



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1102905
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 # _____

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: _____



1102905

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 <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

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> <input type="checkbox"/> Other <i>(Specify)</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	Davis 3407 27-2H
Doc ID	1102905

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
6	5660 - 5880	168756 gals fluid, 110214# proppant	
6	5983 - 6352	170982 gals fluid, 102496# proppant	
6	6462 - 6787	155988 gals fluid, 86609# proppant	
6	6880 - 7205	162624 gals fluid, 73799# proppant	
6	7312 - 7590	170310 gals fluid, 104845# proppant	
6	7688 - 7920	189252 gals fluid, 101268# proppant	
6	8030 - 8393	201390 gals fluid, 101868# proppant	
6	8478 - 8760	242550 gals fluid, 110231# proppant	
6	8875 - 9129	263634 gals fluid, 84233# proppant	
6	9240 - 9468	183750 gals fluid, 36009# proppant	

Form	ACO1 - Well Completion
Operator	Shell Gulf of Mexico Inc.
Well Name	Davis 3407 27-2H
Doc ID	1102905

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	36	15% Fly Ash
Surface	12.25	9.625	36	820	Class C	500	See attached
Intermediate	8.75	7	23	5010	Class C	990	See attached
Liner	6.125	4.5	11.6	9650	Class H	480	See attached

SHELL GULF OF MEXICO, INC. (34574)

Davis 3407 27-1

PETE MARTIN DRILLING (34645)
(SET THE CONDUCTOR)

2-H conductor

2-H mouse Hole

Call in DATE OF SPUD

3/1/2012

3/1/2012

spud in date

3/2/2012

3/3/2012

T.D date

3/2/2012

3/3/2012

Size Hole Drilled

26"

18"

Size Casing Set (in O.D)

18"

14"

conductor wall thickness

.250

.118

Weight Lbs./Ft.

47.44ppf

27.76 ppf

Setting Depth

59'-8"

76.5'

Type of Cement

Type 1\2 portland cement

Type 1\2 portland cement

Cubic yards of cement

6 cu yds

7 cu ysd

2500 PSI Grout Mix

Yes

yes

Type and Percent of Additives

15% fly Ash

15% Fly ash

Comments

0'-13' red dirt 14'-22' red
clay.24'-60' shale0'-13' red dirt 14'-22' red
clay.24'-60' shale

CEMENT JOB REPORT



CUSTOMER SHELL WESTERN E & P INC	DATE 22-MAR-12	F.R. # 1001896166	SERV. SUPV. JONATHAN M SCHULZ III
LEASE & WELL NAME DAVIS 3407 #27-2H - API 15077218160000	LOCATION 27-34S-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	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
Water			8.34				20
Class C + 2% CaCl + .25pps Celloflake + 0.01% stat		500	14.8	1.35	6.34	02:45	120.2
Water			8.34				58.52
Available Mix Water <u>450</u> Bbl.		Available Displ. Fluid <u>350</u> Bbl.		TOTAL			198.72
							75.47

HOLE			TBG-CSG-D.P.							COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
12.25		820	8.921	9.625	36	CSG	802	802	J-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.	
17.	18	84		60	60					9.625	8RD	FRESH WATER	8.34	

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	WATER
58.5	BBSL	Water	8.34	255					3568	2000	Frac Tank

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING: Arrive on location 0500 3/21/2012, Pulling drill Pipe, Running 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 3716 PSI	
05:00						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>	
03:30	3716				WATER	Arrive on location on 3/21/2012	
03:31	170		5.5		WATER	test pumps and lines on 3/22/2012	
03:35	225		5.6	23	WATER	open well/start water ahead	
03:47	281		5.6	62	SLURRY	end water ahead start slurry @ 14.8ppg	
04:01	95		4	118	SLURRY	bbls pumped when cement @ shoe	
04:03	53		3		WATER	end slurry/ shutdown	
04:07	279		4	15	WATER	Drop TRP/start displacement	
04:16	332		3.5	59	WATER	cement to surface	
04:22	0			-25		bbls pumped/ end displacement/ shutdown	
04:26	225					check float/ not holding	
						Pressure up to psi and shutin	
						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"/>	255	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	45	200	230	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

CEMENT JOB REPORT



CUSTOMER SHELL WESTERN E & P INC		DATE 20-MAY-12	F.R. # 1001910331	SERV. SUPV. JUSTIN D STAMPER										
LEASE & WELL NAME DAVIS 3407 #27-2H - API 15077218160000		LOCATION 27-34S-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" Bot Cem Plug, Nitrile cvr, Phen		Shoe PROVIDED BY CUSTOMER												
7" Top Cem Plug, Nitrile cvr, Phen														
MATERIALS FURNISHED BY BJ				PHYSICAL SLURRY PROPERTIES										
				SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER				
SEAL BOND 25					8.34						40			
15:85:8(POZ,C,GEL)+10%SALT+.5%SMS+4#KOLSEA				790	12.4	2.45	13.52				344	253.78		
50:50:2(POZ,C,GEL)+5%SALT+.15%SMS+4#KOLSEA				200	14.2	1.32	5.66				47	26.94		
WATER					8.34						196			
Available Mix Water		1000	Bbl.	Available Displ. Fluid		1000	Bbl.	TOTAL		627	280.72			
HOLE			TBG-CSG-D.P.							COLLAR DEPTHS				
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE		
8.75		5010	6.366	7	23	CSG	5010	4510	L-80	5014	4971			
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	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		
197	BBLs	WATER		8.34	1150						5072	3500	RIG	
EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING: ARRIVE ON LOCATION, WAIT ON CASING, RIG UP														
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"/>								
00:30						ARRIVE ON LOCATION								
15:00						SAFETY MEETING								
15:38	5000				WATER	TEST LINES, START LEAD SLURRY								
17:26	100		3	344	LEAD	FINISH LEAD, START TAIL SLURRY								
17:39	200		3	47	TAIL	FINISH TAIL SLURRY, DROP PLUG, DISPALCE								
18:30	1700		4	186	WATER	SLOW TO BUMP PLUG								
18:35	1700		2	10	WATER	BUMP PLUG, PRESSURE TO 2200PSI								
18:40	0			-1.5		BLEED OFF RECIVED 1.5 BBLs BACK TO TRUCK								
						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:							
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	2200	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	80	600	0	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N								



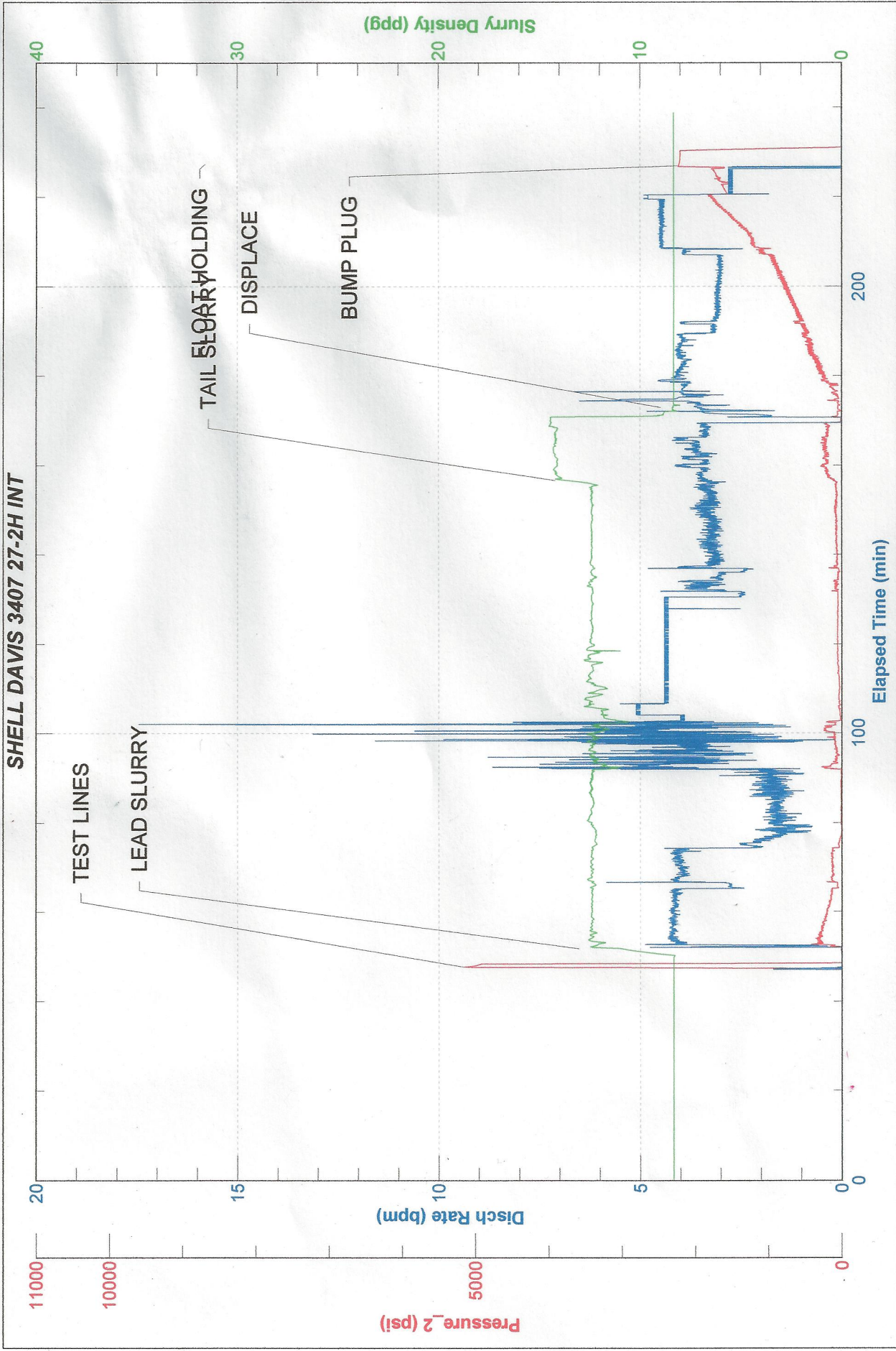
BJ Services JobMaster Program Version 3.50

Job Number: 1001910331

Customer: SHELL

Well Name: DAVIS 3407 27-2H

SHELL DAVIS 3407 27-2H INT



CEMENT JOB REPORT



CUSTOMER SHELL WESTERN E & P INC	DATE 08-JUN-12	F.R. # 1001912983	SERV. SUPV. JONATHAN M SCHULZ III
LEASE & WELL NAME DAVIS 3407 #27-2H - API 15077218160000	LOCATION 27-34S-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
	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 + 3%NaCl+.1%R-3+.5%FL-52+.6%SMS		480	14.3	1.24	5.54	04:30	106	63.14
DISPLACEMENT			8.34				119.98	
Reverse Circulation			8.34				180	
Available Mix Water <u>500</u> Bbl.		Available Displ. Fluid <u>430</u> Bbl.		TOTAL			445.98	63.14

HOLE			TBG-CSG-D.P.						COLLAR DEPTHS			
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
6.125		9650	4	4.5	11.6	LNR	9650		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.
6.3	7	26	CSG	5008	5008						2	1502	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	Rig Tank
118.5	BBLS	DISPLACEMENT	8.34						8552	5000	Rig Tank
		Reverse Circulation	8.34								

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING: Arrive on location, Tripping drill pipe in the hole, Rigging Up Cement ers, Circulate Bottoms Up twice

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 6800 PSI	
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>	
00:00						Arrive on location	
06:50				40	SPACER	rig pumped sealbond spacer	
07:13	6800				WATER	test pumps & lines	
07:32	806		4.6		SLURRY	open well/start slurry @ 14.3ppg	
08:00	73		4	106	SLURRY	end slurry shutdown	
08:03				8	WATER	wash pumps & lines	
08:07	331		7		WATER	drop Plug/start displacement	
08:12	587		5	29	WATER	bbls pumped when caught cement	
08:34	1784		4	117	WATER	bump plug/ shutdown	
08:35	0			- .75		check float/ holding/ bbls return	
08:40	4480					pressure test casing	
08:52	4000					pressure test annulus	
08:58						sting out of liner	
09:02	750		5		WATER	begin reverse circulate	
09:10	1185		6	45	WATER	bbls pumped when CMT to surface Approx. 20bbls	
09:34	611		6	180	WATER	shutdown/ returns clean	
						Thank you for using BHI Pressure Pumping	
						Jonathan Schulz & Crew	

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 6800 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	1800	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	20	411	0	Y <input checked="" type="checkbox"/> N	

Shell Exploration & Production Co. Inc.

Harper Co. KS (NAD-27)

Sec 34-T34S-R07W

Davis 3407 #27-2H/ Job# 9341868/ Nab 180

Wellbore #1

Design: Wellbore #1

Sperry Drilling Services

Combo Report With Grid North & True North

06 June, 2012

Well Coordinates: 140,195.98 N, 2,126,384.79 E (37° 03' 03.19" N, 098° 04' 01.07" W)

Ground Level: 1,402.00 ft

Local Coordinate Origin:

Centered on Well Davis 3407 #27-2H/ Job# 9341868/ Nab 180

Viewing Datum:

WELL @ 1425.80ft (Original Well Elev)

TVDs to System:

N

North Reference:

True

Unit System:

API-US-new

Version: 2003.21 Build: 43

HALLIBURTON

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - 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	359.73	0.00	1,425.80	0.00	0.00 N	0.00 E	140,195.98	2,126,384.79	0.00	0.00	
142.00	0.25	58.21	58.48	1,283.80	142.00	0.16 N	0.26 E	140,196.14	2,126,385.05	0.18	0.17	First MWD Survey
173.00	0.28	78.84	79.11	1,252.80	173.00	0.21 N	0.40 E	140,196.19	2,126,385.18	0.32	0.23	
204.00	0.50	131.02	131.29	1,221.80	204.00	0.14 N	0.57 E	140,196.12	2,126,385.36	1.28	0.16	
235.00	1.71	114.85	115.12	1,190.81	234.99	0.15 S	1.09 E	140,195.84	2,126,385.88	3.99	-0.11	
270.00	2.16	120.07	120.34	1,155.83	269.97	0.70 S	2.13 E	140,195.29	2,126,386.92	1.38	-0.62	
301.00	2.75	115.81	116.08	1,124.86	300.94	1.33 S	3.31 E	140,194.67	2,126,388.10	1.99	-1.20	
332.00	3.08	115.99	116.26	1,093.90	331.90	2.02 S	4.72 E	140,193.98	2,126,389.52	1.06	-1.84	
363.00	3.39	114.92	115.19	1,062.95	362.85	2.78 S	6.30 E	140,193.23	2,126,391.10	1.02	-2.54	
394.00	4.00	114.53	114.80	1,032.01	393.79	3.62 S	8.11 E	140,192.39	2,126,392.91	1.97	-3.32	
425.00	4.99	107.16	107.43	1,001.11	424.69	4.48 S	10.38 E	140,191.55	2,126,395.18	3.69	-4.09	
519.00	5.77	107.61	107.88	907.52	518.28	7.16 S	18.77 E	140,188.91	2,126,403.59	0.83	-6.45	
612.00	5.66	95.88	96.15	814.98	610.82	9.08 S	27.78 E	140,187.03	2,126,412.61	1.26	-8.04	
705.00	5.69	84.95	85.22	722.43	703.37	9.19 S	36.94 E	140,186.96	2,126,421.77	1.16	-7.81	
755.00	5.54	86.72	86.99	672.67	753.13	8.86 S	41.82 E	140,187.32	2,126,426.65	0.46	-7.30	
889.00	5.35	86.27	86.54	539.28	886.52	8.14 S	54.51 E	140,188.09	2,126,439.34	0.15	-6.11	
984.00	3.64	81.96	82.23	444.57	981.23	7.47 S	61.92 E	140,188.80	2,126,446.74	1.83	-5.16	
1,078.00	2.79	72.66	72.93	350.72	1,075.08	6.39 S	67.07 E	140,189.90	2,126,451.88	1.06	-3.89	
1,173.00	2.31	74.12	74.39	255.82	1,169.98	5.20 S	71.12 E	140,191.11	2,126,455.93	0.51	-2.55	
1,268.00	1.70	92.91	93.18	160.87	1,264.93	4.76 S	74.37 E	140,191.57	2,126,459.18	0.94	-1.99	
1,363.00	1.67	94.32	94.59	65.91	1,359.89	4.95 S	77.16 E	140,191.39	2,126,461.97	0.05	-2.08	
1,458.00	0.90	106.29	106.56	-29.06	1,454.86	5.27 S	79.25 E	140,191.08	2,126,464.06	0.85	-2.32	
1,553.00	0.44	97.77	98.04	-124.05	1,549.85	5.54 S	80.33 E	140,190.82	2,126,465.14	0.49	-2.55	
1,743.00	0.18	64.67	64.94	-314.05	1,739.85	5.51 S	81.32 E	140,190.85	2,126,466.13	0.16	-2.48	
1,933.00	0.34	46.94	47.21	-504.05	1,929.85	5.00 S	82.01 E	140,191.36	2,126,466.81	0.09	-1.95	
2,123.00	0.53	9.45	9.72	-694.04	2,119.84	3.75 S	82.57 E	140,192.61	2,126,467.37	0.17	-0.68	
2,313.00	0.37	18.09	18.36	-884.04	2,309.84	2.30 S	82.91 E	140,194.06	2,126,467.71	0.09	0.78	
2,503.00	0.21	65.49	65.76	-1,074.04	2,499.84	1.58 S	83.42 E	140,194.79	2,126,468.21	0.14	1.52	
2,693.00	0.31	48.77	49.04	-1,264.03	2,689.83	1.10 S	84.13 E	140,195.27	2,126,468.92	0.07	2.03	
2,882.00	0.26	74.56	74.83	-1,453.03	2,878.83	0.65 S	84.93 E	140,195.72	2,126,469.71	0.07	2.51	
3,072.00	0.23	86.88	87.15	-1,643.03	3,068.83	0.52 S	85.72 E	140,195.86	2,126,470.51	0.03	2.67	
3,262.00	0.30	30.38	30.65	-1,833.03	3,258.83	0.07 S	86.36 E	140,196.31	2,126,471.14	0.14	3.14	
3,452.00	0.56	12.69	12.96	-2,023.02	3,448.82	1.26 N	86.82 E	140,197.64	2,126,471.60	0.15	4.49	
3,642.00	0.59	19.39	19.66	-2,213.01	3,638.81	3.09 N	87.36 E	140,199.47	2,126,472.13	0.04	6.33	
3,831.00	0.20	333.43	333.70	-2,402.01	3,827.81	4.30 N	87.54 E	140,200.68	2,126,472.30	0.25	7.55	
4,021.00	0.31	314.45	314.72	-2,592.01	4,017.81	4.96 N	87.03 E	140,201.34	2,126,471.79	0.07	8.19	
4,078.00	1.02	347.41	347.68	-2,649.00	4,074.80	5.56 N	86.81 E	140,201.94	2,126,471.57	1.37	8.78	

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - 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			
4,109.00	1.87	344.23	344.50	-2,679.99	4,105.79	6.32 N	86.61 E	140,202.70	2,126,471.37	2.75	9.53	
4,141.00	3.39	3.05	3.32	-2,711.96	4,137.76	7.77 N	86.53 E	140,204.15	2,126,471.28	5.40	10.98	
4,173.00	5.98	7.59	7.86	-2,743.85	4,169.65	10.36 N	86.81 E	140,206.75	2,126,471.55	8.17	13.58	
4,204.00	7.94	8.73	9.00	-2,774.62	4,200.42	14.08 N	87.37 E	140,210.46	2,126,472.09	6.34	17.31	
4,236.00	9.52	1.34	1.61	-2,806.25	4,232.05	18.91 N	87.79 E	140,215.29	2,126,472.49	6.05	22.16	
4,268.00	11.46	358.41	358.68	-2,837.71	4,263.51	24.73 N	87.79 E	140,221.12	2,126,472.46	6.29	27.98	
4,300.00	14.11	356.18	356.45	-2,868.92	4,294.72	31.80 N	87.47 E	140,228.19	2,126,472.11	8.42	35.03	
4,331.00	16.95	356.99	357.26	-2,898.78	4,324.58	40.09 N	87.02 E	140,236.47	2,126,471.62	9.19	43.30	
4,362.00	18.71	357.92	358.19	-2,928.29	4,354.09	49.57 N	86.65 E	140,245.95	2,126,471.21	5.75	52.76	
4,393.00	21.09	358.15	358.42	-2,957.44	4,383.24	60.12 N	86.34 E	140,256.50	2,126,470.85	7.68	63.29	
4,425.00	24.01	358.64	358.91	-2,986.99	4,412.79	72.39 N	86.06 E	140,268.76	2,126,470.51	9.14	75.53	
4,457.00	26.79	357.14	357.41	-3,015.89	4,441.69	86.10 N	85.61 E	140,282.48	2,126,469.99	8.92	89.22	
4,488.00	28.42	357.04	357.31	-3,043.36	4,469.16	100.45 N	84.95 E	140,296.82	2,126,469.26	5.26	103.54	Start of Tangent
4,520.00	28.83	356.32	356.59	-3,071.45	4,497.25	115.76 N	84.13 E	140,312.13	2,126,468.38	1.67	118.81	
4,552.00	29.46	355.37	355.64	-3,099.40	4,525.20	131.31 N	83.07 E	140,327.67	2,126,467.25	2.44	134.30	
4,583.00	29.32	354.30	354.57	-3,126.41	4,552.21	146.47 N	81.77 E	140,342.82	2,126,465.88	1.75	149.40	
4,615.00	29.48	354.29	354.56	-3,154.29	4,580.09	162.10 N	80.29 E	140,358.45	2,126,464.32	0.50	164.98	
4,646.00	29.17	353.47	353.74	-3,181.32	4,607.12	177.21 N	78.74 E	140,373.55	2,126,462.70	1.64	180.01	
4,678.00	29.99	353.37	353.64	-3,209.15	4,634.95	192.91 N	77.00 E	140,389.24	2,126,460.89	2.57	195.64	End of Tangent
4,710.00	32.81	355.54	355.81	-3,236.46	4,662.26	209.51 N	75.48 E	140,405.83	2,126,459.30	9.49	212.17	
4,741.00	35.03	357.18	357.45	-3,262.18	4,687.98	226.77 N	74.47 E	140,423.10	2,126,458.21	7.75	229.38	
4,773.00	37.02	358.15	358.42	-3,288.06	4,713.86	245.58 N	73.80 E	140,441.90	2,126,457.44	6.47	248.15	
4,804.00	40.61	358.66	358.93	-3,312.21	4,738.01	265.00 N	73.35 E	140,461.32	2,126,456.91	11.63	267.55	
4,836.00	45.08	358.58	358.85	-3,335.67	4,761.47	286.75 N	72.93 E	140,483.07	2,126,456.39	13.97	289.27	
4,868.00	48.54	359.20	359.47	-3,357.57	4,783.37	310.08 N	72.59 E	140,506.39	2,126,455.94	10.90	312.56	
4,893.85	52.30	359.71	359.98	-3,374.03	4,799.83	330.00 N	72.50 E	140,526.31	2,126,455.75	14.63	332.46	Cross 330' FSL @ 4,893.85' MD (330' FSL / 2120 FWL)
4,899.00	53.05	359.80	0.07	-3,377.16	4,802.96	334.09 N	72.50 E	140,530.41	2,126,455.74	14.63	336.56	
4,931.00	58.58	359.29	359.56	-3,395.13	4,820.93	360.55 N	72.41 E	140,556.87	2,126,455.52	17.33	363.00	
4,963.00	62.99	357.70	357.97	-3,410.74	4,836.54	388.47 N	71.80 E	140,584.78	2,126,454.78	14.45	390.87	
5,042.00	76.11	356.83	357.10	-3,438.29	4,864.09	462.26 N	68.60 E	140,658.55	2,126,451.24	16.64	464.49	
5,074.00	81.78	357.12	357.39	-3,444.42	4,870.22	493.61 N	67.09 E	140,689.90	2,126,449.59	17.74	495.77	
5,106.00	86.92	358.00	358.27	-3,447.57	4,873.37	525.43 N	65.89 E	140,721.70	2,126,448.23	16.29	527.51	
5,137.00	90.40	358.98	359.25	-3,448.29	4,874.09	556.40 N	65.22 E	140,752.68	2,126,447.42	11.66	558.44	
5,169.00	92.87	359.46	359.73	-3,447.38	4,873.18	588.39 N	64.93 E	140,784.66	2,126,446.99	7.86	590.39	
5,201.00	92.44	0.20	0.47	-3,445.90	4,871.70	620.35 N	64.99 E	140,816.63	2,126,446.89	2.67	622.34	
5,232.00	92.56	0.06	0.33	-3,444.55	4,870.35	651.32 N	65.21 E	140,847.60	2,126,446.97	0.59	653.30	
5,264.00	92.38	359.95	0.22	-3,443.17	4,868.97	683.29 N	65.36 E	140,879.57	2,126,446.97	0.66	685.25	

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - 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			
5,296.00	92.10	0.20	0.47	-3,441.92	4,867.72	715.27 N	65.55 E	140,911.54	2,126,447.02	1.17	717.21	
5,327.00	91.73	1.47	1.74	-3,440.88	4,866.68	746.24 N	66.15 E	140,942.52	2,126,447.47	4.26	748.19	
5,359.00	91.20	2.97	3.24	-3,440.06	4,865.86	778.20 N	67.54 E	140,974.49	2,126,448.71	4.97	780.17	
5,391.00	90.43	3.33	3.60	-3,439.61	4,865.41	810.14 N	69.45 E	141,006.43	2,126,450.47	2.66	812.16	
5,422.00	91.08	3.84	4.11	-3,439.20	4,865.00	841.07 N	71.53 E	141,037.37	2,126,452.41	2.67	843.15	
5,454.00	91.91	3.21	3.48	-3,438.36	4,864.16	872.99 N	73.65 E	141,069.30	2,126,454.38	3.26	875.12	
5,485.00	92.65	3.10	3.37	-3,437.13	4,862.93	903.91 N	75.50 E	141,100.23	2,126,456.09	2.41	906.09	
5,516.00	92.87	3.41	3.68	-3,435.64	4,861.44	934.81 N	77.40 E	141,131.14	2,126,457.85	1.23	937.04	
5,547.00	92.96	3.41	3.68	-3,434.06	4,859.86	965.71 N	79.39 E	141,162.04	2,126,459.69	0.29	967.99	
5,579.00	93.33	2.95	3.22	-3,432.31	4,858.11	997.60 N	81.31 E	141,193.95	2,126,461.47	1.84	999.94	
5,610.00	93.76	2.89	3.16	-3,430.39	4,856.19	1,028.49 N	83.03 E	141,224.85	2,126,463.04	1.40	1,030.87	
5,641.00	94.20	2.75	3.02	-3,428.24	4,854.04	1,059.38 N	84.70 E	141,255.73	2,126,464.57	1.49	1,061.79	
5,672.00	93.55	2.58	2.85	-3,426.14	4,851.94	1,090.26 N	86.28 E	141,286.63	2,126,466.01	2.17	1,092.72	
5,703.00	92.90	2.57	2.84	-3,424.40	4,850.20	1,121.18 N	87.82 E	141,317.55	2,126,467.40	2.10	1,123.67	
5,734.00	92.10	2.64	2.91	-3,423.05	4,848.85	1,152.11 N	89.37 E	141,348.49	2,126,468.81	2.59	1,154.63	
5,765.00	91.29	2.58	2.85	-3,422.13	4,847.93	1,183.05 N	90.93 E	141,379.44	2,126,470.22	2.62	1,185.62	
5,796.00	90.62	2.41	2.68	-3,421.61	4,847.41	1,214.01 N	92.43 E	141,410.41	2,126,471.57	2.23	1,216.61	
5,827.00	90.55	2.34	2.61	-3,421.30	4,847.10	1,244.98 N	93.86 E	141,441.38	2,126,472.86	0.32	1,247.61	
5,858.00	90.71	2.19	2.46	-3,420.96	4,846.76	1,275.95 N	95.23 E	141,472.35	2,126,474.09	0.71	1,278.60	
5,889.00	91.20	2.05	2.32	-3,420.44	4,846.24	1,306.92 N	96.52 E	141,503.33	2,126,475.24	1.64	1,309.60	
5,920.00	91.63	1.87	2.14	-3,419.67	4,845.47	1,337.88 N	97.73 E	141,534.30	2,126,476.30	1.50	1,340.59	
5,951.00	91.63	2.13	2.40	-3,418.79	4,844.59	1,368.85 N	98.95 E	141,565.27	2,126,477.38	0.84	1,371.58	
5,983.00	90.71	3.09	3.36	-3,418.14	4,843.94	1,400.80 N	100.56 E	141,597.23	2,126,478.84	4.15	1,403.57	
6,014.00	89.72	3.14	3.41	-3,418.02	4,843.82	1,431.74 N	102.39 E	141,628.18	2,126,480.53	3.20	1,434.56	
6,045.00	89.97	2.94	3.21	-3,418.11	4,843.91	1,462.69 N	104.18 E	141,659.14	2,126,482.17	1.03	1,465.55	
6,076.00	90.43	2.48	2.75	-3,418.00	4,843.80	1,493.65 N	105.79 E	141,690.10	2,126,483.64	2.10	1,496.55	
6,107.00	90.74	3.22	3.49	-3,417.68	4,843.48	1,524.60 N	107.48 E	141,721.06	2,126,485.19	2.59	1,527.54	
6,139.00	90.31	3.81	4.08	-3,417.39	4,843.19	1,556.53 N	109.59 E	141,753.00	2,126,487.15	2.28	1,559.53	
6,169.00	89.78	3.87	4.14	-3,417.36	4,843.16	1,586.45 N	111.74 E	141,782.93	2,126,489.16	1.78	1,589.51	
6,200.00	90.09	3.38	3.65	-3,417.40	4,843.20	1,617.38 N	113.85 E	141,813.87	2,126,491.12	1.87	1,620.49	
6,231.00	90.56	3.15	3.42	-3,417.22	4,843.02	1,648.32 N	115.76 E	141,844.82	2,126,492.89	1.69	1,651.48	
6,262.00	90.92	2.99	3.26	-3,416.82	4,842.62	1,679.27 N	117.57 E	141,875.77	2,126,494.55	1.27	1,682.48	
6,293.00	90.46	2.47	2.74	-3,416.45	4,842.25	1,710.22 N	119.19 E	141,906.73	2,126,496.03	2.24	1,713.47	
6,325.00	90.49	2.36	2.63	-3,416.18	4,841.98	1,742.18 N	120.69 E	141,938.70	2,126,497.38	0.36	1,745.47	
6,356.00	91.23	2.37	2.64	-3,415.72	4,841.52	1,773.15 N	122.11 E	141,969.67	2,126,498.66	2.39	1,776.46	
6,386.00	91.63	2.16	2.43	-3,414.97	4,840.77	1,803.11 N	123.44 E	141,999.64	2,126,499.85	1.51	1,806.45	
6,417.00	92.35	2.31	2.58	-3,413.89	4,839.69	1,834.06 N	124.79 E	142,030.60	2,126,501.06	2.37	1,837.43	

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - 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			
6,448.00	92.55	1.93	2.20	-3,412.57	4,838.37	1,865.01 N	126.08 E	142,061.55	2,126,502.21	1.38	1,868.40	
6,479.00	91.88	1.44	1.71	-3,411.37	4,837.17	1,895.96 N	127.14 E	142,092.51	2,126,503.12	2.68	1,899.38	
6,511.00	90.59	1.17	1.44	-3,410.68	4,836.48	1,927.94 N	128.02 E	142,124.49	2,126,503.85	4.12	1,931.37	
6,543.00	89.14	1.56	1.83	-3,410.76	4,836.56	1,959.93 N	128.93 E	142,156.48	2,126,504.62	4.69	1,963.37	
6,574.00	89.45	1.44	1.71	-3,411.14	4,836.94	1,990.91 N	129.89 E	142,187.47	2,126,505.43	1.07	1,994.36	
6,606.00	89.75	1.36	1.63	-3,411.36	4,837.16	2,022.90 N	130.82 E	142,219.46	2,126,506.21	0.97	2,026.36	
6,637.00	90.15	0.71	0.98	-3,411.39	4,837.19	2,053.89 N	131.53 E	142,250.45	2,126,506.78	2.46	2,057.36	
6,669.00	90.89	1.08	1.35	-3,411.10	4,836.90	2,085.88 N	132.18 E	142,282.45	2,126,507.28	2.59	2,089.35	
6,701.00	91.33	0.94	1.21	-3,410.48	4,836.28	2,117.87 N	132.89 E	142,314.44	2,126,507.84	1.44	2,121.34	
6,732.00	90.92	1.39	1.66	-3,409.87	4,835.67	2,148.85 N	133.67 E	142,345.43	2,126,508.48	1.96	2,152.34	
6,764.00	91.26	1.11	1.38	-3,409.26	4,835.06	2,180.83 N	134.52 E	142,377.41	2,126,509.18	1.38	2,184.33	
6,795.00	92.50	0.74	1.01	-3,408.24	4,834.04	2,211.81 N	135.17 E	142,408.39	2,126,509.68	4.17	2,215.31	
6,827.00	92.40	0.87	1.14	-3,406.88	4,832.68	2,243.78 N	135.77 E	142,440.36	2,126,510.13	0.51	2,247.27	
6,858.00	91.82	1.02	1.29	-3,405.73	4,831.53	2,274.75 N	136.42 E	142,471.33	2,126,510.64	1.93	2,278.25	
6,890.00	91.79	1.12	1.39	-3,404.73	4,830.53	2,306.72 N	137.17 E	142,503.31	2,126,511.24	0.33	2,310.23	
6,922.00	91.76	0.99	1.26	-3,403.74	4,829.54	2,338.70 N	137.91 E	142,535.29	2,126,511.83	0.42	2,342.21	
6,953.00	92.07	1.25	1.52	-3,402.70	4,828.50	2,369.67 N	138.66 E	142,566.27	2,126,512.44	1.30	2,373.19	
6,985.00	91.57	1.49	1.76	-3,401.68	4,827.48	2,401.64 N	139.58 E	142,598.24	2,126,513.21	1.73	2,405.17	
7,016.00	90.37	1.50	1.77	-3,401.16	4,826.96	2,432.62 N	140.53 E	142,629.23	2,126,514.02	3.87	2,436.17	
7,048.00	90.25	1.30	1.57	-3,400.99	4,826.79	2,464.61 N	141.46 E	142,661.21	2,126,514.80	0.73	2,468.16	
7,080.00	90.62	1.37	1.64	-3,400.74	4,826.54	2,496.60 N	142.36 E	142,693.21	2,126,515.55	1.18	2,500.16	
7,111.00	91.11	0.93	1.20	-3,400.27	4,826.07	2,527.58 N	143.13 E	142,724.20	2,126,516.17	2.12	2,531.16	
7,143.00	90.89	0.82	1.09	-3,399.72	4,825.52	2,559.57 N	143.77 E	142,756.19	2,126,516.67	0.77	2,563.15	
7,175.00	90.31	0.58	0.85	-3,399.38	4,825.18	2,591.56 N	144.31 E	142,788.18	2,126,517.06	1.96	2,595.14	
7,206.00	90.74	0.49	0.76	-3,399.10	4,824.90	2,622.56 N	144.74 E	142,819.18	2,126,517.35	1.42	2,626.13	
7,238.00	91.70	0.42	0.69	-3,398.42	4,824.22	2,654.55 N	145.15 E	142,851.17	2,126,517.61	3.01	2,658.11	
7,270.00	91.33	0.71	0.98	-3,397.57	4,823.37	2,686.54 N	145.62 E	142,883.16	2,126,517.92	1.47	2,690.09	
7,301.00	89.66	0.96	1.23	-3,397.30	4,823.10	2,717.53 N	146.21 E	142,914.15	2,126,518.38	5.45	2,721.08	
7,333.00	88.74	1.22	1.49	-3,397.75	4,823.55	2,749.52 N	146.97 E	142,946.14	2,126,518.99	2.99	2,753.08	
7,365.00	89.29	0.69	0.96	-3,398.30	4,824.10	2,781.50 N	147.66 E	142,978.13	2,126,519.52	2.39	2,785.07	
7,396.00	90.31	0.05	0.32	-3,398.41	4,824.21	2,812.50 N	148.00 E	143,009.13	2,126,519.73	3.88	2,816.06	
7,428.00	89.75	0.15	0.42	-3,398.39	4,824.19	2,844.50 N	148.21 E	143,041.13	2,126,519.78	1.78	2,848.04	
7,459.00	90.18	359.93	0.20	-3,398.41	4,824.21	2,875.50 N	148.38 E	143,072.13	2,126,519.81	1.56	2,879.03	
7,491.00	90.83	359.59	359.86	-3,398.13	4,823.93	2,907.50 N	148.39 E	143,104.13	2,126,519.68	2.29	2,911.00	
7,523.00	91.48	359.74	0.01	-3,397.48	4,823.28	2,939.49 N	148.36 E	143,136.12	2,126,519.49	2.08	2,942.97	
7,555.00	91.70	359.62	359.89	-3,396.59	4,822.39	2,971.48 N	148.33 E	143,168.11	2,126,519.31	0.78	2,974.94	
7,586.00	91.88	359.05	359.32	-3,395.63	4,821.43	3,002.46 N	148.12 E	143,199.09	2,126,518.96	1.93	3,005.89	

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - 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			
7,618.00	90.89	359.13	359.40	-3,394.85	4,820.65	3,034.45 N	147.76 E	143,231.08	2,126,518.45	3.10	3,037.85	
7,650.00	89.44	359.16	359.43	-3,394.76	4,820.56	3,066.45 N	147.43 E	143,263.07	2,126,517.98	4.53	3,069.81	
7,681.00	89.38	359.61	359.88	-3,395.08	4,820.88	3,097.45 N	147.25 E	143,294.07	2,126,517.65	1.46	3,100.78	
7,713.00	88.80	359.17	359.44	-3,395.59	4,821.39	3,129.44 N	147.06 E	143,326.06	2,126,517.31	2.27	3,132.74	
7,745.00	88.24	359.01	359.28	-3,396.41	4,822.21	3,161.43 N	146.70 E	143,358.05	2,126,516.80	1.82	3,164.70	
7,808.00	89.01	0.26	0.53	-3,397.93	4,823.73	3,224.41 N	146.59 E	143,421.03	2,126,516.40	2.33	3,227.63	
7,903.00	91.04	0.40	0.67	-3,397.88	4,823.68	3,319.40 N	147.59 E	143,516.02	2,126,516.96	2.14	3,322.59	
7,998.00	91.70	0.54	0.81	-3,395.61	4,821.41	3,414.36 N	148.82 E	143,610.99	2,126,517.74	0.71	3,417.53	
8,093.00	89.11	0.45	0.72	-3,394.94	4,820.74	3,509.34 N	150.08 E	143,705.98	2,126,518.57	2.73	3,512.50	
8,188.00	89.32	0.72	0.99	-3,396.24	4,822.04	3,604.32 N	151.50 E	143,800.96	2,126,519.55	0.36	3,607.46	
8,282.00	90.68	0.45	0.72	-3,396.24	4,822.04	3,698.31 N	152.90 E	143,894.95	2,126,520.51	1.48	3,701.44	
8,377.00	90.52	1.01	1.28	-3,395.25	4,821.05	3,793.29 N	154.56 E	143,989.94	2,126,521.73	0.61	3,796.41	
8,472.00	90.28	359.89	0.16	-3,394.59	4,820.39	3,888.28 N	155.76 E	144,084.93	2,126,522.48	1.21	3,891.38	
8,567.00	90.74	0.00	0.27	-3,393.74	4,819.54	3,983.27 N	156.11 E	144,179.93	2,126,522.40	0.50	3,986.32	
8,662.00	89.54	0.48	0.75	-3,393.51	4,819.31	4,078.27 N	156.96 E	144,274.93	2,126,522.80	1.36	4,081.28	
8,757.00	92.03	0.24	0.51	-3,392.21	4,818.01	4,173.25 N	158.00 E	144,369.91	2,126,523.40	2.63	4,176.24	
8,852.00	92.24	0.77	1.04	-3,388.67	4,814.47	4,268.17 N	159.29 E	144,464.84	2,126,524.25	0.60	4,271.14	
8,947.00	90.49	0.26	0.53	-3,386.40	4,812.20	4,363.13 N	160.59 E	144,559.80	2,126,525.11	1.92	4,366.09	
9,042.00	88.95	359.88	0.15	-3,386.87	4,812.67	4,458.13 N	161.15 E	144,654.80	2,126,525.23	1.67	4,461.03	
9,137.00	89.41	0.24	0.51	-3,388.23	4,814.03	4,553.11 N	161.70 E	144,749.79	2,126,525.34	0.61	4,555.98	
9,231.00	89.72	359.50	359.77	-3,388.94	4,814.74	4,647.11 N	161.93 E	144,843.78	2,126,525.13	0.85	4,649.92	
9,326.00	91.30	359.93	0.20	-3,388.10	4,813.90	4,742.10 N	161.90 E	144,938.77	2,126,524.66	1.72	4,744.84	
9,421.00	90.92	359.90	0.17	-3,386.26	4,812.06	4,837.08 N	162.21 E	145,033.76	2,126,524.53	0.40	4,839.77	
9,516.00	90.03	359.96	0.23	-3,385.47	4,811.27	4,932.08 N	162.54 E	145,128.75	2,126,524.42	0.94	4,934.71	
9,527.92	90.14	359.88	0.14	-3,385.45	4,811.25	4,944.00 N	162.58 E	145,140.67	2,126,524.40	1.20	4,946.63	Cross 330' FNL @9,527.92' MD (330' FNL / 2289 FWL)
9,594.00	90.77	359.39	359.66	-3,384.92	4,810.72	5,010.08 N	162.47 E	145,206.75	2,126,523.98	1.20	5,012.65	Last MWD Survey
9,650.00	90.77	359.39	359.66	-3,384.17	4,809.97	5,066.07 N	162.13 E	145,262.74	2,126,523.39	0.00	5,068.60	Projected to TD

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - Wellbore #1

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
142.00	142.00	0.16	0.26	First MWD Survey
4,488.00	4,469.16	100.45	84.95	Start of Tangent
4,678.00	4,634.95	192.91	77.00	End of Tangent
4,893.85	4,799.83	330.00	72.50	Cross 330' FSL @ 4,893.85' MD (330' FSL / 2120 FWL)
9,527.92	4,811.25	4,944.00	162.58	Cross 330' FNL @9,527.92' MD (330' FNL / 2289 FWL)
9,594.00	4,810.72	5,010.08	162.47	Last MWD Survey
9,650.00	4,809.97	5,066.07	162.13	Projected to TD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
User	No Target (Freehand)	2.13	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
142.00	9,650.00	MWD	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:	1.97 °/100ft	Maximum Dogleg over Survey:	17.74 °/100ft at 5,074.00 ft
Net Tortousity applicable to Plans:	0.87 °/100ft	Directional Difficulty Index:	6.289

Design Report for Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - Wellbore #1

Audit Info

North Reference Sheet for Sec 34-T34S-R07W - Davis 3407 #27-2H/ Job# 9341868/ Nab 180 - 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 @ 1425.80ft (Original Well Elev). Northing and Easting are relative to Davis 3407 #27-2H/ Job# 9341868/ Nab 180

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: 1.00004941

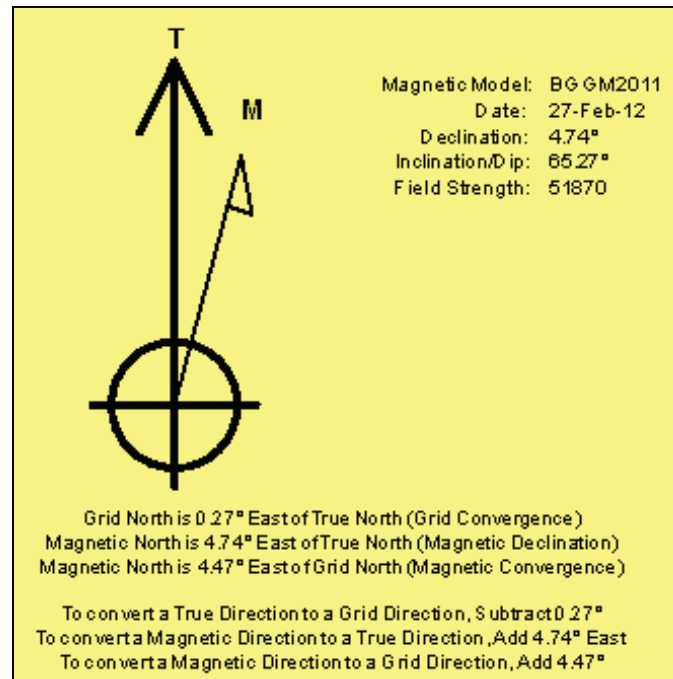
Grid Coordinates of Well: 140,195.98 ft N, 2,126,384.79 ft E

Geographical Coordinates of Well: 37° 03' 03.19" N, 098° 04' 01.07" W

Grid Convergence at Surface is: 0.27°

Based upon Minimum Curvature type calculations, at a Measured Depth of 9,650.00ft the Bottom Hole Displacement is 5,068.66ft in the Direction of 1.83° (True).

Magnetic Convergence at surface is: -4.47° (27 February 2012, , BGGM2011)



T34S, R7W, 6th P.M.

SGOMI

Well location, DAVIS 3407 #27-2H, located as shown on the Line Between the SE 1/4 SW 1/4 of Section 27 and the NE 1/4 NW 1/4 of section 34, T34S, R7W, 6th P.M., Harper County, Kansas.

BASIS OF ELEVATION

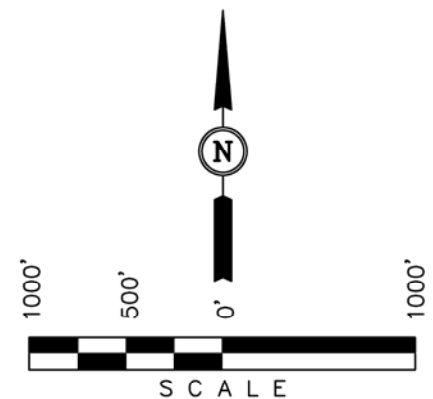
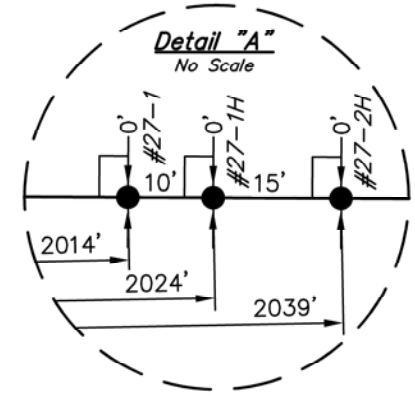
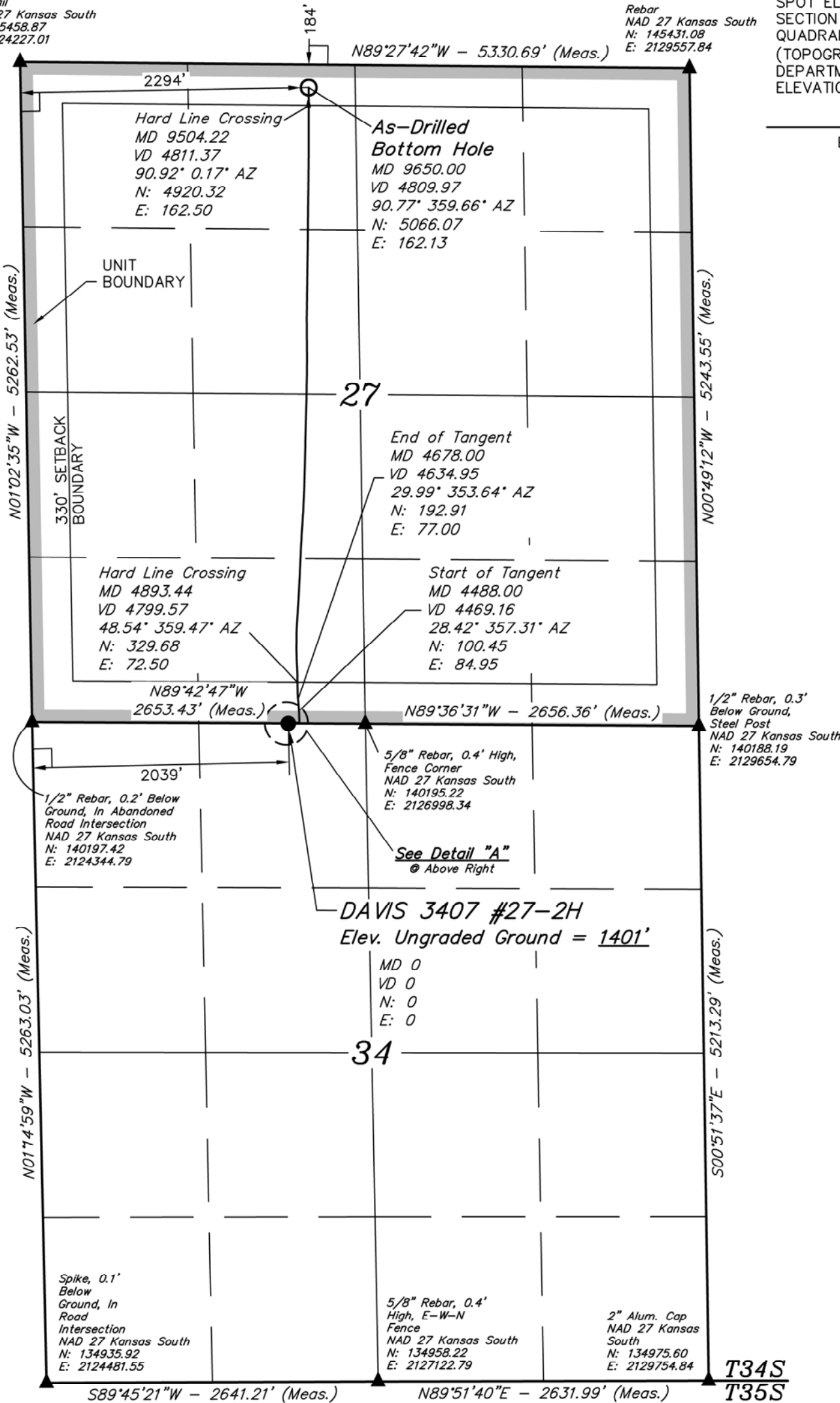
SPOT ELEVATION LOCATED AT THE NORTHEAST CORNER OF SECTION 22, T33S, R7W, 6th P.M. TAKEN FROM THE ANTHONY, QUADRANGLE, KANSAS, HARPER COUNTY, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 1348 FEET.

BASIS OF BEARINGS

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

PK Nail
NAD 27 Kansas South
N: 145458.87
E: 2124227.01

Rebar
NAD 27 Kansas South
N: 145431.08
E: 2129557.84



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. 1435
STATE OF KANSAS

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

LEGEND:

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

NAD 83 (#27-2H AS DRILLED BOTTOM HOLE) LATITUDE = 37°03'53.37" (37.064825) LONGITUDE = 98°04'00.27" (98.066742)	NAD 83 (#27-2H SURFACE LOCATION) LATITUDE = 37°03'03.28" (37.050911) LONGITUDE = 98°04'02.30" (98.067306)
NAD 27 (#27-2H AS DRILLED BOTTOM HOLE) LATITUDE = 37°03'53.28" (37.064800) LONGITUDE = 98°03'59.04" (98.066400)	NAD 27 (#27-2H SURFACE LOCATION) LATITUDE = 37°03'03.19" (37.050886) LONGITUDE = 98°04'01.07" (98.066964)
STATE PLANE NAD 27 N: 145262.62 E: 2126525.96	STATE PLANE NAD 27 N: 140196.45 E: 2126549.52

SCALE 1" = 1000'	DATE SURVEYED: 06-06-12	DATE DRAWN: 09-24-12
PARTY L.S. K.H. C.A.G.	REFERENCES G.L.O. PLAT	
WEATHER COOL	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 29, 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 15-077-21816-01-00
Davis 3407 27-2H
SW/4 Sec.27-34S-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