



DRILLING REPORT

WELL: UL Lead King 344035-16 G 7H				CONTRACTOR: Unit Drilling				RIG: Unit 412				
RPT DATE: December 23, 2018				SPUD DATE: 12/21/18		CASING		OD	WT	GRD	MD	TVD
API #: 42-475-37683				DFS: 2		Conductor		20			93	93
FIELD: Two Georges (Bone Spring)				REPORT NO: 8		Surface		13-3/8	55	J55	926	926
ELEV: 2,605				RKB: 2,626		DOL: 55						
MD: 3,928				TVD: 3,765		LAST BOP TEST: 12/20/18						
24 HR FTG: 1,553				HRS DRLG: 21.5		CSGHD: 2,631						

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
23:40	10.0	31.0		1	1	8.0	2	1	2	3	2	1	160,000	3.00	2,800		0.20	
REDUCED PUMP RATES																		
PUMP		SPM		PRESS		DEPTH												
#1		50		380		3,720												
#2		50		375		3,720												

BIT DATA																	
NO.	SIZE	MAKE	TYPE	SER NO.	NOZZLES	RE-RUN	IN	OUT	FEET	HRS	WOB	RPM	ROP				
4	12.25	Security	PDC MM65DC RR	13008842	x13 TFA 1.0		2,375	3,928	1,553	21.5	39	120	72				

BIT NO.	INNER	OUTER	DULL	LOC	SEAL	GAUGE	OTHER	RP
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HYDRAULICS DATA																	
PUMP	MAKE	MODEL	LINER	STK	SPM	PSI	GPM	GPS	EFF %	ECD	AV DP	AV DC	BIT HHP	PUMP HHP			
1	Weatherford	EQ2200	4.500	12,000	96	3900	375	3.92	97								
2	Weatherford	EQ2200	4.500	12,000	96	3900	375	3.92	97								

BHA																	
DESCRIPTION:		Intermediate 1 - 3															
LENGTH	1,706.88	BHA WT. AIR			BHA WT. MUD			HRS. ON JARS									
ROT. WT.	190,000	P.U. WT.	210,000		S.O. WT.	175,000		TORQUE	14,000								
TIME MADE UP	04:30	DATE MADE UP	12/22/2018		TIME PULLED			DATE PULLED									

SURVEY DATA																	
MD	ANGLE	AZIMUTH	TVD	N/S	COORDINATES	E/W	V. SECTION	DLS									
3,494	3.73	212.48	3,488	-140.3	-63.9	-98.4	1.5										
3,586	4.70	217.64	3,580	-145.8	-67.9	-103.6	1.1										
3,680	4.98	208.78	3,673	-152.5	-72.2	-109.5	0.9										
3,772	3.94	212.28	3,765	-158.6	-75.8	-114.6	1.2										

CONSUMABLES		DIESEL FUEL (gal) Rcvd/Used/On Hand:						DRILL H2O (gal) Rcvd/Used/On Hand:					
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OPERATIONS TIME LOG																	
FROM	TO	HRS	CODE											Start MD	End MD		
06:00	07:00	1.0	Trips	Trip in w/o Drill-N-Ream										2375	2375		
07:00	07:30	0.5	Reaming	Wash and ream 2262 - 2375										2375	2675		
07:30	16:00	8.5	Drilling	Directional drilling with straight MWD system (No Gyro) 35K WOB 750 GPM 3750 SPP 60 Rotary 550-700 Diff Torq=14K 2375-2550, Slide 2550-2565 TF 250, Rotate 2565-2646, Slide 2646-2670 TF 250, Rotate 2670-2817, Slide 2818-2840 TF 250, Rotate 2840-2921, Slide 2921-2946 TF 250, Rotate 2946-3101, Slide 3101-3126 TF 240, Rotate 3126-3194, Slide 3194-3224 TF 240, Rotate 3224-3279										2375	3279		
16:00	16:30	0.5	Lubricate Rig	Rig and Top Drive service. Change drawworks lube filter										3279	3279		
16:30	02:00	9.5	Drilling	Directional drilling with straight MWD system (No Gyro) 38K WOB 750 GPM 3750 SPP 50-60 Rotary 550-700 Diff Torq=14K Slide 3279-3304, Rotate 3304-3369, Slide 3379-3420, Rotate f/3420-3444, Slide f/3444-3464, Rotate f/3464-3470, Slide f/3470-3485, Rotate f/3485-3572, Slide f/3572-3606, Rot f/3606-3659, Slide f/3659-3677, Rot f/3677-3743										3279	3743		
02:00	02:30	0.5	Other	Change out Rotating Head Clean Mud Pump Suction Screens										3743	3743		
02:30	06:00	3.5	Drilling	Directional drilling with straight MWD system (No Gyro) 38K WOB 750 GPM 3750 SPP 50-60 Rotary 550-700 Diff Torq=14K Rot f/3743-3848, Slide f/3848-3882, Rot f/3882-3928										3743	3928		
TOTAL HRS		24.0															

WEATHER																	
GEN. CONDITIONS:		CLEAR		WIND SPEED:		7		WIND DIRECTION:		NNE		TEMP:		37			
COMMENTS:		Natural Gas Usage Daily: 1971.94 Total: 3122.60. Mud Fuel On Hand 0 Gals, Mud Fuel Received 0															



DRILLING REPORT

WELL: UL Lead King 344035-16 G 7H				CONTRACTOR: Unit Drilling				RIG: Unit 412					
RPT DATE: January 10, 2019				SPUD DATE: 12/21/18		CASING		OD	WT	GRD	MD	TVD	
API #: 42-475-37683		DFS: 20		Conductor		20		93		93			
FIELD: Two Georges (Bone Spring)				REPORT NO: 14		Surface		13-3/8		55		J55 926 926	
ELEV: 2,605		RKB: 2,626		DOL: 73		Intermediate		10-3/4		46		J55 5,064 5,058	
MD: 8,169		TVD:		LAST BOP TEST: 1/8/19									
24 HR FTG: 890		HRS DRLG: 10.5		CSGHD: 2,631									

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	
11:00	9.3	27.0		1	3	10.5	0		2	1	100,000		0.10	0.30	5,400		0.50		
REDUCED PUMP RATES																			
PUMP		SPM		PRESS		DEPTH													
#1		50		540															
#2		60		700		7,931													

BIT DATA																	
NO.	SIZE	MAKE	TYPE	SER NO.	NOZZLES	RE-RUN	IN	OUT	FEET	HRS	WOB	RPM	ROP				
5	8.75	Smith	Z619	JN7099	6 X 10				8,169								
4	9.88	REED	PDC	A255496	6 x 11's	N	7,279	8,169	890	10.5	35	118	85				
BIT NO.	4	INNER	1	OUTER	1	DULL	WT	LOC	G	SEAL	X	GAUGE	In	OTHER	No	RP	PP

HYDRAULICS DATA																
PUMP	MAKE	MODEL	LINER	STK	SPM	PSI	GPM	GPS	EFF %	ECD	AV DP	AV DC	BIT HHP	PUMP HHP		
1	Weatherford	EQ2200	4.500	12,000	86	3900	337		97							
2	Weatherford	EQ2200	4.500	12,000	865	3900	337		97							

BHA															
DESCRIPTION:															
Intermediate 2- 2															
LENGTH	1,530.04		BHA WT. AIR		104,789		BHA WT. MUD		89,699		HRS. ON JARS				
ROT. WT.	257,000		P.U. WT.		290,000		S.O. WT.		220,000		TORQUE		14,000		
TIME MADE UP	01:30		DATE MADE UP		1/10/2019		TIME PULLED				DATE PULLED				

SURVEY DATA															
MD	ANGLE	AZIMUTH	TVD	N/S	COORDINATES	E/W	V. SECTION	DLS							
7,771	0.62	161.32	7,758		-313.7		-146.8	0.1							
7,863	0.52	72.28	7,850		-314.0		-146.2	0.9							
7,956	1.43	12.41	7,943		-312.8		-145.6	1.4							
8,049	1.58	11.34	8,036		-310.4		-145.1	0.2							

CONSUMABLES	DIESEL FUEL (gal) Rcvd/Used/On Hand:	DRILL H2O (gal) Rcvd/Used/On Hand:
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OPERATIONS TIME LOG															
FROM	TO	HRS	CODE	DESCRIPTION	Start MD	End MD									
06:00	13:00	7.0	Drilling	DRLG F/7,279' T/7848 Chang eparameters @7650' WOB 25-35 GPM 737/675 DIFF 350-600 SPP 4550 ROTARY 65/40 TORQ 16-20K	7279	7848									
13:00	13:30	0.5	Lubricate Rig	Rig service and jet # 1 tank	7848	7848									
13:30	17:00	3.5	Drilling	DRLG F/ 7,848' T /8169 WOB 35 GPM 675 DIFF 350-600 SPP 4550 ROTARY 40 TORQ 16-24K	7848	8169									
17:00	17:30	0.5	Other	Trouble shoot pressure loss on service, lost 350 psi	8169	8169									
17:30	01:30	8.0	Trips	TOH, from 8169' to surface, LD 8" drill collars, found 8" Thruster with damage seal. LD 8" directional tools, Break out 9 7/8" bit.	8169	8169									
01:30	03:00	1.5	Trips	Made up 6 3/4" mud motor (7/8 lobe/ 3.1 stage), 6 1/2" directional tools, made up 8 3/4" Smith Z619 PDC bit. Surface test MWD, Handle DC	8169	8169									
03:00	05:30	2.5	Trips	TIH from 1530' to 5043'	8169	8169									
05:30	06:00	0.5	Cut off Drill Line	Slip & Cut Drlg line	8169	8169									
TOTAL HRS		24.0													

WEATHER															
GEN. CONDITIONS:															
Clear		WIND SPEED: 6		WIND DIRECTION: SE		TEMP: 46									
COMMENTS: Natural Gas Usage Daily: 1649.98 Total: 11126.87 Mud Fuel On Hand 0 Gals, Mud Fuel Received 0															
www.wellez.net				WellEz Information Management LLC				ver_082818cn							



DRILLING REPORT

WELL: UL Lead King 344035-16 G 7H				CONTRACTOR: Unit Drilling				RIG: Unit 412				
RPT DATE: January 11, 2019				SPUD DATE: 12/21/18		CASING		OD	WT	GRD	MD	TVD
API #: 42-475-37683				DFS: 21		Conductor		20			93	93
FIELD: Two Georges (Bone Spring)				REPORT NO: 15		Surface		13-3/8	55	J55	926	926
ELEV: 2,605				RKB: 2,626		Intermediate		10-3/4	46	J55	5,064	5,058
MD: 9,397				TVD:								
24 HR FTG: 1,228				HRS DRLG: 21.5		CSGHD: 2,631						

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
22:00	9.2	27.0		1	2	10.0	0	2	1		2	1	90,000		0.10	0.20	8,000		0.50	
REDUCED PUMP RATES																				
					PUMP		SPM		PRESS		DEPTH									
					#1		50		540		7,931									
					#2		60		700											

BIT DATA														
NO.	SIZE	MAKE	TYPE	SER NO.	NOZZLES	RE-RUN	IN	OUT	FEET	HRS	WOB	RPM	ROP	
5	8.75	Smith	Z619	JN7099	6 X 10		8,169	9,397	1,228	21.5	29	113	57	
BIT NO.	INNER	OUTER	DULL	LOC	SEAL	GAUGE	OTHER	RP						

HYDRAULICS DATA														
PUMP	MAKE	MODEL	LINER	STK	SPM	PSI	GPM	GPS	EFF %	ECD	AV DP	AV DC	BIT HHP	PUMP HHP
1	Weatherford	EQ2200	4.500	12.000	80	3950	312	3.91	95	9.3	299	499	578	1706
2	Weatherford	EQ2200	4.500	12.000	80	3950	312	3.91	95	9.3	299	499	578	1706

BHA														
DESCRIPTION: Intermediate 2-2														
LENGTH	1,530.04	BHA WT. AIR	104,789	BHA WT. MUD	89,699	HRS. ON JARS								
ROT. WT.	248,000	P.U. WT.	350,000	S.O. WT.	285,000	TORQUE	17,000							
TIME MADE UP	01:30	DATE MADE UP	1/10/2019	TIME PULLED										

SURVEY DATA														
MD	ANGLE	AZIMUTH	TVD	N/S	COORDINATES	E/W	V. SECTION	DLS						
8,965	0.34	214.16	8,951		-312.9	-156.9	-233.2	1.9						
9,058	0.67	163.67	9,044		-313.6	-156.9	-233.4	0.6						
9,150	2.38	122.75	9,136		-315.2	-155.1	-232.1	2.1						
9,243	3.89	109.56	9,229		-317.3	-150.5	-228.2	1.8						

CONSUMABLES	DIESEL FUEL (gal) Rcvd/Used/On Hand:	DRILL H2O (gal) Rcvd/Used/On Hand:
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OPERATIONS TIME LOG														
FROM	TO	HRS	CODE		Start MD	End MD								
06:00	06:30	0.5	Cut off Drill Line	Finish slip and cut, perform brake test	8169	8169								
06:30	07:00	0.5	Lubricate Rig	Rig service	8169	8169								
07:00	08:30	1.5	Trips	Tih to 8169'	8169	8169								
08:30	18:00	9.5	Drilling	DRLG F/8,169' to 8780' WOB 30 GPM 625 DIFF 350-600 SPP 3820 ROTARY 35 TORQ 16-20 0 slides / 0 ft	8169	8780								
18:00	06:00	12.0	Drilling	DRLG F/8780' To 9397' WOB 30 GPM 625 DIFF 350-600 SPP 3820 ROTARY 35 TORQ 16-20 4 slides / 122 ft	8780	9397								
TOTAL HRS		24.0												

WEATHER														
GEN. CONDITIONS:	Rain	WIND SPEED:	8	WIND DIRECTION:	ESE	TEMP:	50							
COMMENTS: Natural Gas Usage Daily: 2099.83 Total: 13226.70 Mud Fuel On Hand 7003 Gals, Mud Fuel Received 7003														
www.wellez.net WellEz Information Management LLC ver_082818cn														



DRILLING REPORT

WELL: UL Lead King 344035-16 G 7H	CONTRACTOR: Unit Drilling	RIG: Unit 412
RPT DATE: January 18, 2019	SPUD DATE: 12/21/18	CASING OD WT GRD MD TVD
API #: 42-475-37683	DFS: 28	Conductor 20 93 93
FIELD: Two Georges (Bone Spring)	REPORT NO: 22	Surface 13-3/8 55 J55 926 926
ELEV: 2,605	RKB: 2,626	Intermediate 10-3/4 46 J55 5,064 5,058
MD:	TVD:	Intermediate 2 7-5/8 30 HCL-80 10,239 10,235
24 HR FTG:	HRS DRLG: 16.5	CSGHD: 2,631

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
22:00	12.4	57.0		5	8		0	7 9 10	17	11	78,260					57.00	4.40	12.00

REDUCED PUMP RATES			
PUMP	SPM	PRESS	DEPTH
#1	50		
#2	60		

BIT DATA													
NO.	SIZE	MAKE	TYPE	SER NO.	NOZZLES	RE-RUN	IN	OUT	FEET	HRS	WOB	RPM	ROP
9	6.75	ULTERRA	CF611	42234	X14 TFA=90		10,789	11,386	597	16.5	20	251	36
BIT NO.	INNER	OUTER	DULL	LOC	SEAL	GAUGE	OTHER	RP					

HYDRAULICS DATA														
PUMP	MAKE	MODEL	LINER	STK	SPM	PSI	GPM	GPS	EFF %	ECD	AV DP	AV DC	BIT HHP	PUMP HHP
1	Weatherford	EQ2200	4.500	12.000	62	3200	245	3.92	97					
2	Weatherford	EQ2200	4.500	12.000										

BHA							
DESCRIPTION:	Curve BHA #2						
LENGTH	1,304.36	BHA WT. AIR	54,412	BHA WT. MUD	44,019	HRS. ON JARS	
ROT. WT.	196,000	P.U. WT.	230,000	S.O. WT.	185,000	TORQUE	7,500
TIME MADE UP	02:00	DATE MADE UP	1/17/2019	TIME PULLED		DATE PULLED	

SURVEY DATA									
MD	ANGLE	AZIMUTH	TVD	N/S	COORDINATES	E/W	V. SECTION	DLS	
11,182	89.08	70.43	10,842		-137.3 398.5		348.7	5.4	
11,230	91.74	70.49	10,842		-121.2 443.7		396.5	5.5	
11,278	93.14	71.23	10,839		-105.5 489.0		444.4	3.3	
11,326	94.35	72.41	10,836		-90.5 534.5		492.2	3.5	

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

FROM	TO	HRS	CODE		Start MD	End MD
06:00	07:00	1.0	Trips	Trip in hole to casing shoe	10789	10789
07:00	07:30	0.5	Other	Pull trip nipple and install rotating head. Check orbit valve	10789	10789
07:30	08:30	1.0	Cut off Drill Line	Cut and slip 120 ft drilling line. Calibrate	10789	10789
08:30	09:30	1.0	Lubricate Rig	Rig and top drive service. Change out hydraulic line on grabber while servicing top drive. Change top drive oil and gear lube, hydraulic filter. Grease top drive track	10789	10789
09:30	10:00	0.5	Trips	Trip in. Wash last stand and fan bottom clean	10789	10789
10:00	02:30	16.5	Drilling	Slide 10789-11001, Rotate 11001-11005, Slide 11005-11050, ROT F/11,050-11,064' SLIDE F/11,064-11,098', ROT F/11,098-11,120', SLIDE F/1120-11,156', ROT F/11,156-11,250', SLIDE F/11,250-11,260', ROT F/11,260-11,294', SLIDE F/11,294-11,309', ROT F/11,309-11,338', SLIDE F/11,338-11,353', ROT F/11,353-11,386' LANDED CURVE AT 11,194' PROJECTED @BIT 87 DEGREES	10789	11386
02:30	03:00	0.5	Cond Mud & Circ	CIRC HOLE CLEAN WITH SWEEP PUMP TRIP SLUG	11386	11386
03:00	03:30	0.5	Trips	SHORT TRIP TO 10,600' PLACES DNR @ 10,335'	11386	11386
03:30	06:00	2.5	Reaming	REAM BACK TO BOTTOM 65 RPM 245 GPM	11386	11386
TOTAL HRS		24.0				

WEATHER							
GEN. CONDITIONS:	Cloudy	WIND SPEED:	6	WIND DIRECTION:	SW	TEMP:	43
COMMENTS:	Natural Gas Usage Daily: 769.54 Total: 19078.33 Mud Fuel On Hand 8000 Gals, Mud Fuel Received 6750						

