500 PSI Grout Mix

yes

yes

Type and Percent of Additives

15% fly ash

15% fly ash

Comments

0-50' Clay, 50-60 Hard Red  
Clay, Water @ 40'0-50' Clay, 50-60 Hard Red  
Clay, Water @ 40'

# CEMENT JOB REPORT



CUSTOMER SHELL WESTERN E & P INC	DATE 19-NOV-12	F.R. # 1001948976	SERV. SUPV. Jonathan M Schulz
LEASE & WELL NAME CROFT FARMS 3407 #27-2H - API 1507721892000	LOCATION 27-34S-7W		COUNTY-PARISH-BLOCK Harper Kansas
DISTRICT McAlester	DRILLING CONTRACTOR RIG # Nabors 180	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, Phe	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	
Class C + 2% CaCl + .25pps Celloflake		325	14.8	1.35	6.34	02:45	77	48.34
Water			8.34				36.5	
Available Mix Water <u>500</u> Bbl.		Available Displ. Fluid <u>430</u> Bbl.		TOTAL			<u>133.5</u>	<u>48.34</u>

HOLE			TBG-CSG-D.P.							COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
12.25		505	8.921	9.625	36	CSG	490	490	K-55			

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.
18.	18	47.4		60	60						9.625	8RD	WATER BASED MU	9

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	MIX WATER
36.5	BBLS	Water	8.34	150					2815	1500	Frac Tank

**EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING** Arrive on location @ 600, Drilling ahead, POOH, Rig up Casing Crew, ning 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 3500 PSI	
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>	
06:00						Arrive on location	
16:51	3500				WATER	test pumps & lines	
16:54	50		3		WATER	open well/start water ahead	
17:01	187		3	20	WATER	end water ahead/start slurry @ 14.8ppg	
17:23	119		3	77	SLURRY	end slurry/ shutdown	
17:28	91		3		WATER	drop TRP start displacement/cement back to surface	
17:40	160		3	36.5	WATER	end displacement/ no bump	
17:42	0			-.25		check floats/ holding/ .25bbls return	
						36bbls cement return to surface	
						Thanks for using BHI Pressure Pumping	
						Jonathan Schulz & 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:
Y <input type="checkbox"/> N <input checked="" type="checkbox"/>		Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	36	133.5	0	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

## CEMENT JOB REPORT



CUSTOMER SHELL WESTERN E & P INC	DATE 15-DEC-12	F.R. # 1001952750	SERV. SUPV. Justin D Stamper
LEASE & WELL NAME CROFT FARMS 3407 #27-2H - API 1507721892000	LOCATION 27-34S-7W	COUNTY-PARISH-BLOCK Harper Kansas	
DISTRICT McAlester	DRILLING CONTRACTOR RIG # Nabors 180	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	Shoe PROVIDED BY CUSTOMER						

PHYSICAL SLURRY PROPERTIES								
MATERIALS FURNISHED BY BJ	LAB REPORT NO.	SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER
SEAL BOND			8.43				40	
15:85:8(POZ,C,GEL)+10%SALT+.5%SMS+4PPS KOL		110	12.4	2.45	13.51		48	35.38
50:50:2(POZ,C,GEL)+4#KOLSL+.15%SMS+.3%FL52		165	14.2	1.32	5.66		39	22.36
WATER			8.34				202	
Available Mix Water	1000 Bbl.	Available Displ. Fluid	1000 Bbl.	TOTAL			329	57.74

HOLE				TBG-CSG-D.P.				COLLAR DEPTHS				
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
8.75		5194	6.366	7	23	CSG	5194	4766	L-80			

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		500	500			4600	4600	7	8RD	WATER BASED ML	9

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	
202.9	BBLS	WATER	8.34	1500					5450	4000	RIG.XPORT

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	5500 PSI
07:30						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ	
05:30						ARRIVE ON LOCATION	
05:45	200		4	40	SEAL BND	SAFETY MEETING	
06:13	5300				WATER	SEAL BOND PUMPED BY RIG	
06:29	450		3	48	LEAD	TEST LINES, START LEAD SLURRY	
06:36	500		3	39	TAIL	FINISH LEAD, START TAIL	
07:19	1500		4	200	WATER	FINSIH TAIL, SHUT DOWN, DROP PLUG, START DISPLACMENT	
07:24	1500		3	11	WATER	SLOW TO BUMP PLUG	
07:35	0				WATER	BUMP PLUG, PRESSURE TO 2000 PSI	
						BLEED OFF RECIVED 1 BBLS BACK TO TUCK	
						FLOATS HOLDING	
						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:			
Y	N	2000	Y	N	0	336	0	Y	N	

# CEMENT JOB REPORT



CUSTOMER SHELL WESTERN E & P INC	DATE 23-DEC-12	F.R. # 1001954763	SERV. SUPV. Chad Mathis
LEASE & WELL NAME CROFT FARMS 3407 #27-2H - API 1507721892000	LOCATION 27-34S-7W		COUNTY-PARISH-BLOCK Harper Kansas
DISTRICT McAlester	DRILLING CONTRACTOR RIG # Nabors 180		TYPE OF JOB Liner

SIZE & TYPE OF PLUGS	LIST-CSG-HARDWARE	MECHANICAL BARRIERS	MD	TVD	HANGER TYPES	MD	TVD
	No Shoe, Cust Sup						

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			8.45				40	
H50:50 + Additives		295	14.3	1.24	5.54	03:30	65.34	38.88
Displacement			8.34				105	
Available Mix Water <u>130</u> Bbl.		Available Displ. Fluid <u>500</u> Bbl.		TOTAL			<u>210.34</u>	<u>38.88</u>

HOLE			TBG-CSG-D.P.							COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
6.125		8698	4	4.5	11.6	CSG	8597	5398	P-110			

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.
6.4	7	23		5194	5194						4	XO	WATER BASED MU	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	
105	BBLS	Displacement	8.34	900					10690	3500	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	5000 PSI
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>	
13:00						Arrive On location	
19:00						Pre-Job Safety Meeting	
19:30				40	SEALBOND	Rig Pumped Spacer	
20:00	5000					Test Lines	
20:12	350		4	65.14	SLURRY	Pump Cement @ 14.3ppg	
20:20						Shut Down Wash up	
20:25	300		7	30	WATER	Pump Displacement	
20:30	1600		2	11	WATER	Caught 1st Plug	
20:37	400		5	50	WATER	Pumping Displacement	
20:42	1600		2	15	WATER	Bump Plug	
20:43						Check Floats, Floats Held	
						.5 Bbls Back To Truck	
						TOC @ 5115.2'	

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	1500	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	0	210	0	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	



# Shell Exploration & Production Co. Inc.

Harper Co. KS (NAD-27)

Sec 27-T34S-R07W

Croft Farms 3407 #27-2H

9858293

Wellbore #1

Design: Wellbore #1

## Sperry Drilling Services

# Combo Report With Grid North & True North

17 January, 2013

Surface UWI : 9858293

TD Date : 19th Nov, 2012

Well Coordinates: 145,105.91 N, 2,128,598.67 E (37° 03' 51.63" N, 098° 03' 33.48" W)

Ground Level: 1,385.00 ft

Local Coordinate Origin:

Centered on Well Croft Farms 3407 #27-2H

Viewing Datum:

WELL @ 1408.00ft (Nabors 180 (23'))

TVDs to System:

N

North Reference:

Grid

Unit System:

API US New

Version: 2003.21 Build: 46

**HALLIBURTON**

## Design Report for Croft Farms 3407 #27-2H - 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	0.00	0.27	-1,408.00	0.00	0.00 N	0.00 E	145,105.91	2,128,598.67	0.00	0.00	
147.00	0.15	266.67	266.94	-1,261.00	147.00	0.01 S	0.19 W	145,105.90	2,128,598.48	0.10	-0.13	Start MWD @ 147.00 MD
209.00	0.61	186.47	186.74	-1,199.00	209.00	0.34 S	0.31 W	145,105.57	2,128,598.36	0.97	0.02	
241.00	0.86	168.29	168.56	-1,167.00	241.00	0.75 S	0.28 W	145,105.16	2,128,598.39	1.06	0.32	
272.00	1.40	165.86	166.13	-1,136.01	271.99	1.34 S	0.14 W	145,104.57	2,128,598.53	1.75	0.83	
301.00	1.99	159.28	159.55	-1,107.02	300.98	2.16 S	0.12 E	145,103.75	2,128,598.79	2.14	1.59	
332.00	2.64	157.88	158.15	-1,076.05	331.95	3.32 S	0.58 E	145,102.59	2,128,599.25	2.10	2.73	
363.00	3.29	155.10	155.37	-1,045.09	362.91	4.79 S	1.23 E	145,101.12	2,128,599.90	2.15	4.21	
394.00	3.70	153.02	153.29	-1,014.15	393.85	6.49 S	2.05 E	145,099.42	2,128,600.72	1.38	5.99	
425.00	4.18	154.94	155.21	-983.22	424.78	8.40 S	2.99 E	145,097.51	2,128,601.66	1.61	7.99	
609.00	7.28	147.86	148.13	-800.16	607.84	24.35 S	12.03 E	145,081.56	2,128,610.70	1.72	25.58	
703.00	8.34	145.79	146.06	-707.03	700.97	35.04 S	19.03 E	145,070.87	2,128,617.70	1.17	38.04	
797.00	6.73	137.79	138.06	-613.85	794.15	44.75 S	26.57 E	145,061.16	2,128,625.24	2.04	50.21	
890.00	5.55	134.57	134.84	-521.38	886.62	51.95 S	33.43 E	145,053.96	2,128,632.10	1.32	60.14	
982.00	5.72	134.27	134.54	-429.83	978.17	58.27 S	39.88 E	145,047.64	2,128,638.55	0.19	69.18	
1,076.00	7.31	134.34	134.61	-336.44	1,071.56	65.72 S	47.52 E	145,040.19	2,128,646.19	1.69	79.84	
1,266.00	6.85	135.25	135.52	-147.88	1,260.12	82.21 S	64.14 E	145,023.70	2,128,662.81	0.25	103.26	
1,455.00	5.70	127.78	128.05	39.98	1,447.98	95.97 S	79.49 E	145,009.94	2,128,678.16	0.75	123.86	
1,645.00	4.67	111.33	111.60	229.21	1,637.21	104.56 S	94.16 E	145,001.35	2,128,692.83	0.95	140.37	
1,834.00	7.01	124.97	125.24	417.23	1,825.23	113.97 S	110.78 E	144,991.94	2,128,709.45	1.43	158.86	
2,024.00	7.35	128.43	128.70	605.74	2,013.74	128.17 S	129.80 E	144,977.74	2,128,728.47	0.29	182.41	
2,119.00	8.09	134.18	134.45	699.88	2,107.88	136.61 S	139.35 E	144,969.30	2,128,738.02	1.13	195.14	
2,214.00	9.26	138.60	138.87	793.79	2,201.79	147.00 S	149.20 E	144,958.91	2,128,747.87	1.42	209.44	
2,309.00	9.22	138.04	138.31	887.56	2,295.56	158.39 S	159.34 E	144,947.52	2,128,758.01	0.10	224.66	
2,404.00	11.00	134.12	134.39	981.08	2,389.08	170.36 S	170.94 E	144,935.55	2,128,769.61	2.01	241.31	
2,498.00	14.85	134.76	135.03	1,072.68	2,480.68	185.09 S	185.94 E	144,920.82	2,128,784.61	4.10	262.33	
2,593.00	15.39	135.95	136.22	1,164.39	2,572.39	202.73 S	203.35 E	144,903.18	2,128,802.02	0.66	287.10	
2,688.00	15.95	135.07	135.34	1,255.86	2,663.86	221.03 S	221.33 E	144,884.88	2,128,820.00	0.64	312.75	
2,783.00	17.95	137.48	137.75	1,346.73	2,754.73	241.06 S	240.44 E	144,864.85	2,128,839.11	2.23	340.42	
2,878.00	19.36	138.45	138.72	1,436.74	2,844.74	263.64 S	260.78 E	144,842.27	2,128,859.45	1.52	370.74	
2,973.00	18.07	139.54	139.81	1,526.71	2,934.71	286.63 S	280.79 E	144,819.28	2,128,879.46	1.41	401.10	
3,068.00	16.05	136.06	136.33	1,617.53	3,025.53	307.30 S	299.47 E	144,798.61	2,128,898.13	2.38	428.90	
3,163.00	13.84	135.01	135.28	1,709.31	3,117.31	324.80 S	316.61 E	144,781.11	2,128,915.28	2.34	453.38	
3,257.00	13.15	132.75	133.02	1,800.72	3,208.72	340.01 S	332.41 E	144,765.91	2,128,931.08	0.92	475.32	
3,352.00	13.48	129.11	129.38	1,893.17	3,301.17	354.33 S	348.94 E	144,751.58	2,128,947.61	0.95	497.15	
3,447.00	12.76	126.78	127.05	1,985.69	3,393.69	367.59 S	365.94 E	144,738.32	2,128,964.61	0.94	518.59	
3,542.00	12.30	127.70	127.97	2,078.42	3,486.42	380.06 S	382.35 E	144,725.85	2,128,981.01	0.53	539.05	

**Design Report for Croft Farms 3407 #27-2H - 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			
3,637.00	11.20	127.00	127.27	2,171.43	3,579.43	391.80 S	397.72 E	144,714.11	2,128,996.39	1.17	558.27	
3,731.00	9.06	124.34	124.61	2,263.96	3,671.96	401.47 S	411.12 E	144,704.44	2,129,009.79	2.33	574.63	
3,826.00	7.68	127.18	127.45	2,357.95	3,765.95	409.53 S	422.36 E	144,696.38	2,129,021.03	1.52	588.30	
3,921.00	6.53	135.44	135.71	2,452.22	3,860.22	417.21 S	431.21 E	144,688.70	2,129,029.88	1.62	600.01	
4,015.00	5.71	129.97	130.24	2,545.68	3,953.68	424.03 S	438.54 E	144,681.88	2,129,037.21	1.07	610.01	
4,110.00	4.30	133.84	134.11	2,640.32	4,048.32	429.53 S	444.73 E	144,676.38	2,129,043.40	1.53	618.29	
4,142.00	4.11	133.08	133.35	2,672.23	4,080.23	431.14 S	446.43 E	144,674.77	2,129,045.10	0.62	620.64	
4,206.00	4.75	135.89	136.16	2,736.04	4,144.04	434.61 S	449.95 E	144,671.30	2,129,048.62	1.06	625.58	
4,237.00	6.80	149.04	149.31	2,766.88	4,174.88	437.11 S	451.79 E	144,668.80	2,129,050.46	7.83	628.63	
4,269.00	10.08	157.77	158.04	2,798.53	4,206.53	441.33 S	453.83 E	144,664.58	2,129,052.50	10.98	633.03	
4,300.00	13.50	159.88	160.15	2,828.87	4,236.87	447.24 S	456.10 E	144,658.67	2,129,054.77	11.12	638.77	
4,332.00	17.18	168.04	168.31	2,859.73	4,267.73	455.37 S	458.36 E	144,650.54	2,129,057.03	13.31	646.05	
4,364.00	21.02	170.01	170.28	2,889.97	4,297.97	465.65 S	460.34 E	144,640.26	2,129,059.01	12.17	654.62	
4,395.00	23.72	172.50	172.77	2,918.63	4,326.63	477.31 S	462.12 E	144,628.60	2,129,060.79	9.23	664.00	
4,427.00	26.31	174.66	174.93	2,947.63	4,355.63	490.76 S	463.62 E	144,615.16	2,129,062.29	8.58	674.43	
4,441.82	26.84	176.72	176.99	2,960.88	4,368.88	497.37 S	464.12 E	144,608.54	2,129,062.78	7.19	679.38	Croft Farms 3407 #27-2H PP
4,458.00	27.46	178.88	179.15	2,975.28	4,383.28	504.74 S	464.40 E	144,601.17	2,129,063.07	7.19	684.71	
4,490.00	29.42	180.81	181.08	3,003.42	4,411.42	519.98 S	464.43 E	144,585.93	2,129,063.10	6.76	695.33	
4,522.00	31.48	181.35	181.62	3,031.00	4,439.00	536.19 S	464.12 E	144,569.72	2,129,062.79	6.49	706.38	
4,553.00	34.24	180.62	180.89	3,057.04	4,465.04	553.01 S	463.84 E	144,552.90	2,129,062.51	8.99	717.86	
4,585.00	37.05	178.96	179.23	3,083.04	4,491.04	571.65 S	463.92 E	144,534.26	2,129,062.58	9.29	730.88	
4,617.00	39.40	178.42	178.69	3,108.18	4,516.18	591.45 S	464.37 E	144,514.46	2,129,063.04	7.42	744.97	
4,648.00	42.21	178.64	178.91	3,131.64	4,539.64	611.70 S	464.89 E	144,494.21	2,129,063.56	9.08	759.41	
4,680.00	44.40	178.60	178.87	3,154.93	4,562.93	633.64 S	465.42 E	144,472.27	2,129,064.09	6.84	775.05	
4,711.00	46.99	179.57	179.84	3,176.58	4,584.58	655.82 S	465.77 E	144,450.09	2,129,064.44	8.65	790.72	
4,743.00	49.72	180.91	181.18	3,197.84	4,605.84	679.73 S	465.66 E	144,426.18	2,129,064.33	9.09	807.26	
4,775.00	51.64	181.12	181.39	3,218.12	4,626.12	704.48 S	465.22 E	144,401.43	2,129,063.89	6.02	824.15	
4,806.00	53.59	180.24	180.51	3,236.94	4,644.94	729.11 S	464.93 E	144,376.81	2,129,063.60	6.68	841.06	
4,838.00	55.53	180.51	180.78	3,255.49	4,663.49	755.18 S	464.76 E	144,350.74	2,129,063.43	6.10	859.06	
4,870.00	56.71	181.67	181.94	3,273.33	4,681.33	781.74 S	464.25 E	144,324.18	2,129,062.92	4.76	877.16	
4,901.00	58.25	182.14	182.41	3,290.00	4,698.00	807.86 S	463.38 E	144,298.05	2,129,062.05	5.13	894.70	
4,933.00	60.69	182.30	182.57	3,306.25	4,714.25	835.40 S	462.32 E	144,270.51	2,129,060.99	7.64	913.07	
4,964.00	64.40	182.54	182.81	3,320.54	4,728.54	862.88 S	461.15 E	144,243.03	2,129,059.82	11.99	931.34	
4,996.00	68.43	181.93	182.20	3,333.34	4,741.34	892.18 S	460.01 E	144,213.73	2,129,058.68	12.71	950.89	
5,028.00	71.72	181.79	182.06	3,344.25	4,752.25	922.24 S	459.04 E	144,183.67	2,129,057.71	10.29	971.09	
5,059.00	73.60	180.18	180.45	3,353.48	4,761.48	951.83 S	458.53 E	144,154.08	2,129,057.20	7.83	991.29	
5,091.00	75.43	179.33	179.60	3,362.03	4,770.03	982.66 S	458.66 E	144,123.25	2,129,057.33	6.27	1,012.82	

**Design Report for Croft Farms 3407 #27-2H - 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			
5,123.00	77.70	178.06	178.33	3,369.46	4,777.46	1,013.78 S	459.37 E	144,092.14	2,129,058.04	8.08	1,034.96	
5,154.00	79.43	176.73	177.00	3,375.61	4,783.61	1,044.13 S	460.76 E	144,061.78	2,129,059.42	6.99	1,057.05	
5,186.00	80.42	175.54	175.81	3,381.21	4,789.21	1,075.56 S	462.88 E	144,030.35	2,129,061.55	4.79	1,080.43	
5,217.00	81.50	174.55	174.82	3,386.08	4,794.08	1,106.06 S	465.52 E	143,999.85	2,129,064.19	4.70	1,103.53	
5,249.00	82.58	173.65	173.92	3,390.51	4,798.51	1,137.58 S	468.78 E	143,968.33	2,129,067.45	4.38	1,127.79	
5,281.00	84.04	172.88	173.15	3,394.24	4,802.24	1,169.15 S	472.51 E	143,936.77	2,129,071.18	5.15	1,152.41	
5,312.00	85.68	172.73	173.00	3,397.01	4,805.01	1,199.78 S	476.38 E	143,906.13	2,129,075.05	5.31	1,176.48	
5,344.00	87.29	172.58	172.85	3,398.98	4,806.98	1,231.45 S	480.46 E	143,874.46	2,129,079.13	5.05	1,201.44	
5,526.00	91.05	173.73	174.00	3,401.61	4,809.61	1,412.10 S	502.14 E	143,693.81	2,129,100.81	2.16	1,342.60	
5,621.00	90.74	175.90	176.17	3,400.13	4,808.13	1,506.70 S	510.73 E	143,599.22	2,129,109.40	2.31	1,414.53	
5,716.00	90.98	176.56	176.83	3,398.70	4,806.70	1,601.48 S	516.97 E	143,504.43	2,129,115.64	0.74	1,484.91	
5,811.00	93.51	178.04	178.31	3,394.98	4,802.98	1,696.29 S	521.45 E	143,409.62	2,129,120.11	3.08	1,554.03	
5,906.00	92.81	177.86	178.13	3,389.74	4,797.74	1,791.09 S	524.84 E	143,314.83	2,129,123.51	0.76	1,622.37	
6,001.00	91.57	176.96	177.23	3,386.11	4,794.11	1,885.92 S	529.13 E	143,220.00	2,129,127.80	1.61	1,691.38	
6,096.00	90.65	177.00	177.27	3,384.27	4,792.27	1,980.77 S	534.13 E	143,125.15	2,129,132.80	0.97	1,760.91	
6,191.00	91.17	176.91	177.18	3,382.76	4,790.76	2,075.62 S	539.18 E	143,030.30	2,129,137.85	0.56	1,830.47	
6,286.00	89.54	178.33	178.60	3,382.18	4,790.18	2,170.53 S	543.12 E	142,935.38	2,129,141.79	2.28	1,899.29	
6,381.00	90.92	178.15	178.42	3,381.79	4,789.79	2,265.48 S	546.04 E	142,840.43	2,129,144.71	1.46	1,967.39	
6,476.00	88.55	178.45	178.72	3,382.23	4,790.23	2,360.43 S	548.86 E	142,745.48	2,129,147.53	2.51	2,035.42	
6,570.00	88.31	178.95	179.22	3,384.81	4,792.81	2,454.37 S	550.99 E	142,651.54	2,129,149.66	0.59	2,102.26	
6,665.00	88.00	177.74	178.01	3,387.87	4,795.87	2,549.28 S	553.73 E	142,556.63	2,129,152.40	1.31	2,170.20	
6,760.00	88.12	177.28	177.55	3,391.08	4,799.08	2,644.14 S	557.86 E	142,461.78	2,129,156.53	0.50	2,239.11	
6,855.00	87.93	177.40	177.67	3,394.36	4,802.36	2,738.98 S	562.26 E	142,366.94	2,129,160.93	0.24	2,308.21	
6,950.00	87.35	175.90	176.17	3,398.27	4,806.27	2,833.73 S	567.81 E	142,272.18	2,129,166.48	1.69	2,378.06	
7,045.00	88.89	176.56	176.83	3,401.39	4,809.39	2,928.47 S	574.05 E	142,177.44	2,129,172.72	1.76	2,448.41	
7,145.00	89.57	176.15	176.42	3,402.73	4,810.73	3,028.26 S	580.41 E	142,077.66	2,129,179.08	0.79	2,522.35	
7,240.00	89.88	176.64	176.91	3,403.19	4,811.19	3,123.07 S	586.38 E	141,982.85	2,129,185.05	0.61	2,592.55	
7,335.00	91.69	176.49	176.76	3,401.89	4,809.89	3,217.89 S	592.07 E	141,888.03	2,129,190.74	1.91	2,662.55	
7,430.00	91.57	177.35	177.62	3,399.18	4,807.18	3,312.71 S	597.18 E	141,793.21	2,129,195.85	0.91	2,732.14	
7,525.00	90.90	176.80	177.07	3,397.14	4,805.14	3,407.56 S	602.02 E	141,698.35	2,129,200.69	0.91	2,801.56	
7,620.00	90.19	177.75	178.02	3,396.23	4,804.23	3,502.45 S	606.54 E	141,603.47	2,129,205.21	1.25	2,870.77	
7,715.00	90.00	177.29	177.56	3,396.07	4,804.07	3,597.36 S	610.65 E	141,508.56	2,129,209.32	0.52	2,939.70	
7,809.00	90.22	176.67	176.94	3,395.89	4,803.89	3,691.23 S	615.60 E	141,414.69	2,129,214.27	0.70	3,008.51	
7,904.00	89.69	179.73	180.00	3,395.97	4,803.97	3,786.17 S	618.59 E	141,319.75	2,129,217.25	3.27	3,076.66	
7,999.00	89.60	178.73	179.00	3,396.56	4,804.56	3,881.16 S	619.86 E	141,224.76	2,129,218.53	1.06	3,143.61	
8,094.00	90.09	178.97	179.24	3,396.81	4,804.81	3,976.14 S	621.77 E	141,129.78	2,129,220.44	0.57	3,211.00	
8,189.00	90.40	177.53	177.80	3,396.41	4,804.41	4,071.09 S	624.67 E	141,034.83	2,129,223.34	1.55	3,279.09	

**Design Report for Croft Farms 3407 #27-2H - 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			
8,284.00	87.75	178.46	178.73	3,397.94	4,805.94	4,166.01 S	627.99 E	140,939.91	2,129,226.66	2.96	3,347.47	
8,379.00	90.99	178.20	178.47	3,398.99	4,806.99	4,260.95 S	630.76 E	140,844.97	2,129,229.43	3.42	3,415.46	
8,474.00	89.91	178.60	178.87	3,398.24	4,806.24	4,355.91 S	633.41 E	140,750.01	2,129,232.08	1.21	3,483.37	
8,569.00	90.71	177.87	178.14	3,397.73	4,805.73	4,450.86 S	636.34 E	140,655.06	2,129,235.01	1.14	3,551.48	End MWD @ 8569.00 MD
8,698.00	90.71	177.87	178.14	3,396.13	4,804.13	4,579.76 S	641.13 E	140,526.15	2,129,239.80	0.00	3,644.54	Projection to TD 8698.00 MD, 4804.13 TVD -4579.76 N, 641.13 E 337 FSL, 409 FEL - Croft Farms 3407 #27-2H BHL

**Design Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
147.00	147.00	-0.01	-0.19	Start MWD @ 147.00 MD
8,569.00	4,805.73	-4,450.86	636.34	End MWD @ 8569.00 MD
8,698.00	4,804.13	-4,579.76	641.13	Projection to TD 8698.00 MD, 4804.13 TVD -4579.76 N, 641.13 E 337 FSL, 409 FEL

**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/_S (ft)	+E/-W (ft)	
User	No Target (Freehand)	134.04	Slot	0.00	0.00	0.00

**Survey tool program**

From (ft)	To (ft)	Survey/Plan	Survey Tool
147.00	425.00	Run 0100	MWD+SC
609.00	4,142.00	Run 0200	MWD+SC
4,206.00	5,344.00	Run 0300	MWD+SC
5,526.00	7,045.00	Run 0500	MWD+SC
7,145.00	8,379.00	Run 0600	MWD+SC
8,474.00	8,698.00	Run 0700	MWD+SC

**HALLIBURTON**

**Design Report for Croft Farms 3407 #27-2H - Wellbore #1**

**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: 2.17 °/100ft      Maximum Dogleg over Survey: 13.31 °/100ft at 4,332.00 ft

Net Tortousity applicable to Plans: 0.55 °/100ft      Directional Difficulty Index: 6.212

**Audit Info**

**North Reference Sheet for Sec 27-T34S-R07W - Croft Farms 3407 #27-2H - Wellbore #1**

All data is in Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to WELL @ 1408.00ft (Nabors 180 (23')). Northing and Easting are relative to Croft Farms 3407 #27-2H

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: 1.00004592

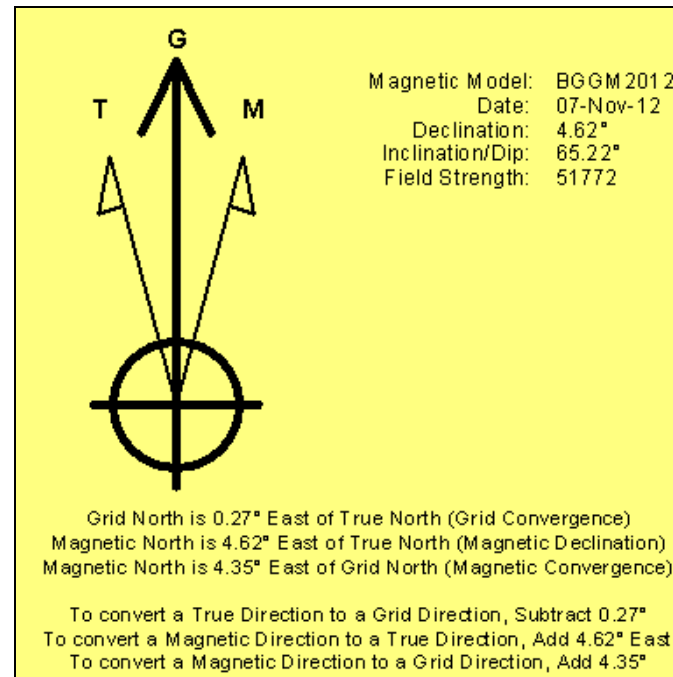
Grid Coordinates of Well: 145,105.91 ft N, 2,128,598.67 ft E

Geographical Coordinates of Well: 37° 03' 51.63" N, 098° 03' 33.48" W

Grid Convergence at Surface is: 0.27°

Based upon Minimum Curvature type calculations, at a Measured Depth of 8,698.00ft the Bottom Hole Displacement is 4,624.42ft in the Direction of 172.03° (Grid).

Magnetic Convergence at surface is: -4.35° ( 7 November 2012, , BGGM2012)



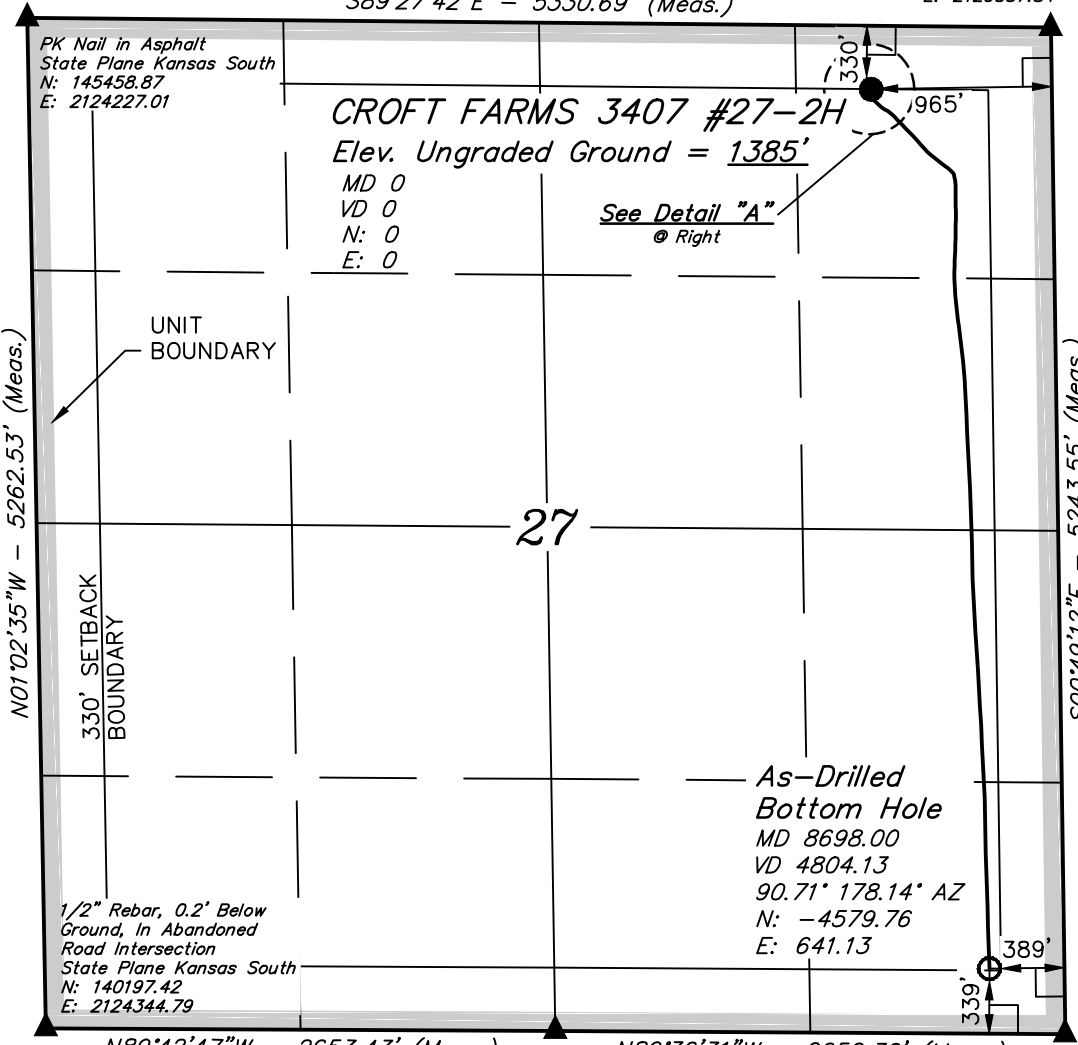
T34S, R7W, 6th P.M.

SGOMI

Well location, CROFT FARMS 3407 #27-2H, located as shown in the NE 1/4 NE 1/4 of Section 27, T34S, R7W, 6th P.M., Harper County, Kansas.

5/8" Rebar 0.1' Below Ground, in Asphalt Road  
State Plane Kansas South  
N: 145431.08  
E: 2129557.84

S89°27'42"E - 5330.69' (Meas.)

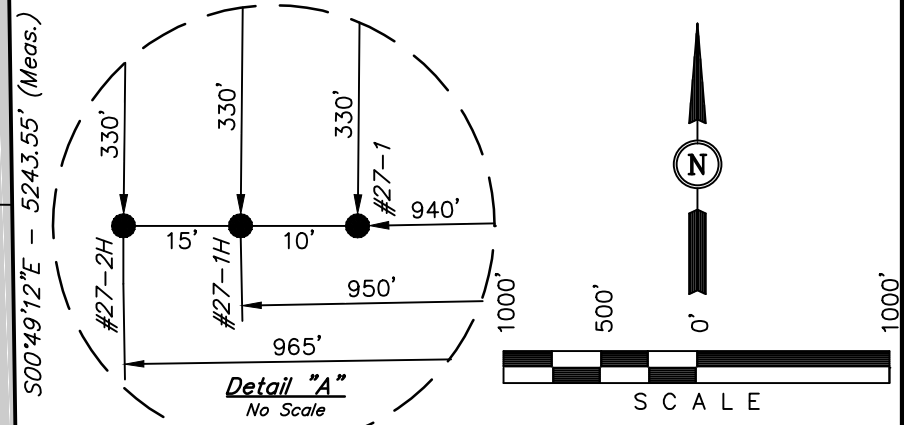


BASIS OF ELEVATION

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.



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.

*Robert J. ...*  
REGISTERED LAND SURVEYOR  
REGISTRATION NO. 1457  
STATE OF KANSAS

LEGEND:

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

5/8" Rebar, 0.4' High, Fence Corner  
State Plane Kansas South  
N: 140195.22  
E: 2126998.33

1/2" Rebar, 0.3' Below Ground, Steel Post  
State Plane Kansas South  
N: 140188.19  
E: 2129654.79

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

NAD 83 (#27-2H AS-DRILLED BOTTOM HOLE)	NAD 83 (#27-2H SURFACE LOCATION)
LATITUDE = 37°03'06.44" (37.051789)	LATITUDE = 37°03'51.72" (37.064367)
LONGITUDE = 98°03'26.83" (98.057453)	LONGITUDE = 98°03'34.71" (98.059642)
NAD 27 (#27-2H AS-DRILLED BOTTOM HOLE)	NAD 27 (#27-2H SURFACE LOCATION)
LATITUDE = 37°03'06.35" (37.051764)	LATITUDE = 37°03'51.63" (37.064342)
LONGITUDE = 98°03'25.60" (98.057111)	LONGITUDE = 98°03'33.48" (98.059300)
STATE PLANE NAD 27 (KANSAS SOUTH)	STATE PLANE NAD 27 (KANSAS SOUTH)
N: 140528.67 E: 2129258.96	N: 145105.91 E: 2128598.67

SCALE 1" = 1000'	DATE SURVEYED: 01-17-13	DATE DRAWN: 01-31-13
PARTY L.S. J.P. C.A.G.	REFERENCES G.L.O. PLAT	
WEATHER COLD	FILE SGOMI	



## Summary of Changes

Lease Name and Number: Croft Farms 3407 27-2H

API/Permit #: 15-077-21892-01-00

Doc ID: 1114847

Correction Number: 1

Approved By: NAOMI JAMES

Field Name	Previous Value	New Value
Amount of Surface Pipe Set and Cemented at	0	490
Approved Date	12/13/2012	02/18/2013
CasingAdd_Type_PctPDF_1	15% Fly Ash	Attached
CasingNumbSacksUsedPDF_1	42	Attached
CasingPurposeOfStringPDF_1	Conductor	Attached
CasingSettingDepthPDF_1	60	Attached
CasingSizeCasingSetPDF_1	18	Attached
CasingSizeHoleDrilledPDF_1	26	Attached
CasingTypeOfCementPDF_1	1/2 Portland Cmt	Attached
CasingWeightPDF_1	47.76	Attached

Summary of changes for correction 1 continued

Field Name	Previous Value	New Value
Completion Or Recompletion Date	11/03/2012	02/08/2013
Date Reached TD	11/03/2012	12/21/2012
Electric Log Run?	No	Yes
Electric Log Submitted Electronically?		Yes
Elogs_PDF		Triple Combo
Kelly Bushing Elevation	1407	1408
Liner Run?		Yes
Method Of Completion - Perf	No	Yes
Perf_Depth_1		Attached
Perf_Material_1		Attached
Perf_Record_1		Attached
Perf_Shots_1		Attached
Producing Formation	CONDUCTOR ONLY	Mississippi

Summary of changes for correction 1 continued

Field Name	Previous Value	New Value
Production Interval #1		5515'
Production Interval #2		8466'
Purchaser's Name	CONDUCTOR ONLY	
Save Link	../../../../kcc/detail/operatorEditDetail.cfm?docID=1104221	../../../../kcc/detail/operatorEditDetail.cfm?docID=1114847
Spud Or Recompletion Date	11/02/2012	11/18/2012
TopsDepth1		4208
TopsDepth2		4399
TopsDepth3		4517
TopsDepth4		4617
TopsDepth5		4671
TopsDepth6		5028
TopsName1	CONDUCTOR ONLY	lola
TopsName2		Hushpuckney

Summary of changes for correction 1 continued

Field Name	Previous Value	New Value
TopsName3		Marmaton
TopsName4		Pawnee
TopsName5		Cherokee
TopsName6		Mississippi
Total Depth	60	8698
Wellsite Geologist	Jack Grow	Earl Manning

## Summary of Attachments

Lease Name and Number: Croft Farms 3407 27-2H

API: 15-077-21892-01-00

Doc ID: 1114847

Correction Number: 1

Attachment Name

CROFT FARMS 3407 27-2H Conductor record

CROFT FARM 3407 #27-2H Surface Cmt. rpt

Croft Farms 3407 27-2H Int Cmt Job

Croft Farms 3407 27-2H Liner Cmt Job

Croft Farms 3407 27-2H Directional Survey

CROFT FARM 3407 #27-2H AS DRILLED plat



**CONFIDENTIAL**

**WELL COMPLETION FORM**

**Form Must Be Typed**  
**Form must be Signed**  
**All blanks must be Filled**

**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- 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:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

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 #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

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

**KCC Office Use ONLY**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_