Confidentiality Requested:

CORRECTION #1

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

1234565

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

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

OPERATOR: License #	API No. 15				
Name:	Spot Description:				
Address 1:					
Address 2:	Feet from Dorth / South Line of Section				
City: State: Zip:+	Feet from East / West Line of Section				
Contact Person:	Footages Calculated from Nearest Outside Section Corner:				
Phone: ()					
CONTRACTOR: License #	GPS Location: Lat:, Long:				
Name:	(e.g. xx.xxxx) (e.gxxx.xxxxx)				
Wellsite Geologist:	Datum: NAD27 NAD83 WGS84				
Purchaser:	County:				
Designate Type of Completion:	Lease Name: Well #:				
New Well Re-Entry Workover	Field Name:				
	Producing Formation:				
	Elevation: Ground: Kelly Bushing:				
Gas D&A ENHR SIGW	Total Vertical Depth: Plug Back Total Depth:				
GG GSW Temp. Abd.	Amount of Surface Pipe Set and Cemented at: Feet				
CM (Coal Bed Methane) Cathodic Other (Core, Expl., etc.):	Multiple Stage Cementing Collar Used? Yes No				
If Workover/Re-entry: Old Well Info as follows:	If yes, show depth set: Feet				
Operator:	If Alternate II completion, cement circulated from:				
Well Name:	feet depth to:w/sx cmt.				
Original Comp. Date: Original Total Depth:					
Deepening Re-perf. Conv. to ENHR Conv. to SWD	Drilling Fluid Management Plan				
Plug Back Conv. to GSW Conv. to Producer	(Data must be collected from the Reserve Pit)				
Commingled Permit #:	Chloride content: ppm Fluid volume: bbls				
Commingled     Permit #:      Dual Completion     Permit #:	Dewatering method used:				
SWD         Permit #:	Location of fluid disposal if hauled offsite:				
ENHR     Permit #:	Location of huid disposa in natied offsite.				
GSW Permit #:	Operator Name:				
	Lease Name: License #:				
Spud Date or Date Reached TD Completion Date or	Quarter Sec TwpS. R East West				
Recompletion Date Recompletion Date	County: Permit #:				

#### AFFIDAVIT

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

### Submitted Electronically

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:						

### CORRECTION #1

1234565

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 Yes No (Attach Additional Sheets)			L	og Formation (Top), Depth and Datum Samp			Sample
Samples Sent to Geological Survey		Yes No	Nam	е		Тор	Datum
Cores Taken Electric Log Run		Yes No					
List All E. Logs Run:							
		CASING Report all strings set-c			on, 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 / SQL	EEZE RECORD	·	· · · · ·	
Purpose: Depth Top Bottom		Type of Cement # Sacks Used		Type and Percent Additives			
Protect Casing Plug Back TD							
Plug Off Zone							
Did you perform a hydraulic fracturing treatment on this well?			Yes		o questions 2 an	d 3)	
Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 Was the hydraulic fracturing treatment information submitted to the chemical disclosure reg		-	? Yes		o question 3) out Page Three o	of the ACO-1)	
Shots Per Foot PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated				cture, Shot, Cement and Kind of Mat		d Depth	

TUBING RECORD: Size: Set At: Packer At: Liner Run: No Yes Date of First, Resumed Production, SWD or ENHR. Producing Method: Pumping Gas Lift Other (Explain) Flowing Estimated Production Water Oil Bbls. Gas Mcf Bbls. Gas-Oil Ratio Gravity Per 24 Hours DISPOSITION OF GAS: METHOD OF COMPLETION: PRODUCTION INTERVAL: Open Hole Perf. Dually Comp. Commingled Vented Sold Used on Lease (Submit ACO-5) (Submit ACO-4) (If vented, Submit ACO-18.) Other (Specify)

Form	ACO1 - Well Completion				
Operator	Unit Petroleum Company				
Well Name	Debes 32 #1H				
Doc ID	1234565				

### Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement		Type and Percent Additives
Surface	28	16	65	160	Н	144	
Intermedia te	12.25	9.625	36	1514	A	605	2% CC + 1/4# celloflake
Intermedia te	8.75	7	26	4384	A	220	5% Gyp + 10% salt
Production	6.125	4.50	11.6	8815	Prem H	400	.2% SASL + 1/4# celloflake
Production	6.125	5.50	17	8815	Prem H	400	.2% SASL + 1/4# celloflake

### Summary of Changes

Lease Name and Number: Debes 32 #1H

API/Permit #: 15-155-21696-01-00

Doc ID: 1234565

**Correction Number: 1** 

Approved By: NAOMI JAMES

Field Name	Previous Value	New Value
Approved Date	09/25/2014	12/09/2014
Save Link	//kcc/detail/operatorE ditDetail.cfm?docID=12	//kcc/detail/operatorE ditDetail.cfm?docID=12
Well Type	21479 GAS	34565 OIL



Confidentiality Requested: Yes No

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

1221479

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

## WELL COMPLETION FORM

CONFIDENTIAL	WELL COMPLETION FORM
WEI	LL HISTORY - DESCRIPTION OF WELL & LEASE

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

#### AFFIDAVIT

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

### Submitted Electronically

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:						

### KOLAR Document ID: 1221479

Operator Name:	Lease Name: Well #:
Sec TwpS. R East 🗌 West	County:

Page Two

**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.

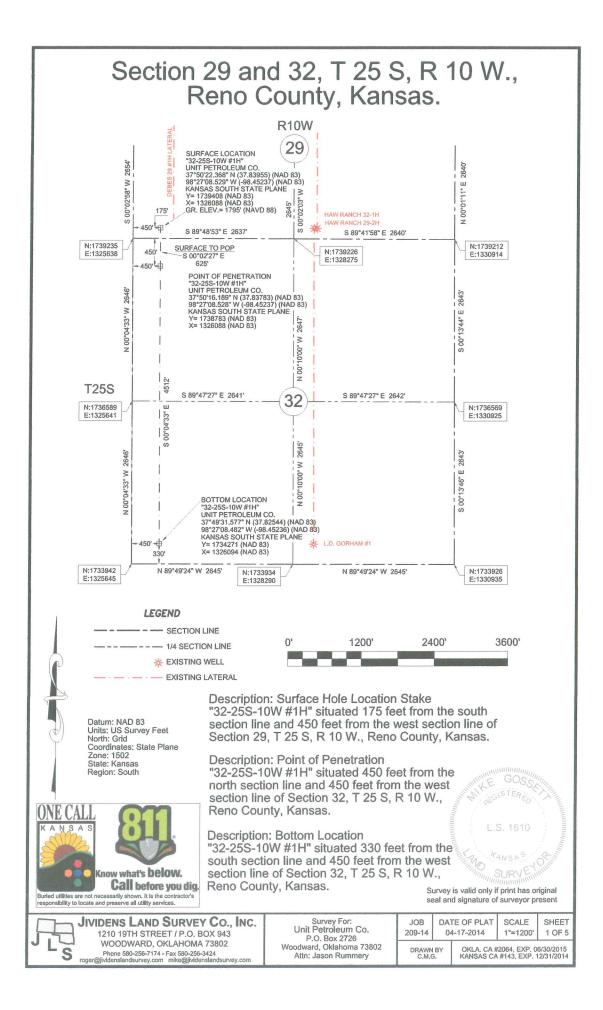
Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

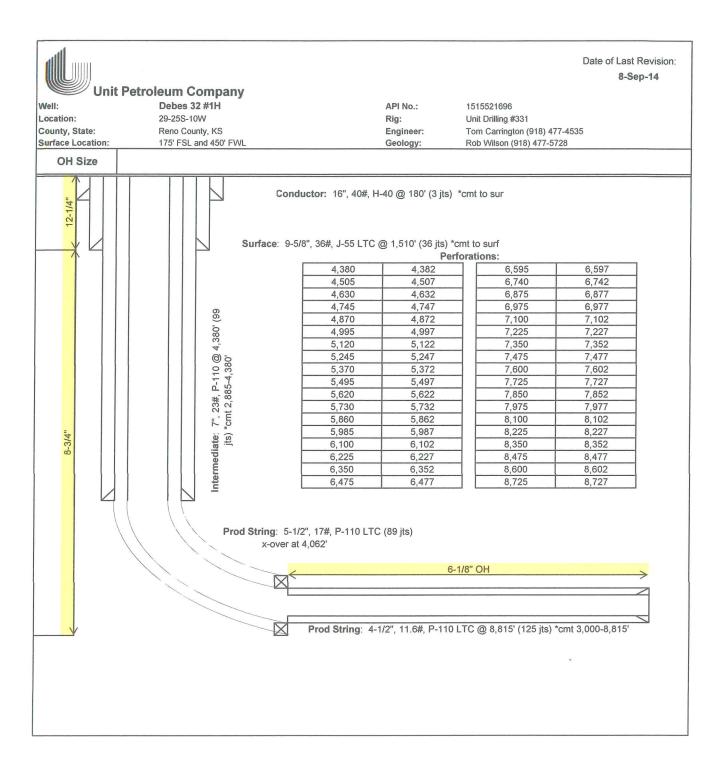
Drill Stem Tests Taken (Attach Additional Sh	acate)	Y	′es 🗌 No		Log Formation (Top), Depth and Datum		Sample		
Samples Sent to Geolo			⁄es 🗌 No	1	Name	Э		Тор	Datum
Cores Taken Electric Log Run Geologist Report / Mud List All E. Logs Run:		□ Y □ Y	Yes ☐ No Yes ☐ No Yes ☐ No						
		Rep	CASING ort all strings set-c		] Ne	w Used rmediate, productio	on. etc.		
Purpose of String	Size Hole Drilled	Siz	ze Casing et (In O.D.)	Weight Lbs. / Ft.		Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
[			ADDITIONAL	CEMENTING /	SQU	EEZE RECORD			
Purpose:	Depth Top Bottom	Туре	e of Cement	# Sacks Used		Type and Percent Additives			
Protect Casing Plug Back TD Plug Off Zone									
<ol> <li>Did you perform a hydra</li> <li>Does the volume of the</li> <li>Was the hydraulic fracture</li> </ol>	total base fluid of the	hydraulic fr	acturing treatment		-	☐ Yes ns? ☐ Yes ☐ Yes	No (If No, s	kip questions 2 ar kip question 3) ill out Page Three	
Date of first Production/Inj Injection:	jection or Resumed Pr	oduction/	Producing Meth	iod:		Gas Lift 🗌 O	ther <i>(Explain)</i>		
Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Water Bbls. Gas-Oil Ratio Gravity				Gravity
DISPOSITIO	N OF GAS:		Ν	IETHOD OF COM	F COMPLETION: PRODUCTION INTERVAL: Top Bottom				
Vented Sold (If vented, Subn	Vented Sold Used on Lease Open Hole Perf.			-	·	nit ACO-4)	юр	Bollom	
Shots Per         Perforation         Perforation         Bridge Plug         Bridge Plug           Foot         Top         Bottom         Type         Set At		Bridge Plug Set At		Acid,		ementing Squeezend of Material Used)			
TUBING RECORD:	Size:	Set At:		Packer At:					

Form	ACO1 - Well Completion
Operator	Unit Petroleum Company
Well Name	Debes 32 #1H
Doc ID	1221479

### Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement		Type and Percent Additives
Surface	28	16	65	160	Н	144	
Intermedia te	12.25	9.625	36	1514	A	605	2% CC + 1/4# celloflake
Intermedia te	8.75	7	26	4384	A	220	5% Gyp + 10% salt
Production	6.125	4.50	11.6	8815	Prem H	400	.2% SASL + 1/4# celloflake
Production	6.125	5.50	17	8815	Prem H	400	.2% SASL + 1/4# celloflake







P.O. Box 1570, Woodward, OK 73802 Ph. 580-254-5400 Fax 580-254-3242

### **CEMENTING REPORT**

Operator: Unit Co	rporation
Well Name: Debes	32-1H
Legal Description:	

Cementing Date	5/31/14
Size of Drill Bit (Inches)	28
Size of Casing (Inches O.D.)	16
Setting Depth of Casing (ft.) from ground level	160
Type of Cement	Common Cement
Sacks of Cement Used	144
Was cement circulated?	Yes

Jeff M. Owen Mid-Continent Conductor, LLC



# TREATMENT REPORT

Customer	INDIT	Ant	onla	1	ease No.						Date					
Lease	EBES	( FI	NU/EE	1	Well #	1	4					0	6 -0	05	-14	ł
Field Order	to Station	· P2	1.77	K			Casing	4	Depth	14'	County		NO		5	State
Туре Јор	NW	93	18 59	refac	2-5			For	mation				Legal	Desc	ription	-10
PIP	E DATA	PI	ERFOR	ATING	à DATA		FLUID	USED			٦	<b>FREA</b>	TMENT	r RE	SUME	
Casing Size	Tubing Si	ze Sho	ots/Ft			Acid				-	RATE	PRE	SS	18	SIP	
Depth 5/4	Depth	Fro	m	То		Pre	Pad			Max				5	Min.	name of the standard contribution and
Volume 7	Volume	Fro		То		Pad				Min				1	0 Min.	
Max Press	Max Pres	s Fro	m	То		Frac				Avg				1	5 Min.	
Well Connecti	on Annulus V	<sup>/ol.</sup> Fro	m	То						HHP Used				A	Innulus Pres	ssure
Plug Depth	Packer De	epth Fro	m	То		Flus	า			Gas Volum	ne			T	otal Load	
Customer Rep	oresentative				Station	Mana	ger DR	UE -	Sett	L	Trea	ter	bear	1	Jul/	12
Service Units	37900	276.	8619	905/	209	57	19918	199	60 -	21010	5					
Driver Names	Sulli sut		C gIZA	w	Ph	ye										
Time	Casing Pressure	Tubin Pressu		ols. Pum	nped	F	late				0	Servi	ce Log	/		
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10244	NE Hiwa	av 61	D P O	BOXE	3613 •	Prat	t KS 6	7124-	8618	3 • (620)	672.	120	- Fa	x (6	520) $672$	-5383



## TREATMENT REPORT

	gy si				-	ease No					Date					
Lease D	shos	TOTE	VM_		V	Vell #	32	-14			-	6	- 8-	201	4	
Field Order	# Static	n D	CL	r, KS			-	Casing	Z1 Dep	<sup>th</sup> 4384	County	E	eno		Sta	ate Ks
1000 A A	-NW/8	Bar	18112		int	ERM	ED	ATE	Formatio	"TD-4.	380		Legal D	escription	29-	25-10
	PE DATA					DATA	Τ	FLUID	USED			<b>FREA</b>		RESUM		
Casing Size	Tubing S	ize S	Shots/F	t			Ad	cid			RATE PRESS ISIF					
Depth 430	54 Depth	F	From		То		Pr	e Pad		Мах		5 Min.				
Volume 17			From		То		Pad			Min				10 Min.		
Max Press	Max Pres	ss F	rom		То					Avg				15 Min.		
Well Connect	ion Annulus	Vol. F	rom		То					HHP Used	ł			Annulu	s Press	ure
Plug Depth	Packer D	epth F	rom		То			ush		Gas Volur	ne			Total Lo	bad	
Customer Re	presentative	1				Station		APL	in Goi	0120	Trea	ter D	Sr.n	Fren	Kli	2
Service Units	27283	770	686	1850	05	1953	-5	73768								
Driver Names	Drun		Ding	mel	i cu	Jas	っ	Jash								
Time	Casing Pressure		sure	Bbls	. Pum	ped		Rate			4	and the second se	ice Log			
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10244	NE HIW	ay 6	Г•Р.	<b>O</b> . B	OX 8	013 •	Pra	all, KS 6	7124-861	13 • (620	1072	-120	- Fax			DJDJ nc. 620-672-3656



# TREATMENT REPORT

Customer		1	. /	1 1	.ease No.						Date				
Lease	NIT	and the second se	lem		Noll #								10		
	OEKE	S		6	2-1	H	Casing	/	Depth	2	County		-17	14	State
Field Order #		Mart H					Ousing	C	mation		County	Ken		soriation	KS
CN	w .	424	mover	1					nation	1			Legar De	escription	10
PIPE	DATA	PE	RFORA	TING	DATA		FLUID	USED			Т	REA	TMENT I	RESUME	
Casing	Tubing Si	ize Shot	s/Ft			Aci	d				RATE	PRE	SS	ISIP	
Depth 060	Depth	From		То		Pre	Pad			Max				5 Min.	
Volume/	Volume	From		То		Pa	Ŀ			Min				10 Min.	
Max Press	Max Pres	s From		То		Fra	С			Avg				15 Min.	
Well Connection	n Annulus \	Vol. From		To						HHP Used	ł			Annulus P	ressure
Plug Depth	Packer De	epth From		То		Flu	sh			Gas Volun				Total Load	
Customer Repr	resentative				Station	Man	ager	s sc	off		Treate	er 12	bento	L/1/10	2
Service Units	37900	2746	198	31	1986	2									
Driver Names	"ILIAN	PRAJES	C	06	1										
Time	Casing Pressure	Tubing Pressure		s. Pum			Rate					Servio	e Log		
12:20								an	Loc	= Sot	Ce,	m	reto		
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10244	<b>NE</b> Hiwa	av 61 •	POB	OX 8	613 •	Pra	tt KS 6	7124-	8613	3 • (620)	672-	1201	• Fay	(620) 67	2-5383

Taylor Printing, Inc. 620-672-3656

# **Unit Petroleum**

Reno County, Kansas [NAD 83] Section 29 T25S-R10W Debes 32 #1H

OH

Design: OH

# **Standard Survey Report**

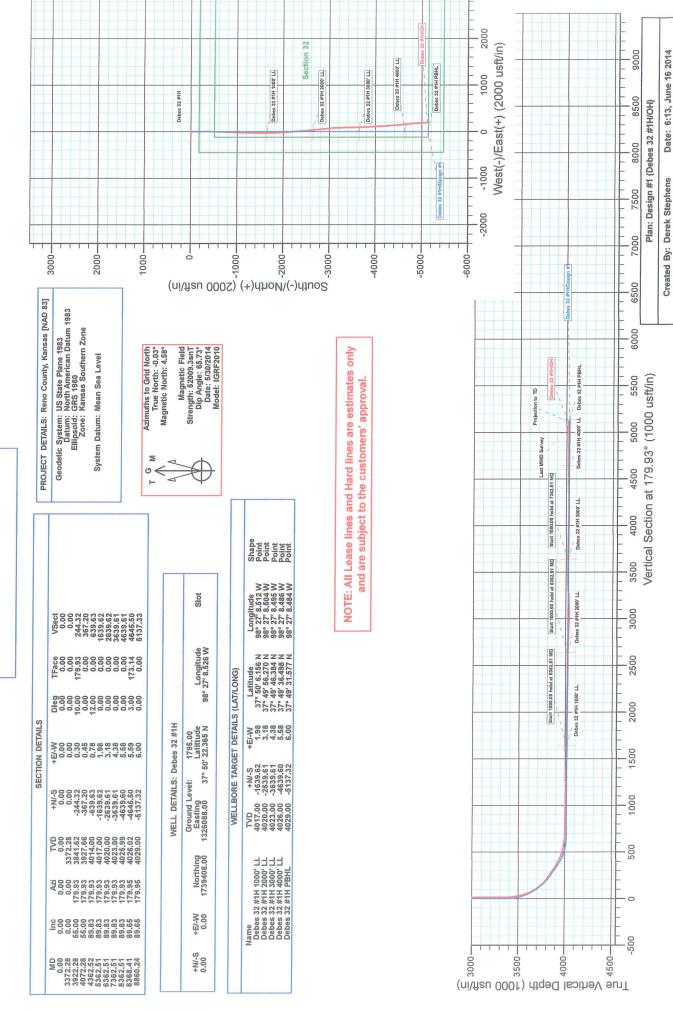
16 June, 2014





Unit Petroleum Project: Reno County, Kansas [NAD 83] Site: Section 23 T255-R10W Well: Debes 32 #/H Wellbore: OH Design: Design #1 Lat: 37° 50' 22:365 N Long: 98° 27' 8.526 W Pad GL: 1795.00 : 14' KB@ 1809.00usft (UDI 331) ŝ





Date: 6:13, June 16 2014



Company: U	Init Petroleum			Local Co-	ordinate Refere	nce:	Well Debes 32	#1H		
Project: R	eno County, Ka	insas [NAD 83]		TVD Refe	rence:		14' KB @ 1809	0.00usft (UDI 331)		
Site: S	ection 29 T25S	-R10W		MD Refer	ence:		14' KB @ 1809	0.00usft (UDI 331)		
Well: D	ebes 32 #1H			North Ref	erence:		Grid			
Wellbore: O	Н			Survey Ca	Iculation Metho	od:	Minimum Curv	ature		
Design: O	н			Database			EDM 5000.1 S	ingle User Db		
Project	Reno Count	y, Kansas [NAD 8	33]							
Map System: Geo Datum:	US State Plar North America	ne 1983 an Datum 1983		System	Datum:		Mean Sea Lev	vel		
Map Zone:	Kansas South	iern Zone					Using geodetic	c scale factor		
Site	Section 29 T	25S-R10W								
Site Position:			Northing:	1,7	39,399.00 usft	Latitude:			37° 50' 22	262 N
From:	Мар		Easting:	1,3	28,604.00 usft	Longitud	e:		98° 26' 37.	161 W
Position Uncertainty	/:	0.00 usft	Slot Radius:		13-3/16 "	Grid Con	vergence:		0.0	3°
Well	Debes 32 #1	Н	evalo de constitución a							
Well Position	+N/-S	0.00 usft	Northing:		1,739,408.0	0 usft	Latitude:		37° 50' 22	.365 N
	+E/-W	0.00 usft	Easting:		1,326,088.0	0 usft	Longitude:		98° 27' 8.	526 W
Position Uncertainty	1	0.00 usft	Wellhead Ele	evation:		usft	Ground Level:		1,795.0	0 usf
Magnetics	Model N	lame GRF2010	Sample Date 5/30/2014		ination (°) 4.61	[	Dip Angle (°) 65.73	(n	<b>itrength</b> I <b>T)</b> 52,009	
		51(1 2010	5/50/2014				00.7	<b>.</b>	02,000	1. gall the
Design	OH									
Audit Notes:										
Version:	1.0		Phase:	ACTUAL	Ti	e On Depth	:			0.00
Vertical Section:		Depth Fr (us	om (TVD) sft)	+N/-S (usft)		E/-W usft)		Direction (°)		
			0.00	0.	00	0.00		179.	93	
Survey Program		Date 6/16/20	)14							
From (usft)	To (usft)	Survey (Wellbo	re)		Tool Name		Description			
100.00		) Gyro (OH)			CB-GYRO-MS			l gyro multishot		
3,297.00	8,825.00	MWD (OH)			MWD		MWD - Standa	ird		
Survey										
Measured			Vertical			Vertical	Dogleg	Build	Turn	
Depth (usft)	Inclination (°)	Azimuth (°)	Depth (usft)	+N/-S (usft)		Section (usft)	Rate (°/100usft)	Rate	Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.41	195.26	100.00	-0.35	-0.09	0.35	0.41	0.41	0.00	
200.00	0.27	178.98	200.00	-0.93	-0.18	0.93	0.17	-0.14	-16.28	
300.00	0.26	10/ 95	200.00	1 47	0.26	1 /6	0.12	0.00	15.97	

300.00

400.00

500.00

600.00

700.00

800.00

900.00

0.36

0.42

0.18

0.40

0.37

0.18

0.35

194.85

211.36

228.59

259.02

222.28

214.21

236.34

300.00

399.99

499.99

599.99

699.99

799.99

899.99

-1.47

-2.08

-2.50

-2.67

-2.97

-3.34

-3.64

-0.26

-0.53

-0.84

-1.30

-1.86

-2.17

-2.51

1.46

2.08

2.50

2.67

2.97

3.34

3.64

0.12

0.13

0.25

0.26

0.24

0.19

0.20

15.87

16.51

17.23

30.43

-36.74

-8.07

0.09

0.06

-0.24

0.22

-0.03

-0.19

0.17



Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Debes 32 #1H
Project:	Reno County, Kansas [NAD 83]	TVD Reference:	14' KB @ 1809.00usft (UDI 331)
Site:	Section 29 T25S-R10W	MD Reference:	14' KB @ 1809.00usft (UDI 331)
Well:	Debes 32 #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	ОН	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination	Azimuth	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
(USIL)	(°)	(°)	(usit)	(usit)	(usit)	(usit)	( nousil)	( / tousit)	(Trousit)
1,000.00	0.32	240.45	999.98	-3.95	-3.01	3.95	0.04	-0.03	4.11
1,100.00	0.23	218.17	1,099.98	-4.24	-3.37	4.24	0.14	-0.09	-22.28
1,200.00	0.38	233.53	1,199.98	-4.60	-3.76	4.60	0.17	0.15	15.36
1,300.00	0.19	216.65	1,299.98	-4.93	-4.13	4.93	0.21	-0.19	-16.88
1,400.00	0.30	201.69	1,399.98	-5.31	-4.32	5.30	0.13	0.11	-14.96
1,500.00	0.36	236.07	1,499.98	-5.72	-4.68	5.72	0.20	0.06	34.38
1,600.00	0.35	218.52	1,599.98	-6.14	-5.13	6.13	0.11	-0.01	-17.55
1,700.00	0.35	220.45	1,699.97	-6.61	-5.52	6.60	0.01	0.00	1.93
1,800.00	0.48	216.99	1,799.97	-7.18	-5.97	7.17	0.13	0.13	-3.46
1,900.00	0.42	201.95	1,899.97	-7.85	-6.36	7.84	0.13	-0.06	-15.04
2,000.00	0.42	219.36	1,999.97	-8.48	-6.73	8.47	0.13	0.00	17.41
2,100.00	0.45	199.75	2,099.96	-9.13	-7.10	9.12	0.15	0.03	-19.61
2,200.00	0.43	197.21	2,199.96	-9.86	-7.34	9.85	0.03	-0.02	-2.54
2,300.00	0.40	203.84	2,199.96	-10.61	-7.63	10.61	0.09	0.07	6.63
2,400.00	0.52	184.67	2,399.95	-11.47	-7.84	11.46	0.00	0.02	-19.17
2,500.00	0.41	174.20	2,499.95	-12.27	-7.84	12.26	0.14	-0.11	-10.47
2,600.00	0.13	135.82	2,599.95	-12.71	-7.73	12.70	0.32	-0.28	-38.38
2,700.00	0.23	93.90	2,699.95	-12.81	-7.45	12.80	0.16	0.10	-41.92
								0.10	
2,800.00	0.37	93.41	2,799.95	-12.84	-6.92	12.83	0.14		
2,900.00	0.44	93.55	2,899.94	-12.88	-6.22	12.87	0.07	0.07	0.14
3,000.00	0.46	102.28	2,999.94	-12.99	-5.44	12.98	0.07	0.02	8.73
3,100.00	0.52	134.90	3,099.94	-13.40	-4.73	13.39	0.28	0.06	32.62
3,180.00	0.46	137.74	3,179.94	-13.89	-4.26	13.89	0.08	-0.08	3.55
3,297.00	0.40	132.20	3,296.93	-14.51	-3.64	14.51	0.06	-0.05	-4.74
3,329.00	0.30	155.90	3,328.93	-14.66	-3.52	14.66	0.54	-0.31	74.06
3,361.00	0.70	145.40	3,360.93	-14.90	-3.38	14.90	1.28	1.25	-32.81
3,393.00	2.60	154.50	3,392.92	-15.72	-2.95	15.71	5.98	5.94	28.44
3,425.00	5.40	163.20	3,424.83	-17.81	-2.20	17.81	8.93	8.75	27.19
3,457.00	8.40	165.80	3,456.60	-21.52	-1.20	21.52	9.42	9.38	8.13
3,488.00	10.80	168.10	3,487.16	-26.56	-0.04	26.56	7.84	7.74	7.42
3,520.00	13.30	172.30	3,518.46	-33.14	1.07	33.14	8.27	7.81	13.13
3,552.00	16.00	176.80	3,549.41	-41.20	1.81	41.20	9.15	8.44	14.06
3,583.00	19.30	178.90	3,578.95	-50.59	2.15	50,59	10.84	10.65	6.77
3,615.00	23.00	178.50	3,608.79	-62.13	2.41	62.13	11.57	11.56	-1.25
3,646.00	26.70	178.30	3,636.91	-75.15	2.78	75.15	11.94	11.94	-0.65
3,678.00	30.40	179.20	3,665.02	-90.43	3.10	90.44	11.64	11.56	2.81
3,710.00	33.80	180.90	3,692.12	-107.43	3.08	107.44	10.99	10.63	5.31
3,742.00	36.70	181.30	3,718.25	-125.90	2.72	125.90	9,09	9.06	1.25
3,742.00	40.40	180.30	3,741.71	-144.59	2.72	144.59	12.51	12.33	-3.33
3,804.00	40.40	179.70	3,765.26	-166.24	2.47	166.25	13.81	13.75	-1.88
3,836.00	49.00	179.40	3,787.12	-189.60	2.66	189.61	13.14	13.13	-0.94
					2.80	214.47	12.56	12.50	1.56
3,868.00	53.00 55.80	179.90 180.20	3,807.25 3,825.30	-214.47 -239.67	2.81	239.67	9.07	9.03	0.97



Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Debes 32 #1H
Project:	Reno County, Kansas [NAD 83]	TVD Reference:	14' KB @ 1809.00usft (UDI 331)
Site:	Section 29 T25S-R10W	MD Reference:	14' KB @ 1809.00usft (UDI 331)
Well:	Debes 32 #1H	North Reference:	Grid
Wellbore:	ОН	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,930.00	56.10	180.00	3,842.66	-265.35	2.74	265.36	1.11	0.97	-0.65
3,962.00	56.30	179.90	3,860.46	-291.95	2.76	291.95	0.68	0.63	-0.31
3,993.00	56.60	179.80	3,877.59	-317.78	2.83	317.78	1.00	0.97	-0.32
4,025.00	56.80	179.90	3,895.16	-344.53	2.90	344.53	0.68	0.63	0.31
4,060.00	58.20	180.30	3,913.96	-374.04	2.85	374.05	4.11	4.00	1.14
4,089.00	61.80	180.80	3,928.46	-399.15	2.60	399.16	12.50	12.41	1.72
4,121.00	65.60	181.40	3,942.64	-427.83	2.05	427.83	11.99	11.88	1.88
4,152.00	68.30	182.00	3,954.77	-456,34	1.20	456.34	8.89	8.71	1.94
4,184.00	71.20	181.90	3,965.85	-486.34	0.18	486.34	9.07	9.06	-0.31
4,216.00	74.30	181.30	3,975.34	-516.89	-0.67	516.89	9.85	9.69	-1.88
4,248.00	77.10	181.50	3,983.24	-547.88	-1.43	547.88	8.77	8.75	0.63
4,279.00	80.00	181.80	3,989.39	-578.25	-2.30	578.25	9.40	9.35	0.97
4,310.00	82.90	181.90	3,994.00	-608.89	-3.29	608.88	9.36	9.35	0.32
4,339.00	86.40	182.00	3,996.71	-637.74	-4.28	637.73	12.07	12.07	0.34
4,417.00	89.40	182.20	3,999.56	-715.62	-7.13	715.62	3.85	3.85	0.26
4,480.00	89.60	182.00	4,000.11	-778.58	-9.44	778.57	0.45	0.32	-0.32
4,542.00	89.60	181.90	4,000.55	-840.54	-11.55	840.53	0.16	0.00	-0.16
4,605.00	90.00	181.90	4,000.77	-903.51	-13.64	903.49	0.63	0.63	0.00
4,665.00	89.10	182.00	4,001.24	-963.47	-15.68	963.45	1.51	-1.50	0.17
4,726.00	89.40	182.00	4,002.04	-1,024.43	-17.81	1,024.41	0.49	0.49	0.00
4,789.00	89.60	181.80	4,002.59	-1,087.39	-19.90	1,087.37	0.45	0.32	-0.32
4,851.00	89.20	181.80	4,003.23	-1,149.36	-21.84	1,149.33	0.65	-0.65	0.00
4,913.00	88.30	181.60	4,004.59	-1,211.31	-23.68	1,211.29	1.49	-1.45	-0.32
4,976.00	88.40	181.20	4,006.40	-1,274.27	-25.22	1,274.24	0.65	0.16	-0.63
5,038.00	88.90	181.10	4,007.86	-1,336.24	-26.47	1,336.21	0.82	0.81	-0.16
5,100.00	89.80	180.90	4,008.56	-1,398.22	-27.55	1,398.19	1.49	1.45	-0.32
5,160.00	90.50	180.50	4,008.41	-1,458.22	-28.28	1,458.19	1.34	1.17	-0.67
5,222.00	90.50	180.20	4,007.87	-1,520.22	-28.66	1,520.18	0.48	0.00	-0.48
5,283.00	89.00	179.80	4,008.13	-1,581.21	-28.66	1,581.18	2.54	-2.46	-0.66
5,341.78	89.09	179.33	4,009.11	-1,639.99	-28.21	1,639.95	0.82	0.16	-0.81
Debes 32 #11	1000' LL								
5,345.00	89.10	179.30	4,009.16	-1,643.20	-28.17	1,643.17	0.82	0.16	-0.81
5,406.00	89.30	179.00	4,010.01	-1,704.19	-27.27	1,704.16	0.59	0.33	-0.49
5,468.00	89.90	178.20	4,010.45	-1,766.17	-25.75	1,766.14	1.61	0.97	-1.29
5,529.00	90.40	177.70	4,010.29	-1,827.13	-23.57	1,827.10	1.16	0.82	-0.82
5,591.00	88.90	177.10	4,010.66	-1,889.06	-20.76	1,889.04	2.61	-2.42	-0.97
5,652.00	88.80	176.60	4,011.89	-1,949.96	-17.41	1,949.94	0.84	-0.16	-0.82
5,714.00	89.20	176.20	4,012.97	-2,011.83	-13.52	2,011.81	0.91	0.65	-0.65
5,776.00	89.00	175.90	4,013.94	-2,073.67	-9.25	2,073.66	0.58	-0.32	-0.48
5,836.00	88.60	175.70	4,015.20	-2,133.50	-4.85	2,133.49	0.75	-0.67	-0.33
5,896.00	88.90	175.70	4,016.51	-2,193.31	-0.35	2,193.31	0.50	0.50	0.00
5,958.00	89.00	175.80	4,017.65	-2,255.13	4.24	2,255.14	0.23	0.16	0.16
6,019.00	89.30	175.50	4,018.55	-2,315.95	8.87	2,315.96	0.70	0.49	-0.49



Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Debes 32 #1H
Project:	Reno County, Kansas [NAD 83]	TVD Reference:	14' KB @ 1809.00usft (UDI 331)
Site:	Section 29 T25S-R10W	MD Reference:	14' KB @ 1809.00usft (UDI 331)
Well:	Debes 32 #1H	North Reference:	Grid
Wellbore:	ОН	Survey Calculation Method:	Minimum Curvature
Design:	ОН	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,081.00	89.40	175.60	4,019.25	-2,377.76	13.68	2,377.77	0.23	0.16	0.16
6,142.00	89.80	175.40	4,019.68	-2,438.57	18.46	2,438.59	0.73	0.66	-0.33
6,204.00	89.80	175.20	4,019.90	-2,500.36	23.54	2,500.39	0.32	0.00	-0.32
6,265.00	89.80	174.90	4,020.11	-2,561.13	28.81	2,561.16	0.49	0.00	-0.49
6,327.00	89.80	175.40	4,020.33	-2,622.91	34.05	2,622.95	0.81	0.00	0.81
6,341.17	89.73	175.40	4,020.38	-2,637.04	35.18	2,637.08	0.49	-0.49	0.00
Debes 32 #1	H 2000' LL								
6,388.00	89.50	175.40	4,020.70	-2,683.71	38.94	2,683.76	0.49	-0.49	0.00
6,450.00	88.90	174,40	4,021.56	-2,745.46	44.45	2,745.51	1.88	-0.97	-1.61
6,512.00	88.40	174.20	4,023.03	-2,807.14	50.61	2,807.19	0.87	-0.81	-0.32
6,576.00	88.50	173.90	4,024.76	-2,870.77	57.24	2,870.83	0.49	0.16	-0.47
6,640.00	88.30	174.10	4,026.54	-2,934.39	63,93	2,934.46	0.44	-0.31	0.31
6,702.00	88.20	174.20	4,028.44	-2,996.04	70.24	2,996.12	0.23	-0.16	0.16
6,765.00	89.20	174.30	4,029.87	-3,058.71	76.55	3,058.79	1.60	1.59	0.16
6,829.00	90.60	176.90	4,029.98	-3,122.51	81.46	3,122.60	4.61	2.19	4.06
6,892.00	93.00	178.50	4,028.00	-3,185.42	83.99	3,185.52	4.58	3.81	2.54
6,956.00	93.40	178.50	4,024.43	-3,249.30	85.66	3,249.40	0.63	0.63	0.00
7,018.00	92.00	178.60	4,021.51	-3,311.21	87.23	3,311.31	2.26	-2.26	0.16
7,082.00	91.00	179.10	4,019.83	-3,375.17	88.51	3,375.28	1.75	-1.56	0.78
7,146.00	89.90	178.90	4,019.33	-3,439.16	89.63	3,439.26	1.75	-1.72	-0.31
7,210.00	90.60	179.10	4,019.05	-3,503.15	90.75	3,503.25	1.14	1.09	0.31
7,273.00	90.30	179.10	4,018.55	-3,566.14	91.74	3,566.25	0.48	-0.48	0.00
7,337.00	90.10	178.70	4,018.33	-3,630.13	92.96	3,630.23	0.70	-0.31	-0.63
7,344.09	90.05	178.64	4,018.32	-3,637.22	93.13	3,637.32	1.02	-0.63	-0.79
Debes 32 #11	1 3000' LL								
7,400.00	89.70	178.20	4,018.44	-3,693.11	94.67	3,693.21	1.02	-0.63	-0.79
7,463.00	89.30	177.00	4,018.99	-3,756.05	97.31	3,756.16	2.01	-0.63	-1.90
7,525.00	89.10	177.80	4,019.86	-3,817.98	100.12	3,818.09	1.33	-0.32	1.29
7,589.00	88.70	177.20	4,021.08	-3,881.90	102.91	3,882.02	1.13	-0.63	-0.94
7,652.00	89.40	177.50	4,022.13	-3,944.83	105.82	3,944.95	1.21	1.11	0.48
7,716.00	89.50	176.90	4,022.74	-4,008.75	108.95	4,008.87	0.95	0.16	-0.94
7,778.00	89.80	176.50	4,023.12	-4,070.64	112.52	4,070.77	0.81	0.48	-0.65
7,842.00	89.80	175.80	4,023.35	-4,134.50	116.81	4,134.63	1.09	0.00	-1.09
7,904.00	89.90	175.70	4,023.51	-4,196.33	121.41	4,196.47	0.23	0.16	-0.16
7,968.00	90.20	175.70	4,023.45	-4,260.15	126.21	4,260.29	0.47	0.47	0.00
8,032.00	90.40	175.70	4,023.12	-4,323.97	131.01	4,324.12	0.31	0.31	0.00
8,096.00	90.90	175.80	4,022.39	-4,387.78	135.75	4,387.94	0.80	0.78	0.16
8,160.00	90.60	175.50	4,021.55	-4,451.59	140.60	4,451.76	0.66	-0.47	-0.47
8,223.00	91.60	175.80	4,020.34	-4,514.40	145.38	4,514.57	1.66	1.59	0.48
8,286.00	89.60	175.30	4,019.68	-4,577.20	150.27	4,577.38	3.27	-3.17	-0.79
8,335.60	89.60	174.83	4,020.03	-4,626.61	154.54	4,626.79	0.95	0.00	-0.95
Debes 32 #1H	4000' LL								
8,349.00	89.60	174.70	4,020.12	-4,639.96	155.76	4,640.14	0.95	0.00	-0.95
8,410.00	89.10	174.30	4,020.82	-4,700.68	161.61	4,700.86	1.05	-0.82	-0.66



Company:	Unit Petroleum	Local Co-ordinate Reference:	Well Debes 32 #1H
Project:	Reno County, Kansas [NAD 83]	TVD Reference:	14' KB @ 1809.00usft (UDI 331)
Site:	Section 29 T25S-R10W	MD Reference:	14' KB @ 1809.00usft (UDI 331)
Well:	Debes 32 #1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	ОН	Database:	EDM 5000.1 Single User Db

#### Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,472.00	89.60	174.60	4,021.52	-4,762.38	167.60	4,762.58	0.94	0.81	0.48
8,536.00	90.60	174.60	4,021.41	-4,826.10	173.62	4,826.30	1.56	1.56	0.00
8,598.00	90.20	175.30	4,020.97	-4,887.86	179.08	4,888.06	1.30	-0.65	1.13
8,660.00	91.10	175.50	4,020.27	-4,949.65	184.05	4,949.86	1.49	1.45	0.32
8,722.00	90.00	175.10	4,019.68	-5,011.44	189.13	5,011.66	1.89	-1.77	-0.65
8,780.00	90.20	175.10	4,019.57	-5,069.23	194.09	5,069.45	0.34	0.34	0.00
Last MWD Sur	rvey								
8,825.00	90.20	175.10	4,019,42	-5,114.06	197.93	5,114,29	0.00	0.00	0.00

Meas		Vertical	Local Coo	rdinates	
Dep		Depth	+N/-S	+E/-W	
(us	π)	(usft)	(usft)	(usft)	Comment
8,7	780.00	4,019.57	-5,069.23	194.09	Last MWD Survey
8,8	325.00	4,019.42	-5,114.06	197,93	Projection to TD

Checked By:

Approved By:

Date: