



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1095441
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: _____



1095441

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> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Shell Gulf of Mexico Inc.
Well Name	WATKINS & FARNEY 3510 18-1H
Doc ID	1095441

Tops

Name	Top	Datum
Stalnaker Top	4068	
Stalnaker Base	4158	
Iola	4337	
Hushpuckney	4520	
Marmation	4637	
Pawnee	4724	
Cherokee	4800	
Mississippi	5074	

Form	ACO1 - Well Completion
Operator	Shell Gulf of Mexico Inc.
Well Name	WATKINS & FARNEY 3510 18-1H
Doc ID	1095441

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
6	9554-9684	228396 gals fluid, 73741# proppant	
6	8892 - 9245	205044 gals fluid, 72760# proppant	
6	8512 - 8800	152670 gals fluid, 57566# proppant	
6	8268 - 8383	0 gals fluid, 0# proppant	
6	8000 -8202	169554 gals fluid, 75618# proppant	
6	7550 - 7929	124068 gals fluid, 75733# proppant	
6	7196 - 7427	126462 gals fluid, 77184# proppant	
6	6699 - 7072	122388 gals fluid, 78741# proppant	
6	6292 - 6294	120246 gals fluid, 78003# proppant	
6	5821 - 6174	112392 gals fluid, 63477# proppant	
6	5338 - 5736	112836 gals fluid, 72677# proppant	

Form	ACO1 - Well Completion
Operator	Shell Gulf of Mexico Inc.
Well Name	WATKINS & FARNEY 3510 18-1H
Doc ID	1095441

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	62	1/2 Portland Cmt	36	15% Fly Ash
Surface	12.25	9.625	36	792	Class C	500	See attached
Intermediate	8.75	7	23	5235	Class C	990	See attached
Liner	6.125	4.5	11.6	9799	Class H	425	See attached

SHELL GULF OF MEXICO, INC. (34574)

Watkins Farney 3510 18-1H

PETE MARTIN DRILLING (34645)
(SET THE CONDUCTOR)

1-H Conductor

1-H Mouse Hole

Call in DATE OF SPUD

3/6/2012

3/6/2012

spud in date

3/8/2012

3/10/2012

T.D date

3/8/2012

3/10/2012

Size Hole Drilled

26" diam

18"

Size Casing Set (in O.D)

18"

14"

conductor wall thickness

.250

.118

Weight Lbs./Ft.

47.44ppf

27.76 ppf

Setting Depth

62'

75'

Type of Cement

Type 1\2 portland cement

Type 1\2 portland cement

Cubic yards of cement

6 cu yds

7 cu yds

2500 PSI Grout Mix

Yes

yes

Type and Percent of Additives

15% fly Ash

15% Fly ash

Comments

0-12' soil 12'-17' mud and
water 17'-48' clay 48'-60' hard
clay0-12' soil 12'-17' mud and
water 17'-48' clay 48'-60' hard
clay

CEMENT JOB REPORT



CUSTOMER SHELL WESTERN E & P INC	DATE 28-JUN-12	F.R. # 1001918265	SERV. SUPV. JUSTIN D STAMPER
LEASE & WELL NAME WATKINS & FARNEY 3510 #18-1H - API 150772384	LOCATION 18-35S-10W		COUNTY-PARISH-BLOCK Barber 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, 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#CELOFLK		500	14.8	1.35	6.34	02:45	119.89	75.45
Water			8.34				56	
Available Mix Water <u>1000</u> Bbl.		Available Displ. Fluid <u>1000</u> Bbl.		TOTAL			195.89	75.45

HOLE			TBG-CSG-D.P.							COLLAR DEPTHS		
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
12.25		800	8.921	9.625	36	CSG	792	792	J-55	792	749	

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	
58	BBLS	Water	8.34	260					2816	1500	FRAC TANK

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING: ARRIVE ON LOCAITON, 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	3500 PSI
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>	
12:20						ARRIVE ON LOCATION	
21:20						SAFETY MEETING	
21:41	3500				WATER	TEST LINES, START WATER AHEAD	
21:46	150		5	20	WATER	FINISH WATER, START SLURRY	
22:22	200		4	120	SLURRY	FINISH SLURRY, SHUT DOWN, DROP PLUG AND DISPLACE	
10:37	350		5	48	WATER	SLOW TO BUMP PLUG	
10:40	350		3	10	WATER	BUMP PLUG, PRESSURE TO 700 PSI	
10:50	0				WATER	BLEED OFF RECIVED .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	700	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	28	198	0	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	

CEMENT JOB REPORT



CUSTOMER SHELL WESTERN E & P INC	DATE 24-JUL-12	F.R. # 1001923308	SERV. SUPV. JUSTIN D STAMPER
LEASE & WELL NAME WATKINS & FARNEY 3510 #18-1H - API 150072384	LOCATION 18-35S-10W		COUNTY-PARISH-BLOCK Barber 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						

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			8.43				40	
15:85:8(POZ,C,GEL)+10%SALT+.5%SMS+4PPS KOL		790	12.4	2.45	13.51	05:00	344	253.59
50:50:2(POZ,C,GEL)+4#KOLSL+.15%SMS+.3%FL52		200	14.2	1.32	5.66		47	26.94
WATER			8.34				204	
Available Mix Water <u>1000</u> Bbl.		Available Displ. Fluid <u>1000</u> Bbl.		TOTAL			635	280.53

HOLE			TBG-CSG-D.P.						COLLAR DEPTHS			
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE
8.75		5240	6.366	7	23	CSG	5235	4726	L-80	5235	5191	

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 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	FRAC TANK
204	BBLs	WATER	8.34	1200					5072	3000	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	4000 PSI
05:00						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>	
05:00						ARRIVE ON LOCATION	
05:47					WATER	SAFETY MEETING	
07:26	4060				LEAD	TEST LINES, START LEAD SLURRY, SEAL BOND PUMPED BY RIG	
07:46	50		3	344	LEAD	FINISH LEAD, START TAIL SLURRY	
07:46	80		3	47	TAIL	FINISH TAIL SLURRY, DROP PLUG AND DISPLACE	
08:52	1500		3	204	WATER	BUMP PLUG, PRESSURE TO 2000 PSI	
					WATER	BLEED OFF RECIVED BBLs BACK TO TRUCK	
08:57	1930					5 MIN	
09:02	1935					10 MIN	
09:07	1944					15 MIN	
09:08						RECIVED 1.5 BBLs OF WATER BACK TO TRUCK. 120 BBS 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	2000	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	120	635	0	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	

CEMENT JOB REPORT



CUSTOMER SHELL WESTERN E & P INC		DATE 09-AUG-12	F.R. # 1001927901	SERV. SUPV. ROY Y JOHNSON JR											
LEASE & WELL NAME WATKINS & FARNEY 3510 #18-1H - API 150072384		LOCATION 18-35S-10W		COUNTY-PARISH-BLOCK Barber 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				
		Guide Shoe, 4-1/2 in (FBO)													
		Float Collar, (FBO)													
PHYSICAL SLURRY PROPERTIES															
MATERIALS FURNISHED BY BJ				LAB REPORT NO.		SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT ₃	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER			
SealBond Spacer 25 (w/ 45lb bag)							8.4				40				
H50:50:0 + Additives						425	14.3	1.24	5.54	05:45	94	55.99			
DISPLACEMENT							8.34				123				
REVERSE OUT							8.34				170				
Available Mix Water		500 Bbl.		Available Displ. Fluid		500 Bbl.		TOTAL		427		55.99			
HOLE			TBG-CSG-D.P.						COLLAR DEPTHS						
SIZE	% EXCESS	DEPTH	ID	OD	WGT.	TYPE	MD	TVD	GRADE	SHOE	FLOAT	STAGE			
6.125	5	9799	1	4.5	11.6	CSG	9799	4765	P-110	9719	9630.8				
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		5240	4765						4	IF	WATER BASED	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			
123	BBLS	DISPLACEMENT		8.34	975						8552	5000	FRAC TANKS		
		REVERSE OUT		8.34											
Circulation Prior to Job															
Circulated Well: Rig <input checked="" type="checkbox"/> BJ <input type="checkbox"/>				Circulation Time: 2				Circulation Rate: 5 BPM							
Mud Density In: 9 LBS/GAL				Mud Density Out: 9 LBS/GAL				PV & YP Mud In:				PV & YP Mud Out:			
Gas Present: NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>				Units:				Solids Present at End of Circulation: NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>							
Displacement And Mud Removal															
Displaced By: Rig <input type="checkbox"/> BJ <input checked="" type="checkbox"/>				Amount Bled Back After Job: 2 BBLS											
Returns During Job: <input type="checkbox"/> NONE <input type="checkbox"/> PARTIAL <input checked="" type="checkbox"/> FULL				Method Used to Verify Returns: SIGHT											
Cement Returns at Surface: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				Were Returns Planned at Surface: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES											
Pipe Movement: <input type="checkbox"/> ROTATION <input type="checkbox"/> RECIPROCATION <input type="checkbox"/> NONE <input type="checkbox"/> UNABLE DUE TO STUCK PIPE															
Centralizers: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				Quantity:				Type: <input type="checkbox"/> BOW <input type="checkbox"/> RIGID							
Job Pumped Through: <input type="checkbox"/> CHOKE MANIFOLD <input type="checkbox"/> SQUEEZE MANIFOLD <input type="checkbox"/> MANIFOLD <input type="checkbox"/> NO MANIFOLD															
Plugs															
Number of Attempts by BJ:				Competition:				Wiper Balls Used: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				Quantity:			
Plug Catcher Used: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				Parabow Used: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES											
Was There a Bottom: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				Top of Plug: FT				Bottom of Plug: FT							
Squeezes (Update Original Treatment Report for Primary Job)															
BLOCK SQUEEZE <input type="checkbox"/>				SHOE SQUEEZE <input type="checkbox"/>				TOP OF LINER SQUEEZE <input type="checkbox"/>				PLANNED <input type="checkbox"/> UNPLANNED <input type="checkbox"/>			
Liner Packer: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				Bond Log: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				PSI Applied:				Fluid Weight: LBS/GAL			
Casing Test (Update Original Treatment Report for Primary Job)															
Casing Test Pressure: PSI				With LBS/GAL				Mud				Time Held: Hours Minutes			
EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:															
PRESSURE/RATE DETAIL						EXPLANATION									

CEMENT JOB REPORT



Shoe Test (Update Original Treatment Report for Primary Job)

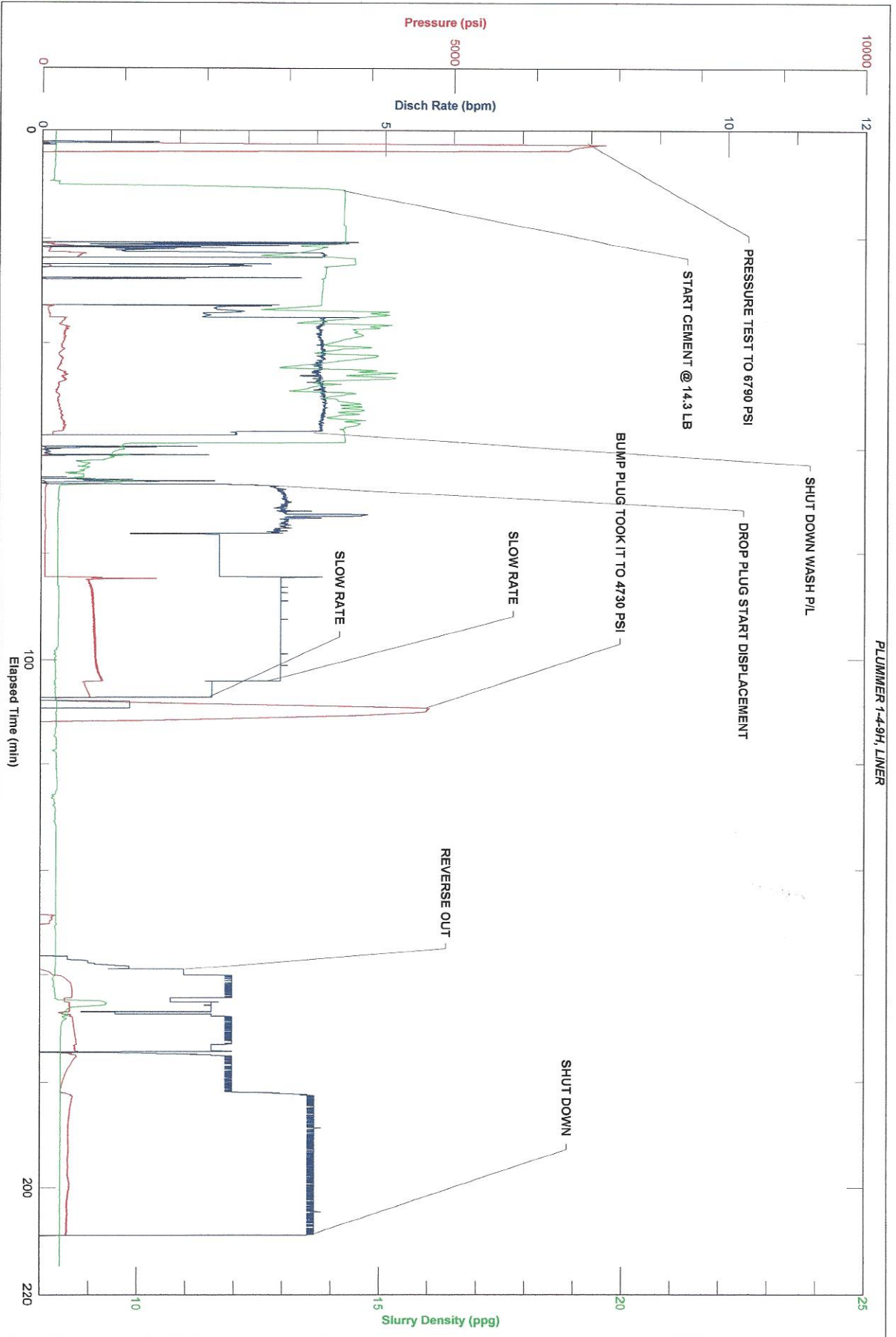
Depth Drilled out of Shoe: FT	Target EMW: LBS/GAL	Actual EMW: LBS/GAL
Number of Times Tests Conducted:	Mud Weight When Test was Conducted: LBS/GAL	
Problems Before Job (I.E. Running Casing, Circulating Well, ETC)		
Problems During Job (I.E. Lost Returns, Equipment Failure, Bulk Delivery, Foaming, ETC)		
Problems After Job (I.E. Gas at Surface, Float Equipment Failed, ETC)		

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"/>	
03:10	0	0	0	0		ARRIVE ON LOCATION (DARREL W CABLE, S.S.C)	
03:20	0	0	0	0		RIG UP	
06:10	0	0	0	0		SAFETY MEETING WITH E.O'S, RIG CREW AND CO REP	
07:08	0	0	0	0	WATER	PRESSURE TEST TO 6790 PSI	
07:13	0	0	0	0	SPACER	RIG PUMPED SPACER	
07:26	340	0	4	40	CEMENT	STARTED SLURRY @ 14.3 LB	
08:04	0	0	0	94	CEMENT	SHUT DOWN/ DROP PLUG	
08:06	0	0	0	0	WATER	WASH PUMPS AND LINES	
08:13	68	0	3.5		WATER	START DISPLACEMENT	
08:21	60	0	3.4	30	WATER	CEMENT @ SHOE	
08:23	51	0	2.5	5	WATER	SLOW RATE	
08:35	642	0	3.5	25	WATER	PICK UP RATE	
08:50	530	0	2.5	55	WATER	SLOW RATE	
08:54	675	0		8	WATER	BUMP PLUG TOOK PSI TO 4730	
08:57	0	0	0			CHECK FLOAT/ HELD/ BLED BACK 2 BBL	
09:08	890	0	0	0		RIG TESTED LINER	
09:43	320	0	3.1		WATER	REVERSED OUT	
10:01	470	0	3.2	43	WATER	REVERSED 12 BBL CEMENT BACK	
10:37	0	0	0	127		SHUT DOWN	
10:45	0	0	0			RIG DOWN	

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 type="checkbox"/> Y <input checked="" type="checkbox"/> N	675	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	12	427	0	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	



BJ Services JobMaster Program Version 3.50
Job Number: 1001927901
Customer: SHELL WESTERN
Well Name: WATKINS AND FARNEY 3501 18-1H



Shell Exploration & Production Co. Inc.

Barber Co. KS (NAD-27)

Sec 18-T35S-R10W

Watkins & Farney 3510 #18-1H / Job #9507142 / Nab 180

Wellbore #1

Design: Wellbore #1

Sperry Drilling Services

Combo Report With Grid North & True North

10 August, 2012

Well Coordinates: 121,116.01 N, 2,015,172.36 E (36° 59' 57.41" N, 098° 26' 52.98" W)

Ground Level: 1,302.00 ft

Local Coordinate Origin: Centered on Well Watkins & Farney 3510 #18-1H / Job #9507142 / Nab 180

Viewing Datum: WELL @ 1325.80ft (Original Well Elev)

TVDs to System: N

North Reference: True

Unit System: API-US-new

Version: 2003.21 Build: 43

HALLIBURTON

Design Report for Watkins & Farney 3510 #18-1H / Job #9507142 / 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	359.96	0.00	1,325.80	0.00	0.00 N	0.00 E	121,116.01	2,015,172.36	0.00	0.00	
144.00	0.15	174.61	174.65	1,181.80	144.00	0.19 S	0.02 E	121,115.82	2,015,172.38	0.10	-0.19	First MWD Survey
206.00	0.99	42.20	42.24	1,119.80	206.00	0.13 N	0.39 E	121,116.14	2,015,172.75	1.77	0.13	
266.00	1.94	39.72	39.76	1,059.82	265.98	1.29 N	1.38 E	121,117.30	2,015,173.74	1.59	1.31	
329.00	3.64	34.77	34.81	996.90	328.90	3.75 N	3.21 E	121,119.77	2,015,175.57	2.72	3.80	
423.00	6.20	34.50	34.54	903.25	422.55	10.39 N	7.79 E	121,126.40	2,015,180.15	2.72	10.49	
516.00	5.67	37.50	37.54	810.75	515.05	18.17 N	13.44 E	121,134.18	2,015,185.79	0.66	18.35	
610.00	5.80	36.17	36.21	717.22	608.58	25.68 N	19.07 E	121,141.70	2,015,191.42	0.20	25.93	
704.00	4.90	41.34	41.38	623.63	702.17	32.53 N	24.53 E	121,148.55	2,015,196.87	1.09	32.85	
829.00	3.73	48.47	48.51	498.99	826.81	39.23 N	31.11 E	121,155.25	2,015,203.45	1.03	39.64	
951.00	1.65	58.68	58.72	377.13	948.67	42.77 N	35.58 E	121,158.80	2,015,207.92	1.74	43.24	
1,077.00	1.22	311.45	311.49	251.15	1,074.65	44.60 N	36.13 E	121,160.63	2,015,208.46	1.84	45.08	
1,171.00	1.65	270.46	270.50	157.18	1,168.62	45.27 N	34.02 E	121,161.30	2,015,206.36	1.15	45.73	
1,266.00	0.63	299.85	299.89	62.20	1,263.60	45.54 N	32.20 E	121,161.57	2,015,204.54	1.20	45.97	
1,361.00	0.79	39.67	39.71	-32.80	1,358.60	46.31 N	32.17 E	121,162.34	2,015,204.50	1.15	46.74	
1,456.00	0.66	69.71	69.75	-127.79	1,453.59	47.00 N	33.10 E	121,163.03	2,015,205.44	0.42	47.44	
1,551.00	0.85	95.86	95.90	-222.78	1,548.58	47.12 N	34.31 E	121,163.15	2,015,206.65	0.41	47.58	
1,645.00	0.78	101.13	101.17	-316.77	1,642.57	46.92 N	35.64 E	121,162.95	2,015,207.97	0.11	47.40	
1,740.00	0.62	103.64	103.68	-411.76	1,737.56	46.68 N	36.77 E	121,162.71	2,015,209.10	0.17	47.17	
1,835.00	0.65	95.45	95.49	-506.76	1,832.56	46.50 N	37.80 E	121,162.53	2,015,210.14	0.10	47.01	
1,930.00	0.51	87.18	87.22	-601.75	1,927.55	46.47 N	38.76 E	121,162.50	2,015,211.10	0.17	46.99	
2,025.00	0.74	86.78	86.82	-696.75	2,022.55	46.53 N	39.80 E	121,162.56	2,015,212.13	0.24	47.06	
2,215.00	0.74	138.94	138.98	-886.73	2,212.53	45.67 N	41.83 E	121,161.70	2,015,214.17	0.34	46.23	
2,404.00	0.81	115.20	115.24	-1,075.72	2,401.52	44.18 N	43.84 E	121,160.21	2,015,216.18	0.17	44.76	
2,594.00	0.70	116.39	116.43	-1,265.70	2,591.50	43.09 N	46.09 E	121,159.12	2,015,218.43	0.06	43.70	
2,784.00	0.59	151.10	151.14	-1,455.69	2,781.49	41.72 N	47.60 E	121,157.75	2,015,219.94	0.21	42.35	
2,974.00	0.75	150.89	150.93	-1,645.68	2,971.48	39.77 N	48.68 E	121,155.81	2,015,221.02	0.08	40.42	
3,164.00	0.28	182.21	182.25	-1,835.67	3,161.47	38.22 N	49.27 E	121,154.26	2,015,221.61	0.28	38.88	
3,353.00	0.44	177.06	177.10	-2,024.66	3,350.46	37.04 N	49.28 E	121,153.07	2,015,221.63	0.09	37.69	
3,543.00	0.25	113.51	113.55	-2,214.66	3,540.46	36.14 N	49.70 E	121,152.18	2,015,222.04	0.21	36.81	
3,733.00	0.07	295.95	295.99	-2,404.66	3,730.46	36.03 N	49.98 E	121,152.06	2,015,222.32	0.17	36.69	
3,922.00	0.19	109.12	109.16	-2,593.66	3,919.46	35.97 N	50.17 E	121,152.01	2,015,222.51	0.14	36.64	
4,112.00	0.22	123.09	123.13	-2,783.66	4,109.46	35.67 N	50.77 E	121,151.71	2,015,223.11	0.03	36.35	
4,207.00	0.35	26.26	26.30	-2,878.66	4,204.46	35.83 N	51.05 E	121,151.87	2,015,223.40	0.46	36.51	
4,270.00	4.01	351.74	351.78	-2,941.60	4,267.40	38.19 N	50.82 E	121,154.22	2,015,223.16	5.92	38.86	
4,302.00	6.88	356.96	357.00	-2,973.46	4,299.26	41.21 N	50.56 E	121,157.24	2,015,222.90	9.09	41.88	
4,334.00	9.71	0.29	0.33	-3,005.12	4,330.92	45.82 N	50.48 E	121,161.86	2,015,222.82	8.97	46.49	

Design Report for Watkins & Farney 3510 #18-1H / Job #9507142 / 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			
4,366.00	13.64	1.87	1.91	-3,036.45	4,362.25	52.29 N	50.62 E	121,168.33	2,015,222.95	12.32	52.97	
4,398.00	16.79	3.32	3.36	-3,067.32	4,393.12	60.68 N	51.02 E	121,176.72	2,015,223.34	9.91	61.36	
4,430.00	19.63	3.81	3.85	-3,097.72	4,423.52	70.66 N	51.65 E	121,186.70	2,015,223.97	8.89	71.35	
4,461.00	22.28	4.10	4.14	-3,126.67	4,452.47	81.72 N	52.42 E	121,197.76	2,015,224.74	8.55	82.41	
4,493.00	24.37	4.13	4.17	-3,156.05	4,481.85	94.35 N	53.34 E	121,210.39	2,015,225.65	6.53	95.06	
4,525.00	27.10	3.79	3.83	-3,184.87	4,510.67	108.21 N	54.31 E	121,224.25	2,015,226.61	8.54	108.93	
4,556.00	29.85	3.44	3.48	-3,212.12	4,537.92	122.96 N	55.25 E	121,239.00	2,015,227.54	8.89	123.69	
4,588.00	32.66	3.28	3.32	-3,239.47	4,565.27	139.53 N	56.23 E	121,255.57	2,015,228.52	8.79	140.28	
4,620.00	34.99	2.86	2.90	-3,266.05	4,591.85	157.32 N	57.20 E	121,273.36	2,015,229.47	7.32	158.07	
4,651.00	38.05	2.59	2.63	-3,290.96	4,616.76	175.74 N	58.08 E	121,291.79	2,015,230.35	9.88	176.51	
4,683.00	41.01	2.01	2.05	-3,315.64	4,641.44	196.09 N	58.91 E	121,312.13	2,015,231.17	9.32	196.87	
4,715.00	44.29	1.95	1.99	-3,339.18	4,664.98	217.76 N	59.68 E	121,333.80	2,015,231.92	10.25	218.54	
4,746.00	47.51	1.60	1.64	-3,360.75	4,686.55	240.00 N	60.38 E	121,356.05	2,015,232.61	10.42	240.79	
4,778.00	50.77	2.15	2.19	-3,381.68	4,707.48	264.19 N	61.19 E	121,380.23	2,015,233.41	10.27	264.99	
4,810.00	53.60	1.91	1.95	-3,401.30	4,727.10	289.45 N	62.10 E	121,405.49	2,015,234.30	8.86	290.26	
4,841.00	56.07	1.50	1.54	-3,419.15	4,744.95	314.78 N	62.87 E	121,430.82	2,015,235.06	8.04	315.60	
4,873.00	58.44	1.24	1.28	-3,436.46	4,762.26	341.68 N	63.53 E	121,457.73	2,015,235.71	7.44	342.51	
4,904.00	61.50	1.00	1.04	-3,451.97	4,777.77	368.51 N	64.08 E	121,484.56	2,015,236.23	9.89	369.34	
4,936.00	64.72	1.16	1.20	-3,466.44	4,792.24	397.04 N	64.64 E	121,513.09	2,015,236.78	10.07	397.88	
4,966.00	67.36	0.79	0.83	-3,478.62	4,804.42	424.45 N	65.12 E	121,540.50	2,015,237.25	8.87	425.29	
4,998.00	69.79	1.12	1.16	-3,490.31	4,816.11	454.23 N	65.64 E	121,570.28	2,015,237.75	7.65	455.08	
5,030.00	73.80	1.80	1.84	-3,500.31	4,826.11	484.62 N	66.44 E	121,600.66	2,015,238.53	12.69	485.46	
5,061.00	78.19	3.24	3.28	-3,507.81	4,833.61	514.66 N	67.78 E	121,630.70	2,015,239.86	14.86	515.52	
5,093.00	82.13	3.59	3.63	-3,513.27	4,839.07	546.12 N	69.68 E	121,662.17	2,015,241.74	12.36	547.01	
5,125.00	84.62	3.44	3.48	-3,516.97	4,842.77	577.84 N	71.65 E	121,693.89	2,015,243.69	7.80	578.75	
5,156.00	85.71	4.22	4.26	-3,519.58	4,845.38	608.66 N	73.74 E	121,724.71	2,015,245.76	4.32	609.60	
5,180.00	86.96	4.04	4.08	-3,521.11	4,846.91	632.55 N	75.48 E	121,748.60	2,015,247.49	5.26	633.51	
5,297.00	90.95	2.68	2.72	-3,523.25	4,849.05	749.30 N	82.42 E	121,865.35	2,015,254.36	3.60	750.34	
5,329.00	90.56	1.81	1.85	-3,522.82	4,848.62	781.27 N	83.69 E	121,897.32	2,015,255.62	2.98	782.32	
5,361.00	89.85	0.68	0.72	-3,522.71	4,848.51	813.26 N	84.41 E	121,929.31	2,015,256.32	4.17	814.32	
5,392.00	89.82	359.98	0.02	-3,522.80	4,848.60	844.26 N	84.61 E	121,960.31	2,015,256.50	2.26	845.32	
5,424.00	90.12	0.09	0.13	-3,522.82	4,848.62	876.26 N	84.65 E	121,992.31	2,015,256.52	1.00	877.32	
5,455.00	90.06	359.50	359.54	-3,522.77	4,848.57	907.26 N	84.56 E	122,023.31	2,015,256.42	1.91	908.31	
5,487.00	89.72	357.88	357.92	-3,522.83	4,848.63	939.25 N	83.85 E	122,055.30	2,015,255.69	5.17	940.29	
5,519.00	90.25	357.83	357.87	-3,522.84	4,848.64	971.23 N	82.68 E	122,087.28	2,015,254.50	1.66	972.25	
5,550.00	90.49	357.63	357.67	-3,522.64	4,848.44	1,002.20 N	81.47 E	122,118.26	2,015,253.27	1.01	1,003.21	
5,582.00	90.25	357.90	357.94	-3,522.43	4,848.23	1,034.18 N	80.24 E	122,150.23	2,015,252.03	1.13	1,035.16	

Design Report for Watkins & Farney 3510 #18-1H / Job #9507142 / Nab 180 - 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
5,614.00	90.71	357.92	357.96	-3,522.16	4,847.96	1,066.16 N	79.10 E	122,182.21	2,015,250.87	1.44	1,067.12	
5,645.00	90.31	357.05	357.09	-3,521.89	4,847.69	1,097.13 N	77.76 E	122,213.18	2,015,249.51	3.09	1,098.07	
5,676.00	89.07	356.18	356.22	-3,522.05	4,847.85	1,128.07 N	75.95 E	122,244.12	2,015,247.69	4.89	1,128.99	
5,708.00	88.36	355.37	355.41	-3,522.77	4,848.57	1,159.98 N	73.62 E	122,276.03	2,015,245.33	3.37	1,160.86	
5,739.00	88.98	354.78	354.82	-3,523.49	4,849.29	1,190.86 N	70.98 E	122,306.90	2,015,242.68	2.76	1,191.70	
5,770.00	89.01	355.45	355.49	-3,524.03	4,849.83	1,221.74 N	68.36 E	122,337.79	2,015,240.04	2.16	1,222.55	
5,802.00	89.47	356.03	356.07	-3,524.46	4,850.26	1,253.65 N	66.01 E	122,369.70	2,015,237.67	2.31	1,254.43	
5,833.00	90.46	355.70	355.74	-3,524.48	4,850.28	1,284.57 N	63.79 E	122,400.62	2,015,235.44	3.37	1,285.31	
5,864.00	91.48	356.25	356.29	-3,523.95	4,849.75	1,315.49 N	61.64 E	122,431.53	2,015,233.27	3.74	1,316.20	
5,895.00	92.13	356.08	356.12	-3,522.98	4,848.78	1,346.41 N	59.59 E	122,462.45	2,015,231.20	2.17	1,347.09	
5,927.00	91.76	357.41	357.45	-3,521.89	4,847.69	1,378.34 N	57.79 E	122,494.38	2,015,229.39	4.31	1,378.99	
5,958.00	91.97	357.00	357.04	-3,520.88	4,846.68	1,409.29 N	56.31 E	122,525.33	2,015,227.88	1.49	1,409.92	
5,989.00	90.52	357.08	357.12	-3,520.21	4,846.01	1,440.24 N	54.73 E	122,556.28	2,015,226.29	4.68	1,440.85	
6,021.00	89.81	357.81	357.85	-3,520.12	4,845.92	1,472.21 N	53.32 E	122,588.24	2,015,224.86	3.18	1,472.79	
6,052.00	89.88	357.76	357.80	-3,520.20	4,846.00	1,503.19 N	52.15 E	122,619.22	2,015,223.67	0.28	1,503.75	
6,083.00	90.80	357.83	357.87	-3,520.02	4,845.82	1,534.16 N	50.98 E	122,650.20	2,015,222.48	2.98	1,534.71	
6,114.00	90.74	358.14	358.18	-3,519.60	4,845.40	1,565.14 N	49.91 E	122,681.18	2,015,221.40	1.02	1,565.67	
6,146.00	89.66	358.37	358.41	-3,519.49	4,845.29	1,597.13 N	48.95 E	122,713.16	2,015,220.43	3.45	1,597.64	
6,177.00	88.55	358.08	358.12	-3,519.97	4,845.77	1,628.11 N	48.02 E	122,744.14	2,015,219.47	3.70	1,628.61	
6,208.00	89.51	358.10	358.14	-3,520.50	4,846.30	1,659.09 N	47.00 E	122,775.12	2,015,218.44	3.10	1,659.57	
6,239.00	89.97	358.15	358.19	-3,520.64	4,846.44	1,690.07 N	46.01 E	122,806.10	2,015,217.43	1.49	1,690.54	
6,271.00	90.09	357.89	357.93	-3,520.62	4,846.42	1,722.05 N	44.93 E	122,838.08	2,015,216.33	0.89	1,722.50	
6,302.00	90.12	357.99	358.03	-3,520.56	4,846.36	1,753.03 N	43.84 E	122,869.06	2,015,215.22	0.34	1,753.46	
6,333.00	89.17	358.11	358.15	-3,520.76	4,846.56	1,784.01 N	42.80 E	122,900.04	2,015,214.17	3.09	1,784.43	
6,364.00	88.95	358.57	358.61	-3,521.26	4,847.06	1,815.00 N	41.93 E	122,931.03	2,015,213.28	1.64	1,815.40	
6,396.00	89.14	358.85	358.89	-3,521.80	4,847.60	1,846.99 N	41.23 E	122,963.01	2,015,212.56	1.06	1,847.37	
6,427.00	89.35	359.19	359.23	-3,522.21	4,848.01	1,877.98 N	40.72 E	122,994.01	2,015,212.04	1.29	1,878.36	
6,458.00	89.57	359.52	359.56	-3,522.50	4,848.30	1,908.98 N	40.39 E	123,025.00	2,015,211.69	1.28	1,909.35	
6,490.00	90.06	0.85	0.89	-3,522.60	4,848.40	1,940.97 N	40.52 E	123,057.00	2,015,211.80	4.43	1,941.34	
6,521.00	90.28	1.18	1.22	-3,522.51	4,848.31	1,971.97 N	41.09 E	123,088.00	2,015,212.35	1.28	1,972.34	
6,552.00	90.52	1.57	1.61	-3,522.29	4,848.09	2,002.96 N	41.85 E	123,118.99	2,015,213.10	1.48	2,003.34	
6,584.00	90.12	1.65	1.69	-3,522.11	4,847.91	2,034.95 N	42.78 E	123,150.97	2,015,214.00	1.27	2,035.34	
6,615.00	89.97	1.80	1.84	-3,522.09	4,847.89	2,065.93 N	43.73 E	123,181.96	2,015,214.94	0.68	2,066.33	
6,646.00	90.03	1.86	1.90	-3,522.09	4,847.89	2,096.91 N	44.74 E	123,212.94	2,015,215.94	0.27	2,097.33	
6,678.00	90.37	1.66	1.70	-3,521.98	4,847.78	2,128.90 N	45.75 E	123,244.93	2,015,216.92	1.23	2,129.32	
6,709.00	90.37	1.27	1.31	-3,521.78	4,847.58	2,159.89 N	46.56 E	123,275.92	2,015,217.72	1.26	2,160.32	
6,740.00	90.68	1.12	1.16	-3,521.49	4,847.29	2,190.88 N	47.23 E	123,306.91	2,015,218.37	1.11	2,191.31	

Design Report for Watkins & Farney 3510 #18-1H / Job #9507142 / Nab 180 - 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
6,772.00	90.90	0.89	0.93	-3,521.05	4,846.85	2,222.87 N	47.81 E	123,338.90	2,015,218.94	0.99	2,223.31	
6,804.00	90.68	1.11	1.15	-3,520.61	4,846.41	2,254.86 N	48.39 E	123,370.89	2,015,219.50	0.97	2,255.31	
6,835.00	90.52	0.65	0.69	-3,520.29	4,846.09	2,285.86 N	48.89 E	123,401.89	2,015,219.98	1.57	2,286.31	
6,867.00	89.69	0.72	0.76	-3,520.23	4,846.03	2,317.85 N	49.30 E	123,433.88	2,015,220.37	2.60	2,318.31	
6,899.00	89.45	0.27	0.31	-3,520.47	4,846.27	2,349.85 N	49.60 E	123,465.88	2,015,220.65	1.59	2,350.30	
6,930.00	90.22	0.37	0.41	-3,520.56	4,846.36	2,380.85 N	49.79 E	123,496.88	2,015,220.83	2.50	2,381.30	
6,962.00	90.31	0.25	0.29	-3,520.41	4,846.21	2,412.85 N	49.99 E	123,528.88	2,015,221.00	0.47	2,413.30	
6,993.00	90.09	359.92	359.96	-3,520.30	4,846.10	2,443.85 N	50.05 E	123,559.88	2,015,221.05	1.28	2,444.30	
7,025.00	90.31	0.02	0.06	-3,520.19	4,845.99	2,475.85 N	50.06 E	123,591.88	2,015,221.04	0.76	2,476.30	
7,057.00	90.65	0.10	0.14	-3,519.92	4,845.72	2,507.85 N	50.12 E	123,623.88	2,015,221.08	1.09	2,508.29	
7,088.00	90.52	0.12	0.16	-3,519.61	4,845.41	2,538.84 N	50.20 E	123,654.88	2,015,221.14	0.42	2,539.29	
7,151.00	91.14	0.20	0.24	-3,518.69	4,844.49	2,601.84 N	50.42 E	123,717.87	2,015,221.33	0.99	2,602.28	
7,185.17	91.18	0.26	0.30	-3,518.00	4,843.80	2,636.00 N	50.58 E	123,752.03	2,015,221.47	0.22	2,636.44	Cross Sec Line @7,185.17' MD, 4,843.80' TVD (2,808.75' FWL)
7,246.00	91.26	0.37	0.41	-3,516.70	4,842.50	2,696.81 N	50.95 E	123,812.85	2,015,221.81	0.22	2,697.26	
7,340.00	90.52	0.43	0.47	-3,515.24	4,841.04	2,790.80 N	51.68 E	123,906.83	2,015,222.48	0.79	2,791.24	
7,435.00	89.51	0.65	0.69	-3,515.22	4,841.02	2,885.79 N	52.64 E	124,001.83	2,015,223.39	1.09	2,886.24	
7,530.00	91.54	1.74	1.78	-3,514.35	4,840.15	2,980.76 N	54.69 E	124,096.79	2,015,225.39	2.43	2,981.23	
7,625.00	90.03	359.76	359.80	-3,513.05	4,838.85	3,075.74 N	55.99 E	124,191.77	2,015,226.64	2.62	3,076.21	
7,720.00	89.66	359.16	359.20	-3,513.30	4,839.10	3,170.73 N	55.17 E	124,286.76	2,015,225.76	0.74	3,171.19	
7,814.00	91.29	0.70	0.74	-3,512.52	4,838.32	3,264.72 N	55.12 E	124,380.75	2,015,225.66	2.39	3,265.17	
7,909.00	90.93	0.65	0.69	-3,510.68	4,836.48	3,359.70 N	56.30 E	124,475.73	2,015,226.79	0.38	3,360.15	
8,004.00	90.37	0.95	0.99	-3,509.61	4,835.41	3,454.68 N	57.69 E	124,570.71	2,015,228.13	0.67	3,455.14	
8,099.00	88.67	0.16	0.20	-3,510.40	4,836.20	3,549.67 N	58.68 E	124,665.70	2,015,229.06	1.97	3,550.14	
8,194.00	89.11	1.29	1.33	-3,512.24	4,838.04	3,644.64 N	59.95 E	124,760.67	2,015,230.28	1.28	3,645.12	
8,289.00	90.62	2.73	2.77	-3,512.47	4,838.27	3,739.57 N	63.35 E	124,855.61	2,015,233.63	2.20	3,740.09	
8,384.00	90.89	3.24	3.28	-3,511.21	4,837.01	3,834.43 N	68.36 E	124,950.47	2,015,238.59	0.61	3,835.00	
8,479.00	91.08	3.11	3.15	-3,509.58	4,835.38	3,929.27 N	73.69 E	125,045.31	2,015,243.86	0.24	3,929.90	
8,574.00	90.99	3.48	3.52	-3,507.87	4,833.67	4,024.09 N	79.21 E	125,140.14	2,015,249.33	0.40	4,024.79	
8,669.00	91.23	2.20	2.24	-3,506.02	4,831.82	4,118.95 N	83.98 E	125,235.00	2,015,254.05	1.37	4,119.71	
8,764.00	91.54	1.84	1.88	-3,503.73	4,829.53	4,213.86 N	87.40 E	125,329.91	2,015,257.41	0.50	4,214.66	
8,859.00	90.52	0.15	0.19	-3,502.02	4,827.82	4,308.83 N	89.11 E	125,424.88	2,015,259.08	2.08	4,309.64	
8,954.00	91.08	0.39	0.43	-3,500.69	4,826.49	4,403.82 N	89.63 E	125,519.87	2,015,259.54	0.64	4,404.62	
9,049.00	90.22	0.39	0.43	-3,499.62	4,825.42	4,498.81 N	90.34 E	125,614.86	2,015,260.20	0.91	4,499.61	
9,144.00	90.03	359.94	359.98	-3,499.41	4,825.21	4,593.81 N	90.68 E	125,709.85	2,015,260.48	0.51	4,594.61	
9,239.00	90.25	359.54	359.58	-3,499.18	4,824.98	4,688.80 N	90.32 E	125,804.85	2,015,260.07	0.48	4,689.59	
9,334.00	90.40	0.25	0.29	-3,498.64	4,824.44	4,783.80 N	90.21 E	125,899.85	2,015,259.90	0.76	4,784.58	
9,428.00	91.81	359.99	0.03	-3,496.83	4,822.63	4,877.78 N	90.47 E	125,993.83	2,015,260.11	1.53	4,878.56	



Design Report for Watkins & Farney 3510 #18-1H / Job #9507142 / 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			
9,523.00	90.40	358.81	358.85	-3,494.99	4,820.79	4,972.76 N	89.54 E	126,088.80	2,015,259.13	1.94	4,973.51	
9,617.00	89.88	359.16	359.20	-3,494.76	4,820.56	5,066.74 N	87.94 E	126,182.79	2,015,257.48	0.67	5,067.47	
9,713.00	90.31	357.92	357.96	-3,494.60	4,820.40	5,162.71 N	85.56 E	126,278.75	2,015,255.05	1.37	5,163.39	
9,762.00	90.37	358.15	358.19	-3,494.31	4,820.11	5,211.68 N	83.92 E	126,327.73	2,015,253.38	0.49	5,212.34	Last MWD Survey
9,814.00	90.37	358.15	358.19	-3,493.98	4,819.78	5,263.65 N	82.28 E	126,379.70	2,015,251.70	0.00	5,264.28	Projected to TD

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
144.00	144.00	-0.19	0.02	First MWD Survey
7,185.17	4,843.80	2,636.00	50.58	Cross Sec Line @7,185.17' MD, 4,843.80' TVD (2,808.75' FWL)
9,762.00	4,820.11	5,211.68	83.92	Last MWD Survey
9,814.00	4,819.78	5,263.65	82.28	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)	0.77	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
144.00	9,814.00	MWD Survey's	MWD+SC

Design Targets

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

Design Report for Watkins & Farney 3510 #18-1H / Job #9507142 / Nab 180 - Wellbore #1

Directional Difficulty Index

Average Dogleg over Survey: 1.85 °/100ft

Maximum Dogleg over Survey: 14.86 °/100ft at 5,061.00 ft

Net Tortosity applicable to Plans: 0.79 °/100ft

Directional Difficulty Index: 6.291

Audit Info

North Reference Sheet for Sec 18-T35S-R10W - Watkins & Farney 3510 #18-1H / Job #9507142 / 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 @ 1325.80ft (Original Well Elev). Northing and Easting are relative to Watkins & Farney 3510 #18-1H / Job #9507142 / 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: 1.00006330

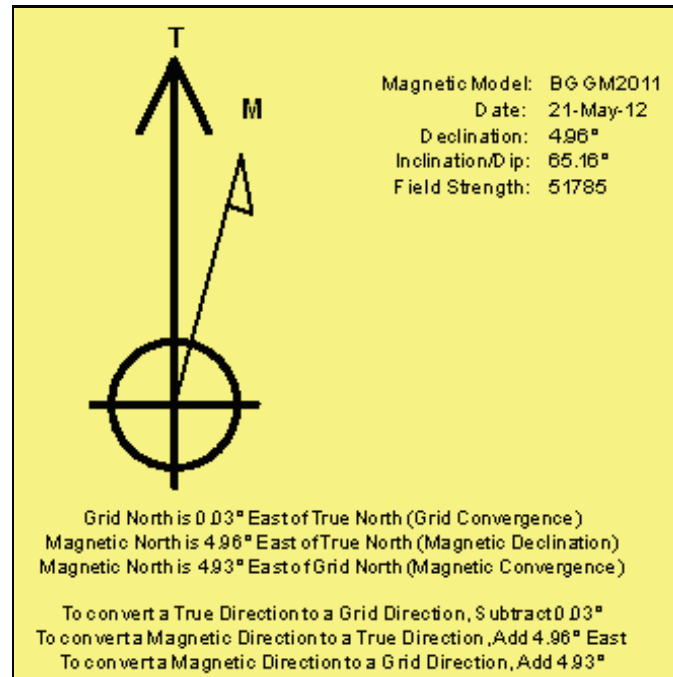
Grid Coordinates of Well: 121,116.01 ft N, 2,015,172.36 ft E

Geographical Coordinates of Well: 36° 59' 57.41" N, 098° 26' 52.98" W

Grid Convergence at Surface is: 0.03°

Based upon Minimum Curvature type calculations, at a Measured Depth of 9,814.00ft the Bottom Hole Displacement is 5,264.30ft in the Direction of 0.90° (True).

Magnetic Convergence at surface is: -4.93° (21 May 2012, , BGGM2011)



T35S, R10W, 6th P.M.

SGOMI

Well location, WATKINS & FARNEY 3510 #18-1H, located as shown in the SE 1/4 NW 1/4 of Section 18, T35S, R10W, 6th P.M., Barber County, Kansas.

BASIS OF ELEVATION

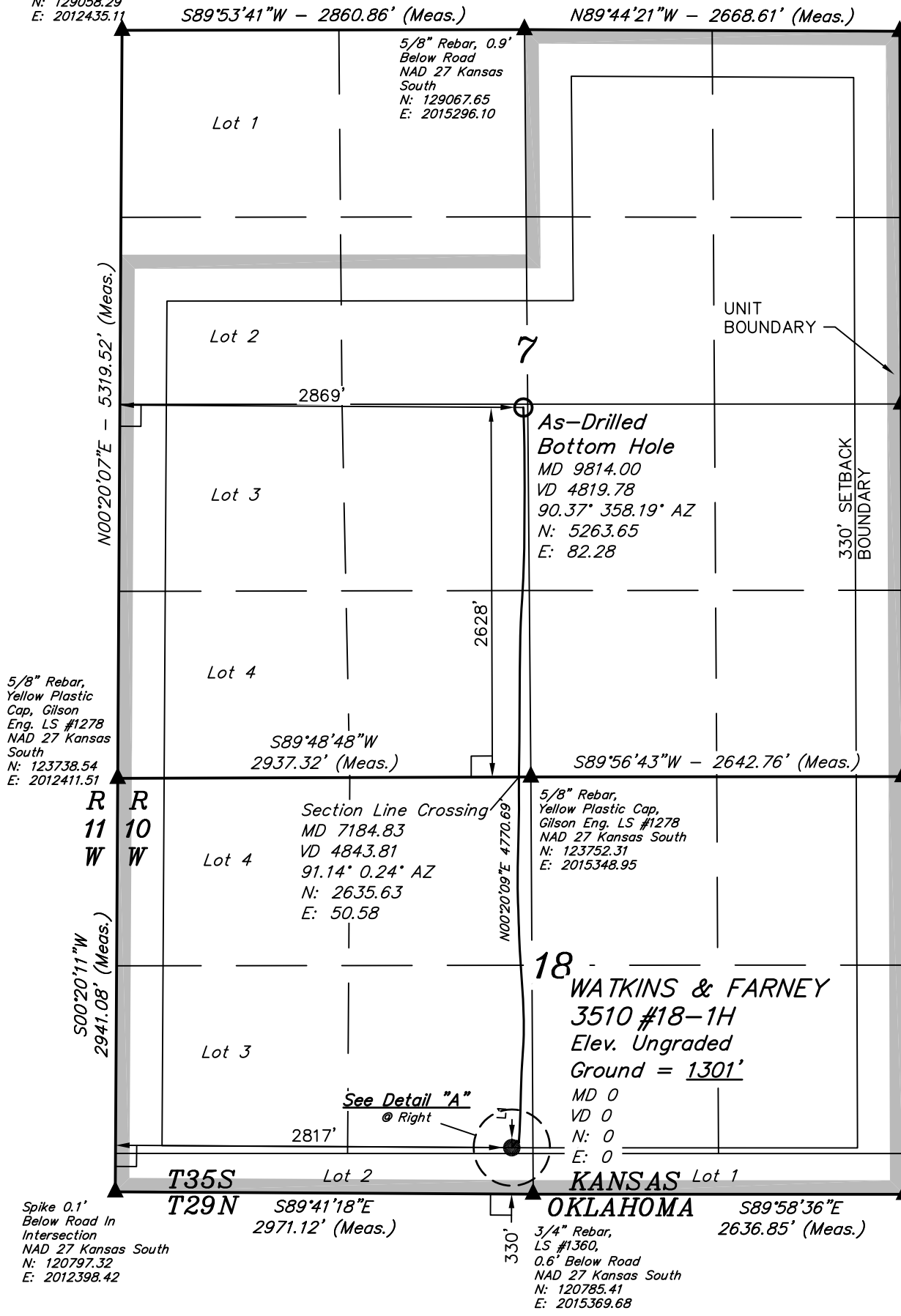
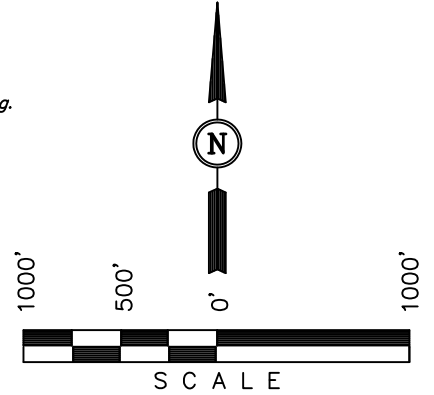
SPOT ELEVATION LOCATED AT THE SOUTHWEST CORNER OF SECTION 12, T35S, R10W, 6th P.M. TAKEN FROM THE CORWIN, QUADRANGLE, KANSAS, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 1274 FEET.

BASIS OF BEARINGS

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

1" Square Bolt in Asphalt Road 0.1' Below Ground
NAD 27 Kansas South
N: 129058.29
E: 2012435.11

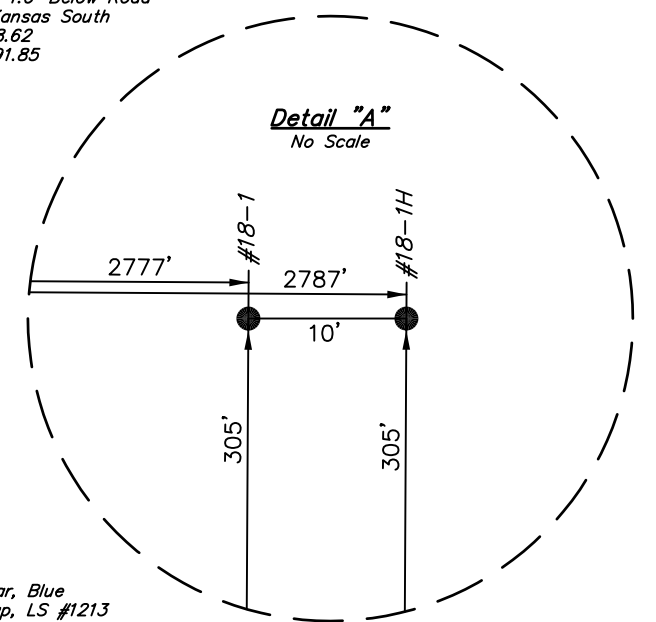
5/8" Rebar, Yellow Plastic Cap, Gilson Eng. LS #1278, 0.2' High
NAD 27 Kansas South
N: 129059.33
E: 2017964.83



5/8" Rebar, Yellow Plastic Cap, Gilson Eng. LS #1278
NAD 27 Kansas South
N: 126409.07
E: 2017978.36

5/8" Rebar, Yellow Plastic Cap, Gilson Eng. LS #1278, 1.0' Below Road
NAD 27 Kansas South
N: 123758.62
E: 2017991.85

5/8" Rebar, Blue Plastic Cap, LS #1213
0.1' Below Road In Intersection
NAD 27 Kansas South
N: 120788.11
E: 2018006.68



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.

JUSTIN J. GILSON
REGISTERED LAND SURVEYOR
REGISTRATION NO. 1461
STATE OF KANSAS
09-15-12

UINTAH ENGINEERING & LAND SURVEYING 85 SOUTH 200 EAST - VERNAL, UTAH 84078 (435) 789-1017		
SCALE 1" = 1000'	DATE SURVEYED: 08-10-12	DATE DRAWN: 09-20-12
PARTY L.S. K.H. C.A.G.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE SGOMI	

LEGEND:

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

NAD 83 (AS-DRILLED BOTTOM HOLE) LATITUDE = 37°00'49.55" (37.013764) LONGITUDE = 98°26'52.74" (98.447983)	NAD 83 (#18-1H SURFACE LOCATION) LATITUDE = 36°59'57.26" (36.999239) LONGITUDE = 98°26'54.07" (98.448353)
NAD 27 (AS-DRILLED BOTTOM HOLE) LATITUDE = 37°00'49.45" (37.013736) LONGITUDE = 98°26'51.47" (98.447631)	NAD 27 (#18-1H SURFACE LOCATION) LATITUDE = 36°59'57.16" (36.999211) LONGITUDE = 98°26'52.80" (98.448000)
STATE PLANE NAD 27 N: 126380.12 E: 2015292.18	STATE PLANE NAD 27 N: 121091.02 E: 2015187.41

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

October 10, 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 15-007-23844-01-00
WATKINS & FARNEY 3510 18-1H
SE/4 Sec.18-35S-10W
Barber 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