

DRILLING REPORT

WELL: UL Huerfano 0706-17 F 6H										CONTRACTOR: Unit										RIG: Unit 401			
RPT DATE: December 19, 2019										SPUD DATE: 12/8/19				CASING			OD	WT	GRD	MD	TVD		
API #: 42475350490000										DFS: 11			Conductor			20	94	J-55	101	101			
										REPORT NO: 8			Surface			13-3/8	55	J-55	1,241	1,198			
FIELD: Phantom (Wolfcamp)										DOL: 29													
ELEV: 2,690		RKB:		21		LAST BOP TEST: 12/11/19																	
MD: 1,414		TVD: 1,413																					
24 HR FTG: 160		HRS DRLG: 1.5		CSGHD:																			
DRILLING FLUID																		SHOE TEST:					
TIME	MW	FV	WL	3RPM	6RPM	PH	CAKE	GELS (10s/10m/30m)	PV	YP	CL	K	Pf	Mf	Ca	OIL	LGS	HTHP					
18:00	9.8			1	1				1	1													
										REDUCED PUMP RATES													
										PUMP			SPM			PRESS			DEPTH				
										#1													
#2																							
BIT DATA																							
NO.		SIZE		MAKE		TYPE		SER NO.	NOZZLES	RE-RUN	IN	OUT	FEET	HRS	WOB	RPM	ROP						
2		12.25		Ulterra		SL616		50974	9 X 13	N	1,254				30	99							
1		17.50		Smith		SDSi616		JP9762	9x15	N	101	1,254	1,153	6.5	22	.13	177.38						
BIT NO.	1	INNER		1	OUTER	2	DULL	CT	LOC	G	SEAL		GAUGE	IG	OTHER	RP	TD						
HYDRAULICS DATA																							
PUMP	MAKE		MODEL		LINER	STK	SPM	PSI	GPM	GPS	EFF %	ECD	AV DP	AV DC	BIT HHP	PUMP HHP							
1	Weatherford		EQ 2200		4.500	12.000																	
2	Weatherford		EQ 2200		4.500	12.000																	
BHA																							
DESCRIPTION:		1st Intermediate																					
LENGTH		849.08		BHA WT. AIR				BHA WT. MUD				HRS. ON JARS											
ROT. WT.		120		P.U. WT.		125		S.O. WT.		115		TORQUE		10,000									
TIME MADE UP		23:30		DATE MADE UP		12/18/2019		TIME PULLED				DATE PULLED											
SURVEY DATA																							
MD		ANGLE		AZIMUTH		TVD		N/S	COORDINATES		E/W	V. SECTION		DLS									
CONSUMABLES																							
		DIESEL FUEL (gal) Rvcd/Used/On Hand:						DRILL H2O (gal) Rvcd/Used/On Hand:															
OPERATIONS TIME LOG																							
FROM	TO	HRS	CODE												Start MD	End MD							
16:00	17:00	1.0	Rig Up & Tear Down	Walk, center, and level rig over well.											1254	1254							
17:00	19:00	2.0	Nipple Up B.OP.	Set stack and torque up flange. Hook up flow line and mud line.											1254	1254							
19:00	21:00	2.0	Test B.OP.	Test bottom flange using lower pipe rams 250/5,000 psi. Test casing to 1,020psi bled down to 950psi over 30 minutes = 6.9% pressure drop. Rig down testers.											1254	1254							
21:00	21:30	0.5	Other	Install wear bushing											1254	1254							
21:30	22:00	0.5	Lubricate Rig	Lubricate rig inspect top drive											1254	1254							
22:00	22:30	0.5	Lubricate Rig	Change out Manual Valve on TDS											1254	1254							
22:30	23:30	1.0	Cut off Drill Line	Cut and slip 123' of drill line											1254	1254							
23:30	00:00	0.5	Other	Prep and organize floor for TIH											1254	1254							
00:00	02:30	2.5	Trips	P/U 8 3/4", with 9 5/8" power section, 7/8 7.0, ABH, 1.5", 0.18 rpg, motor with 12" NBS, 600-1100 gpm, 2,135 psi max diff. 12" NM Stab, UBHO, NMDC, MWD tool, NMDC Pony, M/U 12 1/4" Ulterra SPL616 with 9 X 13 jets, TFA 1.17, P/U 12" Steel Stab, Shock sub, XO, and TIH 8" DC's, XO, 6" DC's											1254	1254							
02:30	03:30	1.0	Trips	TIH to 1,081' Install rotating head. Test orbit valve and rotating head to 500 psi. TIH to 1,184'											1254	1254							
03:30	04:30	1.0	Other	Drill shoe track and rathole, tagged cement at 1,193', float collar at 1,200', and shoe at 1,241'											1254	1254							
04:30	06:00	1.5	Drill - Rotate	Drill 12 1/4" hole F/1,254' to 1,414' started out at 450 GPM and worked up to 600 GPM @ 1800-2000 psi start out at 30 RPM until stabilizers are outside of shoe increased to 50 RPM. 30 WOB, 5k top drive torque Avg ROP 106.7'/hr, pump 10 barrel sweep every stand.											1254	1414							
																</							

DRILLING REPORT

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DRILLING REPORT

WELL: UL Huerfano 0706-17 F 6H										CONTRACTOR: Unit										RIG: Unit 401	
RPT DATE: December 22, 2019										SPUD DATE: 12/8/19		CASING		OD	WT	GRD	MD	TVD			
API #: 42475350490000										DFS: 14		Conductor		20	94	J-55	101	101			
FIELD: Phantom (Wolfcamp)										REPORT NO: 10		Surface		13-3/8	55	J-55	1,241	1,198			
ELEV: 2,690 RKB: 21										DOL: 32		Intermediate		10-3/4	46	J55	5,173	5,051			
MD: 7,383 TVD: 7,175										LAST BOP TEST: 12/11/19											
24 HR FTG: 2,195 HRS DRLG: 14.5										CSGHD:											
DRILLING FLUID																		SHOE TEST:			
TIME	MW	FV	WL	3RPM	6RPM	PH	CAKE	GELS (10s/10m/30m)	PV	YP	CL	K	Pf	Mf	Ca	OIL	LGS	HTHP			
18:00	9.1	28.0		1	1	9.5			1	1	64,000		0.04	0.60	2,000		1.83				
REDUCED PUMP RATES																					
PUMP SPM PRESS DEPTH																					
#1 50 385 7,151																					
#2 50 385 7,151																					
BIT DATA																					
NO.	SIZE	MAKE	TYPE	SER NO.	NOZZLES	RE-RUN	IN	OUT	FEET	HRS	WOB	RPM	ROP								
3	9.88	NOV	TKC66	AZ67194	6 X 14	N	5,188	7,385	2,197	14.5	40	117	151.52								
2	12.25	Uterra	SL616	50974	9 X 13	N	1,414	5,188	3,774	18.3	50	85	206.23								
BIT NO.	1	INNER	1	OUTER	2	DULL	CT	LOC	G	SEAL	GAUGE	IG	OTHER	RP	TD						
HYDRAULICS DATA																					
PUMP	MAKE	MODEL	LINER	STK	SPM	PSI	GPM	GPS	EFF %	ECD	AV DP	AV DC	BIT HHP	PUMP HHP							
1	Weatherford	EQ 2200	4.500	12.000		2600	325		95												
2	Weatherford	EQ 2200	4.500	12.000		2600	326														
BHA																					
DESCRIPTION:		2nd Intermediate																			
LENGTH		863.33		BHA WT. AIR				BHA WT. MUD				HRS. ON JARS									
ROT. WT.		240,000		P.U. WT.		260,000		S.O. WT.		180,000		TORQUE		24,000							
TIME MADE UP		09:00		DATE MADE UP		12/21/2019		TIME PULLED				DATE PULLED									
SURVEY DATA																					
MD		ANGLE		AZIMUTH		TVD		N/S		COORDINATES		E/W		V. SECTION		DLS					
7,004		12.70		75.86		6,803		144.4		1,469.0		484.4		1.3							
7,099		11.69		79.59		6,895		148.7		1,488.6		488.7		1.4							
7,191		11.78		82.27		6,985		151.6		1,507.1		493.8		0.6							
7,285		11.52		83.57		7,078		154.0		1,525.9		499.5		0.4							
CONSUMABLES																					
DIESEL FUEL (gal) Rvcd/Used/On Hand:																					
DRILL H2O (gal) Rvcd/Used/On Hand:																					
OPERATIONS TIME LOG																					
FROM	TO	HRS	CODE											Start MD	End MD						
06:00	07:30	1.5	Run Csg & Cement	Cementing Operations with Halliburton Cementing -473bbls Brine fluid @ 10.1ppg -Final circulating pressure @ 3bpm 555psi -Took pressure up to 1,200psi -Check floats, Bled back 2bbls Red dye spacer back to surface -Rig down Halliburton										5188	5188						
07:30	08:00	0.5	Other	Flush stack and line with sugar water										5188	5188						
08:00	09:00	1.0	Other	Pull landing joint and lay down, set pack off and initial test to 5kpsi, pull test to 40k, retest seals (good) prior to installing pack off ports on wellhead cleaned and pumped through										5188	5188						
09:00	09:30	0.5	Other	Install wear bushing										5188	5188						
09:30	13:30	4.0	Trips	PJSM, pick up 9 7/8" vertical BHA as follows: Reed TKC66 w/6x14's (short gauge with both rounded and shaved cutters TFA: .92), MS Energy Services Mpac: 8" 7/8 .5.9 FBH @ 1.5 slick (.17rpg) Scribe, test MWD Tripped in hole F/surface T/FC @ 5,128'										5188	5188						
13:30	14:30	1.0	Other	Test 10.75" casing to 1,500psi for 30 mins, test orbit to 500psi for 10 mins (all test good)										5188	5188						
14:30	15:15	0.8	Other	Tag cement and drill shoe track and rat hole F/5,120' T/5,188' GPM:425 Tor:7k RPM:20 WOB:15k										5188	5188						
15:15	15:45	0.5	Drill - Rotate	Drill 9 7/8" 2nd Intermediate hole from 5,188' to 5,276' 550 GPM @ 2,100 psi, 20-55 RPM. 20-40 WOB, 16k top drive torque Avg ROP 175/hr, pump 20 barrel sweep every stand. Total of 0 hours of connection, slide prep, and survey time										5188	5276						
15:45	16:00	0.3	Lubricate Rig	LOTO and Service TDS and draw works. Grease crown, blocks, ST80, and catwalk										5276	5276						
16:00	06:00	14.0	Drill - Rotate	Drill 9 7/8" 2nd Intermediate hole from 5,276' to 7,385' 550-750 GPM @ 2,100 psi, 20-55 RPM. 20-40 WOB, 16-24k top drive torque Avg ROP 150.6/hr, pump 20 barrel sweep every stand Total of 2.5 hours of connection, slide prep, and survey time At 01:45 Backed parameters down to 650 GPM, and 30 RPM for Brushy Canyon Rotating time 6.75 hrs, Slide time 4.75 hrs										5276	7385						
TOTAL HRS 24.0																					
WEATHER																					
GEN. CONDITIONS:		Clear		WIND SPEED:		7		WIND DIRECTION:		W		TEMP:		29							
COMMENTS:																					
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DRILLING REPORT

WELL: <u>UL Huerfano 0706-17 F 6H</u>				CONTRACTOR: <u>Unit</u>					RIG:		<u>Unit 401</u>	
RPT DATE: <u>December 23, 2019</u>				SPUD DATE: <u>12/8/19</u>		CASING		OD	WT	GRD	MD	TVD
		API #:	<u>42475350490000</u>		DFS: <u>15</u>		<u>Conductor</u>	<u>20</u>	<u>94</u>	<u>J-55</u>	<u>101</u>	<u>101</u>
					REPORT NO: <u>11</u>		<u>Surface</u>	<u>13-3/8</u>	<u>55</u>	<u>J-55</u>	<u>1,241</u>	<u>1,198</u>
FIELD: <u>Phantom (Wolfcamp)</u>				DOL: <u>33</u>		<u>Intermediate</u>	<u>10-3/4</u>	<u>46</u>	<u>J55</u>	<u>5,173</u>	<u>5,051</u>	
ELEV:		<u>2,690</u>	RKB:	<u>21</u>		LAST BOP TEST: <u>12/11/19</u>						
MD:		<u>9,041</u>	TVD:	<u>8,827</u>								
24 HR FTG:		<u>1,658</u>	HRS DRLG:		<u>18.75</u>	CSGHD:						

DRILLING FLUID															SHOE TEST:			
TIME	MW	FV	WL	3RPM	6RPM	PH	CAKE	GELS (10s/10m/30m)	PV	YP	CL	K	Pf	Mf	Ca	OIL	LGS	HTHP
18:00	9.8	29.0		1	1	9.8				1	1	56,000		0.04	0.60	2,000		2.73
										REDUCED PUMP RATES								
										PUMP		SPM		PRESS		DEPTH		
										#1		50		385		7,151		
										#2		50		385		7,151		

BIT DATA																							
NO.		SIZE		MAKE		TYPE		SER NO.		NOZZLES		RE-RUN		IN	OUT	FEET	HRS	WOB	RPM	ROP			
3		9.88		NOV		TKC66		AZ67194		6 X 14		N		7,385	9,041	1,656	15.0	40	110	110.4			
2		12.25		Ulterra		SL616		50974		9 X 13		N		1,414	5,188	3,774	18.3	50	85	206.23			
BIT NO.	1	INNER		1	OUTER		2	DULL		CT	LOC		G	SEAL		GAUGE		IG	OTHER		RP	TD	

[illegible]

BHA							
DESCRIPTION:	2nd Intermediate						
LENGTH	863.33	BHA WT. AIR		BHA WT. MUD		HRS. ON JARS	
ROT. WT.	255,000	P.U. WT.	285,000	S.O. WT.	220,000	TORQUE	24,000
TIME MADE UP	09:00	DATE MADE UP	12/21/2019	TIME PULLED	03:00	DATE PULLED	12/23/2019

SURVEY DATA								
MD	ANGLE	AZIMUTH	TVD	N/S	COORDINATES	E/W	V. SECTION	DLS
8,696	1.71	72.50	8,483	166.7	1,625.7	529.8	0.3	
8,789	1.41	56.97	8,576	167.7	1,628.0	529.8	0.6	
8,885	1.41	41.85	8,672	169.2	1,629.8	529.2	0.4	
8,979	1.19	32.39	8,766	170.9	1,631.1	528.2	0.3	

CONSUMABLES	DIESEL FUEL (gal) Rcvd/Used/On Hand:	DRILL H2O (gal) Rcvd/Used/On Hand:
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OPERATIONS TIME LOG

[illegible]

TOTAL HRS	24.0						
WEATHER							
GEN. CONDITIONS:	Clear	WIND SPEED:	4	WIND DIRECTION:	NNE	TEMP:	31
COMMENTS:							

DRILLING REPORT

WELL: UL Huerfano 0706-17 F 6H										CONTRACTOR: Unit										RIG: Unit 401													
RPT DATE: December 24, 2019										SPUD DATE: 12/8/19					CASING			OD	WT	GRD	MD	TVD											
API #: 42475350490000										DFS: 16					Conductor			20	94	J-55	101	101											
										REPORT NO: 12					Surface			13-3/8	55	J-55	1,241	1,198											
FIELD: Phantom (Wolfcamp)										DOL: 34					Intermediate			10-3/4	46	J55	5,173	5,051											
ELEV: 2,690					RKB: 21					LAST BOP TEST: 12/11/19																							
MD: 9,873					TVD: 9,659																												
24 HR FTG: 832					HRS DRLG: 15.75					CSGHD:																							
DRILLING FLUID																				SHOE TEST:													
TIME	MW	FV	WL	3RPM	6RPM	PH	CAKE	GELS (10s/10m/30m)			PV	YP	CL	K	Pf	Mf	Ca	OIL	LGS	HTHP													
19:00	9.8	28.0		1	1	10.5					1	1	55,000		0.06	0.60	1,600		2.58														
												REDUCED PUMP RATES																					
												PUMP		SPM		PRESS		DEPTH															
												#1		50		385		7,151															
												#2		50		385		7,151															
BIT DATA																																	
NO.		SIZE		MAKE		TYPE		SER NO.		NOZZLES		RE-RUN		IN		OUT		FEET	HRS	WOB	RPM	ROP											
4		9.88		Halliburton		GT64D		13384412		6 X 14		N		9,041		9,873		832	14.0	40	65	59,429											
3		9.88		NOV		TKC66		AZ67194		6 X 14		N		7,385		9,041		1,656	15.0	40	110	110.4											
BIT NO.		3		INNER		8		OUTER		4		DULL		RO		LOC		C		SEAL	X	GAUGE	I	OTHER	CT	RP	PR						
HYDRAULICS DATA																																	
PUMP		MAKE				MODEL				LINER		STK		SPM		PSI		GPM		GPS		EFF %		ECD		AV DP		AV DC		BIT HHP		PUMP HHP	
1		Weatherford				EQ 2200				4.500		12.000																					
2		Weatherford				EQ 2200				4.500		12.000																					
BHA																																	
DESCRIPTION:				2nd Intermediate																													
LENGTH				863.33				BHA WT. AIR								BHA WT. MUD								HRS. ON JARS									
ROT. WT.				265,000				P.U. WT.				320,000				S.O. WT.				225,000				TORQUE				20,000					
TIME MADE UP				10:00				DATE MADE UP				12/23/2019				TIME PULLED								DATE PULLED									
SURVEY DATA																																	
MD				ANGLE				AZIMUTH				TVD				N/S				COORDINATES				E/W		V. SECTION				DLS			
9,449				2.59				356.31				9,236				183.3				1,635.1				518.7		0.9							
9,543				3.60				351.52				9,329				188.3				1,634.5				513.8		1.1							
9,637				1.98				340.96				9,423				192.8				1,633.5				509.4		1.8							
9,731				1.19				326.28				9,517				195.1				1,632.5				506.8		0.9							
CONSUMABLES				DIESEL FUEL (gal) Rcvd/Used/On Hand:												DRILL H2O (gal) Rcvd/Used/On Hand:																	
OPERATIONS TIME LOG																																	
FROM		TO		HRS		CODE														Start MD		End MD											
06:00		07:30		1.5		Trips		TOOH due to low ROP. L/D MWD tool, motor, and bit. Bit was cored out.												9041		9041											
07:30		09:00		1.5		Trips		P/U JA Oilfield: 8" 7/8 3.4 ABH @ 1.5 slick (0.09 rpg) motor, and MWD tool, Scribe, test MWD M/U 9 7/8" Halliburton GT64D w/6 X 14 jets (TFA 0.092), 4" gauge with rounded cutters												9041		9041											
09:00		13:30		4.5		Trips		TIH and wash down last stand												9041		9041											
13:30		21:30		8.0		Drill - Rotate		Drill 9-7/8" 2nd Intermediate hole from 9,041' to 9,607' 721 GPM @ 2,950 off bottom psi, 50 RPM. 40k WOB, 16-23k top drive torque, 150-500 diff. psi Avg ROP 70.8'/hr, pump 20 barrel sweep every stand Total of 0.5 hours of connection, slide prep, and survey time Rotating time 7.5 hrs, Slide time 0 hrs Chert % 9,000'-9,300' 30%, 9,350'-9,400' 20%, 9,450' TR, 9,500'-9,550' 10%,												9041		9607											
21:30		22:15		0.8		Lubricate Rig		Service rig, re-wrap, and tape up Kelly hose												9607		9607											
22:15		06:00		7.8		Drill - Rotate		Drill 9-7/8" 2nd Intermediate hole from 9,607' to 9,873' 721 GPM @ 2,950 off bottom psi, 50 RPM. 40k WOB, 16-23k top drive torque, 150-500 diff. psi Avg ROP 34.3'/hr, pump 20 barrel sweep every stand Total of 0.5 hours of connection, slide prep, and survey time Rotating time 3.0 hrs, Slide time 4.25 hrs Chert % 9,600'-9,750' TR												9607		9873											



DRILLING REPORT

WELL: UL Huerfano 0706-17 F 6H		CONTRACTOR: Unit		RIG: Unit 401																														
RPT DATE: December 25, 2019		SPUD DATE: 12/8/19		CASING		OD	WT	GRD	MD	TVD																								
API #: 42475350490000		DFS: 17		Conductor		20	94	J-55	101	101																								
FIELD: Phantom (Wolfcamp)		REPORT NO: 13		Surface		13-3/8	55	J-55	1,241	1,198																								
ELEV: 2,690		RKB: 21		DOL: 35		Intermediate		10-3/4	46	J55 5,173 5,051																								
MD: 10,609		TVD: 10,395		LAST BOP TEST: 12/11/19																														
24 HR FTG: 736		HRS DRLG: 16		CSGHD:																														
DRILLING FLUID										SHOE TEST:																								
TIME	MW	FV	WL	3RPM	6RPM	PH	CAKE	GELS (10s/10m/30m)	PV	YP	CL	K	Pf	Mf	Ca	OIL	LGS	HTHP																
19:00	9.9	28.0		1	1	10.3			1	1	58,000		0.06	0.60	1,800		2.63																	
										REDUCED PUMP RATES																								
										PUMP		SPM		PRESS		DEPTH																		
										#1		50		385		7,151																		
										#2		50		385		7,151																		
BIT DATA																																		
NO.	SIZE		MAKE		TYPE		SER NO.		NOZZLES		RE-RUN		IN		OUT		FEET		HRS		WOB		RPM		ROP									
4	9.88		Halliburton		GT64D		13384412		6 X 14		N		9,873		10,609		736		14.9		40		65		49.396									
3	9.88		NOV		TKC66		AZ67194		6 X 14		N		7,385		9,041		1,656		15.0		40		110		110.4									
BIT NO.	3		INNER		8		OUTER		4		DULL		RO		LOC		C		SEAL		X		GAUGE		I		OTHER		CT		RP		PR	
HYDRAULICS DATA																																		
PUMP	MAKE		MODEL		LINER		STK		SPM		PSI		GPM		GPS		EFF %		ECD		AV DP		AV DC		BIT HHP		PUMP HHP							
1	Weatherford		EQ 2200		4.500		12.000																											
2	Weatherford		EQ 2200		4.500		12.000																											
BHA																																		
DESCRIPTION:		2nd Intermediate																																
LENGTH		863.33		BHA WT. AIR				BHA WT. MUD				HRS. ON JARS																						
ROT. WT.		265,000		P.U. WT.				320,000		S.O. WT.		225,000		TORQUE												20,000								
TIME MADE UP		10:00		DATE MADE UP		12/23/2019		TIME PULLED		23:45		DATE PULLED		12/24/2019																				
SURVEY DATA																																		
MD		ANGLE		AZIMUTH		TVD		N/S		COORDINATES		E/W		V. SECTION		DLS																		
10,201		1.19		218.37		9,987		190.0		1,628.3		509.7		0.9																				
10,295		0.88		232.69		10,081		188.8		1,627.1		510.3		0.4																				
10,388		1.10		235.68		10,174		187.9		1,625.8		510.6		0.2																				
10,482		0.62		243.86		10,268		187.2		1,624.6		510.7		0.5																				
CONSUMABLES																																		
DIESEL FUEL (gal) Rvcd/Used/On Hand:										DRILL H2O (gal) Rvcd/Used/On Hand:																								
OPERATIONS TIME LOG																																		
FROM	TO	HRS	CODE													Start MD	End MD																	
06:00	15:30	9.5	Drill - Rotate	Drill 9-7/8" 2nd Intermediate hole from 9,607' to 10,264' 721 GPM @ 3,000 off bottom psi, 50 RPM. 40k WOB, 16-23k top drive torque, 150-500 diff. psi Avg ROP 73'/hr, pump 20 barrel sweep every stand Total of 0.75 hours of connection, slide prep, and survey time Rotating time 6.0 hrs, Slide time 2.75 hrs Chert % 9,800'-9,900' 20%, Last sample with Chert was 9,900'												9873	10264																	
15:30	16:00	0.5	Lubricate Rig	Service rig and inspect top drive												10264	10264																	
16:00	22:30	6.5	Drill - Rotate	Drill 9-7/8" 2nd Intermediate hole from 10,264' to 10,609' 721 GPM @ 3,000 off bottom psi, 50 RPM. 40k WOB, 16-23k top drive torque, 100-400 diff. psi Avg ROP 53.1'/hr, pump 20 barrel sweep every stand Total of 0.5 hours of connection, slide prep, and survey time Rotating time 6.0 hrs, Slide time 0 hrs At 19:10 had a drilling break and started losing mud at 1.5bbls/min dropped MW to 9.8 and mixed LCM losses stopped												10264	10609																	
22:30	23:30	1.0	Cond Mud & Circ	Mix slug, Circulate bottoms up, Flow check, No flow, and Pump slug, TOH due to low ROP												10609	10609																	
23:30	06:00	6.5	Trips	TOOH holding between 45-52 psi on Drilling choke to achieve proper fill volume. 03:20 Stopped at 4,000' to pump 30bbl ECD pill. Started pump pill had goods returns. Had returns for about 20 minutes after pumping ECD pill. Lost returns. At 3,180' pipe was wet, by calculation there was 53bbls of ECD pill and slug in the pipe. Continued TOOH with no returns. Had returns at 04:05. TOOH planning on swapping bit and re running the motor, tried to pump clean water through the motor but it would only pressure up. Suspect it is packed off with the slug we pumped before TOOH.												10609	10609																	
TOTAL HRS 24.0																																		
WEATHER																																		
GEN. CONDITIONS:		Cloudy		WIND SPEED:		3		WIND DIRECTION:		SE		TEMP:		45																				
COMMENTS:																																		
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DRILLING REPORT

WELL: UL Huerfano 0706-17 F 6H										CONTRACTOR: Unit										RIG: Unit 401											
RPT DATE: December 26, 2019										SPUD DATE: 12/8/19										CASING					OD	WT	GRD	MD	TVD		
API #: 42475350490000										DFS: 18					Conductor					20	94	J-55	101	101							
										REPORT NO: 14					Surface					13-3/8	55	J-55	1,241	1,198							
FIELD: Phantom (Wolfcamp)										DOL: 36					Intermediate					10-3/4	46	J55	5,173	5,051							
ELEV: 2,690					RKB: 21					LAST BOP TEST: 12/11/19																					
MD: 10,853					TVD: 10,639																										
24 HR FTG: 244					HRS DRLG: 3					CSGHD:																					
DRILLING FLUID																		SHOE TEST:													
TIME	MW	FV	WL	3RPM	6RPM	PH	CAKE	GELS (10s/10m/30m)	PV	YP	CL	K	Pf	Mf	Ca	OIL	LGS	HTHP													
19:00	9.7	28.0		1	1	10.0			1	1	60,000		0.05	0.60	2,400		2.23														
											REDUCED PUMP RATES																				
											PUMP				SPM				PRESS				DEPTH								
											#1				50				385				7,151								
											#2				50				385				7,151								
BIT DATA																															
NO.		SIZE		MAKE		TYPE		SER NO.		NOZZLES		RE-RUN		IN		OUT		FEET	HRS	WOB	RPM	ROP									
5		9.88		NOV		TKC66		A25387		6 X 14		N		10,609		10,853		244	2.8	37	49	88,727									
4		9.88		Halliburton		GT64D		13384412		6 X 14		N		9,873		10,609		736	14.9	40	65	49,396									
BIT NO.		3		INNER		8		OUTER		4		DULL		RO	LOC	C	SEAL	X	GAUGE	I	OTHER	CT	RP	PR							
HYDRAULICS DATA																															
PUMP		MAKE		MODEL		LINER		STK		SPM		PSI		GPM		GPS		EFF %		ECD		AV DP		AV DC		BIT HHP		PUMP HHP			
1		Weatherford		EQ 2200		4.500		12.000																							
2		Weatherford		EQ 2200		4.500		12.000																							
BHA																															
DESCRIPTION:				2nd Intermediate																											
LENGTH				863.33				BHA WT. AIR								BHA WT. MUD								HRS. ON JARS							
ROT. WT.				265,000				P.U. WT.				320,000				S.O. WT.				225,000				TORQUE				20,000			
TIME MADE UP				08:00				DATE MADE UP				12/25/2019				TIME PULLED				19:30				DATE PULLED				12/25/2019			
SURVEY DATA																															
MD				ANGLE				AZIMUTH				TVD				N/S				COORDINATES				E/W		V. SECTION				DLS	
10,549				0.62				274.30				10,335				187.0				1,623.9				510.6		0.5					
10,644				0.31				274.93				10,430				187.1				1,623.2				510.2		0.3					
10,738				1.10				235.17				10,524				186.6				1,622.2				510.2		0.9					
10,790				1.20				233.61				10,576				186.0				1,621.3				510.4		0.2					
CONSUMABLES				DIESEL FUEL (gal) Rvcd/Used/On Hand:															DRILL H2O (gal) Rvcd/Used/On Hand:												
OPERATIONS TIME LOG																															
FROM		TO		HRS		CODE												Start MD		End MD											
06:00		07:00		1.0		Trips		TOOH stand back HWDP, and DC's. L/D Thruster, Pony, and Stabilizer. Remove bit attempt to pump through motor found it packed off. Attempted to unlock MWD found it packed off with cuttings and barite, washed out UBHO, successfully pumped through motor, UBHO, Tested MWD.										10609		10609											
07:00		08:15		1.3		Trips		L/D Thruster, Pony, and Stabilizer. Remove bit attempt to pump through motor found it packed off. Attempted to unlock MWD found it packed off with cuttings and barite, washed out UBHO, successfully pumped through motor										10609		10609											
08:15		14:00		5.8		Trips		Tested MWD-test good. M/U 9 7/8" Reed TKC66, 6 X 14 Jets (TFA 0.902), with 6" gauge and round cutters, TIH and wash down last stand.										10609		10609											
14:00		17:00		3.0		Drill - Rotate		Drill 9-7/8" 2nd Intermediate hole from 10,609' to 10,853' TD 541 GPM @ 1,927 off bottom psi, 50 RPM. 40k WOB, 16-23k top drive torque, 100-400 diff. psi Avg ROP 81.3'/hr, pump 20 barrel sweep every stand Total of 0.5 hours of connection, slide prep, and survey time Rotating time 2.5 hrs, Slide time 0 hrs Losing mud while drilling lowered mud weight down from 9.8+ to 9.7 losses leveled out.										10609		10853											
17:00		19:30		2.5		Cond Mud & Circ		Circulated high vis sweeps around, flow checked-well flowing at 270bbls an hour, checked weight 3 times over 30minutes weight 9.7+ each time. Shut in well it held at 50psi. Pumped slug.										10853		10853											
19:30		00:45		5.3		Trips		TOOH laying down drill pipe to 5,000' to run casing, holding 50-60 psi on the drilling choke Called Christina Operator #16 at TRRC reported casing and cement job										10853		10853											
00:45		01:15		0.5		Cond Mud & Circ		Pump a 30bbl 12ppg ECD pill and chase it with 10bbls pit water										10853		10853											
01:15		03:15		2.0		Trips		TOOH stand DP in derrick Started pulling wet at 2,640', tried to pump through drill string, it is packed off.										10853		10853											
03:15		03:45		0.5		Other		Pull wear bushing and install trip nipple.										10853		10853											
03:45		06:00		2.3		Trips		L/D HWDP, DC's, and Directional BHA.										10853		10853											



DRILLING REPORT

WELL: UL Huerfano 0706-17 F 6H				CONTRACTOR: Unit				RIG: Unit 401																											
RPT DATE: December 27, 2019				SPUD DATE: 12/8/19				CASING				OD	WT	GRD	MD	TVD																			
API #: 42475350490000				DFS: 19				Conductor				20	94	J-55	101	101																			
FIELD: Phantom (Wolfcamp)				REPORT NO: 15				Surface				13-3/8	55	J-55	1,241	1,198																			
ELEV: 2,690				RKB: 21				DOL: 37				Intermediate				10-3/4	46	J55	5,173	5,051															
MD: 10,853				TVD: 10,639				LAST BOP TEST: 12/11/19				Intermediate				7-5/8	30	HCL-80	10,838	10,634															
24 HR FTG:				HRS DRLG:				CSGHD:																											
DRILLING FLUID																SHOE TEST:																			
TIME	MW	FV	WL	3RPM	6RPM	PH	CAKE	GELS (10s/10m/30m)	PV	YP	CL	K	Pf	Mf	Ca	OIL	LGS	HTHP																	
19:00	9.7	28.0		1	1	10.0			1	1	59,000		0.06	0.60	2,200		2.28																		
REDUCED PUMP RATES																																			
PUMP																SPM		PRESS		DEPTH															
#1																50		385		7,151															
#2																50		385		7,151															
BIT DATA																																			
NO.	SIZE		MAKE		TYPE		SER NO.		NOZZLES		RE-RUN		IN		OUT		FEET		HRS		WOB		RPM		ROP										
5	9.88		NOV		TKC66		A25387		6 X 14		N		10,609		10,853		244		2.8		37		49		88.727										
4	9.88		Halliburton		GT64D		13384412		6 X 14		N		9,873		10,609		736		14.9		40		65		49.396										
BIT NO.		5		INNER		1		OUTER		1		DULL		CT		LOC		S		SEAL		X		GAUGE		I		OTHER		CT		RP		CP	
HYDRAULICS DATA																																			
PUMP		MAKE		MODEL		LINER		STK		SPM		PSI		GPM		GPS		EFF %		ECD		AV DP		AV DC		BIT HHP		PUMP HHP							
1		Weatherford		EQ 2200		4.500		12.000																											
2		Weatherford		EQ 2200		4.500		12.000																											
BHA																																			
DESCRIPTION:		2nd Intermediate																																	
LENGTH				BHA WT. AIR				BHA WT. MUD				HRS. ON JARS																							
ROT. WT.		265,000		P.U. WT.		320,000		S.O. WT.		225,000		TORQUE		20,000																					
TIME MADE UP		08:00		DATE MADE UP		12/25/2019		TIME PULLED		21:00		DATE PULLED		12/25/2019																					
SURVEY DATA																																			
MD		ANGLE		AZIMUTH		TVD		N/S		COORDINATES		E/W		V. SECTION		DLS																			
CONSUMABLES																																			
DIESEL FUEL (gal) Rvcd/Used/On Hand:				DRILL H2O (gal) Rvcd/Used/On Hand:																															
OPERATIONS TIME LOG																																			
FROM	TO	HRS	CODE													Start MD	End MD																		
06:00	07:30	1.5	Trips	Lay down MS directional tools,												10853	10853																		
07:30	08:00	0.5	Trips	Pull wear bushing												10853	10853																		
08:00	08:30	0.5	Trips	Clear rig floor of drilling tools to run 7 5/8" casing.												10853	10853																		
08:30	22:00	13.5	Run Csg & Cement	PJSW with Casing crew Run 7.625" 29.7# HCL-80 BTC casing with Four Star casing as follows: Halliburton Float shoe (depth: 10,838') 2 full joints, Halliburton float collar (depth: 10,750.35'), 256 joints, Cactus hanger and landing joint												10853	10853																		
22:00	00:00	2.0	Cond Mud & Circ	Well flowing at 177 bbls/min circulated holding 40psi back pressure. Spotted 52 bbl LCM pill across Brushy Canyon 8,700'-7,381' R/D casers and R/U cementers while circulating and spotting pill. L/D CRT and M/U Cement head												10853	10853																		
00:00	05:00	5.0	Run Csg & Cement	-3 bbls fresh water (prime lines) test lines to 5,000 psi, 20 bbls gel spacer with red dye -602 bbls (1,585 sxs) of NEOCEM-IL cement @ 11.8ppg, 2.134 yield 12gal/sack, 3LBM KOL-seal, 0.125 LBM Poly-E-Flake (weight verified throughout job) -30bbls (140sxs) of HALCEM Cement @ 15.6ppg, 1.19 yield, 5.23gal/sack, .60% Halad(R)-9, .15% HR-601. -Dropped Halliburton non-rotating plug on fly -Displacement 20 bbls fresh water followed by 474 bbls of 9.7ppg cut brine (lost return 400 bbls into displacement) -Final circulating pressure 825 psi @ 3 bpm, bumped to 1,260 psi, held 5 minutes. Check floats bled back 2 bbls-Rig down Cementers Held 45 psi on DC until we switched to tail. Lead cement covering the brushy canyon, bled down pressure and opened up well. 40bbls into displacement lost returns. The returns we had were not enough no register flow % for the rest of the job.												10853	10853																		
05:00	06:00	1.0	Other	L/D Landing joint, casing bails, and elevators. PU 5" elevators, joint of DP, and install pack off.												10853	10853																		
TOTAL HRS 24.0																																			
WEATHER																																			
GEN. CONDITIONS:		Cloudy		WIND SPEED:		13		WIND DIRECTION:		SE		TEMP:		56																					
COMMENTS:																																			
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WELL:		UL Huerfano 0706-17 F 6H								CONTRACTOR:		Unit		RIG:		Unit 401							
RPT DATE:		December 28, 2019								SPUD DATE:		12/8/19		CASING		OD	WT	GRD	MD	TVD			
		API #:		42475350490000						DFS:		20		Conductor		20	94	J-55	101	101			
										REPORT NO:		16		Surface		13-3/8	55	J-55	1,241	1,198			
FIELD:		Phantom (Wolfcamp)								DOL:		38		Intermediate		10-3/4	46	J55	5,173	5,051			
ELEV:		2,690		RKB:		21			LAST BOP TEST:		12/27/19		Intermediate 2		7-5/8	30	HCL-80	10,838	10,634				
MD:		10,853		TVD:		10,639																	
24 HR FTG:					HRS DRLG:					CSGHD:													
DRILLING FLUID																				SHOE TEST:			
TIME	MW	FV	WL	3RPM	6RPM	PH	CAKE	GELS (10s/10m/30m)			PV	YP	CL	K	Pf	Mf	Ca	OIL	LGS	HTHP			
23:30	12.7	2.0						9	15	21			37,000					60.00		6.20			
												REDUCED PUMP RATES											
												PUMP				SPM		PRESS		DEPTH			
												#1				50		385		7,151			
#2				50		385		7,151															
BIT DATA																							
NO.		SIZE		MAKE		TYPE		SER NO.		NOZZLES		RE-RUN		IN	OUT	FEET	HRS	WOB	RPM	ROP			
6		6.75		Smith		MDi611		JP5652		6 X 10		N											
5		9.88		NOV		TKC66		A25387		6 X 14		N		10,609	10,853	244	2.8	37	49	88.727			
BIT NO.	5	INNER		1	OUTER		1	DULL	CT	LOC	S	SEAL	X	GAUGE	I	OTHER	CT	RP	CP				
HYDRAULICS DATA																							
PUMP		MAKE		MODEL		LINER		STK	SPM	PSI	GPM	GPS	EFF %	ECD	AV DP	AV DC	BIT HHP		PUMP HHP				
1		Weatherford		EQ 2200		4.000		12.000															
2		Weatherford		EQ 2200		4.050		12.000															
BHA																							
DESCRIPTION:		Curve/Lateral																					
LENGTH		2,575.85		BHA WT. AIR				BHA WT. MUD				HRS. ON JARS											
ROT. WT.				P.U. WT.				S.O. WT.				TORQUE											
TIME MADE UP		18:00		DATE MADE UP		12/27/2019		TIME PULLED				DATE PULLED											
SURVEY DATA																							
MD		ANGLE		AZIMUTH		TVD		N/S	COORDINATES		E/W	V. SECTION	DLS										
CONSUMABLES				DIESEL FUEL (gal) Rcvd/Used/On Hand:								DRILL H2O (gal) Rcvd/Used/On Hand:											
OPERATIONS TIME LOG																							
FROM	TO	HRS	CODE													Start MD	End MD						
06:00	07:00	1.0	Other	Pressure test seals on pack off test lower seal to 5,000 psi, and the two upper seals to 10,000 psi. Release from pack off. Pull test and release from pack off. L/D jt of DP												10853	10853						
07:00	12:00	5.0	Test B.O.P.	Test BOPE 250/8,000, Annular 250/3500.												10853	10853						
12:00	13:00	1.0	Test B.O.P.	Test casing to 1,500 psi for 30 minutes												10853	10853						
13:30	16:00	2.5	Other	Change out TDS to 4.5" handling equipment												10853	10853						
16:00	18:30	2.5	Trips	P/U MS Energy Mpac: 5" 6/7 8.0 FBH, 1.83", 6 3/8" NBS, 6 1/2" TS (0.86rpg), Float sub, Pony NMDC, UBHO, NMDC, Install MWD, scribe and test tool. M/U 6 3/4" MDi611, 6 x10 jets (TFA 0.46)												10853	10853						
18:30	01:00	6.5	Trips	P/U NMDC, XO, 22jts HWDP, Typhoon reamer, 29jts HWDP, 9stnd DP, XO, Agitator, XO, and TIH to 10,026'												10853	10853						
01:00	01:45	0.8	Other	Install rotating head and test orbit valve to 500 psi held for 10 minutes.												10853	10853						
01:45	03:00	1.3	Cut off Drill Line	Cut and slip 133' of drill line												10853	10853						
03:00	03:30	0.5	Trips	TIH to 10,700'												10853	10853						
03:30	05:30	2.0	Cond Mud & Circ	Displace DP and Annulus with OBM												10853	10853						
05:30	06:00	0.5	Other	Tagged cement at 10,730', drilled cement and float collar to 10,753'												10853	10853						



DRILLING REPORT

WELL: UL Huerfano 0706-17 F 6H										CONTRACTOR: Unit										RIG: Unit 401	
RPT DATE: December 29, 2019										SPUD DATE: 12/8/19					CASING		OD	WT	GRD	MD	TVD
API #: 42475350490000										DFS: 21		Conductor		20	94	J-55	101	101			
FIELD: Phantom (Wolfcamp)										REPORT NO: 17		Surface		13-3/8	55	J-55	1,241	1,198			
ELEV: 2,690 RKB: 21										DOL: 39		Intermediate		10-3/4	46	J55	5,173	5,051			
MD: 11,430 TVD: 11,150										LAST BOP TEST: 12/27/19		Intermediate 2		7-5/8	30	HCL-80	10,838	10,634			
24 HR FTG: 577 HRS DRLG: 20										CSGHD:											
DRILLING FLUID																	SHOE TEST:				
TIME	MW	FV	WL	3RPM	6RPM	PH	CAKE	GELS (10s/10m/30m)	PV	YP	CL	K	Pf	Mf	Ca	OIL	LGS	HTHP			
18:00	12.7	85.0		7	8		2	7	8	16	23	12	44,000			12,800	57.70	7.35	6.20		
REDUCED PUMP RATES																					
PUMP																	SPM	PRESS	DEPTH		
#1																	50	385	7,151		
#2																	50	385	7,151		
BIT DATA																					
NO.	SIZE	MAKE	TYPE	SER NO.	NOZZLES	RE-RUN	IN	OUT	FEET	HRS	WOB	RPM	ROP								
6	6.75	Smith	MDI611	JP5652	6 X 10	N	10,853	11,430	577	17.2	20	240	33.547								
5	9.88	NOV	TKC66	A25387	6 X 14	N	10,609	10,853	244	2.8	37	49	88.727								
BIT NO.	5	INNER	1	OUTER	1	DULL	CT	LOC	S	SEAL	X	GAUGE	I	OTHER	CT	RP	CP				
HYDRAULICS DATA																					
PUMP	MAKE	MODEL	LINER	STK	SPM	PSI	GPM	GPS	EFF %	ECD	AV DP	AV DC	BIT HHP	PUMP HHP							
1	Weatherford	EQ 2200	4.000	12.000																	
2	Weatherford	EQ 2200	4.050	12.000																	
BHA																					
DESCRIPTION:		Curve/Lateral																			
LENGTH		2,575.85																			
ROT. WT.		P.U. WT.																			
TIME MADE UP		18:00																			
DATE MADE UP		12/27/2019																			
TIME PULLED																					
DATE PULLED																					
SURVEY DATA																					
MD		ANGLE		AZIMUTH		TVD		N/S		COORDINATES		E/W		V. SECTION		DLS					
11,211		29.86		159.21		10,986		121.8		1,636.0		574.9		11.9							
11,259		34.37		159.95		11,027		97.9		1,644.9		600.3		9.4							
11,306		39.68		163.28		11,064		71.0		1,653.8		628.4		12.1							
11,354		45.84		163.76		11,099		39.8		1,663.0		660.6		12.9							
CONSUMABLES																					
DIESEL FUEL (gal) Rcvd/Used/On Hand:																					
DRILL H2O (gal) Rcvd/Used/On Hand:																					
OPERATIONS TIME LOG																					
FROM	TO	HRS	CODE											Start MD	End MD						
06:00	07:30	1.5	Trips	Drill out Cement and Shoe Track, 200 GPM, 10 - 15 WOB, 20 RPM. F/10,736' T/10853'.										10853	10853						
07:30	08:00	0.5	Drill - Rotate	Rotate Drill F/10,853' T/10,863'. 200 GJPM, 15-20 WOB, 25 RPM.										10853	10863						
08:00	08:30	0.5	Other	Preform FIT to EMW of 13.5 PPG. Present MW 12.7, Applied 443 PSI for 15 Min.										10863	10863						
08:30	09:00	0.5	Cond Mud & Circ	Circulate through chokes and gas buster.										10863	10863						
09:00	10:45	1.8	Drill - Rotate	Drill 6 3/4" Vertical from 10,853' to 10,971' (KOP) 267 GPM @ 3,700 off bottom psi, 30 RPM. 20k WOB, 8700 top drive torque, 550-930 diff. psi Avg ROP 61.7 /hr Total of 0.25 hours of connection, slide prep, and survey time Rotating time 1.5 hrs, Slide time 0 hrs										10863	10971						
10:45	20:30	9.8	Drill - Slide	Drill 6 3/4" Curve from 10,971' to 11,175' 270 GPM @ 3,300 off bottom psi, 0 RPM. 20k WOB, 8700 top drive torque, 300-700 diff. psi Avg ROP 21.5 /hr Total of 1.5 hours of connection, slide prep, and survey time Rotating time 0.25 hrs, Slide time 8.0 hrs										10971	11175						
20:30	21:15	0.8	Other	Swap HP rotating head out for low pressure to help with sliding in curve. Reduced drag by 10,000 lbs										11175	11175						
21:15	05:00	7.8	Drill - Slide	Drill 6 3/4" Curve from 11,175' to 11,415' 270 GPM @ 3,300 off bottom psi, 0 RPM. 20k WOB, 8700 top drive torque, 300-700 diff. psi Avg ROP 31' /hr Total of 1.25 hours of connection, slide prep, and survey time Rotating time 0.5 hrs, Slide time 6.0 hrs AT 03:00 Derrickman noticed his hose used to spray off shakers had been running through the grating next to the trip tank and about 10bbls was spilled on location. Used vacuum and dirt to remediate spill, contacted PIC and safety rep. Filed initial report on Felix Solution Center.										11175	11415						
05:00	05:45	0.8	Other	Change out leaking rotating head										11415	11415						
05:45	06:00	0.3	Drill - Slide	Drill 6 3/4" Curve from 11,415' to 11,430' 270 GPM @ 3,300 off bottom psi, 20 RPM. 20k WOB, 8700 top drive torque, 300-700 diff. psi Avg ROP 60' /hr Total of 0 hours of connection, slide prep, and survey time Rotating time 0.25 hrs, Slide time 0 hrs										11415	11430						
TOTAL HRS 24.0																					
WEATHER																					
GEN. CONDITIONS:		Cloudy		WIND SPEED:		14		WIND DIRECTION:		WSW		TEMP:		38							
COMMENTS:																					
www.wellez.net WelleZ Information Management LLC ver_080419br																					

DRILLING REPORT

WELL: UL Huerfano 0706-17 F 6H				CONTRACTOR: Unit					RIG: Unit 401			
RPT DATE: December 30, 2019				SPUD DATE: 12/8/19		CASING		OD	WT	GRD	MD	TVD
		API #:	42475350490000	DFS: 22		Conductor		20	94	J-55	101	101
				REPORT NO: 18		Surface		13-3/8	55	J-55	1,241	1,198
FIELD: Phantom (Wolfcamp)				DOL: 40		Intermediate		10-3/4	46	J55	5,173	5,051
ELEV: 2,690		RKB:	21	LAST BOP TEST: 12/27/19		Intermediate 2		7-5/8	30	HCL-80	10,838	10,634
MD: 12,016		TVD:	11,276									
24 HR FTG: 586		HRS DR LG:	16.75	CSGHD:								

DRILLING FLUID																SHOE TEST:				
TIME	MW	FV	WL	3RPM	6RPM	PH	CAKE	GELS (10s/10m/30m)			PV	YP	CL	K	Pf	Mf	Ca	OIL	LGS	HTHP
18:00	12.7	85.0		6	7		2	9	14	20	21	11	45.00				12.000	58.60	7.10	6.00
												REDUCED PUMP RATES								
												PUMP		SPM		PRESS		DEPTH		
												#1		50		385		7.151		
												#2		50		385		7.151		

BIT DATA																																			
NO.		SIZE		MAKE		TYPE		SER NO.		NOZZLES		RE-RUN		IN		OUT		FEET		HRS		WOB		RPM		ROP									
6		6.75		Smith		MDi611		JP5652		6 X 10		N		11,430		12,016		586		14.0		25		258		41.947									
5		9.88		NOV		TKC66		A25387		6 X 14		N		10,609		10,853		244		2.8		37		49		88.727									
BIT NO.		5		INNER		1		OUTER		1		DULL		CT		LOC		S		SEAL		X		GAUGE		I		OTHER		CT		RP		CP	

[illegible]

BHA							
DESCRIPTION:	Curve/Lateral						
LENGTH	2,575.85	BHA WT. AIR		BHA WT. MUD		HRS. ON JARS	
ROT. WT.		P.U. WT.		S.O. WT.		TORQUE	
TIME MADE UP	18:00	DATE MADE UP	12/27/2019	TIME PULLED	23:45	DATE PULLED	12/29/2019

SURVEY DATA								
MD	ANGLE	AZIMUTH	TVD	N/S	COORDINATES	E/W	V. SECTION	DLS
11,783	81.40	165.45	11,268	-330.9	1,772.7		1,043.2	2.1
11,847	86.58	162.58	11,274	-392.1	1,790.3		1,106.1	9.2
11,879	87.38	161.95	11,276	-422.5	1,800.0		1,137.8	3.2
11,928	90.42	161.86	11,277	-469.1	1,815.2		1,186.4	6.2

CONSUMABLES	DIESEL FUEL (gal) Rcvd/Used/On Hand:	DRILL H2O (gal) Rcvd/Used/On Hand:
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OPERATIONS TIME LOG

[illegible]

TOTAL HRS	24.0							
WEATHER								
GEN. CONDITIONS:	Clear	WIND SPEED:	6	WIND DIRECTION:	N	TEMP:	26	
COMMENTS:								