

10/08/21

110 Old Market St.  
St Martinville, LA 70582

Report #1

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

8.7° 2,988' TVD

Operator <b>MAGNOLIA OIL &amp; GAS</b>							Contractor <b>PATTERSON</b>			County / Parish / Block <b>WASHINGTON</b>			Engineer Start Date <b>10/07/21</b>		24 hr fig. <b>3,024 ft</b>		Drilled Depth <b>3,025 ft</b>										
Well Name and No. <b>BIGHORN PEAK H04 BH</b>							Rig Name and No. <b>248</b>			State <b>TEXAS</b>			Spud Date <b>10/07/21</b>		Current ROP <b>0 ft/hr</b>		Activity <b>POOH</b>										
Report for <b>Kevin Burt/Chris Mayeux</b>							Report for <b>Tool Pusher</b>			Field / OCS-G # <b>GIDDINGS</b>			Fluid Type <b>WBM</b>		Circulating Rate <b>0 gpm</b>		Circulating Pressure <b>psi</b>										
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER											
Weight <b>8.4-9.6</b>		PV <b>0-10</b>		YP <b>0-10</b>		GELS <b>&lt;5 &lt;10</b>		pH <b>8.4-9</b>		API fl <b>&lt;25</b>		% Solids <b>2-10</b>		In Pits 610 bbl In Hole 541 bbl Active 1146 bbl Storage <u>2419 bbl</u> Tot. on Location 3570 bbl		Liner Size 5.25 Stroke 12 bbl/stk 0.0763 stk/min 0 gal/min 0		Liner Size 5.25 Stroke 12 bbl/stk 0.0763 stk/min 0 gal/min 0		Liner Size Stroke bbl/stk 0.0000 stk/min gal/min 0							
							10/7/21																				
Time Sample Taken							22:30																				
Sample Location							PIT																				
Flowline Temperature °F							96 °F						PHHP = 0 CIRCULATION DATA n = 0.737 K = 15.441														
Depth (ft)							2,185'						Bit Depth = 3,000 '			Washout = 5%			Pump Efficiency = 95%								
Mud Weight (ppg)							8.9						Drill String Disp.		Volume to Bit 50.9 bbl Bottoms Up Vol. 485.5 bbl Riser Ann. Vol. -2.6 bbl		Strokes To Bit BottomsUp Stks Riser Strokes			Time To Bit BottomsUp Time Riser Circ. Time							
Funnel Vis (sec/qt) @ 88 °F							29						28.1 bbl														
600 rpm							5																				
300 rpm							3						DRILLING ASSEMBLY DATA							SOLIDS CONTROL							
200 rpm							2						Tubulars OD (in.) ID (in.) Length Top					Unit Screens Hours									
100 rpm							1						Drill Pipe 5.000 4.276 2,547' 0'					Shaker 1 140 8.0									
6 rpm							1						Hevi Wt 5.500 3.800 330' 2,547'					Shaker 2 140 8.0									
3 rpm							1						Other Pipe 7.875 3.250 85' 2,877'					Shaker 3 140 8.0									
Plastic Viscosity (cp) @ 120 °F							2						Dir. BHA 8.000 2.000 38' 2,962'					Desander									
Yield Point (lb/100 ft²) T0 = 1							1						CASING & HOLE DATA										Desilter				
Gel Strength (lb/100 ft²) 10 sec/10 min							1/1						Casing OD (in.) ID (in.) Depth Top					Centrifuge 1 8.0									
Gel Strength (lb/100 ft²) 30 min							1						Riser 20 108'					VOLUME ACCOUNTING (bbls)									
API Filtrate / Cake Thickness							14/1						Surface 108'					Prev. Total on Location 0.0									
HTHP Filtrate / Cake Thickness @ 0 °F													Int. Csg. 108'					Transferred In(+)/Out(-) 2419.0									
Retort Solids Content							4.2%						Washout 1					Oil Added (+) 0.0									
Retort Oil Content													Washout 2					Barite Added (+) 0.0									
Retort Water Content							95.8%						Open Hole Size 14.175 3,025'					Other Product Usage (+) 2.3									
Sand Content							0.2%						ANNULAR GEOMETRY & RHEOLOGY										Water Added (+) 1739.2				
M.B.T. (Methylene Blue Capacity) (ppb)							5.0						annular section		meas. depth		velocity ft/min		flow reg		ECD lb/gal		Left on Cuttings (-) -590.3				
pH							7.0						0x5 108'		0.0		8.90		Sand Trap Discharge								
Alkalinity, Mud Pm							0.1						14.175x5 2,547'		0.0		lam 8.90		Est. Total on Location 3570.2								
Alkalinities, Filtrate Pf/Mf							0.1/0.2						14.175x5.5 2,877'		0.0		lam 8.90		Est. Losses/Gains (-)/(+) 0.0								
Chlorides (mg/L)							700						14.175x7.875 2,962'		0.0		lam 8.90		BIT HYDRAULICS DATA								
Calcium (ppm)							280						14.175x8 3,000'		0.0		lam 8.90		Bit H.S.I.		Bit ΔP		Nozzles (32nds)				
Excess Lime (lb/bbl)																			0.00		psi		14 14 14				
Average Specific Gravity of Solids							2.60		2.60		2.60								Bit Impact Force		Nozzle Velocity (ft/sec)		14 14 14				
Percent Low Gravity Solids							4.1%												0 lbs		0						
Percent Drill Solids							4.1%																				
PPA Spurt / Total (ml) @ @ 0 °F													BIT DATA			Manuf./Type ULTERRA / PDC											
Estimated Total LCM in System ppb													Size		Depth In		Hours		Footage		ROP ft/hr		Motor/MWD		Calc. Circ. Pressure		
Sample Taken By							N. Dilly						13 1/2		1 ft		6.0		3,025 ft		504.2						
Remarks/Recommendations:  OBM RECEIVED: 2419 bbls  Pretreated acitve system with 10sx SAPP & 50gal Detergent.  Sweeps: 2sx SAPP & 10 gal detergent per 100bbls.										Rig Activity:  Finish skidding rig and rig service. Pick up BHA. Drill from 100' to 3,025'TD. Pumped 30bbls soap/sapp sweeps every connection, added soap/sapp sticks down drill pipe every connection, and pumped 100bbls soap/sapp sweeps every 1000'. Dumped sand trap and diluted active system with freshwater as needed to control MW. Stopped adding SAPP at 2,600' and let weight creep up to 9.1-9.2ppg by TD. Pumped 2 tandem hi-vis sweeps at TD and circulated clean. POOH to run casing at report time.																	
Eng. 1: Patrick Blair Phone: 936-465-0952							Eng. 2: Nick Dilly Phone: 337-207-8848			WH 1: MIDLAND Phone: 432-686-7361			WH 2: WH #2 Phone: -			Rig Phone:			Daily Total			Cumulative Cost					
W P Y g G p A S C 1 1 1 1 1 0 1 1 0							Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.												\$3,445.20			\$3,445.20					
										INCLUDING 3RD PARTY CHARGES										\$3,445.20			\$3,445.20				



### THIRD PARTY COST SHEET

[illegible]

**OUTSOURCE FLUID SOLUTIONS LLC.**

# FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 BH

		WEEK 1								WEEK 2								WEEK 3							
		Date	10/8/21	10/9/21	10/10/21	10/11/21	10/12/21	10/13/21	10/14/21	10/15/21	10/16/21	10/17/21	10/18/21	10/19/21	10/20/21	10/21/21	10/22/21	10/23/21	10/24/21	10/25/21	10/26/21	10/27/21	10/28/21		
		Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu			
Grand Totals	Bit Size																								
	Starting Depth																								
	Ending Depth																								
-	Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Starting System Volume		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	Chemical Additions																								
-	Base Fluid Added																								
-	Barite Increase																								
-	Weighted Mud Added																								
-	Slurry Added																								
-	Water Added																								
-	Added for Washout																								
-	Total Additions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	Surface Losses																								
-	Formation Loss																								
-	Mud Loss to Cuttings																								
-	Unrecoverable Volume																								
-	Centrifuge Losses																								
-	Total Losses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	Mud Transferred Out																								
-	Ending System Volume	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	Mud Recovered																								
<div>-</div>		Comments:								Comments:								Comments:							
		10/8/21								10/15/21								10/22/21							
		10/9/21								10/16/21								10/23/21							
		10/10/21								10/17/21								10/24/21							
		10/11/21								10/18/21								10/25/21							
		10/12/21								10/19/21								10/26/21							
		10/13/21								10/20/21								10/27/21							
		10/14/21								10/21/21								10/28/21							

10/09/21

110 Old Market St.  
St Martinville, LA 70582

Report #2

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

0.0°

0' TVD

Operator <b>MAGNOLIA OIL &amp; GAS</b>							Contractor <b>PATTERSON</b>			County / Parish / Block <b>WASHINGTON</b>			Engineer Start Date <b>10/07/21</b>		24 hr fig. <b>0 ft</b>		Drilled Depth <b>3,025 ft</b>																																									
Well Name and No. <b>BIGHORN PEAK H04 BH</b>							Rig Name and No. <b>248</b>			State <b>TEXAS</b>			Spud Date <b>10/07/21</b>		Current ROP <b>0 ft/hr</b>		Activity <b>Skid Rig</b>																																									
Report for <b>Kevin Burt/Chris Mayeux</b>							Report for <b>Tool Pusher</b>			Field / OCS-G # <b>GIDDINGS</b>			Fluid Type <b>WBM</b>		Circulating Rate <b>0 gpm</b>		Circulating Pressure <b>psi</b>																																									
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER																																										
Weight <b>8.4-9.6</b>		PV <b>0-10</b>		YP <b>0-10</b>		GELS <b>&lt;5 &lt;10</b>		pH <b>8.4-9</b>		API fl <b>&lt;25</b>		% Solids <b>2-10</b>		In Pits 0 bbl In Hole 279 bbl Active 0 bbl Storage <u>0 bbl</u> Tot. on Location 279 bbl		Liner Size 5.25 Stroke 12 bbl/stk 0.0763 stk/min 0 gal/min 0		Liner Size 5.25 Stroke 12 bbl/stk 0.0763 stk/min 0 gal/min 0		Liner Size Stroke bbl/stk 0.0000 stk/min gal/min 0																																						
							10/8/21																																																			
Time Sample Taken							12:00																																																			
Sample Location							PIT																																																			
Flowline Temperature °F													PHHP = 0 <b>CIRCULATION DATA</b> n = 0.737   K = 15.441																																													
Depth (ft)							3,025'						Bit Depth = '			Washout = 5%			Pump Efficiency = 95%																																							
Mud Weight (ppg)							9.2						Drill String Disp.  0.0 bbl	Volume to Bit 0.0 bbl Bottoms Up Vol. 0.0 bbl Riser Ann. Vol. 0.0 bbl		Strokes To Bit  BottomsUp Stks  Riser Strokes			Time To Bit  BottomsUp Time  Riser Circ. Time																																							
Funnel Vis (sec/qt) @ 88 °F							36																																																			
600 rpm							5																																																			
300 rpm							3						<b>DRILLING ASSEMBLY DATA</b>							<b>SOLIDS CONTROL</b>																																						
200 rpm							2						Tubulars OD (in.) ID (in.) Length Top					Unit Screens Hours																																								
100 rpm							1						Drill Pipe 0' 0'					Shaker 1 140 6.0																																								
6 rpm							1						Hevi Wt 0'					Shaker 2 140 6.0																																								
3 rpm							1						Other Pipe 0'					Shaker 3 140 6.0																																								
Plastic Viscosity (cp) @ 120 °F							2						Dir. BHA 0'					Desander																																								
Yield Point (lb/100 ft²) T0 = 1							1						<b>CASING &amp; HOLE DATA</b>																																													
Gel Strength (lb/100 ft²) 10 sec/10 min							1/1						Casing OD (in.) ID (in.) Depth Top					Centrifuge 1 6.0																																								
Gel Strength (lb/100 ft²) 30 min							1						Riser 20 108'					<b>VOLUME ACCOUNTING (bbls)</b>																																								
API Filtrate / Cake Thickness							14/1						Surface 10 3/4 9.950 3,014' 108'					Prev. Total on Location 3570.2																																								
HTHP Filtrate / Cake Thickness @ 0 °F													Int. Csg. 108'					Transferred In(+)/Out(-) -2151.0																																								
Retort Solids Content							6.4%						Washout 1					Oil Added (+) 0.0																																								
Retort Oil Content													Washout 2					Barite Added (+) 0.0																																								
Retort Water Content							93.6%						Open Hole Size 0.000 3,025'					Other Product Usage (+) 0.0																																								
Sand Content							0.3%						<b>ANNULAR GEOMETRY &amp; RHEOLOGY</b>																																													
M.B.T. (Methylene Blue Capacity) (ppb)							5.0						annular section		meas. depth	velocity ft/min	flow reg	ECD lb/gal	Water Added (+)																																							
pH							7.0																Left on Cuttings (-) 0.0																																			
Alkalinity, Mud Pm							0.1																					Sand Trap Discharge -1139.7																														
Alkalinities, Filtrate Pf/Mf							0.1/0.2																										Est. Total on Location 279.5																									
Chlorides (mg/L)							700																															Est. Losses/Gains (-)/(+) 0.0																				
Calcium (ppm)							280																																				<b>BIT HYDRAULICS DATA</b>															
Excess Lime (lb/bbl)																																																Bit H.S.I.		Bit ΔP		Nozzles (32nds)						
Average Specific Gravity of Solids							2.60		2.60		2.60																																										Bit Impact Force		Nozzle Velocity (ft/sec)			
Percent Low Gravity Solids							6.3%																																																			
Percent Drill Solids							6.3%																																																			
PPA Spurt / Total (ml) @ @ 0 °F																																																										
Estimated Total LCM in System ppb													Size		Depth In	Hours	Footage	ROP ft/hr	Motor/MWD		Calc. Circ. Pressure																																					
Sample Taken By							P. Blair																																																			
Remarks/Recommendations:  OBM RECEIVED: 2419 bbls  Transfer 2140bls OBM to the HO6 leaving 279bls in casing on HO4.										Rig Activity:  Completed POOH T/surface, racking back HWDP. R/U casing crew, M/U shoe track and test. Ran 10.75" surface casing T/3,014'. Circulate 1.5 times casing capacity, L/D CRT, back out landing joint. R/D casing equipment, R/U offline cement equipment while skidding rig to the Bighorn Pass H06 BH. Pumped cement, bumping plug with 9.0 ppg. OBM, ~109 bbls cement back to surface and diverted to open top for disposal at pm report time.																																																
Eng. 1: Patrick Blair Phone: 936-465-0952							Eng. 2: Nick Dilly Phone: 337-207-8848			WH 1: MIDLAND Phone: 432-686-7361			WH 2: WH #2 Phone: -			Rig Phone:			Daily Total		Cumulative Cost																																					
W P Y g G p A S C 1 1 1 1 1 0 1 1 0							Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.										<b>\$0.00</b>		<b>\$3,445.20</b>																																							
										INCLUDING 3RD PARTY CHARGES										<b>\$0.00</b>		<b>\$3,445.20</b>																																				



### THIRD PARTY COST SHEET

[illegible]

**OUTSOURCE FLUID SOLUTIONS LLC.**

## FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 BH

		WEEK 1							WEEK 2							WEEK 3							
		Date	10/8/21	10/9/21	10/10/21	10/11/21	10/12/21	10/13/21	10/14/21	10/15/21	10/16/21	10/17/21	10/18/21	10/19/21	10/20/21	10/21/21	10/22/21	10/23/21	10/24/21	10/25/21	10/26/21	10/27/21	10/28/21
			Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu
Grand Totals		Bit Size	13 1/2	13 1/2																			
		Starting Depth																					
		Ending Depth																					
-		Footage Drilled	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-		New Hole Vol.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Starting System Volume		2,419	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279
-		Chemical Additions																					
-		Base Fluid Added																					
-		Barite Increase																					
2,419		Weighted Mud Added	2,419																				
-		Slurry Added																					
-		Water Added																					
-		Added for Washout																					
2,419		Total Additions	2,419	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-		Surface Losses																					
-		Formation Loss																					
-		Mud Loss to Cuttings																					
-		Unrecoverable Volume																					
-		Centrifuge Losses																					
-		Total Losses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,140		Mud Transferred Out		2,140																			
279		Ending System Volume	2,419	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279	279
-		Mud Recovered																					
		Comments:							Comments:							Comments:							
279		10/8/21    Transferred 2,419bbls from the HO2 to the HO4.							10/15/21							10/22/21							
		10/9/21    Transferred 2,140bbls from the HO4 to the HO6. Left 279bbls in hole after cement job.							10/16/21							10/23/21							
		10/10/21							10/17/21							10/24/21							
		10/11/21							10/18/21							10/25/21							
		10/12/21							10/19/21							10/26/21							
		10/13/21							10/20/21							10/27/21							
		10/14/21							10/21/21							10/28/21							



10/14/21

110 Old Market St.  
St Martinville, LA 70582

Report #3

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

8.7° 3,022' TVD

Operator				Contractor			County / Parish / Block		Engineer Start Date		24 hr fig.		Drilled Depth			
MAGNOLIA OIL & GAS				PATTERSON			WASHINGTON		10/07/21		10 ft		3,100 ft			
Well Name and No.				Rig Name and No.			State		Spud Date		Current ROP		Activity			
BIGHORN PEAK H04 BH				248			TEXAS		10/07/21		401 ft/hr		Drilling			
Report for				Report for			Field / OCS-G #		Fluid Type		Circulating Rate		Circulating Pressure			
Brandon Parks				Tool Pusher			GIDDINGS		OBM		561 gpm		2,052 psi			
MUD PROPERTY SPECIFICATIONS						MUD VOLUME (BBL)		PUMP #1		PUMP #2		RISER BOOSTER				
Weight	PV	YP	E.S.	CaCl2	GELS	HTHP	In Pits	587 bbl	Liner Size	5.25	Liner Size	5.25	Liner Size			
15-17	20-40	8-20	>500	±275K	<10 <15	<6	In Hole	257 bbl	Stroke	12	Stroke	12	Stroke			
				10/14/21		10/13/21	Active	837 bbl	bbl/stk	0.0763	bbl/stk	0.0763	bbl/stk	0.0000		
Time Sample Taken				0:30		10:30	Storage	1820 bbl	stk/min	87	stk/min	88	stk/min			
Sample Location				pit		pit	Tot. on Location	2664 bbl	gal/min	279	gal/min	282	gal/min	0		
Flowline Temperature °F				108 °F			PHHP = 671 CIRCULATION DATA n = 0.585 K = 212.503									
Depth (ft)				3,035'		3,025'	Bit Depth = 3,035 '		Washout = 5%		Pump Efficiency = 95%					
Mud Weight (ppg)				9.0		8.8	Drill String Disp.	Volume to Bit	49.8 bbl	Strokes To Bit		653	Time To Bit 4 min			
Funnel Vis (sec/qt) @ 98 °F				50		51		Bottoms Up Vol.	200.5 bbl	BottomsUp Stks		2,627	BottomsUp Time 15 min			
600 rpm				24		29		31.3 bbl	Riser Ann. Vol.	-2.6 bbl	Riser Strokes		-34	Riser Circ. Time 0 min		
300 rpm				16		19	DRILLING ASSEMBLY DATA					SOLIDS CONTROL				
200 rpm				13		14	Tubulars	OD (in.)	ID (in.)	Length	Top	Unit	Screens	Hours		
100 rpm				8		11	Drill Pipe	5.000	4.276	2,396'	0'	Shaker 1	140	7.0		
6 rpm				5		5	Hevi Wt	5.000	3.800	338'	2,396'	Shaker 2	140	7.0		
3 rpm				4		4	Collars	6.500	2.750	186'	2,734'	Shaker 3	140	7.0		
Plastic Viscosity (cp) @ 150 °F				8		10	Collars	8.000	3.250	115'	2,920'	Desander				
Yield Point (lb/100 ft²) T0 = 3				8		9	CASING & HOLE DATA					Desilter				
Gel Strength (lb/100 ft²) 10 sec/10 min				4/5		4/8	Casing	OD (in.)	ID (in.)	Depth	Top	Centrifuge 1	12.0			
Gel Strength (lb/100 ft²) 30 min				7		12	Riser	20		108'		VOLUME ACCOUNTING (bbls)				
HTHP Filtrate (cm/30 min) @ 300 °F				7.6		10.0	Surface	10 3/4	9.950	3,014'	108'	Prev. Total on Location	279.5			
HTHP Cake Thickness (32nds)				2.0		2.0	Int. Csg.				108'	Transferred In(+)/Out(-)	2362.0			
Retort Solids Content				9.5%		9%	Washout 1					Oil Added (+)	74.0			
Corrected Solids (vol%)				6.8%		6.5%	Washout 2					Barite Added (+)	0.0			
Retort Oil Content				61.5%		65%	Open Hole Size	10.369	3,100'			Other Product Usage (+)	10.0			
Retort Water Content				29%		26%	ANNULAR GEOMETRY & RHEOLOGY					Water Added (+)				
O/W Ratio				68:32		71:29	annular section	meas. depth	velocity ft/min	flow reg	ECD lb/gal	Left on Cuttings (-)	-1.6			
Whole Mud Chlorides (mg/L)				68,000		62,000						Non-Recoverable Vol. (-)				
Water Phase Salinity (ppm)				268,839		272,160	0x5	108'	-549.9		9.52	Centrifuge	-59.8			
Whole Mud Alkalinity, Pom				1.6		2.2	9.95x5	2,396'	185.8	lam	9.71	Est. Total on Location	2664.1			
Excess Lime (lb/bbl)				2.1 ppb		2.9 ppb	9.95x5	2,734'	185.8	lam	10.18	Est. Losses/Gains (-)/(+)	0.0			
Electrical Stability (volts)				340 v		310 v	9.95x6.5	2,920'	242.2	turb	10.66	BIT HYDRAULICS DATA				
Average Specific Gravity of Solids				2.68		2.58	9.95x8	3,014'	392.7	turb	11.17	Bit H.S.I.	Bit ΔP	Nozzles (32nds)		
Percent Low Gravity Solids				5.5%		5.7%	10.369x8	3,035'	315.9	turb	11.69	0.50	117 psi	14	14	14
ppb Low Gravity Solids				45 ppb		47 ppb						Bit Impact Force	Nozzle Velocity (ft/sec)	14	14	14
Percent Barite				1.3%		0.8%							16	16	16	
ppb Barite				18 ppb		12 ppb	BIT DATA		Manuf./Type ULTERRA / PDC			316 lbs	121			
Estimated Total LCM in System ppb							Size	Depth In	Hours	Footage	ROP ft/hr	Motor/MWD		Calc. Circ. Pressure		
Sample Taken By				N. Dilly	0	M. Washburn	9 7/8	3,025 ft	1.0	75 ft	75.0	1,548 psi		2,052 psi		
Remarks/Recommendations:						Rig Activity:										
OBM RECEIVED: 2641 bbls																
Transfer 2362bbls OBM from the HO6 to HO4 leaving 444bbls in casing on HO6.						Skid rig from H06 to H04. Nipple up, test, & service rig. P/U BHA #2 and TIH. Tag cement at 2,933'. Drill out shoe track, float equipment, and 10' of new formation.										
Cut MW back from 9.8ppg to desired drill out weight of 8.8ppg with centrifuge and diesel additions.						Perform FIT to 11.6ppg EMW. Drilling ahead at 3,100' at report time. Maintaining MW 8.8-9.0ppg with centrifuge and diesel additions. ROP 401'/hr. MWD Temp 113 F.										
Pretreat Active with Lime, Opti G, Bentone 910/990, Mul, & WA prior to drill out.																
Increased water phase due to incidental water incorporation from surface cement job, line flushing, and BOP test.																
Eng. 1: Patrick Blair		Eng. 2: Nick Dilly		WH 1: MIDLAND		WH 2: WH #2		Rig Phone:				Daily Total		Cumulative Cost		
Phone: 936-465-0952		Phone: 337-207-8848		Phone: 432-686-7361		Phone: -						\$6,157.13		\$9,602.33		
W	P	Y	E	C	g	G	H	O	Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.							
0	0	1	0	1	1	1	2	1								
								INCLUDING 3RD PARTY CHARGES				\$14,101.97		\$17,547.17		



### THIRD PARTY COST SHEET

[illegible]

## FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 BH

2,641

10/15/21

110 Old Market St.  
St Martinville, LA 70582

Report #4

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

2.3° 8,258' TVD

Operator				Contractor			County / Parish / Block		Engineer Start Date		24 hr fig.		Drilled Depth				
MAGNOLIA OIL & GAS				PATTERSON			WASHINGTON		10/07/21		5,242 ft		8,342 ft				
Well Name and No.				Rig Name and No.			State		Spud Date		Current ROP		Activity				
BIGHORN PEAK H04 BH				248			TEXAS		10/07/21		330 ft/hr		DRILLING				
Report for				Report for			Field / OCS-G #		Fluid Type		Circulating Rate		Circulating Pressure				
Brandon Parks				Tool Pusher			GIDDINGS		OBM		705 gpm		4,050 psi				
MUD PROPERTY SPECIFICATIONS						MUD VOLUME (BBL)			PUMP #1		PUMP #2		RISER BOOSTER				
Weight	PV	YP	E.S.	CaCl2	GELS	HTHP	In Pits	500 bbl	Liner Size	5.25	Liner Size	5.25	Liner Size				
15-17	20-40	8-20	>500	±275K	<10 <15	<6	In Hole	770 bbl	Stroke	12	Stroke	12	Stroke				
				10/15/21		10/14/21	Active	1270 bbl	bbl/stk	0.0763	bbl/stk	0.0763	bbl/stk	0.0000			
Time Sample Taken				0:30		13:30	Storage	1300 bbl	stk/min	110	stk/min	110	stk/min				
Sample Location				pit		pit	Tot. on Location	2570 bbl	gal/min	353	gal/min	353	gal/min 0				
Flowline Temperature °F				152 °F		130 °F	PHHP = 1666		CIRCULATION DATA						n = 0.628 K = 223.367		
Depth (ft)				8,086'		6,771'	Bit Depth = 8,342 '			Washout = 5%		Pump Efficiency = 95%					
Mud Weight (ppg)				9.5		9.2	Drill String Disp.	Volume to Bit	144.1 bbl	Strokes To Bit		1,888	Time To Bit 9 min				
Funnel Vis (sec/qt)				@ 140 °F	43	59		Bottoms Up Vol.	625.9 bbl	BottomsUp Stks		8,202	BottomsUp Time 37 min				
600 rpm				34		37		66.0 bbl	Riser Ann. Vol.	-2.6 bbl	Riser Strokes		-34	Riser Circ. Time 0 min			
300 rpm				22		24	DRILLING ASSEMBLY DATA					SOLIDS CONTROL					
200 rpm				19		20	Tubulars	OD (in.)	ID (in.)	Length	Top	Unit	Screens	Hours			
100 rpm				13		14	Drill Pipe	5.000	4.276	7,703'	0'	Shaker 1	140	24.0			
6 rpm				6		7	Hevi Wt	5.000	3.800	338'	7,703'	Shaker 2	140	24.0			
3 rpm				5		6	Collars	6.500	2.750	186'	8,041'	Shaker 3	140	24.0			
Plastic Viscosity (cp)				@ 150 °F	12		13	Collars	8.000	3.250	115'	8,227'	Desander				
Yield Point (lb/100 ft²)				T0 = 4	10		11	CASING & HOLE DATA					Desilter				
Gel Strength (lb/100 ft²)				10 sec/10 min	6/7		7/8	Casing	OD (in.)	ID (in.)	Depth	Top	Centrifuge 1	5.0			
Gel Strength (lb/100 ft²)				30 min	8		12	Riser	20		108'	VOLUME ACCOUNTING (bbbls)					
HTHP Filtrate (cm/30 min)				@ 300 °F	9.2		7.0	Surface	10 3/4	9.950	3,014'	108'	Prev. Total on Location	2663.7			
HTHP Cake Thickness (32nds)					2.0		2.0	Int. Csg.				108'	Transferred In(+)/Out(-)				
Retort Solids Content					12%		10.5%	Washout 1					Oil Added (+)	230.5			
Corrected Solids (vol%)					9.5%		8.1%	Washout 2					Barite Added (+)	17.4			
Retort Oil Content					61%		60.5%	Open Hole Size		10.369	8,342'	Other Product Usage (+)	13.1				
Retort Water Content					27%		29%	ANNULAR GEOMETRY & RHEOLOGY					Water Added (+)				
O/W Ratio					69:31		68:32	annular section	meas. depth	velocity ft/min	flow reg	ECD lb/gal	Left on Cuttings (-)	-328.5			
Whole Mud Chlorides (mg/L)					62,000		62,000						Non-Recoverable Vol. (-)				
Water Phase Salinity (ppm)					264,748		251,074	0x5	108'	-691.3		9.83	Centrifuge	-26.2			
Whole Mud Alkalinity, Pom					2.9		2.2	9.95x5	3,014'	233.5	lam	10.04	Est. Total on Location	2570.0			
Excess Lime (lb/bbl)					3.8 ppb		2.9 ppb	10.369x5	7,703'	209.4	lam	10.16	Est. Losses/Gains (-)/(+)	0.0			
Electrical Stability (volts)					451 v		315 v	10.369x5	8,041'	209.4	lam	10.48	BIT HYDRAULICS DATA				
Average Specific Gravity of Solids					2.89		2.76	10.369x6.5	8,227'	264.8	turb	10.80	Bit H.S.I.	Bit ΔP	Nozzles (32nds)		
Percent Low Gravity Solids					6.6%		6.2%	10.369x8	8,342'	397.1	turb	11.13	1.05	196 psi	14	14	14
ppb Low Gravity Solids					54 ppb		51 ppb						Bit Impact Force	Nozzle Velocity (ft/sec)	14	14	14
Percent Barite					2.9%		1.9%						16	16	16		
ppb Barite					42 ppb		27 ppb	BIT DATA		Manuf./Type ULTERRA / PDC		526 lbs	152				
Estimated Total LCM in System ppb							Size	Depth In	Hours	Footage	ROP ft/hr	Motor/MWD	Calc. Circ. Pressure				
Sample Taken By				N. Dilly	0	M. Washburn	9 7/8	3,025 ft	22.0	5,317 ft	241.7	2,545 psi	4,050 psi				
Remarks/Recommendations:						Rig Activity:											
TOTAL OBM RECEIVED: 2641 bbls																	
Plan Forward: TD intermediate interval and POOH.																	
Increasing mud weight 0.2ppg every 1000' starting at 6,400' to a desired 9.8ppg at TD.						Drill ahead from 3,100' to 8,342'. Weigh up to 9.2ppg by 6,400' (Midway), 9.4ppg by 7,400' (Navarro), and currently weighing up to achieve 9.6ppg by 8,800' (Pecan Gap). Adding diesel to maintain MW, control LGS, and for oil wetting of solids.											
Treating active with maintenance amounts of Lime, Opti G, Bentone 910/990, Mul, CaCl, & WA.						Drilling ahead at report time. ROP 330'/hr. MWD Temp 208 F.											
Pumping 10bbls hi-vis sweeps every 300'.																	
Eng. 1: Patrick Blair		Eng. 2: Nick Dilly		WH 1: MIDLAND		WH 2: WH #2		Rig Phone:		Daily Total		Cumulative Cost					
Phone: 936-465-0952		Phone: 337-207-8848		Phone: 432-686-7361		Phone: -				\$18,687.72		\$28,290.05					
W	P	Y	E	C	g	G	H	O	Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.								
0	0	1	0	0	1	1	2	1									
								INCLUDING 3RD PARTY CHARGES				\$42,109.40		\$59,656.57			



### THIRD PARTY COST SHEET

[illegible]

**OUTSOURCE FLUID SOLUTIONS LLC.**

# FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 BH

		WEEK 1								WEEK 2								WEEK 3							
		Date	10/8/21	10/9/21	10/10/21	10/11/21	10/12/21	10/13/21	10/14/21	10/15/21	10/16/21	10/17/21	10/18/21	10/19/21	10/20/21	10/21/21	10/22/21	10/23/21	10/24/21	10/25/21	10/26/21	10/27/21	10/28/21		
		Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu			
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	9 7/8	9 7/8																
	Starting Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342															
	Ending Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342																
5,317	Footage Drilled	-	-	-	-	-	-	75	5,242	-	-	-	-	-	-	-	-	-	-	-	-	-			
504	New Hole Vol.	-	-	-	-	-	-	7	497	-	-	-	-	-	-	-	-	-	-	-	-	-			
	Starting System Volume		2,419	279	279	279	279	279	2,664	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570			
23	Chemical Additions							10	13																
304	Base Fluid Added							74	230																
17	Barite Increase								17																
4,781	Weighted Mud Added	2,419						2,362																	
-	Slurry Added																								
-	Water Added																								
-	Added for Washout																								
5,125	Total Additions	2,419	-	-	-	-	-	2,446	260	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	Surface Losses																								
-	Formation Loss																								
330	Mud Loss to Cuttings							2	328																
-	Unrecoverable Volume																								
85	Centrifuge Losses							59	26																
415	Total Losses	-	-	-	-	-	-	61	354	-	-	-	-	-	-	-	-	-	-	-	-	-			
2,140	Mud Transferred Out		2,140																						
2,570	Ending System Volume	2,419	279	279	279	279	279	2,664	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570	2,570			
-	Mud Recovered																								
2,641		Comments:							Comments:							Comments:									
		10/8/21 Transferred 2,419bbls from the HO2 to the HO4.							10/15/21 Lost 328bbls to mud on cuttings and 26bbls to centrifuge processing active system.							10/22/21									
		10/9/21 Transferred 2,140bbls from the HO4 to the HO6. Left 279bbls in hole after cement job.							10/16/21							10/23/21									
		10/10/21							10/17/21							10/24/21									
		10/11/21							10/18/21							10/25/21									
		10/12/21							10/19/21							10/26/21									
		10/13/21							10/20/21							10/27/21									
		10/14/21 Lost 2bls to mud on cuttings and 59bbls to centrifuge while cutting MW back to 8.8ppg for drill out.							10/21/21							10/28/21									



10/16/21

110 Old Market St.  
St Martinville, LA 70582

Report #5

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

0.0°

0' TVD

Operator				Contractor			County / Parish / Block		Engineer Start Date		24 hr fig.		Drilled Depth					
MAGNOLIA OIL & GAS				PATTERSON			WASHINGTON		10/07/21		1,448 ft		9,790 ft					
Well Name and No.				Rig Name and No.			State		Spud Date		Current ROP		Activity					
BIGHORN PEAK H04 BH				248			TEXAS		10/07/21		0 ft/hr		Run Casing					
Report for				Report for			Field / OCS-G #		Fluid Type		Circulating Rate		Circulating Pressure					
Brandon Parks				Tool Pusher			GIDDINGS		OBM		0 gpm		psi					
MUD PROPERTY SPECIFICATIONS						MUD VOLUME (BBL)			PUMP #1		PUMP #2		RISER BOOSTER					
Weight	PV	YP	E.S.	CaCl2	GELS	HTHP	In Pits	535 bbl	Liner Size	5.25	Liner Size	5.25	Liner Size					
9-18	20-40	8-20	>500	±275K	<10 <15	<6	In Hole	987 bbl	Stroke	12	Stroke	12	Stroke					
				10/16/21		10/15/21	Active	535 bbl	bbl/stk	0.0763	bbl/stk	0.0763	bbl/stk	0.0000				
Time Sample Taken				0:30		2:30	Storage	1000 bbl	stk/min	0	stk/min	0	stk/min					
Sample Location				pit		pit	Tot. on Location	2522 bbl	gal/min	0	gal/min	0	gal/min 0					
Flowline Temperature °F						158 °F	PHHP = 0 CIRCULATION DATA n = 0.637 K = 258.527											
Depth (ft)				9,790'		9,790'	Bit Depth = '			Washout = 5%		Pump Efficiency = 95%						
Mud Weight (ppg)				9.9		9.8	Drill String Disp.	Volume to Bit	0.0 bbl	Strokes To Bit		Time To Bit						
Funnel Vis (sec/qt)				@ 136 °F 50		55		Bottoms Up Vol.	0.0 bbl	BottomsUp Stks		BottomsUp Time						
600 rpm				42		42		0.0 bbl	Riser Ann. Vol.	0.0 bbl	Riser Strokes		Riser Circ. Time					
300 rpm				27		27	DRILLING ASSEMBLY DATA					SOLIDS CONTROL						
200 rpm				22		23	Tubulars	OD (in.)	ID (in.)	Length	Top	Unit	Screens	Hours				
100 rpm				16		15	Drill Pipe	7.625	6.875	0'	0'	Shaker 1	140	19.0				
6 rpm				7		7	Hevi Wt				0'	Shaker 2	140	19.0				
3 rpm				6		6	Collars				0'	Shaker 3	140	19.0				
Plastic Viscosity (cp)				@ 150 °F 15		15	Collars				0'	Desander						
Yield Point (lb/100 ft²)				T0 = 5 12		12	CASING & HOLE DATA					Desilter						
Gel Strength (lb/100 ft²)				10 sec/10 min 8/10		8/12	Casing	OD (in.)	ID (in.)	Depth	Top	Centrifuge 1	0.0					
Gel Strength (lb/100 ft²)				30 min 11		14	Riser	20		108'		VOLUME ACCOUNTING (bbbls)						
HTHP Filtrate (cm/30 min)				@ 300 °F 8.8		8.0	Surface	10 3/4	9.950	3,014'	108'	Prev. Total on Location	2570.0					
HTHP Cake Thickness (32nds)				2.0		2.0	Int. Csg.				108'	Transferred In(+)/Out(-)						
Retort Solids Content				13.7%		13.5%	Washout 1					Oil Added (+)	97.6					
Corrected Solids (vol%)				11.2%		11.1%	Washout 2					Barite Added (+)	24.4					
Retort Oil Content				62.9%		62.5%	Open Hole Size		10.369	9,790'		Other Product Usage (+)	11.5					
Retort Water Content				23.4%		24%	ANNULAR GEOMETRY & RHEOLOGY					Water Added (+)	0.2					
O/W Ratio				73:27		72:28	annular section	meas. depth	velocity ft/min	flow reg	ECD lb/gal	Left on Cuttings (-)	-181.5					
Whole Mud Chlorides (mg/L)				60,000		59,000						Non-Recoverable Vol. (-)						
Water Phase Salinity (ppm)				286,770		278,232						Centrifuge						
Whole Mud Alkalinity, Pom				2.8		2.2						Est. Total on Location	2522.2					
Excess Lime (lb/bbl)				3.6 ppb		2.9 ppb						Est. Losses/Gains (-)/(+)	0.0					
Electrical Stability (volts)				457 v		510 v						BIT HYDRAULICS DATA						
Average Specific Gravity of Solids				3.08		2.99						Bit H.S.I.	Bit ΔP	Nozzles (32nds)				
Percent Low Gravity Solids				6.6%		7%						0.00	psi	14	14	14		
ppb Low Gravity Solids				54 ppb		58 ppb						Bit Impact Force	Nozzle Velocity (ft/sec)	14	14	14		
Percent Barite				4.7%		4.1%							16	16	16			
ppb Barite				67 ppb		59 ppb	BIT DATA		Manuf./Type			ULTERRA / PDC		0 lbs	0			
Estimated Total LCM in System				ppb			Size	Depth In	Hours	Footage	ROP ft/hr	Motor/MWD	Calc. Circ. Pressure					
Sample Taken By				N. Dilly	0	M. Washburn	9 7/8	3,025 ft	34.0	6,765 ft	199.0							
Remarks/Recommendations:						Rig Activity:												
TOTAL OBM RECEIVED: 2641 bbbls																		
Plan Forward: Run 7 5/8" casing and cement same.																		
Increased mud weight 0.2ppg every 1000' starting at 6,400' to a desired 9.8ppg at TD.						Drill 9-7/8" intermediate hole section to TD of 9,790' MD, 9689 TVD (AC). Kick off and build to 20.92 deg inclination. Pump a 30 bbl Hi Visc sweep at TD and circulate hole clean. Observed a few pieces of blocky lignite at shakers up to 3" which is typical in this interval. Mud wt was increased to 9.8 before TD. Slug pipe and POOH. Rigging up 7 5/8" casing tools and testing at report time.												
Treated active system with maintenance amounts of Lime, Opti G, Bentone 910/990, Mul, and WA.																		
Pumped 10bls hi-vis sweeps every 300' to TD.																		
Eng. 1: Patrick Blair		Eng. 2: Nick Dilly		WH 1: MIDLAND		WH 2: WH #2		Rig Phone:				Daily Total		Cumulative Cost				
Phone: 936-465-0952		Phone: 337-207-8848		Phone: 432-686-7361		Phone: -						\$13,594.95		\$39,349.86				
W	P	Y	E	C	G	H	O	Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.										
1	0	1	0	2	1	1	2											
								INCLUDING 3RD PARTY CHARGES				\$24,116.39		\$81,237.82				



### THIRD PARTY COST SHEET

[illegible]

## FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 BH

2,641

10/17/21

110 Old Market St.  
St Martinville, LA 70582

Report #6

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

0.0°

0' TVD

Operator <b>MAGNOLIA OIL &amp; GAS</b>				Contractor <b>PATTERSON</b>			County / Parish / Block <b>WASHINGTON</b>		Engineer Start Date <b>10/07/21</b>		24 hr fig. <b>0 ft</b>		Drilled Depth <b>9,790 ft</b>					
Well Name and No. <b>BIGHORN PEAK H04 BH</b>				Rig Name and No. <b>248</b>			State <b>TEXAS</b>		Spud Date <b>10/07/21</b>		Current ROP <b>0 ft/hr</b>		Activity <b>Skid Rig</b>					
Report for <b>Brandon Parks</b>				Report for <b>Tool Pusher</b>			Field / OCS-G # <b>GIDDINGS</b>		Fluid Type <b>OBM</b>		Circulating Rate <b>0 gpm</b>		Circulating Pressure <b>psi</b>					
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)		PUMP #1		PUMP #2		RISER BOOSTER					
Weight <b>9-18</b>		PV <b>20-40</b>	YP <b>8-20</b>	E.S. <b>&gt;500</b>	CaCl2 <b>±275K</b>	GELS <b>&lt;10 &lt;15</b>	HTHP <b>&lt;6</b>	In Pits 0 bbl		Liner Size 5.25		Liner Size 5.25		Liner Size				
								In Hole 444 bbl		Stroke 12		Stroke 12		Stroke				
					10/17/21		10/16/21	Active 0 bbl		bbl/stk 0.0763		bbl/stk 0.0763		bbl/stk 0.0000				
Time Sample Taken					0:30		12:30	Storage <u>0 bbl</u>		stk/min 0		stk/min 0		stk/min				
Sample Location					pit		pit	Tot. on Location 444 bbl		gal/min 0		gal/min 0		gal/min 0				
Flowline Temperature °F							PHHP = 0 <b>CIRCULATION DATA</b> n = 0.628 K = 223.367											
Depth (ft)				9,790'		9,790'	Bit Depth = '			Washout = 5%			Pump Efficiency = 95%					
Mud Weight (ppg)				9.6		9.8	Drill String Disp.	Volume to Bit 0.0 bbl		Strokes To Bit			Time To Bit					
Funnel Vis (sec/qt) @ 106 °F				52		53		Bottoms Up Vol. 0.0 bbl		BottomsUp Stks			BottomsUp Time					
600 rpm				34		41		0.0 bbl		Riser Ann. Vol. 0.0 bbl		Riser Strokes		Riser Circ. Time				
300 rpm				22		25	<b>DRILLING ASSEMBLY DATA</b>					<b>SOLIDS CONTROL</b>						
200 rpm				17		21	Tubulars	OD (in.)	ID (in.)	Length		Top		Unit	Screens	Hours		
100 rpm				12		14	Drill Pipe			0'		0'		Shaker 1	140	18.0		
6 rpm				6		6	Hevi Wt					0'		Shaker 2	140	18.0		
3 rpm				5		5	Collars					0'		Shaker 3	140	18.0		
Plastic Viscosity (cp) @ 150 °F				12		16	Collars					0'		Desander				
Yield Point (lb/100 ft²) T0 = 4				10		9	<b>CASING &amp; HOLE DATA</b>					Desilter						
Gel Strength (lb/100 ft²) 10 sec/10 min				6/8		7/9	Casing	OD (in.)	ID (in.)	Depth		Top		Centrifuge 1		8.0		
Gel Strength (lb/100 ft²) 30 min				9		11	Riser	20		108'				<b>VOLUME ACCOUNTING (bbls)</b>				
HTHP Filtrate (cm/30 min) @ 300 °F				9.4		8.4	Surface	10 3/4	9.950	3,014'		108'		Prev. Total on Location		2522.2		
HTHP Cake Thickness (32nds)				2.0		2.0	Int. Csg.	7 5/8	6.875	9,779'		108'		Transferred In(+)/Out(-)		-2040.0		
Retort Solids Content				12.5%		13.5%	Washout 1					Oil Added (+) 65.7						
Corrected Solids (vol%)				10.2%		11%	Washout 2					Barite Added (+) 0.0						
Retort Oil Content				63.5%		63.5%	Open Hole Size 0.000 9,790'					Other Product Usage (+) 0.0						
Retort Water Content				24%		23%	<b>ANNULAR GEOMETRY &amp; RHEOLOGY</b>					Water Added (+)						
O/W Ratio				73:27		73:27	annular section	meas. depth	velocity ft/min	flow reg	ECD lb/gal	Left on Cuttings (-) 0.0						
Whole Mud Chlorides (mg/L)				57,000		61,000						Dumped (-) -65.0						
Water Phase Salinity (ppm)				271,360		293,727						Centrifuge -38.9						
Whole Mud Alkalinity, Pom				2.5		3.0						Est. Total on Location 444.0						
Excess Lime (lb/bbl)				3.3 ppb		3.9 ppb						Est. Losses/Gains (-)/(+) 0.0						
Electrical Stability (volts)				465 v		490 v						<b>BIT HYDRAULICS DATA</b>						
Average Specific Gravity of Solids				2.98		3.01						Bit H.S.I.	Bit ΔP	Nozzles (32nds)				
Percent Low Gravity Solids				6.5%		6.9%												
ppb Low Gravity Solids				54 ppb		56 ppb						Bit Impact Force	Nozzle Velocity (ft/sec)					
Percent Barite				3.7%		4.2%												
ppb Barite				53 ppb		60 ppb	<b>BIT DATA</b>		Manuf./Type									
Estimated Total LCM in System ppb							Size	Depth In	Hours	Footage	ROP ft/hr	Motor/MWD		Calc. Circ. Pressure				
Sample Taken By				N. Dilly	0	M. Washburn												
Remarks/Recommendations:  TOTAL OBM RECEIVED: 2641 bbls  Plan Forward: Skid rig to Bighorn Plains HO2 BH  Transfer 2047bbls OBM to HO2 leaving 444bbls in casing on HO4.							Rig Activity:  Ran 7 5/8" casing to 9,779' LP with no issues. Circulate 1 1/2 casing capacity and rig down casing tools. Rig up cementing equipment and test lines. Pump 50bbls 10.5ppg spacer, 283bbls 11.8ppg lead, & 78bbls 16.2ppg Tail. Drop plug and displace with 445bbls of active 9.8ppg OBM. Dumped 65bbls of OBM/Spacer interface. Bump plug and test casing to 3500psi. Rig down cementers and flush lines. Nipple down and install well cap. Preparing to skid rig. Currently in the process of cutting MW in active from 9.8ppg back to 8.8ppg with diesel additions and centrifuge.											
Eng. 1: Patrick Blair Phone: 936-465-0952				Eng. 2: Nick Dilly Phone: 337-207-8848		WH 1: MIDLAND Phone: 432-686-7361		WH 2: WH #2 Phone: -		Rig Phone:		Daily Total		Cumulative Cost				
W P Y E C g G H O 1 0 1 0 1 1 1 2 1				Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.							<b>\$0.00</b>		<b>\$39,349.86</b>					
							<b>INCLUDING 3RD PARTY CHARGES</b>					<b>\$7,452.00</b>		<b>\$88,689.82</b>				





# FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 BH

601



10/19/21

110 Old Market St.  
St Martinville, LA 70582

Report #7

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

17.8° 9,562' TVD

Operator <b>MAGNOLIA OIL &amp; GAS</b>				Contractor <b>PATTERSON</b>			County / Parish / Block <b>WASHINGTON</b>			Engineer Start Date <b>10/04/21</b>			24 hr fig. <b>2,860 ft</b>		Drilled Depth <b>9,840 ft</b>		
Well Name and No. <b>BIGHORN PLAINS H02 BH</b>				Rig Name and No. <b>248</b>			State <b>TEXAS</b>			Spud Date <b>10/06/21</b>			Current ROP <b>40 ft/hr</b>		Activity <b>Drilling</b>		
Report for <b>Brandon Parks / Jim Harrison</b>				Report for <b>Tool Pusher</b>			Field / OCS-G # <b>GIDDINGS</b>			Fluid Type <b>OBM</b>			Circulating Rate <b>865 gpm</b>		Circulating Pressure <b>5,320 psi</b>		
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1		PUMP #2		RISER BOOSTER			
Weight <b>15-17</b>	PV <b>20-40</b>	YP <b>8-20</b>	E.S. <b>&gt;500</b>	CaCl2 <b>±275K</b>	GELS <b>&lt;10 &lt;15</b>	HTHP <b>&lt;6</b>	In Pits 600 bbl	In Hole 850 bbl	Liner Size 5.25	Stroke 12	Liner Size 5.25	Stroke 12	Liner Size				
				10/19/21		10/18/21	Active 1450 bbl		bbl/stk 0.0763		bbl/stk 0.0763		bbl/stk 0.0000				
Time Sample Taken				0:30		14:00	Storage <u>900 bbl</u>		stk/min 135		stk/min 135		stk/min				
Sample Location				pit		suction	Tot. on Location 2350 bbl		gal/min 433		gal/min 433		gal/min 0				
Flowline Temperature °F				163 °F		160 °F	PHHP = 2686 CIRCULATION DATA n = 0.670 K = 172.089										
Depth (ft)				9,789'		9,548'	Bit Depth = 9,840 '			Washout = 0%		Pump Efficiency = 95%					
Mud Weight (ppg)				9.8		9.6	Drill String Disp.	Volume to Bit 170.7 bbl	Strokes To Bit 2,237	Time To Bit 8 min							
Funnel Vis (sec/qt) @ 152 °F				43		55		Bottoms Up Vol. 679.6 bbl	BottomsUp Stks 8,906	BottomsUp Time 33 min							
600 rpm				35		36		75.8 bbl	Riser Ann. Vol. -2.6 bbl	Riser Strokes -34	Riser Circ. Time 0 min						
300 rpm				22		24	DRILLING ASSEMBLY DATA					SOLIDS CONTROL					
200 rpm				17		20	Tubulars OD (in.) ID (in.) Length Top					Unit Screens Hours					
100 rpm				12		14	Drill Pipe 5.000 4.276 9,201' 0'					Shaker 1 140 24.0					
6 rpm				6		7	Hevi Wt 5.000 3.800 334' 9,201'					Shaker 2 140 24.0					
3 rpm				5		6	Collars 6.500 2.750 190' 9,535'					Shaker 3 140 24.0					
Plastic Viscosity (cp) @ 150 °F				13		12	Collars 8.000 3.250 115' 9,725'					Desander					
Yield Point (lb/100 ft²) T0 = 4				9		12	CASING & HOLE DATA					Desilter					
Gel Strength (lb/100 ft²) 10 sec/10 min				6/7		6/8	Casing OD (in.) ID (in.) Depth Top					Centrifuge 1 0.0	VOLUME ACCOUNTING (bbls)				
Gel Strength (lb/100 ft²) 30 min				9		9	Riser 20 108'										
HTHP Filtrate (cm/30 min) @ 300 °F				6.4		7.4	Surface 10 3/4 9.950 3,020' 108'					Prev. Total on Location 2398.0					
HTHP Cake Thickness (32nds)				2.0		2.0	Int. Csg. 108'					Transferred In(+)/Out(-)					
Retort Solids Content				12.6%		12.2%	Washout 1					Oil Added (+) 209.6					
Corrected Solids (vol%)				10.5%		9.9%	Washout 2					Barite Added (+) 13.9					
Retort Oil Content				65.1%		64.4%	Open Hole Size 9.875 9,840'					Other Product Usage (+) 31.2					
Retort Water Content				22.3%		23.4%	ANNULAR GEOMETRY & RHEOLOGY					Water Added (+) 22.6					
O/W Ratio				74:26		73:27	annular section	meas. depth	velocity ft/min	flow reg	ECD lb/gal	Left on Cuttings (-) -325.1					
Whole Mud Chlorides (mg/L)				53,000		58,000						Centrifuge					
Water Phase Salinity (ppm)				271,500		279,887	0x5 108'	-848.4	9.83			Non-Recoverable Vol. (-)					
Whole Mud Alkalinity, Pom				3.0		3.3	9.95x5 3,020'	286.6	turb	10.07		Est. Total on Location 2350.3					
Excess Lime (lb/bbl)				3.9 ppb		4.3 ppb	9.875x5 9,201'	292.5	turb	10.09		Est. Losses/Gains (-)/(+) 0.0	BIT HYDRAULICS DATA				
Electrical Stability (volts)				488 v		460 v	9.875x5 9,535'	292.5	turb	10.12							
Average Specific Gravity of Solids				3.09		2.90	9.875x6.5 9,725'	383.8	turb	10.16		Bit H.S.I. 2.00	Bit ΔP 304 psi	Nozzles (32nds)			
Percent Low Gravity Solids				6.1%		6.8%	9.875x8 9,840'	632.8	turb	10.22		Bit Impact Force 818 lbs	Nozzle Velocity (ft/sec)	14	14	14	
ppb Low Gravity Solids				50 ppb		56 ppb							16	16	16		
Percent Barite				4.4%		3.1%											
ppb Barite				63 ppb		44 ppb	BIT DATA		Manuf./Type Ulterra PDC								
Estimated Total LCM in System ppb							Size 9 7/8	Depth In 3,020 ft	Hours 39.0	Footage 6,812 ft	ROP ft/hr 174.7	Motor/MWD 2,764 psi		Calc. Circ. Pressure 5,320 psi			
Sample Taken By				N. Dilly	0	M Washburn											
Remarks/Recommendations:  OBM RECEIVED: 2142bbl  PLAN FORWARD: TD Intermediate section and POOH.  Staged MW up to 9.8ppg before entering Austin Chalk.  Treating active system with maintenance amounts of Lime, Opti-G, CaCl, Mul, WA, and Bentone 910/990.  Maintaining MW with diesel & water additions.						Rig Activity:  Drill F/6,980' T/9,840' pumping 10bbl hi-vis sweeps every 300' (KOP @ 9,400'). Drill/slide ahead building curve (100% sliding) at report time. Weighed up to 9.6ppg before entering Pecan Gap formation and 9.8 before entering Austin Chalk. Adding diesel and Optiwet for oil wetting of solids, density control, and for volume. Adding lime for alkalinity, OPTIMUL for ES, CaCl for inhibition, and Newphalt/OptiG for HTHP control and wellbore stabilization. Current ROP 40/hr sliding. MWD Temp 243 F.											
Eng. 1: Mike Washburn Phone: 361-945-5777		Eng. 2: Nick Dilly Phone: 337-207-8848		WH 1: MIDLAND Phone: 432-686-7361		WH 2: WH #2 Phone: -		Rig Phone:					Daily Total		Cumulative Cost		
W 0	P 0	Y 1	E 0	C 1	g 1	G 1	H 2	O 1	Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.					\$18,900.10		\$43,299.73	
								INCLUDING 3RD PARTY CHARGES					\$41,248.94			\$101,779.17	



### THIRD PARTY COST SHEET

[illegible]

## FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PLAINS H02 BH

2,353

11/02/21

110 Old Market St.  
St Martinville, LA 70582

Report #9

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

20.9° 14,132' TVD

Operator				Contractor			County / Parish / Block		Engineer Start Date		24 hr fig.		Drilled Depth						
MAGNOLIA OIL & GAS				PATTERSON			WASHINGTON		10/07/21		3,624 ft		14,547 ft						
Well Name and No.				Rig Name and No.			State		Spud Date		Current ROP		Activity						
BIGHORN PEAK H04 BH				248			TEXAS		10/07/21		240 ft/hr		Drilling						
Report for				Report for			Field / OCS-G #		Fluid Type		Circulating Rate		Circulating Pressure						
Kevin Burt/Chris Mayeux				Tool Pusher			GIDDINGS		OBM		445 gpm		5,110 psi						
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)		PUMP #1		PUMP #2		RISER BOOSTER						
Weight	PV	YP	E.S.	CaCl2	GELS	HTHP	In Pits	667 bbl	Liner Size	5.25	Liner Size	5.25	Liner Size						
9-18	8-20	5-20	>200	±270K	<10 <12	<10	In Hole	574 bbl	Stroke	12	Stroke	12	Stroke						
				11/2/21		11/1/21	Active	1241 bbl	bbl/stk	0.0763	bbl/stk	0.0763	bbl/stk	0.0000					
Time Sample Taken				0:30		14:30	Storage	1595 bbl	stk/min	88	stk/min	51	stk/min						
Sample Location				pit		flowline	Tot. on Location	2836 bbl	gal/min	282	gal/min	163	gal/min	0					
Flowline Temperature °F				135 °F		138 °F	PHHP = 1328 CIRCULATION DATA n = 0.621 K = 274.974												
Depth (ft)				14,547'		12,795'	Bit Depth = 14,547 '			Washout = 0%		Pump Efficiency = 95%							
Mud Weight (ppg)				9.1		9.1	Drill String Disp.	Volume to Bit	205.6 bbl	Strokes To Bit		2,694	Time To Bit 19 min						
Funnel Vis (sec/qt) @ 110 °F				48	48	Bottoms Up Vol.		367.9 bbl	BottomsUp Stks		4,822	BottomsUp Time 35 min							
600 rpm				40	38	81.6 bbl		Riser Ann. Vol.	-2.1 bbl	Riser Strokes		-28	Riser Circ. Time 0 min						
300 rpm				26		25	DRILLING ASSEMBLY DATA					SOLIDS CONTROL							
200 rpm				21		21	Tubulars	OD (in.)	ID (in.)	Length	Top	Unit		Screens	Hours				
100 rpm				16		18	Drill Pipe	4.500	3.826	14,386'	0'	Shaker 1		140					
6 rpm				8		9	Hevi Wt	5.250	2.000	34'	14,386'	Shaker 2		140					
3 rpm				7		8	Collars	5.125	2.680	127'	14,420'	Shaker 3		140					
Plastic Viscosity (cp) @ 150 °F				14		13	Collars				14,547'		Desander						
Yield Point (lb/100 ft²) T0 = 6				12		12	CASING & HOLE DATA					Desilter							
Gel Strength (lb/100 ft²) 10 sec/10 min				8/11		10/12	Casing	OD (in.)	ID (in.)	Depth	Top	Centrifuge 1							
Gel Strength (lb/100 ft²) 30 min				13		14	Riser	20			108'	VOLUME ACCOUNTING (bbls)							
HTHP Filtrate (cm/30 min) @ 300 °F				7.4		8.0	Surface	10 3/4	9.950	3,014'	108'	Prev. Total on Location 2862.9							
HTHP Cake Thickness (32nds)				2.0		2.0	Int. Csg.	7 5/8	6.875	9,779'	108'	Transferred In(+)/Out(-) 310.0							
Retort Solids Content				10.5%		10.5%	Washout 1						Oil Added (+) 91.7						
Corrected Solids (vol%)				8%		8%	Washout 2						Barite Added (+) 7.0						
Retort Oil Content				63.5%		65.5%	Open Hole Size		6.750	14,547'			Other Product Usage (+) 13.7						
Retort Water Content				26%		24%	ANNULAR GEOMETRY & RHEOLOGY					Water Added (+) 26.0							
O/W Ratio				71:29		73:27	annular section	meas. depth	velocity ft/min	flow reg	ECD lb/gal	Left on Cuttings (-) -192.5							
Whole Mud Chlorides (mg/L)				62,800		62,000						Lost Returns (-) -248.2							
Water Phase Salinity (ppm)				274,707		288,301	0x4.5	108'	-539.2			9.27	Non-Recoverable Vol. (-) -35.0						
Whole Mud Alkalinity, Pom				3.0		3.0	6.875x4.5	9,779'	404.2	turb	10.33	Est. Total on Location 2835.6							
Excess Lime (lb/bbl)				3.9 ppb		3.9 ppb	6.75x4.5	14,386'	431.4	turb	10.54	Est. Losses/Gains (-)/(+) 0.0							
Electrical Stability (volts)				452 v		506 v	6.75x5.25	14,420'	606.6	turb	10.72	BIT HYDRAULICS DATA							
Average Specific Gravity of Solids				2.70		2.82	6.75x5.125	14,547'	565.8	turb	10.91	Bit H.S.I.	Bit ΔP	Nozzles (32nds)					
Percent Low Gravity Solids				6.4%		5.8%						0.54	75 psi	18	18	18			
ppb Low Gravity Solids				52 ppb		48 ppb						Bit Impact Force	Nozzle Velocity (ft/sec)	18	18	18			
Percent Barite				1.6%		2.2%													
ppb Barite				23 ppb		31 ppb	BIT DATA		Manuf./Type		Halliburton		201 lbs	96					
Estimated Total LCM in System ppb							Size	Depth In	Hours	Footage	ROP ft/hr	Motor/MWD		Calc. Circ. Pressure					
Sample Taken By				C. Beasley	0	P. Blair	6 3/4	9,790 ft	43.0	4,757 ft	110.6	5,102 psi		7,659 psi					
Remarks/Recommendations:							Rig Activity:												
TOTAL OBM RECEIVED: 2842 bbls							Rot/Sld Drlg F/10,923' T/12,900' at pm report time. Increased density T/9.1 ppg, max gas units at 2748. Minor seepage losses F/11,556' T/11,779' @ 10 bbls/hr. Incorporated Procor material into sweep, 5 ppb Superceal and 7 ppb Pro-V with 5 ppb Magmafiber fine, pumped 10 bbls of same, losses subsided. Pumped 10 bbls/stand, currently pumping 10 bbls every other stand. Constantly monitoring flow line OWR for substantial water cation increases, 1% increase from previous am report, all water contaminated fluid has been eliminated from auxiliary storage, will continue to monitor. Drilled to 14,547'. Water increased 2% since mid day report. Water is off and will continue to monitor. 100% AC, Max Gas 1875 units, Casing psi 0. Seepage averaged at 10 BBL/HR over last 24 HRS..												
Plan Forward: TIH Drilling out																			
Transfer 1929 bls OBM F HO2																			
SWEEP: Pumping 15 PPB LCM sweeps as needed or every 300'.																			
Eng. 1: Patrick Blair		Eng. 2: Chris Beasley		WH 1: MIDLAND		WH 2: WH #2		Rig Phone:				Daily Total		Cumulative Cost					
Phone: 936-465-0952		Phone: 903-747-5377		Phone: 432-686-7361		Phone: -						\$13,066.11		\$68,708.42					
W	P	Y	E	C	g	G	H	O	Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.										
1	1	1	1	1	1	1	1	1	INCLUDING 3RD PARTY CHARGES							\$23,394.03		\$149,788.38	



### THIRD PARTY COST SHEET

[illegible]

**OUTSOURCE FLUID SOLUTIONS LLC.**

## FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 BH

		WEEK 1							WEEK 2							WEEK 3								
		Date	10/21/21	10/22/21	10/23/21	10/24/21	10/25/21	10/26/21	10/27/21	10/28/21	10/29/21	10/30/21	10/31/21	11/1/21	11/2/21	11/3/21	11/4/21	11/5/21	11/6/21	11/7/21	11/8/21	11/9/21	11/10/21	
		Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed		
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	9 7/8	9 7/8	9 7/8	9 7/8	6 3/4	6 3/4	6 3/4										
	Starting Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342	9,790	9,790	9,790	10,923	14,547									
	Ending Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342	9,790	9,790	9,790	10,923	14,547										
11,522	Footage Drilled	-	-	-	-	-	-	75	5,242	1,448	-	-	1,133	3,624	-	-	-	-	-	-	-	-		
851	New Hole Vol.	-	-	-	-	-	-	7	497	137	-	-	50	160	-	-	-	-	-	-	-	-		
	Starting System Volume		2,419	279	279	279	279	279	2,664	2,570	2,522	444	2,952	2,863	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836		
75	Chemical Additions							10	11	11		10	19	14										
753	Base Fluid Added							74	230	98	66	100	93	92										
45	Barite Increase								14	24				7										
7,489	Weighted Mud Added	2,419						2,362				2,398		310										
-	Slurry Added																							
46	Water Added								5				15	26										
-	Added for Washout																							
8,408	Total Additions	2,419	-	-	-	-	-	2,446	260	133	66	2,508	127	449	-	-	-	-	-	-	-	-		
-	Surface Losses																							
370	Formation Loss												122	248										
762	Mud Loss to Cuttings							2	328	181			59	192										
91	Unrecoverable Volume										65		15	11										
169	Centrifuge Losses							59	26		39		20	25										
1,392	Total Losses	-	-	-	-	-	-	61	354	181	104	-	216	476	-	-	-	-	-	-	-	-		
4,180	Mud Transferred Out		2,140								2,040													
2,836	Ending System Volume	2,419	279	279	279	279	279	2,664	2,570	2,522	444	2,952	2,863	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836	2,836		
-	Mud Recovered																							
3,309	Comments:							Comments:							Comments:									
	10/21/21	Transferred 2,419bbls from the HO2 to the HO4.							10/28/21	Lost 328bbls to mud on cuttings and 26bbls to centrifuge processing active system.							11/4/21							
	10/22/21	Transferred 2,140bbls from the HO4 to the HO6. Left 279bbls in hole after cement job.							10/29/21	Lost 181bbls to mud on cuttings while drilling and circulating hole clean.							11/5/21							
	10/23/21								10/30/21	Lost 65bbls to spacer interfaced dumped during cement job and 39bbls to centrifuge maintaining and cutting MW back for next well.							11/6/21							
	10/24/21								10/31/21								11/7/21							
	10/25/21								11/1/21								11/8/21							
	10/26/21								11/2/21	310 BBLS received from mudplant							11/9/21							
	10/27/21	Lost 2bbls to mud on cuttings and 59bbls to centrifuge while cutting MW back to 8.8ppg for drill out.							11/3/21								11/10/21							



11/03/21

110 Old Market St.  
St Martinville, LA 70582

Report #10

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

20.9° 14,317' TVD

Operator <b>MAGNOLIA OIL &amp; GAS</b>							Contractor <b>PATTERSON</b>			County / Parish / Block <b>WASHINGTON</b>			Engineer Start Date <b>10/07/21</b>		24 hr fig. <b>2,337 ft</b>		Drilled Depth <b>16,884 ft</b>										
Well Name and No. <b>BIGHORN PEAK H04 BH</b>							Rig Name and No. <b>248</b>			State <b>TEXAS</b>			Spud Date <b>10/07/21</b>		Current ROP <b>0 ft/hr</b>		Activity <b>TRIP</b>										
Report for <b>Kevin Burt/Chris Mayeux</b>							Report for <b>Tool Pusher</b>			Field / OCS-G # <b>GIDDINGS</b>			Fluid Type <b>WBM</b>		Circulating Rate <b>0 gpm</b>		Circulating Pressure <b>psi</b>										
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER											
Weight <b>8.4-9.6</b>		PV <b>0-10</b>		YP <b>0-10</b>		GELS <b>&lt;5 &lt;10</b>		pH <b>8.4-9</b>		API fl <b>&lt;25</b>		% Solids <b>2-10</b>		In Pits 509 bbl In Hole 676 bbl Active 1090 bbl Storage <u>1858 bbl</u> Tot. on Location 3043 bbl		Liner Size 5.25 Stroke 12 bbl/stk 0.0763 stk/min gal/min 0		Liner Size 5.25 Stroke 12 bbl/stk 0.0763 stk/min gal/min 0		Liner Size Stroke bbl/stk 0.0000 stk/min gal/min 0							
							11/3/21																				
Time Sample Taken							12:00																				
Sample Location							PIT																				
Flowline Temperature °F													PHHP = 0 CIRCULATION DATA n = 0.737 K = 15.441														
Depth (ft)							16,884'						Bit Depth = 14,745 '			Washout = 0%			Pump Efficiency = 95%								
Mud Weight (ppg)							8.4						Drill String Disp.		Volume to Bit 208.4 bbl Bottoms Up Vol. 372.8 bbl Riser Ann. Vol. -2.1 bbl		Strokes To Bit BottomsUp Stks Riser Strokes			Time To Bit BottomsUp Time Riser Circ. Time							
Funnel Vis (sec/qt) @ 88 °F							27						82.6 bbl														
600 rpm							5																				
300 rpm							3						DRILLING ASSEMBLY DATA							SOLIDS CONTROL							
200 rpm							2						Tubulars OD (in.) ID (in.) Length Top					Unit Screens Hours									
100 rpm							1						Drill Pipe 4.500 3.826 14,584' 0'					Shaker 1 140									
6 rpm							1						Hevi Wt 5.250 2.000 34' 14,584'					Shaker 2 140									
3 rpm							1						Collars 5.125 2.680 127' 14,618'					Shaker 3 140									
Plastic Viscosity (cp) @ 120 °F							2						Collars 14,745'					Desander									
Yield Point (lb/100 ft²) T0 = 1							1						CASING & HOLE DATA										Desilter				
Gel Strength (lb/100 ft²) 10 sec/10 min							1/1						Casing OD (in.) ID (in.) Depth Top					Centrifuge 1									
Gel Strength (lb/100 ft²) 30 min							1						Riser 20 108'					VOLUME ACCOUNTING (bbls)									
API Filtrate / Cake Thickness													Surface 10 3/4 9.950 3,014' 108'					Prev. Total on Location 2835.5									
HTHP Filtrate / Cake Thickness @ 0 °F													Int. Csg. 7 5/8 6.875 9,779' 108'					Transferred In(+)/Out(-) 207.0									
Retort Solids Content							0.4%						Washout 1					Oil Added (+) 178.0									
Retort Oil Content													Washout 2					Barite Added (+) 27.8									
Retort Water Content							99.6%						Open Hole Size 6.750 16,884'					Other Product Usage (+) 17.2									
Sand Content							0.3%						ANNULAR GEOMETRY & RHEOLOGY										Water Added (+) 675.5				
M.B.T. (Methylene Blue Capacity) (ppb)							5.0						annular section		meas. depth		velocity ft/min		flow reg		ECD lb/gal		Left on Cuttings (-) -124.1				
pH							7.0																Lost Returns (-) -739.0				
Alkalinity, Mud Pm							0.1						0x4.5 108'		0.0				8.40		Non-Recoverable Vol. (-) -35.0						
Alkalinities, Filtrate Pf/Mf							0.1/0.2						6.875x4.5 9,779'		0.0		lam		8.40		Est. Total on Location 3042.9						
Chlorides (mg/L)							700						6.75x4.5 14,584'		0.0		lam		8.40		Est. Losses/Gains (-)/(+) -0.1						
Calcium (ppm)							280						6.75x5.25 14,618'		0.0		lam		8.40		BIT HYDRAULICS DATA						
Excess Lime (lb/bbl)													6.75x5.125 14,745'		0.0		lam		8.40		Bit H.S.I.		Bit ΔP		Nozzles (32nds)		
Average Specific Gravity of Solids							2.60		2.60		2.60										0.00		psi		18 18 18		
Percent Low Gravity Solids							0.4%														Bit Impact Force		Nozzle Velocity (ft/sec)		18 18 18		
Percent Drill Solids							0.4%														0 lbs		0				
PPA Spurt / Total (ml) @ @ 0 °F													BIT DATA			Manuf./Type Halliburton			0 lbs								
Estimated Total LCM in System ppb													Size		Depth In		Hours		Footage		ROP ft/hr		Motor/MWD		Calc. Circ. Pressure		
Sample Taken By							C Beasley						6 3/4		9,790 ft		43.0		7,096 ft		165.0		5,102 psi				
Remarks/Recommendations:  Slug Pit: Fresh water / Tank 7: 9.1 OBM / Tank 5&6: Kill Mud  Plan Forward: POOH & P/U new motor.  Transfer 1929 bls OBM F HO2  SWEEP: Pumping H2O contaminated OBM.										Rig Activity:  Rot/Slid Drlg 14,547', experienced mud volume gains at 15,470' MD ~10 bbls/hr. Frequent retort reports trending water influx F/27% water content @ 06:00 T/31% water content @ 13:00, corresponding ES F/452 volts T/219 volts at flow line. Adding diesel @ 21 bbls/hr, emulsifier at 1/2 drum per hour. Adding Calcium chloride to increase water phase salinity. Monitoring closely at flow line for water flow increases/retort content. Drilled to 16884'. work pipe free @ 16884'. Attempt to stage up MP's to full GPM rate but was unable to. Circulate B/U while preparing mud cap. Pumped 120 BBLs of 17# kill mud down back side with casing psi 0. Strip out of hole with calculated fill on backside with kill mud.																	
Eng. 1: Patrick Blair Phone: 936-465-0952							Eng. 2: Chris Beasley Phone: 903-747-5377			WH 1: MIDLAND Phone: 432-686-7361			WH 2: WH #2 Phone: -			Rig Phone:			Daily Total			Cumulative Cost					
W P Y g G p A S C 1 1 1 1 1 0 1 0 0							Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.												\$76,783.10			\$145,491.52					
										INCLUDING 3RD PARTY CHARGES										\$96,367.10			\$246,155.48				



### THIRD PARTY COST SHEET

[illegible]

## FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 BH

		WEEK 1							WEEK 2							WEEK 3								
		Date	10/21/21	10/22/21	10/23/21	10/24/21	10/25/21	10/26/21	10/27/21	10/28/21	10/29/21	10/30/21	10/31/21	11/1/21	11/2/21	11/3/21	11/4/21	11/5/21	11/6/21	11/7/21	11/8/21	11/9/21	11/10/21	
		Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed		
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	9 7/8	9 7/8	9 7/8	9 7/8	6 3/4	6 3/4	6 3/4	6 3/4									
	Starting Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342	9,790	9,790	9,790	10,923	14,547	16,884								
	Ending Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342	9,790	9,790	9,790	10,923	14,547	16,884									
13,859	Footage Drilled	-	-	-	-	-	-	75	5,242	1,448	-	-	1,133	3,624	2,337	-	-	-	-	-	-	-		
955	New Hole Vol.	-	-	-	-	-	-	7	497	137	-	-	50	160	103	-	-	-	-	-	-	-		
	Starting System Volume		2,419	279	279	279	279	279	2,664	2,570	2,522	444	2,952	2,863	2,836	2,367	2,367	2,367	2,367	2,367	2,367	2,367		
92	Chemical Additions							10	11	11		10	19	14	17									
931	Base Fluid Added							74	230	98	66	100	93	92	178									
73	Barite Increase								14	24				7	28									
7,696	Weighted Mud Added	2,419						2,362				2,398		310	207									
-	Slurry Added																							
46	Water Added								5				15	26										
-	Added for Washout																							
8,838	Total Additions	2,419	-	-	-	-	-	2,446	260	133	66	2,508	127	449	430	-	-	-	-	-	-	-		
-	Surface Losses																							
1,109	Formation Loss												122	248	739									
887	Mud Loss to Cuttings							2	328	181			59	192	125									
106	Unrecoverable Volume										65		15	11	15									
189	Centrifuge Losses							59	26		39		20	25	20									
2,291	Total Losses	-	-	-	-	-	-	61	354	181	104	-	216	476	899	-	-	-	-	-	-	-		
4,180	Mud Transferred Out		2,140								2,040													
2,367	Ending System Volume	2,419	279	279	279	279	279	2,664	2,570	2,522	444	2,952	2,863	2,836	2,367	2,367	2,367	2,367	2,367	2,367	2,367	2,367		
-	Mud Recovered																							
3,516	Comments:							Comments:							Comments:									
	10/21/21	Transferred 2,419bbls from the HO2 to the HO4.							10/28/21	Lost 328bbls to mud on cuttings and 26bbls to centrifuge processing active system.							11/4/21							
	10/22/21	Transferred 2,140bbls from the HO4 to the HO6. Left 279bbls in hole after cement job.							10/29/21	Lost 181bbls to mud on cuttings while drilling and circulating hole clean.							11/5/21							
	10/23/21								10/30/21	Lost 65bbls to spacer interfaced dumped during cement job and 39bbls to centrifuge maintaining and cutting MW back for next well.							11/6/21							
	10/24/21								10/31/21								11/7/21							
	10/25/21								11/1/21								11/8/21							
	10/26/21								11/2/21	310 BBLS received from mudplant							11/9/21							
	10/27/21	Lost 2bbls to mud on cuttings and 59bbls to centrifuge while cutting MW back to 8.8ppg for drill out.							11/3/21	207 BBLS received from mudplant							11/10/21							

11/04/21

110 Old Market St.  
St Martinville, LA 70582

Report #11

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

20.9° 9,590' TVD

Operator <b>MAGNOLIA OIL &amp; GAS</b>							Contractor <b>PATTERSON</b>			County / Parish / Block <b>WASHINGTON</b>			Engineer Start Date <b>10/07/21</b>		24 hr fig. <b>0 ft</b>		Drilled Depth <b>16,884 ft</b>																							
Well Name and No. <b>BIGHORN PEAK H04 BH</b>							Rig Name and No. <b>248</b>			State <b>TEXAS</b>		Spud Date <b>10/07/21</b>		Current ROP <b>0 ft/hr</b>		Activity <b>Rig Service</b>																								
Report for <b>Kevin Burt / Chris Mayeux</b>							Report for <b>Tool Pusher</b>			Field / OCS-G # <b>GIDDINGS</b>		Fluid Type <b>WBM</b>		Circulating Rate <b>0 gpm</b>		Circulating Pressure <b>psi</b>																								
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1		PUMP #2		RISER BOOSTER																										
Weight <b>8.4-9.6</b>		PV <b>0-10</b>		YP <b>0-10</b>		GELS <b>&lt;5 &lt;10</b>		pH <b>8.4-9</b>		API fl <b>&lt;25</b>		% Solids <b>2-10</b>		In Pits 242 bbl In Hole 703 bbl Active 627 bbl Storage <u>1248 bbl</u> Tot. on Location 2193 bbl		Liner Size 4.75 Stroke 12 bbl/stk 0.0625 stk/min 0 gal/min 0		Liner Size 4.75 Stroke 12 bbl/stk 0.0625 stk/min 0 gal/min 0		Liner Size Stroke bbl/stk 0.0000 stk/min gal/min 0																				
							11/4/21																																	
Time Sample Taken							0:30																																	
Sample Location							PIT																																	
Flowline Temperature °F													PHHP = 0 CIRCULATION DATA n = 0.737 K = 15.441																											
Depth (ft)							16,884'						Bit Depth = 9,684 '			Washout = 0%			Pump Efficiency = 95%																					
Mud Weight (ppg)							8.4						Drill String Disp.		Volume to Bit 136.4 bbl Bottoms Up Vol. 248.2 bbl Riser Ann. Vol. -2.1 bbl		Strokes To Bit BottomsUp Stks Riser Strokes			Time To Bit BottomsUp Time Riser Circ. Time																				
Funnel Vis (sec/qt) @ 88 °F							27						55.0 bbl																											
600 rpm							5																																	
300 rpm							3						DRILLING ASSEMBLY DATA						SOLIDS CONTROL																					
200 rpm							2						Tubulars OD (in.) ID (in.) Length Top					Unit Screens Hours																						
100 rpm							1						Drill Pipe 4.500 3.826 9,523' 0'					Shaker 1 140																						
6 rpm							1						Hevi Wt 5.250 2.000 34' 9,523'					Shaker 2 140																						
3 rpm							1						Collars 5.125 2.680 127' 9,557'					Shaker 3 140																						
Plastic Viscosity (cp) @ 120 °F							2						Collars 9,684'					Desander																						
Yield Point (lb/100 ft²) T0 = 1							1						CASING & HOLE DATA						Desilter																					
Gel Strength (lb/100 ft²) 10 sec/10 min							1/1						Casing OD (in.) ID (in.) Depth Top					Centrifuge 1																						
Gel Strength (lb/100 ft²) 30 min							1						Riser 20 108'					VOLUME ACCOUNTING (bbls)																						
API Filtrate / Cake Thickness													Surface 10 3/4 9.950 3,014' 108'					Prev. Total on Location 3042.9																						
HTHP Filtrate / Cake Thickness @ 0 °F													Int. Csg. 7 5/8 6.875 9,779' 108'					Transferred In(+)/Out(-)																						
Retort Solids Content							0.4%						Washout 1					Oil Added (+) 0.0																						
Retort Oil Content													Washout 2					Barite Added (+) 20.9																						
Retort Water Content							99.6%						Open Hole Size 6.750 16,884'					Other Product Usage (+) 0.0																						
Sand Content							0.3%						ANNULAR GEOMETRY & RHEOLOGY						Water Added (+)																					
M.B.T. (Methylene Blue Capacity) (ppb)							5.0						annular section		meas. depth		velocity ft/min		flow reg		ECD lb/gal		Left on Cuttings (-) 0.0																	
pH							7.0																Lost Returns (-) -195.3																	
Alkalinity, Mud Pm							0.1						0x4.5 108'		0.0				8.40		Non-Recoverable Vol. (-) -675.0																			
Alkalinities, Filtrate Pf/Mf							0.1/0.2						6.875x4.5 9,523'		0.0		lam		8.40		Est. Total on Location 2193.5																			
Chlorides (mg/L)							700						6.875x5.25 9,557'		0.0		lam		8.40		Est. Losses/Gains (-)/(+) 0.0																			
Calcium (ppm)							280						6.875x5.125 9,684'		0.0		lam		8.40		BIT HYDRAULICS DATA																			
Excess Lime (lb/bbl)																					Bit H.S.I.		Bit ΔP		Nozzles (32nds)															
Average Specific Gravity of Solids							2.60		2.60		2.60										0.00		psi		18 18 18															
Percent Low Gravity Solids							0.4%														Bit Impact Force		Nozzle Velocity (ft/sec)		18 18 18															
Percent Drill Solids							0.4%																																	
PPA Spurt / Total (ml) @ @ 0 °F													BIT DATA			Manuf./Type Halliburton / PDC			0 lbs		0																			
Estimated Total LCM in System ppb													Size		Depth In		Hours		Footage		ROP ft/hr		Motor/MWD		Calc. Circ. Pressure															
Sample Taken By													6 3/4		16,884 ft																									
Remarks/Recommendations:  Slug Pit: Fresh water / Tank 7: 9.1 OBM / Tank 5&6: Kill Mud  Plan Forward: Finish TIH and drill to TD of production hole with brine/fresh water under mud cap.  Transferred 1929bls OBM F/HO2.  SWEEP: Pumping 10bls of H2O contaminated OBM every 300'.										Rig Activity:  Finished stripping out of hole pumping 17# kill mud down back side with casing psi 0. Change out BHA (motor locked up). TIH to 12,996'. Pull back up inside shoe to 9,684' while working on rig traveling assembly. Servicing rig at report time. Will be drilling ahead with produced brine & freshwater under mud cap once rig repair is complete.																														
Eng. 1: Patrick Blair Phone: 936-465-0952							Eng. 2: Nick Dilly Phone: 337-207-8848							WH 1: MIDLAND Phone: 432-686-7361							WH 2: WH #2 Phone: -							Rig Phone:							Daily Total			Cumulative Cost		
W P Y g G p A S C 1 1 1 1 1 0 1 0 0							Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.																						\$21,023.00			\$166,514.52								
										INCLUDING 3RD PARTY CHARGES																						\$21,023.00			\$267,178.48					



### THIRD PARTY COST SHEET

[illegible]

## FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 BH

		WEEK 1							WEEK 2							WEEK 3								
		Date	10/21/21	10/22/21	10/23/21	10/24/21	10/25/21	10/26/21	10/27/21	10/28/21	10/29/21	10/30/21	10/31/21	11/1/21	11/2/21	11/3/21	11/4/21	11/5/21	11/6/21	11/7/21	11/8/21	11/9/21	11/10/21	
		Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed		
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	9 7/8	9 7/8	9 7/8	9 7/8	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4								
	Starting Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342	9,790	9,790	9,790	10,923	14,547	16,884	16,884							
	Ending Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342	9,790	9,790	9,790	10,923	14,547	16,884	16,884								
13,859	Footage Drilled	-	-	-	-	-	-	75	5,242	1,448	-	-	1,133	3,624	2,337	-	-	-	-	-	-	-		
955	New Hole Vol.	-	-	-	-	-	-	7	497	137	-	-	50	160	103	-	-	-	-	-	-	-		
	Starting System Volume		2,419	279	279	279	279	279	2,664	2,570	2,522	444	2,952	2,863	2,836	3,042	2,193	2,193	2,193	2,193	2,193	2,193		
92	Chemical Additions							10	11	11		10	19	14	17									
931	Base Fluid Added							74	230	98	66	100	93	92	178									
94	Barite Increase								14	24				7	28	21								
7,696	Weighted Mud Added	2,419						2,362				2,398		310	207									
-	Slurry Added																							
721	Water Added								5				15	26	675									
-	Added for Washout																							
9,534	Total Additions	2,419	-	-	-	-	-	2,446	260	133	66	2,508	127	449	1,105	21	-	-	-	-	-	-		
-	Surface Losses																							
1,304	Formation Loss												122	248	739	195								
887	Mud Loss to Cuttings							2	328	181			59	192	125									
781	Unrecoverable Volume										65		15	11	15	675								
189	Centrifuge Losses							59	26		39		20	25	20									
3,161	Total Losses	-	-	-	-	-	-	61	354	181	104	-	216	476	899	870	-	-	-	-	-	-		
4,180	Mud Transferred Out		2,140								2,040													
2,193	Ending System Volume	2,419	279	279	279	279	279	2,664	2,570	2,522	444	2,952	2,863	2,836	3,042	2,193	2,193	2,193	2,193	2,193	2,193	2,193		
-	Mud Recovered																							
3,516	Comments:							Comments:							Comments:									
	10/21/21	Transferred 2,419bbls from the HO2 to the HO4.							10/28/21	Lost 328bbls to mud on cuttings and 26bbls to centrifuge processing active system.							11/4/21	195bbls lost downhole while bullheading fluid and stripping out of hole.						
	10/22/21	Transferred 2,140bbls from the HO4 to the HO6. Left 279bbls in hole after cement job.							10/29/21	Lost 181bbls to mud on cuttings while drilling and circulating hole clean.							11/5/21							
	10/23/21								10/30/21	Lost 65bbls to spacer interfaced dumped during cement job and 39bbls to centrifuge maintaining and cutting MW back for next well.							11/6/21							
	10/24/21								10/31/21								11/7/21							
	10/25/21								11/1/21								11/8/21							
	10/26/21								11/2/21	310 BBLS received from mudplant							11/9/21							
	10/27/21	Lost 2bbls to mud on cuttings and 59bbls to centrifuge while cutting MW back to 8.8ppg for drill out.							11/3/21	207 BBLS received from mudplant							11/10/21							



11/05/21

110 Old Market St.  
St Martinville, LA 70582

Report #12

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

87.9° 10,568' TVD

Operator <b>MAGNOLIA OIL &amp; GAS</b>							Contractor <b>PATTERSON</b>			County / Parish / Block <b>WASHINGTON</b>			Engineer Start Date <b>10/07/21</b>			24 hr fig. <b>946 ft</b>			Drilled Depth <b>17,830 ft</b>																					
Well Name and No. <b>BIGHORN PEAK H04 BH</b>							Rig Name and No. <b>248</b>			State <b>TEXAS</b>			Spud Date <b>10/07/21</b>			Current ROP <b>175 ft/hr</b>			Activity <b>Drilling</b>																					
Report for <b>Kevin Burt / Chris Mayeux</b>							Report for <b>Tool Pusher</b>			Field / OCS-G # <b>GIDDINGS</b>			Fluid Type <b>WBM</b>			Circulating Rate <b>391 gpm</b>			Circulating Pressure <b>4,600 psi</b>																					
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER																								
Weight <b>8.4-9.6</b>		PV <b>0-10</b>		YP <b>0-10</b>		GELS <b>&lt;5 &lt;10</b>		pH <b>8.4-9</b>		API fl <b>&lt;25</b>		% Solids <b>2-10</b>		In Pits 224 bbl In Hole 701 bbl Active 925 bbl Storage <u>1640 bbl</u> Tot. on Location 2565 bbl		Liner Size 4.75 Stroke 12 bbl/stk 0.0625 stk/min 73 gal/min 192		Liner Size 4.75 Stroke 12 bbl/stk 0.0625 stk/min 76 gal/min 199		Liner Size Stroke bbl/stk 0.0000 stk/min gal/min 0																				
						11/5/21						11/4/21																												
Time Sample Taken							0:30				12:30																													
Sample Location							pit				pit																													
Flowline Temperature °F													PHHP = 1049		CIRCULATION DATA		n = 0.585 K = 26.563																							
Depth (ft)							17,827'				16,996'		Bit Depth = 17,830 '		Washout = 0%				Pump Efficiency = 95%																					
Mud Weight (ppg)							8.4				8.5		Drill String Disp.		Volume to Bit 252.3 bbl Bottoms Up Vol. 448.7 bbl Riser Ann. Vol. -2.1 bbl		Strokes To Bit 4,039 BottomsUp Stks 7,183 Riser Strokes -34		Time To Bit 27 min BottomsUp Time 48 min Riser Circ. Time 0 min																					
Funnel Vis (sec/qt) @ 86 °F							27				28		99.5 bbl																											
600 rpm							3				5																													
300 rpm							2				3		DRILLING ASSEMBLY DATA							SOLIDS CONTROL																				
200 rpm							1				2		Tubulars OD (in.) ID (in.) Length Top					Unit Screens Hours																						
100 rpm							1				1		Drill Pipe 4.500 3.826 17,669' 0'					Shaker 1 140																						
6 rpm							1				1		Hevi Wt 5.250 2.000 34' 17,669'					Shaker 2 140																						
3 rpm							1				1		Collars 5.125 2.680 127' 17,703'					Shaker 3 140																						
Plastic Viscosity (cp) @ 120 °F							1				2		Collars 17,830'					Desander																						
Yield Point (lb/100 ft²) T0 = 1							1				1		CASING & HOLE DATA							Desilter																				
Gel Strength (lb/100 ft²) 10 sec/10 min							1/1				1/1		Casing OD (in.) ID (in.) Depth Top					Centrifuge 1																						
Gel Strength (lb/100 ft²) 30 min							1				1		Riser 20 108'					VOLUME ACCOUNTING (bbls)																						
API Filtrate / Cake Thickness													Surface 10 3/4 9.950 3,014' 108'					Prev. Total on Location 2193.5																						
HTHP Filtrate / Cake Thickness @ 0 °F													Int. Csg. 7 5/8 6.875 9,779' 108'					Transferred In(+)/Out(-) 412.0																						
Retort Solids Content							0.6%				1.1%		Washout 1					Oil Added (+) 52.4																						
Retort Oil Content							2%				3%		Washout 2					Barite Added (+) 0.0																						
Retort Water Content							97.4%				95.9%		Open Hole Size 6.750 17,830'					Other Product Usage (+) 2.6																						
Sand Content							0.1%				0.2%		ANNULAR GEOMETRY & RHEOLOGY							Water Added (+)																				
M.B.T. (Methylene Blue Capacity) (ppb)													annular section		meas. depth		velocity ft/min		flow reg		ECD lb/gal		Left on Cuttings (-) 0.0																	
pH							7.0				8.5												Lost Returns (-) -95.6																	
Alkalinity, Mud Pm							0.1				0.1		0x4.5 108'		-473.1				8.54		Non-Recoverable Vol. (-)																			
Alkalinities, Filtrate Pf/Mf							0.1/0.2				0.1/0.5		6.875x4.5 9,779'		354.7		turb		8.99		Est. Total on Location 2564.9																			
Chlorides (mg/L)							1700				25000		6.75x4.5 17,669'		378.5		turb		9.50		Est. Losses/Gains (-)/(+) 0.0																			
Calcium (ppm)							280				320		6.75x5.25 17,703'		532.3		turb		9.69		BIT HYDRAULICS DATA																			
Excess Lime (lb/bbl)													6.75x5.125 17,830'		496.5		turb		9.89		Bit H.S.I.		Bit ΔP		Nozzles (32nds)															
Average Specific Gravity of Solids							2.60		2.60		2.60										0.34		53 psi		18 18 18															
Percent Low Gravity Solids							0.5%				0%										Bit Impact Force		Nozzle Velocity (ft/sec)		18 18 18															
Percent Drill Solids							0.5%																																	
PPA Spurt / Total (ml) @ @ 0 °F													BIT DATA		Manuf./Type		Halliburton / PDC		143 lbs		84																			
Estimated Total LCM in System ppb													Size		Depth In		Hours		Footage		ROP ft/hr		Motor/MWD		Calc. Circ. Pressure															
Sample Taken By							N. Dilly				P. Blair		6 3/4		16,884 ft		13.0		946 ft		72.8		3,369 psi		4,600 psi															
Remarks/Recommendations:  Slug Pit: Fresh water / Tank 7: 9.1 OBM / Tank 5&6 17.0ppg Kill Mud Plan Forward: Finish drilling to TD of production hole with brine/freshwater under mud cap.  Total OBM Received (Consignment Volume): 2607bbls.  Received 412bbls 17.0ppg OBM from mud plant on 11/4.  Mud check derived from drill water in pit #8 while drilling.										Rig Activity:  Finished working on rig traveling assembly. Pump 50bbls of 17.0ppg kill mud on backside. TIH F/9,684' T/14,603'. Continue TIH inspecting every connection down to 16,591'. Wash down bo bottom 16,884'. Spot 30bbls 17.0ppg OBM on backside to pull and repair rotating head. Drill ahead from 16,884' to 17,830' with produced brine hauled in and freshwater. Spotted 40bbls of 17.0ppg kill mud on backside at 17,810' to drop casing pressure from 100psi to 0. Treating drill water with 3.5bbls/hr diesel and 1.5gal/hr PHPA for torque. Drilling ahead at report time with freshwater under OBM cap.																														
Eng. 1: Patrick Blair Phone: 936-465-0952							Eng. 2: Nick Dilly Phone: 337-207-8848							WH 1: MIDLAND Phone: 432-686-7361							WH 2: WH #2 Phone: -							Rig Phone:							Daily Total			Cumulative Cost		
W P Y g G p A S C 1 1 1 1 1 0 1 0 0							Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.														\$3,697.92							\$170,212.44												
										INCLUDING 3RD PARTY CHARGES														\$9,687.36							\$276,865.84									



### THIRD PARTY COST SHEET

[illegible]

# FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 BH

	Date	WEEK 1							WEEK 2							WEEK 3						
		10/21/21	10/22/21	10/23/21	10/24/21	10/25/21	10/26/21	10/27/21	10/28/21	10/29/21	10/30/21	10/31/21	11/1/21	11/2/21	11/3/21	11/4/21	11/5/21	11/6/21	11/7/21	11/8/21	11/9/21	11/10/21
		Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	9 7/8	9 7/8	8,342	9,790	9,790	9,790	10,923	14,547	16,884	16,884	17,830				
	Starting Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342	9,790	9,790	9,790	10,923	14,547	16,884	16,884	17,830					
	Ending Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342	9,790	9,790	9,790	10,923	14,547	16,884	16,884	17,830					
14,805	Footage Drilled	-	-	-	-	-	-	75	5,242	1,448	-	-	1,133	3,624	2,337	-	946	-	-	-	-	-
997	New Hole Vol.	-	-	-	-	-	-	7	497	137	-	-	50	160	103	-	42	-	-	-	-	-
	Starting System Volume		2,419	279	279	279	279	279	2,664	2,570	2,522	444	2,952	2,863	2,836	3,042	2,193	2,564	2,564	2,564	2,564	2,564
95	Chemical Additions							10	11	11		10	19	14	17		3					
983	Base Fluid Added							74	230	98	66	100	93	92	178		52					
94	Barite Increase								14	24				7	28	21						
8,108	Weighted Mud Added	2,419						2,362				2,398		310	207		412					
-	Slurry Added																					
721	Water Added								5				15	26	675							
-	Added for Washout																					
10,001	Total Additions	2,419	-	-	-	-	-	2,446	260	133	66	2,508	127	449	1,105	21	467	-	-	-	-	-
-	Surface Losses																					
1,400	Formation Loss												122	248	739	195	96					
887	Mud Loss to Cuttings							2	328	181			59	192	125							
781	Unrecoverable Volume										65		15	11	15	675						
189	Centrifuge Losses							59	26		39		20	25	20							
3,257	Total Losses	-	-	-	-	-	-	61	354	181	104	-	216	476	899	870	96	-	-	-	-	-
4,180	Mud Transferred Out		2,140								2,040											
2,564	Ending System Volume	2,419	279	279	279	279	279	2,664	2,570	2,522	444	2,952	2,863	2,836	3,042	2,193	2,564	2,564	2,564	2,564	2,564	2,564
-	Mud Recovered																					
3,928	Comments:							Comments:							Comments:							
	10/21/21 Transferred 2,419bbls from the HO2 to the HO4.							10/28/21 Lost 328bbls to mud on cuttings and 26bbls to centrifuge processing active system.							11/4/21 195bbls lost downhole while bullheading fluid and stripping out of hole.							
	10/22/21 Transferred 2,140bbls from the HO4 to the HO6. Left 279bbls in hole after cement job.							10/29/21 Lost 181bbls to mud on cuttings while drilling and circulating hole clean.							11/5/21 96bbls lost to hole filling backside with kill mud.							
	10/23/21							10/30/21 Lost 65bbls to spacer interfaced dumped during cement job and 39bbls to centrifuge maintaining and cutting MW back for next well.							11/6/21							
	10/24/21							10/31/21							11/7/21							
	10/25/21							11/1/21							11/8/21							
	10/26/21							11/2/21 310 BBLS received from mudplant							11/9/21							
10/27/21 Lost 2bbls to mud on cuttings and 59bbls to centrifuge while cutting MW back to 8.8ppg for drill out.							11/3/21 207 BBLS received from mudplant							11/10/21								

11/06/21

110 Old Market St.  
St Martinville, LA 70582

Report #13

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

87.6° 10,563' TVD

Operator <b>MAGNOLIA OIL &amp; GAS</b>							Contractor <b>PATTERSON</b>			County / Parish / Block <b>WASHINGTON</b>			Engineer Start Date <b>10/07/21</b>			24 hr fig. <b>1,723 ft</b>			Drilled Depth <b>19,553 ft</b>																					
Well Name and No. <b>BIGHORN PEAK H04 BH</b>							Rig Name and No. <b>248</b>			State <b>TEXAS</b>			Spud Date <b>10/07/21</b>			Current ROP <b>0 ft/hr</b>			Activity <b>Backreaming</b>																					
Report for <b>Kevin Burt / Chris Mayeux</b>							Report for <b>Tool Pusher</b>			Field / OCS-G # <b>GIDDINGS</b>			Fluid Type <b>WBM</b>			Circulating Rate <b>394 gpm</b>			Circulating Pressure <b>4,090 psi</b>																					
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER																								
Weight <b>8.4-9.6</b>		PV <b>0-10</b>		YP <b>0-10</b>		GELS <b>&lt;5 &lt;10</b>		pH <b>8.4-9</b>		API fl <b>&lt;25</b>		% Solids <b>2-10</b>		In Pits 288 bbl		Liner Size 4.75		Liner Size 4.75		Liner Size																				
														In Hole 778 bbl		Stroke 12		Stroke 12		Stroke																				
						11/6/21						11/5/21		Active 984 bbl		bbl/stk 0.0625		bbl/stk 0.0625		bbl/stk 0.0000																				
								0:30				13:00		Storage <u>1500 bbl</u>		stk/min 74		stk/min 76		stk/min																				
						pit						pit		Tot. on Location 2566 bbl		gal/min 194		gal/min 199		gal/min 0																				
Flowline Temperature °F													PHHP = 939 CIRCULATION DATA n = 0.585 K = 26.563																											
Depth (ft)							19,553'				19,232'		Bit Depth = 17,700 '			Washout = 0%			Pump Efficiency = 95%																					
Mud Weight (ppg)							8.4				8.5		Drill String Disp.		Volume to Bit 250.4 bbl		Strokes To Bit 4,009		Time To Bit 27 min																					
Funnel Vis (sec/qt) @ 89 °F							27				28				Bottoms Up Vol. 445.5 bbl		BottomsUp Stks 7,131		BottomsUp Time 48 min																					
600 rpm							3				5		98.7 bbl		Riser Ann. Vol. -2.1 bbl		Riser Strokes -34		Riser Circ. Time 0 min																					
300 rpm							2				3		DRILLING ASSEMBLY DATA							SOLIDS CONTROL																				
200 rpm							1				2		Tubulars OD (in.) ID (in.) Length Top					Unit Screens Hours																						
100 rpm							1				1		Drill Pipe 4.500 3.826 17,539' 0'					Shaker 1 140																						
6 rpm							1				1		Hevi Wt 5.250 2.000 34' 17,539'					Shaker 2 140																						
3 rpm							1				1		Collars 5.125 2.680 127' 17,573'					Shaker 3 140																						
Plastic Viscosity (cp) @ 120 °F							1				2		Collars 17,700'					Desander																						
Yield Point (lb/100 ft²) T0 = 1							1				1		CASING & HOLE DATA							Desilter																				
Gel Strength (lb/100 ft²) 10 sec/10 min							1/1				1/1		Casing OD (in.) ID (in.) Depth Top					Centrifuge 1																						
Gel Strength (lb/100 ft²) 30 min							1				1		Riser 20 108'					VOLUME ACCOUNTING (bbls)																						
API Filtrate / Cake Thickness													Surface 10 3/4 9.950 3,014' 108'					Prev. Total on Location 2564.9																						
HTHP Filtrate / Cake Thickness @ 0 °F													Int. Csg. 7 5/8 6.875 9,779' 108'					Transferred In(+)/Out(-)																						
Retort Solids Content							0.4%				1%		Washout 1					Oil Added (+) 56.0																						
Retort Oil Content											3%		Washout 2					Barite Added (+) 0.0																						
Retort Water Content							99.6%				96%		Open Hole Size 6.750 19,553'					Other Product Usage (+) 0.8																						
Sand Content							0%				0.2%		ANNULAR GEOMETRY & RHEOLOGY							Water Added (+)																				
M.B.T. (Methylene Blue Capacity) (ppb)													annular section		meas. depth		velocity ft/min		flow reg		ECD lb/gal																			
pH							7.0				8.4		0x4.5 108'		-476.3				8.40		Non-Recoverable Vol. (-)																			
Alkalinity, Mud Pm							0.1				0.1		6.875x4.5 9,779'		357.0		turb		8.82		Est. Total on Location 2565.9																			
Alkalinities, Filtrate Pf/Mf							0.1/0.2				0.1/0.5		6.75x4.5 17,539'		381.1		turb		9.15		Est. Losses/Gains (-)/(+) 0.0																			
Chlorides (mg/L)							1400				23000		6.75x5.25 17,573'		535.9		turb		9.15		BIT HYDRAULICS DATA																			
Calcium (ppm)							240				360		6.75x5.125 17,700'		499.8		turb		9.17		Bit H.S.I.		Bit ΔP		Nozzles (32nds)															
Excess Lime (lb/bbl)																					0.35		54 psi		18 18 18															
Average Specific Gravity of Solids							2.60		2.60		2.60										Bit Impact Force		Nozzle Velocity (ft/sec)		18 18 18															
Percent Low Gravity Solids							0.3%				0%																													
Percent Drill Solids							0.3%																																	
PPA Spurt / Total (ml) @ @ 0 °F													BIT DATA			Manuf./Type Halliburton / PDC			145 lbs		85																			
Estimated Total LCM in System ppb													Size		Depth In		Hours		Footage		ROP ft/hr		Motor/MWD		Calc. Circ. Pressure															
Sample Taken By							N. Dilly				P. Blair		6 3/4		16,884 ft		13.0		2,669 ft		205.3		2,854 psi		4,090 psi															
Remarks/Recommendations:  Slug Pit: Fresh water / Tank 7: 9.1 OBM / Tank 5&6 17.0ppg Kill Mud Plan Forward: Backream out of hole until able to pull on slips. Finish POOH and run production casing.  Total OBM Received (Consignment Volume): 2607bbls.  Received 412bbls 17.0ppg OBM from mud plant on 11/4.  Mud check derived from drill water in pit #8 while drilling.										Rig Activity:  Rot/Sld Drlg F/17,827' T/19,553' TD with produced brine and freshwater. Torque 12-23k. Treated drill water with 3.5bls/hr diesel and 1.5gal/hr PHPA for lubricity. Pumped remaining brine followed by freshwater downhole for 3xBU volumes. Backream off bottom pumping freshwater to 17,700'. Continue backreaming at report time.																														
Eng. 1: Patrick Blair Phone: 936-465-0952							Eng. 2: Nick Dilly Phone: 337-207-8848							WH 1: MIDLAND Phone: 432-686-7361							WH 2: WH #2 Phone: -							Rig Phone:							Daily Total			Cumulative Cost		
W P Y g G p A S C 1 1 1 1 1 0 1 0 0							Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.														\$5,404.52							\$175,616.96												
														INCLUDING 3RD PARTY CHARGES							\$11,807.40							\$288,673.24												

## MATERIAL CONSUMPTION

Date	Operator			Well Name and No.		Rig Name and No.		Report No.	
11/06/21		MAGNOLIA OIL & GAS		BIGHORN PEAK H04 BH		248		Report #13	
DAILY USAGE & COST								CUMULATIVE	
Item	Unit	Unit Cost	Previous Inventory	Received	Closing Inventory	Daily Usage	Daily Cost	Cum Usage	Cum Cost
SAPP (50)	50# sk	\$46.84	42		42			30	\$1,405.20
PHPA LIQUID (pail)	5 gal	\$41.36	72		65	7	\$289.52	29	\$1,199.44
EVO-LUBE	gal	\$14.00							
NEW GEL (PREMIUM)	100# sk	\$11.54							
ALUMINUM TRISTEARATE	25# sk	\$81.16							
CACL2 (50)	50# sk	\$14.32	560		560			316	\$4,525.12
LIME (50)	50# sk	\$5.88	250		250			427	\$2,510.76
OPTI - G	50# sk	\$32.44	160		160			260	\$8,434.40
BENTONE 38 (50)	50# sk	\$152.93	88		88			6	\$917.58
BENTONE 910 (50)	50# sk	\$55.55	75		75			38	\$2,110.90
BENTONE 990 (50)	50# sk	\$88.61	69		69			65	\$5,759.65
OPTI - MUL	gal	\$11.40	660		660			1210	\$13,794.00
OPTI - WET	gal	\$8.84	935		935			770	\$6,806.80
NEW PHALT	50# sk	\$38.72	72		72			18	\$696.96
OIL SORB (25)	25# sk	\$4.75	15		15			32	\$152.00
OPTIPLUS	gal	\$48.40	935	-935				165	\$7,986.00
OPTIPLUS	gal	\$13.70		935	935				
NEW CARB (M)	50# sk	\$5.63	126		126			11	\$61.93
CYBERSEAL	25# sk	\$24.40							
MAGMAFIBER F (25)	25# sk	\$28.05	120		120			90	\$2,524.50
MAGMAFIBER R (30)	30# sk	\$28.05							
VARISEAL	50# sk	\$26.50							
FIBER PLUG	30# sk	\$30.37							
NUT PLUG M (50)	50# sk	\$10.51	40		40				
MICA F (50)	50# sk	\$10.38	40		40				
GRAPHITE - FINE (50)	50# sk	\$25.59	64		64				
NEW WATE (SACK BARITE)	100# sk	\$10.73	80		80				
BARITE BULK (100)	100# sk	\$8.17	1300		1300			1350	\$11,029.50

### THIRD PARTY COST SHEET

[illegible]

**OUTSOURCE FLUID SOLUTIONS LLC.**

# FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 BH

		WEEK 1							WEEK 2							WEEK 3							
		Date	10/21/21	10/22/21	10/23/21	10/24/21	10/25/21	10/26/21	10/27/21	10/28/21	10/29/21	10/30/21	10/31/21	11/1/21	11/2/21	11/3/21	11/4/21	11/5/21	11/6/21	11/7/21	11/8/21	11/9/21	11/10/21
		Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	
Grand Totals	Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	9 7/8	9 7/8	9 7/8	9 7/8	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4					
	Starting Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342	9,790	9,790	9,790	9,790	10,923	14,547	16,884	16,884	17,830	19,553			
	Ending Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342	9,790	9,790	9,790	9,790	10,923	14,547	16,884	16,884	17,830	19,553				
16,528	Footage Drilled	-	-	-	-	-	-	75	5,242	1,448	-	-	1,133	3,624	2,337	-	946	1,723	-	-	-	-	
1,073	New Hole Vol.	-	-	-	-	-	-	7	497	137	-	-	50	160	103	-	42	76	-	-	-	-	
	Starting System Volume		2,419	279	279	279	279	279	2,664	2,570	2,522	444	2,952	2,863	2,836	3,042	2,193	2,566	2,566	2,566	2,566	2,566	
95	Chemical Additions							10	11	11		10	19	14	17		3						
1,039	Base Fluid Added							74	230	98	66	100	93	92	178		52	56					
94	Barite Increase								14	24				7	28	21							
8,110	Weighted Mud Added	2,419						2,362				2,398		310	207		414						
-	Slurry Added																						
721	Water Added								5				15	26	675								
-	Added for Washout																						
10,059	Total Additions	2,419	-	-	-	-	-	2,446	260	133	66	2,508	127	449	1,105	21	469	56	-	-	-	-	
-	Surface Losses																						
1,456	Formation Loss												122	248	739	195	96	56					
887	Mud Loss to Cuttings							2	328	181			59	192	125								
781	Unrecoverable Volume										65		15	11	15	675							
189	Centrifuge Losses							59	26		39		20	25	20								
3,313	Total Losses	-	-	-	-	-	-	61	354	181	104	-	216	476	899	870	96	56	-	-	-	-	
4,180	Mud Transferred Out		2,140								2,040												
2,566	Ending System Volume	2,419	279	279	279	279	279	2,664	2,570	2,522	444	2,952	2,863	2,836	3,042	2,193	2,566	2,566	2,566	2,566	2,566	2,566	
-	Mud Recovered																						
3,930	Comments:							Comments:							Comments:								
	10/21/21 Transferred 2,419bbls from the HO2 to the HO4.							10/28/21 Lost 328bbls to mud on cuttings and 26bbls to centrifuge processing active system.							11/4/21 195bbls lost downhole while bullheading fluid and stripping out of hole.								
	10/22/21 Transferred 2,140bbls from the HO4 to the HO6. Left 279bbls in hole after cement job.							10/29/21 Lost 181bbls to mud on cuttings while drilling and circulating hole clean.							11/5/21 96bbls lost to hole filling backside with kill mud.								
	10/23/21							10/30/21 Lost 65bbls to spacer interfaced dumped during cement job and 39bbls to centrifuge maintaining and cutting MW back for next well.							11/6/21 Lost 56bbls downhole to diesel added to drill water.								
	10/24/21							10/31/21							11/7/21								
	10/25/21							11/1/21							11/8/21								
	10/26/21							11/2/21 310 BBLS received from mudplant							11/9/21								
10/27/21 Lost 2bls to mud on cuttings and 59bbls to centrifuge while cutting MW back to 8.8ppg for drill out.							11/3/21 207 BBLS received from mudplant							11/10/21									



11/07/21

110 Old Market St.  
St Martinville, LA 70582

Report #14

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

87.5° 10,239' TVD

Operator <b>MAGNOLIA OIL &amp; GAS</b>							Contractor <b>PATTERSON</b>			County / Parish / Block <b>WASHINGTON</b>			Engineer Start Date <b>10/07/21</b>		24 hr fig. <b>0 ft</b>		Drilled Depth <b>19,553 ft</b>																				
Well Name and No. <b>BIGHORN PEAK H04 BH</b>							Rig Name and No. <b>248</b>			State <b>TEXAS</b>			Spud Date <b>10/07/21</b>		Current ROP <b>0 ft/hr</b>		Activity <b>Run Casing</b>																				
Report for <b>Kevin Burt / Chris Mayeux</b>							Report for <b>Tool Pusher</b>			Field / OCS-G # <b>GIDDINGS</b>			Fluid Type <b>WBM</b>		Circulating Rate <b>0 gpm</b>		Circulating Pressure <b>psi</b>																				
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER																					
Weight <b>8.4-9.6</b>		PV <b>0-10</b>		YP <b>0-10</b>		GELS <b>&lt;5 &lt;10</b>		pH <b>8.4-9</b>		API fl <b>&lt;25</b>		% Solids <b>2-10</b>		In Pits 295 bbl In Hole 796 bbl Active 765 bbl Storage <u>949 bbl</u> Tot. on Location 2040 bbl		Liner Size 4.75 Stroke 12 bbl/stk 0.0625 stk/min 0 gal/min 0		Liner Size 4.75 Stroke 12 bbl/stk 0.0625 stk/min 0 gal/min 0		Liner Size Stroke bbl/stk 0.0000 stk/min gal/min 0																	
							11/7/21				11/6/21																										
Time Sample Taken							0:30				13:00																										
Sample Location							pit				pit																										
Flowline Temperature °F													PHHP = 0 CIRCULATION DATA n = 0.585 K = 26.563																								
Depth (ft)							19,553'				19,553'		Bit Depth = 12,183 '			Washout = 0%		Pump Efficiency = 95%																			
Mud Weight (ppg)							8.4				8.4		Drill String Disp.		Volume to Bit 224.1 bbl Bottoms Up Vol. 245.5 bbl Riser Ann. Vol. -3.2 bbl		Strokes To Bit BottomsUp Stks Riser Strokes		Time To Bit BottomsUp Time Riser Circ. Time																		
Funnel Vis (sec/qt) @ 89 °F							27				28		80.9 bbl																								
600 rpm							3				3																										
300 rpm							2				2		DRILLING ASSEMBLY DATA						SOLIDS CONTROL																		
200 rpm							1				1		Tubulars OD (in.) ID (in.) Length Top					Unit Screens Hours																			
100 rpm							1				1		Drill Pipe 5.500 4.768 1,775' 0'					Shaker 1 140																			
6 rpm							1				1		Hevi Wt 5.000 4.276 10,408' 1,775'					Shaker 2 140																			
3 rpm							1				1		Collars 12,183'					Shaker 3 140																			
Plastic Viscosity (cp) @ 120 °F							1				1		Collars 12,183'					Desander																			
Yield Point (lb/100 ft²) T0 = 1							1				1		CASING & HOLE DATA						Desilter																		
Gel Strength (lb/100 ft²) 10 sec/10 min							1/1				1/1		Casing OD (in.) ID (in.) Depth Top					Centrifuge 1																			
Gel Strength (lb/100 ft²) 30 min							1				1		Riser 20 108'					VOLUME ACCOUNTING (bbls)																			
API Filtrate / Cake Thickness													Surface 10 3/4 9.950 3,014' 108'					Prev. Total on Location 2565.9																			
HTHP Filtrate / Cake Thickness @ 0 °F													Int. Csg. 7 5/8 6.875 9,779' 108'					Transferred In(+)/Out(-)																			
Retort Solids Content							0.4%				0.4%		Washout 1					Oil Added (+) 45.8																			
Retort Oil Content													Washout 2					Barite Added (+) 13.9																			
Retort Water Content							99.6%				99.6%		Open Hole Size 6.750 19,553'					Other Product Usage (+) 0.0																			
Sand Content							0%				0%		ANNULAR GEOMETRY & RHEOLOGY						Water Added (+)																		
M.B.T. (Methylene Blue Capacity) (ppb)													annular section		meas. depth		velocity ft/min		flow reg		ECD lb/gal																
pH							7.0				7.0		0x5.5 108'		0.0				8.40		Non-Recoverable Vol. (-)																
Alkalinity, Mud Pm							0.1				0.1		6.875x5.5 1,775'		0.0		lam		8.40		Est. Total on Location 2039.8																
Alkalinities, Filtrate Pf/Mf							0.1/0.2				0.1/0.2		6.875x5 9,779'		0.0		lam		8.40		Est. Losses/Gains (-)/(+) 0.0																
Chlorides (mg/L)							1200				1200		6.75x5 12,183'		0.0		lam		8.40		BIT HYDRAULICS DATA																
Calcium (ppm)							200				240										Bit H.S.I.																
Excess Lime (lb/bbl)																					Bit ΔP																
Average Specific Gravity of Solids							2.60		2.60		2.60										Nozzles (32nds)																
Percent Low Gravity Solids							0.3%				0.3%																										
Percent Drill Solids							0.3%				0.3%																										
PPA Spurt / Total (ml) @ @ 0 °F													BIT DATA			Manuf./Type																					
Estimated Total LCM in System ppb													Size		Depth In		Hours		Footage		ROP ft/hr																
Sample Taken By							N. Dilly				P. Blair		6 3/4																								
Remarks/Recommendations:  Slug Pit: Fresh water / Tank 7: 10.0ppg OBM / Tank 5&6: 17.0ppg Kill Mud  Plan Forward: Land casing, cement, & skid rig.  Total OBM Received (Consignment Volume): 2607bbls  Ordered OBM required to complete next well.  Mud check derived from drill water in pit #8.										Rig Activity:  Backream out of hole to 17,636'. POOH on slips F/17,636' T/7,702'. SOOH F/7,702' T/2,961'. Filled backside while tripping with 9.1ppg/10.0ppg reserve OBM. Pumped 50 bbls 17.0ppg kill mud 3 times at 17,636 after backreaming, 9,785' at shoe, and 2,961' when removing trip nipple. Finished POOH F/2,961' and lay down BHA. R/U casing equipment and M/U shoe track. at pm report time for production casing run. Run 5" casing to 10,408'. Swap out casing tools and continue running 5 1/2" casing to 12,183' at report time. Filling casing with freshwater.																											
Eng. 1: Patrick Blair Phone: 936-465-0952							Eng. 2: Nick Dilly Phone: 337-207-8848							WH 1: MIDLAND Phone: 432-686-7361							WH 2: WH #2 Phone: -							Rig Phone:									
W P Y g G p A S C 1 1 1 1 1 0 1 0 0							Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.												\$43,162.00							\$218,778.96											
												INCLUDING 3RD PARTY CHARGES												\$48,395.28							\$337,068.52						



### THIRD PARTY COST SHEET

[illegible]

## FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 B

	Date	WEEK 1							WEEK 2							WEEK 3						
		10/21/21	10/22/21	10/23/21	10/24/21	10/25/21	10/26/21	10/27/21	10/28/21	10/29/21	10/30/21	10/31/21	11/1/21	11/2/21	11/3/21	11/4/21	11/5/21	11/6/21	11/7/21	11/8/21	11/9/21	11/10/21
		Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed
Bit Size	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	13 1/2	9 7/8	9 7/8	9 7/8	9 7/8	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4	6 3/4			
Grand Totals	Starting Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342	9,790	9,790	9,790	10,923	14,547	16,884	16,884	17,830	19,553	19,553		
	Ending Depth	3,025	3,025	3,025	3,025	3,025	3,025	3,100	8,342	9,790	9,790	9,790	10,923	14,547	16,884	16,884	17,830	19,553	19,553			
16,528	Footage Drilled	-	-	-	-	-	-	75	5,242	1,448	-	-	1,133	3,624	2,337	-	946	1,723	-	-	-	-
1,073	New Hole Vol.	-	-	-	-	-	-	7	497	137	-	-	50	160	103	-	42	76	-	-	-	-
	Starting System Volume		2,419	279	279	279	279	279	2,664	2,570	2,522	444	2,952	2,863	2,836	3,042	2,193	2,566	2,566	2,040	2,040	2,040
95	Chemical Additions							10	11	11		10	19	14	17		3					
1,085	Base Fluid Added							74	230	98	66	100	93	92	178		52	56	46			
108	Barite Increase								14	24				7	28	21			14			
8,110	Weighted Mud Added	2,419						2,362				2,398		310	207		414					
-	Slurry Added																					
721	Water Added								5				15	26	675							
-	Added for Washout																					
10,119	Total Additions	2,419	-	-	-	-	-	2,446	260	133	66	2,508	127	449	1,105	21	469	56	60	-	-	-
-	Surface Losses																					
2,042	Formation Loss												122	248	739	195	96	56	586			
887	Mud Loss to Cuttings							2	328	181			59	192	125							
781	Unrecoverable Volume										65		15	11	15	675						
189	Centrifuge Losses							59	26		39		20	25	20							
3,899	Total Losses	-	-	-	-	-	-	61	354	181	104	-	216	476	899	870	96	56	586	-	-	-
4,180	Mud Transferred Out		2,140								2,040											
2,040	Ending System Volume	2,419	279	279	279	279	279	2,664	2,570	2,522	444	2,952	2,863	2,836	3,042	2,193	2,566	2,566	2,040	2,040	2,040	2,040
-	Mud Recovered																					
3,930	Comments:							Comments:							Comments:							
	10/21/21 Transferred 2,419bbls from the HO2 to the HO4.							10/28/21 Lost 328bbls to mud on cuttings and 26bbls to centrifuge processing active system.							11/4/21 195bbls lost downhole while bullheading fluid and stripping out of hole.							
	10/22/21 Transferred 2,140bbls from the HO4 to the HO6. Left 279bbls in hole after cement job.							10/29/21 Lost 181bbls to mud on cuttings while drilling and circulating hole clean.							11/5/21 96bbls lost to hole filling backside with kill mud.							
	10/23/21							10/30/21 Lost 65bbls to spacer interfaced dumped during cement job and 39bbls to centrifuge maintaining and cutting MW back for next well.							11/6/21 Lost 56bbls downhole to diesel added to drill water.							
	10/24/21							10/31/21							11/7/21 Lost 586bbls to formation while backreaming, tripping, and stripping out of hole.							
	10/25/21							11/1/21							11/8/21							
	10/26/21							11/2/21 310 BBLS received from mudplant							11/9/21							
10/27/21 Lost 2bbls to mud on cuttings and 59bbls to centrifuge while cutting MW back to 8.8ppg for drill out.							11/3/21 207 BBLS received from mudplant							11/10/21								

11/08/21

110 Old Market St.  
St Martinville, LA 70582

Report #15

TEL: (337) 394-1078

OUTSOURCE FLUID SOLUTIONS LLC.

0.0°

0' TVD

Operator <b>MAGNOLIA OIL &amp; GAS</b>							Contractor <b>PATTERSON</b>			County / Parish / Block <b>WASHINGTON</b>			Engineer Start Date <b>10/07/21</b>		24 hr fig. <b>0 ft</b>		Drilled Depth <b>19,553 ft</b>																
Well Name and No. <b>BIGHORN PEAK H04 BH</b>							Rig Name and No. <b>248</b>			State <b>TEXAS</b>			Spud Date <b>10/07/21</b>		Current ROP <b>0 ft/hr</b>		Activity <b>Skid Rig</b>																
Report for <b>Kevin Burt / Chris Mayeux</b>							Report for <b>Tool Pusher</b>			Field / OCS-G # <b>GIDDINGS</b>			Fluid Type <b>WBM</b>		Circulating Rate <b>0 gpm</b>		Circulating Pressure <b>psi</b>																
MUD PROPERTY SPECIFICATIONS							MUD VOLUME (BBL)			PUMP #1			PUMP #2			RISER BOOSTER																	
Weight <b>8.4-9.6</b>		PV <b>0-10</b>		YP <b>0-10</b>		GELS <b>&lt;5 &lt;10</b>		pH <b>8.4-9</b>		API fl <b>&lt;25</b>		% Solids <b>2-10</b>		In Pits 0 bbl		Liner Size 4.75		Liner Size 4.75		Liner Size													
														In Hole 0 bbl		Stroke 12		Stroke 12		Stroke													
														Active 0 bbl		bbl/stk 0.0625		bbl/stk 0.0625		bbl/stk 0.0000													
														Storage <u>0 bbl</u>		stk/min 0		stk/min 0		stk/min													
														Tot. on Location 0 bbl		gal/min 0		gal/min 0		gal/min 0													
Flowline Temperature °F							PHHP = 0							CIRCULATION DATA																			
Depth (ft)							Bit Depth = '					Washout = 0%			Pump Efficiency = 95%																		
Mud Weight (ppg)							Drill String Disp.  0.0 bbl		Volume to Bit 0.0 bbl		Strokes To Bit			Time To Bit																			
Funnel Vis (sec/qt) @ 89 °F									Bottoms Up Vol. 0.0 bbl		BottomsUp Stks			BottomsUp Time																			
600 rpm									Riser Ann. Vol. 0.0 bbl		Riser Strokes			Riser Circ. Time																			
300 rpm							DRILLING ASSEMBLY DATA							SOLIDS CONTROL																			
200 rpm							Tubulars		OD (in.)		ID (in.)		Length		Top		Unit		Screens		Hours												
100 rpm							Drill Pipe						0'		0'		Shaker 1		140														
6 rpm							Hevi Wt								0'		Shaker 2		140														
3 rpm							Collars								0'		Shaker 3		140														
Plastic Viscosity (cp) @ 120 °F							Collars								0'		Desander																
Yield Point (lb/100 ft²) T0 =							CASING & HOLE DATA							Desilter																			
Gel Strength (lb/100 ft²) 10 sec/10 min							Casing		OD (in.)		ID (in.)		Depth		Top		Centrifuge 1																
Gel Strength (lb/100 ft²) 30 min							Riser		20				108'				VOLUME ACCOUNTING (bbls)																
API Filtrate / Cake Thickness							Surface		10 3/4				3,014'		108'		Prev. Total on Location			2039.8													
HTHP Filtrate / Cake Thickness @ 0 °F							Int. Csg.		7 5/8				9,779'		108'		Transferred In(+)/Out(-)			-1210.0													
Retort Solids Content							Prod.		5 1/2				9,135'		0'		Oil Added (+)			0.0													
Retort Oil Content							Prod.		5				19,543'		9,135'		Barite Added (+)			0.0													
Retort Water Content							Open Hole Size		0.000				19,553'				Other Product Usage (+)			0.0													
Sand Content							ANNULAR GEOMETRY & RHEOLOGY																										
M.B.T. (Methylene Blue Capacity) (ppb)							annular section		meas. depth		velocity ft/min		flow reg		ECD lb/gal		Water Added (+)																
pH														Left on Cuttings (-)					0.0														
Alkalinity, Mud Pm														Lost Returns (-)					-829.8														
Alkalinities, Filtrate Pf/Mf														Non-Recoverable Vol. (-)																			
Chlorides (mg/L)														Est. Total on Location					0.0														
Calcium (ppm)														Est. Losses/Gains (-)/(+)					0.0														
Excess Lime (lb/bbl)														BIT HYDRAULICS DATA																			
Average Specific Gravity of Solids														Bit H.S.I.		Bit ΔP		Nozzles (32nds)															
Percent Low Gravity Solids														Bit Impact Force		Nozzle Velocity (ft/sec)																	
Percent Drill Solids																																	
PPA Spurt / Total (ml) @ @ 0 °F																																	
Estimated Total LCM in System ppb							Size		Depth In		Hours		Footage		ROP ft/hr		Motor/MWD		Calc. Circ. Pressure														
Sample Taken By							N. Dilly																										
Remarks/Recommendations:  Transfer 1210bls OBM to HO6.  Transfer all inventory to HO6.  Lost all OBM in hole to formation during cement job.							Rig Activity:  Run 5 1/2" casing to 19,543' washing down last 3 joints with freshwater. R/U TIW and cement crew. Pump 125bbls 17.0ppg kill mud down back side. Pump 40 bbls spacer @ 10.5 ppg, pump 319 bbls cement @ 13.5 ppg, and displace w/383bbls fresh water to bump plug. R/U cementers to kill line and pump top job with 40bls spacer @ 10.5ppg, 346bls lead cement @ 13.5ppg, and 50bls tail cement @14.8ppg. Rig down cement equipment and nipple down. Skidding rig at report time.																										
Eng. 1: Patrick Blair Phone: 936-465-0952							Eng. 2: Nick Dilly Phone: 337-207-8848							WH 1: MIDLAND Phone: 432-686-7361							WH 2: WH #2 Phone: -							Rig Phone:		Daily Total		Cumulative Cost	
W P Y g G p A S C 0 2 2 1 1 0 1 0 0							Any opinion and or recommendation, expressed orally or written herein, has been prepared carefully and may be used if the user so elects, however, no representation is made as to the validity of this information, and this is a recommendation only.															\$62,250.00		\$281,028.96									
							INCLUDING 3RD PARTY CHARGES															\$62,250.00		\$399,318.52									



### THIRD PARTY COST SHEET

[illegible]

## FLUID VOLUME ACCOUNTING

Operator:	MAGNOLIA OIL & GAS
Rig Name:	248
Well Name:	BIGHORN PEAK H04 B

**3,930**